



# DATA SHEET

## BA157~BA159

### FAST RECOVERY PLASTIC RECTIFIER

**VOLTAGE** 400 to 1000 Volts **CURRENT** 1.0 Amperes

DO-41

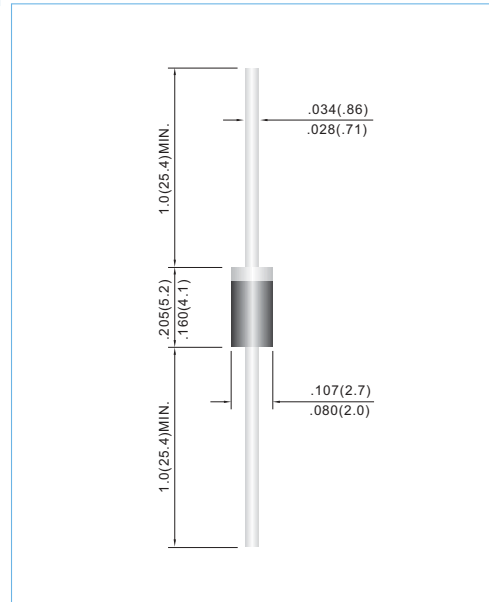
Unit: inch(mm)

#### FEATURES

- High current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low leakage.
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: Molded plastic, DO-41  
 Terminals: Axial leads, solderable to MIL-STD-202G, Method 208  
 Polarity: Color Band denotes cathode end  
 Mounting Position: Any  
 Weight: 0.012 ounce, 0.3 gram



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

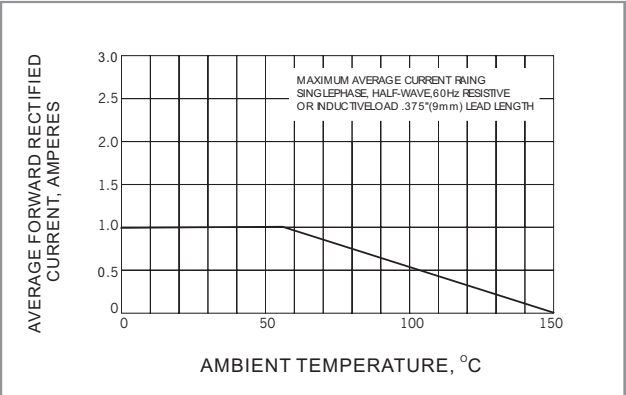
Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	BA157	BA158	BA159	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	400	600	1000	V
Maximum RMS Voltage	$V_{RMS}$	280	420	700	V
Maximum DC Blocking Voltage	$V_{DC}$	400	600	1000	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ C$	$I_{AV}$	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	$V_F$	1.3			V
Maximum DC Reverse Current $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=100^\circ C$	$I_R$	5.0 500			$\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	150	250		ns
Typical Junction capacitance (Note 2)	$C_J$	12			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	41			$^\circ C / W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 TO +150			$^\circ C$

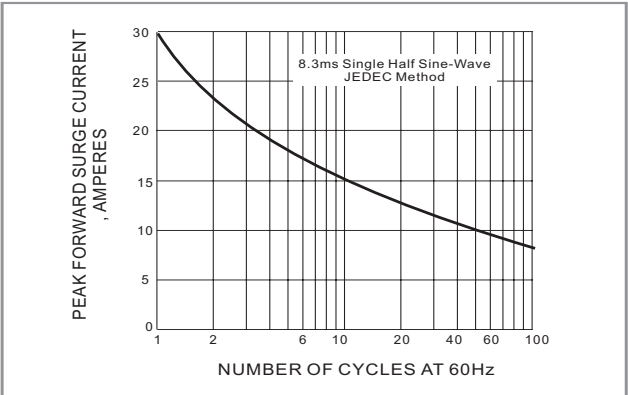
- NOTES: 1. Reverse Recovery Test Conditions:  $I_F=.5A$ ,  $I_R=1A$ ,  $I_{rr}=.25A$   
 2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads equally heatsink.



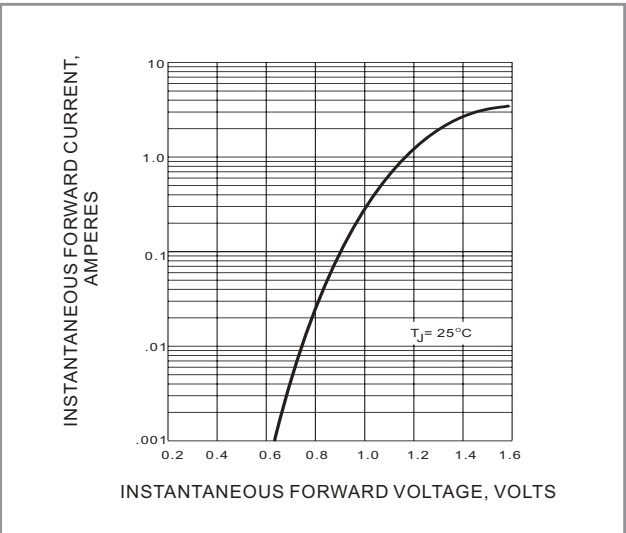
**RATING AND CHARACTERISTIC CURVES**



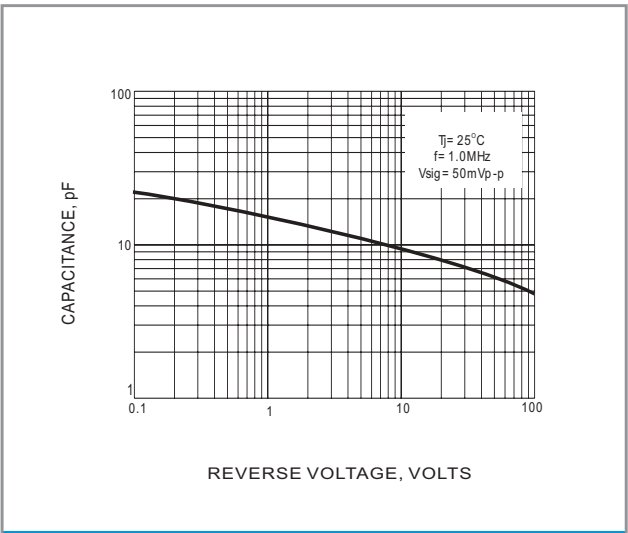
**Fig. 1 FORWARD CURRENT DERATING CURVE**



**Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig. 4 TYPICAL JUNCTION CAPACITANCE**