

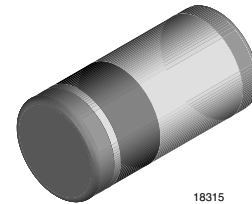
## Zener Diodes

### Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating
- Standard Zener voltage tolerance is  $\pm 5\%$
- These diodes are also available in the DO41 case with type designation 1N4728A to 1N4764A
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



18315

### Mechanical Data

**Case:** MELF glass case

**Weight:** approx. 135 mg

**Cathode band color:** black

**Packaging codes/options:**

GS18/5K per 13" reel (12 mm tape), 10K/box

GS08/1.5K per 7" reel (12 mm tape), 12K/box

### Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Zener current (see Table "Characteristics")				
Power dissipation		$P_{tot}$	1 <sup>1)</sup>	W

Note:

<sup>1)</sup> Valid provided that electrodes 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		$R_{thJA}$	170 <sup>1)</sup>	K/W
Junction temperature		$T_j$	175	$^{\circ}\text{C}$
Storage temperature		$T_{stg}$	- 65 to + 175	$^{\circ}\text{C}$

Note:

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

# ZM4728A to ZM4764A



Vishay Semiconductors

## Electrical Characteristics

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
ZM4728A	3.3	76	10	400	1	100	1	1380	276
ZM4729A	3.6	69	10	400	1	100	1	1260	252
ZM4730A	3.9	64	9	400	1	50	1	1190	234
ZM4731A	4.3	58	9	400	1	10	1	1070	217
ZM4732A	4.7	53	8	500	1	10	1	970	193
ZM4733A	5.1	49	7	550	1	10	1	890	178
ZM4734A	5.6	45	5	600	1	10	2	810	162
ZM4735A	6.2	41	2	700	1	10	3	730	146
ZM4736A	6.8	37	3.5	700	1	10	4	660	133
ZM4737A	7.5	34	4	700	0.5	10	5	605	121
ZM4738A	8.2	31	4.5	700	0.5	10	6	550	110
ZM4739A	9.1	28	5	700	0.5	10	7	500	100
ZM4740A	10	25	7	700	0.25	10	7.6	454	91
ZM4741A	11	23	8	700	0.25	5	8.4	414	83
ZM4742A	12	21	9	700	0.25	5	9.1	380	76
ZM4743A	13	19	10	700	0.25	5	9.9	344	69
ZM4744A	15	17	14	700	0.25	5	11.4	304	61
ZM4745A	16	15.5	16	700	0.25	5	12.2	285	57
ZM4746A	18	14	20	750	0.25	5	13.7	250	50
ZM4747A	20	12.5	22	750	0.25	5	15.2	225	45
ZM4748A	22	11.5	23	750	0.25	5	16.7	205	41
ZM4749A	24	10.5	25	750	0.25	5	18.2	190	38
ZM4750A	27	9.5	35	750	0.25	5	20.6	170	34
ZM4751A	30	8.5	40	1000	0.25	5	22.8	150	30
ZM4752A	33	7.5	45	1000	0.25	5	25.1	135	27
ZM4753A	36	7	50	1000	0.25	5	27.4	125	25
ZM4754A	39	6.5	60	1000	0.25	5	29.7	115	23
ZM4755A	43	6	70	1500	0.25	5	32.7	110	22
ZM4756A	47	5.5	80	1500	0.25	5	35.8	95	19
ZM4757A	51	5	95	1500	0.25	5	38.8	90	18
ZM4758A	56	4.5	110	2000	0.25	5	42.6	80	16
ZM4759A	62	4	125	2000	0.25	5	47.1	70	14
ZM4760A	68	3.7	150	2000	0.25	5	51.7	65	13
ZM4761A	75	3.3	175	2000	0.25	5	56	60	12
ZM4762A	82	3	200	3000	0.25	5	62.2	55	11
ZM4763A	91	2.8	250	3000	0.25	5	69.2	50	10
ZM4764A	100	2.5	350	3000	0.25	5	76	45	9

Notes:

<sup>1)</sup> The zener impedance is derived from the 1 kHz 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

<sup>2)</sup> Valid provided that electrodes are kept at ambient temperature

<sup>3)</sup> Measured under thermal equilibrium and DC test conditions.

## Typical Characteristics

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

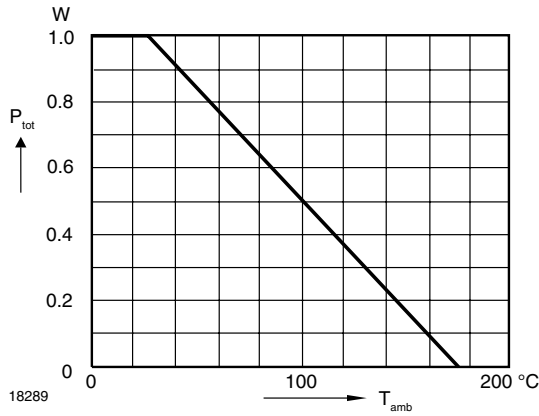
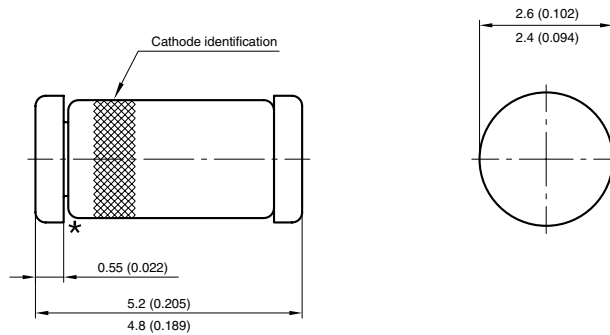


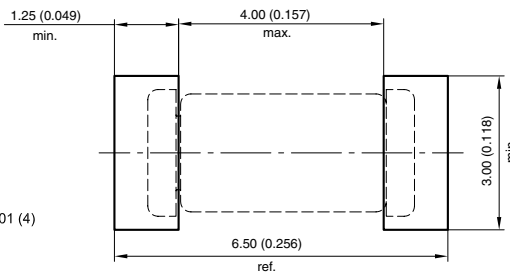
Figure 1. Admissible Power Dissipation vs. Ambient Temperature

## Package Dimensions in millimeters (inches): MELF glass (DO-213)



★ The gap between plug and glass can be either on cathode or anode side

Foot print recommendation:



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