



Date: 13<sup>th</sup> March 2007

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

Re: Correspondence Number AZ40662 with FCC ID: AZ489FT7027.  
Confirmation Number: 1610110661/0663

Dear Mr. Czumak;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 19<sup>th</sup> October 2006 request for information in Correspondence Number AZ40662.

Q1: The FCC requires that SAR system validation tests be performed with brain tissue (not body). Please provide such validation results for each day that the EUT was tested at the head and on the body.

R1: According to IEEE Std 1528-2003; Section 8.2 - System check:  
*The purpose of the system check is to verify that the system operates within its specifications at the device test frequency. System check is a simple check of repeatability to make sure that the system works correctly at the time of compliance test; it is not a verification of the system with respect to external standards.*

According to IEEE std 1528-2003; Section 8.3 - System validation:  
*The system validation procedure evaluates the system against reference SAR values and the performance of probe, readout electronics, and software...*  
And  
*System validation should be performed annually, or when a new system is put into operation, or whenever modifications have been made to the system...*  
And  
*...The system validation must be performed using head tissue-equivalent liquids...*

According to FCC Supplement C, OET Bulletin 65 (Edition 97-01, SAR MEASUREMENT SYSTEM DESCRIPTIONS AND REQUIREMENTS (page12) :  
*The SAR measurement should usually be verified daily when SAR measurements are performed....It is recommended that a flat phantom and a half-wave dipole match to the tissue medium be used to verify the accuracy of SAR measurement systems...*

Therefore, the system validation requires to be performed annually only, not daily. Motorola N&E EME lab has performed the system validation annually using applicable simulated head tissue as indicated in IEEE std 1528-2003. The results for the system validations are indicated in the Appendix D. These

system validation results for the test systems are evaluated against the reference SAR values indicated in the IEEE std 1528-2003.

To verify that the system operates within its spec at the device test frequency, the system check targets are set yearly as follow:

Within the same day of the *system validation* is done, the lab has performed the measurement for the same dipole using the applicable simulated body tissue. This result and the system validation result are set as targets for the daily *system check* (we also called *system performance check*).

The daily system check results indicated in this report are within +/- 10% of the applicable *system check* targets.

- Q2: Please provide worst case SAR plots for left and right head touch and tilt for both 835MHz and 1900MHz operation, as well as for body worn for 835MHz and 2450MHz (WLAN) operation. Please do not submit hand- SAR results.
- R2: [Please see a new SAR report from PC TEST ENG, 02/142007-02/16-2007.](#)
- Q3: Please verify that multi (transmit) slot GPRS operation is not available.
- R3: The radio includes configuration SW, which called Flex.  
In order to be on the safe side GPRS radio group defined radio part number customized to HC700G by the Flex. In the HC700G customized flex, the Europe bands as well as the EDGE are blocked.
- Exhibit 10 was revised accordingly to the g24 part number and is attached.  
[Also, a new SAR Report is attached.](#)
- Q4: The output power levels listed in the Operational Description, the User's Manual, pages 1 and 4 of the first SAR report and page 1 of the second SAR report do not match the actual measured values (WLAN: 0.193 W, 835GSM: 0.979 W, 1900GSM: 1.905 W). Please address these discrepancies.
- R4: [The discrepancies, as described above, were corrected. See amended Users Manual, Test Report.](#)
- Q5: It appears that schematics for the WLAN were not submitted- please do so. If they were, please indicate precisely where they are located.
- R5: Attached please find revised Ex 5
- Q6&R6: Please address the following 4 requirements for frequency hopping spread spectrum transmitters (Bluetooth) from Section 15.247(a) (1):
- a. Is the hopping sequence pseudorandom? Yes
  - b. Are all channels used equally on average? Yes
  - c. Does the receiver input bandwidth approximately equal the transmit bandwidth? Yes
  - d. Does the receiver hop in sequence with the transmit signal? Yes
- Q7: Please address Sections 15.247(g) and (h) for the Bluetooth

transmitter.

- R7: This is a Frequency Hopping Spread Spectrum radio modem that works in the 2.4GHz band and provides connectivity at a short distance (up to 10m). The channel access technology is a piconet of up to eight devices that uses time slots. The maximum raw data rate is 1Mbit/s. The modulation type is GFSK. Also, in accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247(g) and (h) when the transmitter is presented with a continuous data (or information) stream.
- Q8: It appears that the required body-worn SAR warning statement is not in the User's Manual. Please address.
- R8: There is pointer into the user manual, which is referring to the Safety Booklet. User Manual p# 8 "General Information leaflet, Motorola publication Number 6802979C37". The Safety booklet is attached.
- Q9: Please verify that the FCC ID label will be clearly visible at the time of purchase (i.e., the battery will not be installed), as required by the FCC Rules.
- R9: The customer receive the terminal while the battery is uninstalled.
- Q10. The schematics submitted are illegible. Please resubmit with a higher resolution.
- R10: Attached please find revised Ex 5.
- Q11: Two items in the EMC report appear to be past their cal due dates. Please address.
- R11: Typo - Please see revised exhibit 6
- Q12: FYI: in the future, please submit separate test reports for Bluetooth, WLAN, and Part 22/24, as required by the FCC.
- R12: Will take the FYI under consideration for future filings.
- Q13: FYI: in Section 3.4 of the EMC report (p.20/158), pursuant to Section 15.247(a)(1)(iii), there is no specific 20 dB bandwidth limit for devices operating in the 2.4 GHz band.
- R13: Please see revised Ex6.
- Q14: FYI: the power spectral density for Section 15.247 DTS devices should be measured with a sweep = span/ 3 kHz.
- R14: Please see revised Ex6

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

Sincerely,  
*/s/ Mike Ramnath (signed)*  
Manager, Regulatory Compliance  
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