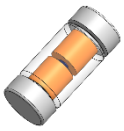
500mW,3 - 75V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is ±5%
- Silicon Planar Power Zener Diodes
- Total power dissipation: Max 500mW
- Moisture sensitivity: level 1, per J-STD-020



LL-34(MINI MELF)

Applications

Protection from high voltage, high energy transients, voltage stabilization.

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)			
Parameter	**Symbol**	**Ratings**	**Unit**
Zener voltage	V_Z	See Next Table	V
Power dissipation at T_L=75℃	P_{tot}	500	mW
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	300	℃/W
Maximum junction temperature	T_J	175	℃
Storage temperature range	T_{STG}	-65 to +175	℃

Note：

1. Valid provided that leads at a distance of 9.5mm from case are kept at ambient temperature.

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

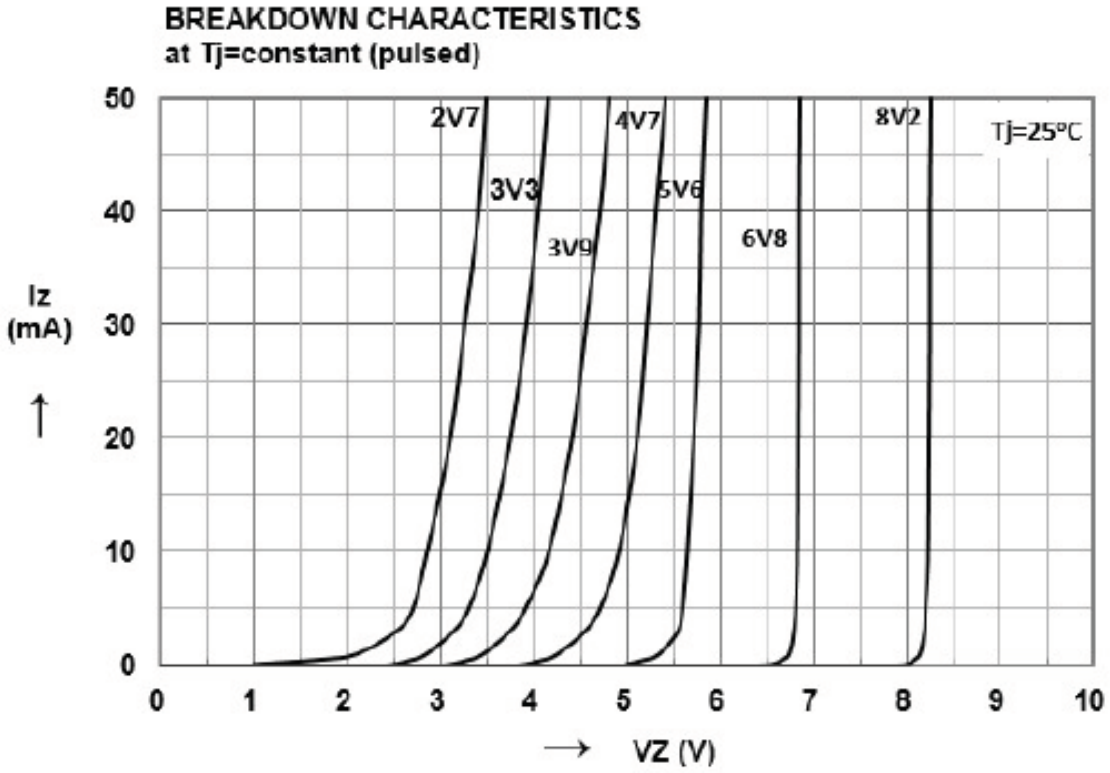
Part Number	V_Z at I_{ZT} (V)			I_{ZT} (mA)	Maximum zener impedance		I_{ZK} (mA)	Maximum reverse leakage at V_R (μA)	Test voltage V_R (V)	Maximum Zener Current
	Min	Typ	Max		Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} at I_{ZK} (Ω)				IZM (mA)
ZMM5225B	2.85	3.0	3.15	20	29	1600	0.25	50	1	152
ZMM5226B	3.14	3.3	3.47	20	28	1600	0.25	25	1	138
ZMM5227B	3.42	3.6	3.78	20	24	1700	0.25	15	1	126
ZMM5228B	3.71	3.9	4.10	20	23	1900	0.25	10	1	115
ZMM5229B	4.09	4.3	4.52	20	22	2000	0.25	5	1	106
ZMM5230B	4.47	4.7	4.94	20	19	1900	0.25	5	2	97
ZMM5231B	4.85	5.1	5.36	20	17	1600	0.25	5	2	89
ZMM5232B	5.32	5.6	5.88	20	11	1600	0.25	5	3	81
ZMM5233B	5.70	6.0	6.30	20	7	1600	0.25	5	3.5	76
ZMM5234B	5.89	6.2	6.51	20	7	1000	0.25	5	4	73
ZMM5235B	6.46	6.8	7.14	20	5	750	0.25	3	5	67
ZMM5236B	7.13	7.5	7.88	20	6	500	0.25	3	6	61
ZMM5237B	7.79	8.2	8.61	20	8	500	0.25	3	6.5	55
ZMM5238B	8.27	8.7	9.14	20	8	600	0.25	3	6.5	52
ZMM5239B	8.65	9.1	9.56	20	10	600	0.25	3	7	50
ZMM5240B	9.50	10	10.50	20	17	600	0.25	3	8	45
ZMM5241B	10.45	11	11.55	20	22	600	0.25	2	8.4	41
ZMM5242B	11.40	12	12.60	20	30	600	0.25	1	9.1	38
ZMM5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	35
ZMM5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	32
ZMM5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	30
ZMM5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	28
ZMM5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	27
ZMM5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	25
ZMM5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	14	24
ZMM5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15	23
ZMM5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	21
ZMM5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	19.1
ZMM5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	18.2
ZMM5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	16.8
ZMM5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	16.2
ZMM5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	15.1
ZMM5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	13.8
ZMM5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	12.6
ZMM5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	11.6
ZMM5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	10.6

