

ZMM5221 - ZMM5267

V_Z : 2.4 to 75 V
 P_D : 500 mW

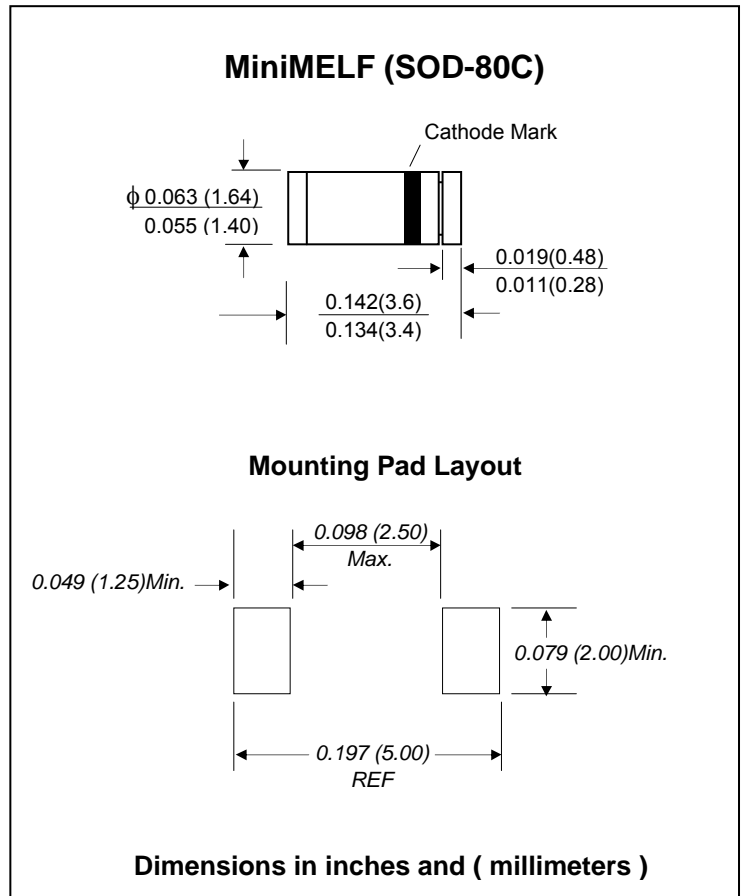
FEATURES :

- Silicon planar zener diodes
- Standard Zener voltage tolerance is $\pm 10\%$
- Other tolerances are available upon request.
- These diodes are also available in the DO-35 case with the type designation 1N5221 ... 1N5267
- Pb / RoHS Free

MECHANICAL DATA :

- * Case : MiniMELF Glass Case (SOD-80C)
- * Weight : 0.05 gram (approximately)

ZENER DIODES



Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specific.

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Maximum Forward Voltage at $I_F = 200$ mA.	V_F	1.1	V
Power Dissipation at $T_a = 75$ °C	P_D	500 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 ⁽¹⁾	°C/W
Junction temperature	T_J	175	°C
Storage temperature range	T_{STG}	-65 to + 150	°C

Notes: (1) Valid provided that electrodes are kept at ambient temperature



ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type	Nominal Zener Voltage ⁽³⁾	Test Current	Maximum Zener Impedance ⁽¹⁾		Maximum Reverse Leakage Current		Typical Temperature Coefficient $\alpha_{VZ}(\%/^{\circ}\text{C})$	Maximum Regulator Current ⁽²⁾ I_{ZM}
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$	$I_R @ V_R$	V_R		
	(V)	(mA)	(Ω)	(Ω)	(μA)	(V)		(mA)
ZMM5221	2.4	20	30	1200	100	1.0	-0.085	190
ZMM5222	2.5	20	30	1250	100	1.0	-0.085	182
ZMM5223	2.7	20	30	1300	75	1.0	-0.080	168
ZMM5224	2.8	20	30	1400	75	1.0	-0.080	162
ZMM5225	3.0	20	29	1600	50	1.0	-0.075	152
ZMM5226	3.3	20	28	1600	25	1.0	-0.070	138
ZMM5227	3.6	20	24	1700	15	1.0	-0.065	126
ZMM5228	3.9	20	23	1900	10	1.0	-0.060	115
ZMM5229	4.3	20	22	2000	5.0	1.0	± 0.055	106
ZMM5230	4.7	20	19	1900	5.0	2.0	± 0.030	97
ZMM5231	5.1	20	17	1600	5.0	2.0	± 0.030	89
ZMM5232	5.6	20	11	1600	5.0	3.0	+0.038	81
ZMM5233	6.0	20	7	1600	5.0	3.5	+0.038	76
ZMM5234	6.2	20	7	1000	5.0	4.0	+0.045	73
ZMM5235	6.8	20	5	750	3.0	5.0	+0.050	67
ZMM5236	7.5	20	6	500	3.0	6.0	+0.058	61
ZMM5237	8.2	20	8	500	3.0	6.5	+0.062	55
ZMM5238	8.7	20	8	600	3.0	6.5	+0.065	52
ZMM5239	9.1	20	10	600	3.0	7.0	+0.068	50
ZMM5240	10	20	17	600	3.0	8.0	+0.075	45
ZMM5241	11	20	22	600	2.0	8.4	+0.076	41
ZMM5242	12	20	30	600	1.0	9.1	+0.077	38
ZMM5243	13	9.5	13	600	0.5	9.9	+0.079	35
ZMM5244	14	9.0	15	600	0.1	10	+0.082	32
ZMM5245	15	8.5	16	600	0.1	11	+0.082	30
ZMM5246	16	7.8	17	600	0.1	12	+0.083	28
ZMM5247	17	7.4	19	600	0.1	13	+0.084	27
ZMM5248	18	7.0	21	600	0.1	14	+0.085	25
ZMM5249	19	6.6	23	600	0.1	14	+0.086	24
ZMM5250	20	6.2	25	600	0.1	15	+0.086	23
ZMM5251	22	5.6	29	600	0.1	17	+0.087	21
ZMM5252	24	5.2	33	600	0.1	18	+0.088	19.1
ZMM5253	25	5.0	35	600	0.1	19	+0.089	18.2
ZMM5254	27	4.6	41	600	0.1	21	+0.090	16.8
ZMM5255	28	4.5	44	600	0.1	21	+0.091	16.2
ZMM5256	30	4.2	49	600	0.1	23	+0.091	15.1
ZMM5257	33	3.8	58	700	0.1	25	+0.092	13.8
ZMM5258	36	3.4	70	700	0.1	27	+0.093	12.6
ZMM5259	39	3.2	80	800	0.1	30	+0.094	11.6
ZMM5260	43	3.0	93	900	0.1	33	+0.095	10.6
ZMM5261	47	2.7	105	1000	0.1	36	+0.095	9.7
ZMM5262	51	2.5	125	1100	0.1	39	+0.096	8.9
ZMM5263	56	2.2	150	1300	0.1	43	+0.096	-
ZMM5264	60	2.1	170	1400	0.1	46	+0.097	-
ZMM5265	62	2.0	185	1400	0.1	47	+0.097	-
ZMM5266	68	1.8	230	1600	0.1	52	+0.097	-
ZMM5267	75	1.7	270	1700	0.1	56	+0.098	-

Notes :

- (1) The Zener impedance is derived from the 1kHz 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) Valid provided that electrodes are kept at ambient temperature
- (3) Tested under thermal equilibrium and DC test conditions