

# S1AW THRU S1MW-HAF

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

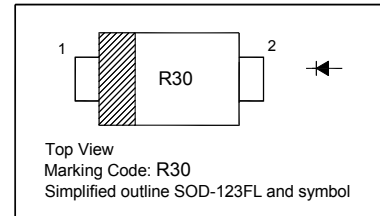
Forward Current - 1 A

### Features

- Halogen and Antimony Free(HAF), RoHS compliant

### 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	S1AW	S1BW	S1DW	S1GW	S1JW	S1KW	S1MW	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 at $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	$I_R$	5 50							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_j$	4							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	180							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150							$^\circ\text{C}$

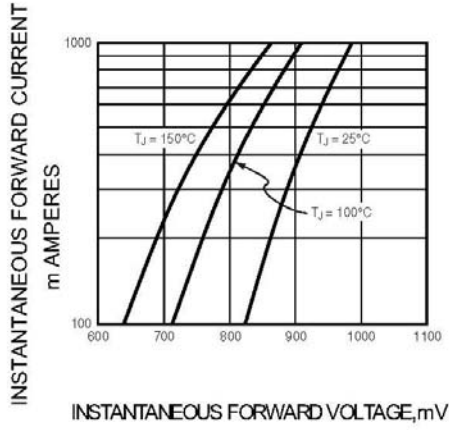
<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C

<sup>2)</sup> Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

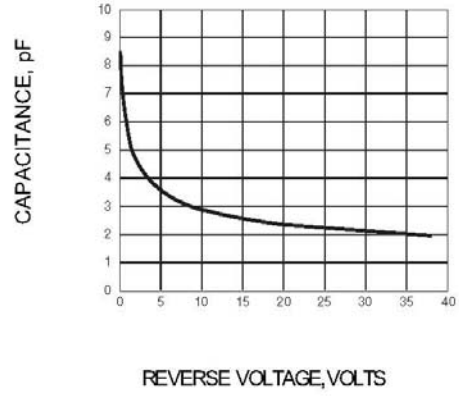
**TOP DYNAMIC**

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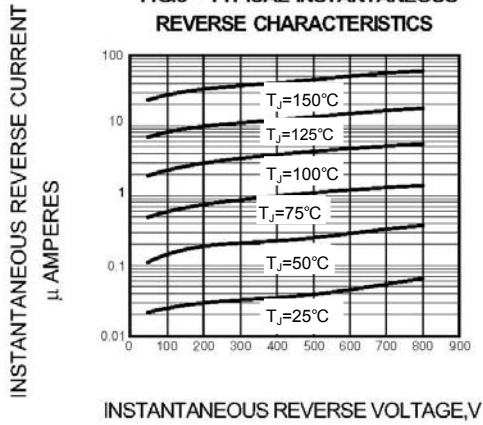
**FIG.1 –TYPICAL FORWARD CHARACTERISTIC**



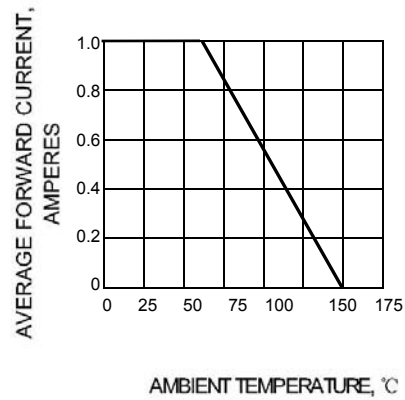
**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



**FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS**



**FIG.4 – FORWARD DERATING CURVE**



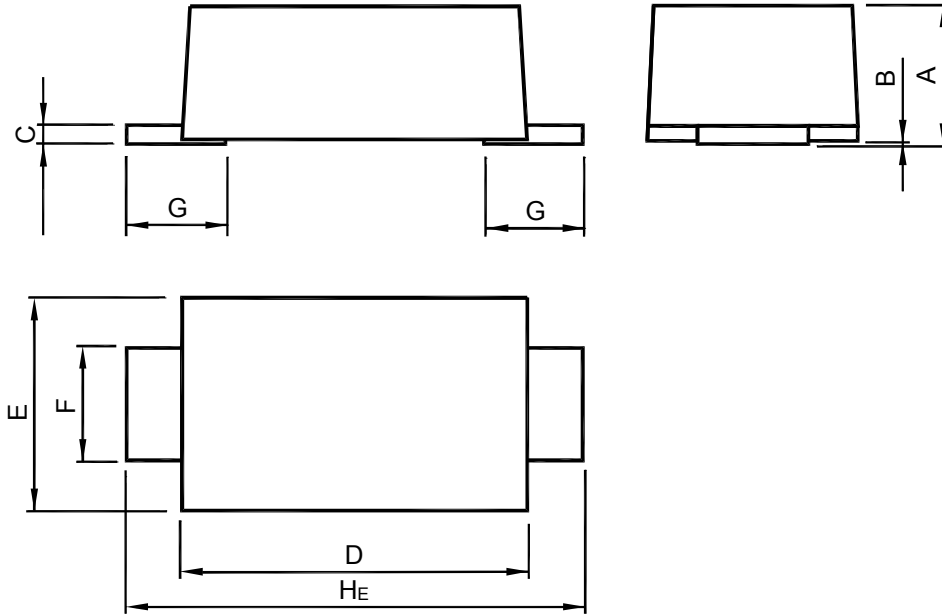
**TOP DYNAMIC**

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## PACKAGE OUTLINE

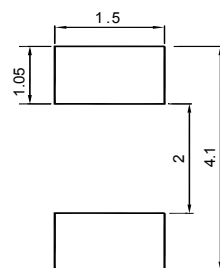
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H <sub>E</sub>
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.6	1.9 1.7	1.1 0.8	0.9 0.7	3.9 3.5

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

**TOP DYNAMIC**