

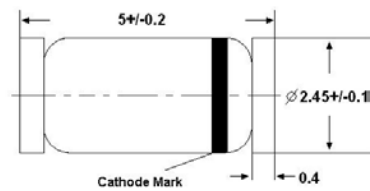


Silicon Planar Power Zener Diodes

For use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is $\pm 10\%$. Other tolerances available are upon request.

These diodes are also available in DO-41 case with the type designation 1N4728...1N4761

LL-41



Glass case MELF
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	1 ¹⁾	W
Operating Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

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

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	170 ¹⁾	$^\circ\text{C/W}$
Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.2	V

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



Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage ³⁾				Dynamic Resistance ¹⁾			Reverse Current		Maximum Surge Current ⁴⁾	Maximum Regulator Current ²⁾
	V_{Znom}	V_Z		at I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R	at $T_a = 25^\circ\text{C}$	
	(V)	Min. (V)	Max. (V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (μA)	(V)	I_{ZSM} (mA)	I_{ZM} (mA)
ZM4727A	3	2.70	3.30	83	10	400	1	150	1	1375	275
ZM4728A	3.3	2.97	3.63	76	10	400	1	150	1	1375	275
ZM4729A	3.6	3.24	3.96	69	10	400	1	100	1	1260	252
ZM4730A	3.9	3.51	4.29	64	9	400	1	100	1	1190	234
ZM4731A	4.3	3.87	4.73	58	9	400	1	50	1	1070	217
ZM4732A	4.7	4.23	5.17	53	8	500	1	10	1	970	193
ZM4733A	5.1	4.59	5.61	49	7	550	1	10	1	890	178
ZM4734A	5.6	5.04	6.16	45	5	600	1	10	2	810	162
ZM4735A	6.2	5.58	6.82	41	2	700	1	10	3	730	146
ZM4736A	6.8	6.12	7.48	37	3.5	700	1	10	4	660	133
ZM4737A	7.5	6.75	8.25	34	4	700	0.5	10	5	605	121
ZM4738A	8.2	7.38	9.02	31	4.5	700	0.5	10	6	550	110
ZM4739A	9.1	8.19	10.01	28	5	700	0.5	10	7	500	100
ZM4740A	10	9.00	11.00	25	7	700	0.25	10	7.6	454	91
ZM4741A	11	9.90	12.10	23	8	700	0.25	5	8.4	414	83
ZM4742A	12	10.80	13.20	21	9	700	0.25	5	9.1	380	76
ZM4743A	13	11.70	14.30	19	10	700	0.25	5	9.9	344	69
ZM4744A	15	13.50	16.50	17	14	700	0.25	5	11.4	304	61
ZM4745A	16	14.40	17.60	15.5	16	700	0.25	5	12.2	285	57
ZM4746A	18	16.20	19.80	14	20	750	0.25	5	13.7	250	50
ZM4747A	20	18.00	22.00	12.5	22	750	0.25	5	15.2	225	45
ZM4748A	22	19.80	24.20	11.5	23	750	0.25	5	16.7	205	41
ZM4749A	24	21.60	26.40	10.5	25	750	0.25	5	18.2	190	38
ZM4750A	27	24.30	29.70	9.5	35	750	0.25	5	20.6	170	34
ZM4751A	30	27.00	33.00	8.5	40	1000	0.25	5	22.8	150	30
ZM4752A	33	29.70	36.30	7.5	45	1000	0.25	5	25.1	135	27
ZM4753A	36	32.40	39.60	7	50	1000	0.25	5	27.4	125	25
ZM4754A	39	35.10	42.90	6.5	60	1000	0.25	5	29.7	115	23
ZM4755A	43	38.70	47.30	6	70	1500	0.25	5	32.7	110	22
ZM4756A	47	42.30	51.70	5.5	80	1500	0.25	5	35.8	95	19
ZM4757A	51	45.90	56.10	5	95	1500	0.25	5	38.8	90	18
ZM4758A	56	50.40	61.60	4.5	110	2000	0.25	5	42.6	80	16
ZM4759A	62	55.80	68.20	4	125	2000	0.25	5	47.1	70	14
ZM4760A	68	61.20	74.80	3.7	150	2000	0.25	5	51.7	65	13
ZM4761A	75	67.50	82.50	3.3	175	2000	0.25	5	56	60	12

¹⁾ The dynamic resistance 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} . Dynamic resistance 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.

