



# SD107WS-AU

## SURFACE MOUNT SCHOTTKY DIODES

|                |             |                |              |
|----------------|-------------|----------------|--------------|
| <b>Voltage</b> | <b>30 V</b> | <b>Current</b> | <b>0.2 A</b> |
|----------------|-------------|----------------|--------------|

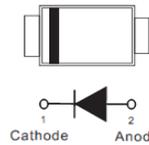
### Features

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

### Mechanical Data

- Case: SOD-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounces, 0.004 grams

SOD-323



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

| PARAMETER   | SYMBOL                          | LIMIT   | UNITS |
|---|---------------------------------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>                | 30      | V     |
| Maximum Rms Voltage   | V <sub>RMS</sub>                | 21      | V     |
| Maximum Dc Blocking Voltage   | V <sub>DC</sub>                 | 30      | V     |
| Maximum Average Forward Current   | I <sub>F(AV)</sub>              | 0.2     | A     |
| Peak Forward Surge Current : 10 ms Single Half Sine-Wave Superimposed On Rated Load | I <sub>FSM</sub>                | 0.75    | A     |
| Maximun Junction Capacitance<br>Measured at 1 MHZ And Applied V <sub>R</sub> = 10 V | C <sub>J</sub>                  | 7       | pF    |
| Typical Thermal Resistance  | R <sub>θJA</sub> <sup>(1)</sup> | 625     | °C/W  |
| Operating Junction Temperature Range  | T <sub>J</sub>                  | -55~150 | °C    |
| Storage Temperature Range   | T <sub>STG</sub>                | -55~150 | °C    |



## SD107WS-AU

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

| PARAMETER       | SYMBOL      | TEST CONDITION                                 | MIN. | TYP. | MAX. | UNITS         |
|-----------------|-------------|--|------|------|------|---------------|
| Forward Voltage | $V_F$       | $I_F = 2\text{ mA}, T_J = 25^\circ\text{C}$    | -    | -    | 0.36 | V             |
|                 |             | $I_F = 50\text{ mA}, T_J = 25^\circ\text{C}$   | -    | -    | 0.55 |               |
|                 |             | $I_F = 100\text{ mA}, T_J = 25^\circ\text{C}$  | -    | -    | 0.8  |               |
|                 |             | $I_F = 50\text{ mA}, T_J = 125^\circ\text{C}$  | -    | 0.3  | -    |               |
|                 |             | $I_F = 100\text{ mA}, T_J = 125^\circ\text{C}$ | -    | 0.39 | -    |               |
| Reverse Current | $I_R^{(2)}$ | $V_R = 21\text{ V}, T_J = 25^\circ\text{C}$    | -    | 0.3  | -    | $\mu\text{A}$ |
|                 |             | $V_R = 25\text{ V}, T_J = 25^\circ\text{C}$    | -    | -    | 1    |               |
|                 |             | $V_R = 25\text{ V}, T_J = 125^\circ\text{C}$   | -    | 0.3  | -    | mA            |

**NOTES:**

1. Mounted on a FR4 PCB, single-sided copper, with 70 x 60 x 1 mm copper pad area
2. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

