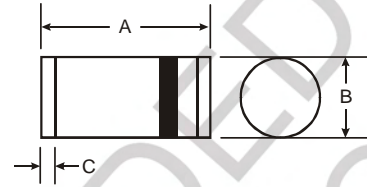


**Features**

- Glass Passivated Junction
- High Current Capability
- Low Forward Voltage Drop
- Low Leakage Current
- **Lead Free Finish/RoHS Compliant Version (Note 2)**



**Mechanical Data**

- Case: MELF
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208 (e3)
- Lead Free Plating (Matte Tin Finish).
- Polarity: Cathode Band
- Marking: Cathode Band Only
- Approximate Weight: 0.25 grams

| MELF                 |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 4.80         | 5.20 |
| B                    | 2.40         | 2.60 |
| C                    | 0.55 Nominal |      |
| All Dimensions in mm |              |      |

**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | DL 4001     | DL 4002 | DL 4003 | DL 4004 | DL 4005 | DL 4006 | DL 4007 | Unit |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |         |         |         |         |         |         |      |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V    |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |         |         |         |         |         |         |      |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 71      | 141     | 283     | 424     | 566     | 707     | V    |
| Average Forward Rectified Current @ T <sub>T</sub> = 75°C                         | I <sub>O</sub>                    | 1.0         |         |         |         |         |         |         | A    |
| Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on Rated Load | I <sub>FSM</sub>                  | 30          |         |         |         |         |         |         | A    |
| Maximum Forward Voltage @ I <sub>F</sub> = 1.0A                                   | V <sub>FM</sub>                   | 1.1         |         |         |         |         |         |         | V    |
| Maximum DC Reverse Current @ T <sub>A</sub> = 25°C                                | I <sub>RM</sub>                   | 5.0         |         |         |         |         |         |         | μA   |
| @Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C                               |                                   | 50          |         |         |         |         |         |         |      |
| Typical Thermal Resistance, Junction to Ambient Air                               | R <sub>θJA</sub>                  | 50          |         |         |         |         |         |         | °C/W |
| Typical Total Capacitance (Note 1)  | C <sub>T</sub>                    | 15          |         |         |         |         |         |         | pF   |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> | -55 to +150 |         |         |         |         |         |         | °C   |

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts.  
2. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.

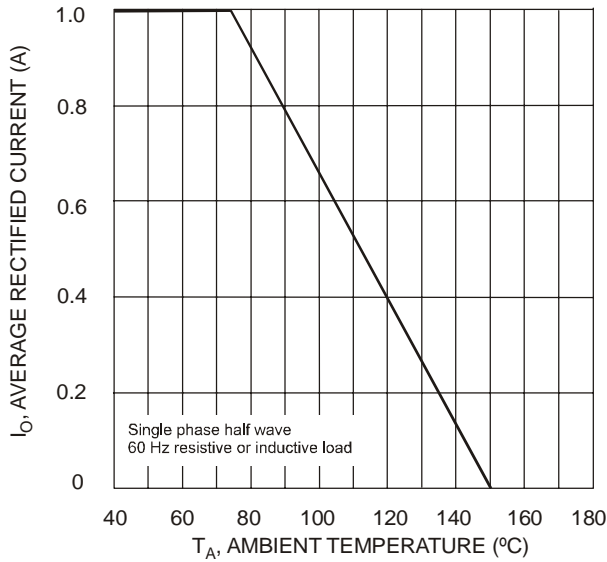


Fig. 1 Forward Current Derating Curve

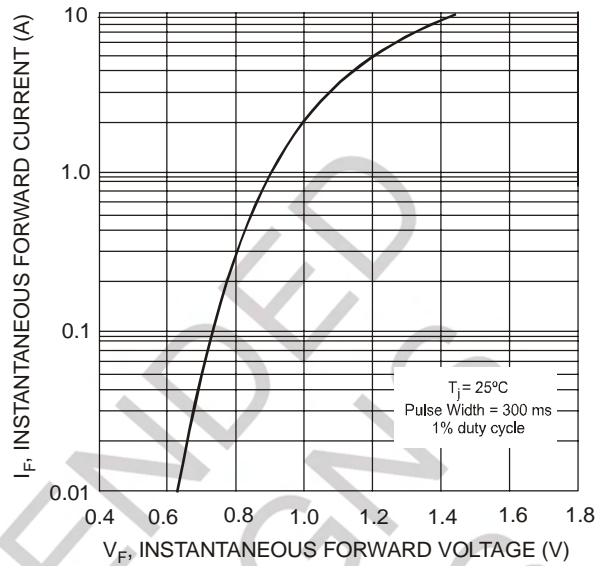


Fig. 2 Typical Forward Characteristics

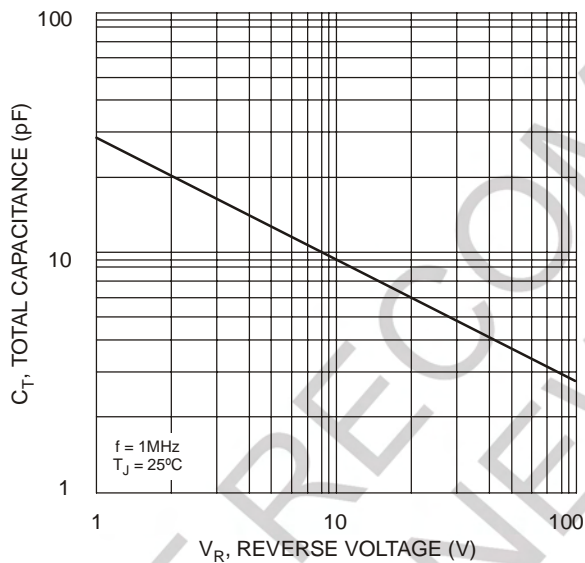


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

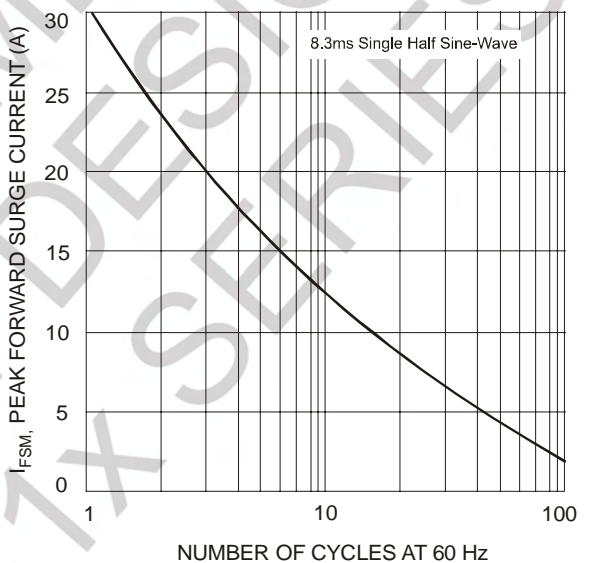


Fig. 4 Max Non-Repetitive Peak Forward Surge Current

## Ordering Information

| Device      | Packaging | Shipping          |
|-------------|-----------|-------------------|
| DL4001-13-F | MELF      | 5,000/Tape & Reel |
| DL4002-13-F | MELF      | 5,000/Tape & Reel |
| DL4003-13-F | MELF      | 5,000/Tape & Reel |
| DL4004-13-F | MELF      | 5,000/Tape & Reel |
| DL4005-13-F | MELF      | 5,000/Tape & Reel |
| DL4006-13-F | MELF      | 5,000/Tape & Reel |
| DL4007-13-F | MELF      | 5,000/Tape & Reel |

### IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

### LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.