SZCJ Shenzhen Changji Semiconductor Co., LTD.

SOD-123FL Plastic-Encapsulate Diodes

US1AL THRU US1ML High Efficient Rectifier Diodes

SOD-123FL





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

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℃ 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}	Ta=25℃	5						
	I_{RRM2}			Ta=125℃	50						
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		72						
	$R_{\theta J-L}$		Between junction and terminal		12						
Juction Capacitance (Typical)	Cj	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 juction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

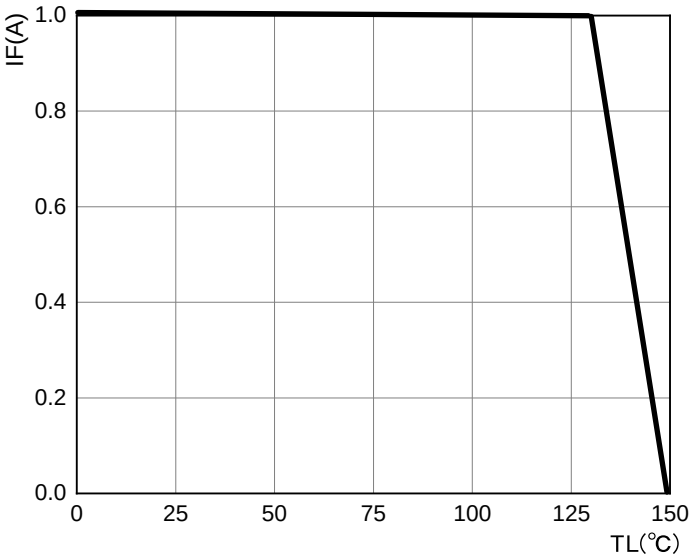
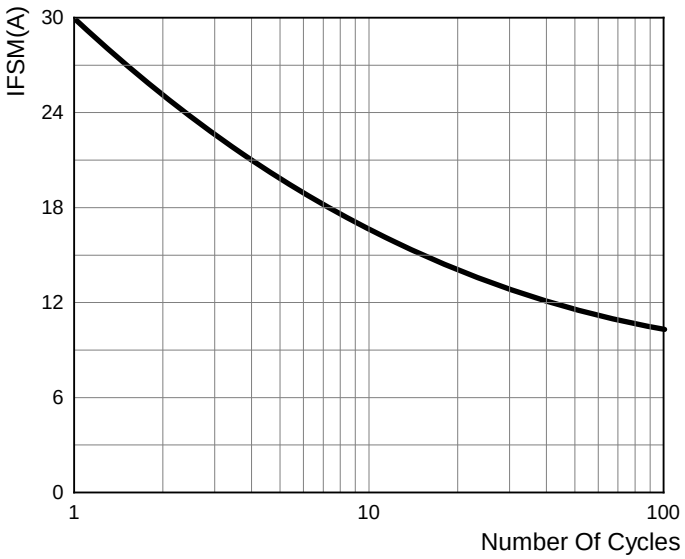
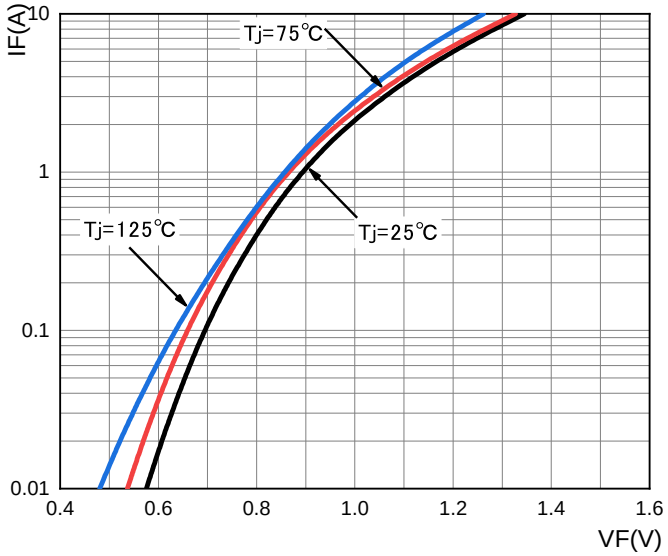


