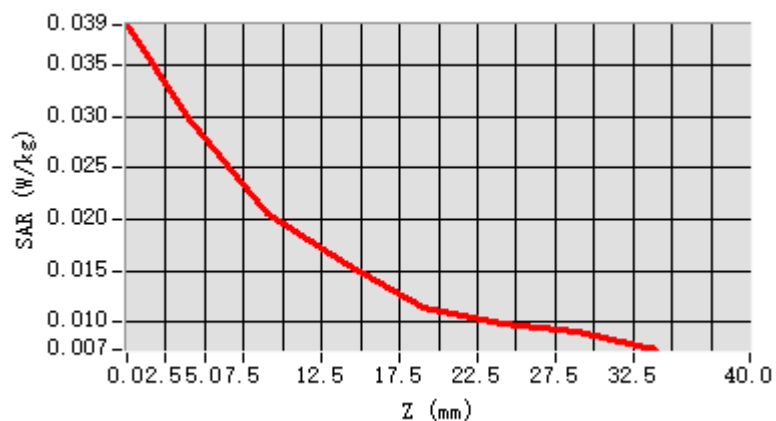
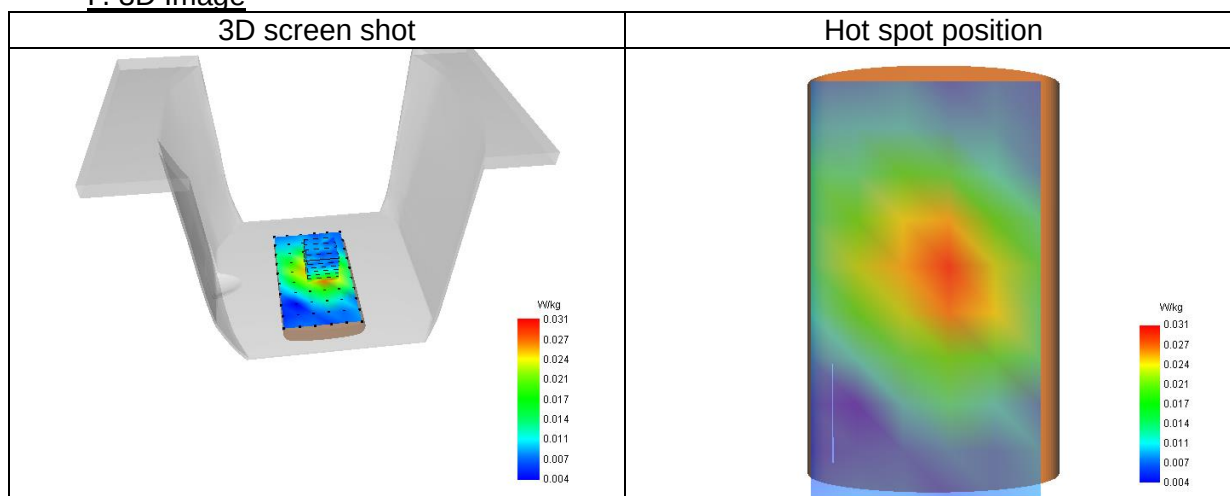




F. 3D Image



4# SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 19/10/2025

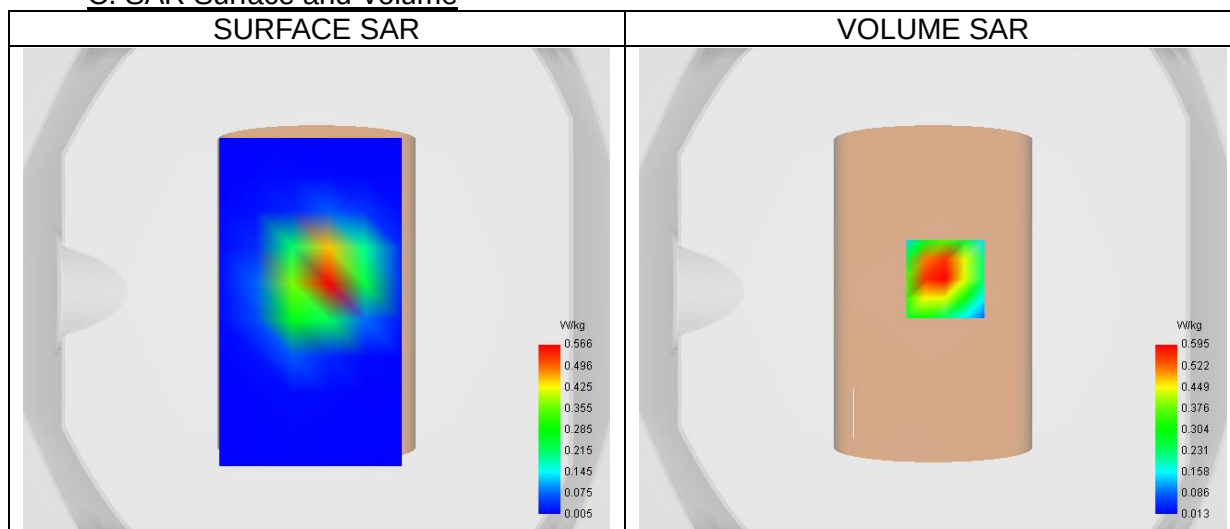
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS1900
Signal	TDMA (GPRS)
Channels/Frequency	Middle (661)/ frequency 1880.00 Mhz
Modulation	GMSK (CS-1)
TX-slots	1

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.49
Relative permittivity (imaginary part)	13.80
Conductivity (S/m)	1.44

C. SAR Surface and Volume



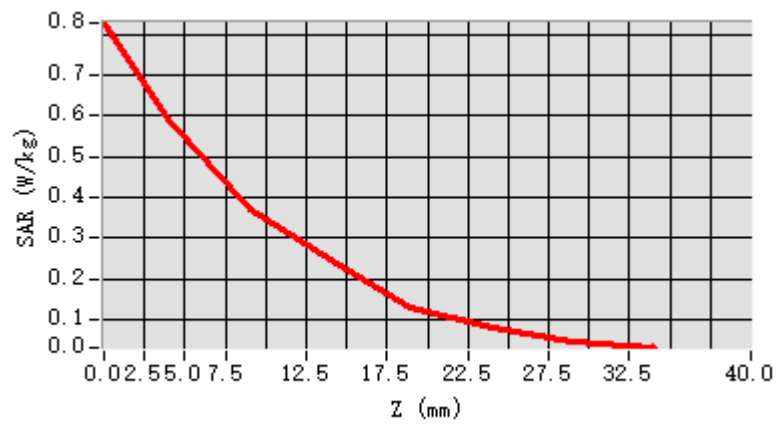
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 0.93 W/kg

D. SAR 1g & 10g

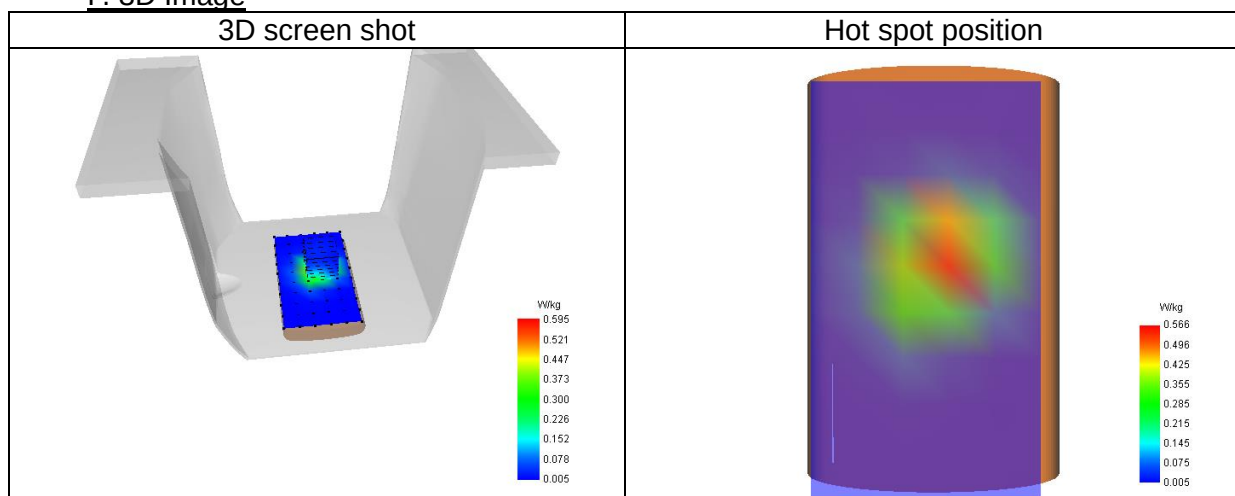
SAR 10g (W/Kg)	0.314
SAR 1g (W/Kg)	0.595
Variation (%)	0.33
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	62.47

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.829	0.595	0.371	0.250	0.130	0.081	0.047



F. 3D Image



5# SAR Measurement at Band 2 (1900) (Body, Validation Plane)

Date of measurement: 19/10/2025

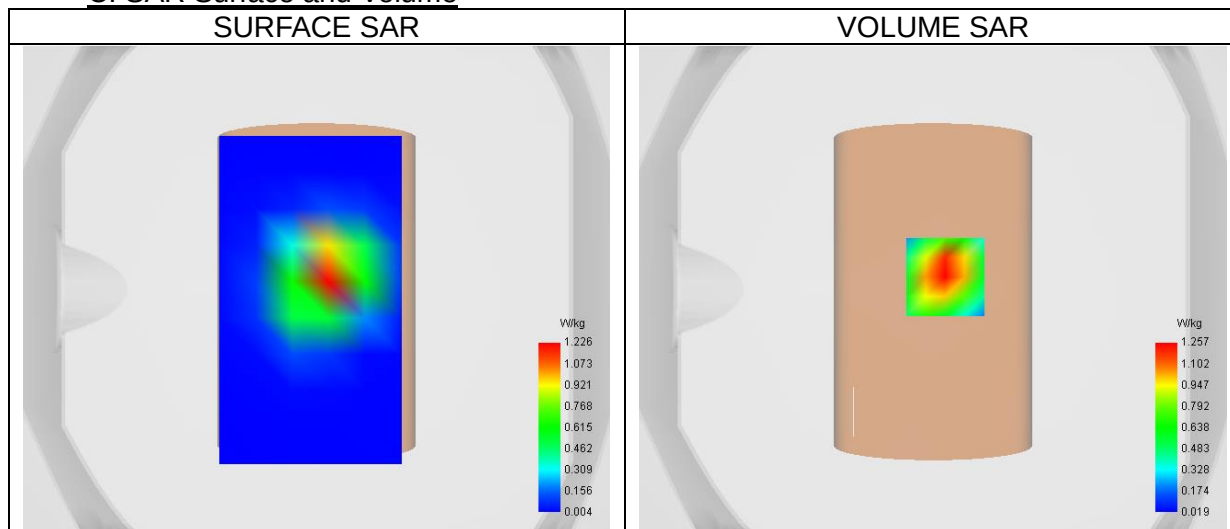
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 2 (1900)
Signal	WCDMA
Channels/Frequency	Middle (9400)/ frequency 1880.00 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.49
Relative permittivity (imaginary part)	13.80
Conductivity (S/m)	1.44

C. SAR Surface and Volume



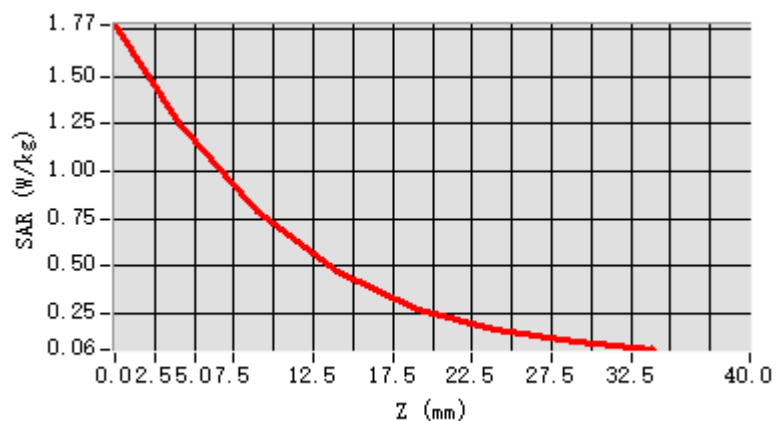
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 1.92 W/kg

D. SAR 1g & 10g

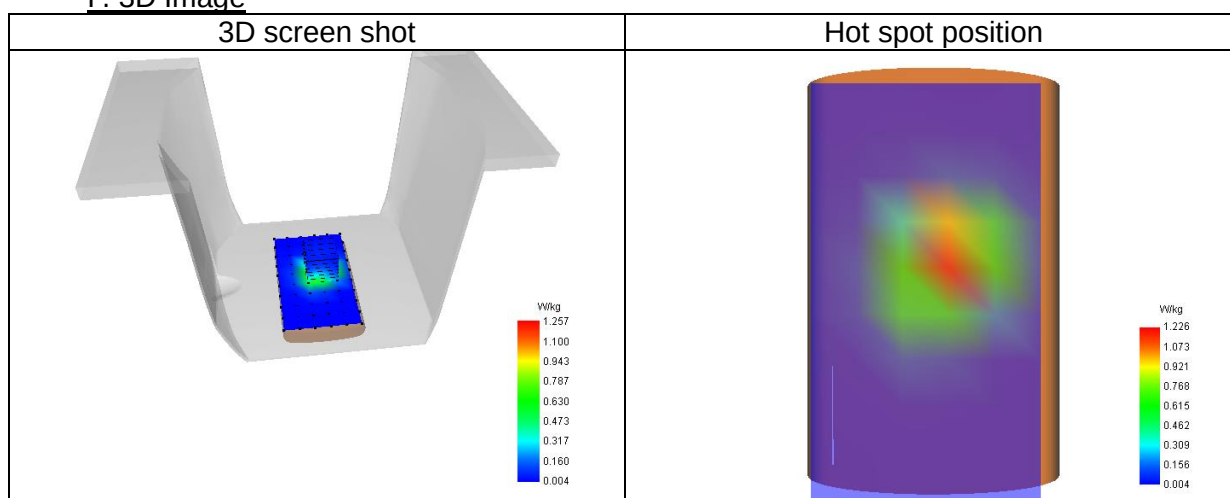
SAR 10g (W/Kg)	0.654
SAR 1g (W/Kg)	1.223
Variation (%)	-1.10
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	62.67

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.772	1.257	0.788	0.468	0.273	0.161	0.095



F. 3D Image



6# SAR Measurement at Band 2 (1900) (Body, Validation Plane)

Date of measurement: 19/10/2025

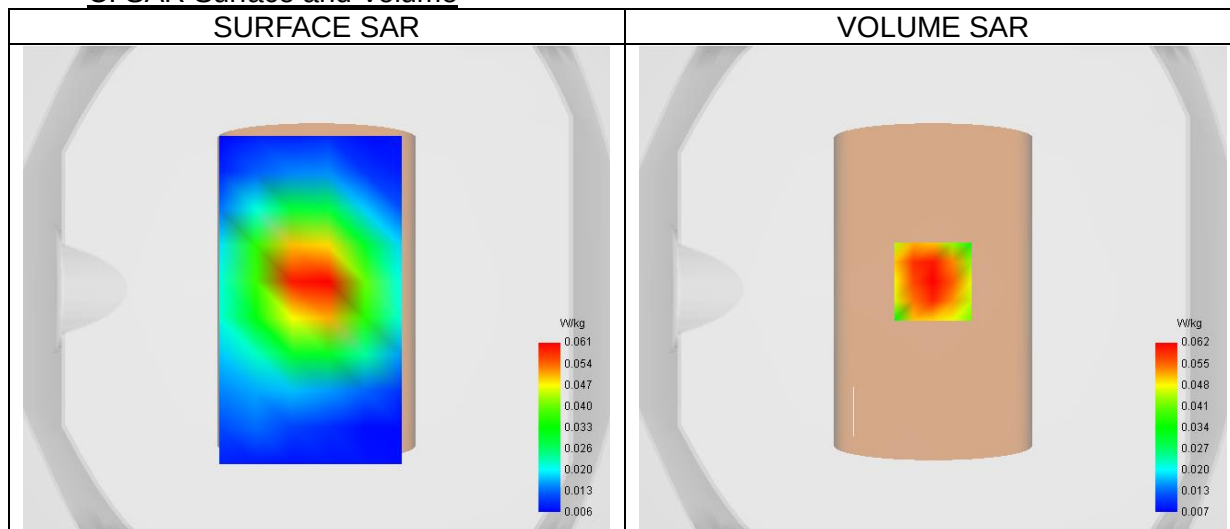
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 2 (1900)
Signal	WCDMA
Channels/Frequency	Middle (9400)/ frequency 1880.00 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.49
Relative permittivity (imaginary part)	13.80
Conductivity (S/m)	1.44

C. SAR Surface and Volume



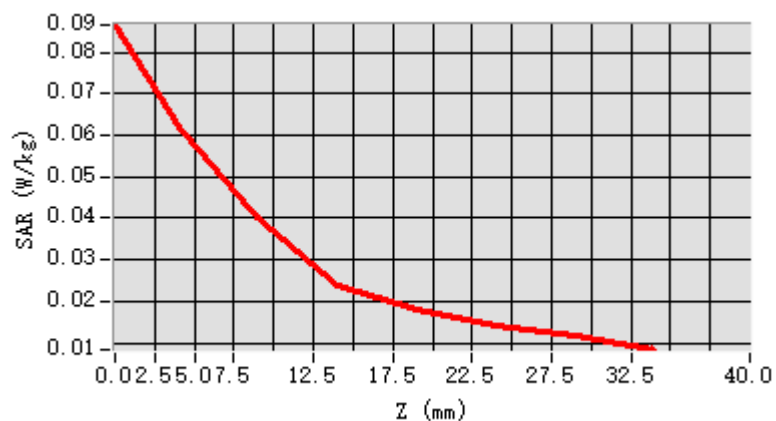
Maximum location: X=0.00, Y=3.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

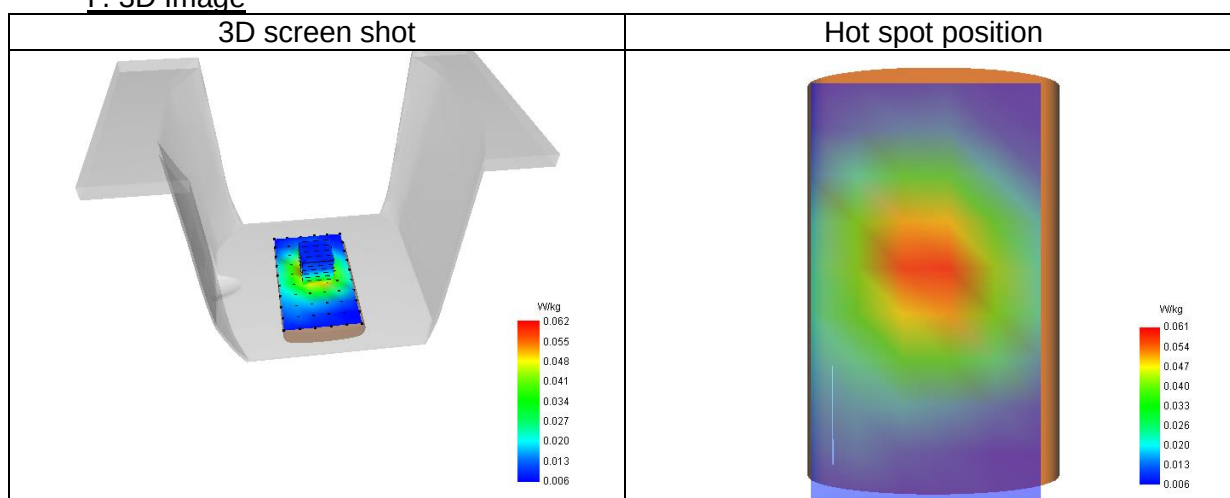
SAR 10g (W/Kg)	0.037
SAR 1g (W/Kg)	0.060
Variation (%)	-2.61
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.087	0.062	0.040	0.024	0.018	0.014	0.012



F. 3D Image



7# SAR Measurement at Band 4 (1700) (Body, Validation Plane)

Date of measurement: 18/10/2025

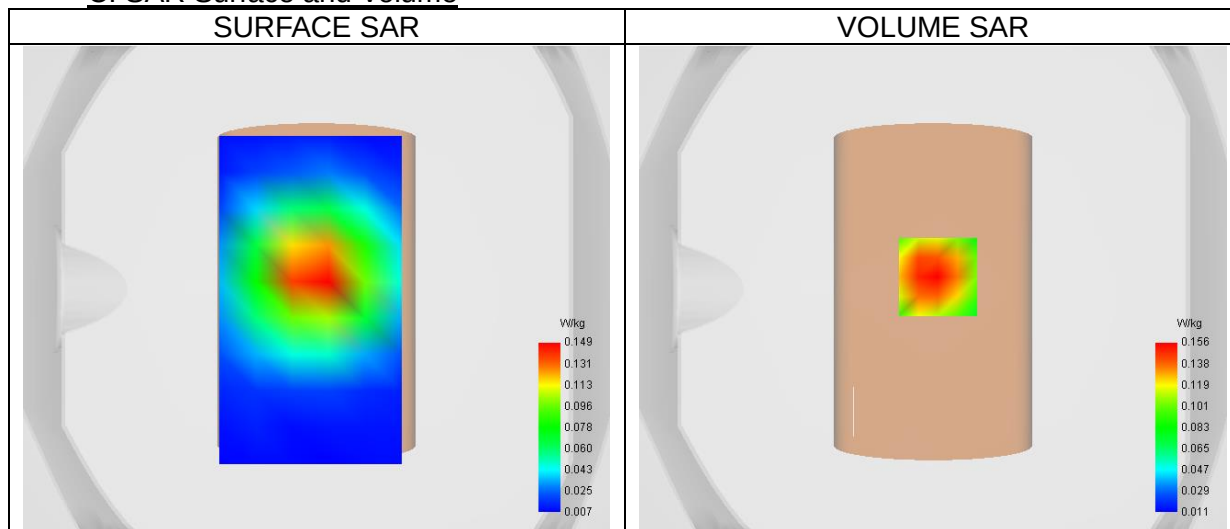
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 4 (1700)
Signal	WCDMA
Channels/Frequency	Middle (1413)/ frequency 1732.60 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1732.60
Relative permittivity (real part)	39.14
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.32

C. SAR Surface and Volume



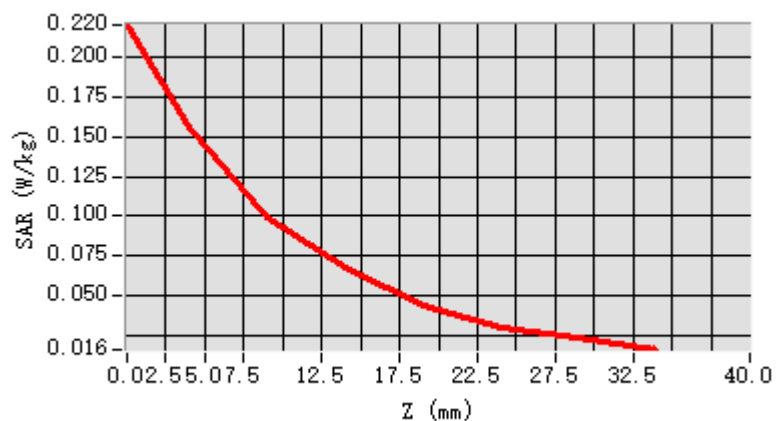
Maximum location: X=2.00, Y=5.00 ; SAR Peak: 0.22 W/kg

