



CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT PCII Report Part 2 of 2

Motorola Solutions Inc.**EME Test Laboratory**

Motorola Solutions Malaysia Sdn Bhd

Plot 2A, Medan Bayan Lepas,

Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.

Date of Report: 04/21/2020**Report Revision:** A**Responsible Engineer:**

Ch'ng Jian Sheng & Lee Kin Kting

Report Author:

Lee Kin Kting

Date/s Tested:

09/27/2019-28/09/2019, 12/29/2019, 31/12/2019, 1/ 17/01/2020, 03/29/2020, 04/07/2020, 04/12/2020

Manufacturer:

Motorola Solutions Inc.

DUT Description:Handheld Portable - 136-174MHz, 1-5W, 12.5, 20, 25kHz, limited keypad, display, GPS, WiFi
136-174MHz, 1-5W, 12.5, 20, 25kHz, full keypad, display, GPS, WiFi**Test TX mode(s):**

CW (PTT), Bluetooth, and WLAN 802.11b/g/n

Max. Power output:

5.90 W (136-174MHz), 10 mW (Bluetooth), 10 mW (Bluetooth LE), 22.4 mW (802.11b), 8.3 mW (802.11g), 12.6 mW (802.11n)

Nominal Power:

5.00 W (380-480MHz), 8.9 mW (Bluetooth), 8.9 mW (Bluetooth LE), 16.6 mW (802.11b), 6.6 mW (802.11g), 10 mW (802.11n)

Tx Frequency Bands:

LMR 136-174 MHz; Bluetooth 2402-2480 MHz; WLAN 2412-2462 MHz

Signaling type:

FM (LMR), FHSS (Bluetooth), 802.11b/g/n (WLAN)

Model(s) Tested:

H92KDF9PW6AN, H92KDH9PW7AN

Model(s) Certified:

H92KDF9PW6AN, H92KDH9PW7AN, H93KDH9PW7AN

Serial Number(s):

837TTR5079, 837CTF0767, 837CTF0785

Classification:

Occupational/Controlled

Applicant Name:

Motorola Solutions Inc.

Applicant Address:

8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322

Classification:

Occupational/Controlled

FCC ID:

AZ489FT7098; LMR 150.8 – 173.4 MHz, Bluetooth 2.402-2.480 GHz, WLAN 802.11 b/g/n 2.412-2.462 GHz

FCC Test Firm Registration Number: 823256

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 FCC 47 CFR § 2.1093.

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 (no deviation from standard methods). 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 (Approved Signatory)****Approval Date:** 4/24/2020

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/27/2019 12:07:31 AM

Robot#: DASY5-PG-4 | Run#: AM-SYSP-150H-190927-01#
 Dipole Model#: CLA150
 Phantom#: ELI4 1109
 Tissue Temp: 20.9 (C)
 Serial#: 4005
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.12 dB
 Adjusted SAR (1W): 3.94 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7485, Calibrated: 1/23/2019, Frequency: 150 MHz, ConvF(14.29, 14.29, 14.29) @ 150 MHz
 Electronics: DAE4 Sn688, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (81x81x1):

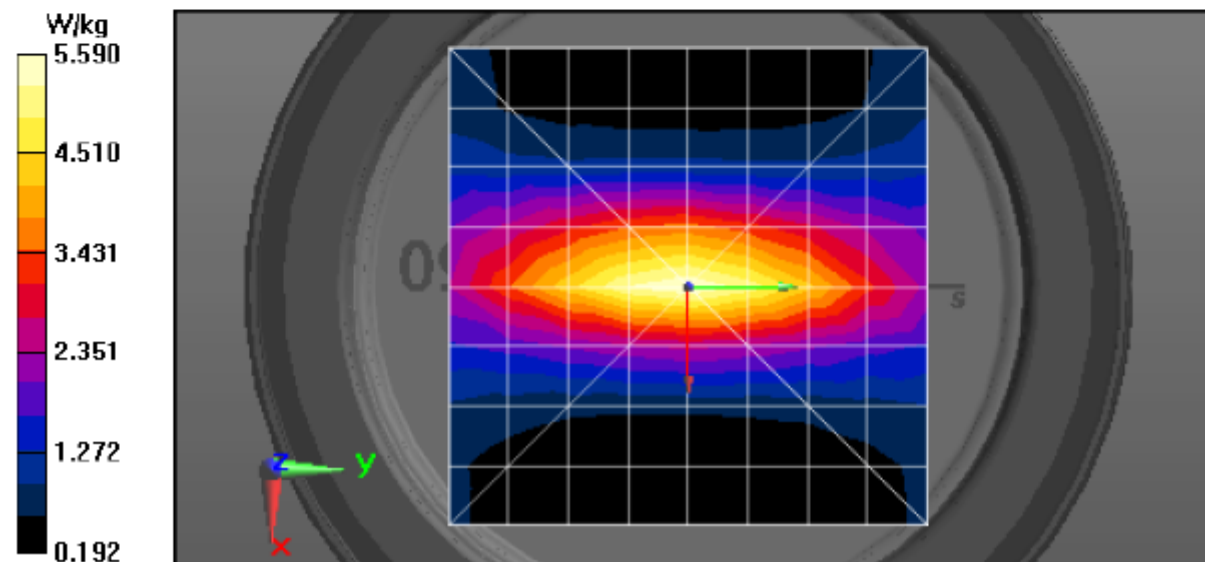
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 85.31 V/m; Power Drift = -0.02 dB
 Fast SAR: SAR(1 g) = 4.63 W/kg; SAR(10 g) = 3.3 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 5.76 W/kg

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 = 85.31 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 6.97 W/kg
 SAR(1 g) = 3.94 W/kg; SAR(10 g) = 2.59 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 5.71 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) = 5.69 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/29/2019 10:10:51 AM

Robot#: DASY5-PG-1 | Run#: AM-SYSP-150H-191229-01
Dipole Model#: CLA150
Phantom#: ELI4 1109
Tissue Temp: 22.1 (C)
Serial#: 4005
Test Freq: 150.000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.2 dB
Adjusted SAR (1W): 4.12 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.77$ S/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 150 MHz, ConvF(13.81, 13.81, 13.81) @ 150 MHz
Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

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

Reference Value = 88.47 V/m; Power Drift = -0.07 dB

Fast SAR: SAR(1 g) = 4.86 W/kg; SAR(10 g) = 3.45 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.98 W/kg

