
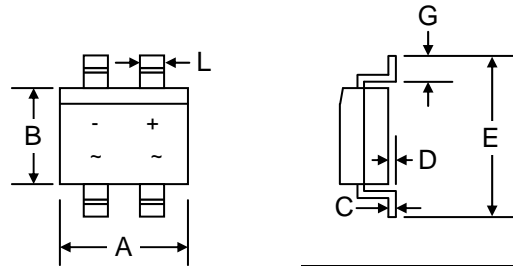


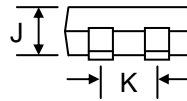
Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Reliability
- High Surge Current Capability
- Design for Surface Mount Application
- Plastic Material – UL Flammability 94V-0
-  Recognized File # E157705



Mechanical Data

- Case: MB-S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.12 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



| MB-S | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 4.50 | 4.90 |
| B | 3.60 | 4.00 |
| C | 0.15 | 0.35 |
| D | — | 0.20 |
| E | — | 7.00 |
| G | 0.70 | 1.10 |
| J | 2.30 | 2.70 |
| K | 2.20 | 2.60 |
| L | 0.56 | 0.84 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | B1S | B2S | B4S | B6S | B8S | B10S | Unit |
|---|----------------|-------------|-----|-----|-----|-----|------|----------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| DC Blocking Voltage | V_R | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) @ $T_A = 40^{\circ}\text{C}$ | I_O | 0.8 | | | | | | A |
| Average Rectified Output Current (Note 2) @ $T_A = 40^{\circ}\text{C}$ | | 0.5 | | | | | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 35 | | | | | | A |
| Forward Voltage per diode @ $I_F = 0.4\text{A}$ | V_{FM} | 1.0 | | | | | | V |
| @ $I_F = 0.8\text{A}$ | | 1.1 | | | | | | |
| Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ | I_{RM} | 5.0 | | | | | | μA |
| At Rated DC Blocking Voltage @ $T_A = 125^{\circ}\text{C}$ | | 500 | | | | | | |
| Typical Junction Capacitance per diode (Note 3) | C_J | 13 | | | | | | pF |
| Thermal Resistance Junction to Ambient (Note 2) | R_{JA} | 134 | | | | | | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction to Ambient (Note 1) | R_{JA} | 76 | | | | | | |
| Thermal Resistance Junction to Lead (Note 2) | R_{JL} | 20 | | | | | | |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | $^{\circ}\text{C}$ |

Note: 1. Mounted on aluminum substrate PCB with 1.3 x 1.3mm pad areas.
2. Mounted on glass epoxy PCB with 1.3 x 1.3mm pad areas.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

