

## SS3020HE SERIES

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

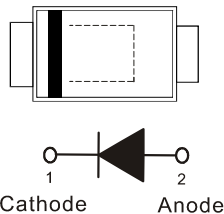
|                |                    |                |                 |
|----------------|--------------------|----------------|-----------------|
| <b>VOLTAGE</b> | <b>20~200 Volt</b> | <b>CURRENT</b> | <b>3 Ampere</b> |
|----------------|--------------------|----------------|-----------------|

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low power loss,high efficiency
- High surge capacity
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

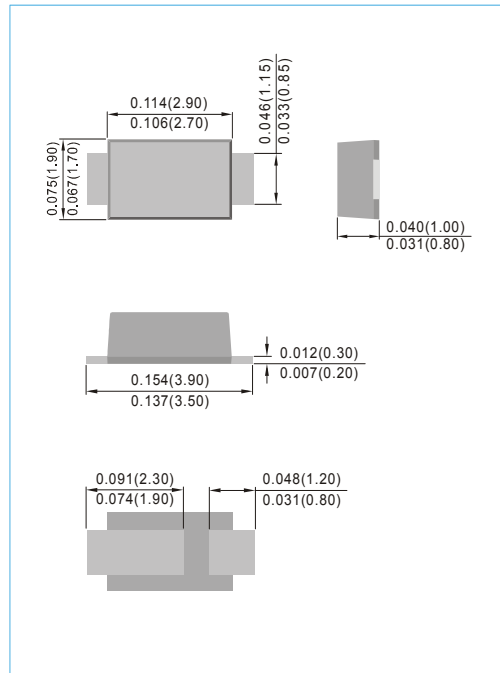
#### MECHANICAL DATA

- Case: SOD-123HE molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Approx weight: 0.0006 ounces, 0.0184 grams



#### SOD-123HE

Unit : inch(mm)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load.

| PARAMETER                                                                           | SYMBOL                             | SS3020-HE   | SS3030-HE | SS3040-HE | SS3060-HE   | SS30100-HE | SS30150-HE | SS30200-HE | UNITS           |
|-------------------------------------------------------------------------------------|------------------------------------|-------------|-----------|-----------|-------------|------------|------------|------------|-----------------|
| Marking Code                                                                        | -                                  | EA          | EB        | EC        | ED          | EF         | EH         | EJ         | -               |
| Maximum Recurrent Peak Reverse Voltage                                              | $V_{RRM}$                          | 20          | 30        | 40        | 60          | 100        | 150        | 200        | V               |
| Maximum RMS Voltage                                                                 | $V_{RMS}$                          | 14          | 21        | 28        | 42          | 70         | 105        | 140        | V               |
| Maximum DC Blocking Voltage                                                         | $V_{DC}$                           | 20          | 30        | 40        | 60          | 100        | 150        | 200        | V               |
| Maximum Average Forward Current                                                     | $I_{F(AV)}$                        | 3           |           |           |             |            |            |            | A               |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$                          | 80          |           |           |             |            |            |            | A               |
| Maximum Forward Voltage at 3A (Note 1)                                              | $V_F$                              | 0.52        |           |           | 0.65        | 0.8        | 0.86       | 0.86       | V               |
| Maximum DC Reverse Current $T_J=25^{\circ}C$                                        | $I_R$                              | 160         |           |           | 100         | 20         | 20         | 20         | $\mu A$         |
| Typical Thermal Resistance (Note 2)                                                 | $R_{\theta JL}$<br>$R_{\theta JA}$ | 20<br>105   |           |           |             |            |            |            | $^{\circ}C / W$ |
| Operating Junction Temperature Range                                                | $T_J$                              | -55 to +125 |           |           | -55 to +150 |            |            |            | $^{\circ}C$     |
| Storage Temperature Range                                                           | $T_{STG}$                          | -55 to +125 |           |           | -55 to +150 |            |            |            | $^{\circ}C$     |

