MOTOROLA SOLUTIONS

MS ISO/IEC 17025 TESTING SAMM No. 0826

ACCREDITED CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT PCII Report 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: 11/27/2021
Report Revision: A

Responsible Engineer:	Saw Sun Hock (EME Engineer)
Report Author:	Sin Keng LEE (EME Engineer)
Date/s Tested:	11/10/2021 – 11/18/2021
Manufacturer:	Motorola Solutions Inc.
DUT Description:	Handheld Portable – APX6000 and APX6000XE Refresh VHF 136-174 MHz 6W
Test TX mode(s):	CW (PTT), Bluetooth, WLAN 802.11 b/g/n
Max. Power output:	Refer Table 4
Nominal Power:	Refer Table 4
Tx Frequency Bands:	LMR 136-174 MHz; Bluetooth 2.402-2.480 GHz; WLAN 802.11 b/g/n 2.412-2.462 GHz
Signaling type:	FM (LMR), FHSS (Bluetooth), 802.11 b/g/n (WLAN)
Model(s) Tested:	H98KGD9PW5BN (PMUD3372D)
Model(s) Certified:	Refer Table 1
Serial Number(s):	481TXV0561
Classification:	Occupational/Controlled
Applicant Name:	Motorola Solutions Inc.
Applicant Address:	8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
FCC ID:	AZ489FT7087; LMR 150.8-173.4 MHz, Bluetooth 2.402-2.480 GHz, WLAN 802.11 b/g/n 2.412-2.462 GHz This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC:	109U-89FT7087; 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.

Saw Sun Hock (Approved Signatory)
Approval Date: 11/30/2021

Appendix D
System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/18/2021 1:44:19 AM

Robot#: DASY5-PG-3 | Run#:	AR-SYSP-150B-211118-02
Dipole Model#	CLA-150
Phantom#:	ELI5 1150
Tissue Temp:	21.8 (C)
Serial#:	4010
Test Freq:	150.0000 (MHz)
Start Power:	1000 (mW)
Rotation (1D):	0.170 dB
Adjusted SAR (1W):	3.73 mW/g (1g)

Comments:

Communication System Band: CLA150, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 150 MHz; σ = 0.77 S/m; ε_r = 59.7; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 150 MHz, ConvF(13.77, 13.77, 13.77) @ 150 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (81x81x1):

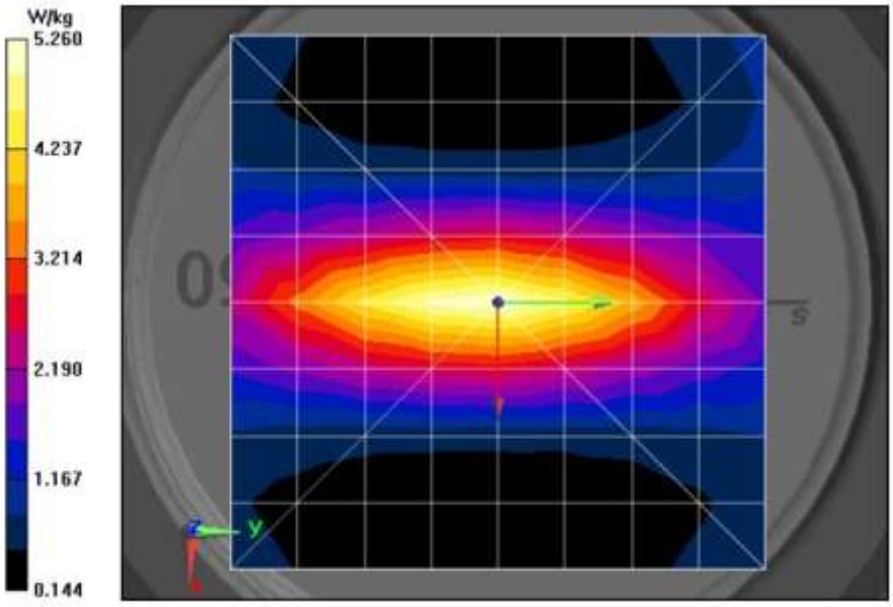
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 82.95 V/m; Power Drift = -0.09 dB
Fast SAR: SAR(1 g) = 4.5 W/kg; SAR(10 g) = 3.19 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.37 W/kg

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 = 82.95 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 6.31 W/kg
SAR(1 g) = 3.73 W/kg; SAR(10 g) = 2.41 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 17.5 mm
Ratio of SAR at M2 to SAR at M1 = 59%
Maximum value of SAR (measured) = 5.19 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) = 5.19 W/kg



Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/18/2021 7:26:44 AM

Robot#: DASY5-PG-3 | Run#:	AR-SYSP-150H-211118-06
Dipole Model#	CLA150
Phantom#:	ELI5 1147
Tissue Temp:	21.1 (C)
Serial#:	4010
Test Freq:	150.0000(MHz)
Start Power:	1000 (mW)
Rotation (1D):	0.180 dB
Adjusted SAR (1W):	3.73 mW/g (1g)

