SAMM 826

CERTIFICATE 2518.05

## DECLARATION OF COMPLIANCE SAR ASSESSMENT 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:** 11/08/2023
**Report Revision:** C

| | |
|---|---|
| **Responsible Engineer:** | Alfred Hoe (EME Engineer) |
| **Report Author:** | Muhammad Hizami bin Ismail (EME Senior Technician) |
| **Date/s Tested:** | 08/08/2023-08/10/2023 |
| **Manufacturer:** | Motorola Solutions Inc. |
| **DUT Description:** | Handheld Portable – SL300 403-470M 2-3W DISPLAY |
| **Test TX mode(s):** | CW (PTT) |
| **Max. Power output:** | Refer to Table 3 part 1 of 2 |
| **Nominal Power:** | Refer to Table 3 part 1 of 2 |
| **Tx Frequency Bands:** | LMR 403-470MHz |
| **Signaling type:** | FM, TDMA |
| **Model(s) Tested:** | AAH88QCP9JA2AN (PMUE4541C); IC Model: PMUE4541CAMNAA |
| **Model(s) Certified:** | AAH88QCP9JA2AN (PMUE4541C); IC Model: PMUE4541CAMNAA, AAH88QCC9JA2AN (PMUE4542C); IC Model: PMUE4542CAANAA |
| **Serial Number(s):** | 546TZP0438 |
| **Classification:** | Occupational/Controlled |
| **Applicant Name:** | Motorola Solutions Inc. |
| **Applicant Address:** | 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322 |
| **Firmware Version:** | D01.23.02.0018 |
| **FCC ID:** | AZ489FT4977<br>Add the following when applicable - This report contains results that are immaterial for FCC equipment approval, which are clearly identified. |
| **FCC Test Firm Registration Number:** | 823256 |
| **IC:** | 109U-89FT4977<br>This report contains results that are immaterial for ISED equipment approval, which are clearly identified. |
| **ISED Test Site registration:** | 24843 |

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.**

**Saw Sun Hock (Approval Signatory)**
**Approval Date: 11/8/2023**

# Appendix D
# System Verification Check Scans

## Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/9/2023 1:51:30 PM**

| | |
|---|---|
| Robot#: DASY5-PG-3 \| Run#: | ZIQ-SYSP-450H-230809-11 |
| Dipole Model# | D450V3 |
| Phantom#: | ELI4 1028 |
| Tissue Temp: | 21.5 (C) |
| Serial#: | 1053 |
| Test Freq: | 450.0000 (MHz) |
| Start Power: | 250 (mW) |
| Rotation (1D): | 0.043 dB |
| Adjusted SAR (1W): | 5.00 mW/g (1g) |

Comments:

Communication System Band: Dipole 450, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 450 MHz; $\sigma$ = 0.88 S/m; $\varepsilon_r$ = 43.1; $\rho$ = 1000 kg/m$^3$

Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 450 MHz, ConvF(11.36, 11.36, 11.36) @ 450 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

### Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (41x231x1):

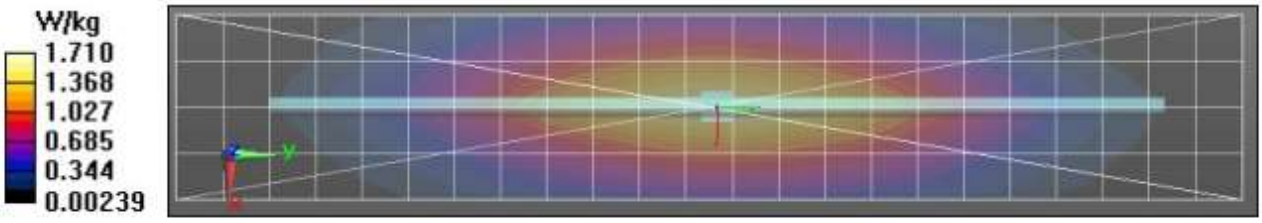
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 45.33 V/m; Power Drift = -0.02 dB
**Fast SAR: SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.933 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.71 W/kg

### 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 = 45.33 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.01 W/kg
**SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.828 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 62.7%
Maximum value of SAR (measured) = 1.73 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) = 1.73 W/kg



## Motorola Solutions, Inc. EME Laboratory

**Date/Time: 11/3/2023 3:23:34 PM**

| | |
|---|---|
| Robot#: DASY5-PG-2 \| Run#: | SHM-SYSP-450H-231103-05 |
| Dipole Model# | D450V3 |
| Phantom#: | ELI4 1050 |
| Tissue Temp: | 21.4 (C) |
| Serial#: | 1077 |
| Test Freq: | 450.0000 (MHz) |
| Start Power: | 250 (mW) |
| Rotation (1D): | 0.060 dB |
| Adjusted SAR (1W): | 4.92 mW/g (1g) |

