

Features

- 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

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking	Peak Repetitive Reverse Voltage V_{RRM}
BAS16T	A2	85V
BAW56T	JD	85V
BAV70T	JJ	85V
BAV99T	JE	85V

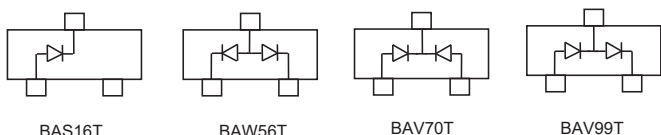
Continuous Forward Current	I_F	75mA	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.0A 1.0A 0.5A	@ t=1.0us @ t=1.0ms @ t=1.0s
Power Dissipation	P_D	150mW	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Maximum Forward Voltage	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 DC Reverse Current At Rated DC Blocking Voltage	I_R	2.5µA 0.03µA	$V_R=75V$ $V_R=20V$
Typical Junction Capacitance	C_J	1.5pF	$V_R=0.0V, f=1.0MHz$
Reverse Recovery Time	t_{rr}	4.0ns	$I_F=10mA, I_R=10mA$ $I_{tr}=0.1 \cdot I_R, R_C=100\Omega$

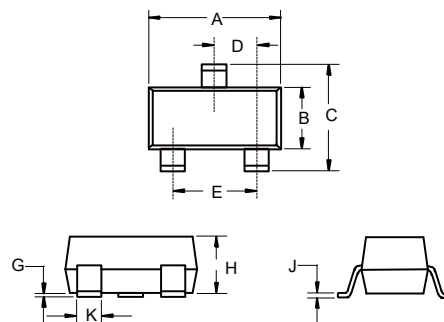
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



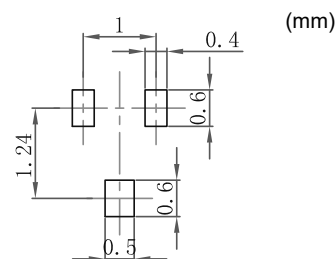
150mW 85Volt Switching Diode

SOT-523



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.030	0.033	0.75	0.85	
C	0.057	0.069	1.45	1.75	
D	0.020	Nominal	0.50	Nominal	
E	0.035	0.043	0.90	1.10	
G	0.000	0.004	0.00	0.10	
H	0.024	0.031	0.60	0.80	
J	0.004	0.008	0.10	0.20	
K	0.006	0.014	0.15	0.35	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

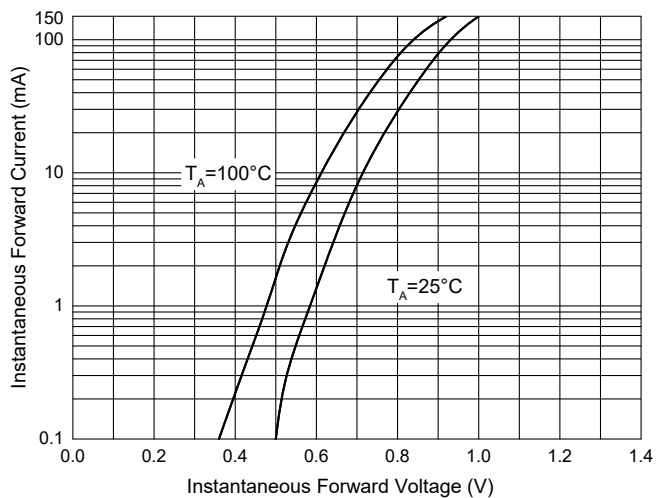


Fig. 2 - Typical Reverse Leakage Characteristics

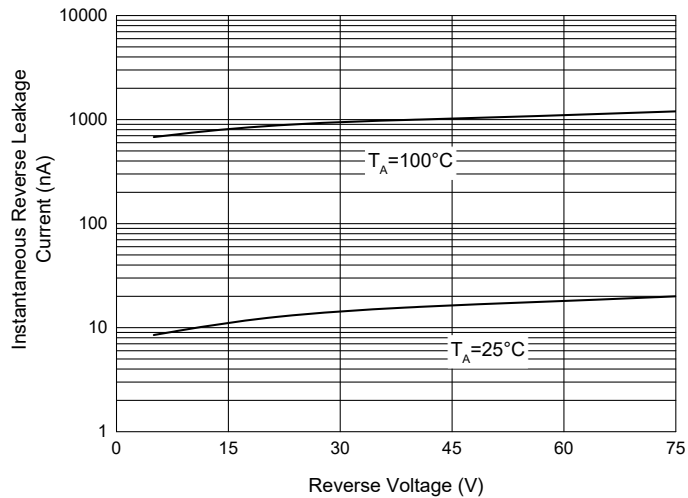


Fig. 3 - Power Derating Curve

