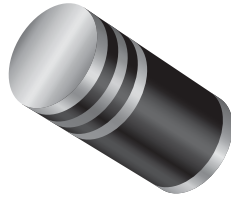


Surface Mount Glass Passivated Power Voltage-Regulating Diodes



GL41 (DO-213AB)

DESIGN SUPPORT TOOLS AVAILABLE



3D Models

| PRIMARY CHARACTERISTICS | |
|-------------------------|----------------|
| V_Z | 100 V to 200 V |
| P_{tot} | 1000 mW |
| I_R | 1.0 μ A |
| T_J max. | 150 °C |
| V_Z specification | Pulse current |
| Circuit configuration | Single |

FEATURES

- Plastic MELF package
- Ideal for automated placement
- Glass passivated chip junction
- Low Zener impedance
- Low regulation factor
- Meets MSL level 1, per J-STD-020C, LF maximum peak of 250 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For general purpose regulation and protection applications.

MECHANICAL DATA

Case: GL41 (DO-213AB)

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 1A whisker test

Polarity: red band denotes Zener diode and positive (cathode)

| MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted) | | | |
|---|----------------|-------------|------|
| PARAMETER | SYMBOL | VALUE | UNIT |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | °C |

| ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) | | | | | | | | | | | |
|--|---------------------|------|------|--------------|----------|-------------------------|----------------------|-------------------------|-------|------------------------------------|---------------------------|
| PART NUMBER (1) | ZENER VOLTAGE RANGE | | | TEST CURRENT | | MAXIMUM ZENER IMPEDANCE | | MAXIMUM REVERSE CURRENT | | MAXIMUM CONTINUOUS FORWARD VOLTAGE | MAXIMUM SURGE CURRENT (2) |
| | V_Z at I_{ZT} | | | I_{ZT} | I_{ZK} | Z_{ZT} AT I_{ZT} | Z_{ZK} AT I_{ZK} | I_R at V_R | | V_F at 0.5 A | I_{RM} |
| | V | | | mA | | Ω | | μA | V | V | mA_{DC} |
| | MIN. | NOM. | MAX. | | | MAX. | MAX. | | | MAX. | MAX. |
| ZGL41-100A | 95 | 100 | 105 | 3.7 | 0.25 | 250 | 3100 | 1.0 | 76.0 | 1.5 | 10.0 |
| ZGL41-110A | 104 | 110 | 116 | 3.4 | 0.25 | 300 | 4000 | 1.0 | 83.6 | 1.5 | 9.1 |
| ZGL41-120A | 114 | 120 | 126 | 3.1 | 0.25 | 380 | 4500 | 1.0 | 91.2 | 1.5 | 8.3 |
| ZGL41-130A | 124 | 130 | 137 | 2.9 | 0.25 | 450 | 5000 | 1.0 | 98.8 | 1.5 | 7.7 |
| ZGL41-140A | 133 | 140 | 147 | 2.7 | 0.25 | 525 | 5500 | 1.0 | 106.4 | 1.5 | 7.1 |
| ZGL41-150A | 142 | 150 | 158 | 2.5 | 0.25 | 600 | 6000 | 1.0 | 114.0 | 1.5 | 6.7 |
| ZGL41-160A | 152 | 160 | 168 | 2.3 | 0.25 | 700 | 6500 | 1.0 | 121.6 | 1.5 | 6.3 |
| ZGL41-170A | 162 | 170 | 179 | 2.2 | 0.25 | 800 | 6750 | 1.0 | 129.2 | 1.5 | 5.9 |
| ZGL41-180A | 171 | 180 | 189 | 2.1 | 0.25 | 900 | 7000 | 1.0 | 136.9 | 1.5 | 5.6 |
| ZGL41-190A | 180 | 190 | 200 | 2.0 | 0.25 | 1050 | 7500 | 1.0 | 144.4 | 1.5 | 5.3 |
| ZGL41-200A | 190 | 200 | 210 | 1.9 | 0.25 | 1200 | 8000 | 1.0 | 152.0 | 1.5 | 5.0 |

Notes

- (1) Surge current is a non-repetitive, 8.3 ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method
 (2) Maximum steady state power dissipation is 1.0 W at $T_L = 75\text{ }^\circ\text{C}$

| ORDERING INFORMATION (Example) | | | | |
|---------------------------------------|-----------------|------------------------|---------------|------------------------------------|
| PREFERRED P/N | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| ZGL41-100A-E3/96 | 0.134 | 96 | 1500 | 7" diameter plastic tape and reel |
| ZGL41-100A-E3/97 | 0.134 | 97 | 5000 | 13" diameter plastic tape and reel |

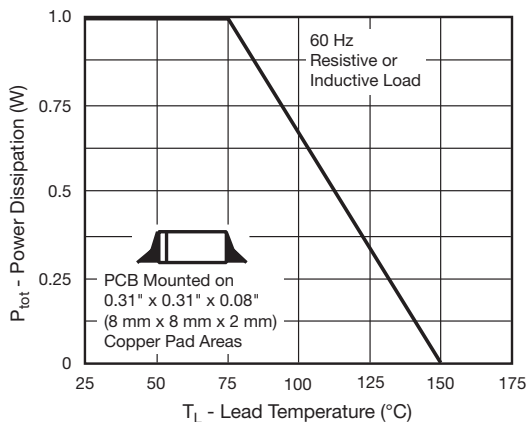
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Maximum Continuous Power Dissipation

