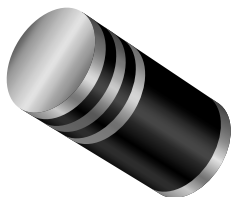


## Surface Mount Glass Passivated Power Voltage-Regulating Diodes



DO-213AB (GL41)

### 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](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For general purpose regulation and protection applications.

### PRIMARY CHARACTERISTICS

|                     |                |
|---------------------|----------------|
| $V_Z$               | 100 V to 200 V |
| $P_{tot}$           | 1000 mW        |
| $I_R$               | 1.0 $\mu$ A    |
| $T_J$ max.          | 150 °C         |
| $V_Z$ specification | Pulse current  |
| Int. construction   | Single         |

### MECHANICAL DATA

**Case:** DO-213AB (GL41)

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** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| PART<br>NUMBER <sup>(1)</sup> | ZENER VOLTAGE<br>RANGE |      |      | TEST<br>CURRENT |          | MAXIMUM ZENER<br>IMPEDANCE |                      | MAXIMUM<br>REVERSE<br>CURRENT |       | MAXIMUM<br>CONTINUOUS<br>FORWARD<br>VOLTAGE | MAXIMUM<br>SURGE<br>CURRENT <sup>(2)</sup> |
|-------------------------------|------------------------|------|------|-----------------|----------|----------------------------|----------------------|-------------------------------|-------|---------------------------------------------|--------------------------------------------|
|                               | $V_Z$ 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              |          | $\Omega$                   |                      | $\mu\text{A}$                 | V     | V                                           | $\text{mA}_{DC}$                           |
|                               | 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**
<sup>(1)</sup> Surge current is a non-repetitive, 8.3 ms pulse width square wave or equivalent sine-wave superimposed on  $I_{ZT}$  per JEDEC method

<sup>(2)</sup> Maximum steady state power dissipation is 1.0 W at  $T_L = 75^\circ\text{C}$ 
**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 |

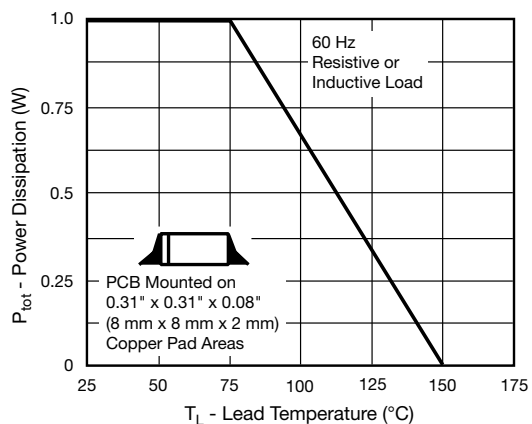
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Maximum Continuous Power Dissipation

