

**LL-34 HERMETICALLY SEALED GLASS  
ZENER VOLTAGE REGULATORS**

**FEATURES**

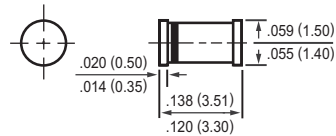
- \* Zener Voltage Range 2.4 to 56 volts
- \* LL-34 (Mini-Melf) Package
- \* Surface Device Type Mounting
- \* Hermetically Sealed Glass
- \* Compression Bonded Construction
- \* All external surfaces are corrosion resistant and leads are readily solderable
- \* Marking:5221~5263

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.



**LL-34**



Dimensions in inches and (millimeters)

**Absolute Maximum Ratings** (Ta=25 °C unless otherwise noted)

Parameter	Symbol	Value	UNIT
Power Dissipation	P <sub>D</sub>	500	mW
Junction Temperature	T <sub>j</sub>	200	°C
Storage Temperature Range	T <sub>S</sub>	-65 to +200	°C

Note: "Fully RoHS Compliant", "100% Sn Plating (Pb-free)".

2018-06  
REV:A

## ELECTRICAL CHARACTERISTICS (@TA=25°C unless otherwise specified)

TYPE	Zener voltage Range (Note 1) Vz (V) @ IZT			Test current  IZT (mA)	Maximum Zener impedance			Maximum Reverse leakage current	
	Nom	Min	Max		ZZT at IZT (Ω)	ZZK (Ω)	at Izk (mA)	IR (μA)	at VR (V)
	Volts	Volts	Volts						
ZMM5221B	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
ZMM5222B	2.5	2.38	2.63	20	30	1250	0.25	100	1.0
ZMM5223B	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
ZMM5224B	2.8	2.66	2.94	20	30	1400	0.25	75	1.0
ZMM5225B	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
ZMM5226B	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
ZMM5227B	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
ZMM5228B	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
ZMM5229B	4.3	4.09	4.52	20	22	2000	0.25	5.0	1.0
ZMM5230B	4.7	4.47	4.94	20	19	1900	0.25	5.0	2.0
ZMM5231B	5.1	4.85	5.36	20	17	1600	0.25	5.0	2.0
ZMM5232B	5.6	5.32	5.88	20	11	1600	0.25	5.0	3.0
ZMM5233B	6.0	5.70	6.30	20	7	1600	0.25	5.0	3.5
ZMM5234B	6.2	5.89	6.51	20	7	1000	0.25	5.0	4.0
ZMM5235B	6.8	6.46	7.14	20	5	750	0.25	3.0	5.0
ZMM5236B	7.5	7.13	7.88	20	6	500	0.25	3.0	6.0
ZMM5237B	8.2	7.79	8.61	20	8	500	0.25	3.0	6.5
ZMM5238B	8.7	8.27	9.14	20	8	600	0.25	3.0	6.5
ZMM5239B	9.1	8.65	9.56	20	10	600	0.25	3.0	7.0
ZMM5240B	10	9.50	10.50	20	17	600	0.25	3.0	8.0
ZMM5241B	11	10.45	11.55	20	22	600	0.25	2.0	8.4
ZMM5242B	12	11.40	12.60	20	30	600	0.25	1.0	9.1
ZMM5243B	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
ZMM5244B	14	13.30	14.70	9.0	15	600	0.25	0.1	10
ZMM5245B	15	14.25	15.75	8.5	16	600	0.25	0.1	11
ZMM5246B	16	15.20	16.80	7.8	17	600	0.25	0.1	12
ZMM5247B	17	16.15	17.85	7.4	19	600	0.25	0.1	13
ZMM5248B	18	17.10	18.90	7.0	21	600	0.25	0.1	14
ZMM5249B	19	18.05	19.95	6.6	23	600	0.25	0.1	14
ZMM5250B	20	19.00	21.00	6.2	25	600	0.25	0.1	15
ZMM5251B	22	20.90	23.10	5.6	29	600	0.25	0.1	17
ZMM5252B	24	22.80	25.20	5.2	33	600	0.25	0.1	18

## ELECTRICAL CHARACTERISTICS (@TA=25°C unless otherwise specified)

TYPE	Zener voltage Range (Note 1) Vz (V) @ IZT			Test current  IZT (mA)	Maximum Zener impedance			Maximum Reverse leakage current	
	Nom	Min	Max		ZzT at IZT (Ω)	Zzk (Ω)	at Izk (mA)	IR (μA)	at VR (V)
	Volts	Volts	Volts						
ZMM5253B	25	23.75	26.25	5.0	35	600	0.25	0.1	19
ZMM5254B	27	25.65	28.35	4.6	41	600	0.25	0.1	21
ZMM5255B	28	26.60	29.40	4.5	44	600	0.25	0.1	21
ZMM5256B	30	28.50	31.50	4.2	49	600	0.25	0.1	23
ZMM5257B	33	31.35	34.65	3.8	58	700	0.25	0.1	25
ZMM5258B	36	34.20	37.80	3.4	70	700	0.25	0.1	27
ZMM5259B	39	37.05	40.95	3.2	80	800	0.25	0.1	30
ZMM5260B	43	40.85	45.15	3.0	93	900	0.25	0.1	33
ZMM5261B	47	44.65	49.35	2.7	105	1000	0.25	0.1	36
ZMM5262B	51	48.45	53.55	2.5	125	1100	0.25	0.1	39
ZMM5263B	56	53.20	58.80	2.2	150	1300	0.25	0.1	43

Notes: 1. Maximum forward voltage = 1.1 V @IF = 200 mA for all types.

2. 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 ( IZT or Izk ) is superimposed to IZT or Izk.

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
LL-34	-T	2,500	---	---	---	178	390*205*310	100,000	8.40

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.