SZCJ Shenzhen Changji Semiconductor Co., LTD.

SOD-123FL Plastic-Encapsulate Diodes

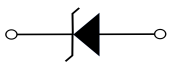
SMF47 SERIES Zener Diodes

Features

- P_{tot} 1.0W
- V_Z 3.3V- 300V
- The marking bar indicates the cathode

SOD-123FL





Applications

- Stabilizing Voltage

Marking

- SMF47XXA

  XX：From 28 To 64 (Vz<100V)

- SMF1XXXA

  XXX：From 110 To 300 (Vz>100V)

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	W	T_L=75℃	1.0
Zener current	I_Z	mA		P_V /V_Z
Operation Junction and Storage Temperature Range	T_J,T_{stg}	℃		-55 ~ +150

Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JA}$	℃/W	Between junction to ambient	170
	$R_{\theta JL}$	℃/W	Between junction to lead	26
Forward voltage	V_F	V	I_F=200mA	1.5

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number	Nominal Zener Voltage				Maximum Zener Impedance			Maximum Reverse Current		Maximum DC Zener Current	Maximum Surge Current
	AVE V_Z @I_{ZT}	MIN V_Z @I_{ZT}	MAX V_Z @I_{ZT}	I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R@V_R		I_{ZM}	I_{RM}
	(V)	(V)	(V)	(mA)	(Ω)	(Ω)	(mA)	(uA)	(V)	(mA)	(mApk)
SMF4728A	3.3	3.14	3.47	76	10	400	1	100	1	274	1370
SMF4729A	3.6	3.42	3.78	69	10	400	1	100	1	251	1255
SMF4730A	3.9	3.71	4.10	64	9	400	1	50	1	232	1160
SMF4731A	4.3	4.09	4.52	58	9	400	1	10	1	210	1050
SMF4732A	4.7	4.47	4.94	53	8	500	1	10	1	192	960
SMF4733A	5.1	4.85	5.36	49	7	550	1	10	1	177	885
SMF4734A	5.6	5.32	5.88	45	5	600	1	10	2	161	805
SMF4735A	6.2	5.89	6.51	41	2	700	1	10	3	146	730
SMF4736A	6.8	6.46	7.14	37	3.5	700	1	5	4	133	660
SMF4737A	7.5	7.13	7.88	34	4	700	0.5	5	5	121	605
SMF4738A	8.2	7.79	8.61	31	4.5	700	0.5	5	6	110	550
SMF4739A	9.1	8.65	9.56	28	5	700	0.5	0.5	7	100	500
SMF4740A	10	9.50	10.50	25	7	700	0.25	0.5	7.6	91	454
SMF4741A	11	10.45	11.55	23	8	700	0.25	0.1	8.4	83	414
SMF4742A	12	11.40	12.60	21	9	700	0.25	0.1	9.1	76	380
SMF4743A	13	12.35	13.65	19	10	700	0.25	0.1	9.9	69	344
SMF4744A	15	14.25	15.75	17	14	700	0.25	0.1	11.4	61	305
SMF4745A	16	15.20	16.80	15.5	16	700	0.25	0.1	12.2	57	285
SMF4746A	18	17.10	18.90	14	20	750	0.25	0.1	13.7	50	250
SMF4747A	20	19.00	21.00	12.5	22	750	0.25	0.1	15.2	45	225
SMF4748A	22	20.90	23.10	11.5	23	750	0.25	0.1	16.7	41	205
SMF4749A	24	22.80	25.20	10.5	25	750	0.25	0.1	18.2	38	190
SMF4750A	27	25.65	28.35	9.5	35	750	0.25	0.1	20.6	34	170
SMF4751A	30	28.50	31.50	8.5	40	1000	0.25	0.1	22.8	30	150
SMF4752A	33	31.35	34.65	7.5	45	1000	0.25	0.1	25.1	27	135
SMF4753A	36	34.20	37.80	7	50	1000	0.25	0.1	27.4	25	125
SMF4754A	39	37.05	40.95	6.5	60	1000	0.25	0.1	29.7	23	115
SMF4755A	43	40.85	45.15	6	70	1500	0.25	0.1	32.7	22	110
SMF4756A	47	44.65	49.35	5.5	80	1500	0.25	0.1	35.8	19	95
SMF4757A	51	48.45	53.55	5	95	1500	0.25	0.1	38.8	18	90
SMF4758A	56	53.20	58.80	4.5	110	2000	0.25	0.1	42.6	16	80
SMF4759A	62	58.90	65.10	4	125	2000	0.25	0.1	47.1	14	70
SMF4760A	68	64.60	71.40	3.7	150	2000	0.25	0.1	51.7	13	65
SMF4761A	75	71.25	78.75	3.3	175	2000	0.25	0.1	56	12	60
SMF4762A	82	77.90	86.10	3	200	3000	0.25	0.1	62.2	11	55
SMF4763A	91	86.45	95.55	2.8	250	3000	0.25	0.1	69.2	10	50
SMF4764A	100	95.00	105.00	2.5	350	3000	0.25	0.1	76	9	45
SMF1110A	110	104.50	115.50	2.3	450	4000	0.25	0.1	83.6	8.6	40
SMF1120A	120	114.00	126.00	2	550	4500	0.25	0.1	91.2	7.8	37
SMF1130A	130	123.50	136.50	1.9	700	5000	0.25	0.1	98.8	7	34
SMF1150A	150	142.50	157.50	1.7	1000	6000	0.25	0.1	114	6.4	30
SMF1160A	160	152.00	168.00	1.6	1100	6500	0.25	0.1	121.6	5.8	28
SMF1180A	180	171.00	189.00	1.4	1200	7000	0.25	0.1	136.8	5.2	25
SMF1200A	200	190.00	210.00	1.2	1900	9990	0.25	0.1	152	4.7	22
SMF1220A	220	209.00	231.00	1	1600	8000	0.25	0.1	167.2	4	20
SMF1240A	240	228.00	252.00	0.9	100	8500	0.25	0.1	182.4	3.8	19
SMF1250A	250	237.50	262.50	0.9	2000	9000	0.25	0.1	190	3.6	18
SMF1270A	270	256.50	283.50	0.8	2100	9000	0.25	0.1	205	3.3	16
SMF1300A	300	285.00	315.00	0.8	2300	9500	0.25	0.1	228	3	15
SMF1330A	330	313.50	346.50	0.7	2500	9500	0.25	0.1	250.2	2.7	13

Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5 %

(2) The revese surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per method.

Typical Characteristics

FIG1: Maximum Continuous Power Dissipation

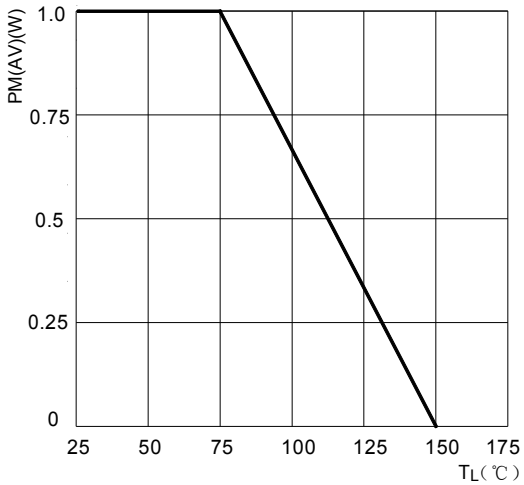


FIG2:Typical Zener Impedance

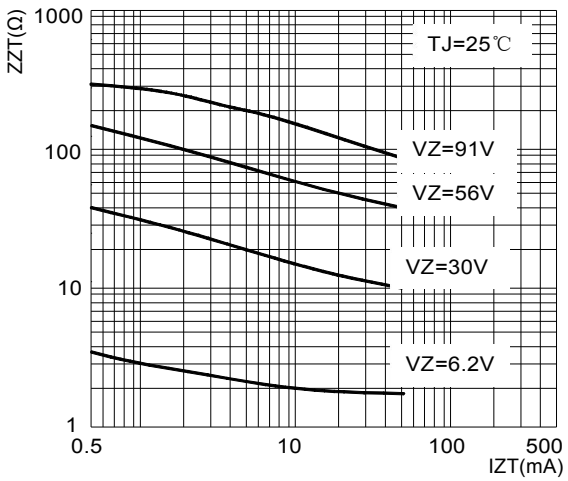


FIG3: Typical Temperature Coefficients

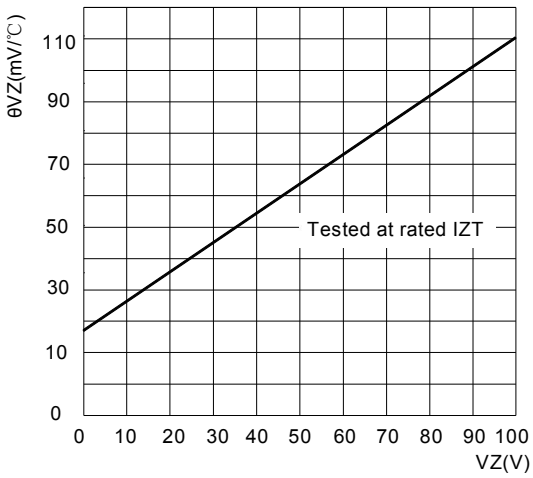


FIG4:Typical Instantaneous Forward Characteristics for SMF4763A

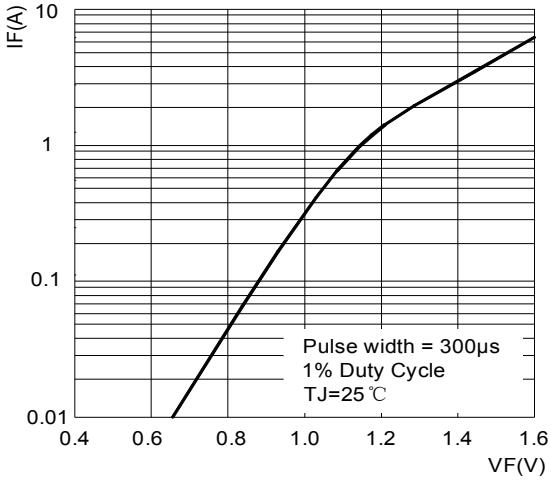
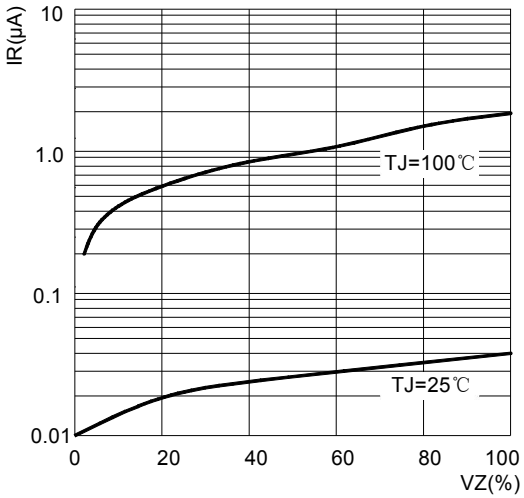
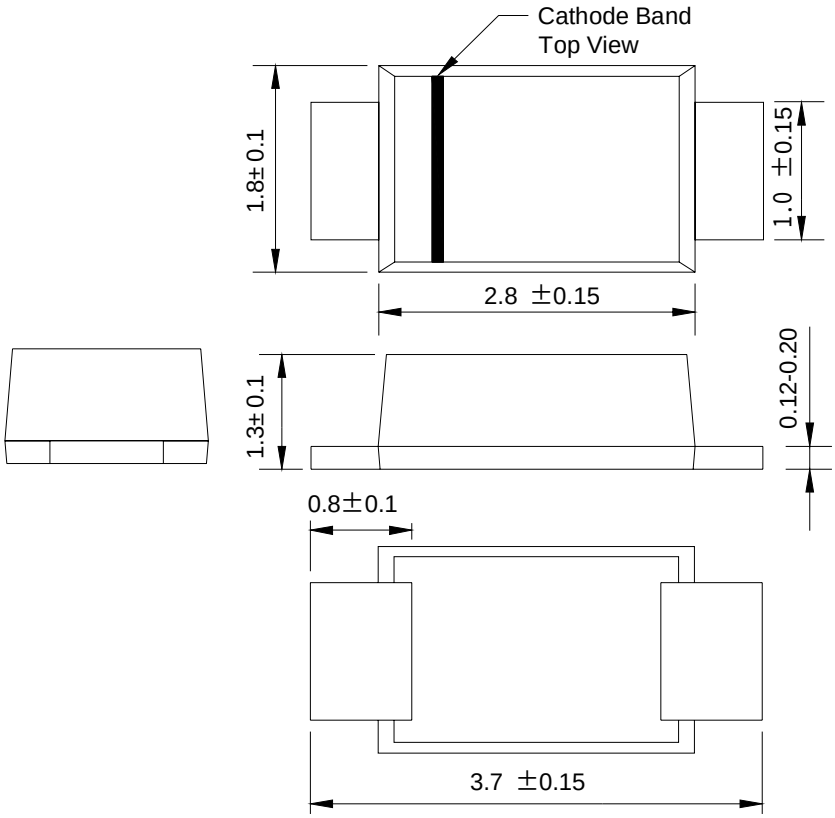


