



CGISS EME Test Laboratory
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S.A.R. EME Compliance Test Report
Part 1 of 2

Date of Report: May 9, 2003
Report Revision: Rev. A
Manufacturer: Motorola
Product Description: UHF/FRS/GMRS 22 channel; w/
display; 1W
FCC ID: K7GT59XX
Tested Model(s): HCUE1102A
Certified Model(s): HCUE1102A

Test Period: 4/4/03 – 4/8/03
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Global EME Regulatory Affairs Liaison

Note: Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report.

Signature on File

Ken Enger
Senior Resource Manager, Laboratory Director, CGISS EME Lab

5/9/03

Date Approved

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REVISION HISTORY

Date	Revision	Comments
5/8/03	O	Pilot Results
5/9/03	A	Revised text in section 4.1. Corrected error in the test position information reported within the “compliance assessment at the face...” table in section 7.1. Corrected error in the formula in section 7.3

1.0 Introduction

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (S.A.R.) measurements performed at the CGISS EME Test Lab for model number HCUE1102A, FCC ID: K7GT59XX.

The applicable exposure environment is General Population/Uncontrolled.

The test results included herein represent the highest S.A.R. levels applicable to this product and clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 mW/g per the requirements of 47 CFR 2.1093(d).

2.0 Reference Standards and Guidelines

This product is designed to comply with the following national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Terminal frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Terminal communications (Electromagnetic Radiation - Human Exposure) Standard 2001
- ANATEL, Brazil Regulatory Authority, Resolution 256 (April 11, 2001) "additional requirements for SMR, cellular and PCS product certification."

3.0 Description of Test Sample



FCC ID: K7GT59XX is a 22 channel super heterodyne analog FM UHF FRS/GMRS device. Both FRS and GMRS modes share the first seven channels.

This device will be marketed to and used by the general population. This device may be used while held in a vertical position 2.5cm in front of the face.

FCC ID: K7GT59XX is capable of operating in the 462.5625-467.7125 MHz. The rated and maximum power for FRS mode is 0.500W ERP. The rated and maximum power output for GMRS mode is 1W ERP as defined by the upper limit of the production line final test station.

FCC ID: K7GT59XX is offered with the following options and accessories:

Antenna

Fixed 462-470MHz Helical ¼ wave antenna; -2dBi

Batteries

AA Store bought alkaline batteries
HKNN4002 NiCd Rechargeable Battery

Body-worn Accessories

NTN9392B Swivel Belt clip
NTN9399B Arm/Belt/Bike carry case (56323)
NTN9153A FR50 carry case (53772)
HLN8865A Waterproof bag (50983)
50982 Fanny Pack

Other Attachments

NTN8867A Remote Speaker Microphone (53724)
NTN8868B Headset w/ swivel boom mic (53725)
NTN8869B Ear bud (53726B)
NTN8870C Ear bud w/ PTT microphone (53727)
NTN8891B Flexible ear receiver (53728)
NTN9396B Earpiece w/ boom mic (56320)
NTN9156A Spirit GT headset with boom mic (53740)
NTN9159B Lightweight headset with boom mic (53743)

3.1 Test Signal

Test Signal mode:

Test Mode	<input checked="" type="checkbox"/>	Base Station	<input type="checkbox"/>	Simulator	<input type="checkbox"/>
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Transmission Mode:

CW	<input checked="" type="checkbox"/>
Native Transmission	<input type="checkbox"/>
TDMA:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

3.2 Test Output Power

A table of the characteristic power slump versus time is provided in Appendix A for all tested batteries.

4.0 Description of Test Equipment

4.1 Descriptions of S.A.R. Measurement System

The laboratory utilizes a Dosimetric Assessment System (DASY3™) S.A.R. measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The test system consists of a Stäubli RX90L robot with an ET3DV6 E-Field probe. Please reference the SPEAG user manual and application notes for detailed probe, robot, and S.A.R. computational procedures.

The S.A.R. measurements were conducted with probe model/serial number ET3DV6/SN1383. The system performance check was conducted daily and within 24 hours prior to testing. DASY output files of the system performance test results and the probe/dipole calibration certificates are included in appendices C and D respectively. The table below summarizes the system performance check results normalized to 1W.

