


MOTOROLA SOLUTIONS

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

Motorola Solutions Malaysia Sdn Bhd (Innoplex)
Plot 2A, Medan Bayan Lepas,
Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.

Date of Report: 11/05/2019
Report Revision: A

Responsible Engineer: Goh Jue Yie (EME Engineer)
Report Author: Goh Jue Yie (EME Engineer)
Date/s Tested: 10/26/2019, 10/28/2019, 11/21/2019, 11/24/2019
Manufacturer: Motorola Solutions Inc.
DUT Description: Handheld Portable –T482 FRS Consumer Radios 462-467 MHz Red-White
Test TX mode(s): CW (PTT)
Max. Power output: 2.00W (462.5500 – 462.7250 MHz), 0.60W (467.5625 – 467.7125 MHz)
Nominal Power: 1.80W (462.5500 – 462.7250 MHz), 0.50W (467.5625 – 467.7125 MHz)
Tx Frequency Bands: 462.5500 – 462.7250 MHz, 467.5625 - 467.7125 MHz
Signaling type: FM
Model(s) Tested: T482 (PMUE4643B)
Model(s) Certified: T482 (PMUE4643B)
Serial Number(s): 1654VU0005, 1654VU0006
Classification: General Population/Uncontrolled Environment
FCC ID: AZ489FT4958
FCC Test Firm Registration Number: 823256

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 W/kg averaged over 1 gram per the requirements of 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**

Digitally signed
by Tiong Nguk
Ing
Date: 2019.11.25
17:55:14 +08'00'

Tiong Nguk Ing
Ing
Deputy Technical Manager (Approved Signatory)
Approval Date: 11/25/2019

Appendix D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2019 2:47:10 PM

Robot#: DASY5-PG-3 | Run#: ZZ-SYSP-450H-191026-03
Dipole Model#: D450V3
Phantom#: EL15 1147
Tissue Temp: 21.5 (C)
Serial#: 1053
Test Freq: 450.0000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.14 dB
Adjusted SAR (1W): 4.20 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.88$ S/m; $\epsilon_r = 43.3$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 450 MHz, ConvF(10.75, 10.75, 10.75) @ 450 MHz
Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x221x1):

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

Reference Value = 39.96 V/m; Power Drift = -0.09 dB

Fast SAR: SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.759 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.35 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 = 39.96 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.62 W/kg

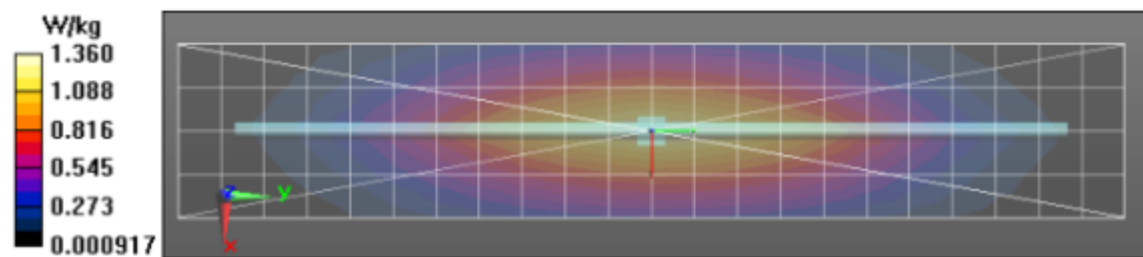
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.704 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.36 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) = 1.36 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 10/27/2019 3:48:54 PM

Robot#: DASY5-PG-3 | Run#: ZZ-SYSP-450H-191027-07
Dipole Model#: D450V3
Phantom#: ELI5 1147
Tissue Temp: 20.5 (C)
Serial#: 1053
Test Freq: 450.0000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.13 dB
Adjusted SAR (1W): 4.44 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.86$ S/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 450 MHz, ConvF(10.75, 10.75, 10.75) @ 450 MHz
Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x221x1):

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

Reference Value = 40.93 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.800 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.39 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 = 40.93 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.66 W/kg

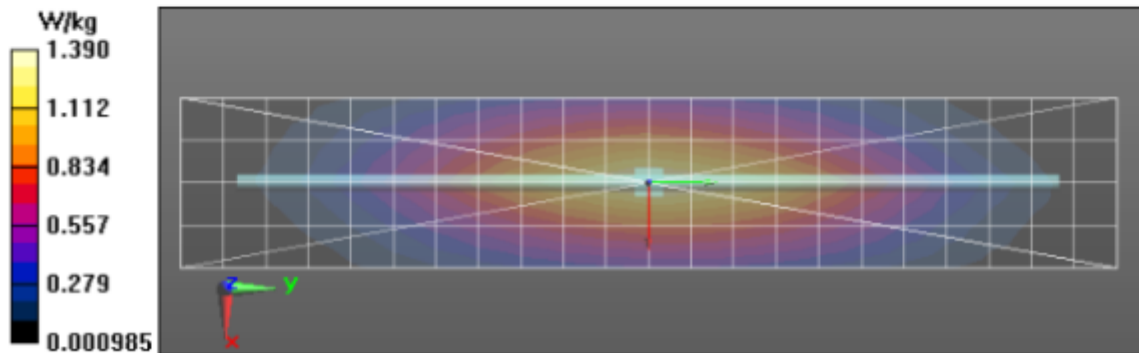
SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.746 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.39 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) = 1.39 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/28/2019 3:57:15 PM

