Quick Start Guide for Demo Board DC230

Description

DC230 demonstrates the LT1533CS in a bipolar-output DC/DC converter. Four versions of the demo board are available, covering the most common output requirements. For example, version A generates +12V and –12V from a 5V input with a total output power of 1.8W.

DC230 contains additional circuitry allowing the user to modify the board to produce regulated or unregulated isolated outputs (modified by inserting and removing 0Ω resistors R9, R10, R27, R28, and R29). The circuit uses two potentiometers to set the slew rates of the power switches, allowing the user to observe the benefit of slew rate control, and to examine the tradeoff between noise performance and circuit efficiency.

The LT1533 Ultralow Noise 1A Switching Regulator implements the quietest DC/DC converters available. The LT1533 uses slew rate control of its internal power switches to eliminate high frequency noise and a push-pull topology to reduce low frequency ripple, generating outputs with less than $100\mu V_{P-P}$ ripple. This part is useful in generating power supplies in noise sensitive systems such as industrial sensing and control, data conversion, and wide band communications. The LT1533 can produce and regulate positive and negative voltages either greater than or less than the input voltage, and is well suited to generating isolated outputs.

Voltage and Power Specifications

Version	Output	Input Range	Output Power
A	+/-12V	4.5-8V	1.8W
B	+/-5V	10.8-14V	3.5W
C	+/-15V	4.5-8V	1.8W
D	+/-5V	4.5-8V	1.8W

Quick Start Procedure

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

Version A

1. Apply loads (e.g. 50mA) across the GND, VOUT–, and GND, VOUT+ turrets.

   or

   Apply a load (e.g. 50mA) across the VOUT– and VOUT+ turrets.
2. Apply 5V across the VIN–, VIN+ turrets.
3. Measure voltage across the VOUT–, VOUT+ turrets.

Version B

1. Apply loads (e.g. 300mA) across the GND, VOUT–, and GND, VOUT+ turrets.

   or

   Apply a load (e.g. 300mA) across the VOUT– and VOUT+ turrets.
2. Apply 12V across the VIN–, VIN+ turrets.
3. Measure voltage across the VOUT–, VOUT+ turrets.

Version C

1. Apply loads (e.g. 50mA) across the GND, VOUT–, and GND, VOUT+ turrets.

   or

   Apply a load (e.g. 50mA) across the VOUT– and VOUT+ turrets.
2. Apply 5V across the VIN–, VIN+ turrets.
3. Measure voltage across the VOUT–, VOUT+ turrets.

Version D

4. Apply loads (e.g. 50mA) across the GND, VOUT–, and GND, VOUT+ turrets.

   or

   Apply a load (e.g. 50mA) across the VOUT– and VOUT+ turrets.
5. Apply 5V across the VIN–, VIN+ turrets.
6. Measure voltage across the VOUT–, VOUT+ turrets.

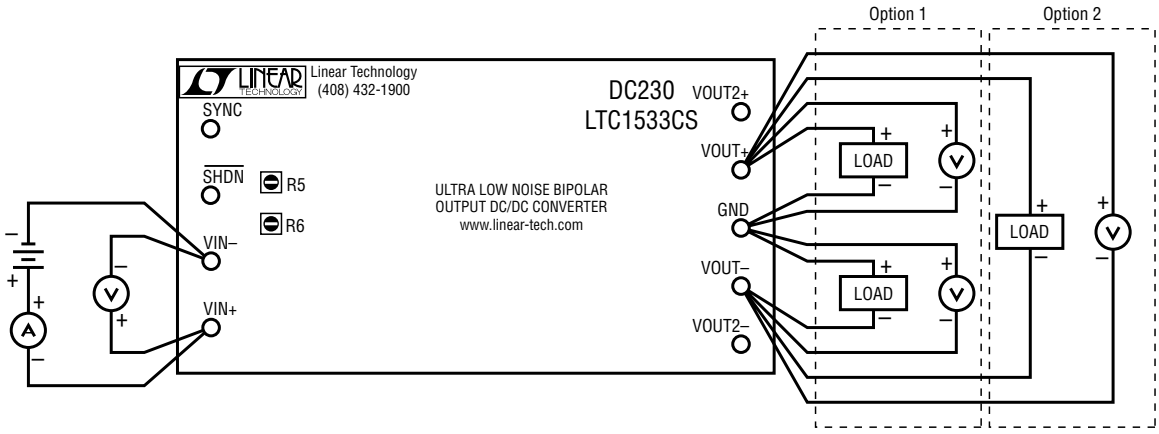

Figure 1. Proper Measurement Equipment Setup

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Power Management IC Development Tools ***category:***

Click to view products by Analog Devices ***manufacturer:***

Other Similar products are found below :

EVAL-ADM1168LQEBZ EVB-EP5348UI MIC23451-AAAYFL EV MIC5281YMME EV DA9063-EVAL ADP122-3.3-EVALZ ADP130-0.8-EVALZ ADP130-1.2-EVALZ ADP130-1.5-EVALZ ADP130-1.8-EVALZ ADP1714-3.3-EVALZ ADP1716-2.5-EVALZ ADP1740-1.5-EVALZ ADP1752-1.5-EVALZ ADP1828LC-EVALZ ADP1870-0.3-EVALZ ADP1871-0.6-EVALZ ADP1873-0.6-EVALZ ADP1874-0.3-EVALZ ADP1882-1.0-EVALZ ADP199CB-EVALZ ADP2102-1.25-EVALZ ADP2102-1.875EVALZ ADP2102-1.8-EVALZ ADP2102-2-EVALZ ADP2102-3-EVALZ ADP2102-4-EVALZ ADP2106-1.8-EVALZ ADP2147CB-110EVALZ AS3606-DB BQ24010EVM BQ24075TEVM BQ24155EVM BQ24157EVM-697 BQ24160EVM-742 BQ24296MEVM-655 BQ25010EVM BQ3055EVM NCV891330PD50GEVB ISLUSBI2CKIT1Z LM2744EVAL LM2854EVAL LM3658SD-AEV/NOPB LM3658SDEV/NOPB LM3691TL-1.8EV/NOPB LM4510SDEV/NOPB LM5033SD-EVAL LP38512TS-1.8EV EVAL-ADM1186-1MBZ EVAL-ADM1186-2MBZ