

# SB560LPC

## Surface Mount Low $V_F$ Schottky Barrier Rectifier

**Voltage**

**60 V**

**Current**

**5 A**

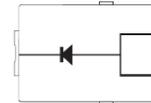
### Features

- Ideal for automated placement
- Low forward voltage drop, low power loss
- High efficiency Operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER  | SYMBOL                   | LIMIT   | UNITS              |
|--|--------------------------|---------|--------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$                | 60      | V                  |
| Maximum RMS Voltage  | $V_{RMS}$                | 42      | V                  |
| Maximum DC Blocking Voltage  | $V_{DC}$                 | 60      | V                  |
| Maximum Average Forward Rectified Current  | $I_{F(AV)}$              | 5       | A                  |
| Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load | $I_{FSM}$                | 120     | A                  |
| Typical Junction Capacitance<br>Measured at 1 MHz And Applied $V_R = 4\text{ V}$     | $C_J$                    | 180     | pF                 |
| Typical Thermal Resistance   | (Note 1) $R_{\theta JA}$ | 65      | $^\circ\text{C/W}$ |
|  | (Note 2) $R_{\theta JC}$ | 1.65    |                    |
|  | (Note 2) $R_{\theta JL}$ | 15      |                    |
| Operating Junction Temperature Range   | $T_J$                    | -55~150 | $^\circ\text{C}$   |
| Storage Temperature Range  | $T_{STG}$                | -55~150 | $^\circ\text{C}$   |

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## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                           | SYMBOL | TEST CONDITION                               | MIN. | TYP. | MAX. | UNITS |
|-------------------------------------|--------|--|------|------|------|-------|
| Forward Voltage                     | $V_F$  | $I_F = 3\text{ A}, T_J = 25^\circ\text{C}$   | -    | 0.52 | 0.57 | V     |
|                                     |        | $I_F = 5\text{ A}, T_J = 25^\circ\text{C}$   | -    | 0.62 | 0.67 |       |
|                                     |        | $I_F = 3\text{ A}, T_J = 125^\circ\text{C}$  | -    | 0.47 | 0.52 |       |
|                                     |        | $I_F = 5\text{ A}, T_J = 125^\circ\text{C}$  | -    | 0.56 | 0.61 |       |
| Reverse current <sup>(Note 3)</sup> | $I_R$  | $V_R = 48\text{ V}, T_J = 25^\circ\text{C}$  | -    | 14   | 100  | uA    |
|                                     |        | $V_R = 60\text{ V}, T_J = 25^\circ\text{C}$  | -    | 18   | 150  |       |
|                                     |        | $V_R = 60\text{ V}, T_J = 125^\circ\text{C}$ | -    | 15   | 50   | mA    |

**NOTES :**

1. Mounted on an FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

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## TYPICAL CHARACTERISTIC CURVES

