







#### **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:** 10/27/2021

**Report Revision:** B

**Responsible Engineer:** Saw Sun Hock (EME Engineer) **Report Author:** Hoe Kean Loon (EME Engineer)

**Date/s Tested:** 10/17/2021-10/18/2021, 10/26/2021-10/27/2021

**Manufacturer:** Motorola Solutions Inc.

**DUT Description:** Handheld Portable – XPR 7350e 136-174 5W NKP GNSS TIA4950

Test TX mode(s):

Max. Power output:

Nominal Power:

Tx Frequency Bands:

CW (PTT)

Refer Table 3

Refer Table 3

LMR 136-174 MHz

Signaling type: FM

Model(s) Tested: AAH56JDC9WA1AN-1 (PMUD2943A)/PMUD2943AAANWA Model(s) Certified: AAH56JDC9WA1AN-1 (PMUD2943A)/PMUD2943AAANWA,

AAH56JDN9WA1AN-1 (PMUD2942A)/PMUD2942AACNWA, AAH56JDC9WA1AN-1 (PMUD2941A)/PMUD2941AAANWA, AAH56JDN9WA1AN-1 (PMUD2940A)/PMUD2940AACNWA.

**Serial Number(s):** 807TXTP773

Classification: Occupational/Controlled Applicant Name: Motorola Solutions Inc.

**Applicant Address:** 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322

**FCC ID:** AZ489FT3851; LMR 150.8-173.4MHz

This report contains results that are immaterial for FCC equipment approval, which

are clearly identified.

109U-89FT3851; LMR 138-174MHz

IC: This report contains results that are immaterial for ISED equipment approval, which

are clearly identified.

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.

Pei Loo Tev

**Deputy Technical Manager - Approved Signatory** 

**Approval Date: 10/27/2021** 

# Appendix D System Verification Check Scans

FCC ID: AZ489FT3851 / IC: 109U-89FT3851

## Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/17/2021 8:37:44 PM

Robot#: DASY5-PG-2 | Run#: AF(SAN)-SYSP-150H-211017-12

 Dipole Model#
 CLA150

 Phantom#:
 ELI5 1147

 Tissue Temp:
 21.1 (C)

 Serial#:
 4005

Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.160 dB
Adjusted SAR (1W): 3.79 mW/g (1g)

#### Comments:

Communication System Band: CLA150, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 150 MHz;  $\sigma = 0.73 \text{ S/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 150 MHz, ConvF(13.84, 13.84, 13.84) @ 150 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

#### 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 = 86.41 V/m; Power Drift = -0.11 dB

Fast SAR: SAR(1 g) = 4.53 W/kg; SAR(10 g) = 3.2 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.33 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 = 86.41 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 6.62 W/kg

SAR(1 g) = 3.79 W/kg; SAR(10 g) = 2.43 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 15 mm

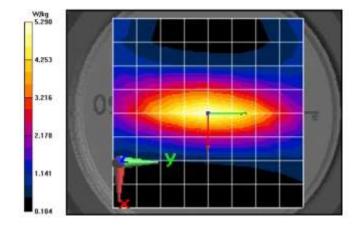
Ratio of SAR at M2 to SAR at M1 = 57%

Maximum value of SAR (measured) = 5.32 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) = 5.51 W/kg



#### Motorola Solutions, Inc. EME Laboratory Date/Time: 10/27/2021 2:22:01 AM

Robot#: DASY5-PG-2 | Run#: MA-SYSP-150B-211027-01#

CLA150 Dipole Model# Phantom#: ELI4 1022 Tissue Temp: 22.1 (C) Serial#: 4010

Test Freq: 150,0000 (MHz) Start Power: 1000 (mW) Rotation (1D): 0.150 dB Adjusted SAR (1W): 3.93 mW/g (1g)

#### Comments:

Communication System Band: CLA150, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 150 MHz;  $\sigma = 0.78 \text{ S/m}$ ;  $\epsilon_r = 59.4$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 150 MHz, ConvF(13.51, 13.51, 13.51) @ 150 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

