



Test Procedure for the NCV8872SEPGEV B Evaluation Board

Test Procedure

Operational Guidelines

1. Connect a DC input voltage, within the 6 V to 40 V range, between VIN and GND.
2. Connect a DC enable voltage, within the 2.0 V to 5.0 V range, between EN/SYNC and GND.
3. The demo board feedback components were selected to for continuous operation at rated 12 V/1.5 A output power at a minimum input voltage of 6 V. The NCV887200 VIN has its operational voltage diode-oriented between the converter output (12 V) and input voltages. The converter turns-on typically at 6.7 V. Once energized, the output voltage supplies power to the IC when the battery voltage is below (approximately) 11.5 V. The decreasing VIN UVLO voltage depends on load current as well as VIN, and will be less than 6 V when operating below rated output current.
4. Optionally for external clock synchronization, connect a pulse source between EN/SYNC and GND. The high state level should be within the 2 to 5 V range, and the low state level within the -0.3 V to 0.8 V range, with a minimum pulse width of 40 ns and a frequency within the 675 and 1100 KHz range. **NOTE:** The converter was designed for 675 KHz 12 V/1.5 A continuous mode operation. Operation beyond 675 KHz or at a different output voltage may require modifications of feedback loop component values.

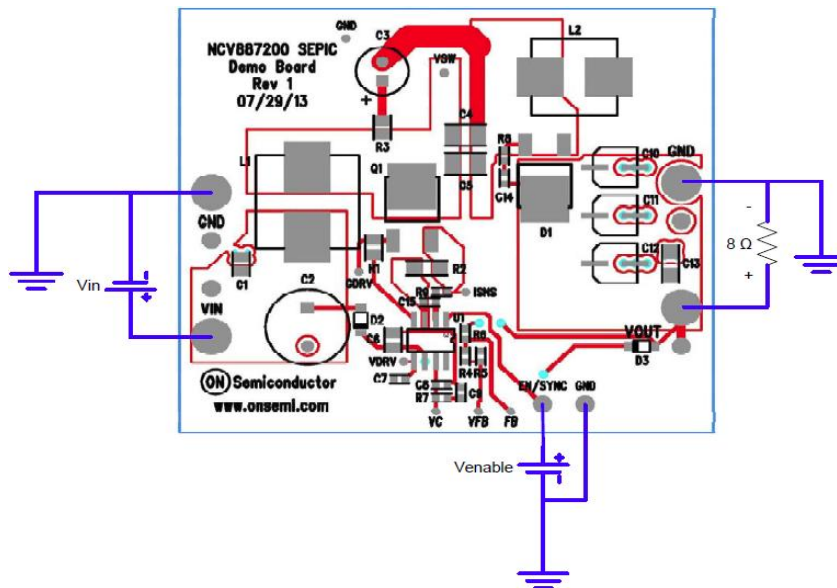


Figure 1. Demo Board Connections

Typical Performance

Start-up

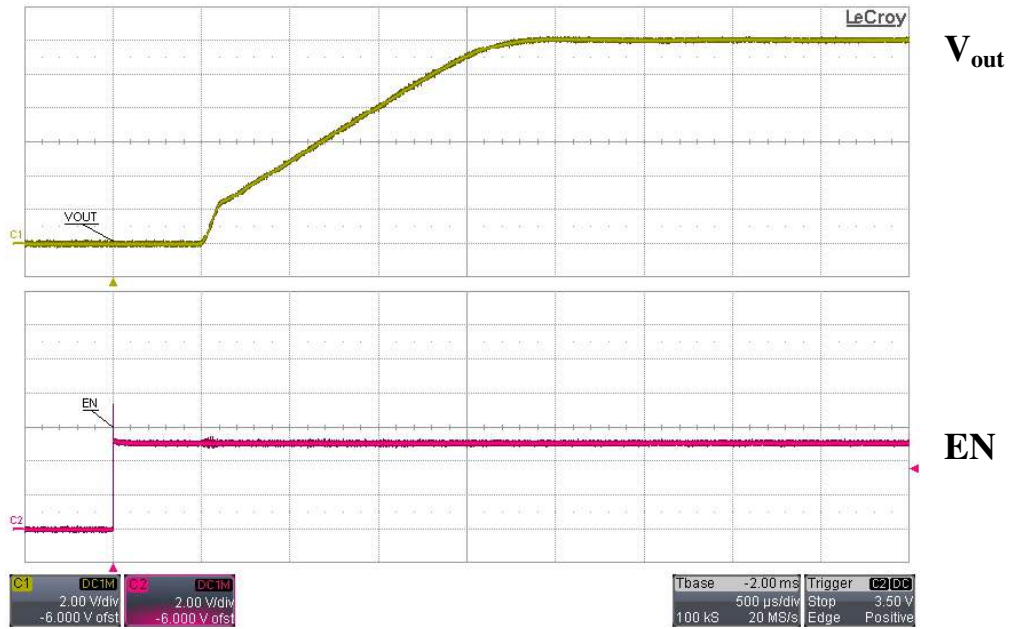


Figure 2 Typical start-up with $V_{IN} = 12\text{ V}$, $I_{out} = 1\text{ A}$

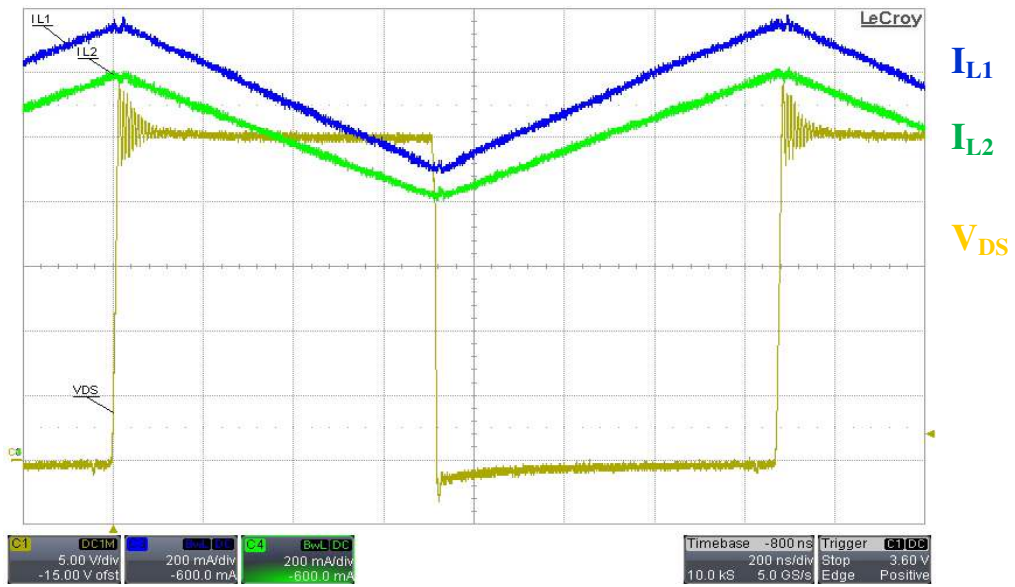


Figure 3 Operational waveforms, $V_{IN} = 12\text{ V}$, $I_{out} = 1\text{ A}$