



# BA157 THRU BA159

## 1.0 AMP. Fast Recovery Rectifiers



Voltage Range  
400 to 1000 Volts  
Current  
1.0 Ampere

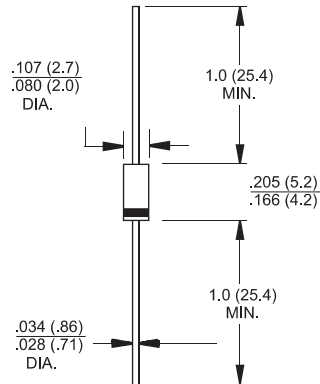
### Features

- ✧ 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: 260°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	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 Rectified Current .375" (9.5mm) Lead Length @ $T_A = 50^\circ C$	$I_{(AV)}$	1.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30			A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.2			V
Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	5.0 100			$\mu A$ $\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	150		250	nS
Typical Junction Capacitance ( Note 2 )	$C_j$	10			pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta JA}$	65			$^\circ C/W$
Operating Temperature Range	$T_J$	-65 to +150			$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150			$^\circ C$

- Notes: 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$   
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.  
 3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (BA157 THRU BA159)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

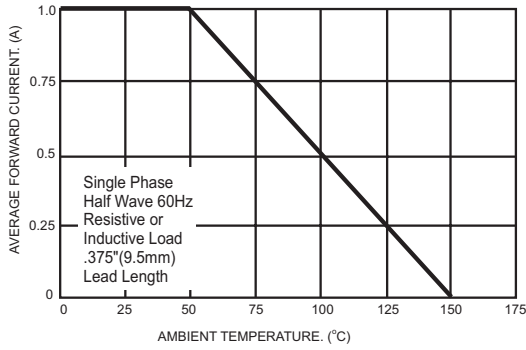


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

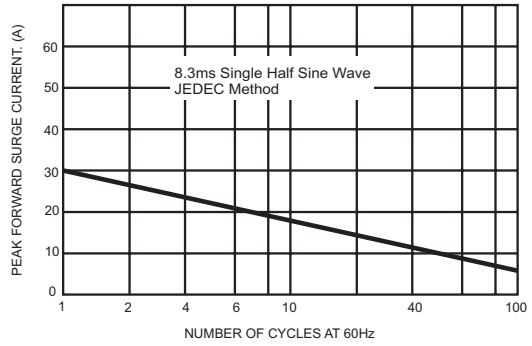


FIG.3- TYPICAL FORWARD CHARACTERISTICS

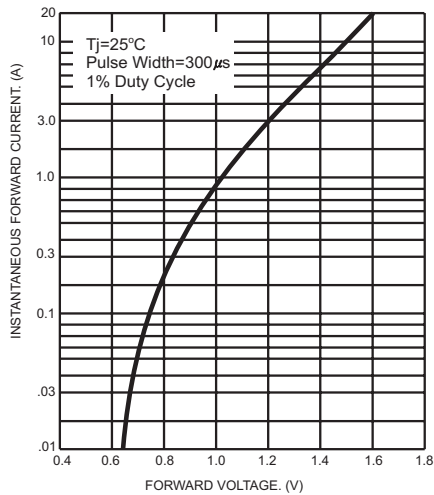


FIG.4- TYPICAL JUNCTION CAPACITANCE

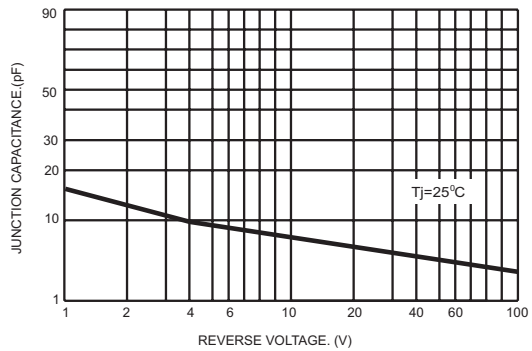
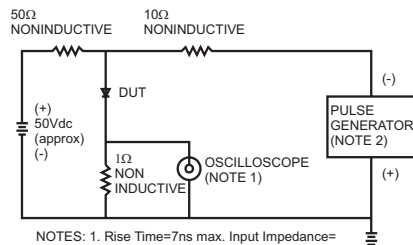
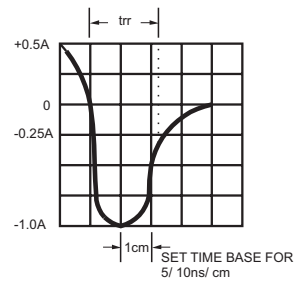


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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



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Datasheets for electronics components.