MOTOROLA SOLUTIONS

SAMM 826

CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT PCII Part 1 of 2

Motorola Solutions Inc.
EME Test Laboratory
Motorola Solutions Malaysia Sdn Bhd
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Date of Report: 08/16/2023
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:	6/30/2023-7/1/2023, 7/17/2023, 7/19/2023
Manufacturer:	Motorola Solutions Inc.
DUT Description:	Handheld Portable – APX N70 Single Band 7/800MHz Portable Radio, Model 4.5
Test TX mode(s):	CW (PTT), BT, WLAN & LTE
Max. Power output:	Refer table 3
Nominal Power:	Refer table 3
Tx Frequency Bands:	Refer table 3
Signaling type:	FM, QPSK, 16QAM, FHSS, DSSS, OFDM, TDMA and NFC
Model(s) Tested:	H35UCT9PW8AN
Model(s) Certified:	Refer section 1.0 Introduction
Serial Number(s):	022TZK0977
Classification:	Occupational/Controlled Environment
Firmware Version:	D01.59.23
Applicant Name:	Motorola Solutions Inc.
Applicant Address:	8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
FCC ID:	AZ489FT7147 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
FCC Test Firm Registration Number:	823256
IC:	109U-89FT7147 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: 8/16/2023

Appendix D
System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 6/30/2023 10:41:34 PM

Robot#: DASY5-PG-02 | Run#: AR-SYSP-835H-230630-01
Dipole Model# D835V2
Phantom#: ELI4 1103
Tissue Temp: 20.5 (C)
Serial#: 4D029
Test Freq: 835.0000 (MHz)
Start Power: 31.6 (mW)
Rotation (1D): 0.089 dB
Adjusted SAR (1W): 9.15 mW/g (1g)

Comments:

Communication System Band: Dipole 835, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 835 MHz; σ = 0.94 S/m; ε_r = 40; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 835 MHz, ConvF(10.21, 10.21, 10.21) @ 835 MHz
Electronics: DAE4 Sn1294, Calibrated: 2/22/2022

Below 2 GHz-Rev.3/System Performance Check/Dipole Area Scan 2 (41x121x1):

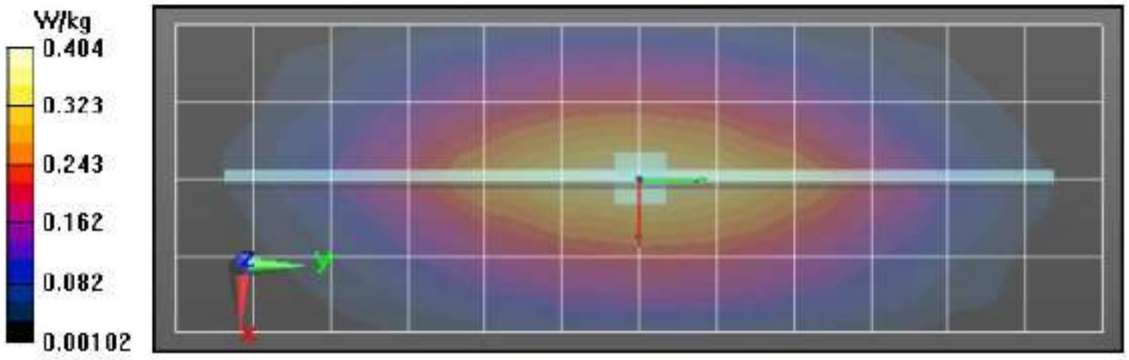
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 21.67 V/m; Power Drift = -0.00 dB
Fast SAR: SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.197 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.404 W/kg

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 = 21.67 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.455 W/kg
SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.188 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 20.2 mm
Ratio of SAR at M2 to SAR at M1 = 65.3%
Maximum value of SAR (measured) = 0.403 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) = 0.404 W/kg



Appendix E
DUT Scans

Assessments for FCC at the Body - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 7/18/2023 2:30:00 AM

Robot#: DASY5-PG-2 | Run#: MFR-AB-230718-03@
Model#: H35UCT9PW8AN
Phantom#: ELI4 1103
Tissue Temp: 20.5 (C)
Serial#: 022TZK0977
Antenna: AN000418A01
Test Freq: 772.0000(MHz)
Battery: PMNN4816A
Carry Acc: PMLN8371A w/ PMLN8508A belt clip
Audio Acc: None(BT)
Start Power: 2.93 (W)

