

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1.2 A

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Simplified outline SOD-123FL and symbol

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00053oz

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	S12AW	S12BW	S12DW	S12GW	S12JW	S12KW	S12MW	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 _c = 125 °C	I _{F(AV)}	1.2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	40							A
Maximum Instantaneous Forward Voltage at 1.2 A	V _F	1.0							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a = 125 °C	I _R	5 50							µA
Typical Junction Capacitance ⁽¹⁾	C _j	18							pF
Typical Thermal Resistance ⁽²⁾	R _{θJA} R _{θJC}	80 25							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

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

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

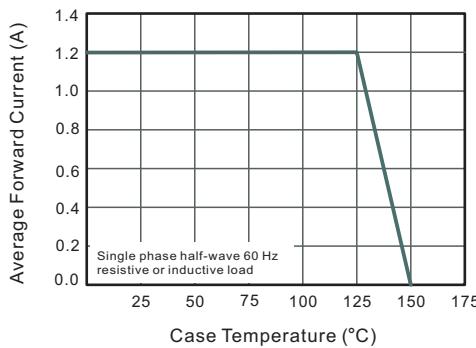


Fig.2 Typical Instantaneous Reverse Characteristics

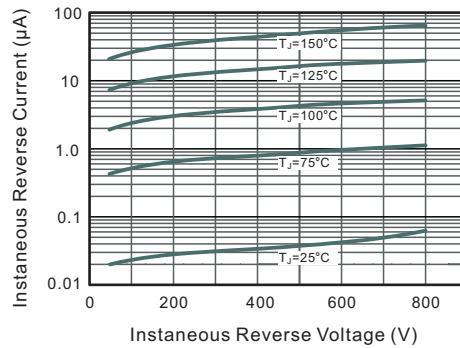


Fig.3 Typical Forward Characteristic

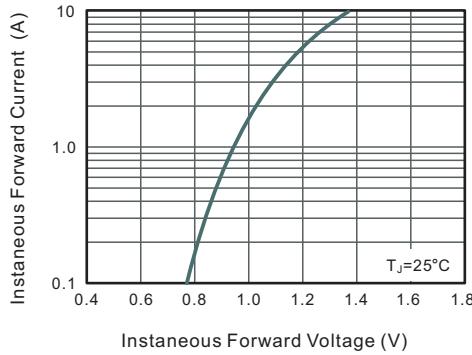


Fig.4 Typical Junction Capacitance

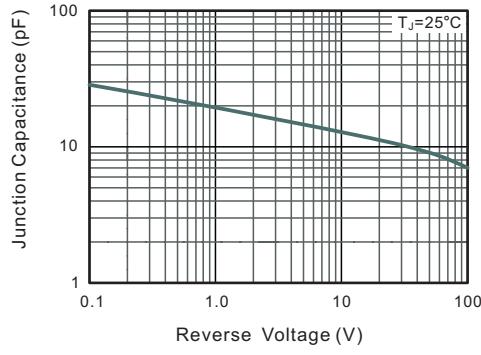
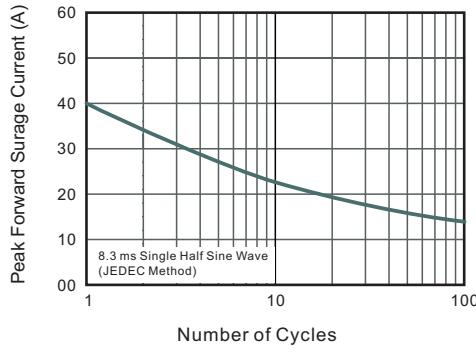


