DC244 Quick Start Guide

Description

Demonstration Circuit DC244 has two voltage supplies: a high efficiency buck converter using two LT1339s running out of phase to produce 12V at 15A, and a negative converter using an LT1373 to produce –5V at 100mA. The LT1339 is a high power, synchronous, current mode switching regulator controller and the LT1373 is a low supply current, high frequency current mode switching regulator. Operating efficiencies exceeding 95% are obtained for 15A of load current for the LT1339 circuit. Gerber files for these circuits are available. Call the LTC factory.

Performance Summary (T_A = 25°C)

V_{IN} = 32V

V_{OUT1} = 12V

I_{OUT1} = 15A

V_{OUT2} = –5V

I_{OUT2} = 100mA

Typical Efficiency for a 12V supply = 95% at 15A (see Figure 1)

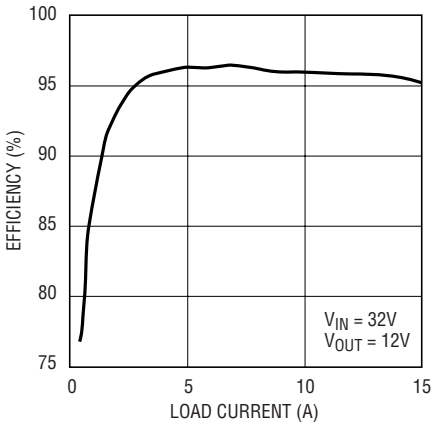

Figure 1. DC244 Efficiency Curve

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Refer to Figure 2 for proper measurement equipment setup and follow the procedure outlined below:

1. Connect the 32V/8A input power supply to the V_{IN} and GND terminals on the board.

2. Connect an ammeter in series with the input supply to measure input current.

3. Connect power resistors or an electronic load to the V_{OUT} and GND terminals for the 12V and –5V supplies.

4. Connect ammeters in series with output loads to measure output current.

5. Connect a voltmeter across the V_{IN} and GND terminals to measure input voltage.

6. Connect a voltmeter across the 12V and the –5V supplies to measure V_{OUT}.

7. After all connections are made, turn on input power and verify that the output voltages are 12V and –5V.

8. Grounding the On/Off pin shuts both supplies off.

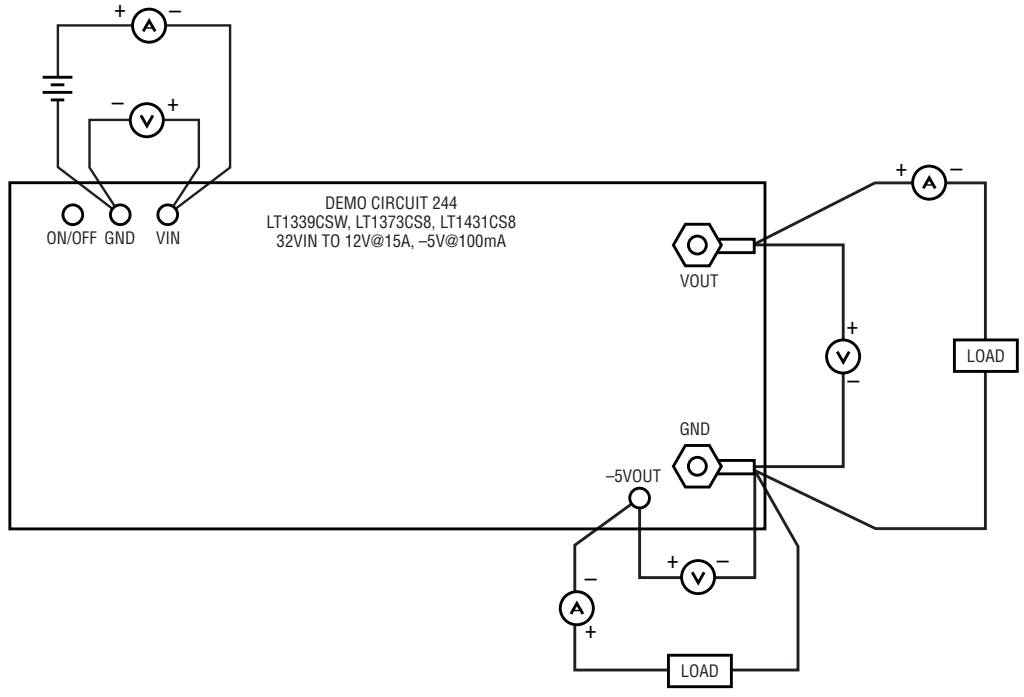

Figure 2. DC244 Proper Measurement Setup