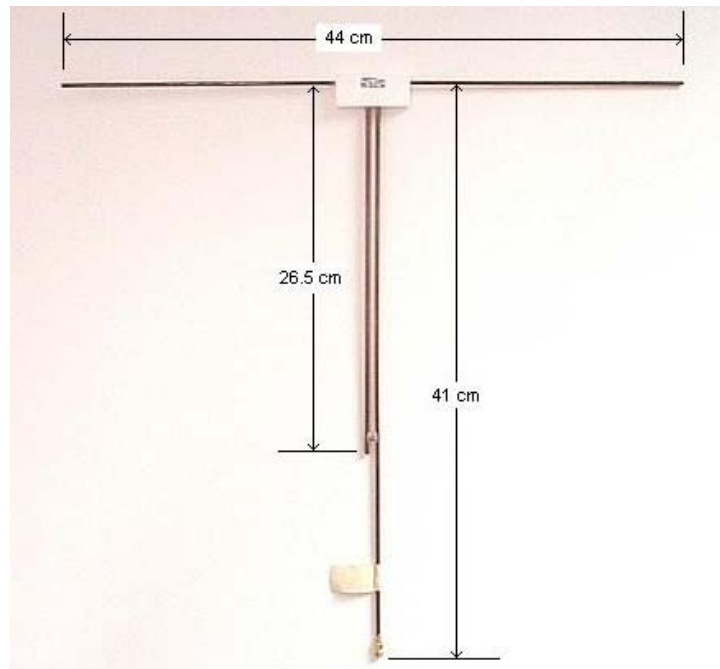


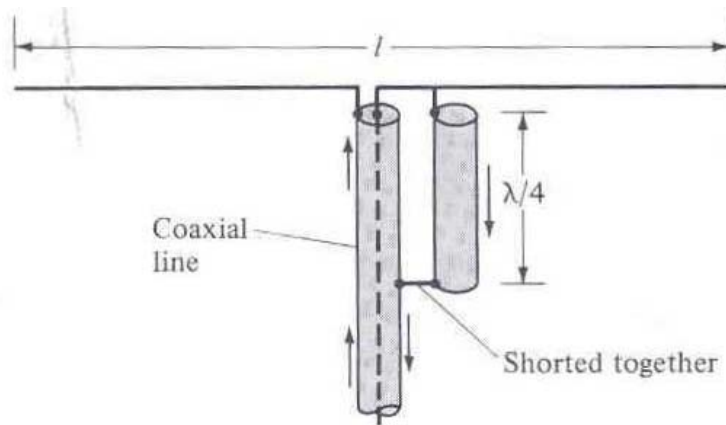
**CGISS EME response to FCC correspondence 22775
(HT1250LS 200MHz; FCC ID ABZ99FT3080)
5/17/02**

Q5. Additional descriptive information of the SAR measurement system to meet Supplement C Appendix B part II recommendations. Please includes details of the E-field probe, scan procedures, calculations, Reference dipole, robot and computer. Please include photographs and drawings of the dipole used for verification.

R5. SPEAG's DASY3™ measurement system with software revision 3.1d was used to assess S.A.R. performance of the HT1250LS radio. The computer system used was a Dell Optiplex GX110 666 megahertz Intel Pentium III computer with 512 megabytes of memory. The measurement setup and procedures are consistent with the guidelines recommended by SPEAG. CGISS EME Laboratory utilizes Stäubli RX90L robots and ET3DV6 E-Field probes. Please reference the following website URLs for detailed specifications of the robot and the E-Field probe: http://www.speag.com/robot_acc.html, <http://www.speag.com/probes.html>. For additional information on the E-field probe and calculations used to determine the S.A.R. results please refer to the attached IEEE paper entitled "IEEE-DosiProbes.pdf". A description of the scan procedures can be found in section 5.2 of the submitted report.

The requested information regarding the reference dipole used for system performance check is presented below.





