



# BA157 THRU BA159

## 1.0 AMP. Fast Recovery Rectifiers



Voltage Range  
400 to 1000 Volts  
Current  
1.0 Ampere

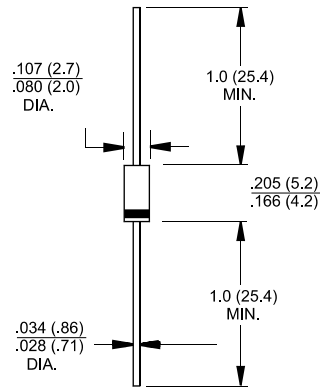
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: DO-41 Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34 gram

### DO-41



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

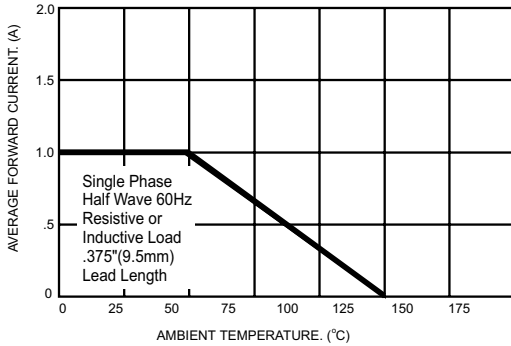
Type Number	BA157	BA158	BA159	Units
Maximum Recurrent Peak Reverse Voltage	400	600	1000	V
Maximum RMS Voltage	280	420	700	V
Maximum DC Blocking Voltage	400	600	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ T <sub>A</sub> = 45°C	1.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	30			A
Maximum Instantaneous Forward Voltage @ 1.0A	1.2			V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	5.0 100			uA uA
Maximum Reverse Recovery Time ( Note 1 )	150		250	nS
Typical Junction Capacitance ( Note 2 )	15			pF
Operating Temperature Range T <sub>J</sub>	-65 to +125			°C
Storage Temperature Range T <sub>STG</sub>	-65 to +150			°C

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

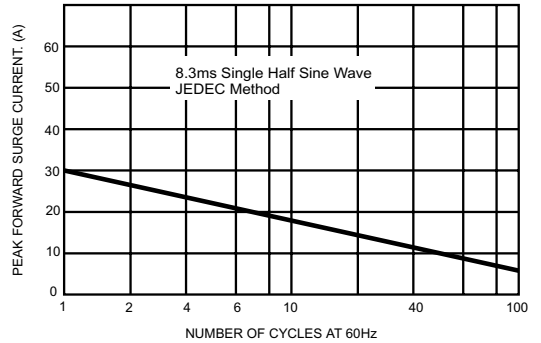
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

## RATINGS AND CHARACTERISTIC CURVES (BA157 THRU BA159)

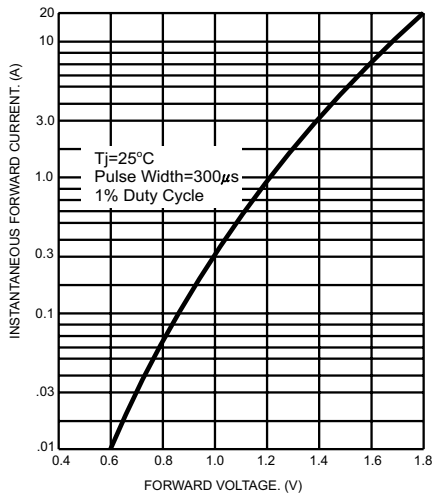
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



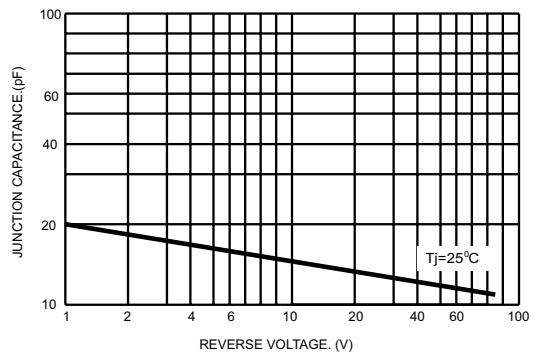
**FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



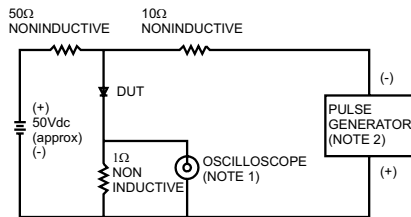
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

