



# ZGL41-100 thru ZGL41-200A

Vishay General Semiconductor

## 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
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS COMPLIANT

### TYPICAL APPLICATIONS

For general purpose regulation and protection applications.

### PRIMARY CHARACTERISTICS

$V_Z$	100 V to 200 V
$P_D$	1.0 W
$I_R$	1.0 $\mu$ A
$T_J$ max.	150 °C

### 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 JESD22-B102

E3 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



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ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
TYPE	NOMINAL ZENER VOLTAGE AT I <sub>ZT</sub> <sup>(1)</sup> V <sub>Z</sub> (V)	TEST CURRENT I <sub>ZT</sub> (mA)	MAXIMUM ZENER DYNAMIC IMPEDANCE			MAXIMUM DC REVERSE LEAKAGE CURRENT AT V <sub>R</sub>		MAXIMUM SURGE CURRENT I <sub>RM</sub> (mAdc) <sup>(2)</sup>	MAX. INSTANTANEOUS FORWARD VOLTAGE AT 200 mA V <sub>F</sub> (V)
			Z <sub>ZT</sub> AT I <sub>ZT</sub>	Z <sub>ZK</sub> AT I <sub>ZK</sub>		I <sub>R</sub>	V <sub>R</sub>		
			(Ω)	(Ω)	(mA)	(μA)	(V)		
ZGL41-100	100	3.7	250	3100	0.25	1.0	76.0	10.0	1.5
ZGL41-110	110	3.4	300	4000	0.25	1.0	83.6	9.1	1.5
ZGL41-120	120	3.1	380	4500	0.25	1.0	91.2	8.3	1.5
ZGL41-130	130	2.9	450	5000	0.25	1.0	98.8	7.7	1.5
ZGL41-140	140	2.7	525	5500	0.25	1.0	106.4	7.1	1.5
ZGL41-150	150	2.5	600	6000	0.25	1.0	114.0	6.7	1.5
ZGL41-160	160	2.3	700	6500	0.25	1.0	121.6	6.3	1.5
ZGL41-170	170	2.2	800	6750	0.25	1.0	129.2	5.9	1.5
ZGL41-180	180	2.1	900	7000	0.25	1.0	136.9	5.6	1.5
ZGL41-190	190	2.0	1050	7500	0.25	1.0	144.4	5.3	1.5
ZGL41-200	200	1.9	1200	8000	0.25	1.0	152.0	5.0	1.5

**Notes:**

- (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<sub>ZT</sub> per JEDEC Method
- (3) Maximum steady state power dissipation is 1.0 W at T<sub>L</sub> = 75 °C

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

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub> = 25 °C unless otherwise noted)

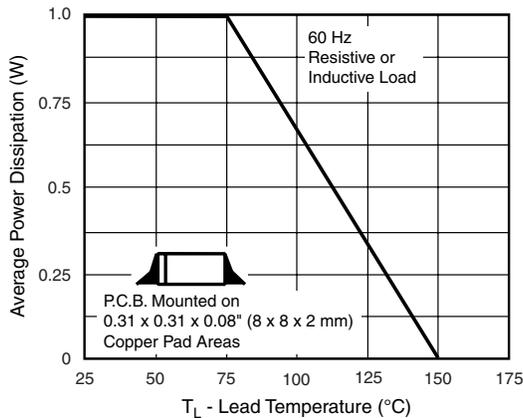


Figure 1. Maximum Continuous Power Dissipation

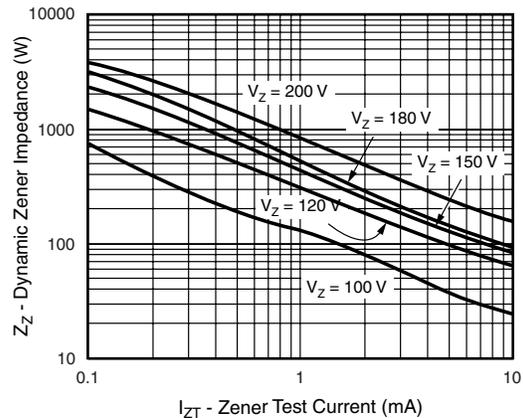


Figure 2. Typical Zener Impedance



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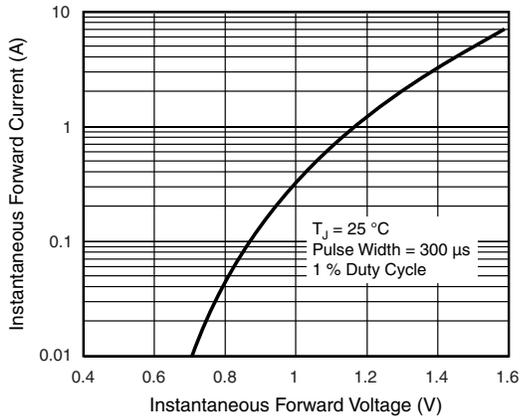


