

FEATURES

- | High Current Rectifier Schottky Diode with Low VF Drop
- | Low Voltage ,Low Inductance
- | For Power Supply
- | For Detection and Step-up-Conversion



SOD-323

MECHANICAL DATA

- | Encapsulation: SOD-323 Small Outline Plastic Package
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any



Marking



Schematic Symbol

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Dc Blocking Voltage	V _R	10	V
Forward Current	I _F	3	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave	I _{FSM}	5	A
Typical Thermal Resistance	R _{θJA}	286	°C/W
Power Dissipation	P _D	350	mW
Operating Junction Range	T _J	125	°C
Storage Temperature Range	T _{STG}	-65 to 150	°C

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=100\text{mA}$		0.33	0.38	V
		$I_F=500\text{mA}$		0.41	0.50	V
		$I_F=1000\text{mA}$		0.45	0.60	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=1\text{mA}$	10			V
Maximum Reverse Current $T_J=25^{\circ}\text{C}$	I_R	$V_R=5\text{V}$			15	μA
		$V_R=8\text{V}$			25	μA
Total Capacitance	C_{tot}	$V_R=5.0\text{V}$, $f=1\text{MHz}$		30		pF

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

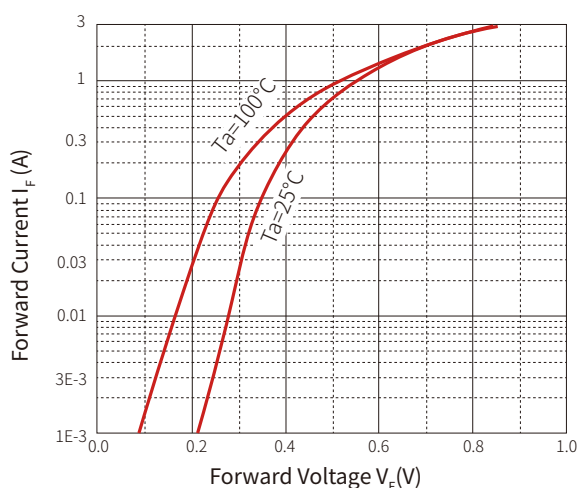


Fig.2 Reverse Characteristics

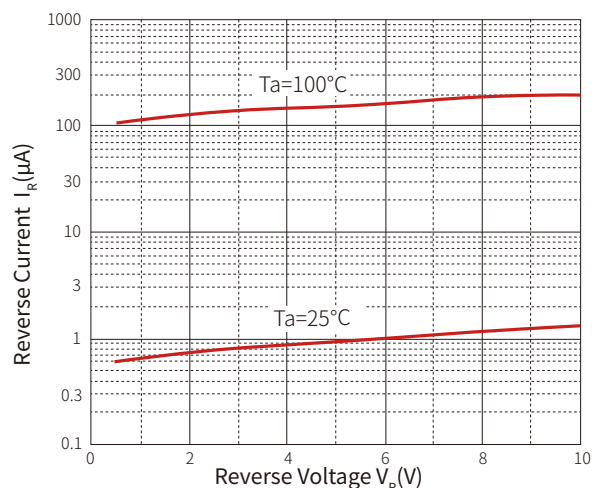
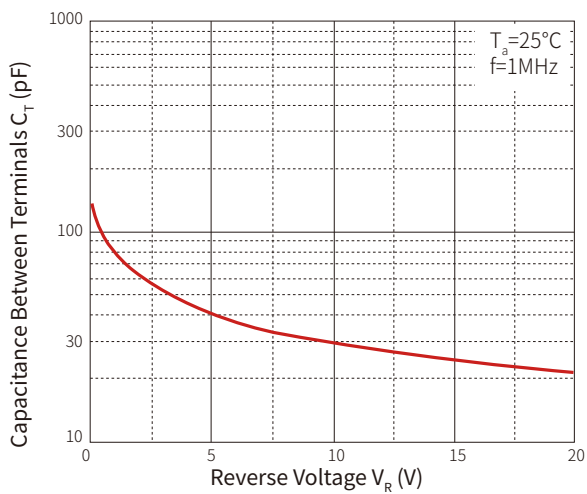
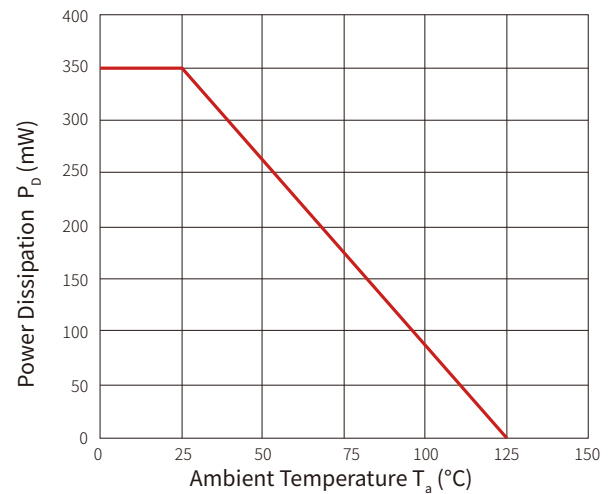
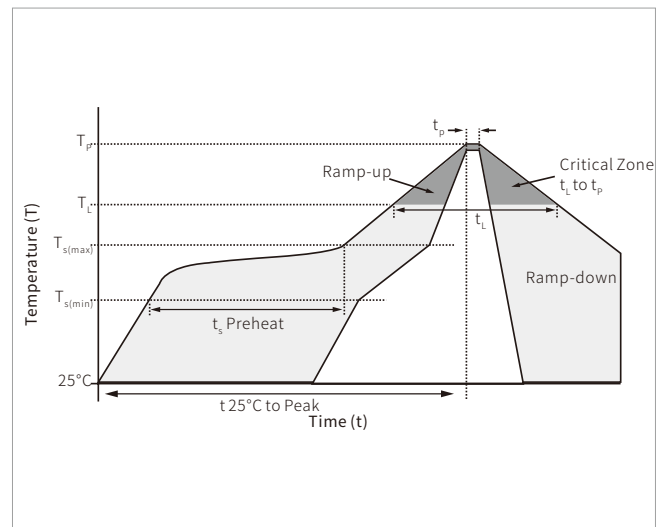


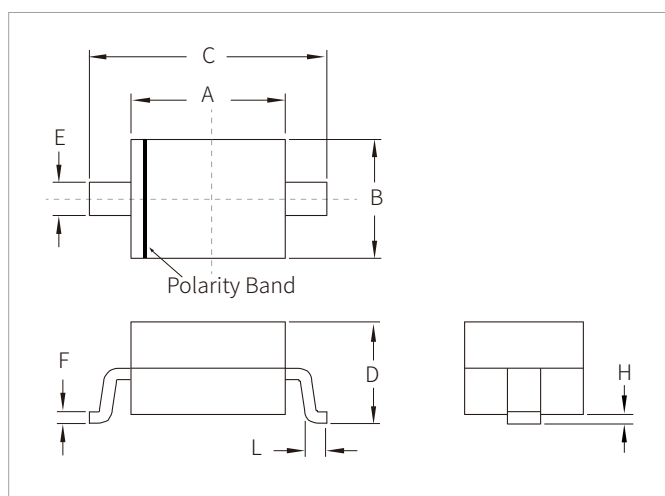
Fig.3 Capacitance Characteristics

Fig.4 Power Derating Curve


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150 $^\circ\text{C}$
	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 $^\circ\text{C}$

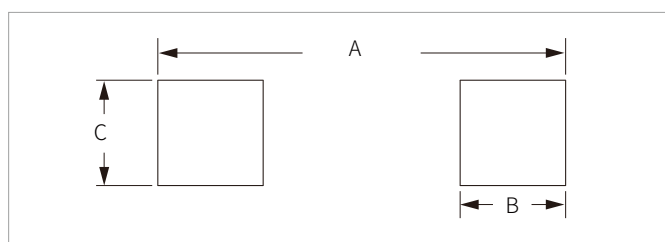


SOD-323 PACKAGE INFORMATION



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	2.70	0.093	0.106
D	0.80	1.10	0.031	0.042
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	-	0.008	-

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
BAT60B	SOD-323	3000PCS	7"

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