

# LL4001G THRU LL4007G

## SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIERS

Reverse Voltage - 50 to 1000 V

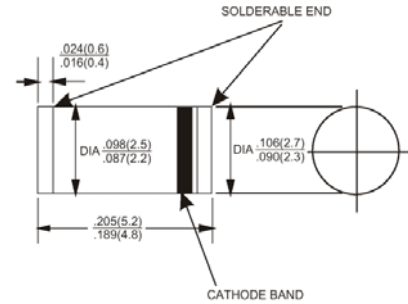
Forward Current - 1 A

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction

### Mechanical data

- **Case:** Molded plastic, MELF (DO-213AB)
- **Terminals:** Solder plated, solderable per MIL-STD-750, method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any



Plastic case MELF (DO-213AB)  
Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical characteristics

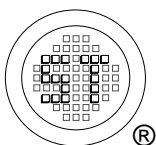
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	LL4001G	LL4002G	LL4003G	LL4004G	LL4005G	LL4006G	LL4007G	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_A = 75\text{ }^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Forward Voltage at 1 A	$V_F$	1.1							V
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	$I_R$	5 200							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	15							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Typical Thermal Resistance <sup>3)</sup>	$R_{\theta JT}$	20							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C

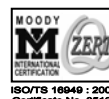
<sup>2)</sup> Thermal resistance from junction to ambient, 0.24 X 0.24" (6 X 6 mm) copper pads to each terminal

<sup>3)</sup> Thermal resistance from junction to terminal, 0.24 X 0.24" (6 X 6 mm) copper pads to each terminal



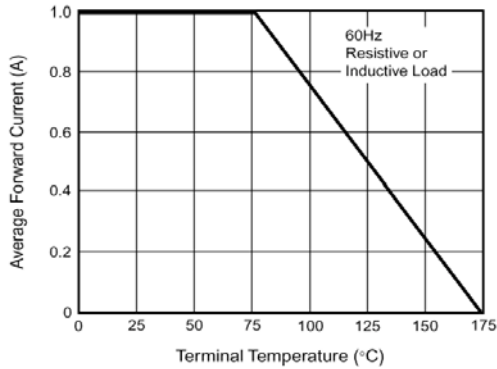
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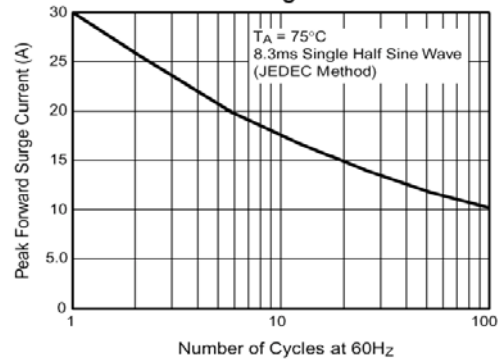


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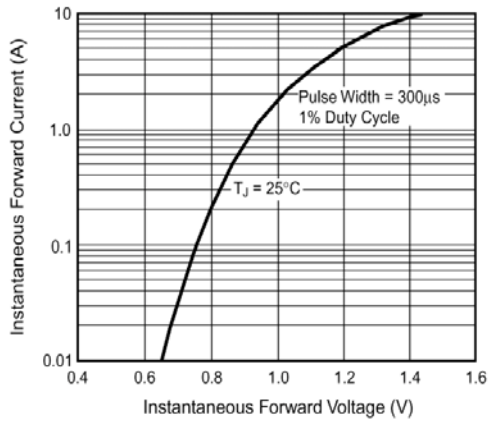
**Fig. 1 - Forward Current Derating Curve**



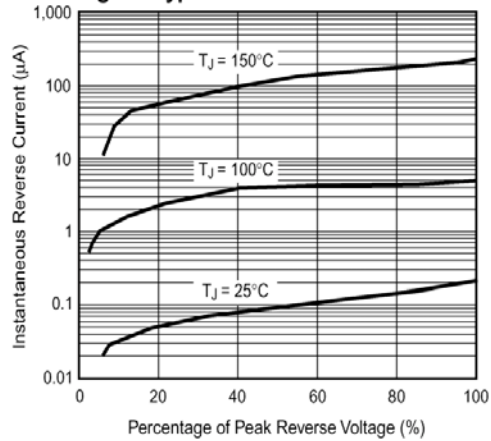
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



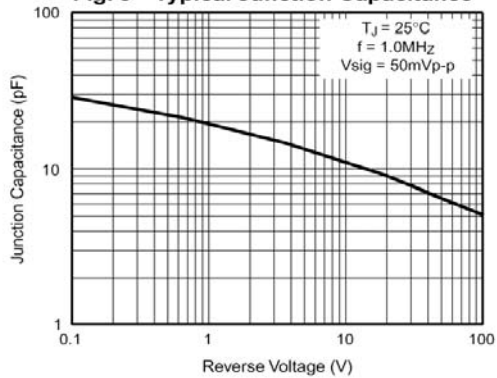
**Fig. 3 - Typical Instantaneous Forward Characteristics**



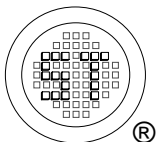
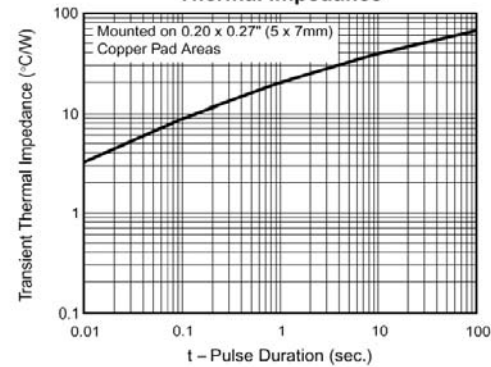
**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**



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