



# US1001FL~US1008FL

## SMALL SURFACE MOUNT ULTRA FAST DIODES

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

SOD-123FL/DO-219AB

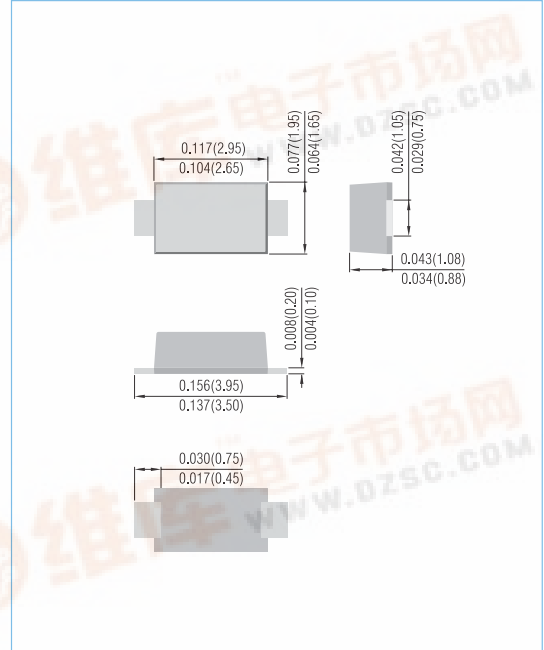
Unit: inch ( mm )

### 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
- Pb free product : 99% Sn can meet RoHS environment substance directive request

### MECHANICAL DATA

- Case: JEDEC DO-219AB, Molded plastic over passivated junction.
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes positive end (cathode)
- standard Packaging : 8mm tape (EIA-481)
- Approx. Weight: 0.0168 gram



### ABSOLUTE MAXIMUM RATINGS

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

PARAMETER	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	$I_{F(AV)}$				1.4		A
					0.5		
Maximum DC reverse current at rated DC blocking voltage	$I_R$				10		$\mu A$
					50		
Operating junction and storage temperature range	$T_J, T_{STG}$				-50 TO + 150		$^{\circ}C$

### ELECTRICAL CHARACTERISTICS

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

PARAMETER	Symbol	US1001FL	US1002FL	US1004FL	US1006FL	US1008FL	Units
Maximum instantaneous forward voltage	$V_F$	0.7A	1	1.4	1.7		V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^{\circ}C$ $T_A=125^{\circ}C$				10	$\mu A$
					50		
Reverse recovery time at $I_F=0.5A, I_R=1A, I_{tr}=0.25A$	$t_{rr}$				50	100	ns
Typical capacitance	$C_J$				9		pF





# US1001FL~US1008FL

## THERMAL CHARACTERISTICS

PARAMETER	Symbol	US1001FL	US1002FL	US1004FL	US1006FL	US1008FL	Units	
Thermal resistance junction to ambient air	$R_{\theta JA}$	180						$^{\circ}C/W$