#### NOTES :

1. Pulse Test with PW =300 $\mu$ sec, 1% Duty Cycle.
2. Mounted on 50cm<sup>2</sup> FR-4 PCB Board

## SS3020HE SERIES

### TYPICAL CHARACTERISTIC CURVES

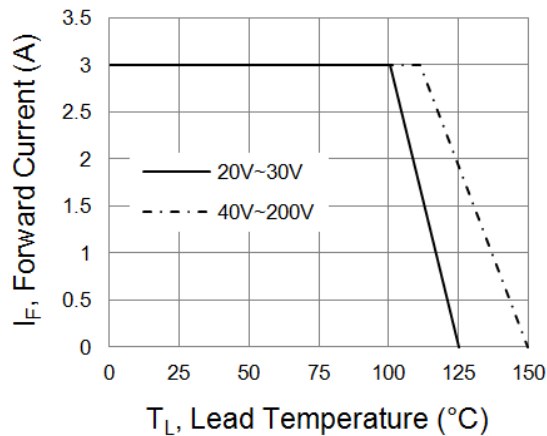


Fig.1 Forward Current Derating Curve

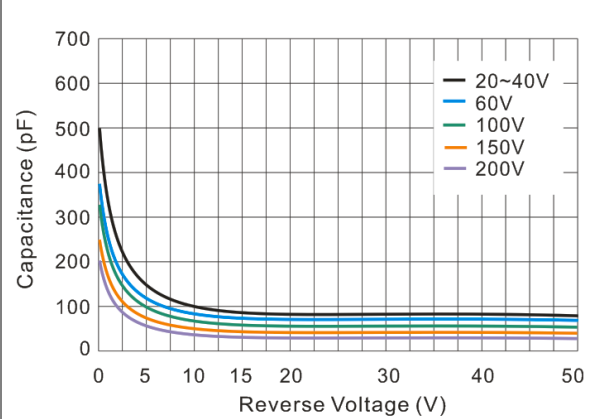


Fig. 2 Typical Junction Capacitance

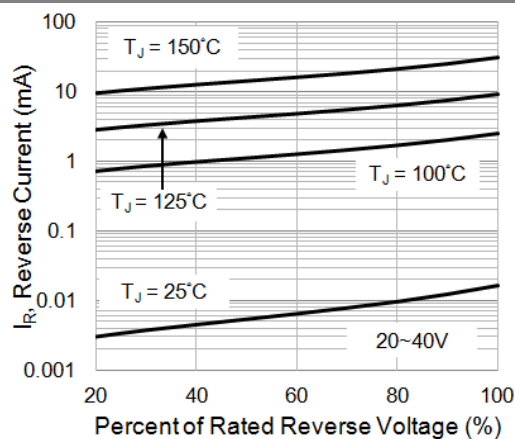


