MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5848
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 1 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
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Fort Lauderdale, FL. 33322

Date of Report: 2/16/06
Report Revision: Rev O
Report ID: i580_Rev O_060216_SR3015

Responsible Engineer: Michael Sailsman (Sr. Staff Test Eng.)
Date/s Tested: 12/27/05-2/9/06 (19 days)
Manufacturer/Location: Motorola – Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 12/02/05
DUT Description: i580; TDMA: 236:310, 1:6, 2:6, 81:120, 1:12; 64QAM, 16 QAM & QPSK Modulation; 0.6W Pulse Avg. MOTOtalk (114:120 8FSK; 0.85 W nominal); GPS & Bluetooth capable
Test TX mode(s): 1:3, 1:6, 114:120, 236:310, 81:120
Max. Power output: Mototalk - 0.891W, iDEN/WiDEN - 0.640W
Nominal Power: MOTOtalk - 0.85W, iDEN/WiDEN - 0.60W
Tx Frequency Bands: MOTOtalk - 902-928MHz, iDEN/WiDEN – 806-825, 896-902MHz
Signaling type: TDMA: iDEN; WiDEN, MOTOtalk - (FHSS 8FSK)
Model(s) Tested: H83XAH6RR4AN/NWF1019A
Model(s) Certified: H83XAH6RR4AN/NWF1019A
Serial Number(s): 364AFW00HP, 364AFW00L0, 364AFW00QQ
Classification: General Population/Uncontrolled
Rule Part(s): 15 & 90

Approved Accessories:
Antenna(s):
8575868A01 (retractable ¼ wave antenna, Gain in/out: 806-825MHz: -1.16/2.15dBd; 896-902MHz: -1.22/2.15dBd; 902-925MHz: 0.39/2.15dBd)
Battery(ies):
SNN5765A (High performance Li Ion); NNTN2332A (Max capacity battery cover); SNN5744A (Slim Li Ion); NNTN2331A (High capacity battery cover)
Body worn accessory(ies):
NNTN6653A (Holster); NNTN4747A (Belt clip)
Audio/Data cable accessory(ies):
NNTN5211A(Surveillance earpiece); NNTN5004A(PTT headset); NNTN5005A(PTT headset); NNTN5006A(PTT headset); NNTN5330A(PTT headset); NNTN5774A(PTT stereo headset); NNTN5751A(Stereo mixing headset w/ PTT); NNTN5752A(Stereo mixing headset); NNTN6312A(3-wire surveillance earpiece); NSN6066A(RSM); NNTN4033A(Privacy earpiece & mic w/PTT); SYN8390B(Privacy earpiece & mic); NNTN4620A(Silver ear bud); SYN8146C(lightweight over the ear headset w/ boom mic); SYN7875C(hearing aid neckloop); NTN8496A(lightweight headset w/ mic); NTN8513B(lightweight headband); NKN6559A(USB cable); NKN6560A(RS232 cable); NNTN5405A(USB data cable w/ charging); NNTN5406A(RS232 data cable w/ charging); NTN2074A (Qwerty keyboard: NNTN5491A/NNTN5863A/NNTN5496A/NNTN5715A)

Max. Calc. 1-g/10-g Avg. SAR: 1.30/0.89 W/kg (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.58/0.41 W/kg (Face)
Max. Calc. 1-g/10-g Avg. SAR: 1.02/0.70 W/kg (Head)

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. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Signature on file
Ken Enger GEMS EME Lab Senior Resource Manager, Laboratory Director,

Approval Date: 2/17/06

Certification Date: 2/17/06

Certification No.: L1060201P

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Report Revision History

Date	Revision	Comments
2/16/06	O	Initial Release

1.0 Introduction and Overview

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (S.A.R.) measurements performed at the GEMS EME Test Lab for the model number H83XAH6RR4AN/NWF1019A of FCC ID: AZ489FT5848. The results herein reflect initial prototype results.

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; Rule Part 47CFR § 2.1093 sub-part J:1999
- Federal Communications Commission, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields”, OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- IEEE 1528, 2003 "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques"
- 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 Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2003
- ANATEL, Brazil Regulatory Authority, Resolution No. 303 of July 2, 2002 "Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9KHz and 300 GHz." and “Attachment to resolution # 303 from July 2, 2002”

2.1 SAR Limits

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average - ANSI - (averaged over the whole body)	0.08	0.4
Spatial Peak - ANSI - (averaged over any 1-g of tissue)	1.60	8.0
Spatial Peak – ICNIRP/ANSI - (hands/wrists/feet/ankles averaged over 10-g)	4.0	20.0
Localized SAR - ICNIRP - (Head and Trunk 10-g)	2.0	10.0

3.0 Description of Device Under Test (DUT)

FCC ID: AZ489FT5848 employs time division multiplexing with duty cycles ranging from 16.667% to 76.1% for Voice (Dispatch or Interconnect), Circuit Data, Packet Data, and WiDEN emission modes. Possible modulations are QPSK, M16-QAM, or M64-QAM. All voice modes employ M16-QAM modulation, and are interleaved as 1:6 (for Dispatch) or 1:3 (maximum for Interconnect). Split 3:1 Interconnect is operated at a 16.667% duty cycle, but because there will be two pulses in each 90-msec frame, the overall interleave is 2:6. Interconnect modes are available in both the 800 and 900 MHz bands, while Dispatch is available only in the 800 MHz band.
Data transmissions employ QPSK, M16-QAM, and M64-QAM modulations, and have duty cycle ranging from 67.5% (Packet Data) to a maximum of 76.1% (for the 25 kHz WiDEN mode). WiDEN operation is also possible in 50, 75, and 100 kHz modes, but these will have lower maximum duty cycle. All data modes are available in the 800 and 900 MHz bands. Packet Data and WiDEN operation is possible with and without connection to an external data device (via a data cable).
This device also incorporates MOTOtalk, which is a Part 15 service, employing Frequency Hopping Spread Spectrum technology in the 900 MHz ISM band. MOTOtalk emissions have a duty cycle of 114:120, and uses 8FSK modulation. Only dispatch (i.e. PTT) operation is possible when operating in this mode.
The unit may be used at the abdomen in this mode (using an audio accessory) or held in front of the face. The low-audio earpiece mode has been locked out in software. No simultaneous operation is possible.
This device also incorporates a Class 2 Bluetooth device. This means that the nominal power should be 0 dBm with a maximum of +4dBm. Bluetooth is a short range wireless protocol used for communication between users. Users link to each other through an Ad-Hock network of pico-nets. The pico-net is the basic communication cell, which can be formed by a "master" and up to 7 "slaves".
This device will be marketed to and used by the general population. This device may be used while held against the head in voice mode, in front of the face in PTT mode, and against the body in phone, dispatch, MOTOtalk, Data, and WiDEN modes.
FCC ID: AZ489FT5848 is capable of operating in the 806-825 MHz and 896-902MHz bands. Packet data transmission is not available while transmitting in the 896-902 MHz band. MOTOtalk operates in the 902-928MHz band. WiDEN operates with the 806-825MHz and 896-902MHz bands. The rated conducted power is 0.60 watts pulsed averaged in 806-825MHz and 896-902MHz bands and 0.85 watts in the MOTOtalk band. The maximum conducted output power is 0.64 watts pulsed average and 0.891 watts respectively as defined by the upper limit of the production line final test station.

FCC ID: AZ489FT5848 is offered with the options and accessories listed on the coversheet of this report.

Test Output Power

A table of the characteristic power slump versus time is provided in Appendix F.

4.0 Description of Test System

4.1 Descriptions of Robotics/probes/Readout Electronics

The laboratory utilizes a Dosimetric Assessment System (DASY4™) S.A.R. measurement system Version 4.6 build 23 manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The test system consists of a Stäubli RX90L robot, DAE3V1, and ET3DV6 E-Field probes. Please reference the SPEAG user manual and application notes for detailed probe, robot, and S.A.R. computational procedures. Section 5.0 presents relevant test equipment information. Appendices B and C present the applicable calibration certificates. 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.

4.2 Description of Phantom(s)

4.2.1 Flat Phantom

Phantom Type	Phantom Material	Phantom Dimensions (cm)	Support structure opening dimensions (cm)	Support structure material	Loss Tangent (wood)
Flat	High Density Polyethylene (HDPE)	80x30x20x0.2	68.58x20.32	Wood	< 0.05

4.2.2 SAM Phantom

Phantom Type	Material Parameters	Material Thickness (mm)	Support structure material	Loss Tangent (wood)
SAMTP1022	200MHz -3GHz; Er = <5, Loss Tangent = <0.05	2mm +/- 0.2mm	Wood	< 0.05

4.3 Description of Equivalent tissues

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) and IEEE 1528, 2003 "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".
The sugar based simulate tissue is produced by placing the correct measured amount of De-ionized water into a large container. Each of the dried ingredients are weighed and added to the water carefully to avoid clumping. If the solution has a high sugar concentration the water is pre-heated to aid in dissolving the ingredients. For Diacetin and Glycol based simulates, sugar and HEC ingredients are not needed. The solution is mixed thoroughly, covered, and allowed to sit overnight prior to use.

Simulated Tissue Composition

% of listed ingredients	900MHz	
	Head	Body
Sugar	56.5	44.9
DGBE (Glycol)	NA	NA
Diacetin	NA	NA
De ionized -Water	40.95	53.06
Salt	1.45	0.94
HEC	1.0	1
Bact.	0.1	0.1

Reference section 6.1 for target parameters

5.0 Additional Test Equipment

Equipment Type	Model Number	Serial Number	Calibration Due Date
Power Meter (HP)	E4419B	MY40330364	1/28/2006
Power Sensor (HP)	8482B	3318A05259	3/28/2006
Power Sensor (HP)	8482B	3318A06774	3/22/2006
Power Sensor (HP)	8482H	1926A01906	12/12/2006
Bi-Directional Coupler (NARDA)	3020A	40296	2/27/2006
Signal Generator (Agilent)	E4438C	MY42082269	1/11/2006
Signal Generator (Agilent)	E4421B	US40051446	12/29/2007
AMP (ComTech PST)	AR88258-10	NIR1A00-1015	CNR
Network Analyzer	8753D	3410A06417	2/7/06
Dielectric Probe Kit	85070C	US99360076	CNR

6.0 SAR Measurement System Verification

The S.A.R. measurements were conducted with probe model/serial number ET3DV6/SN1384. The system performance check was conducted daily and within 24 hours prior to testing. DASY

output files of the probe/dipole calibration certificates and system performance test results are included in appendices B, C, D respectively. The table below summarizes the system performance check results normalized to 1W.
Dipole validation scans at the head from SPEAG are provided in Appendix D. The GEMS EME lab validated the dipole to the applicable IEEE system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values for body at the applicable frequency. The results of the GEMS EME system performance validation are provided herein.

6.1 Equivalent Tissue Test Results

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.

Actual versus Target tissue parameters (12/27/05 – 2/9/06)

FCC Body				
Frequency (MHz)	**Di-electric Constant Target**	**Di-electric Constant Meas. (Range)**	**Conductivity Target S/m**	**Conductivity Meas. (Range) S/m**
900/899	55.0	52.5-54.8	1.05	1.04-1.07
915	55.0	52.4-54.6	1.06	1.06-1.09
815.5	55.3	53.3-55.6	0.97	0.96-0.99

IEEE Head				
Frequency (MHz)	**Di-electric Constant Target**	**Di-electric Constant Meas. (Range)**	**Conductivity Target S/m**	**Conductivity Meas. (Range) S/m**
900/899	41.5	41.1-42.3	0.97	1.0-1.01
915	41.5	40.4-42.1	0.98	1.02-1.08
815.5	41.6	41.7-43.3	0.90	0.93-0.93

6.2 System Check Test Results

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)
1384	FCC Body	5/26/05	SPEAG D900V2 /085	11.43 +/- 0.44	11.41 +/- 10%	1/9/06-1/25/06; 1/27/06; 2/6/06-2/8/06 (16 test days)
1384	IEEE Head	5/26/05	SPEAG D900V2 /085	11.375 +/- 0.255	11.26 +/- 10%	12/27/05-12/30/05 & 1/26/06-1/27/06; 2/9/06 (7 test days)

Note: See APPENDIX D for an explanation of the reference S.A.R. targets stated above.
(System performance results reflects the median performance +/- ½ of the test date(s) performance ranges)

The DASY4™ system is operated per the instructions in the DASY4™ 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.

7.0 DUT Test Strategy and Methodology

7.1 DUT Configuration(s)

The DUT is a portable device with iDEN, WiDEN, and MOTOtalk (FHSS 8FSK) transmission signaling operational at the applicable body, head, and face locations using the relevant offered accessories. The device is placed in the test positions presented in Appendix G.

Test Plan

All options and accessories listed on the cover page of this report 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 and a SAM phantom with the applicable simulated tissue to assess performance at the body and head/face respectively using the relevant transmission modes. Note that a coarse-to-cube approximation methodology was utilized to determine the worst-case S.A.R. performance configuration for each applicable body location. The test configurations that produced the highest S.A.R. results for each body position using the coarse-to-cube approximation methodology were assessed using the full DASY4™ coarse and 7x7x7 cube scans.

Assessments at the Head (Phone mode 1:3) **[Pages 11-13 of 32; Table 1]**

- Assessment in the 806-825MHz band of offered batteries using applicable test configurations at the head.
- Assessment at the 806-825MHz band edges using the worst case configuration from above.
- Assessment in the 896-902MHz band with the worst case battery from above, using applicable test configurations at the head.
- Assessment at the 896-902MHz band edges.
- Assessment with Bluetooth on and with the offered mini keyboard using the worst case configuration from above.

Assessments at the Face (PTT mode 1:6) **[Pages 13-14 of 32; Table 2]**

- Assessment in the 806-825MHz band of the worst case battery from the head assessment above with the flip closed and antenna in and out.
- Assessment at the edges of the 806-825MHz band with the flip closed and antenna in and out.
- Assessment in the 896-902MHz band of the worst case battery from the head assessment above with the flip closed.
- Assessment at the edges of the 896-902MHz band with the flip closed and antenna in and out.

Assessments at the Face (MOTOtalk mode 114:120) **[Page 14 of 32; Table 3]**

- Assessment in the 902-928MHz band using the worst case battery and antenna position from the head assessment above with the flip opened and closed.
- Assessment in the 902-928MHz band of the worse case flip positions above with antenna out.
- Assessment in the 902-928MHz band of the band edge frequencies with worst case configuration from above.
- Assessment with Bluetooth on using the worst case configuration from above.

Assessments at the Body (WiDEN mode 236:310) **[Pages 15-17 of 32; Tables 4/5]**

- Assessment in the 896-902MHz band of the offered batteries and belt clip accessory with antenna in and out.
- Assessment of the 806-825MHz band of the offered batteries and belt clip accessory with antenna in and out. Also test with Bluetooth on and offered mini keypad.
- Assessment in the 806-825MHz and 896-902MHz of the other offered body worn accessory with antenna in and out. Also tests with BT on and offered mini keyboard
- Assessment of the offered data cable options in both bands from above with antenna in and out. Also tests with BT on and offered mini keyboard with antenna in and out.
- Assessment of the 806-825MHz and 896-902MHz band edges using the worst data cable from above with antenna in and out. Also tests with BT on and offered mini keyboard with the worse case antenna position from the band edge assessments above.

Assessments at the Body (iDEN data mode 81:120) **[Pages 17-18 of 32; Table 6]**

- Assessment in the 806-825MHz band of the low, mid, and high frequencies using the worse case battery and body worn accessories from above with antenna in and out.
- Assessment with Bluetooth on using the worst case configuration from above.
- Assessment of worst case configuration above with worst case data cable attachment from WiDEN tests above.

Assessments at the Body (iDEN MOTOtalk mode 114:120) **[Pages 18-20 of 32; Table 7/8]**

- Assessment in the 902-928MHz band with each offered audio accessories using the worse case battery and body worn accessories with antenna in and out.
- Assessment of the 902-928MHz band edges using the worst configuration from above with antenna in and out. Also test
- Assessment with Bluetooth on using the worst case configuration from above.

Assessments at the Body (iDEN phone mode 1:3) **[Pages 20-21 of 32; Table 9]**

- Assessment across the 806-825MHz band using the worst case configuration from the previous assessments at the body above with antenna in and out.
- Assessment across the 896-902MHz band using the worst case configuration from the previous assessments at the body above with antenna in and out.

Assessments at the Body 2.5cm (WiDEN mode 236:310) **[Page 21 of 32; Table 10]**

- Assessment using the worst case test configuration at the body from above (not including Bluetooth on/mini keypad assessments) with the back and front housing of the DUT separated 2.5cm from the phantom.
- Assessment of worse case configuration at the body with Bluetooth on.

Shortened scan assessment at the Body **[APPENDIX E Part 3 of 3]**

- A "shortened" scan was performed using the worst case tested battery. Note that the shortened scan is obtained by first running a coarse scan to find the peak area and then, using a newly charged battery, a cube scan only was performed. The shortened scan represents the cube scan performance results.

7.2 Device Positioning Procedures

Reference Appendix G for photos of the DUT tested positions.

7.2.1 Body

The DUT was positioned in normal use configuration against the phantom with the offered body worn accessory.
The DUT was positioned with its' front and back sides separated 2.5cm from the phantom.

7.2.2 Head

The DUT was placed against the right and left heads of the SAM phantom in the cheek touch and tilt positions.

7.2.3 Face

The DUT was positioned with its' front side separated 2.5cm from the phantom with the flip opened and closed.

8.0 Environmental 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. The liquid depth within the phantom used for measurements was 15cm +/- 0.5cm. 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: 21.1-22.8˚C Avg. 22.19˚C
Relative Humidity	30 - 70 %	Range: 32.7-56.3% Avg. 46.28%
Tissue Temperature	NA	Range: 21.4-22.7˚C Avg. 21.98˚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.

9.0 Test Results Summary

All S.A.R. results obtained by the tests described in Section 7.1 are listed below. As noted in section 7.1, a coarse-to-cube approximation methodology, was utilized to ascertain the worst-case test configurations for each body location. The worst case configurations observed for each body location were assessed using the full DASY4™ coarse and 7x7x7 cube methodology; presented as bolded results below. Bluetooth transmitter is off except where noted. The associated S.A.R. plots are provided in Appendix E. Appendix E also presents shortened S.A.R. cube scans to assess the validity of the calculated results presented herein. Note: The results of the shortened cube scans presented in Appendix E demonstrate that the scaling methodology used to determine the calculated S.A.R. results presented herein are valid.

Table 1

Assessments at the Head (Phone mode 1:3) 806-825MHz band												
Run Number/ SN	**Antenna Pos.**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment at the left ear - antenna positions; offered batteries												
ErC-Lear-051227-10/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.659	0.0305	0.818	0.559	0.82	0.56
ErC-Lear-051227-12/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.660	-0.0178	0.645	0.439	0.65	0.44
ErC-Lear-051227-13/364AFW00QQ	In	813.5125	SNN5765A w/ NNTN2332A	DUT touch	None	None	0.662	0.00321	0.781	0.530	0.78	0.53
ErC-Lear-051227-14/364AFW00QQ	Out	813.5125	SNN5765A w/ NNTN2332A	DUT touch	None	None	0.661	-0.00522	0.591	0.398	0.59	0.40
Assessment at the left ear – Ant. Positions; Tilt position												
ErC-Lear-051227-15/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.656	0.01770	0.217	0.153	0.22	0.15
ErC-Lear-051227-16/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.658	0.0536	0.148	0.106	0.15	0.11
Assessment at the right ear – Ant. Positions; Worse case battery from test above; touch and tilt positions												
*ErC-Rear-051229-04/364AFW00HP	In	813.5125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.660	-0.3740	0.827	0.574	0.90	0.63
ErC-Rear-051228-03/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.652	-0.0363	0.659	0.450	0.66	0.45
ErC-Rear-051228-05/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.655	-0.0105	0.108	0.076	0.11	0.08
ErC-Rear-051228-06/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.658	-0.0561	0.149	0.1070	0.15	0.11

Table 1 (continued)

Run Number/ SN	Antenna	Freq. (MHz)	Battery	Test position	Carry Case	Additional attachments	Initial Power (W)	S.A.R. Drift (dB)	Meas. 1g-S.A.R. (mW/g)	Meas. 10g-S.A.R. (mW/g)	Max Calc. 1g-S.A.R. (mW/g)	Max Calc. 10g-S.A.R. (mW/g)
Assessments at the Head (Phone mode 1:3) 806-825MHz band												
Assessment at the right ear – Antenna positions; band edges												
ErC-Rear-051228-07/364AFW00QQ	In	806.0125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.656	-0.0138	0.797	0.547	0.80	0.55
ErC-Rear-051228-08/364AFW00QQ	Out	806.0125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.659	-0.0432	0.651	0.447	0.66	0.45
ErC-Rear-051228-09/364AFW00QQ	In	824.9875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.656	-0.0141	0.829	0.562	0.83	0.56
ErC-Rear-051228-10/364AFW00QQ	Out	824.9875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.657	0.0429	0.288	0.191	0.29	0.19
Assessments at the Head (Phone mode 1:3) 896-902MHz band												
Assessment at the right ear - Antenna positions; touch/tilt; worse case battery from 800MHz assessment above.												
ErC-Rear-051228-11/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.659	-0.0236	0.470	0.316	0.47	0.32
ErC-Rear-051228-12/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.661	-0.0961	0.385	0.259	0.39	0.26
ErC-Rear-051228-13/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.663	0.0286	0.095	0.067	0.09	0.07
ErC-Rear-051228-14/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.662	-0.1530	0.082	0.058	0.08	0.06
Assessment at the left ear - Antenna positions; touch/tilt; worst case battery from 800MHz assessment above.												
ErC-Lear-051228-15/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.660	-0.1080	0.445	0.297	0.46	0.30
ErC-Lear-051228-16/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.661	-0.0279	0.383	0.254	0.39	0.26
ErC-Lear-051228-17/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.661	-0.0165	0.098	0.069	0.10	0.07
ErC-Lear-051228-18/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	DUT Tilt	None	None	0.663	-0.0664	0.086	0.060	0.09	0.06
Assessment at the right ear – band edges												
*ErC-Rear-051228-19/364AFW00QQ	In	896.01875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.659	-0.0230	0.486	0.329	0.49	0.33
ErC-Rear-051228-20/364AFW00QQ	Out	896.01875	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.660	-0.0386	0.394	0.268	0.40	0.27
ErC-Rear-051228-21/364AFW00QQ	In	901.98125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.661	-0.0326	0.441	0.297	0.44	0.30
ErC-Rear-051228-22/364AFW00QQ	Out	901.98125	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.660	-0.0552	0.356	0.242	0.36	0.25

*Assessment with the worse case test configuration in the 800MHz band with Bluetooth on with and without the mini keyboard; Assessment with the worse case test configuration in the 900MHz band with Bluetooth off; Full DASY 4 coarse and 7x7x7 cube scan measurements.												
JsT-Rear-060127-03/364AFW00HP	In	813.5125 **BT On**	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.677	-0.7970	0.846	0.582	**1.02**	**0.70**
JsT-Rear-060208-04/364AFW00HP	In	813.5125 **BT On**	SNN5744A w/ NNTN2331A	DUT touch	None	NNTN5491A /NNTN5863 A	0.672	-0.5540	0.716	0.493	**0.81**	**0.56**
ErC-Rear-051229-03/364AFW00QQ	In	896.01875 **BT off**	SNN5744A w/ NNTN2331A	DUT touch	None	None	0.658	-0.2230	0.492	0.333	**0.52**	**0.35**

Table 2

Assessments at the Face (PTT mode 1:6) 806-825MHz band												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; worst case battery from head assessment above; band edges; flip closed												
ErC-Face-051229-07/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.655	0.0057	0.169	0.121	0.08	0.06
ErC-Face-051229-08/364AFW00QQ P	Out	813.5125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.652	-0.0184	0.130	0.093	0.07	0.05
ErC-Face-051229-09/364AFW00QQ	In	806.0125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.653	-0.1000	0.167	0.120	0.09	0.06
ErC-Face-051229-10/364AFW00QQ	Out	806.0125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.659	0.0307	0.136	0.098	0.07	0.05
ErC-Face-051229-11/364AFW00QQ	In	824.9875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.657	-0.1250	0.155	0.111	0.08	0.06
ErC-Face-051229-12/364AFW00QQ	Out	824.9875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.657	-0.0461	0.115	0.083	0.06	0.04
Assessments at the Face (PTT mode 1:6) 896-902MHz band												
Antenna positions; worst case battery from head assessment above; band edges; flip closed												
ErC-Face-051229-13/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.662	0.0476	0.109	0.077	0.05	0.04
ErC-Face-051229-14/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.665	-0.1080	0.095	0.067	0.05	0.03
ErC-Face-051229-15/364AFW00QQ	In	896.01875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.669	0.0480	0.112	0.080	0.06	0.04
ErC-Face-051229-16/364AFW00QQ	Out	896.01875	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.666	-0.0348	0.099	0.069	0.05	0.03
ErC-Face-051229-17/364AFW00QQ	In	901.98125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.668	0.00377	0.104	0.075	0.05	0.04

ErC-Face-051229-18/364AFW00QQ	Out	901.98125	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.668	-0.0388	0.094	0.066	0.05	0.03

Table 3

Assessments at the Face (MOTOtalk mode 114:120) 902-928MHz band												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
WC Antenna positions from face assessment-flip open and closed; worst case battery from head assessment; ant in/out WC flip pos.; Bluetooth on												
ErC-Face-051230-02/ 364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip opened	None	None	0.864	-1.3200	0.126	0.090	0.09	0.06
ErC-Face-051230-03/ 364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.865	-1.1000	0.307	0.217	0.20	0.14
ErC-Face-051230-04/ 364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.867	-1.0000	0.270	0.191	0.17	0.12
WC configuration from face assessment; band edges; Bluetooth on with worse case configuration.												
*ErC-Face-051230-05/364AFW00HP	In	902.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.876	-1.5000	0.459	0.325	0.33	0.23
JsT-Face-060127-05 364AFW00L0	In	902.525 **BT On**	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.884	-0.01550	1.110	0.784	0.56	0.40
ErC-Face-051230-06/364AFW00HP	Out	902.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.884	-1.5200	0.325	0.230	0.23	0.16
ErC-Face-051230-07/364AFW00HP	In	927.475	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.861	-1.1400	0.273	0.193	0.18	0.13
ErC-Face-051230-08/364AFW00HP	Out	927.475	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.857	-1.2700	0.263	0.186	0.18	0.13
***Assessment with at the face BT off and on w/ mini keyboard; using the full DASY 4 coarse and 7x7x7 cube scan measurements.**												
JsT-Face-051230-12 364AFW00L0	In	902.525	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	None	0.875	-0.0198	1.090	0.775	**0.56**	**0.40**
MeS-Face-060209-02/364AFW00L0	In	902.5125 **BT on**	SNN5744A w/ NNTN2331A	DUT Front 2.5cm; flip closed	None	NNTN5491A /NNTN5863 A	0.873	-0.0564	1.120	0.791	**0.58**	**0.41**

Table 4

Assessment at the body (WiDEN mode 236:310) 806-825MHz & 896-902MHz bands												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; offered batteries and belt clip												
JsT-Ab-060103-02/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.620	0.1540	0.817	0.564	0.84	0.58
JsT-Ab-060103-03/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.622	0.2080	0.848	0.576	0.87	0.59
JsT-Ab-060103-04/364AFW00QQ	In	899.66875	SNN5765A w/ NNTN2332A	Against phantom	NNTN4747A	None	0.619	0.1820	0.720	0.491	0.74	0.51
JsT-Ab-060103-05/364AFW00QQ	Out	899.66875	SNN5765A w/ NNTN2332A	Against phantom	NNTN4747A	None	0.604	0.1670	0.726	0.503	0.77	0.53
Antenna positions; offered batteries and belt clip; mini keyboard assessment												
*JsT-Ab-060103-06/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.620	-0.0891	1.140	0.798	1.20	0.84
JsT-Ab-060120-05/364AFW00HP (Shortened scan)	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.636	0.1280	1.230	0.892	1.24	0.90
MeS-Ab-060206-03/364AFW00QQ	In	813.5125 **BT On**	SNN5744A w/ NNTN2331A	NNTN4747A	None	NNTN5491A/ NNTN5863A	0.629	0.1390	1.020	0.720	1.04	0.73
JsT-Ab-060103-07/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.622	0.0552	1.020	0.712	1.05	0.73
JsT-Ab-060106-18/364AFW00QQ	In	813.5125	SNN5765A w/ NNTN2332A	Against phantom	NNTN4747A	None	0.626	0.00786	1.010	0.701	1.03	0.72
JsT-Ab-060106-19/364AFW00QQ	Out	813.5125	SNN5765A w/ NNTN2332A	Against phantom	NNTN4747A	None	0.624	0.0402	0.847	0.574	0.87	0.59
Other offered carry accessory per 800/900 band; antenna positions												
JsT-Ab-060106-20/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN6653A	None	0.624	0.0339	1.040	0.714	1.07	0.73
JsT-Ab-060106-21/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN6653A	None	0.623	0.0726	0.796	0.552	0.82	0.57
JsT-Ab-060106-22/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN6653A	None	0.627	0.1620	0.790	0.531	0.81	0.54
JsT-Ab-060106-23/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN6653A	None	0.628	0.0953	0.784	0.544	0.80	0.55

Table 5

Assessment at the body (WiDEN mode 236:310) 806-825MHz & 896-902MHz bands (continued)												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
900Mhz band - Offered data cables with WC configuration from WiDEN assessments above; mini keyboard w/ BT on												
JsT-Ab-060109-09/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6559A	0.628	0.00685	0.621	0.426	0.63	0.43
JsT-Ab-060109-10/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6559A	0.627	0.1130	0.653	0.454	0.67	0.46
JsT-Ab-060109-11/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.629	-0.0300	0.681	0.461	0.70	0.47
JsT-Ab-060109-12/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.628	0.1310	0.645	0.432	0.66	0.44
JsT-Ab-060109-13/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5405A	0.629	0.00132	0.583	0.393	0.59	0.40
JsT-Ab-060109-14/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5405A	0.628	0.1520	0.642	0.439	0.65	0.45
JsT-Ab-060109-15/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.629	-0.0559	0.584	0.399	0.60	0.41
JsT-Ab-060109-16/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.626	0.0939	0.572	0.394	0.58	0.40
MeS-Ab-060208-02/364AFW00QQ	In	899.66875 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.626	0.1020	0.875	0.597	0.89	0.61
MeS-Ab-060208-03/364AFW00QQ	Out	899.66875 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.628	0.1770	0.797	0.539	0.81	0.55
800 Band – Antenna positions; offered data cables with WC configuration from WiDEN assessments above; mini keyboard w/ BT on												
JsT-Ab-060110-02/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6559A	0.622	0.00475	0.833	0.589	0.86	0.61
JsT-Ab-060110-03/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6559A	0.625	-0.0127	0.733	0.499	0.75	0.51
JsT-Ab-060110-04/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.624	0.1490	0.701	0.494	0.72	0.51
JsT-Ab-060110-05/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.623	-0.0393	0.638	0.440	0.66	0.46
JsT-Ab-060110-06/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5405A	0.625	-0.05460	0.673	0.462	0.70	0.48
JsT-Ab-060110-07/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5405A	0.625	-0.0030	0.736	0.506	0.75	0.52
JsT-Ab-060110-08/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.623	0.0298	0.856	0.588	0.88	0.60
JsT-Ab-060110-09/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.626	0.1000	0.719	0.499	0.74	0.51
MeS-Ab-060207-05/364AFW00QQ	In	813.5125 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.620	0.1310	1.000	0.681	1.03	0.70
MeS-Ab-060207-06/364AFW00QQ	Out	813.5125 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.620	0.0163	1.180	0.814	1.22	0.84

Table 5 (continued)

Run Number/ SN	Antenna	Freq. (MHz)	Battery	Test position	Carry Case	Additional attachments	Initial Power (W)	S.A.R. Drift (dB)	Meas. 1g-S.A.R. (mW/g)	Meas. 10g-S.A.R. (mW/g)	Max Calc. 1g-S.A.R. (mW/g)	Max Calc. 10g-S.A.R. (mW/g)
800 Band – Antenna positions; WC configuration from WiDEN assessments above; Band edges; mini keyboard w/ Bluetooth on and WC ant. Pos.												
JsT-Ab-060110-10/364AFW00QQ	In	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.623	0.0657	0.959	0.666	0.99	0.68
JsT-Ab-060110-11/364AFW00QQ	Out	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.624	-0.0892	0.819	0.576	0.86	0.60
MeS-Ab-060209-04/364AFW00QQ	In	806.0125 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.624	0.0599	1.180	0.819	1.21	0.84
JsT-Ab-060110-12/364AFW00QQ	In	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.620	0.0495	0.841	0.578	0.87	0.60
JsT-Ab-060110-13/364AFW00QQ	Out	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5406A	0.621	-0.0141	0.665	0.452	0.69	0.47
MeS-Ab-060207-03/364AFW00QQ	In	824.9875 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.620	-0.1070	1.100	0.761	1.16	0.81
900Band – Antenna positions; WC configuration from WiDEN assessments above; Band edges; mini keyboard w/ Bluetooth on and WC ant. Pos.												
JsT-Ab-060110-14/364AFW00QQ	In	896.01875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.627	-0.0270	0.625	0.429	0.64	0.44
JsT-Ab-060110-15/364AFW00QQ	Out	896.01875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.629	-0.0141	0.625	0.423	0.64	0.43
MeS-Ab-060209-05/364AFW00QQ	In	896.01875 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.622	0.0399	0.873	0.599	0.90	0.62
JsT-Ab-060110-16/364AFW00QQ	In	901.98125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.627	0.0473	0.615	0.418	0.63	0.43
JsT-Ab-060110-17/364AFW00QQ	Out	901.98125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NKN6560A	0.629	0.1420	0.601	0.411	0.61	0.42
MeS-Ab-060206-04/364AFW00QQ	In	901.98125 **BT on**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.624	0.5670	0.828	0.567	0.85	0.58

Table 6

Assessment at the body (Data mode 81:120) 806-825MHz												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; across the band; WC configuration from body assessments above; Bluetooth on with worse case configuration												
JsT-Ab-060111-02/364AFW00QQ	In	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.639	-0.3990	1.080	0.756	1.19	0.83
JsT-Ab-060127-06/364AFW00QQ	In	806.0125 **BT On**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.661	-0.4460	1.100	0.777	1.22	0.86
JsT-Ab-060111-03/364AFW00QQ	Out	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.646	-0.2460	0.949	0.667	1.00	0.71
JsT-Ab-060111-04/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.644	0.1040	1.060	0.750	1.06	0.75
JsT-Ab-060111-05/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.648	-0.1730	0.908	0.640	0.94	0.67
JsT-Ab-060111-06/364AFW00QQ	In	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.645	-0.2170	1.030	0.722	1.08	0.76
JsT-Ab-060111-07/364AFW00QQ	Out	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.647	-0.3800	0.798	0.564	0.87	0.62

WC data attachment (including mini keyboard) from data cable assessments above.												
MeS-Ab-060209-06/364AFW00QQ	Out	813.5125 **BT On**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5491A/ NNTN5863A	0.634	-0.3150	0.933	0.664	1.01	0.72

Table 7

Assessment at the body (MOTOtalkmode 114:120) 902-928MHz												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; offered audio accessories ; w/ WC configuration from overall body assessments above												
JsT-Ab-060111-10/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.874	-0.6100	0.679	0.472	0.40	0.28
JsT-Ab-060111-11/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	1.030	-1.1400	0.686	0.479	0.45	0.31
JsT-Ab-060111-12/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5004A	0.874	-0.9340	0.720	0.499	0.46	0.32
JsT-Ab-060111-13/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5004A	0.876	-0.8190	0.653	0.456	0.40	0.28
JsT-Ab-060111-14/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5005A	0.873	-0.8420	0.754	0.523	0.47	0.32
JsT-Ab-060112-02/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5005A	0.866	-1.1500	0.706	0.492	0.47	0.33
JsT-Ab-060112-03/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5006A	0.872	-0.8050	0.753	0.522	0.46	0.32
JsT-Ab-060112-04/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5006A	0.873	-0.7640	0.656	0.457	0.40	0.28
JsT-Ab-060112-05/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5330A	0.871	-0.6780	0.747	0.518	0.45	0.31
JsT-Ab-060112-06/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5330A	0.876	-0.9150	0.695	0.484	0.44	0.30
JsT-Ab-060112-07/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NSN6066A	0.873	-0.9130	0.656	0.458	0.41	0.29
JsT-Ab-060112-08/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NSN6066A	0.876	-1.0200	0.572	0.400	0.37	0.26
JsT-Ab-060112-09/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN4620A	0.875	-0.8080	0.753	0.523	0.46	0.32
JsT-Ab-060112-10/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN4620A	0.874	-0.8730	0.686	0.477	0.43	0.30
JsT-Ab-060112-11/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN8390B	0.871	-1.1000	0.810	0.565	0.53	0.37
JsT-Ab-060112-12/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN8390B	0.875	-0.8740	0.686	0.477	0.43	0.30

Table 7 (continued)

Run Number/ SN	Antenna	Freq. (MHz)	Battery	Test position	Carry Case	Additional attachments	Initial Power (W)	S.A.R. Drift (dB)	Meas. 1g-S.A.R. (mW/g)	Meas. 10g-S.A.R. (mW/g)	Max Calc. 1g-S.A.R. (mW/g)	Max Calc. 10g-S.A.R. (mW/g)
JsT-Ab-060112-13/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN7875C	0.873	-0.9140	0.805	0.558	0.51	0.35
JsT-Ab-060112-14/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN7875C	0.878	-1.0100	0.699	0.488	0.45	0.31
JsT-Ab-060112-15/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN8146C	0.878	-0.8330	0.791	0.549	0.49	0.34
JsT-Ab-060113-03/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	SYN8146C	0.875	-1.1100	0.715	0.498	0.47	0.33
JsT-Ab-060113-04/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN4033A	0.873	-0.5770	0.721	0.501	0.42	0.29
JsT-Ab-060113-06/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN4033A	0.868	-0.7000	0.651	0.4550	0.39	0.27
JsT-Ab-060113-07/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NTN8496A	0.851	-0.6550	0.638	0.442	0.39	0.27
JsT-Ab-060113-08/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NTN8496A	0.870	-0.7550	0.705	0.490	0.43	0.30
JsT-Ab-060113-09/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NTN8513B	0.872	-0.6730	0.714	0.495	0.43	0.30
JsT-Ab-060113-10/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NTN8513B	0.869	-0.8760	0.666	0.463	0.42	0.29
JsT-Ab-060113-11/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN6312A	0.874	-0.7630	0.757	0.525	0.46	0.32
JsT-Ab-060113-12/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN6312A	0.878	-0.7080	0.688	0.479	0.41	0.29
JsT-Ab-060113-13/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5751A	0.870	-0.6920	0.808	0.562	0.49	0.34
JsT-Ab-060113-14/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5751A	0.864	-0.7570	0.691	0.482	0.42	0.30
JsT-Ab-060113-15/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5752A	0.868	-0.7270	0.747	0.519	0.45	0.31
JsT-Ab-060113-16/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5752A	0.874	-0.9640	0.663	0.461	0.42	0.29
JsT-Ab-060117-02/364AFW00HP	In	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5774A	0.869	-0.7080	0.801	0.557	0.48	0.34
JsT-Ab-060117-03/364AFW00HP	Out	915.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5774A	0.871	-0.9020	0.704	0.491	0.44	0.31

Table 8

Assessment at the body (MOTOtalk mode 114:120) 902-928MHz												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; band edges; WC configuration from MOTOtalk assessments above. Bluetooth on with worse case configuration												
JsT-Ab-060118-02/364AFW00HP	In	902.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.881	-0.7160	0.994	0.692	0.59	0.41
JsT-Ab-060118-03/364AFW00HP	Out	902.525	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.878	-0.8870	0.833	0.582	0.52	0.36
JsT-Ab-060118-04/364AFW00HP	In	927.475	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.862	-0.4940	0.584	0.406	0.34	0.24
JsT-Ab-060118-05/364AFW00HP	Out	927.475	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.863	-0.8560	0.654	0.455	0.41	0.29
JsT-Ab-060127-07/364AFW00HP (Full scan)	In	902.525 **BT On**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	NNTN5211A	0.889	-1.6500	0.874	0.626	0.64	0.46

Table 9

Assessment at the body (Phone mode 1:3) 806-825MHz & 896-902MHz bands												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
800MHz band; Antenna positions; band edges w/ WC configuration overall at the body												
JsT-Ab-060117-08/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.658	-0.0419	0.559	0.390	0.56	0.39
JsT-Ab-060117-09/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.651	-0.0300	0.466	0.330	0.47	0.33
JsT-Ab-060117-10/364AFW00QQ	In	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.660	-0.0154	0.577	0.407	0.58	0.41
JsT-Ab-060117-11/364AFW00QQ	Out	806.0125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.655	-0.0017	0.508	0.360	0.51	0.36
JsT-Ab-060117-12/364AFW00QQ	In	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.654	-0.2210	0.539	0.379	0.57	0.40
JsT-Ab-060117-13/364AFW00QQ	Out	824.9875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.658	-0.0190	0.427	0.302	0.43	0.30
900MHz band; Antenna positions; band edges w/ WC configuration overall at the body												
JsT-Ab-060117-14/364AFW00QQ	In	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.667	-0.0252	0.407	0.284	0.41	0.29
JsT-Ab-060117-15/364AFW00QQ	Out	899.66875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.668	-0.1880	0.361	0.252	0.38	0.26
JsT-Ab-060118-06/364AFW00QQ	In	896.01875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.663	-0.2160	0.417	0.291	0.44	0.31
JsT-Ab-060118-07/364AFW00QQ	Out	896.01875	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.667	-0.1740	0.373	0.260	0.39	0.27
JsT-Ab-060118-08/364AFW00QQ	In	901.98125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.665	-0.1980	0.392	0.271	0.41	0.28
JsT-Ab-060118-09/364AFW00QQ	Out	901.98125	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.667	-0.1680	0.356	0.248	0.37	0.26

Table 10

Assessment at the body (WiDEN mode 236:310) 902-928MHz												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Meas. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Antenna positions; 2.5cm; WC configuration from overall body assessments above.												
JsT-Ab-060118-10/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT Back- @ 2.5cm	None	None	0.627	-0.0439	0.924	0.652	0.95	0.67
JsT-Ab-060118-11/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT Back- @ 2.5cm	None	None	0.624	-0.00674	0.900	0.616	0.92	0.63
JsT-Ab-060118-14/364AFW00QQ	In	813.5125	SNN5744A w/ NNTN2331A	DUT Front @ 2.5cm	None	None	0.625	0.0652	0.588	0.410	0.60	0.42
JsT-Ab-060118-15/364AFW00QQ	Out	813.5125	SNN5744A w/ NNTN2331A	DUT Front @ 2.5cm	None	None	0.624	0.0241	0.489	0.342	0.50	0.35

*Assessment of the WC test configuration at the body (Ref. run JsT-Ab-0600103-06 - Table 4) w/ Bluetooth on/off; full DASY 4 coarse and 7x7x7 cube scan												
JsT-Ab-060127-09/ 364AFW00QQ	In	813.5125 **BT On**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.629	0.1260	1.280	0.873	1.30	0.89
JsT-Ab-060119-05/364AFW00QQ	In	813.5125 **BT Off**	SNN5744A w/ NNTN2331A	Against phantom	NNTN4747A	None	0.623	0.0415	1.250	0.881	1.28	0.91

9.1 Highest S.A.R. results calculation methodology

The calculated maximum 1-gram and 10-gram averaged S.A.R. results reported herein for the full DASY ™ coarse and 7x7x7 cube measurements are determined by scaling the measured S.A.R. to account for power leveling variations and power slump. For this device the Maximum Calculated 1-gram and 10-gram averaged peak S.A.R. is calculated using the following formula:

Max. Calc. 1-g/10-g Avg. SAR = ((S.A.R. meas. / (10^(Pdrift/10)))*(Pmax/Pint))* DC%

P_{max} = Maximum Power (W)

P_{int} = Initial Power (W)

Pdrift = DASY drift results (dB) - (for conservative results positive drifts are not accounted for)

$SAR_{meas.}$ = Measured 1 gram averaged peak S.A.R. (mW/g)

DC % = Transmission mode duty cycle in % where applicable (50% duty cycle is applied for PTT operation.)