Robot#: DASY5-PG-3 | Run#: ZZ-SYSP-450H-191028-12
Dipole Model# D450V3
Phantom#: EL15 1147
Tissue Temp: 20.9 (C)
Serial#: 1053
Test Freq: 450.0000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.14 dB
Adjusted SAR (1W): 4.40 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.85$ S/m; $\epsilon_r = 42.6$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 450 MHz, ConvF(10.75, 10.75, 10.75) @ 450 MHz
Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x221x1):

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

Reference Value = 40.68 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.791 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.37 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 = 40.68 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.63 W/kg

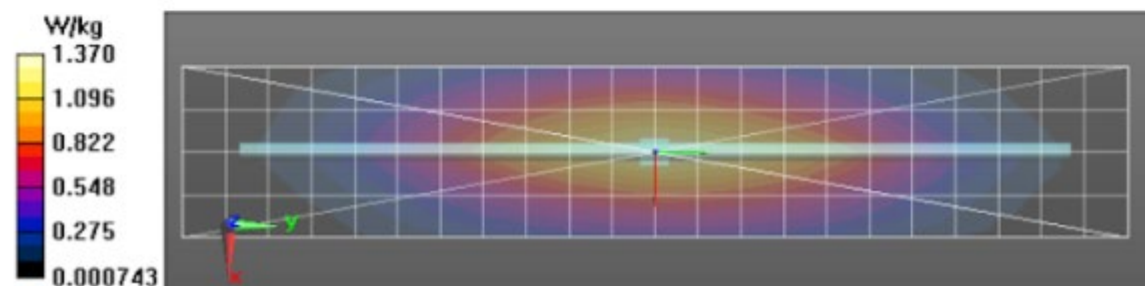
SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.738 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.37 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) = 1.37 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/21/2019 7:26:37 PM

Robot#: DASY5-PG-2 | Run#: BL-SYSP-450H-191121-13
Dipole Model# D450V3
Phantom#: ELI4 1103
Tissue Temp: 21.5 (C)
Serial#: 1053
Test Freq: 450.0000 (MHz)
Start Power: 250 (mW)
Rotation (1D): 0.14 dB
Adjusted SAR (1W): 4.44 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.86$ S/m; $\epsilon_r = 42.4$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 450 MHz, ConvF(11.59, 11.59, 11.59) @ 450 MHz
Electronics: DAE3 Sn374, Calibrated: 7/17/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x201x1):

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

Reference Value = 41.18 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.813 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.42 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 = 41.18 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.71 W/kg

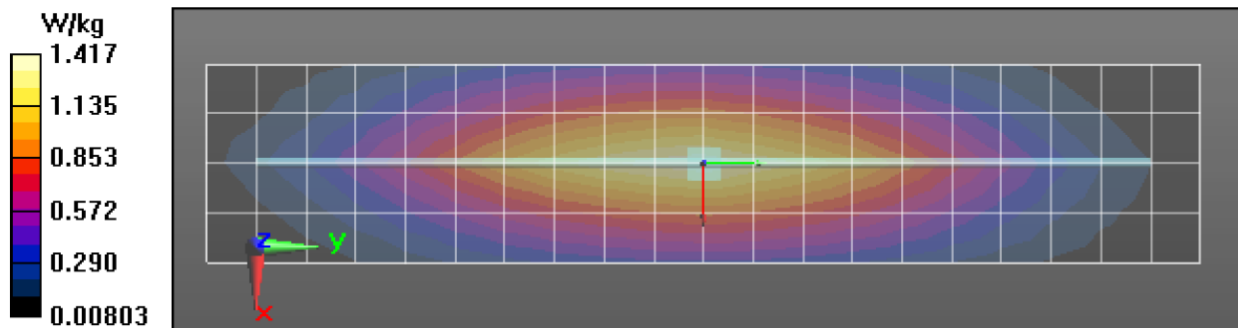
SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.743 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.42 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) = 1.41 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/24/2019 10:56:31 AM

Robot#: DASY5-PG-2 | Run#: AM-SYSP-450H-191124-01
 Dipole Model# D450V3
 Phantom#: ELI5 1147
 Tissue Temp: 21.1 (C)
 Serial#: 1053
 Test Freq: 450.0000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.15 dB
 Adjusted SAR (1W): 4.56 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.86$ S/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 450 MHz, ConvF(11.59, 11.59, 11.59) @ 450 MHz
 Electronics: DAE3 Sn374, Calibrated: 7/17/2019

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x201x1):

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

Reference Value = 41.50 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.827 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.44 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 = 41.50 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.75 W/kg

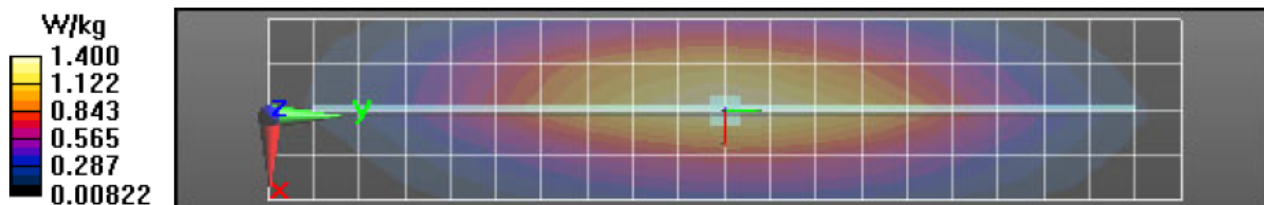
SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.759 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.45 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) = 1.45 W/kg



Appendix E

DUT Scans

Assessments at the Body - Table 18

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2019 8:48:15 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191026-09
 Model#: T482 (PMUE4643B)
 Phantom#: EL15 1147
 Tissue Temp: 21.3 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 462.6375 (MHz)
 Battery: 1532
 Carry Acc: PMLN7220A
 Audio Acc: NTN8867A (53724C)
 Start Power: 1.53 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75, 10.75) @ 462.637 MHz

Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 55.98 V/m; Power Drift = -0.55 dB

Fast SAR: SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.53 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.54 W/kg

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

$dy=7.5$ mm, $dz=5$ mm

Reference Value = 55.98 V/m; Power Drift = -0.73 dB

Peak SAR (extrapolated) = 2.78 W/kg

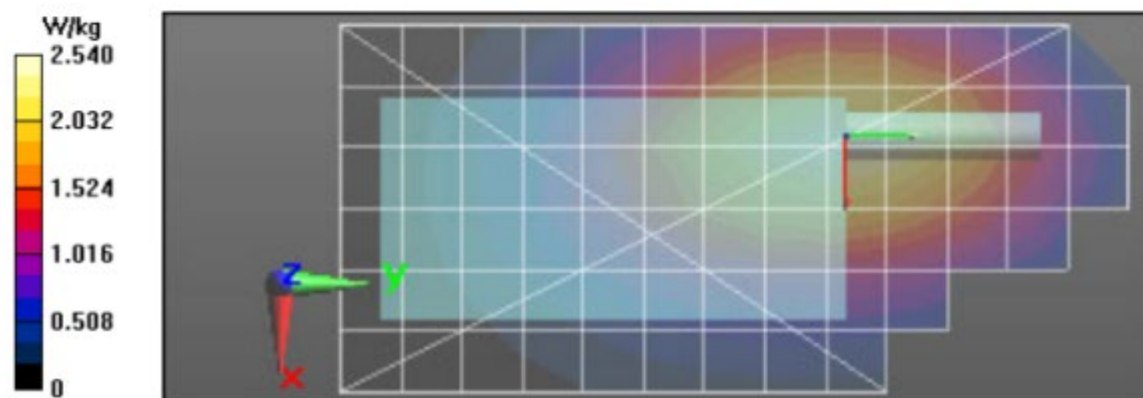
SAR(1 g) = 1.99 W/kg; SAR(10 g) = 1.42 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.42 W/kg

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

$dz=10$ mm

Maximum value of SAR (measured) = 2.35 W/kg



Assessments at the Body - Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2019 10:43:56 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191026-13
 Model#: T482 (PMUE4643B)
 Phantom#: EL15 1147
 Tissue Temp: 21.2 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 462.6375 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: PMLN7240A
 Audio Acc: NTN8867A (53724C)
 Start Power: 1.81 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75) @ 462.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 54.78 V/m; Power Drift = -0.68 dB

Fast SAR: SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.43 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.35 W/kg

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

Reference Value = 54.78 V/m; Power Drift = -0.89 dB

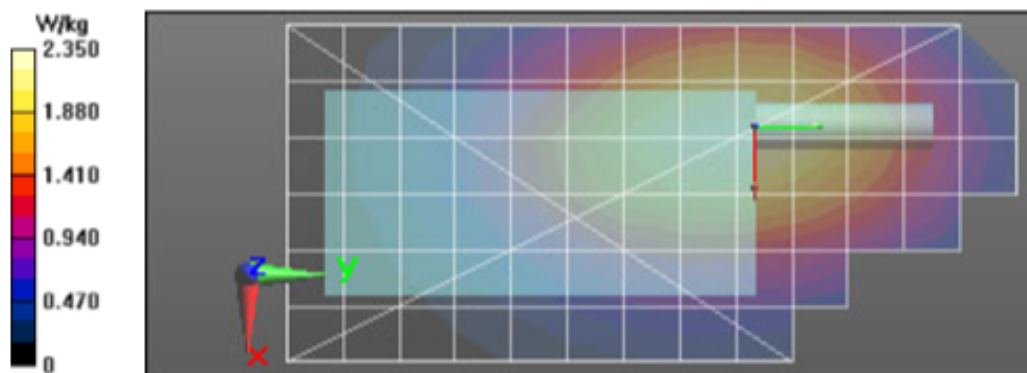
Peak SAR (extrapolated) = 2.51 W/kg

SAR(1 g) = 1.84 W/kg; SAR(10 g) = 1.34 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.20 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) = 2.15 W/kg



