

**MOTOROLA SOLUTIONS**

TESTING CERT # 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2

Motorola Solutions, Inc
EME Test Laboratory
 Motorola Solutions Malaysia Sdn. Bhd. (455657-H)
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Date of Report: 09/18/2014
Report Revision: 0

Responsible Engineer: Veeramani Veerapan (Sr.EME Engineer)
Report Author: Veeramani Veerapan (Sr.EME Engineer)
Date/s Tested: 08/15/14-08/19/14
Manufacturer/Location: Motorola Solutions, Inc, Penang
Sector/Group/Div.: EMS
Date submitted for test: 07/17/14
DUT Description: Handheld Portable PMUD3334A, XCVR 136-174 MHz, Display &
 Handheld Portable PMUD3335A, XCVR 136-174 MHz, Plain
Test TX mode(s): TDMA (PTT)
Max. Power output: 3.3 W
Nominal Power: 3.0 W
Tx Frequency Bands: 136-174 MHz
Signaling type: TDMA
Model(s) Tested: PMUD3334A
Model(s) Certified: PMUD3334A & PMUD3335A
Serial Number(s): 546TQP0093 & 546TQP0079
Classification: Occupational/Controlled
FCC ID: AZ489FT3835; Rule Part 90 (150.8-173.4 MHz), Part 22 (157.77-158.67 MHz)
IC : 109U-89FT3835; (138-144, 148-149.9 MHz and 150.05-174 MHz)

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

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 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: 9/23/2014

Certification Date: 9/23/2014**Certification No.:** L1140901 & L1140902

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory**Date/Time: 8/15/2014 10:54:23 AM**

Robot#: DASY5-PG-1 | Run#: CcC-SYSP-150B-140815-02
 Dipole Model#: D300V3
 Phantom#: ELI4 1037
 Tissue Temp: 20.9 (C)
 Serial#: 1003
 Test Freq: 150 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.031 dB
 Adjusted SAR (1W): 2.23 mW/kg (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz, $\sigma = 0.83$ S/m; $\epsilon_r = 59.5$; $\rho = 1000$ kg/m³

Probe: ES3DV3 - SN3096, , Frequency: 150 MHz, ConvF(7.61, 7.61, 7.61); Calibrated: 10/21/2013

Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/System Performance Check/Dipole Area Scan 2 (41x241x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 27.206 V/m; Power Drift = -0.00 dB

Fast SAR: SAR(1 g) = 0.559 W/kg; SAR(10 g) = 0.406 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.616 W/kg

Below 2 GHz-Rev.1/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

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

Reference Value = 27.206 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 0.894 W/kg

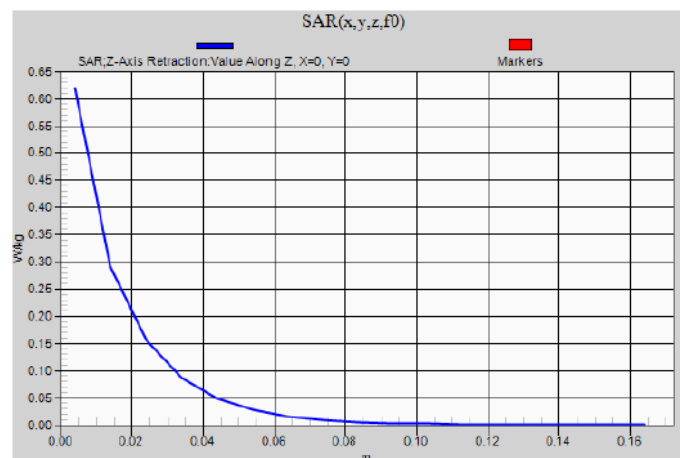
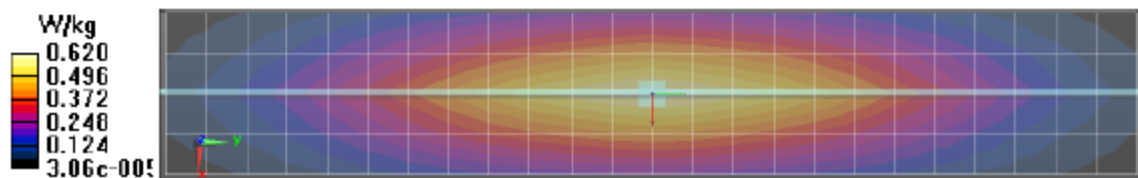
SAR(1 g) = 0.558 W/kg; SAR(10 g) = 0.378 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.618 W/kg

Below 2 GHz-Rev.1/System Performance Check/Z-Axis Retraction (1x1x17):

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

Maximum value of SAR (measured) = 0.620 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/18/2014 10:07:49 AM

