

## 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	



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	$\Omega$	$\Omega$	mA	$\mu\text{A}$	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:**

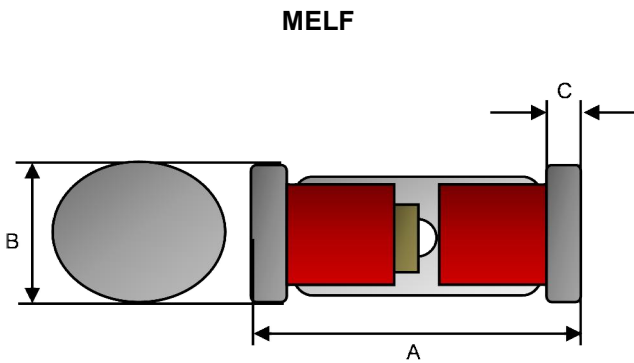
1. The device numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.
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  $I_{ZK}$ .

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

**Note:**

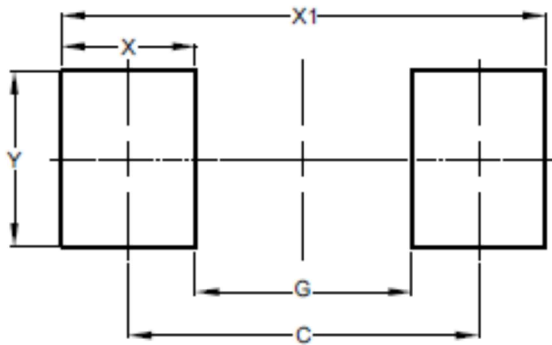
1. "xx" defines voltage from 3.3V (ZM4728A) to 56V (ZM4758A)

**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

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