

**DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2**

<p><b>Motorola Solutions Inc.</b>  <b>EME Test Laboratory</b>                  8000 West Sunrise Blvd                  Fort Lauderdale, FL. 33322</p>	<p><b>Date of Report:</b> 3/26/2013  <b>Report Revision:</b> B  <b>Report ID:</b> SR10958 APX3000 U1 Rev O 130326</p>
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**Responsible Engineer:** Michael Sailsman( Senior Staff EME Engineer)  
**Report Author:** Michael Sailsman (Senior Staff EME Engineer)  
**Date/s Tested:** 10/22/12-3/7/12  
**Manufacturer/Location:** Motorola, Penang  
**Sector/Group/Div.:** AESS – Astro Engineering Subscriber Solutions  
**Date submitted for test:** 9/28/2012  
**DUT Description:** 380-470MHz, 5.0W rated power, 6.25kHz/12.5kHz/25kHz, Capable of digital and analog FM transmission. Also capable of TDMA and Bluetooth transmissions

**Test TX mode(s):** CW (PTT); CW (Bluetooth)  
**Max. Power output:** 5.7W (380-470 MHz); 10 mW Bluetooth  
**Nominal Power:** 5.0W (380-470 MHz); 10 mW Bluetooth  
**Tx Frequency Bands:** 380-470 MHz; 2.402-2.480 GHz (Bluetooth)  
**Signaling type:** FM, TDMA, FHSS (Bluetooth)  
**Model(s) Tested:** H59QDD9PW4AN (MUE4120)  
**Model(s) Certified:** H59QDD9PW4AN (MUE4120)  
**Serial Number(s):** 536TNT0381  
**Classification:** Occupational/Controlled  
**FCC ID:** AZ489FT4911; Rule Part 90 (406.1-470 MHz); Rule Part 15 (2402 – 2480 MHz)  
 Results outside FCC bands are not applicable for FCC compliance demonstration.  
**IC:** 109U-89FT4911; (406.1-430 MHz; 450-470MHz)

\* 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. Results outside FCC bands are not applicable for FCC compliance demonstration. 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.

<p><i>Deanna Zakharia</i>  <b>Deanna Zakharia</b>                  EMS EME Lab Senior Resource Manager,                  Laboratory Director                  Approval Date: 3/28/2013</p>	<p><b>Certification Date:</b> 11/30/2012  <b>Certification No.:</b> L1121109P</p>
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**APPENDIX D**  
**Test System Check Scans**

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/22/2012 6:11:15 PM

Robot#: DASY5-FL-1 | Run#: CM-SYSP-450B-121022-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 22.1 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.03 dB  
 Adjusted SAR (1W): 4.53 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 55.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (41x81x1):**

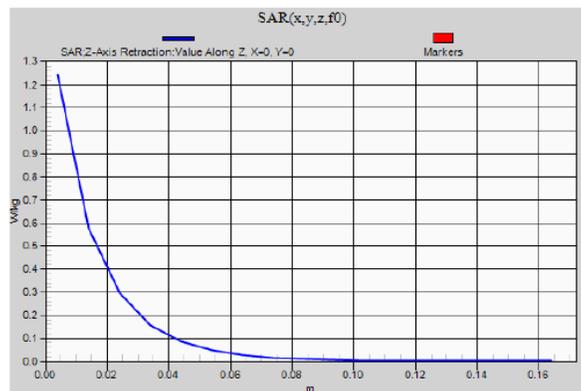
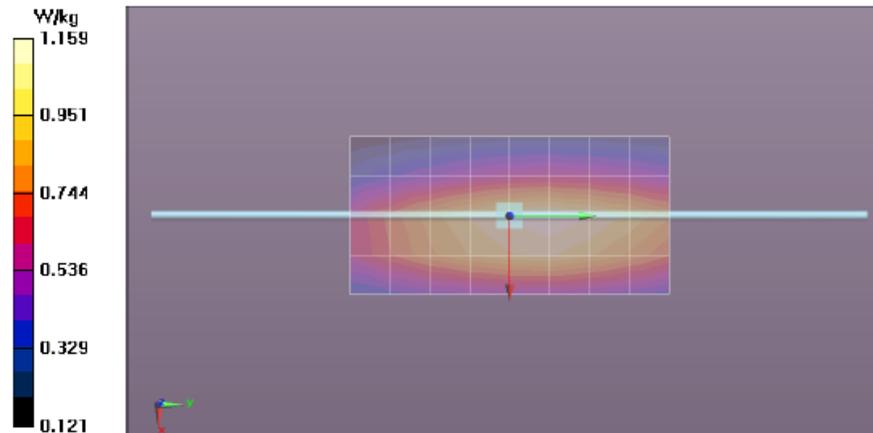
Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 36.081 V/m; Power Drift = -0.02 dB  
 Fast SAR: SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.808 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 1.23 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.081 V/m; Power Drift = -0.02 dB  
 Peak SAR (extrapolated) = 1.770 mW/g  
 SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.756 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.24 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/23/2012 5:46:38 AM

Robot#: DASY5-FL-1 | Run#: EIC-SYSP-450B-121023-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.6 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.039 dB  
 Adjusted SAR (1W): 4.48 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 54.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):**

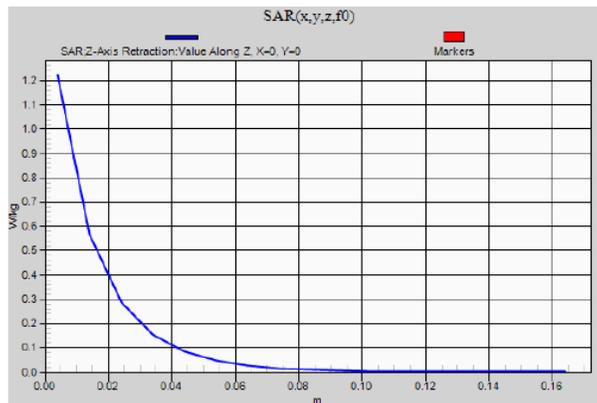
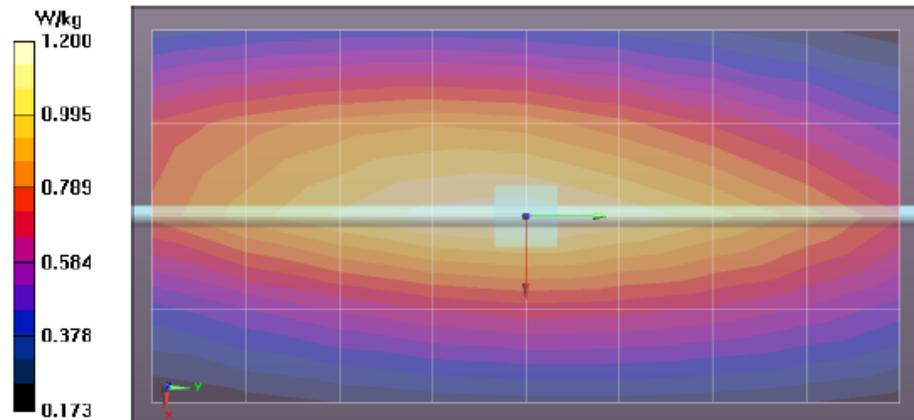
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.20 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 35.993 V/m; Power Drift = 0.00 dB  
 Peak SAR (extrapolated) = 1.740 mW/g  
 SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.748 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.22 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/24/2012 5:29:56 AM

