

SS12-AT THRU SS120-AT

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Forward Current-1A

Reverse Voltage-20V to 200V

FEATURES

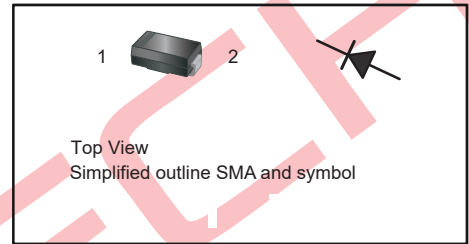
- ◆ For surface mount applications
- ◆ High forward surge current capability
- ◆ Low power loss, high efficiency
- ◆ ESD (HBM) > 4KV

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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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

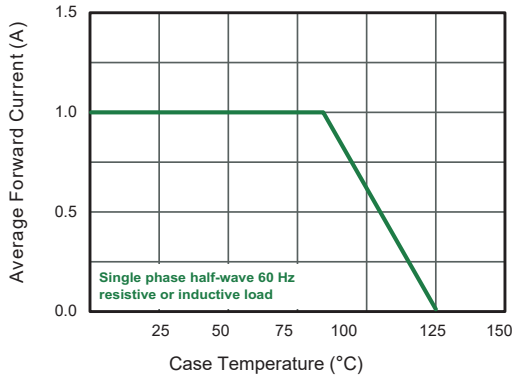


Fig.2 Typical Reverse Characteristics

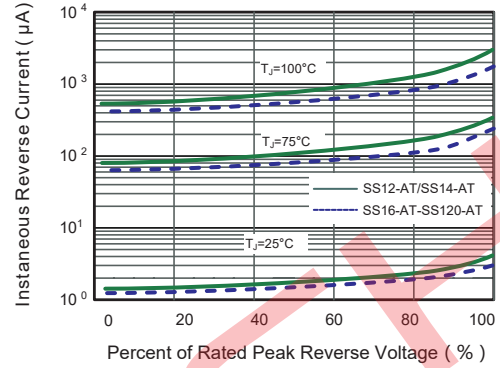


Fig.3 Typical Forward Characteristic

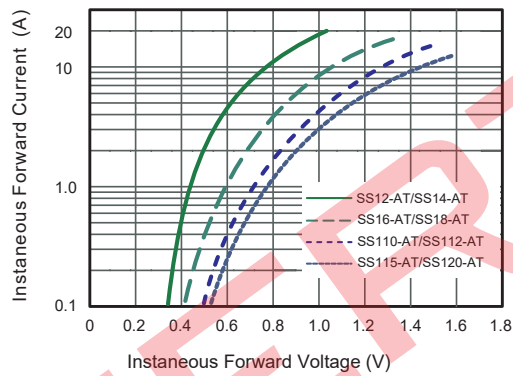


Fig.4 Typical Junction Capacitance

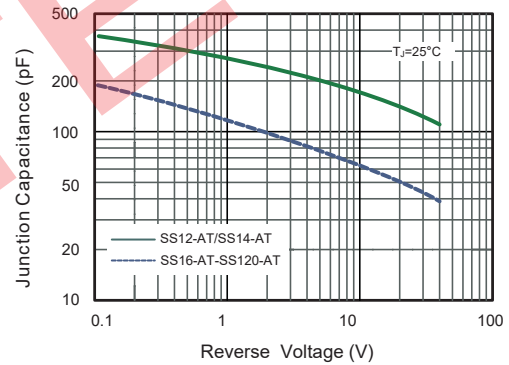


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

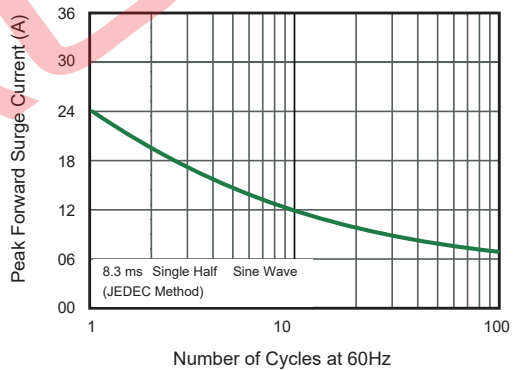
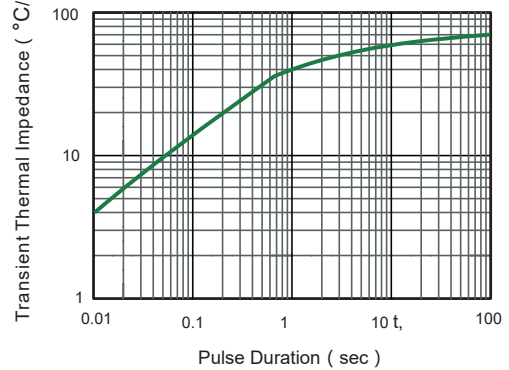


