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# I²C/SMBUS/PMBUS Controller

## DESCRIPTION

Demonstration circuit 1613A is a USB-based controller with generic Inter Integrated Circuit (I²C) ports as well as SMBUS/PMBUS capabilities. It is designed to mate with Linear Technology's family of LTpowerPlay™ demonstration boards. The demo board is fully isolated from the host PC's ground. The evaluation software automatically detects which demo board is connected and loads the appropriate control screen.

The LTpowerPlay system provides a quick and easy way to evaluate the performance of a wide variety of Linear Technology's products

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## DEMONSTRATION CIRCUIT



## QUICK START PROCEDURE

For proper equipment setup, follow the procedure below:

1. Do NOT plug in the DC1613A to the PC, before running the installation program.
2. Download the LTpowerPlay installation program from http://www.linear.com/software/.
3. Run the LTpowerPlay installation program and follow the on-screen instructions.

The LTpowerPlay demo software requires a PC that is running Windows XP (or later), and has an available USB port.

4. Connect the demonstration circuit to be evaluated to the DC1613A using the supplied 12-conductor ribbon cable. The demo software detects the circuit and starts the appropriate control screen.

Each demonstration board also comes with a Quick Start guide similar to this one. For usage details relevant to a particular circuit refer to its Quick Start guide.

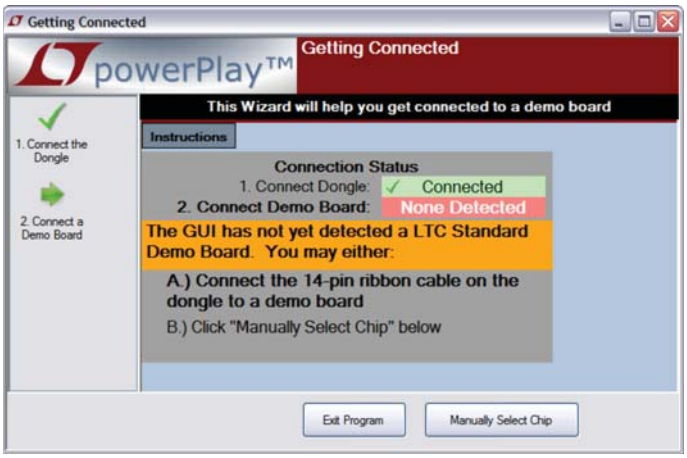
### SOFTWARE TOOLS

The LTpowerPlay demo software includes tools for automatic software updates and for quickly retrieving relevant documentation from the World Wide Web.

NOTE: Adobe Acrobat Reader is required to view the documents and is available at http://www.adobe.com.

To use the tools:

- Quit the demonstration circuit software or disconnect the USB cable so that the main control panel appears:




To update the software (requires internet connection):

- Choose Update from the Tools menu.

  This automatically updates the main program and drivers for individual demo circuits.

## TROUBLESHOOTING GUIDE

**Problem:** DC1613A is plugged in, but LTpowerPlay screen still says "USB Serial Controller Not Connected."

**Solution:** The most likely cause is improper installation of the USB drivers, which causes Windows to recognize the DC1613A as an "Unknown Device." Open the Windows Control Panel, open "System" and click the "Device manager" tab. Open the "Other Devices" item and look for USB SERIAL CONTROLLER. Select this item and click the remove button. Unplug the DC1613A, reinstall the LTpowerPlay software and follow the on-screen instructions.

