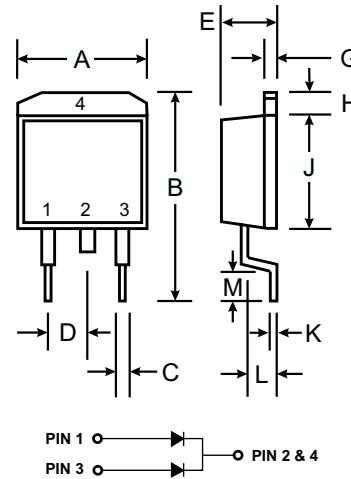


Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 225A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: D²PAK Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 1.7 grams (approx.)
- Mounting Position: Any



| D ² PAK | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 9.65 | 10.69 |
| B | 14.60 | 15.88 |
| C | 0.51 | 1.14 |
| D | 2.29 | 2.79 |
| E | 4.37 | 4.83 |
| G | 1.14 | 1.40 |
| H | 1.14 | 1.40 |
| J | 8.25 | 9.25 |
| K | 0.30 | 0.64 |
| L | 2.03 | 2.92 |
| M | 2.29 | 2.79 |
| 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 | SBG 2030CT | SBG 2035CT | SBG 2040CT | SBG 2045CT | Unit |
|---|-----------------------------------|-------------|------------|------------|------------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 30 | 35 | 40 | 45 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | |
| DC Blocking Voltage | V _R | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 21 | 25 | 28 | 32 | V |
| Average Rectified Output Current @ T _C = 105°C | I _O | 20 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 225 | | | | A |
| Forward Voltage, per Element @ I _F = 10A | V _{FM} | 0.55 | | | | V |
| Peak Reverse Current @ T _j = 25°C at Rated DC Blocking Voltage @ T _j = 100°C | I _{RM} | 1.0 50 | | | | mA |
| Typical Junction Capacitance (Note 2) | C _j | 650 | | | | pF |
| Typical Thermal Resistance Junction to Case (Note 1) | R _{θJC} | 2.0 | | | | K/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +125 | | | | °C |

- Notes: 1. Thermal resistance: junction to case mounted on heat sink.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

