

1W, 3.3V - 56V Surface Mount Zener Diode

FEATURES

- Wide Zener voltage range selection: 3.3V to 56V
- V_Z Tolerance Selection of $\pm 5\%$
- Hermetically sealed glass
- RoHS Compliant

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
- Weight: 129.90mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
V_Z	3.3 - 56	V
Test current I_{ZT}	4.5 - 76	mA
P_D	1	W
$T_{J\ MAX}$	175	$^{\circ}C$
Package	MELF	
Configuration	Single die	



MELF



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

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

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
	Nom		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:

- The device numbers listed have a standard tolerance on the nominal Zener voltage of $\pm 5\%$.
- 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.
- 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} .

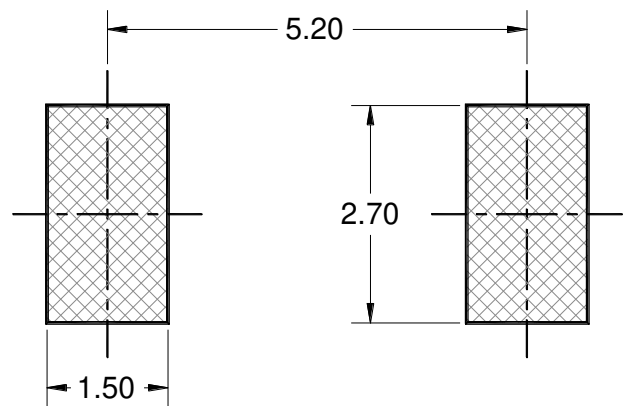
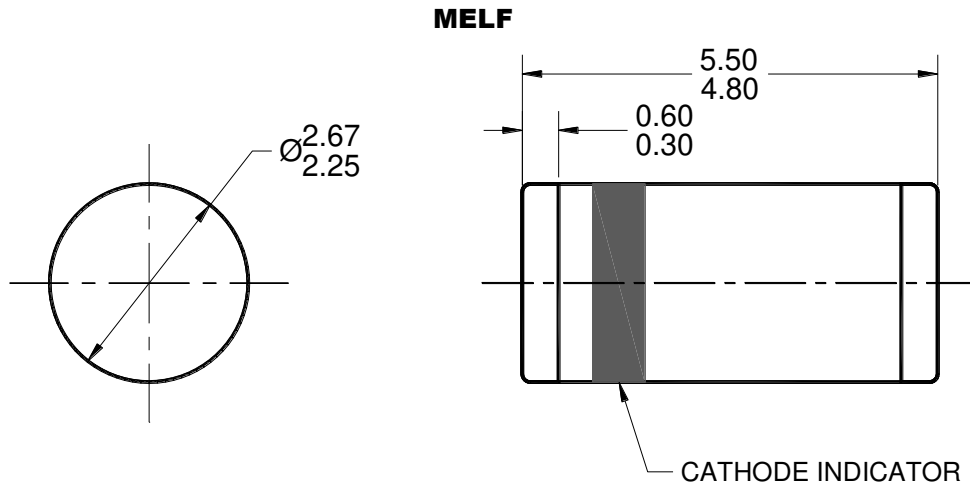
ORDERING INFORMATION

ORDERING CODE ⁽¹⁾⁽²⁾	PACKAGE	PACKING
ZM47xA L0	MELF	5,000 / 13" Tape & Reel
ZM47xA L0G	MELF	5,000 / 13" Tape & Reel

Notes:

- "x" defines voltage from 3.3V (ZM4728A) to 56V (ZM4758A)
- Above ordering codes L0/L0G refer to physically identical parts without any differences

PACKAGE OUTLINE DIMENSIONS



SUGGESTED PAD LAYOUT

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-213, VARIATION AB, ISSUE D.
4. DWG NO. REF: HQ2SD07-MELF-060 REV A.

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