SEMICONDUCTOR

BZV55C2V0 - BZV55C75 & BZV55B2V0 - BZV55B75

LL-34

500 mW LL-34 Hermetically
Sealed Glass Zener Voltage Regulators

FEATURES

- Zener Voltage Range 2.0 to 75 Volts
- LL-34 (Mini-MELF) Package
- Surface Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Terminals Are Readily Solderable
- RoHS Compliant
- Matte Tin (Sn) Terminal Finish
- Color band Indicates Negative Polarity

ABSOLUTE MAXIMUM RATINGS

- Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	Value	Units
Power Dissipation	P_D	500	mW
Operating jumction and storage temperature range	T_J&T_{STG}	-65 to +175	°C

ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified.

Device Type	V_Z@I_{ZT} (Volts)		I_{ZT} (mA)	Z_{ZT}@I_{ZT} Max	I_{ZK} (mA)	Z_{zk}@I_{ZK} Max	I_R@V_R Max	V_R (Volts)
	Min	Max						
BZV55C 2V0	1.88	2.11	5	100	1	600	50	1
BZV55C 2V2	2.08	2.33	5	100	1	600	50	1
BZV55C 2V4	2.28	2.56	5	85	1	600	50	1
BZV55C 2V7	2.51	2.89	5	85	1	600	10	1
BZV55C 3V0	2.8	3.2	5	85	1	600	4	1
BZV55C 3V3	3.1	3.5	5	85	1	600	2	1
BZV55C 3V6	3.4	3.8	5	85	1	600	2	1
BZV55C 3V9	3.7	4.1	5	85	1	600	2	1
BZV55C 4V3	4	4.6	5	75	1	600	1	1
BZV55C 4V7	4.4	5	5	60	1	600	0.5	1
BZV55C 5V1	4.8	5.4	5	35	1	550	0.1	1
BZV55C 5V6	5.2	6	5	25	1	450	0.1	1
BZV55C 6V2	5.8	6.6	5	10	1	200	0.1	2
BZV55C 6V8	6.4	7.2	5	8	1	150	0.1	3
BZV55C 7V5	7	7.9	5	7	1	50	0.1	5
BZV55C 8V2	7.7	8.7	5	7	1	50	0.1	6.2
BZV55C 9V1	8.5	9.6	5	10	1	50	0.1	6.8
BZV55C 10	9.4	10.6	5	15	1	70	0.1	7.5
BZV55C 11	10.4	11.6	5	20	1	70	0.1	8.2
BZV55C 12	11.4	12.7	5	20	1	90	0.1	9.1

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BZV55C2V0 - BZV55C75 & BZV55B2V0 - BZV55B75

Electrical Characteristics

T_A=25^{0}C unless otherwise noted

Device Type	V_Z@I_{ZT} (Volts)		I_{ZT} (mA)	Z_{ZT}@I_{ZT} Max	I_{ZK} (mA)	Z_{zk}@I_{ZK} Max	I_R@V_R Max	V_R (Volts)
	Min	Max						
BZV55C 15	13.8	15.6	5	30	1	110	0.1	11
BZV55C 16	15.3	17.1	5	40	1	170	0.1	12
BZV55C 18	16.8	19.1	5	50	1	170	0.1	13
BZV55C 20	18.8	21.1	5	55	1	220	0.1	15
BZV55C 22	20.8	23.3	5	55	1	220	0.1	16
BZV55C 24	22.8	25.6	5	80	1	220	0.1	18
BZV55C 27	25.1	28.9	5	80	1	220	0.1	20
BZV55C 30	28	32	5	80	1	220	0.1	22
BZV55C 33	31	35	5	80	1	220	0.1	24
BZV55C 36	34	38	5	80	1	220	0.1	27
BZV55C 39	37	41	2.5	90	0.5	500	0.1	28
BZV55C 43	40	46	2.5	90	0.5	600	0.1	32
BZV55C 47	44	50	2.5	110	0.5	700	0.1	35
BZV55C 51	48	54	2.5	125	0.5	700	0.1	38
BZV55C 56	52	60	2.5	135	0.5	1000	0.1	42
BZV55C 62	58	66	2.5	150	0.5	1000	0.1	47
BZV55C 68	64	72	2.5	160	0.5	1000	0.1	51
BZV55C 75	70	80	2.5	170	0.5	1000	0.1	56