10.0 Conclusion

The highest Operational Maximum Calculated 1-gram and 10-gram average S.A.R. values found for FCC ID: AZ489FT5848 models H83XAH6RR4AN.

At the Body: 1-g Avg. = 1.30W/kg; 10-g Avg. = 0.89W/kg
At the Face: 1-g Avg. = 0.58W/kg; 10-g Avg. = 0.41W/kg
At the Head: 1-g Avg. = 1.02W/kg; 10-g Avg. = 0.70W/kg

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

APPENDIX A
Measurement Uncertainty

Uncertainty Budget for System Performance Check (dipole & flat phantom) for 30 MHz to 3 GHz

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	IEEE 1528 section	**Tol. (± %)**	**Prob. Dist.**	**Div.**	c_i **(1 g)**	c_i **(10 g)**	**1 g** u_i **(±%)**	**10 g** u_i **(±%)**	v_i
Measurement System									
Probe Calibration	E.2.1	5.9	N	1.00	1	1	5.9	5.9	∞
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	1.0	R	1.73	1	1	0.6	0.6	∞
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	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t. Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	2.0	R	1.73	1	1	1.2	1.2	∞
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3	3.3	R	1.73	0.64	0.43	1.2	0.8	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.3	1.9	R	1.73	0.6	0.49	0.6	0.5	∞
Combined Standard Uncertainty			RSS				9	9	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				18	17	

Uncertainty Budget for Device Under Test, for 30 MHz to 3 GHz

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	IEEE 1528 section	**Tol. (± %)**	Prob Dist	**Div.**	c_i (1 g)	c_i (10 g)	**1 g** u_i (±%)	**10 g** u_i (±%)	v_i
Measurement System									
Probe Calibration	E.2.1	5.9	N	1.00	1	1	5.9	5.9	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
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	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mech. Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.2	N	1.00	1	1	3.2	3.2	29
Device Holder Uncertainty	E.4.1	4.0	N	1.00	1	1	4.0	4.0	8
SAR drift	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3	3.3	N	1.00	0.64	0.43	2.1	1.4	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.3	1.9	N	1.00	0.6	0.49	1.1	0.9	∞
Combined Standard Uncertainty			RSS				11	11	411
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				22	22	

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) *ci* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
g) *ui* – SAR uncertainty
h) *vi* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty.

Appendix B
Probe Calibration Certification

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client **Motorola CGISS**

Certificate No: ET3-1384_May05

CALIBRATION CERTIFICATE

Object	ET3DV6 - SN:1384
Calibration procedure(s)	QA CAL-01.v5 and QA CAL-12.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	May 26, 2005
Condition of the calibrated item	In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41495277	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41498087	3-May-05 (METAS, No. 251-00466)	May-06
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-04 (METAS, No. 251-00403)	Aug-05
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-05 (METAS, No. 251-00467)	May-06
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-04 (METAS, No. 251-00404)	Aug-05
Reference Probe ES3DV2	SN: 3013	7-Jan-05 (SPEAG, No. ES3-3013_Jan05)	Jan-06
DAE4	SN: 617	19-Jan-05 (SPEAG, No. DAE4-617_Jan05)	Jan-06

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov 05

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Laboratory Technician	N. Vetterli
Approved by:	Katja Pokovic	Technical Manager	Katja

Issued: May 26, 2005

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

ET3DV6 SN:1384 **May 26, 2005**

DASY - Parameters of Probe: ET3DV6 SN:1384

Sensitivity in Free Space[A]			Diode Compression[B]	
NormX	**1.78** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**92** mV
NormY	**1.76** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**92** mV
NormZ	**1.94** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**92** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	10.1	5.1
SAR_{be} [%]	With Correction Algorithm	0.1	0.2

TSL **1810 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	14.5	9.5
SAR_{be} [%]	With Correction Algorithm	1.0	0.1

Sensor Offset

Probe Tip to Sensor Center **2.7** mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

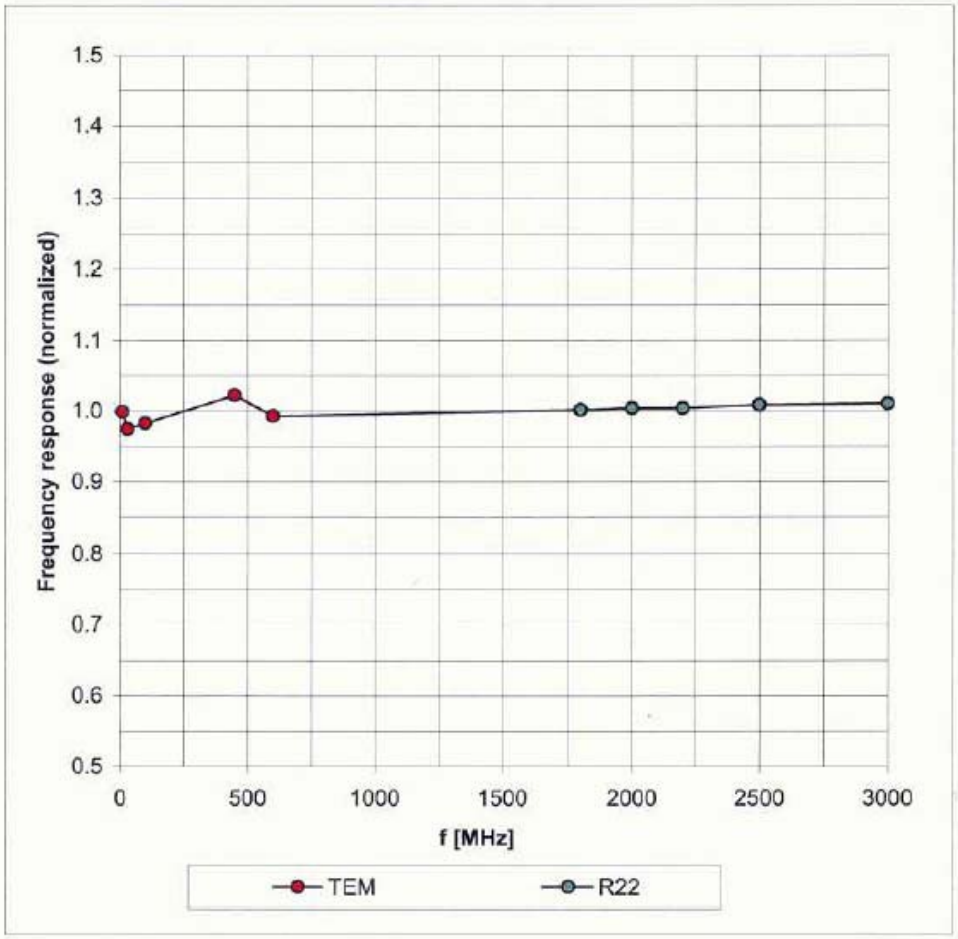
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1384 May 26, 2005

Frequency Response of E-Field

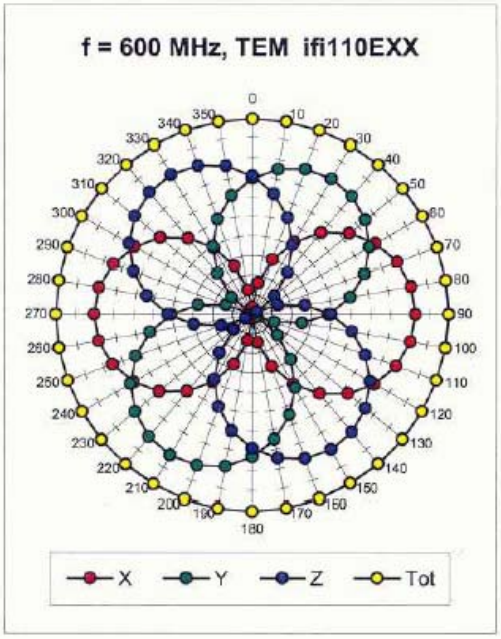
(TEM-Cell:ifi110 EXX, Waveguide: R22)

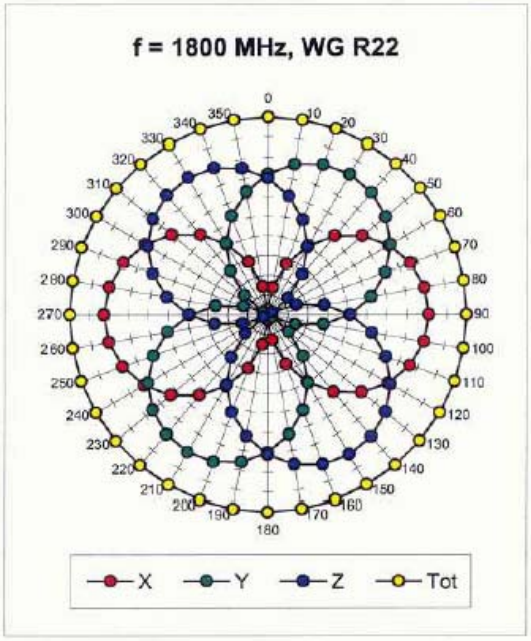


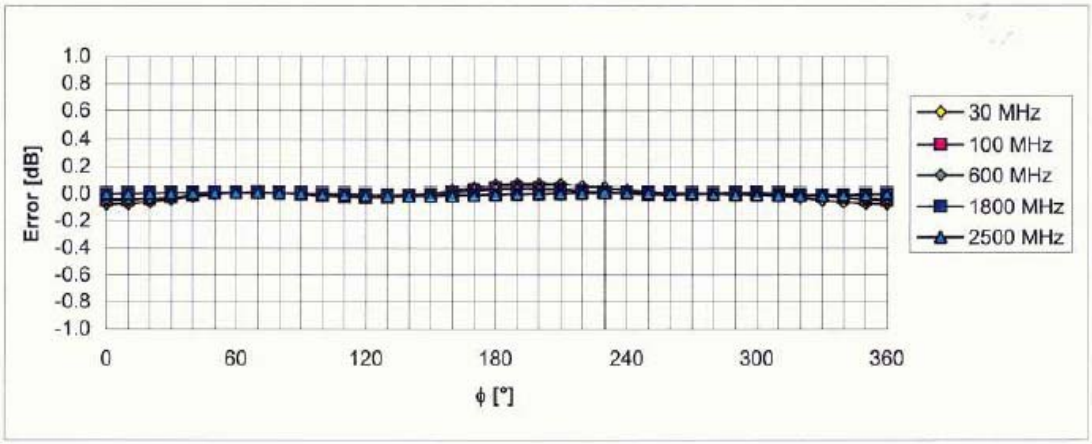
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

ET3DV6 SN:1384 **May 26, 2005**

Receiving Pattern (ϕ), ϑ = 0°





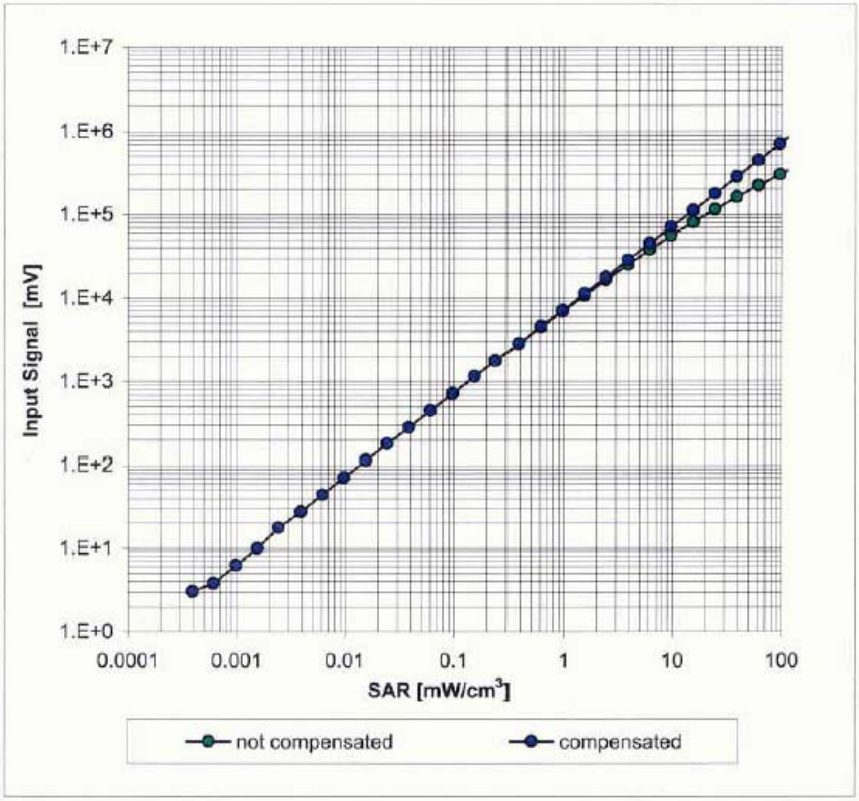


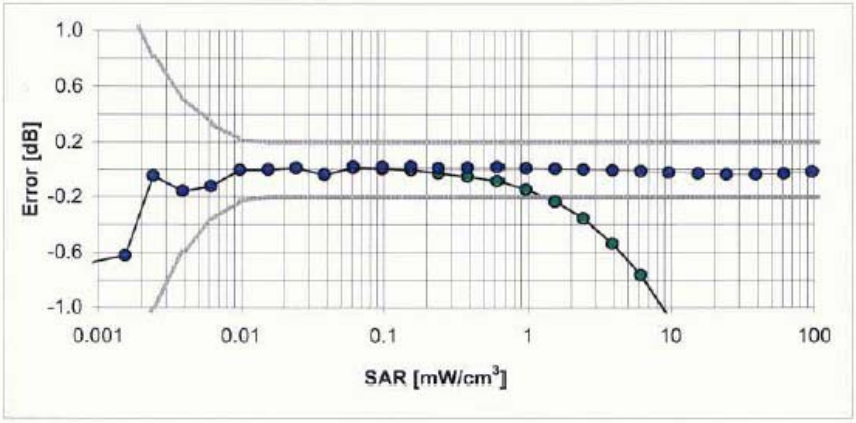
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

ET3DV6 SN:1384 **May 26, 2005**

Dynamic Range f(SAR_{head})

(Waveguide R22, f = 1800 MHz)

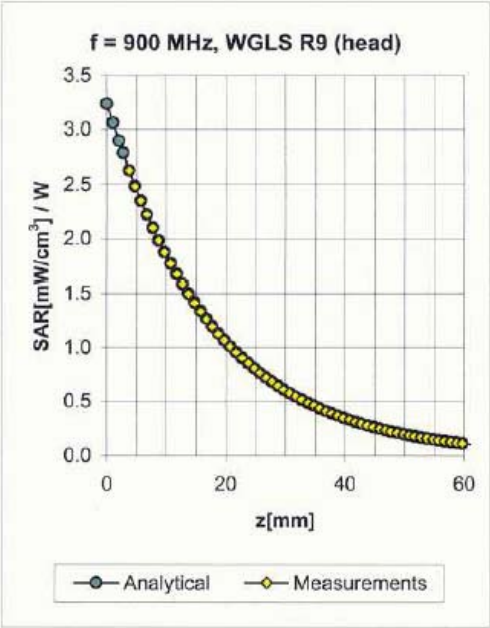


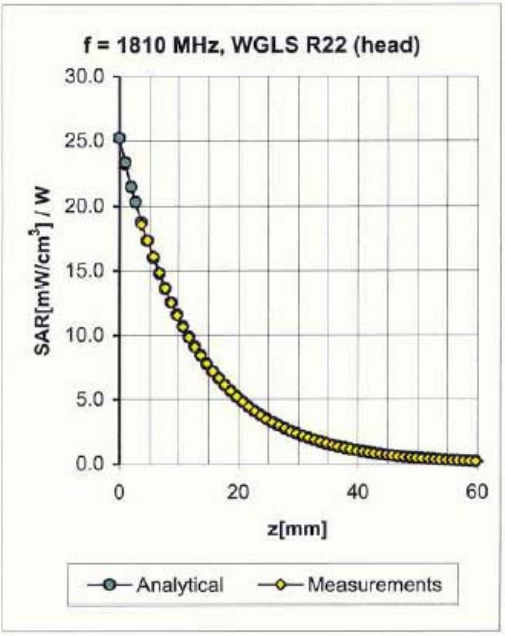


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

ET3DV6 SN:1384 **May 26, 2005**

Conversion Factor Assessment





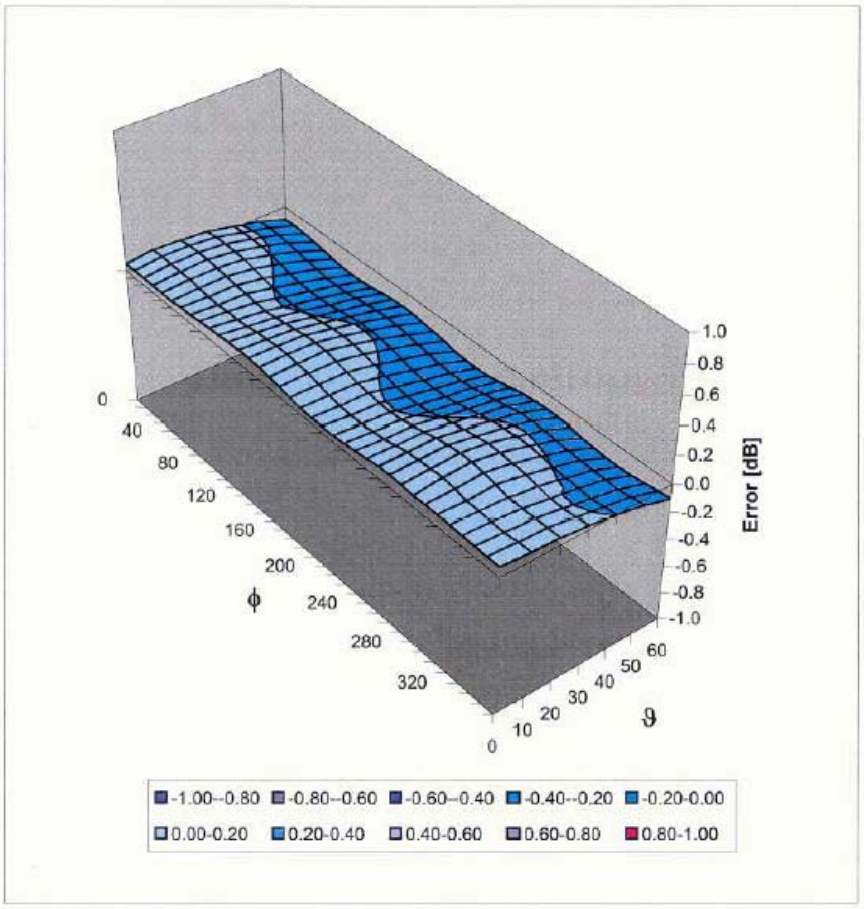
f [MHz]	Validity [MHz][c]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
450	± 50 / ± 100	Head	43.5 ± 5%	0.87 ± 5%	0.08	1.62	7.51 ± 13.3% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.84	1.67	6.53 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.73	2.19	5.31 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.81	2.05	4.71 ± 11.8% (k=2)
450	± 50 / ± 100	Body	56.7 ± 5%	0.94 ± 5%	0.10	1.75	7.10 ± 13.3% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.66	1.95	6.19 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.67	2.58	4.80 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.93	1.80	4.46 ± 11.8% (k=2)

[c] The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

ET3DV6 SN:1384 **May 26, 2005**

Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5848
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: 2/16/06
Report Revision: Rev O
Report ID: i580_Rev O_060216_SR3014

Responsible Engineer: Michael Sailsman (Sr. Staff Test Eng.)
Date/s Tested: 12/27/05-2/9/06 (19 days)
Manufacturer/Location: Motorola – Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 12/02/05
DUT Description: i580; TDMA: 236:310, 1:6, 2:6, 81:120, 1:12; 64QAM, 16 QAM & QPSK Modulation; 0.6W Pulse Avg. MOTOtalk (114:120 8FSK; 0.85 W nominal); GPS & Bluetooth capable
Test TX mode(s): 1:3, 1:6, 114:120, 236:310, 81:120
Max. Power output: Mototalk - 0.891W, iDEN/WiDEN - 0.640W
Nominal Power: MOTOtalk - 0.85W, iDEN/WiDEN - 0.60W
Tx Frequency Bands: MOTOtalk - 902-928MHz, iDEN/WiDEN – 806-825, 896-902MHz
Signaling type: TDMA: iDEN; WiDEN, MOTOtalk - (FHSS 8FSK)
Model(s) Tested: H83XAH6RR4AN/NWF1019A
Model(s) Certified: H83XAH6RR4AN/NWF1019A
Serial Number(s): 364AFW00HP, 364AFW00L0, 364AFW00QQ,
Classification: General Population/Uncontrolled
Rule Part(s): 15 & 90

Approved Accessories:
Antenna(s):
8575868A01 (retractable ¼ wave antenna, Gain in/out: 806-825MHz: -1.16/2.15dBd; 896-902MHz: -1.22/2.15dBd; 902-925MHz: 0.39/2.15dBd)
Battery(ies):
SNN5765A (High performance Li Ion); NNTN2332A (Max capacity battery cover); SNN5744A (Slim Li Ion); NNTN2331A (High capacity battery cover)
Body worn accessory(ies):
NNTN6653A (Holster); NNTN4747A (Belt clip)
Audio/Data cable accessory(ies):
NNTN5211A(Surveillance earpiece); NNTN5004A(PTT headset); NNTN5005A(PTT headset); NNTN5006A(PTT headset); NNTN5330A(PTT headset); NNTN5774A(PTT stereo headset); NNTN5751A(Stereo mixing headset w/ PTT); NNTN5752A(Stereo mixing headset); NNTN6312A(3-wire surveillance earpiece); NSN6066A(RSM); NNTN4033A(Privacy earpiece & mic w/PTT); SYN8390B(Privacy earpiece & mic); NNTN4620A(Silver ear bud); SYN8146C(lightweight over the ear headset w/ boom mic); SYN7875C(hearing aid neckloop); NTN8496A(lightweight headset w/ mic); NTN8513B(lightweight headband); NKN6559A(USB cable); NKN6560A(RS232 cable); NNTN5405A(USB data cable w/ charging); NNTN5406A(RS232 data cable w/ charging); NTN2074A (Qwerty keyboard: NNTN5491A/NNTN5863A/NNTN5496A/NNTN5715A)

Max. Calc. 1-g/10-g Avg. SAR: 1.30/0.89 W/kg (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.58/0.41 W/kg (Face)
Max. Calc. 1-g/10-g Avg. SAR: 1.02/0.70 W/kg (Head)

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. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Signature on file
Ken Enger GEMS EME Lab Senior Resource Manager,
Laboratory Director,

Approval Date: 2/17/06

Certification Date: 2/17/06

Certification No.: L1060201P

Appendix C
Dipole Calibration Certificates

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client **Motorola CGISS**

CALIBRATION CERTIFICATE

Object(s)	D900V2 - SN:085
Calibration procedure(s)	QA CAL-05.v2 Calibration procedure for dipole validation kits
Calibration date:	August 19, 2004
Condition of the calibrated item	In Tolerance (according to the specific calibration document)

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	US37292783	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	MY41092317	18-Oct-02 (Agilent, No. 20021018)	Oct-04
RF generator R&S SML-03	100698	27-Mar-2002 (R&S, No. 20-92389)	In house check: Mar-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Judith Mueller	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: August 25, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

1. Measurement Conditions

The measurements were performed in the half size flat phantom filled with **head simulating solution** of the following electrical parameters at 900 MHz:

Relative Dielectricity	**41.0** ± 5%
Conductivity	**0.97 mho/m** ± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 6.18 at 900 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 15mm from dipole center to the solution surface. The included distance spacer was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250mW ± 3 %. The results are normalized to 1W input power.

