DC422 Demo Board Quick Start Guide

Demonstration circuit DC422 is a constant-frequency step-down converter, using the LTC3405 monolithic synchronous buck regulator. The DC422 has an input voltage range of 2.65V to 6V, and is capable of delivering up to 250mA of output current at 1.8V. In Burst Mode™, the DC supply current is typically only 25µA at no load, and less than 1µA in shutdown. For switching-noise-sensitive applications, turn off Burst Mode™ by pulling the MODE pin up to V_{IN} (jumper JP1 in upper position).

The DC422 demo board features the LTC3405 in a tiny 6-Pin SOT-23 package, operating at 1.5 MHz. This allows the use of low profile surface mount components, ideal for battery-powered, handheld applications.

Gerber files for this circuit are available by calling Linear Technology Corporation at (408) 432-1900.

Quick Start Procedure

Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

Note Be careful about which side of the board you use for input, and which you use for output. When the board is right side up (the title is at the top of the board), the output voltage turret is on the *left* side of the board, and the input voltage turret is on the *right* side of the board—opposite of what you might expect.

1. Connect the input power supply to the V_{IN} and GND terminals on the *right side* of the board.

   Note Do not hot-plug V_{IN} above 5.5V or increase V_{IN} over the rated maximum supply voltage of 6V. Either condition could damage the part.

2. Connect the load between the V_{OUT} and GND terminals on the *left side* of the board.
3. Select the desired operating mode using JP1.

   To select pulse-skipping mode, tie the MODE pin to V_{IN} by inserting the jumper into the lower position. To select Burst Mode™ connect the MODE pin to ground by inserting the jumper into the upper position.

   Note Do not leave this pin floating.

4. To shut down the circuit, pull the RUN pin to ground by inserting jumper JP2 into the upper position.

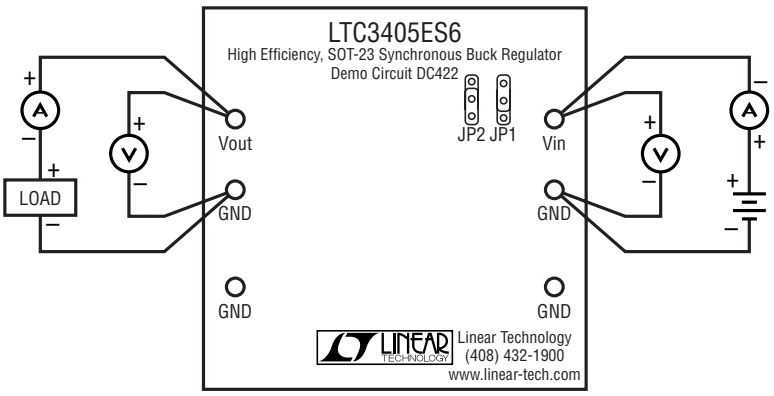

Figure 1. Proper Measurement Equipment Setup