Probe Serial #	Tissue Type	Probe Cal Date	Dipole Kit / Serial #	System Perf. Result when normalized to 1W (mW/g)	Reference S.A.R @ 1W (mW/g)	Test Date(s)
1383	FCC Body	3/26/02	D450V2/1002	4.485 +/- 0.275	4.52 +/- 10%	4/4/03-4/8/03 3 test days
1383	IEEE Head	3/26/02	D450V2/1002	4.44 +/- 0.00	4.70 +/- 10%	4/8/03

The DASY3™ system is operated per the instructions in the DASY3™ Users Manual. The complete manual is available directly from SPEAG™. All measurement equipment used to assess EME S.A.R. compliance was calibrated according to 17025 A2LA guidelines.

4.2 Description of Phantom

4.2.1 Flat Phantom

A rectangular shaped box made of low loss acrylic material. The phantom is mounted on a wooden supporting structure that has a loss tangent of < 0.05. The structure has a 68.58 cm x 20.32 cm opening at its center to allow positioning the DUT to the phantom's surface. The table below shows the flat phantom dimensions used for S.A.R. performance assessment.

Length	80cm
Width	30cm
Height	20cm
Surface Thickness	0.2cm

4.2.2 SAM Phantom

SAM phantom was not applicable for this assessment.

4.3 Simulated Tissue Properties

4.3.1 Type of Simulated Tissue

The simulated tissue used is compliant to that specified in FCC Supplement C (Edition 01 – 01) to OET Bulletin 65 (Edition 97 - 01).

Simulated Tissue	Body Position
FCC Body	Abdomen
IEEE Head	Face

4.3.2 Simulated Tissue Composition

	Tissue Ingredients (%)					
	450 MHz		NA		NA	
	Head	Body	Head	Body	Head	Body
Sugar	56	46.5	NA	NA	NA	NA
DGBE (Glycol)	NA	NA	NA	NA	NA	NA
De ionized -Water	39.1	50.53	NA	NA	NA	NA
Salt	3.8	1.87	NA	NA	NA	NA
HEC	1	1	NA	NA	NA	NA
Bact.	0.1	0.1	NA	NA	NA	NA

Characterization of Simulated tissue materials and ambient conditions:

Simulated tissue prepared for S.A.R. measurements is measured daily and within 24 hours prior to actual S.A.R. testing to verify that the tissue is within 5% of target parameters at the center of the transmit band. This measurement is done using the Agilent (HP) probe kit model 85070C and a HP8753D Network Analyzer.

Target tissue parameters

FCC Body				
Frequency (MHz)	Di-electric Constant Target	Di-electric Constant Meas. (Range)	Conductivity Target S/m	Conductivity Meas. (Range) S/m
450	56.7	55.0-55.4	0.94	0.92-0.93
465	56.6	54.8-55.1	0.94	0.93-0.95

IEEE Head				
Frequency (MHz)	Di-electric Constant Target	Di-electric Constant Meas. (Range)	Conductivity Target S/m	Conductivity Meas. (Range) S/m
450	43.5	43.7-43.7	0.87	0.86-0.86
465	43.4	43.3-43.3	0.87	0.87-0.87

4.4 Test conditions

The EME Laboratory ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/- 2°C of the temperature at which the dielectric properties were determined. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored. The table below presents the range and average environmental conditions during the S.A.R. tests reported herein:

	Target	Measured
Ambient Temperature	20 - 25 °C	Range: 21.6-24.1°C Avg. 22.6°C
Relative Humidity	30 - 70 %	Range: 41.9-59.7% Avg. 46.8%
Tissue Temperature	NA	Range: 20.8-21.1°C Avg. 21.0°C

The EME Lab RF environment uses a Spectrum Analyzer to monitor for extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the S.A.R scans are repeated. However, the lab environment is sufficiently protected such that no S.A.R. impacting interference has been experienced to date.

5.0 Description of Test Procedure

All options and accessories listed in section 3.0 were considered in order to develop the S.A.R. test plan for this product. S.A.R. measurements were performed using a flat phantom to assess performance at the abdomen and in front of the face.

The DUT was assessed at low frequency of the TX band, with the offered belt clip against the flat phantom, in CW transmission mode, using the offered batteries and RSM.

The DUT was assessed at the high frequency of the TX band, with the offered belt clip against the flat phantom, in CW transmission mode, using the offered batteries and RSM.

The DUT was assessed at the frequency and with the battery from above that produced the highest S.A.R. results, along with the other offered carry case accessories against the flat phantom, in CW transmission mode, using the offered RSM.

The DUT was assessed at the low frequency of the TX band, against the flat phantom with the carry case and worst-case battery from above that produced the highest S.A.R. results, along with each of

the offered audio accessory, in CW transmission mode.

