



# US1001FL~US1008FL

## SMALL SURFACE MOUNT FAST DIODES

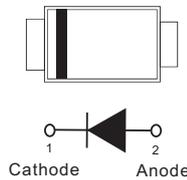
**VOLTAGE** 100 to 800 Volt **CURRENT** 1 Ampere

### FEATURES

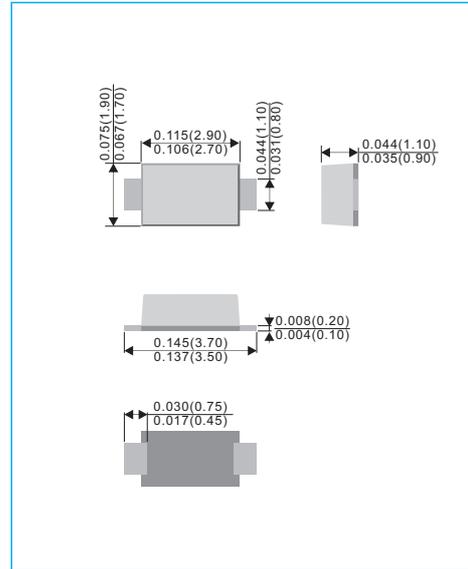
- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass Passivated Chip Junction
- High temperature soldering : 260°C / 10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### 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 denotes cathode end



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



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

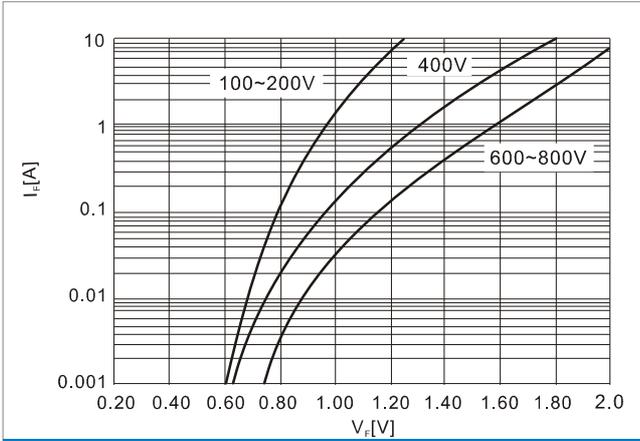
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Rating	Test condition	Symbol	US1001FL	US1002FL	US1004FL	US1006FL	US1008FL	Units
Marking code		-	U1B	U1D	U1G	U1J	U1K	-
Maximum repetitive peak reverse voltage		$V_{RRM}$	100	200	400	600	800	V
Maximum RMS voltage		$V_{RMS}$	70	140	280	420	560	V
Maximum DC blocking voltage		$V_R$	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
Typical thermal resistance	(Note 1)	$R_{\theta JA}$	200					$^\circ\text{C/W}$
Operating junction and storage temperature range		$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$

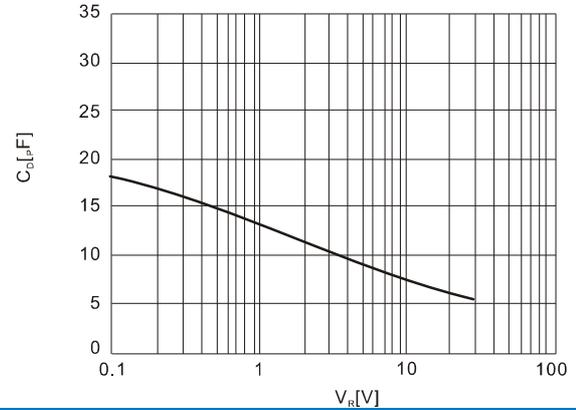
NOTE : 1.Mounted on an FR4 PCB, single-sided copper, mini pad.



