

## Features

- Fast Switching Speed. Low Turn-on Voltage
- Surface Mount Package Ideally Suited For Automatic Insertion
- PN Junction Guard Ring For Transient and ESD Protection
- 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)
- AEC-Q101 Qualified

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance(Note 2): 500°C/W Junction to Ambient

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------------------------------|---------------------|-----------------------------|
| BAS40WXHE3      | 40V                                    | 28V                 | 40V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

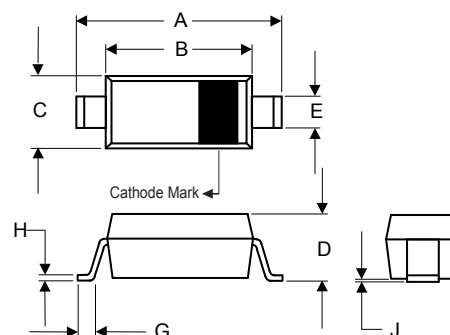
|                                       |             |                |                                                      |
|---------------------------------------|-------------|----------------|------------------------------------------------------|
| Forward Continuous Current            | $I_{F(AV)}$ | 200mA          |                                                      |
| Peak Forward Surge Current            | $I_{FSM}$   | 600mA          | $t_p < 10ms$                                         |
| Power Dissipation                     | $P_d$       | 250mW          |                                                      |
| Maximum Instantaneous Forward Voltage | $V_F$       | 0.37V<br>1.00V | $I_F = 1.0mA$<br>$I_F = 40mA$                        |
| Max Reverse Current                   | $I_R$       | 500nA          | $V_R = 30V$                                          |
| Min Reverse Breakdown Voltage         | $V_{(BR)}$  | 40V            | $I_R = 10\mu A$                                      |
| Max Junction Capacitance              | $C_J$       | 5pF            | $V_R = V_F = 0V, f = 1MHz$                           |
| Max Reverse Recovery Time             | $t_{rr}$    | 7ns            | $I_F = I_R = 10mA, I_{rr} = 0.1I_R, R_L = 100\Omega$ |

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

Note: 2. Part mounted on FR-4 board with recommended pad layout.

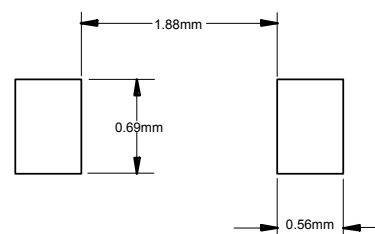
# 250mW, 40 Volt Schottky Barrier Diode

## SOD-323

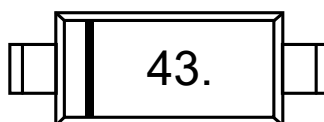


| DIM | INCHES |       | MM    |      | NOTE |
|-----|--------|-------|-------|------|------|
|     | MIN    | MAX   | MIN   | MAX  |      |
| A   | 0.090  | 0.107 | 2.30  | 2.70 |      |
| B   | 0.063  | 0.071 | 1.60  | 1.80 |      |
| C   | 0.045  | 0.053 | 1.15  | 1.35 |      |
| D   | 0.031  | 0.045 | 0.80  | 1.15 |      |
| 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



