Thomas & Betts

DATE : 2009-05-11

Modular Approval Letter for the Modular RF Nexus Modem

FCC ID: W3BGC822843
Product Name: Modular RF Nexus Wireless Modem

This letter is to confirm the Modular RF Nexus Modem meet the FCC rules requirement 15.212. Single modular transmitters must meet the following requirements to obtain a modular transmitter approval:

1. The radio elements of this modular transmitter have their own shielding.
    1. All parts of the radio section, the transceiver IC, the crystal, the balun and the RF filter are inside a RF shielding. See the Figure 1 below.

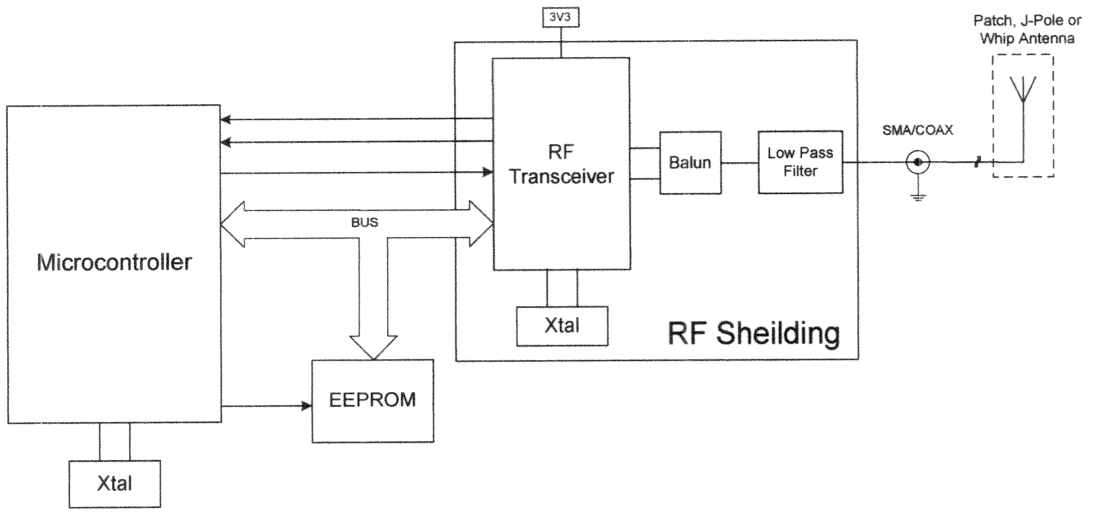

Figure 1

2. This modular transmitter has a buffered modulation/data inputs.
    1. The transceiver IC used for this Modular Nexus RF Modem have two 64 bytes data buffer. One 64 bytes buffer for the receiver section and one 64 bytes buffer for the transmitter section.

3. This modular transmitter has its own power supply regulation.
    1. Two regulators are used, on this Modular Modem, there is one for the 3.3V dc and one for the 1.8V dc

4. This modular transmitter complies with the antenna and transmission system requirements of §§15.203, 15.204(b) and 15.204(c).
    1. Due to different types of housing that the Modular Nexus RF modems will be installed in, the modem was submitted for the FCC approval (part 15.249) with three different antenna types.
        i. One external Whip antenna type for the metal housing. A SMA reverse polarity connector type is used for this antenna. See an example at Figure 2.
        ii. Two internal antenna types for the plastic and fiber-glass housing. One Patch and one J-Pole antenna could be used for other emergency lightning products depending of the mechanical restrictions. See Figure 2 for example.
    2. For these different antenna types, the coax cable could be soldered directly on the modular Nexus RF modem PCB board. (without connector)

