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|  MOTOROLA SOLUTIONS |  TESTING CERT # 2518.05 |
| DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2 | |
| Enterprise Mobility Solutions EME Test Laboratory Motorola Solutions Malaysia Sdn. Bhd. (455657-H) Plot 2, Bayan Lepas Technoplex Industrial Park, Mukim 12, S.W.D. (CSC) 11900 Bayan Lepas, Penang, Malaysia. | Date of Report: 9/26/2012 Report Revision: O Report ID: SR10806_PMUD3214A Rev O 120926 |
| <p> Responsible Engineer: Veeramani Veerapan (Sr.EME Engineer) Report Author: Veeramani Veerapan (Sr.EME Engineer) Date/s Tested: 08/14/12-09/10/12 Manufacturer/Location: Motorola, Penang Sector/Group/Div.: EMS Date submitted for test: 08/03/12 DUT Description: Full Keypad with GPS & GOB 136-174 MHz, 1W Test TX mode(s): CW (PTT) Max. Power output: 1.26 W Nominal Power: 1.15 W Tx Frequency Bands: 136 – 174 MHz Signaling type: FM Model(s) Tested: PMUD3214A Model(s) Certified: PMUD3214A Serial Number(s): 627TNP0284 Classification: Occupational/Controlled FCC ID: ABZ99FT3089; Rule Part 90 (150.8-173.4 MHz) Results outside FCC bands are not applicable for FCC compliance demonstration. IC: 109AB-99FT3089; (138-144; 148-149.9 and 150.05-174 MHz) </p> <p style="text-align: center;">* Refer to section 15 of part 1 for highest SAR summary results.</p> | |
| <p>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.</p> | |
| <p>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> | |
|  Deanna Zakharia EMS EME Lab Senior Resource Manager, Laboratory Director Approval Date: 10/3/2012 | Certification Date: 10/3/2012 Certification No.: L1120902P |

APPENDIX D

Test System Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/14/2012 6:55:36 AM

Robot#: DASY5-PG-2 | Run#: PS-SYSP-300B-120814-01
 Dipole Model# D300V3
 Phantom#: ELI5 1150
 Tissue Temp: 21.1 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 57.2$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3196, , ConvF(6.83, 6.83, 6.83); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.4/System Performance Check/Dipole Area Scan 2 (5x27x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.740 mW/g

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

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 29.415 V/m; Power Drift = -0.02 dB

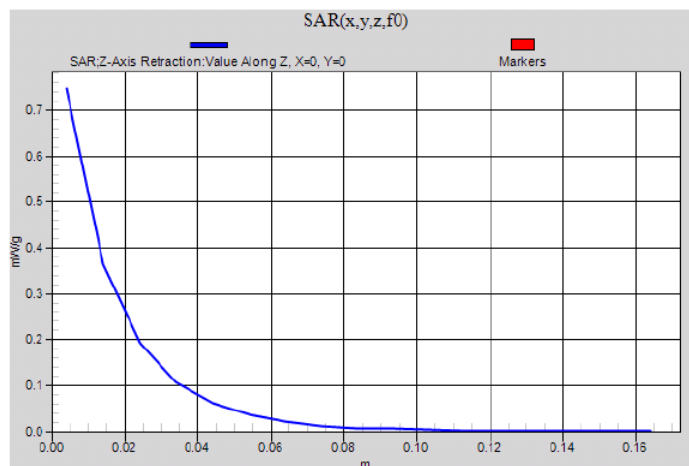
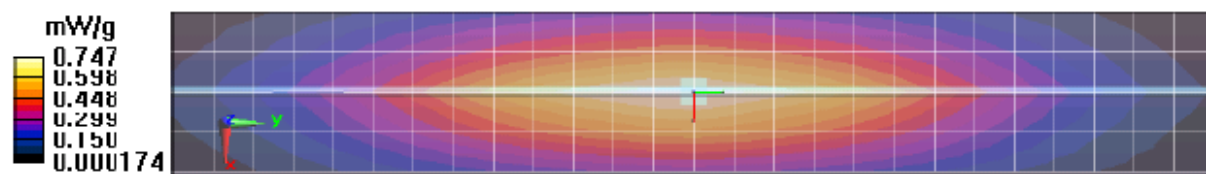
Peak SAR (extrapolated) = 1.019 mW/g

SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.488 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.747 mW/g

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

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/15/2012 6:21:59 AM

Robot#: DASY5-PG-2 | Run#: PS-SYSP-300B-120815-01
 Dipole Model#: D300V3
 Phantom#: ELI5 1150
 Tissue Temp: 21.1 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 57$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3196, , ConvF(6.83, 6.83, 6.83); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.4/System Performance Check/Dipole Area Scan 2 (5x27x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.738 mW/g

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

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 29.449 V/m; Power Drift = -0.01 dB

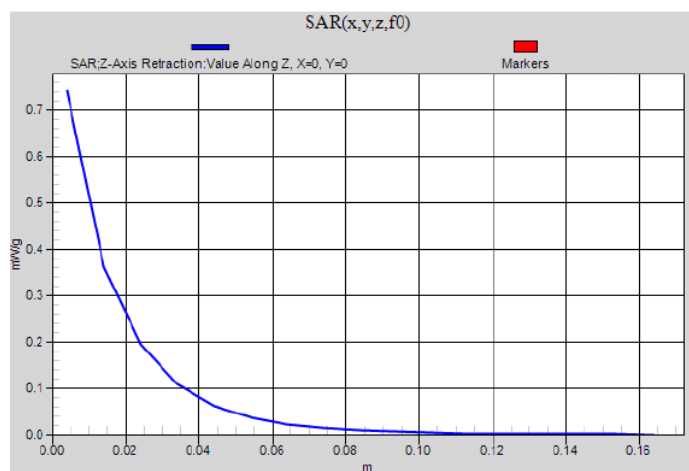
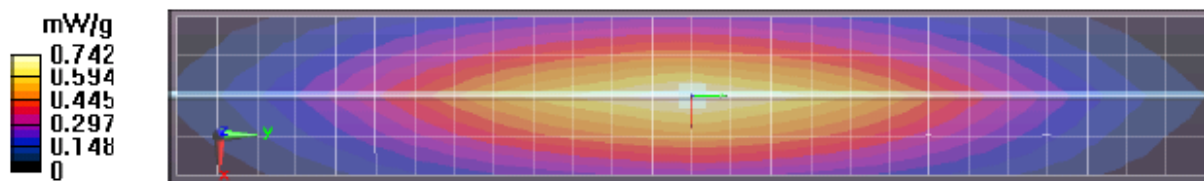
Peak SAR (extrapolated) = 1.012 mW/g

SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.487 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.742 mW/g

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

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/15/2012 1:59:48 PM

Robot#: DASY5-PG-2 | Run#: Lee-SYSP-300H-120815-08
 Dipole Model#: D300V3
 Phantom#: ELI4 1037
 Tissue Temp: 21.1 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.85$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3196, , ConvF(7.2, 7.2, 7.2); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.4/System Performance Check/Dipole Area Scan 2 (5x27x1):

Measurement grid: dx=15mm, dy=15mm

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

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

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 29.542 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.040 mW/g

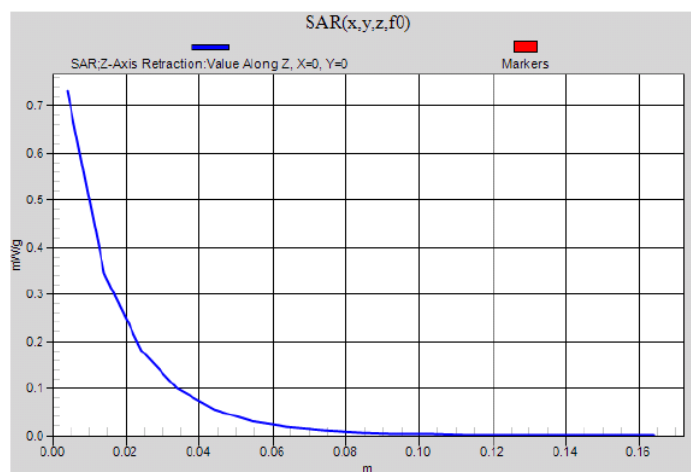
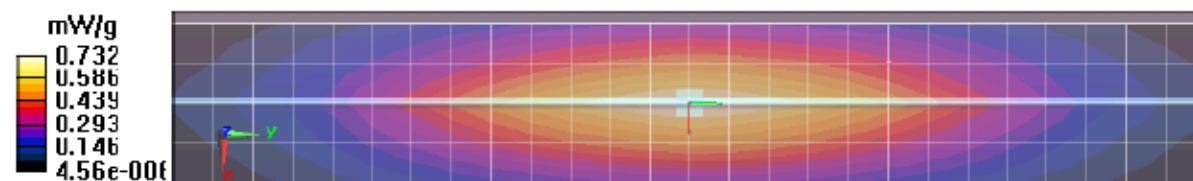
SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.469 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.731 mW/g

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

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

Maximum value of SAR (measured) = 0.732 mW/g



Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/16/2012 6:24:22 AM

Robot#: DASY5-PG-2 | Run#: PS-SYSP-300H-120816-01
 Dipole Model#: D300V3
 Phantom#: ELI4 1037
 Tissue Temp: 21.2 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 46.7$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3196, , ConvF(7.2, 7.2, 7.2); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.4/System Performance Check/Dipole Area Scan 2 (5x27x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.775 mW/g

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

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 29.336 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.134 mW/g

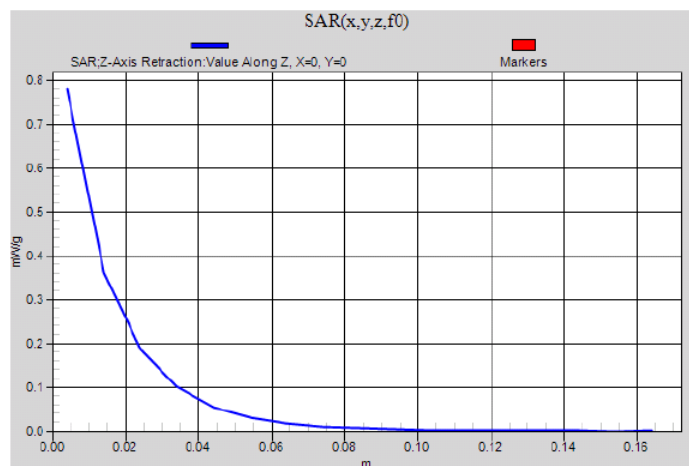
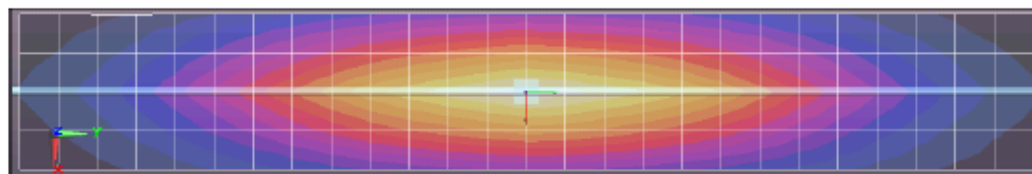
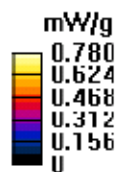
SAR(1 g) = 0.710 mW/g; SAR(10 g) = 0.474 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.782 mW/g

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

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

Maximum value of SAR (measured) = 0.780 mW/g



Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/17/2012 6:29:42 AM

Robot#: DASY5-PG-2 | Run#: PS-SYSP-300H-120817-01
 Dipole Model# D300V3
 Phantom#: ELI4 1037
 Tissue Temp: 21.4 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 46.7$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3196, , ConvF(7.2, 7.2, 7.2); Calibrated: 4/27/2012
 Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.4/System Performance Check/Dipole Area Scan 2 (5x27x1):