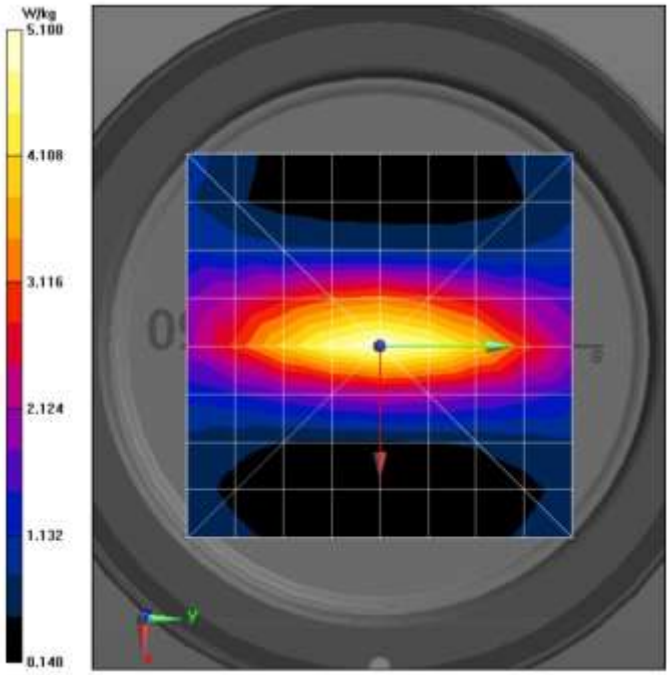
Comments:

Communication System Band: CLA150, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 150 MHz; σ = 0.73 S/m; ε_r = 52.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 150 MHz, ConvF(14.08, 14.08, 14.08) @ 150 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

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 = 84.25 V/m; Power Drift = -0.10 dB
Fast SAR: SAR(1 g) = 4.47 W/kg; SAR(10 g) = 3.16 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.25 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 = 84.25 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 6.25 W/kg
SAR(1 g) = 3.73 W/kg; SAR(10 g) = 2.41 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.7%
Maximum value of SAR (measured) = 5.14 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) = 5.19 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/10/2021 5:59:33 AM

Robot#: DASY5-PG-3 | Run#:	AR-SYSP-2450H-211110-06
Dipole Model#	D2450V2
Phantom#:	ELI4 1028
Tissue Temp:	21.8 (C)
Serial#:	782
Test Freq:	2450 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.120 dB
Adjusted SAR (1W):	49.20 mW/g (1g)

Comments:

Communication System Band: Dipole 2450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 2450 MHz; σ = 1.88 S/m; ε_r = 35.4; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2450 MHz, ConvF(7.83, 7.83, 7.83) @ 2450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

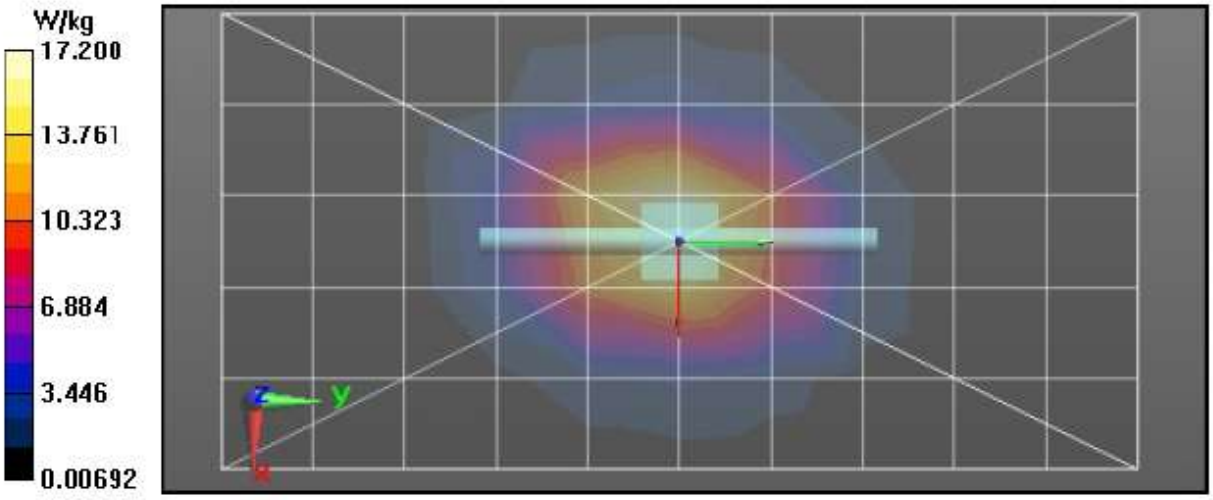
grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 112.6 V/m; Power Drift = -0.04 dB
Fast SAR: SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.26 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 22.5 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 112.6 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 27.3 W/kg
SAR(1 g) = 12.3 W/kg; SAR(10 g) = 5.7 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 46.4%
Maximum value of SAR (measured) = 21.6 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 23.0 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/11/2021 10:22:03 PM

Robot#: DASY5-PG-3 | Run#:	AR-SYSP-2450B-211111-17
Dipole Model#	D2450V2
Phantom#:	ELI4 1028
Tissue Temp:	21.3 (C)
Serial#:	782
Test Freq:	2450 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.110 dB
Adjusted SAR (1W):	53.60 mW/g (1g)