The DUT was assessed at the low frequency of the TX band, with the back and front of the device, as well as the fixed antenna 2.5cm away from the flat phantom. The DUT was assessed with the audio accessory that produced the highest S.A.R. results from the audio accessory assessment above and the worst-case battery, in CW transmission mode.

A representative “shortened” scan was performed using the worst-case test configuration from the assessment above.

5.1 Device Test Positions

Reference Figure 1 for the device orientation and position which exhibited the highest S.A.R. performance.

5.1.1 Abdomen

The DUT back and front was positioned against and with 2.5cm separation distance from the flat phantom.

5.1.2 Head

NA

5.1.3 Face

The DUT front was positioned with 2.5cm separation distance from the flat phantom.

5.2 Test Position Photographs

**Figure 1. Assessment @ the Abdomen;
DUT w/ AA Alkaline battery, belt clip model NTN9153A, and RSM model NTN8867A
(Note: All other offered audio accessories were assessed while attached to the DUT in this position)**



**Figure 2. Assessment @ the Abdomen;
DUT w/ AA Alkaline battery, belt clip model NTN9392B, and RSM model NTN8867A**



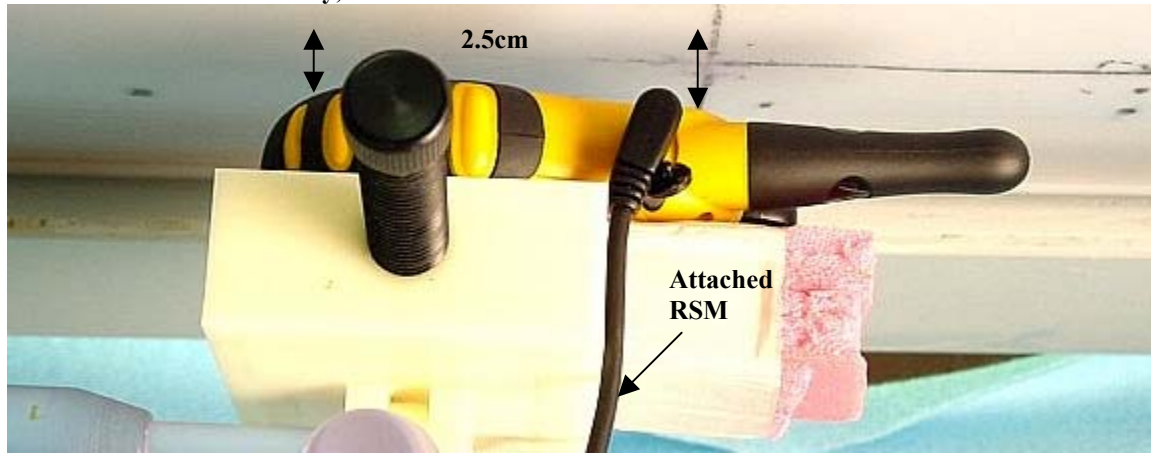
**Figure 3. Assessment @ the Abdomen;
DUT w/ AA Alkaline battery, carry case model NTN9399B, and RSM model NTN8867A**



**Figure 4. Assessment @ the Abdomen;
DUT w/ AA Alkaline battery, carry case model 50982, and RSM model NTN8867A**



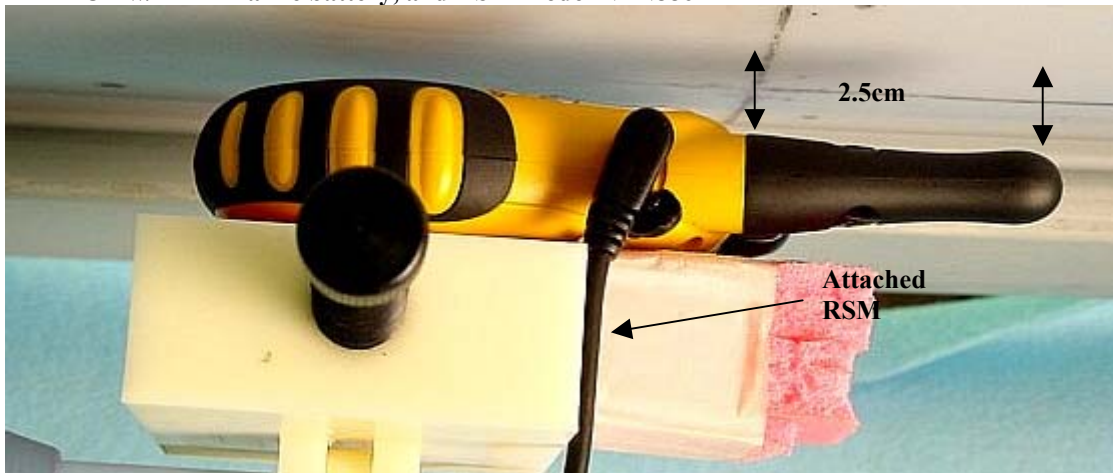
**Figure 5. Assessment @ the Abdomen; DUT Front 2.5cm separation from phantom
DUT w/ AA Alkaline battery, and RSM model NTN8867A**



