

**Features**

- High Conductance
- Fast Switching Speed
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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: -65°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 357°C/W Junction to Ambient

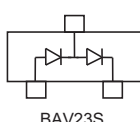
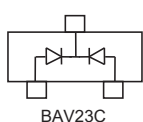
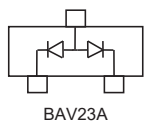
| MCC Part Number | Device Marking | Reverse Voltage $V_R$ | RMS Reverse Voltage $V_{R(RMS)}$ |
|-----------------|----------------|-----------------------|----------------------------------|
| BAV23A          | KT7            | 200V                  | 141V                             |
| BAV23C          | KT6            | 200V                  | 141V                             |
| BAV23S          | KL31           | 200V                  | 141V                             |

|   |           |              |                                      |
|---|-----------|--------------|--------------------------------------|
| Forward DC Current                        | $I_{FM}$  | 225mA        | $T_A=25^\circ C$                     |
| Non-Repetitive Peak Forward Surge Current | $I_{FSM}$ | 9.0A<br>3.0A | @ $t = 1.0\mu s$<br>@ $t = 100\mu s$ |
| Power Dissipation                         | $P_D$     | 350mW        |                                      |

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

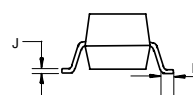
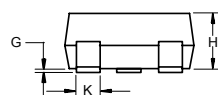
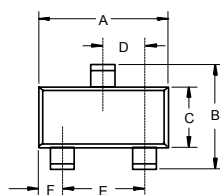
|                               |          |                |   |
|-------------------------------|----------|----------------|---|
| Reverse Breakdown Voltage     | $V_{BR}$ | 250V           | $I_R=100\mu A$  |
| Maximum Forward Voltage       | $V_F$    | 1.00V<br>1.25V | $I_{FM}=100.0mA$<br>$I_{FM}=200.0mA$                          |
| Maximum leakage current       | $I_R$    | 100nA          | $V_R=250V$  |
| Typical Junction Capacitance  | $C_J$    | 5.0pF          | $V_R=0.0V, f=1.0MHz$  |
| Maximum Reverse Recovery Time | $t_{rr}$ | 50.0ns         | $I_F=30mA, I_R=30mA$<br>$I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ |

**Internal Structure**



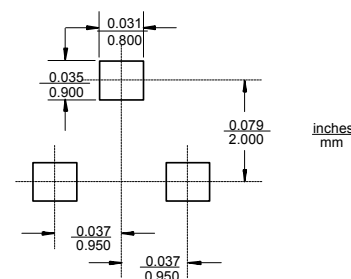
**350mW  
Small Signal Diode**

**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   | 0.014  | 0.020 | 0.35 | 0.51 |      |
| L   | 0.007  | 0.020 | 0.20 | 0.50 |      |

**Suggested Solder Pad Layout**



## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

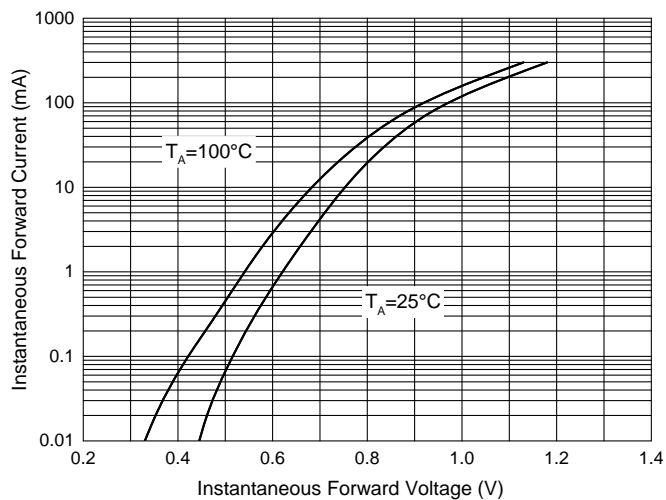


Fig. 2 - Typical Reverse Leakage Characteristics

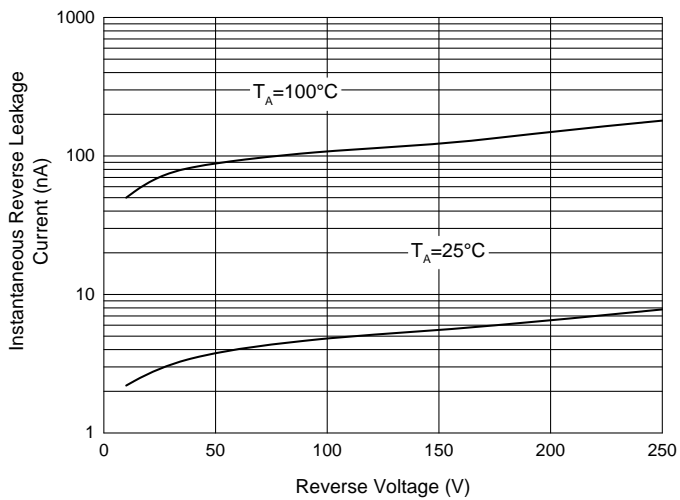
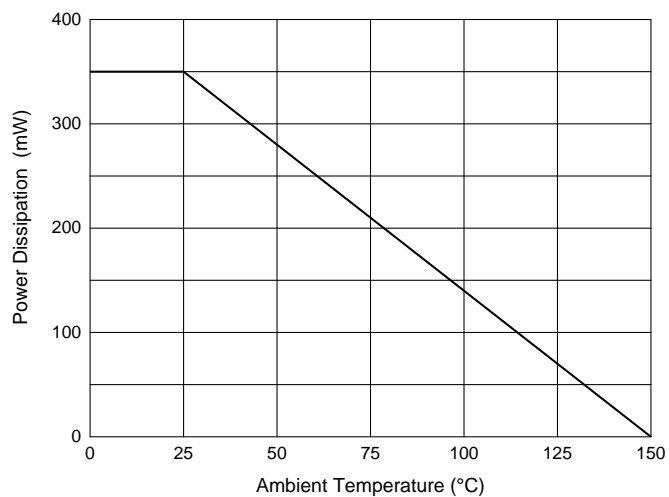


Fig. 3 - Power Derating Curve



## Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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