

DESCRIPTION

Demonstration circuit 441 is a constant-frequency step-down converter, using the LTC3411 monolithic synchronous buck regulator. The DC441 has an input voltage range of 2.65V to 5.5V, and is capable of delivering up to 1.25A of output current. In Burst Mode™ operation, the DC supply current is typically only 240μA at no load, and less than 1μA in shutdown. In switching-noise sensitive applications, pulling the MODE pin to SGND inhibits

Burst Mode™ operation. These features, plus the LTC3411 coming in a small 10-Pin MS package and having an operating frequency of 1MHz (allowing the exclusive use of low profile surface mount components), make the DC441 demo board an ideal circuit for use in battery-powered, hand-held applications.

Design files for this circuit board are available. Call the LTC factory.

QUICK START PROCEDURE

Demonstration circuit 441 is easy to set up to evaluate the performance of the LTC3411. Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

NOTE: When measuring the output ripple, see Figure 2 for proper scope probe technique.

1. Select the desired output voltage using jumper JP2. The fixed output voltages are 1.8V, 2.5V, and 3.3V (as shown). There is also an option to set the output voltage to a custom value by inserting a resistor into the RFB5 pads next to jumper JP2.
2. Connect the input power supply to the Vin and GND terminals on the *left-side* of the board. Do not hot-

plug Vin or increase Vin over the rated maximum supply voltage of 5.5V, or the part may be damaged.

3. Connect the load between the Vout and GND terminals on the *right-side* of the board.
4. Select the desired operating mode using JP1. To select pulse-skipping mode, tie to ground by inserting the jumper into the rightmost position. Inserting the jumper into the leftmost position connects the pin to Vin, which allows Burst Mode™ operation.
5. To shut down the circuit, connect the SHDN/R_T pin to SV_{IN} by inserting the JP3 jumper into the rightmost position.

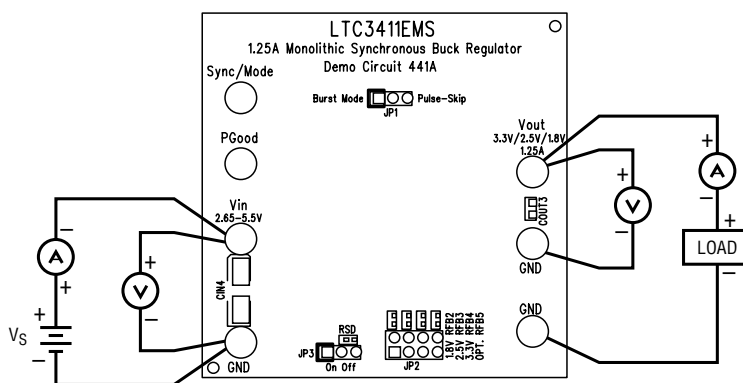


Figure 1. Proper Measurement Equipment Setup

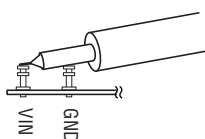


Figure 2. Scope Probe Placement for Measuring Output Ripple