

## 500 mW DO-35 Hermetically Sealed Glass Zener Voltage Regulators



### Maximum Ratings (Note 1)

Rating	Symbol	Value	Units
Maximum Steady State Power Dissipation @TL≤75°C, Lead Length = 3/8"	P <sub>D</sub>	500	mW
Derate Above 75°C		4.0	mW/°C
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200	°C

Note 1: Some part number series have lower JEDEC registered ratings.

### Specification Features:

- Zener Voltage Range = 1.8V to 10V
- ESD Rating of Class 3 (>6 KV) per Human Body Model
- DO-35 Package (DO-204AH)
- Double Slug Type Construction
- Metallurgical Bonded Construction
- RoHS Compliant
- Solder Hot Dip Tin (Sn) Lead Finish

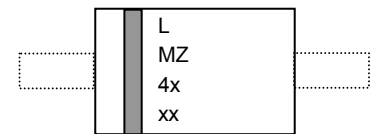
### Specification Features:

**Case** : Double slug type, hermetically sealed glass

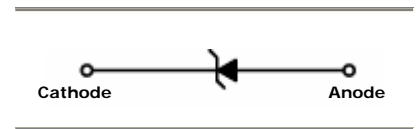
**Finish** : All external surfaces are corrosion resistant and leads are readily solderable

**Polarity** : Cathode indicated by polarity band

**Mounting:** Any



L = Logo  
MZ4xx = MZ4xx Device Code



**ELECTRICAL CHARACTERIZATION** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Device (Note 2.)	Device Marking	Zener Voltage (Note 3)			Zener Impedance	Leakage Current (note 5.)		$I_{ZM}$ (Note 4)	
		$V_Z @ I_{ZT}$				$I_{ZT}$	$I_R @ V_R = 1V$		
		(Volts)			(mA)	$Z_{ZT} @ I_{ZT}$	(uA)	(Volts)	(mA)
		Min	Nom	Max					
MZ4614	MZ4614	1.71	1.8	1.89	0.25	1200	7.5	1	120
MZ4615	MZ4615	1.90	2.0	2.10	0.25	1250	5	1	110
MZ4616	MZ4616	2.09	2.2	2.31	0.25	1300	4	1	100
MZ4617	MZ4617	2.28	2.4	2.52	0.25	1400	2	1	95
MZ4618	MZ4618	2.565	2.7	2.835	0.25	1500	1	1	90
MZ4619	MZ4619	2.850	3.0	3.150	0.25	1600	0.8	1	85
MZ4620	MZ4620	3.135	3.3	3.465	0.25	1650	7.5	1.5	80
MZ4621	MZ4621	3.420	3.6	3.780	0.25	1700	7.5	2	75
MZ4622	MZ4622	3.705	3.9	4.095	0.25	1650	5	2	70
MZ4623	MZ4623	4.085	4.3	4.515	0.25	1600	4	2	65
MZ4624	MZ4624	4.465	4.7	4.935	0.25	1550	10	3	60
MZ4625	MZ4625	4.845	5.1	5.355	0.25	1500	10	3	55
MZ4626	MZ4626	5.320	5.6	5.880	0.25	1400	10	4	50
MZ4627	MZ4627	5.890	6.2	6.510	0.25	1200	10	5	45
MZ4099	MZ4099	6.460	6.8	7.140	0.25	200	10	5.2	35
MZ4100	MZ4100	7.125	7.5	7.875	0.25	200	10	5.7	31.8
MZ4101	MZ4101	7.790	8.2	8.610	0.25	200	1	6.3	29.0
MZ4102	MZ4102	8.265	8.7	9.135	0.25	200	1	6.7	27.4
MZ4103	MZ4103	8.645	9.1	9.555	0.25	200	1	7.0	26.2
MZ4104	MZ4104	9.500	10	10.500	0.25	200	1	7.6	24.8

VF Forward Voltage = 1.1V max @  $I_F = 200\text{mA}$  for all types

**2. TOLERANCE AND VOLTAGE DESIGNATION**

The type numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .

**3. ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT**

The zener voltage ( $V_Z$ ) is tested under pulse condition. The measured  $V_Z$  is guaranteed to be within specification with device junction in thermal equilibrium.

**4. MAXIMUM ZENER CURRENT RATING ( $I_{ZM}$ )**

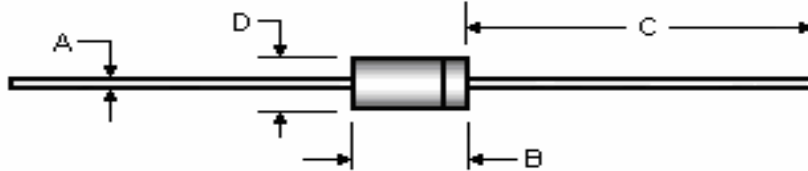
This data was calculated using nominal voltages. The maximum current handling capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.

**5. ZENER IMPEDANCE ( $Z_{ZT}$ ) DERIVATION**

$Z_{ZT}$  is measured by dividing the AC voltage drop across the device by the AC current applied. The specified limits are for  $I_{Z(AC)} = 0.1 I_{Z(DC)}$  with AC frequency = 60Hz.

## Package Outline

### Case Outline




DIM	DO-35			
	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	0.46	0.56	0.018	0.022
<b>B</b>	3.05	5.08	0.120	0.200
<b>C</b>	25.40	38.10	1.000	1.500
<b>D</b>	1.52	2.29	0.060	0.090

**Note:** all dimensions are within JEDEC standard.

This datasheet presents technical data of Tak Cheong's Zener Diodes. Complete specifications for the individual devices are provided in the form of datasheets. A comprehensive Selector Guide is included to simplify the task of choosing the best set of components required for a specific application. For additional information, please visit our website <http://www.takcheong.com>.

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