



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,
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Date of Report: 04/11/2020
Report Revision: A

Responsible Engineer: Ch'ng Jian Sheng
Report Author: Ch'ng Jian Sheng
Date/s Tested: 09/27/2019 - 09/28/2019, 10/21/2019 - 10/22/2019, 10/24/2019, 11/17/2019, 12/29/2019 - 12/31/2019, 01/13/2020, 01/16/2020 - 01/17/2020, 03/29/2020 - 03/30/2020, 04/05/2020, 04/11/2020
Manufacturer: Motorola Solutions Inc.
DUT Description: Handheld Portable - 136-174MHz, 5W rated power, 6.25kHz/12.5kHz/25kHz, Capable of digital and analog FM transmission. Also capable of TDMA transmission.
Test TX mode(s): CW (PTT)
Max. Power output: 5.9W
Nominal Power: 5.0W
Tx Frequency Bands: 136-174MHz
Signaling type: FM, TDMA
Model(s) Tested: H84KDD9PW5AN (MUD3305) & H84KDH9PW7AN (MUD3277)
Model(s) Certified: H84KDD9PW5AN (MUD3305), H84KDH9PW7AN (MUD3277) & H84KDF9PW6AN (MUD3318)
Serial Number(s): 837CQT0048, 837CQT0045
Classification: Occupational/Controlled
Applicant Name: Motorola Solutions Inc.
Applicant Address: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
FCC ID: AZ489FT3834; LMR 150.8-173.4MHz
IC: 109U-89FT3834
Applicant Name: Motorola Solutions Inc.
Applicant Address: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
ISED Test Site registration: 24843
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 and RSS-102 (Issue 5).

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: 4/15/2020

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory
Date/Time: 10/24/2019 12:38:08 AM

Robot#: DASY5-PG-2 | Run#: BL-SYSP-150B-191024-01
Dipole Model# CLA-150
Phantom#: ELI4 1022
Tissue Temp: 21.8 (C)
Serial#: 4005
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.17 dB
Adjusted SAR (1W): 3.92 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 59.3$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 150 MHz, ConvF(13.36, 13.36, 13.36) @ 150 MHz
Electronics: DAE3 Sn374, Calibrated: 7/17/2019

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

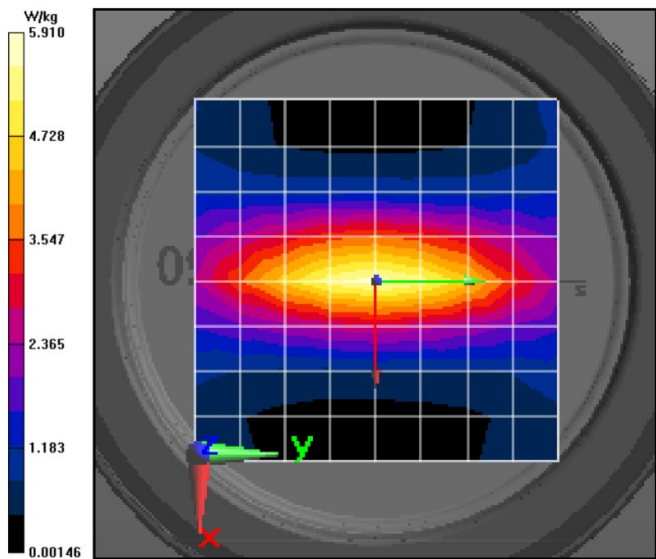
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 84.30 V/m; Power Drift = -0.00 dB
Fast SAR: SAR(1 g) = 4.66 W/kg; SAR(10 g) = 3.33 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.86 W/kg

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 = 84.30 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 7.28 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 2.57 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.83 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) = 5.91 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/21/2019 8:33:57 PM

Robot#: DASY5-PG-2 | Run#: ZZ(NZ)-SYSP-150H-191021-05
Dipole Model#: CLA150
Phantom#: ELI4 1109
Tissue Temp: 20.8 (C)
Serial#: 4005
Test Freq: 150 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.17 dB
Adjusted SAR (1W): 3.86 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.75 \text{ S/m}$; $\epsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 150 MHz, ConvF(13.79, 13.79, 13.79) @ 150 MHz
Electronics: DAE3 Sn374, Calibrated: 7/17/2019

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

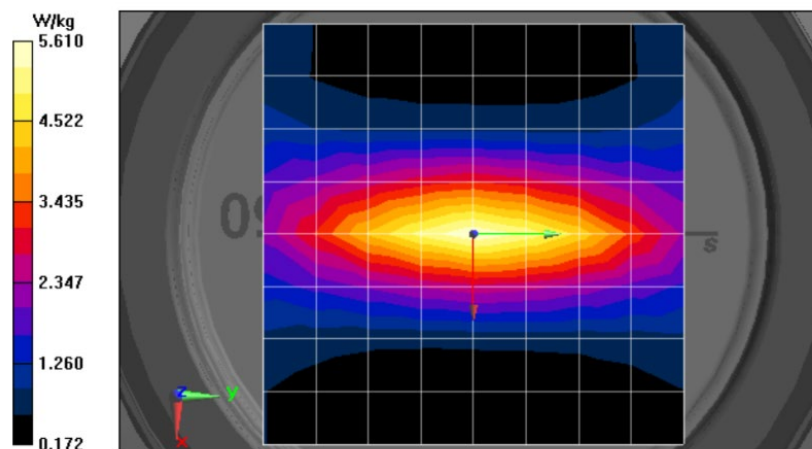
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 86.48 V/m; Power Drift = -0.13 dB
Fast SAR: SAR(1 g) = 4.68 W/kg; SAR(10 g) = 3.29 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.65 W/kg

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 = 86.48 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 7.11 W/kg
SAR(1 g) = 3.86 W/kg; SAR(10 g) = 2.49 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.65 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) = 5.60 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 10/22/2019 3:17:30 PM

Robot#: DASY5-PG-2 | Run#: FD-SYSP-150H-191022-07
Dipole Model#: CLA150
Phantom#: ELI4 1109
Tissue Temp: 21.1 (C)
Serial#: 4005
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.230 dB
Adjusted SAR (1W): 3.77 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.8$ S/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 150 MHz, ConvF(13.79, 13.79, 13.79) @ 150 MHz
Electronics: DAE3 Sn374, Calibrated: 7/17/2019

