

SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- ◆ Glass passivated device
- ◆ Ideal for surface mouted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds,0.375"(9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

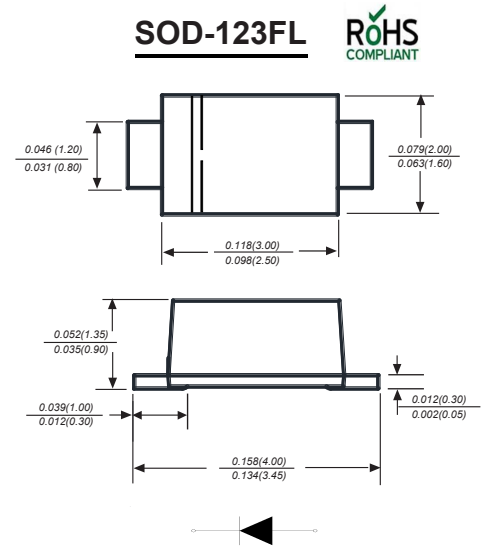
Case : JEDEC SOD-123FL molded plastic body

Terminals : Solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0007 ounce, 0.02 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	SYMBOLS	SOD1F1	SOD1F2	SOD1F3	SOD1F4	SOD1F5	SOD1F6	SOD1F7	UNITS
Marking Code		F1	F2	F3	F4	F5	F6	F7	
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 TL(see fig.1)	I _(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I _{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V _F	1.3							V
Maximum DC reverse current TA=25℃ at rated DCblocking voltage TA=125℃	I _R	5 100							uA
Typical junction capacitance (NOTE 1)	C _J	15							pF
Maximum Reverse Recovery Time	t _{rr}	150				250	500		ns
Typical thermal resistance (NOTE 2)	RθJA	85							℃/W
Operating junction temperature range	T _J	-55 to +150							℃
Storage temperature range	T _{STG}	-55 to +150							℃

Note: 1.Averaged over any 20ms period.
2.Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.
3.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
4.Thermal resistance junction to ambient, 6.0 mm2 copper pads to each terminal.

Typical Characteristics

Fig.1 Forward Current Derating Curve

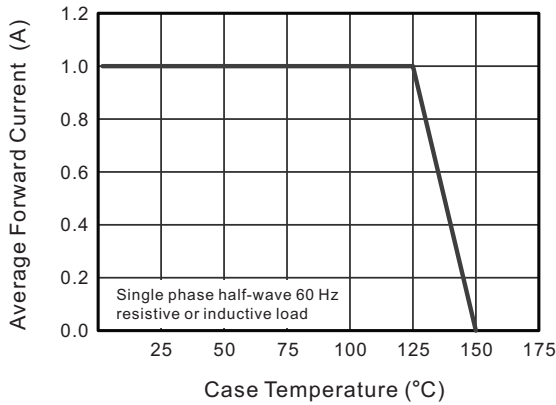


Fig.2 Typical Reverse Characteristics

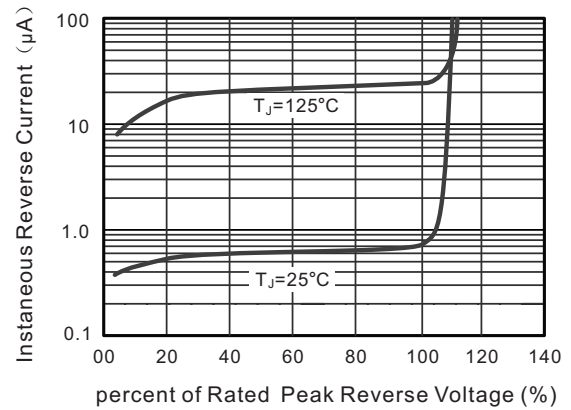


Fig.3 Typical Instantaneous Forward Characteristics

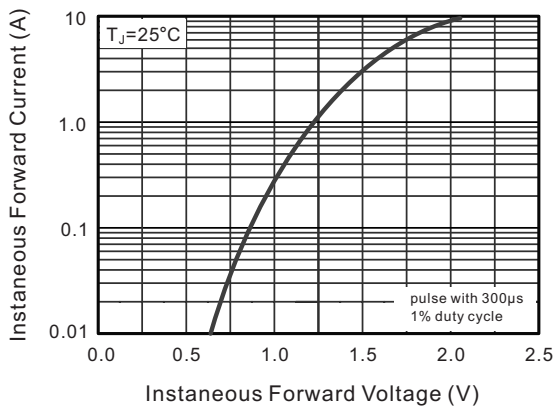


Fig.4 Typical Junction Capacitance

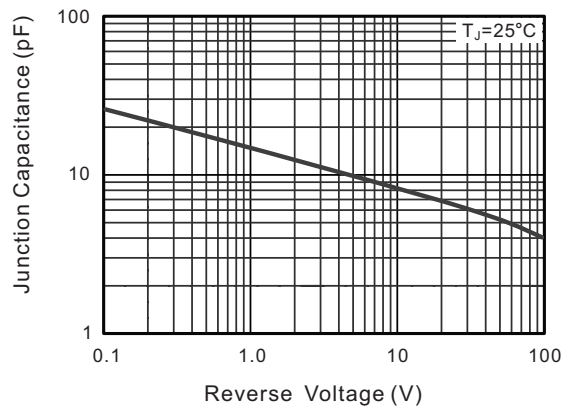
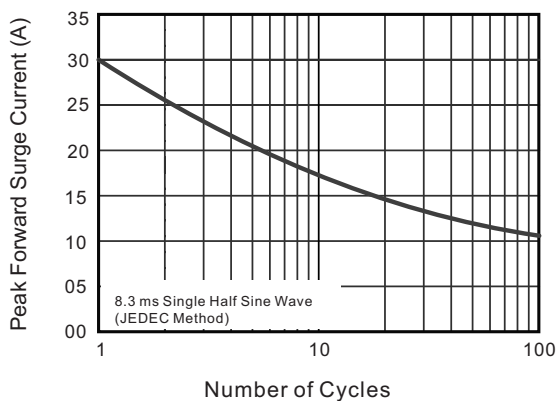
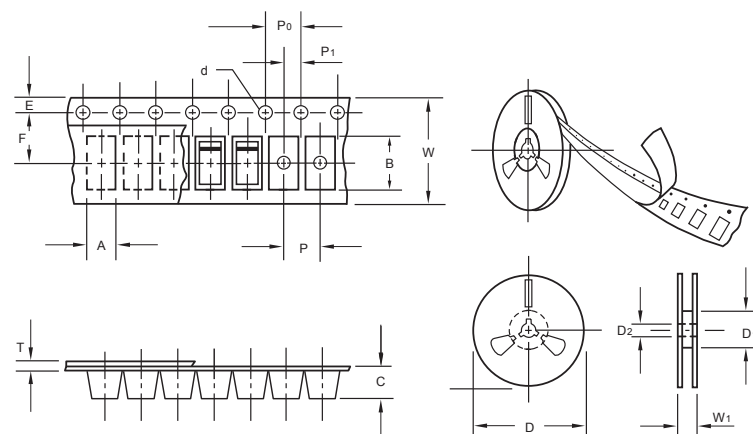


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

Packing information



unit:mm

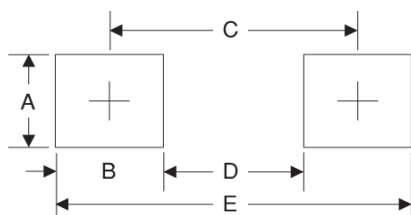
Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	50.0
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173