

**MOTOROLA SOLUTIONS**

TESTING CERT # 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 2**Motorola Solutions Inc**

EME Test Laboratory

Motorola Solutions Malaysia Sdn Bhd (Innoplex) (455657-H)

Plot 2A, Medan Bayan Lepas,

Mukim 12 SWD, 11900 Bayan Lepas Penang, Malaysia.

Date of Report: 06/17/2016**Report Revision:** B

Responsible Engineer: Veeramani (Sr. EME Engineer)
Report Author: Veeramani (Sr. EME Engineer)
Date/s Tested: 05/10/2016- 05/11/2016
Manufacturer: Motorola Solutions Inc.
DUT Description: Handheld Portable - CLP1040 Black Diamond, 450-470MHz, 1 Watt, 4 Channels, Non-Display, Fixed Antenna
Test TX mode(s): CW (PTT)
Max. Power output: 1.1 Watt
Nominal Power: 1.0 Watt
Tx Frequency Bands: 450-470MHz
Signaling type: FM
Model(s) Tested: PMUE3564C
Model(s) Certified: PMUE3564C
Serial Number(s): 009TSA3903
Classification: Occupational/Controlled
FCC ID: AZ489FT4931; 450-470 MHz
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC: 109U-89FT4931; This report contains results that are immaterial for IC equipment approval, which are clearly identified.

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8.0 W/kg averaged over 1 gram per the requirements of OET Bulletin 65. The 10 grams result is not applicable to FCC filing. The test results clearly demonstrate compliance with ICNIRP (1998) Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz), Health Physics 74, 494-522 RF Exposure limits of 2 W/kg averaged over 10grams of contiguous tissue.

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 Nguk Ing
 Deputy Technical Manager
 Approval Date: 6/17/2016

Digitally signed by
 Tiong Nguk Ing
 DN: cn=Tiong Nguk
 Ing, o=Motorola
 Solutions,
 ou=Regulatory
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 Date: 2016.06.17
 10:21:17 +0800

Certification Date: 6/16/2016**Certification No.:** L1160603

APPENDIX D

System Verification Check Scans

Motorola Solutions, Inc. EME Laboratory

Date/Time: 5/9/2016 5:50:16 PM

Robot#: DASY5-PG-1 | Run#: MO-SYSP-450B-160509-07
 Dipole Model#: D450V3
 Phantom#: ELI5 1150
 Tissue Temp: 19.3 (C)
 Serial#: 1053
 Test Freq: 450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.055 dB
 Adjusted SAR (1W): 4.36 mW/g(1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.94$ S/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3122, , Frequency: 450 MHz, ConvF(6.78, 6.78, 6.78); Calibrated: 6/19/2015
 Electronics: DAE4 Sn1488, Calibrated: 7/14/2015

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x181x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
 Reference Value = 37.21 V/m; Power Drift = -0.03 dB
 Fast SAR: SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.775 W/kg (SAR corrected for target medium)
 Maximum value of SAR (interpolated) = 1.28 W/kg

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (5x19x1):

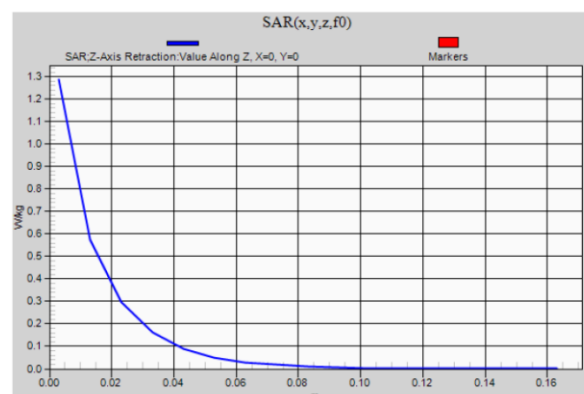
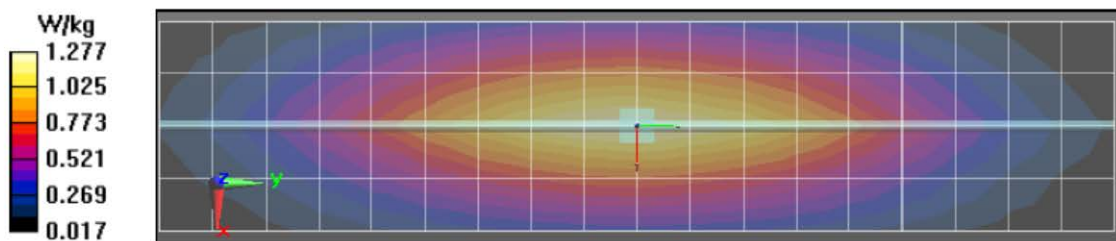
Measurement grid: $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 1.28 W/kg

