

**MOTOROLA SOLUTIONS**

CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2
Motorola Solutions Inc.
EME Test Laboratory

Motorola Solutions Malaysia Sdn Bhd (Innoplex)
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Date of Report: 10/17/2016
Report Revision: A

Responsible Engineer: Chang Chi Chern (EME Engineer)
Report Author: Chang Chi Chern (EME Engineer)
Date/s Tested: 10/6/2016; 10/10/2016
Manufacturer: Motorola Solutions Inc.
DUT Description: 36-174 MHz, 5W, 12.5/20/25 kHz, 2.402-2.480 GHz (Bluetooth), VHF NKP/FKP with GPS, GOB
Test TX mode(s): CW (PTT); BT (CW)
Max. Power output: 6.0 W (VHF); 10mW (BT)
Nominal Power: 5.0 W (VHF); 2.5mW (BT)
Tx Frequency Bands: LMR 136-174 MHz; Bluetooth 2.402-2.480 GHz;
Signaling type: FM (LMR), FHSS (Bluetooth)
Model(s) Tested: PMUD2904A & PMUD2906A
Model(s) Certified: PMUD2904A & PMUD2906A
Serial Number(s): 871TNH0220 & 807TNH0113 (GOB)
Classification: Occupational/Controlled
FCC ID: ABZ99FT3085; LMR 150.8-173.4 MHz, Bluetooth 2.402-2.480 GHz,
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC: 109AB-99FT3085; This report contains results that are immaterial for IC equipment approval, which are clearly identified.

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 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 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.

Tiong Nguk Ing
Deputy Technical Manager
Approval Date: 10/27/2016

Certification Date: 10/27/2016**Certification No.:** 161004AD

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/6/2016 8:38:01 AM

Robot#: DASY5-PG-1 | Run#: TLC-SYSP-150B-161006-05
 Dipole Model#: CLA-150
 Phantom#: ELI5 1150
 Tissue Temp: 20.9 (C)
 Serial#: 4016
 Test Freq: 150.00 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.10 dB
 Adjusted SAR (1 W): 4.20 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.8 \text{ S/m}$; $\epsilon_r = 59.9$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV4 - SN3612, , Frequency: 150 MHz, ConvF(9.42, 9.42, 9.42); Calibrated: 7/11/2016
 Electronics: DAE4 Sn684, Calibrated: 4/29/2016

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (81x81x1):Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 81.19 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 5.12 W/kg; SAR(10 g) = 3.6 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 6.30 W/kg

Below 2 GHz-Rev.2/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 81.19 V/m; Power Drift = -0.01 dB

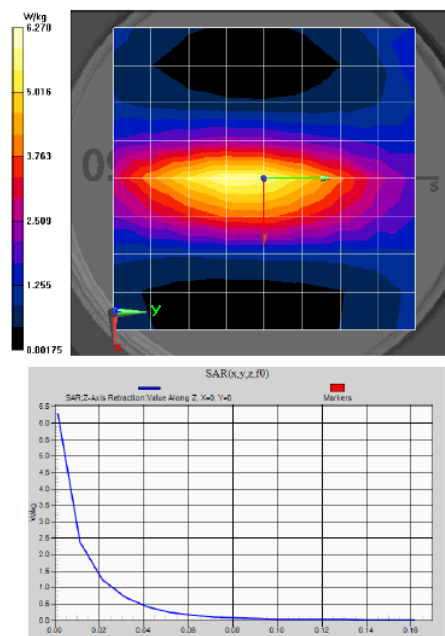
Peak SAR (extrapolated) = 7.81 W/kg

SAR(1 g) = 4.2 W/kg; SAR(10 g) = 2.68 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.16 W/kg

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

Maximum value of SAR (measured) = 6.27 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/10/2016 5:48:12 AM

Robot#: DASY5-PG-1 | Run#: TLC-SYSP-150H-161010-01
 Dipole Model#: CLA-150
 Phantom#: ELI4 1050
 Tissue Temp: 20.9 (C)
 Serial#: 4016
 Test Freq: 150.00 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.086 dB
 Adjusted SAR (1W): 3.92 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.78$ S/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN3612, , Frequency: 150 MHz, ConvF(9.9, 9.9, 9.9); Calibrated: 7/11/2016
 Electronics: DAE4 Sn684, Calibrated: 4/29/2016

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (81x81x1):Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 80.92 V/m; Power Drift = -0.06 dB

Fast SAR: SAR(1 g) = 4.78 W/kg; SAR(10 g) = 3.38 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.97 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 = 80.92 V/m; Power Drift = -0.06 dB

