DESCRIPTION

The SM520C~SM5100C are available in SMC Package.

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction
- RoHS Compliant
- Available in SMC Package

ORDERING INFORMATION

Package Type	Part Number
SMC	SM520C
	SM530C
	SM540C
	SM550C
	SM560C
	SM580C
	SM5100C
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

Case: Molded plastic

Epoxy: UL 94V-0 rate flame retardant

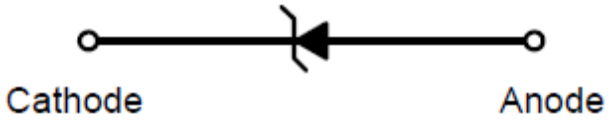
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 1.10 grams

PIN DESCRIPTION



ABSOLUTE MAXIMUM RATINGS

Rating 25℃ ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	SM 520C	SM 530C	SM 540C	SM 550C	SM 560C	SM 580C	SM 5100C	Unit
Maximum Recurrent Peak Reverse Voltage	2 0	30	40	50	60	80	100	V
Maximum RMS Voltage	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage (See Fig.1)	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	120							A
Maximum Instantaneous Forward Voltage at 5.0A	0.55			0.70		0.85		V
Maximum DC Reverse Current T_A=25℃ at Rated DC Blocking Voltage T_A=100℃	5.0 50							mA
Typical Junction Capacitance NOTE1	380							pF
Typical Thermal Resistance $R_{\theta JA}$ NOTE2	10							℃/W
Operating Temperature Range T_J	-50 ~ +125							℃
Storage Temperature Range T_{STG}	-65 ~ +150							℃

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.

NOTE1: Measured at 1MHz and applied reverse voltage of 4.0V D.C.

