BERG
ELECTRONICS

mck McKenzie Socket Division

IC Socket & Adapter Catalog

ISO 9001
REGISTERED

EDITION 13A

BERG ELECTRONICS

mck McKenzie Socket Division

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A few words about our catalog

HIGH TEMP AVAILABLE

Where this logo is displayed Hi-Temp options are available for infrared and vaporphase applications

Inches and millimeters are displayed one over the other

.100 inches
(2,54) (millimeters)

Editor: Michael Knight

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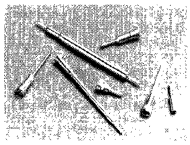

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- **Application Specific Module — Page H8**

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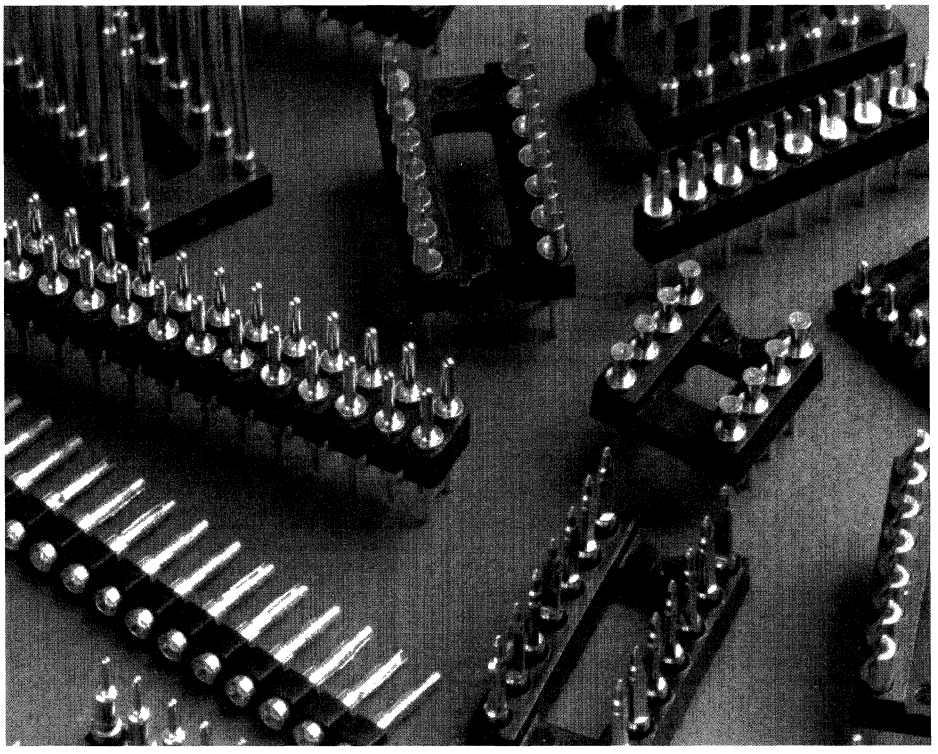
McKenzie offers the broadest selection of screw machine and stamped contacts ready to assemble to your socket and interconnection requirements. The following 10 pages list a vast array of contacts and terminals, providing a variety of:

- plating styles
- solder tail length and diameters
- insertion and extraction forces
- multi-finger hi-rel contacts
- Hi-Temp beryllium nickel inner contacts (-55°C to +225°C)
- flush profiles
- elevated board to board contact profiles
- press-fit contacts

McKenzie Technology's Applications Engineers will assist you in selecting the right contact for your design. We are pleased to quote your custom screw machine or stamped contact requirements.



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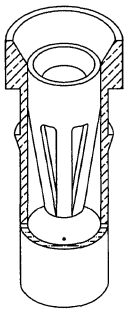
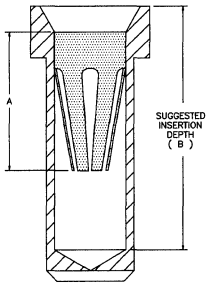
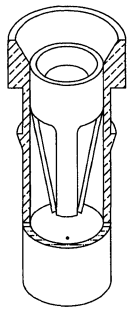
A



6 Finger Clip





4 Finger Clip

CLIP NUMBER*	MATERIAL**	SPECIAL FEATURES	ACCEPTABLE PIN RANGE	A	B	INSERTION FORCE (GMS)[7]	WITHDRAWAL FORCE (GMS)[7]
6(10)	BeCu	Micro miniature	.012/.017 (0,30/0,43)	.060 (1,52)	.085/.115	80[6]	30[6]
3(11)	BeCu	I.C. Leads - Standard	.015/.021 (0,38/0,53)	.075 (1,91)	.100/.160	80[1]	40[1]
3(21)	BeCu	Very Low Force (VLI)	.015/.022 (0,38/0,56)	.075 (1,91)	.100/.160	45[1]	20[1]
3(48)	BeCu	Extremely Low Force (ELIF)™	.015/.024 (0,38/0,61)	.085 (2,16)	.110/.140	20[1]	12[1]
6(22)	BeCu	Very Low Force (VLI)	.015/.022 (0,38/0,56)	.064 (1,62)	.190/.115	90[1]	55[1]
4(12)	BeCu	Ultra Low profile	.015/.022 (0,38/0,56)	.062 (1,57)	.090/.110	350[1]	150[1]
6(32)	BeCu	Very Low Force (VLI)	.015/.026 (0,38/0,66)	.083 (2,10)	.110/.140	65[1]	28
6(35)	BeCu	Ultra Low Force (ULIF)™	.015/.026 (0,38/0,66)	.083 (2,10)	.110/.140	35[1]	20[1]
6(43)	BeCu	Ultra Low Force (ULIF)™	.015/.026 (0,38/0,66)	.083 (2,10)	.110/.140	20[1]	11[1]
4(38)	BeNi	I.C. Leads - Hi-Temp	.015/.025 (0,38/0,64)	.083 (2,10)	.110/.140	190[1]	120[1]
4(30)	BeCu	I.C. Leads - Standard	.015/.025 (0,38/0,64)	.083 (2,10)	.110/.140	175	90[1]
4(20)	BeCu	I.C. Leads - Low Force	.015/.026 (0,38/0,66)	.083 (2,10)	.110/.135	55[1]	25[1]
6(16)	BeCu	Mates to .025" sq. pins	.022/.034 (0,56/0,86)	.086 (2,18)	.110/.160	140[1]	85
4(06)	BeCu		.022/.032 (0,56/0,81)	.113 (2,87)	.140/.170	100[2]	50[2]
6(47)	BeCu	.025" sq./Very Low Force	.025/.037 (0,64/0,94)	.086 (2,18)	.110/.160	75[2]	35[2]
4(34)	BeCu		.032/.047 (0,81/1,19)	.120 (3,05)	.145/.180	225[5]	120[5]
4(03)	BeCu		.040/.060 (1,02/1,52)	.150 (3,81)	.175/.210	250[3]	125[3]
6(23)	BeCu		.045/.067 (1,14/1,70)	.100 (2,54)	.125/.180	350[3]	180[3]
4(13)	BeCu		.048/.064 (1,22/1,63)	.124 (3,15)	.150/.180	140[3]	100[3]
4(07)	BeCu		.065/.082 (1,65/2,08)	.150 (3,81)	.175/.210	170[4]	115[4]

* Number of fingers (clip style)
**BeCu is Beryllium Copper, BeNi is Beryllium Nickel
[1] Average force with .018 polished steel test pin with bullet nose
[2] Average force with .025 polished steel test pin with bullet nose
[3] Average force with .050 polished steel test pin with bullet nose
[4] Average force with .075 polished steel test pin with bullet nose
[5] Average force with .040 polished steel test pin with bullet nose
[6] Average force with .014 polished steel test pin with bullet nose
[7] Force plots available for various pin ranges in section X

Plating Abbreviations

Sockets (Inner contact/Outer shell)

GT = 30µ" Au/200µ" Sn
LT = 10µ" Au/200µ" Sn
GG = 30µ" Au/10µ" Au
LG = 10µ" Au/10µ" Au
TT = 200µ" Sn/200µ" Sn
PP = 200µ" SnPb/100µ" SnPb

Pins

G = 10µ" Au
T = 200µ" Sn
P = 200µ" SnPb
N1 = 50µ" Ni
N2 = 100µ"-150µ" Ni

NOTE: All references to Sn plate throughout this catalog imply a minimum Pb content of 2%, unless stated otherwise.

STANDARD CONTACTS

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
001B	1	GT	#4(30)	.057/.024	.015/.025	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
002B	1	GG	#4(30)	.057/.024	.015/.025	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
003B	1	GT	#6(32)*	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
004B	1	GG	#6(32)*	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
008B	1	LT	#6(35)§	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
009B	1	GT	#6(35)§	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
010B	1	GG	#6(35)§	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
011B	1	LT	#4(30)	.057/.024	.015/.025	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
012B	1	LT	#6(32)*	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
013B	1	GG	#6(32)*	.057/.024	.015/.026	.125	.290	.165	.031	PHOSBRONZE		-	.072	.060	.053	.020	-	.153
014B	1	TT	#4(30)	.057/.024	.015/.025	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
015B	1	TT	#6(32)*	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
016B	1	GT	#4(30)	.057/.024	.015/.025	.125	.290	.165	.031	-	-	-	.072	.060	.053	.020	-	.153
018B	1	TT	#4(30)	.057/.024	.015/.025	.100	.265	.165	.031	-	-	-	.072	.060	.053	.020	-	.153
022B	1	LG	#6(32)*	.057/.024	.015/.025	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.153
027B	1	TT	#6(35)	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.146
030B	1	GT	#3(48)	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.146
033B	1	LT	#6(43)	.057/.024	.015/.026	.125	.290	.165	.030	-	-	-	.072	.060	.053	.020	-	.146

LOW PROFILE CONTACTS — .083" TO .132"

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
001M	2	LT	#6(35)§	.057/.033	.015/.025	.133	.255	.122	.031	HOLLOW TAIL		-	.072	.060	.053	.030	-	.175
153B	2	GT	#6(22)*	.057/.032	.015/.020	.082	.165	.083	.010	HOLLOW TAIL		-	.072	.060	.053	.029	-	.146
156B	2	GT	#4(12)	.057/.032	.015/.020	.082	.165	.083	.010	HOLLOW TAIL		-	.072	.060	.053	.029	-	.146
157B	2	TT	#4(12)	.057/.033	.015/.020	.095	.190	.095	.020	HOLLOW TAIL		-	.072	.060	.052	.030	-	.152
160B	2	GT	#4(12)	.057/.033	.015/.020	.095	.190	.095	.020	HOLLOW TAIL		-	.072	.060	.053	.030	-	.152
161B	2	GG	#4(12)	.057/.033	.015/.020	.095	.190	.095	.020	HOLLOW TAIL		-	.072	.060	.052	.030	-	.152
164B	2	GT	#6(22)*	.057/.033	.015/.020	.095	.190	.095	.020	HOLLOW TAIL		-	.072	.060	.052	.030	-	.152
185B	2	GT	#4(30)	.057/.033	.015/.025	.108	.230	.122	.031	HOLLOW TAIL		-	.072	.062	.053	.030	-	.154
186B	2	GT	#6(32)*	.057/.033	.015/.026	.108	.230	.122	.031	HOLLOW TAIL		-	.072	.060	.053	.030	-	.154
187B	2	GT	#6(35)§	.057/.033	.015/.026	.108	.230	.122	.031	HOLLOW TAIL		-	.072	.060	.053	.030	-	.154
196B	2	GT	#4(30)	.057/.031	.015/.025	.118	.244	.126	.031	HOLLOW TAIL		-	.072	.060	.053	.028	-	.120
197B	2	GT	#6(32)*	.057/.031	.015/.026	.118	.244	.126	.031	HOLLOW TAIL		-	.072	.060	.053	.028	-	.120
199B	2	GT	#6(32)*	.057/.031	.015/.026	.108	.234	.126	.031	HOLLOW TAIL		-	.072	.060	.053	.028	-	.120
208B	1	GT	#4(12)	.057/.024	.015/.022	.125	.257	.132	.020	-	-	-	.072	.060	.052	.020	-	.120
209B	1	GT	#6(22)*	.057/.024	.015/.022	.125	.257	.132	.020	-	-	-	.072	.060	.052	.020	-	.120
210B	1	GG	#6(22)*	.057/.024	.015/.022	.180	.312	.132	.020	-	-	-	.072	.060	.052	.020	-	-
213B	1	GG	#4(12)	.057/.024	.015/.022	.125	.257	.132	.020	-	-	-	.072	.060	.052	.020	-	.120

LONG TAIL CONTACTS — .183" TO 1.215"

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
024B	1	GG	#6(35)§	.057/.024	.015/.026	.273	.445	.173	.031	-	-	-	.072	.060	.053	.020	-	.155
026B	1	GT	#6(35)§	.057/.024	.015/.026	.150	.315	.165	.030	-	-	-	.072	.060	.053	.020	-	.146
054B	1	GT	#4(30)	.057/.024	.015/.025	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
055B	1	GT	#6(32)*	.057/.024	.015/.026	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
057B	1	TT	#4(30)	.057/.024	.015/.025	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
059B	1	GT	#6(35)§	.057/.024	.015/.026	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
067B	1	GT	#4(30)	.057/.024	.015/.025	.273	.446	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
068B	1	GT	#6(32)*	.057/.024	.015/.026	.273	.446	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
079B	1	GT	#4(30)	.059/.024	.015/.025	.382	.555	.173	.030	-	-	-	.072	.062	.053	.020	-	.153
080B	1	GT	#6(32)*	.059/.024	.015/.026	.382	.555	.173	.030	-	-	-	.072	.062	.053	.020	-	.153
091B	1	GG	#4(30)	.057/.024	.015/.025	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153
100B	1	GG	#6(32)*	.057/.024	.015/.026	.183	.356	.173	.030	-	-	-	.072	.060	.053	.020	-	.153

* **Very low insertion clip**

§ **Ultra low insertion force**

Contact Tolerances: Lengths: ±.005
Diameters: ±.002
Angles: ± 2°

Contact Diameter Tolerances for PCB Mount: Barb: ±.002
Tail: ±.002

Note: ***These are suggested PTH sizes. Review contact diameters and tolerances carefully. Dimensions are in inches.***

For more information on plating and clip styles see page A1

LONG TAIL CONTACTS — .183" TO 1.215" (Continued)

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
101B	1	GG	#6(32)*	.057/.024	.015/.026	.183	.356	.173	.030	PHOSBRONZE		-	.072	.060	.053	.020	-	.155
105B	1	GG	#6(32)*	.057/.024	.015/.026	.210	.380	.170	.030	-	-	-	.072	.060	.053	.020	-	.155
114B	1	GG	#6(32)*	.057/.024	.015/.026	.273	.446	.173	.030	-	-	-	.072	.060	.053	.020	-	.155
115B	1	GG	#6(32)*	.057/.024	.015/.026	.273	.446	.173	.030	PHOSBRONZE		-	.072	.060	.053	.020	-	.153
116B	1	GG	#4(30)	.059/.024	.015/.025	.382	.555	.173	.030	-	-	-	.072	.062	.053	.020	-	.15
117B	1	GG	#6(32)*	.059/.024	.015/.026	.382	.555	.173	.030	-	-	-	.072	.062	.053	.020	-	.153
139B	1	GT	#4(30)	.057/.024	.015/.025	.455	.645	.190	.031	-	-	-	.072	.060	.053	.025	-	.140
235B	1	GT	#4(30)	.057/.024	.015/.025	1.215	1.405	.190	.031	-	-	-	.072	.060	.053	.025	-	.149
236B	1	GT	#6(32)*	.057/.024	.015/.026	1.215	1.405	.190	.031	-	-	-	.072	.060	.053	.025	-	.149
259B	3	GT	#6(32)*	.057/.033	.015/.026	.215	.382	.167	.031	-	-	-	.072	.060	.053	.030	-	.160

INTERSTITIAL TYPE CONTACTS

003A	5	GT	#6(43)§	.058/.022	.015/.026	.100	.265	.165	-	-	-	-	.056	.059	.046	.018	-	.145
009A	5	GT	#3(48)§	.057/.024	.015/.025	.150	.315	.165	-	-	-	-	.056	.059	.046	.018	-	.145
010A	5	LT	#3(48)§	.057/.024	.015/.025	.125	.290	.165	-	-	-	-	.056	.059	.046	.018	-	.145
011A	5	LT	#6(43)§	.057/.024	.015/.025	.125	.290	.165	-	-	-	-	.056	.059	.046	.018	-	.145
012A	5	GT	#3(48)§	.057/.024	.015/.025	.100	.265	.165	-	-	-	-	.056	.059	.046	.018	-	.145
013A	5	GG	#3(48)§	.057/.024	.015/.025	.125	.290	.165	-	-	-	-	.056	.059	.046	.018	-	.145
014A	5	LT	#3(48)*	.057/.024	.015/.025	.100	.265	.165	-	-	-	-	.056	.059	.046	.018	-	.145
015A	5	LT	#6(43)*	.057/.024	.015/.025	.100	.265	.165	-	-	-	-	.056	.059	.046	.018	-	.145
016A	5	LT	#6(43)*	.057/.024	.015/.025	.080	.330	.250	-	-	-	-	.056	.059	.046	.018	-	.145
018A	5	GT	#4(38)*	.057/.024	.015/.025	.125	.290	.165	-	-	-	-	.056	.059	.046	.018	-	.145
118B	5	GG	#6(43)§	.058/.024	.015/.026	.270	.435	.165	-	PHOSBRONZE		-	.057	.059	.046	.018	-	.145
120B	5	GG	#6(43)§	.058/.024	.013/.026	.180	.345	.165	-	PHOSBRONZE		-	.057	.059	.046	.018	-	.145
122A	5	GT	#3(48)§	.058/.024	.015/.026	.125	.290	.165	-	-	-	-	.057	.059	.046	.018	-	.145
282B	4	GT	#6(32)*	.059/.024	.015/.026	.125	.290	.165	-	-	-	-	.056	.062	.052	.018	-	.149
285B	4	GG	#6(32)*	.059/.024	.015/.026	.125	.290	.165	-	-	-	-	.056	.062	.052	.018	-	.149
286B	4	LT	#6(32)*	.059/.024	.015/.026	.125	.290	.165	-	-	-	-	.056	.062	.052	.018	-	.149
320B	5	GT	#6(22)*	.057/.024	.015/.020	.125	.290	.165	-	-	-	-	.056	.059	.046	.020	-	.142
321B	5	GT	#6(22)*	.057/.024	.015/.020	.125	.439	.314	-	-	-	-	.056	.059	.046	.018	-	.142
509A	5	GG	#6(43)§	.058/.022	.015/.026	.125	.290	.165	-	-	-	-	.056	.059	.046	.018	-	.145
509B	5	GT	#6(43)§	.058 /.024	.015/.026	.125	.290	.165	-	-	-	-	.057	.059	.046	.018	-	.145

ELEVATED PROFILE CONTACTS — .177" TO .699"

002D	7	GG	#4(30)	.057/.024	.015/.025	.124	.682	.167	.030	-	.358	-	.071	.060	.035	.020	-	.160
003D	7	GT	#4(30)	.059/.024	.015/.025	.158	.542	.208	.031	-	.384	-	.072	.062	.035	.020	-	.180
040B	1	GG	#4(30)	.057/.024	.015/.025	.125	.355	.230	.030	-	-	-	.072	.060	.053	.020	-	.156
041B	1	GT	#4(30)	.057/.024	.015/.025	.125	.355	.230	.030	-	-	-	.072	.060	.053	.020	-	.156
042B	1	GT	#6(32)*	.057/.024	.015/.026	.125	.355	.230	.030	-	-	-	.072	.060	.053	.020	-	.156
043B	1	GG	#6(32)	.057/.024	.015/.025	.125	.355	.230	.030	-	-	-	.072	.060	.053	.020	-	.156

FIG. 1

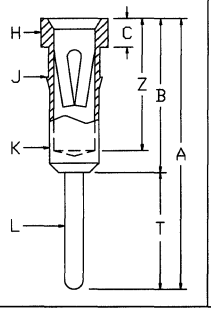


FIG. 2

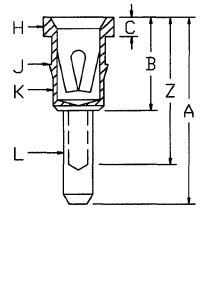


FIG. 3

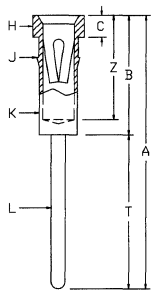


FIG. 4

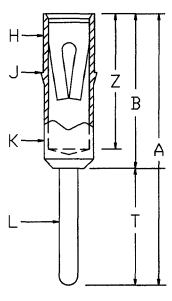


FIG. 5

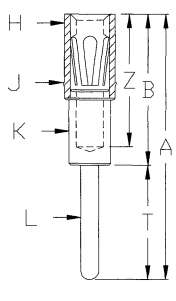
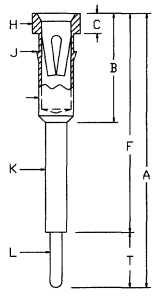


FIG. 7



PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
ELEVATED PROFILE CONTACTS — .177" TO .699" (Continued)																		
220B	1	GT	#4(30)	.059/.024	.015/.025	.165	.665	.500	.380	-	-	-	.072	.062	.052	.020	-	.210
248B	1	GG	#4(30)	.057/.021	.015/.025	.126	.303	.177	.031	-	-	-	.072	.060	.053	.018	-	.148
300B	7	GT	#4(30)	.057/.021	.015/.025	.126	.566	.165	.031	-	.440	-	.072	.060	.033	.018	-	.149
301B	7	GT	#4(30)	.059/.021	.015/.025	.135	.703	.193	.031	-	.568	-	.072	.060	.035	.018	-	.150
302B	7	GT	#4(30)	.059/.021	.015/.025	.170	.542	.208	.031	-	.372	-	.072	.062	.035	.020	-	.180
303B	7	TT	#4(30)	.057/.021	.015/.025	.170	.542	.208	.031	-	.372	-	.072	.062	.035	.020	-	.180
310B	7	GG	#4(30)	.057/.021	.015/.025	.124	.547	.167	.030	-	.423	-	.071	.059	.035	.020	-	.160
312B	7	GG	#4(30)	.057/.021	.015/.025	.124	.705	.167	.030	-	.581	-	.071	.059	.035	.020	-	.160
313B	7	GG	#4(30)	.057/.021	.015/.025	.124	.823	.167	.030	-	.699	-	.071	.059	.035	.020	-	.160
314B	7	GG	#6(32)*	.057/.021	.015/.026	.130	.664	.173	.030	-	.488	-	.072	.060	.035	.018	-	.154
.070" PROGRESSION CONTACTS																		
340B	1	GT	#3(11)	.043/.023	.015/.021	.120	.290	.170	.030	-	-	-	.055	.046	.041	.020	-	.151
341B	1	GT	#3(21)*	.043/.023	.015/.022	.120	.290	.170	.030	-	-	-	.055	.046	.041	.020	-	.151
342B	1	GG	#3(21)*	.043/.023	.015/.022	.200	.370	.170	.030	PHOSBRONZE		-	.055	.046	.041	.018	-	.151
343B	1	GG	#3(21)*	.043/.023	.015/.022	.120	.290	.170	.030	-	-	-	.055	.046	.041	.020	-	.151
WIRE WRAP CONTACTS																		
398B	12	GT	#4(30)	.057/.037	.015/.025	.260 WW	.453	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
400B	12	GT	#4(30)	.057/.037	.015/.025	.360 WW	.553	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
401B	12	GG	#4(30)	.057/.037	.015/.025	.360 WW	.553	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
402B	12	GT	#6(32)*	.057/.037	.015/.026	.360 WW	.553	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
403B	12	GG	#6(32)*	.057/.037	.015/.026	.360 WW	.553	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
410B	12	GT	#4(30)	.057/.037	.015/.025	.500 WW	.693	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
411B	12	GG	#4(30)	.057/.037	.015/.025	.500 WW	.693	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
412B	12	GT	#6(32)*	.057/.037	.015/.026	.500 WW	.693	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
413B	12	GG	#6(32)*	.057/.037	.015/.026	.500 WW	.693	.193	.030	-	-	-	.072	.060	.053	.025	SQ.	.170
415B	9	GG	#4(30)	.057/.040	.015/.025	.510 WW	.705	.195	.031	-	-	-	.072	.060K	.053	.025	SQ.	.170
CONTACTS MATING TO .025" SQUARE POSTS																		
420B	8	GT	#4(06)	.067/.024	.022/.032	.125	.310	.185	.031	.068	.125	.160	.085	.070K	.061	.020	-	.170
424B	1	LT	#6(47)*	.067/.024	.025/.037	.125	.310	.185	.032	-	.125	.155	.077	.070	.062	.020	-	.165
426B	1	LT	#6(46)*	.067/.024	.025/.037	.087	.272	.185	.032	-	.125	.155	.077	.070	.062	.020	-	.165
435B	1	GT	#6(47)*	.061/.029	.025/.037	.230	.490	.260	.032	-	-	-	.072	.064	.061	.025	-	.235
445B	9	GT	#6(16)*	.067/.038	.022/.034	.370 WW	.545	.175	-	-	-	-	-	.070K	.061	.025	SQ.	.155
455B	12	GT	#4(06)	.080/.038	.022/.032	.510 WW	.812	.302	.030	-	-	-	.085	.083	.073	.025	SQ.	.274
BeNi CONTACTS FOR HI-TEMP APPLICATIONS																		
498B	1	GG	#4(38)	.057/.024	.015/.025	.124	.297	.173	.030	-	-	-	.072	.060	.053	.020	-	.156
502B	4	TT	#4(38)	.059/.024	.015/.025	.270	.410	.140	-	HEADLESS		-	.056	.062	.052	.020	-	.117
FLAT HEAD TERMINALS																		
540B	1	G	-	.059/.024	FLAT TOP	.124	.297	.173	.030	-	-	-	.072	.062	.053	.020	-	-
541B	1	T	-	.059/.024	FLAT TOP	.124	.297	.173	.030	-	-	-	.072	.062	.053	.020	-	-

* Very low insertion clip

§ Ultra low insertion force

Contact Tolerances: Lengths: ±.005 Diameters: ±.002 Angles: ± 2°

Contact Diameter Tolerances for PCB Mount: Barb: ±.002 Tail: ±.002

Note: ***These are suggested PTH sizes. Review contact diameters and tolerances carefully. Dimensions are in inches.***

For more information on plating and clip styles see page A1

A

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
DUMMY TERMINALS																		
553B	11	N1	-	.057	FLAT TOP	-	.115	.115	.031	-	-	-	.072	.060	.053	-	-	-
565B	1	-	-	.057/.025	HOLE .043	.183	.356	.173	.031	-	-	-	.072	.060	.053	.020	-	-
567B	1	-	-	.057/.025	NO CLIP	.132	.280	.148	.031	-	-	-	.072	.060	.053	.018	-	-
NAIL HEAD WIRE WRAP TERMINALS																		
570B	10	G	-	.057/.038	FLAT TOP	.260 WW	.453	.193	.030	-	-	.260	.062	.060	.053	.025	SQ.	-
571B	10	G	-	.057/.038	HOLE .043	.260 WW	.453	.193	.030	-	-	.260	.072	.060	.053	.025	SQ.	.170
582B	10	G	-	.057/.038	FLAT TOP	.360 WW	.553	.193	.030	-	-	.360	.072	.060	.053	.025	SQ.	-
583B	10	G	-	.057/.038	FLAT TOP	.360 WW	.553	.193	.030	-	-	.360	.062	.060	.053	.025	SQ.	-
584B	10	G	-	.057/.038	HOLE .043	.360 WW	.553	.193	.030	-	-	.360	.072	.060	.053	.025	SQ.	.170
590B	10	G	-	.057/.038	FLAT TOP	.510 WW	.711	.201	.031	-	-	.510	.072	.060	.053	.025	SQ.	-
591B	10	G	-	.057/.038	FLAT TOP	.500 WW	.693	.193	.030	-	-	.500	.072	.060	.053	.025	SQ.	-
592B	10	G	-	.057/.038	FLAT TOP	.500 WW	.693	.193	.030	-	-	.500	.062	.060	.053	.025	SQ.	-
593B	10	G	-	.057/.038	HOLE .043	.500 WW	.693	.193	.030	-	-	.500	.072	.060	.053	.025	SQ.	-
BARBLESS CONTACTS WITH TAILS																		
600C	15	GT	#4(30)	.057/.024	.015/.025	.124	.297	.173	.030	-	-	-	.072	-	.053	.020	-	.154
601C	15	GG	#4(30)	.057/.024	.015/.025	.124	.297	.173	.030	-	-	-	.072	-	.053	.020	-	.154
LOW PROFILE CONTACTS — PRESSFIT AND SURFACE MOUNTABLE																		
002C	46	GT	#3(21)*	.050 PAD	.015/.022	-	.166	.114	.030	-	-	-	.055	.048	.043	.038	-	.147
004R	46	TT	#4(12)*	.050 PAD	.015/.022	-	.095	.095	.031	-	-	-	.072	.048	.053	.038	-	.072

FIG. 1

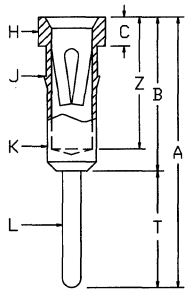


FIG. 4

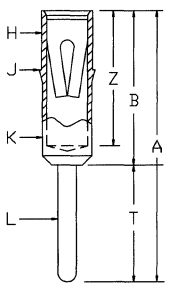


FIG. 7

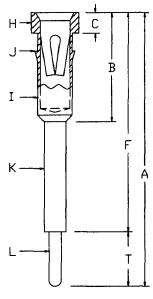


FIG. 8

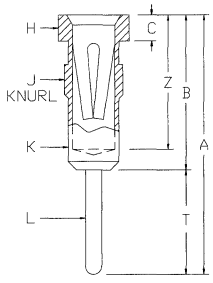


FIG. 9

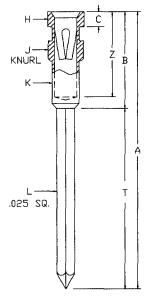


FIG. 10

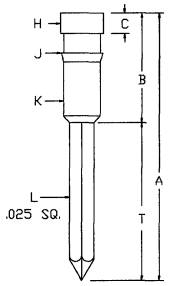


FIG. 11

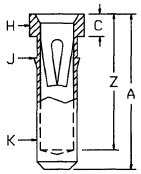


FIG. 12

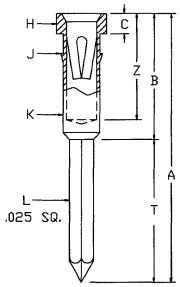


FIG. 15

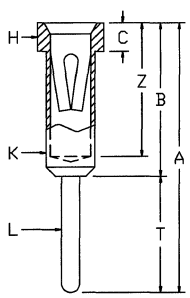
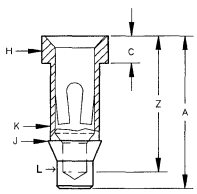


FIG. 46



PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
LOW PROFILE CONTACTS — PRESSFIT AND SURFACE MOUNTABLE (Continued)																		
619C	46	GT	#6(35)§	.050 PAD	.015/.026	-	.166	.166	.030	-	-	-	.072	.058	.053	.039	-	.147
622C	46	GT	#6(32)*	.050 PAD	.015/.026	-	.166	.166	.030	-	-	-	.072	.058	.053	.039	-	.156
623C	46	TT	#6(32)*	.050 PAD	.015/.026	-	.166	.166	.030	-	-	-	.072	.058	.053	.039	-	.156
631C	11	GT	#4(30)	.057	.015/.025	-	.169	.169	.031	-	-	-	.072	.060	.053	-	-	.150
635C	11	GT	#6(32)*	.057	.015/.026	-	.146	.146	.031	-	-	-	.070	.059	.053	-	-	.132
636C	11	TT	#4(30)	.057	.015/.025	-	.146	.146	.031	-	-	-	.070	.059	.053	-	-	.132
645C	11	GT	#4(30)	.057	.015/.025	-	.203	.203	.030	-	-	-	.072	.060	.053	-	-	-
LOW PROFILE CONTACTS																		
002R	16	TT	#3(21)*	.042	.015/.021	-	.140	.140	.050	-	-	-	.055	-	.038	-	-	.123
620C	16	GT	#4(30)	.057	.015/.025	-	.165	.165	.031	-	-	-	.072	-	.053	-	-	.156
647C	16	GT	SPECIAL	.042	.018/.021	-	.142	.142	.014	-	-	-	.057	-	.038	-	-	.135
654C	16	GT	#4(30)	.062	.015/.025	-	.180	.180	.088	-	-	-	.080	-	.056	-	-	.164
656C	16	GG	#4(30)	.062	.015/.025	-	.180	.180	.088	-	-	-	.080	-	.056	-	-	.164
657C	16	GT	#4(30)	.059	.015/.025	-	.161	.161	.016	-	-	-	.072	-	.055	-	-	.153
658C	16	GG	#4(30)	.059	.015/.025	-	.161	.161	.016	-	-	-	.072	-	.055	-	-	.153
659C	16	GT	#4(30)	.061	.015/.025	-	.125	.125	.020	-	-	-	.072	-	.057	-	-	.115
661C	16	GG	#4(38)	.061	.015/.025	-	.125	.125	.020	-	-	-	.072	-	.057	-	-	.115
672C	16	GT	#6(32)	.053	.015/.026	-	.248	.248	.040	-	-	-	.065	-	.049	-	-	.166
690C	16	GT	#4(30)	.059	.015/.025	-	.135	.135	.050	-	-	-	.072	-	.057	-	-	.124
730C	16	GT	#3(21)*	.042	.015/.022	-	.160	.160	.038	-	-	-	.055	-	.038	-	-	.146
775C	16	GT	#4(20)	.055	.015/.026	-	.160	.160	.038	-	-	-	.072	-	.051	-	-	-
777C	16	GT	#4(12)	.053	.015/.022	-	.200	.200	.020	-	-	-	.068	-	.049	-	-	-
785C	16	GT	#4(30)	.062	.015/.025	-	.180	.180	.088	-	-	-	.080	-	.058	-	-	-
FLUSH PROFILE CONTACTS — .016" ABOVE PCB																		
710C	16	GT	#3(11)	.042	.015/.021	-	.136	.136	.016	-	-	-	.055	-	.038	-	-	.124
711C	16	GG	#3(11)	.042	.015/.021	-	.136	.136	.016	-	-	-	.055	-	.038	-	-	.124
712C	16	GT	#3(21)*	.042	.015/.022	-	.136	.136	.016	-	-	-	.055	-	.038	-	-	.124
714C	16	PP	#3(21)*	.042	.015/.022	-	.136	.136	.016	-	-	-	.055	-	.038	-	-	.124
720C	16	GT	#3(11)	.042	.015/.021	-	.170	.170	.016	-	-	-	.055	-	.038	-	-	.151
722C	16	GT	#3(21)*	.042	.015/.022	-	.170	.170	.016	-	-	-	.055	-	.038	-	-	.151
723C	16	GG	#3(21)*	.042	.015/.022	-	.170	.170	.016	-	-	-	.055	-	.038	-	-	.151
LOW PROFILE CONTACTS — REQUIRES .038" MOUNTING HOLE																		
725C	16	GT	#3(21)*	.038	.015/.022	-	.155	.155	.031	LOW CLIP		-	.058	-	.034	-	-	.141
726C	16	TT	#3(21)*	.038	.015/.018	-	.155	.155	.031	LOW CLIP		-	.058	-	.034	-	-	.141
FLUSH PROFILE AND HEX PRESSFIT CONTACTS																		
004C	17	GT	#3(21)*	.041	.015/.021	-	.282	.282	.016	-	-	-	.055	.044	.038	-	-	.266
742C	17	GT	#3(21)*	.042	.015/.022	-	.140	.140	.016	-	-	-	.055	.043	.038	-	-	-
LOW PROFILE CONTACTS — WITH THRU HOLE BODY																		
750C	19	GT	#3(21)*	.041	.015/.022	-	.083	.083	.025	-	-	-	.058	-	.037	-	-	-
752C	19	GT	#3(21)*	.041	.015/.022	-	.138	.138	.025	-	-	-	.058	-	.037	-	-	.139

* **Very low insertion clip**

§ **Ultra low insertion force**

Contact Tolerances: Lengths: ±.005
Diameters: ±.002
Angles: ± 2°

Contact Diameter Tolerances for PCB Mount: Barb: ±.002
Tail: ±.002

Note: ***These are suggested PTH sizes. Review contact diameters and tolerances carefully. Dimensions are in inches.***

For more information on plating and clip styles see page A1

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A

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
LOW PROFILE CONTACTS — WITH THRU HOLE BODY (Continued)																		
760C	19	GT	#6(22)	.065	.015/.022	-	.138	.138	.018	-	-	-	.075	-	.061	-	-	.139
LOW PROFILE CONTACTS — MATING TO .025" — .080" POSTS																		
792C	13	GT	#6(16)*	.067	.022/.034	-	.145	.145	.018	.065	.086	.120	.078	HEX	-	-	-	.120
802C	16	GT	#4(06)*	.064	.022/.032	-	.259	.259	.014	-	-	-	.077	-	.060	-	-	.236
804C	16	GG	#4(34)*	.076	.032/.047	-	.206	.206	.018	-	-	-	.090	-	.073	-	-	.180
810C	16	TT	#4(34)	.089	.032/.047	-	.240	.240	.031	-	-	-	.120	-	.085	-	-	.205
815C	16	GG	#4(13)	.104	.048/.064	-	.290	.290	.012	-	-	-	.118	-	.100	-	-	.296
819C	16	TT	#4(07)	.160	.065/.082	-	.309	.309	.032	-	-	-	.188	-	.156	-	-	-
PCB EDGE MOUNT SOCKET																		
820C	26	GT	#6(16)*	.065	.025-SQ.	-	.407	.257	.014	.010	FLAT SIDE		.077	-	.060	-	-	.238
THRU HOLE EYELET																		
821C	34	T	-	.051	.028	-	.110	.110	.010	THRU HOLE BODY			.060	.054	.047	-	-	-
BIFURCATED TERMINALS																		
830G	20	G	-	.056/.024	-	.124	.417	.293	.157	.100	.035	-	.071	.059	.053	.020	-	-
831G	20	T	-	.056/.024	-	.124	.417	.293	.157	.100	.035	-	.071	.059	.053	.020	-	-
832G	20	G	-	.057/.021	PHOSBZ	.156	.416	.260	.157	.100	.035	-	.072	.060	.052	.018	-	-
834G	20	T	-	.057/.021	PHOSBZ	.156	.416	.260	.157	.100	.035	-	.072	.060	.052	.018	-	-
837G	22	G	-	.057/.038	-	.390 WW	.719	.329	.153	.100	.034	.390	.072	.060	.053	.025 SQ.	-	-
838G	22	G	-	.057/.038	-	.510 WW	.839	.329	.158	.100	.036	-	.072	.060	.053	.025 SQ.	-	-

FIG. 11

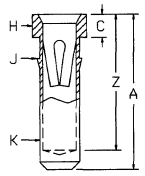


FIG. 13

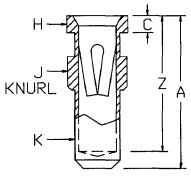


FIG. 16

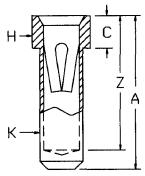


FIG. 17

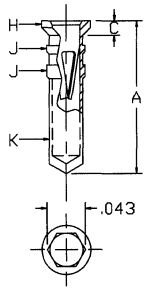


FIG. 20

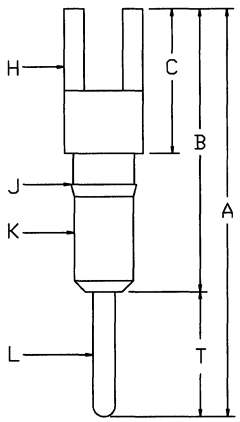


FIG. 22

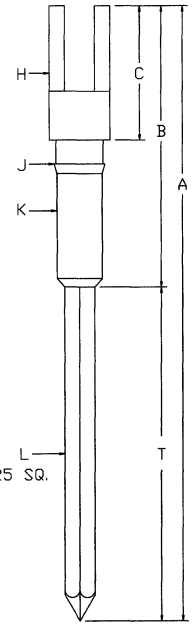
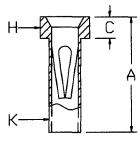


FIG. 19



THRU-HOLE

FIG. 26

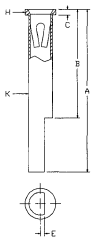
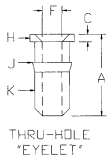
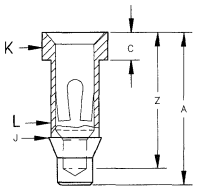


FIG. 34



THRU-HOLE
"EYELET"
ONLY

FIG. 46



PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
SOLDER CUP TERMINALS																		
840K	21	G	-	.056/.024	-	.124	.417	.293	.153	.126	.035	-	.071	.059	.053	.020	-	-
841K	21	T	-	.056/.024	-	.124	.417	.293	.157	.126	.035	-	.071	.059	.053	.020	-	-
842K	23	G	-	.056/.038	-	.390	.719	.329	.157	.126	.035	.390	.071	.059K	.053	.025 SQ.	-	-
843K	23	G	-	.056/.038	-	.510	.839	.329	.157	.126	.035	.510	.071	.059K	.053	.025 SQ.	-	-
TURRET TERMINALS																		
850L	25	G	-	.057/.024	-	.121	.402	.281	.142	.071	.051	-	.072	.060	.053	.020	.039	-
851L	25	T	-	.057/.024	-	.121	.402	.281	.142	.071	.051	-	.072	.060	.053	.020	.039	-
852L	25	G	-	.057/.024	-	.181	.462	.281	.142	.071	.051	-	.072	.060	.053	.020	.039	-
853L	25	T	-	.057/.024	-	.181	.462	.281	.142	.071	.051	-	.072	.060	.053	.020	.039	-
854L	24	G	-	.057/.038	-	.390 WW	.703	.313	.142	.071	.051	.390	.072	.060	.053	.025 SQ.	.039	-
855L	24	G	-	.057/.038	-	.510 WW	.823	.313	.142	.071	.051	.510	.072	.060	.053	.025 SQ.	.039	-
MALE/MALE PINS																		
002S	31	G	-	.057/.022	-	.230	.446	.216	.022	.150	.066	-	.070	.060	.052	.018	.018	-
004S	31	T	-	.057/.022	-	.105	.325	.220	.060	.150	.066	-	.055	.029	-	.018	.018	-
005S	36	G	-	.057/.022	-	.100	.316	.216	.022	.150	.066	-	.070	.060	.052	.018	.018	-
857S	36	T	BRASS	.057/.022	-	.125	.460	.335	.050	.125	.210	.060	.072	.060	.052	.018	.018	-
858S	36	T	BRASS	.057/.022	-	.125	.585	.460	.050	.125	.335	.185	.072	.060	.052	.018	.018	-
859S	36	T	BRASS	.057/.022	-	.125	.835	.710	.050	.125	.585	.435	.072	.060	.052	.018	.018	-
860S	36	T	BRASS	.057/.022	-	.125	1.085	.960	.050	.125	.835	.685	.072	.060	.052	.018	.018	-
861S	36	G	BRASS	.057/.022	-	.125	.460	.335	.050	.125	.210	.060	.072	.060	.052	.018	.018	-
862S	36	G	BRASS	.057/.022	-	.125	.585	.460	.050	.125	.335	.185	.072	.060	.052	.018	.018	-
863S	36	G	BRASS	.057/.022	-	.125	.835	.710	.050	.125	.585	.435	.072	.060	.052	.018	.018	-
864S	36	G	BRASS	.057/.022	-	.125	1.085	.960	.050	.125	.835	.685	.072	.060	.052	.018	.018	-
867S	36	G	PHOSBZ	.057/.022	-	.180	.585	.405	.050	.155	.250	.100	.070	.060	.053	.018	.018	-
868S	31	G	BRASS	.057/.022	-	.108	.299	.191	.022	.125	.066	-	.070	.060	.052	.018	.018	-
869S	31	T	BRASS	.057/.022	-	.108	.299	.191	.022	.125	.066	-	.070	.060	.052	.018	.018	-
870S	31	G	BRASS	.057/.025	-	.115	.482	.367	.052	.170	.197	-	.072	.060	.053	.021	.030	-
874S	31	G	BRASS	.057/.022	-	.156	.477	.321	.052	.166	.155	-	.072	.060	.052	.018	.025	-
876S	31	G	PHOSBZ	.057/.021	-	.156	.477	.321	.051	.166	.155	-	.072	.060	.052	.018	.018	-
877S	31	T	PHOSBZ	.057/.021	-	.156	.477	.321	.051	.166	.155	-	.072	.060	.052	.018	.018	-
878S	31	G	BRASS	.057/.021	-	.156	.477	.321	.051	.166	.155	-	.072	.060	.052	.018	.018	-
879S	31	T	BRASS	.057/.021	-	.156	.477	.321	.051	.166	.155	-	.072	.060	.051	.018	.018	-
880S	31	G	PHOSBZ	.057/.024	-	.125	.335	.210	.020	.125	.085	-	.070	.060	.052	.020	.020	-
881S	31	T	PHOSBZ	.057/.024	-	.125	.335	.210	.020	.125	.085	-	.070	.060	.052	.020	.020	-
882S	31	G	PHOSBZ	.057/.024	-	.125	.335	.210	.020	.125	.085	-	.070	.060	.052	.020	.020	-

FIG. 21

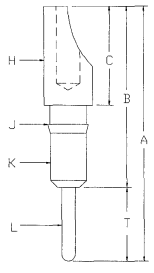


FIG. 23

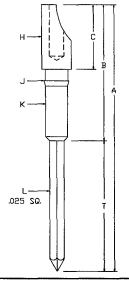


FIG. 24

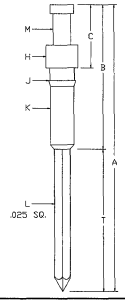


FIG. 25

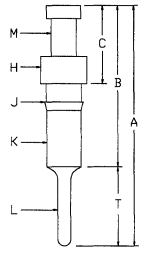


FIG. 27

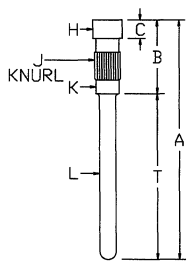
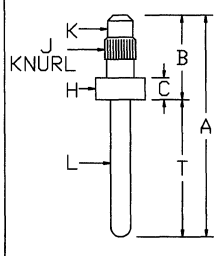


FIG. 28



* Very low insertion clip

§ Ultra low insertion force

Contact Tolerances: Lengths: ±.005
Diameters: ±.002
Angles: ± 2°

Contact Diameter Tolerances for PCB Mount: Barb: ±.002
Tail: ±.002

Note: ***These are suggested PTH sizes. Review contact diameters and tolerances carefully. Dimensions are in inches.***

For more information on plating and clip styles see page A1

A

PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
MALE/MALE PINS (Continued)																		
884S	31	G	BRASS	.057/.022	-	.114	.394	.280	.035	.142	.138	-	.072	.060	.053	.018	.018	-
886S	31	G	BRASS	.057/.022	-	.141	.524	.383	.052	.217	.166	-	.072	.060	.053	.018	.030	-
888S	31	G	BRASS	.057/.022	-	.149	.724	.575	.052	.417	.158	-	.072	.060	.053	.018	.030	-
895S	31	G	-	.057/.022	-	.121	.381	.260	.035	.142	.118	-	.072	.060	.053	.018	.018	
MALE/MALE PINS — INTERSTITIAL APPLICATIONS																		
901S	31	G	PHOSBZ	.032/.021	-	.125	.335	.210	.015	.125	.085	-	.040	.035	.030	.018	.018	-
902S	31	T	PHOSBZ	.032/.021	-	.125	.335	.210	.015	.125	.085	-	.040	.035	.030	.018	.018	-
ELEVATED MALE/MALE PINS																		
920H	33	G	BRASS	.057/.025	-	.115	.890	.605	-	.170	.460	-	.072	.060	.053	.021	.030	-
922H	33	G	BRASS	.056/.024	-	.166	.516	.236	-	.114	.091	-	.071	.059	.053	.020	.030	-
924H	33	G	BRASS	.057/.025	-	.115	.600	.315	-	.170	.170	-	.072	.060	.053	.021	.030	-
926H	33	G	BRASS	.057/.032	-	.118	.866	.630	-	.118	.484	-	.072	.060	.053	.028	.028	-
930H	33	G	BRASS	.057/.025	-	.115	.730	.500	-	.115	.350	-	.072	.060	.053	.021	.021	-
931H	33	T	BRASS	.057/.025	-	.115	.730	.500	-	.115	.350	-	.072	.060	.053	.021	.021	-
932H	33	G	BRASS	.057/.025	-	.115	.980	.750	-	.115	.600	-	.072	.060	.053	.021	.021	-
935H	33	G	BRASS	.057/.025	-	.115	.530	.245	-	.170	.100	-	.072	.060	.053	.021	.030	-
PCB SUBSTRATE PINS																		
002P	29	G	NO CLIP	.028	-	.120	.210	-	.030	-	.060	-	.040	.031	.022	.018	-	-
940P	28	G	PHOSBZ	.026	-	.125	.190	.065	.020	.010	.030	.125	.045	.028K	.023	.018	-	-
944P	27	G	PHOSBZ	.026	-	.180	.260	.080	.020	.015	.045	.180	.032	.028K	.025	.018	-	-
945P	27	P	PHOSBZ	.026	-	.180	.260	.080	.020	.015	.045	.180	.032	.028K	.025	.018	-	-
948P	28	G	PHOSBZ	.026	-	.180	.290	.110	.050	.015	.045	.180	.045	.028K	.025	.018	-	-
951P	30	T	BRASS	.028/.021	-	.115	.170	.055	.015	-	-	.115	.040	.031	.026	.018	-	-
952P	30	G	BRASS	.028/.021	-	.115	.170	.055	.015	-	-	.115	.040	.031	.026	.018	-	-
953P	29	P	PHOSBZ	.028/.022	-	.120	.210	-	.030	-	.060	.120	.040	.031	.022	.018	-	-

FIG. 29

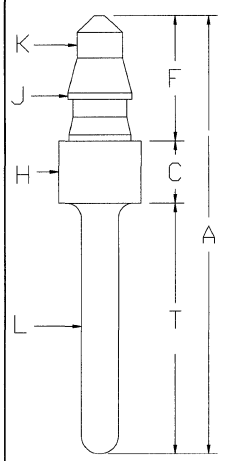


FIG. 30

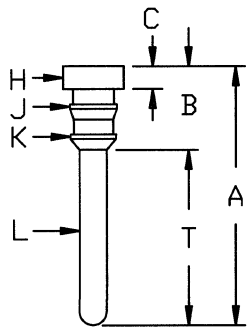


FIG. 31

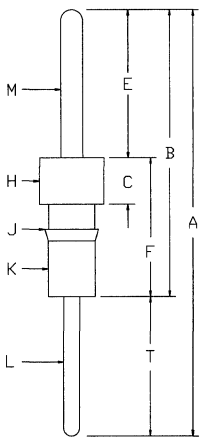


FIG. 33

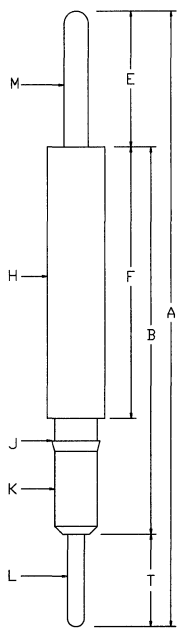
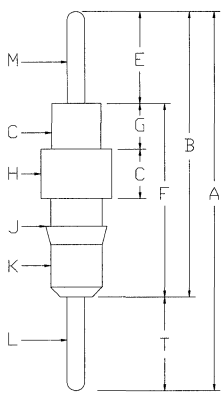
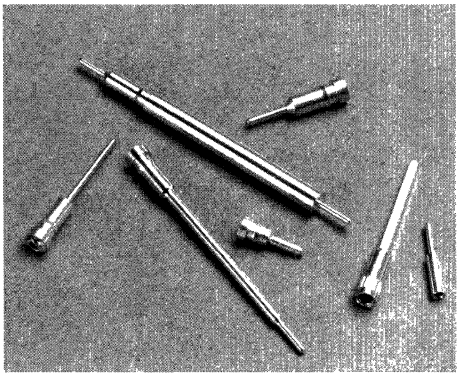


FIG. 36

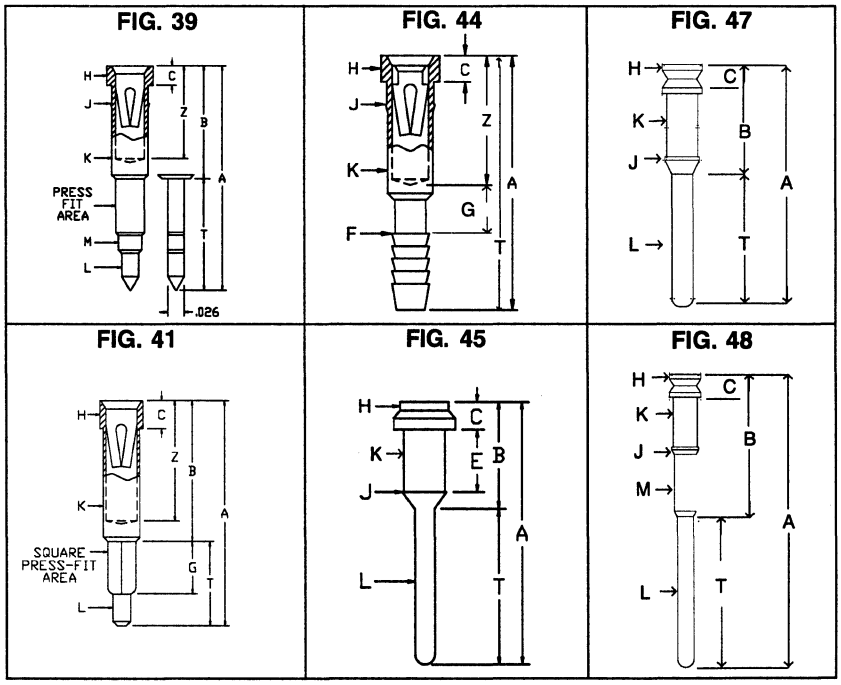


PART NO.	FIG NO.	PLAT-ING	CLIP STYLE	PCB MOUNT	MATING MIN/MAX	TAIL LENGTH T	OVER-ALL A	BODY HEIGHT B	HEAD HEIGHT C	E	F	G	HEAD DIA. H	BARB DIA. J	BODY DIA. K	TAIL DIA. L	PIN DIA. M	MAX DEPTH Z
PRESSFIT AND COMPLIANT CONTACTS																		
001Z	44	GT	#6(35)§	.057/.040	.015/.025	.120	.293	.173	.031	-	-	-	.072	.059	.055	.038/.035	-	.150
003Z	44	GT	#6(35)§	.057/.040	.015/.025	.176	.349	.173	.031	-	-	-	.072	.060	.045	35	-	.150
970E	39	GG	#4(30)	.057/.040	.015/.025	-	.350	.177	.030	.087	.028	.115	.071	.059	.053	.026	.035	-
972E	39	PP	#4(30)	.057/.040	.015/.025	-	.350	.177	.030	.087	.028	.115	.071	.059	.053	.026	.035	-
975E	39	GG	#4(30)	.057/.040	.015/.025	-	.425	.175	.030	.140	.040	.180	.072	.060	.056	.025	.036	-
977E	39	PP	#4(30)	.057/.040	.015/.025	-	.425	.175	.030	.140	.040	.180	.072	.060	.056	.025	.036	-
995E	41	TT	#6(32)*	.055/.035	.016/.026	.120	.320	.200	.040	-	.175	.075	.062	-	.052	.025	.031 SQ.	.175
998E	44	TT	#4(30)	.057/.040	.015/.025	.175	.348	.173	.031	-	.045	.050	.072	.060	.056	.038/.035	TAPER	.150
SURFACE MOUNT MALE PINS																		
001P	47	G	NO CLIP	.050PAD	SMT FLT PIN	.115	.210	.095	.025	-	-	-	.035	.030	.027	.018	-	
003P	48	G	NO CLIP	.050 PAD	SMT FLT PIN	.165	.320	.155	.025	-	-	-	.035	.039	.027	.018	.025	-
976P	45	G	PHOSBZ	.050 PAD	SMT FLT PIN	.125	.240	.115	.035	.057	-	-	.060	.039	.036	.018	-	-

For additional Contact Information and Technical Specifications See Section X



Can't find the contact you're looking for? Custom screw machine contacts are available from McKenzie Technology! Please call with your requirements.



* Very low insertion clip

§ Ultra low insertion force

Contact Tolerances: Lengths: ±.005 Diameters: ±.002 Angles: ± 2°

Contact Diameter Tolerances for PCB Mount: Barb: ±.002 Tail: ±.002

Note: ***These are suggested PTH sizes. Review contact diameters and tolerances carefully. Dimensions are in inches.***

For more information on plating and clip styles see page A1

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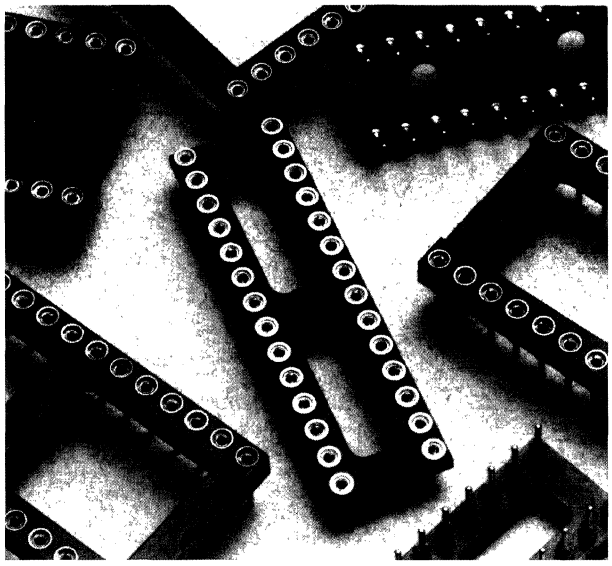
B

McKenzie Delivers Choices!!

- Largest selection of Contact Options
- Open or Closed frame
- Disposable Plastic Pin Carrier™ Option
- True Hi-Temp Options – IR and Vapor Phase compatible
- End-to-End and Side-to-Side stackable
- Wide variety of DIP Adaptors
- Precision Multi-Finger Hi-Rel Contacts
- No solder wicking or flux intrusion
- Integral DeCoupling Capacitors



Standard Insulator Materials

P/N	MATERIAL	DESCRIPTION	CONTINUOUS USE TEMP.
*	**PBT**	Glass Reinforced Polyester Thermoplastic, UL 94V-0	≤ 140°C

**** Part number information specifying material is not necessary to select standard material***

Hi-Temp alternatives suitable for IR and Vapor Phase soldering.

P/N	MATERIAL	DESCRIPTION	CONTINUOUS USE TEMP.
R	**PPS**	Glass Reinforced Polyphenylene Sulfide, UL 94V-0	≤220°C
F	**FR4**	Glass Reinforced Epoxy Laminate, UL 94V-0	≤140°C
H	**Hi-3003**	Glass Reinforced Polyimide Laminate, UL 94V-0	≤250°C

HIGH TEMP
AVAILABLE

For complete material specifications see Section X.