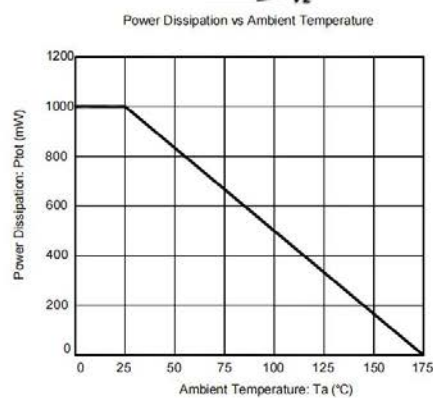
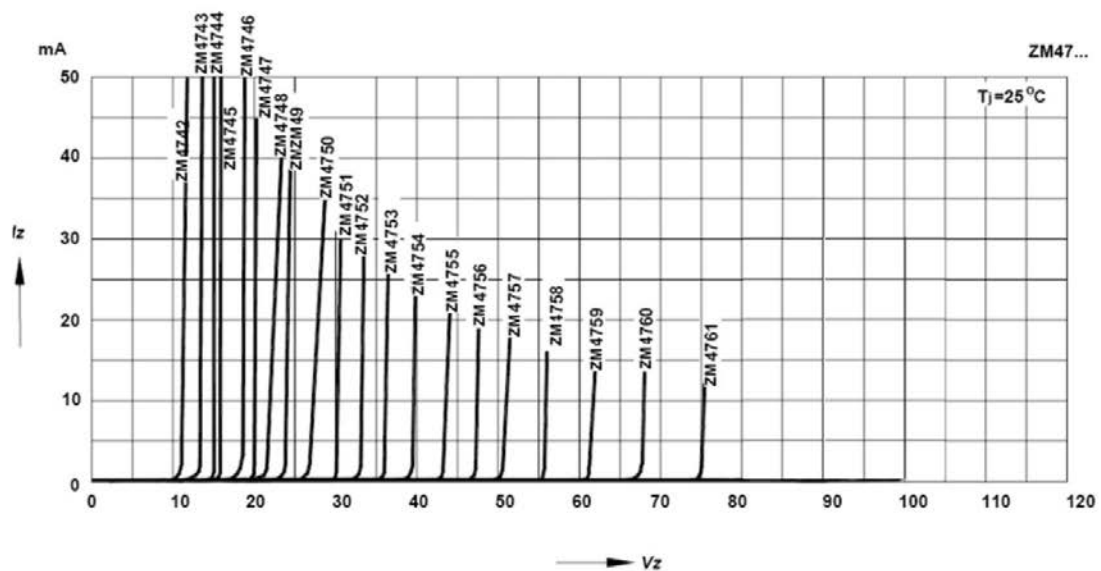
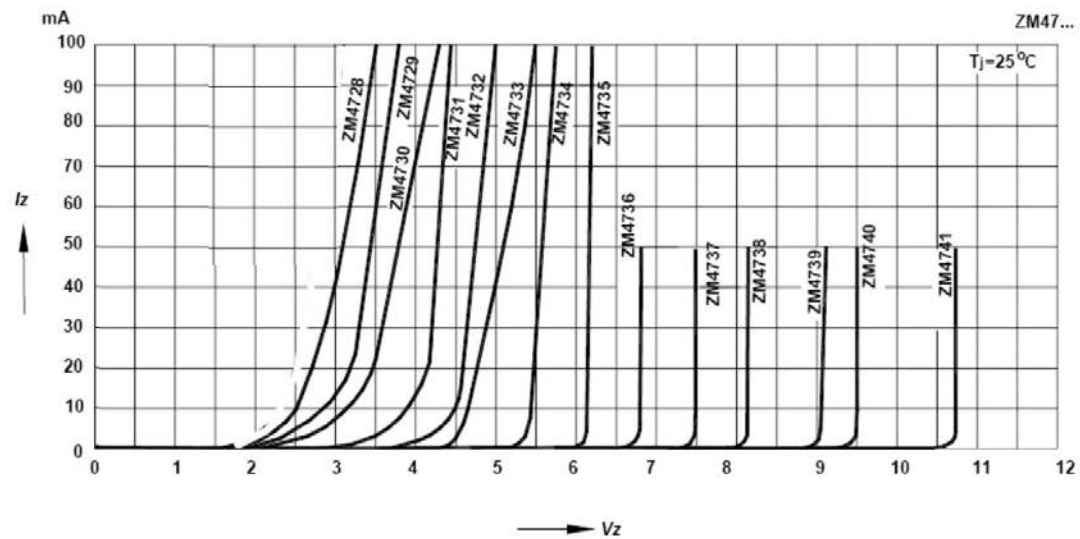
³⁾ Tested with pulses $t_p = 20$ ms.

⁴⁾ The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current I_{ZT} .



Breakdown characteristics

$T_j = \text{constant (pulsed)}$





Attention

- Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.
- HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.
- Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.