

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200V 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

MECHANICAL DATA

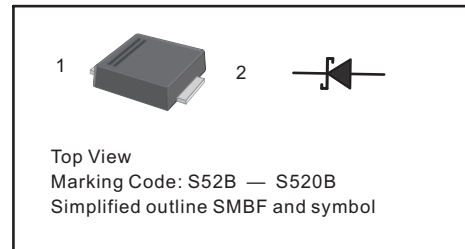
- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

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 %

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	Symbols	SS52BF	SS54BF	SS56BF	SS58BF	SS510BF	SS512BF	SS515BF	SS520BF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	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}	150								A
Max Instantaneous Forward Voltage at 5 A	V_F	0.45	0.55	0.70			0.85			V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	I_R	1.0 50								mA
Typical Junction Capacitance ¹⁾	C_j	800			500					pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	40								$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_j	-55 ~ +125								$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150								$^\circ\text{C}$

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

2) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

Fig.1 Forward Current Derating Curve

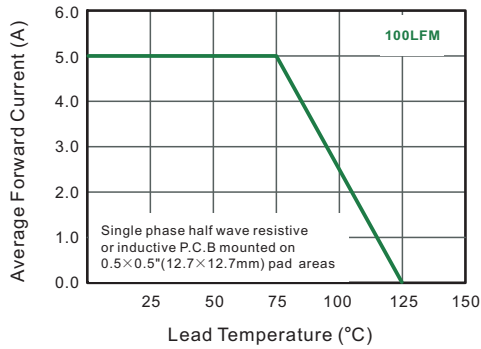


Fig.2 Typical Reverse Characteristics

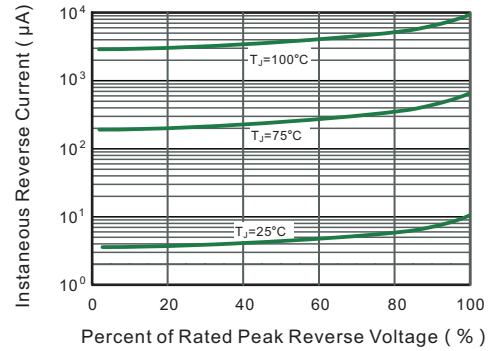


Fig.3 Typical Forward Characteristic

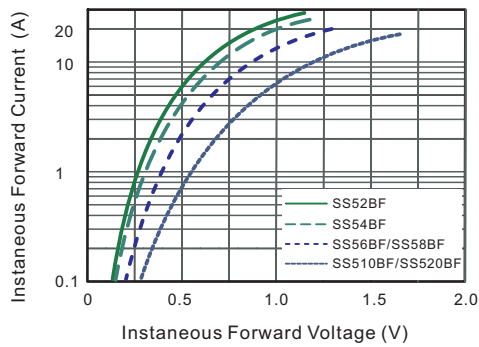


Fig.4 Typical Junction Capacitance

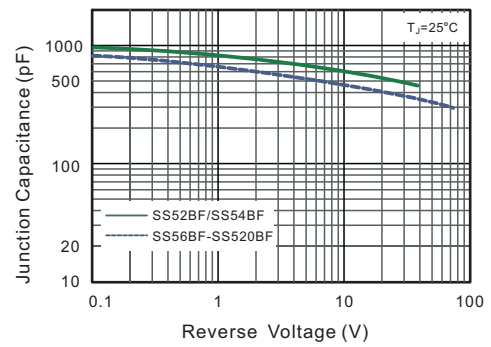


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

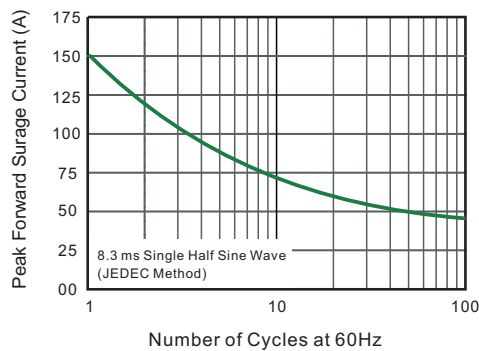
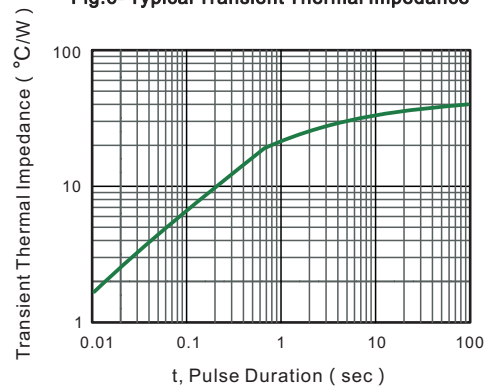


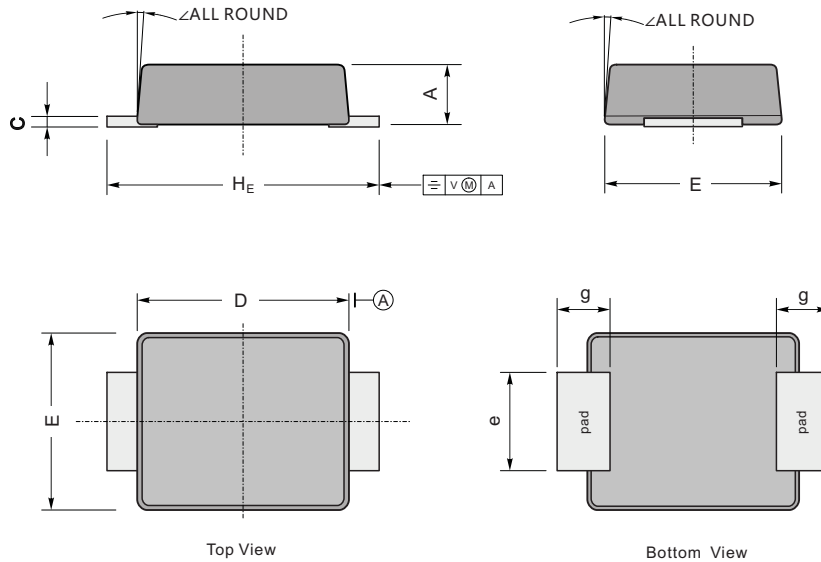
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

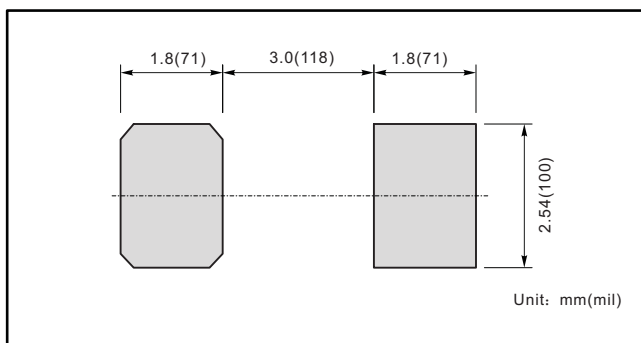
Plastic surface mounted package; 2 leads

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



Marking

Type number	Marking code
SS52BF	S52B
SS54BF	S54B
SS56BF	S56B
SS58BF	S58B
SS510BF	S510B
SS512BF	S512B
SS515BF	S515B
SS520BF	S520B