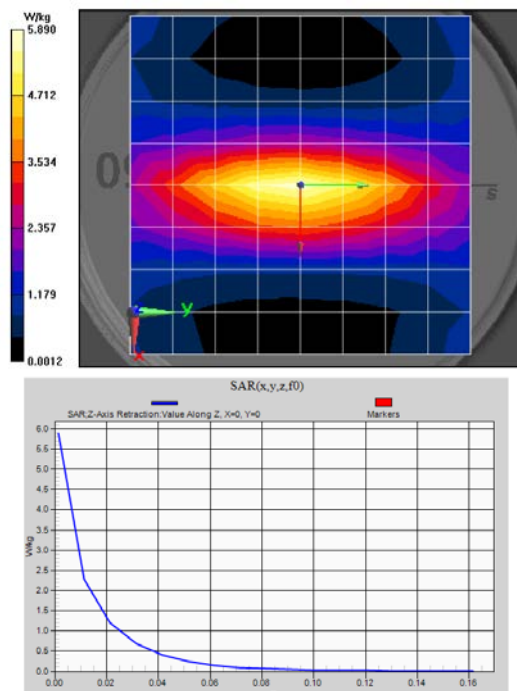
Peak SAR (extrapolated) = 7.32 W/kg

SAR(1 g) = 3.92 W/kg; SAR(10 g) = 2.51 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.88 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

Maximum value of SAR (measured) = 5.89 W/kg



Appendix E

DUT Scans

Assessments at the Body
Table 15
Motorola Solutions, Inc. EME Laboratory
Date/Time: 10/6/2016 9:19:04 PM

Robot#: DASY5-PG-1 | Run#: ZR-AB-161006-19
 Model#: PMUD2904A
 Phantom#: ELI5 1150
 Tissue Temp: 20.5 (C)
 Serial#: 871TNH0220
 Antenna: PMAD4118A
 Test Freq: 167.0000 (MHz)
 Battery: PMNN4525A
 Carry Acc: PMLN5838A/NTN5243A (Back to Phantom)
 Audio Acc: None
 Start Power: 5.36 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 167$ MHz; $\sigma = 0.81$ S/m; $\epsilon_r = 59.6$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN3612, , Frequency: 167 MHz, ConvF(9.42, 9.42, 9.42); Calibrated: 7/11/2016
 Electronics: DAE4 Sr684, Calibrated: 4/29/2016

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 64.13 V/m; Power Drift = -0.33 dB

Fast SAR: SAR(1 g) = 4.23 W/kg; SAR(10 g) = 3.03 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.15 W/kg

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

Reference Value = 64.13 V/m; Power Drift = -0.55 dB

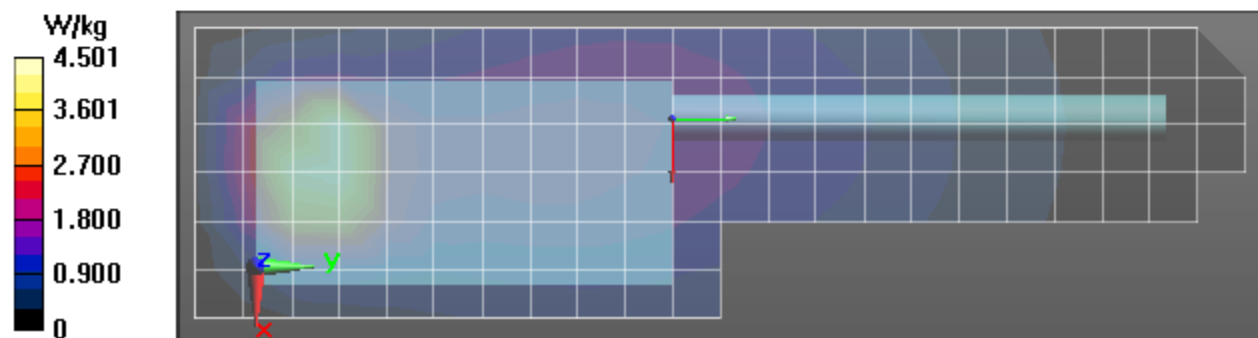
Peak SAR (extrapolated) = 7.63 W/kg

SAR(1 g) = 3.27 W/kg; SAR(10 g) = 1.9 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.13 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) = 5.07 W/kg



Assessments at the Face

Table 15

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/10/2016 1:39:43 PM

Robot#: DASY5-PG-1 | Run#: ZR-FACE-161010-10
 Model#: PMUD2906A
 Phantom#: ELI4 1050
 Tissue Temp: 20.9 (C)
 Serial#: 807TNH0113 (GOB)
 Antenna: PMAD4117A
 Test Freq: 150.8000 (MHz)
 Battery: PMNN4525A
 Carry Acc: None
 Audio Acc: None
 Start Power: 5.56 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 151$ MHz; $\sigma = 0.78$ S/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³
 Probe: EX3DV 4 - SN3612, , Frequency: 150.8 MHz, ConvF(9.9, 9.9, 9.9); Calibrated: 7/11/2016
 Electronics: DAE4 Sn684, Calibrated: 4/29/2016

Below 2 GHz-Rev.2/FACE Scan/1-Area Scan (61x251x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 54.42 V/m; Power Drift = -0.41 dB

Fast SAR: SAR(1 g) = 2 W/kg; SAR(10 g) = 1.54 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.30 W/kg

