



# SMF4727 THRU SZF1220

Surface Mount Zener Diode

## Features

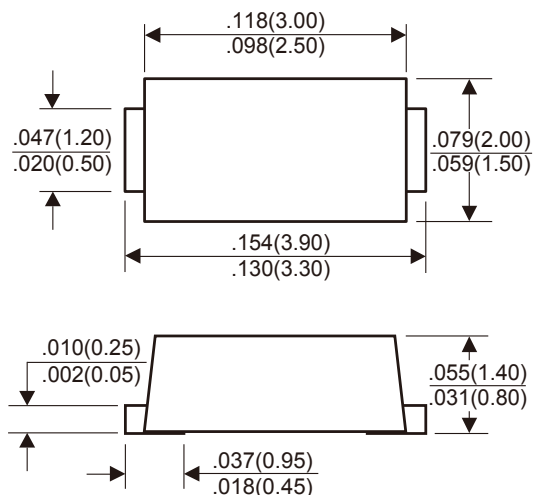
- ★ Ideally suited for automated assembly processes
- ★ Low leakage
- ★ Built-in strain relief
- ★ Low inductance
- ★ High peak reverse power dissipation
- ★ Zener voltage tolerance is  $\pm 5\%$

## Mechanical Data

- ★ Case: Molded plastic, SOD-123FL
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-750, method 2026
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

**Zener Voltage 3.0 to 220 V**  
**Power Dissipation 1.0 Watts**

### SOD-123FL



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$  unless otherwise noted

PARAMETER	SYMBOL	VALUE	UNIT
DC power dissipation at $T_L = 75^\circ\text{C}$	$P_D$	1	W
Maximum forward voltage at $I_F = 200\text{ mA}$	$V_F$	1.2	V
Junction temperature range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

## ORDERING INFORMATION

Part Number	Package	Weight	Quantity	Delivery Mode
SMF47xx SZF1xx0	SOD-123FL	0.015 g	3,000	7" diameter plastic tape and reel

# SMF4727 THRU SZF1220

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

Part Number	Device Marking Code	Zener Voltage $V_Z@I_{ZT}$				Maximum Zener Impedance			Maximum Reverse Leakage Current $I_R@V_R$		Maximum DC Zener Current $I_{ZM}$
		Min (V)	Nom (V)	Max (V)	$I_{ZT}$ (mA)	$Z_{ZT}@I_{ZT}$ ( $\Omega$ )	$Z_{ZK}@I_{ZK}$ ( $\Omega$ )	$I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_R$ (V)	
SMF4727	27A	2.85	3	3.15	80	15	400	1	100	1	301
SMF4728	28A	3.14	3.3	3.47	76	10	400	1	100	1	274
SMF4729	29A	3.42	3.6	3.78	69	10	400	1	100	1	251
SMF4730	30A	3.71	3.9	4.1	64	9	400	1	50	1	232
SMF4731	31A	4.09	4.3	4.52	58	9	400	1	10	1	210
SMF4732	32A	4.47	4.7	4.94	53	8	500	1	10	1	192
SMF4733	33A	4.85	5.1	5.36	49	7	550	1	10	1	177
SMF4734	34A	5.32	5.6	5.88	45	5	600	1	10	2	161
SMF4735	35A	5.89	6.2	6.51	41	2	700	1	10	3	146
SMF4736	36A	6.46	6.8	7.14	37	4	700	1	10	4	133
SMF4737	37A	7.13	7.5	7.88	34	4	700	0.5	10	5	121
SMF4738	38A	7.79	8.2	8.61	31	5	700	0.5	10	6	110
SMF4739	39A	8.65	9.1	9.56	28	5	700	0.5	10	7	100
SMF4740	40A	9.5	10	10.5	25	7	700	0.25	10	7.6	91
SMF4741	41A	10.45	11	11.55	23	8	700	0.25	0.5	8.4	83
SMF4742	42A	11.4	12	12.6	21	9	700	0.25	0.5	9.1	76
SMF4743	43A	12.35	13	13.65	19	10	700	0.25	0.5	9.9	69
SMF4744	44A	14.25	15	15.75	17	14	700	0.25	0.5	11.4	61
SMF4745	45A	15.2	16	16.8	15.5	16	700	0.25	0.5	12.2	57
SMF4746	46A	17.1	18	18.9	14	20	750	0.25	0.5	13.7	50
SMF4747	47A	19	20	21	12.5	22	750	0.25	0.5	15.2	45
SMF4748	48A	20.9	22	23.1	11.5	23	750	0.25	0.5	16.7	41
SMF4749	49A	22.8	24	25.2	10.5	25	750	0.25	0.5	18.2	38
SMF4750	50A	25.65	27	28.35	9.5	35	750	0.25	0.5	20.6	34
SMF4751	51A	28.5	30	31.5	8.5	40	1000	0.25	0.5	22.8	30
SMF4752	52A	31.35	33	34.65	7.5	45	1000	0.25	0.5	25.1	27
SMF4753	53A	34.2	36	37.8	7	50	1000	0.25	0.5	27.4	25
SMF4754	54A	37.05	39	40.95	6.5	60	1000	0.25	0.5	29.7	23
SMF4755	55A	40.85	43	45.15	6	70	1500	0.25	0.5	32.7	22
SMF4756	56A	44.65	47	49.35	5.5	80	1500	0.25	0.5	35.8	19
SMF4757	57A	48.45	51	53.55	5	95	1500	0.25	0.5	38.8	18
SMF4758	58A	53.2	56	58.8	4.5	110	2000	0.25	0.5	42.6	16
SMF4759	59A	58.9	62	65.1	4	125	2000	0.25	0.5	47.1	14
SMF4760	60A	64.6	68	71.4	3.7	150	2000	0.25	0.5	51.7	13
SMF4761	61A	71.25	75	78.75	3.3	175	2000	0.25	0.5	56	12
SMF4762	62A	77.9	82	86.1	3	200	3000	0.25	0.5	62.2	11
SMF4763	63A	86.45	91	95.55	2.8	250	3000	0.25	0.5	69.2	10
SMF4764	64A	95	100	105	2.5	350	3000	0.25	0.5	76	9
SZF1110	11Z	104.5	110	115.5	2.3	450	4000	0.25	0.5	83.6	8.6
SZF1120	12Z	114	120	126	2	550	4500	0.25	0.5	91.2	7.8
SZF1130	13Z	123.5	130	136.5	1.9	700	5000	0.25	0.5	98.8	7
SZF1150	15Z	142.5	150	157.5	1.7	1000	6000	0.25	0.5	114	6.4
SZF1160	16Z	152	160	168	1.6	1100	6500	0.25	0.5	121.6	5.8
SZF1180	18Z	171	180	189	1.4	1200	7000	0.25	0.5	136.8	5.2
SZF1200	20Z	190	200	210	1.2	1900	9990	0.25	0.5	152	4.7
SZF1220	22Z	209	220	231	1	2000	9990	0.25	0.5	167.2	4

