

**Features**

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Surface Mount Application
- 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
- Maximum Thermal Resistance: 244°C/W Junction to Ambient(Note2)

| MCC Part Number | Repetitive Peak Reverse Voltage $V_{RRM}$ | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage $V_R$ |
|-----------------|---|----------------------------------|---------------------------|
| B0530WHE3       | 30V                                       | 21V                              | 30V                       |

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

|                            |             |       |                  |
|----------------------------|-------------|-------|------------------|
| Average Forward Current    | $I_{F(AV)}$ | 0.5A  |                  |
| Peak Forward Surge Current | $I_{FSM}$   | 15A   | @ t=8.3ms        |
| Power Dissipation          | $P_D$       | 410mW | $T_A=25^\circ C$ |

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

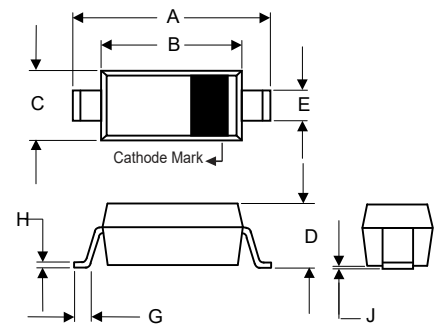
2. Part mounted on FR-4 board with recommended pad layout.

**Internal Structure and Marking Code**



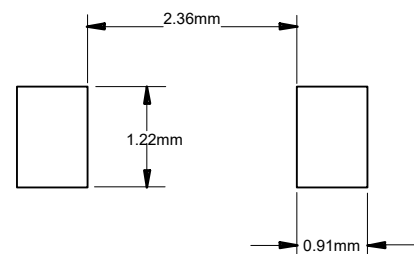
**0.5 Amp  
Schottky Rectifier  
30 Volts**

**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**



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter                 | Symbol   | Conditions  | Min. | Typ. | Max.  | Units   |
|---------------------------|----------|---|------|------|-------|---------|
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R=100\mu A$  | 30   |      |       | V       |
| Forward Voltage           | $V_{F1}$ | $I_F=100mA$   |      |      | 0.375 | V       |
|                           | $V_{F2}$ | $I_F=500mA$   |      |      | 0.55  | V       |
| Reverse Current           | $I_{R1}$ | $V_R=15V$   |      |      | 20    | $\mu A$ |
|                           | $I_{R2}$ | $V_R=30V$   |      |      | 100   | $\mu A$ |
| Junction Capacitance      | $C_J$    | $V_R = 4V, f = 1MHz$                                      |      |      | 50    | pF      |
| Reverse Recovery Time     | $t_{rr}$ | $I_F=I_R=10mA,$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |      |      | 30    | ns      |

