

# SS12-AT THRU SS120-AT

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Forward Current-1A

Reverse Voltage-20V to 200V

### FEATURES

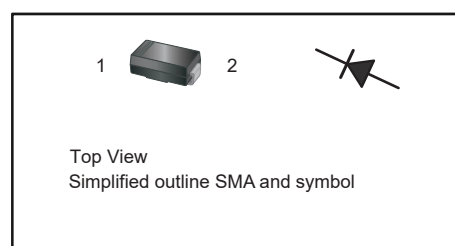
- ◆ For surface mount applications
- ◆ High forward surge current capability
- ◆ Low power loss, high efficiency
- ◆ ESD (HBM) > 4KV

### MECHANICAL DATA

- ◆ Case: SMA molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750 , Method 2026
- ◆ Weight: Approximated 0.070 grams

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derating by 20 %.

PARAMETER	SYMBOL	SS12 -AT	SS14 -AT	SS16 -AT	SS18 -AT	SS110 -AT	SS112 -AT	SS115 -AT	SS120 -AT	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	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current (Note1)	$I_{FSM}$	30								A
Maximum Forward Voltage at 1.0 A	$V_F$	0.55		0.70		0.85		0.90		V
Maximum DC Reverse Current at Rated DC Blocking Voltage at $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	0.3 10			0.2 5			0.1 2		mA
Typical Junction Capacitance (Note2)	$C_J$	110			80					pF
Typical Thermal Resistance(Note3)	$R_{\theta JA}$	90								°C/W
Storage Temperature Range	$T_{STG}$	-55 to +150								°C
Operating Junction Temperature Range	$T_J$	-55 to +125								°C

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).

2. Measured at 1MHz and applied reverse voltage of 4 V D.C.

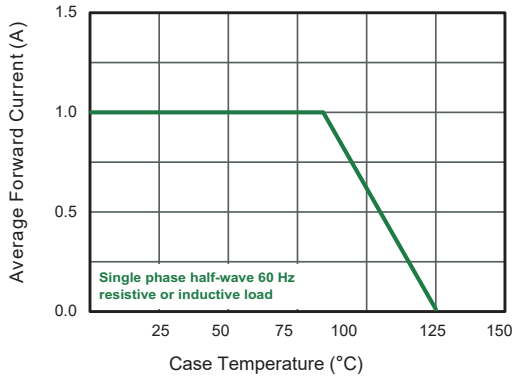
3. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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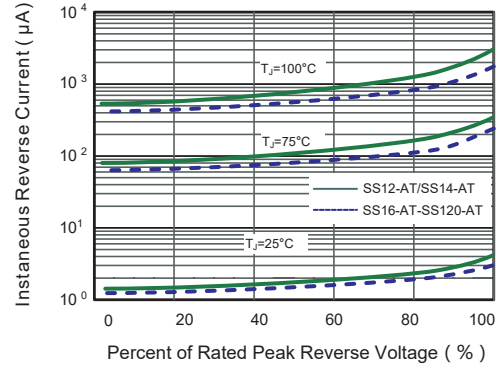
# SS12-AT THRU SS120-AT

## RATINGS AND CHARACTERISTIC CURVES

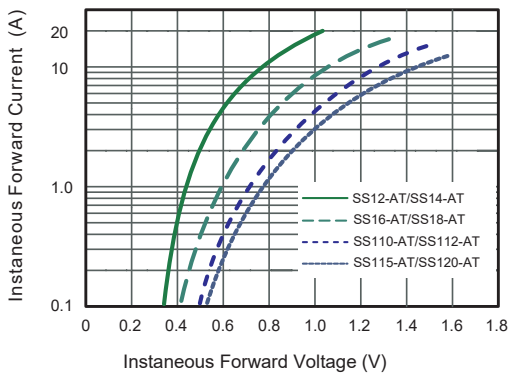
**Fig.1 Forward Current Derating Curve**



