

DESCRIPTION

Demonstration circuit DC480 is a constant-frequency step-down converter that uses the LTC3405A monolithic synchronous buck regulator. The DC480 has an input voltage range of 2.5V to 5.5V, and is capable of delivering up to 300mA of output current at 3.0V minimum input voltage. In Burst Mode™ operation, the DC supply current is typically only 25µA at no load, and less than 1µA in shutdown. In switching-noise sensitive applica-

tions, grounding the MODE pin enables Burst Mode™ operation. These features, plus the LTC3405A coming in a tiny 6-Pin SOT-23 package and having an operating frequency of 1.5 MHz (allowing the exclusive use of low profile surface mount components), make the DC480 demo board an ideal circuit for use in battery-powered, hand-held applications. Gerber files for this circuit are available. Call the LTC Factory.

QUICK START

The DC480 demonstration board is easy to set up to evaluate the performance of the LTC3405A. Refer to Figure 1 for proper measurement equipment setup.

NOTE: When the board is right-side up (the title is legible 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. Set up the circuit appropriately.

Please follow the procedure outlined below for proper operation.

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} or increase V_{IN} over the rated maximum supply voltage of 6V, or the part may be damaged.

2. Connect the load between the V_{OUT} and GND terminals on the *left side* of the board. Refer to figure 1 for the proper measurement equipment setup.
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. Inserting the jumper into the upper position connects the pin to ground, which causes Burst Mode™ operation. Do not leave this pin floating.
4. To shut down the circuit, connect the RUN pin to ground by inserting the JP2 jumper into the upper position. Do not leave this pin floating.

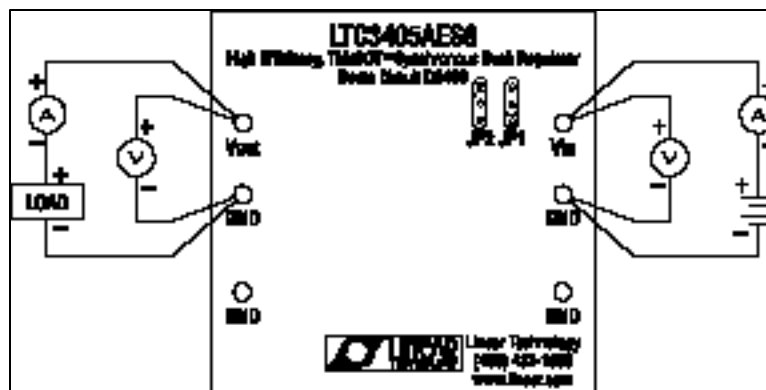


Figure 1. Proper Measurement Equipment Setup