

Test Procedure for the NCP5007EVB Rev.4

ON Semiconductor®



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Table 1: Required Equipment

Dual Channel Oscilloscope	Digital Multimeter (4 digits)	Two Red Test Leads
Two Black Test Leads	DC Power Supply	Oscilloscope Probe
Current Probe		

Test Procedure:

1. Set the DC Power Supply to 3.6 V with a current limit of 500 mA and connect the leads into Vbat and GND.
2. Setup the current probe to measure the actual value of I_{in} from the power supply.
3. Put a jumper across the ISense connector (JP1), and turn on the device by putting another jumper across pins two and three of the ENABLE connector (S1).
4. The LEDs will light up, do not stare directly at them.
5. Using the multimeter, measure the voltage between FB (TP2) and GND. Nominal Voltage should be in the range between 170 to 230 mV.

6. Measure the voltage between Vout (TP3) and GND. Voltage should be 15.17 to 20.73 V.

7. Using the Vout voltage, find the calculated Iin using the following formula:

$$I_{in} = \frac{V_{out} * 0.02}{3.6 * 0.83}$$

8. The actual value of Iin from the current probe in step 2 should be within +/- 15% of the calculated value from step 7.

9. Verify the output switching waveform (Vsw) and the output ripple (Vout) from the data sheet using the oscilloscope.