



MOTOROLA SOLUTIONS



CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT 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: 04/03/2024
Report Revision: A

Responsible Engineer: Yeng Yee Yeong (EME Engineer)
Report Author: Yeng Yee Yeong (EME Engineer)
Date/s Tested: 3/11/2024-3/14/2024 & 3/27/2024
Manufacturer: Motorola Solutions Inc.
Manufacturer Location: Sanmina, Penang
DUT Description: Handheld Portable – TANAPA BPR 50DX UHF1 NKP
Test TX mode(s): CW (PTT)
Max. Power output: Refer Table 3
Nominal Power: Refer Table 3
Tx Frequency Bands: Refer Table 3
Signaling type: Refer Table 3
Model(s) Tested: AAH88SCK8AD5BN
Model(s) Certified: Refer Section 1.0 Introduction
Serial Number(s): 02721ZY0567
Classification: Occupational/Controlled Environment
Firmware Version: I001.048
Applicant Name: Motorola Solutions Inc.
Applicant Address: Plot 2A, Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
FCC ID: AZ489FT4978
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
FCC Test Firm Registration Number: 823256
IC: 109U-89FT4978
 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 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)
Approved Date: 04/04/2024

Appendix D

System Verification Check Scans

Table 13

3/11/24, 10:28 AM

_0_CW_450-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-11, 10:18

System Performance Check Report

Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]
D450V3 - SN1053	450.0	HSL	23.9794	5.7	7.1

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	15		CW, 0--	450.0, 0	8.99	0.882	42.2

Hardware Setup

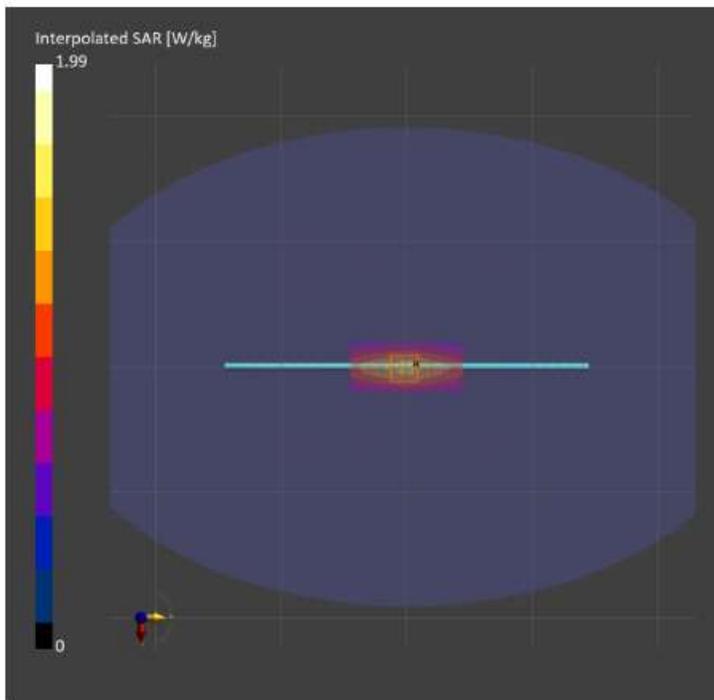
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450, 2024-Mar-11	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-11, 10:18	2024-03-11, 10:26
psSAR1g [W/Kg]	1.22	1.21
psSAR10g [W/Kg]	0.852	0.816
Power Drift [dB]	-0.00	0.02
TSL Correction	Positive / Negative	Positive / Negative



Appendix E

DUT Scans

Highest SAR Configuration of LMR assessments at the FCC Body (406.1-470MHz)

Table 18

3/12/24, 9:34 PM

BACK_0-00_AN000462A01_PMNN4847A_PMLN8600A_PMMN4092A_0_CW_470-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-12, 21:23

Measurement Report for PMUE5898A, 02721ZY0567, BACK, Custom Band, CW, Channel 470000 (470.0 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	470.0, 470000	8.99	0.898	42.0

