

**DESCRIPTION**

The SS32C~SS320C are available in SMC package.

**MECHANICAL DATA**

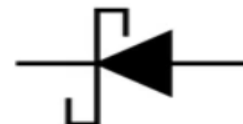
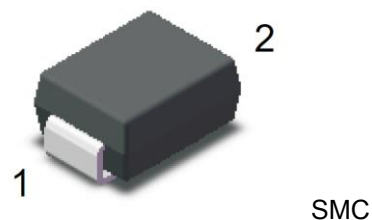
- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

**ORDERING INFORMATION**

Package Type	Part Number
SMC	SS32C
	SS34C
	SS36C
	SS38C
	SS310C
	SS312C
	SS315C
	SS320C
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

**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, Free Wheeling, and Polarity Protection Applications

**PIN DESCRIPTION**

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	SS32C	SS34C	SS36C	SS38C	SS310C	SS312C	SS315C	SS320C	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								A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	80								A
Maximum Instantaneous Forward Voltage at 3A	$V_F$	0.55	0.55	0.70	0.70	0.85	0.85	0.90	0.90	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage	$T_A = 25^\circ\text{C}$	$I_R$	0.50	0.50	0.50	0.30	0.30	0.30	0.30	mA
	$T_A = 100^\circ\text{C}$		5	5	5	3	3	3	3	
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	450	450	450	350	350	350	350	350	pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	50								°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +150								°C
Storage Temperature Range	$T_{stg}$	-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 at 1 MHz and applied reverse voltage of 4 V D.C