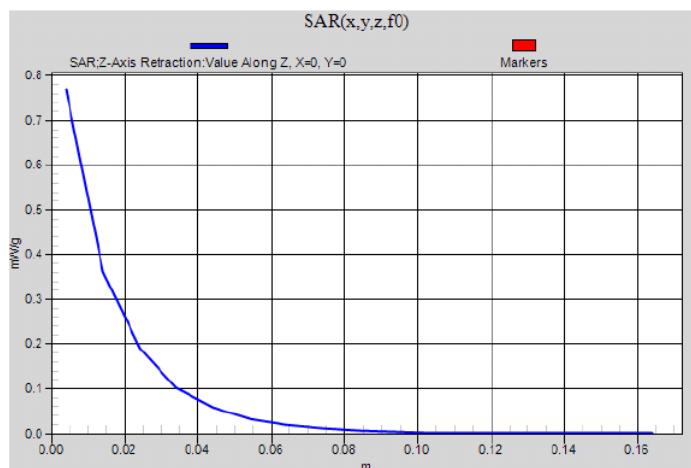
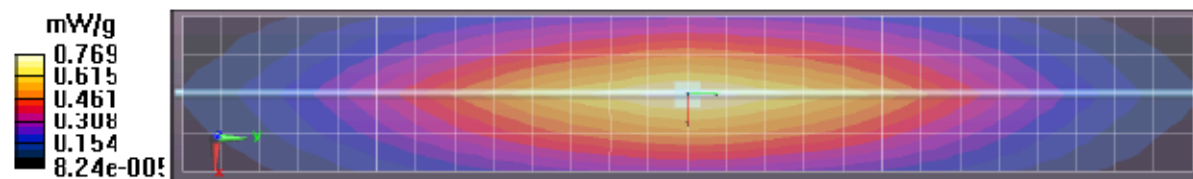
Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.757 mW/g

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

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 29.280 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.085 mW/g
 SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.472 mW/g (SAR corrected for target medium)
 Maximum value of SAR (measured) = 0.758 mW/g

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

grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 0.769 mW/g



Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/6/2012 10:51:02 AM

Robot#: DASY4-PG-1 | Run#: Lee-SYSP-300B-120906-01
 Dipole Model#: D300V3
 Phantom#: ELI5 1150
 Tissue Temp: 21.2 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

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: 0.708 mW/g (1g); 0.483 mW/g (10g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 57.2$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(6.58, 6.58, 6.58)

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

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

Reference Value = 29.6 V/m; Power Drift = -0.0129 dB

Peak SAR (extrapolated) = 1.01 W/kg

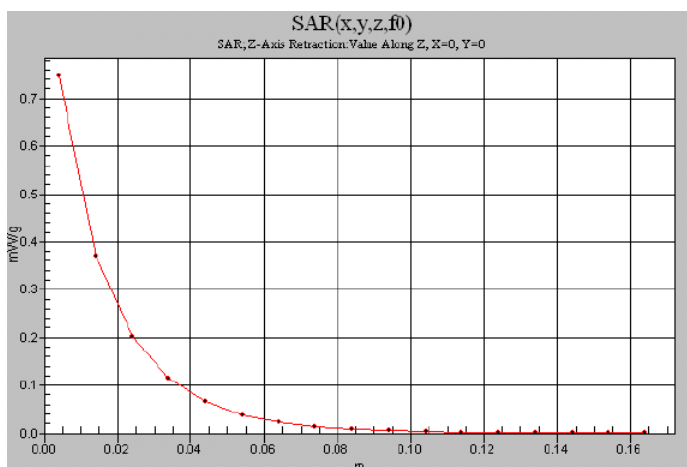
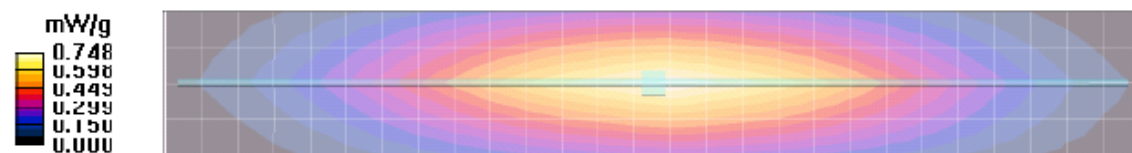
SAR(1 g) = 0.697 mW/g; SAR(10 g) = 0.479 mW/g

Maximum value of SAR (measured) = 0.748 mW/g

System Performance Check/Dipole Area Scan 2 (5x28x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.747 mW/g

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



Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/7/2012 6:47:05 AM

Robot#: DASY4-PG-1 | Run#: PS-SYSP-300B-120907-01
 Dipole Model# D300V3
 Phantom#: ELI5 1150
 Tissue Temp: 21.6 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

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: 0.714 mW/g (1g); 0.486 mW/g (10g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 56.8$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(6.58, 6.58, 6.58)

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

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

Reference Value = 29.6 V/m; Power Drift = -0.00835 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.482 mW/g

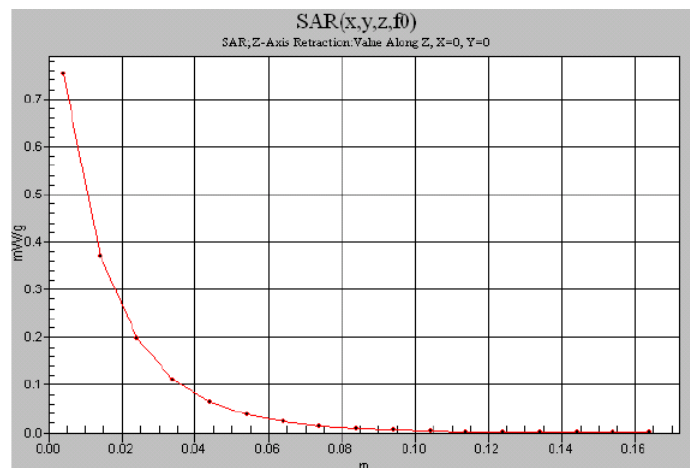
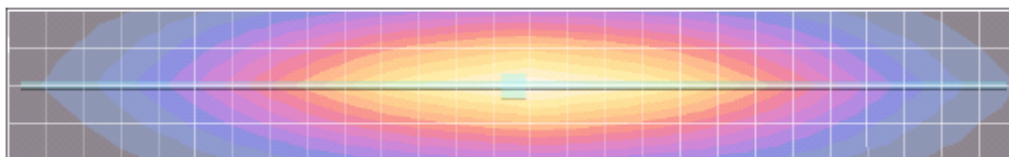
Maximum value of SAR (measured) = 0.751 mW/g

System Performance Check/Dipole Area Scan 2 (5x28x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.753 mW/g

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

mW/g
 0.753
 0.602
 0.452
 0.301
 0.151
 0.000



Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/10/2012 7:11:35 AM

Robot#: DASY4-PG-1 | Run#: PS-SYSP-300B-120910-01
 Dipole Model#: D300V3
 Phantom#: ELI5 1150
 Tissue Temp: 21.0 (C)
 Serial#: 1004
 Test Freq: 300 (MHz)
 Start Power: 250 (mW)

