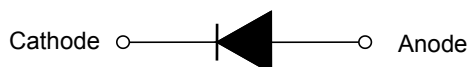


### Surface Mount Ultrafast Recovery Rectifier

#### FEATURES:

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

#### Circuit Diagram & Pin Configuration:



#### SOD-123FL

#### Marking

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

#### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

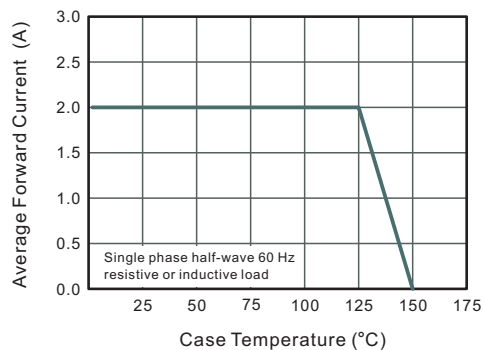
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US2AW	US2BW	US2DW	US2GW	US2JW	US2KW	US2MW	Units
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T <sub>c</sub> = 125 °C	I <sub>F(AV)</sub>	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I <sub>FSM</sub>	50							A
Maximum Instantaneous Forward Voltage at 2 A	V <sub>F</sub>	1.0			1.3	1.68			V
Maximum DC Reverse Current    T <sub>a</sub> = 25 °C at Rated DC Blocking Voltage    T <sub>a</sub> =125 °C	I <sub>R</sub>	5 100							μA
Maximum Reverse Recovery Time <sup>(1)</sup>	t <sub>rr</sub>	50				75			ns
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub> R <sub>θJC</sub>	75 22							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150							°C

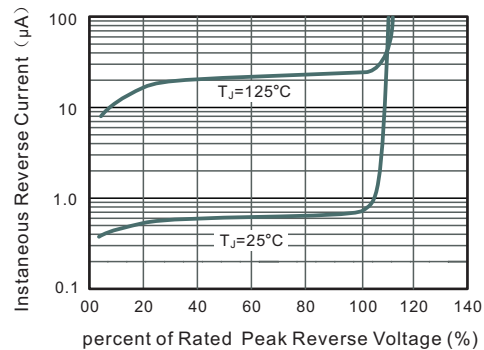
( 1 ) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

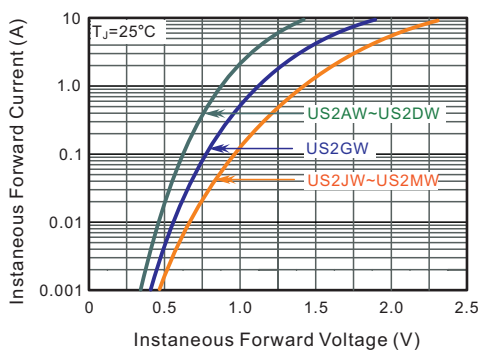
**Fig.1 Forward Current Derating Curve**



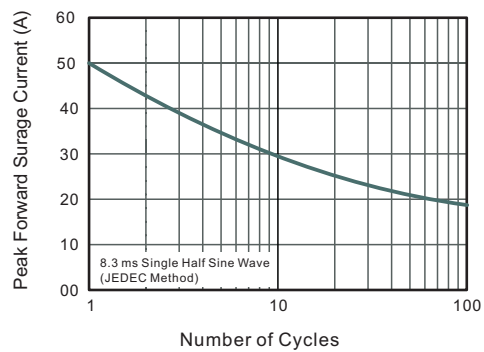
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristics**



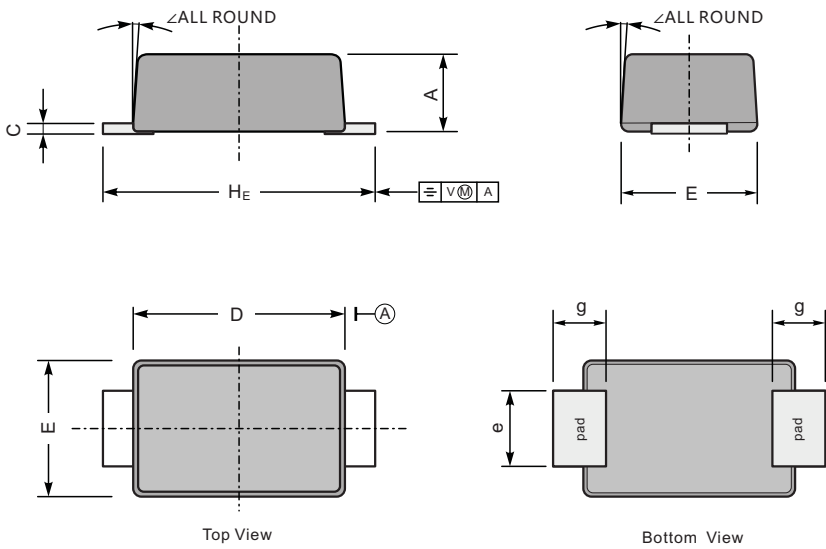
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



PACKAGE OUTLINE

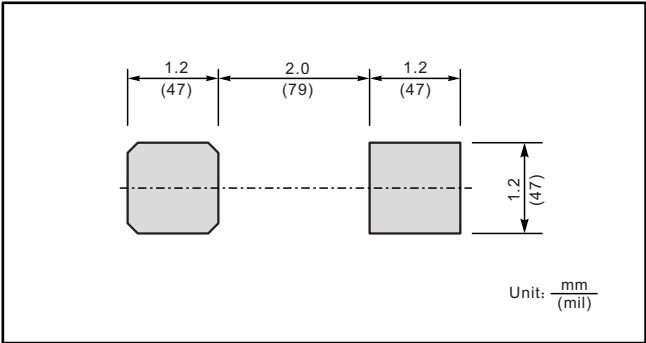
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
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



## NOTICE

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