Fig.3 Typical Reverse Characteristics

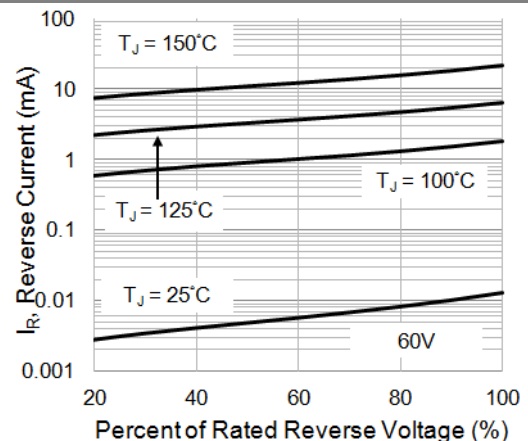


Fig.4 Typical Reverse Characteristics

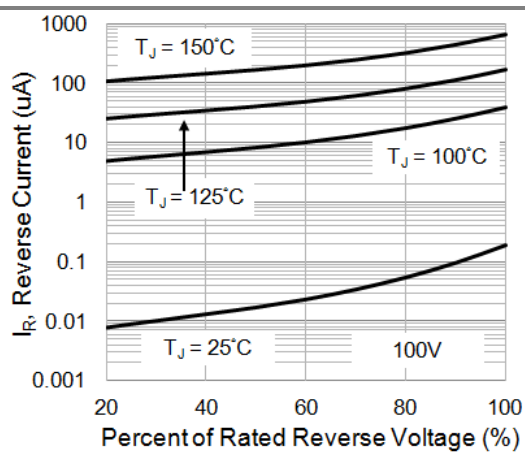


Fig.5 Typical Reverse Characteristics

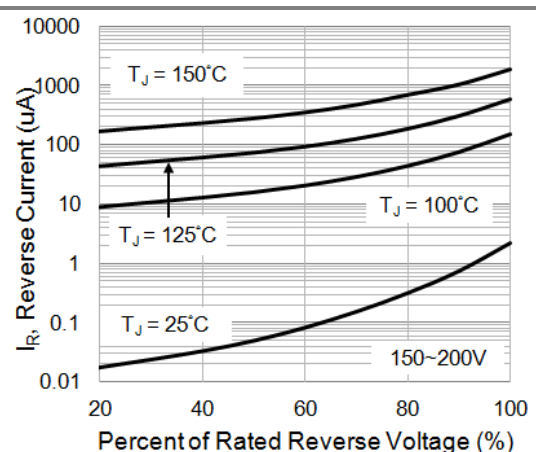


Fig.6 Typical Forward Characteristics

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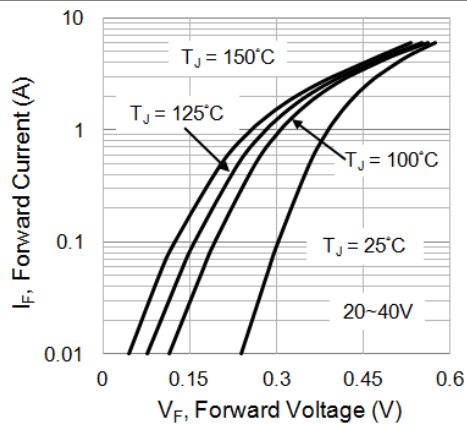