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: 0.730 mW/g (1g); 0.498 mW/g (10g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 300$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 57.2$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(6.58, 6.58, 6.58)

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

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

Reference Value = 29.8 V/m; Power Drift = -0.00648 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.721 mW/g; SAR(10 g) = 0.495 mW/g

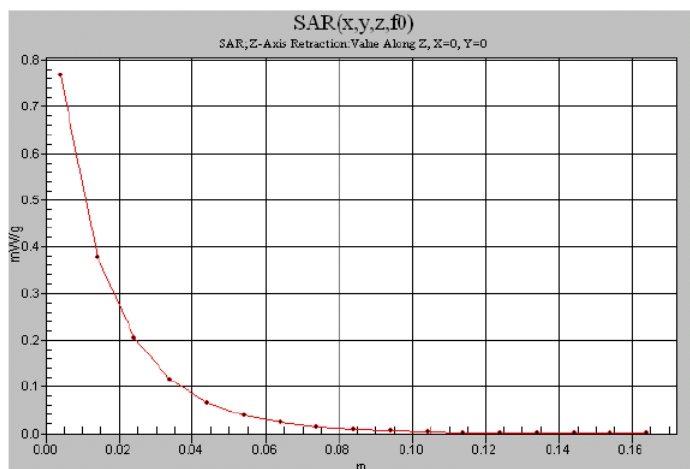
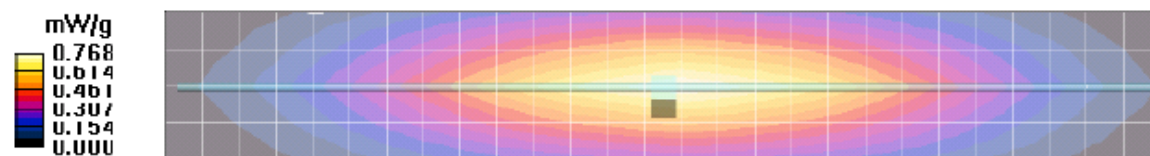
Maximum value of SAR (measured) = 0.770 mW/g

System Performance Check/Dipole Area Scan 2 (5x28x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.773 mW/g

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

Maximum value of SAR (measured) = 0.768 mW/g



APPENDIX E

DUT Scans (Shortened Scan and Highest SAR configurations)

*Highest SAR found is outside of FCC Part 90 band

Shortened Scan Result- Outside FCC Part 90 band Table 21

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/10/2012 9:02:46 AM

Robot#: DASY4-PG-1 | Run#: PS-AB-120910-04
 Model#: PMUD3214A
 Phantom#: ELI5 1150
 Tissue Temp: 21.0 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4127A
 Test Freq: 147.000 (MHz)
 Battery: NNTN8359A
 Carry Acc: PMLN6086A
 Audio Acc: PMMN4067B
 Start Power: 1.26 (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: 0.678 mW/g (1g); 0.390 mW/g (10g)

Comments: Shorten scan.

Duty Cycle: 1:1, Medium parameters used: $f = 147$ MHz; $\sigma = 0.79$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(8.2, 8.2, 8.2)

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Ab Scan/1-Area Scan (61x211x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 22.7 V/m; Power Drift = -0.263 dB

Motorola Fast SAR: SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.368 mW/g

Maximum value of SAR (interpolated) = 0.553 mW/g

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

Reference Value = 22.7 V/m; Power Drift = -0.298 dB

Peak SAR (extrapolated) = 0.725 W/kg

Motorola Fast SAR: SAR(1 g) = 0.623 mW/g; SAR(10 g) = 0.395 mW/g

Maximum value of SAR (interpolated) = 0.725 mW/g

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

Reference Value = 31.6 V/m; Power Drift = -0.165 dB

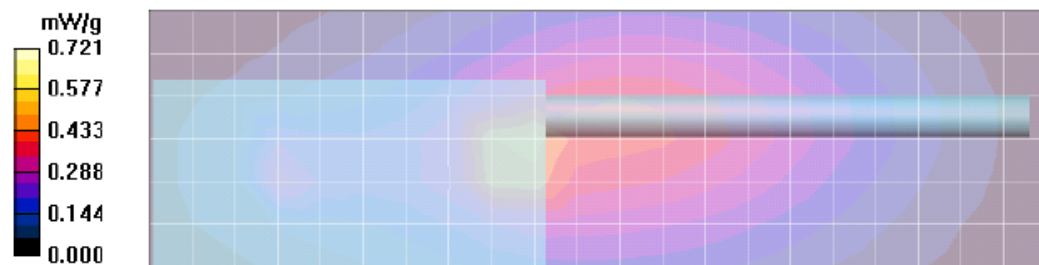
Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.390 mW/g

Maximum value of SAR (measured) = 0.771 mW/g

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

Maximum value of SAR (measured) = 0.721 mW/g



Shortened scan reflect highest SAR producing configuration; approximate run time is 7 minutes.

Representative full scan run time was 26 minutes.

“Shortened” scan max calculated SAR using SAR drift: 1-g Avg. = 0.352 mW/g; 10-g Avg. = 0.203 mW/g.

Zoom scan max calculated SAR using SAR drift (see part 1 table 17): 1-g Avg. = 0.365 mW/g; 10-g Avg. = 0.208 mW/g.