Below 2 GHz-Rev.3/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

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

Reference Value = 88.47 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 7.49 W/kg

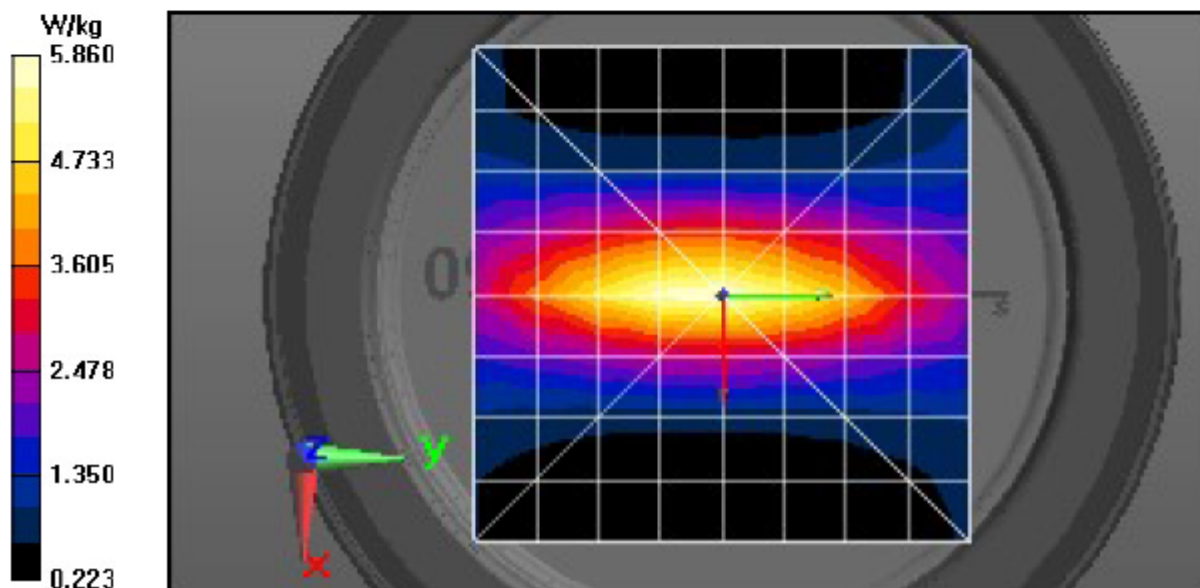
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 2.68 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.03 W/kg

Below 2 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement

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

Maximum value of SAR (measured) = 6.05 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 1/16/2020 2:44:18 AM

Robot#: DASY5-PG-1 | Run#: ZZ-SYSP-150H-200116-04#
 Dipole Model#: CLA150
 Phantom#: ELI4 1109
 Tissue Temp: 21.3 (C)
 Serial#: 4005
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.20 dB
 Adjusted SAR (1W): 4.09 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.72 \text{ S/m}$; $\epsilon_r = 52.9$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 150 MHz, ConvF(13.81, 13.81, 13.81) @ 150 MHz
 Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

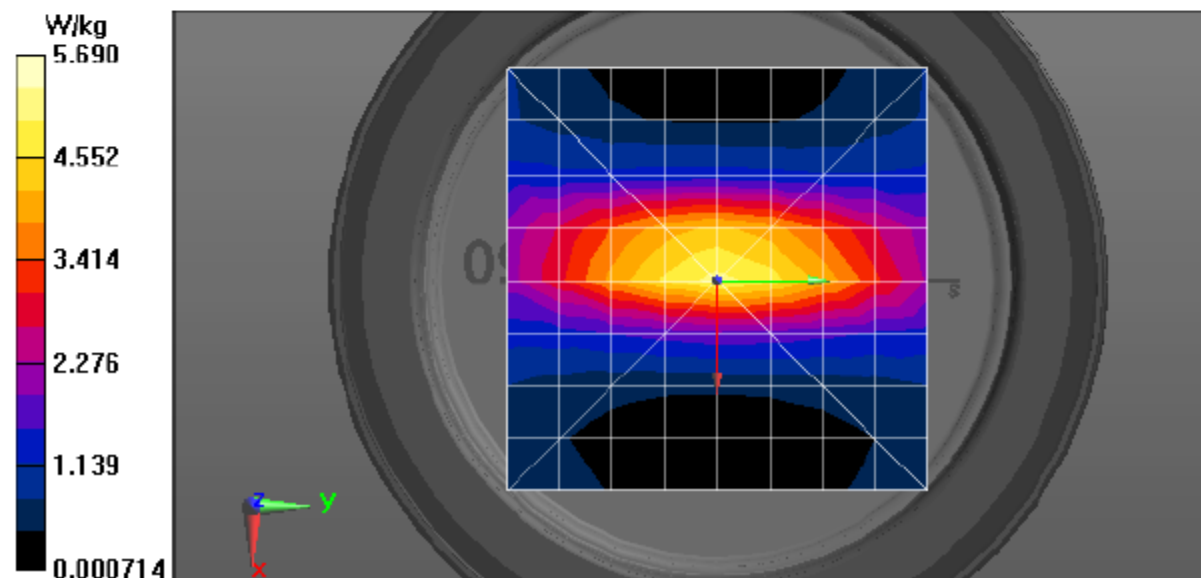
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Reference Value = 88.87 V/m; Power Drift = -0.07 dB
 Fast SAR: SAR(1 g) = 4.86 W/kg; SAR(10 g) = 3.44 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 5.68 W/kg

Below 2 GHz-Rev.3/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 = 88.87 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 7.00 W/kg
 SAR(1 g) = 4.09 W/kg; SAR(10 g) = 2.65 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 5.65 W/kg

Below 2 GHz-Rev.3/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) = 5.69 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/27/2019 11:26:56 PM

Robot#: DASY5-PG-4 | Run#: BL-SYSP-150B-190927-15
 Dipole Model#: CLA150
 Phantom#: ELI4 1022
 Tissue Temp: 21.7 (C)
 Serial#: 4005
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.1 dB
 Adjusted SAR (1W): 4.12 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.78$ S/m; $\epsilon_r = 59.2$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7485, Calibrated: 1/23/2019, Frequency: 150 MHz, ConvF(13.55, 13.55, 13.55) @ 150 MHz
 Electronics: DAE4 Sn688, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (81x81x1):

