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## Description

The ISL97656IRTZEVALZ is an evaluation kit for evaluating the ISL97656, a step-up voltage regulator that operates with high frequency and high efficiency. This evaluation kit is designed to deliver up to 2A output current for portable equipment and TFT-LCD display.

The ISL97656IRTZEVALZ evaluation kit provides a dip switch that allows users to select either 620kHz or 1.2MHz frequency.

## Key Features

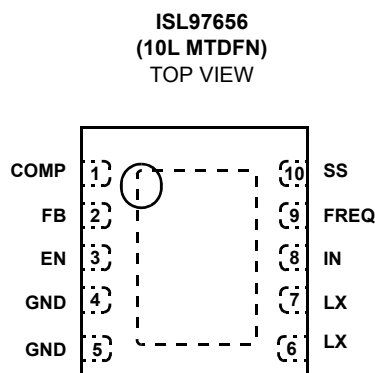
- A Complete Evaluation Platform for the ISL97656 Evaluation
- Input Voltage: 2.3V to 5.5V
- Proven Evaluation Board Layout
- Pb-Free (RoHS Compliant)

## What is Needed

The following instruments will be needed to perform testing:

- Power Supplies
- DC Electronic Load
- Multimeters
- Oscilloscope
- Cables and Wires

## Pinout



## Quick Setup Guide

1. Connect power supply between headers of  $V_{IN}$  and  $V_{IN\_GND}$ . The positive output of the power supply should be connected to  $V_{IN}$  header. Set power supply voltage between 2.3V and 5V, and current limit at 4A.
2. Connect E-load between headers of  $V_{OUT}$  and  $OUT\_GND$ . The positive input of the E-load should be connected to  $V_{OUT}$  header. Set E-load current. The load current should not exceed the maximum output current in Table 1.
3. Close pins 1 and 4 of S1 to tie FREQ pin to  $V_{IN}$  to set 1.25MHz switching frequency. Open pins 1 and 4 to pull FREQ to ground with  $R_4$  to set 620kHz.
4. Close pins 2 and 3 of S1 to tie EN pin to  $V_{IN}$  to enable the part. Open pins 2 and 3 to pull EN to ground with  $R_3$  to disable the part.
5. Make sure all the connections on the evaluation board are correct, then turn on power supply and E-load. The part starts to operate.

## Maximum Output Current

The MOSFET current limit is normally 4A and guaranteed 3.8A. This restricts the maximum output current that the ISL97656 can drive. Table 1 shows typical maximum  $I_{OUT}$  values for 1.2MHz switching frequency and 10μH inductor.

**TABLE 1. TYPICAL MAXIMUM  $I_{OUT}$  VALUES**

$V_{IN}$ (V)	$V_{OUT}$ (V)	$I_{OMAX}$ (mA)
2.5	5	1790
2.5	9	990
2.5	12	750
3.3	5	2370
3.3	9	1300
3.3	12	970
5	9	1970
5	12	1470

