



# SMA4728A THRU SMA4764A

## ZENER DIODES

**REVERSE VOLTAGE:** 3.3 TO 100 VOLTS

**POWER DISSIPATION:** 1.0 WATTS

### FEATURES

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- For use in stabilizing and clipping circuits with high power rating
- Suffix " H " indicated Halogen-free part, ex.SMA4728AH

### MECHANICAL DATA

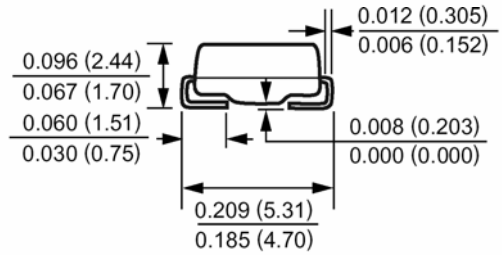
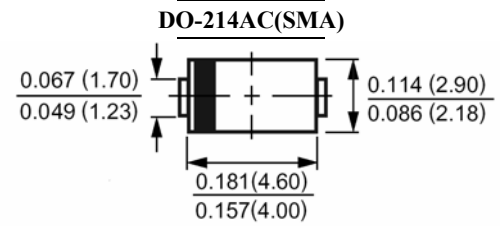
Case : Molded plastic DO-214(SMA)

Epoxy : UL 94V-0 rate flame retardant

Lead : Solderable per MIL-STD-750, method 2026

Polarity : Color band denotes cathode end

Mounting position : Any



Dimensions in inches and (millimeters)

### Absolute Maximum Ratings

Tamb = 25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
DC power dissipation at $T_L=50^\circ\text{C}^{(1)}$	$P_D$	1.0	W
Maximum forward voltage at $I_F=200\text{mA}$	$V_F$	1.2	V
Maximum thermal resistance junction to ambient air $^{(2)}$	$R_{\theta JA}$	170	K/W
Junction Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°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.



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### Electrical Characteristics

Type	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	Ohm	Ohm	mA	uA	V	mA	mApk
SMA4728A	3.3	76.0	10.0	400	1.00	100	1.0	274	1370
SMA4729A	3.6	69.0	10.0	400	1.00	100	1.0	251	1255
SMA4730A	3.9	64.0	9.0	400	1.00	50.0	1.0	232	1160
SMA4731A	4.3	58.0	9.0	400	1.00	10.0	1.0	210	1050
SMA4732A	4.7	53.0	8.0	500	1.00	10.0	1.0	192	960
SMA4733A	5.1	49.0	7.0	550	1.00	10.0	1.0	177	885
SMA4734A	5.6	45.0	5.0	600	1.00	10.0	2.0	161	805
SMA4735A	6.2	41.0	2.0	700	1.00	10.0	3.0	146	730
SMA4736A	6.8	37.0	3.5	700	1.00	5.0	4.0	133	660
SMA4737A	7.5	34.0	4.0	700	0.50	5.0	5.0	121	605
SMA4738A	8.2	31.0	4.5	700	0.50	5.0	6.0	110	550
SMA4739A	9.1	28.0	5.0	700	0.50	0.5	7.0	100	500
SMA4740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91	454
SMA4741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83	414
SMA4742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76	380
SMA4743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69	344
SMA4744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61	305
SMA4745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57	285
SMA4746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50	250
SMA4747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45	225
SMA4748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41	205
SMA4749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38	190
SMA4750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34	170
SMA4751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30	150
SMA4752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27	135
SMA4753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25	125
SMA4754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23	115
SMA4755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22	110
SMA4756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19	95
SMA4757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18	90
SMA4758A	56.0	4.5	110	2000	0.25	0.1	42.6	16	80
SMA4759A	62.0	4.0	125	2000	0.25	0.1	47.1	14	70
SMA4760A	68.0	3.7	150	2000	0.25	0.1	51.7	13	65
SMA4761A	75.0	3.3	175	2000	0.25	0.1	56.0	12	60
SMA4762A	82.0	3.0	200	3000	0.25	0.1	62.2	11	55
SMA4763A	91.0	2.8	250	3000	0.25	0.1	69.2	10	50
SMA4764A	100	2.5	350	3000	0.25	0.1	76.0	9.0	45

**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



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### RATINGS AND CHARACTERISTIC CURVES

