

FEATURES

- | Low Reverse Current
- | Surface Mount Package Ideally Suited for Automatic Insertion
- | Fast Switching Speed
- | For General Purpose Switching Applications
- | Meet AEC-Q101 Requirements



SOD-323



Schematic Symbol

APPROVALS

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

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	BAV19WSQ	BAV20WSQ	BAV21WSQ	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_R	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Average Rectified Output Current	I_O	200			mA
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	2.0			A
Power Dissipation	P_d	250			mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			$^{\circ}\text{C/W}$
Junction Temperature	T_J	150			$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150			$^{\circ}\text{C}$

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

Parameter		Test Condition	Symbol	Min.	Max.	Unit
Reverse current	BAV19WSQ	$V_R=100\text{V}$	$V_{(BR)}$		0.1	μA
	BAV20WSQ	$V_R=120\text{V}$			0.1	
	BAV21WSQ	$V_R=200\text{V}$			0.1	
Forward voltage		$I_F=100\text{mA}$	V_F		1	V
		$I_F=200\text{mA}$			1.25	V
Reverse recovery time		$I_F=I_R=30\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$	t_{rr}		50	ns
Total capacitance		$V_R=0\text{V}, f=1.0\text{MHz}$	C_{tot}		5	pF

CHARACTERISTIC CURVES

Fig 1. Forward Characteristics

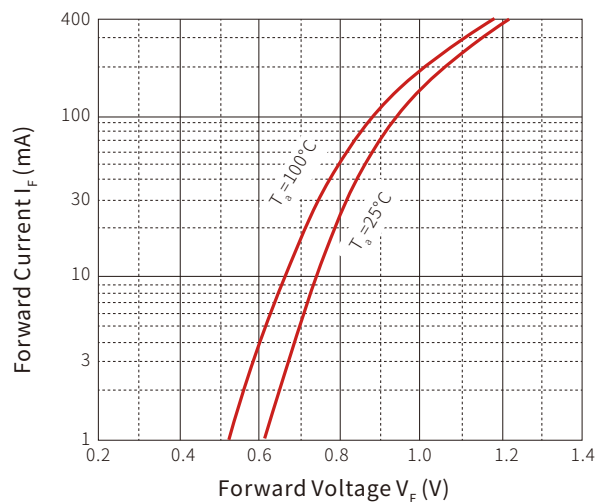


Fig 2. Reverse Characteristics

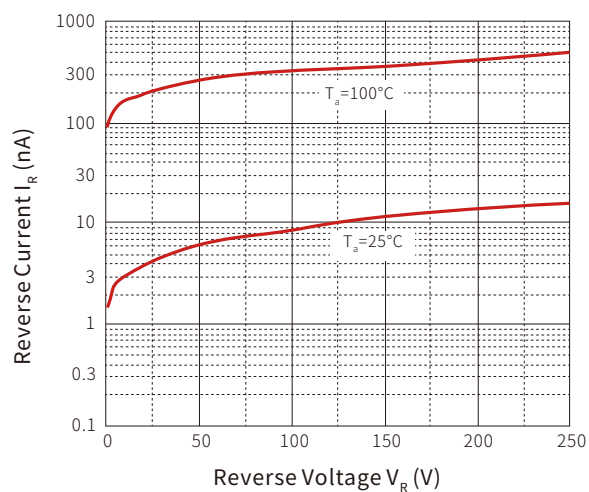




Fig 3. Capacitance Characteristics

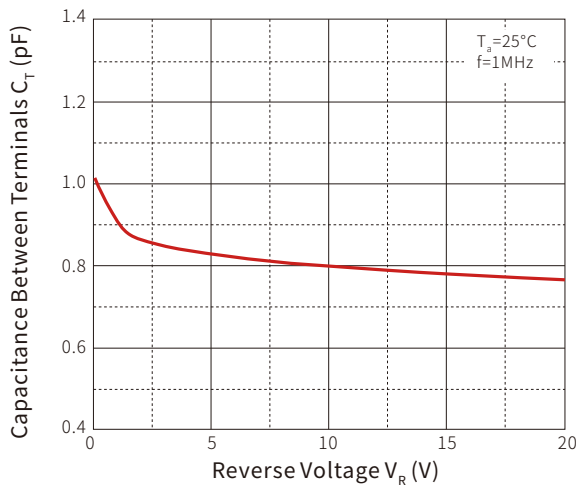
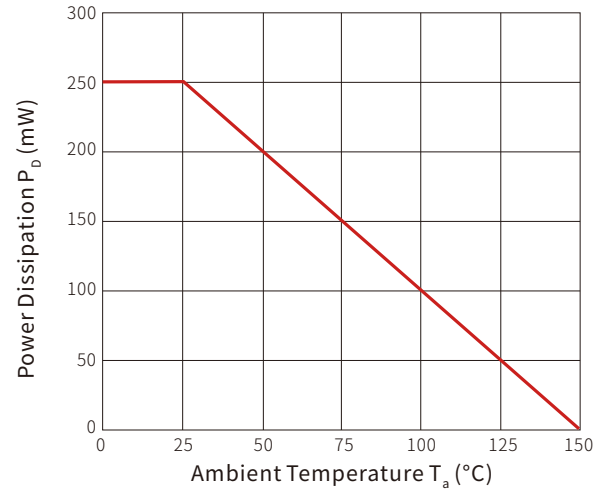
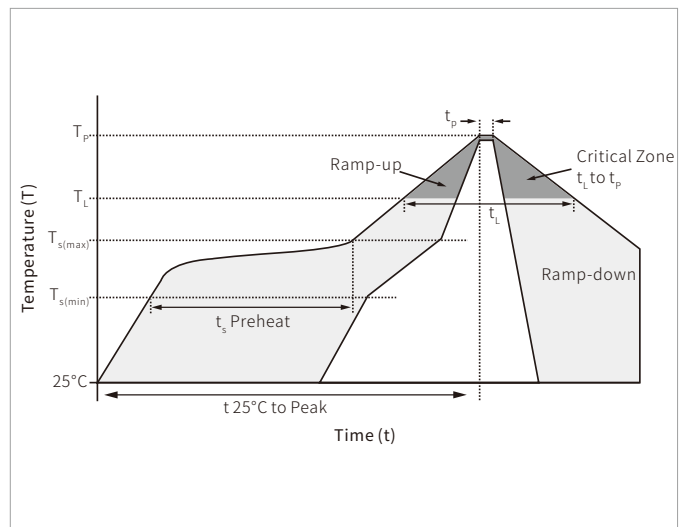


Fig 4. Power Derating Curve

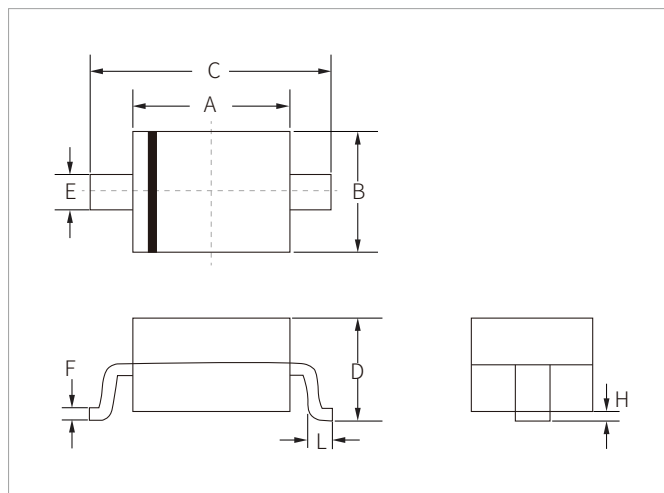


SOLDERING PARAMETERS

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

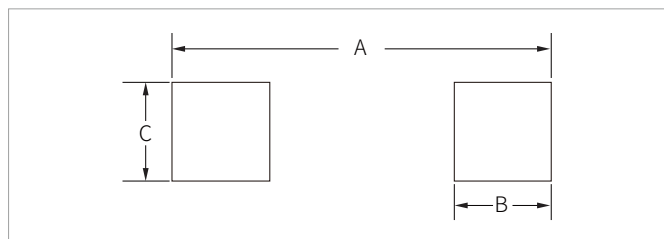


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.75	0.093	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

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
BAV19WSQ-BAV21WSQ	SOD-323	3000PCS	7"

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By QR Code

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