

## US1001FL~US1008FL

### SMALL SURFACE MOUNT FAST DIODES

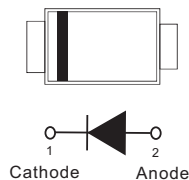
**VOLTAGE** 100 to 800 Volts **CURRENT** 1.0 Amperes

#### 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
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

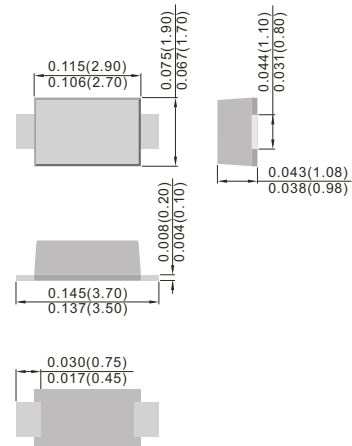
#### MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0006 ounces, 0.0173 grams
- Polarity : Color band cathode



#### SOD-123FL

Unit : inch(mm)



### 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 <sub>RRM</sub>	100	200	400	600	800	V
Maximum RMS voltage		V <sub>RMS</sub>	70	140	280	420	560	V
Maximum DC blocking voltage		V <sub>R</sub>	100	200	400	600	800	V
Maximum average forward rectified current	T <sub>A</sub> =25°C	I <sub>F(AV)</sub>	1					A
Peak forward surge current 8.3ms single half sine-wave	T <sub>L</sub> =25°C	I <sub>FSM</sub>	30					A
Maximum instantaneous forward voltage	1A	V <sub>F</sub>	1		1.4		1.7	V
Maximum DC reverse current at rated DC blocking voltage	T <sub>J</sub> =25°C	I <sub>R</sub>	1					μA
Reverse recovery time	I <sub>F</sub> =0.5A I <sub>R</sub> =1A I <sub>rr</sub> =0.25A	t <sub>rr</sub>	50			100		nS
Typical capacitance	4V,1MHz	C <sub>J</sub>	9					pF
Thermal resistance junction to ambient air		R <sub>θJA</sub>	180					°C/W
Operating junction and storage temperature range		T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150					°C

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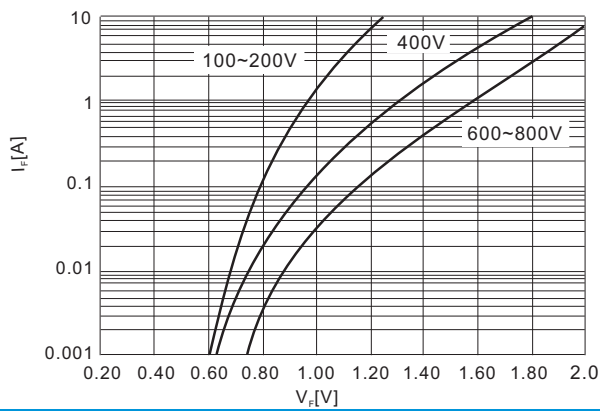


