


MOTOROLA SOLUTIONS

ACCREDITED
 TESTING CERT # 2518.01

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2
Motorola Solutions Inc.
EME Test Laboratory
 8000 West Sunrise Blvd
 Fort Lauderdale, FL. 33322.

Date of Report: 2/6/12
Report Revision: O
Report ID: SR10103 APX4000 VHF BT 2 of 2
 Rev O 120206

Responsible Engineer: Michael Sailsman (Senior Staff Eng.)
Report Author: Michael Sailsman (Senior Staff Eng.)
Date/s Tested: 12/21/11-12/27/11; 1/31/12
Manufacturer/Location: Penang
Sector/Group/Div.: AESS Astro Engineering Subscriber Solutions
Date submitted for test: 12/15/11
DUT Description: 136 - 174MHz 3-5.9W 6.25kHz/12.5kHz/25kHz, Single Display Model full keypad. Capable of digital and analog FM transmission. Also capable of TDMA transmission and BT
Test TX mode(s): CW (PTT); BT (CW)
Max. Power output: 5.9W; 0.010 W (Bluetooth)
Nominal Power: 5.5W, 0.010 W (Bluetooth)
Tx Frequency Bands: 136 - 174 MHz; 2.402-2.480 GHz (Bluetooth)
Signaling type: FM; TDMA; FHSS(BT)
Model(s) Tested: H51KDH9PW7AN (MUD2601)
Model(s) Certified: H51KDH9PW7AN (MUD2601)
Serial Number(s): 426TMZ0214, 426TMZ0211
Classification: Occupational/Controlled
FCC ID: AZ489FT3828; Rule Part 90 150.8 - 174MHz. Results outside this band are not applicable to demonstrate FCC compliance.
IC: 109U-89FT3828; 138-144MHz; 148-149.9MHz and 150.05-174MHz. Results outside this band are not applicable to demonstrate IC compliance.

* 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 Solutions Inc 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.

Deanna Zakharia
EMS EME Lab Senior Resource Manager,
Laboratory Director
Approval Date: 2/6/2012

Certification Date: 2/6/12

Certification No.: L1120208P

Appendix D Test System Verification Scans

The SAR result indicated on the Manufacture's Calibrated certificate for dipole D300V3 S/N 1015 is not used due to the following:

- The IEEE1528-2003 and the FCC OET-65 Supplement C, System Verification section recommends 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 the dipole are higher than +/-10% (e.g. 2.91 +/-18.1% at k=2 for the D300V3 S/N 1015).
- The allowed tolerance for the probe are also higher than +/- 10% (e.g. 13.4% 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 target set for the tested dipoles, 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 -3.44% for the 300MHz dipole which are 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: 12/21/2011 5:53:46 AM, Date/Time: 12/21/2011 5:58:44 AM, Date/Time: 12/21/2011 6:07:45 AM

Robot# / Run#: DASY5-FL-1 / ErC-SYSP-300B-111221-01
 Phantom# / Tissue Temp.: OVAL1018 / 21.1 (C)
 Dipole Model# / Serial#: D300V3 / 1015
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.80 mW/g (1g)
 Adjusted SAR (1W): 2.76 mW/g (1g)
 Percent from Target (+/-): 1.6 % (1g)
 Rotation (1D): 0.042 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: 0.689 mW/g (1g); 0.467 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(6.83, 6.83, 6.83)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011
 Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 57.7$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.3m/System Performance Check/Dipole Area Scan 2 (5x9x1):

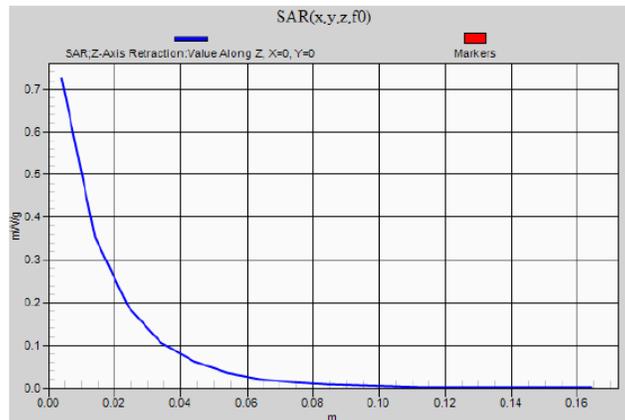
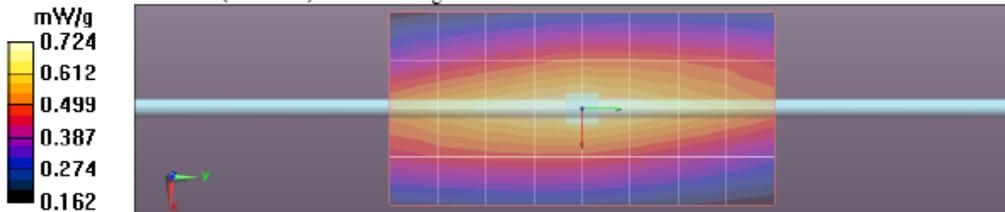
Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.724 mW/g

Below 3 GHz-Rev.3m/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 29.018 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 0.999 W/kg
 SAR(1 g) = 0.678 mW/g; SAR(10 g) = 0.464 mW/g
 Maximum value of SAR (measured) = 0.726 mW/g

Below 3 GHz-Rev.3m/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.725 mW/g



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Date/Time: 12/22/2011 5:58:06 AM, Date/Time: 12/22/2011 6:03:04 AM, Date/Time: 12/22/2011 6:12:05 AM

Robot# / Run#: DASY5-FL-1 / ErC-SYSP-300B-111222-01
 Phantom# / Tissue Temp.: OVAL1018 / 21.2 (C)
 Dipole Model# / Serial#: D300V3 / 1015
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.80 mW/g (1g)
 Adjusted SAR (1W): 2.78 mW/g (1g)
 Percent from Target (+/-): 0.6 % (1g)
 Rotation (1D): 0.091 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: 0.696 mW/g (1g); 0.474 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(6.83, 6.83, 6.83)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011
 Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 57.8$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.3m/System Performance Check/Dipole Area Scan 2 (5x9x1):