Robot#: DASY5-PG-1 | Run#: CeC-SYSP-150B-140818-02
 Dipole Model#: D300V3
 Phantom#: ELI4 1037
 Tissue Temp: 21.6 (C)
 Serial#: 1003
 Test Freq: 150 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.058 dB
 Adjusted SAR (1W): 2.20 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.84$ S/m; $\epsilon_r = 59.3$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3096, , Frequency: 150 MHz, ConvF(7.61, 7.61, 7.61); Calibrated: 10/21/2013
 Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/System Performance Check/Dipole Area Scan 2 (41x241x1):

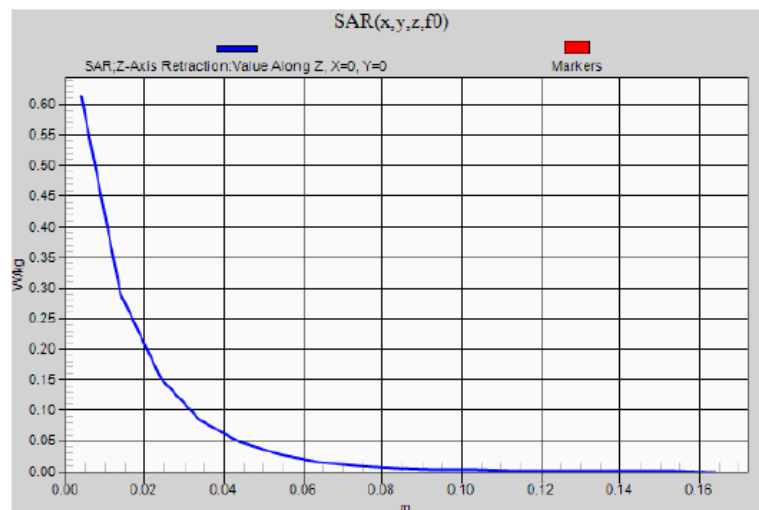
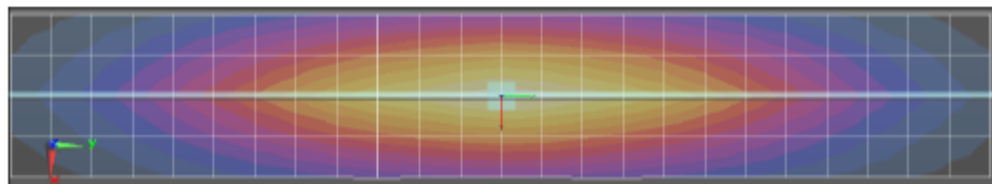
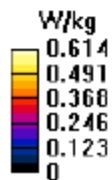
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 26.986 V/m; Power Drift = 0.01 dB
Fast SAR: SAR(1 g) = 0.549 W/kg; SAR(10 g) = 0.400 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 0.610 W/kg

Below 2 GHz-Rev.1/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 26.986 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.885 W/kg
SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.373 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 0.613 W/kg

Below 2 GHz-Rev.1/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=10$ mm
 Maximum value of SAR (measured) = 0.614 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/18/2014 3:45:21 PM

Robot#: DASY5-PG-1 | Run#: CcC-SYSP-150H-140818-09
 Dipole Model#: D300V3
 Phantom#: ELI4 1103
 Tissue Temp: 21.2 (C)
 Serial#: 1003
 Test Freq: 150 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.056 dB
 Adjusted SAR (1W): 2.27 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.74$ S/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3096, Frequency: 150 MHz, CorrF(7.51, 7.51, 7.51); Calibrated: 10/21/2013
 Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/System Performance Check/Dipole Area Scan 2 (41x241x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 28.224 V/m; Power Drift = -0.00 dB
Fast SAR: SAR(1 g) = 0.565 W/kg; SAR(10 g) = 0.411 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 0.591 W/kg

Below 2 GHz-Rev.1/System Performance Check/Dipole Area Scan 2 (5x25x1):

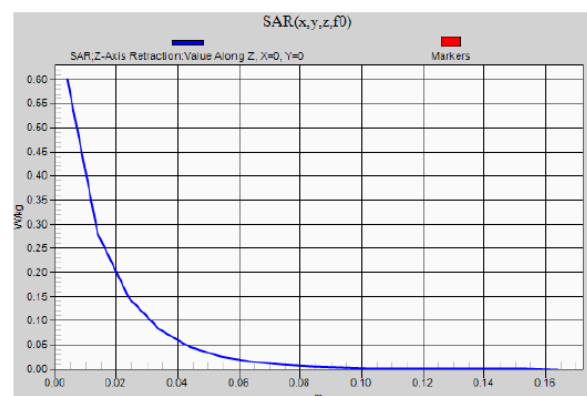
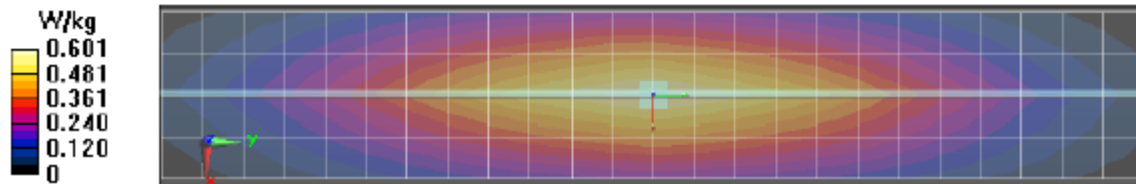
Measurement grid: $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 0.591 W/kg

