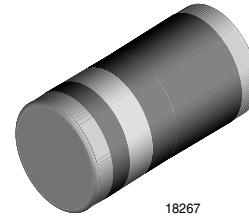


Zener Diodes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- For surface mounted applications
- Glass passivated chip junction
- Low zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 250 °C/ 10 seconds at terminals



Mechanical Data

Case: MELF Plastic molded plastic over glass passivated junction

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Red band denotes Zener diode and positive end (cathode)

Mounting Position: Any

Weight: 0.0046oz., 116 mg

Packaging codes/options:

26 / 5 k per 13 " Reel (12 mm tape), 60 k/box

46 / 1.5 k per 7 " Reel (12 mm tape), 30 k/box

Absolute Maximum Ratings

$T_{amb} = 25\text{ °C}$, unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|---|----------------|-----------|-------------------|------|
| Zener current (see Table "Characteristics") | | | | |
| Power dissipation | | P_{tot} | 1.0 ³⁾ | W |

Thermal Characteristics

$T_{amb} = 25\text{ °C}$, unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|--|----------------|------------|---------------|------|
| Thermal resistance junction to ambient air | | R_{thJA} | 170 | °C/W |
| Junction temperature | | T_j | 150 | °C |
| Storage temperature | | T_s | - 65 to + 150 | °C |

Electrical Characteristics

| Partnumber | Nominal Zener Voltage ¹⁾ | Test Current | Maximum Dynamic Impedance | | | Maximum DC Reverse Leakage Current | | Maximum Zener Current ⁽²⁾ | Maximum Forward Voltage @ 200 mA |
|------------|-------------------------------------|--------------|-----------------------------------|-----------------------------------|-----------------|------------------------------------|----------------|--------------------------------------|----------------------------------|
| | | | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R | V _R | | |
| | | | Ω | Ω | mA | μA | V | | |
| GLL4735 | 6.2 | 41 | 2 | 700 | 1 | 50 | 3 | 730 | 1.2 |
| GLL4736 | 6.8 | 37 | 3.5 | 700 | 1 | 10 | 4 | 660 | 1.2 |
| GLL4737 | 7.5 | 34 | 4 | 700 | 0.5 | 10 | 5 | 605 | 1.2 |
| GLL4738 | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6 | 550 | 1.2 |
| GLL4739 | 9.1 | 28 | 5 | 700 | 0.5 | 10 | 7 | 500 | 1.2 |
| GLL4740 | 10 | 25 | 7 | 700 | 0.25 | 10 | 7.6 | 454 | 1.2 |
| GLL4741 | 11 | 23 | 8 | 700 | 0.25 | 5 | 8.4 | 414 | 1.2 |
| GLL4742 | 12 | 21 | 9 | 700 | 0.25 | 5 | 9.1 | 380 | 1.2 |
| GLL4743 | 13 | 19 | 10 | 700 | 0.25 | 5 | 9.9 | 344 | 1.2 |
| GLL4744 | 15 | 17 | 14 | 700 | 0.25 | 5 | 11.4 | 305 | 1.2 |
| GLL4745 | 16 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 | 285 | 1.2 |
| GLL4746 | 18 | 14 | 20 | 750 | 0.25 | 5 | 13.7 | 250 | 1.2 |
| GLL4747 | 20 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 | 225 | 1.2 |
| GLL4748 | 22 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 | 205 | 1.2 |
| GLL4749 | 24 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 | 190 | 1.2 |
| GLL4750 | 27 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 | 170 | 1.2 |
| GLL4751 | 30 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 | 150 | 1.2 |
| GLL4752 | 33 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.1 | 135 | 1.2 |
| GLL4753 | 36 | 7 | 50 | 1000 | 0.25 | 5 | 27.4 | 125 | 1.2 |
| GLL4754 | 39 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 | 115 | 1.2 |
| GLL4755 | 43 | 6 | 70 | 1500 | 0.25 | 5 | 32.7 | 110 | 1.2 |
| GLL4756 | 47 | 5.5 | 80 | 1500 | 0.25 | 5 | 35.8 | 95 | 1.2 |
| GLL4757 | 51 | 5 | 95 | 1500 | 0.25 | 5 | 38.8 | 90 | 1.2 |
| GLL4758 | 56 | 4.5 | 110 | 2000 | 0.25 | 5 | 42.6 | 80 | 1.2 |
| GLL4759 | 62 | 4 | 125 | 2000 | 0.25 | 5 | 47.1 | 70 | 1.2 |
| GLL4760 | 68 | 3.7 | 150 | 2000 | 0.25 | 5 | 51.7 | 65 | 1.2 |
| GLL4761 | 75 | 3.3 | 175 | 2000 | 0.25 | 5 | 56 | 60 | 1.2 |
| GLL4762 | 82 | 3 | 200 | 3000 | 0.25 | 5 | 62.2 | 55 | 1.2 |
| GLL4763 | 91 | 2.8 | 250 | 3000 | 0.25 | 5 | 69.2 | 50 | 1.2 |

⁽¹⁾ Standard voltage tolerance is ± 10 %, Suffix A = ± 5 %

⁽²⁾ Surge current is a non-repetitive, 8.3 ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method

