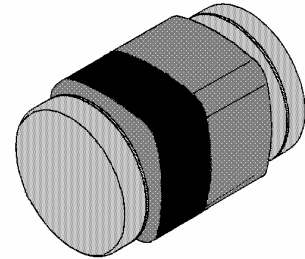


## SILICON PLANAR ZENER DIODES

Standard Zener voltage tolerance is  $\pm 20\%$ . Add suffix "A" for  $\pm 10\%$  tolerance and suffix "B" for  $\pm 5\%$  tolerance, Other tolerance, non standard and higher Zener voltages are upon request.

LS-31



### Features

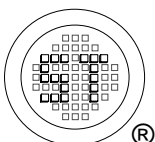
- Fits onto SOD 323 / SOT 23 footprints
- Micro Melf package

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

	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation at $T_{amb} = 75^\circ\text{C}$	$P_{tot}$	500 <sup>(1)</sup>	mW
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-65 to +200	$^\circ\text{C}$

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

	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	-	0.3 <sup>(1)</sup>	K/W
Forward Voltage at $I_F = 200\text{mA}$	$V_F$	-	-	1.1	V



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Certificate No. 014

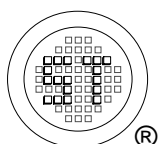
ISO 9001:2000  
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Dated : 22/01/2005

# ZMC52 Series

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Type	Zener Voltage Range <sup>1)</sup>		Maximum Zener Impedance <sup>1)</sup>			Reverse Leakage Current		Temp. Coefficient of Zener Voltage
	V <sub>znom</sub> <sup>3)</sup> V	I <sub>ZT</sub> mA	r <sub>ZJT</sub> Ω	r <sub>ZJK</sub> at Ω	I <sub>ZK</sub> mA	I <sub>R</sub> <sup>2)</sup> at μA	V <sub>R</sub> V	TK <sub>VZ</sub> %/K
ZMC 5221	2.4	20	<30	<1200	0.25	<100	1	<-0.085
ZMC 5222	2.5	20	<30	<1250	0.25	<100	1	<-0.085
ZMC 5223	2.7	20	<30	<1300	0.25	<75	1	<-0.080
ZMC 5224	2.8	20	<30	<1400	0.25	<75	1	<-0.080
ZMC 5225	3.0	20	<29	<1600	0.25	<50	1	<-0.075
ZMC 5226	3.3	20	<28	<1600	0.25	<25	1	<-0.070
ZMC 5227	3.6	20	<24	<1700	0.25	<15	1	<-0.065
ZMC 5228	3.9	20	<23	<1900	0.25	<10	1	<-0.060
ZMC 5229	4.3	20	<22	<2000	0.25	<5	1	<-0.055
ZMC 5230	4.7	20	<19	<1900	0.25	<5	2	<±0.030
ZMC 5231	5.1	20	<17	<1600	0.25	<5	2	<±0.030
ZMC 5232	5.6	20	<11	<1600	0.25	<5	3	<+0.038
ZMC 5233	6.0	20	<7	<1600	0.25	<5	3.5	<+0.038
ZMC 5234	6.2	20	<7	<1000	0.25	<5	4	<+0.045
ZMC 5235	6.8	20	<5	<750	0.25	<3	5	<+0.050
ZMC 5236	7.5	20	<6	<500	0.25	<3	6	<+0.058
ZMC 5237	8.2	20	<8	<500	0.25	<3	6.5	<+0.062
ZMC 5238	8.7	20	<8	<600	0.25	<3	6.5	<+0.065
ZMC 5239	9.1	20	<10	<600	0.25	<3	7	<+0.068
ZMC 5240	10	20	<17	<600	0.25	<3	8	<+0.075
ZMC 5241	11	20	<22	<600	0.25	<2	8.4	<+0.076
ZMC 5242	12	20	<30	<600	0.25	<1	9.1	<+0.077
ZMC 5243	13	9.5	<13	<600	0.25	<0.5	9.9	<+0.079
ZMC 5244	14	9.0	<15	<600	0.25	<0.1	10	<+0.082
ZMC 5245	15	8.5	<16	<600	0.25	<0.1	11	<+0.082
ZMC 5246	16	7.8	<17	<600	0.25	<0.1	12	<+0.083
ZMC 5247	17	7.4	<19	<600	0.25	<0.1	13	<+0.084
ZMC 5248	18	7.0	<21	<600	0.25	<0.1	14	<+0.085
ZMC 5249	19	6.6	<23	<600	0.25	<0.1	14	<+0.086
ZMC 5250	20	6.2	<25	<600	0.25	<0.1	15	<+0.086
ZMC 5251	22	5.6	<29	<600	0.25	<0.1	17	<+0.087
ZMC 5252	24	5.2	<33	<600	0.25	<0.1	18	<+0.088
ZMC 5253	25	5.0	<35	<600	0.25	<0.1	19	<+0.089
ZMC 5254	27	4.6	<41	<600	0.25	<0.1	21	<+0.090
ZMC 5255	28	4.5	<44	<600	0.25	<0.1	21	<+0.091
ZMC 5256	30	4.2	<49	<600	0.25	<0.1	23	<+0.091
ZMC 5257	33	3.8	<58	<700	0.25	<0.1	25	<+0.092
ZMC 5258	36	3.4	<70	<700	0.25	<0.1	27	<+0.093
ZMC 5259	39	3.2	<80	<800	0.25	<0.1	30	<+0.094
ZMC 5260	43	3.0	<93	<900	0.25	<0.1	33	<+0.095
ZMC 5261	47	2.7	<105	<1000	0.25	<0.1	36	<+0.095
ZMC 5262	51	2.5	<125	<1100	0.25	<0.1	39	<+0.096
ZMC 5263	56	2.2	<150	<1300	0.25	<0.1	43	<+0.096
ZMC 5264	60	2.1	<170	<1400	0.25	<0.1	46	<+0.097
ZMC 5265	62	2.0	<185	<1400	0.25	<0.1	47	<+0.097
ZMC 5266	68	1.8	<230	<1600	0.25	<0.1	52	<+0.097
ZMC 5267	75	1.7	<270	<1700	0.25	<0.1	56	<+0.098
ZMC 5268	82	1.5	<330	<2000	0.25	<0.1	62	<+0.098
ZMC 5269	87	1.4	<370	<2200	0.25	<0.1	68	<+0.099
ZMC 5270	91	1.4	<400	<2300	0.25	<0.1	69	<+0.099
ZMC 5271	100	1.3	<500	--	--	<0.1	75	<+0.100
ZMC 5272	110	1.2	<700	--	--	<0.1	83	<+0.100
ZMC 5273	120	1.0	<950	--	--	<0.1	90	<+0.100
ZMC 5274	130	0.95	<1100	--	--	<0.1	98	<+0.110
ZMC 5275	140	0.90	<1300	--	--	<0.1	105	<+0.110



