

Introduction

The complete schematic of the ISL97702 OLED driver Demo Board is shown in Figure 1. In order to use the demo board properly, it is necessary to understand the purpose and function of the on board jumpers (JP1, JP2, JP3).

In the demo board, jumper JP1 is used to enable ISL97702 through the NEN pin. The part is enabled when the NEN pin is connected to GND through JP1.

JP2 is used for the selection of the output voltage feedback network. The pre-installed values of resistors R1, R5 and R6 in the demo board schematic set the selectable output voltages to 18.3V and 12.6V. Either of these two output voltages can be selected by shunting JP2 to either VDD or GND.

JP3 is used to select either the internal ISL97702 switching frequency, or to synchronize to an external frequency. When JP3 is shunted to VDD, the ISL97702 boost converter switching frequency is internally set to around 1MHz. When JP3 is opened, the NSYNC pin of ISL97702 will connect through the J4 pin of the demo board.

To test the demo board, the following procedure must be followed:

Shunt JP1 to GND. To enable ISL97702 boost converter.

Connect the load. The load is connected through VOUT and GND_OUT terminals.

Apply a DC power voltage source. The DC power voltage source is applied through both VDD_IN and GND_IN terminals. For ISL97702, the allowed input voltage range is from 2.3 to 5.5V. Due to the boost function, the input DC voltage must be lower than the output voltage in order to regulate the output voltage.

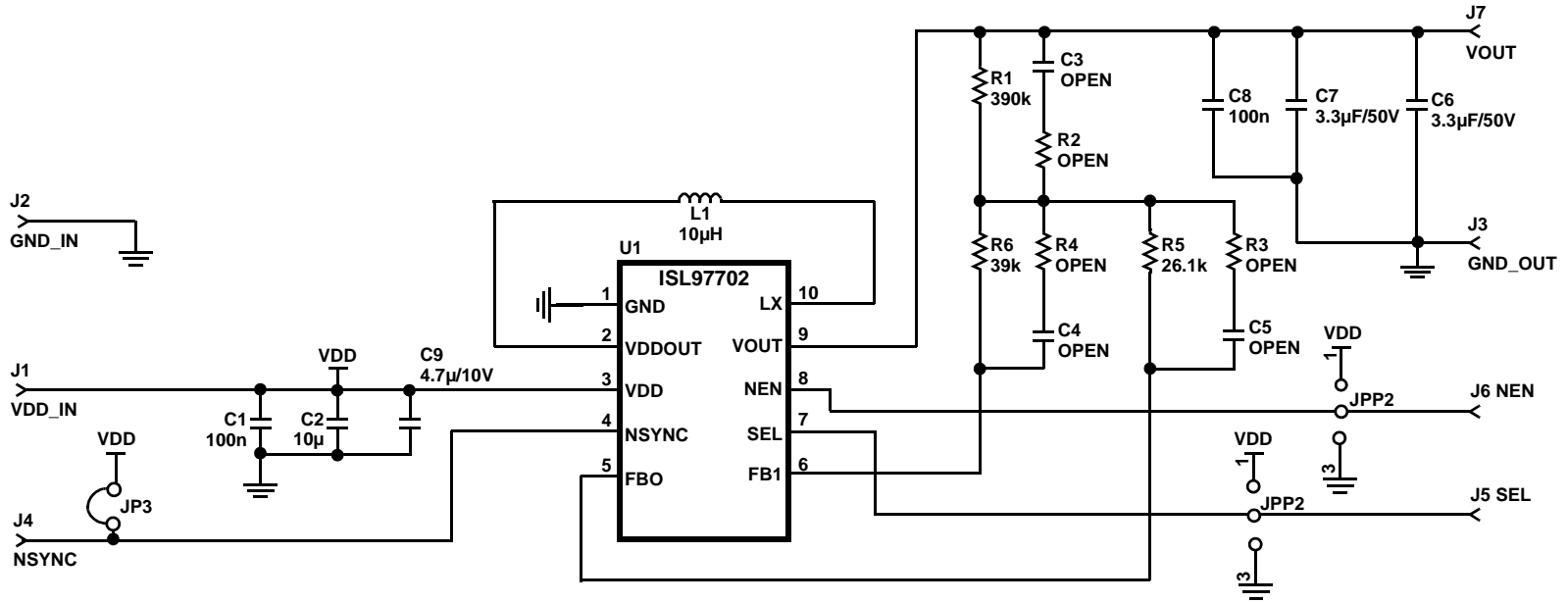


FIGURE 1. COMPLETED SCHEMATIC OF ISL97702 OLED DEMO BOARD

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ISL97702 Bill of Materials

DESIGNATOR	PART TYPE	FOOTPRINT	MANUFACTURER
C6	3.3 μ F/50V	1210	
C7	3.3 μ F/50V	1210	
C9	4.7 μ /10V	805	
C2	47 μ /10V	1206	
L1	10 μ H	6028	SUMIDA
R5	26.1k	603	
R6	39k	603	
C8	100n	603	
C1	100n	603	
R1	390k	603	
J2	GND_IN	POWERPOST	
J3	GND_OUT	POWERPOST	
JP1	JUMPER-3PIN	JUMPER-3PIN	
JP2	JUMPER-3PIN	JUMPER-3PIN	
JP3	JUMPER	JUMPER-2PIN	
J6	NEN	POWERPOST	
J4	NSYNC	POWERPOST	
R2	OPEN	603	
C3	OPEN	603	
J5	SEL	POWERPOST	
J1	VDD_IN	POWERPOST	
J7	VOUT	POWERPOST	
R4	OPEN	603	
R3	OPEN	603	

