

## 500 mW LL-34 Hermetically Sealed Glass Zener Voltage Regulators



SURFACE MOUNT  
LL34

DEVICE MARKING DIAGRAM



Cathode Band Color  
Brown  
Blue  
Tolerance  
10%  
5%

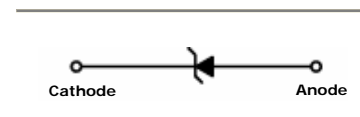
### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Value	Units
Power Dissipation	500	mW
Storage Temperature Range	-65 to +200	$^\circ\text{C}$
Operating Junction Temperature	+200	$^\circ\text{C}$

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

### 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 $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	$V_Z @ I_{ZT}$ (Volts) Nominal	$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) 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**  $T_A = 25^\circ\text{C}$  unless otherwise noted

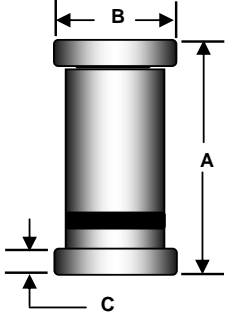
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TCLLZ5242B	12	20	30	600	1	9.1
TCLLZ5243B	13	9.5	13	600	0.5	9.9
TCLLZ5244B	14	9	15	600	0.1	10
TCLLZ5245B	15	8.5	16	600	0.1	11
TCLLZ5246B	16	7.8	17	600	0.1	12
TCLLZ5247B	17	7.4	19	600	0.1	13
TCLLZ5248B	18	7	21	600	0.1	14
TCLLZ5249B	19	6.6	23	600	0.1	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:**

- The type numbers listed have zener voltage as shown and have a standard tolerance on the nominal zener voltage of  $\pm 5\%$  in Blue marking, suffix A= $\pm 10\%$  in Brown marking.
- 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.
- 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		<table border="1"> <thead> <tr> <th data-bbox="737 516 846 653" rowspan="3">DIM</th> <th colspan="4" data-bbox="850 516 1378 558">LL-34</th> </tr> <tr> <th colspan="2" data-bbox="850 564 1114 606">Millimeters</th> <th colspan="2" data-bbox="1118 564 1378 606">Inches</th> </tr> <tr> <th data-bbox="850 613 980 653">Min</th> <th data-bbox="985 613 1114 653">Max</th> <th data-bbox="1118 613 1248 653">Min</th> <th data-bbox="1253 613 1378 653">Max</th> </tr> </thead> <tbody> <tr> <td data-bbox="737 659 846 699">A</td> <td data-bbox="850 659 980 699">3.30</td> <td data-bbox="985 659 1114 699">3.50</td> <td data-bbox="1118 659 1248 699">0.130</td> <td data-bbox="1253 659 1378 699">0.138</td> </tr> <tr> <td data-bbox="737 705 846 745">B</td> <td data-bbox="850 705 980 745">1.40</td> <td data-bbox="985 705 1114 745">1.50</td> <td data-bbox="1118 705 1248 745">0.055</td> <td data-bbox="1253 705 1378 745">0.059</td> </tr> <tr> <td data-bbox="737 751 846 791">C</td> <td data-bbox="850 751 980 791">0.35</td> <td data-bbox="985 751 1114 791">0.50</td> <td data-bbox="1118 751 1248 791">0.014</td> <td data-bbox="1253 751 1378 791">0.020</td> </tr> </tbody> </table>			DIM	LL-34				Millimeters		Inches		Min	Max	Min	Max	A	3.30	3.50	0.130	0.138	B	1.40	1.50	0.055	0.059	C	0.35	0.50	0.014	0.020
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**Notes:**

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

## **NOTICE**

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