


MOTOROLA


TESTING CERT # 2518.01

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2

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

Date of Report: 7/7/10
Report Revision: 0
Report ID: SAR rpt_H98KGD9PW5AN_Rev.O
 _100707_SR8455

Responsible Engineer: Kim Uong (Principal Staff Eng.)
Report Author: Kim Uong (Principal Staff Eng.)
Date/s Tested: 6/6/10 – 6/30/10
Manufacturer/Location: Motorola, Schaumburg
Sector/Group/Div.: G&PS
Date submitted for test: 6/7/10
DUT Description: 136-174 MHz 1-6W 6.25kHz/12.5kHz /25kHz, Basic Top Display Model. Capable of digital and analog FM transmission. Also capable of TDMA transmission.

Test TX mode(s): CW (PTT)
Max. Power output: 6.6 Watts
Nominal Power: 6.0 Watts
Tx Frequency Bands: 136-174 MHz(VHF)
Signaling type: FM and TDMA
Model(s) Tested: H98KGD9PW5AN
Model(s) Certified: H98KGD9PW5AN
Serial Number(s): NUD1002A0052, NUD1002A0039
Classification: Occupational/Controlled
FCC ID: AZ489FT3824; Rule part 90 (150.8-173.4MHz)
IC ID: 109U-89FT3824

* Refer to section 15 of part 1 for highest SAR summary results.

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of 47 CFR 2.1093(d). The 10 grams result is not applicable to FCC filing. The test results clearly demonstrate compliance with ICNIRP (1998) Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz), Health Physics 74, 494-522 RF Exposure limits of 10 W/kg averaged over 10grams of contiguous tissue.

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 3.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory. I attest to the accuracy of the data and assume full responsibility for the completeness of these measurements. This reporting format is consistent with the suggested 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 – Deanna Zakharia
Deanna Zakharia
EMS EME Lab Senior Resource Manager,
Laboratory Director

Approval Date: 7/7/2010

Certification Date:

Certification No.:

Appendix D

Test System Verification Scans

The SAR result indicated on the Manufacture's Calibrated certificates for dipoles D300V2 S/N 1001 and D300V2 S/N 1002 were not used due to the following:

- The IEEE 1528-2003 and the FCC OET-65 Supplement C, System Verification section indicated that "The measured 1-g SAR should be within 10% of the expected target values specified for the specific phantom and RF source used in the system verification measurement."
- SPEAG calibration certificate indicates that the allowed tolerance for this dipole is higher than +/-10% (e.g. 2.95 +/-18.1% at k=2 for the D300V2 S/N 1001, and 3.08 +/- 17% at k=2 for the D300V2 S/N 1002).
- The allowed tolerance for the probes is also higher than +/- 10% (e.g. 18.0% at k=2 at 300 MHz for the probe being used to assess this product).

Due to probe, dipole and system tolerances noted above, the lab averages dipole results across multiple probes to establish a set of averaged targets for each dipole using the following procedure:

- The System Validation was conducted per IEEE1528-2003 and IEC62209-2 Edition 1.0 2010-03 standards using the simulated head tissue and multiple probes that are available and applicable for the dipole under test to verify the System Validation. Results for this dipole are within the measurement system uncertainty of the reference SAR values indicated within IEC62209-2 Edition 1.0 2010-03 when using flat phantom with 2mm thickness is used. These results then are averaged and used as the target for the daily system performance check when the simulated head tissue is used.
- The dipole targets for the body are set immediately following the same process noted above. Since there is no standard referencing the SAR values for the System Validation using the simulated body tissue, the compliant System Validation results using the simulated head tissue are used to justify the use of the System Validation results using the simulated body tissue due to the same setup except for the simulated tissue type.

The targets set in this report were conducted following the above process.

Note that the targets set for the tested dipole, when using the simulated head tissue, meets the requirement for the system validation per IEEE1528-2003, IEC62209-2 Edition 1.0 2010-03 standards, and the difference between this result and the result from the manufacture's dipole calibration certificate is up to 7.5% for 300 dipole which is well within the measurement uncertainty of the measurement system at k=2.

To assess the isotropic characteristics of the measurement probe, a probe rotation was performed using the "Rotation (1D)" function in the DASY software with a measured isotropy tolerance of +/- 0.5dB.

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Date/Time: 6/6/2010 5:10:08 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300H-100606-01
 Phantom# / Tissue Temp.: OVAL1016 / 21.3 (C)
 Dipole Model# / Serial#: D300V2 / 1001
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.77 mW/g (1g)
 Adjusted SAR (1W): 2.85 mW/g (1g)
 Percent from Target (+/-): 2.8 % (1g)
 Rotation (1D): 0.17 dB

Note:
 Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 0.712 mW/g (1g); 0.477 mW/g (10g)

Comments:

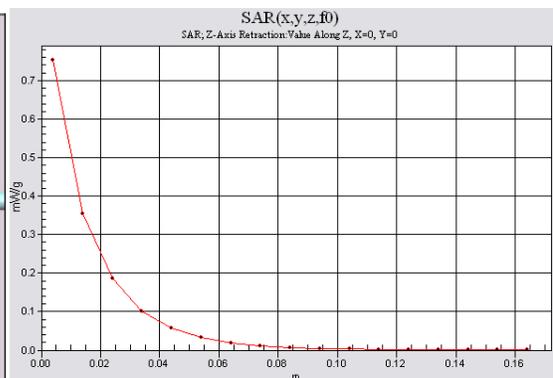
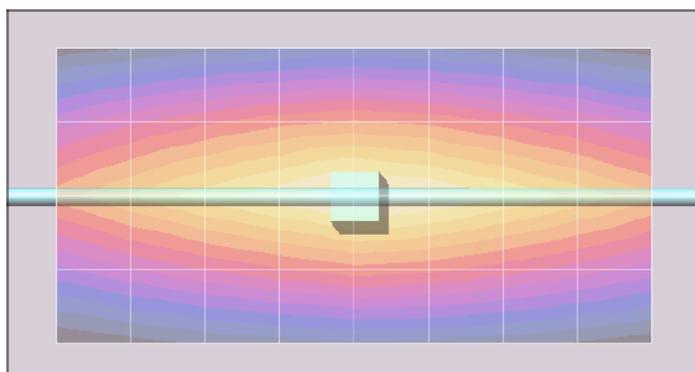
Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.68, 6.68, 6.68)
 Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 45.7$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 29.3 V/m; Power Drift = -0.000501 dB
 Peak SAR (extrapolated) = 1.10 W/kg
 SAR(1 g) = 0.710 mW/g; SAR(10 g) = 0.476 mW/g
 Maximum value of SAR (measured) = 0.759 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm
 Reference Value = 29.3 V/m; Power Drift = -0.000501 dB
Motorola Fast SAR: SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.518 mW/g
 Maximum value of SAR (interpolated) = 0.759 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.753 mW/g



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Date/Time: 6/7/2010 11:44:48 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100607-01
 Phantom# / Tissue Temp.: OVAL1022 / 21.4 (C)
 Dipole Model# / Serial#: D300V2 / 1001
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.48 mW/g (1g)
 Adjusted SAR (1W): 2.66 mW/g (1g)
 Percent from Target (+/-): 7.1 % (1g)
 Rotation (1D): 0.18 dB

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 0.664 mW/g (1g); 0.447 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.5 V/m; Power Drift = -0.00978 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.664 mW/g; SAR(10 g) = 0.447 mW/g

Maximum value of SAR (measured) = 0.708 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

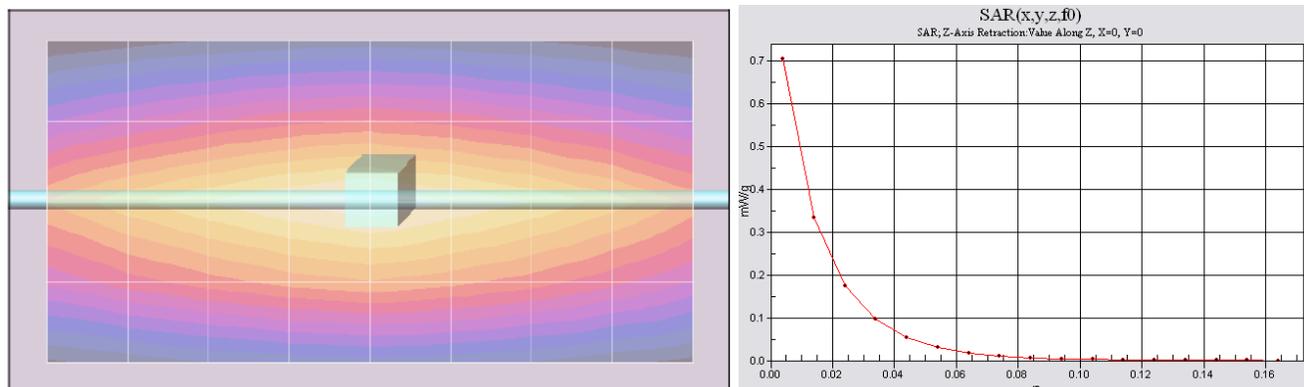
Reference Value = 27.5 V/m; Power Drift = -0.00978 dB

