**SOD-123FL Plastic-Encapsulate Diodes****ES1AL THRU ES1JL Super Fast Recovery Rectifier Diodes****Features**

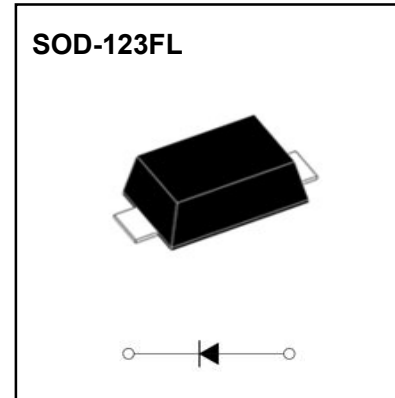
- $I_{F(AV)}$ 1A
- V_{RRM} 50V-600V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- ES1AL-ES1DL : ESL
- ES1EL-ES1GL : ESM
- ES1JL : ESH

**Limiting Values (Absolute Maximum Rating)**

Item	Symbol	Unit	Test Conditions	ES1						
				AL	BL	CL	DL	EL	GL	JL
Repetitive Peak Reverse Voltage	V _{RRM}	V		50	100	150	200	300	400	600
Maximum RMS Voltage	V _{RMS}	V		35	70	105	140	210	280	420
Average Forward Current	I _{F(AV)}	A	60Hz Half-sine wave, Resistance load, Ta=90℃	1.0						
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave, 1 cycle, Ta=25℃	30						
Operation Junction and Storage Temperature Range	T _J , T _{STG}	℃		-55 ~ +150						

Electrical Characteristics (T=25 °C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		ES1					
					AL	BL	CL	DL	EL	GL
Peak Forward Voltage	V _F	V	I _F =1.0A		0.95			1.25		1.70
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A		35					
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25°C	5					
	T _a =100°C			100						
Thermal Resistance(Typical)	R _{θJ-A}	°C/W	Between junction and ambient		70					
	R _{θJ-L}		Between junction and terminal		25					

