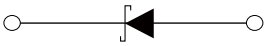
FEATURES

- 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°C)

Parameter	Symbol	B5817WSQ	B5818WSQ	B5819WSQ	Unit
Marking		QSJ	QSK	QSL	
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			°C/W
Junction and Storage Temperature Range	T_J,T_{STG}	-65-+125			°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

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

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

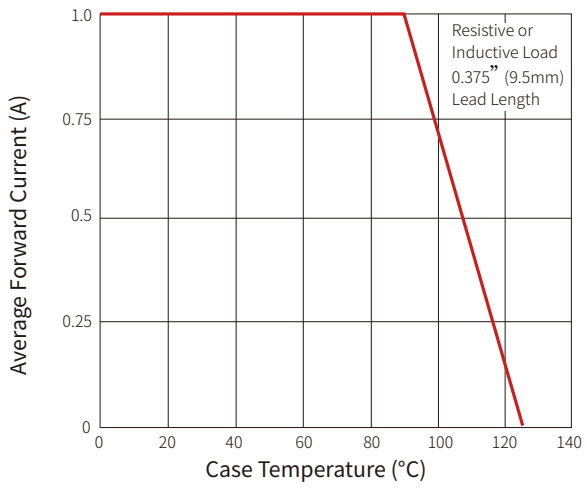


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

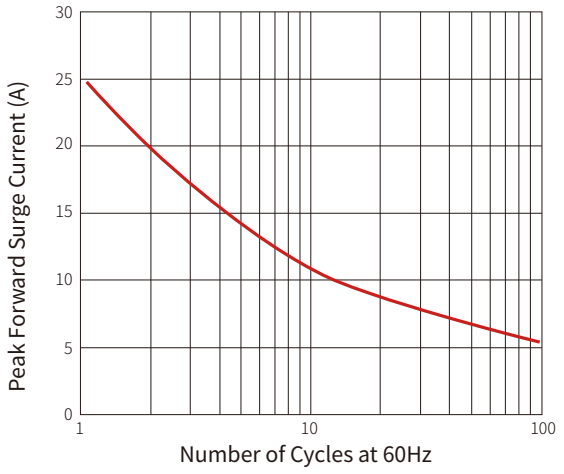


Fig.3 Typical Instantaneous Forward Characteristics

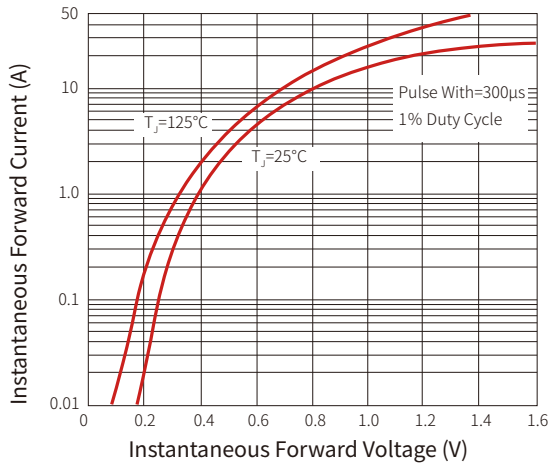


Fig.4 Typical Reverse Characteristics

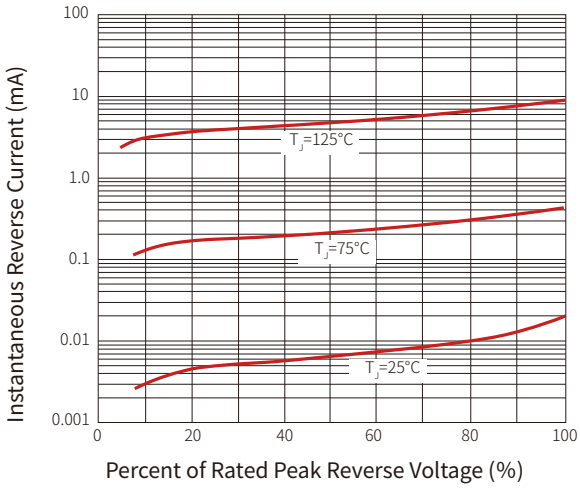


Fig.5 Typical Junction Capacitance

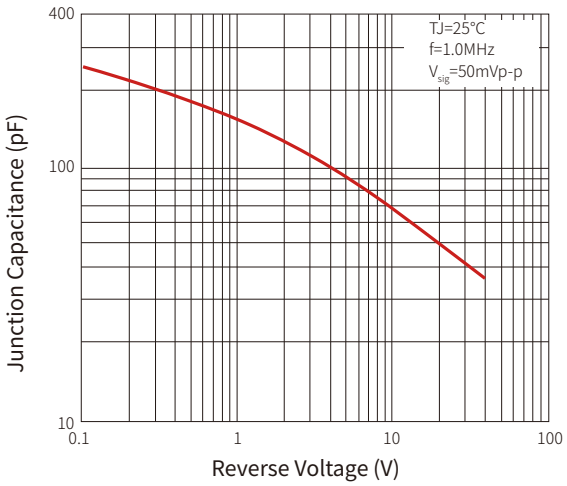
