

**SOD-123FL Plastic-Encapsulate Diodes****SMF47 SERIES** Zener Diodes**Features**

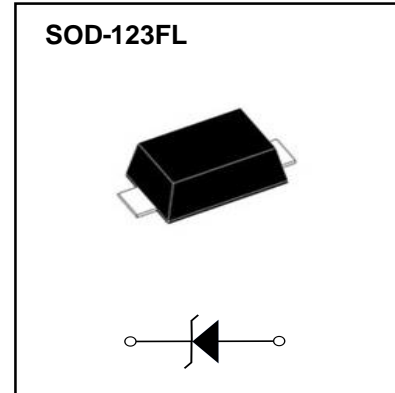
- $P_{tot}$  1.0W
- $V_Z$  3.3V- 300V
- The marking bar indicates the cathode

**Applications**

- Stabilizing Voltage

**Marking**

- SMF47XXA  
XX : From 28 To 64 ( $V_Z < 100V$ )
- SMF1XXXXA  
XXX : From 110 To 300 ( $V_Z > 100V$ )

**Limiting Values(Absolute Maximum Rating)**

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

**Electrical Characteristics ( $T_a = 25^\circ C$  Unless otherwise specified)**

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

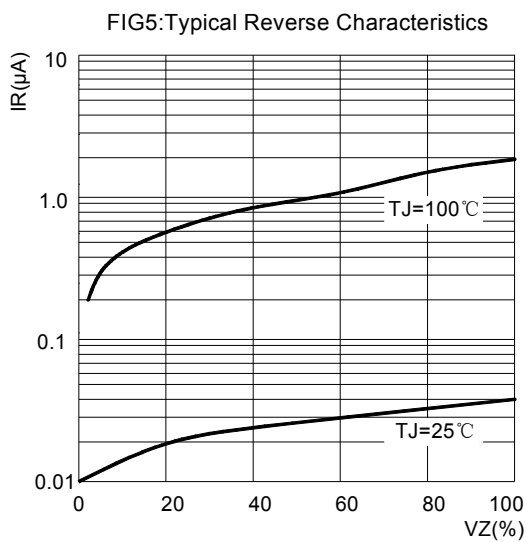
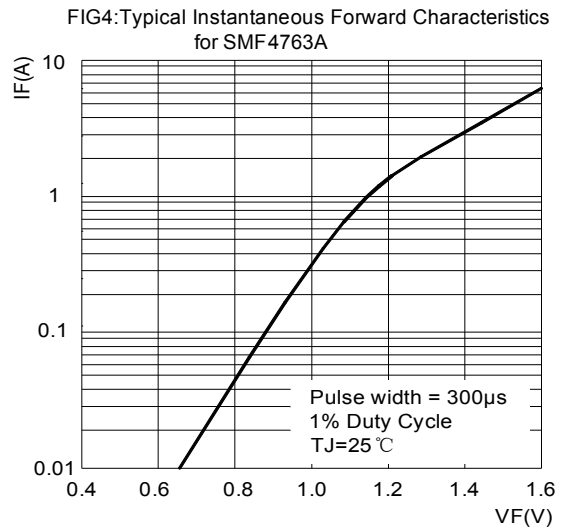
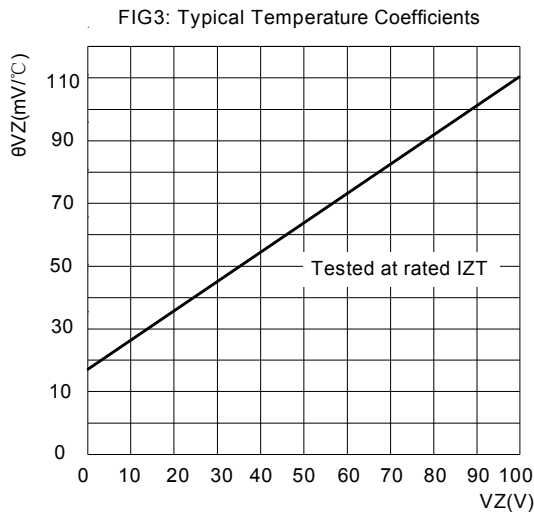
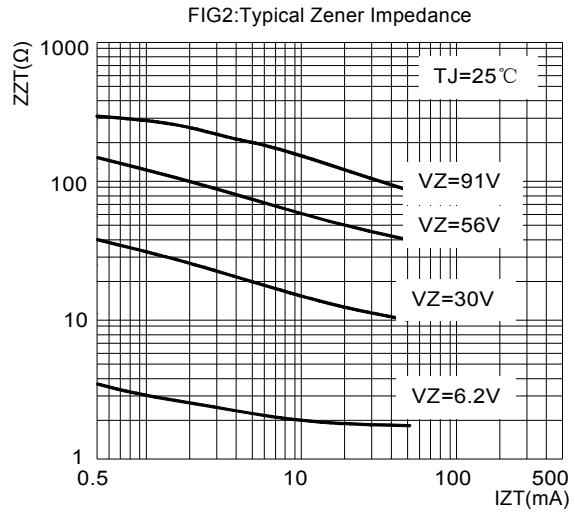
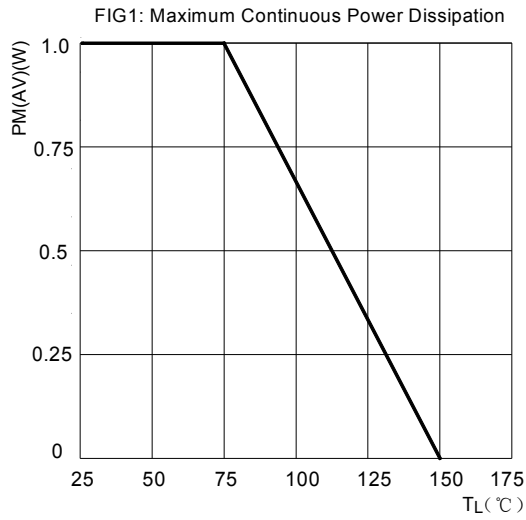
## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Maximum DC Zener 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)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu\text{A}$ )	(V)	(mA)	(mApk)
SMF4728A	3.3	76	10	400	1	100	1	274	1370
SMF4729A	3.6	69	10	400	1	100	1	251	1255
SMF4730A	3.9	64	9	400	1	50	1	232	1160
SMF4731A	4.3	58	9	400	1	10	1	210	1050
SMF4732A	4.7	53	8	500	1	10	1	192	960
SMF4733A	5.1	49	7	550	1	10	1	177	885
SMF4734A	5.6	45	5	600	1	10	2	161	805
SMF4735A	6.2	41	2	700	1	10	3	146	730
SMF4736A	6.8	37	3.5	700	1	5	4	133	660
SMF4737A	7.5	34	4	700	0.5	5	5	121	605
SMF4738A	8.2	31	4.5	700	0.5	5	6	110	550
SMF4739A	9.1	28	5	700	0.5	0.5	7	100	500
SMF4740A	10	25	7	700	0.25	0.5	7.6	91	454
SMF4741A	11	23	8	700	0.25	0.1	8.4	83	414
SMF4742A	12	21	9	700	0.25	0.1	9.1	76	380