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

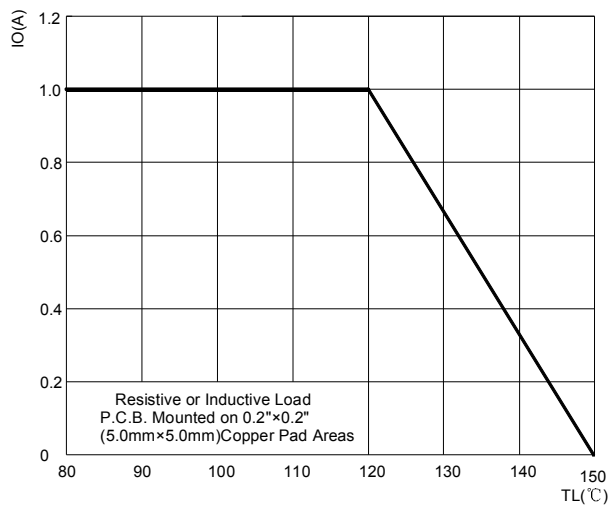


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

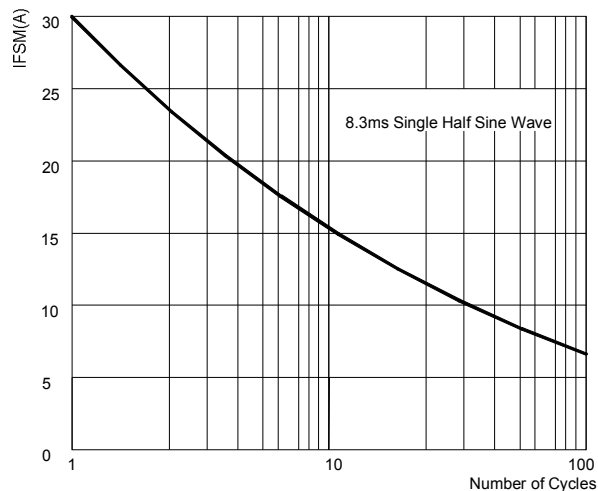


FIG.3: TYPICAL FORWARD CHARACTERISTICS

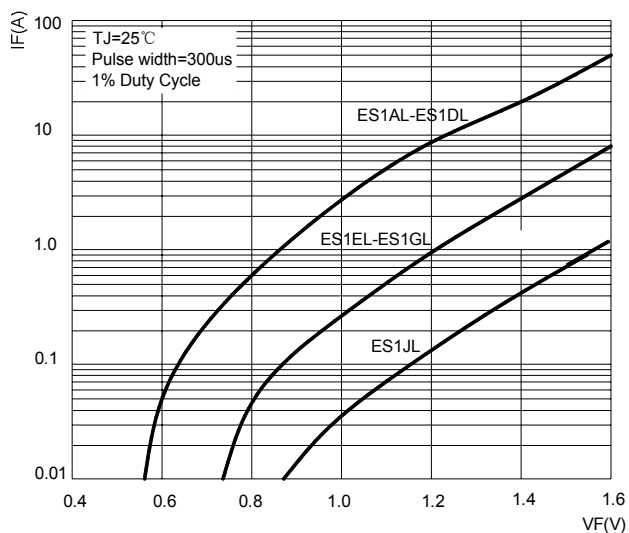


FIG.4: TYPICAL REVERSE CHARACTERISTICS

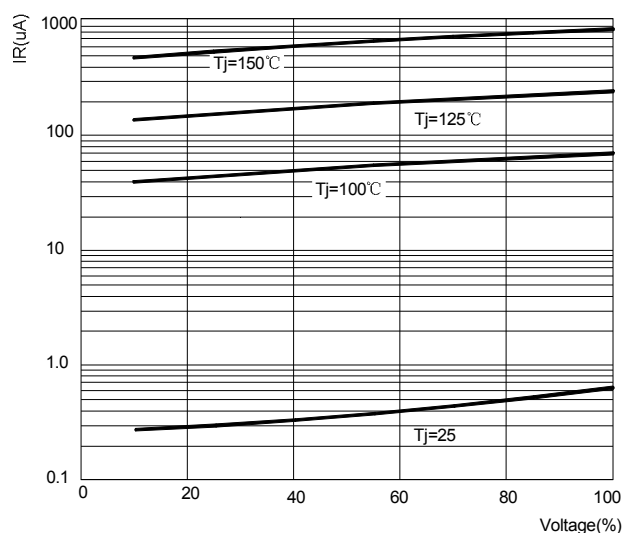
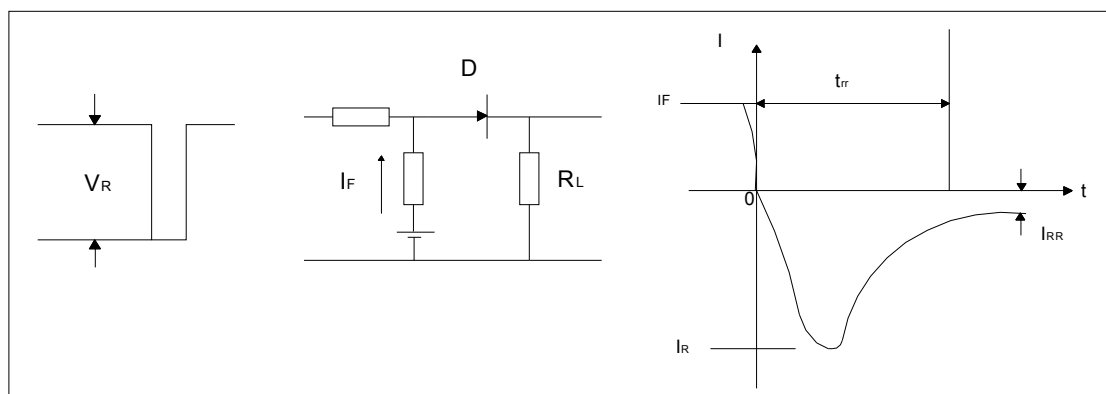
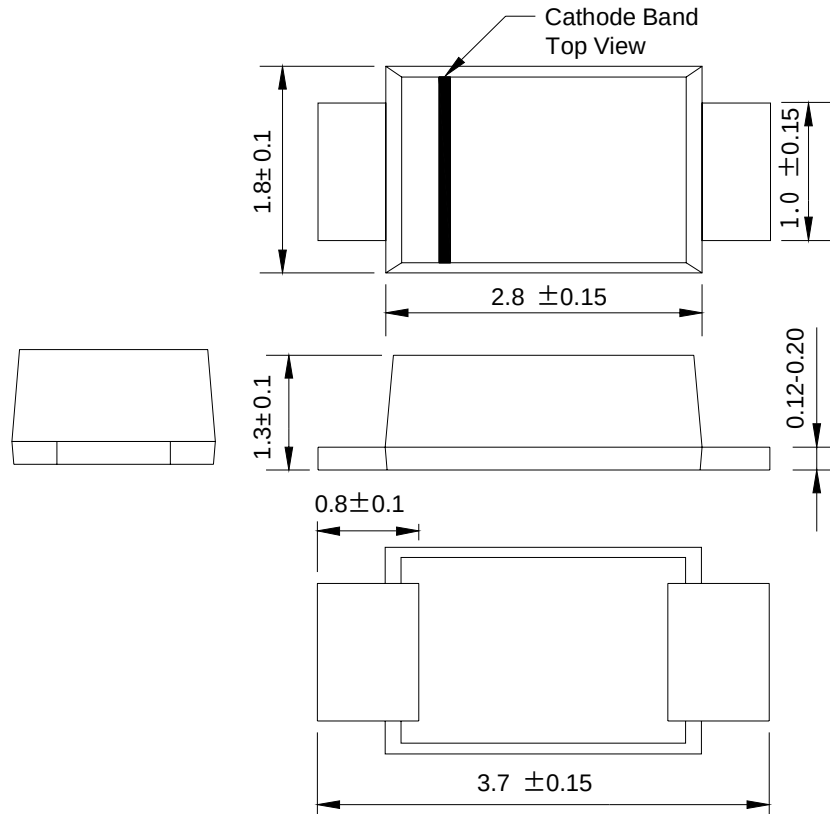