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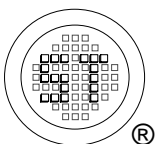
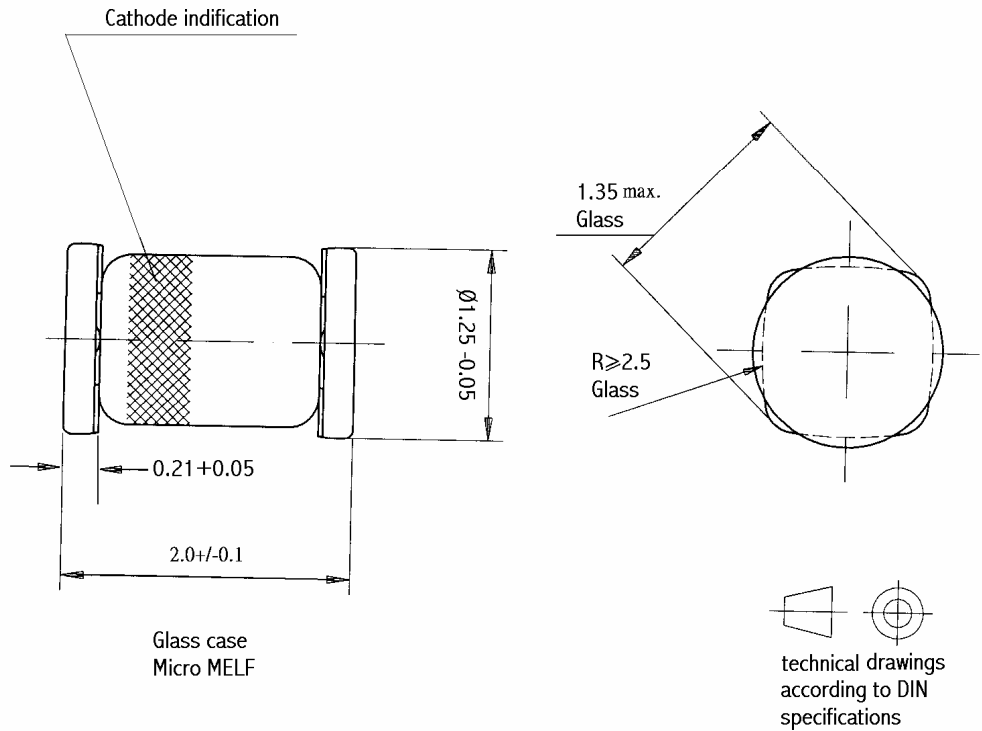
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Dated : 22/01/2005

Type	Zener Voltage Range <sup>1)</sup>		Maximum Zener Impedance <sup>1)</sup>			Reverse Leakage Current		Temp. Coefficient of Zener Voltage
	V <sub>znom</sub> <sup>3)</sup> V	I <sub>ZT</sub> mA	r <sub>ZJT</sub> Ω	r <sub>ZJK</sub> Ω	at I <sub>ZK</sub> mA	I <sub>R</sub> <sup>2)</sup> μA	at V <sub>R</sub> V	TK <sub>VZ</sub> %/K
ZMC 5276	150	0.85	<1500	--	--	<0.1	113	<+0.110
ZMC 5277	160	0.80	<1700	--	--	<0.1	120	<+0.115
ZMC 5278	170	0.74	<1900	--	--	<0.1	127	<+0.115
ZMC 5279	180	0.68	<2200	--	--	<0.1	135	<+0.120
ZMC 5280	190	0.66	<2400	--	--	<0.1	142	<+0.120
ZMC 5281	200	0.65	<2500	--	--	<0.1	150	<+0.120

- 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<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- 2) Measured under thermal equilibrium and DC test conditions.
- 3) Tested with pulses t<sub>p</sub> = 20 ms.

**Dimensions in mm**



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