

## RoHS Compliant



### Features:

- · High surge current capability
- · Void-free plastic in a DO-41 package
- 1A operation at T<sub>A</sub> = 55°C with no thermal runaway
- Fast switching for high efficiency
- · Exceeds environmental standards of MIL-S-19500/228

## **Specifications:**

### **Mechanical Data:**

Case : Moulded plastic, DO-41

Terminals : Axial leads, solderable per MIL-STD-202, Method 208

Polarity : Colour band denotes cathode

Mounting position : Any

Weight : 0.012 oz, 0.3g

## **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%.

Parameters	BA157	BA159	Units
Maximum Recurrent Peak Reverse Voltage	400	1,000	
Maximum RMS Voltage	280	700	V
Maximum DC Blocking Voltage	400	1,000	
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length at T <sub>A</sub> = 55°C	1		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	30		^
Maximum Forward Voltage at 1A	1.3		V
Maximum reverse current $T_J = 25^{\circ}C$ at rated DC blocking voltage $T_J = 100^{\circ}C$	5 500		μΑ

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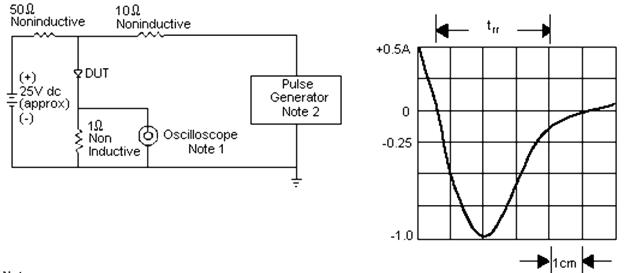


Parameters	BA157	BA159	Units
Typical Junction Capacitance (Note 1)	12		pF
Maximum reverse recovery time (Note 2)	150	250	°C/W
Operating and Storage Temperature Range	-50 to +150		°C

#### Notes:

- 1. Measured at 1MHz and applied reverse voltage of 4V.
- 2. Reverse recovery test conditions:  $I_F = 0.5A$ ,  $I_R = 1A$ ,  $I_{RR} = 0.25A$ .

## **Ratings and Characteristic Curves**



#### Notes:

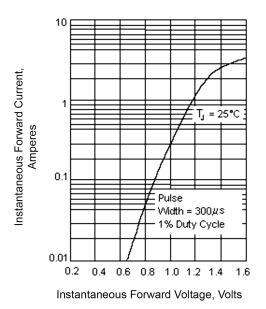
- 1. Rise Time = 7nS maximum Input Impedance =  $1M\Omega$ , 22pF
- 2. Rise Time = 10nS maximum Source Impedance =  $50\Omega$

Figure 1 - Reverse Recovery Time Characteristics and Test Circuit Diagram



Set Time Base For 50nS/cm





Average Forward Rectified Current, Amperes Maximum Average Current Rating 1.2 Single Phase, Half Wave 60Hz 1.0 Resistive or Inductive Load .375"(9.5mm) Lead Lengths .8 .6 .2 0 20 40 60 80 100 120 140 160 180 Ambient Temperature, °C

Figure 3 - Forward Current Derating Curve

Figure 2 - Typical Instantaneous Forward Characteristics

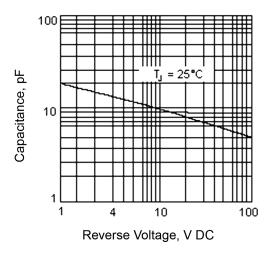


Figure 4 - Typical Junction Capacitance

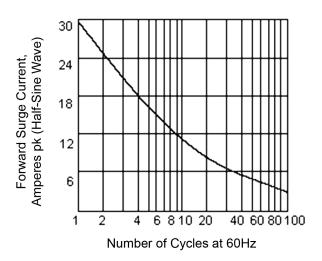
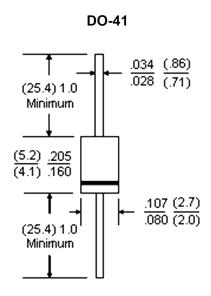


Figure 5 - Peak Forward Surge Current





Dimensions: Inches (Millimetres)

### **Part Number Table**

Description	Part Number	
Diode, Fast, 1A, 400V	BA157	
Diode, Fast, 1A, 1,000V	BA159	

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