

## FEATURES

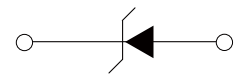
- | Fast Switching Device (TRR <50nS)
- | Power Dissipation of 250mW
- | High Stability and High Reliability
- | Low Reverse Leakage



SOD-323



Marking



Schematic Symbol

## MECHANICAL DATA

- | SOD-323 Small Outline Plastic Package
- | Polarity: Color Band Denotes Cathode End
- | Mounting Position: Any

## APPROVALS

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

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	200	V
Peak Reverse Voltage	V <sub>RM</sub>	150	V
Power Dissipation	P <sub>d</sub>	250	mW
Average Rectified Current	I <sub>O</sub>	200	mA
Non-repetitive Peak Forward Current	I <sub>FM</sub>	400	mA
Peak Forward Surge Current @tp=1ms; T <sub>A</sub> =25°C	I <sub>FSM</sub>	1.7	A
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	500	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to 150	°C

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

Parameter	Test Condition	Symbol	Min.	Max.	Unit
Breakdown Voltage	$I_R = 100\mu\text{A}$	$V_{BR}$	200		V
Reverse Leakage Current	$V_R = 150\text{V}$	$I_R$		0.1	$\mu\text{A}$
Forward Voltage	$I_F = 100\text{mA}$	$V_F$		1.00	V
	$I_F = 200\text{mA}$			1.25	V
Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_{tot}$		5	pF
Reverse Recovery Time	$I_F = I_R = 30\text{mA}, I_{rr} = 3\text{mA}, R_L = 100\Omega$	$t_{rr}$		50	nS

## CHARACTERISTIC CURVES

Fig 1. Forward Characteristics

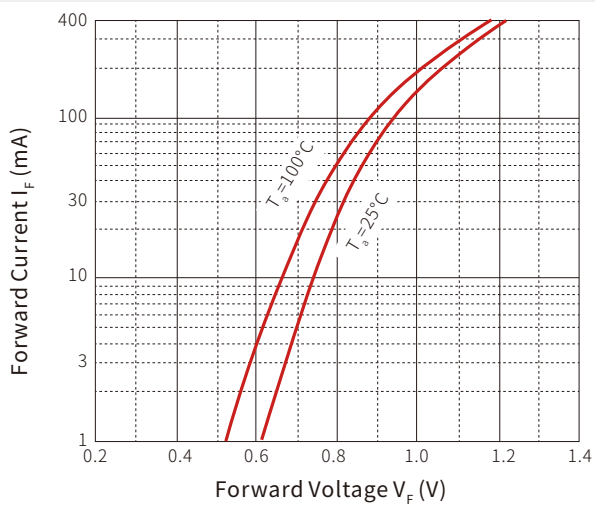
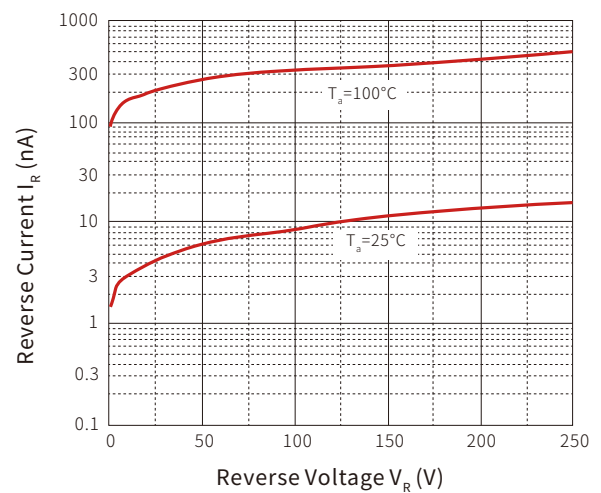
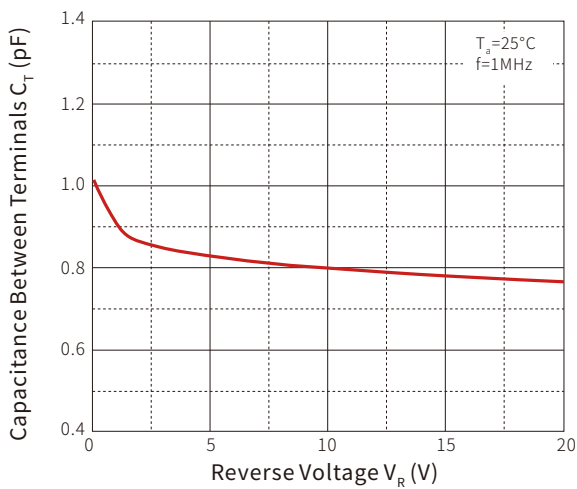
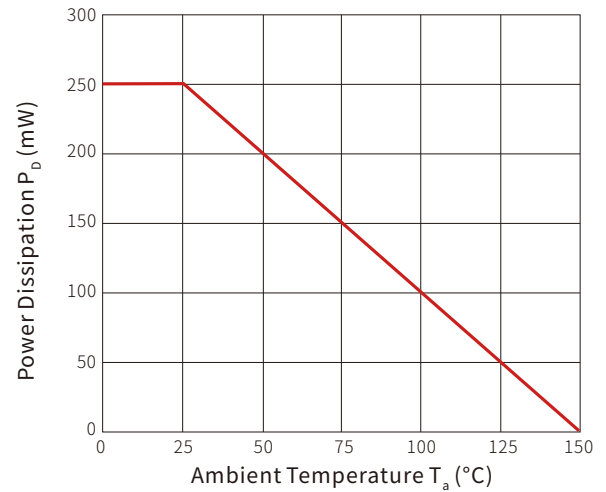