(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

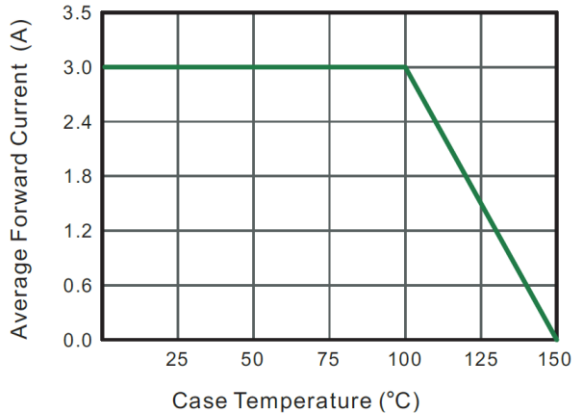


Fig 2. Typical Reverse Characteristics

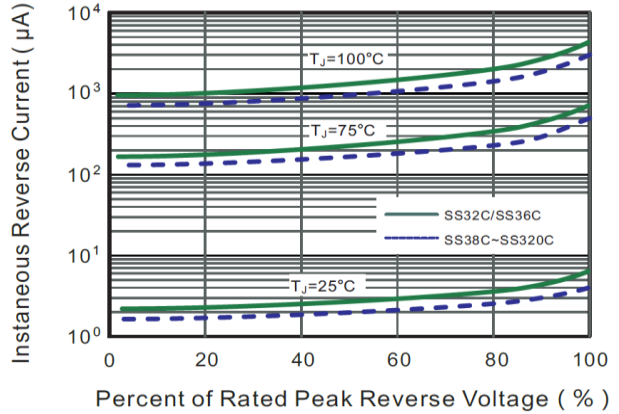


Fig 3. Typical Forward Characteristics

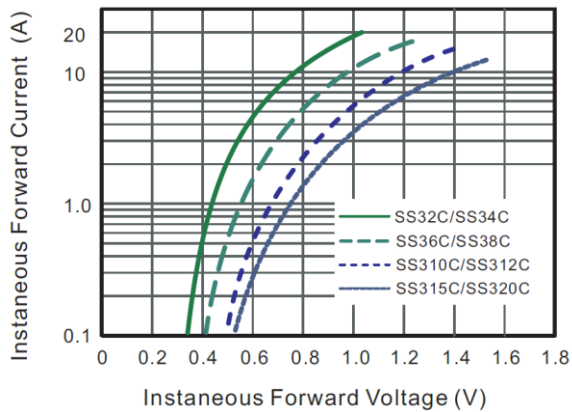


Fig 4. Typical Junction Capacitance

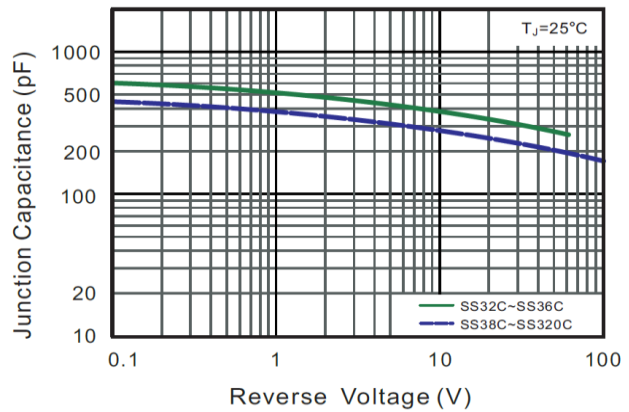


Fig 5. Maximum Non-Repetitive Peak  
Forward Surge Current

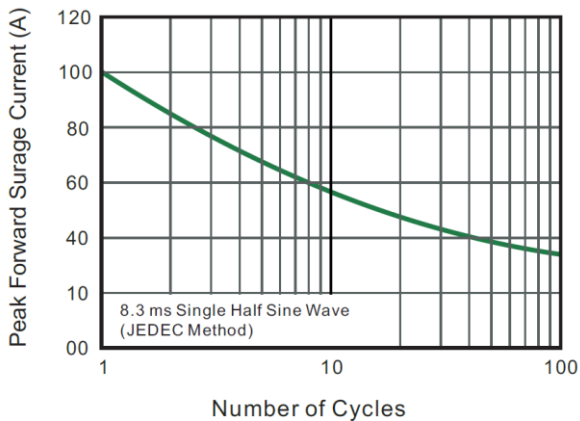
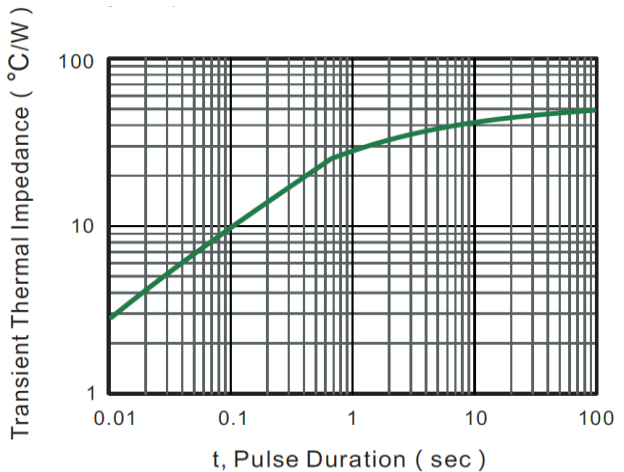


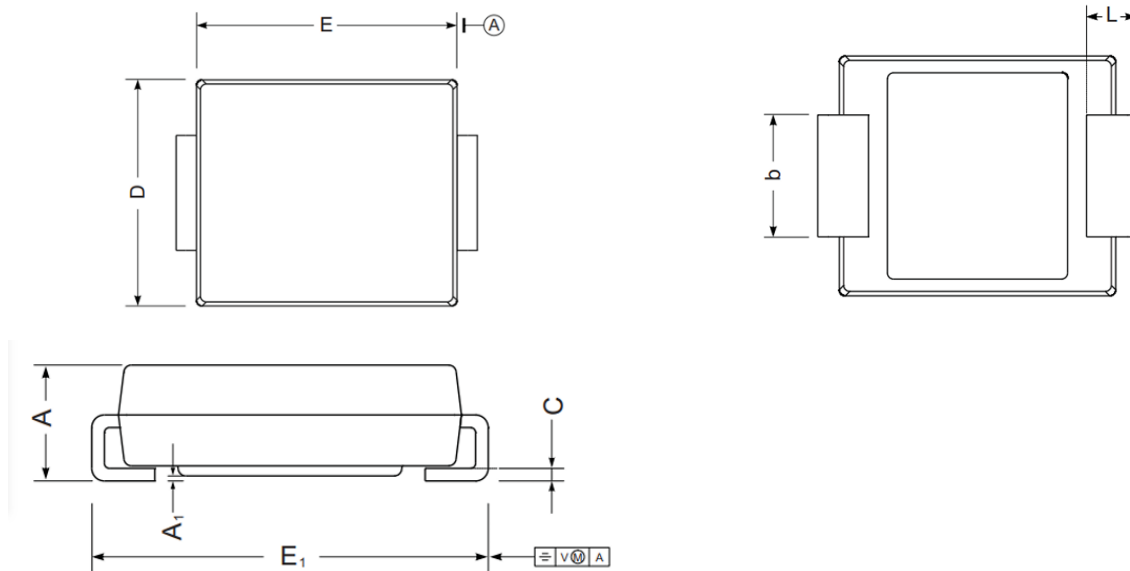
Fig 6. Typical Transient Thermal Impedance



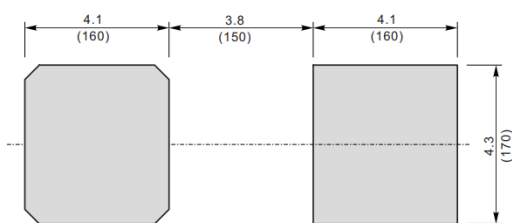


## PACKAGE INFORMATION

Dimension in SMC Package (Unit: mm)



### The recommended mounting pad size



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

SYMBOL	MIN	MAX
A	2.000	2.620
E	6.500	7.000
D	5.600	6.200
E <sub>1</sub>	7.600	8.000
A <sub>1</sub>	0.050	0.210
C	0.150	0.310
L	0.900	1.600
b	2.750	3.250

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