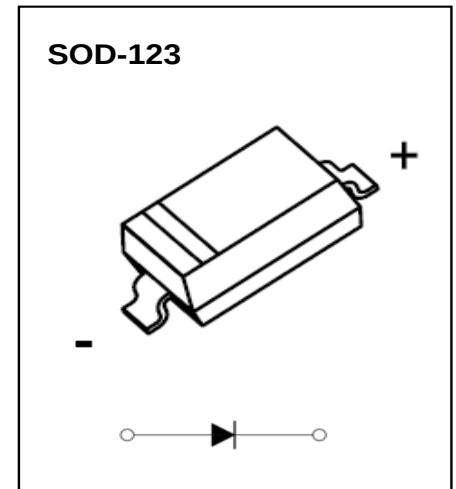


SOD-123 Plastic-Encapsulate Diodes**B5817W/B5818W/B5819W****SCHOTTKY BARRIER DIODE****FEATURES**

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

MARKING

B5817W	B5818W	B5819W

**MAXIMUM RATINGS** ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

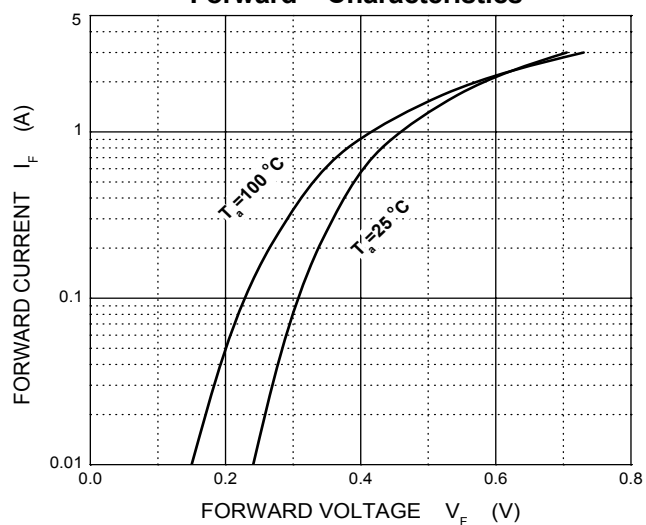
Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	1			A
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	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			$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	$-40 \sim +125$			$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$			$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

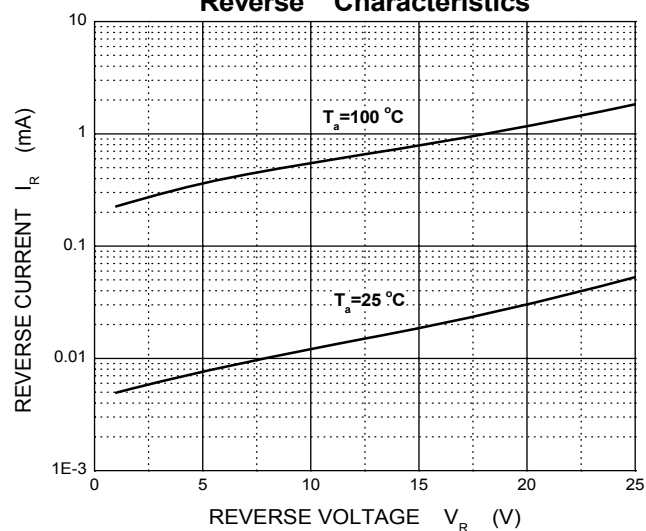
Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$ B5817W B5818W B5819W	20 30 40		V
Reverse voltage leakage current	I_R	$V_R=20\text{V}$ $V_R=30\text{V}$ $V_R=40\text{V}$ B5817W B5818W B5819W		1	mA
Forward voltage	V_F	B5817W $I_F=1\text{A}$		0.45	V
		B5817W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