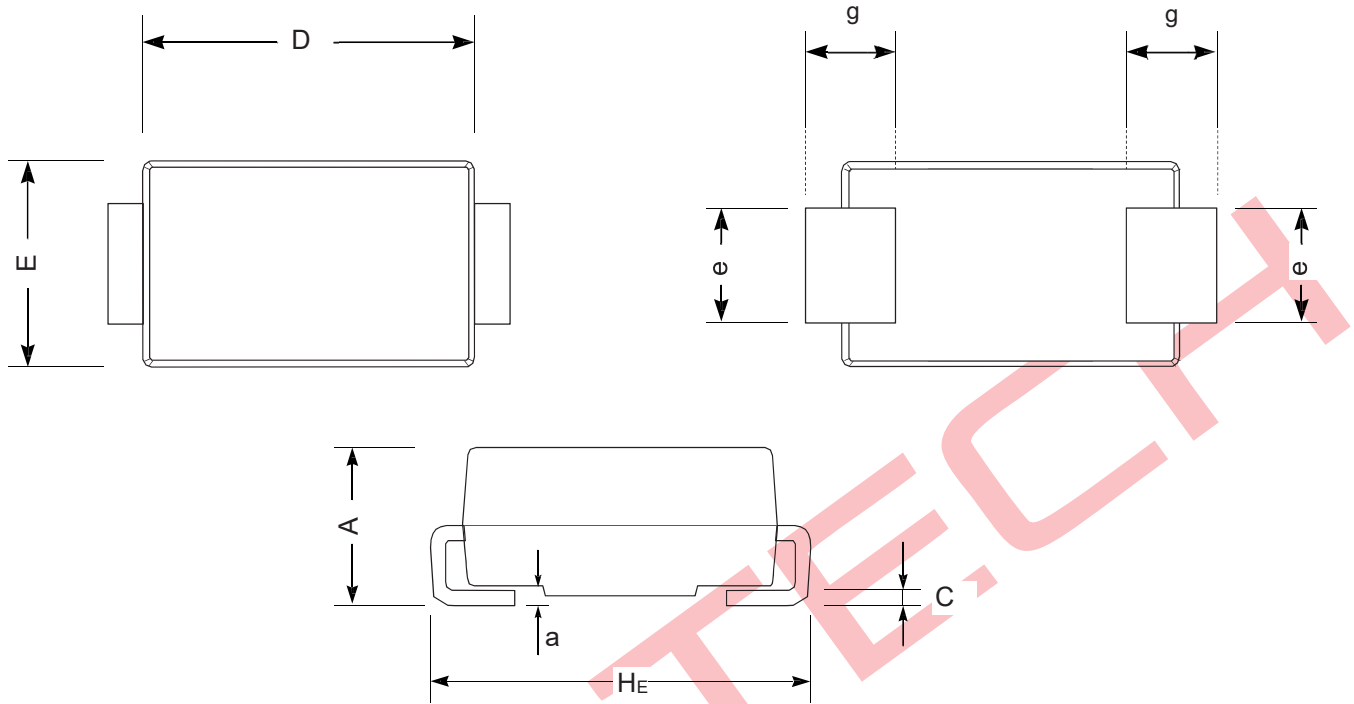
Fig.6- Typical Transient Thermal Impedance



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PACKAGE OUTLINE

SMA



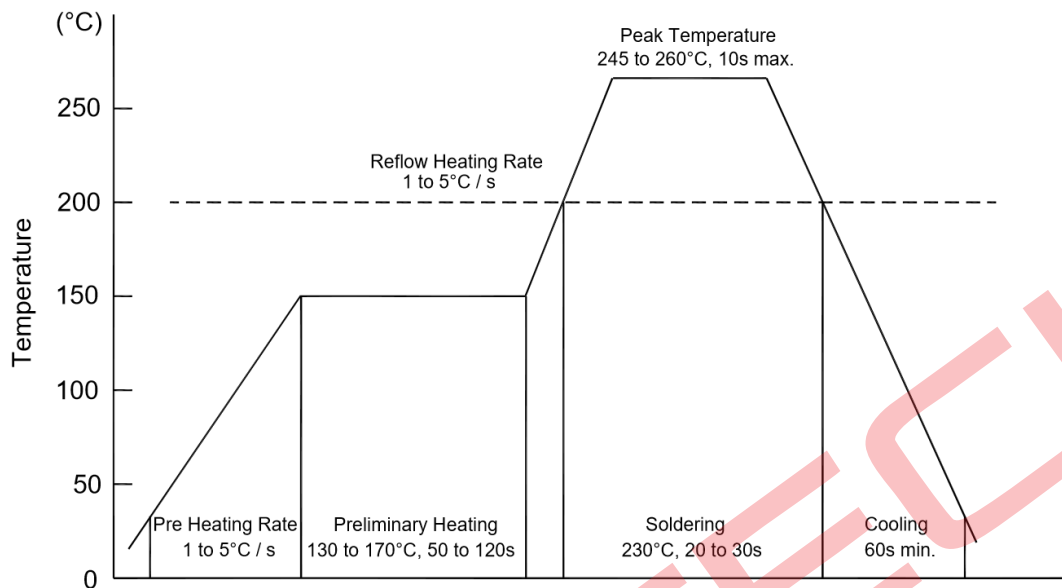
UNIT		A	D	E	H_E	C	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

ORDERING INFORMATION

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

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

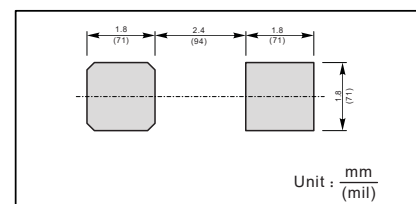
MSL

- ◆ 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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