Comments:

Communication System Band: Dipole 450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 450 MHz; $\sigma$ = 0.86 S/m; $\varepsilon_r$ = 41.8; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 450 MHz, ConvF(10.96, 10.96, 10.96) @ 450 MHz
Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

### Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (41x211x1):

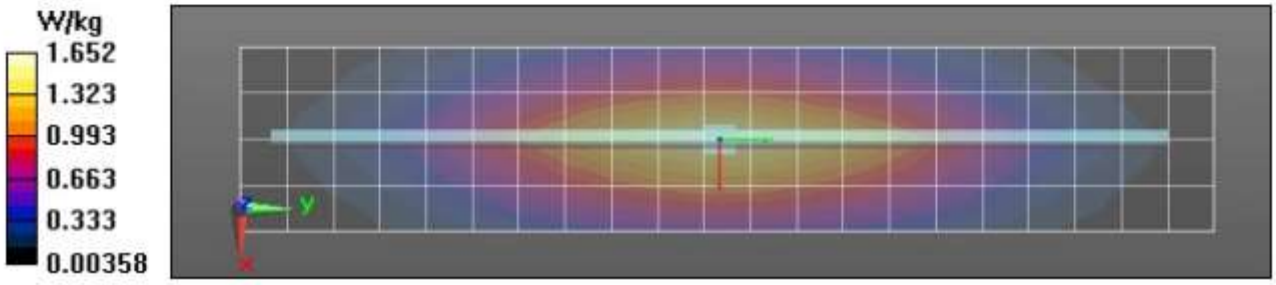
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 45.13 V/m; Power Drift = 0.05 dB
**Fast SAR: SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.916 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.66 W/kg

### 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 = 45.13 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.96 W/kg
**SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.827 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 63.3%
Maximum value of SAR (measured) = 1.68 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) = 1.67 W/kg



# Appendix E
# DUT Scans

## Highest Configuration at FCC Body (Full scan) – Table 19

### Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/9/2023 5:31:25 PM**

Robot#: DASY5-PG-3 | Run#: ZIQ-AB-230809-14
Model#: AAH88QCP9JA2AN (PMUE4541C)
Phantom#: ELI4 1028
Tissue Temp: 21.4 (C)
Serial#: 546TZP0438
Antenna: PMAE4093B
Test Freq: 406.2000 (MHz)
Battery: PMNN4468B
Carry Acc: PMLN7128A
Audio Acc: PMMN4125B
Start Power: 2.40 (W)

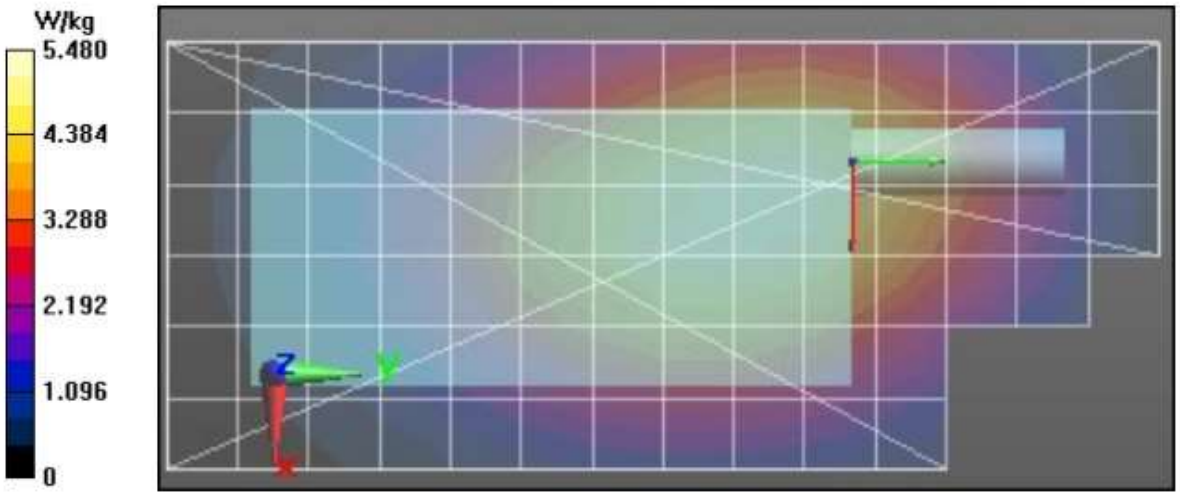
Comments:

Communication System Band: Tonga UHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 406 MHz; $\sigma$ = 0.84 S/m; $\varepsilon_r$ = 44; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 406.2 MHz, ConvF(11.36, 11.36, 11.36) @ 406.2 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

**Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (61x141x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 80.17 V/m; Power Drift = -0.38 dB
**Fast SAR: SAR(1 g) = 4.66 W/kg; SAR(10 g) = 3.39 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.58 W/kg

**Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 80.17 V/m; Power Drift = -0.44 dB
Peak SAR (extrapolated) = 6.27 W/kg
**SAR(1 g) = 4.42 W/kg; SAR(10 g) = 3.26 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.6%
Maximum value of SAR (measured) = 5.49 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) = 5.49 W/kg



## Highest Configuration at FCC Face - Table 21

### Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/9/2023 7:38:42 AM**

Robot#: DASY5-PG-3 | Run#: ZIQ-FACE-230809-06@
Model#: AAH88QCP9JA2AN (PMUE4541C)
Phantom#: ELI4 1028
Tissue Temp: 21.5 (C)
Serial#: 546TZP0438
Antenna: PMAE4093B
Test Freq: 415.6000 (MHz)
Battery: PMNN4468B
Carry Acc: @front
Audio Acc: N/A
Start Power: 2.40 (W)

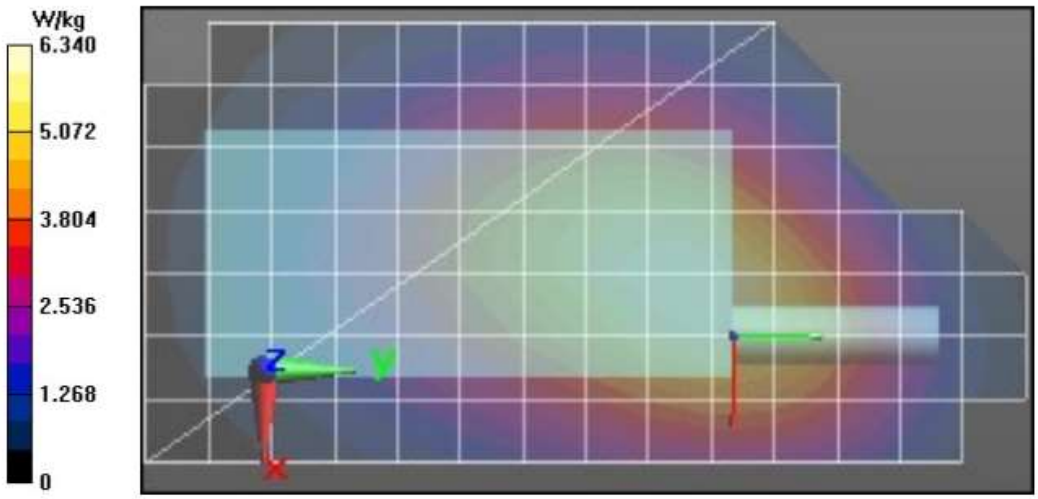
Comments:

Communication System Band: Tonga UHF Plus1, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 416 MHz; $\sigma$ = 0.85 S/m; $\varepsilon_r$ = 42.8; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 415.6 MHz, ConvF(11.36, 11.36, 11.36) @ 415.6 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

**Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x151x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 87.38 V/m; Power Drift = -0.39 dB
**Fast SAR: SAR(1 g) = 5.35 W/kg; SAR(10 g) = 3.88 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.50 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 = 87.38 V/m; Power Drift = -0.50 dB
Peak SAR (extrapolated) = 6.93 W/kg
**SAR(1 g) = 4.78 W/kg; SAR(10 g) = 3.48 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 68.2%
Maximum value of SAR (measured) = 6.07 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) = 6.00 W/kg



## Highest Configuration at ISED Body - Table 23

### Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/9/2023 5:31:25 PM**

Robot#: DASY5-PG-3 | Run#: ZIQ-AB-230809-14
Model#: AAH88QCP9JA2AN (PMUE4541C)
Phantom#: ELI4 1028
Tissue Temp: 21.4 (C)
Serial#: 546TZP0438
Antenna: PMAE4093B
Test Freq: 406.2000 (MHz)
Battery: PMNN4468B
Carry Acc: PMLN7128A
Audio Acc: PMMN4125B
Start Power: 2.40 (W)