Figure 3. Typical Instantaneous Forward Characteristics

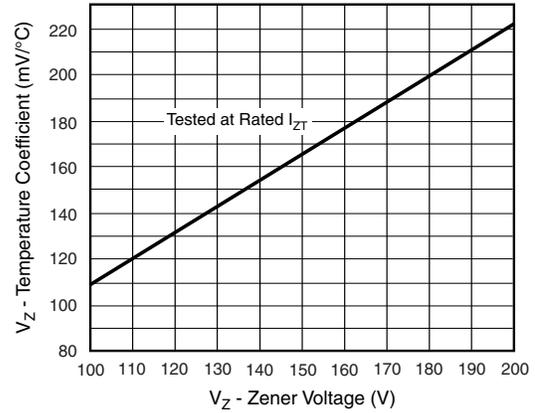


Figure 5. Steady State Power Derating Curve

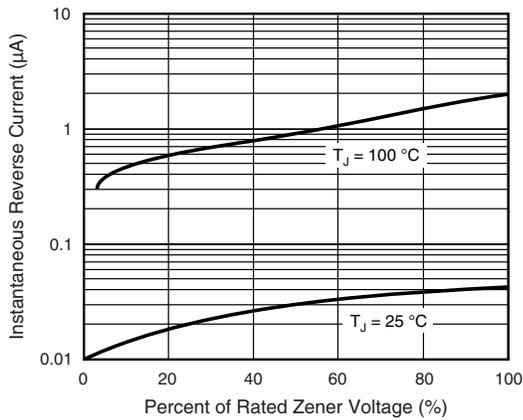


Figure 4. Typical Reverse Characteristics

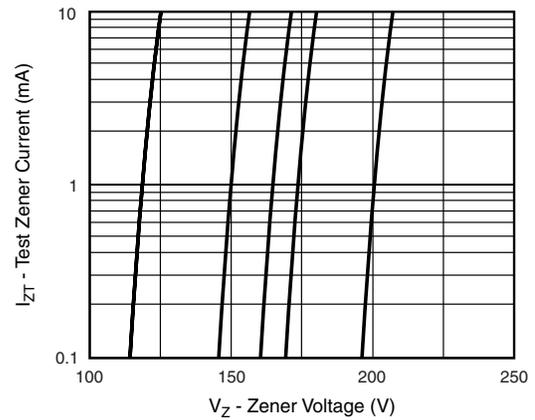
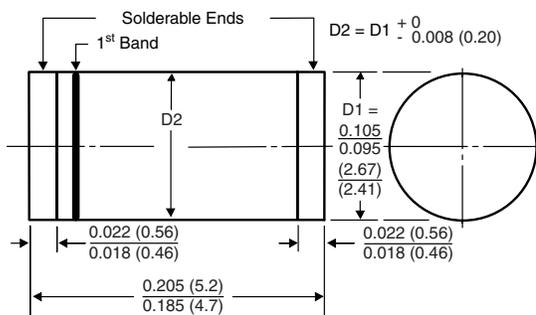


Figure 6. Typical Zener Voltage

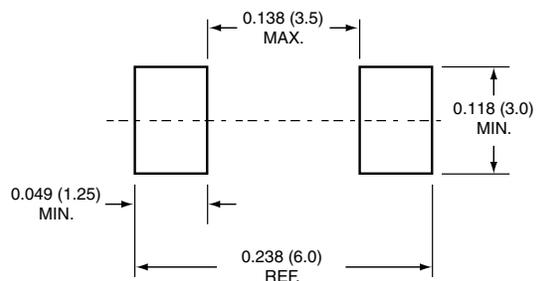
## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### DO-213AB (GL41)



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

### Mounting Pad Layout





### Disclaimer

All product specifications and data are subject to change without notice.

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