SMF4743A	13	19	10	700	0.25	0.1	9.9	69	344
SMF4744A	15	17	14	700	0.25	0.1	11.4	61	305
SMF4745A	16	15.5	16	700	0.25	0.1	12.2	57	285
SMF4746A	18	14	20	750	0.25	0.1	13.7	50	250
SMF4747A	20	12.5	22	750	0.25	0.1	15.2	45	225
SMF4748A	22	11.5	23	750	0.25	0.1	16.7	41	205
SMF4749A	24	10.5	25	750	0.25	0.1	18.2	38	190
SMF4750A	27	9.5	35	750	0.25	0.1	20.6	34	170
SMF4751A	30	8.5	40	1000	0.25	0.1	22.8	30	150
SMF4752A	33	7.5	45	1000	0.25	0.1	25.1	27	135
SMF4753A	36	7	50	1000	0.25	0.1	27.4	25	125
SMF4754A	39	6.5	60	1000	0.25	0.1	29.7	23	115
SMF4755A	43	6	70	1500	0.25	0.1	32.7	22	110
SMF4756A	47	5.5	80	1500	0.25	0.1	35.8	19	95
SMF4757A	51	5	95	1500	0.25	0.1	38.8	18	90
SMF4758A	56	4.5	110	2000	0.25	0.1	42.6	16	80
SMF4759A	62	4	125	2000	0.25	0.1	47.1	14	70
SMF4760A	68	3.7	150	2000	0.25	0.1	51.7	13	65
SMF4761A	75	3.3	175	2000	0.25	0.1	56	12	60
SMF4762A	82	3	200	3000	0.25	0.1	62.2	11	55
SMF4763A	91	2.8	250	3000	0.25	0.1	69.2	10	50
SMF4764A	100	2.5	350	3000	0.25	0.1	76	9	45
SMF1110A	110	2.3	450	4000	0.25	0.1	83.6	8.6	40
SMF1120A	120	2	550	4500	0.25	0.1	91.2	7.8	37
SMF1130A	130	1.9	700	5000	0.25	0.1	98.8	7	34
SMF1150A	150	1.7	1000	6000	0.25	0.1	114	6.4	30
SMF1160A	160	1.6	1100	6500	0.25	0.1	121.6	5.8	28
SMF1180A	180	1.4	1200	7000	0.25	0.1	136.8	5.2	25
SMF1200A	200	1.2	1900	9990	0.25	0.1	152	4.7	22
SMF1220A	220	1	1600	8000	0.25	0.1	167.2	4	20
SMF1240A	240	0.9	100	8500	0.25	0.1	182.4	3.8	19
SMF1250A	250	0.9	2000	9000	0.25	0.1	190	3.6	18
SMF1270A	270	0.8	2100	9000	0.25	0.1	205	3.3	16
SMF1300A	300	0.8	2300	9500	0.25	0.1	228	3	15
SMF1330A	330	0.7	2500	9500	0.25	0.1	250.2	2.7	13

