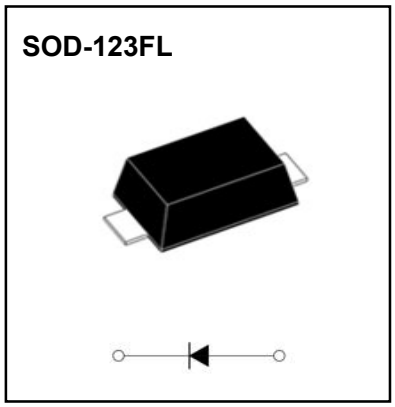
SZCJ Shenzhen Changji Semiconductor Co., LTD.

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	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		ES1						
					AL	BL	CL	DL	EL	GL	JL
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	$V_{RM}=V_{RRM}$	Ta =25℃	5						
	I_{RRM2}			Ta =125℃	50						
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		75						
	$R_{\theta J-L}$		Between junction and terminal		15.7						
Typical Junction Capacitance	C_J	pF	Measured at 1MHz and applied reverse voltage of 4.0V D.C.		14				12		10

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

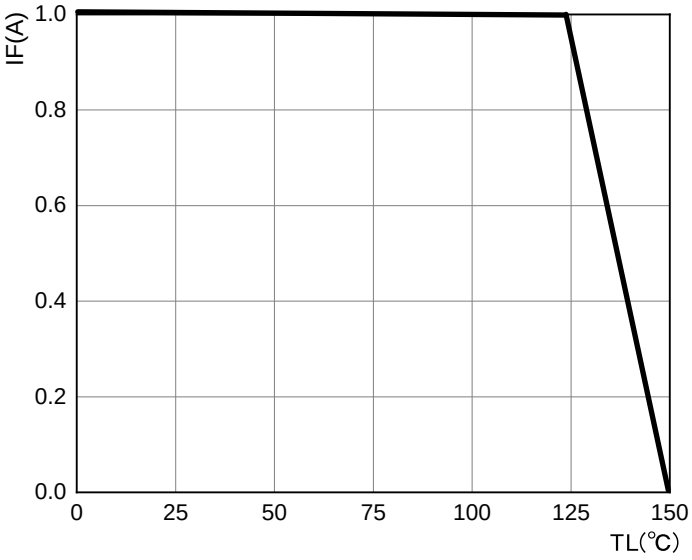
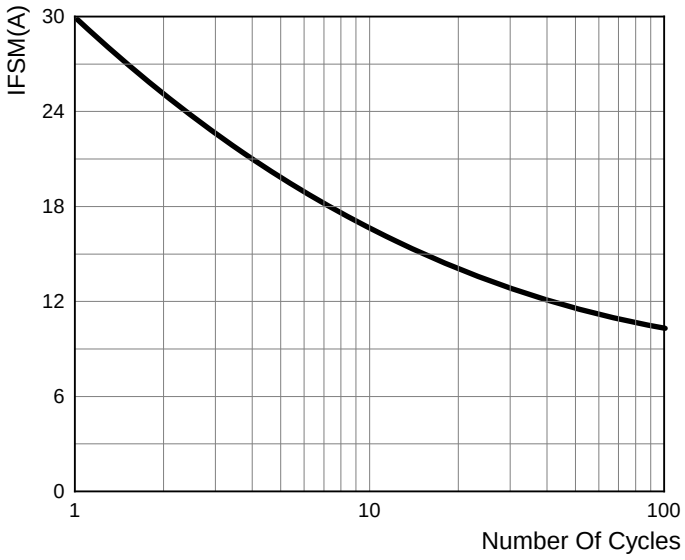
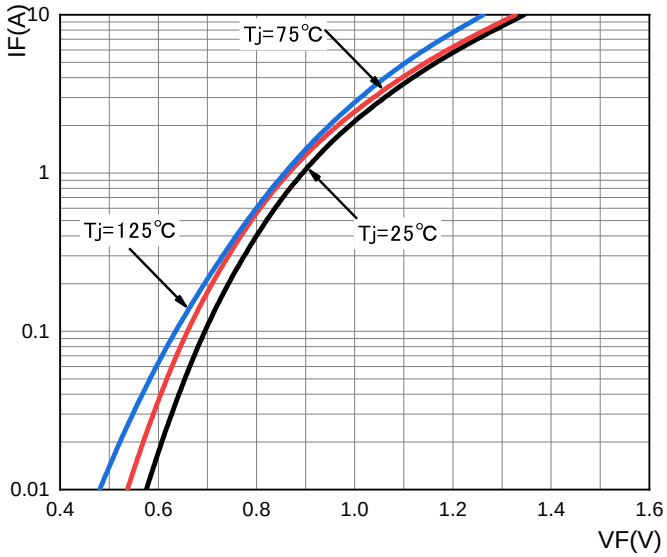


