



FR107W

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 1000 V

Forward Current - 1 A

FEATURES

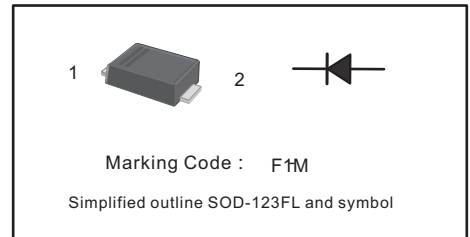
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

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	FR107W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current at $T_a = 65\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	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	1.3	V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	I_R	5 100	μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	500	ns
Typical Junction Capacitance ²⁾	C_j	15	pF
Typical Thermal Resistance ³⁾	$R_{\theta JA}$	85	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

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

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



Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

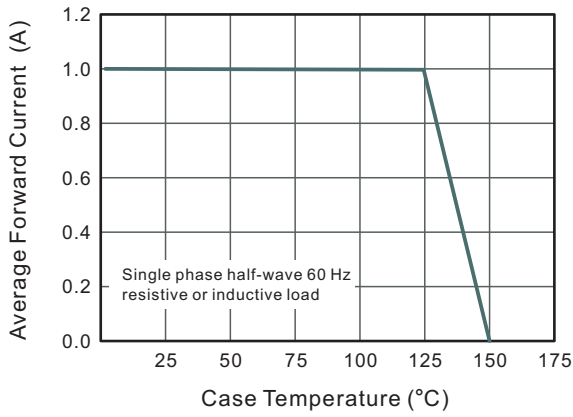


Fig.2 Typical Reverse Characteristics

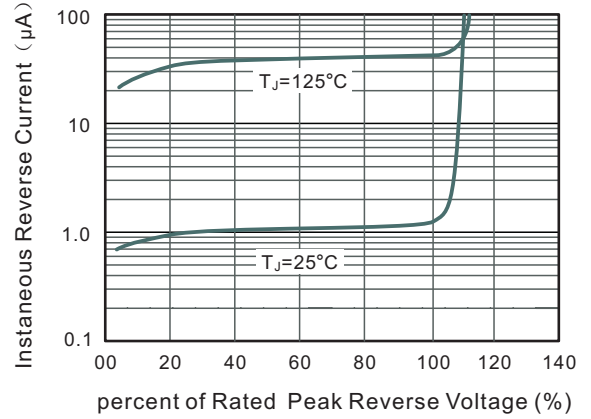


Fig.3 Typical Instantaneous Forward Characteristics

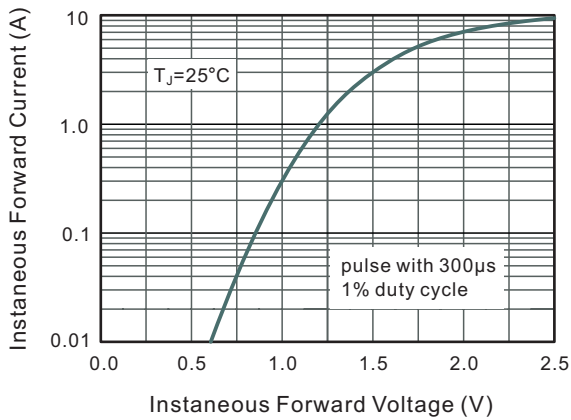


Fig.4 Typical Junction Capacitance

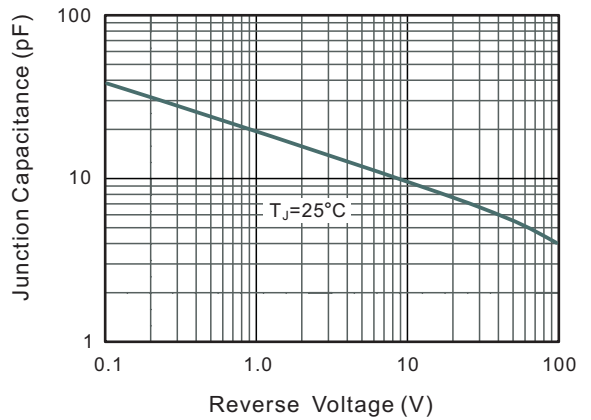
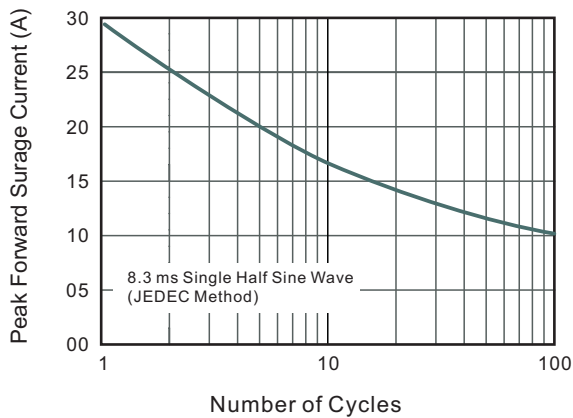