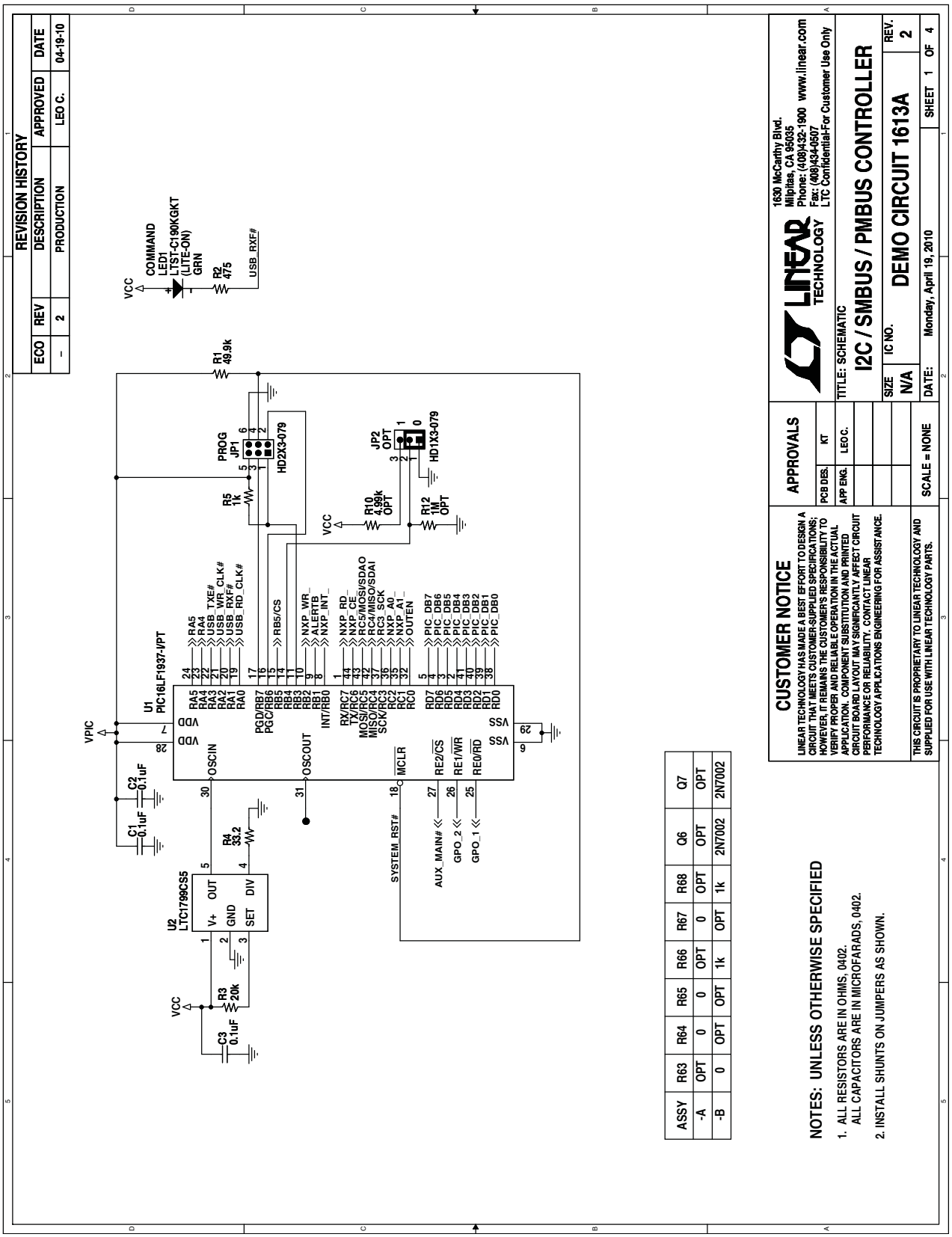
**Problem:** Demo board software loads properly, but will not run or gives "Device Not accessible" errors.

**Solution:** Verify that the demo board is properly powered up. This Quick Start guide lists the basic power connections to DC1613A. Some demo boards may have additional requirements; refer to the demo board's Quick Start guide for details.