Fig.7 Typical Forward Characteristics

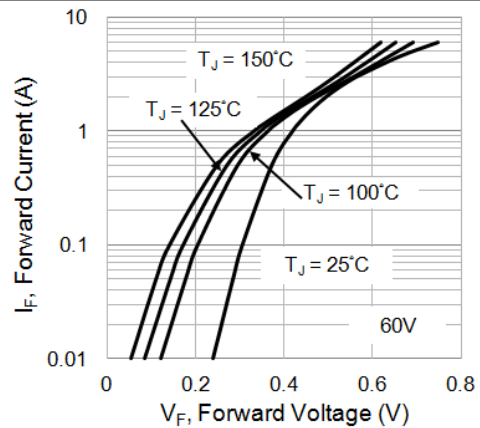


Fig.8 Typical Forward Characteristics

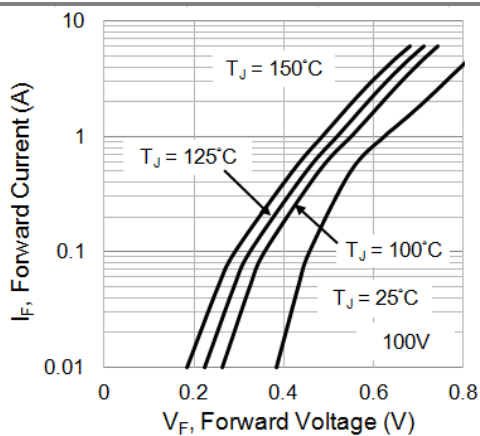


Fig.9 Typical Forward Characteristics

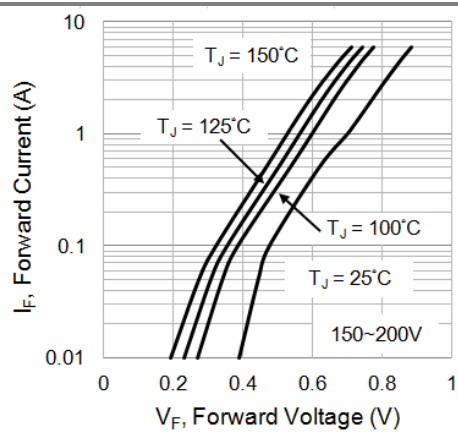


Fig.10 Typical Junction Capacitance

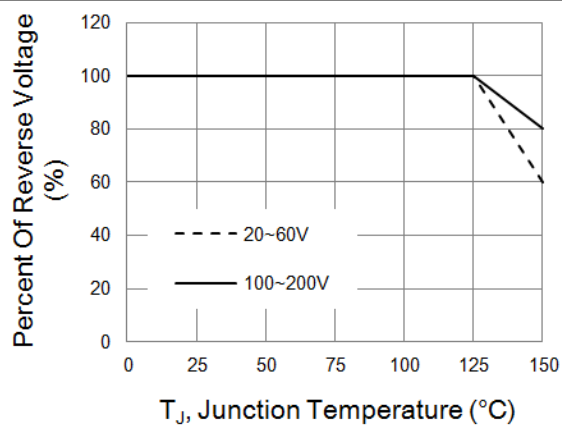


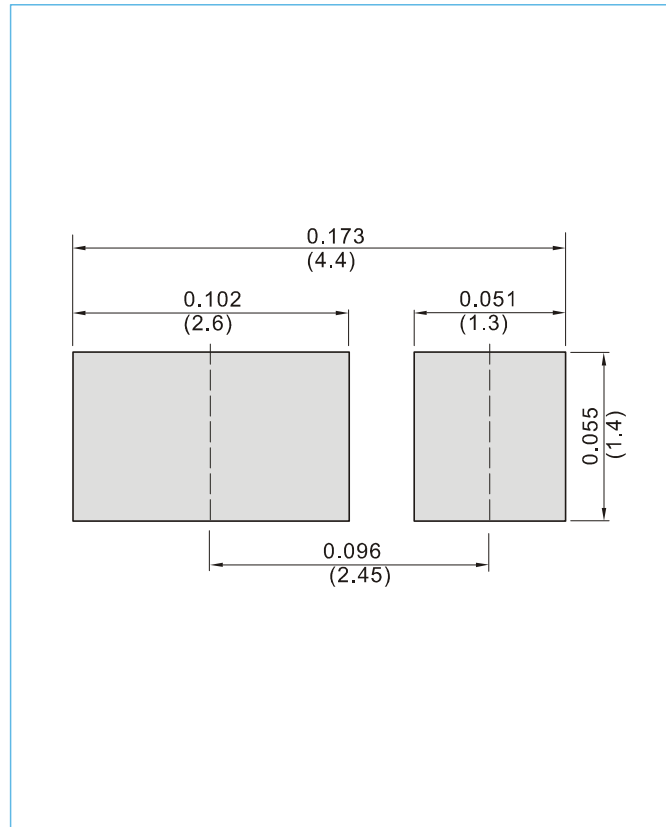
Fig.11 Operating Temperature Derating Curve

## SS3020HE SERIES

### MOUNTING PAD LAYOUT

**SOD-123HE**

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

## SS3020HE SERIES

Part No\_packing code\_Version

SS3020HE\_R1\_00001

SS3020HE\_R2\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code XX                      |                      |                                  |                      | Version Code XXXXX |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|--------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS         | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                 | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS               | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                    |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                    |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                    |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                    |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                    |                      |                                       |



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