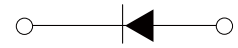


FEATURES

- | Low Reverse Current
- | Surface Mount Package Ideally Suited for Automatic Insertion
- | Fast Switching Speed
- | For General Purpose Switching Applications



SOD-123



Schematic Symbol

MECHANICAL DATA

- | SOD-123 Small Outline Plastic Package
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A = 25°C)

Parameter	Symbol	BAV19W	BAV20W	BAV21W	Unit
Marking		A8	T2	T3	
Non-Repetitive Peak Reverse Voltage	V _{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V _{RRM}	100	150	200	V
Working Peak Reverse Voltage	V _{RWM}	100	150	200	V
RMS Reverse Voltage	V _{R(RMS)}	71	106	141	V
Power Dissipation	P _D	250			mW
Average Rectified Output Current	I _O	200			mA
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I _{FSM}	2.0			A
Thermal Resistance from Junction to Ambient	R _{θJA}	500			°C/W
Junction Temperature	T _J	150			°C
Storage Temperature Range	T _{STG}	-55 to 150			°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Parameter	Test Condition	Symbol	Min.	Max.	Unit
Reverse current	BAV19W $V_R = 100\text{V}$	I_R		0.1	μA
	BAV20W $V_R = 150\text{V}$			0.1	μA
	BAV21W $V_R = 200\text{V}$			0.1	μA
Forward voltage	$I_F = 100\text{mA}$	V_F		1	V
	$I_F = 200\text{mA}$			1.25	V
Total capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_{tot}		5	pF
Reverse recovery time	$I_F = I_R = 30\text{mA}, I_{\text{tr}} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}		50	ns

