



## ZENER DIODE

# 1N4728A THRU 1N4764A

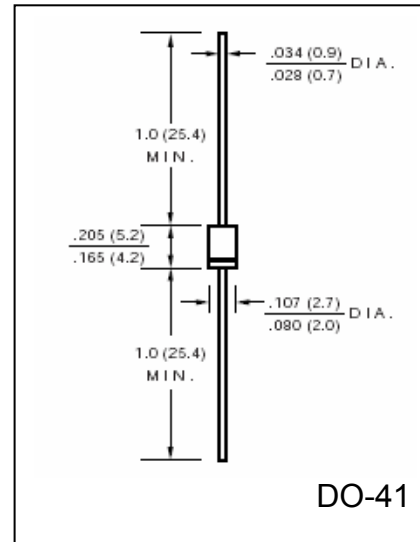
VOLTAGE RANGE	3.3 to 100 Volts
POWER DISSIPATION	1.0 Watt

### FEATURES

- Planer die construction
- General Purpose, high power device
- 1W power dissipation
- Also available in an SMA package as the SML4728A series
- Also available in a Glass Melf package as the ZM4728A series

### MECHANICAL DATA

- Case: Plastic DO-41
- Leads: Solderable per MIL-STD 750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.00035 ounce, 0.01 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOL	VALUE	UNIT
Device Characteristics – See table			
Power dissipation (Note 1)	$P_D$	1.0	Watt
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	170	°C/W
Operating Junction Temperature Range	$T_J$	(-65 to +150)	°C
Storage Temperature Range	$T_{STG}$	(-65 to +150)	°C

### Notes:

1. Provided terminals are kept at ambient temperature



## RATINGS FOR 1N4728A THRU 1N4764A

**Electrical Characteristics - All values at  $T_A = 25^{\circ}\text{C}$  unless otherwise specified**

Type Number	Nominal Zener Voltage at $I_{ZT}$ (Note 2)		Maximum Zener Impedance (Note 1)			Maximum Reverse Current		Maximum Surge Current 8.3mS	Maximum Regulator Current, (Note 3)
	$V_Z$	$I_{ZT}$	$Z_{ZT}@ I_{ZT}$	$Z_{ZK}@ I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$	$I_{ZS}$	$I_{ZM}$
	(V)	mA	Ohms		mA	$\mu\text{A}$	V	mA	mA
1N4728A	3.3	76	10	400	1.0	100	1	1380	276
1N4729A	3.6	69	10	400	1.0	100	1	1260	252
1N4730A	3.9	64	9.0	400	1.0	50	1	1190	234
1N4731A	4.3	58	9.0	400	1.0	10	1	1070	217
1N4732A	4.7	53	8.0	500	1.0	10	1	970	193
1N4733A	5.1	49	7.0	500	1.0	10	1	890	178
1N4734A	5.6	45	5.0	550	1.0	10	2	810	162
1N4735A	6.2	41	2.0	600	1.0	10	3	730	146
1N4736A	6.8	37	3.5	700	1.0	10	4	660	133
1N4737A	7.5	34	4.0	700	0.5	10	5	605	121
1N4738A	8.2	31	4.5	700	0.5	10	6	550	110
1N4739A	9.1	28	5.0	700	0.5	10	7	500	100
1N4740A	10	25	7.0	700	0.25	10	7.6	454	91
1N4741A	11	23	8.0	700	0.25	5	8.4	414	83
1N4742A	12	21	9.0	700	0.25	5	9.1	380	76
1N4743A	13	19	10	700	0.25	5	9.9	344	69
1N4744A	15	17	14	700	0.25	5	11.4	304	61
1N4745A	16	15.5	16	700	0.25	5	12.2	285	57
1N4746A	18	14	20	750	0.25	5	13.7	250	50
1N4747A	20	12.5	22	750	0.25	5	15.2	225	45
1N4748A	22	11.5	23	750	0.25	5	16.7	205	41
1N4749A	24	10.5	25	750	0.25	5	18.2	190	38
1N4750A	27	9.5	35	750	0.25	5	20.6	170	34
1N4751A	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752A	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753A	36	7	50	1000	0.25	5	27.4	125	25
1N4754A	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755A	43	6	70	1500	0.25	5	32.7	110	22
1N4756A	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757A	51	5	95	1500	0.25	5	38.8	90	18
1N4758A	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759A	62	4.0	125	2000	0.25	5	47.1	70	14
1N4760A	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761A	75	3.3	175	2000	0.25	5	56.0	60	12
1N4762A	82	3.0	200	3000	0.25	5	62.2	55	11
1N4763A	91	2.8	250	3000	0.25	5	69.2	50	10
1N4764A	100	2.5	350	3000	0.25	5	76.0	45	9

**Notes:**

1. Zener impedance is derived from the 1KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .
2. Measured under thermal equilibrium and DC test conditions
3. Valid provided that electrodes at a distance of 10mm from the case are kept at ambient temperature.

