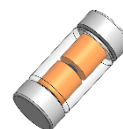


500mW,2.4 - 75V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Silicon Planar Power Zener Diodes
- Total power dissipation: Max 500mW
- Moisture sensitivity: level 1, per J-STD-020
- BZV55-C series zener voltage tolerance is $\pm 5\%$
- BZV55-F series zener voltage tolerance is $\pm 3\%$
- BZV55-B series zener voltage tolerance is $\pm 2\%$



LL-34(MINI MELF)

Applications

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

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	V_Z	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	P_{tot}	500	mW
Continuous forward current	I_F	250	mA
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	0.38	$^\circ\text{C}/\text{mW}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	0.30	$^\circ\text{C}/\text{mW}$
Maximum junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +175	$^\circ\text{C}$

Note:

1. Mounted on ceramic substrate 10mm*10mm*0.6mm.

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

Part Number	V _Z at I _{ZT} =5mA (V)							Maximum zener impedance(Ω)		Test voltage V _R (V)	Maximum reverse leakage at V _R (μA)
	Typ	Y=C		Y=F		Y=B		I _{ZT} =5mA f=1KHZ	I _{ZT} =1mA f=1KHZ		
		Min	Max	Min	Max	Min	Max				
BZV55-Y2V4	2.4	2.28	2.52	2.33	2.47	2.35	2.45	100	600	1	50
BZV55-Y2V7	2.7	2.57	2.84	2.62	2.78	2.65	2.75	100	600	1	20
BZV55-Y3V0	3.0	2.85	3.15	2.91	3.09	2.94	3.06	95	600	1	5
BZV55-Y3V3	3.3	3.14	3.47	3.20	3.40	3.23	3.37	95	600	1	5
BZV55-Y3V6	3.6	3.42	3.78	3.49	3.71	3.53	3.67	90	600	1	3
BZV55-Y3V9	3.9	3.71	4.10	3.78	4.02	3.82	3.98	90	600	1	3
BZV55-Y4V3	4.3	4.09	4.52	4.17	4.43	4.21	4.39	90	600	1	3
BZV55-Y4V7	4.7	4.47	4.94	4.56	4.84	4.61	4.79	80	500	2	2
BZV55-Y5V1	5.1	4.85	5.36	4.95	5.25	5.00	5.20	60	480	2	1
BZV55-Y5V6	5.6	5.32	5.88	5.43	5.77	5.49	5.71	40	400	2	3
BZV55-Y6V2	6.2	5.89	6.51	6.01	6.39	6.08	6.32	10	150	4	2
BZV55-Y6V8	6.8	6.46	7.14	6.60	7.00	6.66	6.94	15	80	4	1
BZV55-Y7V5	7.5	7.13	7.88	7.28	7.73	7.35	7.65	15	80	5	3
BZV55-Y8V2	8.2	7.79	8.61	7.95	8.45	8.04	8.36	15	80	5	2
BZV55-Y9V1	9.1	8.65	9.56	8.83	9.37	8.92	9.28	15	100	6	1
BZV55-Y10	10	9.50	10.50	9.70	10.30	9.80	10.20	20	150	7	0.7
BZV55-Y11	11	10.45	11.55	10.67	11.33	10.78	11.22	20	150	8	0.5
BZV55-Y12	12	11.40	12.60	11.64	12.36	11.76	12.24	25	150	8	0.2
BZV55-Y13	13	12.35	13.65	12.61	13.39	12.74	13.26	30	170	8	0.1
BZV55-Y15	15	14.25	15.75	14.55	15.45	14.70	15.30	30	200	10	0.1
BZV55-Y16	16	15.20	16.80	15.52	16.48	15.68	16.32	40	200	11	0.1
BZV55-Y18	18	17.10	18.90	17.46	18.54	17.64	18.36	45	225	13	0.05
BZV55-Y20	20	19.00	21.00	19.40	20.60	19.60	20.40	55	225	14	0.05
BZV55-Y22	22	20.90	23.10	21.34	22.66	21.56	22.44	55	250	15	0.05
BZV55-Y24	24	22.80	25.20	23.28	24.72	23.52	24.48	70	250	17	0.05
BZV55-Y27	27	25.65	28.35	26.19	27.81	26.46	27.54	80	300	19	0.05
BZV55-Y30	30	28.50	31.50	29.10	30.90	29.40	30.60	80	300	21	0.05
BZV55-Y33	33	31.35	34.65	32.01	33.99	32.34	33.66	80	325	23	0.05
BZV55-Y36	36	34.20	37.80	34.92	37.08	35.28	36.72	90	350	25	0.05
BZV55-Y39	39	37.05	40.95	37.83	40.17	38.22	39.78	130	350	27	0.05
BZV55-Y43	43	40.85	45.15	41.71	44.29	42.14	43.86	150	375	30	0.05
BZV55-Y47	47	44.65	49.35	45.59	48.41	46.06	47.94	170	375	33	0.05
BZV55-Y51	51	48.45	53.55	49.47	52.53	49.98	52.02	180	400	36	0.05
BZV55-Y56	56	53.20	58.80	54.32	57.68	54.88	57.12	200	425	39	0.05
BZV55-Y62	62	58.90	65.10	60.14	63.86	60.76	63.24	215	450	43	0.05
BZV55-Y68	68	64.60	71.40	65.96	70.04	66.64	69.36	240	475	48	0.05

