

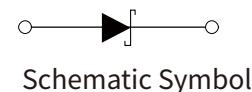
FEATURES

- For Use In Low Voltage, High Frequency Inverters Free Wheeling, And Polarity Protection Applications



MECHANICAL DATA

- Encapsulation: 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 ($T_A = 25^\circ C$)

Symbol	Parameter	Value	Unit
V_{RM}	Non-repetitive Peak Reverse Voltage		
V_{RRM}	Peak Repetitive Peak Reverse Voltage	20	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	14	
I_o	Average Rectified Output Current	1	
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	9	A
I_{FRM}	Repetitive Peak Forward Current	1.5	
P_d	Power Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	400	$^\circ\text{C}/\text{W}$
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55~+150	

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$)

Symbol	Parameter	Test	Min.	Max.	Unit
V_{BR}	Reverse Breakdown Voltage	$I_R=1\text{mA}$	20		V
I_R	Reverse Voltage Leakage Current	$V_R=20$	1		mA
V_F	Peak Forward Voltage	$I_F=1\text{A}$	0.45		V
		$I_F=3\text{A}$	0.75		V
C_D	Diode Capacitance	$V_F=4\text{V}$, $f=1\text{MHz}$	120		pF

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

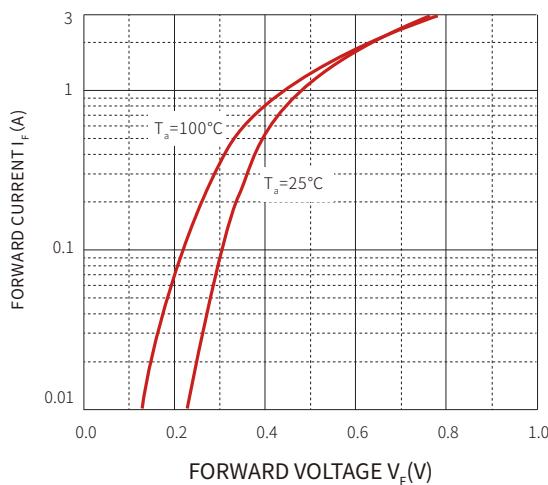


Fig.2 Reverse Characteristics

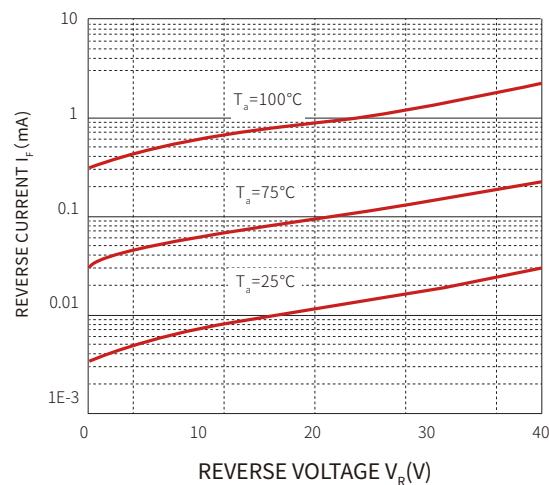


Fig.3 Capacitance Characteristics

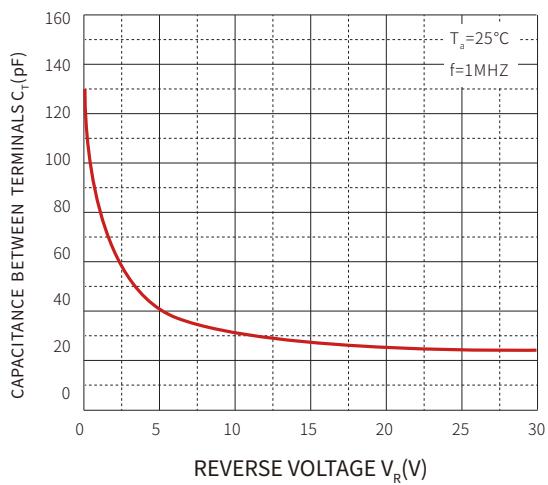
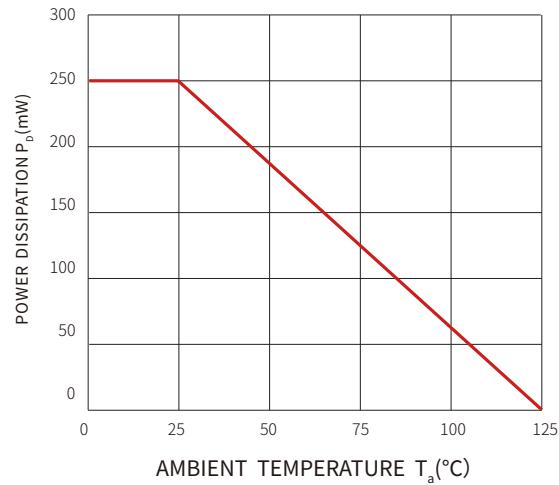
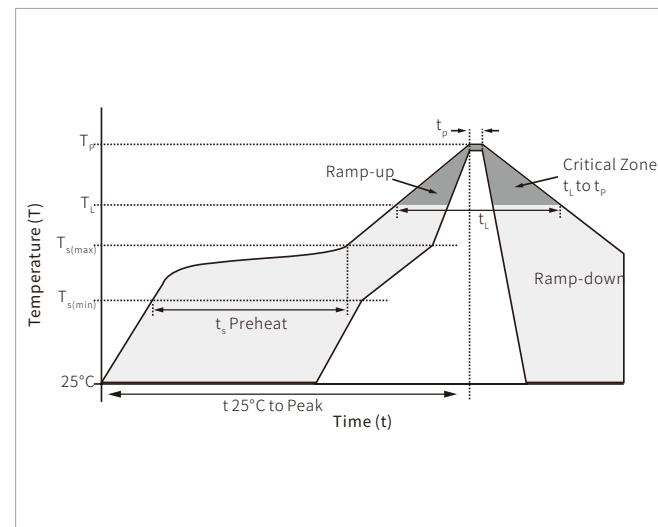


Fig.4 Power Derating Curve

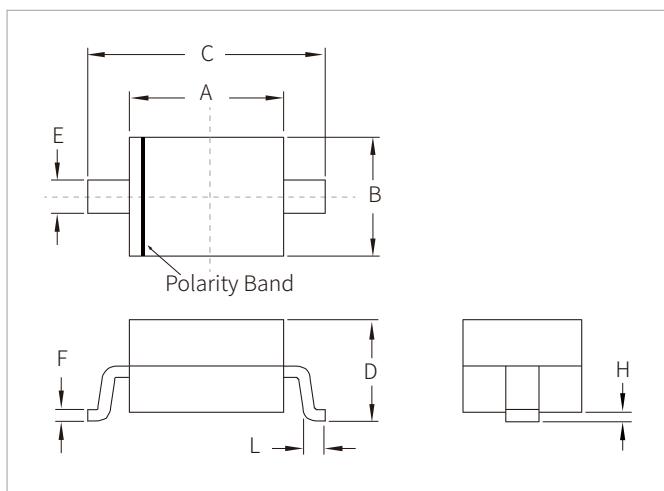


SOLDERING PARAMETERS

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

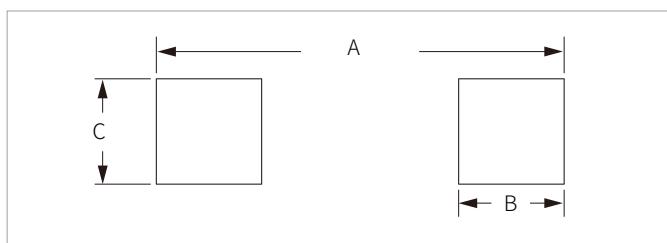


SOD-323 PACKAGE INFORMATION



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	2.70	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
B5817WS	SOD-323	3000PCS	7"

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