D. SAR 1g & 10g

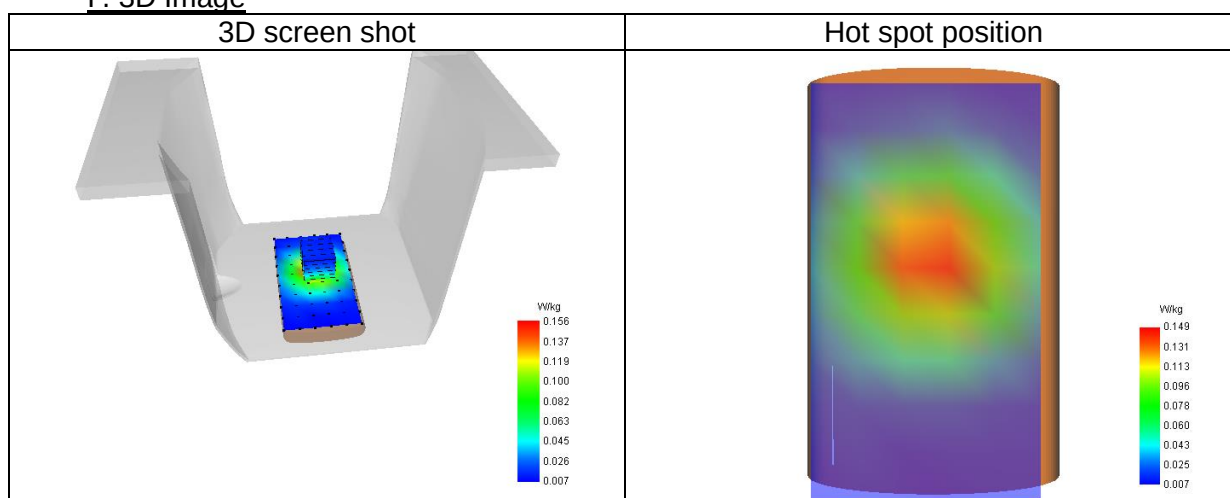
SAR 10g (W/Kg)	0.092
SAR 1g (W/Kg)	0.148
Variation (%)	0.24
Horizontal validation criteria: minimum distance (mm)	22.63
Vertical validation criteria: SAR ratio M2/M1 (%)	63.27

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.220	0.156	0.099	0.068	0.044	0.029	0.024



F. 3D Image



8# SAR Measurement at Band 4 (1700) (Body, Validation Plane)

Date of measurement: 18/10/2025

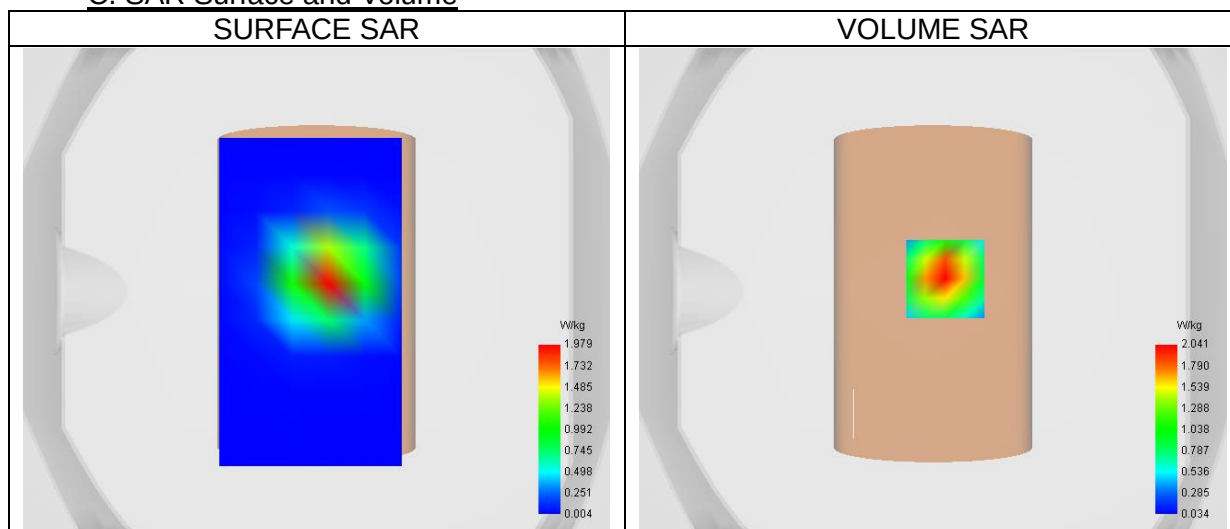
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 4 (1700)
Signal	WCDMA
Channels/Frequency	Middle (1413)/ frequency 1732.60 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1732.60
Relative permittivity (real part)	39.14
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.32

C. SAR Surface and Volume



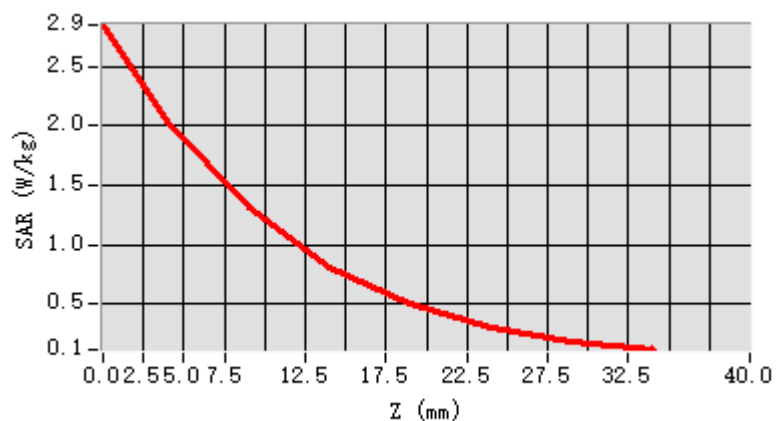
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 2.99 W/kg

D. SAR 1g & 10g

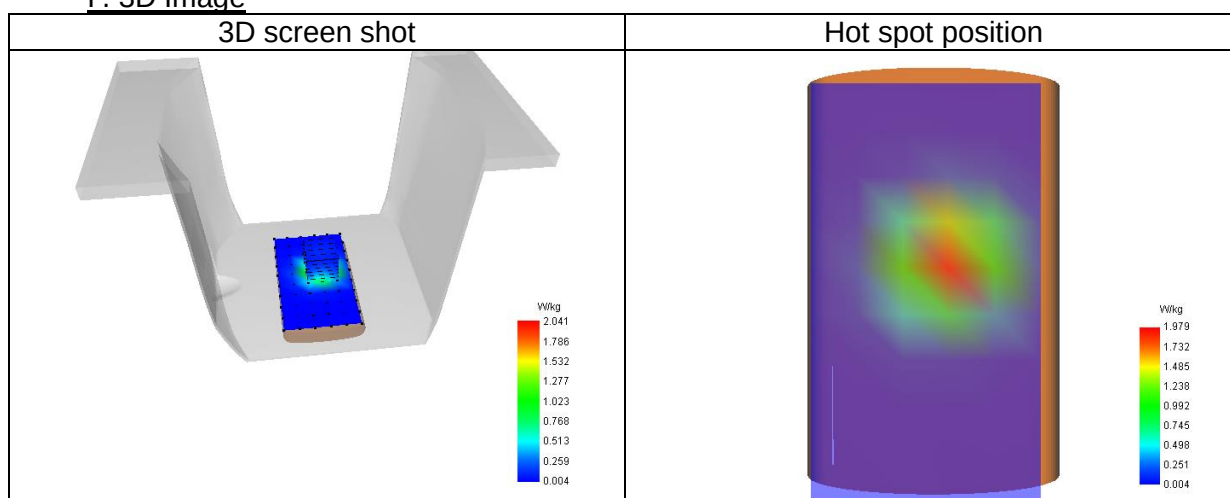
SAR 10g (W/Kg)	1.041
SAR 1g (W/Kg)	1.911
Variation (%)	-0.87
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	64.08

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	2.854	2.041	1.308	0.811	0.495	0.299	0.180



F. 3D Image



9# SAR Measurement at Band 5 (850) (Body, Validation Plane)

Date of measurement: 17/10/2025

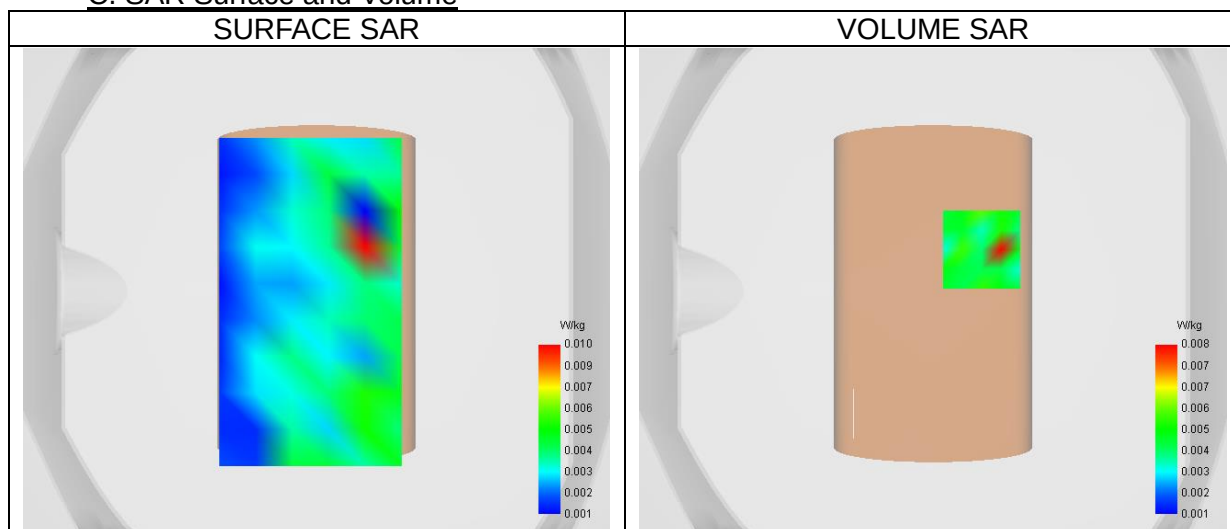
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 5 (850)
Signal	WCDMA
Channels/Frequency	Middle (4182)/ frequency 836.40 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	836.40
Relative permittivity (real part)	41.34
Relative permittivity (imaginary part)	19.40
Conductivity (S/m)	0.90

C. SAR Surface and Volume



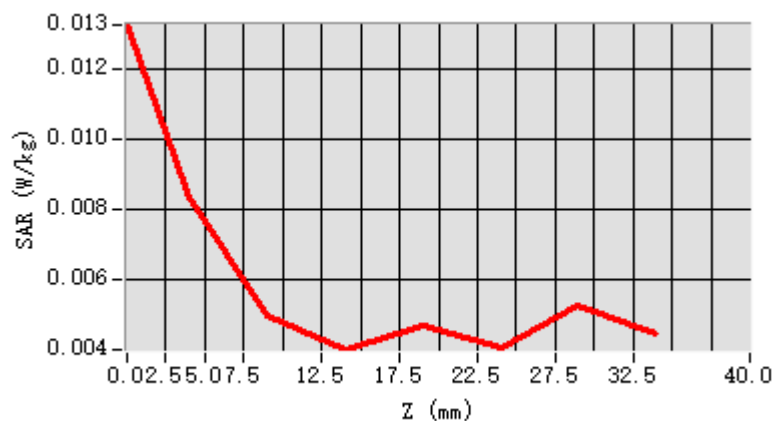
Maximum location: X=20.00, Y=17.00 ; SAR Peak: 0.02 W/kg

D. SAR 1g & 10g

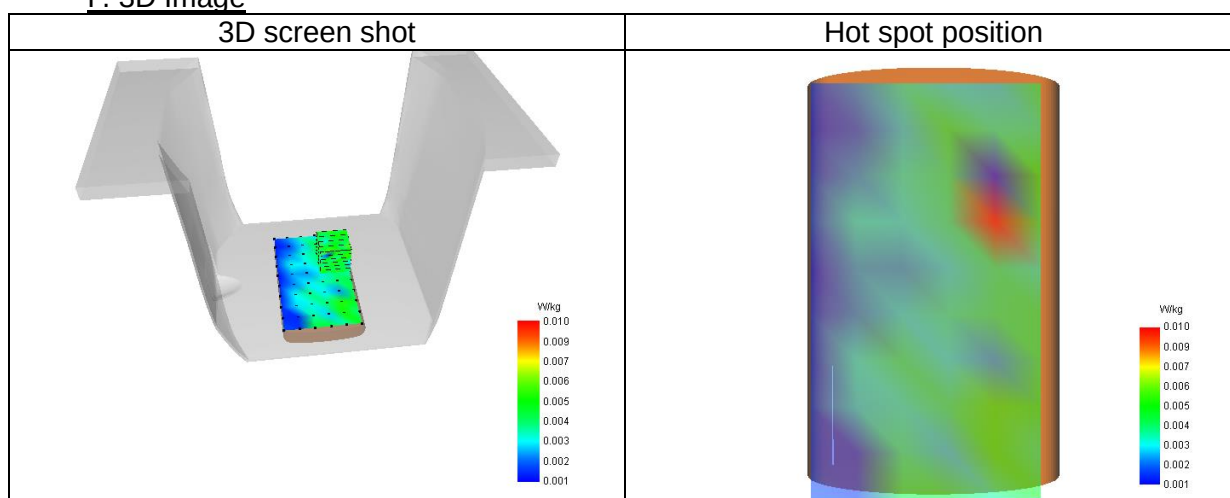
SAR 10g (W/Kg)	0.004
SAR 1g (W/Kg)	0.007
Variation (%)	-3.23
Horizontal validation criteria: minimum distance (mm)	8.00
Vertical validation criteria: SAR ratio M2/M1 (%)	71.47

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.013	0.008	0.005	0.004	0.005	0.004	0.005



F. 3D Image



10# SAR Measurement at Band 5 (850) (Body, Validation Plane)

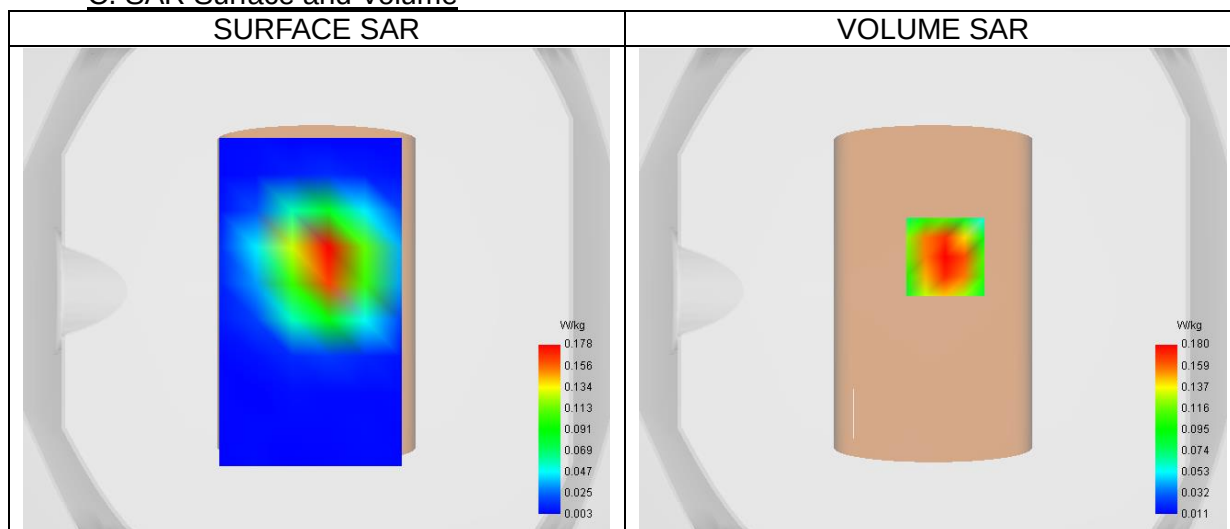
Date of measurement: 17/10/2025

A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 5 (850)
Signal	WCDMA
Channels/Frequency	Middle (4182)/ frequency 836.40 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	836.40
Relative permittivity (real part)	41.34
Relative permittivity (imaginary part)	19.40
Conductivity (S/m)	0.90

C. SAR Surface and Volume

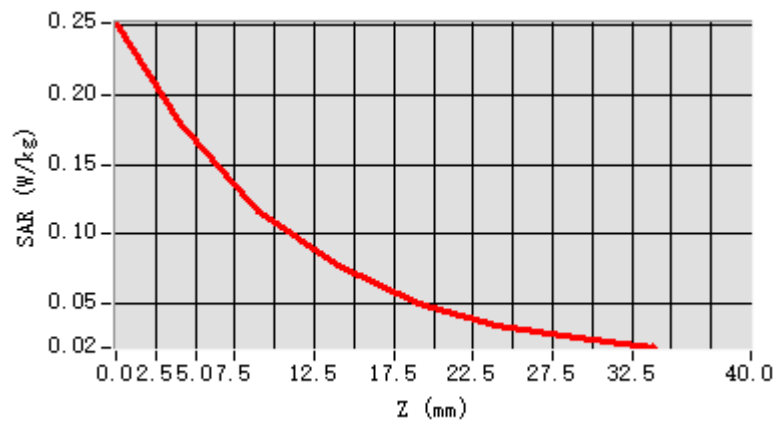
Maximum location: X=5.00, Y=14.00 ; SAR Peak: 0.26 W/kg

D. SAR 1g & 10g

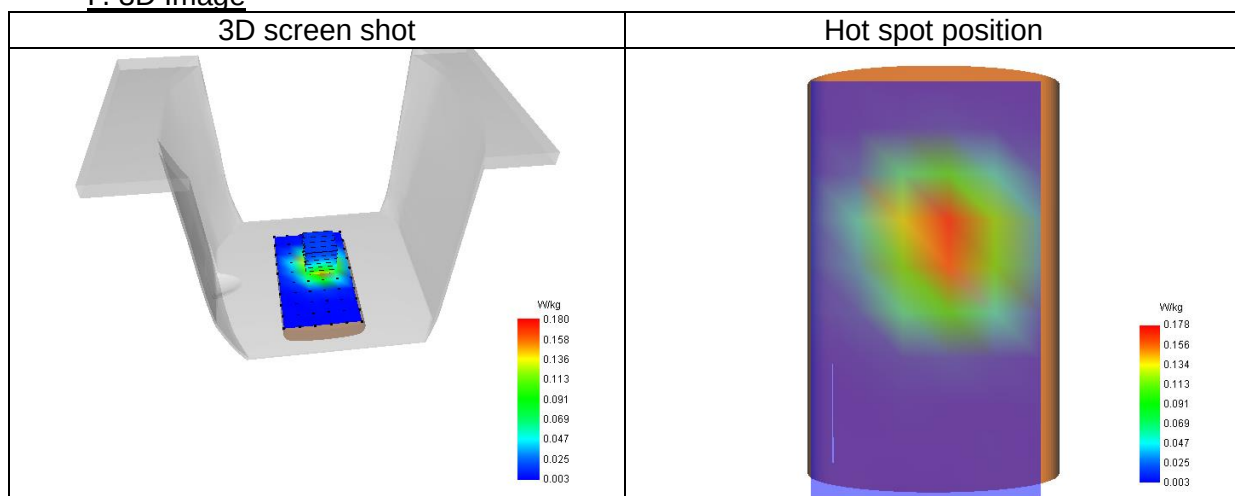
SAR 10g (W/Kg)	0.105
SAR 1g (W/Kg)	0.172
Variation (%)	-0.91
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	64.55

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.252	0.180	0.116	0.077	0.050	0.035	0.025



F. 3D Image



11# SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 28/10/2025

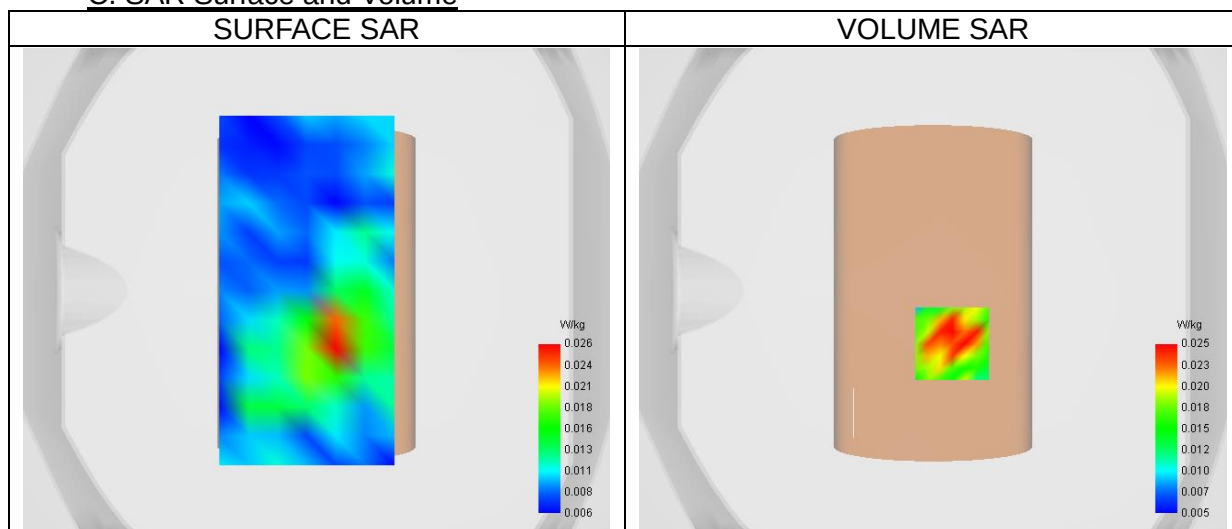
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.63
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Signal	IEEE 802.11 b
Channels/Frequency	Middle (6)/ frequency 2437.00 Mhz

B. Permittivity

Middle TX Frequency (MHz)	2437.00
Relative permittivity (real part)	38.19
Relative permittivity (imaginary part)	13.56
Conductivity (S/m)	1.84

