

## 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

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ 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		$\Omega$		$\mu\text{A}$	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**

- (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  $T_L = 75\text{ }^\circ\text{C}$

<b>ORDERING INFORMATION</b> (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

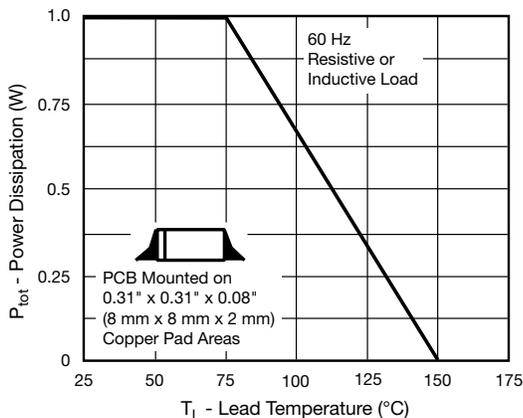
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Maximum Continuous Power Dissipation

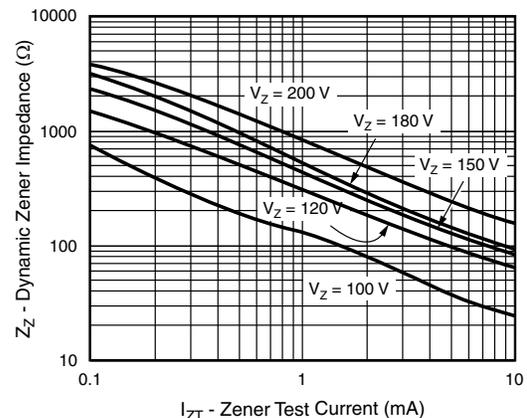


Fig. 2 - Typical Zener Impedance

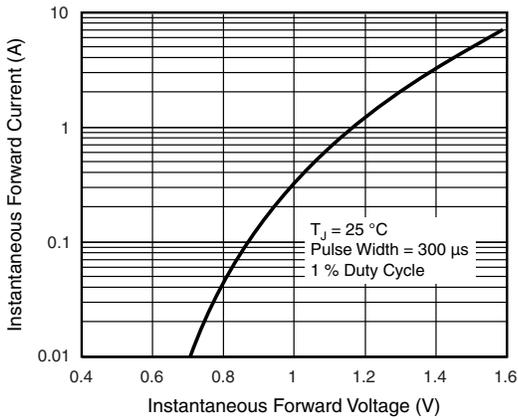


Fig. 3 - Typical Instantaneous Forward Characteristics

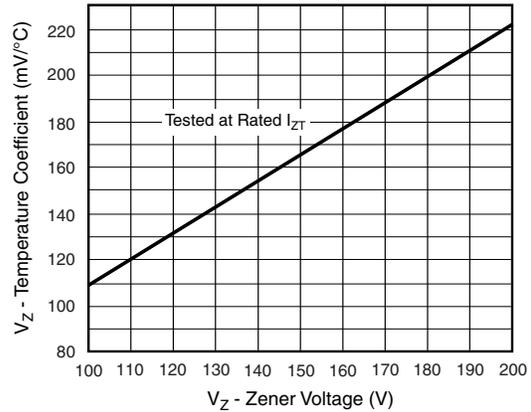


Fig. 5 - Steady State Power Derating Curve

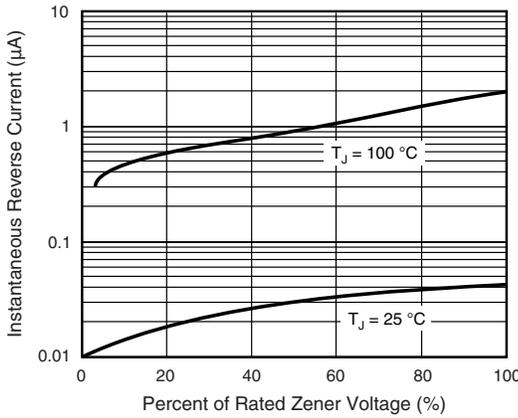


Fig. 4 - Typical Reverse Characteristics

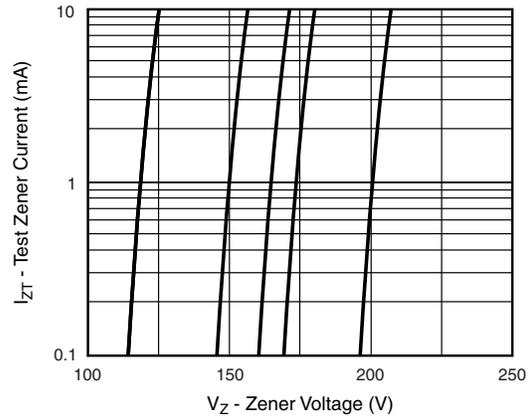
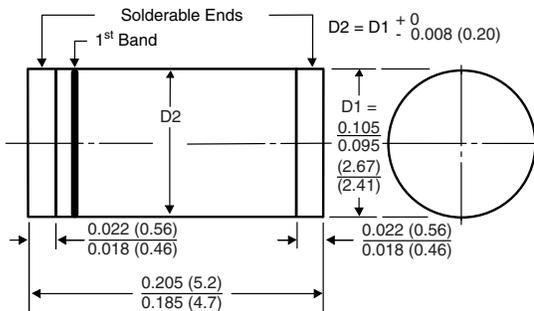


Fig. 6 - Typical Zener Voltage

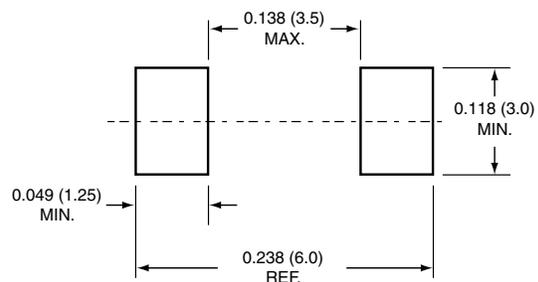
## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### DO-213AB (GL41)



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

### Mounting Pad Layout





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