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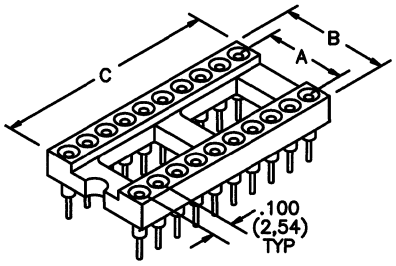
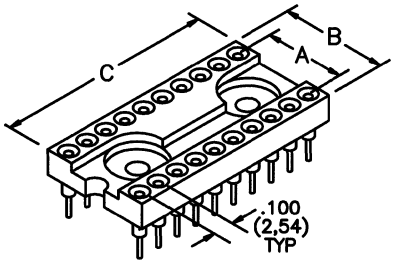
Insulator Options



OPEN FRAME



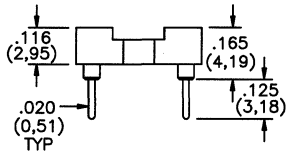
CLOSED FRAME

Insulators are
UL 94V-0 Rated
Thermoplastic

AVAILABLE

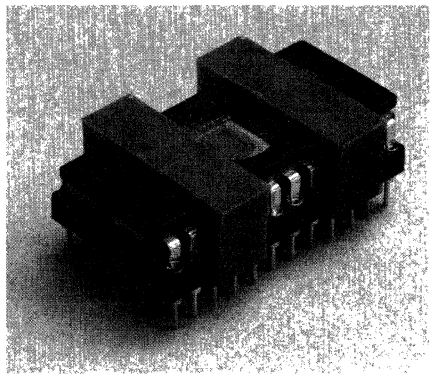
See page B1 for Hi-Temp Options

OUR MOST POPULAR CONTACT



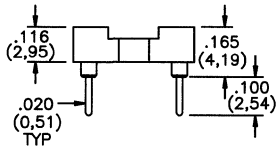
Specify	Contact/Shell
001B	30µ" Gold/200µ" Tin
002B	30µ" Gold/10µ" Gold
011B	10µ" Gold/200µ" Tin
014B	200µ" Tin/200µ" Tin
016B*	30µ" Gold/200µ" Tin
PTH =	.026 ± .003

**CLINCHABLE SOFT BRASS*

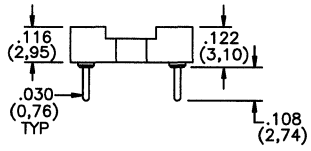


IC Retention DIP Clamps See Page B19

SHORTER SOLDER TAIL — NO TRIMMING

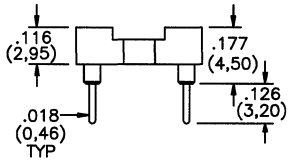


Specify	Contact/Shell
018B	200µ" Tin/200µ" Tin
PTH =	.026 ± .003

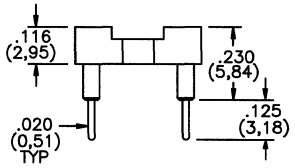


Specify	Contact/Shell
185B	30µ" Gold/200µ" Tin
PTH =	.036 ± .003

HIGHER PCB STANDOFF



Specify	Contact/Shell
248B	30µ" Gold/10µ" Gold
PTH =	.024 ± .003



Specify	Contact/Shell
040B	30µ" Gold/10µ" Gold
041B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003

Contact/Shell:
Inner Contact — Beryllium Copper
Outer Shell — 1/2 Hard Brass

Plating:
Outer Shell — Gold over 100µ" Nickel or Tin over 100µ" Nickel
Inner Contact — Gold over 50µ" Nickel or Tin over 100µ" Nickel

Other contact and plating styles available, see Section A or consult the factory

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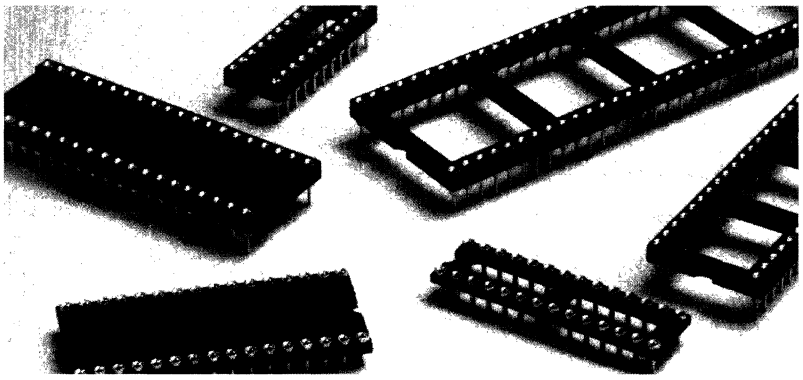
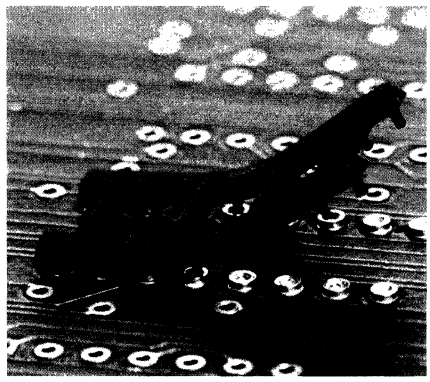
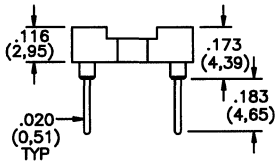


Open and Closed Frame DIP Sockets

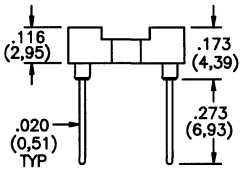


B

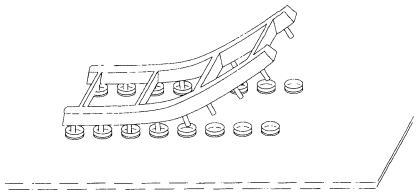
EXTRA LONG SOLDER TAILS



Specify	Contact/Shell
091B	30µ" Gold/10µ" Gold
054B	30µ" Gold/200µ" Tin
057B	200µ" Tin/200µ" Tin
PTH =	.026 ± .003



Specify	Contact/Shell
067B	30µ"Gold/200µ" Tin
113B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003



All contact styles are available in our Patented PPC™ Disposable Carrier System. Specify PPC in part number.

How To Order

PPC - DIP - 320 - 011B - CF - R

- PPC: For pins on a carrier strip begin the part number with "PPC™" or "HPC" (option) *
- DIP: Product Code
- 320: # of Contacts; Row-to-Row Spacing
- 011B: Contact Style
- CF: Closed Frame (Option)
- R: Hi-Temp Material Call Out (Option)**

***Only add the "PPC" option to the front of the part number if a carrier system is required.**

****See page B1 for Material Call Outs. Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.**

NO. OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	40	48	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)					.900 (22,86)
B	.400 (10,16)									.500 (12,70)			.700 (17,78)					1.000 (25,40)
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	2.000 (50,80)	2.400 (60,96)	3.200 (81,28)

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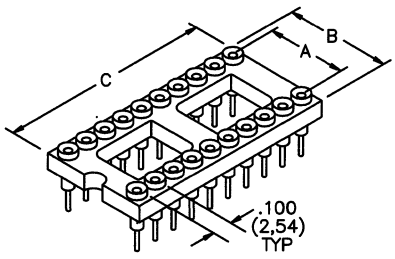
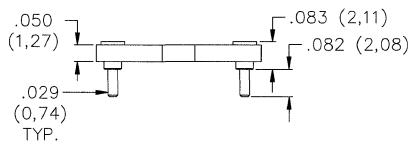


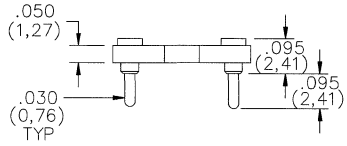
OPEN FRAME

Features

- Profiles to .083" (2,11) above PCB
- Available in our PPC™ disposable carrier system
- Hi-Rel multifinger contacts are non-solder wicking

ULTRA LOW PROFILE OPTIONS





Specify	Contact/Shell
156B	30µ" Gold/200µ" Tin
153B*	30µ" Gold/200µ" Tin
PTH =	.035 ± .003

*** Very Low Insertion Force (VLI) Recommended for socketing IC's that have stamped leads**

Specify	Contact/Shell
157B	200µ" Tin/200µ" Tin
160B	30µ" Gold/200µ" Tin
161B	30µ" Gold/10µ" Gold
164B*	30µ" Gold/200µ" Tin
PTH =	.036 ± .003

How To Order
with Low Profile Molded Insulator

DIP - 050 - 320 - 160B - R

- DIP — Product Code
- 050 — Insulator Thickness
- 320 — # of Contacts; Row-to-Row Spacing
- 160B — Contact Style
- R — Hi-Temp Material Call Out (Option)**

How To Order
our PPC Disposable Carrier System

PPC - DIP - 320 - 160B

- PPC — Plastic Pin Carrier™ (or HPC)
- DIP — Product Code
- 320 — # of Contacts; Row-to-Row Spacing
- 160B — Contact Style

Insulators are UL 94V-0 Rated Thermoplastic.

HIGH TEMP

AVAILABLE

See page B1 for Hi-Temp Options

*****See page B1 for Material Call Outs***

Other contact and plating styles available, see Section A or consult the factory

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

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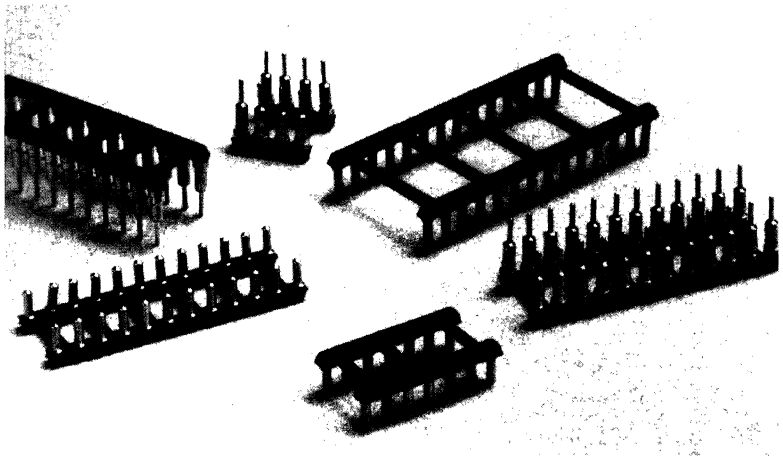


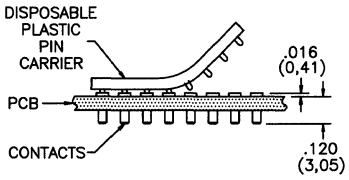
Achieve near flush socket profile with our patented Plastic Pin Carrier (PPC™) Disposable Carrier System — Patent No. 4,420,877

Features

- Rigid Pin Carrier for ease in assembly
- Contact is fully masked and protected during solder and washing.
- No expensive RTV compounds
- No contact intrusion – Eliminates damage or oversizing of contacts
- Full inspectability of solder joints
- Easy flux removal

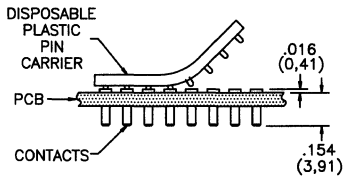
B

.016" (0,41) ABOVE PC BOARD



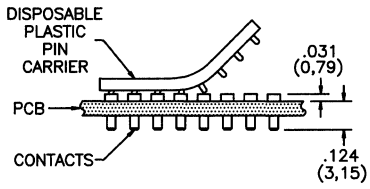
Specify	Contact/Shell
710C	30µ" Gold/200µ" Tin
711C	30µ" Gold/10µ"Gold
714C	200µ" Tin-Lead/200µ" Tin-Lead
PTH =	.042 ± .003

.016" (0,41) ABOVE PC BOARD



Specify	Contact/Shell
720C	30µ" Gold/200µ" Tin
721C	30µ" Gold/10µ"Gold
PTH =	.042 ± .003

.031" (0,79) ABOVE BOARD



Specify	Contact/Shell
725C	30µ" Gold/200µ" Tin
726C	200µ" Tin/200µ" Tin
PTH =	.038 ± .003

How To Order

P P C - D I P - 3 2 0 - 7 1 0 C

- P P C: Plastic Pin Carrier™ HPC for Hi-Temp Material
- D I P: Product Code
- 3: Row-to-Row Spacing
- 2 0: # of Contacts
- 7 1 0 C: Contact Style

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel or 93/7 Tin/Lead over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
CENTER TO CENTER	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	

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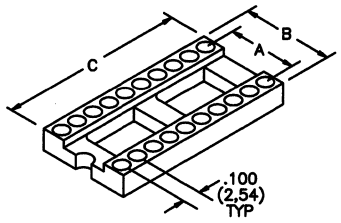
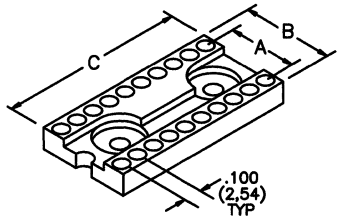
Insulator Options



OPEN FRAME



CLOSED FRAME

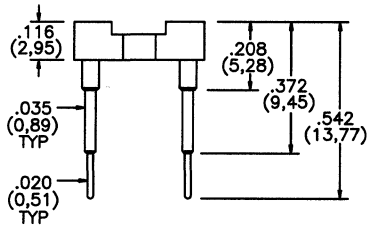
Insulators are
UL94-V0 Rated
Thermoplastic

HIGH TEMP

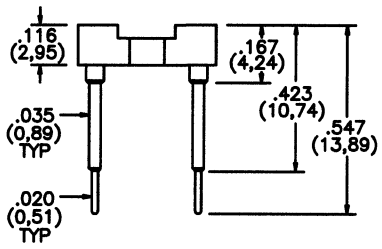
AVAILABLE

See page B1 for complete material specifications

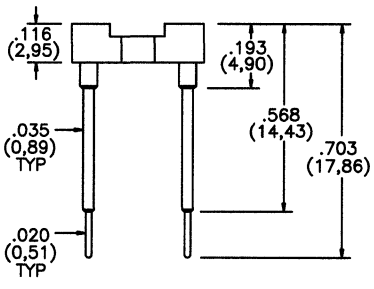
Popular Elevated DIP Sockets



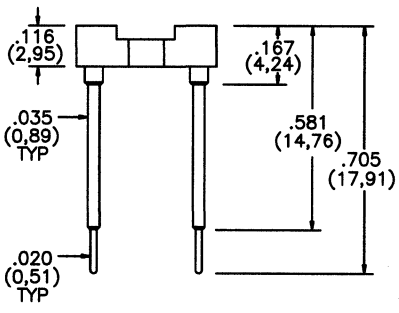
Specify	Contact/Shell
302B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003



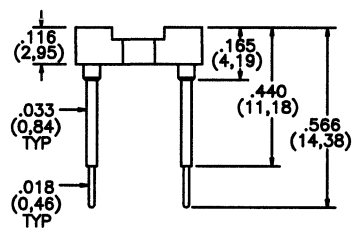
Specify	Contact/Shell
310B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003



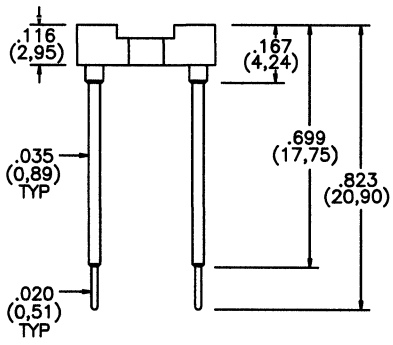
Specify	Contact/Shell
301B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003



Specify	Contact/Shell
312B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003



Specify	Contact/Shell
300B	30µ" Gold/200µ" Tin
PTH =	.024 ± .003



Specify	Contact/Shell
313B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over 100µ Nickel or Tin over 100µ Nickel
Inner Contact — Gold over 50µ Nickel or Tin over 100µ Nickel

Other contact and plating styles available, see section A or consult the factory

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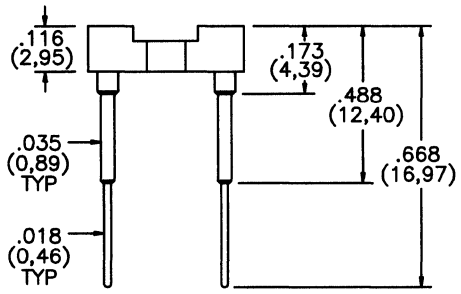
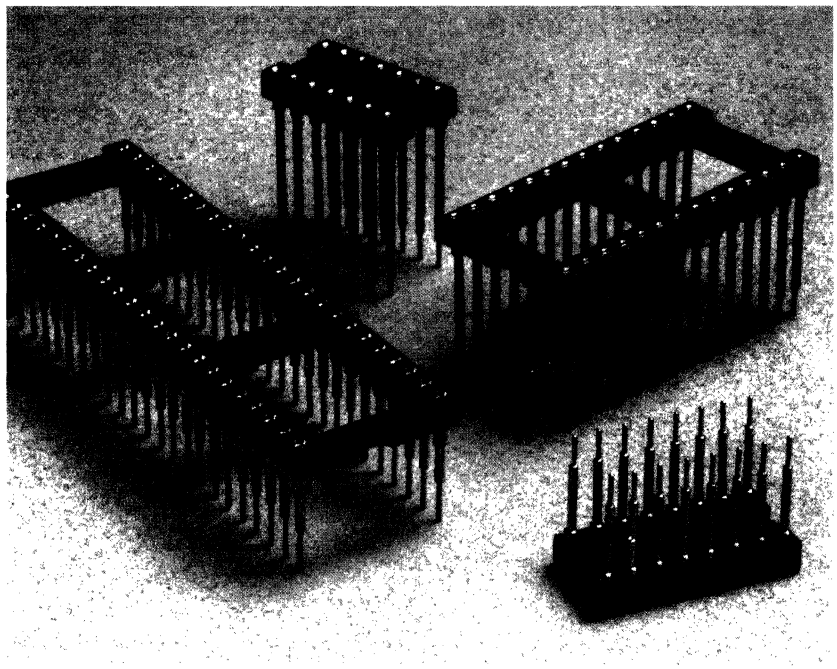
B



Specify	Contact/Shell
314B	30µ" Gold/10µ" Gold
PTH =	.024 ± .003



Elevated DIP Sockets

How to Order

DIP - 320 - 300B - CF - R

- DIP: Product Code
- 320: # of Contacts (3: Row-to-Row Spacing)
- 300B: Contact Style
- CF: Closed Frame (Option)*
- R: Hi-Temp Material Call Out (Option)

Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.

See page B1 for Material Call Outs

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

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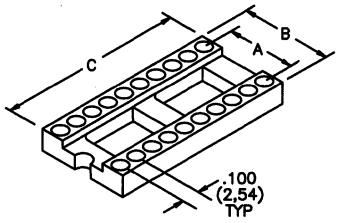
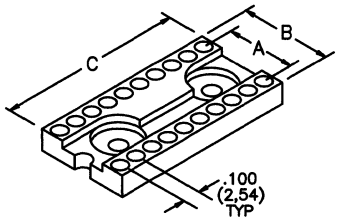
Insulator Options



OPEN FRAME



CLOSED FRAME

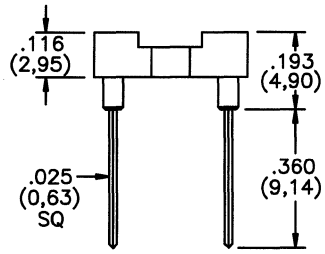
Insulators are UL 94V-0 Rated Thermoplastic

HIGH TEMP

AVAILABLE

See page B1 for complete material specifications

2 LEVEL WIRE WRAP



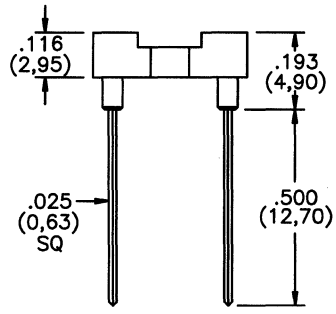
Standard Insertion Force

Specify	Contact/Shell
400B	30µ" Gold/200µ" Tin
401B	30µ" Gold/10µ" Gold

Very Low Insertion Force

Specify	Contact/Shell
402B	30µ" Gold/200µ" Tin
403B	30µ" Gold/10µ" Gold

3 LEVEL WIRE WRAP



Standard Insertion Force

Specify	Contact/Shell
410B	30µ" Gold/200µ" Tin
411B	30µ" Gold/10µ" Gold

Very Low Insertion Force

Specify	Contact/Shell
412B	30µ" Gold/200µ" Tin
413B	30µ" Gold/10µ" Gold

How To Order

DWW 3 20 - 400B - CF - R

- DWW — Product Code
- 3 — Row-to-Row Spacing
- 20 — Number of Contacts
- 400B — Contact Style
- CF — Closed Frame (Option)*
- R — Hi-Temp Material Call Out (Option)**

Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.

Also available in PPC™

See page B1 for Material Callouts

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel
Inner Contact — Gold over Nickel

Other contact and plating styles available, see section A or consult the factory

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

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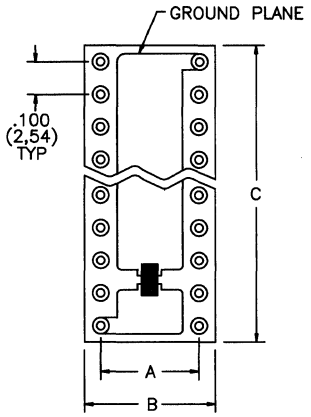
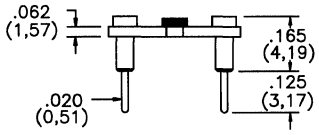
B

Insulator Options

- Integral Decoupling Capacitor reduces noise
- SMT construction eliminates capacitor intermittence during thermal cycling
- Three standard capacitance values: .01, .10, .33 µf — Specify in part number
- For other capacitance values, please consult factory

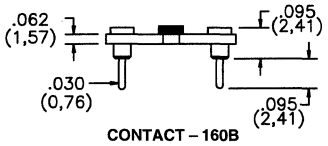


LOW PROFILE



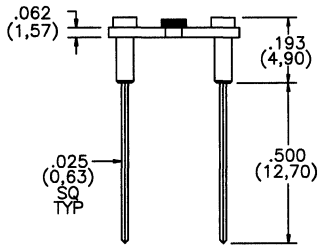
CONTACT – 011B

ULTRA LOW PROFILE



CONTACT – 160B

3-LEVEL WIRE WRAP

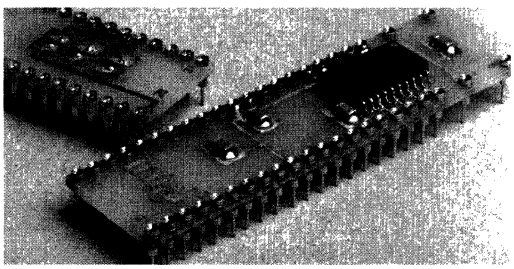


CONTACT – 410B

Other contact and plating styles available, see Section A or consult factory

NO. OF CONTACTS	A	B MAX	C MAX	PART NUMBER Low Profile	PART NUMBER Ultra Low Profile	PART NUMBER Wire Wrap 3-Level
Standard .100" DIP Spacing				*Fill in One of Three Standard Capacitance Values as XX – .01, .10, .33 µf* ▼	▼	▼
8	0.300 (07,62)	0.400 (10,16)	0.400 (10,16)	DXC 308 – 011B – XX	DXC 308 – 160B – XX	DXC 308 – 410B – XX
14			0.700 (17,78)	DXC 314 – 011B – XX	DXC 314 – 160B – XX	DXC 314 – 410B – XX
16			0.800 (20,32)	DXC 316 – 011B – XX	DXC 316 – 160B – XX	DXC 316 – 410B – XX
18			0.900 (22,86)	DXC 318 – 011B – XX	DXC 318 – 160B – XX	DXC 318 – 410B – XX
20			1.000 (25,40)	DXC 320 – 011B – XX	DXC 320 – 160B – XX	DXC 320 – 410B – XX
22			1.100 (27,94)	DXC 322 – 011B – XX	DXC 322 – 160B – XX	DXC 322 – 410B – XX
24			1.200 (30,48)	DXC 324 – 011B – XX	DXC 324 – 160B – XX	DXC 324 – 410B – XX
28			1.400 (35,56)	DXC 328 – 011B – XX	DXC 328 – 160B – XX	DXC 328 – 410B – XX
22	0.400 (10,16)	0.500 (12,70)	1.100 (27,94)	DXC 422 – 011B – XX	DXC 422 – 160B – XX	DXC 422 – 410B – XX
24			1.200 (30,48)	DXC 424 – 011B – XX	DXC 424 – 160B – XX	DXC 424 – 410B – XX
24	0.600 (15,24)	0.700 (17,78)	1.200 (30,48)	DXC 624 – 011B – XX	DXC 624 – 160B – XX	DXC 624 – 410B – XX
28			1.400 (35,56)	DXC 628 – 011B – XX	DXC 628 – 160B – XX	DXC 628 – 410B – XX
32			1.600 (40,64)	DXC 632 – 011B – XX	DXC 632 – 160B – XX	DXC 632 – 410B – XX
40			2.000 (50,80)	DXC 640 – 011B – XX	DXC 640 – 160B – XX	DXC 640 – 410B – XX
48			2.400	DXC 648 – 011B – XX	DXC 648 – 160B – XX	DXC 648 – 410B – XX

Consult Factory for Alternative Contact and Capacitance Values



Design Your Own — Consult the factory

Insulator:
1oz. Copper clad FR4
Minimum PbSn plating 300µ

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Tin over Nickel
Inner Contact — Gold over Nickel

Capacitor:
Standard Capacitance Tolerance is ±10%.
Maximum Height above board is .065"

BERG ELECTRONICS

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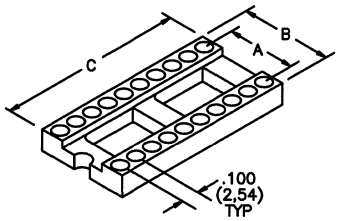
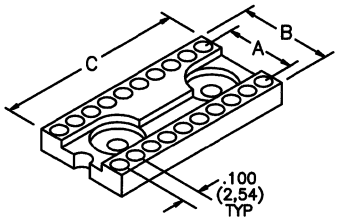
Insulator Options



OPEN FRAME



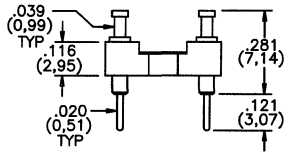
CLOSED FRAME

Insulators are
UL 94V-0 Rated
Thermoplastic

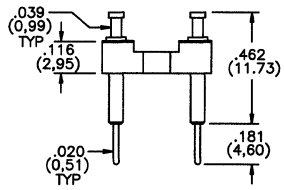
AVAILABLE

See page B1 for complete material specifications

Turret Terminal

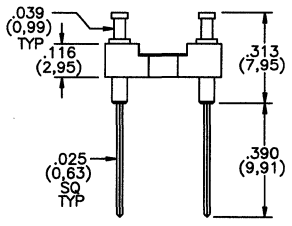


Specify	Plating
850L	10µ" Gold



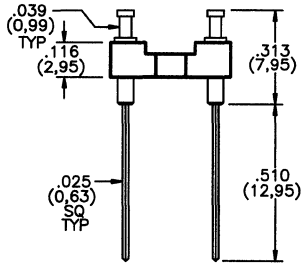
Specify	Plating
853L	200µ" Tin

WIRE WRAP



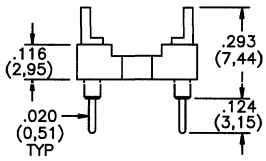
Specify	Plating
854L	10µ" Gold

WIRE WRAP

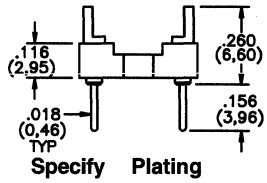


Specify	Plating
855L	10µ" Gold

Bifurcated Terminal

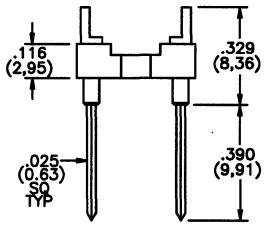


Specify	Plating
830G	10µ" Gold
831G	200µ" Tin



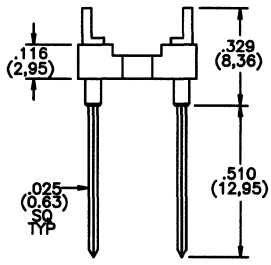
Specify	Plating
832G	10µ" Gold
834G	200µ" Tin

WIRE WRAP



Specify	Plating
837G	10µ" Gold

WIRE WRAP



Specify	Plating
838G	10µ" Gold

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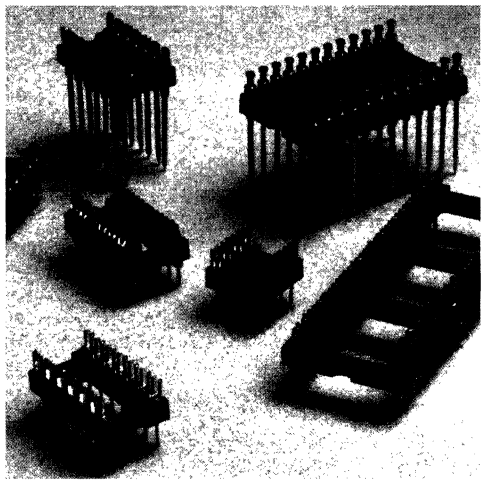
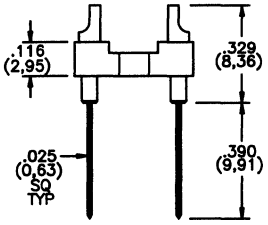
B

Solder Cup

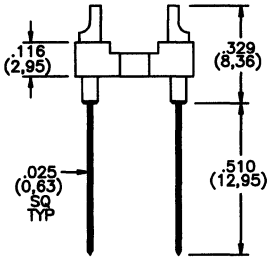


WIRE WRAP

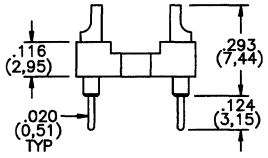


Specify	Plating
842K	10µ" Gold

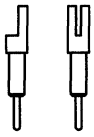
WIRE WRAP



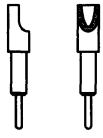
Specify	Plating
843K	10µ" Gold



Specify	Plating
840K	10µ" Gold



Bifurcated contact at 90° Rotation



Solder Cup contact at 90° Rotation

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

Other contact and plating styles available, see Section A or consult factory

How to Order

DPL - 320 - 850L - CF - R

- DPL: Specify Product Code — DPG - DIP Bifurcated Adaptor; DPK - DIP Solder Cup Adaptor; DPL - DIP Turret Adaptor
- 320: # of Contacts (3) / Row-to-Row Spacing (20)
- 850L: Contact Style
- CF: Closed Frame (Option)*
- R: Hi-Temp Material Call Out (Option)**

Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.

*****See page B1 for Material Call Outs***

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

BERG ELECTRONICS

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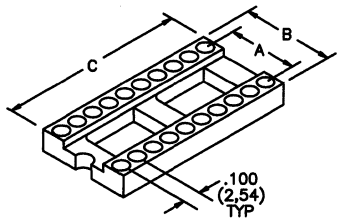
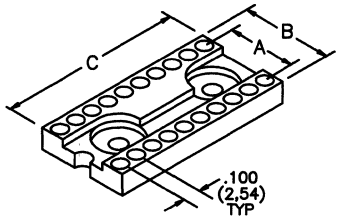
Insulator Options



OPEN FRAME



CLOSED FRAME

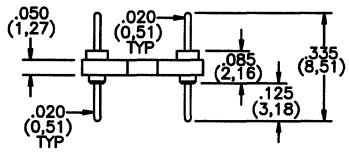
Insulators are UL 94V-0 Rated Thermoplastic.

HIGH TEMP

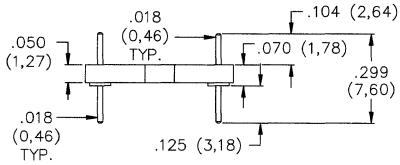
AVAILABLE

See page B1 for complete material specifications

Low Profile Options



Specify	Plating/Material
880S	10µ" Gold/Phosphor Bronze
881S	200µ" Tin/ Phosphor Bronze
PTH =	.026 ± .003

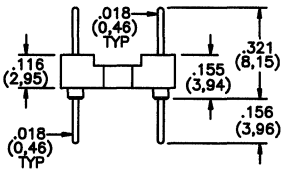


Specify	Plating/Material
868S	10µ" Gold/Brass
869S	200µ" Tin/ Brass
PTH =	.024 ± .003

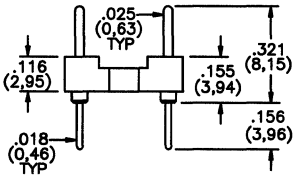
How to Order

DST - 050 - 320 - 880S - R

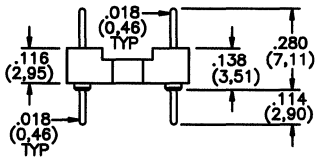
- DST — Product Code
- 050 — Insulator Thickness
- 320 — Row-to-Row Spacing; Number of terminals
- 880S — Terminal Style
- R — Hi Temp Material Callout (Option)*



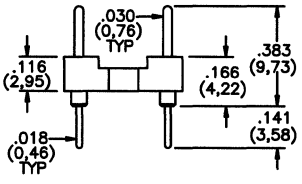
Specify	Plating/Material
876S	10µ" Gold/Phosphor Bronze
878S	10µ" Gold/Brass
879S	200µ" Tin/Brass
PTH =	.024 ± .003



Specify	Plating/Material
874S	10µ" Gold/Brass
PTH =	.024 ± .003



Specify	Plating/Material
884S	10µ" Gold/Brass
PTH =	.024 ± .003



Specify	Plating/Material
886S	10µ" Gold/Brass
PTH =	.024 ± .003

Other contact and plating styles available, see section A or consult the factory

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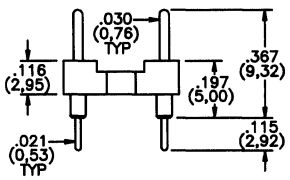
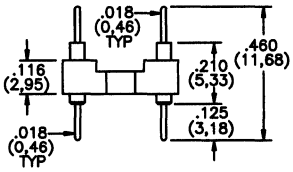
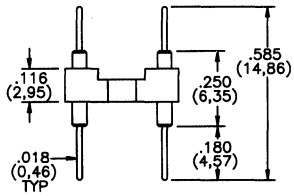
B



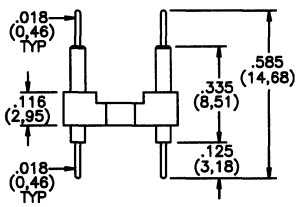
Specify	Plating/Material
870S	10µ" Gold/Brass
PTH =	.027 ± .003



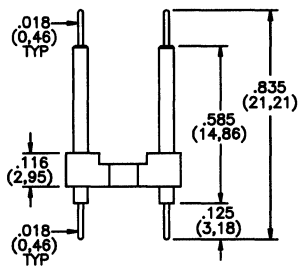
Specify	Plating/Material
861S	10µ" Gold/Brass
857S	200µ" Tin/Brass
PTH =	.024 ± .003



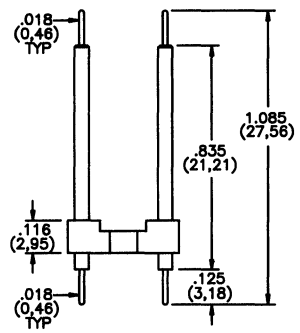
Specify	Plating/Material
867S	10µ" Gold/Phosphor Bronze
PTH =	.024 ± .003



Specify	Plating/Material
862S	10µ" Gold/Brass
858S	200µ" Tin/Brass
PTH =	.024 ± .003

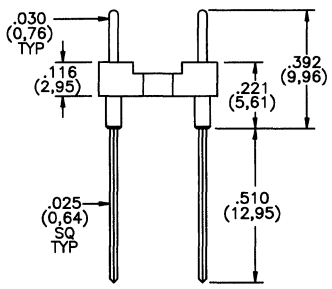


Specify	Plating/Material
863S	10µ" Gold/Brass
859S	200µ" Tin/Brass
PTH =	.024 ± .003



Specify	Plating/Material
864S	10µ" Gold/Brass
860S	200µ" Tin/Brass
PTH =	.024 ± .003

WIRE WRAP



Specify	Plating/Material
900S	10µ" Gold/Brass

How to Order

D S T - 3 2 0 - 8 6 2 S - C F - R

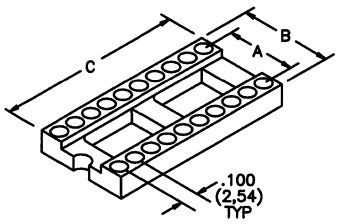
- **DST** — Product Code
- **320** — # of Contacts / Row-to-Row Spacing
- **862S** — Terminal Style
- **CF** — Closed Frame (Option)*
- **R** — Hi-Temp Material Call Out (Option)**

Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.

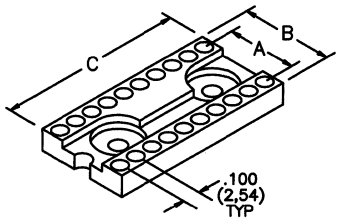
See page B1 for Material Call Outs

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

Insulator Options



OPEN FRAME



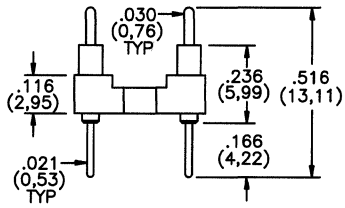
CLOSED FRAME

Insulators are UL 94-V0 Rated Thermoplastic.

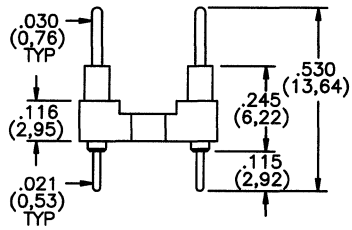
HIGH TEMP

AVAILABLE

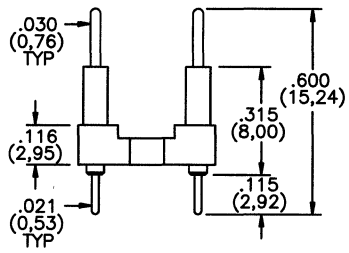
See page B1 for complete material specifications



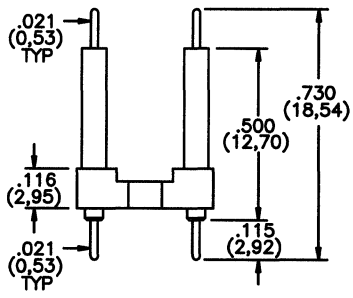
Specify	Plating
922H	10µ" Gold
PTH =	.027 ± .003



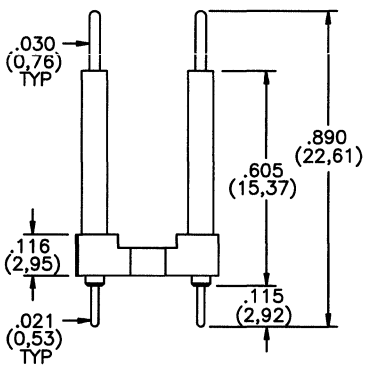
Specify	Plating
935H	10µ" Gold
PTH =	.027 ± .003



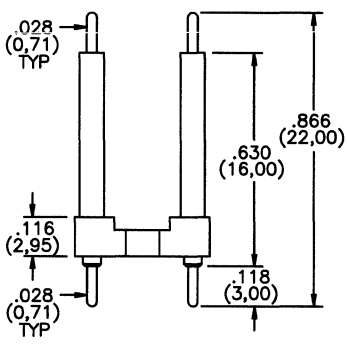
Specify	Plating
924H	10µ" Gold
PTH =	.027 ± .003



Specify	Plating
930H	10µ" Gold
PTH =	.027 ± .003



Specify	Plating
920H	10µ" Gold
PTH =	.027 ± .003



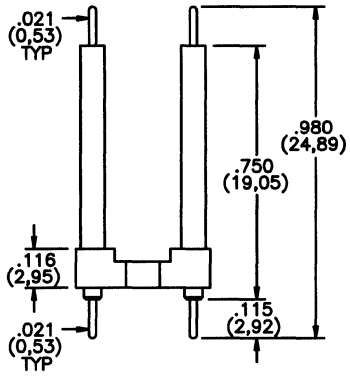
Specify	Plating
926H	10µ" Gold
PTH =	.034 ± .003

Plating:
Gold over Nickel or Tin over Nickel

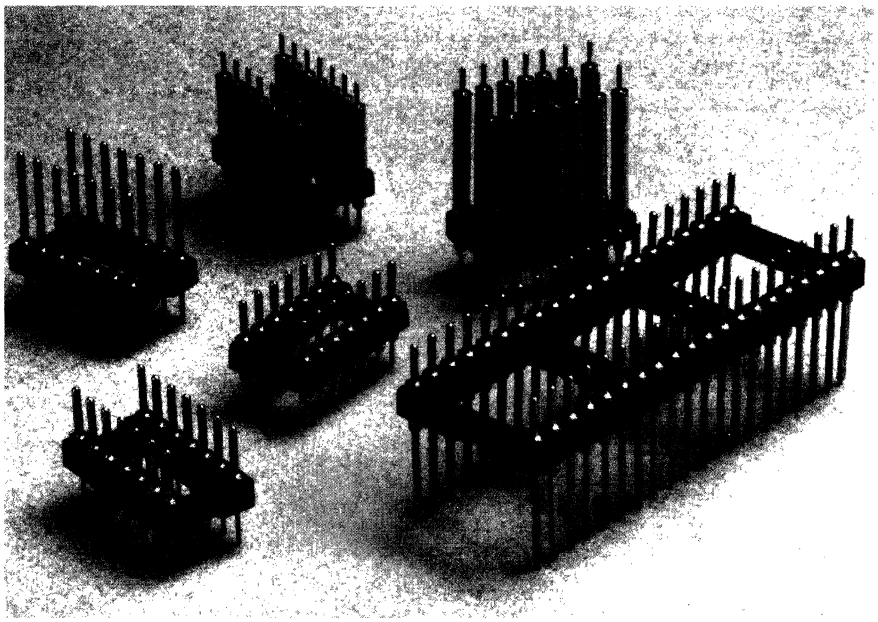
Terminal:
1/2 Hard Brass

Other contact and plating styles available, see section A or consult the factory

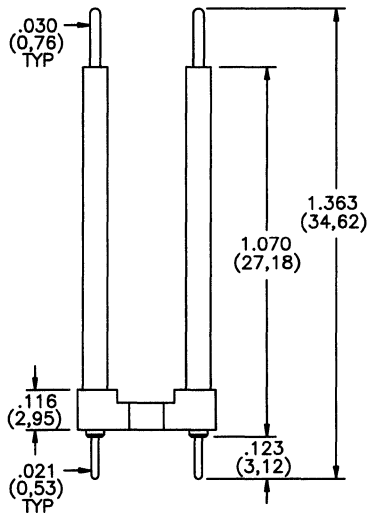
B



Specify	Plating
932H	10µ" Gold
PTH =	.027 ± .003



Open Frame DIP Headers



Specify	Plating
928H	10µ" Gold
PTH =	.027 ± .003

- Male to Male DIP Headers are useful for interconnecting two or more printed circuit boards
- Dozens of between board dimensions are achievable when combined with various mating DIP Sockets

How to Order

DHS - 3 2 0 - 9 3 5 H - CF -R

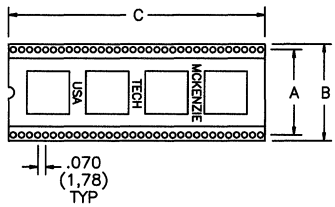
- DHS: Product Code
- 3: Row-to-Row Spacing
- 20: # of Contacts
- 935H: Terminal Style
- CF: Closed Frame (Option)*
- R: Hi-Temp Material Call Out (Option)**

Open frame is standard and available for all sizes and row-to-row spacing. Closed frame available in sizes shaded in table below. Add "CF" to the end of the p/n.

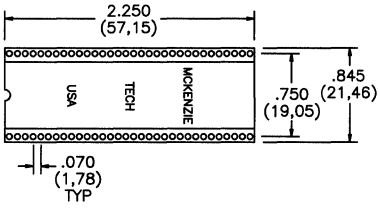
*****See page B1 for Material Call Outs***

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)

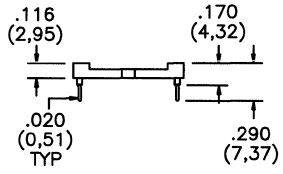
Insulator Options



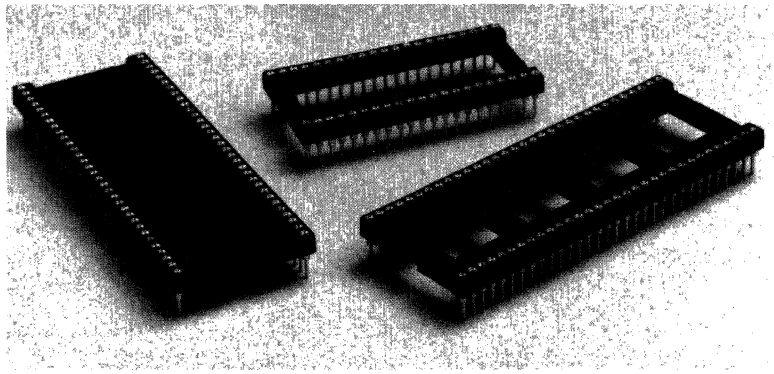
OPEN FRAME



CLOSED FRAME



PTH = .026 ± .003



Features

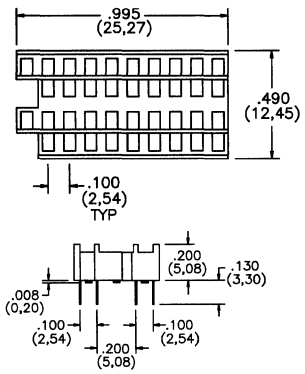
- High Density .070" (1,78) progression
- Hi-Rel multi-finger Beryllium copper contact
- Closed bottom contact – no solder wicking

NO. OF CONTACTS	A	B MAX	C MAX	PART NUMBER	PART NUMBER
Open Frame				*Contact: 200µ" Tin*	*Contact: 30µ" Gold*
16	0.300 (7,62)	0.400 (10,16)	0.600 (15,24)	DIP 70 – 3016 – 345B	DIP 70 – 3016 – 340B
28	0.400 (10,16)	0.500 (12,70)	1.000 (25,40)	DIP 70 – 4028 – 345B	DIP 70 – 4028 – 340B
30			1.060 (26,92)	DIP 70 – 4030 – 345B	DIP 70 – 4030 – 340B
48			1.700 (43,18)	DIP 70 – 4048 – 345B	DIP 70 – 4048 – 340B
28	0.600 (15,24)	0.700 (17,78)	1.000 (25,40)	DIP 70 – 6028 – 345B	DIP 70 – 6028 – 340B
40			1.400 (35,56)	DIP 70 – 6040 – 345B	DIP 70 – 6040 – 340B
42			1.500 (38,10)	DIP 70 – 6042 – 345B	DIP 70 – 6042 – 340B
48			1.700 (43,18)	DIP 70 – 6048 – 345B	DIP 70 – 6048 – 340B
52			1.850 (46,99)	DIP 70 – 6052 – 345B	DIP 70 – 6052 – 340B
56			2.00 (50,80)	DIP 70 – 6056 – 345B	DIP 70 – 6056 – 340B
64			2.250 (57,15)	DIP 70 – 6064 – 345B	DIP 70 – 6064 – 340B
68	0.750 (19,05)	0.845 (21,46)	2.400 (60,96)	DIP 70 – 6068 – 345B	DIP 70 – 6068 – 340B
64	0.750 (19,05)	0.845 (21,46)	2.250 (57,15)	DIP 70 – 7564 – 345B	DIP 70 – 7564 – 340B
Closed Frame					
64			2.250 (57,15)	DIP 70 – 7564 – 345B – CF	DIP 70 – 7564 – 340B – CF

Outer Shell: 1/2 Hard brass; 200µ" Tin over 50µ" Nickel · See page B21 for Shrink DIP Adaptors

B

318/320 DIP PATTERNS



DDP 318/320-SAF-B

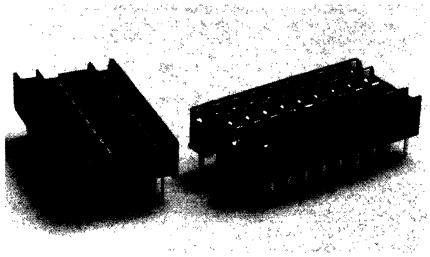
Insulator:
Glass Reinforced Thermoplastic, UL 94V-0

Contact:
Stamped Phosphor Bronze (Alloy 5210)

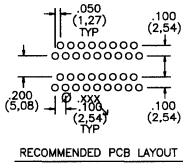
Plating:
150µ" Tin over Nickel

Features

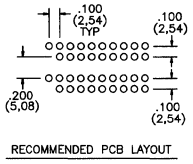
- High density 64K/256K and 256K/1 Megabyte memory arrays
- Two sizes available
- Side-to-side and end-to-end stackable
- Anti-solder wicking closed bottom design
- Economical Dual Wipe contact design



Stamped and Formed Contacts



"A" STYLE PCB



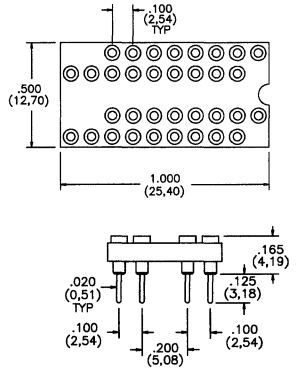
"B" STYLE PCB LAYOUT

How to Order

DDP-318/320-SAF-A
DDP-316/318-SAF-B

- Dual DIP
- # of Contacts
- DIP Center Spacing
- Dual Wipe Stamped Contact
- Specify PCB Layout: A- Staggered, B- Straight

HI-REL DUAL DIP SOCKETS

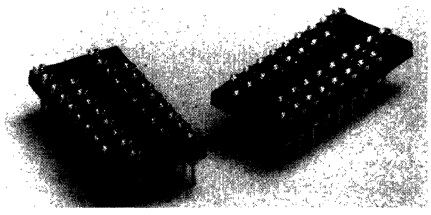


CONTACT – 011B

Other contact and plating styles available, see Section A or consult the factory

Features

- Hi-Rel multi-finger Beryllium Copper contact
- Side-to-side and end-to-end stackable
- Non-solder wicking design



Insulator:
UL 94V-0 Thermoplastic

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

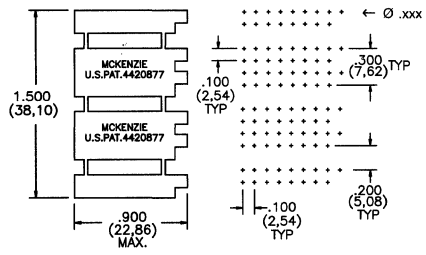
Plating:
Outer Shell — Tin over Nickel
Inner Contact — Gold over Nickel

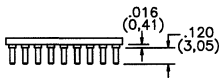
How To Order

DDP-316/318-011B

- Dual DIP
- Number of Contacts
- DIP Center Spacing
- Contact Style

PPC™ DUAL DIP ARRAY



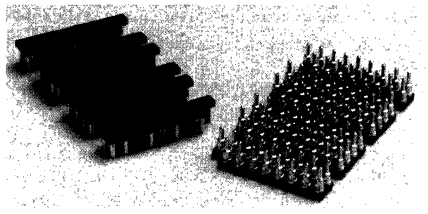


CONTACT – 710C

Features

- PPC™ Disposable Carrier System is ideal for low profile applications
- Use 3 for 9 chip memory arrays, X and Y stackable
- Hi-Rel multi-finger contacts are non-solder wicking

PPC™ molded of
UL 94V-0 Rated Thermoplastic
Patent No. 4,420,877



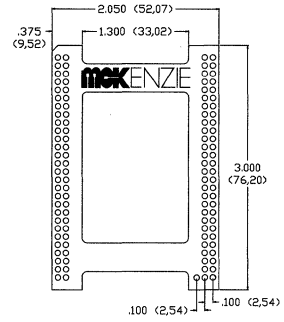
How To Order

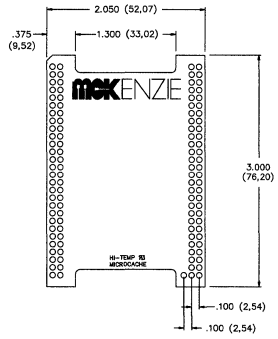
PPC-DDP-316/318-710C

- Plastic Pin Carrier (or HPC)
- Dual DIP
- Number of Contacts
- DIP Center Spacing
- Contact Style

BERG ELECTRONICS

mck McKenzie Socket Division





- CF Option

HIGH TEMP

AVAILABLE

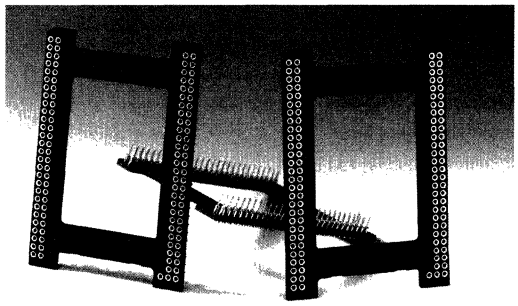
Microcache™ Socket

- Socket for INTEL® TURBOCACHE 486™ Module
- Two contact options available to mate with either .020" (0,51) round leads or .025" (0,64) square leads
- Pin 1 location notch and polarity pin
- Closed Frame option available — add "CF" to part number
- A cost effective molded PPS insulator is used for both versions.

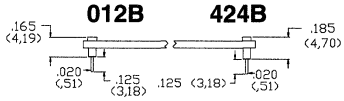
Material Specifications

Plating:
Outer shell — Tin over Nickel
Inner contact — Gold over Nickel

Insulator Material:
Hi-Temp, Glass Reinforced Thermoplastic
UL 94V-0

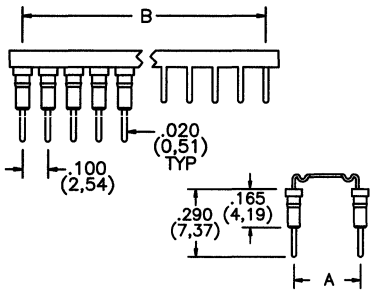


CONTACT OPTIONS



Part Numbers
DQD 17/113-012B — accepts .020 (0,51) round leads
DQD 17/113-424B — accepts .025 (0,64) square leads

Metal Pin Carrier



Contact Style 011B

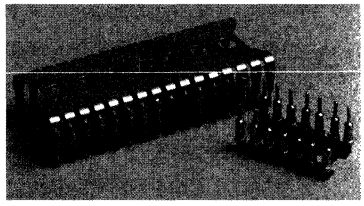
Other contact and plating styles available, see Section A or consult factory

Carrier:
Stamped Brass

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

- Disposable metal carrier system
- Supports a wide variety of female contacts in DIP patterns
- Rigid carrier speeds assembly
- X and Y stackable
- Suitable for IR or vapor phase soldering



DIP Configuration

How To Order

MPC - 6 32 - 011B

Product Code
Number of Contacts
Center to Center DIP Spacing
Specify Contact Style

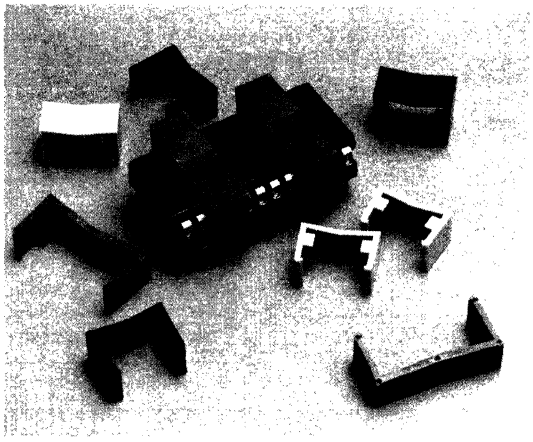
NO.OF CONTACTS	6	8	14	16	18	20	24	28	32	40	48
A	.300 (7,62)						.600 (15,24)				
B	.200 (5,08)	.300 (7,62)	.600 (15,24)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.100 (27,94)	1.300 (33,02)	1.500 (38,10)	1.900 (48,26)	2.300 (58,42)

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

DIP Clamps

- Positive IC retention in high shock or vibration environments
- Designed to fit McKenzie Technology's standard open or closed frame DIP sockets

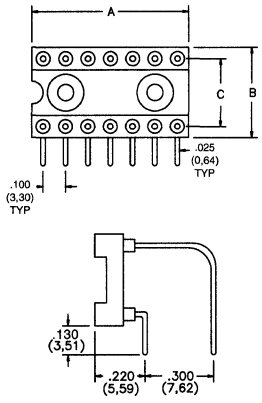
B



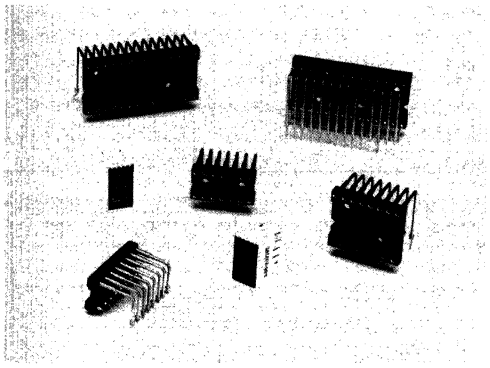
DIP CENTERS	INSULATOR THICKNESS	PART NUMBER
.300	.115 – .120	CPP DC300C-118- FR50
.300	.085 – .095	CPP DC300P-090-FR50
.600	.115 – .120	CPP DC600P-118-FR50

Consult the factory for custom applications and samples

Right Angle Sockets



- Ideally suited for mounting LED's, Lamps, DIP switches, test points, and programming jumpers
- Hi-Rel multi-finger Beryllium Copper contacts are non-solder wicking



Many sizes and footprints

How To Order

D R A - 3 2 0 - G T

- Product Code
- Center Spacing 3 or 6
- Number of Contacts
- Gold Contact and Shell

Insulator is Glass Reinforced Thermoplastic, UL 94V-0

NO.OF CONTACTS	8	14	16	18	20	8	14	16	18	20	24	28	32	36	40	48
A	.400 (10,16)	.700 (17,78)	.847 (21,50)	.900 (22,86)	1.000 (25,40)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.200 (30,48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)
B	.400 (10,16)					.750 (19,00)					.700 (17,80)					
C	.300 (7,62)					.600 (15,24)										

BERG ELECTRONICS

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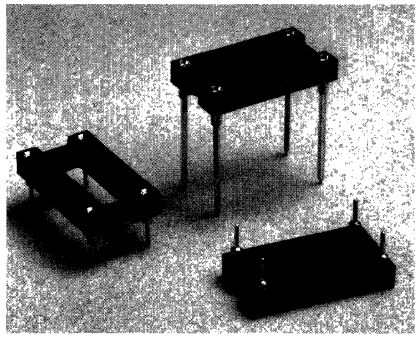
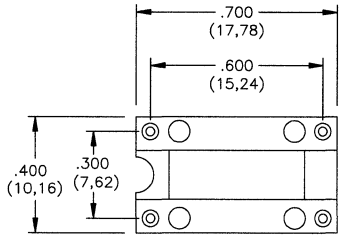
Crystal Oscillator Socket

- Accepts four lead crystal oscillators
- Half size Crystal Oscillator sockets now available!
- Top side standoff option prevents shorting to can
- Hi-Rel multi-finger contact accepts round leads from .015" (0,38) to .025" (0,64)
- Please consult the factory for clamp options

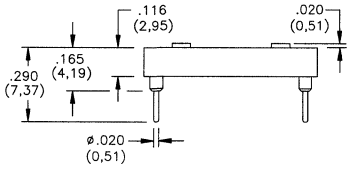


Also available in PPC™

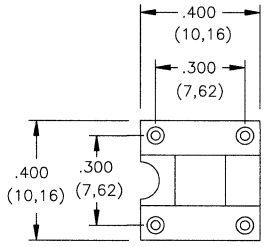
STANDARD SIZE



STANDARD SIZE WITH STANDOFFS



HALF SIZE



Insulators are UL 94V-0 Rated Thermoplastic

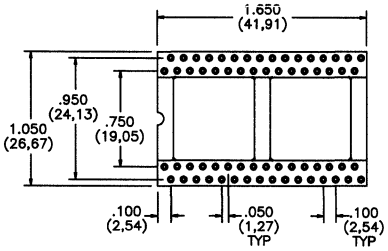
TYPE	PART NUMBER	CONTACT/SHELL PLATING
Standard size	DCO 304-014B	Tin / Tin
Standard size with standoffs	DCO 304-014B-ST	Tin / Tin
Half size	DCO 304-014B/308	Tin / Tin

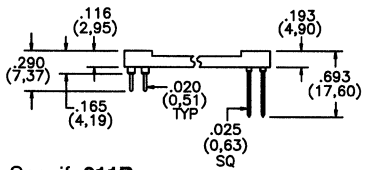
Contact/Shell:
Inner Contact — Beryllium Copper
Outer Shell — 1/2 Hard Brass

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

Other contact and plating styles available, see Section A or consult the factory

Quad DIP Sockets





Specify **011B** or **014B** for solder tail

Specify **410B** for Wire Wrap

Insulators are UL 94V-0 Rated Thermoplastic

- Accepts staggered row DIP patterns for NEC and Rockwell devices
- Hi-Rel multi-finger contacts are non-solder wicking
- See Section D for other standard socket alternatives

TYPE	PART NUMBER	CONTACT/SHELL PLATING
Solder tail version	DQD Q64-014B	Tin / Tin
Solder tail version	DQD Q64-011B	Gold/Tin
Wire Wrap version	DQD Q64-410B	Gold/Tin

Other pin counts available. Consult the factory.

