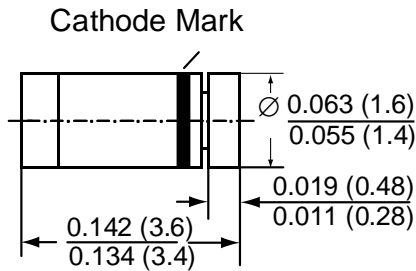


Zener Diodes

V_z Range 3.0 to 75V

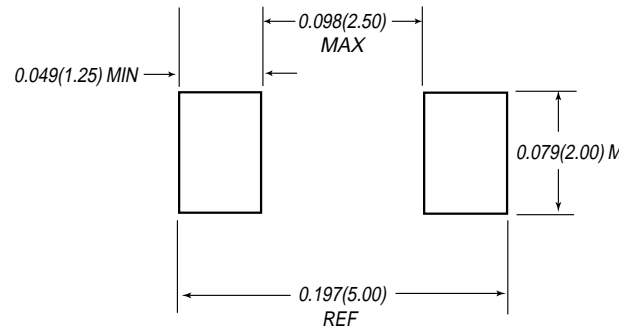
Power Dissipation 500mW

MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

Mounting Pad Layout



Mechanical Data

Case: MiniMELF Glass Case (SOD-80C)

Weight: approx. 0.05g

Packaging codes/options:

D1/10K per 13" reel (8mm tape), 20K/box

D2/2.5K per 7" reel (8mm tape), 20K/box

Features

- Silicon Planar Power Zener Diodes
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix. Other tolerances are available upon request.
- These diodes are also available in the DO-35 case with the type designation 1N5225 ... 1N5267, SOT-23 case with the type designation MMBZ5225 ... MMBZ5267 and SOD-123 case with type designation MMSZ5225 ... MMSZ5267.

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener Current (see Table "Characteristics")			
Power Dissipation at T _{amb} = 75°C	P _{tot}	500 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	300 ⁽¹⁾	°C/W
Maximum Junction temperature	T _j	175	°C
Storage Temperature Range	T _s	-65 to +150	°C

Note:

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

Electrical Characteristics (T_A = 25°C unless otherwise noted) Maximum V_F = 1.25V at I_F = 200mA

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

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

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept
at ambient temperature

