

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
	
SOD-123	

Marking Code

B5817W	SJ
B5818W	SK
B5819W	SL

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

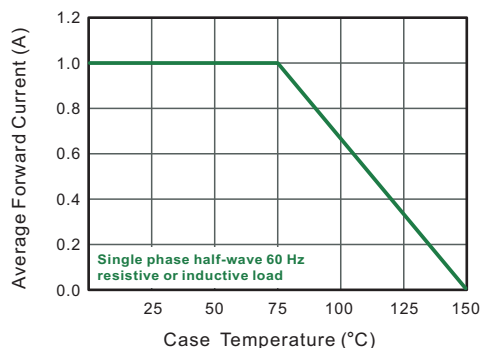


Fig.2 Typical Reverse Characteristics

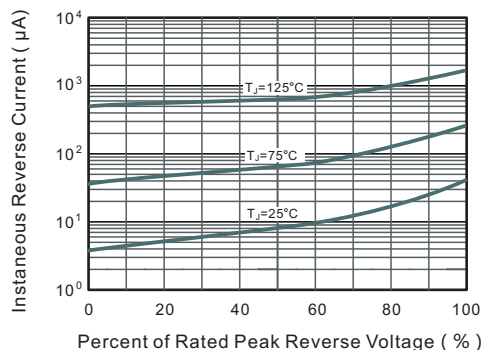


Fig.3 Typical Forward Characteristic

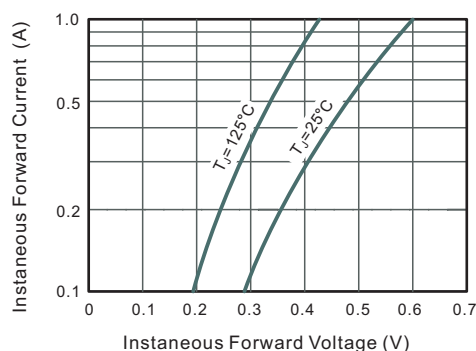


Fig.4 Typical Junction Capacitance

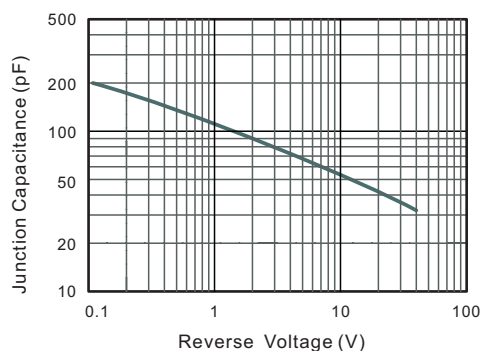
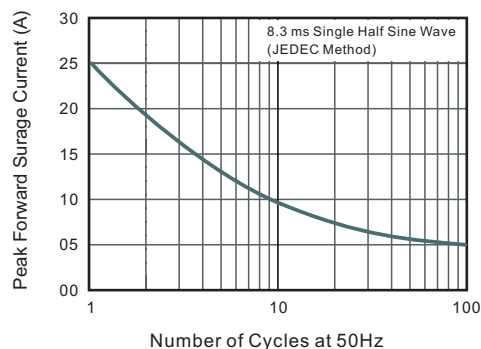


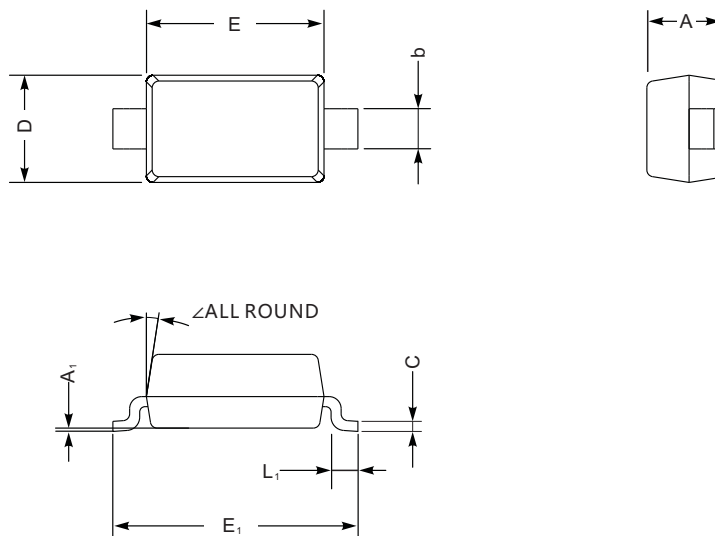
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

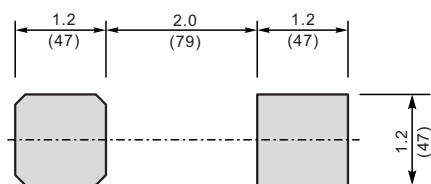
SOD-123

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
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