

# **LMP91300SWIFEVM User's Guide**

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## 1. Introduction

The Texas Instruments LMP91300SWIFEVM evaluation module (EVM) allows a designer to program and burn the registers of the LMP91300 using the SWIF (Single Wire InterFace) protocol. It is designed to power the LMP91300 during programming but not during normal use of the part.

## 2. Setup

This section describes how to properly connect, set up and use the LMP91300SWIFEVM.

### 2.1. Software Installation

Refer to the LMP91300 Software User's Guide for instructions on installing the software and drivers for the LMP91300SWIFEVM eval board.

### 2.2. Input/Output Connector Description

**J1 – Power to LMP91300** Connect pin 2 to the power line of the board that has the LMP91300 installed. Pin 3 is connected to ground. Pin 1 can be used to connect to the load pin of the LMP91300 board.

**J2 – USB** Connects the EVM via USB to the computer.

**TP1, TP2, TP3, TP4, TP5, TP6** – Connection to GND.

**TP7** – +15V

**TP8** – +8V

**TP9** – +12V

**TP10** – +3.3V

**TP11** – SWIF\_MOSI, SWIF signal from the micro to the LMP91300

**TP12** – SWIF\_MISO, SWIF signal from the LMP91300 to the micro

**TP13** – Inverted SWIF\_MOSI

## TP14 – Inverted SWIF\_MISO

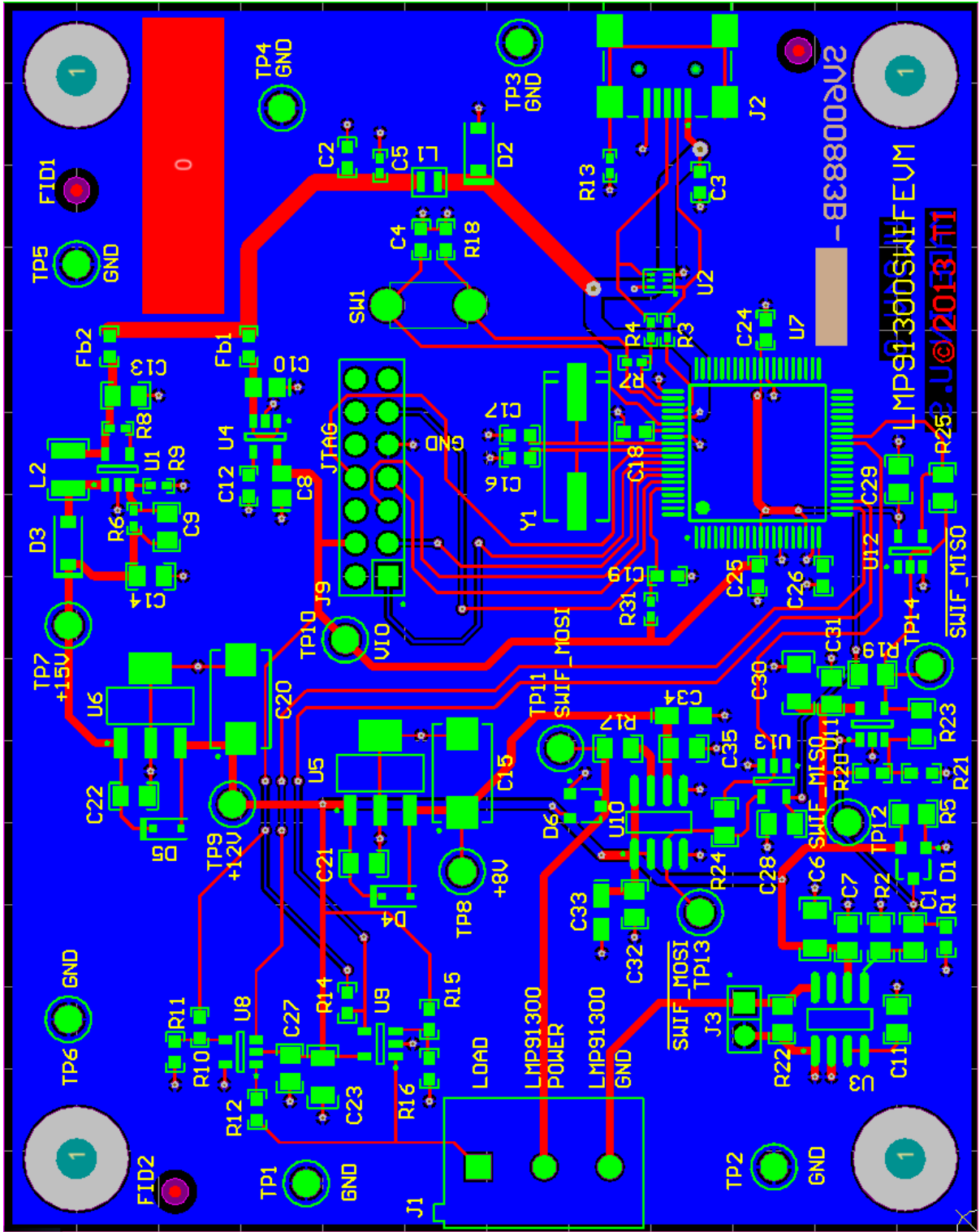
### **2.3. Setup**

- 2.3.1. Connect pin 2 of J1 to the power line of the board that contains the LMP91300.
- 2.3.2. Connect pin 3 of J1 to the ground line of the board that contains the LMP91300.
- 2.3.3. Connect the LMP91300SWIFEVM to the computer using a USB cable connected to J2.
- 2.3.4. Start the software as described in the LMP91300 Software User's Guide.