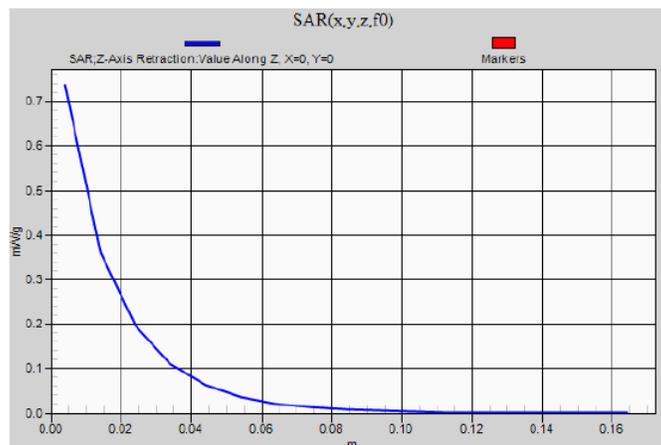
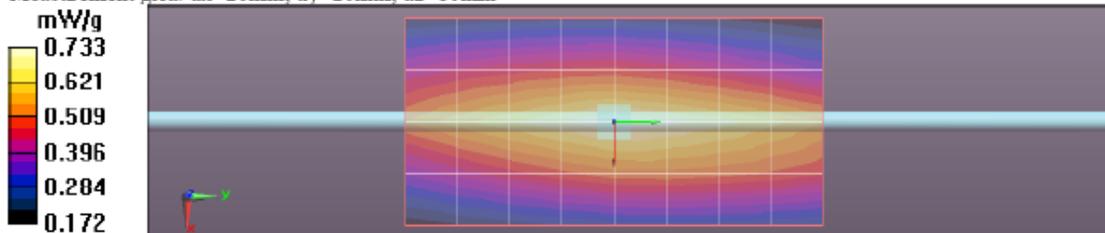
Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.733 mW/g

Below 3 GHz-Rev.3m/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 29.011 V/m; Power Drift = 0.0059 dB
 Peak SAR (extrapolated) = 1.014 W/kg
 SAR(1 g) = 0.688 mW/g; SAR(10 g) = 0.471 mW/g
 Maximum value of SAR (measured) = 0.737 mW/g

Below 3 GHz-Rev.3m/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: dx=20mm, dy=20mm, dz=10mm



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Date/Time: 12/27/2011 5:50:22 AM, Date/Time: 12/27/2011 5:55:35 AM, Date/Time: 12/27/2011 6:07:32 AM

Robot# / Run#: DASY5-FL-1 / ErC-SYSP-300H-111227-01
 Phantom# / Tissue Temp.: OVAL1109 / 21.6 (C)
 Dipole Model# / Serial#: D300V3 / 1015
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.81 mW/g (1g)
 Adjusted SAR (1W): 2.92 mW/g (1g)
 Percent from Target (+/-): 3.8 % (1g)
 Rotation (1D): 0.073 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: 0.729 mW/g (1g); 0.490 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(6.88, 6.88, 6.88)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011
 Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 45.1$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.3m/System Performance Check/Dipole Area Scan 2 (5x9x1):

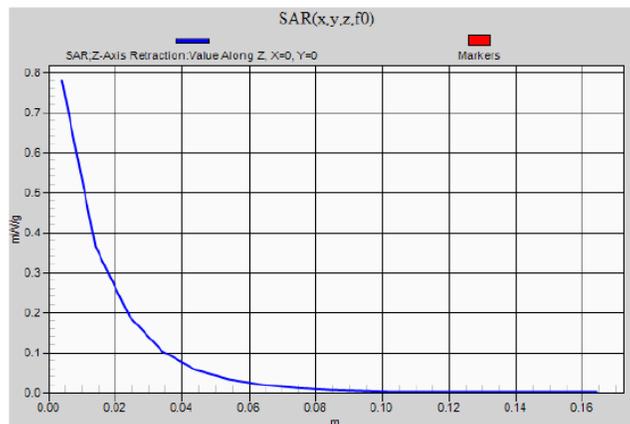
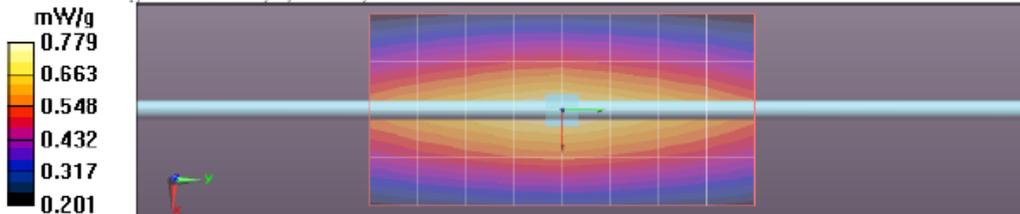
Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.779 mW/g

Below 3 GHz-Rev.3m/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 30.014 V/m; Power Drift = 0.0078 dB
 Peak SAR (extrapolated) = 1.120 W/kg
 SAR(1 g) = 0.729 mW/g; SAR(10 g) = 0.490 mW/g
 Maximum value of SAR (measured) = 0.778 mW/g

Below 3 GHz-Rev.3m/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: dx=20mm, dy=20mm, dz=10mm



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Date/Time: 1/31/2012 7:02:16 AM, Date/Time: 1/31/2012 7:07:18 AM, Date/Time: 1/31/2012 7:16:22 AM

Robot# / Run#: DASY5-FL-1 / ErC-SYSP-300B-120131-01
 Phantom# / Tissue Temp.: OVAL1018 / 21.5 (C)
 Dipole Model# / Serial#: D300V3 / 1015
 TX Freq. / Start power: 300 (MHz) / 250 (mW)

Target SAR (1W): 2.80 mW/g (1g)
 Adjusted SAR (1W): 2.81 mW/g (1g)
 Percent from Target (+/-): 0.4 % (1g)
 Rotation (1D): 0.026 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: 0.703 mW/g (1g); 0.480 mW/g (10g)

Comments:

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(6.83, 6.83, 6.83)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011
 Duty Cycle: 1:1, Medium parameters used: f = 300 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 57.2$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.3m/System Performance Check/Dipole Area Scan 2 (5x9x1):

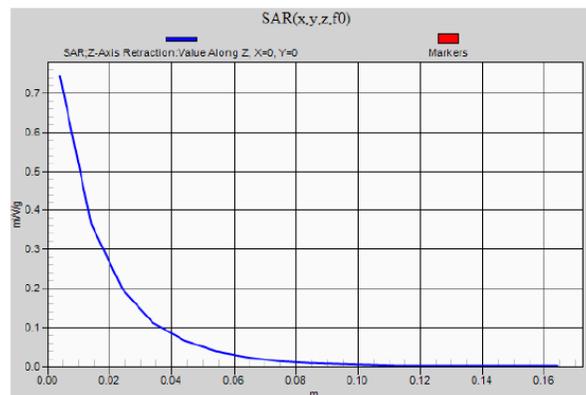
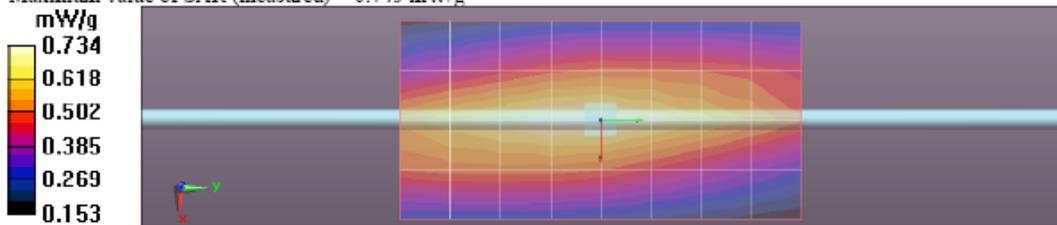
Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.734 mW/g