Body - Highest SAR Configuration Result- Outside FCC Part 90 band **Table 17**

Motorola Solutions, Inc. EME Laboratory
Date/Time: 9/6/2012 2:34:40 PM

Robot#: DASY4-PG-1 | Run#: Lee-AB-120906-07
Model#: PMUD3214A
Phantom#: ELI5 1150
Tissue Temp: 21.1 (C)
Serial#: 627TNP0284
Antenna: PMAD4127A
Test Freq: 147.000 (MHz)
Battery: NNTN8359A
Carry Acc: PMLN6086A
Audio Acc: PMMN4067B
Start Power: 1.27 (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: 0.677 mW/g (1g); 0.385 mW/g (10g)

Comments: Full Scan

Duty Cycle: 1:1, Medium parameters used: $f = 147$ MHz; $\sigma = 0.79$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³
Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(8.2, 8.2, 8.2)
Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Ab Scan/1-Area Scan (61x211x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 24.1 V/m; Power Drift = -0.260 dB

Motorola Fast SAR: SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (interpolated) = 0.596 mW/g

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

Reference Value = 24.1 V/m; Power Drift = -0.294 dB

Peak SAR (extrapolated) = 0.788 W/kg

Motorola Fast SAR: SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (interpolated) = 0.788 mW/g

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

Reference Value = 24.1 V/m; Power Drift = -0.326 dB

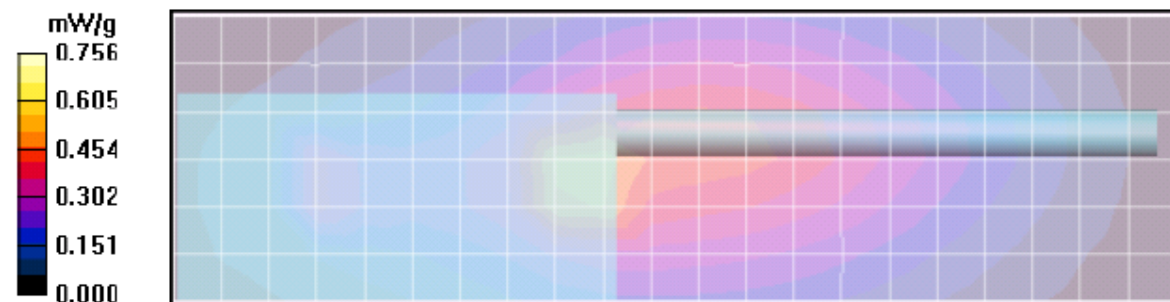
Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.776 mW/g

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

Maximum value of SAR (measured) = 0.756 mW/g



Face - Highest SAR Configuration Result-Within FCC Part 90 band **Table 19**

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/15/2012 2:47:03 PM

Robot#: DASY5-PG-2 | Run#: Lee-FACE-120815-09
 Model#: PMUD3214A
 Phantom#: ELI4 1037
 Tissue Temp: 21.1 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4127A
 Test Freq: 155.400(MHz)
 Battery: NNTN8359A
 Carry Acc: NONE
 Audio Acc: NONE
 Start Power: 1.28 (W)

Comments: Full Scan

Duty Cycle: 1:1, Medium parameters used: $f = 155 \text{ MHz}$; $\sigma = 0.73 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

Probe: ES3DV3 - SN3196, , ConvF(8.6, 8.6, 8.6); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Face Scan/1-Area Scan (61x211x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 28.370 V/m; Power Drift = -0.44 dB

Fast SAR: SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.446 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.598 mW/g

Below 3 GHz-Rev.5/Face Scan/2-Volume Scan 2D (41x41x1): Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=1\text{mm}$

Reference Value = 28.370 V/m; Power Drift = -0.37 dB

Peak SAR (extrapolated) = **Not Specified** mW/g

Fast SAR: SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.431 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.582 mW/g

Below 3 GHz-Rev.5/Face 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 = 28.370 V/m; Power Drift = -0.43 dB

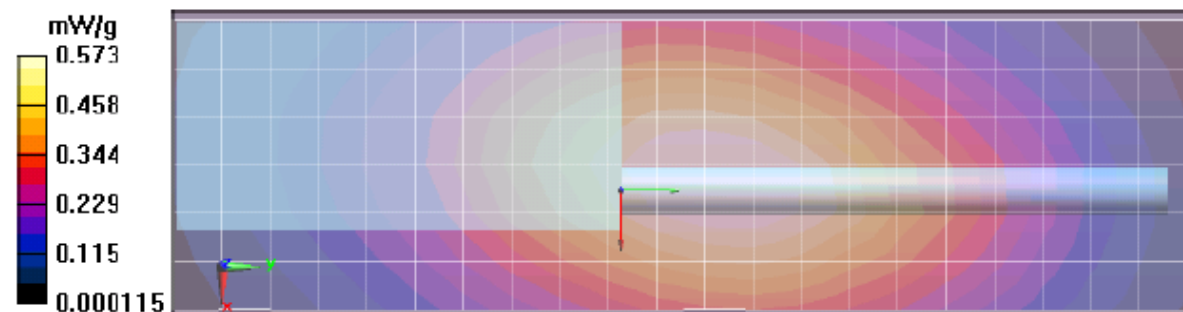
Peak SAR (extrapolated) = 0.734 mW/g

SAR(1 g) = 0.565 mW/g; SAR(10 g) = 0.435 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.572 mW/g

Below 3 GHz-Rev.5/Face 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) = 0.573 mW/g



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

Assessments at the Body with Body worn PMLN6086A

Table 14

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/14/2012 12:09:34 PM

Robot#: DASY5-PG-2 | Run#: Lee-AB-120814-03
 Model#: PMUD3214A
 Phantom#: ELI5 1150
 Tissue Temp: 21.4 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4128A
 Test Freq: 160.000 (MHz)
 Battery: NNTN8359A
 Carry Acc: PMLN6086A
 Audio Acc: PMMN4067B
 Start Power: 1.27 (W)

Comments: Full Scan.

Duty Cycle: 1:1, Medium parameters used: $f = 160 \text{ MHz}$; $\sigma = 0.79 \text{ mho/m}$; $\epsilon_r = 60.6$; $\rho = 1000 \text{ kg/m}^3$

Probe: ES3DV3 - SN3196, , ConvF(8.3, 8.3, 8.3); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (61x211x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 11.739 V/m; Power Drift = -0.23 dB

Fast SAR: SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.119 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.188 mW/g

Below 3 GHz-Rev.5/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=1\text{mm}$

Reference Value = 11.739 V/m; Power Drift = -0.26 dB

Peak SAR (extrapolated) = **Not Specified** mW/g

Fast SAR: SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.129 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.244 mW/g

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 = 11.739 V/m; Power Drift = -0.29 dB