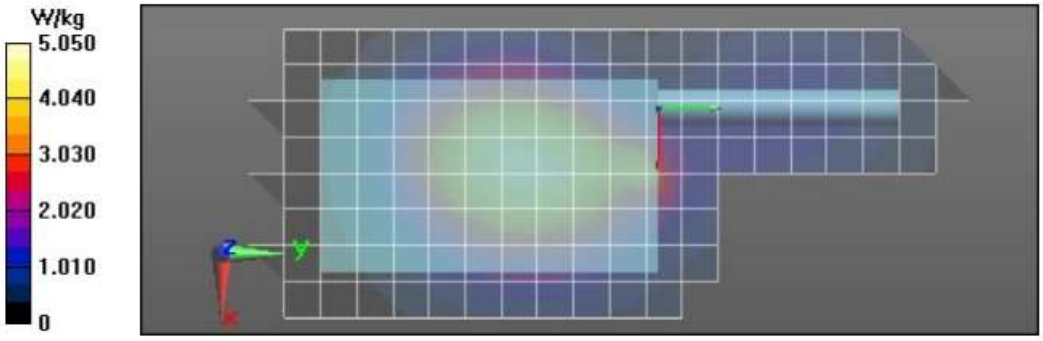
Comments:

Communication System Band: Mahalo 7/800, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 772 MHz; σ = 0.86 S/m; ε_r = 41.5; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 772 MHz, ConvF(10.44, 10.44, 10.44) @ 772 MHz
Electronics: DAE4 Sn1294, Calibrated: 2/22/2022

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 62.64 V/m; Power Drift = -0.26 dB
Fast SAR: SAR(1 g) = 4.17 W/kg; SAR(10 g) = 2.91 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.13 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 62.64 V/m; Power Drift = -0.30 dB
Peak SAR (extrapolated) = 5.42 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 3.16 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 = 76.2%
Maximum value of SAR (measured) = 5.02 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) = 4.98 W/kg



Assessments for FCC at the Face - Table 16

Motorola Solutions, Inc. EME Laboratory

Date/Time: 7/18/2023 1:58:28 AM

Robot#: DASY5-PG-2 | Run#: MFR-FACE-230718-02@
Model#: H35UCT9PW8AN
Phantom#: ELI4 1103
Tissue Temp: 20.5 (C)
Serial#: 022TZK0977
Antenna: AN000418A01
Test Freq: 851.0000(MHz)
Battery: PMNN4817A
Carry Acc: @ back
Audio Acc: N/A
Start Power: 3.58 (W)

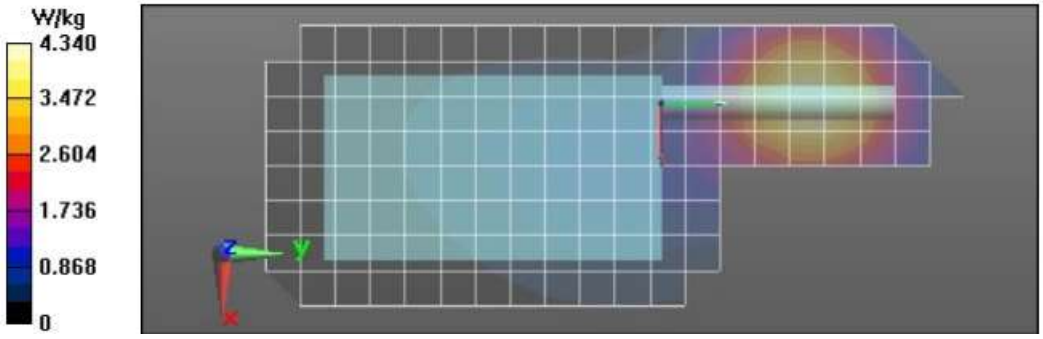
Comments:

Communication System Band: Aloha 7/800, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 851 MHz; σ = 0.94 S/m; ε_r = 40.4; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 851 MHz, ConvF(10.21, 10.21, 10.21) @ 851 MHz
Electronics: DAE4 Sn1294, Calibrated: 2/22/2022