(c) $\lambda/4$ coaxial balun (1 : 1)

C.A. Balanis, *Antenna Theory: Analysis and Design*, John Wiley & Sons, Inc., N.Y., 1997, pp. 481.

Q6. Revised uncertainty table using the IEEE P1528 draft template.

R6.) Per item #13 of the *OET 65 Supplement C EAB Part 22/24 SAR Review Reminder Sheet 01/2002* handed out during the February and April, 2002 TCB council meeting attached herein as “SARremindersheet.doc”, the tabulated total measurement uncertainty is nominal until the IEEE Std 1528 is completed. Much of the required information has to be supplied by the equipment manufacturer, which has not yet been officially supplied. Other items are based on results of studies currently underway. The total measurement uncertainty of $\pm 12\%$ ($K=1$) was stated in section 6.0 on page 15 of the original filing.

Q7. Justification for the system validation performed. Tissue parameters noted on the validation SAR plots do not appear to be within 5% of the stated values required on the certificate dated August 24 2001. Please include an analysis of the expected effect on SAR for using the incorrect tissue parameter. Also, if possible please provide validation scans taken at 835 MHz in the same time frame as these test were made correlating to the SPEAG certificates provided.

R7. The target values presented on the certificate dated August 24 2001 states a dielectric constant of 58.2 and conductivity of $0.92 \pm 5\%$ at 300MHz for body. The S.A.R. plots presented in Appendix B of the submitted report shows dielectric constant values for body tissue ranging from 55.4 to 56.3 and conductivity values ranging from 0.91 to 0.95. These results are within the $\pm 5\%$ tolerance allowed. The table below presents a summary of the % delta from the target.

Date	Measured		Target		% Difference from Target	
	Permittivity	Conductivity	Permittivity	Conductivity	Permittivity	Conductivity
2/1/2002	55.5	0.92	58.2	0.92	4.64	0.00
2/4/2002	55.4	0.91	58.2	0.92	4.81	1.09
2/5/2002	55.4	0.91	58.2	0.92	4.81	1.09
2/6/2002	55.4	0.93	58.2	0.92	4.81	-1.09
2/7/2002	56.3	0.94	58.2	0.92	3.26	-2.17
2/8/2002	56.2	0.95	58.2	0.92	3.44	-3.26
2/11/2002	55.8	0.93	58.2	0.92	4.12	-1.09
2/12/2002	55.6	0.91	58.2	0.92	4.47	1.09

The requested system performance check scan at 835MHz can be found on page 41 of 61 in the submitted report.

Q8. To validate SAR scaling performed please provide power versus time plots (30 minutes) using the battery resulting in the highest SAR configuration. Also, provide a "focused" zoom SAR scan for the highest SAR configuration using the shortest possible scan time.

R8. The requested power versus time plot using the battery resulting in the highest S.A.R. configuration is presented below.

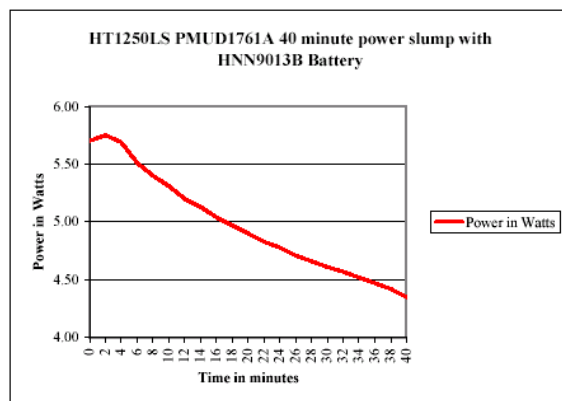
HT1250LS 200MHz Product Model #: PMUD1761A

Date 5/7/2002
Performed By liam David Hopper

Power slump data

Radio ID	Battery #
WQDVT040	HNN9013B

Time	Power (watts)
0	5.70
2	5.75
4	5.69
6	5.51
8	5.40
10	5.31
12	5.20
14	5.13
16	5.04
18	4.97
20	4.90
22	4.83
24	4.78
26	4.71
28	4.66
30	4.61
32	4.57
34	4.52
36	4.47
38	4.42
40	4.35



The requested “focused” zoom S.A.R. scan, the system performance check scan, as well as the associated Z axis scans for the highest S.A.R. configuration using a cube scan time of 6 minutes are presented below.

