



# US1001FL~US1008FL

## SMALL SURFACE MOUNT FAST DIODES

**VOLTAGE** 100 to 800 Volts **CURRENT** 1.0 Amperes

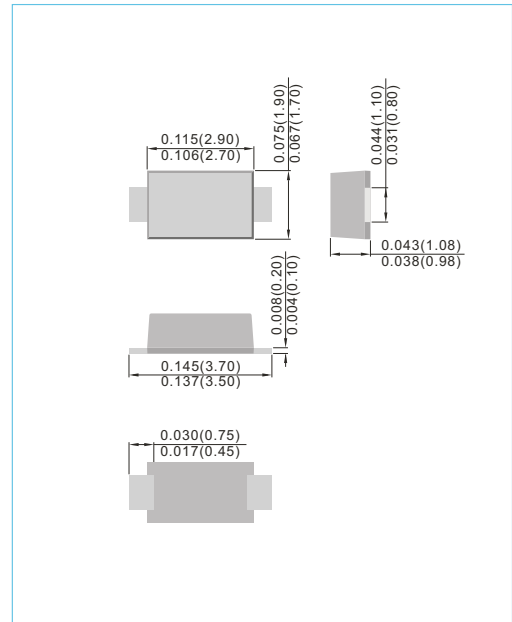
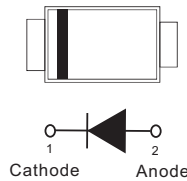
**SOD-123FL** Unit : inch(mm)

### FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass Passivated Chip Junction
- High temperature soldering : 260°C / 10 seconds at terminals
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0006 ounce, 0.0172 gram
- Polarity : Color band cathode



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Rating	Test condition	Symbol	US1001FL	US1002FL	US1004FL	US1006FL	US1008FL	Units
Marking code		-	U1B	U1D	U1G	U1J	U1K	-
Maximum repetitive peak reverse voltage		$V_{RRM}$	100	200	400	600	800	V
Maximum RMS voltage		$V_{RMS}$	70	140	280	420	560	V
Maximum DC blocking voltage		$V_{DC}$	100	200	400	600	800	V
Maximum average forward rectified current	$T_A=25^\circ\text{C}$	$I_{F(AV)}$	1					A
Peak forward surge current 8.3ms single half sine-wave	$T_L=25^\circ\text{C}$	$I_{FSM}$	30					A
Maximum instantaneous forward voltage	1A	$V_F$	1		1.4		1.7	V
Maximum DC reverse current at rated DC blocking voltage	$T_J=25^\circ\text{C}$	$I_R$	1					$\mu\text{A}$
Reverse recovery time	$I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{rr}=0.25\text{A}$	$t_{rr}$	50			100		nS
Typical capacitance	4V,1MHz	$C_J$	9					pF
Thermal resistance junction to ambient air		$R_{\theta JA}$	180					$^\circ\text{C/W}$
Operating junction and storage temperature range		$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$



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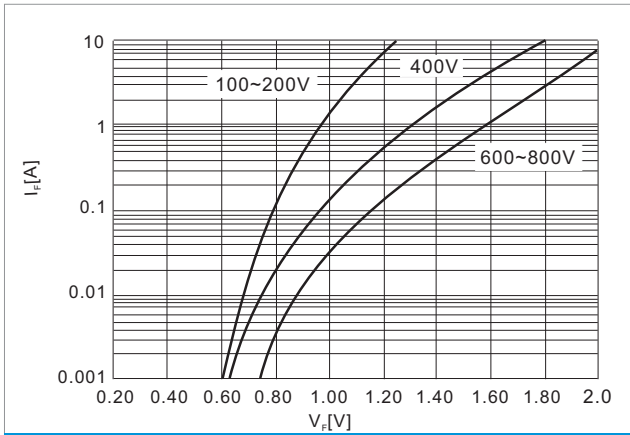


