

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 703 10V MICROPOWER SYNCHRONOUS BOOST CONVERTER IN THINSOT

LTC3459ES6

DESCRIPTION

Demonstration circuit 703 features the LTC3459 10V micropower synchronous boost converter. The circuit in DC703 is designed to generate an 8V output from a 1.8V to 5.5V input voltage range. The maximum output current is listed on the DC703 silkscreen and is dependent on the output voltage.

The boost converter circuit is enabled using JP1. Placing the jumper to “OFF” turns off the boost

converter and the output goes to 0V. Placing the jumper to “ON” enables the boost converter and allows the output to rise to a regulated 8V. The SHDN pin is also accessible via the turret, J4.

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

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Table 1. Performance Summary (T_A = 25°C unless otherwise noted)

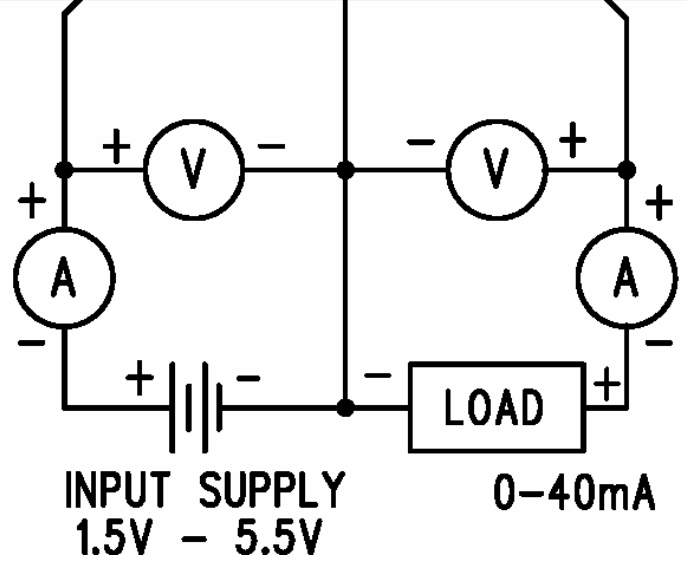
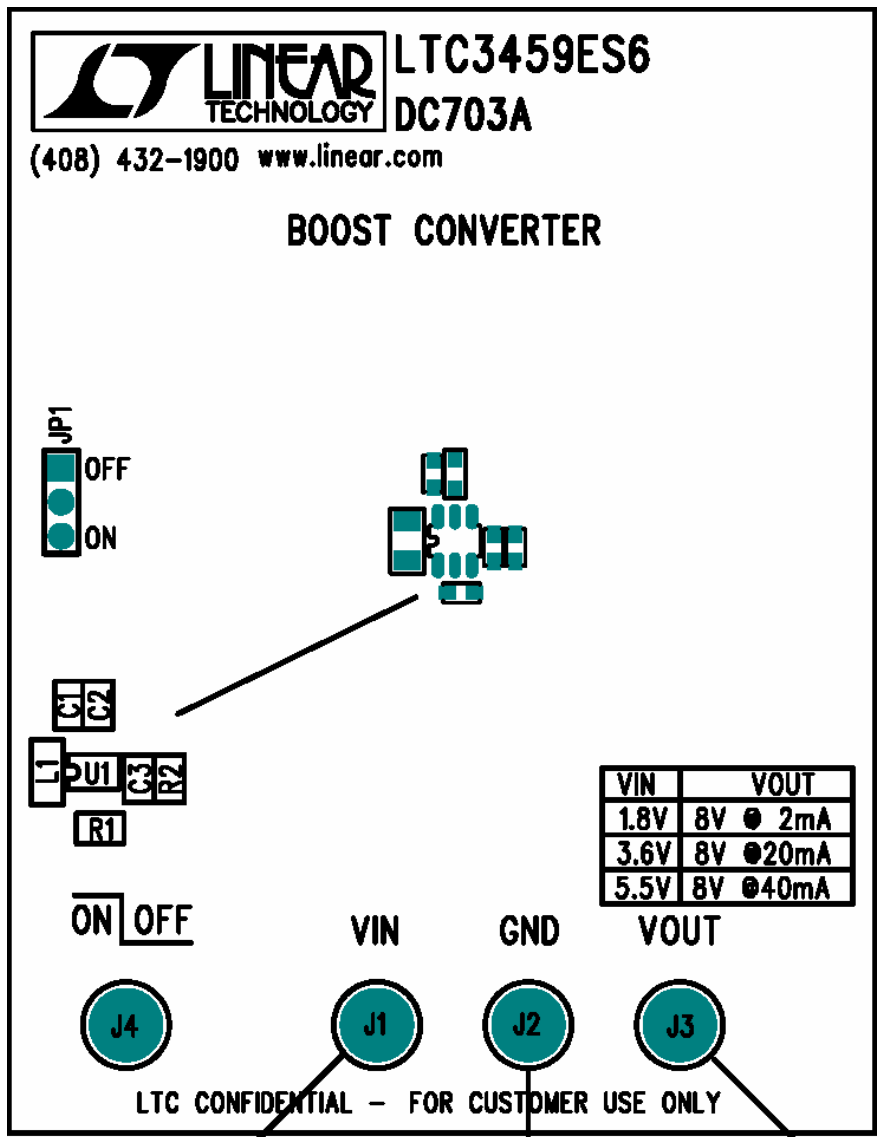
PARAMETER FOR BOOST CONVERTER	CONDITION	VALUE
Minimum Input Voltage		1.5V
Maximum Input Voltage		5.5V
Maximum Output Current	With 5.5V input	40mA
Typical Efficiency	With 5.5V input and 2~40mA load	>85%
Programmable output voltage range		2.5V ~ 10V

