



## DESCRIPTION

The S1AW~S1MW are available in SOD-123FL package

## FEATURES

- Available in SOD-123FL package

## ORDERING INFORMATION

Package Type	Part Number
SOD-123FL	S1AW
	S1BW
	S1DW
	S1GW
	S1JW
	S1KW
	S1MW
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

## PIN DESCRIPTION





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

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Measured at 1 MHz and applied reverse voltage of 4 V D.C

NOTE2: Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted



## TYPICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ , unless otherwise noted

Figure. 1 Forward Current Derating Curve

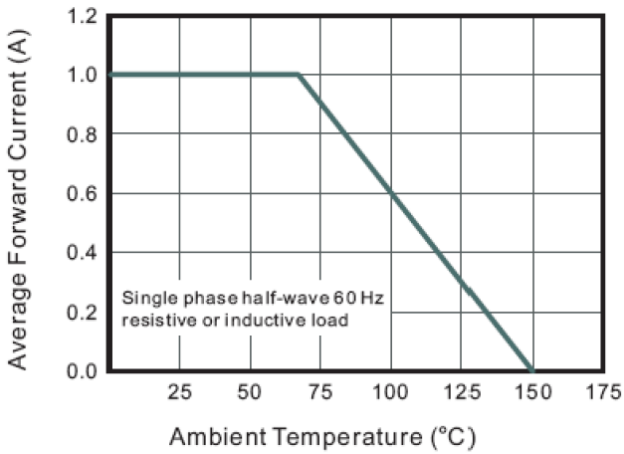


Figure. 2 Typical Instantaneous Reverse Characteristics

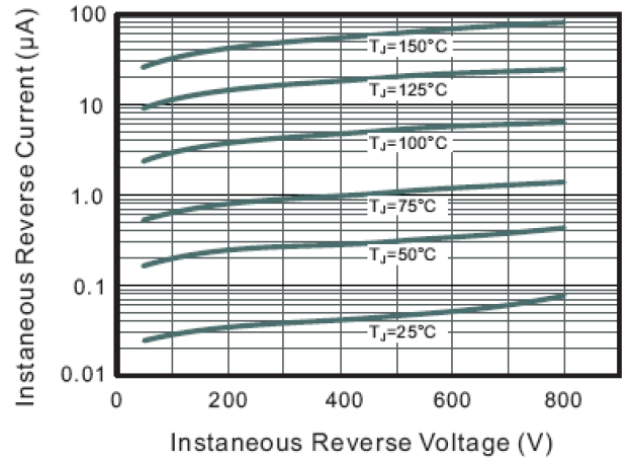


Figure. 3 Typical Forward Characteristics

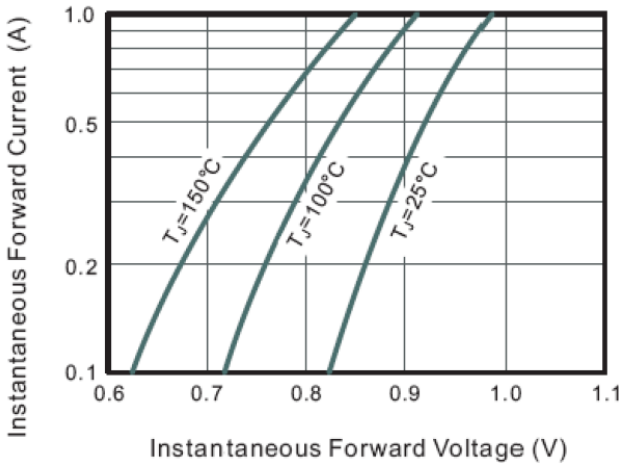
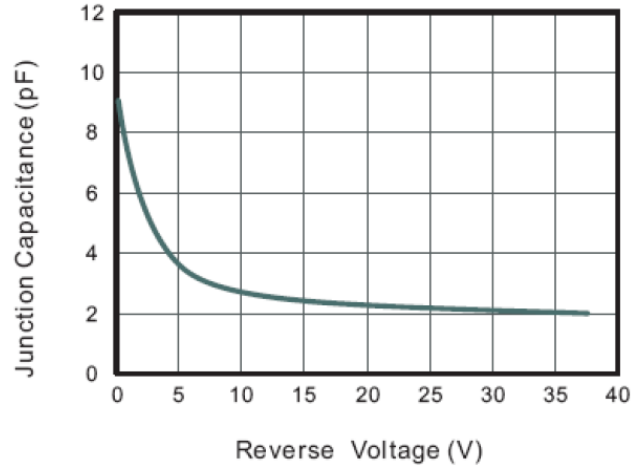


Figure. 4 Typical Junction Capacitance

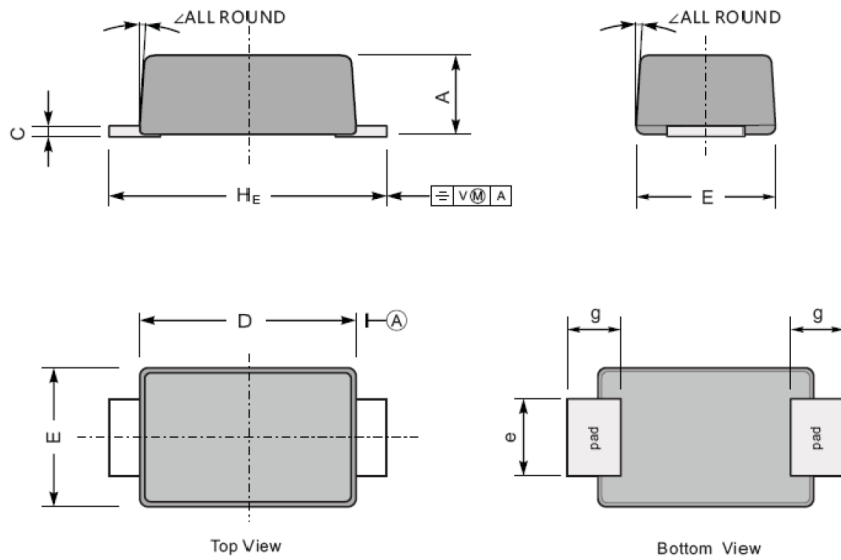




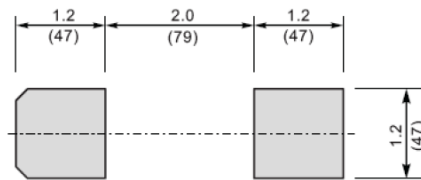
**PACKAGE INFORMATION**

Dimension in SOD-123FL (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit:  $\frac{mm}{(mil)}$

UNIT		A	C	D	E	e	g	$H_E$	$\angle$
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	Min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	



## IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or severe property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.