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

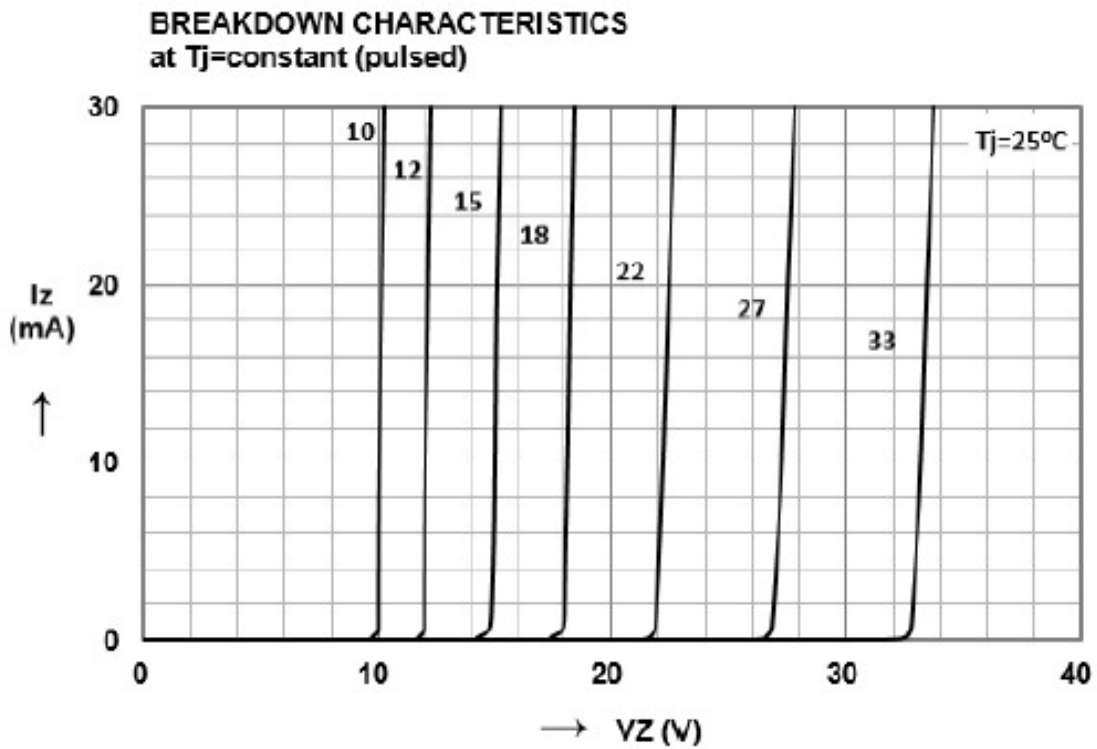
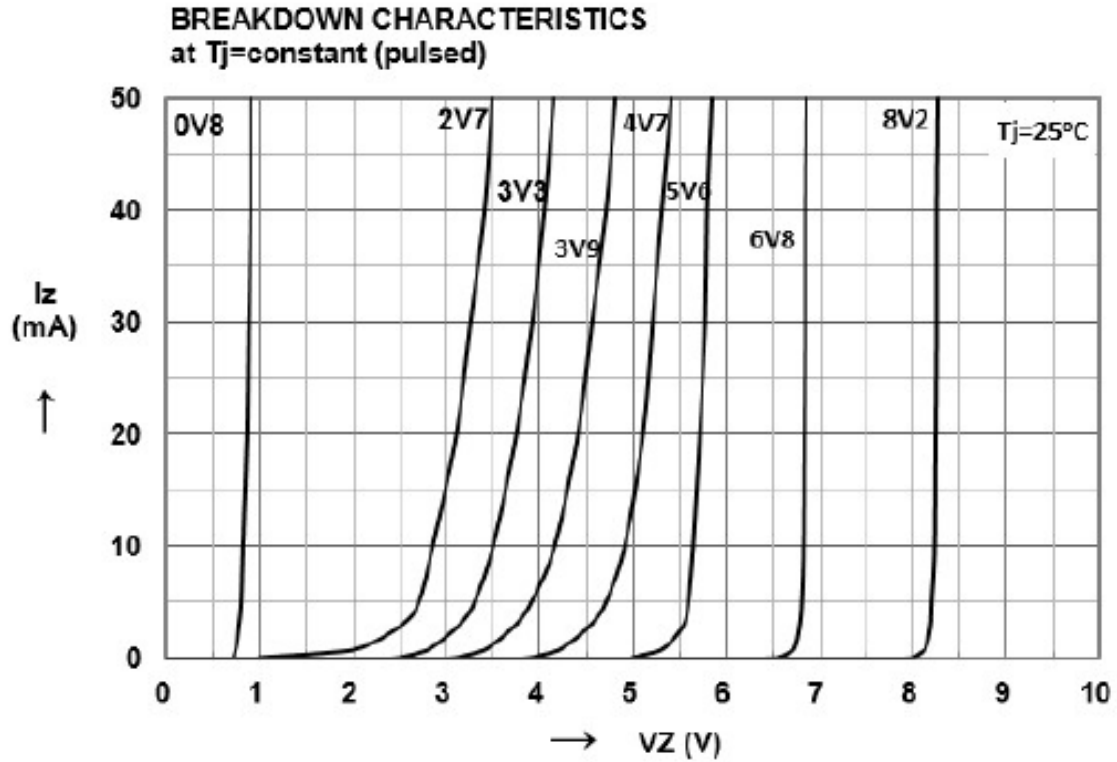
Part Number	V _Z at I _{ZT} =5mA (V)						Maximum zener impedance(Ω)		Test voltage V _R (V)	Maximum reverse leakage at V _R (μA)	
	Typ	Y=C		Y=F		Y=B		I _{ZT} =5mA f=1KHZ			I _{ZT} =1mA f=1KHZ
		Min	Max	Min	Max	Min	Max				
BZV55-Y75	75	71.25	78.75	72.75	77.25	73.50	76.50	255	500	53	0.05

Note:

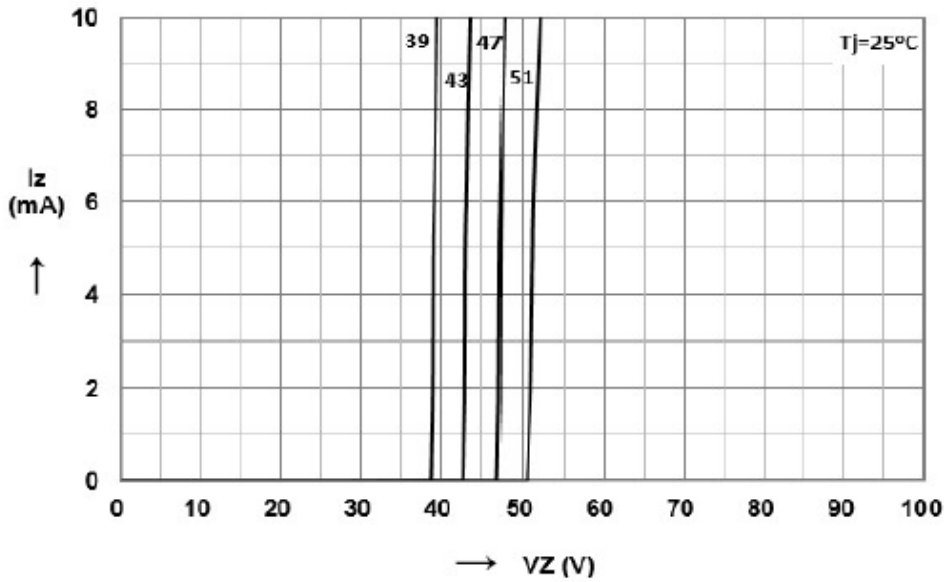
1. BZV55-C series zener voltage tolerance is $\pm 5\%$
2. BZV55-F series zener voltage tolerance is $\pm 3\%$
3. BZV55-B series zener voltage tolerance is $\pm 2\%$

Ratings and Characteristics Curves

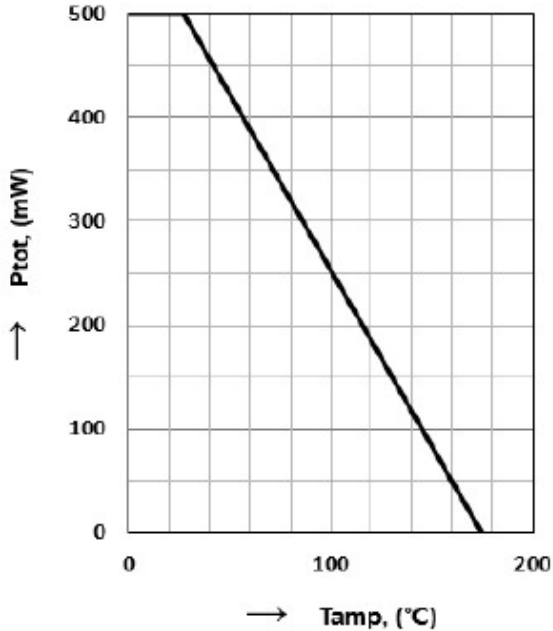
(TA = 25°C unless otherwise noted)



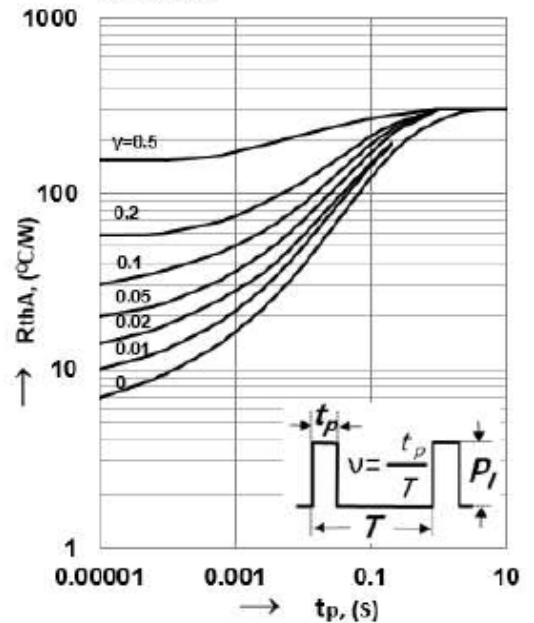
BREAKDOWN CHARACTERISTICS at $T_j = \text{constant}$ (pulsed)