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



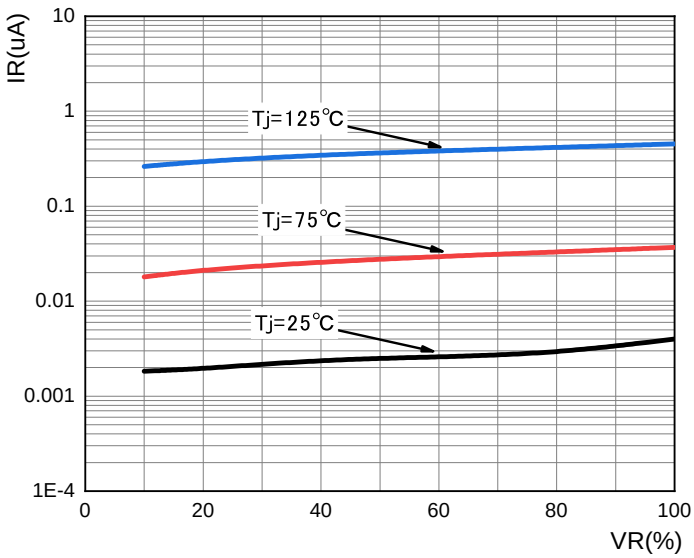
ES1AL-ES1DL

FIG.3 : TYPICAL FORWARD CHARACTERISTICS



ES1AL-ES1DL

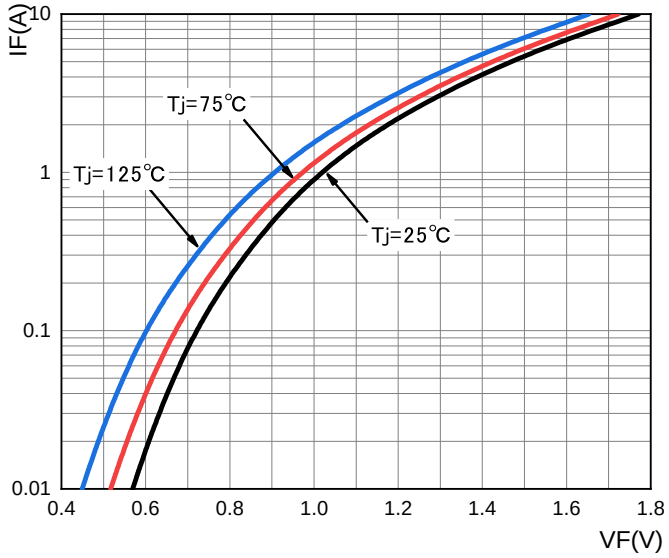
FIG.4 TYPCAL REVERSE CHARACTERISTICS



Typical Characteristics

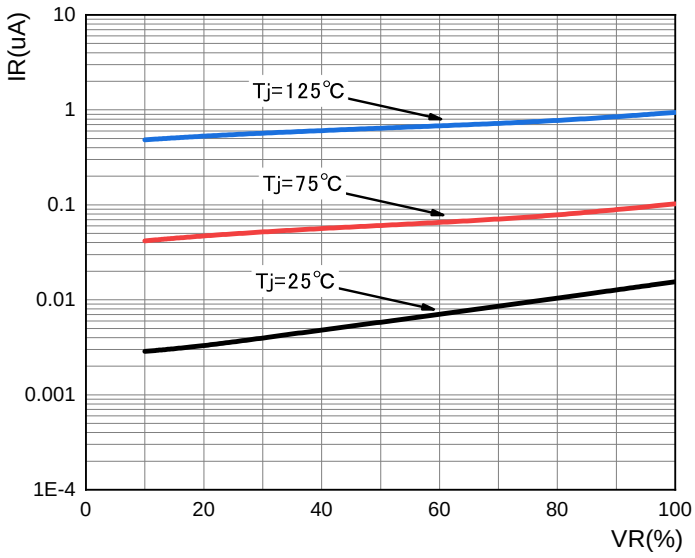
ES1EL-ES1GL