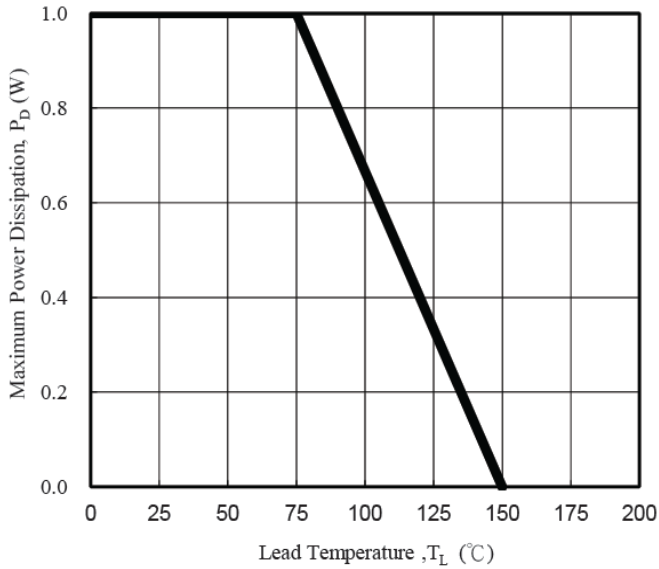


Fig. 1 - Power Temperature Derating Curve

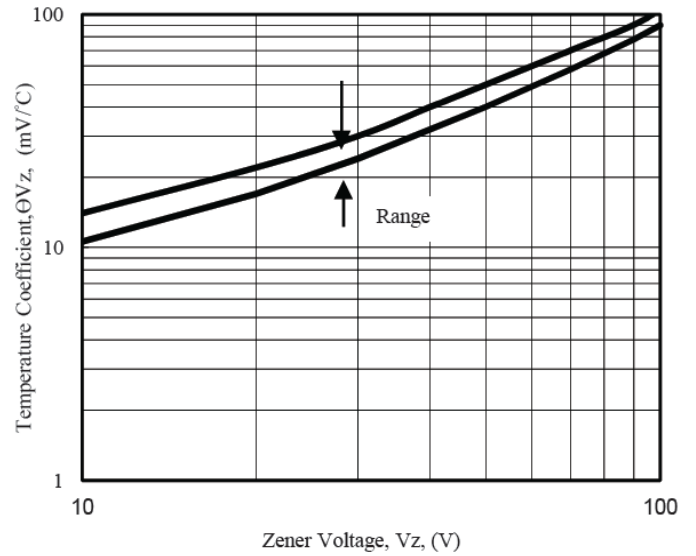


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

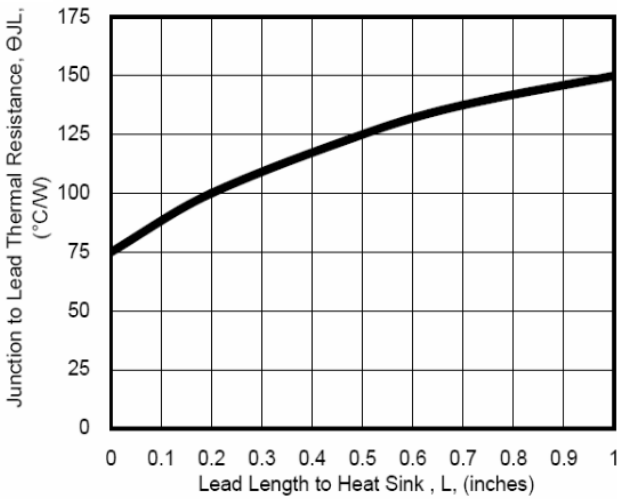


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

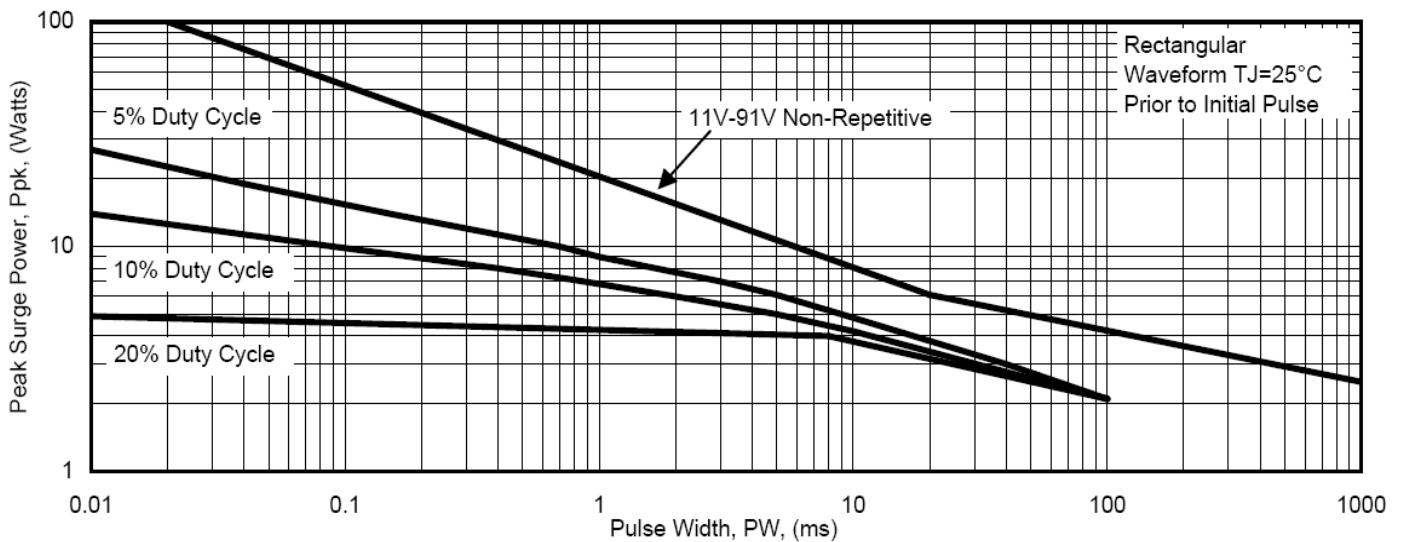


Fig. 4 - Maximum Surge Power