B5819WE

Surface Mount Schottky Rectifier
Reverse Voltage - 40V
Forward Current - 1.0A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View
Simplified outline SOD-123HE and symbol

FEATURES

- Heatsink structure
- Metal silicon junction, majority carrier conduction
- Super Low VF Schottky barrier diodes
- For surface mounted applications
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SOD-123HE
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:14mg/0.0005oz

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbols	B5819WE	Units
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3 ms single half sinewave superimposed on rated load	I_{FSM}	15	A
Operating junction temperature range	T_j	- 55 to + 125	℃
Storage temperature range	T_{stg}	- 55 to + 150	℃

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbols	B5819WE	Units
Minimum Breakdown voltage	T_a = 25°C, I_R = 1mA	V_{BR}	40	V
Maximum instantaneous forward voltage	I_F=1A, Ta=25℃	V_F	0.60	V
Maximum DC reverse current at rated DC blocking voltage	T_a = 25°C	I_R	50	uA
Typical junction capacitance	4.0 V, 1 MHz	C_J	60	pF

Fig.1 Forward Current Derating Curve

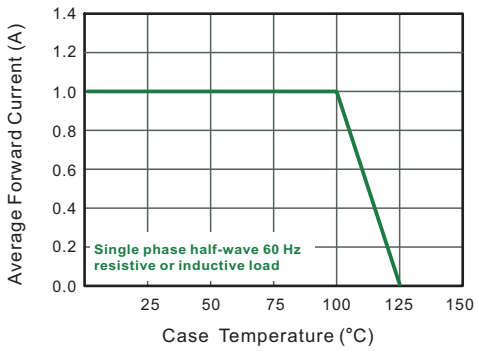


Fig.2 Typical Reverse Characteristics

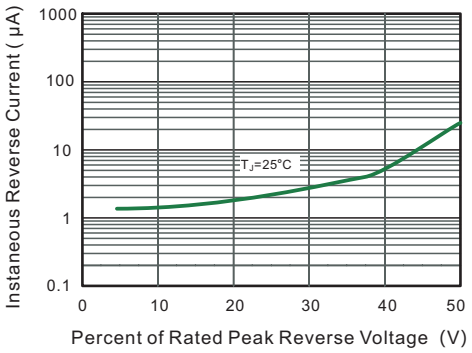


Fig.3 Typical Forward Characteristic

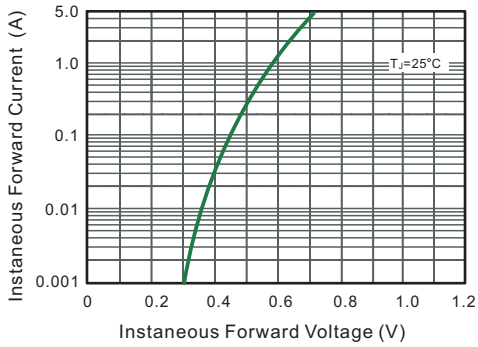


Fig.4 Typical Junction Capacitance

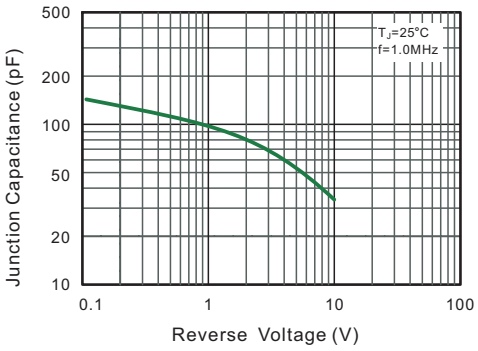
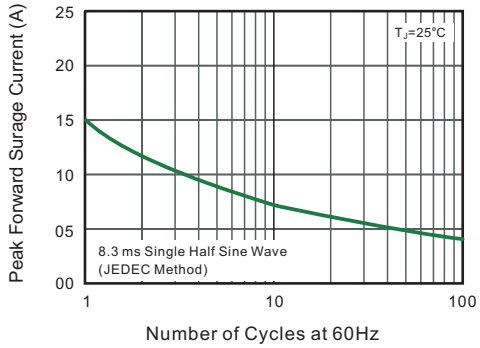
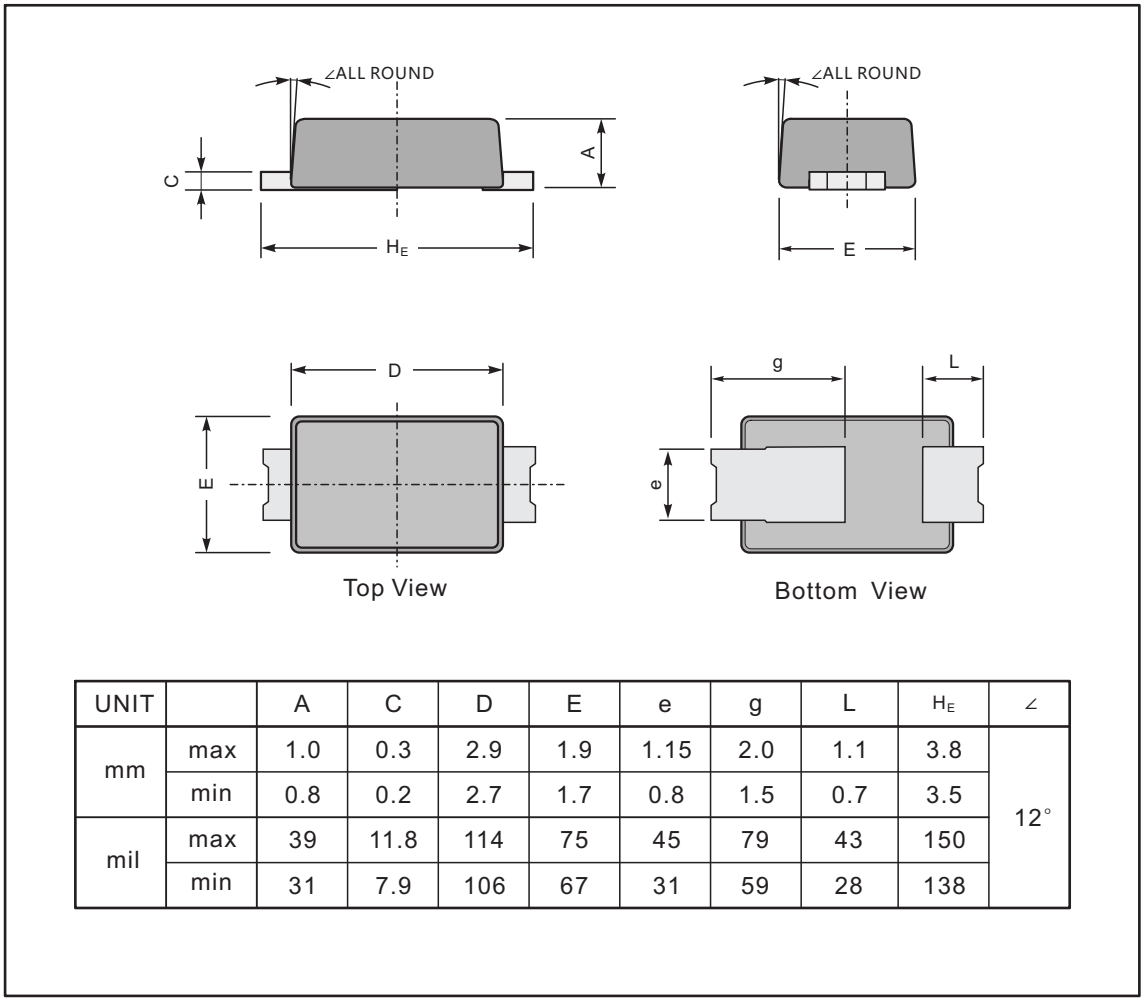


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



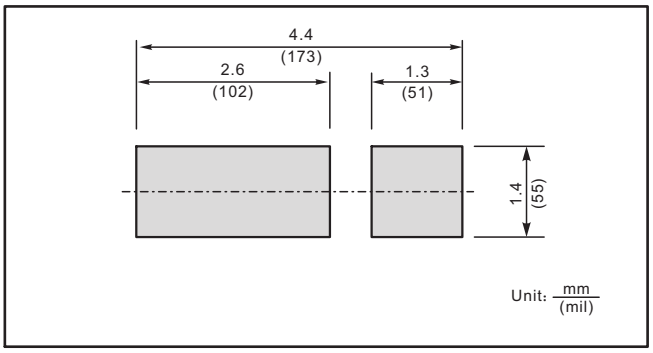
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123HE



UNIT		A	C	D	E	e	g	L	H_E	∠
mm	max	1.0	0.3	2.9	1.9	1.15	2.0	1.1	3.8	12°
	min	0.8	0.2	2.7	1.7	0.8	1.5	0.7	3.5	
mil	max	39	11.8	114	75	45	79	43	150	
	min	31	7.9	106	67	31	59	28	138	

The recommended mounting pad size



Marking

Type number	Marking code
B5819WE	SL