

# BA157 THRU BA159

## FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 400 to 1000 Volts CURRENT - 1.0 Ampere

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic in a DO-41 package
- 1.0 ampere operation at  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, DO-41

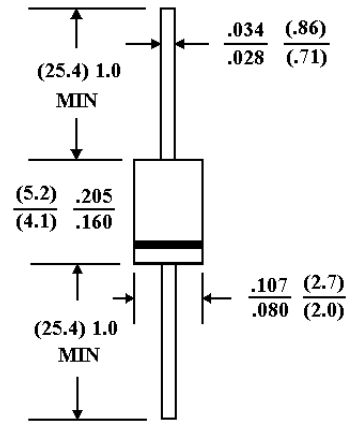
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.012 ounce, 0.3 gram

### DO-41



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	BA157	BA158	BA159	UNITS
Maximum Recurrent Peak Reverse Voltage	400	600	1000	V
Maximum RMS Voltage	280	420	700	V
Maximum DC Blocking Voltage	400	600	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A=55\text{ }^{\circ}\text{C}$	1.0			A
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JEDEC method)	30			A
Maximum Forward Voltage at 1.0A	1.3			V
Maximum Reverse Current $T_J=25\text{ }^{\circ}\text{C}$	5.0			$\mu\text{g A}$
at Rated DC Blocking Voltage $T_J=100\text{ }^{\circ}\text{C}$	500			
Typical Junction capacitance (Note 1)	12			pF
Maximum Reverse Recovery Time(Note 2)	150		250	ns
Operating and Storage Temperature Range	-55 to +150			$^{\circ}\text{C}$

### NOTES:

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

RATING AND CHARACTERISTIC CURVES

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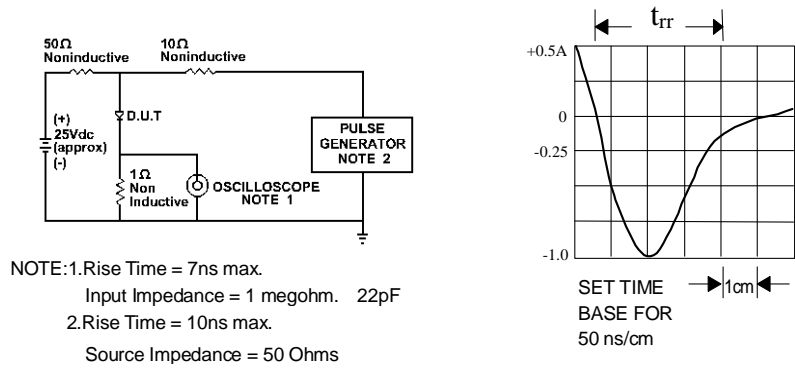


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

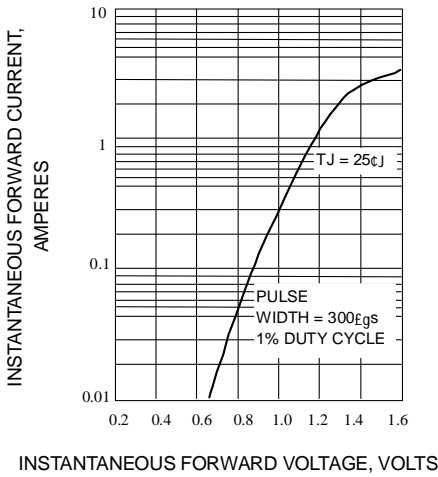


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

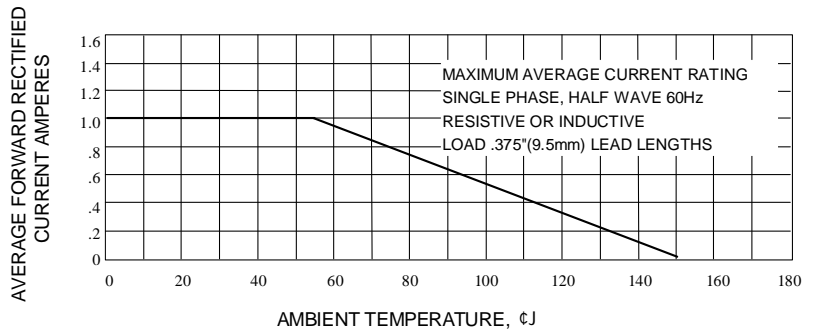


Fig. 3-FORWARD CURRENT DERATING CURVE

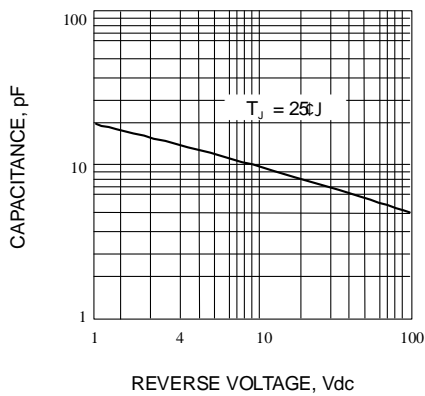


Fig. 4-TYPICAL JUNCTION CAPACITANCE

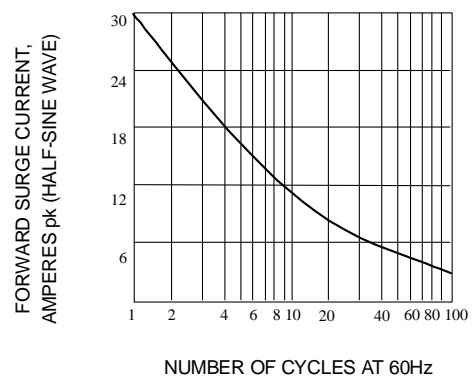


Fig. 5-PEAK FORWARD SURGE CURRENT