



# ZM4728 THRU ZM4764

## SILICON PLANAR POWER ZENER DIODES

### Features

#### Silicon Planar Power Zener Diodes

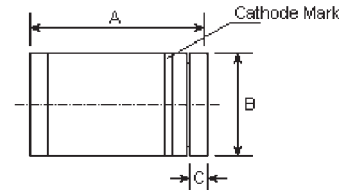
for use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is  $\pm 10\%$ . Add suffix "A" for  $\pm 5\%$  tolerance. Other tolerances available upon request.

These diodes are also available in DO-41 case with the type designation 1N4728 thru 1N4764.

These diodes are delivered taped.  
Details see "Taping".

Weight approx. : 0.25g

#### MELF



DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.189	0.205	4.8	5.2	
B	0.092	0.100	2.35	2.55	$\phi$
C	0.016	-	0.4	-	

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

	Symbols	Values	Units
Zener current see Table "Characteristics"			
Power dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1 <sup>(1)</sup>	W
Junction temperature	$T_j$	175	$^\circ\text{C}$
Storage temperature range	$T_s$	-65 to +175	$^\circ\text{C}$

Note:

(1) Valid provided that electrodes are kept at ambient temperature.

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

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient Air	$R_{thA}$	-	-	170 <sup>(1)</sup>	K/W
Forward voltage at $I_F=200\text{mA}$	$V_F$	-	-	1.2	V

Note:

(1) Valid provided that electrodes are kept at ambient temperature.

Type	Nominal Zener voltage range <sup>3)</sup> at $I_{ZT}$	Test current	Maximum Zener Impedance <sup>1)</sup>			Maximum reverse leakage current		Surge current at $T_A=25^\circ\text{C}$	Maximum regulator current <sup>2)</sup>
	$V_z$	$I_{ZT}$	at $I_{ZT}$ $Z_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$	$I_R$	$I_{ZM}$
	V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	V	mA	mA
ZM4728	3.3	76	10	400	1.0	150	1	1375	275
ZM4729	3.6	69	10	400	1.0	100	1	1260	252
ZM4730	3.9	64	9	400	1.0	100	1	1190	234
ZM4731	4.3	58	9	400	1.0	50	1	1070	217
ZM4732	4.7	53	8	500	1.0	10	1	970	193
ZM4733	5.1	49	7	550	1.0	10	1	890	178
ZM4734	5.6	45	5	600	1.0	10	2	810	162
ZM4735	6.2	41	2	700	1.0	10	3	730	146
ZM4736	6.8	37	3.5	700	1.0	10	4	660	133
ZM4737	7.5	34	4.0	700	0.5	10	5	605	121
ZM4738	8.2	31	4.5	700	0.5	10	6	550	110
ZM4739	9.1	28	5.0	700	0.5	10	7	500	100
ZM4740	10	25	7	700	0.25	10	7.6	454	91
ZM4741	11	23	8	700	0.25	5	8.4	414	83
ZM4742	12	21	9	700	0.25	5	9.1	380	76
ZM4743	13	19	10	700	0.25	5	9.9	344	69
ZM4744	15	17	14	700	0.25	5	11.4	304	61
ZM4745	16	15.5	16	700	0.25	5	12.2	285	57
ZM4746	18	14	20	750	0.25	5	13.7	250	50
ZM4747	20	12.5	22	750	0.25	5	15.2	225	45
ZM4748	22	11.5	23	750	0.25	5	16.7	205	41
ZM4749	24	10.5	25	750	0.25	5	18.2	190	38
ZM4750	27	9.5	35	750	0.25	5	20.6	170	34
ZM4751	30	8.5	40	1000	0.25	5	22.8	150	30
ZM4752	33	7.5	45	1000	0.25	5	25.1	135	27
ZM4753	36	7.0	50	1000	0.25	5	27.4	125	25
ZM4754	39	6.5	60	1000	0.25	5	29.7	115	23
ZM4755	43	6.0	70	1500	0.25	5	32.7	110	22
ZM4756	47	5.5	80	1500	0.25	5	35.8	95	19
ZM4757	51	5.0	95	1500	0.25	5	38.8	90	18
ZM4758	56	4.5	110	2000	0.25	5	42.6	80	16
ZM4759	62	4.0	125	2000	0.25	5	47.1	70	14
ZM4760	68	3.7	150	2000	0.25	5	51.7	65	13
ZM4761	75	3.3	175	2000	0.25	5	56.0	60	12
ZM4762	82	3.0	200	3000	0.25	5	62.2	55	11
ZM4763	91	2.8	250	3000	0.25	5	69.2	50	10
ZM4764	100	2.5	350	3000	0.25	5	76.0	45	9

Notes:

- (1) The Zener Impedance is derived from the 60 Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ . Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- (2) Valid provided that electrodes are kept at ambient temperature.
- (3) Measured under thermal equilibrium and DC test conditions.

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## RATINGS AND CHARACTERISTIC CURVES

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### Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept  
at ambient temperature

