

Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- High Conductance
- 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

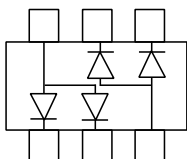
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

| MCC Part Number | Device Marking | Repetitive Peak Reverse Voltage V_{RRM} | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage V_R |
|-----------------|----------------|---|----------------------------------|---------------------------|
| BAW56DW | KJC | 75V | 53V | 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 | 150mA | |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | 2.0A 1.0A | @ $t=1.0\mu s$ @ $t=1.0s$ |
| Power Dissipation | P_D | 200mW | |

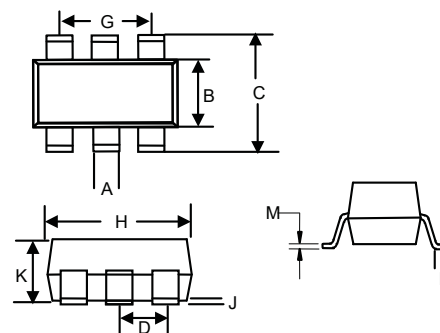
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



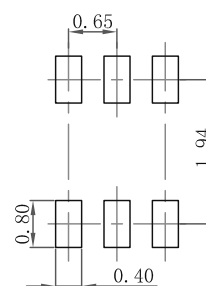
200mW Switching Diodes 75 Volts

SOT-363



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|--------------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.006 | 0.014 | 0.15 | 0.35 | |
| B | 0.045 | 0.053 | 1.15 | 1.35 | |
| C | 0.079 | 0.096 | 2.00 | 2.45 | |
| D | 0.026 | | 0.65 Nominal | | |
| G | 0.047 | 0.055 | 1.20 | 1.40 | |
| H | 0.071 | 0.087 | 1.80 | 2.20 | |
| J | ----- | 0.004 | ----- | 0.10 | |
| K | 0.031 | 0.043 | 0.80 | 1.10 | |
| L | 0.010 | 0.018 | 0.26 | 0.46 | |
| M | 0.003 | 0.006 | 0.08 | 0.15 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|----------|---|--|
| Minimum Breakdown Voltage | V_{BR} | 75V | $I_R=2.5\mu A$ |
| Maximum Forward Voltage ⁽²⁾ | V_F | 0.715V 0.855V 1.000V 1.250V | $I_F=1.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=150.0mA$ |
| Maximum Peak Reverse voltage ⁽²⁾ | I_R | 2.5 μA 50 μA 30 μA 25nA | $V_R=75V$ $V_R=75V, T_J=150^\circ C$ $V_R=25V, T_J=150^\circ C$ $V_R=20V$ |
| Maximum Junction Capacitance | C_J | 2.0pF | $V_R=0.0V, f=1.0MHz$ |
| Maximum Reverse Recovery Time | t_{rr} | 4.0ns | $I_F=10mA, I_R=10mA$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ |

Note: 2. Short duration test pulse to minimize self-heating effect.

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

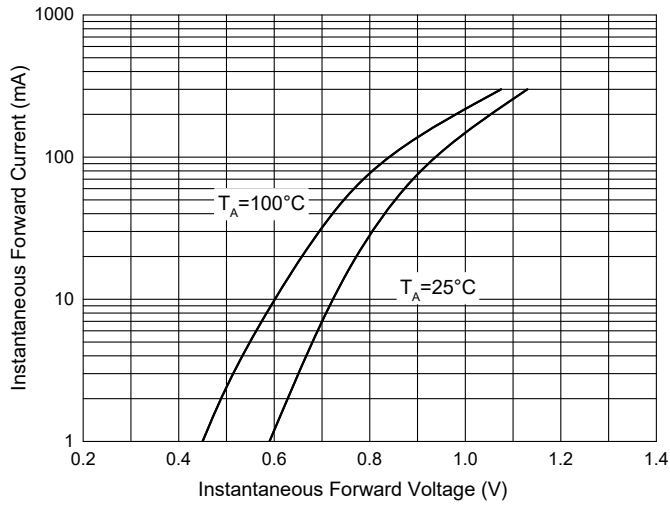


Fig. 2 - Typical Reverse Leakage Characteristics

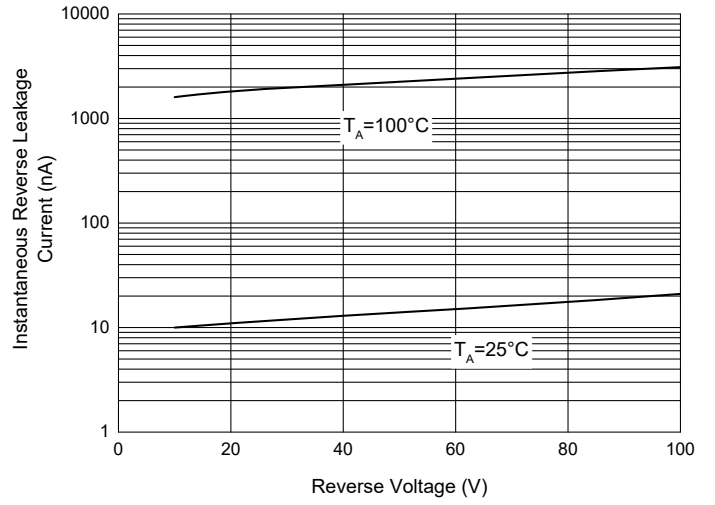
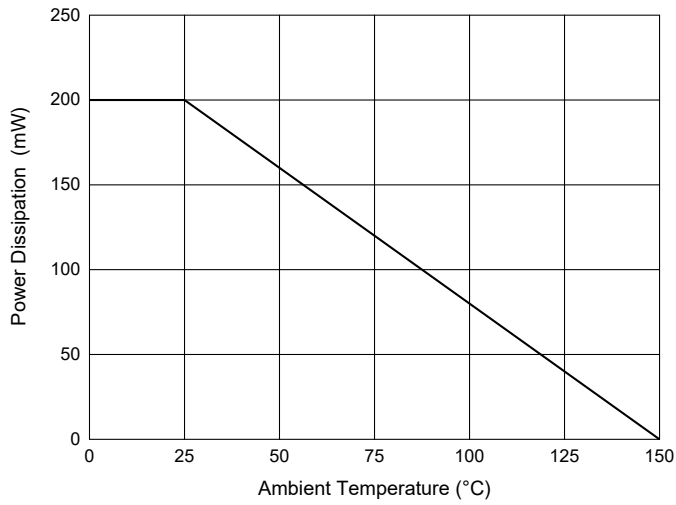


Fig. 3 - Power Derating Curve



Ordering Information

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

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