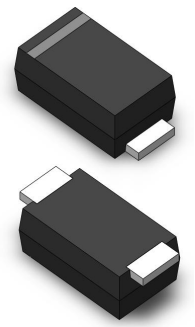
SOCAY

Fast Recovery Diodes

FR1001FL~FR1010FL **1A** **100 to 1000V** **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



SOD-123FL

Mechanical Data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00053oz

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter		Symbol	FR1001FL	FR1002FL	FR1004FL	FR1006FL	FR1008FL	FR1010FL	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_C = 125℃		$I_{F(AV)}$	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 at Rated DC Blocking Voltage	Ta =25℃	I_R	5						μA
	Ta =125℃		100						
Typical Junction Capacitance at V_R=4V, f=1MHz		C_J	15						pF
Maximum Reverse Recovery Time (1)		t_{rr}	150			250	500		ns
Typical Thermal Resistance (2)		$R_{\theta JA}$	85						℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 ~ +150						℃

Notes:

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

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

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Characteristic Curves

Fig1. Forward Current Derating Curve

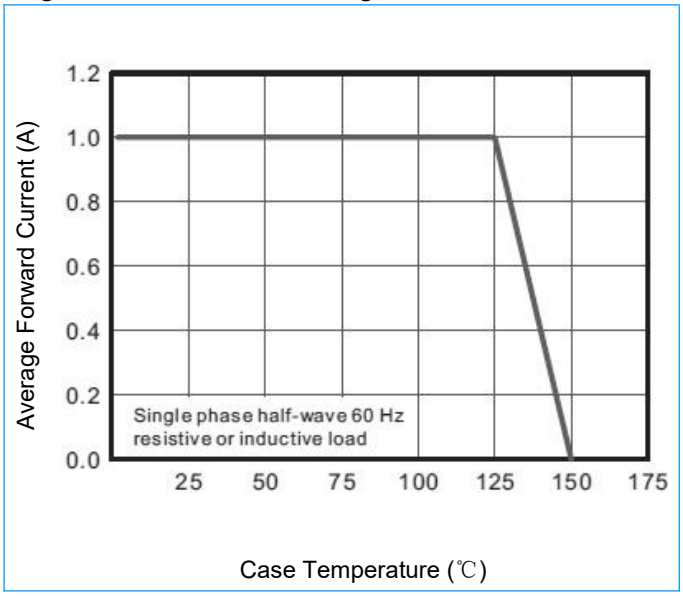


Fig2. Typical Reverse Characteristics

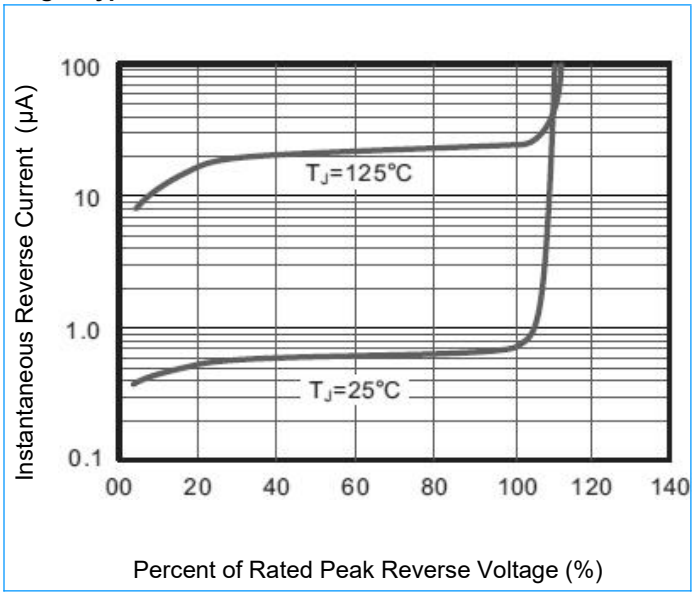


Fig3. Typical Instantaneous Forward Characteristics

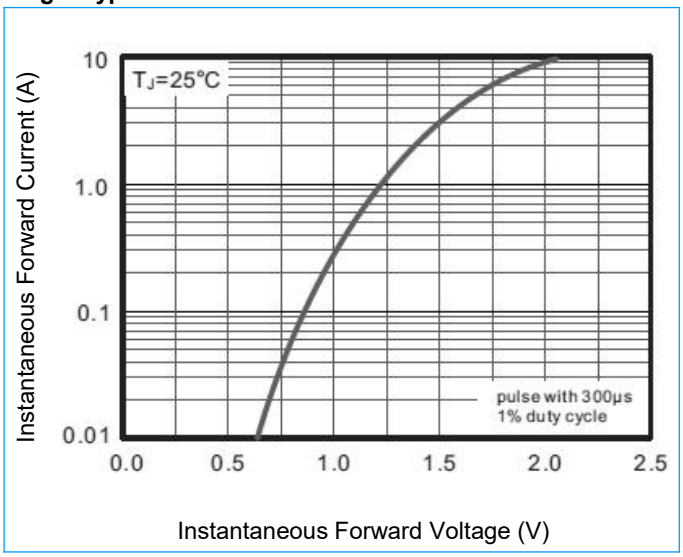
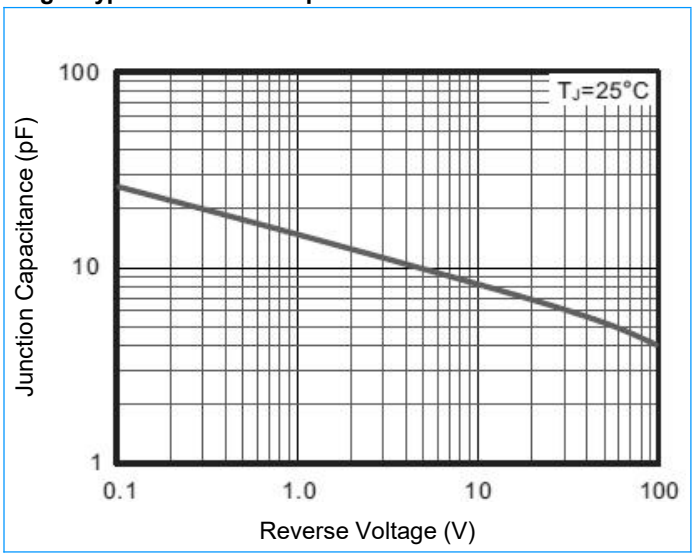


