

## SCHOTTKY BARRIER RECTIFIERS

### FEATURES

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Simplified outline SOD-323 and symbol

### MECHANICAL DATA

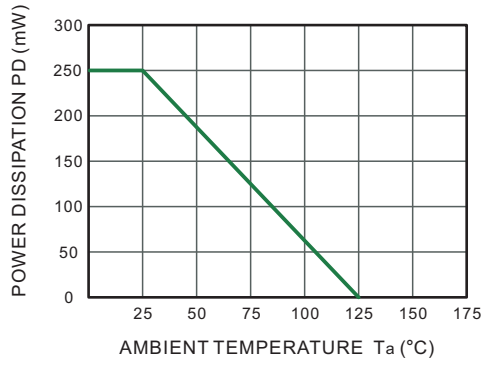
- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

### Maximum Ratings and Electrical characteristics

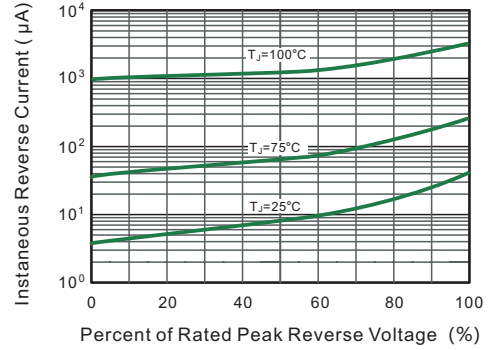
Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	B5817WS	B5818WS	B5819WS	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1			A
Power dissipation	$P_D$	250			mW
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	$I_{FSM}$	9			A
Maximum Instantaneous Forward Voltage at 1 A at 3 A	$V_F$	0.45 0.75	0.55 0.875	0.6 0.9	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage $T_j = 25^{\circ}C$ $T_j = 100^{\circ}C$	$I_R$	1 10			mA
Thermal Resistance, Junction to Ambient Air (NOTE 1)	$R_{\theta JA}$	400			$^{\circ}C/W$
Typical Junction Capacitance $V_R=4V, f=1MHz$	$C_j$	120			pF
Storage and Operating Junction Temperature Range	$T_j, T_{stg}$	-55 ~ +125			$^{\circ}C$

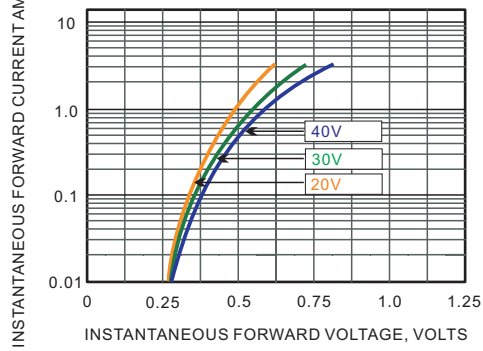
**Fig.1 Power Derating Curve**



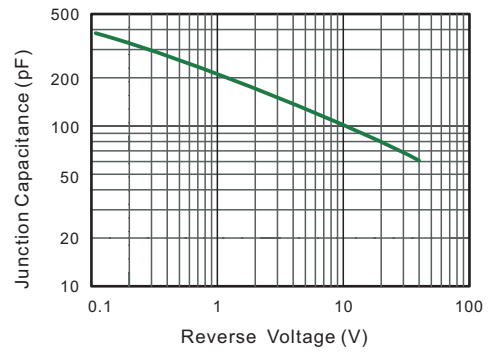
**Fig.2 Typical Reverse Characteristics**



**Fig.3 TYPICAL FORWARD VOLTAGE**



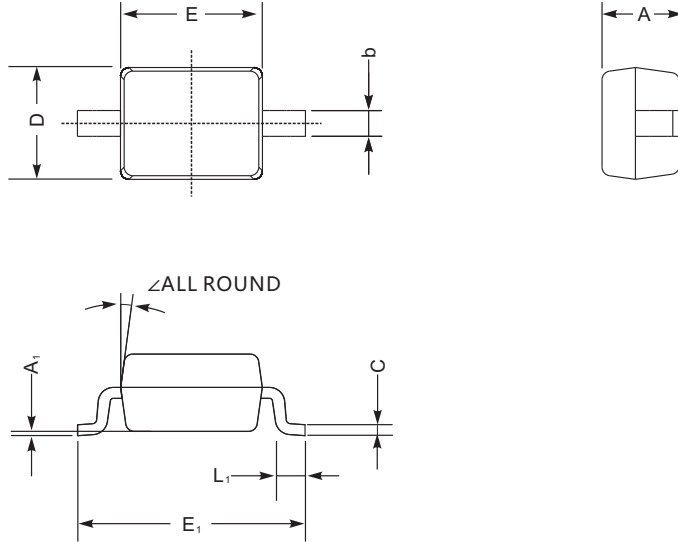
**Fig.4 Typical Junction Capacitance**



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

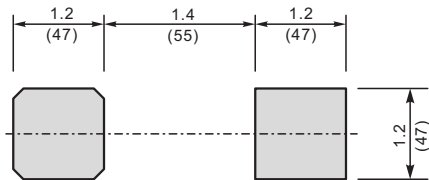
**SOD-323**



SOD-323 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	55	100	9.8	7.9	—	

**The recommended mounting pad size**



Unit:  $\frac{\text{mm}}{\text{mil}}$

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