



# 1E1 ~ 1E6

## SUPERFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 800 Volts **CURRENT** 1.0 Ampere

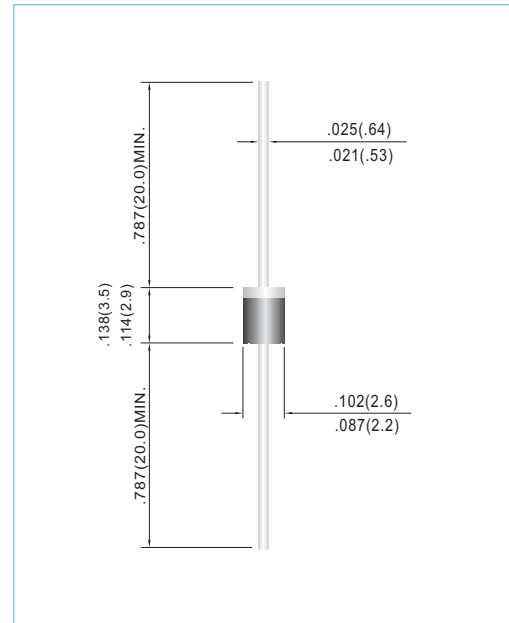
**R-1** Unit: inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Superfast recovery times-epitaxial construction.
- Low forward voltage, high current capability.
- Exceeds environmental standards of MIL-S-19500/228.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Molded plastic, R-1.
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end.
- Mounting Position: Any
- Weight: 0.0068 ounce, 0.1937 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	1E1	1E2	1E2A	1E3	1E3A	1E4	1E5	1E6	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	800	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	560	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	800	V	
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0								A	
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	30								A	
Maximum Forward Voltage at 1.0A	$V_F$	0.95			1.25		1.7			V	
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	$I_R$	1.0				150				$\mu\text{A}$	
Typical Junction capacitance (Note 2)	$C_J$	17									pF
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	35									ns
Typical Thermal Resistance	$R_{\theta JA}$	60									$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150								$^\circ\text{C}$	

**NOTES:**

1. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=.25\text{A}$
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC



# 1E1 ~ 1E6

## RATING AND CHARACTERISTIC CURVES

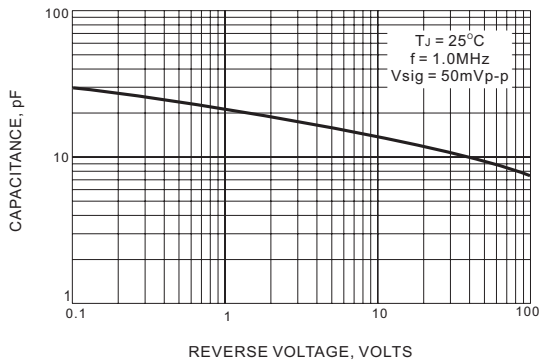


FIG.1 TYPICAL JUNCTION CAPACITANCE

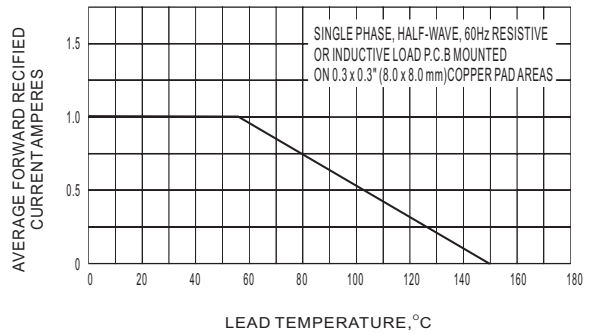


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

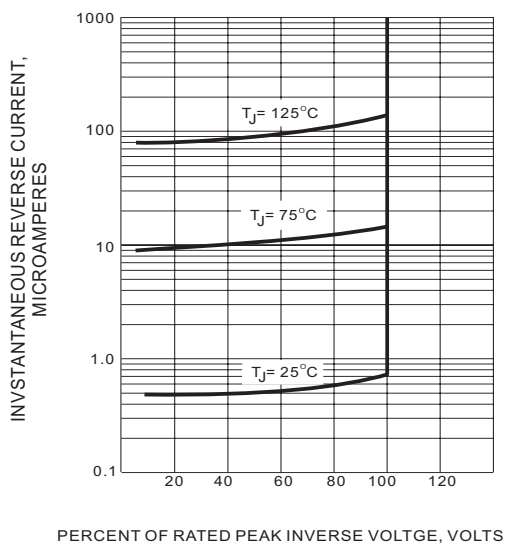


FIG.3 TYPICAL REVERSE CHARACTERISTICS

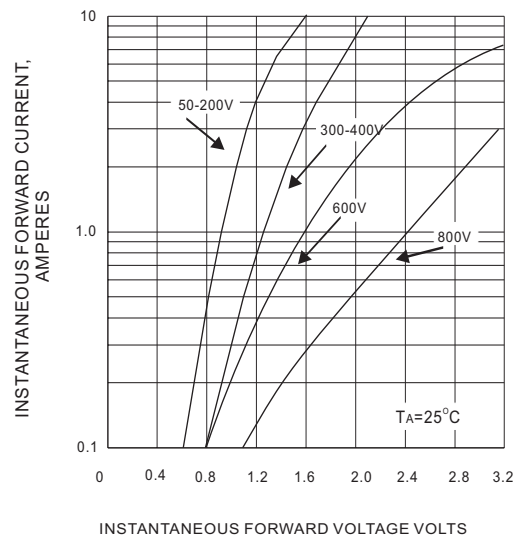


FIG.4 TYPICAL FORWARD CHARACTERISTICS

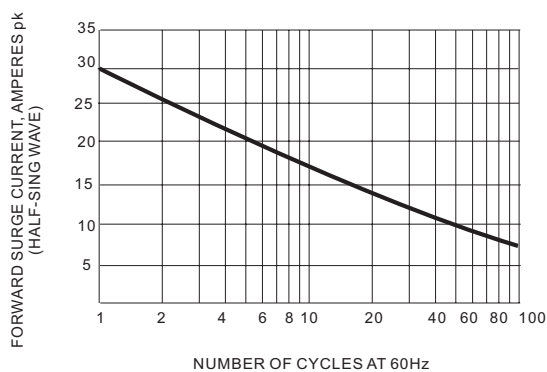


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT