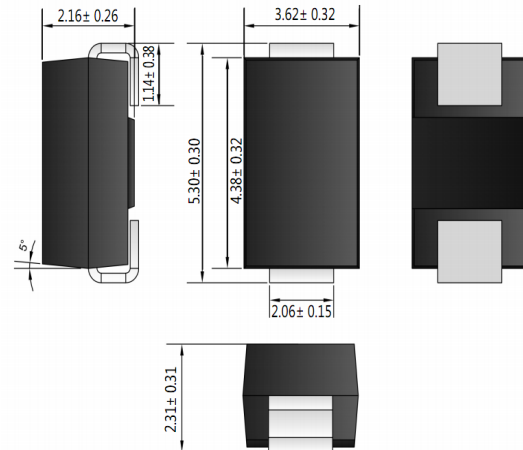


Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Super-Fast Recovery Time
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

SMB /DO-214AA

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 | ER1A | ER1B | ER1C | ER1D | ER1E | ER1G | ER1J | Unit | | |
|---|----------------|-------------|------|------|------|------|------|------|--------------------|---------------|----------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V | | |
| DC Blocking Voltage | V_R | | | | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V | | |
| Average Rectified Output Current @ $T_L = 110^{\circ}\text{C}$ | I_O | 1.0 | | | | | | | A | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | | | | | | | A | | |
| Forward Voltage @ $I_F = 1.0\text{A}$ | V_{FM} | 0.95 | | | 1.25 | | 1.7 | | V | | |
| Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^{\circ}\text{C}$ | I_{RM} | 5.0 | | | | 100 | | | | μA | |
| Reverse Recovery Time (Note 1) | t_{rr} | 35 | | | | | | | nS | | |
| Typical Junction Capacitance (Note 2) | C_J | 10 | | | | | | | pF | | |
| Thermal Resistance Junction to Ambient (Note 3) | R_{JA} | 75 | | | | | | | | | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction to Lead (Note 3) | R_{JL} | 25 | | | | | | | | | |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^{\circ}\text{C}$ | | |

- Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on PCB with 5.0mm x 5.0mm x 0.013mm thick copper pads.

