

**Features**

- AEC-Q101 Qualified
- High Breakdown Voltage
- Low Turn-on Voltage
- Guard Ring Construction For Transient Protection
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note 2): 500°C/W Junction to Ambient Air

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| BAT46WHE3       | 100V                                   | 70V                 | 100V                        |

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

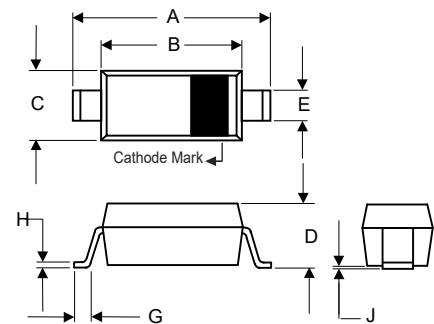
|                                  |             |   |  |
|----------------------------------|-------------|---|--|
| Forward DC Current               | $I_F$       | 150mA   |  |
| Average Rectified Output Current | $I_O$       | 75mA  |  |
| Repetitive Peak Forward Current  | $I_{FRM}$   | 350mA   | $t_p < 1.0s$ ,<br>Duty Cycle < 50%                                 |
| Forward Surge Forward Current    | $I_{FSM}$   | 750mA   | $t_p = 10ms$   |
| Power Dissipation                | $P_D$       | 200mW   |  |
| Reverse Breakdown Voltage        | $V_{(BR)R}$ | 100V(Min)   | $I_R = 100\mu A_{dc}$  |
| Forward Voltage                  | $V_F$       | 0.25V(Max)<br>0.45V(Max)<br>1.0V(Max)                   | $I_F = 0.1mA$<br>$I_F = 10mA$<br>$I_F = 250mA$                     |
| Leakage Current                  | $I_R$       | 0.5 $\mu A$ (Max)<br>1 $\mu A$ (Max)<br>2 $\mu A$ (Max) | $V_R = 10V$<br>$V_R = 50V$<br>$V_R = 75V$                          |
| Typical Junction Capacitance     | $C_T$       | 18pF(Typ)<br>8pF(Typ)                                   | $V_R = 0, f = 1.0MHz$<br>$V_R = 2V, f = 1.0MHz$                    |
| Maximum Reverse Recovery Time    | $t_{rr}$    | 3.0ns   | $I_F = I_R = 10mA$ ,<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.
2. Device mounted on an 1inchx1inchx2oz copper FR4 PCB, single-sided copper,reference footprint

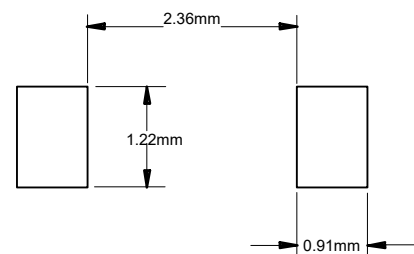
**200mW  
Schottky Diode  
100 Volts**

**SOD-123**

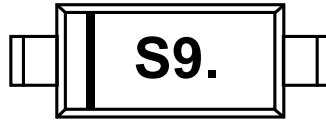


| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.140  | 0.152 | 3.55 | 3.85 |      |
| B   | 0.100  | 0.112 | 2.55 | 2.85 |      |
| C   | 0.055  | 0.071 | 1.40 | 1.80 |      |
| D   | ----   | 0.053 | ---- | 1.35 |      |
| E   | 0.018  | 0.026 | 0.45 | 0.65 |      |
| G   | 0.006  | ----  | 0.15 | ---- |      |
| H   | ----   | 0.010 | ---- | 0.25 |      |
| J   | ----   | 0.006 | ---- | 0.15 |      |