Below 2 GHz-Rev.1/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 28.224 V/m; Power Drift = -0.00 dB
 Peak SAR (extrapolated) = 0.862 W/kg
SAR(1 g) = 0.567 W/kg; SAR(10 g) = 0.381 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 0.594 W/kg

Below 2 GHz-Rev.1/System Performance Check/Z-Axis Retraction (1x1x17):

Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=10$ mm
 Maximum value of SAR (measured) = 0.601 W/kg



Motorola Solutions, Inc. EME Laboratory**Date/Time: 8/19/2014 10:19:00 AM**

Robot#: DASY5-PG-1 | Run#: CcC-SYSP-150H-140819-02
 Dipole Model#: D300V3
 Phantom#: ELI4 1103
 Tissue Temp: 21.5 (C)
 Serial#: 1003
 Test Freq: 150 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.054 dB
 Adjusted SAR (1W): 2.25 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.74$ S/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3096, , Frequency: 150 MHz, ConvF(7.51, 7.51, 7.51); Calibrated: 10/21/2013
 Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/System Performance Check/Dipole Area Scan 2 (41x241x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 28.209 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.407 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.586 W/kg

Below 2 GHz-Rev.1/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

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

Reference Value = 28.209 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.859 W/kg

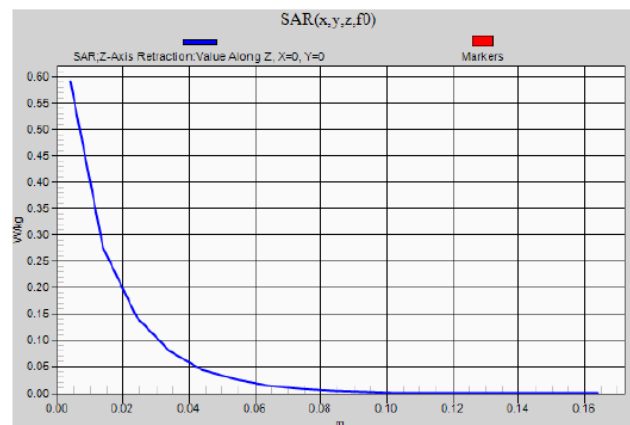
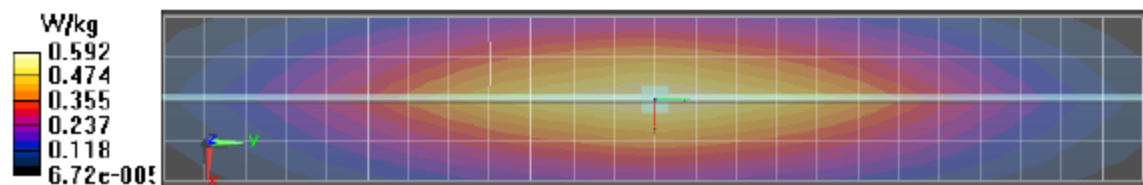
SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.377 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.591 W/kg

Below 2 GHz-Rev.1/System Performance Check/Z-Axis Retraction (1x1x17):

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

Maximum value of SAR (measured) = 0.592 W/kg



Appendix E

DUT Scans

Assessments at the Body with Body-worn PMLN7190A

Table 17

Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/15/2014 2:35:53 PM

Robot#: DASYS-PG-1 | Run#: CcC-AB-140815-04
 Model#: PMUD3334A
 Phantom#: ELI4 1037
 Tissue Temp: 20.9 (C)
 Serial#: 546TQP0093
 Antenna: PMAD4146A
 Test Freq: 156.000 (MHz)
 Battery: PMNN4468A
 Carry Acc: PMLN7190A
 Audio Acc: PMLN7156A
 Start Power: 3.30 (W)

Comments:

Duty Cycle: 1:1.99986, Medium parameters used: $f = 156 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 59.3$; $\rho = 1000 \text{ kg/m}^3$

Probe: ES3DV3 - SN3096, Frequency: 156 MHz, CorvF(7.61, 7.61, 7.61); Calibrated: 10/21/2013

Electronics: DAE4 Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Ab Scan/1-Area Scan (61x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 19.507 V/m; Power Drift = -0.26 dB

Fast SAR: SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.224 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.312 W/kg