Below 3 GHz-Rev.3m/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 29.202 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 1.024 W/kg
 SAR(1 g) = 0.695 mW/g; SAR(10 g) = 0.477 mW/g
 Maximum value of SAR (measured) = 0.744 mW/g

Below 3 GHz-Rev.3m/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.745 mW/g



DIPOLE SAR TARGET - HEAD

Date: 08/01/11 Frequency (MHz): 300
 Lab Location: FL08 Mixture Type: IEEE Head
 DAE Serial #: 363 Ambient Temp.(°C): 21.1

Tissue Characteristics
 Permittivity: 45.7 Phantom Type/SN: OVAL1109
 Conductivity: 0.83 Distance (mm): 15
 Tissue Temp.(°C): 21.3

Reference Source: Dipole Power to Dipole: 250 mW
 Reference SN: 1015

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

2.85

Difference from Target

-1.40% (1g-SAR)

New Target:

Average 1g-SAR Value (mW/g):	2.81
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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
3147	2.82	0.4%	R2
3163	2.89	2.8%	R2
3185	2.72	-3.2%	R2
Average	2.8100	New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: J. Turco Initial: 

DIPOLE SAR TARGET - BODY

Date: 08/01/11 Frequency (MHz): 300
 Lab Location: FL08 Mixture Type: Body
 DAE Serial #: 363 Ambient Temp.(°C): 21.9

Tissue Characteristics
 Permittivity: 57.5 Phantom Type/SN: OVAL1018
 Conductivity: 0.92 Distance (mm): 15
 Tissue Temp.(°C): 21.9

Reference Source: Dipole Power to Dipole: 250 mW
 Reference SN: 1015

New Target:
 Average Measured SAR Value: 2.80 mW/g(1g avg.),

Probe SN #s	1-G Cube	Diff from Ave	Robot
3147	2.77	-1.0%	R2
3163	2.88	3.0%	R2
3185	2.74	-2.0%	R2
Average		New Measured SAR Value	

(normalized to 1.0 W)

Test performed by: J. Turco Initial: 

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

Shortened Scan Result Table 27

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Date/Time: 1/31/2012 2:25:11 PM, Date/Time: 1/31/2012 2:51:49 PM, Date/Time: 1/31/2012 3:00:56 PM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-10
 Phantom# / Tissue Temp.: OVAL1018 / 21.1 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8129A
 Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / None
 Start Power: 5.63 (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: 1.22 mW/g (1g); 0.599 mW/g (10g)

Comments: Zoom scan. Without Belt Loop SHORT SCAN

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.188 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 24.801 V/m; Power Drift = -0.12 dB

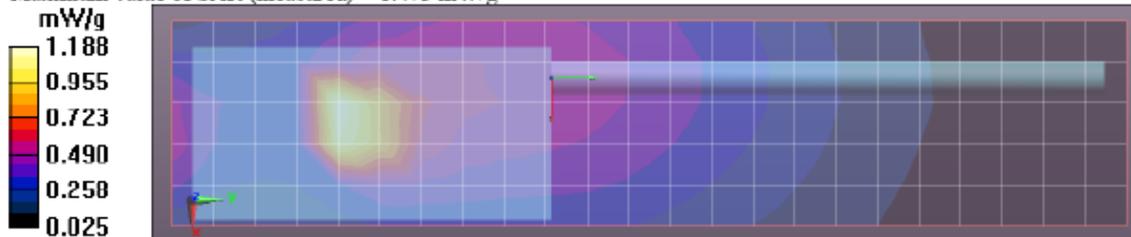
Peak SAR (extrapolated) = 4.359 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.598 mW/g

Maximum value of SAR (measured) = 1.237 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.473 mW/g



Shortened scan reflect highest SAR producing configuration; approximate run time is 9 minutes.

Representative full scan run time was 27 minutes.

“Shortened” scan max calculated SAR using SAR drift: 1-g Avg. = 0.66 mW/g; 10-g Avg. = 0.32 mW/g.

Zoom scan max calculated SAR using SAR drift (see part 1 table 21): 1-g Avg. = 1.07 mW/g; 10-g Avg. = 0.41 mW/g.

Table 21
Body - Highest SAR Configuration Result

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 1:06:34 PM, Date/Time: 1/31/2012 1:25:39 PM, Date/Time: 1/31/2012 1:33:21 PM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-08
Phantom# / Tissue Temp.: OVAL1018 / 21.0 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
Battery: NNTN8129A
Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / None
Start Power: 5.70 (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: 1.91 mW/g (1g); 0.732 mW/g (10g)

Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.236 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 25.852 V/m; Power Drift = -0.35 dB

Peak SAR (extrapolated) = 10.594 W/kg

SAR(1 g) = 1.9 mW/g; SAR(10 g) = 0.731 mW/g

Maximum value of SAR (measured) = 2.180 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 2.080 mW/g

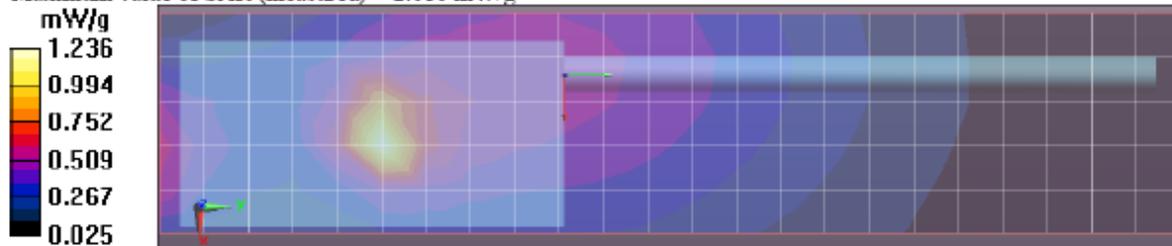


Table 25 Face - Highest SAR Configuration Result

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/22/2011 4:17:11 PM, Date/Time: 12/22/2011 4:33:56 PM, Date/Time: 12/22/2011 4:37:04 PM,
Date/Time: 12/22/2011 4:44:50 PM

Robot# / Run#: DASY5-FL-1 / CM-Face-111222-12
Phantom# / Tissue Temp.: OVAL1019 / 21.2 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0211
Antenna / TX Freq.: NAR6593A / 162.0125 (MHz)
Battery: NNTN8128A
Carry Acc. / Cable Acc.: None / None
Start Power: 5.68 (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: 0.919 mW/g (1g); 0.709 mW/g (10g)

Comments: Zoom scan. Front of DUT toward phantom.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(8.2, 8.2, 8.2)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

