

TYPES 1N645, 1N646, 1N647, 1N648, 1N649 DIFFUSED SILICON HIGH POWER GLASS DIODE/RECTIFIERS



400 MILLIAMPERES 225 to 600 VOLTS PIV

2-million-to-1 forward-to-reverse current ratio

Ruggedized to meet stringent military requirements

**Designed for • magnetic amplifiers • modulators
demodulators • networks • power supplies**

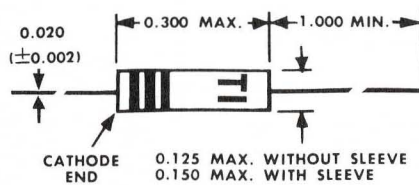


ACTUAL SIZE

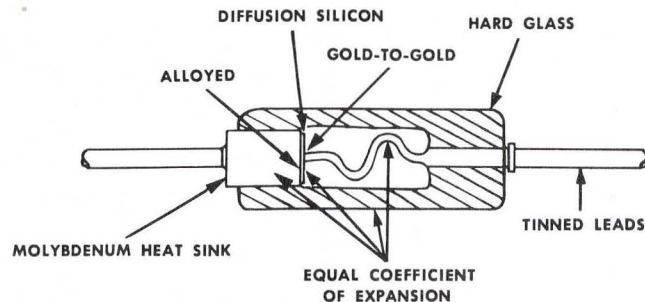
TYPES 1N645, 1N646, 1N647, 1N648, 1N649
BULLETIN NO. DL-S 1011, NOVEMBER, 1958
REPLACES BULLETIN NO. DL-S 770, JULY, 1957

mechanical data

Hard glass hermetically sealed case with gold-to-gold contact. Unit weight is 0.195 gram.



ALL DIMENSIONS IN INCHES



maximum ratings

Peak Inverse Voltage at -65 to $+150^{\circ}\text{C}$
Average Rectified Forward Current at $+25^{\circ}\text{C}$
Average Rectified Forward Current at $+150^{\circ}\text{C}$
Recurrent Peak Forward Current at $+25^{\circ}\text{C}$
Power Dissipation at $+25^{\circ}\text{C}$
Surge Current, 1 Second at $+25$ to $+150^{\circ}\text{C}$
Operating Temperature, Ambient
Altitude

	1N645	1N646	1N647	1N648	1N649	
PIV	225	300	400	500	600	V
I_o	400	400	400	400	400	mA
I_o	150	150	150	150	150	mA
i_f	1.25	1.25	1.25	1.25	1.25	amp
P	600	600	600	600	600	mW
I_{DC}	3	3	3	3	3	Amp
T_A	-65 to +150					$^{\circ}\text{C}$
	100,000					ft

specifications

Minimum Breakdown Voltage at $+100^{\circ}\text{C}$
Max. Reverse Current at PIV at $+25^{\circ}\text{C}$
Max. Reverse Current at PIV at $+100^{\circ}\text{C}$
Max. Voltage Drop at $I_b = 400$ mA; at $+25^{\circ}\text{C}$
Typical Capacitance at -12V at 1 mc

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V_Z	275	360	480	600	720	V
I_{Lb}	0.2	0.2	0.2	0.2	0.2	μA
I_{Lb}	15	15	20	20	25	μA
E_b	1.0	1.0	1.0	1.0	1.0	V
C	9	9	9	9	9	$\mu\mu\text{f}$

LICENSED UNDER BELL SYSTEM PATENTS

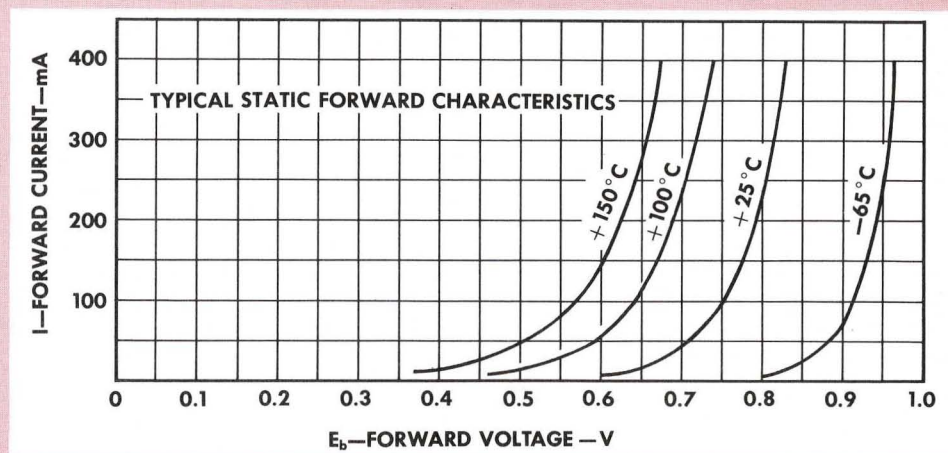
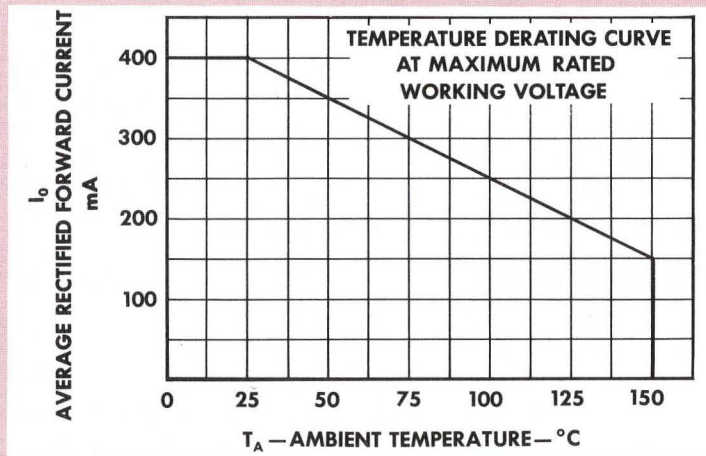
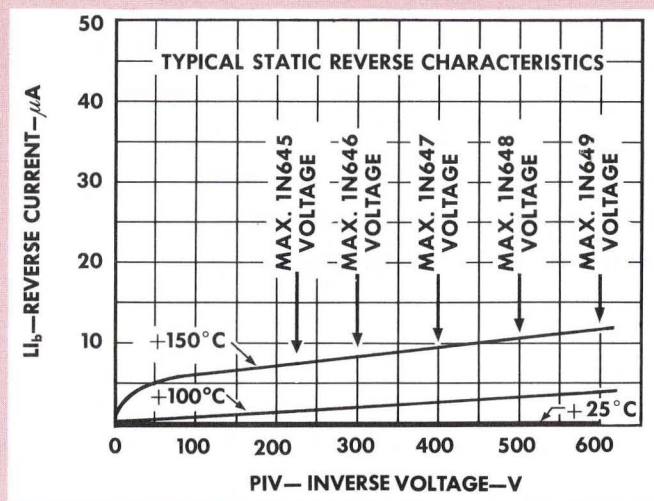
SEMICONDUCTOR-COMPONENTS DIVISION

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TEXAS INSTRUMENTS
INCORPORATED
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CHARACTERISTICS

TYPES 1N645, 1N646, 1N647, 1N648, 1N649



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IN ORDER TO SUPPLY THE BEST PRODUCTS POSSIBLE, TEXAS INSTRUMENTS RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME IN ORDER TO IMPROVE DESIGN.