

**MOTOROLA SOLUTIONS**

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: 03/18/2015
Report Revision: B

Responsible Engineer: Deanna Zakharia (EME Lab Senior Resource Manager)
Report Author: Jessica Zada (EME Engineer)
Date/s Tested: 3/11/2015-3/12/2015
Manufacturer/Location: Plantation
Sector/Group/Div.: EMS
Date submitted for test: 03/09/2015
DUT Description: T461 FRS/ GMRS Consumer Radio 462 and 467 MHz
Test TX mode(s): CW (PTT)
Max. Power output: 2W for GMRS, 0.5W for FRS
Nominal Power: 1.5W for GMRS, 0.4W for FRS
Tx Frequency Bands: FRS 467.5625 - 467.7125 MHz
 FRS 462.5625 - 462.7125 MHz
 GMRS 462.5500 – 462.7250 MHz
Signaling type: FM
Model(s) Tested: T461 (PMUE4621A)
Model(s) Certified: T461 (PMUE4621A)
Serial Number(s): 1654RA0056
Classification: General Population / Uncontrolled
FCC ID: AZ489FT4924; FRS 467.5625 - 467.7125 MHz,
 FRS 462.5625 - 462.7125 MHz, GMRS 462.5500 – 462.7250
IC: 109U-89FT4924

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 W/kg averaged over 1 gram per the requirements of OET Bulletin 65. 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 2 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 4.0 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: 3/18/2015

Deanna Zakharia
Digitally signed by Deanna Zakharia
 DN: cn=Deanna Zakharia, o=Motorola
 Solutions, ou=Regulatory Compliance Lab,
 email=deanna.zakharia@motorola.com,
 Date: 2015.03.18 15:28:10 -0400

Certification Date: 3/17/2015**Certification No.:** L1150302

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory
Date/Time: 3/11/2015 6:04:49 PM

Robot#: DASY5-pg-1 | Run#: MO-SYSP-450B-150311-05
 Dipole Model#: D450V3
 Phantom#: ELI4 1103
 Tissue Temp: 21.3 (C)
 Serial#: 1054
 Test Freq: 450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.077 dB
 Adjusted SAR (1W): 4.32 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 55.1$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3274, Frequency: 450 MHz, ConvF(7.06, 7.06, 7.06); Calibrated: 11/12/2014
 Electronics: DAE4 Sn684, Calibrated: 11/5/2014

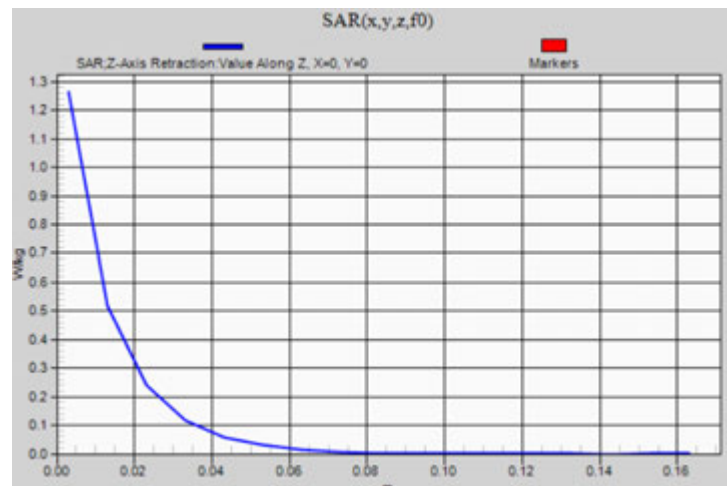
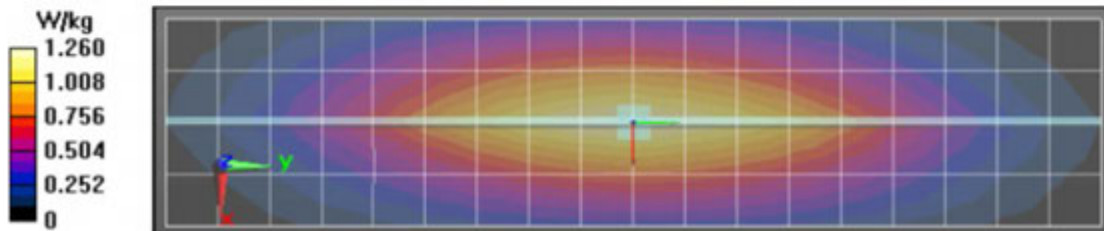
Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x181x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 37.23 V/m; Power Drift = -0.05 dB
 Fast SAR: SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.770 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 1.25 W/kg

