

FR101W THRU FR107W

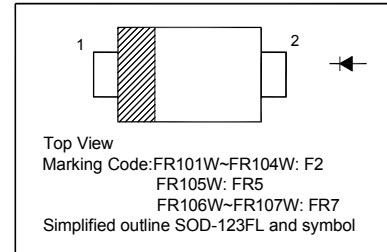
Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

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	FR101W	FR102W	FR103W	FR104W	FR105W	FR106W	FR107W	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	1.3							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 50							μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	150				200	500		ns
Typical Junction Capacitance ²⁾	C_j	15							pF
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 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

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Fig.1 Forward Current Derating Curve

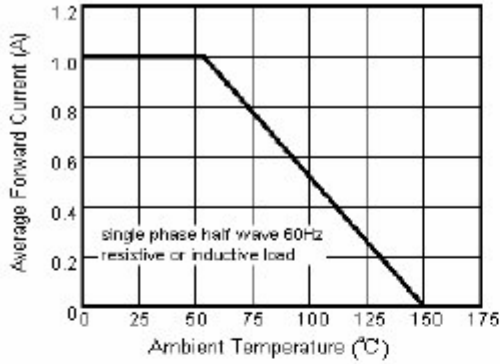


Fig.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

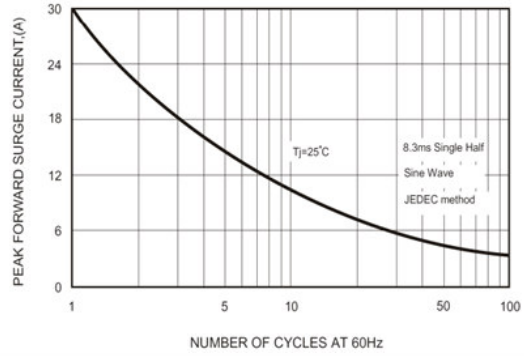


Fig.3 Typical Instantaneous Forward Characteristics

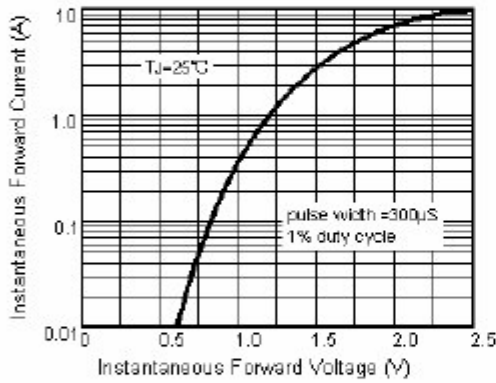


Fig.4 Typical Reverse Characteristics

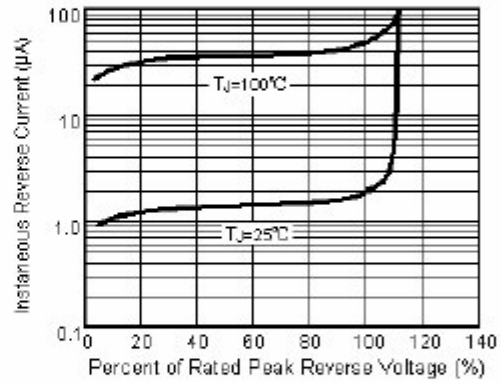
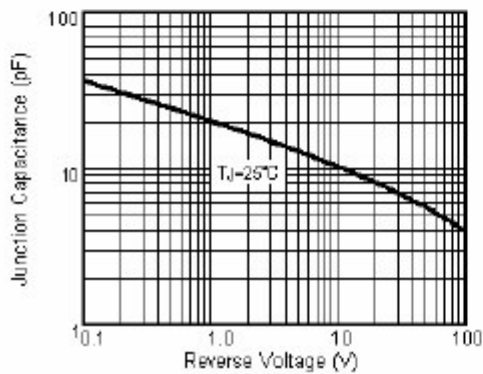


Fig.5 Typical Junction Capacitance



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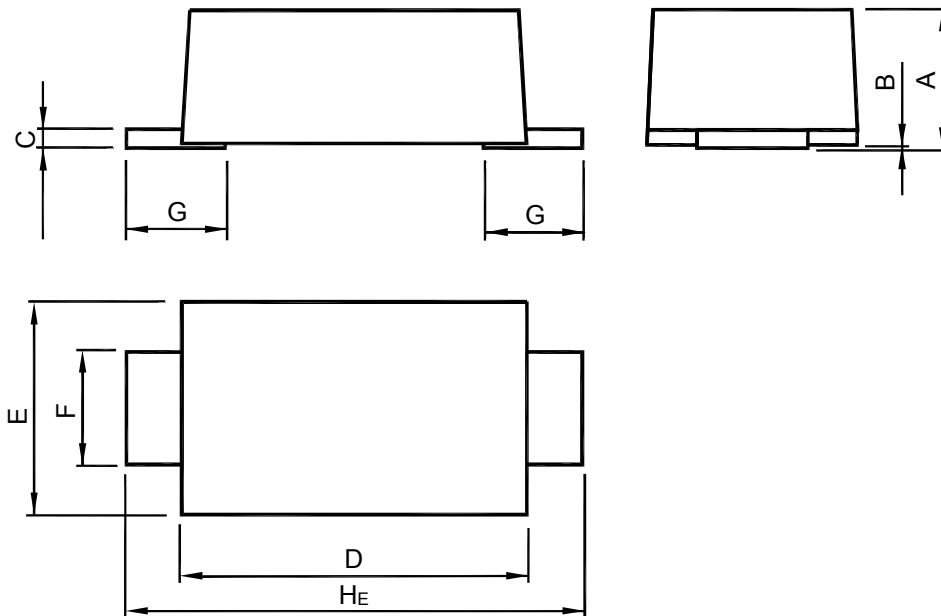
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 ISO 9001 : 2008 Certificate No. 01141012
 OHSAS 18001 : 2007 Certificate No. 05191508008
 IECQ QC 080000 Certificate No. E241800074482

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PACKAGE OUTLINE

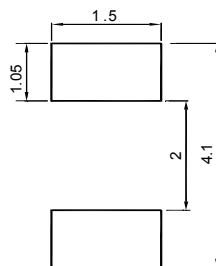
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	HE
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

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