

FEATURES

For use in low voltage, high frequency inverters
Free wheeling, and polarity protection applications

SOD-323



MARKING: B5817WS:SJ B5818WS:SK B5819WS:SL



Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

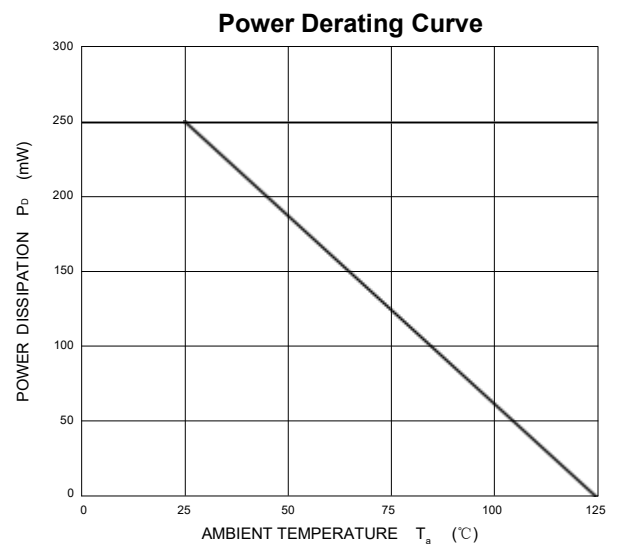
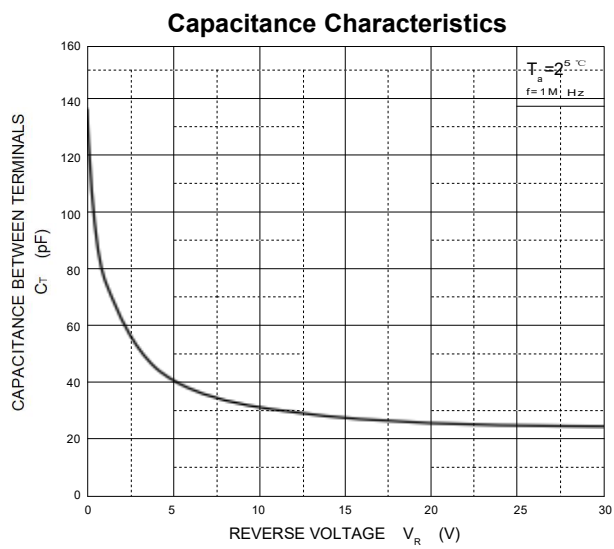
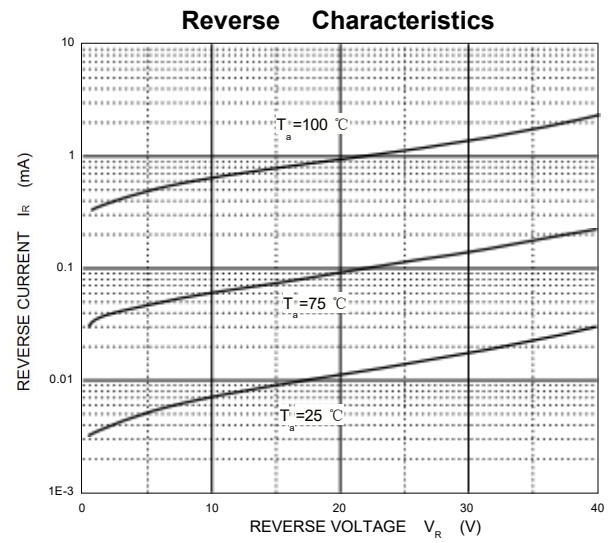
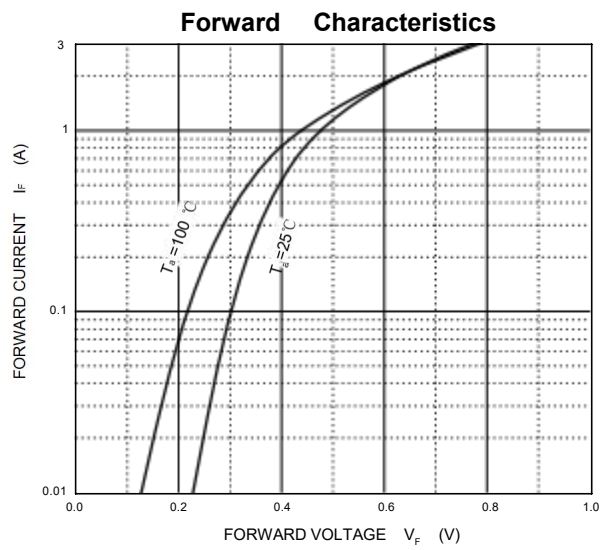
Parameter	Symbol	B5817WS	B5818WS	B5819WS	Unit
Non-repetitive peak reverse voltage	V_{RM}	20	30	40	V
Peak repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Working peak reverse voltage	V_{RWM}				
DC blocking voltage	V_R				
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	I_O	1			A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	9			A
Repetitive peak forward current	I_{FRM}	1.5			A
Power dissipation	P_d	250			mW
Thermal resistance junction to ambient	$R_{\theta JA}$	400			°C/W
Operating Junction Temperature Range	T_J	-40~+125			°C
Storage Temperature Range	T_{STG}	-55~+150			°C

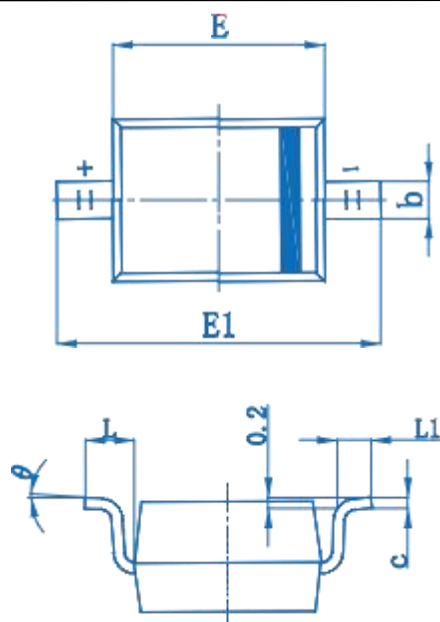
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	IR= 1mA	B5817WS	20		V
			B5818WS	30		
			B5819WS	40		
Reverse voltage leakage current	I_R	VR=20V	B5817WS		1	mA
		VR=30V	B5818WS			
		VR=40V	B5819WS			
Forward voltage	V_F	B5817WS	IF=1A		0.45	V
			IF=3A		0.75	
		B5818WS	IF=1A		0.55	V
			IF=3A		0.875	
		B5819WS	IF=1A		0.6	V
			IF=3A		0.9	
Diode capacitance	C_D	VR=4V, f=1MHz			120	pF

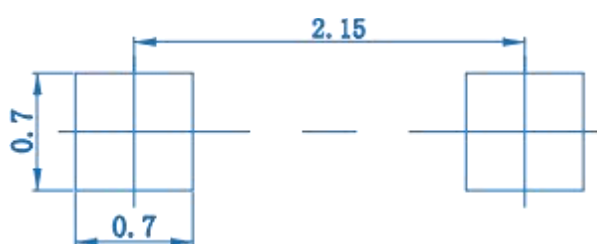
Typical Characteristics

B5819WS



SOD-323 Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.