⁽³⁾ Maximum steady state power dissipation is 1.0 watt at T_T = 75 °C

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

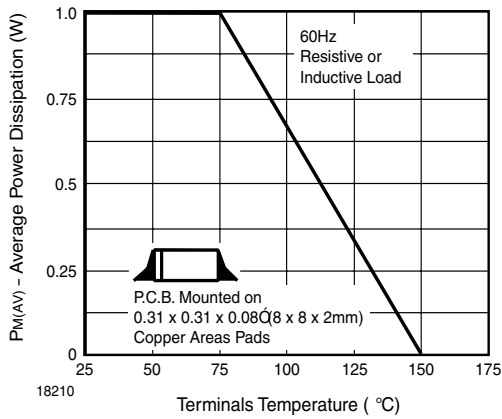


Figure 1. Maximum Continuous Power Dissipation

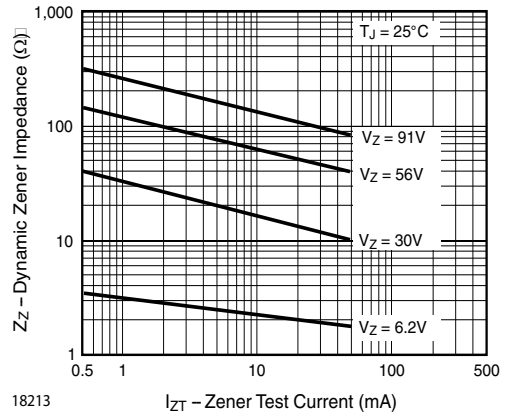


Figure 4. Typical Zener Impedance

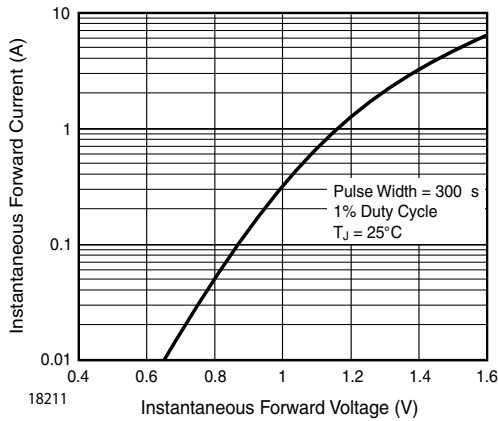


Figure 2. Typical Instantaneous Forward Characteristics for GLL4763

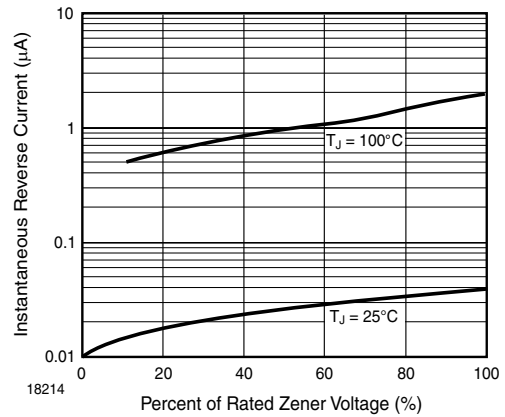


Figure 5. Typical Reverse Characteristics

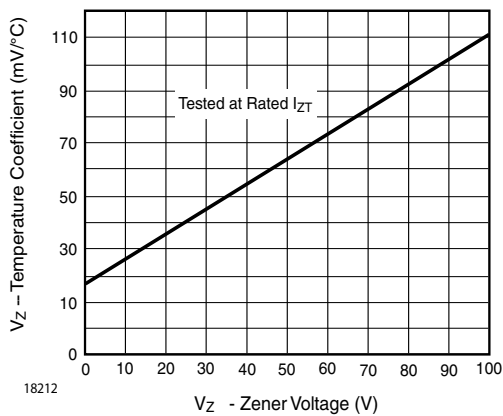


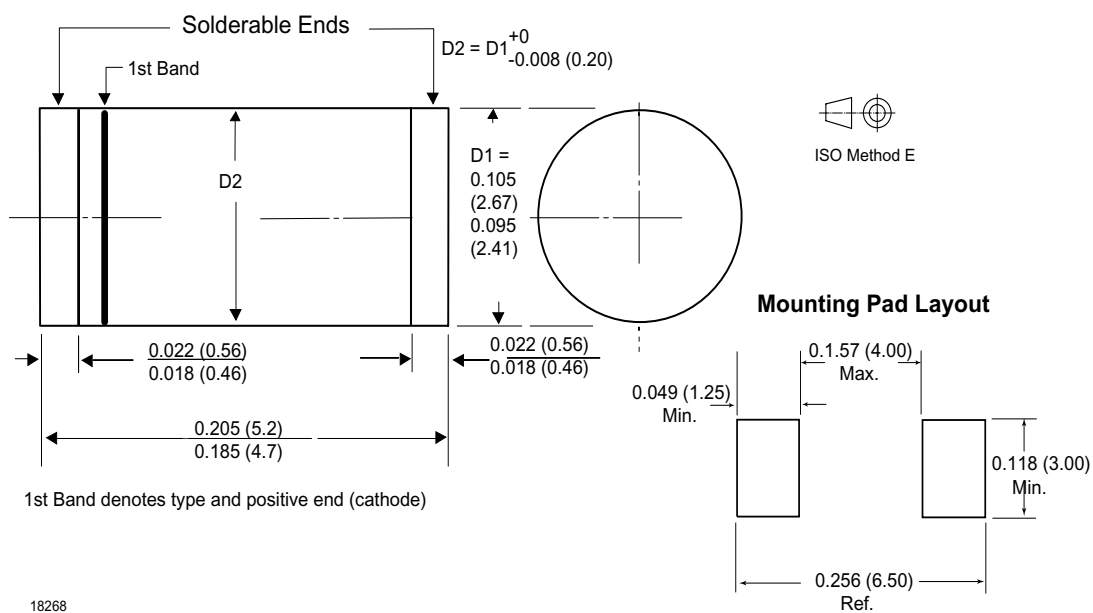
Figure 3. Typical Temperature Coefficients

GLL4735 to GLL4763A



Vishay Semiconductors

Package Dimensions in Inches (mm)





Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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