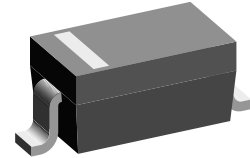


## Small Signal Zener Diodes

### Features

- Silicon Planar Power Zener Diodes.
- Standard Zener voltage tolerance is  $\pm 5\%$  with a "B" suffix (e.g.: MMSZ5225B-V), suffix "C" is  $\pm 2\%$  tolerance
- These diodes are also available in MiniMELF case with the designation TZM5225 ...TZM5267, DO-35 case with type designation 1N5225 ... 1N5267 and SOT23 case with the type designation MMBZ5225-V ... MMBZ5267-V.
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



17431

### Mechanical Data

**Case:** SOD123 Plastic case

**Weight:** approx. 9.3 mg

**Packaging codes/options:**

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

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

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Zener current (see Table "Characteristics")				
Power dissipation	$T_L = 75\text{ }^{\circ}\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW

<sup>1)</sup> On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	340 <sup>1)</sup>	K/W
Maximum junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 175	$^{\circ}\text{C}$

<sup>1)</sup> On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

# MMSZ5225-V to MMSZ5267-V



Vishay Semiconductors

## Electrical Characteristics

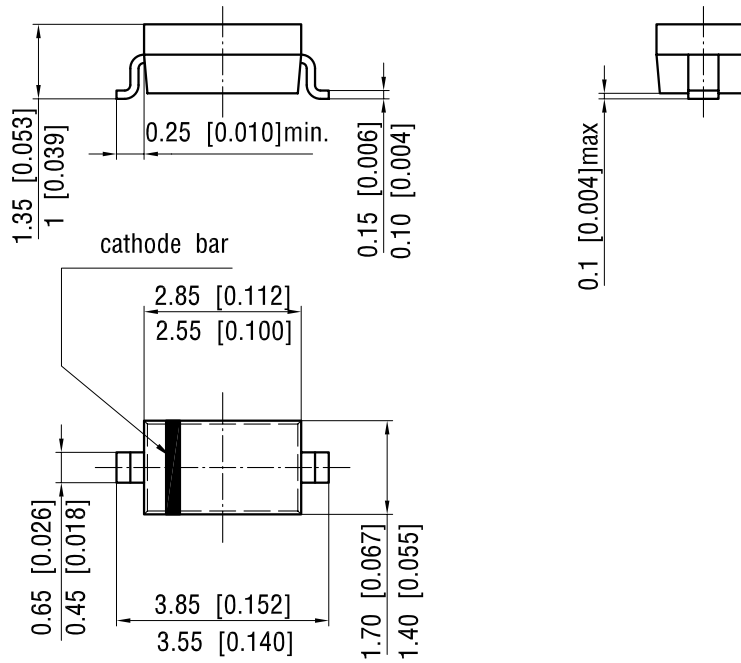
$T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise noted  
 Maximum  $V_F = 0.9\text{ V}$  at  $I_F = 10\text{ mA}$

Partnumber	Marking Code	Nominal Zener Voltage <sup>2)</sup>	Test Current	Maximum Dynamic Impedance <sup>1)</sup>		Typical Temperature of Coefficient	Maximum Reverse Leakage Current	
		$V_Z$ at $I_{ZT}$	$I_{ZT}$	$Z_{ZT}$ at $I_{ZT}$	$Z_{ZK}$ at $I_{ZK} = 0.25\text{ mA}$		$\alpha_{VZ}$	$I_R$
		V	mA	$\Omega$	$\Omega$	%/ $^{\circ}\text{C}$	$\mu\text{A}$	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	$\pm 0.030$	5.0	2.0
MMSZ5231	E1	5.1	20	17	1600	$\pm 0.030$	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

<sup>1)</sup> 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.

<sup>2)</sup> Measured with device junction in thermal equilibrium.

## Package Dimensions in mm (Inches)



foot print recommendation:

