



SMF4728A-SMF1330A

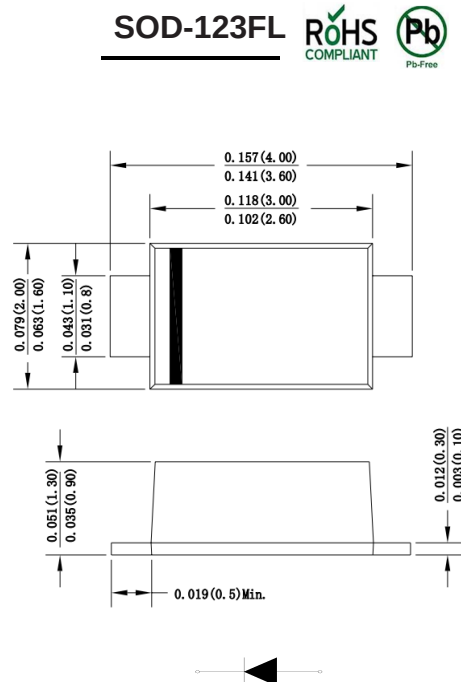
1.0W Zener Diode

Features

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping with high power rating

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.0007 ounce, 0.02 gram



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Value	UNIT
DC power dissipation at $T_L = 50^{\circ}\text{C}$ ⁽¹⁾	P_D	1	W
Maximum forward voltage at $I_F = 200\text{ mA}$	V_F	1.5	V
Maximum thermal resistance junction to ambient air ⁽²⁾	$R_{\theta JA}$	170	K/W
Junction temperature range	T_J	- 55 to + 150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	- 55 to + 150	$^{\circ}\text{C}$

Note:

(1) T_L = Lead temperature at 0.3mm from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

Electrical Characteristics(T_A=25℃ 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)	(mA _{pk})
SMF4728A	FHD	3.3	76.0	10.0	400	1.00	100.0	1.0	274.0	1370
SMF4729A	FHE	3.6	69.0	10.0	400	1.00	100.0	1.0	251.0	1255
SMF4730A	FHF	3.9	64.0	9.0	400	1.00	50.0	1.0	232.0	1160
SMF4731A	FHG	4.3	58.0	9.0	400	1.00	10.0	1.0	210.0	1050
SMF4732A	FHJ	4.7	53.0	8.0	500	1.00	10.0	1.0	192.0	960
SMF4733A	FHK	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885
SMF4734A	FHL	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805
SMF4735A	FHN	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730
SMF4736A	FHO	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660
SMF4737A	FHQ	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605
SMF4738A	FHR	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550
SMF4739A	FHT	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500
SMF4740A	FHU	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
SMF4741A	FHV	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
SMF4742A	FHW	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
SMF4743A	FHX	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
SMF4744A	FHZ	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
SMF4745A	FJA	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
SMF4746A	FJF	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
SMF4747A	FJG	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
SMF4748A	FJK	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
SMF4749A	FJL	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
SMF4750A	FJN	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
SMF4751A	FJQ	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
SMF4752A	FJR	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
SMF4753A	FJS	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
SMF4754A	FJT	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
SMF4755A	FLG	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
SMF4756A	FLJ	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
SMF4757A	FLK	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
SMF4758A	FLL	56.0	4.5	110.0	2000	0.25	0.1	42.6	16.0	80
SMF4759A	FLN	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70
SMF4760A	FLO	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65
SMF4761A	FLQ	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60
SMF4762A	FLR	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55
SMF4763A	FLT	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50
SMF4764A	FLU	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45
SMF1110A	FLV	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40
SMF1120A	FLW	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37
SMF1130A	FLX	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34
SMF1150A	FLZ	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30
SMF1160A	FPA	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28
SMF1180A	FPF	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25
SMF1200A	FPG	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22
SMF1220A	FPK	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20
SMF1240A	FPL	240.0	0.9	1800.0	8500	0.25	0.1	182.4	3.8	19
SMF1250A	FPM	250.0	0.9	2000.0	9000	0.25	0.1	190.0	3.6	18
SMF1270A	FPN	270.0	0.8	2100.0	9000	0.25	0.1	205.0	3.3	16
SMF1300A	FPQ	300.0	0.8	2300.0	9500	0.25	0.1	228.0	3.0	15
SMF1330A	FLR	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



