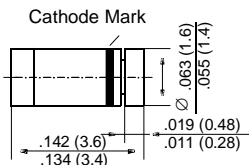


# ZMM5225 THRU ZMM5267

## ZENER DIODES

### Mini-MELF



Dimensions are in inches and (millimeters)

### 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.



### MECHANICAL DATA

**Case:** Mini-MELF Glass Case (SOD-80)

**Weight:** approx. 0.05 g

### MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Zener Current (see Table "Characteristics")			
Power Dissipation at $T_{amb} = 75^{\circ}\text{C}$	$P_{tot}$	500 <sup>(1)</sup>	mW
Maximum Junction Temperature	$T_j$	175	$^{\circ}\text{C}$
Storage Temperature Range	$T_s$	- 65 to +150	$^{\circ}\text{C}$

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	-	-	300 <sup>(1)</sup>	$^{\circ}\text{C}/\text{W}$
Forward Voltage at $I_F = 200 \text{ mA}$	$V_F$	-	-	1.1	Volts

#### NOTES

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

# ZMM5225 THRU ZMM5267

## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Type	Nominal Zener Voltage <sup>(3)</sup> at I <sub>ZT</sub> V <sub>Z</sub> (V)	Test current I <sub>ZT</sub> (mA)	Maximum Zener impedance <sup>(1)</sup>		Typical Temperature Coefficient $\alpha_{VZ}$ (%/K)	Maximum Reverse Leakage Current		Maximum regulator current <sup>(2)</sup> I <sub>ZM</sub> (mA)
			at I <sub>ZT</sub> Z <sub>ZT</sub> ( $\Omega$ )	at I <sub>ZK</sub> =0.25mA Z <sub>ZK</sub> ( $\Omega$ )		I <sub>R</sub> ( $\mu$ A)	Test Voltage V <sub>R</sub> (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	$\pm$ 0.030	5.0	2.0	97
ZMM5231	5.1	20	17	1600	$\pm$ 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<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. 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 ZMM5225 THRU ZMM5267

## Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept  
at ambient temperature