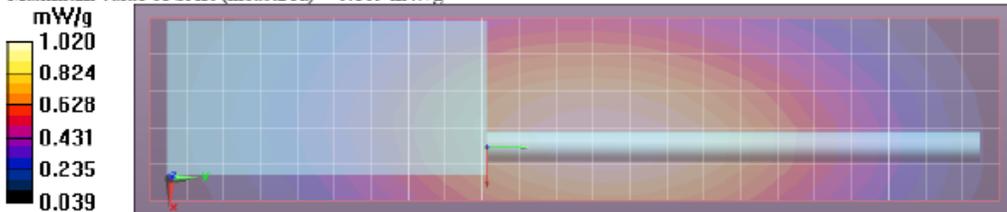
Duty Cycle: 1:1, Medium parameters used: $f = 162$ MHz; $\sigma = 0.78$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Face Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 36.329 V/m; Power Drift = -0.29 dB
Motorola Fast SAR: SAR(1 g) = 0.982 mW/g; SAR(10 g) = 0.748 mW/g
Maximum value of SAR (interpolated) = 1.027 mW/g

Below 3 GHz-Rev.4e/Face Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm
Reference Value = 36.329 V/m; Power Drift = -0.36 dB
Peak SAR (extrapolated) = **Not Specified** W/kg
Motorola Fast SAR: SAR(1 g) = 0.936 mW/g; SAR(10 g) = 0.711 mW/g
Maximum value of SAR (interpolated) = 0.977 mW/g

Below 3 GHz-Rev.4e/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 36.329 V/m; Power Drift = -0.82 dB
Peak SAR (extrapolated) = 1.215 W/kg
SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.706 mW/g
Maximum value of SAR (measured) = 0.948 mW/g

Below 3 GHz-Rev.4e/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.869 mW/g



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

Table 13
Assessments at the Body with Body worn PMLN4651A

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/21/2011 11:55:28 AM, Date/Time: 12/21/2011 12:11:26 PM, Date/Time: 12/21/2011 12:14:25 PM, Date/Time: 12/21/2011 12:22:04 PM

Robot# / Run#: DASY5-FL-1 / HvH-Ab-111221-02
 Phantom# / Tissue Temp.: OVAL1018 / 21.0 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8128A
 Carry Acc. / Cable Acc.: PMLN4651A / HMN4104B
 Start Power: 5.80 (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: 0.860 mW/g (1g); 0.557 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61.6$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 32.769 V/m; Power Drift = -0.23 dB
 Motorola Fast SAR: SAR(1 g) = **0.852 mW/g**; SAR(10 g) = 0.601 mW/g
 Maximum value of SAR (interpolated) = 0.928 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 32.769 V/m; Power Drift = -0.26 dB
 Peak SAR (extrapolated) = **Not Specified** W/kg
 Motorola Fast SAR: SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.588 mW/g
 Maximum value of SAR (interpolated) = 0.936 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 32.769 V/m; Power Drift = -0.34 dB
 Peak SAR (extrapolated) = 1.586 W/kg
 SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.556 mW/g
 Maximum value of SAR (measured) = 0.906 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.922 mW/g

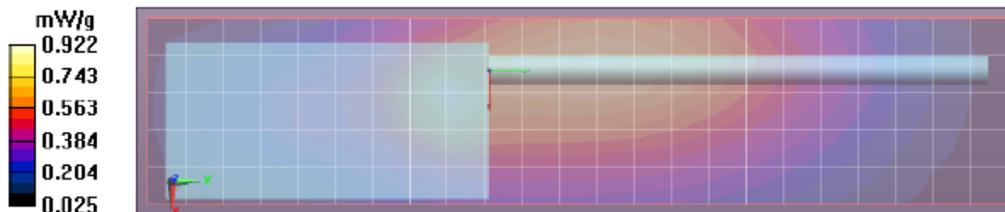


Table 14
Assessments at the Body with Body worn PMLN4651A (additional battery)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/21/2011 12:47:00 PM, Date/Time: 12/21/2011 1:02:56 PM, Date/Time: 12/21/2011 1:05:55 PM,
 Date/Time: 12/21/2011 1:13:35 PM

Robot# / Run#: DASY5-FL-1 / HvH-Ab-111221-03
 Phantom# / Tissue Temp.: OVAL1018 / 20.8 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8129A
 Carry Acc. / Cable Acc.: PMLN4651A / HMN4104B
 Start Power: 5.80 (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: 0.870 mW/g (1g); 0.552 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: f = 168 MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61.6$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm
 Reference Value = 30.908 V/m; Power Drift = -0.20 dB
 Motorola Fast SAR: SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.598 mW/g
 Maximum value of SAR (interpolated) = 0.922 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm
 Reference Value = 30.908 V/m; Power Drift = -0.24 dB
 Peak SAR (extrapolated) = **Not Specified** W/kg
 Motorola Fast SAR: SAR(1 g) = 0.881 mW/g; SAR(10 g) = 0.593 mW/g
 Maximum value of SAR (interpolated) = 0.970 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 30.908 V/m; Power Drift = -0.31 dB
 Peak SAR (extrapolated) = 1.669 W/kg
 SAR(1 g) = 0.866 mW/g; SAR(10 g) = 0.551 mW/g
 Maximum value of SAR (measured) = 0.877 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.925 mW/g

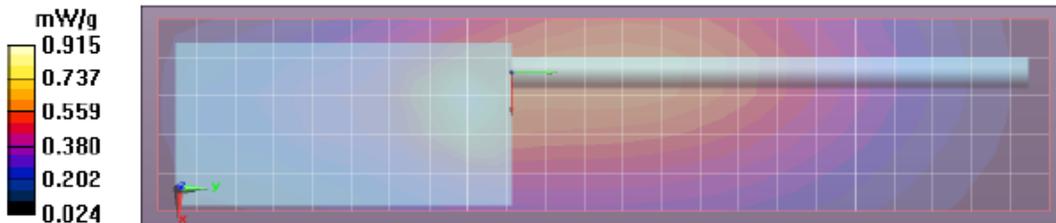


Table 15
Assessments at the Body with Body worn PMLN7008A

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/21/2011 2:35:37 PM, Date/Time: 12/21/2011 2:51:34 PM, Date/Time: 12/21/2011 2:54:33 PM,
Date/Time: 12/21/2011 3:03:45 PM

Robot# / Run#: DASY5-FL-1 / HvH-Ab-111221-05
Phantom# / Tissue Temp.: OVAL1018 / 21.1 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
Battery: NNTN8128A
Carry Acc. / Cable Acc.: PMLN7008A / HMN4104B
Start Power: 5.85 (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: 0.917 mW/g (1g); 0.593 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61.6$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 32.622 V/m; Power Drift = -0.20 dB

Motorola Fast SAR: SAR(1 g) = 0.910 mW/g; SAR(10 g) = 0.640 mW/g

Maximum value of SAR (interpolated) = 0.999 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 32.622 V/m; Power Drift = -0.25 dB

Peak SAR (extrapolated) = **Not Specified** W/kg

Motorola Fast SAR: SAR(1 g) = 0.919 mW/g; SAR(10 g) = 0.634 mW/g

Maximum value of SAR (interpolated) = 0.992 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 32.622 V/m; Power Drift = -0.36 dB

Peak SAR (extrapolated) = 1.717 W/kg

SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.592 mW/g

Maximum value of SAR (measured) = 0.978 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.974 mW/g

