



**VOLTAGE RANGE: 1000 --- 2000 V**  
**CURRENT: 0.5 A**



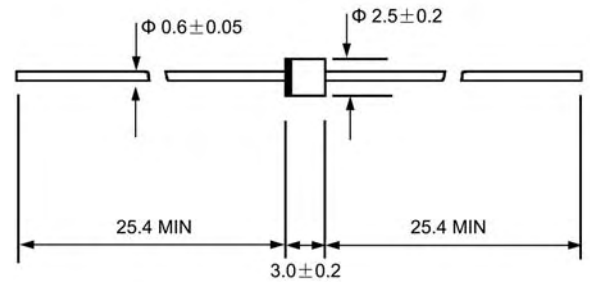
## Features

- ◇ Fast switching
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents

## Mechanical Data

- ◇ Case: JEDEC R--1, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.20 grams
- ◇ Mounting position: Any

**R - 1**



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

		1F10	1F12	1F14	1F15	1F16	1F18	1F20	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	1000	1200	1400	1500	1600	1800	2000	V
Maximum RMS voltage	$V_{RMS}$	700	840	980	1050	1120	1260	1400	V
Maximum DC blocking voltage	$V_{DC}$	1000	1200	1400	1500	1600	1800	2000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	0.5							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_J=125^\circ C$	$I_{FSM}$	25.0							A
Maximum instantaneous forward voltage @ 0.5 A	$V_F$	1.8							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 100.0							$\mu A$
Maximum reverse recovery time (NOTE1)	$t_{rr}$	300							ns
Typical junction capacitance (NOTE2)	$C_J$	15							pF
Operating junction temperature range	$T_J$	-55 ---- + 150							$^\circ C$
Storage temperature range	$T_{STG}$	-55 ---- + 150							$^\circ C$

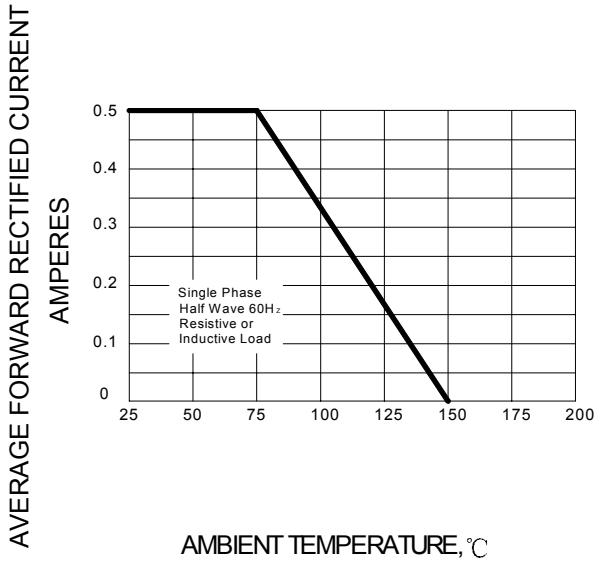
NOTE: 1. Reverse recovery test conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$ .

2. Measured at 1MHz and applied reverse voltage of 4.0V.

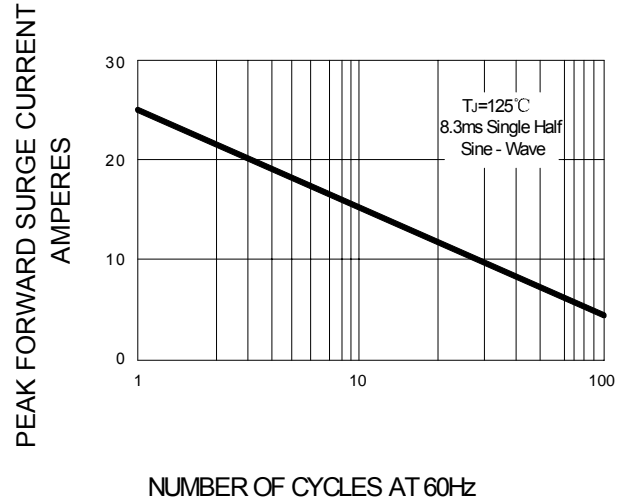


## Ratings AND Characteristic Curves

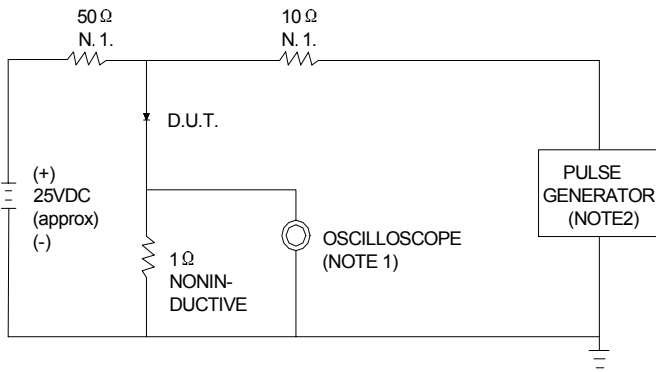
**FIG.1 – FORWARD DERATING CURVE**



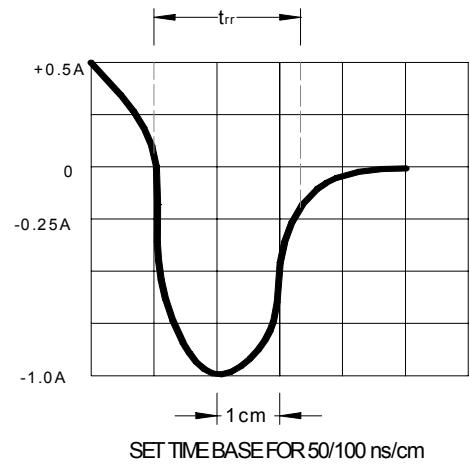
**FIG.2 – PEAK FORWARD SURGE CURRENT**



**FIG.3 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ, 22pF.  
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 Ω.



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
R-1	5000/AMMO	50000	42X28X31	12.00	10.00