Motorola Fast SAR: SAR(1 g) = 0.668 mW/g; SAR(10 g) = 0.484 mW/g

Maximum value of SAR (interpolated) = 0.708 mW/g

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

Maximum value of SAR (measured) = 0.706 mW/g



Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/9/2010 10:16:20 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100609-01
 Phantom# / Tissue Temp.: OVAL1022 / 20.5 (C)
 Dipole Model# / Serial#: D300V2 / 1001
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.48 mW/g (1g)
 Adjusted SAR (1W): 2.68 mW/g (1g)
 Percent from Target (+/-): 8.2 % (1g)
 Rotation (1D): 0.18 dB

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 0.671 mW/g (1g); 0.453 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 56.5$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.7 V/m; Power Drift = 0.00855 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.671 mW/g; SAR(10 g) = 0.453 mW/g

Maximum value of SAR (measured) = 0.717 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

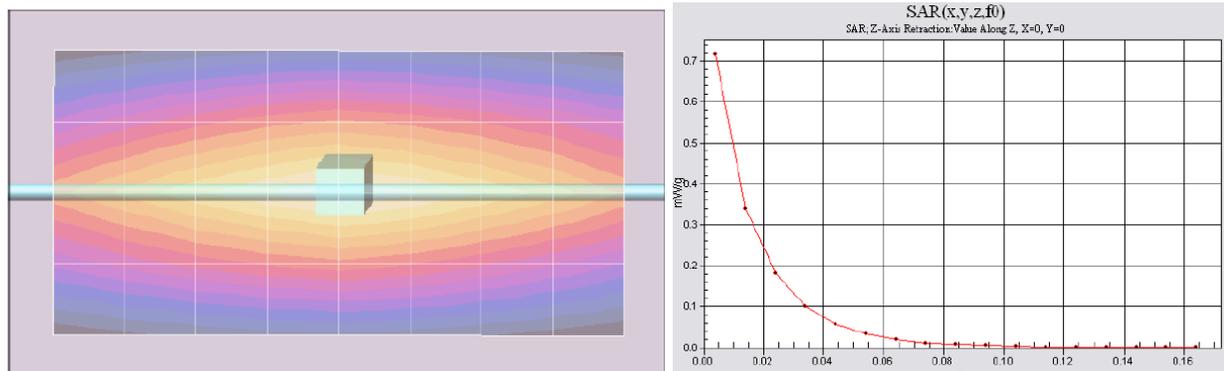
Reference Value = 27.7 V/m; Power Drift = 0.00855 dB

Motorola Fast SAR: SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.489 mW/g

Maximum value of SAR (interpolated) = 0.715 mW/g

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

Maximum value of SAR (measured) = 0.717 mW/g



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Date/Time: 6/26/2010 5:12:01 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100626-01
 Phantom# / Tissue Temp.: OVAL1022 / 21.7 (C)
 Dipole Model# / Serial#: D300V2 / 1002
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.67 mW/g (1g)
 Adjusted SAR (1W): 2.56 mW/g (1g)
 Percent from Target (+/-): 4.3 % (1g)
 Rotation (1D): 0.083 dB

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 0.639 mW/g (1g); 0.433 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.94$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.9 V/m; Power Drift = -0.00556 dB

Peak SAR (extrapolated) = 0.981 W/kg

SAR(1 g) = 0.639 mW/g; SAR(10 g) = 0.433 mW/g

Maximum value of SAR (measured) = 0.681 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

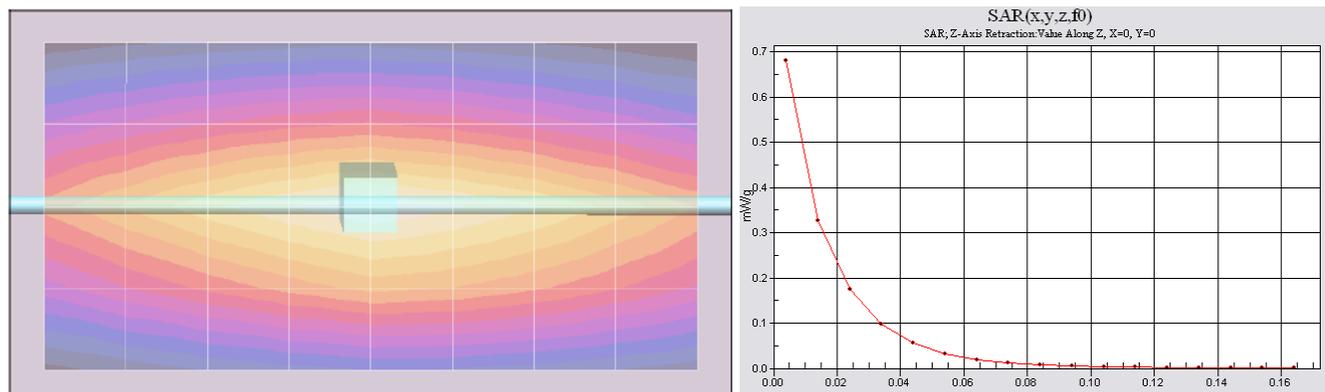
Reference Value = 26.9 V/m; Power Drift = -0.00556 dB

Motorola Fast SAR: SAR(1 g) = 0.640 mW/g; SAR(10 g) = 0.464 mW/g

Maximum value of SAR (interpolated) = 0.678 mW/g

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

Maximum value of SAR (measured) = 0.681 mW/g



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Date/Time: 6/27/2010 5:14:26 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100627-01
 Phantom# / Tissue Temp.: OVAL1022 / 21.5 (C)
 Dipole Model# / Serial#: D300V2 / 1002
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.67 mW/g (1g)
 Adjusted SAR (1W): 2.50 mW/g (1g)
 Percent from Target (+/-): 6.5 % (1g)
 Rotation (1D): 0.085 dB

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 0.624 mW/g (1g); 0.425 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.8 V/m; Power Drift = 0.00068 dB

Peak SAR (extrapolated) = 0.953 W/kg

SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.425 mW/g

Maximum value of SAR (measured) = 0.664 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

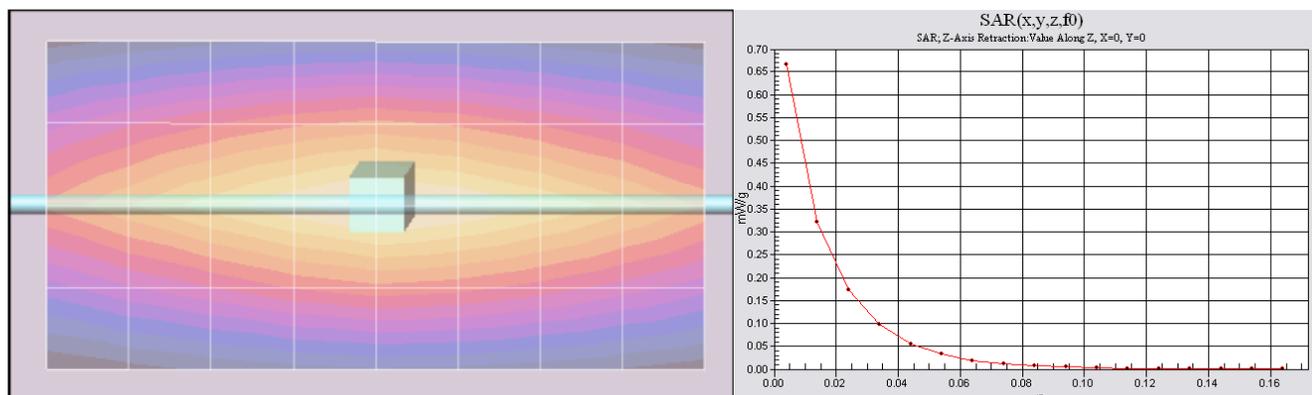
Reference Value = 26.8 V/m; Power Drift = 0.00068 dB

Motorola Fast SAR: SAR(1 g) = 0.628 mW/g; SAR(10 g) = 0.455 mW/g

Maximum value of SAR (interpolated) = 0.665 mW/g

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

Maximum value of SAR (measured) = 0.666 mW/g



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Date/Time: 6/28/2010 12:42:40 PM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100628-01
 Phantom# / Tissue Temp.: OVAL1022 / 20.6 (C)
 Dipole Model# / Serial#: D300V2 / 1002
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.67 mW/g (1g)
 Adjusted SAR (1W): 2.52 mW/g (1g)
 Percent from Target (+/-): 5.5 % (1g)
 Rotation (1D): 0.081 dB

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 0.631 mW/g (1g); 0.430 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.7$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.0 V/m; Power Drift = 0.00263 dB

Peak SAR (extrapolated) = 0.963 W/kg

SAR(1 g) = 0.631 mW/g; SAR(10 g) = 0.430 mW/g

Maximum value of SAR (measured) = 0.672 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

