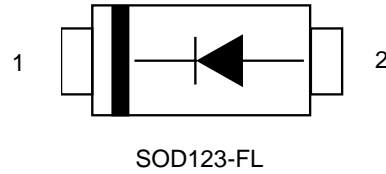


### Description

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



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 $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	25							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 $T_a = 125^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Maximum Reverse Recovery Time <sup>1)</sup>	$t_{rr}$	150				250	500		ns
Typical Junction Capacitance <sup>2)</sup>	$C_j$	15							pF
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

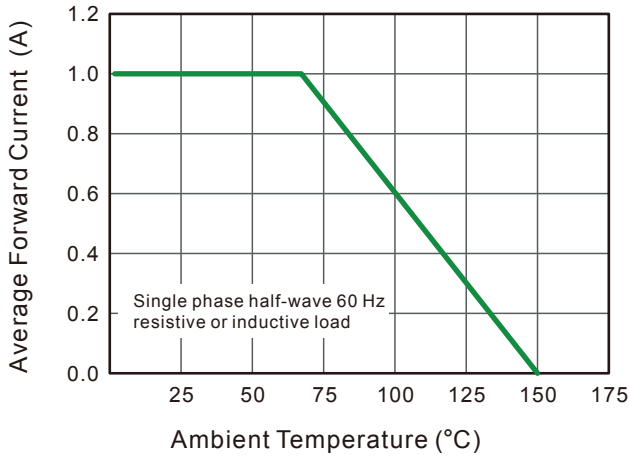


Fig.1 Forward Current Derating Curve

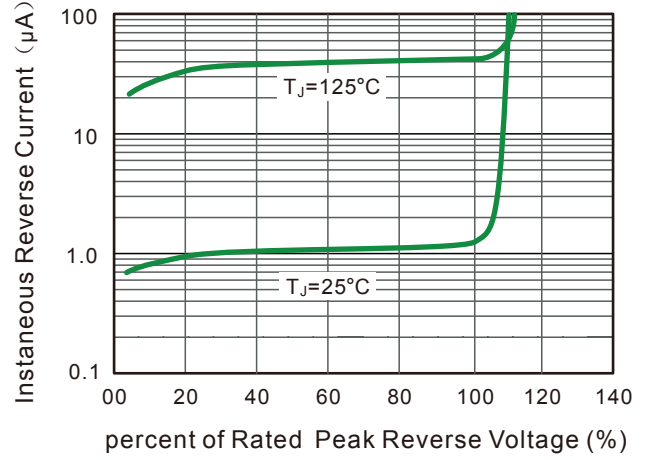


Fig.2 Typical Reverse Characteristics

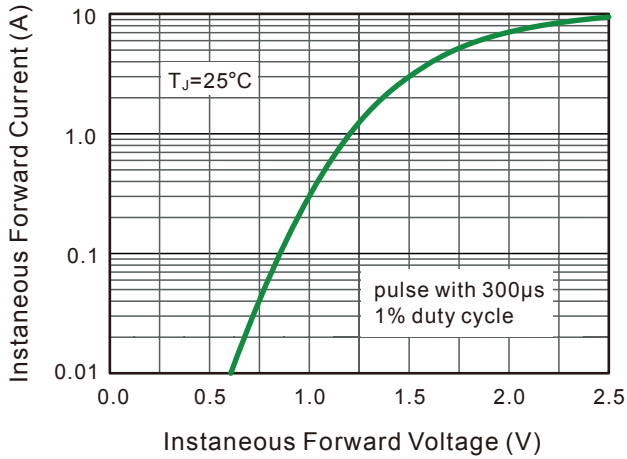


Fig.3 Typical Instantaneous Forward Characteristics

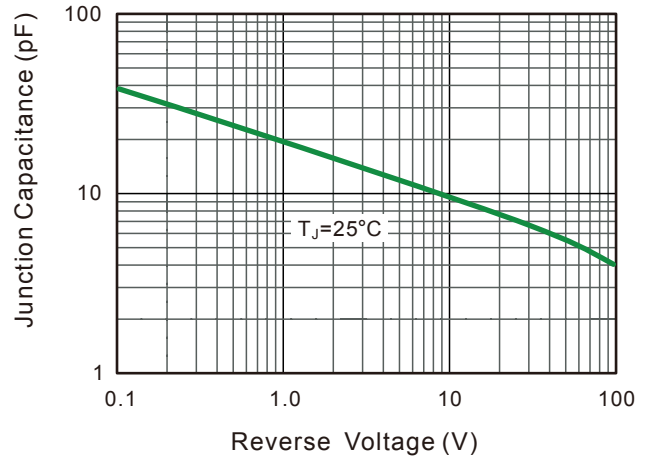


Fig.4 Typical Junction Capacitance

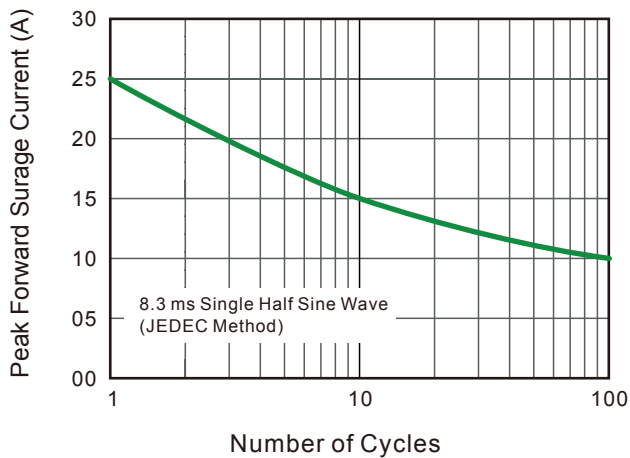
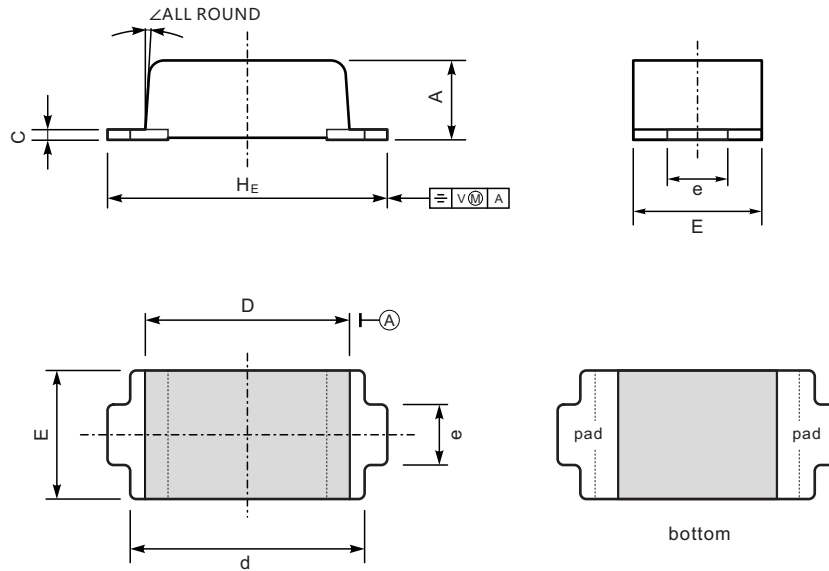


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

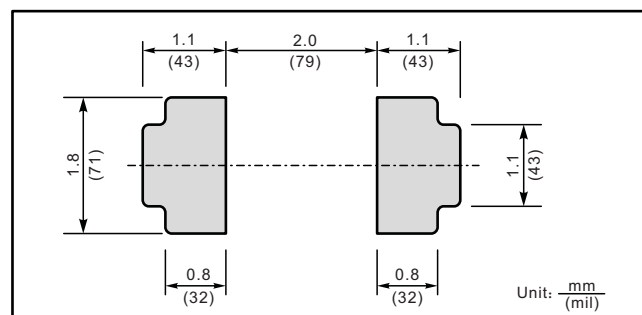
Product dimension(SOD-123FL)