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

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 37.21 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 1.76 W/kg
 SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.723 W/kg (SAR corrected for target medium)

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

Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=10$ mm
 Maximum value of SAR (measured) = 1.29 W/kg



Motorola Solutions, Inc. EME Laboratory

Date/Time: 5/10/2016 5:27:10 PM

Robot#: DASY5-PG-1 | Run#: FIE-SYSP-450B-160510-07
 Dipole Model#: D450V3
 Phantom#: ELI5 1150
 Tissue Temp: 19.4 (C)
 Serial#: 1053
 Test Freq: 450.000 (MHz)
 Start Power: 250 (mW)
 Rotation (1D): 0.059 dB
 Adjusted SAR (1W): 4.36 mW/g(1g)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3122, , Frequency: 450 MHz, ConvF(6.78, 6.78, 6.78); Calibrated: 6/19/2015
 Electronics: DAE4 Sn1488, Calibrated: 7/14/2015

Below 2 GHz-Rev.2/System Performance Check/Dipole Area Scan 2 (41x181x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 37.35 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.774 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 1.25 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

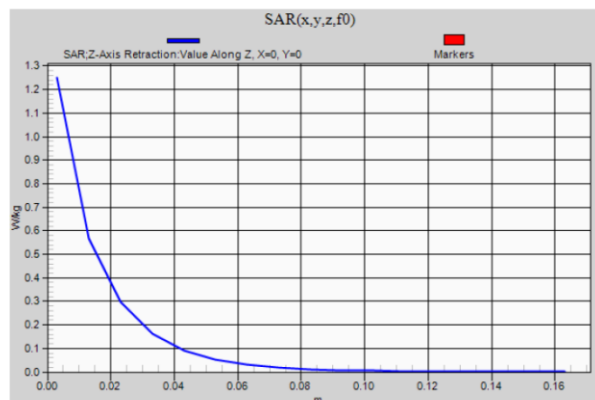
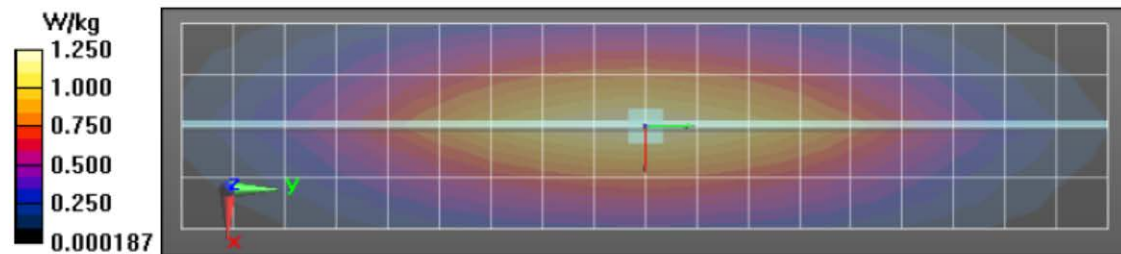
Reference Value = 37.35 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.726 W/kg (SAR corrected for target medium)

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

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



APPENDIX E

DUT Scan

Assessments at the Body with Body Worn HKLN4438B

Table 18

Motorola Solutions, Inc. EME Laboratory

Date/Time: 5/10/2016 8:57:57 PM

Robot#: DASY5-PG-1| Run#: FIE-AB-160510-12
 Model#: PMUE3564C
 Phantom#: ELI5 1150
 Tissue Temp: 19.1 (C)
 Serial#: 009TSA3903
 Antenna: Fixed (Internal)
 Test Freq: 450.0000 (MHz)
 Battery: HKNN4013A
 Carry Acc: HKLN4438B
 Audio Acc: HKLN4529A
 Start Power: 1.050 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3122, , Frequency: 450 MHz, ConvF(6.78, 6.78, 6.78); Calibrated: 6/19/2015
 Electronics: DAE4 Sn1488, Calibrated: 7/14/2015