Assessments at the Body - Table 20

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/26/2019 11:50:57 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191026-15
 Model#: T482 (PMUE4643B)
 Phantom#: EL15 1147
 Tissue Temp: 21.2 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 462.6375 (MHz)
 Battery: 1532
 Carry Acc: PMLN7706A
 Audio Acc: NTN8867A (53724C)
 Start Power: 1.53 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463 \text{ MHz}$; $\sigma = 0.89 \text{ S/m}$; $\epsilon_r = 43$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75, 10.75) @ 462.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 54.35 V/m; Power Drift = -0.47 dB

Fast SAR: SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.45 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.40 W/kg

Below 2 GHz-Rev.2/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 = 54.35 V/m; Power Drift = -0.64 dB

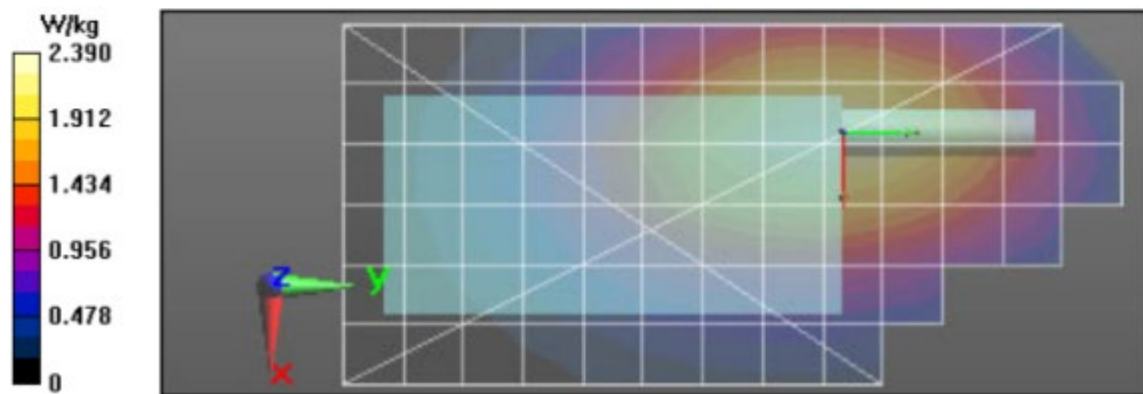
Peak SAR (extrapolated) = 2.62 W/kg

SAR(1 g) = 1.9 W/kg; SAR(10 g) = 1.37 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.29 W/kg

Below 2 GHz-Rev.2/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) = 2.25 W/kg



Assessments at the Body - Table 21

Motorola Solutions, Inc. EME Laboratory
Date/Time: 10/27/2019 11:19:14 AM

Robot#: DASY5-PG-3 | Run#: ZZ-AB-191027-02#
Model#: T482 (PMUE4643B)
Phantom#: EL15 1147
Tissue Temp: 21.0 (C)
Serial#: 1654VU0005
Antenna: Fixed Antenna
Test Freq: 462.6375 (MHz)
Battery: 1532
Carry Acc: PMLN7220A
Audio Acc: GU6443A (1518)
Start Power: 1.53 (W)

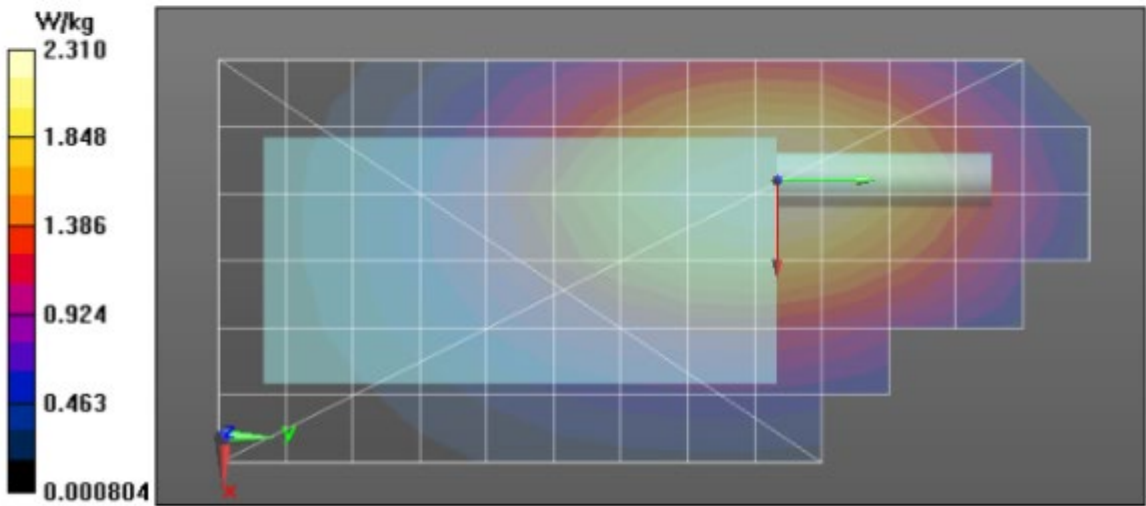
Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463 \text{ MHz}$; $\sigma = 0.89 \text{ S/m}$; $\epsilon_r = 43$; $\rho = 1000 \text{ kg/m}^3$
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75, 10.75) @ 462.637 MHz
Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Reference Value = 54.98 V/m; Power Drift = -0.52 dB
Fast SAR: SAR(1 g) = 2.06 W/kg; SAR(10 g) = 1.48 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 2.45 W/kg

