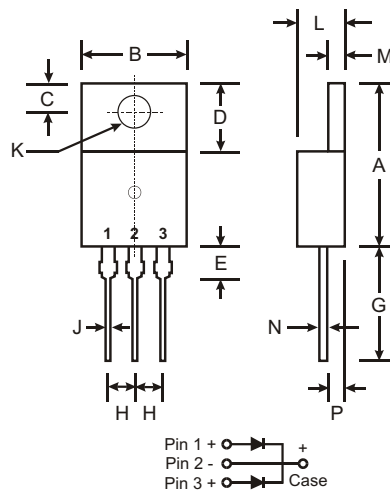


Features

- 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
- 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: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| TO-220AB | | |
|----------------------|--------------------|--------------------|
| Dim | Min | Max |
| A | 14.22 | 15.88 |
| B | 9.65 | 10.67 |
| C | 2.54 | 3.43 |
| D | 5.84 | 6.86 |
| E | — | 6.35 |
| G | 12.70 | 14.73 |
| H | 2.29 | 2.79 |
| J | 0.51 | 1.14 |
| K | 3.53 \varnothing | 4.09 \varnothing |
| L | 3.56 | 4.83 |
| M | 1.14 | 1.40 |
| N | 0.30 | 0.64 |
| P | 2.03 | 2.92 |
| 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 | SBL 2030CT | SBL 2035CT | SBL 2040CT | SBL 2045CT | SBL 2050CT | SBL 2060CT | Unit |
|---|--|-------------|------------|------------|------------|------------|------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 30 | 35 | 40 | 45 | 50 | 60 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 21 | 24.5 | 28 | 31.5 | 35 | 42 | V |
| Average Rectified Output Current (Note 1) @ T _C = 95°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} | 250 | | | | | | A |
| Forward Voltage Drop @ I _F = 10A, T _C = 25°C | V _{FM} | 0.55 | | | | 0.75 | | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 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} | 2.8 | | | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | | °C |

- Notes: 1. Thermal resistance junction to case mounted on heatsink.
2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.

