

V_Z: 3.3 to 330 V

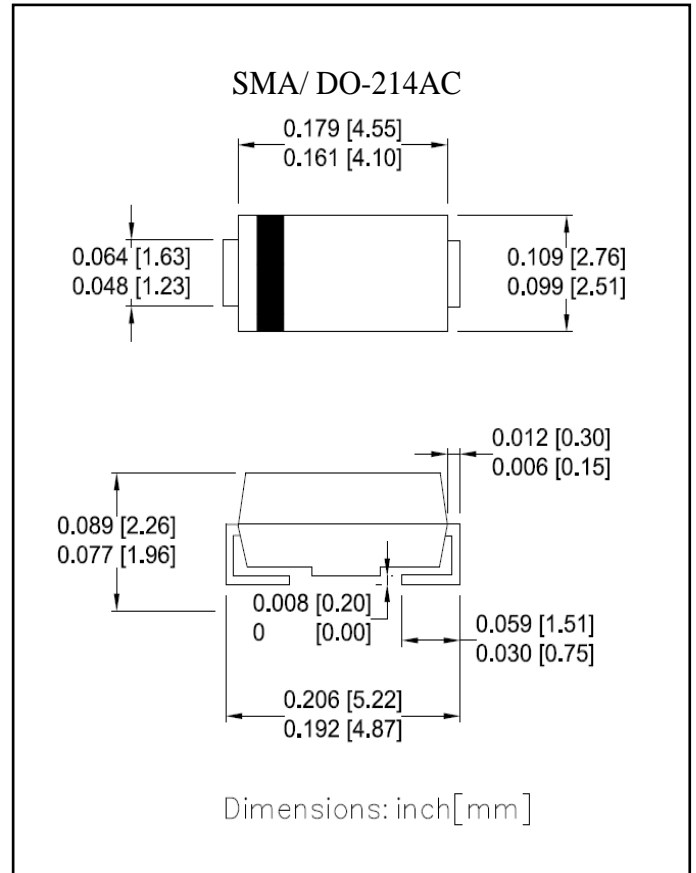
P_D: 1 W

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



Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	UNIT
DC power dissipation at T _L = 50 °C ⁽¹⁾	P _D	1	W
Maximum forward voltage at I _F = 200 mA	V _F	1.2	V
Maximum thermal resistance junction to ambient air ⁽²⁾	R _{ΘJA}	170	K/W
Junction temperature range	T _J	- 55 to + 175	°C
Storage temperature range	T _{STG}	- 55 to + 175	°C

