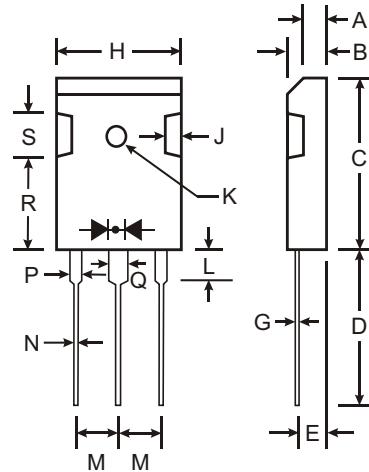


Features

- 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 Application

Mechanical Data

- Case: Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Matte Tin Finish, Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: 5.6 grams (approx.)



| TO-3P | | |
|----------------------|--------------------|--------------------|
| Dim | Min | Max |
| A | 1.88 | 2.08 |
| B | 4.87 | 5.13 |
| C | 21.25 | 21.75 |
| D | 19.60 | 20.10 |
| E | 2.10 | 2.40 |
| G | 0.51 | 0.76 |
| H | 15.75 | 16.25 |
| J | 1.93 | 2.18 |
| K | 2.90 \varnothing | 3.20 \varnothing |
| L | 3.78 | 4.38 |
| M | 5.20 | 5.70 |
| N | 1.12 | 1.22 |
| P | 1.90 | 2.16 |
| Q | 2.93 | 3.22 |
| R | 11.70 | 12.80 |
| S | 4.40 Typical | |
| 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 6030PT | SBL 6040PT | SBL 6050PT | SBL 6060PT | Unit |
|--|--|-------------|------------|------------|------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current @ T _C = 100°C (Note 1) | I _O | 60 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 500 | | | | A |
| Forward Voltage Drop @ I _F = 30A, T _C = 25°C | V _{FM} | 0.55 | | 0.70 | | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 100°C | I _{RM} | 20 200 | | | | mA |
| Typical Total Capacitance (Note 2) | C _T | 1500 | | | | pF |
| Typical Thermal Resistance Junction to Case (Note 1) | R _{θJc} | 0.5 | | | | °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 1.0MHz and applied reverse voltage of 4.0V DC.