2. SAR Measurement with DASY4 System

Standard SAR-measurements were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values measured with the dosimetric probe ET3DV6 SN:1507 and applying the advanced extrapolation are:

averaged over 1 cm^3 (1 g) of tissue:	**11.0 mW/g** ± 16.8 % (k=2)[1]
averaged over 10 cm^3 (10 g) of tissue:	**7.04 mW/g** ± 16.2 % (k=2)[1]

3. Dipole Impedance and Return Loss

The impedance was measured at the SMA-connector with a network analyzer and numerically transformed to the dipole feedpoint. The transformation parameters from the SMA-connector to the dipole feedpoint are:

Electrical delay:	**1.392 ns**	(one direction)
Transmission factor:	**0.987**	(voltage transmission, one direction)

The dipole was positioned at the flat phantom sections according to section 1 and the distance spacer was in place during impedance measurements.

Feedpoint impedance at 900 MHz:	Re{Z} = **48.8 Ω**
	Im {Z} = **-6.6 Ω**
Return Loss at 900 MHz	**-22.7 dB**

4. Handling

Do not apply excessive force to the dipole arms, because they might bend. Bending of the dipole arms stresses the soldered connections near the feedpoint leading to a damage of the dipole.

5. Design

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

6. Power Test

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Date/Time: 08/19/04 15:25:59

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN085

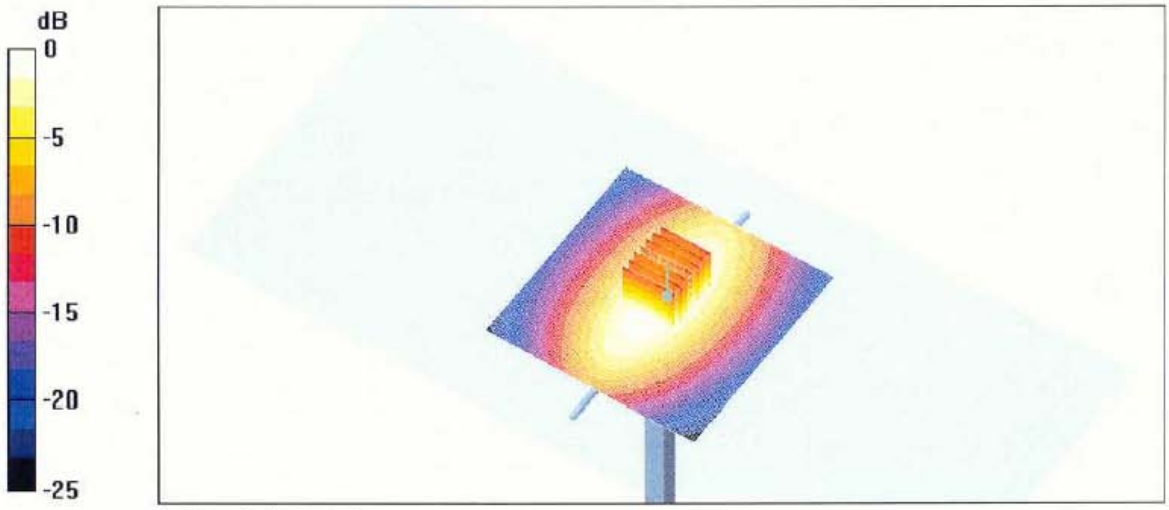
Communication System: CW-900; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: HSL 900 MHz;
Medium parameters used: f = 900 MHz; σ = 0.97 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507; ConvF(6.18, 6.18, 6.18); Calibrated: 1/23/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 7/22/2004
- Phantom: Flat Phantom half size; Type: QD000P49AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.3 Build 16; Postprocessing SW: SEMCAD, V1.8 Build 123

Pin = 250 mW; d = 15 mm/Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.93 mW/g

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.2 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 4.11 W/kg
SAR(1 g) = 2.74 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.97 mW/g



0 dB = 2.97mW/g

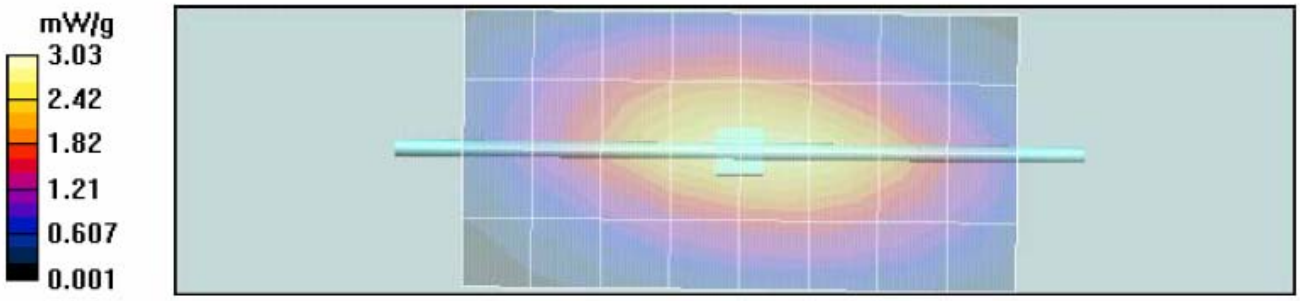
Appendix D
Test System Verification Scans

Note: Dipole validation scans at the head from SPEAG are provided in APPENDIX D. The GEMS EME lab validated the dipole to the applicable IEEE system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values for body at the applicable frequency. The results of the GEMS EME system performance validation are provided herein. To assess the isotropic characteristics of the measurement probe, two system performance zoom scans (0 and 90 degrees) were measured. The results were averaged together and adjusted to account for the power drift in order to obtain the final calculated 1 and 10 gram results.

Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 12/27/05
Run #: ErC-SYSP-900H-051227-01 Sim.Tissue Temp: 21.7 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.36 mW/g calculated 1g-SAR; + 0.87% from target (including drift)
7.23 mW/g calculated 10g-SAR; + 0.27% from target (including drift)

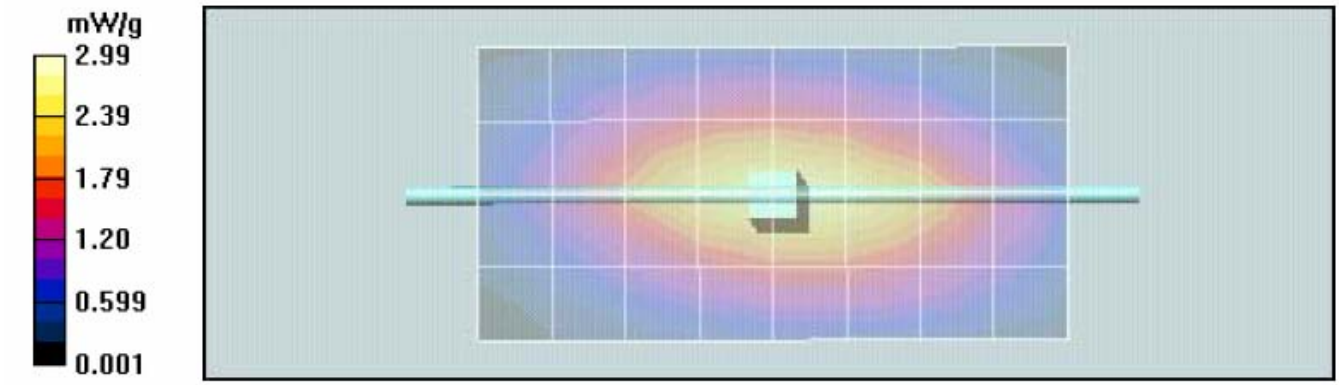
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1 mho/m; εr = 41.5; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = -0.0297 dB
Peak SAR (extrapolated) = 4.24 W/kg
SAR(1 g) = 2.8 mW/g; SAR(10 g) = 1.78 mW/g
Maximum value of SAR (measured) = 3.03 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = -0.0297 dB
Peak SAR (extrapolated) = 4.30 W/kg
SAR(1 g) = 2.84 mW/g; SAR(10 g) = 1.81 mW/g
Maximum value of SAR (measured) = 3.08 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.00 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 12/28/05
Run #: ErC-SYSP-900H-051228-01 Sim.Tissue Temp: 22.2 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.12 mW/g calculated 1g-SAR; - 1.21% from target (including drift)
7.08 mW/g calculated 10g-SAR; - 1.80% from target (including drift)

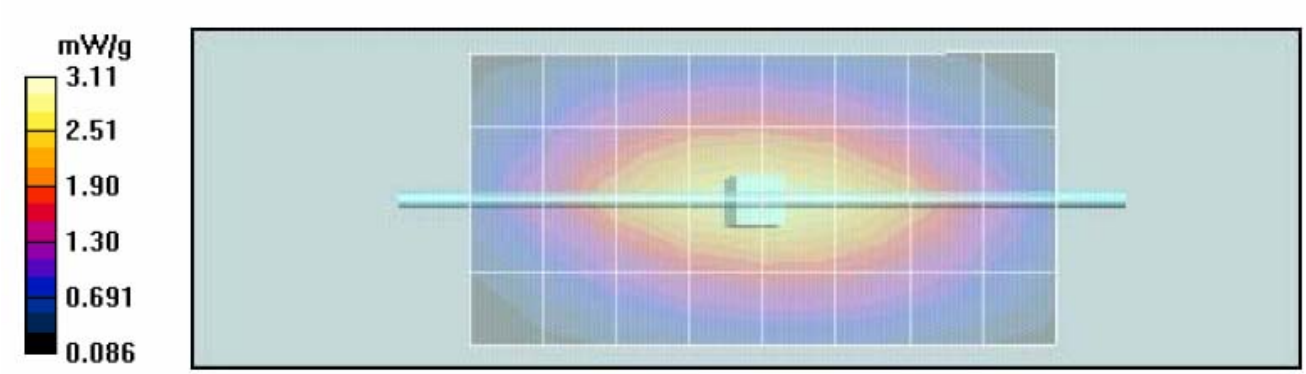
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1 mho/m; εr = 41.7; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.0249 dB
Peak SAR (extrapolated) = 4.13 W/kg
SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.73 mW/g
Maximum value of SAR (measured) = 2.95 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.0249 dB
Peak SAR (extrapolated) = 4.28 W/kg
SAR(1 g) = 2.81 mW/g; SAR(10 g) = 1.79 mW/g
Maximum value of SAR (measured) = 3.06 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.96 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 12/29/05
Run #: ErC-SYSP-900H-051229-01 Sim.Tissue Temp: 22.7 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

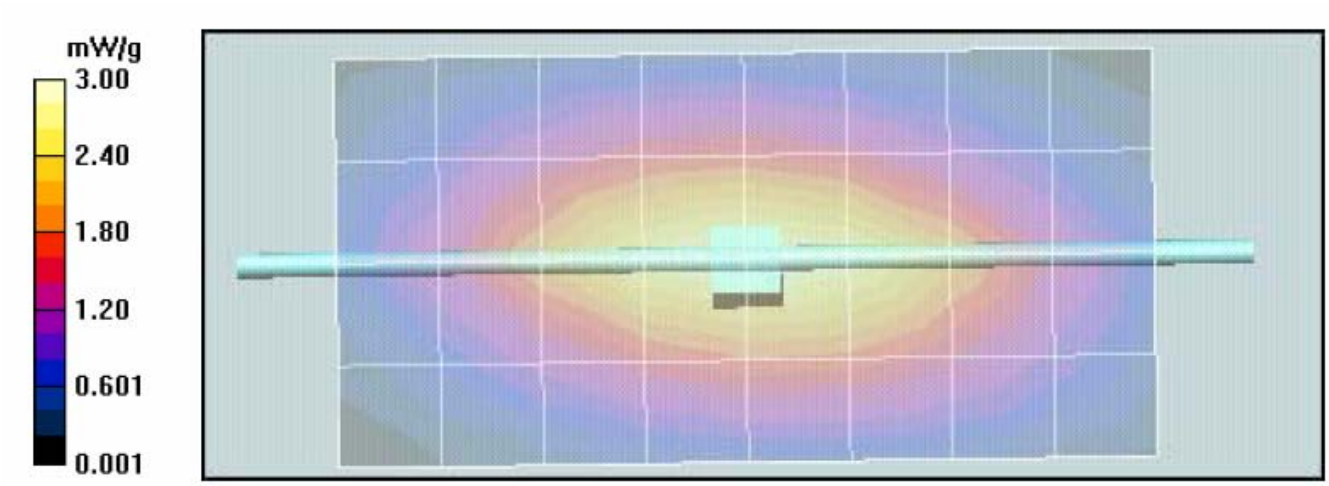
Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.63 mW/g calculated 1g-SAR; + 3.24% from target (including drift)
7.39 mW/g calculated 10g-SAR; + 2.56% from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1.01 mho/m; εr = 42.3; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 4.37 W/kg
SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.82 mW/g
Maximum value of SAR (measured) = 3.11 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 4.43 W/kg
SAR(1 g) = 2.91 mW/g; SAR(10 g) = 1.85 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 12/30/05
Run #: ErC-SYSP-900H-051230-01 Sim.Tissue Temp: 22.5 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)
Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.24 mW/g calculated 1g-SAR; - 0.14% from target (including drift)
7.19 mW/g calculated 10g-SAR; - 0.33% from target (including drift)

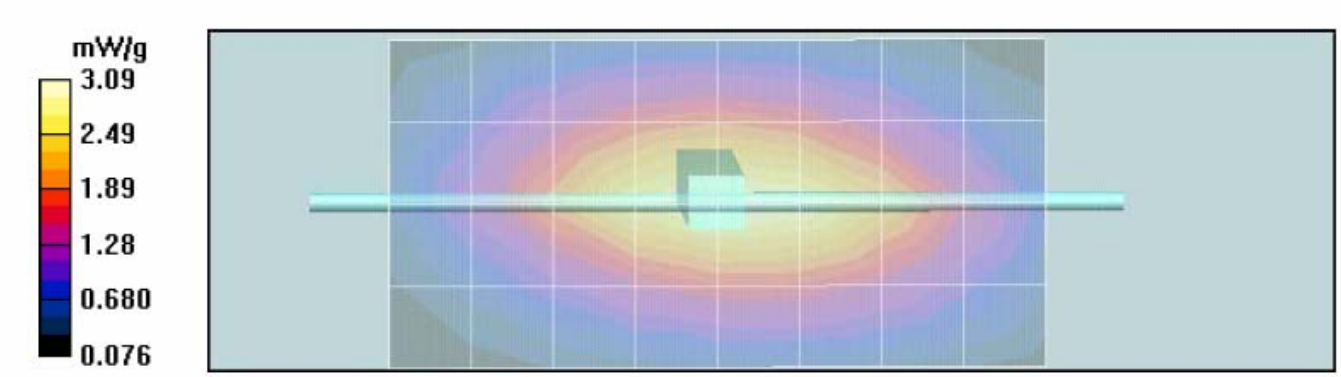
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1.01 mho/m; εr = 42.2; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.0403 dB
Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 3.00 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.0403 dB
Peak SAR (extrapolated) = 4.26 W/kg
SAR(1 g) = 2.81 mW/g; SAR(10 g) = 1.8 mW/g
Maximum value of SAR (measured) = 3.04 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.01 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/03/06
Run #: ErC-SYSP-900H-060103-01 Sim.Tissue Temp: 21.7 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.65 mW/g calculated 1g-SAR; + 3.46% from target (including drift)
7.41 mW/g calculated 10g-SAR; + 2.77% from target (including drift)

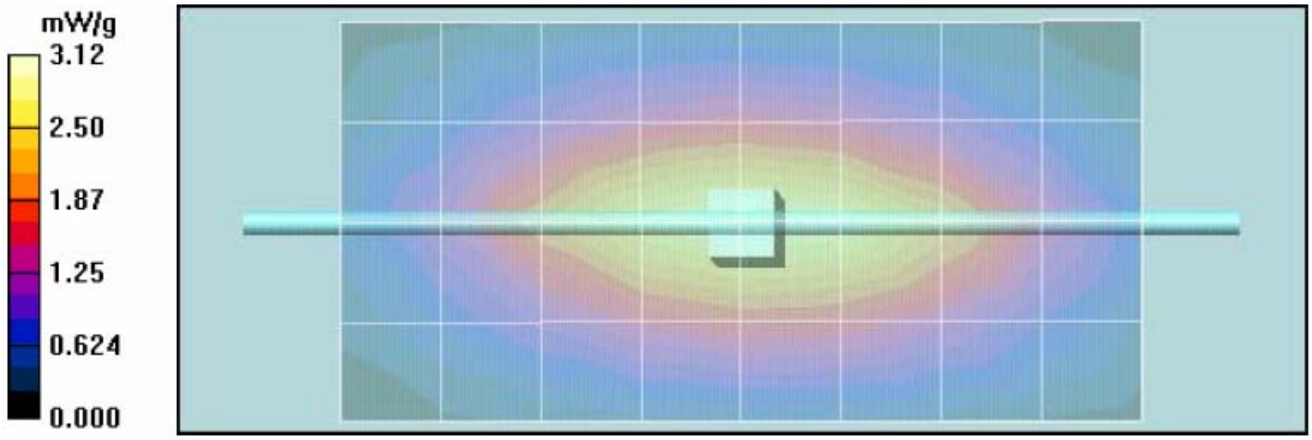
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1.01 mho/m; εr = 42.2; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.6 V/m; Power Drift = -0.0411 dB
Peak SAR (extrapolated) = 4.35 W/kg
SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.82 mW/g
Maximum value of SAR (measured) = 3.11 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.6 V/m; Power Drift = -0.0411 dB
Peak SAR (extrapolated) = 4.44 W/kg
SAR(1 g) = 2.91 mW/g; SAR(10 g) = 1.85 mW/g
Maximum value of SAR (measured) = 3.16 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.09 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/06/06
Run #: ErC-SYSP-900B-060106-01 Sim.Tissue Temp: 22.1 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.61 mW/g calculated 1g-SAR; + 1.76% from target (including drift)
7.47 mW/g calculated 10g-SAR; + 0.59% from target (including drift)
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)

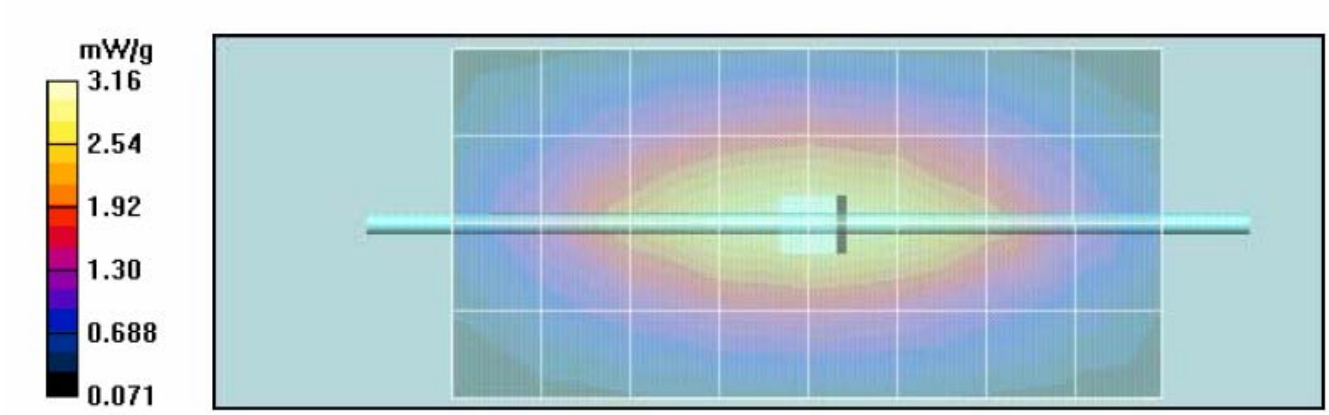
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.05 mho/m; εr = 54.2; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.00351 dB
Peak SAR (extrapolated) = 4.20 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.85 mW/g
Maximum value of SAR (measured) = 3.13 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.00351 dB
Peak SAR (extrapolated) = 4.31 W/kg
SAR(1 g) = 2.94 mW/g; SAR(10 g) = 1.89 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.11 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/09/06
Run #: HvH-SYSP-900B-060109-01 Sim.Tissue Temp: 22.2 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.75 mW/g calculated 1g-SAR; 3.00 % from target (including drift)
7.56 mW/g calculated 10g-SAR; 1.69 % from target (including drift)