Plastic surface mounted package; 2 leads

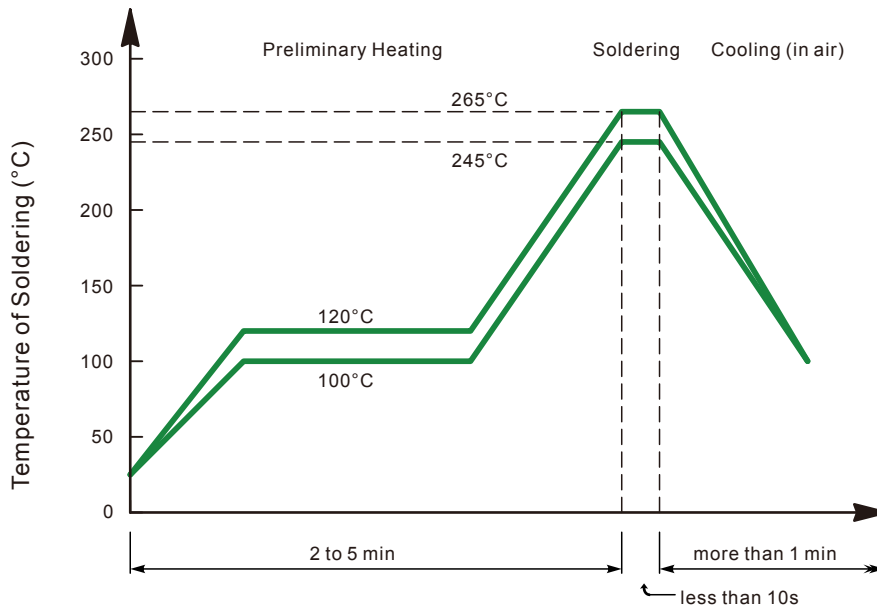


UNIT		A	C	D	d	E	e	H <sub>E</sub>	$\angle$
mm	max	1.08	0.16	2.9	3.3	1.8	1.0	3.8	5°
	min	0.95	0.14	2.6	3.0	1.5	0.7	3.5	
mil	max	42.5	6.3	114	130	70	39	150	
	min	37.4	5.5	102	118	60	28	138	

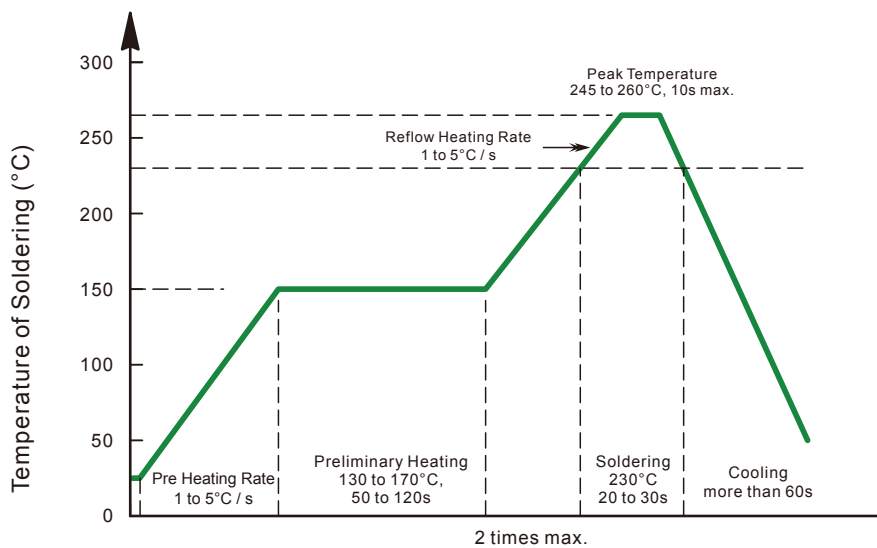
The recommended mounting pad size



• Recommended condition of flow soldering



• Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)


• Condition of hand soldering

Temperature: 370°C  
 Time: 3s max.  
 Times: one time

• Remark:

Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)


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