

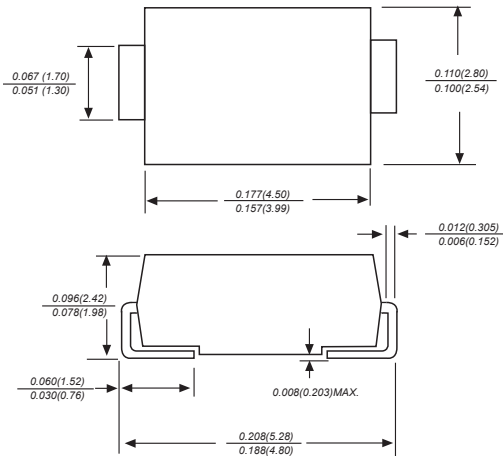
# 1SMA4728A THRU 1SMA200A



## ZENER DIODES

**Zener Voltage:** 3.3-200V **Peak Pulse Power:** 1W

### DO-214AC/SMA



Dimensions in inches and (millimeters)

### FEATURE

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Typical  $I_R$  less than 5.0  $\mu$ A above 11V
- ◆ High temperature soldering guaranteed: 260°C / 10 seconds at terminals
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### MECHANICAL DATA

**Case:** Molded plastic over passivated junction

**Terminals:** Plated leads, solderable per MIL-STD 750, method 2025

**Polarity:** Color band denotes cathode end

**Standard packaging:** 12mm tape (EIA-481)

**Weight:** 0.002 ounce, 0.07 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Catalog Number	SYMBOLS	VALUE	UNITS
Peak Power Dissipation at $T_A=50^\circ\text{C}$ , Derate above 50°C (Note 1)	$P_D$	1.0 6.67	Watts mW/ $^\circ\text{C}$
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 2)	$I_{FSM}$	10.0	Amps
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^\circ\text{C}$

Notes: 1. Mounted on 5.0mm<sup>2</sup> (0.013mm thick) land areas.

2. Measured on 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minute Maximum.

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) VF=1.2V max, IF=200mA for all types.

Part Number	V <sub>Z</sub> @ I <sub>ZT</sub>			Maximum Zener Impedance				Maximum Leakage Current		Marking Code	Package
				Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V		
1.0 Watt ZENER Diodes -- continued											
1SMA4728A	3.3	3.1	3.5	10.0	76.0	400	1.00	100	1.0	728A	SMA
1SMA4729A	3.6	3.4	3.8	10.0	69.0	400	1.00	100	1.0	729A	SMA
1SMA4730A	3.9	3.7	4.1	9.0	64.0	400	1.00	50	1.0	730A	SMA
1SMA4731A	4.3	4.1	4.5	9.0	58.0	400	1.00	10	1.0	731A	SMA
1SMA4732A	4.7	4.5	4.9	8.0	53.0	500	1.00	10	1.0	732A	SMA
1SMA4733A	5.1	4.8	5.4	7.0	49.0	550	1.00	10	1.0	733A	SMA
1SMA4734A	5.6	5.3	5.9	5.0	45.0	600	1.00	10	2.0	734A	SMA
1SMA4735A	6.2	5.9	6.5	2.0	41.0	700	1.00	10	3.0	735A	SMA
1SMA4736A	6.8	6.5	7.1	3.5	37.0	700	1.00	10	4.0	736A	SMA
1SMA4737A	7.5	7.1	7.9	4.0	34.0	700	0.50	10	5.0	737A	SMA
