



Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.6 Ω + 0.7 j Ω
Return Loss	- 31.7 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.158 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 14.06.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:1026

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.86$ S/m; $\epsilon_r = 37.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 03.11.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.05.2024
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 116.6 V/m; Power Drift = 0.09 dB

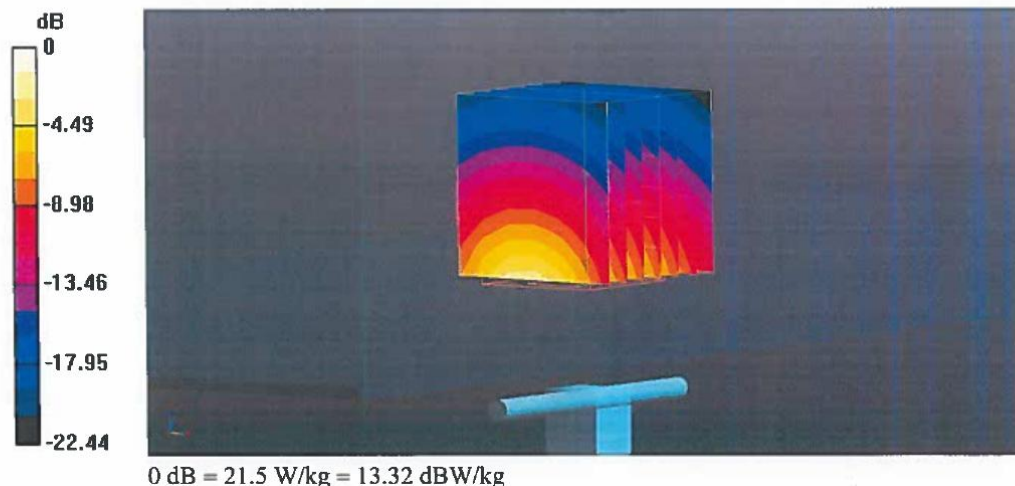
Peak SAR (extrapolated) = 27.0 W/kg

SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.25 W/kg

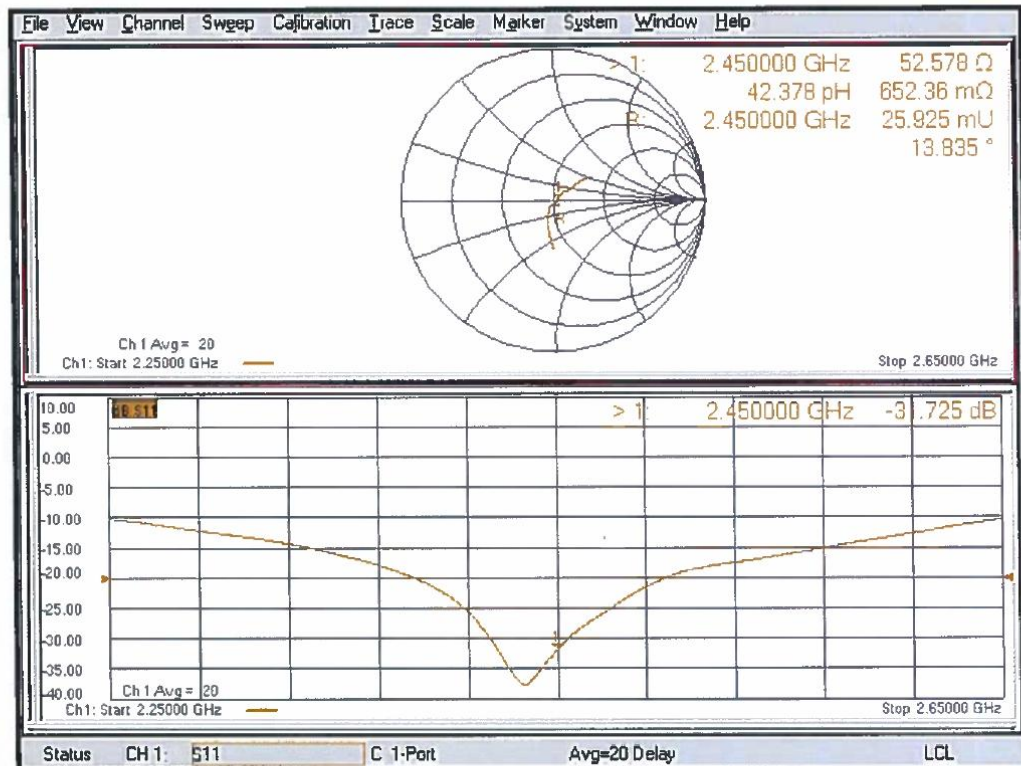
Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 50.6%

Maximum value of SAR (measured) = 21.5 W/kg



Impedance Measurement Plot for Head TSL





**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

Client

TÜV SÜD
Fareham, United Kingdom

Certificate No.

D2450V2-715_Dec24

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 715**

Calibration procedure(s) **QA CAL-05.v12
Calibration Procedure for SAR Validation Sources between 0.7 - 3 GHz**

Calibration date **December 9, 2024**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.
Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Cal
Power Sensor R&S NRP-33T	SN: 100967	28-Mar-24 (No. 217-04038)	Mar-25
Power Sensor R&S NRP16A	SN: 101859	22-Jul-24 (No. 4030A315008547)	Jul-25
Spectrum Analyzer R&S FSV40	SN: 101832	25-Jan-24 (No. 4030-315007551)	Jan-25
Mismatch; Short [S4188] Attenuator [S4423]	SN: 1152	28-Mar-24 (No. 217-04050)	Mar-25
OCP DAK-12	SN: 1016	24-Sept-24 (No. OCP-DAK12-1016_Sep24)	Sep-25
OCP DAK-3.5	SN: 1249	23-Sept-24 (No. OCP-DAK3.5-1249_Sep24)	Sep-25
Reference Probe EX3DV4	SN: 7349	03-Jun-24 (No. EX3-7349_Jun24)	Jun-25
DAE4ip	SN: 1836	28-Oct-24 (No. DAE4ip-1836_Oct24)	Oct-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
ACAD Source Box	SN: 1000	28-May-24 (No. 675-ACAD_Source_Box-240528)	May-25
Signal Generator R&S SMB100A	SN: 182081	28-May-24 (No. 675-CAL16-S4588-240528)	May-25
Mismatch; SMA	SN: 1102	22-May-24 (No. 675-Mismatch_SMA-240522)	May-25

	Name	Function	Signature
Calibrated by	Krešimir Franjić	Laboratory Technician	
Approved by	Sven Köhn	Technical Manager	
Issued: December 10, 2024			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

Glossary

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation

- DASY System Handbook

Methods Applied and Interpretation of Parameters

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

D2450V2 - SN: 715

December 9, 2024

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY8 Module SAR	16.4.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with spacer
Zoom Scan Resolution	dx, dy = 5mm, dz = 1.5mm	Graded Ratio = 1.5 mm (Z direction)
Frequency	2450MHz $\pm$ 1MHz	

Head TSL parameters at 2450 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	37.8 $\pm$ 6%	1.82 mho/m $\pm$ 6%
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 2450 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	24 dBm input power	12.7 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	50.6 W/kg $\pm$ 17.0% (k = 2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	24 dBm input power	5.89 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.4 W/kg $\pm$ 16.5% (k = 2)