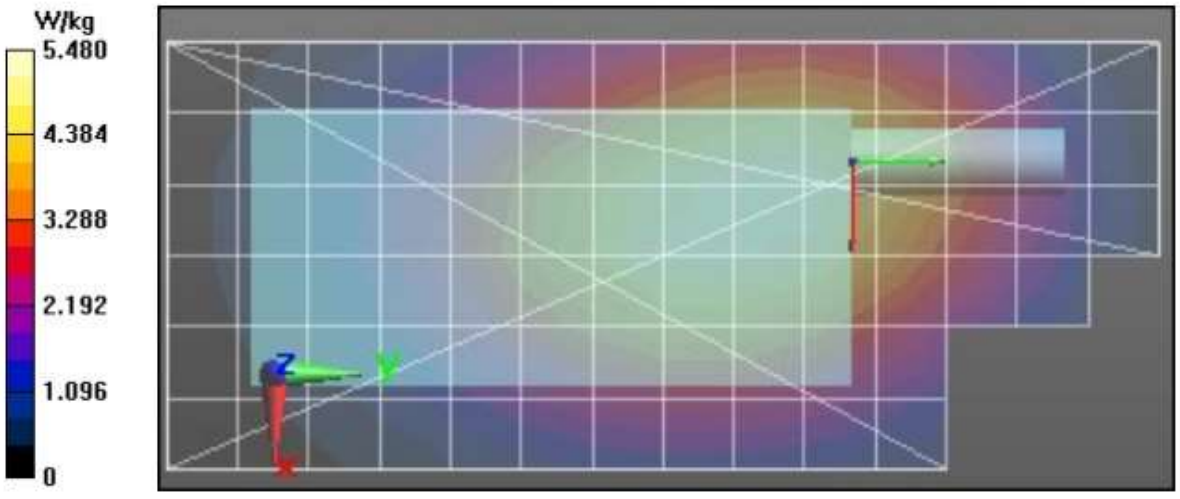
Comments:

Communication System Band: Tonga UHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 406 MHz; $\sigma$ = 0.84 S/m; $\varepsilon_r$ = 44; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 406.2 MHz, ConvF(11.36, 11.36, 11.36) @ 406.2 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

**Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (61x141x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 80.17 V/m; Power Drift = -0.38 dB
**Fast SAR: SAR(1 g) = 4.66 W/kg; SAR(10 g) = 3.39 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.58 W/kg

**Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 80.17 V/m; Power Drift = -0.44 dB
Peak SAR (extrapolated) = 6.27 W/kg
**SAR(1 g) = 4.42 W/kg; SAR(10 g) = 3.26 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.6%
Maximum value of SAR (measured) = 5.49 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) = 5.49 W/kg



# Highest Configuration at ISED Face - Table 23

## Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/10/2023 5:43:27 PM**

: Robot#: DASY5-PG-3 | Run#: IRA-FACE-230810-16
Model#: AAH88QCP9JA2AN (PMUE4541C)
Phantom#: ELI4 1028
Tissue Temp: 22.0 (C)
Serial#: 546TZP0438
Antenna: PMAE4093B
Test Freq: 415.6000 (MHz)
Battery: PMNN4468B
Carry Acc: @front
Audio Acc: N/A
Start Power: 2.40 (W)

Comments:

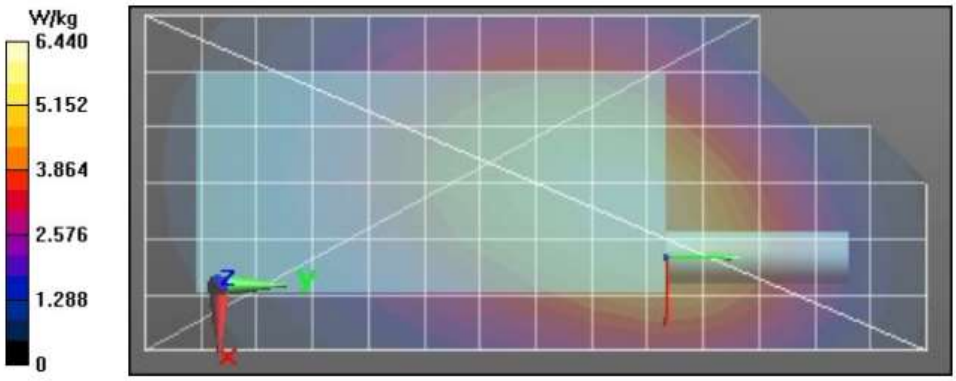
Communication System Band: Tonga UHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 416 MHz; $\sigma$ = 0.84 S/m; $\varepsilon_r$ = 44.6; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 415.6 MHz, ConvF(11.36, 11.36, 11.36) @ 415.6 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

