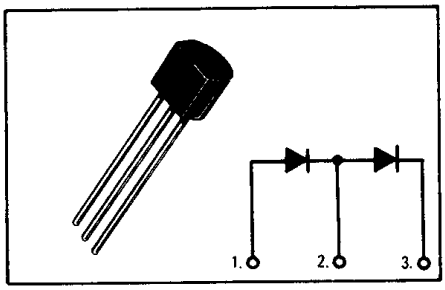
MSD7000 (SILICON)

SILICON EPITAXIAL DUAL SERIES DIODE

. . . designed for use in biasing, steering and voltage doubler applications.

- High Breakdown Voltage —
  $V_{(BR)}$ = 100 Volts minimum
- Low Capacitance —
  C = 1.5 pF maximum @ V_R = 0

SILICON EPITAXIAL DUAL SERIES DIODE

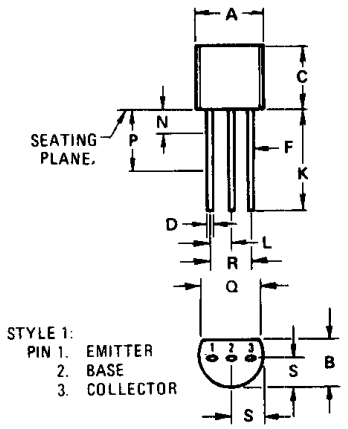


MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Recurrent Peak Forward Current	I_F	200	mA
Peak Forward Surge Current (Pulse Width = 10 μs)	$I_{FM(surge)}$	500	mA
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	350 2.82	mW mW/°C
Operating Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Fig. No.	Symbol	Min	Max	Unit
Breakdown Voltage ($I_{(BR)}$ = 100 μAdc)	–	$V_{(BR)}$	100	–	Vdc
Reverse Current	2	I_R			μAdc
(V_R = 100 Vdc)			–	0.5	
(V_R = 50 Vdc)			–	0.2	
(V_R = 50 Vdc, T_A = 125°C)			–	100	
Forward Voltage	1	V_F			Vdc
(I_F = 1.0 mAdc)			0.55	0.7	
(I_F = 10 mAdc)			0.67	0.82	
(I_F = 100 mAdc)			0.75	1.1	
Capacitance (V_R = 0)	3	C	–	2.0	pF
Reverse Recovery Time (I_F = I_R = 10 mAdc, V_R = 5.0 Vdc, i_{rr} = 1.0 mAdc)	4,5	t_{rr}	–	15	ns



	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	4.450	5.200	0.175	0.205
B	3.180	4.190	0.125	0.165
C	4.320	5.330	0.170	0.210
D	0.407	0.533	0.016	0.021
F	0.407	0.482	0.016	0.019
K	12.700	–	0.500	–
L	1.150	1.390	0.045	0.055
N	–	1.270	–	0.050
P	6.350	–	0.250	–
Q	3.430	–	0.135	–
R	2.410	2.670	0.095	0.105
S	2.030	2.670	0.080	0.105

CASE 29-02
TO-92

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FIGURE 1 – FORWARD CHARACTERISTICS