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

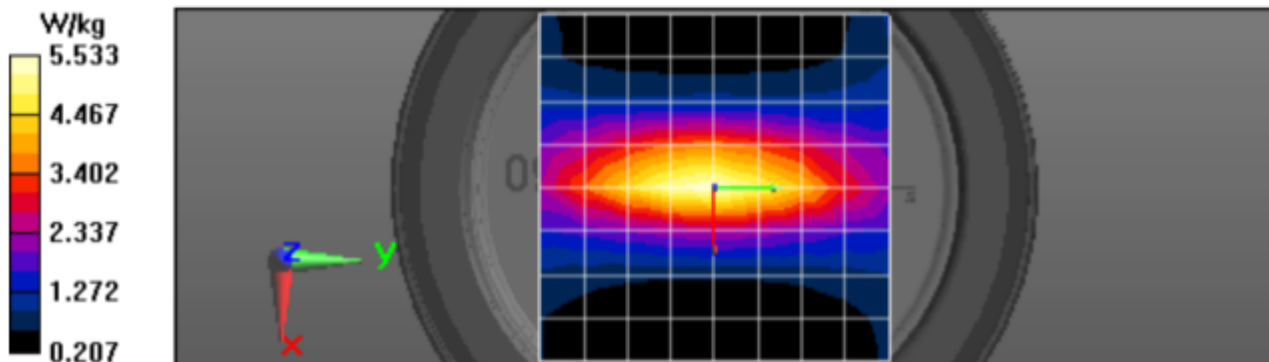
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Reference Value = 84.13 V/m; Power Drift = 0.04 dB
Fast SAR: SAR(1 g) = 4.51 W/kg; SAR(10 g) = 3.2 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.72 W/kg

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 = 84.13 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 7.22 W/kg
SAR(1 g) = 3.77 W/kg; SAR(10 g) = 2.44 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.75 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) = 5.70 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/17/2019 3:50:14 PM

Robot#: DASY5-PG-3 | Run#: FD(NZ)-SYSP-150H-191117-07
Dipole Model#: CLA150
Phantom#: ELI4 1108
Tissue Temp: 20.8 (C)
Serial#: 4005
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.17 dB
Adjusted SAR (1W): 3.85 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.73$ S/m; $\epsilon_r = 50$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 150 MHz, ConvF(12.97, 12.97, 12.97) @ 150 MHz
Electronics: DAE4 Sn1483, 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 = 85.57 V/m; Power Drift = -0.12 dB

Fast SAR: SAR(1 g) = 4.48 W/kg; SAR(10 g) = 3.18 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.33 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 = 85.57 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 6.46 W/kg

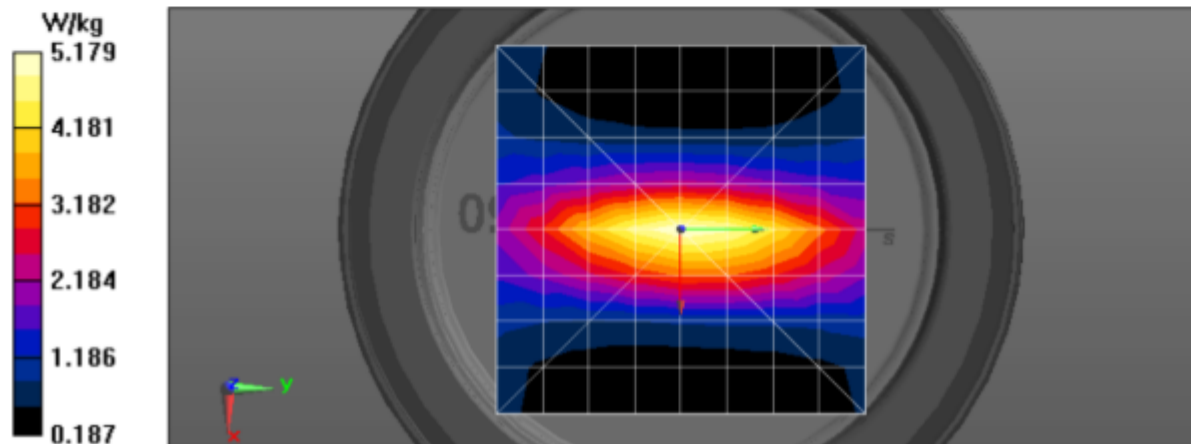
SAR(1 g) = 3.85 W/kg; SAR(10 g) = 2.51 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.32 W/kg

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

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

Maximum value of SAR (measured) = 5.30 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

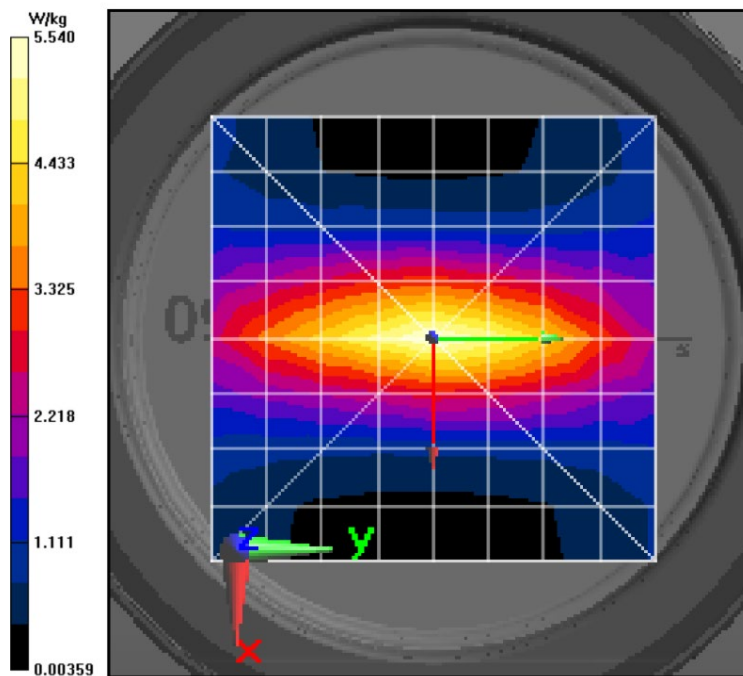
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 2.77 W/kg (SAR corrected for target medium)

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: 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: $f = 150 \text{ MHz}$; $\sigma = 0.79 \text{ S/m}$; $\epsilon_r = 52.7$; $\rho = 1000 \text{ kg/m}^3$
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):