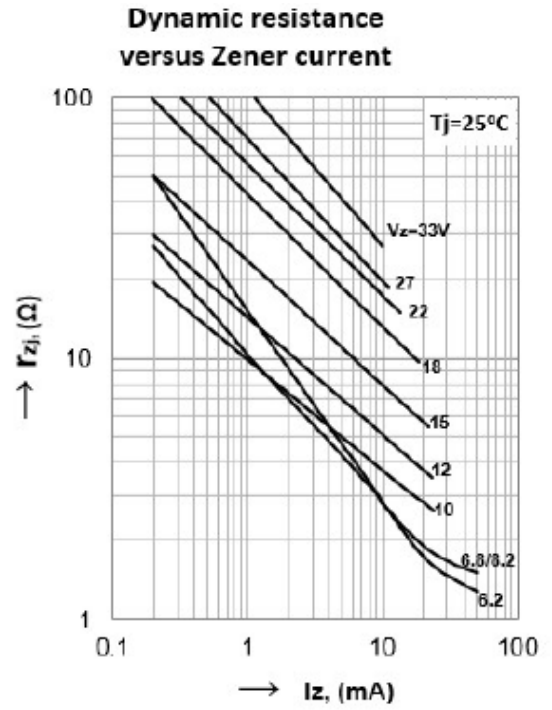
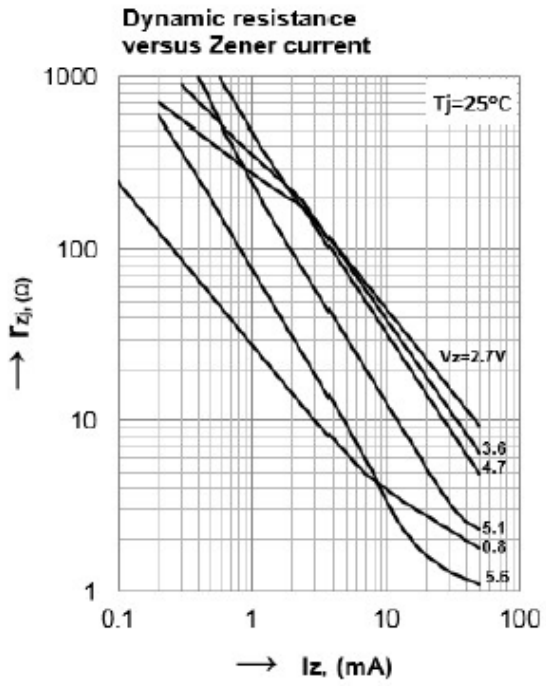


Admissible power dissipation versus ambient temperature Valid provided that leads are kept at ambient temperature



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



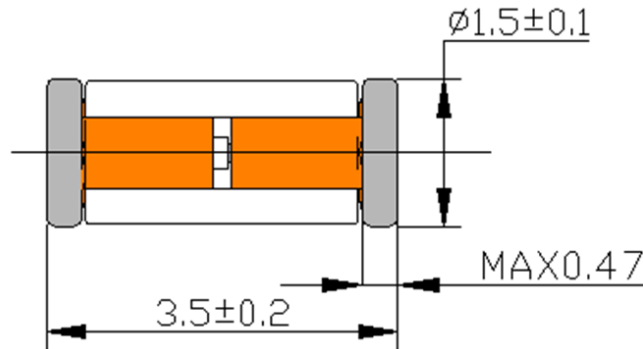


Package Outline Dimensions

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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