**Figure 6. Assessment @ the Abdomen; DUT Back 2.5cm separation from phantom
DUT w/ AA Alkaline battery, and RSM model NTN8867A**



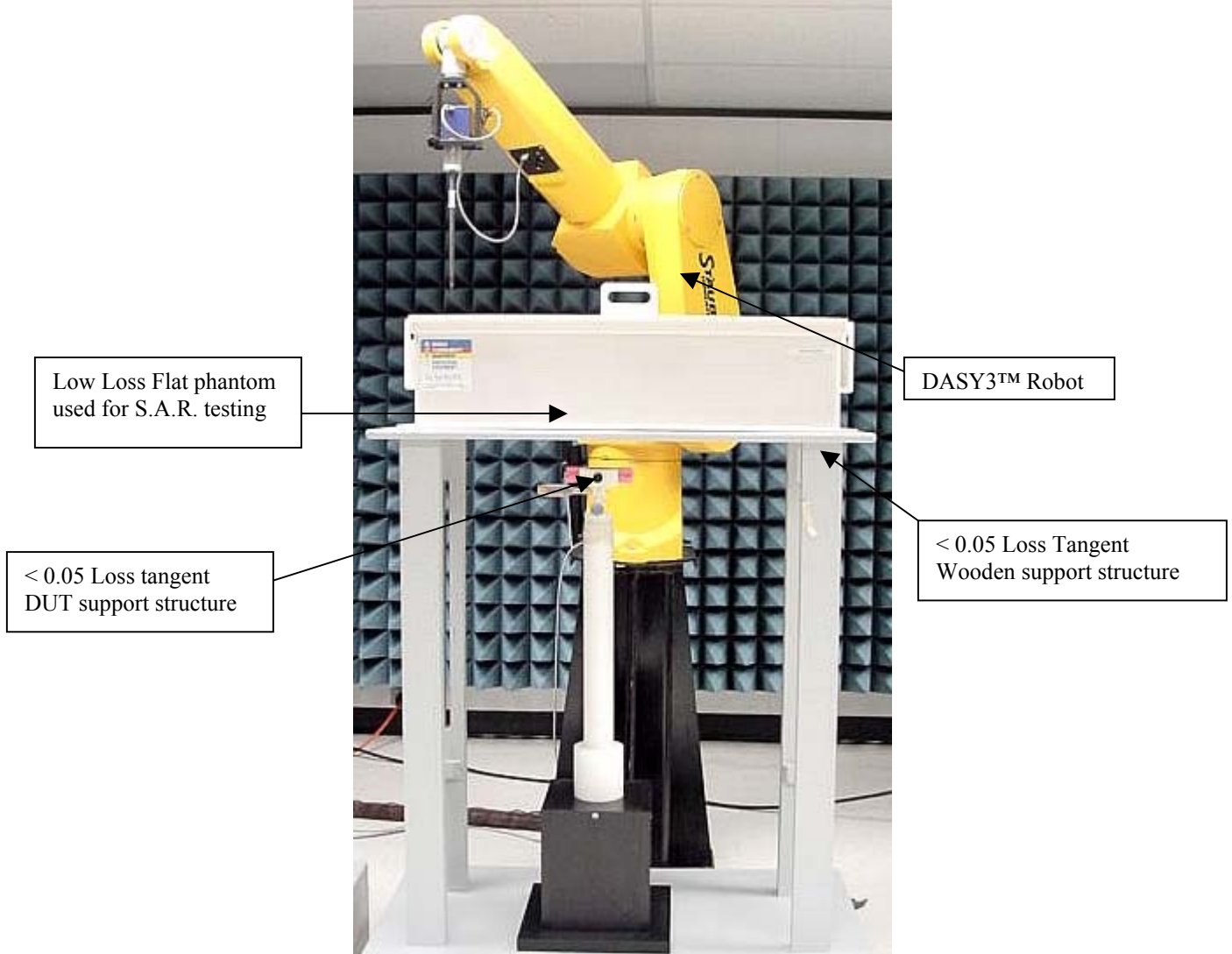
**Figure 7. Assessment @ the Abdomen; DUT Antenna 2.5cm separation from phantom
DUT w/ AA Alkaline battery, and RSM model NTN8867A**