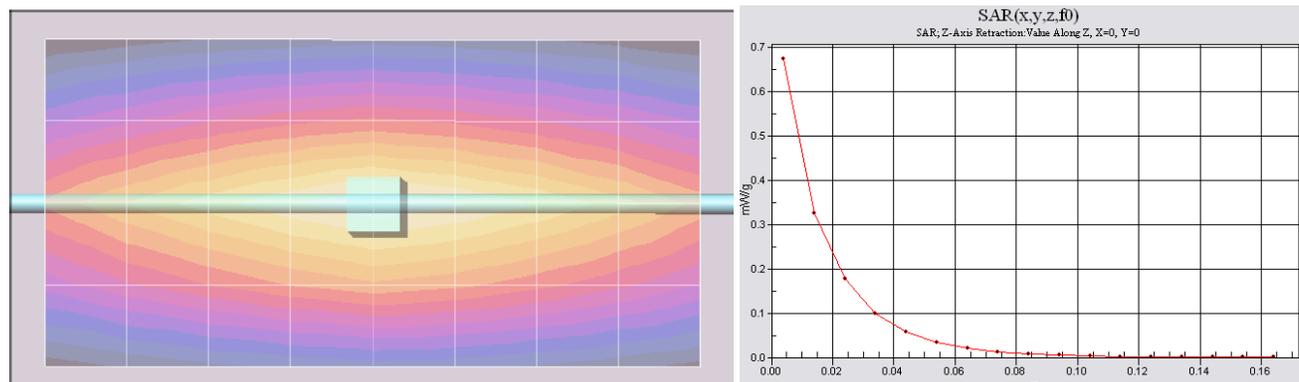
Reference Value = 27.0 V/m; Power Drift = 0.00263 dB

Motorola Fast SAR: SAR(1 g) = 0.635 mW/g; SAR(10 g) = 0.460 mW/g

Maximum value of SAR (interpolated) = 0.673 mW/g

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

Maximum value of SAR (measured) = 0.673 mW/g



Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/29/2010 12:23:57 PM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100629-01
 Phantom# / Tissue Temp.: OVAL1022 / 21.7 (C)
 Dipole Model# / Serial#: D300V2 / 1002
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.67 mW/g (1g)
 Adjusted SAR (1W): 2.53 mW/g (1g)
 Percent from Target (+/-): 5.3 % (1g)
 Rotation (1D): 0.079 dB

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 0.632 mW/g (1g); 0.429 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.8 V/m; Power Drift = -0.00593 dB

Peak SAR (extrapolated) = 0.969 W/kg

SAR(1 g) = 0.632 mW/g; SAR(10 g) = 0.429 mW/g

Maximum value of SAR (measured) = 0.673 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

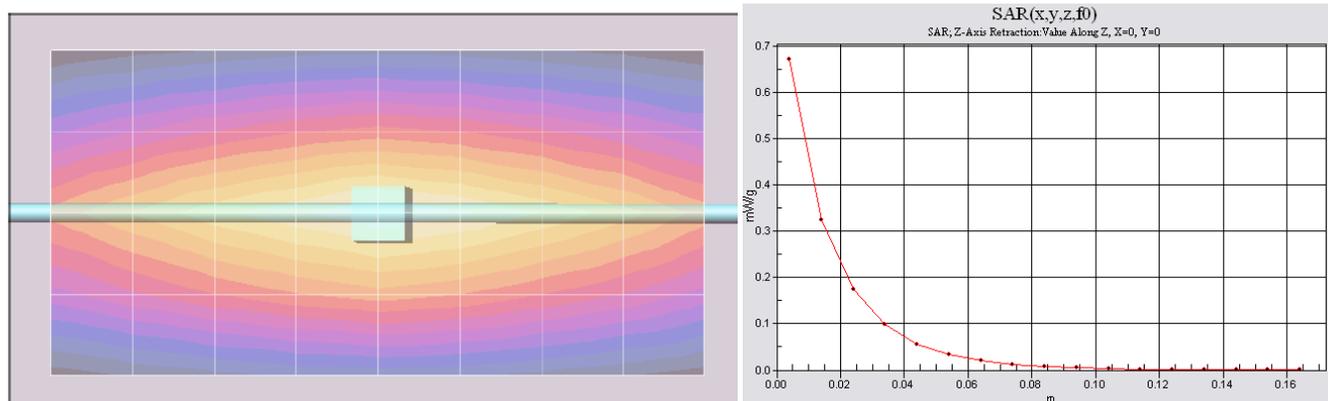
Reference Value = 26.8 V/m; Power Drift = -0.00593 dB

Motorola Fast SAR: SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.462 mW/g

Maximum value of SAR (interpolated) = 0.675 mW/g

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

Maximum value of SAR (measured) = 0.672 mW/g



Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/30/2010 9:07:48 AM

Robot# / Run#: DASY4-FL-1 / HvH-SYSP-300B-100630-01
 Phantom# / Tissue Temp.: OVAL1022 / 21.6 (C)
 Dipole Model# / Serial#: D300V2 / 1002
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.67 mW/g (1g)
 Adjusted SAR (1W): 2.49 mW/g (1g)
 Percent from Target (+/-): 6.7 % (1g)
 Rotation (1D): 0.083 dB

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 0.623 mW/g (1g); 0.424 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(6.9, 6.9, 6.9)
 Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

System Performance Check/0-Degree Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.8 V/m; Power Drift = 0.00191 dB

Peak SAR (extrapolated) = 0.949 W/kg

SAR(1 g) = 0.623 mW/g; SAR(10 g) = 0.424 mW/g

Maximum value of SAR (measured) = 0.662 mW/g

System Performance Check/Dipole Area Scan 2 (41x81x1): Measurement grid: dx=15mm, dy=15mm

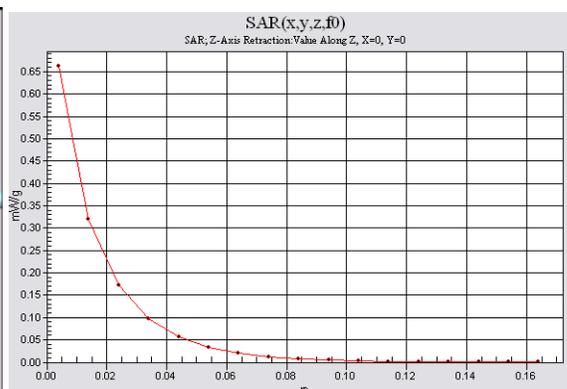
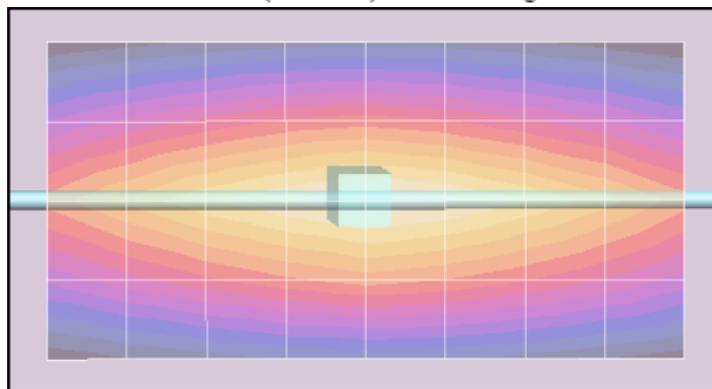
Reference Value = 26.8 V/m; Power Drift = 0.00191 dB

Motorola Fast SAR: SAR(1 g) = 0.626 mW/g; SAR(10 g) = 0.455 mW/g

Maximum value of SAR (interpolated) = 0.662 mW/g

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

Maximum value of SAR (measured) = 0.663 mW/g



DIPOLE SAR TARGET - HEAD

Date:	<u>12/29/09</u>	Frequency (MHz):	<u>300</u>
Lab Location:	<u>FL08-G&PS</u>	Mixture Type:	<u>IEEE Head</u>
DAE Serial #:	<u>401</u>	Ambient Temp.(°C):	<u>21.9</u>

Tissue Characteristics		Phantom Type/SN:	<u>OVAL1020</u>
Permittivity:	<u>47.4</u>	Distance (mm):	<u>15</u>
Conductivity:	<u>0.91</u>		
Tissue Temp.(°C):	<u>20.9</u>		

Reference Source:	<u>Dipole</u>	Power to Dipole:	<u>250</u> mW
Reference SN:	<u>1001</u>		

Target 1g-SAR Value (mW/g, normalized to 1.0 W):

2.85

Difference from Target

-2.69% (1g-SAR)

New Target:

Average 1g-SAR Value (mW/g):	2.77
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Passes K=2

Percent Difference From Target (MUST be within k=2 Uncertainty):

Probe SN #s	1g-SAR (Cube)	Diff from Ave	Robot
3163	2.75	-0.8%	R3
3147	2.75	-0.8%	R3
3185	2.82	1.7%	R3
Average	2.7733	New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: Ed Church Initial: EC