V_F Forward Voltage = 1.0 V Maximum @ I_F = 100 mA for all types

Electrical Characteristics

T_A=25^{0}C unless otherwise noted

Device Type	V_Z@I_{ZT} (Volts)		I_{ZT} (mA)	Z_{ZT}@I_{ZT} Max	I_{ZK} (mA)	Z_{zk}@I_{ZK} Max	I_R@V_R Max	V_R (Volts)
	Min	Max						
BZV55B 2V4	2.35	2.45	5	85	1	600	50	1
BZV55B 2V7	2.65	2.75	5	85	1	600	10	1
BZV55B 3V0	2.94	3.06	5	85	1	600	4	1
BZV55B 3V3	3.23	3.37	5	85	1	600	2	1
BZV55B 3V6	3.53	3.67	5	85	1	600	2	1
BZV55B 3V9	3.82	3.98	5	85	1	600	2	1
BZV55B 4V3	4.21	4.39	5	75	1	600	1	1
BZV55B 4V7	4.61	4.79	5	60	1	600	0.5	1
BZV55B 5V1	5.00	5.20	5	35	1	550	0.1	1
BZV55B 5V6	5.49	5.71	5	25	1	450	0.1	1
BZV55B 6V2	6.08	6.32	5	10	1	200	0.1	2
BZV55B 6V8	6.66	6.94	5	8	1	150	0.1	3
BZV55B 7V5	7.33	7.63	5	7	1	50	0.1	5
BZV55B 8V2	8.04	8.36	5	7	1	50	0.1	6.2
BZV55B 9V1	8.92	9.28	5	10	1	50	0.1	6.8
BZV55B 10	9.80	10.20	5	15	1	70	0.1	7.5
BZV55B 11	10.78	11.22	5	20	1	70	0.1	8.2
BZV55B 12	11.76	12.24	5	20	1	90	0.1	9.1
BZV55B 13	12.74	13.26	5	26	1	110	0.1	10
BZV55B 15	14.70	15.30	5	30	1	110	0.1	11
BZV55B 16	15.68	16.32	5	40	1	170	0.1	12
BZV55B 18	17.64	18.36	5	50	1	170	0.1	13
BZV55B 20	19.60	20.40	5	55	1	220	0.1	15
BZV55B 22	21.56	22.44	5	55	1	220	0.1	16
BZV55B 24	23.52	24.48	5	80	1	220	0.1	18
BZV55B 27	26.46	27.54	5	80	1	220	0.1	20
BZV55B 30	29.40	30.60	5	80	1	220	0.1	22
BZV55B 33	32.34	33.66	5	80	1	220	0.1	24
BZV55B 36	35.28	36.72	5	80	1	220	0.1	27
BZV55B 39	38.22	39.78	2.5	90	0.5	500	0.1	28
BZV55B 43	42.14	43.86	2.5	90	0.5	600	0.1	32

BZV55C2V0 - BZV55C75 & BZV55B2V0 - BZV55B75 LL-34

Electrical Characteristics

$T_A=25^0C$ unless otherwise noted

Device Type	$V_Z@I_{ZT}$ (Volts)		I_{ZT} (mA)	$Z_{ZT}@I_{ZT}$ Max	I_{ZK} (mA)	$Z_{zk}@I_{ZK}$ Max	$I_R@V_R$ Max	V_R (Volts)
	Min	Max						
BZV55B 47	46.06	47.94	2.5	110	0.5	700	0.1	35
BZV55B 51	49.98	52.02	2.5	125	0.5	700	0.1	38
BZV55B 56	54.88	57.12	2.5	135	0.5	1000	0.1	42
BZV55B 62	60.76	63.24	2.5	150	0.5	1000	0.1	47
BZV55B 68	66.64	69.36	2.5	160	0.5	1000	0.1	51
BZV55B 75	73.50	76.50	2.5	170	0.5	1000	0.1	56

V_F Forward Voltage = 1.0 V Maximum @ I_F =100mA for all types

NOTES:

1. The type numbers listed have zener voltage min/mix limits as shown.
2. For detalied information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.