D2450V2 - SN: 715

December 9, 2024

Body TSL parameters at 2450 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ±0.2)°C	52.1 ±6%	2.03 mho/m ±6%
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 2450 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR for nominal Body TSL parameters	24 dBm input power	12.0 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	47.8 W/kg ±17.0% (k = 2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	Condition	
SAR for nominal Body TSL parameters	24 dBm input power	5.67 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.6 W/kg ±16.5% (k = 2)



D2450V2 - SN: 715

December 9, 2024

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 2450 MHz

Impedance	$53.9 \Omega + 0.1 j\Omega$
Return Loss	-28.5 dB

Antenna Parameters with Body TSL at 2450 MHz

Impedance	$49.9 \Omega + 2.1 j\Omega$
Return Loss	-33.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.156 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured. The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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D2450V2 - SN: 715

December 9, 2024

System Performance Check Report

Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]
D2450V2 - SN715	2450	HSL	24

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	10	CW, 0--		2450.0	7.24	1.82	37.8

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
MFP V8.0 Center	HSL, 2024-12-05	EX3DV4 - SN7349, 2024-06-03	DAE4ip Sn1836, 2024-10-28

Scans Setup

	Zoom Scan
Grid Extents [mm]	30 x 30 x 30
Grid Steps [mm]	5.0 x 5.0 x 1.5
Sensor Surface [mm]	1.4
Graded Grid	Yes
Grading Ratio	1.5
MAIA	N/A
Surface Detection	VMS + 6p
Scan Method	Measured

Measurement Results

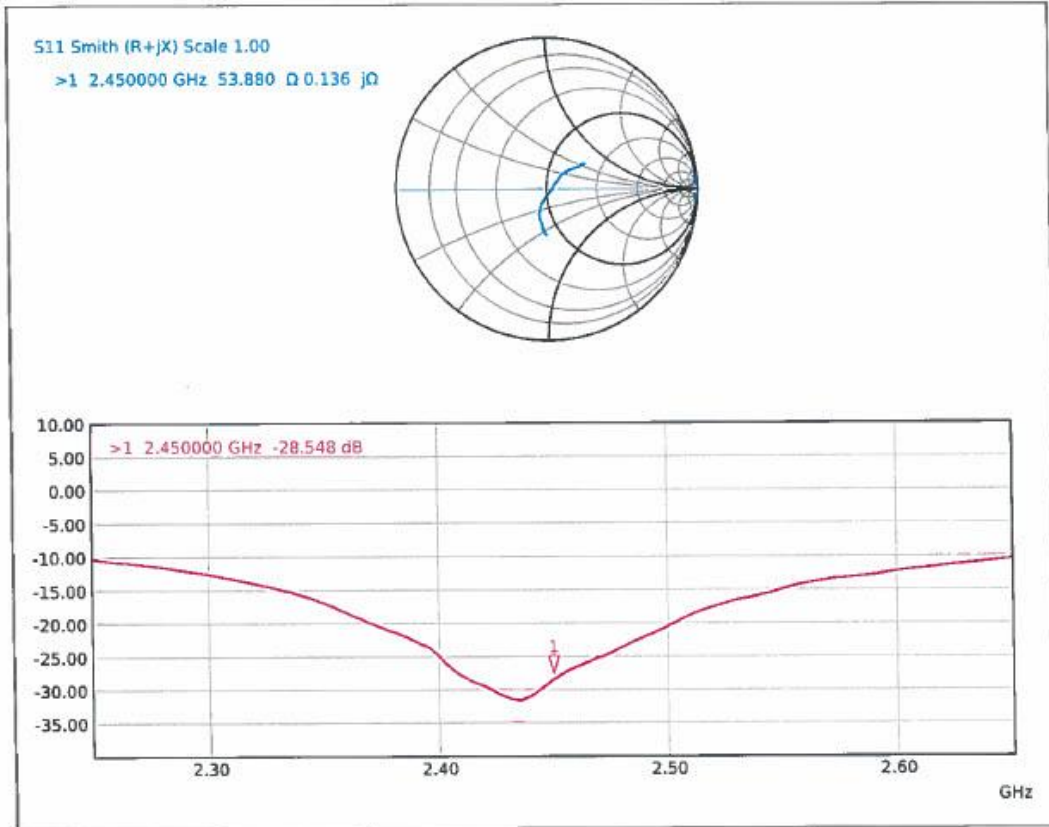
	Zoom Scan
Date	2024-12-05
ptSAR1g [W/Kg]	12.7
ptSAR10g [W/Kg]	5.89
Power Drift [dB]	0.00
Power Scaling	Disabled
Scaling Factor [dB]	
TSL Correction	Positive / Negative



D2450V2 - SN: 715

December 9, 2024

Impedance Measurement Plot for Head TSL





D2450V2 - SN: 715

December 9, 2024

System Performance Check Report

Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]
D2450V2 - SN715	2450	MSL	24

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	10	CW, 0--		2450, 0		7.95	2.03	52.1

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
MFP VB.0 Center	MSL, 2024-12-09	EX3DV4 - SN7349, 2024-06-03	DAE4ip Sn1836, 2024-10-28

Scans Setup

	Zoom Scan
Grid Extents [mm]	30 x 30 x 30
Grid Steps [mm]	5.0 x 5.0 x 1.5
Sensor Surface [mm]	1.4
Graded Grid	Yes
Grading Ratio	1.5
MAIA	N/A
Surface Detection	VMS + 6p
Scan Method	Measured

Measurement Results

	Zoom Scan
Date	2024-12-09
psSAR1g [W/Kg]	12.0
psSAR10g [W/Kg]	5.67
Power Drift [dB]	-0.01
Power Scaling	Disabled
Scaling Factor [dB]	
TSL Correction	Positive / Negative

