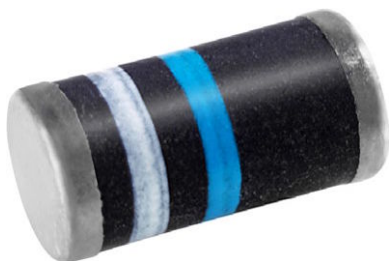




**THE DATASHEET OF
GLL4739A-E3/97**



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



Fig. 1 - Maximum Continuous Power Dissipation

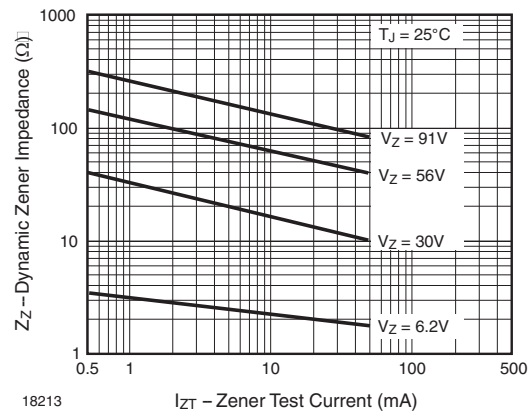


Fig. 4 - Typical Zener Impedance



Fig. 2 - Typical Instantaneous Forward Characteristics for GLL4763

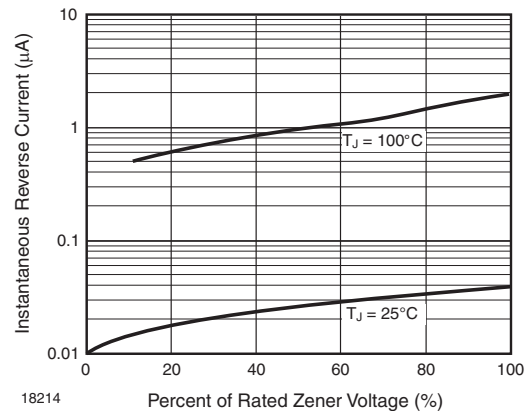


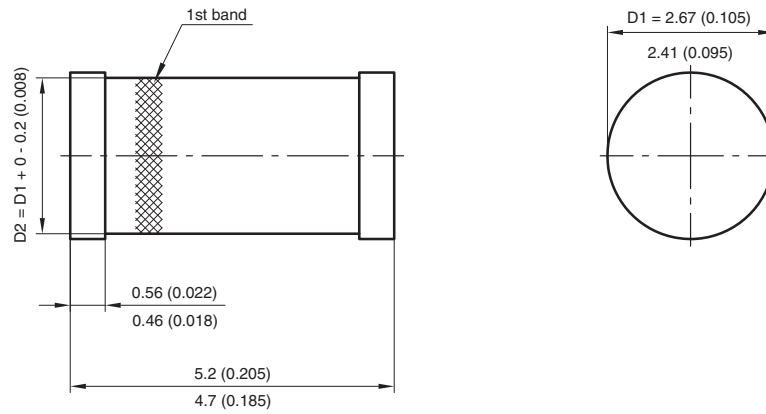
Fig. 5 - Typical Reverse Characteristics



Fig. 3 - Typical Temperature Coefficients

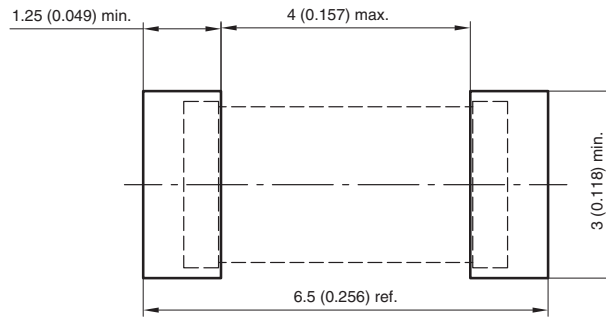


PACKAGE DIMENSIONS in millimeters (inches): MELF DO-213AB (plastic)



1st band denotes type and positive end (cathode)

Foot print recommendation:



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18268



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