

**SOD-123FL Plastic-Encapsulate Diodes****US1AL THRU US1ML** High Efficient Rectifier Diodes**Features**

- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- US1AL-US1DL : USL
- US1GL : USM
- US1JL-US1ML : USH

SOD-123FL**Limiting Values(Absolute Maximum Rating)**

Item	Symbol	Unit	Test Conditions	US1						
				AL	BL	DL	GL	JL	KL	ML
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	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 ($T=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		US1						
					AL	BL	DL	GL	JL	KL	ML
Peak Forward Voltage	V _F	V	I _F =1.0A		1.0			1.3	1.7		
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		50			75			
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25℃	5						
	T _a =125℃			50							
Thermal Resistance(Typical)	R _{θJ-A}	℃/W	Between junction and ambient		72						
	R _{θJ-L}		Between junction and terminal		12						
Juction Capacitance (Typical)	C _j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		14			12	6		

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

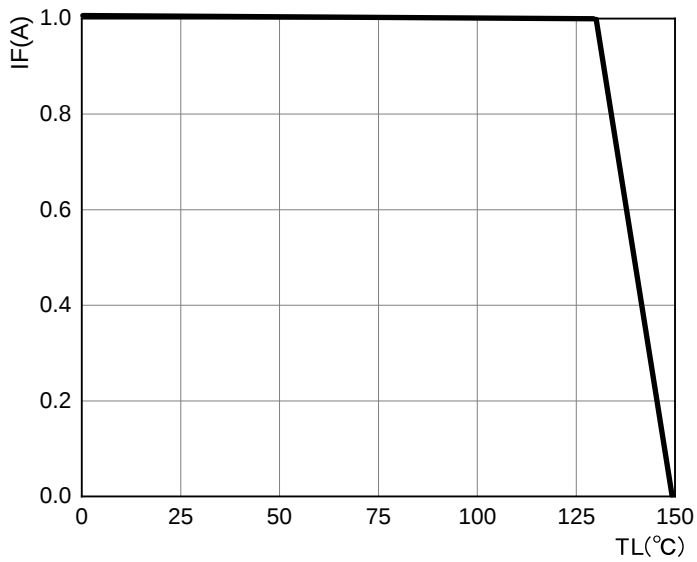
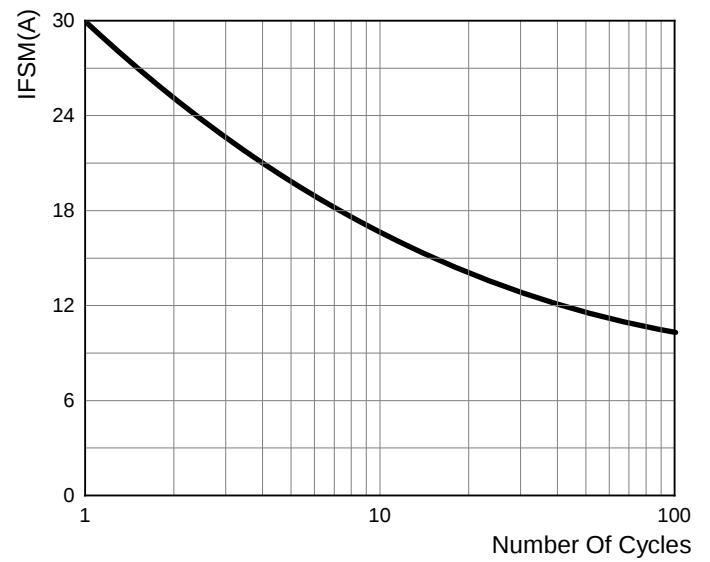
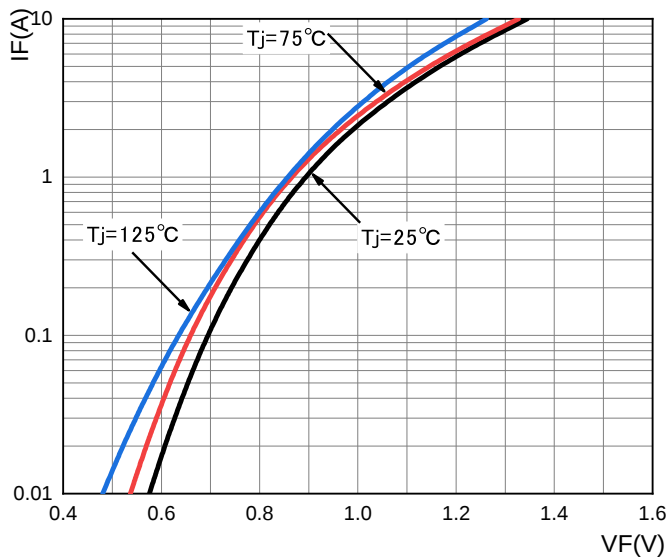