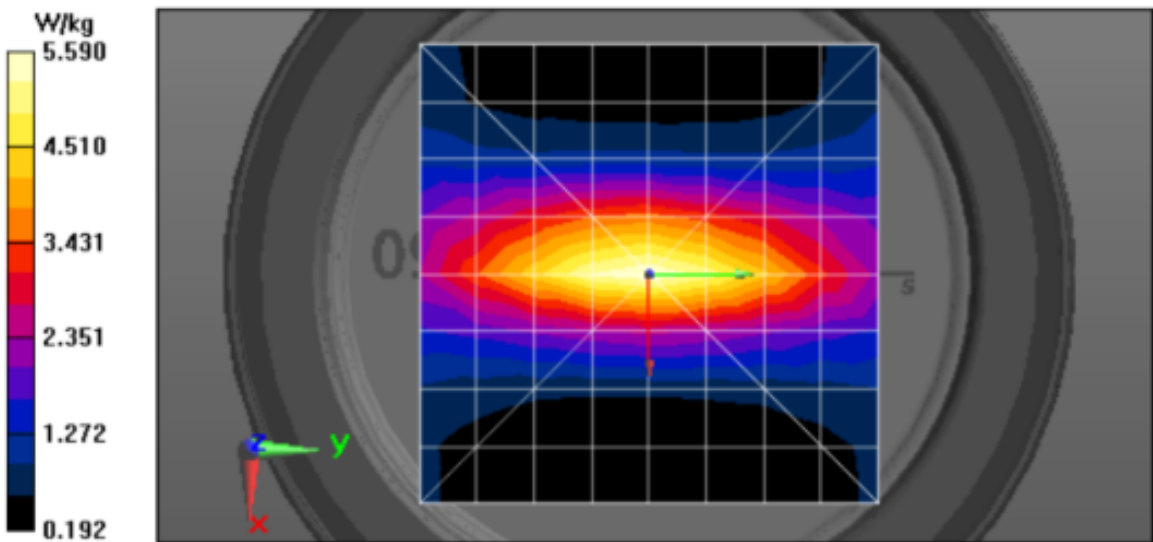
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 85.31 V/m; Power Drift = -0.02 dB
Fast SAR: SAR(1 g) = 4.63 W/kg; SAR(10 g) = 3.3 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.76 W/kg

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

Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$
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: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=10\text{mm}$
Maximum value of SAR (measured) = 5.69 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 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=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 87.57 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 7.28 W/kg

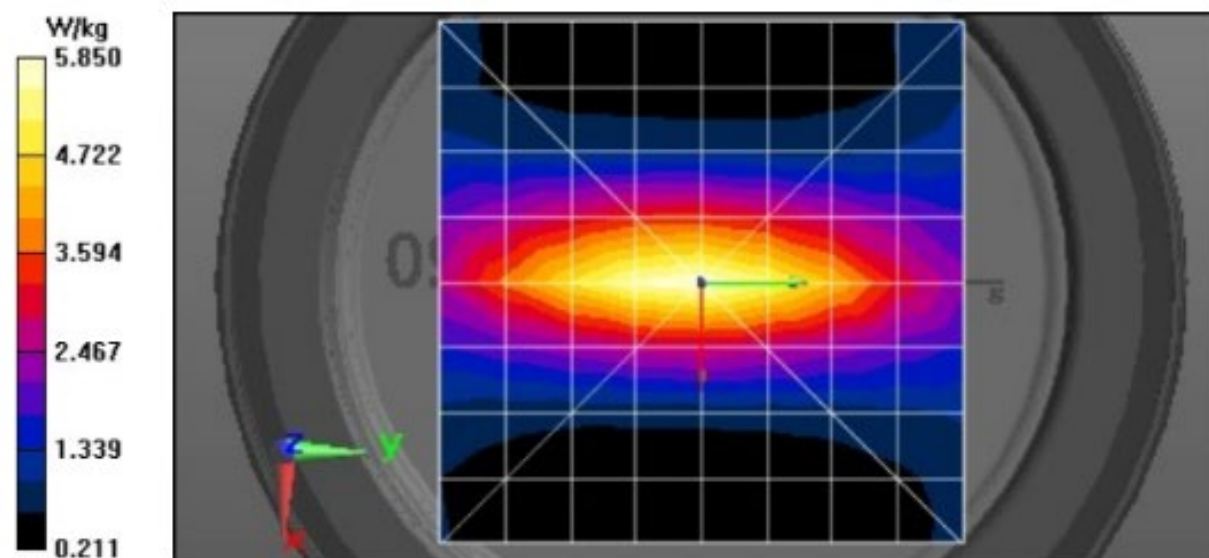
SAR(1 g) = 4.13 W/kg; SAR(10 g) = 2.7 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.88 W/kg

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

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

Maximum value of SAR (measured) = 5.91 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):

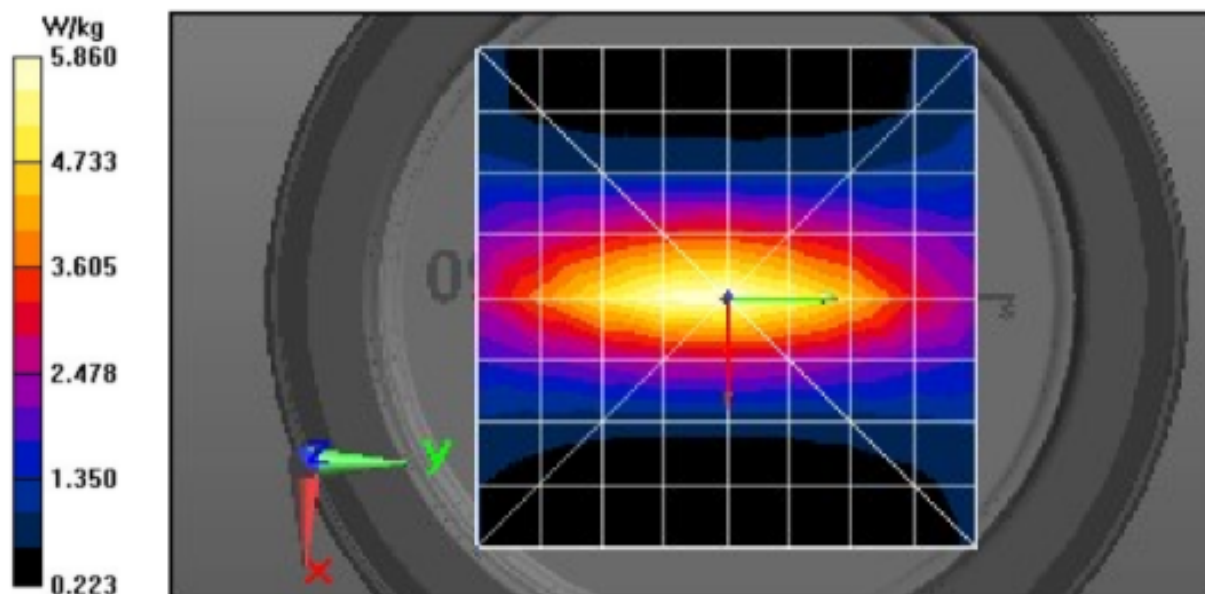
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Reference Value = 88.47 V/m; Power Drift = -0.07 dB
Fast SAR: SAR(1 g) = 4.86 W/kg; SAR(10 g) = 3.45 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.98 W/kg

