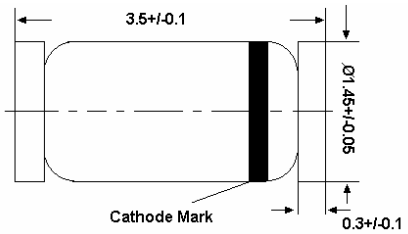
ZMM5221...ZMM5267

SILICON PLANAR ZENER DIODES

Standard zener voltage tolerance is ± 20%. Add suffix "A" for ± 10% tolerance, suffix "B" for ± 5% tolerance and suffix "C" for ± 2% tolerance. Other tolerance, non standard and higher zener voltages are upon request.

LL-34



Glass case MiniMELF
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation at T_a = 75 °C	P_{tot}	500 [1]	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_S	- 65 to + 175	°C
[1] Valid provided that electrodes are kept at ambient temperature.			

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3 [1]	K/mW
Forward Voltage at I_F = 200 mA	V_F	1.1	V
[1] Valid provided that electrodes are kept at ambient temperature.			

®

Type	Nominal Zener Voltage [2]		Maximum Zener Impedance [1]			Maximum Reverse Leakage Current		
	V_Z (V)	at I_{ZT} (mA)	Z_{ZT} (Ω) at I_{ZT}	Z_{ZK} (Ω)	at I_{ZK}	I_R (µA)	Suffix A at V_R (V)	Suffix B at V_R (V)
ZMM5221	2.4	20	30	1200	0.25	100	0.95	1
ZMM5222	2.5	20	30	1250	0.25	100	0.95	1
ZMM5223	2.7	20	30	1300	0.25	75	0.95	1
ZMM5224	2.8	20	30	1400	0.25	75	0.95	1
ZMM5225	3	20	29	1600	0.25	50	0.95	1
ZMM5226	3.3	20	28	1600	0.25	25	0.95	1
ZMM5227	3.6	20	24	1700	0.25	15	0.95	1
ZMM5228	3.9	20	23	1900	0.25	10	0.95	1
ZMM5229	4.3	20	22	2000	0.25	5	0.95	1
ZMM5230	4.7	20	19	1900	0.25	5	0.95	2
ZMM5231	5.1	20	17	1600	0.25	5	1.9	2
ZMM5232	5.6	20	11	1600	0.25	5	2.9	3
ZMM5233	6	20	7	1600	0.25	5	3.3	3.5
ZMM5234	6.2	20	7	1000	0.25	5	3.8	4
ZMM5235	6.8	20	5	750	0.25	3	4.8	5
ZMM5236	7.5	20	6	500	0.25	3	5.7	6
ZMM5237	8.2	20	8	500	0.25	3	6.2	6.5
ZMM5238	8.7	20	8	600	0.25	3	6.2	6.5
ZMM5239	9.1	20	10	600	0.25	3	6.7	7
ZMM5240	10	20	17	600	0.25	3	7.6	8
ZMM5241	11	20	22	600	0.25	2	8.0	8.4
ZMM5242	12	20	30	600	0.25	1	8.7	9.1
ZMM5243	13	9.5	13	600	0.25	0.5	9.4	9.9
ZMM5244	14	9	15	600	0.25	0.1	9.5	10
ZMM5245	15	8.5	16	600	0.25	0.1	10.5	11
ZMM5246	16	7.8	17	600	0.25	0.1	11.4	12
ZMM5247	17	7.4	19	600	0.25	0.1	12.4	13
ZMM5248	18	7.0	21	600	0.25	0.1	13.3	14
ZMM5249	19	6.6	23	600	0.25	0.1	13.3	14
ZMM5250	20	6.2	25	600	0.25	0.1	14.3	15
ZMM5251	22	5.6	29	600	0.25	0.1	16.2	17
ZMM5252	24	5.2	33	600	0.25	0.1	17.1	18
ZMM5253	25	5	35	600	0.25	0.1	18.1	19
ZMM5254	27	4.6	41	600	0.25	0.1	20	21
ZMM5255	28	4.4	44	600	0.25	0.1	20	21
ZMM5256	30	4.2	49	600	0.25	0.1	22	23
ZMM5257	33	3.8	58	700	0.25	0.1	24	25
ZMM5258	36	3.4	70	700	0.25	0.1	26	27
ZMM5259	39	3.2	80	800	0.25	0.1	29	30
ZMM5260	43	3	93	900	0.25	0.1	31	33
ZMM5261	47	2.7	105	1000	0.25	0.1	34	36
ZMM5262	51	2.5	125	1100	0.25	0.1	37	39
ZMM5263	56	2.2	150	1300	0.25	0.1	43	45
ZMM5264	60	2.1	170	1400	0.25	0.1	44	46
ZMM5265	62	2	185	1400	0.25	0.1	-	47
ZMM5266	68	1.8	230	1600	0.25	0.1	-	52
ZMM5267	75	1.7	270	1700	0.25	0.1	-	56

