MOTOROLA SOLUTIONS

MS ISO/IEC 17025 TESTING SAMM No. 0826

ACCREDITED CERTIFICATE 2518.05

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: 10/7/2021
Report Revision: A

Responsible Engineer:	Saw Sun Hock (EME Engineer)
Report Author:	Sin Keng LEE (EME Engineer)
Date/s Tested:	09/21/2021 – 09/22/2021
Manufacturer:	Motorola Solutions Inc.
DUT Description:	Handheld Portable – LMR 403-512 MHz 4W NKP TIA4950
Test TX mode(s):	CW (PTT)
Max. Power output:	Refer Table 3
Nominal Power:	Refer Table 3
Tx Frequency Bands:	LMR 403-512 MHz
Signaling type:	FM (LMR)
Model(s) Tested:	AAH02RDC9VA1AN-1 (PMUE5780A) / PMUE5780AAANAA
Model(s) Certified:	AAH02RDC9VA1AN-1 (PMUE5780A) / PMUE5780AAANAA AAH02RDH9VA1AN-1 (PMUE5845A) / PMUE5845AABNAA AAH02RDC9VA1AN-1 (PMUE3999C) / PMUE3999CAANAA AAH02RDH9VA1AN-1 (PMUE5839A) / PMUE5839AABNAA
Serial Number(s):	867TXM2661
Classification:	Occupational/Controlled
FCC ID:	AZ489FT4969; LMR 406.125-512 MHz This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC:	109U-89FT4969; LMR 406.1-430MHz, 450-470MHz This report contains results that are immaterial for ISED equipment approval, which are clearly identified.
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.

Pei Loo Tey
Approved Signatory
Approval Date: 10/8/2021

Appendix D
System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/21/2021 9:20:02 PM

Robot#: DASY5-PG-3 | Run#:	AMN-SYSP-450B-210921-17
Dipole Model#	D450V3
Phantom#:	ELI4 1040
Tissue Temp:	20.6 (C)
Serial#:	1054
Test Freq:	450.0000 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.14 dB
Adjusted SAR (1W):	4.84 mW/g (1g)

Comments:

Communication System Band: Dipole 450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 450 MHz; σ = 0.92 S/m; ε_r = 55.5; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 450 MHz, ConvF(12.07, 12.07, 12.07) @ 450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (41x221x1):

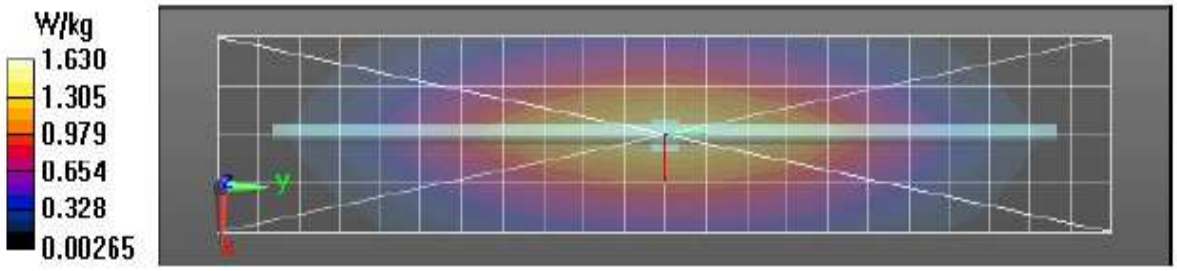
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 42.89 V/m; Power Drift = -0.04 dB
Fast SAR: SAR(1 g) = 1.31 W/kg; SAR(10 g) = 0.901 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.63 W/kg

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 = 42.89 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.811 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 = 63.5%
Maximum value of SAR (measured) = 1.63 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) = 1.63 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/22/2021 3:30:14 PM