Below 2 GHz-Rev.1/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 = 19.507 V/m; Power Drift = -0.42 dB

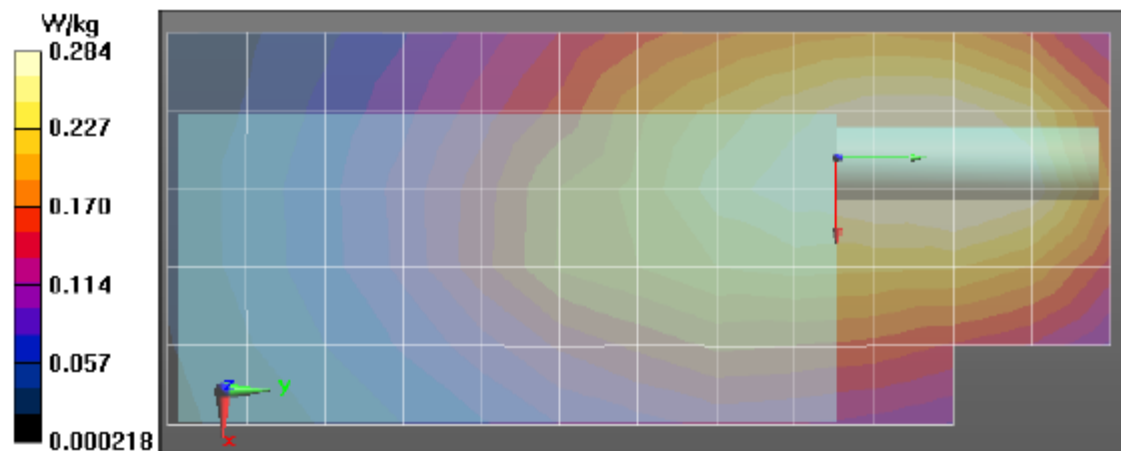
Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.288 W/kg; SAR(10 g) = 0.201 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.300 W/kg

Below 2 GHz-Rev.1/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) = 0.284 W/kg



Assessments at the Body with Body-worn PMLN7128A

Table 18

Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/15/2014 4:50:52 PM

Robot#: DASY5-PG-1 | Run#: CcC-AB-140815-06
 Model#: PMUD3334A
 Phantom#: ELI4 1037
 Tissue Temp: 20.6 (C)
 Serial#: 546TQP0093
 Antenna: PMAD4146A
 Test Freq: 156.000 (MHz)
 Battery: PMNN4468A
 Carry Acc: PMLN7128A
 Audio Acc: PMLN7156A
 Start Power: 3.29 (W)

Comments:

Duty Cycle: 1:1.99986, Medium parameters used: $f = 156$ MHz; $\sigma = 0.83$ S/m; $\epsilon_r = 59.3$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3096, , Frequency: 156 MHz, ConvF(7.61, 7.61, 7.61); Calibrated: 10/21/2013
 Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Ab Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 22.592 V/m; Power Drift = -0.29 dB

Fast SAR: SAR(1 g) = 0.428 W/kg; SAR(10 g) = 0.317 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.455 W/kg

Below 2 GHz-Rev.1/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.592 V/m; Power Drift = -0.40 dB

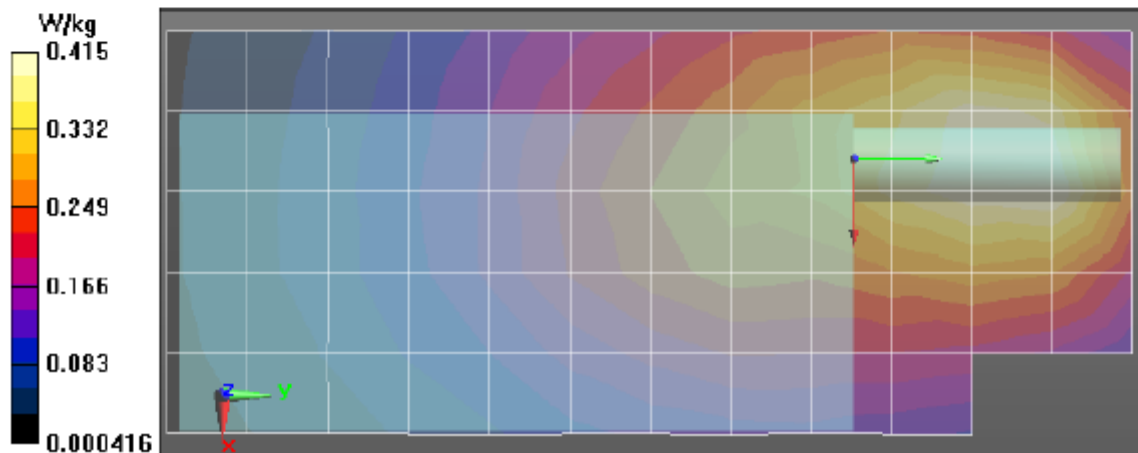
Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.278 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.442 W/kg

