



**THE DATASHEET OF
SD103CWS-TP**



Features

- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance and Low Forward Voltage Drop
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 500°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| SD103AWS | S4 | 40V | 28V | 40V |
| SD103BWS | S5 | 30V | 21V | 30V |
| SD103CWS | S6 | 20V | 14V | 20V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

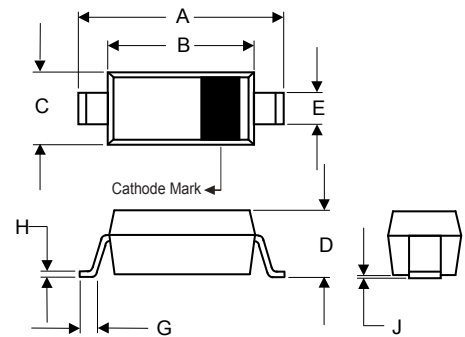
| | | | |
|---|---|----------------|--|
| Forward Continuous Current(Note2) | $I_{F(AV)}$ | 350mA | |
| Peak Forward Surge Current | I_{FSM} | 1500mA | $t \leq 1.0s$ |
| Maximum Power Dissipation | P_d | 200mW | Note 2 |
| Maximum Instantaneous Forward Voltage | V_F | 0.37V 0.60V | $I_{FM}=20mA$ $I_{FM}=200mA$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | SD103AWS SD103BWS SD103CWS I_R | 5.0µA | $V_R = 30V$ $V_R = 20V$ $V_R = 10V$ |
| Typical Reverse Recovery Time | T_{rr} | 10ns | $I_F = I_R = 200mA$ $I_{rr} = 0.1 \times I_R$ $R_L = 100\Omega$ |
| Maximum Junction Capacitance | C_J | 50pF | Measured at 1.0MHz, $V_R = 0.0V$ |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. Valid provided that electrodes are kept at ambient temperature

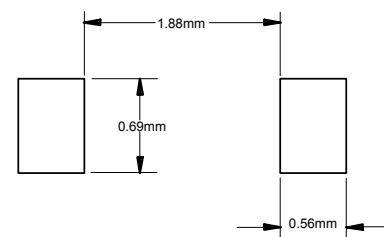
**200mW Small Signal Schottky Diode
20 to 40 Volts**

SOD-323



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.090 | 0.107 | 2.30 | 2.70 | |
| B | 0.063 | 0.071 | 1.60 | 1.80 | |
| C | 0.045 | 0.053 | 1.15 | 1.35 | |
| D | 0.031 | 0.040 | 0.80 | 1.00 | |
| E | 0.010 | 0.016 | 0.25 | 0.40 | |
| G | 0.004 | 0.018 | 0.10 | 0.45 | |
| H | 0.004 | 0.010 | 0.10 | 0.25 | |
| J | ----- | 0.006 | ----- | 0.15 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