1SMA4738A	8.2	7.8	8.6	4.5	31.0	700	0.50	10	6.0	738A	SMA
1SMA4739A	9.1	8.6	9.6	5.0	28.0	700	0.50	10	7.0	739A	SMA
1SMA4740A	10.0	9.5	10.5	7.0	25.0	700	0.25	10	7.6	740A	SMA
1SMA4741A	11.0	10.5	11.6	8.0	23.0	700	0.25	5.0	8.4	741A	SMA
1SMA4742A	12.0	11.4	12.6	9.0	21.0	700	0.25	5.0	9.1	742A	SMA
1SMA4743A	13.0	12.4	13.7	10.0	19.0	700	0.25	5.0	9.9	743A	SMA
1SMA4744A	15.0	14.3	15.8	14.0	17.0	700	0.25	5.0	11.4	744A	SMA
1SMA4745A	16.0	15.2	16.8	16.0	15.5	700	0.25	5.0	12.2	745A	SMA
1SMA4746A	18.0	17.1	18.9	20.0	14.0	750	0.25	5.0	13.7	746A	SMA
1SMA4747A	20.0	19.0	21.0	22.0	12.5	750	0.25	5.0	15.2	747A	SMA
1SMA4748A	22.0	20.9	23.1	23.0	11.5	750	0.25	5.0	16.7	748A	SMA
1SMA4749A	24.0	22.8	25.2	25.0	10.5	750	0.25	5.0	18.2	749A	SMA
1SMA4750A	27.0	25.7	28.4	35.0	9.5	750	0.25	5.0	20.6	750A	SMA
1SMA4751A	30.0	28.5	31.5	40.0	8.5	1000	0.25	5.0	22.8	751A	SMA
1SMA4752A	33.0	31.4	34.7	45.0	7.5	1000	0.25	5.0	25.1	752A	SMA
1SMA4753A	36.0	34.2	37.8	50.0	7.0	1000	0.25	5.0	27.4	753A	SMA
1SMA4754A	39.0	37.1	41	60.0	6.5	1000	0.25	5.0	29.7	754A	SMA
1SMA4755A	43.0	40.9	45.2	70.0	6.0	1500	0.25	5.0	32.7	755A	SMA
1SMA4756A	47.0	44.7	49.4	80.0	5.5	1500	0.25	5.0	35.8	756A	SMA
1SMA4757A	51.0	48.5	53.6	95.0	5.0	1500	0.25	5.0	38.8	757A	SMA
1SMA4758A	56.0	53.2	58.8	110	4.5	2000	0.25	5.0	42.6	758A	SMA
1SMA4759A	62.0	58.9	65.1	125	4.0	2000	0.25	5.0	47.1	759A	SMA
1SMA4760A	68.0	64.6	71.4	150	3.7	2000	0.25	5.0	51.7	760A	SMA
1SMA4761A	75.0	71.3	78.8	175	3.3	2000	0.25	5.0	56.0	761A	SMA
1SMA4762A	82.0	77.9	86.1	200	3.0	3000	0.25	5.0	62.2	762A	SMA
1SMA4763A	91.0	86.5	95.6	250	2.8	3000	0.25	5.0	69.2	763A	SMA
1SMA4764A	100	95.0	105	350	2.5	3000	0.25	5.0	76.0	100A	SMA
1SMA110A	110	104.5	115.5	450	2.3	4000	0.25	5.0	83.6	110A	SMA
1SMA120A	120	114	126	550	2.0	4500	0.25	5.0	91.2	120A	SMA
1SMA130A	130	123.5	136.5	700	1.9	5000	0.25	5.0	98.8	130A	SMA
1SMA150A	150	142.5	157.5	1000	1.7	6000	0.25	5.0	114.0	150A	SMA
1SMA160A	160	152	168	1100	1.6	6500	0.25	5.0	121.6	160A	SMA
1SMA180A	180	171	189	1200	1.4	7000	0.25	5.0	136.8	180A	SMA
1SMA200A	200	190	210	1500	1.2	8000	0.25	5.0	152.0	200A	SMA