FIG5:Typical Reverse Characteristics

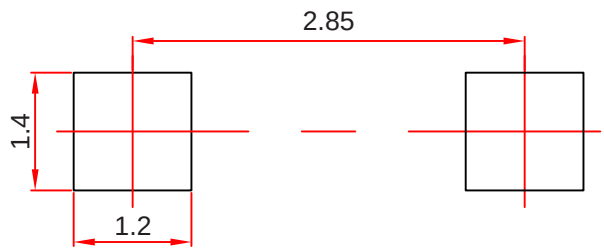


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
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

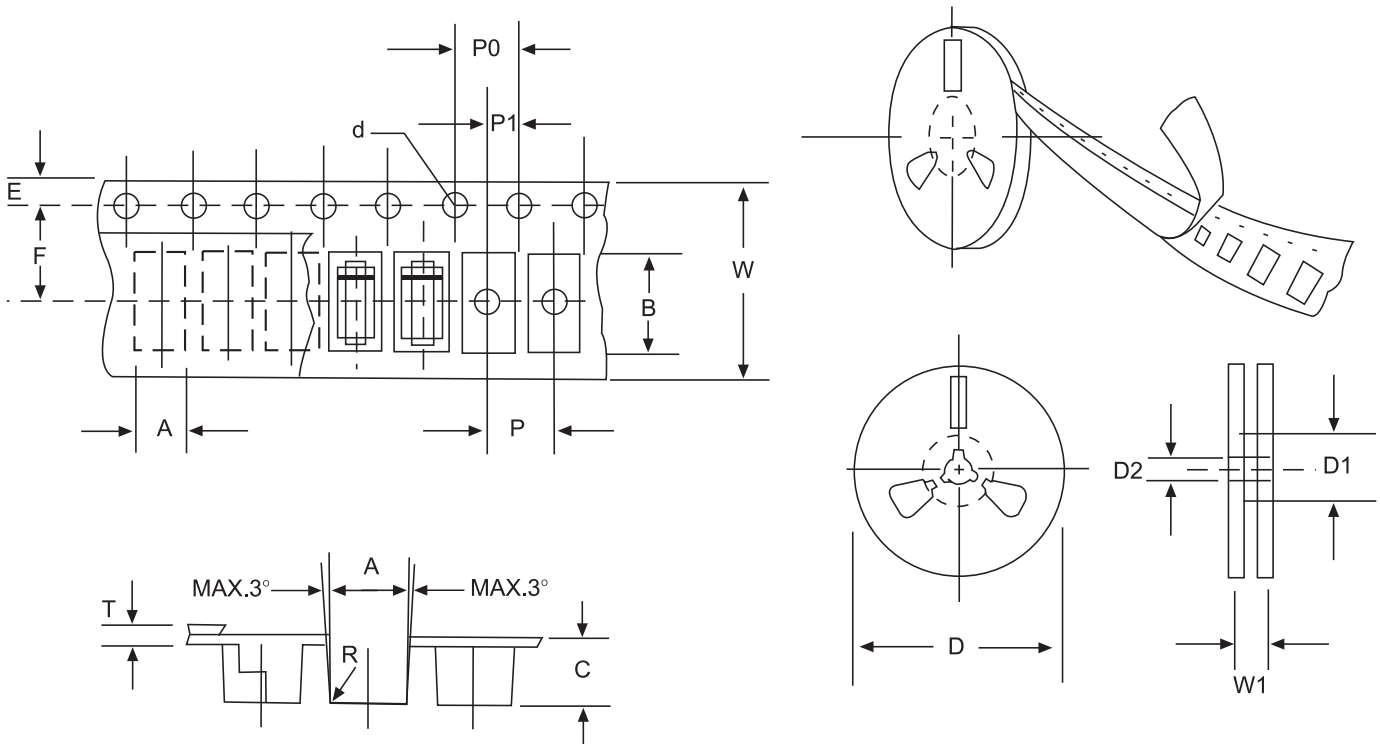


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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.