C. SAR Surface and Volume



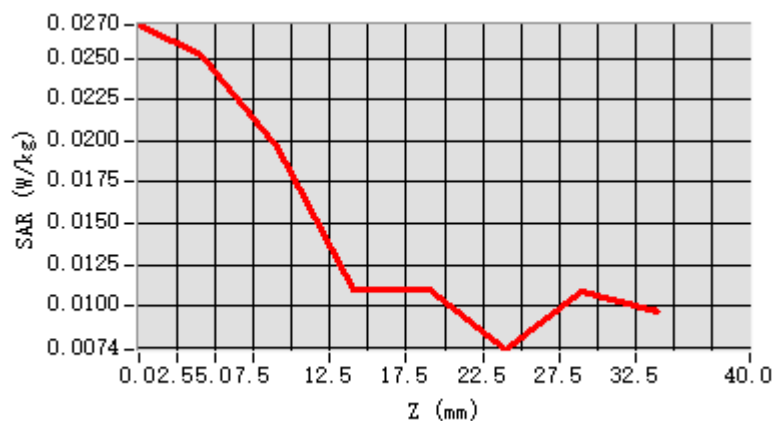
Maximum location: X=8.00, Y=-22.00 ; SAR Peak: 0.04 W/kg

D. SAR 1g & 10g

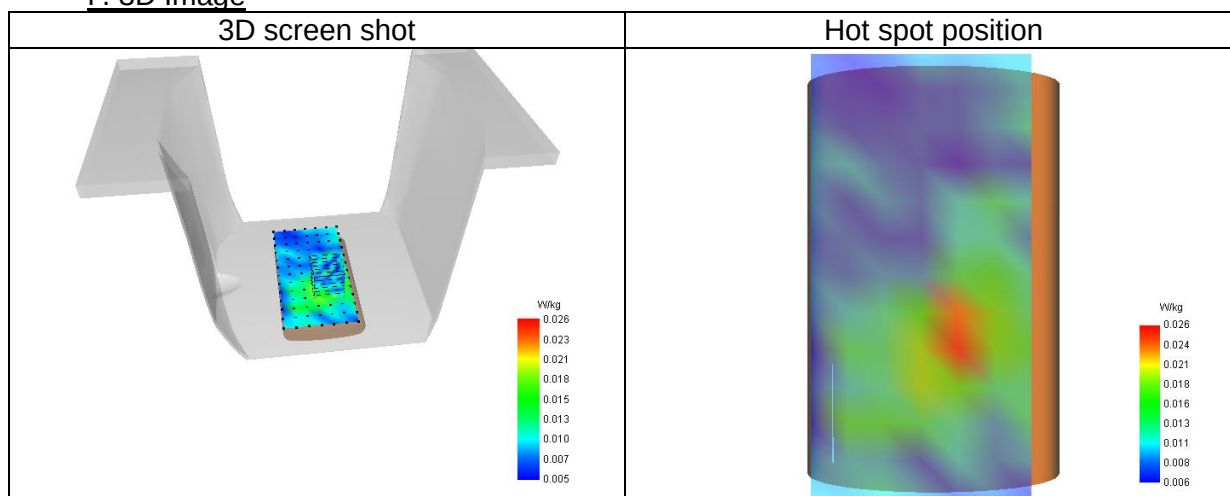
SAR 10g (W/Kg)	0.016
SAR 1g (W/Kg)	0.024
Variation (%)	1.78
Horizontal validation criteria: minimum distance (mm)	15.81
Vertical validation criteria: SAR ratio M2/M1 (%)	77.91

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.027	0.025	0.020	0.011	0.011	0.007	0.011



F. 3D Image



12# SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 28/10/2025

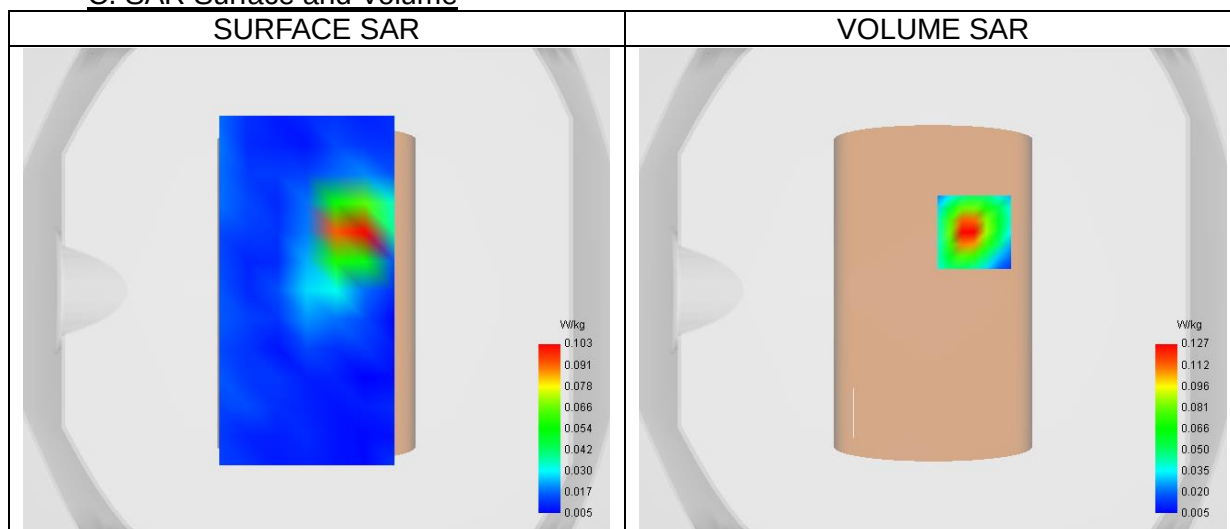
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.63
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Signal	IEEE 802.11 b
Channels/Frequency	Middle (6)/ frequency 2437.00 Mhz

B. Permittivity

Middle TX Frequency (MHz)	2437.00
Relative permittivity (real part)	38.19
Relative permittivity (imaginary part)	13.56
Conductivity (S/m)	1.84

C. SAR Surface and Volume



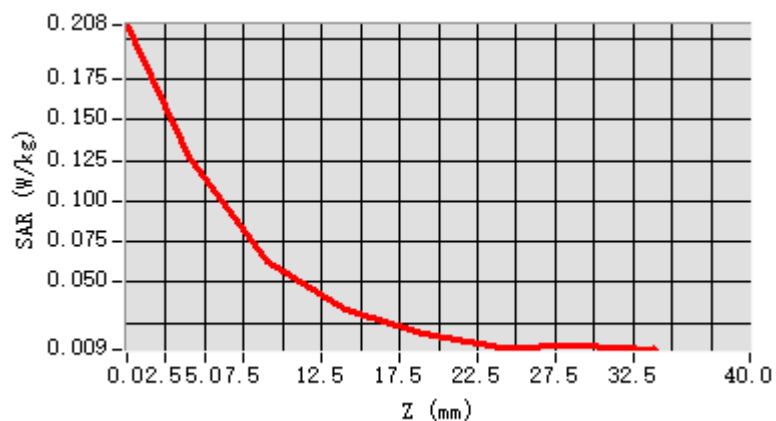
Maximum location: X=17.00, Y=24.00 ; SAR Peak: 0.22 W/kg

D. SAR 1g & 10g

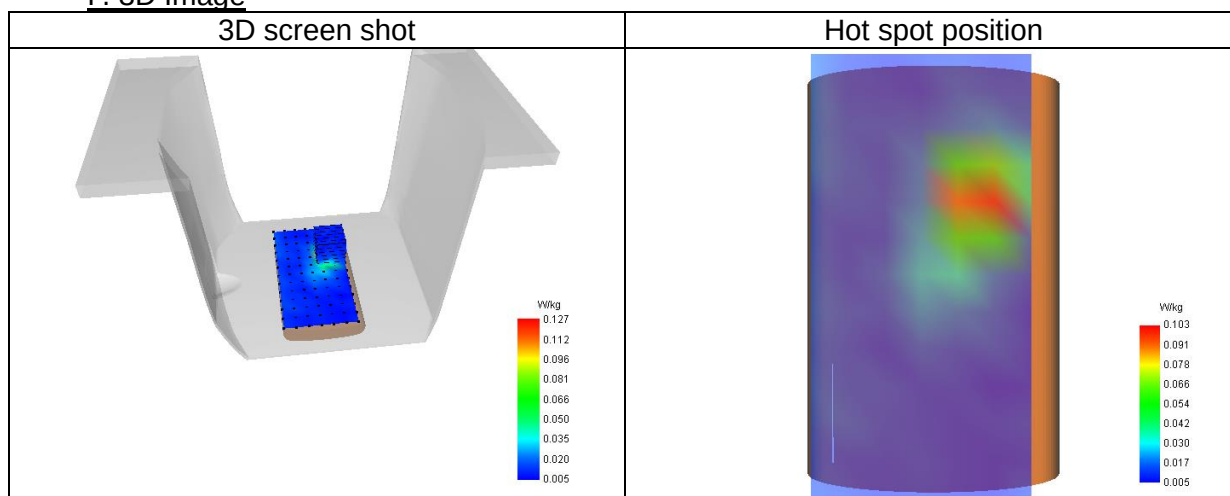
SAR 10g (W/Kg)	0.052
SAR 1g (W/Kg)	0.118
Variation (%)	-4.26
Horizontal validation criteria: minimum distance (mm)	10.00
Vertical validation criteria: SAR ratio M2/M1 (%)	50.49

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.208	0.127	0.063	0.034	0.019	0.010	0.012



F. 3D Image



13# SAR Measurement at LTE band 2 (Body, Validation Plane)

Date of measurement: 19/10/2025

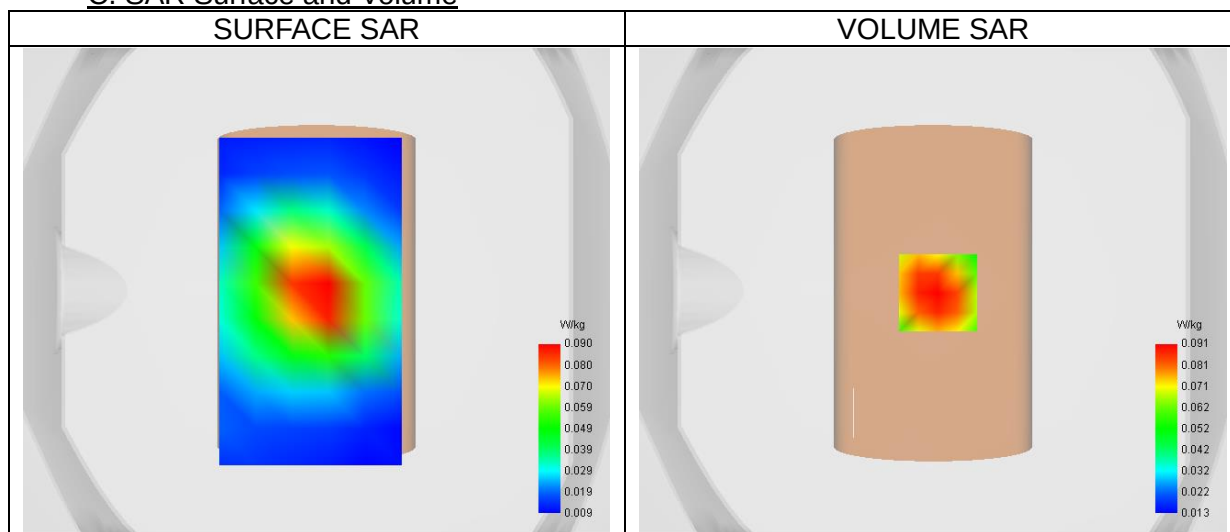
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (18900)/ frequency 1880.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1880.00

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.49
Relative permittivity (imaginary part)	13.80
Conductivity (S/m)	1.44

C. SAR Surface and Volume



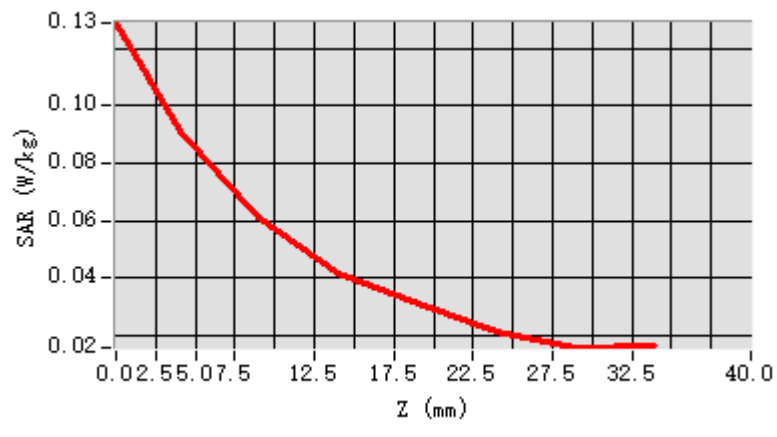
Maximum location: X=2.00, Y=-1.00 ; SAR Peak: 0.13 W/kg

D. SAR 1g & 10g

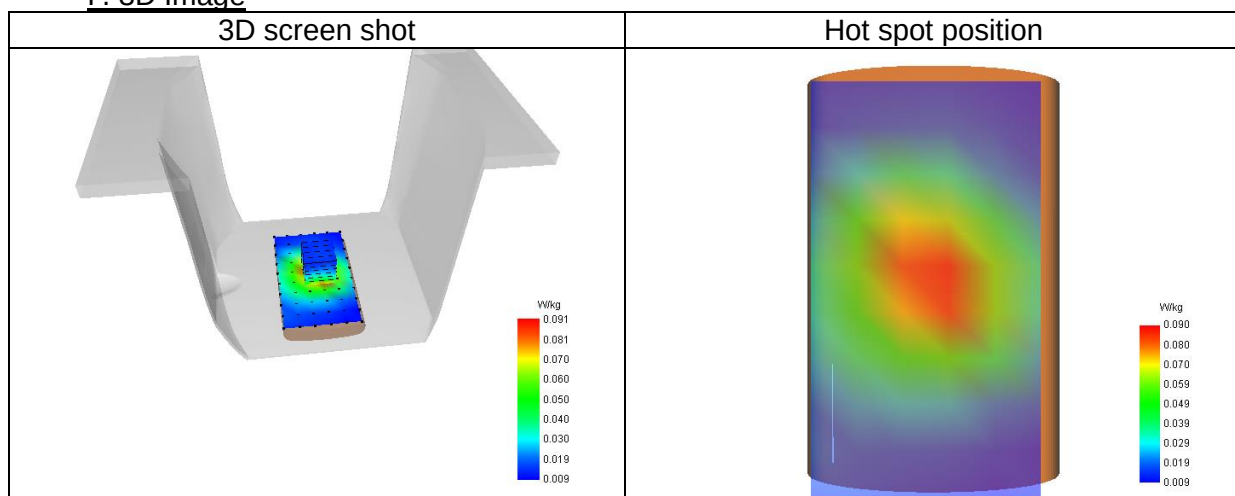
SAR 10g (W/Kg)	0.058
SAR 1g (W/Kg)	0.091
Variation (%)	-2.46
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.129	0.091	0.061	0.041	0.031	0.021	0.016



F. 3D Image



14# SAR Measurement at LTE band 2 (Body, Validation Plane)

Date of measurement: 19/10/2025

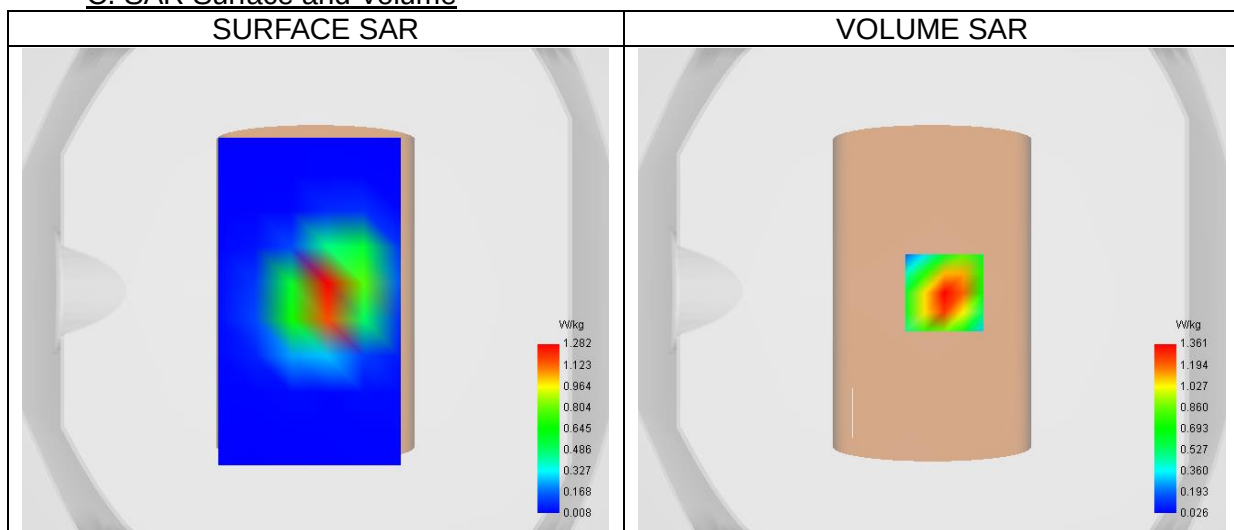
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (18900)/ frequency 1880.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1880.00

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.49
Relative permittivity (imaginary part)	13.80
Conductivity (S/m)	1.44

C. SAR Surface and Volume



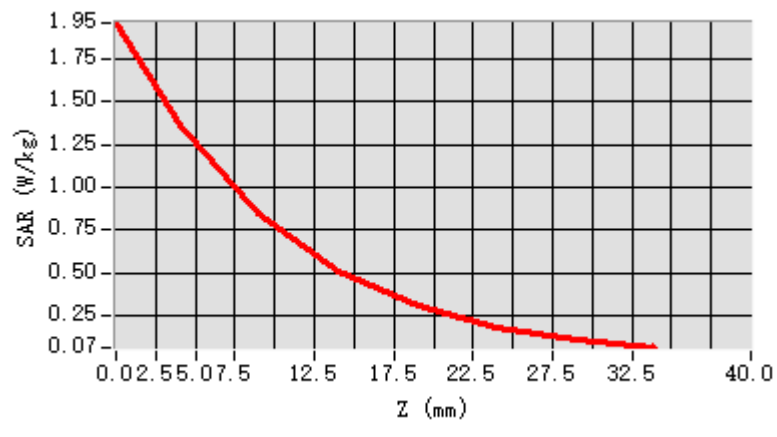
Maximum location: X=5.00, Y=-1.00 ; SAR Peak: 2.04 W/kg

D. SAR 1g & 10g

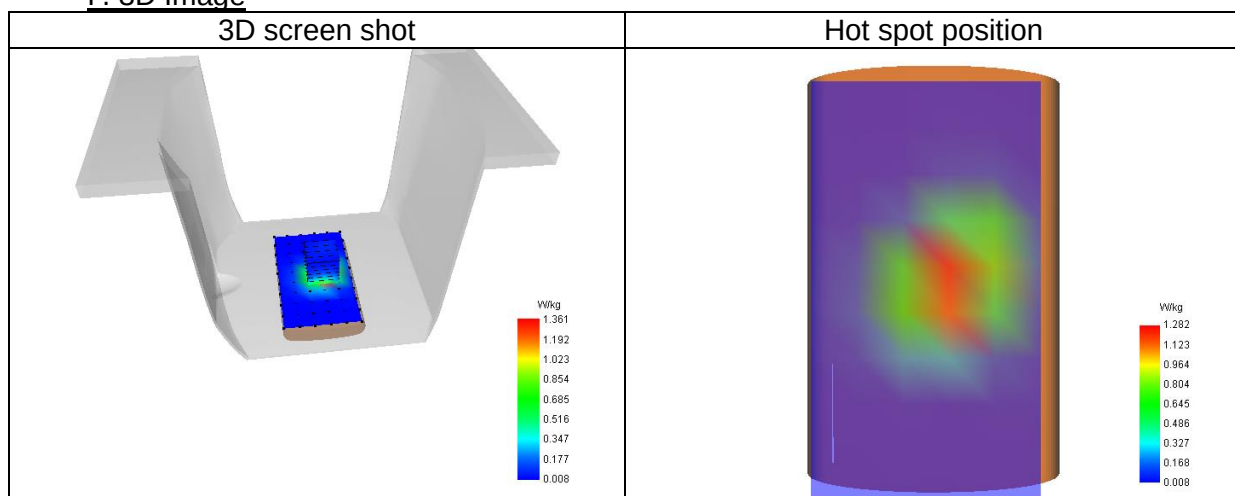
SAR 10g (W/Kg)	0.722
SAR 1g (W/Kg)	1.330
Variation (%)	-0.70
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	62.19

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.955	1.361	0.846	0.513	0.310	0.186	0.111



F. 3D Image



15# SAR Measurement at LTE band 4 (Body, Validation Plane)

Date of measurement: 18/10/2025

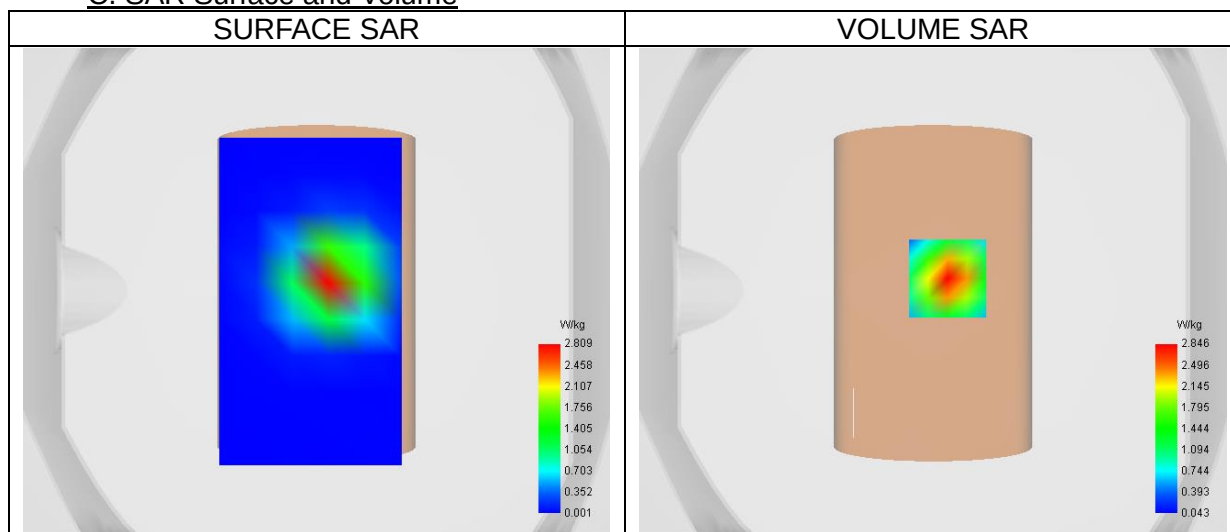
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (20175)/ frequency 1732.50 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1732.50

B. Permittivity

Middle TX Frequency (MHz)	1732.50
Relative permittivity (real part)	39.14
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.32