## CHARACTERISTIC CURVES 1N4728A THRU 1N4764A

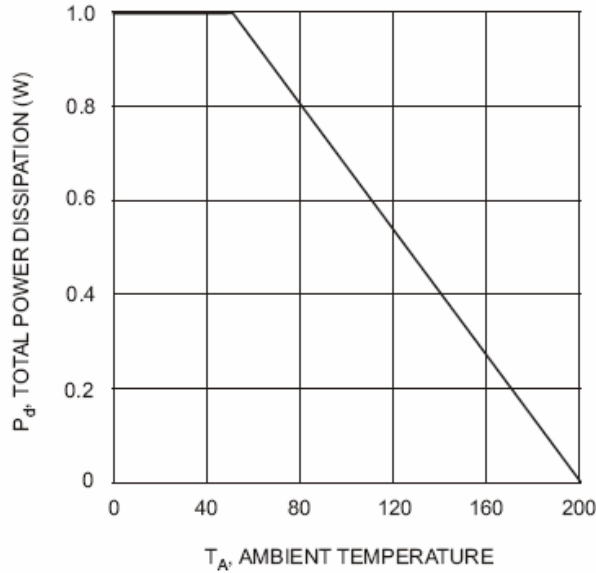


Fig. 1 Power Dissipation vs Ambient Temperature

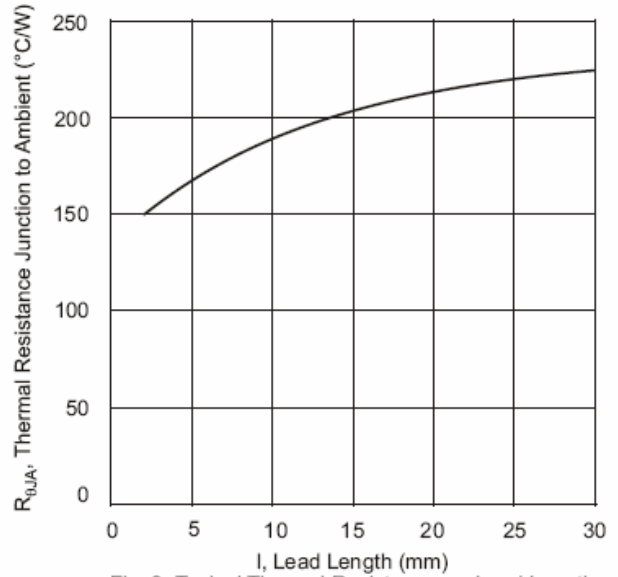


Fig. 2 Typical Thermal Resistance vs. Lead Length

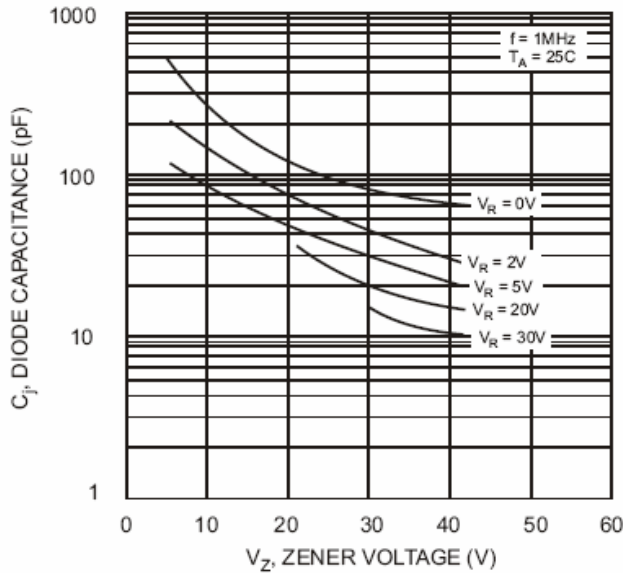


Fig. 3, Junction Capacitance vs Zener Voltage

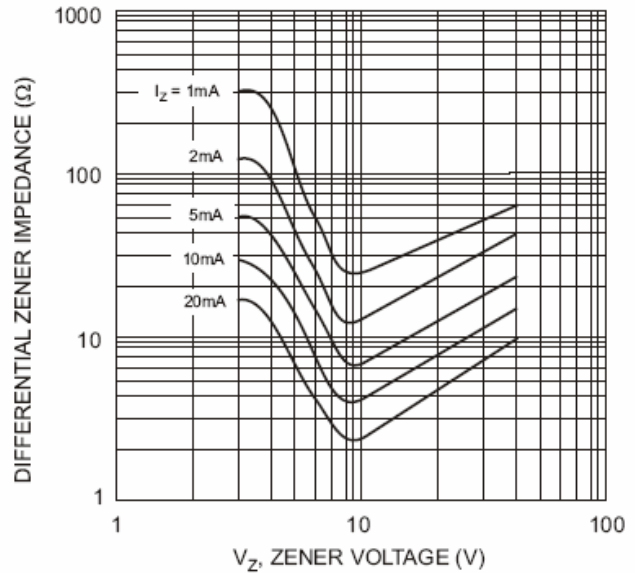


Fig. 4 Typical Zener Impedance vs. Zener Voltage