#### 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 = 84.45 V/m; Power Drift = 0.00 dB

Fast SAR: SAR(1 g) = 4.69 W/kg; SAR(10 g) = 3.33 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.62 W/kg

#### Below 2 GHz-Rev.3/System Performance Check/0-Degree Cube (6x6x7)/Cube 0:

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

Reference Value = 84.45 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 6.95 W/kg

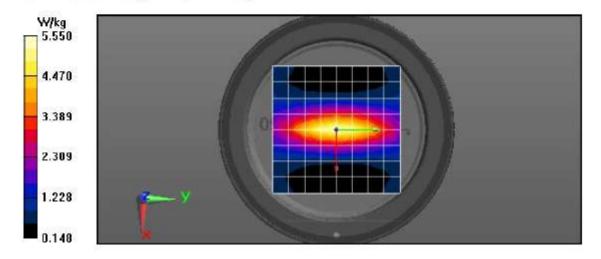
SAR(1 g) = 3.93 W/kg; SAR(10 g) = 2.54 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 15 mm
Ratio of SAR at M2 to SAR at M1 = 57.1%

Maximum value of SAR (measured) = 5.58 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) = 5.64 W/kg



### Motorola Solutions, Inc. EME Laboratory

Date/Time: 10/27/2021 5:00:02 PM

Robot#: DASY5-PG-2 | Run#: AR(SAN)-SYSP-150H-211027-16#

 Dipole Model#
 CLA150

 Phantom#:
 ELI5 1147

 Tissue Temp:
 22.1 (C)

 Serial#:
 4010

Test Freq: 150.0000 (MHz)
Start Power: 1000 (mW)
Rotation (1D): 0.150 dB
Adjusted SAR (1W): 3.91 mW/g (1g)

#### Comments:

Communication System Band: CLA150, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 150 MHz;  $\sigma = 0.73 \text{ S/m}$ ;  $\varepsilon_r = 51$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 150 MHz, ConvF(13.84, 13.84, 13.84) @ 150 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

### 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 = 86.26 V/m; Power Drift = -0.06 dB

Fast SAR: SAR(1 g) = 4.7 W/kg; SAR(10 g) = 3.32 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.60 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 = 86.26 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 6.88 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 2.51 W/kg (SAR corrected for target medium)

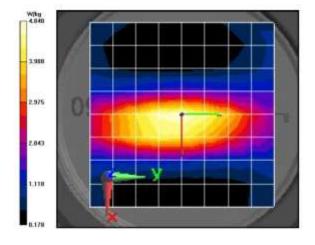
Smallest distance from peaks to all points 3 dB below = 15.3 mm

Ratio of SAR at M2 to SAR at M1 = 56.8% Maximum value of SAR (measured) = 5.55 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) = 5.52 W/kg



# Appendix E DUT Scans

#### Assessments at the Body - Table 18

#### Motorola Solutions, Inc. EME Laboratory Date/Time: 10/27/2021 4:07:35 AM

Robot#: DASY5-PG-2 | Run#: MA-AB-211027-03# PMUD2943A Model#: Phantom#: ELI4 1022 Tissue Temp: 22.0 (C)

807TXTP773 (GOB) Serial#: PMAD4116A Antenna: 150.8000 (MHz) Test Freq: Battery: PMNN4488A Carry Acc: PMLN7296A Audio Acc: PMMN4024A Start Power. 5.97 (W)

#### Comments:

Communication System Band: Belize VHF, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 151 MHz;  $\sigma = 0.78$  S/m;  $\varepsilon_r = 59.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 150.8 MHz, ConvF(13.51, 13.51, 13.51) @ 150.8 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

### Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (71x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 44.43 V/m; Power Drift = -2.07 dB

Fast SAR: SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.44 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 2.79 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 = 44.43 V/m; Power Drift = -2.69 dB

Peak SAR (extrapolated) = 2.65 W/kg

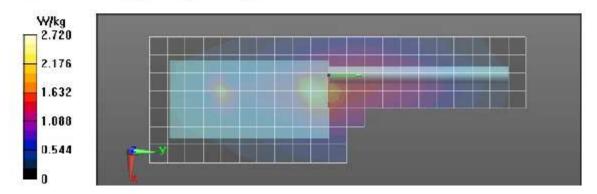
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.669 W/kg (SAR corrected for target medium) Smallest distance from peaks to all points 3 dB below = 15.4 mm Ratio of SAR at M2 to SAR at M1 = 43.2%