HT1250LS 200MHz; Test Date: 05/15/02

Motorola CGISS EME Lab

Model #: PMUD1761A SN:WQDVT040

Run #: Ab_R1_020515-02

TX Freq: 219 MHz

Sim Tissue Temp: 21.7 (Celsius)

Run Time: 6 min for cube 2

Start Power: 5.84 W End Power: 5.72

- Accessories -

Antenna:HKAD4000A Battery Kit: HNN9013B

Carry: belt clip HLN9714A Audio Acc. HLN9716B &HMN9725D

- Comments-

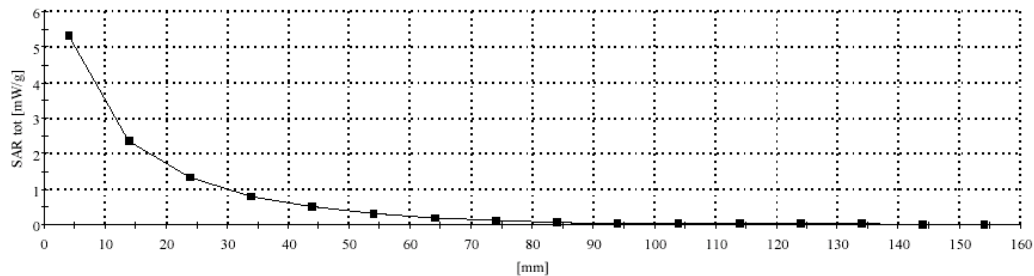
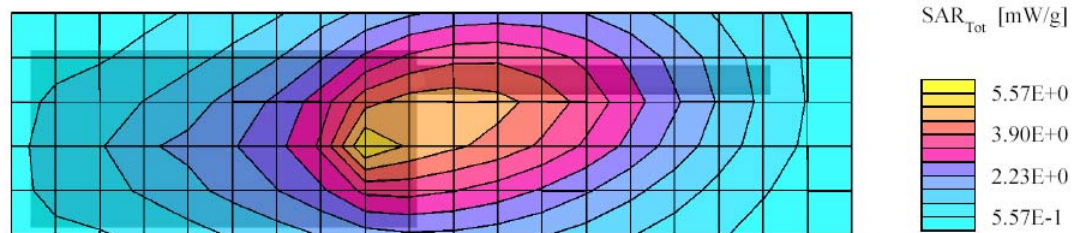
Flat Phantom; Device Section; Position: (90°,0°);

Probe: ET3DV6 - SN1547; ConvF (7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC

Body_219MHz: $\sigma=0.86$ mho/m $\epsilon=57.7$ $\rho=1.00$ g/cm³; DAE3: 401-V1 DAE Cal Date: 10/15/01

Cubes (2): SAR (1g): 5.29 mW/g ± 0.06 dB, SAR (10g): 3.50 mW/g ± 0.05 dB, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 123.0, 31.5, 4.0



CGISS Dipole 300MHz SN 300-002; Test Date: 05/15/02

Motorola CGISS EME Lab

Model #: CGISS 300 SN: 002

Run #: Sys Perf_R1_020515-01

TX Freq: 300 MHz

Tissue Temp: 21.7 (Celsius)

Start Power: 250mW

- Comments-

Target at 1W is 2.93 (including drift) (1g)

SAR calculated is 2.91mW/g, Percent from target (including drift) for 1g is 0.5%

Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: $\sigma = 0.93$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: SN401-V1 DAE Cal Date: 10/15/01

Cube 7x7x7: SAR (1g): 0.725 mW/g, SAR (10g): 0.486 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 138.0, 31.5, 4.0

Power Drift: -0.02