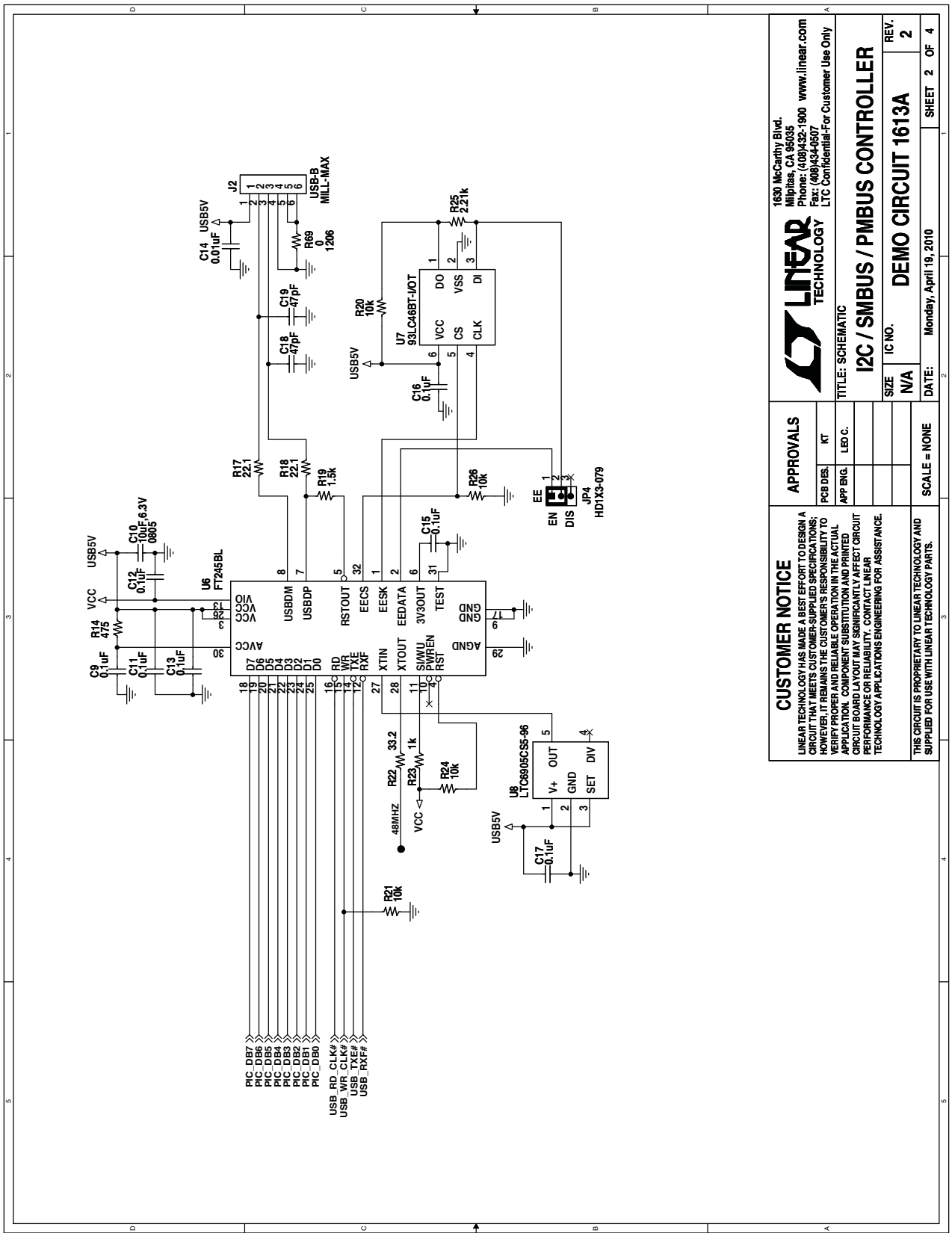
**Problem:** After connecting the demo board to DC1613A with the supplied 12-pin ribbon cable, LTpowerPlay software still displays "Evaluation Board is not Connected."