Below 2 GHz-Rev.2/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 37.23 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 1.75 W/kg
 SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.687 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 1.26 W/kg

Below 2 GHz-Rev.2/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=10$ mm



Motorola Solutions, Inc. EME Laboratory
Date/Time: 3/12/2015 6:53:01 PM

Robot#: DASY5-pg-2 | Run#: MO-SYSP-450H-150312-10
Dipole Model#: D450V3
Phantom#: ELI4 1103
Tissue Temp: 21.1 (C)
Serial#: 1054
Test Freq: 450.000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.049 dB
Adjusted SAR (1W): 4.32 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 43.4$; $\rho = 1000$ kg/m³
Probe: ES3DV3 - SN3274, Frequency: 450 MHz, ConvF(6.76, 6.76, 6.76); Calibrated: 11/12/2014
Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x181x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 38.70 V/m; Power Drift = -0.01 dB
Fast SAR: SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.774 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.27 W/kg

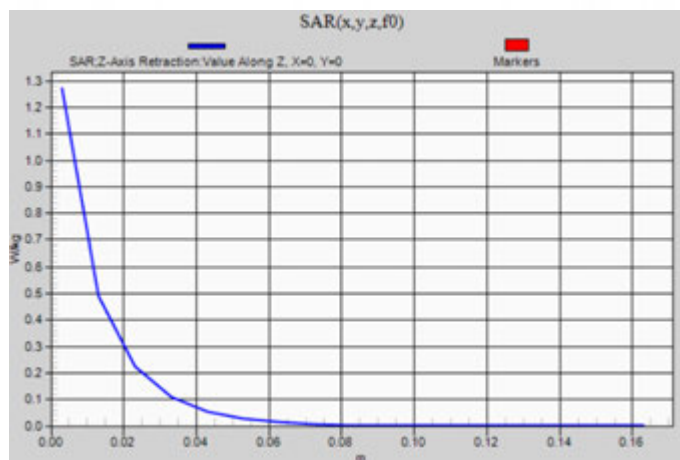
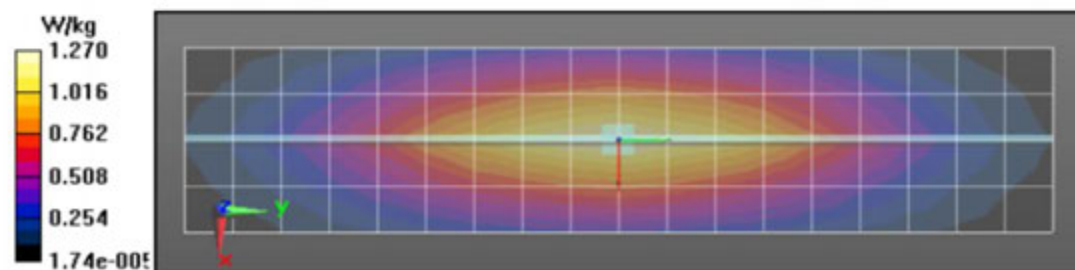
Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (5x19x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.27 W/kg

Below 2 GHz-Rev.2/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 38.70 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.680 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.29 W/kg

Below 2 GHz-Rev.2/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm



Appendix E

DUT Scans

Assessments at the Body for FRS band - Table 17

Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/11/2015 9:52:15 PM

Robot#: DASY5-PG-2 | Run#: MO-AB-150311-10
 Model#: PMUE4621A
 Phantom#: ELI4 1103
 Tissue Temp: 20.5 (C)
 Serial#: 1654RA0056
 Antenna: Fixed
 Test Freq: 467.6375 (MHz)
 Battery: PMNN4477A
 Carry Acc: PMLN7220A
 Audio Acc: 53724B RSM
 Start Power: 0.48 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3274, Frequency: 468 MHz, ConvF(7.06, 7.06, 7.06); Calibrated: 11/12/2014
 Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (51x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 32.34 V/m; Power Drift = -0.58 dB

Fast SAR: SAR(1 g) = 0.815 W/kg; SAR(10 g) = 0.584 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.915 W/kg

