

## Features

- Silicon Epitaxial Planar Diodes
- 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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 305°C/W Junction to Ambient

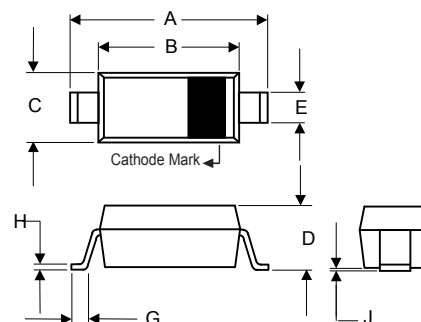
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Continuous Reverse Voltage
BAV19W	A8	120V	71V	100V
BAV20W	T2	200V	106V	150V
BAV21W	T3	250V	141V	200V

Forward DC Current	$I_F$	250mA	$T_A=25^\circ\text{C}$
Rectified Current (Average) Half Wave Rectification with Resist	$I_{F(AV)}$	200mA	$T_A=25^\circ\text{C}$
Repetitive Peak Forward Current	$I_{FRM}$	625mA	$f>50\text{Hz}, T_A=25^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	1.0A	$t<1\text{s}, T_J=25^\circ\text{C}$
Power Dissipation	$P_{tot}$	410mW	$T_A=25^\circ\text{C}$

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

# 410mW Small Signal Diodes 120 to 250 Volts

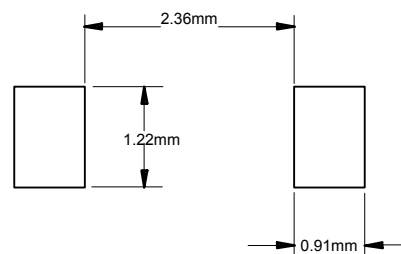
## SOD-123



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.067	1.40	1.70	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

### Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	$V_F$	$I_F=100\text{mA}$			1	V
		$I_F=200\text{mA}$			1.25	V
Dynamic Forward Resistance	$r_f$	$I_F=10\text{mA}$		5		$\Omega$
Reverse Current	$I_R$	BAV19W $V_R=100\text{V}$			100	nA
		BAV20W $V_R=150\text{V}$			100	nA
		BAV21W $V_R=200\text{V}$			100	nA
		BAV19W $V_R=100\text{V}, T_J=100^\circ\text{C}$			15	$\mu\text{A}$
		BAV20W $V_R=150\text{V}, T_J=100^\circ\text{C}$			15	$\mu\text{A}$
		BAV21W $V_R=200\text{V}, T_J=100^\circ\text{C}$			15	$\mu\text{A}$
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$		1.5		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=30\text{mA},$ $I_{rr}=0.1*I_R, R_L=100\Omega$			50	ns