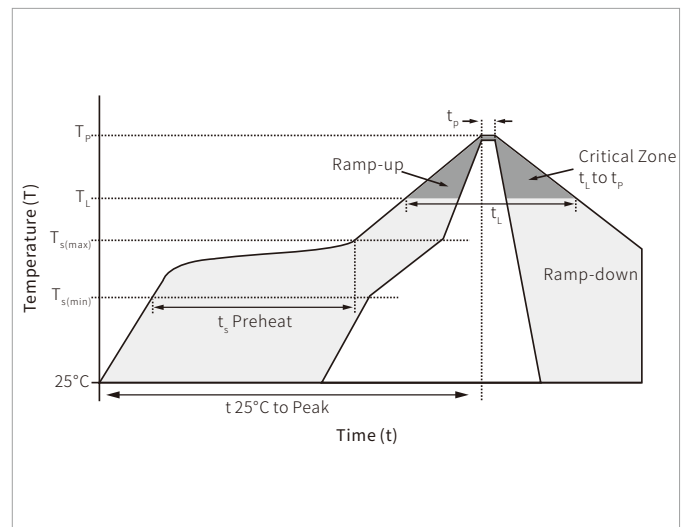
Fig 2. Reverse Characteristics



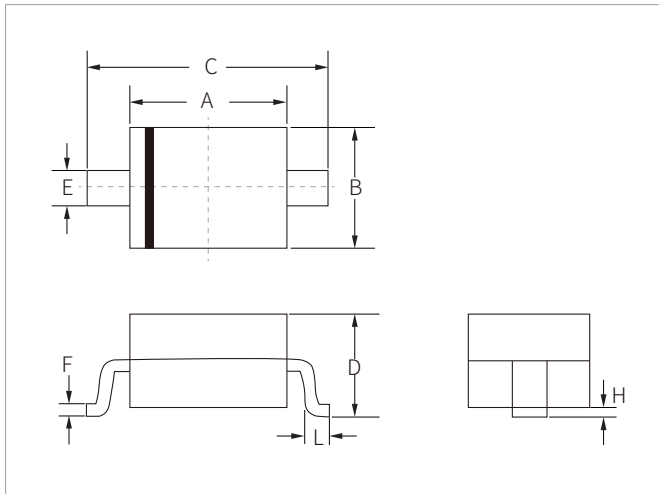
**Fig 3. Capacitance Characteristics**

**Fig 4. Power Derating Curve**


## SOLDERING PARAMETERS

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

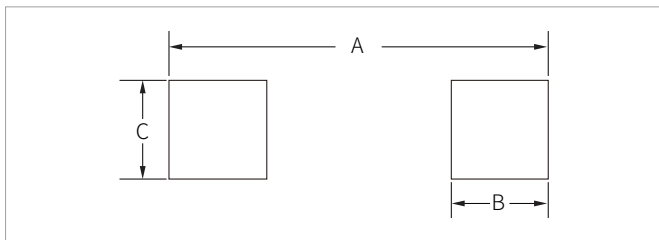


## SOD-323 PACKAGE INFORMATION



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
BAV20WS	SOD-323	3000PCS	7"

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