

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 2000 V

Forward Current - 1 A

### FEATURES

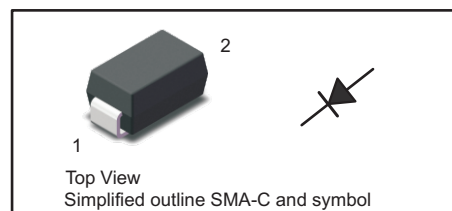
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

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

### 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 derate by 20 %.

Parameter	Symbols	S1YAC	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	2000	V
Maximum RMS voltage	$V_{RMS}$	1400	V
Maximum DC Blocking Voltage	$V_{DC}$	2000	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	1	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30	A
Peak Forward Surge Current, 1ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	60	A
$I^2t$ Rating for fusing (3ms $\leq t \leq$ 8.3ms)	$I^2t$	3.7	A <sup>2</sup> S
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_j = 25\text{ }^\circ\text{C}$ $T_j = 125\text{ }^\circ\text{C}$	$I_R$	5 100	$\mu\text{A}$
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	8	pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	100 20 25	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^\circ\text{C}$

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

(2) P.C.B. mounted with 0.2"X 0.2" (5 X 5 mm) copper pad areas.



Fig.1 Forward Current Derating Curve

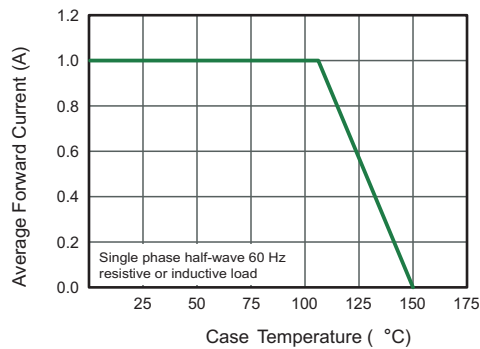


Fig.2 Typical Instaneous Reverse Characteristics

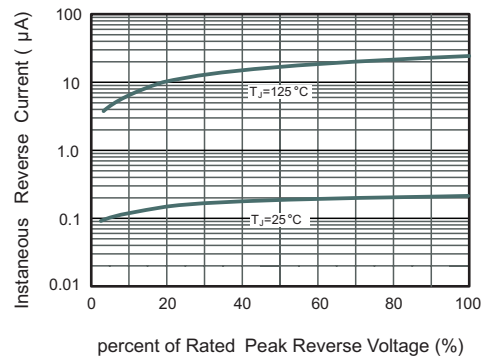


Fig.3 Typical Instaneous Forward Characteristics

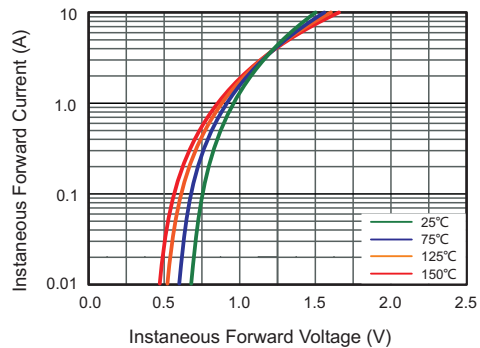


Fig.4 Typical Junction Capacitance

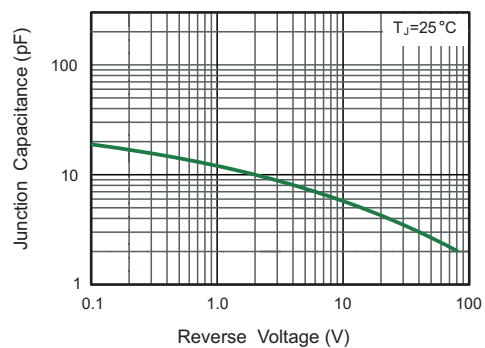
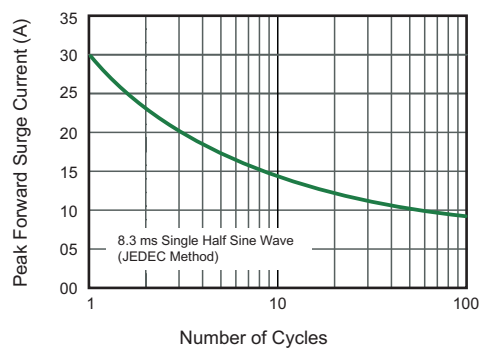


