

Test Procedure for the NCP4371QC30GEVB Demoboard

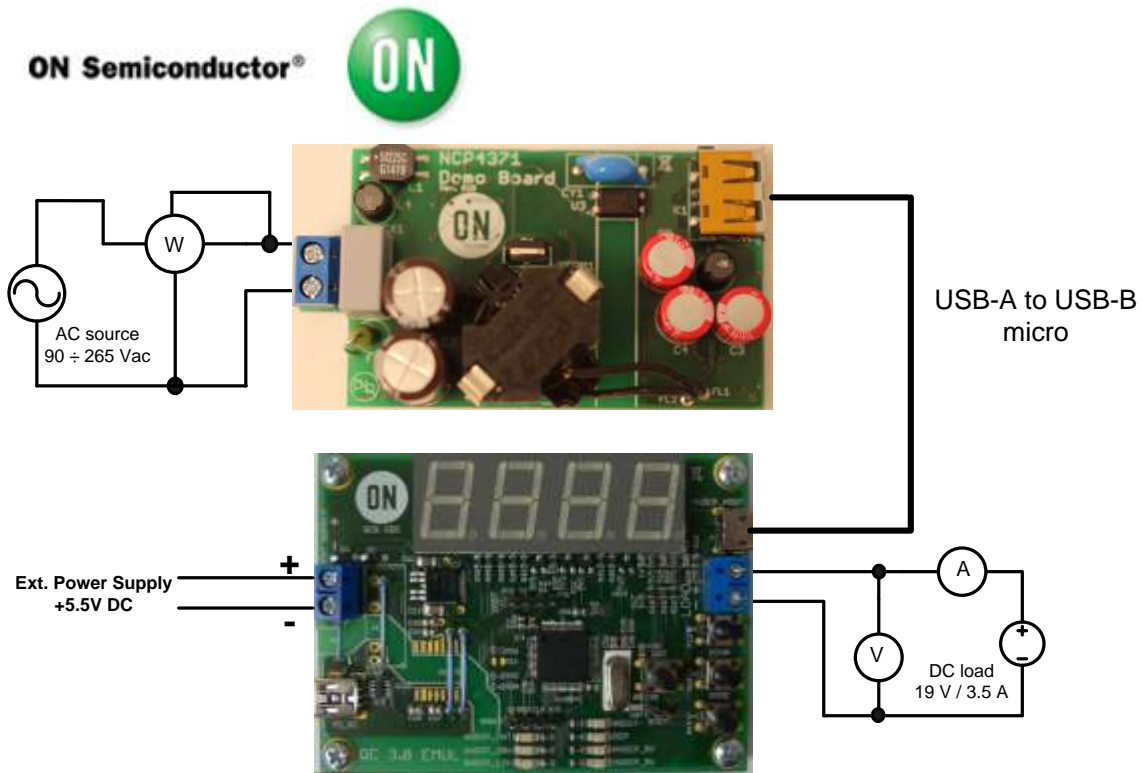


Figure 1: Test Setup

The following steps describe the test procedure for all these boards:

Required Equipment:

Current limited AC Power Supply (e.g. AGILENT 6811B)	1pc
DC Volt-Meter able to measure up to 60 V DC (e.g. KEITHLEY 2000)	1pc
DC Amp-Meter able to measure up to 5 A DC (e.g. FLUKE 89 IV)	1pc
Watt-Meter (e.g. Yokogawa WT210)	1pc
DC Electronic Load (e.g. AGILENT 6060B)	1pc
QC3.0 EMULATOR	1pc

Test Procedure:

1. Connect the test setup as shown in Figure 1.
2. Apply an input voltage, $V_{IN} = 120 \text{ Vac}$
3. Check $V_{OUT} = 5.0 \text{ V} \pm 0.2 \text{ V}$
4. Apply $I_{OUT(\text{load})} = 500 \text{ mA}$
5. Check $V_{OUT} > 4.5 \text{ V}$
6. Check efficiency that $\text{Eff} > 80\%$
7. Apply $I_{OUT(\text{load})} = 2 \text{ A}$
8. Check $V_{OUT} > 4.5 \text{ V}$
9. Check efficiency that $\text{Eff} > 82\%$
10. Apply $I_{OUT(\text{load})} = 1 \text{ A}$

11. Push button MODE on QC3.0 Emulator, yellow LED HVDCP_CNT is on
12. Push UP button several times and observe if VOUT increases in 200mV steps
13. Push DOWN button several times and observe if VOUT decreases in 200mV steps
14. Push button MODE on QC3.0 Emulator (2x), yellow LED HVDCP_9V is on
15. Check $V_{OUT} > 8.5 \text{ V}$
16. Push button MODE on QC3.0 Emulator (1x), yellow LED HVDCP_12V is on
17. Check $V_{OUT} > 11.5 \text{ V}$
18. Push button MODE on QC3.0 Emulator (1x), yellow LED HVDCP_20V is on
19. Check $V_{OUT} > 11.5 \text{ V}$
20. Push button MODE on QC3.0 Emulator (1x), yellow LED HVDCP_5V is on
21. Check $V_{OUT} > 4.5 \text{ V}$
22. Increase an input voltage to $V_{IN} = 230 \text{ Vac}$
23. Apply $I_{OUT(load)} = 2 \text{ A}$
24. Check $V_{OUT} > 4.5 \text{ V}$
25. Check efficiency that $\text{Eff} > 82\%$
26. Turn off AC source
27. End of the test

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