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

Maximum value of SAR (measured) = 0.415 W/kg



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 21

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/19/2014 12:10:02 PM

Robot#: DASY5-PG-1 | Run#: CcC-FACE-140819-04
 Model#: PMUD3334A
 Phantom#: ELI4 1103
 Tissue Temp: 21.2 (C)
 Serial#: 546TQP0093
 Antenna: PMAD4146A
 Test Freq: 156.0000 (MHz)
 Battery: PMNN4468A
 Carry Acc: NONE
 Audio Acc: NONE
 Start Power: 3.29 (W)

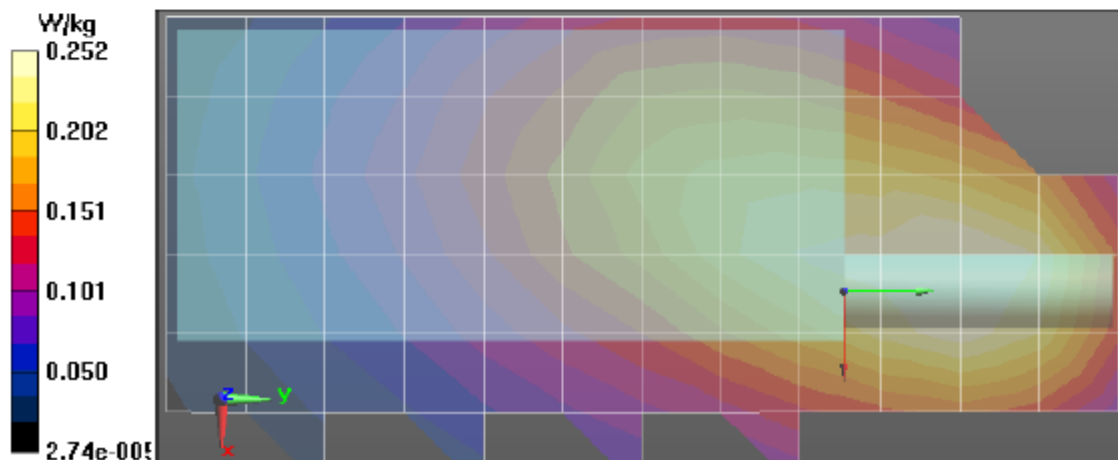
Comments:

Duty Cycle: 1:1.99986, Medium parameters used: $f = 156 \text{ MHz}$; $\sigma = 0.74 \text{ S/m}$; $\epsilon_r = 50.7$; $\rho = 1000 \text{ kg/m}^3$
 Probe: ES3DV3 - SN3096, , Frequency: 156 MHz, CorrF(7.51, 7.51, 7.51); Calibrated: 10/21/2013
 Electronics: DAE4 Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Face Scan/1-Area Scan (61x121x1): Interpolated grid: $dx=1.500 \text{ mm}$,
 $dy=1.500 \text{ mm}$
 Reference Value = 18.572 V/m; Power Drift = -0.15 dB
Fast SAR: SAR(1 g) = 0.260 W/kg; SAR(10 g) = 0.196 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 0.268 W/kg

Below 2 GHz-Rev.1/Face 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 = 18.572 V/m; Power Drift = -0.29 dB
 Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.257 W/kg; SAR(10 g) = 0.178 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 0.266 W/kg

Below 2 GHz-Rev.1/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) = 0.252 W/kg



Assessment outside FCC Part 90 at the Body

Table 19

Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/18/2014 10:52:43 AM

Robot#: DASY5-PG-1 | Run#: CcC-AB-140818-03
 Model#: PMUD3334A
 Phantom#: ELI4 1037
 Tissue Temp: 21.4 (C)
 Serial#: 546TQP0093
 Antenna: PMAD4144A
 Test Freq: 136.000 (MHz)
 Battery: PMNN4468A
 Carry Acc: PMLN7128A
 Audio Acc: PMLN7156A
 Start Power: 3.28 (W)

Comments:

Duty Cycle: 1:1.99986, Medium parameters used: $f = 136 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 59.7$; $\rho = 1000 \text{ kg/m}^3$
 Probe: ES3DV3 - SN3096, , Frequency: 136 MHz, ConvF(7.61, 7.61, 7.61); Calibrated: 10/21/2013
 Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Ab Scan/1-Area Scan (61x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 24.975 V/m; Power Drift = -0.36 dB

Fast SAR: SAR(1 g) = 0.534 W/kg; SAR(10 g) = 0.399 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.567 W/kg

Below 2 GHz-Rev.1/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 = 24.975 V/m; Power Drift = -0.50 dB

