



Date: 7th July 2010

Gregory Czumak
PCTEST Engineering Laboratory, Inc.
6660-B Dobbin Road
Columbia, MD 21045

Re: Correspondence Number AZ4100814 with FCC ID: AZ492FT7041
Confirmation Number: Y1007020814-15

Dear Mr. Czumak;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 6TH July 2010 request for information in Correspondence Number AZ4100814.

Q1. Please identify the exact location of the statement in the User's Manual required by Section 15.21. If that statement is not present, please revise the manual to include it.

R1. Please see page 12 of 50 "RF Safety Booklet". See attached.

[Changes or modifications made to this product, not expressly approved by Motorola, will void the user's authority to operate the equipment", per FCC Rule Part 15.21.](#)

Q2. Please revise the block diagrams on pp. 2 and 3 of the BLD document to include the clock/oscillator/XTAL values.

R2. Enclosed please find revised block diagram on page 3. There is no clock/oscillator/XTAL is involved on page 2.

Q3. The FCC ID label shows the FCC DoC logo. Because the EUT is designed for exclusive vehicular use, the digital circuitry is exempt from authorization requirements, per Section 15.103, thus, there are no devices in the EUT subject to DoC. Please remove the DoC logo from the FCC ID label and resubmit the label.

R3. Please see revised label attached.

Q4. Please submit Operational Descriptions for both the WiMAX and DTS (WiFi) transmitters that describe the functionality of their RF sections (how RF is generated, what modulation is applied, how are levels controlled, how are spurious emissions attenuated, etc.).

R4. See attached for a revised Operational Description.

Q5. The schematic diagrams appear to only show the antenna connections. Please submit complete schematics for the EUT.

R5. See attached for revised Schematics.

Q6. The EUT utilizes 2 antennas for WiMAX- is MIMO operation employed? If so, please verify whether MIMO operation uses spatial multiplexing, in which elements are always driven incoherently at each frequency, or not, and, if not, please include any required directional array gain calculations with the reported antenna gains.

R6. The WiMAX in EUT is actually MISO, multiple input and a single output. This means that device has two receivers and one transmitter. This transmitter can transmit either with Antenna 1 or Antenna 2.

Q7. Although 2 different antennas are listed as available for the DTS (WiFi), it appears that only one can be used at a time, thus precluding MIMO operation for the DTS. Please confirm.

R7. In WiFi mode there is only one antenna port, the user can purchase one of two part numbers as described in the User Manual.

Q8. In the WiMAX EMC report, it appears that conducted output power, occupied bandwidth and bandedge measurements were not performed on all 4 of the EUT's emission types (QPSK and 16QAM, 5 and 10 MHz bandwidths). All 4 of these must be listed on the grant of certification with their own line entry, thus, this data is required. Please submit this data for all 4 of the EUT's WiMAX emissions.

R8. On Exhibit 6c, Test Report MOT310510 Section 3.4, noted that the worst case results is determined for applicable modulation types and data rates. Pre-scan has been conducted to determine the worst-case.

Q9. In the WiMAX EMC report, please confirm that spurious radiated and conducted emissions were investigated in all operating modes (both modulations, both bandwidths) and that the data submitted represents the worst-case results.

R9. On Exhibit 6c, Test Report MOT310510 Section 3.4, noted that the worst case results is determined for applicable modulation types and data rates. Pre-scan has been conducted to determine the worst-case. Repeat from R8.

Q10. In the DTS (WiFi) EMC report, data is provided for each test only at certain specific data rates. Please confirm that all data rates were investigated for these measurements, and that the data submitted represents the worst-case results.

R10. On Exhibit 6c, Test Report MOT310510 Section 3.4, noted that the worst case results is determined for applicable modulation types and data rates. Pre-scan has been conducted to determine the worst-case. Repeat from R8.

Q11. The MPE calculations use a 46% duty cycle for WiMAX operation (which differs from the 27% and 32% duty cycles used in the EMC report). Where does this value come from? Is this a source based duty cycle? Please justify this value and its usage in the MPE calculations.

R11. This is a source-based duty cycle and the duty cycle is pre-determined by the base station.

Please contact me at (954) 723-5793 if you require any additional information.

Sincerely,

/s/ Mike Ramnath (signed)

Manager, Regulatory Compliance

Email: Mike.Ramnath@motorola.com