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: 1/13/2020 2:41:11 AM

Robot#: DASY5-PG-3 | Run#: ZZ-SYSP-150B-200113-04
Dipole Model#: CLA150
Phantom#: ELI4 1016
Tissue Temp: 22.4 (C)
Serial#: 4005
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.07 dB
Adjusted SAR (1W): 4.06 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.81$ S/m; $\epsilon_r = 58.9$; $\rho = 1000$ 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 = 85.11 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 4.79 W/kg; SAR(10 g) = 3.41 W/kg (SAR corrected for target medium)

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

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

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

Reference Value = 85.11 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 7.19 W/kg

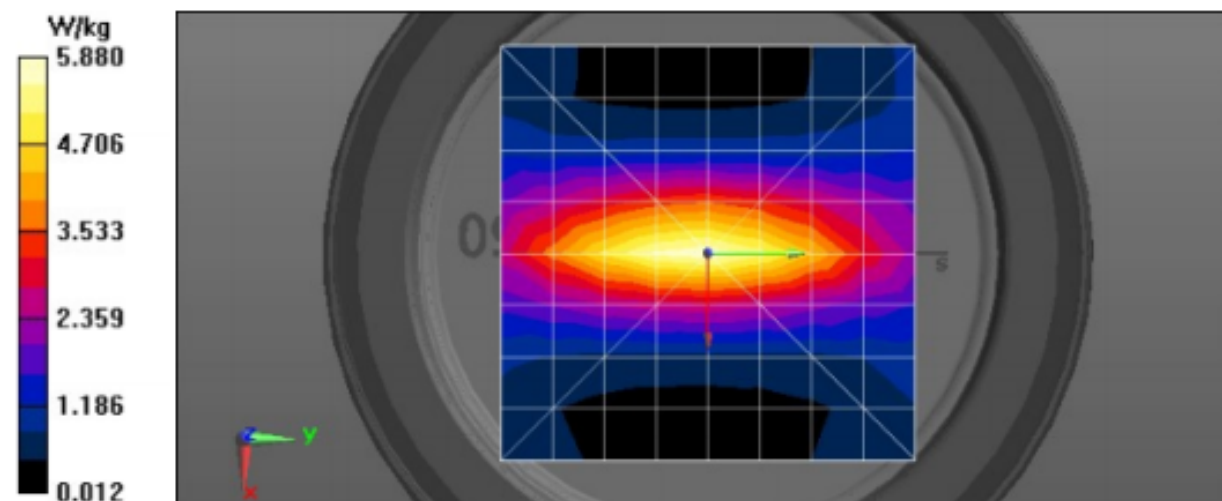
SAR(1 g) = 4.06 W/kg; SAR(10 g) = 2.66 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.90 W/kg

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

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

Maximum value of SAR (measured) = 5.88 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 1/16/2020 10:10:28 PM

Robot#: DASY5-PG-3 | Run#: ZZ(MA)-SYSP-150H-200116-07
Dipole Model# CLA150
Phantom#: ELI4 1016
Tissue Temp: 19.1 (C)
Serial#: 4005
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.081 dB
Adjusted SAR (1W): 4.01 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.74 \text{ S/m}$; $\epsilon_r = 49.8$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7486, Calibrated: 10/24/2019, Frequency: 150 MHz, ConvF(13.49, 13.49, 13.49) @ 150 MHz
Electronics: DAE4 Sn850, Calibrated: 10/16/2019

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

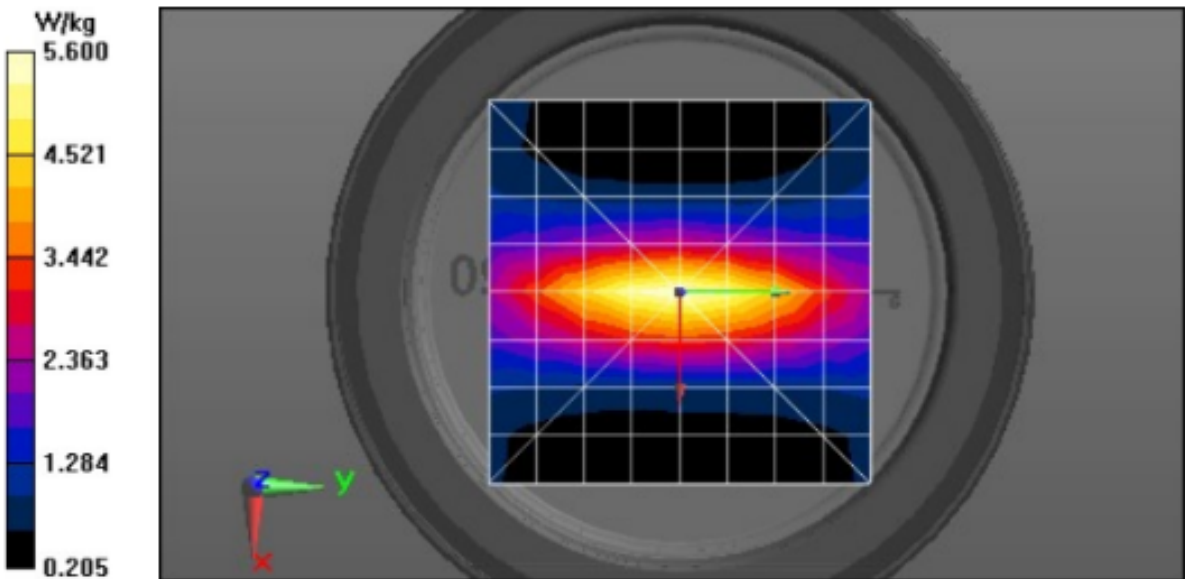
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 87.34 V/m; Power Drift = 0.00 dB
Fast SAR: SAR(1 g) = 4.73 W/kg; SAR(10 g) = 3.36 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.67 W/kg