Below 2 GHz-Rev.2 2/Ab Scan/1-Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 30.23 V/m; Power Drift = -0.20 dB

Fast SAR: SAR(1 g) = 0.759 W/kg; SAR(10 g) = 0.548 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0.832 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/1-Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.821 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/3-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 30.23 V/m; Power Drift = -0.36 dB

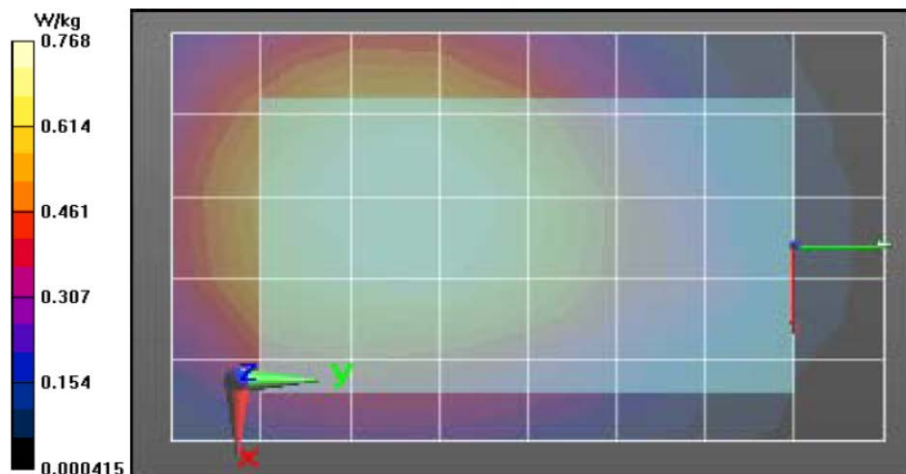
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.515 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.794 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 0.768 W/kg



Assessments at the Body with Body Worn HKLN4433A

Table 19

Motorola Solutions, Inc. EME Laboratory

Date/Time: 5/10/2016 9:28:23 PM

Robot#: DASY5-PG-1| Run#: FIE-AB-160510-13
 Model#: PMUE3564C
 Phantom#: ELI5 1150
 Tissue Temp: 19.1 (C)
 Serial#: 009TSA3903
 Antenna: Fixed (Internal)
 Test Freq: 450.0000 (MHz)
 Battery: HKNN4014A
 Carry Acc: HKLN4433A
 Audio Acc: HKLN4529A
 Start Power: 1.050 (W)

Comments:

Duty Cycle: 1:1, Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.91 \text{ S/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$
 Probe: ES3DV3 - SN3122, , Frequency: 450 MHz, ConvF(6.78, 6.78, 6.78); Calibrated: 6/19/2015
 Electronics: DAE4 Sn1488, Calibrated: 7/14/2015

Below 2 GHz-Rev.2 2/Ab Scan/1-Area Scan (51x81x1): Interpolated grid: $dx=1.500 \text{ mm}$,
 $dy=1.500 \text{ mm}$

Reference Value = 66.97 V/m; Power Drift = -0.19 dB

Fast SAR: SAR(1 g) = 4.46 W/kg; SAR(10 g) = 3.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 5.11 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$,
 $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 66.97 V/m; Power Drift = -0.42 dB

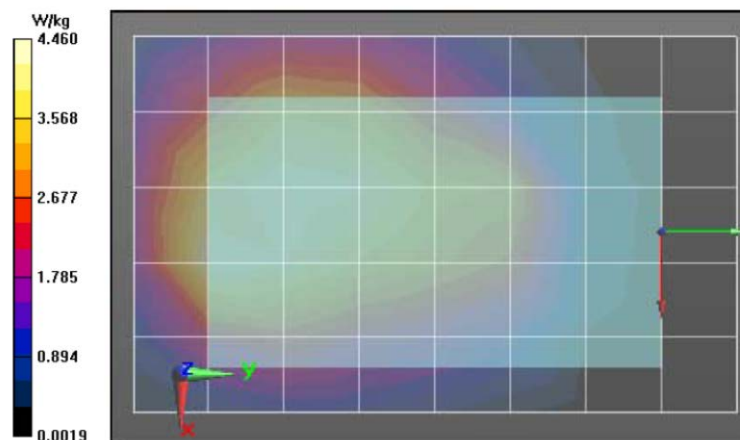
Peak SAR (extrapolated) = 7.35 W/kg

SAR(1 g) = 4.02 W/kg; SAR(10 g) = 2.65 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.70 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: $dx=20\text{mm}$,
 $dy=20\text{mm}$, $dz=10\text{mm}$