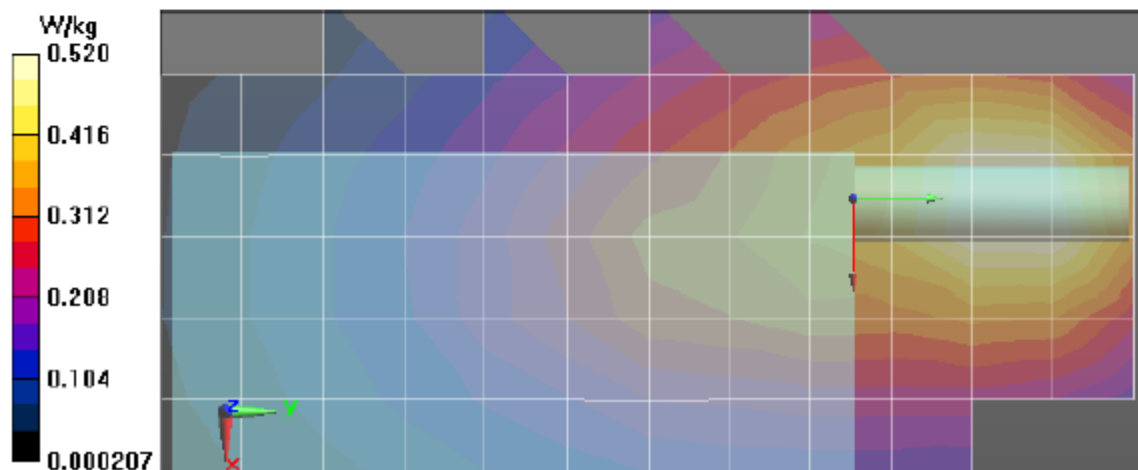
Peak SAR (extrapolated) = 0.945 W/kg

SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.348 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.554 W/kg

Below 2 GHz-Rev.1/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) = 0.520 W/kg



Assessment outside FCC Part 90 at the Face

Table 22

Motorola Solutions, Inc. EME Laboratory

Date/Time: 8/19/2014 1:04:16 PM

Robot#: DASY5-PG-1 | Run#: CcC-FACE-140819-06
 Model#: PMUD3334A
 Phantom#: ELI4 1103
 Tissue Temp: 20.7 (C)
 Serial#: 546TQP0093
 Antenna: PMAD4144A
 Test Freq: 140.0000 (MHz)
 Battery: PMNN4468A
 Carry Acc: NONE
 Audio Acc: NONE
 Start Power: 3.29 (W)

Comments:

Duty Cycle: 1:1.99986, Medium parameters used: $f = 140$ MHz; $\sigma = 0.73$ S/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3096, , Frequency: 140 MHz, CorrF(7.51, 7.51, 7.51); Calibrated: 10/21/2013
 Electronics: DAE4 Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Face Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 27.379 V/m; Power Drift = -0.14 dB

Fast SAR: SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.490 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.686 W/kg

Below 2 GHz-Rev.1/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.379 V/m; Power Drift = -0.28 dB

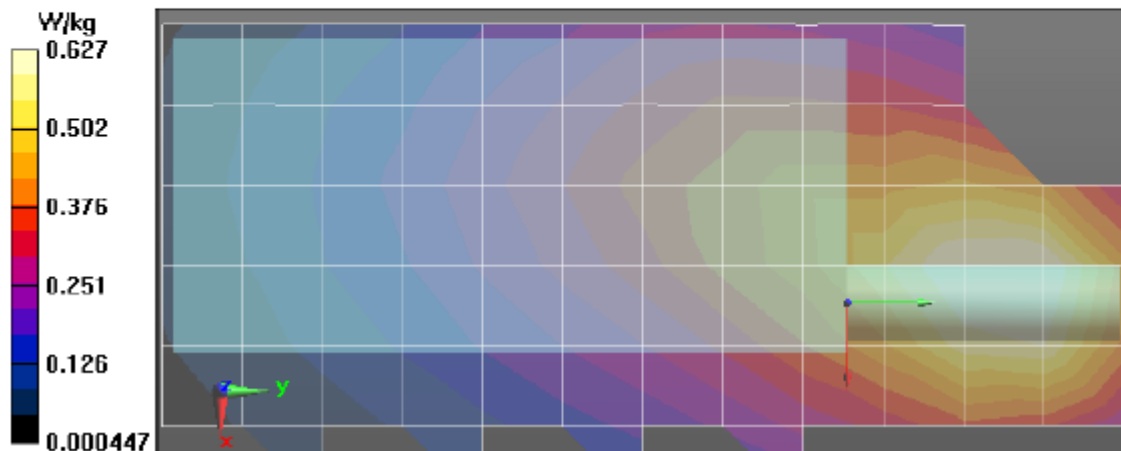
Peak SAR (extrapolated) = 0.993 W/kg

SAR(1 g) = 0.628 W/kg; SAR(10 g) = 0.424 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.640 W/kg

