

## SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 V    Forward Current - 2 A

### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

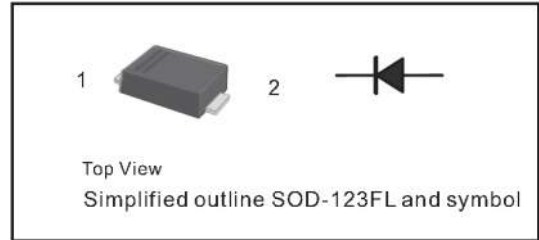
### MECHANICAL DATA

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

### Maximum Ratings and Electrical characteristics

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

PIN	DESCRIPTION
1	Cathode
2	Anode

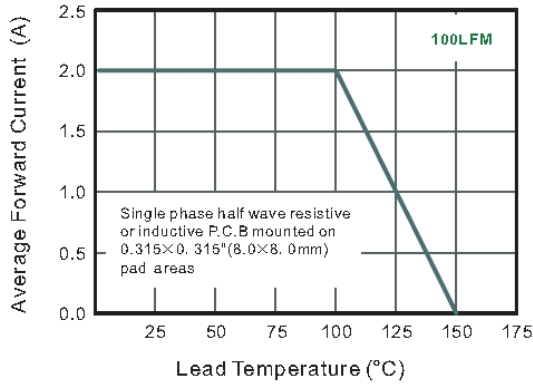


Parameter	Symbol	US2AW	US2BW	US2DW	US2GW	US2JW	US2KW	US2MW	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	50							A
Maximum Instantaneous Forward Voltage at 2 A	$V_F$	1.0		1.4		1.68			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Maximum Reverse Recovery Time <sup>1)</sup>	$t_{rr}$	50				75			ns
Typical Junction Capacitance <sup>2)</sup>	$C_j$	25							pF
Typical Thermal Resistance <sup>3)</sup>	$R_{\theta JA}$	90							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{sig}$	-55 ~ +150							$^\circ\text{C}$

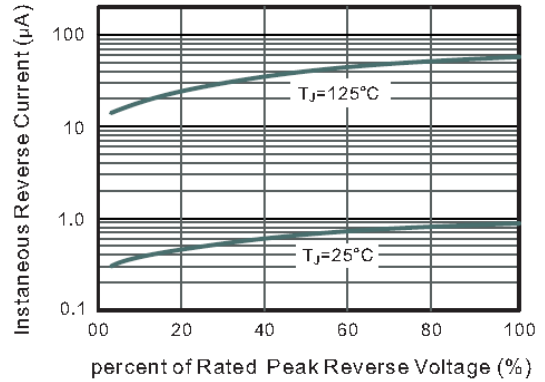
1) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$     2) Measured at 1 MHz and applied reverse voltage of 4 V D.C

3) P.C.B. mounted with 0.2x0.2" ( 5.0x5.0mm ) copper pad areas.

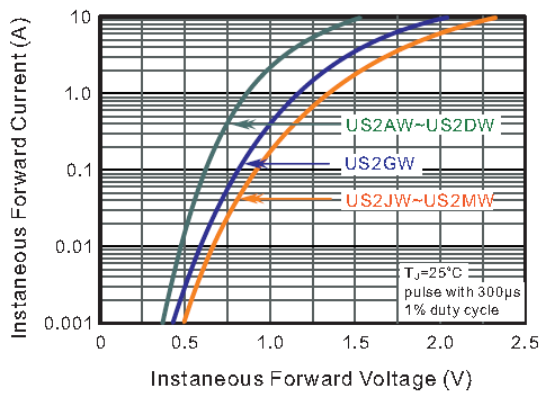
**Fig.1 Maximum Average Forward Current Rating**



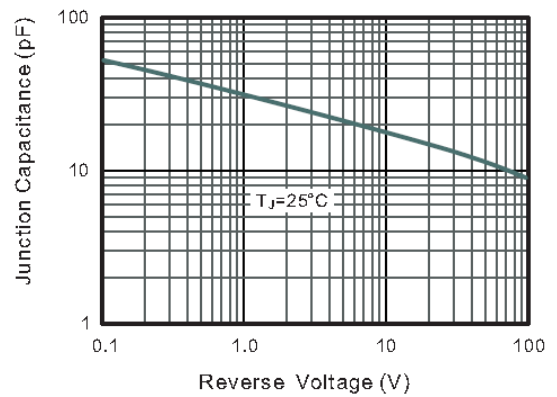
**Fig.2 Typical Reverse Characteristics**



