



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

December 12, 2006

Re: Request for Full Modular Approval for Mobile Application / FCC Part15C, Section 15.247
Digital Transceiver, Model AWS24S / FCC ID: UP2AWS24S.

To whom it may concern:

Modular Approval is being requested for this device. The following statements detail these requirements and the manner in which the device meets them. The module has its own complete RF transceiver with built in antenna and reference oscillator. The module meets all of the technical specifications applicable to the frequency band of operation.

1. RF Shielding

The module contains an internal shield (solid ground plane) as shown in the detailed film layer. The shielding is achieved by the ground plane of the module as well as the die and substrate ground to prevent any RF coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. In addition the traces are very short to minimize undesirable radiation. This can be seen on the detailed PCB film layer provided within this documentation.

2. Buffered modulation / data inputs

Data to the modulation circuit is buffered on the module via the WirelessUSB integrated circuit. Refer to the information regarding the on-board serdes (SPI) provided with the file "Data Sheet DSAWS24S" that details the theory of operation.

3. Power supply regulation

Power supply regulation is provided within the WirelessUSB integrated circuit that regulates the control voltage to the RF and data circuitry. The maximum allowable voltage that can be used in the chip is 2.4Vdc – 3.6Vdc. The variable input voltage is therefore a voltage regulator.

4. Antenna requirements

The module uses a mini coaxial connector for adaptation of an external antenna. A 2dBi coaxial dipole antenna was used for compliance testing as specifically sighted in the "User Manual UMAWS24S"

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

Test data contained in this application is for the device tested as a stand alone device. Radiated spurious emissions data demonstrating compliance with the requirements of Part 15 of the FCC rules for intentional radiators has been provided. Please refer to the test report for details.



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

The module itself is appropriately labeled with its own FCC ID. When the module is installed inside another device or in a casing, the exterior label will make reference to the enclosed module and its FCC ID. Refer to the label location and drawings contained within this application. The UMAWS24S User Manual contains specific references for exterior end product label requirements, including the use of the wording "Contains Transmitter Module FCC ID UP2AWS24S".

7. Operating requirements

The module has no serviceable parts. The Digital Electronic Device manufacturer has control to the module via the serial data for data transmission modes and data rates as well as predefined output power settings. This can be seen in the "Data Sheet DSAWS24S" provided.

8. RF Exposure requirements

The module meets the requirements for a portable device as per FCC RF exposure requirements and requires a separation distances of 20cm between the radiating structure and human as reflected in the module's UMAWS24S User Manual.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne Embree", is written over a horizontal line.

Wayne Embree
Design Services Manager
Artaflex Inc.