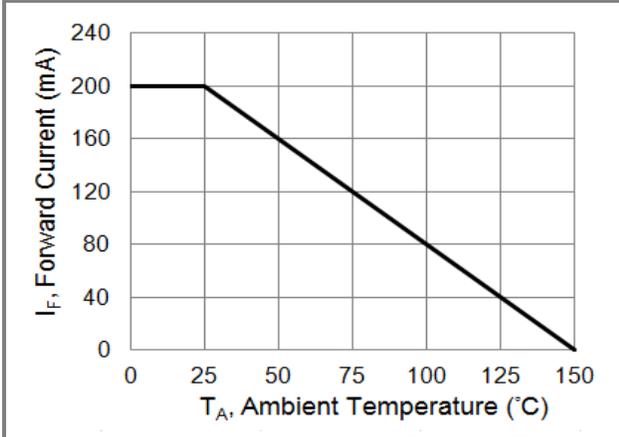


Fig.1 Forward Current Derating Curve

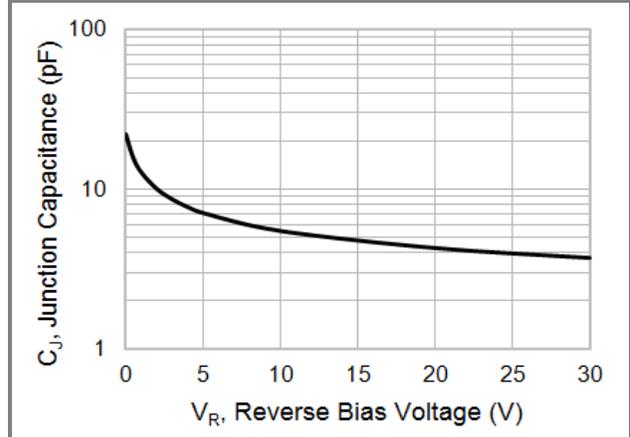


Fig.2 Typical Junction Capacitance

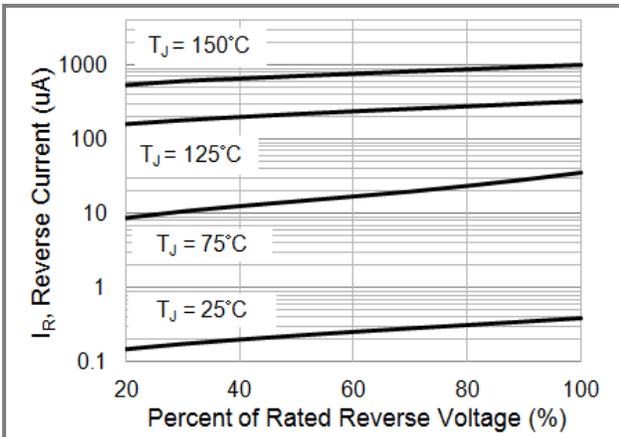


Fig.3 Typical Reverse Characteristics

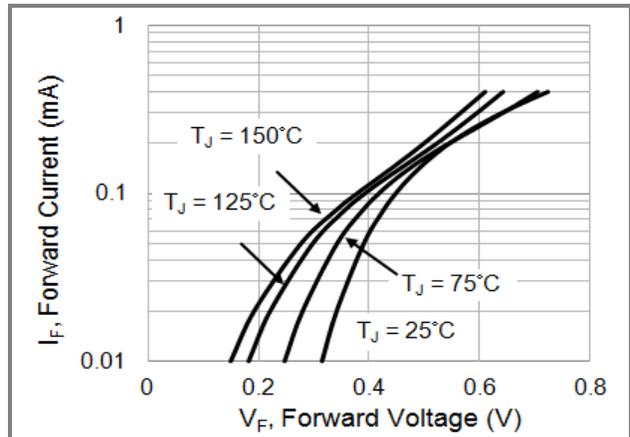


Fig.4 Typical Forward Characteristics

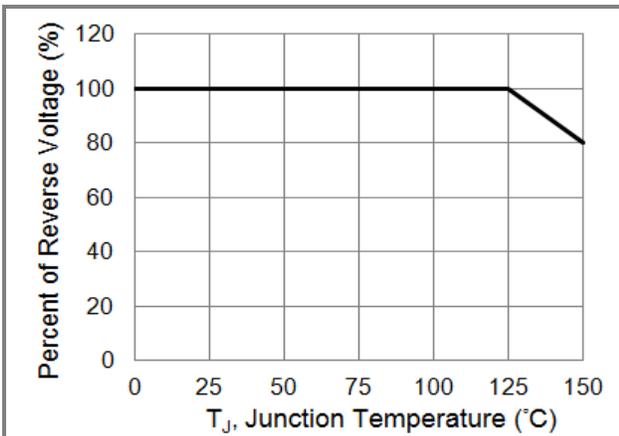


Fig.5 Operating Temperature Derating Curve

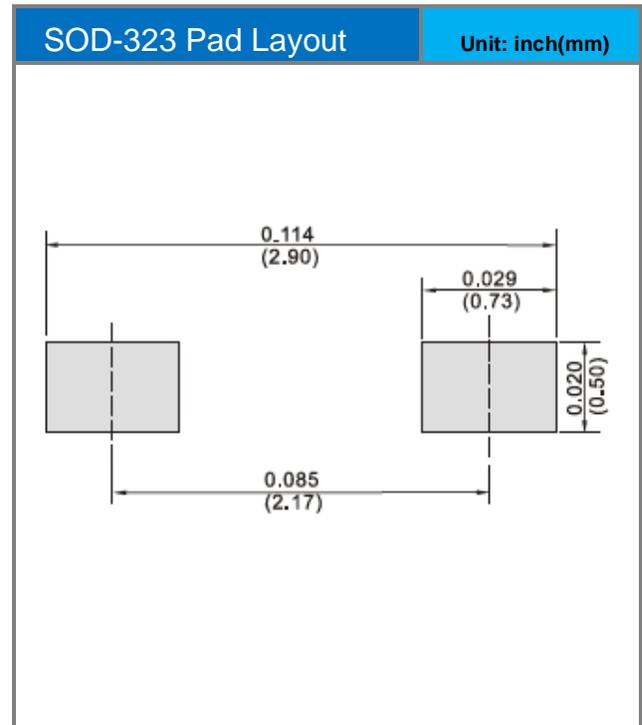
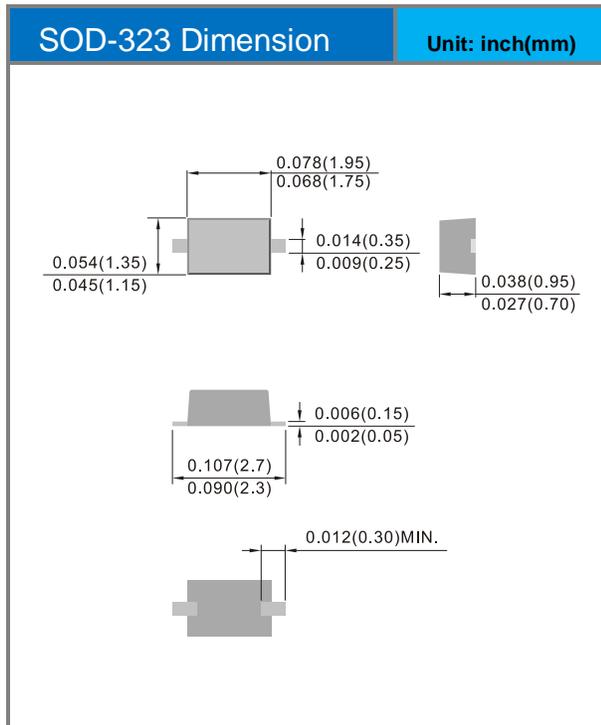


# SD107WS-AU

## Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version      |
|----------------------|--------------|--------------|---------|--------------|
| SD107WS-AU_R1_000A1  | SOD-323      | 5K / 7" Reel | S9      | Halogen free |

## Packaging Information & Mounting Pad Layout





## SD107WS-AU

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