

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Silicon Epitaxial Planar Diodes
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- 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 (Note 2)

MCC Part Number	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage V_R
BAV19WHE3	120V	85V	120V
BAV20WHE3	200V	141V	200V
BAV21WHE3	250V	177V	250V

Electrical Characteristics @ 25°C Unless Otherwise Specified

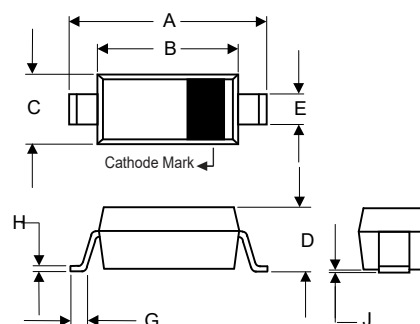
Average Forward Current	$I_{F(AV)}$	200mA	(Note 2)
Peak Forward Surge Current	I_{FSM}	1A	$t < 1s$
Power Dissipation	P_d	410mW	$T_A = 25^\circ C$

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

Note: 2. Mounted on FR-4 board with recommended pad layout.

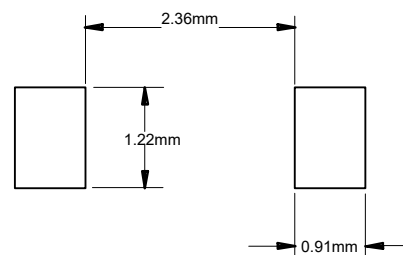
410mW Small Signal Diodes 120 to 250 Volts

SOD-123

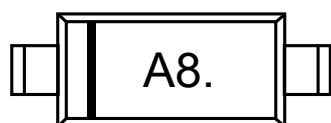


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

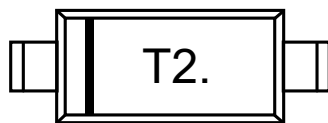
Suggested Solder Pad Layout



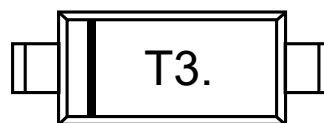
Internal Structure and Marking Code



BAV19WHE3



BAV20WHE3



BAV21WHE3

Electrical Characteristics @ 25°C Unless Otherwise Specified

BAV19WHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	120			V
Forward Voltage	V_F	$I_F=100mA$			1.00	V
		$I_F=200mA$			1.25	V
Reverse Current	I_R	$V_R=100V$			100	nA
		$V_R=100V, T_J=100^\circ C$			15	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		1.5	2.0	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA,$ $I_{rr}=3mA, R_L=100\Omega$			50	ns

BAV20WHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	200			V
Forward Voltage	V_F	$I_F=100mA$			1.00	V
		$I_F=200mA$			1.25	V
Reverse Current	I_R	$V_R=150V$			100	nA
		$V_R=150V, T_J=100^\circ C$			15	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		1.5	2.0	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA,$ $I_{rr}=3mA, R_L=100\Omega$			50	ns

BAV21WHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	250			V
Forward Voltage	V_F	$I_F=100mA$			1.00	V
		$I_F=200mA$			1.25	V
Reverse Current	I_R	$V_R=200V$			100	nA
		$V_R=200V, T_J=100^\circ C$			15	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		1.5	2.0	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA,$ $I_{rr}=3mA, R_L=100\Omega$			50	ns

