Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

Pinning

1.Cathode	2.Anode

SOD-123FL

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- 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 / 0.00053oz

Marking Code		
FR101W	YFW F1	YFW F1A
FR102W	YFW F2	YFW F1B
FR103W	YFW F3	YFW F1D
FR104W	YFW F4	YFW F1G
FR105W	YFW F5	YFW F1J
FR106W	YFW F6	YFW F1K
FR107W	YFW F7	YFW F1M

Absolute Maximum Ratings and 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_c = 125 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.3							V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a=125 °C	I_R	5 100							μA
Typical Junction Capacitance at V_R=4V,f=1MHZ	C_j	15							pF
Maximum Reverse Recovery Time (1)	Trr	150				250	500		nS
Typical Thermal Resistance (2)	$R_{\theta JA}$	85							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) Measured with I_F=0.5A,I_R=1A,I_n=0.25A

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

Fig.1 Forward Current Derating Curve

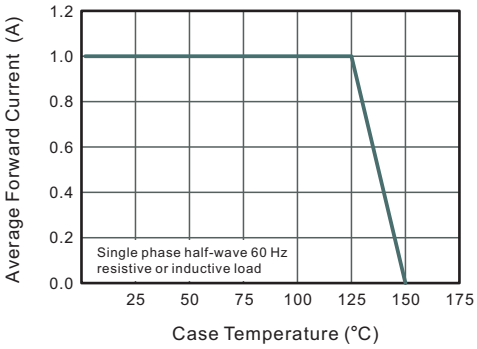


Fig.2 Typical Reverse Characteristics

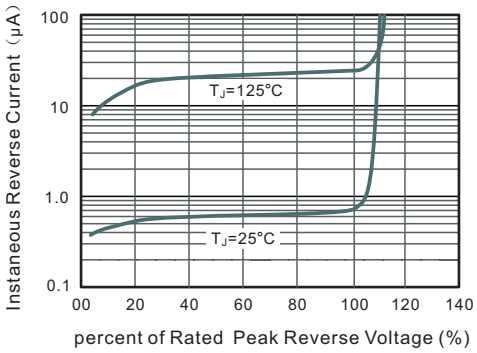


Fig.3 Typical Instaneous Forward Characteristics

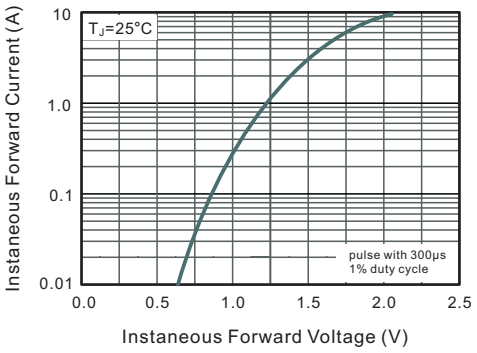


Fig.4 Typical Junction Capacitance

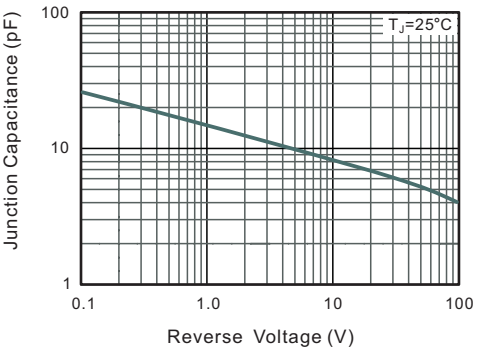
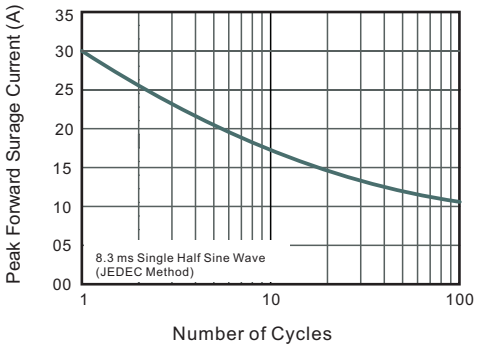
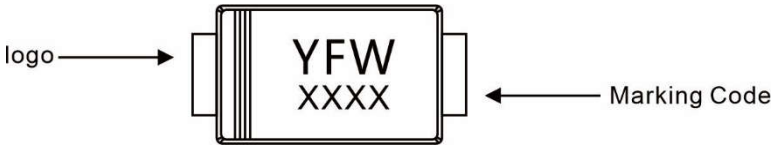


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Marking Diagram

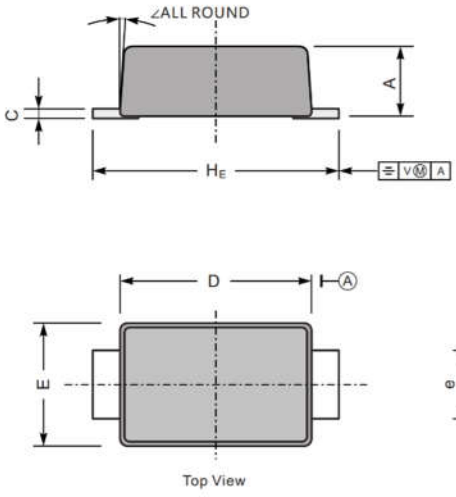


Ordering information

Package	Packing Description	Packing Quantity
SOD-123FL	Tape/Reel,7"reel	3000PCS/Reel 120000PCS/Carton

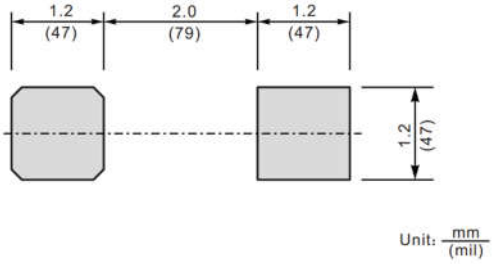
Package Dimensions

SOD-123FL



Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	43
C	0.12	0.20	4.7	7.9
D	2.6	2.9	102	114
E	1.7	1.9	67	75
e	0.8	1.1	31	43
g	0.7	0.9	28	35
HE	3.5	3.8	138	150
∠	7°			

The recommended mounting pad size



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