SM520A~SM5200A

SCHOTTKY DIODE
REVERSE VOLTAGE 20 TO 200V FORWARD CURRENT 5.0A

DESCRIPTION

The SM520A~SM5200A 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	SM520A
	SM540A
	SM560A
	SM580A
	SM5100A
	SM5120A
	SM5150A
	SM5200A
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 520A	SM 540A	SM 560A	SM 580A	SM 5100A	SM 5120A	SM 5150A	SM 5200A	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}	120				100				A
Max Instantaneous Forward Voltage at 5A	V_F	0.55		0.70		0.85				V
Maximum DC Reverse Current T_A=25°C at Rated DC Reverse Voltage T_A=100°C	I_R	1.0 50								mA
Typical Junction Capacitance NOTE1	C_J	500		300						pF
Typical thermal Resistance NOTE2	$R_{\theta JA}$	60								°C/W
Operating Junction Temperature Range	T_J	-55 to +150								°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

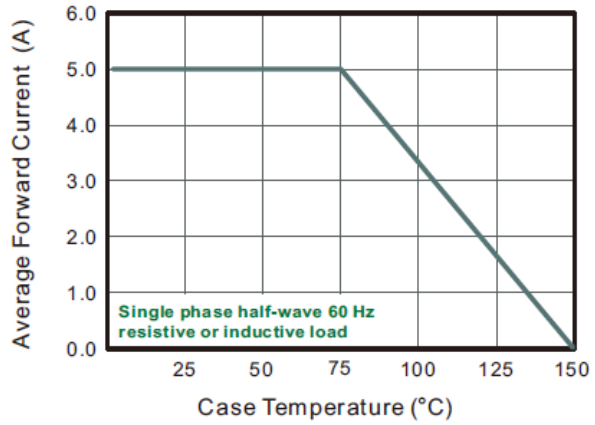


Figure. 2 Typical Reverse Characteristics

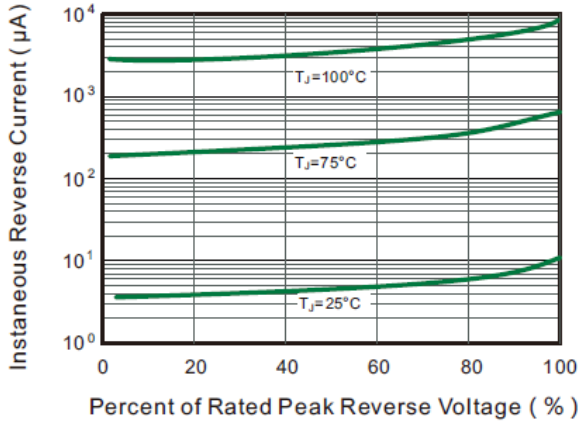


Figure. 3 Typical Forward Characteristic

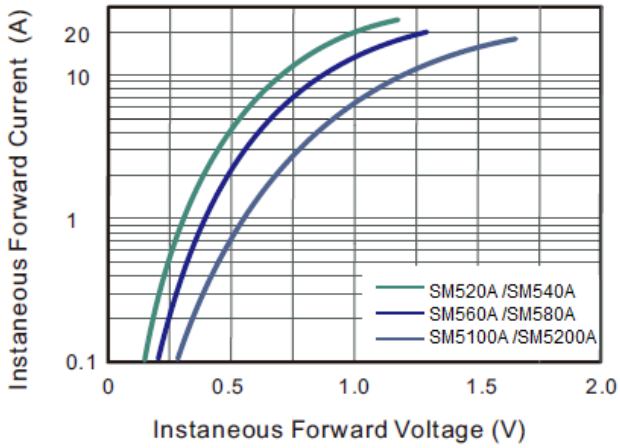


Figure. 4 Typical Junction Capacitance

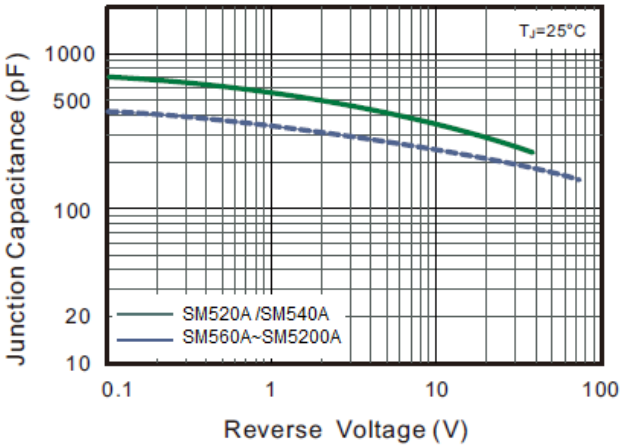


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

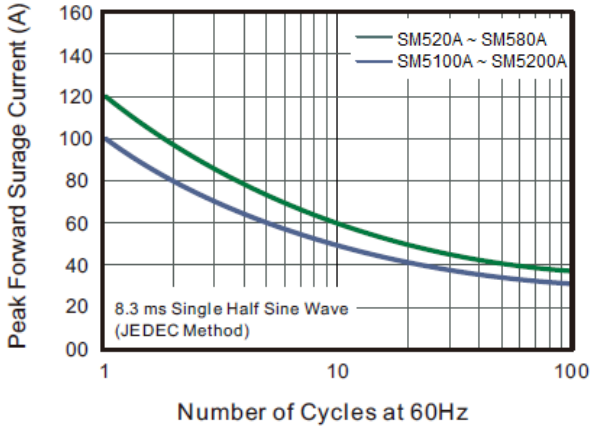
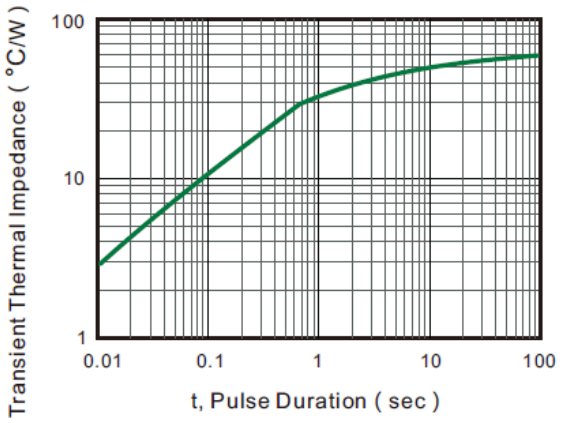


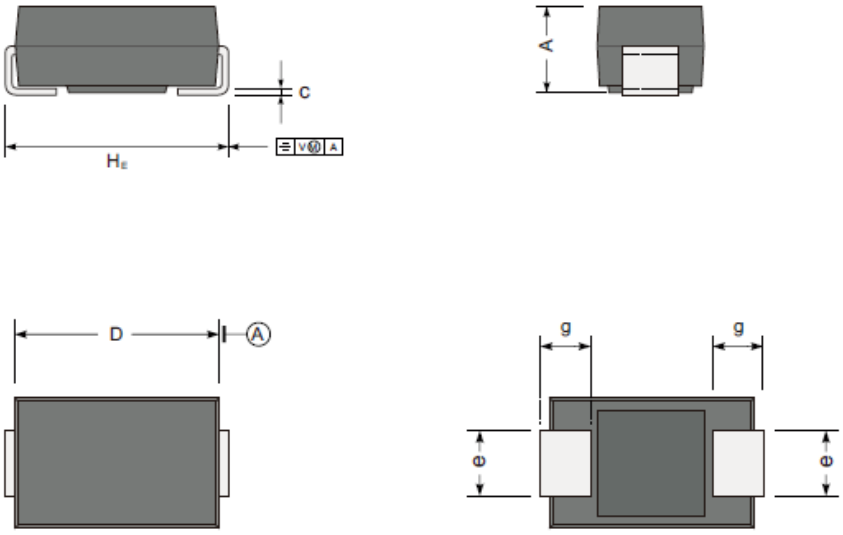
Figure. 6 Typical Transient Thermal Impedance



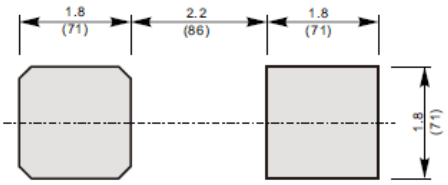
PACKAGE INFORMATION

Dimension in SMA Package (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit : mm / (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

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