

FEATURES

| Fast Switching Device (TRR <4.0 nS)

| Power Dissipation of 250mW

| High Stability and High Reliability

| Low reverse leakage



SOD-323

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°C)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	V
DC Blocking Voltage	V _R	100	V
Power Dissipation	P _D	250	mW
Continuous Forward Current	I _O	250	mA
Thermal Resistance from Junction to Ambient	R _{θJA}	500	°C/W
Non-repetitive Peak Forward Surge Current@t= 8.3ms,T _A =25°C	I _{FSM}	2.0	A
Operating 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 Voltage	$I_R = 100\mu\text{A}$	$V_{(BR)}$	100		V
Reverse Leakage Current	$V_R = 25\text{V}$	I_R		30	nA
	$V_R = 75\text{V}$			1	μA
Forward Voltage	$I_F = 1\text{mA}$	V_F		0.715	V
	$I_F = 10\text{mA}$			0.855	V
	$I_F = 50\text{mA}$			1.00	V
	$I_F = 150\text{mA}$			1.25	V
Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		1.5	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}, RL = 100\Omega$ $I_{RR} = 0.1 \times I_R$	T_{RR}		4	ns

CHARACTERISTIC CURVES

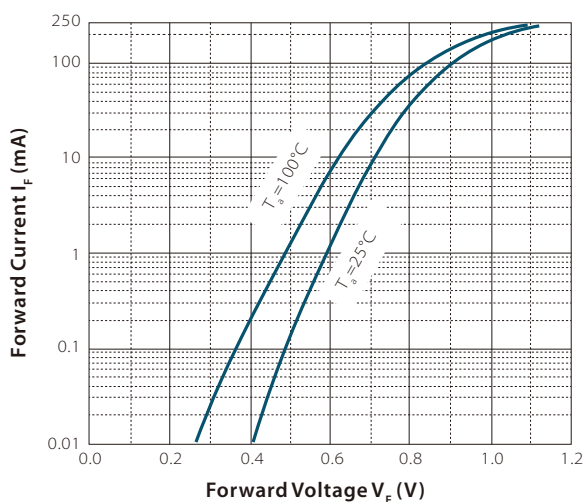
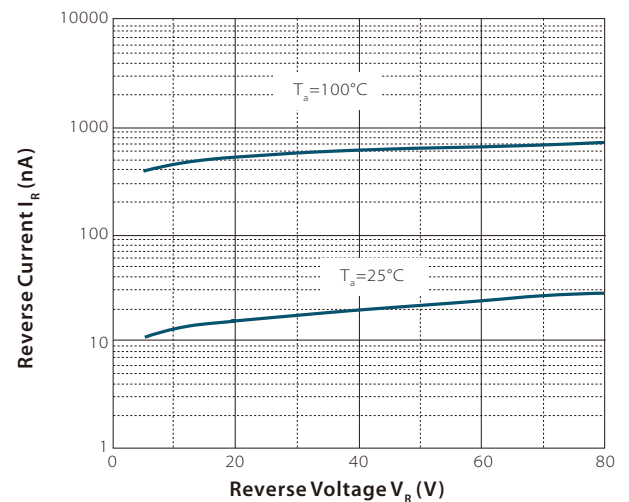
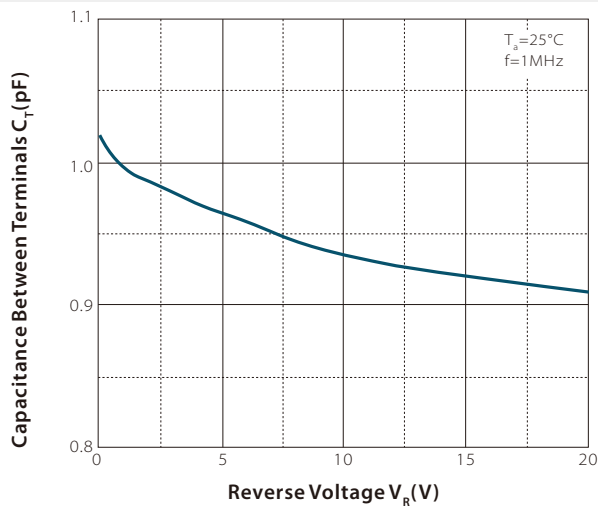
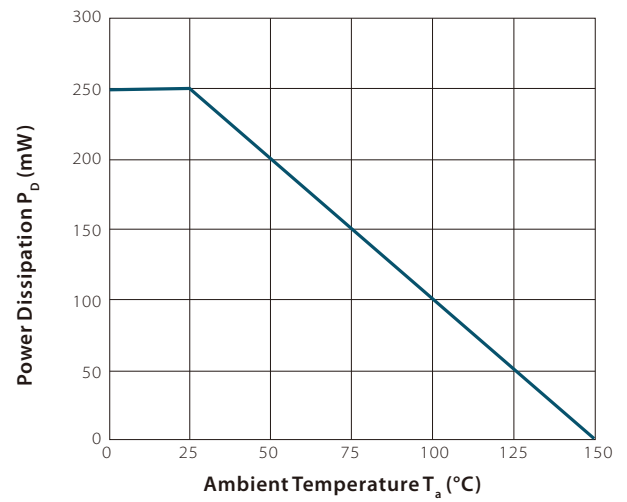
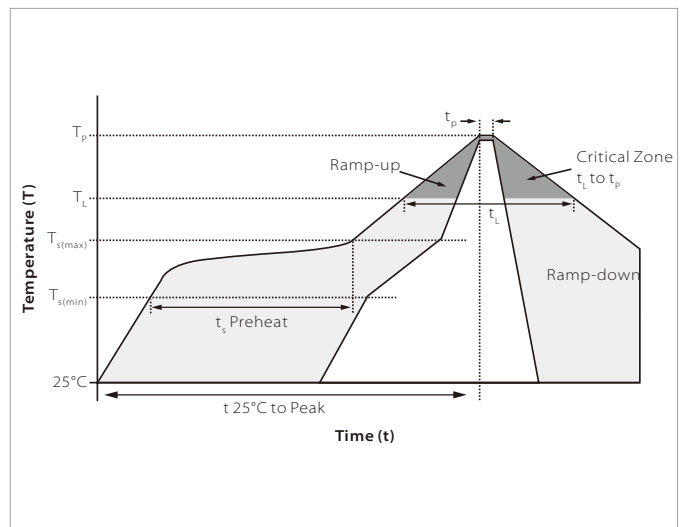
Fig 1. Forward Characteristics