Below 2 GHz-Rev.3/System Performance Check/0-Degree Cube (5x6x7)/Cube 0:

Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$
Reference Value = 87.34 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 6.87 W/kg
SAR(1 g) = 4.01 W/kg; SAR(10 g) = 2.62 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.60 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) = 5.64 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/11/2020 4:03:29 PM

Robot#: DASY5-PG-4 | Run#: NZ-SYSP-150B-200411-15
Dipole Model#: CLA150
Phantom#: ELI4 1016
Tissue Temp: 21.6 (C)
Serial#: 4016
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.20 dB
Adjusted SAR (1W): 4.25 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 59.6$; $\rho = 1000$ kg/m³
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):

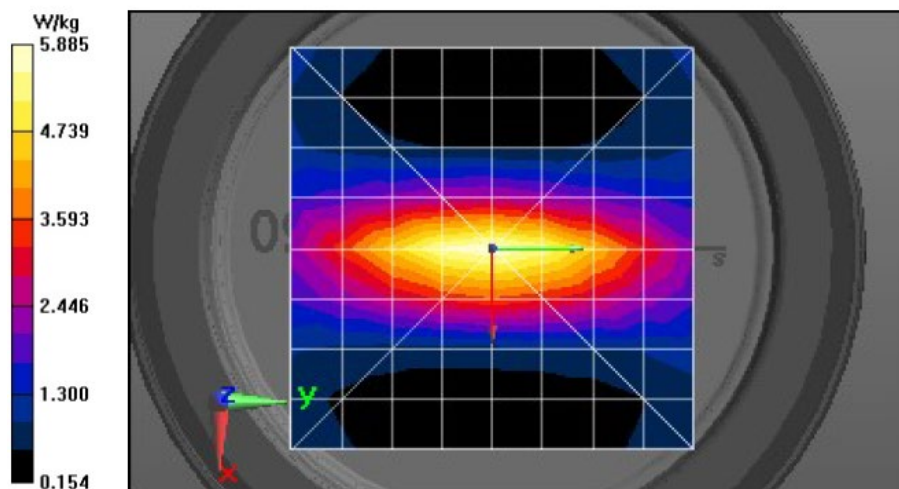
Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Reference Value = 86.48 V/m; Power Drift = 0.01 dB
Fast SAR: SAR(1 g) = 4.99 W/kg; SAR(10 g) = 3.55 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.00 W/kg

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 = 86.48 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 7.27 W/kg
SAR(1 g) = 4.25 W/kg; SAR(10 g) = 2.76 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.96 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) = 6.00 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 3/30/2020 4:18:18 AM

Robot#: DASY5-PG-4 | Run#: BL-SYSP-150H-200330-04#
Dipole Model# CLA150
Phantom#: ELI4 1109
Tissue Temp: 21.2 (C)
Serial#: 4016
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.2 dB
Adjusted SAR (1W): 3.76 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.72 \text{ S/m}$; $\epsilon_r = 54.1$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 150 MHz, ConvF(12.15, 12.15, 12.15) @ 150 MHz
Electronics: DAE4 Sn729, Calibrated: 10/16/2019

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

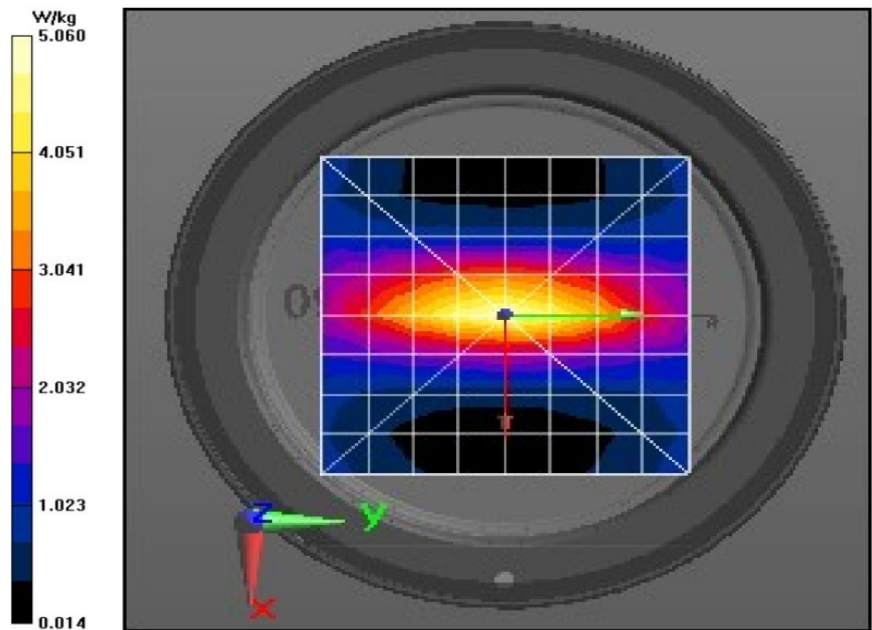
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 84.07 V/m; Power Drift = -0.11 dB
Fast SAR: SAR(1 g) = 4.44 W/kg; SAR(10 g) = 3.13 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.13 W/kg

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 = 84.07 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 6.16 W/kg
SAR(1 g) = 3.76 W/kg; SAR(10 g) = 2.45 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.05 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) = 5.06 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 4/5/2020 3:21:19 AM

Robot#: DASY5-PG-1 | Run#: ZZ-SYSP-150B-200405-04
Dipole Model# CLA150
Phantom#: ELI4 1016
Tissue Temp: 20.1 (C)
Serial#: 4016
Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.16 dB
Adjusted SAR (1W): 4.31 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 150 \text{ MHz}$; $\sigma = 0.78 \text{ S/m}$; $\epsilon_r = 59$; $\rho = 1000 \text{ kg/m}^3$
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):

