

Zener Diodes



FEATURES

- Plastic package has underwriters laboratory flammability classification UL 94 V-0
- For surface mounted applications
- Glass passivated chip junction
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 250 °C/10 s at terminals
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

DESIGN SUPPORT TOOLS AVAILABLE



PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V _Z range nom.	6.2 to 91	V
Test current I _{ZT}	2.8 to 41	mA
V _Z specification	Pulse current	
Circuit configuration	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
GLL4735 to GLL4763A	GLL4735-E3/97 to GLL4763A-E3/97	5000 (12 mm tape on 13" reel)	5000/box
GLL4735 to GLL4763A	GLL4735-E3/96 to GLL4763A-E3/96	1500 (12 mm tape on 7" reel)	1500/box

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
MELF (DO-213AB)	116 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation	Maximum steady state power dissipation is 1 W at T _T = 75 °C	P _{tot}	1000	mW
Zener current	see table "Characteristics"			
Junction to ambient air		R _{thJA}	170	°C/W
Junction temperature		T _j	150	°C
Storage temperature range		T _{stg}	-65 to +150	°C

**ELECTRICAL CHARACTERISTICS** ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

PART NUMBER	ZENER VOLTAGE RANGE ⁽¹⁾	TEST CURRENT		DC REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE $f = 1\text{ kHz}$		ZENER CURRENT ⁽²⁾	FORWARD VOLTAGE at 200 mA
	V_Z at I_{ZT1}	I_{ZT1}	I_{ZT2}	I_R at V_R		Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}	I_{ZM}	V_F
	V	mA		μA	V	Ω		mA_{pk}	V
	NOM.			MAX.		MAX.	MAX.	MAX.	MAX.
GLL4735	6.2	41	1	50	3	2	700	730	1.2
GLL4736	6.8	37	1	10	4	3.5	700	660	1.2
GLL4737	7.5	34	0.5	10	5	4	700	605	1.2
GLL4738	8.2	31	0.5	10	6	4.5	700	550	1.2
GLL4739	9.1	28	0.5	10	7	5	700	500	1.2
GLL4740	10	25	0.25	10	7.6	7	700	454	1.2
GLL4741	11	23	0.25	5	8.4	8	700	414	1.2
GLL4742	12	21	0.25	5	9.1	9	700	380	1.2
GLL4743	13	19	0.25	5	9.9	10	700	344	1.2
GLL4744	15	17	0.25	5	11.4	14	700	305	1.2
GLL4745	16	15.5	0.25	5	12.2	16	700	285	1.2
GLL4746	18	14	0.25	5	13.7	20	750	250	1.2
GLL4747	20	12.5	0.25	5	15.2	22	750	225	1.2
GLL4748	22	11.5	0.25	5	16.7	23	750	205	1.2
GLL4749	24	10.5	0.25	5	18.2	25	750	190	1.2
GLL4750	27	9.5	0.25	5	20.6	35	750	170	1.2
GLL4751	30	8.5	0.25	5	22.8	40	1000	150	1.2
GLL4752	33	7.5	0.25	5	25.1	45	1000	135	1.2
GLL4753	36	7	0.25	5	27.4	50	1000	125	1.2
GLL4754	39	6.5	0.25	5	29.7	60	1000	115	1.2
GLL4755	43	6	0.25	5	32.7	70	1500	110	1.2
GLL4756	47	5.5	0.25	5	35.8	80	1500	95	1.2
GLL4757	51	5	0.25	5	38.8	95	1500	90	1.2
GLL4758	56	4.5	0.25	5	42.6	110	2000	80	1.2
GLL4759	62	4	0.25	5	47.1	125	2000	70	1.2
GLL4760	68	3.7	0.25	5	51.7	150	2000	65	1.2
GLL4761	75	3.3	0.25	5	56	175	2000	60	1.2
GLL4762	82	3	0.25	5	62.2	200	3000	55	1.2
GLL4763	91	2.8	0.25	5	69.2	250	3000	50	1.2

Notes(1) Standard voltage tolerance is $\pm 10\%$, suffix A = $\pm 5\%$ (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

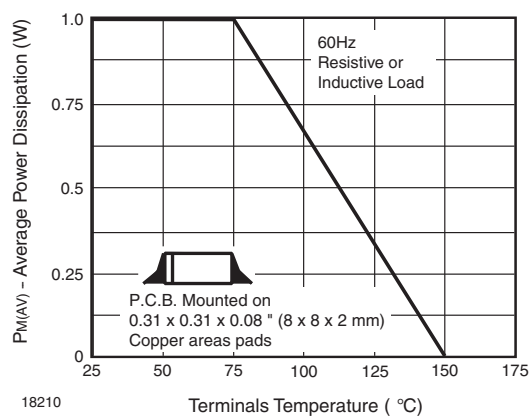
BASIC CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Maximum Continuous Power Dissipation

