



## AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER

**1A1 THRU 1A9**

**VOLTAGE RANGE  
CURRENT**

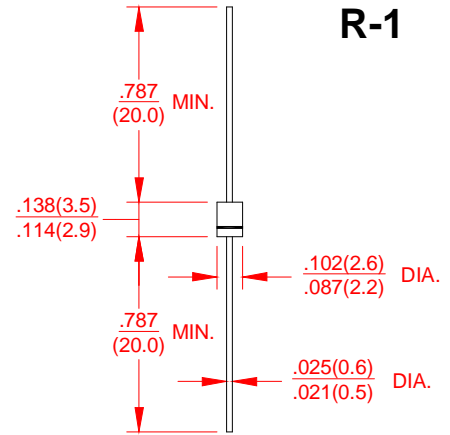
**50 to 1000 Volts  
1.0 Ampere**

### FEATURES

- Low cost construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds/.375" (9.5mm) lead length at 5 lbs (2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.0070 ounce, 0.20 grams



Dimensions in inches and (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 current by 20%

	SYMBOLS	1A1	1A2	1A3	1A4	1A5	1A6	1A7	1A8	1A9	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1200	1500	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	840	1050	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1200	1500	Volts
Maximum Average Forward Rectified Current 0.375" (9.5mm) lead length at $T_A=25^\circ\text{C}$	$I_{(AV)}$	1.0									Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25									Amps
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.1									Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$T_A=25^\circ\text{C}$	5.0									$\mu\text{A}$
	$T_A=125^\circ\text{C}$	50									
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at $T_L=75^\circ\text{C}$	$I_{R(AV)}$	30									$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	40									pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50									$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150									$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150									$^\circ\text{C}$

#### Notes:

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal Resistance from junction to Ambient at .375" (9.5mm) lead length, P.C. board mounted.



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## RATING AND CHARACTERISTIC CURVES 1A1 Thru 1A9

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

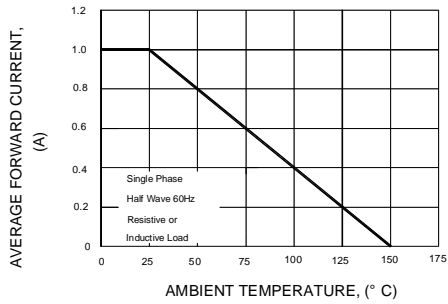


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

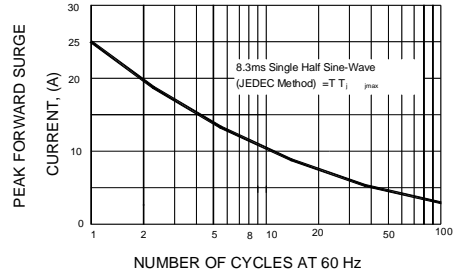


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

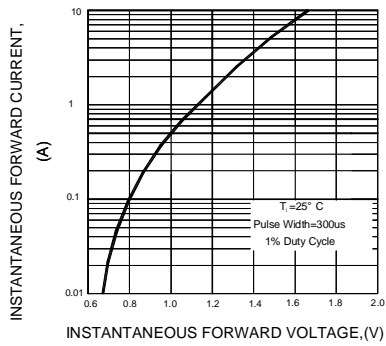


FIG.4-TYPICAL REVERSE CHARACTERISTICS

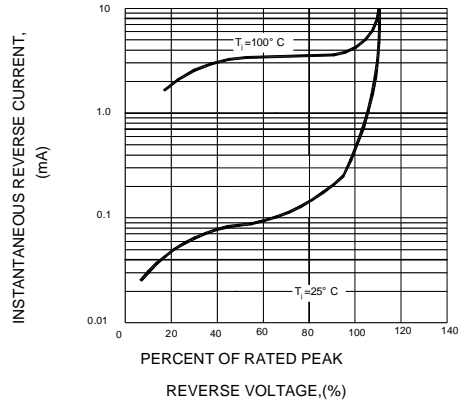


FIG.4-TYPICAL JUNCTION CAPACITANCE

