

**Features**

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Low Current Leakage
- Small Outline Surface Mount Package
- 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**

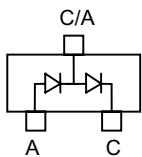
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 357°C/W Junction To Ambient

| MCC Part Number | Device Marking |
|-----------------|----------------|
| BAV99HE3        | A7             |

| Parameter                        | Symbol    | Value |
|----------------------------------|-----------|-------|
| DC Blocking Voltage              | $V_R$     | 100V  |
| Average Rectified Output Current | $I_O$     | 215mA |
| Repetitive Peak Forward Current  | $I_{FRM}$ | 500mA |
| Power Dissipation                | $P_D$     | 350mW |
| Peak Forward Surge Current       | t=1s      | 1A    |
|                                  | t=1μs     | 4A    |

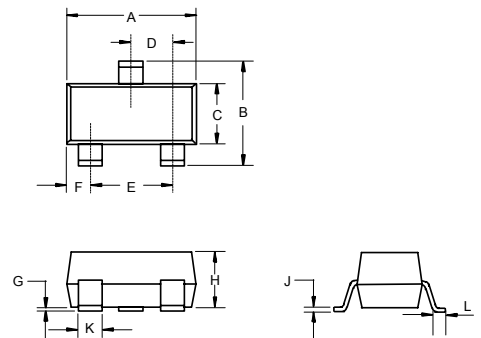
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



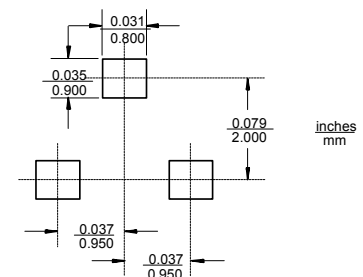
**350mW  
Dual Series  
Switching Diode**

**SOT-23**



| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.110  | 0.120 | 2.80 | 3.04 |      |
| B   | 0.083  | 0.104 | 2.10 | 2.64 |      |
| C   | 0.047  | 0.055 | 1.20 | 1.40 |      |
| D   | 0.034  | 0.041 | 0.85 | 1.05 |      |
| E   | 0.067  | 0.083 | 1.70 | 2.10 |      |
| F   | 0.018  | 0.024 | 0.45 | 0.60 |      |
| G   | 0.0004 | 0.006 | 0.01 | 0.15 |      |
| H   | 0.035  | 0.043 | 0.90 | 1.10 |      |
| J   | 0.003  | 0.007 | 0.08 | 0.18 |      |
| K   | 0.012  | 0.020 | 0.30 | 0.51 |      |
| L   | 0.007  | 0.020 | 0.20 | 0.50 |      |

**Suggested Solder Pad Layout**



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

| Parameter                    | Symbol   | Conditions  | Min. | Typ. | Max.  | Units   |
|------------------------------|----------|---|------|------|-------|---------|
| Reverse Breakdown Voltage    | $V_{BR}$ | $I_R=100\mu A$  | 100  |      |       | V       |
| Forward Voltage              | $V_F$    | $I_F=1mA$   |      |      | 0.715 | V       |
|                              |          | $I_F=10mA$  |      |      | 0.855 | V       |
|                              |          | $I_F=50mA$  |      |      | 1     | V       |
|                              |          | $I_F=150mA$   |      |      | 1.25  | V       |
| Reverse Current              | $I_R$    | $V_R=75V, T_J=25^\circ C$                                 |      |      | 2.5   | $\mu A$ |
|                              |          | $V_R=75V, T_J=150^\circ C$                                |      |      | 50    | $\mu A$ |
|                              |          | $V_R=25V, T_J=150^\circ C$                                |      |      | 30    | $\mu A$ |
| Typical Junction Capacitance | $C_J$    | Measured at<br>1.0MHz, $V_R=0V$                           |      | 2    |       | pF      |
| Reverse Recovery Time        | $t_{rr}$ | $I_F=I_R=10mA,$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |      |      | 4     | ns      |

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

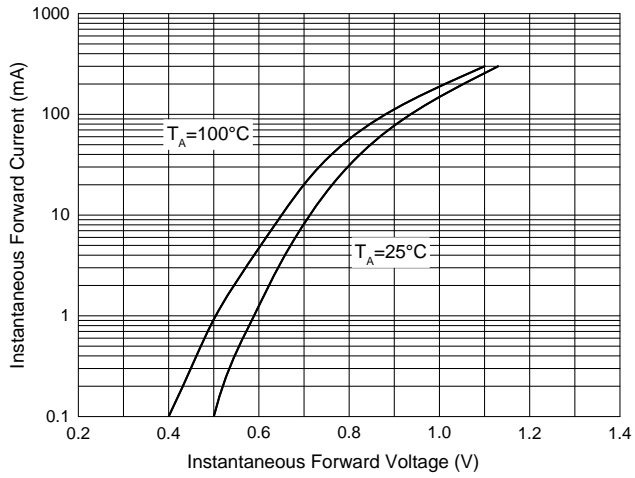


Fig. 2 - Typical Reverse Leakage Characteristics

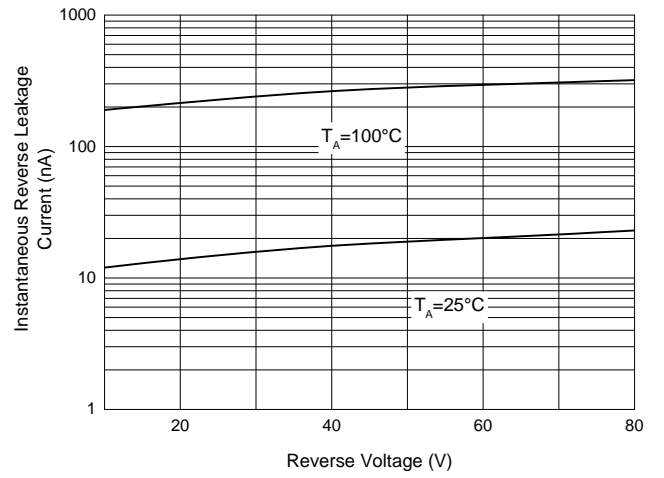
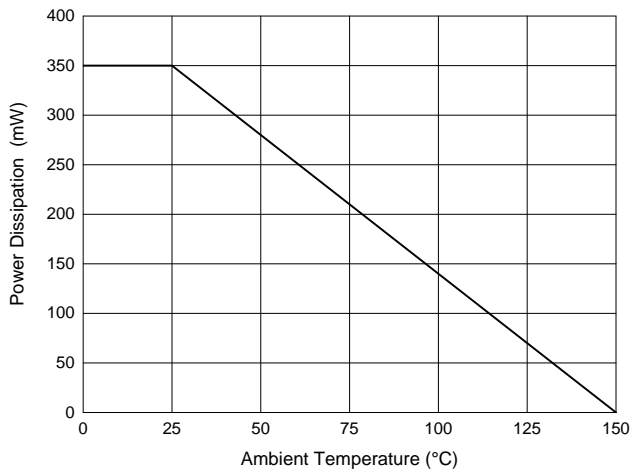


Fig. 3 - Power Derating Curve



## Ordering Information

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

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