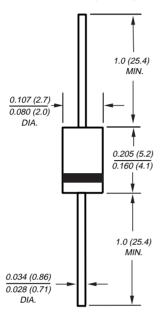


Vishay Semiconductors formerly General Semiconductor

Fast Switching Plastic Rectifier

Reverse Voltage 400 to 1000V Forward Current 1.0A





Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- · High surge current capability
- Void-free plastic package
- · Fast switching for high efficiency
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AL, molded plastic body **Terminals:** Plated axial leads, solderable per

MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any Weight: 0.012 oz., 0.3 g Packaging codes/options:

1/5K per bulk box

23/3K per Ammo mag. (52mm tape), 4/5.5K per 13" reel (52mm tape),

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | BA157 | BA158 | BA159D | BA159 | Unit |
|--|-----------------|-------|-------|--------|-------|------|
| Maximum repetitive peak reverse voltage | Vrrm | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | VRMS | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C | lF(AV) | | А | | | |
| Peak forward surge current 10ms single half sine-wave superimposed on rated load at Ta=25°C | IFSM | | А | | | |
| Maximum operation junction temperature | TJ | | °C | | | |
| Maximum storage temperature | Tstg | | °C | | | |

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | BA157 | BA158 | BA159D | BA159 | Unit |
|---|-----------------|-------|-------|--------|-------|------|
| Maximum instantaneous forward voltage at 1.0A | VF | | V | | | |
| Maximum DC reverse current at rated DC blocking voltage T _A =25°C | IR | | μΑ | | | |
| Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | t _{rr} | 150 | 250 | 50 | 00 | ns |
| Typical junction capacitance at 4.0V, 1MHz | CJ | | pF | | | |

BA157 thru BA159

Vishay Semiconductors formerly General Semiconductor

Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current **Derating Curve** 1.0 Resistive or Inductive Load Average Forward Current (A) 0.8 0.6 0.4 0.2 0.375" (9.5mm) Lead Length 0 25 50 75 100 125 150 175 n Ambient Temperature (°C)

Fig. 3 - Typical Instantaneous **Forward Characteristics**

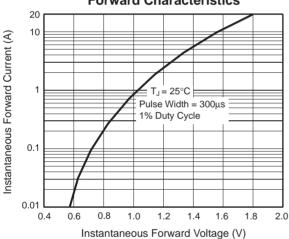


Fig. 5 - Typical Junction Capacitance

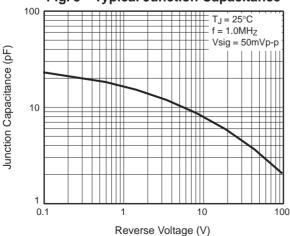


Fig. 2 - Maximum Non-Repetitive Peak **Forward Surge Current**

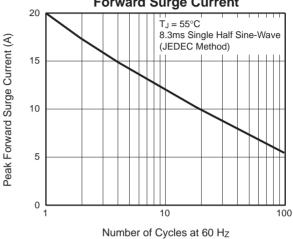
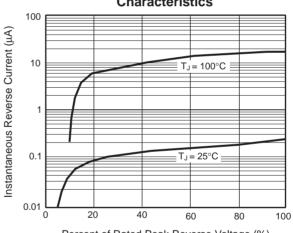
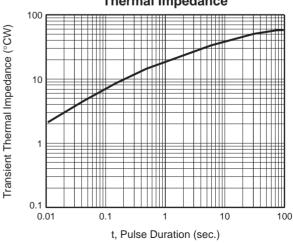


Fig. 4 - Typical Reverse Characteristics



Percent of Rated Peak Reverse Voltage (%)

Fig. 6 - Typical Transient Thermal Impedance



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