

Zener Diodes SOD-123F

SML4728A~SMZ1330A

MERITEK

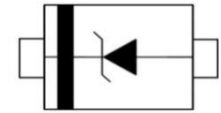
FEATURE

- Zener Voltage Range: 3.3~330V
- Zener Voltage Tolerance: $\pm 5\%$
- Power Dissipation: 1W
- Glass Passivation Junction, Low Inductance
- Built- In Strain Relief
- High Peak Reverse Power Dissipation



MECHANICAL DATA

- Flammability Classification Rating UL 94V-0
- Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denoted Cathode End



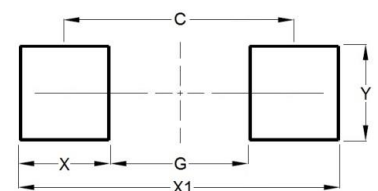
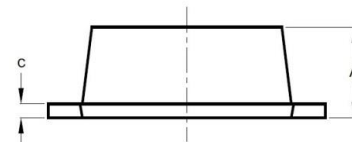
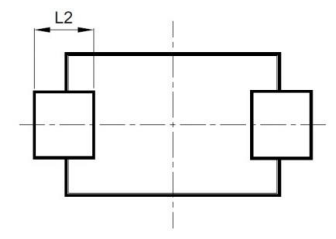
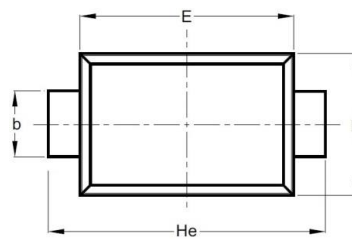
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$	P_D	1.0	W
Maximum Forward Voltage at $I_F = 200\text{mA}$	V_F	1.2	V
Maximum thermal resistance junction to ambient air	$R_{\theta JA}$	170	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$

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

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.95	1.30
b	0.70	1.20
c	0.05	0.25
D	1.60	1.90
E	2.60	2.90
He	3.55	3.85
L2	0.45	0.75
C	3.10	3.10
G	1.95	1.95
X	1.15	1.15
X1	4.25	4.25
Y	1.22	1.22



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ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max Zener Current	Max 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	V
SML4728A	3.3	76.0	10.0	400	1.0	100	1.0	274	1370
SML4729A	3.6	69.0	10.0	400	1.0	100	1.0	251	1255
SML4730A	3.9	64.0	9.0	400	1.0	50	1.0	232	1160
SML4731A	4.3	58.0	9.0	400	1.0	10.0	1.0	210	1050
SML4732A	4.7	53.0	8.0	500	1.0	10.0	1.0	192	960
SML4733A	5.1	49.0	7.0	550	1.0	10.0	1.0	177	885
SML4734A	5.6	45.0	5.0	600	1.0	10.0	2.0	161	805
SML4735A	6.2	41.0	2.0	700	1.0	10.0	3.0	146	730
SML4736A	6.8	37.0	3.5	700	1.0	5.0	4.0	133	660
SML4737A	7.5	34.0	4.0	700	0.5	5.0	5.0	121	605
SML4738A	8.2	31.0	4.5	700	0.5	5.0	6.0	110	550
SML4739A	9.1	28.0	5.0	700	0.5	0.5	7.0	100	500
SML4740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
SML4741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
SML4742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
SML4743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
SML4744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
SML4745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
SML4746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
SML4747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
SML4748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
SML4749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
SML4750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
SML4751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
SML4752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
SML4753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
SML4754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
SML4755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
SML4756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
SML4757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
SML4758A	56.0	4.5	110	2000	0.25	0.1	42.6	16.0	80
SML4759A	62.0	4.0	125	2000	0.25	0.1	47.1	14.0	70
SML4760A	68.0	3.7	150	2000	0.25	0.1	51.7	13.0	65
SML4761A	75.0	3.3	175	2000	0.25	0.1	56.0	12.0	60
SML4762A	82.0	3.0	200	3000	0.25	0.1	62.2	11.0	55
SML4763A	91.0	2.8	250	3000	0.25	0.1	69.2	10.0	50
SML4764A	100	2.5	350	3000	0.25	0.1	76.0	9.0	45
SMZ1110A	110	2.3	450	4000	0.25	0.1	83.6	8.6	40
SMZ1120A	120	2.0	550	4500	0.25	0.1	91.2	7.8	37
SMZ1130A	130	1.9	700	5000	0.25	0.1	98.8	7.0	34
SMZ1150A	150	1.7	1000	6000	0.25	0.1	114.0	6.4	30
SMZ1160A	160	1.6	1100	6500	0.25	0.1	121.6	5.8	28
SMZ1180A	180	1.4	1200	7000	0.25	0.1	136.8	5.2	25
SMZ1200A	200	1.2	1900	9990	0.25	0.1	152.0	4.7	22
SMZ1220A	220	1.0	1600	8000	0.25	0.1	167.2	4.0	20
SMZ1240A	240	0.9	1800	8500	0.25	0.1	182.4	3.8	19
SMZ1250A	250	0.9	2000	9000	0.25	0.1	190.0	3.6	18
SMZ1270A	270	0.8	2100	9000	0.25	0.1	205.0	3.3	16
SMZ1300A	300	0.8	2300	9500	0.25	0.1	228.0	3.0	15
SMZ1330A	330	0.7	2500	9500	0.25	0.1	250.2	2.7	13