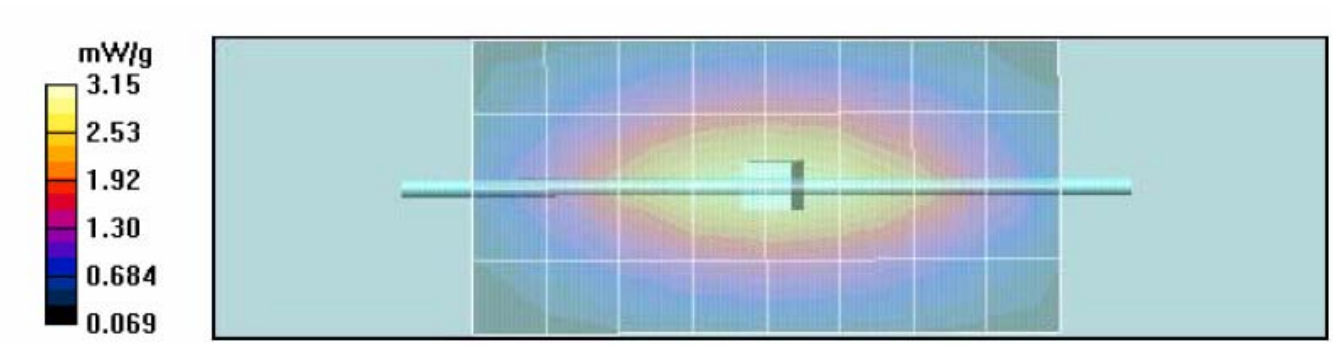
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; εr = 53.6; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = 0.00273 dB
Peak SAR (extrapolated) = 4.23 W/kg
SAR(1 g) = 2.91 mW/g; SAR(10 g) = 1.87 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = 0.00273 dB
Peak SAR (extrapolated) = 4.32 W/kg
SAR(1 g) = 2.97 mW/g; SAR(10 g) = 1.91 mW/g
Maximum value of SAR (measured) = 3.23 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.16 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/10/06
Run #: HvH-SYSP-900B-060110-01 Sim.Tissue Temp: 22.0 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.68 mW/g calculated 1g-SAR; 2.36 % from target (including drift)
7.53 mW/g calculated 10g-SAR; 1.38 % from target (including drift)

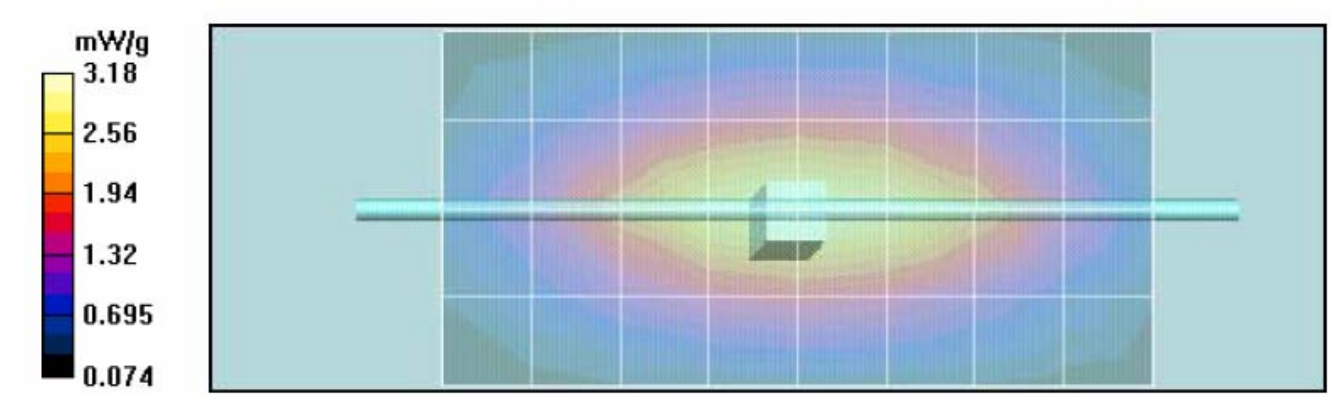
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; εr = 53.5; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = -0.00707 dB
Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.86 mW/g
Maximum value of SAR (measured) = 3.12 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = -0.00707 dB
Peak SAR (extrapolated) = 4.30 W/kg
SAR(1 g) = 2.95 mW/g; SAR(10 g) = 1.9 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.15 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/11/06
Run #: HvH-SYSP-900B-060111-01 Sim.Tissue Temp: 21.9 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.79 mW/g calculated 1g-SAR; 3.31 % from target (including drift)
7.61 mW/g calculated 10g-SAR; 2.44 % from target (including drift)

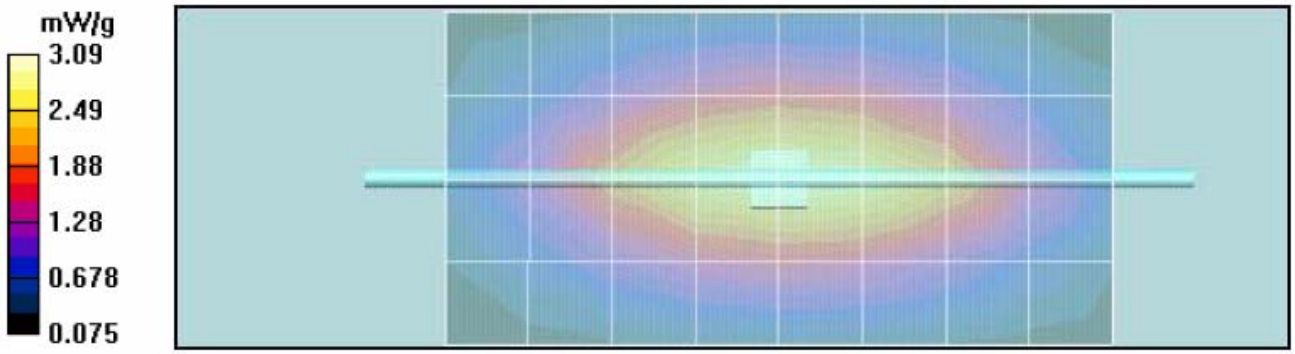
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; εr = 53.9; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.0177 dB
Peak SAR (extrapolated) = 4.23 W/kg
SAR(1 g) = 2.91 mW/g; SAR(10 g) = 1.88 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.0177 dB
Peak SAR (extrapolated) = 4.32 W/kg
SAR(1 g) = 2.96 mW/g; SAR(10 g) = 1.91 mW/g
Maximum value of SAR (measured) = 3.24 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.18 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/12/06
Run #: HvH-SYSP-900B-060112-01 Sim.Tissue Temp: 21.7 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.60 mW/g calculated 1g-SAR; 1.68 % from target (including drift)
7.49 mW/g calculated 10g-SAR; 0.87 % from target (including drift)

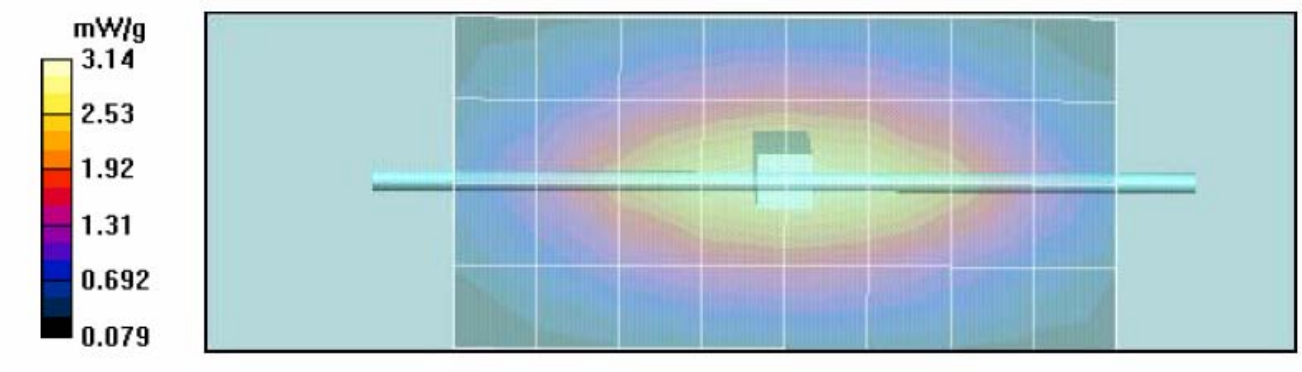
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.05 mho/m; εr = 53.7; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.1 V/m; Power Drift = -0.00833 dB
Peak SAR (extrapolated) = 4.14 W/kg
SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.85 mW/g
Maximum value of SAR (measured) = 3.09 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.1 V/m; Power Drift = -0.00833 dB
Peak SAR (extrapolated) = 4.29 W/kg
SAR(1 g) = 2.93 mW/g; SAR(10 g) = 1.89 mW/g
Maximum value of SAR (measured) = 3.14 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/13/06
Run #: HvH-SYSP-900B-060113-01 Sim.Tissue Temp: 21.5 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.75 mW/g calculated 1g-SAR; 2.94 % from target (including drift)
7.59 mW/g calculated 10g-SAR; 2.14 % from target (including drift)

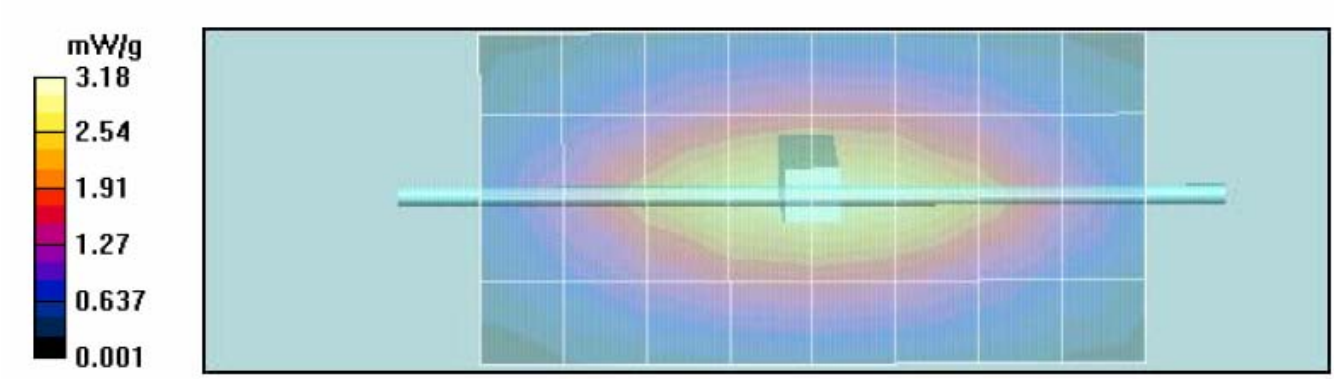
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; εr = 53.6; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.0167 dB
Peak SAR (extrapolated) = 4.19 W/kg
SAR(1 g) = 2.89 mW/g; SAR(10 g) = 1.87 mW/g
Maximum value of SAR (measured) = 3.12 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.0167 dB
Peak SAR (extrapolated) = 4.31 W/kg
SAR(1 g) = 2.96 mW/g; SAR(10 g) = 1.91 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.14 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/17/06
Run #: HvH-SYSP-900B-060117-01 Sim.Tissue Temp: 21.5 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.85 mW/g calculated 1g-SAR; 3.89 % from target (including drift)
7.65 mW/g calculated 10g-SAR; 2.95 % from target (including drift)

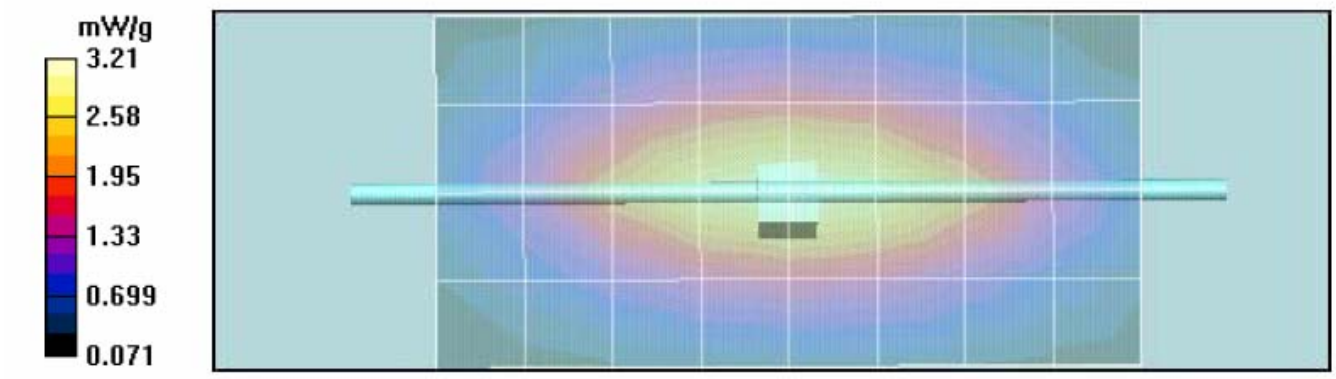
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.07 mho/m; εr = 53.4; ρ = 1000 kg/m3 Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm;Reference Value = 57.4 V/m; Power Drift = -0.00506 dB
Peak SAR (extrapolated) = 4.25 W/kg
SAR(1 g) = 2.93 mW/g; SAR(10 g) = 1.89 mW/g
Maximum value of SAR (measured) = 3.18 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.4 V/m; Power Drift = -0.00506 dB
Peak SAR (extrapolated) = 4.36 W/kg
SAR(1 g) = 2.99 mW/g; SAR(10 g) = 1.93 mW/g
Maximum value of SAR (measured) = 3.26 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.19 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/18/06
Run #: HvH-SYSP-900B-060118-01 Sim.Tissue Temp: 21.9 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.87 mW/g calculated 1g-SAR; 4.04 % from target (including drift)
7.67 mW/g calculated 10g-SAR; 3.23 % from target (including drift)

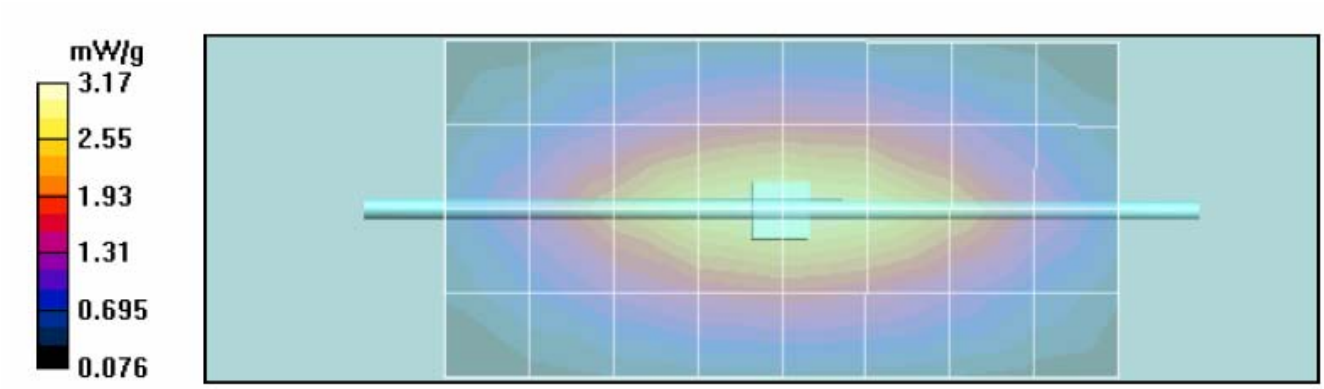
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.07 mho/m; εr = 53.4; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.4 V/m; Power Drift = 0.0396 dB
Peak SAR (extrapolated) = 4.33 W/kg
SAR(1 g) = 2.96 mW/g; SAR(10 g) = 1.91 mW/g
Maximum value of SAR (measured) = 3.23 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.4 V/m; Power Drift = 0.0396 dB
Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 3.03 mW/g; SAR(10 g) = 1.96 mW/g
Maximum value of SAR (measured) = 3.28 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.21 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/19/06
Run #: HvH-SYSP-900B-060119-01 Sim.Tissue Temp: 22.0 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.80 mW/g calculated 1g-SAR; 3.42 % from target (including drift)
7.61 mW/g calculated 10g-SAR; 2.46 % from target (including drift)

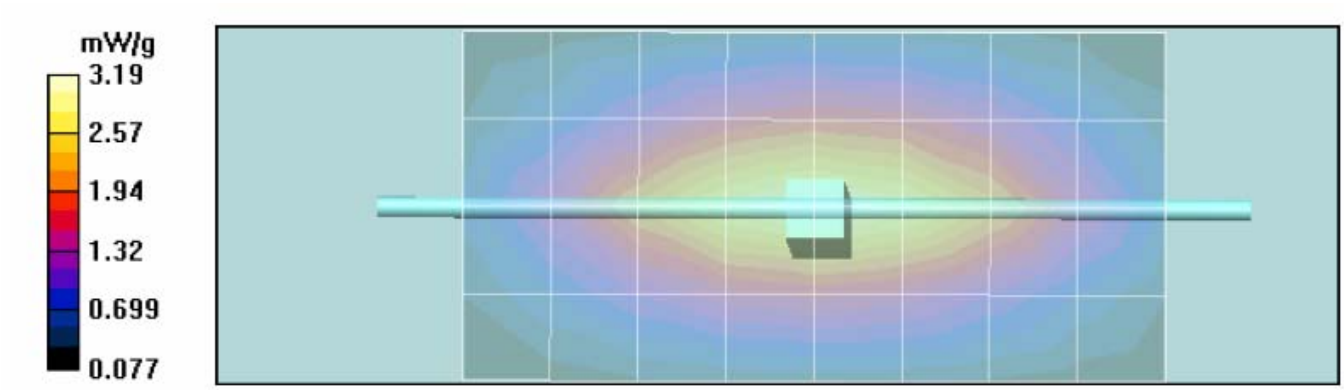
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.07 mho/m; εr = 53.2; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.00748 dB
Peak SAR (extrapolated) = 4.24 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.88 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.9 V/m; Power Drift = -0.00748 dB
Peak SAR (extrapolated) = 4.32 W/kg
SAR(1 g) = 2.97 mW/g; SAR(10 g) = 1.92 mW/g
Maximum value of SAR (measured) = 3.25 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/20/06
Run #: HvH-SYSP-900B-060120-01 Sim.Tissue Temp: 21.8 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.77 mW/g calculated 1g-SAR; 3.19 % from target (including drift)
7.62 mW/g calculated 10g-SAR; 2.50 % from target (including drift)

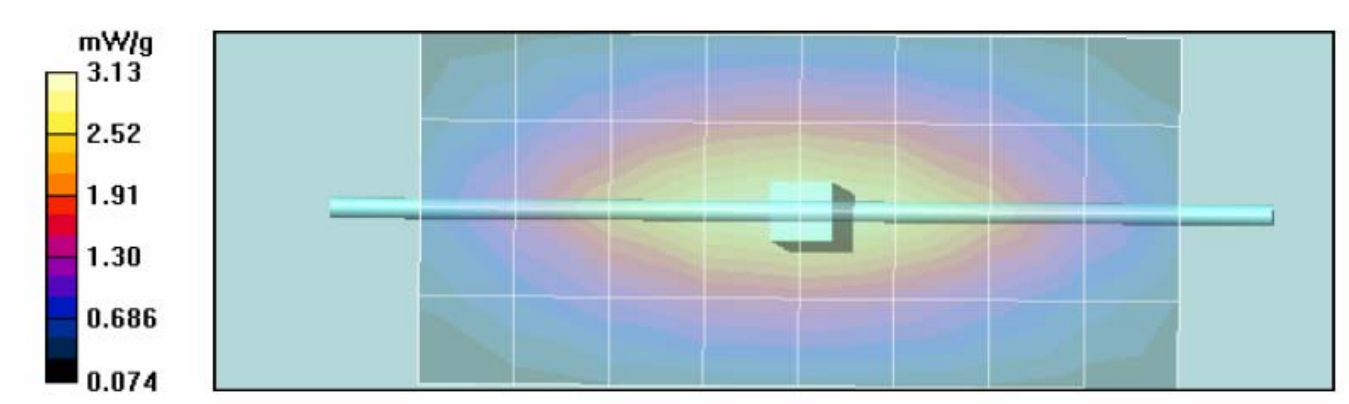
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.07 mho/m; εr = 53.1; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = 0.00234 dB
Peak SAR (extrapolated) = 4.24 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.89 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.0 V/m; Power Drift = 0.00234 dB
Peak SAR (extrapolated) = 4.32 W/kg
SAR(1 g) = 2.97 mW/g; SAR(10 g) = 1.92 mW/g
Maximum value of SAR (measured) = 3.11 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.19 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/25/06
Run #: HvH-SYSP-900B-060125-01 Sim.Tissue Temp: 21.3 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.61 mW/g calculated 1g-SAR; 1.79 % from target (including drift)
7.47 mW/g calculated 10g-SAR; 0.55 % from target (including drift)

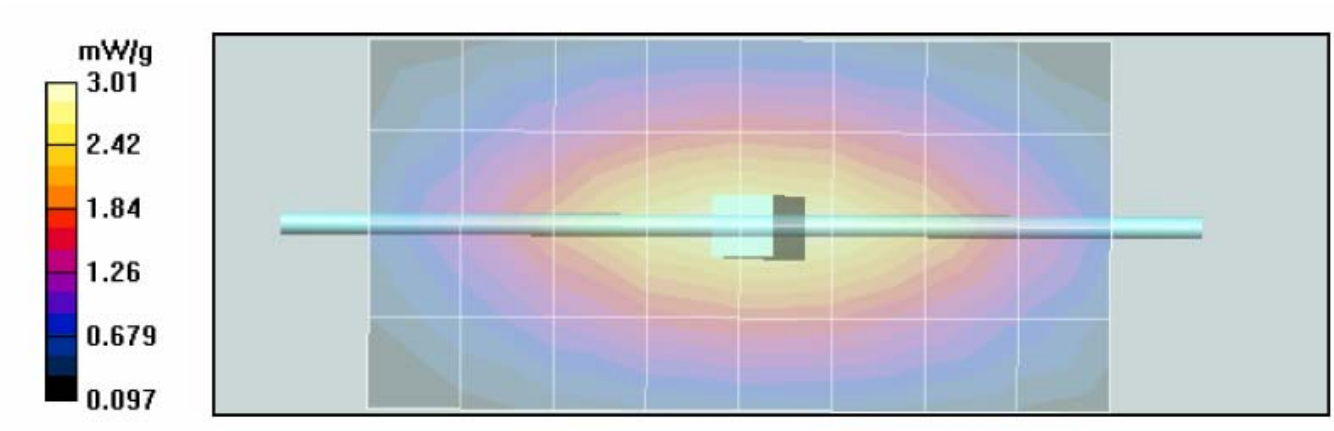
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; εr = 53.3; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.0169 dB
Peak SAR (extrapolated) = 4.23 W/kg
SAR(1 g) = 2.89 mW/g; SAR(10 g) = 1.86 mW/g
Maximum value of SAR (measured) = 3.15 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.0169 dB
Peak SAR (extrapolated) = 4.30 W/kg
SAR(1 g) = 2.94 mW/g; SAR(10 g) = 1.89 mW/g
Maximum value of SAR (measured) = 3.07 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.13 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/26/06
Run #: ErC-SYSP-900H-060126-01 Sim.Tissue Temp: 21.2 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.37 mW/g calculated 1g-SAR; 1.01% from target (including drift)
7.26 mW/g calculated 10g-SAR; 0.64% from target (including drift)

