

MINI MELF Glass-Encapsulate Diodes

Zener Diodes

Features

- P_d 500mW
- V_z 2.4V-75V

Applications

- Stabilizing Voltage

MINI MELF(SOD-80/ LL- 34)



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	mW	$L=4\text{mm}, T_L=25^\circ\text{C}$	500
Zener current	I_z	mA	P_{tot} / V_z	See Table
Maximum junction temperature	T_j	$^\circ\text{C}$		175
Storage temperature range	T_{stg}	$^\circ\text{C}$		-65 to +175

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JA}$	$^\circ\text{C}/\text{W}$	junction to ambient air, $L=4\text{mm}, T_L=\text{constant}$	300
Forward voltage	V_F	V	$I_F=200\text{mA}$	1

Electrical Characteristics (T_A=25°C unless otherwise noted)

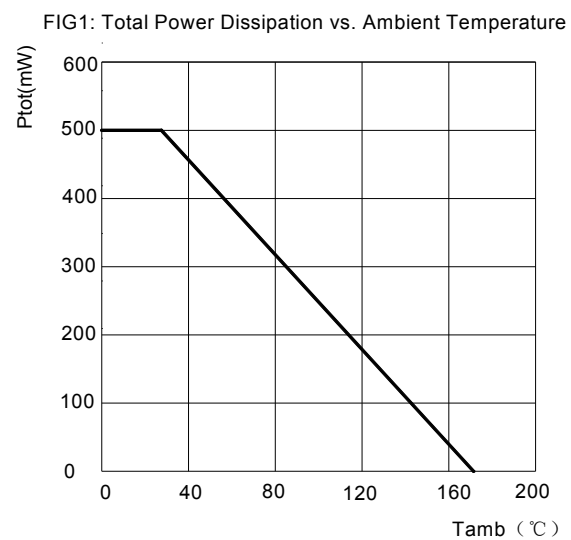
Part Number	Zener voltage range ¹⁾	Dynamic resistance		Test current		Reverse leakage current		Temperature Coefficient
	V _Z	r _{ZT} at I _{ZT}	r _{ZK} at I _{ZK}	I _{ZT}	I _{ZK}	I _R at V _R		TK _{VZ}
	V	Ω	Ω	mA	mA	μA	V	%K
	Typ.	Typ.	Typ.					
ZMM5221B	2.4	< 30	< 1200	20	0.25	< 100	1	< - 0.085
ZMM5222B	2.5	< 30	< 1250	20	0.25	< 100	1	< - 0.085
ZMM5223B	2.7	< 30	< 1300	20	0.25	< 75	1	< - 0.080
ZMM5224B	2.8	< 30	< 1400	20	0.25	< 75	1	< - 0.080
ZMM5225B	3	< 29	< 1600	20	0.25	< 50	1	< - 0.075
ZMM5226B	3.3	< 28	< 1600	20	0.25	< 25	1	< - 0.070
ZMM5227B	3.6	< 24	< 1700	20	0.25	< 15	1	< - 0.065
ZMM5228B	3.9	< 23	< 1900	20	0.25	< 10	1	< - 0.060
ZMM5229B	4.3	< 22	< 2000	20	0.25	< 5	1	< ± 0.055
ZMM5230B	4.7	< 19	< 1900	20	0.25	< 5	2	< ± 0.030
ZMM5231B	5.1	< 17	< 1600	20	0.25	< 5	2	< ± 0.030
ZMM5232B	5.6	< 11	< 1600	20	0.25	< 5	3	< + 0.038
ZMM5233B	6	< 7	< 1600	20	0.25	< 5	3.5	< + 0.038
ZMM5234B	6.2	< 7	< 1000	20	0.25	< 5	4	< + 0.045
ZMM5235B	6.8	< 5	< 750	20	0.25	< 3	5	< + 0.050
ZMM5236B	7.5	< 6	< 500	20	0.25	< 3	6	< + 0.058
ZMM5237B	8.2	< 8	< 500	20	0.25	< 3	6.5	< + 0.062
ZMM5238B	8.7	< 8	< 600	20	0.25	< 3	6.5	< + 0.065
ZMM5239B	9.1	< 10	< 600	20	0.25	< 3	7	< + 0.068
ZMM5240B	10	< 17	< 600	20	0.25	< 3	8	< + 0.075
ZMM5241B	11	< 22	< 600	20	0.25	< 2	8.4	< + 0.076
ZMM5242B	12	< 30	< 600	20	0.25	< 1	9.1	< + 0.077
ZMM5243B	13	< 13	< 600	9.5	0.25	< 0.5	9.9	< + 0.079
ZMM5244B	14	< 15	< 600	9	0.25	< 0.1	10	< + 0.082
ZMM5245B	15	< 16	< 600	8.5	0.25	< 0.1	11	< + 0.082
ZMM5246B	16	< 17	< 600	7.8	0.25	< 0.1	12	< + 0.083
ZMM5247B	17	< 19	< 600	7.4	0.25	< 0.1	13	< + 0.084
ZMM5248B	18	< 21	< 600	7	0.25	< 0.1	14	< + 0.085
ZMM5249B	19	< 23	< 600	6.6	0.25	< 0.1	14	< + 0.086
ZMM5250B	20	< 25	< 600	6.2	0.25	< 0.1	15	< + 0.086
ZMM5251B	22	< 29	< 600	5.6	0.25	< 0.1	17	< + 0.087
ZMM5252B	24	< 33	< 600	5.2	0.25	< 0.1	18	< + 0.088
ZMM5253B	25	< 35	< 600	5	0.25	< 0.1	19	< + 0.089
ZMM5254B	27	< 41	< 600	4.6	0.25	< 0.1	21	< + 0.090
ZMM5255B	28	< 44	< 600	4.5	0.25	< 0.1	21	< + 0.091
ZMM5256B	30	< 49	< 600	4.2	0.25	< 0.1	23	< + 0.091
ZMM5257B	33	< 58	< 700	3.8	0.25	< 0.1	25	< + 0.092
ZMM5258B	36	< 70	< 700	3.4	0.25	< 0.1	27	< + 0.093
ZMM5259B	39	< 80	< 800	3.2	0.25	< 0.1	30	< + 0.094
ZMM5260B	43	< 93	< 900	3	0.25	< 0.1	33	< + 0.095