Contact/Shell:
Inner Contact — Beryllium Copper
Outer Shell — 1/2 Hard Brass

Plating:
Outer Shell — Tin over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

Other contact and plating styles available, see Section A or consult the factory

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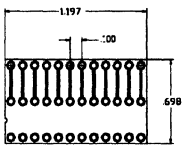
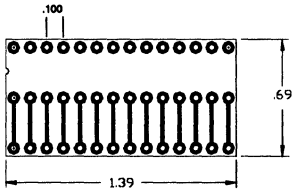
B

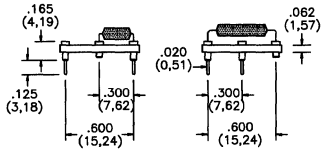
DIP Package Convertor



24 Pin



28 Pin



Material:
Copper clad FR4

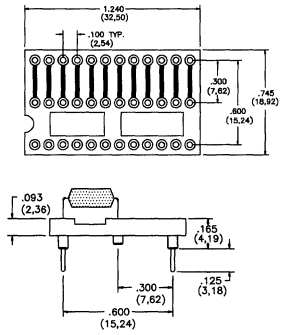
- No need to scrap or redesign existing PCBs!
- Converts .3" (7,62) DIP device to the .6" (15,24) PCB configuration for either a 24 pin or 28 pin device
- Converts .6" (15,24) DIP device to the .3" (7,62) PCB configuration for either a 24 pin or 28 pin device
- Hi-Rel multi-finger contacts are non-solder wicking
- Other adaptors made to your requirements, consult factory

How To Order

ADP - 324/624 - 011B

Adaptor Product Code | Device | PCB DIP Layout | Contact Style

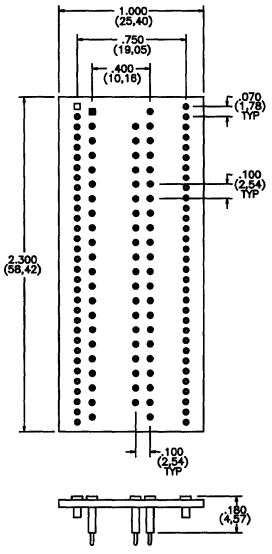
Molded DIP Adaptor



- Economical molded UL 94V-0 Thermoplastic
- Converts .3" (7,62) DIP device to .6" (15,24) PCB
- Hi-Rel multi-finger contacts are non-solder wicking
- Gold plated contact and tin plated shell

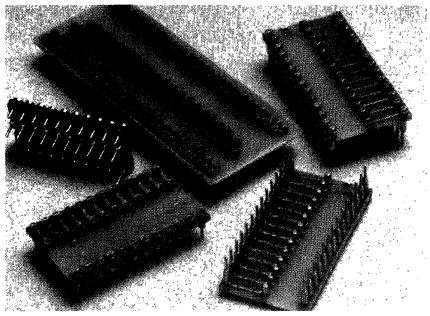
Part Number: ADP DIP-324/624

Shrink DIP Adaptor



ADP SDIP64-02

- Converts Shrink DIP .070" (1,78) to standard .100" (2,54) DIP pattern for prototype boards
- Hi-Rel multi-finger contacts are non-solder wicking
- Copper clad FR4 epoxy construction



Consult factory for socket part numbers for your application

BERG ELECTRONICS

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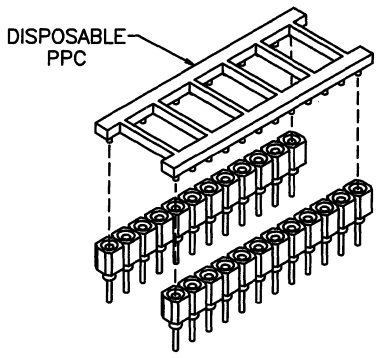
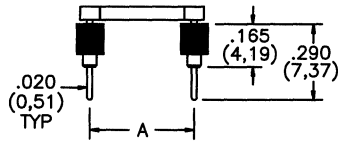
DISPOSABLE PPC™





Contact - 011B

PPC™ and Insulators are UL 94V-0 Rated Thermoplastic

AVAILABLE

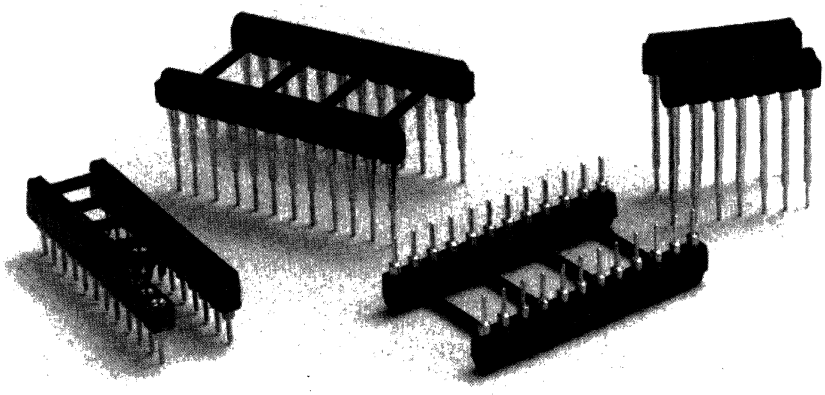
Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Tin over Nickel
Inner Contact — Gold over Nickel

PPC Patent No. 4,420,877

Features

- Frees space between insulators for other components
- Holds SIP strips parallel during soldering
- Speeds assembly
- Masks contacts from flux and cleaning solutions
- Better airflow
- All SIP strips in Section C can be configured with disposable PPC™



For SIP socket alternatives, see Section C

How To Order

PPC 2 SIP - 6 24 - 011 B

- PPC: Plastic Pin Carrier™ (or HPC)
- 2 SIP: Product Code
- 6: Row-to-Row Spacing
- 24: Number of Contacts
- 011 B: Contact Style

See Section A for Contact and Plating Options
See Section C for Material Call Outs

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	

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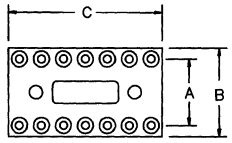
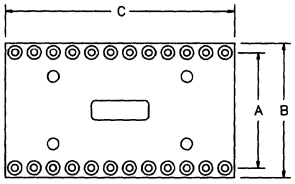
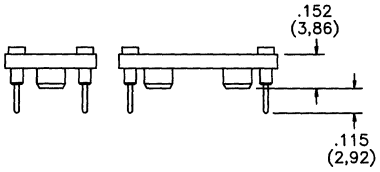


TYPICAL 2 STAND-OFF



TYPICAL 4 STAND-OFF



Contact 498B

AVAILABLE

Material:
High-Temp
Glass Reinforced Polyimide

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper
or
Hi-temp Beryllium Nickel

Plating:
Outer Shell — Gold over Nickel
Inner Contact — Gold over Nickel

Other contact and plating styles available, see Section A or consult the factory

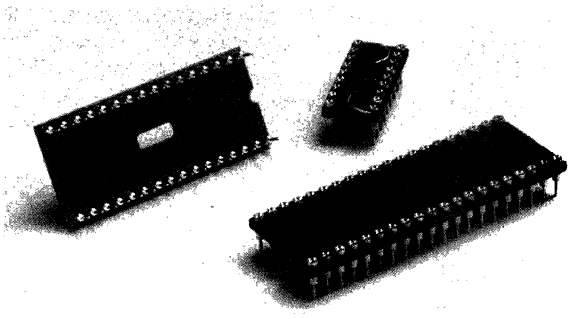
For Your Harshest Environments

- Down Hole Oil Field Equipment
- Burn-in and Test Applications
- Industrial Equipment

B

Features

- Polyimide Glass Laminate -60°C to +250°C continuous – UL 94V-1
- Available with or without standoffs
- Your choice of Super Hi-Temp Beryllium-Nickel contacts (-55°C to +225°C) or standard Beryllium Copper contacts (-55°C to +150°C)
- Optional decoupling capacitor able to withstand -55°C to +260°C continuous



With and without optional capacitor

How To Order

DVD 6 24 - 498B - S - 01

- DVD: Devil DIP Product Code
- 6 24: Number of Contacts / Row-to-Row Spacing
- 498B: Contact Style
- S: Standoffs (Option)
- 01: Axial Leaded Capacitor Value (Option)

NO.OF CONTACTS	6	8	14	16	18	20	22	24	28	20	22	24	24	28	32	36	40	48	50	64
A	.300 (7,62)									.400 (10,16)			.600 (15,24)						.900 (22,86)	
B	.400 (10,16)									.500 (12,70)			.700 (17,78)						1.000 (25,40)	
C	.300 (7,62)	.400 (10,16)	.700 (17,78)	.800 (20,32)	.900 (22,86)	1.000 (25,40)	1.100 (27,94)	1.200 (30,48)	1.400 (35,56)	1.000 (25,40)	1.100 (27,94)	1.200 (30.48)	1.200 (30.48)	1.400 (35,56)	1.600 (40,64)	1.800 (45,72)	2.000 (50,80)	2.400 (60,96)	2.500 (63,50)	3.200 (81,28)
NO.OF STANDOFFS	2 Standoffs												4 Standoffs							

BERG ELECTRONICS

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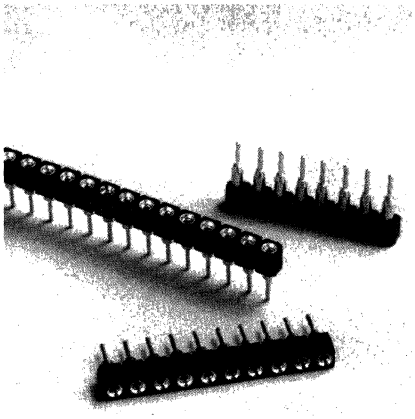


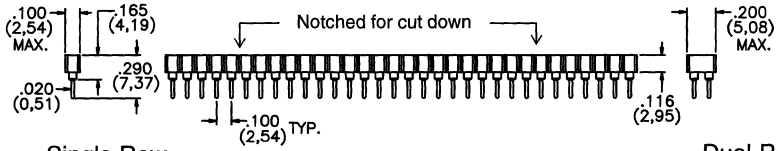
Single Row SIP Sockets

Features

- Hi-Temp Options — IR and Vapor Phase Compatible
- X and Y Stackable
- Disposable Plastic Pin Carrier (PPC™) System Option
- Hi-Rel multifinger contact
- Insulators are notched for convenient cut down

STANDARD TEMPERATURE GLASS REINFORCED THERMOPLASTIC

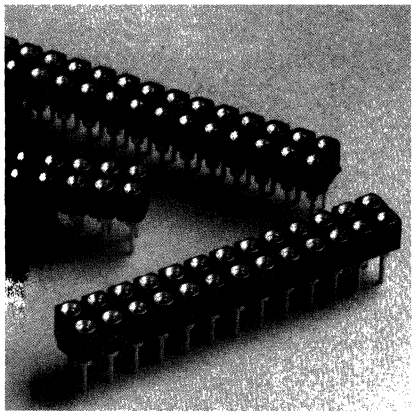
Continuous use temperature 140°C



Single Row
1 to 32 Positions

011B contact

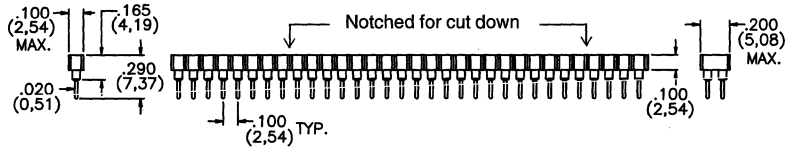
Dual Row
2 to 64 Positions



Dual Row SIP Sockets

HI-TEMP PPS GLASS REINFORCED THERMOPLASTIC

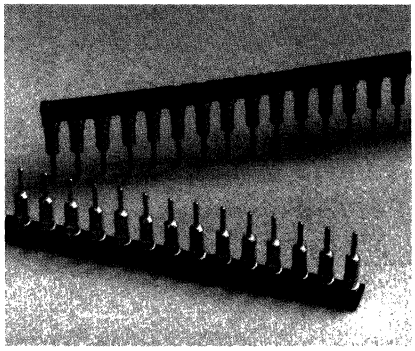
Continuous use temperature 220°C



Single Row
1 to 32 Positions

011B contact

Dual Row
2 to 66 Positions

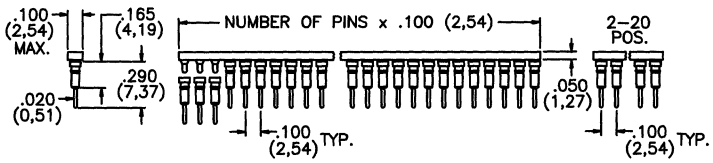


PPC™ SIP Sockets (disposable carrier system)

Patent No. 4,420,877

PLASTIC PIN CARRIER (PPC™) SYSTEM

Patent #4,420,877



Single Row
1 to 60 Positions

011B contact

Dual Row
2 to 20 Rows

Insulators are all UL 94V-0 Rated Thermoplastic

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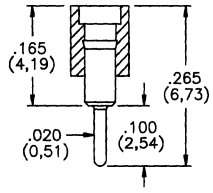
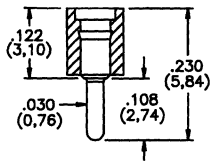
SHORTER SOLDER TAIL — NO TRIMMING

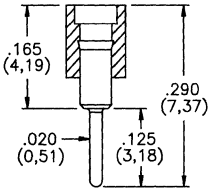


Specify	Contact/Shell
018B	200µ" Tin/200µ" Tin
PTH =	.026 ± .003



Specify	Contact/Shell
185B	30µ" Gold/200µ" Tin
PTH =	.036 ± .003

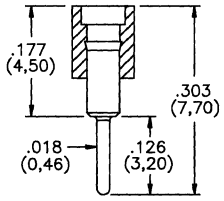
OUR MOST POPULAR CONTACT



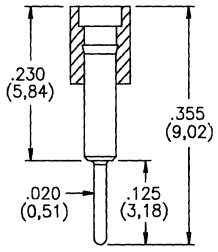
Specify	Contact/Shell
001B	30µ" Gold/200µ" Tin
002B	30µ" Gold/10µ" Gold
011B	10µ" Gold/200µ" Tin
014B	200µ" Tin/200µ" Tin
016B*	30µ" Gold/200µ" Tin
PTH =	.026 ± .003

CLINCHABLE SOFT BRASS

HIGHER PCB STANDOFF

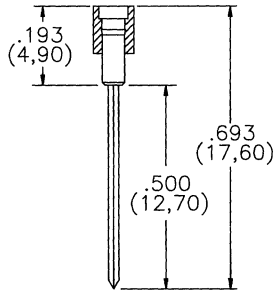


Specify	Contact/Shell
248B	30µ" Gold/10µ" Gold
PTH =	.024 ± .003



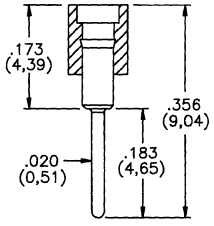
Specify	Contact/Shell
040B	30µ" Gold/10µ" Gold
041B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003

WIRE WRAP™ SIPs

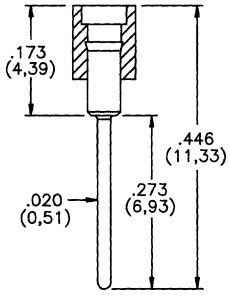


Specify	Contact/Shell
410B	30µ" Gold/200µ" Tin
411B	30µ" Gold/10µ" Gold

EXTRA LONG SOLDER TAILS



Specify	Contact/Shell
057B	200µ" Tin/200µ" Tin
054B	30µ" Gold/200µ" Tin
091B	30µ"Gold/10µ"Gold
PTH =	.026 ± .003



Specify	Contact/Shell
067B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell–Gold over 100µ" Nickel or Tin over 100µ" Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

Other contact and plating styles available, see Section A or consult the factory

How To Order

PPC SIP - 1 x 32 - 011B - R

- PPC: For pins on a carrier strip begin the part number with "PPC™" or HPC for Hi-Temp Material
- SIP: Product Code
- 1: Number of Rows
- 32: Number of Contacts per Row
- 011B: Contact Style
- R: Hi-Temp Material Call Out (Option)*

See page B1 for Material Call Outs

BERG ELECTRONICS

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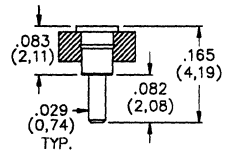
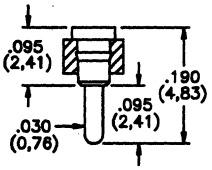
LOWEST PROFILE OPTIONS

ULTRA LOW PROFILE OPTIONS



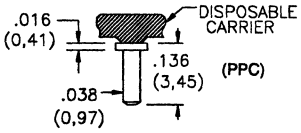
Specify	Contact/Shell
156B	30µ" Gold/200µ" Tin
PTH =	.035 ± .003

VERY LOW PROFILE

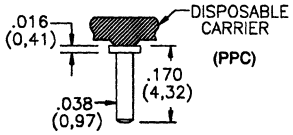


Specify	Contact/Shell
157B	200µ" Tin/200µ" Tin
160B	30µ" Gold/200µ" Tin
PTH =	.036 ± .003

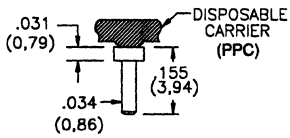
FLUSH PROFILE



Specify	Contact/Shell
710C	30µ" Gold/200µ" Tin
711C	30µ" Gold/10µ" Gold
714C	200µ" Tin-Lead/200µ" Tin-Lead
PTH =	.044 ± .003



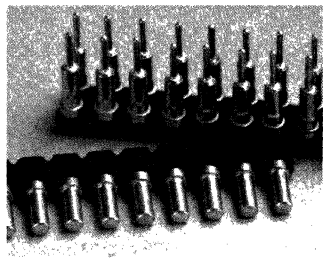
Specify	Contact/Shell
720C	30µ" Gold/200µ" Tin
721C	30µ" Gold/10µ" Gold
PTH =	.044 ± .003



Specify	Contact/Shell
725C	30µ" Gold/200µ" Tin
726C	30µ" Tin/200µ" Tin
PTH =	.040 ± .003

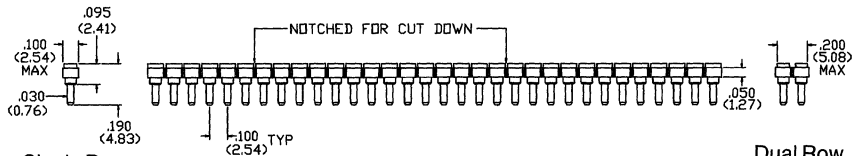
Features

- Profiles as low as .016" (0,41) above PCB
- X and Y stackable
- Single and Dual Row available



STANDARD SOCKET BODY
GLASS REINFORCED THERMOPLASTIC, UL 94V-0

Continuous use temperature 140°C



Single Row
1 to 32 Positions

160B contact

Dual Row
2 to 64 Positions

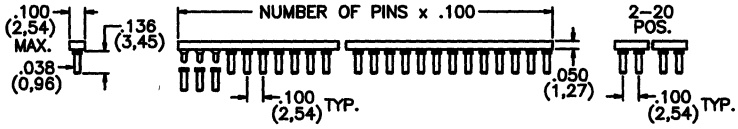
How To Order

S I P 0 5 0 - 1 x 3 2 - 1 6 0 B - R

Product Code	Insulator Thickness	Number of Rows	Number of Contacts per Row	Contact Style	Hi-Temp Material Call Out (Option)*

PLASTIC PIN CARRIER (PPC™) SYSTEM

Patent # 4,420,877



Single Row
1 to 60 Positions

710C contact
(Shown)

Dual Row
2 to 20 Rows

How To Order

P P C S I P - 1 x 3 2 - 1 6 0 B

Plastic Pin Carrier™ (or HPC)	Product Code	Number of Rows	Number of Contacts per Row	Contact Style

See Section A for other contact/plating options

****See page B1 for Material Call Outs***

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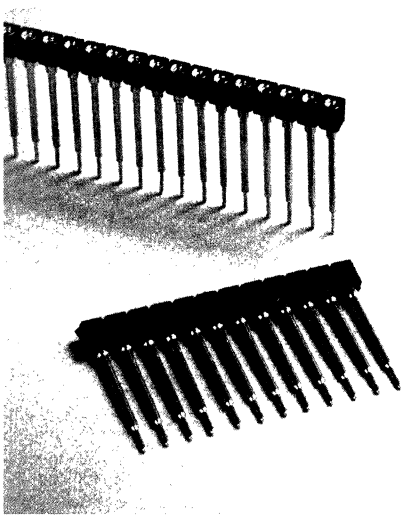
C



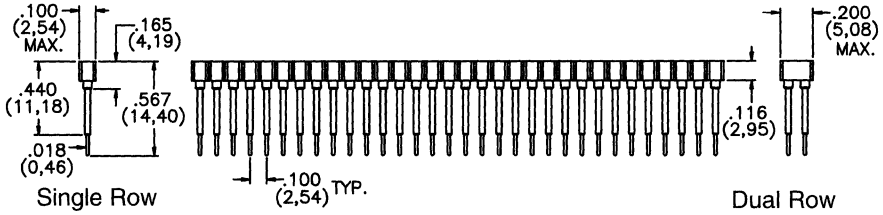
Elevated SIP Socket

Features

- Elevated Sockets allow for greater package density
- Allows stacking of PCB
- Maximizes airfow
- Available in Hi-Temp PPS Insulator material

STANDARD TEMPERATURE — UL 94V-0 THERMOPLASTIC

Continuous use temperature 140°C

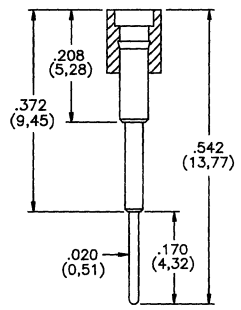


Single Row
1 to 32 Positions

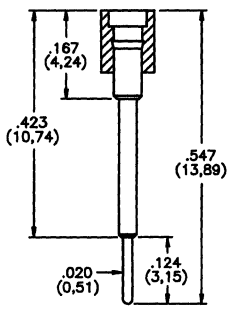
Dual Row
2 to 64 Positions

300B contact

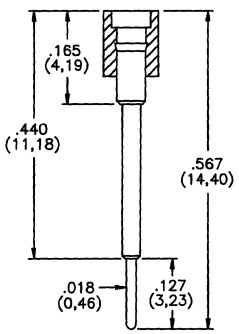
Popular Elevated SIP Sockets



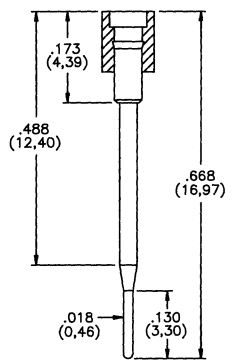
Specify	Contact/Shell
302B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003



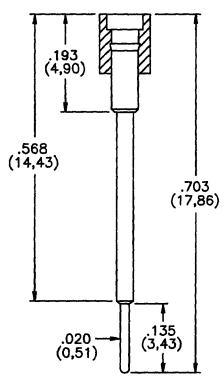
Specify	Contact/Shell
310B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003



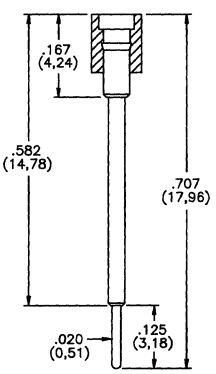
Specify	Contact/Shell
300B	30µ" Gold/200µ" Tin
PTH =	.024 ± .003



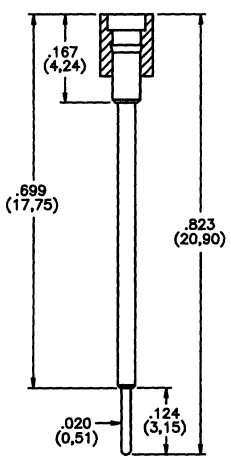
Specify	Contact/Shell
314B	30µ" Gold/10µ" Gold
PTH =	.024 ± .003



Specify	Contact/Shell
301B	30µ" Gold/200µ" Tin
PTH =	.026 ± .003



Specify	Contact/Shell
312B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003



Specify	Contact/Shell
313B	30µ" Gold/10µ" Gold
PTH =	.026 ± .003

How To Order

SIP 1 x 32 - 300B - R

- SIP — Product Code
- 1 — Number of Rows
- 32 — Number of Contacts per Row
- 300B — Contact Style
- R — Hi-Temp Material Call Out (Option)*

HIGH TEMP
AVAILABLE

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

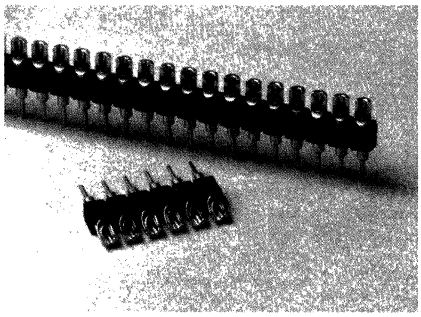
Plating:
Outer Shell — Gold over 100µ Nickel or Tin over 100µ Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

Other contact and plating styles available, See Section A or consult the factory.

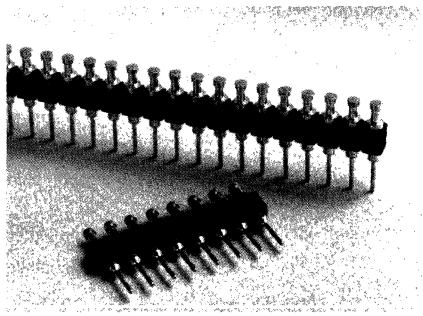
See page B1 for Material Call Outs

BERG ELECTRONICS

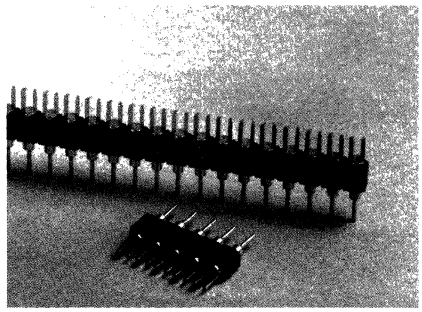
mck McKenzie Socket Division



Solder Cup



Turret



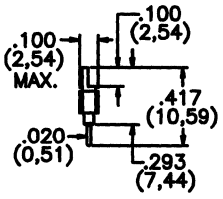
Bifurcated

Features

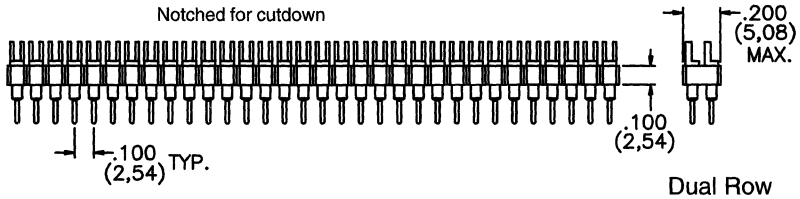
- Pin Styles - solder cup, turret or bifurcated
- Termination - solder tail, wire wrap or solder cup
- Available in standard insulator or Hi-Temp PPS

STANDARD TEMPERATURE — GLASS REINFORCED THERMOPLASTIC, UL 94V-0

Continuous use temperature 140°C

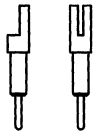


Single Row
1 to 32 Positions

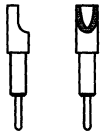


830G contact

Dual Row
2 to 64 Positions



Bifurcated
contact at
90° Rotation



Solder Cup
contact at
90° Rotation

How To Order

S P L 1 x 3 2 - 8 5 0 L - R

- SPL: Specify Product Code
  - SPG - SIP Bifurcated Adaptor
  - SPK - SIP Solder Cup Adaptor
  - SPL - SIP Turret Adaptor
- 1: Number of Rows
- 32: Number of Contacts per Row
- 850L: Contact Style
- R: Hi-Temp Material Call Out (Option)*

*See page B1 for Material Callouts

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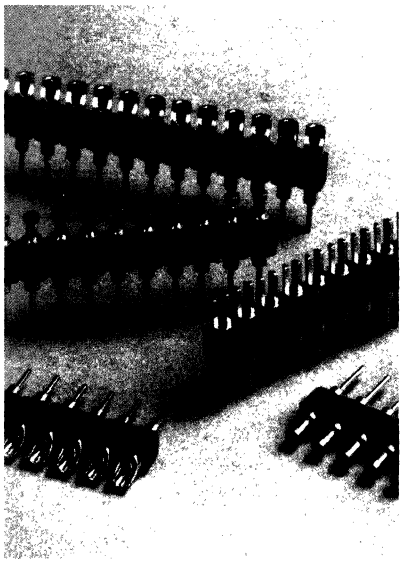
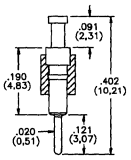
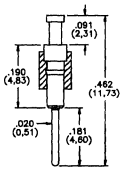


Turret Terminals

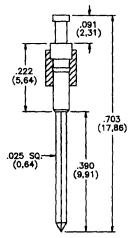
WIRE WRAP™



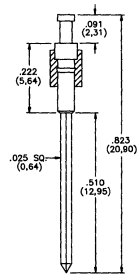
Specify Plating
850L 10µ" Gold



Specify Plating
853L 200µ" Tin



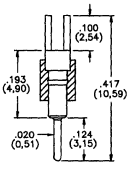
Specify Plating
854L 10µ" Gold



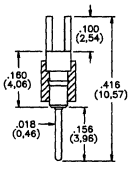
Specify Plating
855L 10µ" Gold

Bifurcated Terminals

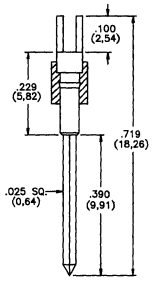
WIRE WRAP™



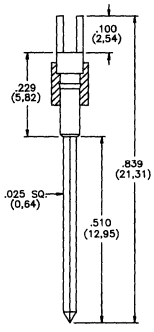
Specify Plating
830G 10µ" Gold
831G 200µ"Tin



Specify Plating
832G 10µ" Gold
834G 200µ"Tin



Specify Plating
837G 10µ" Gold



Specify Plating
838G 10µ" Gold

Insulators are
UL 94V-0 Rated
Thermoplastic

HIGH TEMP
AVAILABLE

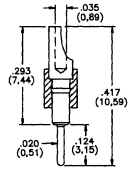
Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold over Nickel or Tin over Nickel
Inner Contact — Gold over Nickel or Tin over Nickel

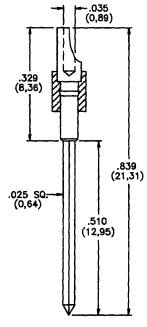
Other contact and plating styles available, see Section A or consult the factory

Solder Cup

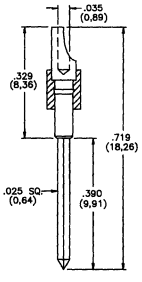
WIRE WRAP™



Specify 840K
Plating
10µ" Gold



Specify 843K
Plating
10µ" Gold



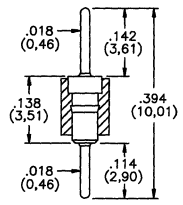
Specify 842K
Plating
10µ" Gold

See page B1 for complete material specifications

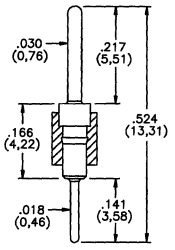
BERG ELECTRONICS

mck McKenzie Socket Division

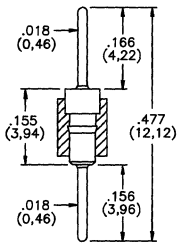
SST — Male to Male Header Options



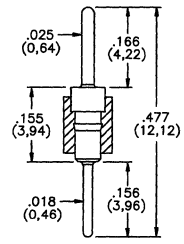
Specify	Plating/Material
884S	10µ" Gold/Brass
PTH =	.024 ± .003



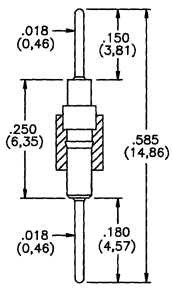
Specify	Plating/Material
886S	10µ" Gold/Brass
PTH =	.024 ± .003



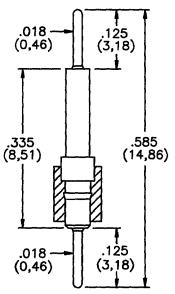
Specify	Plating/Material
876S	10µ" Gold/ Phosphor Bronze
878S	10µ" Gold/Brass
879S	200µ" Tin/Brass
PTH =	.024 ± .003



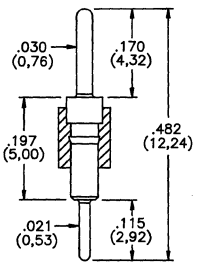
Specify	Plating/Material
874S	10µ" Gold/Brass
PTH =	.024 ± .003



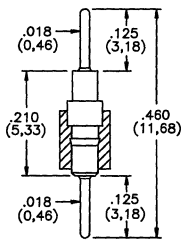
Specify	Plating/Material
867S	10µ" Gold/ Phosphor Bronze
PTH =	.024 ± .003



Specify	Plating/Material
862S	10µ" Gold/Brass
858S	200µ"Tin/Brass
PTH =	.024 ± .003

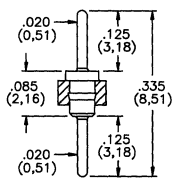


Specify	Plating/Material
870S	10µ" Gold/Brass
PTH =	.027 ± .003

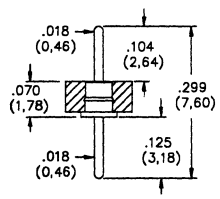


Specify	Plating/Material
861S	10µ" Gold/Brass
857S	200µ"Tin/Brass
PTH =	.024 ± .003

Low Profile Options



Specify	Plating/Material
880S	10µ" Gold/Phosphor Bronze
881S	200µ"Tin/Phosphor Bronze
PTH =	.026 ± .003

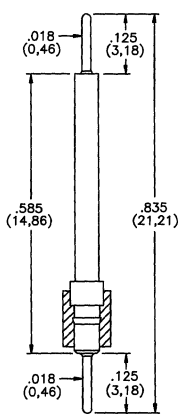


Specify	Plating/Material
868S	10µ" Gold/Brass
869S	200µ"Tin/Brass
PTH =	.024 ± .003

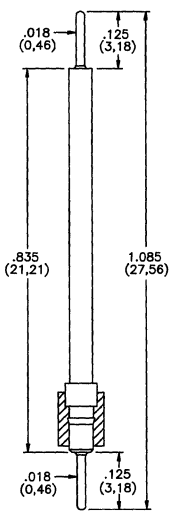
How To Order

SST 050 - 1 x 32 - 881S - R

- SST — Product Code
- 050 — Insulator Thickness (Option)
- 1 — Number of Rows
- 32 — Number of Contacts per Row
- 881S — Contact Style
- R — Hi-Temp Material Call Out (Option)*



Specify	Plating/Material
863S	10µ" Gold/Brass
859S	200µ"Tin/Brass
PTH =	.024 ± .003



Specify	Plating/Material
864S	10µ" Gold/Brass
860S	200µ"Tin/Brass
PTH =	.024 ± .003

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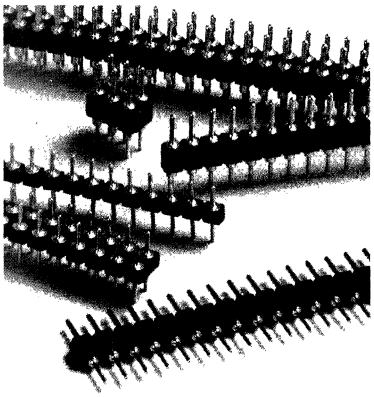
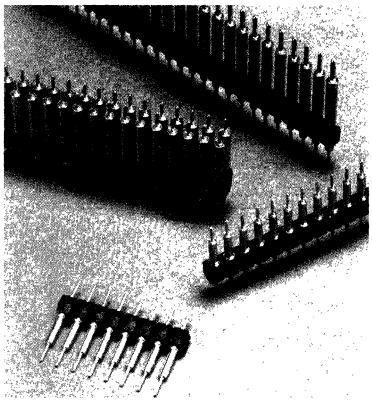
C



SST: Male-to-Male SIP Headers



SHS: Extended Male-to-Male SIP Headers

Insulators are UL 94V-0 Rated Thermoplastic

HIGH TEMP

AVAILABLE

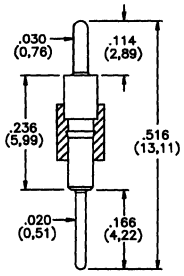
Plating:
Gold over 100µ" Nickel or Tin over 100µ" Nickel

Terminal:
½ Hard Brass or Phosphor Bronze

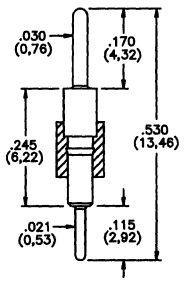
Other contact and plating styles available, see Section A or consult the factory

See page B1 for complete material specifications

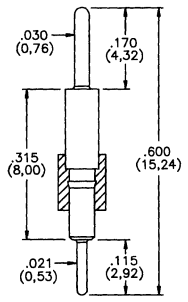
SHS — Extended Header Options



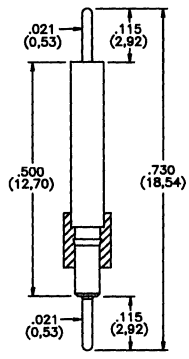
Specify	Plating
922H	10µ" Gold
PTH =	.026 ± .003



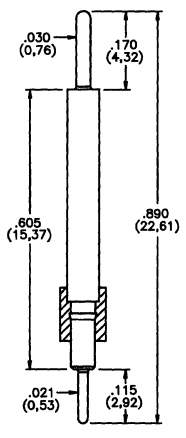
Specify	Plating
935H	10µ" Gold
PTH =	.027 ± .003



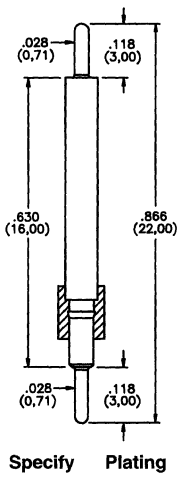
Specify	Plating
924H	10µ" Gold
PTH =	.027 ± .003



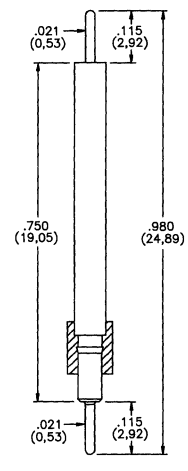
Specify	Plating
930H	10µ" Gold
PTH =	.027 ± .003



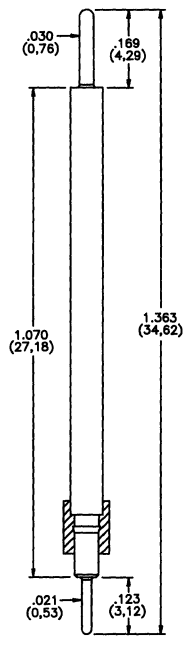
Specify	Plating
920H	10µ" Gold
PTH =	.027 ± .003



Specify	Plating
926H	10µ" Gold
PTH =	.034 ± .003



Specify	Plating
932H	10µ" Gold
PTH =	.027 ± .003



Specify	Plating
928H	10µ" Gold
PTH =	.027 ± .003

How To Order

SHS 1 x 32 - 926H - R

- **SHS** — Specify Product Code: SST - Male to Male Header; SHS - Extended Male to Male Header
- **1** — Number of Rows
- **32** — Number of Contacts per Row
- **926H** — Contact Style
- **R** — Hi-Temp Material Call Out (Option)*

See page B1 for Material Callouts

BERG ELECTRONICS

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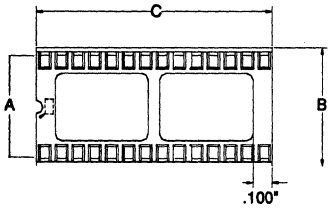
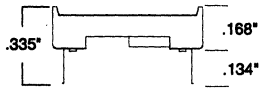
Dual In Line (DIP)

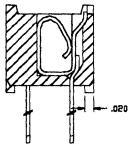


Top View

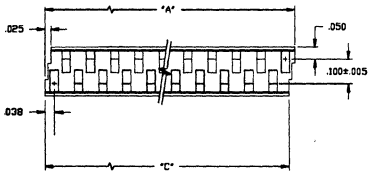


End View

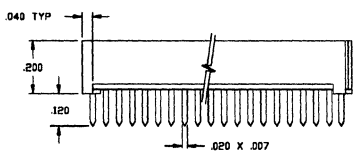
Zig Zag In Line (ZIP)



End View



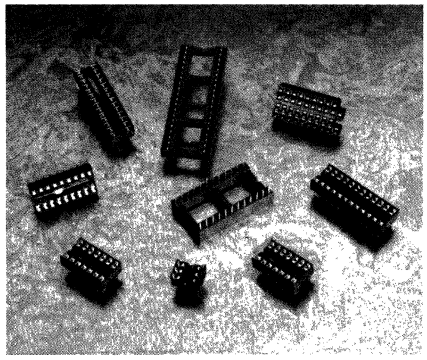
Top View



Side View

Features

- Stamped and Formed Contacts
- Closed bottom construction for anti solder-wicking
- Side-to-side and end-to-end stackable
- Double beam, preloaded contacts



Ordering Information

Part Number	# Contacts	A	B	C
SAF LCS-306-OT	6	.300	.395	.295
SAF LCS-308-OT	8	.300	.395	.395
SAF LCS-314-OT	14	.300	.395	.695
SAF LCS-316-OT	16	.300	.395	.795
SAF LCS-318-OT	18	.300	.395	.895
SAF LCS-320-OT	20	.300	.395	.995
SAF LCS-322-OT	22	.300	.395	1.095
SAF LCS-324-OT	24	.300	.395	1.195
SAF LCS-328-OT	28	.300	.395	1.395
SAF LCS-624-OT	24	.600	.695	1.195
SAF LCS-628-OT	28	.600	.695	1.395
SAF LCS-632-OT	32	.600	.695	1.595
SAF LCS-640-OT	40	.600	.695	1.995
SAF LCS-648-OT	48	.600	.695	2.395
SAF ZIP -16-T	16	.825	.800	.750
SAF ZIP -18-T	18	.925	.900	.850
SAF ZIP -20-T	20	1.025	1.000	.950
SAF ZIP -24-T	24	1.225	1.200	1.150

Specifications

Insulator Material: glass-filled PBT (UL 94V-O)

Contact Material: Phosphor Bronze

Contact Plating: Tin over Nickle

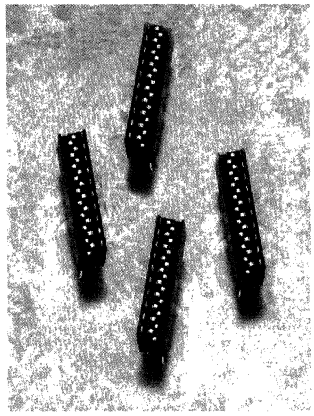
Current Rating: 1A per contact

Contact Resistance: 20mΩ max

Withstanding Voltage: 500 v ac (1 minute)

Insulator Resistance: 5,000 mΩ min. (500v dc)

Operating Temperature: -55°C to +105°C



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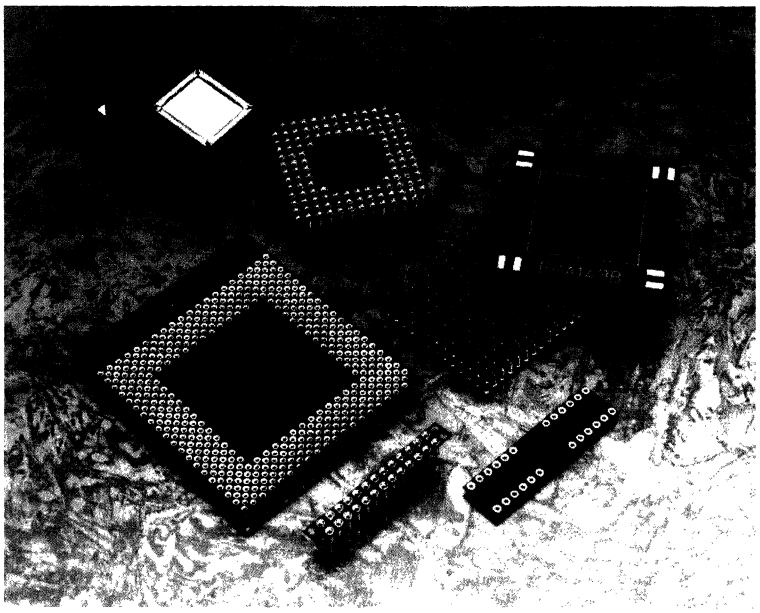


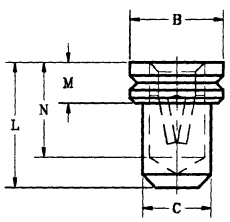
Features

- High temperature solder process compatable.
- Polymide film can be removed after soldering, leaving only the specified pattern of socket pins.
- Ultra low profile (0.015" above the board profile) contacts available.
- Available in SIP, DIP, PGA, and PZA configurations.
- Call for part numbers and more detailed information.

D

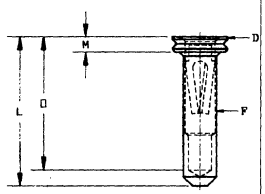
Contact Options

004R



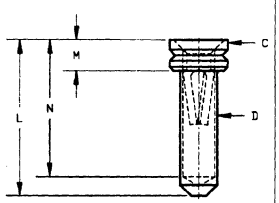
DIMENSION	MIN.	MAX.
B DIAMETER	.073	.074
C DIAMETER	.0525	.055
M LENGTH	.030	.032
N DEPTH	.067	.072
L LENGTH	.090	.095

005R



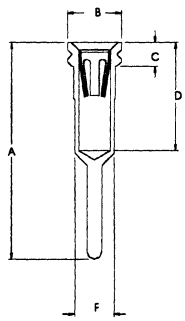
DIMENSION	MIN.	MAX.
D DIAMETER	.058	.059
F DIAMETER	.004	.036
M LENGTH	.015	.017
O DEPTH	.135	.141
L LENGTH	.152	.158

009R



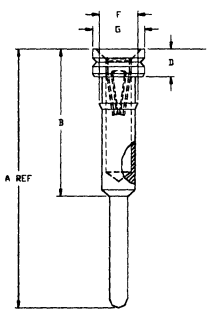
DIMENSION	MIN.	MAX.
C DIAMETER	.058	.059
D DIAMETER	.037	.038
M LENGTH	.030	.032
N DEPTH	.131	.136
L LENGTH	.155	.160

001J



DIMENSION	MIN.	MAX.
B DIAMETER	.069	.075
F DIAMETER	.053	.059
A LENGTH	.287	.293
C DEPTH	.029	.035
D LENGTH	.142	.148

003J



DIMENSION	MIN.	MAX.
A LENGTH	.285	.295
B LENGTH	.162	.168
D LENGTH	.030	.032
F DIAMETER	.043	.044
G DIAMETER	.058	.059

	004R	005R	009R	001J	003J
Inner Clip	4(30)	3(21)	3(11)	N/A	3(21)
No. Contact Points	4	3	3	N/A	3
Clip/Shell Plating	G/T	G/T	G/T	G/T	G/T
Avg. Insertion Force	175g	45g	80g	N/A	45g
Avg. Extraction Force	90g	20g	40g	N/A	20g
Recommended For:	DIP/SIP	PZA	DIP/SIP	Headers	PGA

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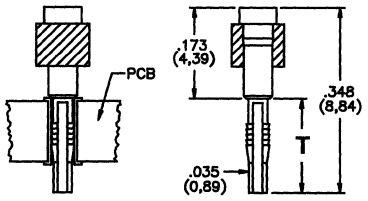
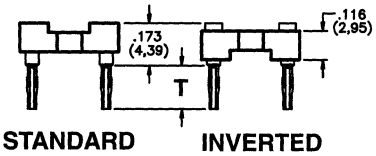
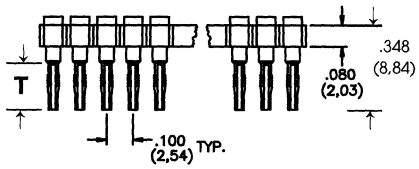
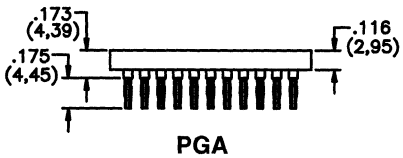




STANDARD DIP **INVERTED DIP** ***(optional)***



STANDARD SIP



PGA

Recommended PCB plated Thru-Hole diameter is Ø .040" ± .003"

Insulators are UL 94V-0 Rated Thermoplastic.

HIGH TEMP

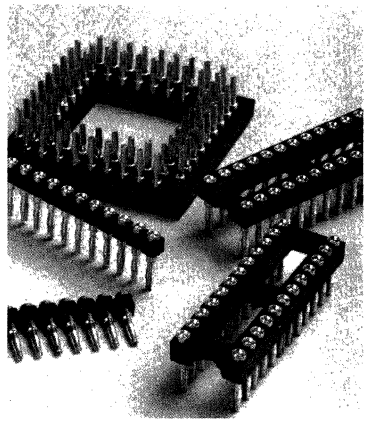
AVAILABLE

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

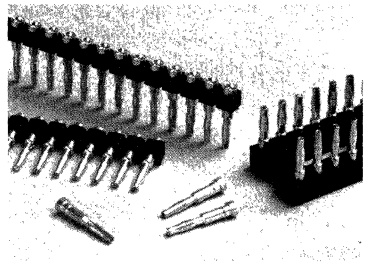
Plating:
Outer Shell — Gold over 50µ" Nickel or Tin over 50µ" Nickel
Inner Contact — Gold over 50µ" Nickel or Tin over 50µ" Nickel

Features

- New Compliant Pressfit does not distort plated through hole (PTH)
- Eliminates solder process
- Designed for .040" (1,02) ± .003" (0,08) Plated Thru-Holes (PTH)
- 16 pounds retention force in .040" (1,02) PTH in .062" (1,57) thick PCB
- Available in a variety of socket styles: SIP, DIP, Inverted DIP, and PGA



PGA, DIP and SIP



SIP and DIP

Specify Contact/Shell		Tail Length (T)
998E	200µ" Tin/200µ" Tin	.175 (4,45)
0012	30µ" Gold/200µ" Tin	.120 (3,05)

How To Order
DIP Pressfit

DPF 3 20 - 998E - 1

- DPF — DIP Pressfit
- 3 — Row-to-Row Spacing
- 20 — Number of Contacts
- 998E — Contact Style
- 1 — Inverted (Optional)

How To Order
SIP Pressfit

SPF 080 - 1 x 18 - 998E

- SPF — SIP Pressfit
- 080 — Insulator Thickness
- 1 — Number of Rows
- 18 — Number of Contacts per Row (Max. Number of Contacts per Row = 18)
- 998E — Contact Style

See Section F for PGA patterns and additional information.

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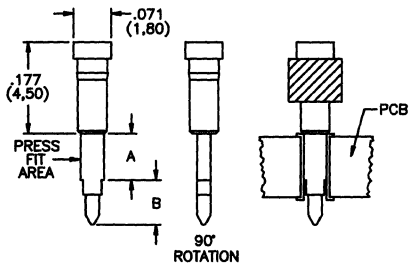
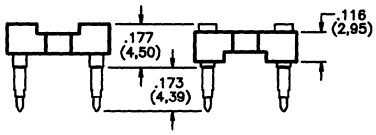
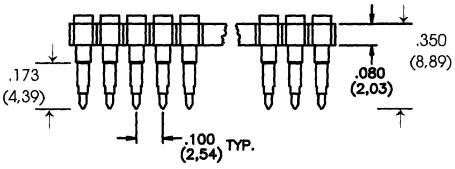


Flats are randomly oriented in Sockets.



STANDARD DIP **INVERTED DIP** ***(optional)***



SIP

Recommended PCB plated Thru-Hole diameter is Ø .039" ± .003"

Insulators are
UL 94V-0 Rated
Thermoplastic

HIGH TEMP

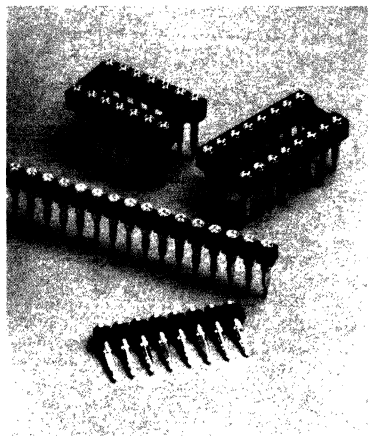
AVAILABLE

Contact/Shell:
Outer Shell — 1/2 Hard Brass
Inner Contact — Beryllium Copper

Plating:
Outer Shell — Gold or 93/7 Tin/Lead over 50µ" Nickel
Inner Contact — Gold over 50µ" Nickel

Features

- Pressfit eliminates soldering
- Ideal for backplane applications
- Retention force exceeds 12 pounds in .039" (0,99) plated Thru-Hole (PTH)
- Sizes for .062" (1,57) and .125" (3,18) PCB thickness
- Suggested PCB hole size
  Use 1.15mm drill prior to plating
  Plate .001" copper per side of hole
  Finished hole size .036-.041



E

SPECIFY	CONTACT/SHELL	A DIM	B DIM	PCB THICKNESS
970E	30µ"Gold/10µ"Gold	.075 (1,91)	.100 (2,54)	.062 (1,57)
972E	200µ"Tin Lead/100µ"Tin-Lead			
975E	30µ"Gold/10µ"Gold	.140 (3,56)	.110 (2,79)	.125 (3,18)
977E	200µ"Tin Lead/100µ"Tin-Lead			

How To Order
DIP Pressfit

DPF 3 20 - 970E - |

- DPF — DIP Pressfit
- 3 — Row-to-Row Spacing
- 20 — Number of Contacts
- 970E — Contact Style
- | — Inverted (Optional)

How To Order
SIP Pressfit

SPF 080 - 1 x 18 - 977E

- SPF — SIP Pressfit
- 080 — Insulator Thickness
- 1 — Number of Rows
- 18 — Number of Contacts per Row (Max. Number of Contacts per Row = 18)
- 977E — Contact Style

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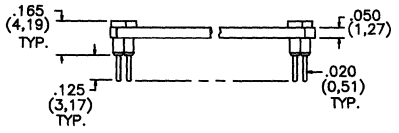
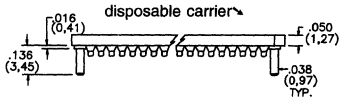
LOW PROFILE



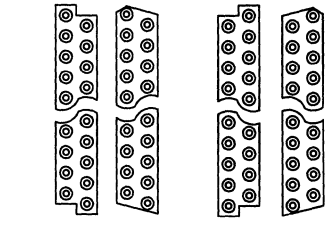
Specify	Contact/Shell
001B	30µ" Gold/200µ" Tin
002B	30µ" Gold/10µ" Gold
011B	10µ" Gold/200µ" Tin
014B	200µ" Tin/200µ" Tin
PTH =	.026 ± .003

FLUSH PROFILE PPC™



Specify	Contact/Shell
710C	30µ" Gold/200µ" Tin
711C	30µ" Gold/10µ"Gold
714C	200µ" Tin-Lead/200µ" Tin-Lead
PTH =	.044 ± .003

PATTERN OPTIONS
Top View

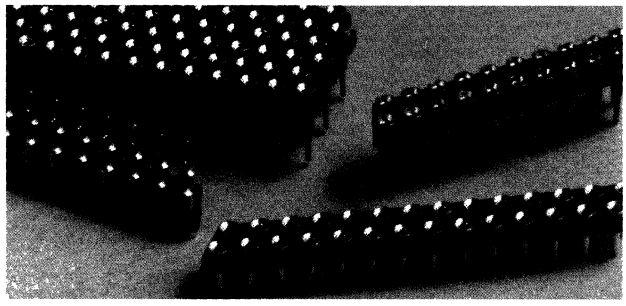


Standard Pattern Inverted Patterns

Insulators are
UL 94V-0 Rated
Thermoplastic

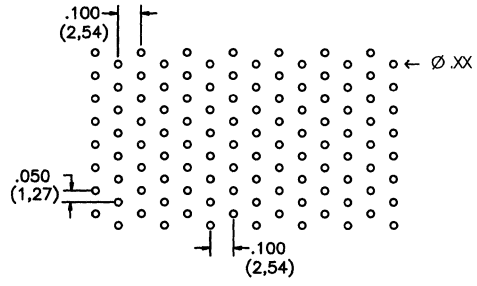
Features

- For high density memory using vertical zig-zag in-line patterns
- Available in 16, 18, 20, 24, and 28 positions
- End-to-end and side-to-side stackability
- PPC™ option provides as low as .016" (0,41) above board profile — near flush
- Wide variety of contact styles available
- Use inverted style to create Quad in-line patterns — no insulator crossbars



Ganged ZIP Pattern

- Ganged packages maximize device density
- Ganged ZIPs are available in arrays up to 20 ganged ZIPs of 32 pins each for a total of 640 pins
- Available in molded insulator or disposable PPC™



TYPICAL GANGED ZIP PCB LAYOUT

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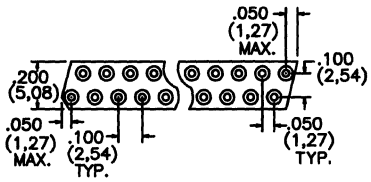
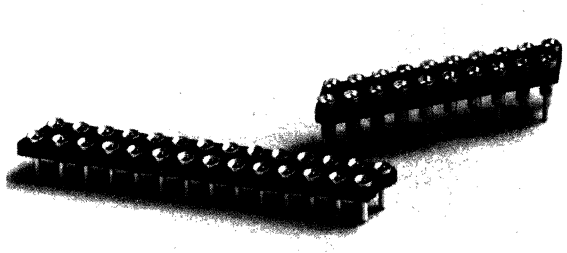
Parellelogram Insulators



VIEWED FROM TOP OF CONTACTS



How To Order

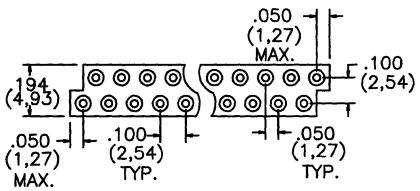
ZIP 1 x 20 - 011B - L - F - L

- ZIP 1 x: Zig Zag Inline, Number of Ganged Devices
- 20: Number of Contacts 16, 18, 20, 28
- 011B: Contact Style
- L: Parallelogram Shape
- F: Hi-Temp Material Call Out (Option)*
- L: Inverted (Option)

See page B1 for Material Callouts

E

Stepped Insulators



VIEWED FROM TOP OF CONTACTS

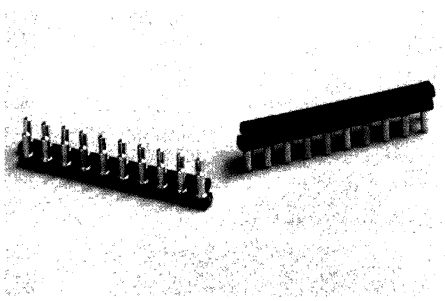
How To Order

ZIP 1 x 24 - 011B - S - F - L

- ZIP 1 x: Zig Zag Inline, Number of Ganged Devices
- 24: Number of Contacts 16, 18, 28, 40
- 011B: Contact Style
- S: Stepped Shape
- F: Hi-Temp Material Call Out (Option)*
- L: Inverted (Option)

See page B1 for Material Callouts

Disposable Plastic Pin Carriers



Patent No. 4,420,877

- Available in a wide variety of contacts
- Ideal for flush profile or high-density ganged applications

How To Order

PPC ZIP - 1 x 28 - 710C

- PPC: Plastic Pin Carrier (or HPC)
- ZIP: Zig Zag Inline
- 1 x: Number of Ganged Devices
- 28: Number of Contacts per Device
- 710C: Contact Style

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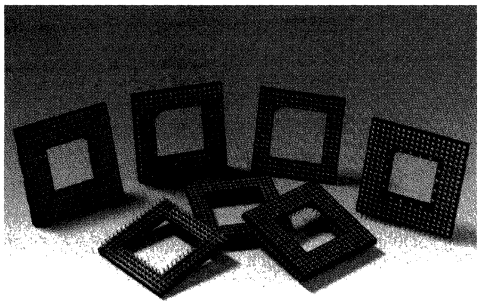
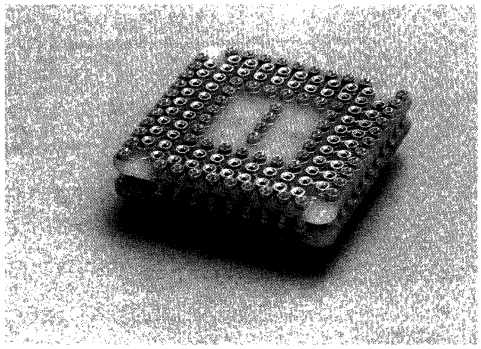
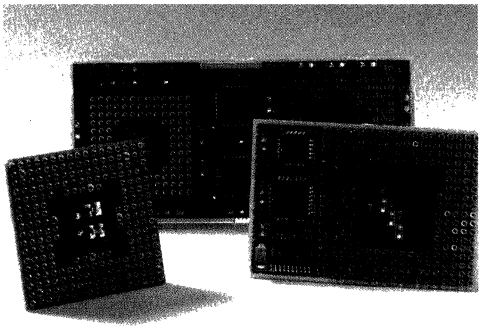


Largest Selection of Footprints



Custom Configurations



Hybrid PGA Sockets, Application and Customer Specific Modules

Pin Grid Array Sockets

Delivery + Quality + Selection + Price = McKenzie PGA

McKenzie Technology is the source for Pin Grid Array Sockets. We offer the largest selection of footprints and contact options in the industry.

State of the art, on-site molding and automated assembly mean unbeatable quality and delivery at a very competitive price.

With a reputation built on engineered innovation, our PGA Socket family includes many leading edge products designed to deliver solutions for your most difficult requirements.

Among these are:

- Ultra Low Insertion Force (ULIF) screw machine contacts with a third of the insertion/extraction forces found in industry standard PGA Sockets (recommended for pin counts greater than 150).

- Extremely low profile (.016" [0,41] above board height) contacts on our patented plastic pin carrier (PPC) system for applications short on head room or needing the lowest lead length possible for high speed digital requirements.

- Application Specific Modules, Circuit Correction and Hybrid Sockets designed to correct bugs in ASIC's and errors in board layouts.

- Impedance controlled (ZGA) for high speed devices.

If you do not find the PGA Socket you are looking for in this section, please complete the worksheet found on page F10 of this catalog and fax it to us.

Standard to custom, no one does it better!

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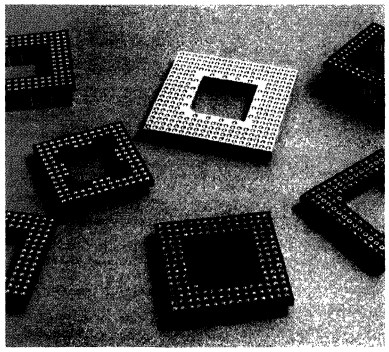
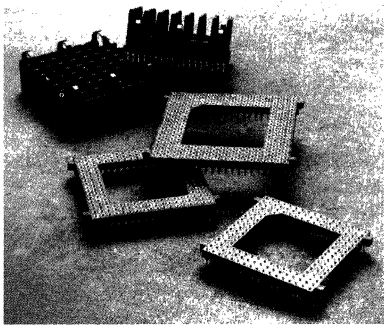
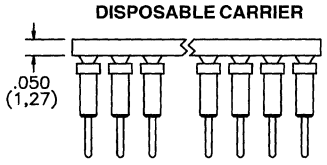


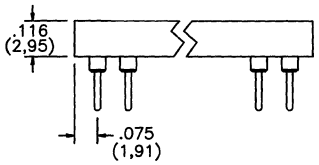
Options, options, options...



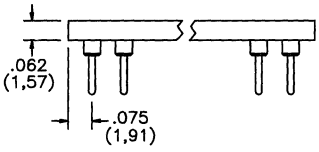
Heatsink options



Plastic Pin Carrier™
Pat. #4,420,877



Molded PPS Thermoplastic



Molded Glass Laminate

Sockets from the Industry's Source!

- Largest selection of molded PGA footprints
- Widest variety of contact styles — over 140 contact options listed in Section A
- Insulator materials that meet your toughest Hi-Temp application needs
- Contact options ensure the lowest possible insertion and extraction forces
- Custom patterns and high pin count PGA's are our specialty.

