MOTOROLA SOLUTIONS

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,
Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.

**Date of Report:** 07/02/2024
**Report Revision:** B

| | |
|---|---|
| **Responsible Engineer:** | Puteri Alifah Ilyana Binti Nor Rahim (EME Engineer) |
| **Report Author:** | Puteri Alifah Ilyana Binti Nor Rahim (EME Engineer) |
| **Date/s Tested:** | 5/15/2024-5/16/2024 & 5/24/2024 |
| **Manufacturer:** | Motorola Solutions Inc. |
| **Manufacturer Location:** | Sanmina, Penang |
| **DUT Description:** | Handheld Portable – TANAPA BPR 50DX 136-174 MHz 5W NKP |
| **Test TX mode(s):** | CW (PTT) |
| **Max. Power output:** | Refer Table 3 |
| **Nominal Power:** | Refer Table 3 |
| **Tx Frequency Bands:** | Refer Table 3 |
| **Signaling type:** | Refer Table 3 |
| **Model(s) Tested:** | AAH88LDK8AD5BN |
| **Model(s) Certified: (HVIN/PMN)** | Refer Section 1.0 Introduction |
| **Serial Number(s):** | 02721AE0323 |
| **Classification:** | Occupational/Controlled Environment |
| **Firmware Version (FVIN):** | I001.058 |
| **Applicant Name:** | Motorola Solutions Inc. |
| **Applicant Address:** | Plot 2A, Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia |
| **FCC ID:** | AZ489FT3856<br>This report contains results that are immaterial for FCC equipment approval, which are clearly identified. |
| **FCC Test Firm Registration Number:** | 823256 |
| **IC:** | 109U-89FT3856<br>This report contains results that are immaterial for ISED equipment approval, which are clearly identified. |
| **IC Test Site registration:** | 24843 |

The test results clearly demonstrate compliance with 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)**
**Approved Date: 07/02/2024**

# Appendix D

# System Verification Check Scans

# Table 13

5/16/24, 2:10 PM __0_CW_150-00MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-16, 13:45

## System Performance Check Report

### Summary

| Dipole | Frequency [MHz] | TSL | Power [dBm] | Dev. 1g [%] | Dev. 10g [%] |
|---|---|---|---|---|---|
| CLA-150 - SN4016 | 150.0 | HSL | 30.0 | 7.3 | 5.0 |

### Exposure Conditions

| Phantom Section, TSL | Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | 0 | | CW, 0-- | 150.0, 0 | 10.14 | 0.770 | 49.9 |

### Hardware Setup

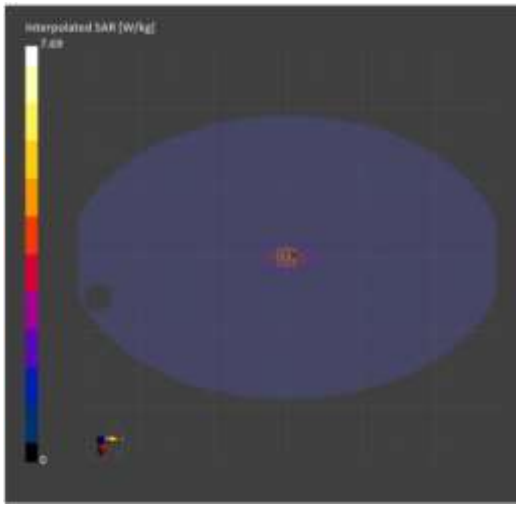
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-16 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

### Scans Setup

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 40.0 x 90.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

### Measurement Results

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-16, 13:45 | 2024-05-16, 13:53 |
| psSAR1g [W/Kg] | 4.13 | 4.05 |
| psSAR10g [W/Kg] | 2.95 | 2.61 |
| Power Drift [dB] | -0.00 | 0.01 |
| TSL Correction | Positive / Negative | Positive / Negative |



# Appendix E

# DUT Scans

## Highest SAR Configuration of LMR assessments at the FCC Body (150.8-173.4 MHz)

## Table 18

5/27/24, 1:55 PM BACK_0-00_AN000465A01_PMNN4847A_PMLN8600A_PMLN6542A_0_CW_159-10MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-27, 13:26

**Measurement Report for PMUD3535A, 02721AE0323,BACK, Custom Band, CW, Channel 159100 (159.1 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE0323 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | BACK, 0.00 | Custom Band | CW, 0-- | 159.1, 159100 | 10.14 | 0.732 | 49.7 |