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



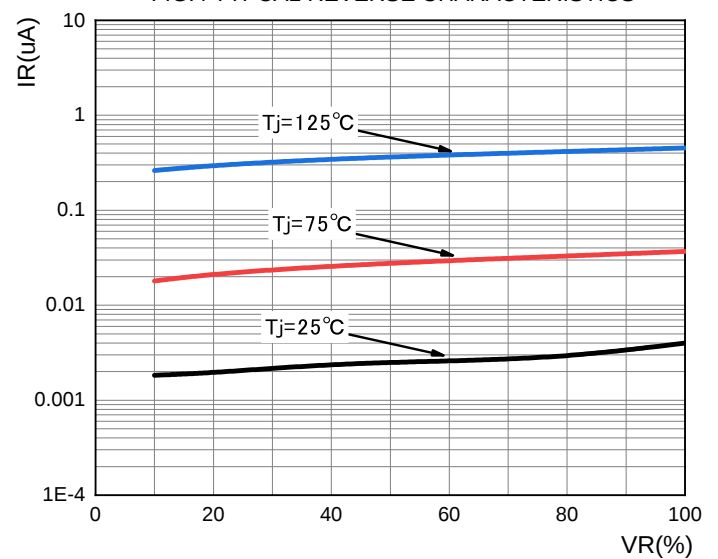
US1AL-US1DL

FIG.3 : TYPICAL FORWARD CHARACTERISTICS



US1AL-US1DL

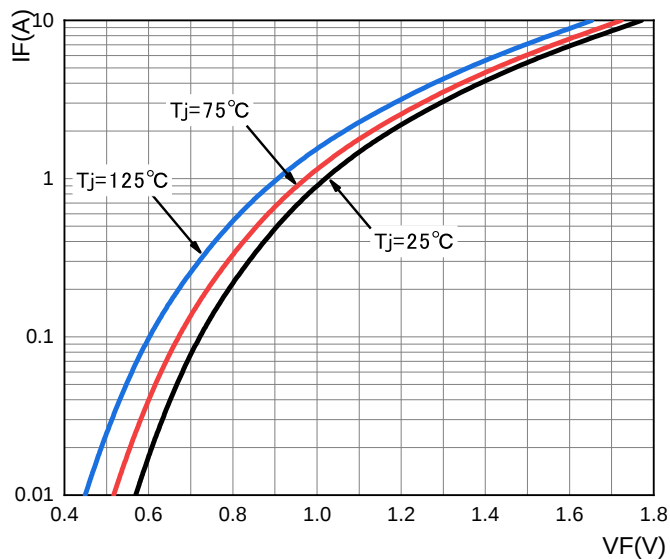
FIG.4 TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

