Test Procedure for the NCP1341GEVB Evaluation Board

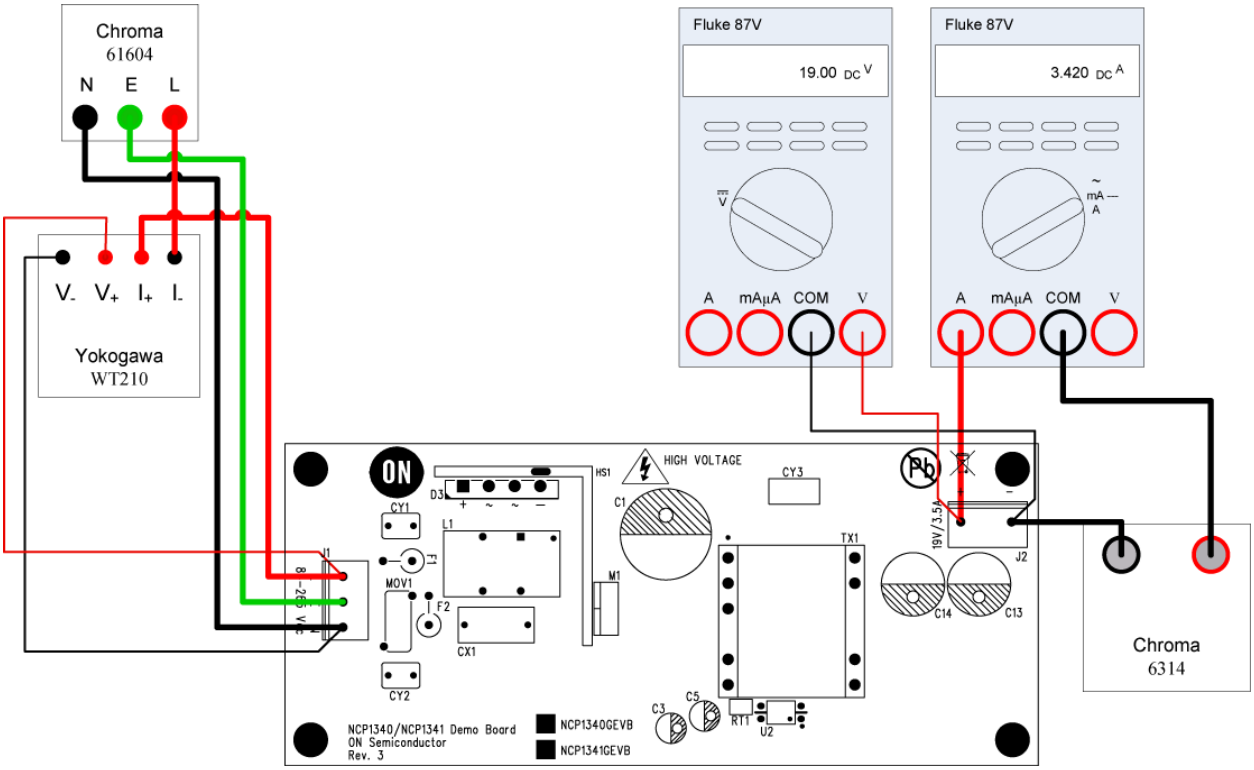


Figure 1: Test Setup

Table 1: Required Equipment

***Chroma 61604 AC Power Source**	***Yokogawa WT-210 Power Analyzer**	***Fluke 87V True RMS Multimeter**
***Fluke 87V True RMS Multimeter**	***Chroma 6314 Electronic Load**	**NCP1341GEVB Evaluation Board**

***Equivalent test equipment may be substituted.**

Test Procedure:

1. Connect the electronic load to the output labeled “19 V / 3.5 A”.
2. Connect one of the multimeters in series with the output and load and set it to measure current.
3. Connect the second multimeter to the output and set it to measure voltage.
4. Connect the ac power source and power analyzer to the terminals labeled “Input”. Set the current compliance limit to "Auto”.
5. Set the ac power source to 90 Vac / 60 Hz.
6. Set the electronic load to 3.42 A.
7. Turn the AC source on.
8. Allow the board to warm up for approximately 30 minutes.
9. Wait for approximately 1 minute, and then measure the output voltage (**V_{OUT}**) using the corresponding multimeter. Verify it is within the limits of Table 2.
10. Measure input power (**P_{IN}**) using the power analyzer.
11. Measure V_{OUT} and **I_{OUT}** using the corresponding multimeters.
12. Calculate efficiency (**η**) using the equation: $\eta = \frac{I_{OUT} \cdot V_{OUT}}{P_{IN}} \cdot 100\%$
13. Repeat steps 9-12 with the ac source set to 115 Vac / 60 Hz, 230 Vac / 50 Hz, 265 Vac / 50 Hz. Verify the results are within the limits of Table 2.
14. Turn off the ac source.
15. Since high voltage will be present on the bulk capacitor (C1) after the voltage is removed, use a dc voltmeter to verify the voltage is less than 30 V before continuing.
16. Disconnect the ac source.
17. Disconnect the power analyzer.
18. Disconnect the electronic load.
19. Disconnect both multimeters.
20. End of test.

Table 2: Desired Results

For 90 Vac / 60 Hz input,	**V_{OUT} = 19 ± 0.25 V**
	η > 91.5%
For 115 Vac / 60 Hz input,	**V_{OUT} = 19 ± 0.25 V**
	η > 92.5%
For 230 Vac / 50 Hz input,	**V_{OUT} = 19 ± 0.25 V**
	η > 92.5%
For 265 Vac / 50 Hz input,	**V_{OUT} = 19 ± 0.25 V**
	η > 92%