MOTOROLA SOLUTIONS

MS ISO/IEC 17025
TESTING
SAMM No.0826

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2

Motorola Solutions Inc.
EME Test Laboratory
Motorola Solutions Malaysia Sdn Bhd (Innoplex)
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Date of Report: 03/06/2019
Report Revision: B

Responsible Engineer:	Goh Jue Yie (EME Engineer)
Report Author:	Goh Jue Yie (EME Engineer)
Date/s Tested:	20/12/2018
Manufacturer:	Motorola Solutions Inc
DUT Description:	Handheld Portable T100 Consumer Radio 462-467 MHz Blue
Test TX mode(s):	CW (PTT)
Max. Power output:	0.60W (462.5500 – 462.7250 MHz, 467.5625 – 467.7125 MHz)
Nominal Power:	0.45W (462.5500 – 462.7250 MHz, 467.5625 – 467.7125 MHz)
Tx Frequency Bands:	462.5500 – 462.7250 MHz, 467.5625 - 467.7125 MHz
Signaling type:	FM
Model(s) Tested:	T100
Model(s) Certified:	T100MC / PMUE5064CD, T100TMC / PMUE5096CD, T100TP, T107, T107MC/ PMUE5065CD
Serial Number(s):	6904UW0014
Classification:	General Population/Uncontrolled Environment
FCC ID:	AZ489FT4952
IC:	109U-89FT4952
ISED Test Site registration:	109AK
FCC Test Firm Registration Number:	823256

The test results clearly demonstrate compliance with General Population / Uncontrolled RF Exposure limits of 1.6 W/kg averaged over 1 gram per the requirements of FCC 47 CFR § 2.1093 and ISED 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. 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.

Tiong

Digitally signed by Tiong Nguk Ing
DN: cn=Tiong Nguk Ing, email=n.i.tiong@motorolasolutions.com, c=US
Date: 2019.03.07 20:19:34 +08'00'

Tiong Nguk Ing
Deputy Technical Manager (Approved Signatory)
Approval Date: 3/7/2019

Appendix D
System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 12/20/2018 10:56:00 AM

Robot#: DASY5-PG-2 | Run#:	FD(BL)-SYSP-450H-181220-01
Dipole Model#	D450V3
Phantom#:	ELI4 1103
Tissue Temp:	21.2 (C)
Serial#:	1054
Test Freq:	450.0000 (MHz)
Start Power:	250 (mW)
Rotation (1D):	0.030 dB
Adjusted SAR (1W):	4.32 mW/g (1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: f = 450 MHz; σ = 0.88 S/m; ε_r = 43.5; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7519, , Frequency: 450 MHz, ConvF(10.99, 10.99, 10.99); Calibrated: 10/19/2018
Electronics: DAE4 Sn1294, Calibrated: 10/16/2018

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x201x1):

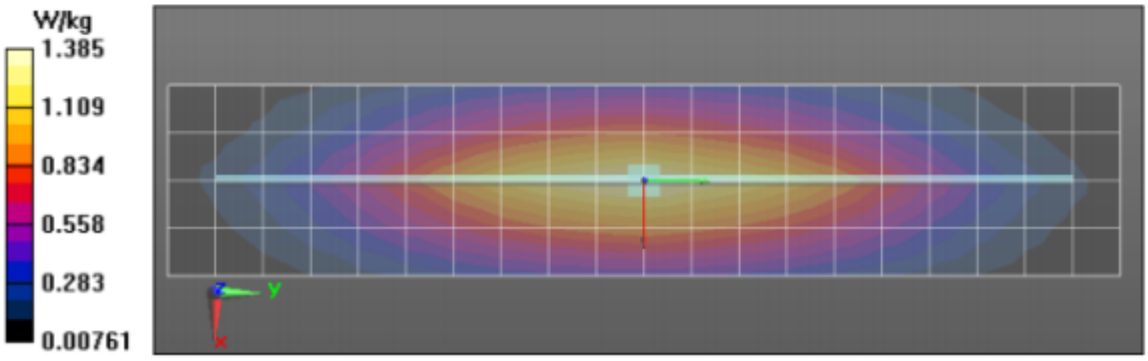
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 40.21 V/m; Power Drift = 0.03 dB
Fast SAR: SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.785 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 1.39 W/kg

Below 2 GHz-Rev.2/System Performance Check/0-Degree Cube (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 40.21 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.720 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.39 W/kg

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

Measurement grid: dx=20mm, dy=20mm, dz=10mm



Appendix E
DUT Scans

Assessments at the Face for 462.5500 – 462.7250MHz band - Table 17

Motorola Solutions, Inc. EME Laboratory
Date/Time: 12/20/2018 1:25:11 PM

Robot#: DASY5-PG-4 | Run#: FD(BL)-FACE-181220-03
Model#: PMUE5066C
Phantom#: ELI4 1103
Tissue Temp: 21.2 (C)
Serial#: 6904UW0014
Antenna: Fixed Antenna
Test Freq: 462.63750 (MHz)
Battery: 3x AAA Alkaline
Carry Acc: None
Audio Acc: None
Start Power: 0.52 (W)