Below 2 GHz-Rev.2/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 = 54.98 V/m; Power Drift = -0.65 dB
Peak SAR (extrapolated) = 2.70 W/kg
SAR(1 g) = 1.95 W/kg; SAR(10 g) = 1.4 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.35 W/kg

Below 2 GHz-Rev.2/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) = 2.31 W/kg



Assessments at the Face - Table 23

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/27/2019 4:57:41 PM

Robot#: DASY5-PG-3 | Run#: ZZ-FACE-191027-09
Model#: T482 (PMUE4643B)
Phantom#: ELI5 1147
Tissue Temp: 20.5 (C)
Serial#: 1654VU0005
Antenna: Fixed Antenna
Test Freq: 462.6375 (MHz)
Battery: PMNN4477A
Carry Acc: @ front
Audio Acc: N/A
Start Power: 1.72 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³
Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75, 10.75) @ 462.637 MHz
Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 50.84 V/m; Power Drift = -0.39 dB

Fast SAR: SAR(1 g) = 1.79 W/kg; SAR(10 g) = 1.3 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.13 W/kg

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

Reference Value = 50.84 V/m; Power Drift = -0.52 dB

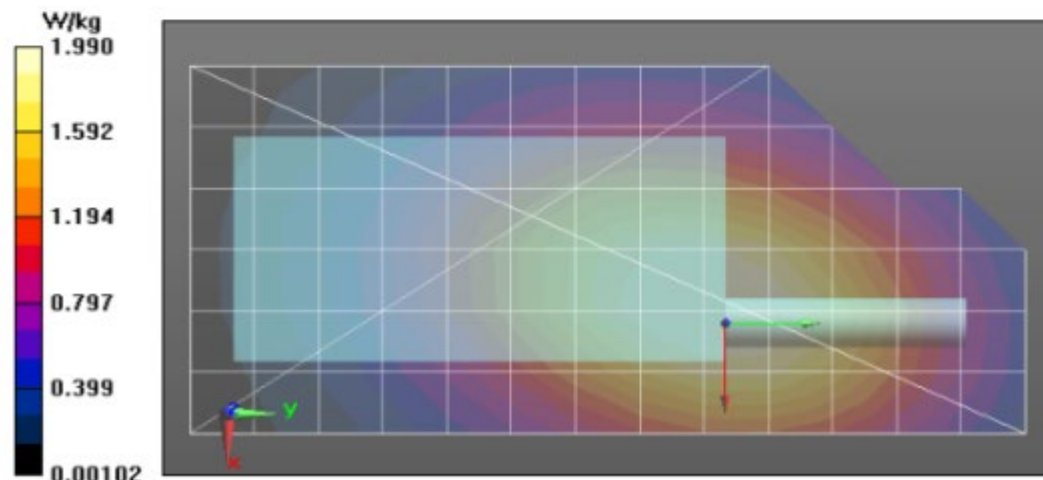
Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 1.7 W/kg; SAR(10 g) = 1.26 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.01 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) = 1.99 W/kg



Assessments at the Body - Table 25

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/27/2019 9:54:27 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191027-15
 Model#: T482 (PMUE4643B)
 Phantom#: ELI5 1147
 Tissue Temp: 20.8 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 467.6375 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: PMLN7220A
 Audio Acc: NTN8867A (53724C)
 Start Power: 0.480 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468 \text{ MHz}$; $\sigma = 0.87 \text{ S/m}$; $\epsilon_r = 42.6$; $\rho = 1000 \text{ kg/m}^3$
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 467.637 MHz, ConvF(10.75, 10.75, 10.75) @ 467.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 44.55 V/m; Power Drift = -0.51 dB

Fast SAR: SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.954 W/kg (SAR corrected for target medium)

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

Below 2 GHz-Rev.2/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 44.55 V/m; Power Drift = -0.65 dB

