

SOD-123

FEATURES

For use in low voltage, high frequency inverters

Free wheeling, and polarity protection applications.



MARKING: B5817W:SJ B5818W:SK B5819W:SL

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

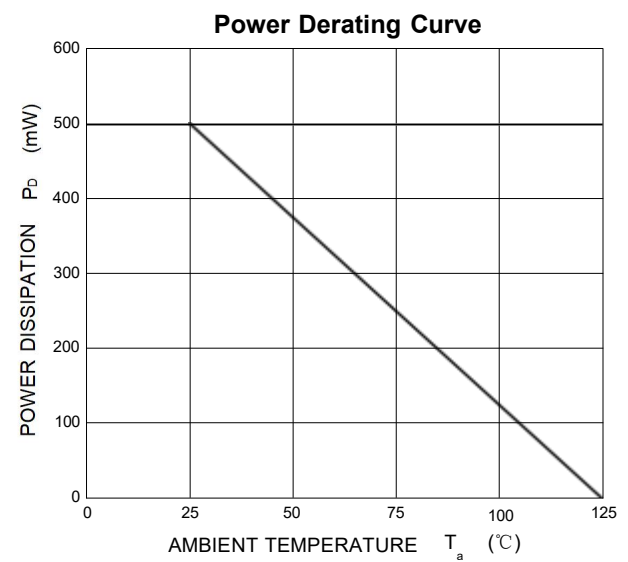
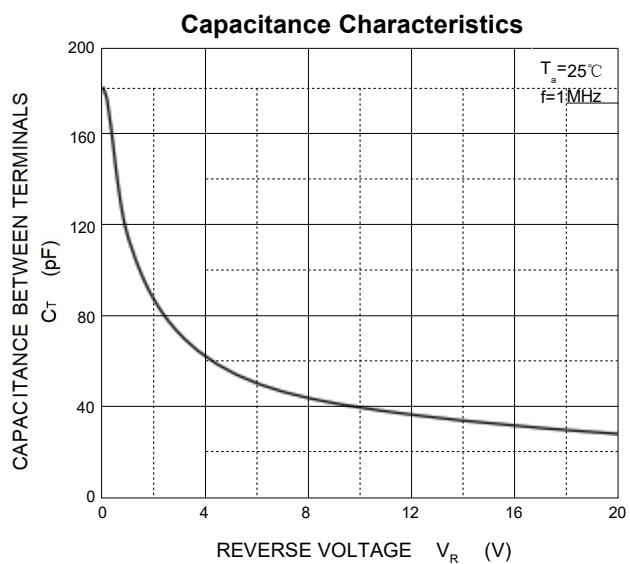
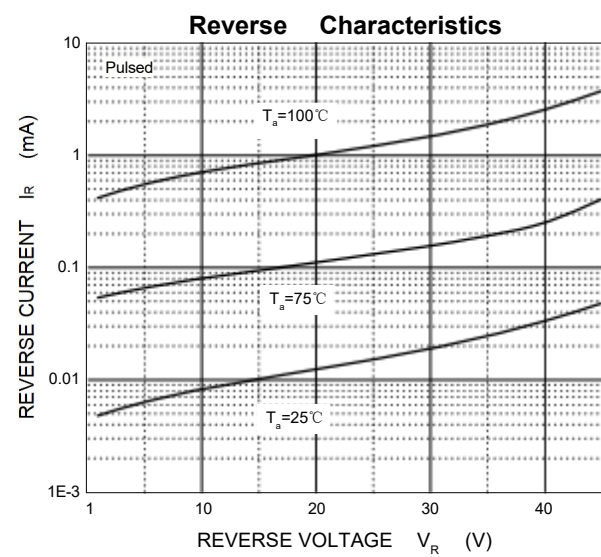
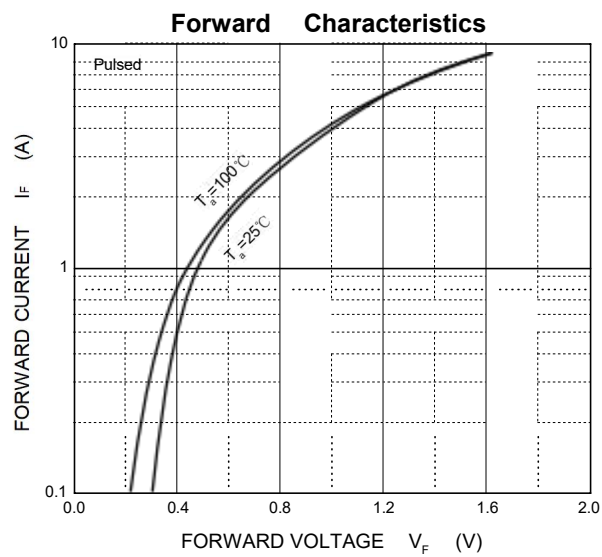
Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	1			A
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	500			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200			°C/W
Operation Junction temperature Range	T_J	-40~+125			°C
Storage Temperature Range	T_{STG}	-55~+150			°C

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

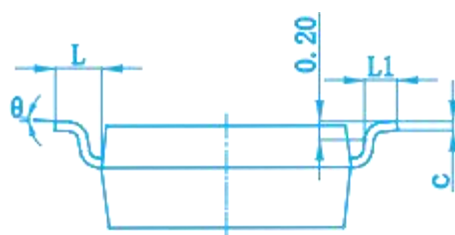
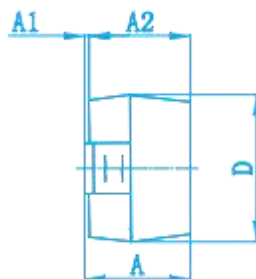
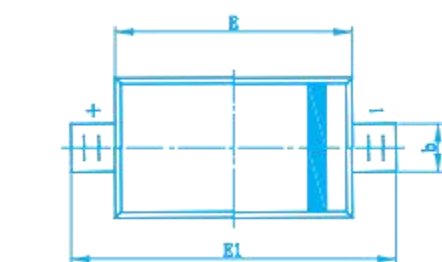
Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 1mA$ B5817W B5818W B5819W	20 30 40		V
Reverse voltage leakage current	I_R	$V_R = 20V$ $V_R = 30V$ $V_R = 40V$ B5817W B5818W B5819W		1	mA
Forward voltage	V_F	B5817W $I_F = 1A$ $I_F = 3A$		0.45 0.75	V
		B5818W $I_F = 1A$ $I_F = 3A$		0.55 0.875	V
		B5819W $I_F = 1A$ $I_F = 3A$		0.6 0.9	V
Diode capacitance	C_D	$V_R = 4V, f = 1MHz$		120	pF

Typical Characteristics

B5819W

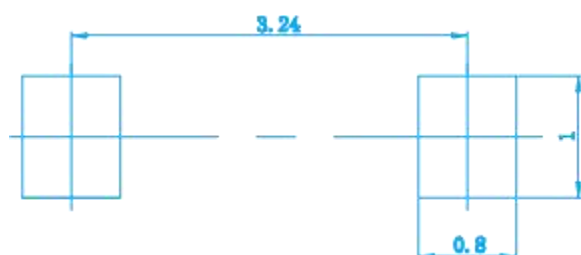


SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 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.