



V_Z : 3.3 to 330 V

P_D : 1 W

Surface Mount Zener Diodes

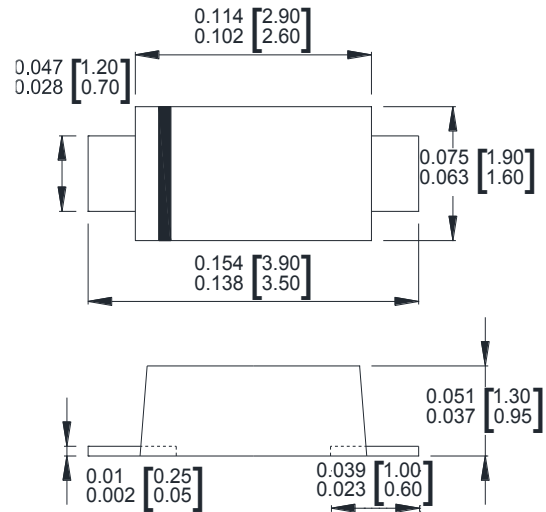
Features

- 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 circuits with high power rating

Mechanical Data

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

SOD-123



Dimensions : inch [mm]

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
Maximum thermal resistance junction to ambient air	$R_{\theta JA}$	170	$^\circ\text{C}/\text{W}$
Junction temperature range	T_J	- 55 to + 175	$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to + 175	$^\circ\text{C}$