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

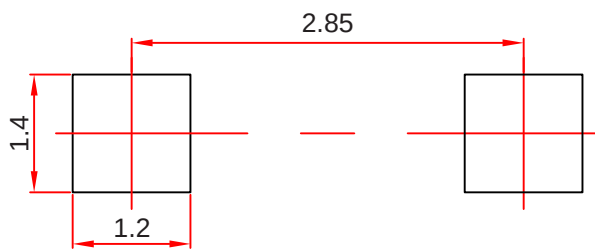


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL 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

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

Reel Taping Specifications For Surface Mount Devices–SOD-123FL

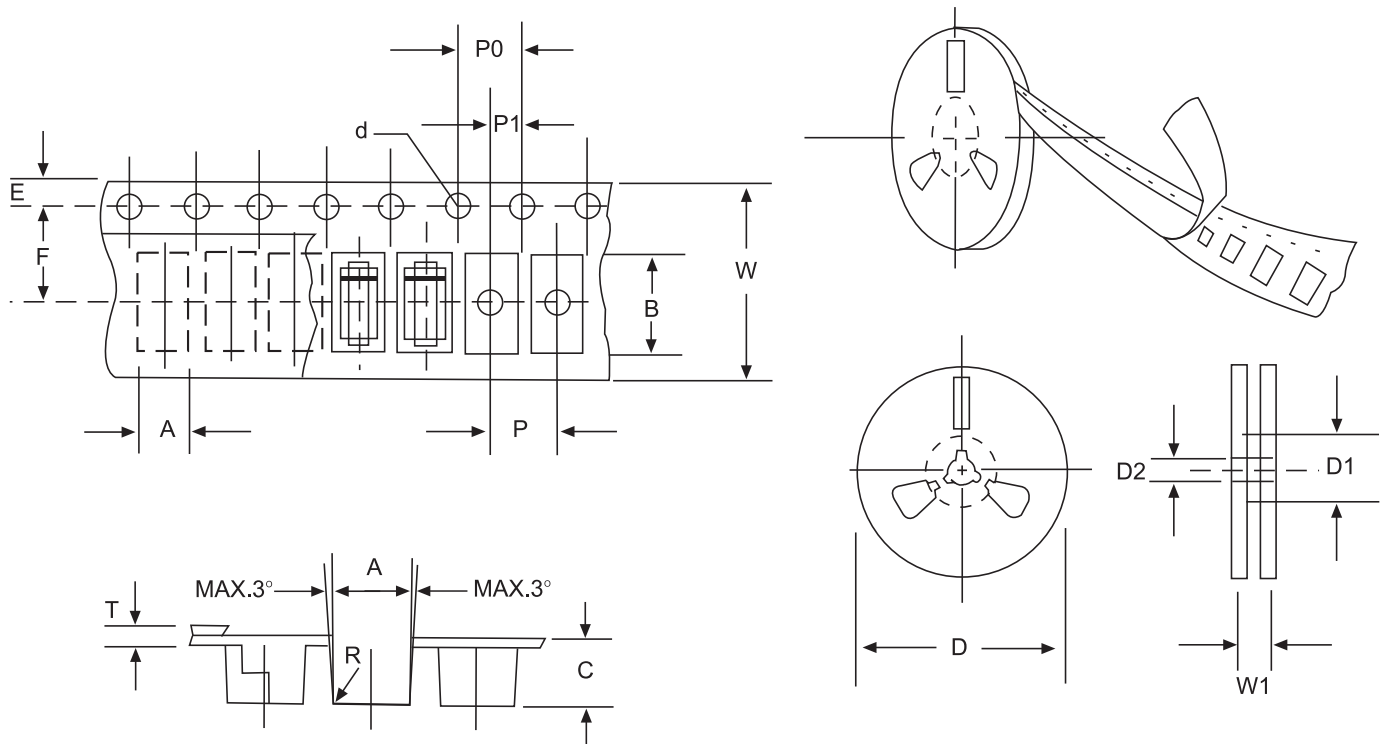


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SOD-123FLmm(inch)
Carrier width	A	2.05±0.1(0.081±0.004)
Carrier length	B	3.95±0.1(0.156±0.004)
Carrier depth	C	1.45±0.1(0.057±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	178±2.0(7.0±0.079)
Reel inner diameter	D1	54±1.0(2.13±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	3.50±0.1(0.138±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)
Totall tape thickness	T	0.21±0.25(0.008±0.010)
Tape width	W	8.0±0.2(0.315±0.008)
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.