

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

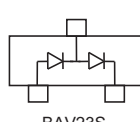
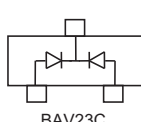
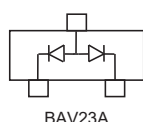
Forward DC Current	I_{FM}	225mA	$T_A=25^\circ\text{C}$
Non-Repetitive Peak Forward Surge Current	I_{FSM}	9.0A 3.0A 1.7A	@ $t = 1.0\mu\text{s}$ @ $t = 100\mu\text{s}$ @ $t = 10\text{ms}$
Repetitive Peak Forward Current	I_{FRM}	625mA	
Power Dissipation	P_D	350mW	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Breakdown Voltage	V_{BR}	250V	$I_R=100\mu\text{A}$
Maximum Forward Voltage	V_F	1.00V 1.25V	$I_{FM}=100.0\text{mA}$ $I_{FM}=200.0\text{mA}$
Maximum leakage current	I_R	100nA	$V_R=250\text{V}$
Typical Junction Capacitance	C_J	5.0pF	$V_R=0.0\text{V}, f=1.0\text{MHz}$
Maximum Reverse Recovery Time	t_{rr}	50.0ns	$I_F=30\text{mA}, I_R=30\text{mA}$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$

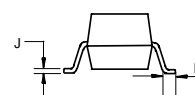
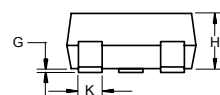
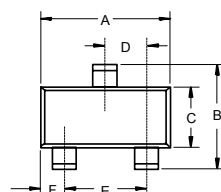
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



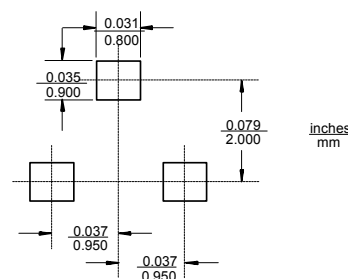
350mW Small Signal Diode

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

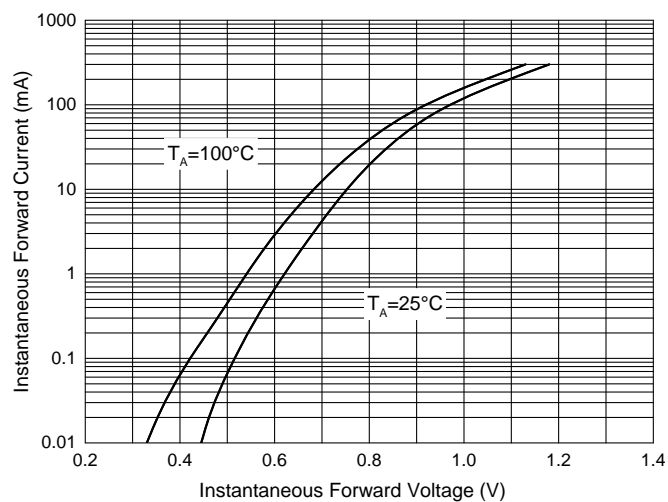


Fig. 2 - Typical Reverse Leakage Characteristics

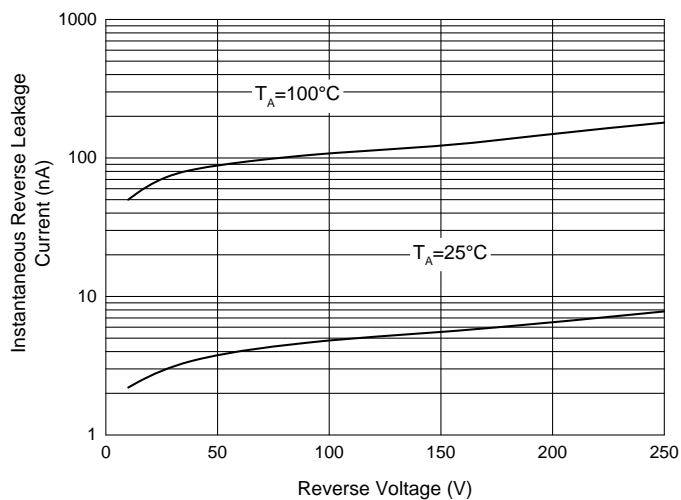
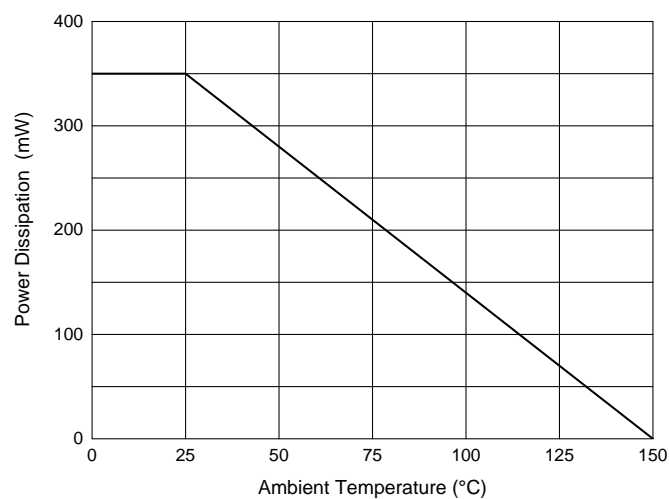


Fig. 3 - Power Derating Curve



Ordering Information

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

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