



## DESCRIPTION

The SM220A~SM2200A are available in SMA 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 SMA Package

## ORDERING INFORMATION

Package Type	Part Number
SMA	SM220A
	SM240A
	SM260A
	SM280A
	SM2100A
	SM2120A
	SM2150A
	SM2200A
Note	5,000pcs/Reel
AiT provides all RoHS Compliant Products	

## MECHANICAL DATA

Case: SMA

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

Approx. Weight: 60mg / 0.0021oz

## 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 220A	SM 240A	SM 260A	SM 280A	SM 2100A	SM 2120A	SM 2150A	SM 2200A	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	$I_{F(AV)}$	2.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50				40				A
Max Instantaneous Forward Voltage at 2A	$V_F$	0.55	0.70		0.85	0.95			V	
Maximum DC Reverse Current at Rated DC Reverse Voltage	$I_R$	$T_A=25^\circ C$			$T_A=100^\circ C$					mA
		0.5			0.3					
Typical Junction Capacitance <sup>NOTE1</sup>	$C_J$	220		80						pF
Typical thermal Resistance <sup>NOTE2</sup>	$R_{\theta JA}$	80								°C/W
Operating Junction Temperature Range	$T_J$	-55 to +125								°C
Storage Temperature Range	$T_{stg}$	-55 to +150								°C

NOTE1: Measured at 1MHz 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 PERFORMANCE CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

