

SOD123SL Plastic-Encapsulate Diodes

Fast Recovery Rectifier

Features

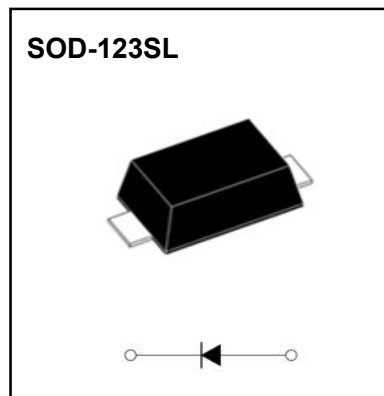
- I_o 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- FFM101-M-FFM104-M : F2
- FFM105-M : F5
- FFM106-M-FFM107-M : F7



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	FFM						
				101-M	102-M	103-M	104-M	105-M	106-M	107-M
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	280	420	560	700
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a=90^\circ\text{C}$	1						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30						
Junction Temperature	T_J	$^\circ\text{C}$		-55 ~ +150						
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150						

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	FFM						
				101-M	102-M	103-M	104-M	105-M	106-M	107-M
Peak Forward Voltage	V_{FM}	V	$I_{FM}=1.0\text{A}$	1.3						
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$						
	I_{RRM2}			$T_a=125^\circ\text{C}$						
Reverse Recovery time	t_r	ns	$I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{RR}=0.25\text{A}$	150			250	500		
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	105 ¹⁾						
	$R_{\theta J-L}$		Between junction and terminal	32 ¹⁾						

