

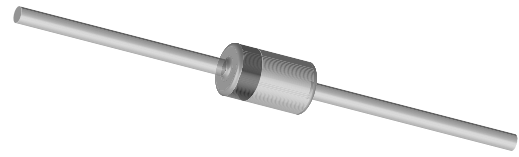
## Zener Diodes

### Features

- Silicon planar power Zener diodes
- For use in stabilizing and clipping circuits with high power rating
- Standard Zener voltage tolerance is  $\pm 5\%$
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**



17173

### Applications

- Voltage stabilization

### Mechanical Data

**Case:** DO-41

**Weight:** approx. 310 mg

**Packaging codes/options:**

TR/5K per 13" reel, 25K/box

TAP/5K per Ammo pack (52 mm tape), 25K/box

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Power dissipation		$P_{tot}$	1.3 <sup>1)</sup>	W
Z-current		$I_Z$	$P_V/V_Z$	mA

<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	110 <sup>1)</sup>	K/W
Junction temperature		$T_j$	175	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 175	$^{\circ}\text{C}$

<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

### Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 200\text{ mA}$	$V_F$			1.2	V

# 1N4728A to 1N4764A



Vishay Semiconductors

## Electrical Characteristics

1N4728A...1N4764A

Part number	Nominal Zener voltage <sup>1)</sup>	Test current	Maximum dynamic impedance			Maximum reverse leakage current		Surge current <sup>3)</sup>	Maximum regulator current <sup>2)</sup>
	$V_Z$ at $I_{ZT}$	$I_{ZT}$	$Z_{ZT}$ at $I_{ZT}$	$Z_{ZK}$ at $I_{ZK}$	$I_{ZK}$	$I_R$	Test voltage $V_R$	at $T_A = 25\text{ }^\circ\text{C}$ $I_R$	$I_{ZM}$
	V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	V	mA	mA
1N4728A	3.3	76	10	400	1	100	1	1380	276
1N4729A	3.6	69	10	400	1	100	1	1260	252
1N4730A	3.9	64	9	400	1	50	1	1190	234
1N4731A	4.3	58	9	400	1	10	1	1070	217
1N4732A	4.7	53	8	500	1	10	1	970	193
1N4733A	5.1	49	7	550	1	10	1	890	178
1N4734A	5.6	45	5	600	1	10	2	810	162
1N4735A	6.2	41	2	700	1	10	3	730	146
1N4736A	6.8	37	3.5	700	1	10	4	660	133
1N4737A	7.5	34	4	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	700	0.5	10	7	500	100
1N4740A	10	25	7	700	0.25	10	7.6	454	91
1N4741A	11	23	8	700	0.25	5	8.4	414	83
1N4742A	12	21	9	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	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	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

<sup>1)</sup> Based on dc-measurement at thermal equilibrium while maintaining the lead temperature ( $T_L$ ) at  $30\text{ }^\circ\text{C} + 1\text{ }^\circ\text{C}$ , 9.5 mm (3/8") from the diode body.

<sup>2)</sup> Valid provided that electrodes at a distance of 4 mm from case are kept at ambient temperature.

<sup>3)</sup>  $t_p = 10\text{ ms}$ .

## Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

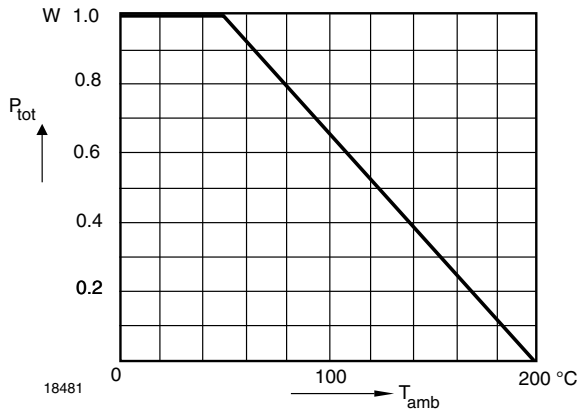
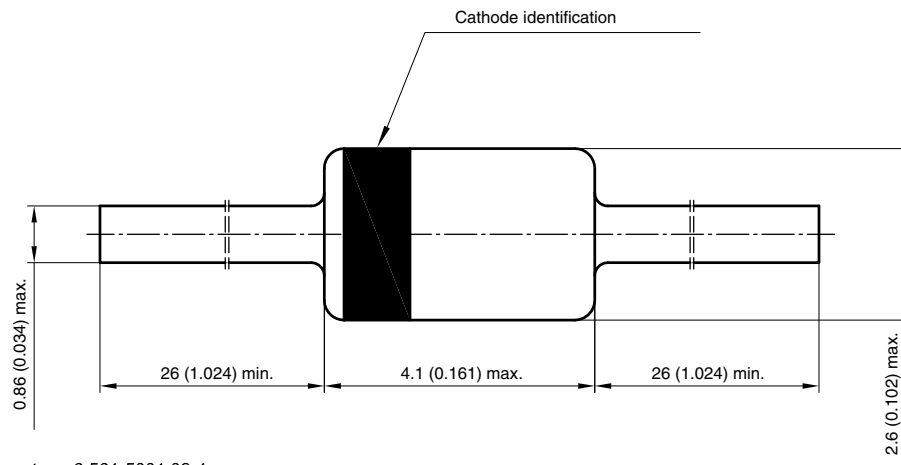


Figure 1. Admissible Power Dissipation vs. Ambient Temperature

## Package Dimensions in millimeters (inches): DO-41



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