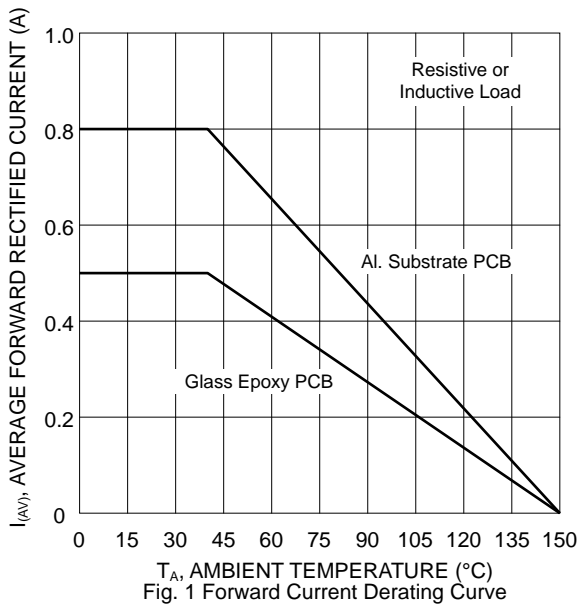


Fig. 1 Forward Current Derating Curve

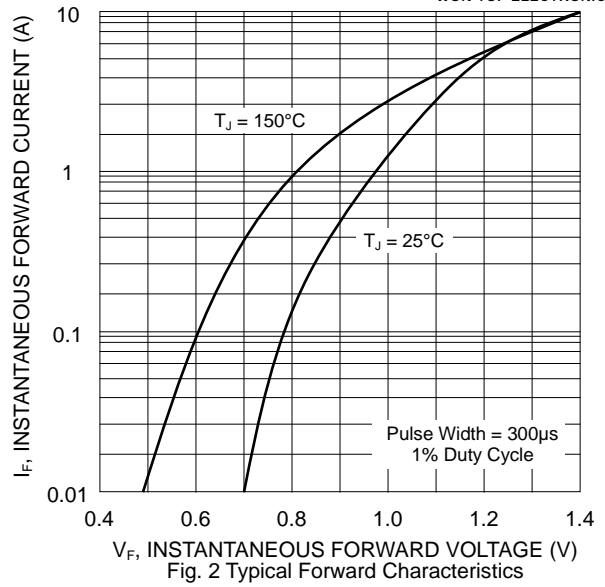


Fig. 2 Typical Forward Characteristics

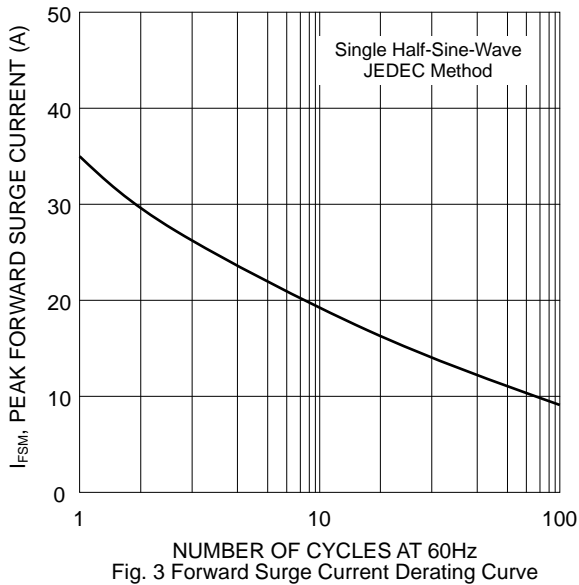


Fig. 3 Forward Surge Current Derating Curve

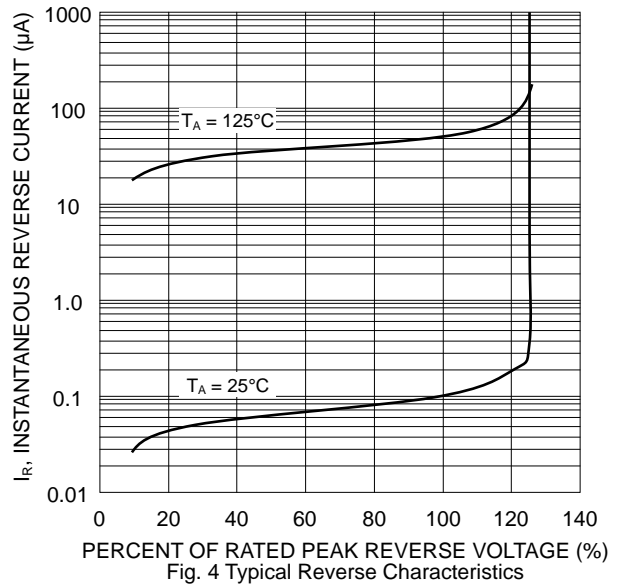


Fig. 4 Typical Reverse Characteristics

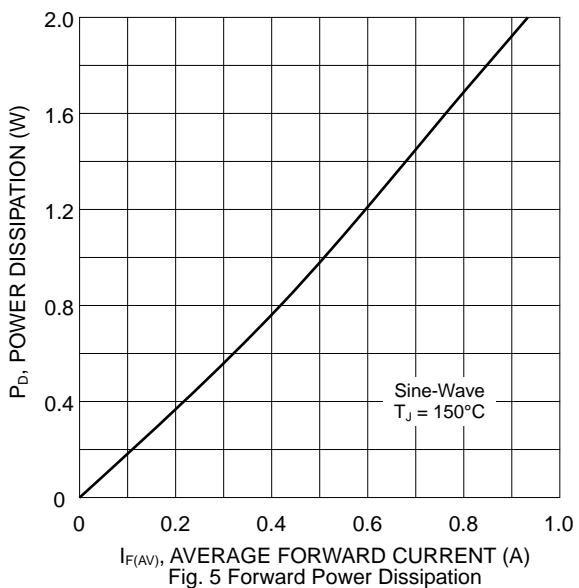


Fig. 5 Forward Power Dissipation

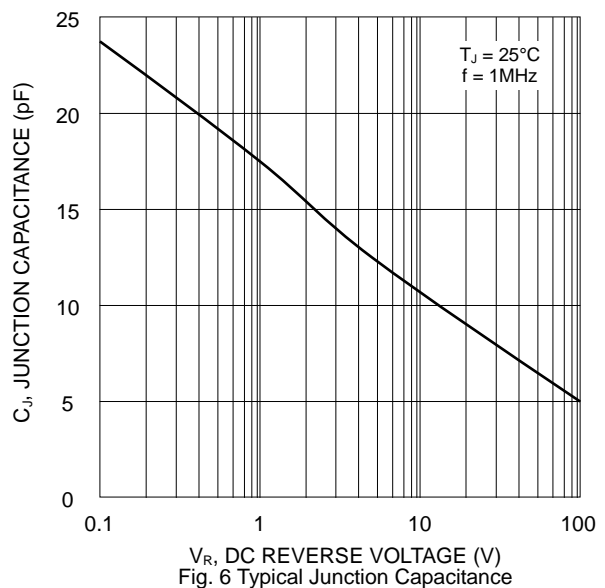
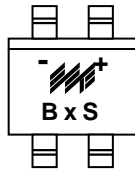


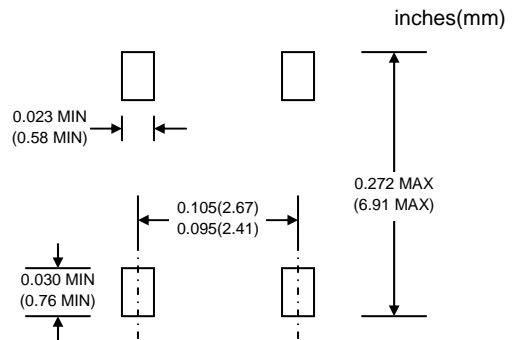
Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



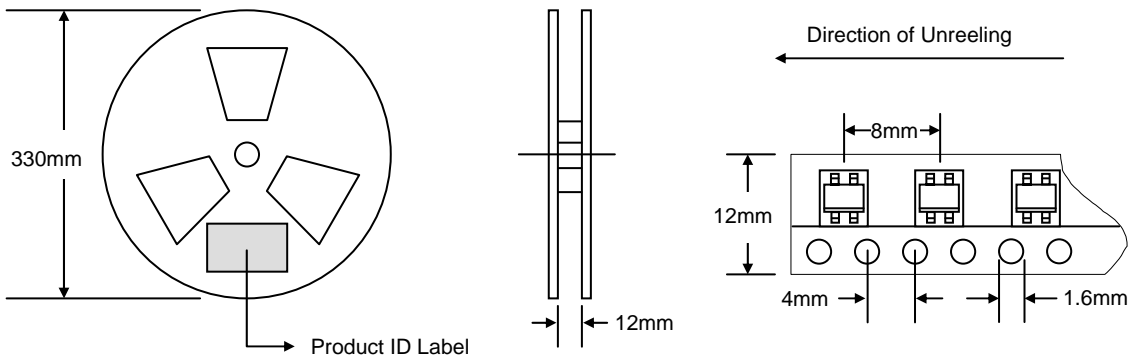
BxS = Device Number
 x = 1, 2, 4, 6, 8 or 10
 Polarity = As Marked on Body

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 330 | 3,000 | 340 x 337 x 45 | 6,000 | 370 x 370 x 420 | 48,000 | 15.0 |

Note: 1. Paper reel, white or gray color.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| B1S-T3 | MB-S | 3000/Tape & Reel |
| B2S-T3 | MB-S | 3000/Tape & Reel |
| B4S-T3 | MB-S | 3000/Tape & Reel |
| B6S-T3 | MB-S | 3000/Tape & Reel |
| B8S-T3 | MB-S | 3000/Tape & Reel |
| B10S-T3 | MB-S | 3000/Tape & Reel |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, B1S-T3-LF.**

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