



DESCRIPTION

The S3AC_S3MC are available in SMC package.

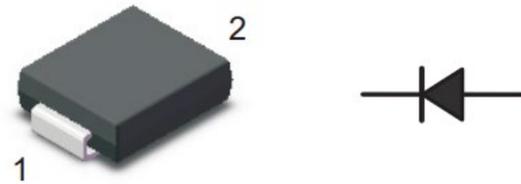
FEATURE

- For Surface Mounted Applications
- Low Profile Package
- Glass Passivated Chip Junction
- Compliant with EU RoHS 2011/65/EU Directives

MECHANICAL DATA

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

PIN DESCRIPTION



ORDERING INFORMATION

Package Type	Part Number
SMC	S3AC
	S3BC
	S3DC
	S3GC
	S3JC
	S3KC
	S3MC
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	S3AC	S3BC	S3DC	S3GC	S3JC	S3KC	S3MC	Unit	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	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}	90							A	
Maximum Instantaneous Forward Voltage at 3A	V_F	1.0							V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	I_R	5							μA
	$T_A = 125^\circ\text{C}$		100							
Typical Junction Capacitance ⁽¹⁾	C_j	40							pF	
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	40							$^\circ\text{C/W}$	
	$R_{\theta JC}$	16								
Operating Temperature Range	T_j	-55 ~ +150							$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-55 ~ +150							$^\circ\text{C}$	

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 DC

(2) P.C.B mounted with 2.0" X 2.0" (5 X 5cm) copper pd areas.



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Forward Current Derating Curve

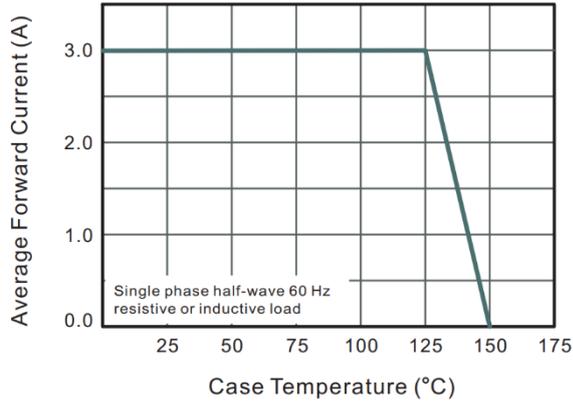


Fig 2. Typical Reverse Characteristics

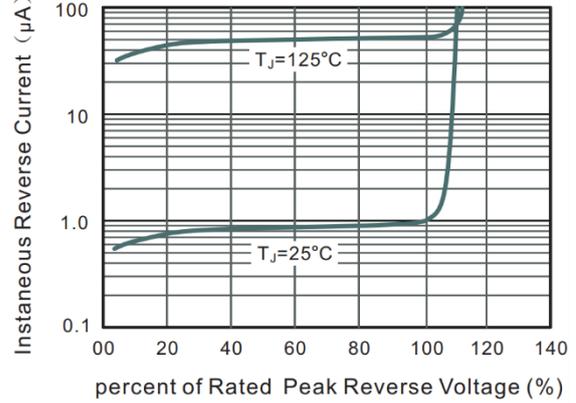


Fig 3. Typical Forward Characteristic

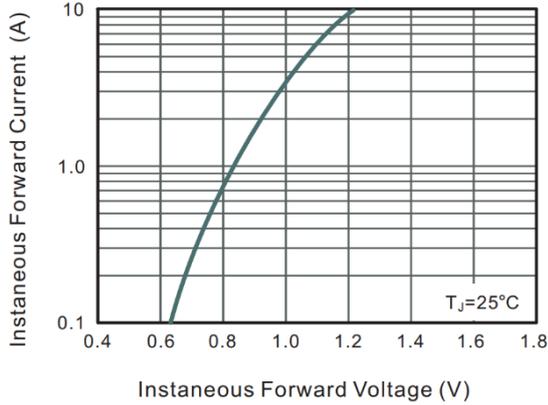


Fig 4. Typical Junction Capacitance

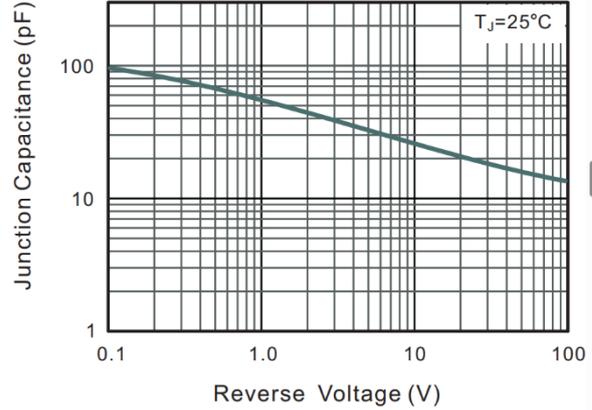
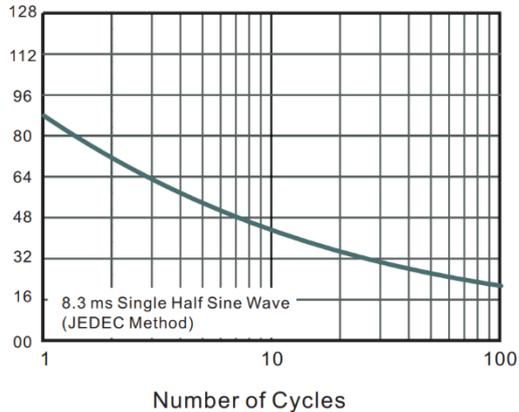


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

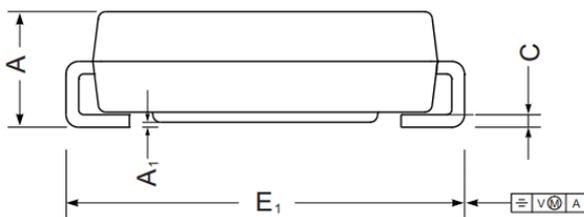
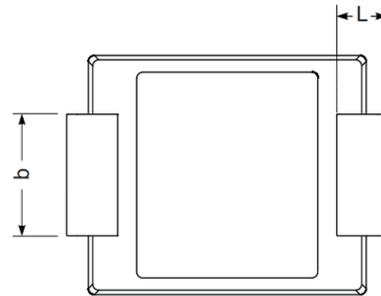
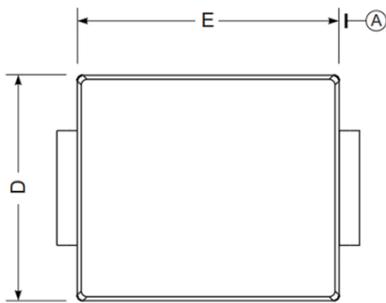




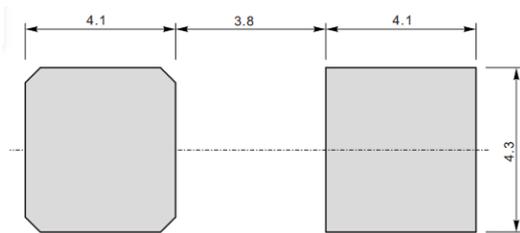
PACKAGE INFORMATION

Dimension in SMC Package (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit : mm

SYMBOL	MIN	MAX
A	2.000	2.620
A1	0.210	0.310
b	2.750	3.250
C	0.150	0.310
D	5.600	6.200
E	6.500	7.000
E1	7.600	8.000
L	0.900	1.600



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