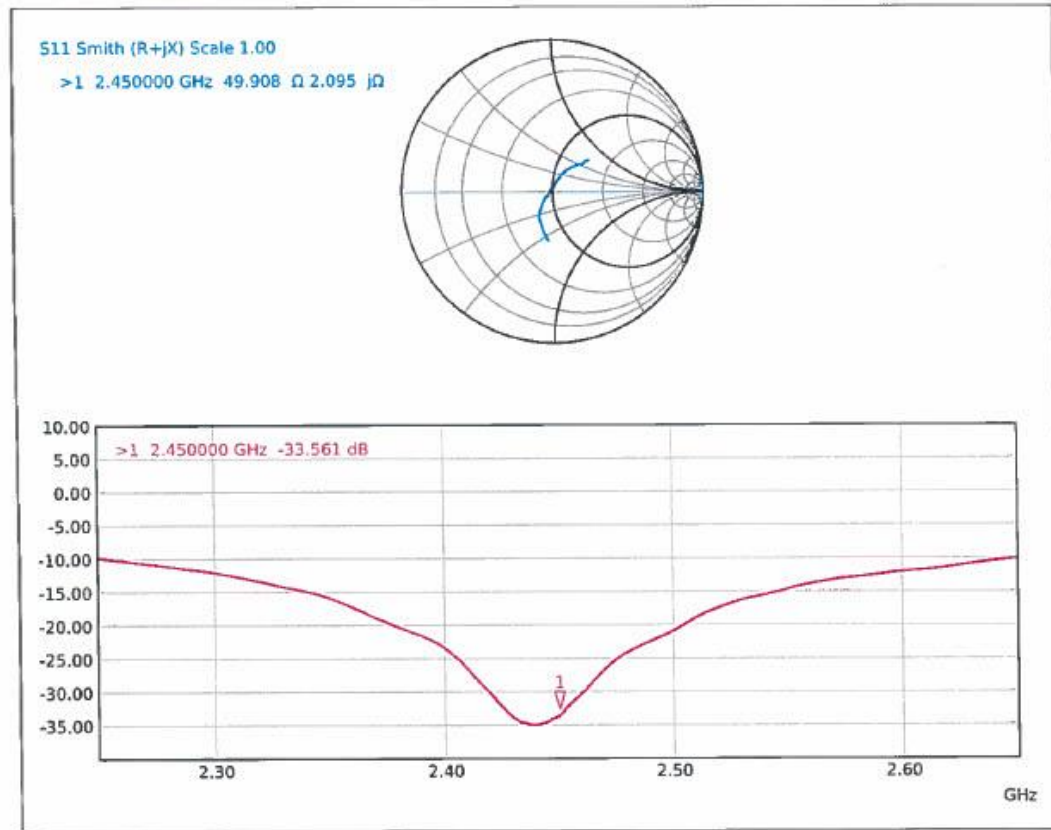


0 dB = 23.3 W/Kg

D2450V2 - SN: 715

December 9, 2024

Impedance Measurement Plot for Body TSL





ANNEX C

TEST RESULTS



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH1), Channel 78 (2480.000 MHz)

Equipment Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	EUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Phone

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, Head Simulating Liquid	EDGE RIGHT, 0.00	ISM 2.4 GHz Band	Bluetooth, 10030-	2480.000, 78	7.14	1.83	38.9

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - SN:2057	HBBL-600-10000 DAKS 3.5 Head 21.21 deg.C 2025-Jan-14 SYS1.prn, 2025-01-14	EX3DV4 - SN7719, 2024-07-05	DAE4 Sn1584, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 x 320.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-15, 11:13	2025-01-15, 11:23
psSAR1g [W/kg]	0	0
psSAR10g [W/kg]	0	0
Power Drift [dB]	3.95	1.92
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		32.5
Dist 3dB Peak [mm]		1.5

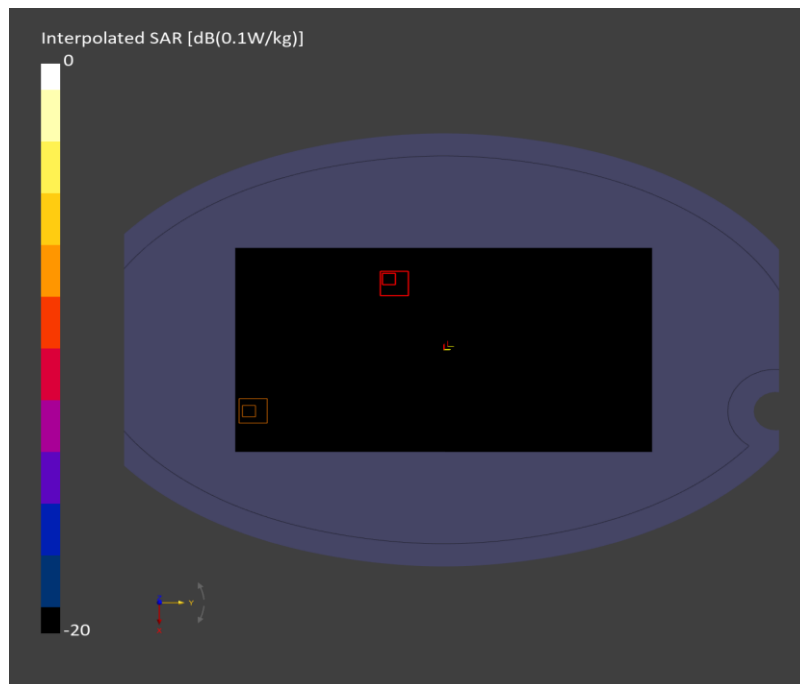


Figure C.1: Testing results for the SN23-N at 2480.000 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE LEFT, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH1), Channel 0 (2402.000 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE LEFT, 0.00	ISM 2.4 GHz Band	Bluetooth, 10030-CAA	2402.000, 0	7.14	1.81	39.2

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - SN:2057	HBBL-600-10000 DAKS 3.5 Head 20.4 deg.C 2024-Nov-20 SYS1.prm, 2024-11-20	EX3DV4 - SN7719, 2024-07-05	DAE4 Sn1584, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 x 320.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-11-20, 16:18	2024-11-20, 16:27
psSAR1g [W/Kg]	0.134	0.133
psSAR10g [W/Kg]	0.069	0.067
Power Drift [dB]	-0.03	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		83.6
Dist 3dB Peak [mm]		12.4

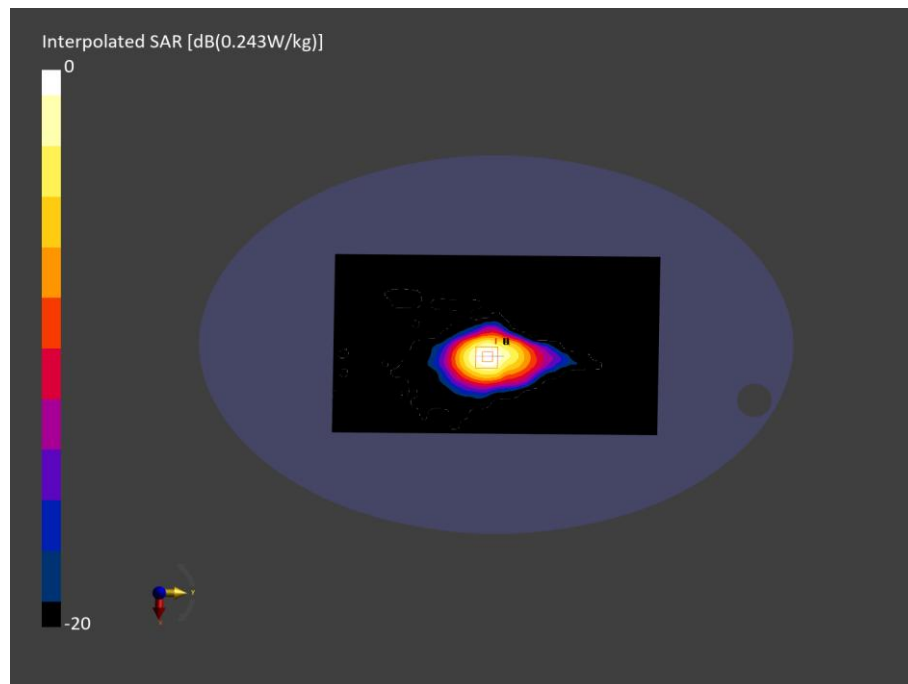


Figure C.2: SAR Testing Results for the SN23-N at 2402.0 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc., EDGE RIGHT, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps), Channel 11 (2462.000 MHz)

