

LL4001G THRU LL4007G

SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIERS

Reverse Voltage - 50 to 1000 V

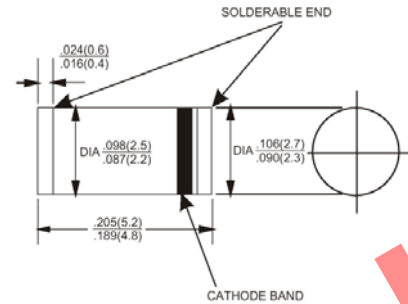
Forward Current - 1 A

Features

- For surface mounted applications
- High temperature metallurgically bonded construction

Mechanical data

- **Case:** Molded plastic, MELF (DO-213AB)
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any



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

Maximum Ratings and Electrical characteristics

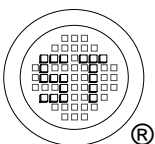
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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 $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	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	I_R	$T_A = 25^\circ\text{C}$							5	μA
		$T_A = 125^\circ\text{C}$							200	
Typical Junction Capacitance ¹⁾	C_J	15							pF	
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	50							$^\circ\text{C}/\text{W}$	
Typical Thermal Resistance ³⁾	$R_{\theta JT}$	20							$^\circ\text{C}/\text{W}$	
Operating Junction Temperature Range	T_j	- 55 to + 150							$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	- 55 to + 150							$^\circ\text{C}$	

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

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



SEMTECH ELECTRONICS LTD.



ISO/TS 16949 : 2009
Certificate No. 180713000



ISO14001 : 2004
Certificate No. 7116



ISO 9001 : 2008
Certificate No. 90719410



BS-OHSAS 18001 : 2007
Certificate No. 7116



IECQ QC 080000
Certificate No. PFC-HSPM-1485

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FIG.1 -MAXIMUM FORWARD CURRENT DERATING CURVE

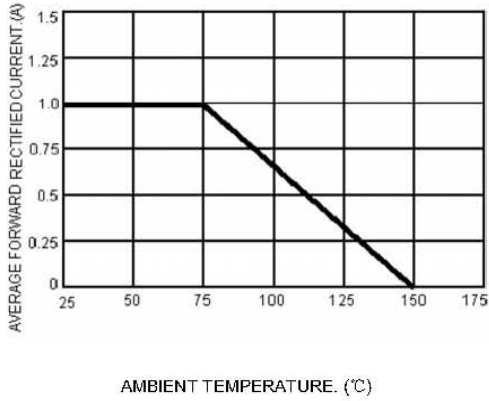


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

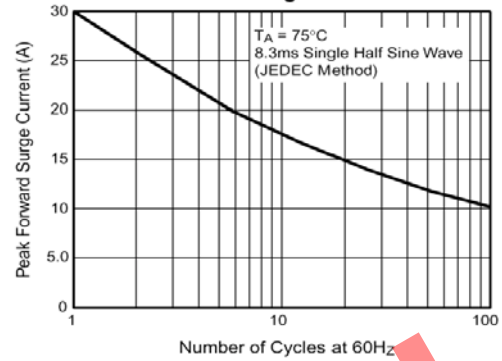


Fig. 3 - Typical Instantaneous Forward Characteristics

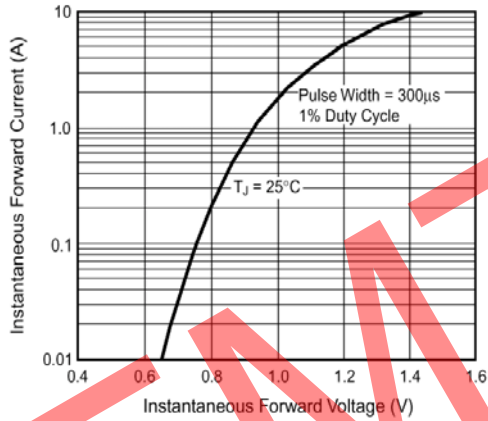


Fig. 4 - Typical Reverse Characteristics

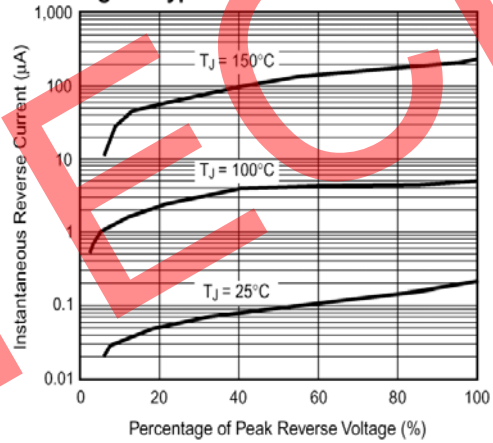


Fig. 5 - Typical Junction Capacitance

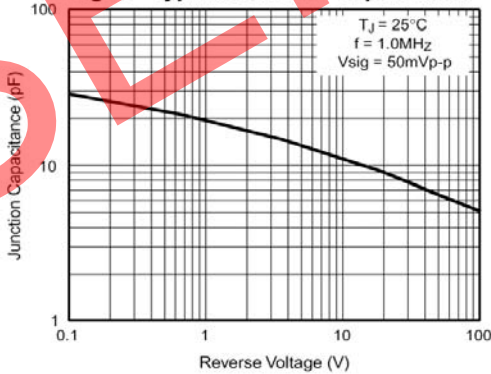
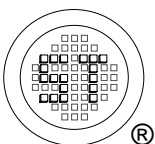
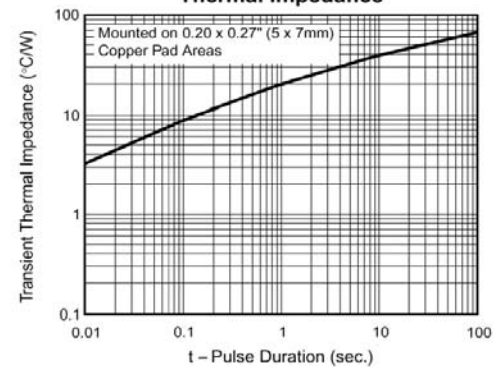


Fig. 6 - Typical Transient Thermal Impedance



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