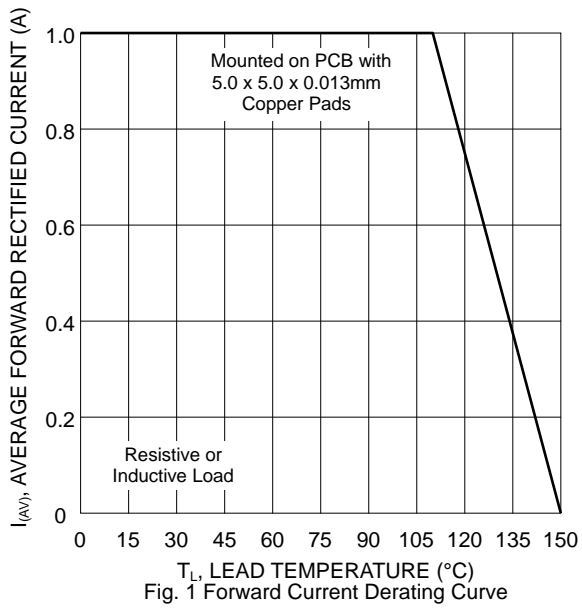


Fig. 1 Forward Current Derating Curve

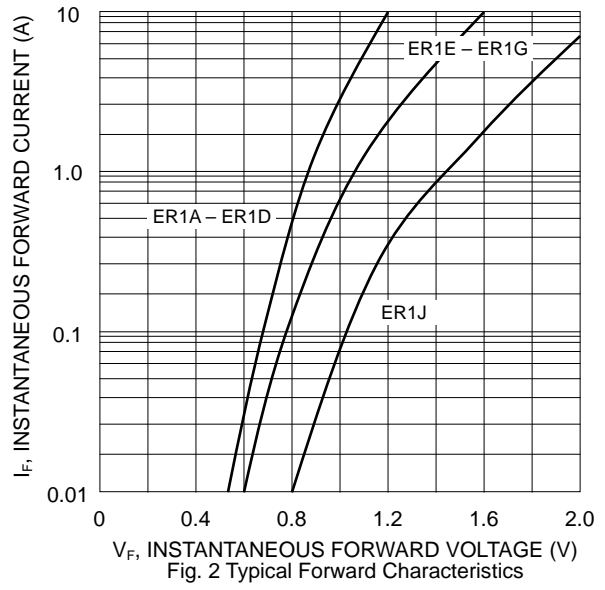


Fig. 2 Typical Forward Characteristics

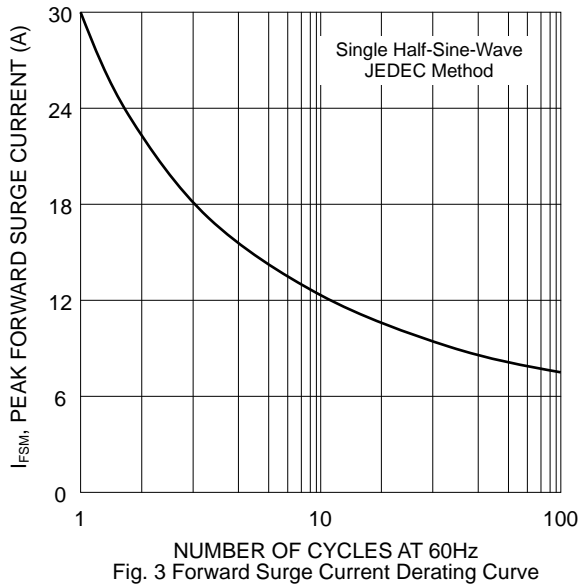


Fig. 3 Forward Surge Current Derating Curve

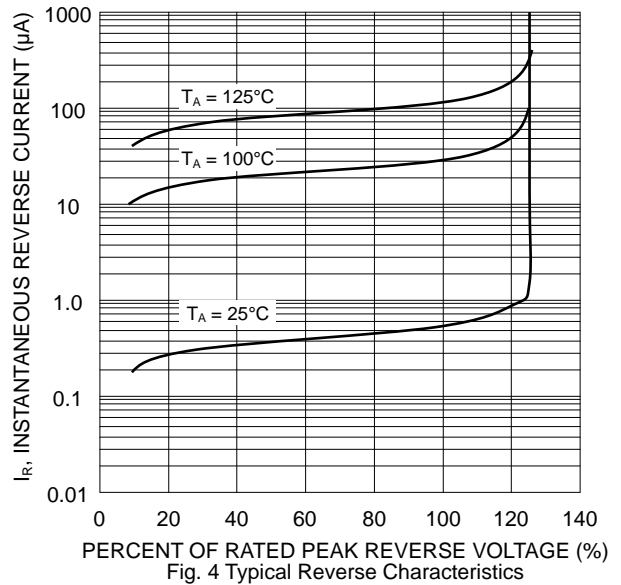


Fig. 4 Typical Reverse Characteristics

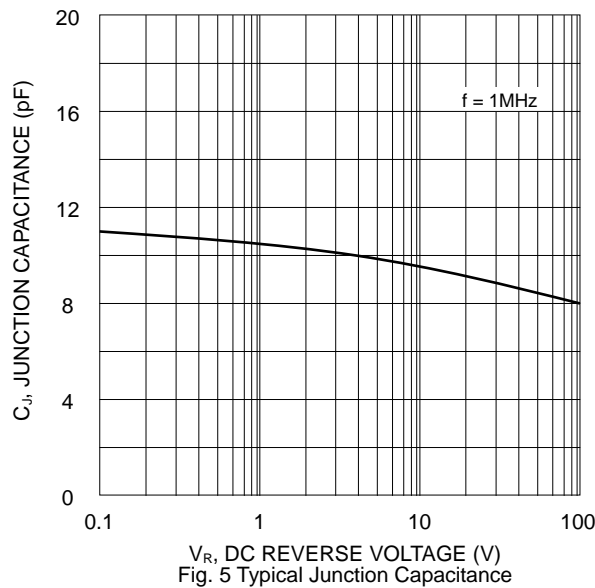
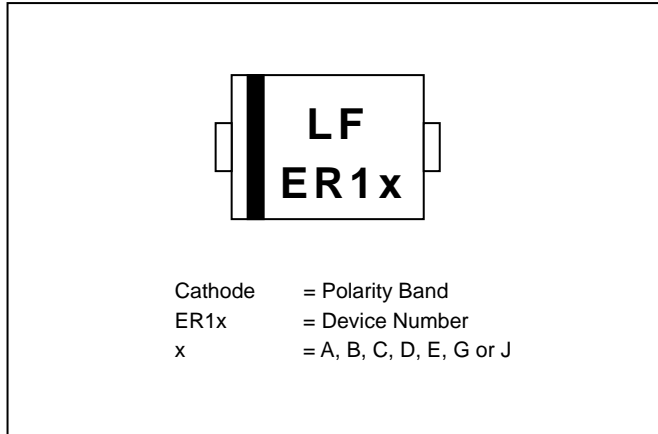
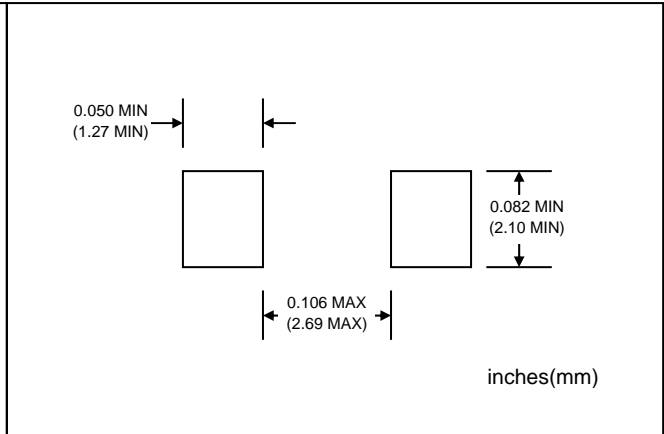


Fig. 5 Typical Junction Capacitance

MARKING INFORMATION



RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL

330mm
 Product ID Label
 12mm
 Direction of Unreeling
 8mm
 12mm
 4mm
 1.6mm

| 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 | 14.0 |