

FEATURES

| Extreme fast switches

| VR 300V

| IFAV 225mA



SOD-323

MECHANICAL DATA

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

Parameter		Symbol	Value	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	300	V
Power Dissipation		P_d	200	mW
Non Repetitive Peak Forward Surge Current	tp=1μs	I_{FSM}	4	A
	tp=1ms		2.3	
	tp=10ms		1.7	
Average Forward Current		I_{FAV}	225	mA
Thermal Resistance From Junction To Ambient		$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range		T_J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature Range		T_{STG}	-55 to 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	300			V
Reverse Leakage Current	I_R	$V_R=240\text{V}$			100	nA
Forward Voltage	V_F	$I_F=100\text{mA}$			1	V
Reverse Recovery Time	t_{rr}	$I_F=30\text{mA}$, $R_L=100\Omega$, $I_{RR}=0.1\times I_R$			50	nS
Capacitance	C_T	$V_R=0\text{V}$, $f=1\text{MHz}$			5	pF

CHARACTERISTIC CURVES

Fig.1 V_F — I_F

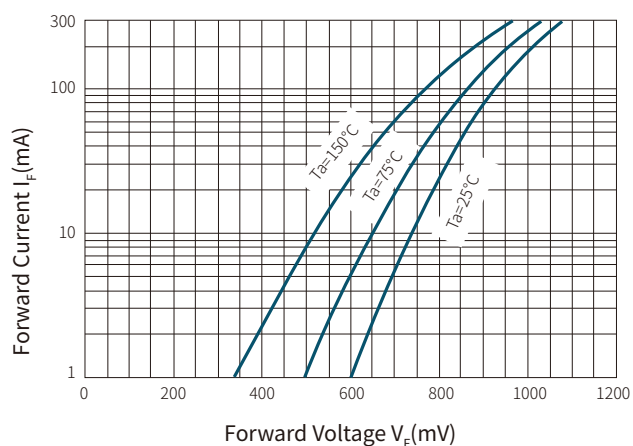


Fig.2 I_R — V_R

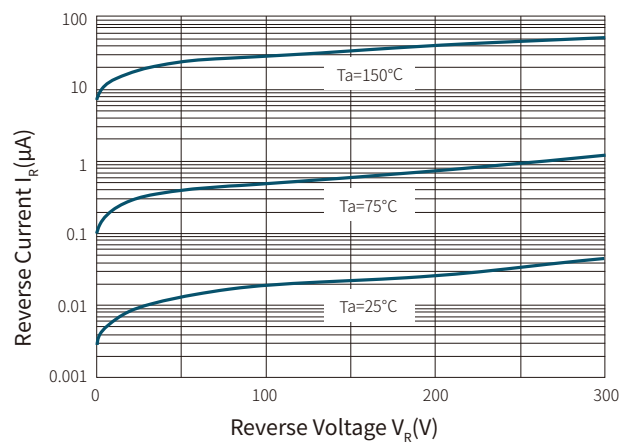
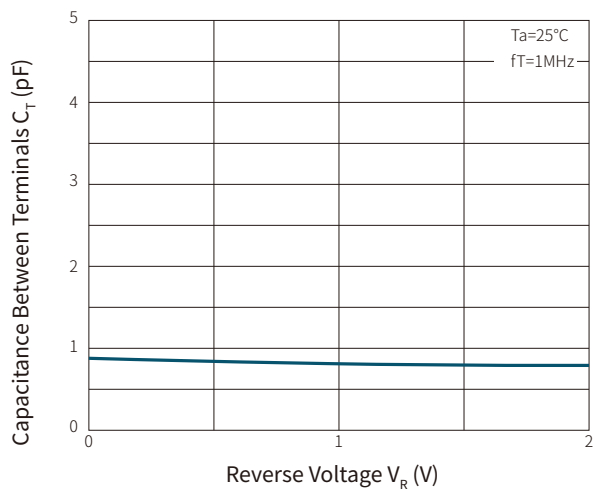
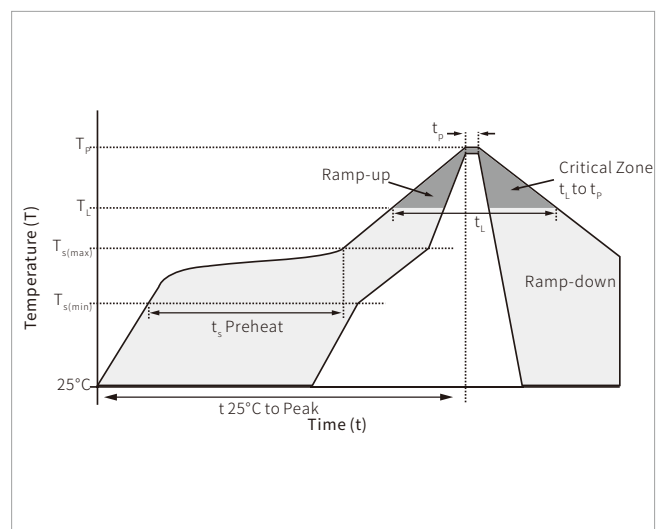


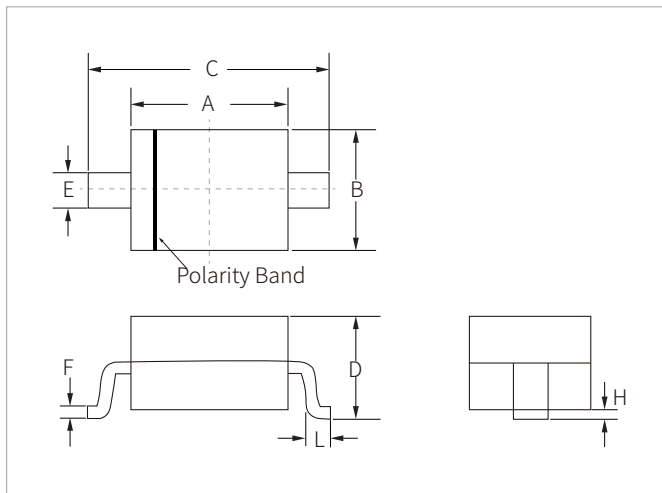
Fig.3 C_j — V_R


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

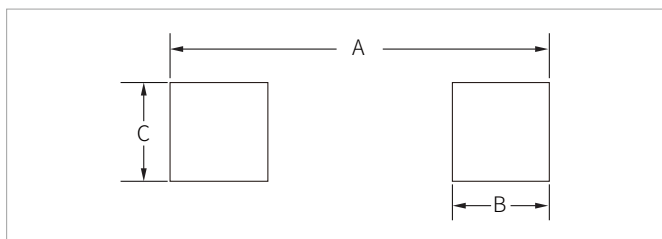


SOD-323 PACKAGE INFORMATION



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
BAS21J	SOD-323	3000PCS	7"

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