CHARACTERISTIC CURVES

Fig 1. Forward Characteristics

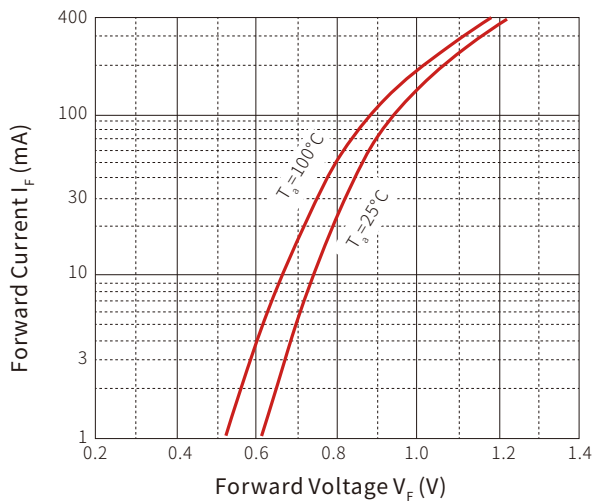


Fig 2. Reverse Characteristics

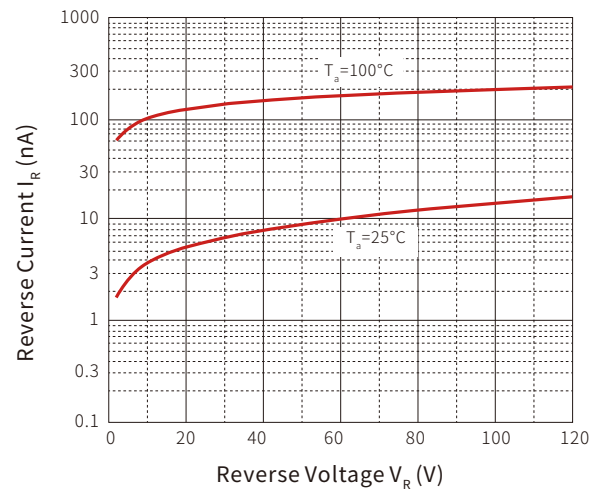
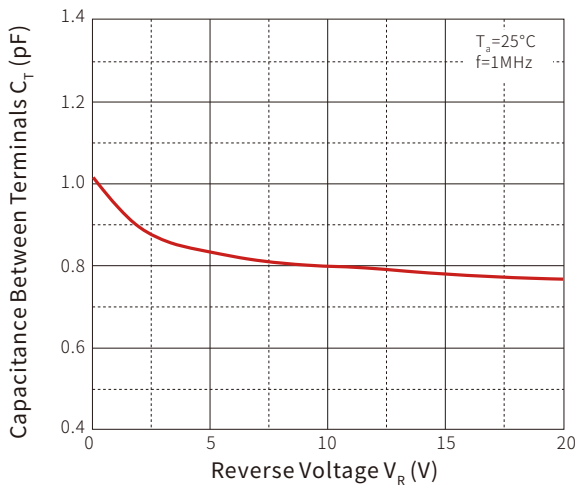
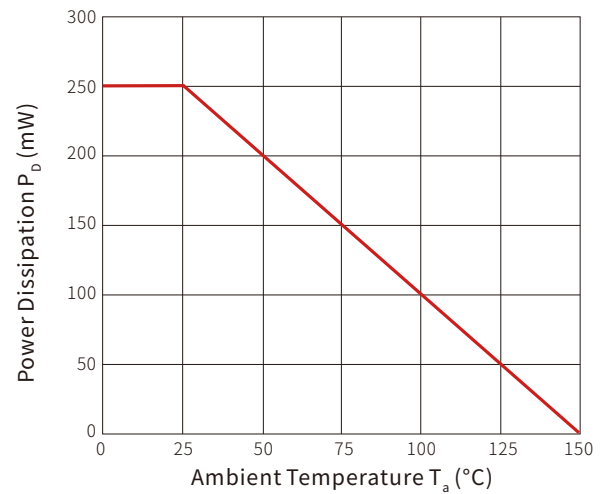
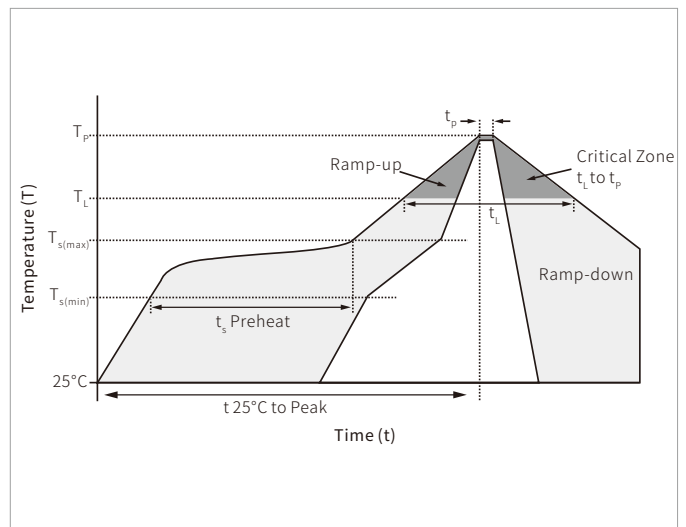


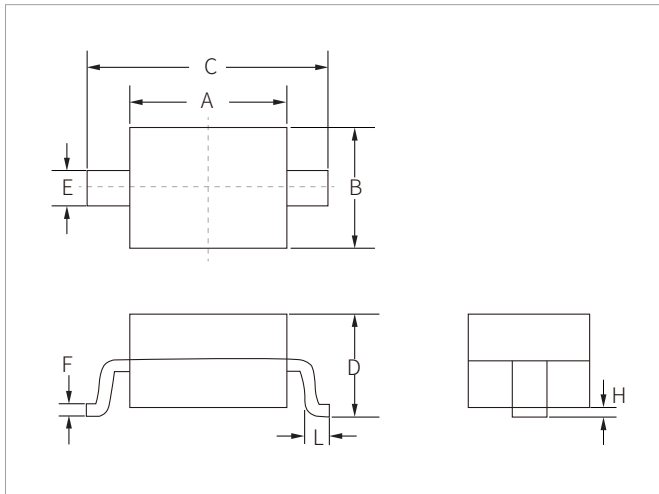
Fig 3. Capacitance Characteristics

Fig 4. Power Derating Curve


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150°C
	Temperature Max ($T_{s(\max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

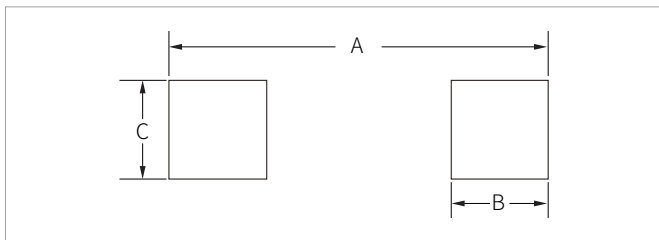


SOD-123 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	2.80	0.102	0.110
B	1.50	1.70	0.059	0.067
C	3.55	3.85	0.140	0.152
D	0.95	1.25	0.037	0.049
E	0.45	0.65	0.018	0.026
F	0.08	0.15	0.003	0.006
H	0.00	0.10	0.000	0.004
L	0.25	0.45	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAV19W-BAV21W	SOD-123	3000PCS	7"

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By QR Code

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