Small Signal Zener Diodes

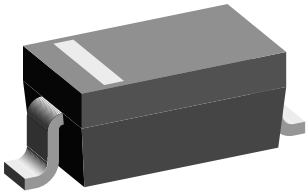
Features

- Silicon planar power Zener ziodes.
- Standard Zener voltage tolerance is ± 5 % with a “B” suffix (e.g.: MMSZ5225B-V), suffix “C” is ± 2 % tolerance
- These diodes are also available in MiniMELF case with the designation TZM5225 to TZM5267,
  DO-35 case with type designation 1N5225 to 1N5267 and SOT-23 case with the type designation MMBZ5225-V to MMBZ5267-V.
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT



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Mechanical Data

Case: SOD-123

Weight: approx. 10.3 mg

Packaging codes/options:

GS18/10K per 13 " reel (8 mm tape), 10K/box

GS08/3K per 7 " reel (8 mm tape), 15K/box

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Zener current (see table "Characteristics")				
Power dissipation	T_L = 75 °C	P_{tot}	500 [1]	mW

[1] On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	340 [1]	K/W
Maximum junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

[1] On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

Electrical Characteristics

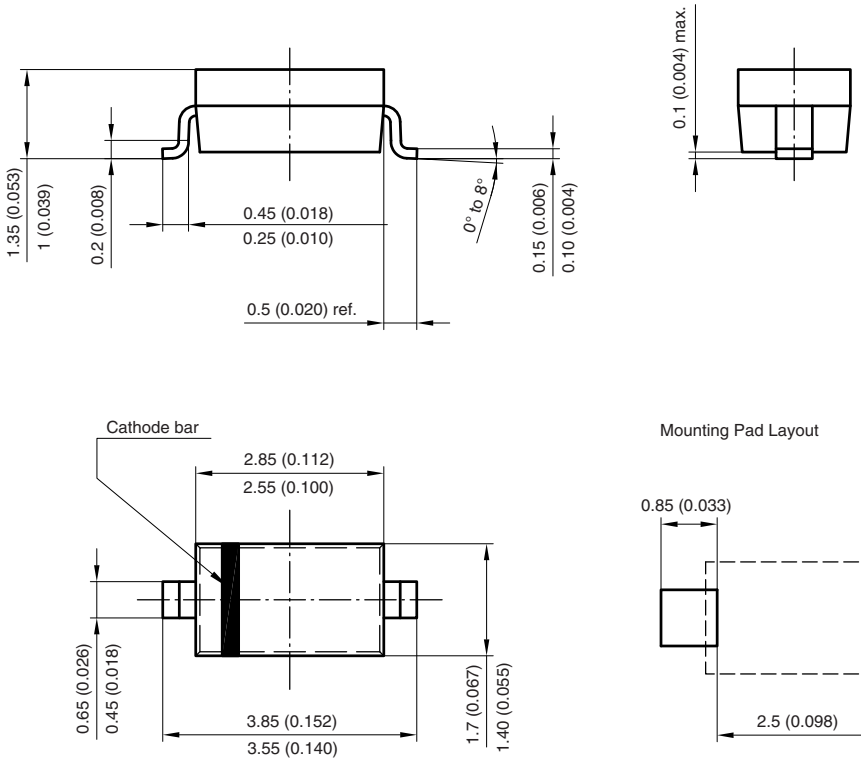
Maximum V_F = 0.9 V, at I_F = 10 mA

Part number	Marking code	Nominal Zener voltage [2]	Test current	Maximum dynamic impedance [1]		Typical temperature of coefficient	Maximum reverse leakage current	
		V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK} = 0.25 mA	α_{VZ}	I_R	V_R
		V	mA	Ω	Ω	%/°C	µA	V
MMSZ5225	C5	3	20	30	1600	- 0.075	50	1
MMSZ5226	D1	3.3	20	28	1600	- 0.070	25	1
MMSZ5227	D2	3.6	20	24	1700	- 0.065	15	1
MMSZ5228	D3	3.9	20	23	1900	- 0.060	10	1
MMSZ5229	D4	4.3	20	22	2000	- 0.055	5	1
MMSZ5230	D5	4.7	20	19	1900	± 0.030	5	2
MMSZ5231	E1	5.1	20	17	1600	± 0.030	5	2
MMSZ5232	E2	5.6	20	11	1600	+ 0.038	5	3
MMSZ5233	E3	6	20	7	1600	+ 0.038	5	3.5
MMSZ5234	E4	6.2	20	7	1000	+ 0.045	5	4
MMSZ5235	E5	6.8	20	5	750	+ 0.050	3	5
MMSZ5236	F1	7.5	20	6	500	+ 0.058	3	6
MMSZ5237	F2	8.2	20	8	500	+ 0.062	3	6.5
MMSZ5238	F3	8.7	20	8	600	+ 0.065	3	6.5
MMSZ5239	F4	9.1	20	10	600	+ 0.068	3	7
MMSZ5240	F5	10	20	17	600	+ 0.075	3	8
MMSZ5241	H1	11	20	22	600	+ 0.076	2	8.4
MMSZ5242	H2	12	20	30	600	+ 0.077	1	9.1
MMSZ5243	H3	13	9.5	13	600	+ 0.079	0.5	9.9
MMSZ5244	H4	14	9	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	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	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	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	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

[1] The Zener Impedance is derived from the 1 kHz 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.

Package Dimensions in milimeters (inches): SOD-123



Rev. 4 - Date: 24. Sep. 2009
Document no.: S8-V-3910.01-001 (4)
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