

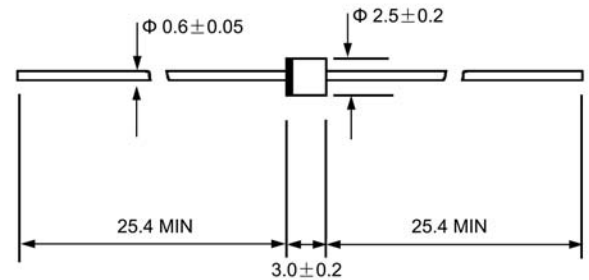
## Features

- ◇ 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-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, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		1E1	1E2	1E3	1E4	1E5	1E6	1E7	1E8	1E9	UNITS	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	800	1000	V	
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	560	700	V	
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	800	1000	V	
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0									A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	30									A	
Maximum instantaneous forward voltage @1.0 A	$V_F$	0.95			1.25			2.2			V	
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0					150					$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	35									ns	
Typical junction capacitance (Note2)	$C_J$	12									pF	
Typical thermal resistance (Note3)	$R_{\theta JA}$	55									$^\circ C/W$	
Operating junction temperature range	$T_J$	- 55---- +150									$^\circ C$	
Storage temperature range	$T_{STG}$	- 55---- + 150									$^\circ C$	

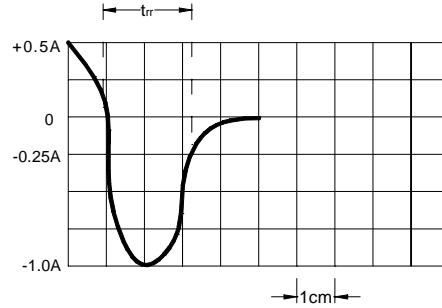
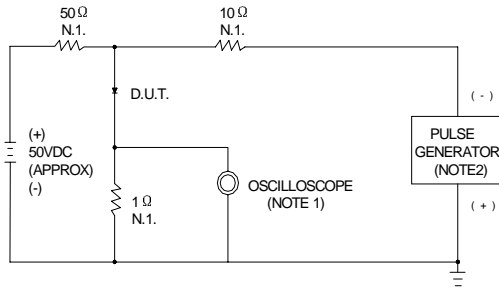
NOTE:1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

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

3. Thermal resistance from junction to ambient.

## Ratings AND Characteristic Curves

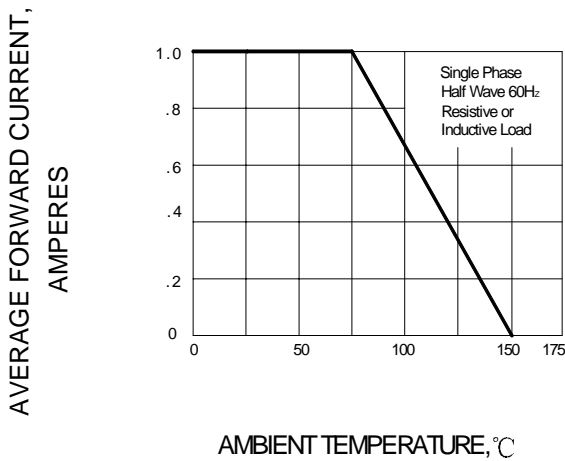
**FIG.1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



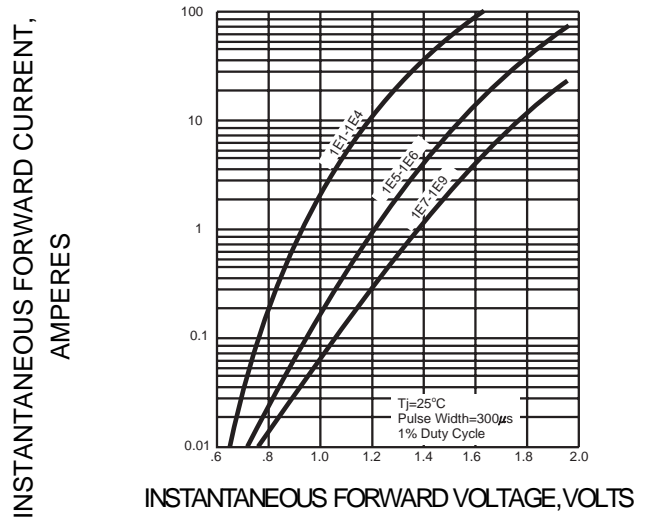
NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ. 22pF  
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50Ω

SET TIME BASE FOR 15 ns / cm

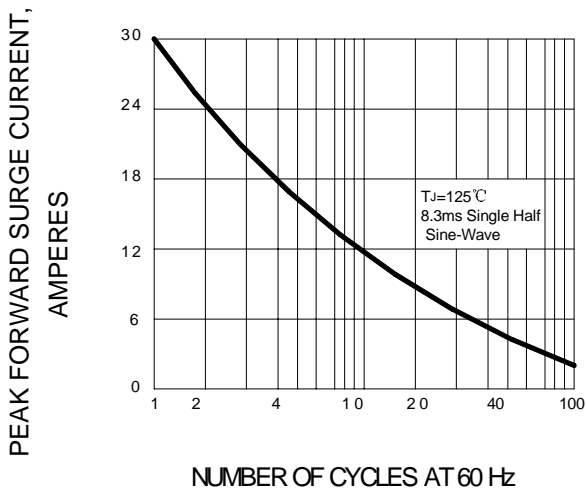
**FIG.2 – TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – PEAK FORWARD SURGE CURRENT**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