NOTE2: Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

TYPICAL PERFORMANCE CHARACTERISTICS

Fig. 1 Typical Forward Current Derating Curve

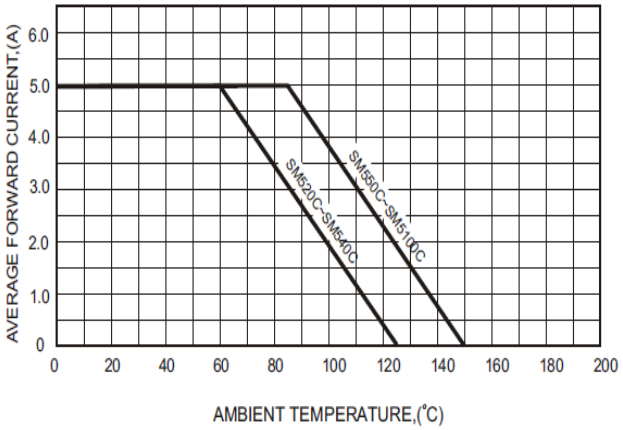


Fig. 2 Typical Forward Characteristics

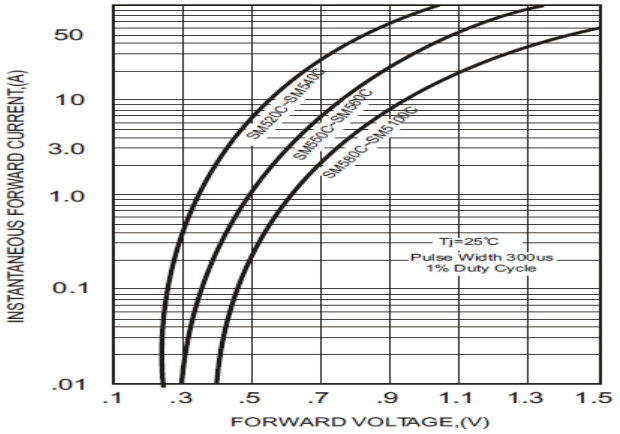


Fig. 3 Maximum Non-Repetitive Forward Surge Current

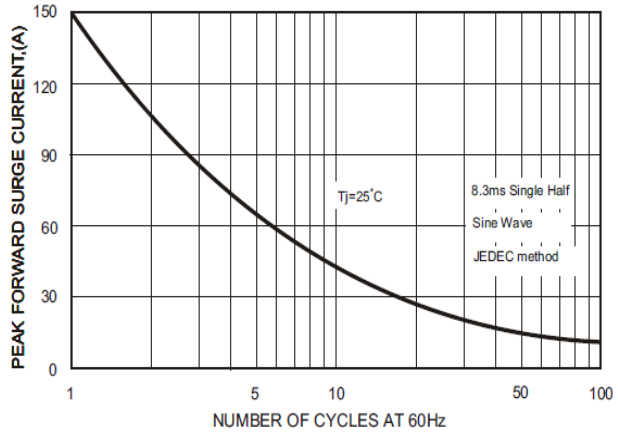


Fig. 4 Typical Junction Capacitance

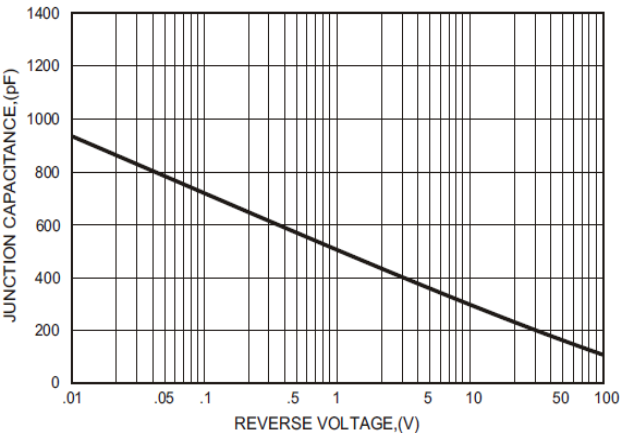
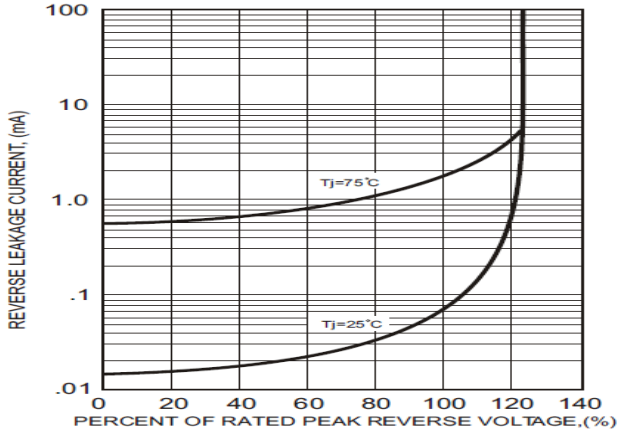
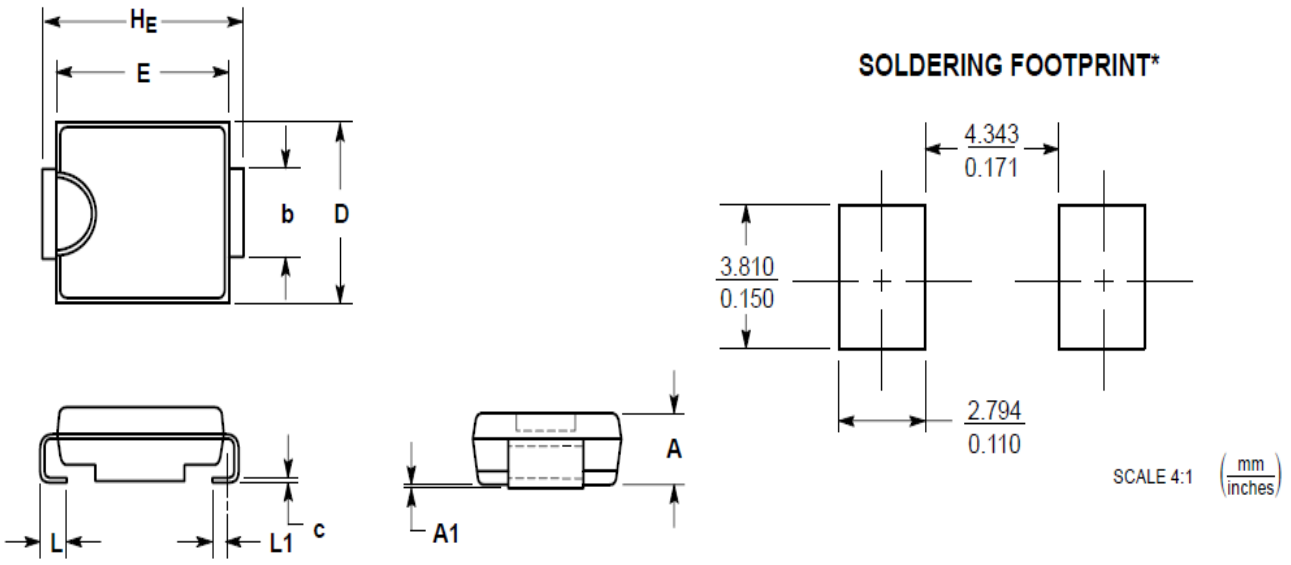


Fig. 5 Typical Reverse Characteristics



PACKAGE INFORMATION

Dimension in SMC Package (Unit: mm)



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.075	0.095	1.90	2.41
A1	0.002	0.006	0.05	0.15
b	0.115	0.121	2.92	3.07
c	0.006	0.012	0.15	0.30
D	0.220	0.240	5.59	6.10
E	0.260	0.280	6.60	7.11
H_E	0.305	0.320	7.75	8.13
L	0.030	0.050	0.76	1.27
L1	0.020 REF		0.51 REF	

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