

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 647

1.2MHZ, SOT-23 DC/DC CONVERTER

LT3467

DESCRIPTION

Demonstration circuit 647 is a 1.2MHz, SOT-23 DC/DC Converter featuring the LT®3467. The demo board demonstrates two separate DC/DC converters for different application needs. The Boost Circuit is designed to convert a 5V input to 12V output at 300mA maximum load. The SEPIC Circuit generates a constant 12V/300mA output with 10V~16V variable input. Both circuits are designed to demonstrate the soft start feature, advantages of the 1.2MHz switching frequency, the internal 42V/1.1A switch, wide input voltage range and small circuit size. These circuits are intended for space-conscious applications such

as digital cameras, cellular phones, palmtop computers and LCD displays. The 1.2MHz switching frequency, 1.1A integrated switch, small circuit size, and low component count makes the LT3467 suitable for use in many other applications, such as PC cards, miniature disk drives, xDSL power supplies, flash memory products and local 5V or 12V supplies.

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

LT is a registered trademark of Linear Technology Corporation

Table 1. Performance Summary ($T_A = 25^\circ\text{C}$)

PARAMETERS FOR BOOST CONVERTER	CONDITION	VALUE
Input Voltage		5V
Output Voltage V_{OUT}	$V_{\text{IN}} = 5\text{V}$, $I_{\text{OUT}} = 0\text{A}$ to 300mA	$12\text{V} \pm 2\%$
Maximum Output Current		300mA
Typical Output Ripple V_{OUT}	$V_{\text{IN}} = 5\text{V}$, $I_{\text{OUT}} = 300\text{mA}$	55mV _{P-P}
Typical efficiency	$V_{\text{IN}} = 5\text{V}$, $I_{\text{OUT}} = 300\text{mA}$	86%
PARAMETERS FOR SEPIC CONVERTER	CONDITION	VALUE
Minimum Input Voltage		10V
Maximum Input Voltage		16V
Output Voltage V_{OUT}	$V_{\text{IN}} = 10\text{V}$ to 16V, $I_{\text{OUT}} = 0\text{A}$ to 300mA	$12\text{V} \pm 2\%$
Maximum Output Current		300mA
Typical Output Ripple V_{OUT}	$V_{\text{IN}} = 10\text{V}$, $I_{\text{OUT}} = 300\text{mA}$	50mV _{P-P}
Typical efficiency	$V_{\text{IN}} = 10\text{V}$ to 16V, $I_{\text{OUT}} = 300\text{mA}$	80%

QUICK START PROCEDURE

Demonstration circuit 647 is easy to set up to evaluate the performance of the LT3467. Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

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 V_{IN} or V_{OUT} and GND terminals. See Figure 2 for proper scope probe technique.

NOTE: Steps 1-4 are for Boost Converter only.

1. Place jumper in the following positions:

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 647

1.2MHZ, SOT-23 DC/DC CONVERTER

JP1 On

2. With power off, connect the input power supply to V_{IN} and GND.

3. Turn on the power at the input.

NOTE: Make sure that the input voltage does not exceed 5V.

4. Check for the proper output voltages.

NOTE: If there is no output, temporarily disconnect the load to make sure that the load is not set too high.

NOTE: Once the proper output voltages are established, adjust the loads within the operating range and observe the output voltage regulation, ripple voltage, efficiency and other parameters directly across the V_{IN} or V_{OUT} and GND terminals. See Figure 2 for proper scope probe technique.

NOTE: Steps 5-9 are for Sepic converter only.

5. Place jumper in the following positions:

JP2 On

6. With power off, connect the input power supply to V_{IN} and GND.

7. Turn on the power at the input.

NOTE: Make sure that the input voltage is set between 10V and 16V.

8. Check for the proper output voltages.

NOTE: If there is no output, temporarily disconnect the load to make sure that the load is not set too high.

9. Once the proper output voltages are established, adjust the loads within the operating range and observe the output voltage regulation, ripple voltage, efficiency and other parameters.