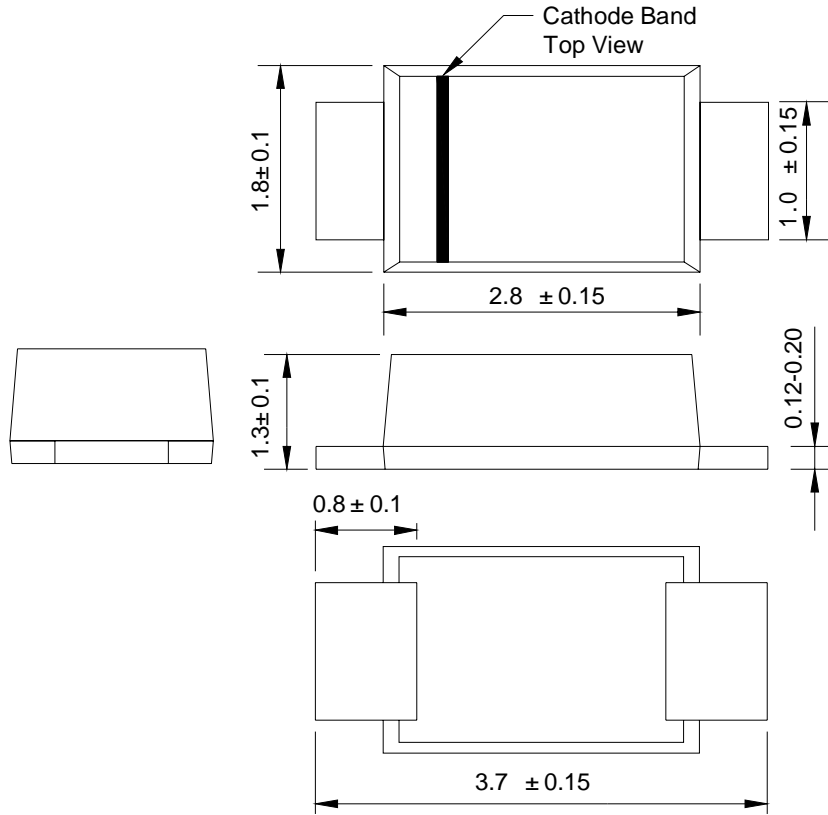
### Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on  $I_{ZT}$  per method.

