

SMF4728A THRU SMF1330A

SOD123FL Plastic-Encapsulate Diodes

Zener Diodes

Features

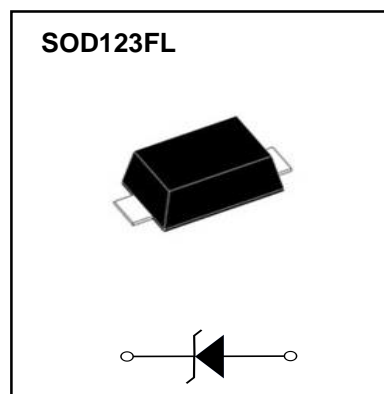
- P_d 1.0W
- V_z 3.3V-330V

Applications

- Stabilizing Voltage

Marking

- SMF47XXA
XX : From 28 To 64
SMFXXXXA
XXXX: From 1110 To 1330



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	W	$T_L=75^\circ\text{C}$	1.0
Zener current	I_z	mA		P_V/V_Z
Maximum junction temperature	T_j	$^\circ\text{C}$		150
Storage temperature range	T_{stg}	$^\circ\text{C}$		-65 to +150

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JL}$	$^\circ\text{C/W}$	Between junction and lead	170
Forward voltage	V_F	V	$I_F=200\text{mA}$	1.5

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
		$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}	I_{RM}
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
SMF4728A	728A	3.3	76.0	10.0	400	1.00	100.0	1.0	274.0	1370
SMF4729A	729A	3.6	69.0	10.0	400	1.00	100.0	1.0	251.0	1255
SMF4730A	730A	3.9	64.0	9.0	400	1.00	50.0	1.0	232.0	1160
SMF4731A	731A	4.3	58.0	9.0	400	1.00	10.0	1.0	210.0	1050
SMF4732A	732A	4.7	53.0	8.0	500	1.00	10.0	1.0	192.0	960
SMF4733A	733A	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885
SMF4734A	734A	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805
SMF4735A	735A	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730
SMF4736A	736A	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660
SMF4737A	737A	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605
SMF4738A	738A	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550
SMF4739A	739A	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500
SMF4740A	740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
SMF4741A	741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
SMF4742A	742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
SMF4743A	743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
SMF4744A	744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
SMF4745A	745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
SMF4746A	746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
SMF4747A	747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
SMF4748A	748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
SMF4749A	749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
SMF4750A	750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
SMF4751A	751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
SMF4752A	752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
SMF4753A	753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
SMF4754A	754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
SMF4755A	755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
SMF4756A	756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
SMF4757A	757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
SMF4758A	758A	56.0	4.5	110.0	2000	0.25	0.1	42.6	16.0	80
SMF4759A	759A	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70
SMF4760A	760A	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65
SMF4761A	761A	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60
SMF4762A	762A	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55
SMF4763A	763A	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50
SMF4764A	764A	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45
SMF1110A	110A	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40
SMF1120A	120A	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37
SMF1130A	130A	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34
SMF1150A	150A	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30
SMF1160A	160A	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28
SMF1180A	180A	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25
SMF1200A	200A	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22
SMF1220A	220A	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20
SMF1240A	240A	240.0	0.9	1800.0	8500	0.25	0.1	182.4	3.8	19
SMF1250A	250A	250.0	0.9	2000.0	9000	0.25	0.1	190.0	3.6	18
SMF1270A	270A	270.0	0.8	2100.0	9000	0.25	0.1	205.0	3.3	16
SMF1300A	300A	300.0	0.8	2300.0	9500	0.25	0.1	228.0	3.0	15
SMF1330A	330A	330.0	0.7	2500.0	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 $\pm 5\%$
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC

Typical Characteristics

FIG1: Maximum Continuous Power Dissipation

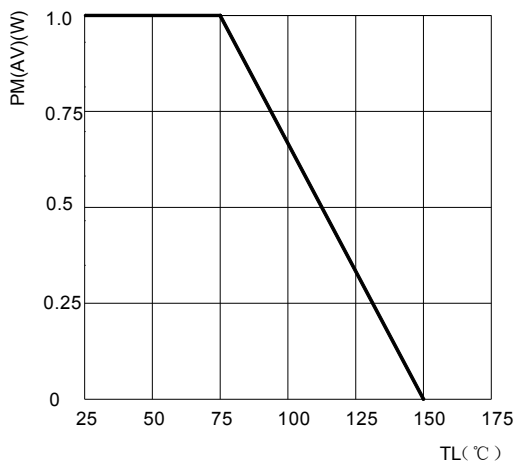


FIG2: Typical Zener Impedance

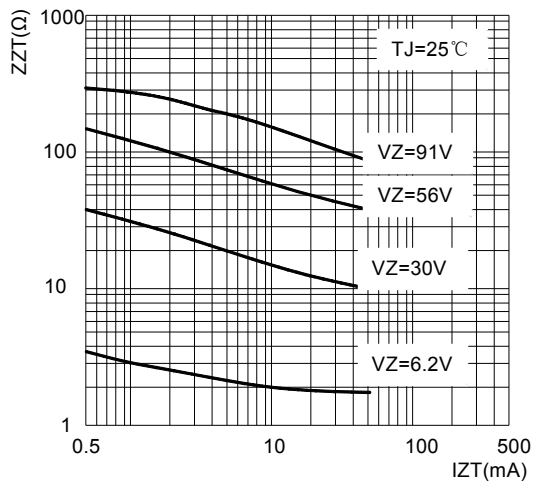


FIG3: Typical Temperature Coefficients

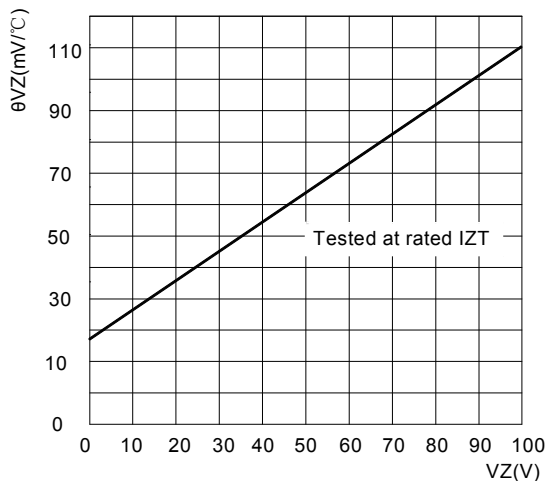


FIG4: Typical Instantaneous Forward Characteristics for SMA4763A

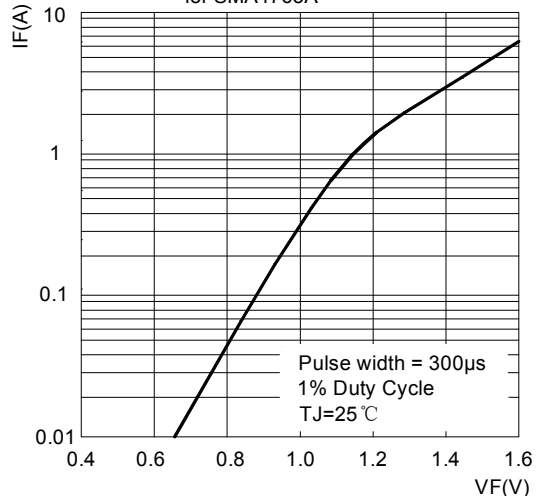
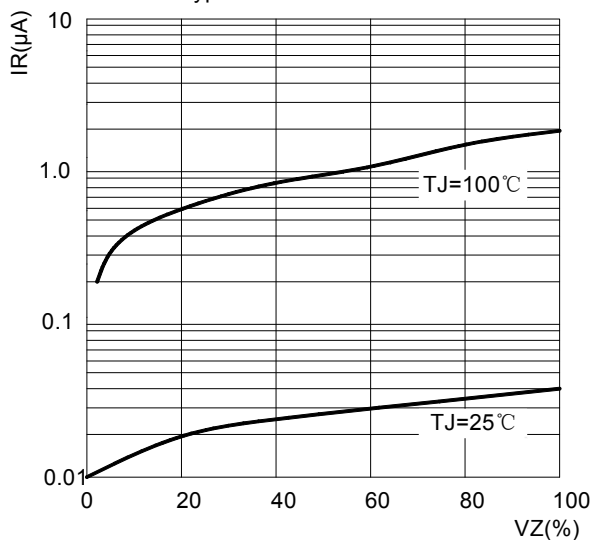
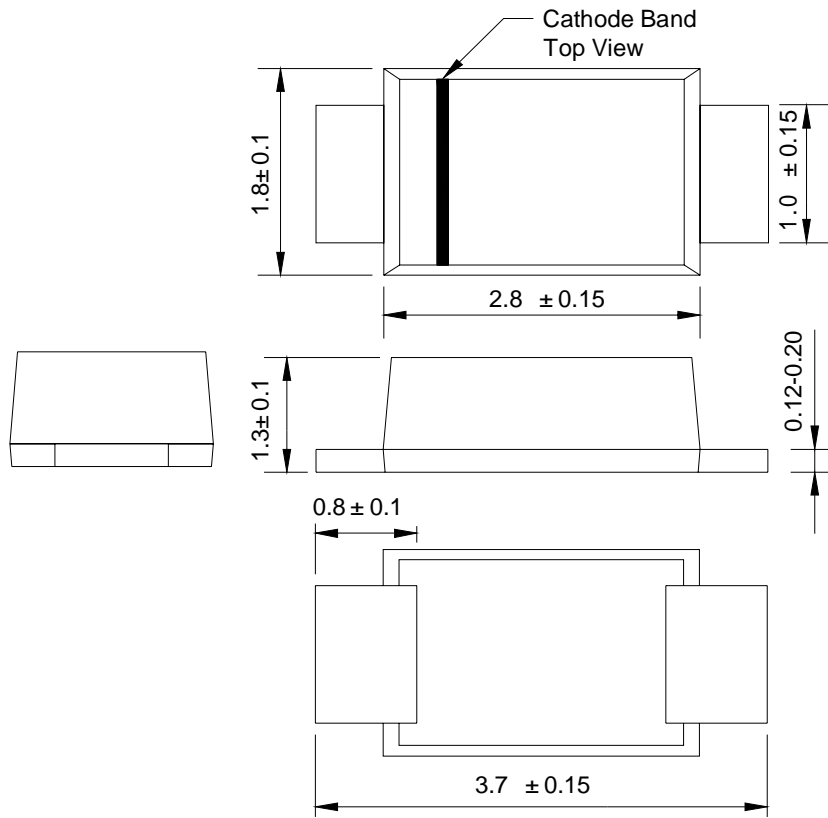