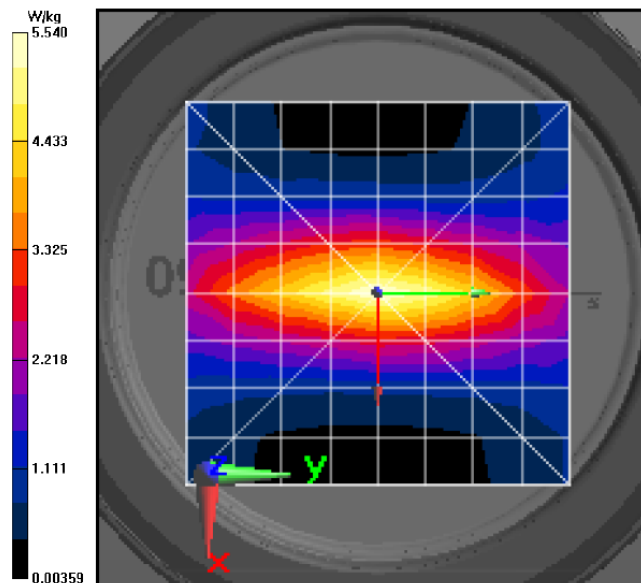
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 85.46 V/m; Power Drift = 0.01 dB
 Fast SAR: SAR(1 g) = 4.68 W/kg; SAR(10 g) = 3.32 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 5.61 W/kg

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 = 85.46 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 6.46 W/kg
 SAR(1 g) = 4.12 W/kg; SAR(10 g) = 2.77 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 5.50 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) = 5.54 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/30/2019 11:34:46 PM

Robot#: DASY5-PG-1 | Run#: AM-SYSP-150B-191230-10
 Dipole Model#: CLA150
 Phantom#: ELI4 1016
 Tissue Temp: 22.5 (C)
 Serial#: 4005
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.18 dB
 Adjusted SAR (1W): 4.13 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.78$ S/m; $\epsilon_r = 58.9$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 150 MHz, ConvF(13.5, 13.5, 13.5) @ 150 MHz
 Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

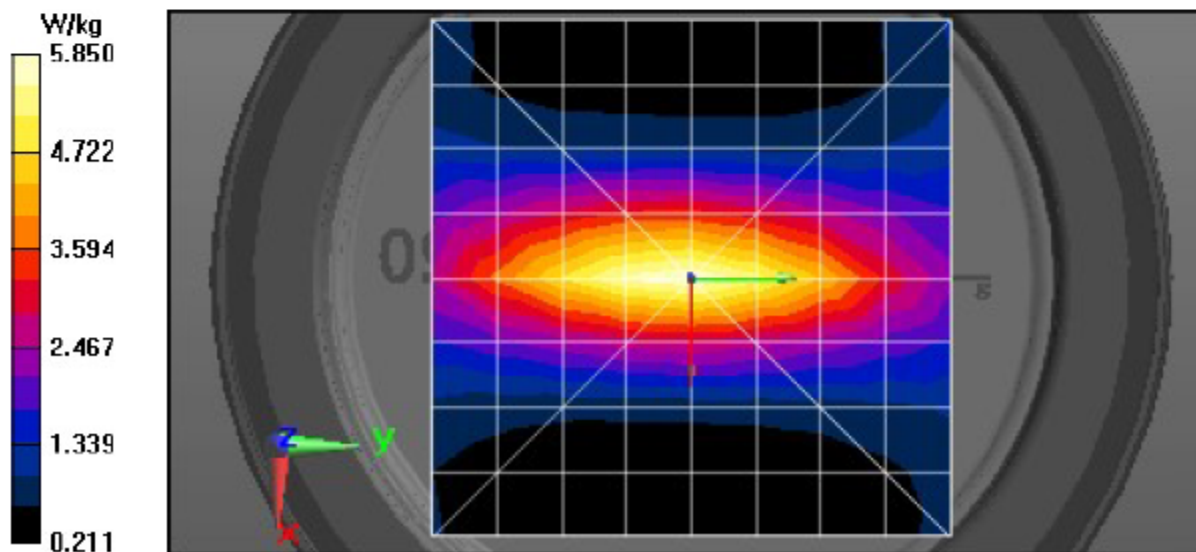
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 87.57 V/m; Power Drift = -0.13 dB
 Fast SAR: SAR(1 g) = 4.93 W/kg; SAR(10 g) = 3.5 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 5.94 W/kg

Below 2 GHz-Rev.3/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 87.57 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 7.28 W/kg
 SAR(1 g) = 4.13 W/kg; SAR(10 g) = 2.7 W/kg (SAR corrected for target medium)
 Maximum value of SAR (measured) = 5.88 W/kg

Below 2 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement

grid: $dx=20$ mm, $dy=20$ mm, $dz=10$ mm
 Maximum value of SAR (measured) = 5.91 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/16/2020 11:52:59 AM

Robot#: DASY5-PG-3 | Run#: FAZ-SYSP-150B-200116-03
 Dipole Model#: CLA150
 Phantom#: ELI4 1016
 Tissue Temp: 19.6 (C)
 Serial#: 4005
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.071 dB
 Adjusted SAR (1W): 4.11 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.76$ S/m; $\epsilon_r = 60$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7486, Calibrated: 10/24/2019, Frequency: 150 MHz, ConvF(13.04, 13.04, 13.04) @ 150 MHz
 Electronics: DAE4 Sn850, Calibrated: 10/16/2019

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

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

Reference Value = 85.97 V/m; Power Drift = 0.05 dB

Fast SAR: SAR(1 g) = 4.84 W/kg; SAR(10 g) = 3.43 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.72 W/kg

Below 2 GHz-Rev.3/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

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

Reference Value = 85.97 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 6.90 W/kg