Fig 2. Reverse Characteristics


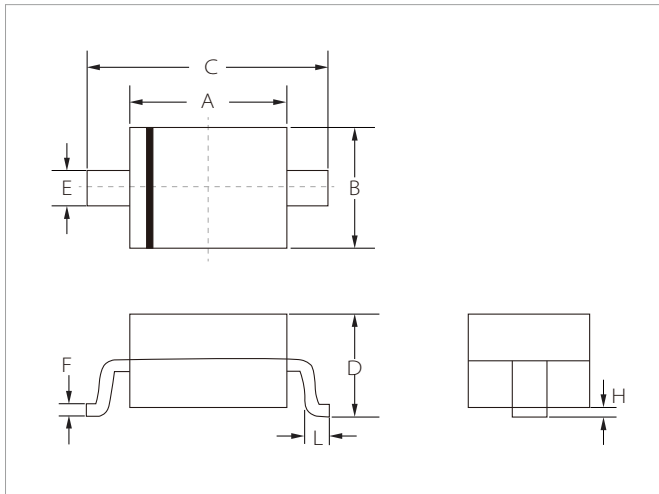
Fig 3. Capacitance Characteristics

Fig 4. Power Derating Curve


SOLDERING PARAMETERS

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

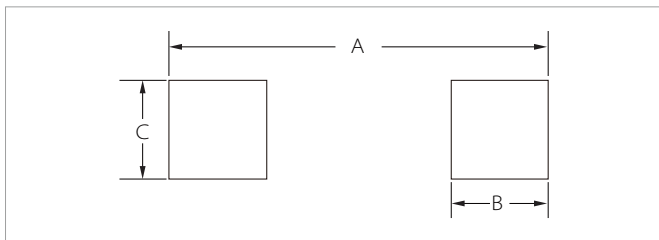


SOD-323 PACKAGE INFORMATION



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	2.39	2.75	0.094	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	Marking	Component Package	QTY/Reel	Reel Size
BAS316	A6	SOD-323	3000PCS	7"

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