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

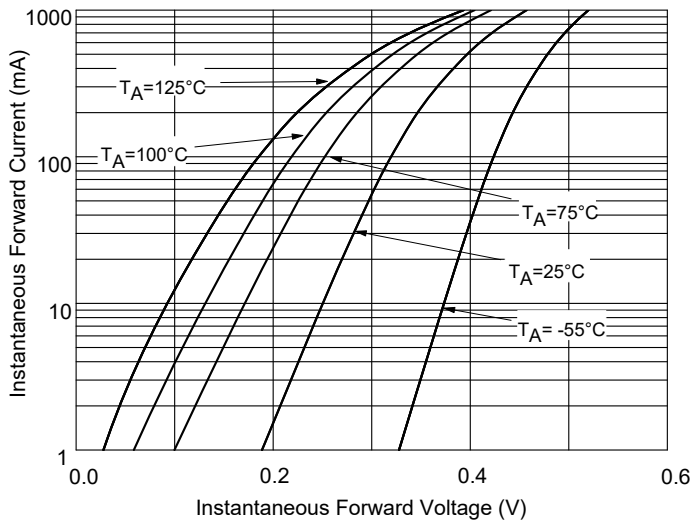


Fig. 2 - Typical Reverse Leakage Characteristics

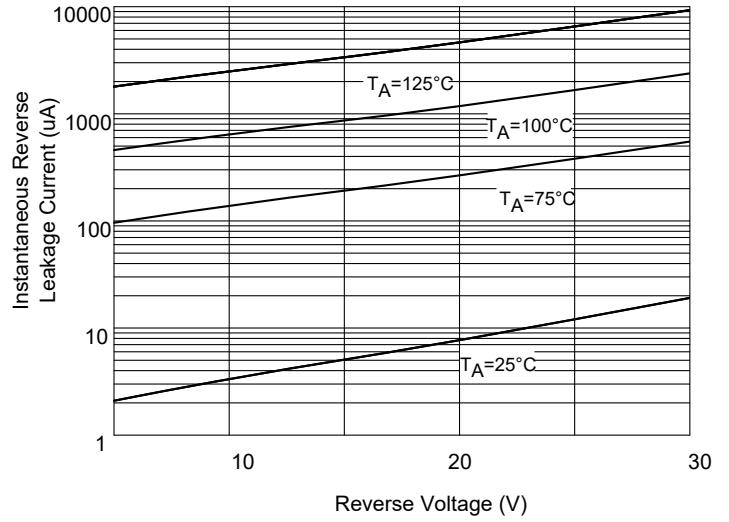


Fig. 3 - Capacitance Characteristics

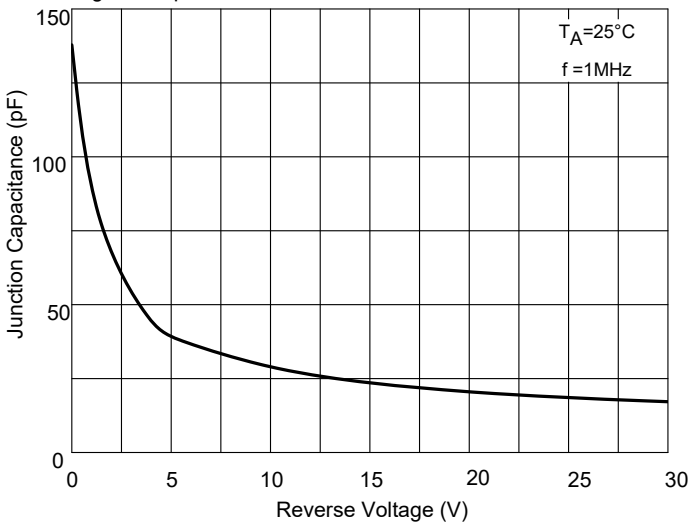
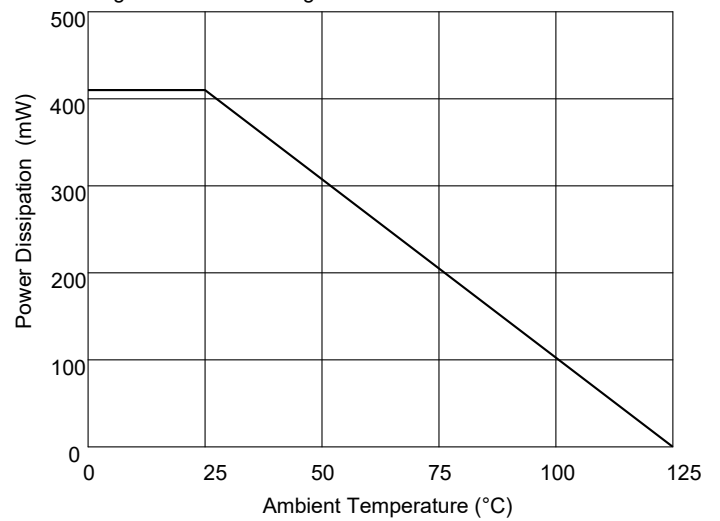


Fig. 4 - Power Derating Curve



## Ordering Information

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

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