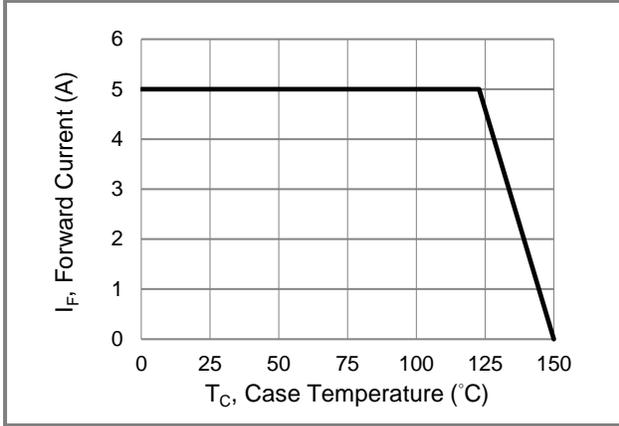


Fig.1 Forward Current Derating Curve

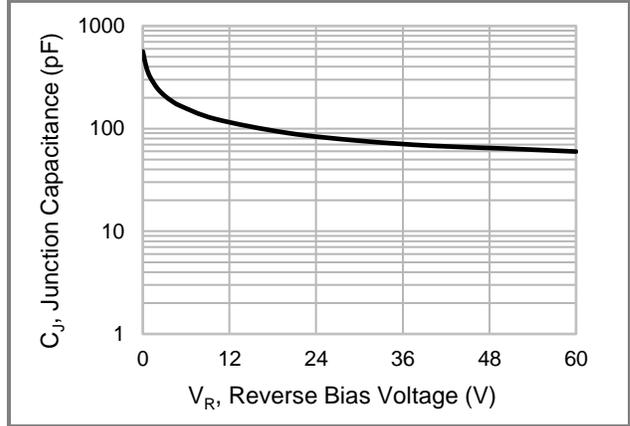


Fig.2 Typical Junction Capacitance

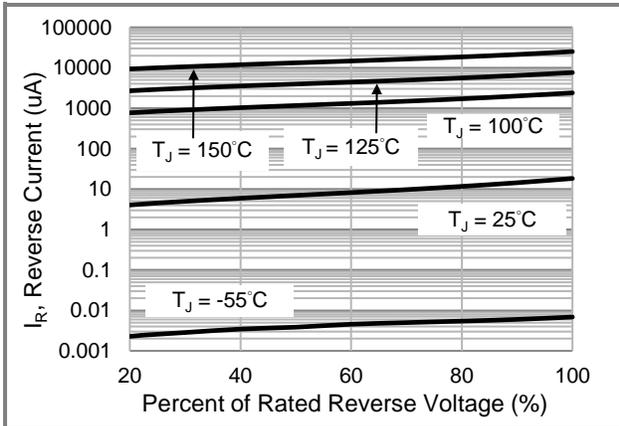


Fig.3 Typical Reverse Characteristics

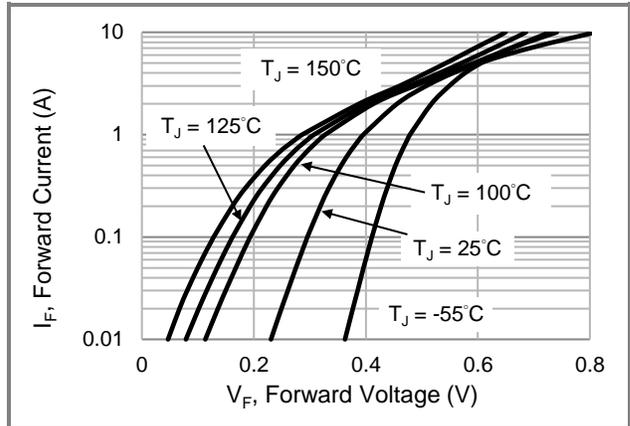


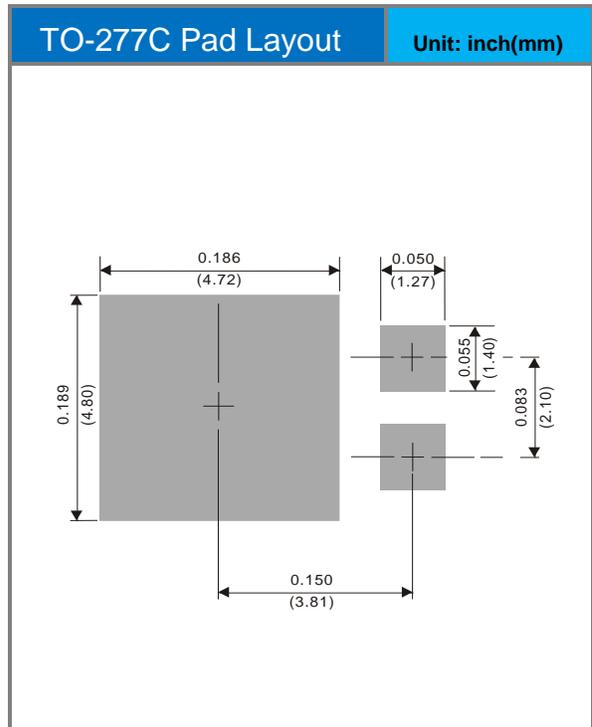
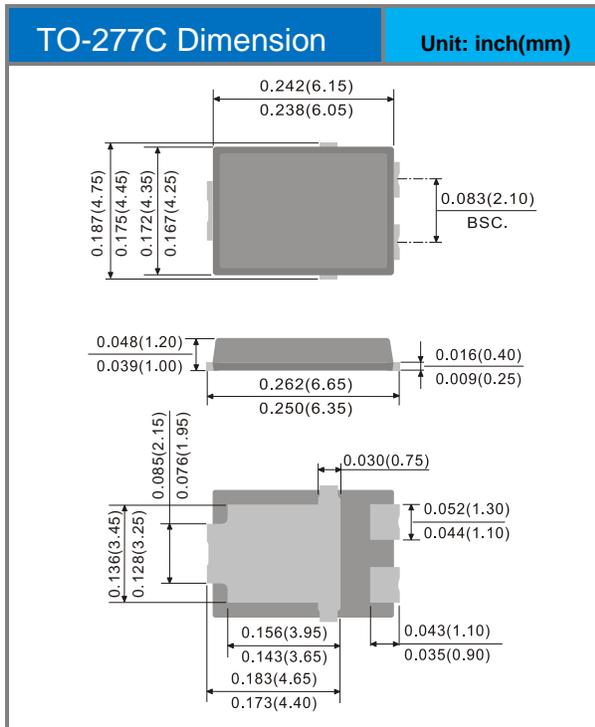
Fig.4 Typical Forward Characteristics

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## Product and Packing Information

| Part No. | Package Type | Packing Type      | Marking  |
|----------|--------------|-------------------|----------|
| SB560LPC | TO-277C      | 5K pcs / 13" reel | SB560LPC |

## Packaging Information & Mounting Pad Layout



## **SB560LPC**

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