Robot#: DASY5-FL-1 | Run#: EIC-SYSP-450B-121024-01  
 Dipole Model# D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.6 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.033 dB  
 Adjusted SAR (1W): 4.48 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):**

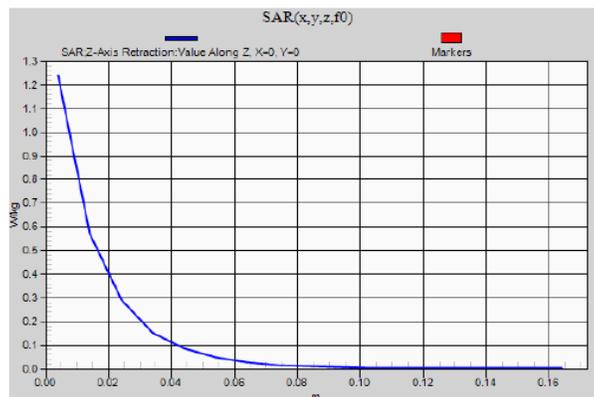
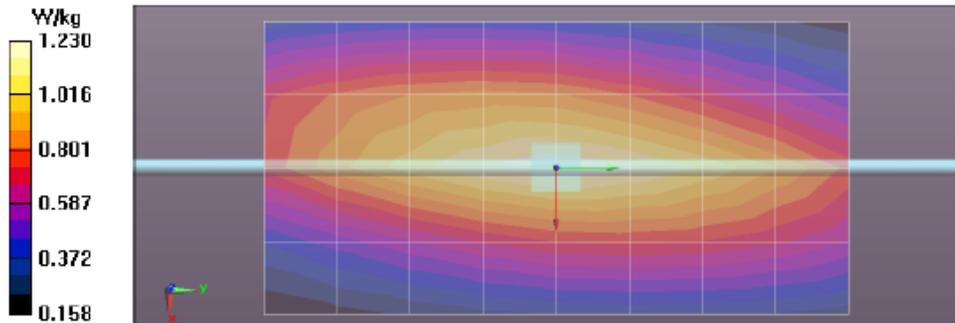
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.23 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 35.874 V/m; Power Drift = -0.01 dB  
 Peak SAR (extrapolated) = 1.769 mW/g  
 SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.746 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.24 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/25/2012 7:45:05 AM

Robot#: DASY5-FL-1 | Run#: E1C-SYSP-450B-121025-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 22.0 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.033 dB  
 Adjusted SAR (1W): 4.48 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 54.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):**

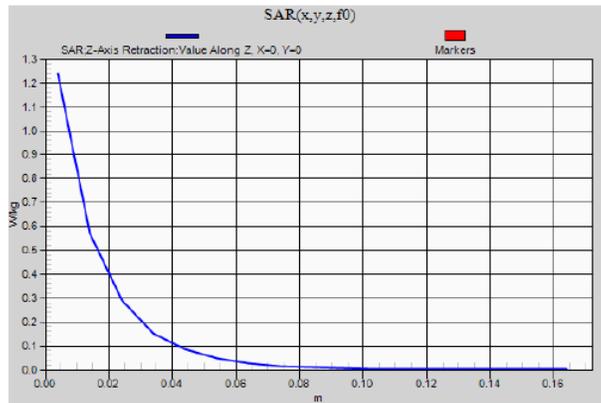
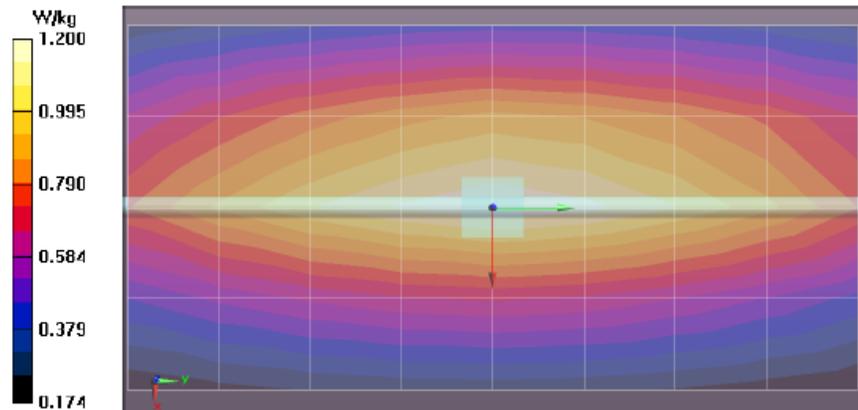
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.20 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 35.867 V/m; Power Drift = -0.00 dB  
 Peak SAR (extrapolated) = 1.760 mW/g  
 SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.744 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.24 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2012 5:27:15 AM

Robot#: DASY5-FL-1 | Run#: ErC-SYSP-450B-121026-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.028 dB  
 Adjusted SAR (1W): 4.52 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 55.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):**

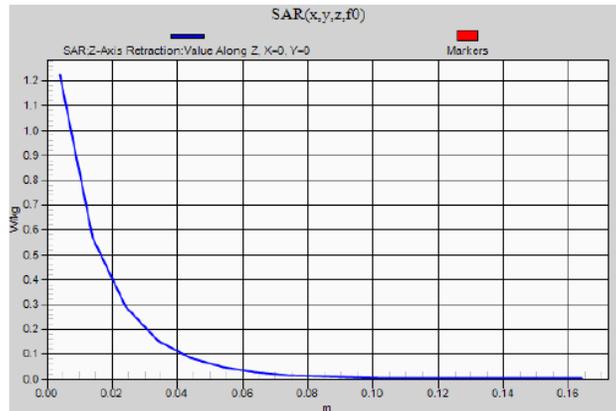
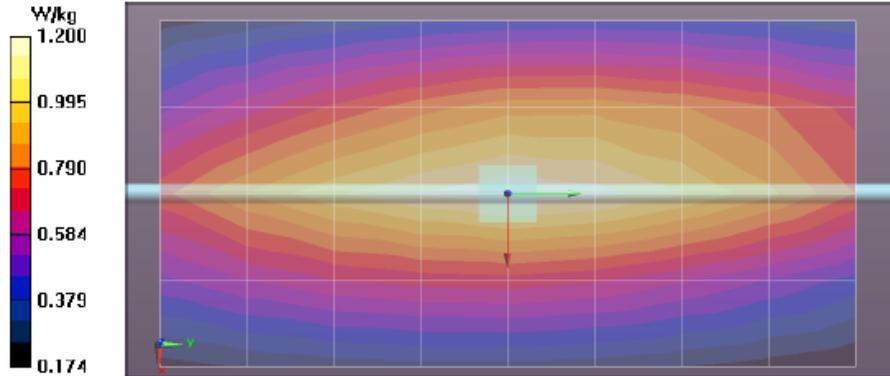
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.20 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.104 V/m; Power Drift = -0.00 dB  
 Peak SAR (extrapolated) = 1.740 mW/g  
 SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.751 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.22 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/30/2012 5:36:47 AM

Robot#: DASY5-FL-1 | Run#: EtC-SYSP-450B-121030-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.030 dB  
 Adjusted SAR (1W): 4.60 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 54.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):**

