



**DESCRIPTION**

The SM320C~SM3200C are available in SMC package.

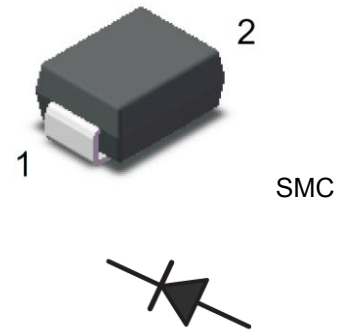
**MECHANICAL DATA**

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

**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
SMC	SM320C
	SM340C
	SM360C
	SM380C
	SM3100C
	SM3120C
	SM3150C
	SM3200C
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	SM320C	SM340C	SM360C	SM380C	SM3100C	SM3120C	SM3150C	SM3200C	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								A	
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I <sub>FSM</sub>	80								A	
Maximum Instantaneous Forward Voltage at 3A	V <sub>F</sub>	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	I <sub>R</sub>	T <sub>A</sub> = 25°C	0.50	0.50	0.50	0.30	0.30	0.30	0.30	0.30	mA
		T <sub>A</sub> = 100°C	5	5	5	3	3	3	3	3	
Typical Junction Capacitance	C <sub>j</sub>	450	450	450	350	350	350	350	350	pF	
Typical Thermal Resistance (2)	R <sub>θJA</sub>	50								°C/W	
Operating Temperature Range	T <sub>j</sub>	-55 ~ +150								°C	
Storage Temperature Range	T <sub>stg</sub>	-55 ~ +150								°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<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1 A, I<sub>rr</sub> = 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

