

# Z043 - Z0200

**V<sub>Z</sub> : 43 - 200 Volts**

**P<sub>D</sub> : 0.5 Watt**

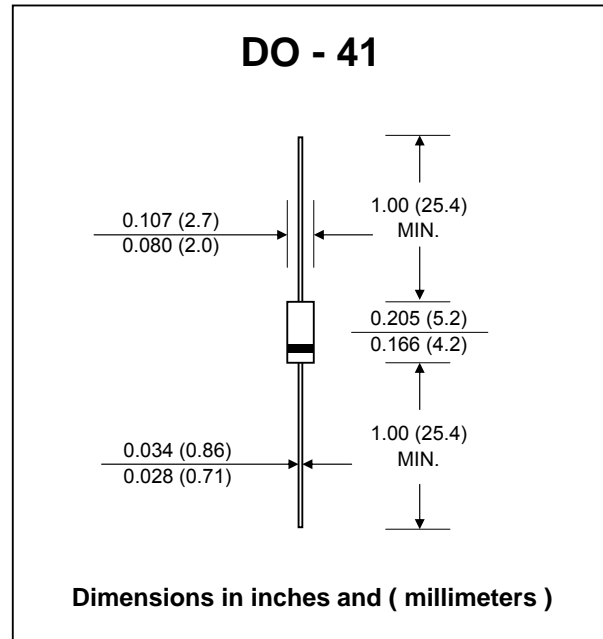
### FEATURES :

- \* Complete voltage range 43 to 200 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 : 0.339 gram

## SILICON ZENER DIODES



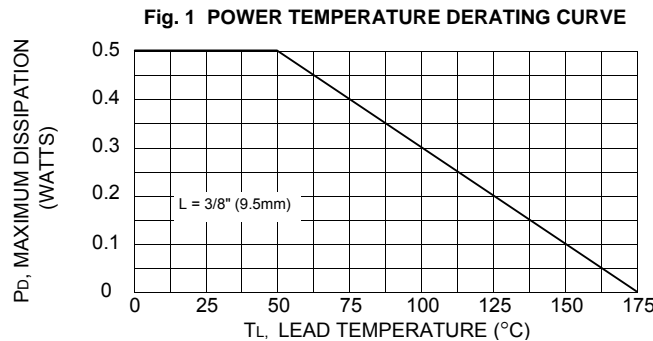
### MAXIMUM RATINGS

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>   | 0.5           | 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>STG</sub> | - 55 to + 175 | °C    |

#### 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.



## ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified

| Type No.     | Nominal Zener Voltage | Test Current | Maximum Zener Impedance |                   |          | Maximum Reverse Leakage Current |     | Maximum DC Zener Current | Maximum Surge Current |
|--------------|-----------------------|--------------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|-----------------------|
|              | $V_Z @ I_{ZT}$        | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$ | $I_R @ V_R$                     |     | $I_{ZM}$                 | $I_{RM}^{(2)}$        |
|              | (V)                   | (mA)         | ( $\Omega$ )            | ( $\Omega$ )      | (mA)     | ( $\mu$ A)                      | (V) | (mA)                     | (mApk)                |
| <b>Z043</b>  | 43                    | 2.75         | 70                      | 1500              | 0.25     | 5.0                             | 32  | 11.0                     | 52                    |
| <b>Z047</b>  | 47                    | 2.40         | 80                      | 1500              | 0.25     | 5.0                             | 35  | 9.6                      | 47                    |
| <b>Z051</b>  | 51                    | 2.23         | 95                      | 1500              | 0.25     | 5.0                             | 38  | 8.9                      | 44                    |
| <b>Z056</b>  | 56                    | 2.00         | 110                     | 2000              | 0.25     | 5.0                             | 42  | 8.0                      | 40                    |
| <b>Z062</b>  | 62                    | 1.83         | 125                     | 2000              | 0.25     | 5.0                             | 47  | 7.3                      | 36                    |
| <b>Z068</b>  | 68                    | 1.65         | 150                     | 2000              | 0.25     | 5.0                             | 52  | 6.6                      | 33                    |
| <b>Z075</b>  | 75                    | 1.50         | 175                     | 2000              | 0.25     | 5.0                             | 57  | 6.0                      | 30                    |
| <b>Z082</b>  | 82                    | 1.37         | 200                     | 3000              | 0.25     | 5.0                             | 62  | 5.5                      | 27                    |
| <b>Z091</b>  | 91                    | 1.25         | 250                     | 3000              | 0.25     | 5.0                             | 73  | 5.0                      | 24                    |
| <b>Z0100</b> | 100                   | 1.12         | 350                     | 3000              | 0.25     | 5.0                             | 76  | 4.5                      | 22                    |
| <b>Z0110</b> | 110                   | 1.00         | 450                     | 4000              | 0.25     | 5.0                             | 83  | 4.1                      | 20                    |
| <b>Z0120</b> | 120                   | 0.95         | 550                     | 4500              | 0.25     | 5.0                             | 91  | 3.8                      | 18                    |
| <b>Z0130</b> | 130                   | 0.88         | 700                     | 5000              | 0.25     | 5.0                             | 98  | 3.5                      | 17                    |
| <b>Z0150</b> | 150                   | 0.75         | 1000                    | 6000              | 0.25     | 5.0                             | 114 | 3.0                      | 15                    |
| <b>Z0160</b> | 160                   | 0.70         | 1100                    | 6500              | 0.25     | 5.0                             | 121 | 2.8                      | 14                    |
| <b>Z0180</b> | 180                   | 0.62         | 1400                    | 7000              | 0.25     | 5.0                             | 136 | 2.5                      | 12.5                  |
| <b>Z0190</b> | 190                   | 0.57         | 1400                    | 7500              | 0.25     | 5.0                             | 144 | 2.3                      | 11.8                  |
| <b>Z0200</b> | 200                   | 0.55         | 1900                    | 9990              | 0.25     | 5.0                             | 152 | 2.2                      | 11.2                  |

**Note :**

- (1) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 10\%$ .  
 Add suffix "A" for  $\pm 5\%$  tolerance, Add suffix "B" for  $\pm 2\%$  tolerance.