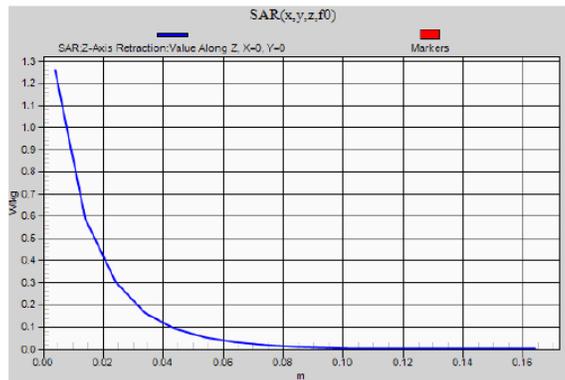
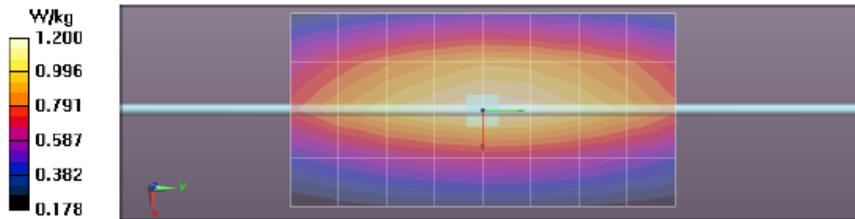
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.20 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.326 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 1.785 mW/g  
 SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.768 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.26 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/31/2012 4:28:17 PM

Robot#: DASY5-FL-1 | Run#: CM-SYSP-450B-121031-01  
 Dipole Model#: D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.7 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.032 dB  
 Adjusted SAR (1W): 4.56 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (41x81x1):**

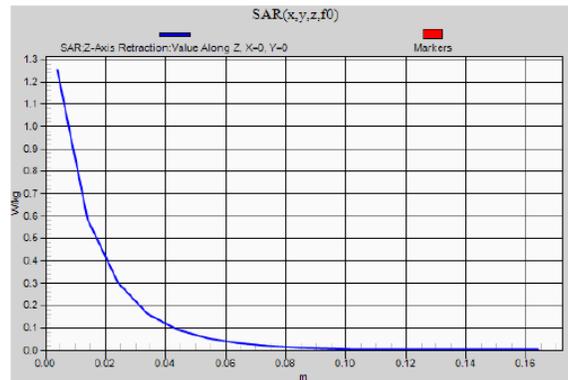
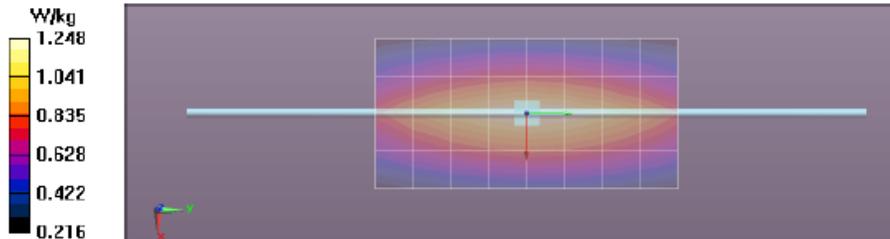
Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 36.267 V/m; Power Drift = 0.00 dB  
 Fast SAR: SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.821 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 1.25 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.267 V/m; Power Drift = 0.00 dB  
 Peak SAR (extrapolated) = 1.779 mW/g  
 SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.765 mW/g (SAR corrected for target medium)

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/2/2012 5:51:10 PM

Robot#: DASY5-FL-1 | Run#: CM-SYSP-450B-121102-06  
 Dipole Model# D450V3  
 Phantom#: OVAL1016  
 Tissue Temp: 21.7 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.035 dB  
 Adjusted SAR (1W): 4.60 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 56.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (41x81x1):**

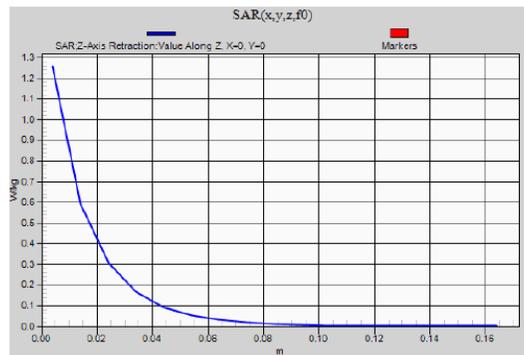
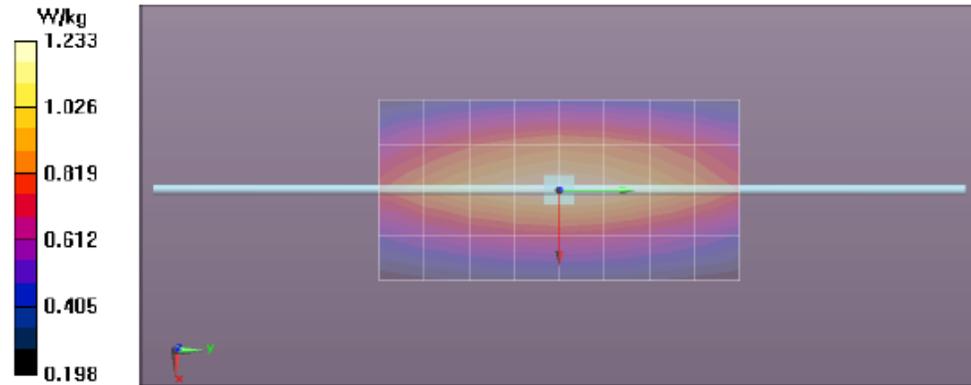
Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 36.288 V/m; Power Drift = -0.01 dB  
 Fast SAR: SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.824 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 1.25 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:**

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.288 V/m; Power Drift = -0.01 dB  
 Peak SAR (extrapolated) = 1.779 mW/g  
 SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.773 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.26 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):**

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



**Motorola Solutions, Inc. EME Laboratory**  
 Date/Time: 3/4/2013 8:25:40 AM

Robot#: DASY5-FL-2 | Run#: JtT-SYSP-450B-130304-01  
 Dipole Model#: D450V3  
 Phantom#: 80602002C-S2  
 Tissue Temp: 23.6 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.033 dB  
 Adjusted SAR (1W): 4.52 mW/g (1g)

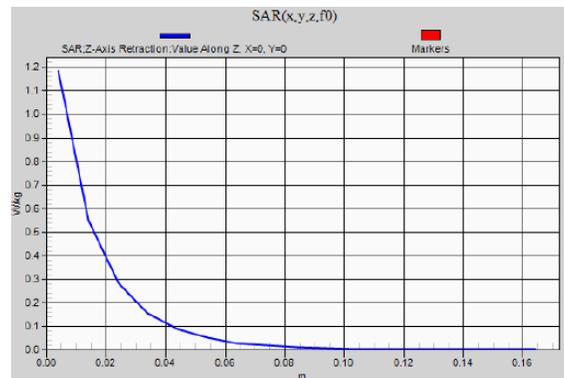
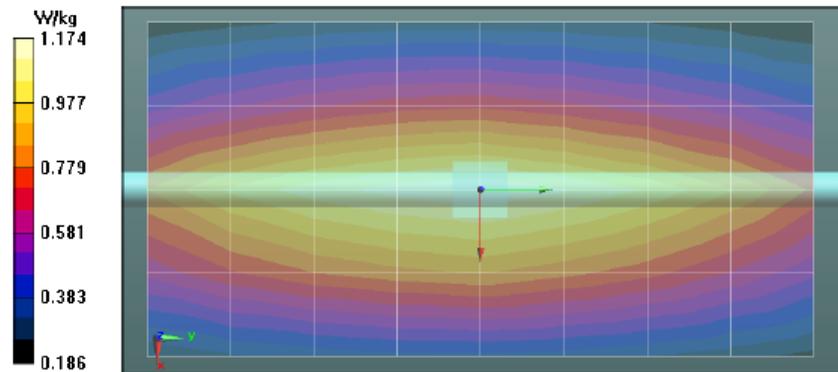
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 56.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE3 Sn363, Calibrated: 1/28/2013

