



Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 40V

Forward Current - 5.0A

FEATURES

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Simplified outline SMBF and symbol

MECHANICAL DATA

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SSL54BF	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 @ Fig.1	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	A
Peak Forward Surge Current, 1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	300	A
I^2t Rating for fusing (3ms $\leq t \leq$ 8.3ms)	I^2t	93.3	A^2s
Max Instantaneous Forward Voltage at 5 A	V_F	0.45	V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Reverse Voltage $T_a = 100^\circ C$	I_R	1.0 50	mA
Typical Junction Capacitance ⁽¹⁾	C_j	320	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	42 10 15	$^\circ C/W$
Operating Junction Temperature Range	T_j	-55 ~ +125	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ C$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C.

(2) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

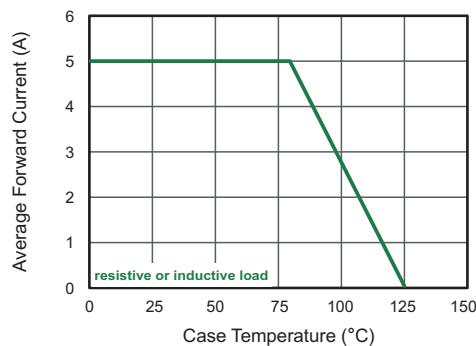


Fig.2 Typical Reverse Characteristics

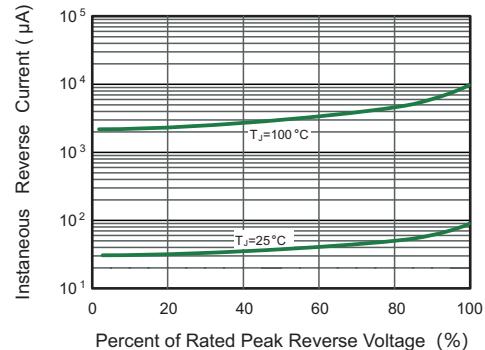


Fig.3 Typical Forward Characteristic

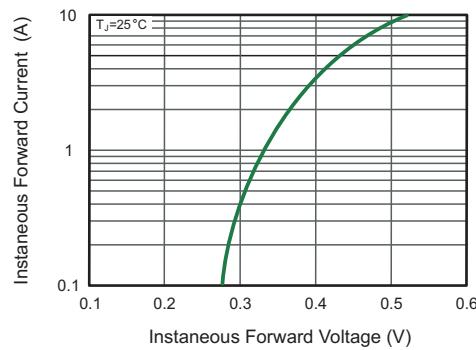


Fig.4 Typical Junction Capacitance

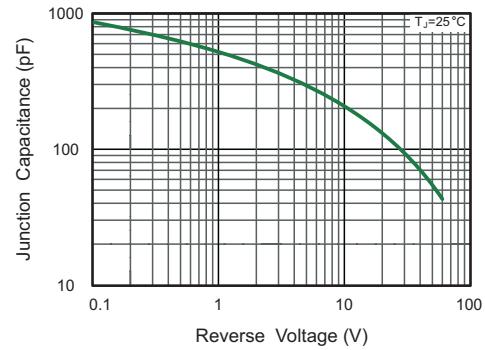
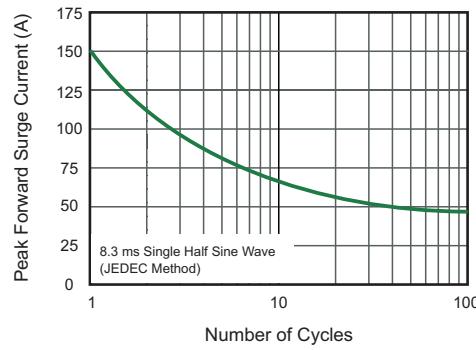