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

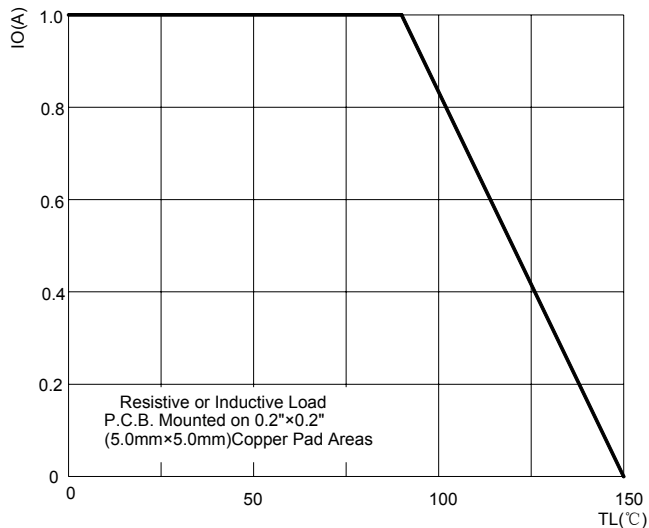


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

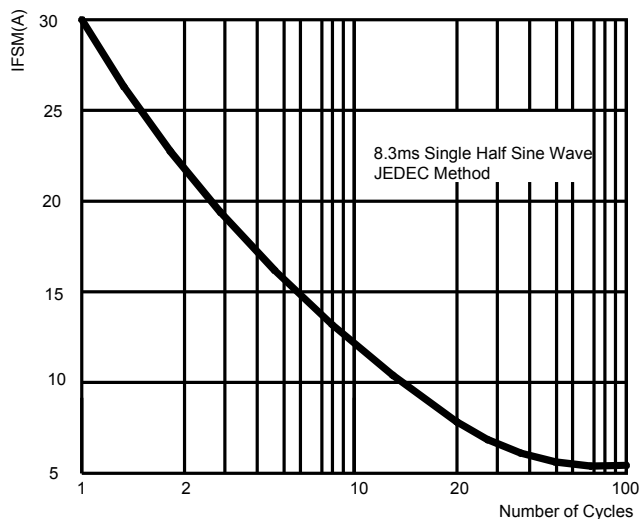


FIG.3: TYPICAL FORWARD CHARACTERISTICS

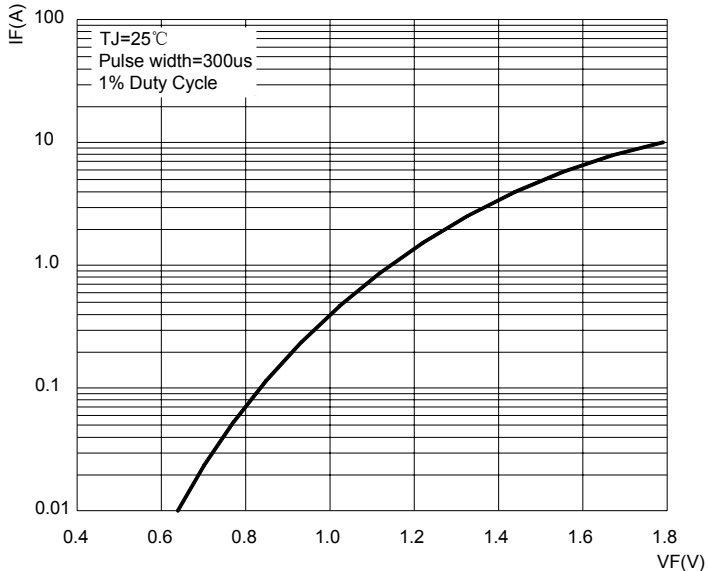


FIG.4: TYPICAL REVERSE CHARACTERISTICS

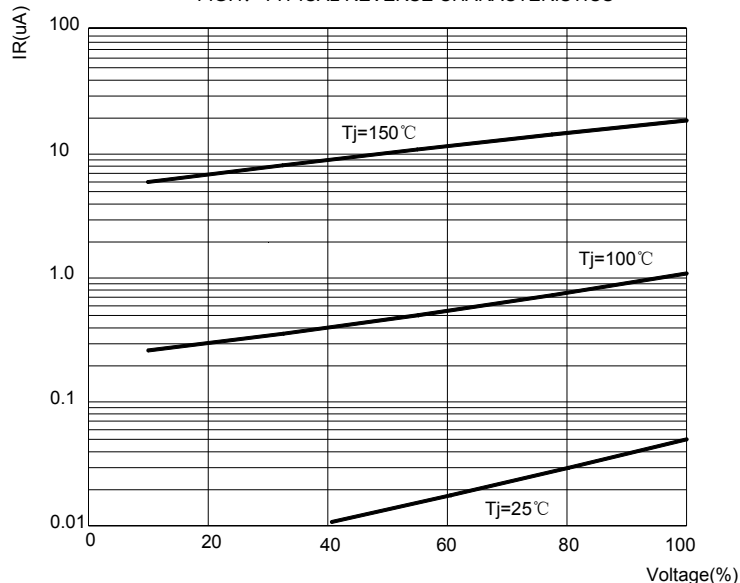
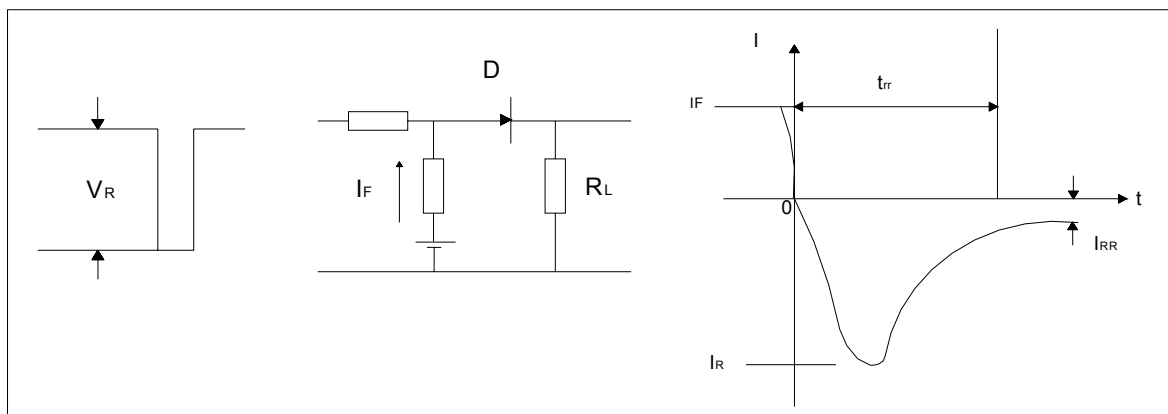
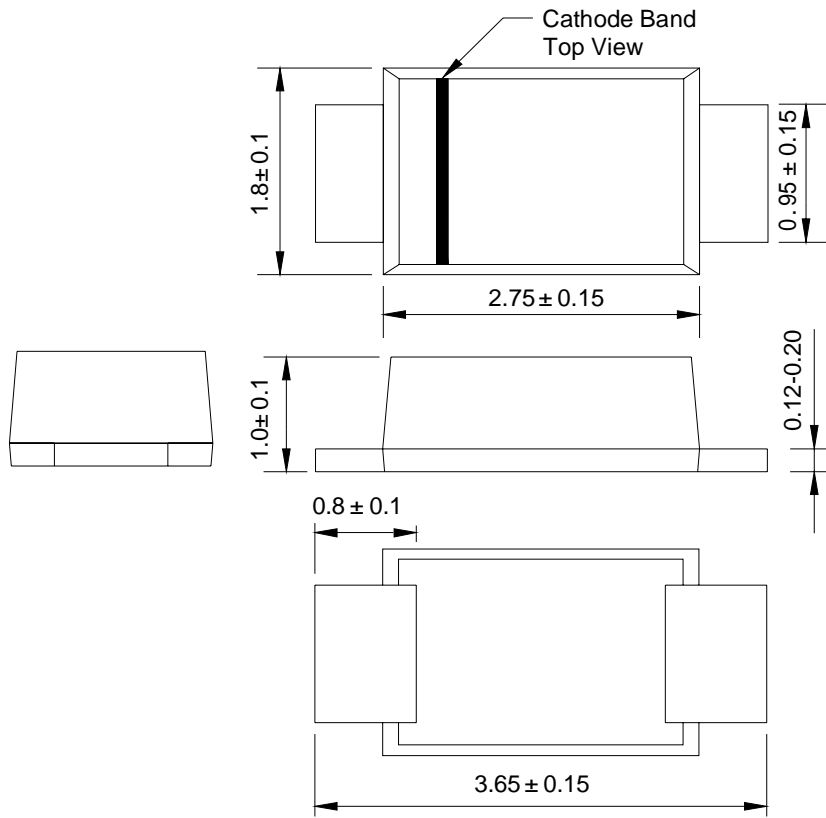