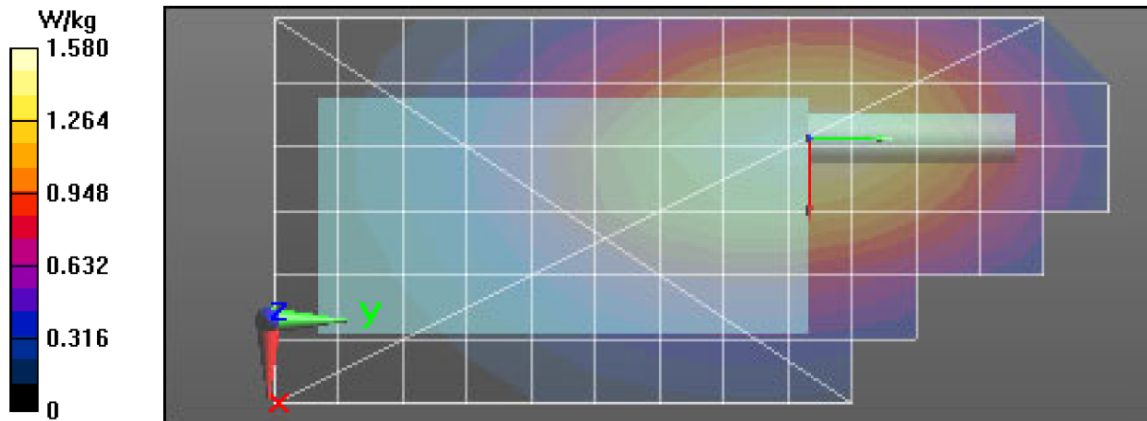
Peak SAR (extrapolated) = 1.74 W/kg

SAR(1 g) = 1.26 W/kg; SAR(10 g) = 0.905 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.52 W/kg

Below 2 GHz-Rev.2/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) = 1.49 W/kg



Assessments at the Body - Table 26

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/27/2019 11:28:45 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191027-18
 Model#: T482 (PMUE4643B)
 Phantom#: ELI5 1147
 Tissue Temp: 20.7 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 467.6375 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: PMLN7240A
 Audio Acc: NTN8867A (53724C)
 Start Power: 0.480 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 42.6$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 467.637 MHz, ConvF(10.75, 10.75, 10.75) @ 467.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 43.26 V/m; Power Drift = -0.51 dB

Fast SAR: SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.906 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.49 W/kg

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

Reference Value = 43.26 V/m; Power Drift = -0.66 dB

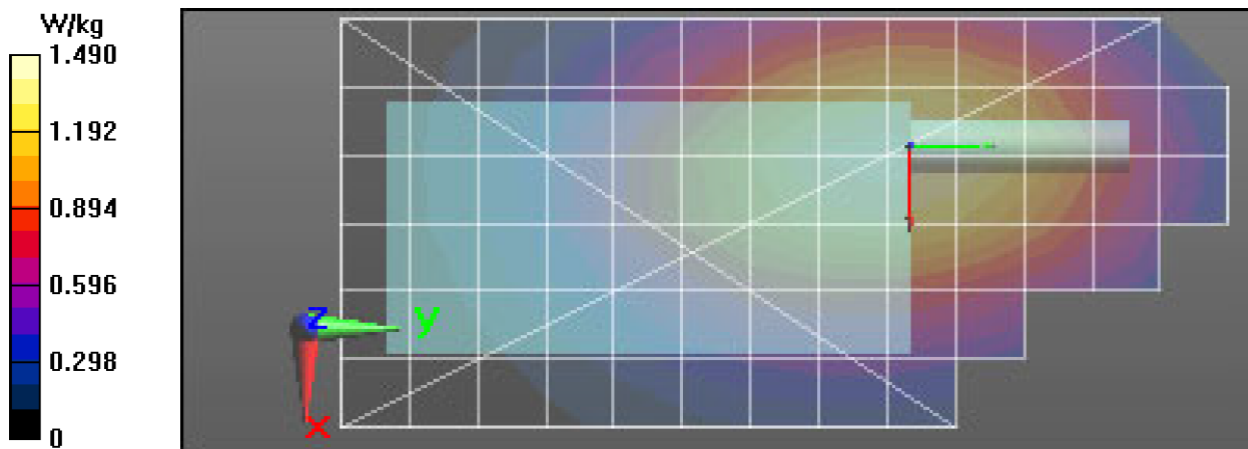
Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.866 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.43 W/kg

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

Maximum value of SAR (measured) = 1.39 W/kg



Assessments at the Body - Table 27

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/28/2019 12:53:28 AM

Robot#: DASY5-PG-3 | Run#: AM-AB-191028-02#
 Model#: T482 (PMUE4643B)
 Phantom#: ELI5 1147
 Tissue Temp: 20.6 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 467.6375 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: PMLN7706A
 Audio Acc: NTN8867A (53724C)
 Start Power: 0.48 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 42.6$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 467.637 MHz, ConvF(10.75, 10.75, 10.75) @ 467.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 42.30 V/m; Power Drift = -0.52 dB

Fast SAR: SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.849 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.40 W/kg