Hardware Setup

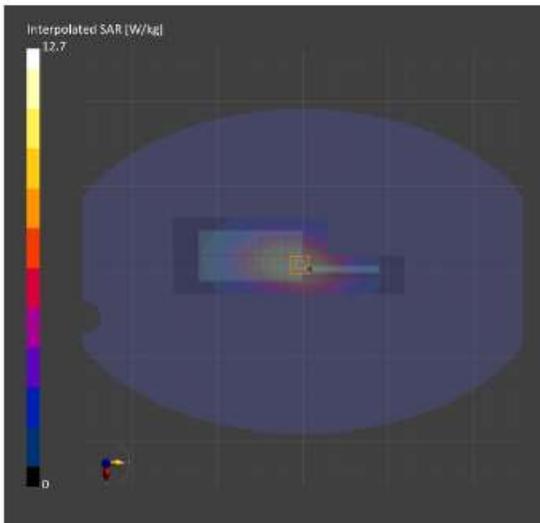
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-12	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 270.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-12, 21:23	2024-03-12, 21:32
psSAR1g [W/Kg]	9.10	8.55
psSAR10g [W/Kg]	6.57	6.26
Power Drift [dB]	-0.21	-0.62
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.3
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at the FCC Face (406.1-470MHz)

Table 21

3/13/24, 11:45 AM

FRONT_25-00_AN000468A01_PMNN4847A_front_NA_0_CW_422-20MHz.html

Motorola Solutions, EME Laboratory

2024-03-13, 11:34

Measurement Report for PMUE5898A, 02721ZY0567,FRONT, Custom Band, CW, Channel 422200 (422.2 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 25.00	Custom Band	CW, 0--	422.2, 422200	8.99	0.860	43.9

Hardware Setup

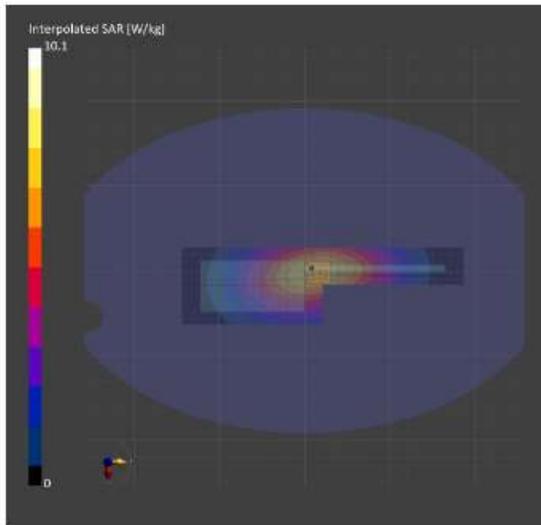
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-13	EX3DV4 - 5N3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 330.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-13, 11:34	2024-03-13, 11:43
psSAR1g [W/Kg]	7.27	7.15
psSAR10g [W/Kg]	5.32	5.41
Power Drift [dB]	-0.11	-0.33
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.9
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at the ISED, Canada Body (406.1-430MHz)

Table 22

3/12/24, 10:22 PM

BACK_0-00_AN000468A01_PMNN4847A_PMLN8600A_PMMN4092A_0_CW_406-20MHz.html

Motorola Solutions, EME Laboratory

2024-03-12, 21:58

Measurement Report for PMUE5898A, 02721ZY0567, BACK, Custom Band, CW, Channel 406200 (406.2 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	406.2, 406200	8.99	0.844	43.4