Typical Characteristics

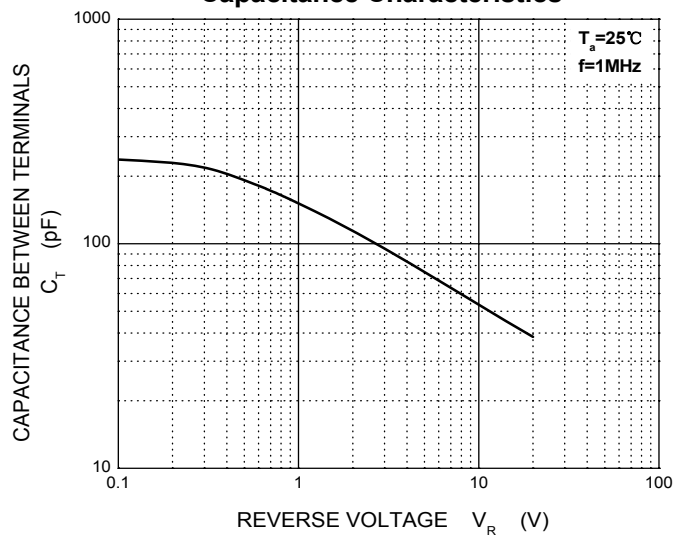
Forward Characteristics



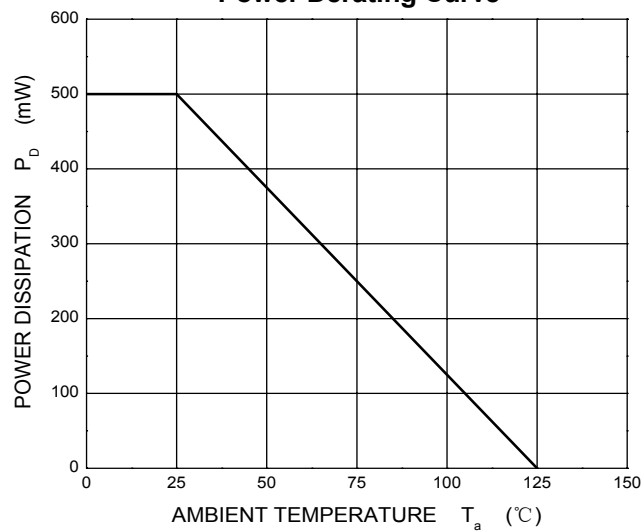
Reverse Characteristics



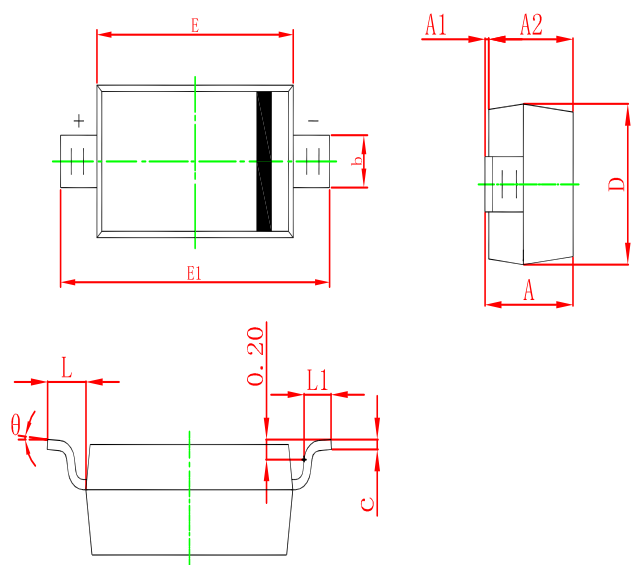
Capacitance Characteristics



Power Derating Curve

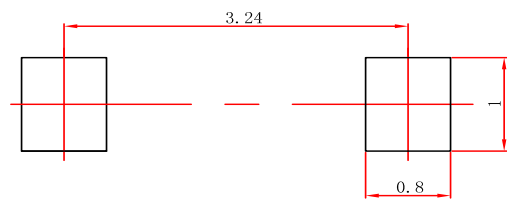


Package Outline Dimensions (SOD-123)



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°

Suggested Pad Layout (SOD-123)



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.