

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Low Forward Voltage and Reverse Recovery Characteristics
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 500°C /W Junction to Ambient

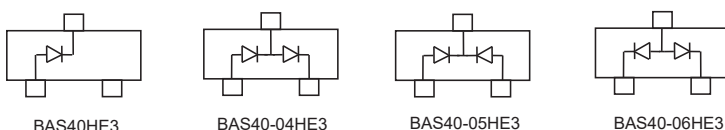
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|-----------------------------|
| BAS40HE3 | 43 | 40V | 40V |
| BAS40-04HE3 | 44 | 40V | 40V |
| BAS40-05HE3 | 45 | 40V | 40V |
| BAS40-06HE3 | 46 | 40V | 40V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 200mA | 25°C |
| Peak Forward Surge Current | I_{FSM} | 600mA | $t_p < 1s, T_a = 25°C$ |
| Power Dissipation | P_d | 200mW | $T_A = 25°C$ |
| Maximum Forward Voltage | V_F | 380mV 1000mV | $I_F = 1.0mA$ $I_F = 40mA$ |
| DC Reverse Current at Rated DC Blocking Voltage | I_R | 10 nA(TYP) 200nA(MAX) | $t_p < 300\mu s, V_R = 30V$ |
| Min Reverse Breakdown Voltage | V_{BR} | 40V | $I_R = 10\mu A$ |
| Typical Junction Capacitance | C_T | 5pF | Measured at 1.0MHz, $V_R = 0.0V$ |
| Maximum Reverse Recovery Time | t_{rr} | 5.0ns | $I_{rr} = 1mA, I_R = I_F = 10mA$ $R_L = 100\Omega$ |

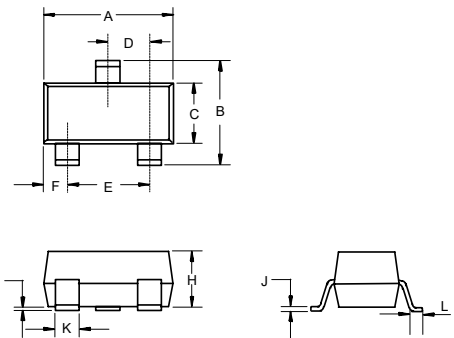
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure:



**200mW, 40V
Schottky Barrier
Diode**

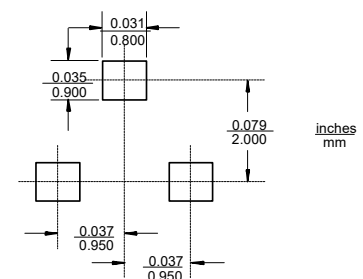
SOT-23



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 | 0.012 | 0.020 | 0.30 | 0.51 | |
| L | 0.007 | 0.020 | 0.20 | 0.50 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

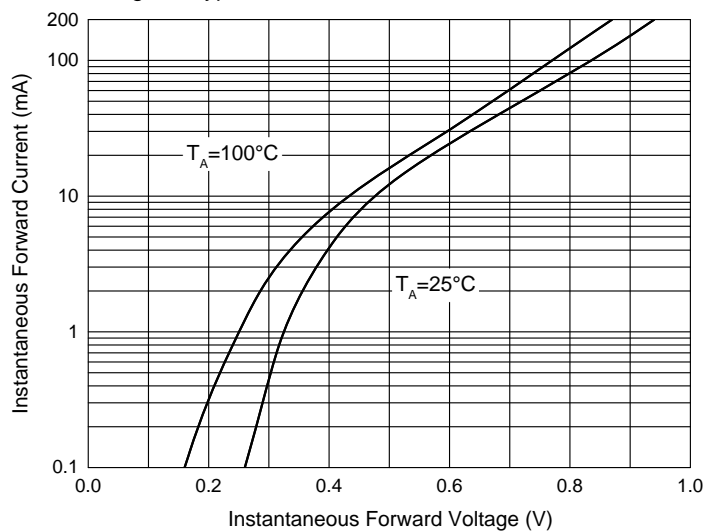


Fig. 2 - Typical Reverse Leakage Characteristics

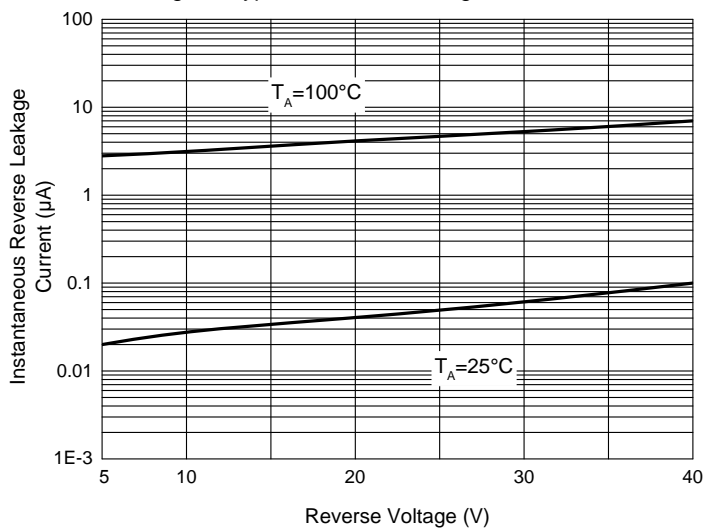
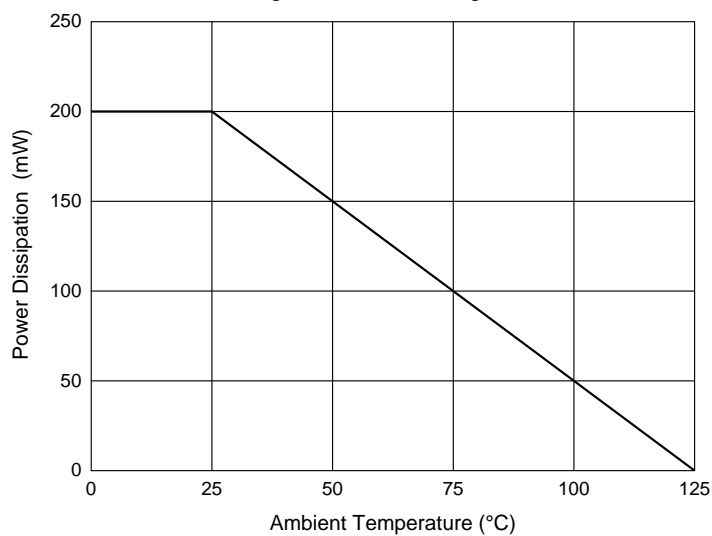


Fig. 3 - Power Derating Curve



Ordering Information

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

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