Fig.1-Typical forward characteristics

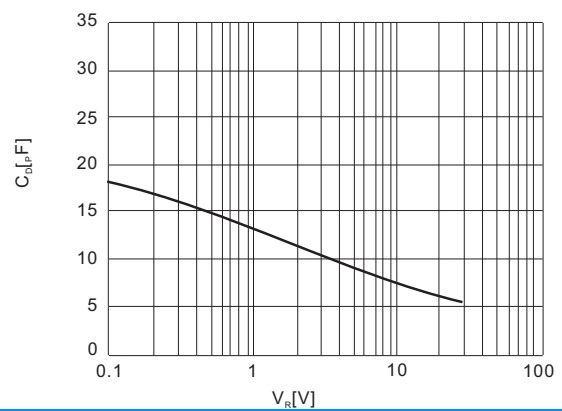


Fig.2-Typical diode capacitance vs. Reverse voltage

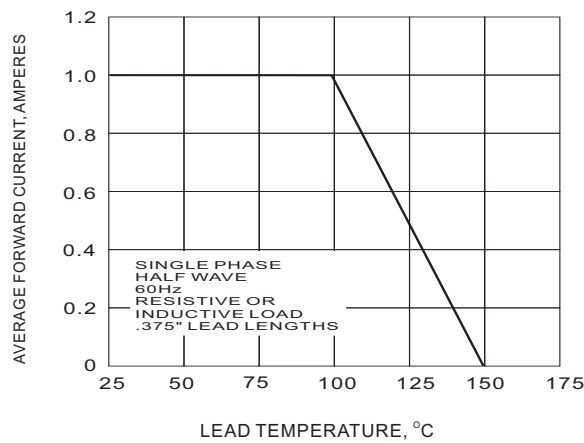


Fig.3 FORWARD CURRENT DERATING CURVE

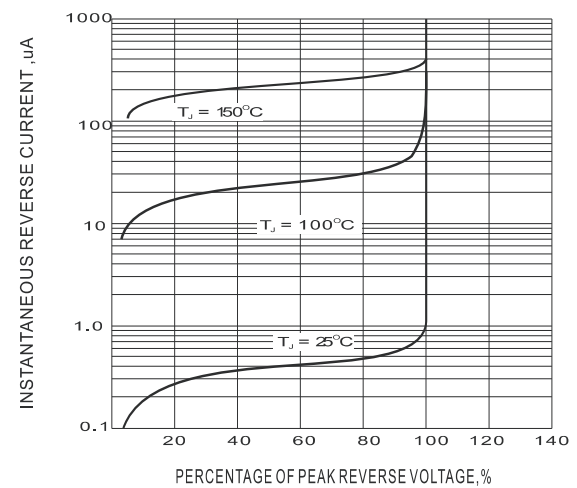


Fig.4-TYPICAL REVERSE CHARACTERISTIC

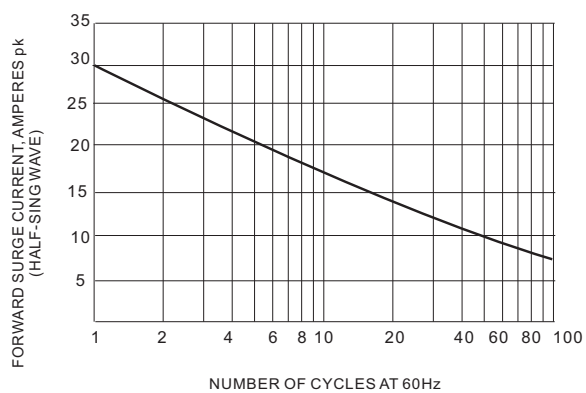


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT

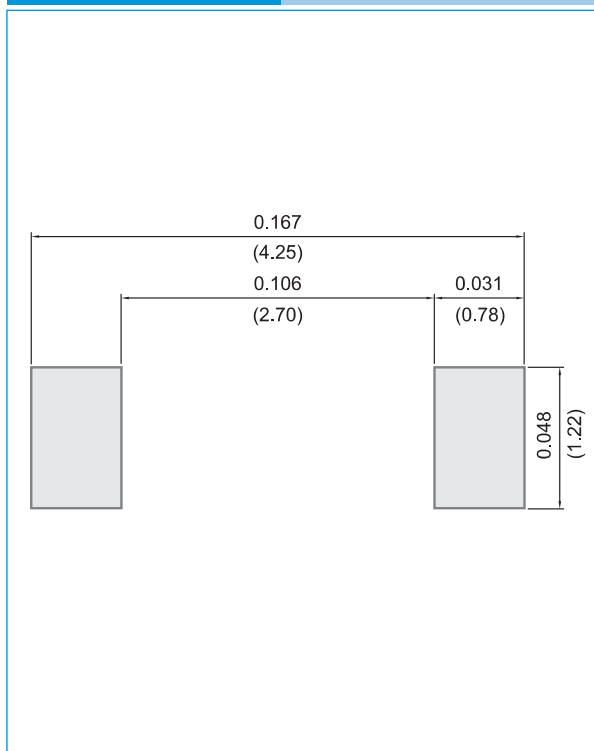


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### MOUNTING PAD LAYOUT

SOD-123FL

Unit: inch(mm)



### ORDER INFORMATION

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

## US1001FL~US1008FL

### Part No\_packing code\_Version

US1001FL\_R1\_00001

US1001FL\_R2\_00001

For example :

**RB500V-40** **R2** **00001**

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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