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

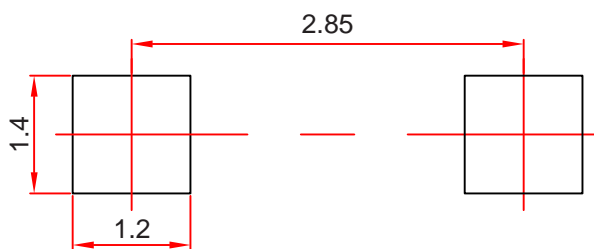


SOD-123SL Package Outline Dimensions



Dimensions in millimeters

SOD-123SL Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices–SOD123SL

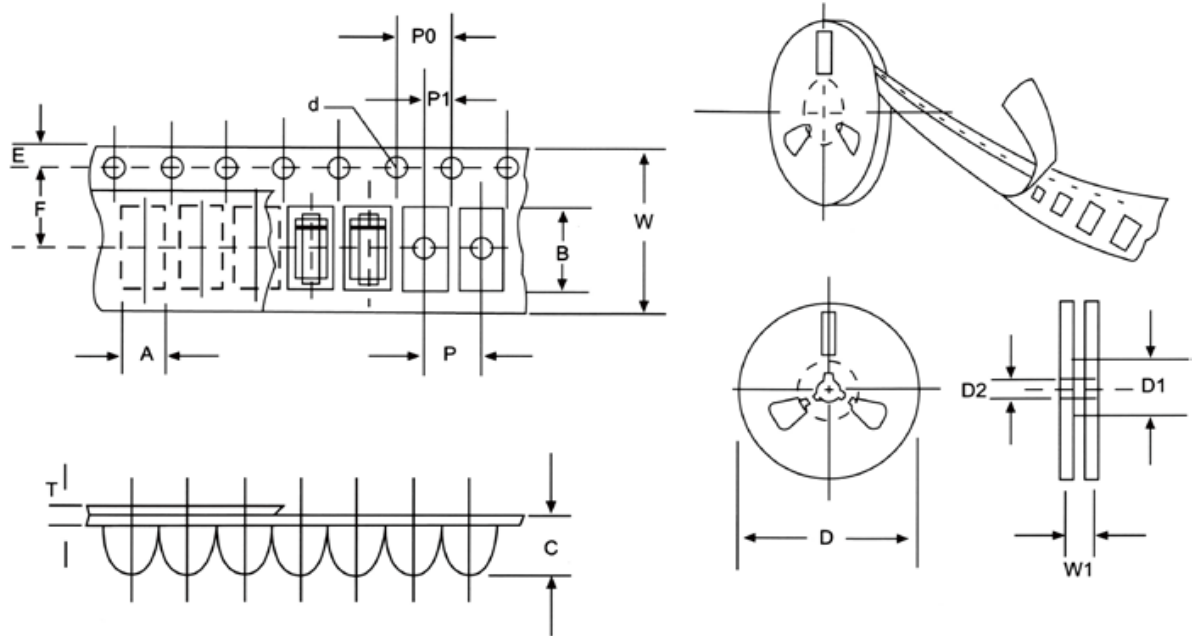


FIG:CONFIGURATION OF AXIAL TAPING

ITEM	SYMBOL	SOD123SL mm(inch)
Carrier width	A	2.15+0.1(0.112+0.004)
Carrier length	B	3.95+0.1(0.187+0.004)
Carrier depth	C	1.35+0.1(0.056+0.004)
Sprocket hole	d	1.55+0.1(0.056+0.004)
Reel outside diameter	D	280/178+2.0(11/7.0+0.079)
Reel inner diameter	D1	8.0+0.2(0.315+0.008)
Feed hole diameter	D2	13+0.5(0.512+0.020)
Sprocket hole position	E	1.75+0.1(0.069+0.004)
Punch hole position	F	3.50+0.1(0.217+0.002)
Punch hole pitch	P	4.0+0.1(0.157+0.004)
Sprocket hole pitch	P0	4.0+0.1(0.157+0.004)
Embossment center	P1	2.0+0.1(0.079+0.004)
Total tape thickness	T	0.22-0.26(0.009-0.010)
Tape width	W	8.0+0.3/-0.1(0.315+0.012/-0.004)
Reel width	W1	10.0+2.0(0.394+0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.