

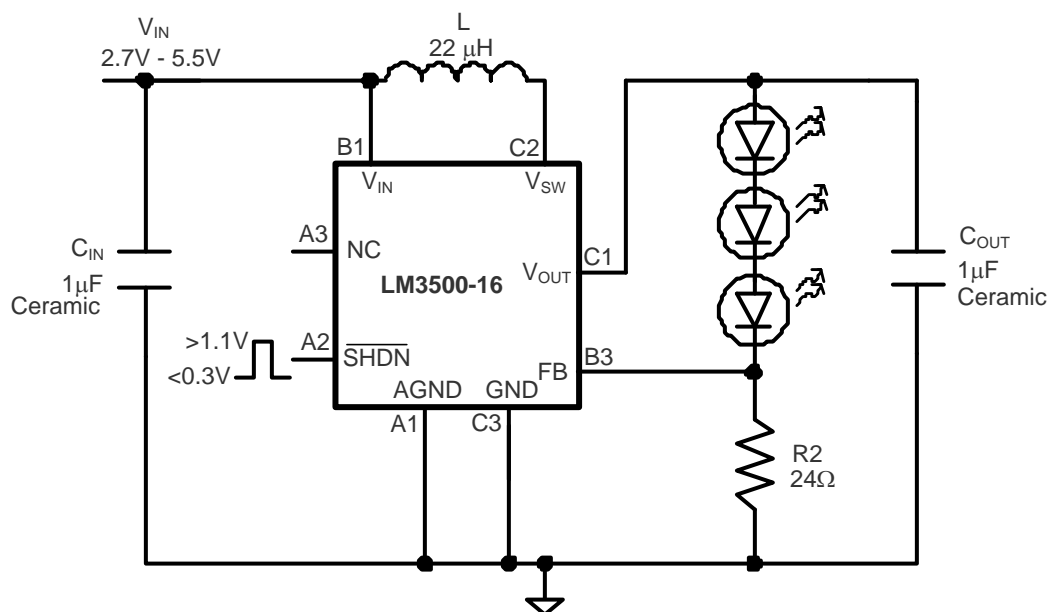
AN-1309 LM3500 Evaluation Board

1 Introduction

The LM3500 is a synchronous step-up DC/DC converter designed for white LED applications. The evaluation board is set up to drive 3 standard V_F white LEDs from a single Li-Ion battery. A fourth LED pad (D4) is included for testing of up to 4 low V_F white LEDs.

The LED current is set using the resistor R2 and the equation $I_{LED} = 0.5V/R2$. The evaluation board comes set up for approximately 20 mA LED current. Please note that for correct operation the SHDN pin must have a voltage greater than 1.1V applied to it.

2 Schematic



3 Bill of Materials

| Designator | Component | Manufacturer |
|------------------|---|-------------------|
| U1 | LM3500TL-ADJ, μ SMD 8-lead | Texas Instruments |
| L | 22 μ H, DT1608C-223 | Coilcraft |
| C _{IN} | 1 μ F, 25V Ceramic C3216X7R1E105K | TDK |
| C _{OUT} | 1 μ F, 25V Ceramic C3216X7R1E105K | TDK |
| D1–D3 | White LED, LWT67C | Osram |
| D4 | 0 Ω Resistor, 1206 Case, CRCW1206–000J | Vishay |
| R1 | 24 Ω , 1206 Case, CRCW1206–240J | Vishay |

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