Plastic Pin Carrier (PPC™) Option

- Rigid disposable carrier keeps contact lined up for easy insertion
- Ultra low profile applications as low as .016" (0,41) max. above the surface of your board
- Self masks against solder, flux, and solvent contamination
- Ideal for high speed systems to reduce propagation delays by shortening interconnect paths between devices

F

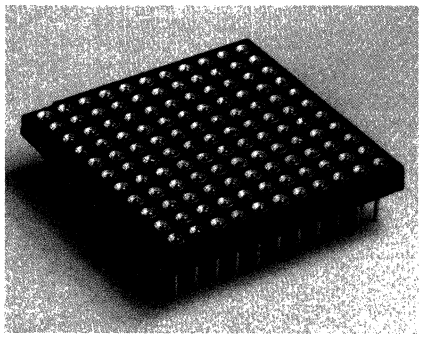
Heat Sink Attachment Option

- Molded bezel attaches to bottom of PGA Socket giving it tabs to which a heatsink can be clipped
- Rotatable so that the heatsink can be clipped on relative to the direction of the airflow
- Designed to mate with leading heatsink manufacturers' heatsink and clip assemblies
- Can be applied to any PGA socket with a standard soldered tail contact

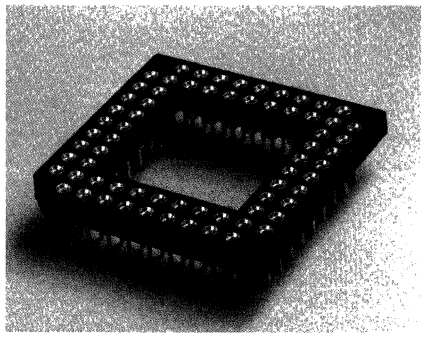
Hi-Temp Insulator Materials

R	**PPS**	Glass Reinforced Polyphenylene Sulfide, UL 94V-0, ≤220°C
F	**FR4**	Glass Reinforced Epoxy Laminate, UL 94V-0, ≤140°C
H	**Hi-3003**	Glass Reinforced Polyimide Laminate, UL 94V-0, ≤250°C

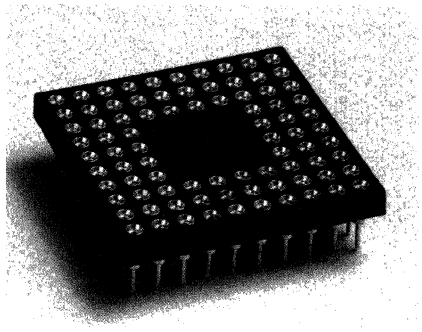
INSULATOR CENTER OPTIONS



Full matrix of holes-option "M"

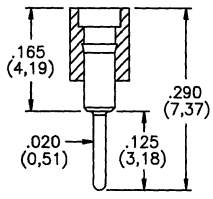


Square center hole-option "H"



Solid center-option "S"

OUR MOST POPULAR CONTACTS



Specify	Contact/Shell
003B*	30µ" Gold/200µ" Tin
004B*	30µ" Gold/10µ" Gold
012B*	10µ" Gold/200µ" Tin
015B*	200µ" Tin/200µ" Tin
008B§	10µ" Gold/200µ" Tin
009B§	30µ" Gold/200µ" Tin
010B§	30µ" Gold/10µ" Gold

* Very low insertion force (VLI)
§ Ultra low insertion force (ULIF)

See section A for details

Follow These Steps to Order:

1. Select pattern and socket body center style from this section
2. Choose contact style from table at left or, from Section A
3. Determine insulator material best suited to your application or use Plastic Pin Carrier (PPC™ or HPC™).
4. Specify Heatsink attachment if required
5. See page F12 for recommended PCB layout diagrams
6. Please call for application assistance or samples

For other features please consult the factory:
E = Standoff feet located on the top surface of the insulator
P = 'Pick-n-Place', circular tab in middle of ins. for auto placement
S = Standoff feet located on the bottom surface of the insulator
T = Heat sink mounting feature provided by the socket

How To Order

PPC PGA - 132H 012B 1 - 1414 - R

- PPC: Plastic Pin Carrier (Option)
- PGA: Product Code
- 132: Number of Contacts
- H: Center Configuration — M - Matrix; H - Hole; S - Solid
- 012B: Contact Style
- 1: Insertion Force Code — 1 - Very Low Force; 5 - Ultra Low force
- 1414: Footprint Pattern Code
- R: Material Call Out — R - PPS; F - FR4 Glass Epoxy; H - Polyimide Glass

All McKenzie Molded Sockets

® Recognized

Insertion Force Note: *McKenzie Technology strongly recommends using an Ultra Low Insertion Force (ULIF) style contact where the pin count exceeds 150 pins.*

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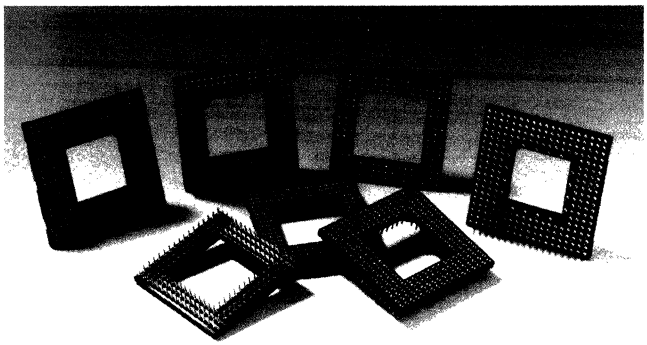
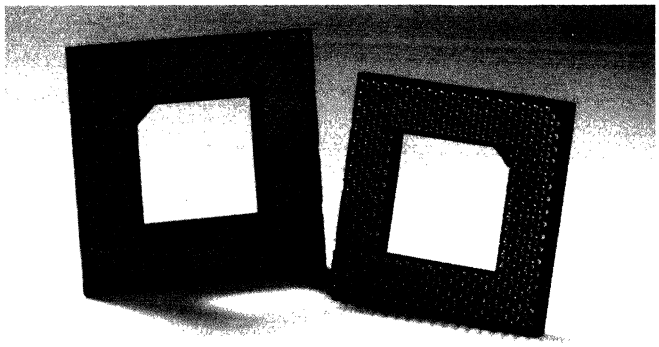
Ultra Low Force Contacts for High Pin Count PGA Sockets



Standard PGA's



Interstitial PZA Sockets

Contact	Contact/Shell Plating	Tail Length	Above PCB Height
008B	10µ" Gold/200µ" Tin	.125 (3,18)	.165 (4,19)
009B	30µ" Gold/200µ" Tin	.125 (3,18)	.165 (4,19)
187B	30µ" Gold/10µ" Gold	.108 (2,74)	.122 (3,10)
010B	30µ" Gold/10µ" Gold	.125 (3,18)	.165 (4,19)
059B	30µ" Gold/200µ" Tin	.183 (4,65)	.173 (4,39)
026B	30µ" Gold/200µ" Tin	.150 (3,81)	.165 (4,19)
022B	10µ" Gold/10µ" Gold	.125 (3,18)	.165 (4,19)
024B	30µ" Gold/10µ" Gold	.273 (6,93)	.173 (4,39)
001M	10µ" Gold/200µ" Tin	.133 (3,38)	.122 (3,10)
027B	200µ"Tin/200µ"Tin	.125 (3,18)	.165 (4,19)
030B	30µ"Gold/200µ"Tin	.125 (3,18)	.165 (4,19)
033B	10µ"Gold/200µ"Tin	.125 (3,18)	.165 (4,19)

Contact	Contact/Shell Plating	Tail Length	Above PCB Height
509B	30µ" Gold/200µ" Tin	.125 (3,18)	.165 (4,19)
118B	30µ" Gold/10µ" Gold	.270 (6,86)	.165 (4,19)
120B	30µ" Gold/10µ" Gold	.180 (4,57)	.165 (4,19)
003A	30µ" Gold/200µ" Tin	.100 (0,00)	.165 (4,19)
509A	30µ" Gold/10µ" Gold	.125 (3,18)	.165 (4,19)
009A	30µ"Gold/200µ"Tin	.150 (3,81)	.165 (4,19)
010A	10µ"Gold/200µ"Tin	.125 (3,18)	.165 (4,19)
011A	10µ"Gold/200µ"Tin	.125 (3,18)	.165 (4,19)
012A	30µ"Gold/200µ"Tin	.100 (2,54)	.165 (4,19)
013A	30µ"Gold/10µ"Gold	.125 (3,18)	.165 (4,19)
014A	10µ"Gold/200µ"Gold	.100 (2,54)	.165 (4,19)
015A	10µ"Gold/200µ"Gold	.100 (2,54)	.165 (4,19)
016A	10µ"Gold/200µ"Gold	.080 (2,03)	.250 (6,35)
018A	30µ"Gold/200µ"Gold	.125 (3,18)	.165 (4,19)

Solder tail / Diameter .018 ± .002

Features

- Screw machine contacts utilize a specially designed six finger inner clip which has an average insertion force of 1¼ oz. (35 grams) and less than ¾ oz. (21 grams) extraction forces.
- Available in all PGA patterns including custom footprints for your ASIC and RISC devices.
- Sockets are molded in Hi-Temp PPS material and are surface mount compatible.
- Ideal for devices with 150 or more pins.
- Typical insertion/extraction forces in ganged arrangements will experience 15% to 25% increase due to accumulated dimensional tolerance mismatch between the device and socket.
- See page X2, for further insertion/extraction force data.

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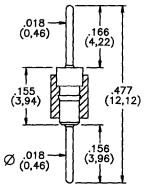
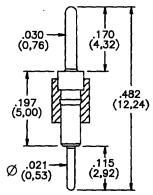
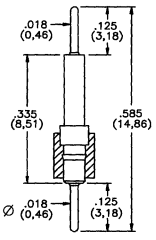
TYPICAL CONTACTS AVAILABLE



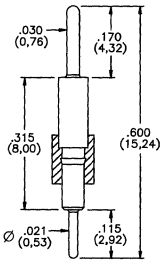
878S — gold
879S — tin



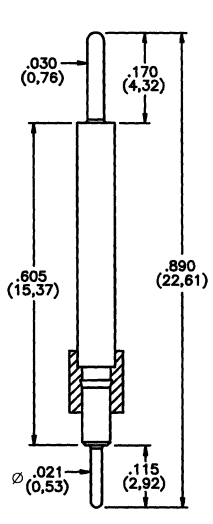
870S - gold



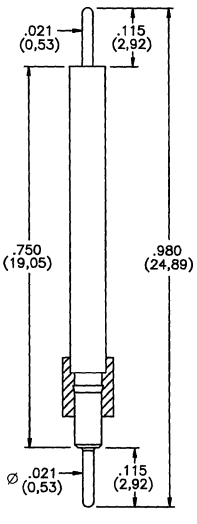
862S — gold
858S — tin



924H — gold
925H — tin

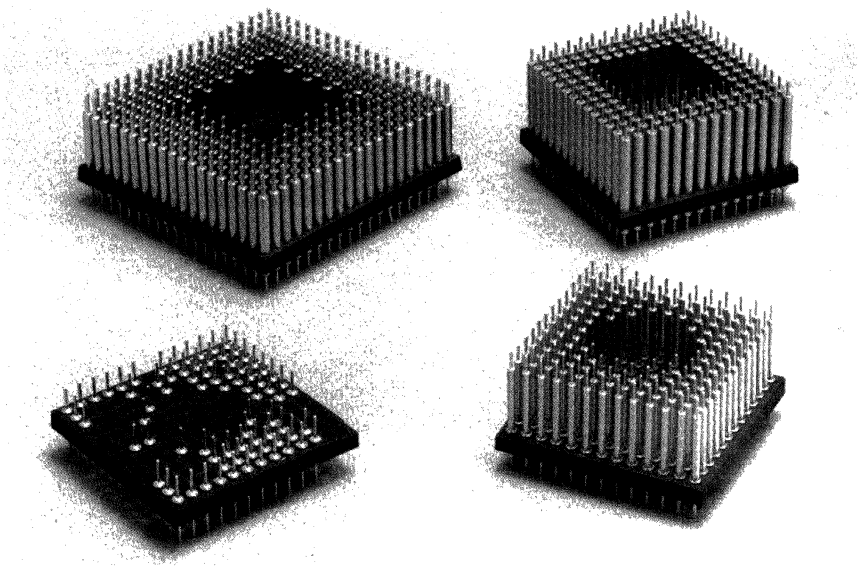


920H — gold



932H — gold

Many more to choose from



Features

- Widest selection of contacts styles available in the industry!
- Standard and Hi-Temp insulator styles
- Call for samples

See Section A for complete terminal selection

How To Order

P G A 1 3 2 H 8 6 2 S - 1 4 1 4 - R

- Product Code: PGA
- Number of Contacts: 132
- Center Configuration: H
  - M - Matrix
  - H - Hole
  - S - Solid
- Terminal Style: 862S
- Footprint Pattern Code: 1414
- Material Call Out: R
  - R - PPS
  - F - FR4 Glass Epoxy
  - H - Polyimide Glass

Follow these steps:

- Select pattern and socket body center option from pages F12-F42
- Choose terminal styles from Section A
- Select insulator material requirements
- Call the factory for application assistance or samples

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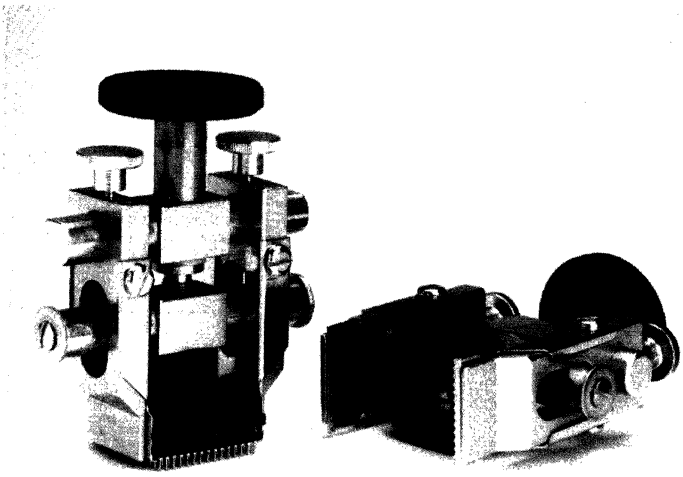


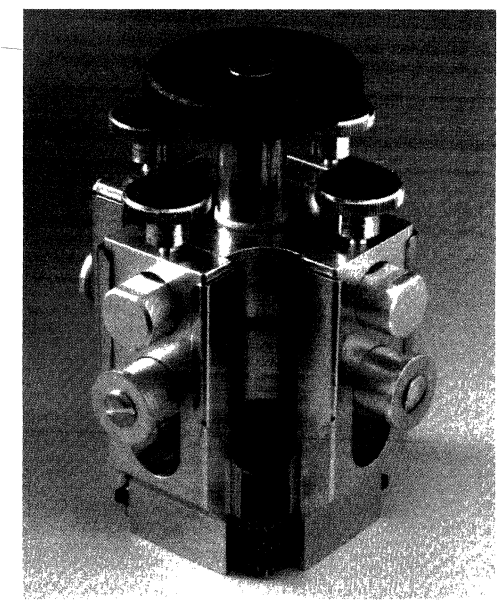
Adjustable TOL PGAIN-10/25-1

Adjustable Insertion Tool

- Expensive PGA packages deserve to be handled with care. McKenzie's PGA Insertion tools assure parallel insertion and an even distribution of forces across the entire surface of the device
- Tool grips socket and gently seats device without bending pins or stressing solder joints
- Available in specific size models starting at 10 x 10, and an adjustable model for devices from 10 x 10 to 25 x 25

PART NUMBER	PGA SOCKET SIZE	DIMENSION OF DEVICE
TOL PGAIN-10/25-1	10 x 10 to 25 x 25	1.05 (26,67) to 2.55 (64,77)

F



Four sided TOL PGAX-16/25-1

Adjustable Extraction Tools

- Design assures parallel extraction
- Heavy duty steel and aluminum construction
- Quick and easy thumb screw adjustment with a high gear ratio
- The wide lift range allows for extraction of devices with attached heat sinks

PART NUMBER	PGA SOCKET SIZE	DIMENSION OF DEVICE
TOL PGAX-16/25-1 (Four Sided)	16 x16 to 25 x 25	1.65 (41,91) to 2.55 (64,77)
TOL PGAX-10/15-1 (Two Sided)	10 x10 to 15 x 15	1.05 (26,67) to 1.55 (39,37)

Optional larger knob is available for increased turning power

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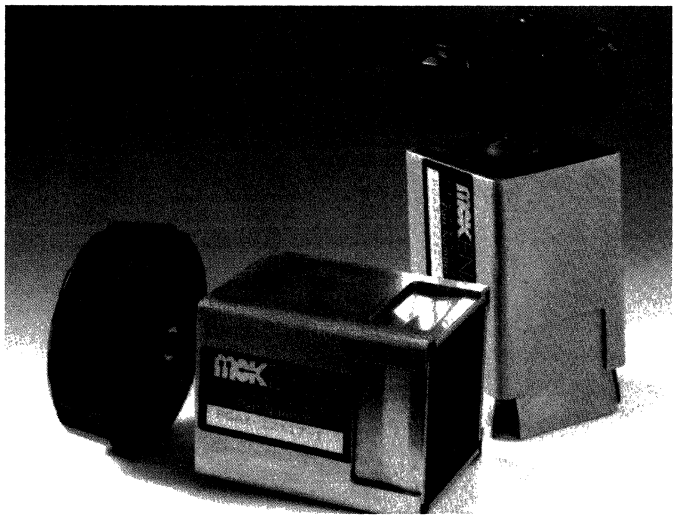
Even the most difficult high pin count PGA device can be positively removed with McKenzie Technology's smooth action extraction tool.



Features

- Rugged stainless steel construction assures parallel device removal
- Large molded knob requires minimum turning effort
- Thin wall construction and cut-a-ways minimizes interference with adjacent components
- Removes both standard socketed and flush socketed devices
- Specific size tools require no adjustment and ensure positive engagement with device

Ordering Note

Device packages vary in size and dimensional tolerances. Be sure to check specific device dimensions against minimums/maximums listed below before ordering.

Tool P/N's	Minimum	Maximum
TOL PGAX - 10x10 - 1	1.040 (26,42)	1.080 (27,43)
TOL PGAX - 11x11 - 1	1.140 (28,96)	1.180 (29,97)
TOL PGAX - 12x12 - 1	1.240 (31,50)	1.280 (32,51)
TOL PGAX - 13x13 - 1	1.340 (34,04)	1.380 (35,05)
TOL PGAX - 14x14 - 1	1.440 (36,58)	1.480 (37,59)
TOL PGAX - 15x15 - 1	1.540 (39,12)	1.580 (40,13)
TOL PGAX - 16x16 - 1	1.640 (41,66)	1.680 (42,67)
TOL PGAX - 17x17 - 1	1.732 (43,99)	1.780 (45,21)
TOL PGAX - 18x18 - 1	1.840 (46,74)	1.880 (47,75)
TOL PGAX - 19x19 - 1	1.940 (49,28)	1.980 (50,29)
TOL PGAX - 20x20 - 1	2.040 (51,82)	2.080 (52,83)
TOL PGAX - 21x21 - 1	2.140 (54,36)	2.180 (55,37)
TOL PGAX - 22x22 - 1	2.240 (56,90)	2.280 (57,91)
TOL PGAX - 23x23 - 1	2.340 (59,44)	2.380 (60,45)
TOL PGAX - 24x24 - 1	2.440 (61,98)	2.480 (62,99)
TOL PGAX - 25x25 - 1	2.540 (64,52)	2.580 (65,53)

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The device package configurations listed below may have changed since the printing of this cross reference. McKenzie Technology can not guarantee the accuracy of this information. Samples are available for engineering review. Please consult the factory for samples for your applications.

DEVICE #	MCKENZIE SOCKET
ACTEL	
A1280-PG176	PGA 176H008B5 - 1512R
A1240-PG132	PGA 133H012B1 - 13F7R
ALTERA	
EP1800	PGA 68H012B1 - 1189R
EP1810	PGA 68H012B1 - 1189R
EP1830	PGA 68H012B1 - 1189R
EPF8452	PGA 160H008B5 - 15C3
EPF8820	PGA 192H008B5 - 1781
EPM5128	PGA 68H012B1 - 1132R
EPM5192	PGA 84H012B1 - 1109R
EPM5130	PGA 100H012B1 - 13B5R
AMD	
AM29325	PGA 145H012B1 - 1521R
AM95C60	PGA 149H012B1 - 1517R
AM486DX	PGA 168H008B5 - 1706
AM486SX	PGA 168H008B5 - 1706
29000	PGA 169H008B5 - 1709R
A9850	PGA 68H012B1 - 1132R
AM2018	PGA 84H012B1 - 1109R
AM2064	PGA 68H012B1 - 1132R
AM29117	PGA 68H012B1 - 1132R
AM29030	PGA 146H012B1 - 15B8R
SERIES 3500	PGA 169H008B5 - 1709R
AM29331	PGA 120H012B1 - 13E4R
AM29334	PGA 120H012B1 - 13E4R
AM3020	PGA 84H012B1 - 1109R
AM3030	PGA 84H012B1 - 1109R
AM3042	PGA 132H012B1 - 1414R
AM3064	PGA 132H012B1 - 1414R
AM3090	PGA 175H008B5 - 1608R
AM80186	PGA 68H012B1 - 1132R
AM80286	PGA 68H012B1 - 1132R
ANALOG DEVICES	
AD1010	PGA 68H012B1 - 1132R
ADSP1101	PGA 101H012B1 - 1321R
ADSP3201	PGA 145H012B1 - 1521R
ADSP3202	PGA 145H012B1 - 1521R
ADSP3210	PGA 101H012B1 - 1345R
ADSP3211	PGA 145H012B1 - 1521R
ADSP3221	PGA 145H012B1 - 1521R
ADSP3220	PGA 145H012B1 - 1521R
ADSP1009/10A	PGA 68H012B1 - 1132R
ADSP1012	PGA 68H012B1 - 1132R
ADSP1016A	PGA 68H012B1 - 1132R
ADSP7018	PGA 108H012B1 - 1204R
ADSP8018	PGA 108H012B1 - 1204R
AD1016	PGA 149H012B1 - 1517R
AD3220	PGA 176H008B5 - 1512R
ADSP1024	PGA 85H012B1 - 1107R

DEVICE #	MCKENZIE SOCKET
AT&T	
3020	PGA 84H012B1 - 1109R
32106	PGA 125H012B1 - 1373R
32100	PGA 133H012B1 - 13B3R
32103	PGA 133H012B1 - 13B3R
32104	PGA 133H012B1 - 13B3R
ATT3030	PGA 132H012B1 - 1109R
ATT3042	PGA 132H012B1 - 1414R
ATT3064	PGA 132H012B1 - 1414R
ATT3090	PGA 175H008B5 - 1608R
BIT	
B6000	PGA 259H008B5 - 1829R
B6020	PGA 259H008B5 - 1829R
B6010	PGA 259H008B5 - 1829R
B2022	PGA 225H008B5 - 1804R
B2023	PGA 225H008B5 - 1804R
B2020	PGA 225H008B5 - 1804R
B2021	PGA 225H008B5 - 1804R
CYPRESS	
CY7B138	PGA 68H012B1 - 1132R
CY7B144	PGA 68H012B1 - 1132R
CY7C341	PGA 84H012B1 - 1354R
CY7C342	PGA 68H012B1 - 1132R
CY7C510	PGA 68H012B1 - 1132R
CY7C516	PGA 68H012B1 - 1132R
CY7C517	PGA 68H012B1 - 1132R
CY7C600	PGA 209H008B5 - 1725R
CY7C601A	PGA 207M009B5- 1760R
CY7C602A	PGA 144H012B1 - 1523R
CY7C9101	PGA 68H012B1 - 1132R
CY7C9117	PGA 68H012B1 - 1132R
CY7C9117	PGA 68H012B1 - 1132R
CYM7232	PGA 401H008B5 - 2506R
CYM7264	PGA 401H008B5 - 2506R
VIC068-A	PGA 144H012B1 - 1523R
VIC068	PGA 144H012B1 - 1523R
VIC64	PGA 144H012B1 - 1523R
DIGITAL EQUIPMENT	
AXP21064A	PGA 431H008B5 - 2406R
AXP21064	PGA 431H008B5 - 2406R
AXP 21066	PGA 287H008B5 - 2211R
AXP 21068	PGA 287H008B5 - 2211R
FUTURE ALPHA AXP	PZA 499H509B - 43AC
FUJITSU	
C8000	PGA 180H008B5 - 1508R
MB86930	PGA 179H008B5 - 1836R
MB86940	PGA 135H012B1 - 1458R
B1100	PGA 84H012B1 - 1002R
B2000	PGA 135H012B1 - 1458R
B350	PGA 84H012B1 - 1002R
B500	PGA 64H012B1 - 1011R

DEVICE #	MCKENZIE SOCKET
B600	PGA 84H012B1 - 1002R
C1275	PGA 64H012B1 - 1011R
C2000H	PGA 65H012B1 - 1137R
C2000H	PGA 64H012B1 - 1011R
C2600VH	PGA 84H012B1 - 1002R
C3900H	PGA 65H012B1 - 1137R
C3900H	PGA 64H012B1 - 1011R
C440H	PGA 64H012B1 - 1011R
C770	PGA 64H012B1 - 1011R
MB86901	PGA 179H008B5 - 1510R
MB86940	PGA 135H012B1 - 1458R
MB87068	PGA 84H012B1 - 1002R
MBL80186	PGA 65H012B1 - 1137R
MBL80286	PGA 64H012B1 - 1011R
HITACHI	
HD61811Y	PGA 68H012B1 - 1015R
HD63450Y10	PGA 68H012B1 - 1015R
HD63450Y12	PGA 68H012B1 - 1015R
HD63450Y6	PGA 68H012B1 - 1015R
HD63450Y8	PGA 68H012B1 - 1015R
HD63484Y4	PGA 68H012B1 - 1015R
HD63484Y6	PGA 68H012B1 - 1015R
HD63484Y8	PGA 68H012B1 - 1015R
HD63484Y98	PGA 68H012B1 - 1015R
HD64400	PGA 135H012B1 - 1458R
HD64530	PGA 68H012B1 - 1015R
HD68000Y10	PGA 68H012B1 - 1015R
HD68000Y12	PGA 68H012B1 - 1015R
HD68000Y8	PGA 68H012B1 - 1015R
HD68450Y	PGA 68H012B1 - 1015R
HD68450Y10	PGA 68H012B1 - 1015R
HD68450Y8	PGA 68H012B1 - 1015R
HD68HC000	PGA 68H012B1 - 1015R
HD68HC0008	PGA 68H012B1 - 1015R
HD68HC000Y10	PGA 68H012B1 - 1015R
HD68HC000Y12	PGA 68H012B1 - 1015R
HD81821	PGA 135H012B1 - 1458R
HD81831	PGA 135H012B1 - 1458R
HG28AI8	PGA 120H012B1 - 1314R
HG28E10	PGA 120H012B1 - 1314R
HG61H04	PGA 68H012B1 - 1015R
HG61H06	PGA 68H012B1 - 1015R
HG61H09	PGA 68H012B1 - 1015R
HG61H25	PGA 120H012B1 - 1314R
HG61H20	PGA 120H012B1 - 1314R
HG61H15	PGA 120H012B1 - 1314R
HG61H15	PGA 68H012B1 - 1015R
HG61H20	PGA 68H012B1 - 1015R
HG61H25	PGA 68H012B1 - 1015R
HG61H09	PGA 120H012B1 - 1314R
HG62B40	PGA 120H012B1 - 1314R
HG62B40	PGA 135H012B1 - 1458R

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DEVICE #	MCKENZIE SOCKET
HG62B71	PGA 179H008B5 - 1510R
HG62B71	PGA 135H012B1 - 1458R
HG62E101	PGA 135H012B1 - 1458R
HG62E101	PGA 179H008B5 - 1510R
HG62E130	PGA 179H008B5 - 1510R
HG62E75	PGA 135H012B1 - 1458R
HUGHES	
1121609-501	PGA 84H012B1 - 1109R
1121609-502	PGA 121H012B1 - 1312R
1121609-503	PGA 181H008B5 - 1592R
INTEGRATED DEVICE TECHNOLOGY	
79R3000	PGA 145H012B1 - 1521R
79R3010	PGA 84H012B1 - 1109R
79R3020	PGA 68H012B1 - 1132R
IDT7005S/L	PGA 68H012B1 - 1132R
IDT7006S/L	PGA 68H012B1 - 1132R
IDT7024S/L	PGA 84H012B1 - 1109R
IDT7025S/L	PGA 84H012B1 - 1109R
DT7050S	PGA 108H012B1 - 1204R
IDT7050L	PGA 108H012B1 - 1204R
IDT7052S	PGA 108H012B1 - 1204R
IDT7052L	PGA 108H012B1 - 1204R
IDT7133S/L	PGA 68H012B1 - 1132R
IDT7133SA/LA	PGA 68H012B1 - 1132R
IDT7143S/L	PGA 68H012B1 - 1132R
IDT7143SA/LA	PGA 68H012B1 - 1132R
IDT72511	PGA 68H012B1 - 1132R
IDT72521	PGA 68H012B1 - 1132R
IDT72605	PGA 68H012B1 - 1132R
IDT72615	PGA 68H012B1 - 1132R
IDT79R4400	PZA 447H011A - 39AC
IDT79RV4400	PGA 179HOO8B5 - 1836R
IDT79R4600	PGA 179HOO8B5 - 1836R
IDT79R3000A	PGA 179HOO8B5 - 1836R
iDT79R3000A	PGA 175HOO8B5 - 1608R
IDT79R3500	PGA 161H008B5 - 16??
XX-R4000	PZA 447H509B-39AC
INTERGRAPH	
C400	PGA 299H008B5 - 2010R
INTEL	
108517-001	PGA 149H012B1 - 1557R
80586 (P5)	PGA 273H008B5 - 2119R
80960MX	PZA 348H509B -37ADR
P6	PZA 97201 - 2642
i486	PGA 169H008B5 - 1780R
i486DX2	PGA 38H008B5 - 1938R
80486	PGA 168H008B5 - 1706R
80860	PGA 168H008B5 - 1707R
80186	PGA 68H012B1 - 1132R
80188	PGA 68H012B1 - 1132R
80286	PGA 68H012B1 - 1132R
80387	PGA 68H012B1 - 1132R
8096	PGA 68H012B1 - 1132R
8097	PGA 68H012B1 - 1132R
82389	PGA 149H012B1 - 1557R
82965	PGA 132H012B1 - 1414R
8396	PGA 68H012B1 - 1132R
8397	PGA 68H012B1 - 1132R
8796	PGA 68H012B1 - 1132R
82786	PGA 88H012B1 - 1327R
80386	PGA 132H012B1 - 1414R
80960	PGA 132H012B1 - 1414R
82258	PGA 68H012B1 - 1132R
82380	PGA 132H012B1 - 1414R
82385	PGA 132H012B1 - 1414R
82716/VSDD	PGA 68H012B1 - 1132R
DX4	PGA 168H008B5 - 1706R
80487	PGA 169H008B5 - 1709R
P24C	PGA 168H008B5 - 1706R
P24S	PGA 168H008B5 - 1706R
82385	PGA 132H003B1 - 1414R
P54C	PZA 296H122AB - 37AH
P54CM	PZA 296H122AB - 37AH
P54CT	PZA 320H122A - 37AQ
P54CS	PZA 296H122AB - 37AH
P5T	PGA 273H008B5 - 2119R
P24CT	PGA 235H008B5 - 1848R
P24T	PGA 238HM008B5 - 1938R
P24CT	PGA 237H008B5 - 1950R
8025	PGA 175H008B5 - 1608R
82496-66	PGA 280H008B5 - 1908R
LOGIC DEVICES	
L499C01	PGA 68H012B1 - 1132R
L4C381	PGA 68H012B1 - 1132R
LMA1009	PGA 68H012B1 - 1132R
LMA1010	PGA 68H012B1 - 1132R
LMU12	PGA 68H012B1 - 1132R
LRF08	PGA 68H012B1 - 1132R
LRF08G	PGA 68H012B1 - 1132R
LSH32	PGA 68H012B1 - 1132R
LMU18	PGA 85H012B1 - 1107R
LSI LOGIC	
FG100	PGA 101H012B1 - 1345R
FD120	PGA 121H012B1 - 1312R
FE144	PGA 148H012B1 - 1520R
FF180	PGA 181H008B5 - 1592R
FC84	PGA 85H012B1 - 1107R
FH132	PGA 132H012B1 - 1414R
L64032	PGA 132H012B1 - 1414R
LCA10000	PGA 225H008B5 - 1804R
L64811	PGA 207M009B5 - 1760R
L64841	PGA 143M003B1 - 15A7R
L64815	PGA 224H008B5 - 1804R
L65850	PGA 223H008B5 - 1819R
L64852	PGA 223H008B5 - 1819R
L64801	PGA 185H008B5 - 1510R
L64851	PGA 180H008B5 - 1506R
LR3000GC-16	PGA 145H012B1 - 1521R
LR2000GM-16	PGA 145H012B1 - 1521R
LR3000GC-20	PGA 145H012B1 - 1521R
LR3000GC-25	PGA 145H012B1 - 1521R
LR3000AHM-20	PGA 175M009B5 - 15A5R
LR3000AHC-25	PGA 175M009B5 - 15A5R
LR3000AHC-33	PGA 175M009B5 - 15A5R
XX-R4000	PZA 447H509B - 39AC
MIPS COMPUTER SYSTEMS	
R3000	PGA 145H012B1 - 1521R
R3000A	PGA 175H008B5 - 1608R
R6000	PGA 259M009B5-1828R
R4000SC,MC	PZA 447H509B- 39AC
R4000PC	PGA 179H008B5 - 1836R
MITSUBISHI	
M33210GS-20/FP-20	PGA 135H012B1 - 1458R
M33220GS-20	PGA 135H012B1 - 1458R
M33230GS-20	PGA 179M009B5 - 1844R
M33241GS	PGA 179H008B5 - 1510R
M33245GS	PGA 135H012B1 - 1458R
M33281GS-20	PGA 135H012B1 - 1458R
MONOLITHIC MEMORIES	
545556	PGA 88H012B1 - 1327R
745556	PGA 88H012B1 - 1327R
PAL32R16	PGA 88H012B1 - 1327R
PAL64R32	PGA 88H012B1 - 1327R
MOSTEK	
GA3000D	PGA 101H012B1 - 1345R
GA4000D	PGA 121H012B1 - 1312R
GB6000D	PGA S145H012B1 - 1521R
GB8000D	PGA 181H008B5 - 1592R
GB10000D	PGA 209H008B5 - 1725R
50294-0001	PGA 84H012B1 - 1015R
68200	PGA 85H012B1 - 1107R
GA2000D	PGA 85H012B1 - 1107R
MOTOROLA	
DSP96002	PGA 223H008B5 - 1838R
DSP56001	PGA 88H012B1 - 13D5R
DSP56002	PGA 88H012B1 - 13D5R
68020	PGA 114H012B1 - 1340R
MCA-2900ETL	PGA 124H012B1 - 1308R
68030	PGA 128H012B1 - 13B8R
68851	PGA 132H012B1 - 1367R
MCA2500ECL	PGA 148H012B1 - 1520R
68461	PGA 149H012B1 - 1517R
MCA2500	PGA 149H012B1 - 1517R
MCA2800	PGA 149H012B1 - 1517R
MCA2800ALS	PGA 149H012B1 - 1517R
88100	PGA 181H008B5 - 1738R
68010	PGA 68H012B1 - 1005R
68360	PGA 241H009B5 - 1849R
68440	PGA 68H012B1 - 1005R
68442	PGA 68H012B1 - 1005R
68450	PGA 68H012B1 - 1005R
68451	PGA 68H012B1 - 1005R
68881	PGA 68H012B1 - 1005R
68000	PGA 68H012B1 - 1005R
MCA1200ECL	PGA 72H012B1 - 1123R

DEVICE #	MCKENZIE SOCKET
MCA-600ECL	PGA 72H012B1 - 1123R
68012	PGA 84H012B1 - 1002R
68605	PGA 84H012B1 - 1002R
68824	PGA 84H012B1 - 1002R
XSP56001R20	PGA 88H012B1 - 13D5R
MC68020	PGA 68H008B5 - 1005R
MC68060	PGA 206H008B5 - 1854R
MC68LC060	PGA 206H008B5 - 1854R
MC68EC060	PGA 206H008B5 - 1854R
MC68EC040	PGA 179H008B5 - 1836R
MC68EN360	PGA 241H008B5 - 1849R
MC68EC030	PGA 124H008B5 - 1308
68040	PGA 179H008B5 - 1836R
NATIONAL SEMICONDUCTOR	
DP 8025	PGA 175H008B5 - 1404R
MCA1500M	PGA 124H012B1 - 1308R
MCA2800ALS	PGA 124H012B1 - 1308R
N124A	PGA 124H012B1 - 1308R
MCA2500ECL	PGA 149H012B1 - 1517R
MCA1300ALS	PGA 84H012B1 - 1002R
MCA2800ALS	PGA 84H012B1 - 1002R
SCX6200	PGA 84H012B1 - 1002R
NS32532-20	PGA 175H008B5 - 1608R
NS32532-25	PGA 175H008B5 - 1608R
NS32532-30	PGA 175H008B5 - 1608R
NS32332-10	PGA 84H012B1 - 1354R
NS32332-15	PGA 84H012B1 - 1354R
NS32382-10	PGA 125M003B1 - 1466R
NS32382-15	PGA 125M003B1 - 1466R
NS32580-20	PGA 172M009B5 - 1593R
NS32580-25	PGA 172M009B5 - 1593R
NS32580-30	PGA 172M009B5 - 1593R
U84B	PGA 84H012B1 - 1002R
NEC	
NC4000	PGA 124H012B1 - 1308R
VR4200	PGA 179H0085B - 1836R
VR4000PC	PGA 179H008B5 - 1836R
VR4000SC	PZA 447H011A - 39AC
VR4400PC	PGA 179H008B5 - 1836R
VR4400MC	PZA 447H011A - 39AC
VR4400SC	PZA 447H011A - 39AC
XX-R4000	PZA 447H509B-39AC
NEXGEN	
NxVL	PZA 401H509B - 37AG
Nx586	PZA 463H011A - 37AT
OKI SEMICONDUCTOR	
MSM6992AS	PGA 132H012B1 - 1414R
MSM6992HAS	PGA 132H012B1 - 1414R
10V0262	PGA 133H012B1 - 1412R
10V0304	PGA 133H012B1 - 1412R
10V0416	PGA 133H012B1 - 1412R
10V0416	PGA 177H008B5 - 1551R
10V0604	PGA 208H008B5 - 1740R
10V0604	PGA 177H008B5 - 1551R
10V0604	PGA 133H012B1 - 1412R

DEVICE #	MCKENZIE SOCKET
10V0826	PGA 208H008B5 - 1740R
10V0826	PGA 177H008B5 - 1551R
10V0826	PGA 133H012B1 - 1412R
10V1005	PGA 208H008B5 - 1740R
10V1005	PGA 177H008B5 - 1551R
10V1005	PGA 133H012B1 - 1412R
75H000	PGA 133H012B1 - 1412R
75HB000	PGA 133H012B1 - 1412R
75V000	PGA 133H012B1 - 1412R
76H000	PGA 133H012B1 - 1412R
76V000	PGA 133H012B1 - 1412R
77H000	PGA 133H012B1 - 1412R
77H000	PGA 177H008B5 - 1551R
77V00	PGA 177H008B5 - 1551R
77V000	PGA 133H012B1 - 1412R
78H000	PGA 177H008B5 - 1551R
78H000	PGA 133H012B1 - 1412R
78H000	PGA 208H008B5 - 1740R
78V000	PGA 177H008B5 - 1551R
78V000	PGA 133H012B1 - 1412R
78V000	PGA 208H008B5 - 1740R
7U060	PGA 133H012B1 - 1412R
7U081	PGA 133H012B1 - 1412R
7U100	PGA 133H012B1 - 1412R
7U150	PGA 133H012B1 - 1412R
7U150	PGA 177H008B5 - 1551R
7U150	PGA 208H008B5 - 1740R
7U200	PGA 133H012B1 - 1412R
7U200	PGA 177H008B5 - 1551R
7U200	PGA 208H008B5 - 1740R
7U300	PGA 133H012B1 - 1412R
7U300	PGA 177H008B5 - 1551R
7U300	PGA 208H008B5 - 1740R
SIEMENS	
R4000SC	PZA 447H509B-39AC
R4000SC	PGA 179H008B5 - 1836R
SABR3000A-25	PGA 145H012B1 - 1521R
SABR3000A-40	PGA 175H008B5 - 1608R
SAB82258A-40	PGA 68H012B1 - 1132R
SUN MICROSYSTEMS	
SPARC	PGA 257H008B5 - 1915R
SUPER SPARC	PGA 383H008B5 - 2205R
TEXAS INSTRUMENTS	
TMP68H000Y	PGA 68H012B1 - 1005R
TMP68000YC	PGA 68H012B1 1005R
TMS320C40	PZA 325H011A - 35AA
TMS320C80	PZA 305H011A - 35AN
TOSHIBA	
TMS320C25	PZA 325H509B-35AA
XX-R4000	PZA 447H509B-39AC
TC85R4000PC	PGA 179H008B5 - 1836
TC85R4000SC	PZA 447H011A - 39AC
TC85R4400PC	PGA 179H008B5 - 1836
TC86R4400PC	PGA 179H008B5 - 1836
TC85R4400SC	PZA 447H011A - 39AC

DEVICE #	MCKENZIE SOCKET
TC86R4400SC	PZA 447H011A - 39AC
TC85R4400MC	PZA 447H011A - 39AC
TC86R4400MC	PZA 447H011A - 39AC
TC86R4600-100	PGA 179H008B5 - 1836
TRW	
TDC1033	PGA 128HH012B1-1327R
TDC1042	PGA 88H012B1 - 1009R
TMC2301	PGA 120H012B1 - 1314R
VITESSE	
VSC 4500	PGA 149H012B1 - 1517R
VSC 5K	PGA 149H012B1 - 1517R
VSC 10K	PGA 211M009B5 -1772R
VSC 15K	PGA 211M009B5 -1772R
WEITEK	
1232	PGA 68H012B1 - 1132R
1233	PGA 68H012B1 - 1132R
2010	PGA 68H012B1 - 1132R
2264	PGA 144H012B1 - 1523R
2265	PGA 144H012B1 - 1523R
7137	PGA 144H012B1 - 1523R
WTL1010	PGA 68H012B1 - 1132R
WTL1064	PGA 149H012B1 - 1517R
WTL1065	PGA 149H012B1 - 1517R
WTL1164	PGA 68H012B1 - 1132R
WTL1165	PGA 68H012B1 - 1132R
WTL1516A	PGA 68H012B1 - 1132R
WTL1516B	PGA 68H012B1 - 1132R
WHITE MICROELECTRONICS	
WF1024K32 - XHX	PGA 66M003B1 - 11A9
XILINX	
XC2018-100PG84X	PGA 84H012B1 - 1109R
XC2018-33PG84X	PGA 84H012B1 - 1109R
XC2018-50PG84X	PGA 84H012B1 - 1109R
XC2018-70PG84X	PGA 84H012B1 - 1109R
XC2064-100PG68X	PGA 68H012B1 - 1132R
XC2064-33PG68X	PGA 68H012B1 - 1132R
XC2064-50PG68X	PGA 68H012B1 - 1132R
XC2064-70PG68X	PGA 68H012B1 - 1132R
XC3020-100PG84X	PGA 84H012B1 - 1109R
XC3030-100PG84X	PGA 84H012B1 - 1109R
XC3042-100PG132X	PGA 132H012B1 - 1414R
XC3042-100PG84X	PGA 84H012B1 - 1109R
XC3042-100PP132X	PGA 132H012B1 - 1414R
XC3042-50PG84X	PGA 84H012B1 - 1109R
XC3042-50PP132X	PGA 132H012B1 - 1414R
XC3042-70PG132X	PGA 132H012B1 - 1414R
XC3042-70PG84X	PGA 84H012B1 - 1109R
XC3042-70PP132X	PGA 132H012B1 - 1414R
XC3064-100PG132X	PGA 132H012B1 - 1414R
XC3064-100PP132X	PGA 132H012B1 - 1414R
XC3064-50PG132X	PGA 132H012B1 - 1414R
XC3090-100PG175X	PGA 175H008B5 - 1608R
XC3090-50PG175X	PGA 175H008B5 - 1608R
XC3090-70PG175X	PGA 175H008B5 - 1608R
XC3100A	PGA 156H008B5 - 1611

F

BERG ELECTRONICS

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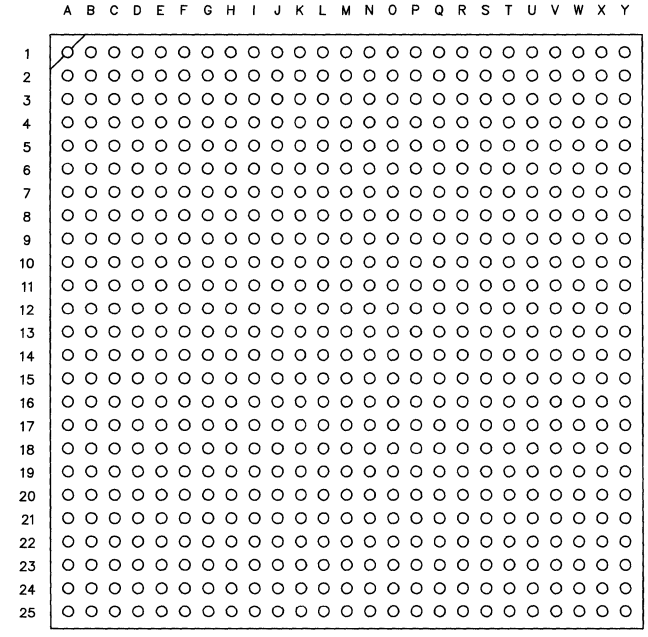
Customer Worksheet

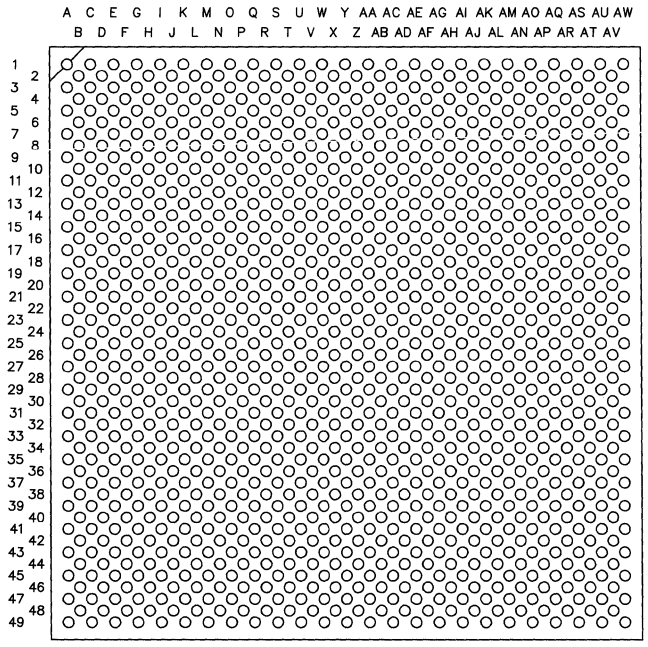
Fax us at (510) 651-1020 (day or night) for quick engineering evaluation samples and quotation

(As viewed from top of sockets)

PGA/.100 PROGRESSION



PZA/INTERSTITIAL PROGRESSION



LEGEND:

- O Blank or empty position
- ● Shade in each contact position

All McKenzie MOLDED SOCKETS ® RECOGNIZED

Device Mfg/Type*_____
**Include Mfg.'s footprint or datasheet if available*

Pin Count_____Lead Dim._____

PCB Thickness ❑ .062" (1,57) ❑ .090" (2,29) ❑ _____

❑ Soldertail or ❑ Wire wrap (❑ 2 LVL ❑ 3 LVL)

Specify contact style** _____
***See pg. F2-F3 for standard contacts, or section A for other options*

Printed Circuit Board PTH Size_____

Insulator Material:

❑ Standard Molded Thermoplastic, UL 94V-0
❑ Hi-Temp Molded Thermoplastic, UL 94V-0
❑ FR4 Glass Epoxy, UL 94V-0
❑ Disposable Plastic Pin Carrier (PPC or HPC)

Soldering Temp/Time_____°F /_____sec.
Continuous Operating Temp_____°F

Preferred Center Style: ❑ Hole (ventilated) see example*
❑ Solid Center ❑ Stand Offs (❑ Bottom ❑ Top)

Est. monthly production qty.:_____Starting:_____

Requested by _____

Title _____

Address _____

_____

City/State/Zip _____

Phone _____Fax _____

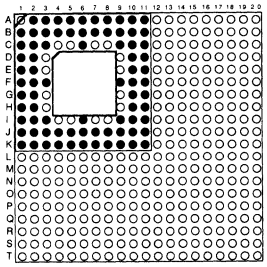
Notes_____

_____

_____

_____

***EXAMPLE:**



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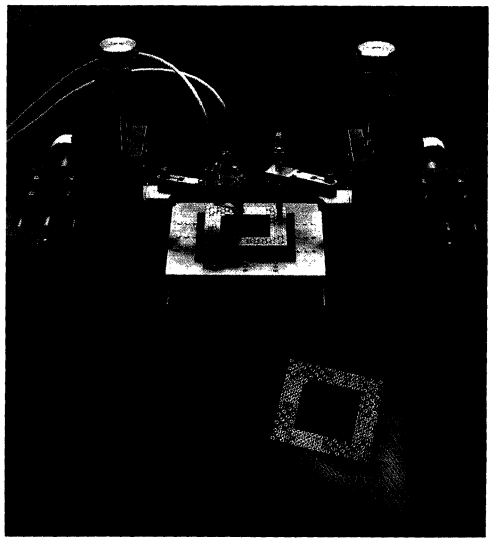
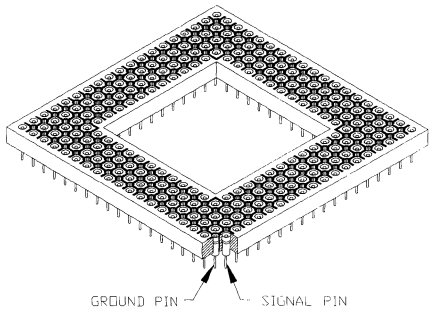
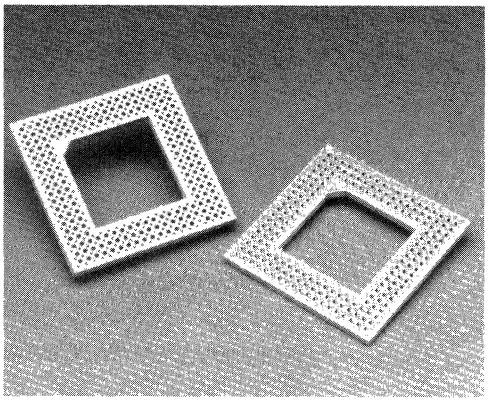


Features

- Designed for today's high speed integrated circuits.
- Reduces cross talk, controls impedance and protects signal integrity.
- Tunable to the characteristic impedance of the signal line.
- Ultra low insertion force (ULIF) screw machine contacts used for high reliability and managed mating force.

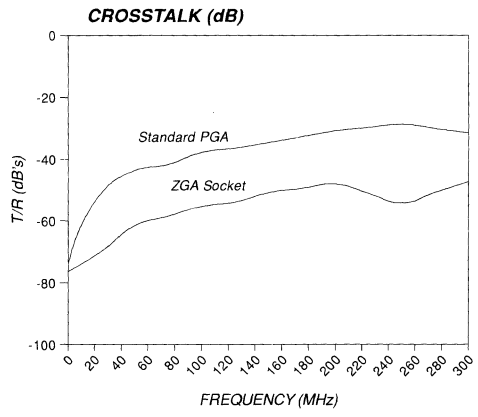


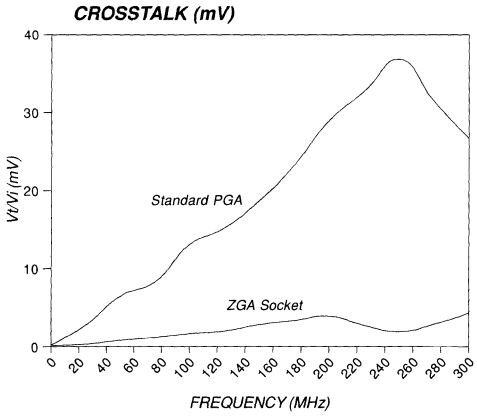


Example of metallization pattern between the socket ground plane and the signal contact position

- Ground planes are plated on the top and bottom surface of the socket. The ground plane patterns encircle each contact and are connected through the body of the socket by plated through holes.
- To "tune" the socket to the particular electrical characteristics and net list of the matching device, the ground planes are extended to connect to contacts which house ground pins from the device and the distance between the ground plane pattern and the contacts which house critical signal pins is varied.
- Part Number for Intel Pentium™ CPU socket:
  ZGA 273H509B-2119-002
  Part Number for Intel i486™ CPU socket:
  ZGA 273H509B-2119-004
- **Consult factory for further information and to discuss ZGA sockets for your particular processor.**

F





Plots of crosstalk measurements taken over a bandwidth of 300MHz

BERG ELECTRONICS

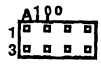
mck McKenzie Socket Division

See page F5 and F6 for the industry's most effective PGA Extraction Tools.

3 x 3 ARRAYS

DIMENSIONS: **SOCKETS** .350" square (8,89)mm square — **PPC™ CARRIERS** .300" square (7,62)mm square

09M 0301



08S 0310

08M 0302

06M 0303

06M 0304

04M 0305

4 x 4 ARRAYS

DIMENSIONS: **SOCKETS** .450" square (11,43)mm square — **PPC™ CARRIERS** .400" square (10,16)mm square

16M 0401

12M 0408

12M 0402

12M 0403

08M 0404

08M 0405

08M 0406

04M 0407

5 x 5 ARRAYS

DIMENSIONS: **SOCKETS** .550" square (13,97)mm square — **PPC™ CARRIERS** .500" square (12,70)mm square

25M 0501

24M 0502

23M 0515

22M 0503

21M 0516

21M 0512

21M 0509

20M 0514

20M 0513

20M 0506

20M 0507

16M 0508

16M 0505

15M 0511

12M 0504

10M 0510

MOLDED SOCKETS

RECOGNIZED

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Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

PGA-68H 003B1-1132

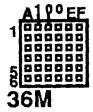
Pin Count

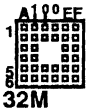
Center Configuration

Pattern Number

6 x 6 ARRAYS

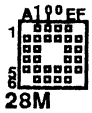
DIMENSIONS: **SOCKETS** .650" square (16,51)mm square; **PPC™ CARRIERS** .600" square (15,24)mm square


36M 0601

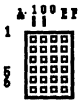

32M 0604

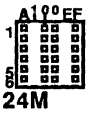

30M 0609


29M 0608

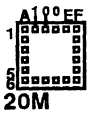

28M 0605


28S 0606


26M 0607

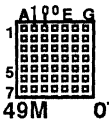

24M 0603

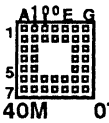

24M 0607

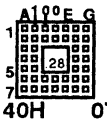

20M 0602

7 x 7 ARRAYS

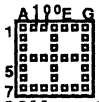
DIMENSIONS: **SOCKETS** .750" square (19,05)mm square; **PPC™ CARRIERS** .700" square (17,78)mm square

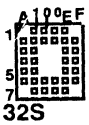

49M 0701

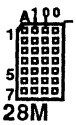

40M 0703

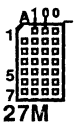

40H 0702

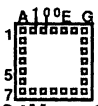

36M 0712

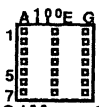

33M 0709


32S 0710

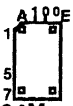

28M 0704


27M 0705


24M 0707

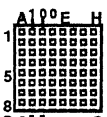

21M 0708

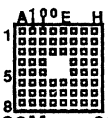

04H 0711

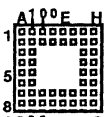

04M 0706

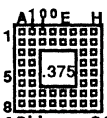
8 x 8 ARRAYS

DIMENSIONS: **SOCKETS** .850" square (21,59)mm square; **PPC™ CARRIERS** .800" square (20,32)mm square

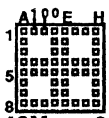

64M 0801

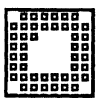

60M 0807

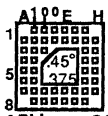

48M 0805



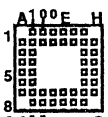
48H 0810

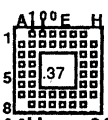

48M 0808


45M 0813

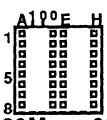


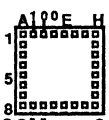
45H 0811

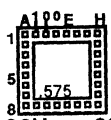

44M 0803



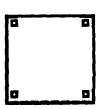
44H 0802

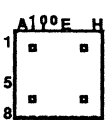

32M 0806


28M 0804



28H 0812


04M 0814


04M 0809

F

BERG ELECTRONICS

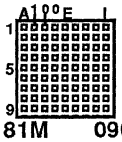
mck McKenzie Socket Division

Sockets from the industry's source!
Widest variety of contact styles - over 140 contact options listed in Section A.

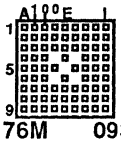
9 x 9 ARRAYS

DIMENSIONS:

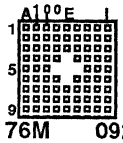
	SOCKETS	PPC™ CARRIERS
	.950" square	.900" square
	(24,13)mm square	(22,86)mm square



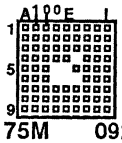
81M 0901



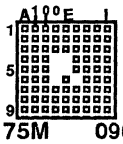
76M 0939



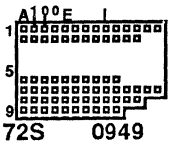
76M 0921



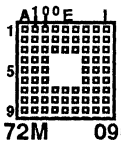
75M 0928



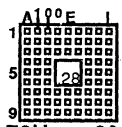
75M 0902



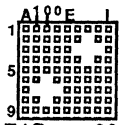
72S 0949



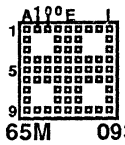
72M 0904



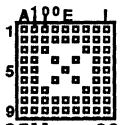
72H 0903



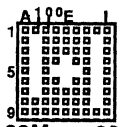
71S 0937



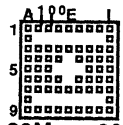
65M 0934



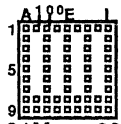
65M 0905



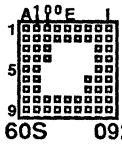
63M 0920



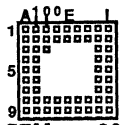
62M 0919



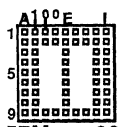
61M 0918



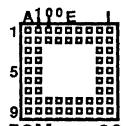
60S 0922



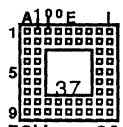
57M 0927



57M 0906



56M 0908



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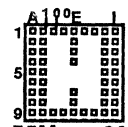

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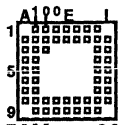
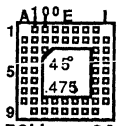


53M 0930



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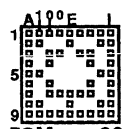

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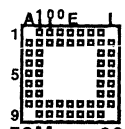

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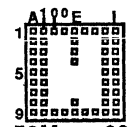

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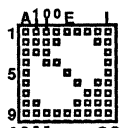

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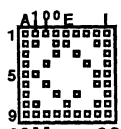

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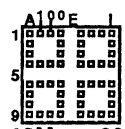

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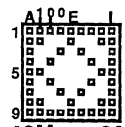

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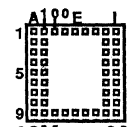

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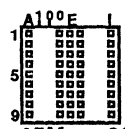

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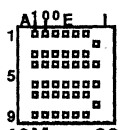

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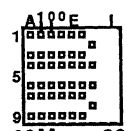
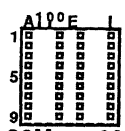
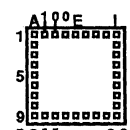


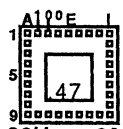
40M 0912



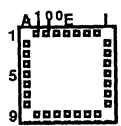
36M 0932



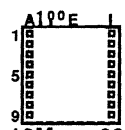
32M 0914



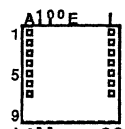
32H 0913



28M 0916



18M 0931



14M 0936

MOLDED SOCKETS

RECOGNIZED

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

PGA-68H 003B1-1132

Pin Count

Center Configuration

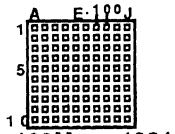
Pattern Number

DIMENSIONS:

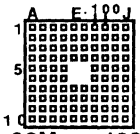
SOCKETS
1.050" square
(26,67)mm square

PPC™ CARRIERS
1.000" square
(25,40)mm square

10 x 10 ARRAYS



100M 1001



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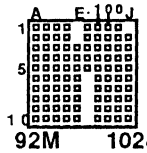
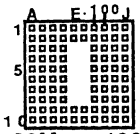
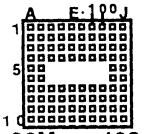


92M 1028



88M 1022



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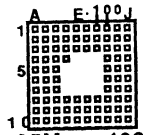

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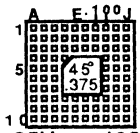
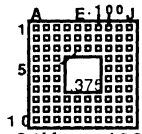
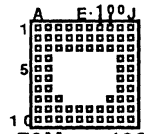


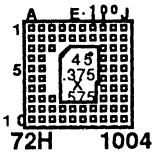
85H 1030



84H 1002



72M 1023



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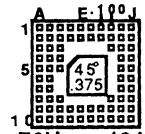
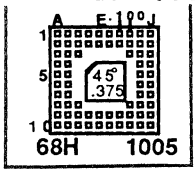
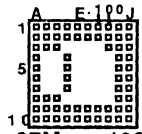


70H 1013

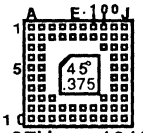
MOTOROLA 68000



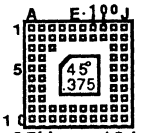
68H 1005



67M 1024



67H 1012



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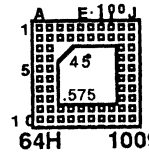

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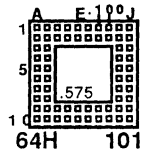
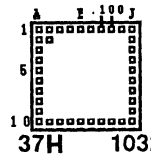
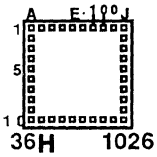


64H 1011



37H 1032



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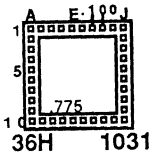

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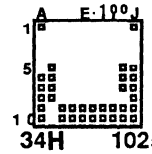

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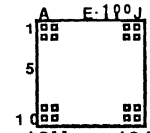
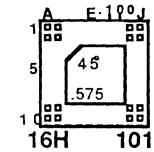
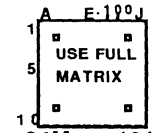


16H 1017



16H 1016



04M 1018

All McKenzie Molded Sockets

® Recognized

F

BERG ELECTRONICS

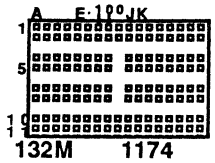
mck McKenzie Socket Division

Select PPC™ (disposable carrier system) Sockets for low profile PGA applications.