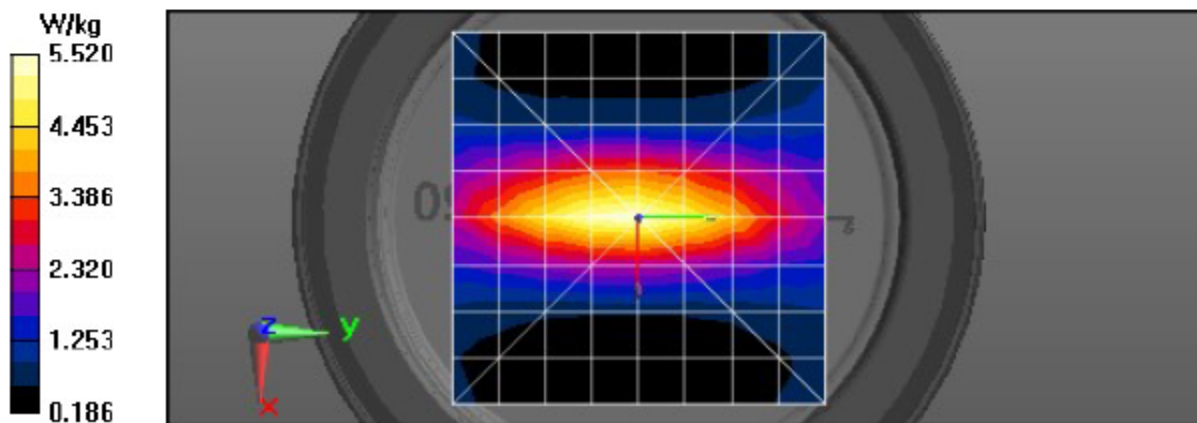
SAR(1 g) = 4.11 W/kg; SAR(10 g) = 2.69 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.65 W/kg

Below 2 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement

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

Maximum value of SAR (measured) = 5.65 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/29/2020 4:19:54 AM

Robot#: DASY5-PG-4 | Run#: BL-SYSP-150B-200329-03
 Dipole Model#: CLA150
 Phantom#: ELI4 1016
 Tissue Temp: 20.7 (C)
 Serial#: 4016
 Test Freq: 150.0000 (MHz)
 Start Power: 1000 (mW)
 Rotation (1D): 0.2 dB
 Adjusted SAR (1W): 4.16 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.79 \text{ S/m}$; $\epsilon_r = 61.2$; $\rho = 1000 \text{ kg/m}^3$

Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 150 MHz, ConvF(11.72, 11.72, 11.72) @ 150 MHz

Electronics: DAE4 Sn729, Calibrated: 10/16/2019

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 86.08 V/m; Power Drift = -0.08 dB

Fast SAR: SAR(1 g) = 4.94 W/kg; SAR(10 g) = 3.5 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.99 W/kg

Below 2 GHz-Rev.3/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 = 86.08 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 7.16 W/kg

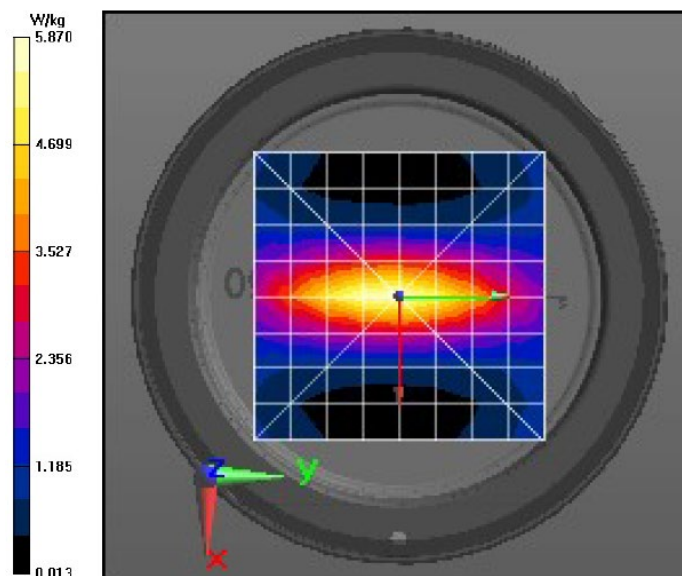
SAR(1 g) = 4.16 W/kg; SAR(10 g) = 2.7 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.86 W/kg

Below 2 GHz-Rev.3/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) = 5.87 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/6/2020 9:10:11 PM

Robot#: DASY5-PG-4 | Run#: ZZ(MA)-SYSP-2450H-200406-11
 Dipole Model#: D2450V2
 Phantom#: ELI4 1028
 Tissue Temp: 20.5 (C)
 Serial#: 703
 Test Freq: 2450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.200 dB
 Adjusted SAR (1W): 52.00 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 2450$ MHz; $\sigma = 1.88$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2450 MHz, ConvF(7.06, 7.06, 7.06) @ 2450 MHz
 Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 111.7 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.35 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 22.3 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

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

Reference Value = 111.7 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 27.1 W/kg

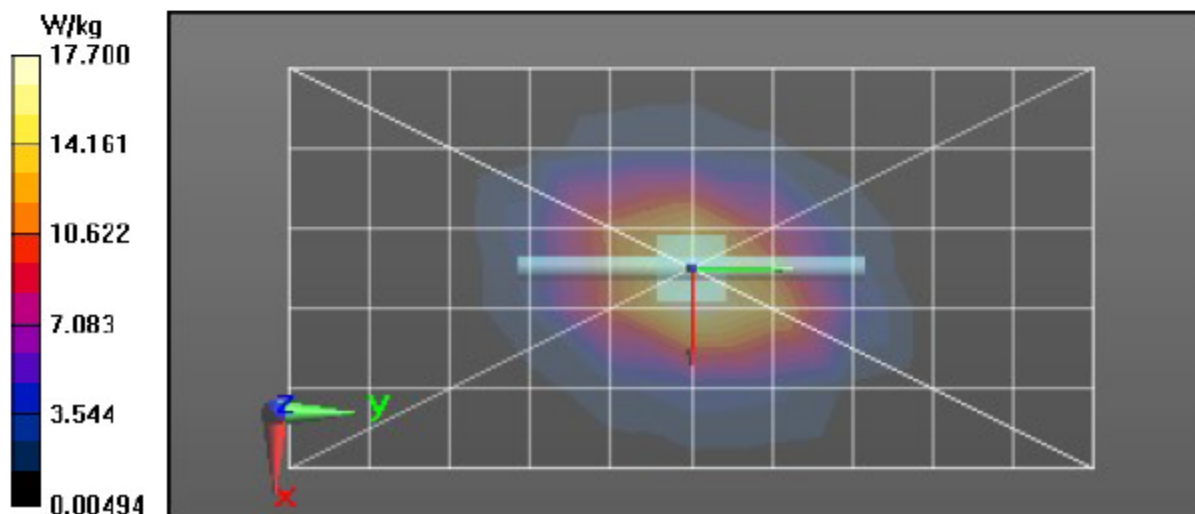
SAR(1 g) = 13 W/kg; SAR(10 g) = 5.99 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 21.8 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