Hardware Setup

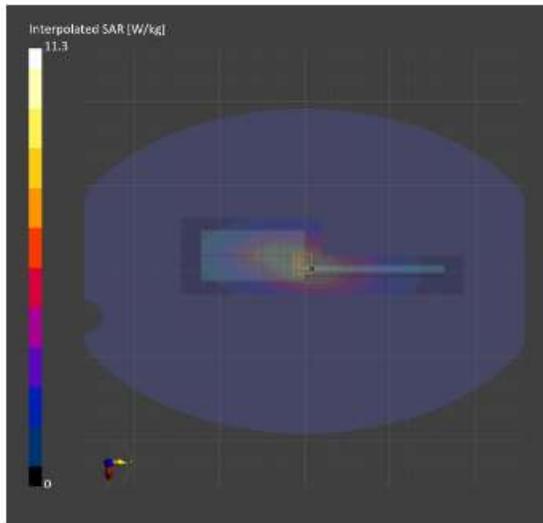
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-12	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 330.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-12, 21:58	2024-03-12, 22:07
psSAR1g [W/Kg]	8.11	7.88
psSAR10g [W/Kg]	5.91	5.84
Power Drift [dB]	-0.16	-0.30
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.1
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at the ISED, Canada Face (406.1-430MHz)

Table 22

3/13/24, 11:45 AM

FRONT_25-00_AN000468A01_PMNN4847A_front_NA_0_CW_422-20MHz.html

Motorola Solutions, EME Laboratory

2024-03-13, 11:34

Measurement Report for PMUES898A, 02721ZY0567,FRONT, Custom Band, CW, Channel 422200 (422.2 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUES898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 25.00	Custom Band	CW, 0--	422.2, 422200	8.99	0.860	43.9

Hardware Setup

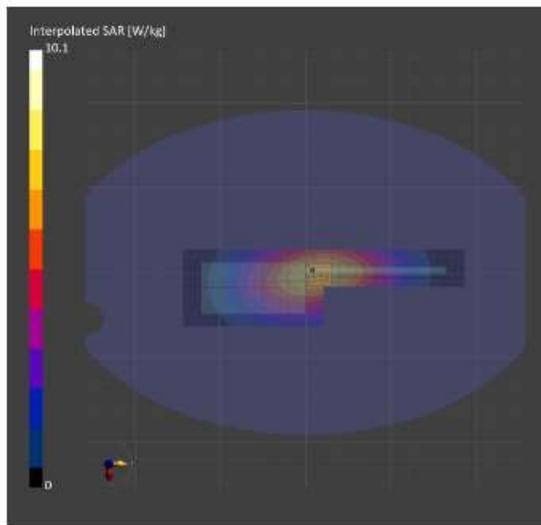
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-13	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 330.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-13, 11:34	2024-03-13, 11:43
psSAR1g [W/Kg]	7.27	7.15
psSAR10g [W/Kg]	5.32	5.41
Power Drift [dB]	-0.11	-0.33
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.9
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at the ISED, Canada Body (450-470MHz)

Table 23

3/12/24, 9:34 PM

BACK_0-00_AN000462A01_PMNN4847A_PMLN8600A_PMMN4092A_0_CW_470-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-12, 21:23

Measurement Report for PMUE5898A, 02721ZY0567, BACK, Custom Band, CW, Channel 470000 (470.0 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	470.0, 470000	8.99	0.898	42.0

Hardware Setup

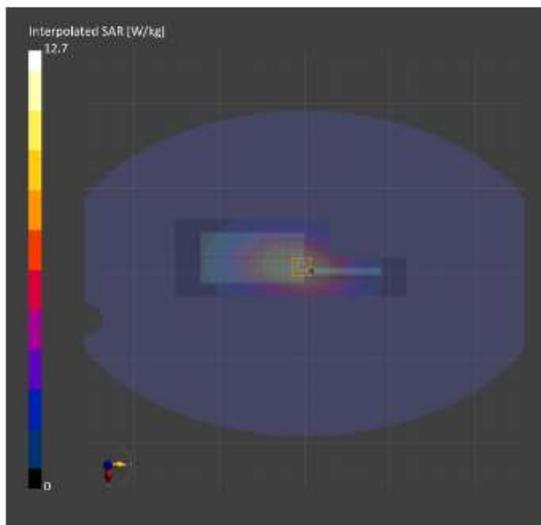
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-12	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 270.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-12, 21:23	2024-03-12, 21:32
psSAR1g [W/Kg]	9.10	8.55
psSAR10g [W/Kg]	6.57	6.26
Power Drift [dB]	-0.21	-0.62
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.3
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at the ISED, Canada Face (450-470MHz)