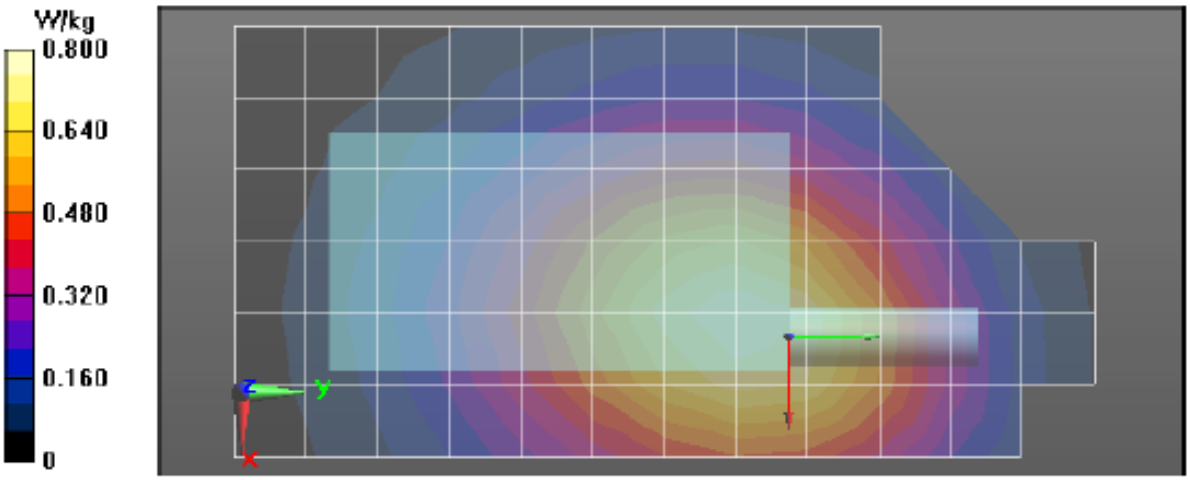
Comments:

Duty Cycle: 1:1, Medium parameters used: f = 463 MHz; σ = 0.89 S/m; ε_r = 43.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7519, , Frequency: 462.637 MHz, ConvF(10.99, 10.99, 10.99); Calibrated: 10/19/2018
Electronics: DAE4 Sn1294, Calibrated: 10/16/2018

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 31.20 V/m; Power Drift = -0.54 dB
Fast SAR: SAR(1 g) = 0.676 W/kg; SAR(10 g) = 0.488 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.804 W/kg

Below 2 GHz-Rev.2/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.20 V/m; Power Drift = -0.75 dB
Peak SAR (extrapolated) = 0.835 W/kg
SAR(1 g) = 0.609 W/kg; SAR(10 g) = 0.440 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.730 W/kg

Below 2 GHz-Rev.2/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.714 W/kg



Assessments at the Face for 467.5625 – 467.7125MHz band - Table 19

Motorola Solutions, Inc. EME Laboratory
Date/Time: 12/20/2018 2:53:41 PM

Robot#: DASY5-PG-4 | Run#: FD(BL)-FACE-181220-06
Model#: PMUE5066C
Phantom#: ELI4 1103
Tissue Temp: 21.2 (C)
Serial#: 6904UW0014
Antenna: Fixed Antenna
Test Freq: 467.63750 (MHz)
Battery: 3x AAA Alkaline
Carry Acc: None
Audio Acc: None
Start Power: 0.508 (W)

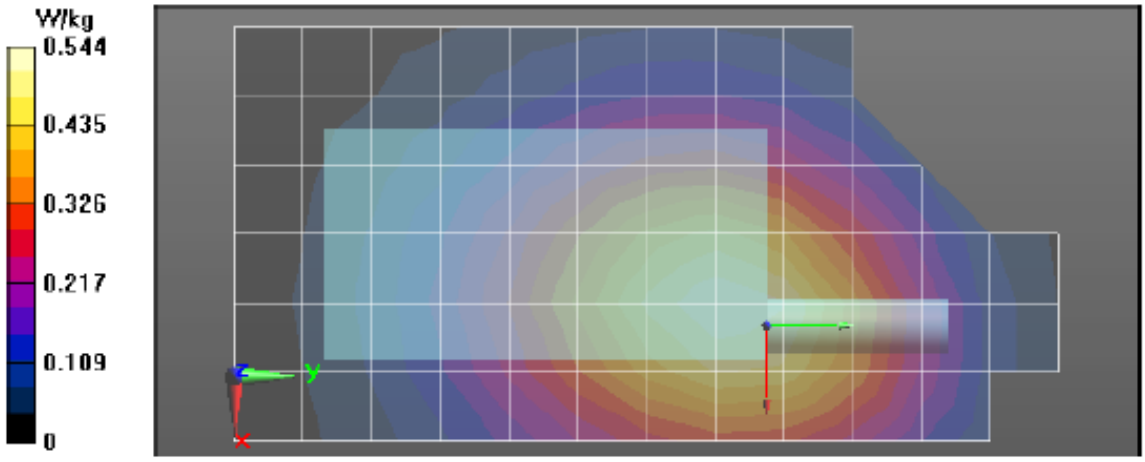
Comments:

Duty Cycle: 1:1, Medium parameters used: f = 468 MHz; σ = 0.89 S/m; ε_r = 43.1; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7519, , Frequency: 467.637 MHz, ConvF(10.99, 10.99, 10.99); Calibrated: 10/19/2018
Electronics: DAE4 Sn1294, Calibrated: 10/16/2018

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 25.40 V/m; Power Drift = -0.32 dB
Fast SAR: SAR(1 g) = 0.459 W/kg; SAR(10 g) = 0.331 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.546 W/kg

Below 2 GHz-Rev.2/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.40 V/m; Power Drift = -0.49 dB
Peak SAR (extrapolated) = 0.591 W/kg
SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.309 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.516 W/kg

Below 2 GHz-Rev.2/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.505 W/kg



APPENDIX F
Shortened Scan of Highest SAR configuration

Shortened Scan
Table 20
Motorola Solutions, Inc. EME Laboratory
Date/Time: 12/20/2018 4:07:18 PM

Robot#: DASY5-PG-4 | Run#: FD(BL)-FACE-181220-08
Model#: PMUE5066C
Phantom#: ELI4 1103
Tissue Temp: 21.2 (C)
Serial#: 6904UW0014
Antenna: Fixed Antenna
Test Freq: 462.63750 (MHz)
Battery: 3x AAA Alkaline
Carry Acc: None
Audio Acc: None
Start Power: 0.52 (W)

Comments: Shorten Scan

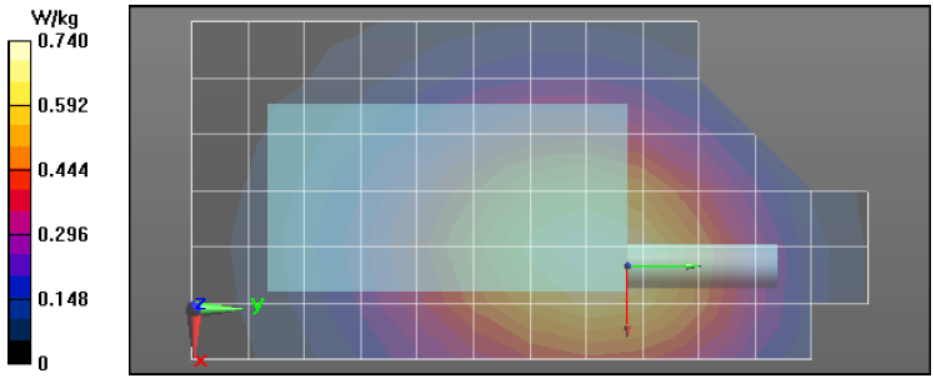
Duty Cycle: 1:1, Medium parameters used: f = 463 MHz; σ = 0.89 S/m; ε_r = 43.2; ρ = 1000 kg/m^3
Probe: EX3DV4 - SN7519, , Frequency: 462.637 MHz, ConvF(10.99, 10.99, 10.99); Calibrated: 10/19/2018
Electronics: DAE4 Sn1294, Calibrated: 10/16/2018

Below 2 GHz-Rev.2/Face Scan/1-Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 29.91 V/m; Power Drift = -0.55 dB
Fast SAR: SAR(1 g) = 0.623 W/kg; SAR(10 g) = 0.449 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.742 W/kg

Below 2 GHz-Rev.2/Face Scan/2-Volume 2D Scan (41x41x1): Interpolated grid: dx=0.7500 mm, dy=0.7500 mm, dz=1.000 mm
Reference Value = 29.91 V/m; Power Drift = -0.70 dB
Fast SAR: SAR(1 g) = 0.576 W/kg; SAR(10 g) = 0.421 W/kg (SAR corrected for target medium)
Maximum value of SAR (interpolated) = 0.678 W/kg

Below 2 GHz-Rev.2/Face Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 29.11 V/m; Power Drift = -0.46 dB
Peak SAR (extrapolated) = 0.868 W/kg
SAR(1 g) = 0.633 W/kg; SAR(10 g) = 0.457 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.757 W/kg

Below 2 GHz-Rev.2/Face Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.667 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)	20	8	0.37
Full scan (area & zoom)	17	30	0.38

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