Equipment Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	EUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.,	290.0 x 125.0 x 135.0		Phone

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, Head Simulating Liquid	EDGE RIGHT, 0.00	WLAN 2.4GHz	WLAN, 10012-	2462.000, 11	7.14	1.82	38.9

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - SN:2057	HBBL-600-10000 DAKS 3.5 Head 21.21 deg.C 2025-Jan-14 SYS1.prn, 2025-01-14	EX3DV4 - SN7719, 2024-07-05	DAE4 Sn1584, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 x 320.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-14, 13:28	2025-01-14, 13:38
psSAR1g [W/kg]	0	0
psSAR10g [W/kg]	0	0
Power Drift [dB]	-7.43	-2.40
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		51.1
Dist 3dB Peak [mm]		2.3

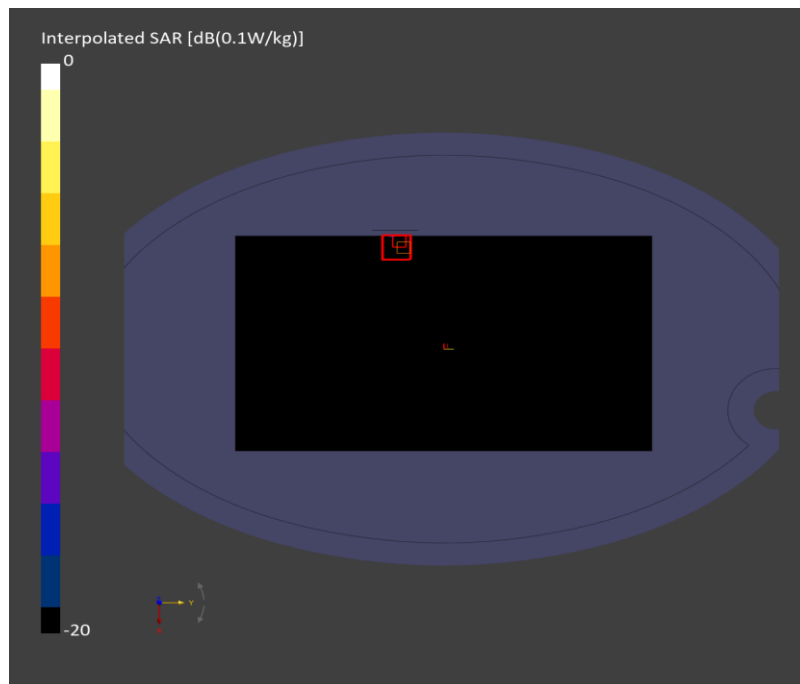


Figure C.3: Testing results for the SN23-N at 2462.000 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE LEFT, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps), Channel 1 (2412.000 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE LEFT, 0.00	WLAN 2.4GHz	WLAN, 10012-CAB	2412.000, 1	7.14	1.82	39.2

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - SN:2057	HBBL-600-10000 DAKS 3.5 Head 20.4 deg.C 2024-Nov-20 SYS1.prm, 2024-11-20	EX3DV4 - SN7719, 2024-07-05	DAE4 Sn1584, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 x 320.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-11-20, 14:42	2024-11-20, 14:51
psSAR1g [W/Kg]	0.293	0.290
psSAR10g [W/Kg]	0.151	0.148
Power Drift [dB]	-0.02	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		83.7
Dist 3dB Peak [mm]		12.2

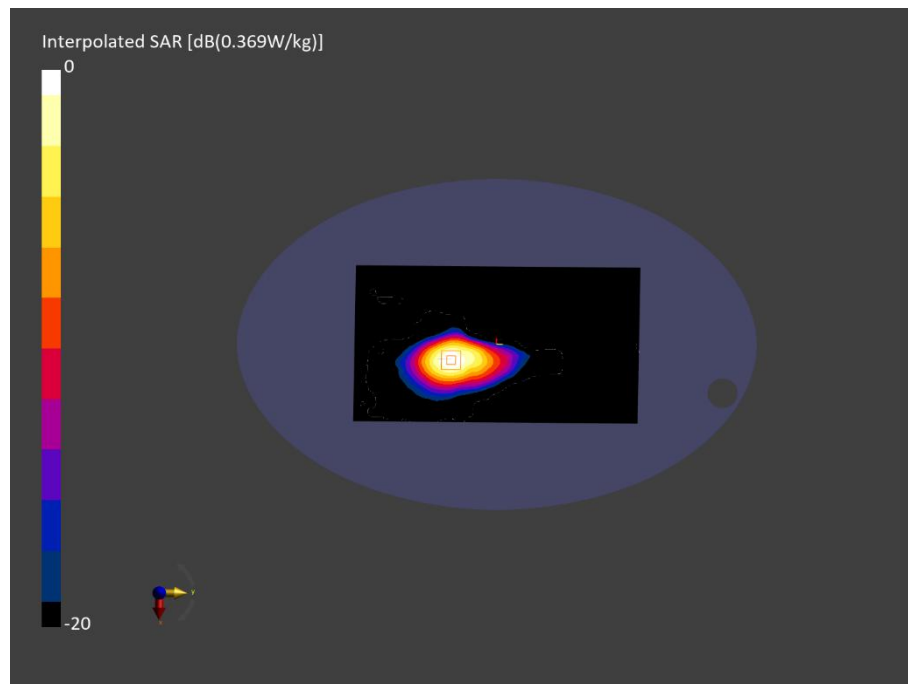


Figure C.4: SAR Testing Results for the SN23-N at 2412.0 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, GSM 850, GSM-FDD (TDMA, GMSK), Channel 128 (824.200 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	GSM 850	GSM, 10021-DAC	824.200, 128	8.86	0.857	43.3

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-10, 13:47	2024-12-10, 13:54
psSAR1g [W/Kg]	0.446	0.456
psSAR10g [W/Kg]	0.283	0.287
Power Drift [dB]	-0.02	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		88.4
Dist 3dB Peak [mm]		13.5