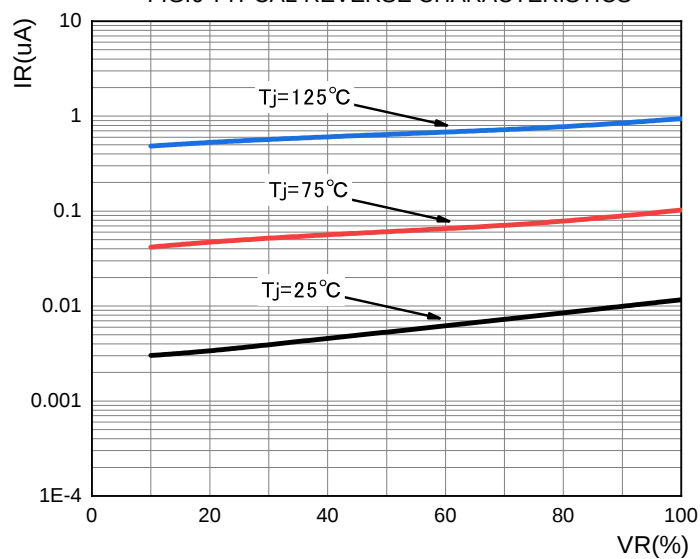
US1GL

FIG.5 : TYPICAL FORWARD CHARACTERISTICS



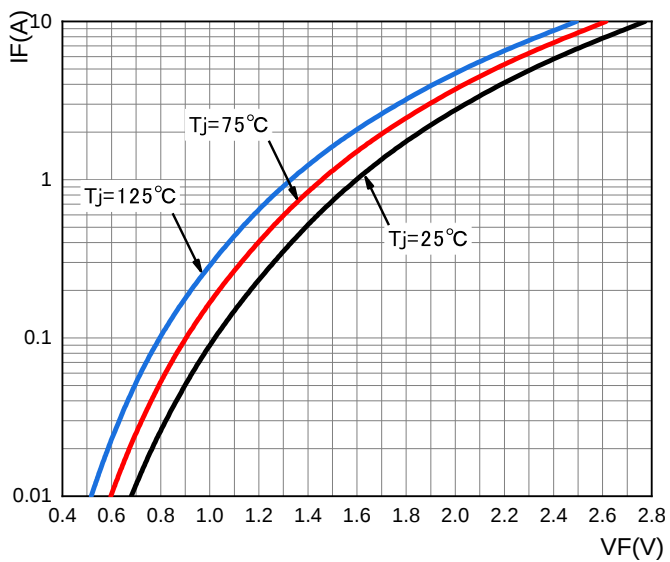
US1GL

FIG.6 TYPICAL REVERSE CHARACTERISTICS



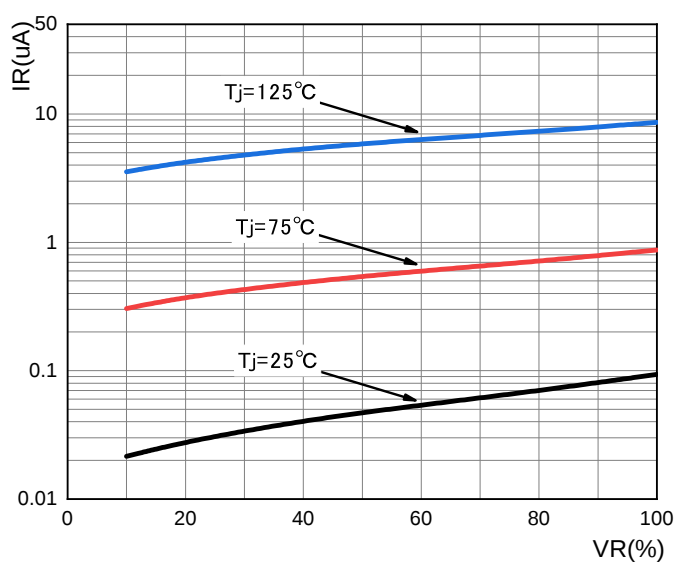
US1JL-US1ML

FIG.7 : TYPICAL FORWARD CHARACTERISTICS

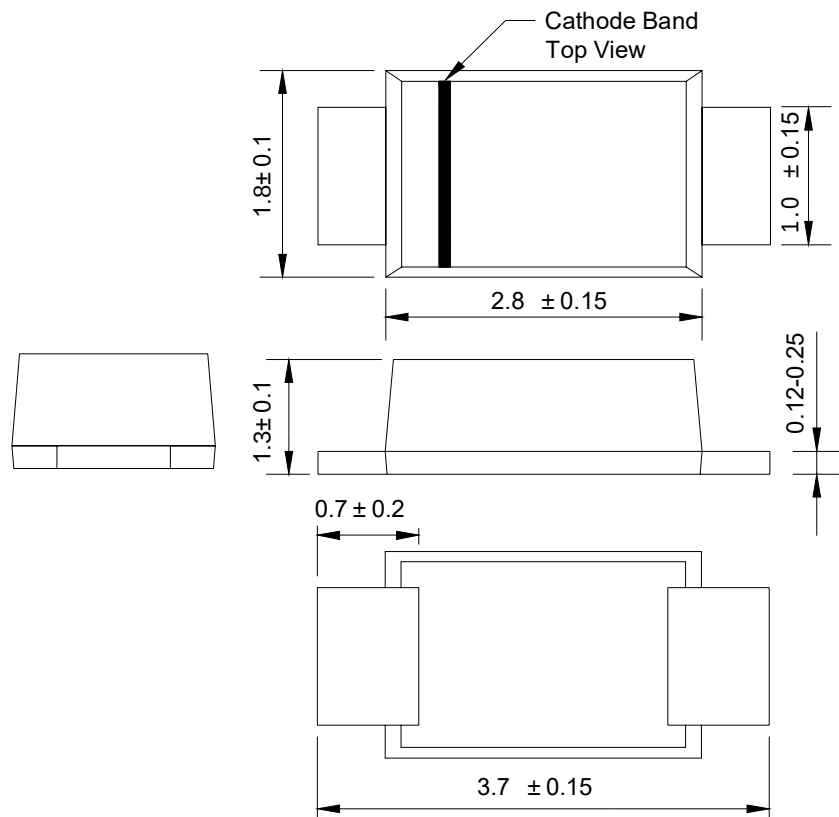


US1JL-US1ML

FIG.8 TYPICAL REVERSE CHARACTERISTICS