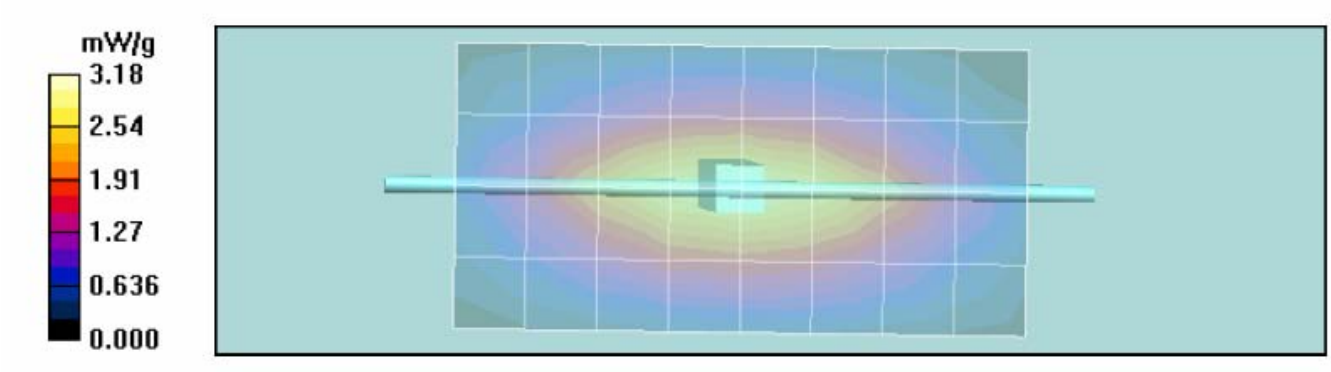
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1 mho/m; εr = 41.1; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.082 dB
Peak SAR (extrapolated) = 4.15 W/kg
SAR(1 g) = 2.75 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.98 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.2 V/m; Power Drift = -0.082 dB
Peak SAR (extrapolated) = 4.30 W/kg
SAR(1 g) = 2.83 mW/g; SAR(10 g) = 1.8 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.01 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 1/27/06
Run #: ErC-SYSP-900B-060127-01 Sim.Tissue Temp: 21.8 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:
11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.74 mW/g calculated 1g-SAR; 2.93 % from target (including drift)
7.55 mW/g calculated 10g-SAR; 1.64 % from target (including drift)

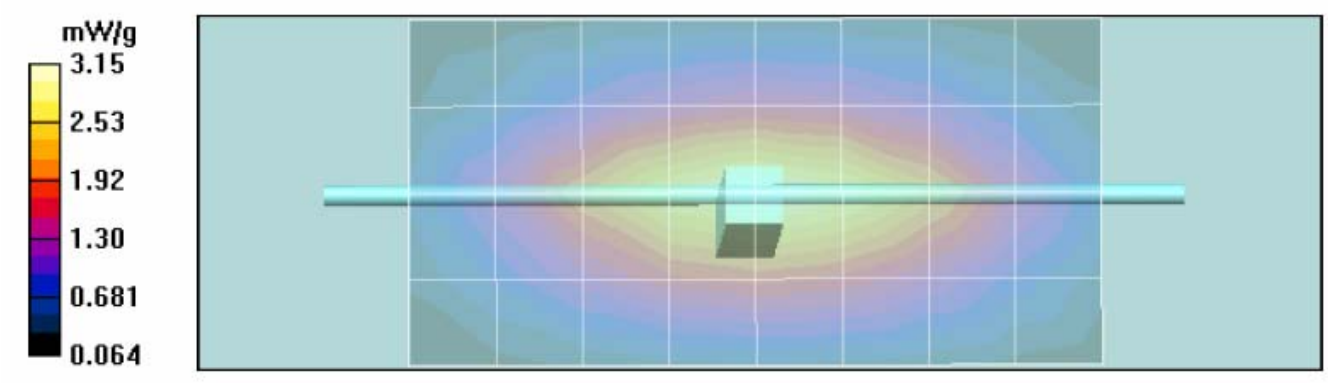
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19),
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.07 mho/m; εr = 52.6; ρ = 1000 kg/m3 ; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.7 V/m; Power Drift = 0.0278 dB
Peak SAR (extrapolated) = 4.27 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.88 mW/g
Maximum value of SAR (measured) = 3.17 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.7 V/m; Power Drift = 0.0278 dB
Peak SAR (extrapolated) = 4.41 W/kg
SAR(1 g) = 2.99 mW/g; SAR(10 g) = 1.92 mW/g
Maximum value of SAR (measured) = 3.13 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.15 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 02/06/06
Run #: HvH-SYSP-900B-060206-01 Sim.Tissue Temp: 22.1 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.66 mW/g calculated 1g-SAR; 2.19 % from target (including drift)
7.51 mW/g calculated 10g-SAR; 1.03 % from target (including drift)

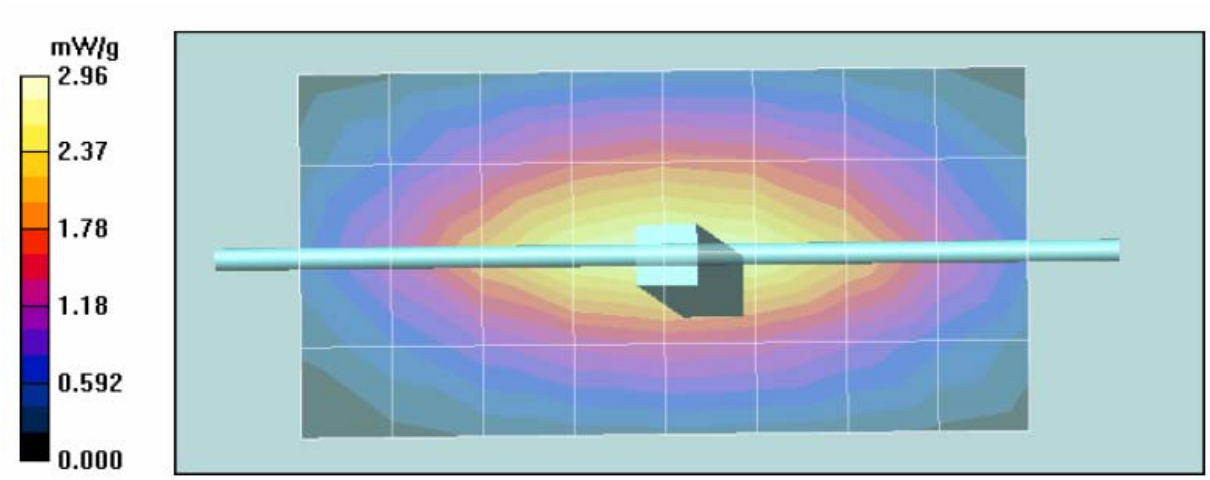
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.05 mho/m; ε_r = 53; ρ = 1000 kg/m^3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.3 V/m; Power Drift = 0.00758 dB
Peak SAR (extrapolated) = 4.21 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.86 mW/g
Maximum value of SAR (measured) = 3.14 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.3 V/m; Power Drift = 0.00758 dB
Peak SAR (extrapolated) = 4.35 W/kg
SAR(1 g) = 2.96 mW/g; SAR(10 g) = 1.9 mW/g
Maximum value of SAR (measured) = 3.23 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.15 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 02/07/06
Run #: MeS-SYSP-900B-060207-01 Sim.Tissue Temp: 21.5 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
10.99 mW/g calculated 1g-SAR; -3.66 % from target (including drift)
7.10 mW/g calculated 10g-SAR; -4.50 % from target (including drift)

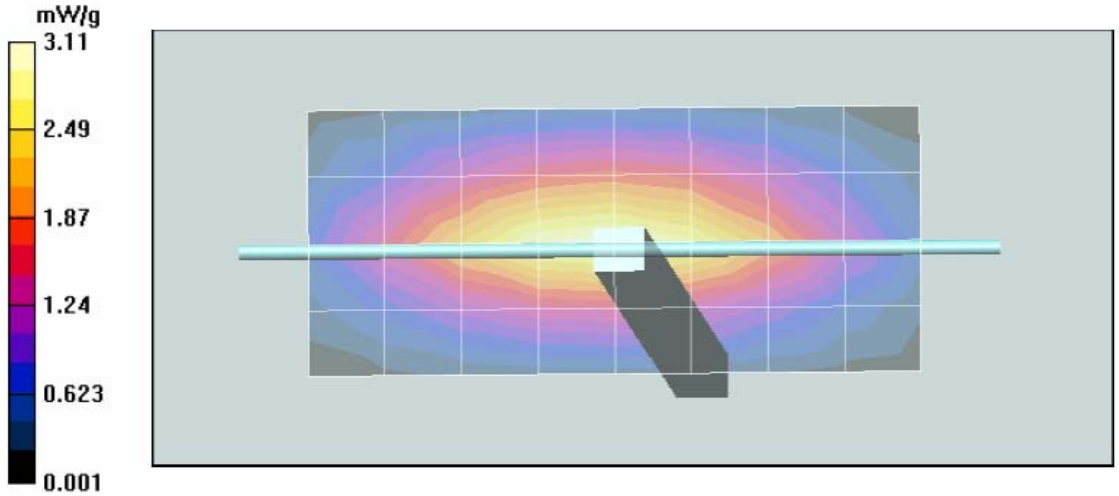
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.05 mho/m; ε_r = 52.6; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 55.6 V/m; Power Drift = 0.00279 dB; Peak SAR (extrapolated) = 3.98 W/kg
SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.96 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 55.6 V/m; Power Drift = 0.00279 dB; Peak SAR (extrapolated) = 4.07 W/kg
SAR(1 g) = 2.78 mW/g; SAR(10 g) = 1.79 mW/g
Maximum value of SAR (measured) = 3.02 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.94 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 02/08/06
Run #: MeS-SYSP-900B-060208-01 Sim.Tissue Temp: 21.3 (C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.53 mW/g calculated 1g-SAR; 1.07 % from target (including drift)
7.43 mW/g calculated 10g-SAR; -0.03 % from target (including drift)

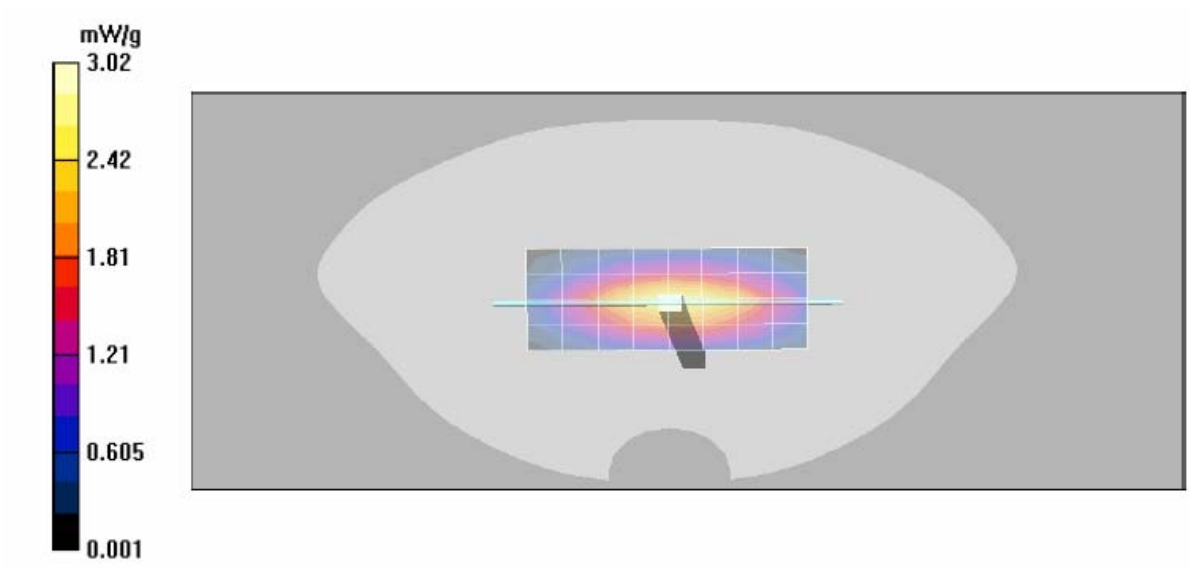
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: f = 900 MHz; σ = 1.04 mho/m; ε_r = 52.5; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 57.1 V/m; Power Drift = -0.005 dB; Peak SAR (extrapolated) = 4.19 W/kg
SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.84 mW/g
Maximum value of SAR (measured) = 3.11 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 57.1 V/m; Power Drift = -0.005 dB; Peak SAR (extrapolated) = 4.25 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.87 mW/g
Maximum value of SAR (measured) = 3.15 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.07 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN 085; Test Date: 02/09/06
Run #: MeS-SYSP-900H-060209-01 Sim.Tissue Temp: 21.5(C)
TX Freq: 900 (MHz) Start power: 250 (mW)

Target:11.26 mW/g for 1g SAR 7.21 mW/g for 10g SAR
11.30 mW/g calculated 1g-SAR; 0.33% from target (including drift)
7.18 mW/g calculated 10g-SAR; -0.36% from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: f = 900 MHz; σ = 1 mho/m; ε_r = 41.4; ρ = 1000 kg/m3;Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.6 V/m; Power Drift = -0.0144 dB; Peak SAR (extrapolated) = 4.24 W/kg
SAR(1 g) = 2.78 mW/g; SAR(10 g) = 1.77 mW/g
Maximum value of SAR (measured) = 3.01 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.6 V/m; Power Drift = -0.0144 dB; Peak SAR (extrapolated) = 4.36 W/kg
SAR(1 g) = 2.85 mW/g; SAR(10 g) = 1.81 mW/g
Maximum value of SAR (measured) = 3.08 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.95 mW/g



SYSTEM PERFORMANCE TARGET CHECK

Date:	**25 March 2005**	Frequency (MHz):	900
Lab Location:	GEMS-EME	Mixture Type:	900-Body
Robot System:	GEMS-EME -2	Ambient Temp.(°C):	22.0
Probe Serial #:	1393	Tissue Temp.(°C):	21.6
DAE Serial #:	DAE3V1 SN406		

Tissue Characteristics		Phantom Type/SN:	80302002D-S14
Permitivity:	52.9	Distance (mm):	15
Conductivity:	1.04		

Reference Source: Dipole (Dipole/Handset)
Reference SN: 085

Power to Dipole: 250 mW
Power Output (radio): N/A mW

Measured SAR Value: 2.855 mW/g, 1.86 mW/g (10g avg.)
Power Drift: -0.003 dB

Measured SAR Value: 11.41 mW/g, 7.43 mW/g (10g avg.)
(normalized to 1.0 W,
with drift compensation)

Test performed by: Dave Hopper Initial:

DUT: Dipole 900 MHz; Date/Time: 03/25/05 17:01:42
Run #: 050325-05 Test operator: Dave Hopper
Robot = GEMS-2 Phantom #: 80302002D-S14 Sim.Tissue Temp: 21.6 (C)
Model #: D900V2 S/N: 085
TX Freq: 900(MHz) Start power: 250 (mW)
Target:
Establishing New Body Targets
11.41 mW/g calculated 1g-SAR; 0 % from target (including drift)
7.43 mW/g calculated 10g-SAR; 0 % from target (including drift)

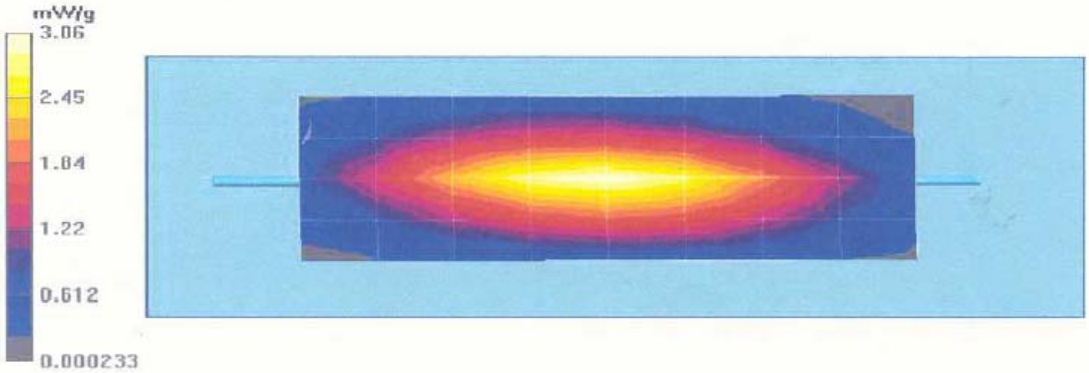
Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, ε_r = 52.9; ρ = 1000 kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

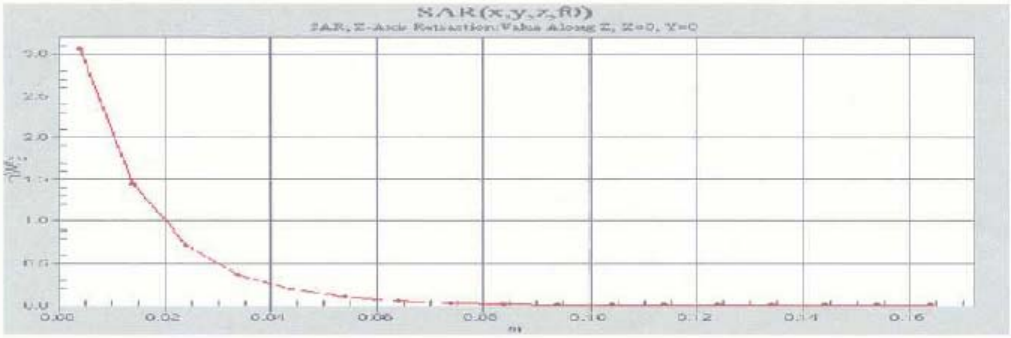
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 4.06 W/kg
SAR(1 g) = 2.83 mW/g; SAR(10 g) = 1.84 mW/g
Maximum value of SAR (measured) = 3.07 mW/g

System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 4.1 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.88 mW/g
Maximum value of SAR (measured) = 3.14 mW/g

System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.04 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 3.06 mW/g





SYSTEM VALIDATION

Date:	03/25/05	Frequency (MHz):	900
Lab Location:	GEMS-EME	Mixture Type:	900-IEEE Head
Robot System:	GEMS-EME -2	Ambient Temp.(°C):	22.0
Probe Serial #:	1393	Tissue Temp.(°C):	20.3
DAE Serial #:	DAE3V1 SN406		

Tissue Characteristics		Phantom Type/SN:	SAMTP1209
Permitivity:	41.6	Distance (mm):	15
Conductivity:	1.00		

Reference Source: Dipole (Dipole/Handset)
Reference SN: 085

Power to Dipole: 250 mW
Power Output (radio): N/A mW

Target SAR Value: 10.8 mW/g, 6.9 mW/g (10g avg.)
(normalized to 1.0 W)

Measured SAR Value: 2.78 mW/g, 1.78 mW/g (10g avg.)
Power Drift: -0.0529 dB

Measured SAR Value: 11.26 mW/g, 7.21 mW/g (10g avg.)
(normalized to 1.0 W,
with drift compensation)

Percent Difference From Target (must be within System Uncertainty): 4.22 % (1g avg)
4.45 % (10g avg)

Test performed by: Dave Hopper Initial: DH

DUT: Dipole 900 MHz; Date/Time: 03/25/05 15:22:41
Run #: 050325-04 Test operator: Dave Hopper
Robot = GEMS-2 Phantom #: SAMTP1209 Sim.Tissue Temp: 20.9 (C)
Model #: D900V2 S/N: 085
TX Freq: 900(MHz) Start power: 250 (mW)
Target:
11.2 mW/g for 1g SAR 7.16 mW/g for 10g SAR
11.26 mW/g calculated 1g-SAR; 0.50 % from target (including drift)
7.21 mW/g calculated 10g-SAR; 1.23 % from target (including drift)

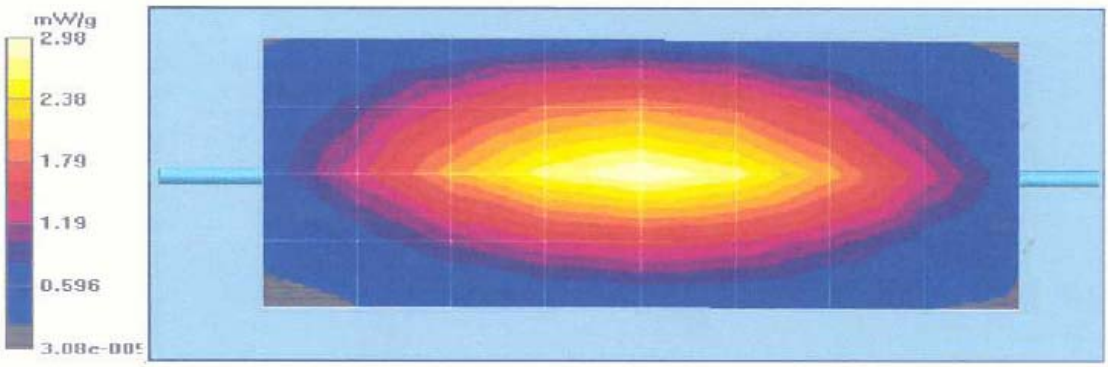
Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.73, 6.73, 6.73)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: $\sigma = 1$; mho/m, $\varepsilon_r = 41.6$; $\rho = 1000$ kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