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

Reference Value = 54.42 V/m; Power Drift = -0.53 dB

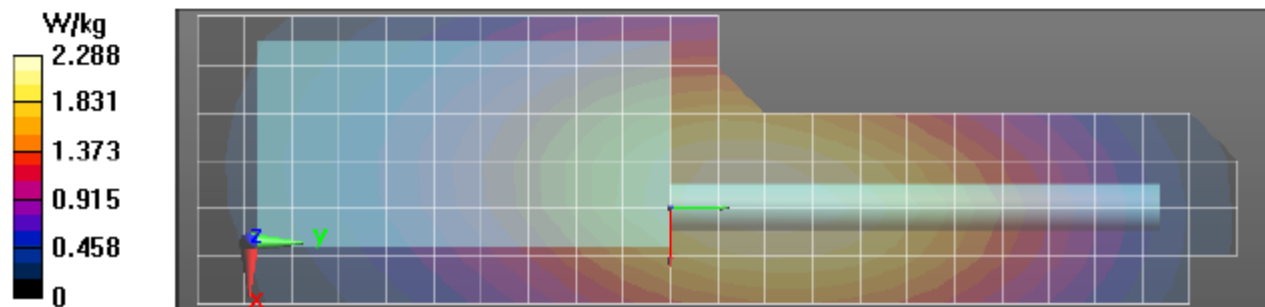
Peak SAR (extrapolated) = 2.53 W/kg

SAR(1 g) = 1.85 W/kg; SAR(10 g) = 1.43 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.17 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) = 2.15 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Table 17

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/10/2016 3:20:16 PM

Robot#: DASY3-PG-1 | Run#: ZR-FACE-161010-12
 Model#: PMUD2906A
 Phantom#: ELI4 1050
 Tissue Temp: 20.7 (C)
 Serial#: 807TNH0113 (GOB)
 Antenna: PMAD4117A
 Test Freq: 150.8000 (MHz)
 Battery: PMNN4525A
 Carry Acc: None
 Audio Acc: None
 Start Power: 5.54 (W)

Comments: Shorten Scan

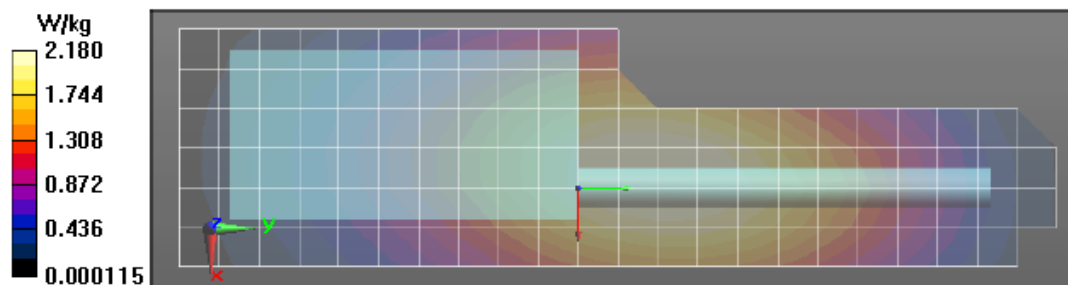
Duty Cycle: 1:1, Medium parameters used: $f = 151 \text{ MHz}$; $\sigma = 0.78 \text{ S/m}$; $\epsilon_r = 50.7$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV 4 - SN3612, Frequency: 150.8 MHz, ConvF(9.9, 9.9, 9.9); Calibrated: 7/11/2016
 Electronics: DAE4 Sn684, Calibrated: 4/29/2016

Below 2 GHz-Rev.2/FACE Scan/1-Area Scan (61x251x1): Interpolated grid: $dx=1.500 \text{ mm}$,
 $dy=1.500 \text{ mm}$
 Reference Value = 54.59 V/m; Power Drift = -0.42 dB
Fast SAR: SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.55 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 2.31 W/kg

Below 2 GHz-Rev.2/FACE Scan/2-Volume 2D Scan (41x41x1): Interpolated grid: $dx=0.7500 \text{ mm}$,
 $dy=0.7500 \text{ mm}$, $dz=1.000 \text{ mm}$
 Reference Value = 54.59 V/m; Power Drift = -0.48 dB
Fast SAR: SAR(1 g) = 1.83 W/kg; SAR(10 g) = 1.39 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 2.02 W/kg

Below 2 GHz-Rev.2/FACE Scan/3-Zoom Scan (6x5x7)/Cube 0: Measurement grid:
 $dx=7.5 \text{ mm}$, $dy=7.5 \text{ mm}$, $dz=5 \text{ mm}$
 Reference Value = 53.65 V/m; Power Drift = -0.25 dB
 Peak SAR (extrapolated) = 2.79 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.58 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 2.39 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) = 2.18 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)	16	8	1.17	0.91
Full scan (area & zoom)	15	25	1.13	0.87

APPENDIX G

DUT Test Position Photos

Body (Highest SAR configuration)

DUT w/ antenna PMAD4118A with new offered battery PMNN4525A and body worn accessory PMLN5838A/NNTN5243A against the phantom again phantom without an audio accessory.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4118A	0	54	98

Face (Highest SAR configuration)

DUT with front side separated 2.5cm from phantom with antenna PMAD4117A and battery PMNN4525A.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4117A	26	37	44

APPENDIX H

Battery photo



New offered battery PMNN4525A

For photos of other previously approved accessories please refer to previous filing report.