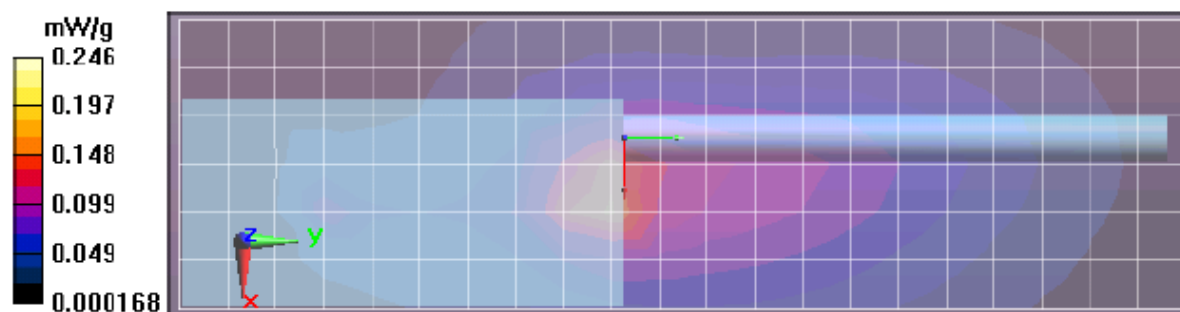
Peak SAR (extrapolated) = 0.543 mW/g

SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.111 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.239 mW/g

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) = 0.246 mW/g



Assessments at the Body with Body worn PMLN6097A

Table 15

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/14/2012 6:11:32 PM

Robot#: DASY5-PG-2 | Run#: CcC-AB-120814-10
 Model#: PMUD3214A
 Phantom#: ELI5 1150
 Tissue Temp: 21.4 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4131A
 Test Freq: 160.000 (MHz)
 Battery: NNTN8359A
 Carry Acc: PMLN6097A
 Audio Acc: PMMN4067B
 Start Power: 1.29 (W)

Comments: Full Scan.

Duty Cycle: 1:1, Medium parameters used: $f = 160$ MHz; $\sigma = 0.79$ mho/m; $\epsilon_r = 60.6$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3196, , ConvF(8.3, 8.3, 8.3); Calibrated: 4/27/2012
 Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.155 V/m; Power Drift = -0.13 dB

Fast SAR: SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.067 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.119 mW/g

Below 3 GHz-Rev.5/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 6.155 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = **Not Specified** mW/g

Fast SAR: SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.068 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.122 mW/g

Below 3 GHz-Rev.5/Ab Scan/3-Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

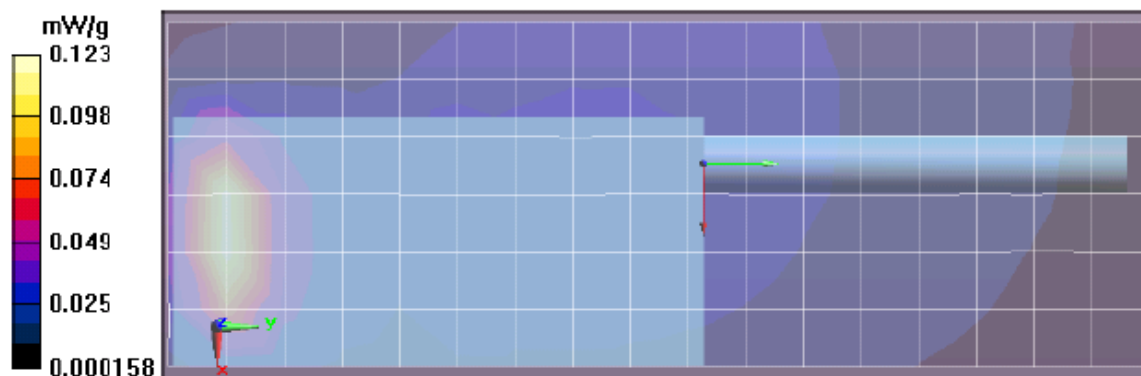
Reference Value = 6.155 V/m; Power Drift = -0.21 dB

Peak SAR (extrapolated) = 0.283 mW/g

SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.0543 mW/g (SAR corrected for target medium)

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) = 0.123 mW/g



Assessments at the body with Body worn PMLN6099A

Table 16

Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/15/2012 7:56:41 AM

Robot#: DASY5-PG-2 | Run#: PS-AB-120815-03
Model#: PMUD3214A
Phantom#: ELI5 1150
Tissue Temp: 21.4 (C)
Serial#: 627TNP0284
Antenna: PMAD4128A
Test Freq: 160.000 (MHz)
Battery: NNTN8359A
Carry Acc: PMLN6099A
Audio Acc: PMMN4067B
Start Power: 1.22 (W)

Comments: Full Scan.

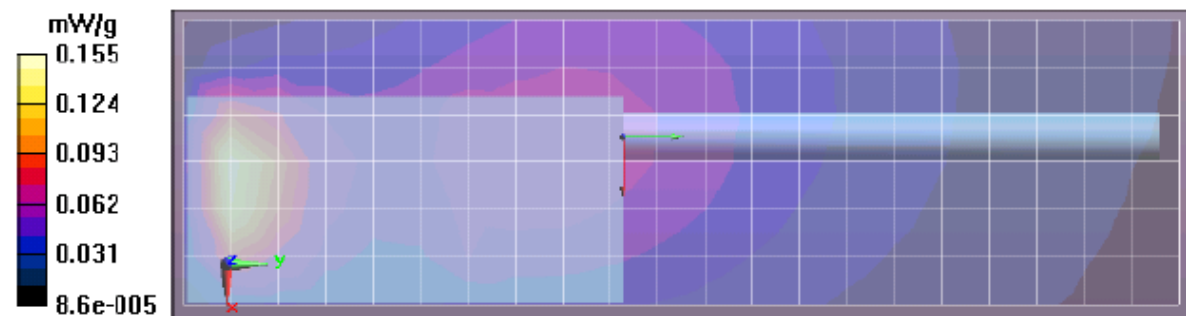
Duty Cycle: 1:1, Medium parameters used: $f = 160 \text{ MHz}$; $\sigma = 0.79 \text{ mho/m}$; $\epsilon_r = 60.3$; $\rho = 1000 \text{ kg/m}^3$
Probe: ES3DV3 - SN3196, , ConvF(8.3, 8.3, 8.3); Calibrated: 4/27/2012
Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Ab Scan/1-Area Scan (61x211x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Reference Value = 8.970 V/m; Power Drift = -0.17 dB
Fast SAR: SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.095 mW/g (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.162 mW/g

Below 3 GHz-Rev.5/Ab Scan/2-Volume 2D Scan (41x41x1): Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=1\text{mm}$
Reference Value = 8.970 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = **Not Specified** mW/g
Fast SAR: SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.097 mW/g (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.163 mW/g

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 = 8.970 V/m; Power Drift = -0.22 dB
Peak SAR (extrapolated) = 0.348 mW/g
SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.0789 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.159 mW/g

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) = 0.155 mW/g



Assessment at the Body with other audio accessories

Assessment per “KDB 643646 D01 Body SAR Test Consideration for Audio Accessories without Built-in Antenna; Sec 1, A. when overall < 4.0 W/kg, SAR tested for that audio accessory is not necessary.” This was applicable to all remaining accessories.

