

Surface Mount Schottky Barrier Rectifier

Reverse Voltage -20V to 200V

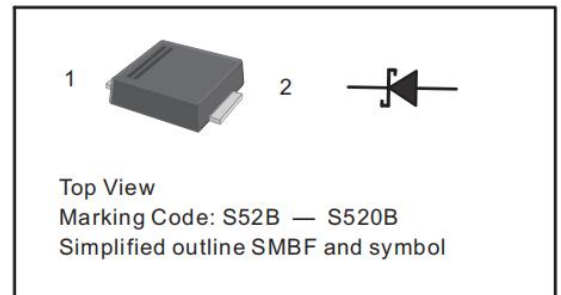
Forward Current -5.0A

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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	Symbol	SS52 BF	SS54 BF	SS56 BF	SS58 BF	SS510 BF	SS512 BF	SS515 BF	SS520 BF	Unit
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}	120								A
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed On Rated Load(JEDEC method)	I _{FSM}	240								A
I ² t Rating for fusing (3ms≤8.3ms)	I ² t	59.7								A ² S
Max Instantaneous Forward Voltage at 5A	V _F	0.55		0.70	0.85		0.95			V
Maximum DC Reverse Current T _a = 25°C at Rated DC Reverse Voltage T _a = 100°C	I _R	1.0								mA
		50								
Typical Junction Capacitance ⁽¹⁾	C _j	270		220	160		100		80	pF
Typical Thermal Resistance ⁽²⁾	R _{θJA}	42								°C/W
	R _{θJC}	10								
	R _{θJL}	15								
Operating Junction Temperature Range	T _j	-55~+125								°C
Storage Temperature Range	T _{stg}	-55~+150								°C

