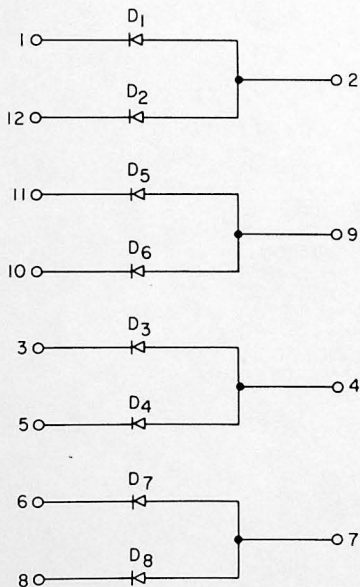


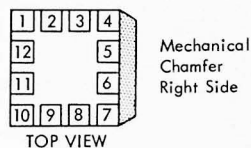
Functional Description

The FDD-1C module contains four dual diodes with common anodes between pairs. All of the individual cathodes plus the four paired anodes are connected to the module pins thereby allowing flexibility in applications for the circuit designer. The diodes can be used for clamps and "AND" extends.

Schematic



Terminal Configuration



Maximum Ratings

Maximum Current = 5.0ma

Diode Breakdown Voltage = 13V

FDD-1C Module Functional Tests

INDIVIDUAL DEVICE PARAMETER TESTS						
TESTS	COM-PONENTS	TEST CONDITIONS	T °C	LIMITS		UNITS
				MIN	MAX	
Q _S	D ₁ - D ₈	I _F = 3.0ma SEE FIG. 1	25		33	PC
V _P	D ₁ - D ₈	I _F = 2.0ma SEE FIG. 2	25		1.0	V
V _F	D ₁ - D ₈	I _F = 0.10ma	25	0.51		V
V _F	D ₁ - D ₈	I _F = 1.0ma	25		0.80	V
V _F	D ₁ - D ₈	I _F = 2.0ma	25		0.88	V
V _F	D ₁ - D ₈	I _F = 5.0ma	25		1.0	V
BV _R	D ₁ - D ₈	I _R = 0.01ma	25	13		V
I _R	D ₁ - D ₈	V _R = 12.0V	75		1.0	μa
DIODE CAPACITANCE	D ₁ - D ₈	OV BIAS, f = 1.0 ± 0.5mhz AC SIGNAL ≤ 50mv P-P	25		3.5	pf

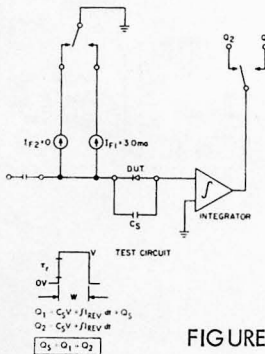


FIGURE 1

Store Charge Test

V-PULSE AMPLITUDE: 5V ± 25%

W-PULSE WIDTH: > 50ns

RISE TIME: 1% - 50% < 0.5ns

10% - 90% < 0.4ns

SOURCE IMPEDANCE < 10 OHMS

I_{F1} - FORWARD CURRENT = 3.0ma ± 0.3%

I_{F2} - FORWARD CURRENT = 0ma

C_S - SHUNT CAPACITY < 50 pf

INTEGRATOR RESPONSE ≥ 1ns

Q₁ - CHARGE WHEN D.U.T. IS FORWARD BIASED WITH I_{F1} = 3.0ma

Q₂ - CHARGE WHEN D.U.T. IS FORWARD BIASED WITH I_{F2} = 0ma

Q_S - STORED CHARGE

I_{REV} - DIODE LEAKAGE CURRENT

Forward Recovery

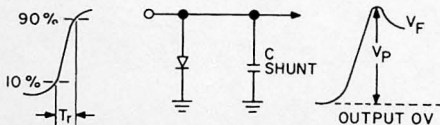


FIGURE 2

Notes

For this test the diode shunt capacity (incl Probe) shall be 10.5 ± 1 pf with a 50 Ω HF Resistor in place of the Diode, the rise time, t_r , of the input voltage wave form shall be ≤ 2 ns, the operating frequency ≤ 50 khz, pulse width ≤ 50 ns, Bandwidth of detector ≥ 750 mhz. Turn on is from $V_f = 0$.