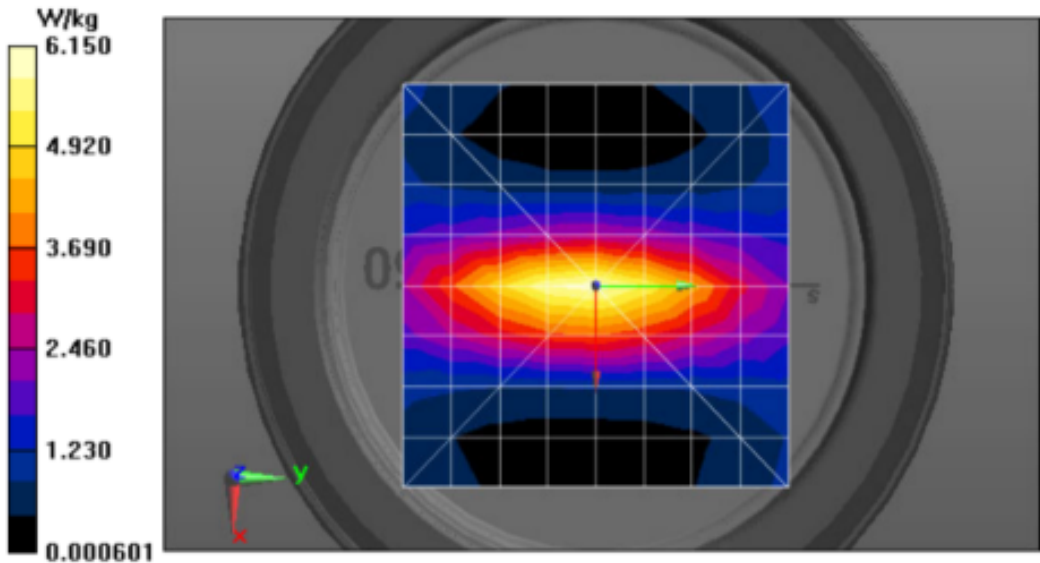
Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 88.94 V/m; Power Drift = -0.07 dB
Fast SAR: SAR(1 g) = 5.18 W/kg; SAR(10 g) = 3.66 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.27 W/kg

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 = 88.94 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 7.64 W/kg
SAR(1 g) = 4.31 W/kg; SAR(10 g) = 2.77 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 6.19 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) = 6.15 W/kg



Appendix E DUT Scans

Assessment for FCC at Body - Table 16

Motorola Solutions, Inc. EME Laboratory
Date/Time: 1/13/2020 11:14:33 AM

Robot#: DASY5-PG-3 | Run#: FAZ-AB-200113-07
Model#: H84KDD9PW5AN(MUD3305)
Phantom#: ELI4 1016
Tissue Temp: 22.0 (C)
Serial#: 837CQT0048
Antenna: NAR6593A
Test Freq: 150.8000 (MHz)
Battery: NNTN8128C
Carry Acc: PMLN4651A
Audio Acc: PMLN6130A
Start Power: 5.82 (W)

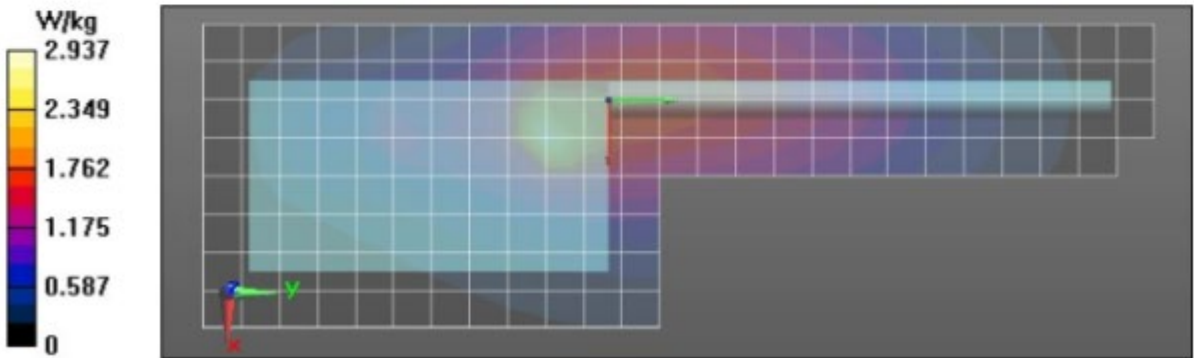
Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 151 \text{ MHz}$; $\sigma = 0.81 \text{ S/m}$; $\epsilon_r = 58.9$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7486, Calibrated: 10/24/2019, Frequency: 150.8 MHz, ConvF(13.04, 13.04, 13.04) @ 150.8 MHz
Electronics: DAE4 Sn850, 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 = 48.87 V/m; Power Drift = -0.52 dB
Fast SAR: SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.58 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 3.03 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 = 48.87 V/m; Power Drift = -0.63 dB
Peak SAR (extrapolated) = 4.36 W/kg
SAR(1 g) = 1.91 W/kg; SAR(10 g) = 1.19 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.05 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) = 3.05 W/kg



Assessment for FCC at Face - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 1/17/2020 1:45:48 AM

Robot#: DASY5-PG-3 | Run#: ZZ(MA)-FACE-200117-03#
Model#: H84KDD9PW5AN(MUD3305)
Phantom#: ELI4 1108
Tissue Temp: 19.3 (C)
Serial#: 837CQT0048
Antenna: NAR6593A
Test Freq: 150.8000 (MHz)
Battery: NNTN8128C
Carry Acc: None @ front
Audio Acc: N/A
Start Power: 5.83 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 151$ MHz; $\sigma = 0.74$ S/m; $\epsilon_r = 49.8$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7486, Calibrated: 10/24/2019, Frequency: 150.8 MHz, ConvF(13.49, 13.49, 13.49) @ 150.8 MHz

Electronics: DAE4 Sn850, Calibrated: 10/16/2019

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (91x261x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 50.62 V/m; Power Drift = -0.39 dB

Fast SAR: SAR(1 g) = 1.6 W/kg; SAR(10 g) = 1.24 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.87 W/kg

