SEMICONDUCTOR

DATA SHEET

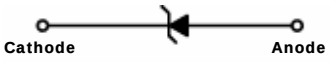
ZL2V4B~ZL75B

500 mW DO-35 Hermetically Sealed Glass Zener Voltage Regulators

AXIAL LEAD
DO35

DEVICE MARKING DIAGRAM

Device Code : ZLxxxT
VZ Tolerance (T) : B = ±2%
C = ±5%



ELECTRICAL SYMBOL

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
Lead Temperature (1/16" from case for 10 seconds)	+230	°C

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

Specification Features:

- Zener Voltage Range 2.4 to 75 Volts
- DO-35 Package (JEDEC)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All external surfaces are corrosion resistant and leads are readily solderable
- Cathode indicated by polarity band

Electrical Characteristics

T_A = 25°C unless otherwise noted

Device Type	V_Z @ I_{ZT} (Volts)			I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ω) Max	I_{ZK} (mA)	Z_{ZK} @ I_{ZK} (Ω) Max	I_R @ V_R (μA) Max	V_R (Volts)
	Min	Nom	Max						
ZL2V4B	2.35	2.4	2.45	5	94	1	564	45	1
ZL2V7B	2.65	2.7	2.75	5	94	1	564	18	1
ZL3V0B	2.94	3.0	3.06	5	89	1	564	9	1
ZL3V3B	3.23	3.3	3.37	5	89	1	564	4.5	1
ZL3V6B	3.53	3.6	3.67	5	84	1	564	4.5	1
ZL3V9B	3.82	3.9	3.98	5	84	1	564	2.7	1
ZL4V3B	4.21	4.3	4.39	5	84	1	564	2.7	1
ZL4V7B	4.61	4.7	4.79	5	75	1	470	2.7	2
ZL5V1B	5.00	5.1	5.20	5	56	1	451	1.8	2
ZL5V6B	5.49	5.6	5.71	5	37	1	376	0.9	2
ZL6V2B	6.08	6.2	6.32	5	9	1	141	2.7	4
ZL6V8B	6.66	6.8	6.94	5	14	1	75	1.8	4
ZL7V5B	7.33	7.5	7.63	5	14	1	75	0.9	5
ZL8V2B	8.04	8.2	8.36	5	14	1	75	0.63	5
ZL9V1B	8.92	9.1	9.28	5	14	1	94	0.45	6
ZL10B	9.80	10	10.20	5	18	1	141	0.18	7
ZL11B	10.78	11	11.22	5	18	1	141	0.09	8
ZL12B	11.76	12	12.24	5	23	1	141	0.09	8
ZL13B	12.74	13	13.26	5	28	1	160	0.09	8
ZL15B	14.70	15	15.30	5	28	1	188	0.045	10.5
ZL16B	15.68	16	16.32	5	37	1	188	0.045	11.2
ZL18B	17.64	18	18.36	5	42	1	212	0.045	12.6
ZL20B	19.60	20	20.40	5	51	1	212	0.045	14.0
ZL22B	21.56	22	22.44	5	51	1	235	0.045	15.4
ZL24B	23.52	24	24.48	5	65	1	235	0.045	16.8

Electrical Characteristics

T_A = 25°C unless otherwise noted

Device Type	V_Z @ I_{ZT} (Volts)			I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ω) Max	I_{ZK} (mA)	Z_{ZK} @ I_{ZK} (Ω) Max	I_R @ V_R (μA) Max	V_R (Volts)
	Min	Nom	Max						
ZL27B	26.46	27	27.54	5	75	0.5	282	0.045	18.9
ZL30B	29.40	30	30.60	5	75	0.5	282	0.045	21.0
ZL33B	32.34	33	33.66	5	75	0.5	306	0.045	23.0
ZL36B	35.28	36	36.72	5	84	0.5	329	0.045	25.2
ZL39B	38.22	39	39.78	5	122	0.5	329	0.045	27.3
ZL43B	42.14	43	43.86	5	141	0.5	353	0.045	30.1
ZL47B	46.06	47	47.94	5	160	0.5	353	0.045	33.0
ZL51B	49.98	51	52.02	5	169	0.5	376	0.045	35.7
ZL56B	54.88	56	57.12	5	188	0.5	400	0.045	39.2
ZL62B	60.76	62	63.24	5	202	0.5	423	0.045	43.4
ZL68B	66.64	68	69.36	5	226	0.5	447	0.045	47.6
ZL75B	73.50	75	76.50	5	240	0.5	470	0.045	52.5

V_F Forward Voltage = 1 V Maximum @ I_F = 100 mA for all types

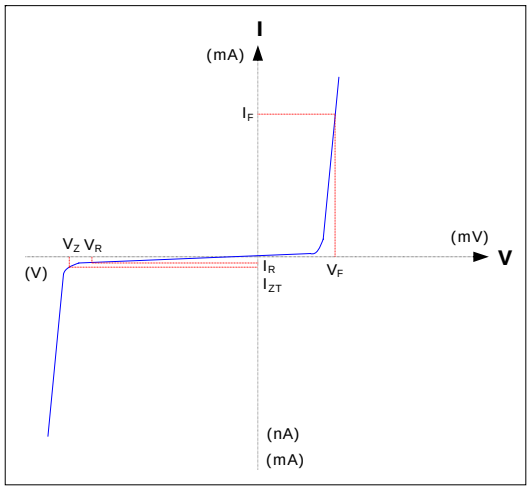
Notes:

1. The device numbers listed have a standard tolerance on the nominal zener voltage of ±2%. Device tolerance of ±5% is indicated by a “C” instead of a “B”.
2. 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.
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}.

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



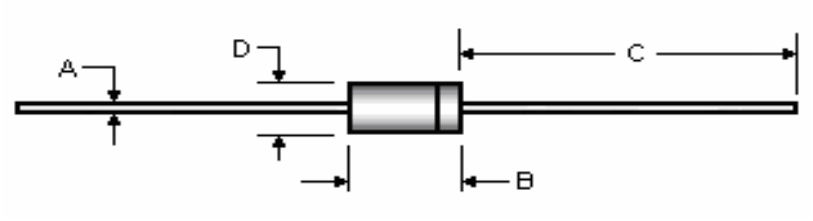
PACKAGE OUTLINE & DIMENSIONS

ZL2V4B~ZL75B

Package Outline

Package	Case Outline

DO-35



DIM	DO-35			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.46	0.55	0.018	0.022
B	3.05	5.08	0.120	0.200
C	25.40	38.10	1.000	1.500
D	1.53	2.28	0.060	0.090

Notes:

1. All dimensions are within JEDEC standard.
2. DO35 polarity denoted by cathode band.