



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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SBL4030PT - SBL4060PT

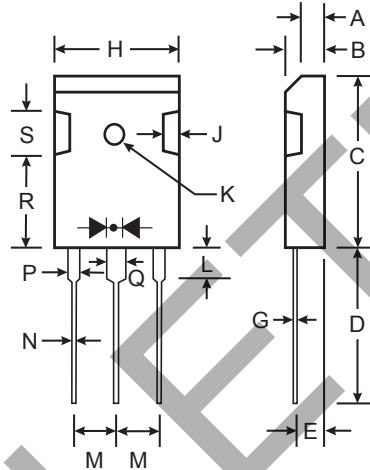
40A SCHOTTKY BARRIER RECTIFIER

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
- **Lead Free Finish, RoHS Compliant (Note 3)**

Mechanical Data

- Case: TO-3P
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 5.6 grams (approximate)



| TO-3P | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 1.88 | 2.08 |
| B | 4.68 | 5.36 |
| C | 20.63 | 22.38 |
| D | 18.5 | 21.5 |
| E | 2.1 | 2.4 |
| G | 0.51 | 0.76 |
| H | 15.38 | 16.25 |
| J | 1.90 | 2.70 |
| K | 2.90 | 3.65 |
| L | 3.78 | 4.50 |
| M | 5.2 | 5.7 |
| N | 0.89 | 1.53 |
| P | 1.82 | 2.46 |
| Q | 2.92 | 3.23 |
| R | 11.70 | 12.84 |
| S | — | 6.10 |
| 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 4030PT | SBL 4035PT | SBL 4040PT | SBL 4045PT | SBL 4050PT | SBL 4060PT | 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 @ $T_C = 100^{\circ}C$ (Note 1) | I_O | 40 | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 375 | | | | | | A |
| Forward Voltage Drop @ $I_F = 20A, T_C = 25^{\circ}C$ | V_{FM} | 0.58 | | | | 0.70 | | V |
| Peak Reverse Current @ $T_C = 25^{\circ}C$ at Rated DC Blocking Voltage @ $T_C = 100^{\circ}C$ | I_{RM} | 1.0 100 | | | | | | mA |
| Typical Total Capacitance (Note 2) | C_T | 800 | | | | | | pF |
| Typical Thermal Resistance Junction to Case (Note 1) | $R_{\theta JC}$ | 1.4 | | | | | | $^{\circ}C/W$ |
| Operating Temperature Range | T_J | -55 to +125 | | | | | | $^{\circ}C$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | $^{\circ}C$ |

- Notes:
1. Thermal resistance junction to case mounted on heatsink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

