

Features

- Surface Mount Package
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- AEC-Q101 Qualified

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance(Note2): 833°C/W Junction to Ambient

| MCC Part Number | Repetitive Peak Reverse Voltage V_{RRM} | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage V_R |
|-----------------|---|----------------------------------|---------------------------|
| BAS21XHE3 | 250V | 180V | 250V |

| Parameter | Symbol | Value |
|--------------------------------------|-------------|-------|
| Maximum Peak Reverse Voltage | V_{RM} | 250V |
| Working Peak Reverse Voltage | V_{RWM} | 250V |
| Average Forward Current | $I_{F(AV)}$ | 200mA |
| Average Rectified Output Current | I_O | 100mA |
| Peak Forward Surge Current (t=8.3ms) | I_{FSM} | 2A |
| 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.

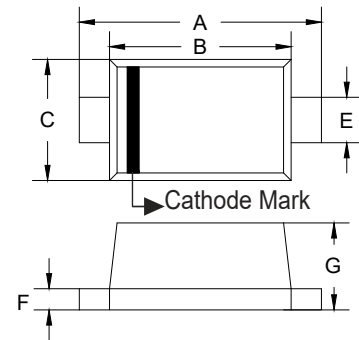
Note: 2. Part mounted on FR-4 board with recommended pad layout.

Internal Structure and Marking Code



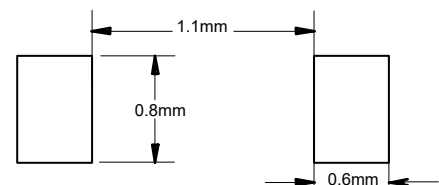
High Voltage Switching Diode

SOD-523



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.059 | 0.067 | 1.50 | 1.70 | |
| B | 0.043 | 0.051 | 1.10 | 1.30 | |
| C | 0.030 | 0.033 | 0.75 | 0.85 | |
| E | 0.010 | 0.014 | 0.25 | 0.35 | |
| F | 0.003 | 0.008 | 0.08 | 0.20 | |
| G | 0.020 | 0.026 | 0.50 | 0.65 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|-----------------------|----------|--|------|------|------|-------|
| Forward Voltage | V_F | $I_F=100\text{mA}$ | | | 1.1 | V |
| Reverse Current | I_R | $V_R=250\text{V}$ | | | 150 | nA |
| Breakdown voltage | V_R | $I_R = 100\mu\text{A}$ | 250 | | | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}, f = 1\text{MHz}$ | | | 5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=30\text{mA},$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | | 50 | ns |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

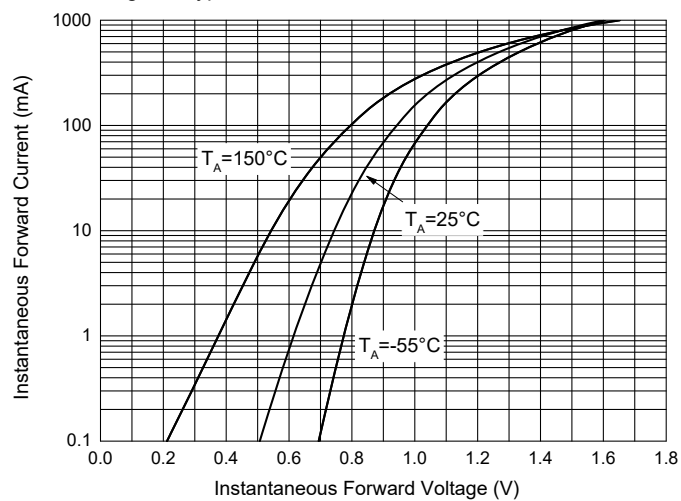


Fig. 2 - Typical Reverse Leakage Characteristics

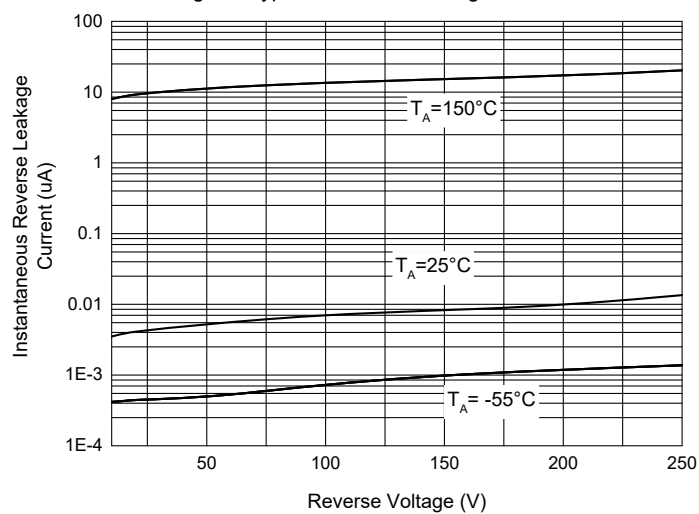


Fig. 3 - Capacitance Characteristics

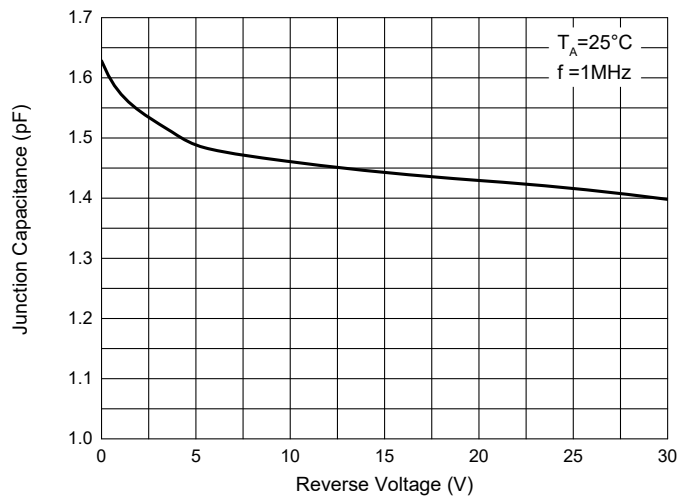
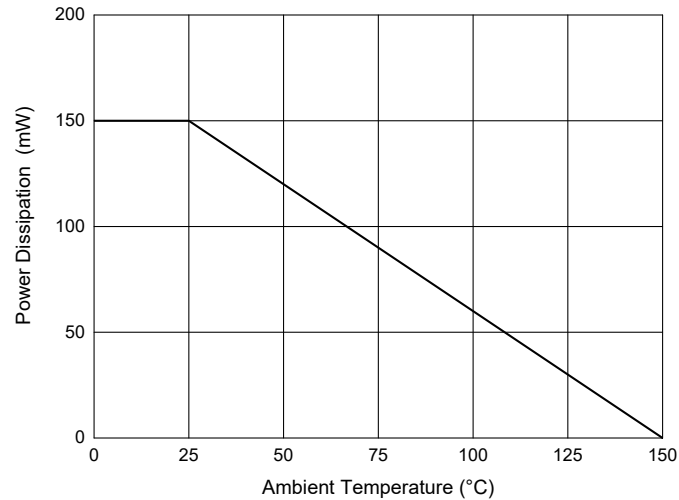


Fig. 4 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 8Kpcs/Reel |

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