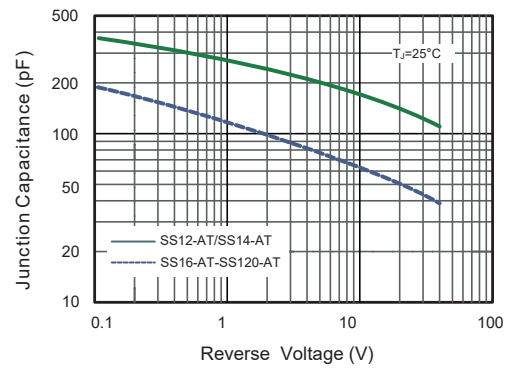
**Fig.2 Typical Reverse Characteristics**



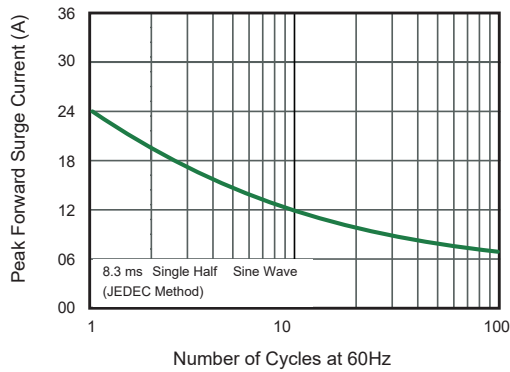
**Fig.3 Typical Forward Characteristic**



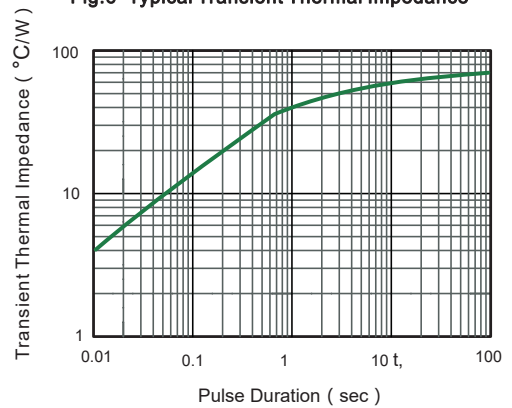
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



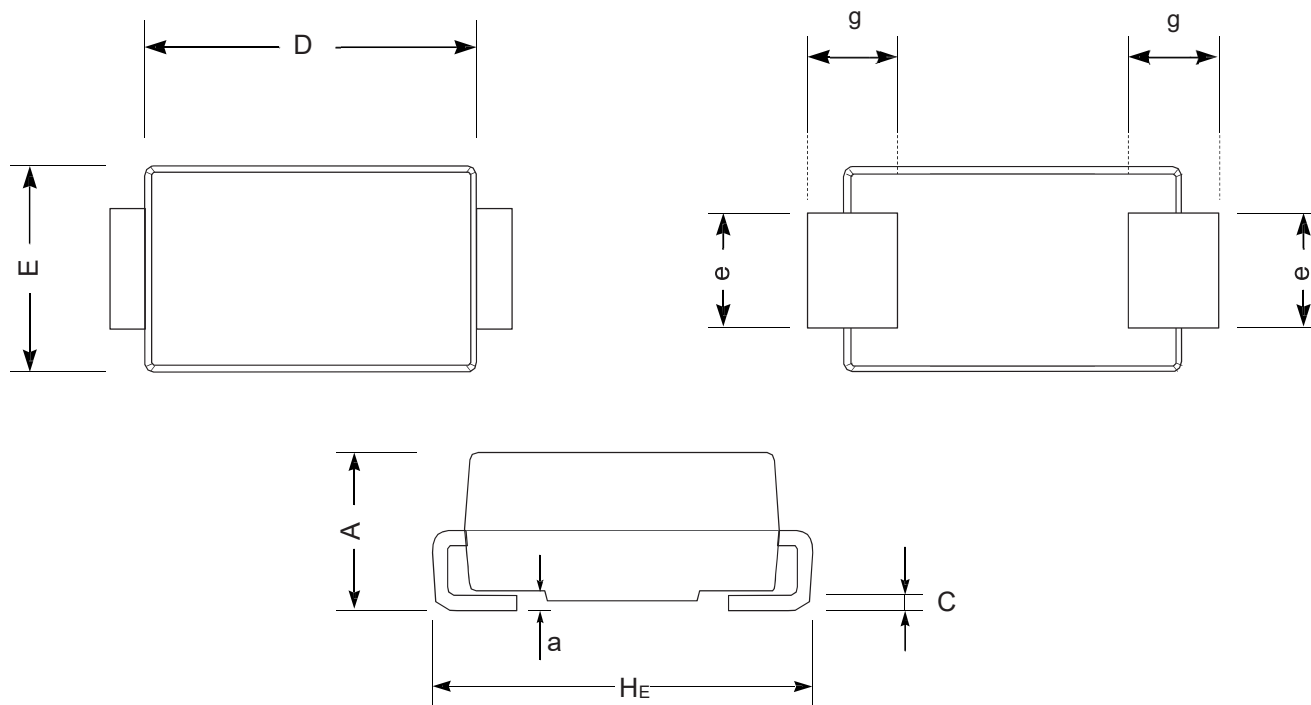
**Fig.6- Typical Transient Thermal Impedance**