**Suggested Solder Pad Layout**



## Internal Structure and Marking Code



## Curve Characteristics

Fig. 1 - Forward Characteristics

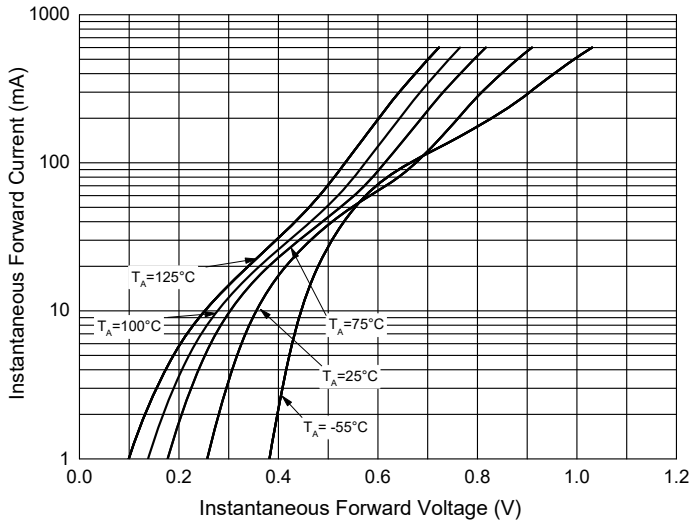


Fig. 2 - Reverse Characteristics

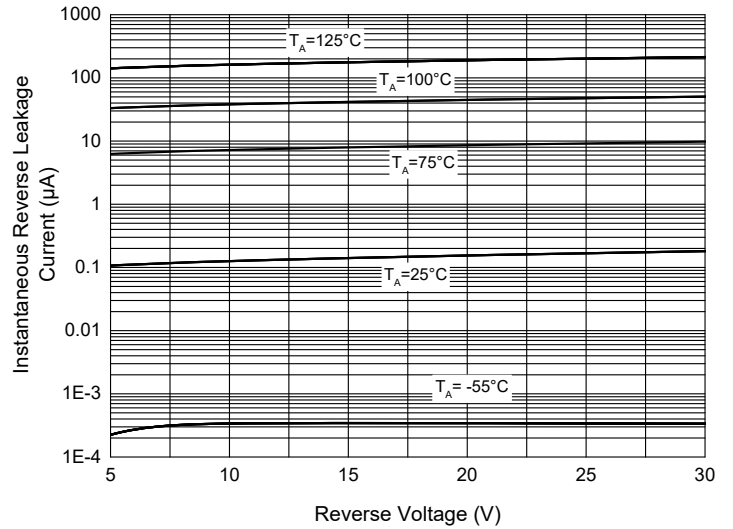


Fig. 3 - Capacitance Characteristics

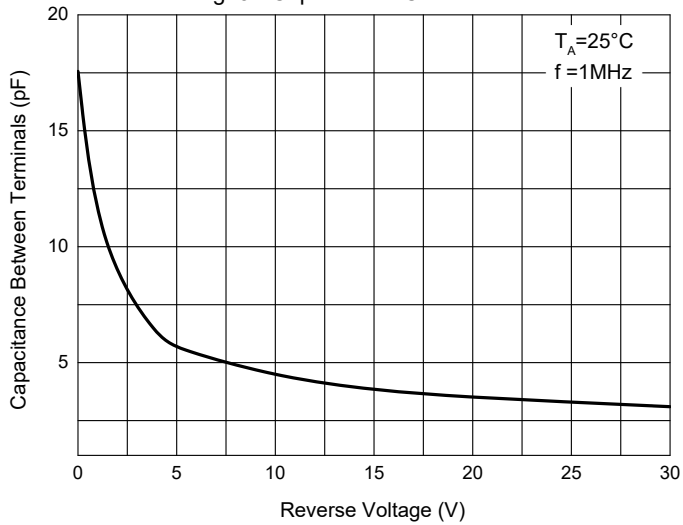
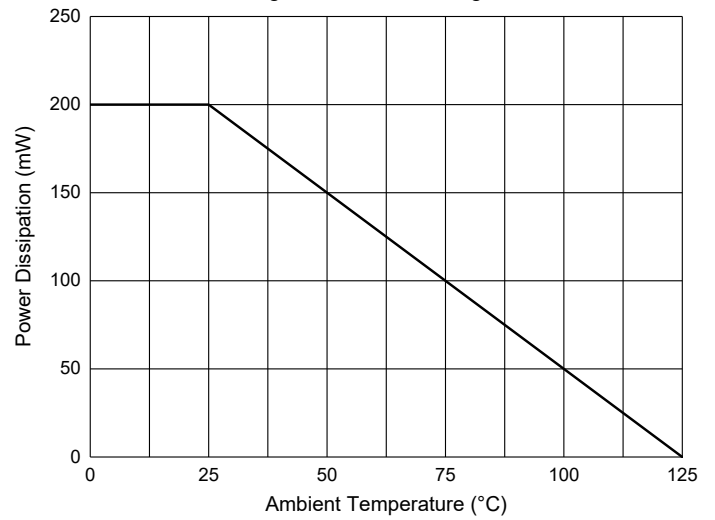


Fig. 4 - Power Derating Curve



## Ordering Information

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

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