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

Maximum value of SAR (measured) = 21.9 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/12/2020 11:10:58 AM

Robot#: DASY5-PG-4 | Run#: NZ-SYSP-2450H-200412-06#
 Dipole Model#: D2450V2
 Phantom#: ELI4 1108
 Tissue Temp: 21.4 (C)
 Serial#: 703
 Test Freq: 2450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.18 dB
 Adjusted SAR (1W): 50.40 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 2450$ MHz; $\sigma = 1.89$ S/m; $\epsilon_r = 37.3$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2450 MHz, ConvF(7.06, 7.06, 7.06) @ 2450 MHz

Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

grid: $dx=1.200$ mm, $dy=1.200$ mm

Reference Value = 111.4 V/m; Power Drift = -0.05 dB

Fast SAR: SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.25 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 22.3 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 111.4 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 27.0 W/kg

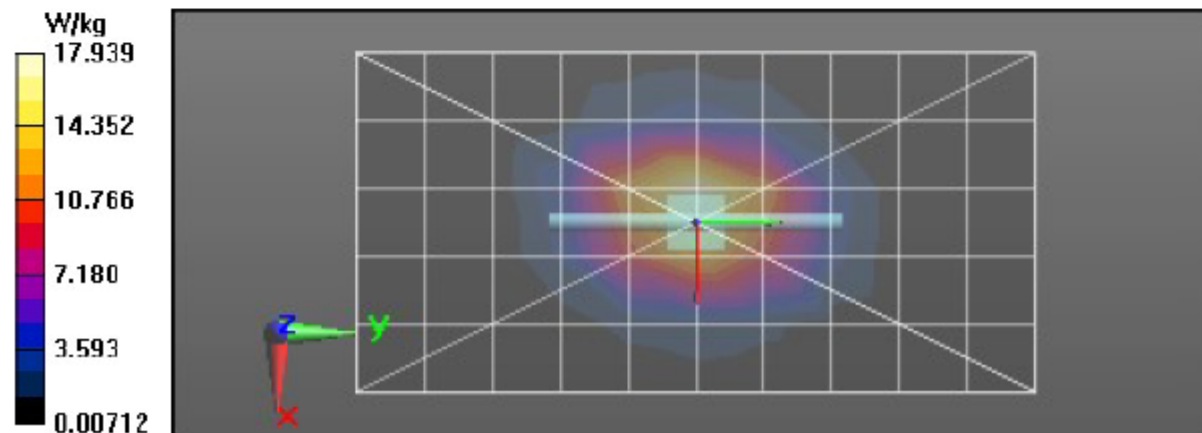
SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.92 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 21.8 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

$dx=20$ mm, $dy=20$ mm, $dz=10$ mm

Maximum value of SAR (measured) = 21.9 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/7/2020 10:40:57 AM

Robot#: DASY5-PG-4 | Run#: NZ-SYSP-2450B-200407-06
Dipole Model#: D2450V2
Phantom#: ELI4 1028
Tissue Temp: 20.9 (C)
Serial#: 703
Test Freq: 2450.000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.22 dB
Adjusted SAR (1W): 48.00 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ S/m; $\epsilon_r = 50.5$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2450 MHz, ConvF(6.97, 6.97, 6.97) @ 2450 MHz
Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 103.5 V/m; Power Drift = 0.02 dB

Fast SAR: SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.64 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 20.9 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

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

Reference Value = 103.5 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 25.0 W/kg

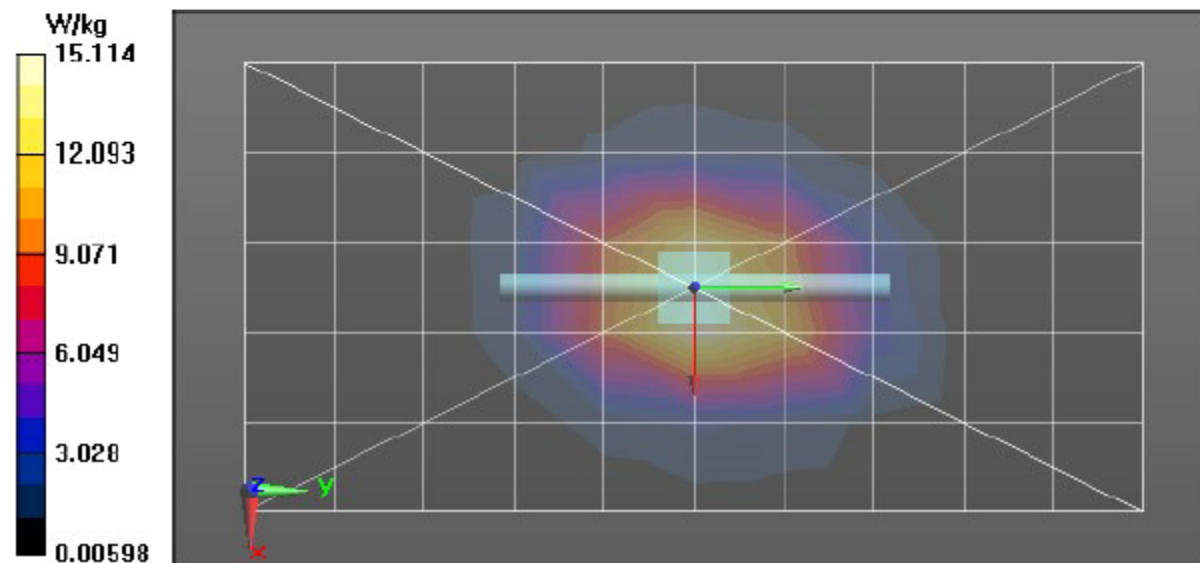
SAR(1 g) = 12 W/kg; SAR(10 g) = 5.66 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 20.4 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

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

Maximum value of SAR (measured) = 20.6 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/12/2020 1:55:26 AM

Robot#: DASY5-PG-4 | Run#: ZZ(MA)-SYSP-2450B-200412-01
 Dipole Model#: D2450V2
 Phantom#: ELI4 1108
 Tissue Temp: 20.5 (C)
 Serial#: 703
 Test Freq: 2450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.210 dB
 Adjusted SAR (1W): 48.00 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2450 MHz, ConvF(6.97, 6.97, 6.97) @ 2450 MHz
 Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 104.6 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.65 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 21.0 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