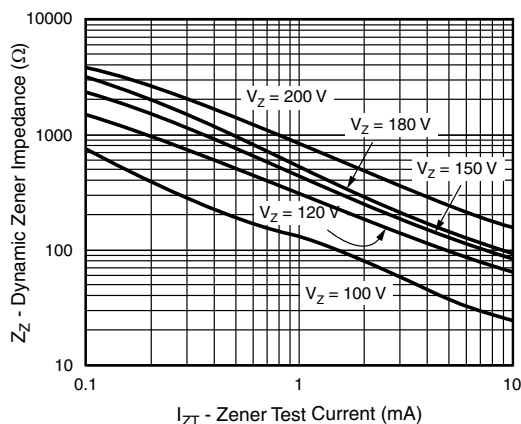


Fig. 2 - Typical Zener Impedance

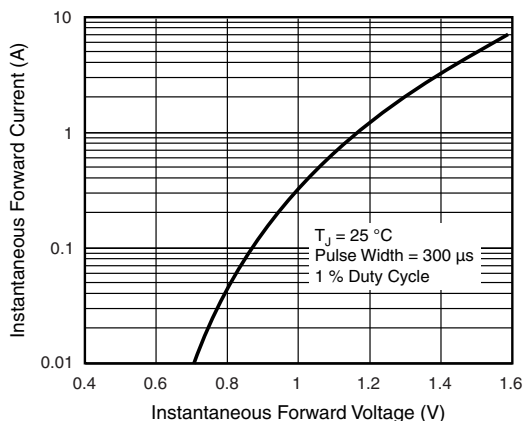


Fig. 3 - Typical Instantaneous Forward Characteristics

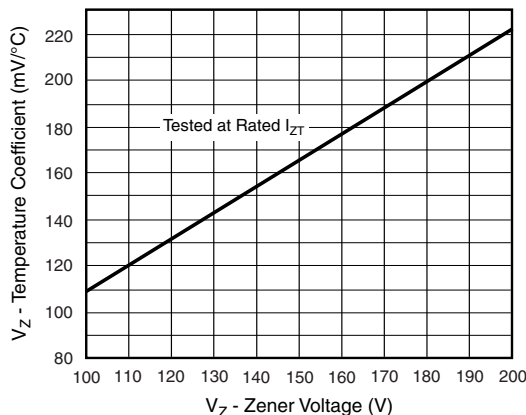


Fig. 5 - Steady State Power Derating Curve

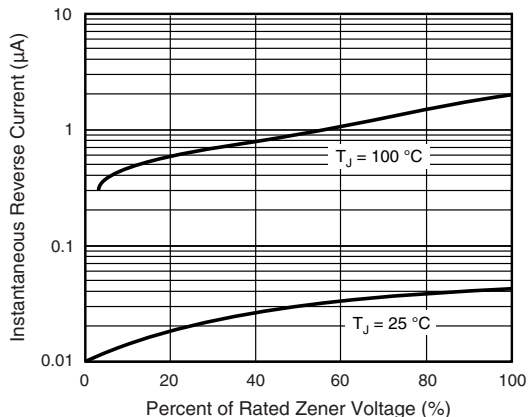


Fig. 4 - Typical Reverse Characteristics

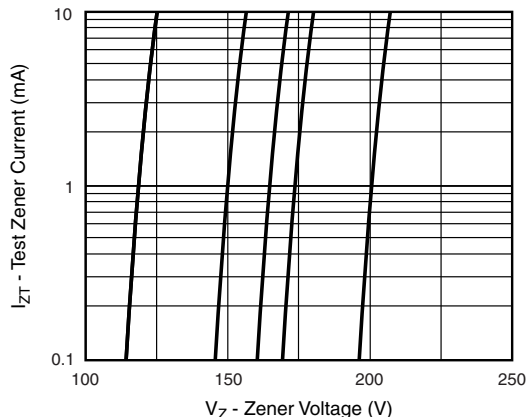
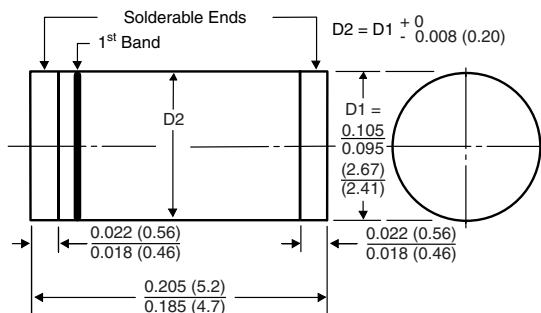


Fig. 6 - Typical Zener Voltage

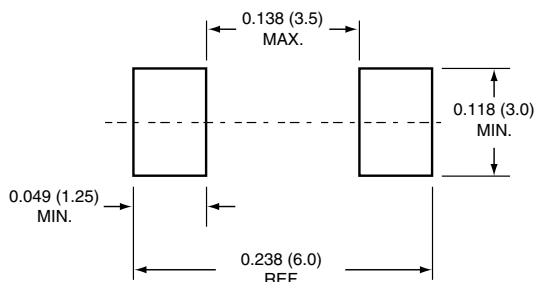
### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### DO-213AB (GL41)



1<sup>st</sup> Band Denotes Type and Positive End (Cathode)

#### Mounting Pad Layout





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