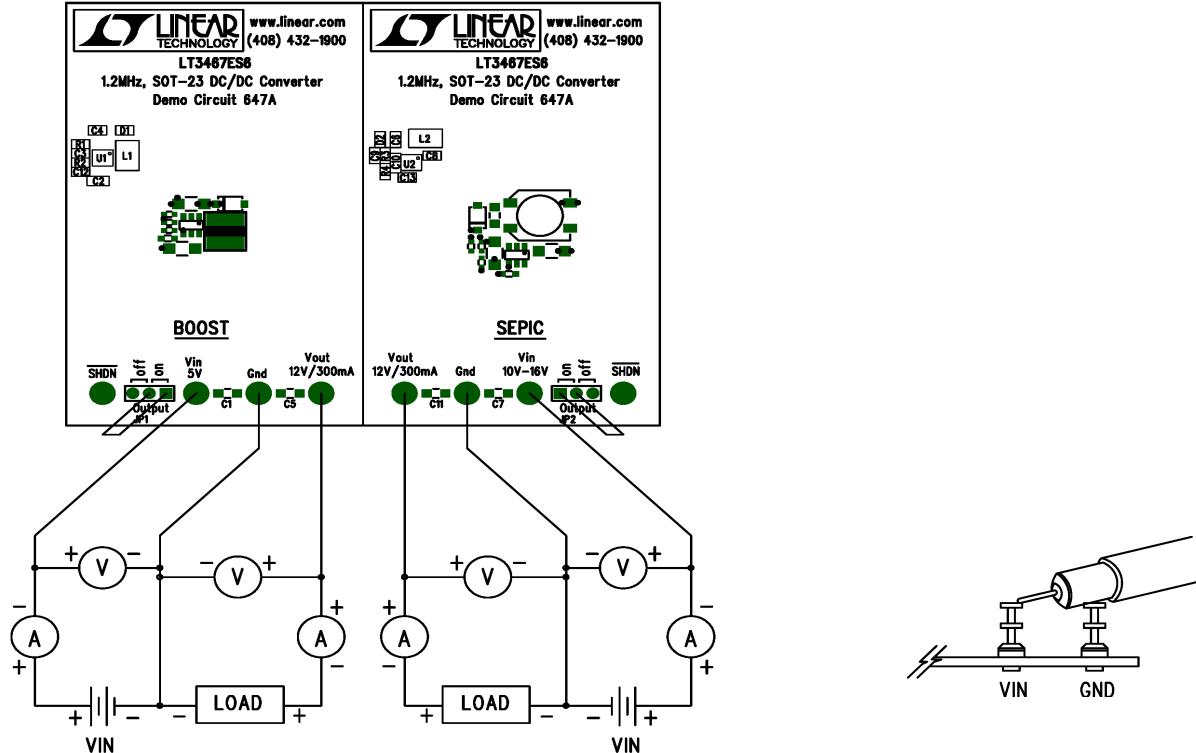
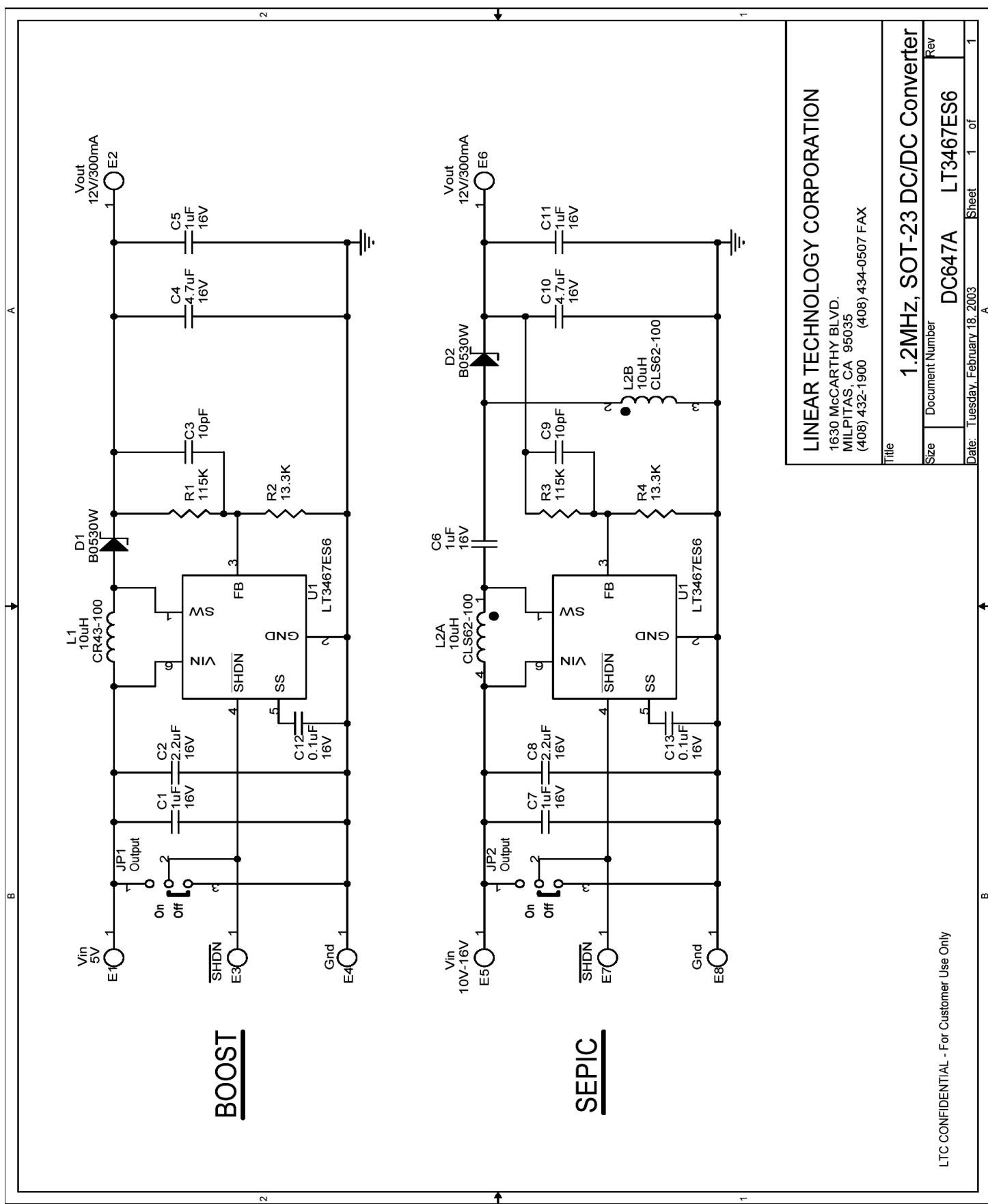


Figure 1. Proper Measurement Equipment setup

Figure 2. Measurement Input or Output Ripple

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 647

1.2MHZ, SOT-23 DC/DC CONVERTER





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помошь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помошь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.