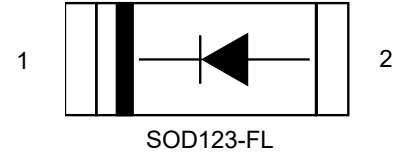


Description

- Surface Mount Fast Recovery Rectifiers
- Reverse Voltage - 50 to 1000 V
- Forward Current - 1 A



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
- pprox. Weight: 15mg 0.00053oz

Maximum Ratings and Electrical characteristics per line @ 25°C (unless otherwise specified)
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %

Parameter	Symbols	PFR101W	PFR102W	PFR103W	PFR104W	PFR105W	PFR106W	PFR107W	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 $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum 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	5 100							μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	150				250	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 1 MHz and applied reverse voltage of 4 V D.C

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

Typical Characteristics

Fig.1 Forward Current Derating Curve

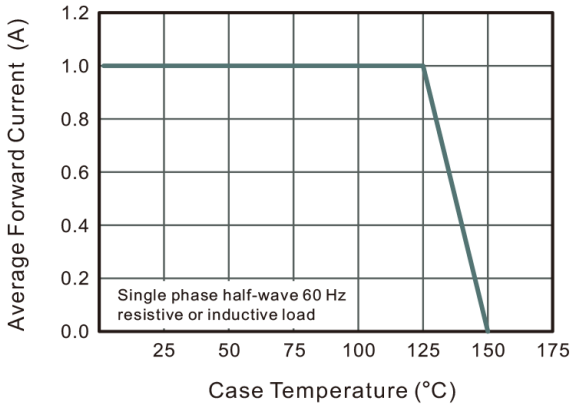


Fig.2 Typical Reverse Characteristics

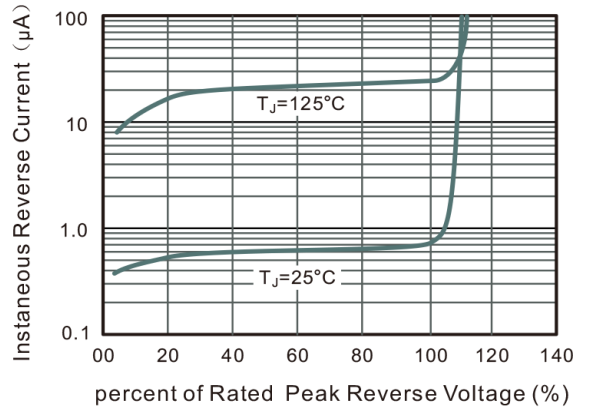


Fig.3 Typical Instantaneous Forward Characteristics

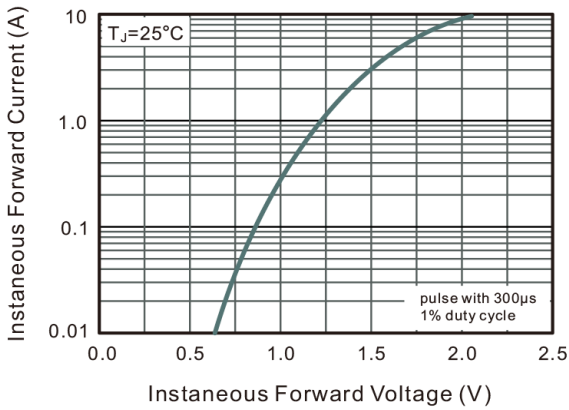


Fig.4 Typical Junction Capacitance

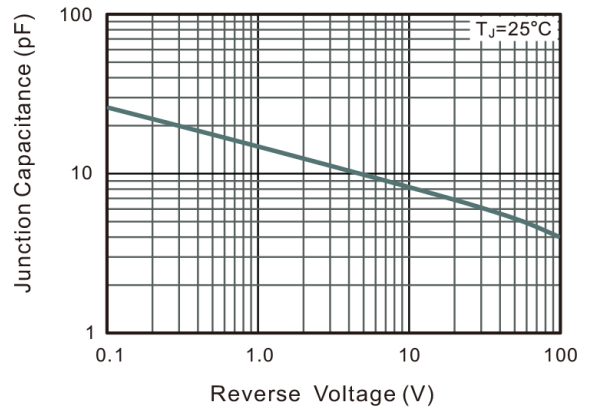
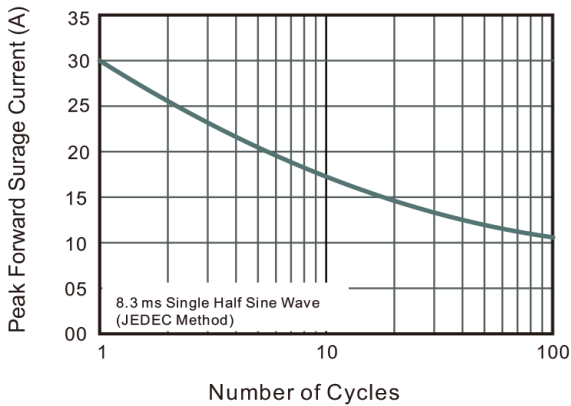
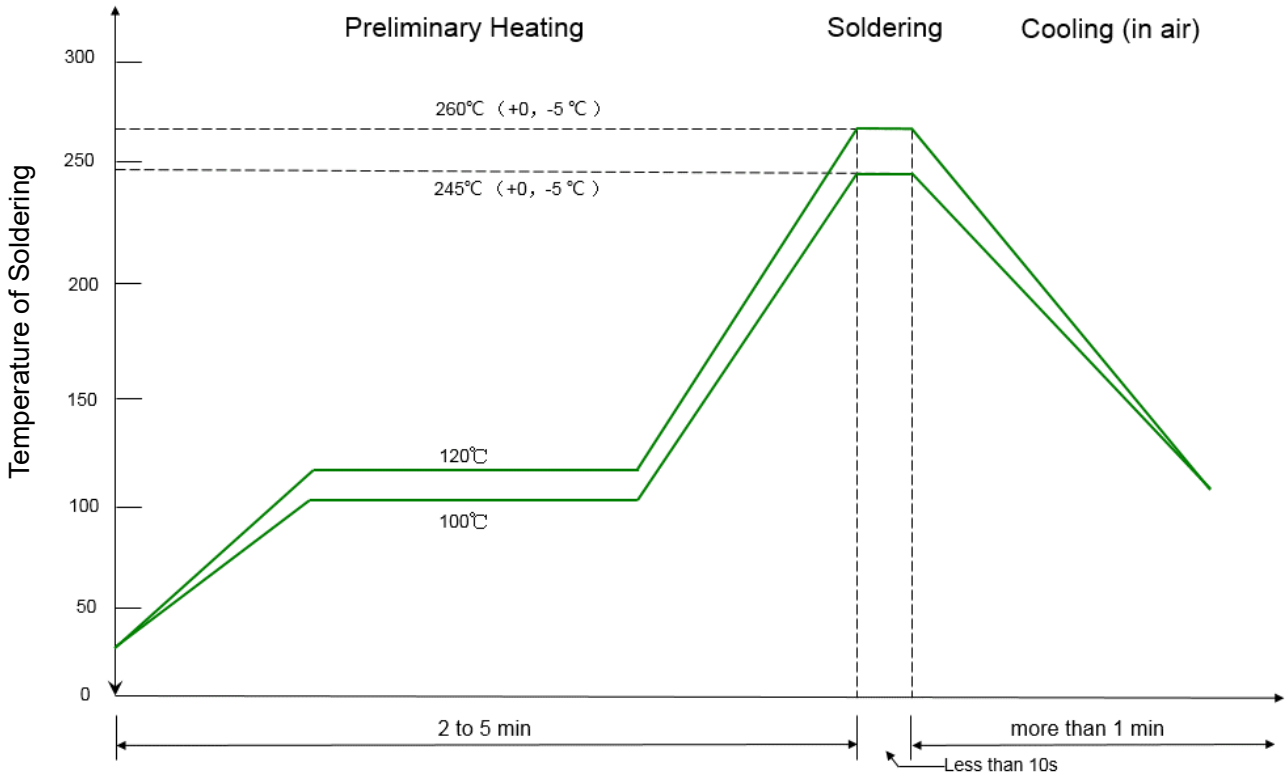


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

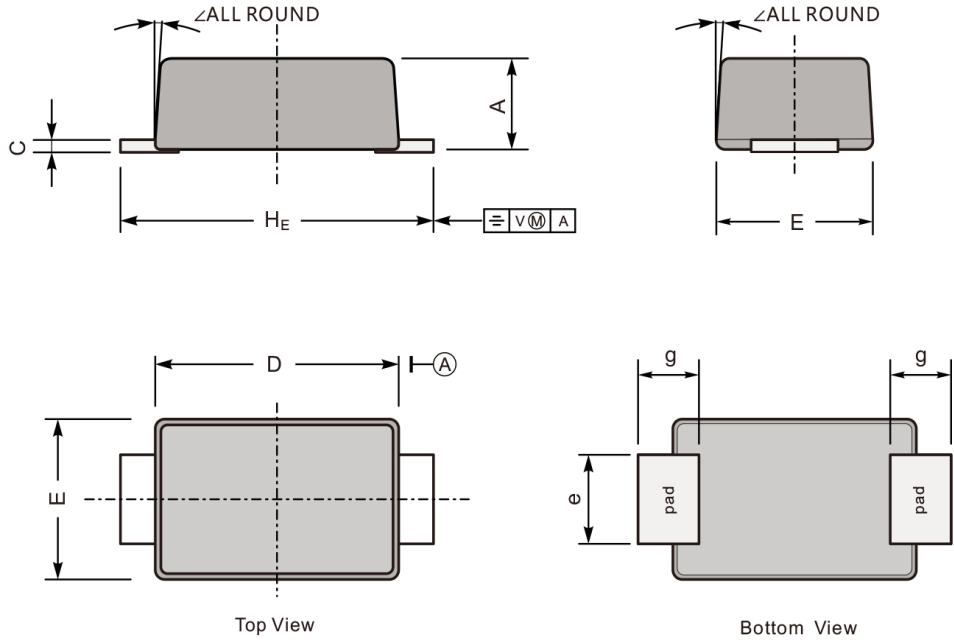


Solder Reflow Recommendation



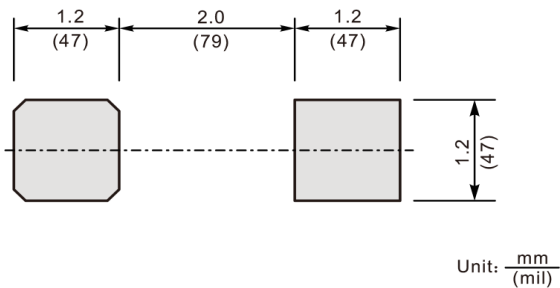
Remark: Pb free for 260°C; Pb for 245°C

Product dimension (SOD-123FL)



UNIT		A	C	D	E	e	g	H _E	∠
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	


The recommended mounting pad size



Marking

Type number	Marking code
PFR101W	F2
PFR102W	
PFR103W	
PFR104W	F5
PFR105W	
PFR106W	F7
PFR107W	


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