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

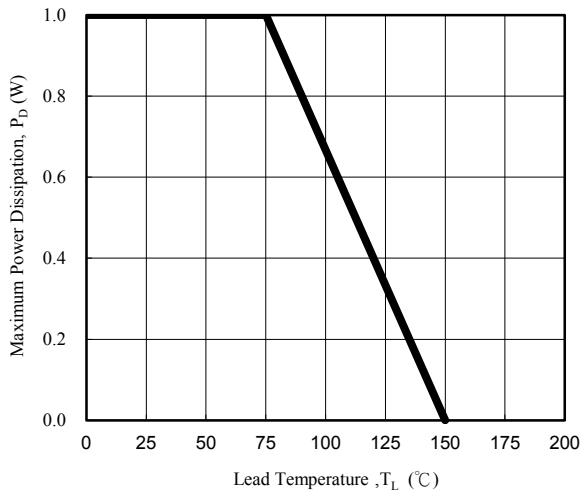


Fig. 1 - Power Temperature Derating Curve

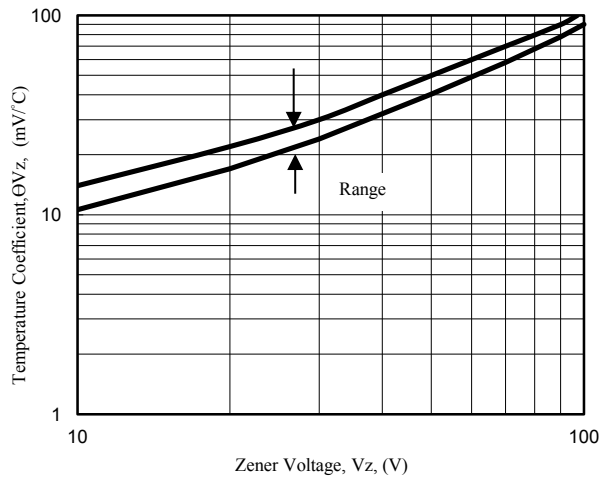


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

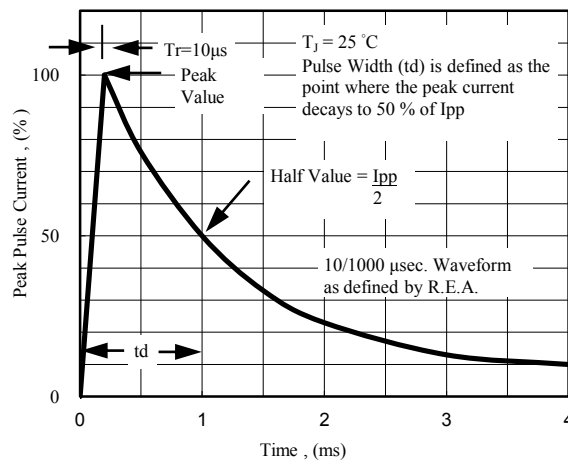


Fig. 3 - Pulse Waveform

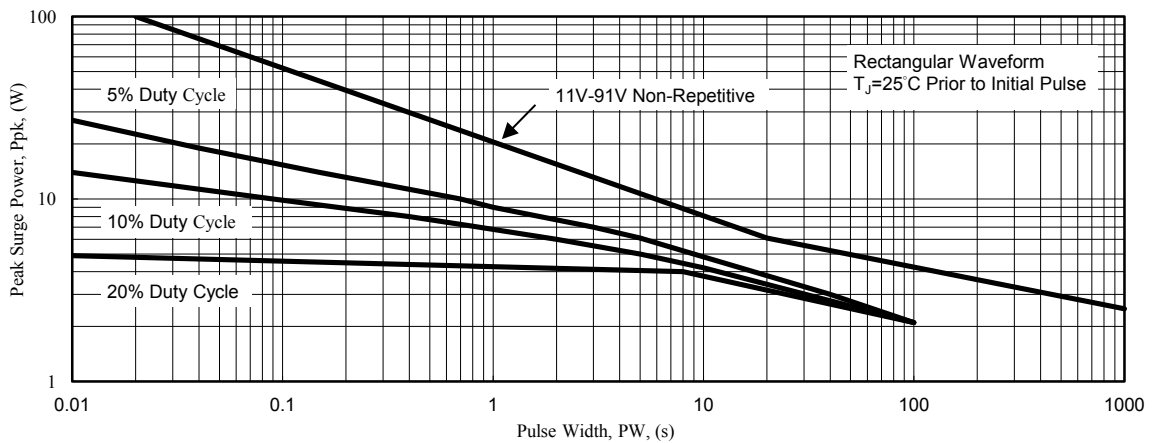


Fig. 4 - Maximum Surge Power

Electrical Characteristics(T_A=25°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)
SML4728A	28A	3.3	76.0	10.0	400	1.00	100.0	1.0	274.0	1370
SML4729A	29A	3.6	69.0	10.0	400	1.00	100.0	1.0	251.0	1255
SML4730A	30A	3.9	64.0	9.0	400	1.00	50.0	1.0	232.0	1160
SML4731A	31A	4.3	58.0	9.0	400	1.00	10.0	1.0	210.0	1050
SML4732A	32A	4.7	53.0	8.0	500	1.00	10.0	1.0	192.0	960
SML4733A	33A	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885
SML4734A	34A	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805
SML4735A	35A	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730
SML4736A	36A	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660
SML4737A	37A	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605
SML4738A	38A	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550
SML4739A	39A	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500
SML4740A	40A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
SML4741A	41A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
SML4742A	42A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
SML4743A	43A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
SML4744A	44A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
SML4745A	45A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
SML4746A	46A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
SML4747A	47A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
SML4748A	48A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
SML4749A	49A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
SML4750A	50A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
SML4751A	51A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
SML4752A	52A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
SML4753A	53A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
SML4754A	54A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
SML4755A	55A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
SML4756A	56A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
SML4757A	57A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
SML4758A	58A	56.0	4.5	110.0	2000	0.25	0.1	42.6	16.0	80
SML4759A	59A	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70
SML4760A	60A	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65
SML4761A	61A	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60
SML4762A	62A	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55
SML4763A	63A	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50
SML4764A	64A	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45
SMZ1110A	11Z	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40
SMZ1120A	12Z	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37
SMZ1130A	13Z	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34
SMZ1150A	15Z	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30
SMZ1160A	16Z	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28
SMZ1180A	18Z	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25
SMZ1200A	20Z	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22
SMZ1220A	22Z	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20
SMZ1240A	24Z	240.0	0.9	1800.0	8500	0.25	0.1	182.4	3.8	19
SMZ1250A	25Z	250.0	0.9	2000.0	9000	0.25	0.1	190.0	3.6	18
SMZ1270A	27Z	270.0	0.8	2100.0	9000	0.25	0.1	205.0	3.3	16
SMZ1300A	30Z	300.0	0.8	2300.0	9500	0.25	0.1	228.0	3.0	15
SMZ1330A	33Z	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 method