Assessments at the Face

Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/15/2012 2:47:03 PM

Robot#: DASY5-PG-2 | Run#: Lee-FACE-120815-09
 Model#: PMUD3214A
 Phantom#: ELI4 1037
 Tissue Temp: 21.1 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4127A
 Test Freq: 155.400(MHz)
 Battery: NNTN8359A
 Carry Acc: NONE
 Audio Acc: NONE
 Start Power: 1.28 (W)

Comments: Full Scan

Duty Cycle: 1:1, Medium parameters used: $f = 155 \text{ MHz}$; $\sigma = 0.73 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

Probe: ES3DV3 - SN3196, , ConvF(8.6, 8.6, 8.6); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Face Scan/1-Area Scan (61x211x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 28.370 V/m; Power Drift = -0.44 dB

Fast SAR: SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.446 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.598 mW/g

Below 3 GHz-Rev.5/Face Scan/2-Volume Scan 2D (41x41x1): Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=1\text{mm}$

Reference Value = 28.370 V/m; Power Drift = -0.37 dB

Peak SAR (extrapolated) = **Not Specified** mW/g

Fast SAR: SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.431 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.582 mW/g

Below 3 GHz-Rev.5/Face 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 = 28.370 V/m; Power Drift = -0.43 dB

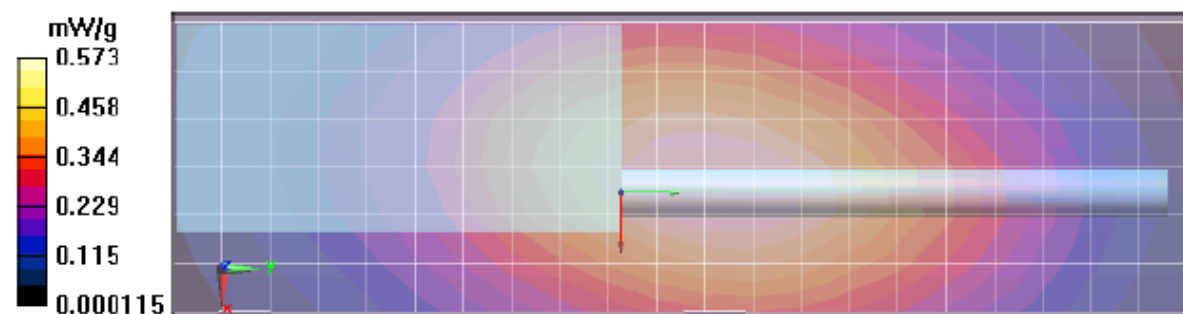
Peak SAR (extrapolated) = 0.734 mW/g

SAR(1 g) = 0.565 mW/g; SAR(10 g) = 0.435 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.572 mW/g

Below 3 GHz-Rev.5/Face 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) = 0.573 mW/g



APPENDIX G
DUT Scans - Outside FCC Part 90 (136-174 MHz)

Outside FCC Part 90 at the Body

Table 17

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/6/2012 2:34:40 PM

Robot#: DASY4-PG-1 | Run#: Lee-AB-120906-07
 Model#: PMUD3214A
 Phantom#: ELI5 1150
 Tissue Temp: 21.1 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4127A
 Test Freq: 147.000 (MHz)
 Battery: NNTN8359A
 Carry Acc: PMLN6086A
 Audio Acc: PMMN4067B
 Start Power: 1.27 (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: 0.677 mW/g (1g); 0.385 mW/g (10g)

Comments: Full Scan

Duty Cycle: 1:1, Medium parameters used: $f = 147$ MHz; $\sigma = 0.79$ mho/m; $\epsilon_r = 61$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3122, Calibrated: 4/26/2012, ConvF(8.2, 8.2, 8.2)

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Ab Scan/1-Area Scan (61x211x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 24.1 V/m; Power Drift = -0.260 dB

Motorola Fast SAR: SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (interpolated) = 0.596 mW/g

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

Reference Value = 24.1 V/m; Power Drift = -0.294 dB

Peak SAR (extrapolated) = 0.788 W/kg

Motorola Fast SAR: SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (interpolated) = 0.788 mW/g

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

Reference Value = 24.1 V/m; Power Drift = -0.326 dB

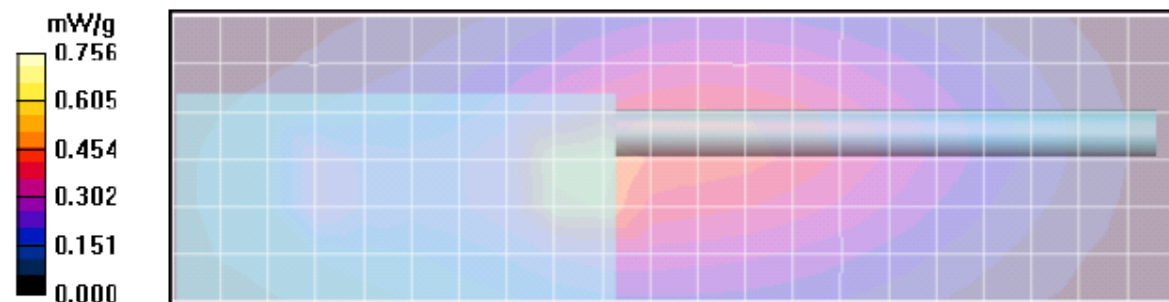
Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.776 mW/g

