

1W, 5% Tolerance Hermetically Sealed Glass Zener Voltage Regulators

FEATURES

- Wide zener voltage range selection: 3.3V to 56V
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Low voltage stabilizers or voltage references
- Adapters
- On-board DC/DC converter

MECHANICAL DATA

- Case: MELF
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
V_Z	3.3-56	V
P_D	1	W
T_J Max.	175	°C
Package	MELF	
Configuration	Single die	



PDF.Support

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	1	W
Junction temperature range	T_J	-65 to +175	°C
Storage temperature range	T_{STG}	-65 to +200	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	170	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PART NUMBER	ZENER VOLTAGE	TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT	
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$	
	V	mA	Ω	Ω	mA	μA	V
			Max.	Max.		Max.	
ZM4728A	3.3	76	10	400	1.0	100	1.0
ZM4729A	3.6	69	10	400	1.0	100	1.0
ZM4730A	3.9	64	9	400	1.0	50	1.0
ZM4731A	4.3	58	9	400	1.0	10	1.0
ZM4732A	4.7	53	8	500	1.0	10	1.0
ZM4733A	5.1	49	7	550	1.0	10	1.0
ZM4734A	5.6	45	5	600	1.0	10	2.0
ZM4735A	6.2	41	2	700	1.0	10	3.0
ZM4736A	6.8	37	3.5	700	1.0	10	4.0
ZM4737A	7.5	34	4.0	700	0.5	10	5.0
ZM4738A	8.2	31	4.5	700	0.5	10	6.0
ZM4739A	9.1	28	5.0	700	0.5	10	7.0
ZM4740A	10	25	7.0	700	0.25	10	7.6
ZM4741A	11	23	8.0	700	0.25	5.0	8.4
ZM4742A	12	21	9.0	700	0.25	5.0	9.1
ZM4743A	13	19	10	700	0.25	5.0	9.9
ZM4744A	15	17	14	700	0.25	5.0	11.4
ZM4745A	16	15.5	16	700	0.25	5.0	12.2
ZM4746A	18	14.0	20	700	0.25	5.0	13.7
ZM4747A	20	12.5	22	750	0.25	5.0	15.2
ZM4748A	22	11.5	23	750	0.25	5.0	16.7
ZM4749A	24	10.5	25	750	0.25	5.0	18.2
ZM4750A	27	9.5	35	750	0.25	5.0	20.6
ZM4751A	30	8.5	40	1000	0.25	5.0	22.8
ZM4752A	33	7.5	45	1000	0.25	5.0	25.1
ZM4753A	36	7.0	50	1000	0.25	5.0	27.4
ZM4754A	39	6.5	60	1000	0.25	5.0	29.7
ZM4755A	43	6.0	70	1500	0.25	5.0	32.7
ZM4756A	47	5.5	80	1500	0.25	5.0	35.8
ZM4757A	51	5.0	95	1500	0.25	5.0	38.8
ZM4758A	56	4.5	110	2000	0.25	5.0	42.6

Notes:

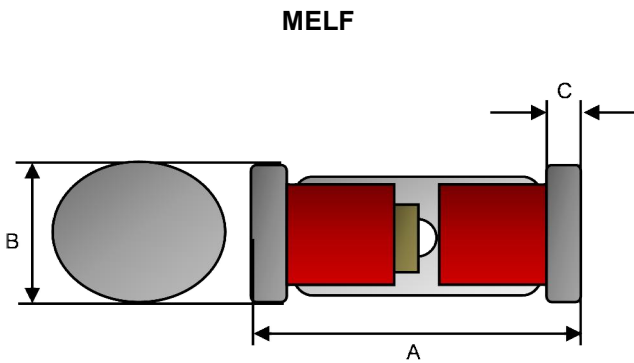
1. The device numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.
3. The Zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the DC zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK} .

ORDERING INFORMATION		
PART NO. (Note 1)	PACKAGE	PACKING
ZM47xxA L0	MELF	5K / 13" Reel
ZM47xxA L0G	MELF	5K / 13" Reel

Note:

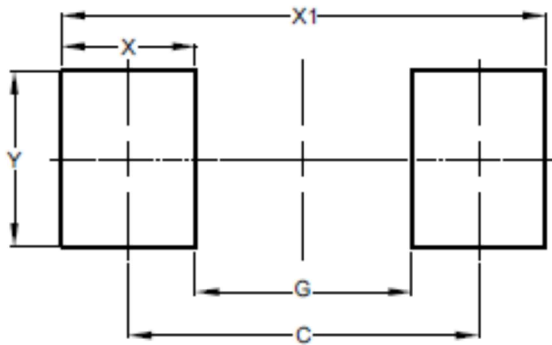
- "xx" defines voltage from 3.3V (ZM4728A) to 56V (ZM4758A)

PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.80	5.50	0.189	0.217
B	2.25	2.67	0.089	0.105
C	0.30	0.60	0.012	0.024

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
C	4.80	0.189
G	3.30	0.130
X	1.50	0.059
X1	6.30	0.248
Y	2.70	0.106

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.