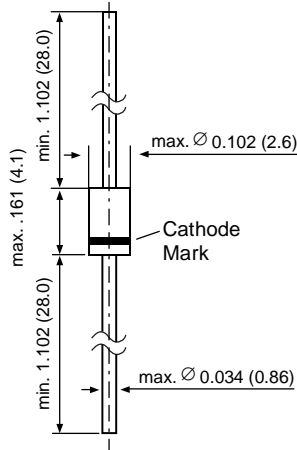




# 1N4728A THRU 1N4764A

## 1W ZENER DIODES

### DO-41 Glass



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Silicon Planar Power Zener Diodes
- ◆ For use in stabilizing and clipping circuits with high power rating.
- ◆ Standard Zener voltage tolerance is  $\pm 10\%$ . Add suffix "A" for  $\pm 5\%$  tolerance. Other Zener voltages and tolerances are available upon request.
- ◆ These diodes are also available in the MELF case with type designation ZM4728 thru ZM4764

### MECHANICAL DATA

**Case:** DO-41 Glass Case

**Weight:** approx. 0.35 g

### MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Zener Current (see Table "Characteristics")			
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	$P_{tot}$	1.0 <sup>(1)</sup>	Watts
Junction Temperature	$T_j$	175	°C
Storage Temperature Range	$T_s$	- 65 to +175	°C

### Characteristics at $T_{amb} = 25^\circ\text{C}$

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	—	—	170 <sup>(1)</sup>	°C/W
Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	—	—	1.2	Volts

#### NOTES:

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

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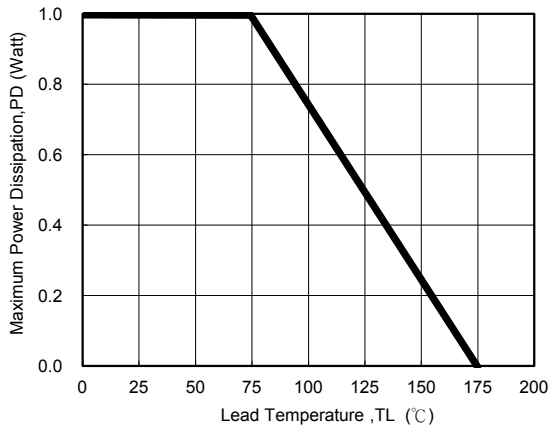


