

## Zener Diodes



### FEATURES

- Plastic package has underwriters laboratory flammability classification 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
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### PRIMARY CHARACTERISTICS

| PARAMETER                    | VALUE         | UNIT |
|------------------------------|---------------|------|
| V <sub>Z</sub> range nom.    | 6.2 to 91     | V    |
| Test current I <sub>ZT</sub> | 2.8 to 41     | mA   |
| V <sub>Z</sub> specification | Pulse current |      |
| Int. construction            | Single        |      |

### ORDERING INFORMATION

| DEVICE NAME         | ORDERING CODE                 | TAPED UNITS PER REEL           | MINIMUM ORDER QUANTITY |
|---------------------|-------------------------------|--------------------------------|------------------------|
| GLL4735 to GLL4763A | GLL4735 to GLL4763A-series-97 | 5 000 (12 mm tape on 13" reel) |                        |
| GLL4735 to GLL4763A | GLL4735 to GLL4763A-series-96 | 1 500 (12 mm tape on 7" reel)  |                        |

### PACKAGE

| PACKAGE NAME            | WEIGHT | MOLDING COMPOUND FLAMMABILITY RATING | MOISTURE SENSITIVITY LEVEL        | SOLDERING CONDITIONS     |
|-------------------------|--------|--------------------------------------|-----------------------------------|--------------------------|
| MELF DO-213AB (plastic) | 116 mg | UL 94 V-0                            | MSL level 1 (according J-STD-020) | 260 °C/10 s at terminals |

### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

| PARAMETER                 | TEST CONDITION                                                          | SYMBOL            | VALUE         | UNIT |
|---------------------------|-------------------------------------------------------------------------|-------------------|---------------|------|
| Power dissipation         | Maximum steady state power dissipation is 1 W at T <sub>T</sub> = 75 °C | P <sub>tot</sub>  | 1000          | mW   |
| Zener current             | see table "Characteristics"                                             |                   |               |      |
| Junction to ambient air   |                                                                         | R <sub>thJA</sub> | 170           | °C/W |
| Junction temperature      |                                                                         | T <sub>j</sub>    | 150           | °C   |
| Storage temperature range |                                                                         | T <sub>stg</sub>  | - 65 to + 150 | °C   |

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

| PART<br>NUMBER | ZENER VOLTAGE<br>RANGE <sup>(1)</sup> | TEST CURRENT |           | DC REVERSE<br>LEAKAGE<br>CURRENT |      | DYNAMIC RESISTANCE<br>$f = 1\text{ kHz}$ |                       | ZENER<br>CURRENT <sup>(2)</sup> | FORWARD<br>VOLTAGE<br>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           |           | $\mu\text{A}$                    | V    | $\Omega$                                 |                       | $\text{mA}_{pk}$                | 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

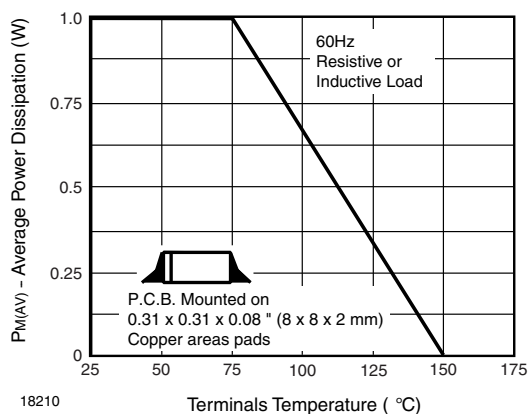
**BASIC CHARACTERISTICS** ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Maximum Continuous Power Dissipation

