

Surface Mount 1W Zener Diodes

Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with higher power rating
- Standard Zener voltage tolerance is $\pm 5\%$. Other Zener voltages and tolerances are available upon request
- These diodes are also available in the DO-41 case with type designation 1N4728A ... 1N4764A
- Pb-free and RoHS Compliance



MELF



Mechanical Data

- Case: MELF Glass Case
- Package: Standard 1.5K per 7" Reel and 5K per 13" Reel
- Approx. Weight: 0.16 grams

Absolute Maximum Ratings

($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Power Dissipation at $T_{amb}=25^{\circ}\text{C}$ (Note)	P_{tot}	1.0	Watts
Junction Temperature	T_J	200	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ 200	$^{\circ}\text{C}$
Forward Voltage at $I_F=200\text{mA}$	V_F	1.2	Volts
Thermal Resistance Junction to Ambient Air (Note)	$R_{\theta JA}$	170	$^{\circ}\text{C/W}$

Note: Valid provided that electrodes are kept at ambient temperature

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ZM47XXA Series

Electrical Characteristics

(Tamb = 25°C unless otherwise specified)

Part NO.	Nominal Zener Voltage ³ @IZT	Test Current	Max. Zener Impedance ¹			Max. Reverse Leakage Current		Surge Current @ TA=25°C	Max. Regulator Current ²
	Vz (V)	IZT (mA)	ZZT (Ω)	ZZK (Ω)	IZK(mA)	IR (uA)	VR (V)	Ir (uA)	IZM (uA)
ZM4728A	3.3	76	10	400	1	100	1.0	1380	276
ZM4729A	3.6	69	10	400	1	100	1.0	1260	252
ZM4730A	3.9	64	9	400	1	50	1.0	1170	234
ZM4731A	4.3	58	9	400	1	10	1.0	1085	217
ZM4732A	4.7	53	8	500	1	10	1.0	965	193
ZM4733A	5.1	49	7	550	1.0	10	1.0	890	178
ZM4734A	5.6	45	5	600	1.0	10	2.0	810	162
ZM4735A	6.2	41	2	700	1.0	10	3.0	730	146
ZM4736A	6.8	37	3.5	700	1.0	10	4.0	660	133
ZM4737A	7.5	34	4.0	700	0.5	10	5.0	605	121
ZM4738A	8.2	31	4.5	700	0.5	10	6.0	550	110
ZM4739A	9.1	28	5.0	700	0.5	10	7.0	500	100
ZM4740A	10	25	7	700	0.25	10	7.6	454	91
ZM4741A	11	23	8	700	0.25	5	8.4	414	83
ZM4742A	12	21	9	700	0.25	5	9.1	380	76
ZM4743A	13	19	10	700	0.25	5	9.9	344	69
ZM4744A	15	17	14	700	0.25	5	11.4	304	61
ZM4745A	16	15.5	16	700	0.25	5	12.2	285	57
ZM4746A	18	14	20	750	0.25	5	13.7	250	50
ZM4747A	20	12.5	22	750	0.25	5	15.2	225	45
ZM4748A	22	11.5	23	750	0.25	5	16.7	205	41
ZM4749A	24	10.5	25	750	0.25	5	18.2	190	38
ZM4750A	27	9.5	35	750	0.25	5	20.6	170	34
ZM4751A	30	8.5	40	1000	0.25	5	22.8	150	30
ZM4752A	33	7.5	45	1000	0.25	5	25.1	135	27
ZM4753A	36	7.0	50	1000	0.25	5	27.4	125	25
ZM4754A	39	6.5	60	1000	0.25	5	29.7	115	23
ZM4755A	43	6.0	70	1500	0.25	5	32.7	110	22

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ZM47XXA Series

ZM4756A	47	5.5	80	1500	0.25	5	35.8	95	19
ZM4757A	51	5.0	95	1500	0.25	5	38.8	90	18
ZM4758A	56	4.5	110	2000	0.25	5	42.6	80	16
ZM4759A	62	4.0	125	2000	0.25	5	47.1	70	14
ZM4760A	68	3.7	150	2000	0.25	5	51.7	65	13
ZM4761A	75	3.3	175	2000	0.25	5	56.0	60	12
ZM4762A	82	3.0	200	3000	0.25	5	62.2	55	11
ZM4763A	91	2.8	250	3000	0.25	5	69.2	50	10
ZM4764A	100	2.5	350	3000	0.25	5	76.0	45	9

Note:

1. The Zener impedance is derived from the 1KHZ 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} . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units
2. Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature
3. Measured under thermal equilibrium and DC test conditions

Typical Characteristics (T_{amb}=25 unless otherwise specified)

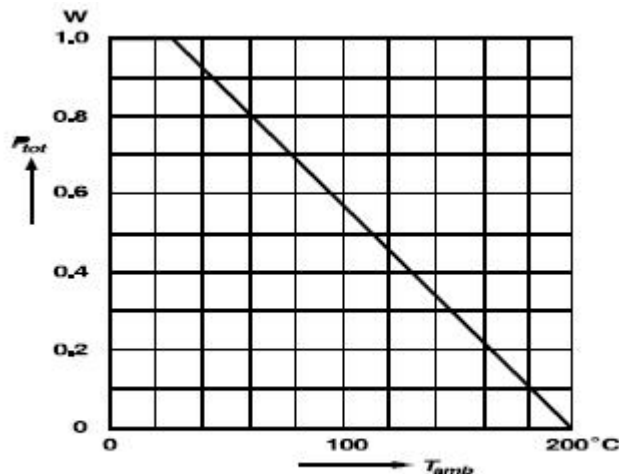
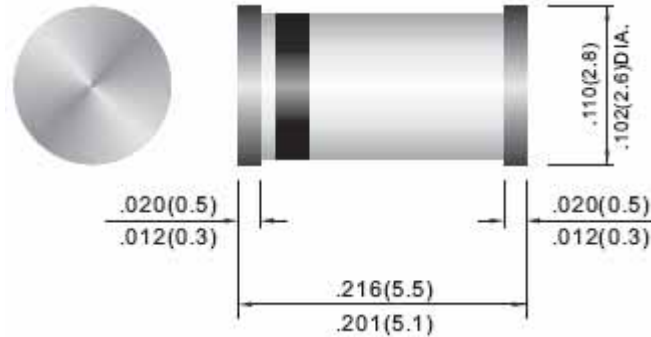


Figure 1. Admissible Power Dissipation vs. Ambient Temperature

Package Dimensions in inch (mm)



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