

# Z1220C ~ Z1300C

**V<sub>Z</sub> : 220 - 300 Volts**  
**P<sub>D</sub> : 1 Watt**

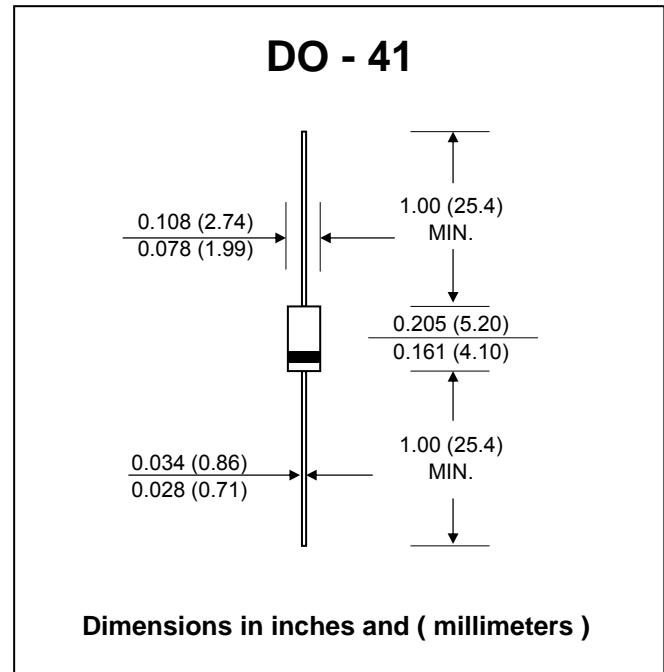
## FEATURES :

- \* Complete voltage range 220 to 300 Volts
- \* High peak reverse power dissipation
- \* High reliability
- \* Low leakage current
- \* **Pb / RoHS Free**

## 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 : 0.335 gram

# SILICON ZENER DIODES



## 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           | W     |
| Maximum Forward Voltage at I <sub>F</sub> = 200 mA         | V <sub>F</sub>   | 2.0           | V     |
| 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>STG</sub> | - 55 to + 175 | °C    |

## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

| Type No.<br>(Note 3) | Nominal Zener Voltage            |                 | Maximum Zener Impedance           |                                   |                 | Maximum Reverse Leakage Current |                 | Maximum DC Zener Current       | Maximum Surge 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> | I <sub>ZM</sub> | I <sub>RM</sub> <sup>(4)</sup> |                       |
|                      | (V)                              | (mA)            | (Ω)                               | (Ω)                               | (mA)            | (μA) (V)                        | (mA)            | (mApk)                         |                       |
| <b>Z1220C</b>        | 220                              | 1.00            | 1600                              | 8000                              | 0.25            | 5.0 167.2                       | 4.0             | 20                             |                       |
| <b>Z1240C</b>        | 240                              | 0.93            | 1800                              | 8500                              | 0.25            | 5.0 182.4                       | 3.8             | 19                             |                       |
| <b>Z1250C</b>        | 250                              | 0.90            | 2000                              | 9000                              | 0.25            | 5.0 190                         | 3.6             | 18                             |                       |
| <b>Z1270C</b>        | 270                              | 0.82            | 2100                              | 9000                              | 0.25            | 5.0 205                         | 3.3             | 16                             |                       |
| <b>Z1300C</b>        | 300                              | 0.75            | 2300                              | 9500                              | 0.25            | 5.0 228                         | 3.0             | 15                             |                       |

### Notes :

- (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.
- (3) The type number listed have a standard tolerance on the nominal zener voltage of ± 2%.  
No suffix indicates ± 10% tolerance, suffix "A" indicates ± 5% tolerance.
- (4) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC Method