

## Features

- Guard Ring Construction for Transient Protection
- 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 |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| SD103AX         | S4             | 40V                                    | 28V                 | 40V                         |

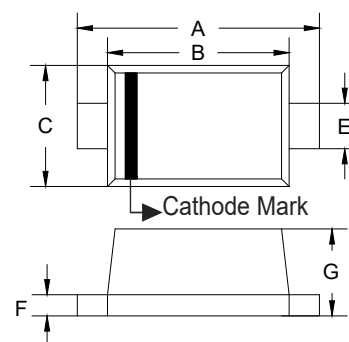
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                 |           |                |                                                                        |
|-------------------------------------------------|-----------|----------------|------------------------------------------------------------------------|
| Average Forward Current                         | $I_F$     | 350mA          |                                                                        |
| Peak Forward Surge Current                      | $I_{FSM}$ | 1.0A           | $t \leq 1.0s$                                                          |
| Maximum Power Dissipation                       | $P_d$     | 200mW          |                                                                        |
| Maximum Forward Voltage                         | $V_F$     | 370mV<br>600mV | $I_{FM} = 20mA$<br>$I_{FM} = 200mA$                                    |
| DC Reverse Current At Rated DC Blocking Voltage | $I_R$     | 5.0μA(Max)     | $V_R = 30V$                                                            |
| Typical Junction Capacitance                    | $C_j$     | 50pF           | Measured at 1.0MHz, $V_R=0.0V$                                         |
| Typical Reverse Recovery Time                   | $t_{rr}$  | 10ns           | $I_F = I_R = 200mA$ ,<br>$I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$ |

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

# 200mW, 40Volt Small Signal Schottky Diode

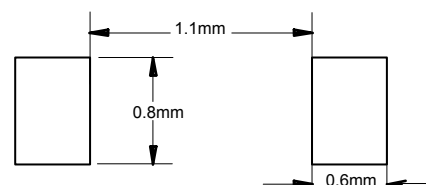
## SOD-523



### DIMENSIONS

| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.059  | 0.067 | 1.50 | 1.70 |      |
| B   | 0.043  | 0.051 | 1.10 | 1.30 |      |
| C   | 0.030  | 0.033 | 0.75 | 0.85 |      |
| E   | 0.010  | 0.014 | 0.25 | 0.35 |      |
| F   | 0.003  | 0.008 | 0.08 | 0.20 |      |
| G   | 0.020  | 0.026 | 0.50 | 0.65 |      |

### Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

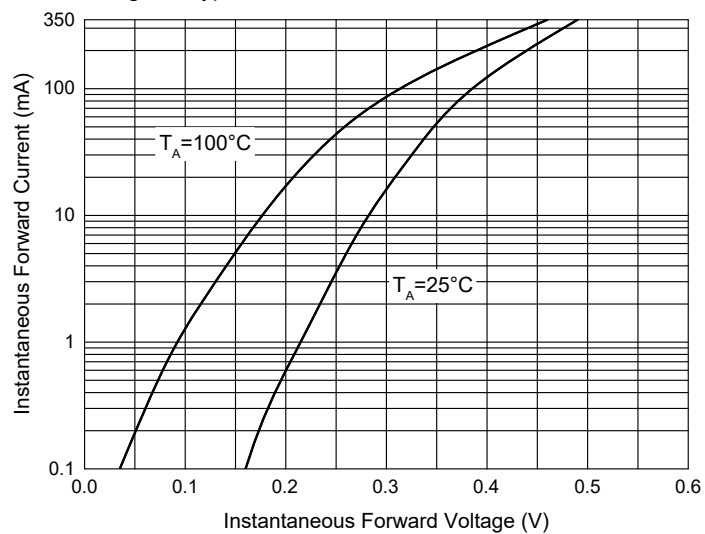


Fig. 2 - Typical Reverse Leakage Characteristics

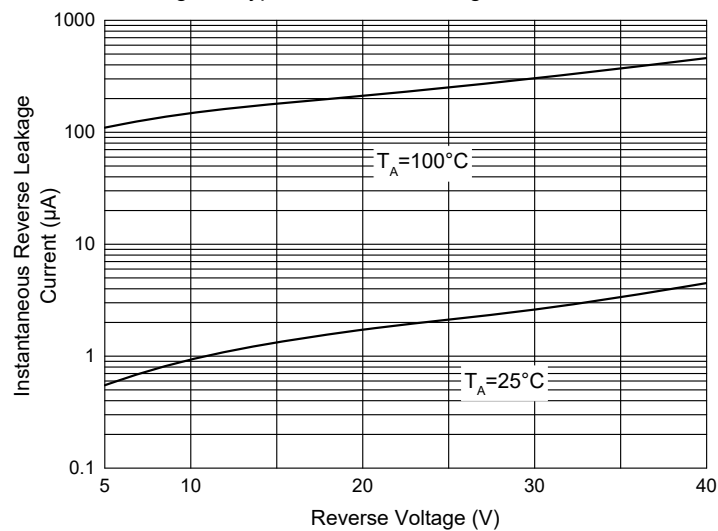
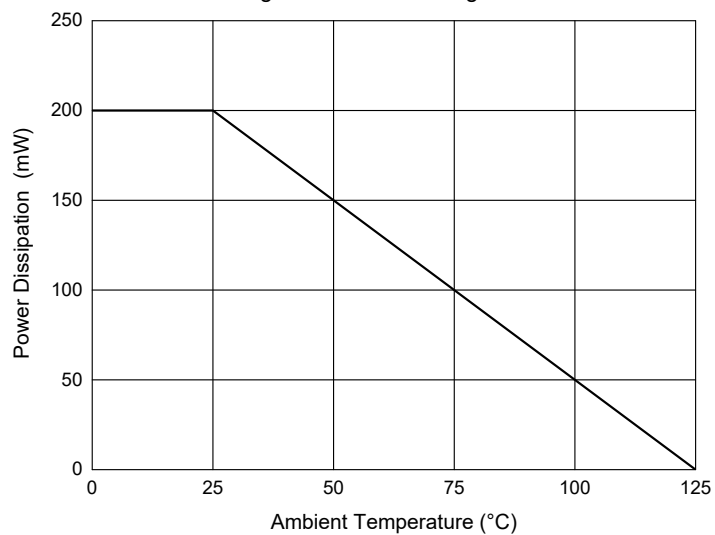


Fig. 3 - Power Derating Curve



## Ordering Information

| Device          | Packing               |
|-----------------|-----------------------|
| Part Number-TP  | Tape&Reel: 8Kpcs/Reel |
| Part Number-T3P | Tape&Reel: 3Kpcs/Reel |

For packaging details, go to our website at <https://www.mccsemi.com/pdf/productpackaging/SOD-523%20Package.pdf>

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