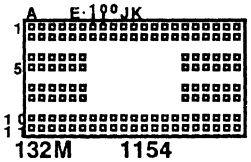
11 x 11 ARRAYS

DIMENSIONS:

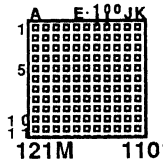
	SOCKETS	PPC™ CARRIERS
	1.150" square	1.100" square
	(29,21)mm square	(27,94)mm square



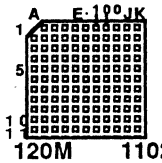
132M 1174



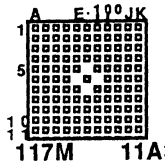
132M 1154



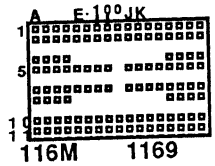
121M 1101



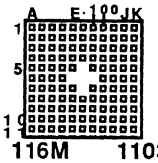
120M 1102



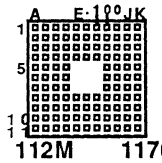
117M 11A3



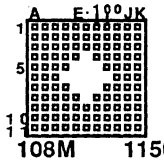
116M 1169



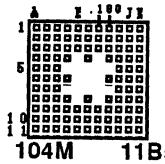
116M 1103



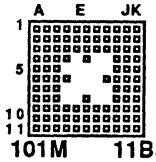
112M 1176



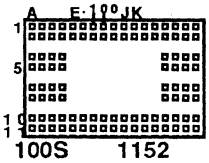
108M 1150



104M 11B5



101M 11B5



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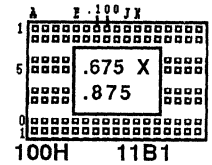

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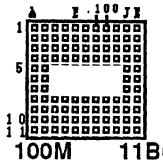

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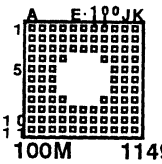

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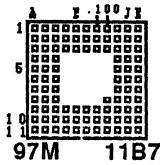
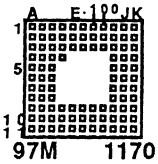
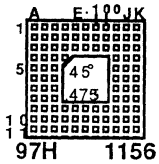


97M 11B7



97M 1170



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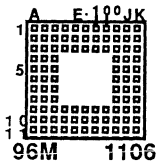

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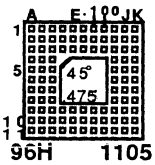

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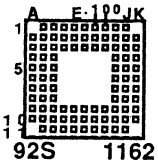

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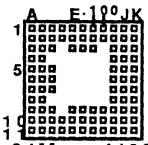
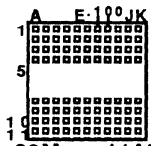
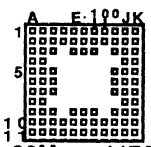


91M 1192



88M 11A7



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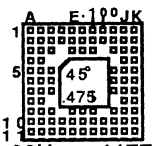

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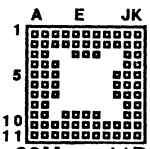

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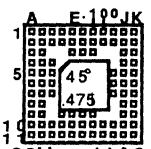

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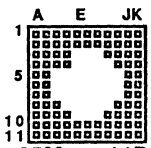

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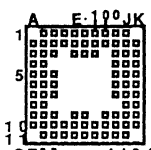

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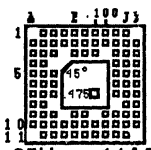

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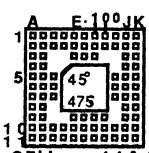

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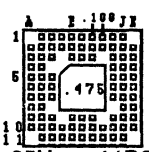

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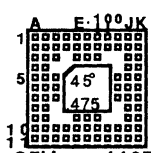

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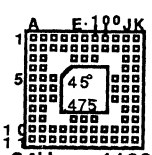

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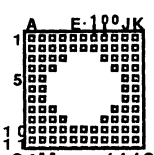

84M 1112

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Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS Optional FR4 on request.

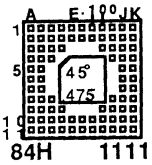
See page F2 for ordering information

PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:

	SOCKETS	PPC™ CARRIERS
	1.150" square	1.100" square
	(29,21)mm square	(27,94)mm square

11 x 11 ARRAYS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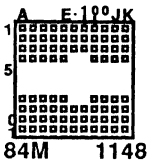
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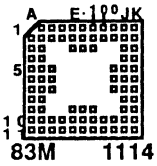
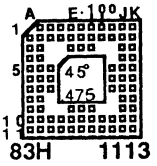

83M 1114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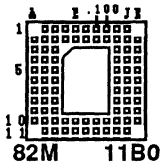
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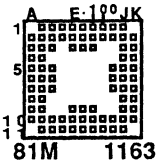
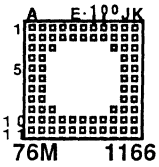

81M 1163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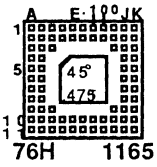
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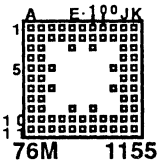
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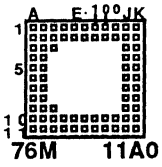
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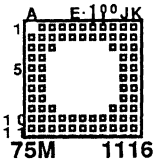
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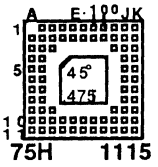
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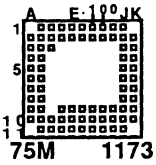
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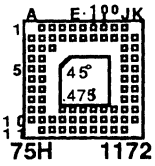
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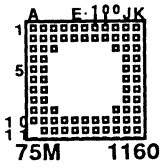
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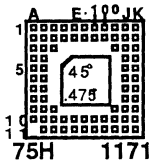
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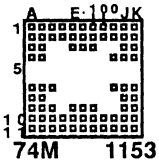
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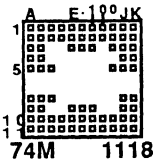
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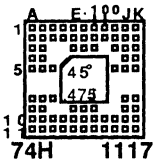
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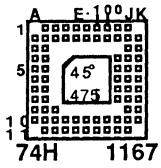
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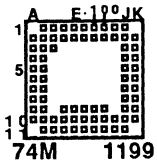
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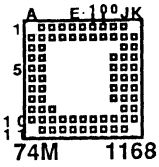
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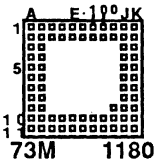
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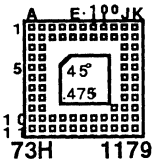
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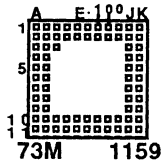
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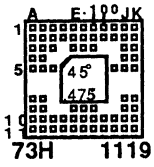
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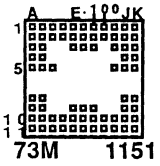
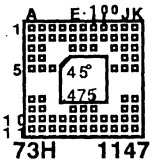

73M 1151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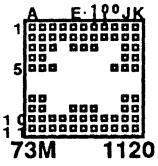
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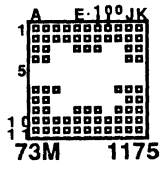
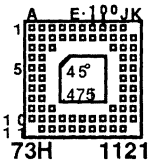

73M 1175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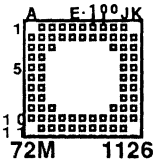
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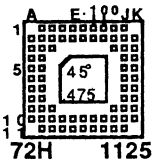
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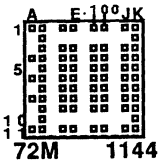
72M 1144

F

BERG ELECTRONICS

mck McKenzie Socket Division

Decoupling Capacitor Sockets manufactured to your specifications.
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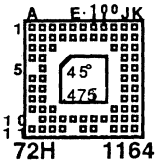
11 x 11 ARRAYS

DIMENSIONS:

	SOCKETS	PPC™ CARRIERS
	1.150" square (29,21)mm square	1.100" square (27,94)mm square



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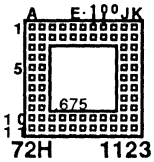

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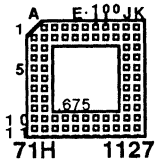
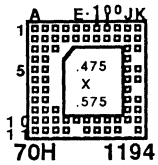


71H 1127



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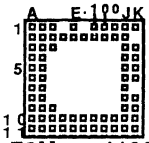

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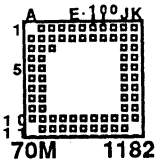
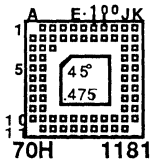


70M 1182



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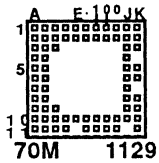

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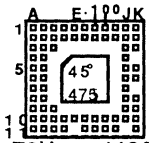

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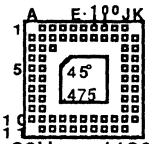

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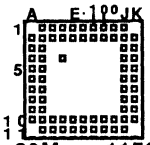

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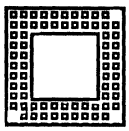
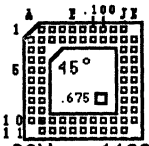

69H 11B8

(Intel 80387™)



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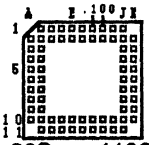
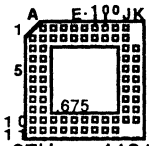
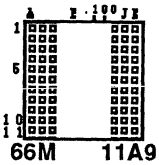

68S 1133



67H 1134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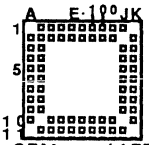

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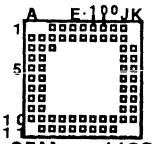

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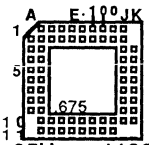

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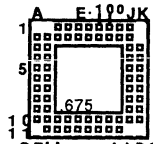

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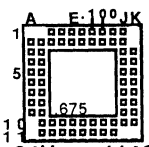

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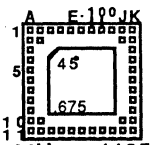

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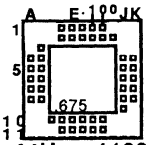

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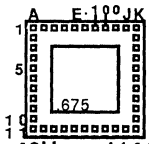

40H 1141

All McKenzie Molded Sockets

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Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

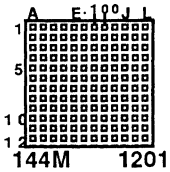
See page F2 for ordering information

PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:

SOCKETS	PPC™ CARRIERS
1.250" square	1.200" square
(31,75)mm square	(30,48)mm square

12 x 12 ARRAYS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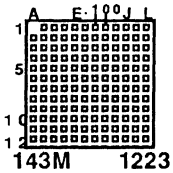
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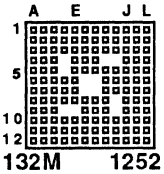
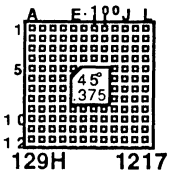
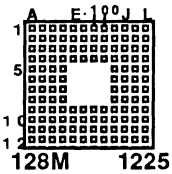

132M 1252



129H 1217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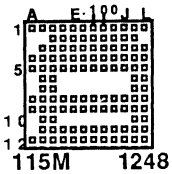
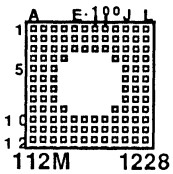
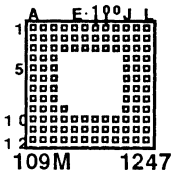

115M 1248


112M 1228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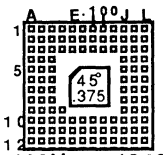

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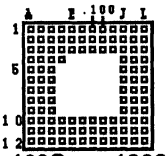
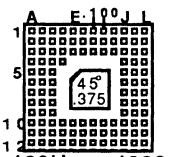

109S 1203



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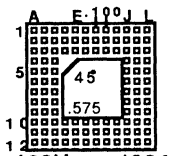
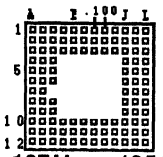


108H 1204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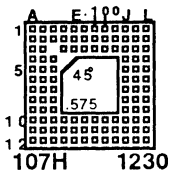

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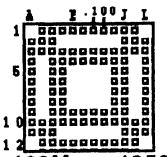
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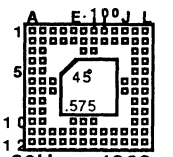

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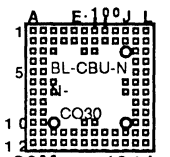

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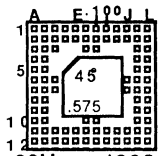

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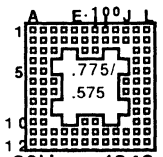

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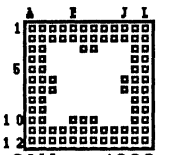
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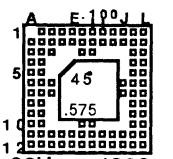

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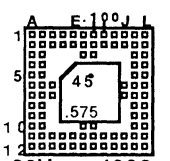

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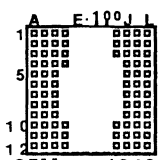
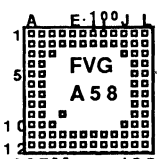
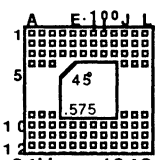
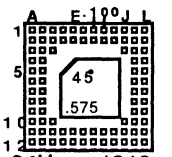

85M 1249



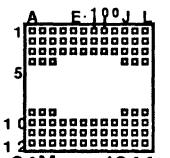
085M 1234

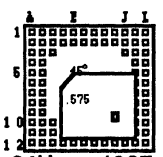


84H 1243

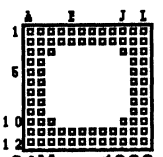


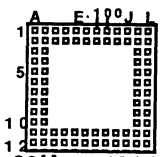
84H 1212

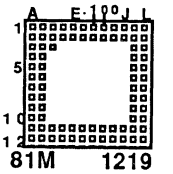

84M 1244

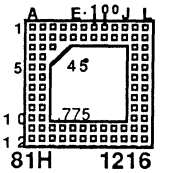


84H 1237

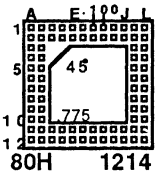

84M 1238


80H 1215

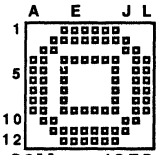

81M 1219

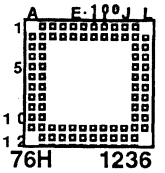


81H 1216



80H 1214


80M 1253


76H 1236

F

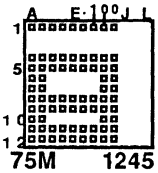
See page F5 and F6 for the industry's most effective PGA Extraction Tools.

12 x 12 ARRAYS

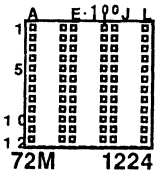
DIMENSIONS:

SOCKETS
1.250" square
(31,75)mm square

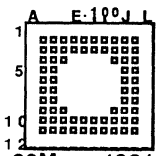
PPC™ CARRIERS
1.200" square
(30,48)mm square



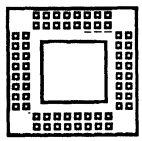
75M 1245

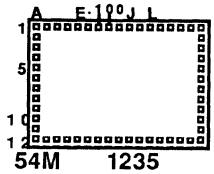


72M 1224

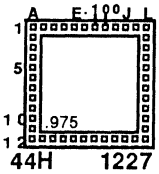


68M 1231

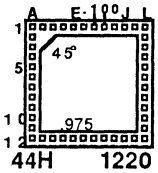

64H 1254



54M 1235



44H 1227



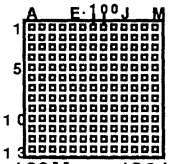
44H 1220

13 x 13 ARRAYS

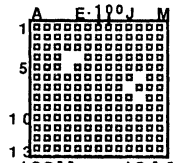
DIMENSIONS:

SOCKETS
1.350" square
(34,29)mm square

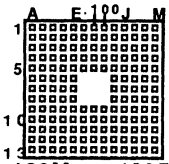
PPC™ CARRIERS
1.300" square
(33,02)mm square



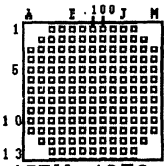
169M 1301



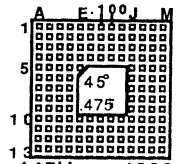
163M 13A9



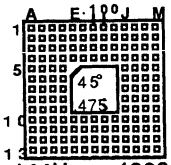
160M 1395



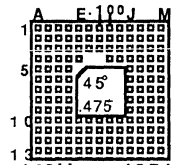
157M 13E8



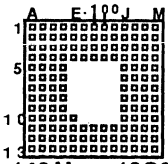
145H 1369



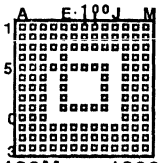
144H 1302



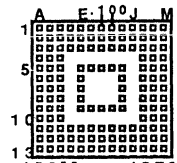
142H 1351



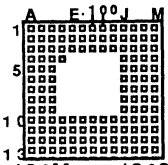
140H 13C0



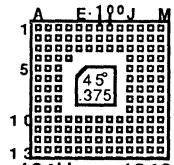
138M 1360



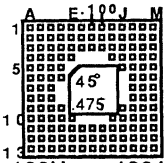
136M 1359



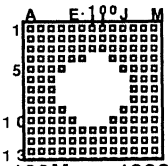
134M 1348



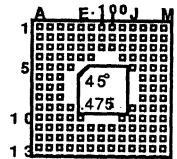
134H 1349



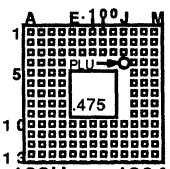
133H 1381



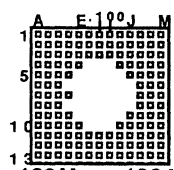
133M 1386



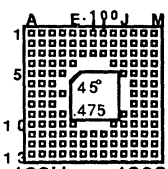
133H 1385



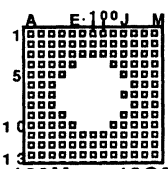
133H 1304



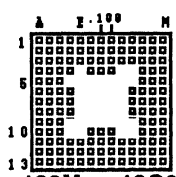
133H 1384



133H 1383



133M 13C9



133M 13G0

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

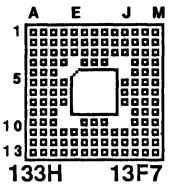
See page F2 for ordering information

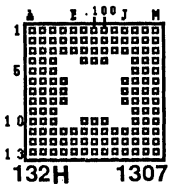
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

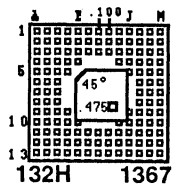
DIMENSIONS:

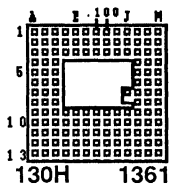
	SOCKETS	PPC™ CARRIERS
	1.350" square	1.300" square
	(34,29)mm square	(33,02)mm square

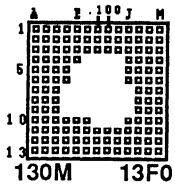
13 x 13 ARRAYS

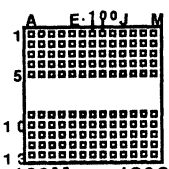

133H 13F7

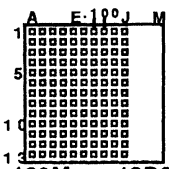

132H 1307

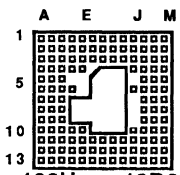

132H 1367

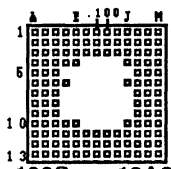

130H 1361

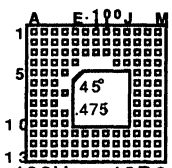

130M 13F0

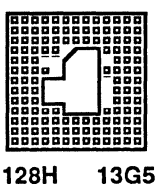

130M 1398

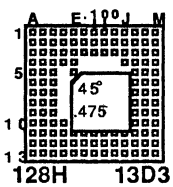

130M 13B2

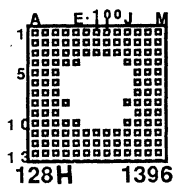

128H 13B8

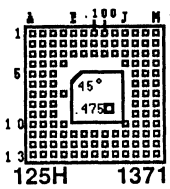

128S 13A3

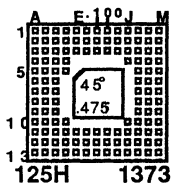

128H 13D0

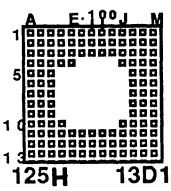

128H 13G5

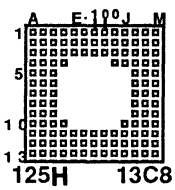

128H 13D3

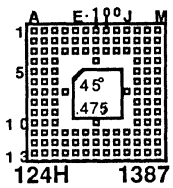

128H 1396

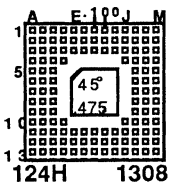

125H 1371

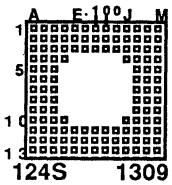

125H 1373

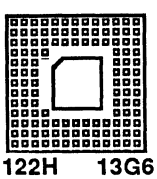

125H 13D1

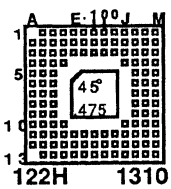

125H 13C8

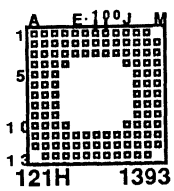

124H 1387

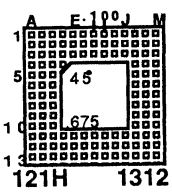

124H 1308

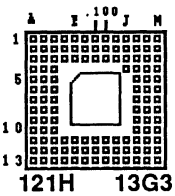

124S 1309


122H 13G6


122H 1310


121H 1393


121H 1312


121H 13G3

F

BERG ELECTRONICS

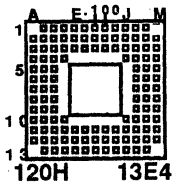
mck McKenzie Socket Division

Sockets from the industry's source!
Widest variety of contact styles - over 140 contact options listed in Section A.

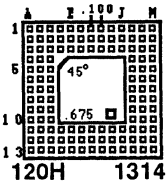
13 x 13 ARRAYS

DIMENSIONS:

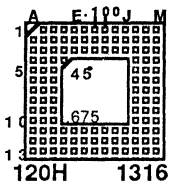
	SOCKETS	PPC™ CARRIERS
	1.350" square	1.300" square
	(34,29)mm square	(33,02)mm square



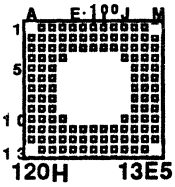
120H 13E4



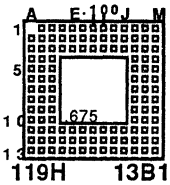
120H 1314



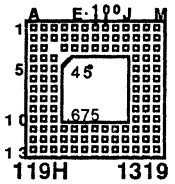
120H 1316



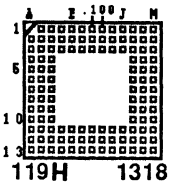
120H 13E5



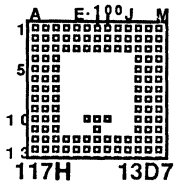
119H 13B1



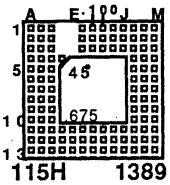
119H 1319



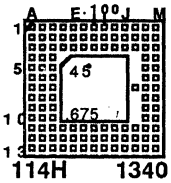
119H 1318



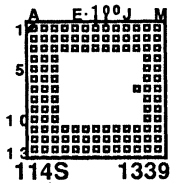
117H 13D7



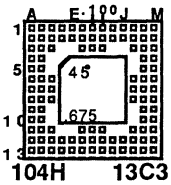
115H 1389



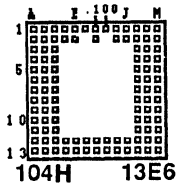
114H 1340



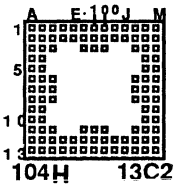
114S 1339



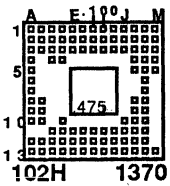
104H 13C3



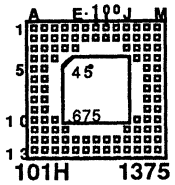
104H 13E6



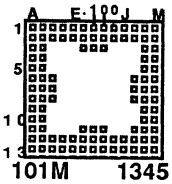
104H 13C2



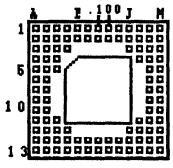
102H 1370



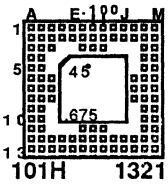
101H 1375



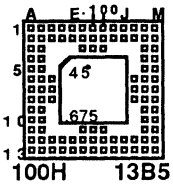
101M 1345



101H 13G2



101H 1321



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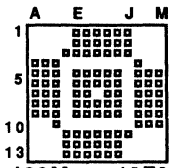

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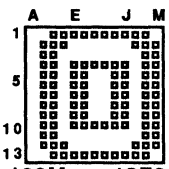
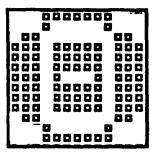


100M 13F8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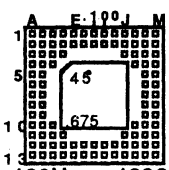


100H 1323

All McKenzie Molded Sockets

® Recognized

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

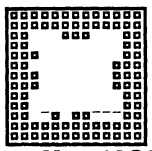
See page F2 for ordering information

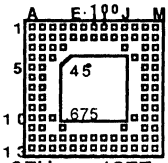
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:

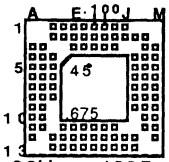
SOCKETS	PPC™ CARRIERS
1.350" square	1.300" square
(34,29)mm square	(33,02)mm square

13 x 13 ARRAYS

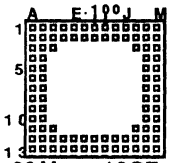

100M 13G8

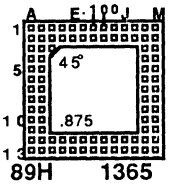


97H 1377

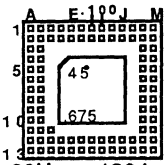


96H 1325

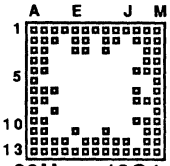

92H 13C7

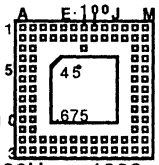


89H 1365



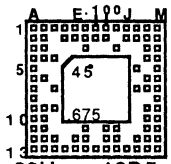
89H 1391


89H 13G1

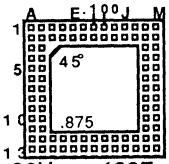


89H 1363

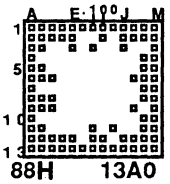
MOTOROLA
56001



88H 13D5



88H 1327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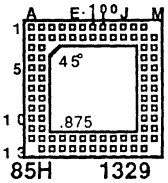
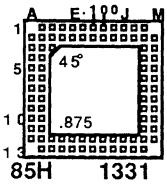
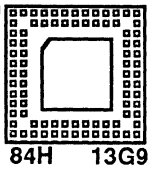
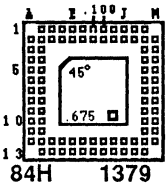


85H 1329

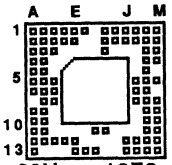


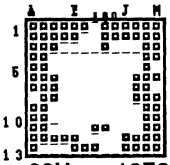
85H 1331

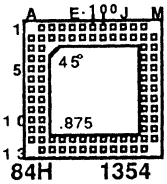

84H 13G9



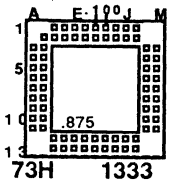
84H 1379


83H 13F6

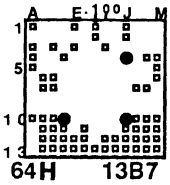

83H 13F6

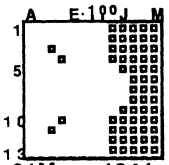


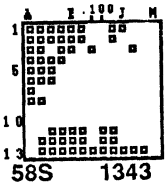
84H 1354

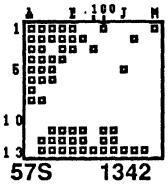


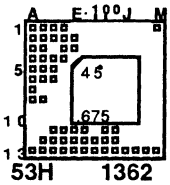
73H 1333


64H 13B7

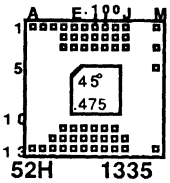

61M 1341


58S 1343


57S 1342



53H 1362



52H 1335

F

BERG ELECTRONICS

mck McKenzie Socket Division

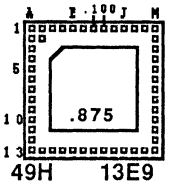
Select PPC™ (disposable carrier system) Sockets for low profile PGA applications.

13 x 13 ARRAYS

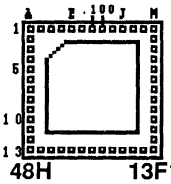
DIMENSIONS:

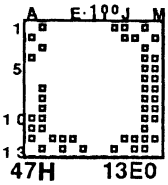
SOCKETS
1.350" square
(34,29)mm square

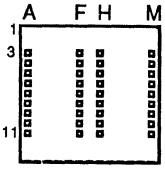
PPC™ CARRIERS
1.300" square
(33,02)mm square

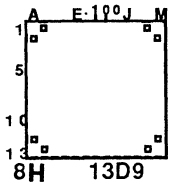


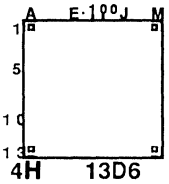
49H 13E9


48H 13F1


47H 13E0


36M 13G7


8H 13D9

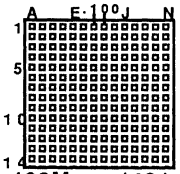

4H 13D6

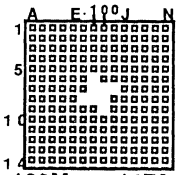
14 x 14 ARRAYS

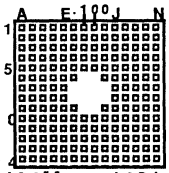
DIMENSIONS:

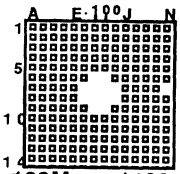
SOCKETS
1.450" square
(36,83)mm square

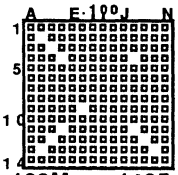
PPC™ CARRIERS
1.400" square
(35,56)mm square

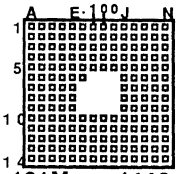

196M 1401

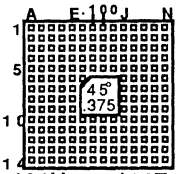

188M 1479


184M 1461

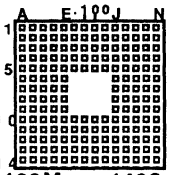

183M 1462

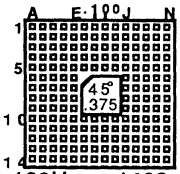

183M 1465


181M 1446

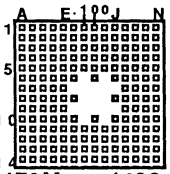


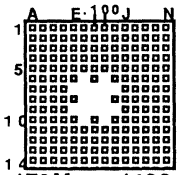
181H 1447

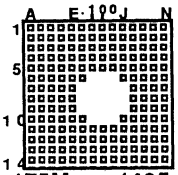

180M 1403

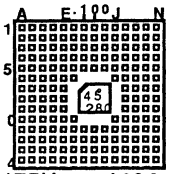


180H 1402

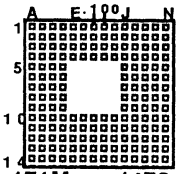

179M 1420

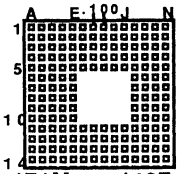

179M 1423


175M 1405



175H 1404


171M 1473


171M 1407

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

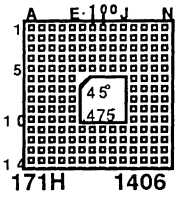
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:

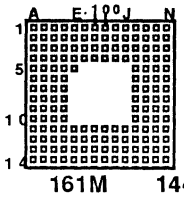
SOCKETS
1.450" square
(36,83)mm square

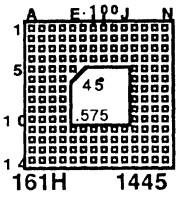
PPC™ CARRIERS
1.400" square
(35,56)mm square

14 x 14 ARRAYS

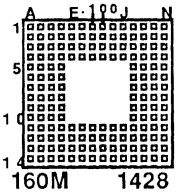


171H 1406


161M 1444



161H 1445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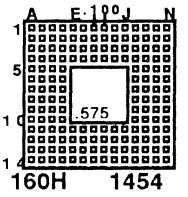
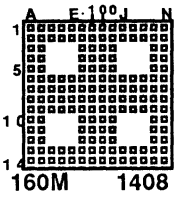
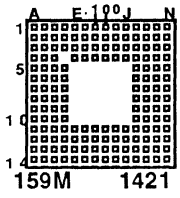


160H 1454


160M 1408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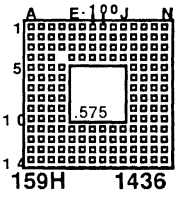

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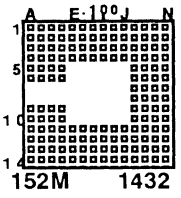
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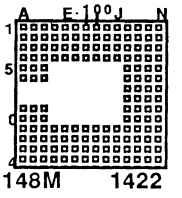
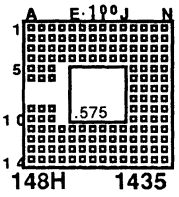
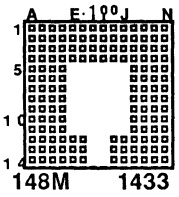
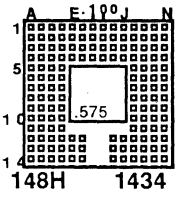

148M 1422

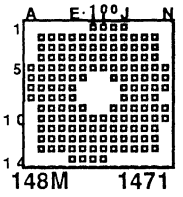


148H 1435


148M 1433



148H 1434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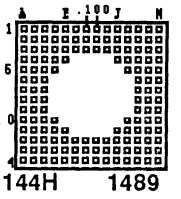
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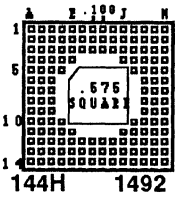

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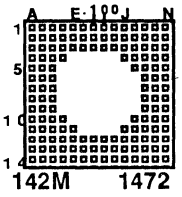
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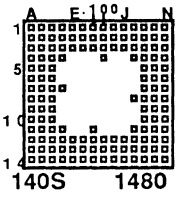
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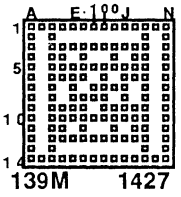
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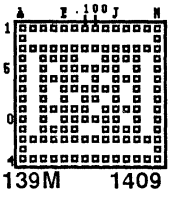
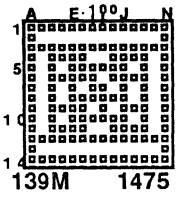

139M 1409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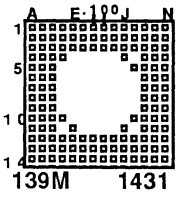
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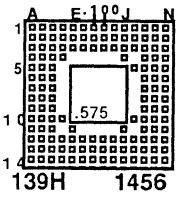

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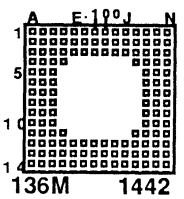
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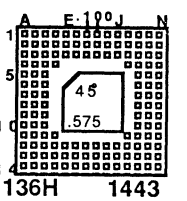

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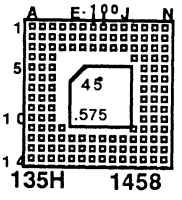

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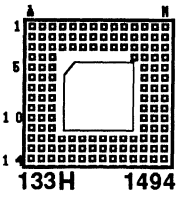
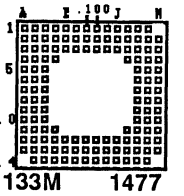

133H 1494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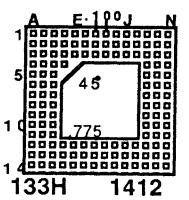

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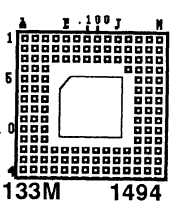

133M 1494

F

BERG ELECTRONICS

mck McKenzie Socket Division

Decoupling Capacitor Sockets manufactured to your specifications. Fax us your requirements today.

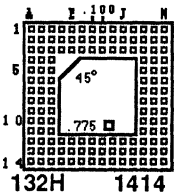
14 x 14 ARRAYS

DIMENSIONS:

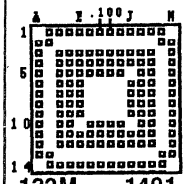
SOCKETS
1.450" square
(36,83)mm square

PPC™ CARRIERS
1.400" square
(35,56)mm square

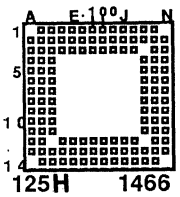
(Intel 80386™)



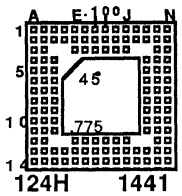
132H 1414



132M 1491



125H 1466



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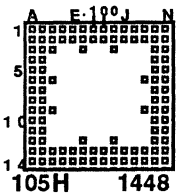
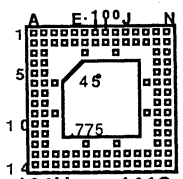
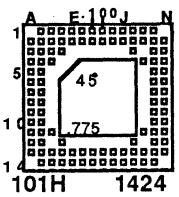


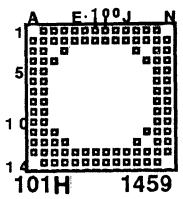
105H 1448



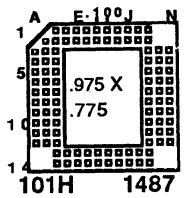
104H 1416



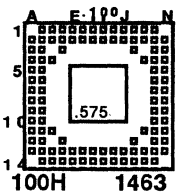
101H 1424



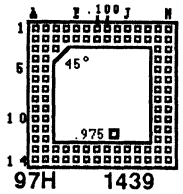
101H 1459



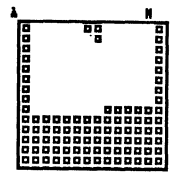
101H 1487



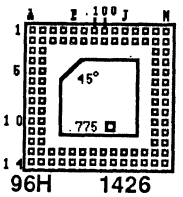
100H 1463



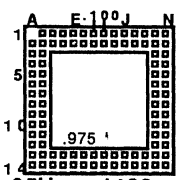
97H 1439



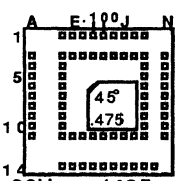
96M 1495



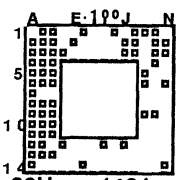
96H 1426



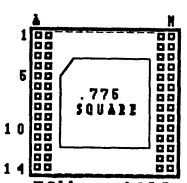
95H 1468



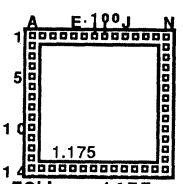
68H 1425



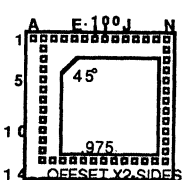
62H 1481



56H 1493



52H 1455



49H 1418

All McKenzie Molded Sockets

® Recognized

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

PGA-68H 003B1-1132

Pin Count

Center Configuration

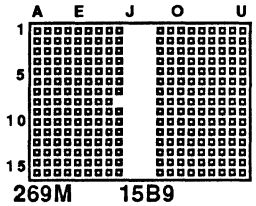
Pattern Number

DIMENSIONS:

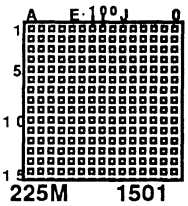
SOCKETS
1.550" square
(39,37)mm square

PPC™ CARRIERS
1.500" square
(38,10)mm square

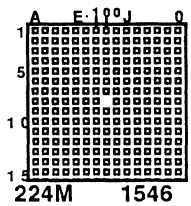
15 x 15 ARRAYS



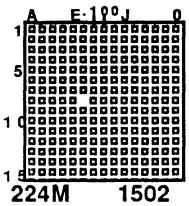
269M 15B9



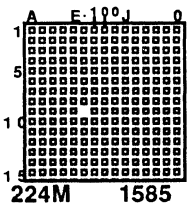
225M 1501



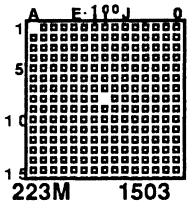
224M 1546



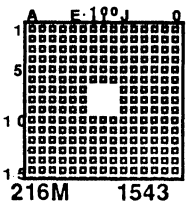
224M 1502



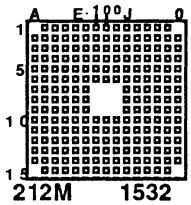
224M 1585



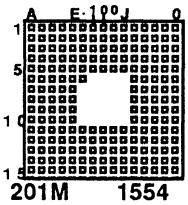
223M 1503



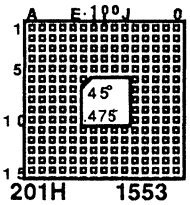
216M 1543



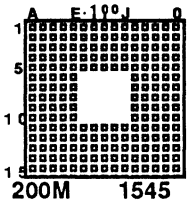
212M 1532



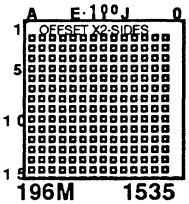
201M 1554



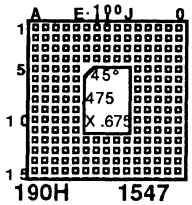
201H 1553



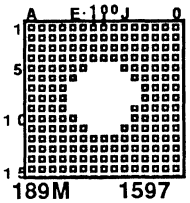
200M 1545



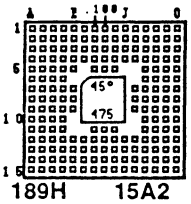
196M 1535



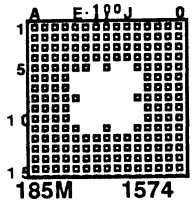
190H 1547



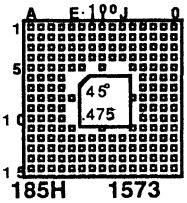
189M 1597



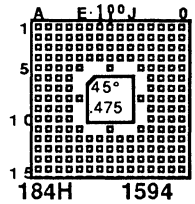
189H 15A2



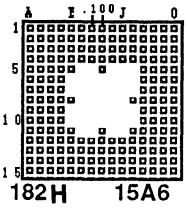
185M 1574



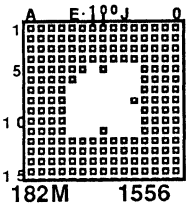
185H 1573



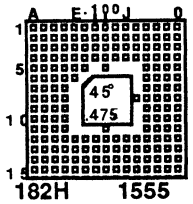
184H 1594



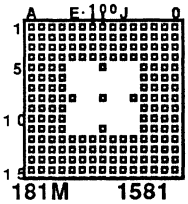
182H 15A6



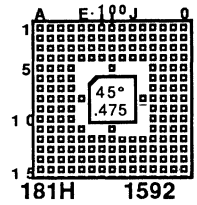
182M 1556



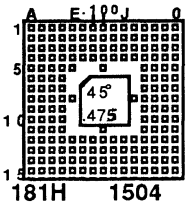
182H 1555



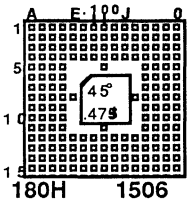
181M 1581



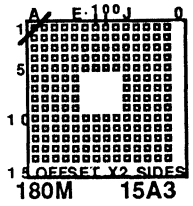
181H 1592



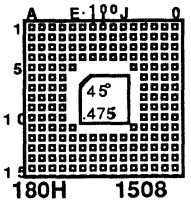
181H 1504



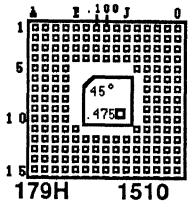
180H 1506



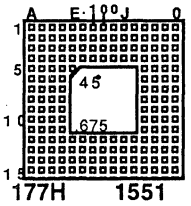
180M 15A3



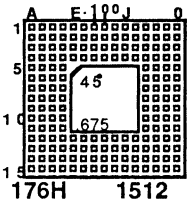
180H 1508



179H 1510



177H 1551



176H 1512

F

BERG ELECTRONICS

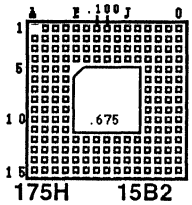
mck McKenzie Socket Division

See page F5 and F6 for the industry's most effective PGA Extraction Tools.

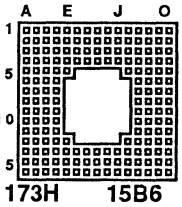
15 x 15 ARRAYS

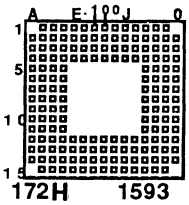
DIMENSIONS:

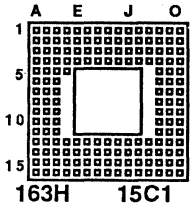
	SOCKETS	PPC™ CARRIERS
	1.550" square	1.500" square
	(39,37)mm square	(38,10)mm square

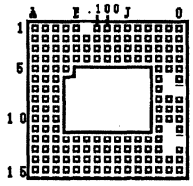


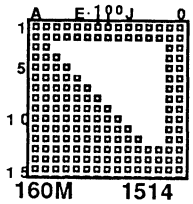
175H 15B2

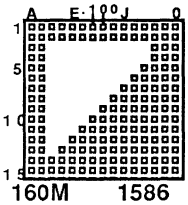

173H 15B6

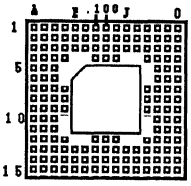

172H 1593

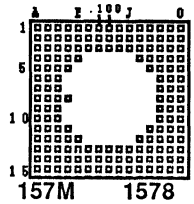

163H 15C1

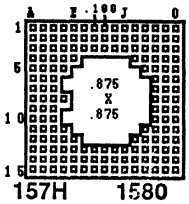

163H 15B7


160M 1514

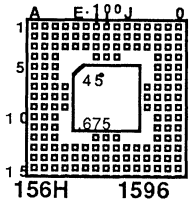

160M 1586


160H 15C3

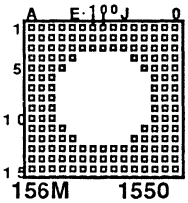

157M 1578

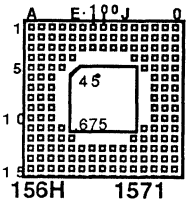


157H 1580

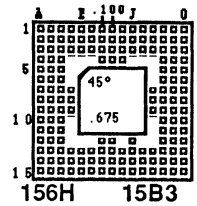


156H 1596

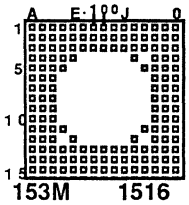

156M 1550

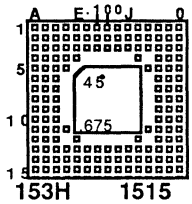


156H 1571

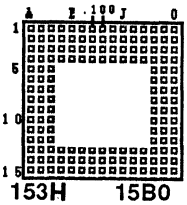


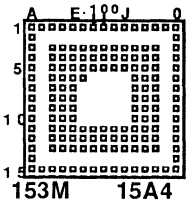
156H 15B3

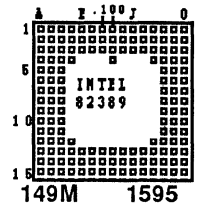

153M 1516



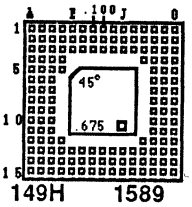
153H 1515


153H 15B0

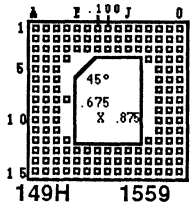

153M 15A4



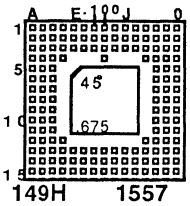
149M 1595



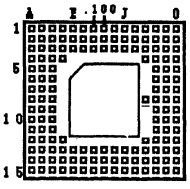
149H 1589

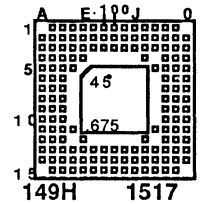


149H 1559

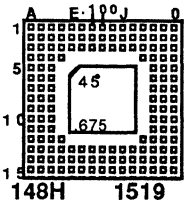


149H 1557

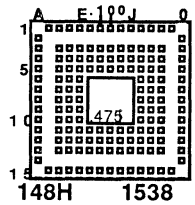

149H 15C2



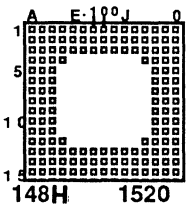
149H 1517

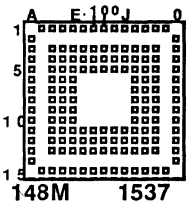


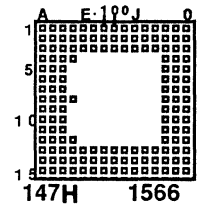
148H 1519

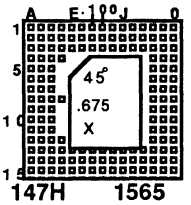


148H 1538


148H 1520


148M 1537


147H 1566



147H 1565

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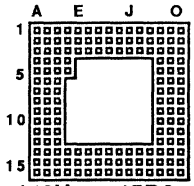
Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

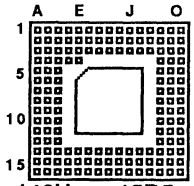
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:
SOCKETS 1.550" square (39,37)mm square
PPC™ CARRIERS 1.500" square (38,10)mm square

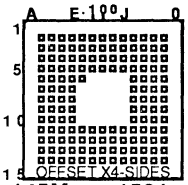
15 x 15 ARRAYS



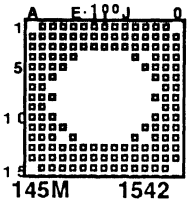
146H 15B8



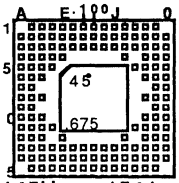
146H 15B5



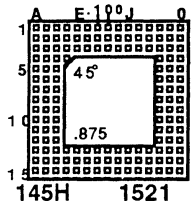
145M 1561



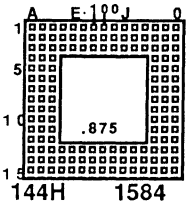
145M 1542



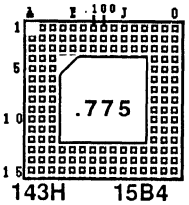
145H 1541



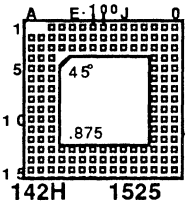
145H 1521



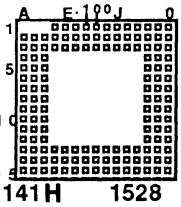
144H 1584



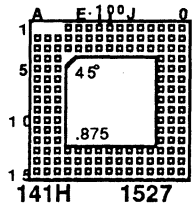
143H 15B4



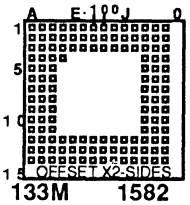
142H 1525



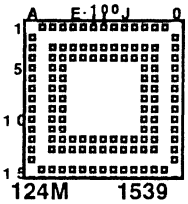
141H 1528



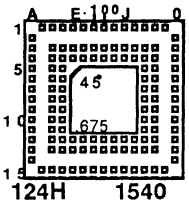
141H 1527



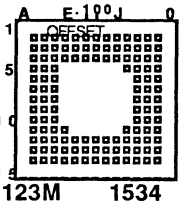
133M 1582



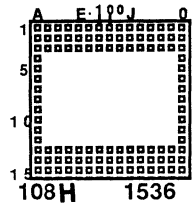
124M 1539



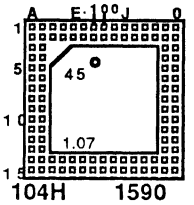
124H 1540



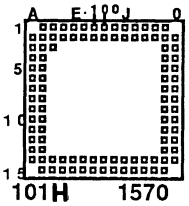
123M 1534



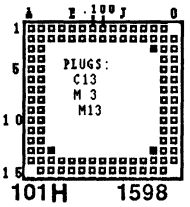
108H 1536



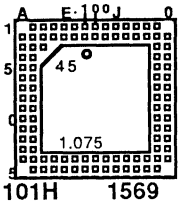
104H 1590



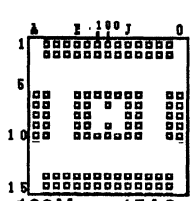
101H 1570



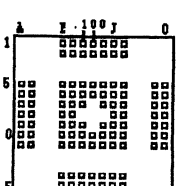
101H 1598



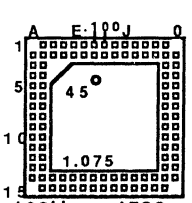
101H 1569



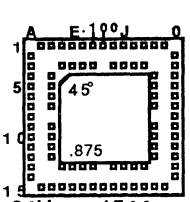
100M 15A9



100M 15B1



100H 1529



84H 1544

F

BERG ELECTRONICS

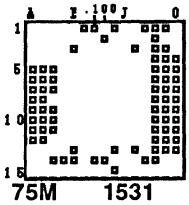
mck McKenzie Socket Division

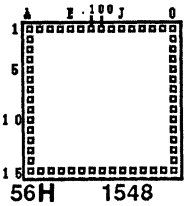
Sockets from the industry's source!
Widest variety of contact styles - over 140 contact options listed in Section A.

15 x 15 ARRAYS

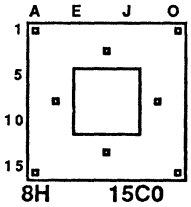
DIMENSIONS:

SOCKETS	PPC™ CARRIERS
1.550" square	1.500" square
(39,37)mm square	(38,10)mm square


75M 1531


56H 1548

8M 15A0

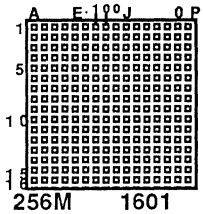


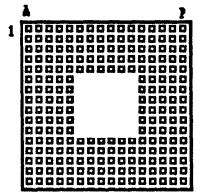
8H 15C0

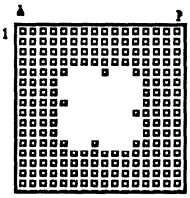
16 x 16 ARRAYS

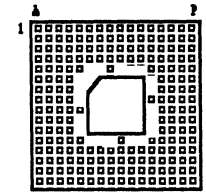
DIMENSIONS:

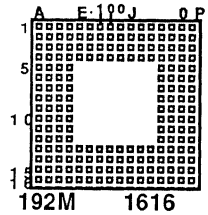
SOCKETS	PPC™ CARRIERS
1.650" square	1.600" square
(41,91)mm square	(40,64)mm square

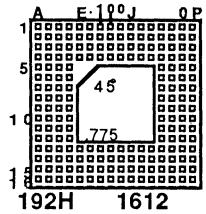

256M 1601


220M 1639

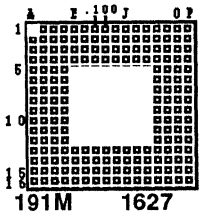

200M 1641

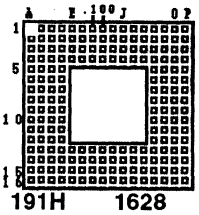

200H 1640

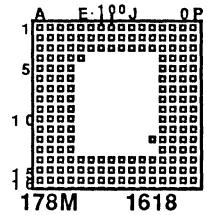

192M 1616

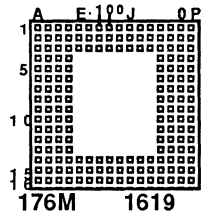


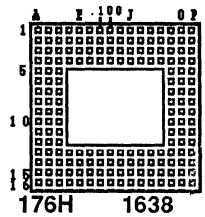
192H 1612


191M 1627

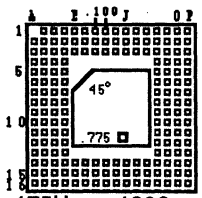

191H 1628


178M 1618

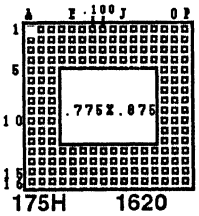

176M 1619


176H 1638

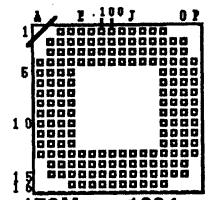
(NS32532)



175H 1608



175H 1620


173M 1624

MOLDED SOCKETS

RECOGNIZED

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Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

PGA-68H 0.03E1-1132

Pin Count

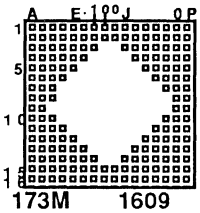
Center Configuration

Pattern Number

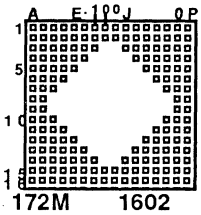
DIMENSIONS:

	SOCKETS	PPC™ CARRIERS
	1.650" square	1.600" square
	(41,91)mm square	(40,64)mm square

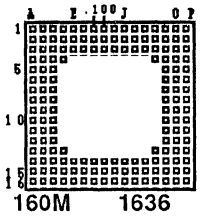
16 x 16 ARRAYS



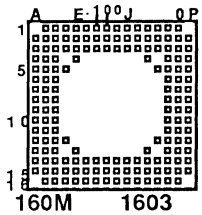
173M 1609



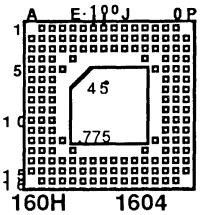
172M 1602



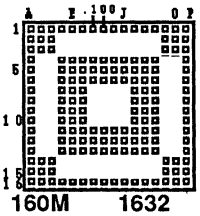
160M 1636



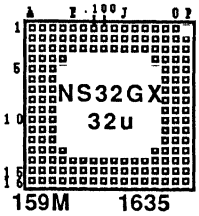
160M 1603



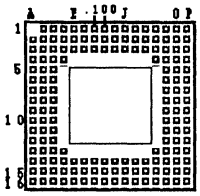
160H 1604



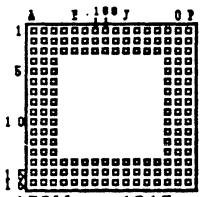
160M 1632



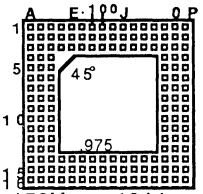
159M 1635



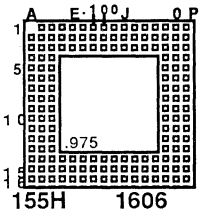
159H 1637



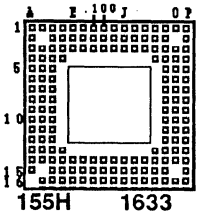
156M 1615



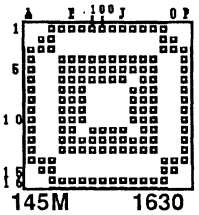
156H 1611



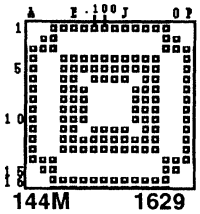
155H 1606



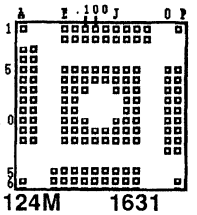
155H 1633



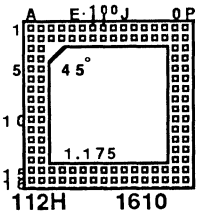
145M 1630



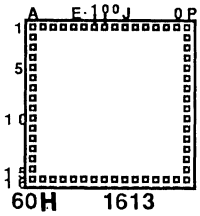
144M 1629



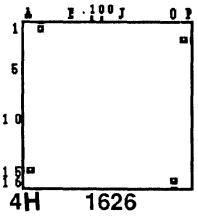
124M 1631



112H 1610



60H 1613



4H 1626

MOLDED INSULATORS

RECOGNIZED

F

BERG ELECTRONICS

mck McKenzie Socket Division

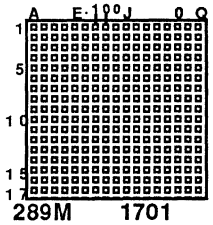
RISC Sockets immediately available

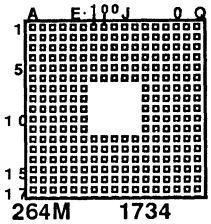
17 x 17 ARRAYS

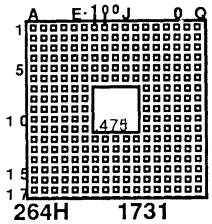
DIMENSIONS:

SOCKETS
1.750" square
(44,45)mm square

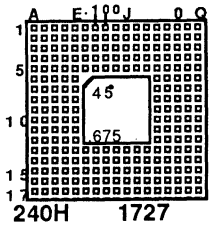
PPC™ CARRIERS
1.700" square
(43,18)mm square


289M 1701

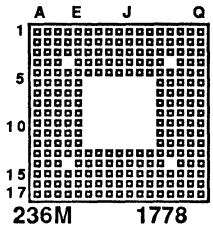

264M 1734

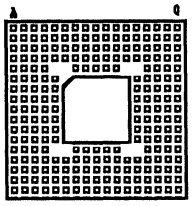


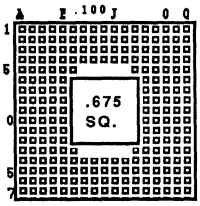
264H 1731



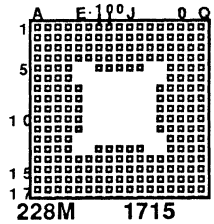
240H 1727

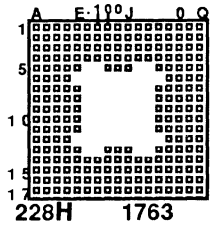

236M 1778

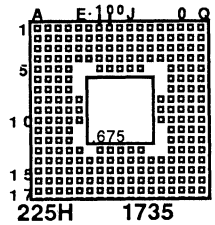

232H 1790



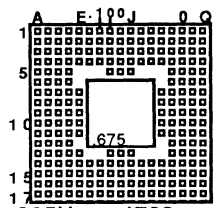
230H 1784


228M 1715

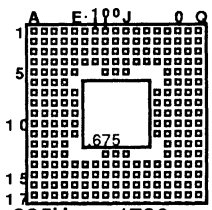

228H 1763



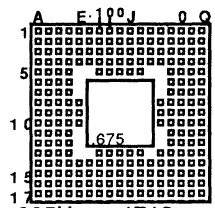
225H 1735



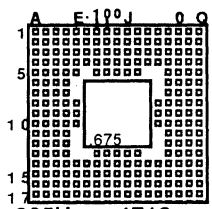
225H 1732



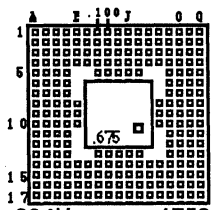
225H 1729



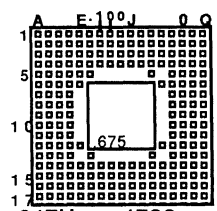
225H 1713



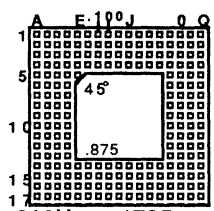
225H 1716



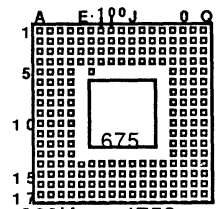
224H 1752



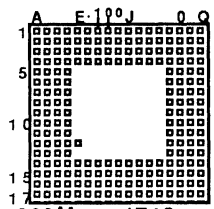
217H 1736

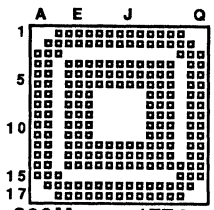


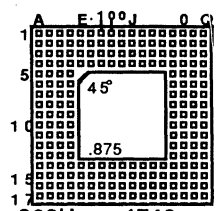
209H 1725



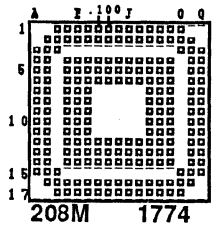
209H 1753

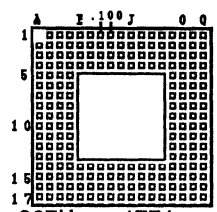

209H 1746

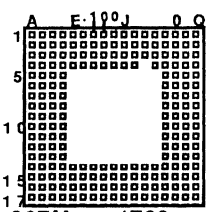

209M 1774

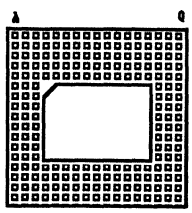


208H 1740


208M 1774


207H 1771


207H 1762


201H 1791

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F2 for ordering information

PGA-68H 003B1-1132

Pin Count

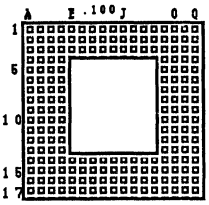
Center Configuration

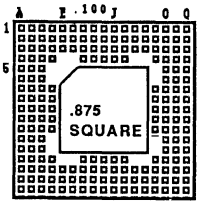
Pattern Number

DIMENSIONS:

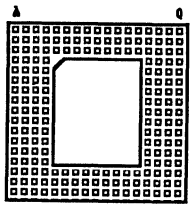
SOCKETS	PPC™ CARRIERS
1.750" square	1.700" square
(44,45)mm square	(43,18)mm square

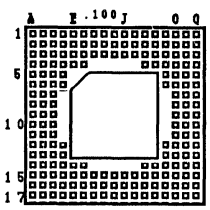
17 x 17 ARRAYS

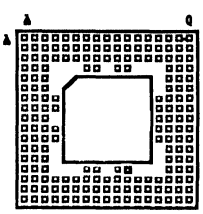

199H 1782

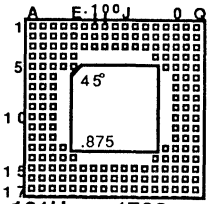


192H 1781

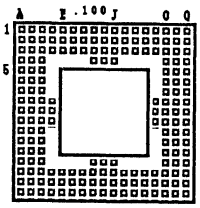

190H 1793

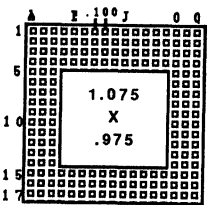

188H 1783


185H 1787

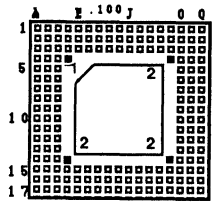


181H 1738


180H 1786

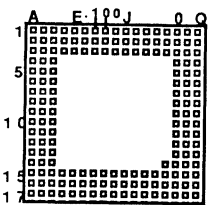


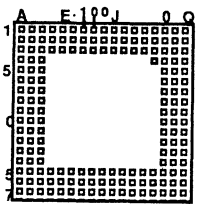
PGA 179H 1765



171H 1777

1. EMPTY HOLE.NO CONTACT
2. POLARITY PLUG


169H 1745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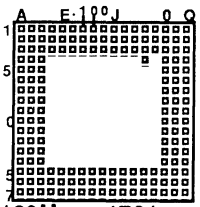
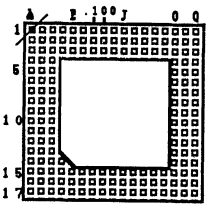
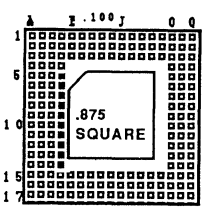
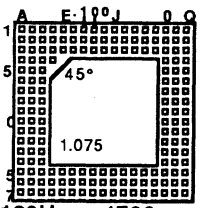

169H 1761


169H 1770

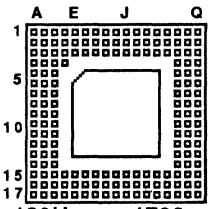


169H 1780

■ SOLID SECTION



169H 1709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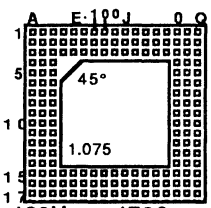
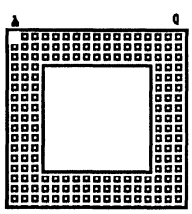
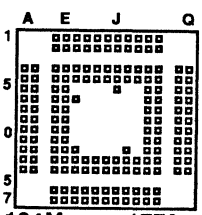
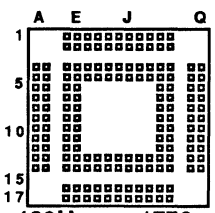


168H 1706

INTEL i486™


167H 1795


164M 1779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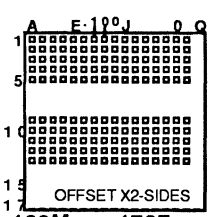
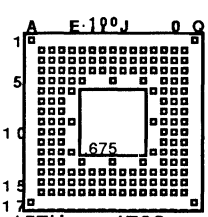
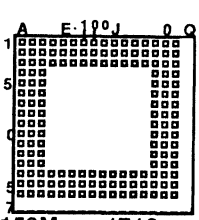


160M 1737



157H 1733


156M 1718

F

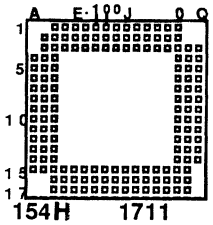
BERG ELECTRONICS

mck McKenzie Socket Division

Select PPC™ (disposable carrier system) Sockets for low profile PGA applications.

