

Wireless Subwoofer TI Design Tests

This system design was tested for THD+N vs. frequency at 5 watts and 30 watts and THD+N vs. power at 100 Hz. Both the direct analog input and the wireless systems were tested. All tests were conducted on a 4 ohm load with 24V power supply. At higher voltages, the TAS5624ADDEVM can achieve higher output power. See TAS5624A datasheet for expected results: <http://www.ti.com/product/tas5624a>

Figures 1-3 show tests on the direct analog input (non-wireless) system. This test consists of applying an analog signal directly to the wireless subwoofer board (via the on board ADC) and then outputting it with the TAS5624ADDEVM.

Figures 4-6 show tests done on the wireless system. The wireless test consists of applying an analog signal to input of the PurePath™ Wireless Development Kit (CC85xxDK), which wireless transmits the data (2.4 GHz) to the wireless subwoofer board (with CC85xx module attached), and then outputting it with the TAS5624ADDEVM.

Direct Analog Input (non-wireless) Test Results:

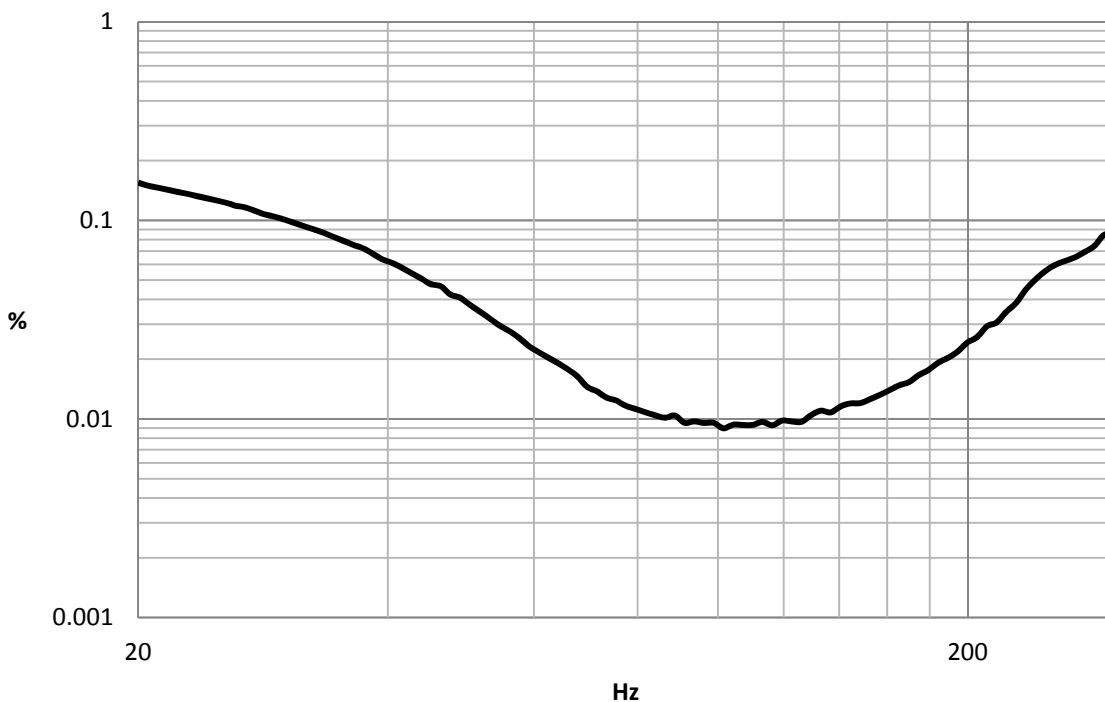


Figure 1 - THD+N vs. Frequency 5 watts

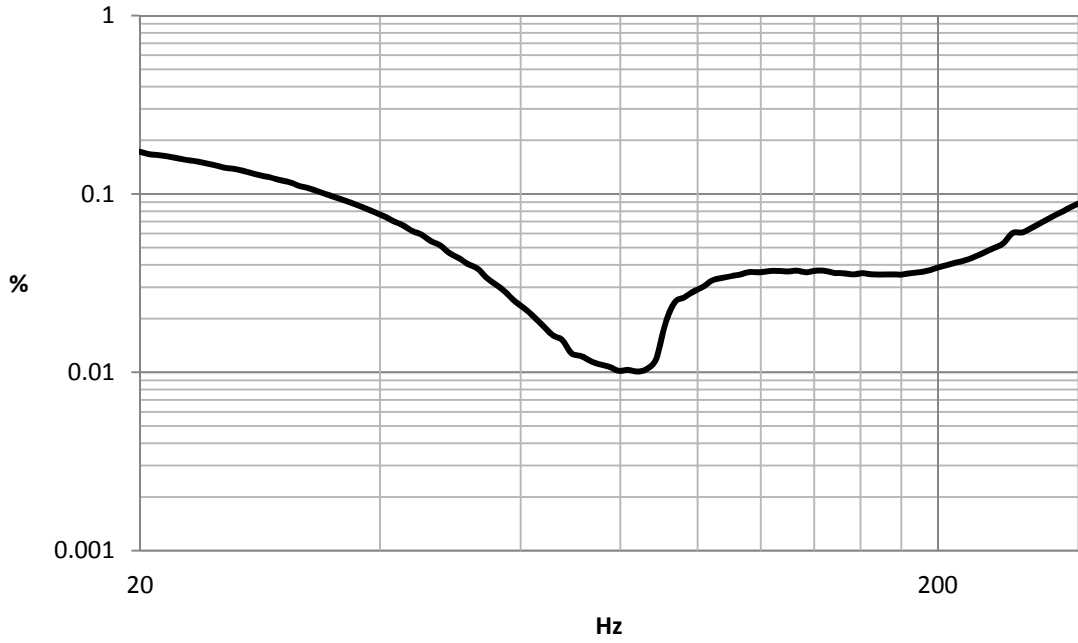


Figure 2 - THD+N vs. frequency 30 watts

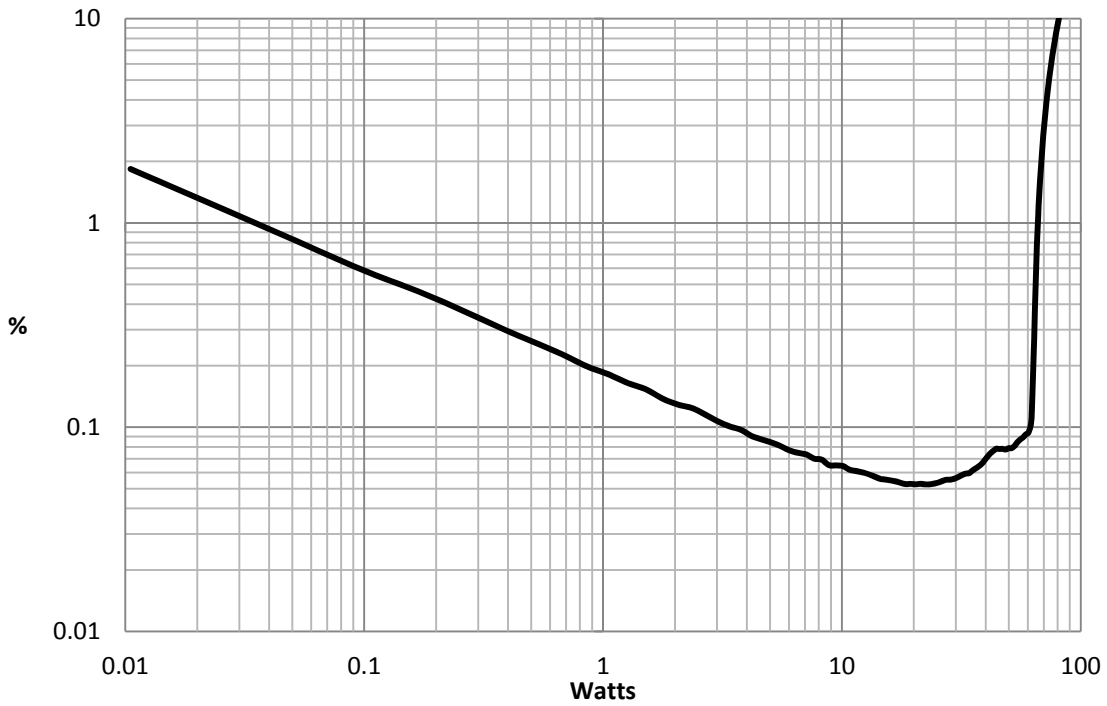


Figure 3 - THD+N vs. Power 100 Hz

Wireless System Tests Results:

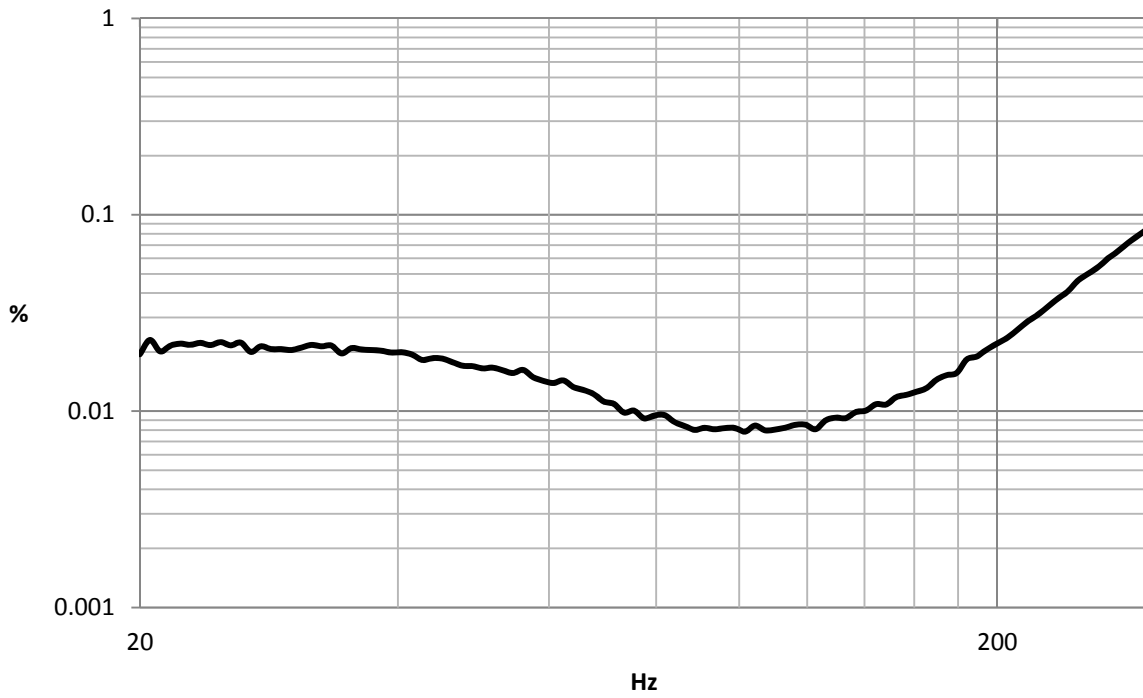


Figure 4 - THD+N vs. Frequency 5 watts

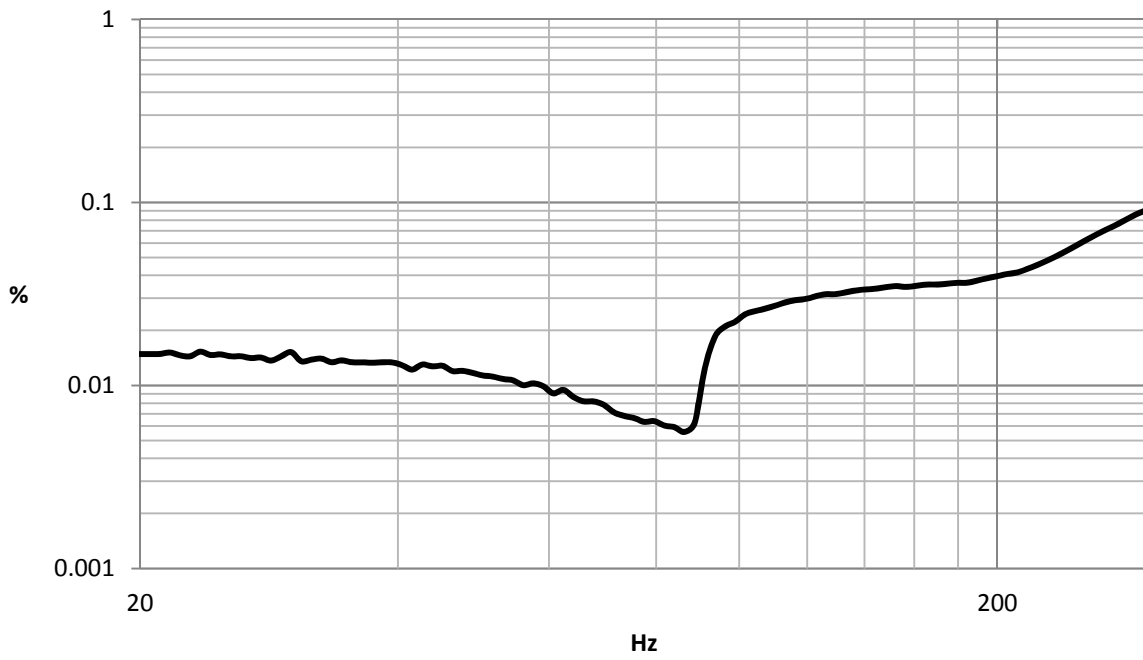


Figure 5 - THD+N vs. Frequency 30 watts

