

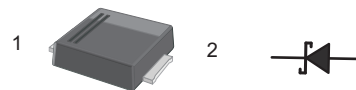
Surface Mount Schottky Barrier Rectifier

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

MECHANICAL DATA

- Case: SMBF



Top View
Marking Code: S510B
Simplified outline SMBF and symbol

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings and Electrical characteristics

Parameter	Symbols	SS510BF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120	A
Max Instantaneous Forward Voltage at 5 A	V_F	0.85	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^{\circ}\text{C}$ $T_a = 100^{\circ}\text{C}$	I_R	1.0 50	mA
Typical Junction Capacitance ⁽¹⁾	C_j	500	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	45	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_j	-55 ~ +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

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

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

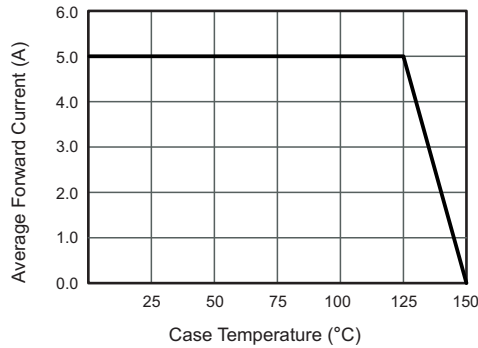


Fig.2 Typical Reverse Characteristics

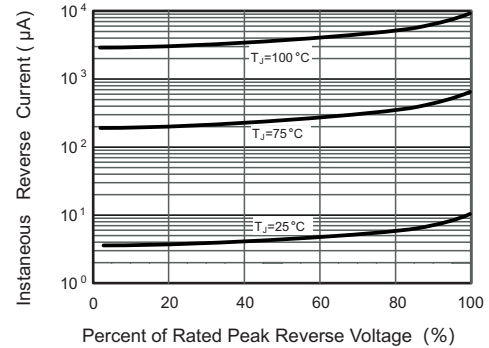


Fig.3 Typical Forward Characteristic

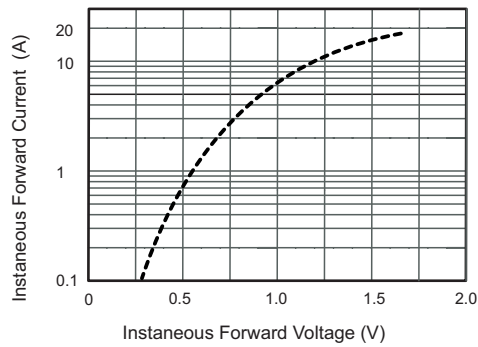


Fig.4 Typical Junction Capacitance

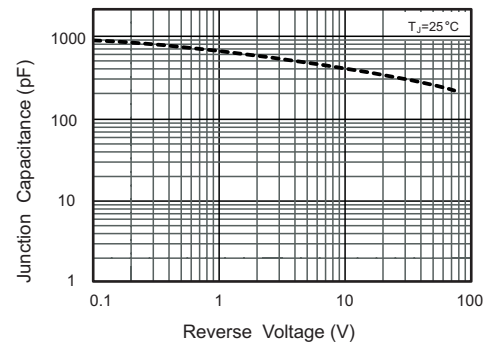


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

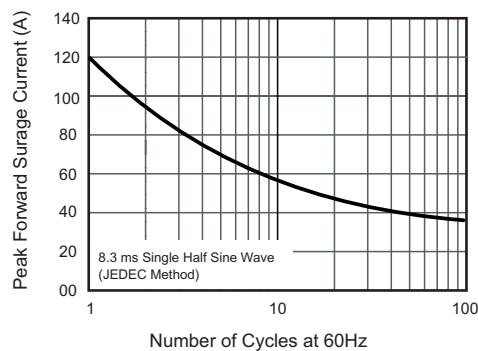
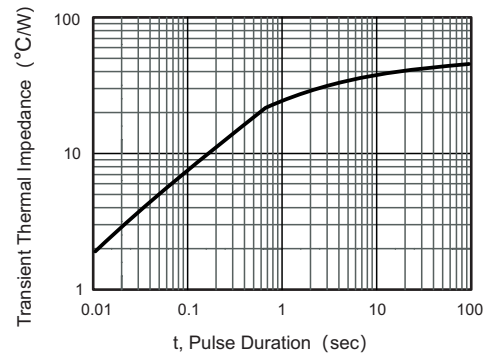


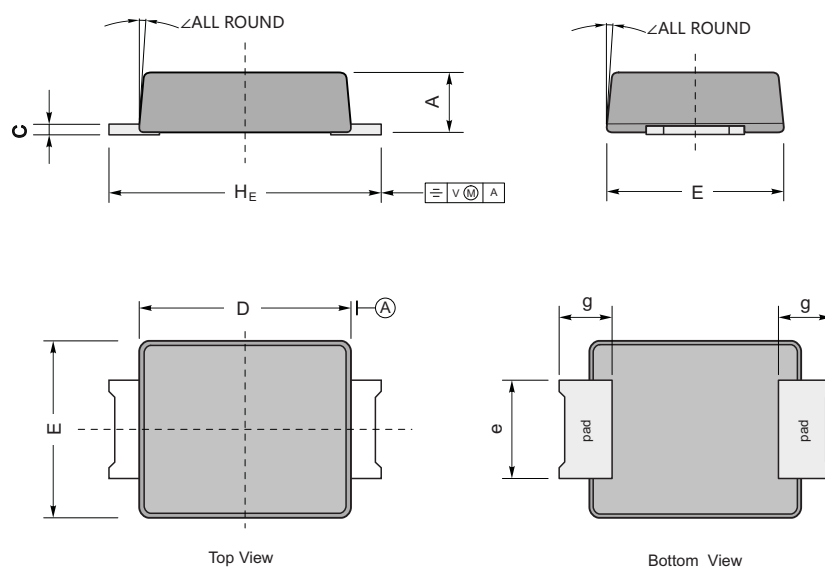
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



UNIT		A	C	D	E	H _E	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

The recommended mounting pad size

