



# SOD1H1 THRU SOD1H8

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

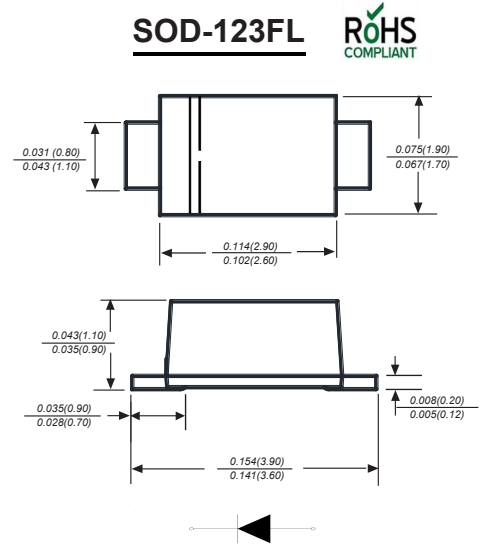
## SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

### 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** : Solder plated, 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	SOD1H1	SOD1H2	SOD1H3	SOD1H4	SOD1H5	SOD1H6	SOD1H7	SOD1H8	UNITS
Marking Code		U1	U2	U3	U4	U5	U6	U7	U8	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V
Maximum average forward rectified current at $T_L=65^\circ C$	$I_{AV}$	1.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25								A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.0		1.30		1.70			V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ C$ $T_A=125^\circ C$	$I_R$	5.0 100.0								$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50					75			ns
Typical junction capacitance (NOTE 2)	$C_J$	15.0								pF
Typical thermal resistance	$R_{\theta JA}$	85								$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	- 5 5 t o + 1 5 0								$^\circ C$

Note: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .



# SOD1H1 THRU SOD1H8

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

## Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

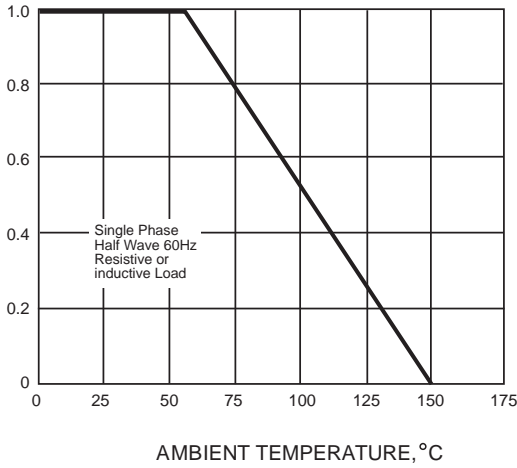


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT, AMPERES

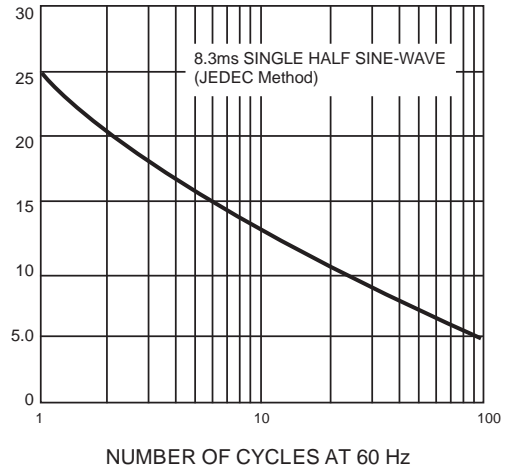


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

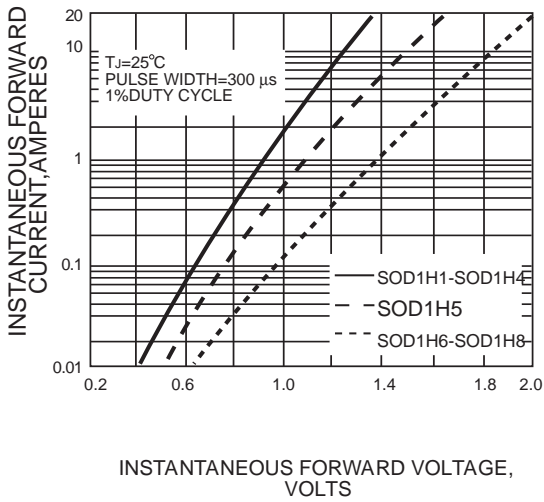
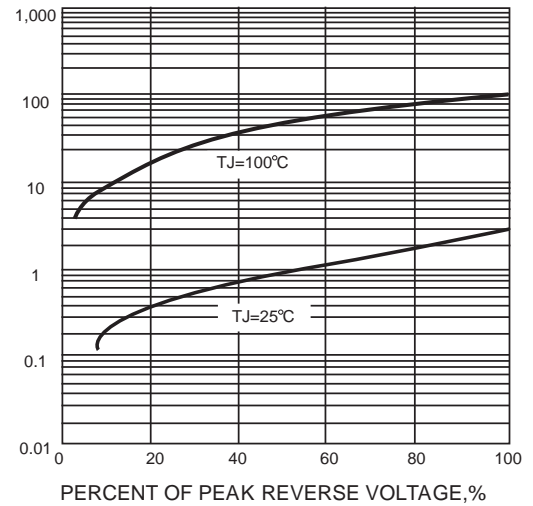


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



The curve above is for reference only.

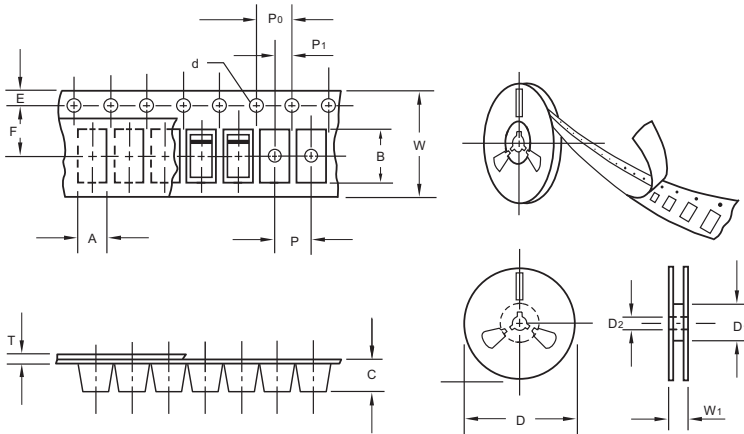


# SOD1H1 THRU SOD1H8

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

## 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