DESCRIPTION

Demonstration circuit DC1154 is a Telecom non isolated DC/DC converter featuring the LTC3873 constant frequency current mode flyback controller. The DC1154 converts 36V to 72V input voltage to an isolated 3A of output current at 3.3V.The 200kHz constant frequency operation is maintained down to very light load to reduce low frequency noise generated over a wide range of load current. The converter provides high output voltage accuracy (typically ±2%) over wide load range with no minimum load requirement.

The DC1154 also provides an isolated design by installing the optocoupler and LTC4430 related circuitry. The demonstration circuit can be easily modified to generate different output voltages up to 15V. As output voltage is increased, the maximum output current must be reduced to limit the output power to no more than 10W. Higher output voltages and currents can be achieved by changing the MOSFET, transformer and output capacitors. Please consult LTC factory for details.

The DC1154 has a small circuit footprint. It is a high performance and cost effective solution for Telecom, Automotive and Power over Ethernet applications.

Design files for this circuit board are available. Call the LTC factory.

QUICK START PROCEDURE

Demonstration circuit DC1154 is easy to set up to evaluate the performance of the LTC3873. For proper measurement equipment setup refer to Figure 1 and follow the procedure below:

When measuring the input or output voltage ripple, care must be taken to minimize the length of the oscilloscope probe ground lead. Measure the input or output voltage ripple by connecting the probe tip directly across the +VIN or +VOUT and –VIN or -VOUT terminals, see Figure 2.

1. With power off, connect the input power supply to +VIN and –VIN terminals.
2. Move the RUN jumper into ON position.
3. Turn the input power source on and slowly increase the input voltage. Be careful not to exceed 72V. Make sure that the input voltage VIN does not exceed 72V. If higher operating voltage is required, power components with higher voltage ratings should be used.
4. Check for proper output voltage. VOUT=3.3V.

   If there is no output, temporarily disconnect the load to make sure that the load is not set too high.
5. To shut the converter down, move the RUN jumper into OFF position
6. Once the proper output voltage is established, adjust the load within 3.0A range and observe the output voltage regulation, ripple voltage, efficiency and other parameters.