DIPOLE SAR TARGET - BODY

Date: 12/29/09 Frequency (MHz): 300
 Lab Location: FL08-G&PS Mixture Type: Body
 DAE Serial #: 401 Ambient Temp.(°C): 22

Tissue Characteristics
 Permittivity: 58.0 Phantom Type/SN: OVAL1022
 Conductivity: 0.91 Distance (mm): 15
 Tissue Temp.(°C): 20.7

Reference Source: Dipole Power to Dipole: 250 mW
 Reference SN: 1001

New Target:

Average Measured SAR Value: 2.48 mW/g(1g avg.),

Probe SN #s	1-G Cube	Diff from Ave	Robot
3185	2.46	-0.8%	R3
3147	2.48	0.0%	R3
3163	2.50	0.8%	R3
Average		New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: Ed Church Initial: EC

DIPOLE SAR TARGET - HEAD

Date: 04/09/10 Frequency (MHz): 300
 Lab Location: FL08-G&PS Mixture Type: IEEE Head
 DAE Serial #: 729 Ambient Temp.(°C): 22

Tissue Characteristics
 Permittivity: 44.9 Phantom Type/SN: OVAL1021
 Conductivity: 0.84 Distance (mm): 15
 Tissue Temp.(°C): 21.8

Reference Source: Dipole Power to Dipole: 250 mW
 Reference SN: 1002

Target 1g-SAR Value (mW/g, normalized to 1.0 W):

2.85

Difference from Target

-7.49% (1g-SAR)

New Target:

Average 1g-SAR Value (mW/g): **2.64**

Passes K=2

Percent Difference From Target (MUST be within k=2 Uncertainty):

Probe SN #s	1g-SAR (Cube)	Diff from Ave	Robot
3006	2.56	-2.9%	R2
3147	2.53	-4.0%	R2
1547	2.82	7.0%	R2
Average	2.6367	New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: Ed Church Initial: EC

DIPOLE SAR TARGET - BODY

Date: 04/09/10 Frequency (MHz): 300
 Lab Location: FL08-G&PS Mixture Type: Body
 DAE Serial #: 729 Ambient Temp.(°C): 22

Tissue Characteristics
 Permittivity: 55.8 Phantom Type/SN: OVAL1022
 Conductivity: 0.95 Distance (mm): 15
 Tissue Temp.(°C): 21.9

Reference Source: Dipole Power to Dipole: 250 mW
 Reference SN: 1002

New Target:

Average Measured SAR Value: 2.67 mW/g(1g avg.),

Probe SN #s	1-G Cube	Diff from Ave	Robot
1547	2.87	7.5%	R2
3147	2.50	-6.4%	R2
3006	2.64	-1.1%	R2
Average		New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: Ed Church Initial: EC

Appendix E
FCC Part 90 (150.8 – 173.4 MHz)
DUT Scans (Shortened Scan and Highest SAR configurations)

Shortened Scan Result (Section 13.7, Table 18)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/30/2010 3:21:43 PM

Robot# / Run#: DASY4-FL-1 / HvH-Ab-100630-04
 Phantom# / Tissue Temp.: OVAL1022 / 20.8 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.74 (W)

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.61 mW/g (1g); 1.81 mW/g (10g)

Comments: Shorten scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.81$ mho/m; $\epsilon_r = 60$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 45.0 V/m; Power Drift = -0.419 dB

Motorola Fast SAR: SAR(1 g) = 2.82 mW/g; SAR(10 g) = 1.77 mW/g

Maximum value of SAR (interpolated) = 3.27 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 45.0 V/m; Power Drift = -0.487 dB

Peak SAR (extrapolated) = 3.32 W/kg

Motorola Fast SAR: SAR(1 g) = 3.01 mW/g; SAR(10 g) = 1.86 mW/g

Maximum value of SAR (interpolated) = 3.32 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 45.4 V/m; Power Drift = -0.182 dB

Peak SAR (extrapolated) = 10.3 W/kg

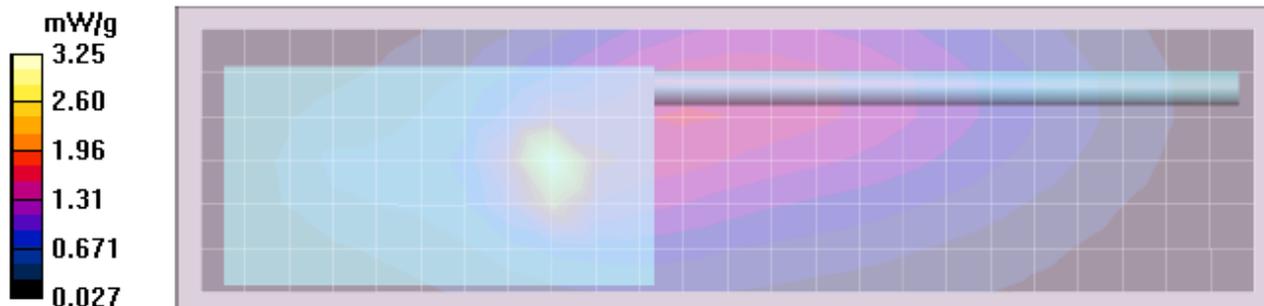
SAR(1 g) = 3.61 mW/g; SAR(10 g) = 1.81 mW/g

Maximum value of SAR (measured) = 3.63 mW/g

Shortened scan reflect highest SAR producing configuration; approximate run time 7 minutes. Representative full scan run time was 28 minutes

“Shortened” scan max calculated SAR using SAR drift: 1-g Avg. = 1.88 mW/g; 10-g Avg. = 0.94 mW/g

Zoom scan max calculated SAR using SAR drift (see part 1 section 13.7): 1-g Avg. = 1.96 mW/g; 10-g Avg. = 0.98 mW/g



Body - Highest SAR Configuration Result (Section 13.3, Table 14)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/26/2010 6:19:52 PM

Robot# / Run#: DASY4-FL-1 / MeC-Ab-100626-17
 Phantom# / Tissue Temp.: OVAL1022 / 21.3 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.73 (W)

Note: Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.37 mW/g (1g); 1.69 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.83$ mho/m; $\epsilon_r = 60.4$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 45.3 V/m; Power Drift = -0.444 dB

Motorola Fast SAR: SAR(1 g) = 3.31 mW/g; SAR(10 g) = 2.01 mW/g

Maximum value of SAR (interpolated) = 3.96 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 45.3 V/m; Power Drift = -0.513 dB

Peak SAR (extrapolated) = 3.61 W/kg

Motorola Fast SAR: SAR(1 g) = 3.34 mW/g; SAR(10 g) = 2.08 mW/g

Maximum value of SAR (interpolated) = 3.61 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 45.3 V/m; Power Drift = -0.665 dB

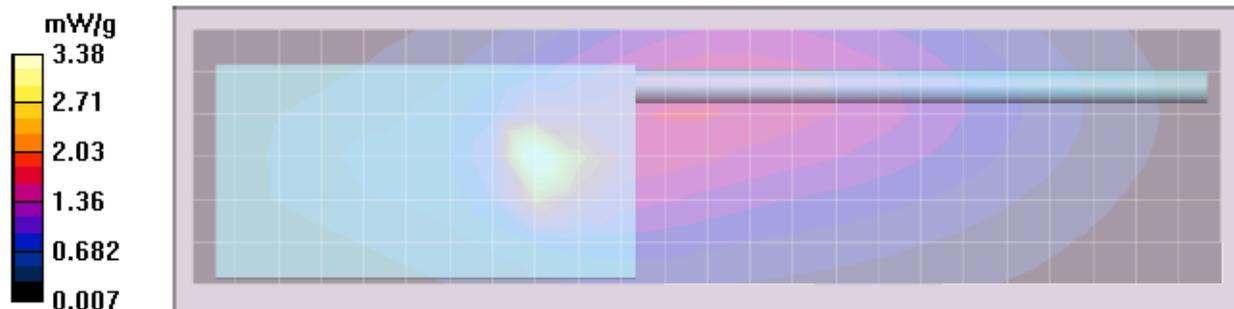
Peak SAR (extrapolated) = 9.27 W/kg

SAR(1 g) = 3.37 mW/g; SAR(10 g) = 1.69 mW/g

Maximum value of SAR (measured) = 3.45 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 3.38 mW/g



Face - Highest SAR Configuration Result (Section 13.6, Table 17)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/6/2010 12:47:39 PM

Robot# / Run#: DASY4-FL-1 / HvH-Face-100606-11
 Phantom# / Tissue Temp.: OVAL1016 / 21.5 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 173.4000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 6.78 (W)

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 1.354 mW/g (1g); 1.041 mW/g (10g)

Comments: Full scan. Front facing phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.7, 7.7, 7.7)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.76$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Face Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 41.4 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 1.35 mW/g; SAR(10 g) = 1.04 mW/g

Maximum value of SAR (measured) = 1.41 mW/g

Face Scan/Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 41.4 V/m; Power Drift = -0.0586 dB

