FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 2.0 A

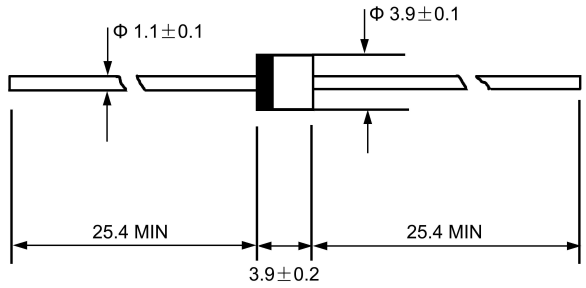
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC R--3,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight:0.021 unces,0.58 grams
- ◇ Mounting position: Any

R - 3



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		FR 251	FR 252	FR 253	FR 254	FR 255	FR 256	FR 257	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forw ard rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	2.0							A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load	I_{FSM}	100.0							A
Maximum instantaneous forw ard voltage @ 2.0 A	V_F	1.3							V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=100℃	I_R	5.0 100.0							μA
Maximum reverse recovery time (Note1)	t_{rr}	150				250	500		ns
Typical junction capacitance (Note2)	C_J	22							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	35							℃/W
Operating junction temperature range	T_J	- 55---- +125							℃
Storage temperature range	T_{STG}	- 55---- + 150							℃

NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

FIG.1 – TYPICAL FORWARD DERATING CURVE

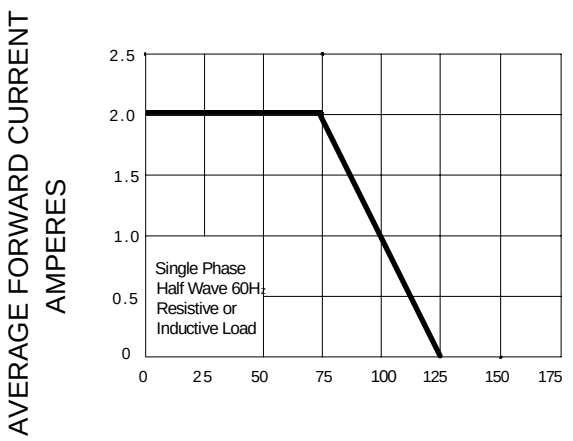


FIG.2– FORWARD SURGE CURRENT

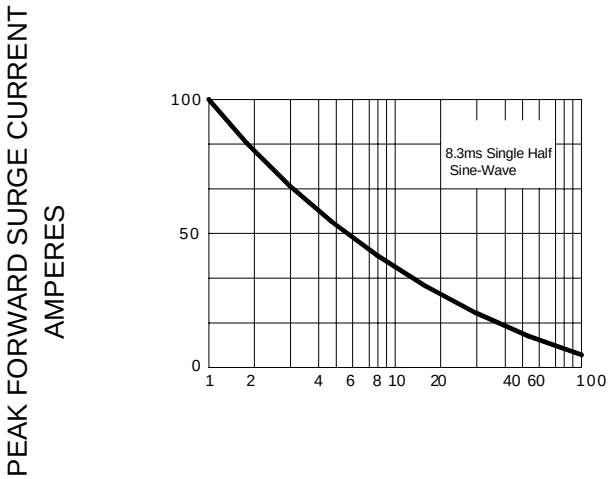


FIG.3–TYPICAL JUNCTION CAPACITANCE

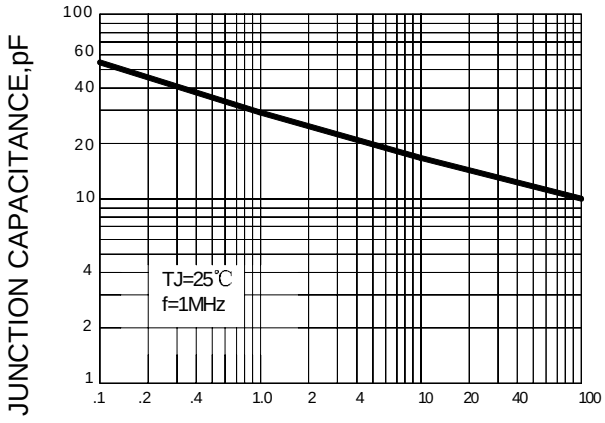


FIG.4 –TYPICAL FORWARD CHARACTERISTIC

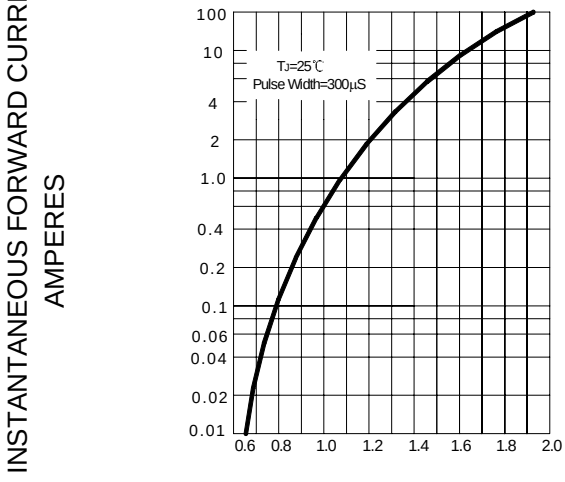
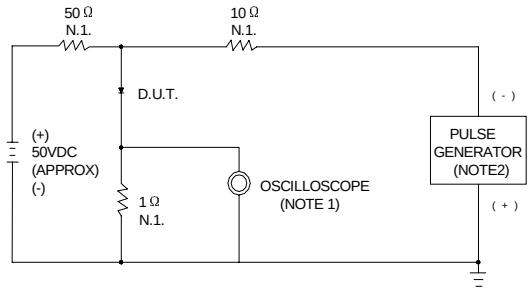
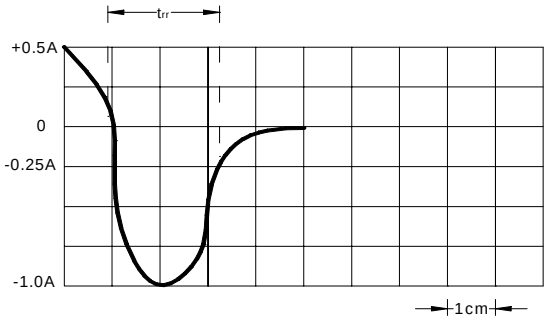


FIG.5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





NOTES:1.RISE TIME =7ns MAX. INPUT IMPEDANCE=1MΩ.22pF

2.RISE TIME=10ns MAX. SOURCE IMPEDANCE=50Ω

SET TIME BASE FOR 50/100 ns /cm