Maximum value of SAR (measured) = 4.46 W/kg



APPENDIX F

Shortened Scan of Highest SAR configuration

Motorola Solutions, Inc. EME Laboratory

Date/Time: 5/11/2016 4:03:17 PM

Robot#: DASY5-PG-1| Run#: AZ-AB-160511-08
 Model#: PMUE3564C
 Phantom#: ELI5 1150
 Tissue Temp: 19.9 (C)
 Serial#: 009TSA3903
 Antenna: Fixed (Internal)
 Test Freq: 450.0000 (MHz)
 Battery: HKNN4014A
 Carry Acc: HKLN4433A
 Audio Acc: HKLN4529A
 Start Power: 1.05 (W)

Comments: Shorten Scan

Duty Cycle: 1:1, Medium parameters used: $f = 450$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³
 Probe: ES3DV3 - SN3122, Frequency: 450 MHz, ConvF(6.78, 6.78, 6.78); Calibrated: 6/19/2015
 Electronics: DAE4 Sn1488, Calibrated: 7/14/2015

Below 2 GHz-Rev.2 2/Ab Scan/1-Area Scan (51x81x1): Interpolated grid: $dx=1.500$ mm,
 $dy=1.500$ mm

Reference Value = 62.97 V/m; Power Drift = -0.19 dB

Fast SAR: SAR(1 g) = 4.07 W/kg; SAR(10 g) = 2.76 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 4.70 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/2-Volume 2D Scan (41x41x1): Interpolated grid: $dx=0.7500$
 mm, $dy=0.7500$ mm, $dz=1.000$ mm

Reference Value = 62.97 V/m; Power Drift = -0.29 dB

Fast SAR: SAR(1 g) = 3.83 W/kg; SAR(10 g) = 2.68 W/kg (SAR corrected for target medium)

Below 2 GHz-Rev.2 2/Ab Scan/3-Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm,
 $dy=7.5$ mm, $dz=5$ mm

Reference Value = 71.37 V/m; Power Drift = -0.34 dB

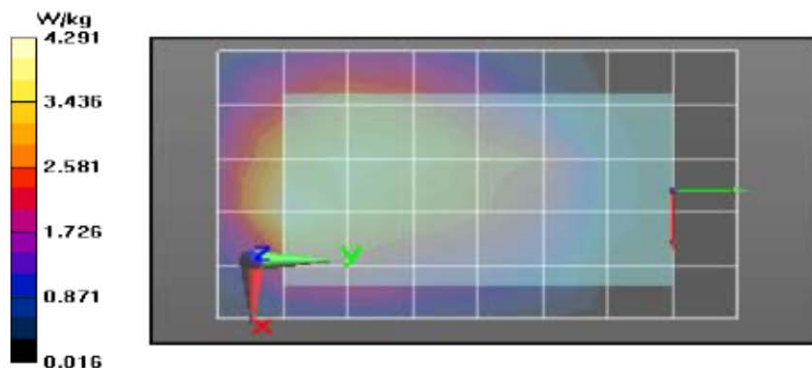
Peak SAR (extrapolated) = 7.04 W/kg

SAR(1 g) = 3.81 W/kg; SAR(10 g) = 2.5 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.44 W/kg

Below 2 GHz-Rev.2 2/Ab Scan/4-Z-Axis Scan (1x1x17): Measurement grid: $dx=20$ mm,
 $dy=20$ mm, $dz=10$ mm

Maximum value of SAR (measured) = 4.18 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)	SAR 10g (W/kg)
Shorten scan (zoom)	20	5	2.16	1.42
Full scan (area & zoom)	19	15	2.32	1.53

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