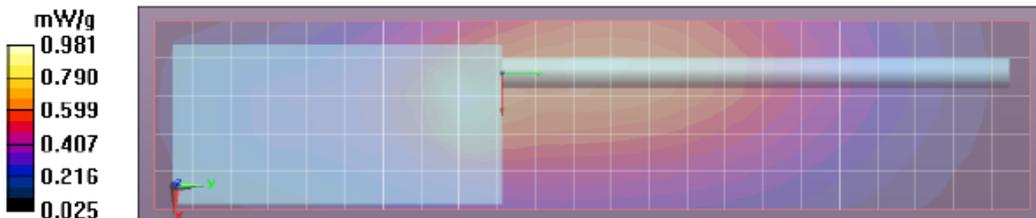


Table 16
Assessments at the Body with Body worn PMLN7008A (additional battery)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/21/2011 3:18:19 PM, Date/Time: 12/21/2011 3:34:17 PM, Date/Time: 12/21/2011 3:37:17 PM,
Date/Time: 12/21/2011 3:44:56 PM

Robot# / Run#: DASY5-FL-1 / HvH-Ab-111221-06
Phantom# / Tissue Temp.: OVAL1018 / 21.0 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
Battery: NNTN8129A
Carry Acc. / Cable Acc.: PMLN7008A / HMN4104B
Start Power: 5.82 (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: 0.888 mW/g (1g); 0.565 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61.6$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 30.474 V/m; Power Drift = -0.21 dB

Motorola Fast SAR: SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.599 mW/g

Maximum value of SAR (interpolated) = 0.932 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 30.474 V/m; Power Drift = -0.25 dB

Peak SAR (extrapolated) = **Not Specified** W/kg

Motorola Fast SAR: SAR(1 g) = 0.900 mW/g; SAR(10 g) = 0.612 mW/g

Maximum value of SAR (interpolated) = 0.979 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 30.474 V/m; Power Drift = -0.32 dB

Peak SAR (extrapolated) = 1.709 W/kg

SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.564 mW/g

Maximum value of SAR (measured) = 0.934 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.950 mW/g

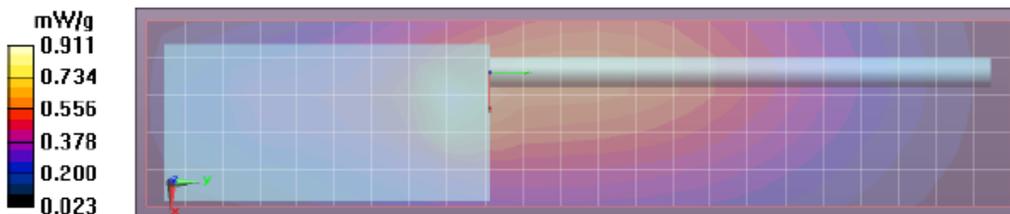


Table 17
Assessments at the body with Body worn PMLN6085A

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 7:57:11 AM, Date/Time: 1/31/2012 8:16:15 AM, Date/Time: 1/31/2012 8:23:55 AM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-02
 Phantom# / Tissue Temp.: OVAL1018 / 21.2 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8128A
 Carry Acc. / Cable Acc.: PMLN6085A / HMN4104B
 Start Power: 5.62 (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: 0.208 mW/g (1g); 0.165 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.224 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 16.204 V/m; Power Drift = -0.37 dB
 Peak SAR (extrapolated) = 0.269 W/kg
 SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.165 mW/g
 Maximum value of SAR (measured) = 0.216 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.211 mW/g

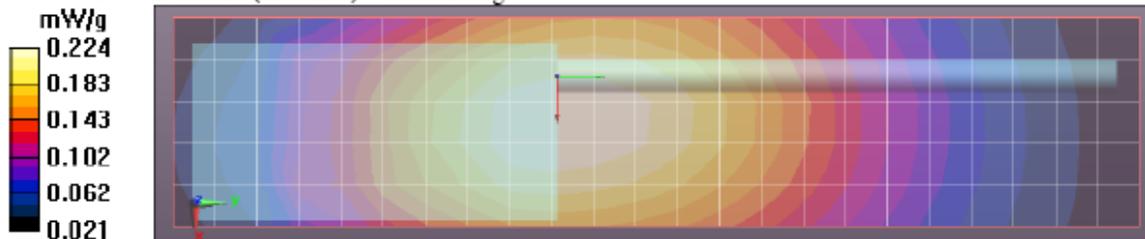


Table 18
A Assessment at the Body with Body worn PMLN6085A (additional battery)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 8:43:33 AM, Date/Time: 1/31/2012 9:02:37 AM, Date/Time: 1/31/2012 9:11:50 AM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-03
 Phantom# / Tissue Temp.: OVAL1018 / 21.2 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8129A
 Carry Acc. / Cable Acc.: PMLN6085A / HMN4104B
 Start Power: 5.67 (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: 0.207 mW/g (1g); 0.164 mW/g (10g)

Comments: Zoom scan.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.222 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 16.107 V/m; Power Drift = -0.33 dB
 Peak SAR (extrapolated) = 0.266 W/kg
 SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.164 mW/g
 Maximum value of SAR (measured) = 0.213 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.212 mW/g

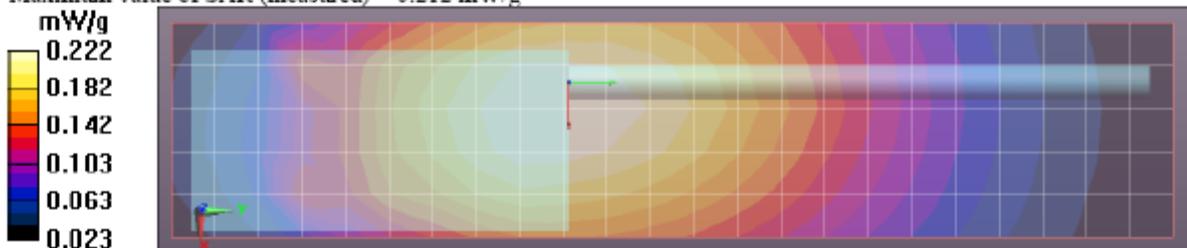


Table 19
Assessment at the Body with Body worn PMLN6085A/NTN5243A

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 10:07:32 AM, Date/Time: 1/31/2012 10:26:36 AM, Date/Time: 1/31/2012 10:34:17 AM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-05
 Phantom# / Tissue Temp.: OVAL1018 / 21.1 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8128A
 Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / HMN4104B
 Start Power: 5.77 (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: 1.13 mW/g (1g); 0.468 mW/g (10g)

Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.928 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 21.551 V/m; Power Drift = -0.47 dB

Peak SAR (extrapolated) = 5.663 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.468 mW/g

Maximum value of SAR (measured) = 1.277 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.270 mW/g