Table 23

3/13/24, 4:55 PM

FRONT_25-00_AN000462A01_PMNN4847A_front_NA_0_CW_470-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-13, 15:00

Measurement Report for PMUE5898A, 02721ZY0567,FRONT, D450, CW, Channel 70 (470.0 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 25.00	D450	CW, 0--	470.0, 70	8.99	0.902	42.9

Hardware Setup

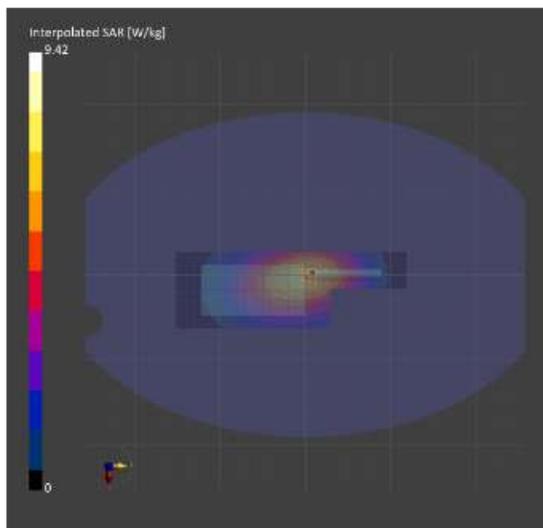
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450, 2024-Mar-13	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 270.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-13, 15:00	2024-03-13, 15:09
psSAR1g [W/Kg]	6.81	6.50
psSAR10g [W/Kg]	4.97	4.87
Power Drift [dB]	-0.18	-0.49
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.5
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at outside FCC Frequency range Body (400-470MHz)

Table 18

3/12/24, 9:34 PM

BACK_0-00_AN000462A01_PMNN4847A_PMLN8600A_PMMN4092A_0_CW_470-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-12, 21:23

Measurement Report for PMUE5898A, 02721ZY0567, BACK, Custom Band, CW, Channel 470000 (470.0 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	470.0, 470000	8.99	0.898	42.0

Hardware Setup

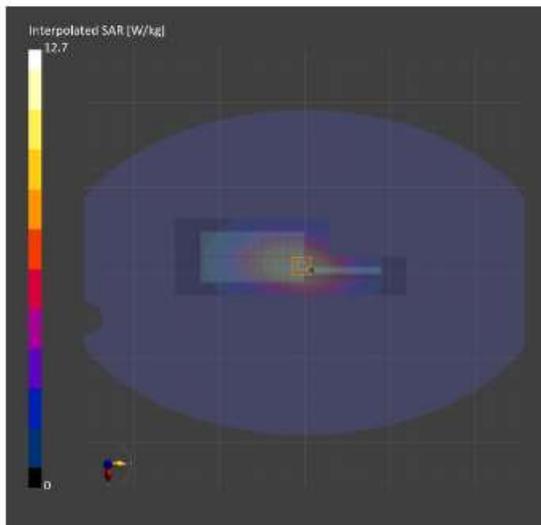
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-12	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 270.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-12, 21:23	2024-03-12, 21:32
psSAR1g [W/Kg]	9.10	8.55
psSAR10g [W/Kg]	6.57	6.26
Power Drift [dB]	-0.21	-0.62
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.3
Dist 3dB Peak [mm]		> 15.0



Highest SAR Configuration of LMR assessments at outside FCC Frequency range Face (400-470MHz)

Table 21

3/13/24, 11:45 AM

FRONT_25-00_AN000468A01_PMNN4847A_front_NA_0_CW_422-20MHz.html

Motorola Solutions, EME Laboratory

2024-03-13, 11:34

Measurement Report for PMUE5898A, 02721ZY0567,FRONT, Custom Band, CW, Channel 422200 (422.2 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 25.00	Custom Band	CW, 0--	422.2, 422200	8.99	0.860	43.9

