



SEMICONDUCTOR

DATA SHEET

LLZxxV Series



500 mW LL-34 Hermetically Sealed Glass Zener Voltage Regulators

Absolute Maximum Ratings T_A = 25°C unless otherwise noted

Parameter	Value	Units
Power Dissipation	500	mW
Storage Temperature Range	-65 to +200	°C
Operating Junction Temperature	+200	°C

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

**SURFACE MOUNT
LL34**

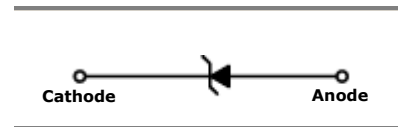
DEVICE MARKING DIAGRAM



Cathode Band Color : Blue

Specification Features:

- Zener Voltage Range 2.0 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 leads are readily solderable
- 1st 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 _{VT} @ I _{ZT} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
LLZ2V4	2.4	5	100	120	1
LLZ2V7	2.7	5	110	100	1
LLZ3V0	3.0	5	120	50	1
LLZ3V3	3.3	5	120	20	1
LLZ3V6	3.6	5	100	10	1
LLZ3V9	3.9	5	100	5	1
LLZ4V3	4.3	5	100	5	1
LLZ4V7	4.7	5	80	5	1
LLZ5V1	5.1	5	80	5	1.5
LLZ5V6	5.6	5	60	5	2.5
LLZ6V2	6.2	5	60	5	3
LLZ6V8	6.8	5	20	2	3.5
LLZ7V5	7.5	5	20	0.5	4
LLZ8V2	8.2	5	20	0.5	5
LLZ9V1	9.1	5	25	0.5	6
LLZ10V	10	5	30	0.2	7
LLZ11V	11	5	30	0.2	8
LLZ12V	12	5	30	0.2	9
LLZ13V	13	5	35	0.2	10
LLZ15V	15	5	40	0.2	11

LLZxxV Series

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LLZ16V	16	5	40	0.2	12
LLZ18V	18	5	45	0.2	13
LLZ20V	20	5	45	0.2	15
LLZ22V	22	5	30	0.2	17
LLZ24V	24	5	35	0.2	19
LLZ27V	27	5	45	0.2	21
LLZ30V	30	5	55	0.2	23
LLZ33V	33	5	65	0.2	25
LLZ36V	36	5	75	0.2	27
LLZ39V	39	5	85	0.2	30
LLZ43V	43	5	90	0.2	33
LLZ47V	47	5	90	0.2	36
LLZ51V	51	5	110	0.2	39
LLZ56V	56	5	110	0.2	43

V_F Forward Voltage = 1.2 V Maximum @ I_F = 200 mA for all types

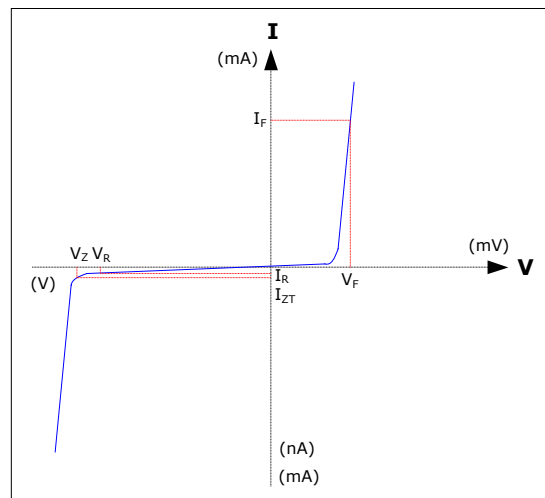
Notes:

- The type numbers listed have zener voltage as shown and have a standard tolerance on the nominal zener voltage of 5%.
- For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest YEASHIN 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}.

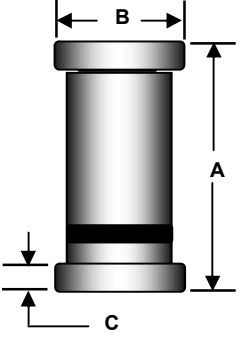
Electrical Symbol Definition

Symbol	Parameter
V _Z	Reverse Zener Voltage @ I _{ZT}
I _{ZT}	Reverse Current
Z _{ZT}	Maximum Zener Impedance @ I _{ZT}
I _{ZK}	Reverse Current
Z _{ZK}	Maximum Zener Impedance @ I _{ZK}
I _R	Reverse Leakage Current @ V _R
V _R	Breakdown Voltage
I _F	Forward Current
V _F	Forward Voltage @ I _F

Typical Characteristics



PACKAGE OUTLINE & DIMENSIONS

Package	Case Outline																																
LL34		<table border="1"> <thead> <tr> <th data-bbox="737 479 852 629" rowspan="3">DIM</th> <th colspan="4" data-bbox="852 479 1431 524">LL-34</th> </tr> <tr> <th colspan="2" data-bbox="852 524 1142 577">Millimeters</th> <th colspan="2" data-bbox="1142 524 1431 577">Inches</th> </tr> <tr> <th data-bbox="852 577 999 629">Min</th> <th data-bbox="999 577 1142 629">Max</th> <th data-bbox="1142 577 1289 629">Min</th> <th data-bbox="1289 577 1431 629">Max</th> </tr> </thead> <tbody> <tr> <td data-bbox="737 629 852 680">A</td> <td data-bbox="852 629 999 680">3.30</td> <td data-bbox="999 629 1142 680">3.60</td> <td data-bbox="1142 629 1289 680">0.130</td> <td data-bbox="1289 629 1431 680">0.142</td> </tr> <tr> <td data-bbox="737 680 852 732">B</td> <td data-bbox="852 680 999 732">1.40</td> <td data-bbox="999 680 1142 732">1.50</td> <td data-bbox="1142 680 1289 732">0.055</td> <td data-bbox="1289 680 1431 732">0.059</td> </tr> <tr> <td data-bbox="737 732 852 784">C</td> <td data-bbox="852 732 999 784">0.35</td> <td data-bbox="999 732 1142 784">0.50</td> <td data-bbox="1142 732 1289 784">0.014</td> <td data-bbox="1289 732 1431 784">0.020</td> </tr> </tbody> </table>				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
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Notes:

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