TAK CHEONG®

SEMICONDUCTOR

500 mW LL-34 Hermetically Sealed Glass Zener Voltage Regulators



SURFACE MOUNT
LL34

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Parameter	Value	Units
Power Dissipation	500	mW
Storage Temperature Range	-65 to +175	°C
Operating Junction Temperature	+175	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

DEVICE MARKING DIAGRAM



Cathode Band Color	Tolerance
Brown	10%
Blue	5%

Specification Features:

- Zener Voltage Range 2.4 to 56 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) Lead Finish
- Color band Indicates Negative Polarity



ELECTRICAL SYMBOL

Electrical Characteristics

T_A = 25°C unless otherwise noted

Device Type	V_Z @ I_{ZT} (Volts) Nominal	I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ω) Max	Z_{ZK} @ I_{ZK} = 0.25mA (Ω) Max	I_R @ V_R (µA) Max	V_R (Volts)
TCLLZ5221B	2.4	20	30	1200	100	1
TCLLZ5222B	2.5	20	30	1250	100	1
TCLLZ5223B	2.7	20	30	1300	75	1
TCLLZ5224B	2.8	20	30	1400	75	1
TCLLZ5225B	3	20	29	1600	50	1
TCLLZ5226B	3.3	20	28	1600	25	1
TCLLZ5227B	3.6	20	24	1700	15	1
TCLLZ5228B	3.9	20	23	1900	10	1
TCLLZ5229B	4.3	20	22	2000	5	1
TCLLZ5230B	4.7	20	19	1900	5	2
TCLLZ5231B	5.1	20	17	1600	5	2
TCLLZ5232B	5.6	20	11	1600	5	3
TCLLZ5233B	6	20	7	1600	5	3.5
TCLLZ5234B	6.2	20	7	1000	5	4
TCLLZ5235B	6.8	20	5	750	3	5
TCLLZ5236B	7.5	20	6	500	3	6
TCLLZ5237B	8.2	20	8	500	3	6.5
TCLLZ5238B	8.7	20	8	600	3	6.5
TCLLZ5239B	9.1	20	10	600	3	7
TCLLZ5240B	10	20	17	600	3	8
TCLLZ5241B	11	20	22	600	2	8.4

Electrical Characteristics

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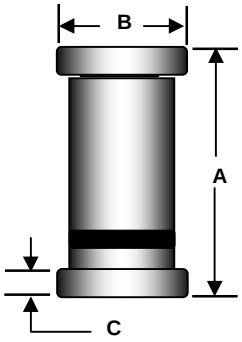
Device Type	V_Z @ I_{ZT} (Volts) Nominal	I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ω) Max	Z_{ZK} @ I_{ZK} = 0.25mA (Ω) Max	I_R @ V_R (μA) Max	V_R (Volts)
TCLLZ5242B	12	20	30	600	1	9.1
TCLLZ5243B	13	9.5	13	600	0.5	9.9
TCLLZ5244B	14	9	15	600	0.1	10
TCLLZ5245B	15	8.5	16	600	0.1	11
TCLLZ5246B	16	7.8	17	600	0.1	12
TCLLZ5247B	17	7.4	19	600	0.1	13
TCLLZ5248B	18	7	21	600	0.1	14
TCLLZ5249B	19	6.6	23	600	0.1	14
TCLLZ5250B	20	6.2	25	600	0.1	15
TCLLZ5251B	22	5.6	29	600	0.1	17
TCLLZ5252B	24	5.2	33	600	0.1	18
TCLLZ5253B	25	5	35	600	0.1	19
TCLLZ5254B	27	4.6	41	600	0.1	21
TCLLZ5255B	28	4.5	44	600	0.1	21
TCLLZ5256B	30	4.2	49	600	0.1	23
TCLLZ5257B	33	3.8	58	700	0.1	25
TCLLZ5258B	36	3.4	70	700	0.1	27
TCLLZ5259B	39	3.2	80	800	0.1	30
TCLLZ5258B	36	3.4	70	700	0.1	27
TCLLZ5259B	39	3.2	80	800	0.1	30
TCLLZ5260B	43	3	93	900	0.1	33
TCLLZ5261B	47	2.7	105	1000	0.1	36
TCLLZ5262B	51	2.5	125	1100	0.1	39
TCLLZ5263B	56	2.2	150	1300	0.1	43

V_F Forward Voltage = 1.1 V Maximum @ I_F = 200 mA for all types

Notes:

1. The type numbers listed have zener voltage as shown and have a standard tolerance on the nominal zener voltage of ±5% in Blue marking, suffix A=±10% in Brown marking.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics 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}.

Package Outline

Package	Case Outline
LL34	

DIM	LL-34			
	Millimeters		Inches	
	Min	Max	Min	Max
A	3.30	3.60	0.130	0.142
B	1.40	1.50	0.055	0.059
C	0.35	0.50	0.014	0.020

Notes:

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