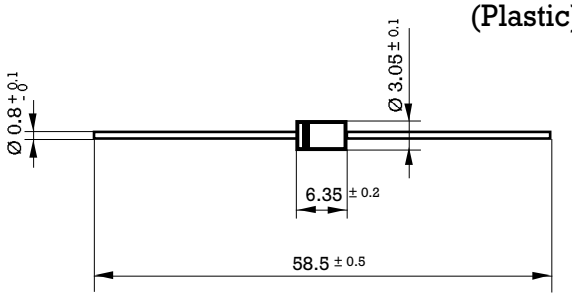
# 2 W Glass Passivated Zener Diode

Dimensions in mm. DO-15 (Plastic)




**Mounting instructions**

1. Min. distance from body to soldering point, 4 mm.
2. Max. solder temperature, 350 °C.
3. Max. soldering time, 3.5 sec.
4. Do not bend lead at a point closer than 2 mm. to the body.

**Voltage**
**6.2 to 200 V.**

**Power**
**2.0 W**

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- **Glass passivated junction**
- The plastic material carries U/L recognition 94 V-0
- Terminals: Axial Leads
- Polarity: Color band denotes cathode

## Maximum Ratings, according to IEC publication No. 134

| | | |
|---|---|---|
| $P_{tot}$ | Power dissipation at Tamb = 25 °C | 2 W |
| $P_{ZSM}$ | Non repetitive peak zener dissipation (t = 10 ms) | 60 W |
| $T_j$ | Operating temperature range | – 65 to + 175 °C |
| $T_{stg}$ | Storage temperature range | – 65 to + 175 °C |

## Electrical Characteristics at Tamb = 25 °C

| | | |
|---|---|---|
| $R_{thj\text{-}a}$ | Max. thermal resistance at: 10 mm. lead length | 60 °C/W |

| Type | Zener (1) Voltage Range $V_Z$ at $I_{ZT}$ | Maximum Zener Impedance $Z_{ZT}$ at $I_{ZT}$ | Test Current $I_{ZT}$ | Temp coef. of Zener Volt. | Min Reverse Voltage at $I_R$ = 1 µA $V_R$ | Max Regulator Current at 45 °C $I_{ZM}$ |
|---|---|---|---|---|---|---|
| | (V) | (Ω) | (mA) | (% / °C) | (V) | (mA) |
| **ZY6V2GP** | 5.8-6.6 | 2 | 100 | +0.025 | 1.5 | 245 |
| **ZY6V8GP** | 6.4-7.2 | 2 | 100 | +0.035 | 2 | 220 |
| **ZY7V5GP** | 7.0-7.9 | 2 | 100 | +0.035 | 2 | 200 |
| **ZY8V2GP** | 7.7-8.7 | 2 | 100 | +0.055 | 3.5 | 180 |
| **ZY9V1GP** | 8.5-9.6 | 4 | 50 | +0.055 | 6.9 | 165 |
| **ZY10GP** | 9.4-10.6 | 4 | 50 | +0.070 | 7.5 | 145 |
| **ZY11GP** | 10.4-11.6 | 7 | 50 | +0.075 | 8.3 | 135 |
| **ZY12GP** | 11.4-12.7 | 7 | 50 | +0.075 | 9.1 | 120 |
| **ZY13GP** | 12.4-14.1 | 10 | 50 | +0.075 | 9.9 | 110 |
| **ZY15GP** | 13.8-15.8 | 10 | 50 | +0.075 | 11.4 | 98 |
| **ZY16GP** | 15.3-17.1 | 15 | 25 | +0.085 | 12.2 | 90 |
| **ZY18GP** | 16.8-19.1 | 15 | 25 | +0.085 | 13.7 | 80 |
| **ZY20GP** | 18.8-21.2 | 15 | 25 | +0.085 | 15.2 | 72 |
| **ZY22GP** | 20.8-23.3 | 15 | 25 | +0.085 | 16.7 | 66 |
| **ZY24GP** | 22.8-25.6 | 15 | 25 | +0.085 | 18.2 | 60 |
| **ZY27GP** | 25.1-28.9 | 15 | 25 | +0.085 | 20.5 | 53 |
| **ZY30GP** | 28-32 | 15 | 25 | +0.085 | 22.8 | 48 |
| **ZY33GP** | 31-35 | 15 | 25 | +0.085 | 25 | 44 |
| **ZY36GP** | 34-38 | 40 | 10 | +0.085 | 27.4 | 40 |
| **ZY39GP** | 37-41 | 40 | 10 | +0.085 | 29.6 | 37 |
| **ZY43GP** | 40-46 | 45 | 10 | +0.095 | 32.7 | 33 |
| **ZY47GP** | 44-50 | 45 | 10 | +0.095 | 35.7 | 30 |
| **ZY51GP** | 48-54 | 60 | 10 | +0.095 | 38.8 | 27 |
| **ZY56GP** | 52-60 | 60 | 10 | +0.095 | 42.5 | 25 |
| **ZY62GP** | 58-66 | 80 | 10 | +0.105 | 47.1 | 21 |
| **ZY68GP** | 64-72 | 80 | 10 | +0.105 | 51.7 | 20 |
| **ZY75GP** | 70-79 | 100 | 10 | +0.105 | 57 | 18 |
| **ZY82GP** | 77-88 | 100 | 10 | +0.105 | 62.4 | 16 |
| **ZY91GP** | 85-96 | 200 | 5 | +0.110 | 69.2 | 15 |
| **ZY100GP** | 94-106 | 200 | 5 | +0.110 | 76 | 13 |
| **ZY110GP** | 104-116 | 250 | 5 | +0.110 | 83.5 | 12 |
| **ZY120GP** | 114-127 | 250 | 5 | +0.110 | 91.2 | 11 |
| **ZY130GP** | 124-141 | 300 | 5 | +0.110 | 98.2 | 10 |
| **ZY150GP** | 138-156 | 300 | 5 | +0.110 | 114 | 9 |
| **ZY160GP** | 153-171 | 350 | 5 | +0.110 | 122 | 8.5 |
| **ZY180GP** | 168-191 | 350 | 5 | +0.110 | 137 | 8.0 |
| **ZY200GP** | 188-212 | 350 | 5 | +0.110 | 152 | 7.5 |

