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Date: October 11, 2002

Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Road Columbia, MD 21046

Subject: Modular Approval (MA) Attestation for Bluetooth™ Transceiver Module,
Model UGPZ1, FCC ID: CWTUGPZ1

Gentlemen:

We have the following attestation to the eight requirements described by FCC public notice DA00-1407 "Part 15 Unlicensed Modular Transmitter Approval".

1. RF shielding.

The model, UGPZ1 Bluetooth™ transceiver module (hereinafter "module") has an own RF shielding.

The shielding is made by metal and completely added to RF part during our manufacturing. It is not easily removed from the completed module.

Please refer to the assembly drawing and an external photograph.

2. Excessive data rates or over modulation.

The module circuit buffers all modulation and control of the transmitter.

The control of the transmitter is via data commands and software instructions contained within the module.

The transmitter is tested with the module operated at the maximum power. Data commands are reduced the power of transmitter but do not influence the modulation contents.

3. Power supply regulation.

The module has its own power supply regulator to insure compliance with part 15 requirements regardless of the quality or level of external DC supplying the module from the end product.

Please refer to the attached schematics and diagrams.

The regulator operates within the +4.4Vdc +/-0.8V range.

The test report shows the operation of the module across a voltage range of +3.6V to +5.2 volts.

4. Antenna and unique coupler requirements to antenna connector.

The on-board antenna is mounted on the printed wiring board of the module directly.

The provisions to address a connector that meets the unique coupler requirements of 15.203 of part 15 does not apply.

We specify the following meaning to "User Guide Information" inserted into the user manual to comply with 15.204 (C) of part 15 for end product.

(1) No modification of antenna will be required.

(2) The end product must be certified by FCC, if customer will use the unique antenna.

5. Stand-alone configuration

The module is set on the supporting jig to hold it, and with extended cable for the supply voltage and the interface of USB/UART.

The cable for USB/UART interface is similar to used within the personal computer.

The supporting jig consists of printed circuits without any components, such ferrite etc. which are affected to the radiation/conducted emissions.

The length of those cables is at least 10cm (four inches).

The above configuration allows the module to be placed for the radiation and AC conducted emissions measurements.

6. Label with own FCC ID number and exterior label.

The module is labeled with own FCC ID number. Please refer to the drawing of label and an assembly drawing for its location on the module.

Since the FCC ID number will not be visible when the module is installed inside the end product, there are instructions given to our customers on how to apply the exterior label.

Please refer to the "User Guide Information".

7. Compliant with any specific rule or operating requirements.

The module as manufactured is completely controlled by the onboard processor.

There are no influences to the operation of the transmitter the end user can induce that will operate the module outside of scope of the regulations.

We install the software that controls transmitter power, operating frequencies, hopping sequences and duty cycle. We also place the revision control for the software.

8. RF exposure requirements.

This module may be installed into any end product both mobile and portable applications.

Because the module only radiates very low power levels, it complies with RF exposure requirements.

According to Supplement C, Edition 01-01 to OET Bulletin 65, Edition 97-01 spread spectrum transmitters are categorically excluded from routine environmental evaluation because of the low power level, where there is a high likelihood of compliance with RF exposure standards.

Sincerely yours,

Signature:



Name: Masaaki Ueki

Title: Compliance Team Leader

Company: Alps Electric Co., Ltd Communication Devices Division