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

Maximum value of SAR (measured) = 0.627 W/kg



Appendix F

Shortened Scan of Highest SAR configuration

Shortened Scan Table 23

Motorola Solutions, Inc. EME Laboratory
Date/Time: 8/19/2014 3:30:30 PM

Robot#: DASY5-PG-1 | Run#: CcC-FACE-140819-11
Model#: PMUD3334A
Phantom#: ELI4 1103
Tissue Temp: 20.5 (C)
Serial#: 546TQP0093
Antenna: PMAD4144A
Test Freq: 140.0000 (MHz)
Battery: PMNN4468A
Cany Acc: NONE
Audio Acc: NONE
Start Power: 3.29 (W)

Comments: Shorten scan.

Duty Cycle: 1:1.99986, Medium parameters used: $f = 140$ MHz, $\sigma = 0.73$ S/m, $\epsilon_r = 51.4$, $\rho = 1000$ kg/m³
Probe: ES3DW3 - SN3096, , Frequency: 140 MHz, ConvF(7.51, 7.51, 7.51); Calibrated: 10/21/2013
Electronics: DAE4Sn684, Calibrated: 10/15/2013

Below 2 GHz-Rev.1/Face Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm,
dy=1.500 mm

Reference Value = 27.633 V/m; Power Drift = -0.17 dB

Fast SAR: SAR(1 g) = 0.671 W/kg; SAR(10 g) = 0.500 W/kg (SAR corrected for target medium)

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

Below 2 GHz-Rev.1/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm,
dy=7.5mm, dz=5mm

Reference Value = 30.814 V/m; Power Drift = -0.12 dB

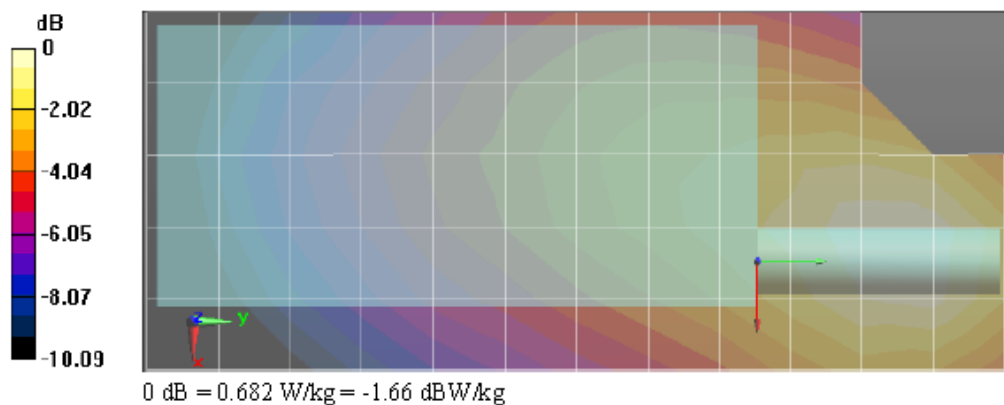
Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.665 W/kg; SAR(10 g) = 0.445 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.682 W/kg

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

Maximum value of SAR (measured) = 0.661 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)	23	7	0.343	0.229
Full scan (area & zoom)	21	16	0.336	0.227