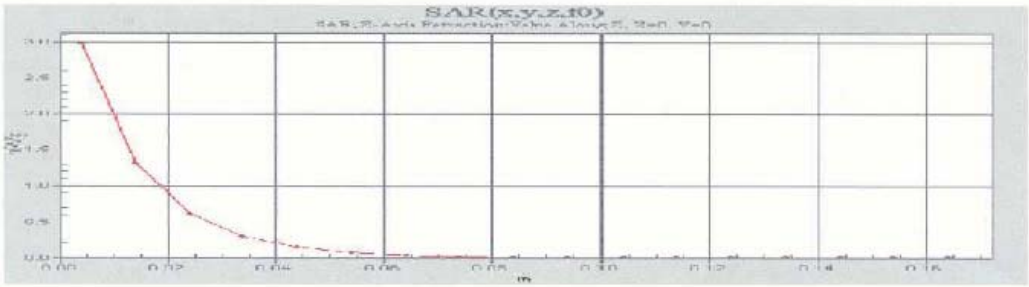
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.7 V/m; Power Drift = -0.0529 dB
Peak SAR (extrapolated) = 4.11 W/kg
SAR(1 g) = 2.75 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.98 mW/g

System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.7 V/m; Power Drift = -0.0529 dB
Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.81 mW/g; SAR(10 g) = 1.8 mW/g
Maximum value of SAR (measured) = 3.05 mW/g

System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.96 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm





MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5848
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 3 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: 2/16/06
Report Revision: Rev O
Report ID: i580_Rev O_060216_SR3014

Responsible Engineer: Michael Sailsman (Sr. Staff Test Eng.)
Date/s Tested: 12/27/05-2/9/06 (19 days)
Manufacturer/Location: Motorola – Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 12/02/05
DUT Description: i580; TDMA: 236:310, 1:6, 2:6, 81:120, 1:12; 64QAM, 16 QAM & QPSK Modulation; 0.6W Pulse Avg. MOTOtalk (114:120 8FSK; 0.85 W nominal); GPS& Bluetooth capable
Test TX mode(s): 1:3, 1:6, 114:120, 236:310, 81:120
Max. Power output: Mototalk - 0.891W, iDEN/WiDEN - 0.640W
Nominal Power: MOTOtalk - 0.85W, iDEN/WiDEN - 0.60W
Tx Frequency Bands: MOTOtalk - 902-928MHz, iDEN/WiDEN – 806-825, 896-902MHz
Signaling type: TDMA: iDEN; WiDEN, MOTOtalk - (FHSS 8FSK)
Model(s) Tested: H83XAH6RR4AN/NWF1019A
Model(s) Certified: H83XAH6RR4AN/NWF1019A
Serial Number(s): 364AFW00HP, 364AFW00L0, 364AFW00QQ
Classification: General Population/Uncontrolled
Rule Part(s): 15 & 90

Approved Accessories:
Antenna(s):
8575868A01 (retractable ¼ wave antenna, Gain in/out: 806-825MHz: -1.16/2.15dBd; 896-902MHz: -1.22/2.15dBd; 902-925MHz: 0.39/2.15dBd)
Battery(ies):
SNN5765A (High performance Li Ion); NNTN2332A (Max capacity battery cover); SNN5744A (Slim Li Ion); NNTN2331A (High capacity battery cover)
Body worn accessory(ies):
NNTN6653A (Holster); NNTN4747A (Belt clip)
Audio/Data cable accessory(ies):
NNTN5211A(Surveillance earpiece); NNTN5004A(PTT headset); NNTN5005A(PTT headset); NNTN5006A(PTT headset); NNTN5330A(PTT headset); NNTN5774A(PTT stereo headset); NNTN5751A(Stereo mixing headset w/ PTT); NNTN5752A(Stereo mixing headset); NNTN6312A(3-wire surveillance earpiece); NSN6066A(RSM); NNTN4033A(Privacy earpiece & mic w/PTT); SYN8390B(Privacy earpiece & mic); NNTN4620A(Silver ear bud); SYN8146C(lightweight over the ear headset w/ boom mic); SYN7875C(hearing aid neckloop); NTN8496A(lightweight headset w/ mic); NTN8513B(lightweight headband); NKN6559A(USB cable); NKN6560A(RS232 cable); NNTN5405A(USB data cable w/ charging); NNTN5406A(RS232 data cable w/ charging); NTN2074A (Qwerty keyboard: NNTN5491A/NNTN5863A/NNTN5496A/NNTN5715A)

Max. Calc. 1-g/10-g Avg. SAR: 1.30/0.89 W/kg (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.58/0.41 W/kg (Face)
Max. Calc. 1-g/10-g Avg. SAR: 1.02/0.70 W/kg (Head)

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. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Signature on file
Ken Enger GEMS EME Lab Senior Resource Manager,
Laboratory Director,

Approval Date: 2/17/06

Certification Date: 2/17/06

Certification No.: L1060201P

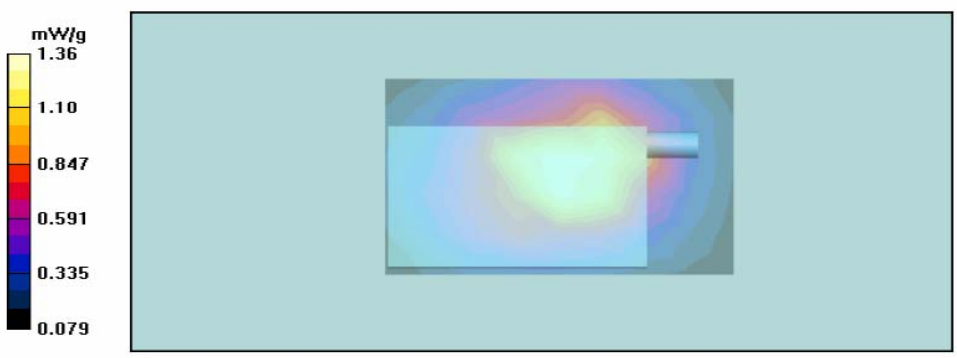
Appendix E
DUT Scans (Shortened scans & Highest SAR configurations)

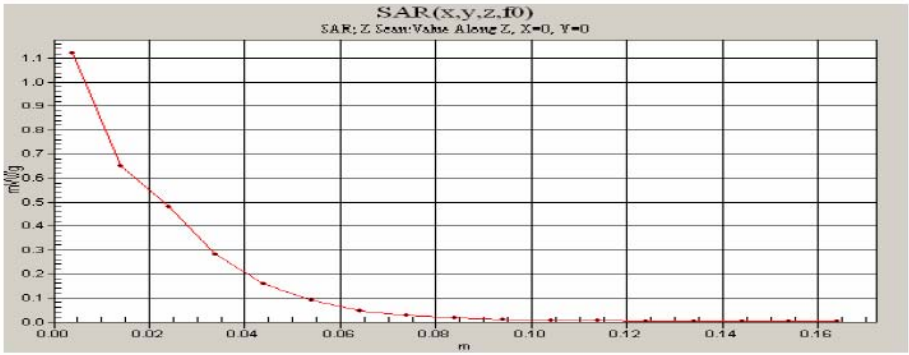
Shortened Scan Results

Motorola GEMS EME Laboratory
Test Date: 6/20/06
Run #: JsT-Ab-060120-05 Sim. Tissue Temp: 21.5 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00HP
Antenna: In TX Freq: 813.5125 MHz; Start power: .636 W
Battery: SNN5744A w/ NNTN2331A
Carry acc.: NNTN4747A Audio/Data acc.: None

Comments: Short Scan at the body w/ body worn accessory against phantom
Shortened scan reflect highest S.A.R. producing test configuration BT off; Run time 6 minutes.
Representative "normal" scan run time was 20 minutes
"Shortened" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.24mW/g; 10-g Avg. = 0.90mW/g
"Normal" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.28mW/g; 10-g Avg. = 0.91mW/g
(see part 1 of 3 section 9.0 run # JsT-Ab-060119-05)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.33, Medium: 815.5 MHz FCC Body, Medium parameters used: f = 815.5 MHz; σ = 0.98 mho/m; εr = 54.1; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab template/5x5x7 Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm
Reference Value = 35.1 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.892 mW/g
Maximum value of SAR (measured) = 1.38 mW/g

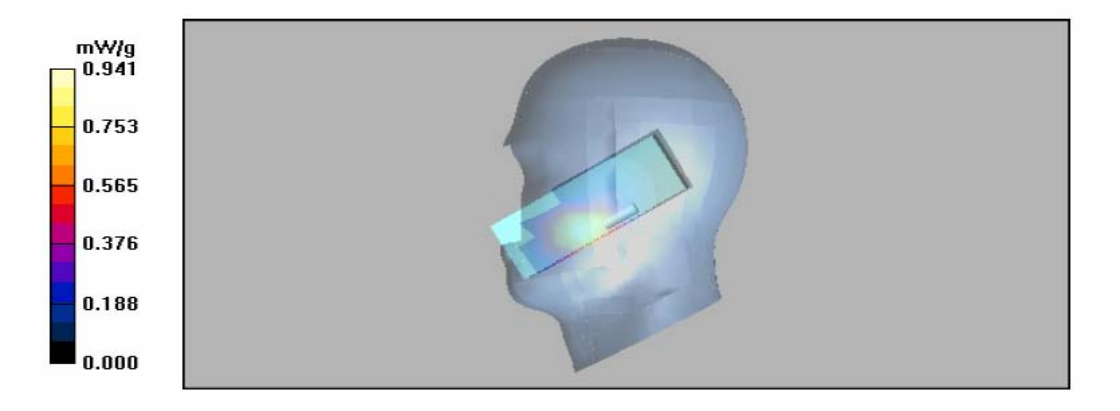


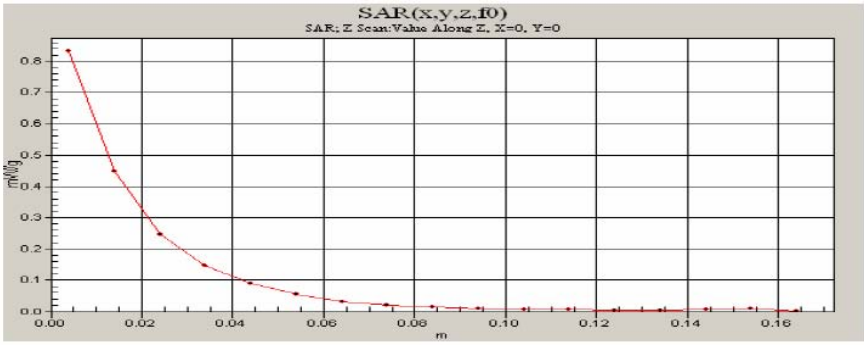


Highest SAR Configurations Results

Motorola GEMS EME Laboratory
Test Date: 12/27/05
Run #: JsT-REAR-060127-03 Sim. Tissue Temp: 21.5 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00HP
Antenna: In TX Freq: 813.5125 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .677 W
Carry acc.: None Audio/Data acc.: None

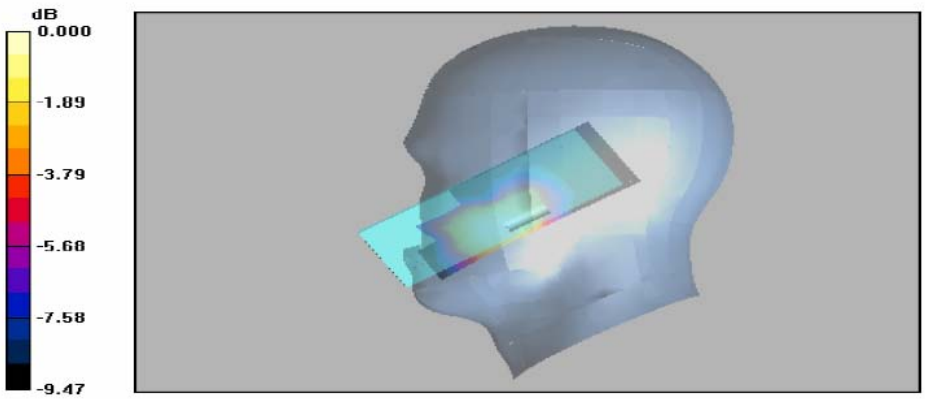
Comments: DUT in Cheek Touch position; BT On
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 815.5 IEEE Head, Medium parameters used: f = 815.5 MHz; σ = 0.93 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 34.1 V/m; Power Drift = -0.797 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.582 mW/g

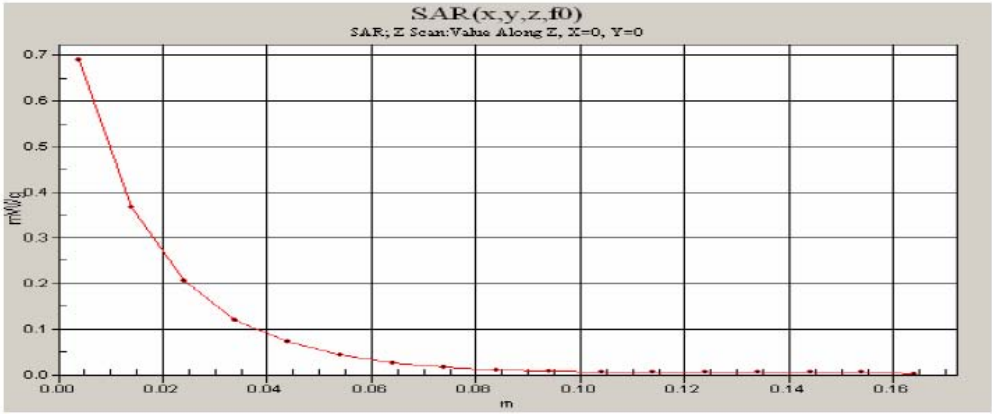




Motorola GEMS EME Laboratory
Test Date: 02/08/06
Run #: JsT-Rear-060208-04 Sim. Tissue Temp: 21.8 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00HP
Antenna: In TX Freq: 813.5125 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .672 W
Carry acc.: None Audio/Data acc.: NNTN5491A/NNTN5863A

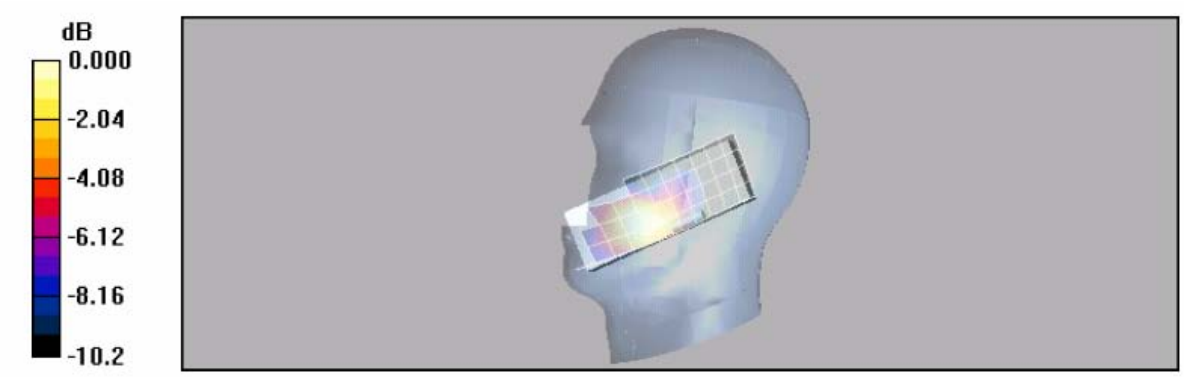
Comments: Cheek Touch; BT on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 815.5 IEEE Head, Medium parameters used: f = 815.5 MHz; σ = 0.93 mho/m; ε_r = 42.5; ρ = 1000 kg/m^3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 30.9 V/m; Power Drift = -0.554 dB
Peak SAR (extrapolated) = 1.00 W/kg
SAR(1 g) = 0.716 mW/g; SAR(10 g) = 0.493 mW/g
Maximum value of SAR (measured) = 0.775 mW/g

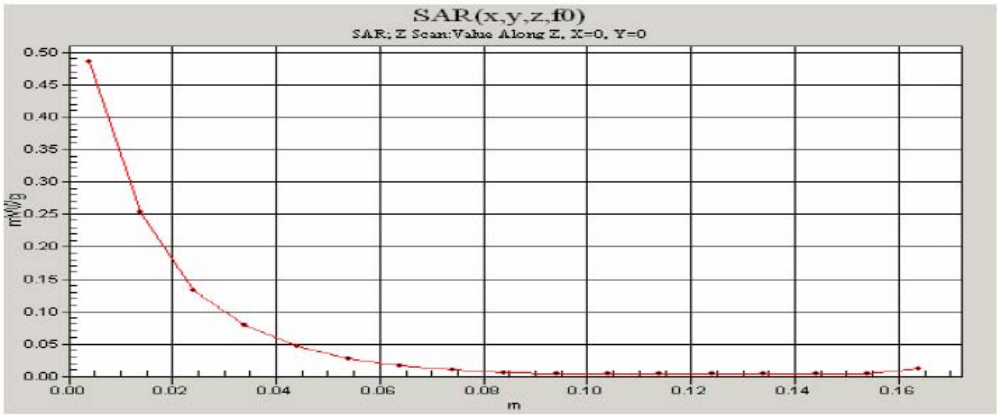




Motorola GEMS EME Laboratory
Test Date: 12/29/05
Run #: ErC-REAR-051229-03 Sim. Tissue Temp: 22.7 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00QQ
Antenna: In TX Freq: 896.01875 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .658 W
Carry acc.: None Audio/Data acc.: None

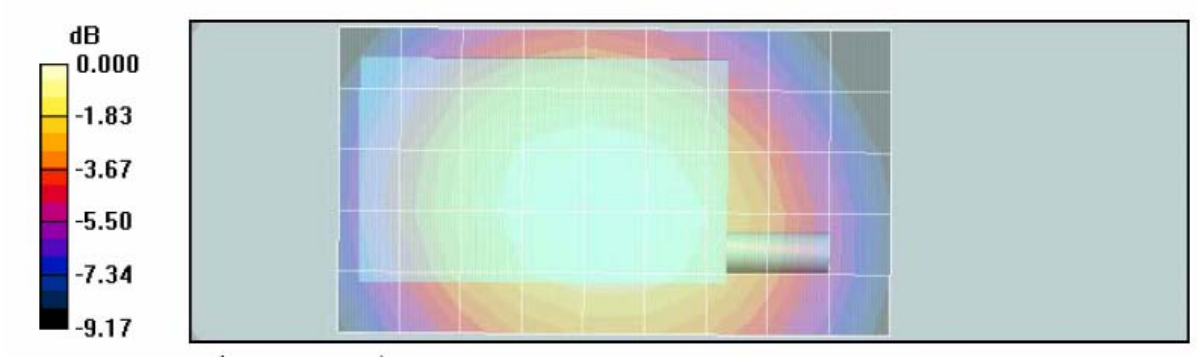
Comments: DUT in Cheek Touch position; BT On
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 899 IEEE Head, Medium parameters used: f = 899 MHz; σ = 1.01 mho/m; ε_r = 42.3; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 23.4 V/m; Power Drift = -0.223 dB
Peak SAR (extrapolated) = 0.685 W/kg
SAR(1 g) = 0.492 mW/g; SAR(10 g) = 0.333 mW/g

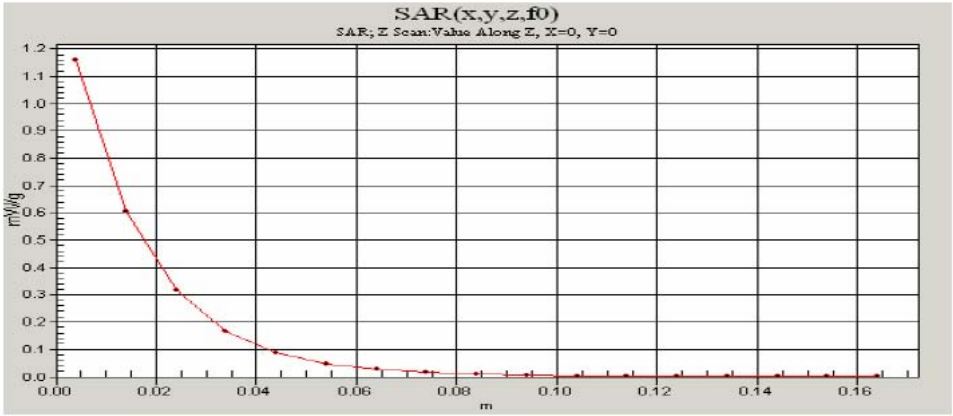




Motorola GEMS EME Laboratory
Test Date: 12/30/05
Run #: ErC-FACE-051230-12 Sim. Tissue Temp: 22.4 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00L0
Antenna: In TX Freq: 902.525 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .875 W
Carry acc.: None Audio/Data acc.: None

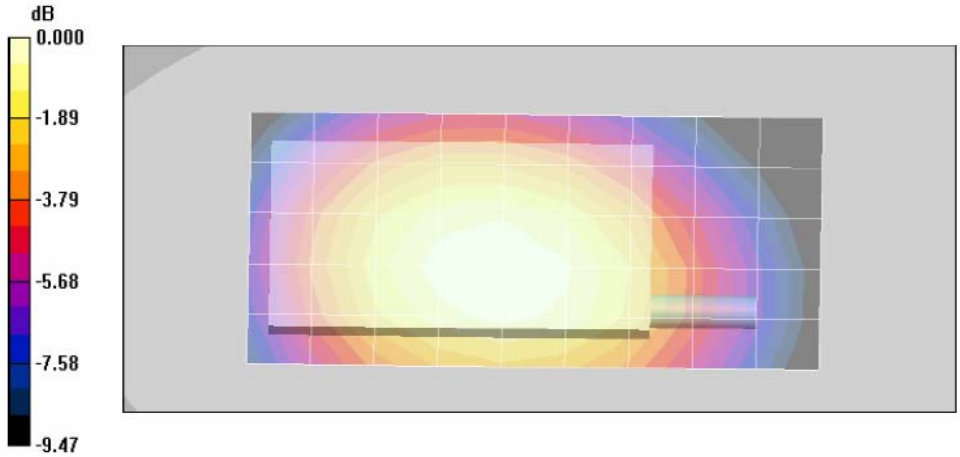
Comments: DUT front separated 2.5cm; BT off
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: f = 915 MHz; σ = 1.02 mho/m; εr = 42; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
FACE SCAN/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.9 V/m; Power Drift = -0.0198 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.775 mW/g