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

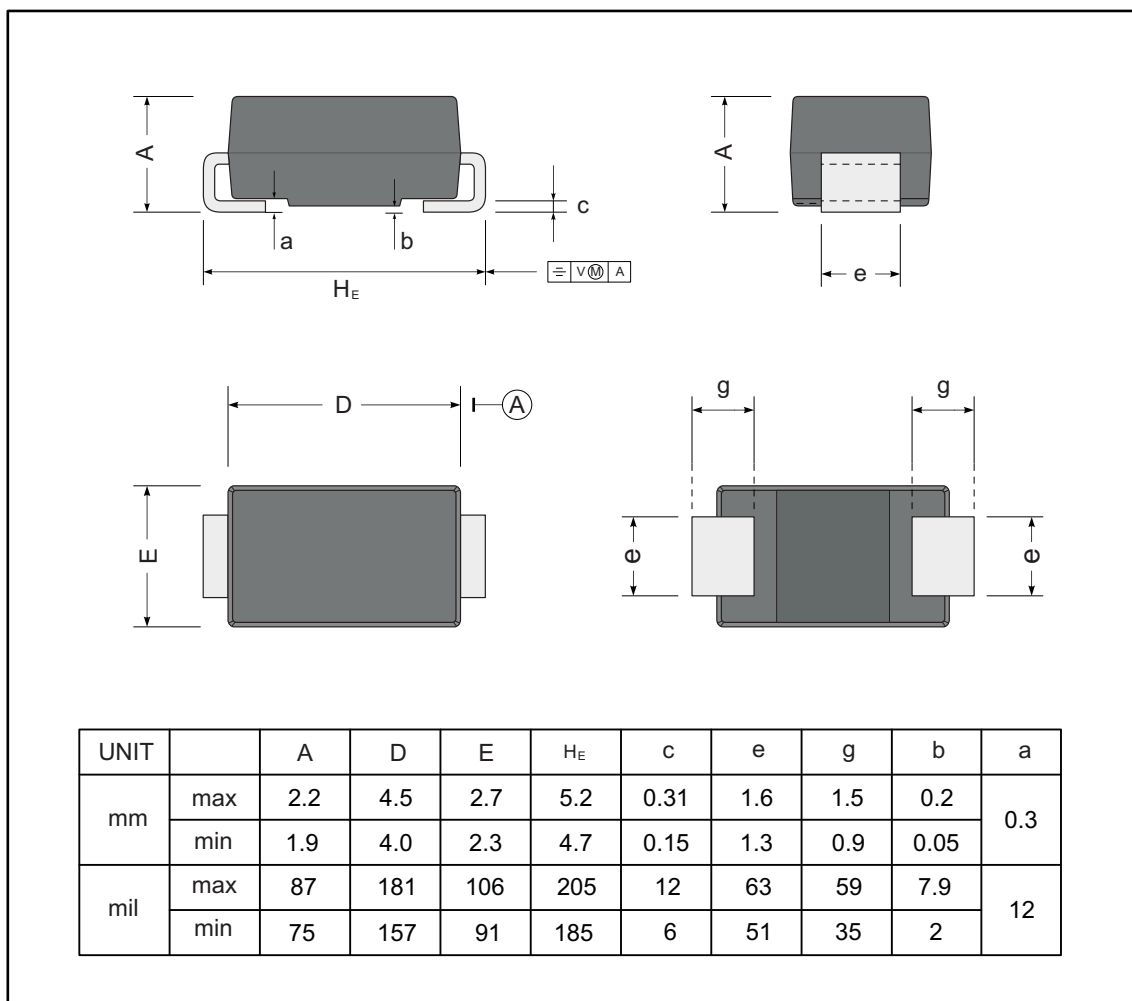




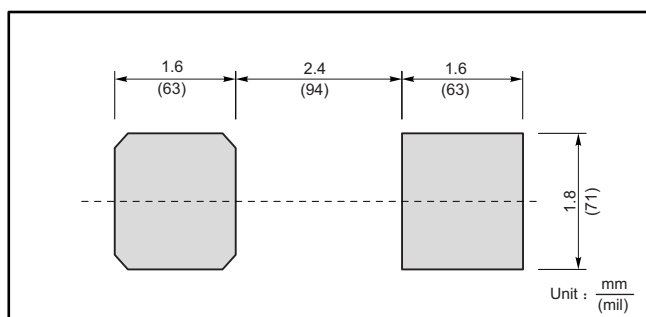
### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA-C



### The recommended mounting pad size



### Marking

Type number	Marking code
S1YAC	S1Y



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