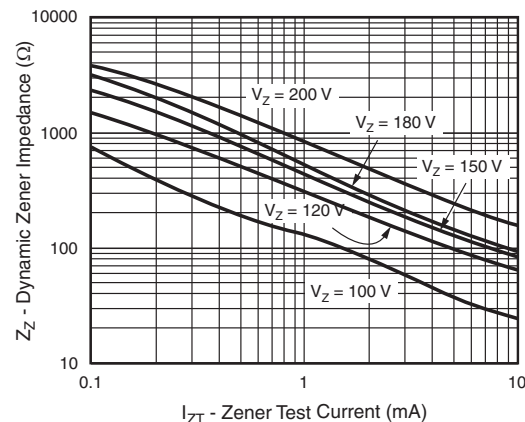


Fig. 2 - Typical Zener Impedance

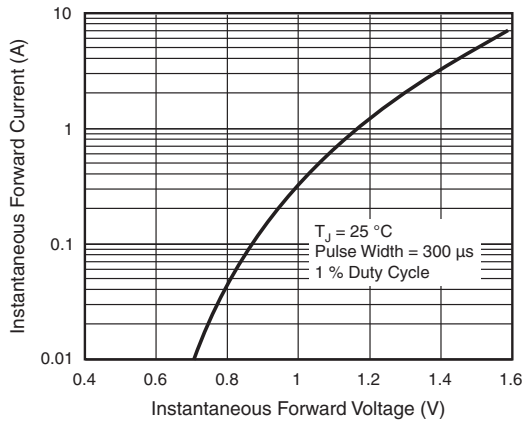


Fig. 3 - Typical Instantaneous Forward Characteristics

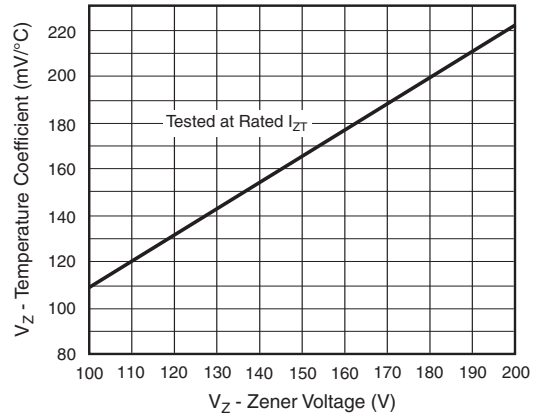


Fig. 5 - Steady State Power Derating Curve

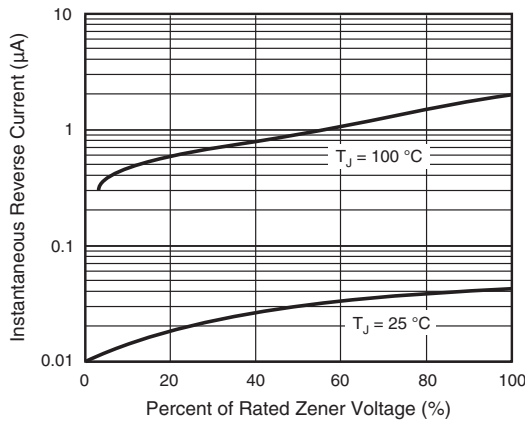


Fig. 4 - Typical Reverse Characteristics

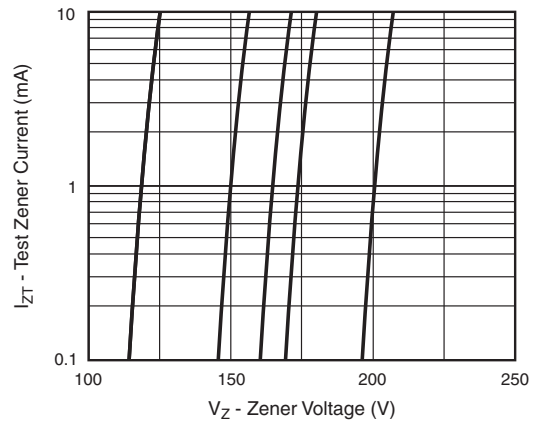
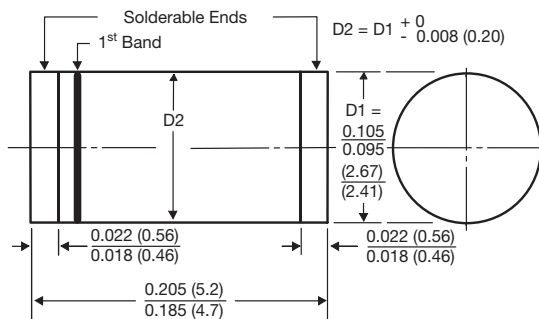


Fig. 6 - Typical Zener Voltage

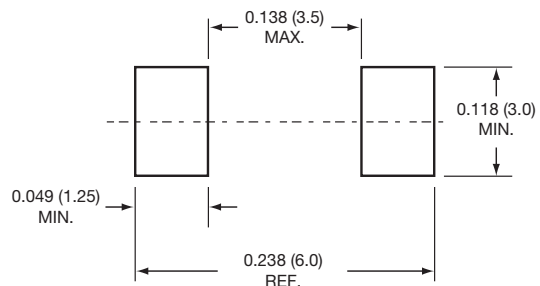
PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

GL41 (DO-213AB)



1st band denotes type and positive end (cathode)

Mounting Pad Layout





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