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

Reference Value = 104.6 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 25.0 W/kg

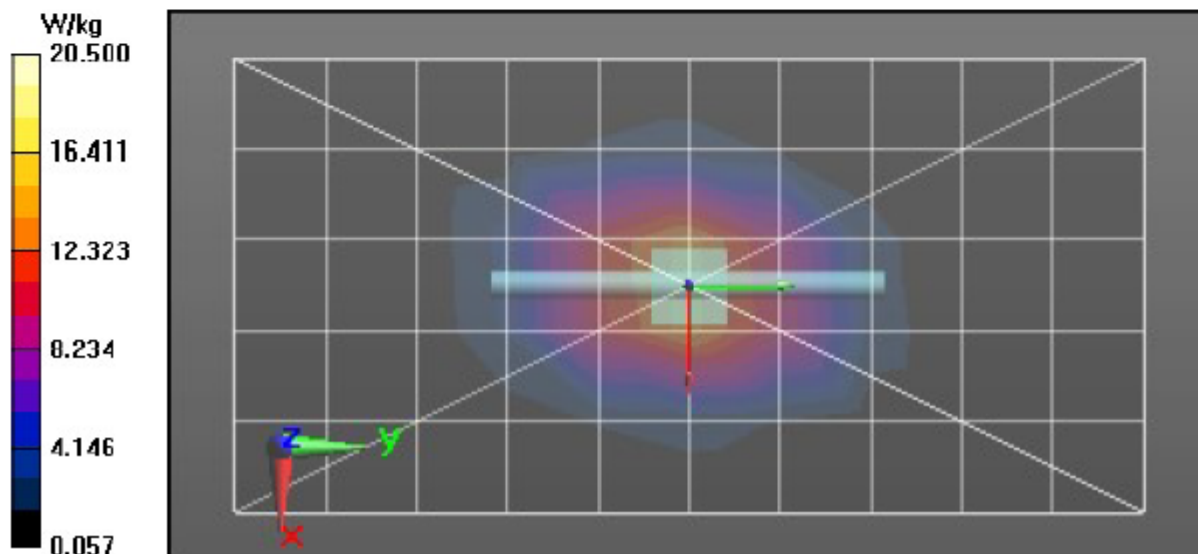
SAR(1 g) = 12 W/kg; SAR(10 g) = 5.65 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 20.5 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

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

Maximum value of SAR (measured) = 20.5 W/kg



Appendix E

DUT Scans

Assessment for LMR FCC Body Configuration - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/31/2019 2:34:41 AM

Robot#: DASY5-PG-1 | Run#: AM-AB-191231-03#
 Model#: H92KDH9PW7AN (PMUD3432A)
 Phantom#: ELI4 1016
 Tissue Temp: 22.5 (C)
 Serial#: 837CTF0767
 Antenna: PMAD4088B
 Test Freq: 166.7000 (MHz)
 Battery: PMNN4491C
 Carry Acc: PMLN7008A
 Audio Acc: None
 Start Power: 5.18 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 167$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 58.5$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 166.7 MHz, ConvF(13.5, 13.5, 13.5) @ 166.7 MHz
 Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x261x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 45.24 V/m; Power Drift = -0.72 dB

Fast SAR: SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.31 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.56 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 45.24 V/m; Power Drift = -0.81 dB

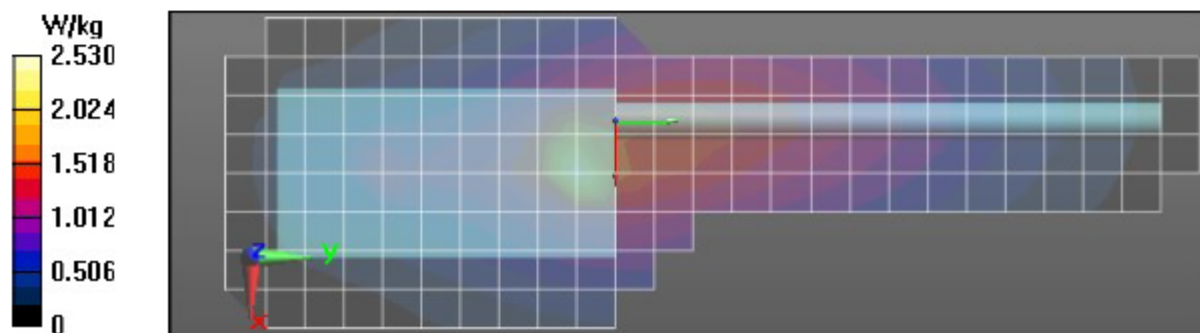
Peak SAR (extrapolated) = 3.65 W/kg

SAR(1 g) = 1.55 W/kg; SAR(10 g) = 0.981 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.55 W/kg

Below 2 GHz-Rev.3/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 2.59 W/kg



Assessment for LMR FCC Face Configuration - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/29/2019 1:31:41 PM

Robot#: DASY5-PG-1 | Run#: AM-FACE-191229-05
 Model#: H92KDF9PW6AN (PMUD3431B)
 Phantom#: ELI4 1109
 Tissue Temp: 22.1 (C)
 Serial#: 837TTR5079
 Antenna: PMAD4095A
 Test Freq: 173.4000 (MHz)
 Battery: PMNN4491C
 Carry Acc: @ front
 Audio Acc: None
 Start Power: 5.18 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 173$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 173.4 MHz, ConvF(13.81, 13.81, 13.81) @ 173.4 MHz
 Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (81x261x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 47.10 V/m; Power Drift = -0.64 dB

Fast SAR: SAR(1 g) = 1.38 W/kg; SAR(10 g) = 1.06 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.64 W/kg

