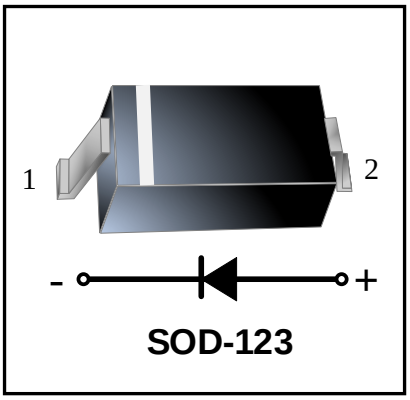
BAV21W

Fast Switching Diode

Features

- Fast Switching Devices
- General Purpose Diodes
- SOD-123 Micro SMD Package
- RoHS Compliant / Green EMC
- Matte Tin (Sn) Lead Finish
- Cathode Band / Device Marking



SOD-123

Mechanical Characteristics

- SOD-123 Package
- Marking : Making Code
- RoHS Compliant

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Repetitive Voltage	V_{RM}	250	V
Repetitive Peak Reverse Voltage	V_{RRM}	200	V
Non-repetitive Peak Forward Surge Current @ t=8.3mS	I_{FSM}	2.0	A
Continuous Forward Current	I_O	200	mA
Power Dissipation	P_D	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	℃/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	℃

Electrical Characteristics (T_{amb}=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 100mA	-	-	1	V
		I_F = 200mA	-	-	1.25	
Reverse Voltage Leakage Current	I_R	V_R = 200V	-	-	0.1	μA
Reverse Breakdown Voltage	V_{BR}	I_R = 100μA	250	-	-	V
Diode Capacitance	C_D	V_R =0V,f=1MHz	-	-	5.0	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=30mA,I_{RR}=0.1*I_R, R_L=100Ω	-	-	50	ns

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Typical Characteristics

Figure 1. I_F vs. V_F

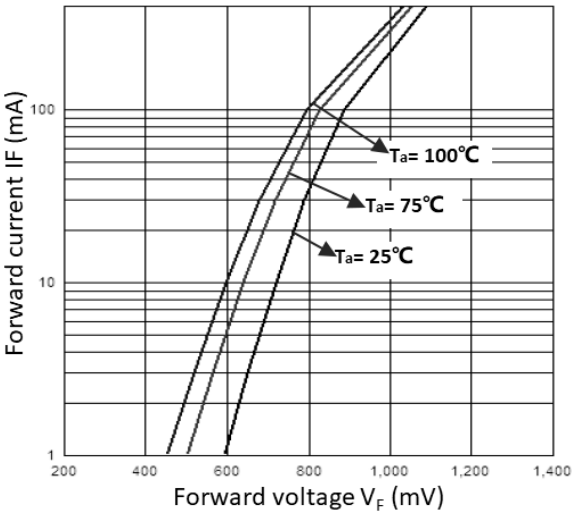
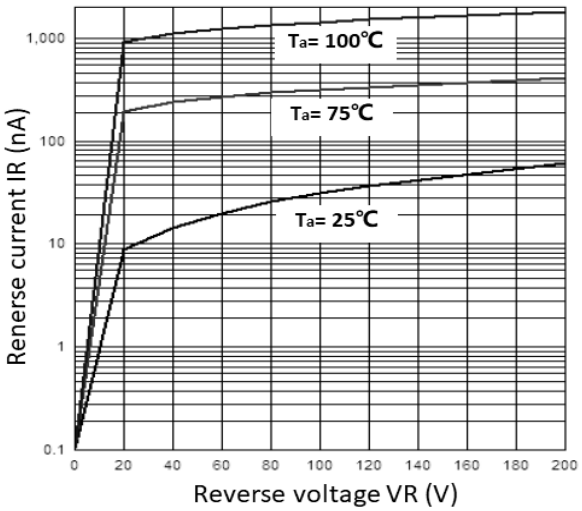
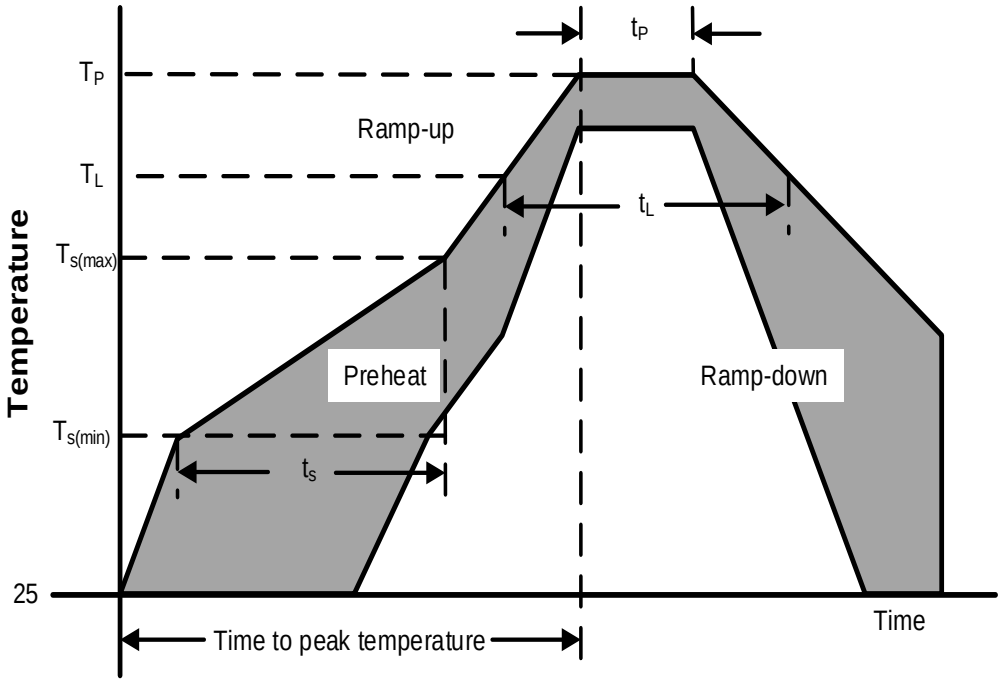