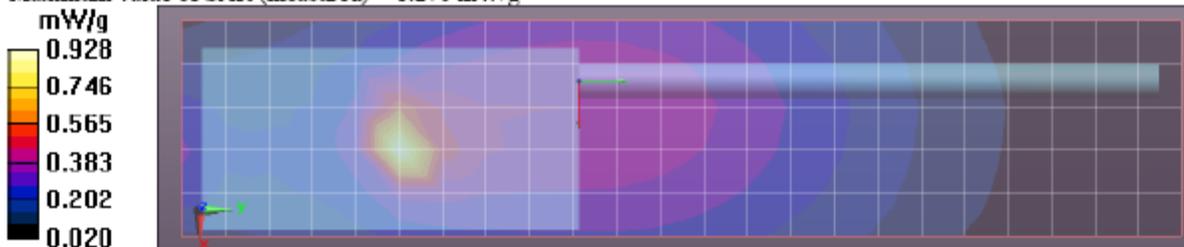


Table 20
Assessment at the Body with Body worn PMLN6085A/NTN5243A (additional battery)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 10:49:30 AM, Date/Time: 1/31/2012 11:08:34 AM, Date/Time: 1/31/2012 11:16:17 AM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-06
 Phantom# / Tissue Temp.: OVAL1018 / 21.1 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8129A
 Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / HMN4104B
 Start Power: 5.75 (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: 1.23 mW/g (1g); 0.499 mW/g (10g)

Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.748 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 21.314 V/m; Power Drift = -0.30 dB

Peak SAR (extrapolated) = 6.381 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.499 mW/g

Maximum value of SAR (measured) = 1.475 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.372 mW/g

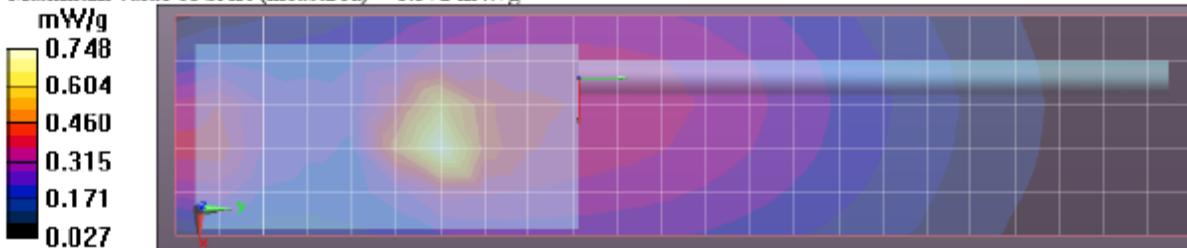


Table 21
Assessment of wireless BT configuration

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 1:06:34 PM, Date/Time: 1/31/2012 1:25:39 PM, Date/Time: 1/31/2012 1:33:21 PM

Robot# / Run#: DASY5-FL-1 / ErC-Ab-120131-08
 Phantom# / Tissue Temp.: OVAL1018 / 21.0 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 167.7000 (MHz)
 Battery: NNTN8129A
 Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / None
 Start Power: 5.70 (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: 1.91 mW/g (1g); 0.732 mW/g (10g)

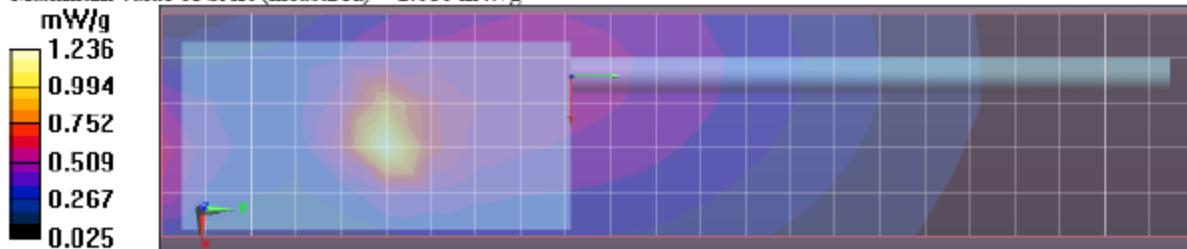
Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011
 Duty Cycle: 1:1, Medium parameters used: $f = 168$ MHz; $\sigma = 0.8$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.236 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 25.852 V/m; Power Drift = -0.35 dB
 Peak SAR (extrapolated) = 10.594 W/kg
 SAR(1 g) = 1.9 mW/g; SAR(10 g) = 0.731 mW/g
 Maximum value of SAR (measured) = 2.180 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 2.080 mW/g



**Table 24
Assessment at the Face with default battery**

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/22/2011 2:04:51 PM, Date/Time: 12/22/2011 2:21:35 PM, Date/Time: 12/22/2011 2:24:44 PM,
Date/Time: 12/22/2011 2:32:29 PM

Robot# / Run#: DASY5-FL-1 / CM-Face-111222-09
Phantom# / Tissue Temp.: OVAL1019 / 21.3 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 162.0125 (MHz)
Battery: NNTN8129A
Carry Acc. / Cable Acc.: None / None
Start Power: 5.76 (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: 0.861 mW/g (1g); 0.669 mW/g (10g)

Comments: Zoom scan. Front of DUT toward phantom.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(8.2, 8.2, 8.2)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: f = 162 MHz; $\sigma = 0.78$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Face Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 35.057 V/m; Power Drift = -0.36 dB
Motorola Fast SAR: SAR(1 g) = 0.917 mW/g; SAR(10 g) = 0.699 mW/g
Maximum value of SAR (interpolated) = 0.958 mW/g

Below 3 GHz-Rev.4e/Face Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 35.057 V/m; Power Drift = -0.42 dB
Peak SAR (extrapolated) = **Not Specified** W/kg
Motorola Fast SAR: SAR(1 g) = 0.869 mW/g; SAR(10 g) = 0.662 mW/g
Maximum value of SAR (interpolated) = 0.907 mW/g

Below 3 GHz-Rev.4e/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 35.057 V/m; Power Drift = -0.52 dB
Peak SAR (extrapolated) = 1.132 W/kg
SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.666 mW/g
Maximum value of SAR (measured) = 0.889 mW/g

Below 3 GHz-Rev.4e/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.878 mW/g

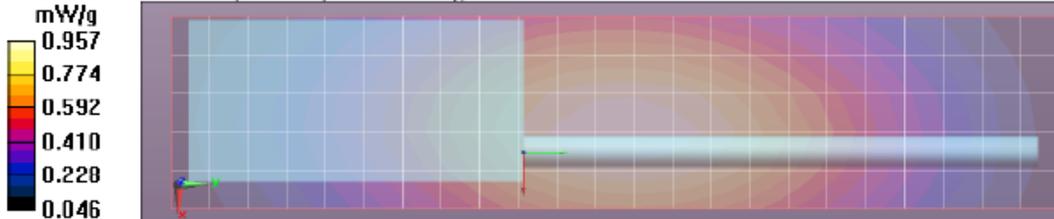


Table 25
Assessment at the Face (additional battery)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/22/2011 4:17:11 PM, Date/Time: 12/22/2011 4:33:56 PM, Date/Time: 12/22/2011 4:37:04 PM,
Date/Time: 12/22/2011 4:44:50 PM

