Modular Approval for MURATA ELECTRONICS NORTH AMERICA, FCC ID: HSW-CCT900

Dear Application Examiner:

Regarding Part 15 Unlicensed Modular Transmitter Approval, the following requirements called out in FCC Part 15.212 are observed:

1. The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 is a completely self-contained radio which has its own RF shielding on the RF section. No other RF shielding is required or implemented.

2. The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with Part 15 requirements under conditions of excessive data rates or over-modulation.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 is a completely self-contained radio which modulates its own RF transmitter. It controls the data flow to the transmitter section compliant with Part 15 requirements.

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

The module itself contains power regulators to regulate the incoming power. The power supplies are shown in detail in the schematic and block diagram.

4. The modular transmitter must comply with the antenna and transmission system requirements of §§ 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a ‘‘unique’’ antenna coupler (at all connections between the module and the antenna, including the cable). The ‘‘professional installation’’ provision of § 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 has a unique antenna connector (U. FL) in diversity formation.

5. The modular transmitter must be tested in a stand-alone configuration, *i.e.*, the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in § 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see § 15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see § 15.31(i)).

The module itself was tested while connected to an evaluation board. The evaluation board was provided as a means to communicate with the radio through the serial connection. Nothing on the evaluation board contributes to the performance of the radio, therefore the radio is considered to have been tested in a standalone configuration.

6. The modular transmitter must be labeled with its own FCC ID number, and, if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording

such as the following: “Contains Transmitter Module FCC ID: XYZMODEL1” or “Contains FCC ID: XYZMODEL1.” Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 consists of a printed circuit board with a shield wall and lid. The lid bears a label which displays the FCC identification number. The CCT900 can be mounted in different devices and each device in which the CCT900 is installed will have the FCC ID number visible to the consumer.

7. The modular transmitter must comply with any specific rule or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 meets the specific requirements of FCC Part 15.247. All instructions necessary to operate the module are contained in the User Manual.

8. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.

The MURATA ELECTRONICS NORTH AMERICA model CCT900 complies with RF exposure requirements for Mobile Equipment.