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

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

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

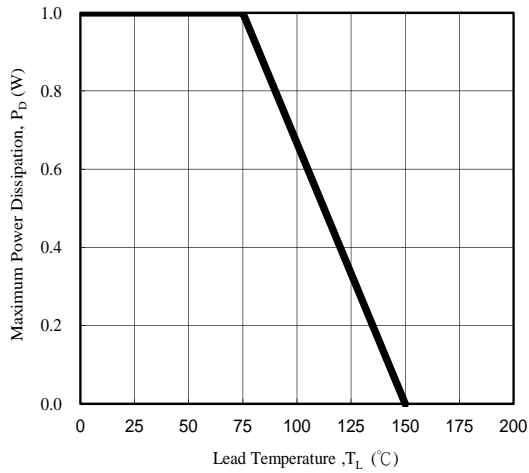


Fig. 1 - Power Temperature Derating Curve

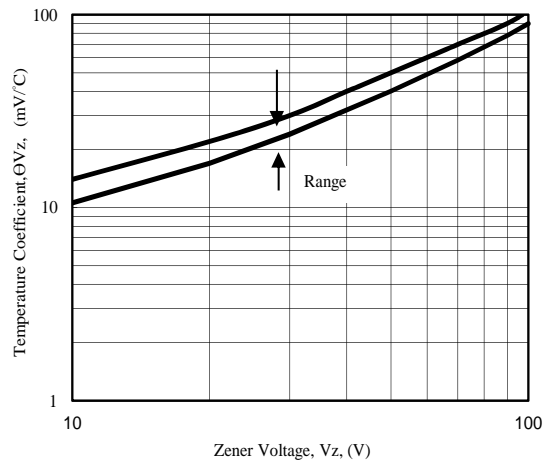


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

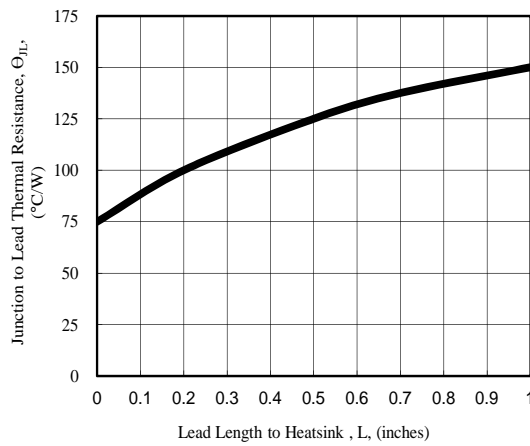


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

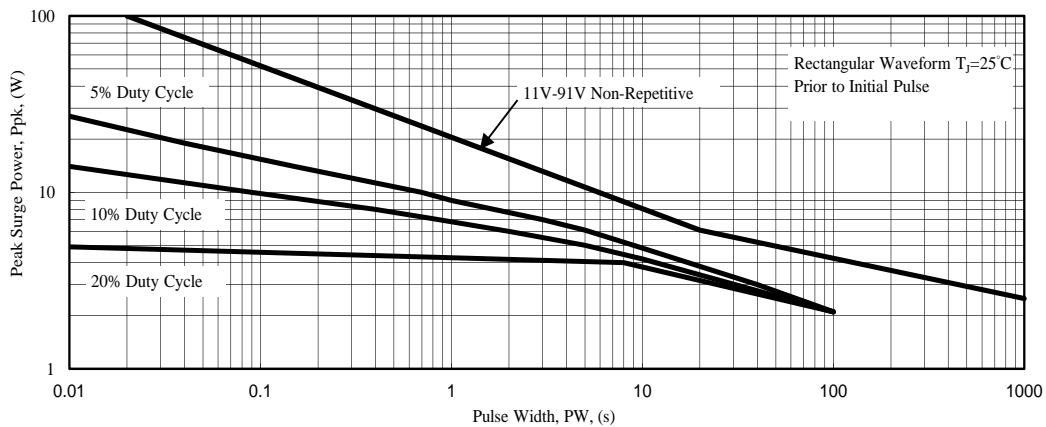


Fig. 4 - Maximum Surge Power

Electrical Characteristics($T_A=25^{\circ}\text{C}$ 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)
TSMA4728A	28A	3.3	76.0	10.0	400	1.00	100.0	1.0	274.0	1370
TSMA4729A	29A	3.6	69.0	10.0	400	1.00	100.0	1.0	251.0	1255
TSMA4730A	30A	3.9	64.0	9.0	400	1.00	50.0	1.0	232.0	1160
TSMA4731A	31A	4.3	58.0	9.0	400	1.00	10.0	1.0	210.0	1050
TSMA4732A	32A	4.7	53.0	8.0	500	1.00	10.0	1.0	192.0	960
TSMA4733A	33A	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885
TSMA4734A	34A	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805
TSMA4735A	35A	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730
TSMA4736A	36A	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660
TSMA4737A	37A	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605
TSMA4738A	38A	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550
TSMA4739A	39A	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500
TSMA4740A	40A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
TSMA4741A	41A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
TSMA4742A	42A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
TSMA4743A	43A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
TSMA4744A	44A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
TSMA4745A	45A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
TSMA4746A	46A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
TSMA4747A	47A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
TSMA4748A	48A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
TSMA4749A	49A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
TSMA4750A	50A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
TSMA4751A	51A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
TSMA4752A	52A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
TSMA4753A	53A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
TSMA4754A	54A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
TSMA4755A	55A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
TSMA4756A	56A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
TSMA4757A	57A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
TSMA4758A	58A	56.0	4.5	110.0	2000	0.25	0.1	42.6	16.0	80
TSMA4759A	59A	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70
TSMA4760A	60A	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65
TSMA4761A	61A	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60
TSMA4762A	62A	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55
TSMA4763A	63A	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50
TSMA4764A	64A	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45
TSZ1110A	11Z	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40
TSZ1120A	12Z	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37
TSZ1130A	13Z	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34
TSZ1150A	15Z	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30
TSZ1160A	16Z	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28
TSZ1180A	18Z	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25
TSZ1200A	20Z	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22
TSZ1220A	22Z	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20
TSZ1240A	24Z	240.0	0.9	1800.0	8500	0.25	0.1	182.4	3.8	19
TSZ1250A	25Z	250.0	0.9	2000.0	9000	0.25	0.1	190.0	3.6	18
TSZ1270A	27Z	270.0	0.8	2100.0	9000	0.25	0.1	205.0	3.3	16
TSZ1300A	30Z	300.0	0.8	2300.0	9500	0.25	0.1	228.0	3.0	15
TSZ1330A	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