



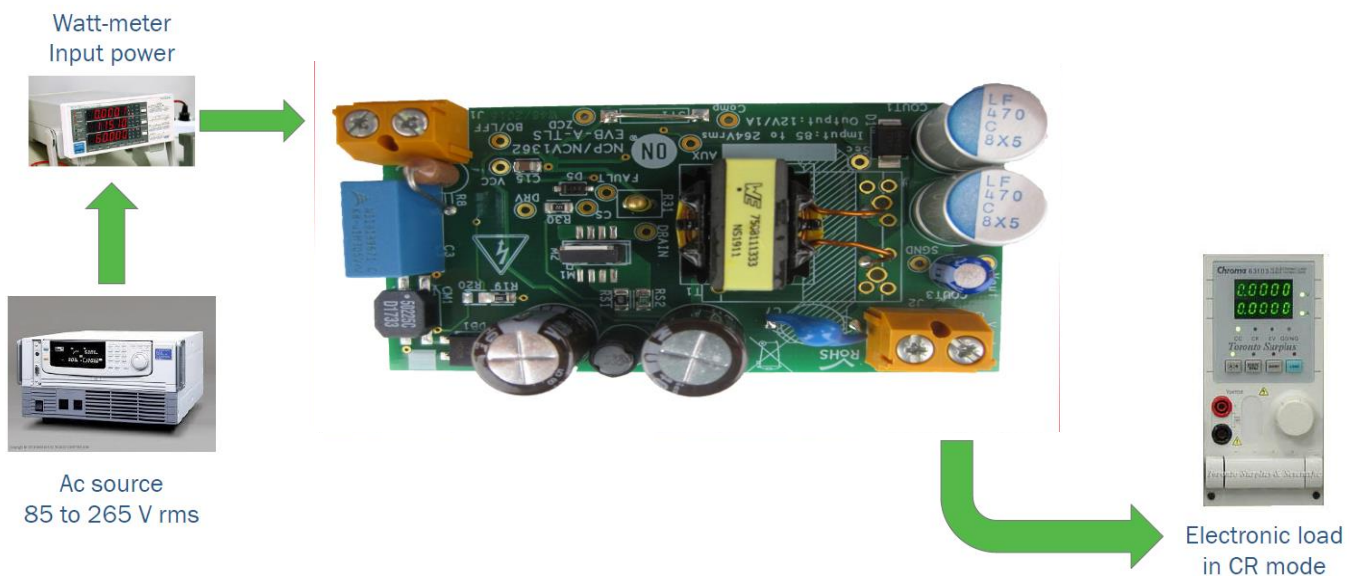
Test Procedure for the NCV1362WGEVB Evaluation Board

Needed Equipment

- The needed equipments are the following:
 - ✓ An ac source (85 to 265 V rms, 60 / 50 Hz), needed power is below 30 W
 - ✓ An input ac watt-meter, up to 30 W
 - ✓ A dc load with Constant Resistance mode absorbing up to 30 V, $V_{in(max)} < 30 V$, $I_{out(max)} < 2 A$
 - ✓ Usually, dc electronic load can display dc V and dc A. If not, an voltmeter and ammeter will be needed

- *If the load does not use local Kelvin sensors, then the output voltage must be measured at the board level, not at the cable ends.*

Connecting the Board for Testing





Test n° 1: No-load Standby

- Apply the input voltage 115 V rms to J1 connector
- Electronic load is disconnected

- ✓ Check that output voltage is around 12 V (12.3 V max)
- ✓ Verify that input power is below 30 mW

- Apply the input voltage to 230 V rms

- ✓ Input power must be below 50 mW

Test n° 2: Nominal Power

- Apply the input voltage 115 V rms to J1 connector
- Connect electronic load (in CR mode) to J2 connector
- Load is set to 12 Ω

- ✓ Check that output voltage is 12 V ($\pm 5\%$)
- ✓ Verify that input power is: $13\text{ W} < P_{in} < 15\text{ W}$

- Apply the input voltage to 265 V rms
- Repeat above steps



Test n° 3: Constant Current Regulation – 115 V rms

- Apply the input voltage 115 V rms to J1 connector
- Connect electronic load (in CR mode) to J2 connector

- Load is set to 8.8 Ω
 - ✓ Check that output voltage is 10 V
 - ✓ Check that output current is 1.14 A

- Load is set to 7 Ω
 - ✓ Check that output voltage is 8 V
 - ✓ Check that output current is 1.14 A

Test n° 4: Constant Current Regulation – 230 V rms

- Apply the input voltage 230 V rms to J1 connector
- Connect electronic load (in CR mode) to J2 connector

- Load is set to 8.8 Ω
 - ✓ Check that output voltage is 10 V
 - ✓ Check that output current is 1.14 A

- Load is set to 7 Ω
 - ✓ Check that output voltage is 8 V
 - ✓ Check that output current is 1.13 A



Test n° 5: UVP Protection in CC Regulation

- Apply the input voltage 115 V rms to J1 connector
- Connect electronic load (in CR mode) to J2 connector
- Load is slowly decreased from 12 Ω to 5 Ω
 - ✓ *Check that the controller stops switching when the output voltage drops around 7.6 V*
- Apply the input voltage to 265 V rms
- Repeat above steps