**Hardware Setup**

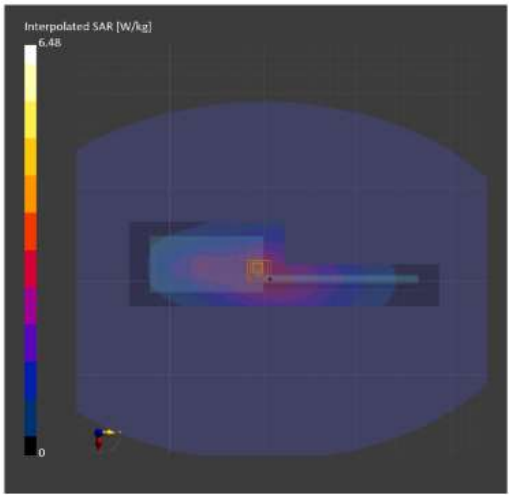
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-27 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-27, 13:26 | 2024-05-27, 13:37 |
| psSAR1g [W/Kg] | 3.29 | 3.24 |
| psSAR10g [W/Kg] | 2.42 | 2.22 |
| Power Drift [dB] | 0.07 | -0.52 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 73.2 |
| Dist 3dB Peak [mm] | | 18.8 |



# Highest SAR Configuration of LMR assessments at the FCC Face (150.8-173.4MHz)

## Table 20

5/15/24, 5:47 AM FRONT_25-00_AN000465A01_PMNN4847A_ front_NA_0_CW_159-10MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-15, 05:26

**Measurement Report for PMUD3535A, 02721AE023,FRONT, Custom Band, CW, Channel 159100 (159.1 MHz)**

### Device Under Test Properties

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE023 | 121.0 x 60.0 x 35.0 |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | FRONT, 25.00 | Custom Band | CW, 0-- | 159.1, 159100 | 10.14 | 0.742 | 49.5 |

### Hardware Setup

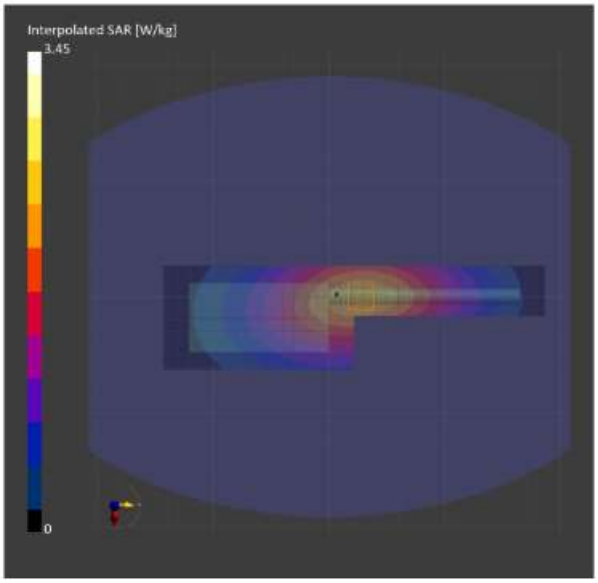
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-14 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

### Scans Setup

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | All points |
| Scan Method | Measured | Measured |

### Measurement Results

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-15, 05:26 | 2024-05-15, 05:42 |
| psSAR1g [W/Kg] | 2.38 | 2.24 |
| psSAR10g [W/Kg] | 1.83 | 1.71 |
| Power Drift [dB] | -0.19 | -0.63 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 82.7 |
| Dist 3dB Peak [mm] | | > 15.0 |



# Highest SAR Configuration of LMR assessments at outside FCC Frequency range Body (136-174 MHz)

## Table 21

5/29/24, 4:59 PM BACK_0-00_AN000464A01_PMNN4847A_PMLN8600A_PMLN6542A_0_CW_138-00MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-29, 16:46

**Measurement Report for PMUD3535A, 02721AE0323,BACK, CLA150, CW, Channel 38 (138.0 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE0323 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | BACK, 0.00 | CLA150 | CW, 0-- | 138.0, 38 | 10.14 | 0.777 | 52.6 |

