



# BA157 THRU BA159

## FAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 400 to 1000 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- High surge current capability
- Void-free Plastic in a DO-41 package.
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.
- Suffix "H" indicates Halogen-free parts, ex. BA157H

### MECHANICAL DATA

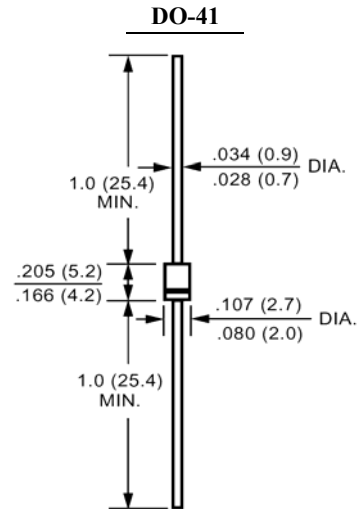
Case : Molded plastic, DO-41

Epoxy : UL 94V-O rate flame retardant

Lead : Axial leads, solderable per MIL-STD-202,  
method 208 guaranteed

Polarity : Color band denotes cathode end

Mounting position : Any



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

Parameter	Symbols	BA157	BA158	BA159	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	400	600	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	280	420	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	400	600	1000	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0			Amp
Maximum Forward Voltage at 1.0A DC and 25 °C	$V_F$	1.3			Volts
Maximum Reverse Current at $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=100^\circ C$	$I_R$	5.0 150			$\mu A$
Typical Junction Capacitance (Note 1)	$C_J$	10			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	65.0			°C/W
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	150		250	nS
Operating and Storage Temperature Range	$T_J, T_{stg}$	-65 to +150			°C

#### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions:  $I_F=5A, I_R=1A, I_{RR}=25A.$



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### RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

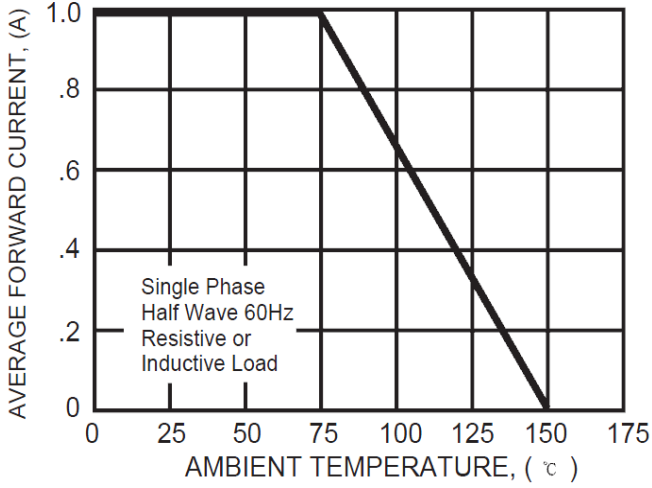


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

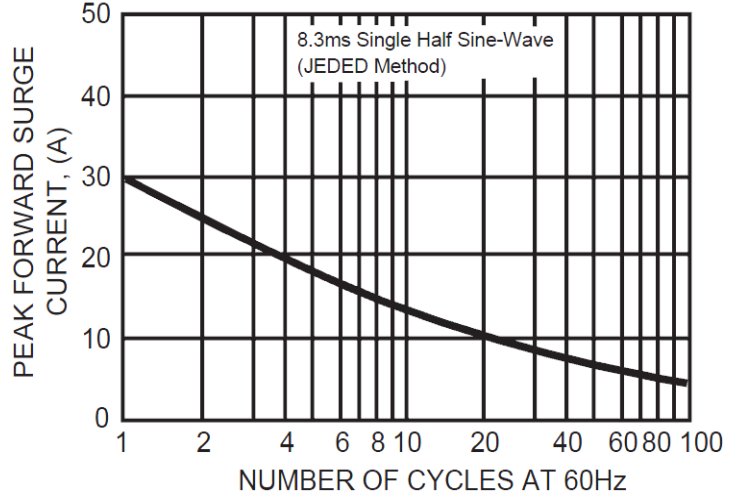


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

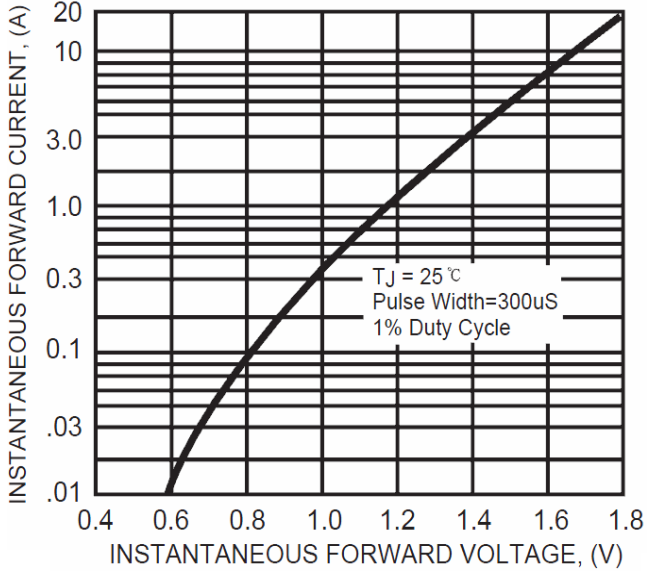


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