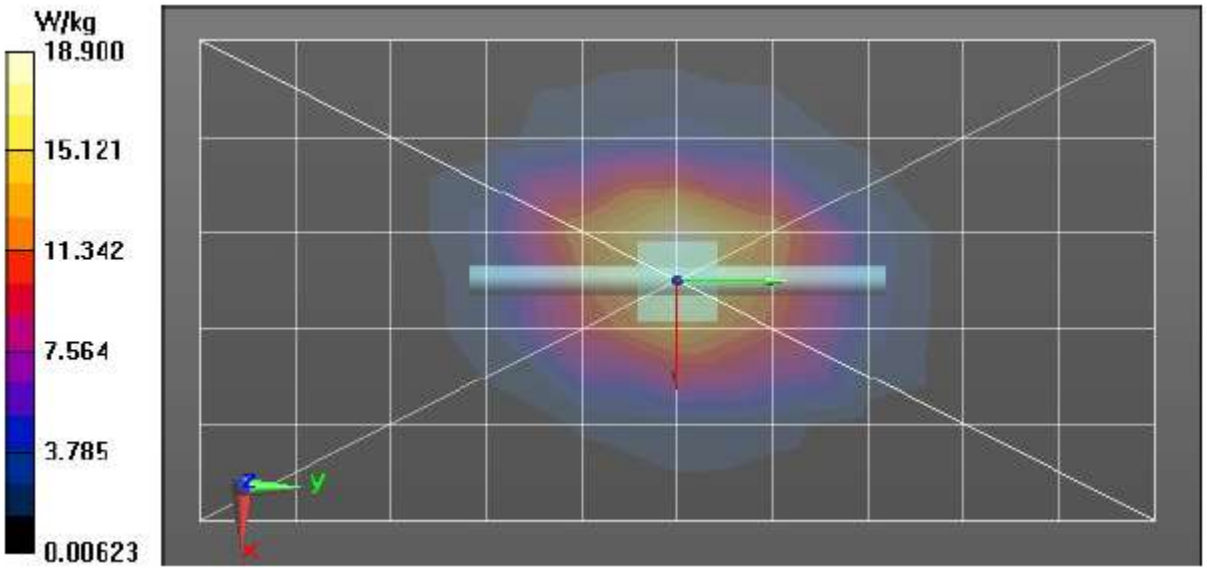
Comments:

Communication System Band: Dipole 2450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 2450 MHz; σ = 2.02 S/m; ε_r = 48; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2450 MHz, ConvF(7.82, 7.82, 7.82) @ 2450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 112.6 V/m; Power Drift = -0.11 dB
Fast SAR: SAR(1 g) = 13.9 W/kg; SAR(10 g) = 6.52 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 23.8 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 112.6 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 29.3 W/kg
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.17 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 47.6%
Maximum value of SAR (measured) = 23.7 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 23.6 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/17/2021 6:04:24 AM

Robot#: DASY5-PG-3 | Run#:	AR-SYSP-2450B-211117-04
Dipole Model#	D2450V2
Phantom#:	ELI4 1028
Tissue Temp:	21.9 (C)
Serial#:	782
Test Freq:	2450 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.130 dB
Adjusted SAR (1W):	55.60 mW/g (1g)

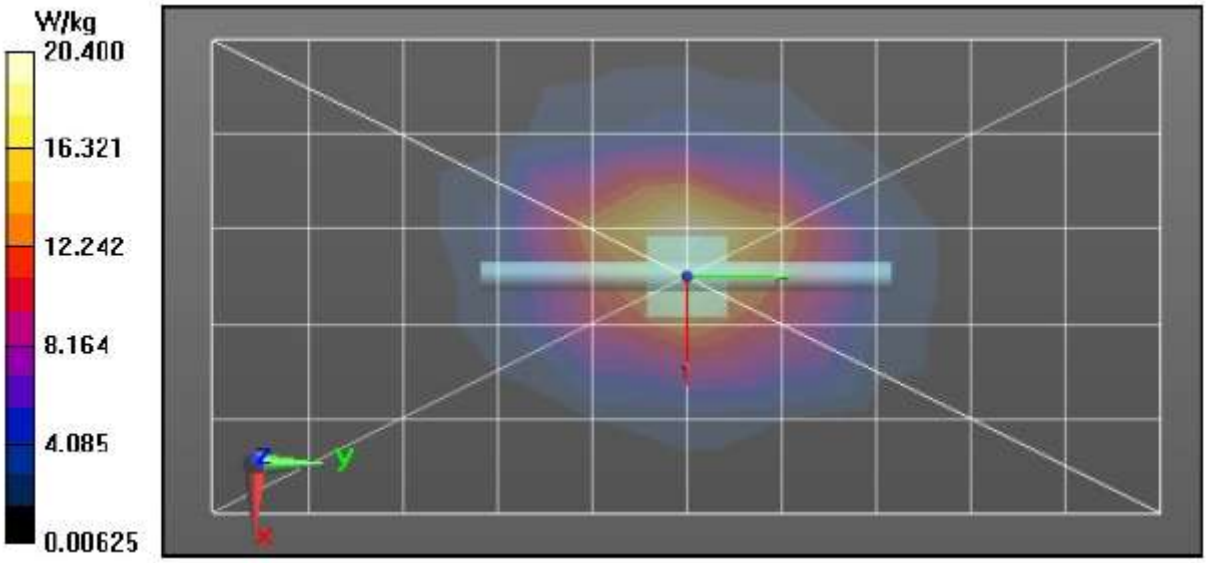
Comments:

Communication System Band: Dipole 2450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 2450 MHz; σ = 1.98 S/m; ε_r = 48.7; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2450 MHz, ConvF(7.82, 7.82, 7.82) @ 2450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 114.9 V/m; Power Drift = -0.10 dB
Fast SAR: SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.73 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 24.5 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 114.9 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 29.4 W/kg
SAR(1 g) = 13.9 W/kg; SAR(10 g) = 6.44 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 48.7%
Maximum value of SAR (measured) = 23.9 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 23.9 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/18/2021 4:38:56 PM

Robot#: DASY5-PG-3 | Run#:	MA(BAD)-SYSP-2450H-211118-10#
Dipole Model#	D2450V2
Phantom#:	ELI4 1022
Tissue Temp:	21.7 (C)
Serial#:	782
Test Freq:	2450 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.16 dB
Adjusted SAR (1W):	55.20 mW/g (1g)

Comments:

Communication System Band: Dipole 2450, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 2450 MHz; σ = 1.87 S/m; ε_r = 35.7; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2450 MHz, ConvF(7.83, 7.83, 7.83) @ 2450 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (51x101x1): Interpolated

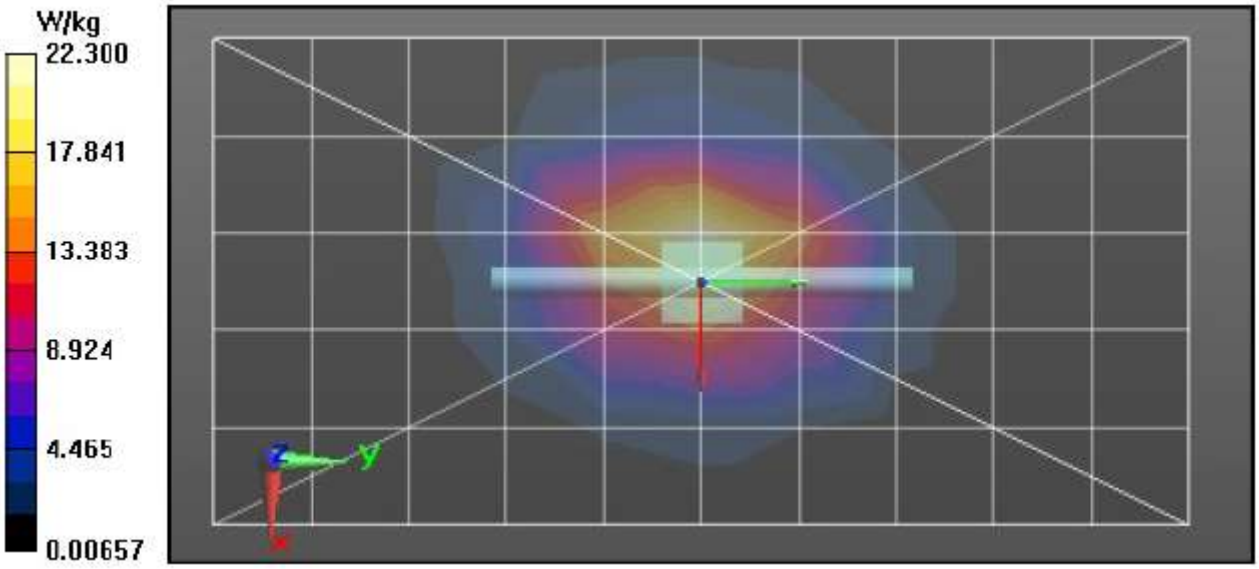
grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 119.4 V/m; Power Drift = -0.03 dB
Fast SAR: SAR(1 g) = 14.9 W/kg; SAR(10 g) = 7.02 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 25.0 W/kg

2-3 GHz-Rev.3/System Performance Check/0-Degree Cube (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 119.4 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 31.4 W/kg
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.33 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 45.1%
Maximum value of SAR (measured) = 24.7 W/kg

2-3 GHz-Rev.3/System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid:

dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 24.9 W/kg



Appendix E
DUT Scans

Assessments at the LMR Body - Table 17

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/18/2021 2:40:17 AM

Robot#: DASY5-PG-3 | Run#: AR-AB-211118-03
Model#: H98KGD9PW5BN (PMUD3372D)
Phantom#: ELI5 1150
Tissue Temp: 21.7 (C)
Serial#: 481TXV0561
Antenna: NAR6593A
Test Freq: 167.7500 (MHz)
Battery: NNTN7034B
Carry Acc: HLN6875A
Audio Acc: None
Start Power: 6.43 (W)

Comments:

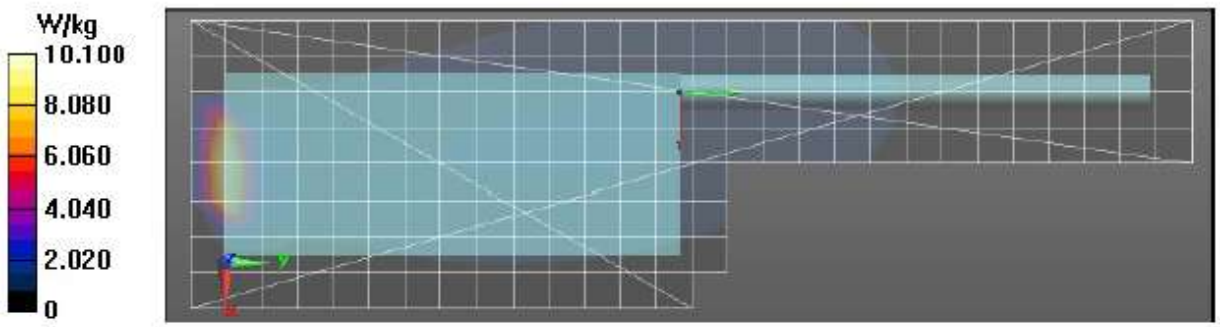
Communication System Band: APX6000 VHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 168 MHz; σ = 0.78 S/m; ε_r = 59.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 167.75 MHz, ConvF(13.77, 13.77, 13.77) @ 167.75 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x281x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 41.94 V/m; Power Drift = -0.06 dB
Fast SAR: SAR(1 g) = 7.91 W/kg; SAR(10 g) = 4.53 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 11.6 W/kg

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (9x29x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 10.1 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (12x10x8)/Cube 0: Measurement grid: dx=3.6mm, dy=3.6mm, dz=1.4mm
Reference Value = 41.94 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 42.4 W/kg
SAR(1 g) = 5.66 W/kg; SAR(10 g) = 2.1 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 5 mm
Ratio of SAR at M2 to SAR at M1 = 50%
Maximum value of SAR (measured) = 13.7 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) = 14.0 W/kg



Assessments at the LMR Face - Table 18

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/18/2021 9:01:52 AM

Robot#: DASY5-PG-3 | Run#: MA(BAD)-FACE-211118-07
Model#: H98KGD9PW5BN (PMUD3372D)
Phantom#: ELI5 1147
Tissue Temp: 21.1 (C)
Serial#: 481TXV0561
Antenna: NAR6593A
Test Freq: 167.7500 (MHz)
Battery: PMNN4485A
Carry Acc: Front
Audio Acc: None
Start Power: 6.49 (W)

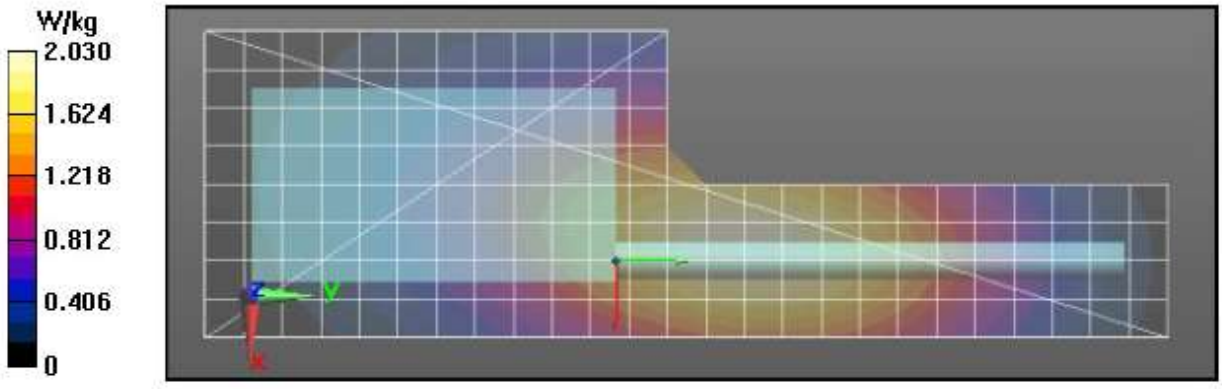
Comments:

Communication System Band: APX6000 VHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 168 MHz; σ = 0.75 S/m; ε_r = 51.4; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 167.75 MHz, ConvF(14.08, 14.08, 14.08) @ 167.75 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (81x261x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 51.73 V/m; Power Drift = 0.04 dB
Fast SAR: SAR(1 g) = 1.75 W/kg; SAR(10 g) = 1.34 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 2.06 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 = 51.73 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.35 W/kg
SAR(1 g) = 1.62 W/kg; SAR(10 g) = 1.24 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) = 2.05 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) = 2.03 W/kg



Assessments at the WLAN 2.4GHz Body (FCC & ISED) - Table 20 &21

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/12/2021 3:56:25 AM

Robot#: DASY5-PG-3 | Run#: AR-AB-211112-04#
Model#: H98KGD9PW5BN (PMUD3372D)
Phantom#: ELI4 1028
Tissue Temp: 21.7 (C)
Serial#: 481TXV0561
Antenna: 84009370002 WiFi Ant
Test Freq: 2412.0000 (MHz)
Battery: PMNN4403B
Carry Acc: PMLN5709A w/ HLN6875A
Audio Acc: None
Start Power: 0.0424 (W)