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

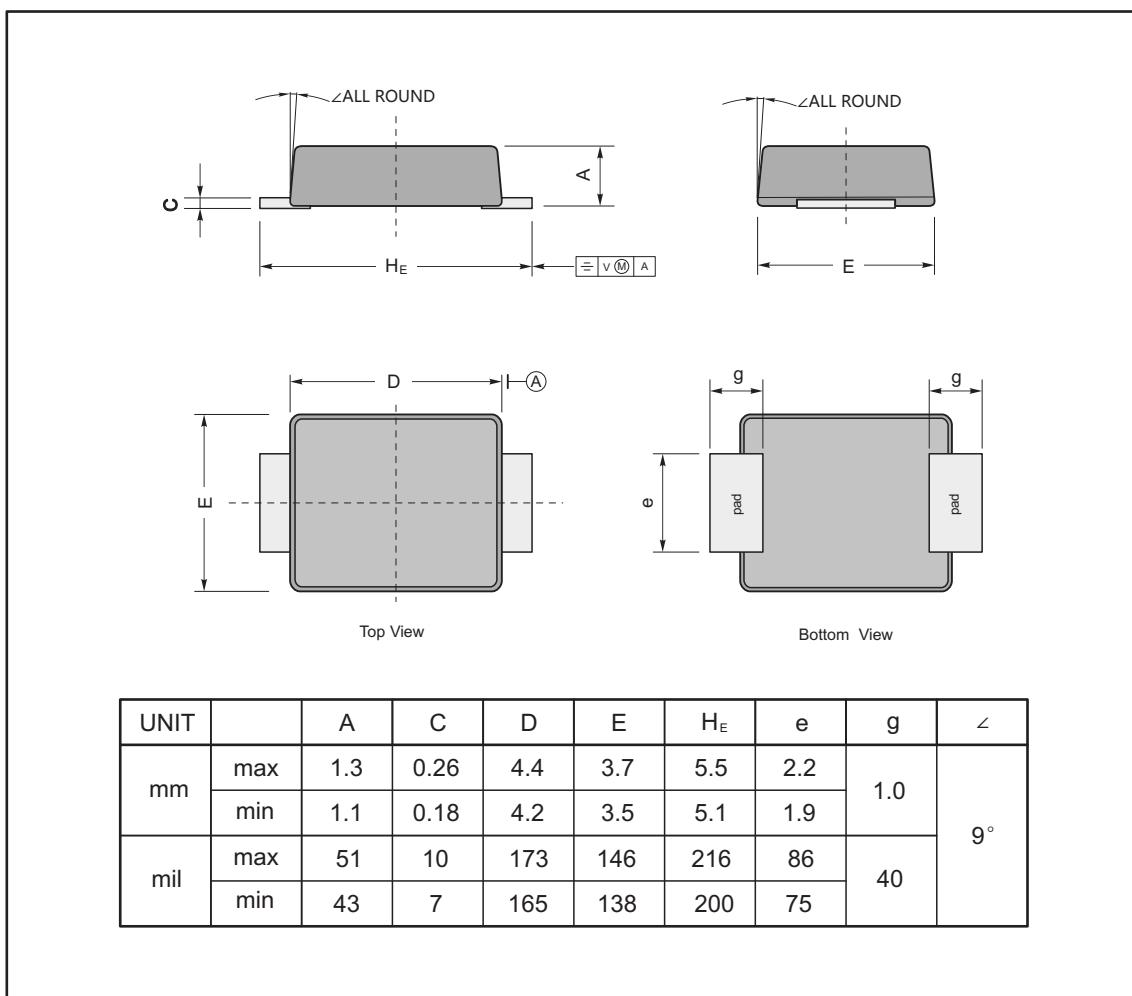




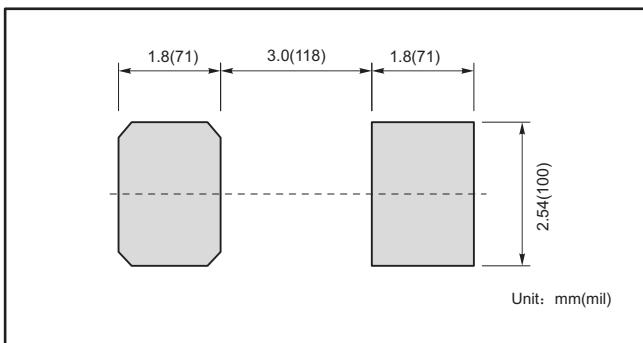
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



The recommended mounting pad size



Marking

Type number	Marking code
SSL54BF	SL54B



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