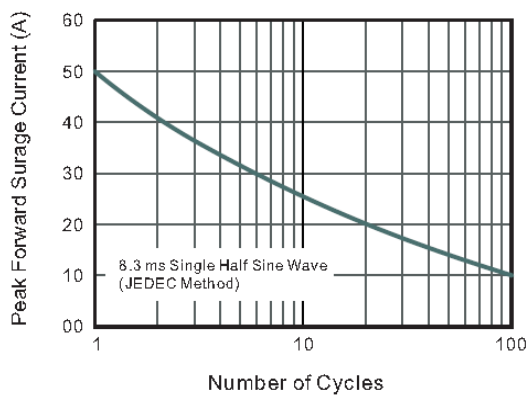
**Fig.3 Typical Forward Characteristics**



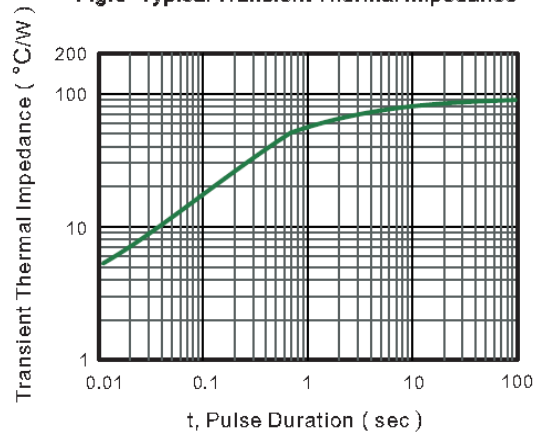
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



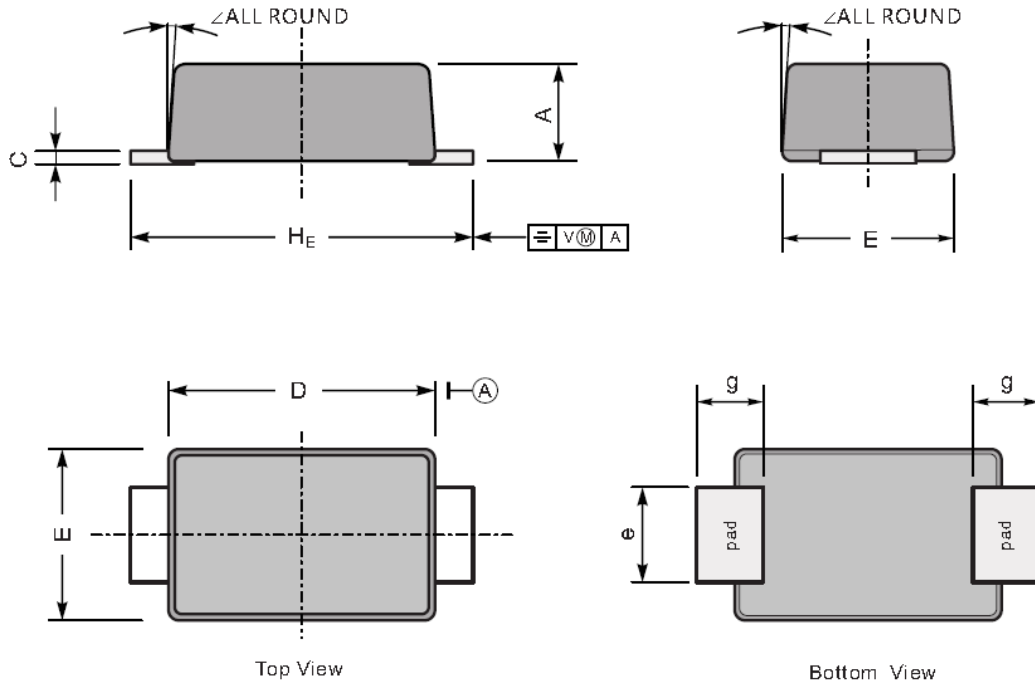
**Fig.6- Typical Transient Thermal Impedance**



## PACKAGE OUTLINE

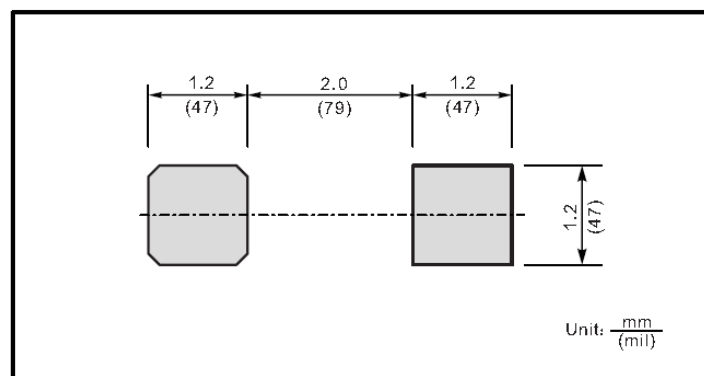
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT		A	C	D	E	e	g	$H_E$	$\angle$
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

### The recommended mounting pad size



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