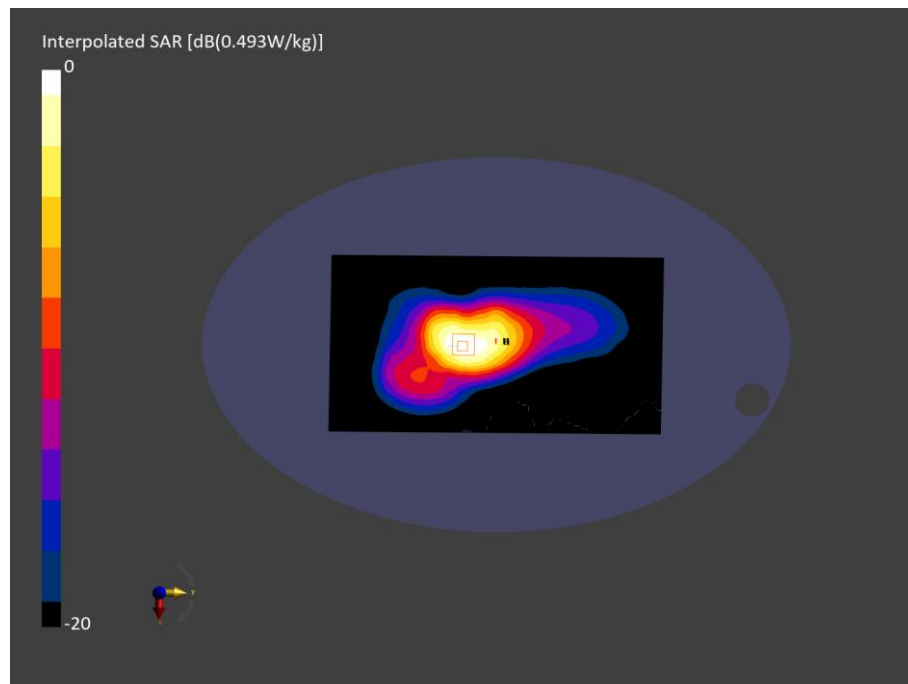


Figure C.5: SAR Testing Results for the SN23-N at 824.2 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, PCS 1900, GSM-FDD (TDMA, GMSK), Channel 810 (1909.800 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	PCS 1900	GSM, 10021-DAC	1909.800, 810	7.71	1.43	41.2

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-11, 10:36	2024-12-11, 10:41
psSAR1g [W/Kg]	0.316	0.333
psSAR10g [W/Kg]	0.178	0.192
Power Drift [dB]	-0.01	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		86.4
Dist 3dB Peak [mm]		12.8

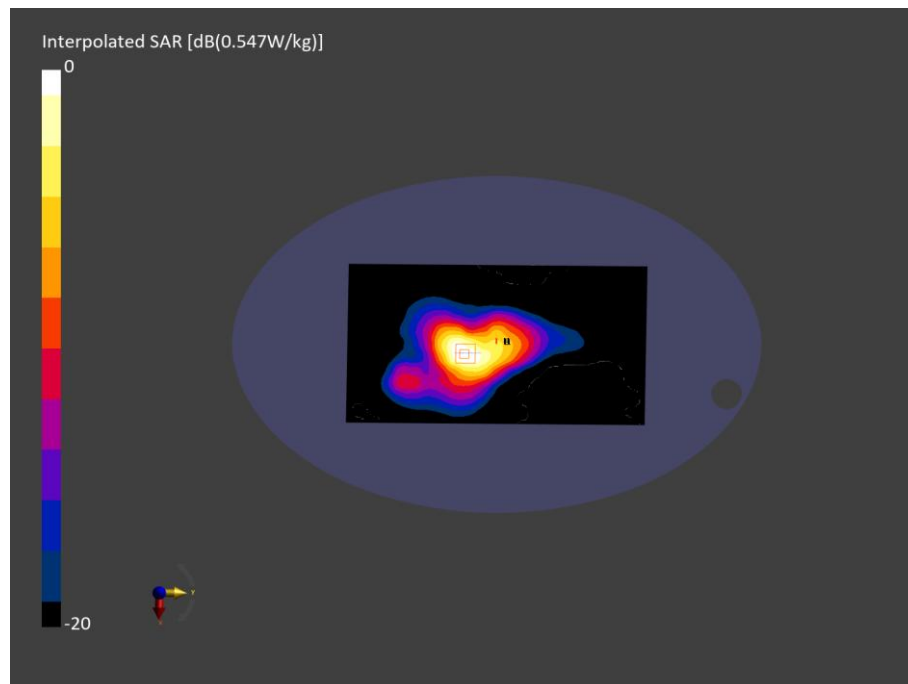


Figure C.6: SAR Testing Results for the SN23-N at 1909.8 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 2, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 18675 (1857.500 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 2	LTE-FDD, 10175-CAH	1857.500, 18675	7.71	1.39	41.3

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prm, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 13:00	2024-12-12, 13:07
psSAR1g [W/Kg]	0.605	0.608
psSAR10g [W/Kg]	0.335	0.349
Power Drift [dB]	-0.01	-0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.3
Dist 3dB Peak [mm]		12.6

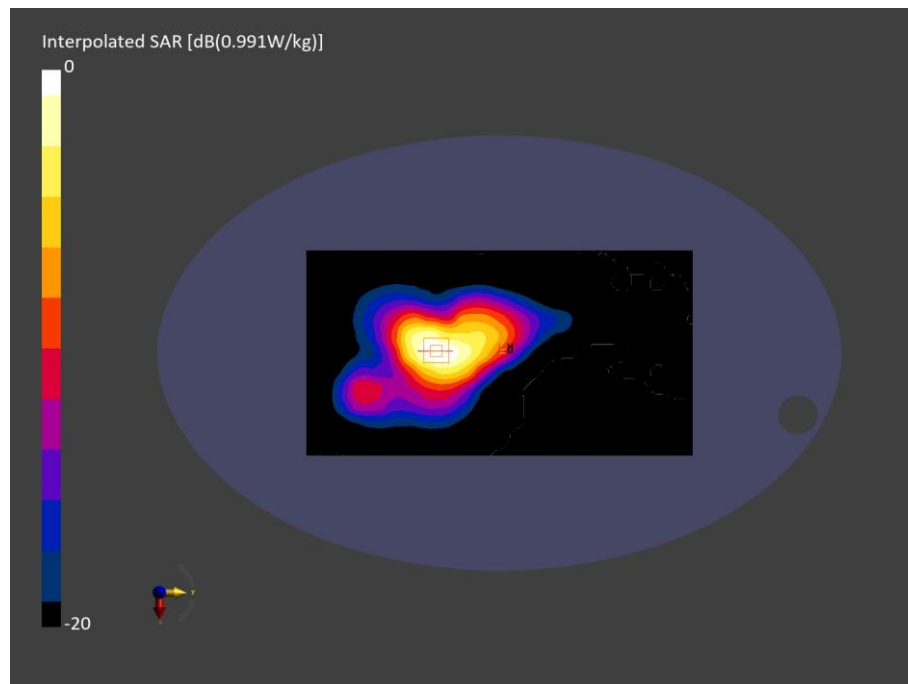


Figure C.7: SAR Testing Results for the SN23-N at 1857.5 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 4, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20075 (1722.500 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 4	LTE-FDD, 10169-CAF	1722.500, 20075	7.83	1.30	41.5

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prm, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 14:19	2024-12-12, 14:25
psSAR1g [W/Kg]	1.22	1.27
psSAR10g [W/Kg]	0.670	0.717
Power Drift [dB]	0.07	0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		86.3
Dist 3dB Peak [mm]		12.1