**Hardware Setup**

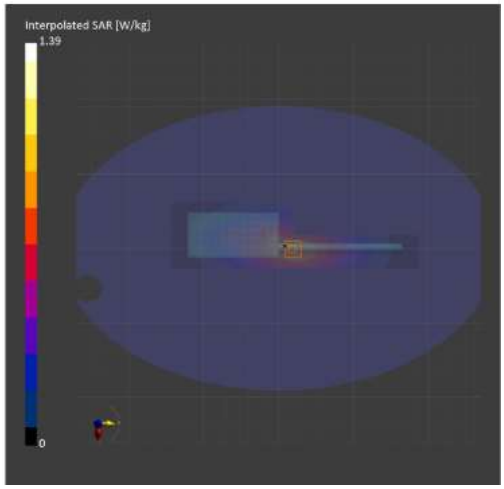
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-29 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-29, 16:46 | 2024-05-29, 16:57 |
| psSAR1g [W/Kg] | 0.856 | 0.852 |
| psSAR10g [W/Kg] | 0.660 | 0.628 |
| Power Drift [dB] | -0.05 | -0.16 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 82.9 |
| Dist 3dB Peak [mm] | | > 15.0 |



# Highest SAR Configuration of LMR assessments at outside FCC Frequency range Face (136-174 MHz)

## Table 21

5/16/24, 4:21 PM FRONT_25-00_AN000464A01_PMNN4847A_ front_NA_0_CW_138-00MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-16, 16:08

**Measurement Report for PMUD3535A, 02721AE0323,FRONT, CLA150, CW, Channel 38 (138.0 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE0323 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | FRONT, 25.00 | CLA150 | CW, 0-- | 138.0, 38 | 10.14 | 0.762 | 50.5 |

**Hardware Setup**

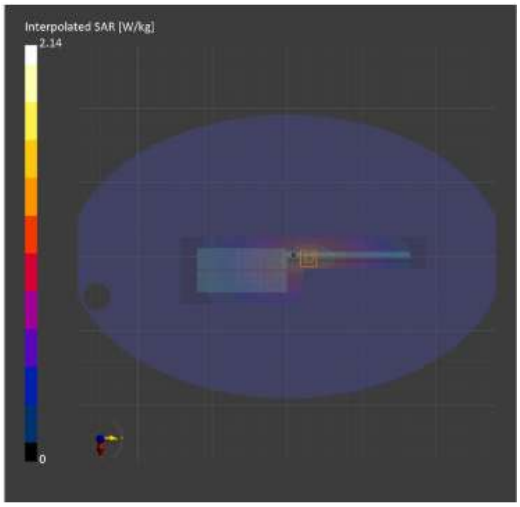
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-16 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-16, 16:08 | 2024-05-16, 16:18 |
| psSAR1g [W/Kg] | 1.33 | 1.34 |
| psSAR10g [W/Kg] | 1.03 | 1.02 |
| Power Drift [dB] | -0.08 | -0.25 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 82.4 |
| Dist 3dB Peak [mm] | | > 15.0 |



# Highest SAR Configuration of LMR assessments at the ISED, Canada Body (138-174MHz)

## Table 22

5/27/24, 1:55 PM BACK_0-00_AN000465A01_PMNN4847A_PMLN8600A_PMLN6542A_0_CW_159-10MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-27, 13:26

**Measurement Report for PMUD3535A, 02721AE0323,BACK, Custom Band, CW, Channel 159100 (159.1 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE0323 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | BACK, 0.00 | Custom Band | CW, 0-- | 159.1, 159100 | 10.14 | 0.732 | 49.7 |

**Hardware Setup**

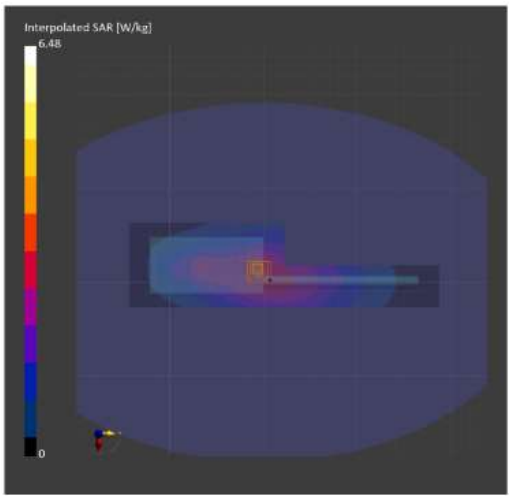
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-27 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-27, 13:26 | 2024-05-27, 13:37 |
| psSAR1g [W/Kg] | 3.29 | 3.24 |
| psSAR10g [W/Kg] | 2.42 | 2.22 |
| Power Drift [dB] | 0.07 | -0.52 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 73.2 |
| Dist 3dB Peak [mm] | | 18.8 |



# Highest SAR Configuration of LMR assessments at the ISED, Canada Face (138-174 MHz)

## Table 22

5/15/24, 5:47 AM FRONT_25-00_AN000465A01_PMNN4847A_ front_NA_0_CW_159-10MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-15, 05:26