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 Method.

# RATINGS AND CHARACTERISTICS CURVES SMF4727 THRU SZF1220

Fig.1 - Power Derating Curve

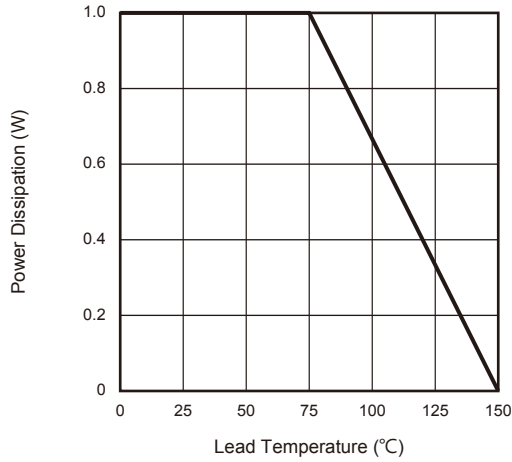


Fig.2 - Temperature Coefficients vs. Zener Voltage

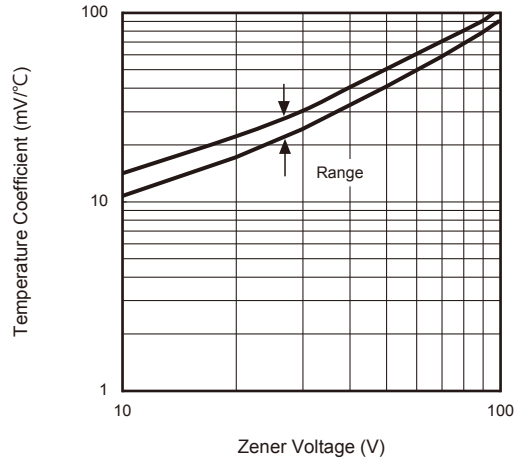


Fig.3 - Pulse Waveform

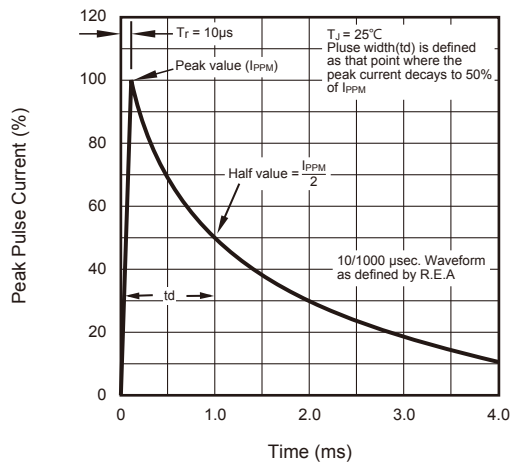


Fig.4 - Maximum Surge Power