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

Maximum value of SAR (measured) = 0.756 mW/g



Outside FCC Part 90 at the Face Table 20

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/16/2012 2:50:41 PM

Robot#: DASY5-PG-2 | Run#: Lee-FACE-120816-04
 Model#: PMUD3214A
 Phantom#: ELI4 1037
 Tissue Temp: 21.2 (C)
 Serial#: 627TNP0284
 Antenna: PMAD4126A
 Test Freq: 141.700 (MHz)
 Battery: NNTN8359A
 Carry Acc: NONE
 Audio Acc: NONE
 Start Power: 1.26 (W)

Comments: Full Scan

Duty Cycle: 1:1, Medium parameters used: $f = 142$ MHz; $\sigma = 0.78$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3196, , ConvF(8.6, 8.6, 8.6); Calibrated: 4/27/2012

Electronics: DAE4 Sn688, Calibrated: 4/23/2012

Below 3 GHz-Rev.5/Face Scan/1-Area Scan (61x211x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 24.123 V/m; Power Drift = -0.34 dB

Fast SAR: SAR(1 g) = 0.418 mW/g; SAR(10 g) = 0.319 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.437 mW/g

Below 3 GHz-Rev.5/Face Scan/2-Volume Scan 2D (41x41x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm

Reference Value = 24.123 V/m; Power Drift = -0.37 dB

Peak SAR (extrapolated) = **Not Specified** mW/g

Fast SAR: SAR(1 g) = 0.409 mW/g; SAR(10 g) = 0.311 mW/g (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.426 mW/g

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

Reference Value = 24.123 V/m; Power Drift = -0.43 dB

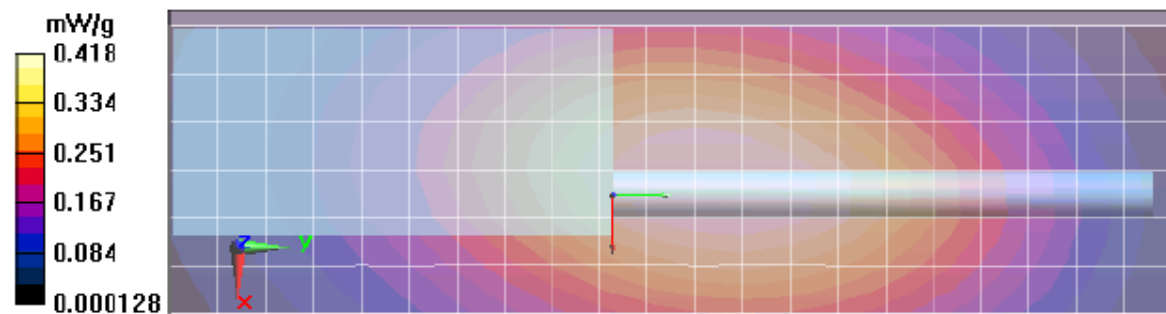
Peak SAR (extrapolated) = 0.533 mW/g

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.313 mW/g (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.420 mW/g

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

Maximum value of SAR (measured) = 0.418 mW/g



APPENDIX H

DUT Supplementary Data (Power slump)

Power Slump Model # : PMUD3214A

Serial # : 627TNP0284

Battery: NNTN8359A

Transmit Mode: CW

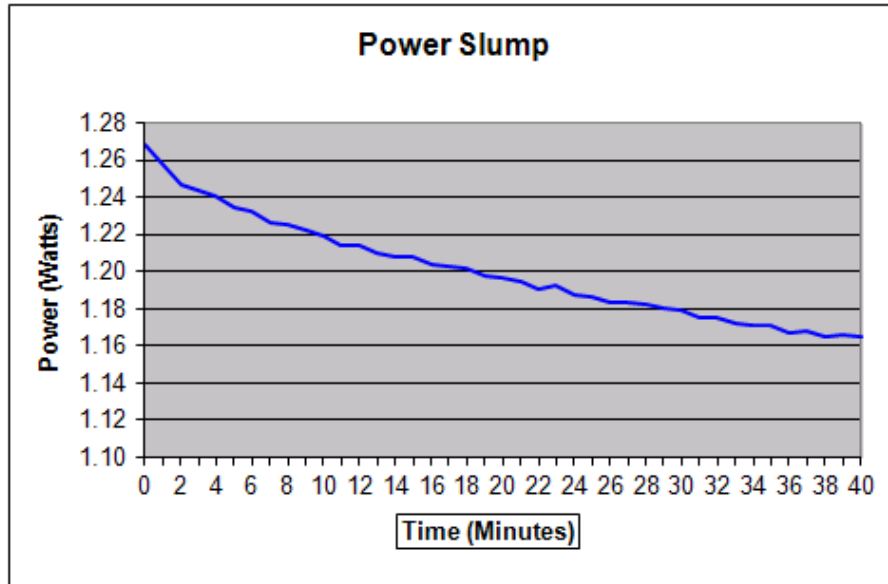
Frequency 147 MHz

Audio Accessory: PMMN4067B

Date: 9/14/2012

| Tx Time (Minutes) | Measure Power (Watts) |
|----------------------|--------------------------|
|----------------------|--------------------------|

| | |
|------|------|
| 0.0 | 1.27 |
| 1.0 | 1.26 |
| 2.0 | 1.25 |
| 3.0 | 1.24 |
| 4.0 | 1.24 |
| 5.0 | 1.23 |
| 6.0 | 1.23 |
| 7.0 | 1.23 |
| 8.0 | 1.23 |
| 9.0 | 1.22 |
| 10.0 | 1.22 |
| 11.0 | 1.21 |
| 12.0 | 1.21 |
| 13.0 | 1.21 |
| 14.0 | 1.21 |
| 15.0 | 1.21 |
| 16.0 | 1.20 |
| 17.0 | 1.20 |
| 18.0 | 1.20 |
| 19.0 | 1.20 |
| 20.0 | 1.20 |
| 21.0 | 1.19 |
| 22.0 | 1.19 |
| 23.0 | 1.19 |
| 24.0 | 1.19 |
| 25.0 | 1.19 |
| 26.0 | 1.18 |
| 27.0 | 1.18 |
| 28.0 | 1.18 |
| 29.0 | 1.18 |
| 30.0 | 1.18 |
| 31.0 | 1.17 |
| 32.0 | 1.17 |
| 33.0 | 1.17 |
| 34.0 | 1.17 |
| 35.0 | 1.17 |
| 36.0 | 1.17 |
| 37.0 | 1.17 |
| 38.0 | 1.17 |
| 39.0 | 1.17 |
| 40.0 | 1.17 |



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