Below 2 GHz-Rev.2/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm,

dy=7.5mm, dz=5mm

Reference Value = 32.34 V/m; Power Drift = -0.77 dB

Peak SAR (extrapolated) = 1.13 W/kg

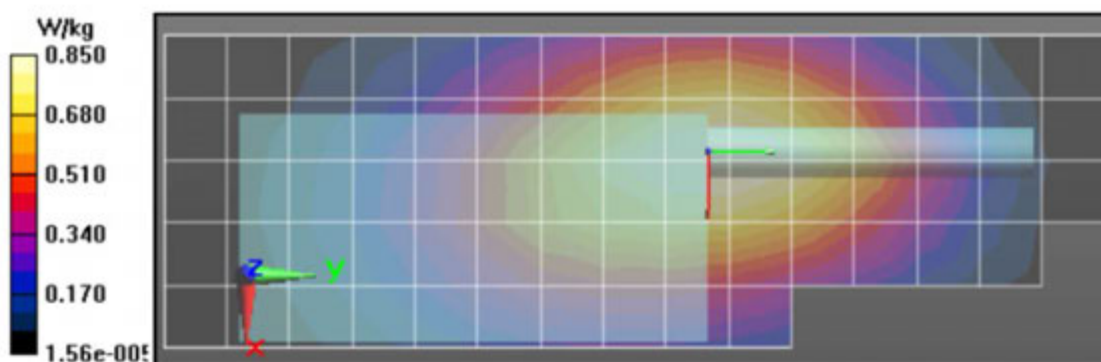
SAR(1 g) = 0.752 W/kg; SAR(10 g) = 0.514 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.866 W/kg

Below 2 GHz-Rev.2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm,

dz=10mm

Maximum value of SAR (measured) = 0.850 W/kg



Assessment at the Body for GMRS band – Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/12/2015 2:11:01 PM

Robot#: DASY5-PG-2 | Run#: KKL-AB-150312-08
 Model#: PMUE4621A
 Phantom#: ELI4 1103
 Tissue Temp: 20.0 (C)
 Serial#: 1654RA0056
 Antenna: Fixed
 Test Freq: 462.6375 (MHz)
 Battery: PMNN4477A
 Carry Acc: PMLN7220A
 Audio Acc: GU6970A
 Start Power: 1.58 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.93$ S/m; $\epsilon_t = 54.9$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3274, Frequency: 463 MHz, ConvF(7.06, 7.06, 7.06); Calibrated: 11/12/2014
 Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (51x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 41.52 V/m; Power Drift = -0.61 dB

Fast SAR: SAR(1 g) = 1.4 W/kg; SAR(10 g) = 1 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.58 W/kg

Below 2 GHz-Rev.2/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm,

dy=7.5mm, dz=5mm

Reference Value = 41.52 V/m; Power Drift = -0.80 dB

Peak SAR (extrapolated) = 1.89 W/kg

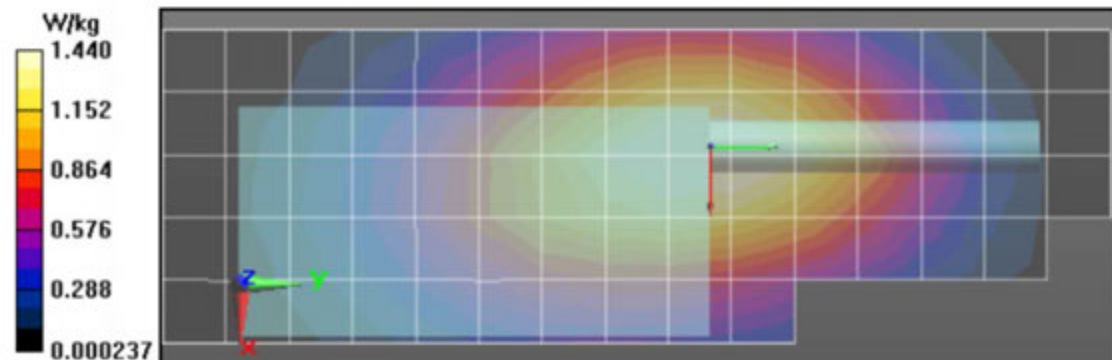
SAR(1 g) = 1.27 W/kg; SAR(10 g) = 0.880 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.46 W/kg

Below 2 GHz-Rev.2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm,

dz=10mm

Maximum value of SAR (measured) = 1.44 W/kg



Assessments at the Face for FRS band - Table 21

Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/12/2015 8:35:49 PM

Robot#: DASY5-PG-2 | Run#: MO(AZ)-FACE-150312-11

Model#: PMUE4621A

Phantom#: ELI4 1103

Tissue Temp: 20.2 (C)

