



# THE DATASHEET OF LM2775EVM



# Using the LM2775EVM Evaluation Module

## User's Guide



Literature Number: SNVU469A  
May 2015–Revised June 2018

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# LM2775EVM User's Guide

## 1 Introduction

The Texas Instruments LM2775EVM evaluation module (EVM) helps designers evaluate the operation and performance of the LM2775 switched capacitor 5-v boost converter. The device offers configurability via two logic pins allowing or disallowing PFM operation at light loads and active discharge during shutdown.

The EVM contains one LM2775 switched capacitor 5-V boost converter (See [Table 1](#)). For more details and electrical characteristics of this device, see the LM2775 device data sheet ([SNVSA57](#)).

**Table 1. Device and Package Configurations**

FLASH LED DRIVER	IC	PACKAGE
U1	LM2775	WSON

## 2 Setup

This section describes the jumpers and connectors on the EVM as well as how to properly connect, set up, and use the LM2775EVM.

### 2.1 Input/Output Connector Description

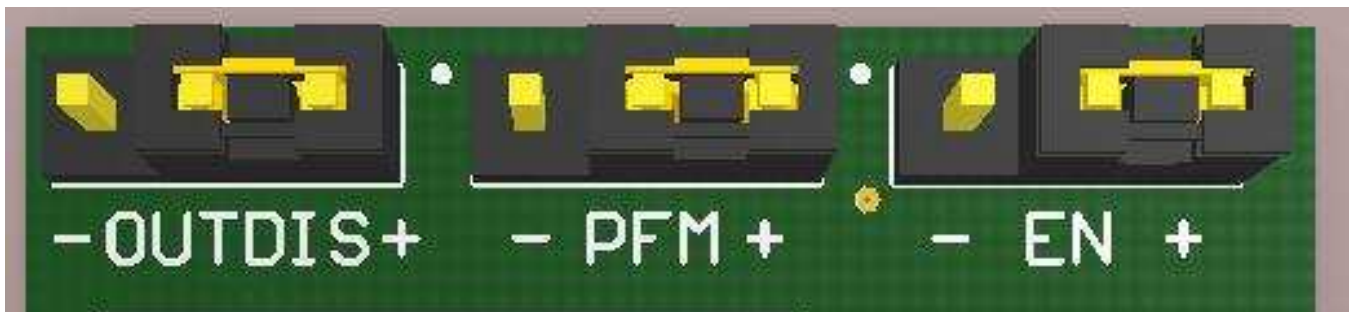
**VIN / GND:** These are the power input pins for the driver. The pins provide power (VIN) and ground (GND) connections to allow the user to attach the EVM to a cable harness.

**EN (J1):** This is the jumper used to enable the boost converter (EN pin). The driver will be enabled when the EN pin is high (+) and disabled when it is low (–).

**PFM (J2):** This jumper is used to enable and disable PFM mode. PFM mode will be allowed when the PFM pin is high (+) and disabled when it is low (–).

**OUTDIS (J3):** This jumper is used to discharge the output during shutdown. Active discharge is enabled when the OUTDIS pin is high (+) and disabled when it is low (–).

**VOUT-** This is the output pin for the LM2775EVM. Currents up to 200 mA can be drawn from this terminal when the input voltage is higher than 3.1 V and lower than 5.5 V.



**Figure 1. Enable Jumper Settings**



The LM2775 will dissipate power, especially during high current and high input voltage operation. The EVM layout is designed to minimize temperature rise during operation.

**NOTE:** High frequency switching noise at the output can be minimized by adding a 0.1- $\mu$ F ceramic capacitor close to the output terminals (VOUT)

