DESCRIPTION

The SM520C~SM5200C are available in SMC Package

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 SMC Package

ORDERING INFORMATION

Package Type	Part Number
SMC	SM520C
	SM540C
	SM560C
	SM580C
	SM5100C
	SM5120C
	SM5150C
	SM5200C
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

Case: SMC

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

Approx. Weight: A 0.22g / 0.0077oz

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	SM 520C	SM 540C	SM 560C	SM 580C	SM 5100C	SM 5120C	SM 5150C	SM 5200C	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	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	175				150				A
Maximum Instantaneous Forward Voltage at 5A	V_F	0.45	0.55	0.70		0.85				V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=25°C T_A=100°C	I_R	1.0 50								mA
Typical Junction Capacitance NOTE1	C_J	600				400				pF
Typical Thermal Resistance NOTE2	$R_{\theta JA}$	35								°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150								°C
Storage Temperature Range	T_{STG}	-55 ~ +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 CHARACTERISTICS

Figure. 1 Typical Forward Current Derating Curve

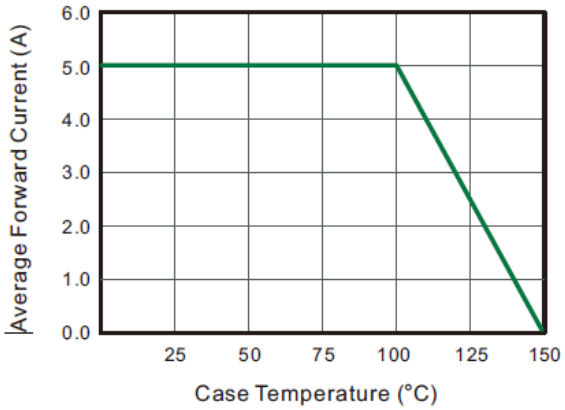


Figure. 2 Typical Reverse Characteristics

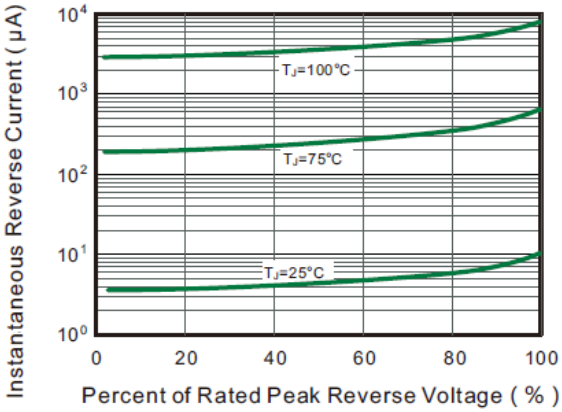


Figure. 3 Typical Forward Characteristic

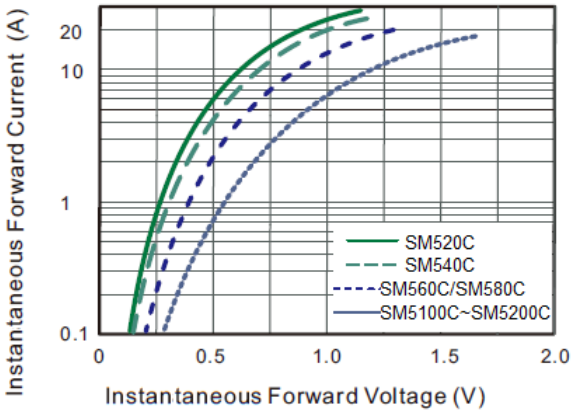


Figure. 4 Typical Junction Capacitance

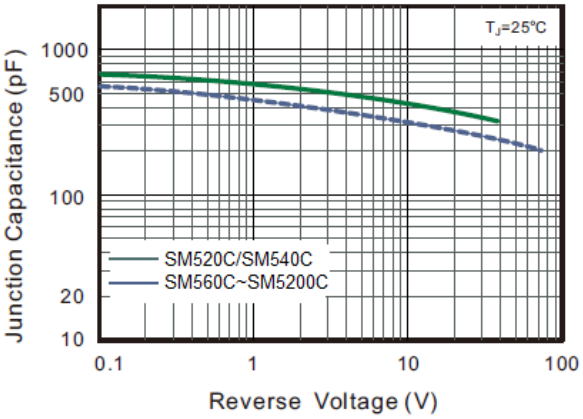


Figure. 5 Maximum Non-Repetitive Peak Forward Surage Current

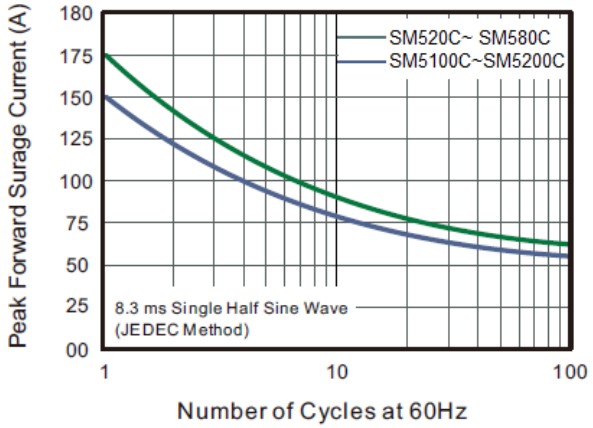
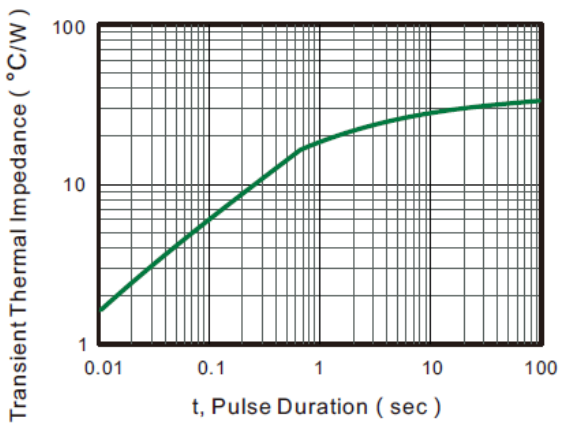


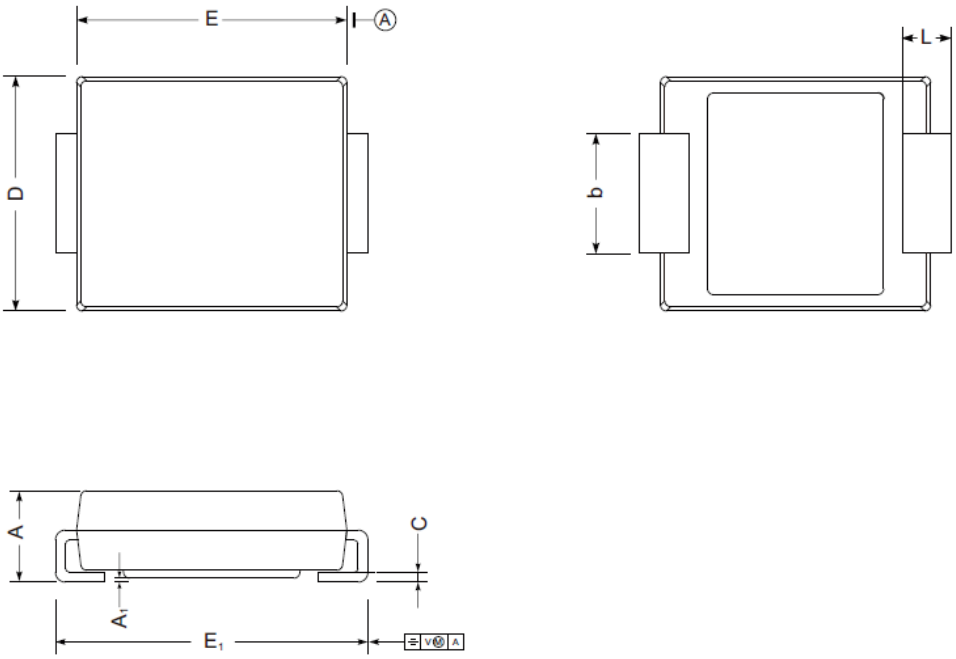
Figure. 6 Typical Transient Thermal Impedance



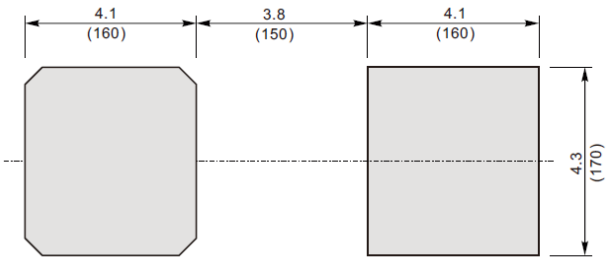
PACKAGE INFORMATION

Dimension in SMC (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit : mm (mil)

UNIT		A	E	D	E_1	A_1	C	L	b
mm	Max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	Min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	Max	103	276	244	315	8.3	12	63	128
	Min	79	256	220	299	2.0	5.9	35	108

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