

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

Forward Current - 5 A

FEATURES

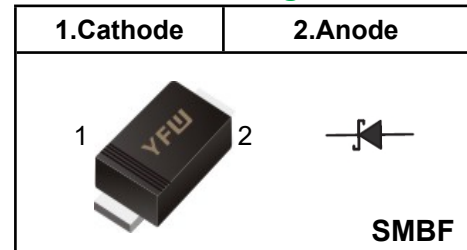
- ◆Metal silicon junction, majority carrier conduction
- ◆For surface mounted applications
- ◆Low power loss, high efficiency
- ◆High forward surge current capability
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



MECHANICAL DATA

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

Pinning



Marking Code

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

Absolute Maximum Ratings and Electrical characteristics

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

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	
Maximum Instantaneous Forward Voltage at 5 A	V_F	0.55		0.70		0.85		0.95		V	
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage $T_A = 25^{\circ}C$ $T_A = 100^{\circ}C$	I_R					1.0				50	mA
Typical Junction Capacitance ⁽¹⁾	C_j	800					500				pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$					45					°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150								°C	
Storage Temperature Range	T_{stg}	-55 ~ +150								°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

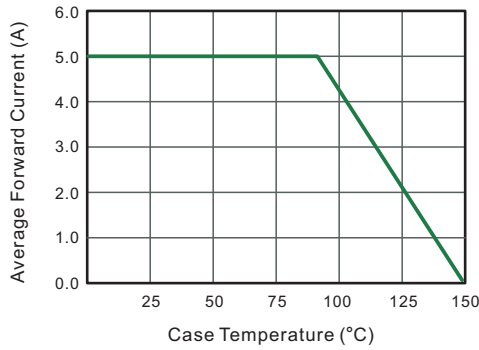


Fig.2 Typical Reverse Characteristics

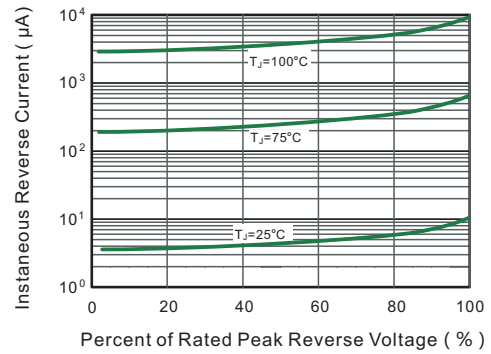


Fig.3 Typical Forward Characteristic

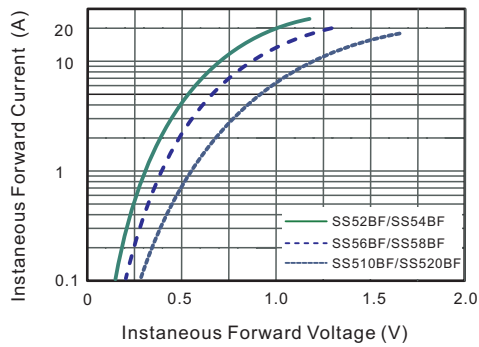


Fig.4 Typical Junction Capacitance

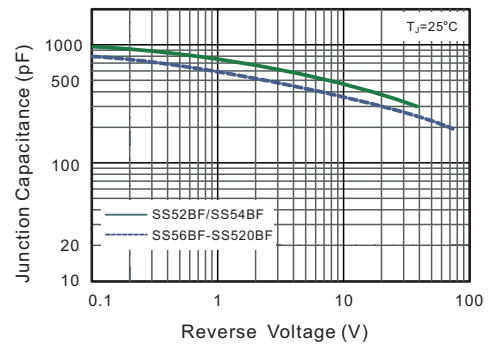


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

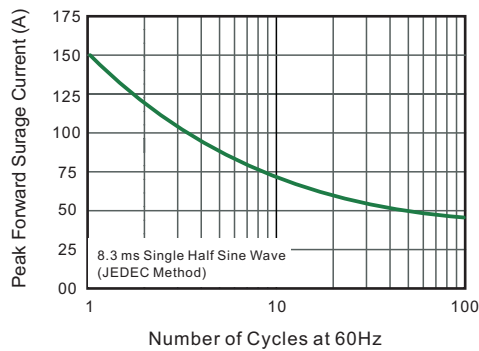
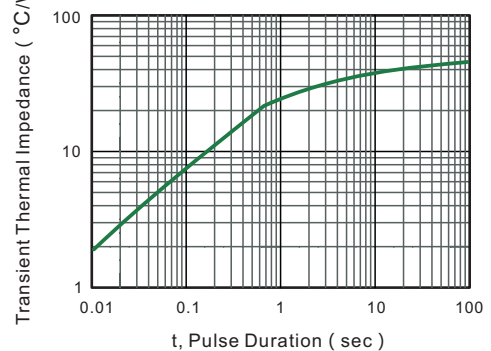


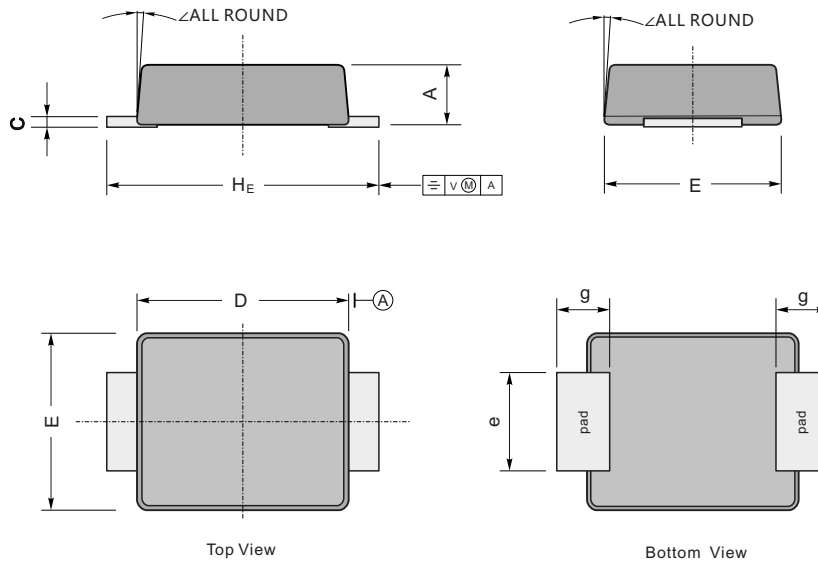
Fig.6- Typical Transient Thermal Impedance



Package Outline

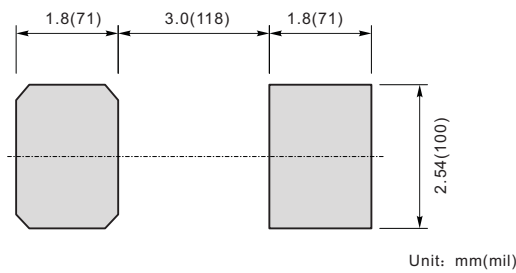
SMBF

Plastic surface mounted package; 2 leads



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		
	min	43	7	165	138	200	75		

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMBF	Tape/Reel, 13" reel	5000	EIA-481-1