



#### SCHOTTKY BARRIER RECTIFIER

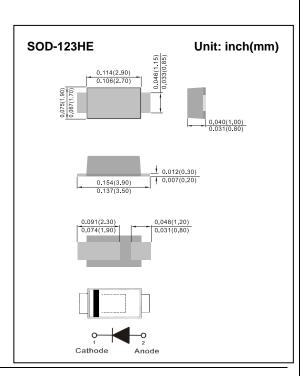
Voltage 60 V Current 3 A

#### **Features**

- Low forward voltage drop, low reverse current
- High efficiency
- Low thermal resistance
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### Mechanical Data

- Case: SOD-123HE Molded Plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Weight: 0.0006 ounces, 0.0184 grams



### Maximum Ratings And Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   |          | SYMBOL          | LIMIT       | UNIT |
|---|----------|-----------------|-------------|------|
| Maximum repetitive peak reverse voltage   |          | VRRM            | 60          | V    |
| Maximum rms voltage   | VRMS     | 42              | V           |      |
| Maximum dc blocking voltage   | VR       | 60              | V           |      |
| Maximum average forward rectified current   | lf(AV)   | 3               | Α           |      |
| Peak forward surge current : 8.3ms single half sine-<br>wave superimposed on rated load |          | IFSM            | 80          | А    |
| Typical junction capacitance (VR=4V,f=1MHz)   |          | Сл              | 150         | pF   |
| Typical thermal resistance  | (Note 2) | $R_{	heta JC}$  | 16          |      |
|   | (Note 2) | $R_{	heta JL}$  | 12          | °C/W |
|   | (Note 1) | $R_{\theta JA}$ | 185         |      |
| Operating junction temperature range  |          | Тл              | -55 to +175 | °C   |
| Storage temperature range   |          | Тѕтс            | -55 to +175 | °C   |

Note: 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area





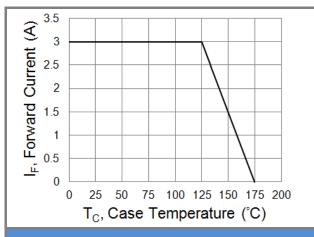
# Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                     | SYMBOL         | TEST CONDITION        |                       | MIN. | TYP. | MAX. | UNITS |
|-------------------------------|----------------|-----------------------|-----------------------|------|------|------|-------|
| Breakdown voltage             | $V_{BR}$       | I <sub>R</sub> =0.5mA | T <sub>J</sub> =25°C  | 60   | ı    | -    | V     |
| Instantaneous forward voltage | V <sub>F</sub> | I <sub>F</sub> =1A    | TJ=25°C               | -    | 0.54 | -    | V     |
|                               |                | I <sub>F</sub> =3A    |                       | -    | ı    | 0.7  |       |
|                               |                | I <sub>F</sub> =1A    | TJ=125°C              | -    | 0.44 | -    | V     |
|                               |                | I <sub>F</sub> =3A    |                       | -    | 0.56 | -    |       |
| Reverse current               | I <sub>R</sub> | V <sub>R</sub> =48V   | T <sub>J</sub> =25°C  | -    | 100  | -    | nA    |
|                               |                | V <sub>R</sub> =60V   | TJ=25°C               | -    | -    | 5    | μΑ    |
|                               |                |                       | T <sub>J</sub> =125°C | -    | -    | 2    | mA    |

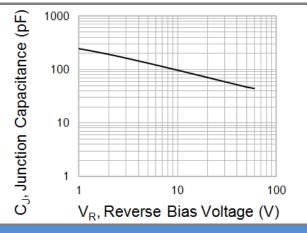




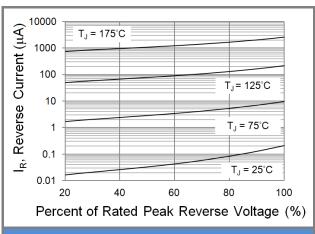
#### **TYPICAL CHARACTERISTIC CURVES**



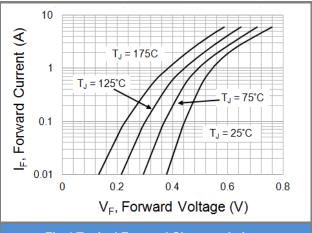
**Fig.1 Forward Current Derating Curve** 



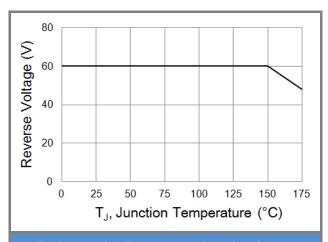
**Fig.2 Typical Junction Capacitance** 



**Fig.3 Typical Reverse Characteristics** 



**Fig.4 Typical Forward Characteristics** 



**Fig.5 Operating Temperature Derating Curve** 

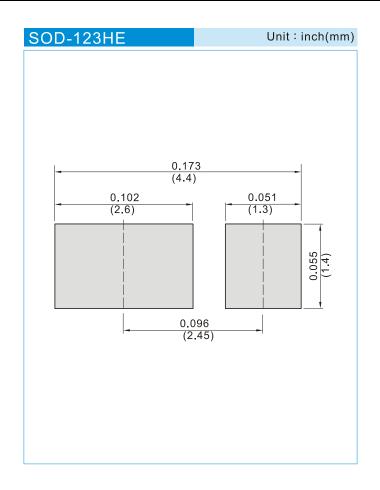




### **Part No Packing Code Version**

| Part No Packing Code | Package Type | Packing Type       | Marking | Version      |
|----------------------|--------------|--------------------|---------|--------------|
| SB3H60AH_R1_00001    | SOD-123HE    | 3K pcs / 7" reel   | ER      | Halogen free |
| SB3H60AH_R2_00001    | SOD-123HE    | 10K pcs / 13" reel | ER      | Halogen free |

#### **Mounting Pad Layout**







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