

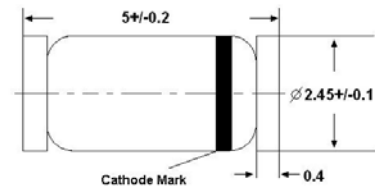
# ZM4727...ZM4761

## Silicon Planar Power Zener Diodes

for use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is  $\pm 10\%$ . Add suffix "A" for  $\pm 5\%$  tolerance and suffix "B" for  $\pm 2\%$  tolerance. Other tolerances available are upon request.

These diodes are also available in DO-41 case with the type designation 1N4727...1N4761

LL-41



Glass case MELF  
Dimensions in mm

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

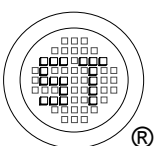
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{\text{tot}}$	1 <sup>1)</sup>	W
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 65 to + 175	$^\circ\text{C}$

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

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

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta\text{JA}}$	170 <sup>1)</sup>	K/W
Forward Voltage at $I_F = 200 \text{ mA}$	$V_F$	1.2	V

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



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## Characteristics at T<sub>a</sub> = 25°C

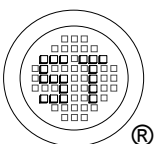
Type	Zener Voltage <sup>3)</sup>		Dynamic Resistance <sup>1)</sup>			Reverse Current		Maximum Surge Current <sup>4)</sup>	Maximum Regulator Current <sup>2)</sup>
	V <sub>Znom</sub>	at I <sub>ZT</sub>	Z <sub>ZT</sub>	Z <sub>ZK</sub>	at I <sub>ZK</sub>	I <sub>R</sub>	at V <sub>R</sub>	at T <sub>a</sub> = 25°C	I <sub>ZM</sub>
	(V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (μA)	(V)	I <sub>ZSM</sub> (mA)	I <sub>ZM</sub> (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
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

<sup>1)</sup> 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<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Dynamic resistance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

<sup>2)</sup> Valid provided that electrodes are kept at ambient temperature.

<sup>3)</sup> Tested with pulses tp = 20 ms.

<sup>4)</sup> 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<sub>ZT</sub>.



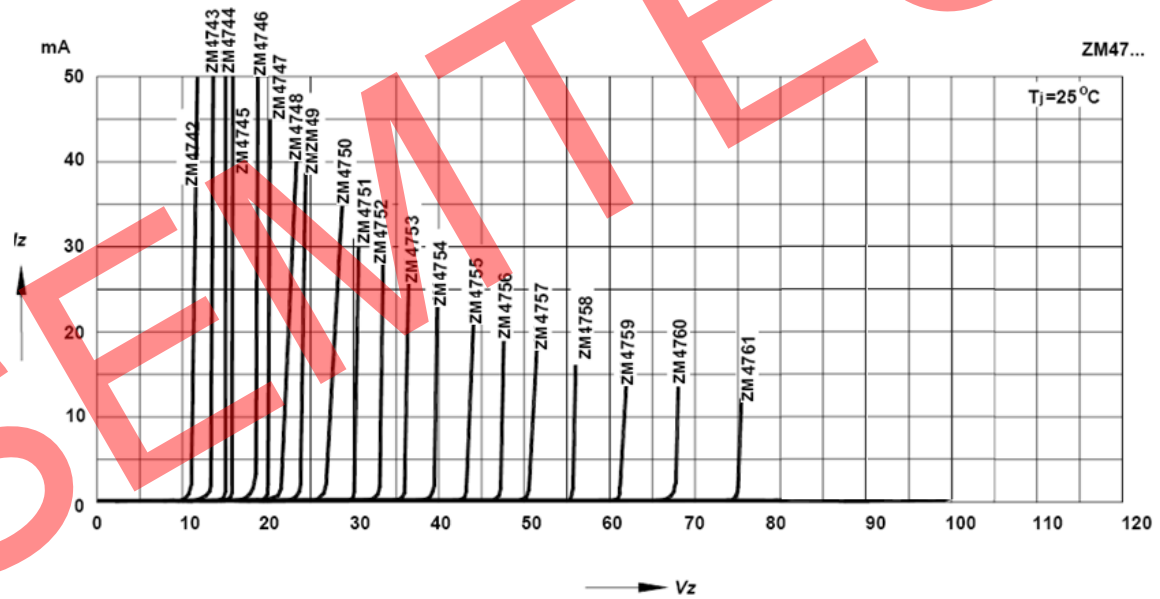
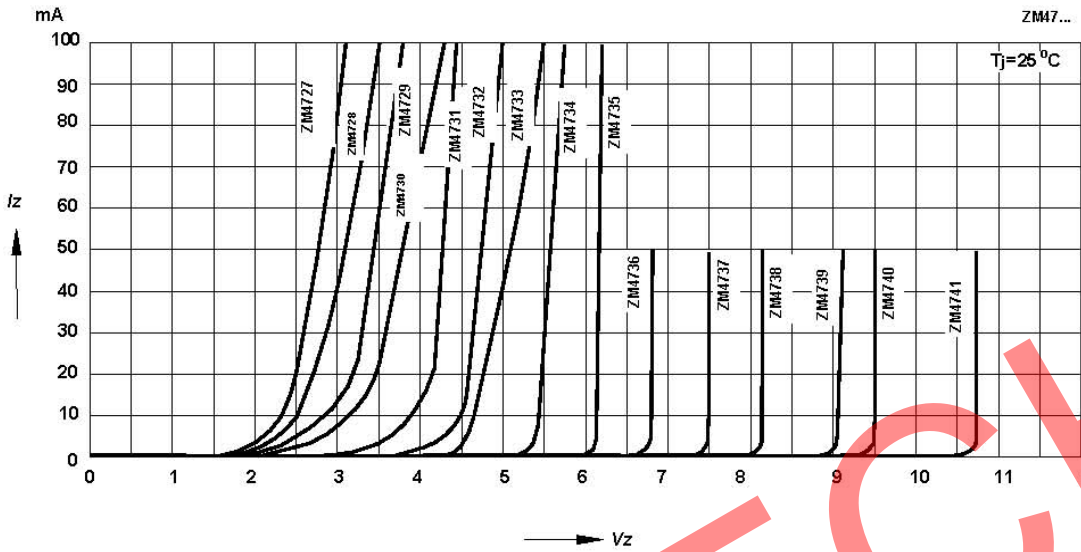
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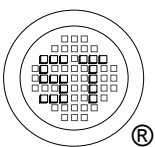
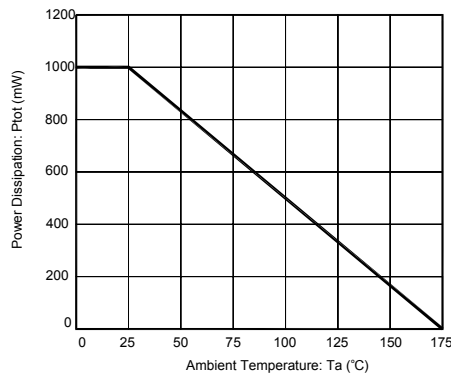
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## Breakdown characteristics

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



Power Dissipation vs Ambient Temperature



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