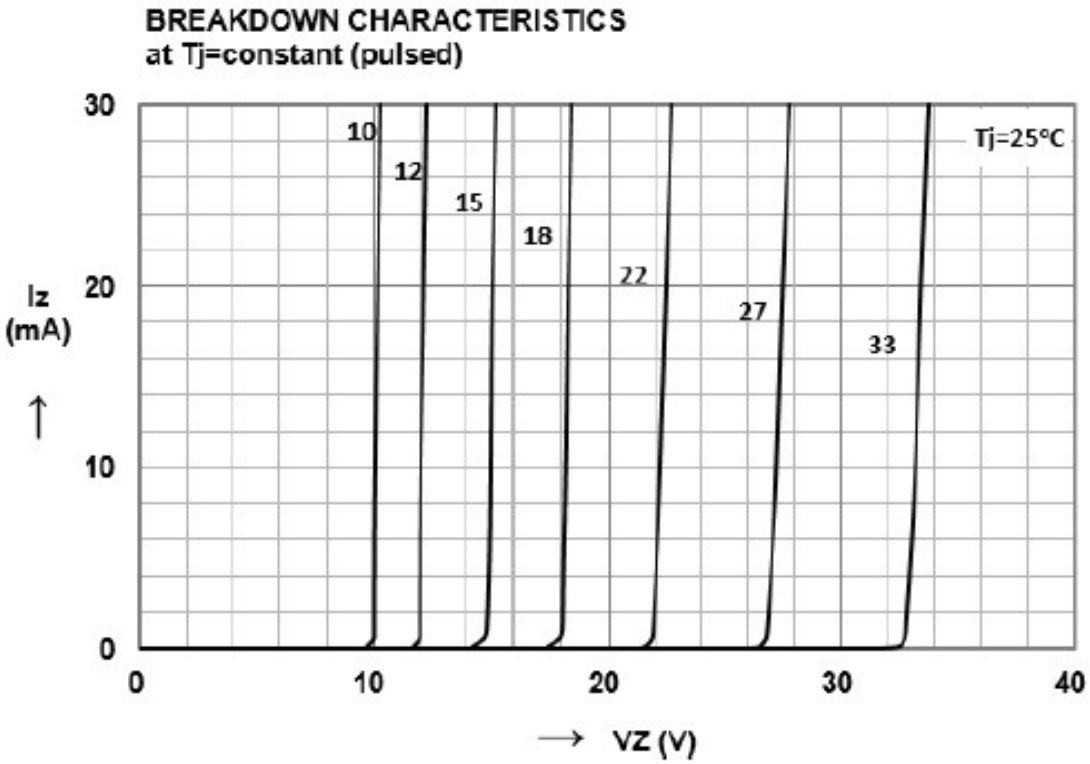
Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number	V_Z at I_{ZT} (V)			I_{ZT} (mA)	Maximum zener impedance		I_{ZK} (mA)	Maximum reverse leakage at V_R (μA)	Test voltage V_R (V)	Maximum Zener Current
	Min	Typ	Max		Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} at I_{ZK} (Ω)				IZM (mA)
ZMM5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	9.7
ZMM5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39	8.9
ZMM5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43	-
ZMM5264B	57.00	60	63.00	2.1	170	1400	0.25	0.1	46	-
ZMM5265B	58.90	62	65.10	2.0	185	1600	0.25	0.1	47	-
ZMM5266B	64.60	68	71.40	1.8	230	1700	0.25	0.1	52	-
ZMM5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56	-