17 x 17 ARRAYS

DIMENSIONS: **SOCKETS** 1.750" square (44,45)mm square — **PPC™ CARRIERS** 1.700" square (43,18)mm square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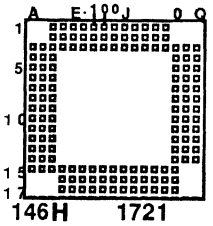
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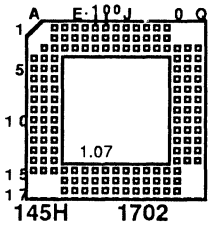

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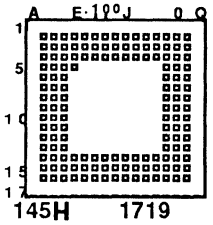
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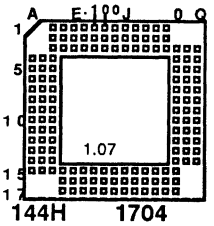

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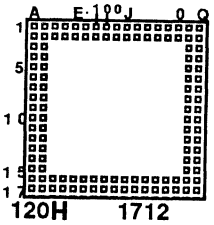
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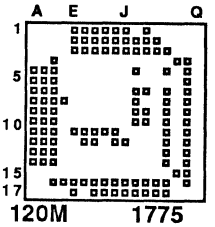
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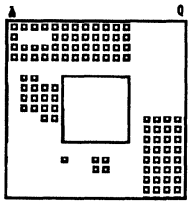
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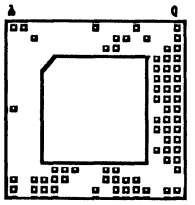
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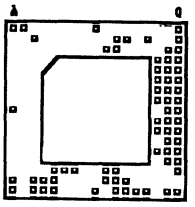
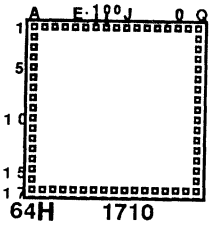

68H 1789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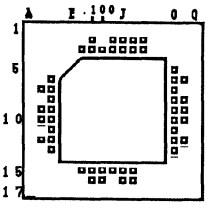
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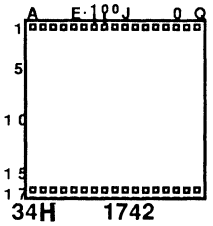
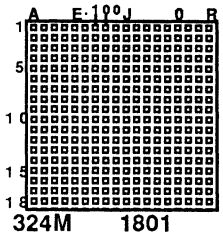

34H 1742

18 x 18 ARRAYS

DIMENSIONS: **SOCKETS** 1.850" square (46,99)mm square — **PPC™ CARRIERS** 1.800" square (45,72)mm square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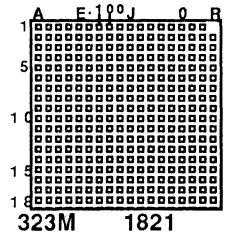
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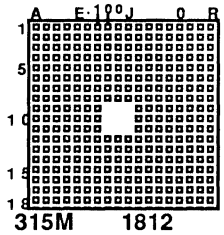
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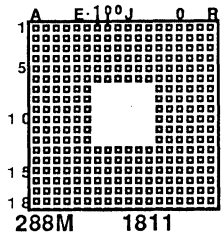
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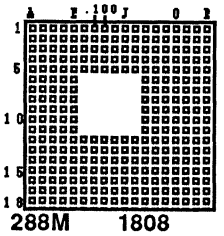
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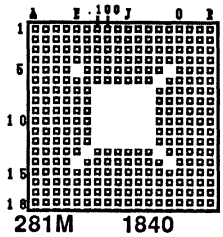
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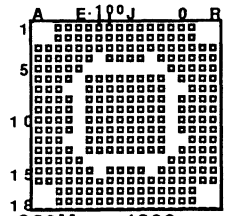
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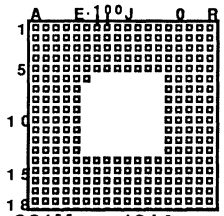
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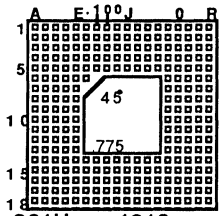
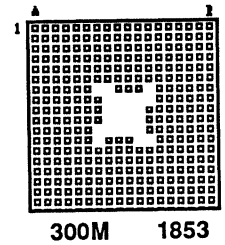


261H 1813


300M 1853

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

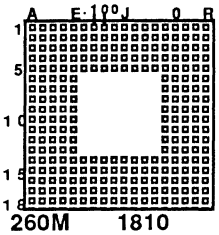
See page F2 for ordering information

PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

DIMENSIONS:

	SOCKETS	PPC™ CARRIERS
	1.850" square	1.800" square
	(46,99)mm square	(45,72)mm square

18 x 18 ARRAYS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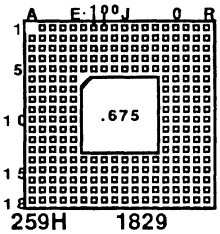

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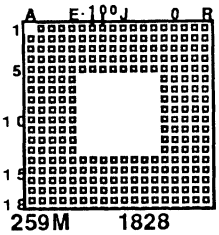
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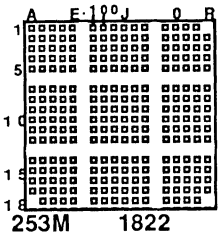
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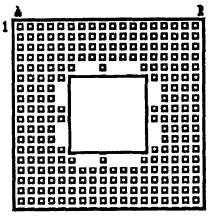
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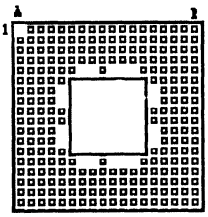
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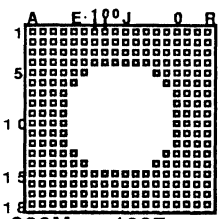
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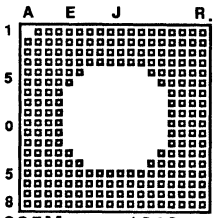
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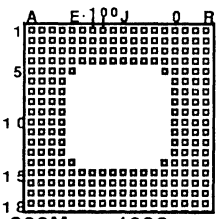
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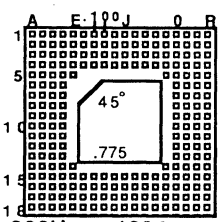

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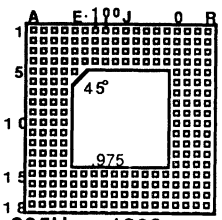

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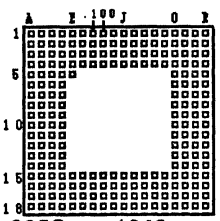
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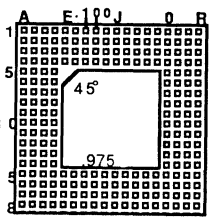
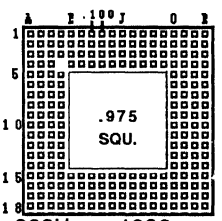
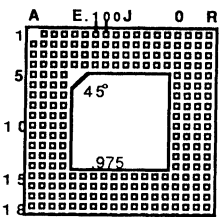


224H 1804



223H 1838



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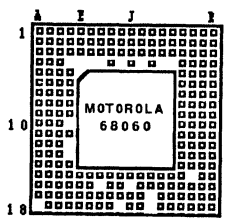
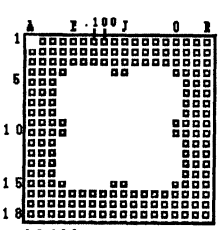
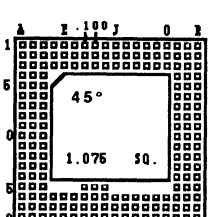


206H 1854


191H 1841



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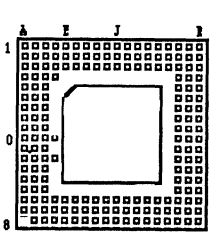
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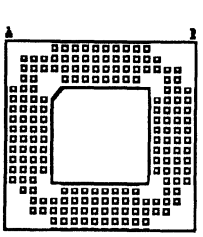
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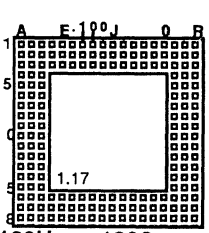

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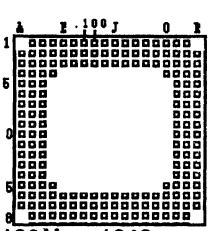
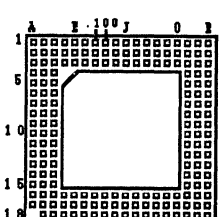

180H 1842

Motorola 68040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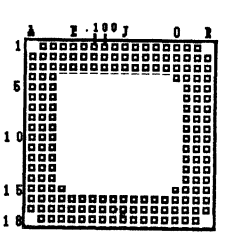
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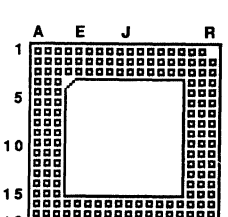

179H 1845

BERG ELECTRONICS

mck McKenzie Socket Division

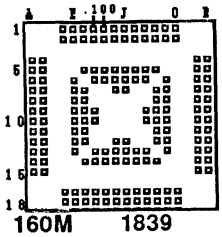
Select PPC™ (disposable carrier system) Sockets for low profile PGA applications.

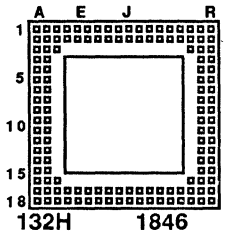
18 x 18 ARRAYS

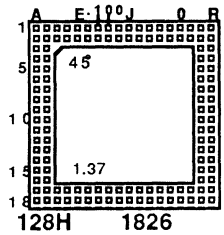
DIMENSIONS:

SOCKETS 1.850" square (46,99)mm square

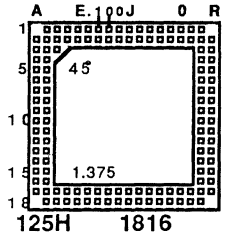
PPC™ CARRIERS 1.800" square (45,72)mm square


160M 1839

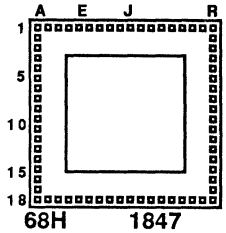

132H 1846



128H 1826



125H 1816

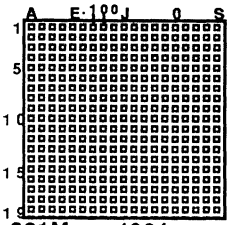

68H 1847

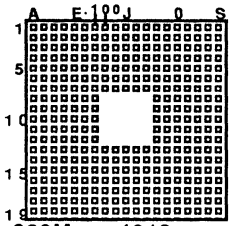
19 x 19 ARRAYS

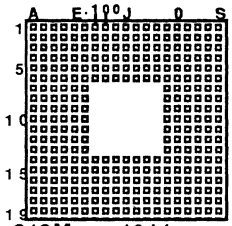
DIMENSIONS:

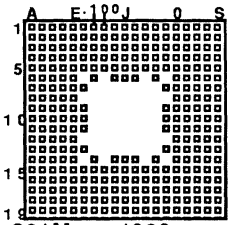
SOCKETS 1.950" square (49,53)mm square

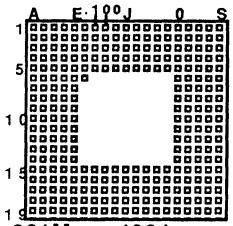
PPC™ CARRIERS 1.900" square (48,26)mm square

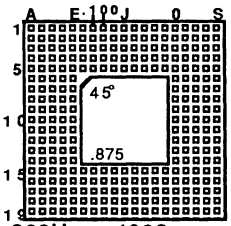

361M 1901


336M 1912

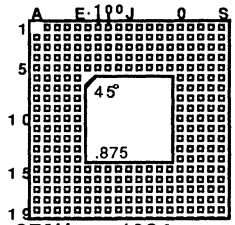

312M 1911


301M 1909

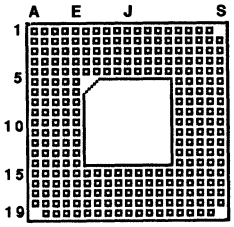

281M 1921

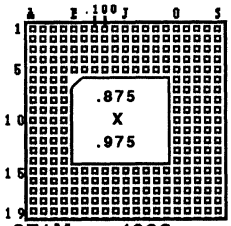


280H 1908

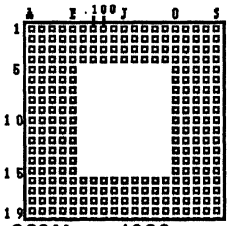


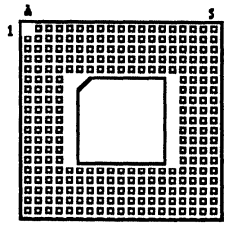
279H 1924


277H 1935

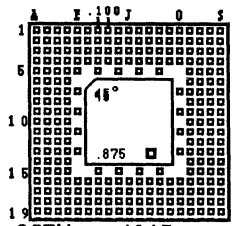


271M 1928

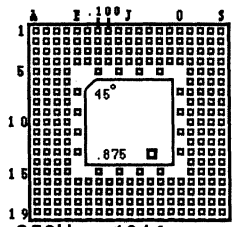

262H 1930


261H 1942

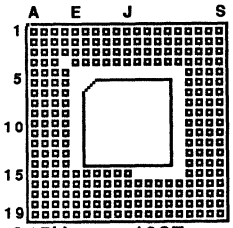
Sun Sparc

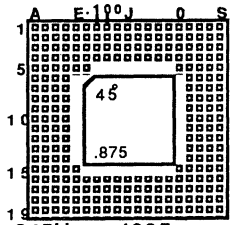


257H 1915



256H 1914


245H 1937



245H 1925

910 Page Avenue • Fremont, California 94538 USA • Telephone (510) 651-2700 • FAX (510) 651-1020

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

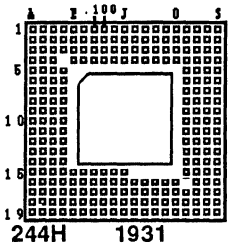
See page F2 for ordering information

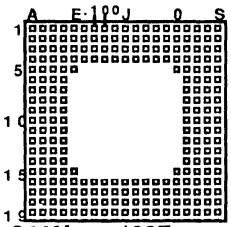
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

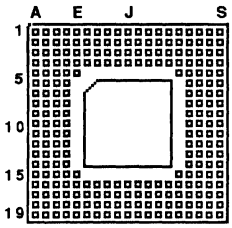
DIMENSIONS:

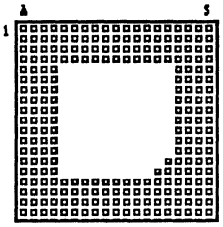
SOCKETS	PPC™ CARRIERS
1.950" square	1.900" square
(49,53)mm square	(48,26)mm square

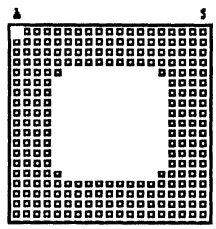
19 x 19 ARRAYS

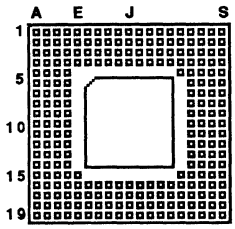

244H 1931

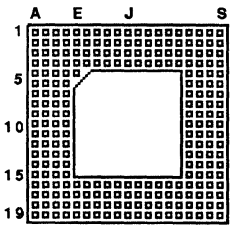

244H 1927

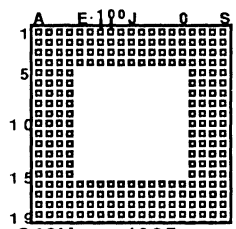

244H 1936


243M 1949

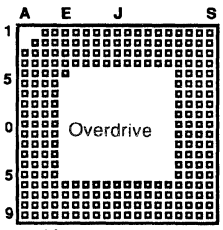

243M 1944


243H 1932

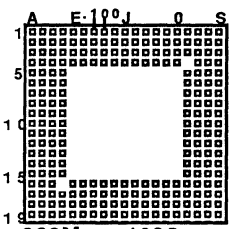

241H 1939

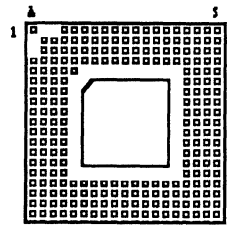

240H 1905

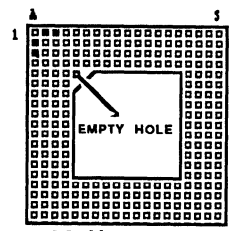
Intel P24T



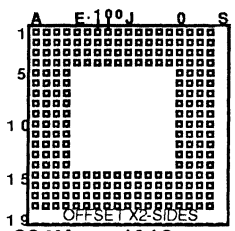
238H 1938


238M 1926

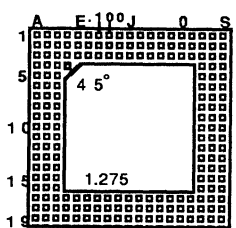

237H 1950



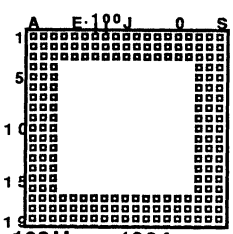
236H 1945

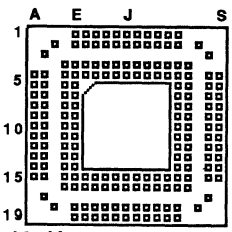


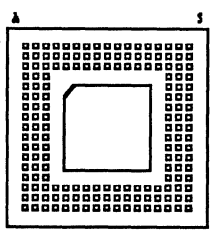
224H 1916

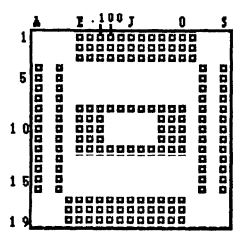


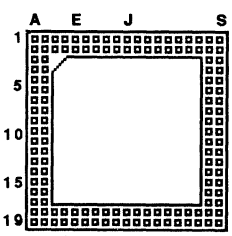
193H 1907

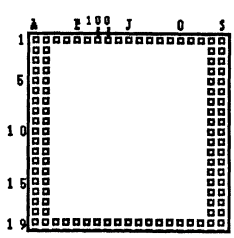

192H 1904

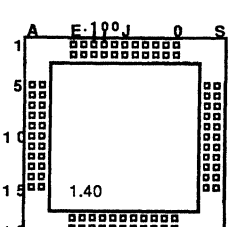

184H 1934


168H 1943

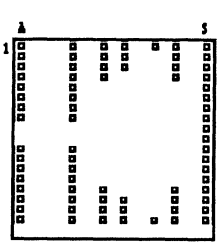

164M 1941

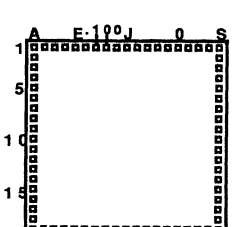

136H 1933

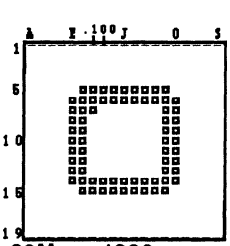

105H 1940

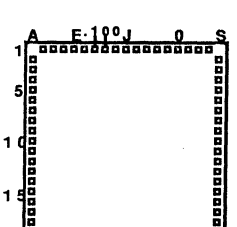


88H 1917


74M 1947


72H 1902


69M 1929


68H 1918

BERG ELECTRONICS

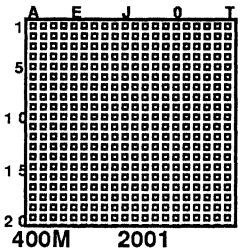
mck McKenzie Socket Division

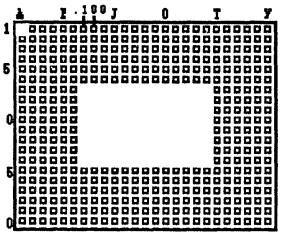
RISC Sockets immediately available.

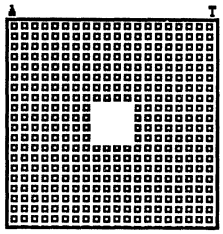
20 x 20 ARRAYS

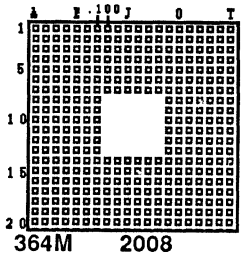
DIMENSIONS:

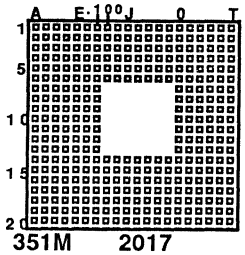
SOCKETS	PPC™ CARRIERS
2.050" square	2.000" square
(52,07)mm square	(50,80)mm square

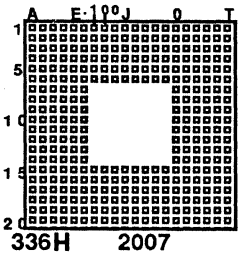

400M 2001

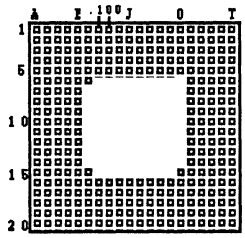

399M 2022

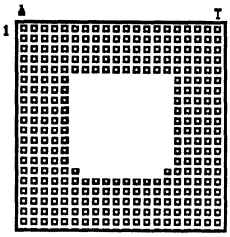

384M 2028

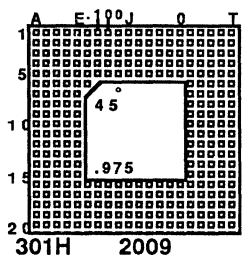

364M 2008


351M 2017

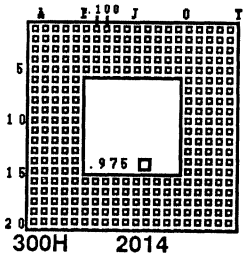

336H 2007


303M 2026

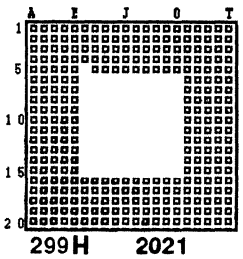

302S 2029

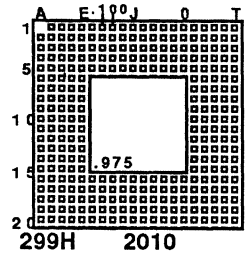


301H 2009

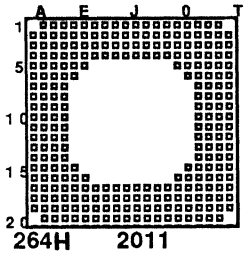


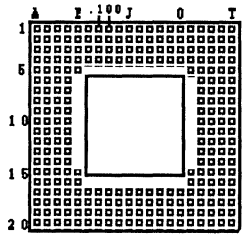
300H 2014

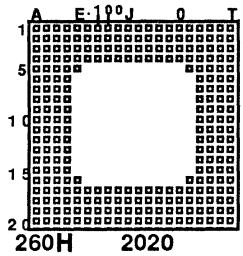

299H 2021

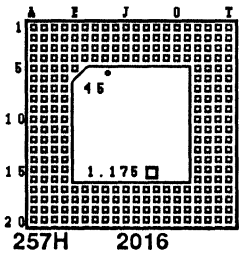


299H 2010

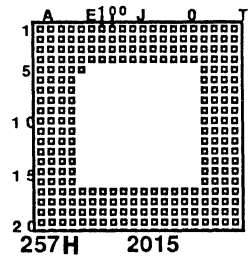

264H 2011

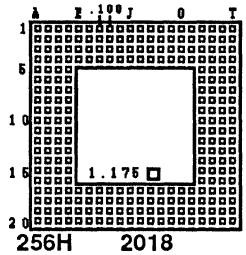

262H 2027


260H 2020

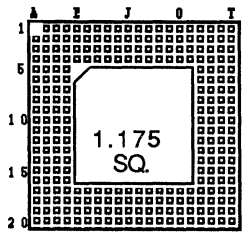


257H 2016

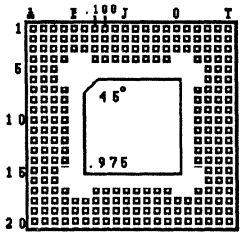

257H 2015



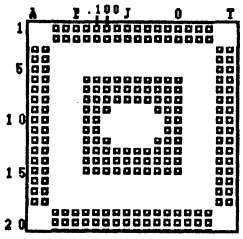
256H 2018

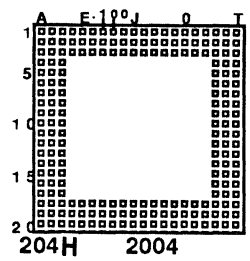


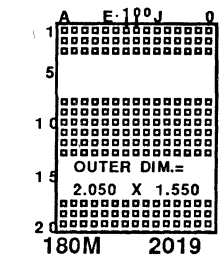
255H 2025



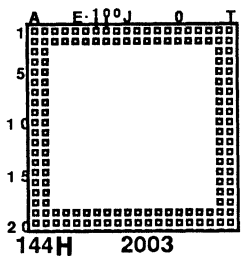
240H 2024

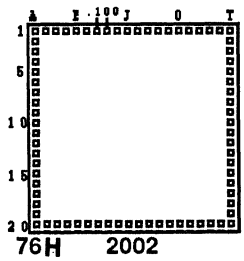

208M 2023


204H 2004



180M 2019


144H 2003


76H 2002

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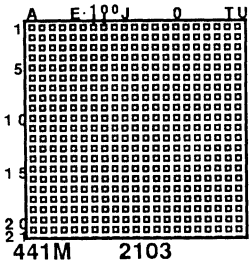
Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

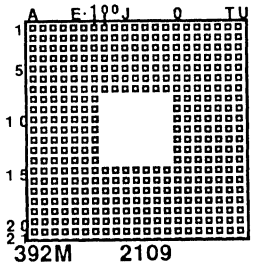
See page F2 for ordering information

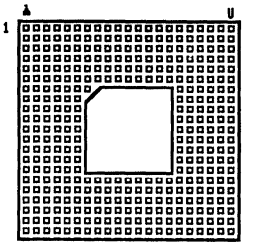
PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

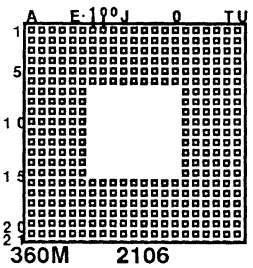
DIMENSIONS:	SOCKETS	PPC™ CARRIERS
	2.150" square	2.100" square
	(54,61)mm square	(53,34)mm square

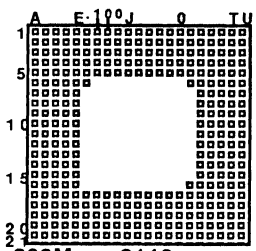
21 x 21 ARRAYS

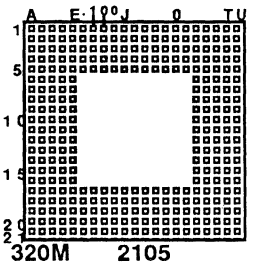

441M 2103

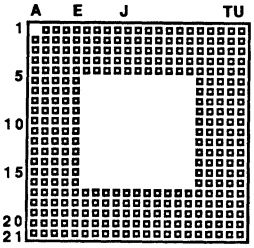

392M 2109

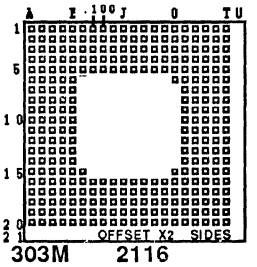

361H 2124


360M 2106

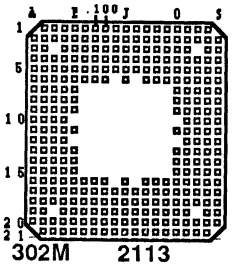

323M 2112

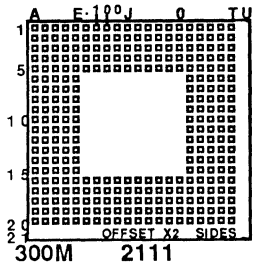

320M 2105


319M 2118

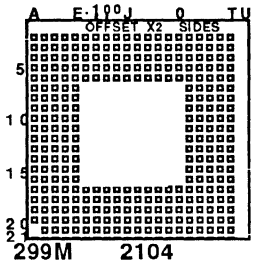


303M 2116

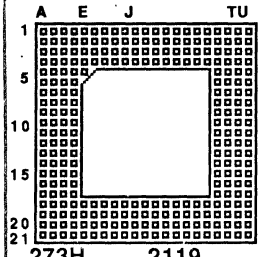

302M 2113

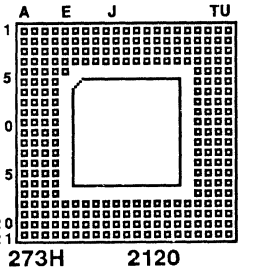


300M 2111

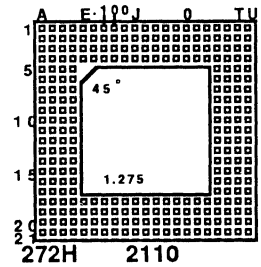


299M 2104

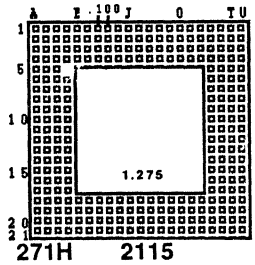

273H 2119


273H 2120

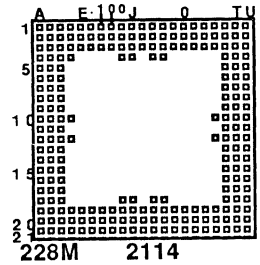
Intel Pentium™

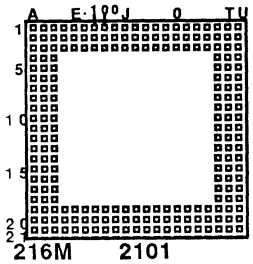


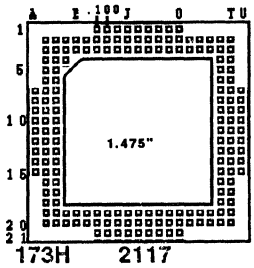
272H 2110



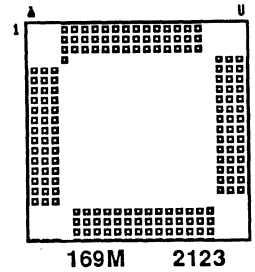
271H 2115

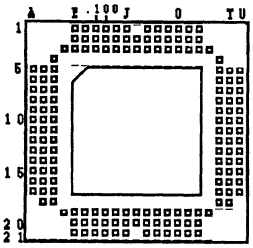

228M 2114

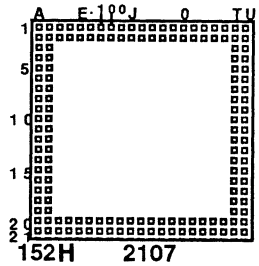

216M 2101

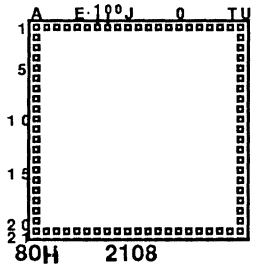


173H 2117


169M 2123


164H 2122


152H 2107


80H 2108

MOLDED SOCKETS
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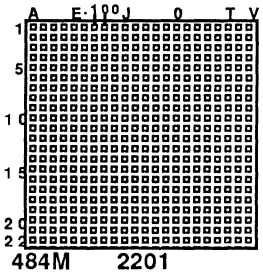
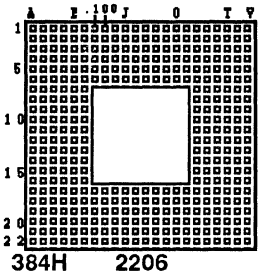
mck McKenzie Socket Division

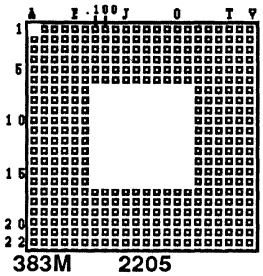
Sockets from the industry's source!
Widest variety of contact styles — over 140 contact options listed in Section A

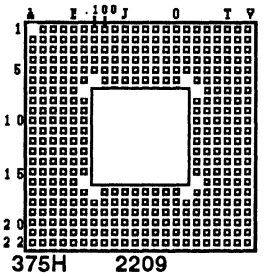
22 x 22 ARRAYS

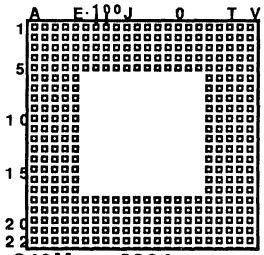
	SOCKETS	PPC™ CARRIERS
DIMENSIONS:	2.250" square (57,15)mm square	2.200" square (55,88)mm square

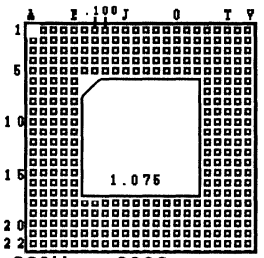

484M 2201


384H 2206

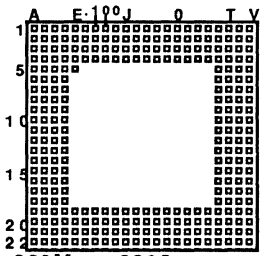

383M 2205

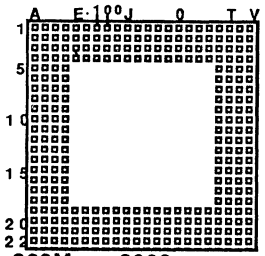

375H 2209

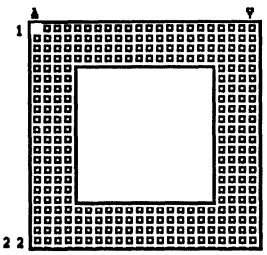

340M 2204

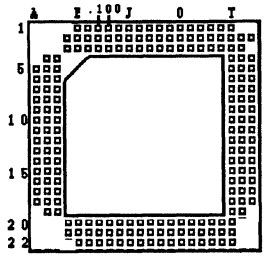


339H 2208


289M 2203

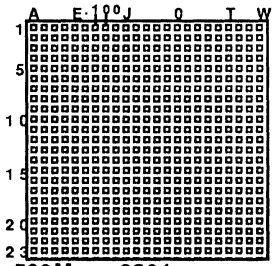

288M 2202

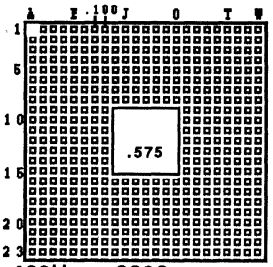

287H 2211


196H 2210

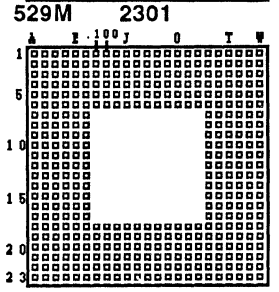
23 x 23 ARRAYS

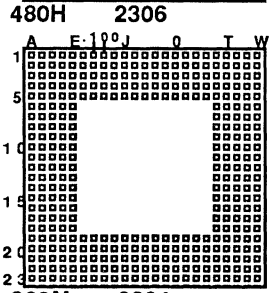
	SOCKETS	PPC™ CARRIERS
DIMENSIONS:	2.350" square (59,69)mm square	2.300" square (58,42)mm square

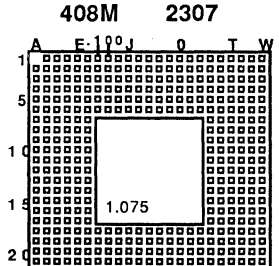

529M 2301



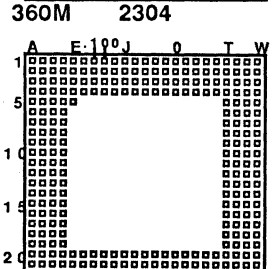
480H 2306

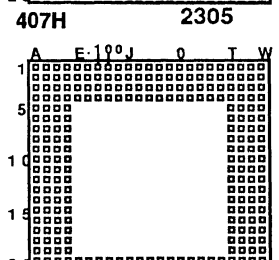

408M 2307

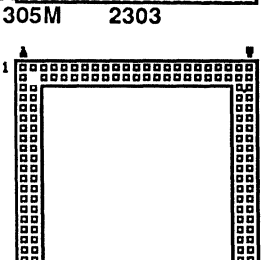

360M 2304

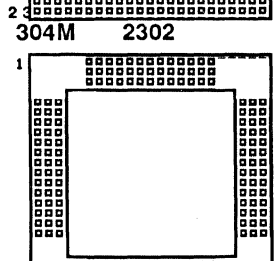


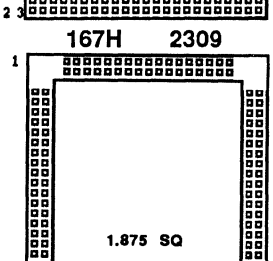
407H 2305


305M 2303


304M 2302


167H 2309


162H 2310



136H 2308

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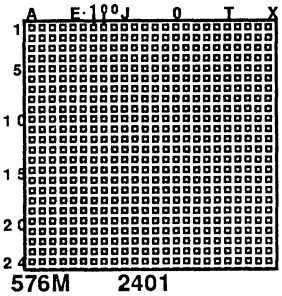
Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

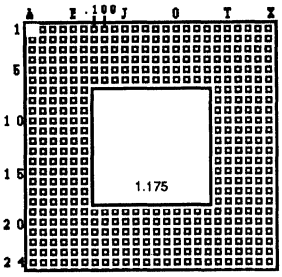
See page F2 for ordering information

PGA-68H 003B1-1132
Pin Count
Center Configuration
Pattern Number

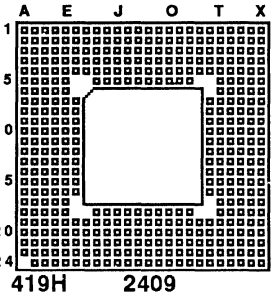
DIMENSIONS:	SOCKETS	PPC™ CARRIERS
	2.450" square (62,23)mm square	2.400" square (60,96)mm square

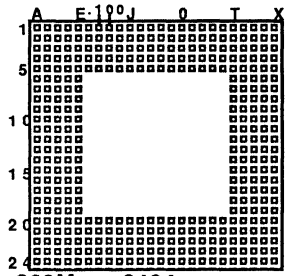
24 x 24 ARRAYS

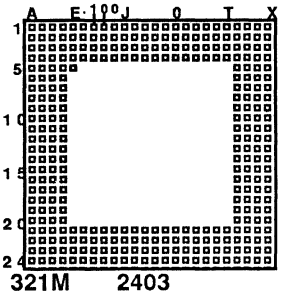

576M 2401

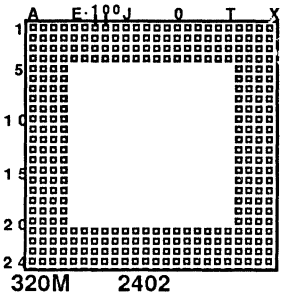


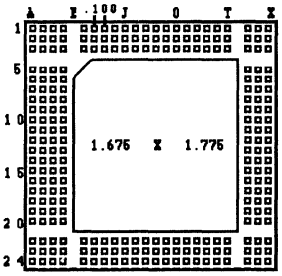
431H 2406


419H 2409

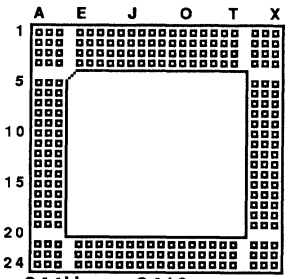

380M 2404


321M 2403

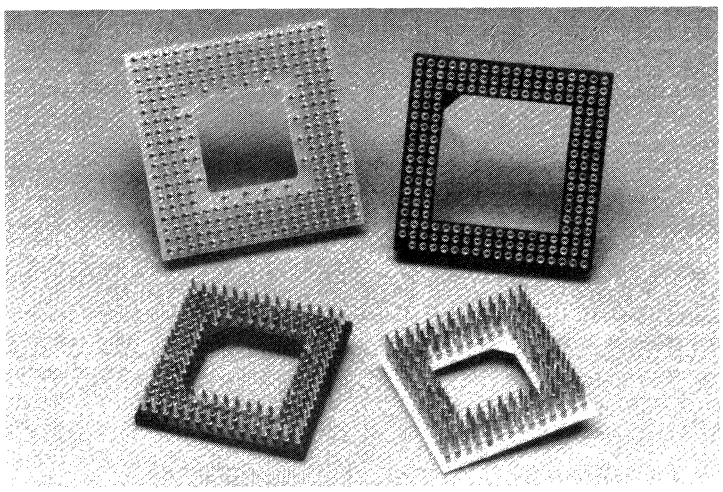

320M 2402



244H 2407


244H 2410

F



Press Fit PGA Sockets — A Solderless Alternative

BERG ELECTRONICS

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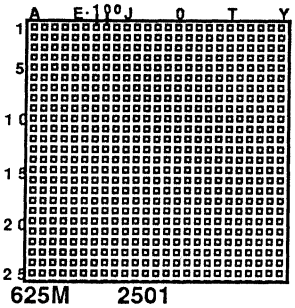
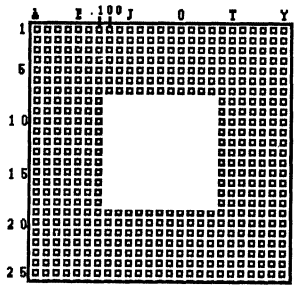
Select PPC™ (disposable carrier system) Sockets for low profile PGA applications.

25 x 25 ARRAYS

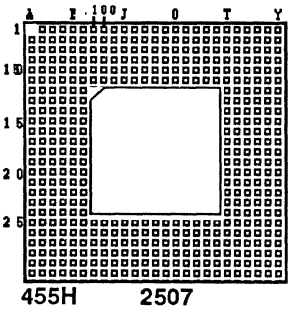
DIMENSIONS: **SOCKETS** 2.550" square (64,77)mm square — **PPC™ CARRIERS** 2.500" square (63,50)mm square



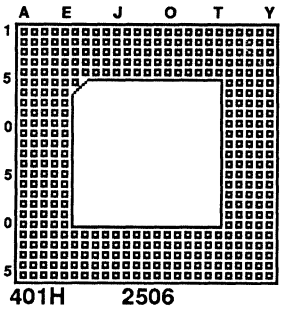
625M 2501



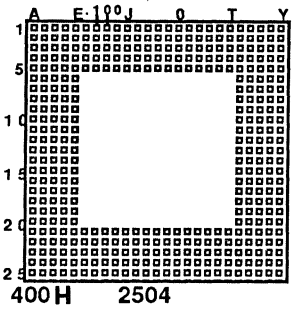
504M 2505



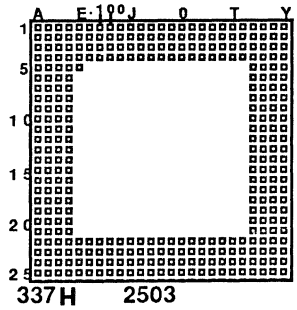
455H 2507



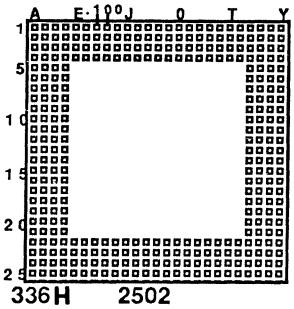
401H 2506



400H 2504



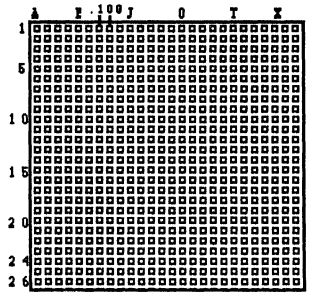
337H 2503



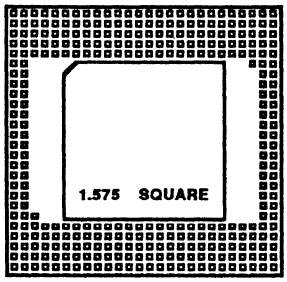
336H 2502

26 x 26 ARRAYS

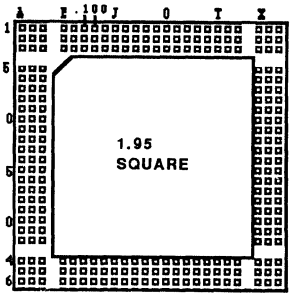
DIMENSIONS: **SOCKETS** 2.650" square (67,31)mm square — **PPC™ CARRIERS** 2.600" square (66,04)mm square



676M 2601



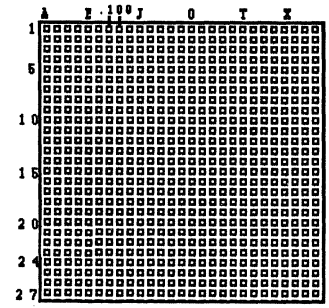
326H 2603



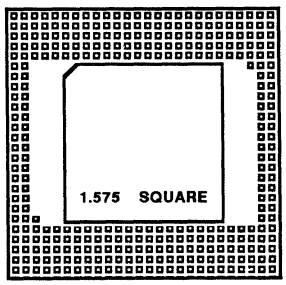
252H 2602

27 x 27 ARRAYS

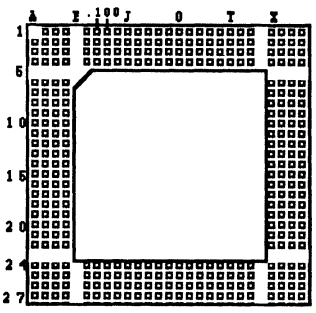
DIMENSIONS: **SOCKETS** 2.750" square (69,85)mm square — **PPC™ CARRIERS** 2.700" square (68,58)mm square



729M 2701



326H 2603



351H 2702

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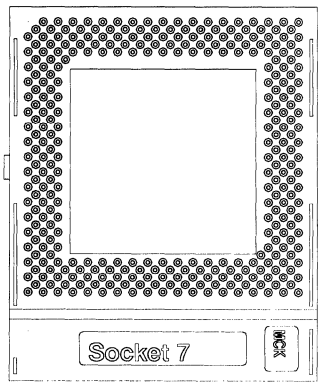
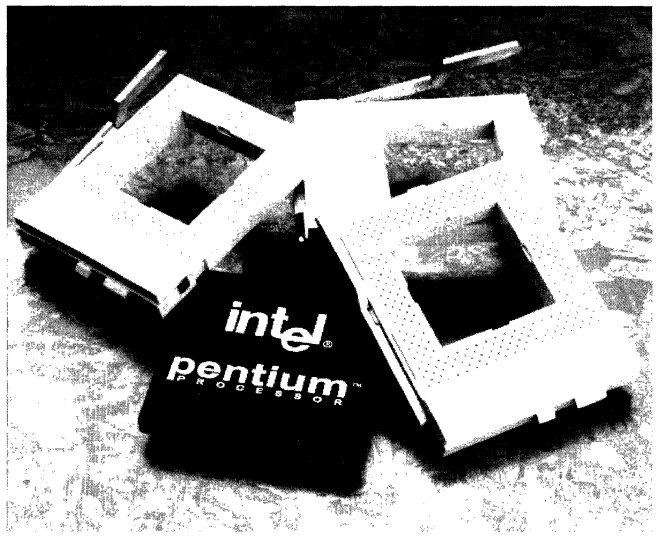
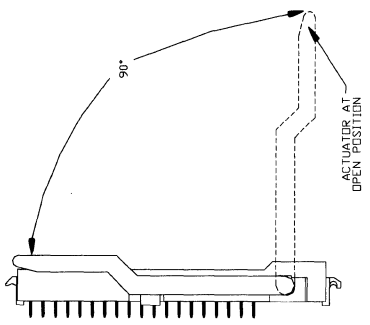
Top View





- Call for details on the ultra low profile screw driver actuated ZIF socket.
- Standoffs on the bottom side of the socket allow for easy, post-solder cleaning.
- Tabs for Thermalloy, IERC and AAVID heatsink and clip solutions are standard features.
- An internal stop tab in the cam housing prevents the actuator from being pulled too far back when opened.
- Contact layout is polarized to prevent the upgrade processor from being incorrectly inserted.
- Open center construction enables other components to be placed on the PCB in the center of the socket.

Side View



Materials

Housing:	LCP, glass filled, UL 94V-0 rated
Contact:	Phosphor Bronze
Plating (Soldertail):	100µ" tin-lead over 50µ" nickel
Plating (Contact Area):	Gold over 50µ" nickel (See Table)
Actuator:	Die Cast Zinc alloy
Operating Temperature:	-55°C to 105°C
Operating Voltage:	250 VAC

Environmental Performance

Temperature & Humidity:	90% RH, 25°C to 65°C, 240 hrs.
Temperature Life:	85°C, 300 hrs.
Thermal Shock:	-55°C to +85°C, 5 cycles
Withstanding Temperature:	240°C wave solder reflow

Electrical Performance

Dielectric Withstanding Voltage:	1000 VAC
Insulation Resistance:	1000 megaohms minimum
Capacitance:	1 pf between contacts max.
Low Level Contact Resistance:	ΔR 10 milliohms max.

DESCRIPTION	PLATING	TAIL LENGTH	PART NUMBER
Socket 5	10µ" Au	2.35 mm	97050-2120
Socket 5	30µ" Au	2.35 mm	97050-4120
Socket 7	10µ" Au	2.35 mm	97054-2120
Socket 7	30µ" Au	2.35 mm	97054-4120

F

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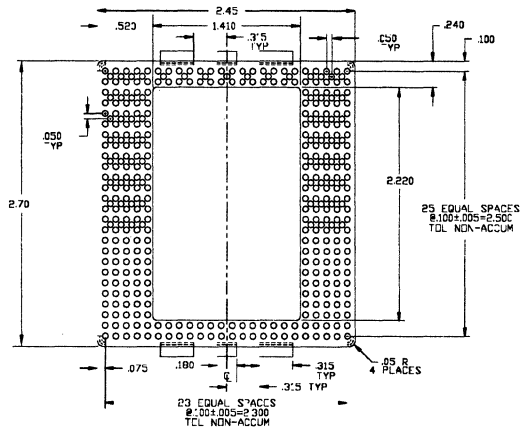

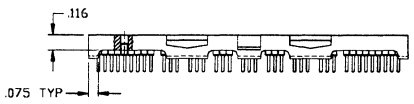

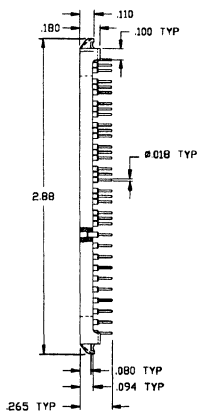

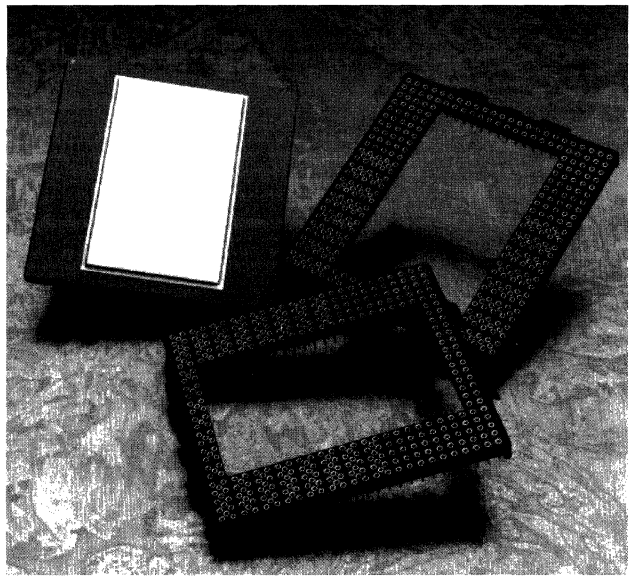

- The socket body is injection molded PPS and features tabs to which a heat sink can be attached via a heat sink clip.
- The dimensions and placement of the heatsink tabs match those detailed in Intel's P6 socket specification.
- Two contact options are available. Both contacts, the 6(43) and 3(48), are Ultra Low Insertion Force (ULIF) contacts, and are available with either 10µ" or 30µ" of gold plating.
- A special extraction tool is also available.

Materials

Insulator:	PPS, UL 94V-0 40% Glass Reinforced.
Pin - Outer Shell:	Brass Alloy 360, 1/2 hard, per QQ-B-626.
Inner Contact:	Beryllium Copper (BeCu) - Alloy172.
Plating - Shell:	200µ"(nominal) BRIGHT ACID TIN per MIL-T-10727, Type 1, over 200µ" (nominal) Nickel per QQ-N-290.
Plating - Contact area:	10µ" or 30µ"(nominal) GOLD per MIL-G-45204, GRADE C, over 50µ"(nominal) Nickel per QQ-N-290.

Average Initial Insertion/Extraction Forces For 387 Contacts

Contact #	Insertion	Extraction
6(43)	74 Lbf.	61 Lbf.
3(48)	41 Lbf.	35 Lbf.