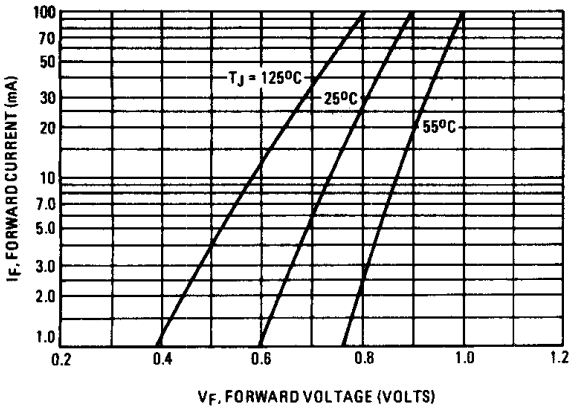


FIGURE 2 – REVERSE LEAKAGE CURRENT

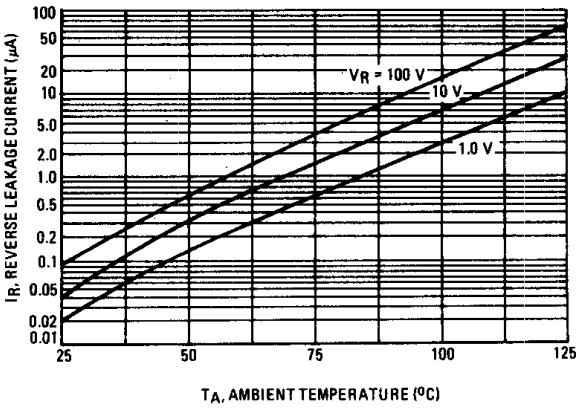


FIGURE 3 – CAPACITANCE

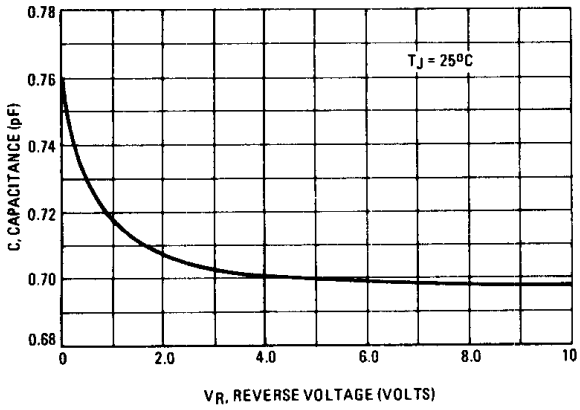


FIGURE 4 – REVERSE RECOVERY TIME

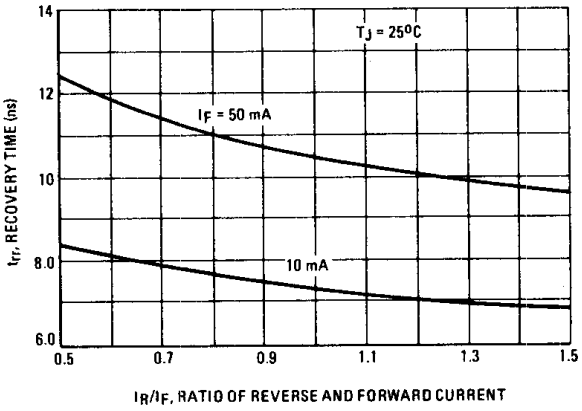
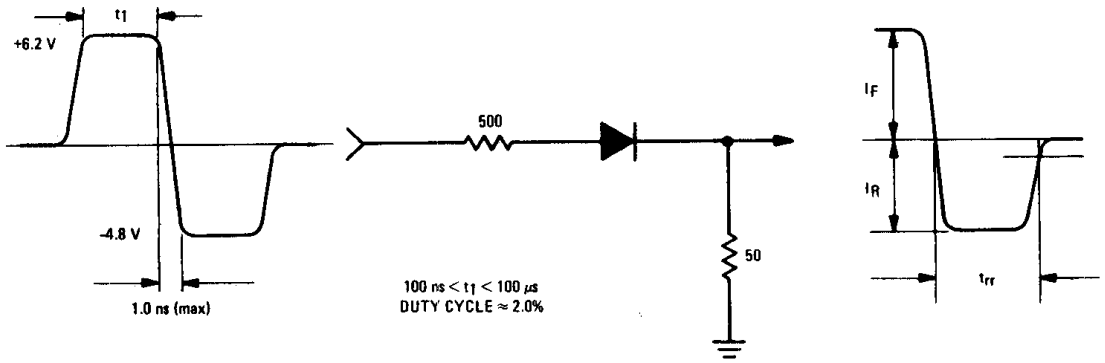


FIGURE 5 – RECOVERY TIME EQUIVALENT TEST CIRCUIT



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