(1) Tested with pulses.
Pulse test: tp ≤ 50 ms; δ < 2%

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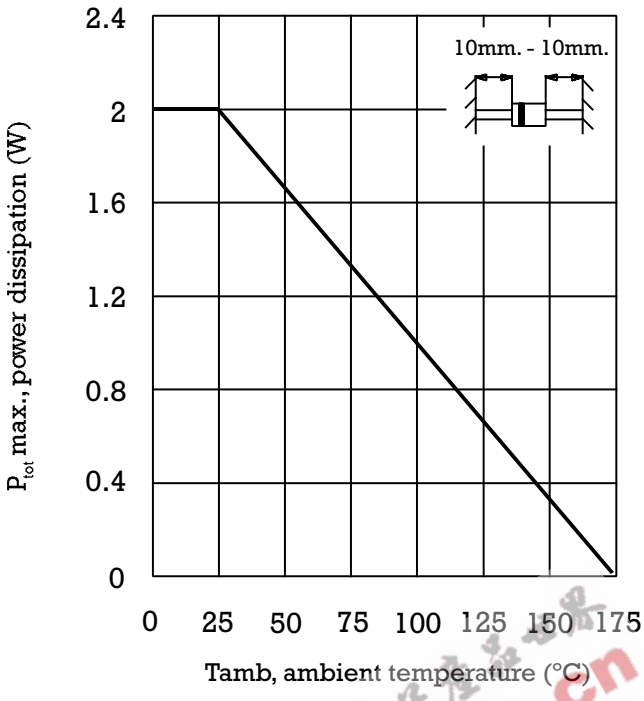
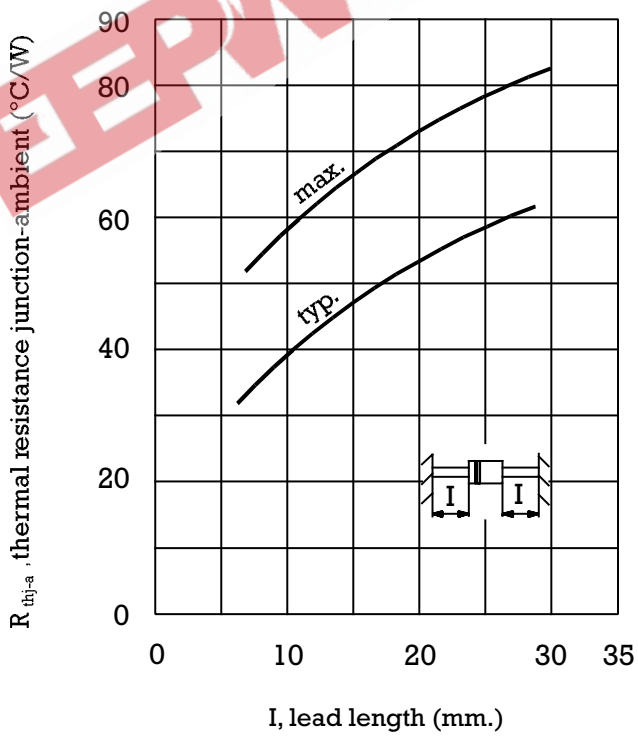
## Characteristic Curves

POWER DISSIPATION




THERMAL RESISTANCE

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BREAKDOWN CHARACTERISTICS