Robot# / Run#: DASY5-FL-1 / CM-Face-111222-12
Phantom# / Tissue Temp.: OVAL1019 / 21.2 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0211
Antenna / TX Freq.: NAR6593A / 162.0125 (MHz)
Battery: NNTN8128A
Carry Acc. / Cable Acc.: None / None
Start Power: 5.68 (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: 0.919 mW/g (1g); 0.709 mW/g (10g)

Comments: Zoom scan. Front of DUT toward phantom.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(8.2, 8.2, 8.2)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 162$ MHz; $\sigma = 0.78$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Face Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 36.329 V/m; Power Drift = -0.29 dB

Motorola Fast SAR: SAR(1 g) = 0.982 mW/g; SAR(10 g) = 0.748 mW/g

Maximum value of SAR (interpolated) = 1.027 mW/g

Below 3 GHz-Rev.4e/Face Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 36.329 V/m; Power Drift = -0.36 dB

Peak SAR (extrapolated) = **Not Specified** W/kg

Motorola Fast SAR: SAR(1 g) = 0.936 mW/g; SAR(10 g) = 0.711 mW/g

Maximum value of SAR (interpolated) = 0.977 mW/g

Below 3 GHz-Rev.4e/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 36.329 V/m; Power Drift = -0.82 dB

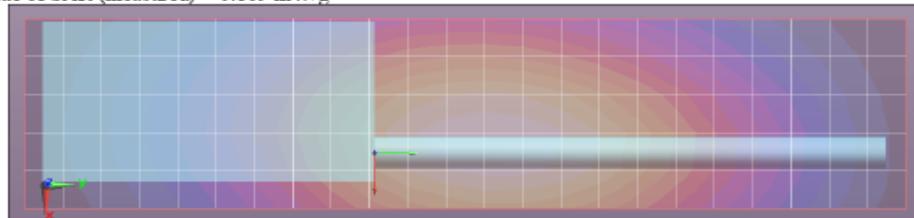
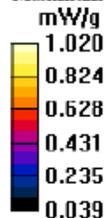
Peak SAR (extrapolated) = 1.215 W/kg

SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.706 mW/g

Maximum value of SAR (measured) = 0.948 mW/g

Below 3 GHz-Rev.4e/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.869 mW/g



Appendix G

DUT Scans – Outside FCC Part 90 (136-150.8 MHz band)

Table 22
Assessment outside FCC Part 90 at the body (136-150.8 MHz)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 4:19:47 PM, Date/Time: 1/31/2012 4:35:49 PM, Date/Time: 1/31/2012 4:38:49 PM,
Date/Time: 1/31/2012 4:49:47 PM

Robot# / Run#: DASY5-FL-1 / CM-Ab-120131-12
Phantom# / Tissue Temp.: OVAL1018 / 21.0 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 139.7000 (MHz)
Battery: NNTN8129A
Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / None
Start Power: 5.68 (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: 3.97 mW/g (1g); 1.49 mW/g (10g)

Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 140$ MHz; $\sigma = 0.78$ mho/m; $\epsilon_r = 62.1$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 34.623 V/m; Power Drift = -0.41 dB

Motorola Fast SAR: SAR(1 g) = 3.57 mW/g; SAR(10 g) = 1.89 mW/g

Maximum value of SAR (interpolated) = 4.892 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 34.623 V/m; Power Drift = -0.47 dB

Peak SAR (extrapolated) = **Not Specified** W/kg

Motorola Fast SAR: SAR(1 g) = 3.52 mW/g; SAR(10 g) = 1.77 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) = 5.041 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 34.623 V/m; Power Drift = -0.64 dB

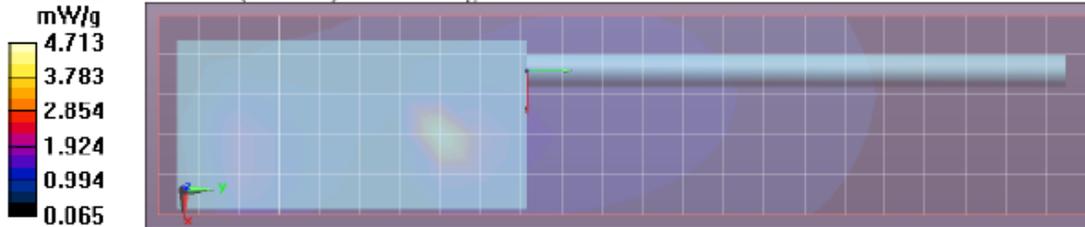
Peak SAR (extrapolated) = 22.069 W/kg

SAR(1 g) = 3.96 mW/g; SAR(10 g) = 1.49 mW/g

Maximum value of SAR (measured) = 4.666 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 4.260 mW/g



Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/31/2012 6:59:36 PM, Date/Time: 1/31/2012 7:15:37 PM, Date/Time: 1/31/2012 7:18:37 PM,
Date/Time: 1/31/2012 7:26:17 PM

Robot# / Run#: DASY5-FL-1 / CM-Ab-120131-15
Phantom# / Tissue Temp.: OVAL1018 / 20.9 (C)
DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
Battery: NNTN8129A
Carry Acc. / Cable Acc.: PMLN6085A w-NTN5243A / None
Start Power: 5.69 (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: 2.62 mW/g (1g); 1.05 mW/g (10g)

Comments: Zoom scan. Without Belt Loop

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(7.9, 7.9, 7.9)
Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 151$ MHz; $\sigma = 0.79$ mho/m; $\epsilon_r = 61.6$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Ab Scan/1-Area Scan (51x231x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 28.216 V/m; Power Drift = -0.039 dB

Motorola Fast SAR: SAR(1 g) = 2 mW/g; SAR(10 g) = 1.1 mW/g

Maximum value of SAR (interpolated) = 2.602 mW/g

Below 3 GHz-Rev.4e/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 28.216 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = **Not Specified** W/kg

Motorola Fast SAR: SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.22 mW/g

Maximum value of SAR (interpolated) = 3.341 mW/g

Below 3 GHz-Rev.4e/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 28.216 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 14.206 W/kg

SAR(1 g) = 2.61 mW/g; SAR(10 g) = 1.05 mW/g

Maximum value of SAR (measured) = 2.755 mW/g

Below 3 GHz-Rev.4e/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 3.112 mW/g

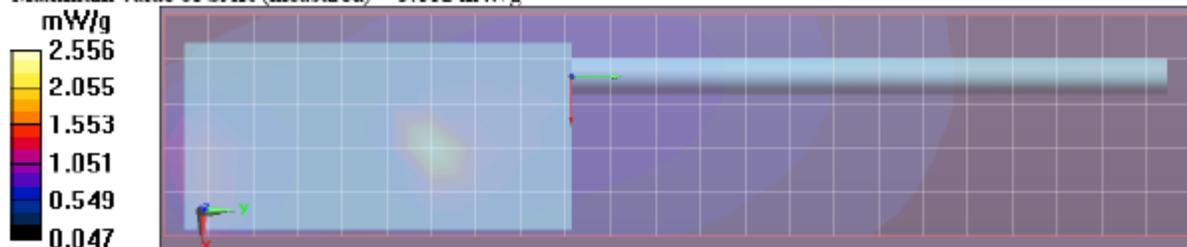


Table 26
Assessment outside FCC Part 90 at the face (136-150.8 MHz)