Motorola Fast SAR: SAR(1 g) = 1.38 mW/g; SAR(10 g) = 1.05 mW/g

Maximum value of SAR (interpolated) = 1.44 mW/g

Face Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 41.4 V/m; Power Drift = -0.0761 dB

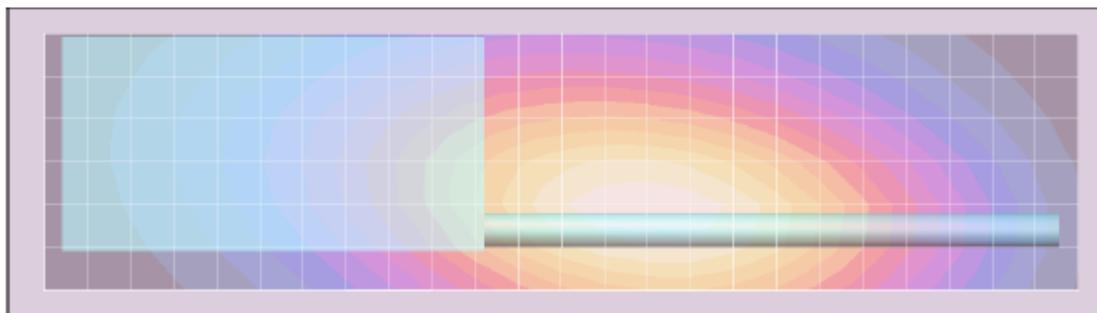
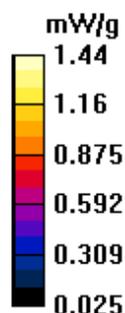
Peak SAR (extrapolated) = 1.43 W/kg

Motorola Fast SAR: SAR(1 g) = 1.37 mW/g; SAR(10 g) = 1.04 mW/g

Maximum value of SAR (interpolated) = 1.43 mW/g

Face Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.39 mW/g



Appendix F
DUT Scans - FCC Part 90 (150.8 – 173.4 MHz)

Section 1.0

Assessments at the Body (CW mode) - Belt clip NTN8266B and offered audio accessories (Section 13.1 Table 12)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/29/2010 1:45:07 PM

Robot# / Run#: DASY4-FL-1 / HvH-Ab-100629-03
 Phantom# / Tissue Temp.: OVAL1022 / 21.3 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 155.0000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.73 (W)

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.20 mW/g (1g); 1.60 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.82$ mho/m; $\epsilon_r = 60.1$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 44.1 V/m; Power Drift = -0.121 dB

Motorola Fast SAR: SAR(1 g) = 2.84 mW/g; SAR(10 g) = 1.73 mW/g

Maximum value of SAR (interpolated) = 3.33 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 44.1 V/m; Power Drift = -0.148 dB

Peak SAR (extrapolated) = 3.45 W/kg

Motorola Fast SAR: SAR(1 g) = 3.1 mW/g; SAR(10 g) = 1.9 mW/g

Maximum value of SAR (interpolated) = 3.45 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 44.1 V/m; Power Drift = -0.204 dB

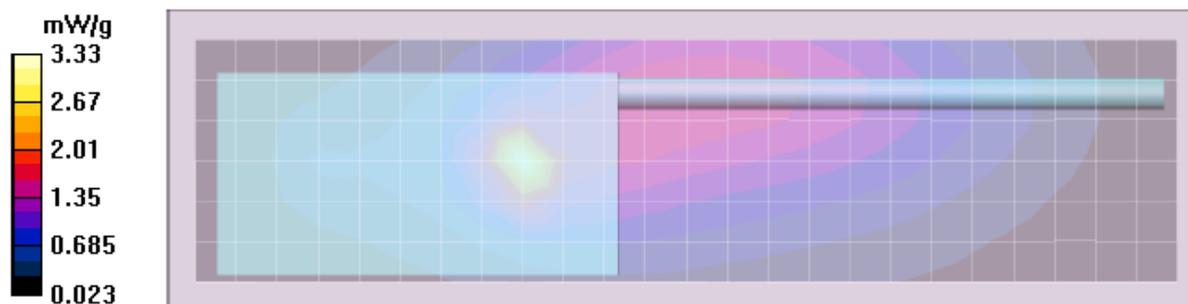
Peak SAR (extrapolated) = 9.07 W/kg

SAR(1 g) = 3.2 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 3.25 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 3.19 mW/g



Section 2.0

Assessments at the Body (CW mode) - Belt clip HLN6875A and offered audio accessories (Section 13.2 Table 13)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/9/2010 1:39:20 PM

Robot# / Run#: DASY4-FL-1 / HvH-Ab-100609-06
Phantom# / Tissue Temp.: OVAL1022 / 20.7 (C)
DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
Antenna / TX Freq.: NAR6593A / 155.0000 (MHz)
Battery: PMNN4403A
Carry Acc. / Cable Acc.: HLN6875A / HMN4104A
Start Power: 6.73 (W)

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 1.80 mW/g (1g); 0.791 mW/g (10g)

Comments: Full scan. DUT rolled, battery not touching phantom

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.82$ mho/m; $\epsilon_r = 62.2$; $\rho = 1000$ kg/m³

Ab Scan/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 30.8 V/m; Power Drift = -0.408 dB

Peak SAR (extrapolated) = 5.87 W/kg

SAR(1 g) = 1.8 mW/g; SAR(10 g) = 0.790 mW/g

Maximum value of SAR (measured) = 1.83 mW/g

Ab Scan/Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 30.8 V/m; Power Drift = -0.254 dB

Motorola Fast SAR: SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.927 mW/g

Maximum value of SAR (interpolated) = 1.62 mW/g

Ab Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 30.8 V/m; Power Drift = -0.295 dB

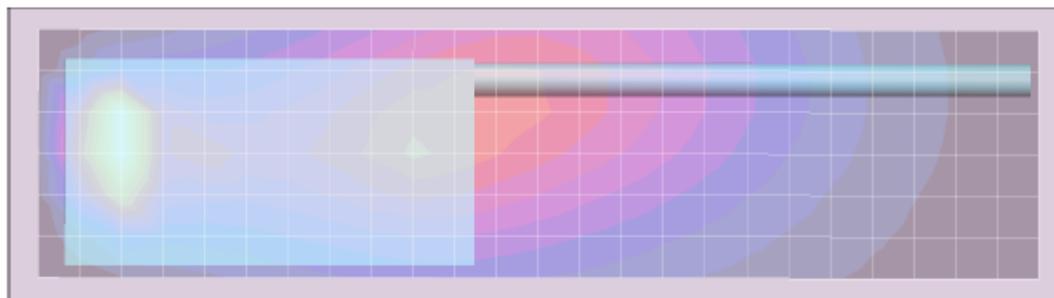
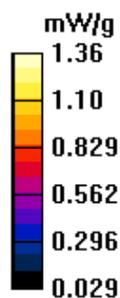
Peak SAR (extrapolated) = 2.12 W/kg

Motorola Fast SAR: SAR(1 g) = 1.76 mW/g; SAR(10 g) = 1.01 mW/g

Maximum value of SAR (interpolated) = 2.12 mW/g

Ab Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.99 mW/g



Section 3.0
Assessments at the Body (CW mode) – Other Frequency Channels
(Section 13.3 Table 14)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/26/2010 6:19:52 PM

Robot# / Run#: DASY4-FL-1 / MeC-Ab-100626-17
 Phantom# / Tissue Temp.: OVAL1022 / 21.3 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.73 (W)

Note: Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.37 mW/g (1g); 1.69 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.83$ mho/m; $\epsilon_r = 60.4$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 45.3 V/m; Power Drift = -0.444 dB

Motorola Fast SAR: SAR(1 g) = 3.31 mW/g; SAR(10 g) = 2.01 mW/g

Maximum value of SAR (interpolated) = 3.96 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 45.3 V/m; Power Drift = -0.513 dB

Peak SAR (extrapolated) = 3.61 W/kg

Motorola Fast SAR: SAR(1 g) = 3.34 mW/g; SAR(10 g) = 2.08 mW/g

Maximum value of SAR (interpolated) = 3.61 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 45.3 V/m; Power Drift = -0.665 dB

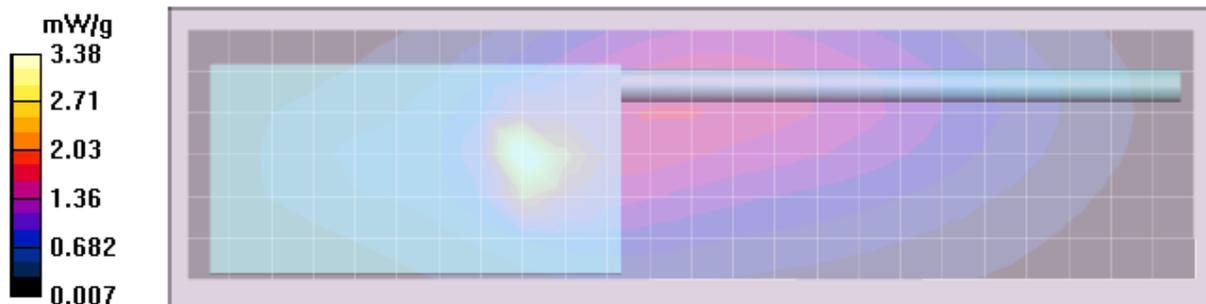
Peak SAR (extrapolated) = 9.27 W/kg

SAR(1 g) = 3.37 mW/g; SAR(10 g) = 1.69 mW/g

Maximum value of SAR (measured) = 3.45 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 3.38 mW/g