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



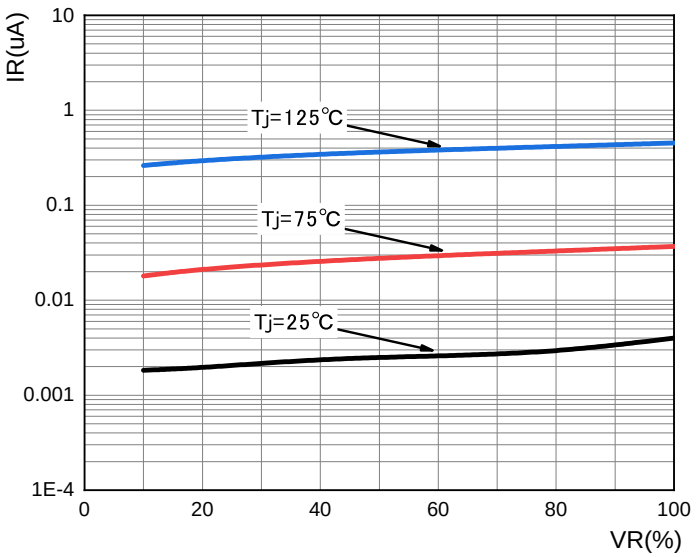
US1AL-US1DL

FIG.3 : TYPICAL FORWARD CHARACTERISTICS



US1AL-US1DL

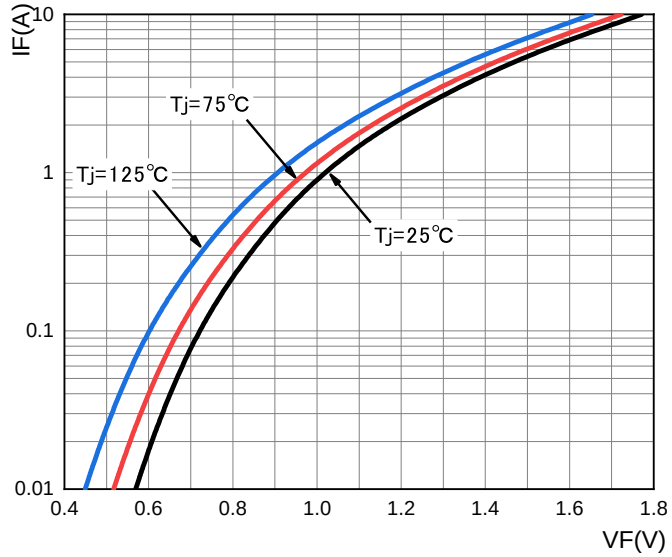
FIG.4 TYPCAL REVERSE CHARACTERISTICS



Typical Characteristics

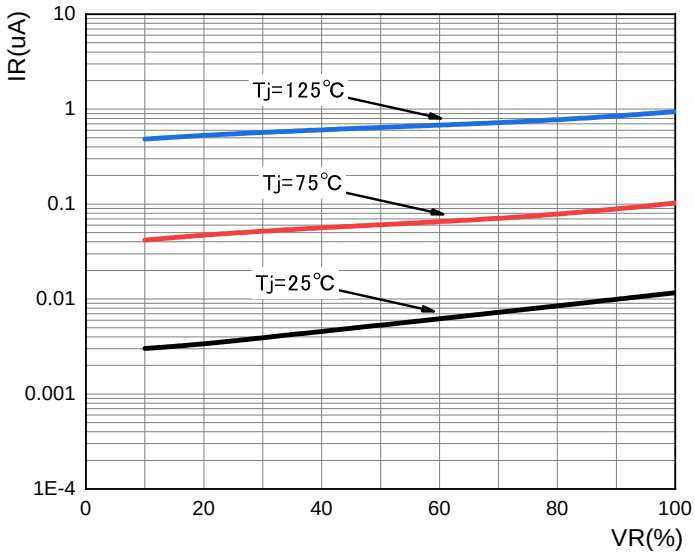
US1GL

FIG.5 : TYPICAL FORWARD CHARACTERISTICS



