

## MZ4615 thru MZ4626

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

#### Maximum Ratings (Note 1)

Rating	Symbol	Value	Unit
Maximum Steady State Power Dissipation @ $T_L \leq 75^\circ\text{C}$ , Lead Length = 3/8"	$P_D$	500	mW
Derate Above $75^\circ\text{C}$		4.0	mW/ $^\circ\text{C}$
Operating and Storage Temperature Range	$T_J, T_{stg}$	-65 to +200	$^\circ\text{C}$

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

#### Specification Features

- Zener Voltage Range = 2 V to 5.6 V
- ESD Rating of Class 3 (>16 KV) per Human Body Model
- DO-35 Package (DO-204AH)
- Double Slug Type Construction
- Metallurgical Bonding

#### Mechanical Characteristics

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

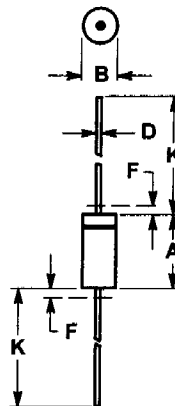
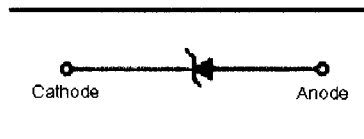
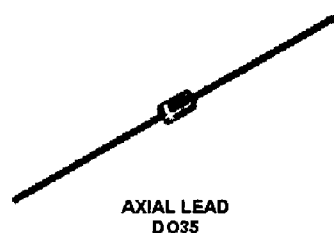
**Finish** : All external surfaces are corrosion resistant and leads are readily solderable.

**Polarity** : Cathode indicated by polarity band

**Mounting**: Any

#### Maximum Lead Temperature for Soldering Purposes

230 $^\circ\text{C}$ , 1/16" from the case for 10 seconds

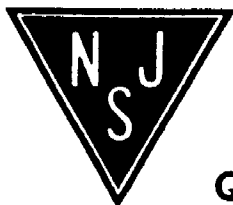


#### NOTES:

1. PACKAGE CONTOUR OPTIONAL WITHIN A AND B HEAT SLUGS, IF ANY, SHALL BE INCLUDED WITHIN THIS CYLINDER, BUT NOT SUBJECT TO THE MINIMUM LIMIT OF B.
2. LEAD DIAMETER NOT CONTROLLED IN ZONE F TO ALLOW FOR FLASH, LEAD FINISH BUILDUP AND MINOR IRREGULARITIES OTHER THAN HEAT SLUGS.
3. POLARITY DENOTED BY CATHODE BAND.
4. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.05	5.08	0.120	0.200
B	1.52	2.29	0.060	0.090
D	0.46	0.56	0.018	0.022
F	—	1.27	—	0.050
K	25.40	38.10	1.000	1.500

All JEDEC dimensions and notes apply.



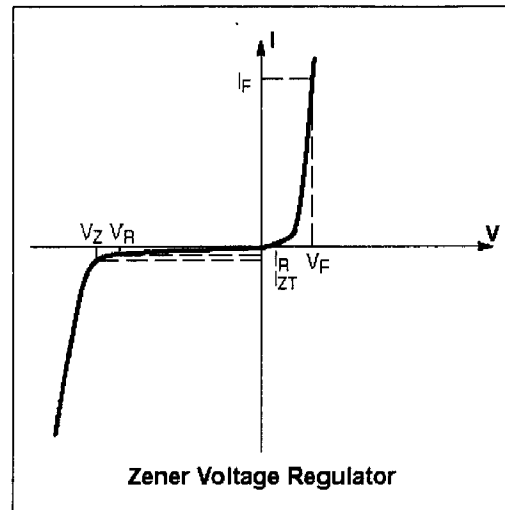
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**Quality Semi-Conductors**

Designed for 250mW applications requiring low leakage and low impedance. Zener impedance and zener voltage specified for low-level operation at  $I_{ZT} = 250\mu\text{A}$ .

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted,  $V_F = 1\text{ V Max @ } I_F = 200\text{ mA}$  for all types)

Symbol	Parameter
$V_Z$	Reverse Zener Voltage @ $I_{ZT}$
$I_{ZT}$	Reverse Current
$Z_{ZT}$	Maximum Zener Impedance @ $I_{ZT}$
$I_{ZM}$	Maximum Zener Current
$I_R$	Reverse Leakage Current @ $V_R$
$V_R$	Breakdown Voltage
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted,  $V_F = 1\text{ V Max @ } I_F = 200\text{ mA}$  for all types)

Device (Note 2.)	Device Marking	Zener Voltage (Note 3 & 4.)			$I_{ZM}$	Leakage Current (Note 5.)		Zener Impedance $Z_{ZT}$ (Note 6.)
		$V_Z$ (Volts)				$I_R @ V_R$		
		Min	Nom	Max	mA	$\mu\text{A Max}$	Volts	$\Omega \text{ Max}$
MZ4615	MZ4615	1.9	2.0	2.1	110	5	1	1250
MZ4616	MZ4616	2.09	2.2	2.31	100	4	1	1300
MZ4620	MZ4620	3.135	3.3	3.465	80	7.5	1.5	1650
MZ4623	MZ4623	4.1151	4.3	4.515	65	4	2	1600
MZ4624	MZ4624	4.465	4.7	4.935	60	10	3	1550
MZ4626	MZ4626	5.32	5.6	5.9136	50	10	4	1400

**2. TOLERANCE AND TYPE NUMBER DESIGNATION ( $V_Z$ )**

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

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

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature ( $T_L$ ) at  $25^\circ\text{C} \pm 1^\circ\text{C}$  and 3/8" lead length.

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

Maximum zener current ratings are based on maximum zener voltage of the individual units and JEDEC 250 mW rating.

**5. REVERSE LEAKAGE CURRENT ( $I_R$ )**

Reverse leakage currents are guaranteed and measured at  $V_R$  shown on the table.

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

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 ( $I_{ZT}$ ) is superimposed on  $I_{ZT}$ .