

## ZENER DIODE

### 1N4728 THRU 1N4764

#### FEATURES

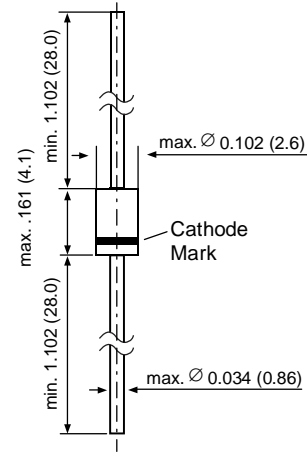
- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating.
- Standard Zener voltage tolerance is  $\pm 10\%$ . Add suffix "A" for  $\pm 5\%$  tolerance. Other Zener voltages and tolerances are available upon request.
- These diodes are also available in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

#### MECHANICAL DATA

- Case: DO-41 Glass Case.
- Weight: approx. 0.35g

Shelf life: 12 months

#### DO-41 Glass



Dimensions in inches and (millimeters)

#### 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	$^{\circ}\text{C}$
Storage Temperature Range	$T_s$	- 65 to +175	$^{\circ}\text{C}$

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	-	-	170 <sup>(1)</sup>	$^{\circ}\text{C}/\text{W}$
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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## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Type	Nominal Zener voltage <sup>(3)</sup> at $I_{ZT}$ $V_z$ V	Test current $I_{ZT}$ mA	Maximum Zener impedance <sup>(1)</sup>			Maximum reverse leakage current		Surge current at $T_A = 25^\circ\text{C}$ $I_{RM}$ mA	Maximum regulator current <sup>(2)</sup> $I_{ZM}$ mA
			$Z_{ZT}$ at $I_{ZT}$ $\Omega$	$Z_{ZK}$ $\Omega$	at $I_{ZK}$ mA	$I_R$ $\mu\text{A}$	at $V_R$ V		
1N4728	3.3	76	10	400	1.0	100	1	1380	276
1N4729	3.6	69	10	400	1.0	100	1	1260	252
1N4730	3.9	64	9	400	1.0	50	1	1190	234
1N4731	4.3	58	9	400	1.0	10	1	1070	217
1N4732	4.7	53	8	500	1.0	10	1	970	193
1N4733	5.1	49	7	550	1.0	10	1	890	178
1N4734	5.6	45	5	600	1.0	10	2	810	162
1N4735	6.2	41	2	700	1.0	10	3	730	146
1N4736	6.8	37	3.5	700	1.0	10	4	660	133
1N4737	7.5	34	4.0	700	0.5	10	5	605	121
1N4738	8.2	31	4.5	700	0.5	10	6	550	110
1N4739	9.1	28	5.0	700	0.5	10	7	500	100
1N4740	10	25	7	700	0.25	10	7.6	454	91
1N4741	11	23	8	700	0.25	5	8.4	414	83
1N4742	12	21	9	700	0.25	5	9.1	380	76
1N4743	13	19	10	700	0.25	5	9.9	344	69
1N4744	15	17	14	700	0.25	5	11.4	304	61
1N4745	16	15.5	16	700	0.25	5	12.2	285	57
1N4746	18	14	20	750	0.25	5	13.7	250	50
1N4747	20	12.5	22	750	0.25	5	15.2	225	45
1N4748	22	11.5	23	750	0.25	5	16.7	205	41
1N4749	24	10.5	25	750	0.25	5	18.2	190	38
1N4750	27	9.5	35	750	0.25	5	20.6	170	34
1N4751	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753	36	7.0	50	1000	0.25	5	27.4	125	25
1N4754	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755	43	6.0	70	1500	0.25	5	32.7	110	22
1N4756	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757	51	5.0	95	1500	0.25	5	38.8	90	18
1N4758	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759	62	4.0	125	2000	0.25	5	47.1	70	14
1N4760	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761	75	3.3	175	2000	0.25	5	56.0	60	12
1N4762	82	3.0	200	3000	0.25	5	62.2	55	11
1N4763	91	2.8	250	3000	0.25	5	69.2	50	10
1N4764	100	2.5	350	3000	0.25	5	76.0	45	9

### NOTES:

- (1) The 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 ( $I_{ZT}$  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 at a distance of 10mm from case are kept at ambient temperature
- (3) Measured under thermal equilibrium and DC test conditions

# RATINGS AND CHARACTERISTIC CURVES 1N4728 THRU 1N4764

## Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient  
temperature at a distance of 10 mm from case