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):** Measurement grid:  
 dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.17 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.011 V/m; Power Drift = -0.01 dB  
 Peak SAR (extrapolated) = 1.689 mW/g  
 SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.749 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.19 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):** Measurement grid:  
 dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 1.18 W/kg



**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 3/7/2013 8:07:19 AM

Robot#: DASY5-FL-2 | Run#: J5T-SYSP-450B-130307-01  
 Dipole Model#: D450V3  
 Phantom#: 80602002C-S2  
 Tissue Temp: 21.7 (C)  
 Serial#: 1077  
 Test Freq: 450 (MHz)  
 Start Power: 250 (mW)  
 Rotation (1D): 0.029 dB  
 Adjusted SAR (1W): 4.56 mW/g (1g)

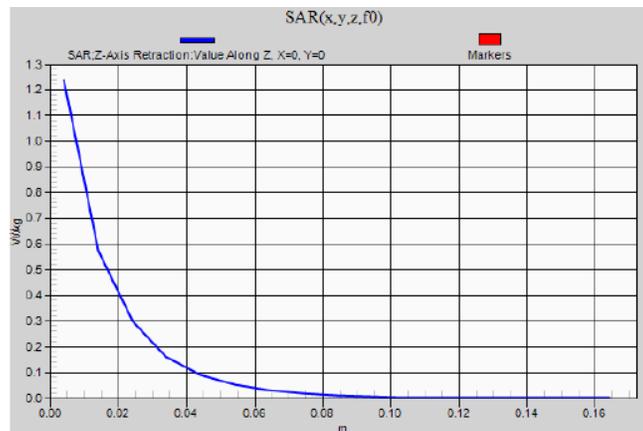
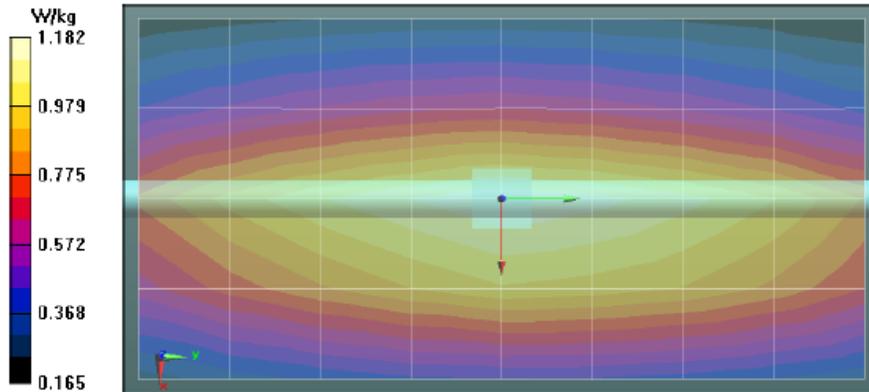
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 58.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , Conv:F(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE3 Sn363, Calibrated: 1/28/2013

**Below 3 GHz-Rev.4a/System Performance Check/Dipole Area Scan 2 (5x9x1):** Measurement grid:  
 dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 1.18 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 36.006 V/m; Power Drift = 0.02 dB  
 Peak SAR (extrapolated) = 1.755 mW/g  
 SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.759 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 1.23 W/kg

**Below 3 GHz-Rev.4a/System Performance Check/Z-Axis Retraction (1x1x17):** Measurement grid:  
 dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 1.24 W/kg



**APPENDIX E**  
**DUT Scans (Shortened Scan and Highest SAR configurations)**

### Shortened Scan Result Table 24

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/30/2012 4:51:13 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121030-09  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.1 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 422.1000 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: BDN6729A w/BDN6783A w/RLN4922A  
 Start Power: 5.69 (W)

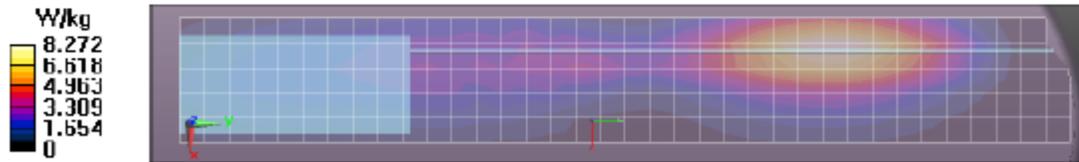
Comments: Back of DUT flush against phantom; Part one Short Scan

Duty Cycle: 1:1, Medium parameters used:  $f = 422 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x361x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value = 99.475 V/m; Power Drift = -0.63 dB  
 Fast SAR: SAR(1 g) = 8.11 mW/g; SAR(10 g) = 5.82 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 8.57 W/kg

**Below 3 GHz-Rev.5/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 = 21.311 V/m; Power Drift = -0.14 dB  
 Peak SAR (extrapolated) = 16.737 mW/g  
 SAR(1 g) = 11.2 mW/g; SAR(10 g) = 7.6 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 12.0 W/kg

**Below 3 GHz-Rev.5/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) = 11.6 W/kg



Shortened scan reflect highest SAR producing configuration; approximate run time is 9 minutes.  
 Representative full scan run time was 47 minutes.  
 “Shortened” scan max calculated SAR using SAR drift: 1-g Avg. = 5.79 mW/g; 10-g Avg. = 3.93 mW/g.  
 Zoom scan max calculated SAR using SAR drift (see part 1 table 21): 1-g Avg. = 6.66 mW/g; 10-g Avg. = 4.49 mW/g.

### Body - Highest SAR Configuration Result Table 21

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/26/2012 6:29:19 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121026-15  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 422.1000 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: RLN4922A w/BDN6729A w/BDN6783A  
 Start Power: 5.69 (W)

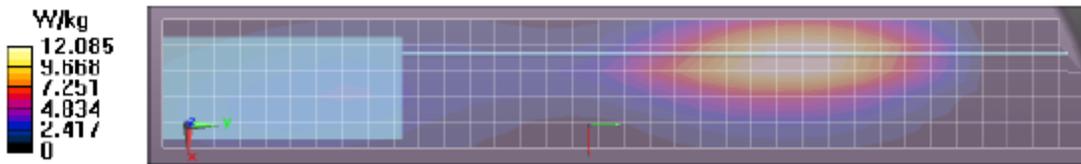
Comments: Back of DUT flush against phantom; Part one

Duty Cycle: 1:1, Medium parameters used:  $f = 422$  MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x361x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 123.2 V/m; Power Drift = -0.24 dB  
 Fast SAR: SAR(1 g) = 12.6 mW/g; SAR(10 g) = 9.07 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 13.2 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 123.2 V/m; Power Drift = -0.30 dB  
 Peak SAR (extrapolated) = 18.408 mW/g  
 SAR(1 g) = 12.4 mW/g; SAR(10 g) = 8.37 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 13.1 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm



**APPENDIX F**  
**Assessment of FCC Part 90 (406.1-470 MHz bands)**

**Assessments at the body with body worn PMLN4651A  
Table 14**

**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/22/2012 10:42:52 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121022-06  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4065A  
 Test Freq: 406.1250 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: PMLN4651A  
 Audio Acc: HMN4104B  
 Start Power: 5.68 (W)

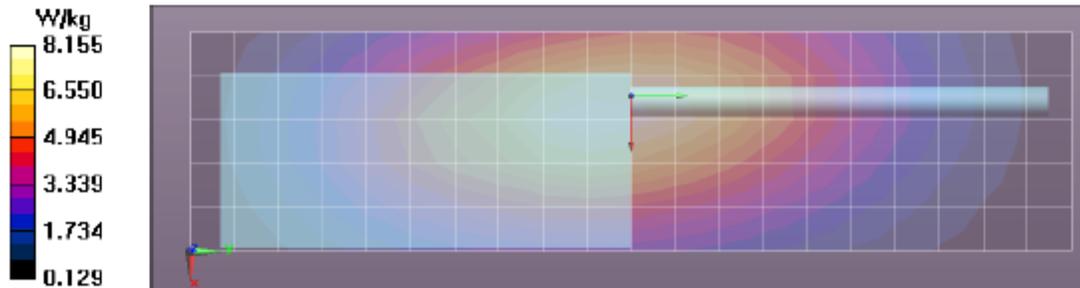
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 406 \text{ MHz}$ ;  $\sigma = 0.94 \text{ mho/m}$ ;  $\epsilon_r = 55.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x201x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value =  $90.657 \text{ V/m}$ ; Power Drift =  $-0.25 \text{ dB}$   
 Fast SAR: SAR(1 g) =  $7.77 \text{ mW/g}$ ; SAR(10 g) =  $5.75 \text{ mW/g}$  (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) =  $8.18 \text{ W/kg}$

**Below 3 GHz-Rev.5/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 =  $90.657 \text{ V/m}$ ; Power Drift =  $-0.35 \text{ dB}$   
 Peak SAR (extrapolated) =  $10.303 \text{ mW/g}$   
 SAR(1 g) =  $7.51 \text{ mW/g}$ ; SAR(10 g) =  $5.53 \text{ mW/g}$  (SAR corrected for target medium)  
 Maximum value of SAR (measured) =  $7.93 \text{ W/kg}$

**Below 3 GHz-Rev.5/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) =  $7.83 \text{ W/kg}$



**Assessments at the body with body worn PMLN7008A  
Table 15**

**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/23/2012 6:46:09 AM

Robot#: DASY5-FL-1 | Run#: ErC-Ab-121023-02  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.6 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4065A  
 Test Freq: 438.1000 (MHz)  
 Battery: NNTN8128B  
 Carry Acc: PMLN7008A  
 Audio Acc: HMN4104B  
 Start Power: 5.54 (W)

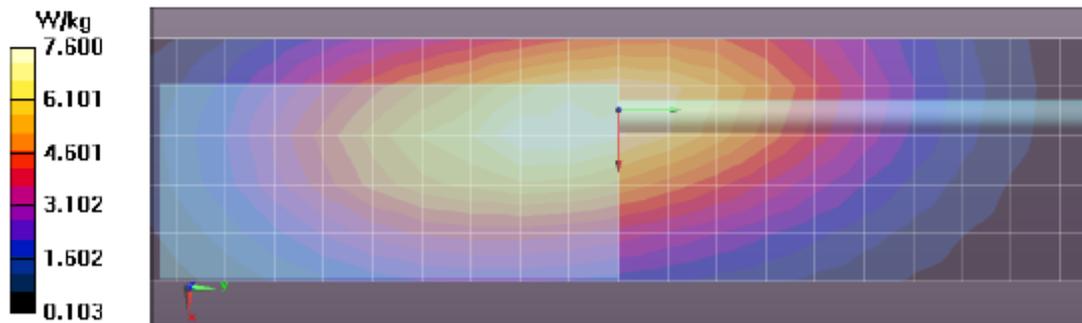
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 438 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (6x21x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 7.60 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 87.820 V/m; Power Drift = -0.55 dB  
 Peak SAR (extrapolated) = 10.040 mW/g  
 SAR(1 g) = 7.09 mW/g; SAR(10 g) = 5.08 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 7.51 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 7.45 W/kg



**Assessments at the body with body worn PMLN6327A  
Table 16**

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/23/2012 11:50:25 AM

Robot#: DASY5-FL-1 | Run#: ErC-Ab-121023-07  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.4 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4065A  
 Test Freq: 406.1250 (MHz)  
 Battery: NNTN8305A  
 Carry Acc: PMLN6327A  
 Audio Acc: HMN4104B  
 Start Power: 5.58 (W)

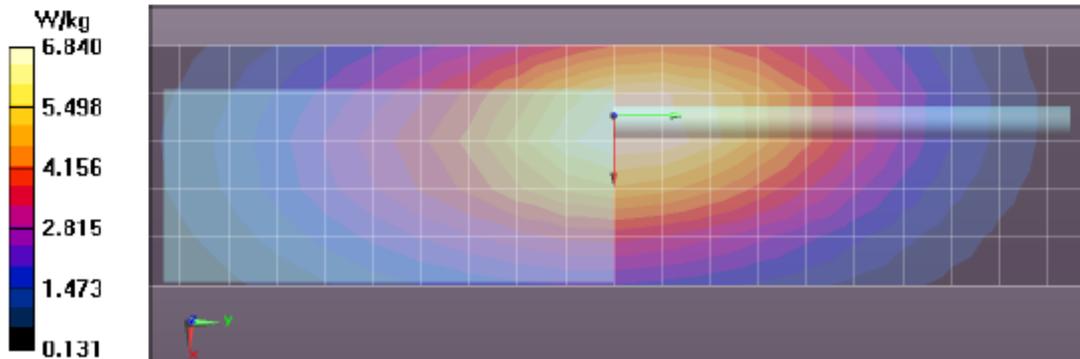
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 406$  MHz;  $\sigma = 0.93$  mho/m;  $\epsilon_r = 55.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (6x21x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 6.84 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 85.893 V/m; Power Drift = 0.12 dB  
 Peak SAR (extrapolated) = 9.152 mW/g  
 SAR(1 g) = 6.77 mW/g; SAR(10 g) = 4.97 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 7.10 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 7.24 W/kg



**Assessment at the body with other audio accessories**  
**Table 17**

**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/23/2012 4:28:53 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121023-12  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.5 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4065A  
 Test Freq: 438.1000 (MHz)  
 Battery: NNTN8128B  
 Carry Acc: PMLN7008A  
 Audio Acc: PMMN4062A  
 Start Power: 5.61 (W)

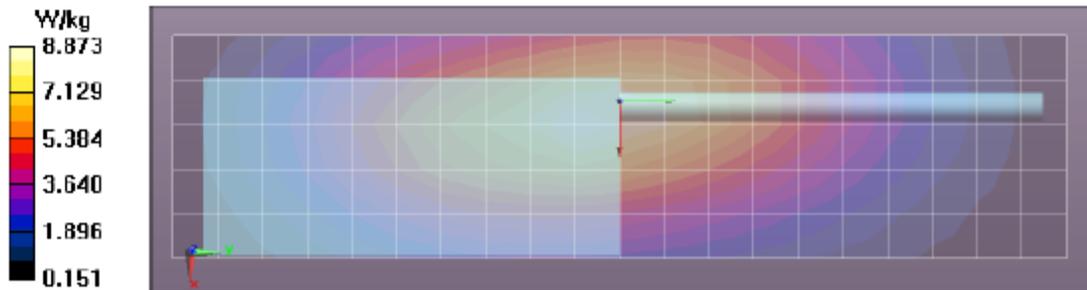
Comments:

Duty Cycle: 1:1, Medium parameters used: f = 438 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 54.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x201x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 93.003 V/m; Power Drift = -0.28 dB  
 Fast SAR: SAR(1 g) = 8.38 mW/g; SAR(10 g) = 6.1 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 8.90 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (21x21x36)/Cube 0:** Interpolated grid: dx=1.500 mm, dy=1.500 mm, dz=1.000 mm  
 Reference Value = 93.003 V/m; Power Drift = -0.37 dB  
 Peak SAR (extrapolated) = **Not Specified** mW/g  
 Fast SAR: SAR(1 g) = 8.13 mW/g; SAR(10 g) = 5.9 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 11.4 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 8.49 W/kg



Assessment of wireless BT configuration  
Table 18

Motorola Solutions, Inc. EME Laboratory  
Date/Time: 10/24/2012 11:07:30 AM

Robot#: DASY5-FL-1 | Run#: ErC-Ab-121024-10  
Model#: H59QDD9PW4AN (MUE4120)  
Phantom#: OVAL1016  
Tissue Temp: 21.8 (C)  
Serial#: 536TNT0381  
Antenna: PMAE4065A  
Test Freq: 438.1000 (MHz)  
Battery: NNTN8128B  
Carry Acc: PMLN7008A  
Audio Acc: NTN2574B  
Start Power: 5.68 (W)

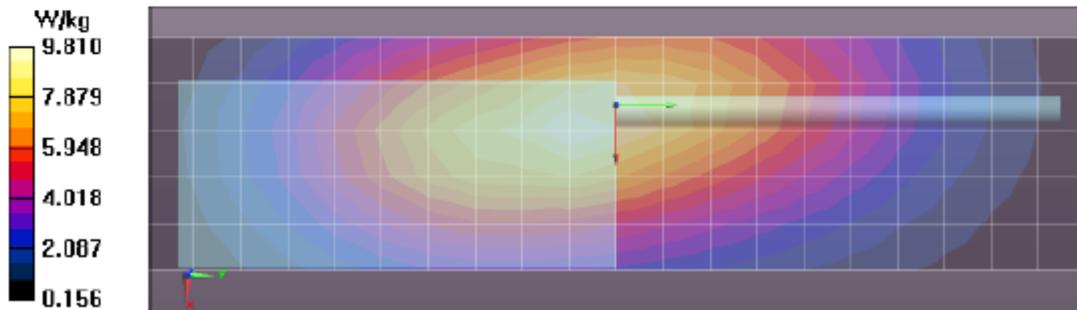
Comments:

Duty Cycle: 1:1, Medium parameters used:  $f = 438$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 55.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (6x21x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 9.81 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
Reference Value = 96.482 V/m; Power Drift = -0.43 dB  
Peak SAR (extrapolated) = 12.705 mW/g  
SAR(1 g) = 8.97 mW/g; SAR(10 g) = 6.44 mW/g (SAR corrected for target medium)  
Maximum value of SAR (measured) = 9.54 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
Maximum value of SAR (measured) = 9.42 W/kg



### Assessment of covert application (no body worn attached)

Due to the overall length of the device with the flexible covert antenna, the area and zoom scans for the DUT were performed in two parts. The following plots shows parts 1(DUT and part of antenna) and 2 (the remaining part of the antenna). The part that exhibited the highest SAR results (part 1) was used to assess and report the compliance performance for the covert application. The plot under Table 21 below shows the highest configuration for the covert application. Per FCC guidance two additional verification tests were performed with a larger phantom to demonstrate compliance with the antenna fully coupled.

Motorola Solutions, Inc. EME Laboratory  
Date/Time: 10/25/2012 11:37:02 AM

Robot#: DASY5-FL-1 | Run#: EIC-AB-121025-05  
Model#: H59QDD9FW4AN (MUE4120)  
Phantom#: OVAL1016  
Tissue Temp: 21.9 (C)  
Serial#: 536TNT0381  
Antenna: PMAE4080A  
Test Freq: 406.1250 (MHz)  
Battery: NNTNS128B  
Carry Acc: None  
Audio Acc: NTN2574B  
Start Power: 5.76 (W)

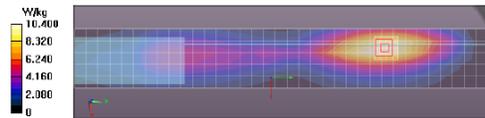
Comments: Back of DUT flush against phantom; Part one of two parts

Duty Cycle: 1:1, Medium parameters used:  $f = 406$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Probe: ES3DV3 - SN3301, ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
Electronics: DAE4 Ssl1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (6x37x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 10.4 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
Reference Value = 108.4 V/m; Power Drift = -0.35 dB  
Peak SAR (extrapolated) = 15.331 mW/g  
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 6.87 mW/g (SAR corrected for target medium)  
Maximum value of SAR (measured) = 10.9 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm



Motorola Solutions, Inc. EME Laboratory  
Date/Time: 10/25/2012 10:40:48 AM

Robot#: DASY5-FL-1 | Run#: EIC-AB-121025-04  
Model#: H59QDD9FW4AN (MUE4120)  
Phantom#: OVAL1016  
Tissue Temp: 21.9 (C)  
Serial#: 536TNT0381  
Antenna: PMAE4080A  
Test Freq: 406.1250 (MHz)  
Battery: NNTNS128B  
Carry Acc: None  
Audio Acc: NTN2574B  
Start Power: 5.76 (W)

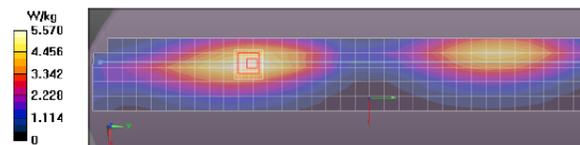
Comments: Back of DUT flush against phantom; Part two of two parts

Duty Cycle: 1:1, Medium parameters used:  $f = 406$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Probe: ES3DV3 - SN3301, ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
Electronics: DAE4 Ssl1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (6x35x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 5.57 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
Reference Value = 76.204 V/m; Power Drift = -0.29 dB  
Peak SAR (extrapolated) = 7.919 mW/g  
SAR(1 g) = 5.27 mW/g; SAR(10 g) = 3.58 mW/g (SAR corrected for target medium)  
Maximum value of SAR (measured) = 5.60 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
Maximum value of SAR (measured) = 5.56 W/kg



Per FCC guidance, below are the requested compliance verification assessment scans.  
See Exhibit 7B for test setup photos

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 3/4/2013 11:14:30 AM

Robot#: DASY5-FL-2 | Run#: JsT-Ab-130304-03  
 Model#: H59QDD9PW4AN (MUE4120A)  
 Phantom#: 80602002C-S2  
 Tissue Temp: 23.1 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 422.1000 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: RLN4922A w/ BDN6729A and BDN6783A  
 Start Power: 5.71 (W)

