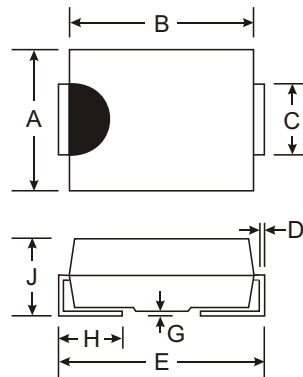


Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 175A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material - UL Flammability Classification 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Approx. Weight: 0.21grams
- Marking: Type Number



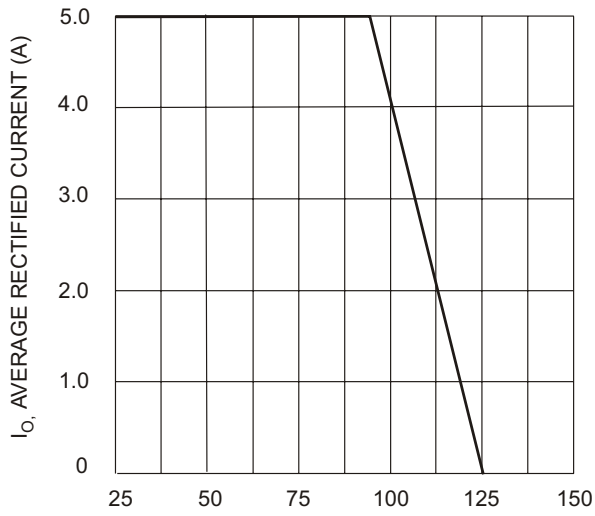
| SMC | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 5.59 | 6.22 |
| B | 6.60 | 7.11 |
| C | 2.75 | 3.18 |
| D | 0.15 | 0.31 |
| E | 7.75 | 8.13 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.00 | 2.62 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

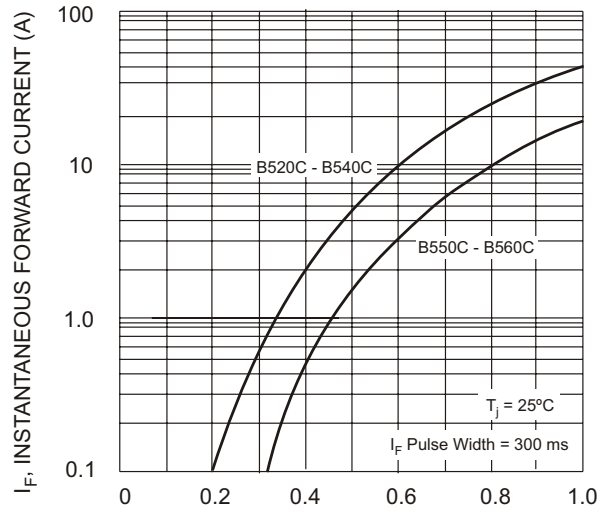
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | B520C | B530C | B540C | B550C | B560C | Unit |
|---|---------------------------------|-------------|-------|-------|-------|-------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current @ T _T = 90°C | I _O | 5.0 | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 175 | | | | | A |
| Forward Voltage @ I _F = 5.0A DC | V _{FM} | 0.55 | | | 0.70 | | V |
| Peak Reverse Current at Rated DC Blocking Voltage @ T _A = 25°C @ T _A = 100°C | I _{RM} | 0.5 20 | | | | | mA |
| Typical Junction Capacitance (Note 2) | C _j | 300 | | | | | pF |
| Typical Thermal Resistance, Junction to Terminal (Note 1) | R _{θJT} | 10 | | | | | K/W |
| Typical Thermal Resistance, Junction to Ambient | R _{θJA} | 50 | | | | | °C/W |
| Operating Temperature Range | T _j | -55 to +125 | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | °C |

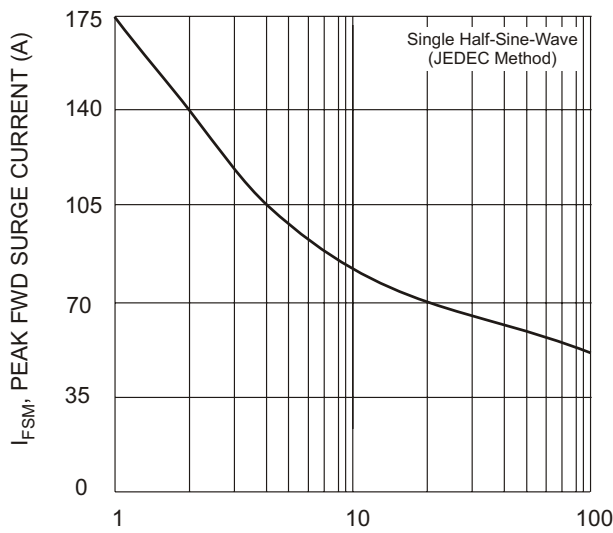
Notes: 1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.



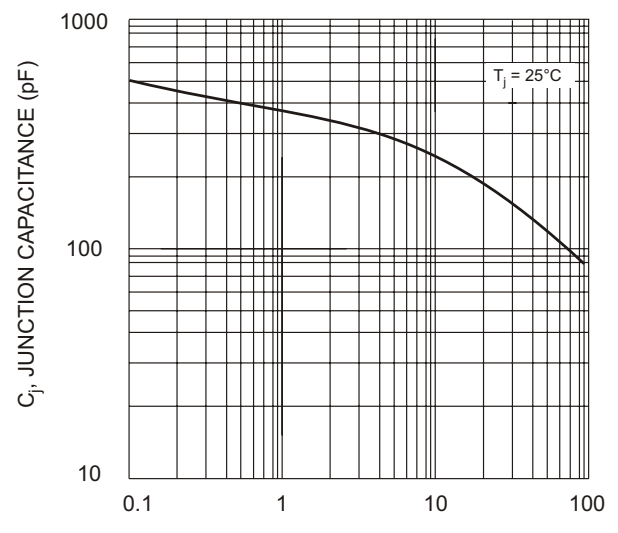
T_T , TERMINAL TEMPERATURE (°C)
 Fig. 1 Forward Current Derating Curve



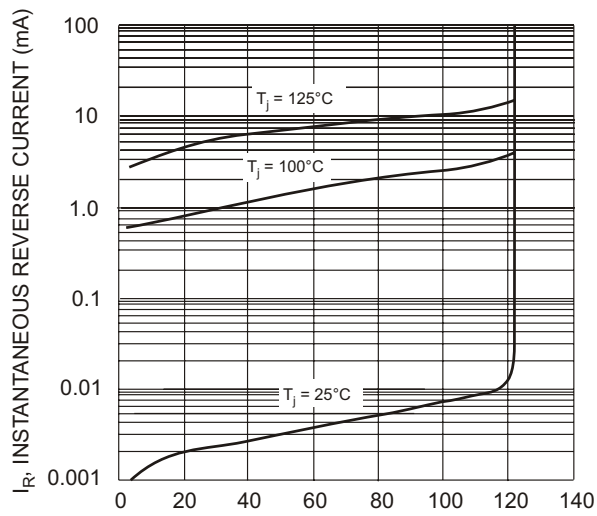
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
 Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz
 Fig. 3 Max Non-Repetitive Peak Fwd Surge Current



V_R , REVERSE VOLTAGE (V)
 Fig. 4 Typical Junction Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
 Fig. 5 Typical Reverse Characteristics