

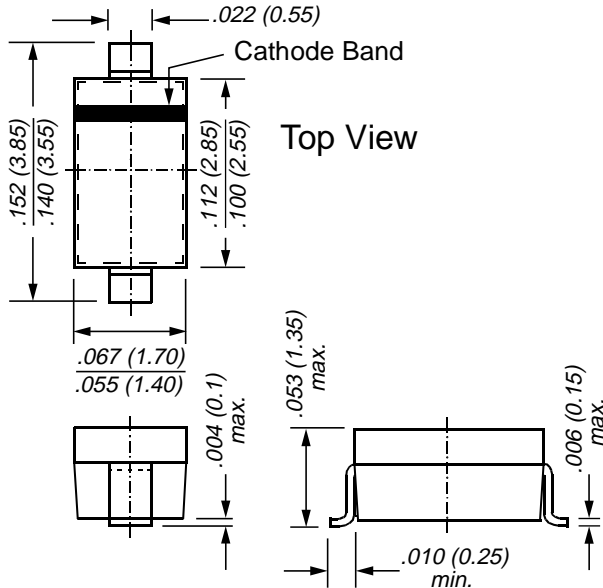


Zener Diodes

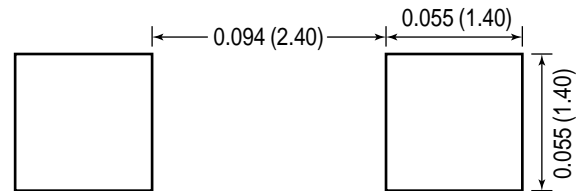
Vz Range 3.0 to 75V

Power Dissipation 500mW

SOD-123



Mounting Pad Layout



Dimensions in inches and (millimeters)

Mechanical Data

Case: SOD-123 Plastic Case

Weight: approx. 0.01g

Packaging codes/options:

D3/10K per 13" reel (8mm tape), 30K/box

D4/3K per 7" reel (8mm tape), 30K/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 MiniMELF case with the designation ZMM5225 ... ZMM5267, DO-35 case with type designation 1N5225 ... 1N5267 and SOT-23 case with the type designation MMBZ5225 ... MMBZ5267.

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 _L = 75°C	P _{tot}	500 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	340 ⁽¹⁾	°C/W
Maximum Junction Temperature	T _j	150	°C
Storage Temperature Range	T _S	-65 to +175	°C

Note: (1) FR-4 or FR-5 board with minimum recommended solder pad layout

Electrical Characteristics (T_A = 25°C unless otherwise noted) Maximum V_F = 0.9 V at I_F = 10mA

Type	Marking Code	Nominal Zener Voltage ⁽³⁾ at I _{ZT} V _Z (V)	Test Current I _{ZT} (mA)	Maximum Zener Impedance ⁽¹⁾		Typical Temperature Coefficient α _{VZ} (%/°C)	Maximum Reverse Leakage Current	
				at I _{ZT} Z _{ZT} (Ω)	at I _{ZK} = 0.25mA (Ω)		I _R (μA)	Test Voltage V _R (V)
MMSZ5225	C5	3.0	20	30	1600	-0.075	50	1.0
MMSZ5226	D1	3.3	20	28	1600	-0.070	25	1.0
MMSZ5227	D2	3.6	20	24	1700	-0.065	15	1.0
MMSZ5228	D3	3.9	20	23	1900	-0.060	10	1.0
MMSZ5229	D4	4.3	20	22	2000	-0.055	5.0	1.0
MMSZ5230	D5	4.7	20	19	1900	±0.030	5.0	2.0
MMSZ5231	E1	5.1	20	17	1600	±0.030	5.0	2.0
MMSZ5232	E2	5.6	20	11	1600	+0.038	5.0	3.0
MMSZ5233	E3	6.0	20	7	1600	+0.038	5.0	3.5
MMSZ5234	E4	6.2	20	7	1000	+0.045	5.0	4.0
MMSZ5235	E5	6.8	20	5	750	+0.050	3.0	5.0
MMSZ5236	F1	7.5	20	6	500	+0.058	3.0	6.0
MMSZ5237	F2	8.2	20	8	500	+0.062	3.0	6.5
MMSZ5238	F3	8.7	20	8	600	+0.065	3.0	6.5
MMSZ5239	F4	9.1	20	10	600	+0.068	3.0	7.0
MMSZ5240	F5	10	20	17	600	+0.075	3.0	8.0
MMSZ5241	H1	11	20	22	600	+0.076	2.0	8.4
MMSZ5242	H2	12	20	30	600	+0.077	1.0	9.1
MMSZ5243	H3	13	9.5	13	600	+0.079	0.5	9.9
MMSZ5244	H4	14	9.0	15	600	+0.082	0.1	10
MMSZ5245	H5	15	8.5	16	600	+0.082	0.1	11
MMSZ5246	J1	16	7.8	17	600	+0.083	0.1	12
MMSZ5247	J2	17	7.4	19	600	+0.084	0.1	13
MMSZ5248	J3	18	7.0	21	600	+0.085	0.1	14
MMSZ5249	J4	19	6.6	23	600	+0.086	0.1	14
MMSZ5250	J5	20	6.2	25	600	+0.086	0.1	15
MMSZ5251	K1	22	5.6	29	600	+0.087	0.1	17
MMSZ5252	K2	24	5.2	33	600	+0.087	0.1	18
MMSZ5253	K3	25	5.0	35	600	+0.089	0.1	19
MMSZ5254	K4	27	4.6	41	600	+0.090	0.1	21
MMSZ5255	K5	28	4.5	44	600	+0.091	0.1	21
MMSZ5256	M1	30	4.2	49	600	+0.091	0.1	23
MMSZ5257	M2	33	3.8	58	700	+0.092	0.1	25
MMSZ5258	M3	36	3.4	70	700	+0.093	0.1	27
MMSZ5259	M4	39	3.2	80	800	+0.094	0.1	30
MMSZ5260	M5	43	3.0	93	900	+0.095	0.1	33
MMSZ5261	N1	47	2.7	105	1000	+0.095	0.1	36
MMSZ5262	N2	51	2.5	125	1100	+0.096	0.1	39
MMSZ5263	N3	56	2.2	150	1300	+0.096	0.1	43
MMSZ5264	N4	60	2.1	170	1400	+0.097	0.1	46
MMSZ5265	N5	62	2.0	185	1400	+0.097	0.1	47
MMSZ5266	P1	68	1.8	230	1600	+0.097	0.1	52
MMSZ5267	P2	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) Measured with device junction in thermal equilibrium.