



DATA SHEET

SEMICONDUCTOR

ZM47xxA Series

1 Watt DL-41 Hermetically Sealed Glass Zener Voltage Regulators



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Value	Units
Storage Temperature Range	-65 to +200	$^\circ\text{C}$
Maximum Junction Operating Temperature	+175	$^\circ\text{C}$
Total Device Dissipation	1.0	Watt
Thermal Resistance Junction to Ambient	170	$^\circ\text{C} / \text{W}$

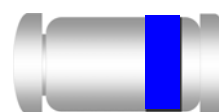
These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

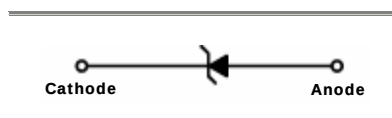
- Zener Voltage Range 3.3 to 56 Volts
- DL-41 MELF Package (JEDEC DO-213AB)
- Surface Mount Devices (SMD)
- Hermetically Sealed Glass
- Compression Bonded Construction
- All external surfaces are corrosion resistant and leads are readily solderable
- Cathode indicated by polarity band

SURFACE MOUNT
DL-41

DEVICE MARKING DIAGRAM



Cathode Band Color: Blue



ELECTRICAL SYMBOL

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	$V_Z @ I_{ZT}$ (Volts) Nominal	I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
ZM4728A	3.3	76	10	1	400	100	1
ZM4729A	3.6	69	10	1	400	100	1
ZM4730A	3.9	64	9	1	400	50	1
ZM4731A	4.3	58	9	1	400	10	1
ZM4732A	4.7	53	8	1	500	10	1
ZM4733A	5.1	49	7	1	550	10	1
ZM4734A	5.6	45	5	1	600	10	2
ZM4735A	6.2	41	2	1	700	10	3
ZM4736A	6.8	37	3.5	1	700	10	4
ZM4737A	7.5	34	4	0.5	700	10	5
ZM4738A	8.2	31	4.5	0.5	700	10	6
ZM4739A	9.1	28	5	0.5	700	10	7
ZM4740A	10	25	7	0.25	700	10	7.6
ZM4741A	11	23	8	0.25	700	5	8.4
ZM4742A	12	21	9	0.25	700	5	9.1
ZM4743A	13	19	10	0.25	700	5	9.9
ZM4744A	15	17	14	0.25	700	5	11.4
ZM4745A	16	15.5	16	0.25	700	5	12.2
ZM4746A	18	14	20	0.25	700	5	13.7
ZM4747A	20	12.5	22	0.25	750	5	15.2
ZM4748A	22	11.5	23	0.25	750	5	16.7

ZM47xxA Series

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$T_A = 25^\circ\text{C}$ unless otherwise noted

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ZM4749A	24	10.5	25	0.25	750	5	18.2
ZM4750A	27	9.5	35	0.25	750	5	20.6
ZM4751A	30	8.5	40	0.25	1000	5	22.8
ZM4752A	33	7.5	45	0.25	1000	5	25.1
ZM4753A	36	7	50	0.25	1000	5	27.4
ZM4754A	39	6.5	60	0.25	1000	5	29.7
ZM4755A	43	6	70	0.25	1500	5	32.7
ZM4756A	47	5.5	80	0.25	1500	5	35.8
ZM4757A	51	5	95	0.25	1500	5	38.8
ZM4758A	56	4.5	110	0.25	2000	5	42.6

V_F Forward Voltage = 1.2 V Maximum @ $I_F = 200$ mA for all types

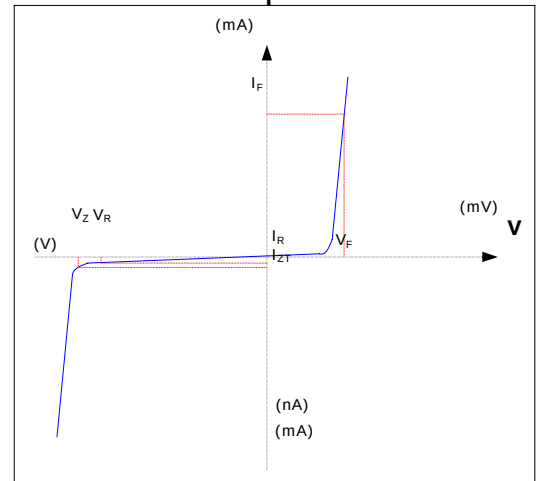
Notes:

- 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
- 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} .

Electrical Symbol Definition

Symbol	Parameter
V_Z	Reverse Zener Voltage @ I_{ZT}
I_{ZT}	Reverse Current
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}
I_R	Reverse Leakage Current @ V_R
V_R	Breakdown Voltage
I_F	Forward Current
V_F	Forward Voltage @ I_F

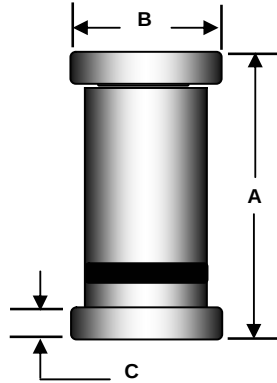
Typical Characteristics



PACKAGE OUTLINE & DIMENSIONS

ZM47xxA Series

Package Outline

Package	Case Outline																												
DL- 41 MELF	 <table><tr><th rowspan="3">DIM</th><th colspan="4">DL- 41 MELF</th></tr><tr><th colspan="2">Millimeters</th><th colspan="2">Inches</th></tr><tr><th>Min</th><th>Max</th><th>Min</th><th>Max</th></tr><tr><td>A</td><td>4.80</td><td>5.20</td><td>0.189</td><td>0.205</td></tr><tr><td>B</td><td>2.39</td><td>2.66</td><td>0.094</td><td>0.105</td></tr><tr><td>C</td><td>0.41</td><td>0.55</td><td>0.016</td><td>0.022</td></tr></table>	DIM	DL- 41 MELF				Millimeters		Inches		Min	Max	Min	Max	A	4.80	5.20	0.189	0.205	B	2.39	2.66	0.094	0.105	C	0.41	0.55	0.016	0.022
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Notes:

1. All dimensions are within DO-213AB JEDEC standard.
2. DL-41 MELF polarity denoted by cathode band.