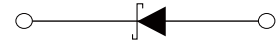


FEATURES

- High Current Capability
- Low Forward Voltage Drop
- Meet AEC-Q101 Requirements



SOD-323



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	B5817WSQ	B5818WSQ	B5819WSQ	Unit
Marking		SJ	SK	SL	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
Working Peak Reverse Voltage	V_{RWM}	20	30	40	V
DC Reverse Voltage	V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Forward Current	I_F	1			A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	25			A
Power Dissipation	P_D	200			mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			$^{\circ}\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-65+125			$^{\circ}\text{C}$

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

Parameter	Symbol	Test Conditions	B5817WSQ	B5818WSQ	B5819WSQ	Unit
Peak Forward Voltage	V_{FM}	$I_F=0.1\text{A}$	0.32	0.35	0.4	V
		$I_F=1\text{A}$	0.45	0.55	0.60	V
		$I_F=3\text{A}$ ($t<5\mu\text{s}$)	0.75	0.875	0.90	V
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$	20	30	40	V
Instantaneous Reverse Current	I_{RM}	$V_R=V_{RWM}$	1			mA
Junction Capacitance	C_j	$V_R=4\text{V}$, $f=1.0\text{MHz}$	120			pF

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

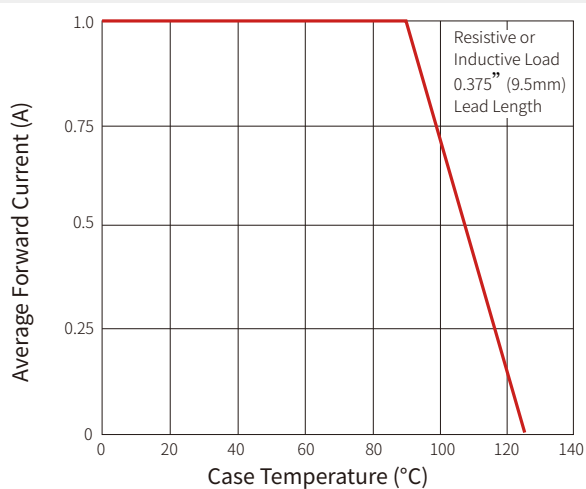


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

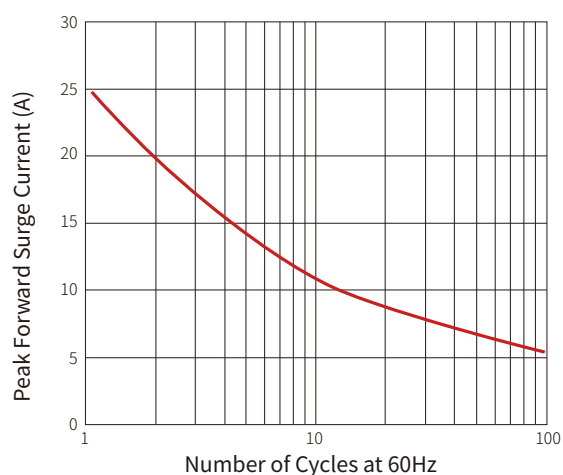
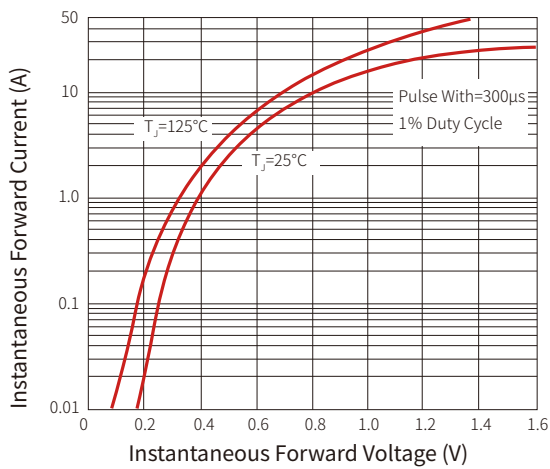
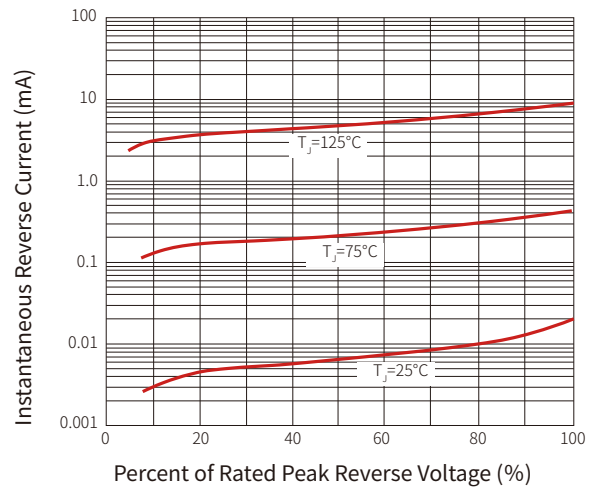
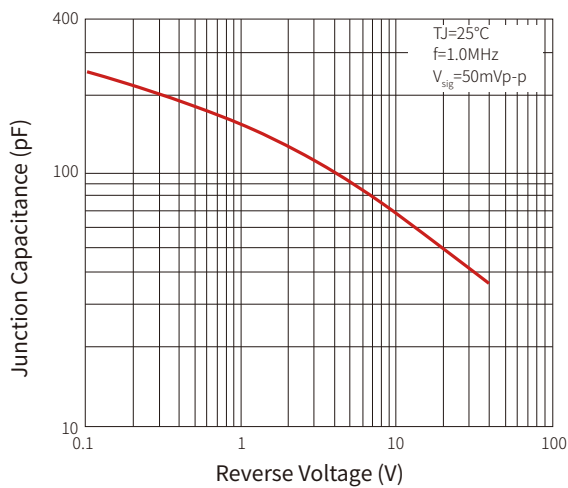
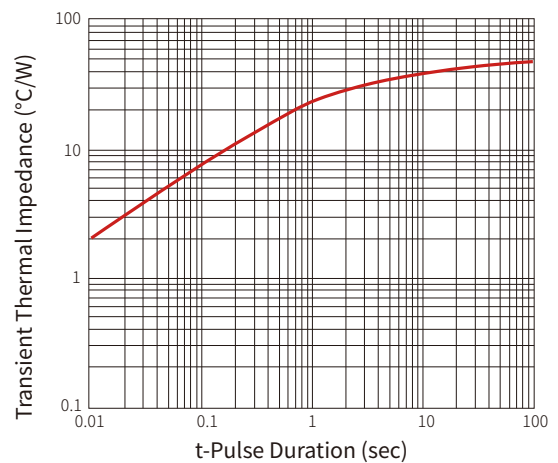
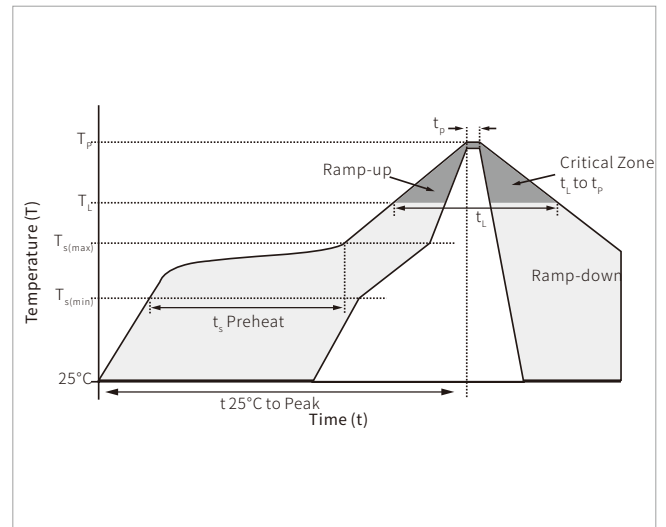


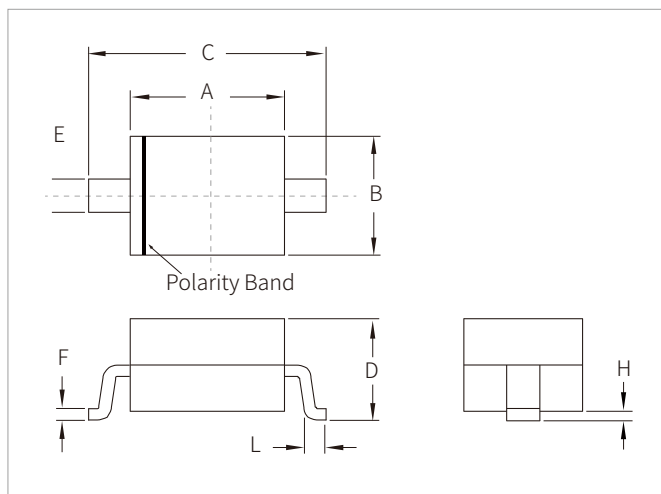
Fig.3 Typical Instantaneous Forward Characteristics

Fig.4 Typical Reverse Characteristics

Fig.5 Typical Junction Capacitance

Fig.6 Typical Transient Thermal Impedance


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

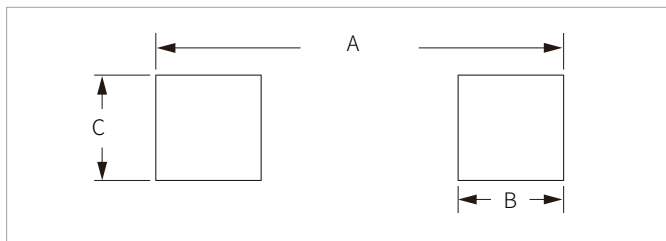


SOD-323 PACKAGE INFORMATION



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
B5817WSQ-B5819WSQ	SOD-323	3000PCS	7"

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By QR Code

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