C. SAR Surface and Volume



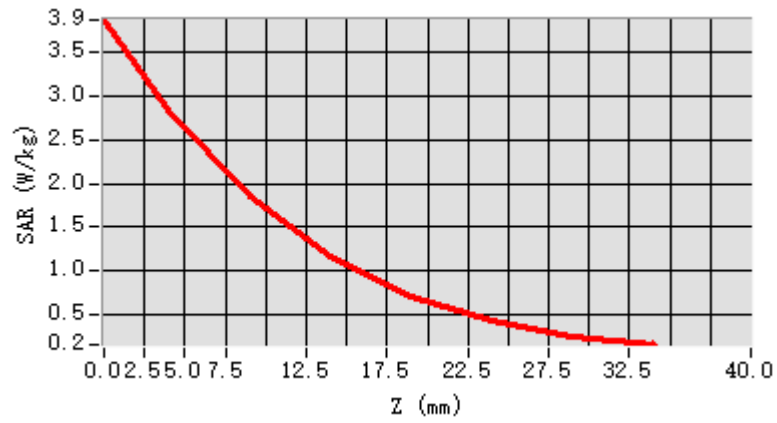
Maximum location: X=6.00, Y=5.00 ; SAR Peak: 3.97 W/kg

D. SAR 1g & 10g

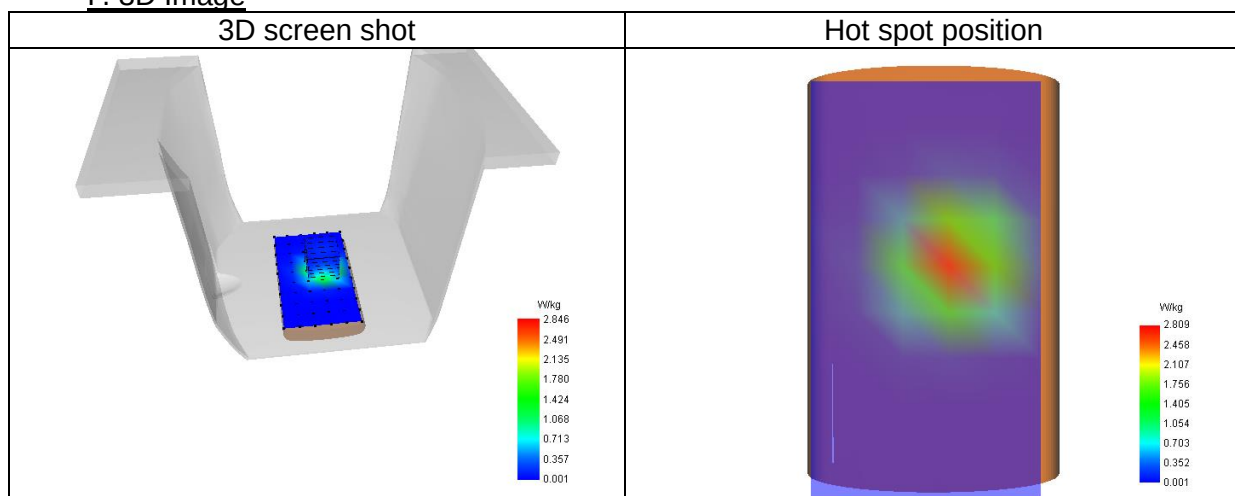
SAR 10g (W/Kg)	1.444
SAR 1g (W/Kg)	2.629
Variation (%)	2.70
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	65.47

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.871	2.846	1.864	1.159	0.698	0.420	0.254



F. 3D Image



16# SAR Measurement at LTE band 4 (Body, Validation Plane)

Date of measurement: 18/10/2025

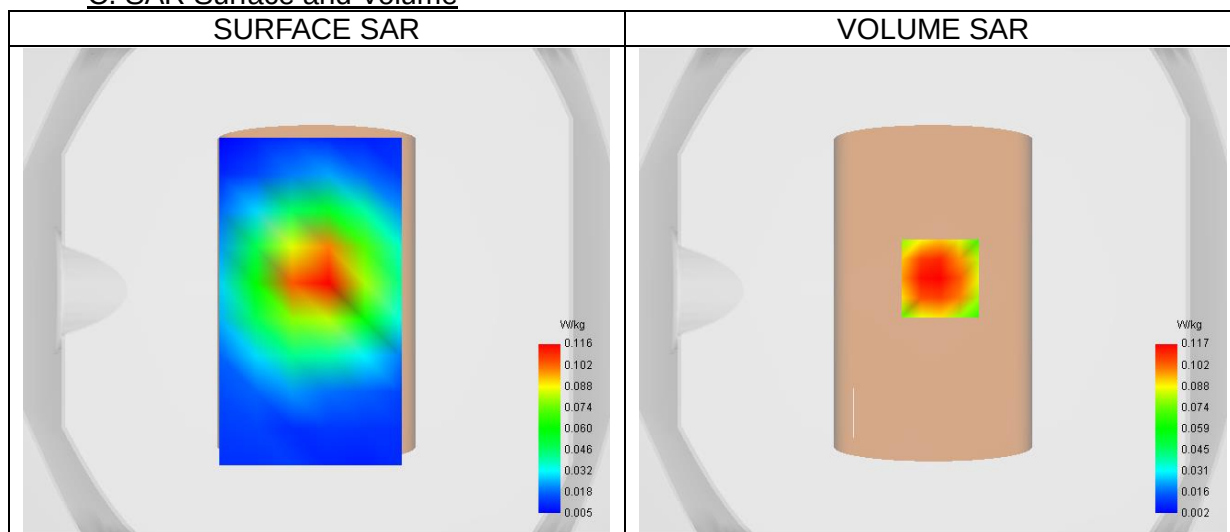
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (20175)/ frequency 1732.50 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1732.50

B. Permittivity

Middle TX Frequency (MHz)	1732.50
Relative permittivity (real part)	39.14
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.32

C. SAR Surface and Volume



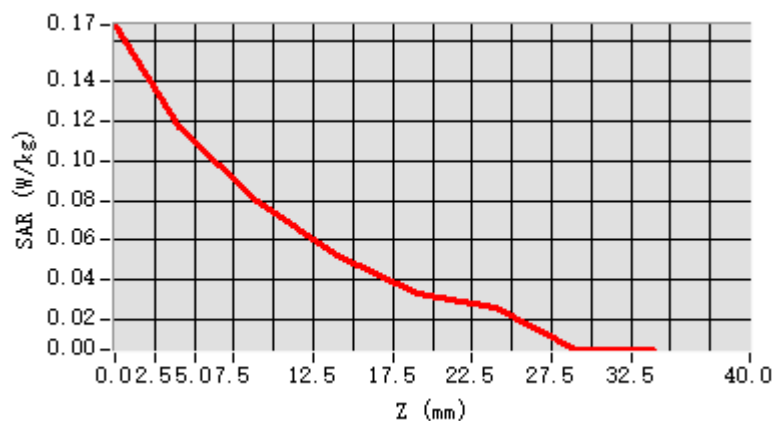
Maximum location: X=3.00, Y=5.00 ; SAR Peak: 0.18 W/kg

D. SAR 1g & 10g

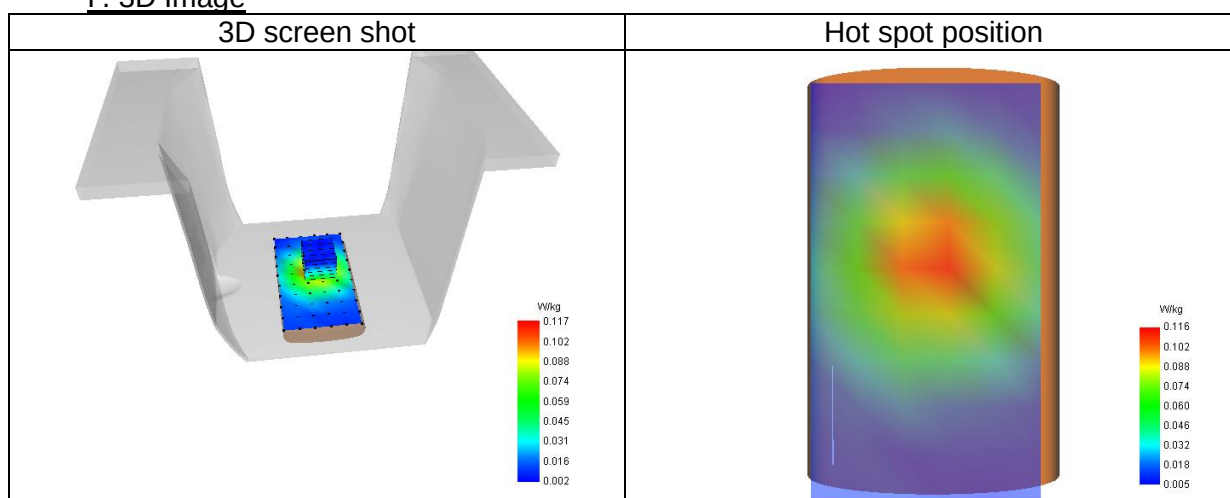
SAR 10g (W/Kg)	0.072
SAR 1g (W/Kg)	0.117
Variation (%)	-0.27
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.168	0.117	0.079	0.053	0.033	0.026	0.005



F. 3D Image



17# SAR Measurement at LTE band 5 (Body, Validation Plane)

Date of measurement: 17/10/2025

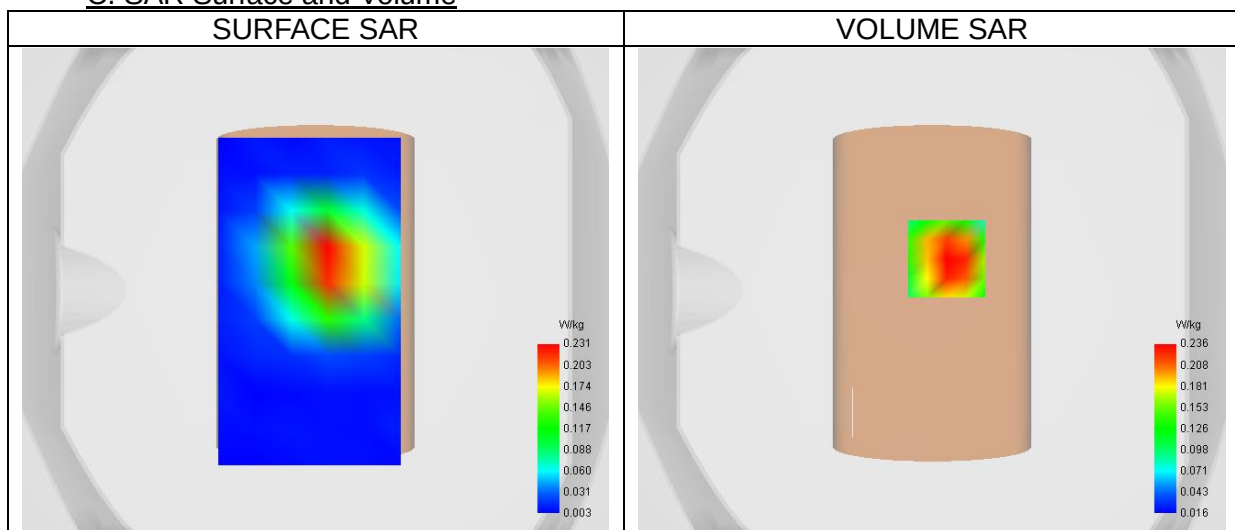
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (20525)/ frequency 836.50 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	836.50

B. Permittivity

Middle TX Frequency (MHz)	836.50
Relative permittivity (real part)	41.34
Relative permittivity (imaginary part)	19.40
Conductivity (S/m)	0.90

C. SAR Surface and Volume



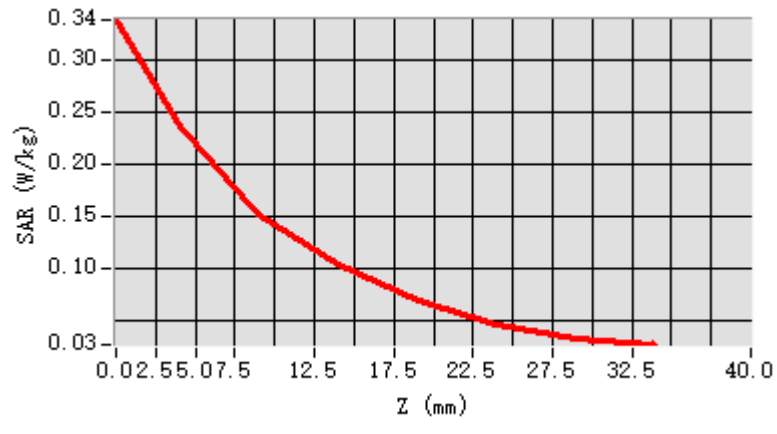
Maximum location: X=6.00, Y=13.00 ; SAR Peak: 0.35 W/kg

D. SAR 1g & 10g

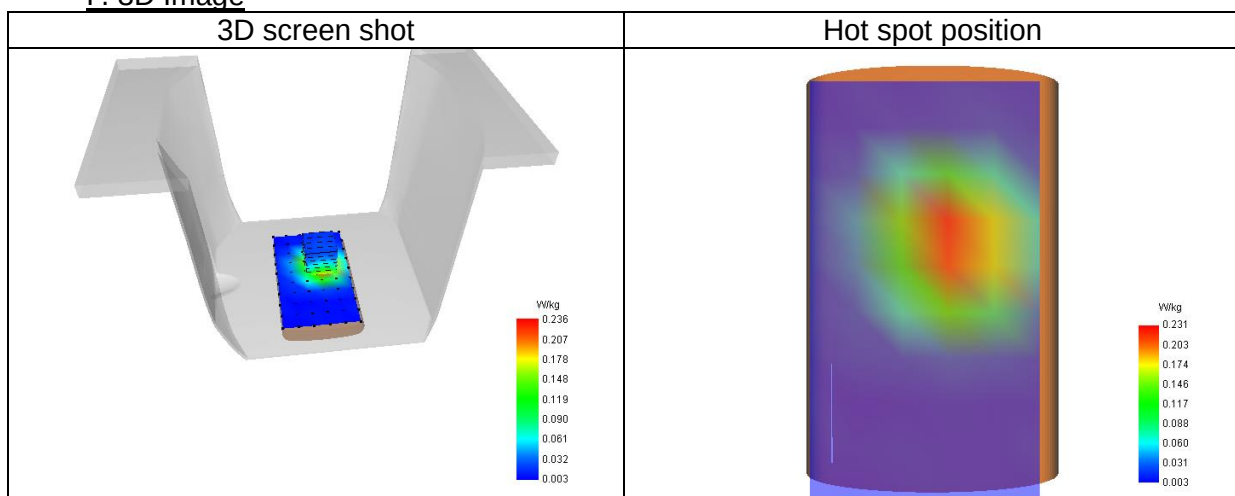
SAR 10g (W/Kg)	0.139
SAR 1g (W/Kg)	0.229
Variation (%)	-1.04
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	64.62

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.337	0.236	0.152	0.103	0.070	0.048	0.034



F. 3D Image



18# SAR Measurement at LTE band 5 (Body, Validation Plane)

Date of measurement: 17/10/2025

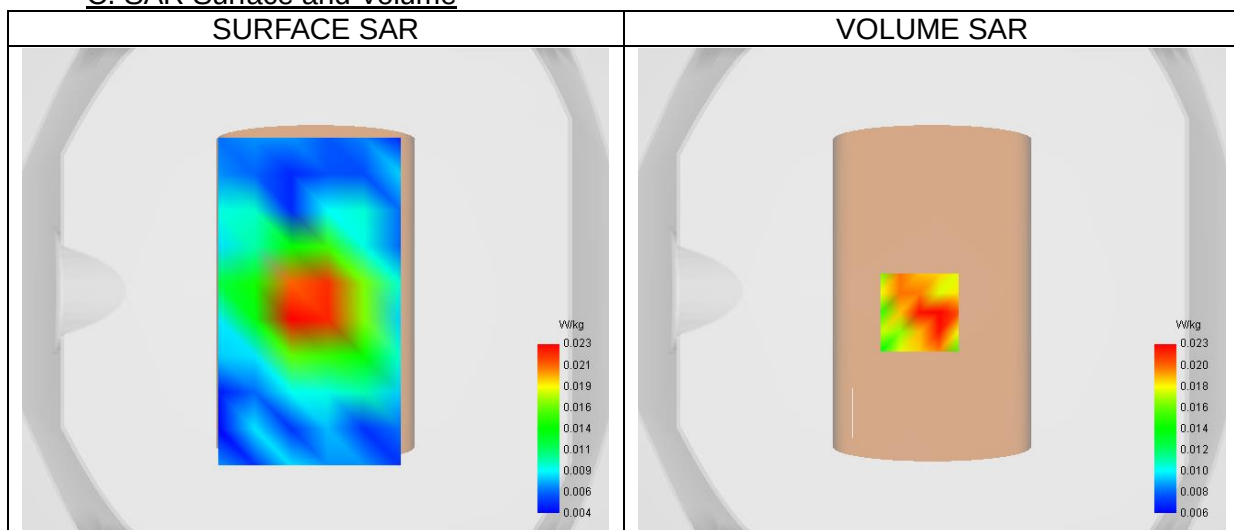
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (20525)/ frequency 836.50 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	836.50

B. Permittivity

Middle TX Frequency (MHz)	836.50
Relative permittivity (real part)	41.34
Relative permittivity (imaginary part)	19.40
Conductivity (S/m)	0.90

C. SAR Surface and Volume



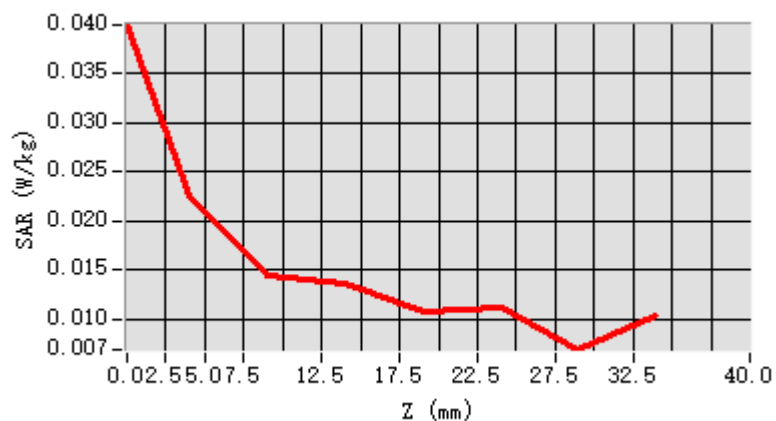
Maximum location: X=-5.00, Y=-9.00 ; SAR Peak: 0.03 W/kg

D. SAR 1g & 10g

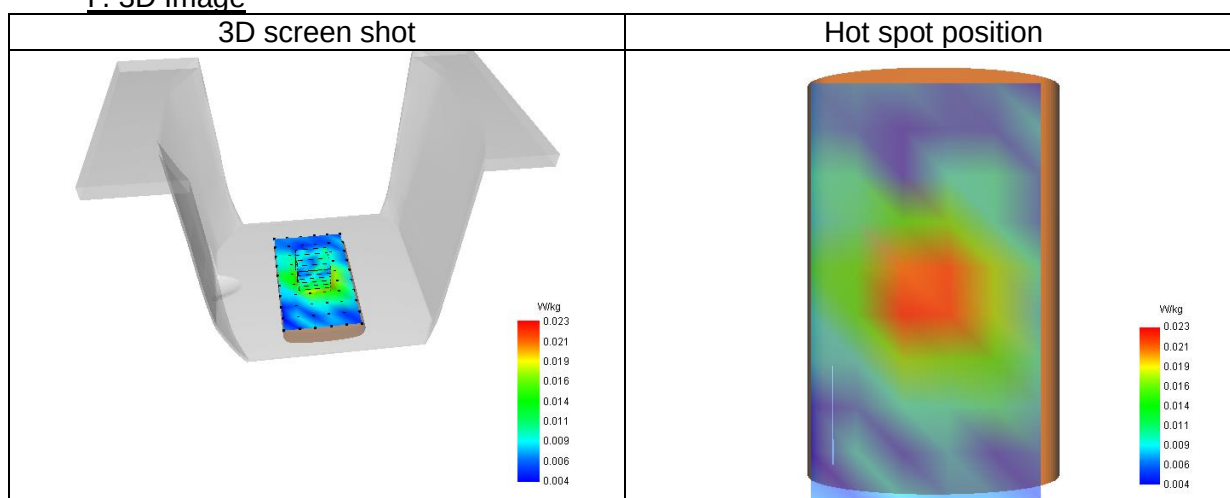
SAR 10g (W/Kg)	0.015
SAR 1g (W/Kg)	0.023
Variation (%)	-2.12
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.040	0.023	0.014	0.014	0.011	0.011	0.007



F. 3D Image



19# SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 20/10/2025

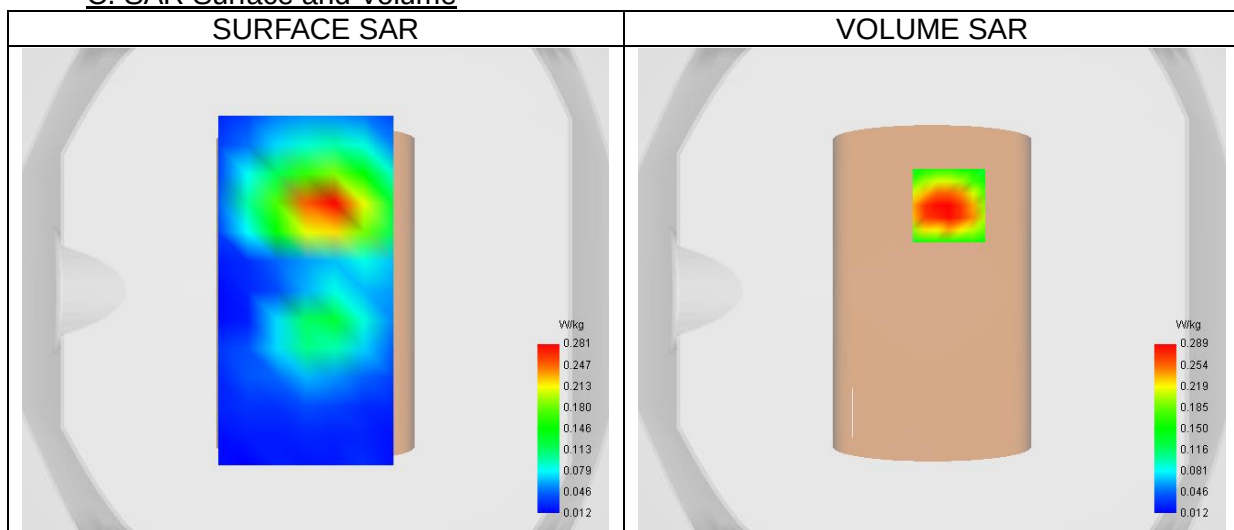
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.52
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (21100)/ frequency 2535.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	2535.00

B. Permittivity

Middle TX Frequency (MHz)	2535.00
Relative permittivity (real part)	40.39
Relative permittivity (imaginary part)	13.84
Conductivity (S/m)	1.95