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

Reference Value = 42.30 V/m; Power Drift = -0.67 dB

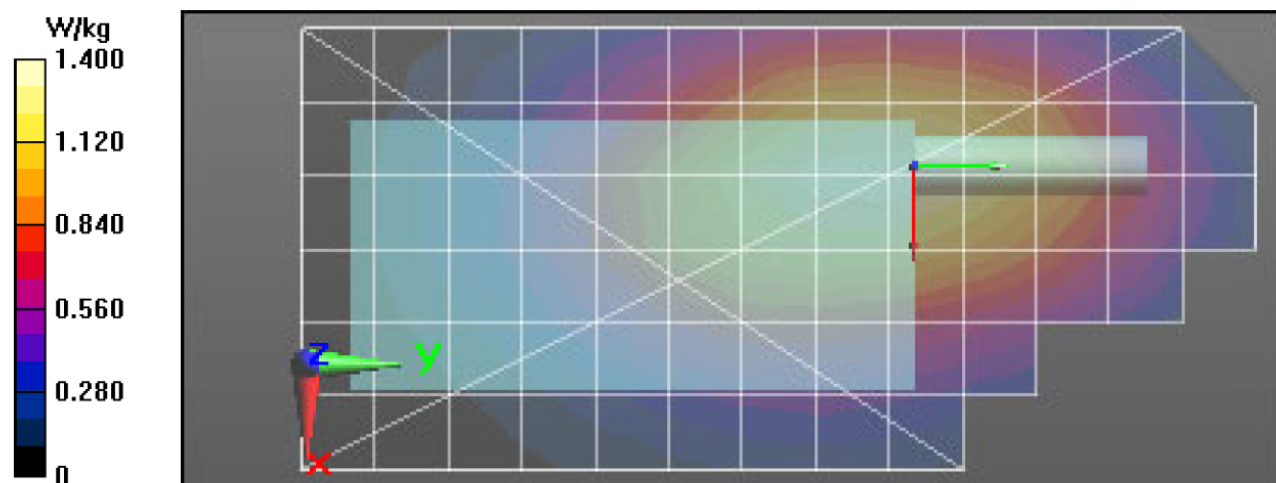
Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.802 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.34 W/kg

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

Maximum value of SAR (measured) = 1.31 W/kg



Assessments at the Body - Table 28

Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/22/2019 12:55:18 AM

Robot#: DASY5-PG-2 | Run#: BL-AB-191122-03#
 Model#: T482 (PMUE4643B)
 Phantom#: ELI4 1103
 Tissue Temp: 21.8 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 467.63750 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: PMLN7220A
 Audio Acc: NTN9396B (56320B)
 Start Power: 0.48 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.88$ S/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³

Probe: EX3DV4 - SN7534, Calibrated: 7/25/2019, Frequency: 467.637 MHz, ConvF(11.59, 11.59, 11.59) @ 467.637 MHz
 Electronics: DAE3 Sn374, Calibrated: 7/17/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 43.02 V/m; Power Drift = -0.38 dB

Fast SAR: SAR(1 g) = 1.27 W/kg; SAR(10 g) = 0.913 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.51 W/kg

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

Reference Value = 43.02 V/m; Power Drift = -0.51 dB

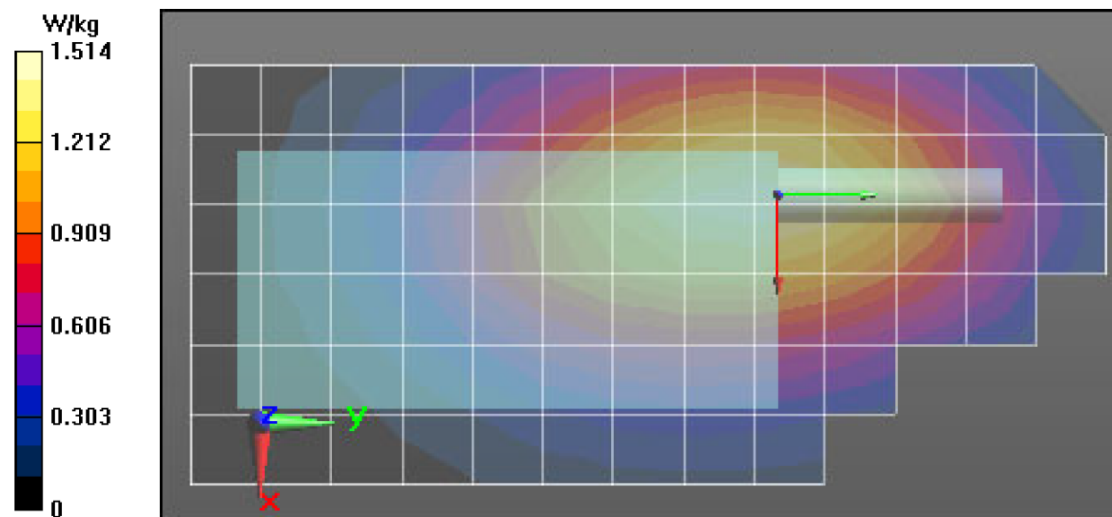
Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.852 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.45 W/kg