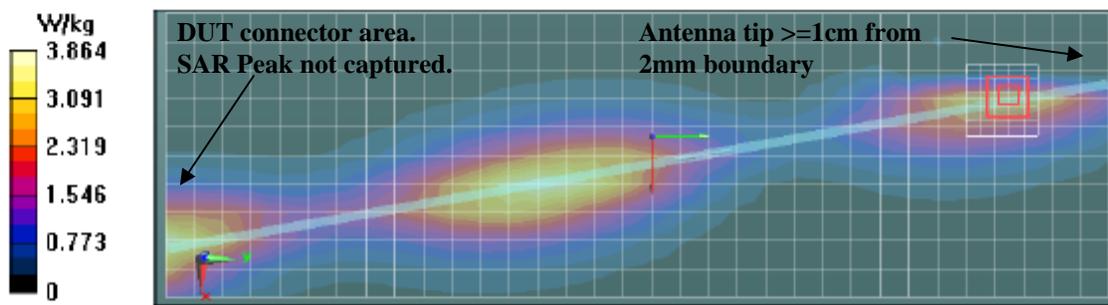
Comments: Shortened Scan; Tested with 80x60cm Phantom  
 Back of DUT Flush Against Phantom in 6mm region with Antenna Tip  $\geq 1$ cm from 6mm Area Boundary.

Duty Cycle: 1:1, Medium parameters used:  $f = 422$  MHz;  $\sigma = 0.9$  mho/m;  $\epsilon_r = 56.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE3 Sn363, Calibrated: 1/28/2013

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (101x331x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Reference Value = 61.323 V/m; Power Drift = -32.49 dB  
 Fast SAR: SAR(1 g) = 4 mW/g; SAR(10 g) = 2.63 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 5.52 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm  
 Reference Value = 67.257 V/m; Power Drift = -0.26 dB  
 Peak SAR (extrapolated) = 5.784 mW/g  
 SAR(1 g) = 4.01 mW/g; SAR(10 g) = 2.72 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 4.15 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm  
 Maximum value of SAR (measured) = 4.01 W/kg



Peak SAR is on antenna connector. See plot below DUT within the 2mm area of the phantom.

**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 3/7/2013 10:03:17 AM

Robot#: DASY5-FL-2 | Run#: JsT-Ab-130307-02  
 Model#: H59QDD9PW4AN (MUE4120A)  
 Phantom#: 80602002C-S2  
 Tissue Temp: 21.3 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 422.1000 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: RLN4922A w/ BDN6729A and BDN6783A  
 Start Power: 5.75 (W)

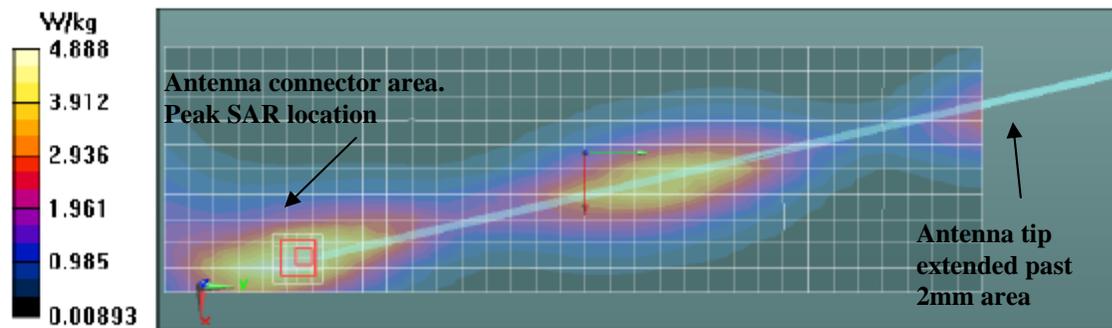
Comments: Full Scan; Tested with 80x60cm Phantom  
 Back of DUT Flush Against Phantom in 2mm region  
 Ant Tip Extending Past 2mm Area Boundary.

Duty Cycle: 1:1, Medium parameters used:  $f = 422 \text{ MHz}$ ;  $\sigma = 0.94 \text{ mho/m}$ ;  $\epsilon_r = 58.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE3 Sn363, Calibrated: 1/28/2013

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (101x331x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value = 75.605 V/m; Power Drift = -0.78 dB  
 Fast SAR: SAR(1 g) = 4.8 mW/g; SAR(10 g) = 3.42 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 5.07 W/kg

**Below 3 GHz-Rev.5/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 = 75.605 V/m; Power Drift = -0.86 dB  
 Peak SAR (extrapolated) = 6.507 mW/g  
 SAR(1 g) = 4.24 mW/g; SAR(10 g) = 2.82 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 4.50 W/kg

**Below 3 GHz-Rev.5/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) = 4.48 W/kg



**Peak SAR on antenna connector**

**Table 20**

**Motorola Solutions, Inc. EME Laboratory**

Date/Time: 10/24/2012 11:44:05 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121024-19  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.6 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 406.1250 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: NTN2574B  
 Start Power: 5.56 (W)

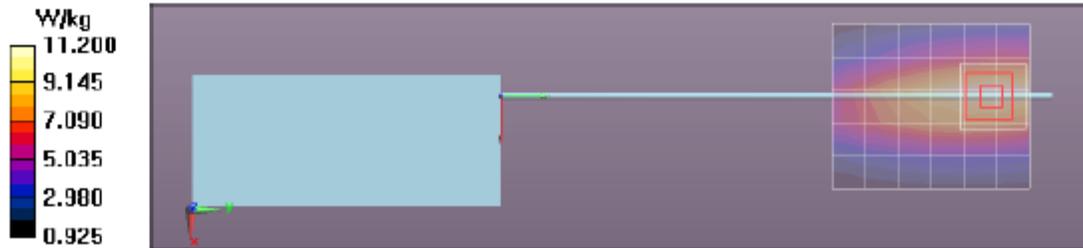
Comments: Part 1 of 2 (shortened scan on reduced area grid)

Duty Cycle: 1:1, Medium parameters used:  $f = 406 \text{ MHz}$ ;  $\sigma = 0.94 \text{ mho/m}$ ;  $\epsilon_r = 56$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value = 103.4 V/m; Power Drift = -0.08 dB  
 Fast SAR: SAR(1 g) = 10.7 mW/g; SAR(10 g) = 7.59 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 11.4 W/kg

**Below 3 GHz-Rev.5/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 = 103.4 V/m; Power Drift = -0.18 dB  
 Peak SAR (extrapolated) = 15.871 mW/g  
 SAR(1 g) = 10.4 mW/g; SAR(10 g) = 6.97 mW/g (SAR corrected for target medium)

**Below 3 GHz-Rev.5/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) = 11.0 W/kg



**Table 21**

**Motorola Solutions, Inc. EME Laboratory**  
Date/Time: 10/26/2012 6:29:19 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121026-15  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 422.1000 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: RLN4922A w/BDN6729A w/BDN6783A  
 Start Power: 5.69 (W)

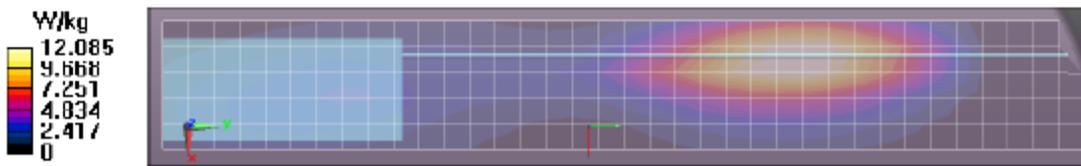
Comments: Back of DUT flush against phantom; Part one

