

SB120CH

Surface Mount Very Low V_F Schottky Rectifier

Voltage

20 V

Current

1 A

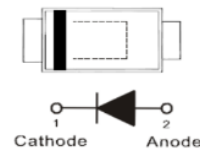
Features

- Very low forward voltage drop
- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-323HE Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.005 grams

SOD-323HE



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

| PARAMETER | SYMBOL | LIMIT | UNIT |
|---|-----------------------------|---------|------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | V |
| Maximum RMS Voltage | V_{RMS} | 14 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 1 | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 10 | A |
| Typical Thermal Resistance | (Note 1) $R_{\theta JL}$ | 80 | °C/W |
| | (Note 1) $R_{\theta JC}$ | 60 | |
| | (Note 2) $R_{\theta JA}$ | 300 | |
| Operating Junction Temperature Range | T_J | -55~150 | °C |
| Storage Temperature Range | T_{STG} | -55~150 | °C |

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|----------------|------------------------|------|------|------|------|
| Forward Voltage | V _F | I _F = 10 mA | - | 0.29 | 0.34 | V |
| | | I _F = 0.5 A | - | 0.42 | 0.47 | |
| | | I _F = 1A | - | 0.47 | 0.52 | |
| | V _F | I _F = 10 mA | - | 0.13 | - | V |
| | | I _F = 0.5 A | - | 0.31 | - | |
| Reverse Current ^(Note 3) | I _R | V _R = 10V | - | 0.8 | 20 | uA |
| | | V _R = 20V | - | 2 | 50 | |
| | I _R | V _R = 10 V | - | 0.9 | - | mA |
| | | V _R = 20 V | - | 1.8 | - | |

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.
2. Mounted on a FR4 PCB, single-sided copper, standard footprint.
3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