# RATINGS AND CHARACTERISTIC CURVES( 1SMA4728A THRU 1SMA200A)

FIG.1- POWER TEMPERATURE DERATING CURVE

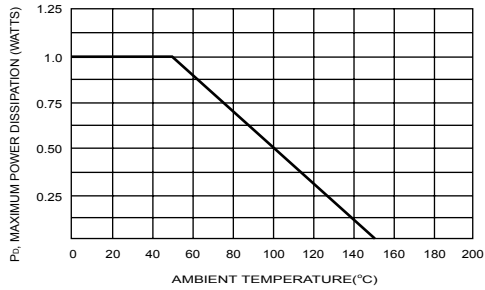


FIG.2- TYPICAL FORWARD CHARACTERISTICS

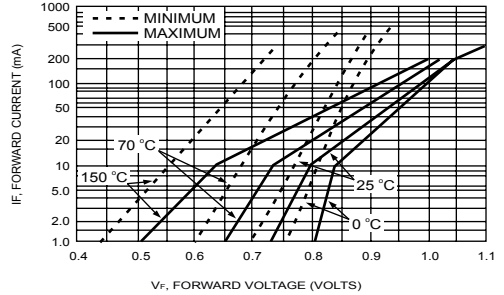


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

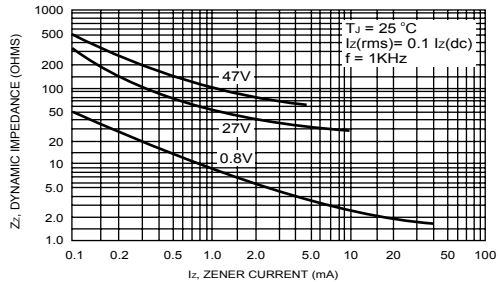


FIG.5- TYPICAL LEAKAGE CURRENT

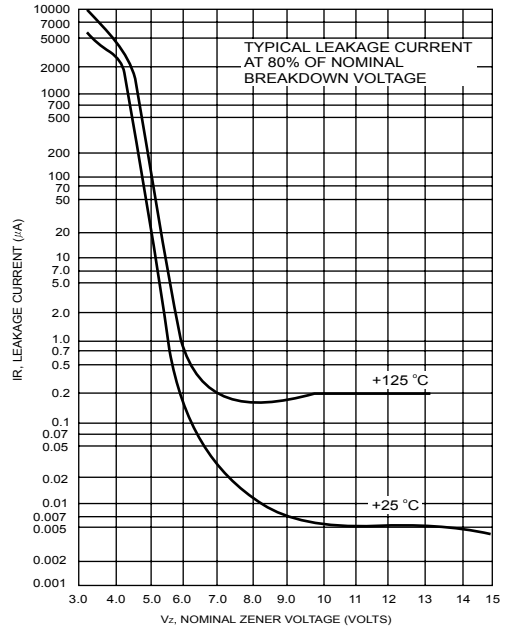


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

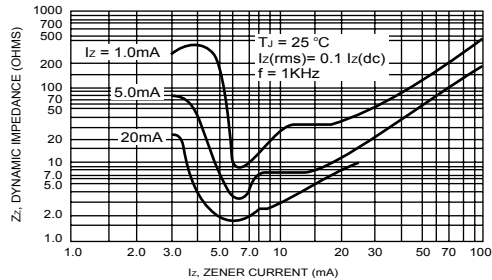


FIG.6- TYPICAL CAPACITANCE versus V<sub>Z</sub>

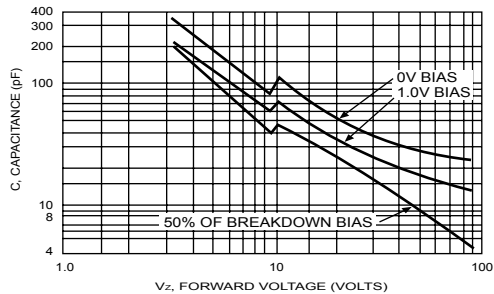
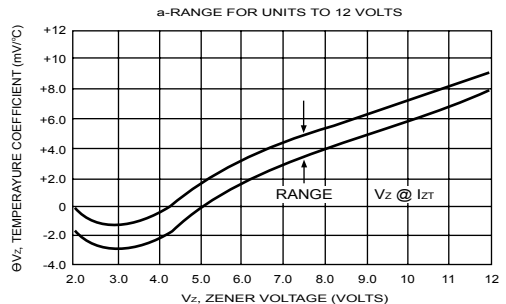


FIG.7- TEMPERATURE COEFFICIENTS



The curve graph is for reference only

# RATINGS AND CHARACTERISTIC CURVES( 1SMA4728A THRU 1SMA200A)

FIG.7- TEMPERATURE COEFFICIENTS

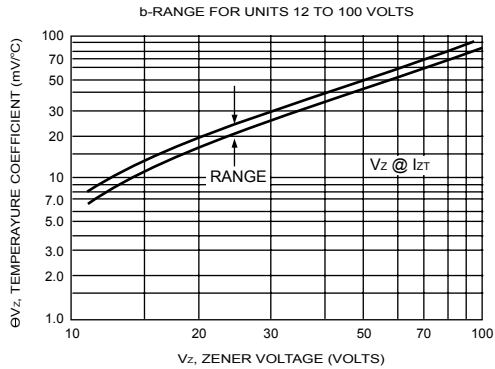


FIG.8- EFFECT OF ZENER CURRENT

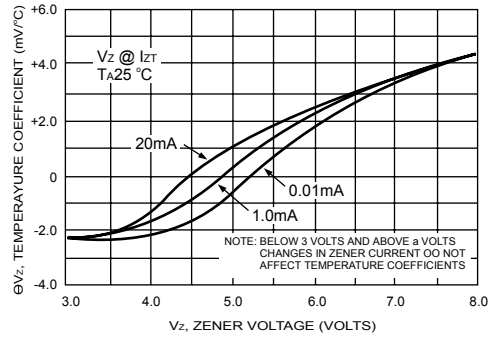
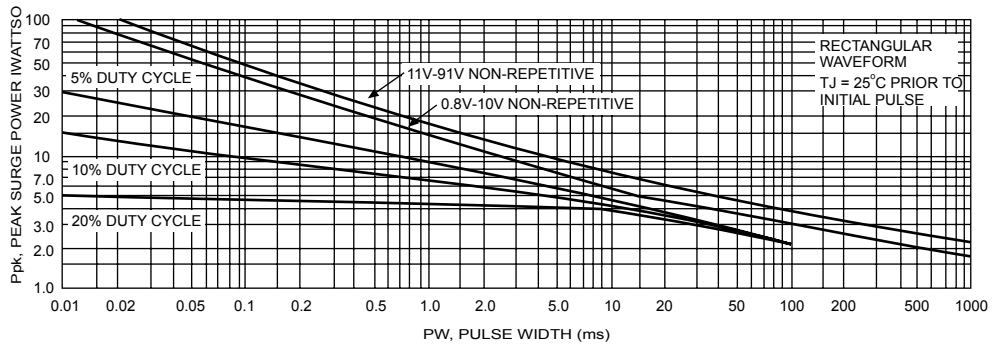


FIG.9- MAXIMUM SURGE POWER



The curve graph is for reference only