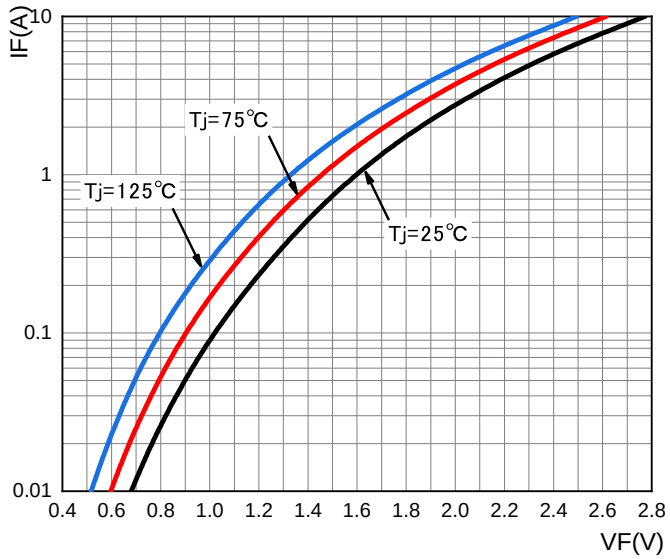
US1GL

FIG.6 TYPCAL REVERSE CHARACTERISTICS



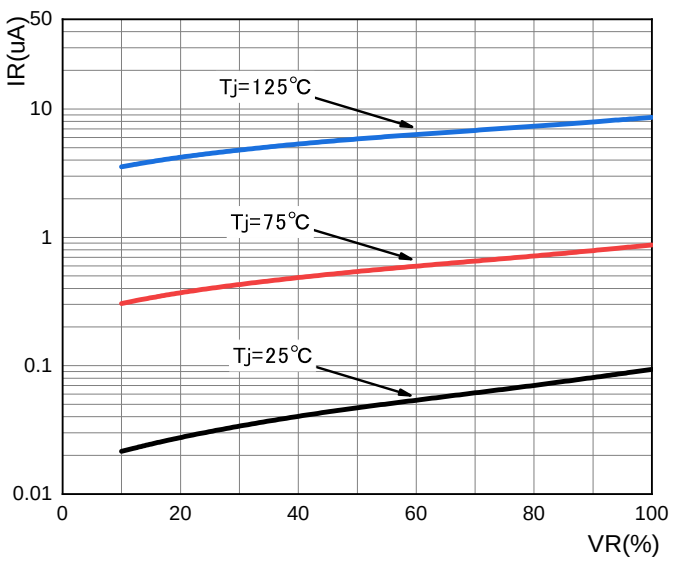
US1JL-US1ML

FIG.7 : TYPICAL FORWARD CHARACTERISTICS

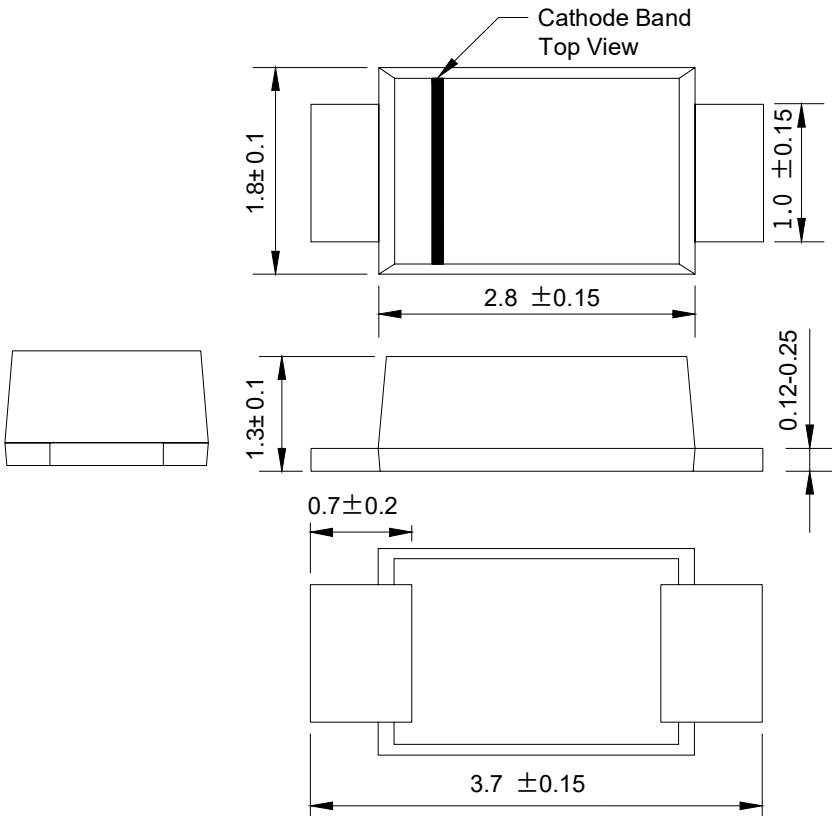


US1JL-US1ML

FIG.8 TYPCAL REVERSE CHARACTERISTICS

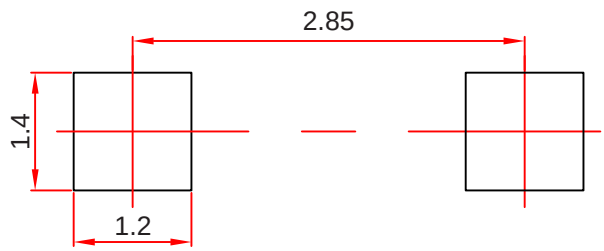