Fig4. Typical Junction Capacitance



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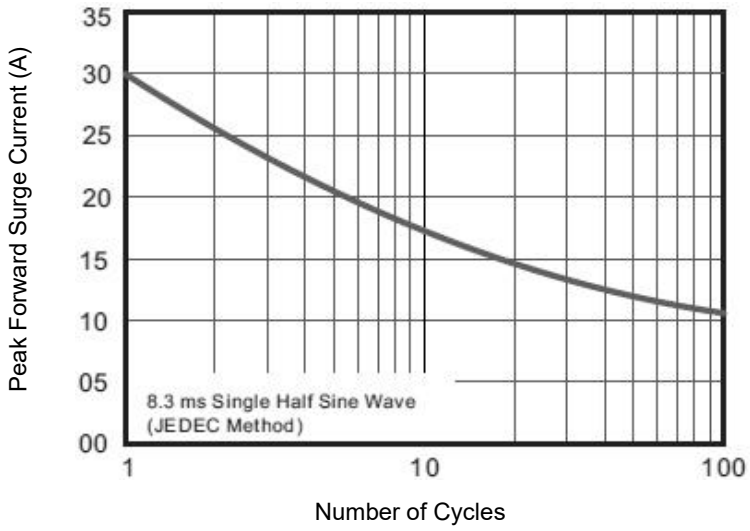
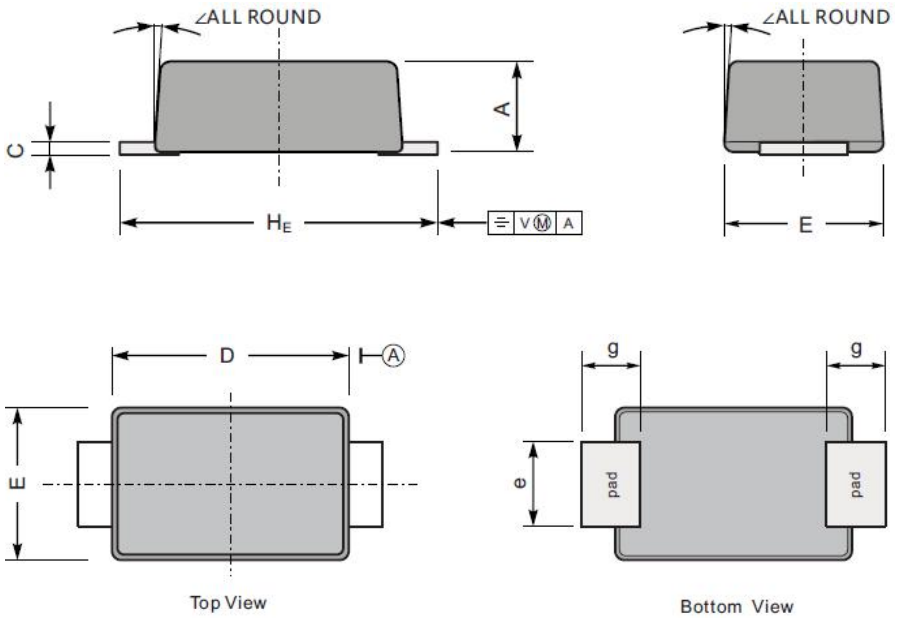
Characteristic Curves (Continue)

Fig5. Maximum Non-Repetitive Peak Forward Surage Current



SOD-123FL Package Outline

Plastic surface mounted package; 2 leads



Symbol	mm		mil	
	Min	Max	Min	Max
A	0.9	1.3	35	51
C	0.12	0.20	4.7	7.9
D	2.6	2.9	102	114
E	1.6	2.0	63	79
e	0.8	1.1	31	43
g	0.7	0.9	28	35
H_E	3.5	3.8	138	150
∠	7°			

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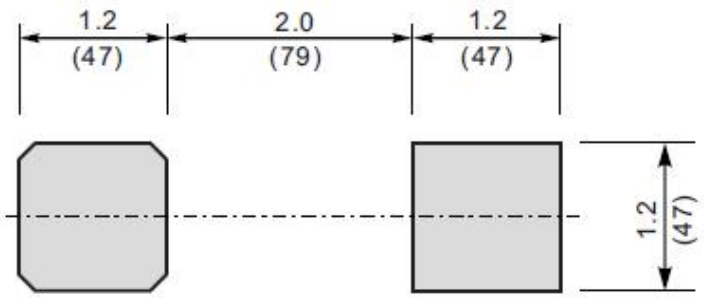
The Recommended Mounting Pad Size



Unit: mm (mil)

Packaging Information

Part Number	Component Package	Quantity
FR1001FL~FR1010FL	SOD-123FL	3000 PCS/REEL

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