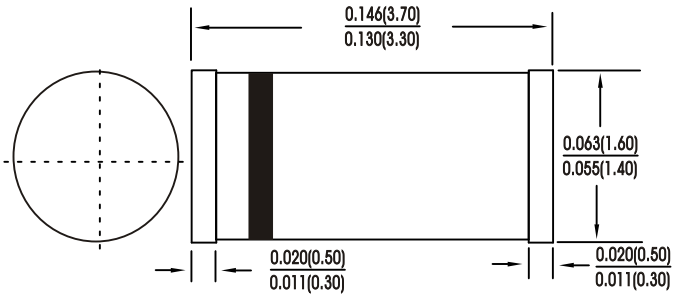
ZMM5221B(A)(C)(D) THRU ZMM5257B(A)(C)(D)

SURFACE MOUNT ZENER DIODES

FEATURES:

MINI-MELF SOD-80/DO-213AA

- Silicon planer power zener diodes
- Standard Zener voltage tolerance is ±5% AND a "B" suffix. Other tolerances are available upon request



MECHANICAL DATA

Case: MINI MELF Molded Glass(SOD-80)

Weight : approx. 0.05g

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

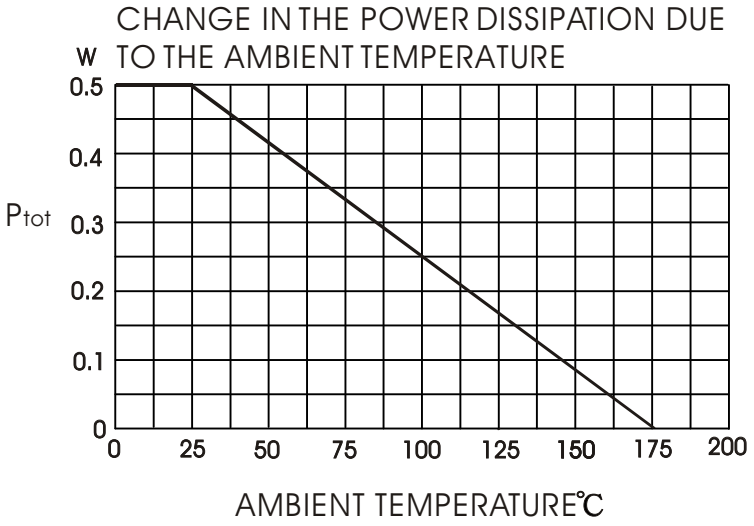
Rating at 25° C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Characteristic	Symbol	Value	Units
Power Dissipation at Tamb=25 ℃	Ptot	0.5[1)]	W
Z-current	Iz	Pv/Vz	mA
Tremal Resistance Junction to Ambient Air	RthJ-A	300[1)]	K/mW
Maximum instantaneous forward voltage drop at IF=200 mADC	V_F	1.1	Volts
Junction temperature	T_J	175	℃
Storage temperature range	Tstg	-65 to+175	℃

1) Valid provided that leads are kept at ambient temperature at a distance of 10mm from case


CHANGE IN THE POWER DISSIPATION DUE
TO THE AMBIENT TEMPERATURE
W
0.5
0.4
Ptot
0.3
0.2
0.1
0
0
25
50
75
100
125
150
175
200
AMBIENT TEMPERATURE℃

ZENER DIODES ZMM5221B(A)(C)(D) THRU ZMM5257B(A)(C)(D)

Device Type	Nominal Zener Voltage Vz at Izt*	Test Current IzT	Maximum Zener Impedance			Maximum Reverse Leakage Current		Typical Temperature coefficient	Maximum Regulator Current IzM
			ZzT at IzT	ZzK at IzK	IzK	IR	Test Voltage		
	Volts	mA	Ω	Ω	mA	μA	Volts	%/℃	mA
ZMM5221B	2.4	20	30	1200	0.25	100	1.0	-0.085	191
ZMM5222B	2.5	20	30	1250	0.25	100	1.0	-0.085	182
ZMM5223B	2.7	20	30	1300	0.25	75	1.0	-0.080	168
ZMM5224B	2.8	20	30	1400	0.25	75	1.0	-0.080	162
ZMM5225B	3.0	20	29	1600	0.25	50	1.0	-0.075	151
ZMM5226B	3.3	20	28	1600	0.25	25	1.0	-0.070	138
ZMM5227B	3.6	20	24	1700	0.25	15	1.0	-0.065	126
ZMM5228B	3.9	20	23	1900	0.25	10	1.0	-0.060	115
ZMM5229B	4.3	20	22	2000	0.25	5	1.0	-0.055	106
ZMM5230B	4.7	20	19	1900	0.25	5	2.0	-0.030	97
ZMM5231B	5.1	20	17	1600	0.25	5	2.0	+0.030	89
ZMM5232B	5.6	20	11	1600	0.25	5	3.0	+0.038	81
ZMM5233B	6.0	20	7	1600	0.25	5	3.5	+0.038	76
ZMM5234B	6.2	20	7	1000	0.25	5	4.0	+0.045	73
ZMM5235B	6.8	20	5	750	0.25	3	5.0	+0.050	67
ZMM5236B	7.5	20	6	500	0.25	3	6.0	+0.058	61
ZMM5237B	8.2	20	8	500	0.25	3	6.5	+0.062	55
ZMM5238B	8.7	20	8	600	0.25	3	6.5	+0.065	52
ZMM5239B	9.1	20	10	600	0.25	3	7.0	+0.068	50
ZMM5240B	10	20	17	600	0.25	3	8.0	+0.075	45
ZMM5241B	11	20	22	600	0.25	2	8.4	+0.076	41
ZMM5242B	12	20	30	600	0.25	1	9.1	+0.077	38
ZMM5243B	13	9.5	13	600	0.25	0.5	9.9	+0.079	35
ZMM5244B	14	9.0	15	600	0.25	0.1	10	+0.082	32
ZMM5245B	15	8.5	16	600	0.25	0.1	11	+0.082	30
ZMM5246B	16	7.8	17	600	0.25	0.1	12	+0.083	28
ZMM5247B	17	7.4	19	600	0.25	0.1	13	+0.084	27
ZMM5248B	18	7.0	21	600	0.25	0.1	14	+0.085	25
ZMM5249B	19	6.6	23	600	0.25	0.1	14	+0.086	24
ZMM5250B	20	6.2	25	600	0.25	0.1	15	+0.086	23
ZMM5251B	22	5.6	29	600	0.25	0.1	17	+0.087	21.2
ZMM5252B	24	5.2	33	600	0.25	0.1	18	+0.087	19.1
ZMM5253B	25	5.0	35	600	0.25	0.1	19	+0.089	18.2
ZMM5254B	27	4.6	41	600	0.25	0.1	21	+0.090	16.8
ZMM5255B	28	4.5	44	600	0.25	0.1	21	+0.091	16.2
ZMM5256B	30	4.2	49	600	0.25	0.1	23	+0.091	15.1
ZMM5257B	33	3.8	58	700	0.25	0.1	25	+0.092	13.8

1) STANDARD VOLTAGE TOLERANCE IS ±5% AND
SUFFIX "A" FOR ±3%
SUFFIX "B"X FOR ± 5%
SUFFIX "C" FOR ±10%
SUFFIX "D" FOR ±20%
*MEASURED WITH PULSES TP=10ms

ZENER DIODE NUMBRERING SYSTEM

ZMM5225 / 1* B / 1*

1* TYPE Number ZMM=ZENEB MINI MELF
2* TOOLERANCE OF Vz
3* ZMM5225B=3.0V± 5%