### RATING AND CHARACTERISTIC CURVES

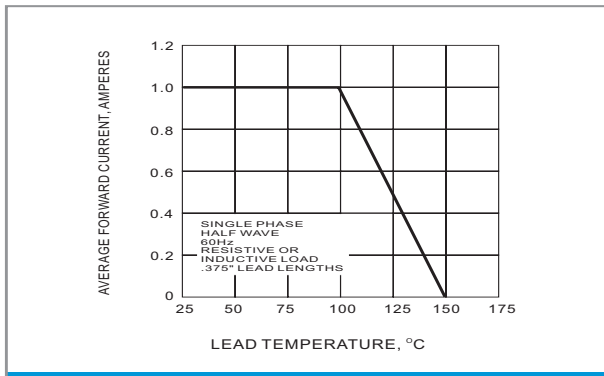


Fig.1 FORWARD CURRENT DERATING CURVE

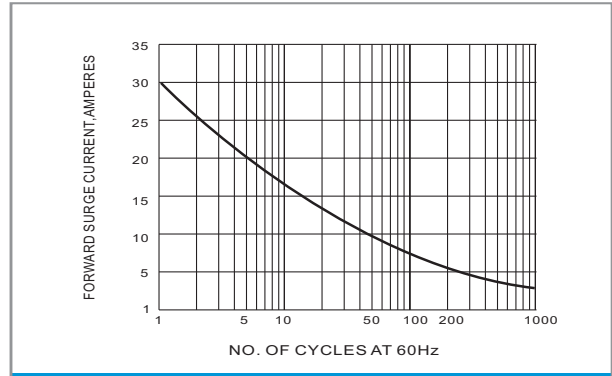


Fig.2 PEAK FORWARD SURGE CURRENT

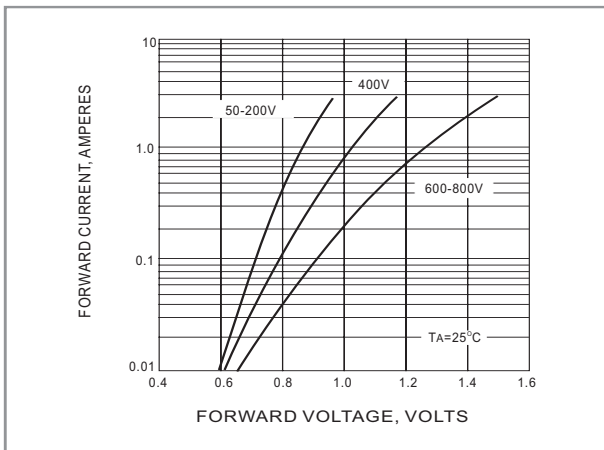


Fig.3 FORWARD CHARACTERISTICS

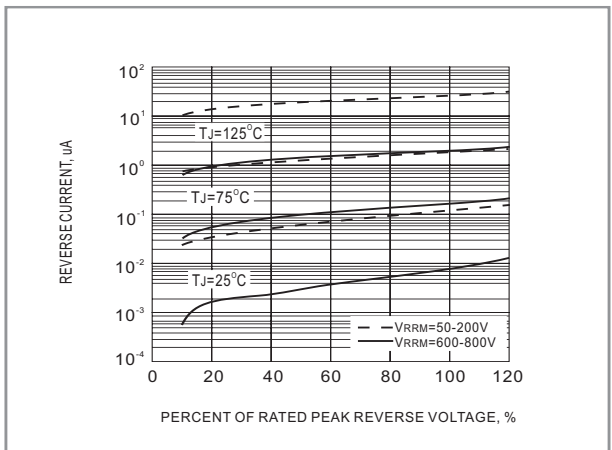


Fig.4 TYPICAL REVERSE CHARACTERISTICS

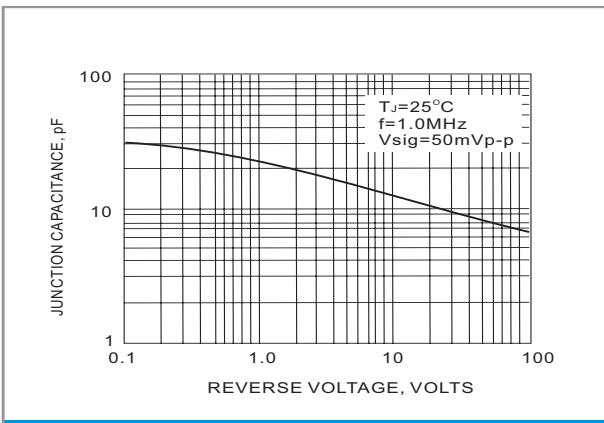
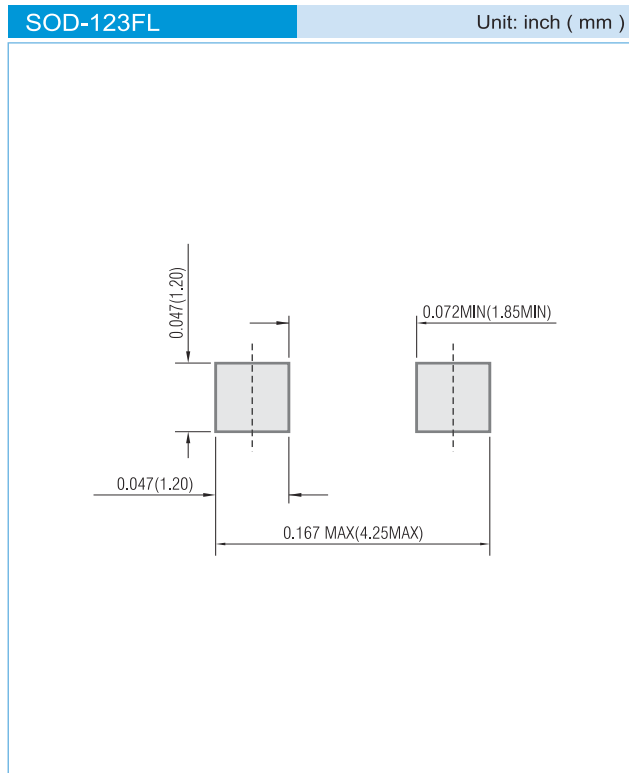


Fig.5 TYPICAL JUNCTION CAPACITANCE



## US1001FL~US1008FL

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information

T/R - 10K per 13" plastic Reel

T/R - 3K per 7" plastic Reel

### LEGAL STATEMENT

#### Copyright PanJit International, Inc 2005

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.