



## DESCRIPTION

The SM320BF~SM3200BF are available in SMBF package

## ORDERING INFORMATION

Package Type	Part Number
SMBF	SM320BF
	SM340BF
	SM360BF
	SM380BF
	SM3100BF
	SM3120BF
	SM3150BF
	SM3200BF
Note	5,000pcs/Reel
AiT provides all RoHS Compliant Products	

## PIN DESCRIPTION

CATHODE  ANODE

## 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
- Available in SMBF package

## 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	Symbol	SM 320BF	SM 340BF	SM 360BF	SM 380BF	SM 3100BF	SM 3120BF	SM 3150BF	SM 3200BF	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	80	100	120	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	3.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	80				70				A
Max Instantaneous Forward Voltage at 3A	V <sub>F</sub>	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Reverse Voltage	I <sub>R</sub>	0.5				0.3				mA
T <sub>A</sub> =25°C		5.0				3.0				
Typical Junction Capacitance <small>NOTE1</small>	C <sub>J</sub>	450				400				pF
Typical Thermal Resistance <small>NOTE2</small>	R <sub>θJA</sub>	50								°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~125								°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~150								°C

NOTE1: Measured at 1MHz and applied reverse voltage of 4V D.C.

NOTE2: P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.



**TYPICAL CHARACTERISTICS**

Figure. 1 Forward Current Derating Curve

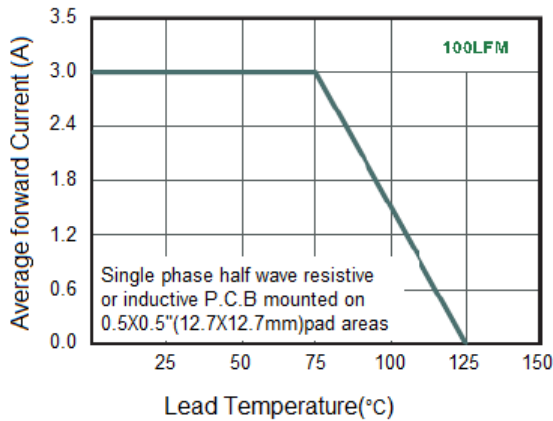


Figure. 3 Typical Forward Characteristic

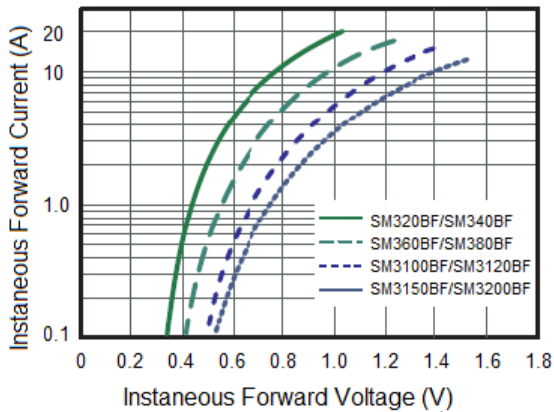


Figure. 5 Typical Transient Thermal Impedance

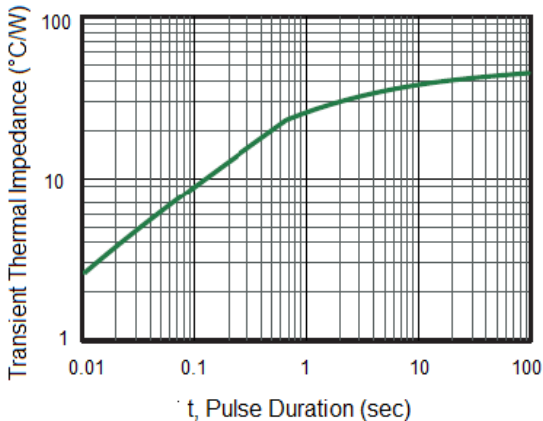


Figure. 2 Typical Reverse Characteristics

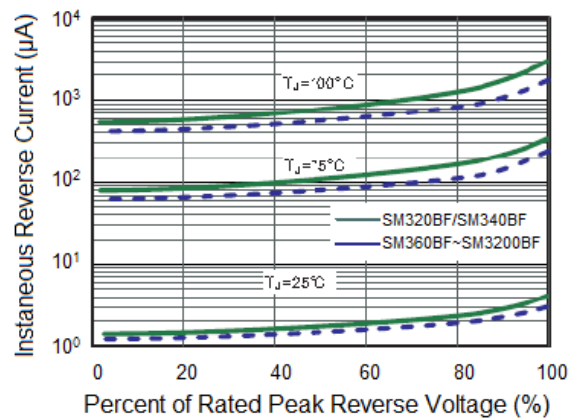
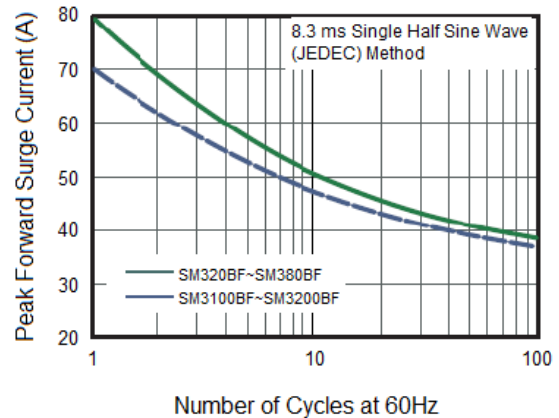


Figure. 4 Maximum Non-Repetitive Peak Forward Surge Current

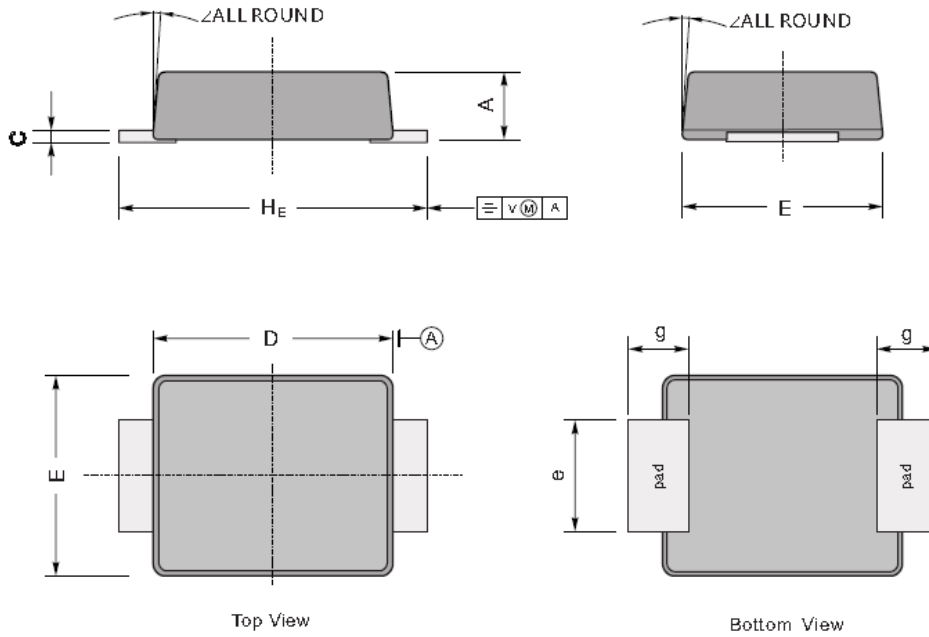




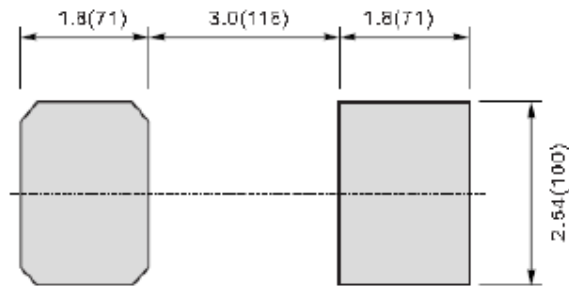
**PACKAGE INFORMATION**

Dimension in SMBF (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit: mm(mil)

UNIT		A	C	D	E	H <sub>E</sub>	e	g	$\angle$
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		



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