

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current
- 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)

Mechanical Data

- Weight: 0.008 Grams (Approx.)
- Case: SOT-23

Maximum Ratings

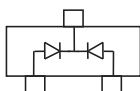
- Operating Junction Temperature Range: 150° C
- Storage Temperature Range: -65°C to +150° C
- Thermal Resistance: 500°C/W Junction to Ambient

MCC Part Number	Device Marking	Peak Repetitive Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	Working Peak Reverse Voltage V_{RWM}
BAV170	JX	85V	60V	85V

Forward Continuous Current	I_F	215mA 125mA	Single diode loaded Note1 Double diode loaded Note1
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.0A 1.0A 0.5A	@ $t=1.0\mu s$ @ $t=1.0ms$ @ $t=1.0s$
Repetitive Peak Forward Current	I_{FRM}	500mA	
Power Dissipation	P_D	250mW	

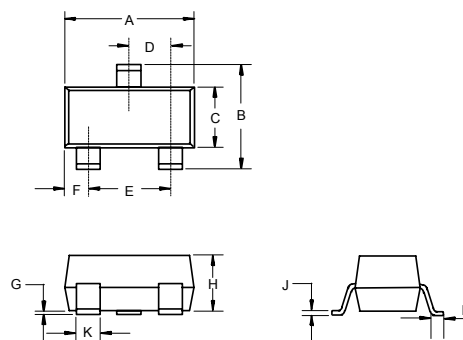
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



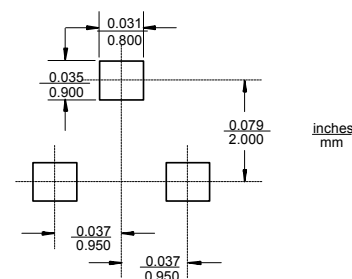
250mW Low Leakage Diode 85 Volts

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



Electrical Characteristics @ 25°C Unless Otherwise Specified

Minimum Reverse Breakdown Voltage	V_{BR}	85V	$I_R=100\mu A$
Maximum Forward Voltage	V_F (Note 2)	0.90V 1.00V 1.10V 1.25V	$I_F=1.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=150.0mA$
Maximum Leakage Current	I_R	5nA	$V_R=75V$
Typical Junction Capacitance	C_J	2.0pF	$V_R=0.0V, f=1.0MHz$
Maximum Reverse Recovery Time	t_{rr}	3.0 μs	$I_F=10mA, I_R=10mA$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$

Note: 2. Short duration pulse test to minimize self-heating effect.

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

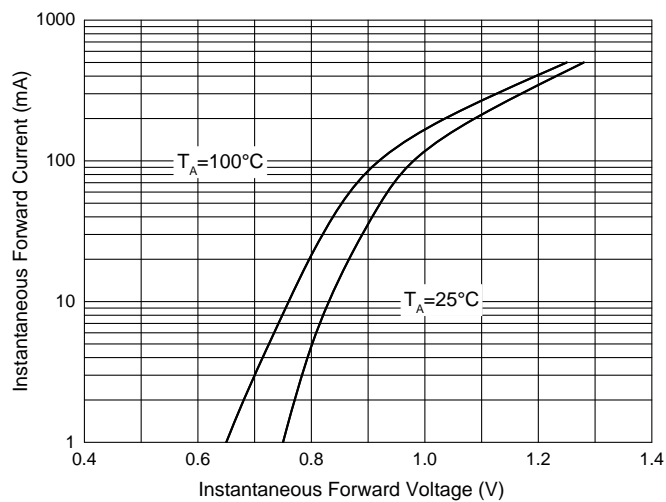


Fig. 2 - Typical Reverse Leakage Characteristics

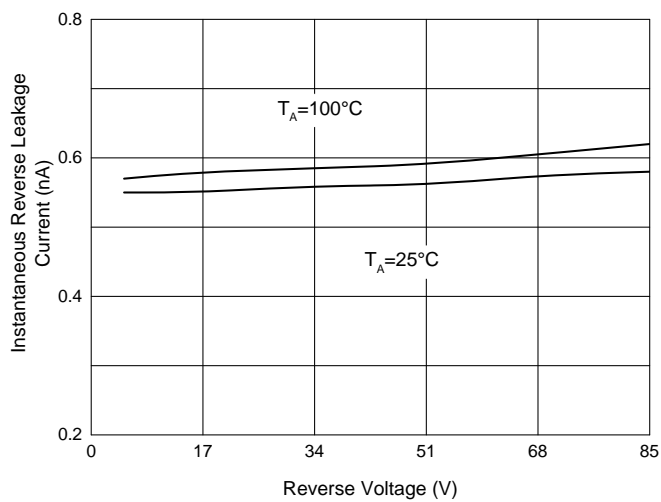
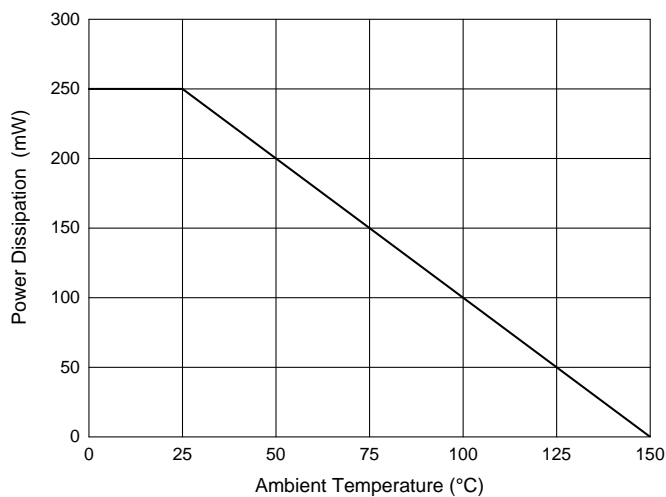


Fig. 3 - Power Derating Curve



Ordering Information

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

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