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

Reference Value = 50.62 V/m; Power Drift = -0.46 dB

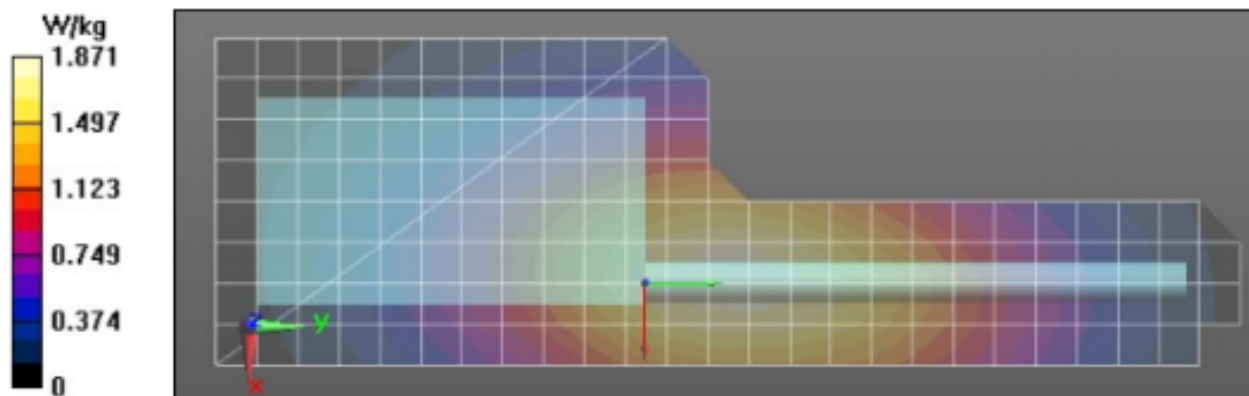
Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 1.42 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.77 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) = 1.75 W/kg



Assessment for ISED, Canada at Body - Table 17 and 18

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/24/2019 8:40:12 AM

Robot#: DASY5-PG-2 | Run#: FAZ-AB-191024-08
Model#: H84KDD9PW5AN(MUD3305)
Phantom#: ELI4 1022
Tissue Temp: 21.9 (C)
Serial#: 837CQT0048
Antenna: NAR6593A
Test Freq: 144.4000 (MHz)
Battery: PMNN4424B
Carry Acc: PMLN4651A
Audio Acc: PMLN6130A
Start Power: 5.43 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 144$ MHz; $\sigma = 0.82$ S/m; $\epsilon_r = 59.5$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 144.4 MHz, ConvF(13.36, 13.36, 13.36) @ 144.4 MHz
Electronics: DAE3 Sn374, Calibrated: 7/17/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (81x251x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 59.60 V/m; Power Drift = -0.29 dB

Fast SAR: SAR(1 g) = 3.65 W/kg; SAR(10 g) = 2.54 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 4.41 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 = 59.60 V/m; Power Drift = -0.39 dB

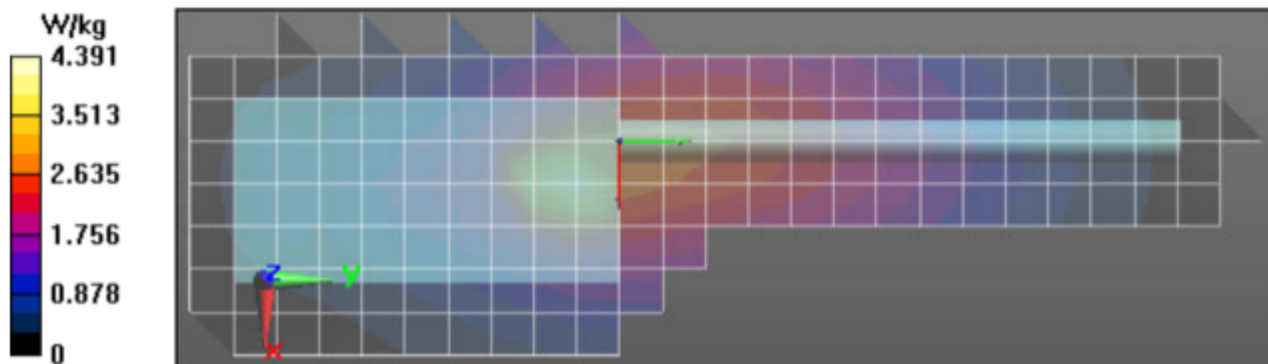
Peak SAR (extrapolated) = 6.43 W/kg

SAR(1 g) = 3.23 W/kg; SAR(10 g) = 2.05 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.50 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) = 4.54 W/kg



Assessment for ISED, Canada at Face - Table 17 and 18

Motorola Solutions, Inc. EME Laboratory
Date/Time: 12/29/2019 2:15:49 PM

Robot#: DASY5-PG-1 | Run#: AM-FACE-191229-06
Model#: H84KDH9PW7AN(MUD3277)
Phantom#: ELI4 1109
Tissue Temp: 22.1 (C)
Serial#: 837CQT0045
Antenna: NAR6593A
Test Freq: 144.4000 (MHz)
Battery: PMNN4491C
Carry Acc: None @ front
Audio Acc: N/A
Start Power: 5.55 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 144 \text{ MHz}$; $\sigma = 0.77 \text{ S/m}$; $\epsilon_r = 52$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7533, Calibrated: 11/6/2019, Frequency: 144.4 MHz, ConvF(13.81, 13.81, 13.81) @ 144.4 MHz
Electronics: DAE4 Sn1488, Calibrated: 7/23/2019

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

Reference Value = 63.97 V/m; Power Drift = 0.08 dB

Fast SAR: SAR(1 g) = 2.84 W/kg; SAR(10 g) = 2.2 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 3.35 W/kg

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

Reference Value = 63.97 V/m; Power Drift = 0.03 dB

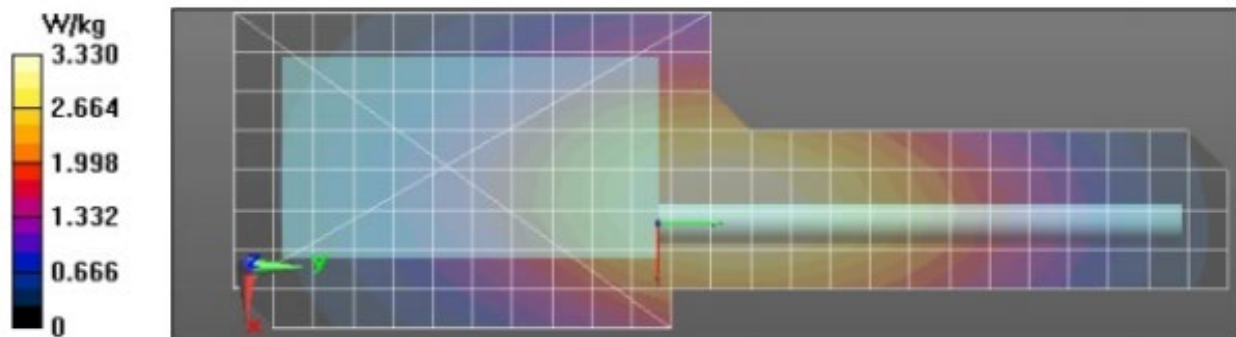
Peak SAR (extrapolated) = 3.87 W/kg

SAR(1 g) = 2.64 W/kg; SAR(10 g) = 2.06 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.33 W/kg