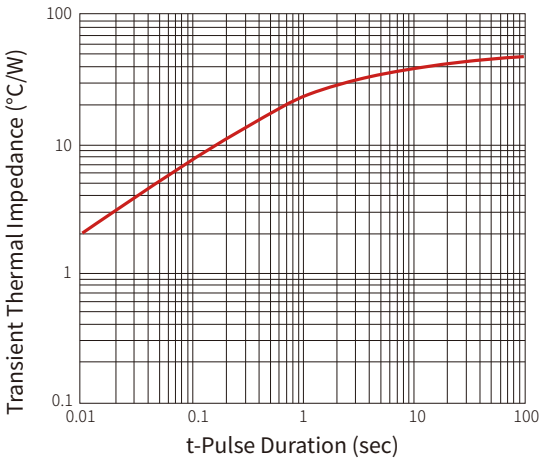
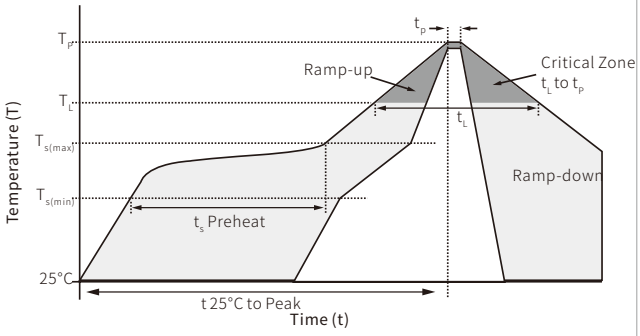


Fig.6 Typical Transient Thermal Impedance

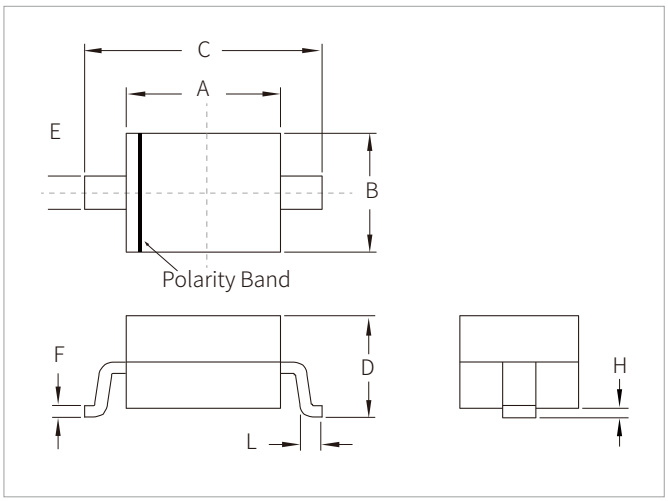


SOLDERING PARAMETERS

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

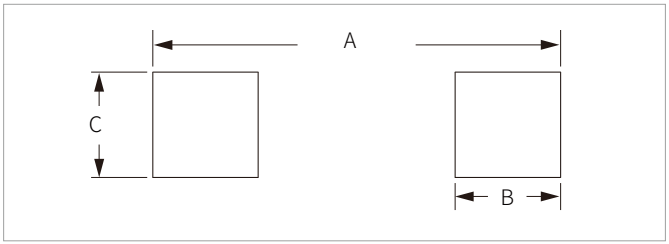


SOD-323 PACKAGE INFORMATION



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”

Headquarters
No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline
400-021-5756

Web
Https://www.semiware.com

Sales Center
Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service
Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support
Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions
Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code
Website
Wechat

To find your local partner within Semiware' s global website: www.semiware.com