



DESCRIPTION

The SM220BF~SM2200BF are available in SMB package.

ORDERING INFORMATION

Package Type	Part Number
SMBF	SM220BF
	SM240BF
	SM260BF
	SM280BF
	SM2100BF
	SM2120BF
	SM2150BF
	SM2200BF
Note	SPQ: 5,000pcs/Reel
AiT provides all RoHS Compliant Products	

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

PIN DESCRIPTION





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	Symbol	SM 220BF	SM 240BF	SM 260BF	SM 280BF	SM 2100BF	SM 2120BF	SM 2150BF	SM 2200BF	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 at	$I_{F(AV)}$	2.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	55				45				A
Max Instantaneous Forward Voltage at 2A	V_F	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$ 0.5		$T_A=100^\circ\text{C}$ 5		0.3		3		mA
Typical Junction Capacitance ^{NOTE1}	C_J	250				110				pF
Typical Thermal Capacitance ^{NOTE2}	$R_{\theta JA}$	65								°C/W
Operating Temperature Range	T_J	-55 to +125								°C
Storage Temperature Range	T_{STG}	-55 to +150								°C

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

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



TYPICAL PERFORMANCE CHARACTERISTICS

T_A = 25°C unless otherwise noted.

Figure. 1 Forward Current Derating Curve

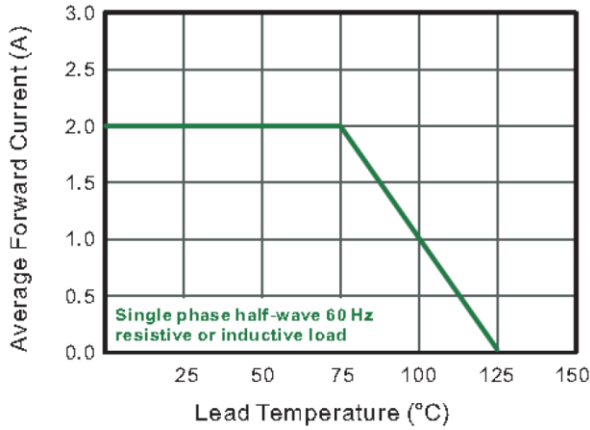


Figure. 2 Typical Reverse Characteristics

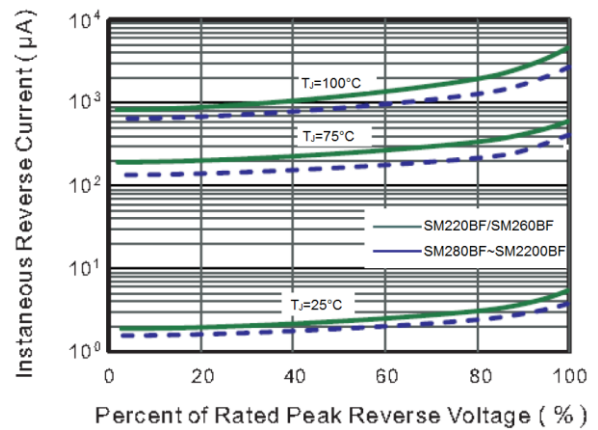


Figure. 3 Typical Forward Characteristic

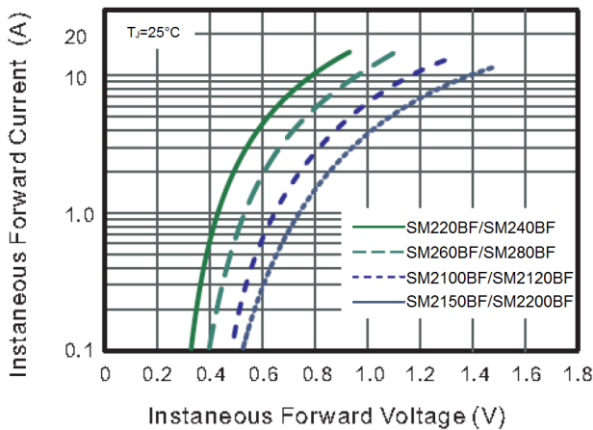


Figure. 4 Typical Junction Capacitance

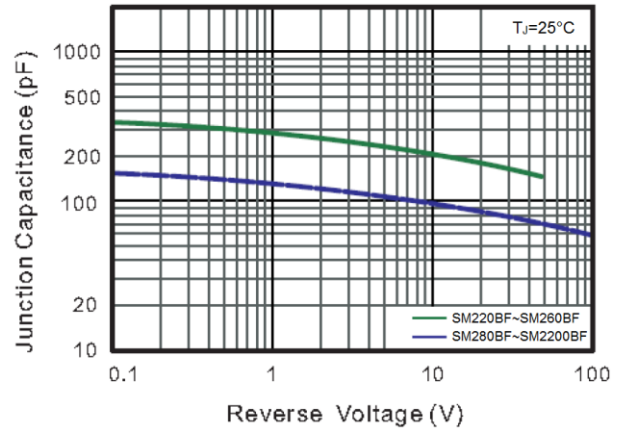


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

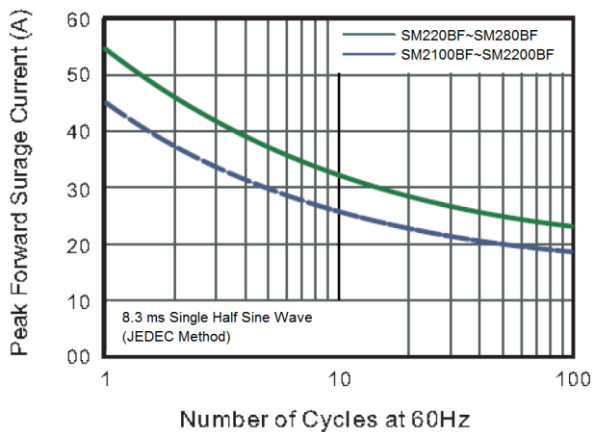
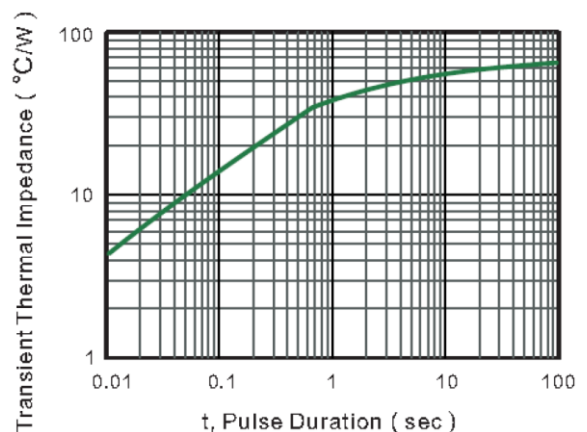


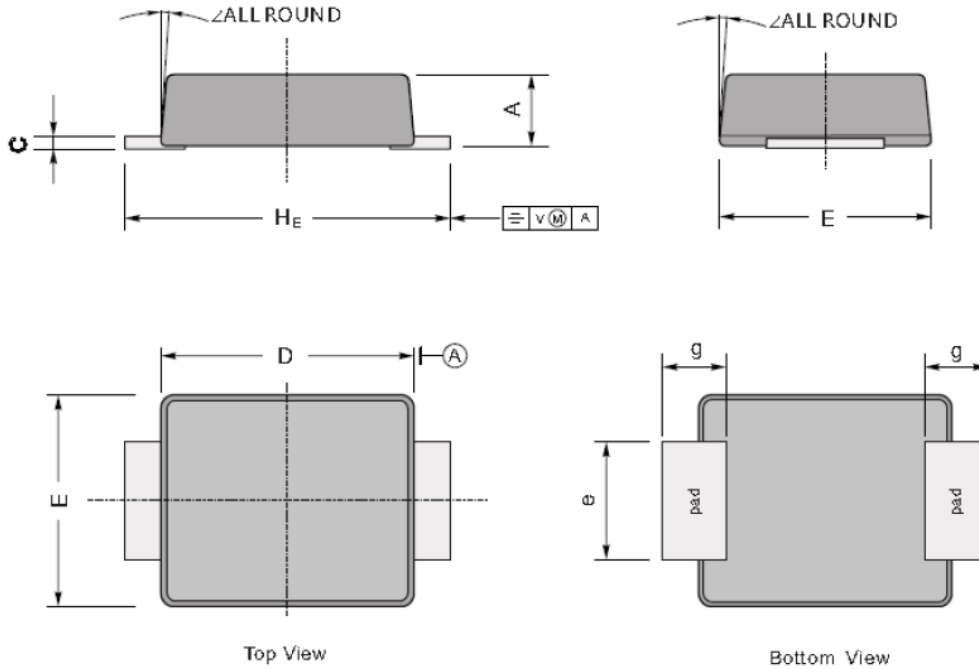
Figure. 6 Typical Transient Thermal Impedance



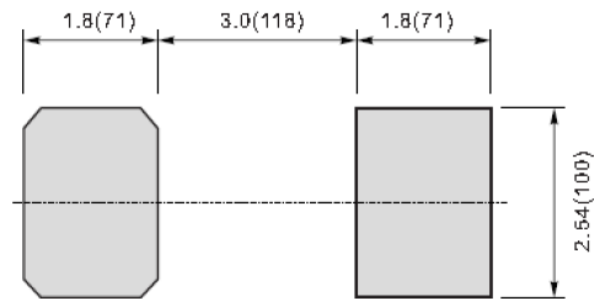


PACKAGE INFORMATION

Dimension in SMBF Package (Unit: mm)
Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit: mm(mil)

UNIT		A	C	D	E	HE	e	g	α
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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