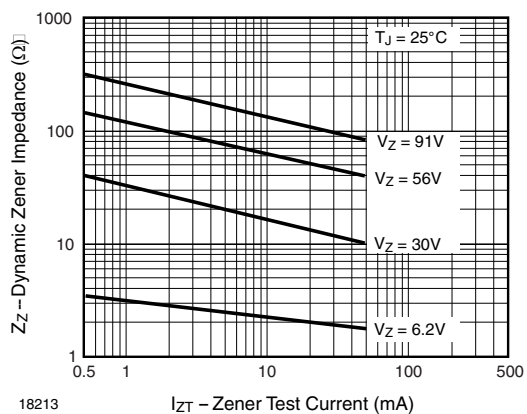


Fig. 4 - Typical Zener Impedance

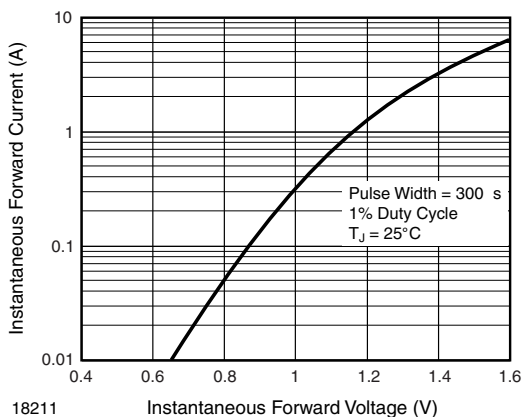


Fig. 2 - Typical Instantaneous Forward Characteristics for GLL4763

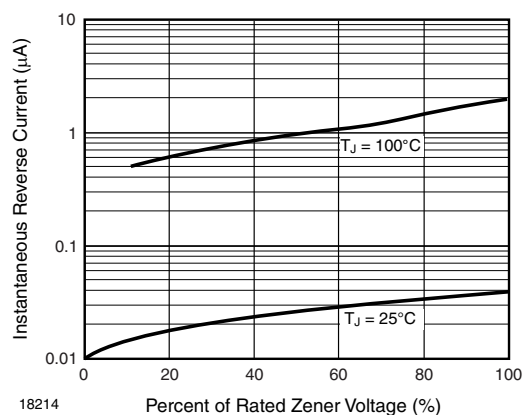


Fig. 5 - Typical Reverse Characteristics

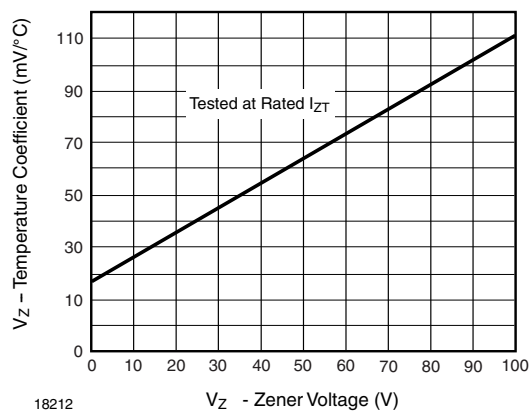
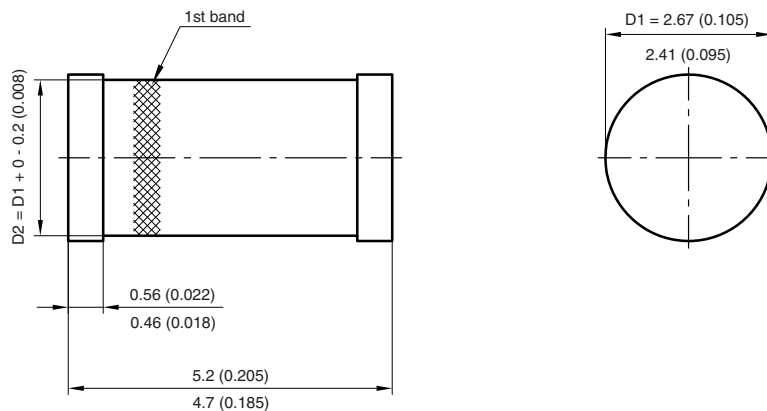


Fig. 3 - Typical Temperature Coefficients

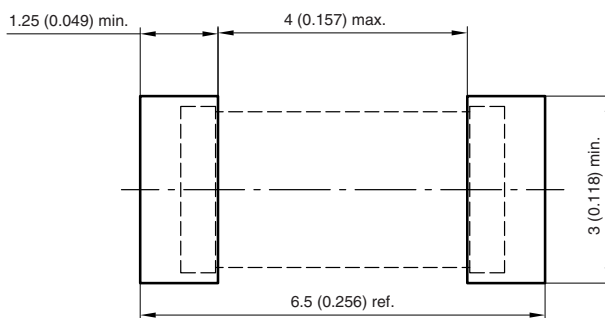


**PACKAGE DIMENSIONS** in millimeters (inches): **MELF DO-213AB (plastic)**



1st band denotes type and positive end (cathode)

Foot print recommendation:



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