



# THE DATASHEET OF BAV23S-TP



**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: -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	Repetitive Peak Reverse Voltage $V_{RRM}$	Reverse Voltage $V_R$	RMS Reverse Voltage $V_{R(RMS)}$
BAV23A	KT7	250V	200V	141V
BAV23C	KT6	250V	200V	141V
BAV23S	KL31	250V	200V	141V

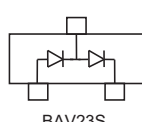
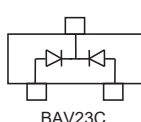
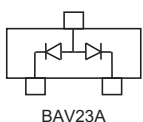
Forward DC Current	$I_{FM}$	225mA	$T_A=25^\circ C$
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	9.0A 3.0A 1.7A	@ t = 1.0µs @ t = 100µs @ t = 10ms
Repetitive Peak Forward Current	$I_{FRM}$	625mA	
Power Dissipation	$P_D$	350mW	

**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 1.25V	$I_{FM}=100.0mA$ $I_{FM}=200.0mA$
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	$I_F=30mA, I_R=30mA$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$

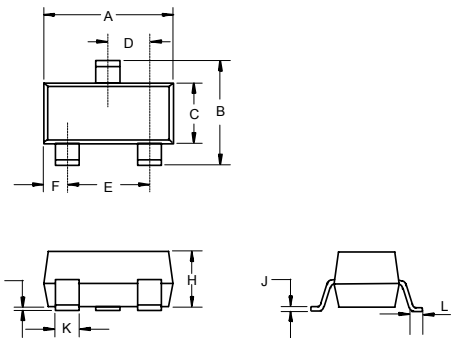
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



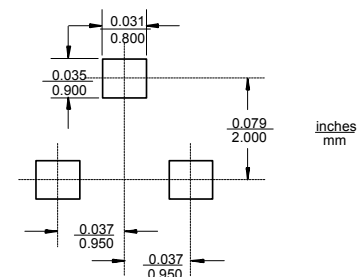
**350mW  
Small Signal Diode**

**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

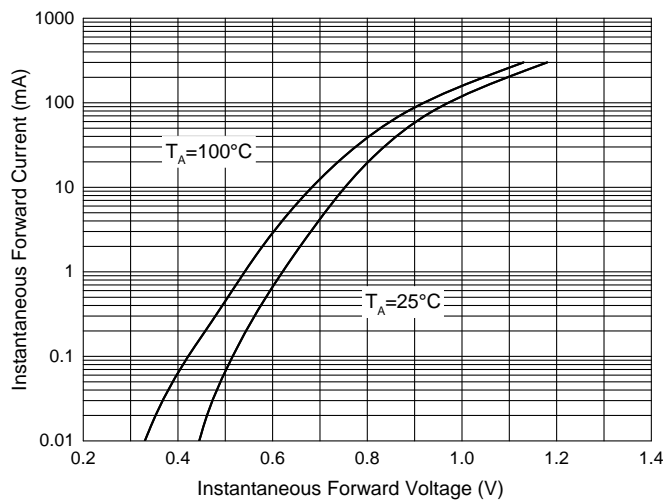


Fig. 2 - Typical Reverse Leakage Characteristics

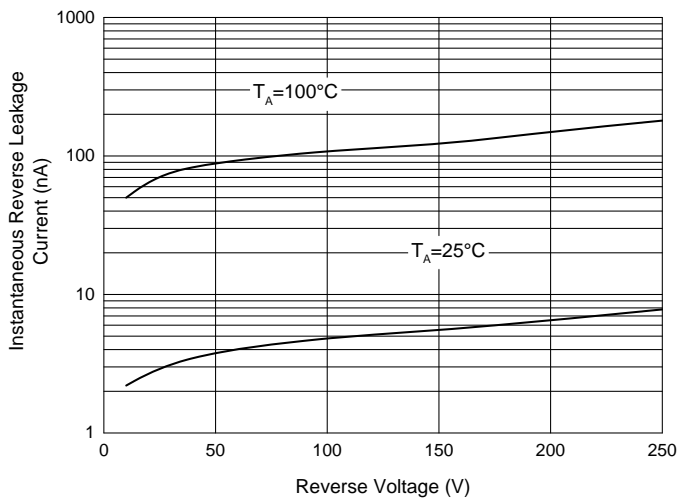
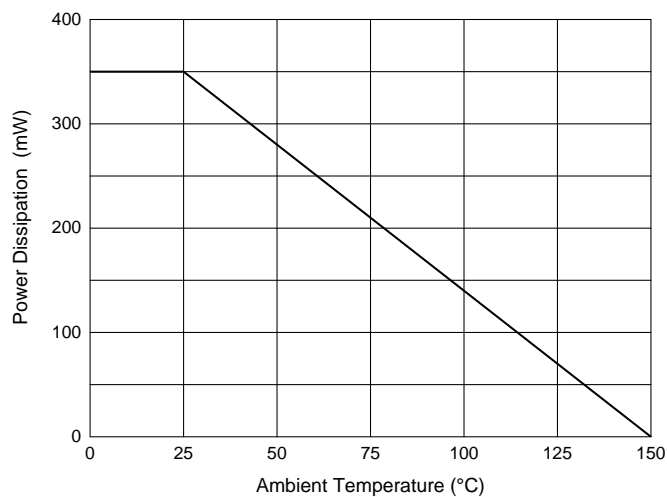


Fig. 3 - Power Derating Curve



## Ordering Information

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

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