Serial#: 1654RA0056

Antenna: Fixed

Test Freq: 467.6375 (MHz)

Battery: PMNN4477A

Carry Acc: NONE

Audio Acc: NONE

Start Power: 0.48 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 43.2$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3274, Frequency: 468 MHz, ConvF(6.76, 6.76, 6.76); Calibrated: 11/12/2014

Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (71x211x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 27.08 V/m; Power Drift = -0.42 dB

Fast SAR: SAR(1 g) = 0.656 W/kg; SAR(10 g) = 0.475 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.735 W/kg

Below 2 GHz-Rev.2/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.08 V/m; Power Drift = -0.55 dB

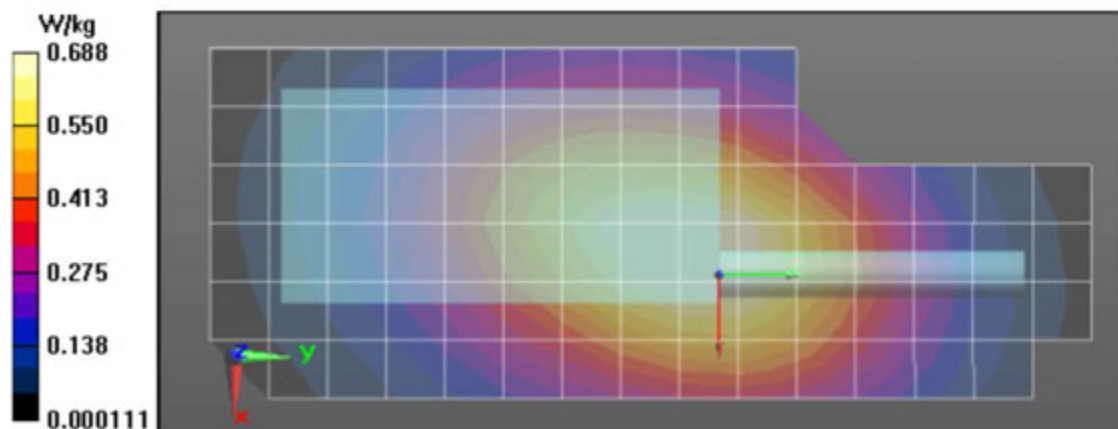
Peak SAR (extrapolated) = 0.972 W/kg

SAR(1 g) = 0.598 W/kg; SAR(10 g) = 0.407 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.697 W/kg

Below 2 GHz-Rev.2/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.688 W/kg



Assessments at the Face for GMRS band - Table 23

Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/12/2015 10:33:33 PM

Robot#: DASY5-PG-2 | Run#: MO(AZ)-FACE-150312-14
 Model#: PMUE4621A
 Phantom#: ELI4 1103
 Tissue Temp: 20.6(C)
 Serial#: 1654RA0056
 Antenna: Fixed
 Test Freq: 462.6375 (MHz)
 Battery: PMNN4477A
 Carry Acc: @front
 Audio Acc: N/A
 Start Power: 1.58 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463 \text{ MHz}$; $\sigma = 0.89 \text{ S/m}$; $\epsilon_r = 43.2$; $\rho = 1000 \text{ kg/m}^3$
 Probe: ES3DV3 - SN3274, , Frequency: 463 MHz, ConvF(6.76, 6.76, 6.76); Calibrated: 11/12/2014
 Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (71x211x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 40.83 V/m; Power Drift = -0.16 dB

Fast SAR: SAR(1 g) = 1.43 W/kg; SAR(10 g) = 1.03 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.61 W/kg

Below 2 GHz-Rev.2/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 = 40.83 V/m; Power Drift = -0.25 dB