Section 4.0
Assessments at 2.5cm without body worn accessory (CW Mode)
(Section 13.4 Table 15)

Motorola Enterprise Mobility Solutions EME Laboratory
 Date/Time: 6/29/2010 9:41:41 PM

Robot# / Run#: DASY4-FL-1 / MeC-Ab-100629-11
 Phantom# / Tissue Temp.: OVAL1022 / 21.1 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / RMN5058A
 Start Power: 6.70 (W)

Note: Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 1.62 mW/g (1g); 1.24 mW/g (10g)

Comments: Full scan, Back of DUT antenna @ 2.5 cm. from phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)
 Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 155$ MHz; $\sigma = 0.82$ mho/m; $\epsilon_r = 60.1$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 47.9 V/m; Power Drift = -0.430 dB

Motorola Fast SAR: SAR(1 g) = 1.72 mW/g; SAR(10 g) = 1.31 mW/g

Maximum value of SAR (interpolated) = 1.80 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 47.9 V/m; Power Drift = -0.493 dB

Peak SAR (extrapolated) = 1.76 W/kg

Motorola Fast SAR: SAR(1 g) = 1.68 mW/g; SAR(10 g) = 1.27 mW/g

Maximum value of SAR (interpolated) = 1.76 mW/g

Ab Scan/3-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 47.9 V/m; Power Drift = -0.764 dB

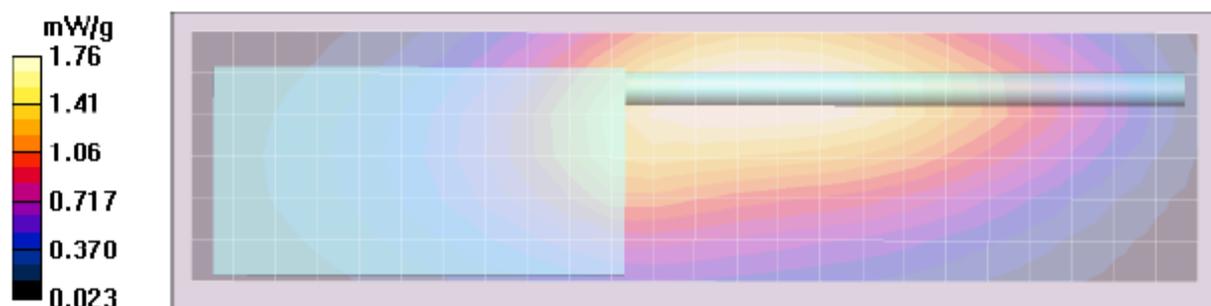
Peak SAR (extrapolated) = 2.20 W/kg

SAR(1 g) = 1.62 mW/g; SAR(10 g) = 1.24 mW/g

Maximum value of SAR (measured) = 1.68 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.63 mW/g



Section 5.0
Assessments at the Face (CW mode)
(Section 13.5 Table 16)

Motorola Enterprise Mobility Solutions EME Laboratory
Date/Time: 6/6/2010 7:15:20 AM

Robot# / Run#: DASY4-FL-1 / HvH-Face-100606-04
Phantom# / Tissue Temp.: OVAL1016 / 21.3 (C)
DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
Battery: PMNN4403A
Carry Acc. / Cable Acc.: None / None
Start Power: 6.65 (W)

Note:
Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 1.104 mW/g (1g); 0.845 mW/g (10g)

Comments: Full scan. Front facing phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.7, 7.7, 7.7)
Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.76$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Face Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 37.1 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.844 mW/g

Maximum value of SAR (measured) = 1.15 mW/g

Face Scan/Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 37.1 V/m; Power Drift = -0.112 dB

Motorola Fast SAR: SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.848 mW/g

Maximum value of SAR (interpolated) = 1.17 mW/g

Face Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 37.1 V/m; Power Drift = -0.116 dB

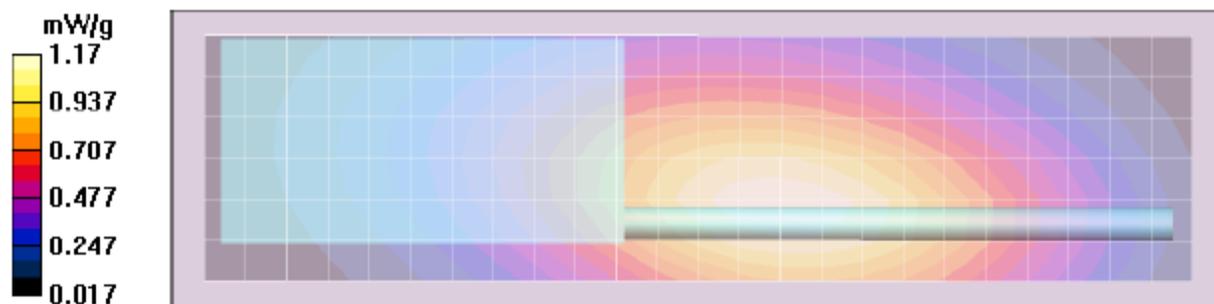
Peak SAR (extrapolated) = 1.14 W/kg

Motorola Fast SAR: SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.827 mW/g

Maximum value of SAR (interpolated) = 1.14 mW/g

Face Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.14 mW/g



Section 6.0
Assessments at the Face (CW mode) – Other Frequency Channels
(Section 13.6 Table 17)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/6/2010 12:47:39 PM

Robot# / Run#: DASY4-FL-1 / HvH-Face-100606-11
 Phantom# / Tissue Temp.: OVAL1016 / 21.5 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 173.4000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 6.78 (W)

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 1.354 mW/g (1g); 1.041 mW/g (10g)

Comments: Full scan. Front facing phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.7, 7.7, 7.7)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.76$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Face Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 41.4 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 1.35 mW/g; SAR(10 g) = 1.04 mW/g

Maximum value of SAR (measured) = 1.41 mW/g

Face Scan/Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 41.4 V/m; Power Drift = -0.0586 dB

Motorola Fast SAR: SAR(1 g) = 1.38 mW/g; SAR(10 g) = 1.05 mW/g

Maximum value of SAR (interpolated) = 1.44 mW/g

Face Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 41.4 V/m; Power Drift = -0.0761 dB

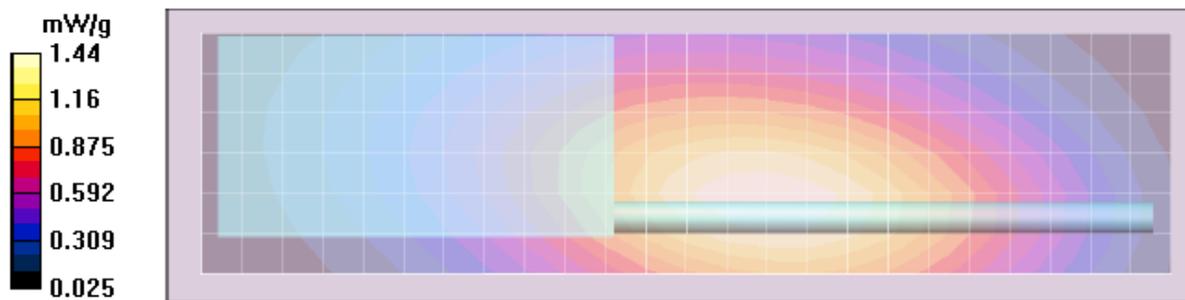
Peak SAR (extrapolated) = 1.43 W/kg

Motorola Fast SAR: SAR(1 g) = 1.37 mW/g; SAR(10 g) = 1.04 mW/g

Maximum value of SAR (interpolated) = 1.43 mW/g

Face Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.39 mW/g



APPENDIX G

DUT Scans (136 – 174 MHz)

Data enclosed for this appendix is not applicable for FCC part 90

Section 1.0

Assessments at the Body (CW mode) - Belt clip NTN8266B, and offered audio accessories (Section 13.1 Table 12)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/29/2010 1:07:14 PM

Robot# / Run#: DASY4-FL-1 / HvH-Ab-100629-02
 Phantom# / Tissue Temp.: OVAL1022 / 21.3 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 142.3000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.67 (W)

Note:

Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 4.94 mW/g (1g); 2.37 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142 \text{ MHz}$; $\sigma = 0.81 \text{ mho/m}$; $\epsilon_r = 60.8$; $\rho = 1000 \text{ kg/m}^3$

Ab Scan/1-Area Scan (61x241x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 52.0 V/m; Power Drift = -0.341 dB

