

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

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

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

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	200	V
Peak Reverse Voltage	V_{RM}	150	V
Power Dissipation	P_d	250	mW
Average Rectified Current	I_O	200	mA
Non-repetitive Peak Forward Current	I_{FM}	400	mA
Peak Forward Surge Current @ $t_p=1\text{ms}$; $T_A=25^{\circ}\text{C}$	I_{FSM}	1.7	A
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to 150	$^{\circ}\text{C}$

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	μA
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

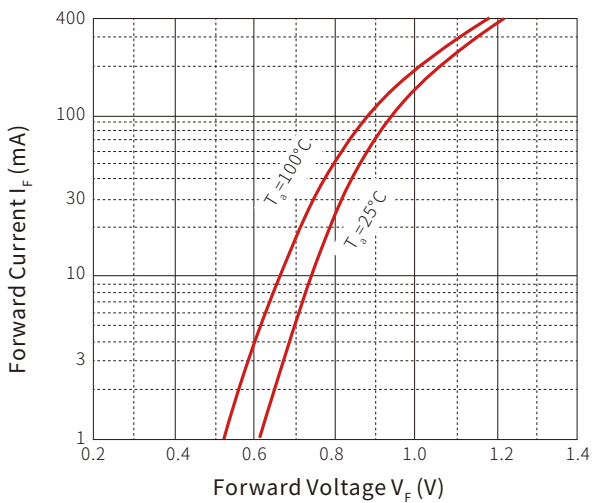


Fig 2. Reverse Characteristics

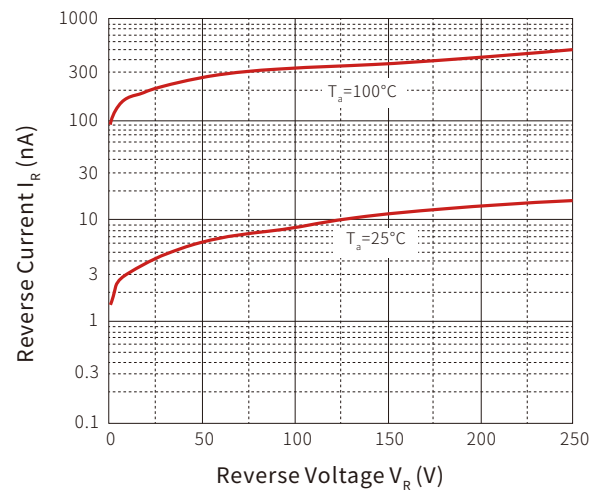
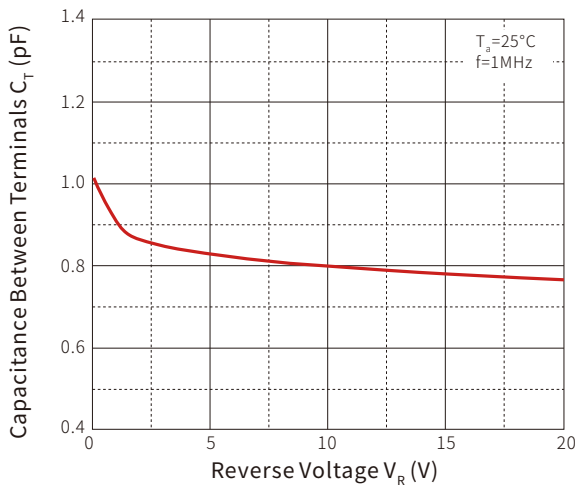
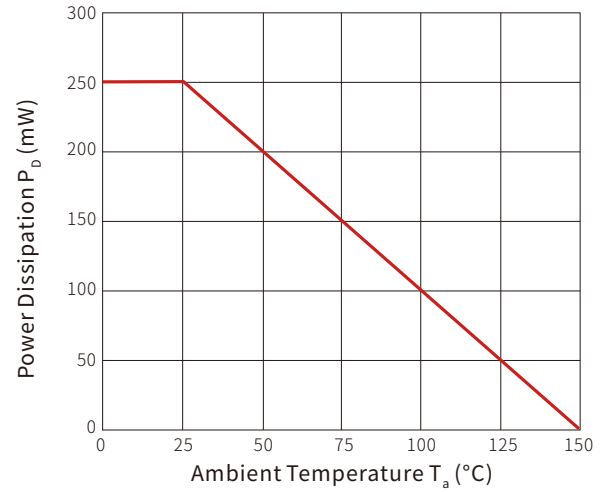
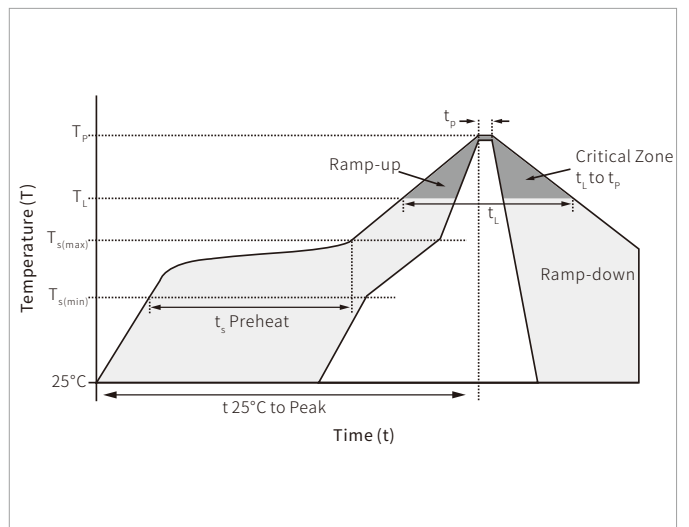


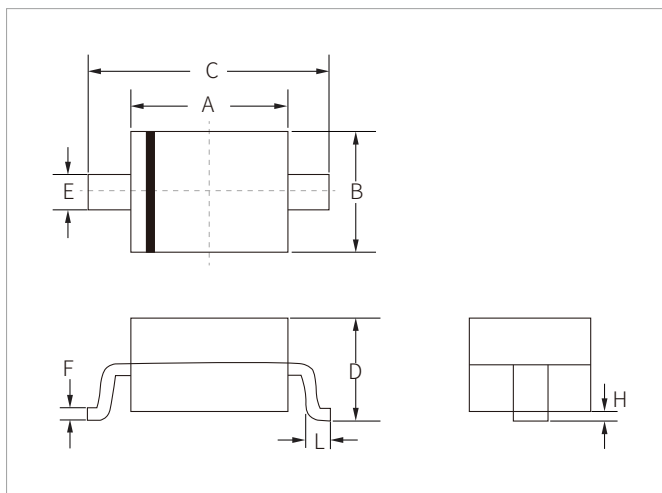
Fig 3. Capacitance Characteristics

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 $^\circ\text{C}$

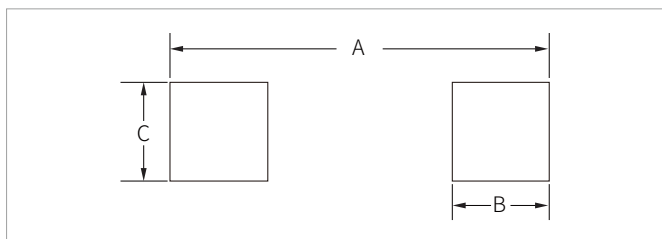


SOD-323 PACKAGE INFORMATION



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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