



DESCRIPTION

The SM220B~SM2200B are available in SMB package.

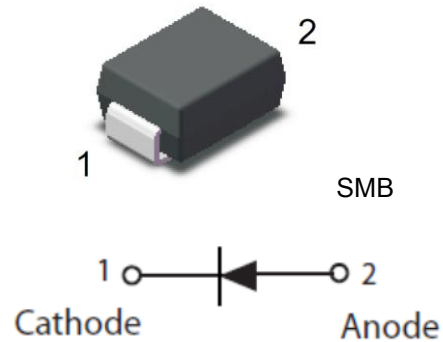
MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.55g / 0.002oz

FEATURE

- 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, Freewheeling, and Polarity Protection Applications

PIN DESCRIPTION



ORDERING INFORMATION

Package Type	Part Number
SMB	SM220B
	SM240B
	SM260B
	SM280B
	SM2100B
	SM2120B
	SM2150B
	SM2200B
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

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 current derate by 20 %.

Parameter	Symbol	SM220B	SM240B	SM260B	SM280B	SM2100B	SM2120B	SM2150B	SM2200B	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)}	2								A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	55	55	55	55	45	45	45	45	A
Maximum Instantaneous Forward Voltage at 3A	V _F	0.55	0.55	0.70	0.70	0.85	0.85	0.95	0.95	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25°C	I _R	0.50	0.50	0.50	0.30	0.30	0.30	0.30	mA
	T _A = 100°C		5	5	5	3	3	3	3	
Typical Junction Capacitance	C _j	220	220	220	110	110	110	110	110	pF
Typical Thermal Resistance (2)	R _{θJA}	60								°C/W
Operating Temperature Range	T _j	-55 ~ +125								°C
Storage Temperature Range	T _{stg}	-55 ~ +125								°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

(1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Forward Current Derating Curve