\* Pulse Test: Pulse Width 300  $\mu\text{sec}$ , Duty Cycle 2%

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

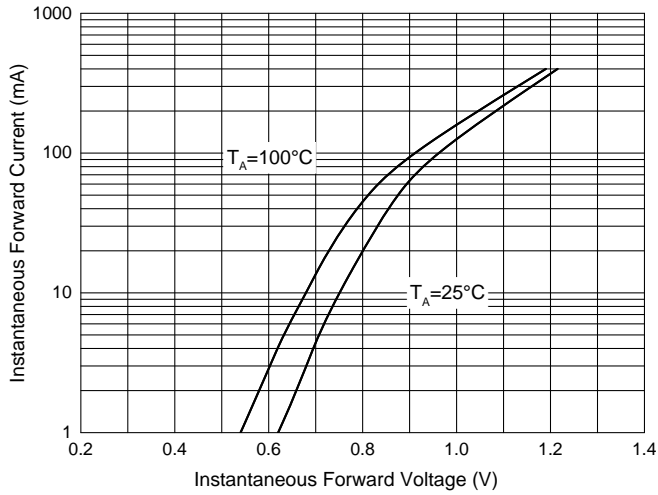


Fig. 2 - Typical Reverse Leakage Characteristics

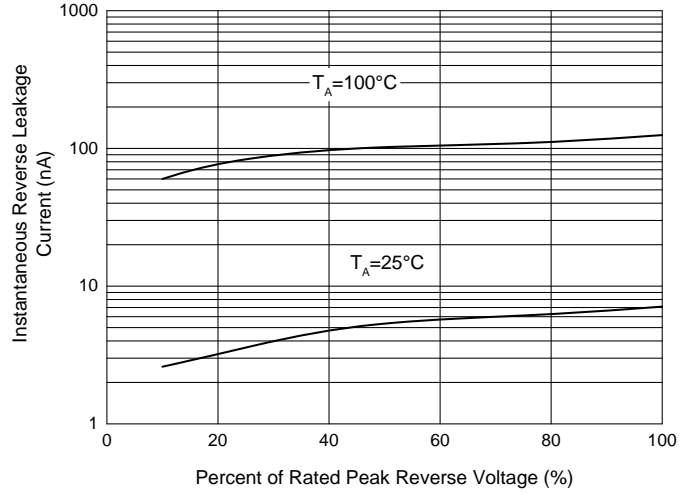


Fig. 3 - Power Derating Curve

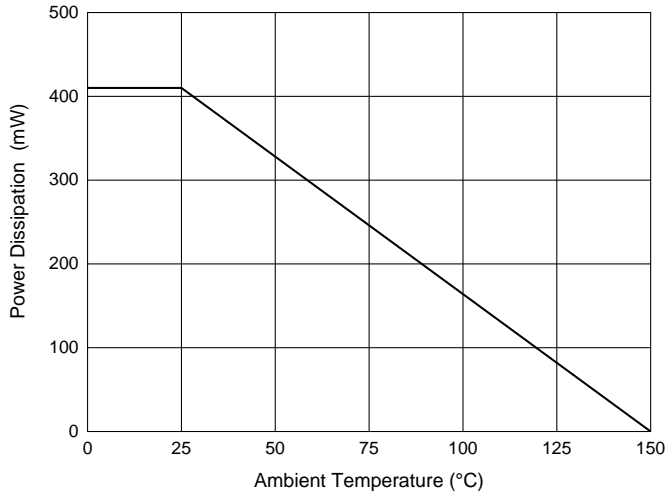


Fig. 4 - Current Derating Curve

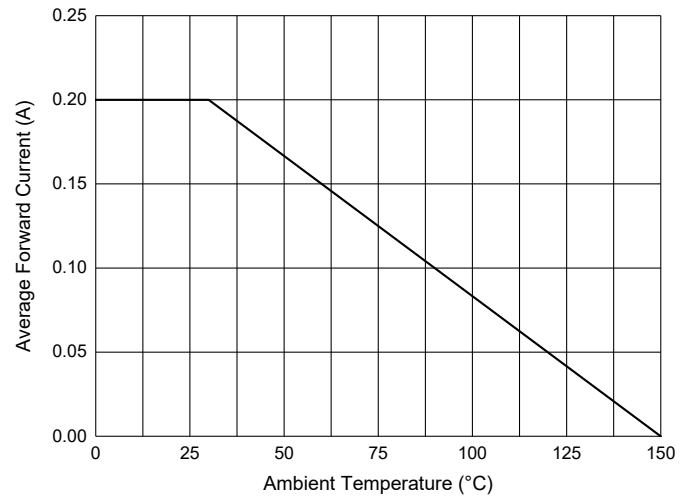
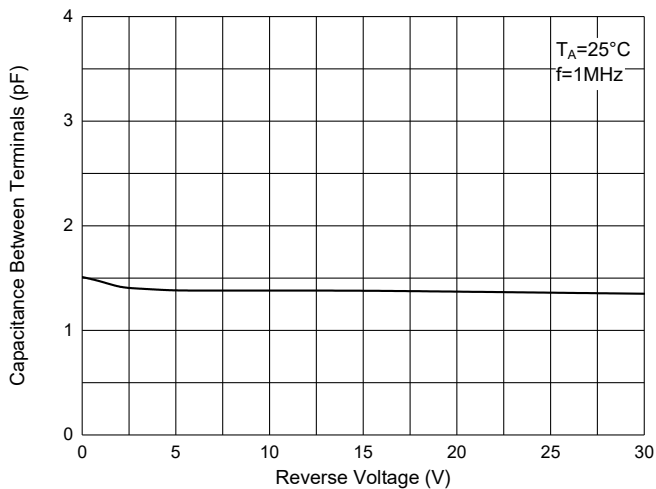


Fig. 5 - Capacitance Characteristics



## Ordering Information

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

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