To: William Graff
From: Andy Leimer
aleimer@fcc.gov
FCC Equipment Authorization Branch
Re: FCC ID: O6YUTS-708SY

Applicant: UTStarcom, Inc.
Correspondence Reference Number: 3262
731 Confirmation Number: TC244459
Date of Original Email: 12/12/2001

Subject: Information Request

EMC - Please provide the following information:

1) This is a PCS phone that communicates with micro-base stations - the emission designator (DXW) is used for 800 MHz by FCC convention. It is unclear if the device is a PCS/GSM 1900 (Emission Designator GXW) or PCS/TDMA (Emission Designator F9W). Is the PCS device GSM 1900 or TDMA? Correct the Grant emissions designator accordingly.

This device is a PCS/TDMA 1.9GHz. I though, per convention, that F9W was used for PCS/CDMA. It is my understanding that the designator DXW is currently used for PCS/TDMA in the 800MHz and 1900MHz band. We would like to use DXW for consistency with previously granted product of the same type.
122801 System Overview.pdf
122801 Operational Description.pdf
122801 PAS Specifications.pdf

2) The Parts List is unreadable and contains too much parts information.
Submit a revised parts list for the transmitter only. It should contain the major components of all RF circuits.

Revised Parts List has been uploaded
122801 Parts List 1.pdf
122801 Parts List 2.pdf
122801 Parts List 3.pdf
122801 Parts List 4.pdf
122801 UTS-708SY T-R Block Diagram.pdf

3) Submit the Tune-up Procedure.
Tune up Procedure has been uploaded.
122801 UTS-708SY Tune-up Procedure.pdf

4) The Grant condition indicates that the power is Average EIRP. The Test Report indicates that a Roberts Dipole was used for the EIRP measurement. A Roberts Dipole when used for the substitution method would yield ERP power. The use of a horn antenna would give EIRP power results when using the substitution method. In addition, it is my understanding that a Robert's Dipole is only good up to 1 GHz for calibrated measurements. Describe what is meant by average EIRP as stated in the Grant condition. Further explain the EIRP measurement procedure. Note: Peak EIRP should be listed on the Grant.

The test equipment list was incomplete and it was revised. A double ridge antenna was used to perform substitution measurement above 1 GHz. Average EIRP level means that the EUT reference level was measured (substitution method) using a HP power meter (diode sensor) in time-gated TDMA mode with a BW up to 300kHz. The test report was revised to list the Peak EIRP of 0.129 Watt.

5) The Operation Description lists the Peak Power as 80 mW for private mode. The Test Report lists EIRP as 16.1 mW. Explain this discrepancy. What does "Private" mean?

The test report lists EIRP as 16.1mW average. Peak EIRP is 129 mWatts. The "private" word does not have any use in the US. It is used in Japan only to dissociate public from private usage and it was removed from the operation description. The operation description lists output power as conducted peak power 80 mW.

SAR - Please provide the following information:

1) The Test Report timing plots indicate that the Duty Factor is 0.112 (Duty Factor = 0.560 ms / 5.0 ms). Crest Factor = 1/DF or 8.93. This would indicate that this is possibly a GSM phone. The SAR plots were tested using a Crest Factor of 3 (Typical for PCS/TDMA). Repeat all SAR measurements using the 8.93 Crest Factor OR adjust the data to correct for the use of an incorrect Crest Factor. If the data is adjusted provide a justification and explanation.

122801 SAR Amendment Cover Letter.PDF
122801 UTS-708SY SAR Test Report Revision.PDF

2) Liquid depths during testing. If available please provide Z-axis scan SAR data for the highest SAR test points.

122801 SAR Amendment Cover Letter.PDF
122801 UTS-708SY SAR Test Report Revision.PDF

3) Probe conversion factors used for muscle tissue SAR measurements.
Certified conversion factors were only found for head simulating liquid in the posted exhibits. Please also provide a statement justifying any cases where the probe calibration was performed at different frequencies and with different tissue parameters than used for testing. Please include an analysis of the expected variation on the SAR value. Alternatively please provide new SAR data using a probe calibrated at corresponding test frequencies and with test tissue dielectric parameters.

122801 SAR Amendment Cover Letter.PDF
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4) Ambient and liquid temperatures during all tests and validations. Per Supplement C Appendix B I.

122801 SAR Amendment Cover Letter.PDF
122801 UTS-708SY SAR Test Report Revision.PDF

5) Recalculated SAR values and SAR plots for all test points using measured liquid parameters if possible without additional testing. Targets parameters were apparently used as noted on the provided SAR plots. If not possible please provide analysis showing the expected effects on the SAR values if the measured parameters had been used.

122801 SAR Amendment Cover Letter.PDF
122801 UTS-708SY SAR Test Report Revision.PDF

6) Confirmation that the phantom used is 2 mm thick. It is understood that some phantoms SPEAG sent out were actually 3.2 mm thick.

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7) A revised User's Manual with the RF exposure information removed.
This device was tested in the body-worn configuration at 0 cm separation distance and thus does not require any User's Manual statements for RF exposure.

The safety information provided in the user's manual are based on OET 65C rev. 01-01 page 41 item 2. We believe that, although the measured SAR level are low, the tested configuration at 0 cm distance from the back of the phone, does provide provisions for ensuring compliance with belt-clips having metal parts or when the phone is used with the keypad facing the body (0cm) in body-worn use.
We would like to keep the current general RF exposure information listed in the user's manual.

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122801 UTS-708SY SAR Test Report Revision.PDF