FIG.5 : TYPICAL FORWARD CHARACTERISTICS



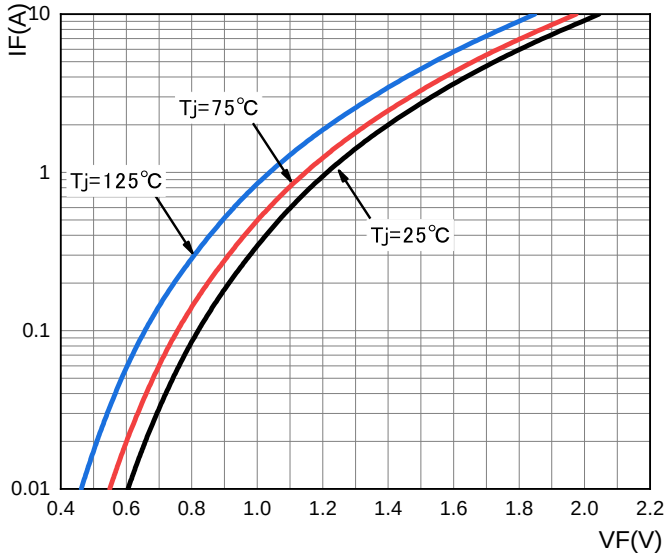
ES1EL-ES1GL

FIG.6 TYPCAL REVERSE CHARACTERISTICS



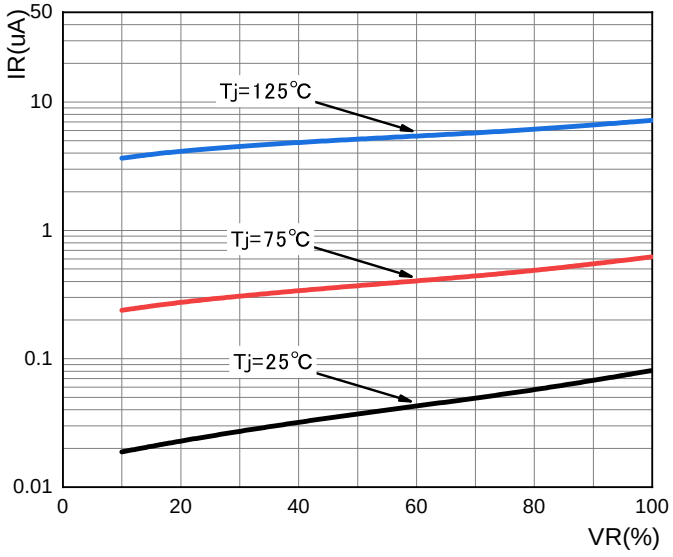
ES1JL

FIG.7 : TYPICAL FORWARD CHARACTERISTICS

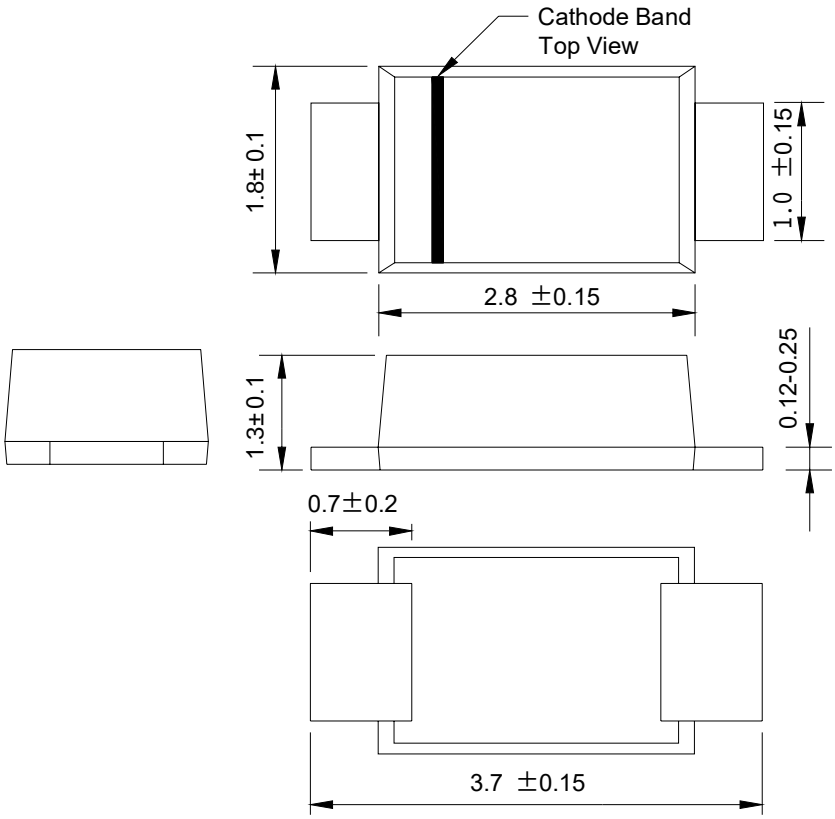


ES1JL

FIG.8 TYPCAL REVERSE CHARACTERISTICS