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## PACKAGE OUTLINE

### SMA



UNIT		A	D	E	$H_E$	C	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

### ORDERING INFORMATION

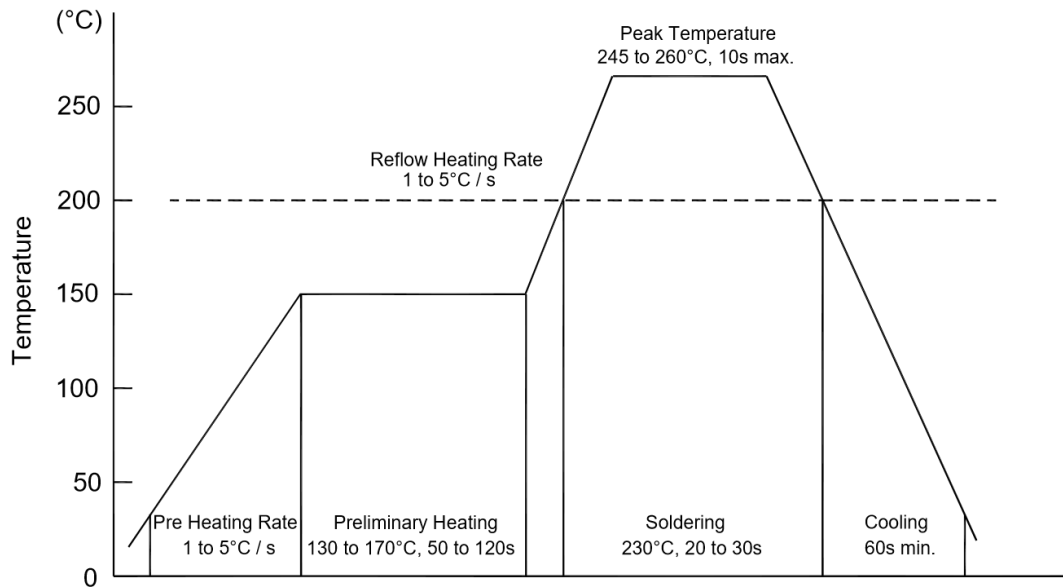
Device	Package	Shipping
SS12-AT thru SS120-AT	SMA	5,000/ Tape & Reel (13 inches)

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## CONDITIONS OF SOLDERING AND STORAGE

### RECOMMENDED CONDITIONS OF REFLOW SOLDERING



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

#### Condition of hand soldering

- Temperature: 370 °C
- Time: 3s max.
- Times: one time

### STORAGE CONDITIONS

#### Temperature

5 to 40 °C

#### Humidity

30 to 80% RH

#### Recommended period

One year after manufacturing

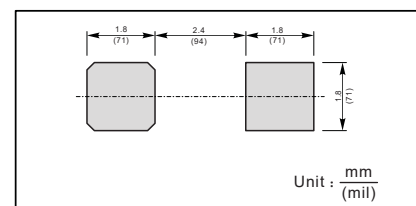
### MSL

- ◆ 1 Level

### Marking

Type number	Marking code
SS12-AT	SS12
SS14-AT	SS14
SS16-AT	SS16
SS18-AT	SS18
SS110-AT	SS110
SS112-AT	SS112
SS115-AT	SS115
SS120-AT	SS120

### Pad size



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