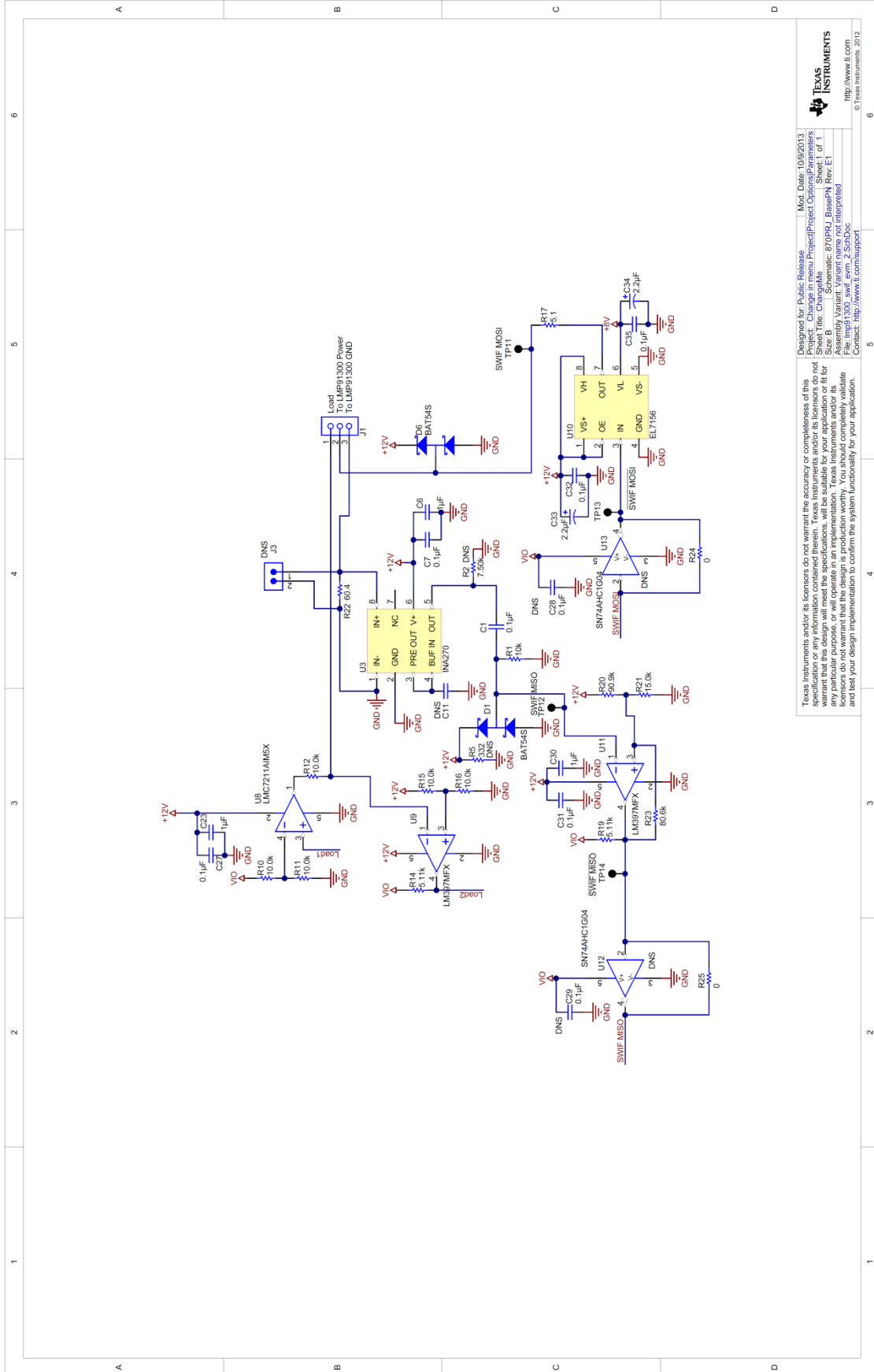
### **2.4. Load Setup**

- 2.4.1. U8 and U9 can be used to monitor the load line and electronically add a load. They can be controlled using pins 22 and 23 of the MSP430. If this circuitry is used the user will need to write code to control it.

### 3. Board Layout







Designed for Public Release  
 Project: Change in menu Project\Project Options\Parameters  
 Sheet: File: Chg Schmatic: 87070PJ\_BasePN\_R06.E1 of 1  
 Assembly Variant: Variant name not interpreted  
 File: lmp91300\_swif\_evm\_2\_SchDoc  
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Mod. Date: 10/9/2013  
 Project: Change in menu Project\Project Options\Parameters  
 Sheet: File: Chg Schmatic: 87070PJ\_BasePN\_R06.E1 of 1  
 Assembly Variant: Variant name not interpreted  
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## EVM WARNINGS AND RESTRICTIONS

It is important to operate this EVM within the input voltage range of -0.3 V to 48 V and the output voltage range of 0.9 V to 18 V.

Exceeding the specified input range may cause unexpected operation and/or irreversible damage to the EVM. If there are questions concerning the input range, please contact a TI field representative prior to connecting the input power.

Applying loads outside of the specified output range may result in unintended operation and/or possible permanent damage to the EVM. Please consult the EVM User's Guide prior to connecting any load to the EVM output. If there is uncertainty as to the load specification, please contact a TI field representative.

During normal operation, some circuit components may have case temperatures greater than 85° C. The EVM is designed to operate properly with certain components above 60° C as long as the input and output ranges are maintained. These components include but are not limited to linear regulators, switching transistors, pass transistors, and current sense resistors. These types of devices can be identified using the EVM schematic located in the EVM User's Guide. When placing measurement probes near these devices during operation, please be aware that these devices may be very warm to the touch.

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