

QUICK START PROCEDURE

Demonstration Circuit 1040 is easy to set up to evaluate the performance of the LTC3544. For proper measurement equipment configuration, set up the circuit according to the diagram in Figure 1.

NOTE: When measuring the input or output voltage ripple, care must be taken to avoid a long ground lead on the oscilloscope probe. Measure the input or output voltage ripple by touching the probe tip directly across the VIN or VOUT and GND terminals. See the Measurement Equipment Set-up diagram in Figure 2 for proper scope probe technique.

1. Connect the input power supply to the VIN and GND terminals. Connect the loads between the matching VOUT and GND terminals. Refer to Figure 1 for the proper measurement equipment setup. Make sure that loads on outputs VOUT1 through VOUT4 do not exceed 100mA, 200mA, 200mA and 300mA respectively.
2. Apply 5V at VIN and place RUN jumper shunts JP1 through JP4 in the ON positions.
3. Measure all four outputs VOUT1 through VOUT4; they should read 1.2V, 1.5V, 0.8V, 1.8V respectively. All output voltages should be within +/- 2% tolerance.
4. Vary the input voltage from 5.5V to 2.5V, all four output voltages should be within +/- 2% tolerance.
5. Vary the VOUT1 load current from 0 to 100mA. Each output voltage should be within a tolerance of +/- 2%.
6. Vary the VOUT2 and VOUT3 load currents from 0 to 200mA. Each output voltage should be within a tolerance of +/- 2%.
7. Vary the VOUT4 load current from 0 to 300mA. Each output voltage should be within a tolerance of +/- 2%.
8. To turn either output off, place corresponding jumper in OFF position.

Warning - If the power for the demo board is carried in long leads, the input voltage at the part could “ring”, which could affect the operation of the circuit or even exceed the maximum voltage rating of the IC. To eliminate the ringing, insert a small tantalum capacitor (for instance, AVX part # TAJW686M010) on the pads between the input power and return terminals on the bottom of the demo board. The (greater) ESR of the tantalum will dampen the (possible) ringing voltage due to the use of long input leads. On a normal, typical PCB, with short traces, the capacitor is not needed.