Below 2 GHz-Rev.3/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) = 3.29 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Assessment - Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 4/11/2020 7:55:36 PM

Robot#: DASY5-PG-4 | Run#: ZZ(MA)-AB-200411-17
Model#: H84KDD9PW5AN(MUD3305)
Phantom#: ELI4 1016
Tissue Temp: 21.4 (C)
Serial#: 837CQT0048
Antenna: NAR6593A
Test Freq: 150.8000 (MHz)
Battery: NNTN8128C
Carry Acc: PMLN4651A
Audio Acc: PMLN6130A
Start Power: 5.65 (W)

Comments: Shorten scan

Duty Cycle: 1:1, Medium parameters used: $f = 151$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 59.6$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7511, Calibrated: 10/24/2019, Frequency: 150.8 MHz, ConvF(11.72, 11.72, 11.72) @ 150.8 MHz
Electronics: DAE4 Sn729, Calibrated: 10/16/2019

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

Reference Value = 45.16 V/m; Power Drift = -0.48 dB

Fast SAR: SAR(1 g) = 2.27 W/kg; SAR(10 g) = 1.48 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.99 W/kg

Below 2 GHz-Rev.3/Ab Scan/2-Volume 2D Scan (41x41x1): Interpolated grid: dx=0.7500 mm,

dy=0.7500 mm, dz=1.000 mm

Reference Value = 45.16 V/m; Power Drift = -0.52 dB

Fast SAR: SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.49 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 3.11 W/kg

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

dy=7.5mm, dz=5mm

Reference Value = 65.32 V/m; Power Drift = -0.26 dB

Peak SAR (extrapolated) = 4.75 W/kg

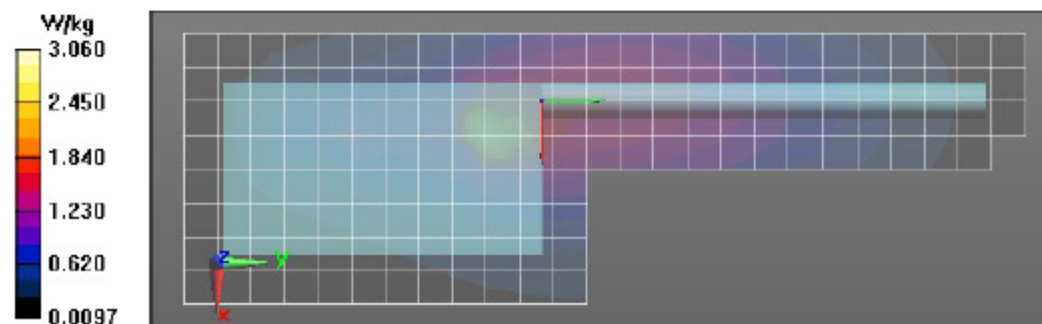
SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.23 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.30 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) = 3.06 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)	19	8	1.12
Full scan (area & zoom)	16	25	1.12

APPENDIX G DUT Test Position Photos

1.0 Highest SAR Test Position per body location

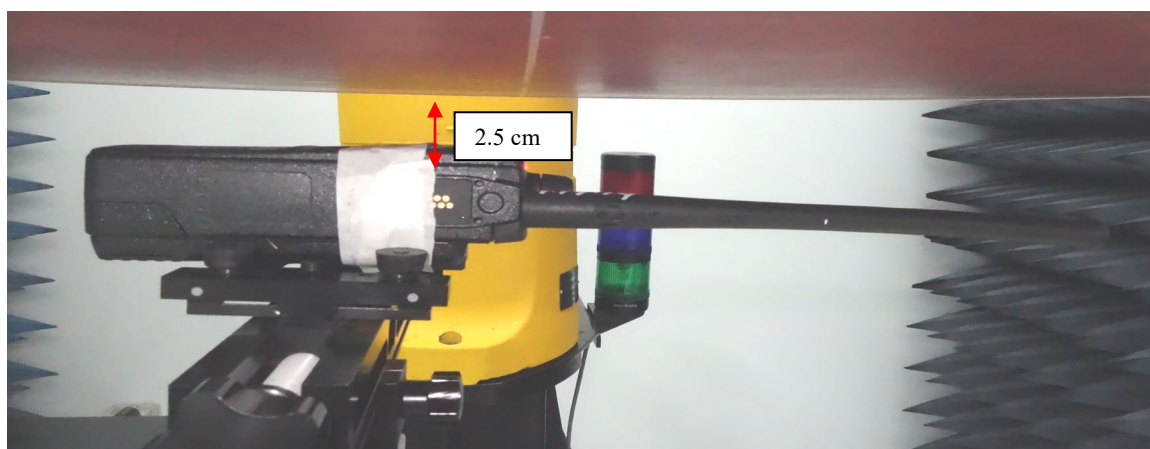
1.1 Body

DUT with antenna NAR6593A, newly offered battery PMNN4424B and belt clip PMLN4651A positioned against the phantom with audio accessory PMLN6130A attached. Same position is applicable to other batteries.

Antenna kit #	Separation Distances (mm)		
	@ bottom surface of DUT	@ base of antenna	@ tip of antenna
NAR6593A	8	31	53

1.2 Face

Front of DUT with antenna NAR6593A and newly offered battery PMNN4491C separated 2.5cm from the phantom without an audio accessory attached. Same position is applicable to other batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of DUT	@ base of antenna	@ tip of antenna
NAR6593A	28	41	53

APPENDIX H Battery Photo



Front view



side view



Back view

New offered battery PMNN4448B



Front view



side view



Back view

New offered battery PMNN4424B



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.