



## DESCRIPTION

The SM320B~SM3200B are available in SMB Package.

## ORDERING INFORMATION

Package Type	Part Number
SMB	SM320B
	SM340B
	SM360B
	SM380B
	SM3100B
	SM3120B
	SM3150B
	SM3200B
Note	SPQ: 3,000pcs/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 SMB Package

## MECHANICAL DATA

Case: SMB

Terminals: Solderable per MIL-STD-750,  
Method 2026

Approx. Weight: 95mg ( 0.0034oz )

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	SM 320B	SM 340B	SM 360B	SM 380B	SM 3100B	SM 3120B	SM 3150B	SM 3200B	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	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	80								A
Max Instantaneous Forward Voltage at 3A	$V_F$	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Reverse Voltage	$I_R$	$T_A = 25^\circ C$		0.5		0.3				mA
		$T_A = 100^\circ C$		5		3				
Typical Junction Capacitance <sup>NOTE1</sup>	$C_J$	450			400				pF	
Typical thermal resistance <sup>NOTE2</sup>	$R_{\theta JA}$	60								°C/W
Operating Junction Temperature Range	$T_J$	-55 to +150								°C
Storage Temperature Range	$T_{STG}$	-55 to +150								°C

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

NOTE2: P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



## TYPICAL PERFORMANCE CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

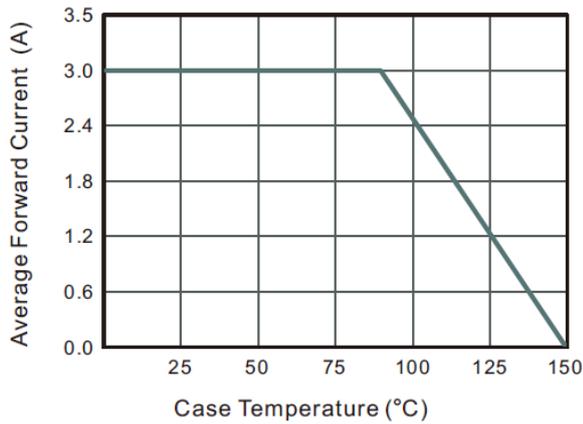


Figure. 2 Typical Reverse Characteristics

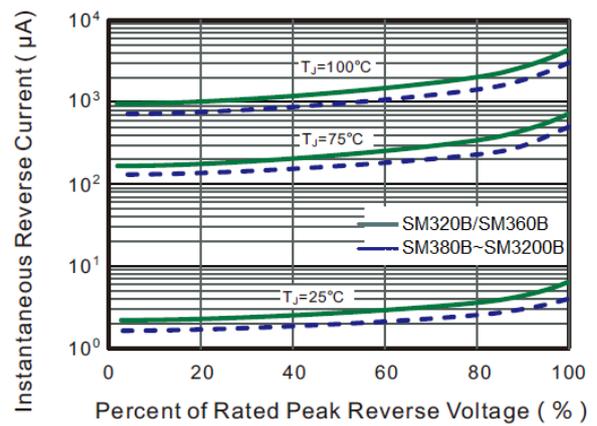


Figure. 3 Typical Forward Characteristic

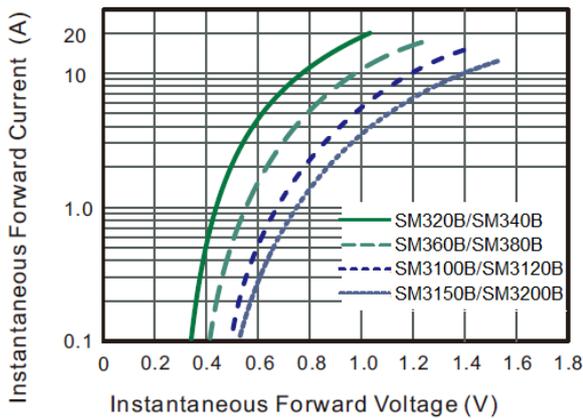


Figure. 4 Typical Junction Capacitance

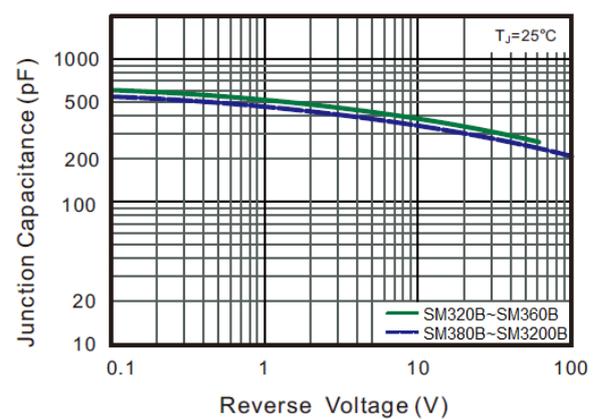


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

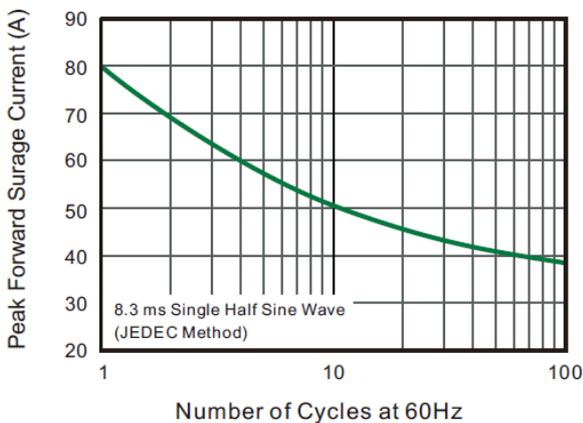
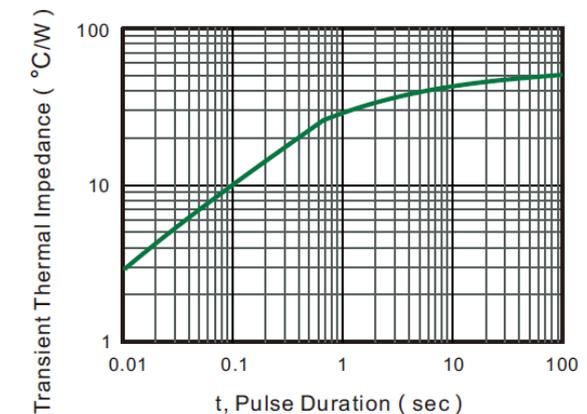


Figure. 6 Typical Transient Thermal Impedance

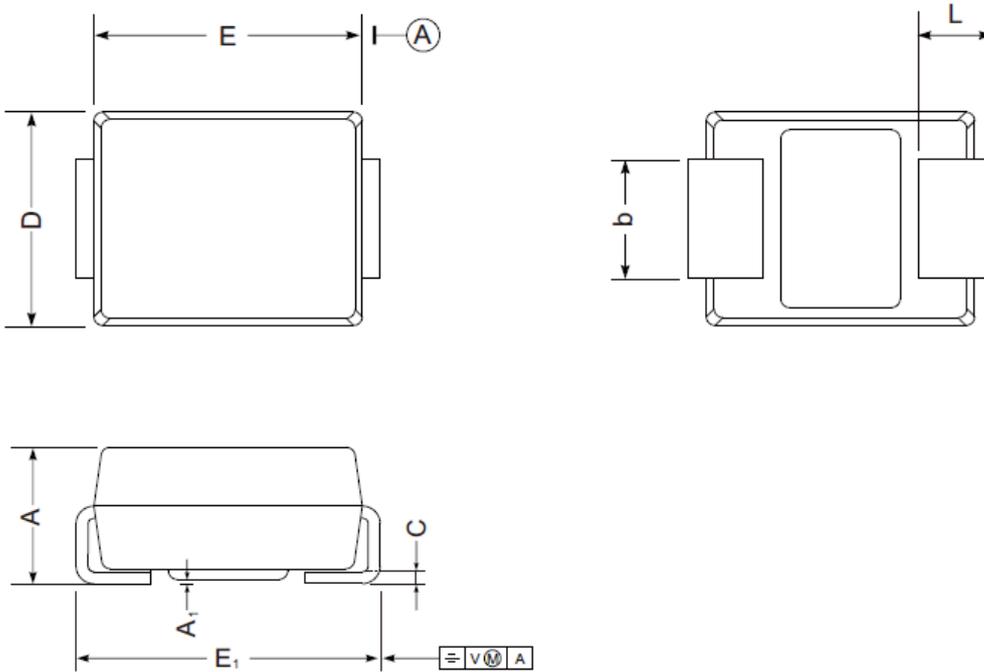




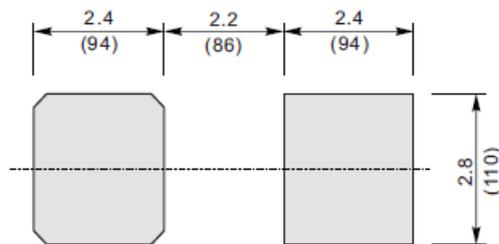
**PACKAGE INFORMATION**

Dimension in SMB Package (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit :  $\frac{\text{mm}}{\text{mil}}$

UNIT		A	E	D	E <sub>1</sub>	A <sub>1</sub>	L	C	b
mm	Max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.2
	Min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.9
mil	Max	96	185	155	220	7.9	59	12	87
	Min	84	160	130	200	2.0	32	6	75



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