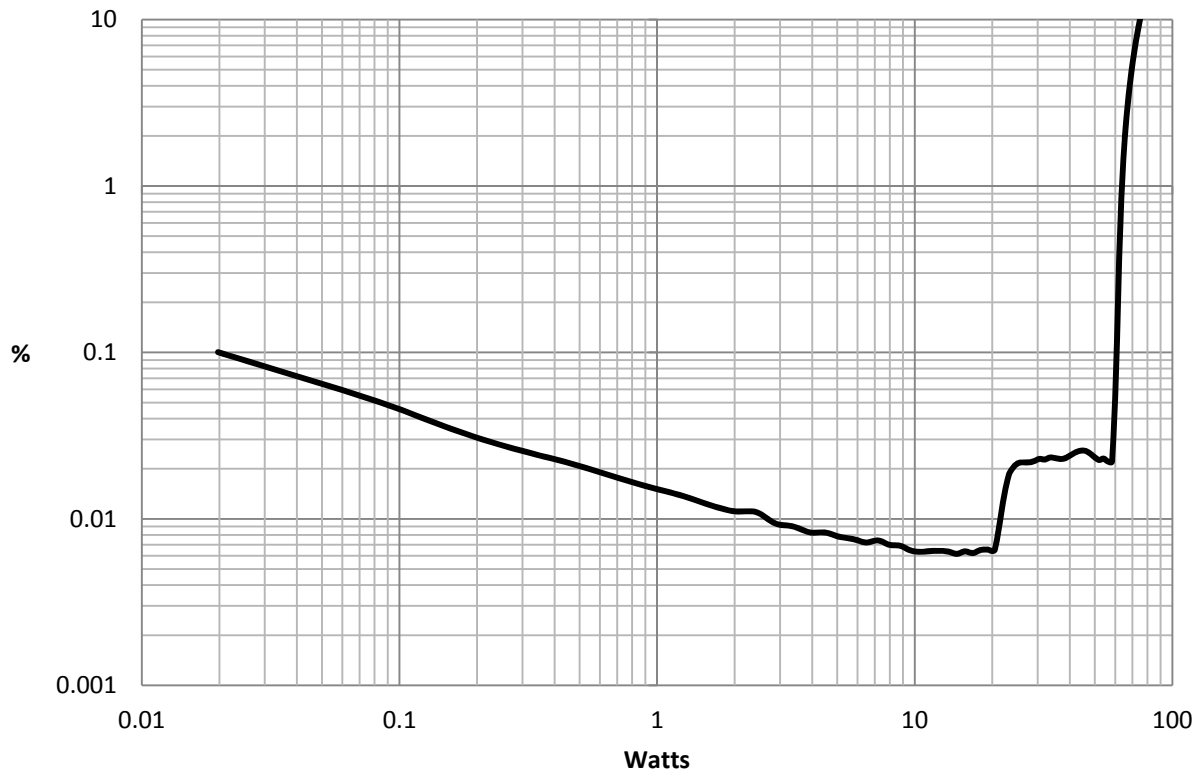


Figure 6 - THD+N vs. Power 100 Hz

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