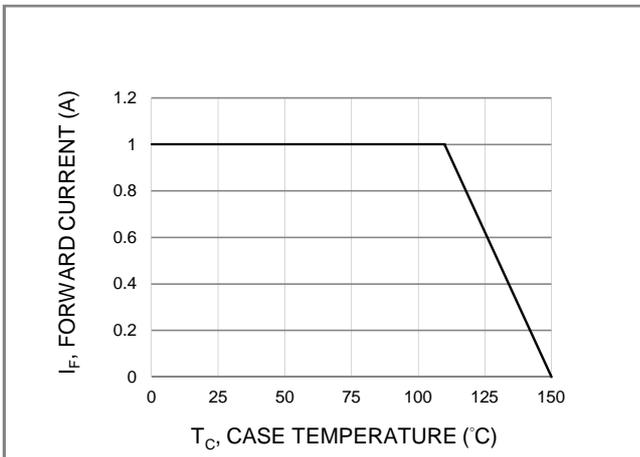
# US1001FL~US1008FL



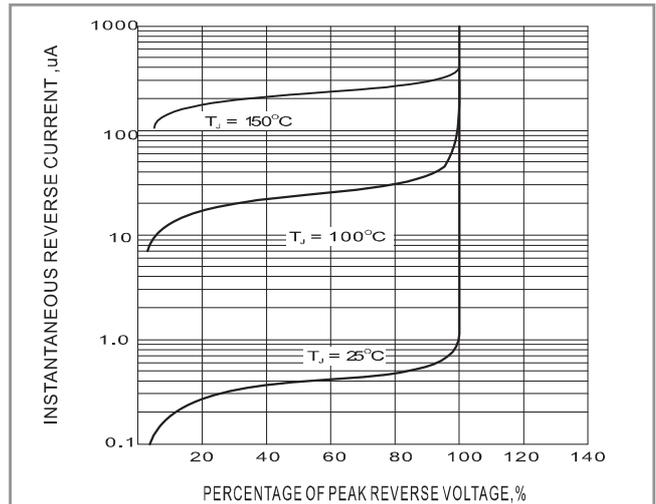
**Fig. 1-Typical forward characteristics**



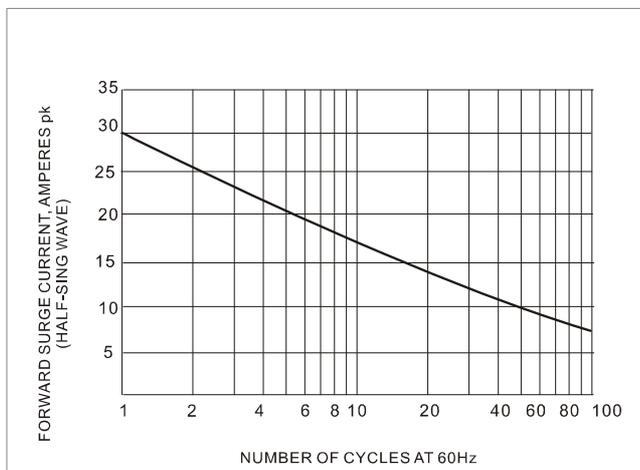
**Fig. 2-Typical diode capacitance vs. Reverse voltage**



**Fig. 3 FORWARD CURRENT DERATING CURVE**



**Fig. 4-TYPICAL REVERSE CHARACTERISTIC**

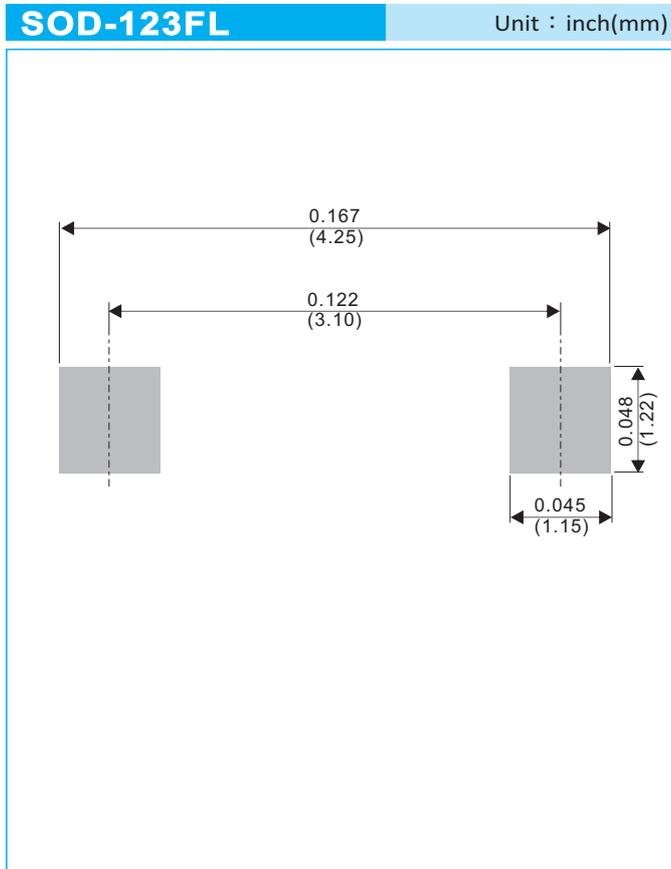


**FIG. 5 MAXIMUM NON-REPEITIVE SURGE CURRENT**



## US1001FL~US1008FL

### MOUNTING PAD LAYOUT



### 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**



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>			



## US1001FL~US1008FL

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.