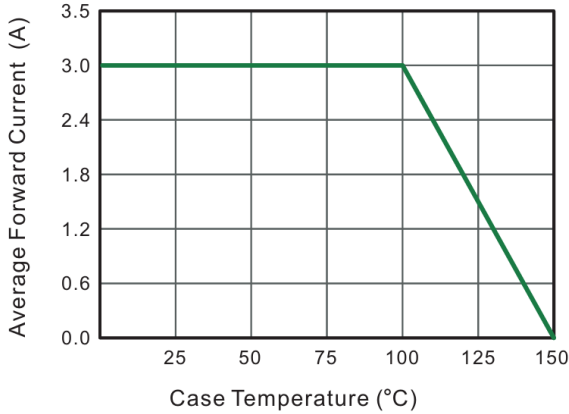


Fig 2. Typical Reverse Characteristics

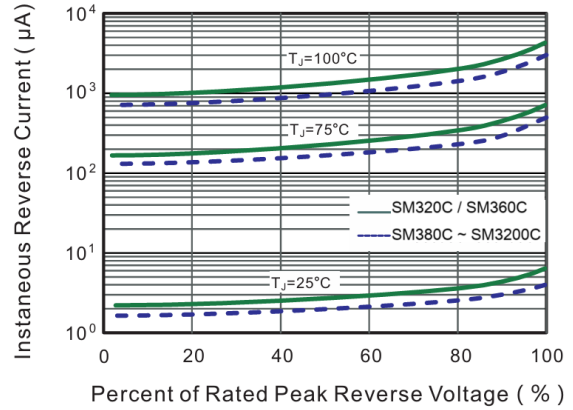


Fig 3. Typical Forward Characteristics

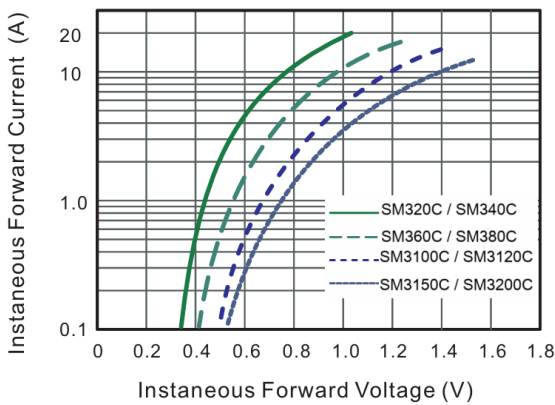


Fig 4. Typical Junction Capacitance

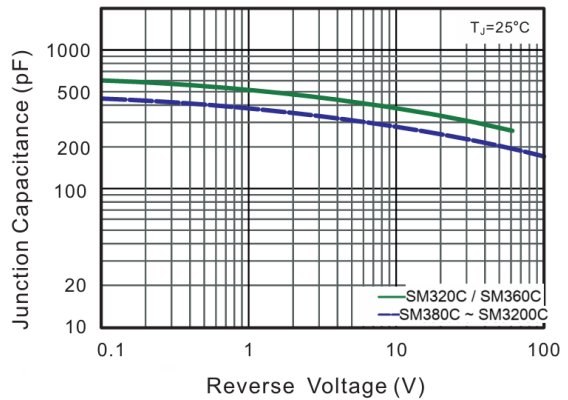


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

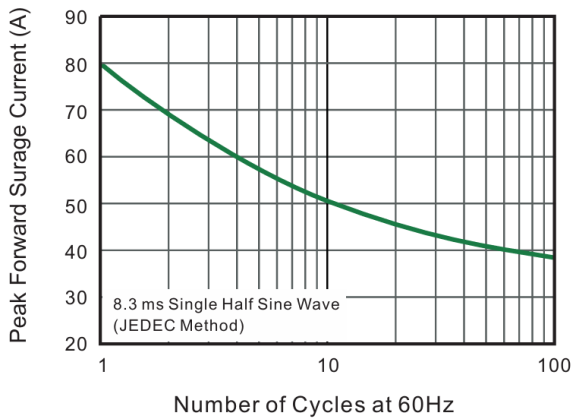
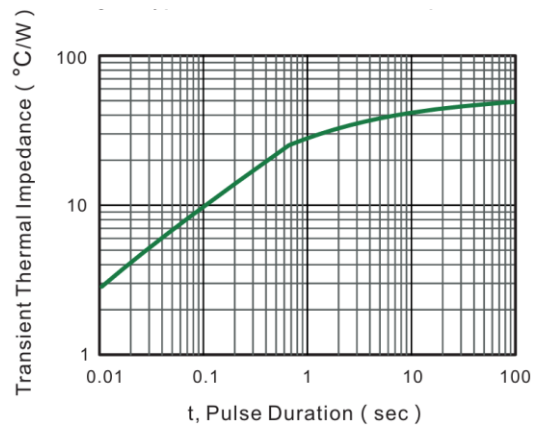


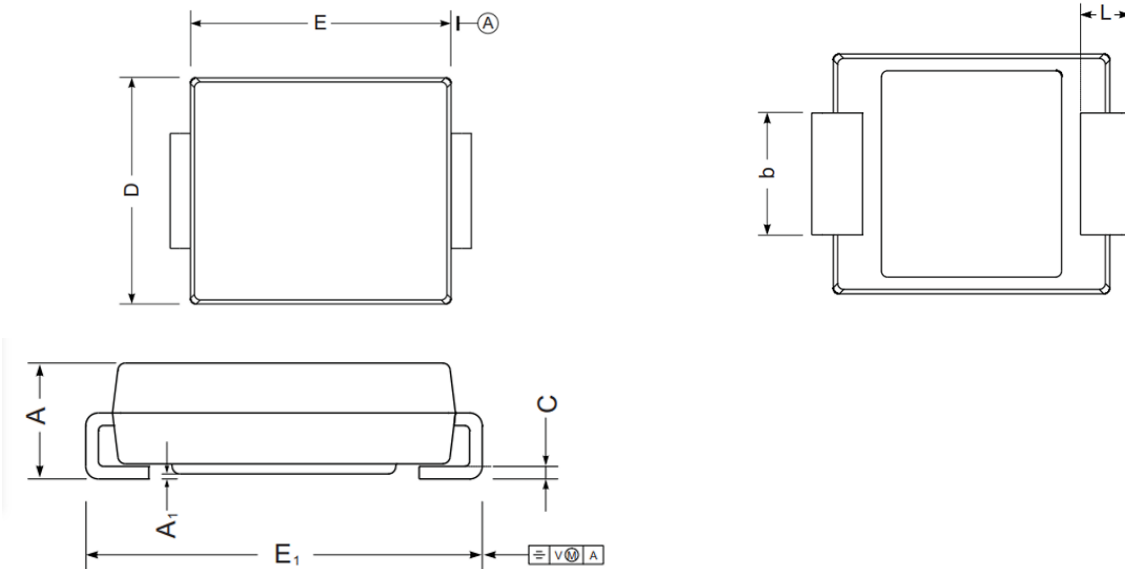
Fig 6. Typical Transient Thermal Impedance





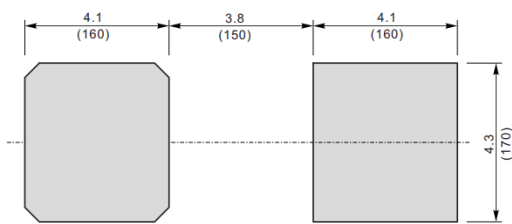
**PACKAGE INFORMATION**

Dimension in SMC Package (Unit: mm)



SYMBOL	MIN	MAX
A	2.000	2.620
A <sub>1</sub>	0.05	0.210
b	2.750	3.250
C	0.150	0.310
D	5.600	6.200
E	6.500	7.000
E <sub>1</sub>	7.600	8.000
L	0.900	1.600

**The recommended mounting pad size**



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



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