C. SAR Surface and Volume



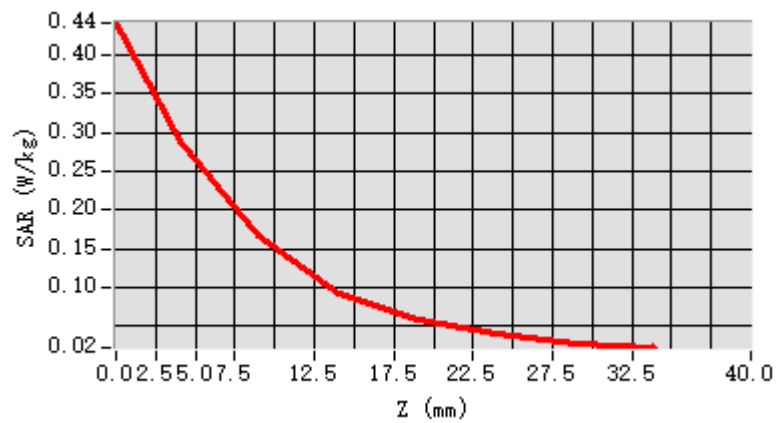
Maximum location: X=7.00, Y=35.00 ; SAR Peak: 0.45 W/kg

D. SAR 1g & 10g

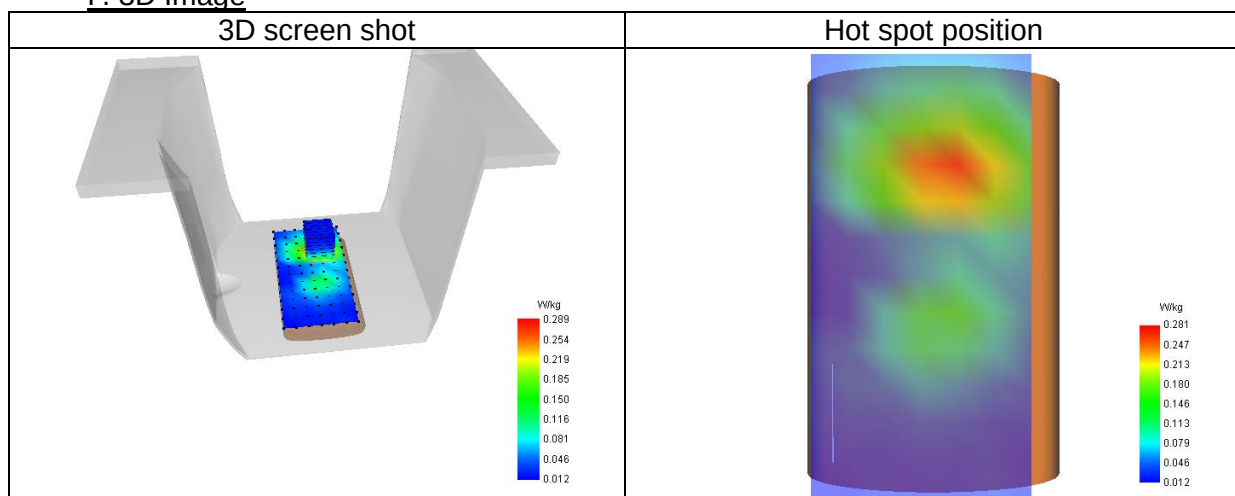
SAR 10g (W/Kg)	0.152
SAR 1g (W/Kg)	0.275
Variation (%)	1.74
Horizontal validation criteria: minimum distance (mm)	21.21
Vertical validation criteria: SAR ratio M2/M1 (%)	58.13

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.441	0.289	0.168	0.092	0.059	0.040	0.028



F. 3D Image



20# SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 20/10/2025

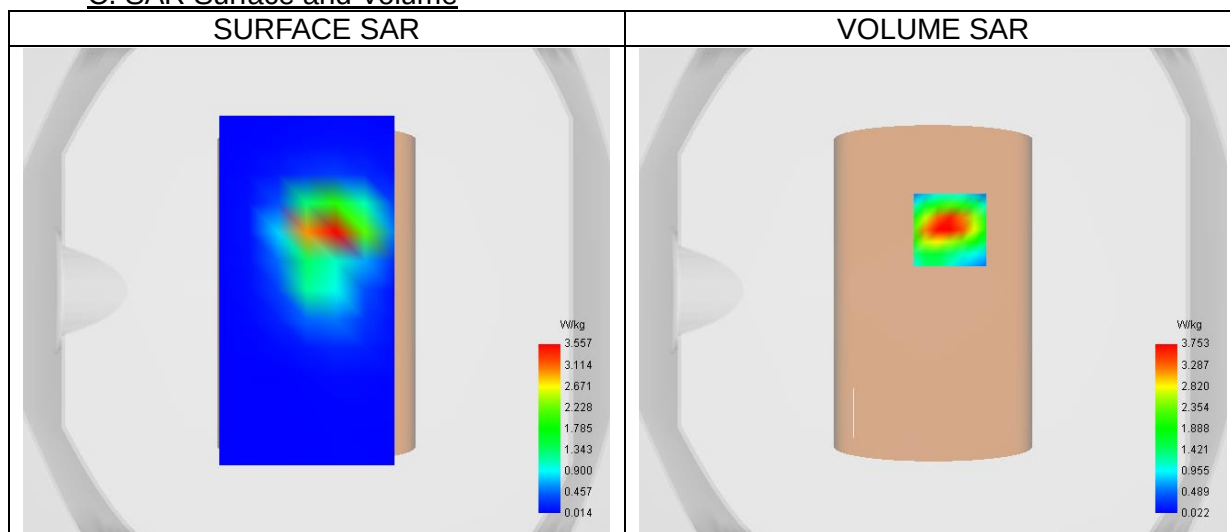
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.52
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (21100)/ frequency 2535.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	2535.00

B. Permittivity

Middle TX Frequency (MHz)	2535.00
Relative permittivity (real part)	40.17
Relative permittivity (imaginary part)	13.52
Conductivity (S/m)	1.90

C. SAR Surface and Volume



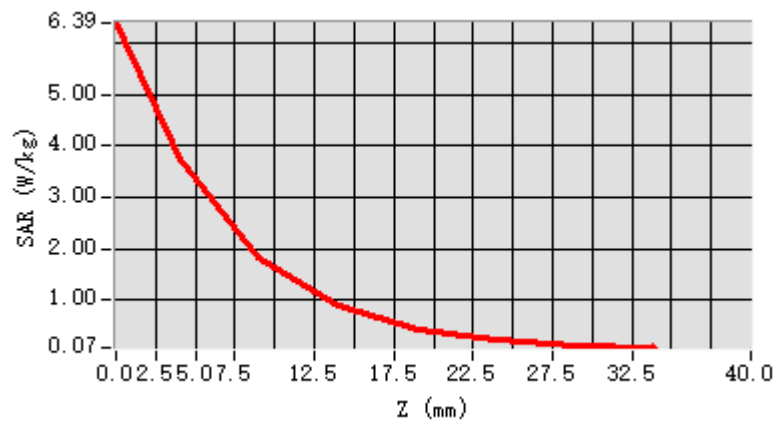
Maximum location: X=7.00, Y=25.00 ; SAR Peak: 6.59 W/kg

D. SAR 1g & 10g

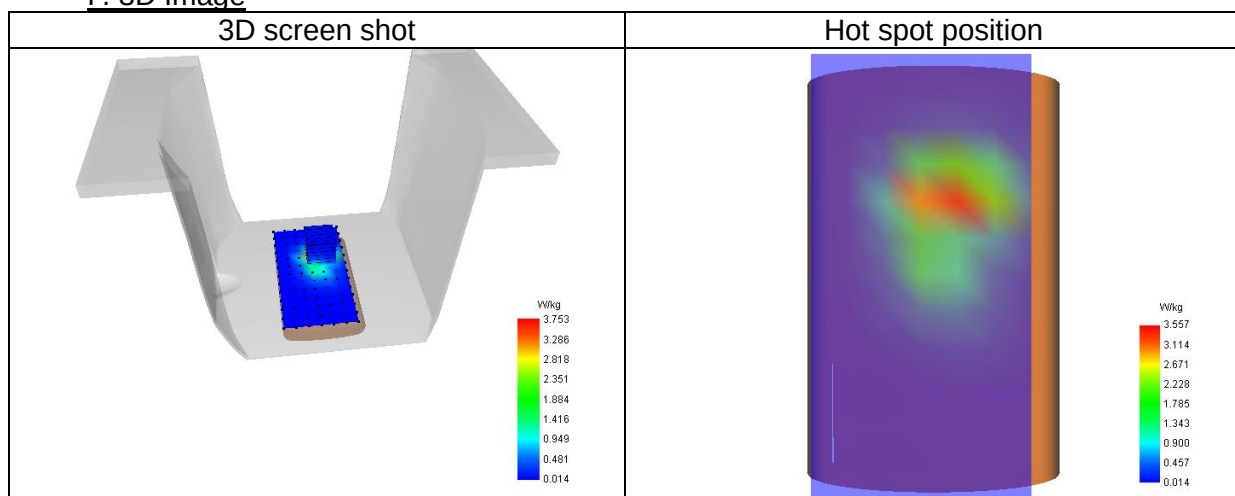
SAR 10g (W/Kg)	1.497
SAR 1g (W/Kg)	3.475
Variation (%)	-0.31
Horizontal validation criteria: minimum distance (mm)	10.00
Vertical validation criteria: SAR ratio M2/M1 (%)	48.32

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.393	3.753	1.814	0.874	0.440	0.213	0.120



F. 3D Image



21# SAR Measurement at LTE band 12 (Body, Validation Plane)

Date of measurement: 27/10/2025

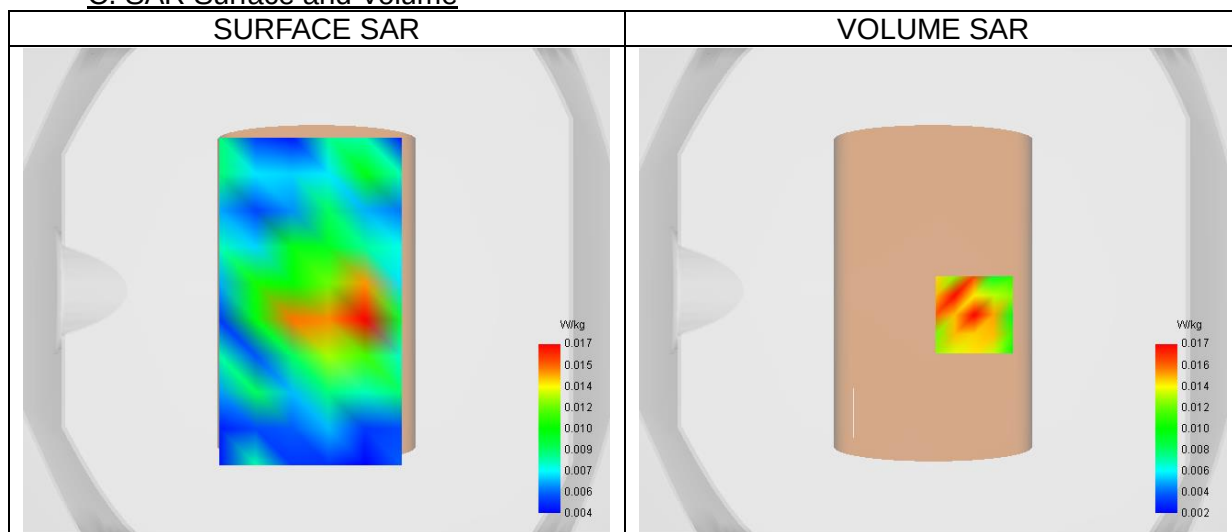
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23095)/ frequency 707.50 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	707.50

B. Permittivity

Middle TX Frequency (MHz)	707.50
Relative permittivity (real part)	40.96
Relative permittivity (imaginary part)	21.82
Conductivity (S/m)	0.86

C. SAR Surface and Volume



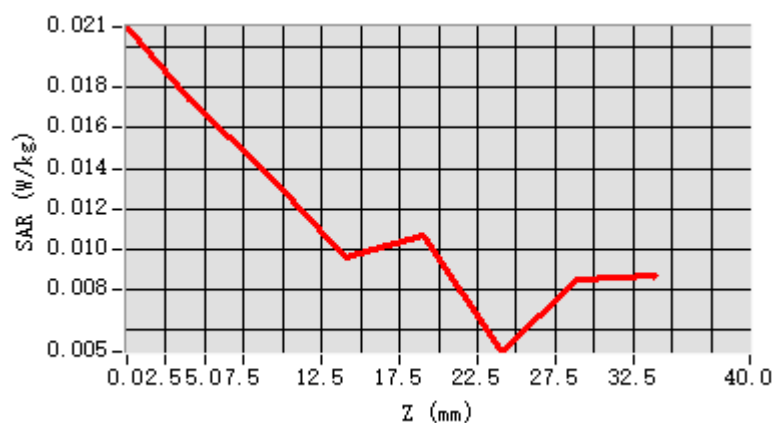
Maximum location: X=17.00, Y=-10.00 ; SAR Peak: 0.02 W/kg

D. SAR 1g & 10g

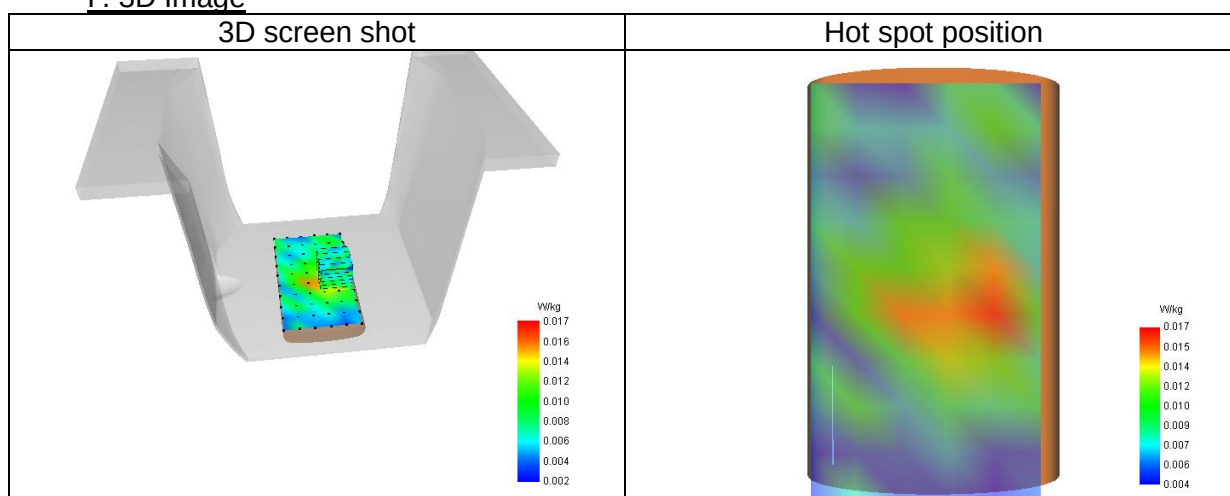
SAR 10g (W/Kg)	0.011
SAR 1g (W/Kg)	0.017
Variation (%)	-0.73
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.021	0.017	0.014	0.010	0.011	0.005	0.008



F. 3D Image



22# SAR Measurement at LTE band 12 (Body, Validation Plane)

Date of measurement: 27/10/2025

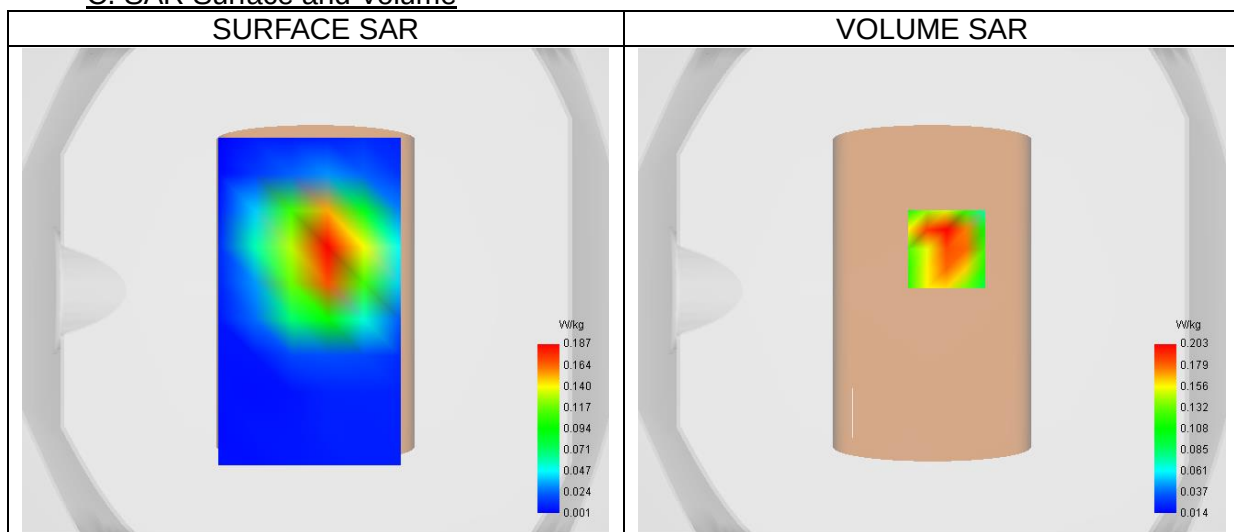
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23095)/ frequency 707.50 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	707.50

B. Permittivity

Middle TX Frequency (MHz)	707.50
Relative permittivity (real part)	40.96
Relative permittivity (imaginary part)	21.82
Conductivity (S/m)	0.86

C. SAR Surface and Volume



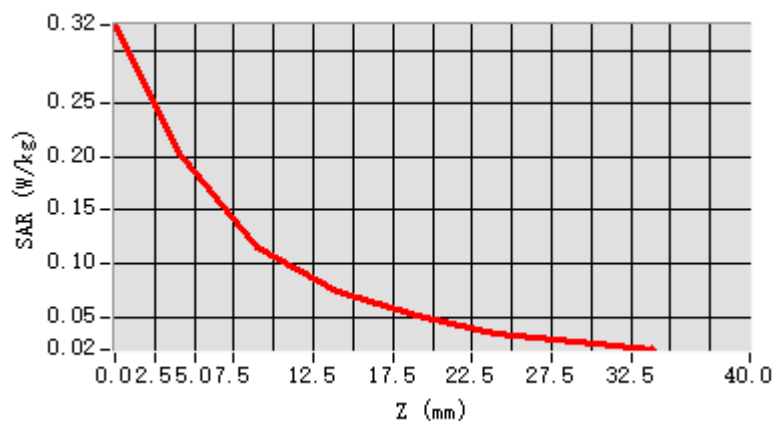
Maximum location: X=6.00, Y=17.00 ; SAR Peak: 0.32 W/kg

D. SAR 1g & 10g

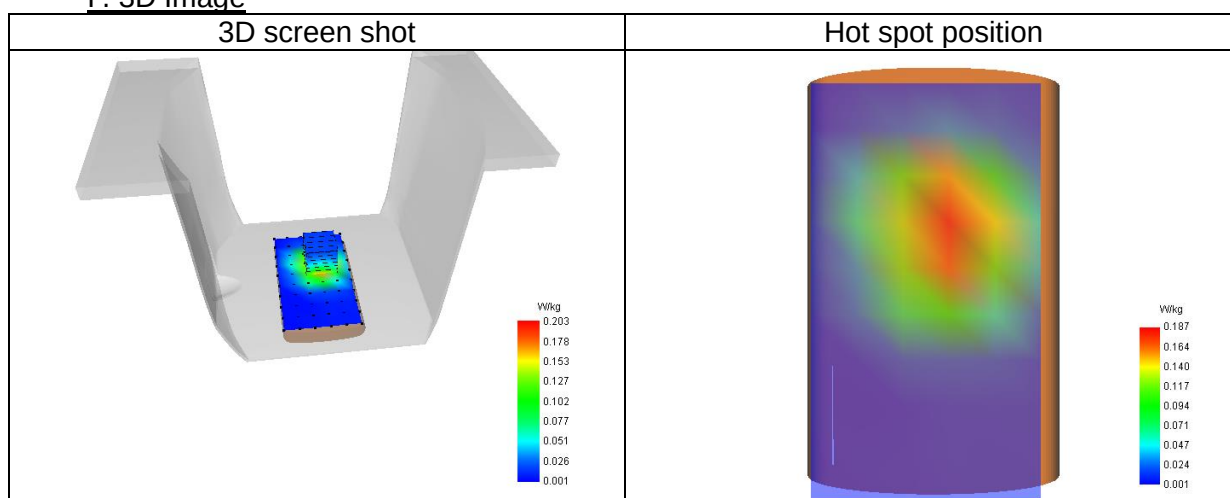
SAR 10g (W/Kg)	0.110
SAR 1g (W/Kg)	0.192
Variation (%)	2.95
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	57.47

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.324	0.203	0.115	0.074	0.052	0.034	0.026



F. 3D Image



23# SAR Measurement at LTE band 13 (Body, Validation Plane)

Date of measurement: 27/10/2025

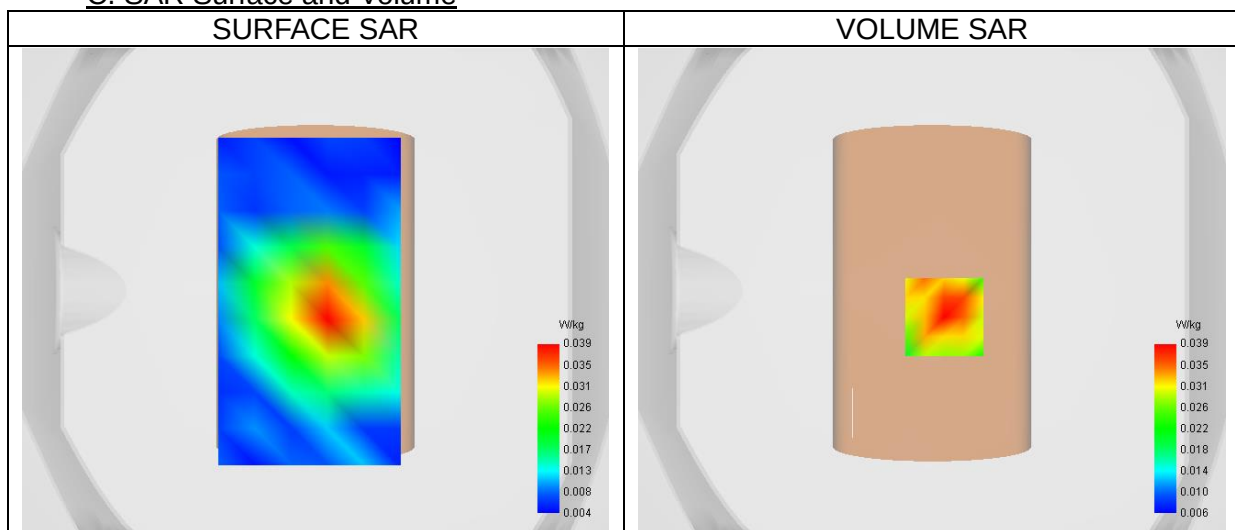
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23230)/ frequency 782.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	782.00

