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Declaration of Identity

I hereby declare that to the best of my knowledge the RF emissions and radio performance of the CC2500EM rev 3.0 Evaluation Module from Texas Instruments (TI) are fully in line with that of the CC2500EM rev 2.2, which has been tested at Nemko AS, Norway and passes all FCC Part 15.247 tests.

The difference between the rev 3.0 and rev 2.2 board revisions is that the form factor of the original NDK AT-41CD2 26 MHz can crystal (rev 2.2) has been replaced by the smaller Epson Toyocom FA128 26 MHz SMD crystal (rev 3.0) causing some very minor changes to the board layout around the crystal. These crystals have the same operating frequency (26 MHz), but the Epson Toyocom crystal has a wider temperature range (-40˚C to +85˚C vs. -30˚C to +70˚C), smaller form factor and improved frequency tolerance (±10 ppm vs. ±20 ppm) compared with the original crystal used at the CC2500EM rev 2.2. The load capacitors used differs – 16 pF for the NDK crystal vs. 10 pF for the Epson Toyocom crystal. As a consequence of this component change, no negative impact to the RF performance or emissions of the CC2500EM rev 3.0 Evaluation Module was expected vs. the tested CC2500EM rev 2.2.

The RF performance of the CC2500EM rev 3.0 has been thoroughly tested in the RF laboratory and anechoic chamber at Texas Instruments Norway. This testing was performed in order to explore potential unexpected and/or unwanted effects caused by replacing the external crystal. No negative effects were discovered and the test results were in line with the official NEMKO test results on rev 2.2. The output power and peak eirp was slightly lower for CC2500EM rev 3.0 obtained at TI, while the radiated receiver emissions is in line with that of CC2500EM rev 2.2 and the harmonics results show slightly improved suppression of the 2nd and 3rd harmonics compared to CC2500EM rev 2.2. Please see the separate CC2500EM Rev 2.2 vs. Rev 3.0 comparison document.

Based on this TI looks forward to a hopefully positive answer in terms of being able to supply the CC2500EM rev 3.0 to professional developers without further testing.

Yours sincerely

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