## Internal Structure and Marking Code



## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

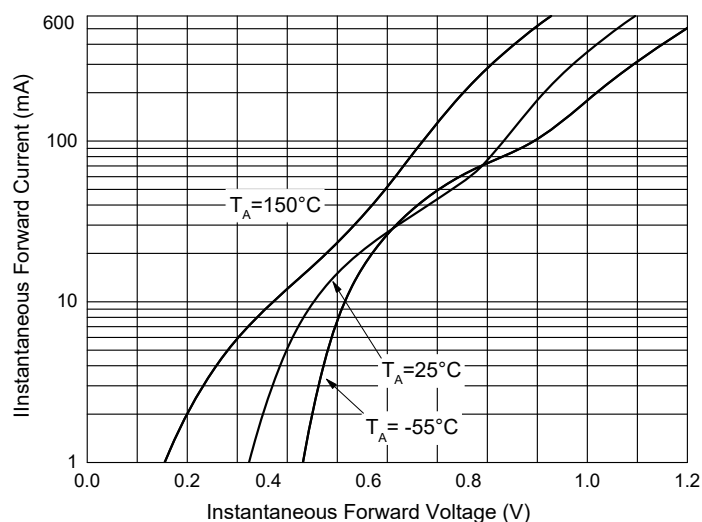


Fig. 2 - Typical Reverse Leakage Characteristics

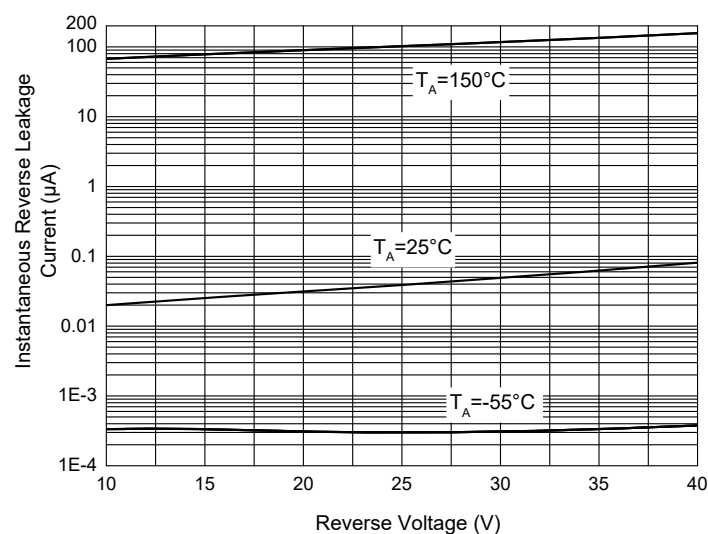


Fig. 3 - Capacitance Characteristics

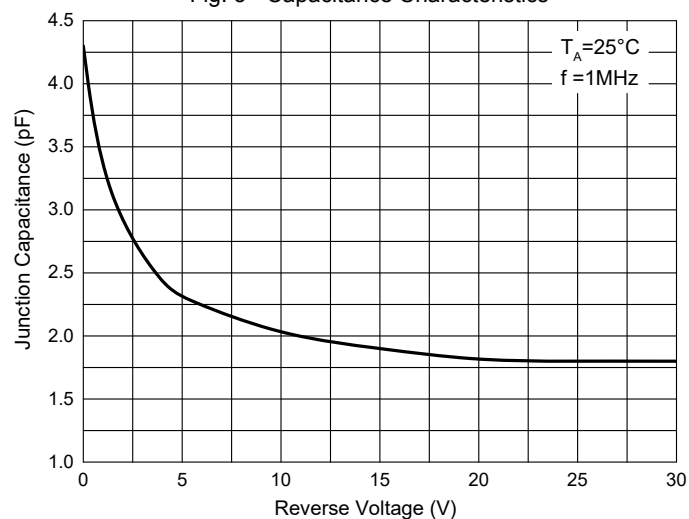
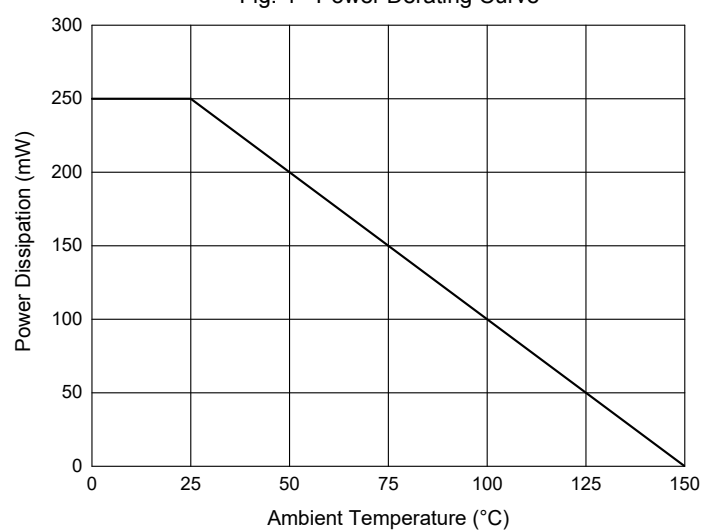


Fig. 4 - Power Derating Curve



## Ordering Information

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

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