B. Permittivity

Middle TX Frequency (MHz)	782.00
Relative permittivity (real part)	40.07
Relative permittivity (imaginary part)	21.08
Conductivity (S/m)	0.92

C. SAR Surface and Volume



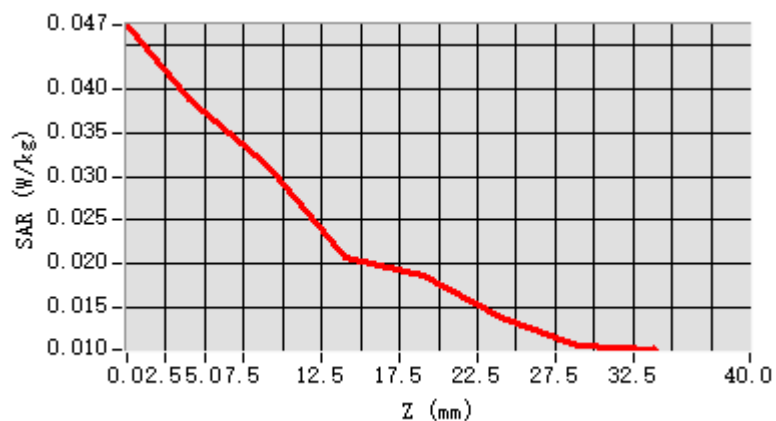
Maximum location: X=5.00, Y=-11.00 ; SAR Peak: 0.05 W/kg

D. SAR 1g & 10g

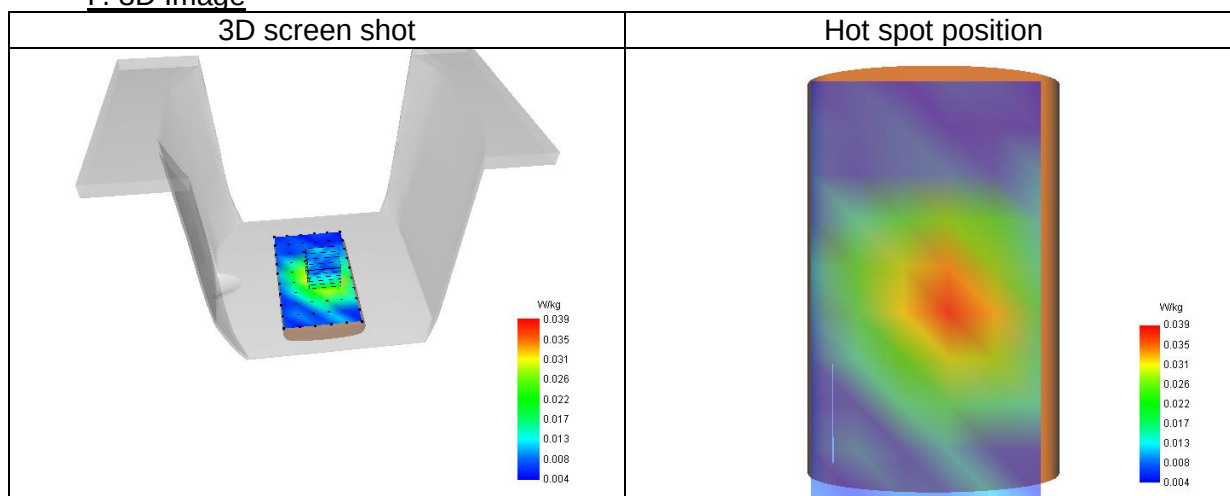
SAR 10g (W/Kg)	0.026
SAR 1g (W/Kg)	0.039
Variation (%)	-4.59
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.047	0.039	0.031	0.021	0.019	0.014	0.011



F. 3D Image



24# SAR Measurement at LTE band 13 (Body, Validation Plane)

Date of measurement: 27/10/2025

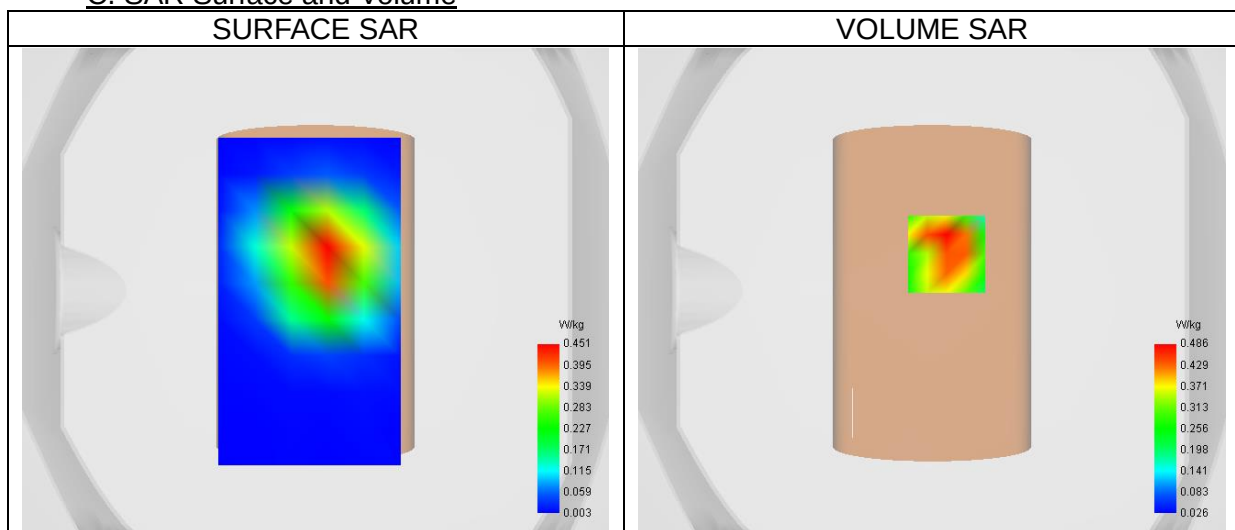
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23230)/ frequency 782.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	782.00

B. Permittivity

Middle TX Frequency (MHz)	782.00
Relative permittivity (real part)	40.07
Relative permittivity (imaginary part)	21.08
Conductivity (S/m)	0.92

C. SAR Surface and Volume



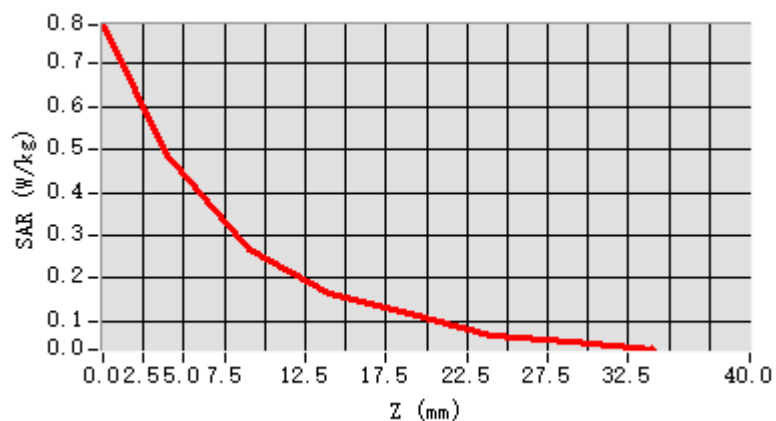
Maximum location: X=6.00, Y=15.00 ; SAR Peak: 0.77 W/kg

D. SAR 1g & 10g

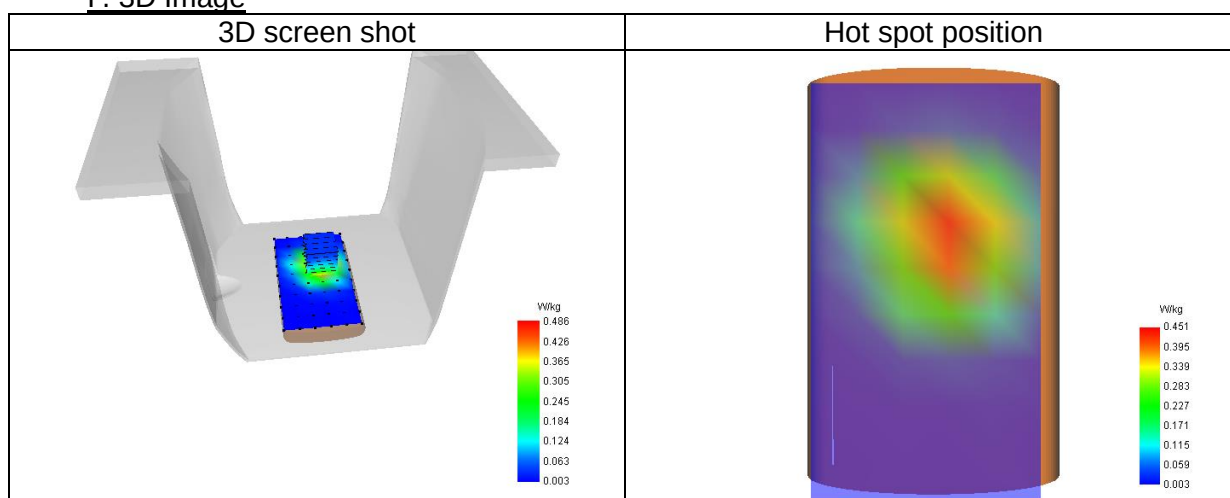
SAR 10g (W/Kg)	0.262
SAR 1g (W/Kg)	0.470
Variation (%)	-0.51
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	56.57

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.789	0.486	0.268	0.164	0.116	0.069	0.054



F. 3D Image



25# SAR Measurement at LTE band 17 (Body, Validation Plane)

Date of measurement: 27/10/2025

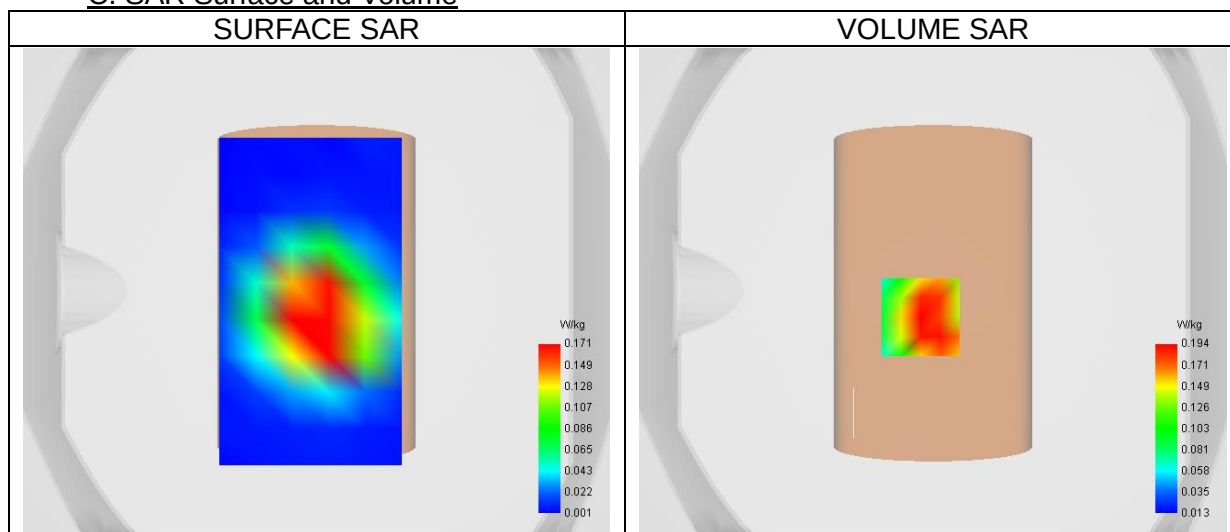
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23790)/ frequency 710.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	710.00

B. Permittivity

Middle TX Frequency (MHz)	710.00
Relative permittivity (real part)	40.94
Relative permittivity (imaginary part)	21.76
Conductivity (S/m)	0.86

C. SAR Surface and Volume



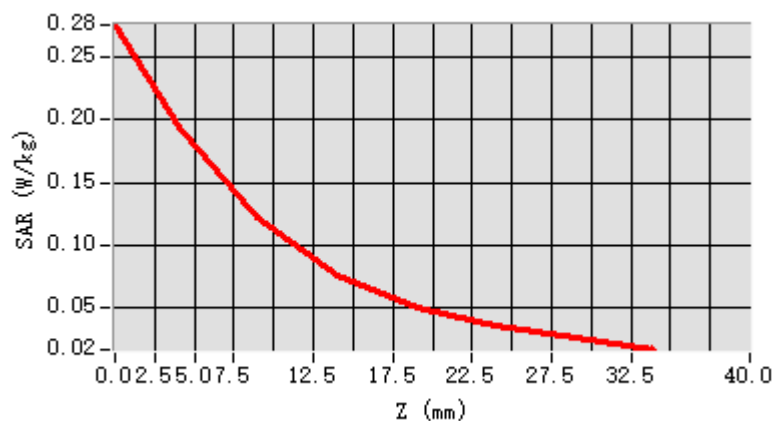
Maximum location: X=-5.00, Y=-11.00 ; SAR Peak: 0.29 W/kg

D. SAR 1g & 10g

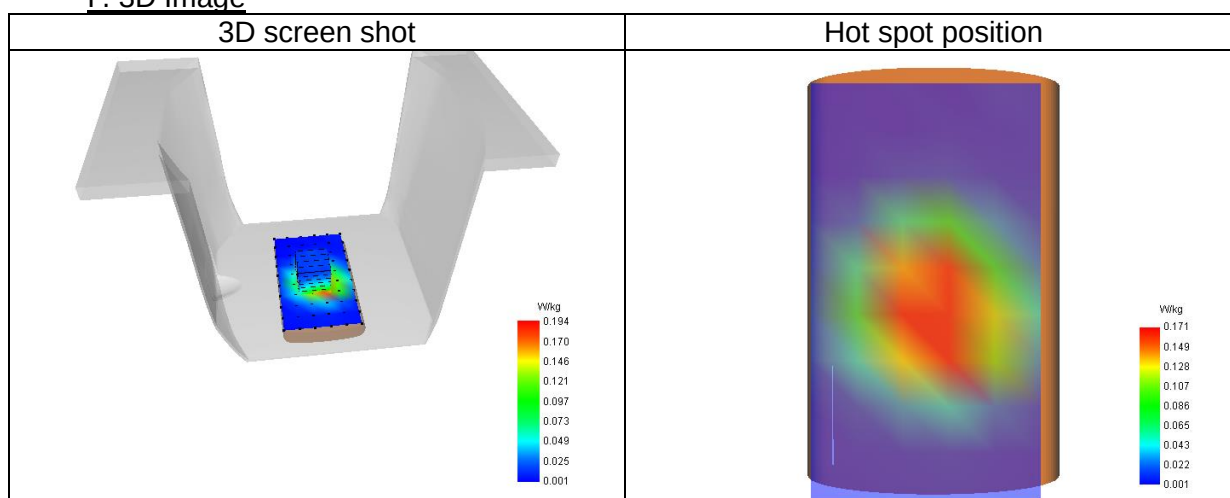
SAR 10g (W/Kg)	0.112
SAR 1g (W/Kg)	0.187
Variation (%)	1.10
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	63.33

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.276	0.194	0.123	0.076	0.051	0.037	0.027



F. 3D Image



26# SAR Measurement at LTE band 17 (Body, Validation Plane)

Date of measurement: 27/10/2025

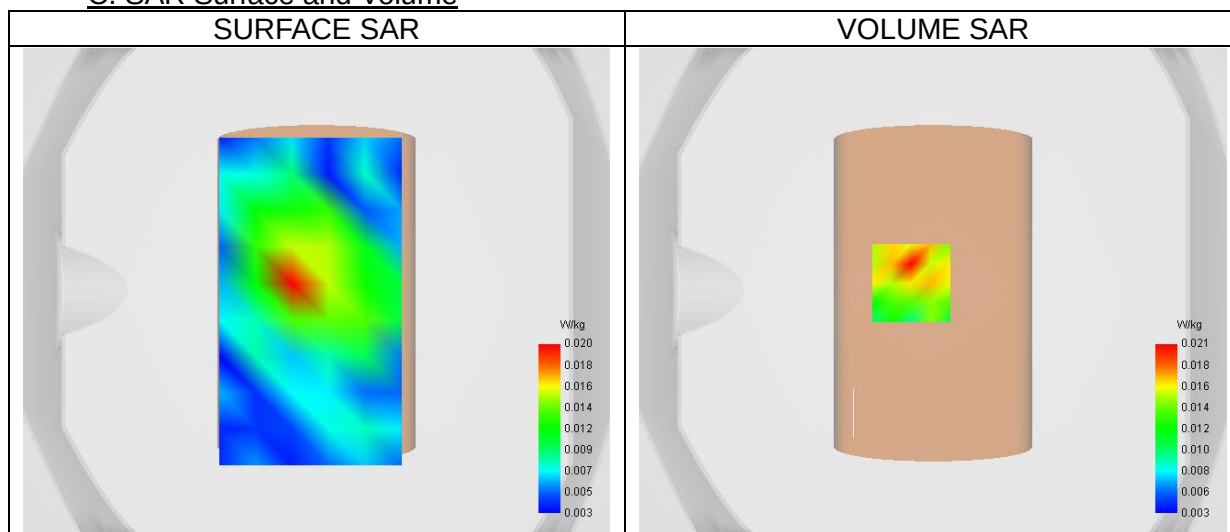
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (23790)/ frequency 710.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	710.00

B. Permittivity

Middle TX Frequency (MHz)	710.00
Relative permittivity (real part)	40.94
Relative permittivity (imaginary part)	21.76
Conductivity (S/m)	0.86

C. SAR Surface and Volume



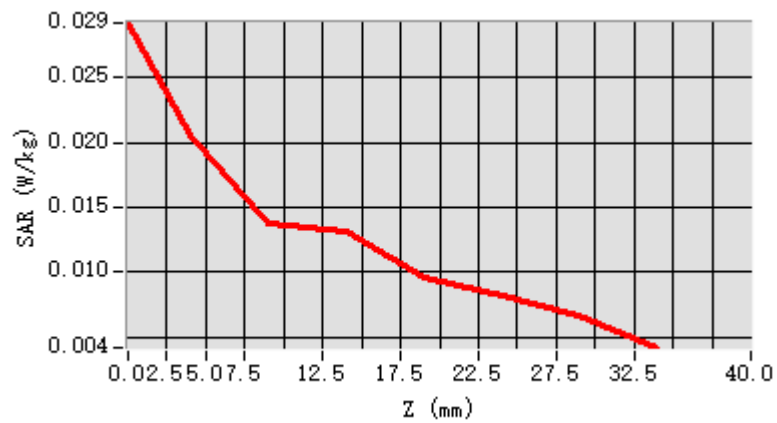
Maximum location: X=-9.00, Y=3.00 ; SAR Peak: 0.03 W/kg

D. SAR 1g & 10g

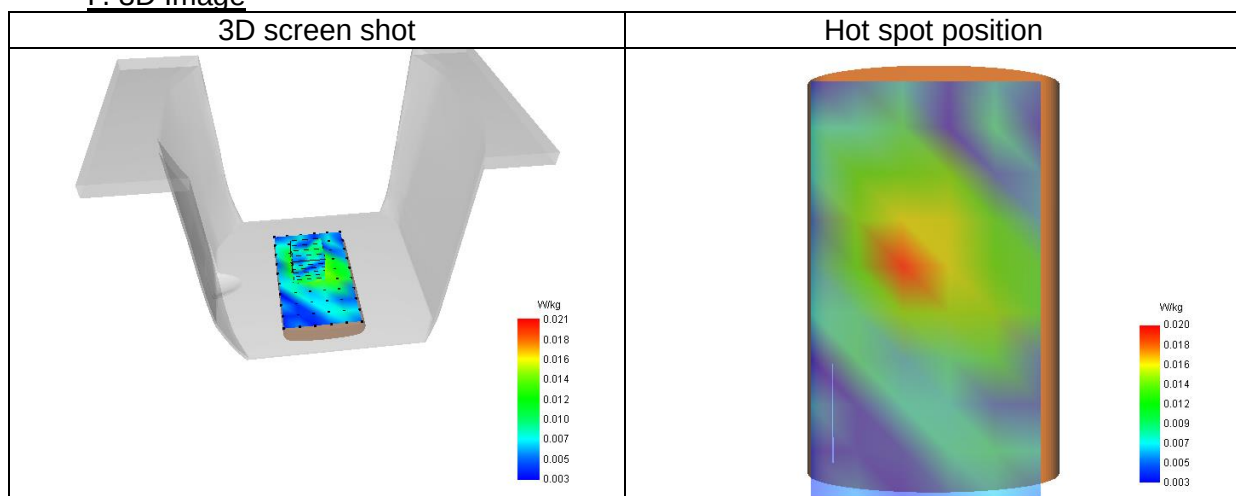
SAR 10g (W/Kg)	0.012
SAR 1g (W/Kg)	0.019
Variation (%)	3.65
Horizontal validation criteria: minimum distance (mm)	24.00
Vertical validation criteria: SAR ratio M2/M1 (%)	76.21

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.029	0.021	0.014	0.013	0.010	0.008	0.007



F. 3D Image



27# SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 17/10/2025

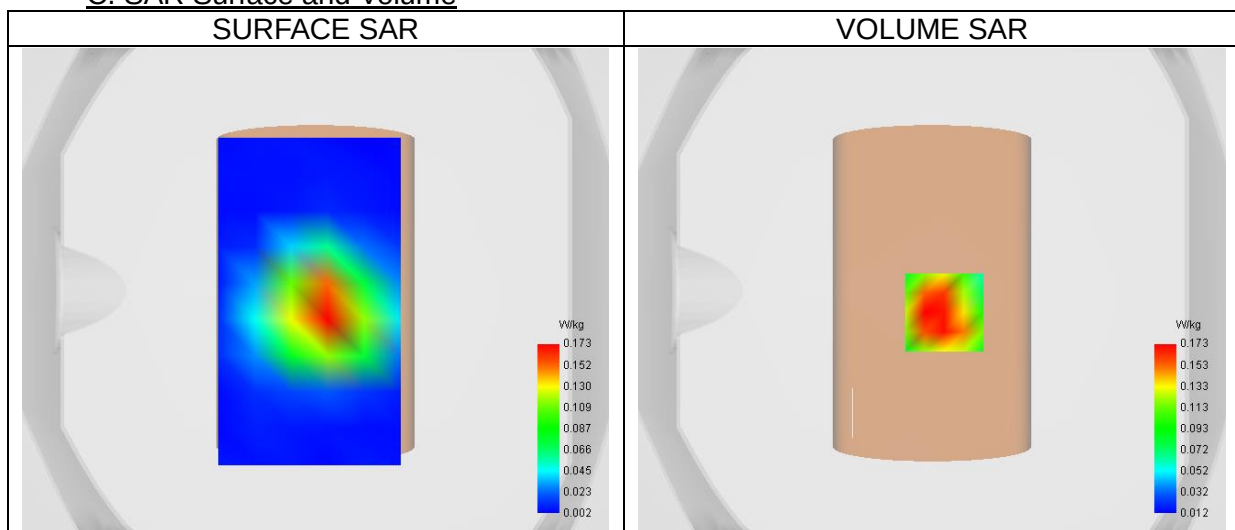
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (26740)/ frequency 819.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	819.00