QUICK START PROCEDURE

Demonstration circuit 703 is easy to set up to evaluate the performance of the LT3459. Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

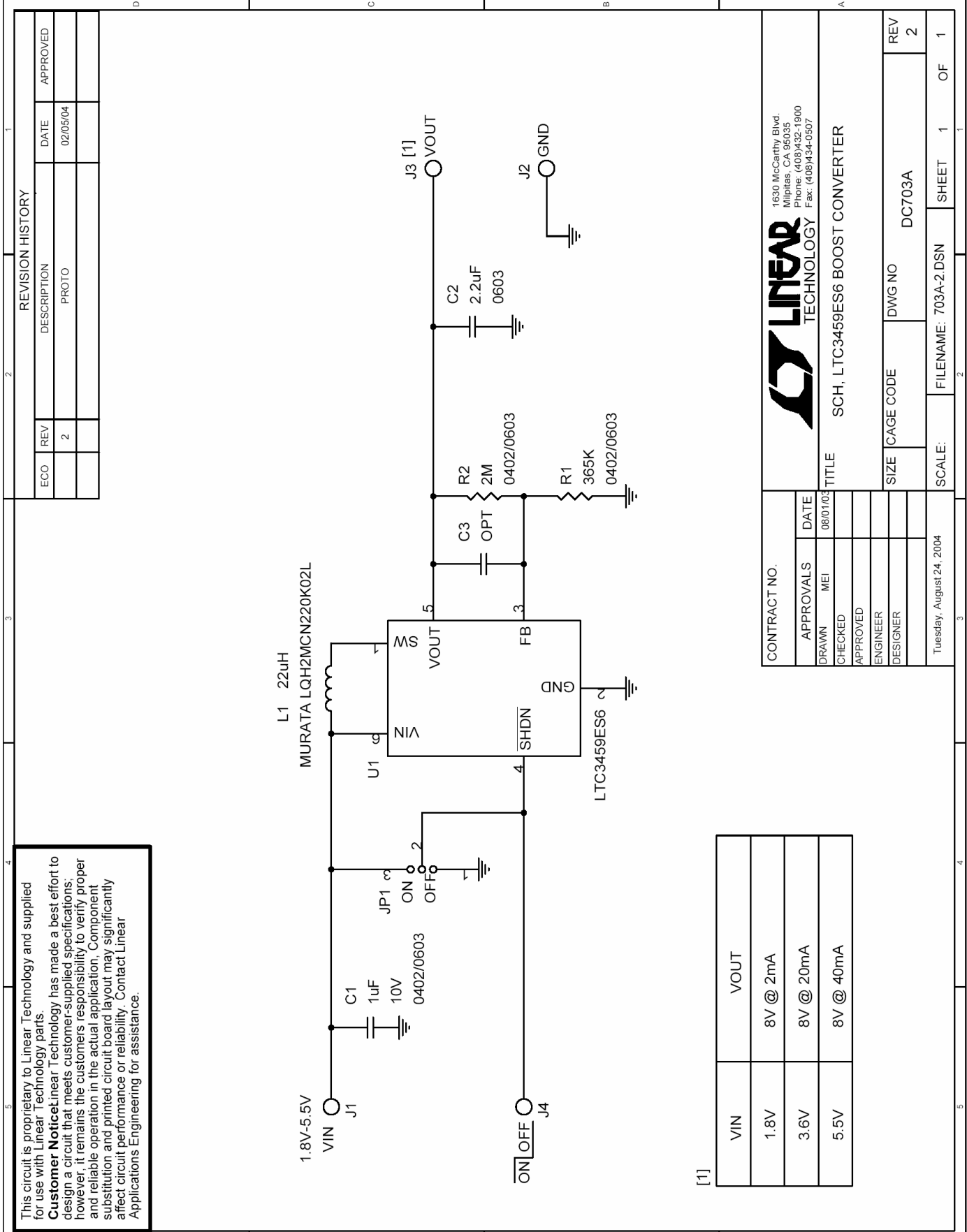
1. With power off, connect the input power supply to **VIN** and **GND**. Make sure JP1 is set to “ON”.
2. Set the input supply between 1.8V to 5.5V. Turn on the power at the input and observe the output voltage across **VOUT** and **GND**. The output voltage should read $\cong 8V$.
3. Turn on the load (follow the chart on the demo board silkscreen for input voltage and output current). The output voltage should be regulating to $\cong 8V$ with different load conditions.
4. Test the SHDN function by placing the jumper JP1 to “OFF”. The output voltage should read 0V. Enable the boost converter by placing the jumper (JP1) back to “ON”. The output should now read $\cong 8V$.

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This circuit is proprietary to Linear Technology and supplied for use with Linear Technology parts.
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 Applications Engineering for assistance.

[1]

VIN	VOUT
1.8V	8V @ 2mA
3.6V	8V @ 20mA
5.5V	8V @ 40mA

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CONTRACT NO.		TITLE SCH, LTC3459ES6 BOOST CONVERTER	
APPROVALS DRAWN MEI	DATE 08/01/02	SIZE A	DWG NO DC703A
CHECKED	APPROVED	ENGINEER	REV 2
DESIGNER	Tuesday, August 24, 2004	SCALE:	FILENAME: 703A-2.DSN
SHEET 1 OF 1		OF 1	