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

(2) P.C.B. mounted with 1.5"x1.5" (3.81x3.81cm) copper pad areas

Typical Characteristics

Fig.1 Forward Current Derating Curve

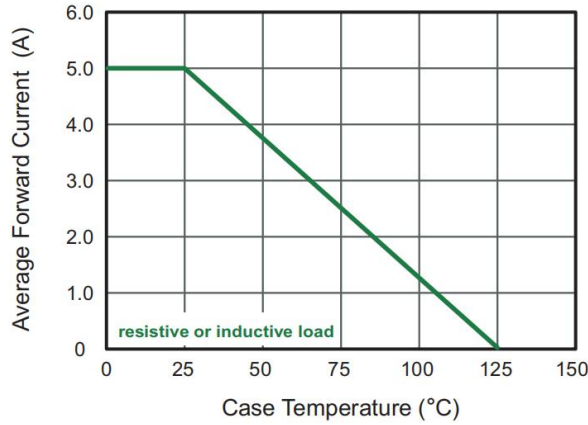


Fig.2 Typical Reverse Characteristics

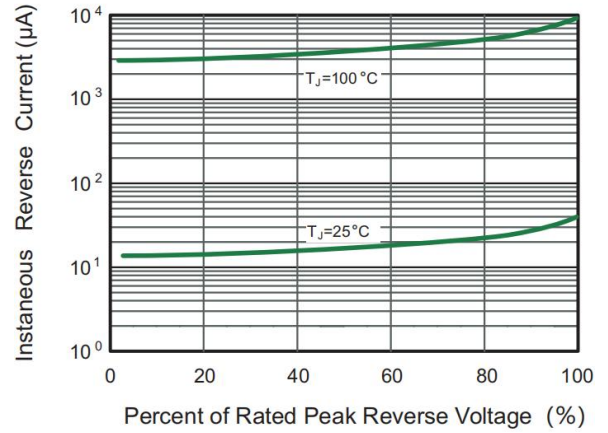


Fig.3 Typical Forward Characteristic

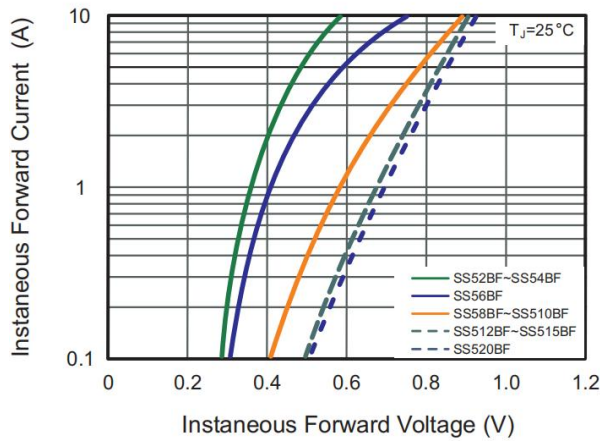


Fig.4 Typical Junction Capacitance

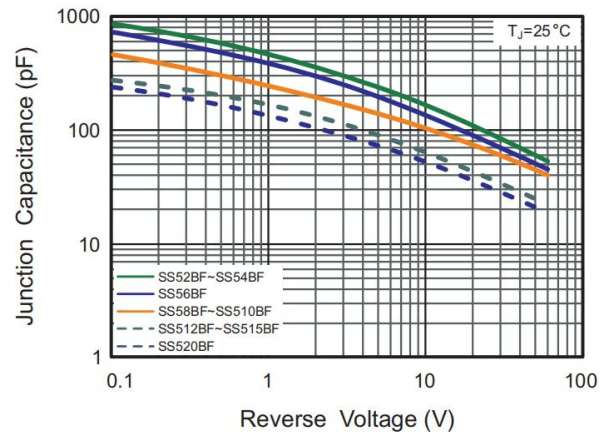
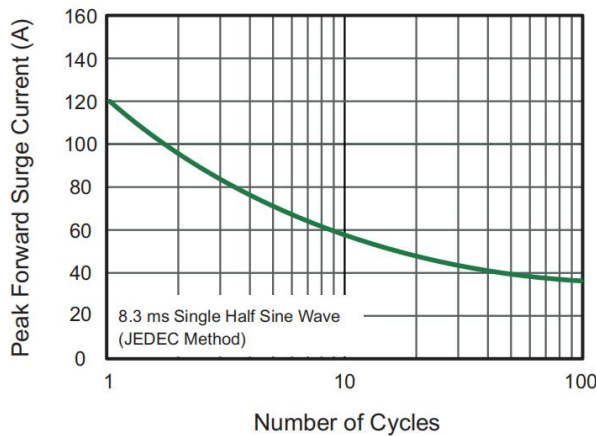


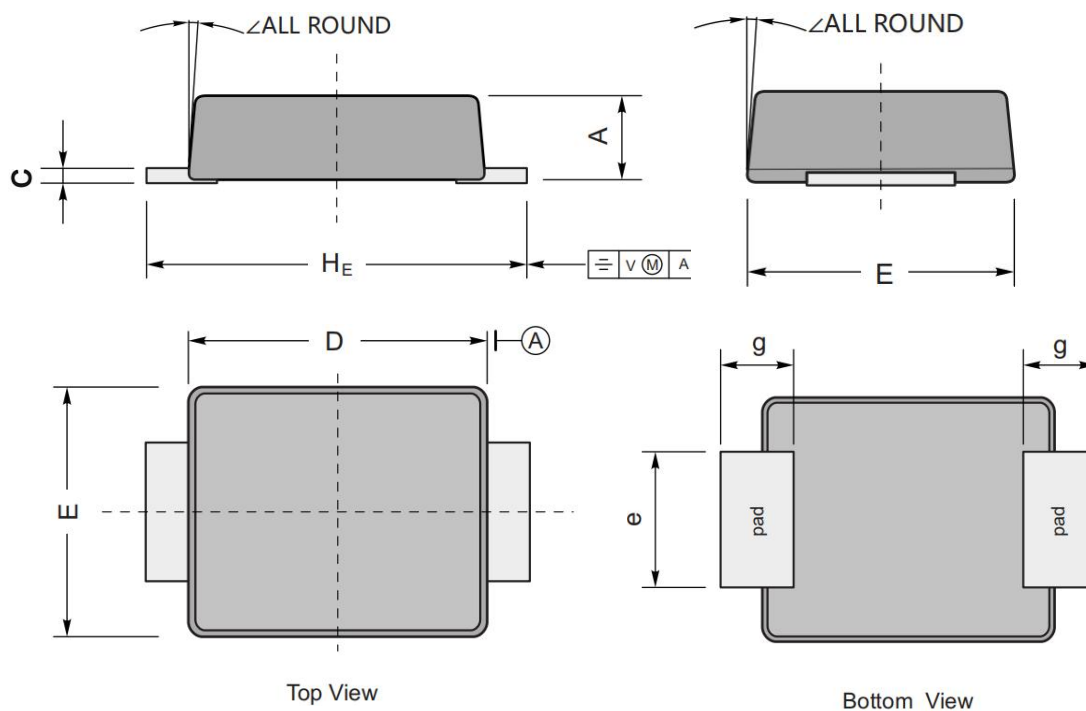
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Information

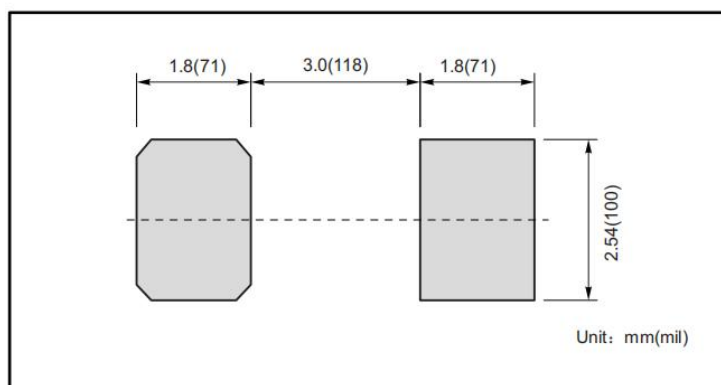
SMBF

Dimensions in mm



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

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