Demo Board Layout

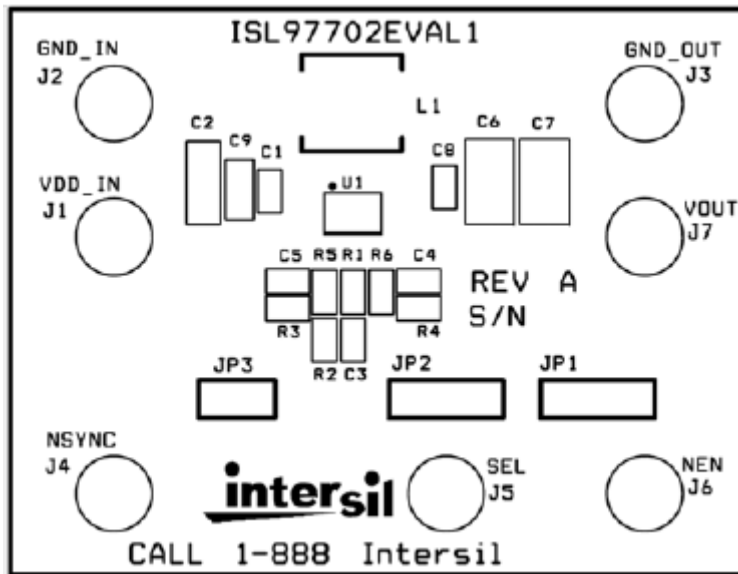


FIGURE 2. TOP SILKSCREEN OF ISL97702 BOOST DEMO BOARD

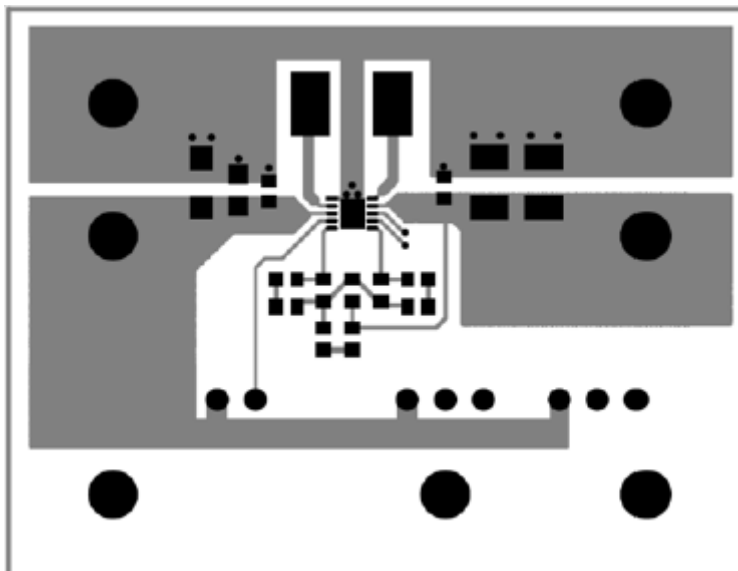


FIGURE 3. TOP LAYER OF ISL97702 BOOST DEMO BOARD

Demo Board Layout (Continued)

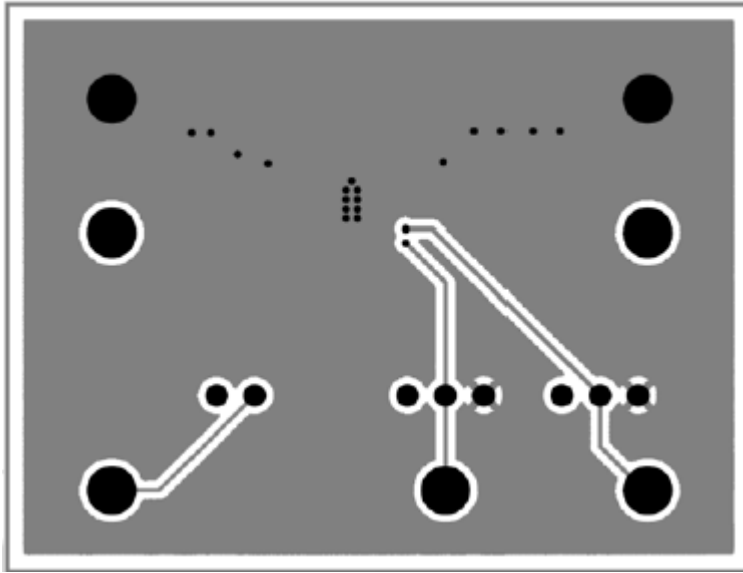


FIGURE 4. BOTTOM LAYER OF ISL97702 BOOST DEMO BOARD

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