

**SCHOTTKY BARRIER RECTIFIERS**

**Reverse Voltage - 20 to 40 V**



**Forward Current - 1 A**

**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
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



**Pinning**

1.Cathode	2.Anode
1 	2 
<b>SOD-123</b>	

**Marking Code**

<b>B5817W</b>	<b>SJ</b>
<b>B5818W</b>	<b>SK</b>
<b>B5819W</b>	<b>SL</b>

**MECHANICAL DATA**

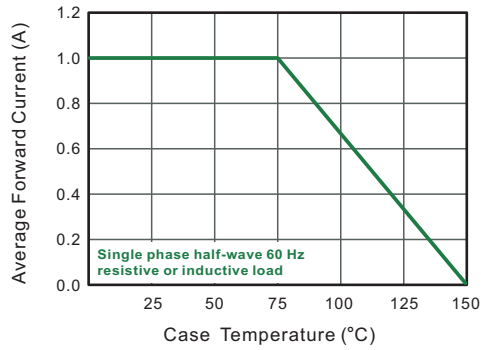
- ◆Case: SOD-123
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 15mg /0.00048oz

**Maximum Ratings and Electrical characteristics**

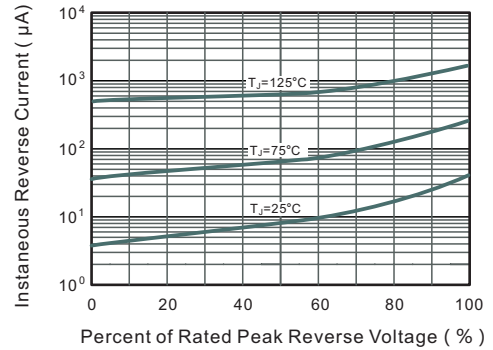
Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	B5817W	B5818W	B5819W	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
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	$I_{FSM}$	25			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 TA = 25°C TA = 100°C	$I_R$	1 10			mA
Typical Junction Capacitance	$C_j$	110			pF
Storage and Operating Junction Temperature Range	$T_j, T_{stg}$	-55 ~ +150			°C

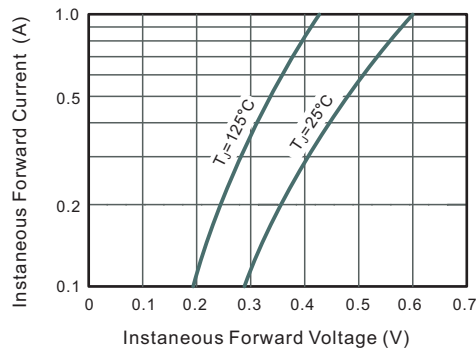
**Fig.1 Forward Current Derating Curve**



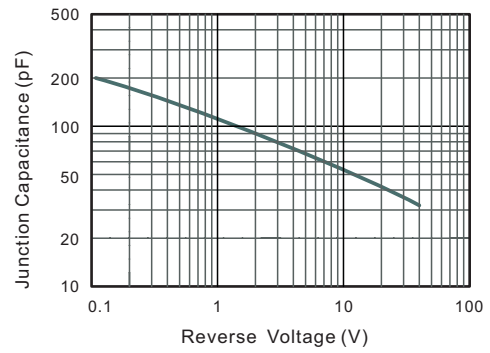
**Fig.2 Typical Reverse Characteristics**



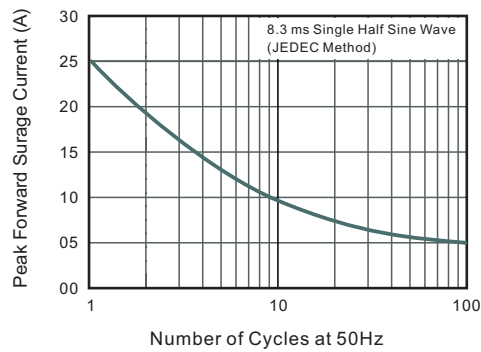
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

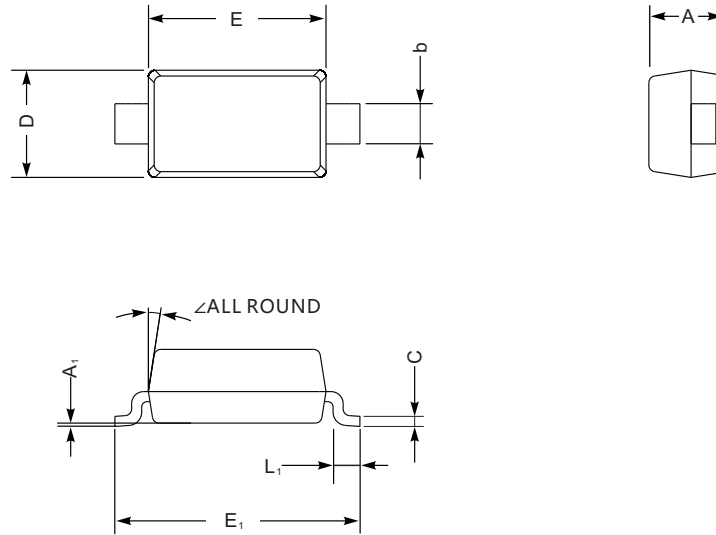


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



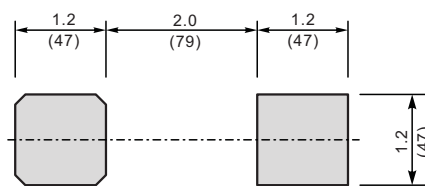
**Package Outline SOD-123**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

**The recommended mounting pad size**



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

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123	Tape/Reel, 7" reel	3000	EIA-481-1