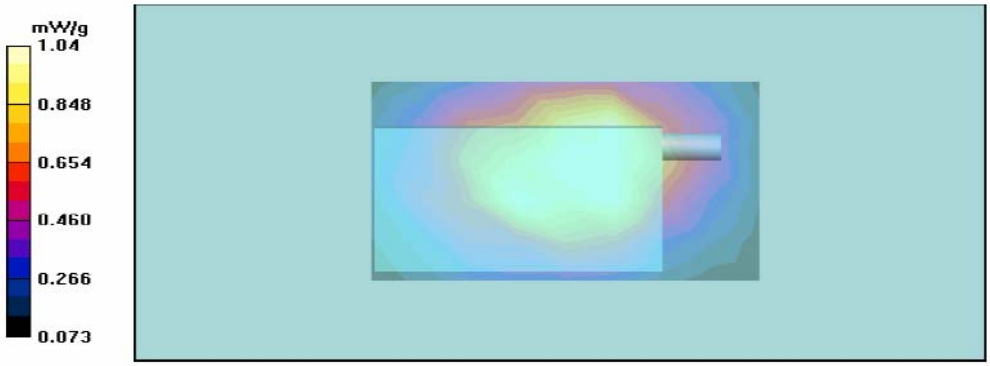
Motorola GEMS EME Laboratory
Test Date: 02/09/06
Run #: MeS-FACE-060209-02 Sim. Tissue Temp: 21.5 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00L0
Antenna: In TX Freq: 902.525 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .873W
Carry acc.: None Audio/Data acc.: NNTN5491A/NNTN5863A

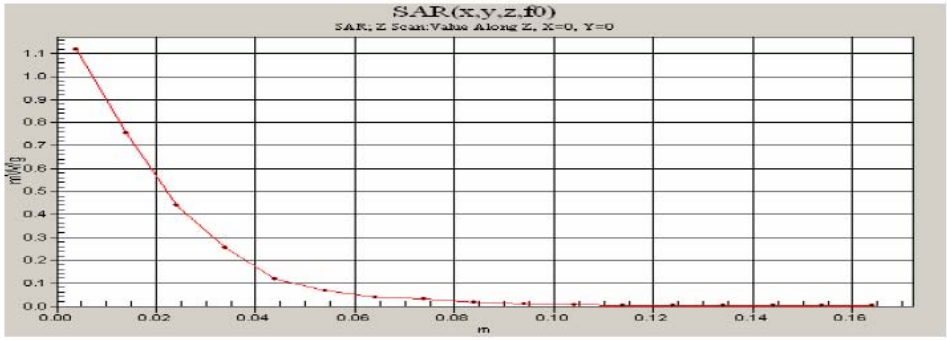
Comments: DUT front 2.5cm separation; BT On
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: f = 915 MHz; σ = 1.02 mho/m; ε_r = 41.3; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
FACE SCAN/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.3 V/m; Power Drift =-0.0564 dB; Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.791 mW/g
Maximum value of SAR (measured) = 1.18 mW/g



Motorola GEMS EME Laboratory
Test Date: 1/27/06
Run #: JsT-Ab-060127-09 Sim. Tissue Temp: 21.5 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00QQ
Antenna: In TX Freq: 813.5125 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .629 W
Carry acc.: NNTN4747A Audio/Data acc.: None

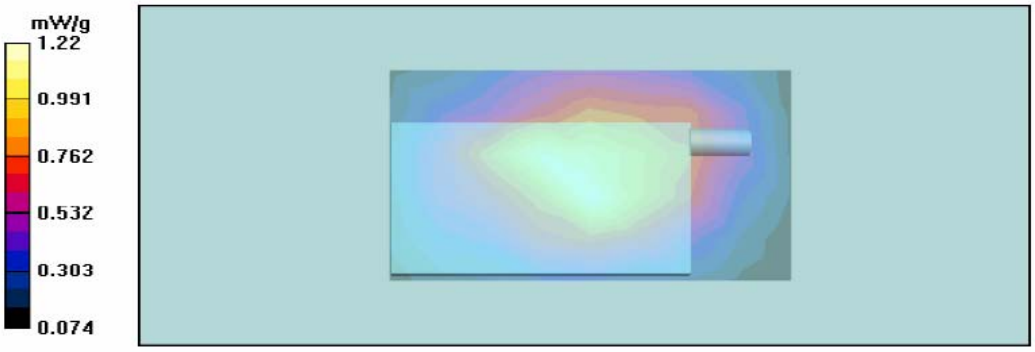
Comments: DUT w/ carry accessory against the phantom; BT On
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.33, Medium: 815.5 MHz FCC Body, Medium parameters used: f = 815.5 MHz; σ = 0.98 mho/m; ε_r = 53.5; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab template/7x7x7 Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.4 V/m; Power Drift = 0.126 dB
Peak SAR (extrapolated) = 2.17 W/kg
SAR(1 g) = 1.28 mW/g; SAR(10 g) = 0.873 mW/g
Maximum value of SAR (measured) = 1.40 mW/g
Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.
(Note: refinement considered and engineering evaluation concluded cube incorporates the absolute avg. SAR)

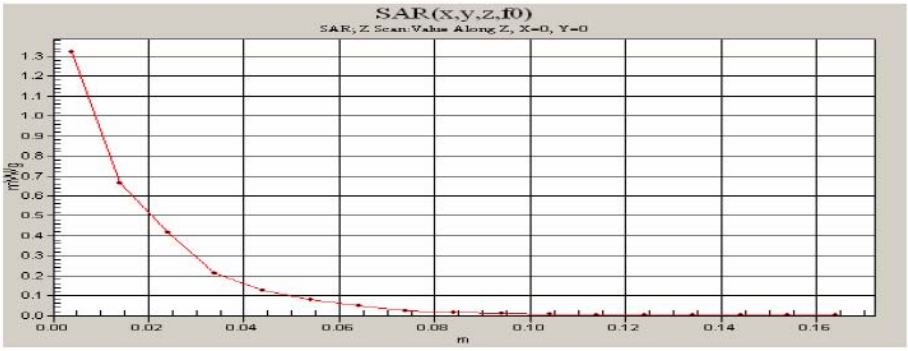




Motorola GEMS EME Laboratory
Test Date: 1/19/06
Run #: JsT-Ab-060119-05 Sim. Tissue Temp: 21.8 (C)
Model #: H83XAH6RR4AN/NWF1019A SN: 364AFW00QQ
Antenna: In TX Freq: 813.5125 MHz
Battery: SNN5744A w/ NNTN2331A Start power: .623 W
Carry acc.: NNTN4747A Audio/Data acc.: None

Comments: DUT w/ carry accessory against phantom; BT off
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.33, Medium: 815.5 MHz FCC Body, Medium parameters used: f = 815.5 MHz; σ = 0.98 mho/m; εr = 54.3; ρ = 1000 kg/m3; Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab template/7x7x7 Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.8 V/m; Power Drift = 0.0415 dB
Peak SAR (extrapolated) = 2.12 W/kg
SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.881 mW/g
Maximum value of SAR (measured) = 1.37 mW/g
Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.
(Note: refinement considered and engineering evaluation concluded cube incorporates the absolute avg. SAR)





APPENDIX F
DUT Supplementary Data (Power slump)

Battery	**SNN5744A**	
Serial Number	**364AFW00QQ**	
Frequency	**813.5125**	Bluetooth On
Transmit Mode	**WiDen**	

1/2/2006

Time	Pwr in MW
9:00	620
9:01	620
9:02	624
9:03	624
9:04	626
9:05	627
9:06	627
9:07	628
9:08	629
9:09	629
9:10	630
9:11	630
9:12	631
9:13	631
9:14	631
9:15	631
9:16	631
9:17	631
9:18	631
9:19	632
9:20	632
9:21	632
9:22	632
9:23	632
9:24	632
9:25	632
9:26	632
9:27	632
9:28	632
9:29	632
9:30	632
9:31	632
9:32	632
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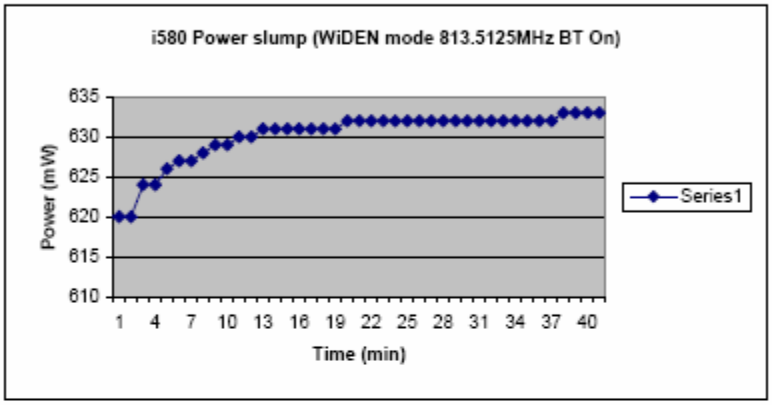
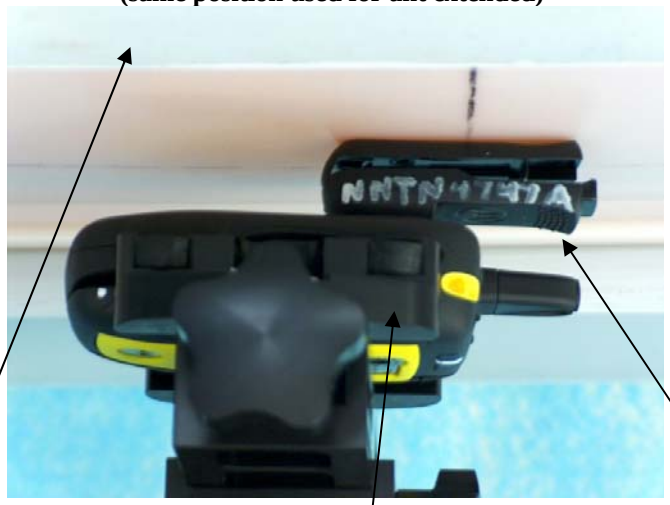
9:35	632
9:36	632
9:37	633
9:38	633
9:39	633
9:40	633



Appendix G
DUT Test Position Photos

Figure 1: Highest S.A.R. Test Position (Body)
DUT w/ belt clip against the phantom; antenna retracted
(same position used for ant extended)



Flat phantom surface

Low Loss Tangent DUT support structure

DUT holster against the flat phantom

Figure 2: Highest S.A.R. Test Position (face)
DUT flip closed w/ front side separated 2.5cm from the phantom
(same position used for antenna extended)

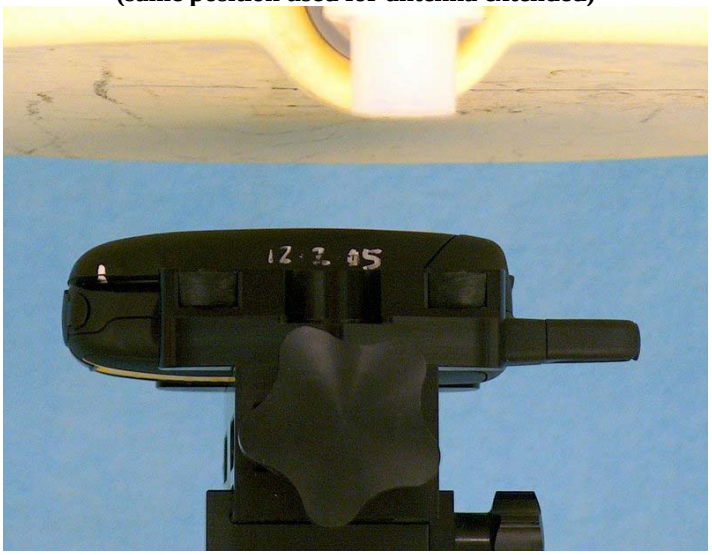


Figure 3: Highest S.A.R. Test Position (Head)
DUT at the right ear in cheek touch position. (same position used for antenna extended & mini keyboard)

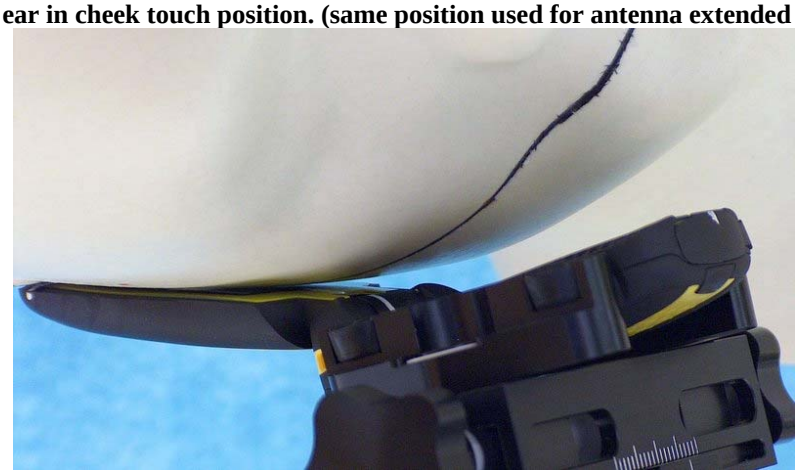


Figure 4: Body Assessment
DUT w/ belt clip against the phantom; audio kit NNTN5751A attached
(same position used for antenna extended and other tested audio accessories)

Figure 5: Body Assessment
DUT w/ belt clip against the phantom; Data cable kit NNTN5406A attached
(same position used for antenna extended and other tested data/mini keyboard attachments)

Figure 6: Body Assessment
DUT w/ holster against the phantom. (same position used for antenna extended)

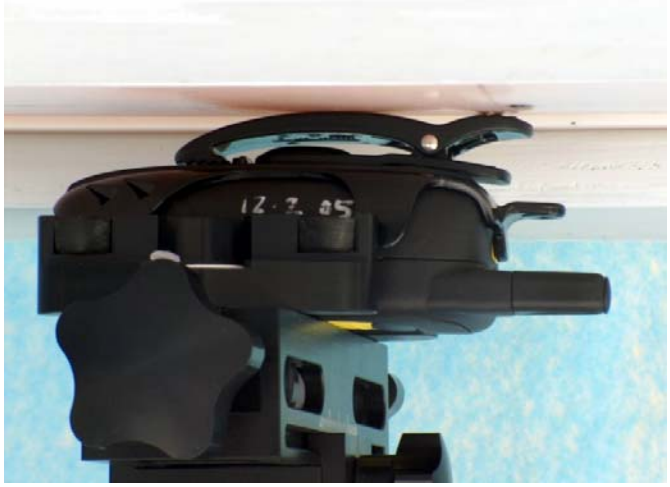


Figure 7: Body Assessment
DUT w/ back side separated 2.5cm from the phantom. (same position used for antenna extended)

Figure 8: Body Assessment
DUT w/ front side separated 2.5cm from the phantom. (same position used for antenna extended)

Figure 9: Assessment at the Head
DUT at the right ear in 15º tilt position. (same position used for antenna retracted)

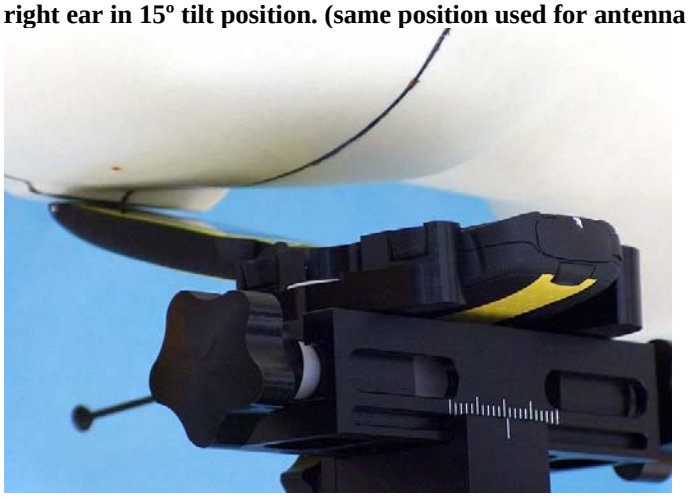


Figure 10: Assessment at the Head
DUT at the left ear in cheek touch position. (same position used for antenna extended)

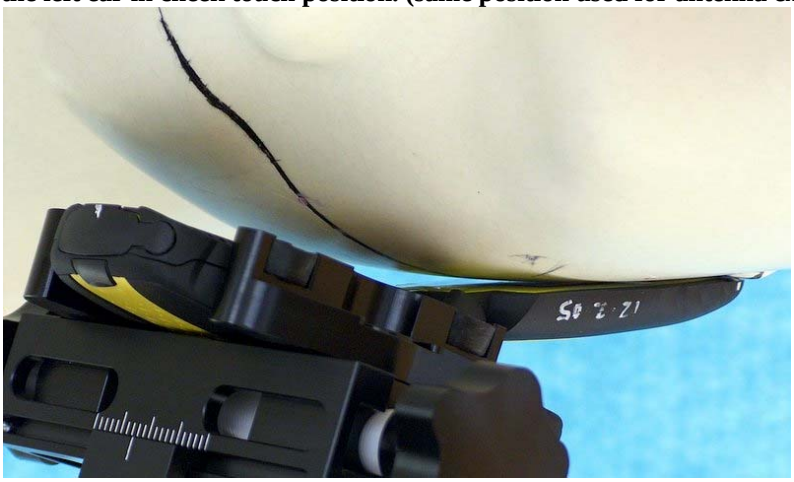


Figure 11: Assessment at the Head
DUT at the left ear in tilt position. (same position used for antenna extended)

Figure 12: Assessment at the face
DUT front separated 2.5cm. Flip closed (same position used for antenna extended)

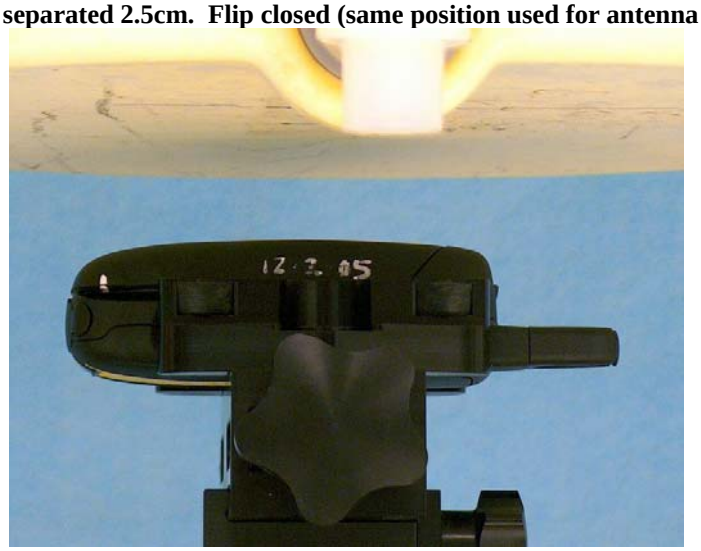
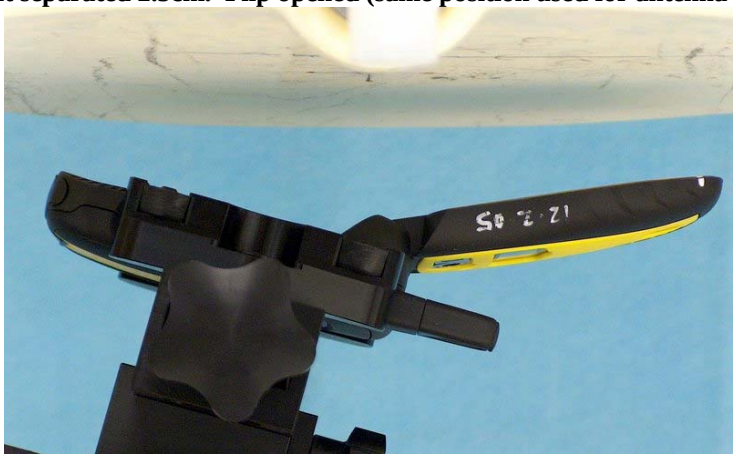


Figure 13: Assessment at the face
DUT front separated 2.5cm. Flip opened (same position used for antenna extended)



Appendix H
DUT and Accessory Photos

The purpose of this appendix is to illustrate the offered body-worn carry accessory(ies). The sample that was used in the following photos represents the product used to obtain the results presented herein.

Photo 1.
Model NNTN4747AA
Back View

Photo 2.
Model NNTN4747AA
Front View

Photo 3.
Model NNTN4747AA
Side View

Photo 4.
Model NNTN6653A
Back View

Photo 5.
Model NNTN6653A
Front View

Photo 6.
Model NNTN6653A
Side View

Appendix I
DUT Body-worn Separation Distances

The following table summarizes the test status and applicable separation distance provided by each of the tested accessory (ies):

Body Worn Kits	Tested ?	Min. Separation distances between DUT antenna and phantom surface. (mm)	Comments
NNTN6653A	Yes	35-40	NA
NNTN4747A	Yes	25-39	NA
Audio Acc. Kits	**Tested ?**	**Separation distances between DUT antenna and phantom surface. (mm)**	**Comments**
NNTN5211A	Yes	NA	NA
NNTN5004A	Yes	NA	NA
NNTN5005A	Yes	NA	NA
NNTN5006A	Yes	NA	NA
NNTN5330A	Yes	NA	NA
NNTN5774A	Yes	NA	NA
NNTN5751A	Yes	NA	NA
NTN5752A	Yes	NA	NA
NTN6312A	Yes	NA	NA
NSN6066A	Yes	NA	NA
NNTN4033A	Yes	NA	NA
SYN8390B	Yes	NA	NA
NNTN4620A	Yes	NA	NA
SYN8146C	Yes	NA	NA
SYN7875C	Yes	NA	NA
NTN8496A	Yes	NA	NA
NTN8513B	Yes	NA	NA
Data cable Kits	**Tested ?**	**Separation distances between DUT antenna and phantom surface. (mm)**	**Comments**
NKN6559A	Yes	NA	NA
NKN6560A	Yes	NA	NA
NNTN5405A	Yes	NA	NA
NNTN5406A	Yes	NA	NA
NTN2074A	Yes	NA	Applicable tested kits - NNTN5491A & NNTN5863A
Other Accessory Kits	**Tested ?**	**Separation distances between DUT antenna and phantom surface. (mm)**	**Comments**
SNN5765A	Yes	NA	Max capacity battery
SNN5744A	Yes	NA	High capacity battery
NNTN2331A	Yes	NA	Tested with High capacity battery
NNTN2332A	Yes	NA	Tested with Max capacity battery