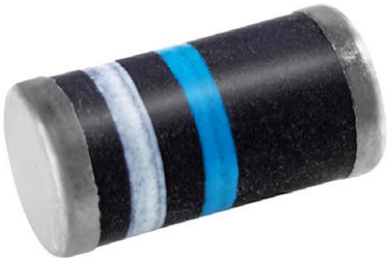
Zener Diodes



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

3D Models

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

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ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)									
PART NUMBER	**ZENER VOLTAGE RANGE (1)**	**TEST CURRENT**		**DC REVERSE LEAKAGE CURRENT**		**DYNAMIC RESISTANCE f = 1 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 ± 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_{ZT} per JEDEC® method

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BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

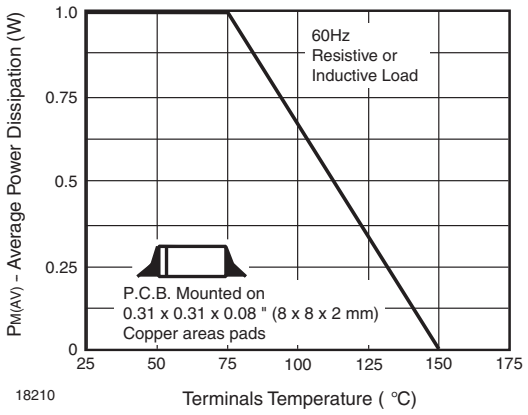

Fig. 1 - Maximum Continuous Power Dissipation

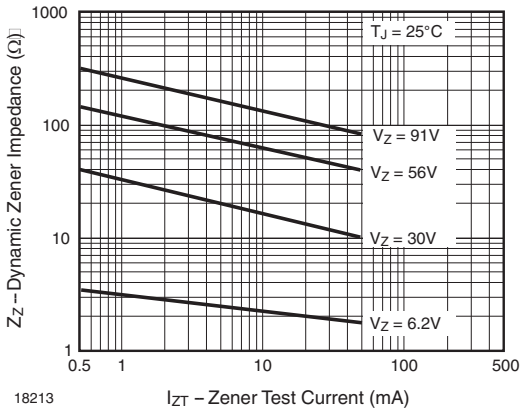

Fig. 4 - Typical Zener Impedance

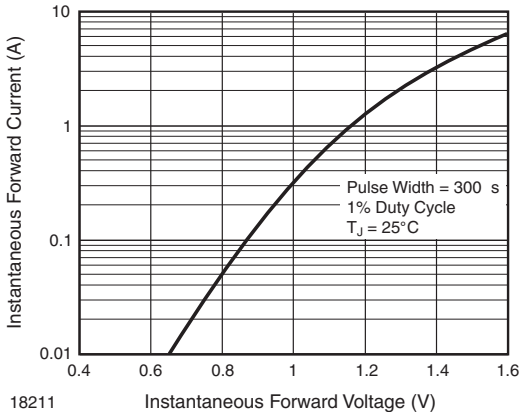

Fig. 2 - Typical Instantaneous Forward Characteristics for GLL4763

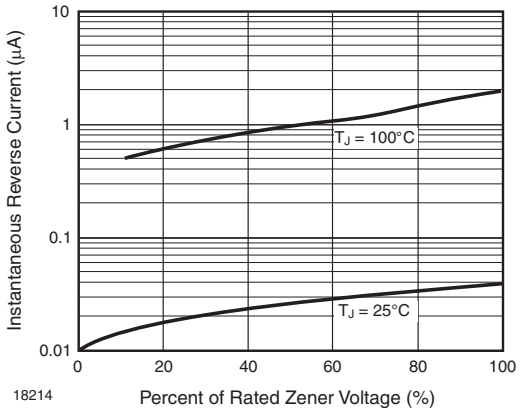

Fig. 5 - Typical Reverse Characteristics

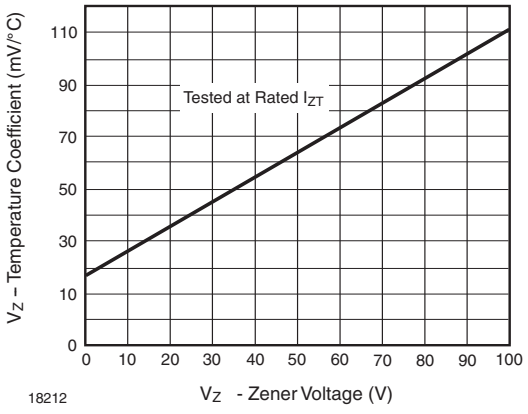

Fig. 3 - Typical Temperature Coefficients

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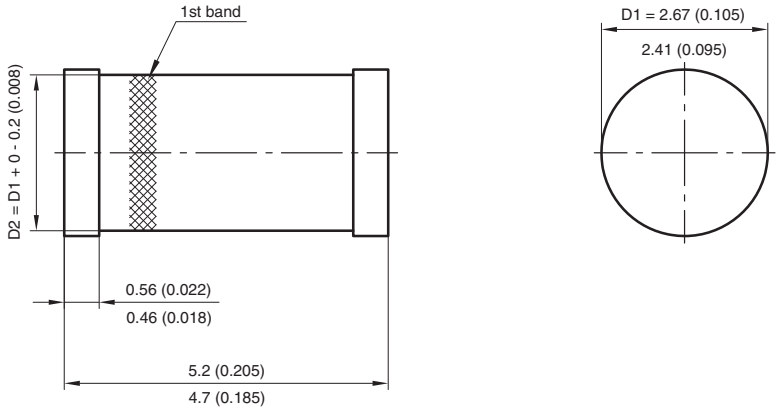
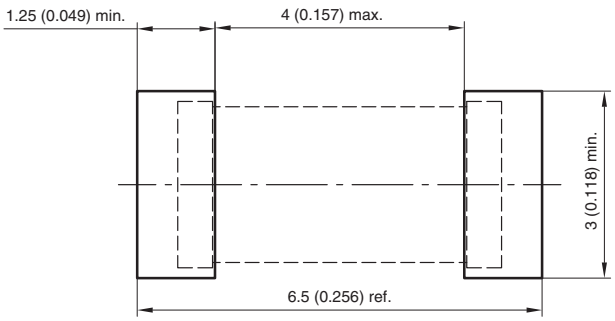
PACKAGE DIMENSIONS in millimeters (inches): **MELF DO-213AB (plastic)**



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

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