

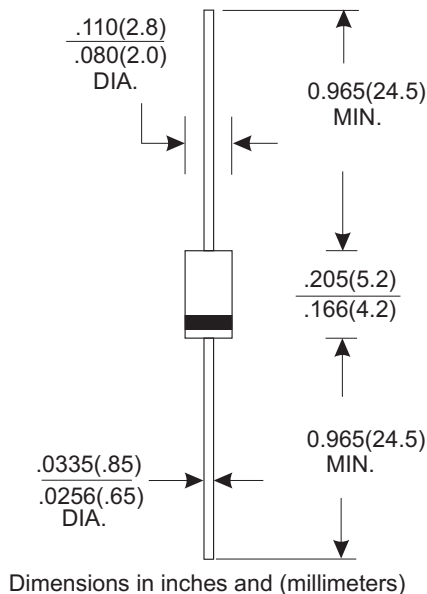


# BA157 THRU BA159

## FAST RECOVERY RECTIFIERS

Reverse Voltage - 400 to 1000 Volts Forward Current - 1.0 Ampere

### DO-41



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: 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
- \* Mounting position: Any
- \* Weight: 0.29 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, 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	400	600	1000	V
Maximum DC Blocking Voltage	400	600	1000	V
Maximum Average Forward Rectified Current				
.375"(9.5mm) Lead Length at Ta=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 at 1.0A	1.3			V
Maximum DC Reverse Current Ta=25°C	5.0			µA
at Rated DC Blocking Voltage Ta=100°C	100			µA
Maximum Reverse Recovery Time (Note 1)	150	150	250	nS
Typical Junction Capacitance (Note 2)	25			pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	-65 — +150			°C

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (BA157 THRU BA159)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

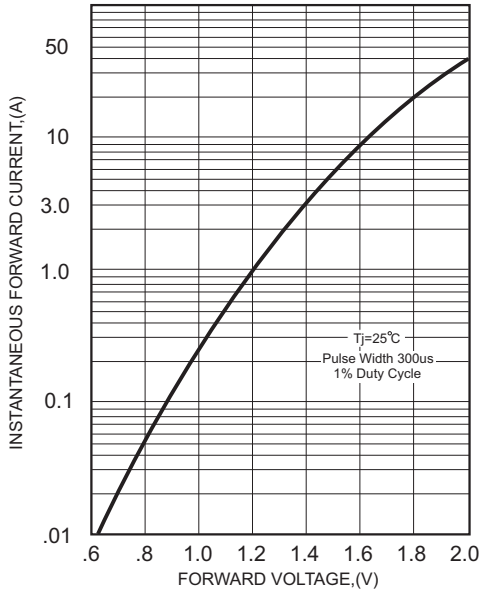


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

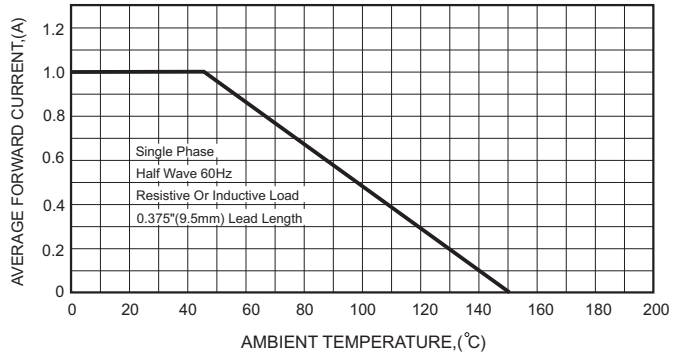


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

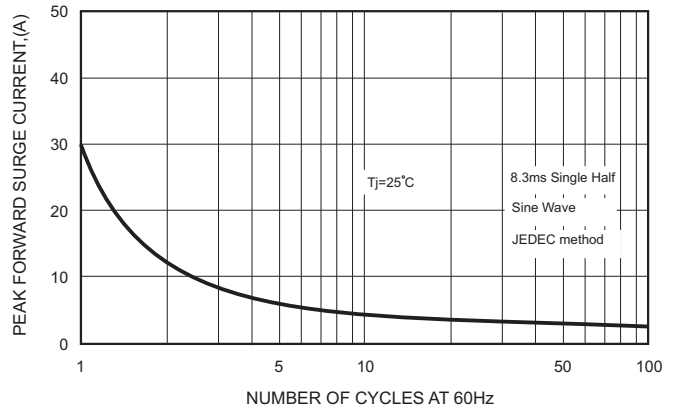
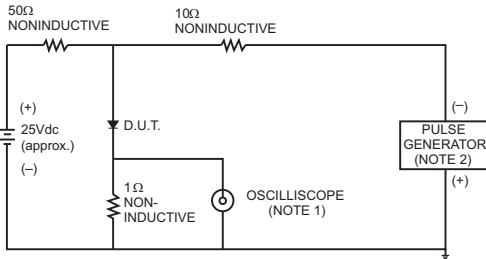


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

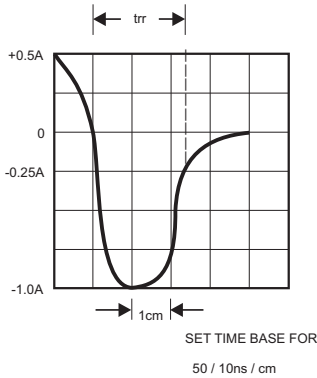


FIG.5-TYPICAL JUNCTION CAPACITANCE

