



SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage 60 V Current 1 A

Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

• Case: SOD-323HE Package

• Terminals: Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0002 ounces, 0.005 grams



SOD-323HE





Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|---|------------------|-------|
| Maximum Repetitive 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 Current | I _{F(AV)} | 1 | Α |
| Peak Forward Surge Current: 8.3 ms single half sine-wave superimposed on rated load per diode | I _{FSM} | 22 | А |
| Typical Junction Capacitance Measured at 1 MHz And Applied VR = 4V | CJ | 35 | pF |
| Typical Thermal Resistance | R _{θJA} ⁽¹⁾ R _{θJA} ⁽²⁾ R _{θJL} ⁽²⁾ | 300 220 50 | °C/W |
| Operating Junction Temperature Range | T_J | -40~150 | °C |
| Storage Temperature Range | T _{STG} | -40~150 | °C |





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

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS | |
|-----------------|-------------------------------|---|------|------|------|-------|--|
| Forward Voltage | | $I_F = 0.1 \text{ A}, T_J = 25 ^{\circ}\text{C}$ | - | 1 | 0.43 | V | |
| | | $I_F = 0.7 \text{ A}, T_J = 25 ^{\circ}\text{C}$ | - | - | 0.58 | | |
| | \/ | $I_F = 1 \text{ A}, T_J = 25 ^{\circ}\text{C}$ | - | ı | 0.68 | | |
| | V _F | $I_F = 0.1 \text{ A}, T_J = 125 ^{\circ}\text{C}$ | - | 0.24 | - | | |
| | | $I_F = 0.7 \text{ A}, T_J = 125 ^{\circ}\text{C}$ | - | 0.48 | - | | |
| | | I _F = 1 A, T _J = 125 °C | - | 0.54 | - | | |
| Reverse Current | I _R ⁽³⁾ | $V_R = 5 \text{ V}, T_J = 25 ^{\circ}\text{C}$ | - | 0.3 | - | | |
| | | $V_R = 60 \text{ V}, T_J = 25 ^{\circ}\text{C}$ | - | - | 100 | uA | |
| | | $V_R = 60 \text{ V}, T_J = 125 ^{\circ}\text{C}$ | - | 1.8 | - | mA | |

NOTES:

- 1. Mounted on a FR4 PCB, single-sided copper, mini pad.
- 2. Mounted on a FR4 PCB, single-sided copper, with 15 mm x 50 mm copper pad area
- 3. Short duration pulse test used to minimize self-heating effect





TYPICAL CHARACTERISTIC CURVES

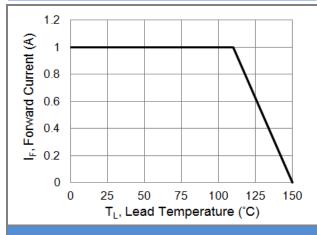


Fig.1 Forward Current Derating Curve

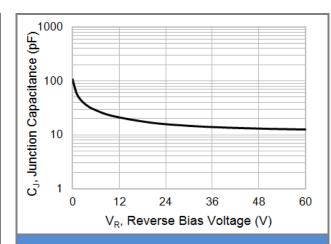


Fig.2 Typical Junction Capacitance

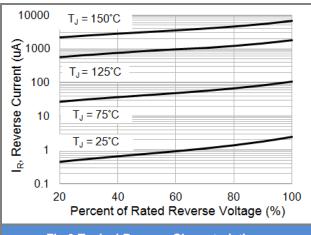


Fig.3 Typical Reverse Characteristics

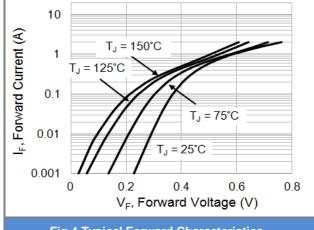


Fig.4 Typical Forward Characteristics

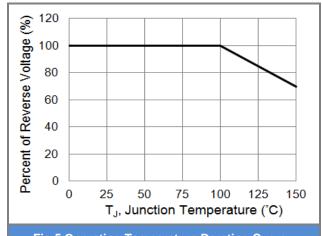


Fig.5 Operating Temperature Derating Curve

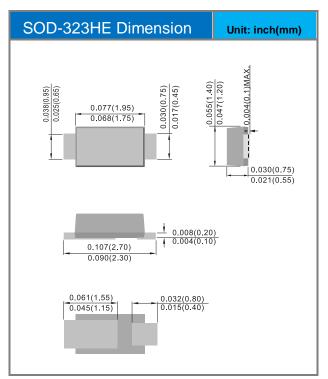


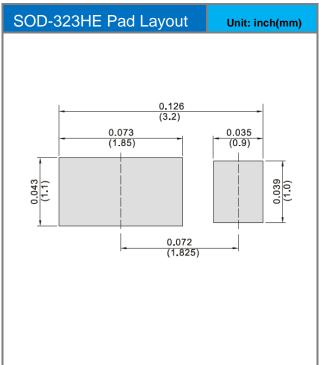


Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|------------------------|--------------|--------------|---------|--------------|
| SS1060HEWS-AU_R1_000A1 | SOD-323HE | 5K / 7" Reel | EW | Halogen free |

Packaging Information & Mounting Pad Layout









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