



SEMICONDUCTOR

1N4728 THRU 1N4764

1W SILICON PLANAR ZENER DIODES

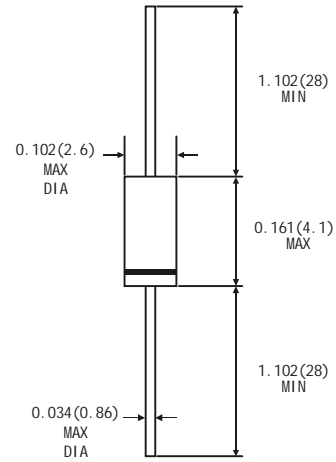
FEATURES

- Silicon planar power zener diodes
For use in stabilizing and clipping circuits with high power rating.
- Standards Zener voltage tolerance is $\pm 10\%$.
Add suffix "A" for $\pm 5\%$ tolerance Other tolerance available upon request

MECHANICAL DATA

- *Case:* DO-41 glass case
- *Weight:* Approx. 0.35 gram

DO-41(GLASS)



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (TA=25 C) °

	<i>Symbols</i>	<i>Value</i>	<i>Units</i>
Zener current see table "Characteristics"			
Power dissipation at TA=25°C	P _{tot}	1 ¹⁾	mW
Junction temperature	T _J	175	°C
Storage temperature range	T _{STG}	-65 to +175	°C

1) Valid provided that a distance of 8mm from case are kept at ambient temperature

ELECTRICAL CHARACTERISTICS (TA=25 C)

	<i>Symbols</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Units</i>
Thermal resistance junction to ambient air	R _{thA}			170 ¹⁾	°C/W
Forward voltage at I _F =200mA	V _F			1.2	V

1) Valid provided that a distance of 8mm from case are kept at ambient temperature

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Type	Nominal Zener Voltage ³⁾	Test Current	Maximum Zener Impedance ¹⁾			Maximum reverse leakage current		Surge current	Maximum regulator Current ²⁾		
	$\frac{dI}{dV_z}$ V	I_{zT} mA	$\frac{dI}{dZ_z}$ Ω	Z_{zK} Ω	$\frac{dI}{dI_{zK}}$ mA	I_{r1} μ A	$\frac{dI}{dV_r}$ V	$\frac{dI}{dI_R}$ mA @ $T_A=0.25$	I_{ZM} mA		
1N4728	3.3	76	10	400	1.0	100	1.0	1380	276		
1N4729	3.6	69	10			1.0	1260	252			
1N4730	3.9	64	9			50	1.0	1190	234		
1N4731	4.3	58	9	500		1.0	1.0	1070	217		
1N4732	4.7	53	8				1.0	970	193		
1N4733	5.1	49	7				550	1.0	890	178	
1N4734	5.6	45	5				600	2.0	810	162	
1N4735	6.2	41	2				700	1.0	3.0	730	146
1N4736	6.8	37	3.5						4.0	660	133
1N4737	7.5	34	4.0						0.5	5.0	605
1N4738	8.2	31	4.5		6.0					550	110
1N4739	9.1	28	5.0		7.0					500	100
1N4740	10	25	7		7.6					454	91
1N4741	11	23	8	8.4	414	83					
1N4742	12	21	9	9.1	380	76					
1N4743	13	19	10	9.9	344	69					
1N4744	15	17	14	11.4	304	61					
1N4745	16	15.5	16	12.2	285	57					
1N4746	18	14	20	750	0.25	5	13.7	250		50	
1N4747	20	12.5	22			15.2	225	45			
1N4748	22	11.5	23			16.7	205	41			
1N4749	24	10.5	25			18.2	190	38			
1N4750	27	9.5	35			20.6	170	34			
1N4751	30	8.5	40			22.8	150	30			
1N4752	33	7.5	45			25.1	135	27			
1N4753	36	7.0	50			27.4	125	25			
1N4754	39	6.5	60			29.7	115	23			
1N4755	43	6.0	70			1000	0.25	5	32.7	110	22
1N4756	47	5.5	80	35.8	95			19			
1N4757	51	5.0	95	38.8	90			18			
1N4758	56	4.5	110	42.6	80			16			
1N4759	62	4.0	125	47.1	70			14			
1N4760	68	3.7	150	51.7	65			13			
1N4761	75	3.3	175	56.0	60			12			
1N4762	82	3.0	200	62.2	55			11			
1N4763	91	2.8	250	69.2	50			10			
1N4764	100	2.5	350	76.0	45			9			
				1500	0.25	5	32.7	110	22		
						35.8	95	19			
						38.8	90	18			
						42.6	80	16			
						47.1	70	14			
						51.7	65	13			
						56.0	60	12			
						62.2	55	11			
						69.2	50	10			
						76.0	45	9			
				2000	0.25	5	32.7	110	22		
						35.8	95	19			
						38.8	90	18			
						42.6	80	16			
						47.1	70	14			
						51.7	65	13			
						56.0	60	12			
						62.2	55	11			
						69.2	50	10			
						76.0	45	9			
				3000	0.25	5	32.7	110	22		
						35.8	95	19			
						38.8	90	18			
						42.6	80	16			
						47.1	70	14			
						51.7	65	13			
						56.0	60	12			
						62.2	55	11			
						69.2	50	10			
						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 at a distance of 10mm from case
are kept at ambient temperature)

