

S1AAT THRU S1MAT

GENERAL PURPOSE SILICON RECTIFIERS

Reverse Voltage - 50 to 1000 V Forward Current - 1 A

FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass passivated chip junction
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SMA
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.055g / 0.002oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SMA and symbol

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 derate by 20 %.

PARAMETER	SYMBOL	S1AAT	S1BAT	S1DAT	S1GAT	S1JAT	S1KAT	S1MAT	UNITS
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	$I_{F(AV)}$	1							A
Peak Forward Surge Current ⁽¹⁾	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25\text{ °C}$ at Rated DC Blocking Voltage $T_a = 125\text{ °C}$	I_R	5 50							μA
Typical Junction Capacitance ⁽²⁾	C_J	15							pF
Typical Thermal Resistance ⁽³⁾	$R_{\theta JA}$	75							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150							°C

NOTE:

(1) Measured at 8.3 ms Single half sine wave superimposed on rated load

(2) Measured at 1 MHz 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.

Dated:06/2017

Rev: 1.0

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

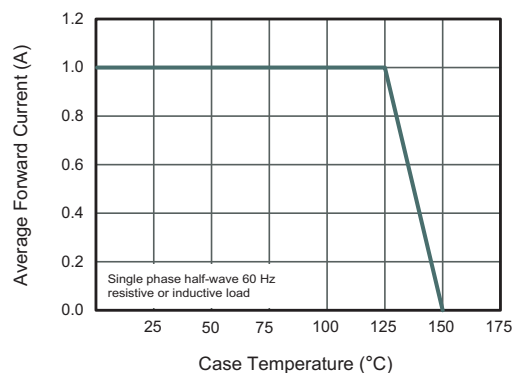


Fig.2 Typical Reverse Characteristics

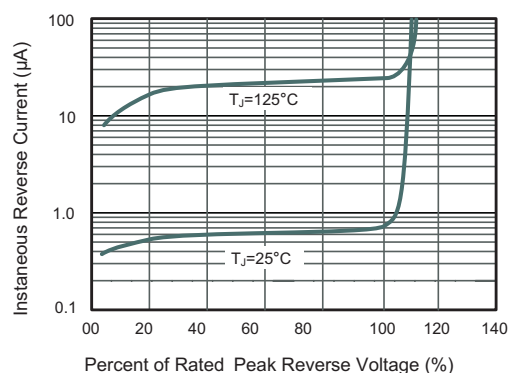


Fig.3 Typical Forward Characteristic

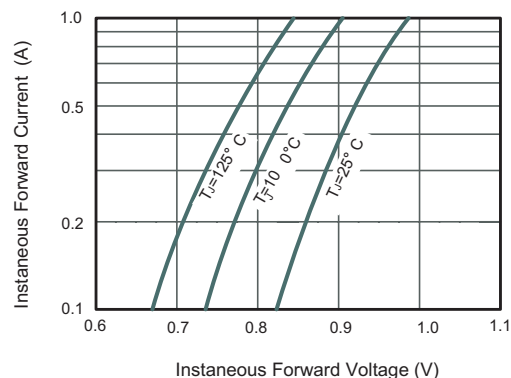


Fig.4 Typical Junction Capacitance

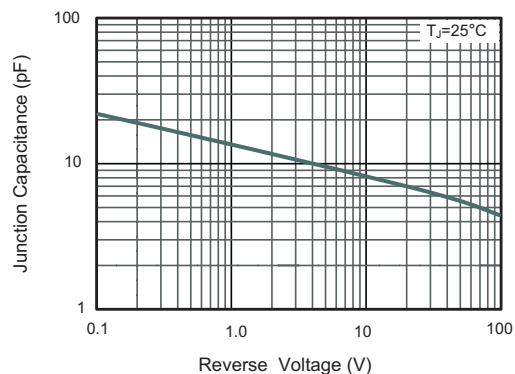
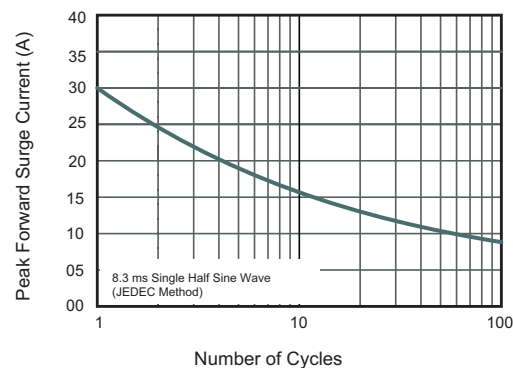
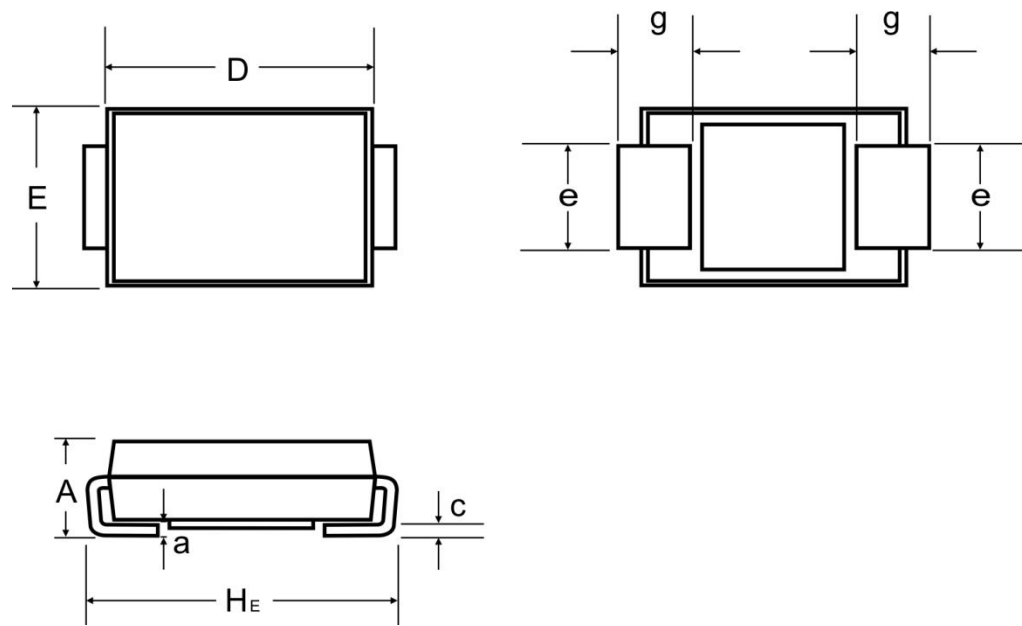


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



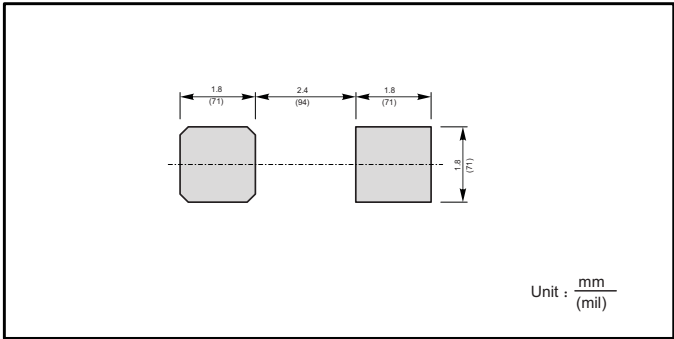
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PACKAGE OUTLINE



NUIT		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	

The recommended mounting pad size



ORDER INFORMATION

Device	Package	Shipping
S1AAT THRU S1MAT	SMA	5000PCS/Reel&Tape(13inch)