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

Reference Value = 47.10 V/m; Power Drift = -0.73 dB

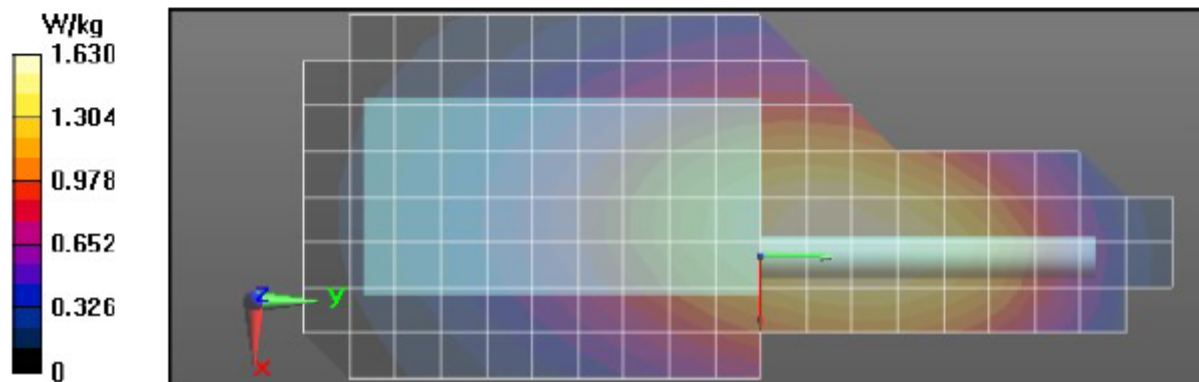
Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.931 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.57 W/kg

Below 2 GHz-Rev.3/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 1.56 W/kg



Assessment for WiFi 2.4G Hz FCC Body Configuration - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/12/2020 9:58:56 AM

Robot#: DASY5-PG-4 | Run#: NZ-AB-200412-05
 Model#: PMUD3432A
 Phantom#: ELI4 1108
 Tissue Temp: 21.6 (C)
 Serial#: 837CTF0767
 Antenna: AN000151A01 WiFi Ant
 Test Freq: 2437.0000 (MHz)
 Battery: NNTN8128C
 Carry Acc: PMLN4651A
 Audio Acc: None
 Start Power: 0.0260 (W)

Comments:

Communication System Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz), Communication System UID: 10415 - AAA, Duty Cycle: 1:1.42561,

Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ S/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2437 MHz, ConvF(6.97, 6.97, 6.97) @ 2437 MHz

Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/Ab Scan/1-Area Scan (101x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 2.188 V/m; Power Drift = -0.79 dB

Fast SAR: SAR(1 g) = 0.00809 W/kg; SAR(10 g) = 0.00238 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.0203 W/kg

2-3 GHz-Rev.3/Ab Scan/3-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.188 V/m; Power Drift = 0.12 dB

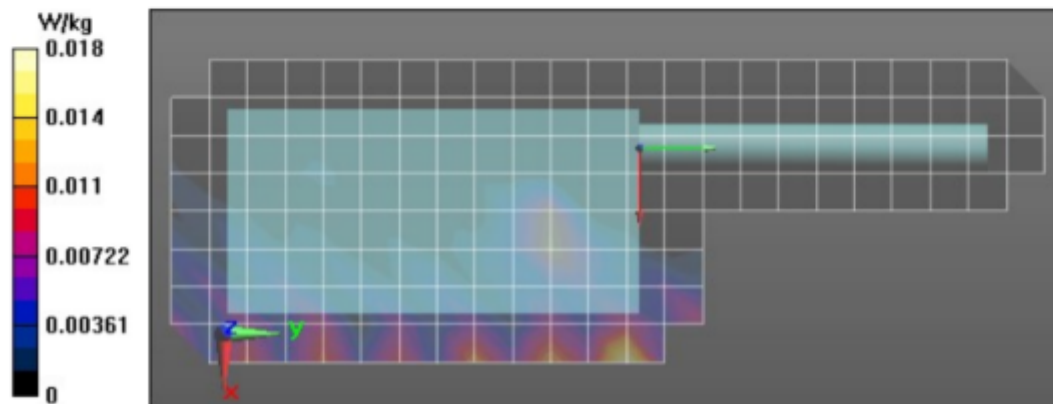
Peak SAR (extrapolated) = 0.0180 W/kg

SAR(1 g) = 0.00912 W/kg; SAR(10 g) = 0.0031 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.0154 W/kg

2-3 GHz-Rev.3/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.0134 W/kg



Assessment for WiFi 2.4G Hz FCC Face Configuration - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/7/2020 1:11:38 AM

Robot#: DASY5-PG-4 | Run#: ZZ(MA)-FACE-200407-01#
 Model#: H92KDF9PW6AN (PMUD3431A)
 Phantom#: ELI4 1028
 Tissue Temp: 21.1 (C)
 Serial#: 837CTF0785
 Antenna: AN000151A01 WiFi Ant
 Test Freq: 2437.0000 (MHz)
 Battery: PMNN4491C
 Carry Acc: Radio @ Front
 Audio Acc: None
 Start Power: 0.0193 (W)

Comments:

Communication System Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz), Communication System UID: 10415 - AAA, Duty Cycle: 1:1.42561,

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 2437 MHz, ConvF(7.06, 7.06, 7.06) @ 2437 MHz

Electronics: DAE4 Sn729, Calibrated: 10/16/2019

2-3 GHz-Rev.3/Face Scan/1-Area Scan (91x231x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 4.487 V/m; Power Drift = 0.07 dB

Fast SAR: SAR(1 g) = 0.029 W/kg; SAR(10 g) = 0.017 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.0423 W/kg

2-3 GHz-Rev.3/Face Scan/3-Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.487 V/m; Power Drift = 0.10 dB

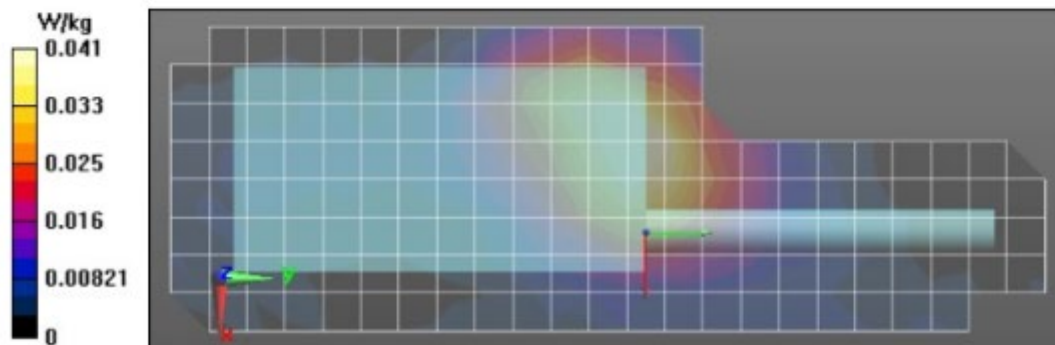
Peak SAR (extrapolated) = 0.0540 W/kg

SAR(1 g) = 0.028 W/kg; SAR(10 g) = 0.014 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.0430 W/kg