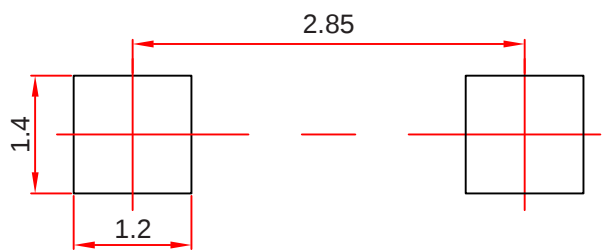


SOD-123FL Package Outline Dimensions



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

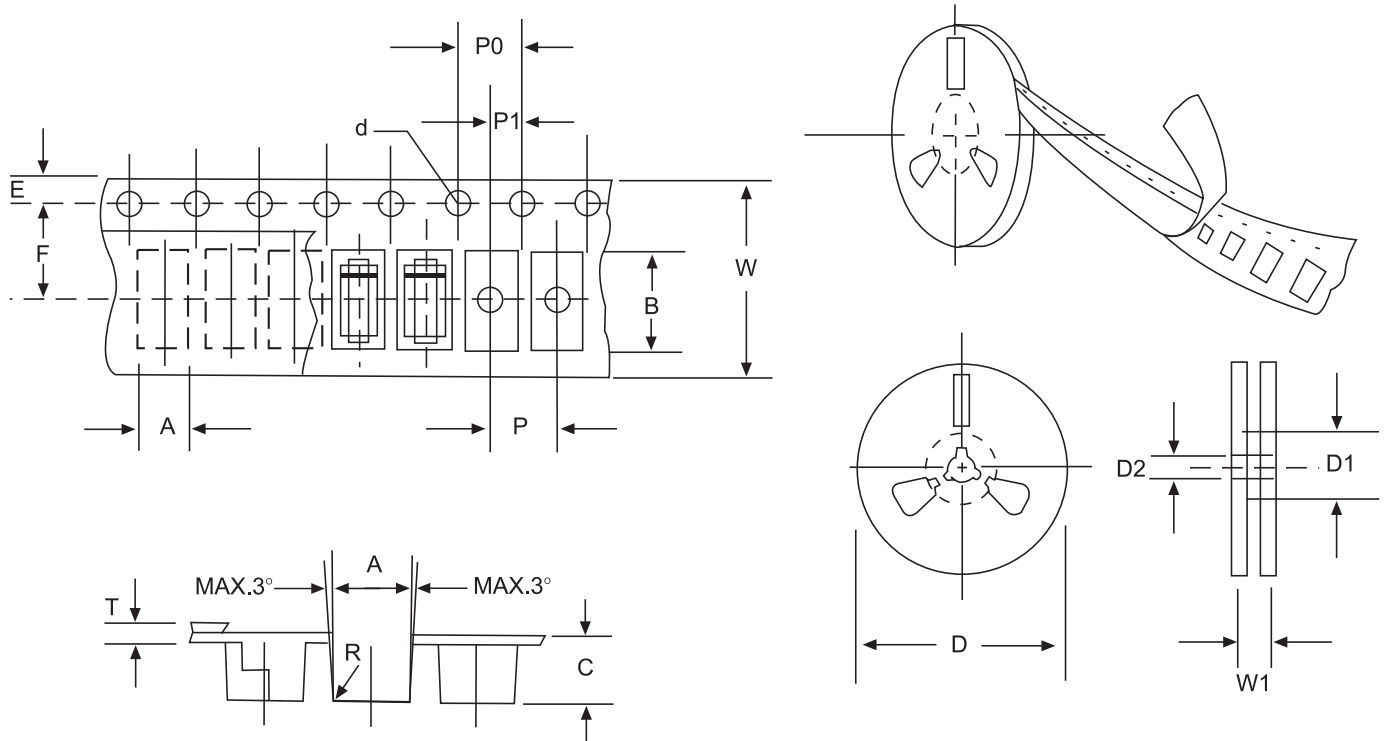


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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)
Strocket 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.