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

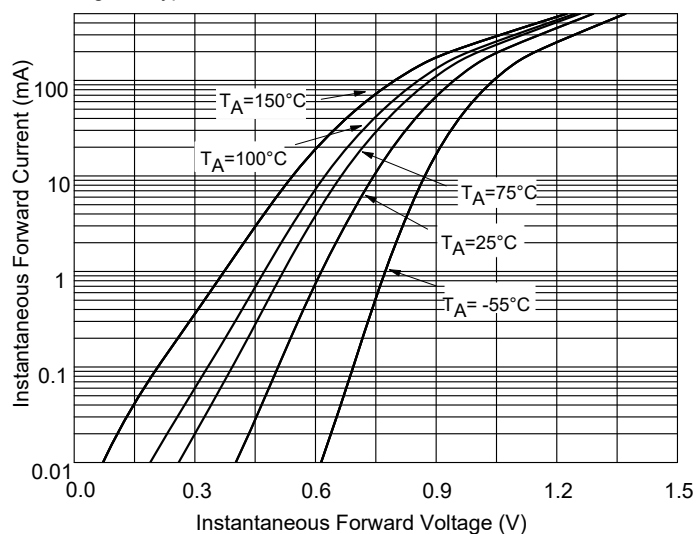


Fig. 2 - Typical Reverse Leakage Characteristics

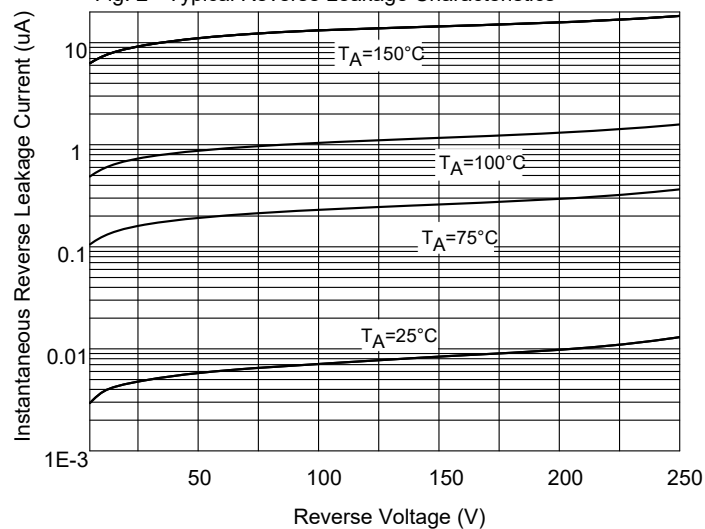


Fig. 3 - Capacitance Characteristics

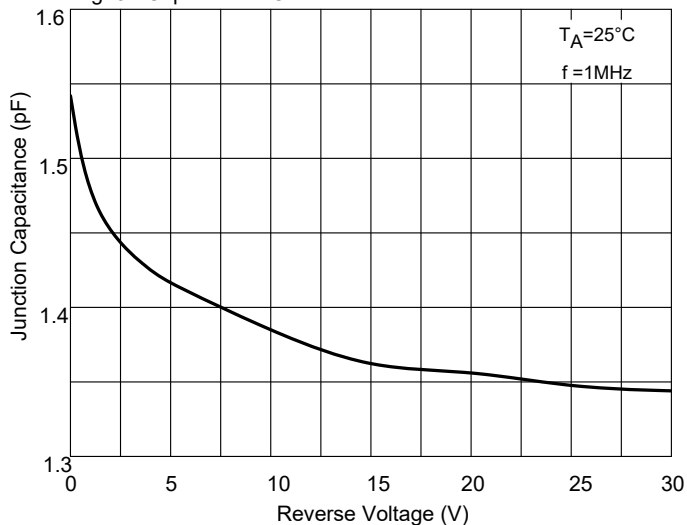
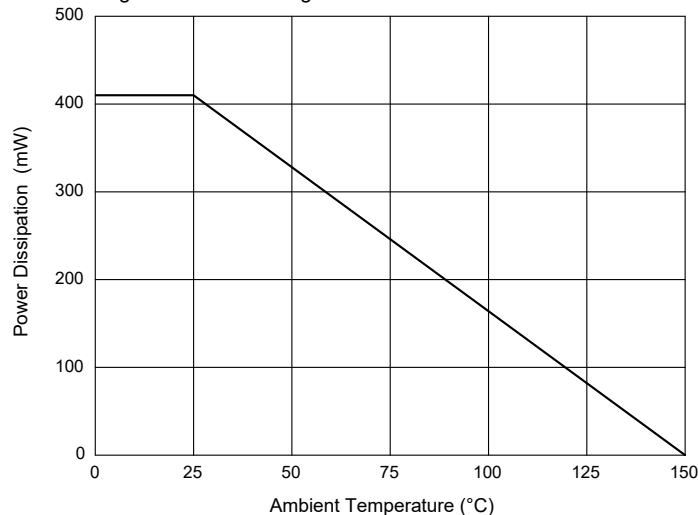


Fig. 4 - Power Derating Curve



Ordering Information

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

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