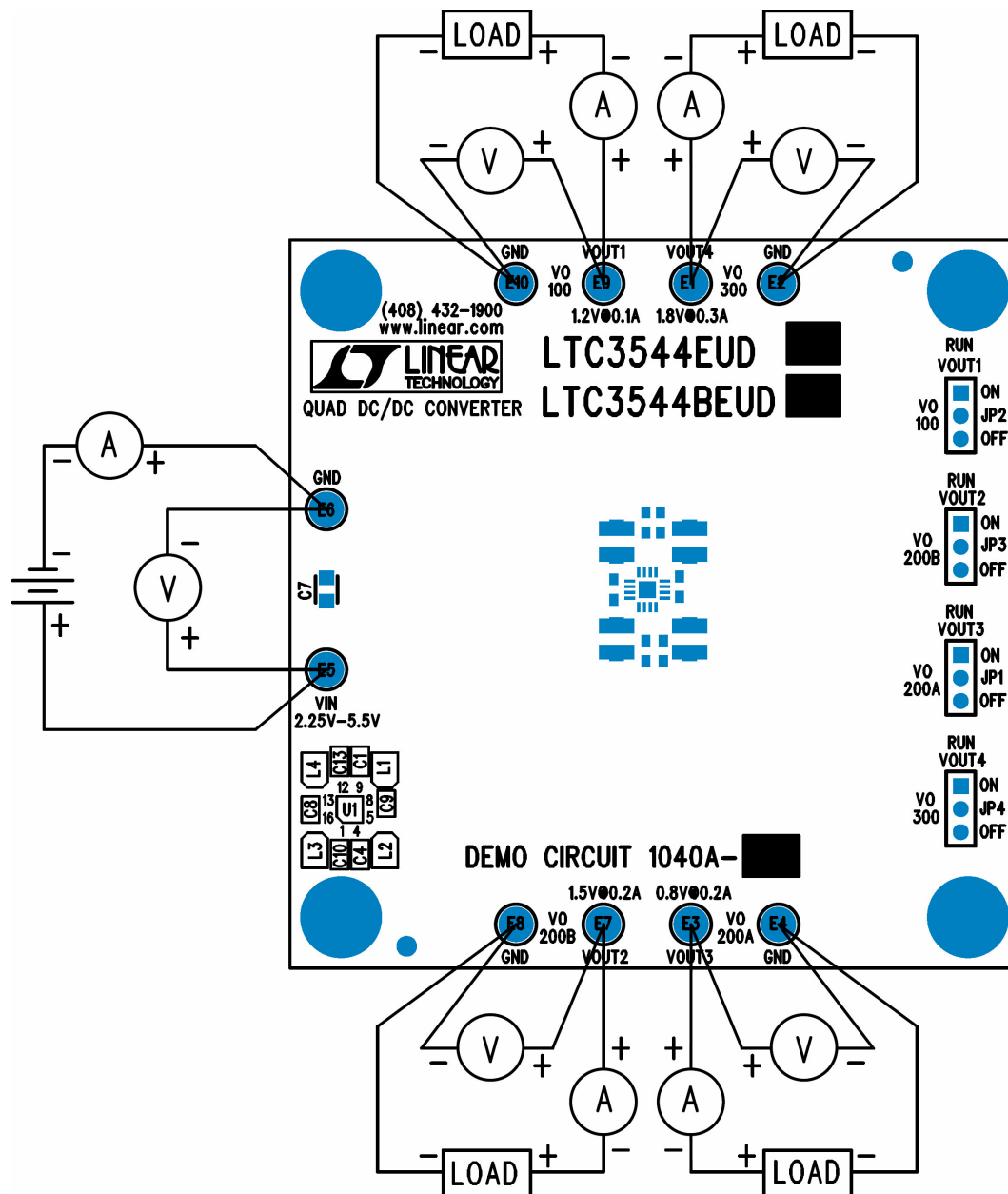


Figure 1. Proper Measurement Equipment Setup

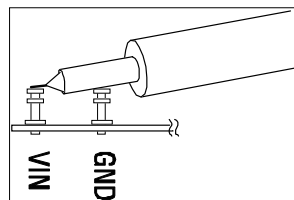
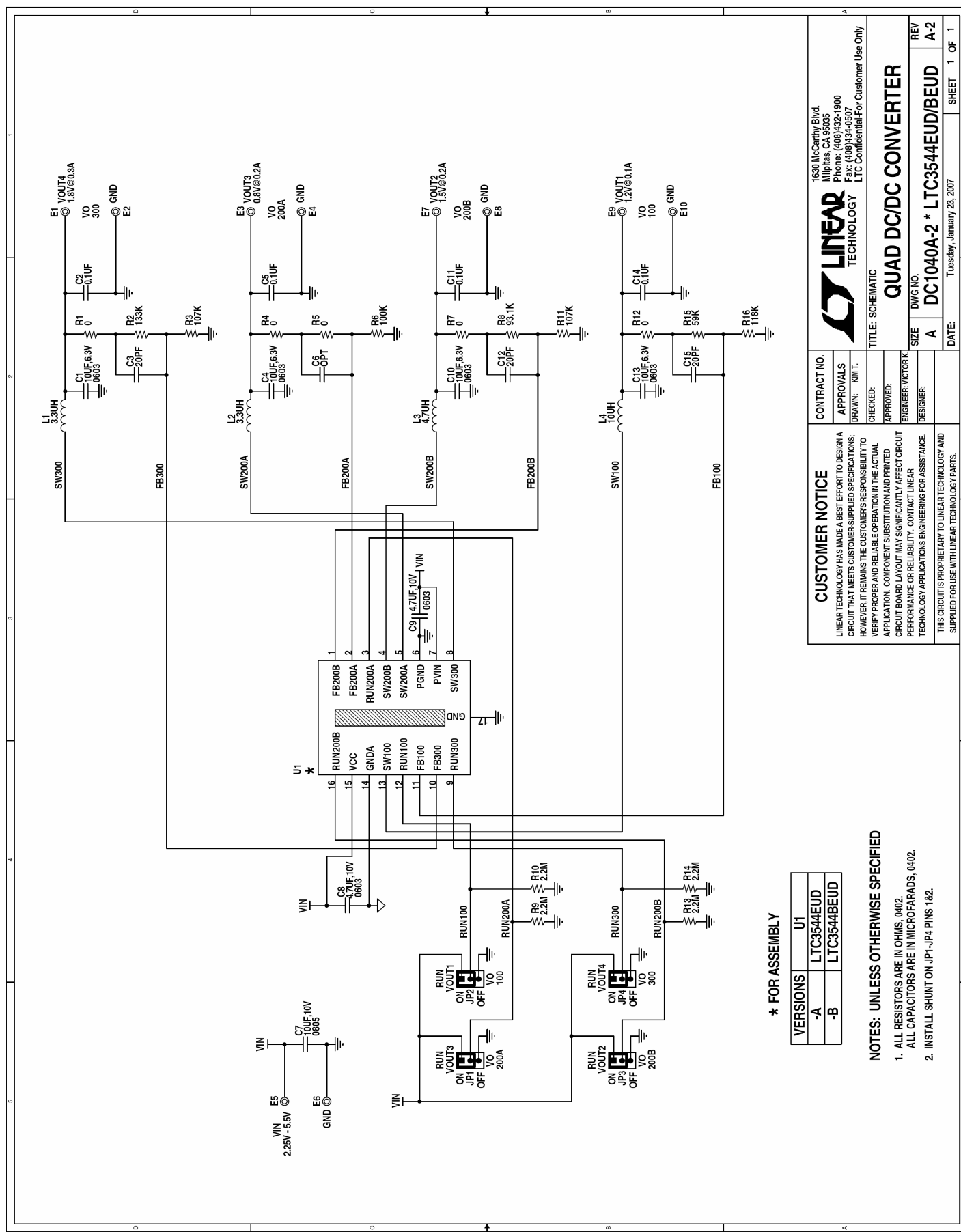


Figure 2. Measuring Input or Output Ripple

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 1040

QUAD DC/DC CONVERTER



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QUAD DC/DC CONVERTER DC1040A-2 * LTC3544EUD/BEUD		DATE: January 23, 2007 SIZE: A DWG NO.: A-2 REV: 1 OF 1	