

US2AW THRU US2MW

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

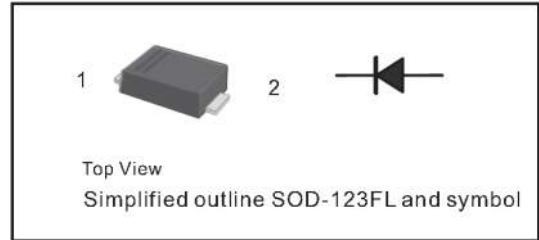
MECHANICAL DATA

- 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 %.

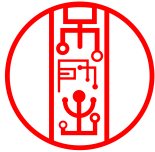
PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	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 $T_a = 65\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	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 $T_a = 25\text{ }^{\circ}\text{C}$ $T_a = 125\text{ }^{\circ}\text{C}$	I_R	5 100							μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	50				75			ns
Typical Junction Capacitance ²⁾	C_j	25							pF
Typical Thermal Resistance ³⁾	$R_{\theta JA}$	90							$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{sig}	-55 ~ +150							$^{\circ}\text{C}$

1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_T = 0.25\text{ A}$ 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.



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Fig.1 Maximum Average Forward Current Rating

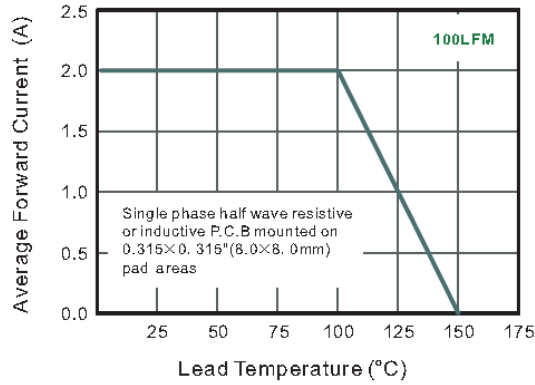


Fig.2 Typical Reverse Characteristics

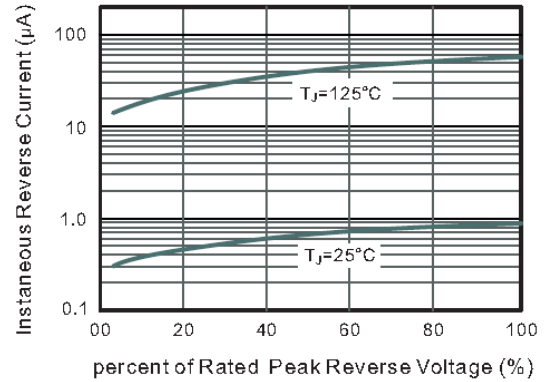


Fig.3 Typical Forward Characteristics

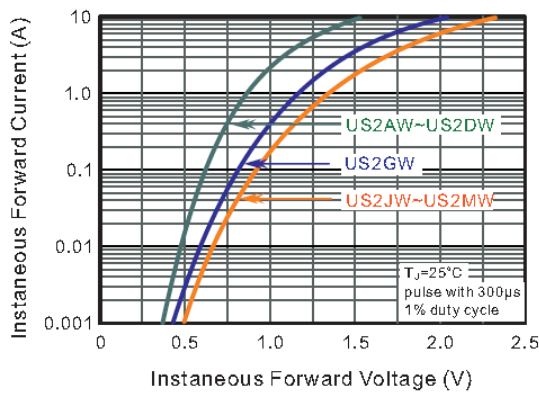


Fig.4 Typical Junction Capacitance

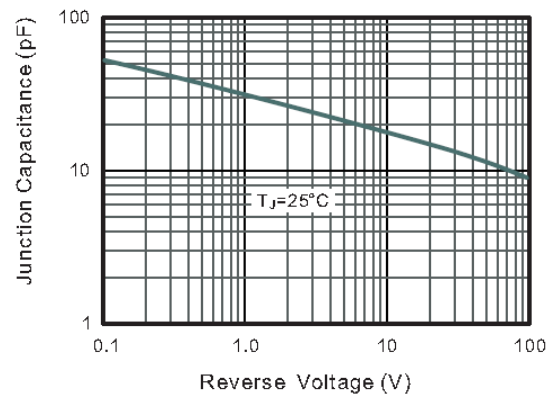


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

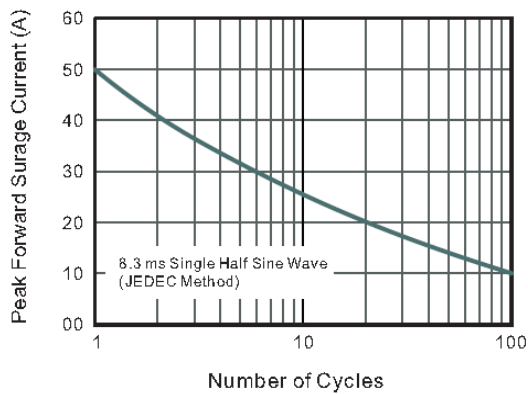
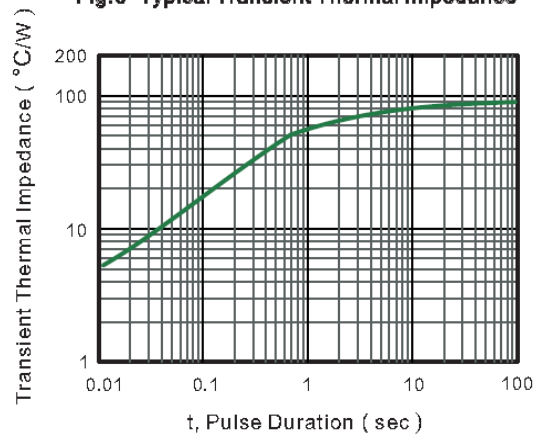
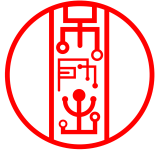


Fig.6 Typical Transient Thermal Impedance



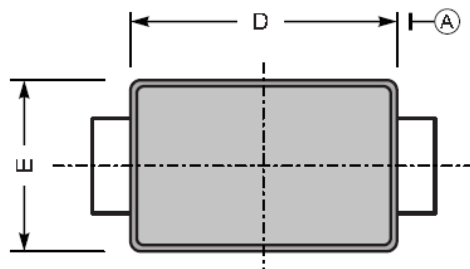
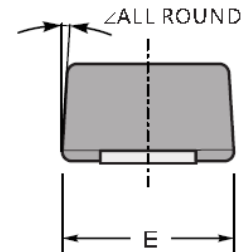
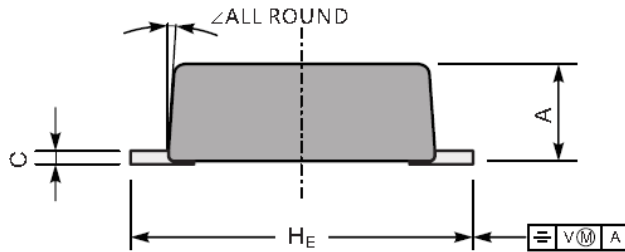


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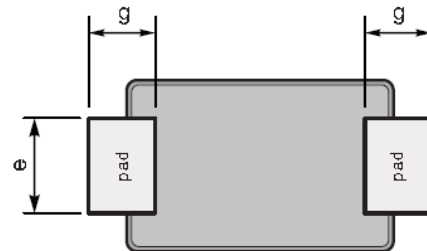
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



Top View



Bottom View

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

