



# 1E1 SERIES

## SUPERFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 800 Volt **CURRENT** 1 Ampere

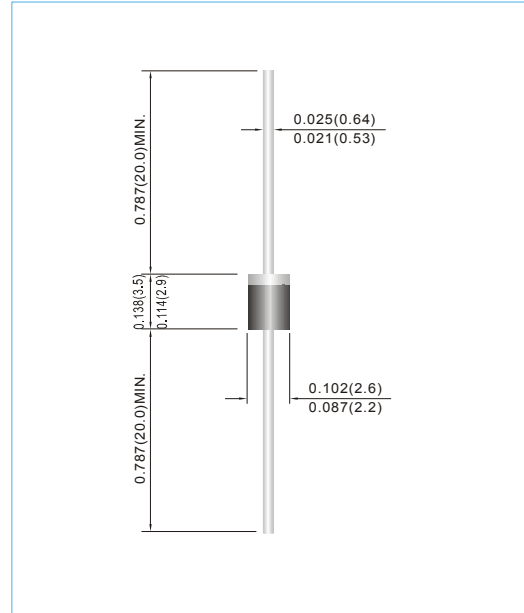
**R-1** Unit : inch(mm)

### 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.
- Lead free in compliance with EU RoHS 2011/65/EU directive

### 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	2.5		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	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



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## RATING AND CHARACTERISTIC CURVES

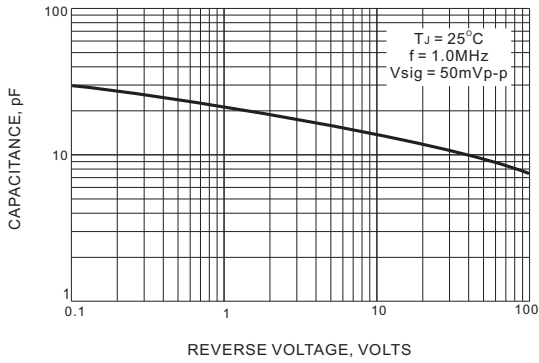


FIG.1 TYPICAL JUNCTION CAPACITANCE

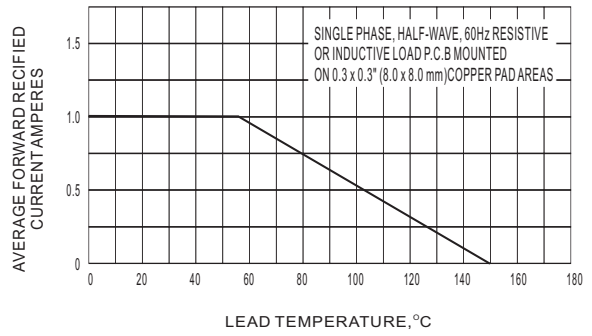


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

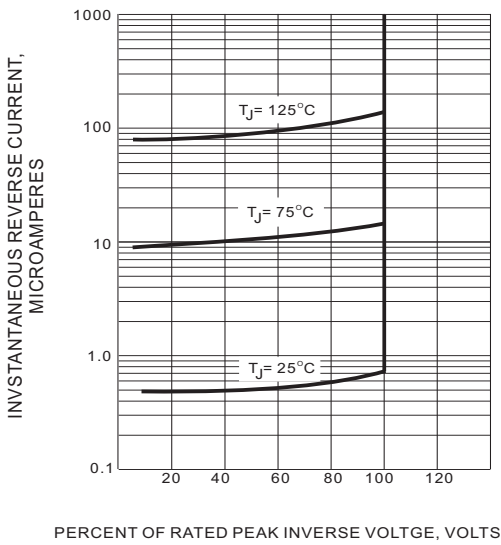


FIG.3 TYPICAL REVERSE CHARACTERISTICS

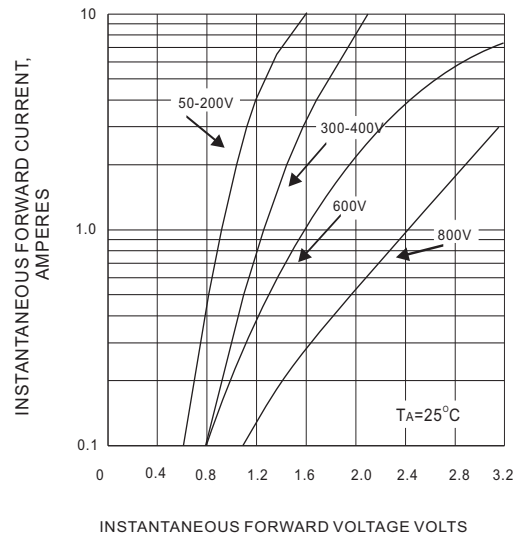


FIG.4 TYPICAL FORWARD CHARACTERISTICS

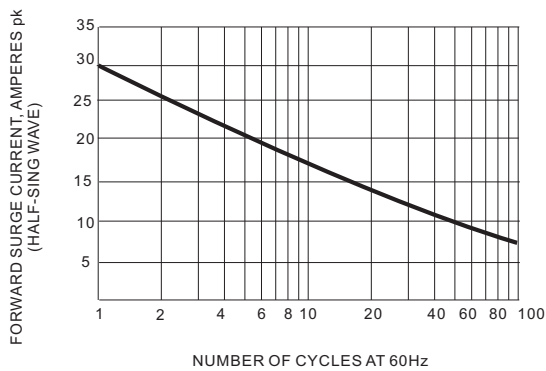


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT



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## Part No\_packing code\_Version

- 1E1\_AX\_00001
- 1E1\_AX\_10001
- 1E1\_AY\_00001
- 1E1\_AY\_10001
- 1E1\_B0\_00001
- 1E1\_B0\_10001
- 1E1\_R2\_00001
- 1E1\_R2\_10001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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