B. Permittivity

Middle TX Frequency (MHz)	819.00
Relative permittivity (real part)	41.61
Relative permittivity (imaginary part)	19.39
Conductivity (S/m)	0.88

C. SAR Surface and Volume



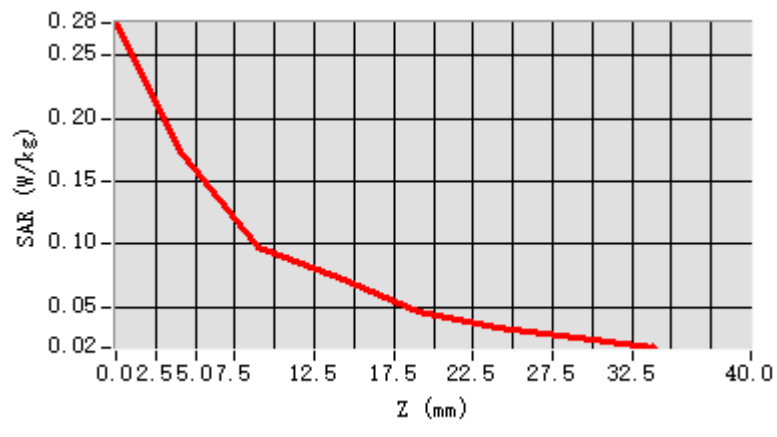
Maximum location: X=5.00, Y=-9.00 ; SAR Peak: 0.25 W/kg

D. SAR 1g & 10g

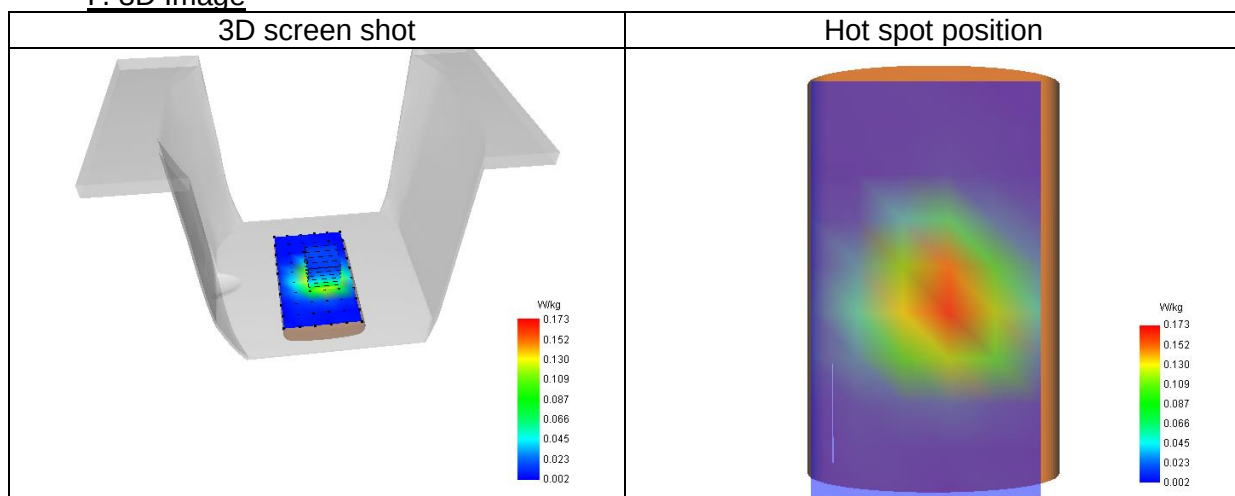
SAR 10g (W/Kg)	0.104
SAR 1g (W/Kg)	0.170
Variation (%)	0.11
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	68.59

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.276	0.173	0.096	0.073	0.045	0.034	0.025



F. 3D Image



28# SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 17/10/2025

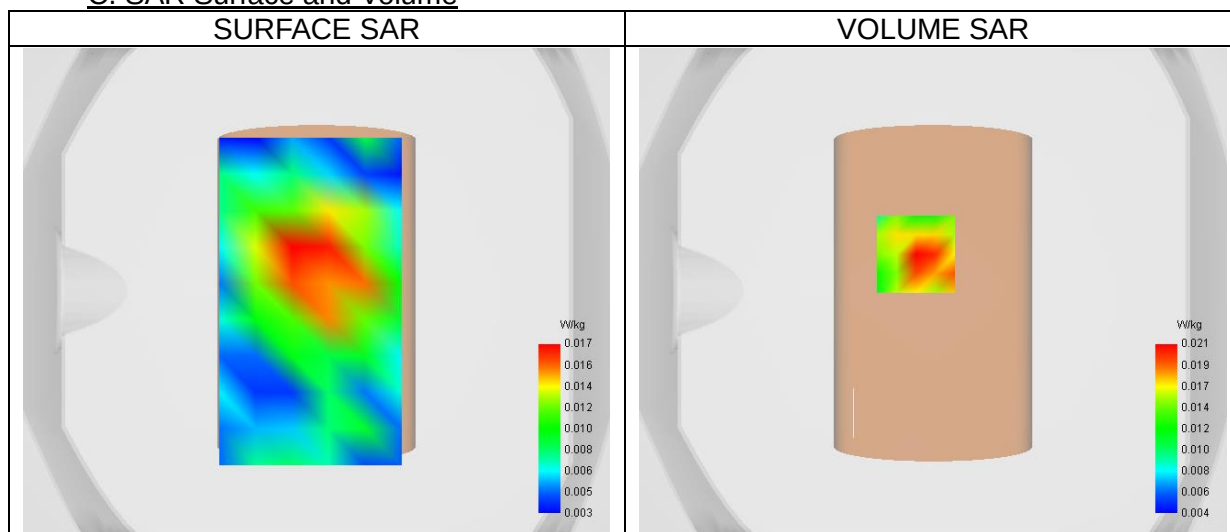
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (26865)/ frequency 831.50 Mhz
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	831.50

B. Permittivity

Middle TX Frequency (MHz)	831.50
Relative permittivity (real part)	41.39
Relative permittivity (imaginary part)	19.39
Conductivity (S/m)	0.90

C. SAR Surface and Volume



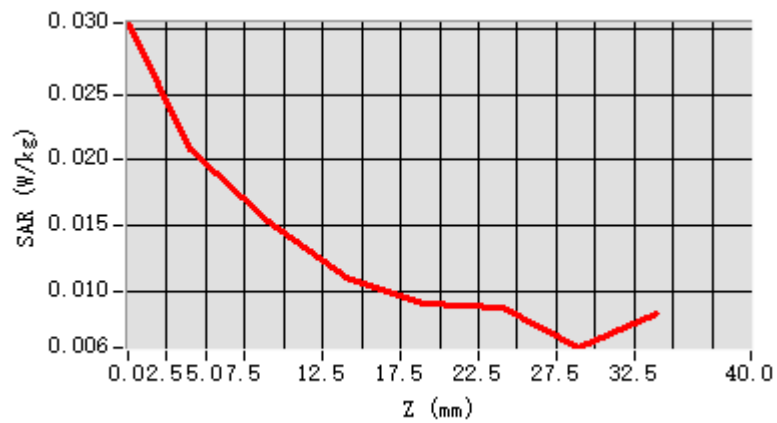
Maximum location: X=-7.00, Y=15.00 ; SAR Peak: 0.04 W/kg

D. SAR 1g & 10g

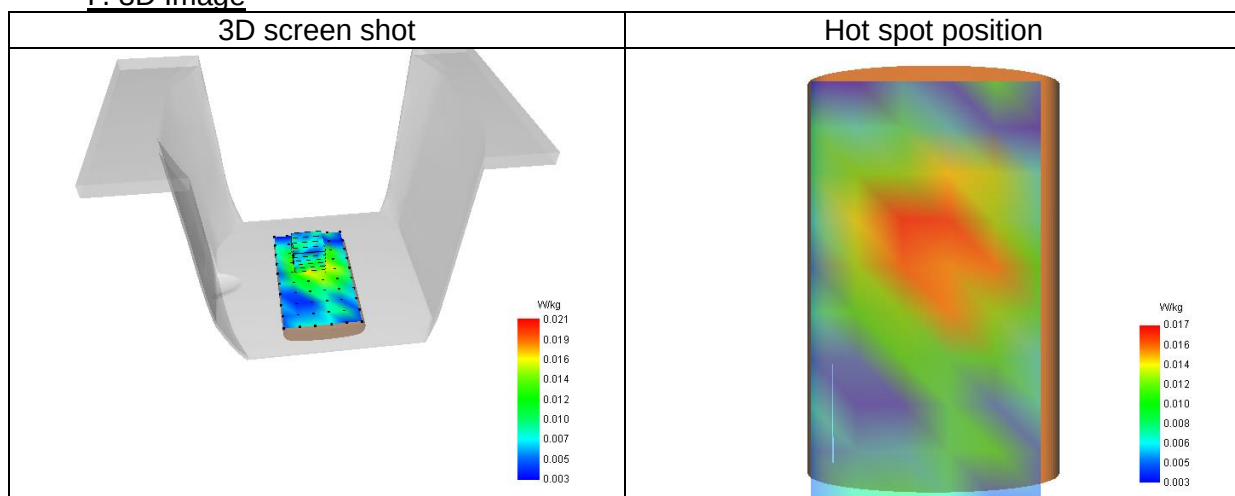
SAR 10g (W/Kg)	0.013
SAR 1g (W/Kg)	0.021
Variation (%)	-4.00
Horizontal validation criteria: minimum distance (mm)	22.63
Vertical validation criteria: SAR ratio M2/M1 (%)	81.54

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.030	0.021	0.015	0.011	0.009	0.009	0.006



F. 3D Image



29# SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 17/10/2025

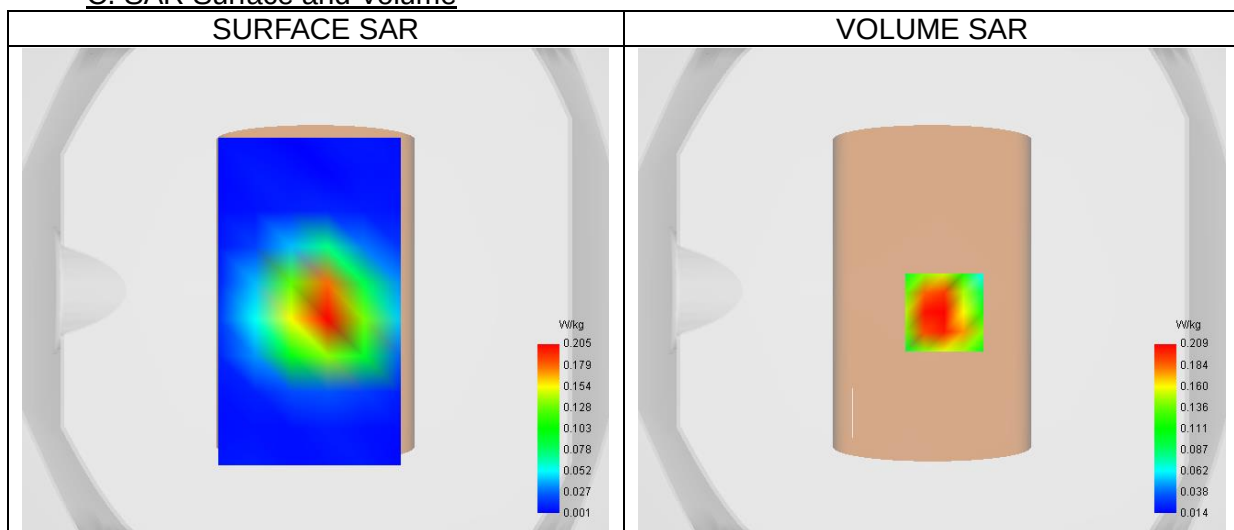
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (26865)/ frequency 831.50 Mhz
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	831.50

B. Permittivity

Middle TX Frequency (MHz)	831.50
Relative permittivity (real part)	41.39
Relative permittivity (imaginary part)	19.39
Conductivity (S/m)	0.90

C. SAR Surface and Volume



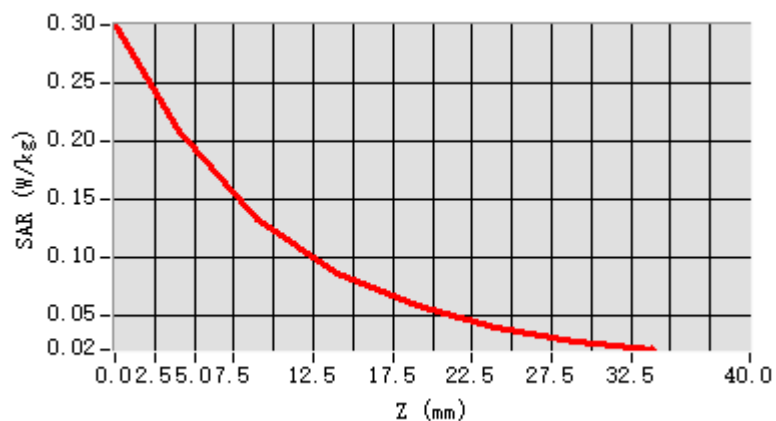
Maximum location: X=5.00, Y=-9.00 ; SAR Peak: 0.31 W/kg

D. SAR 1g & 10g

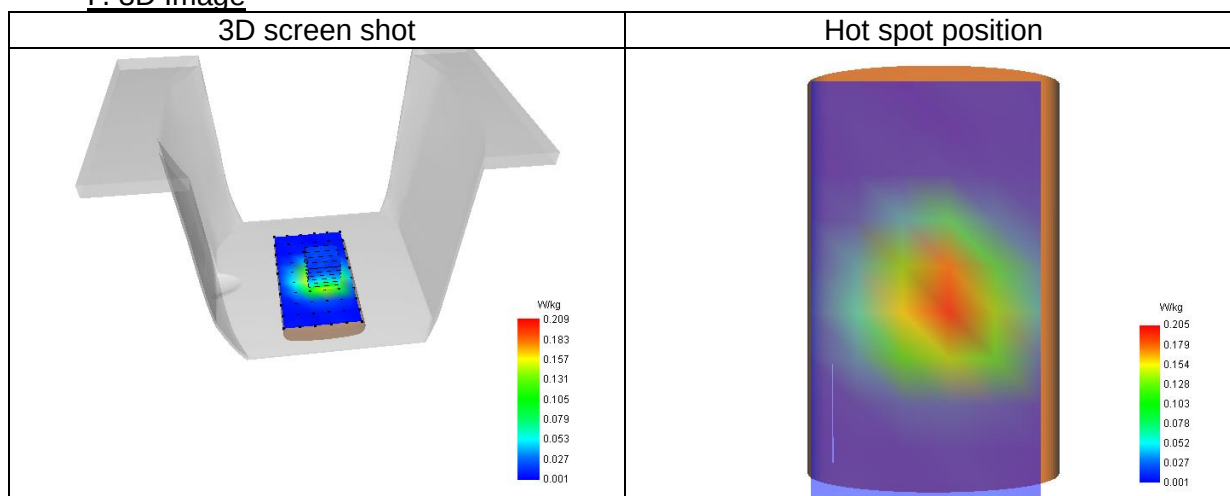
SAR 10g (W/Kg)	0.122
SAR 1g (W/Kg)	0.205
Variation (%)	0.86
Horizontal validation criteria: minimum distance (mm)	17.89
Vertical validation criteria: SAR ratio M2/M1 (%)	63.51

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.299	0.209	0.133	0.087	0.058	0.039	0.029



F. 3D Image



30# SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 17/10/2025

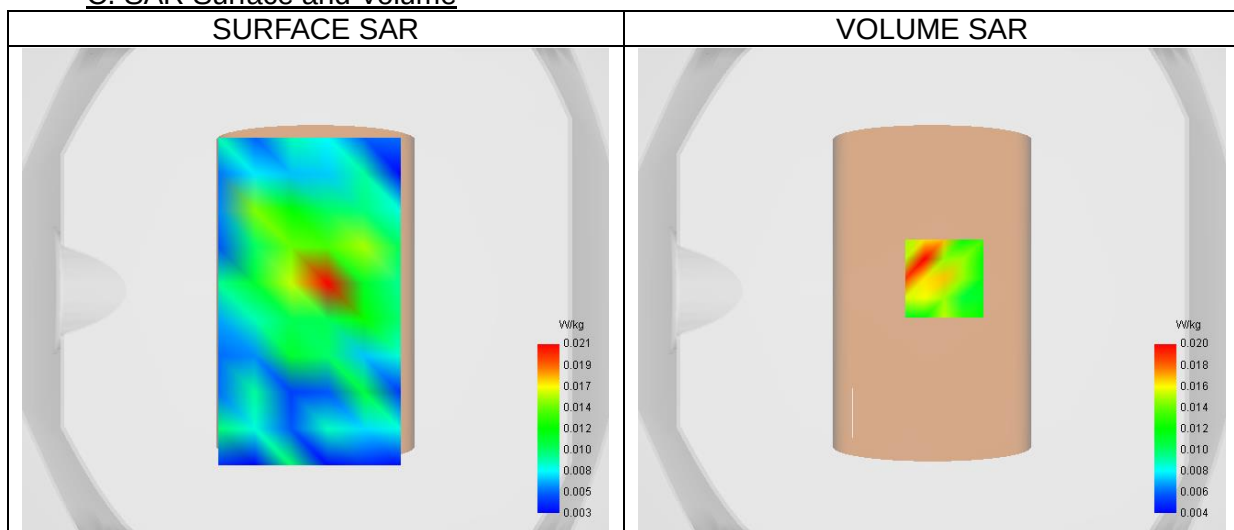
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (26740)/ frequency 819.00 Mhz
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	819.00

B. Permittivity

Middle TX Frequency (MHz)	819.00
Relative permittivity (real part)	41.61
Relative permittivity (imaginary part)	19.39
Conductivity (S/m)	0.88

C. SAR Surface and Volume



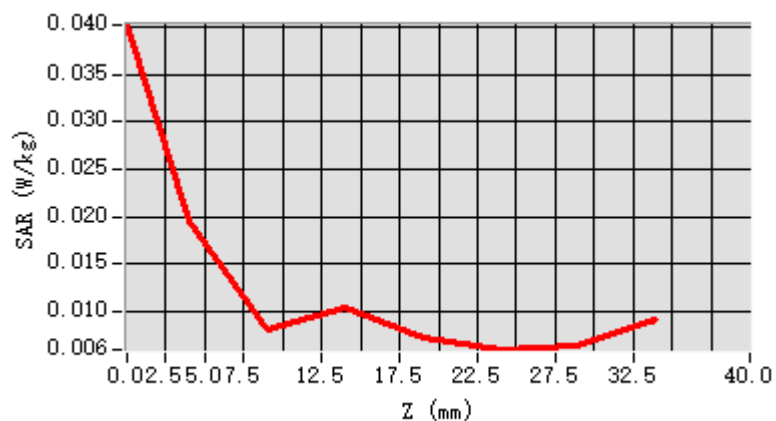
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 0.03 W/kg

D. SAR 1g & 10g

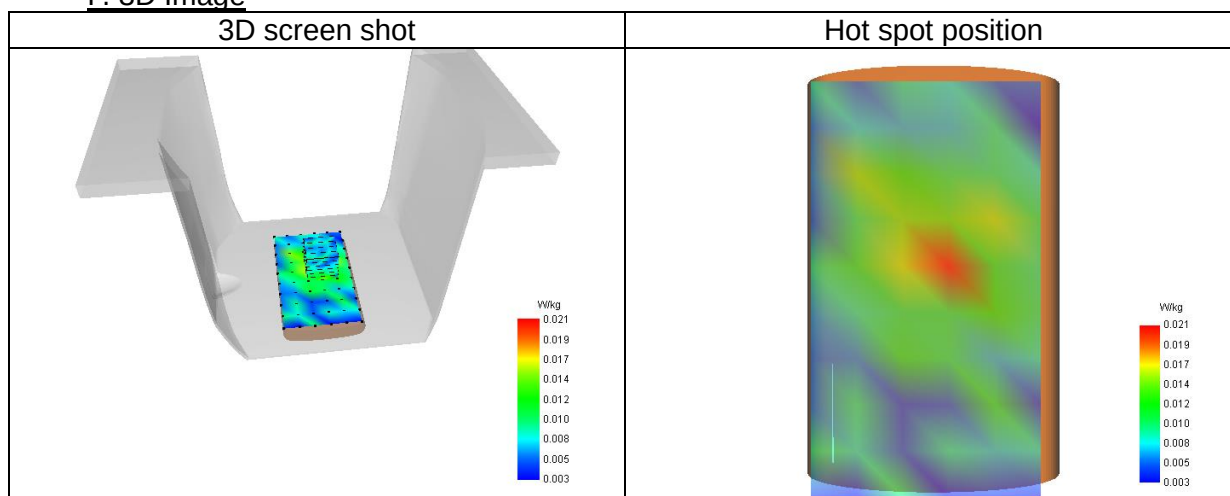
SAR 10g (W/Kg)	0.012
SAR 1g (W/Kg)	0.018
Variation (%)	-0.78
Horizontal validation criteria: minimum distance (mm)	0.00
Vertical validation criteria: SAR ratio M2/M1 (%)	0.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.040	0.020	0.008	0.010	0.007	0.006	0.006



F. 3D Image



31# SAR Measurement at LTE band 41 (Body, Validation Plane)

Date of measurement: 20/10/2025

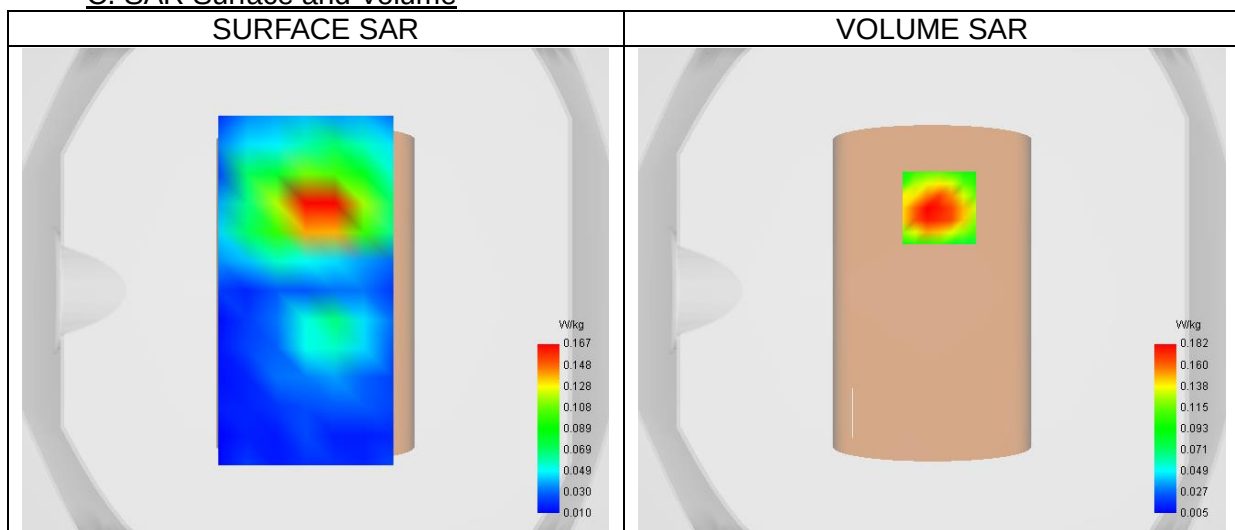
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.52
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Signal	LTE TDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (40620)/ frequency 2593.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	2593.00

