



# SURFACE MOUNT ZENER DIODE

## ZMM52 Series

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

Electrical Characteristics ( Ta = 25 ° C )

500mW

Device Type	Nominal Zener Voltage Vz at IzT*	Test Current IzT	Maximum Zener Impedance		Typical Temperature Coefficient	Maximum Reverse Leakage Current		Maximum Regulator Current IzM
			ZzT at IzT	Zzk at Izk=0.25mA		I <sub>R</sub>	Test-Voltage Suffix B	
	Volts	mA	Ω	Ω	% / °C	μA	Volts	mA
ZMM5221B	2.4	20	30	1200	-0.085	100	1.0	191
ZMM5222B	2.5	20	30	1250	-0.085	100	1.0	182
ZMM5223B	2.7	20	30	1300	-0.080	75	1.0	168
ZMM5224B	2.8	20	30	1400	-0.080	75	1.0	162
ZMM5225B	3.0	20	29	1600	-0.075	50	1.0	151
ZMM5226B	3.3	20	28	1600	-0.070	25	1.0	138
ZMM5227B	3.6	20	24	1700	-0.065	15	1.0	126
ZMM5228B	3.9	20	23	1900	-0.060	10	1.0	115
ZMM5229B	4.3	20	22	2000	+/-0.055	5	1.0	106
ZMM5230B	4.7	20	19	1900	+/-0.030	5	2.0	97
ZMM5231B	5.1	20	17	1600	+/-0.030	5	2.0	89
ZMM5232B	5.6	20	11	1600	+0.038	5	3.0	81
ZMM5233B	6.0	20	7	1600	+0.038	5	3.5	76
ZMM5234B	6.2	20	7	1000	+0.045	5	4.0	73
ZMM5235B	6.8	20	5	750	+0.050	3	5.6	67
ZMM5236B	7.5	20	6	500	+0.058	3.0	6.0	61
ZMM5237B	8.2	20	8	500	+0.062	3.0	6.5	55
ZMM5238B	8.7	20	8	600	+0.065	3.0	6.5	52
ZMM5239B	9.1	20	10	600	+0.068	3.0	7.0	50
ZMM5240B	10	20	17	600	+0.075	3.0	8.0	45
ZMM5241B	11	20	22	600	+0.076	2.0	8.4	41
ZMM5242B	12	20	30	600	+0.077	1.0	9.1	38
ZMM5243B	13	9.5	13	600	+0.079	0.5	9.9	35
ZMM5244B	14	9.0	15	600	+0.082	0.1	10	32
ZMM5245B	15	8.5	16	600	+0.082	0.1	11	30
ZMM5246B	16	7.8	17	600	+0.083	0.1	12	28
ZMM5247B	17	7.4	19	600	+0.084	0.1	13	27
ZMM5248B	18	7.0	21	600	+0.085	0.1	14	25
ZMM5249B	19	6.6	23	600	+0.086	0.1	14	24
ZMM5250B	20	6.2	25	600	+0.086	0.1	15	23
ZMM5251B	22	5.6	29	600	+0.087	0.1	17	21.2
ZMM5252B	24	5.2	33	600	+0.088	0.1	18	19.1
ZMM5253B	25	5.0	35	600	+0.089	0.1	19	18.2
ZMM5254B	27	4.6	41	600	+0.090	0.1	21	16.8
ZMM5255B	28	4.5	44	600	+0.091	0.1	21	16.2
ZMM5256B	30	4.2	49	600	+0.091	0.1	23	15.1
ZMM5257B	33	3.8	58	700	+0.092	0.1	25	13.8
ZMM5258B	36	3.4	70	700	+0.093	0.1	27	12.6
ZMM5259B	39	3.2	80	800	+0.094	0.1	30	11.5
ZMM5260B	43	3	93	900	+0.095	0.1	33	10.6
ZMM5261B	47	2.7	150	1000	+0.095	0.1	36	9.7

Standard Voltage Tolerance is ± 5 % and :

Suffix "A" for ± 3 %

Suffix "B" for ± 5 %

Suffix "C" for ± 10 %

Suffix "D" for ± 20 %

Measured with Pulses Tp = 40 m sec

● Absolute Maximum Ratings

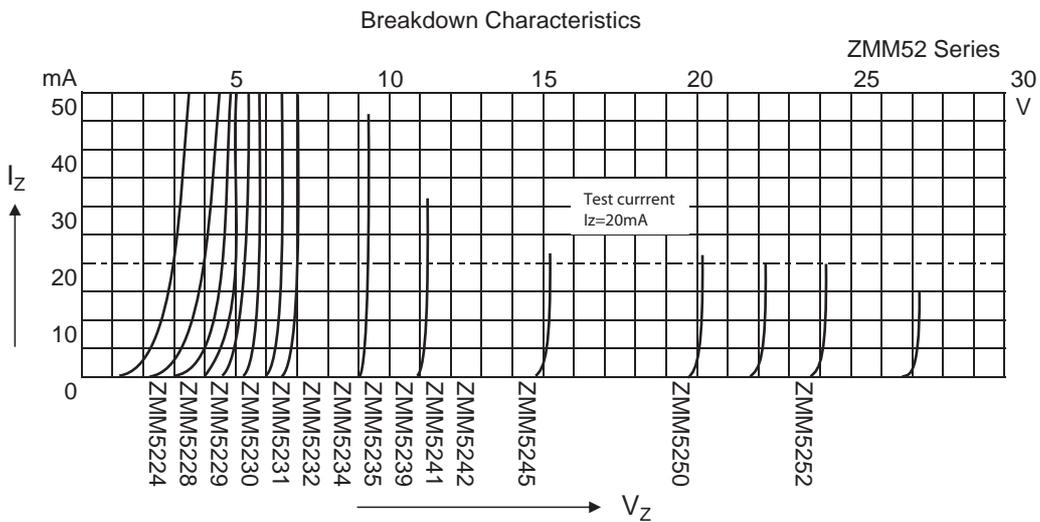
Items	Symbol	Value	Unit
Power Dissipation at $T_{amb} = 25\text{ }^{\circ}\text{C}$	$P_{TOT}$	500 *	mW
Junction Temperature	$T_J$	175	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 ~ +175	$^{\circ}\text{C}$

\* Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

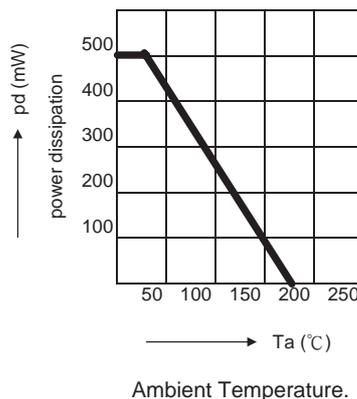
● Characteristic at  $T_{amb} = 25\text{ }^{\circ}\text{C}$

Items	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	-	-	0.3 *	K / mW
Forward Voltage @ $I_F = 200\text{ mA}$	$V_F$	-	-	1.1	V

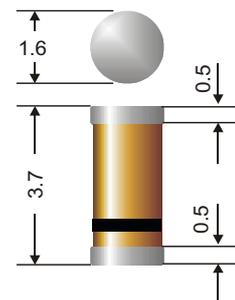
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Change in the power dissipation due to the ambient temperature.



**MINI MELF (SOD-80)**



Dimensions in mm

**Mechanical Data**

Items	Materials
Package	Mini MELF ( SOD-80 )
Case	Hermetically Sealed Glass
Lead Finish	Solder Plating