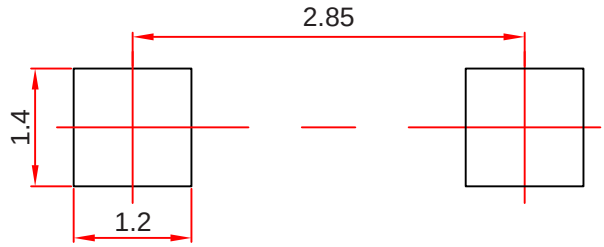


SOD-123FL Package Outline Dimensions



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

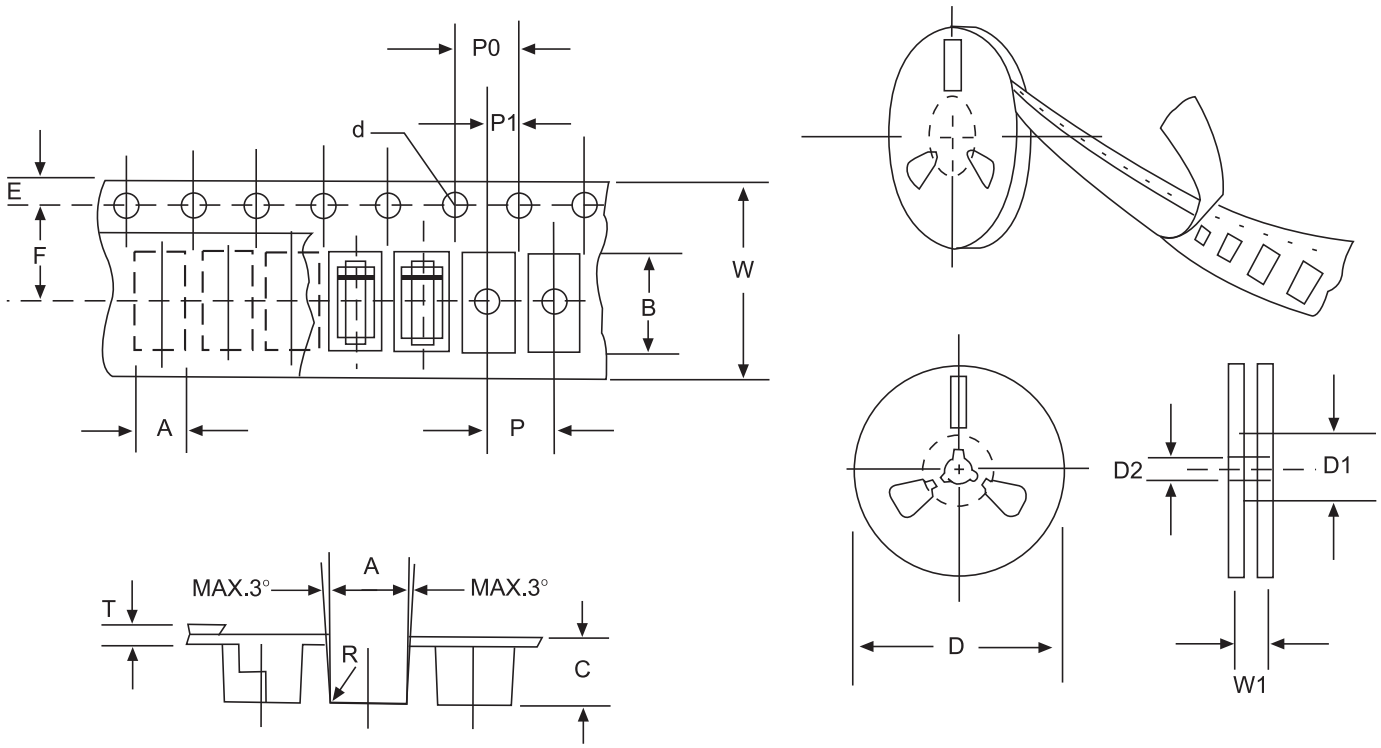


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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)
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.