Motorola Fast SAR: SAR(1 g) = 4.31 mW/g; SAR(10 g) = 2.63 mW/g

Maximum value of SAR (interpolated) = 5.03 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=1\text{mm}$

Reference Value = 52.0 V/m; Power Drift = -0.393 dB

Peak SAR (extrapolated) = 5.59 W/kg

Motorola Fast SAR: SAR(1 g) = 4.85 mW/g; SAR(10 g) = 2.87 mW/g

Maximum value of SAR (interpolated) = 5.59 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.0 V/m; Power Drift = -0.481 dB

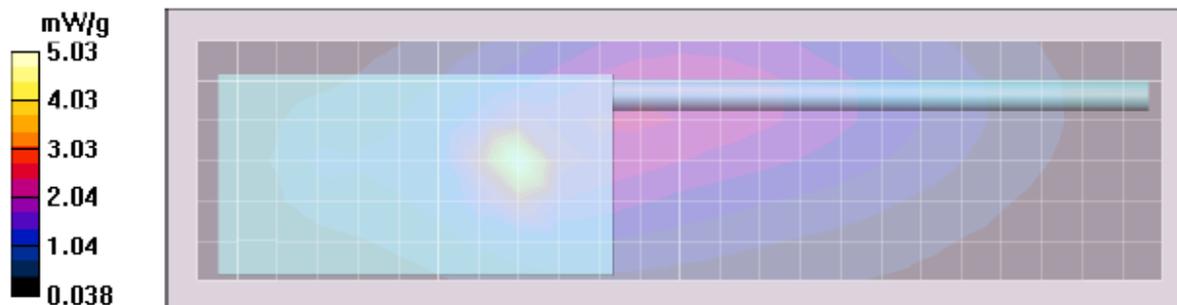
Peak SAR (extrapolated) = 15.1 W/kg

SAR(1 g) = 4.94 mW/g; SAR(10 g) = 2.37 mW/g

Maximum value of SAR (measured) = 4.72 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=10\text{mm}$

Maximum value of SAR (measured) = 4.85 mW/g



Section 2.0

Assessments at the Body (CW mode) - Belt clip HLN6875A, and offered audio accessories (Section 13.2 Table 13)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/29/2010 6:09:30 PM

Robot# / Run#: DASY4-FL-1 / MeC-Ab-100629-08
Phantom# / Tissue Temp.: OVAL1022 / 21.3 (C)
DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
Antenna / TX Freq.: NAR6593A / 142.3000 (MHz)
Battery: PMNN4403A
Carry Acc. / Cable Acc.: HLN6875A / RMN5058A
Start Power: 6.70 (W)

Note: Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.86 mW/g (1g); 1.73 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.81$ mho/m; $\epsilon_r = 60.8$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 41.0 V/m; Power Drift = -0.273 dB

Motorola Fast SAR: SAR(1 g) = 3.25 mW/g; SAR(10 g) = 2.13 mW/g

Maximum value of SAR (interpolated) = 3.60 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 41.0 V/m; Power Drift = -0.323 dB

Peak SAR (extrapolated) = 4.75 W/kg

Motorola Fast SAR: SAR(1 g) = 3.93 mW/g; SAR(10 g) = 2.25 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.

Maximum value of SAR (interpolated) = 4.75 mW/g

Ab Scan/3-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 41.0 V/m; Power Drift = -0.490 dB

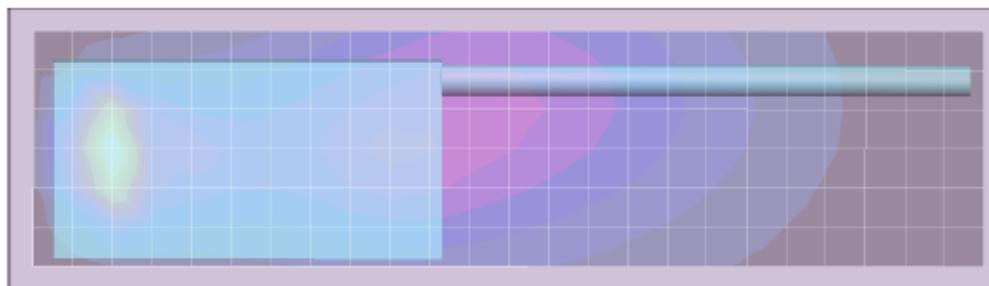
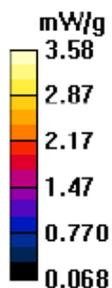
Peak SAR (extrapolated) = 11.9 W/kg

SAR(1 g) = 3.86 mW/g; SAR(10 g) = 1.73 mW/g

Maximum value of SAR (measured) = 3.84 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 4.25 mW/g



Section 3.0
Assessments at the Body (CW mode) – Other Frequency Channels
(Section 13.3 Table 14)

Motorola Enterprise Mobility Solutions EME Laboratory
Date/Time: 6/28/2010 3:18:52 PM

Robot# / Run#: DASY4-FL-1 / HvH-Ab-100628-03
 Phantom# / Tissue Temp.: OVAL1022 / 20.1 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 136.0000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: NTN8266B / RMN5058A
 Start Power: 6.67 (W)

Note:
 Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 8.94 mW/g (1g); 4.30 mW/g (10g)

Comments: Full scan.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)
 Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 65.4 V/m; Power Drift = -0.0952 dB

Motorola Fast SAR: SAR(1 g) = 7.39 mW/g; SAR(10 g) = 4.61 mW/g

Maximum value of SAR (interpolated) = 8.54 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 65.4 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 9.81 W/kg

Motorola Fast SAR: SAR(1 g) = 8.6 mW/g; SAR(10 g) = 5.17 mW/g

Maximum value of SAR (interpolated) = 9.81 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 65.4 V/m; Power Drift = -0.133 dB

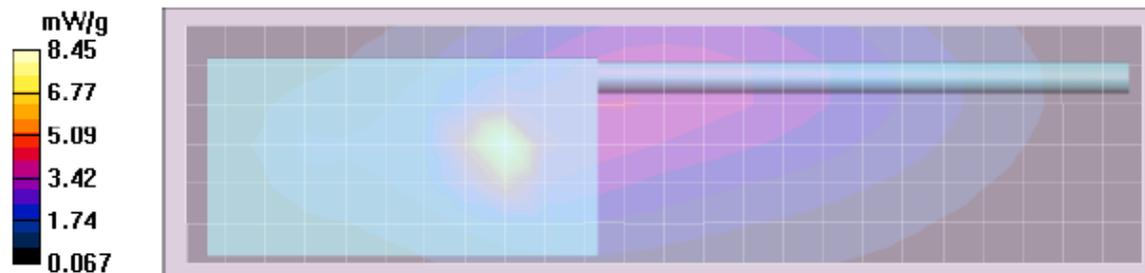
Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 8.94 mW/g; SAR(10 g) = 4.3 mW/g

Maximum value of SAR (measured) = 8.57 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 9.21 mW/g



Section 4.0

Assessments at 2.5cm without body worn accessory (CW Mode)

(Section 13.4 Table 15)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/29/2010 10:36:11 PM

Robot# / Run#: DASY4-FL-1 / MeC-Ab-100629-12
 Phantom# / Tissue Temp.: OVAL1022 / 21.0 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 136.0000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / RMN5058A
 Start Power: 6.72 (W)

Note: Prior to recording the Reported SAR values below, the Measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported SAR: 3.66 mW/g (1g); 2.80 mW/g (10g)

Comments: Full scan, Back of DUT antenna @ 2.5 cm. from phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.4, 7.4, 7.4)
 Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.81$ mho/m; $\epsilon_r = 60.8$; $\rho = 1000$ kg/m³

Ab Scan/1-Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 69.5 V/m; Power Drift = -0.138 dB

Motorola Fast SAR: SAR(1 g) = 3.69 mW/g; SAR(10 g) = 2.81 mW/g

Maximum value of SAR (interpolated) = 3.86 mW/g

Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 69.5 V/m; Power Drift = -0.154 dB

Peak SAR (extrapolated) = 3.87 W/kg

Motorola Fast SAR: SAR(1 g) = 3.69 mW/g; SAR(10 g) = 2.79 mW/g

Maximum value of SAR (interpolated) = 3.87 mW/g

Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 69.5 V/m; Power Drift = -0.178 dB

