

**Features**

- Extremely-Fast Switching Speed
- 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 |
|-----------------|----------------|--|---------------------|-----------------------------|
| BAT54WX         | JV             | 30V                                    | 21V                 | 30V                         |

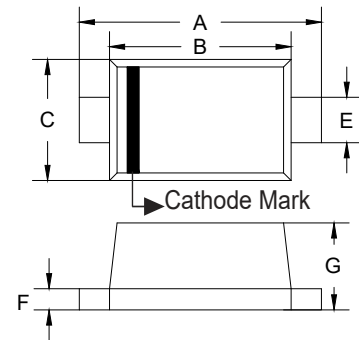
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

|   |            |   |   |
|---|------------|---|---|
| Average Forward Current                         | $I_F$      | 200mA                                     |   |
| Peak Forward Surge Current                      | $I_{FSM}$  | 600mA                                     | $t=8.3ms$   |
| Repetitive Peak Forward Current                 | $I_{FRM}$  | 300mA                                     | $t_p \leq 1s$ ; Duty Cycle $\leq 50\%$                                |
| Power Dissipation                               | $P_d$      | 200mW                                     |   |
| Reverse Breakdown Voltage                       | $V_{(BR)}$ | 30V(Min)                                  | $I_R=10\mu A$   |
| Maximum Forward Voltage                         | $V_F$      | 0.24V<br>0.50V<br>0.80V<br>0.32V<br>0.40V | $I_F=0.1mA$<br>$I_F=30mA$<br>$I_F=100mA$<br>$I_F=1.0mA$<br>$I_F=10mA$ |
| DC Reverse Current At Rated DC Blocking Voltage | $I_R$      | 2 $\mu A$ (Max)                           | $V_R = 25V$   |
| Maximum Junction Capacitance                    | $C_T$      | 10pF                                      | $V_R=1V, f=1MHZ$  |
| Maximum Reverse Recovery Time                   | $t_{rr}$   | 5.0ns                                     | $I_F=10mA, I_R=10mA$ to 1mA, $R_L=100\Omega$                          |

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, 30Volt Schottky Barrier Diode**

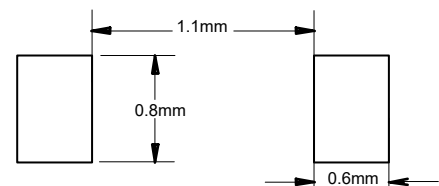
**SOD-523**



**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

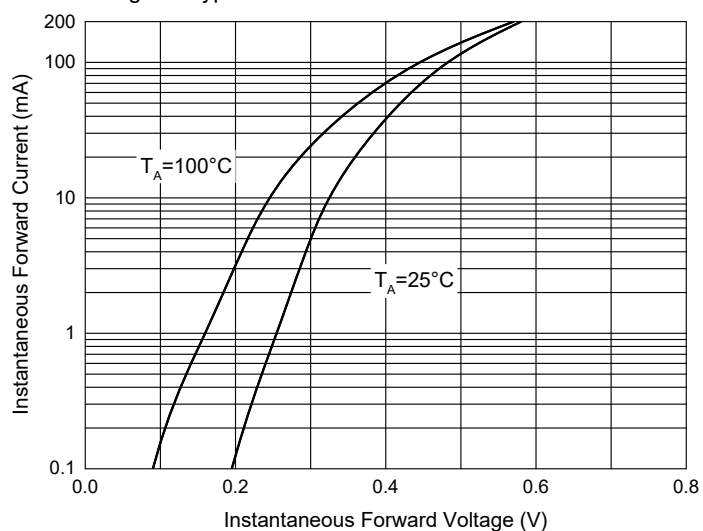


Fig. 2 - Typical Reverse Leakage Characteristics

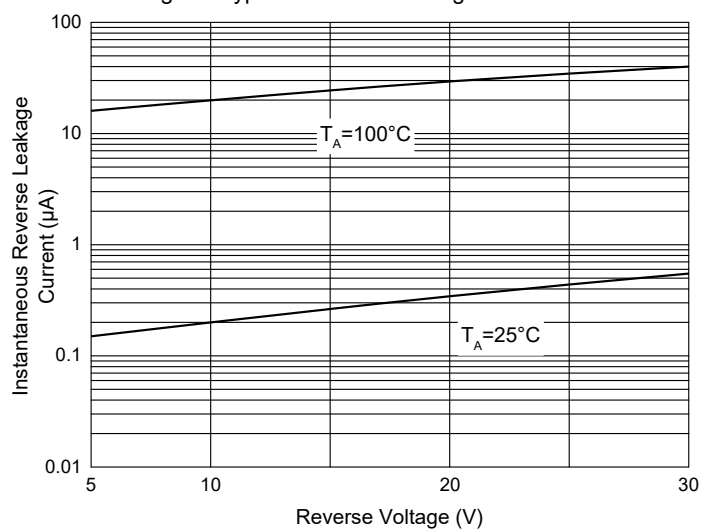
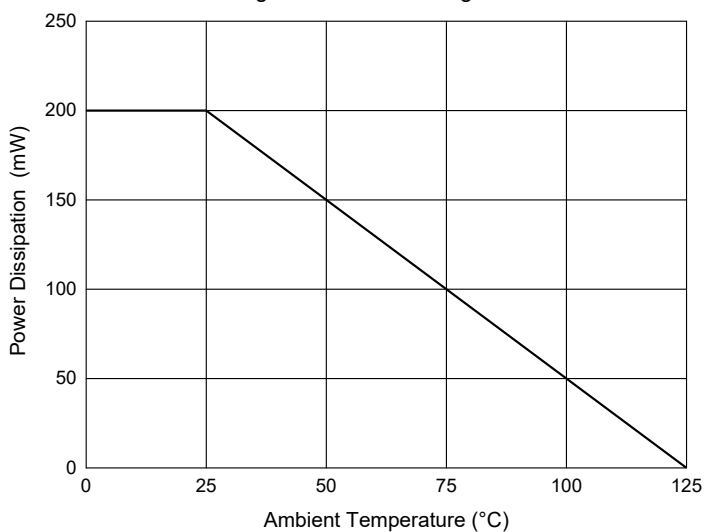


Fig. 3 - Power Derating Curve



## Ordering Information

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

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