

1.0 A Fast Recovery Silicon Rectifier
Rectifier Reverse Voltage 50 to 600V

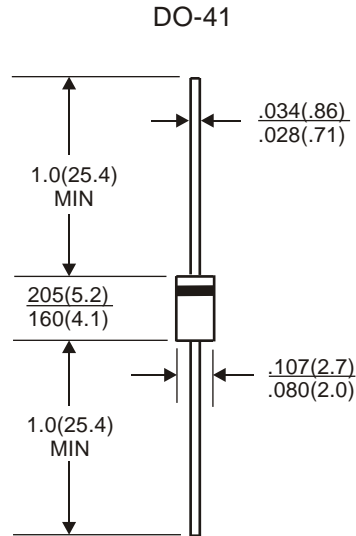


Features

- Diffused junction
- Fast switching for high efficiency
- High current capability and low Forward Voltage Drop
- Surge overload rating to 30A peak
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

Case: Molded plastic
 Terminals: Solder plated solderable per MIL-STD-202, Method 208
 Polarity: Cathode band
 Mounting Position: Any
 Weight: 0.3grams (approx)



All dimensions inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
 For Capacitive load derate current by 20%.

| Parameter | Symbol | BA157 | BA158 | BA159 | unit |
|---|----------|--------------|-------|-------|------|
| Maximum repetitive peak reverse voltage | VRRM | 400 | 600 | 1000 | V |
| Maximum RMS bridge input voltage | VRMS | 280 | 420 | 700 | V |
| Maximum DC blocking voltage | VDC | 400 | 600 | 1000 | V |
| Maximum average forward rectified output current at TA=75°C | IF(AV) | 1.0 | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM | 30.0 | | | A |
| Maximum reverse recovery time TJ=25°C | Trr | 150 | 250 | 500 | nS |
| Typical thermal resistance per element | ReJA | 50 | | | °C/W |
| Typical junction capacitance per element | Cj | 15 | | | pF |
| Operating junction and storage temperature range | TJ, TSTG | -65 to + 150 | | | °C |

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
 For Capacitive load derate by 20 %.

| Parameter | Symbol | BA157 | BA158 | BA159 | Unit |
|---|--------|------------|-------|-------|------|
| Maximum instantaneous forward voltage drop per leg at 1.0A | VF | 1.3 | | | V |
| Maximum DC reverse current at rated DC blocking voltage per element | IR | 5.0 / 50.0 | | | μA |

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) BA157 thru BA159

Fig. 1 Reverse Recovery Time and Test Circuit Diagram

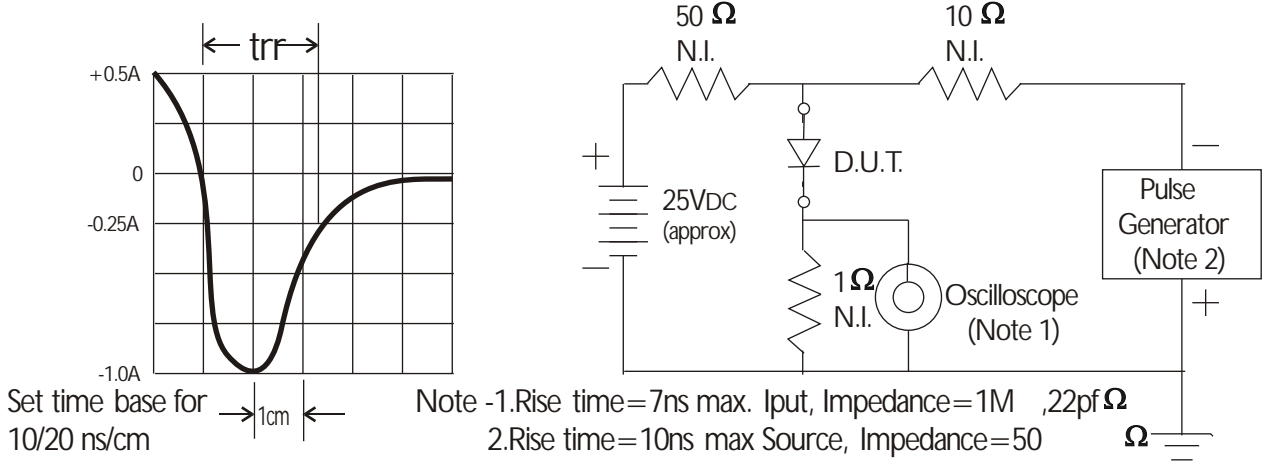


Fig. 2 Derating Curve for Output Rectified Current

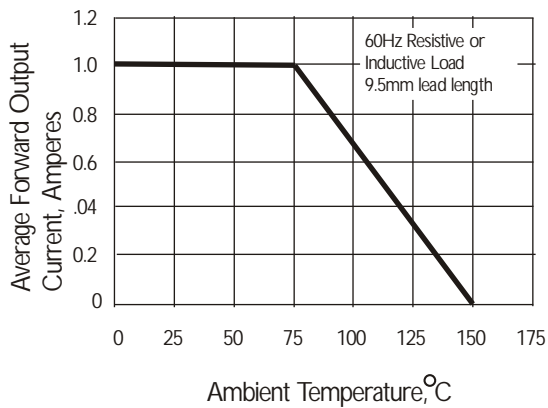


Fig. 3 Peak Forward Surge Current

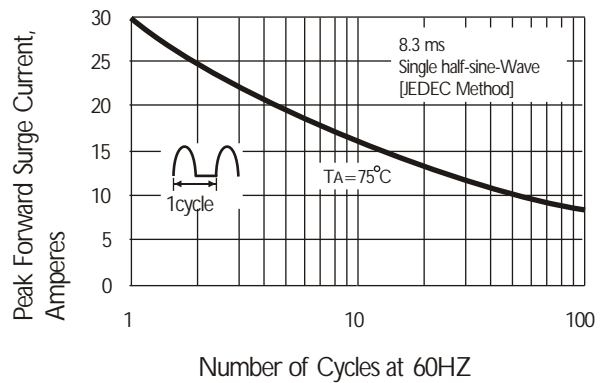


Fig. 4 Typical Instantaneous Forward Characteristics

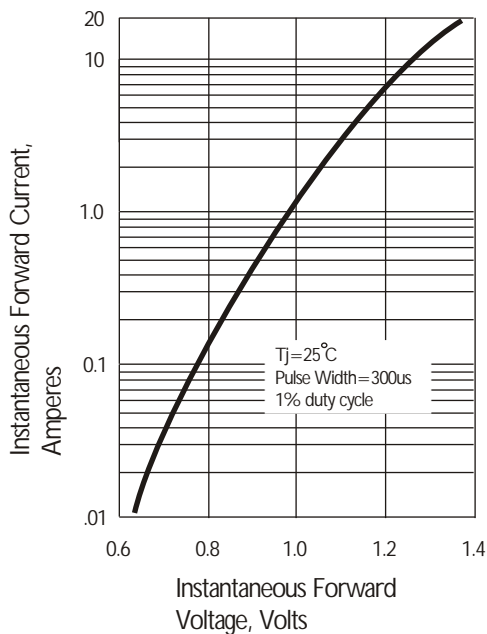


Fig. 5 Typical Junction Capacitance