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/27/2011 7:46:57 AM, Date/Time: 12/27/2011 8:06:53 AM, Date/Time: 12/27/2011 8:17:59 AM

Robot# / Run#: DASY5-FL-1 / ErC-Face-111227-03
 Phantom# / Tissue Temp.: OVAL1109 / 21.6 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 139.7000(MHz)
 Battery: NNTN8128A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 5.82 (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: 1.32 mW/g (1g); 1.02 mW/g (10g)

Comments: Zoom scan. Front of DUT toward phantom.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(8.2, 8.2, 8.2)

Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 140$ MHz; $\sigma = 0.73$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Face Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.485 mW/g

Below 3 GHz-Rev.4e/Face Scan/3-Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 46.486 V/m; Power Drift = -1.29 dB

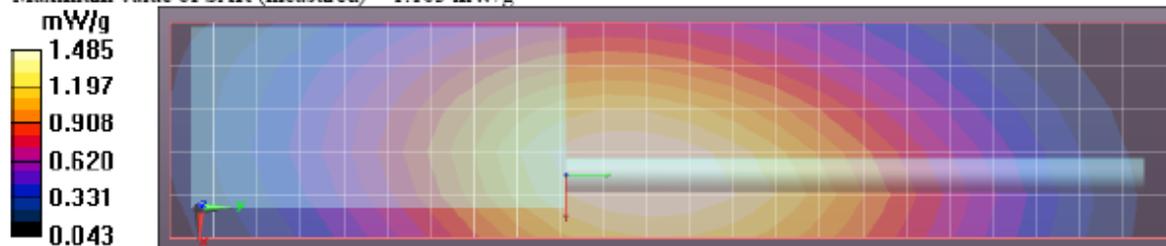
Peak SAR (extrapolated) = 1.740 W/kg

SAR(1 g) = 1.31 mW/g; SAR(10 g) = 1.02 mW/g

Maximum value of SAR (measured) = 1.362 mW/g

Below 3 GHz-Rev.4e/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.163 mW/g



Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/27/2011 10:41:42 AM, Date/Time: 12/27/2011 11:01:38 AM, Date/Time: 12/27/2011 11:09:22 AM

Robot# / Run#: DASY5-FL-1 / ErC-Face-111227-06
 Phantom# / Tissue Temp.: OVAL1109 / 21.6 (C)
 DUT Model# / Serial#: H51KDH9PW7AN (MUD2601) / 426TMZ0214
 Antenna / TX Freq.: NAR6593A / 150.8000 (MHz)
 Battery: NNTN8128A
 Carry Acc. / Cable Acc.: None / None
 Start Power: 5.75 (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: 1.19 mW/g (1g); 0.932 mW/g (10g)

Comments: Zoom scan. Front of DUT toward phantom.

Probe: ES3DV3 - SN3163, Calibrated: 4/13/2011, ConvF(8.2, 8.2, 8.2)
 Electronics: DAE4 Sn1231, Calibrated: 9/21/2011

Duty Cycle: 1:1, Medium parameters used: $f = 151$ MHz; $\sigma = 0.74$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Below 3 GHz-Rev.4e/Face Scan/1-Area Scan (6x24x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.253 mW/g

Below 3 GHz-Rev.4e/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 40.935 V/m; Power Drift = -0.09 dB

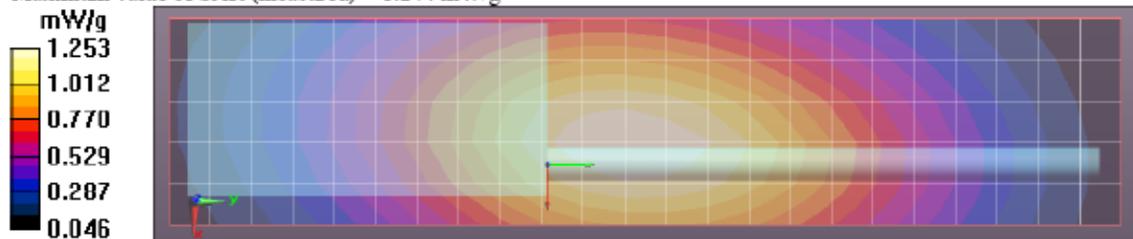
Peak SAR (extrapolated) = 1.565 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.932 mW/g

Maximum value of SAR (measured) = 1.240 mW/g

Below 3 GHz-Rev.4e/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.244 mW/g



APPENDIX H

DUT Supplementary Data (Power slump)

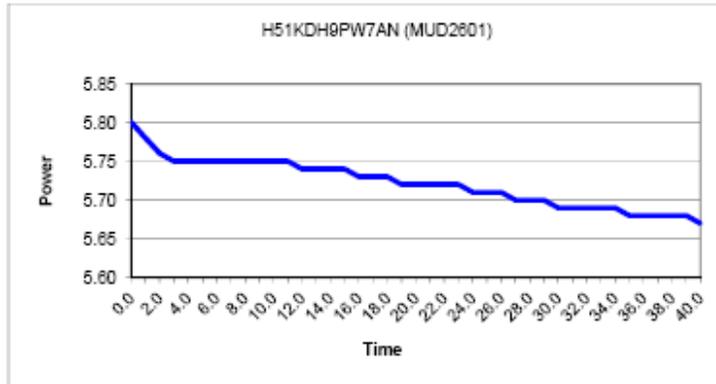
Model # H51KDH9PW7AN (MUD2601)

Serial # 426TMZ0214

Battery	NNTN8128A	Transmit Mode	CW
Frequency	167.7000 MHz	Audio Accessory	None
Date	1/4/2012		

TX TIME (Minutes)	Measured Power (Watts)
-----------------------------	----------------------------------

0.0	5.80
1.0	5.78
2.0	5.76
3.0	5.75
4.0	5.75
5.0	5.75
6.0	5.75
7.0	5.75
8.0	5.75
9.0	5.75
10.0	5.75
11.0	5.75
12.0	5.74
13.0	5.74
14.0	5.74
15.0	5.74
16.0	5.73
17.0	5.73
18.0	5.73
19.0	5.72
20.0	5.72
21.0	5.72
22.0	5.72
23.0	5.72
24.0	5.71
25.0	5.71
26.0	5.71
27.0	5.70
28.0	5.70
29.0	5.70
30.0	5.69
31.0	5.69
32.0	5.69
33.0	5.69
34.0	5.69
35.0	5.68
36.0	5.68
37.0	5.68
38.0	5.68
39.0	5.68



Appendix I
DUT Test Position Photos

Photos available in Exhibit 7B

Appendix J
DUT, Body worn and audio accessories Photos

Photos available in Exhibit 7B