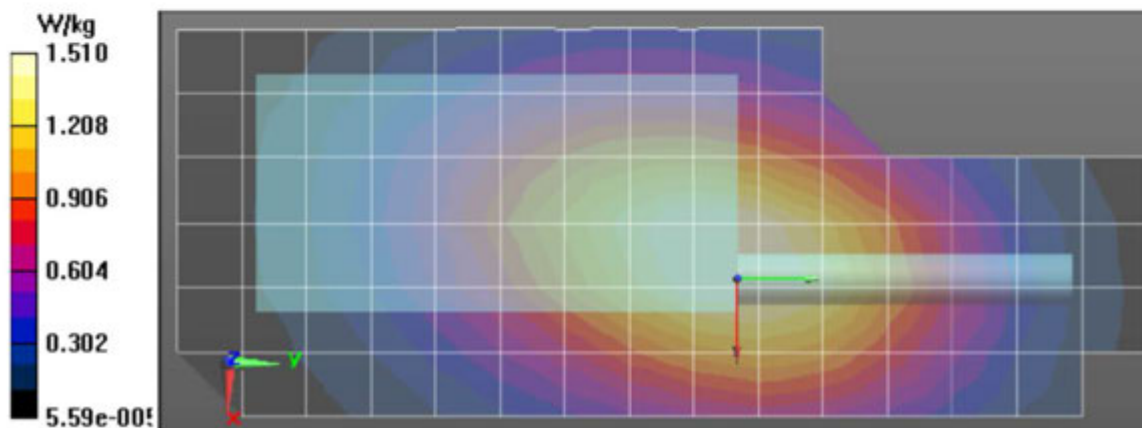
Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.893 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.54 W/kg

Below 2 GHz-Rev.2/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) = 1.51 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Table 24

Motorola Solutions, Inc. EME Laboratory Date/Time: 3/12/2015 2:41:55 PM

Robot#: DASY5-PG-2 | Run#: MO-AB-150312-09
 Model#: PMUE4621A
 Phantom#: ELI4 1103
 Tissue Temp: 20.0 (C)
 Serial#: 1654RA0056
 Antenna: Fixed
 Test Freq: 462.6375 (MHz)
 Battery: PMNN4477A
 Carry Acc: PMLN7220A
 Audio Acc: GU6970A
 Start Power: 1.58 (W)

Comments:

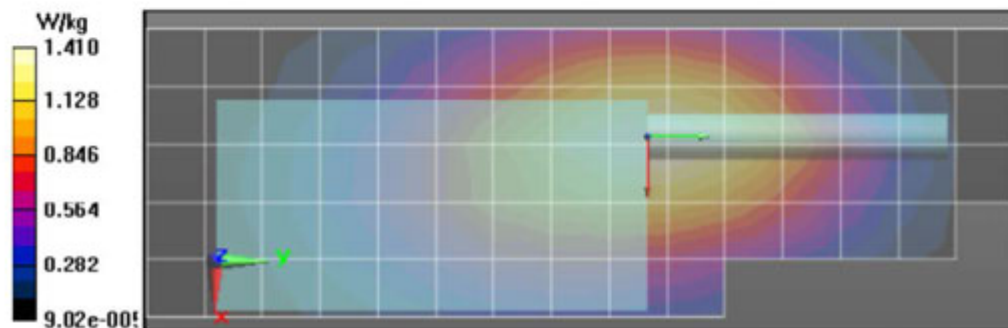
Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3274, , Frequency: 463 MHz, ConvF(7.06, 7.06, 7.06); Calibrated: 11/12/2014
 Electronics: DAE4 Sn684, Calibrated: 11/5/2014

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (51x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Reference Value = 40.60 V/m; Power Drift = -0.51 dB
 Fast SAR: SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.942 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 1.48 W/kg

Below 2 GHz-Rev.2/Ab Scan/2-Volume Scan 2D (41x41x1): Interpolated grid: dx=0.7500 mm, dy=0.7500 mm, dz=1.000 mm
 Reference Value = 40.60 V/m; Power Drift = -0.58 dB
 Fast SAR: SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.926 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 1.42 W/kg

Below 2 GHz-Rev.2/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 44.03 V/m; Power Drift = -0.57 dB
 Peak SAR (extrapolated) = 2.10 W/kg
 SAR(1 g) = 1.41 W/kg; SAR(10 g) = 0.969 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 1.62 W/kg

Below 2 GHz-Rev.2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
 Maximum value of SAR (measured) = 1.41 W/kg



Shortened scan reflects highest SAR producing configuration and is compared to the full scan.

Scan Description	Referenced Table	Test Time (min.)	SAR 1g (W/kg)	SAR 10g (W/kg)
Shorten scan (zoom)	24	7	1.018	0.669
Full scan (area & zoom)	19	16	0.996	0.67

APPENDIX G

DUT Test Position Photos

Photos available in Exhibit 7B

APPENDIX H

DUT, Body worn and audio accessories Photos

Photos available in Exhibit 7B