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





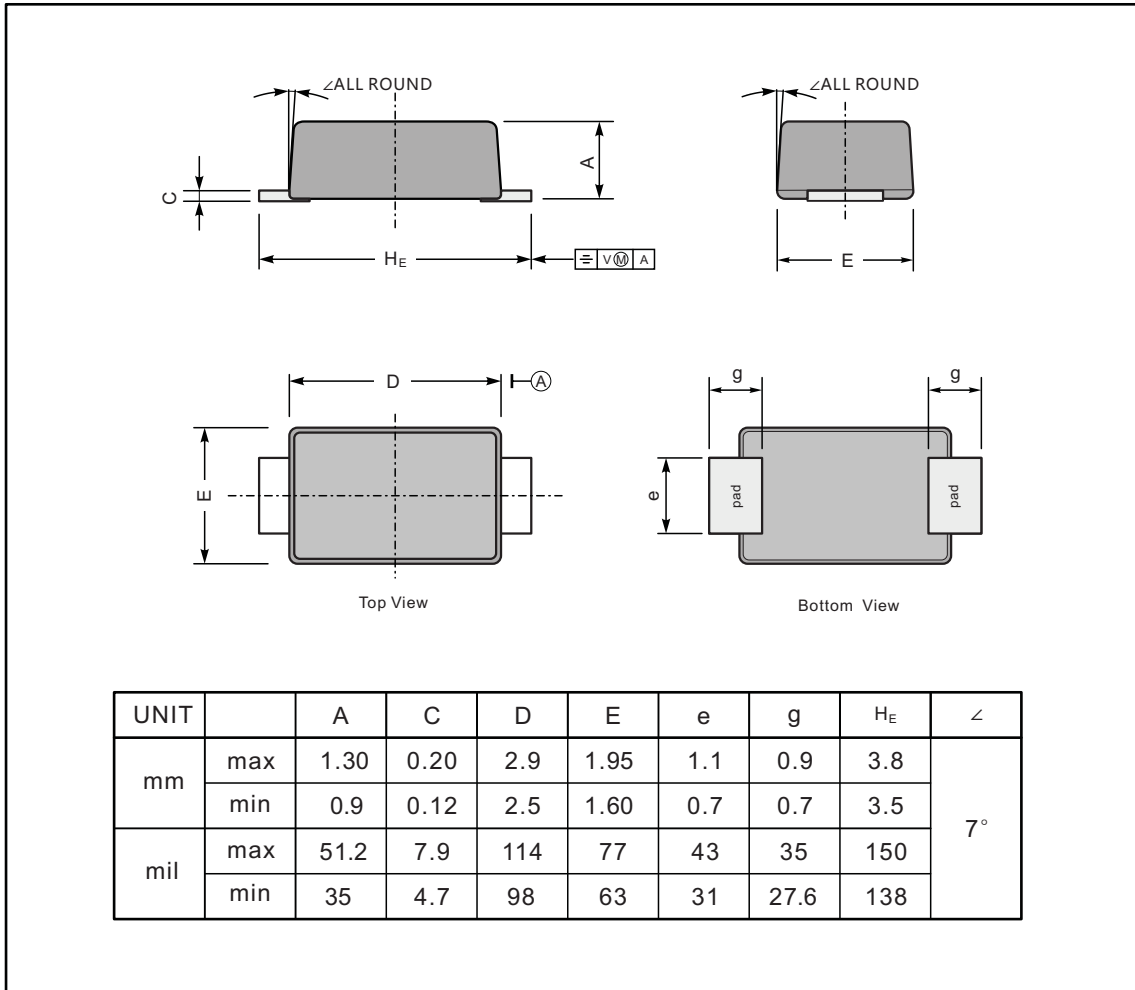
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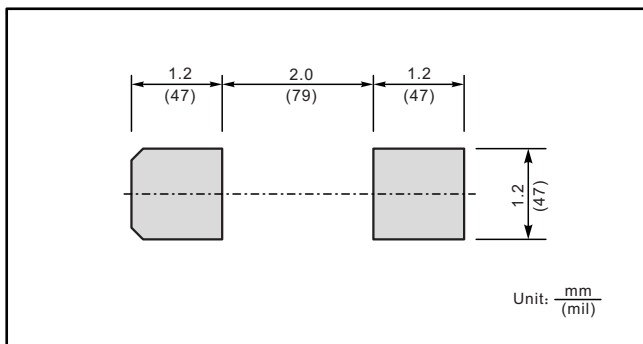
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size



Marking

Type number	Marking code
FR107W	F1M

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