



## Test Procedure for the NCP2890GEVB Evaluation Board

### NCP2890:

- 1) If you can use the UPL (R&S) equipment, this is the most complete and recommended solution.
  1. Set  $V_p=5V$  to power supply connector
  2. Set an 8 Ohms load (resistance) on the output
  3. With the Upl, select only Channel 1 in Generator panel and Channel 1 in the Analyzer panel (be careful to be in floating mode)
  4. Connect Generator (Channel 1) to the input connector. Connect the Analyzer (Channel 1) to the load.
  5. Set a voltage sweep for Channel 1 (Generator) at 1kHz frequency between 0 Vrms and 1.6 rms
  6. In the analyzer panel select a THDN measurement (Trace A) and in the graph display select for trace B the Input rms value
  7. Save trace A and B in the .exp format and with Excel you can compare with the reference file in the attachment: X is the input signal, Y the THDN value and Y2 the RMS measurement. For info:  $P_{out}=(RMS)^2/8$ . The final graph is THDN vs.  $P_{out}$ .

Or,

- 2) If you can use only a Function Generator for the input signal:
  1. Set  $V_p=5V$  to power supply connector
  2. Set an 8 Ohms load (resistance) on the output
  3. With your Function Generator, set a sinewave signal at 1 kHz and 1.4 Vrms input signal with HI-Z. Note that if HI-Z is switched off, use 700 mVrms input signal.
  4. Place 2 oscilloscope probes on the output (differential measurement) and you should get a 2.8 Vrms output signal with a “perfect sinewave”. That is to say no clipping at the minimum and maximum of the sinewave.

This is the only test performed. You could also check the quiescent current. Place an 8 Ohms load, no input signal,  $V_p$  set to 5 V and you should measure around 2 mA.