Hardware Setup

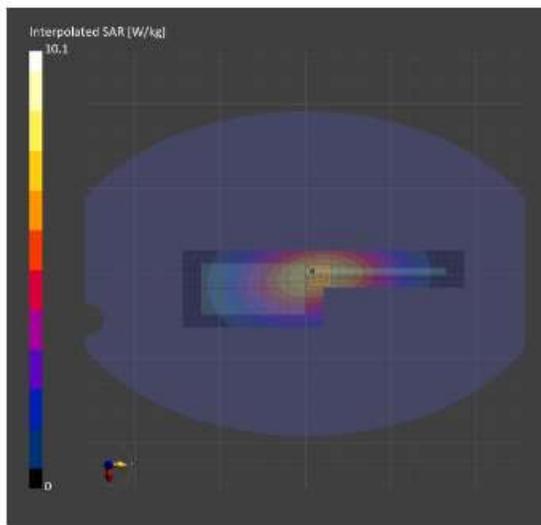
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450 , 2024-Mar-13	EX3DV4 - SN3612, 2021-10-22	DAE4 Sn1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 330.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-13, 11:34	2024-03-13, 11:43
psSAR1g [W/Kg]	7.27	7.15
psSAR10g [W/Kg]	5.32	5.41
Power Drift [dB]	-0.11	-0.33
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.9
Dist 3dB Peak [mm]		> 15.0



APPENDIX F

Shortened Scan of Highest SAR configuration

Shortened Scan Assessment

Table 25

3/27/24, 11:48 AM

BACK_0-00_AN000462A01_PMNN4847A_PMLN8600A_PMMN4092A_0_CW_470-00MHz.html

Motorola Solutions, EME Laboratory

2024-03-27, 11:21

Measurement Report for PMUE5898A, 02721ZY0567, BACK, Custom Band, CW, Channel 470000 (470.0 MHz)

Device Under Test Properties

Model	Serial Number	Dimensions [mm]
PMUE5898A	02721ZY0567	122.0 x 60.0 x 35.0

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	470.0, 470000	8.99	0.876	42.1

Hardware Setup

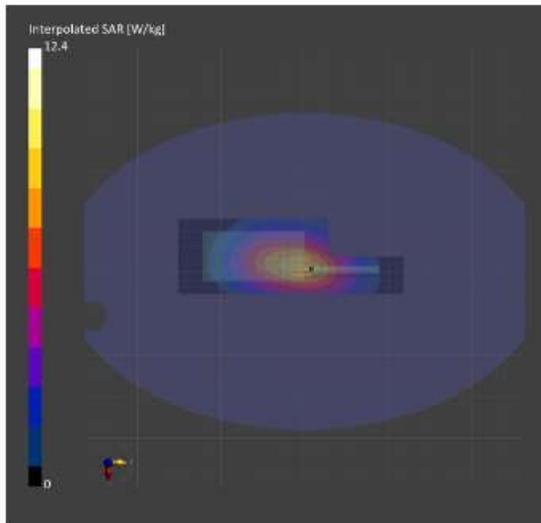
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - 1011	HSL450, 2024-Mar-27	EX3DV4 - SN3612, 2021-10-22	DAE4 5n1483, 2022-10-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 270.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-03-27, 11:21	2024-03-27, 11:39
psSAR1g [W/Kg]	8.36	8.29
psSAR10g [W/Kg]	6.04	6.00
Power Drift [dB]	-0.19	-0.31
TSL Correction	Positive only	Positive only
M2/M1 [%]		86.3
Dist 3dB Peak [mm]		> 15.0



APPENDIX G

DUT Test Position Photos

Photos are available in Exhibit 7B

APPENDIX H

DUT, Body worn and audio accessories Photos

Photos are available in Exhibit 7B