



## AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER

**BY251 THRU BY255**

**VOLTAGE RANGE  
CURRENT**

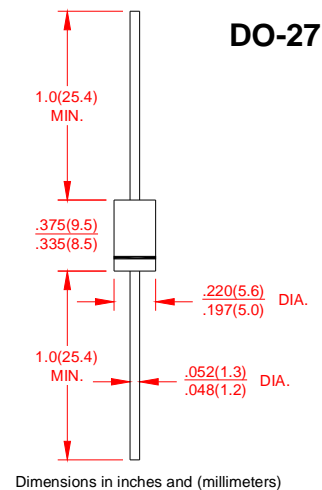
**200 to 1300 Volts  
3.0 Ampere**

### FEATURES

- Low coat construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.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: 0.042 ounce, 1.19 grams



### 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	BY251	BY252	BY253	BY254	BY255	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1300	Volts
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	910	Volts
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1300	Volts
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125					Amps
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.1					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$T_A = 25^\circ\text{C}$	$I_R$					$\mu\text{A}$
	$T_A = 100^\circ\text{C}$	50					
Maximum Full Load Reverse Current, full cycle average 0.375”(9.5mm)lead length at $T_L=75^\circ\text{C}$	$I_{R(AV)}$	500					$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	40					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	30					$^\circ\text{C}/\text{W}$
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 BY251 Thru BY255

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

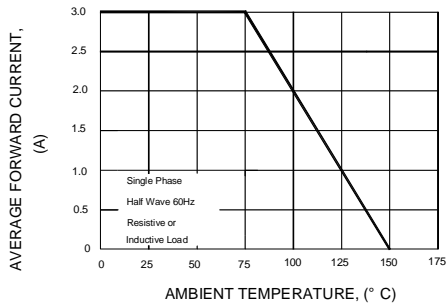


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

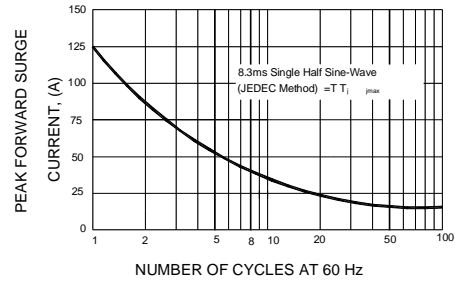


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

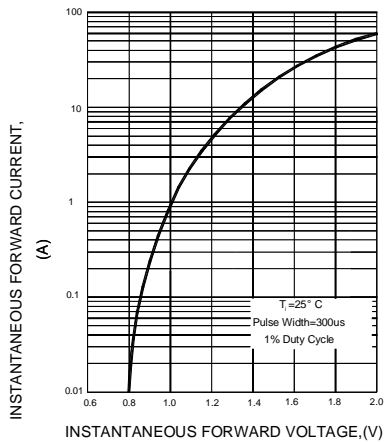


FIG.4-TYPICAL REVERSE CHARACTERISTICS

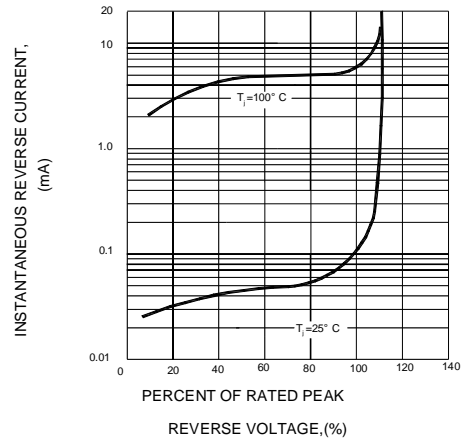


FIG.5-TYPICAL JUNCTION CAPACITANCE