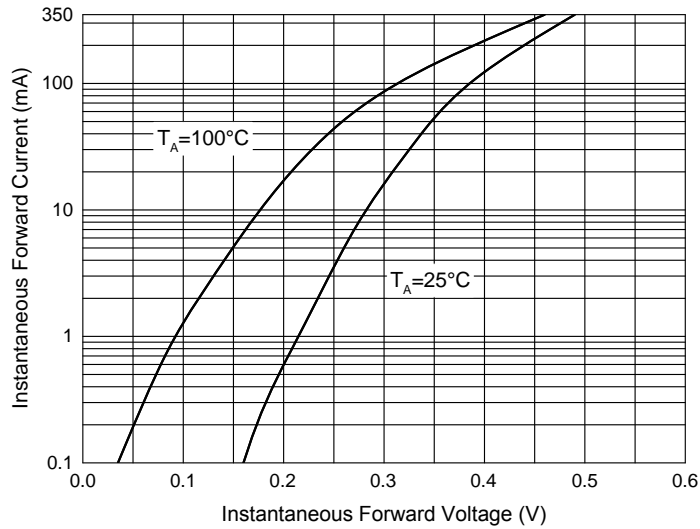


Fig. 2 - Typical Reverse Leakage Characteristics

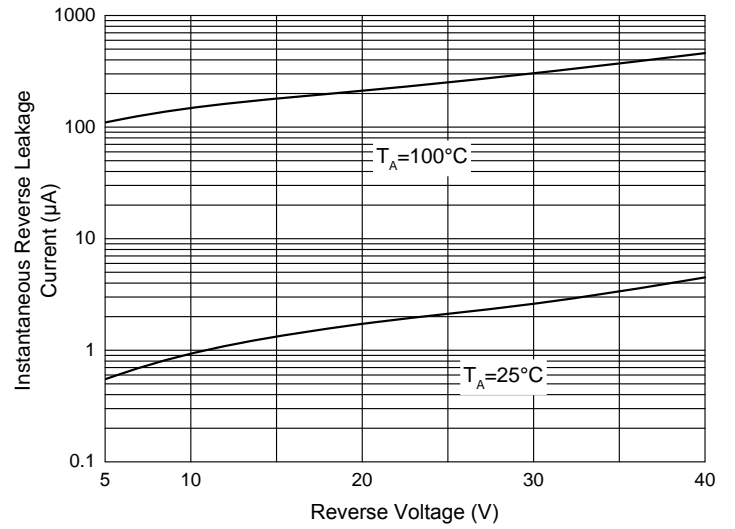


Fig. 3 - Power Derating Curve

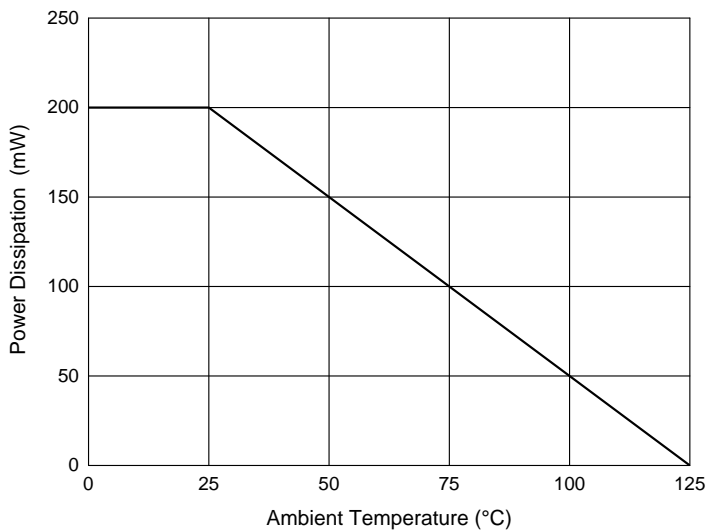
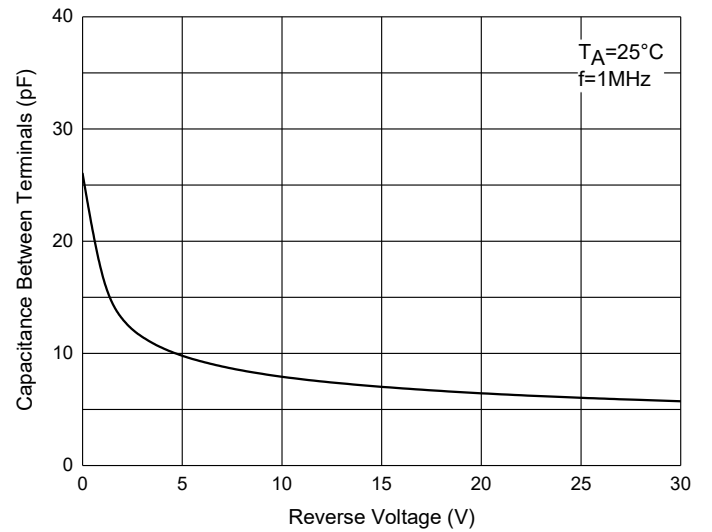


Fig. 4 - Capacitance Characteristics



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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