



## LL4001 THRU LL4007 SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER

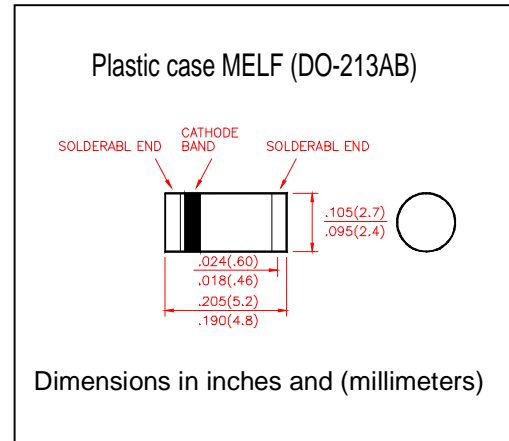
VOLTAGE RANGE -50 to 1000 Volts FORWARD CURRENT 1.0 A

### FEATURES

- For surface mounted applications
- Glass passivated chip junction
- Low leakage current
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed 250°C/10 second at terminals

### MECHANICAL DATA

- Case: molded plastic
- Polarity: band indicate cathode
- Mounting position: Any
- Weight: 0.12 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|  | SYMBOLS                   | LL 4001     | LL 4002 | LL 4003 | LL 4004 | LL 4005 | LL 4006 | LL 4007 | UNIT                      |
|--|---------------------------|-------------|---------|---------|---------|---------|---------|---------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$                 | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | Volts                     |
| Maximum RMS Voltage  | $V_{RMS}$                 | 35          | 70      | 140     | 280     | 420     | 560     | 700     | Volts                     |
| Maximum DC Blocking Voltage  | $V_{DC}$                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | Volts                     |
| Maximum Average Forward Rectified Current at $T_T=100^\circ\text{C}$                                   | $I_{(AV)}$                | 1.0         |         |         |         |         |         |         | Amps                      |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC method) | $I_{FSM}$                 | 30          |         |         |         |         |         |         | Amps                      |
| Maximum Instantaneous Forward Voltage at 1.0A  | $V_F$                     | 1.1         |         |         |         |         |         |         | Volts                     |
| Maximum DC Reverse Current<br>at rated DC Blocking Voltage at  | $T_A = 25^\circ\text{C}$  | 5.0         |         |         |         |         |         |         | $\mu\text{A}$             |
|  | $T_A = 125^\circ\text{C}$ | 100         |         |         |         |         |         |         |                           |
| Typical Junction Capacitance (Note 1)  | $R_{0JT}$                 | 15          |         |         |         |         |         |         | PF                        |
| Typical Thermal Resistance (Note 2)  | $T_{\pi}$                 | 50          |         |         |         |         |         |         | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$            | -65 to +150 |         |         |         |         |         |         | $^\circ\text{C}$          |

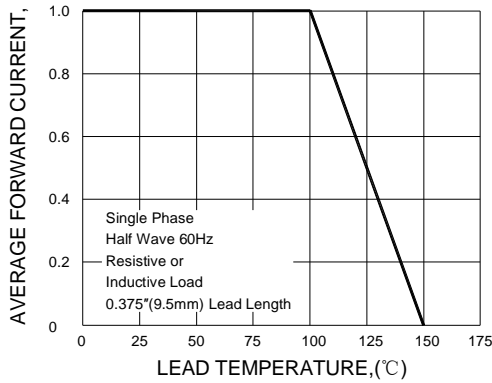
- Notes:**
- <sup>1</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C
  - <sup>2</sup> Thermal resistance from junction to terminal 6.0 mm<sup>3</sup> copper pads to each terminal
  - <sup>3</sup> Thermal resistance junction to terminal 6.0 mm<sup>3</sup> copper pads to each terminal



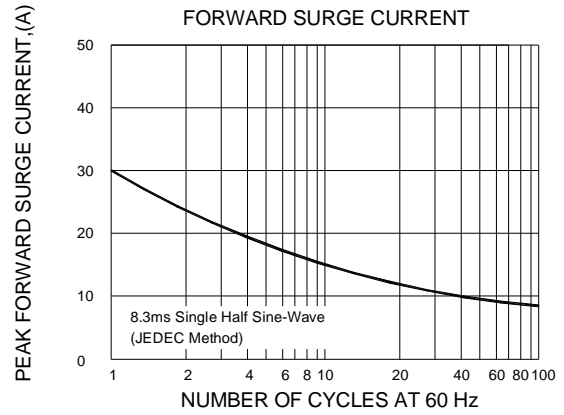
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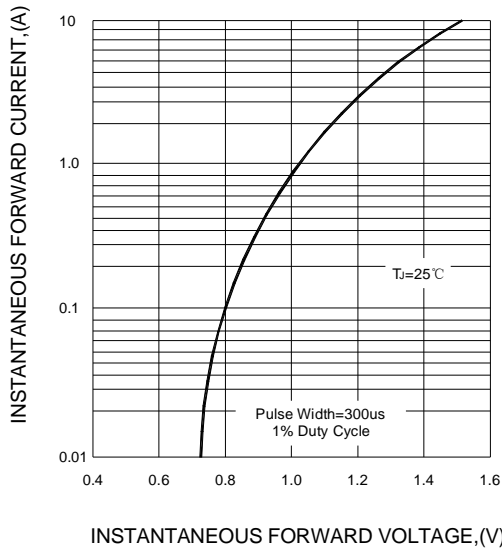
F1G.1-FORWARD CURRENT DERATING CURVE



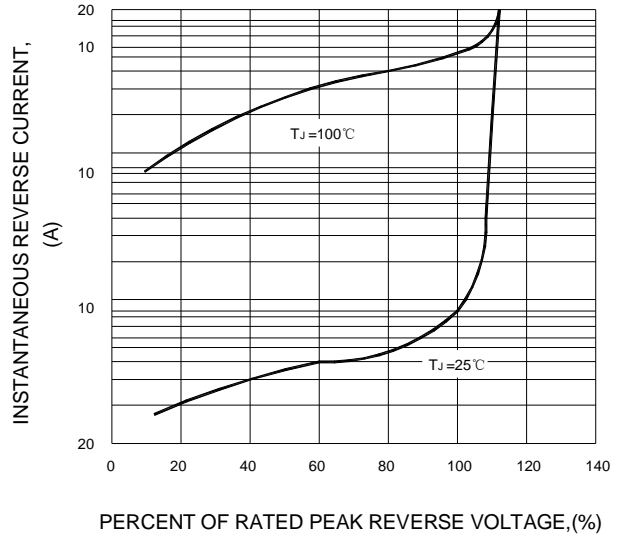
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE