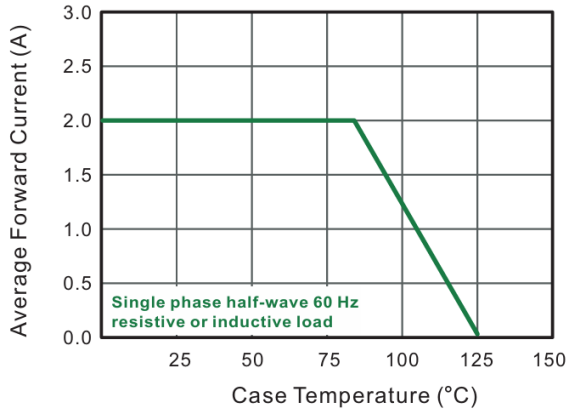


Fig 2. Typical Reverse Characteristics

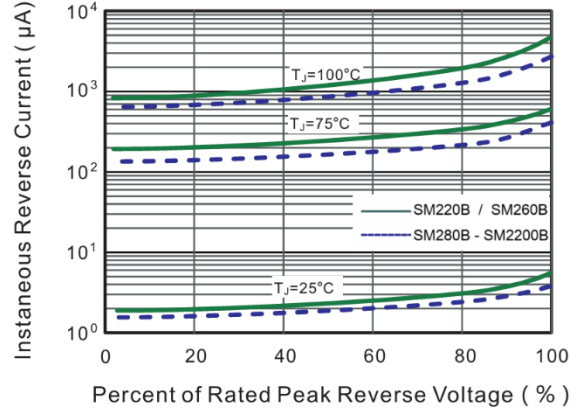


Fig 3. Typical Forward Characteristics

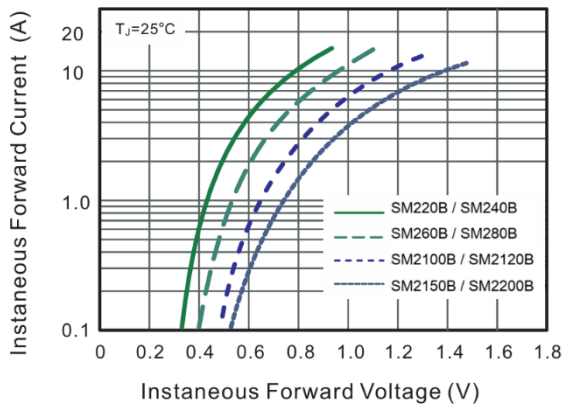


Fig 4. Typical Junction Capacitance

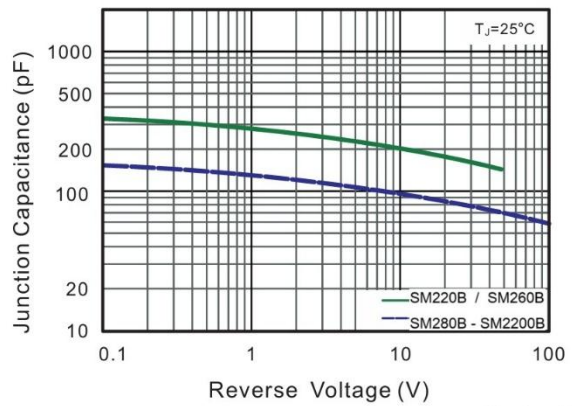


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

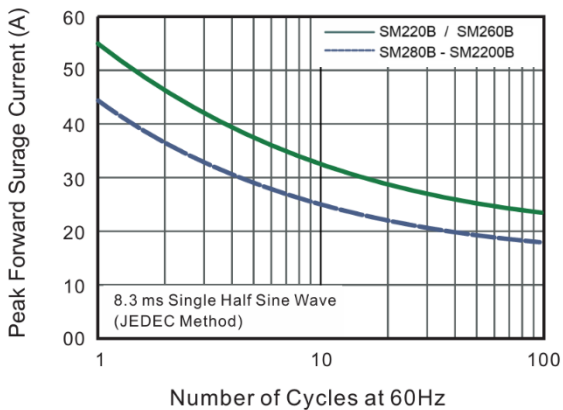
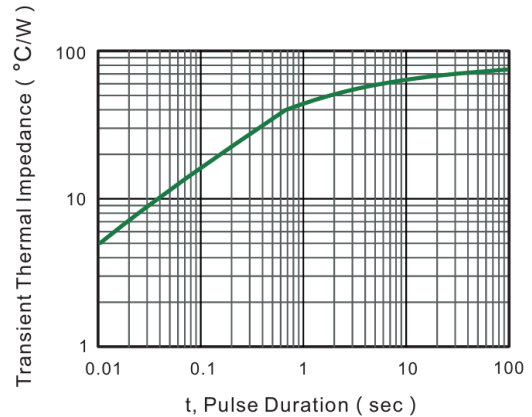


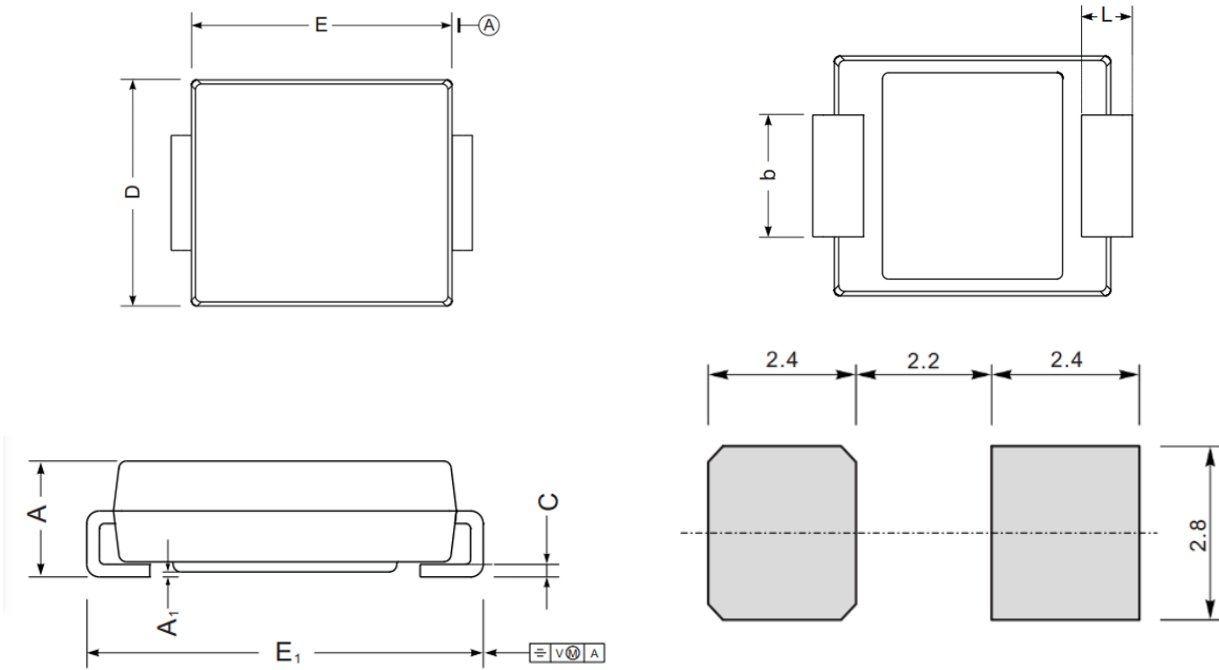
Fig 6. Typical Transient Thermal Impedance





PACKAGE INFORMATION

Dimension in SMB Package (Unit: mm)



The recommended mounting pad size

SYMBOL	MIN	MAX
A	2.130	2.440
A1	0.050	0.200
b	1.900	2.200
C	0.152	0.305
D	3.300	3.940
E	4.060	4.700
E1	5.080	5.590
L	0.800	1.500



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