



# Z1110 - Z1400

**V<sub>Z</sub> : 110 - 400 Volts**

**P<sub>D</sub> : 1 Watt**

## FEATURES :

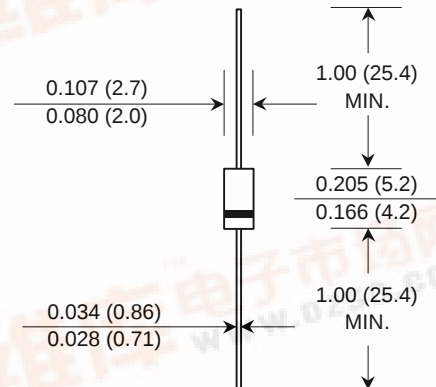
- \* Complete voltage range 110 to 400 Volts
- \* High peak reverse power dissipation
- \* High reliability
- \* Low leakage current

## MECHANICAL DATA

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram

## SILICON ZENER DIODES

### DO - 41



Dimensions in inches and ( millimeters )

## MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

| Rating                                                     | Symbol           | Value         | Unit  |
|------------------------------------------------------------|------------------|---------------|-------|
| DC Power Dissipation at T <sub>L</sub> = 50 °C (Note1)     | P <sub>D</sub>   | 1.0           | Watt  |
| Maximum Forward Voltage at I <sub>F</sub> = 200 mA         | V <sub>F</sub>   | 1.2           | Volts |
| Maximum Thermal Resistance Junction to Ambient Air (Note2) | R <sub>θJA</sub> | 170           | K / W |
| Junction Temperature Range                                 | T <sub>J</sub>   | - 55 to + 175 | °C    |
| Storage Temperature Range                                  | T <sub>s</sub>   | - 55 to + 175 | °C    |

Note : (1) T<sub>L</sub> = Lead temperature at 3/8 " (9.5mm) from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| TYPE  | Nominal Zener Voltage            |                 | Maximum Zener Impedance           |                                   |                 | Maximum Reverse Leakage Current |                | Maximum DC Zener Current |
|-------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|----------------|--------------------------|
|       | V <sub>Z</sub> @ I <sub>ZT</sub> | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub> @ V <sub>R</sub> | V <sub>R</sub> | I <sub>ZM</sub>          |
|       | (V)                              | (mA)            | (Ω)                               | (Ω)                               | (mA)            | (μA)                            | (V)            | (mA)                     |
| Z1110 | 110                              | 2.3             | 450                               | 4000                              | 0.25            | 5.0                             | 83.6           | 8.6                      |
| Z1120 | 120                              | 2.0             | 550                               | 4500                              | 0.25            | 5.0                             | 91.2           | 7.8                      |
| Z1130 | 130                              | 1.9             | 700                               | 5000                              | 0.25            | 5.0                             | 98.8           | 7.0                      |
| Z1150 | 150                              | 1.7             | 1000                              | 6000                              | 0.25            | 5.0                             | 114.0          | 6.4                      |
| Z1160 | 160                              | 1.6             | 1100                              | 6500                              | 0.25            | 5.0                             | 121.6          | 5.8                      |
| Z1180 | 180                              | 1.4             | 1200                              | 7000                              | 0.25            | 5.0                             | 136.8          | 5.2                      |
| Z1200 | 200                              | 1.2             | 1500                              | 8000                              | 0.25            | 5.0                             | 152.0          | 4.7                      |
| Z1240 | 240                              | 0.93            | 1800                              | 8500                              | 0.25            | 5.0                             | 182.4          | 3.8                      |
| Z1250 | 250                              | 0.90            | 2000                              | 9000                              | 0.25            | 5.0                             | 190            | 3.6                      |
| Z1270 | 270                              | 0.82            | 2100                              | 9000                              | 0.25            | 5.0                             | 205            | 3.3                      |
| Z1300 | 300                              | 0.75            | 2300                              | 9500                              | 0.25            | 5.0                             | 228            | 3.0                      |
| Z1330 | 330                              | 0.70            | 2500                              | 9500                              | 0.25            | 5.0                             | 250            | 2.8                      |
| Z1380 | 380                              | 0.60            | 2700                              | 9500                              | 0.25            | 5.0                             | 288            | 2.4                      |
| Z1400 | 400                              | 0.55            | 2800                              | 9500                              | 0.25            | 5.0                             | 304            | 2.3                      |

Note : (1) The type number listed have a standard tolerance on the nominal zener voltage of ±10%.

A standard tolerance of ±5% on individual units is also available and is indicated by suffixing