PART NUMBER	PLATING	CLIP	TAIL LENGTH
97211-2642	10µ" Au	3(48)	.085"
97211-4642	30µ" Au	3(48)	.085"
97212-2642	10µ" Au	6(43)	.085"
97212-4642	30µ" Au	6(43)	.085"
97600-0000	Extraction Tool		

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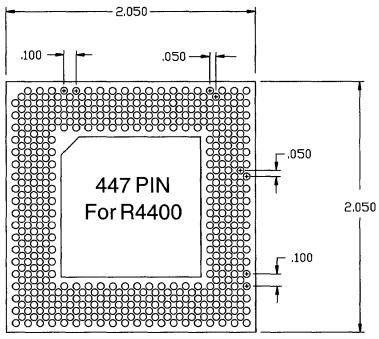
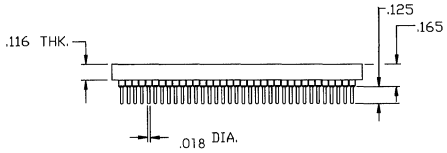
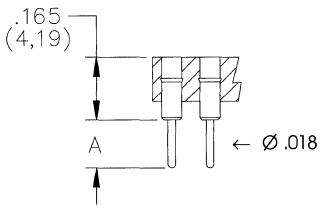






Contact	Contact/Shell Plating	"A"
509B	30µ" Gold/200µ" Tin	.125 (3,18)
118B	30µ" Gold/10µ" Gold	.270 (6,86)
120B	30µ" Gold/10µ" Gold	.180 (4,57)
003A	30µ" Gold/200µ" Tin	.100 (0,00)
509A	30µ" Gold/10µ" Gold	.125 (3,18)
009A	30µ"Gold/200µ"Tin	.150 (3,81)
010A	10µ"Gold/200µ"Tin	.125 (3,18)
011A	10µ"Gold/200µ"Tin	.125 (3,18)
012A	30µ"Gold/200µ"Tin	.100 (2,54)
013A	30µ"Gold/10µ"Gold	.125 (3,18)
014A	10µ"Gold/200µ"Gold	.100 (2,54)
015A	10µ"Gold/200µ"Gold	.100 (2,54)
016A	10µ"Gold/200µ"Gold	.080 (2,03)
018A	30µ"Gold/200µ"Gold	.125 (3,18)

* Recommended PTH diameter is .024" ± .003

Technical Specifcations:

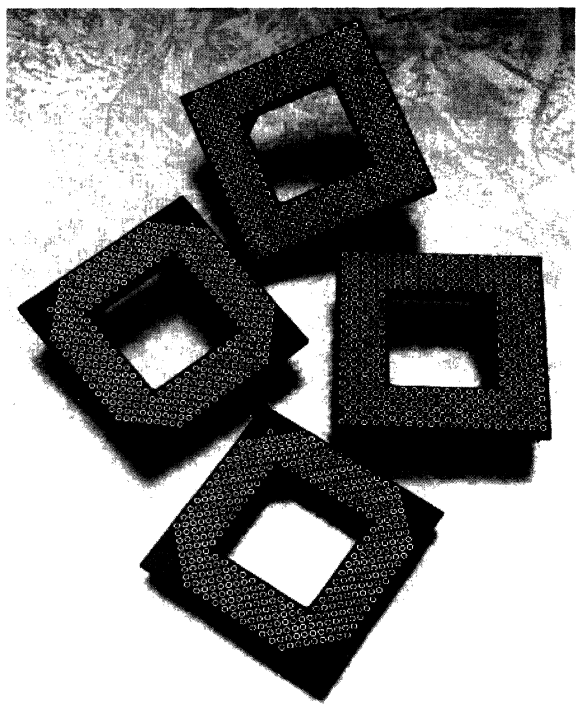
Operating Temperature: -50°C to +150°C
Contact Resistance (low level): <5 mΩ per contact
Contact Current Rating: 3 A
Durability: 100 cycles (min) with 5 mΩ change

Material Specifications:

Insulators
Available in standard and high temperature materials in all patterns all UL 94V-O approved
Insulation Resistance: 5000 mΩ min.
Withstanding Voltage: 1000 V AC
Contacts
Outer Contact Shell: 1/2 hard brass
Inner Contact: BeCu
Platings: (various options) Tin or Gold over Nickel

Features

- Contact density is increased 55% over conventional Pin Grid Aray sockets
- Insulator is molded Hi-Temp PPS
- Ultra Low Insertion Force (ULIF™), 6 finger contacts
- Pins flush with top surface of the socket
- All materials are surface mount compatible
- Custom footprints readily available



"Shown are Sockets for NexGen Processors"

See patterns on next 4 pages.

How to Order

P Z A | 4 4 7 H | 0 1 1 A | - 3 9 A C | - F

- P Z A — Product Code
- 4 4 7 — Number of Contacts
- H — Center Configuration: M - Matrix, H - Hole
- 0 1 1 A — Contact Style
- 3 9 A C — Footprint Pattern Code
- F — Material Call Out (Option): F - FR4 Glass Epoxy, H - Polymide Glass

HIGH TEMP AVAILABLE

All McKenzie Molded Sockets ® Recognized

* For molded Hi-Temp PPS insulator material no call out is neccessary

Interstitial PGA Sockets

BERG ELECTRONICS

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PZA-447H 509B -39AC

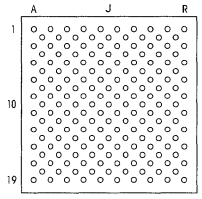
Pin Count — Center Configuration — Pattern Number

Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

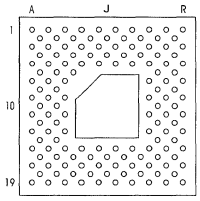
See page F43 for ordering information

19 x 19 ARRAYS

DIMENSIONS: **SOCKETS** 1.050" square (26,67)mm square



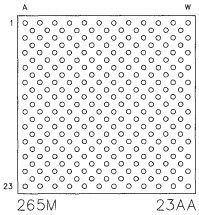
181M 19AA



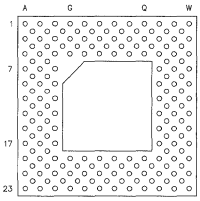
141H 19AB

23 x 23 ARRAYS

DIMENSIONS: **SOCKETS** 1.250" square (31,75)mm square



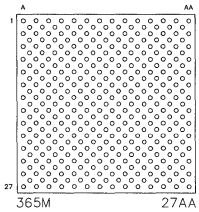
265M 23AA



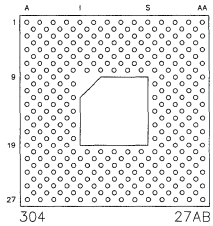
180 23AB

27 x 27 ARRAYS

DIMENSIONS: **SOCKETS** 1.450" square (36,83)mm square



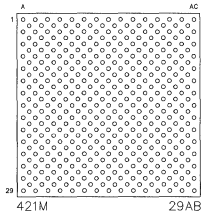
365M 27AA



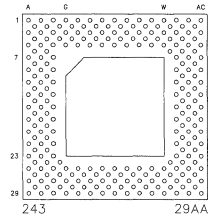
304 27AB

29 x 29 ARRAYS

DIMENSIONS: **SOCKETS** 1.550" square (39,37)mm square



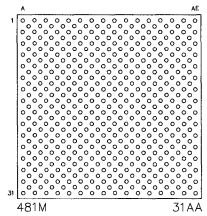
421M 29AB



243 29AA

31 x 31 ARRAYS

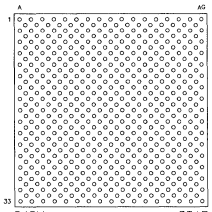
DIMENSIONS: **SOCKETS** 1.650" square (41,91)mm square



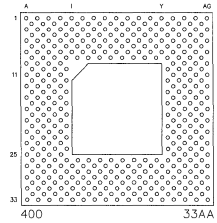
481M 31AA

33 x 33 ARRAYS

DIMENSIONS: **SOCKETS** 1.750" square (44,45)mm square

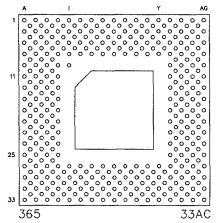


545M 33AB

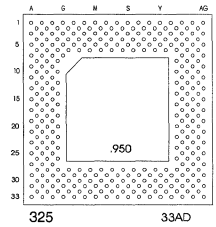


400 33AA

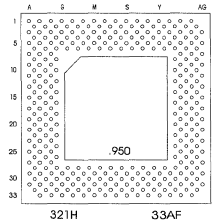
33 x 33 ARRAYS



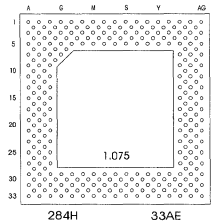
365 33AC



325 33AD



321H 33AF



284H 33AE

All McKenzie Molded Sockets

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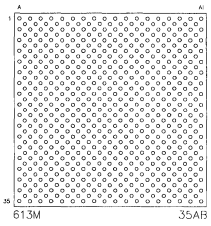
Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

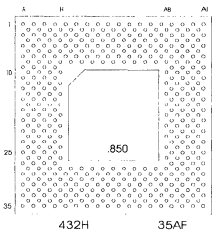
PZA-447H509B-39AC
Pin Count — Center Configuration — Pattern Number

See page F43 for ordering information

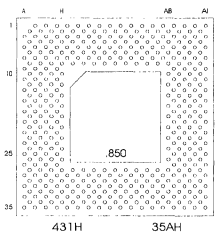
35 x 35 ARRAYS

DIMENSIONS: **SOCKETS** 1.850" square (46,99)mm square

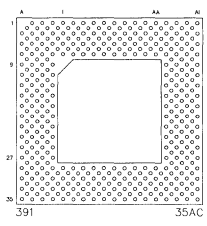

613M 35AB

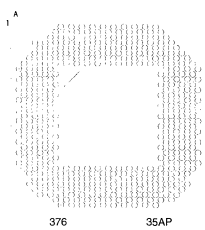


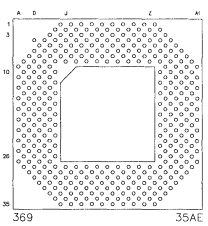
432H 35AF

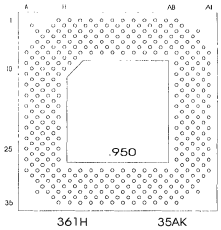


431H 35AH


391 35AC

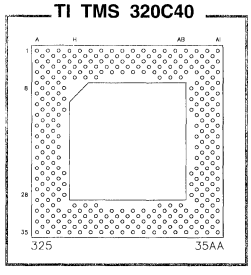

376 35AP

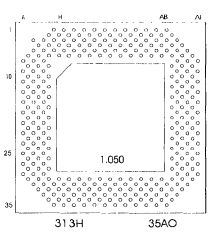

369 35AE



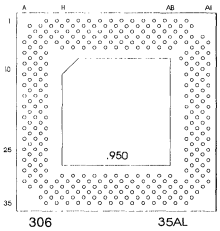
361H 35AK

TI TMS 320C40

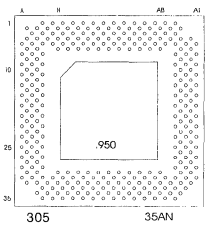

325 35AA



313H 35AO

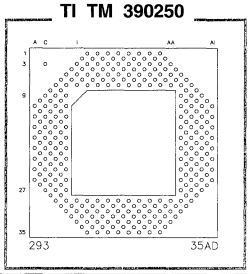


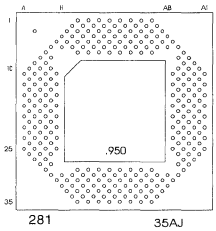
306 35AL



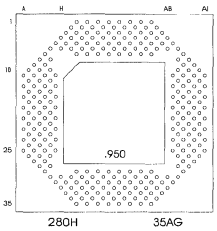
305 35AN

TI TM 390250

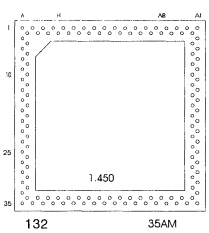

293 35AD



281 35AJ



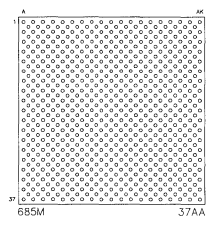
280H 35AG

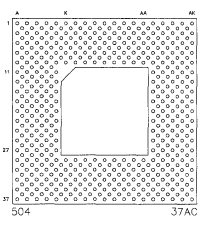


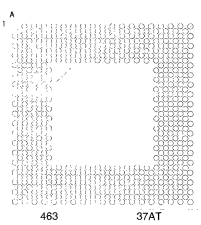
132 35AM

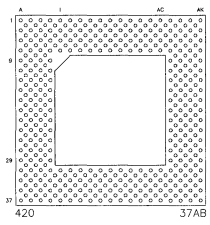
37 x 37 ARRAYS

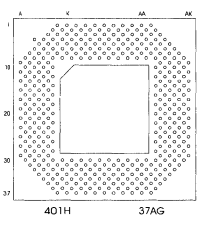
DIMENSIONS: **SOCKETS** 1.950" square (49,53)mm square

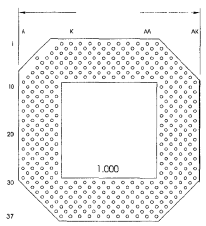

685M 37AA


504 37AC

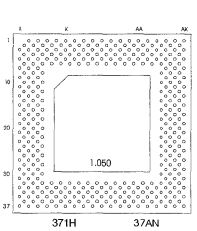

463 37AT


420 37AB

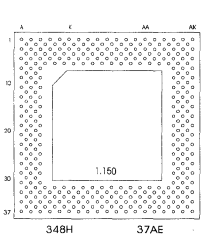

401H 37AG



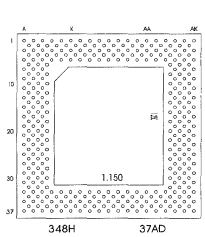
401H 37AM



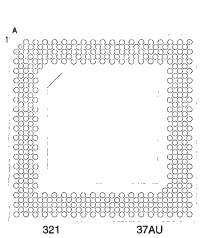
371H 37AN



348H 37AE



348H 37AD


321 37AU

F

BERG ELECTRONICS

mck McKenzie Socket Division

PZA-447H509B-39AC

Pin Count — Center Configuration — Pattern Number

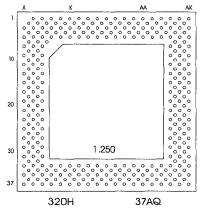
Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

See page F43 for ordering information

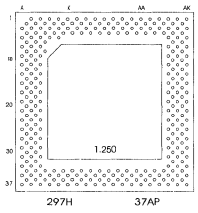
37 x 37 ARRAYS

SOCKETS

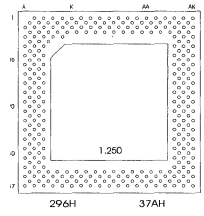
DIMENSIONS: 1.950" square
(49,53)mm square



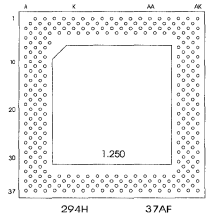
320H 37AQ



297H 37AP



296H 37AH

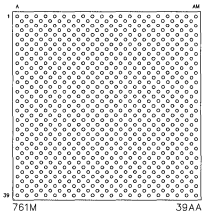


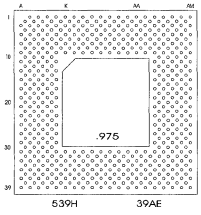
294H 37AF

39 x 39 ARRAYS

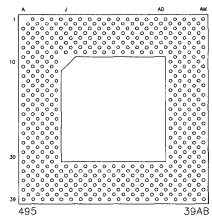
SOCKETS

DIMENSIONS: 2.050" square
(52,07)mm square

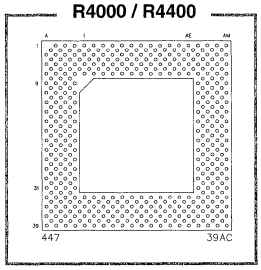

761M 39AA

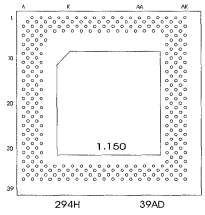


539H 39AE


495 39AB

R4000 / R4400


447 39AC

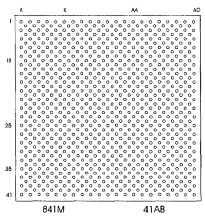


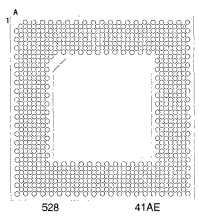
294H 39AD

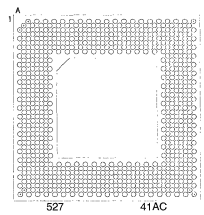
41 x 41 ARRAYS

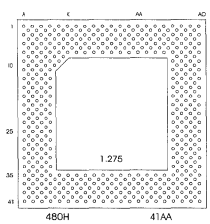
SOCKETS

DIMENSIONS: 2.150" square
(54,61)mm square


841M 41AB


528 41AE


527 41AC



480H 41AA

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Polarity mark (contact #1) is located in upper left corner. Top view of sockets are shown from highest to lowest pin count. Arrays are available in molded Thermoplastic (UL 94V-0 approved) or vapor phase and infrared compatible PPS. Optional FR4 on request.

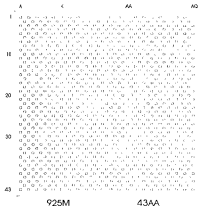
PZA-447H 509B -39AC
Pin Count — Center Configuration — Pattern Number

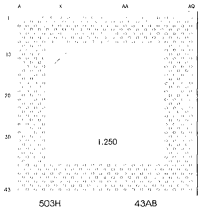
See page F2 for ordering information

43 x 43 ARRAYS

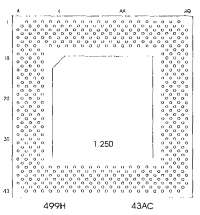
SOCKETS

DIMENSIONS: 2.250" square
(57,15)mm square


925M 43AA



503H 43AB

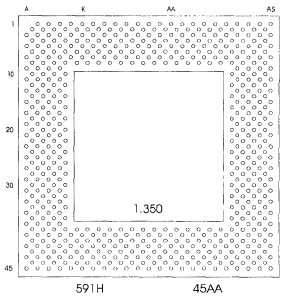


499H 43AC

45 x 45 ARRAYS

SOCKETS

DIMENSIONS: 2.350" square
(59,69)mm square

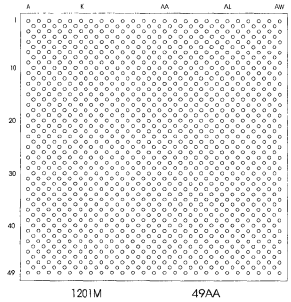


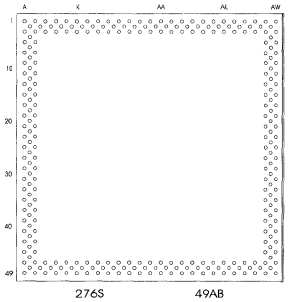
591H 45AA

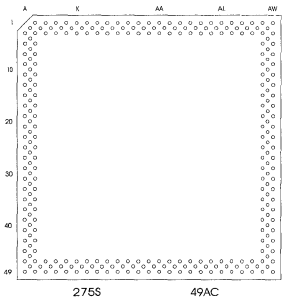
49 x 49 ARRAYS

SOCKETS

DIMENSIONS: 2.550" square
(64,77)mm square


1201M 49AA

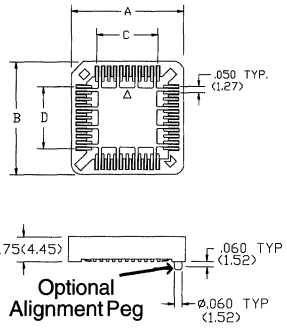

276S 49AB

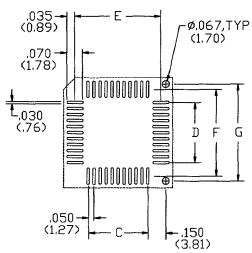

275S 49AC

Surface Mount PLCC Sockets

BERG ELECTRONICS

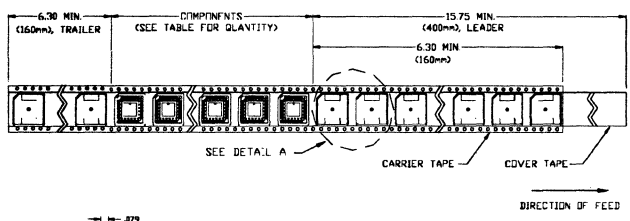
mck McKenzie Socket Division

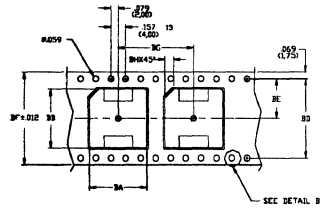


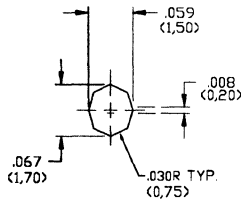


PCB Pad Layout

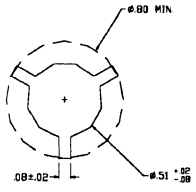
- Center pad provides area for pick-and-place
- Windows allow visual inspection and repair access for all solder joints
- Socket accepts standard JEDEC devices
- Optional alignment peg for positive positioning
- Molded of high temperature PPS.

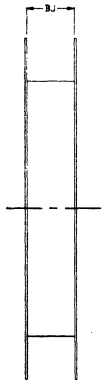


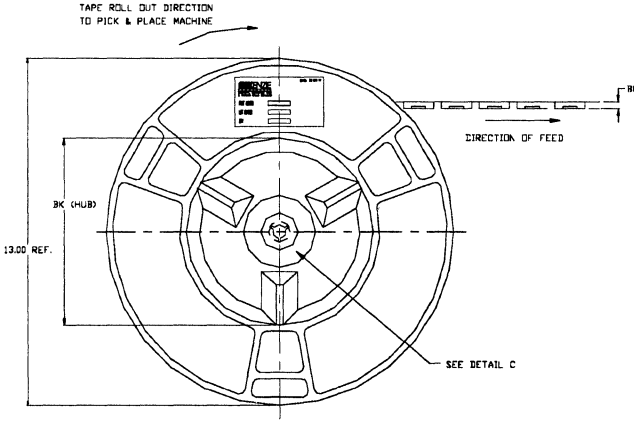




DETAIL B







PART NUMBER	NO. OF LEADS	A ±.008(.20)	B ±.008(.20)	C ±.008(.20)	D ±.008(.20)	E ±.008(.20)	F ±.008(.20)	G ±.008(.20)	TUBE QTY.	REEL QTY.	BA	BB	BD	BE	BF	BG	BH	BJ	BK	BL
PLCC-20P-T-SMT	20	.600 (15,24)	.600 (15,24)	.200 (5,08)	.200 (5,08)	.334 (8,48)	.334 (8,48)	.500 (12,70)	37	490	.630 (16,00)	.630 (16,00)	------	.453 (11,50)	.945 (24,00)	.945 (24,00)	.059 (1,50)	.976 (24,80)	4.00 (100.0)	.220 (5,58)
PLCC-28P-T-SMT	28	.700 (17,78)	.700 (17,78)	.300 (7,62)	.300 (7,62)	.434 (11,02)	.434 (11,02)	.600 (15,24)	32	400	.732 (18,60)	.732 (18,60)	1.118 (28,40)	.559 (14,20)	1.260 (32,00)	.945 (24,00)	.094 (2,40)	1.291 (32,80)	4.00 (100.0)	.252 (6,40)
PLCC-32P-T-SMT	32	.700 (17,78)	.800 (20,32)	.300 (7,62)	.400 (10,16)	.434 (11,02)	.534 (13,56)	.700 (17,78)	28	400	.740 (18,80)	.839 (21,30)	1.118 (28,40)	.559 (14,20)	1.260 (32,00)	.945 (24,00)	.098 (2,50)	1.291 (32,80)	4.00 (100.0)	.252 (6,40)
PLCC-44P-T-SMT	44	.900 (22,86)	.900 (22,86)	.500 (12,70)	.500 (12,70)	.634 (16,10)	.634 (16,10)	.800 (20,32)	25	250	.937 (23,80)	.937 (23,80)	1.591 (40,40)	.795 (20,20)	1.732 (44,00)	1.260 (32,00)	.098 (2,50)	1.764 (44,80)	7.00 (177.8)	.252 (6,40)
PLCC-52P-T-SMT	52	1.000 (25,40)	1.000 (25,40)	.600 (15,24)	.600 (15,24)	.734 (18,64)	.734 (18,64)	.900 (22,86)	23	250	1.031 (26,20)	1.031 (26,20)	1.591 (40,40)	.795 (20,20)	1.732 (44,00)	1.260 (32,00)	.098 (2,50)	1.764 (44,80)	7.00 (177.8)	.252 (6,40)
PLCC-68P-T-SMT	68	1.213 (30,81)	1.213 (30,81)	.800 (20,32)	.800 (20,32)	.934 (23,72)	.934 (23,72)	1.100 (27,94)	18	220	1.236 (31,40)	1.236 (31,40)	1.591 (40,40)	.795 (20,20)	1.732 (44,00)	1.417 (36,00)	.098 (2,50)	1.764 (44,80)	7.00 (177.8)	.252 (6,40)
PLCC-84P-T-SMT	84	1.413 (35,89)	1.413 (35,89)	1.000 (25,40)	1.000 (25,40)	1.134 (28,80)	1.134 (28,80)	1.300 (33,02)	16	220	1.429 (36,30)	1.429 (36,30)	2.063 (52,40)	1.031 (26,20)	2.205 (56,00)	1.575 (40,00)	.098 (2,50)	2.236 (56,80)	7.00 (177.8)	.252 (6,40)

**** Add — P to P/N for alignment pegs, ie: PLCC-44P-T-SMT-P***

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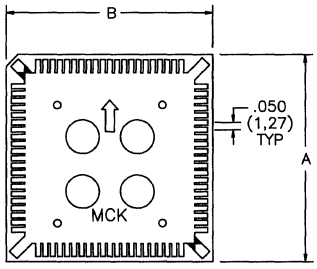
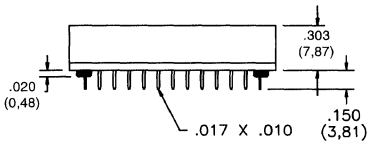
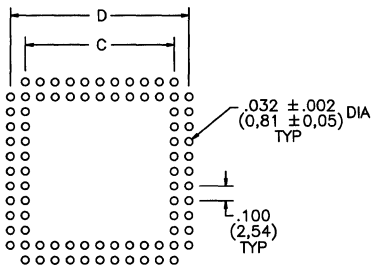
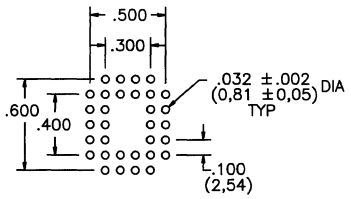




PCB HOLE LAYOUT



All sizes (Except 32 Position)



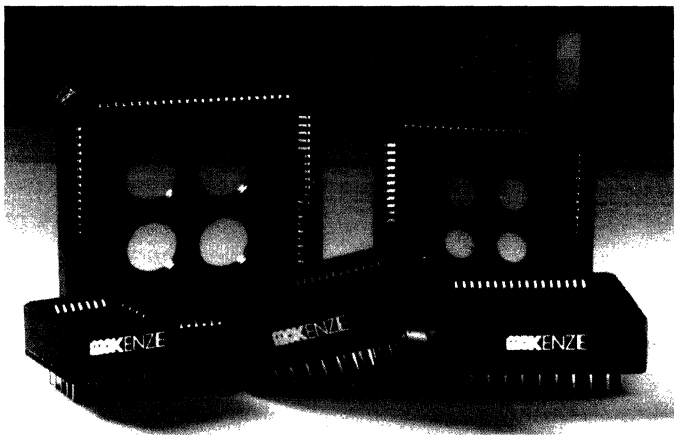
32 Position (Only)

Technical Specifications

Operating Temp Range: -55°C to +125°C
Current Rating: 1 A
Capacitance: 1.0 picofarads (max.)
Contact Resistance: 30 Milliohms (max.)
Insulation Resistance: 1000 Megohms (min.)
Withstanding Voltage: 600 V AC

Material Specifications

Socket Body: Hi-Temp PPS, UL 94V-0, 220°C
Contact: Phosphor Bronze Alloy 5210, full hard
Plating: .000150" Tin/.000040" Nickel (min.)



Sizes: 20, 28, 32, 44, 52, 68, 84 and 100 pin

Plastic Leaded Chip Carrier Sockets

- Conforms to EIA JEDEC outline for Plastic Leaded Chip Carriers on .050" (1,27) centers
- Phosphor bronze contacts with 150µ" tin plating over a 40µ" nickel barrier
- High temperature PPS thermoplastic (UL 94V-0) is infrared and vapor phase compatible
- Easy to use extraction tool provides positive protection for both chip carrier and device during removal — see pg. G2
- Closed bottom prevents solder wicking and bridging
- Open center and standoff provide for thorough cleaning after soldering
- Converts the .050" (1,27) PLCC spacing to .100" (2,54) PC board spacing
- Easy access for testing single contacts
- Polarization indicators assure positive chip carrier orientation

Dimensional Specifications for ordering PLCC

PART NUMBER	NO. POS.	A	B	C	D	TUBE QTY.
PLCC-20P-T	20	.613 (15,57)	.613 (15,57)	.200 (5,08)	.400 (10,16)	37
PLCC-28P-T	28	.713 (18,11)	.713 (18,11)	.300 (7,62)	.500 (12,70)	32
PLCC-32P-T	32	.795 (20,19)	.700 (17,78)	.300 (7,62)	.500 (12,70)	28
PLCC-44P-T	44	.913 (23,19)	.913 (23,19)	.500 (12,70)	.700 (17,78)	25
PLCC-52P-T	52	1.060 (26,92)	1.060 (26,92)	.600 (15,24)	.800 (20,32)	21
PLCC-68P-T-2	68	1.217 (30,91)	1.217 (30,91)	.800 (20,32)	1.000 (25,40)	18
PLCC-84P-T-2	84	1.417 (35,99)	1.417 (35,99)	1.000 (25,40)	1.200 (30,48)	16
PLCC-100P-T	100	1.663 (42,24)	1.663 (42,24)	1.200 (30,48)	1.400 (35,56)	13

See page H1 for footprint compatible Surface Mount Sockets

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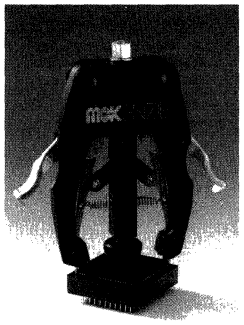


Precision PLCC Extraction Tool

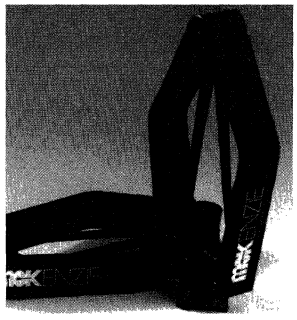
Positively extracts PLCC devices from 20 to 100 pins from most manufactures SMT style sockets — even low profile versions.

Part Number TOL PLCC-XT-HD

- Infinitely adjustable design reduces the possibility of device damage
- Pressure stop assures parallel extraction
- Quality steel and aluminum mechanism with plastic frame

Economy PLCC Extraction Tool

McKenzie Technology's Universal PLCC Extraction Tool provides an economical alternative for PLCC chip removal.

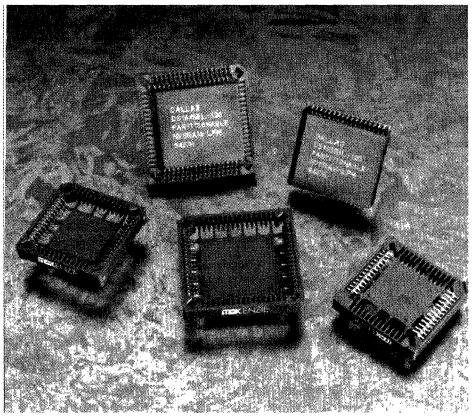


Part Number TOL PLCC-XT-2

- Removes chip sizes 20, 28, 32, 44, 52, 68, 84, and100 pin
- Compatible with most manufacturers' PLCC sockets
- For Thru-Hole and SMT style sockets

Extraction tools are not sampled.

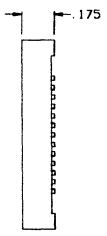
Socket Solutions for the Dallas Semiconductor NVRAM



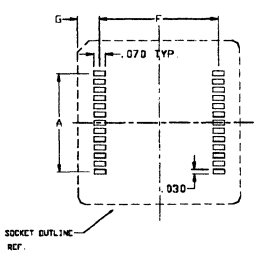
Part Number	Dimensions ± .008				
	A	B	C	F	G
PLCC-26P-SMT-3	.600	1.000	.770	.734	.133
PLCC-34P-SMT-3	.800	1.213	.980	.934	.140

Features

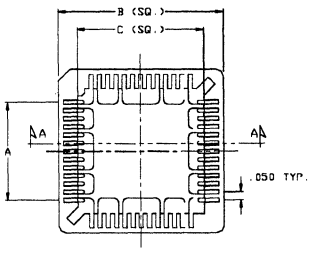
- Very low profile: 0.175" above the PCB
- Hi-Temp materials compatible with any surface mount solder reflow process.
- Center pad provides area for automated pick-and-place equipment.
- Optional alignment peg for accurate positioning when hand placing: add a "-P" to the end of the part number.
- All solder joints are inspectable
- For high volume requirements, tape and reel packaging is available: add a "-T" to the end of the part number.
- Part number PLCC-26P-SMT-3 is a 26 pin socket for Dallas Semiconductor part number DS1643L. Part number PLCC-34P-SMT-3 is a 34 pin socket for Dallas Semiconductor part number DS1630ABL, DS1630YL, DS1645ABL, DS1645YL, DS1650ABL, DS1650YL, DS1730YL, DS1745YL, DS1750YL and DS1646L.



Side View



Recommended PCB Layout



Top View

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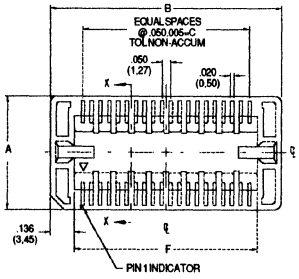
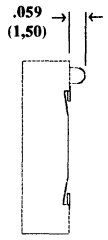
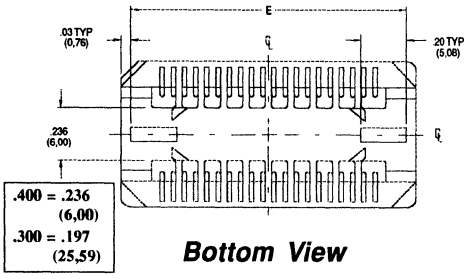
Same footprint as the device



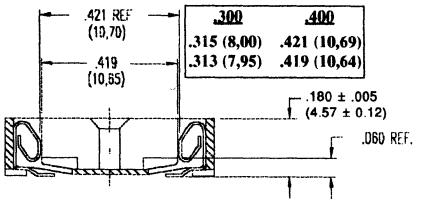
Top View



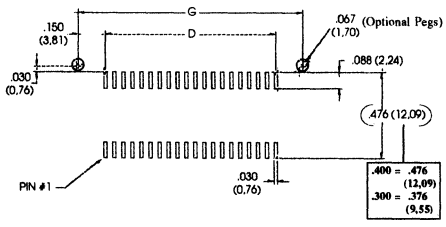
Optional Peg



Bottom View



End View



Recommended PCB Layout

Features

- Available in 28, 32, 40 and 42 pin versions for .400 between row spacing parts, and 24, 26 and 32 pin versions for .300 between row spacing parts.
- Same footprint as the device they socket.
- Low profile of just .180" above the board.
- Molded a high temperature PPS.
- Design incorporates a central pick-and-place tab.
- All solderjoints are 100% inspectable.
- Optional alignment pegs for hand loading.
- Work with a standard PLCC extraction tool.
- Standard packaging is tubes. Many sizes also available in tape and reel.

Performance

- Contact Resistance: Initial: 15 milliohms maximum
  Final: 10 milliohms max after testing
- Insulation Resistance: Greater than 10,000 ohms
- Operating Temperature: -50°C to +105°C
- Dielectric Withstanding Voltage: 1000 VAC RMS (1 min.)
- Capacitance: Less than 1.0 pf at 1000 KHz
- Durability: 25 cycles

G

Part Number	No. Pos	A ± .006	B ± .006	C ± .005	D ± .005	E ± .006	F ± .006	G ± .006
SOJ 24P-3.0	24	.546 (13,87)	.915 (23,24)	.550 (13,97)	.550 (13,97)	.852 (21,64)	.644 (16,36)	.850 (21,59)
SOJ 26P-3.0	26	.546 (13,87)	.965 (24,51)	.600 (15,24)	.600 (15,24)	.902 (22,91)	.694 (17,63)	.900 (22,86)
SOJ 28P-3.0	28	.546 (13,87)	1.015 (25,78)	.650 (16,51)	.650 (16,51)	.952 (24,18)	.744 (18,90)	.950 (24,13)
SOJ 28P-4.0	28	.646 (16,41)	1.015 (25,78)	.650 (16,51)	.650 (16,51)	.952 (24,18)	.743 (18,88)	.950 (24,13)
SOJ 32P-4.0	32	.646 (16,41)	1.115 (28,32)	.750 (19,05)	.750 (19,05)	1.052 (26,72)	.843 (21,42)	1.050 (26,67)
S0J 40P-4.0	40	.646 (16,41)	1.315 (33,40)	.950 (24,13)	.950 (24,13)	1.252 (31,80)	1.043 (26,50)	1.250 (31,75)
SOJ 42P-4.0	42	.646 (16,41)	1.365 (35,67)	1.000 (25,40)	1.000 (25,40)	1.302 (33,07)	1.093 (27,77)	1.300 (33,02)

Add a -P to the end of the part number for peg option.

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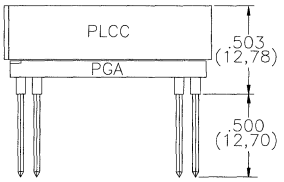


Specify 410B or 411B for Wire Wrap

Typical PCB Layout

ADP PLCC 68-410B

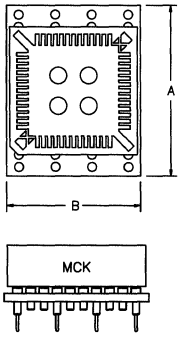
PLCC Adaptors

- Low cost Adaptor to standard PGA pattern on .100" (2,54) grid

PLCC	PART NUMBER*	PGA PATTERN*
20	ADP PLCC20-410B*	0514
28	ADP PLCC28-410B*	0605
32	ADP PLCC32-410B*	0710
44	ADP PLCC44-410B*	0803
52	ADP PLCC52-410B*	0926
68	ADP PLCC68-410B*	1132
84	ADP PLCC84-410B*	1354
100	ADP PLCC100-410B*	1530

*Specify Tail Style:
410B – 200µ" Tin 3 Level Wire Wrap
411B – 10µ" Gold 3 Level Wire Wrap

See Section F For PGA Patterns



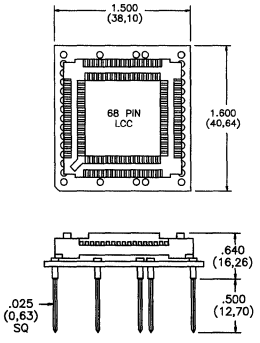
ADP PCC 52-01

PLCC to Prototype Board Adaptor

- Adapts PLCC to Wire Wrap logic board
- PLCC Socket is soldered to copper clad FR4 PCB

PART NUMBER	A	B
ADP PCC 28-02*	1.10" (27,94)	.80" (20,32)
ADP PCC 44-01*	1.20" (30,48)	.90" (22,86)
ADP PCC 52-01*	1.40" (35,56)	1.10" (27,94)
ADP PCC 68-02*	1.40" (35,56)	1.20" (30,48)
ADP PCC 84-02*	1.40" (35,56)	1.40" (35,56)
ADP PCC 100-01*	1.80" (45,72)	1.70" (43,18)

*Soldertail is standard
Add "WW" to Part Number for 3 level Wire wrap



ADP 68LCC55159-591B

LCC to Prototype Board Adaptor

- Adapts 68 pin LCC (JEDEC, A, B, D,) to 100" (2,54) logic board spacing
- Available in Soldertail or Wire Wrap versions

PART NUMBER	TAIL STYLE
ADP68 LCC55159-540B	10µ" Gold Soldertail
ADP68 LCC55159-591B	10µ" Gold Wire Wrap

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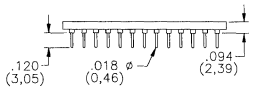
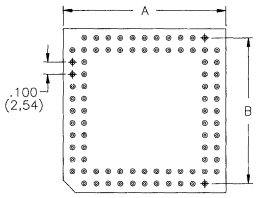
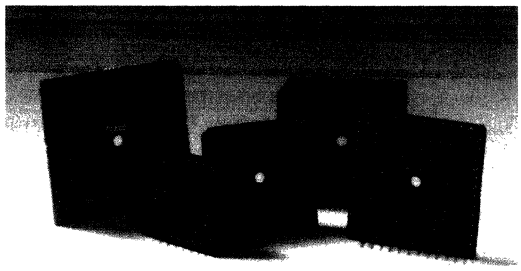
PLCC Device Carriers

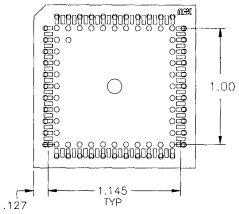






- Adapts JEDEC plastic leaded chip carrier to standard PGA footprint
- Allows device to be socketed or Thru-Hole mounted
- McKenzie offers full value added services and can solder your consigned devices to the carriers. Call factory for details.

PLCC and PQFP device carriers pictured

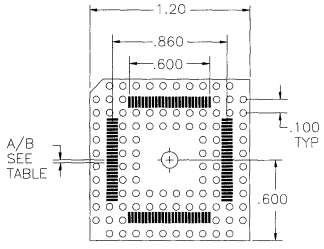


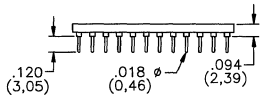
ADP 84DC-PLCC/PGA

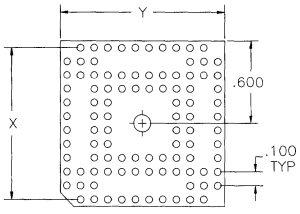
PART NUMBER	PGA PATTERN*	A	B
ADP 52DC-PLCC/PGA	0926	.950 (24,13)	.800 (20,32)
ADP 68DC-PLCC/PGA	1132	1.15 (29,21)	1.000 (25,40)
ADP 84DC-PLCC/PGA	1354	1.35 (34,29)	1.200 (30,48)

See Section F for Mating PGA Sockets.** **See page H6 & H7 for adaptor net lists

QFP Device Carriers



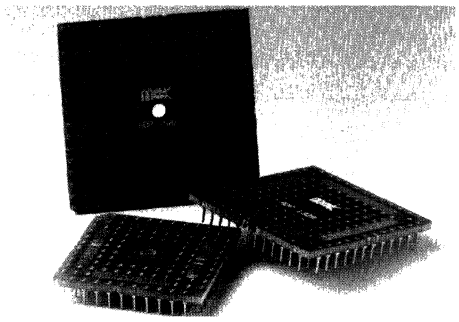




ADP 100ADC-QFP/PGA

Insulator:
Copper Clad FR-4

Contacts:
Tin/Lead Plated Phosphor Bronze
Radius Tip



- Adapts JEDEC or EIAJ gull wing devices to .100" (2,54) grid
- Allows for easy testing and prototyping
- Adaptor can be socketed or soldered to PCB

PART NUMBER	X	Y	PGA PATTERN
ADP 100A*DC-QFP/PGA ADP 100B*DC-QFP/PGA	1.100 (27,94)	1.200 (30,48)	1250
ADP 132A*DC-QFP/PGA ADP 132B*DC-QFP/PGA	1.300 (33,02)	1.400 (35,56)	1491
ADP 144A*DC-QFP/PGA ADP 144B*DC-QFP/PGA	1.500 (38,10)	1.600 (40,64)	1629
ADP 160A*DC-QFP/PGA ADP 160B*DC-QFP/PGA	1.500 (38,10)	1.600 (40,64)	1632

**** A = 0.025 inches pitch, B = 0.65 mm pitch***

See page H4 & H5 for adaptor net lists. Consult factory for availability of other sizes.

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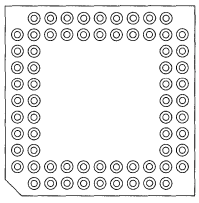
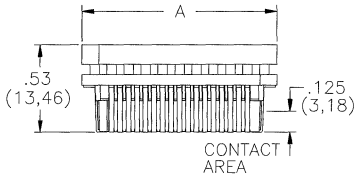
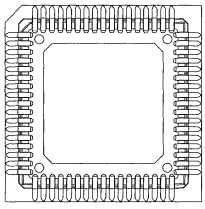


Top View



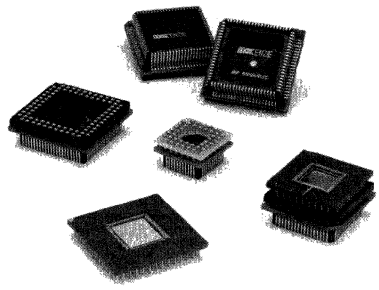
Side View



Bottom View
ADP 68PGA/PLCC

Features

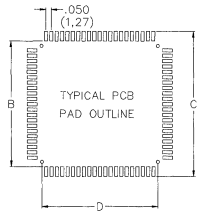
- Adapts from 44, 52, 68, or 84 pin PGA socket to standard .100" (2,54) grid female PLCC pattern
- Fits securely in most manufacturers' PLCC sockets
- Custom female pin patterns available, consult factory
- Accepts .015" (0,38) -.026" (0,66) round mating pin
- Net list available upon request



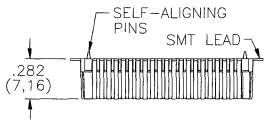
Plug a PGA into a PLCC socket

PART NUMBER	A	PGA PATTERN*
ASM 44PGA/PLCC	.850 (21,59)	0802
ASM 52PGA/PLCC	.950 (24,13)	0926
ASM 68PGA/PLCC	1.200 (30,48)	1132
ASM 84PGA/PLCC	1.400 (35,56)	1354

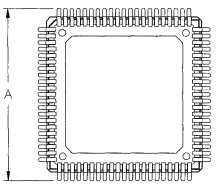
****See Section F For PGA Patterns***



Top View



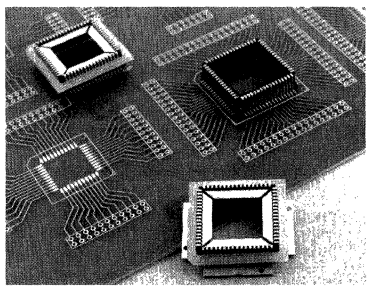
Side View



Bottom View
ADP 84PLCC-SM

Features

- Surface mounts directly to your PCB
- Consult factory for SMT pad specifications
- Fits securely in most manufacturers' PLCC sockets



PART NUMBER	A	B	C	D
ADP 44PLCC-SM	.820 (20,83)	.660 (16,76)	.840 (21,33)	.580 (14,73)
ADP 52PLCC-SM	.920 (23,37)	.755 (19,18)	.935 (23,75)	.680 (17,27)
ADP 68PLCC-SM	1.120 (28,45)	.970 (24,64)	1.150 (29,21)	.880 (22,35)
ADP 84PLCC-SM	1.320 (33,53)	1.170 (29,72)	1.350 (34,29)	1.08 (27,43)

Contact:
Material: Phosphor Bronze/Alloy 510
Plating: Selective Gold 30µ"(min.) over Nickel in contact area
Tin/Lead 200µ" (min.) over Nickel in surface mount area

Insulator:
Hi-Temp,
Glass Reinforced Thermoplastic,
UL 94V-0

How To Order

ADP 44PLCC-SM-T

- ADP — Product Code
- 44PLCC — Number of Contacts
- SM — Surface Mount
- T - Tin Lead Plate (Option)
  Blank - Selective Plated (Gold)

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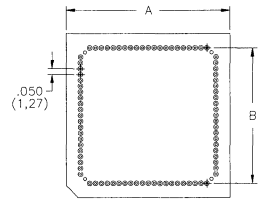
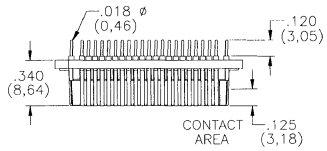
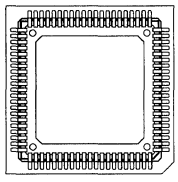


Top View



Side View

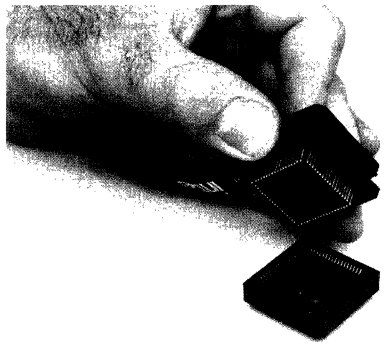


Bottom View
ADP 84PLCC-050

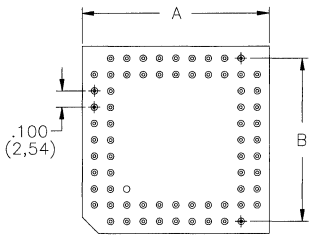
PLCC Adaptor Plug (.050")

- Converts .050" (1,27) thru hole pattern to 68 or 84 position PLCC plug
- Standard plug has gold plated leads, tin plated is available

Male Soldertail:
Phosphor Bronze, 200µ" Tin/Lead over 50µ" Nickel



PART NUMBER	A	B
ASM 68PLCC-050	1.20 (30,48)	.956 (24,28)
ASM 84PLCC-050	1.40 (35,56)	1.156 (29,36)



Top View

PLCC Adaptor Plugs (.100")

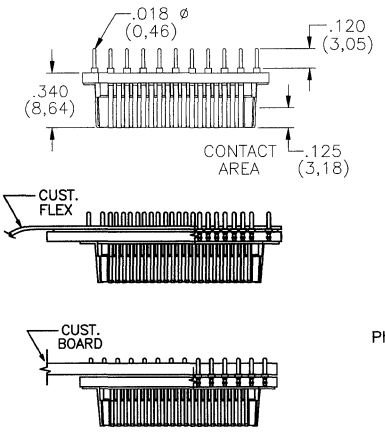
- Converts Thru-Hole .100" PGA (2,54) to PLCC plug
- Available in all standard PLCC pin counts
- Excellent for emulator cable, and daughter card to mother board applications
- Standard plug has gold plated leads, tin plated is available

H

PART NUMBER	A	B	PGA PATTERN*
ASM 44PLCC/PGA	.850 (21,59)	.700 (17,78)	0802
ASM 52PLCC/PGA	.950 (24,13)	.800 (20,32)	0926
ASM 68PLCC/PGA	1.200 (30,48)	1.000 (25,40)	1132
ASM 84PLCC/PGA	1.400 (35,56)	1.200 (30,48)	1354

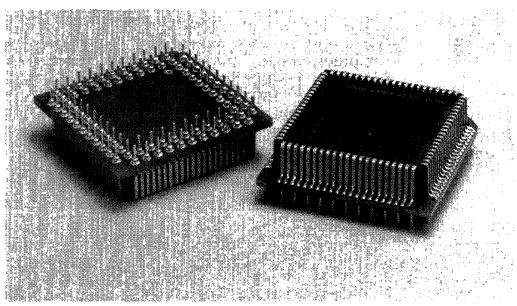
See Section F For PGA Patterns

Typical application



Side View

Male Soldertail:
Phosphor Bronze, 200µ" Tin/Lead over 50µ" Nickel



Consult factory for alternative mating configuration

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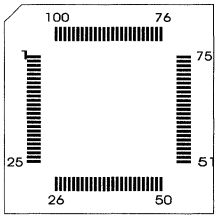
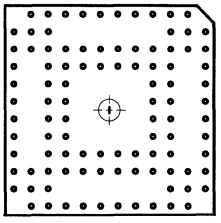
100 Pin, .025" and 65mm Pitch QFP Device Carriers

Part Numbers
ADP 100A-DC-QFP/PGA = .025" Pitch
ADP 100B-DC-QFP/PGA = .65mm Pitch



QFP Pads
Top view of device carrier

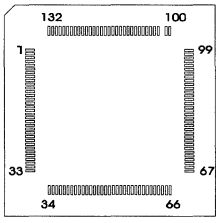


PGA Footprint
Top view of socket or PCB

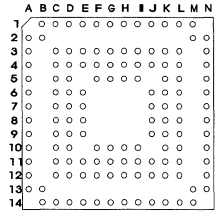
NET LIST — 100

QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN
1	B3	21	D8	41	H12	61	J7	81	J1
2	C3	22	A11	42	G9	62	L7	82	H3
3	C4	23	C9	43	I12	63	I7	83	I1
4	A2	24	C10	44	H10	64	L6	84	H4
5	D4	25	B10	45	J12	65	J6	85	H1
6	A3	26	C11	46	H9	66	L5	86	G3
7	C5	27	B11	47	K12	67	I6	87	G1
8	A4	28	D10	48	I10	68	L4	88	G4
9	D5	29	B12	49	K11	69	J5	89	F1
10	A5	30	D9	50	J11	70	L3	90	F3
11	C6	31	C12	51	K10	71	I5	91	E1
12	A6	32	E10	52	J10	72	L2	92	F4
13	D6	33	D12	53	J9	73	J4	93	D1
14	A7	34	E9	54	L11	74	J3	94	E3
15	C7	35	E12	55	I9	75	K3	95	C1
16	A8	36	F10	56	L10	76	J2	96	E4
17	D7	37	F12	57	J8	77	K2	97	B1
18	A9	38	F9	58	L9	78	I3	98	D3
19	C8	39	G12	59	I8	79	K1	99	B2
20	A10	40	G10	60	L8	80	I4	100	C2

Part Numbers
ADP 132A-DC-QFP/PGA = .025" Pitch
ADP 132B-DC-QFP/PGA = .65mm Pitch



QFP Pads
Top view of device carrier



PGA Footprint
Top view of socket or PCB

NET LIST — 132

QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN
1	A2	23	A9	45	G10	67	N13	89	N6	111	H5
2	A3	24	D10	46	G11	68	N12	90	K5	112	H4
3	A4	25	D11	47	G12	69	N11	91	K4	113	H3
4	C4	26	C10	48	G14	70	L11	92	L5	114	H1
5	D5	27	A10	49	H10	71	K10	93	N5	115	G5
6	C5	28	A11	50	H11	72	L10	94	N4	116	G4
7	A5	29	C12	51	H12	73	N10	95	L3	117	G3
8	E6	30	C11	52	H14	74	J9	96	L4	118	G1
9	D6	31	A12	53	I10	75	K9	97	N3	119	F5
10	C6	32	A13	54	I11	76	L9	98	N2	120	F4
11	A6	33	B13	55	I12	77	N9	99	M2	121	F3
12	E7	34	B14	56	I14	78	J8	100	M1	122	F1
13	D7	35	C14	57	J11	79	K8	101	L1	123	E4
14	C7	36	D14	58	K11	80	L8	102	K1	124	D4
15	A7	37	D12	59	J12	81	N8	103	K3	125	E3
16	E8	38	E11	60	J14	82	J7	104	J4	126	E1
17	D8	39	E12	61	K14	83	K7	105	J3	127	D1
18	C8	40	E14	62	L12	84	L7	106	J1	128	C3
19	A8	41	F10	63	K12	85	N7	107	I5	129	D3
20	E9	42	F11	64	L14	86	J6	108	I4	130	C1
21	D9	43	F12	65	M14	87	K6	109	I3	131	B1
22	C9	44	F14	66	M13	88	L6	110	I1	132	B2

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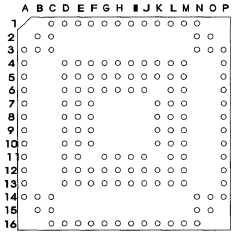
Part Numbers ADP 144A-DC-QFP/PGA = .025" Pitch
ADP 144B-DC-QFP/PGA = .65mm Pitch

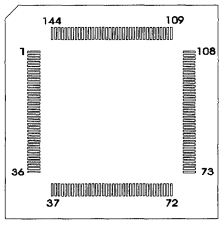
NET LIST — 144

QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN
1	B3	19	F9	37	C15	55	I11	73	O14	91	K8	109	N2	127	H6
2	B2	20	A9	38	B15	56	I16	74	O15	92	P8	110	O2	128	H1
3	A3	21	D9	39	C16	57	I13	75	P14	93	M8	111	N1	129	H4
4	E5	22	E9	40	E12	58	I12	76	L12	94	L8	112	L5	130	H5
5	A4	23	F10	41	D16	59	J11	77	P13	95	K7	113	M1	131	G6
6	D5	24	A10	42	E13	60	J16	78	M12	96	P7	114	L4	132	G1
7	A5	25	D10	43	E16	61	J13	79	P12	97	M7	115	L1	133	G4
8	E6	26	E10	44	F12	62	J12	80	L11	98	L7	116	K5	134	G5
9	A6	27	D11	45	F16	63	K13	81	P11	99	M6	117	K1	135	F4
10	D6	28	A11	46	F13	64	K16	82	M11	100	P6	118	K4	136	F1
11	F7	29	E11	47	G11	65	K12	83	K10	101	L6	119	J6	137	F5
12	A7	30	A12	48	G16	66	L16	84	P10	102	P5	120	J4	138	E1
13	D7	31	D12	49	G13	67	L13	85	M10	103	M5	121	J1	139	E4
14	E7	32	A13	50	G12	68	M16	86	L10	104	P4	122	J5	140	D1
15	F8	33	D13	51	H11	69	M13	87	K9	105	M4	123	I6	141	D4
16	A8	34	A14	52	H16	70	N16	88	P9	106	P3	124	I1	142	C1
17	D8	35	C14	53	H13	71	N14	89	M9	107	N3	125	I4	143	C3
18	E8	36	B14	54	H12	72	N15	90	L9	108	O3	126	I5	144	C2



PGA Footprint
Top view of socket or PCB

144

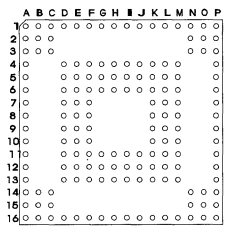


QFP Pads
Top view of device carrier

Part Numbers ADP 160A-DC-QFP/PGA = .025" Pitch
ADP 160B-DC-QFP/PGA = .65mm Pitch

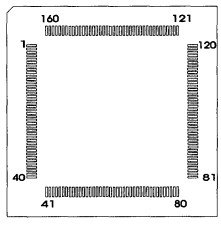
NET LIST — 160

QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN	QFP PAD	PGA PIN
1	B3	21	F9	41	C15	61	I11	81	O14	101	K8	121	N2	141	H6
2	A1	22	A9	42	A16	62	I16	82	P16	102	P8	122	P1	142	H1
3	A2	23	D9	43	B16	63	I13	83	P15	103	M8	123	O1	143	H4
4	A3	24	E9	44	C16	64	I12	84	P14	104	L8	124	N1	144	H5
5	F6	25	F10	45	F11	65	J11	85	K11	105	K7	125	K6	145	G6
6	E5	26	A10	46	E12	66	J16	86	L12	106	P7	126	L5	146	G1
7	A4	27	D10	47	D16	67	J13	87	P13	107	M7	127	M1	147	G4
8	D5	28	E10	48	E13	68	J12	88	M12	108	L7	128	L4	148	G5
9	A5	29	D11	49	E16	69	K13	89	P12	109	M6	129	L1	149	F4
10	E6	30	A11	50	F12	70	K16	90	L11	110	P6	130	K5	150	F1
11	A6	31	E11	51	F16	71	K12	91	P11	111	L6	131	K1	151	F5
12	D6	32	A12	52	F13	72	L16	92	M11	112	P5	132	K4	152	E1
13	F7	33	D12	53	G11	73	L13	93	K10	113	M5	133	J6	153	E4
14	A7	34	A13	54	G16	74	M16	94	P10	114	P4	134	J1	154	D1
15	D7	35	D13	55	G13	75	M13	95	M10	115	M4	135	J4	155	D4
16	E7	36	A14	56	G12	76	N16	96	L10	116	P3	136	J5	156	C1
17	F8	37	C14	57	H11	77	N14	97	K9	117	N3	137	I6	157	C3
18	A8	38	A15	58	H16	78	O16	98	P9	118	P2	138	I1	158	B1
19	D8	39	B15	59	H13	79	O15	99	M9	119	O2	139	I4	159	B2
20	E8	40	B14	60	H12	80	N15	100	L9	120	O3	140	I5	160	C2



PGA Footprint
Top view of socket or PCB

160



QFP Pads
Top view of device carrier

H

Part Number ADP 52-DC-PLCC/PGA **Net List — 52**

PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN
1	E1	14	A5	27	E9	40	I5
2	E2	15	B5	28	E8	41	H5
3	D1	16	A6	29	F9	42	I4
4	D2	17	B6	30	F8	43	H4
5	C1	18	A7	31	G9	44	I3
6	C2	19	B7	32	G8	45	H3
7	B1	20	A8	33	H9	46	I2
8	A2	21	B9	34	I8	47	H1
9	B2	22	B8	35	H8	48	H2
10	A3	23	C9	36	I7	49	G1
11	B3	24	C8	37	H7	50	G2
12	A4	25	D9	38	I6	51	F1
13	B4	26	D8	39	H6	52	F2

Part Number ADP 68-DC-PLCC/PGA **Net List — 68**

PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	QFP PAD	PGA PIN
1	F1	15	B4	29	C11	43	J11	57	J4
2	F2	16	A5	30	C10	44	K10	58	K3
3	E1	17	B5	31	D11	45	J10	59	J3
4	E2	18	A6	32	D10	46	K9	60	K2
5	D1	19	B6	33	E11	47	J9	61	J1
6	D2	20	A7	34	E10	48	K8	62	J2
7	C1	21	B7	35	F11	49	J8	63	
8	C2	22	A8	36	F10	50	K7	64	I2
9	B1	23	B8	37	G11	51	J7	65	H1
10	A2	24	A9	38	G10	52	K6	66	H2
11	B2	25	B9	39	H11	53	J6	67	G1
12	A3	26	A10	40	H10	54	K5	68	G2
13	B3	27	B11	41	I11	55	J5		
14	A4	28	B10	42	I10	56	K4		

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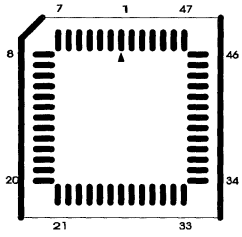
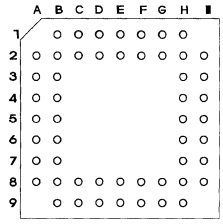
Part Number ADP 84-DC-PLCC/PGA **Net List — 84**

PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN	PLCC PAD	PGA PIN
1	G1	15	B3	29	B10	43	G13	57	L11	71	L4
2	G2	16	A4	30	A11	44	G12	58	M10	72	M3
3	F1	17	B4	31	B11	45	H13	59	L10	73	L3
4	F2	18	A5	32	A12	46	H12	60	M9	74	M2
5	E1	19	B5	33	B13	47	I13	61	L9	75	L1
6	E2	20	A6	34	B12	48	I12	62	M8	76	L2
7	D1	21	B6	35	C13	49	J13	63	L8	77	K1
8	D2	22	A7	36	C12	50	J12	64	M7	78	K2
9	C1	23	B7	37	D13	51	K13	65	L7	79	J1
10	C2	24	A8	38	D12	52	K12	66	M6	80	J2
11	B1	25	B8	39	E13	53	L13	67	L6	81	I1
12	A2	26	A9	40	E12	54	M12	68	M5	82	I2
13	B2	27	B9	41	F13	55	L12	69	L5	83	H1
14	A3	28	A10	42	F12	56	M11	70	M4	84	H2

52

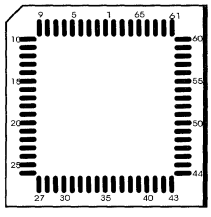


PLCC Pads
Top view of PLCC side on the device carrier

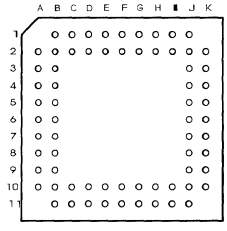


PGA Footprint
Top view of PGA socket or footprint on PC-Board that the device carrier is plugged into

68

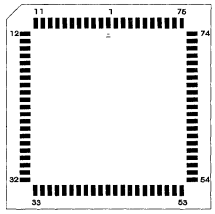


PLCC Pads
Top view of PLCC side on the device carrier

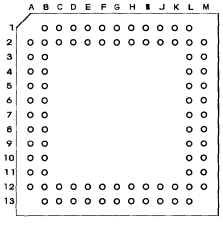


PGA Footprint
Top view of PGA socket or footprint on PC-Board that the device carrier is plugged into

84



PLCC Pads
Top view of PLCC side on the device carrier



PGA Footprint
Top view of PGA socket or footprint on PC-Board that the device carrier is plugged into

H

BERG ELECTRONICS

mck McKenzie Socket Division

McKenzie is a leader in the assembly of custom adapters. These adapters range from simple IC package converters to more complicated Application Specific Modules (ASM™). For the entire range of adapters, McKenzie offers a broad range of services.