Figure 2. I_R vs. V_R



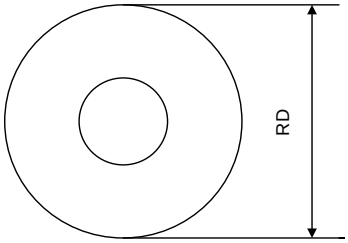
Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (ts)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{S(max)}$ to T_L——Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		280°C

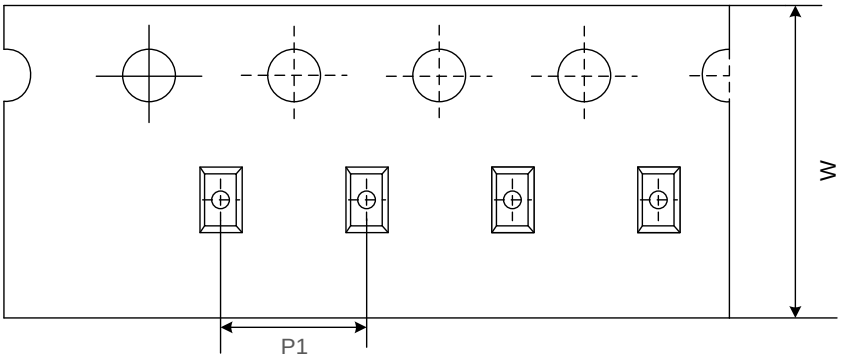


Tape And Reel Information

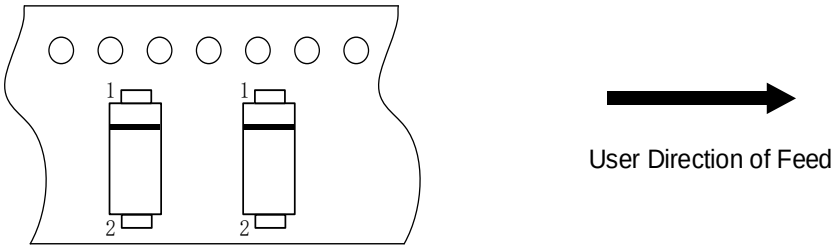
Reel Dimensions



Tape Dimensions



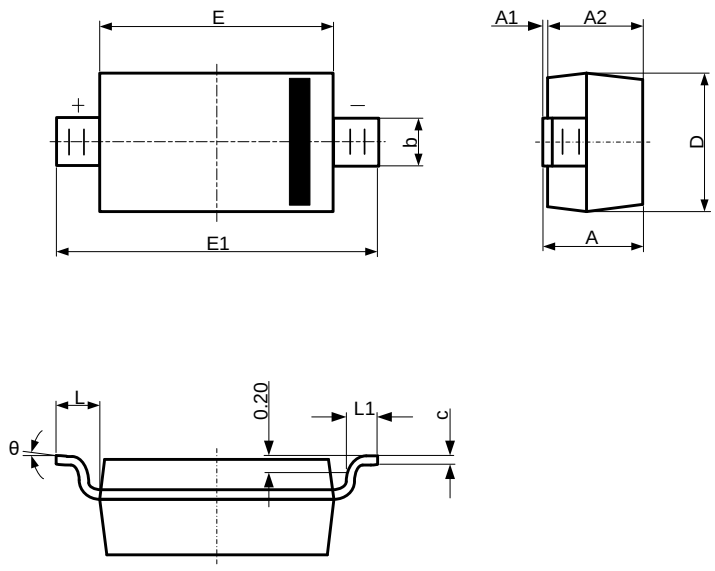
Quadrant Assignments For PIN1 Orientation In Tape

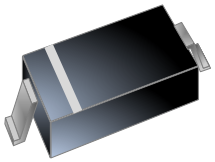


RD	Reel Dimensions	7 inch
W	Overall width of the carrier tape	8 mm
P1	Pitch between successive cavity centers	4mm

Outline Drawing – SOD-123

PACKAGE OUTLINE

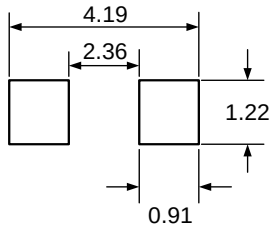




SOD-123

DIMENSIONS

SYMBOL	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



DIMENSIONS: MILLIMETERS

Notes

1. Controlling Dimensions in Millimeters.
2. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes

Part Number	BAV21W
Marking Code	T3

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.