**Measurement Report for PMUD3535A, 02721AE023,FRONT, Custom Band, CW, Channel 159100 (159.1 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE023 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | FRONT, 25.00 | Custom Band | CW, 0-- | 159.1, 159100 | 10.14 | 0.742 | 49.5 |

**Hardware Setup**

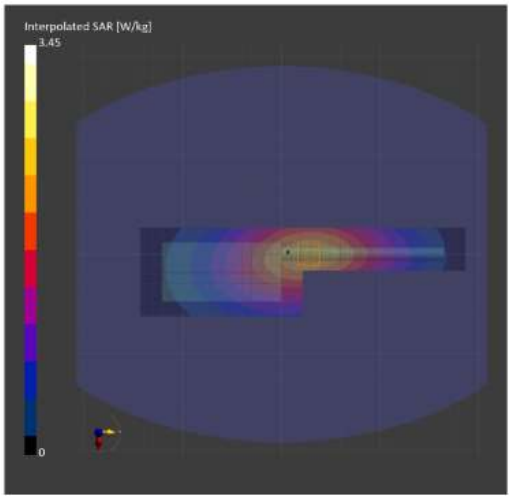
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-14 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | All points |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-15, 05:26 | 2024-05-15, 05:42 |
| psSAR1g [W/Kg] | 2.38 | 2.24 |
| psSAR10g [W/Kg] | 1.83 | 1.71 |
| Power Drift [dB] | -0.19 | -0.63 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 82.7 |
| Dist 3dB Peak [mm] | | > 15.0 |



# APPENDIX F

## Shortened Scan of Highest SAR configuration

# Shortened Scan Assessment

## Table 23

5/28/24, 5:43 AM BACK_0-00_AN000465A01_PMNN4847A_PMLN8600A_PMLN6542A_0_CW_159-10MHz.html

**Motorola Solutions, EME Laboratory**

2024-05-28, 05:18

**Measurement Report for PMUD3535A, 02721AE0323,BACK, Custom Band, CW, Channel 159100 (159.1 MHz)**

**Device Under Test Properties**

| Model | Serial Number | Dimensions [mm] |
|---|---|---|
| PMUD3535A | 02721AE0323 | 121.0 x 60.0 x 35.0 |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|---|---|---|---|---|---|---|---|
| Flat, HSL | BACK, 0.00 | Custom Band | CW, 0-- | 159.1, 159100 | 10.14 | 0.732 | 49.7 |

**Hardware Setup**

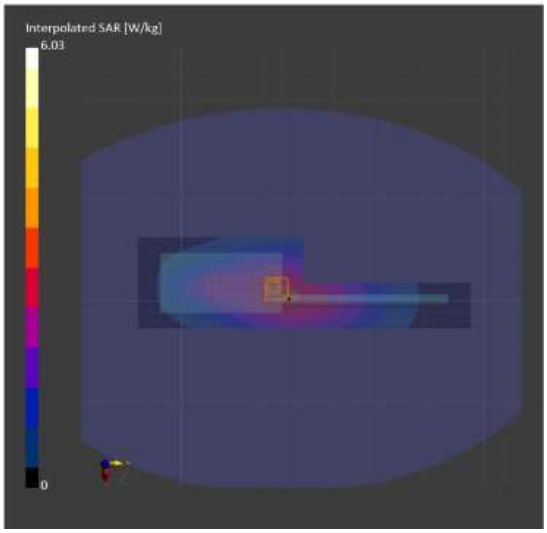
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|---|---|---|
| ELI V4.0 (20deg probe tilt) - 1011 | HSL150 , 2024-May-28 | EX3DV4 - SN3612, 2021-10-22 | DAE4 Sn1483, 2022-10-10 |

**Scans Setup**

| | Area Scan | Zoom Scan |
|---|---|---|
| Grid Extents [mm] | 90.0 x 330.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 6.0 x 6.0 x 1.5 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

**Measurement Results**

| | Area Scan | Zoom Scan |
|---|---|---|
| Date | 2024-05-28, 05:18 | 2024-05-28, 05:34 |
| psSAR1g [W/Kg] | 3.17 | 3.18 |
| psSAR10g [W/Kg] | 2.35 | 2.23 |
| Power Drift [dB] | -0.21 | -0.35 |
| TSL Correction | Positive only | Positive only |
| M2/M1 [%] | | 76.3 |
| Dist 3dB Peak [mm] | | > 15.0 |



# APPENDIX G

## DUT Test Position Photos

**Photos are available in Exhibit 7B**

# APPENDIX H

## DUT, Body worn and audio accessories Photos

**Photos are available in Exhibit 7B**