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

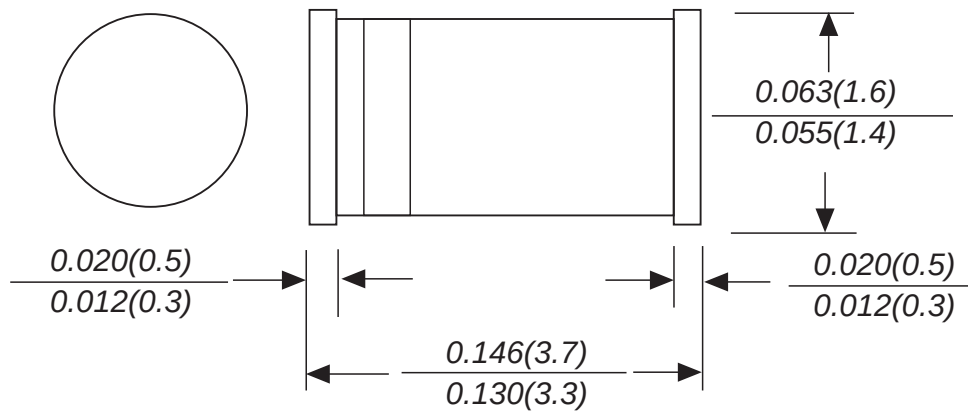
Part Number	Zener voltage range ¹⁾	Dynamic resistance		Test current		Reverse leakage current		Temperature Coefficient
	VZ	r_{ZT} at I_{ZT}	r_{ZK} at I_{ZK}	I_{ZT}	I_{ZK}	I_R at V_R		TK_{VZ}
	V	Ω	Ω	mA	mA	μA	V	%K
	Typ.	Typ.	Typ.					
ZMM5261B	47	105	< 1000	2.7	0.25	< 0.1	36	< + 0.095
ZMM5262B	51	125	< 1100	2.5	0.25	< 0.1	39	< + 0.096
ZMM5263B	56	150	< 1300	2.2	0.25	< 0.1	43	< + 0.096
ZMM5264B	60	170	< 1400	2.1	0.25	< 0.1	46	< + 0.097
ZMM5265B	62	185	< 1400	2	0.25	< 0.1	47	< + 0.097
ZMM5266B	68	230	< 1600	1.8	0.25	< 0.1	52	< + 0.097
ZMM5267B	75	270	< 1700	1.7	0.25	< 0.1	56	< + 0.098

Notes:

Based on dc-measurement at thermal equilibrium; case temperature maintained at $30^{\circ}\text{C} \pm 2^{\circ}\text{C}$