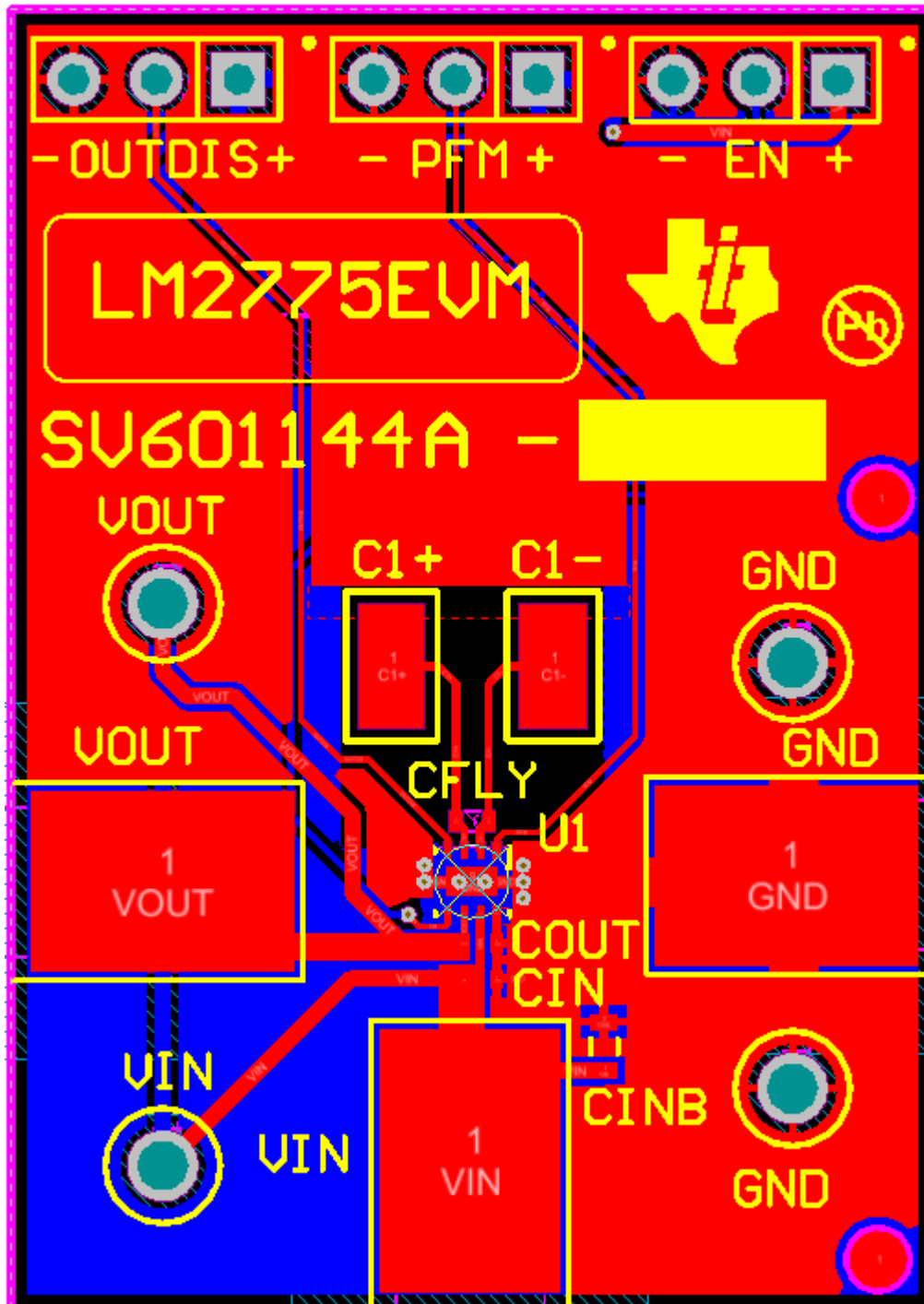


Figure 3. Top Assembly Layer

