

**Features**

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Silicon Epitaxial Planar Diodes
- Epoxy Meets UL 94 V-0 Flammability Rating
- 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 +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 305°C/W Junction to Ambient

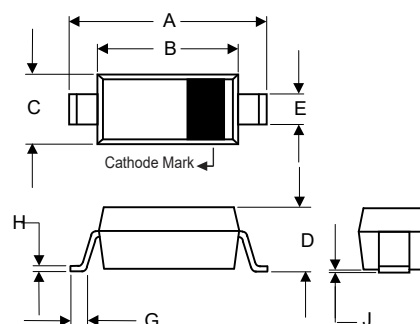
| MCC Part Number | Device Marking |
|-----------------|----------------|
| BAV19WHE3       | A8             |
| BAV20WHE3       | T2             |
| BAV21WHE3       | T3             |

| Parameter   | Symbol      | Value |
|---|-------------|-------|
| Continuous Reverse Voltage                                      | $V_R$       | 100V  |
| BAV20WHE3   |             | 150V  |
| BAV21WHE3   |             | 200V  |
| Repetitive Peak Reverse Voltage                                 | $V_{RRM}$   | 120V  |
| BAV20WHE3   |             | 200V  |
| BAV21WHE3   |             | 250V  |
| Forward DC Current  | $I_F$       | 250mA |
| Rectified Current (Average) Half Wave Rectification with Resist | $I_{F(AV)}$ | 200mA |
| Repetitive Peak Forward Current (f>50Hz)                        | $I_{FRM}$   | 625mA |
| Peak Forward Surge Current(t<1s)                                | $I_{FSM}$   | 1A    |
| Power Dissipation   | $P_{tot}$   | 410mW |

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

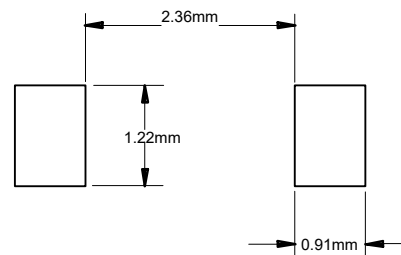
**410mW  
Small Signal  
Diodes  
120 to 250 Volts**

**SOD-123**



| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
|     | 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         |
|----------------------------|-----------|------------------|---|------|------|------|---------------|
| Forward Voltage            |           | $V_F$            | $I_F=100\text{mA}$  |      |      | 1.00 | V             |
|                            |           |                  | $I_F=200\text{mA}$  |      |      | 1.25 | V             |
| Reverse Current            | BAV19WHE3 | $I_R$            | $V_R=100\text{V}$   |      |      | 100  | nA            |
|                            |           |                  | $V_R=100\text{V}, T_J=100^\circ\text{C}$                              |      |      | 15   | $\mu\text{A}$ |
|                            | BAV20WHE3 |                  | $V_R=150\text{V}$   |      |      | 100  | nA            |
|                            |           |                  | $V_R=150\text{V}, T_J=100^\circ\text{C}$                              |      |      | 15   | $\mu\text{A}$ |
|                            | BAV21WHE3 |                  | $V_R=200\text{V}$   |      |      | 100  | nA            |
|                            |           |                  | $V_R=200\text{V}, T_J=100^\circ\text{C}$                              |      |      | 15   | $\mu\text{A}$ |
| Dynamic Forward Resistance |           | $r_f$            | $I_F = 10\text{mA}$   |      | 5    |      | $\Omega$      |
| Total Capacitance          |           | $C_{\text{tot}}$ | $V_R = 0\text{V}, f = 1\text{MHz}$                                    |      | 1.5  |      | pF            |
| Reverse Recovery Time      |           | $t_{\text{rr}}$  | $I_F=I_R=30\text{mA},$<br>$I_{\text{rr}}=3.0\text{mA}, R_L=100\Omega$ |      |      | 50   | ns            |

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

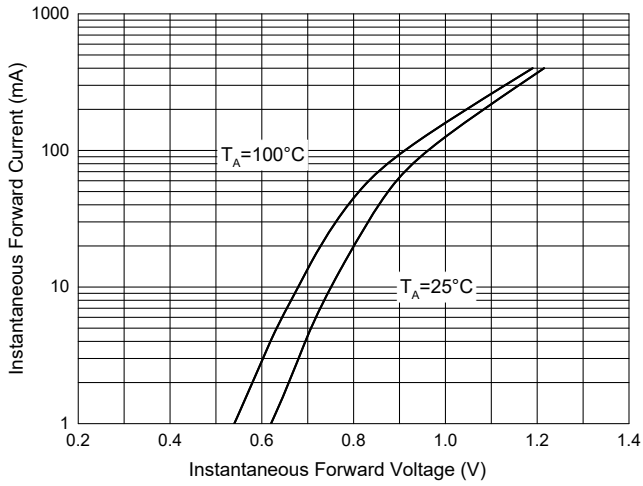


Fig. 2 - Typical Reverse Leakage Characteristics

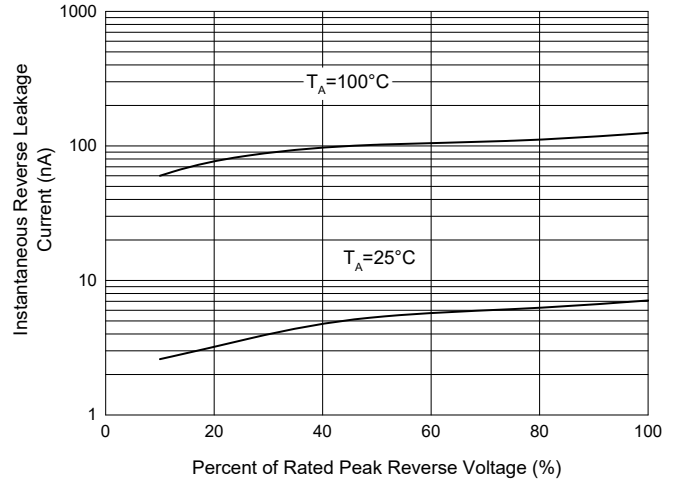
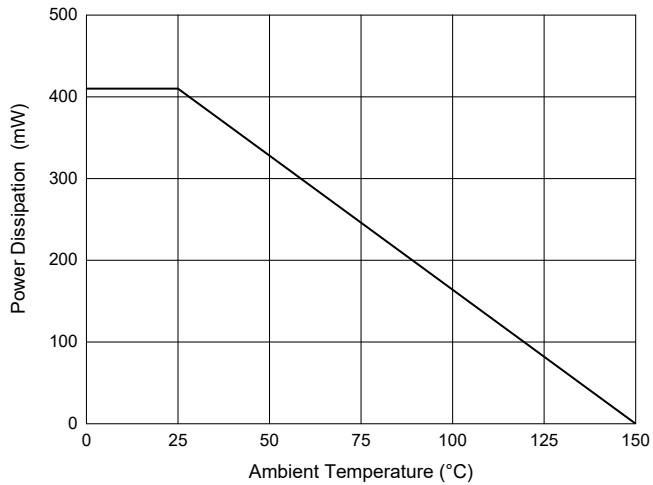


Fig. 3 - Power Derating Curve



## Ordering Information

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

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