Fig. 1-Typical forward characteristics

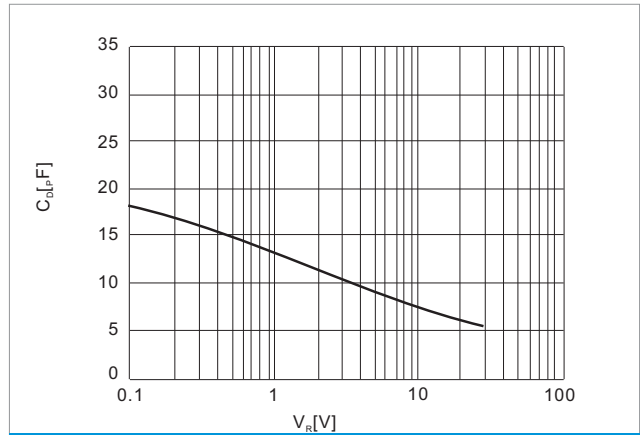


Fig. 2-Typical diode capacitance vs. Reverse voltage

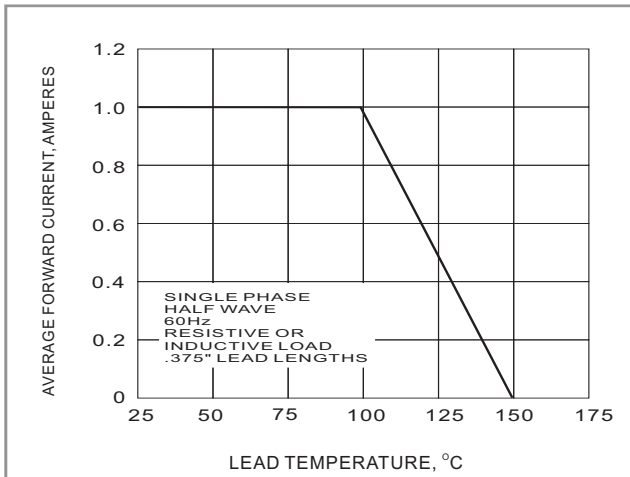


Fig. 3 FORWARD CURRENT DERATING CURVE

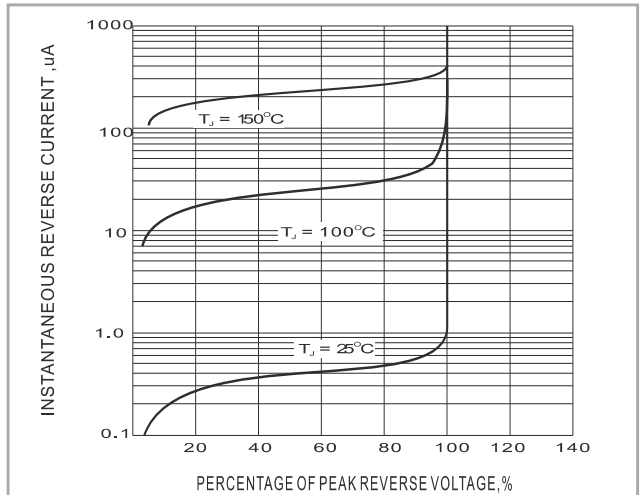


Fig. 4-TYPICAL REVERSE CHARACTERISTIC

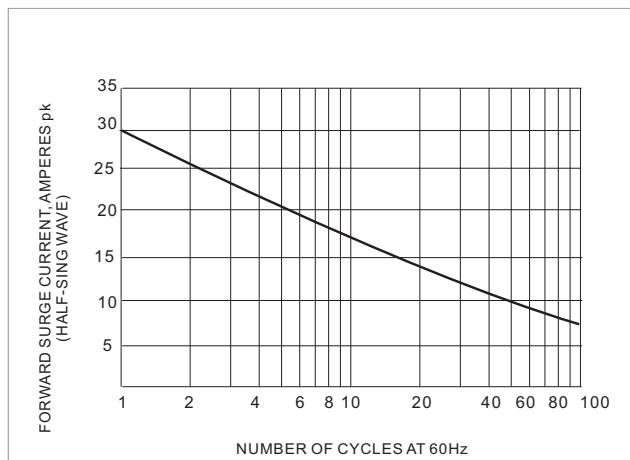
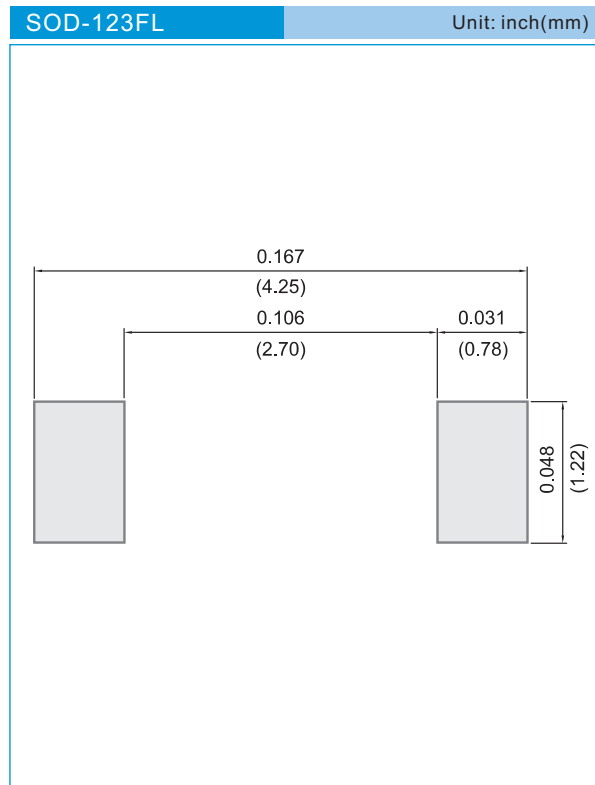


FIG. 5 MAXIMUM NON-REPEITIVE SURGE CURRENT



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel

### LEGAL STATEMENT

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