

Test Procedure for the NCP2890 Demo 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 a 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 1 kHz frequency between 0Vrms and 1.6V rms
6. In the analyzer panel select a THDN measurement (traceA) 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 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 a 8 Ohms load (resistance) on the output
3. With your Function Generator, set a sinewave signal at 1kHz and 1.4Vrms input signal
4. Place 2 oscilloscope probes on the output (differential measurement) and you should get a 2.8Vrms 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 a 8 Ohms load, no input signal, V_p set to 5V and you should measure around 2mA.