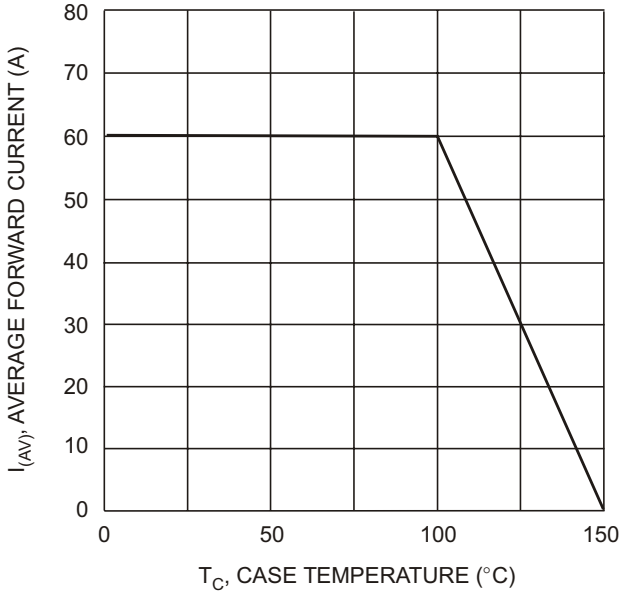


Fig. 1 Forward Current Derating Curve

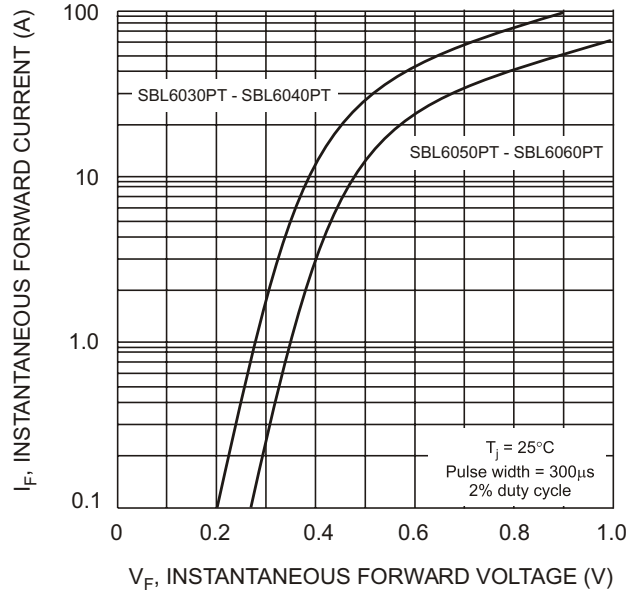


Fig. 2 Typical Forward Characteristics

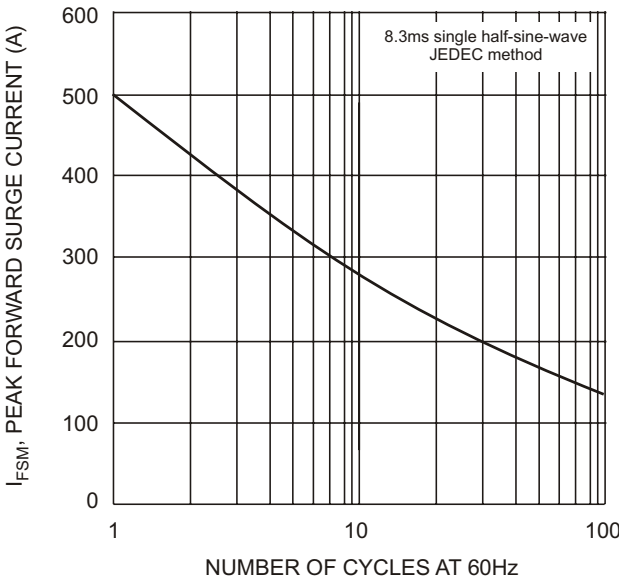


Fig. 3 Max Non-Repetitive Forward Surge Current

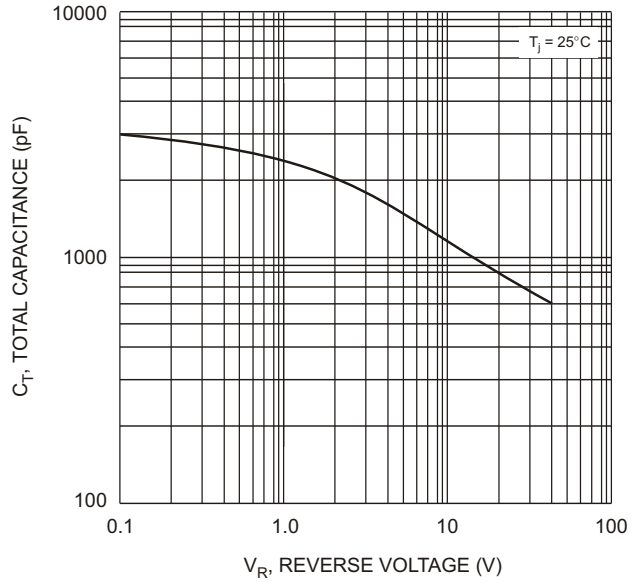


Fig. 4 Typical Total Capacitance per Element

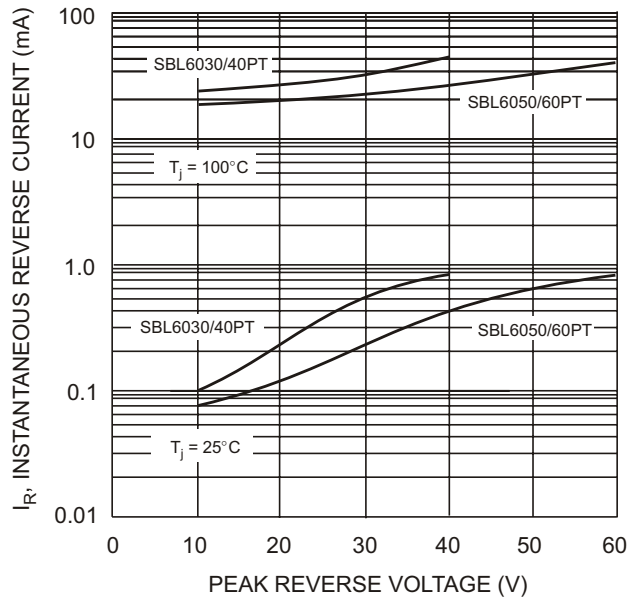


Fig. 5 Typical Reverse Characteristics