Fig. 1 - Power Temperature Derating Curve

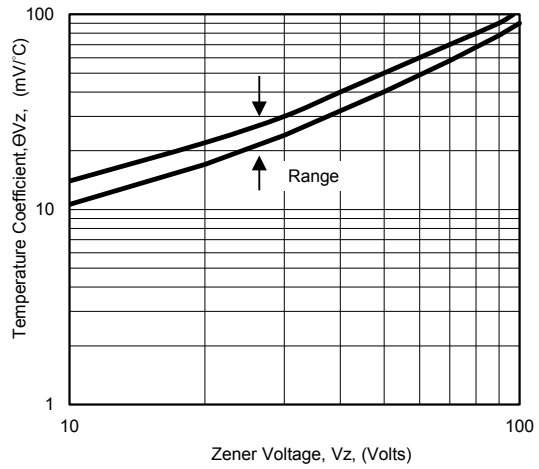


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

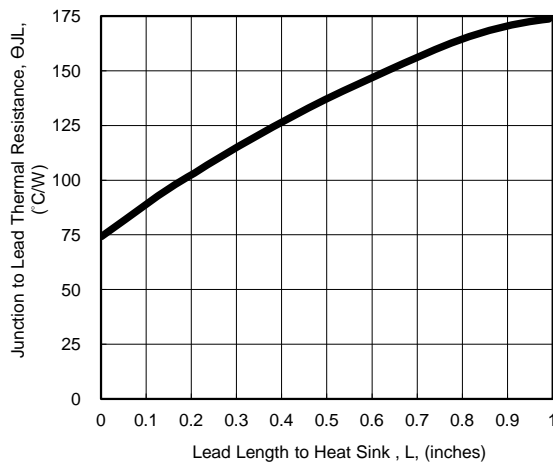


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

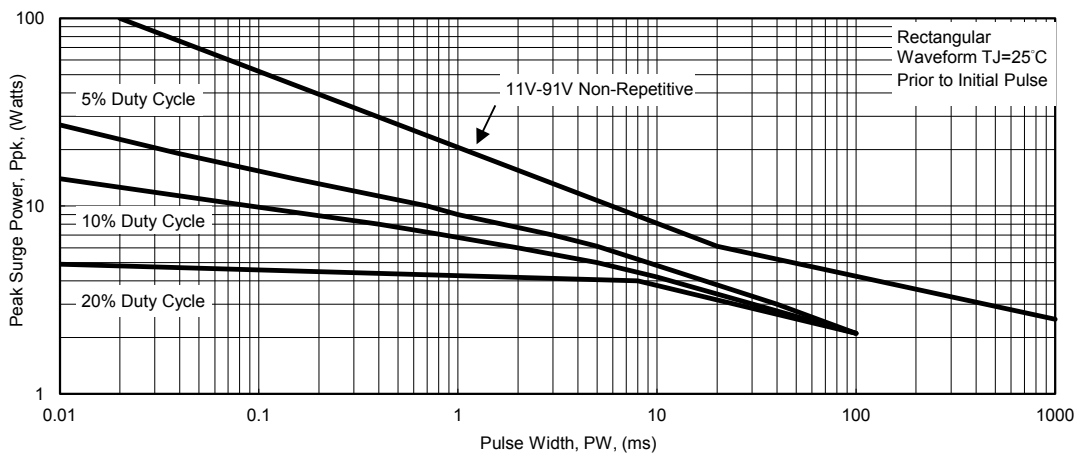


FIG.4 - Maximum Surge Power

ZENER 1W SERIES	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM	IRM
	(V)	(mA)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu$ A)	(V)	(mA)	(mApk)
1N4728A	3.3	76	10	400	1.0	100	1.0	276	1380
1N4729A	3.6	69	10	400	1.0	100	1.0	252	1260
1N4730A	3.9	64	9	400	1.0	50	1.0	234	1190
1N4731A	4.3	58	9	400	1.0	10	1.0	217	1070
1N4732A	4.7	53	8	500	1.0	10	1.0	193	970
1N4733A	5.1	49	7	550	1.0	10	1.0	178	890
1N4734A	5.6	45	5	600	1.0	10	2.0	462	810
1N4735A	6.2	41	2	700	1.0	10	3.0	146	730
1N4736A	6.8	37.0	3.5	700	1.0	10	4.0	133	660
1N4737A	7.5	34.0	4.0	700	0.5	10	5.0	121	605
1N4738A	8.2	31.0	4.5	700	0.5	10	6.0	110	550
1N4739A	9.1	28.0	5.0	700	0.5	10	7.0	100	500
1N4740A	10	25.0	7.0	700	0.25	10	7.6	91	454
1N4741A	11	23.0	8.0	700	0.25	5.0	8.4	83	414
1N4742A	12	21.0	9.0	700	0.25	5.0	9.1	76	380
1N4743A	13	19.0	10	700	0.25	5.0	9.9	69	344
1N4744A	15	17.0	14	700	0.25	5.0	11.4	61	305
1N4745A	16	15.5	16	700	0.25	5.0	12.2	57	285
1N4746A	18	14.0	20	750	0.25	5.0	13.7	50	250
1N4747A	20	12.5	22	750	0.25	5.0	15.2	45	225
1N4748A	22	11.5	23	750	0.25	5.0	16.7	41	205
1N4749A	24	10.5	25	750	0.25	5.0	18.2	38	190
1N4750A	27	9.5	35	750	0.25	5.0	20.6	34	170
1N4751A	30	8.5	40	1000	0.25	5.0	22.8	30	150
1N4752A	33	7.5	45	1000	0.25	5.0	25.1	27	135
1N4753A	36	7.0	50	1000	0.25	5.0	27.4	25	125
1N4754A	39	6.5	60	1000	0.25	5.0	29.7	23	115
1N4755A	43	6.0	70	1500	0.25	5.0	32.7	22	110
1N4756A	47	5.5	80	1500	0.25	5.0	35.8	19	95
1N4757A	51	5.0	95	1500	0.25	5.0	38.8	18	90
1N4758A	56	4.5	110	2000	0.25	5.0	42.6	16	80
1N4759A	62	4.0	125	2000	0.25	5.0	47.1	14	70
1N4760A	68	3.7	150	2000	0.25	5.0	51.7	13	65
1N4761A	75	3.3	175	2000	0.25	5.0	56.0	12	60
1N4762A	82	3.0	200	3000	0.25	5.0	62.2	11	55
1N4763A	91	2.8	250	3000	0.25	5.0	69.2	10	50
1N4764A	100	2.5	350	3000	0.25	5.0	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 on IZT per JEDEC Method