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

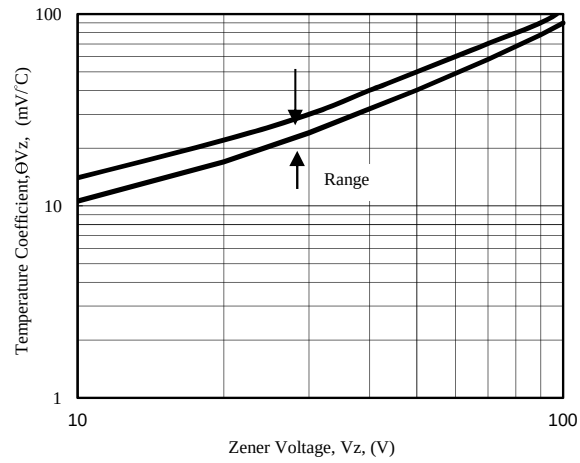
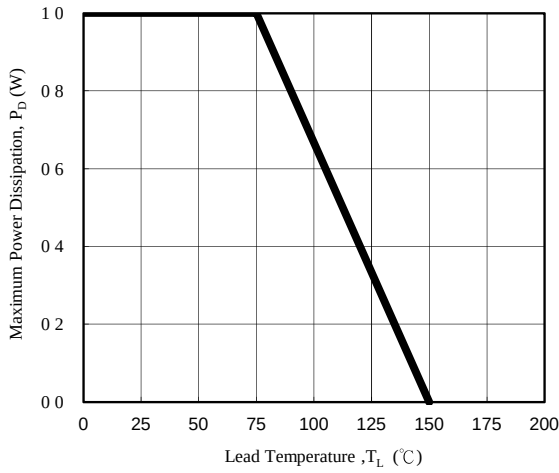


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

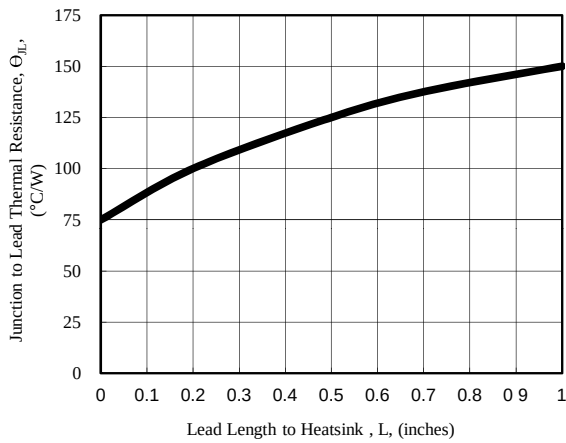


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

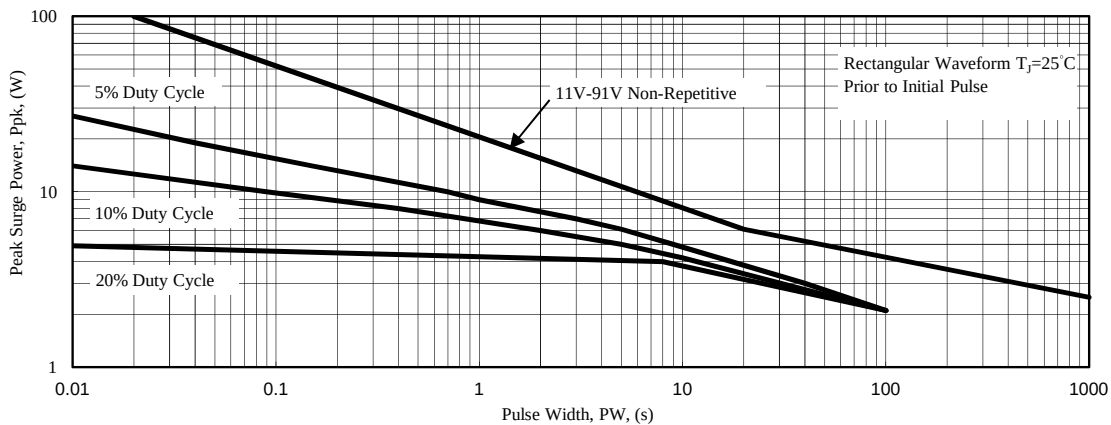
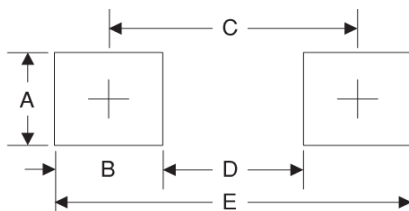


Fig. 4 - Maximum Surge Power

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173