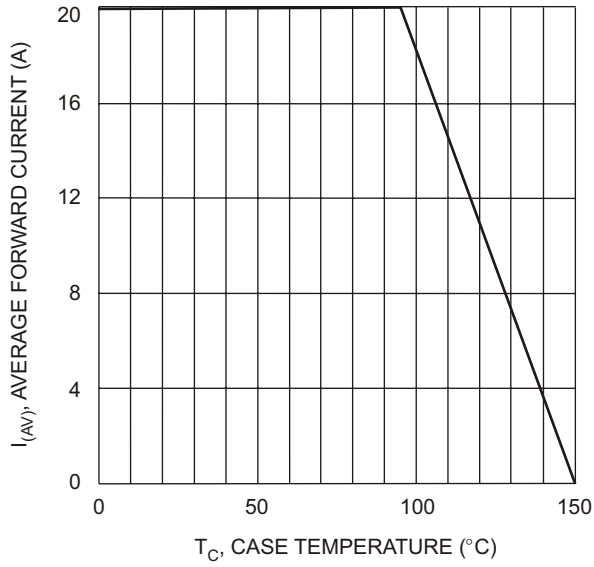


Fig. 1 Forward Current Derating Curve

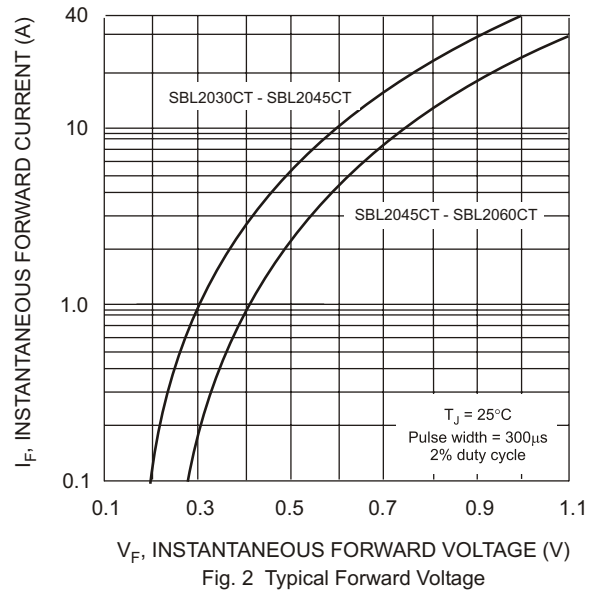


Fig. 2 Typical Forward Voltage

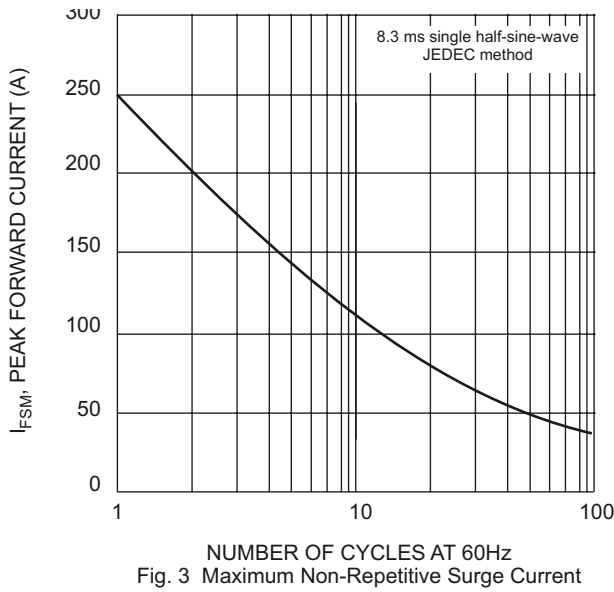


Fig. 3 Maximum Non-Repetitive Surge Current

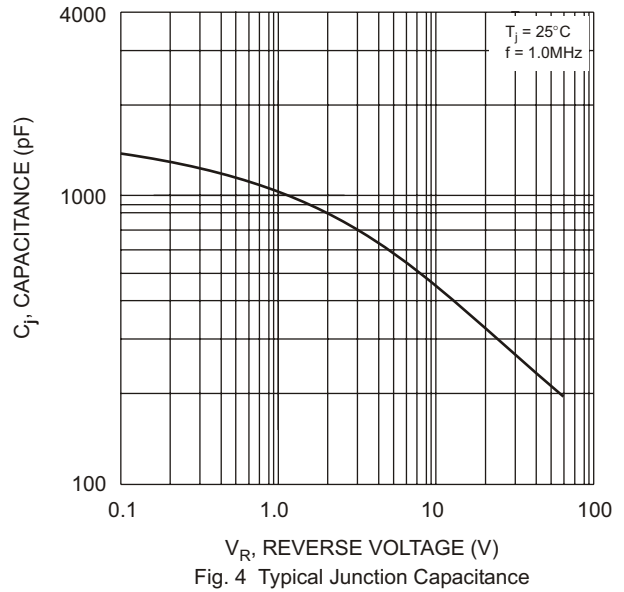


Fig. 4 Typical Junction Capacitance

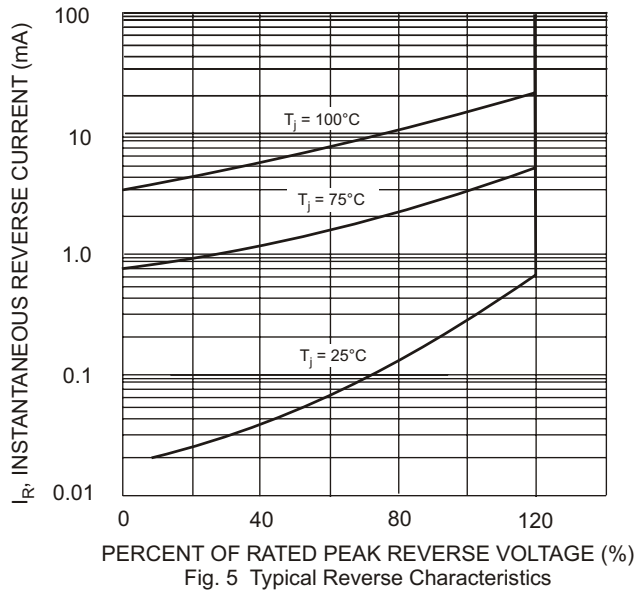


Fig. 5 Typical Reverse Characteristics