**Below 2 GHz-Rev.3/Face Scan/1-Area Scan (61x141x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 87.73 V/m; Power Drift = -0.38 dB
**Fast SAR: SAR(1 g) = 5.54 W/kg; SAR(10 g) = 4.01 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.60 W/kg

**Below 2 GHz-Rev.3/Face Scan/2-Volume Scan 2D (41x41x1):** Interpolated grid: dx=0.7500 mm, dy=0.7500 mm, dz=1.000 mm
Reference Value = 87.73 V/m; Power Drift = -0.44 dB
**Fast SAR: SAR(1 g) = 5.33 W/kg; SAR(10 g) = 3.91 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.30 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 = 91.89 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 7.35 W/kg
**SAR(1 g) = 5.23 W/kg; SAR(10 g) = 3.82 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.5%
Maximum value of SAR (measured) = 6.45 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) = 6.22 W/kg



# APPENDIX F
# Shortened Scan of Highest SAR configuration

# Shortened Scan - Table 24

## Motorola Solutions, Inc. EME Laboratory

**Date/Time: 8/10/2023 5:43:27 PM**

: Robot#: DASY5-PG-3 | Run#: IRA-FACE-230810-16
Model#: AAH88QCP9JA2AN (PMUE4541C)
Phantom#: ELI4 1028
Tissue Temp: 22.0 (C)
Serial#: 546TZP0438
Antenna: PMAE4093B
Test Freq: 415.6000 (MHz)
Battery: PMNN4468B
Carry Acc: @front
Audio Acc: N/A
Start Power: 2.40 (W)

Comments:

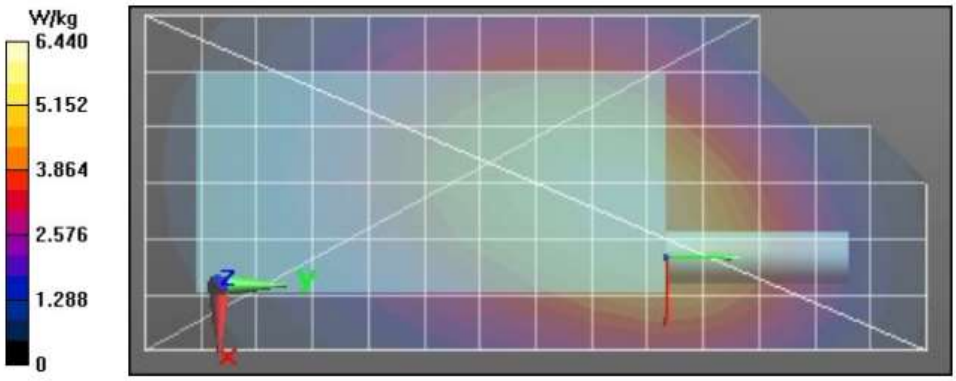
Communication System Band: Tonga UHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 416 MHz; $\sigma$ = 0.84 S/m; $\varepsilon_r$ = 44.6; $\rho$ = 1000 kg/m$^3$
Probe: EX3DV4 - SN7519, Calibrated: 2/28/2022, Frequency: 415.6 MHz, ConvF(11.36, 11.36, 11.36) @ 415.6 MHz
Electronics: DAE4 Sn684, Calibrated: 2/22/2022

**Below 2 GHz-Rev.3/Face Scan/1-Area Scan (61x141x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 87.73 V/m; Power Drift = -0.38 dB
**Fast SAR: SAR(1 g) = 5.54 W/kg; SAR(10 g) = 4.01 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.60 W/kg

**Below 2 GHz-Rev.3/Face Scan/2-Volume Scan 2D (41x41x1):** Interpolated grid: dx=0.7500 mm, dy=0.7500 mm, dz=1.000 mm
Reference Value = 87.73 V/m; Power Drift = -0.44 dB
**Fast SAR: SAR(1 g) = 5.33 W/kg; SAR(10 g) = 3.91 W/kg** (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 6.30 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 = 91.89 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 7.35 W/kg
**SAR(1 g) = 5.23 W/kg; SAR(10 g) = 3.82 W/kg** (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.5%
Maximum value of SAR (measured) = 6.45 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) = 6.22 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) | 24 | 9 | 2.78 |
| Full scan (area & zoom) | 19 | 20 | 2.68 |

# 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**