

## Features

- Fast Switching Speed
- High Conductance
- Lead Free Plating
- For General Purpose Switching Applications
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

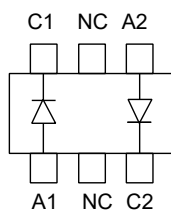
## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 833°C/W Junction to Ambient

| MCC Part Number                     | Device Marking | Repetitive Peak Reverse Voltage $V_{RRM}$ | DC Blocking Voltage $V_R$ |
|-------------------------------------|----------------|---|---------------------------|
| BAS16V                              | KAM            | 75V                                       | 75V                       |
| Non-Repetitive Peak Reverse Voltage | $V_{RM}$       | 100V                                      |                           |
| Working Peak Reverse Voltage        | $V_{RWM}$      | 75V                                       |                           |
| Forward Continuous Current          | $I_{FM}$       | 300mA                                     |                           |
| Average Rectified Output Current    | $I_o$          | 200mA                                     |                           |
| Peak Forward Surge Current          | $I_{FSM}$      | 2.0A<br>1.0A                              | @1.0μs<br>@1.0s           |
| Power Dissipation                   | $P_D$          | 150mW                                     |                           |

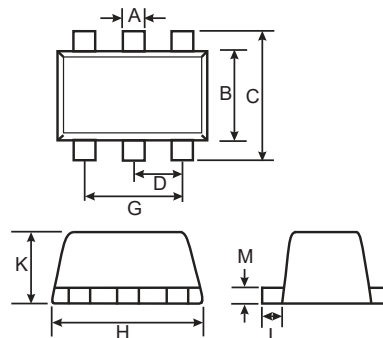
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure



# 150mW Switching Diode

## SOT-563



| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
|     | MIN        | MAX   | MIN  | MAX  |      |
| A   | 0.006      | 0.011 | 0.15 | 0.30 |      |
| B   | 0.043      | 0.051 | 1.10 | 1.30 |      |
| C   | 0.059      | 0.067 | 1.50 | 1.70 |      |
| D   | 0.020      |       | 0.50 |      | TYP. |
| G   | 0.035      | 0.043 | 0.90 | 1.10 |      |
| H   | 0.059      | 0.067 | 1.50 | 1.70 |      |
| K   | 0.022      | 0.026 | 0.55 | 0.65 |      |
| L   | 0.004      | 0.011 | 0.10 | 0.30 |      |
| M   | 0.004      | 0.007 | 0.10 | 0.18 |      |

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

|                               |          |                                      |   |
|-------------------------------|----------|--------------------------------------|---|
| Minimum Breakdown Voltage     | $V_{BR}$ | 75V                                  | $I_R=100\mu A$  |
| Maximum Forward Voltage       | $V_F$    | 0.715V<br>0.855V<br>1.000V<br>1.250V | $I_F=1.0mA$<br>$I_F=10.0mA$<br>$I_F=50.0mA$<br>$I_F=150.0mA$  |
| Maximum Peak Reverse voltage  | $I_R$    | 1.0 $\mu A$<br>25nA                  | $V_R=75V$<br>$V_R=20V$  |
| Maximum Total Capacitance     | $C_T$    | 2.0pF                                | $V_R=0.0V, f=1.0MHz$  |
| Maximum Reverse Recovery Time | $t_{rr}$ | 4.0ns                                | $I_F=10mA, I_R=10mA$<br>$I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ |

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

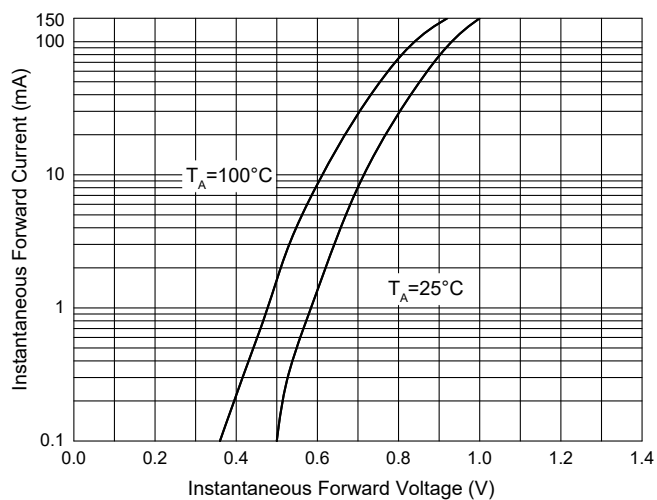


Fig. 2 - Typical Reverse Leakage Characteristics

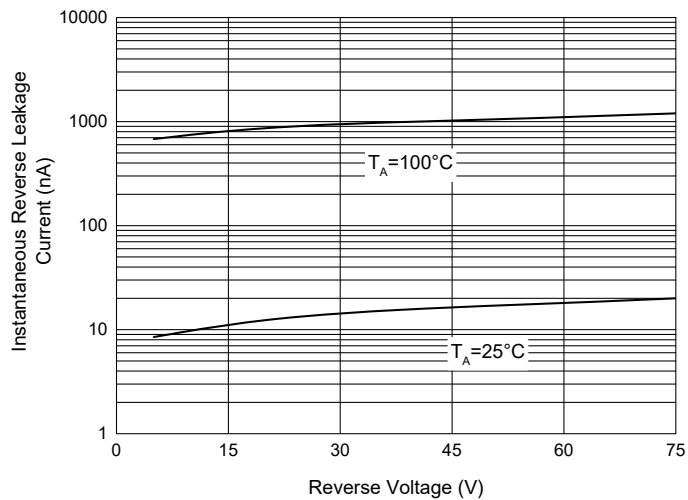
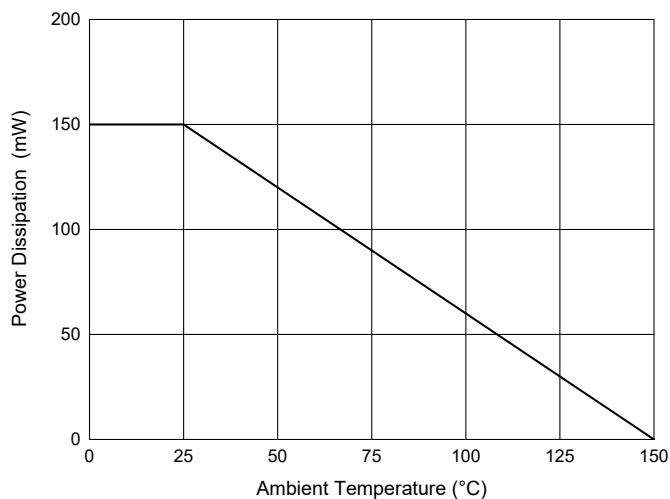


Fig. 3 - Power Derating Curve



## Ordering Information

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

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