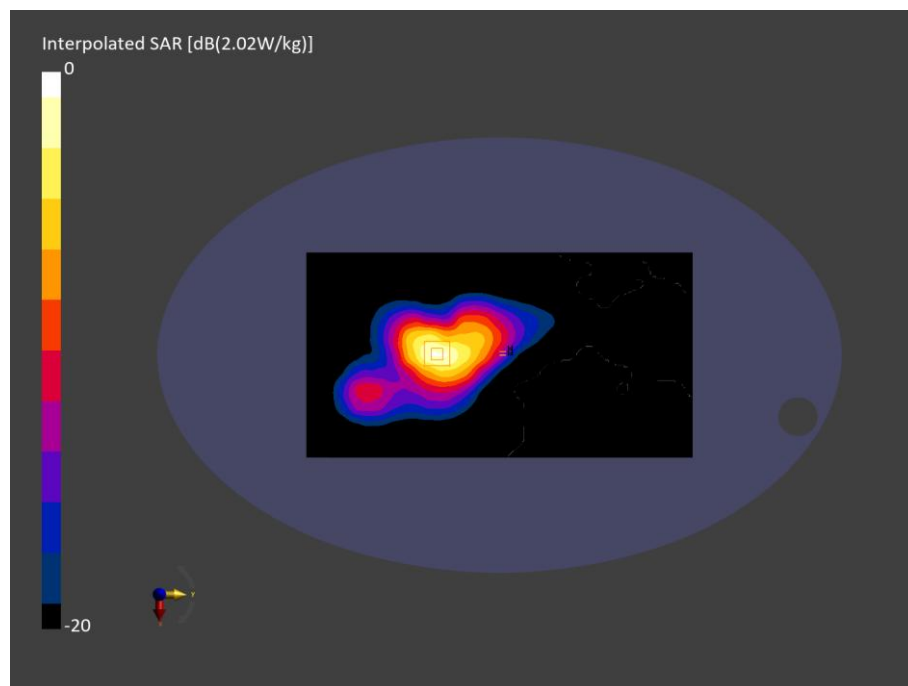


Figure C.8: SAR Testing Results for the SN23-N at 1722.5 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc., EDGE LEFT, Band 5, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20549 (838.900 MHz)

Equipment Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	EUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.,	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE LEFT, 0.00	Band 5	LTE-FDD, 10175-	838.900, 20549	8.86	0.910	42.6

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 19.59 deg.C 2025-Jan-07 SYS5 B7, 2025-01-07	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-08, 13:46	2025-01-08, 13:56
psSAR1g [W/kg]	0.009	0.009
psSAR10g [W/kg]	0.006	0.006
Power Drift [dB]	0.14	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		62.7
Dist 3dB Peak [mm]		14.9

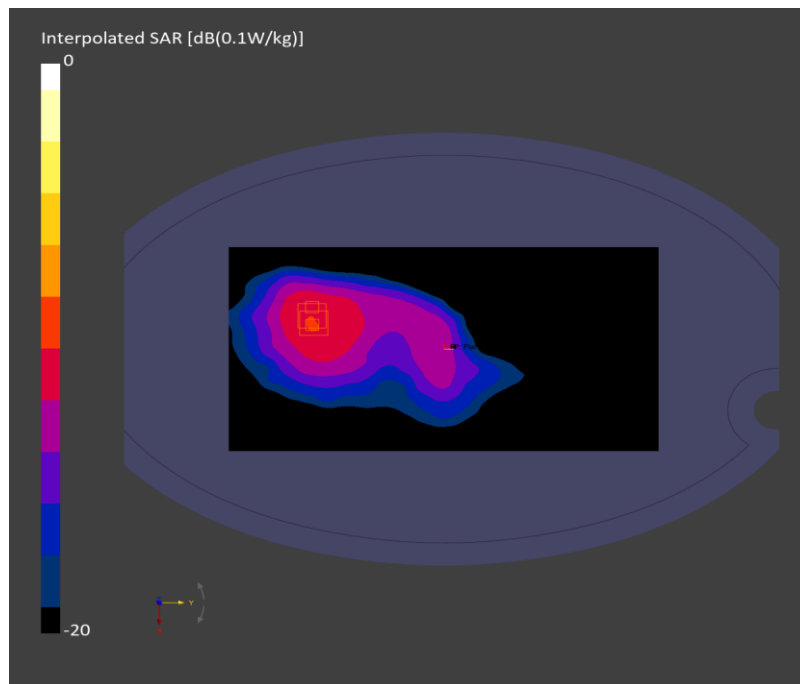


Figure C.9: Testing results for the SN23-N at 838.900 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 5, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20549 (838.900 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 5	LTE-FDD, 10175-CAH	838.900, 20549	8.86	0.862	43.2

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 15:36	2024-12-12, 15:42
psSAR1g [W/Kg]	0.699	0.699
psSAR10g [W/Kg]	0.438	0.432
Power Drift [dB]	-0.14	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		88.6
Dist 3dB Peak [mm]		13.7

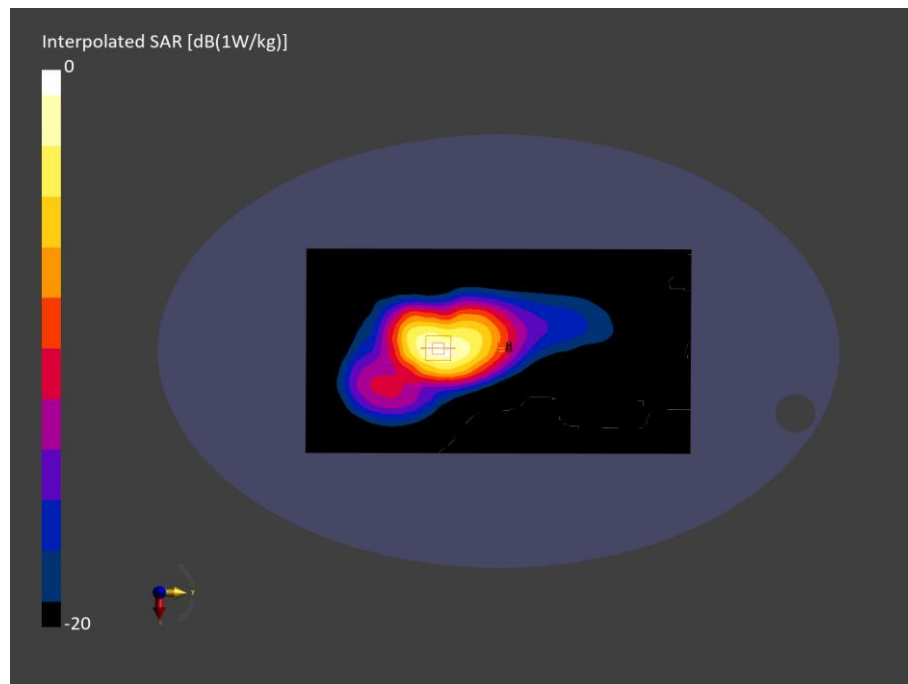


Figure C.10: SAR Testing Results for the SN23-N at 838.9 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 12, LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23154 (713.400 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 12	LTE-FDD, 10184-CAF	713.400, 23154	9.05	0.817	43.6

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 16:47	2024-12-12, 16:53
psSAR1g [W/Kg]	0.295	0.290
psSAR10g [W/Kg]	0.192	0.182
Power Drift [dB]	0.01	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		87.8
Dist 3dB Peak [mm]		13.2

