

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 +150	°C
Operating Junction Temperature	+150	°C

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

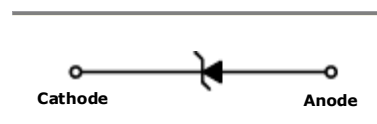
DEVICE MARKING DIAGRAM



Cathode Band Color : Blue

Specification Features:

- Zener Voltage Range 3.0 to 27 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) Terminal Finish
- Color band Indicates Negative Polarity



ELECTRICAL SYMBOL

Electrical Characteristics T_A = 25°C unless otherwise noted

Device Type	V _Z @ I _{ZT} (Volts)		I _{ZT} (mA)	Z _{VT} @ I _{ZT} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
	Min	Max				
ZMM3V0	2.8	3.2	5	95	50	1
ZMM3V3	3.1	3.5	5	95	25	1
ZMM3V6	3.4	3.8	5	90	15	1
ZMM3V9	3.7	4.1	5	90	10	1
ZMM4V3	4.0	4.6	5	90	5	1
ZMM4V7	4.4	5	5	80	3	2
ZMM5V1	4.8	5.4	5	60	2	2
ZMM5V6	5.2	6	5	40	1	2
ZMM6V2	5.8	6.6	5	10	3	4
ZMM6V8	6.4	7.2	5	15	2	4
ZMM7V5	7.0	7.9	5	15	1	5
ZMM8V2	7.7	8.7	5	15	0.7	5
ZMM9V1	8.5	9.6	5	15	0.5	6
ZMM10V	9.4	10.6	5	20	0.2	7
ZMM11V	10.4	11.6	5	20	0.1	8
ZMM12V	11.4	12.7	5	25	0.1	8
ZMM13V	12.4	14.1	5	30	0.1	8
ZMM15V	13.8	15.6	5	30	0.05	10.5
ZMM16V	15.3	17.1	5	40	0.05	11.2
ZMM18V	16.8	19.1	5	45	0.05	12.6
ZMM20V	18.8	21.2	5	55	0.05	14

Electrical Characteristics T_A = 25°C unless otherwise noted

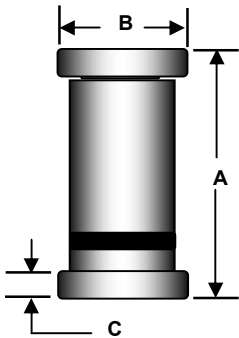
Device Type	V _Z @ I _{ZT} (Volts)		I _{ZT} (mA)	Z _{zt} @ I _{ZT} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
	Min	Max				
ZMM22V	20.8	23.3	5	55	0.05	15.4
ZMM24V	22.8	25.6	5	70	0.05	16.8
ZMM27V	25.1	28.9	2	80	0.05	18.9

V_F Forward Voltage = 1.5 V Maximum @ I_F = 100 mA for all types

Notes:

1. The type numbers listed have zener voltage min/max limits as shown and have a standard tolerance on the nominal zener voltage of 5%.
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					
	LL-34				
	DIM	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.



NOTICE

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.takcheong.com>, or consult your nearest Tak Cheong's sales office for further assistance.