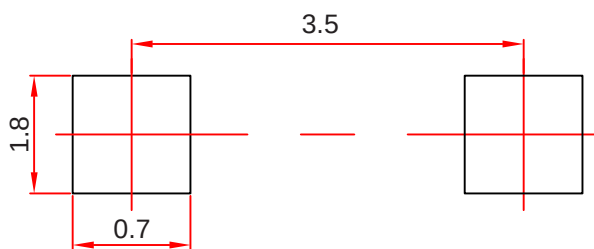


MINI MELF Package Outline Dimensions



Dimensions in millimeters

MINI MELF Suggested Pad Layout

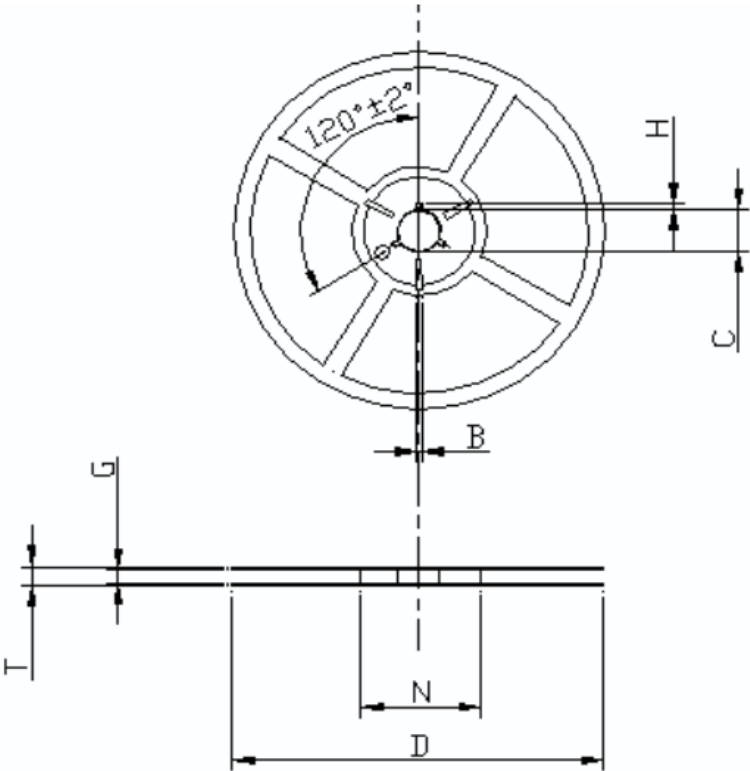


Note:

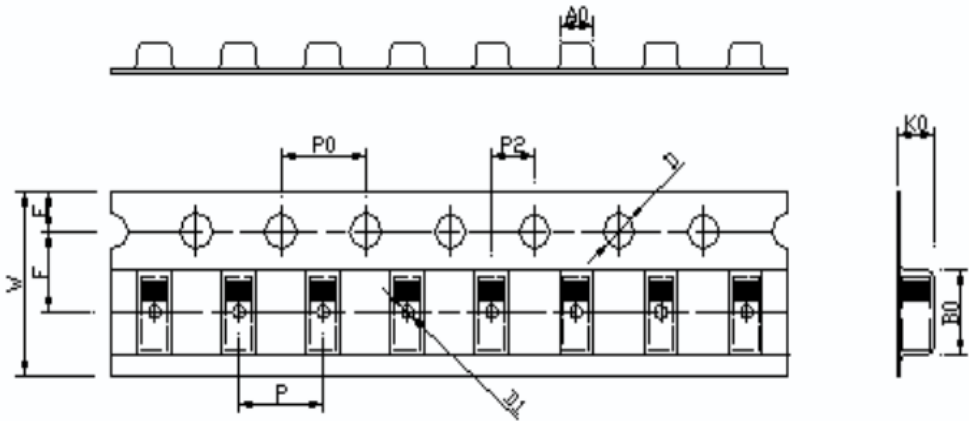
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSMD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSMD does not assume any liability arising out of the application or use of any product described herein.



SYMBOL	B	C	D	G	H	N	T
SIZE(mm)	2±0.5	13±0.5	178±2	8.4±1.5	4±0.5	60	<14.9



SYMBOL	W	P	E	F	D	D1	P0	P2	A0	B0	K0
SIZE(mm)	8.0±0.1	4.0±0.1	1.75±0.1	3.5±0.05	1.5±0.1	1.0±0.1	4.0±0.1	2.0±0.05	1.70±0.1	3.80±0.1	1.85±0.1