## Ordering Information

PART NUMBER	DESCRIPTION
ISL97656IRTZEVALZ	Evaluation Board for ISL97656



## PCB Layout

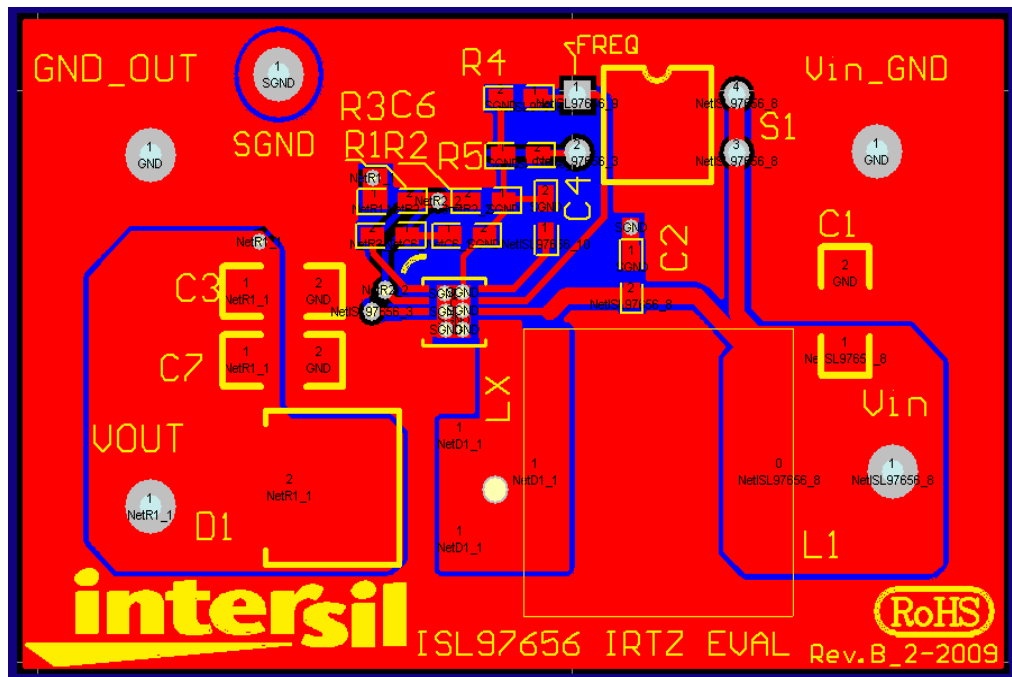


FIGURE 1. EVALUATION BOARD ASSEMBLY LAYER

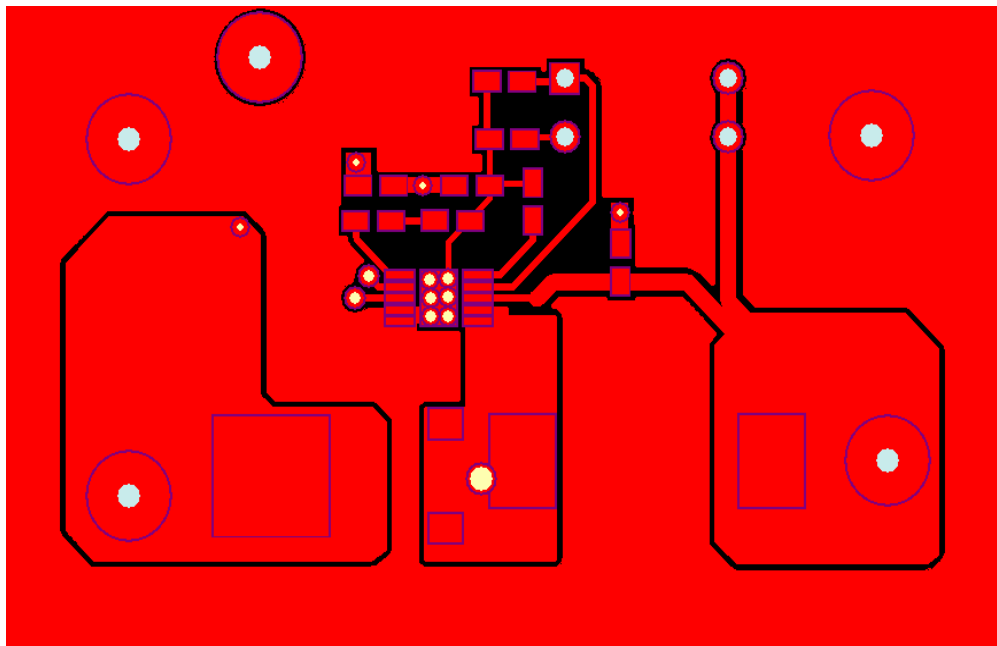


FIGURE 2. TOP LAYER

**PCB Layout** (Continued)

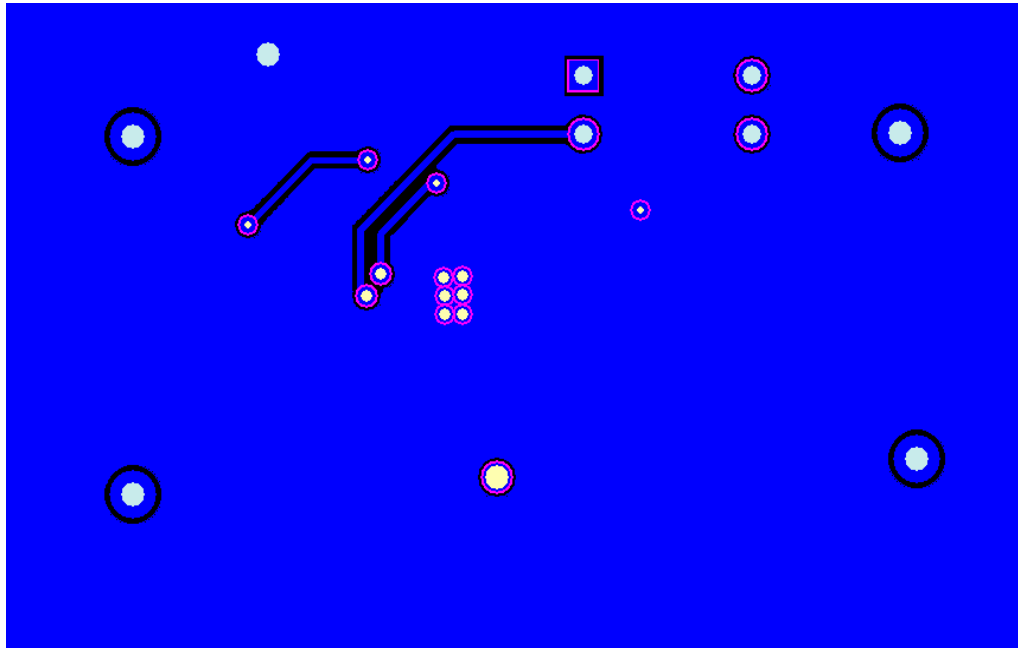


FIGURE 3. BOTTOM LAYER

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