Note:

1. T_A=25°C unless otherwise noted

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

CHARACTERISTIC CURVES

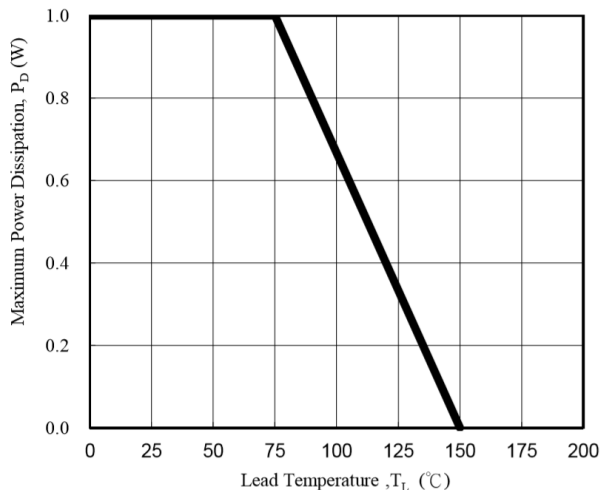


Fig. 1 - Power Temperature Derating Curve

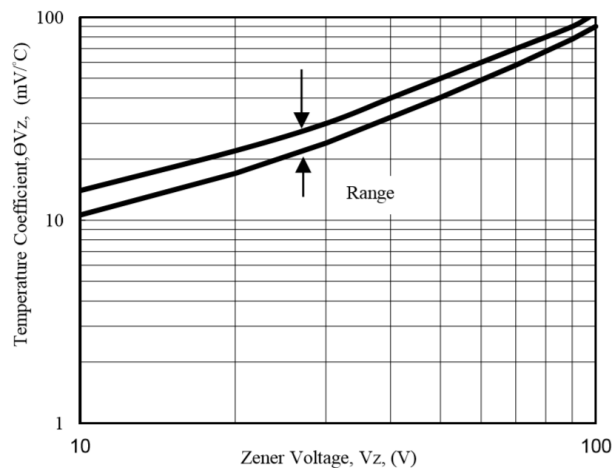


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

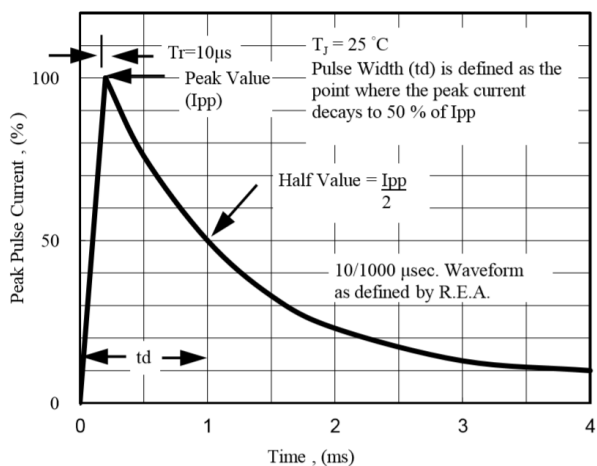


Fig. 3 - Pulse Waveform

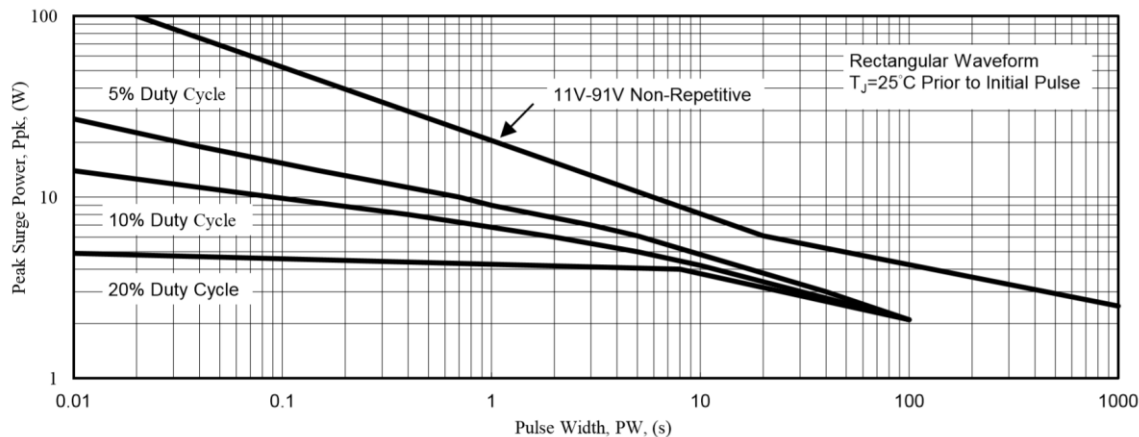


Fig. 4 - Maximum Surge Power

*Specifications subject to change without notice