US1AW THRU US1MW

Features

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

Simplified outline SOD-123FL and symbol

Mechanical Data

- Case:SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 20
- Approx. Weight: 15mg/0.00053oz

Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

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

Parameter	Symbols	US1AW	US1BW	US1DW	US1GW	US1JW	US1KW	US1MW	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 Tc = 125 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.0			1.3	1.65			V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I_R	5 100							μA
Maximum Reverse Recovery Time(1)	trr	50				75			ns
Typical Junction Capacitance (2)	C_j	15							pF
Typical Thermal Resistance(3)	$R_{\theta JA}$	85							℃/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							℃

（1）Measured with IF = 0.5 A, IR = 1 A, Irr = 0.25 A

（2）Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

Rating And Characteristic Curves

Fig.1 Forward Current Derating Curve

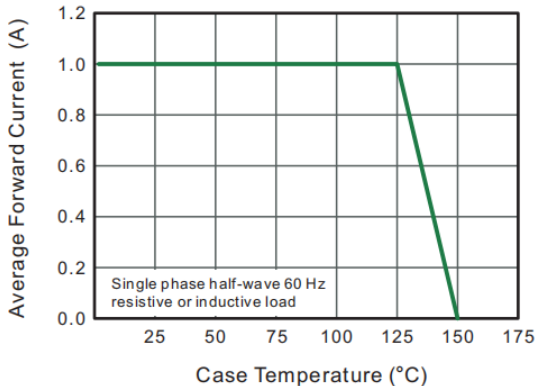


Fig.2 Typical Reverse Characteristics

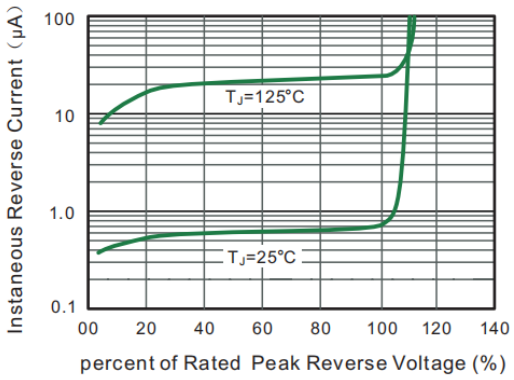


Fig.3 Typical Forward Characteristics

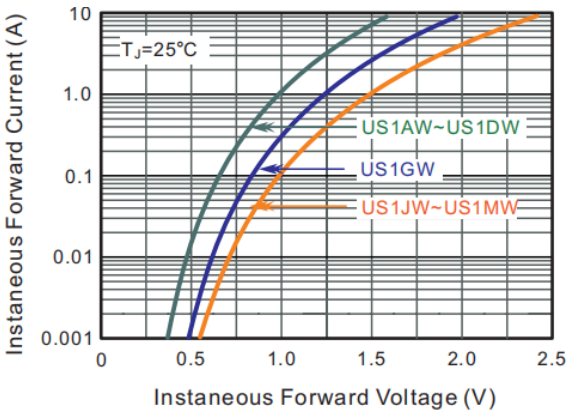


Fig.4 Maximum Non-Repetitive Peak

Forward Surage Current

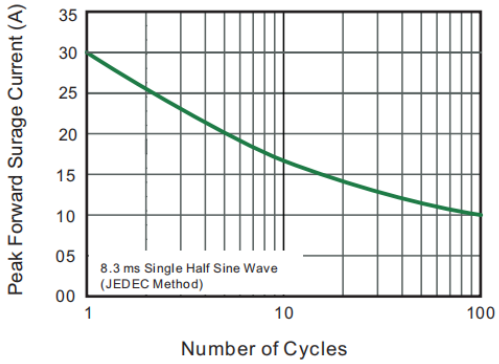


Fig.5 Typical Junction Capacitance

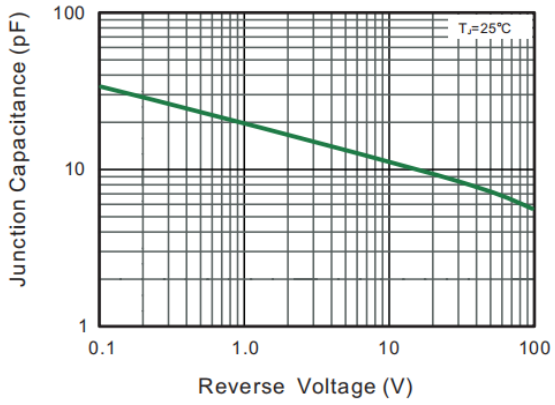
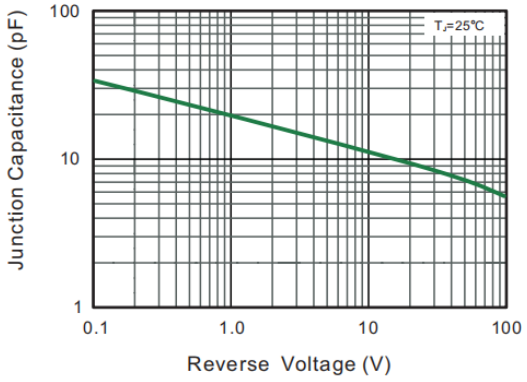
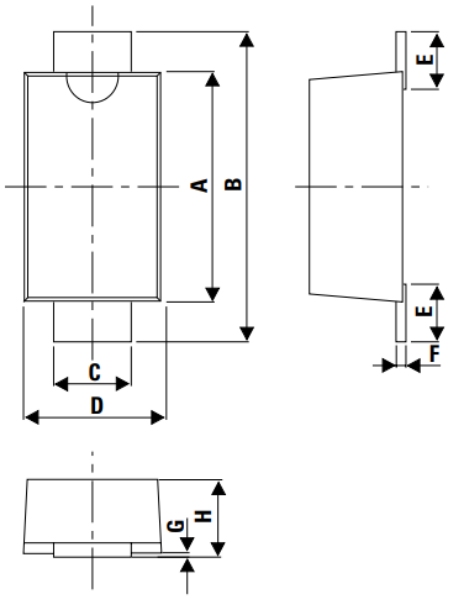


Fig.6 Typical Junction Capacitance



Package Outline

Plastic surface mounted package; 2 leads SOD-123FL



Dimensions	Millimeter	
	Min	Max
A	2.50	3.10
B	3.40	3.90
C	0.70	1.20
D	1.50	2.00
E	0.35	0.90
F	0.05	0.26
G	0.00	0.10
H	0.90	1.25

The recommended mounting pad size

Mounting Pad Layout