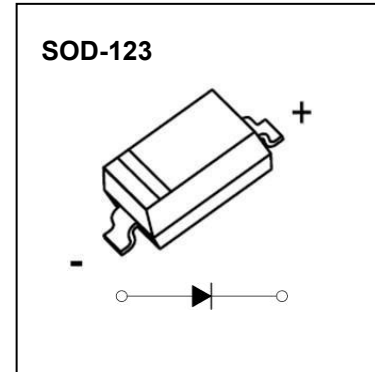


## CSD5817-5819

SCHOTTKY BARRIER DIODE

### FEATURES

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



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

Parameter	Symbol	CSD5817	CSD5818	CSD5819	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
Junction temperature	$T_J$	125			°C
Storage Temperature	$T_{STG}$	-55~+150			°C

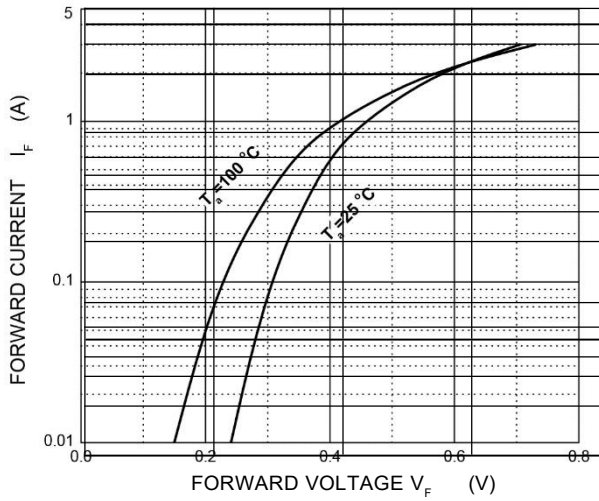
### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1mA$			V
		CSD5817	20		
		CSD5818 CSD5819	30 40		
Reverse voltage leakage current	$I_R$	$V_R=20V$			mA
		$V_R=30V$		1	
		$V_R=40V$			
Forward voltage	$V_F$	CSD5817	$I_F=1A$	0.45	V
			$I_F=3A$	0.75	
		CSD5818	$I_F=1A$	0.55	V
			$I_F=3A$	0.875	
		CSD5819	$I_F=1A$	0.6	V
			$I_F=3A$	0.9	
Diode capacitance	$C_D$	$V_R=4V, f=1MHz$		120	pF

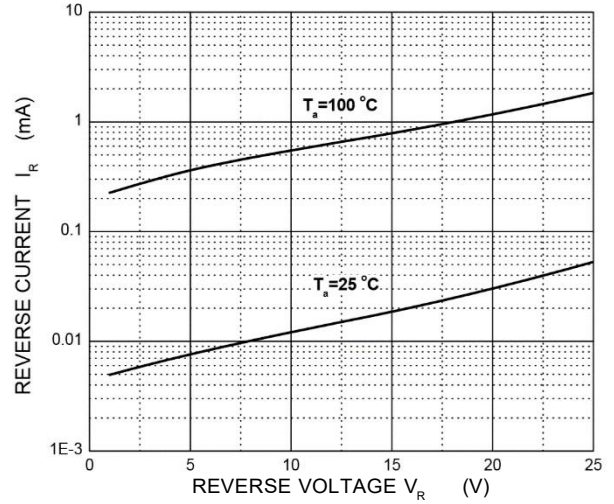
**Typical Characteristics**

**1N5817W**

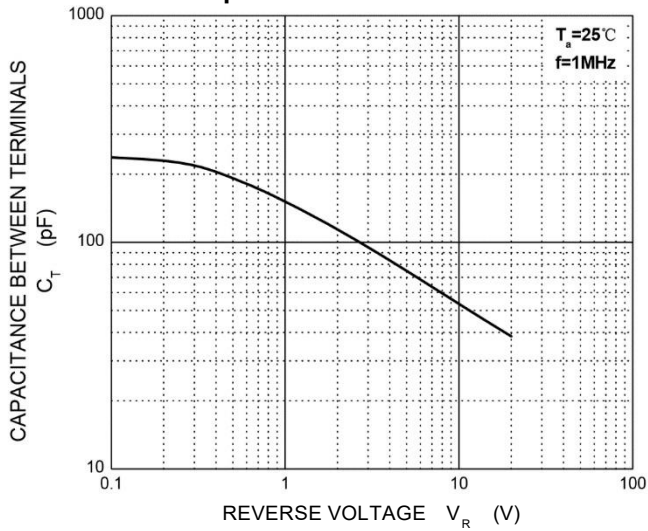
**Forward Characteristics**



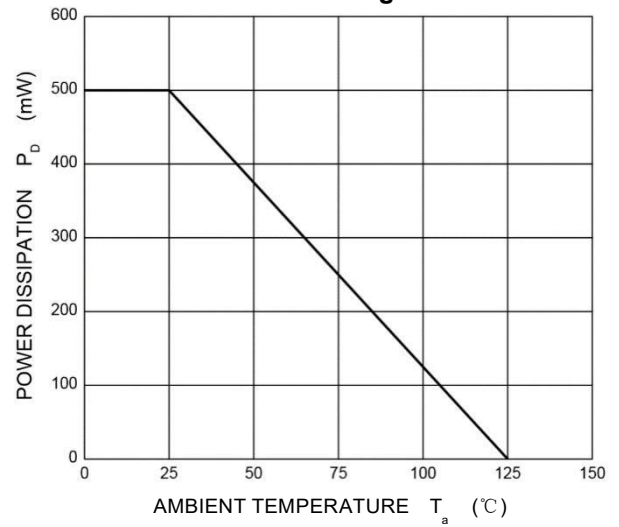
**Reverse Characteristics**



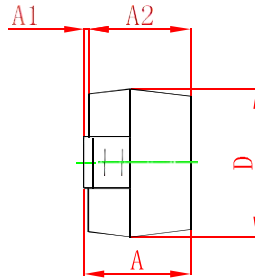
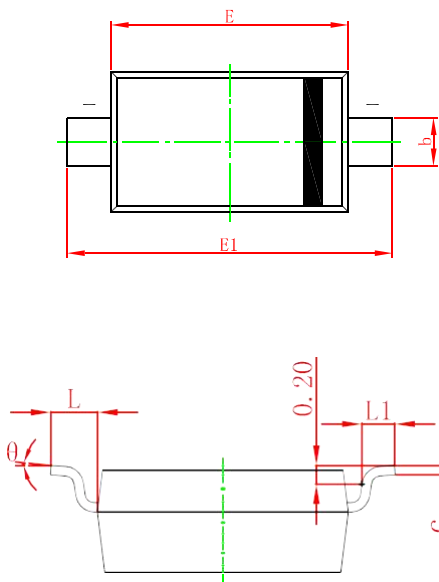
**Capacitance Characteristics**



**Power Derating Curve**

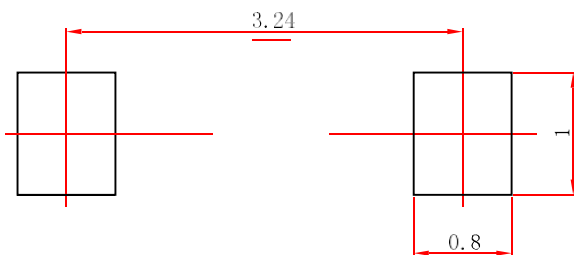


**SOD-123 Package Outline Dimensions**



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.

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