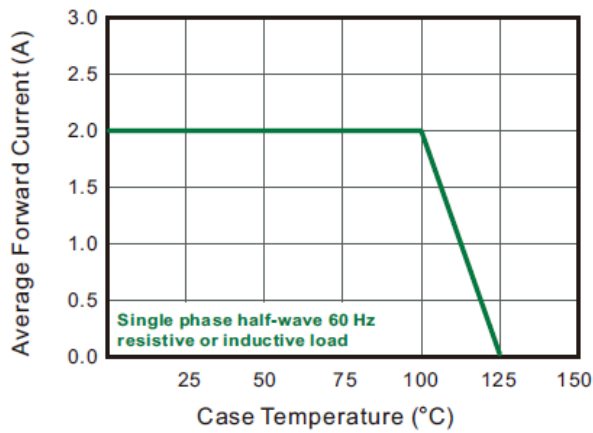


Figure. 2 Typical Reverse Characteristics

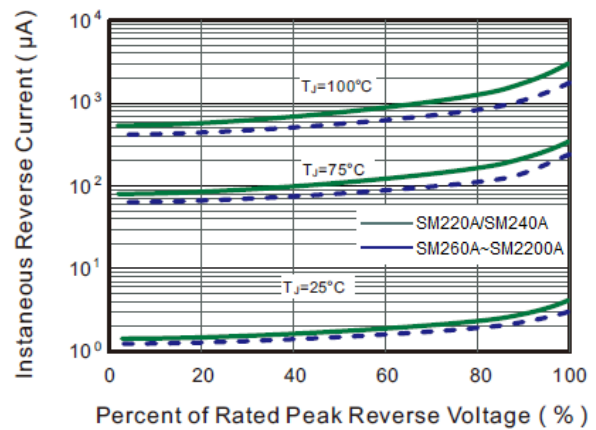


Figure. 3 Typical Forward Characteristic

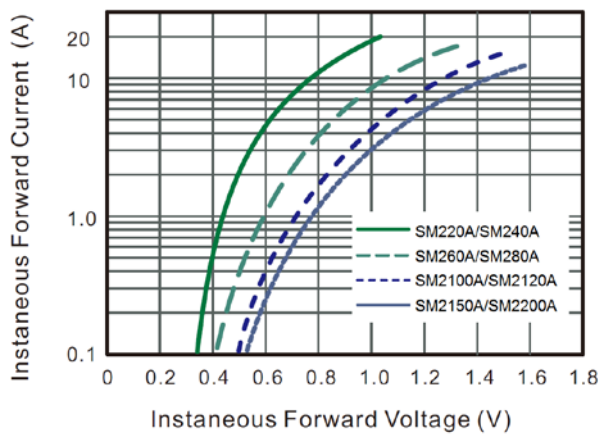


Figure. 4 Typical Junction Capacitance

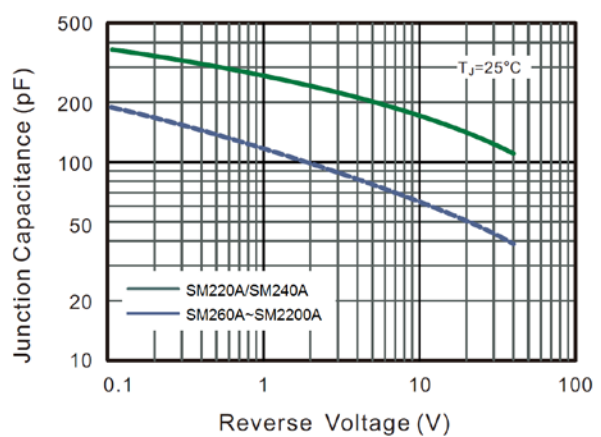


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

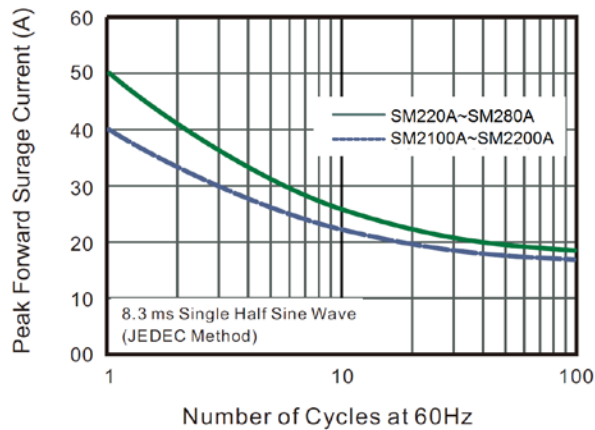
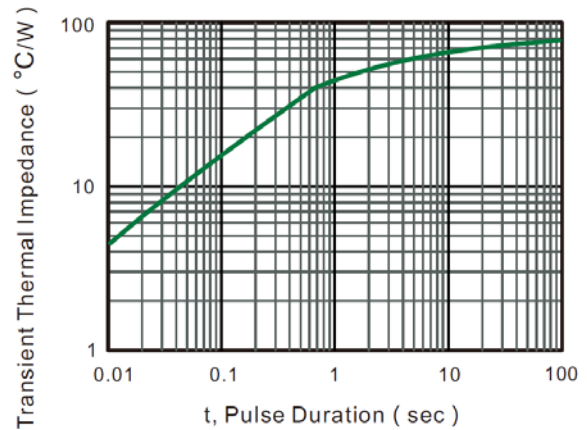


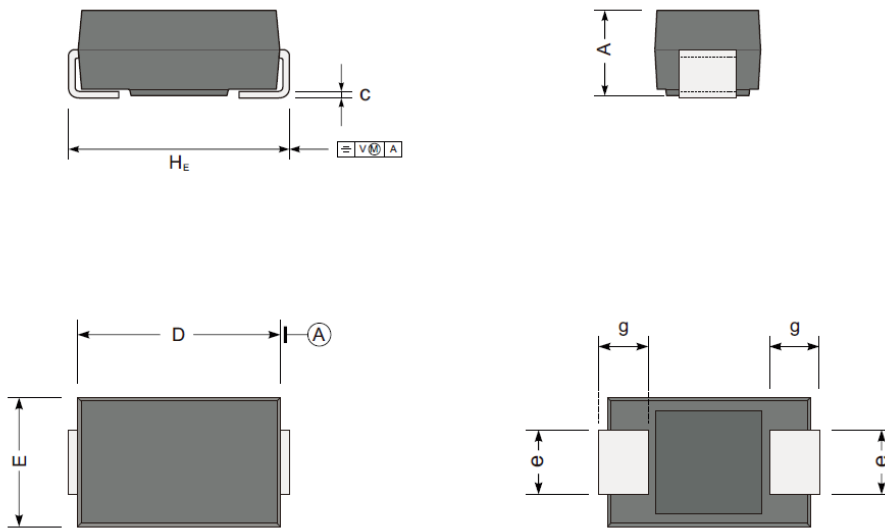
Figure. 6 Typical Transient Thermal Impedance



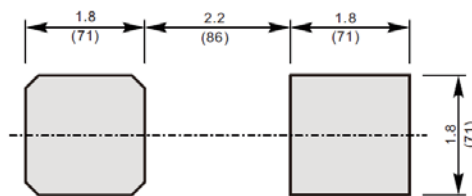


**PACKAGE INFORMATION**

Dimension in SMA Package (Unit: mm)



The recommended mounting pad size



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

UNIT		A	D	E	HE	c	e	g
mm	max	2.2	4.83	2.9	5.4	0.31	1.7	1.5
	min	1.9	4.32	2.3	4.7	0.12	1.2	0.9
mil	max	87	190	114	213	12	67	59
	min	75	170	91	185	5	47	35



## IMPORTANT NOTICE

AiT Components (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Components' integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or severe property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Components assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.