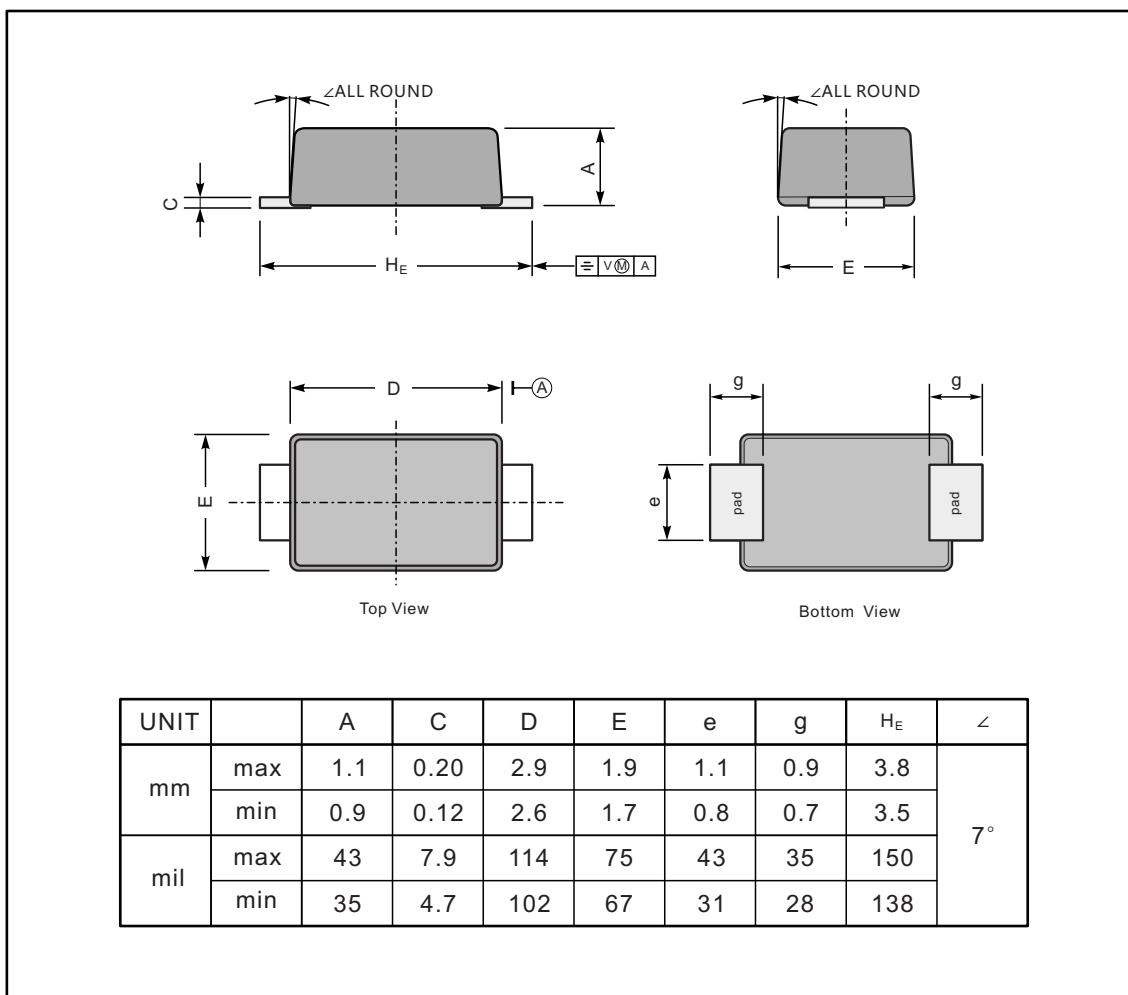
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



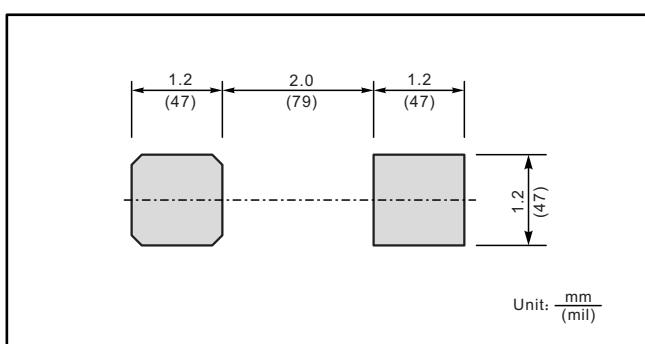
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size



Marking

Type number	Marking code
S12AW	S12A
S12BW	S12B
S12DW	S12D
S12GW	S12G
S12JW	S12J
S12KW	S12K
S12MW	S12M