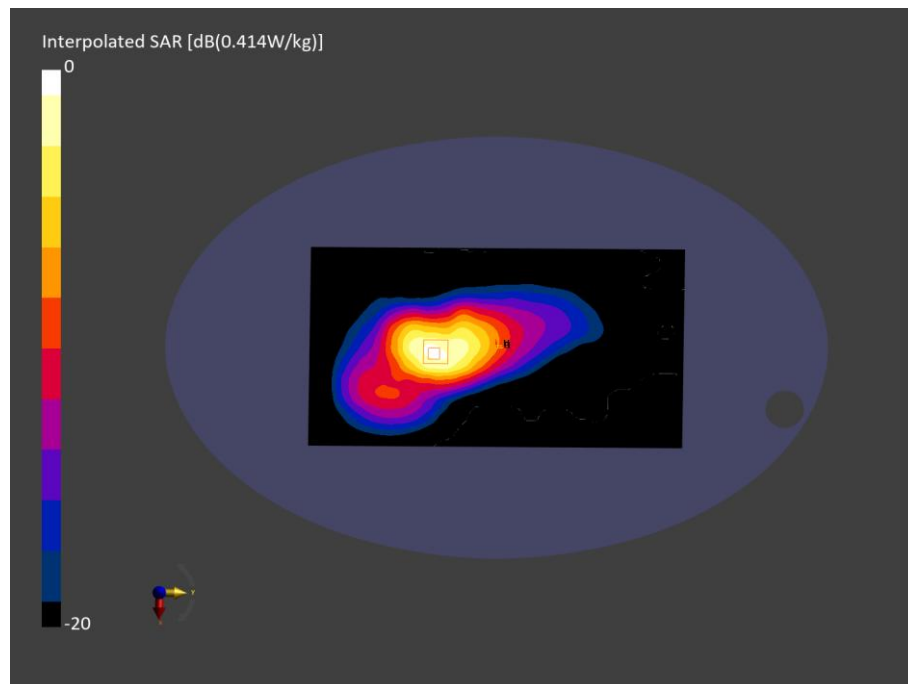


Figure C.11: SAR Testing Results for the SN23-N at 713.4 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 13, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23230 (782.000 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 13	LTE-FDD, 10175-CAH	782.000, 23230	9.05	0.841	43.4

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 17:32	2024-12-12, 17:39
psSAR1g [W/Kg]	0.443	0.461
psSAR10g [W/Kg]	0.289	0.289
Power Drift [dB]	-0.20	-0.23
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		88.5
Dist 3dB Peak [mm]		14.1

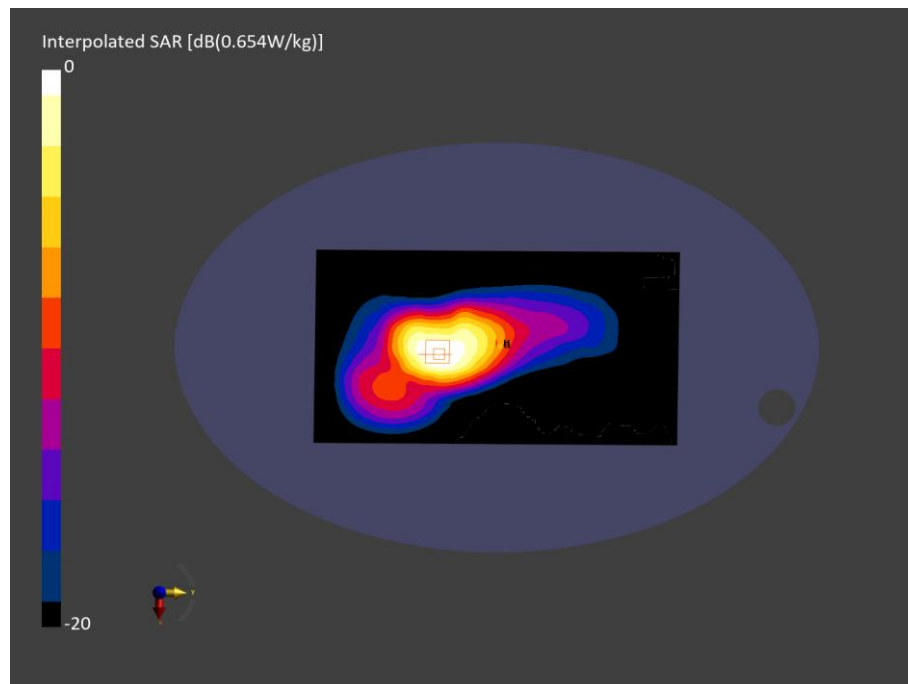


Figure C.12: SAR Testing Results for the SN23-N at 782.0 MHz



Measurement Report for VeriFinder SN23-N, 4G, Symetrica Inc. EDGE RIGHT, Band 26, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 26964 (841.400 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
VeriFinder SN23-N, 4G, Symetrica Inc.	290.0 x 125.0 x 135.0		Detector

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, Head Simulating Liquid	EDGE RIGHT, 0.00	Band 26	LTE-FDD, 10175-CAH	841.400, 26964	8.86	0.863	43.2

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 18.73 deg.C 2024-Dec-09 SYS1.prn, 2024-12-09	EX3DV4 - SN7805, 2024-02-14	DAE4ip Sn1786, 2024-08-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	2024-12-12, 18:59	2024-12-12, 19:06
psSAR1g [W/Kg]	0.704	0.694
psSAR10g [W/Kg]	0.439	0.429
Power Drift [dB]	0.02	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		88.7
Dist 3dB Peak [mm]		13.0

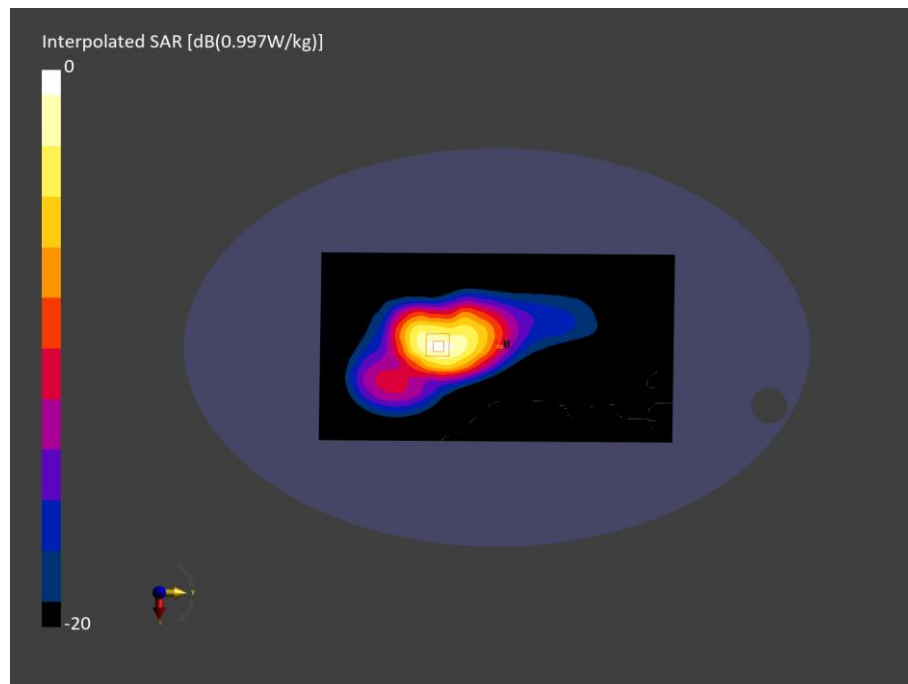


Figure C.13: SAR Testing Results for the SN23-N at 841.4 MHz



ANNEX D

Photographs of the EUT



Figure D.1: Front face of the VeriFinder.



