

Features

- High Conductance
- Fast Switching Speed
- 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

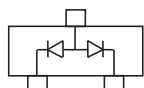
| MCC Part Number | | Device Marking | |
|---|-----------|----------------|---|
| BAS21A | | JS2 | |
| BAS21C | | JS3 | |
| BAS21S | | JS4 | |
| Forward DC Current | I_{FM} | 200mA | $T_A=25^\circ\text{C}$ |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | 2.5A 0.5A | @ $t = 1.0\mu\text{s}$ @ $t = 1\text{s}$ |
| Power Dissipation | P_D | 225mW | $T_A=25^\circ\text{C}$ |

Electrical Characteristics @ 25°C Unless Otherwise Specified

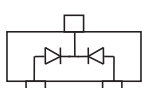
| | | | |
|---------------------------|----------|-------------------|---|
| Reverse Breakdown Voltage | V_{BR} | 250V | $I_R=100\mu\text{A}$ |
| Maximum Forward Voltage | V_F | 1.10V | $I_{FM}=100.0\text{mA}$ $T_J=25^\circ\text{C}$ |
| Maximum leakage current | I_R | 1.0 μA | $V_R=200\text{V}$ $T_J=25^\circ\text{C}$ |
| Diode Capacitance | C_D | 5.0pF | $V_R=0.0\text{V}, f=1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | 50.0ns | |

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

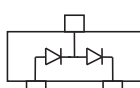
Internal Structure



BAS21A



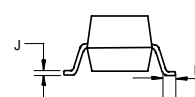
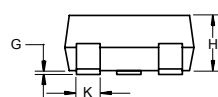
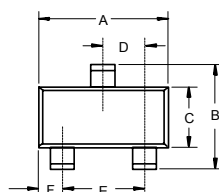
BAS21C



BAS21S

225mW 250Volt Switching Diode

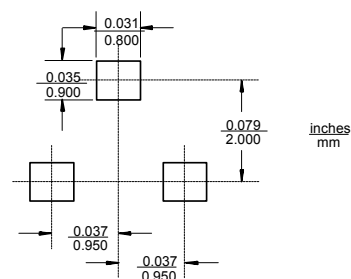
SOT-23



DIMENSIONS

| 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

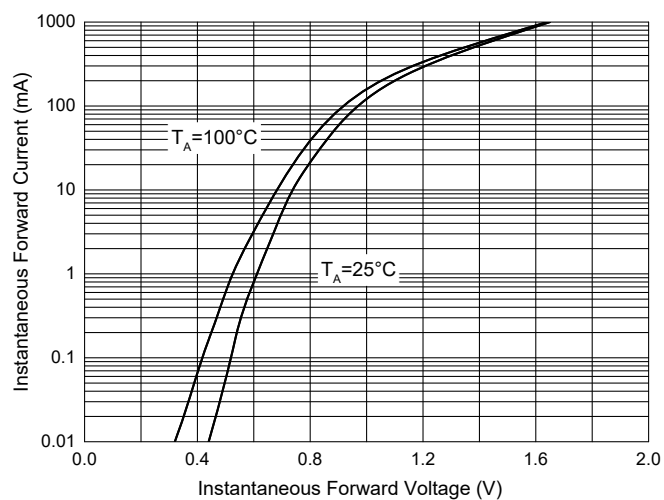


Fig. 2 - Typical Reverse Leakage Characteristics

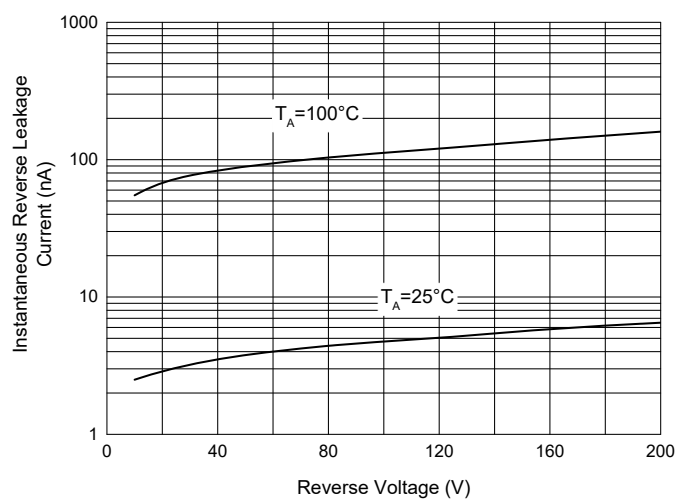
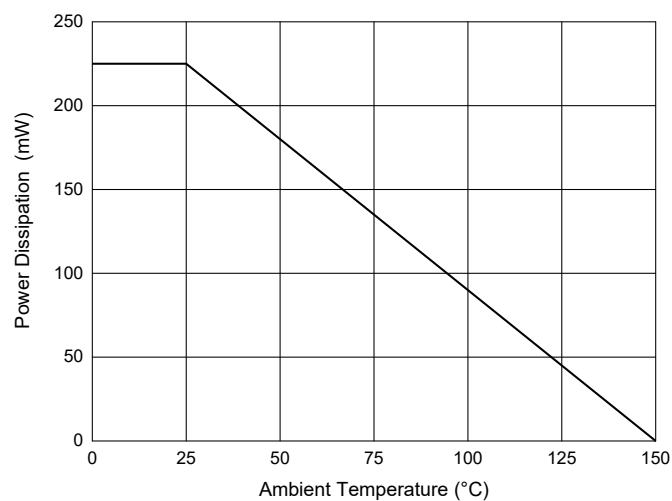


Fig. 3 - Power Derating Curve



Ordering Information

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

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