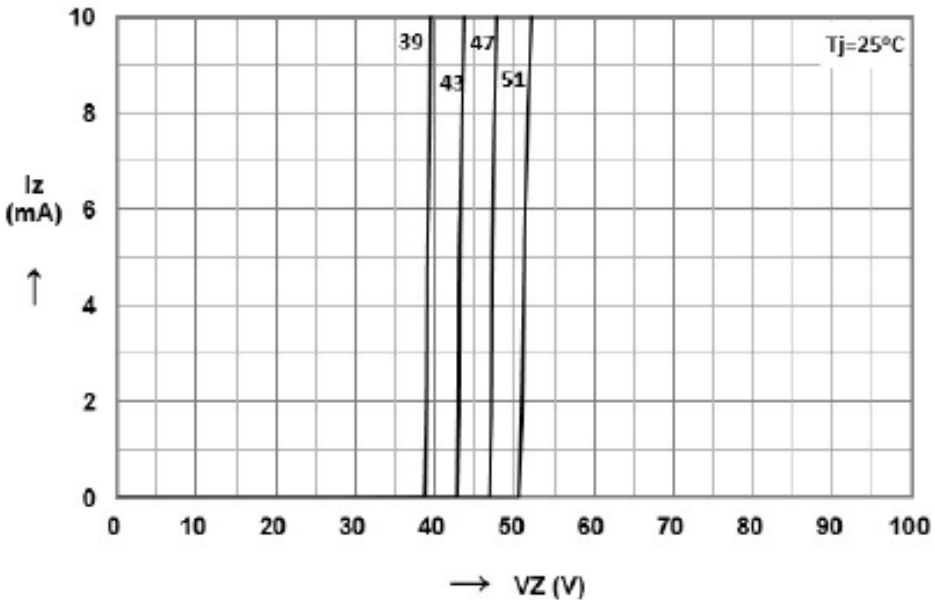
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

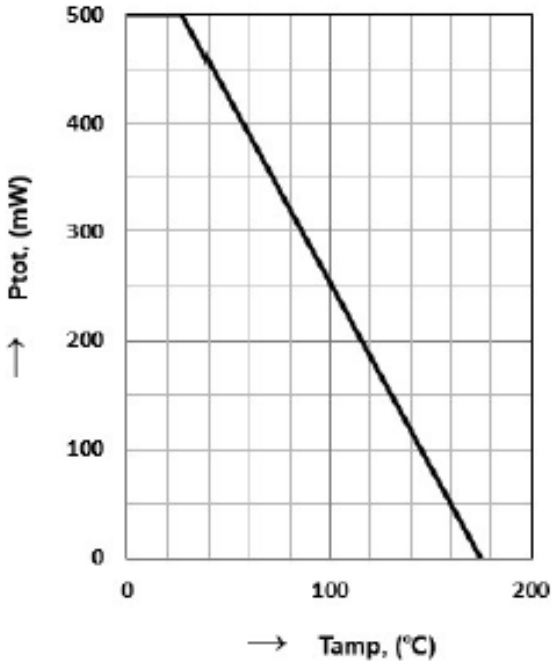




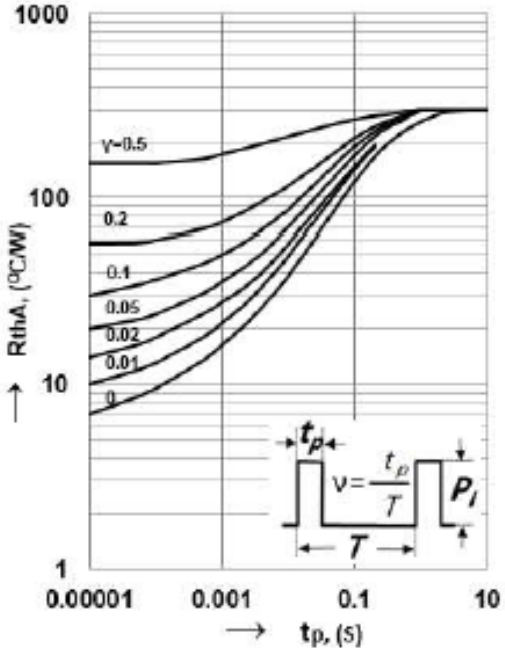
BREAKDOWN CHARACTERISTICS
at Tj=constant (pulsed)

