DC328A INTRODUCTION

Description

Demonstration Circuit DC328 is a step-up (boost) regulator using the LTC1872. DC328 is capable of providing 1A at an output voltage of 5V from a single Li-Ion cell. It is able to do this because of the capabilities of the LTC1872, a constant frequency step-up DC/DC controller that comes in a SOT-23 package. The LTC1872 uses a current mode PWM architecture to drive an external N-channel power MOSFET in boost regulator applications. The result is a high performance, high current boost regulator powered from an input source as low as 2.5V. High efficiency over a wide load current range and small package size (SOT-23) make the LTC1872 ideal for battery-powered applications. Its constant high switching frequency of 550kHz allows the use of tiny surface mount components. To further enhance efficiency at low load currents, the LTC1872 is configured for Burst Mode™ operation.

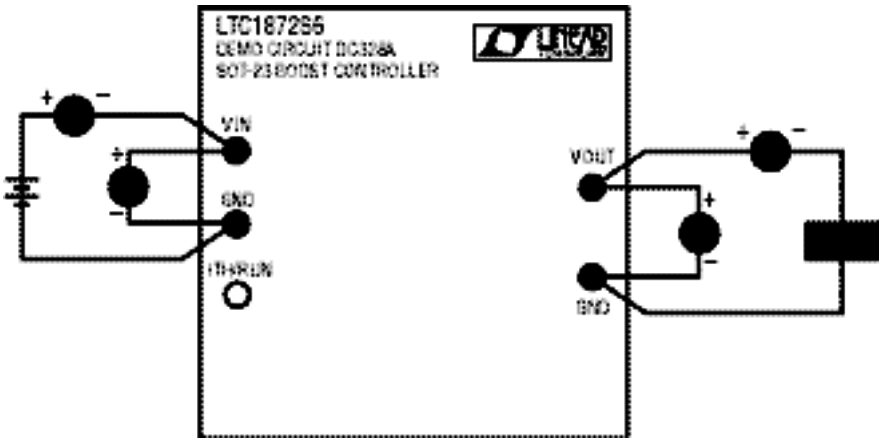


Figure 1. DC328A Test and Measurement Set-up

Quick Start Guide

It is easy to set up DC328 to evaluate the performance of the LTC1872. Please follow the procedure outlined below for proper operation.

1. Connect the input power supply to the V_{IN} and GND terminals.
2. Connect the load between the V_{OUT} and GND terminals.
3. Connect true-RMS meters, as shown in Figure 1.
4. To shut down the circuit, connect the I_{TH}/RUN terminal to GND.