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



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

NOTICE

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

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

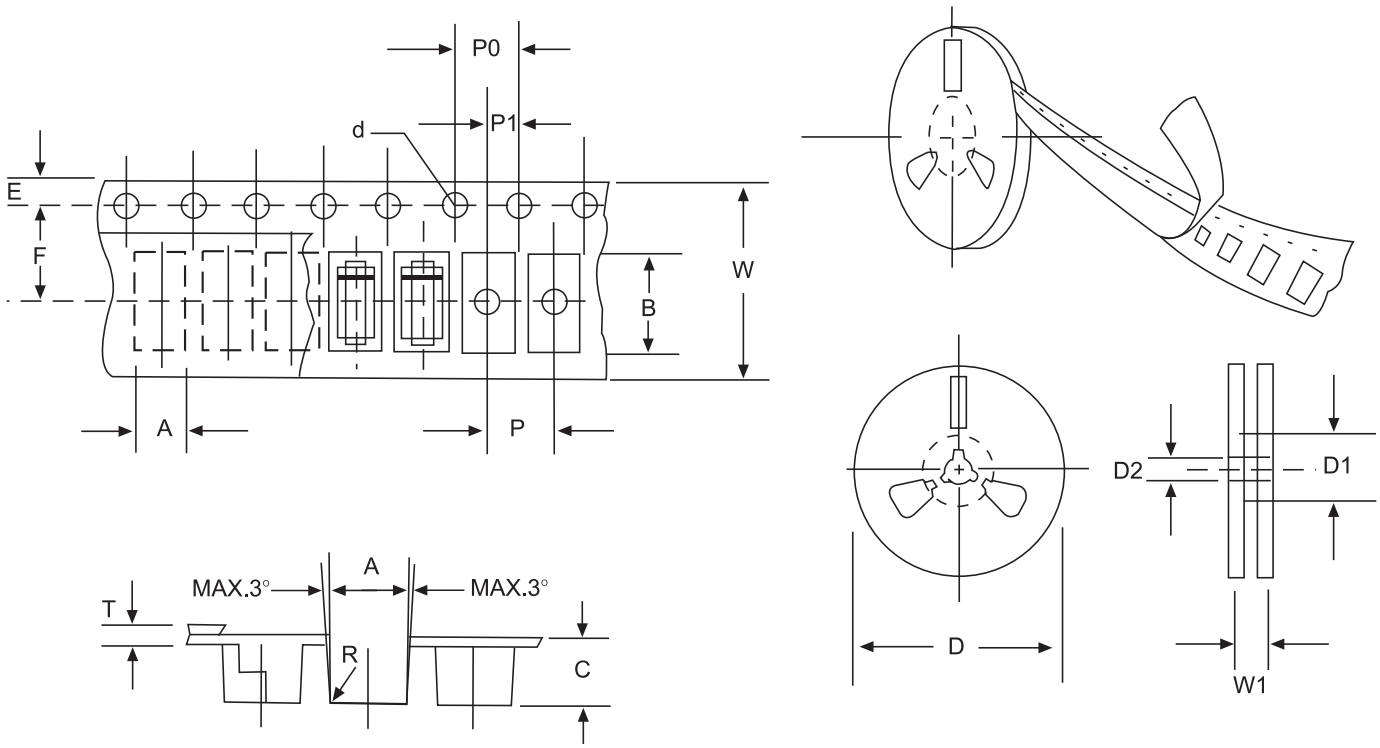


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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.