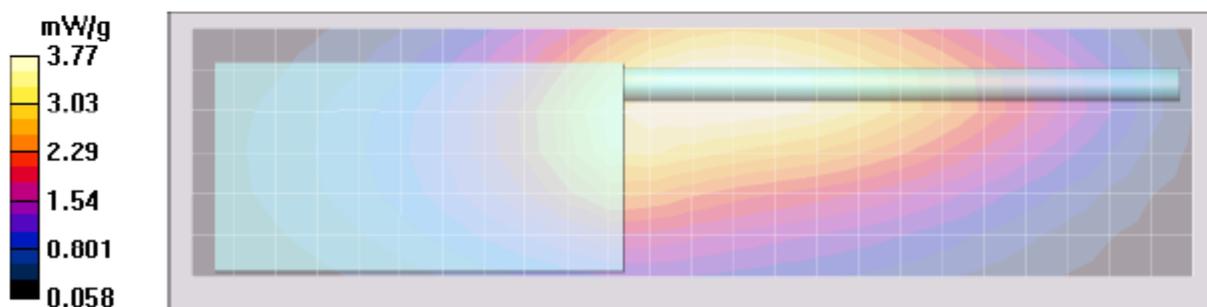
Peak SAR (extrapolated) = 4.97 W/kg

SAR(1 g) = 3.66 mW/g; SAR(10 g) = 2.8 mW/g

Maximum value of SAR (measured) = 3.81 mW/g

Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 3.79 mW/g



Section 5.0
Assessments at the Face (CW mode)
(Section 13.5 Table 16)

Motorola Enterprise Mobility Solutions EME Laboratory

Date/Time: 6/6/2010 5:47:33 AM

Robot# / Run#: DASY4-FL-1 / HvH-Face-100606-02
 Phantom# / Tissue Temp.: OVAL1016 / 21.3 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0052
 Antenna / TX Freq.: NAR6593A / 142.3000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 6.67 (W)

Note:

Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 1.618 mW/g (1g); 1.252 mW/g (10g)

Comments: Full scan. Front facing phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.7, 7.7, 7.7)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.74$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Face Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 49.7 V/m; Power Drift = -0.643 dB

Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 1.61 mW/g; SAR(10 g) = 1.25 mW/g

Maximum value of SAR (measured) = 1.67 mW/g

Face Scan/Area Scan (61x24x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 49.7 V/m; Power Drift = -0.425 dB

Motorola Fast SAR: SAR(1 g) = 1.73 mW/g; SAR(10 g) = 1.32 mW/g

Maximum value of SAR (interpolated) = 1.81 mW/g

Face Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 49.7 V/m; Power Drift = -0.472 dB

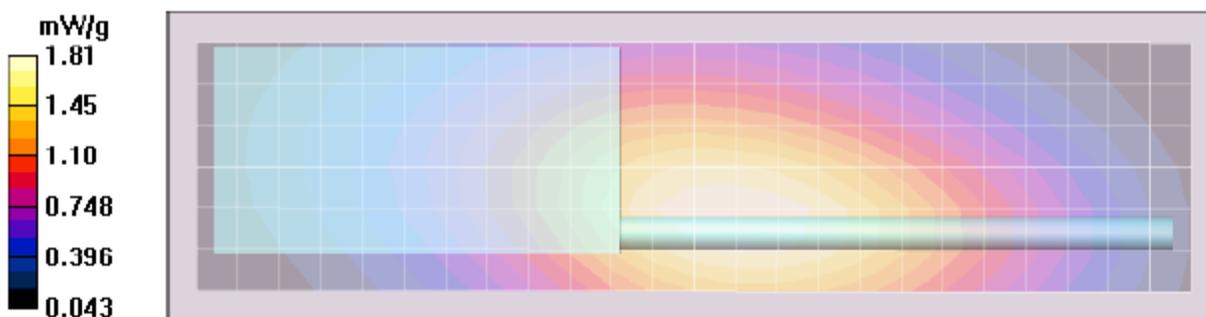
Peak SAR (extrapolated) = 1.73 W/kg

Motorola Fast SAR: SAR(1 g) = 1.65 mW/g; SAR(10 g) = 1.26 mW/g

Maximum value of SAR (interpolated) = 1.73 mW/g

Face Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.64 mW/g



Section 6.0
Assessments at the Face (CW mode) – Other Frequency Channels
(Section 13.6 Table 17)

Motorola Enterprise Mobility Solutions EME Laboratory
 Date/Time: 6/6/2010 1:27:20 PM

Robot# / Run#: DASY4-FL-1 / HvH-Face-100606-12
 Phantom# / Tissue Temp.: OVAL1016 / 21.5 (C)
 DUT Model# / Serial#: H98KGD9PW5AN / NUD1002A0039
 Antenna / TX Freq.: NAR6593A / 136.0000 (MHz)
 Battery: PMNN4403A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 6.58 (W)

Note:
 Prior to recording the reported SAR values below, the measured SAR values were corrected for tissue frequencies from 136 MHz to 3 GHz.

Reported: 2.332 mW/g (1g); 1.814 mW/g (10g)

Comments: Full scan. Front facing phantom.

Probe: ES3DV3 - SN3185, Calibrated: 11/23/2009, ConvF(7.7, 7.7, 7.7)

Electronics: DAE3 Sn374, Calibrated: 4/15/2010

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.74$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Face Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.6 V/m; Power Drift = -0.504 dB

Peak SAR (extrapolated) = 3.08 W/kg

SAR(1 g) = 2.32 mW/g; SAR(10 g) = 1.81 mW/g

Maximum value of SAR (measured) = 2.41 mW/g

Face Scan/Area Scan (61x241x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 58.6 V/m; Power Drift = -0.337 dB

Motorola Fast SAR: SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.89 mW/g

Maximum value of SAR (interpolated) = 2.59 mW/g

Face Scan/Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 58.6 V/m; Power Drift = -0.386 dB

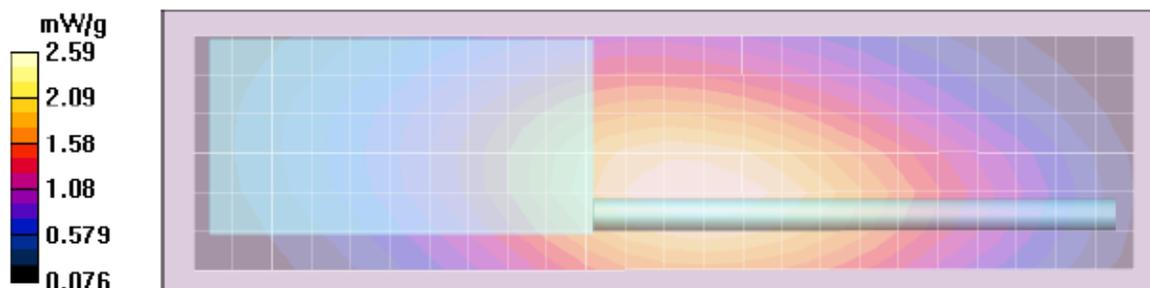
Peak SAR (extrapolated) = 2.46 W/kg

Motorola Fast SAR: SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.8 mW/g

Maximum value of SAR (interpolated) = 2.46 mW/g

Face Scan/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 2.37 mW/g



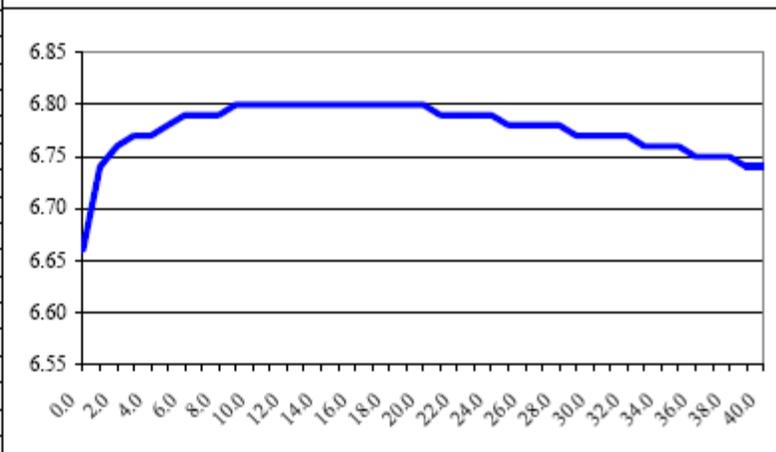
APPENDIX H DUT Supplementary Data (Power slump)

Model # H98KGD9PW5AN
Serial # NUD1002A0052

Battery: PMNN4403A
Frequency: 136.00 MHz
Date: 6/30/2010

Transmit Mode: CW
Audio Accessory: RMN5058A

TX TIME (minutes)	Measured Power Watts
	PMNN4403A
0.0	6.66
1.0	6.74
2.0	6.76
3.0	6.77
4.0	6.77
5.0	6.78
6.0	6.79
7.0	6.79
8.0	6.79
9.0	6.80
10.0	6.80
11.0	6.80
12.0	6.80
13.0	6.80
14.0	6.80
15.0	6.80
16.0	6.80
17.0	6.80
18.0	6.80
19.0	6.80
20.0	6.80
21.0	6.79
22.0	6.79
23.0	6.79
24.0	6.79
25.0	6.78
26.0	6.78
27.0	6.78
28.0	6.78
29.0	6.77
30.0	6.77
31.0	6.77
32.0	6.77
33.0	6.76
34.0	6.76
35.0	6.76
36.0	6.75
37.0	6.75
38.0	6.75
39.0	6.74
40.0	6.74



Appendix I
DUT Test Position Photos

Photos available in Exhibit 7B

Appendix J
DUT and Body worn Accessory Photos

Photos available in Exhibit 7B