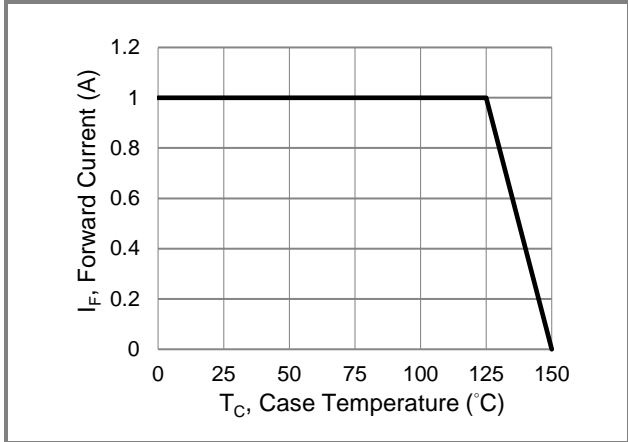


Fig.1 Forward Current Derating Curve

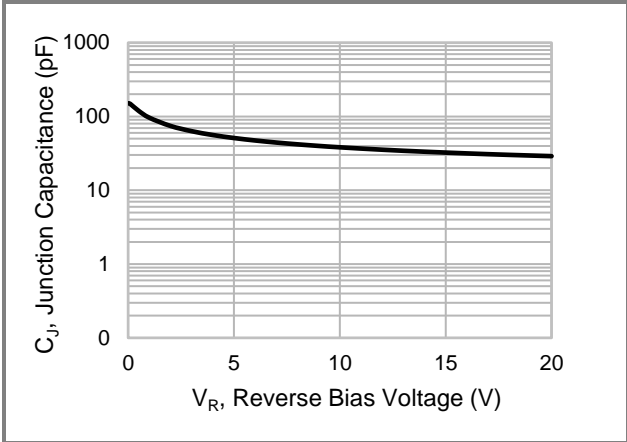


Fig.2 Typical Junction Capacitance

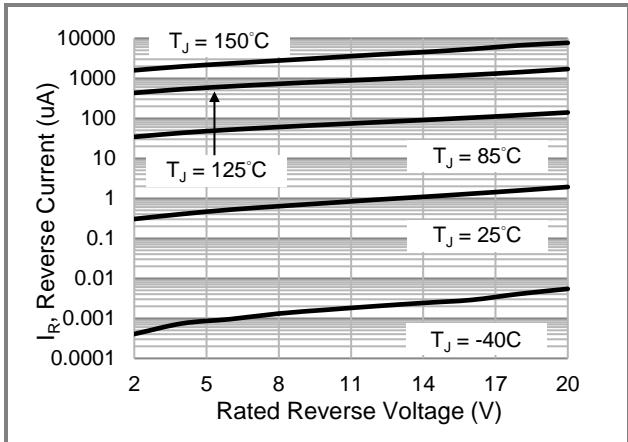


Fig.3 Typical Reverse Characteristics

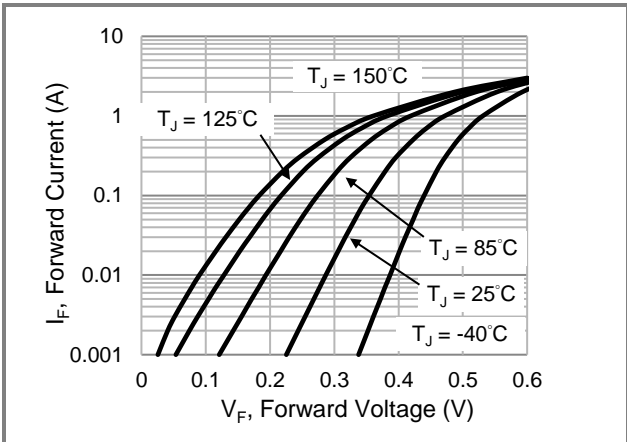


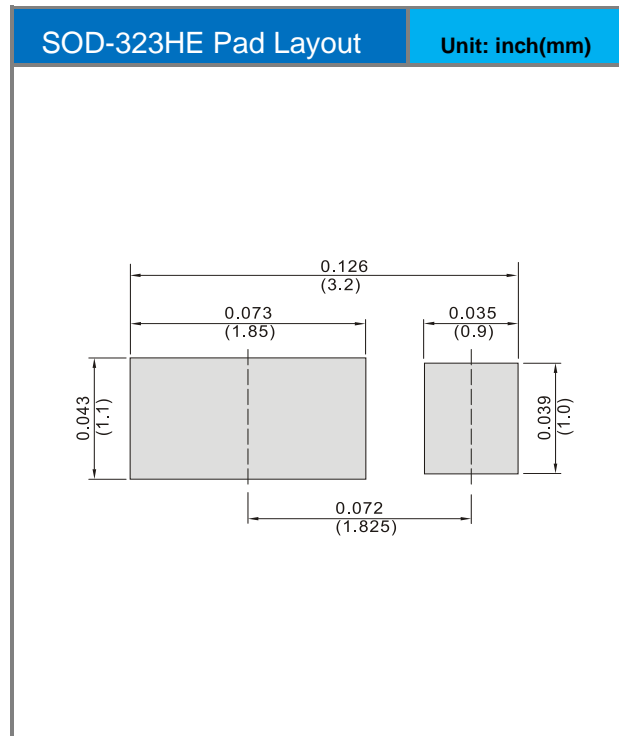
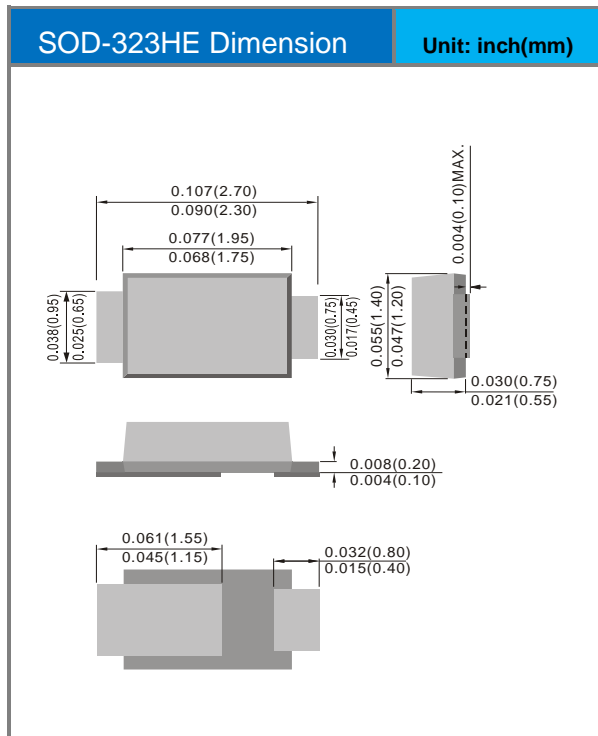
Fig.4 Typical Forward Characteristics

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Product and Packing Information

| Part No. | Package Type | Packing Type | Marking |
|----------|--------------|------------------|---------|
| SB120CH | SOD-323HE | 5K pcs / 7" reel | AHA |

Packaging Information & Mounting Pad Layout



SB120CH

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