**Figure 8. Assessment @ the Face; DUT front 2.5cm separation from phantom
DUT w/ AA Alkaline battery, and RSM model NTN8867A**



Figure 9: Robot Test System (Flat Phantom)



5.3 Probe Scan Procedures

The E-field probe first scans a coarse grid over a large area inside the phantom in order to locate the interpolated maximum S.A.R. distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position as reference for the cube evaluations.

6.0 Measurement Uncertainty

Table 1: Uncertainty Budget for Device Under Test

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e = f(d,k)</i>	<i>f</i>	<i>g</i>	<i>h =</i> <i>c x f / e</i>	<i>i =</i> <i>c x g / e</i>	<i>k</i>
Uncertainty Component	Section of IEEE P1528	Tol. (± %)	Prob. Dist.	Divisor	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)	<i>v_i</i>
Measurement System									
Probe Calibration	E.2.1	4.8	N	1.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	5.8	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	1.3	R	1.73	1	1	0.8	0.8	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.6	N	1.00	1	1	3.6	3.6	29
Device Holder Uncertainty	E.4.1	2.8	N	1.00	1	1	2.8	2.8	8
Output Power Variation - SAR drift measurement	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty			RSS				11.72	11.09	1363
Expanded Uncertainty (95% CONFIDENCE LEVEL)			<i>k</i> =2				22.98	21.75	

Table 2: Uncertainty Budget for System Performance Check

<i>a</i>	<i>b</i> Section of IEEE P1528	<i>c</i> Tol. (± %)	<i>d</i> Prob. Dist.	<i>e</i> = <i>f</i> (<i>d</i> , <i>k</i>)		<i>g</i>	<i>h</i> = <i>c x f / e</i>	<i>i</i> = <i>c x g / e</i>	<i>k</i>
				Div.					
Measurement System									
Probe Calibration	E.2.1	4.8	N	1.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	∞
Boundary Effect	E.2.3	5.8	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.0	R	1.73	1	1	0.0	0.0	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	∞
Input Power and SAR Drift Measurement	8, 6.6.2	4.7	R	1.73	1	1	2.7	2.7	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty				RSS			10.16	9.43	∞
Expanded Uncertainty									
(95% CONFIDENCE LEVEL)				<i>k</i> =2			19.92	18.48	

Notes for Tables 1 and 2

- a) Column headings *a-k* are given for reference.
- b) Tol. - tolerance in influence quantity.
- c) Prob. Dist. – Probability distribution
- d) N, R - normal, rectangular probability distributions
- e) Div. - divisor used to translate tolerance into normally distributed standard uncertainty
- f) *c_i* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) *u_i* – SAR uncertainty
- h) *v_i* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty.

7.0 S.A.R. Test Results

All S.A.R. results obtained by the tests described in Section 5.0 are listed in section 7.1 below. The bolded result indicates the highest observed S.A.R. performance. DASY3™ S.A.R. measurement scans are provided in APPENDIX B for the highest observed S.A.R.

7.1 S.A.R. results

Note that the AA batteries cause the DUT to produce a max power of 1W while the NiCd causes a 0.750W max power.

