

FCC  
Federal Communications Commission

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***Request for the modular approval - FCC ID: ED9 LMX9820ASM***

Dear Application Examiner,

the Bluetooth module **LMX9820A** is seeking for FCC authorization as a modular transmitter. There is no reference oscillator and antenna installed on the module. DA 00-1407 require, that a transmitter module is defined as a complete RF transmitter, so that it must contain its own reference oscillator. In this particular case no own reference oscillator is on board, this leads to a "Limited Modular Approval"

The following requirements are fulfilled:

**1. The modular transmitter must have its own RF shielding**

The radio portion of the module is contained in its own RF shielding. See enclosed product photos in exhibit "L\_External photo\_LMX9820A".

**2. The modular transmitter must have buffered modulation/data inputs**

The module has a memory management unit inside of the IC. It buffers the data inputs from UART and USB terminal.

**3. The modular transmitter must have its own power supply regulation**

The IC contains an own voltage regulation. In case of changes in the supply voltage VCC (for example caused by temperature changes or other effects), the internal voltage will be stabilized.

**4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204c**

The transmitter shall only be used with the tested integral antenna or with an antenna that has less antenna gain. Requirements for the use of external antennas

are specified in Antenna design Exhibit "I\_antenna\_LMX5251\_2\_LMX9814\_20 AN" and " User manual"

**5. The modular transmitter must be tested in a stand-alone configuration**

The EUT was tested in a stand-alone configuration. The module was fixed in Development Kit during the test. See also test setup photos and test report (B\_4\_Natsc\_IRV\_0104\_BTT\_FCCa). For radiated measurements, the required distance of 10 cm was ensured by special connector.

**6. The modular transmitter must be labelled with its own FCC ID number**

The labelling information was specified in Exhibit D\_label\_information. If the module is installed inside of an end-product, OEM customer will be instructed to how to apply the exterior label. Relevant OEM labelling requirements present in the product user manual.

**7. The modular transmitter comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements.**

The EUT is compliant with all applicable FCC rules. Detail instructions are given in the product Users Guide

**8. The modular transmitter must comply with any applicable RF exposure requirements.**

The maximum measured power output is 1,629 mW (2,12 dBm), the maximum antenna gain is 0 dBi = numeric gain 1 (see also FCC test report - Exhibit Test report FCC Part 15.247 B\_4\_Natsc\_IRV\_0104\_BTT\_FCCa)

The maximum measured power output is 1.63mW (2.12 dBm), the maximum antenna gain is 0 dBi which is far below the low threshold defined as  $(60/f \text{ GHz}) \text{ mW}$  for  $d < 2.5 \text{ cm}$  in the TCB exclusion list.

For these devices no action is required.

Please contact us if you have any additional questions.

Best Regards

7layers AG