## **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<sub>A</sub>=55 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,

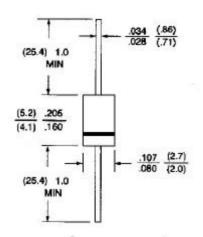
Method 208

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 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	1.0			Α
.375"(9.5mm) lead length at T <sub>A</sub> =55				
Peak Forward Surge Current 8.3ms single half	30			Α
sine				
wave superimposed on rated load(JECEC method)				
Maximum Forward Voltage at 1.0A	1.3			V
Maximum Reverse Current T <sub>J</sub> =25	5.0			Α
at Rated DC Blocking Voltage T <sub>J</sub> =100	500			
Typical Junction capacitance (Note 1)	12			₽F
Maximum Reverse Recovery Time(Note 2)	150 250		ns	
Operating and Storage Temperature Range	-55 to +150			

#### NOTES:

- 1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
- 2. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A

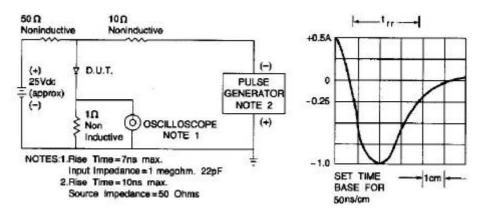
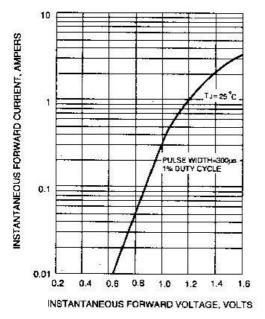


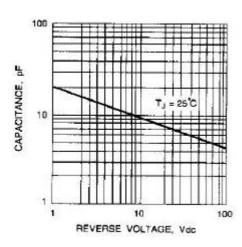
Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



AVERAGE FORWARD RECTIFIED 1.6 MAXIMUM AVERAGE CURRENT RATING SINGLE PHASE, HALF-WAYII, 60Hz RESISTIVE OR INDUCTIVE LOAD .375 (Brisn) LEAD LENGT CURRENT AMPERES 1.4 1.2 1.0 .8 .6 .2 0 0 80 100 40 60 120 160 180 AMBIENT TEMPERATURE, 'C

Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

Fig. 3-FORWARD CURRENT DERATING CURVE



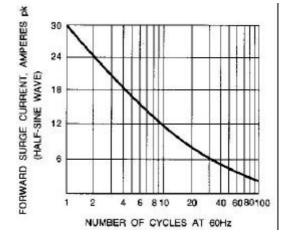


Fig. 4-TYPICAL JUNCTION CAPACITANCE

Vs. REVERSE VOLTAGE

Fig. 5-PEAK FORWARD SURGE CURRENT