# Typical Characteristics

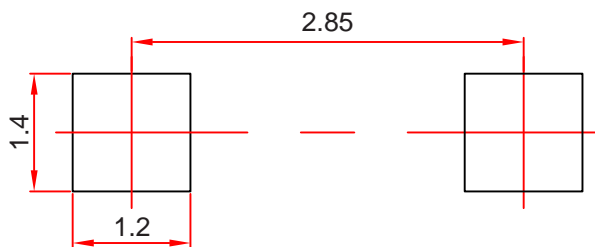


## SOD-123FL Package Outline Dimensions



Dimensions in millimeters

## SOD-123FL Suggested Pad Layout



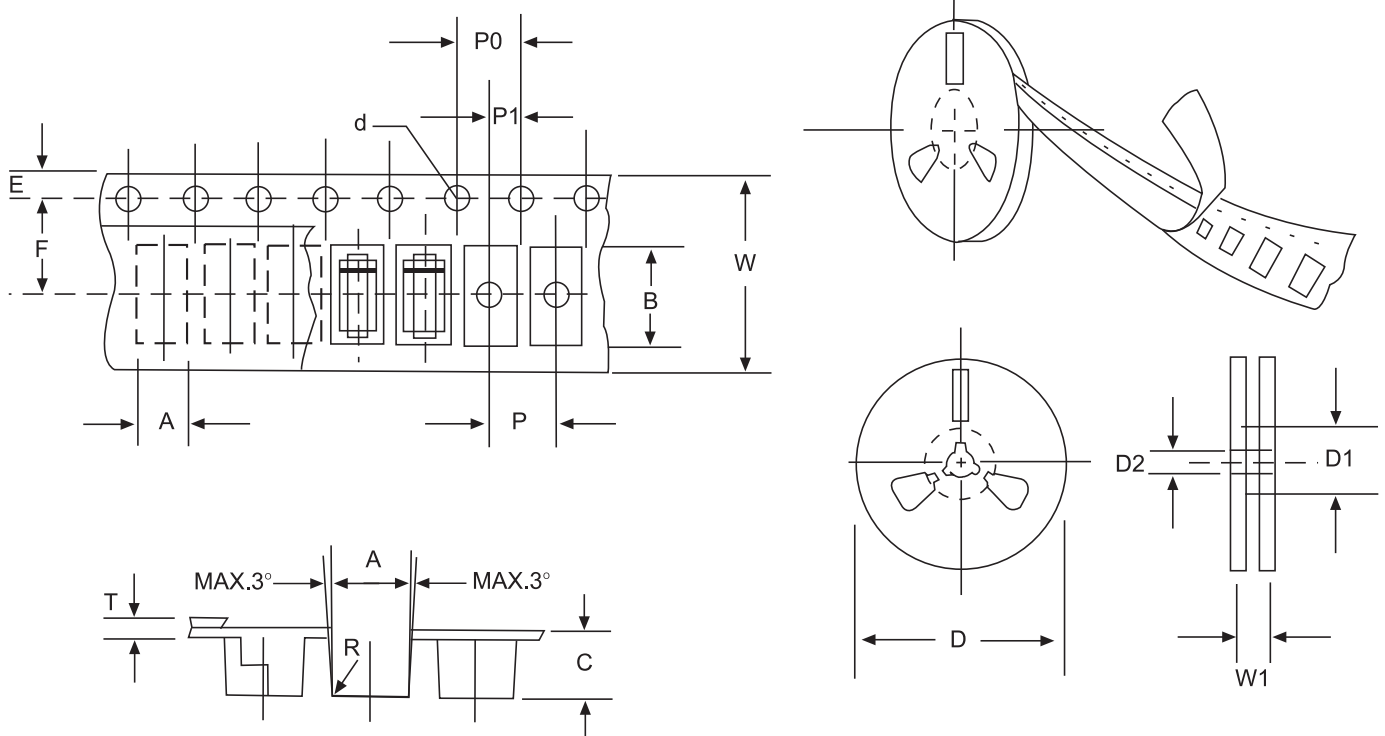
### Note:

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

### NOTICE

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# 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)
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	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.