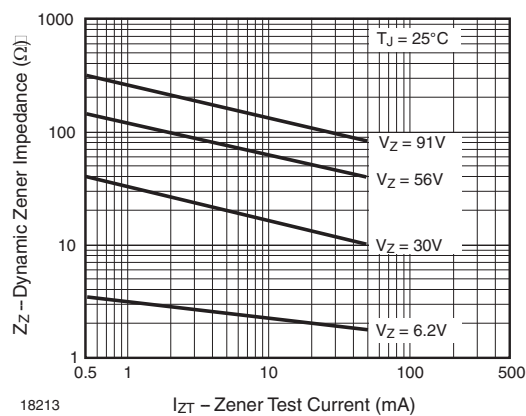


Fig. 4 - Typical Zener Impedance

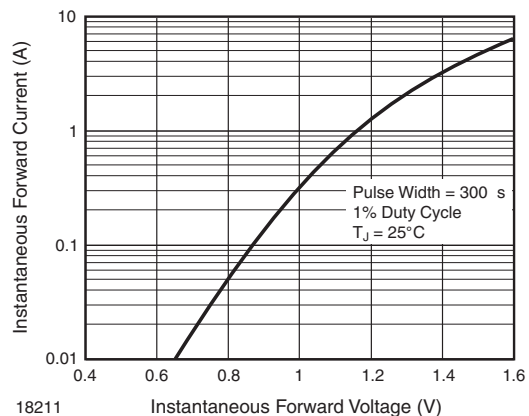


Fig. 2 - Typical Instantaneous Forward Characteristics for GLL4763

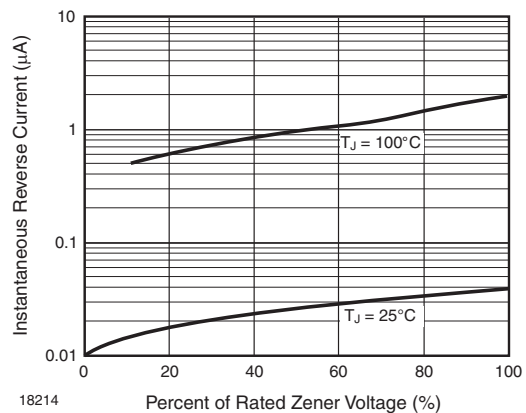


Fig. 5 - Typical Reverse Characteristics

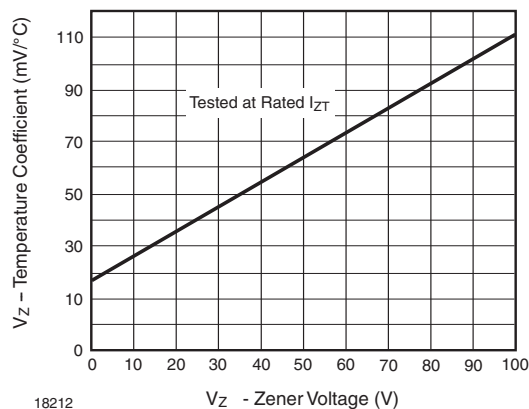
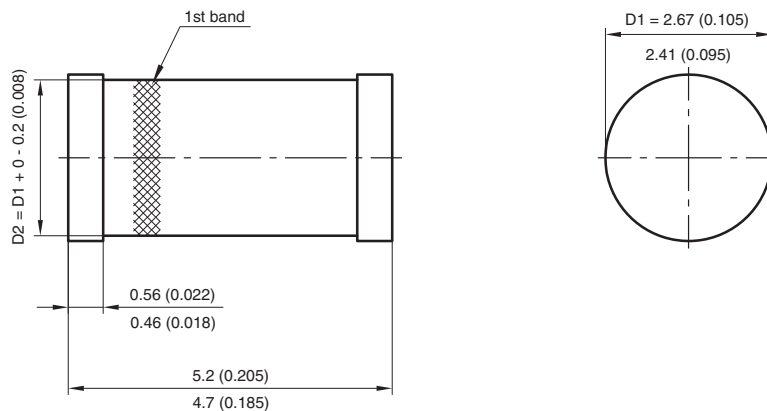


Fig. 3 - Typical Temperature Coefficients

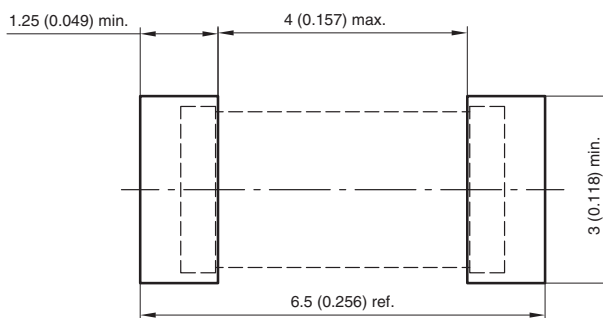


PACKAGE DIMENSIONS in millimeters (inches): **MELF DO-213AB (plastic)**



1st band denotes type and positive end (cathode)

Foot print recommendation:



Document-No.: S8-V-3453.03-001 (4)
Created-Date: 13.May.2009
18268



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.