Robot#: DASY5-PG-3 | Run#:	MA-SYSP-450H-210922-09
Dipole Model#	D450V3
Phantom#:	ELI4 1103
Tissue Temp:	21.5 (C)
Serial#:	1054
Test Freq:	450.0000 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.160 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; σ = 0.84 S/m; ε_r = 42.4; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 450 MHz, ConvF(11.86, 11.86, 11.86) @ 450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (41x221x1):

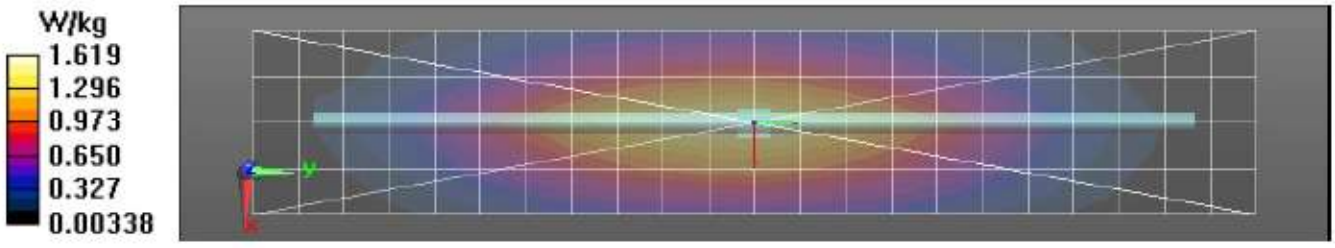
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 45.17 V/m; Power Drift = -0.06 dB
Fast SAR: SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.912 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.63 W/kg

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 = 45.17 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.824 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 = 64.1%
Maximum value of SAR (measured) = 1.64 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) = 1.64 W/kg



Appendix E
DUT Scans

Assessments at the Body - Table 18

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/22/2021 3:35:10 AM

Robot#: DASY5-PG-3 | Run#:	AMN-AB-210922-04#
Model#:	PMUE5780A
Phantom#:	ELI4 1040
Tissue Temp:	21.1 (C)
Serial#:	867TXM2661
Antenna:	PMAE4071A
Test Freq:	470.0000 (MHz)
Battery:	PMNN4417BR
Carry Acc:	RLN4570A
Audio Acc:	None
Start Power:	4.70 (W)

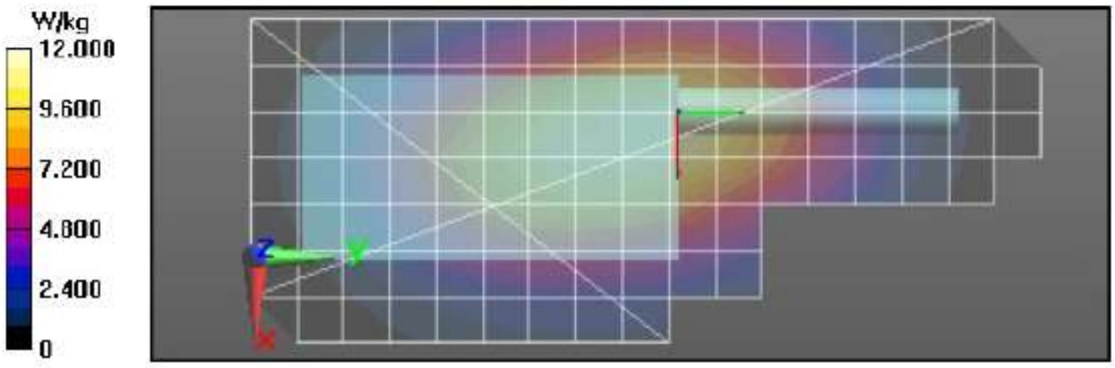
Comments:

Communication System Band: Andorra, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 470 MHz; σ = 0.94 S/m; ε_r = 55.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 470 MHz, ConvF(12.07, 12.07, 12.07) @ 470 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (71x171x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 119.5 V/m; Power Drift = -0.65 dB
Fast SAR: SAR(1 g) = 10 W/kg; SAR(10 g) = 7.28 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.4 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 = 119.5 V/m; Power Drift = -0.84 dB
Peak SAR (extrapolated) = 13.4 W/kg
SAR(1 g) = 9.3 W/kg; SAR(10 g) = 6.81 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 = 69.8%
Maximum value of SAR (measured) = 11.8 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) = 11.5 W/kg



Assessments at the Face - Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/22/2021 5:22:33 PM

Robot#: DASY5-PG-3 | Run#: MA-FACE-210922-10

Model#:	PMUE5780A
Phantom#:	ELI4 1103
Tissue Temp:	21.5 (C)
Serial#:	867TXM2661
Antenna:	PMAE4071A
Test Freq:	470.0000 (MHz)
Battery:	PMNN4406BR
Carry Acc:	@ front
Audio Acc:	None
Start Power:	4.72 (W)

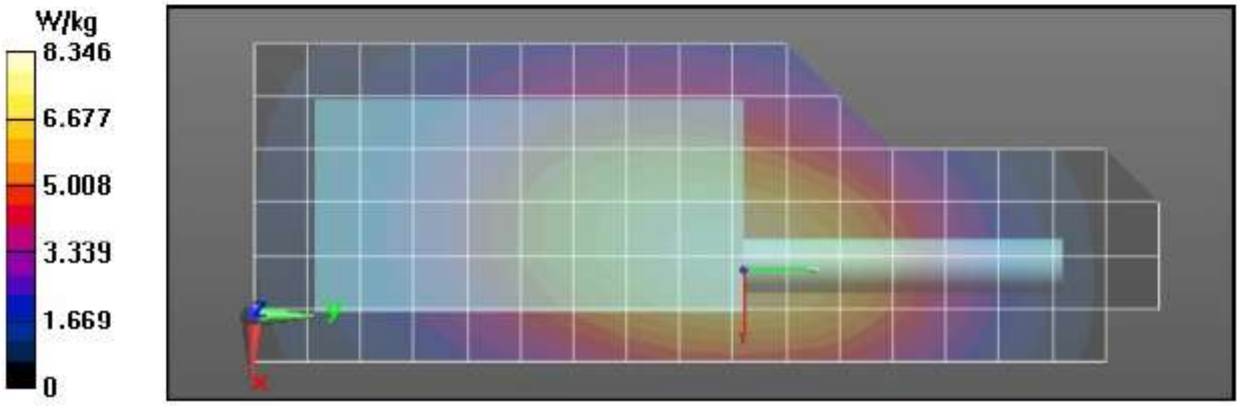
Comments:

Communication System Band: Andorra, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 470 MHz; σ = 0.85 S/m; ε_r = 42; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 470 MHz, ConvF(11.86, 11.86, 11.86) @ 470 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x171x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 101.7 V/m; Power Drift = -0.30 dB
Fast SAR: SAR(1 g) = 6.86 W/kg; SAR(10 g) = 5.01 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 8.35 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 = 101.7 V/m; Power Drift = -0.41 dB
Peak SAR (extrapolated) = 8.80 W/kg
SAR(1 g) = 6.43 W/kg; SAR(10 g) = 4.78 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 = 72.2%
Maximum value of SAR (measured) = 7.93 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) = 7.86 W/kg



Assessments for ISED body - Table 20

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/22/2021 4:39:48 AM

Robot#: DASY5-PG-3 | Run#:	AMN-AB-210922-06#
Model#:	PMUE5780A
Phantom#:	ELI4 1040
Tissue Temp:	21.1 (C)
Serial#:	867TXM2661
Antenna:	PMAE4071A
Test Freq:	470.0000 (MHz)
Battery:	PMNN4417BR
Carry Acc:	RLN4570A
Audio Acc:	None
Start Power:	4.70 (W)

Comments:

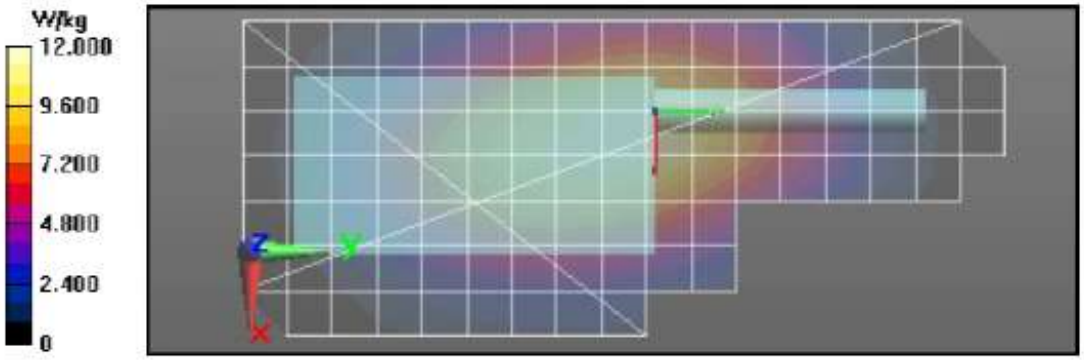
Communication System Band: Andorra, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 470 MHz; σ = 0.94 S/m; ε_r = 55.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 470 MHz, ConvF(12.07, 12.07, 12.07) @ 470 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (71x171x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 119.5 V/m; Power Drift = -0.69 dB
Fast SAR: SAR(1 g) = 10.1 W/kg; SAR(10 g) = 7.32 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.5 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 = 119.5 V/m; Power Drift = -0.80 dB
Fast SAR: SAR(1 g) = 9.84 W/kg; SAR(10 g) = 7.21 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.0 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 = 123.6 V/m; Power Drift = -0.75 dB
Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 10 W/kg; SAR(10 g) = 7.4 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 = 69.7%
Maximum value of SAR (measured) = 12.7 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) = 11.8 W/kg



Assessments for ISED face - Table 20

Motorola Solutions, Inc. EME Laboratory

Date/Time: 9/22/2021 5:22:33 PM

Robot#: DASY5-PG-3 | Run#: MA-FACE-210922-10

Model#:	PMUE5780A
Phantom#:	ELI4 1103
Tissue Temp:	21.5 (C)
Serial#:	867TXM2661
Antenna:	PMAE4071A
Test Freq:	470.0000 (MHz)
Battery:	PMNN4406BR
Carry Acc:	@ front
Audio Acc:	None
Start Power:	4.72 (W)

Comments:

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

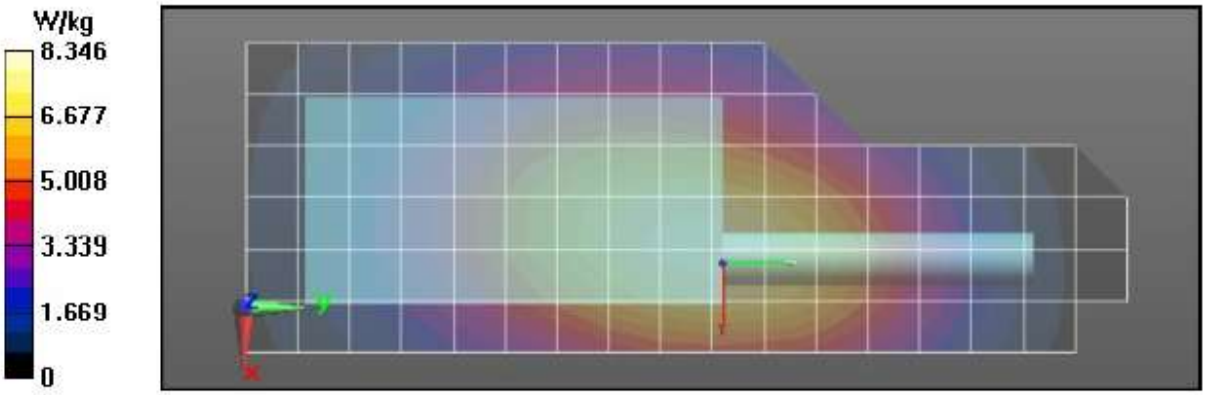
Medium parameters used: f = 470 MHz; σ = 0.85 S/m; ε_r = 42; ρ = 1000 kg/m^3

Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 470 MHz, ConvF(11.86, 11.86, 11.86) @ 470 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (71x171x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 101.7 V/m; Power Drift = -0.30 dB
Fast SAR: SAR(1 g) = 6.86 W/kg; SAR(10 g) = 5.01 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 8.35 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 = 101.7 V/m; Power Drift = -0.41 dB
Peak SAR (extrapolated) = 8.80 W/kg
SAR(1 g) = 6.43 W/kg; SAR(10 g) = 4.78 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 = 72.2%
Maximum value of SAR (measured) = 7.93 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) = 7.86 W/kg



APPENDIX F
Shortened Scan of Highest SAR configuration

Shortened Scan
Table 21

Motorola Solutions, Inc. EME Laboratory
Date/Time: 9/22/2021 4:39:48 AM

Robot#: DASY5-PG-3 | Run#: AMN-AB-210922-06#
Model#: PMUE5780A
Phantom#: ELI4 1040
Tissue Temp: 21.1 (C)
Serial#: 867TXM2661
Antenna: PMAE4071A
Test Freq: 470.0000 (MHz)
Battery: PMNN4417BR
Carry Acc: RLN4570A
Audio Acc: None
Start Power: 4.70 (W)

Comments:

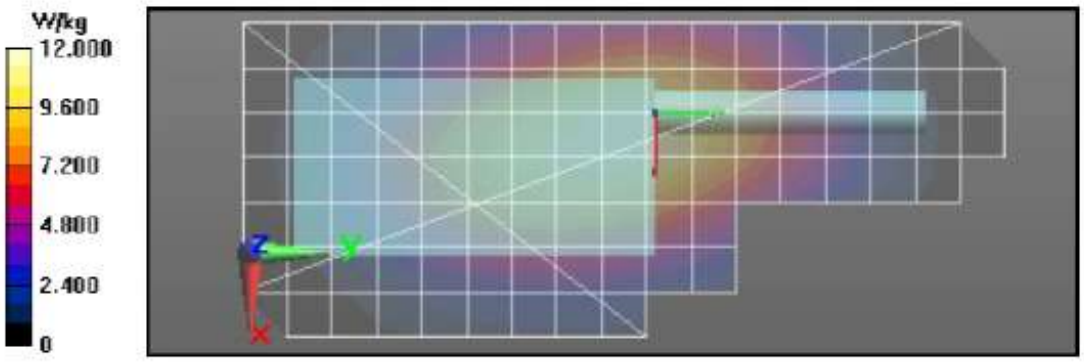
Communication System Band: Andorra, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 470 MHz; σ = 0.94 S/m; ε_r = 55.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 470 MHz, ConvF(12.07, 12.07, 12.07) @ 470 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (71x171x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 119.5 V/m; Power Drift = -0.69 dB
Fast SAR: SAR(1 g) = 10.1 W/kg; SAR(10 g) = 7.32 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.5 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 = 119.5 V/m; Power Drift = -0.80 dB
Fast SAR: SAR(1 g) = 9.84 W/kg; SAR(10 g) = 7.21 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.0 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 = 123.6 V/m; Power Drift = -0.75 dB
Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 10 W/kg; SAR(10 g) = 7.4 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 = 69.7%
Maximum value of SAR (measured) = 12.7 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) = 11.8 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)	22	8	6.07
Full scan (area & zoom)	24	25	5.74

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