[1] The Zener Impedance 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} . Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

[2] Tested with pulses tp = 20 ms.

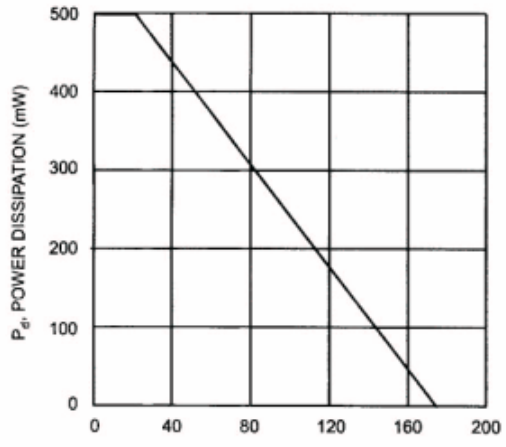


Fig.1 Power Dissipation vs Ambient Temperature

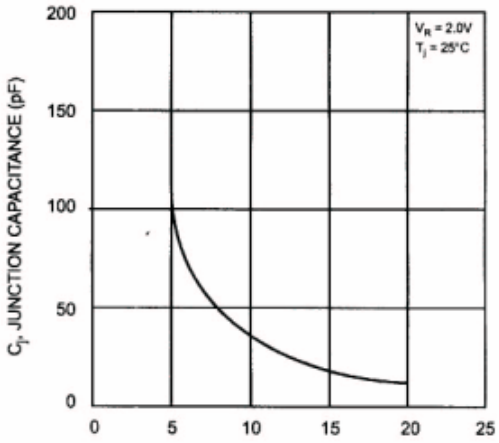


Fig. 2 Junction Capacitance vs Zener Voltage

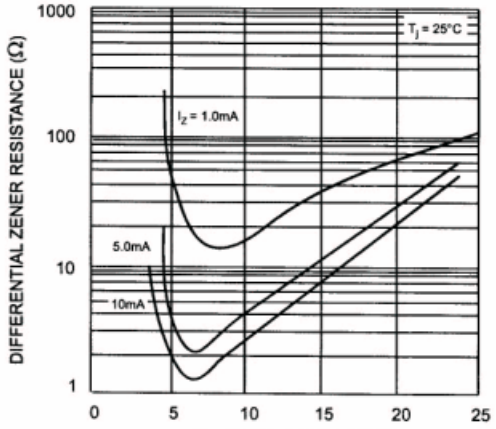


Fig. 3 Differential Zener Impedance

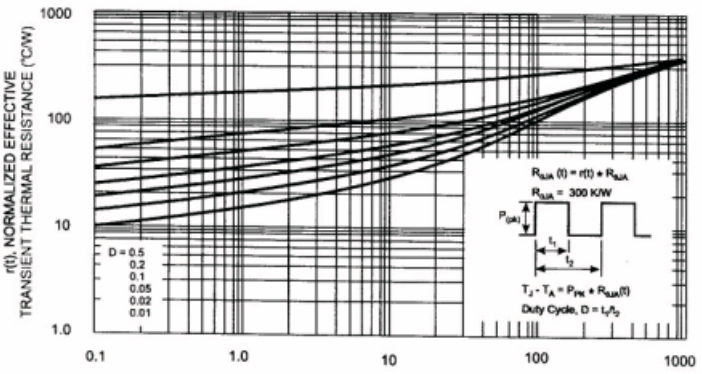


Fig. 4 Typical Normalized Transient Thermal Impedance Curves