Below 2 GHz-Rev.3/Face Scan/1-Area Scan (81x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 68.17 V/m; Power Drift = -0.22 dB
Fast SAR: SAR(1 g) = 3.49 W/kg; SAR(10 g) = 2.41 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 4.46 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 = 68.17 V/m; Power Drift = -0.24 dB
Peak SAR (extrapolated) = 4.87 W/kg
SAR(1 g) = 3.52 W/kg; SAR(10 g) = 2.49 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%
Maximum value of SAR (measured) = 4.44 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) = 4.42 W/kg



Additional Assessment for ISED at the Body (769-775MHz) – Table 17

Motorola Solutions, Inc. EME Laboratory

Date/Time: 7/19/2023 11:48:25 AM

Robot#: DASY5-PG-2 | Run#: AR-AB-230719-11
Model#: H35UCT9PW8AN
Phantom#: ELI4 1103
Tissue Temp: 20.1 (C)
Serial#: 022TZK0977
Antenna: AN000418A01
Test Freq: 769.1000 (MHz)
Battery: PMNN4816A
Carry Acc: PMLN8371A w/ PMLN8508A belt clip
Audio Acc: None(BT)
Start Power: 2.87 (W)

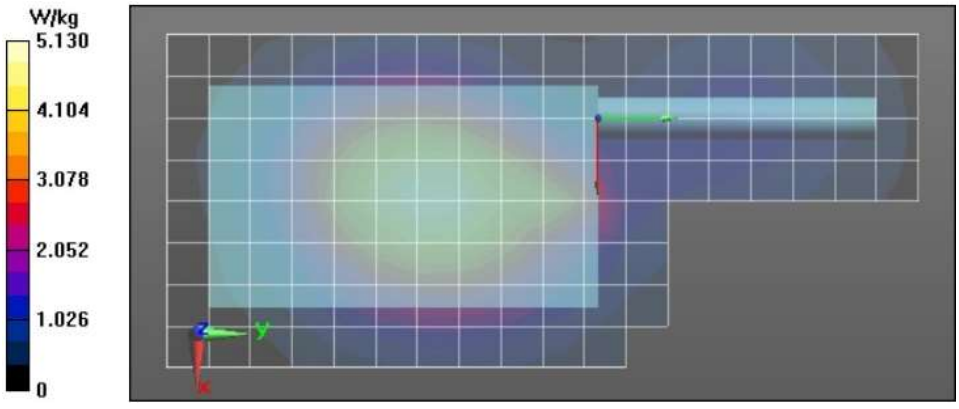
Comments:

Communication System Band: Mahalo 7/800, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 769 MHz; σ = 0.87 S/m; ε_r = 42.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 769.1 MHz, ConvF(10.44, 10.44, 10.44) @ 769.1 MHz
Electronics: DAE4 Sn1294, Calibrated: 2/22/2022

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 55.98 V/m; Power Drift = -0.23 dB
Fast SAR: SAR(1 g) = 4.2 W/kg; SAR(10 g) = 2.93 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.19 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 55.98 V/m; Power Drift = -0.30 dB
Peak SAR (extrapolated) = 5.42 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 3.16 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 = 76.5%
Maximum value of SAR (measured) = 5.03 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) = 4.99 W/kg



APPENDIX F
Shortened Scan of Highest SAR configuration

Shortened Scan
Table 18

Motorola Solutions, Inc. EME Laboratory
Date/Time: 7/19/2023 6:40:01 PM

Robot#: DASY5-PG-2 | Run#: AR-AB-230719-16
Model#: H35UCT9PW8AN
Phantom#: ELI4 1103
Tissue Temp: 20.2 (C)
Serial#: 022TZK0977
Antenna: AN000418A01
Test Freq: 769.1000 (MHz)
Battery: PMNN4816A
Carry Acc: PMLN8371A w/ PMLN8508A belt clip
Audio Acc: None(BT)
Start Power: 2.88 (W)

Comments:

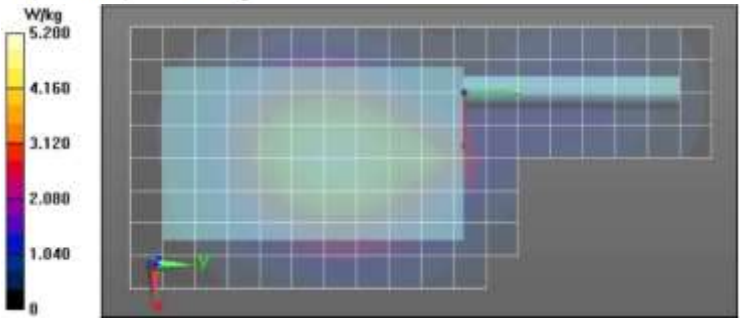
Communication System Band: Mahalo 7/800, Communication System UID: 0, Duty Cycle: 1:1,
Medium parameters used: f = 769 MHz; σ = 0.87 S/m; ε_r = 42.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7364, Calibrated: 2/28/2022, Frequency: 769.1 MHz, ConvF(10.44, 10.44, 10.44) @ 769.1 MHz
Electronics: DAE4 Sn1294, Calibrated: 2/22/2022

Below 2 GHz-Rev.3/Ab Scan/1-Area Scan (81x231x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 55.27 V/m; Power Drift = -0.17 dB
Fast SAR: SAR(1 g) = 4.24 W/kg; SAR(10 g) = 2.95 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 5.24 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 = 55.27 V/m; Power Drift = -0.20 dB
Maximum value of SAR (measured) = 5.10 W/kg

Below 2 GHz-Rev.3/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 81.92 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 5.64 W/kg
SAR(1 g) = 4.43 W/kg; SAR(10 g) = 3.29 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 = 76.5%
Maximum value of SAR (measured) = 5.23 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) = 5.11 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)	18	6	2.35
Full scan (area & zoom)	17	24	2.38

APPENDIX G
DUT Test Position Photos

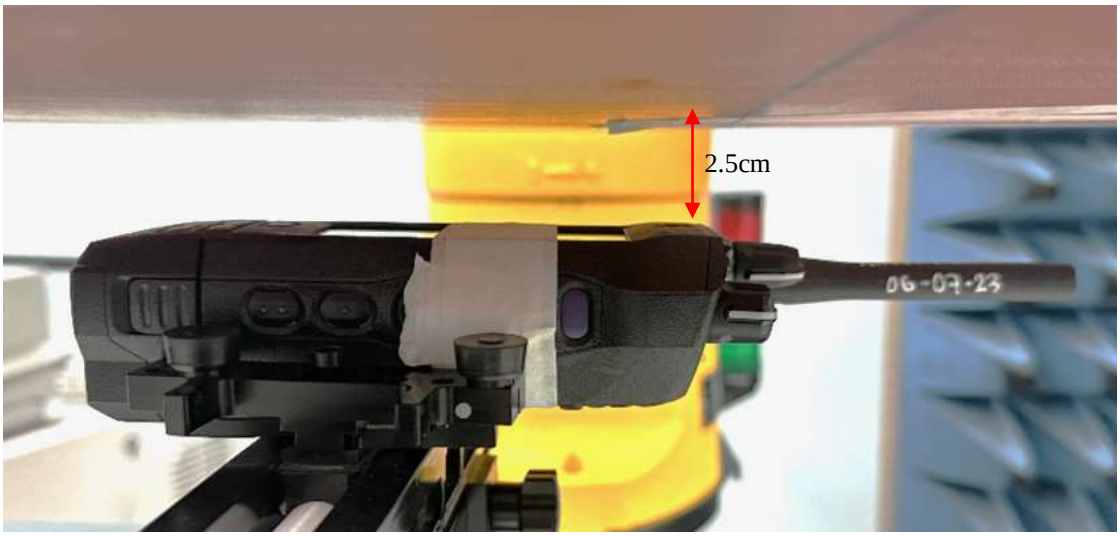
1.0 Highest SAR Test Position per body location

1.1 Body

DUT with antenna AN000418A01 with offered battery PMNN4816A and body worn kit PMLN8371A w/ PMLN8508A belt clip against the phantom without an audio accessory attached.

1.2 Face

Back of DUT with antenna AN000418A01 with offered battery PMNN4817A separated 2.5cm from the phantom without an audio accessory attached.



APPENDIX H
DUT, Body worn and audio accessories Photos

New Antenna Photo

Please refer to original filing report for other accessories