**Solution:** Contact Linear Technology Applications Engineering.

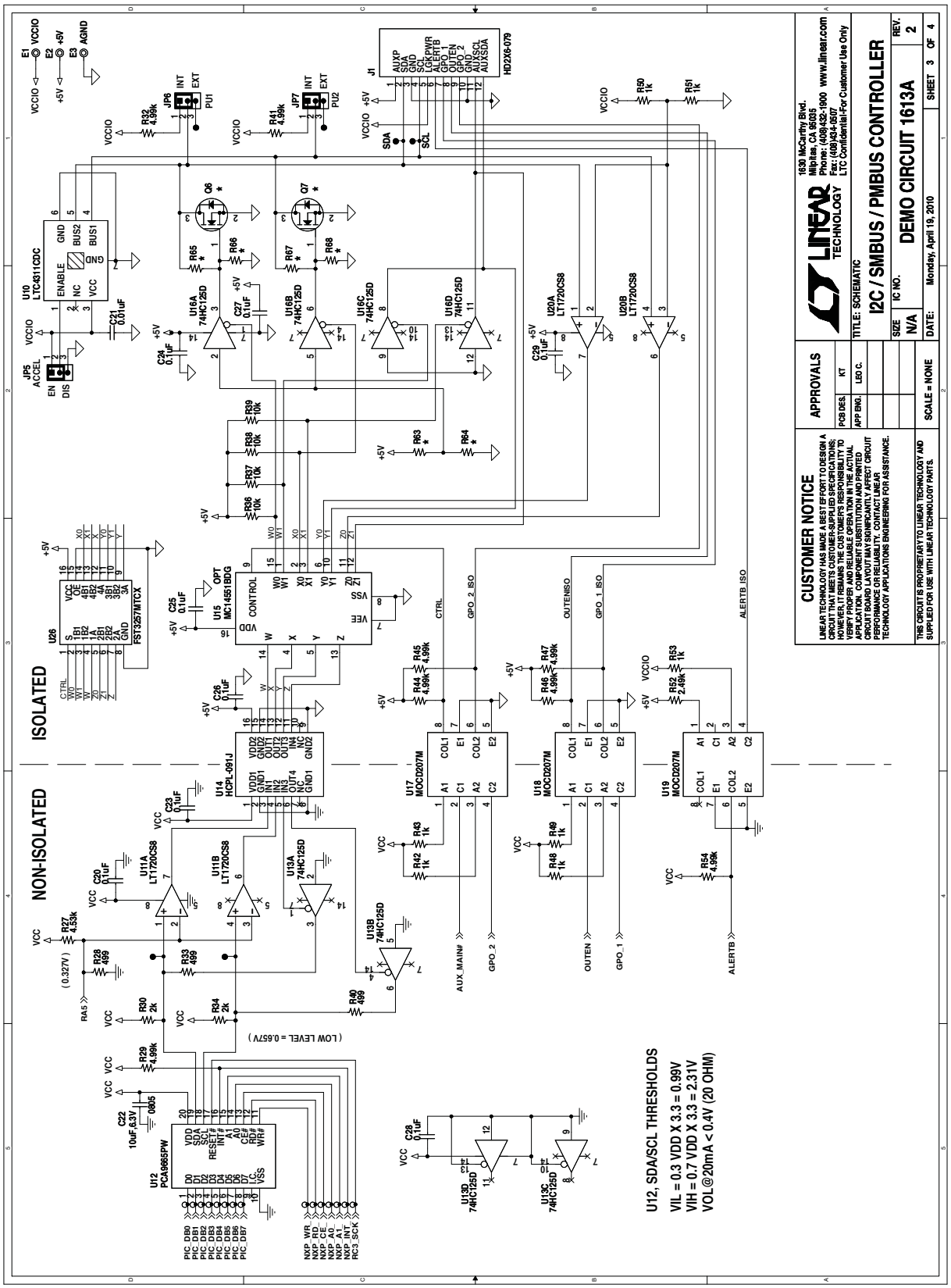
## SCHEMATIC DIAGRAM



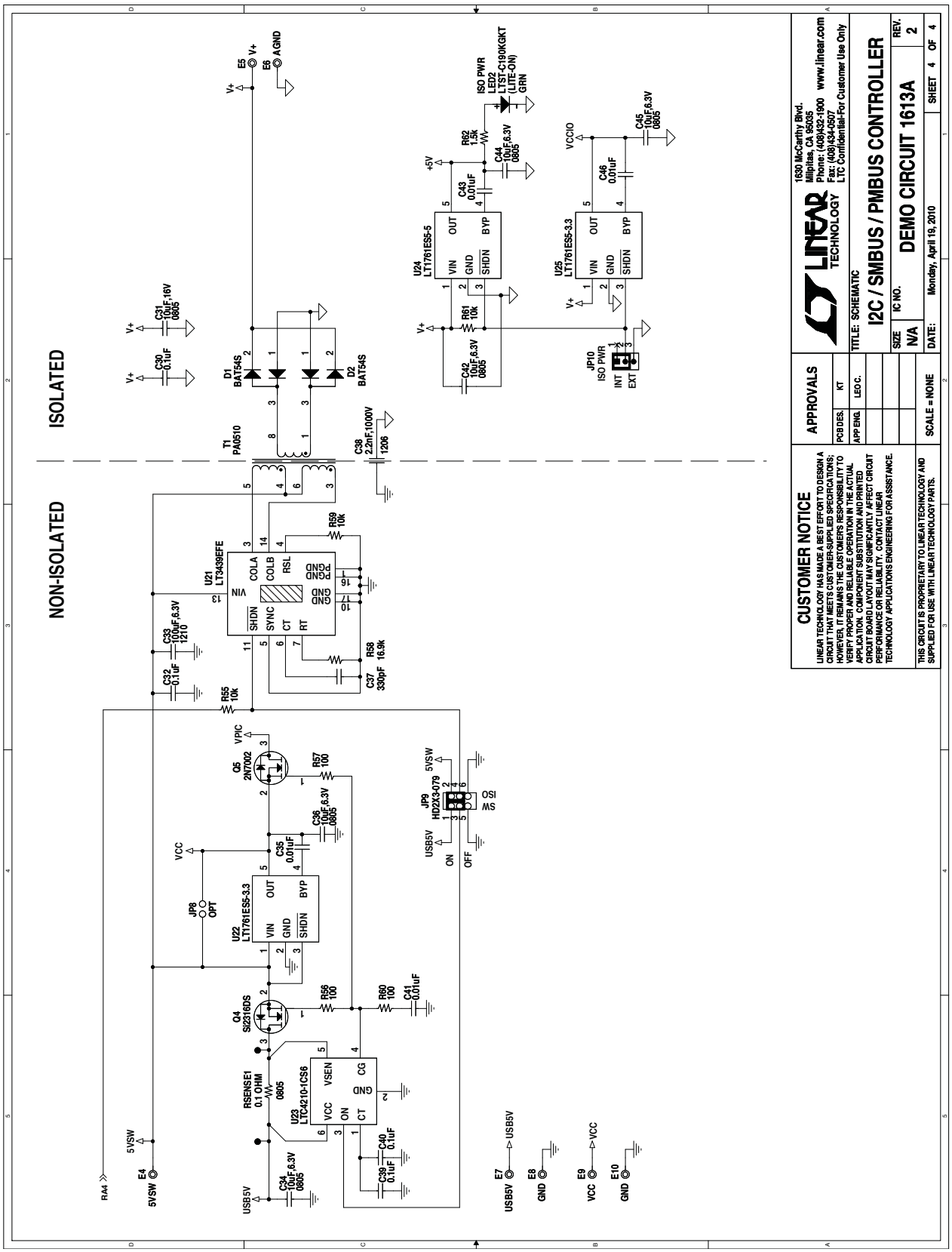
## SCHEMATIC DIAGRAM



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## SCHEMATIC DIAGRAM






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LTC currently services a variety of customers for products around the world, and therefore this transaction **is not exclusive**.

**Please read the DEMO BOARD manual prior to handling the product**. Persons handling this product must have electronics training and observe good laboratory practice standards. **Common sense is encouraged**.

This notice contains important safety information about temperatures and voltages. For further safety concerns, please contact a LTC application engineer.

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