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

Maximum value of SAR (measured) = 1.43 W/kg



Assessments at the Face - Table 30

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/28/2019 3:06:44 PM

Robot#: DASY5-PG-3 | Run#: ZZ-FACE-191028-11#
 Model#: T482 (PMUE4643B)
 Phantom#: ELI5 1147
 Tissue Temp: 20.2 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 467.6375 (MHz)
 Battery: 3XAA Alkaline
 Carry Acc: @ front
 Audio Acc: N/A
 Start Power: 0.48 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 468$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 42.6$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 467.637 MHz, ConvF(10.75, 10.75, 10.75) @ 467.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 38.33 V/m; Power Drift = -0.26 dB

Fast SAR: SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.760 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.24 W/kg

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

Reference Value = 38.33 V/m; Power Drift = -0.38 dB

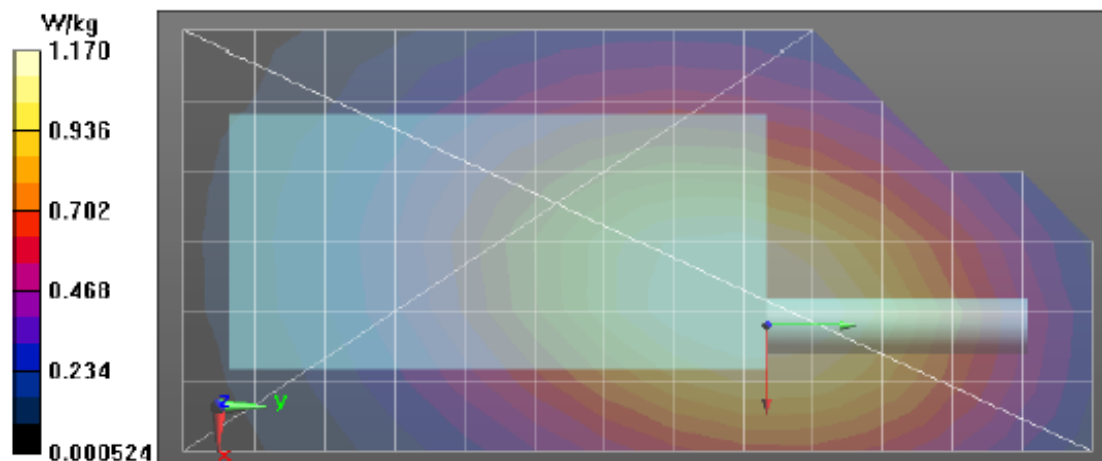
Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 1 W/kg; SAR(10 g) = 0.740 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.19 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) = 1.17 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Table 31

Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/28/2019 8:52:41 PM

Robot#: DASY5-PG-3 | Run#: AM-AB-191028-14
 Model#: T482 (PMUE4643B)
 Phantom#: EL15 1147
 Tissue Temp: 20.2 (C)
 Serial#: 1654VU0005
 Antenna: Fixed Antenna
 Test Freq: 462.6375 (MHz)
 Battery: 1532
 Carry Acc: PMLN7220A
 Audio Acc: NTN8867A (53724C)
 Start Power: 1.53 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 463$ MHz; $\sigma = 0.86$ S/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³
 Probe: EX3DV4 - SN7364, Calibrated: 1/23/2019, Frequency: 462.637 MHz, ConvF(10.75, 10.75, 10.75) @ 462.637 MHz
 Electronics: DAE4 Sn1483, Calibrated: 1/10/2019

Below 2 GHz-Rev.2/Ab Scan/1-Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 52.98 V/m; Power Drift = -0.41 dB

Fast SAR: SAR(1 g) = 1.88 W/kg; SAR(10 g) = 1.35 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.23 W/kg

Below 2 GHz-Rev.2/Ab Scan/2-Volume 2D Scan (41x41x1): Interpolated grid: dx=0.7500 mm, dy=0.7500 mm, dz=1.000 mm

Reference Value = 52.98 V/m; Power Drift = -0.45 dB

Fast SAR: SAR(1 g) = 1.87 W/kg; SAR(10 g) = 1.36 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.19 W/kg

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

Reference Value = 55.25 V/m; Power Drift = -0.37 dB

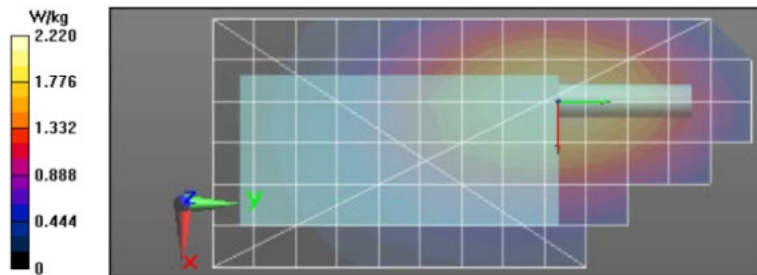
Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.46 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.43 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) = 2.16 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)	31	7	1.37
Full scan (area & zoom)	18	20	1.46

APPENDIX G DUT Test Position Photos

Photos available in Exhibit 7B

APPENDIX H DUT, Body worn and audio accessories Photos

Photos available in Exhibit 7B