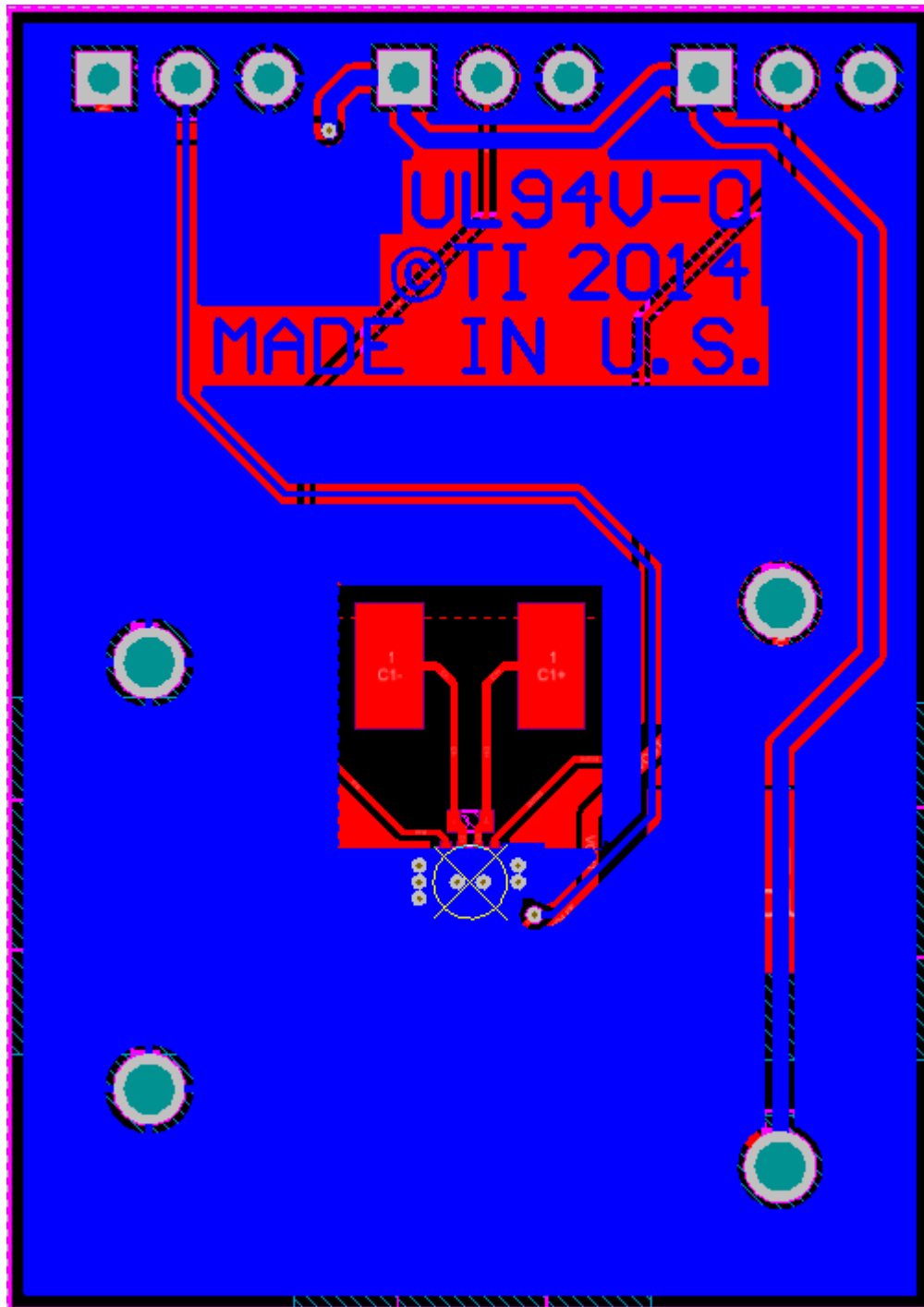


Figure 4. Bottom Assembly Layer (UNMIRRORED)

