ON Semiconductor

Test Procedure for the NCP1083QBCGEVB Evaluation Board

1. Connect a load to the output connector Jout(1,2,3) is +12V and Jout(4,5,6) is ground. The load may range from 0 to 30W.

2. When using the Power over Ethernet input, connect a lab supply or IEEE802.3 Standards compliant PSE equipment to one of the power over Ethernet inputs pair connections:

    a. On connector P1, pins 3(+) and 5 or 6 (-) for regular efficiency.
    b. On connector P1, pins 4(+) and 5 or 6 (-) for increased efficiency.
    c. Efficiency should be around 80 to 85% with the connection to pin 4 being slightly higher.

    Note: PoE Standard input voltage is between 36 and 57 volts DC. Further IEEE802.3 PoE Standards can easily be looked up online.

3. The DC/DC converter shall start working as soon as detection and classification is completed in PoE powered mode or as soon as power is applied on the auxiliary input.

4. Measure the output voltage to be 12V and that ripple or noise on the output is within the specification.

5. Make sure that the board can output up to 30 W (2.5 A) to the electronic load with the output voltage staying within about ± 5%.

6. DC/DC converter stability can be briefly checked by switching on and off repeatedly the load and monitor the voltage transients on an oscilloscope (there should be no oscillation on the output voltage).

Notes:

Only apply power to either one of the PoE input pairs or the auxiliary input supply, not at 2 or 3 inputs at the same time (although this should not result in damage to the board)