Duty Cycle: 1:1, Medium parameters used:  $f = 422 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x361x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value = 123.2 V/m; Power Drift = -0.24 dB  
 Fast SAR: SAR(1 g) = 12.6 mW/g; SAR(10 g) = 9.07 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 13.2 W/kg

**Below 3 GHz-Rev.5/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 = 123.2 V/m; Power Drift = -0.30 dB  
 Peak SAR (extrapolated) = 18.408 mW/g  
 SAR(1 g) = 12.4 mW/g; SAR(10 g) = 8.37 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 13.1 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$ ,  $dz=10\text{mm}$



## APPENDIX G

### Assessment of Outside Part 90

#### Table 22

**Motorola Solutions, Inc. EME Laboratory**  
 Date/Time: 10/30/2012 6:58:22 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121030-11  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.1 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 380.0125 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: BDN6729A w/BDN6783A w/RLN4922A  
 Start Power: 5.73 (W)

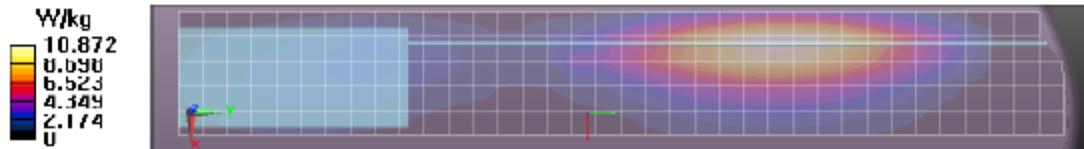
Comments: Back of DUT flush against phantom; Part one; Shortened scan

Duty Cycle: 1:1, Medium parameters used:  $f = 380 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 56.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012  
 Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x361x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Reference Value = 117.9 V/m; Power Drift = -3.38 dB  
 Fast SAR: SAR(1 g) = 11.8 mW/g; SAR(10 g) = 8.22 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (interpolated) = 12.3 W/kg

**Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=7.5\text{mm}$ ,  
 $dy=7.5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 118.5 V/m; Power Drift = -0.19 dB  
 Peak SAR (extrapolated) = 17.153 mW/g  
 SAR(1 g) = 12 mW/g; SAR(10 g) = 8.2 mW/g (SAR corrected for target medium)  
 Maximum value of SAR (measured) = 12.3 W/kg

**Below 3 GHz-Rev.5/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) = 11.9 W/kg



## APPENDIX H

### Assessment of IC allocated frequencies at the body

**Table 23**

#### Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2012 5:26:22 PM

Robot#: DASY5-FL-1 | Run#: CM-Ab-121026-14  
 Model#: H59QDD9PW4AN (MUE4120)  
 Phantom#: OVAL1016  
 Tissue Temp: 21.9 (C)  
 Serial#: 536TNT0381  
 Antenna: PMAE4080A  
 Test Freq: 406.1250 (MHz)  
 Battery: NNTN8129A  
 Carry Acc: None  
 Audio Acc: RLN4922A w/BDN6729A w/BDN6783A  
 Start Power: 5.65 (W)

Comments: Back of DUT flush against phantom; Part one

Duty Cycle: 1:1, Medium parameters used:  $f = 406$  MHz;  $\sigma = 0.91$  mho/m;  $\epsilon_r = 55.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Probe: ES3DV3 - SN3301, , ConvF(7.03, 7.03, 7.03); Calibrated: 7/30/2012

Electronics: DAE4 Sn1231, Calibrated: 3/5/2012

**Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (51x361x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 121.4 V/m; Power Drift = -0.30 dB

Fast SAR: SAR(1 g) = 12.1 mW/g; SAR(10 g) = 8.71 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 12.5 W/kg

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

dy=7.5mm, dz=5mm

Reference Value = 121.4 V/m; Power Drift = -0.36 dB

Peak SAR (extrapolated) = 17.456 mW/g

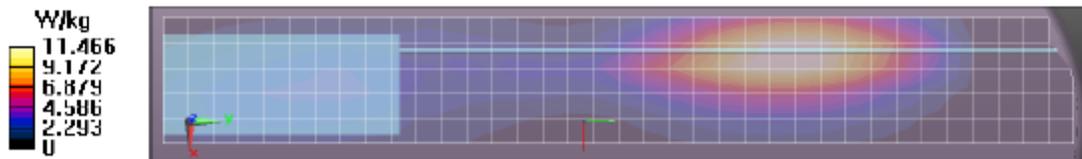
SAR(1 g) = 11.8 mW/g; SAR(10 g) = 8.01 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 12.4 W/kg

**Below 3 GHz-Rev.5/Ab Scan/4-Z-Axis Scan (1x1x17):** Measurement grid: dx=20mm, dy=20mm,

dz=10mm

Maximum value of SAR (measured) = 12.3 W/kg

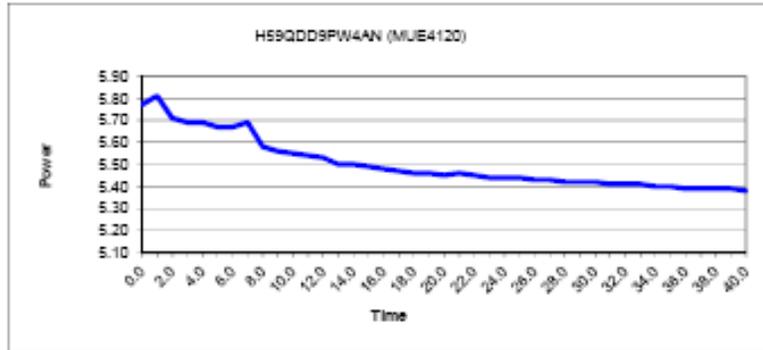


## APPENDIX I DUT Supplementary Data (Power slump)

Model # H59QDD9PW4AN (MUE4120)  
Serial # 536TNT0381

<b>Battery#</b>	NNTN8129A	<b>Transmit Mode</b>	CW
<b>Frequency</b>	422.1	<b>Audio Accessory</b>	RLN4822A / BDN6728A / BDN6783A
<b>Date</b>	11/1/2012		

TX TIME (Minutes)	Measured Power (Watts)
0.0	5.77
1.0	5.81
2.0	5.71
3.0	5.69
4.0	5.69
5.0	5.67
6.0	5.67
7.0	5.69
8.0	5.58
9.0	5.56
10.0	5.55
11.0	5.54
12.0	5.53
13.0	5.50
14.0	5.50
15.0	5.49
16.0	5.48
17.0	5.47
18.0	5.46
19.0	5.46
20.0	5.45
21.0	5.46
22.0	5.45
23.0	5.44
24.0	5.44
25.0	5.44
26.0	5.43
27.0	5.43
28.0	5.42
29.0	5.42
30.0	5.42
31.0	5.41
32.0	5.41
33.0	5.41
34.0	5.40
35.0	5.40
36.0	5.39
37.0	5.39
38.0	5.39
39.0	5.39
40.0	5.38



**APPENDIX J**  
**DUT Test Position Photos**

**Photos available in Exhibit 7B**

**APPENDIX K**  
**DUT, Body worn and audio accessories Photos**

**Photos available in Exhibit 7B**