Compliance Assessment at the abdomen; CW mode												
Run Number/ SN	Freq. (MHz)	Battery	Test position	Carry Case	Additional attachments	Initial Power (W)	End Power (W)	S.A.R. Drift (dB)	Measured 1g-S.A.R. (mW/g)	Max Calc. 1g-S.A.R. (mW/g)	Meas. 10g-S.A.R. (mW/g)	Max Calc. 10g-S.A.R. (mW/g)
Worst-case battery and frequency search assessment												
Ab-R3-030404-06/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9392B	NTN8867A	0.953	0.667	-1.340	1.360	0.97	0.945	0.68
Ab-R3-030404-07/175WDE004S	462.5625	HKNN4002	Against phantom	NTN9392B	NTN8867A	0.723	0.620	-0.070	1.210	0.64	0.840	0.44
Ab-R3-030404-08/175WDE004S	467.7125	AA Alkaline	Against phantom	NTN9392B	NTN8867A	0.505	0.443	-0.610	0.903	0.51	0.627	0.36
Carry case assessment												
Ab-R3-030404-09/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9399B	NTN8867A	0.953	0.667	-1.160	1.340	0.92	0.927	0.64
Ab-R3-030404-10/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN8867A	0.953	0.667	-1.250	1.940	1.36	1.320	0.92
Ab-R3-030408-07/175WDE004S (shortened scan)	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN8867A	0.953	0.701	-0.730	2.500	1.55	1.680	1.04
Ab-R3-030404-11/175WDE004S	462.5625	AA Alkaline	Against phantom	50982	NTN8867A	0.953	0.667	-0.140	1.680	0.91	1.150	0.62
Audio attachment assessment												
Ab-R3-030407-02/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN8868B	0.953	0.667	-1.080	1.780	1.20	1.210	0.81
Ab-R3-030407-03/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN8870C	0.953	0.667	-0.420	1.860	1.08	1.270	0.73
Ab-R3-030407-05/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN9396B	0.953	0.667	-0.930	1.980	1.29	1.320	0.86
Ab-R3-030407-07/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN9156A	0.953	0.667	-0.990	2.070	1.36	1.410	0.93
Ab-R3-030407-08/175WDE004S	462.5625	AA Alkaline	Against phantom	NTN9153A	NTN9159B	0.953	0.667	-1.000	2.110	1.39	1.440	0.95
2.5cm assessment												
Ab-R3-030407-09/175WDE004S	462.5625	AA Alkaline	Back 2.5cm	None	NTN8867A	0.953	0.667	-1.110	0.811	0.55	0.569	0.39
Ab-R3-030407-10/175WDE004S	462.5625	AA Alkaline	Front 2.5cm	None	NTN8867A	0.953	0.667	-1.010	0.982	0.65	0.689	0.46
Ab-R3-030407-11/175WDE004S	462.5625	AA Alkaline	Front w/ Ant 2.5cm	None	NTN8867A	0.953	0.667	-1.000	1.660	1.10	1.140	0.753

Compliance Assessment at the Face; CW mode												
Run Number/ SN	Freq. (MHz)	Battery	Test position	Carry Case	Additional attachments	Initial Power (W)	End Power (W)	S.A.R. Drift (dB)	Measured 1g-S.A.R. (mW/g)	Max Calc. 1g-S.A.R. (mW/g)	Meas. 10g-S.A.R. (mW/g)	Max Calc. 10g-S.A.R. (mW/g)
Worst-case battery and frequency search												
Face-R3-030408-09/175WDE004S	462.5625	AA Alkaline	Front 2.5cm	None	None	0.953	0.667	-1.080	1.360	0.92	0.94	0.63
Face-R3-030408-10/175WDE004S	462.5625	HKNN4002	Front 2.5 cm	None	None	0.723	0.620	-0.880	1.310	0.832	0.901	0.57
Face-R3-030404-11/175WDE004S	467.7125	AA Alkaline	Front 2.5 cm	None	None	0.505	0.443	-0.670	1.020	0.59	0.702	0.41

7.2 Peak S.A.R. location

Refer to APPENDIX B for detailed S.A.R. scan distributions.

7.3 Highest S.A.R. results calculation methodology

The calculated maximum 1-gram and 10-gram averaged S.A.R. value is determined by scaling the measured S.A.R. to account for power leveling variations and power output slump. For this device the Highest Maximum Calculated 1-gram and 10-gram averaged peak S.A.R. results are calculated using the following formula:

$$\text{Highest Max. Calc. 1-g Avg. SAR} = ((\text{S.A.R. meas.} / (10^{(\text{Pdrift}/10)})) * (\text{Pmax}/\text{Pint})) / 2$$

P_{max} = Maximum Power (mW)

P_{int} = Initial Power (mW)

P_{end} = End Power (mW)

$\text{SAR}_{\text{meas.}}$ = Measured 1 or 10 gram averaged peak S.A.R. (mW/g)

8.0 Conclusion

The highest Operational Maximum Calculated 1-gram and 10-gram average S.A.R. values found for

FCC ID: K7GT59XX model HCUE1102A.

At the abdomen: 1-g Avg. = 1.55 mW/g; 10-g Avg. = 1.04 mW/g

At the Face: 1-g Avg. = 0.92 mW/g; 10-g Avg. = 0.63 mW/g

These test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of **1.6 mW/g** per the requirements of 47 CFR 2.1093(d)