



ZM4727A THRU ZM4761A

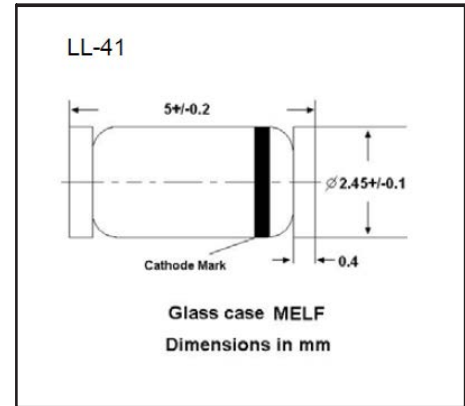
Silicon Planar Power Zener Diodes

FEATURES

- Total power dissipation: Max. 1W.
- Wide zener reverse voltage range 3.0V to 75V.
- Tolerance approximately $\pm 5\%$

MECHANICAL DATA

- Case: LL-41



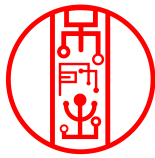
Absolute Maximum Ratings And Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	1	W
Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.2	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	170	$^\circ\text{C/W}$
Storage Temperature Range	T_{stg}	-65 ~ +175	$^\circ\text{C}$
Junction Temperature Range	T_j	175	$^\circ\text{C}$

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage ³⁾		Dynamic Resistance ¹⁾			Reverse Current		Maximum Surge Current ⁴⁾	Maximum Regulator Current ²⁾
	$V_{Z\text{nom}}$	at I_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R	at $T_a = 25^\circ\text{C}$	
	(V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (μA)	(V)	I_{ZSM} (mA)	I_{ZM} (mA)
ZM4727	3	83	10	400	1	150	1	1375	275
ZM4728	3.3	76	10	400	1	150	1	1375	275
ZM4729	3.6	69	10	400	1	100	1	1260	252
ZM4730	3.9	64	9	400	1	100	1	1190	234
ZM4731	4.3	58	9	400	1	50	1	1070	217
ZM4732	4.7	53	8	500	1	10	1	970	193
ZM4733	5.1	49	7	550	1	10	1	890	178
ZM4734	5.6	45	5	600	1	10	2	810	162
ZM4735	6.2	41	2	700	1	10	3	730	146
ZM4736	6.8	37	3.5	700	1	10	4	660	133
ZM4737	7.5	34	4	700	0.5	10	5	605	121
ZM4738	8.2	31	4.5	700	0.5	10	6	550	110
ZM4739	9.1	28	5	700	0.5	10	7	500	100



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ZM4740	10	25	7	700	0.25	10	7.6	454	91
ZM4741	11	23	8	700	0.25	5	8.4	414	83
ZM4742	12	21	9	700	0.25	5	9.1	380	76
ZM4743	13	19	10	700	0.25	5	9.9	344	69
ZM4744	15	17	14	700	0.25	5	11.4	304	61
ZM4745	16	15.5	16	700	0.25	5	12.2	285	57
ZM4746	18	14	20	750	0.25	5	13.7	250	50
ZM4747	20	12.5	22	750	0.25	5	15.2	225	45
ZM4748	22	11.5	23	750	0.25	5	16.7	205	41
ZM4749	24	10.5	25	750	0.25	5	18.2	190	38
ZM4750	27	9.5	35	750	0.25	5	20.6	170	34
ZM4751	30	8.5	40	1000	0.25	5	22.8	150	30
ZM4752	33	7.5	45	1000	0.25	5	25.1	135	27
ZM4753	36	7	50	1000	0.25	5	27.4	125	25
ZM4754	39	6.5	60	1000	0.25	5	29.7	115	23
ZM4755	43	6	70	1500	0.25	5	32.7	110	22
ZM4756	47	5.5	80	1500	0.25	5	35.8	95	19
ZM4757	51	5	95	1500	0.25	5	38.8	90	18
ZM4758	56	4.5	110	2000	0.25	5	42.6	80	16
ZM4759	62	4	125	2000	0.25	5	47.1	70	14
ZM4760	68	3.7	150	2000	0.25	5	51.7	65	13
ZM4761	75	3.3	175	2000	0.25	5	56	60	12

1)The dynamic resistance is derived from the 60 Hz 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} . Dynamic resistance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

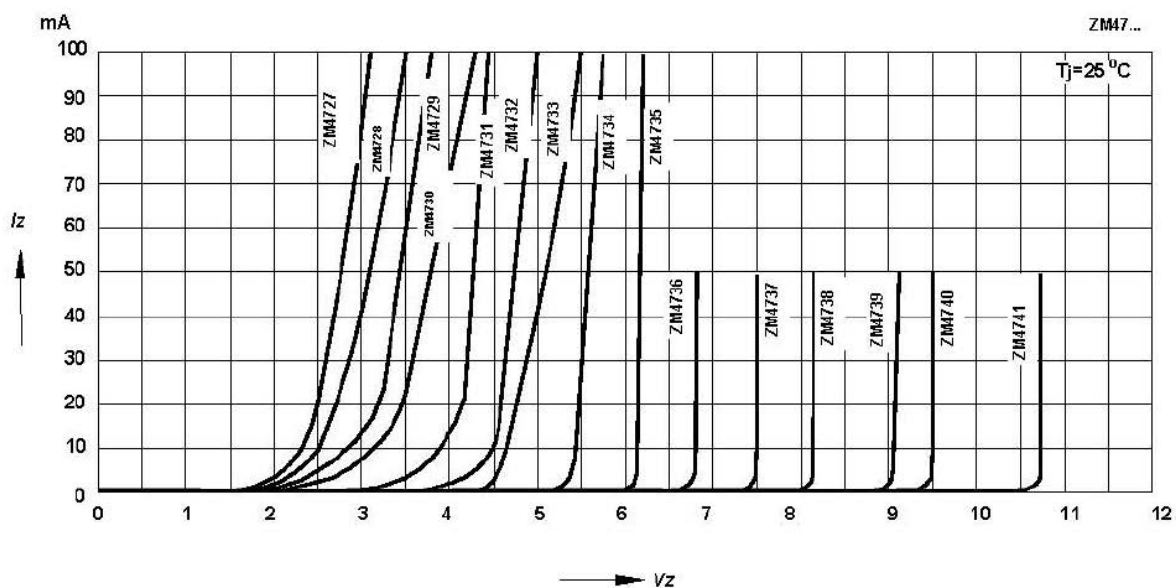
2)Valid provided that electrodes are kept at ambient temperature.

3)Tested with pulses $t_p = 20$ ms.

4)The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current I_{zt} .

Breakdown characteristics

$T_j = \text{constant (pulsed)}$





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