FIG5: Typical Reverse Characteristics

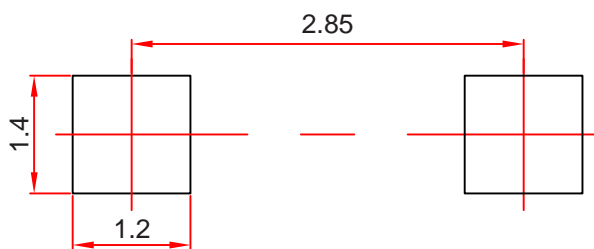


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



Note:

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

NOTICE

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Reel Taping Specifications For Surface Mount Devices–SOD123FL

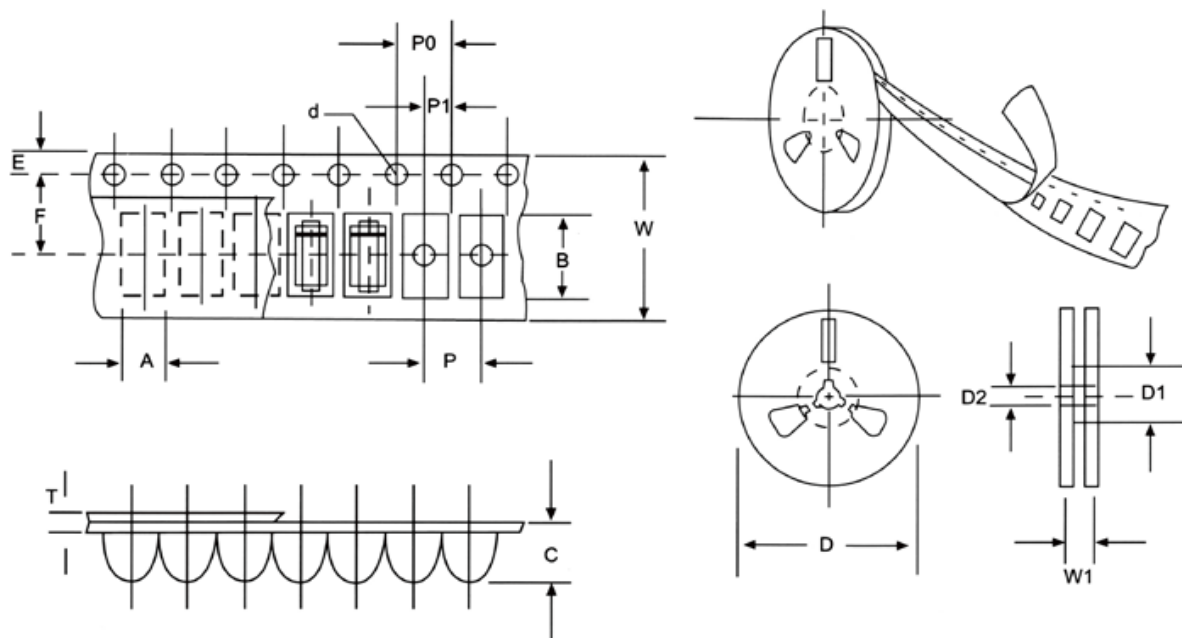


FIG:CONFIGURATION OF AXIAL TAPING

ITEM	SYMBOL	SOD123FL mm(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	280/178+2.0(11/7.0+0.079)
Reel inner diameter	D1	8.0+0.2(0.315+0.008)
Feed hole diameter	D2	13+0.5(0.512+0.020)
Sprocket 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	0.21-0.25(0.008-0.010)
Total tape thickness	T	8.0+0.3/-0.1(0.315+0.012/-0.004)
Tape width	W	2.0+0.1(0.079+0.004)
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.