Comments:

Communication System Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz), Communication System UID: 10415 - AAA, Duty Cycle: 1:1.4243,

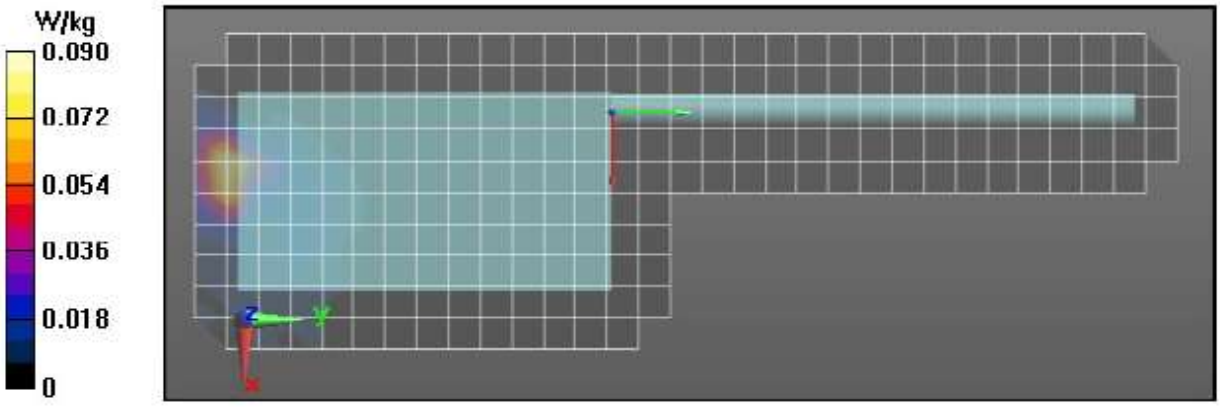
Medium parameters used: f = 2412 MHz; σ = 1.98 S/m; ε_r = 48.1; ρ = 1000 kg/m^3

Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2412 MHz, ConvF(7.82, 7.82, 7.82) @ 2412 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/Ab Scan/1-Area Scan (101x331x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 1.958 V/m; Power Drift = -0.38 dB
Fast SAR: SAR(1 g) = 0.057 W/kg; SAR(10 g) = 0.026 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.103 W/kg

2-3 GHz-Rev.3/Ab Scan/3-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.958 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.140 W/kg
SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.025 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 7.1 mm
Ratio of SAR at M2 to SAR at M1 = 39.9%
Maximum value of SAR (measured) = 0.101 W/kg

2-3 GHz-Rev.3/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.103 W/kg



Assessments at the WLAN 2.4GHz Face (FCC & ISED) - Table 20 & 21

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/10/2021 9:51:21 AM

Robot#: DASY5-PG-3 | Run#:	MA(BAD)-FACE-211110-07
Model#:	H98KGD9PW5BN (PMUD3372D)
Phantom#:	ELI4 1022
Tissue Temp:	21.7 (C)
Serial#:	481TXV0561
Antenna:	84009370002 WiFi Ant
Test Freq:	2412.0000 (MHz)
Battery:	PMNN4485A
Carry Acc:	Radio front @ 2.5 cm
Audio Acc:	None
Start Power:	0.0424 (W)

Comments:

Communication System Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz), Communication System UID: 10415 - AAA, Duty Cycle: 1:1.4243,

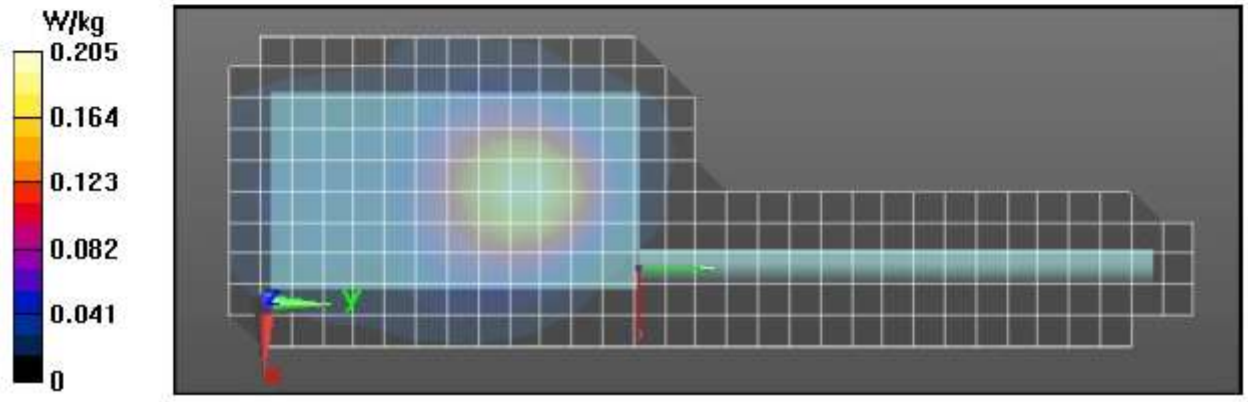
Medium parameters used: f = 2412 MHz; σ = 1.84 S/m; ε_r = 35.6; ρ = 1000 kg/m^3

Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 2412 MHz, ConvF(7.83, 7.83, 7.83) @ 2412 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

2-3 GHz-Rev.3/Face Scan/1-Area Scan (101x331x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 8.574 V/m; Power Drift = -0.41 dB
Fast SAR: SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.083 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.214 W/kg

2-3 GHz-Rev.3/Face Scan/3-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.574 V/m; Power Drift = -0.40 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.081 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 = 54.4%
Maximum value of SAR (measured) = 0.211 W/kg

2-3 GHz-Rev.3/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.212 W/kg



Assessments at the ISED LMR Body - Table 21

Motorola Solutions, Inc. EME Laboratory

Date/Time: 11/18/2021 3:50:35 AM

Robot#: DASY5-PG-3 | Run#:	AR-AB-211118-04
Model#:	H98KGD9PW5BN (PMUD3372D)
Phantom#:	ELI5 1150
Tissue Temp:	21.7 (C)
Serial#:	481TXV0561
Antenna:	NAR6593A
Test Freq:	139.7000 (MHz)
Battery:	NNTN7034B
Carry Acc:	HLN6875A
Audio Acc:	None
Start Power:	6.49 (W)

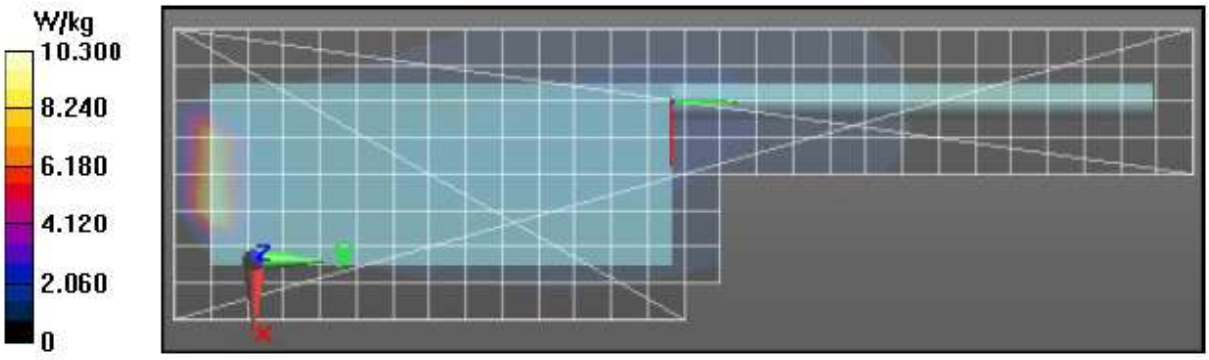
Comments:

Communication System Band: APX6000 VHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 140 MHz; σ = 0.77 S/m; ε_r = 60; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 139.7 MHz, ConvF(13.77, 13.77, 13.77) @ 139.7 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x281x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 47.37 V/m; Power Drift = -0.07 dB
Fast SAR: SAR(1 g) = 8.44 W/kg; SAR(10 g) = 4.81 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 12.9 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (15x13x8)/Cube 0: Measurement grid: dx=2.7mm, dy=2.7mm, dz=1.4mm
Reference Value = 47.37 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 48.1 W/kg
SAR(1 g) = 6.69 W/kg; SAR(10 g) = 2.56 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 4.9 mm
Ratio of SAR at M2 to SAR at M1 = 49.9%
Maximum value of SAR (measured) = 16.1 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) = 16.2 W/kg



Assessments at the ISED LMR Face - Table 21

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/18/2021 9:47:49 AM

Robot#: DASY5-PG-3 | Run#:	MA(BAD)-FACE-211118-08
Model#:	H98KGD9PW5BN (PMUD3372D)
Phantom#:	ELI5 1147
Tissue Temp:	21.3 (C)
Serial#:	481TXV0561
Antenna:	NAR6593A
Test Freq:	139.7000 (MHz)
Battery:	PMNN4485A
Carry Acc:	Front
Audio Acc:	None
Start Power:	6.52 (W)

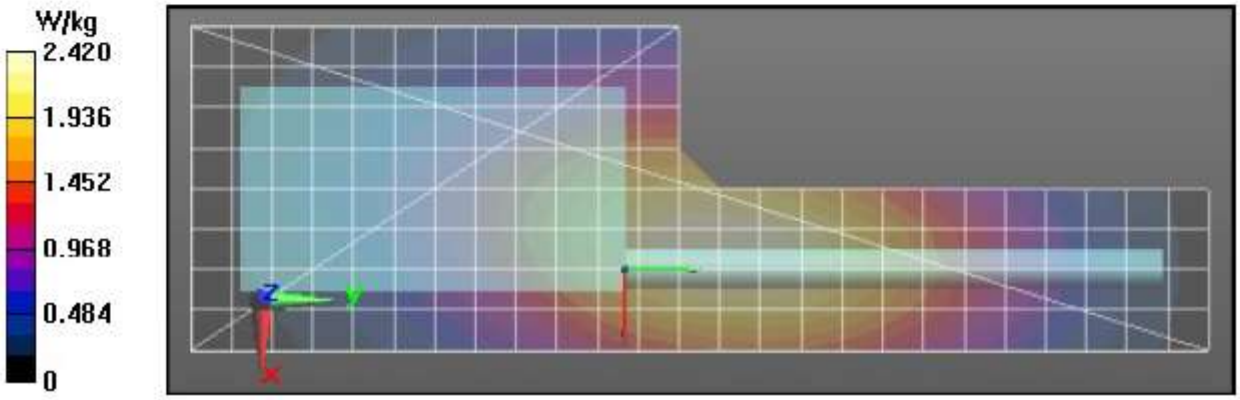
Comments:

Communication System Band: APX6000 VHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 140 MHz; σ = 0.73 S/m; ε_r = 52.7; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 139.7 MHz, ConvF(14.08, 14.08, 14.08) @ 139.7 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (81x261x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 57.59 V/m; Power Drift = 0.00 dB
Fast SAR: SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.66 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 2.47 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 = 57.59 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.91 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.55 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 = 69.2%
Maximum value of SAR (measured) = 2.52 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) = 2.50 W/kg



APPENDIX F
Shortened Scan of Highest SAR configuration

Shortened Scan- Table 2

Motorola Solutions, Inc. EME Laboratory
Date/Time: 11/18/2021 9:15:23 PM

Robot#: DASY5-PG-3 | Run#: AR-AB-211118-13
Model#: H98KGD9PW5BN (PMUD3372D)
Phantom#: ELI5 1150
Tissue Temp: 21.7 (C)
Serial#: 481TXV0561
Antenna: NAR6593A
Test Freq: 167.7500 (MHz)
Battery: NNTN7034B
Carry Acc: HLN6875A
Audio Acc: None
Start Power: 6.45 (W)

Comments:

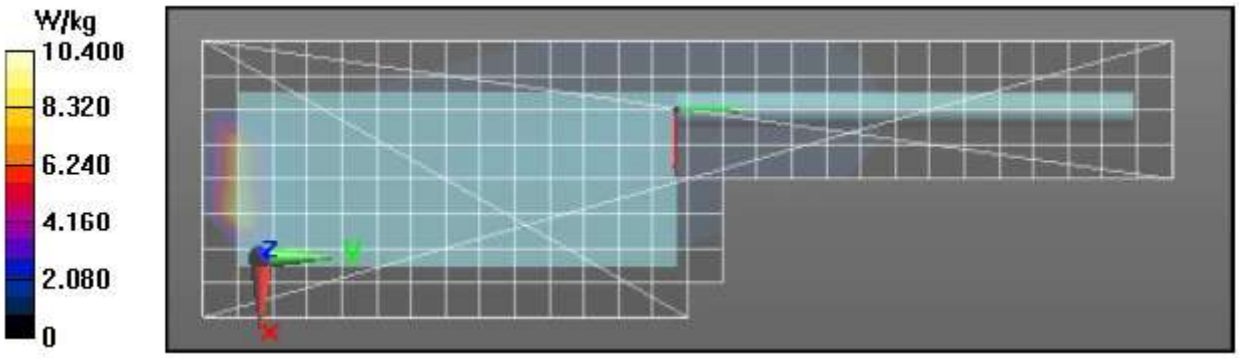
Communication System Band: APX6000 VHF, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 168 MHz; σ = 0.78 S/m; ε_r = 59.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7533, Calibrated: 4/19/2021, Frequency: 167.75 MHz, ConvF(13.77, 13.77, 13.77) @ 167.75 MHz
Electronics: DAE3 Sn374, Calibrated: 4/8/2021

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x281x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 42.85 V/m; Power Drift = -0.06 dB
Fast SAR: SAR(1 g) = 7.88 W/kg; SAR(10 g) = 4.37 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 (5x5x1): Measurement grid: dx=7.5mm, dy=7.5mm, dz=1mm
Reference Value = 42.85 V/m; Power Drift = -0.06 dB
Maximum value of SAR (measured) = 12.3 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (13x10x8)/Cube 0: Measurement grid: dx=3.6mm, dy=3.6mm, dz=1.4mm
Reference Value = 112.2 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 46.3 W/kg
SAR(1 g) = 5.72 W/kg; SAR(10 g) = 2.14 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 5 mm
Ratio of SAR at M2 to SAR at M1 = 47.5%
Maximum value of SAR (measured) = 14.7 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) = 12.1 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)
Shortened scan (zoom)	22	8	2.97
Full scan (area & zoom)	17	50	2.95

APPENDIX G
DUT Test Position Photos

1.0 Highest SAR Test Position

1.1 Body

DUT with antenna NAR6593A with offered battery NNTN7034B and body worn HLN6875A against the phantom without an audio accessory attached.

Antenna kit #	Separation Distances (mm)		
	@bottom surface of the DUT	@ antenna's base	@ antenna's tip
NAR6593A	0	45	84

1.2 Face

Front of DUT with antenna NAR6593A with offered battery PMNN4485A separated 2.5cm from the phantom without an audio accessory attached.

Antenna kit #	Separation Distances (mm)		
	@bottom surface of the DUT	@ antenna's base	@ antenna's tip
NAR6593A	28	35	50