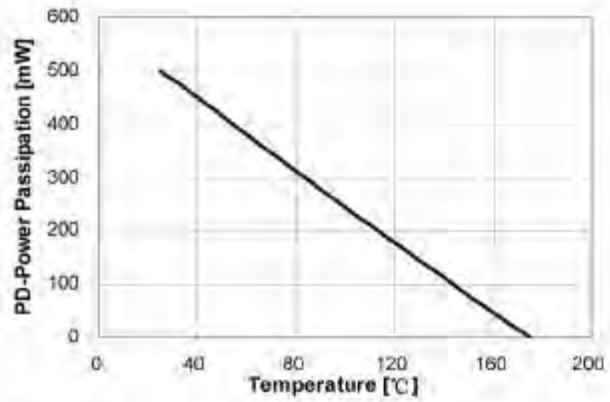


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

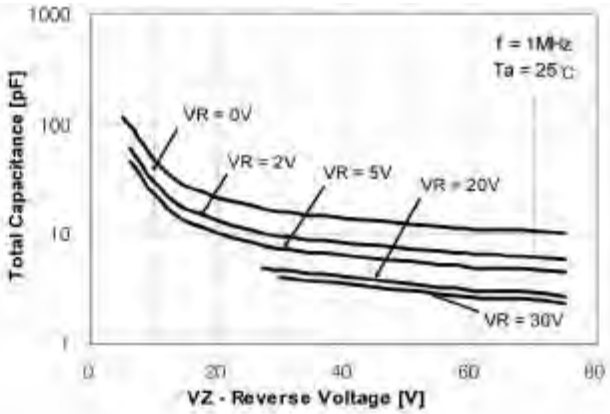


Figure 2. Total Capacitance

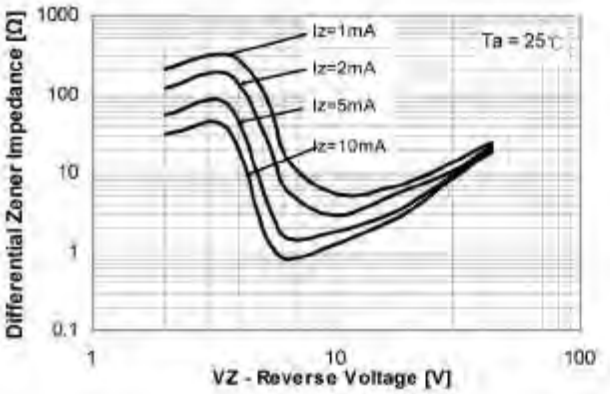


Figure 3. Differential Impedance vs. Zener Voltage

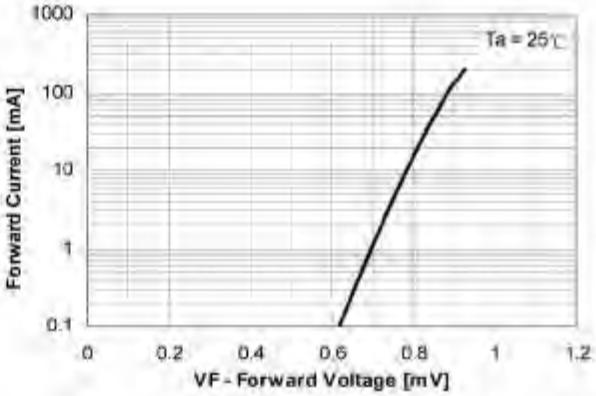


Figure 4. Forward Current vs. Forward Voltage

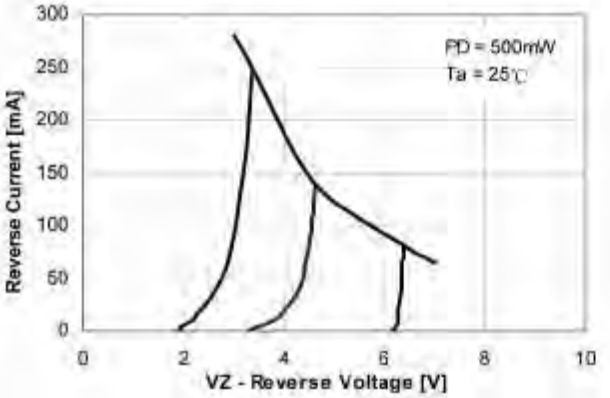


Figure 5. Reverse Current vs. Reverse Voltage

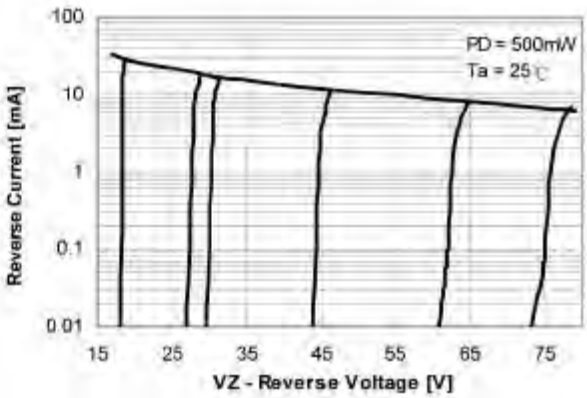
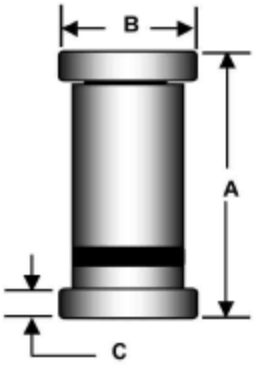


Figure 6. Reverse Current vs. Reverse Voltage

BZV55C2V0 - BZV55C75 & BZV55B2V0 - BZV55B75 LL-34

PACKAGE OUTLINE

Package	Case Outline
LL34	

DIM	LL-34			
	Millimeters		Inches	
	Min	Max	Min	Max
A	3.302	3.505	0.130	0.138
B	1.397	1.499	0.055	0.059
C	0.350	0.500	0.014	0.020

Notes:

1. All dimensions are within DO213AC JEDEC standard.
2. LL-34 polarity denoted by cathode band.

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