Figure D.2: Left face of the VeriFinder.

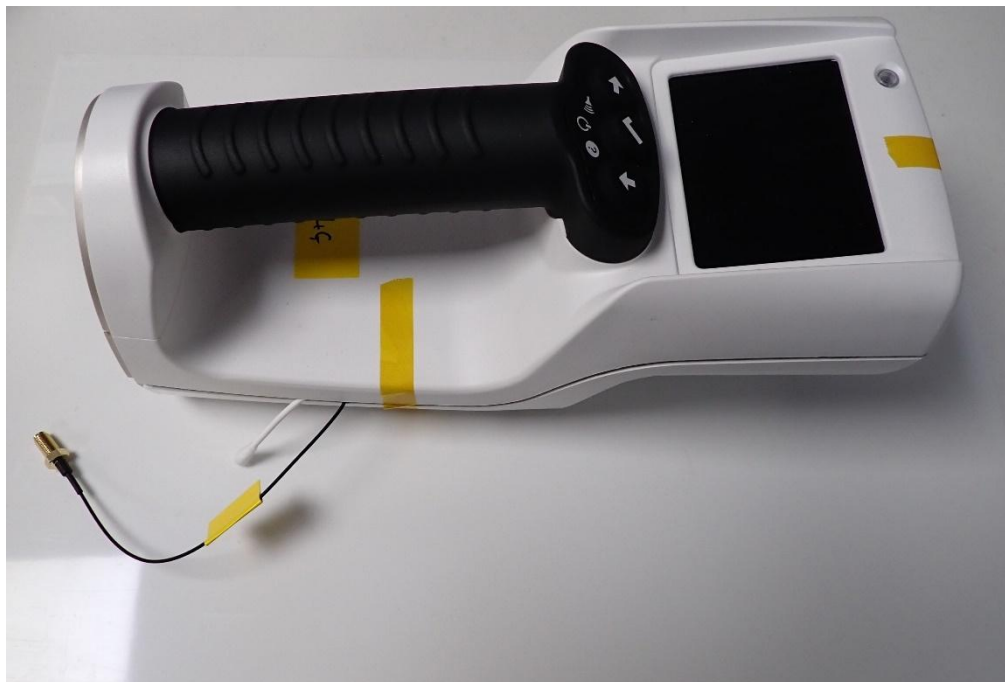


Figure D.3: Conducted sample of the VeriFinder.



Figure D.4: EUT left face touching the body at 0mm gap configuration.

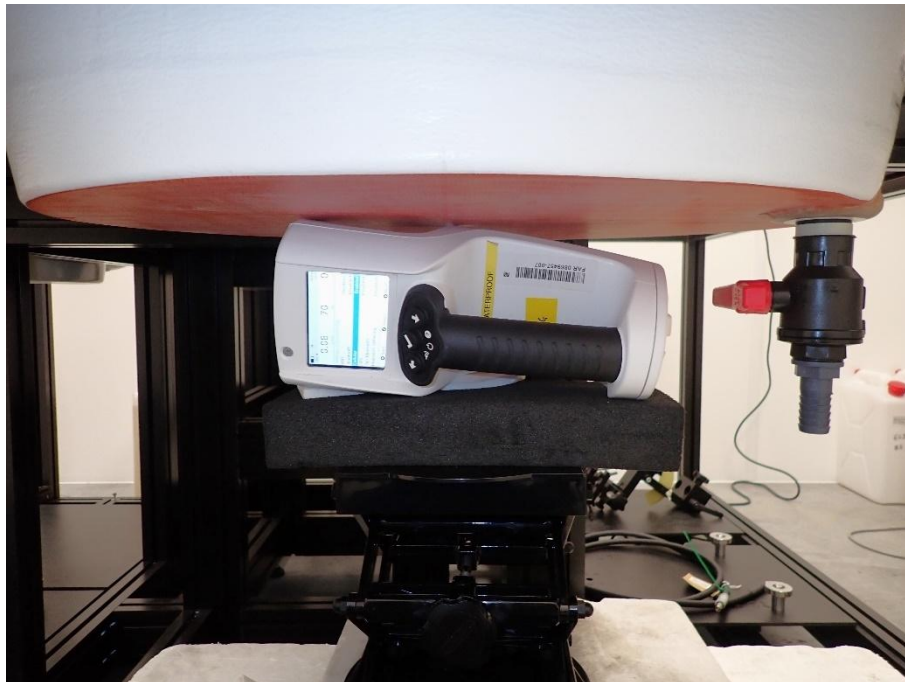


Figure D.5: EUT right face touching the body at 0mm gap configuration.



Figure D.6: EUT top face touching the body at 0mm gap configuration.



Figure D.7: EUT front face touching the body at 0mm gap configuration.



Figure D.8: EUT back face touching the body at 0mm gap configuration.

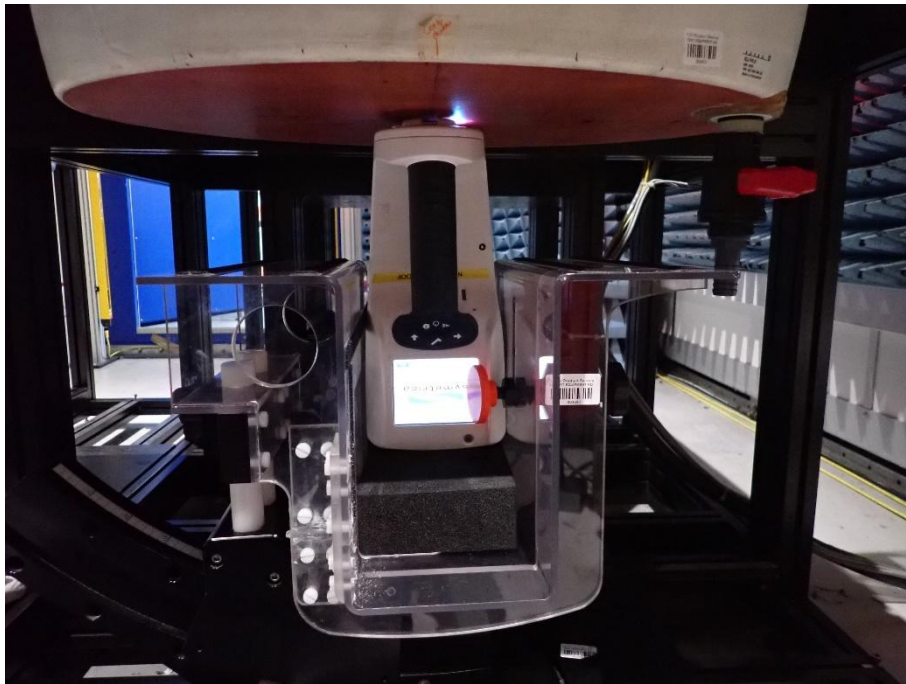


Figure D.9: EUT bottom face touching the body at 0mm gap configuration.