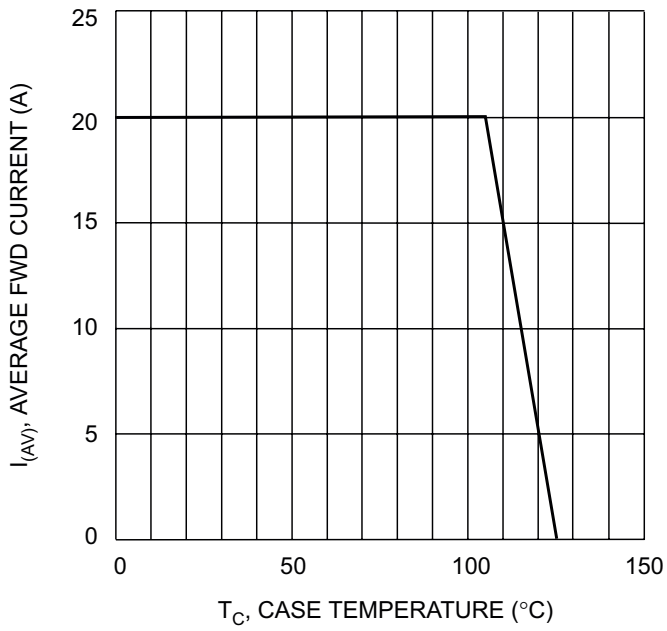


Fig. 1 Forward Current Derating Curve

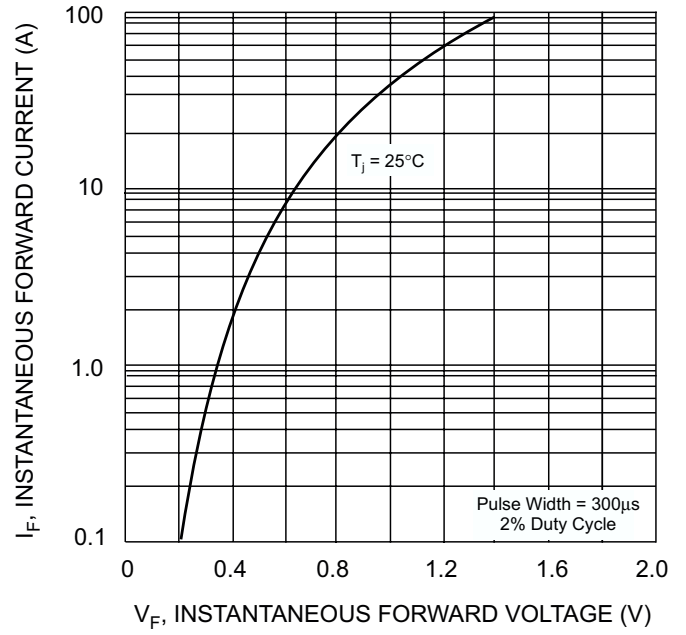


Fig. 2 Typical Forward Characteristics

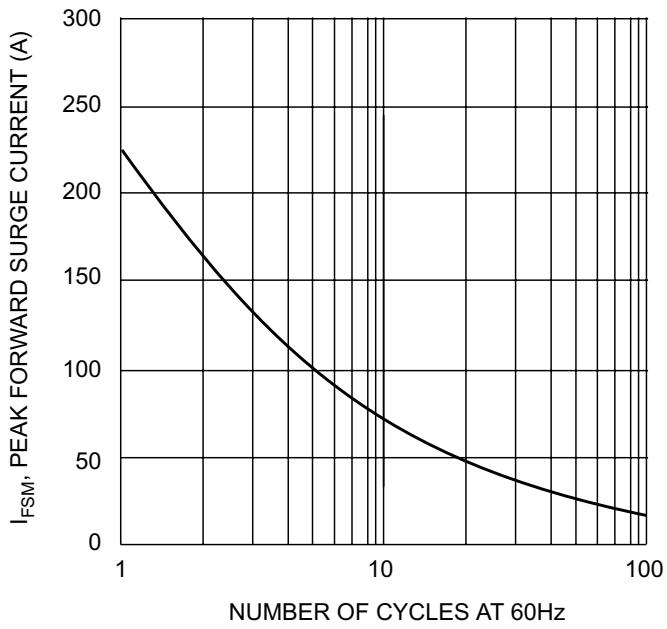


Fig. 3 Max Non-Repetitive Surge Current

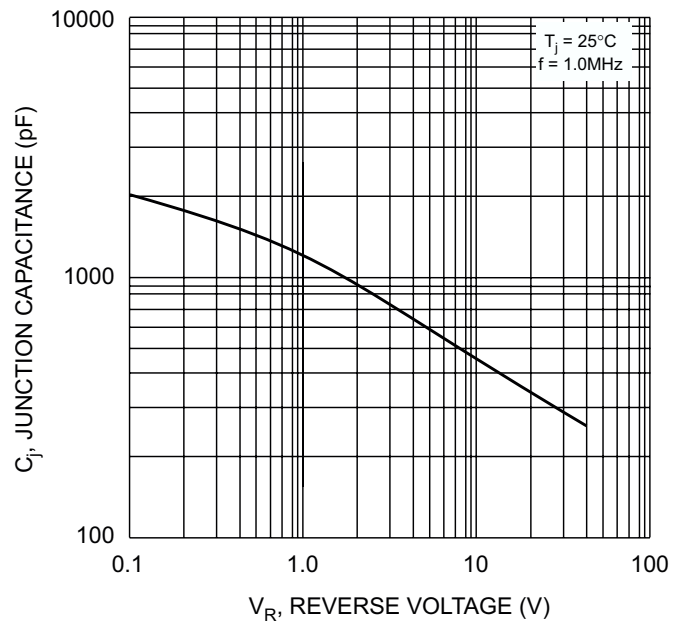


Fig. 4 Typical Junction Capacitance