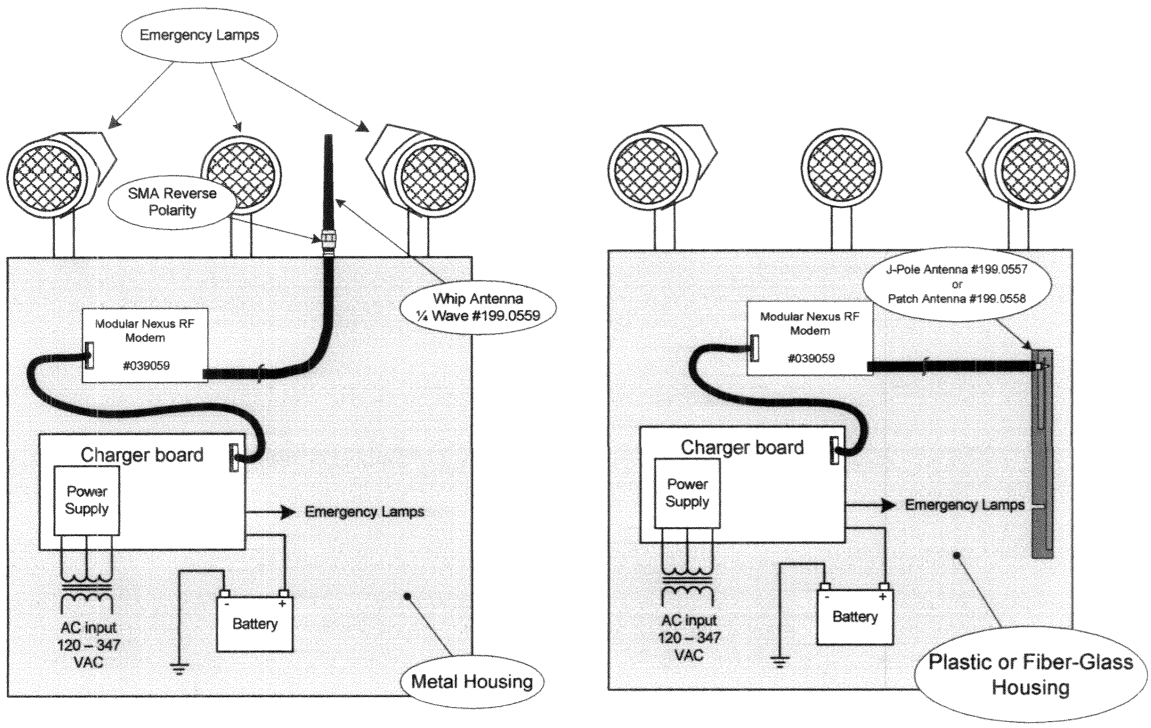

Figure 2

5. This modular transmitter was tested in a stand-alone configuration, i.e. not inside another housing.
    1. During the test, the transmitter module was powered by a battery via a 10 pins cable.
    2. The 10 pins cable provides connection for power and data between the mother board (charger) and the modular modem.
    3. The cable was submitted with a flat ferrite installed close to the modem card connector.

6. The modular transmitter has a permanently affixed label with the FCC ID number, IC ID number and the T&B part number. For example see Figure 3.

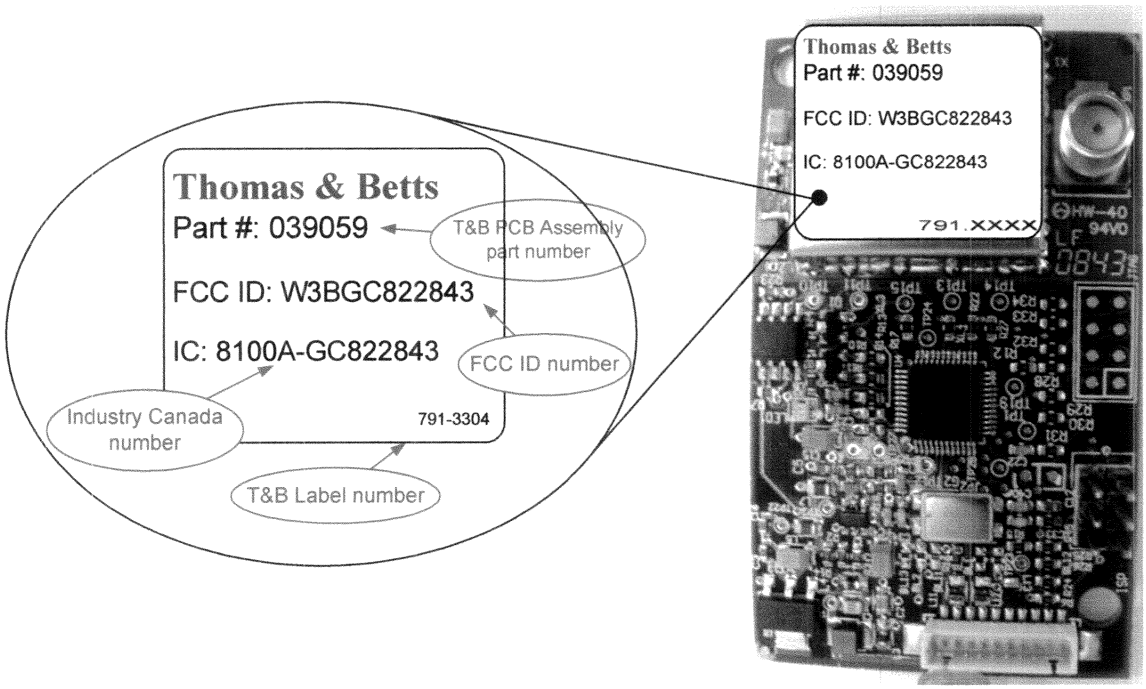

Figure 3

7. An operational description manual will be provided with each unit. A copy of this manual is available. See document "Modular Nexus RF modem Operational Description_Rev-2.pdf "

8. In the final configuration, the Modular Nexus RF Modem will respect the RF exposure requirements. This Modular Nexus RF Modem will be installed inside a plastic, fiber glass or a steel housing but only the module and antenna configurations submitted at the FCC lab will be used.

Dated this ***11*** ***Day of May*** ***20 09***

By: _____ ***Camille Descarries***
Signature ***Printed***

Title: *Team leader R&D*

On behalf of : ***(Thomas and Betts)***

Telephone: ***(514) 685-2277 (7263)***