Maximum value of SAR (measured) = 1.74 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) = 1.71 W/kg



#### Assessments at the Face - Table 19

#### Motorola Solutions, Inc. EME Laboratory Date/Time: 10/18/2021 12:04:38 PM

Robot#: DASY5-PG-2 | Run#: MFR-FACE-211018-11#

AAH56JDC9WA1AN-1 (PMUD2943A) Model#:

Phantom#: ELI5 1147 Tissue Temp: 20.4 (C)

Serial#: 807TXTP773 (GOB) Antenna: PMAD4118A Test Freq: 166.5000 (MHz) Battery: PMNN4491C Carry Acc: NONE Audio Acc: NONE Start Power: 6.00 (W)

#### Comments:

Communication System Band: Belize VHF, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 168 MHz;  $\sigma = 0.75$  S/m;  $\epsilon_r = 50.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 166.5 MHz, ConvF(13.84, 13.84, 13.84) @ 166.5 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

## Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x211x1): Interpolated grid: dx=1.500 mm, dy=1.500

Reference Value = 60.86 V/m; Power Drift = -0.38 dB

Fast SAR: SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.84 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.83 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 = 60.86 V/m; Power Drift = -0.43 dB

Peak SAR (extrapolated) = 3.21 W/kg

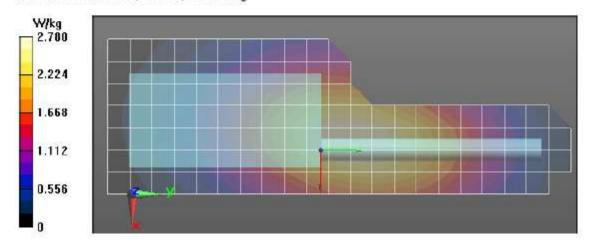
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.66 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid Ratio of SAR at M2 to SAR at M1 = 68.6%

Maximum value of SAR (measured) = 2.77 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) = 2.75 W/kg



## Assessments for ISED Body - Table 20

#### Motorola Solutions, Inc. EME Laboratory Date/Time: 10/27/2021 5:29:24 AM

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Robot#: DASY5-PG-2 | Run#: MA-AB-211027-05#

Model#: PMUD2943A Phantom#: ELI4 1022 Tissue Temp: 21.9 (C)

#### Comments:

Communication System Band: Belize VHF, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 140 MHz;  $\sigma = 0.77 \text{ S/m}$ ;  $\epsilon_r = 59.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 139.7 MHz, ConvF(13.51, 13.51, 13.51) @ 139.7 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

#### Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (71x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 49.38 V/m; Power Drift = -0.38 dB

Fast SAR: SAR(1 g) = 2.86 W/kg; SAR(10 g) = 1.87 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 3.71 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 = 49.38 V/m; Power Drift = -0.46 dB

Peak SAR (extrapolated) = 5.78 W/kg

SAR(1 g) = 2.22 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 13.8 mm

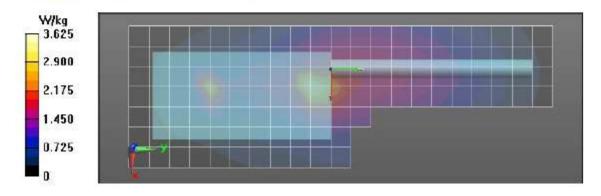
Ratio of SAR at M2 to SAR at M1 = 40.7%

Maximum value of SAR (measured) = 3.70 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) = 3.68 W/kg



#### **Assessments for ISED Face - Table 20**

#### Motorola Solutions, Inc. EME Laboratory Date/Time: 10/18/2021 12:04:38 PM

Robot#: DASY5-PG-2 | Run#: MFR-FACE-211018-11#

AAH56JDC9WA1AN-1 (PMUD2943A) Model#:

Phantom#: ELI5 1147 Tissue Temp: 20.4 (C)

Serial#: 807TXTP773 (GOB) Antenna: PMAD4118A Test Freq: 166.5000 (MHz) Battery: PMNN4491C Carry Acc: NONE Audio Acc: NONE Start Power: 6.00 (W)

#### Comments:

Communication System Band: Belize VHF, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 168 MHz;  $\sigma = 0.75$  S/m;  $\epsilon_r = 50.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 166.5 MHz, ConvF(13.84, 13.84, 13.84) @ 166.5 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

# Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x211x1): Interpolated grid: dx=1.500 mm, dy=1.500

Reference Value = 60.86 V/m; Power Drift = -0.38 dB

Fast SAR: SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.84 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.83 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 = 60.86 V/m; Power Drift = -0.43 dB

Peak SAR (extrapolated) = 3.21 W/kg

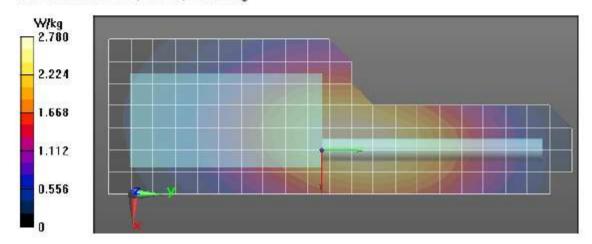
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.66 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid Ratio of SAR at M2 to SAR at M1 = 68.6%

Maximum value of SAR (measured) = 2.77 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) = 2.75 W/kg



# **APPENDIX F** Shortened Scan of Highest SAR configuration

Motorola Solutions, Inc. EME Laboratory Date/Time: 10/27/2021 5:55:06 PM

Robot#: DASY5-PG-3 | Run#: AR(SAN)-FACE-211027-17#

Model#: AAH56JDC9WA1AN-1 (PMUD2943A)

Phantom#: ELI5 1147 Tissue Temp: 22.5 (C)

807TXTP773 (GOB) Serial#: PMAD4118A Antenna: Test Freq: 166.5000 (MHz) PMNN4491C Battery: NONE Carry Acc: Audio Acc: NONE Start Power: 6.00 (W)

#### Comments:

Communication System Band: Belize Refresh VHF, Communication System UID: 0, Duty Cycle: 1:1,

Medium parameters used: f = 167 MHz;  $\sigma = 0.75 \text{ S/m}$ ;  $\epsilon_r = 50.3$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Probe: EX3DV4 - SN7534, Calibrated: 4/19/2021, Frequency: 166.5 MHz, ConvF(13.84, 13.84, 13.84) @ 166.5 MHz

Electronics: DAE4 Sn1598, Calibrated: 4/7/2021

# Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x211x1): Interpolated grid: dx=1.500 mm, dy=1.500

Reference Value = 62.31 V/m; Power Drift = -0.02 dB
Fast SAR: SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.94 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 2.98 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 = 62.31 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.93 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 3.03 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 = 65.17 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.66 W/kg

SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.87 W/kg (SAR corrected for target medium)

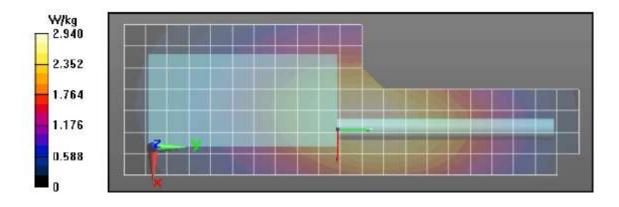
Smallest distance from peaks to all points 3 dB below. Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 68%

Maximum value of SAR (measured) = 3.14 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) = 3.04 W/kg



# **Shortened Scan Table 21**

## 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)     | 21               | 8                | 1.25          |
| Full scan (area & zoom) | 19               | 25               | 1.20          |

FCC ID: AZ489FT3851 / IC: 109U-89FT3851

Photos available in Exhibit 7B

**APPENDIX G DUT Test Position Photos** 

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# APPENDIX H DUT, Body worn and audio accessories Photos

Photos available in Exhibit 7B

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