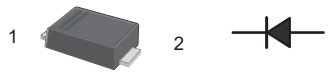
SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 V

Forward Current - 2 A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123FL and symbol

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Juntion
- Easy to pick and place
- 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 0.00048oz

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 %.

Parameter	Symbols	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 Ta = 65 °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	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage Ta = 25 °C Ta =100 °C	I_R	5 50							μA
Maximum Reverse Recovery Time [1]	t_{rr}	50				75			ns
Typical Junction Capacitance [2]	C_j	25							pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 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.

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Fig.1 Maximum Average Forward Current Rating

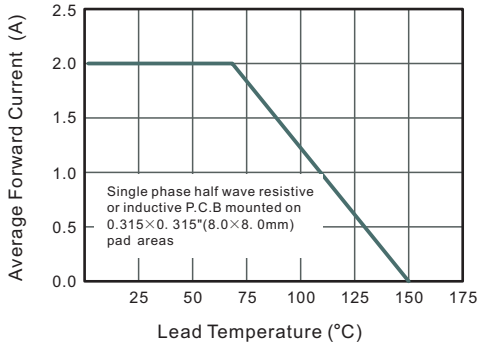


Fig.2 Typical Reverse Characteristics

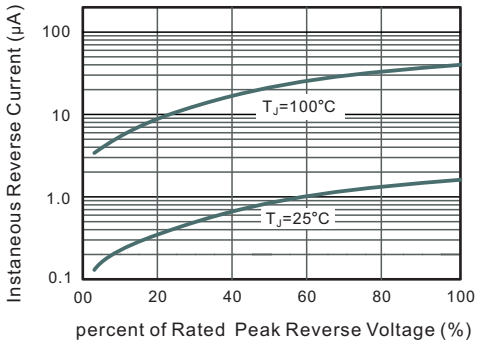


Fig.3 Typical Instaneous Forward Characteristics

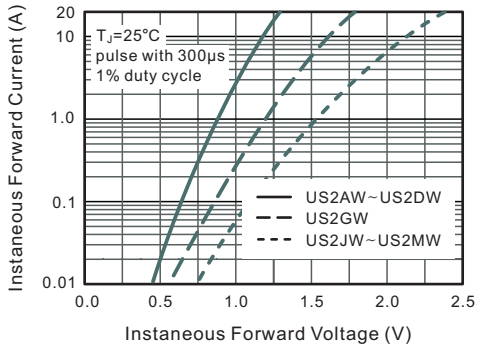


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

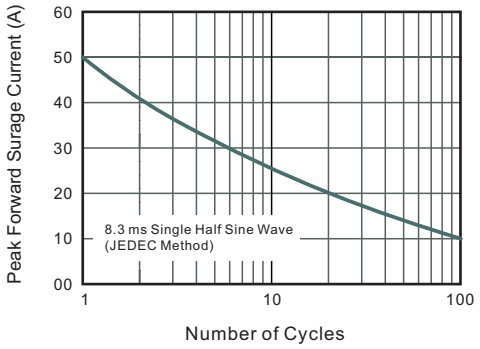


Fig.5 Typical Junction Capacitance

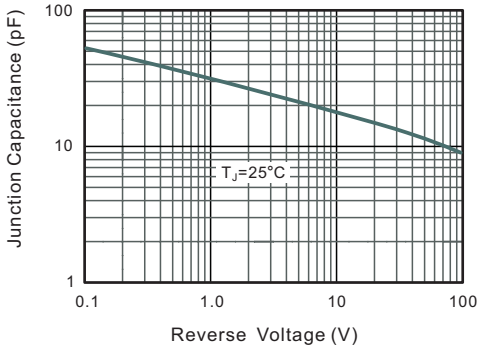
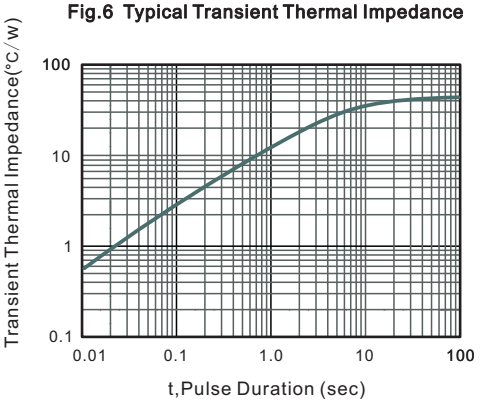


Fig.6 Typical Transient Thermal Impedance



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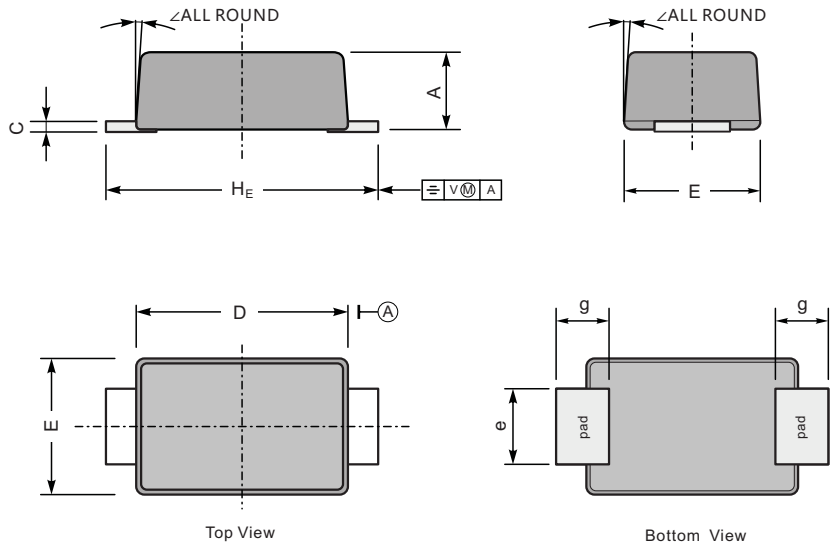
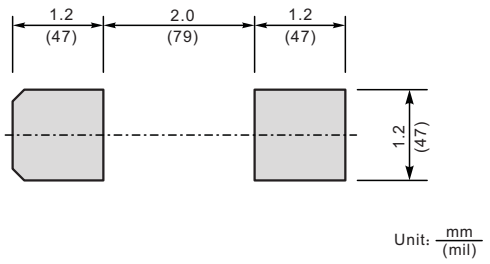
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123FL



UNIT		A	C	D	E	e	g	H_E	∠
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



Marking

Type number	Marking code
US2AW	U2L
US2BW	
US2DW	
US2GW	U2M
US2JW	U2H
US2KW	
US2MW	

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