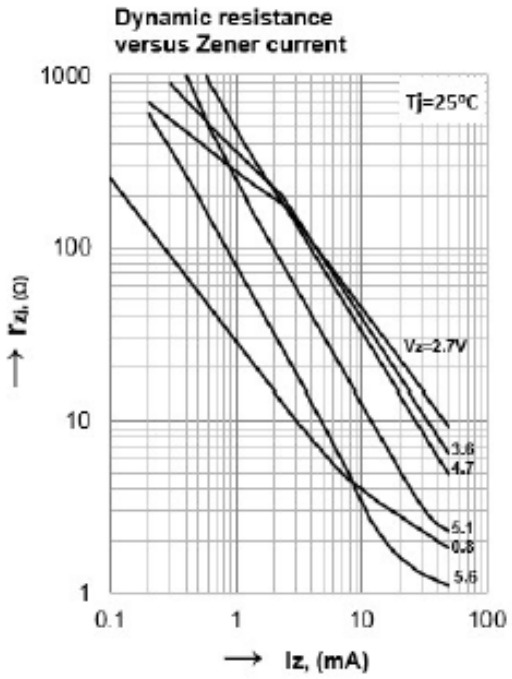


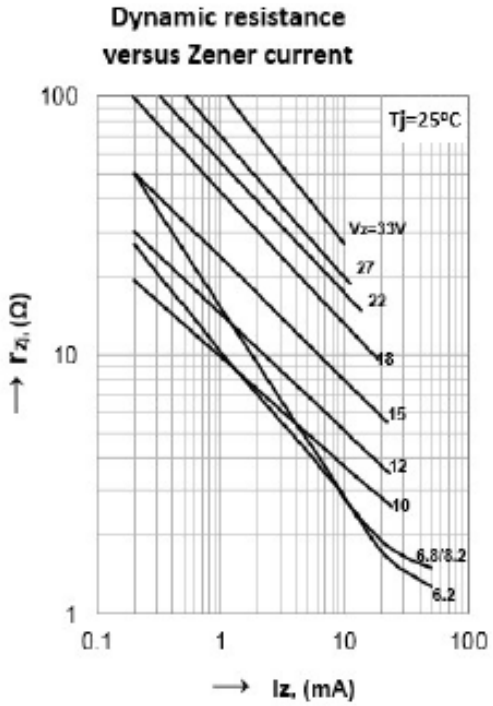
Admissible power dissipation
versus ambient temperature
Valid provided that leads are kept at ambient temperature



Pulse thermal resistance
versus pulse duration
Valid provided that leads are kept at ambient temperature




Dynamic resistance
versus Zener current
Tj=25°C
Vz=2.7V
3.6
4.7
5.1
6.8
5.6
1000
100
10
1
0.1
1
10
100
rZi (Ω)
Iz, (mA)

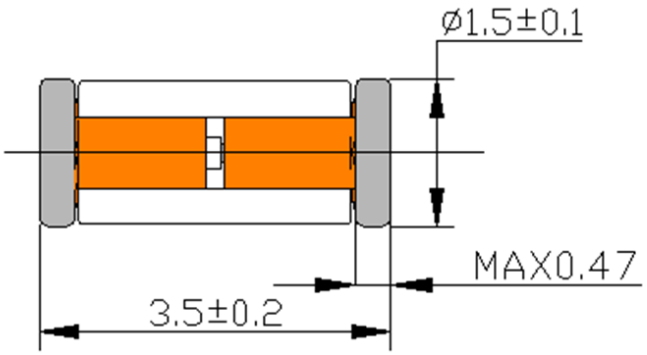

Dynamic resistance
versus Zener current
Tj=25°C
Vz=33V
27
22
18
15
12
10
6.8/8.2
6.2
100
10
1
0.1
1
10
100
rZi (Ω)
Iz, (mA)

Package Outline Dimensions

in inches (millimeters)

LL-34 (MINI MELF)

CASE DIMENSION (LL-34 Type) Unit mm



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.31	Modify document format

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