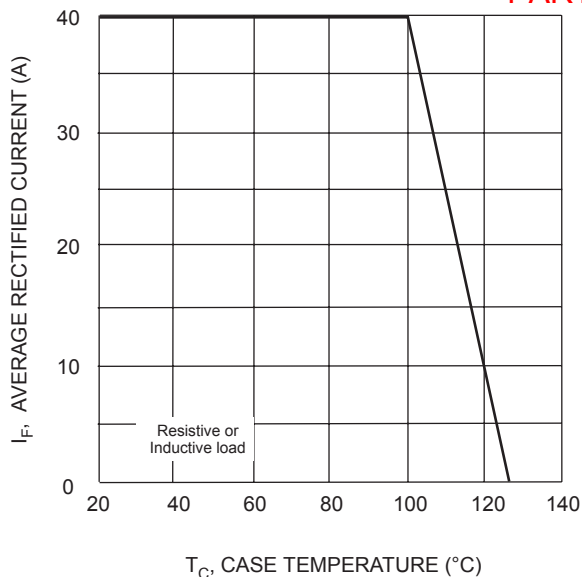


Fig. 1 Forward Current Derating Curve

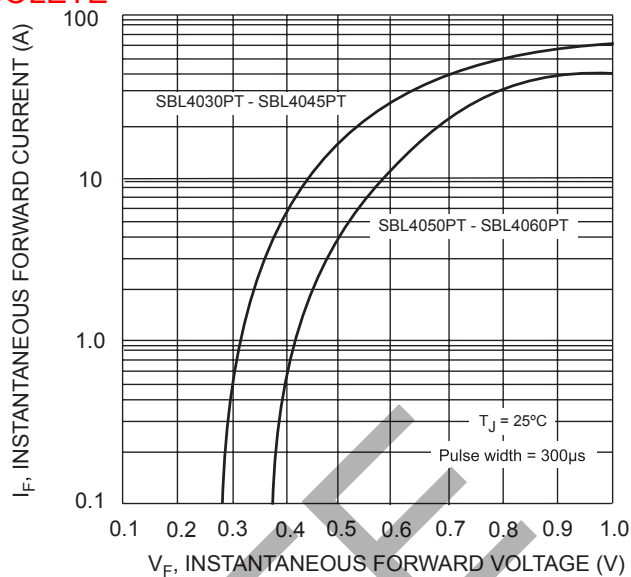


Fig. 2 Typical Forward Characteristics

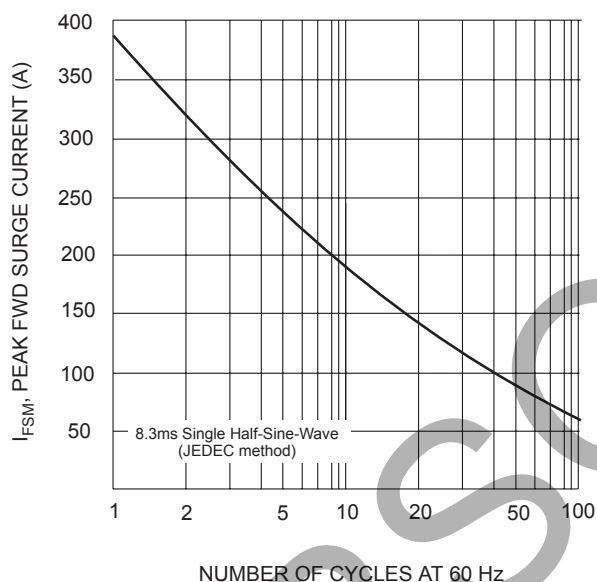


Fig. 3 Max Non-Repetitive Surge Current

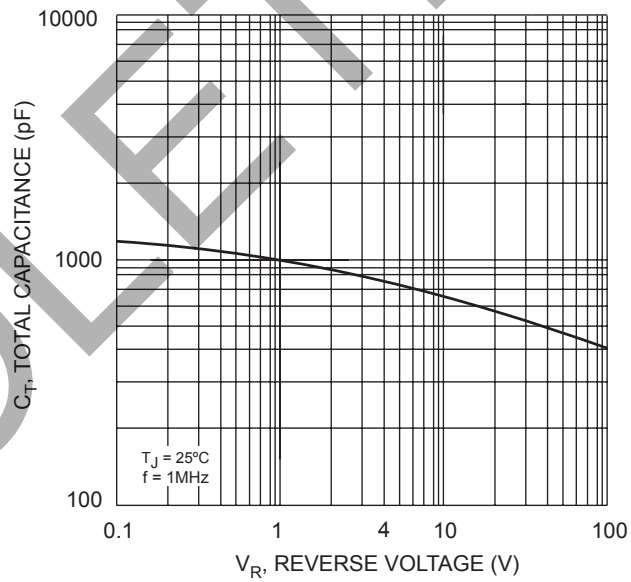


Fig. 4 Typical Total Capacitance per Element

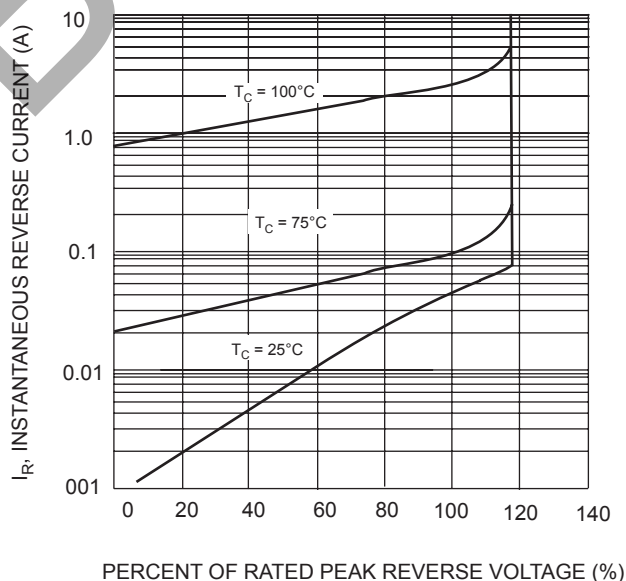


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

| Device | Packaging | Shipping |
|-----------|-----------|----------|
| SBL4030PT | TO-3P | 30/Tube |
| SBL4035PT | TO-3P | 30/Tube |
| SBL4040PT | TO-3P | 30/Tube |
| SBL4045PT | TO-3P | 30/Tube |
| SBL4050PT | TO-3P | 30/Tube |
| SBL4060PT | TO-3P | 30/Tube |

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>

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