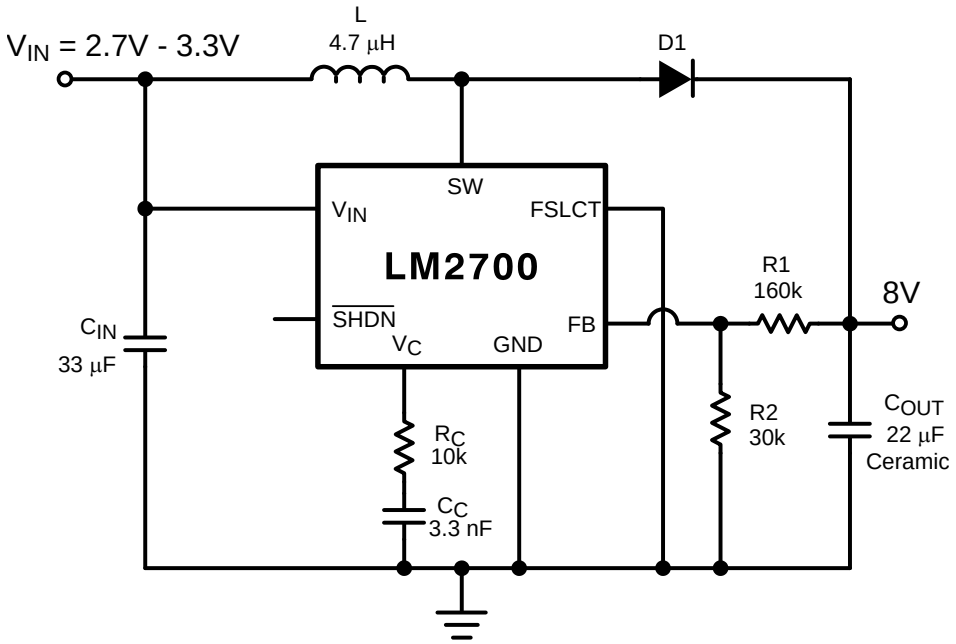
AN-1308 LM2700 Evaluation Board

1 Introduction

The LM2700 is a high current step-up DC/DC converter that can be used for TFT-LCD applications. The evaluation board is set up for 8V output from a single Li-Ion battery input. The switching frequency can be selected using the jumper on the FSLCT pin. The evaluation board is optimized for 600 kHz operation but will remain stable for 1.25 MHz operation if desired. The LM2700 comes in both the TSSOP-14 and the WSON-14 packages. The TSSOP package was chosen for the evaluation board due to ease of use and replacement.

2 Schematic



3 Bill of Materials

Designator	Component	Manufacturer
U1	LM2700MT-ADJ, TSSOP-14	Texas Instruments
L	4.7 µH, DO3316P-472	Coilcraft
C_{IN1}	33 µF, 10V Tantalum 195D336X9010Z2T	Vishay
C_{IN2}	1 µF, Ceramic VJ0805Y105KXA	Vishay
C_{OUT}	22 µF Ceramic EMK325BJ226MM	Taiyo-Yuden
D1	20V, 3A Schottky MBRM320	ON Semiconductor
R_C	10k, 1206 Case, CRCW12061002F	Vishay
C_C	3.3 nF, 1206 Case, VJ1206Y332KXA	Vishay
R_1	162k, 1206 Case, CRCW12061623F	Vishay
R_2	30.1k, 1206 Case, CRCW12063012F	Vishay
C_{C2}	Blank, 1206 Size Pad from V_C to GND	

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