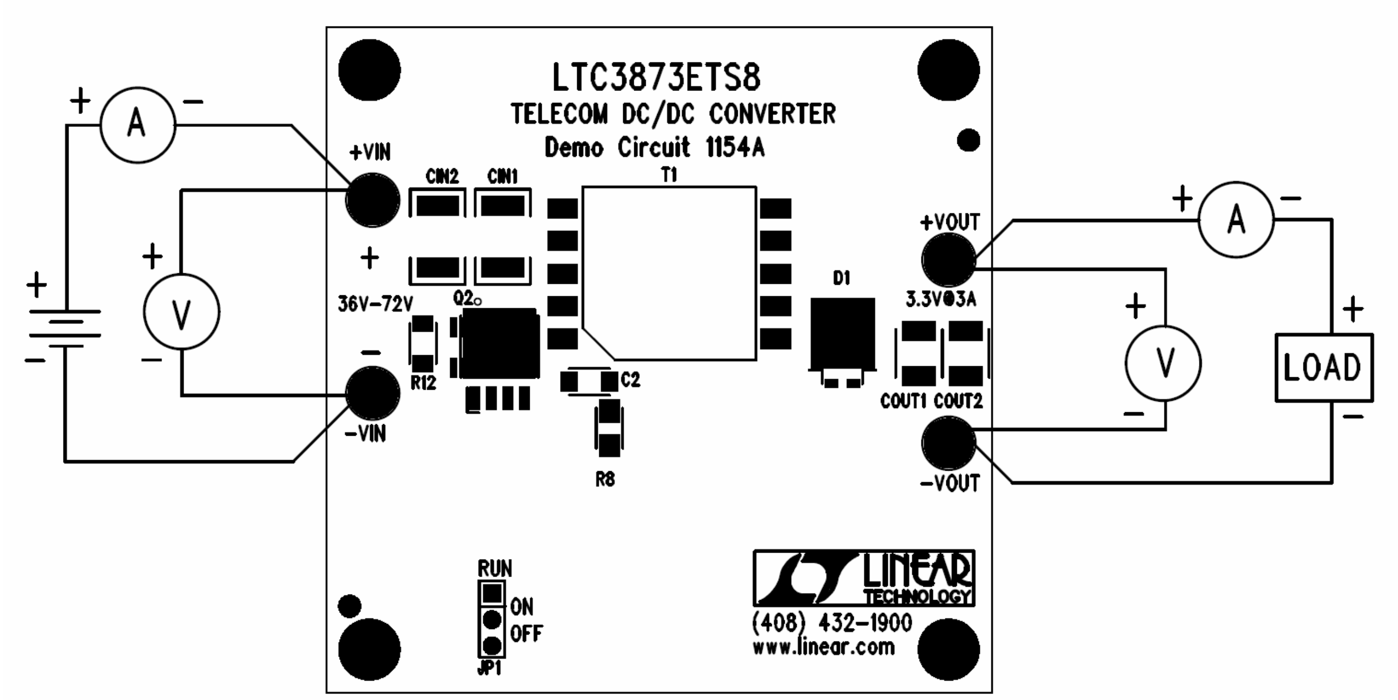


Figure 1. Proper Measurement Equipment Setup

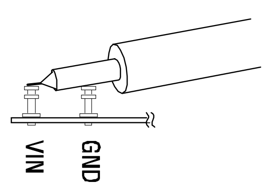
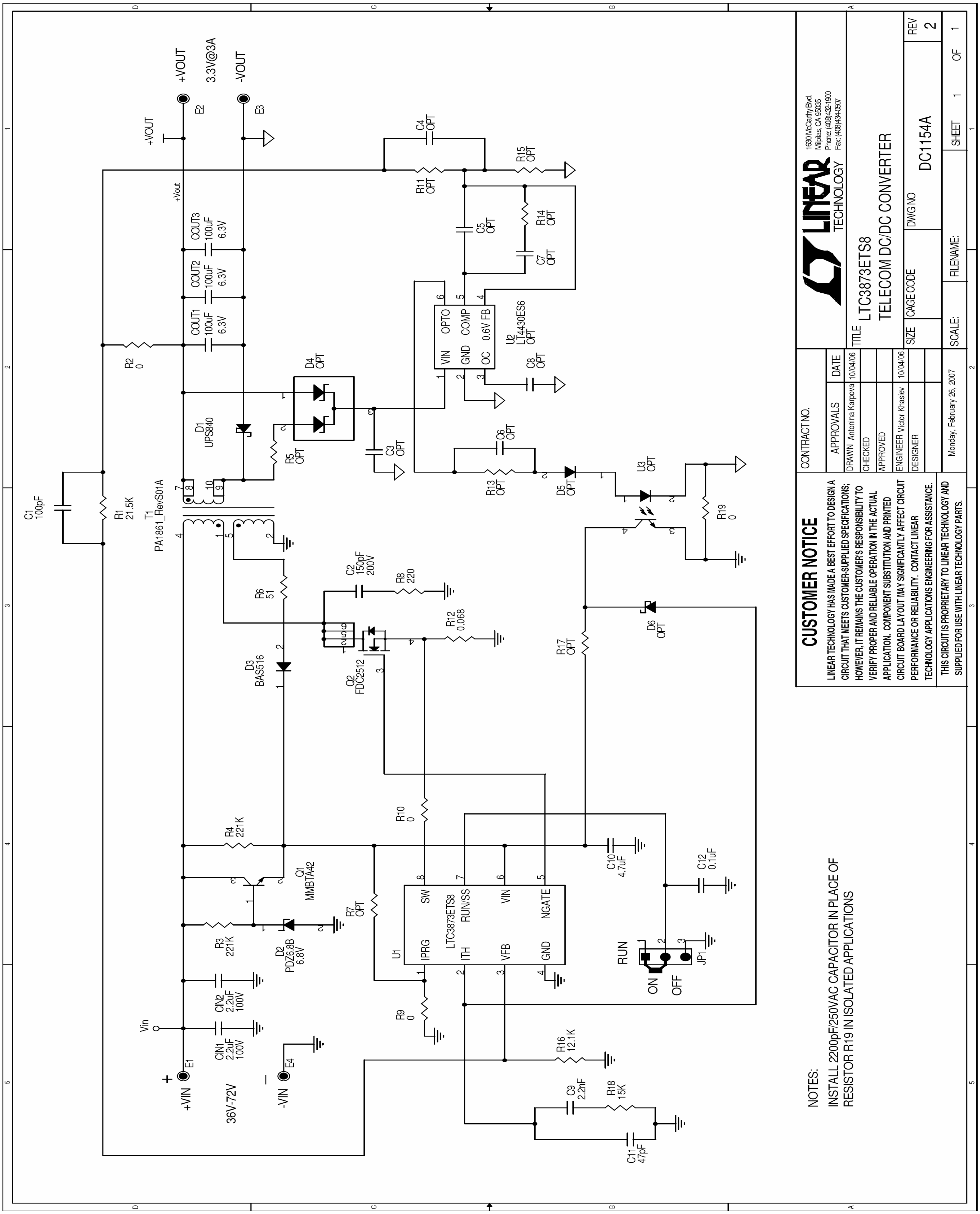


Figure 2. Measuring Input or Output Ripple



+VIN
36V-72V
-VIN
+VOUT
3.3V@3A
-VOUT
LTC3873ETS8
LT4430ES6
PA1861_RevS01A
CUSTOMER NOTICE
LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.
THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.
NOTES:
INSTALL 2200pF/250VAC CAPACITOR IN PLACE OF RESISTOR R19 IN ISOLATED APPLICATIONS
TITLE
LTC3873ETS8
TELECOM DC/DC CONVERTER
DWG NO
DC1154A
REV
2
SHEET 1 OF 1
Monday, February 26, 2007

LifeElectronics
Живое партнерство

ООО "ЛайфЭлектроникс" "LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru

www.lifeelectronics.ru