2-3 GHz-Rev.3/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.0420 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Assessment - Table 17

Motorola Solutions, Inc. EME Laboratory

Date/Time: 3/29/2020 11:37:31 AM

Robot#: DASY5-PG-4 | Run#: ZR-AB-200329-06
 Model#: H92KDH9PW7AN (PMUD3432A)
 Phantom#: ELI4 1016
 Tissue Temp: 20.0 (C)
 Serial#: 837CTF0767
 Antenna: PMAD4088B
 Test Freq: 166.7000 (MHz)
 Battery: PMNN4491C
 Carry Acc: PMLN7008A
 Audio Acc: None
 Start Power: 5.16 (W)

Comments: Shorten Scan

Duty Cycle: 1:1, Medium parameters used: $f = 167 \text{ MHz}$; $\sigma = 0.8 \text{ S/m}$; $\epsilon_r = 60.7$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 166.7 MHz, ConvF(11.72, 11.72, 11.72) @ 166.7 MHz
 Electronics: DAE4 Sn729, Calibrated: 10/16/2019

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (91x261x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 45.28 V/m; Power Drift = -0.52 dB

Fast SAR: SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.39 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.75 W/kg

Below 2 GHz-Rev.3/Ab 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 = 45.28 V/m; Power Drift = -0.56 dB

Fast SAR: SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.35 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.77 W/kg

Below 2 GHz-Rev.3/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 = 54.86 V/m; Power Drift = 0.11 dB

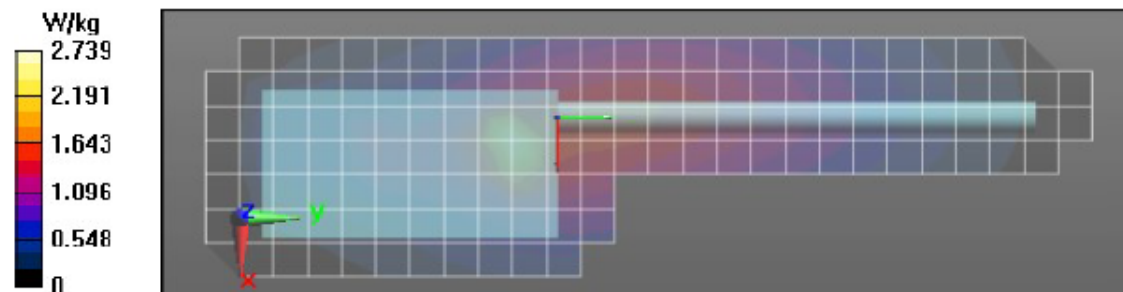
Peak SAR (extrapolated) = 3.98 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.71 W/kg

Below 2 GHz-Rev.3/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) = 2.72 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)
Shorten scan (zoom)	17	8	0.99
Full scan (area & zoom)	16	25	1.06

APPENDIX G

DUT Test Position Photos

1.0 Highest SAR Test Position per body location

1.1 Body

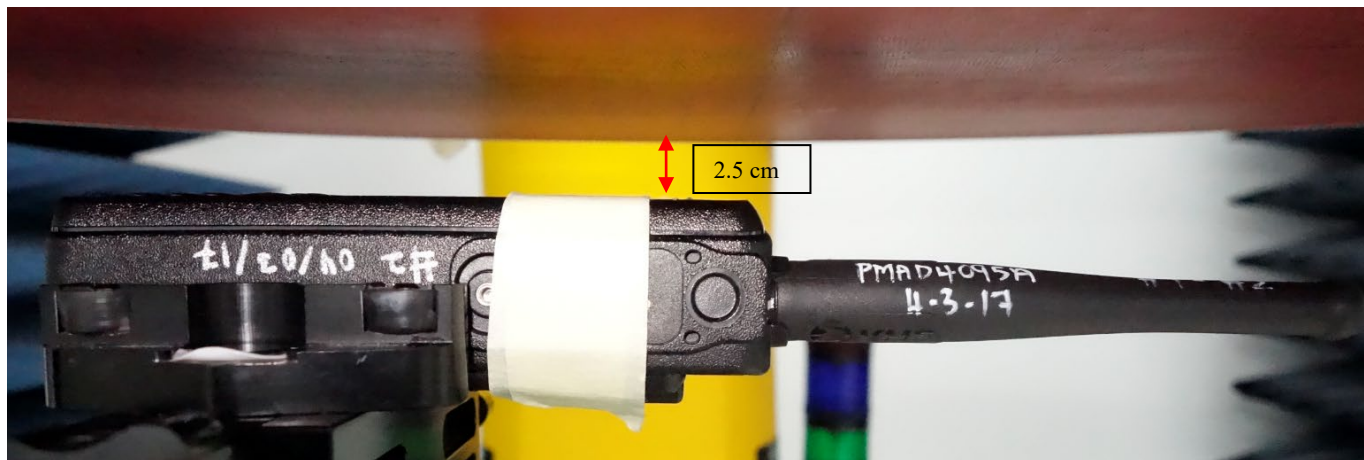
DUT with antenna PMAD4088B, new offered battery PMNN4491C and body worn PMLN7008A positioned against the phantom without audio accessory attached. Same position applied to battery PMNN4448B and NNTN8128C.



Antenna kit #	Batteries	Separation Distances (mm)		
		@ bottom surface of DUT	@ base of antenna	@ tip of antenna
PMAD4088B	PMNN4448B	8	33	60
	NNTN8128C	8	27	55
	PMNN4491C	8	27	55

1.2 Face

Front of DUT with antenna PMAD4095A and new offered battery PMNN4491C separated 2.5cm from the phantom without an audio accessory attached. Same position applied to battery PMNN4448B and NNTN8128C.



Antenna kit #	Batteries	Separation Distances (mm)		
		@ bottom surface of DUT	@ base of antenna	@ tip of antenna
PMAD4095A	PMNN4448B	26	37	42
	NNTN8128C			
	PMNN4491C			

APPENDIX H

Battery Photo



Front view



side view



Back view

New offered battery PMNN4448B



Front view



Side view



Back view

New offered battery NNTN8128C



Front view



side view



Back view

New offered battery PMNN4491C

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