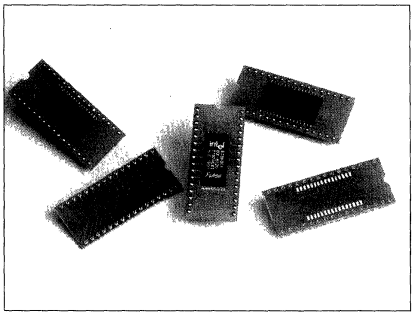
Offering

- Unique interconnect systems which address all design issues.
- Turnkey assembly — In-house pick-and-place machines and reflow chambers enable us to do component attachment.
- Engineering assistance — PCB layout, to creation of gerber plots, to circuit design assistance.
- Materials procurement active and passive components can either be kitted and consigned to McKenzie, or McKenzie's purchasing department can handle and manage the procurement of any material.
- ISO 9001 registered company

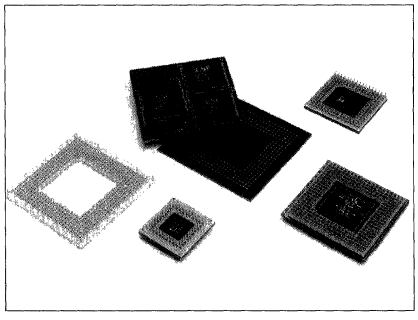
Design Issues

- Contact coplanarity
- Material selection — TCE mismatch
- Alignment during SMT placement
- Pin tip position after solder attach
- Solder joint inspection
- Contact retention & Solder joint strength
- Manufacturability and yields
- Warpage, testing and packaging
- Minimizing PCB layers
- Cost effective solutions

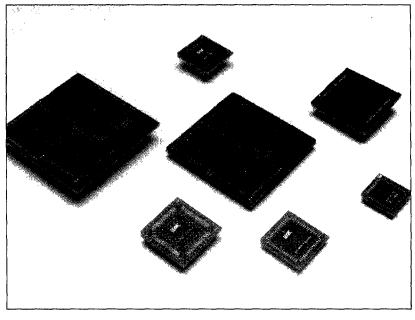
Examples of adapters turnkey assembled at McKenzie



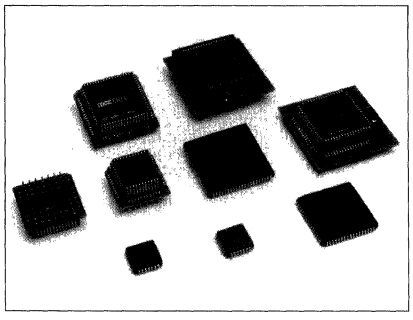
TSOP Adapters



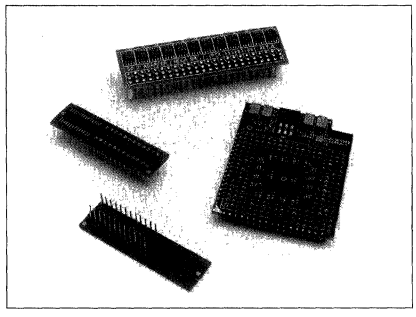
Specialized SMT Connectors(Page K1)



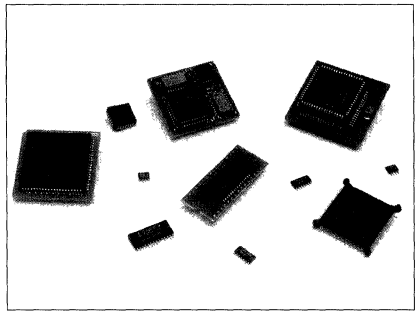
QFP Adapters



PLCC Adapters



Pinned Boards



Fine Pitch Assembly

Please contact your local McKenzie source or McKenzie directly for a detailed Design Guideline and Capabilities Brochure.

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Features

- Designed to be cut without losing a position
- Tin or Gold plating
- Mates to female headers on I5
- Consult factory for custom lengths and unique square post header requirements

PH1 and PH2 Series

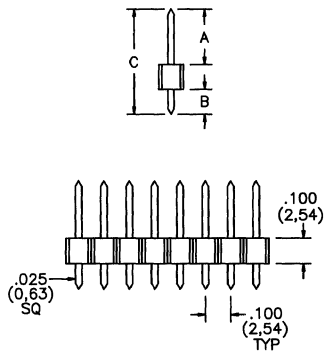
A	B	C
MATING LENGTH	TAIL LENGTH	OVERALL LENGTH
.230 (5,84)	.100 (2,54)	.430 (10,92)
.230 (5,84)	.115 (2,92)	.445 (11,30)
.235 (5,97)	.145 (3,68)	.480 (12,19)
.270 (6,86)	.140 (3,56)	.510 (12,95)
.318 (8,08)	.110 (2,79)	.528 (13,41)
.318 (8,08)	.127 (3,23)	.545 (13,84)
.343 (8,71)	.120 (3,05)	.563 (14,30)

PH3 and PH4 Series

A	B	C
MATING LENGTH	TAIL LENGTH	OFFSET DIM.
PH3		
.230 (5,84)	.095 (2,41)	.060 (1,52)
.318 (8,08)	.095 (2,41)	.060 (1,52)
PH4		
.235 (5,97)	.120 (3,05)	.060 (1,52)
.318 (8,08)	.135 (3,43)	.060 (1,52)

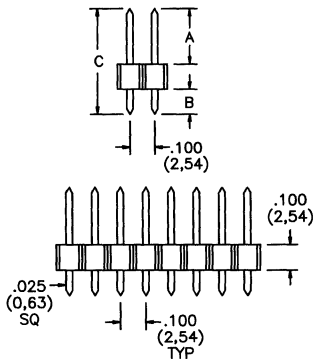
MOLDED SOCKETS
® RECOGNIZED

PH1 Series



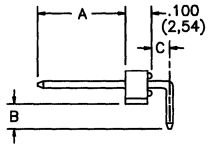
Single row
1-36 position

PH2 Series



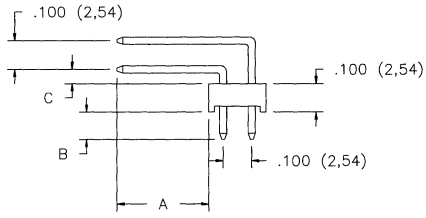
Dual row
2-72 position

PH3 Single row/ Right angle



Single row/Right angle
Horizontal insulator version also available.

PH4 Dual row/ Right angle



Dual row/Right angle
Vertical insulator version also available.

How To Order

P H 2 | 2 3 0 | / | 1 0 0 | - | 3 6 | G

PH1 = Single Row Straight
PH2 = Dual Row Straight
PH3 = Single Row Right Angle
PH4 = Dual Row Right Angle

Mating Length (A dim.)

Tail Length (B dim.)

Number of Contacts:
Std. = X36 Single Row
(Range = 01-36)
Std. = X72 Dual Row
(Range = 04-72

Material
G - 10µ" Gold
T - 200µ" Tin

Technical Specifications

Temperature Range: -40°C to +150°C min. continuous
Max Load: 4 Amps
Insulator: Glass filled Nylon UL 94V-0
Contact Material: Phosphor Bronze, full hard

Contact Plating:
Standard
G=10µ" Gold over 50µ" Nickel, min.
T=200µ" Tin over Nickel 50µ", min.
Custom Option
G30=30µ" Gold over 50µ" Nickel, min.

Loose piece .025 square posts readily available

BERG ELECTRONICS

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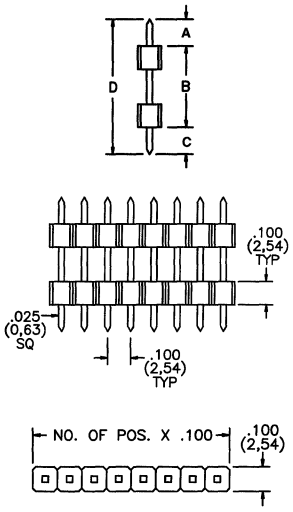
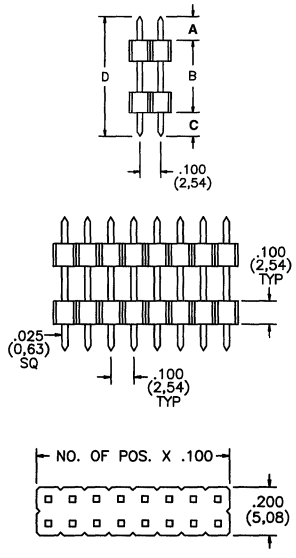
PHS-H1

Single row Extended header



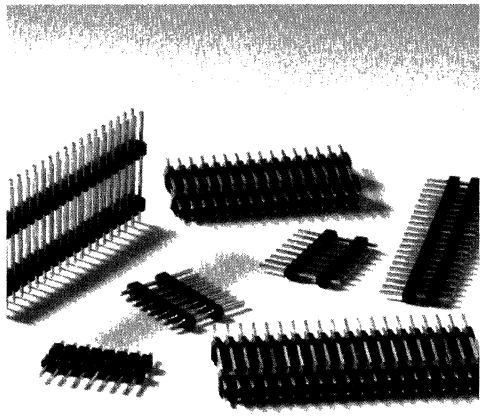
PHS-H2

Dual row Extended header



Features

- Ideal board-to-board interconnection
- Tin or Gold Plating
- Extended headers are also available in 2mm progression
- Available up to 40 positions in single row or 80 positions in dual row
- Bottom insulator has a .020" board stand off for post soldering wash process



A	B	C	D
MATING LENGTH	STACKING HEIGHT	TAIL LENGTH	OVERALL LENGTH
.235 (5,97)	.200 (5,08)	.100 (2,54)	.535 (13,59)
.235 (5,97)	.300 (7,62)	.100 (2,54)	.635 (16,13)
.260 (6,61)	.375 (9,53)	.100 (2,54)	.735 (18,67)
.320 (8,13)	.430 (10,92)	.185 (4,70)	.935 (23,75)
.235 (5,97)	.570 (14,48)	.230 (5,84)	1.035 (26,29)
.295 (7,50)	.640 (16,26)	.200 (5,08)	1.135 (28,83)
.235 (5,97)	.770 (19,56)	.230 (5,84)	1.235 (31.37)
.255 (6,48)	.815 (20,70)	.265 (6,73)	1.335 (33,91)

Other pin lengths and stacking heights available - consult factory

How to Order

PHS H1 320 /430/ 185 - 935 - 36 G

- PHS — Product Code
- H1 — Number of Rows: Single = H1, Dual = H2
- 320 — Mating Length (A dim.)
- /430/ — Space between header top surface and bottom surface (B dim.)
- 185 — Tail Length (C dim.)
- 935 — Total Length (D dim.)
- 36 — # of Contacts
- G — Plating: G - 10µ" Gold over 50µ" Nickel; T - 200µ" Tin over 50µ" Nickel

Technical Specifications

Maximum Current: 3 amps
Insulator: Glass Reinforced Thermoplastic, UL 94V-0
Temp. Range: -40°C to +150°C min.
Contact Material: Phosphor Bronze, full hard
Contact Plating: G=10µ" Gold/50µ"Nickel
T =200µ" Tin/50µ" Nickel
Custom option: G30=30µ" Gold/50µ" Nickel
A, B, C, D - Dim. Tolerance: +/- .008"

MOLDED SOCKETS
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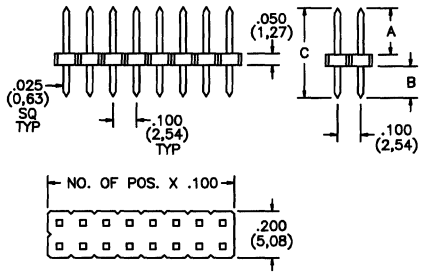
PH2 .050" Series



Dual row — 2-72 position

Technical Specifications

Temperature Range: -40°C to +150°C min. continuous
Max Load: 4 Amps
Insulator: Glass filled Nylon UL 94V-0
Contact Material: Phosphor Bronze, full hard
Contact Plating:
Standard
G=10µ" Gold over 50µ" Nickel, min.
T=200µ" Tin over 50µ" Nickel, min.
Custom Option
G30=30µ" Gold over 50µ" Nickel, min.

MOLDED SOCKETS RECOGNIZED

.050" Series

- New .050" (1,27) insulator provides low above board profile
- Available in Tin or Gold plating
- Can be used in conjunction with our .177" (4,50) MicroShunts to achieve lowest profile (see pages J - J2)

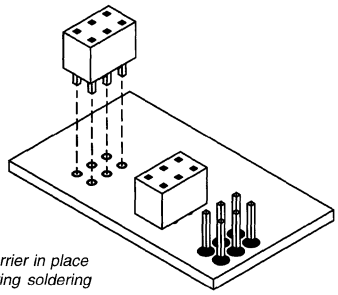
A	B	C
MATING LENGTH	TAIL LENGTH	OVERALL LENGTH
.200	.135	.385
.200	.180	.430

How To Order

PH2 050 - 200 / 135 - 36 G

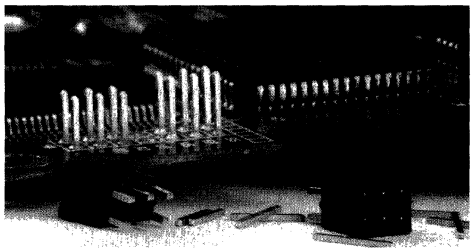
- PH2 — Dual Row Style
- 050 — Plastic Body Thickness
- 200 — Mating Length (A dim.)
- 135 — Tail Length (B dim.)
- 36 — Total Pin Count
- G — Plating: G - 10µ" Gold over 50µ" Nickel; T - 200µ" Tin over 50µ" Nickel

For MicroShunt information, see Section J. Consult the factory for other options



Carrier in place during soldering

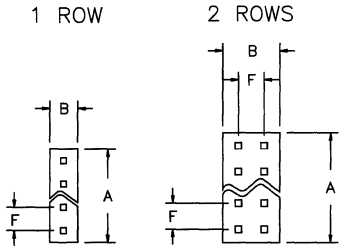
After carrier removed



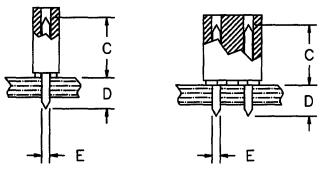
Pin Header Carriers

- Single, dual, and three row versions
- Removable carrier provides lowest above board profile
- Carrier is removed after soldering
- Available in both .100" (2,54) and 2mm pitch
- Provides .020" (0,51) or .025" (0,64) square post without an insulator
- Available in Tin or Gold plating

Top



Side

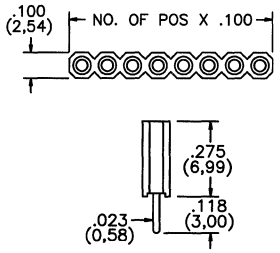


PART NUMBER*	NO. of ROWS	NO. of POSITIONS	A	B	C* MATING	D* TAIL	E	F	OVERALL PIN LENGTH
PHC 1x12-190/120 G	1	12	1.195 (30,35)	.098 (2,49)	.190 (4,83)	.120 (3,05)	.025 sq. (0,64)	.100 (2,54)	.310 (7,87)
PHC 2x01-190/085 G	2	1	.095 (2,41)	.196 (4,98)	.190 (4,83)	.085 (2,16)	.025 sq. (0,64)	.100 (2,54)	.275 (6,99)
PHC 2x03-220/090 G	2	3	.295 (7,49)	.196 (4,98)	.220 (5,59)	.090 (2,29)	.025 sq. (0,64)	.100 (2,54)	.310 (7,87)
PHC 2x05-236/114 G	2	5	.495 (12,57)	.196 (4,98)	.236 (5,99)	.114 (2,90)	.025 sq. (0,64)	.100 (2,54)	.350 (8,89)
PHC M - 2x01-138/059 G	2	1	.068 (1,72)	.154 (3,91)	.138 (3,51)	.059 (1,50)	.020 sq. (0,51)	.079 (2,00)	.197 (5,00)
PHC M - 2x12-138/112 G	2	12	.937 (23,80)	.154 (3,91)	.138 (3,51)	.112 (2,85)	.020 sq. (0,51)	.079 (2,00)	.250 (6,35)

**** Available in different lengths and configurations, consult factory***

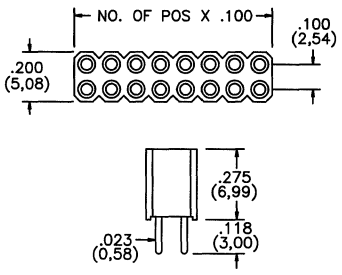
Screw Machine Contact

SH 17 Series



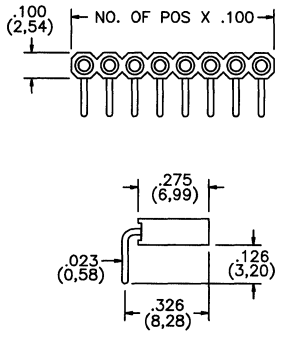
Single row
1-36 position

SH 27 Series



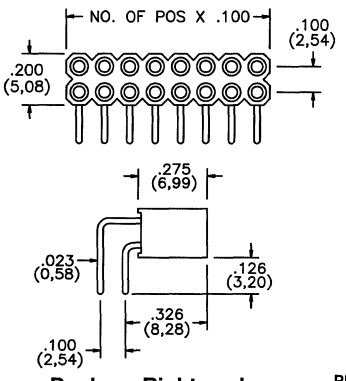
Dual row
2-72 position

SH 37 Series



Single row Right angle
1-36 position

SH 47 Series



Dual row Right angle
2-72 position

- Designed to mate with .025" (0,64) Square Post Headers (PH1 and PH2 Series on page I2 - I3)
- Screw machine inner contact provides optimal electrical and mechanical interconnection
- Available in single or dual row

How To Order

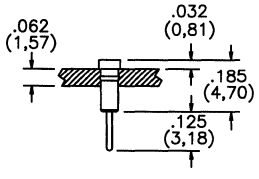
SH - 17 - 36 - ST GT

- SH — Product Code
- 17 - Single Row; 27 - Dual Row; 37 - Single Row Right Angle; 47 - Dual Row Right Angle — Number of Positions
- 36 — Number of Positions
- ST — Solder Tail
- GT — Gold Contact/Tin outer sleeve

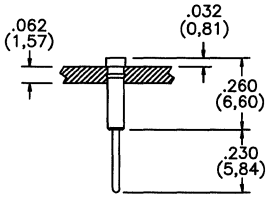
Material Specifications
Material: Outer Shell – Brass, Inner Contact – 6 Fingers, Berylium Copper
Plating: Outer Shell – Tin over Nickel, Inner Contact – Gold over Nickel
Insulator: UL 94V-0 Thermoplastic

Technical Specifications
Contact Resistance: 10 Milliohm
Insulation Resistance: 10 Ohm, U=100
Overload Voltage:1500 Veff, 50Hz
Max Current: 3A DC
Temperature Range: -55 to +105°C
Mech. Life Cycles: 200

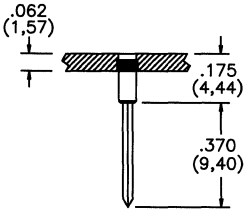
Design Your Own Custom .025 Square Post Receptacle



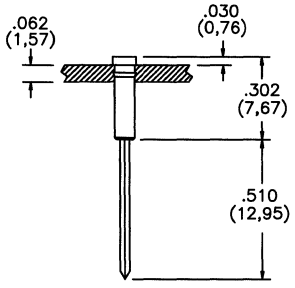
424B
.125 solder tail



435B
.230 solder tail



445B
2 level Wire Wrap



455B
3 level Wire Wrap

- Available in solder tail or Wire Wrap
- Tin or Gold plating
- Hi-Temp insulator
- Available in PPC

HIGH TEMP
AVAILABLE

How To Order

PPC SIP - 1 x 32 - 011B - F

- PPC — Option
- SIP — Product Code
- 1 — Number of Rows
- 32 — Number of Contacts per Row
- 011B — Contact Style
- F — Hi-Temp Material Call Out

Contact/Shell:
Outer Shell–1/2 Hard Brass
Inner Contact-Beryllium Copper

Plating:
Outer Shell–Tin over Nickel
Inner Contact-Gold over Nickel

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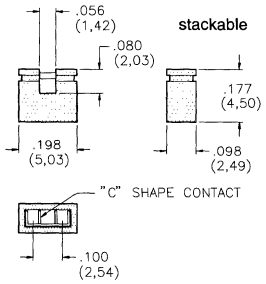
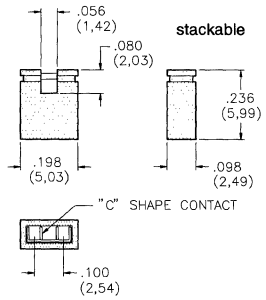
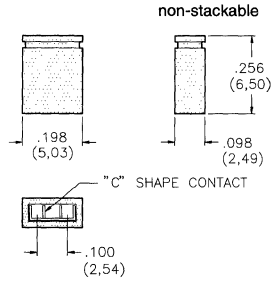
ULTRA LOW PROFILE



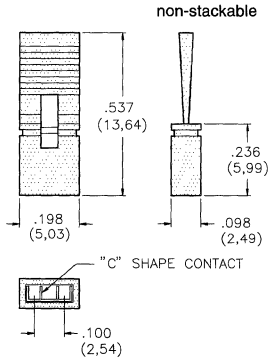
VERY LOW PROFILE



LOW PROFILE



FLEXIBLE HANDLE WITH TESTPOINT



Ultra Low Profile with testpoint .177" (4,5) high

PART NUMBER		PLATING	COLOR
MSB	1770-G-C-STP	GOLD	BLACK
MSB	1770-T-C-STP	TIN	BLACK
Red, yellow, blue or grey available on request			

Very Low Profile with testpoint .236"(6,0) high

PART NUMBER		PLATING	COLOR
MSB	2360-G-C-STP	GOLD	BLACK
MSB	2360-T-C-STP	TIN	BLACK
MSB	2362-G-C-STP	GOLD	RED
MSB	2362-T-C-STP	TIN	RED
MSB	2364-G-C-STP	GOLD	YELLOW
MSB	2364-T-C-STP	TIN	YELLOW
MSB	2366-G-C-STP	GOLD	BLUE
MSB	2366-T-C-STP	TIN	BLUE
Grey available on request			

Low Profile .256" (6,50) high

PART NUMBER		PLATING	COLOR
MSB	2560-G-C-C	GOLD	BLACK
MSB	2560-T-C-C	TIN	BLACK
MSB	2562-G-C-C	GOLD	RED
MSB	2562-T-C-C	TIN	RED
MSB	2564-G-C-C	GOLD	YELLOW
MSB	2564-T-C-C	TIN	YELLOW
MSB	2566-G-C-C	GOLD	BLUE
MSB	2566-T-C-C	TIN	BLUE
MSB	2568-G-C-C	GOLD	GREY
MSB	2568-T-C-C	TIN	GREY

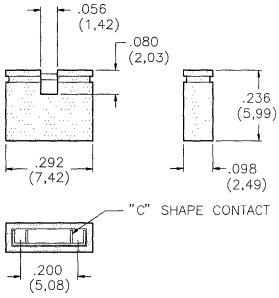
Flexible Handle with testpoint

PART NUMBER		PLATING	COLOR
MSB	5370-G-H	GOLD	BLACK
MSB	5370-T-H	TIN	BLACK
Red, yellow, blue or grey available on request			

Technical Specifications
Temperature Range: -40°C to +140°C
Max Load: 3 Amps
Contact Resistance: Gold – Less than 10 milliohm
Tin – Less than 20 milliohm
Mechanical Life: Gold – A minimum of 200 cycles
Tin – A minimum of 40 cycles

Material Specifications
Contact Material: Dual wipe phosphor bronze
Insulator: Glass Reinforced Thermoplastic
Plating: "G" 15µ" gold over 40µ" nickel
"T" 100µ" tin over 40µ"nickel

J



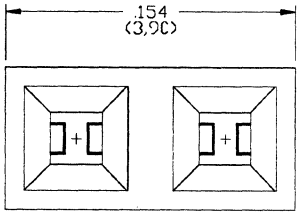
.200" (5,08) Progression MicroShunt™ with testpoint

PART NUMBER	PLATING	COLOR
MSB 2368-200-G-C-CTP	GOLD	GREY
MSB 2368-200-T-C-CTP	TIN	GREY

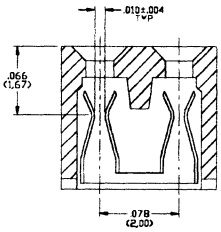
See material and technical specifications on page J

2mm Shunts

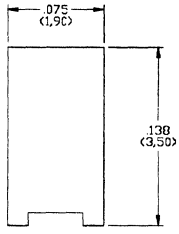
Top View



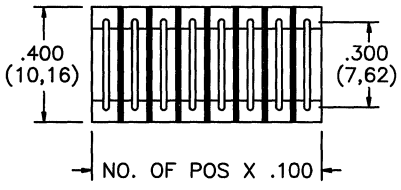
Front View

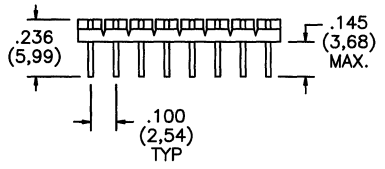


Side View



MSB M - 3,50 - G - STP

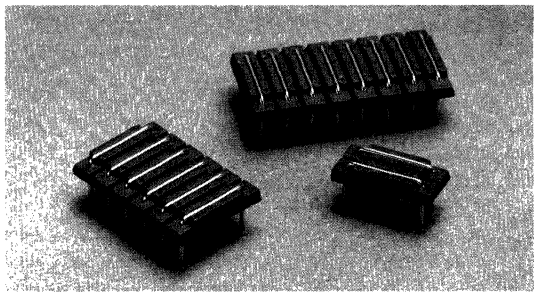




Insulator:
Glass Reinforced Thermoplastic,
UL 94V-0 Rated

Contact:
Phosphor Bronze
.018-.020 TYP Diameter

Plating:
10µ" Gold over 50µ" Nickel



Programmable Jumper Plugs

- Available in multiple units of 1 through 8
- .300" (7,62) centers
- Custom configurations available with shorting jumpers installed to customer specifications

How To Order

J M P | P J P - 3 6 | G - 8 R

- J M P — Product Code
- P J P — Programmable Jumper Plug
- 3 6 — Wire Jumper Style
- G — Specify
  G - 10µ" Gold over 50µ" Nickel
  T - 200µ" Tin over 50µ" Nickel
- 8 R — Positions (Specify 1-8)

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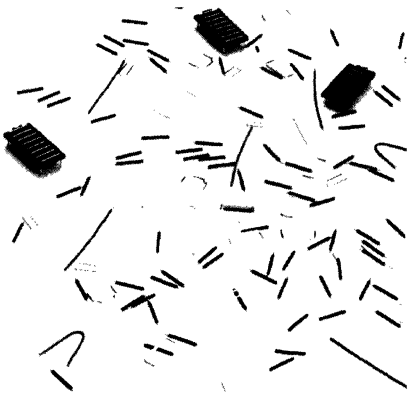
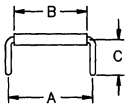


Insulated and Bare Wire Jumpers

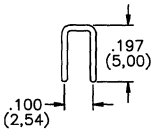
- Available bare or with your choice of two insulation materials
- PVC Insulator suitable for jumpering socket terminals
- Teflon insulation for direct soldering to PCB or other Hi-Temp applications
- Custom configurations and wire gauges available – consult factory



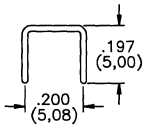
Material:
24 Gauge AWG. solid Copper wire
Tin plated per MIL-QQW-343

Insulator:
Low Temp - PVC per UL1061
MIL W 16878, TYPE B
Hi-Temp - Dupont Teflon
TPFE (TEF)

BRASS



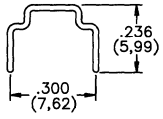
JMP BR16G



JMP BR26G

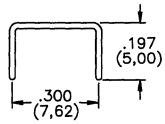
PART NUMBER*	A	B	C
JMP .100 x .125-XXX-24	.100 (2,54)	.085 (2,16)	.125 (3,18)
JMP .100 x .175-XXX-24			.175 (4,45)
JMP .100 x .250-XXX-24			.250 (6,35)
JMP .200 x .125-XXX-24	.200 (5,08)	.175 (4,45)	.125 (3,18)
JMP .200 x .175-XXX-24			.175 (4,45)
JMP .200 x .250-XXX-24			.250 (6,35)
JMP .300 x .125-XXX-24	.300 (7,62)	.275 (6,99)	.125 (3,18)
JMP .300 x .175-XXX-24			.175 (4,45)
JMP .300 x .250-XXX-24			.250 (6,35)
JMP .400 x .125-XXX-24	.400 (10,16)	.375 (9,53)	.125 (3,18)
JMP .400 x .175-XXX-24			.175 (4,45)
JMP .400 x .250-XXX-24			.250 (6,35)
JMP .500 x .125-XXX-24	.500 (12,70)	.475 (12,07)	.125 (3,18)
JMP .500 x .175-XXX-24			.175 (4,45)
JMP .500 x .250-XXX-24			.250 (6,35)
JMP .600 x .125-XXX-24	.600 (15,24)	.575 (14,61)	.125 (3,18)
JMP .600 x .175-XXX-24			.175 (4,45)
JMP .600 x .250-XXX-24			.250 (6,35)

*To order fill in XXX with: PVC for PVC insulation
TEF for Teflon insulation
BAR for Bare (no insulation)



JMP BR36G

PHOSPHOR BRONZE



JMP BR36GR

Uninsulated Wire Jumpers

- Gold plated
- Suitable for jumpering socket terminals
- Inexpensive switching and programming changes
- Lead diameter .020" (0,51)

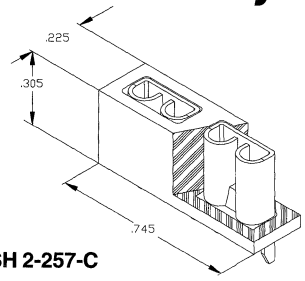
PART NUMBER	MATERIAL	PLATING
JMP BR16G	BRASS	10µ"GOLD OVER 50µ" NICKEL
JMP BR26G	BRASS	10µ"GOLD OVER 50µ" NICKEL
JMP BR36G	BRASS	10µ"GOLD OVER 50µ" NICKEL

J

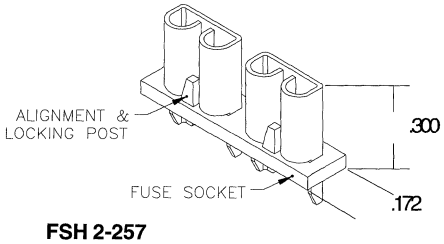
BERG ELECTRONICS

mck McKenzie Socket Division

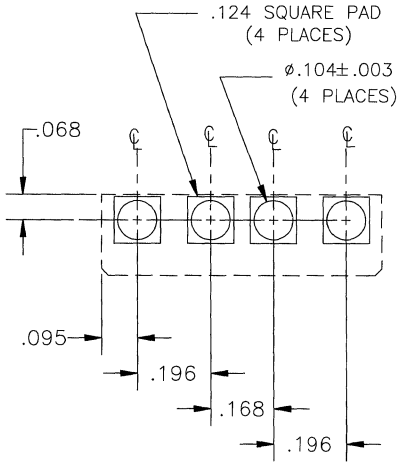
Immediate Availability



FSH 2-257-C



FSH 2-257



Suggested footprint for PCB layout

HIGH TEMP

AVAILABLE

Technical Specifications:

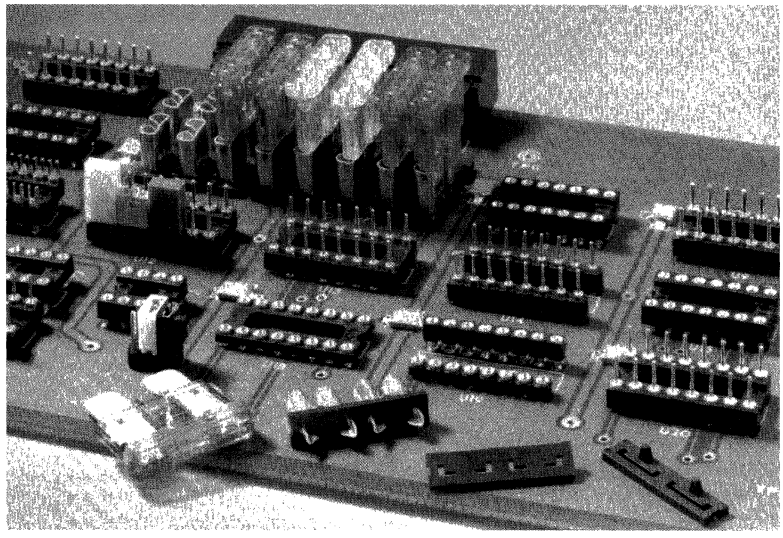
Operating Temperature: 0° C to 100° C
Contact Current Rating: 15 AMP Max.

Recommended for Wave Soldering Applications
(260° C @ 5 seconds max.)

Material Specifications:

Insulator
Hi-Temp, Glass Reinforced Thermoplastic,
UL 94V-0 rated
Withstanding Voltage: 500 VAC Min.
Insulation Resistance:
1000 Megohms Min. @ 500 VAC

Contacts:
Contact Material: Brass alloy, Tin Plated



PART NUMBER: FSH 2-257 (SHROUDED: FSH 2-257-C)

Features

- Compatible with commonly used Littelfuse Series 257 fast-acting, blade type ATO auto fuses
- Solder tails for PCB board mounting
- Unique locking post provides positive contact alignment
- Hi-Temp insulator for wave soldering
- Design prevents solder-wicking into the spring clip area and contamination during wash
- Contacts are rated to 15A
- Shrouded version insures contact isolation
- .020 stand offs aid post solder wash process

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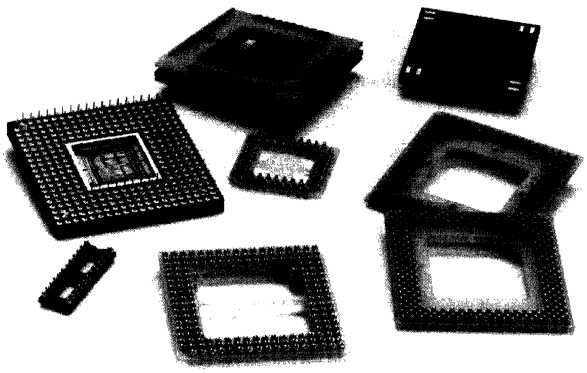
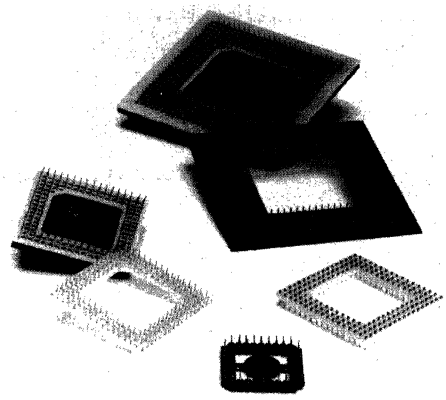
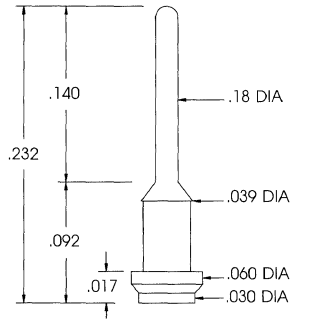


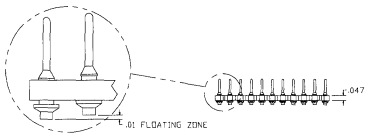
SMT sockets

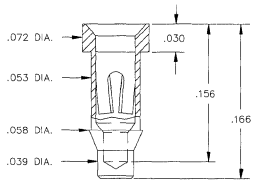


SMT headers

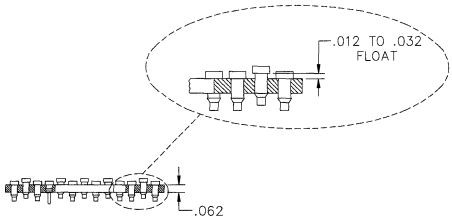


Specify **Contact/Shell**
976P 10µ" Gold/PHSBRNZ





Specify **Contact/Shell**
622C 30µ" Gold/Tin
623C Tin/Tin



Features

- Available in either DIP or PGA configurations
- Contacts float on the Z-axis to insure perfect coplanarity
- Socket profile = .166 above PCB
- Header profile = .232 above PCB with bottom of mated connector at .140 above PCB.
- Pick and Place Tabs for Automatic Assembly Equipment.
- Hi-Temp PPS insulators compatible with all SMT processes.
- Specially designed contact insures a high strength, high reliability solder joint every time
- Recommended PCB pad size: .050" round

How to Order

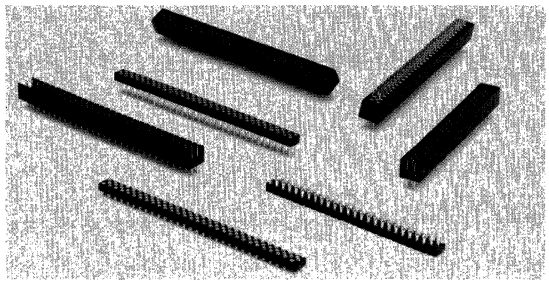
PGA 132H 622C1 - 1414

- PGA — Pin Grid Array
- 132H — See F section for further information
- 622C1 — Contact 623C 976P
- 1414 — See F section for pattern options
- (blank) — FR4 Material

DSM 320 - 622C

- DSM — DIP Surface Mount
- 320 — See page B4 for options
- 622C — Contact 623C 976P
- (blank) — FR4 Material

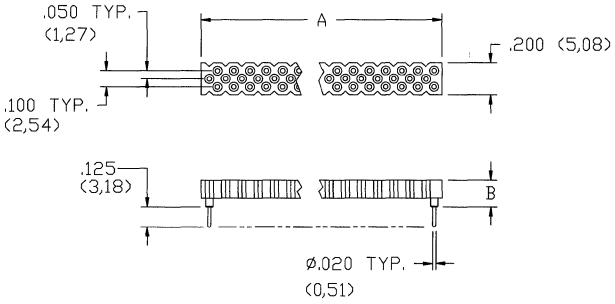
K



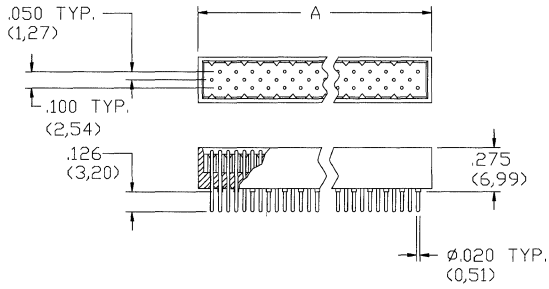
Features

- High density, two piece connector system
- Interstitial array provides a 50% increase in density over that of conventional .100" x .100" connector systems
- Mated connector pair provides .295" (7,49) or .433" (11,00) spacing between boards
- Utilizes multi-finger screw machine contacts for high reliability and low insertion forces

FEMALE



MALE



How To Order (Female)

PART NUMBER	NO. OF POS.	A	B
ZIP X 50/100 - 3 x 30 - 320B- R	90	3.050 (77,47)	.165 (4,19)
ZIP X 50/100 - 3 x 30 - 321B- R	90	3.050 (77,47)	.314 (7,98)

How To Order (Male)

PART NUMBER	NO. OF POS.	A
ZIP X 50/100 - 3 x 25 - P382G50- R	75	2.550 (64,77)
ZIP X 50/100 - 3 x 30 - P382G50- R	90	3.144 (79,86)

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INSULATORS	UL*	CONTINUOUS USE** TEMPERATURE	HEAT DEFLECTION** TEMPERATURE (@264 psi)
Hi-Temp - Vapor Phase and IR Compatible			
Polyimide Laminate (H), Glass Reinforced	94V-0	250°C	270°C
Fortron (PPS), (R), 40% Glass Reinforced	94V-0	220°C	260°C
Tefzel HT2004 (EPTFE),			
4% Glass Reinforced	94V-0		
8% Glass Reinforced	94V-0		
25% Glass Reinforced	94V-0	200°C	210°C
Vectra, C130 (LCP), (V)	94V-0	200°C	243°C
FR-4 Glass Epoxy (F)	94V-0	140°C	149°C
Standard Temp-Wave Solder Compatible			
Tefzel 280 (ETFE)	94V-0	150°C	74°C
Valox Polyester (420-SE0) (PBT)			
30% Fiberglass	94V-0	140°C	204°C
Zytel FR50, 25% Glass Reinforced Nylon	94V-0	130°C	240°C

**UL Flammability rating*

*** Typical value as defined by raw material supplier.*

OUTER SHELL AND TERMINAL MATERIALS – Screw Machine Sockets

Brass - Alloy 360, 1/2 hard, per QQ-B-626
Phosphor Bronze - Alloy 544 (B2), hard, per QQ-B-750, Comp. B

INNER CONTACT MATERIALS – Screw Machine Sockets

Beryllium Copper (BeCu) - Alloy 172, heat treated, per QQ-C-533
Beryllium Nickel (BeNi) - Alloy 440, heat treated

OUTER SHELL AND TERMINAL PLATINGS – Screw Machine Sockets

200µ" (nominal) BRIGHT ACID TIN per MIL-T-10727, Type 1 over 100µ" (nominal) Nickel per QQ-N-290
10µ" (nominal) GOLD per MIL-G-45204, Type 1 GRADE C, over 100µ" (nominal) Nickel per QQ-N-290
50µ" (nominal) GOLD per MIL-G-45204, Type 1 GRADE C, over 100µ" (nominal) Nickel per QQ-N-290
200µ" (nominal) TIN/LEAD (93%/7%) per MIL-P-81728, Type 1 over 100µ" (nominal) Nickel per QQ-N-290

INNER CONTACT PLATINGS – Screw Machine Sockets

10µ" (nominal) GOLD per MIL-G-45204, Type 1, GRADE C, over 50µ" (nominal) Nickel per QQ-N-290
30µ" (nominal) GOLD per MIL-G-45204, Type 1, GRADE C, over 50µ" (nominal) Nickel per QQ-N-290
50µ" (nominal) GOLD per MIL-G-45204, Type 1, GRADE C, over 50µ" (nominal) Nickel per QQ-N-290

X

All McKenzie Molded Insulators

® Recognized

PERFORMANCE CHARACTERISTICS* — Screw Machine Sockets

Parameter	Value
Contact Resistance	<10 milliohms per contact
Contact Capacitance	0.3 pF
Contact Current Rating (for 10°C temperature rise)	3 A except for #6 (10) which is 2 A
Insulation Resistance (@ 500 V DC)	10,000 megaohms (min)
Contact Operating Temperature Range	-55°C to +150°C (BeCu) -55°C to +225°C (BeNi)
Dielectric Withstanding Voltage	1000 VAC
Rated Voltage	100 V AC
Durability	1000 cycles (min) @10 milliohms maximum change
Inner Contact Retention in Shell	7.5 lbs (3360 grams) minimum
Shell Retention force in Insulator (PGA's/DIP's)	10lbs (4480 grams) minimum

TEST CONDITIONS

Test	Results
Thermal Shock (IEC-68-2-14)	<2 milliohms change in contact resistance after 4 cycles (-10°C to +85°C)
Vibration (MIL-S-83505)	No electrical discontinuities or mechanical damage (10-2000Hz, 20G's, 1hr)
Solderability	Conforms to MIL-STD-202, Method 208
Shock (MIL-STD-202)	No discontinuities or mechanical damage (10 cycles of 200G's)
Temperature/Humidity Cycling (MIL-STD-1344)	<2 milliohms increase in contact resistance after 21 days, 40°C, 93% RH
Salt Spray (MIL-7344A)	<2 milliohms increase in contact resistance after 48 hrs, 35°C, 5% NaCi

**Unless otherwise stated*

SPECIFICATIONS

When applicable, McKenzie Technology's products and procedures are designed to meet the following general specifications:

MIL-STD 105	Sampling procedures
MIL-STD 109	Quality assurance terms and definitions
MIL-STD 202	Test methods for electronic and electrical components part
MIL-STD 1130	Connections, electrical, solderless, wrapped
MIL-STD 1344	Test methods for electrical connectors
MIL-STD 45662	Calibration system requirements
MIL-I-45208A	Inspection system requirements
MIL-C-39029	General specification for contacts, electrical connectors
MIL-S-83505	General specification for sockets (lead, electronic components)
ASTM-B487-79	Measuring metal\oxide coating thickness by microscopical examination of a cross section
ASTM-B567	Standard method of test for coating thickness by the Beta Backscatter principle
ASTM-A754-79	Standard method of test for coating thickness by X-ray florescence
MIL-M-24519	Molding plastics, electrical, thermoplastic
MIL-S-83734	Sockets, plug in electronic components, DIP, SIP, general specification for
MIL-P-13949	Plastic sheet, laminated, metal clad, general specification for

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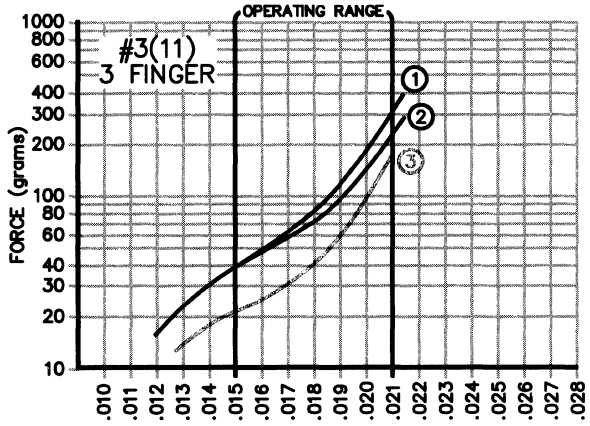
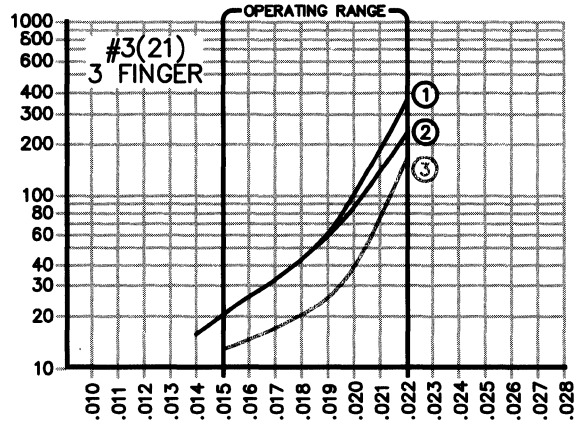
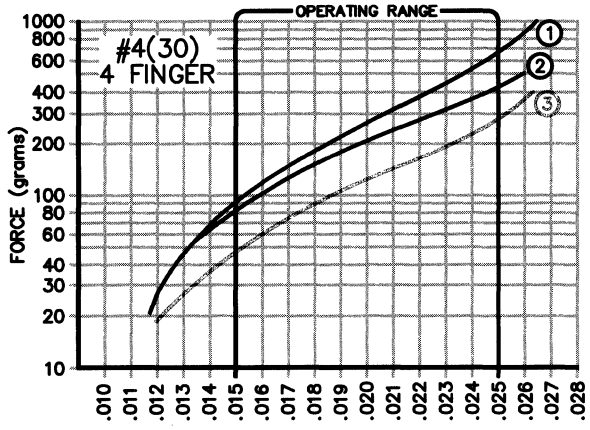
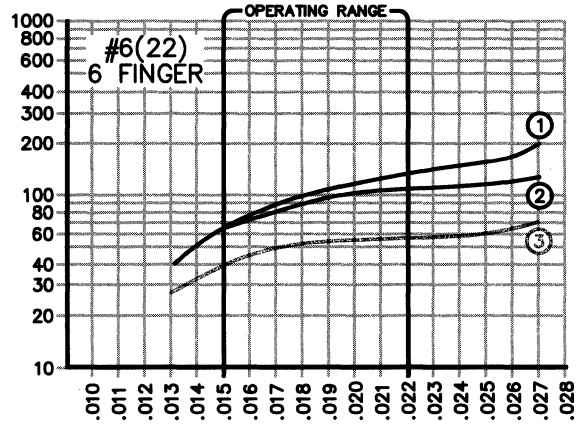
INNER CONTACT TEST DATA

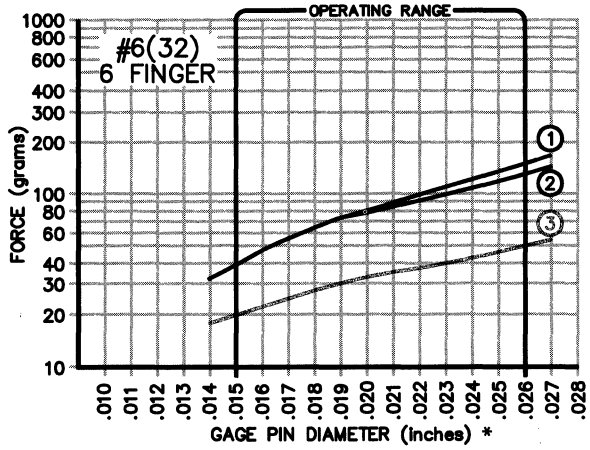
KEY:
① INITIAL INSERTION FORCE ② INSERTION FORCE ON 2nd CYCLE ③ WITHDRAWAL FORCE

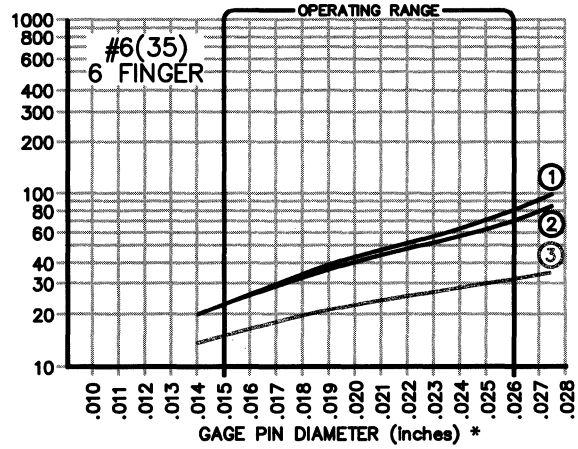












Note: All curves shown represent the average of 5 contacts tested with each size gage pin
*Polished steel gage pin, round with bullet tip

X

ISO9001 *Registered!*

BERG ELECTRONICS

mck McKenzie Socket Division

OUR COMMITMENT TO QUALITY

McKenzie Technology, is an ISO 9001 registered company (certificate number 041003243) and as such, is committed to continuous improvement in all our business processes, with the ultimate goal to deliver zero defect electronic interconnection products to our customers worldwide.

DESIGN

Quality is emphasized at every step of the engineering design process. We employ the latest in Computer Aided Design integrated directly into our in-house CNC (Computer Numerical Control) tooling and mold making equipment. Customer requirements are captured on detailed design drawings which are translated directly to working machine programs. This ensures accuracy and quality of our molded parts and tooling.

PURCHASING

It is our intent to purchase high quality materials delivered on time while not encumbering our vendors with excessive requirements. Our vendor qualification is a three step process. At a minimum, compliance to delivery, an on site survey and minimum process capability (Cpk) of 1.33 is required with a plan to continuously improve the process.

MANUFACTURING QUALITY

We believe quality is a process and a philosophy and can not be inspected into the product. Extensive in-house training, certification, process controls and statistical techniques are utilized to continuously monitor and improve quality. Action oriented quality meetings chaired by operators insure involvement and focus at all levels. Quality performance is also used as a critical review criteria for all operations people.

As part of our ongoing SPC implementation, all new process equipment is SPC capable. We have recently added on-board SPC with closed-loop process control to our injection molding operation.

INSPECTION

McKenzie Technology's Inspection System is designed to be compliant with MIL-I-45208. Both Incoming and Final Quality Control conform to MIL-STD-105E for attributes and MIL-STD-414 for variables. Test sampling is accomplished with sampling plans based on an AQL (Acceptable Quality Level) which supplies the sensitivity for Assurance of Quality. Additional sampling and testing are done as required by Mil Specification, product experience, process capability, or customer requirements. All quality measurement and test equipment is calibrated in accordance with MIL-STD-45662. Every inspection activity addresses feedback and root cause correction in order to satisfy Quality Assurance goals of error prevention.

TRACKING AND ORDER PROCESSING

Tracking of all orders and data is accomplished via an on-line integrated MRP system. Our on-time shipment performance is treated as quality performance and thus tracked and slated for continuous improvement.

Consistent with our effort to continuously improve our process and service, we would welcome comments and suggestions from our customers and vendors.

John V. Anderson

Director of Quality Assurance

ISO 9001 TÜV CERT REGISTERED

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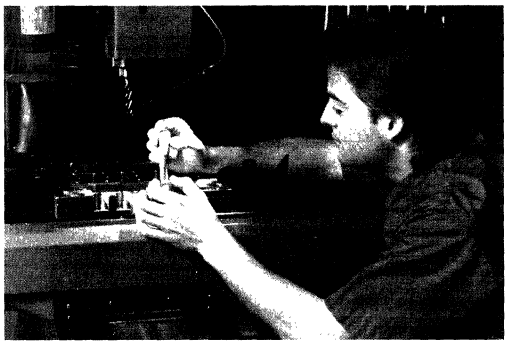
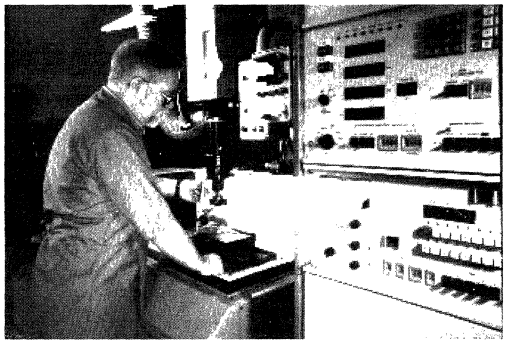


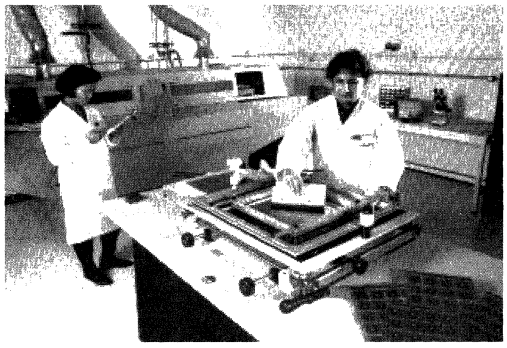
McKenzie Technology is a dynamic manufacturer of sockets for integrated circuits (IC's) and related board-to-board interconnect systems. An early pioneer of the molded pin grid array (PGA) socket, McKenzie continues to dominate the high density IC socket market.

Founded in 1980 on the principals of service and engineered solutions, McKenzie Technology has established itself with customers throughout the world as a leading source for high quality, competitively priced product.

The keys to our success:

- Our extensive in-house tool making facility in which all molds, loading and test fixtures are built and maintained.
- On-site injection molding operation.
- A total commitment to quality is evident everywhere in our manufacturing process — from integral inspection stations in the process flow, to statistical process control in both our molding and assembly departments.
- The sample department is independent of the main production area and is committed to turning your sample and small quantity orders around in 48 hours.
- As we continue to experience tremendous growth, an ongoing efficiency improvement program has kept our lead times on catalog product at two weeks or less!





- McKenzie's focus on engineering with a large staff of talented engineers accessible to our customers means ready support of existing product, quick design of customer specific product, and the development of interconnect solutions today for tomorrow's IC packages.

Put us to the test, you won't be disappointed!

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Product Code	Catalog Page	Product Code	Catalog Page
ADP	H	PH3	I
ADP DIP	B20	PH4	I
ASM	H8	PHC	I2
CONTACT SPECS	A1	PHS	I1
CPP	B18	PLC	G + G2
CROSS REFERENCE	F7	PPC 2 SIP	B21
DCO	B19	PPC DIP	B3
DDP	B16	PPC PGA	F
DHS	B14	PPC SIP	C2
DIP	B2	PZA	F45
DIP 050	B3	SAF	D
DIP 70	B15	SCR	A SECTION
DPF	E1	SH-17	I3
DPG	B10	SH-27	I3
DPK	B10	SH-37	I3
DPL	B10	SH-47	I3
DQD	B17	SHS	C7
DQDQ	B19	SIP	C-C1
DRA	B18	SIP 050	C2
DSM	K1	SOCKET 5 & 7	F43
DST	B12	SOJ	G3
DVD	B22	SPF	E-E1
DWW	B7	SPG	C4
DXC	B8	SPK	C4
FSH	K	SPL	C4
JMP	J2-J3	SST	C6-C7
LCS (SEE SAF)	**	SST 050	C6
MPC	B17	SUB	K2
MSB	J1-J2	TOL PGA IN	F5
MSBM	J2	TOL PGA X	F5-F6
P6	F44	TOL PLCC	G2
PGA	F	TPC	D1
PGA SMT	K1	ZGA	F11
PH1	I	ZIF	F43
PH2	I	ZIP	E2-E3
PH2 050	I2	ZIP X50	K2

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FOR MORE DETAILED PRODUCT INFORMATION, OR FOR THE LOCATION NEAREST YOU, CONTACT ONE OF THE REGIONAL HEADQUARTERS LISTED BELOW.

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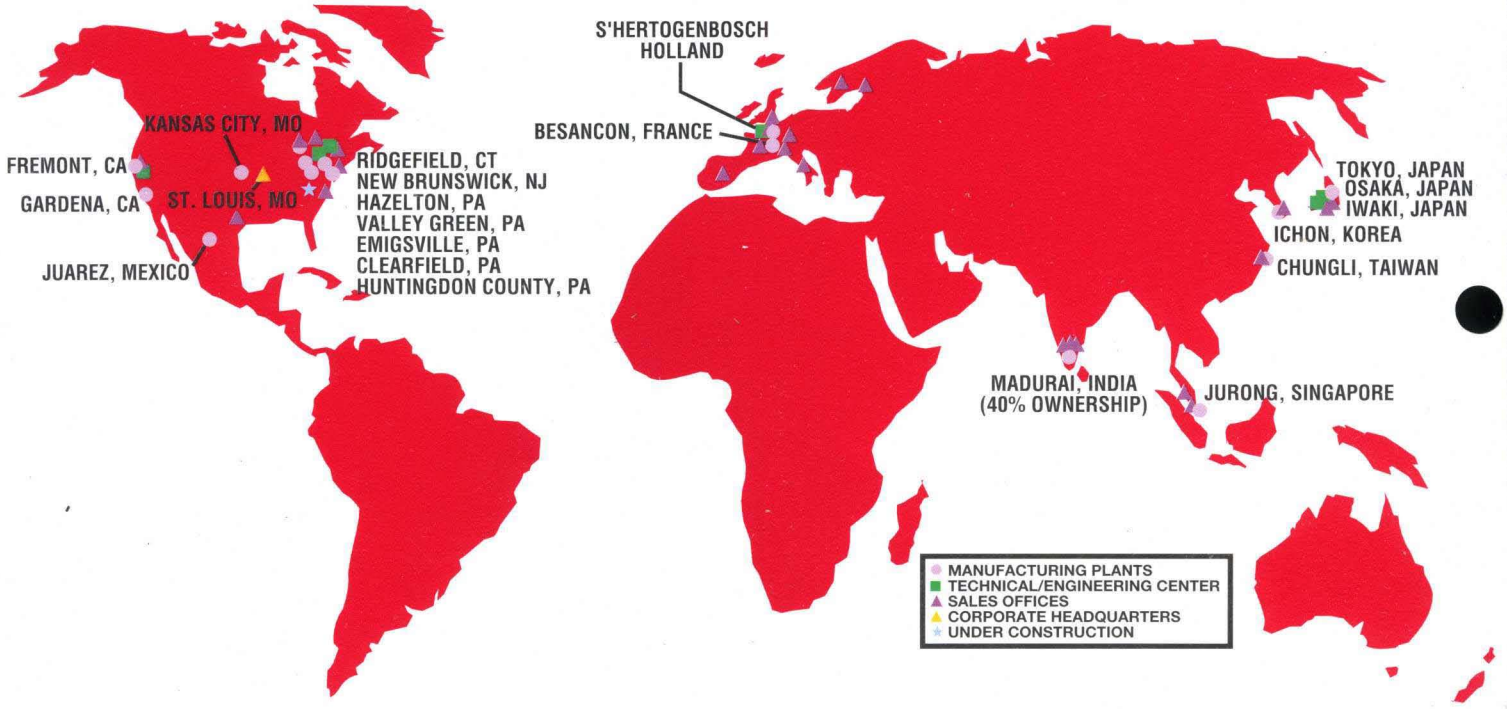
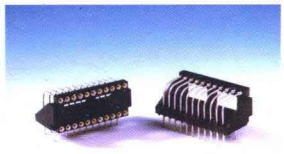
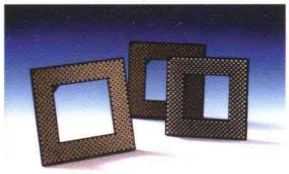
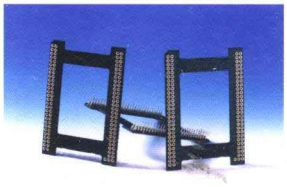
BERG'S LOCATIONS



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