Appendix G

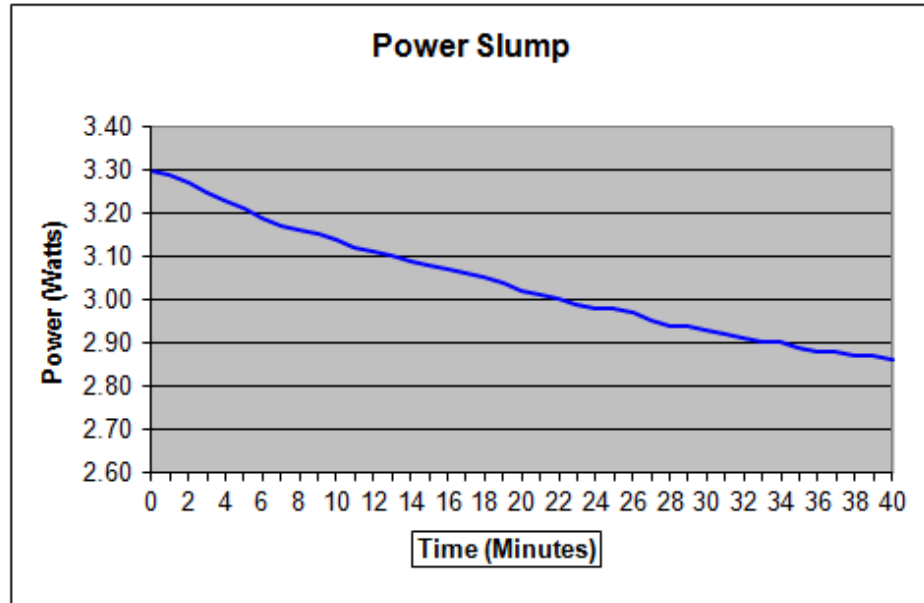
DUT Power slump

Battery: PMNN4468A
Frequency 140 MHz
Date: 9/2/2014

Transmit Mode: TDMA
Audio Accessory: NA

Tx Time **Measure Power**
(Minutes) **(Watts)**

0.0	3.30
1.0	3.29
2.0	3.27
3.0	3.25
4.0	3.23
5.0	3.21
6.0	3.19
7.0	3.17
8.0	3.16
9.0	3.15
10.0	3.14
11.0	3.12
12.0	3.11
13.0	3.10
14.0	3.09
15.0	3.08
16.0	3.07
17.0	3.06
18.0	3.05
19.0	3.04
20.0	3.02
21.0	3.01
22.0	3.00
23.0	2.99
24.0	2.98
25.0	2.98
26.0	2.97
27.0	2.95
28.0	2.94
29.0	2.94
30.0	2.93
31.0	2.92
32.0	2.91
33.0	2.90
34.0	2.90
35.0	2.89
36.0	2.88
37.0	2.88
38.0	2.87
39.0	2.87
40.0	2.86



Appendix H

DUT Test Position Photos

Photos available in Exhibit 7B

Appendix I
DUT, Body worn and audio accessories Photos

Photos available in Exhibit 7B

Appendix J

150MHz Validation

According to KDB 865664 D01 section 3.5 system validation requirements in the 100MHz to 300MHz range, when the required dipole sources are unavailable, the 300 MHz dipole defined in IEEE Std 1528-2003 is used in conjunction with the procedures in section and 3.4.2 to perform SAR system validation and verification.

During the 2013 April TCBC Workshop FCC acknowledged that not all requirements could be satisfied as stated in sections 3.4.2 but for the labs to follow the process and document the results regardless.

The following data was recorded per the process stated in KDB 865664 D01 section 3.4.2. The established 150 MHz targets for head and body SAR in section 10.2 are the mean of the first five SAR results i.e. Head = 2.20 mW/g and Body = 2.16 mW/g.

300MHz Dipole # 1003 with ES probe 3096

BODY

Test #	Run #	CoC-SYSP-300B-131127-07; Lee-SYSP-150B-131127-08; 1-300MHz, 2-150MHz	Probe Cal Factor (300MHz)	Probe Cal Factor (150MHz)	Probe Cal Factor % Delta	Meas. Body Tissue (300MHz)		Meas. Body Tissue (150MHz)		Tissue % Delta		Dipole Return Loss (dB) @ 150MHz	Meas. 300MHz SAR (1g)	Meas. 150MHz SAR (1g)	Normaliz ed 1W/ 300MHz SAR (1g)	Normaliz ed 1W/ 150MHz SAR (1g)	SAR % Delta (between 300 & 150MHz)	SPEAG's Normalized 1W SAR (1g)	SAR % Delta Normalized 1g (Measured difference)	Comments						
						Er (perm)	h(ga (cor	Er (perm)	h(ga (cor	Er (perm)	h(ga (cor															
1	1	1-300MHz, 2-150MHz	3096	6.80	7.61	11.9%	55.7	0.89	53.5	0.79	6.8%	-11.2%	1003	0.684	0.538	2.74	2.15	-21.3%	2.93	-6.6%	Input power 250mW					
150 MHz System Performance																Meas. Body Tissue (150MHz)					Meas. 150MHz SAR (10g)		Rotation (dB)		Comments	
1	Lee-SYSP-150B-131127-08		53.5	0.79	0.538	2.15	0.367	1.47	150MHz Target (1g)	150MHz Target (10g)			0.055	Input power 250mW												
2	Lee-SYSP-150B-131127-09		53.5	0.79	0.542	2.17	0.368	1.47	150MHz Target (1g)	150MHz Target (10g)			0.100	Input power 250mW												
3	Lee-SYSP-150B-131127-10		53.5	0.79	0.538	2.15	0.366	1.46	150MHz Target (1g)	150MHz Target (10g)			0.120	Input power 250mW												
4	Lee-SYSP-150B-131127-11		53.5	0.79	0.538	2.15	0.368	1.47	150MHz Target (1g)	150MHz Target (10g)			0.110	Input power 250mW												
5	Lee-SYSP-150B-131127-12		53.5	0.79	0.545	2.18	0.372	1.49	150MHz Target (1g)	150MHz Target (10g)			0.110	Input power 250mW												
																Mean		Mean		Mean		Mean				
																Std dev		Std dev		Std dev		Std dev				
																Coeff. Vari		Coeff. Vari		Coeff. Vari		Coeff. Vari				