4 Schematic

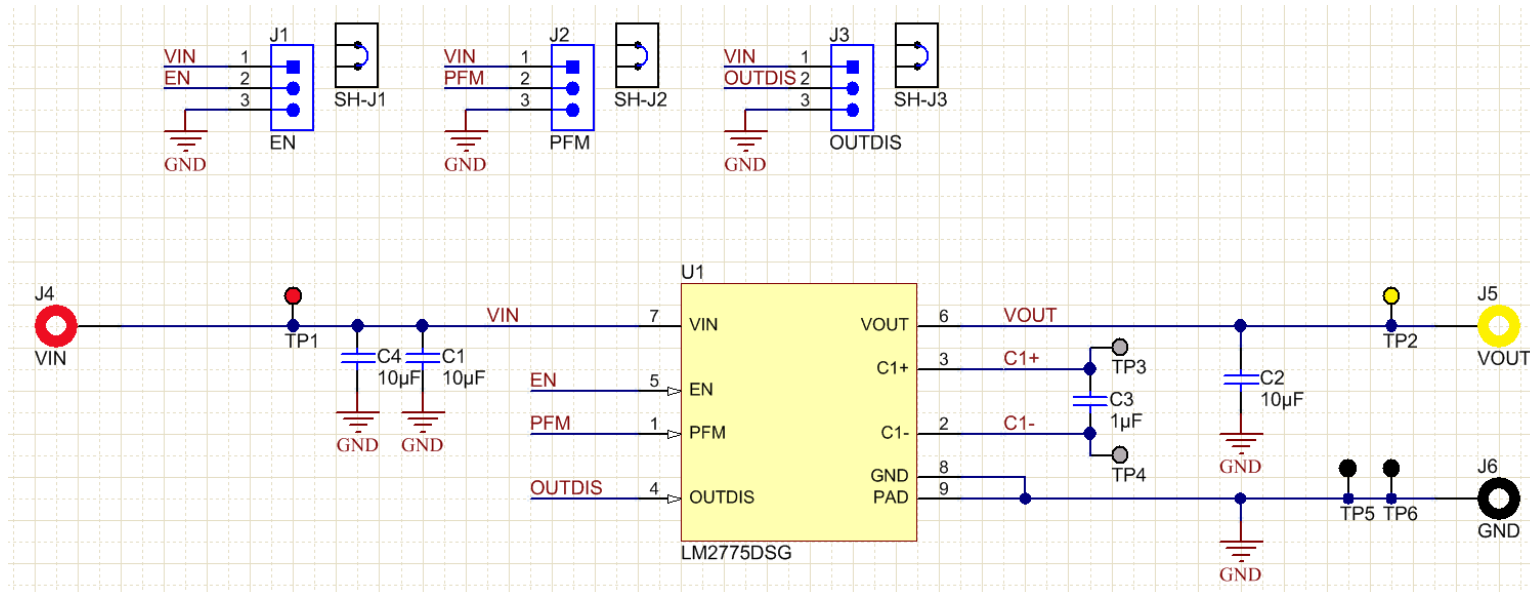


Figure 5. LM2775EVM Schematic

## 5 Bill of Materials

DESIGNATOR	DESCRIPTION	MANUFACTURER	PART NUMBER	QUANTIT Y
U1	Switched Capacitor 5 V Boost Converter, DSG0008A	Texas Instruments	LM2775DSG	1
!PCB1	Printed Circuit Board	Any	SV601144	1
C1, C2	CAP, CERM, 10 $\mu$ F, 10 V, +/- 20%, X5R, 0402	Samsung	CL05A106MP5NUNC	2
C3	CAP, CERM, 1 $\mu$ F, 35 V, +/- 10%, JB, 0402	TDK	C1005JB1V105K050BC	1
C4	CAP, CERM, 10 $\mu$ F, 10 V, +/- 20%, X5R, 0603	TDK	C1608X5R1A106M	1
J1, J2, J3	Header, 100mil, 3x1, Gold, TH	Samtec	TSW-103-07-G-S	3
J4	Standard Banana Jack, Insulated, Red	Keystone	6091	1
J5	BANANA JACK, 15A, Insulated, Nylon, Yellow	Emerson Network Power	108-0907-001	1
J6	Standard Banana Jack, Insulated, Black	Keystone	6092	1
SH-J1, SH-J2, SH-J3	Shunt, 100mil, Gold plated, Black	3M	969102-0000-DA	3
TP1	Test Point, Multipurpose, Red, TH	Keystone	5010	1
TP2	Test Point, Multipurpose, Yellow, TH	Keystone	5014	1
TP5, TP6	Test Point, Multipurpose, Black, TH	Keystone	5011	2

### Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

#### Changes from Original (May 2015) to A Revision

**Page**

- Added a note "High frequency switching noise at the output can be minimized by adding a 0.1- $\mu$ F ceramic capacitor close to the output terminals" ..... **6**

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