B. Permittivity

Middle TX Frequency (MHz)	2593.00
Relative permittivity (real part)	40.11
Relative permittivity (imaginary part)	14.00
Conductivity (S/m)	2.02

C. SAR Surface and Volume



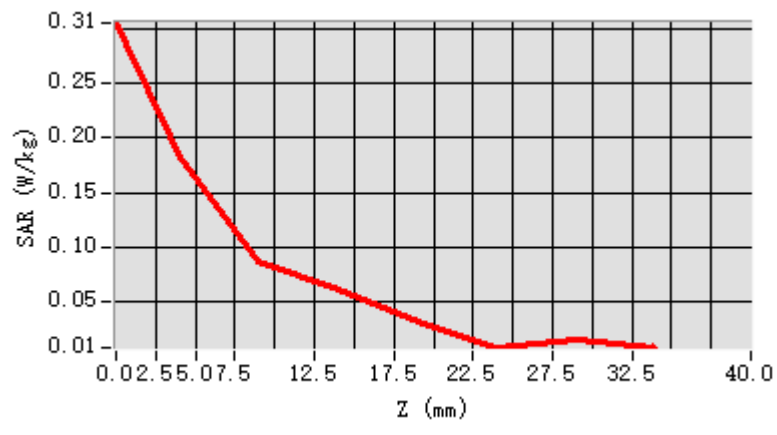
Maximum location: X=3.00, Y=34.00 ; SAR Peak: 0.33 W/kg

D. SAR 1g & 10g

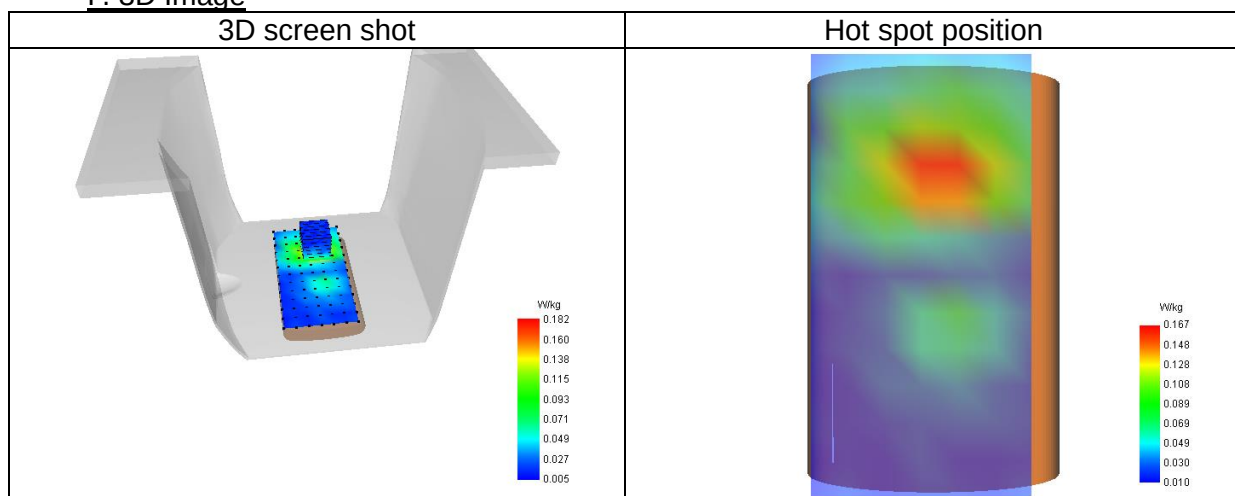
SAR 10g (W/Kg)	0.086
SAR 1g (W/Kg)	0.176
Variation (%)	-1.84
Horizontal validation criteria: minimum distance (mm)	18.03
Vertical validation criteria: SAR ratio M2/M1 (%)	55.86

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.305	0.182	0.086	0.061	0.031	0.008	0.015



F. 3D Image



32# SAR Measurement at LTE band 41 (Body, Validation Plane)

Date of measurement: 20/10/2025

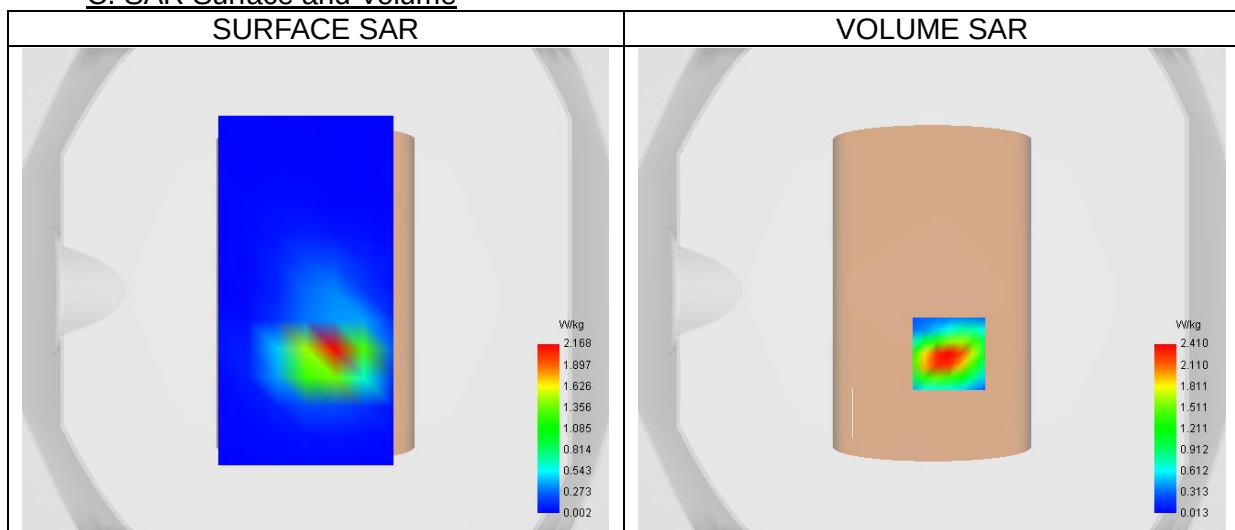
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.52
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Signal	LTE TDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (40620)/ frequency 2593.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	2593.00

B. Permittivity

Middle TX Frequency (MHz)	2593.00
Relative permittivity (real part)	40.11
Relative permittivity (imaginary part)	14.00
Conductivity (S/m)	2.02

C. SAR Surface and Volume



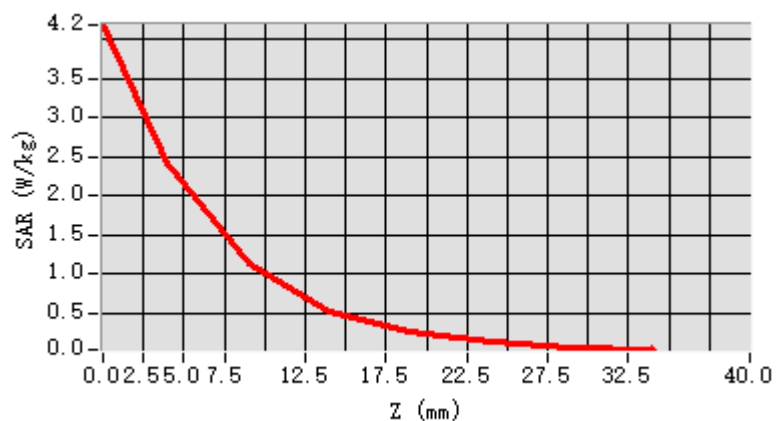
Maximum location: X=7.00, Y=-26.00 ; SAR Peak: 4.22 W/kg

D. SAR 1g & 10g

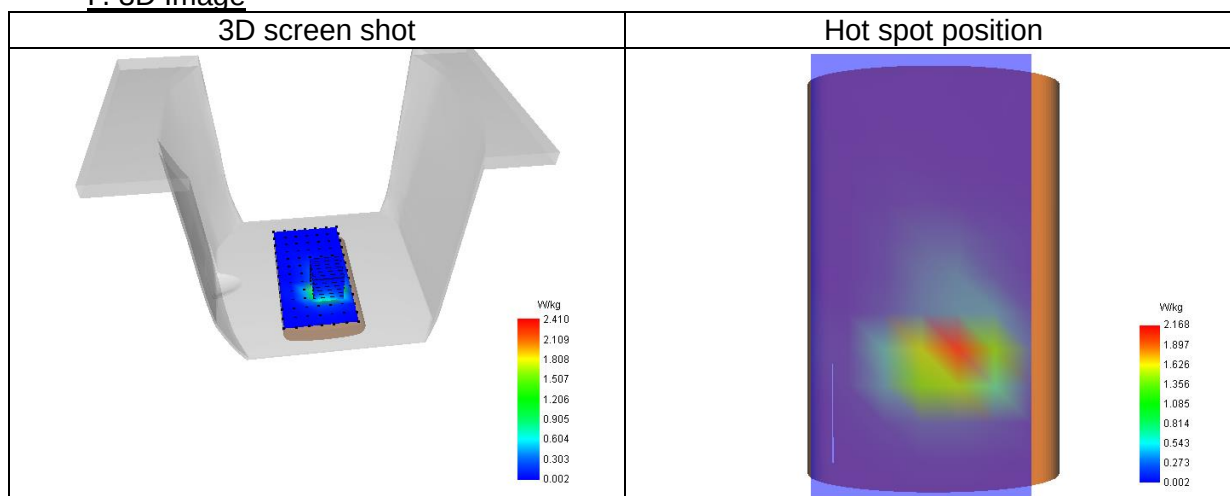
SAR 10g (W/Kg)	0.941
SAR 1g (W/Kg)	2.222
Variation (%)	1.79
Horizontal validation criteria: minimum distance (mm)	10.00
Vertical validation criteria: SAR ratio M2/M1 (%)	48.94

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.188	2.410	1.125	0.531	0.260	0.134	0.071



F. 3D Image



33# SAR Measurement at LTE band 66 (Body, Validation Plane)

Date of measurement: 18/10/2025

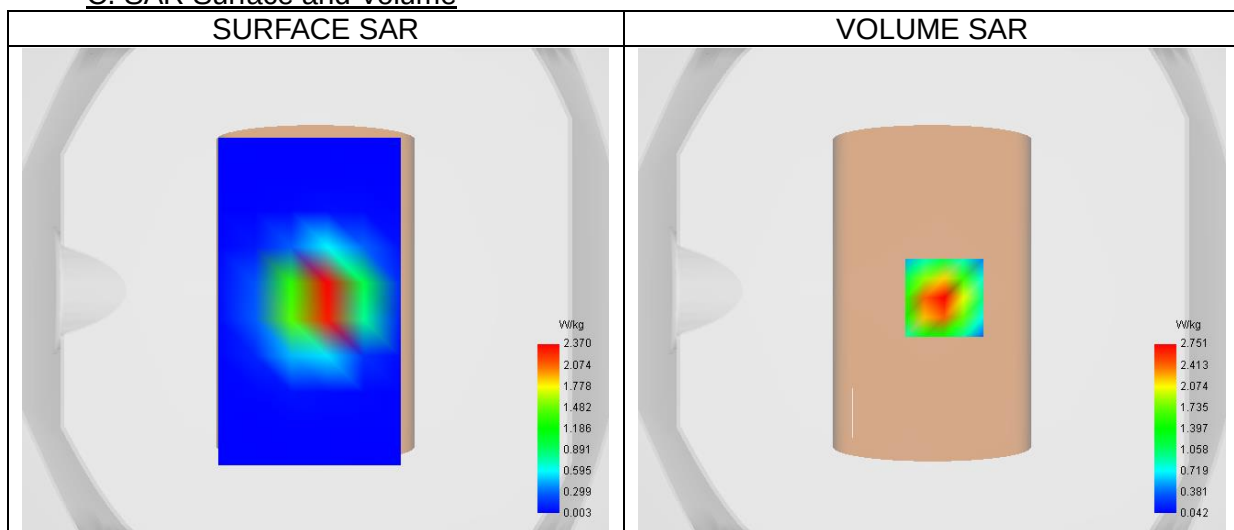
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (132322)/ frequency 1745.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1745.00

B. Permittivity

Middle TX Frequency (MHz)	1745.00
Relative permittivity (real part)	39.07
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.33

C. SAR Surface and Volume



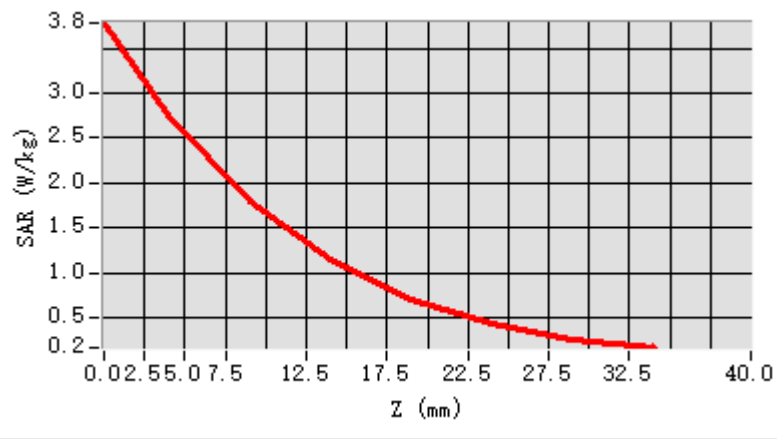
Maximum location: X=5.00, Y=-3.00 ; SAR Peak: 3.94 W/kg

D. SAR 1g & 10g

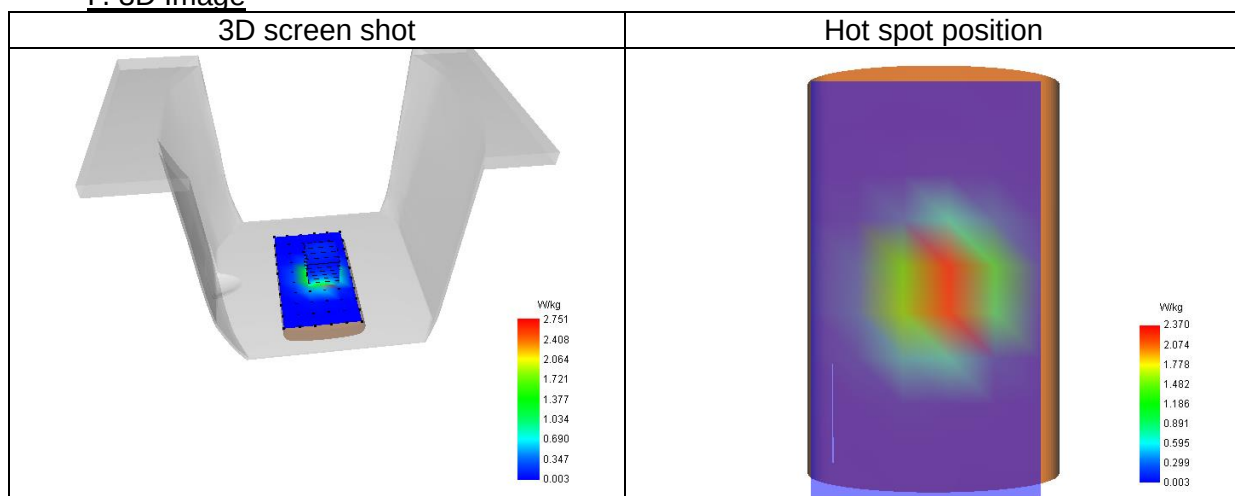
SAR 10g (W/Kg)	1.423
SAR 1g (W/Kg)	2.596
Variation (%)	0.29
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	65.30

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.786	2.751	1.797	1.137	0.705	0.426	0.261



F. 3D Image



34# SAR Measurement at LTE band 66 (Body, Validation Plane)

Date of measurement: 18/10/2025

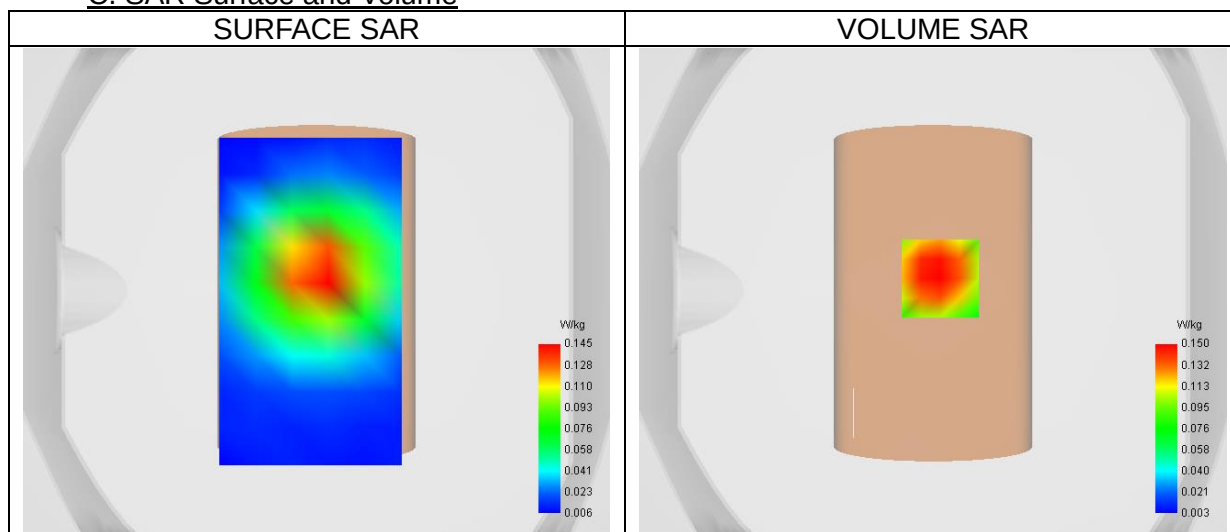
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Signal	LTE FDD
Channel Center [EARFCN] / Channel Center [MHz]	Middle (132322)/ frequency 1745.00 Mhz
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
Middle TX Frequency (MHz)	1745.00

B. Permittivity

Middle TX Frequency (MHz)	1745.00
Relative permittivity (real part)	39.07
Relative permittivity (imaginary part)	13.71
Conductivity (S/m)	1.33

C. SAR Surface and Volume



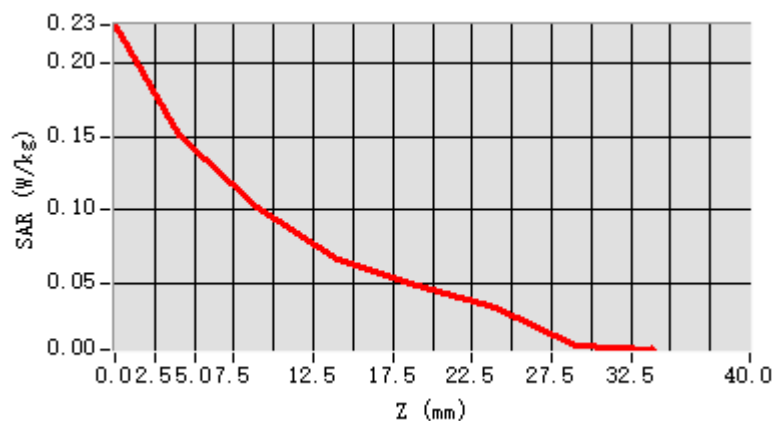
Maximum location: X=3.00, Y=5.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

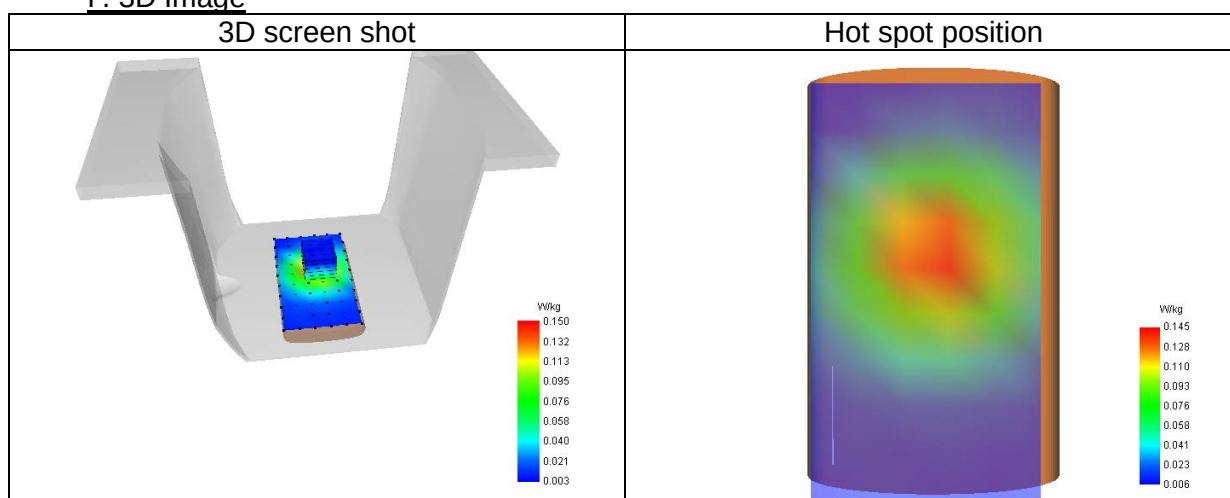
SAR 10g (W/Kg)	0.094
SAR 1g (W/Kg)	0.151
Variation (%)	-4.49
Horizontal validation criteria: minimum distance (mm)	22.63
Vertical validation criteria: SAR ratio M2/M1 (%)	67.47

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.226	0.150	0.101	0.066	0.048	0.033	0.008



F. 3D Image



12. Appendix D. Calibration Certificate

Table of contents
E Field Probe - 0725-EPGO-448
750 MHz Dipole - SN 03/15 DIP 0G750-355
835 MHz Dipole - SN 03/15 DIP 0G835-347
1800 MHz Dipole - SN 03/15 DIP 1G800-349
1900 MHz Dipole - SN 03/15 DIP 1G900-350
2450 MHz Dipole - SN 03/15 DIP 2G450-352
Justification of the extended calibration

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**COMOSAR E-Field Probe Calibration Report**

Ref : ACR.108.1.25.BES.A

**SHENZHEN NTEK TESTING TECHNOLOGY
CO., LTD.**

**BUILDING E, FENDA SCIENCE PARK, SANWEI
COMMUNITY, XIXIANG STREET,
BAO'AN DISTRICT, SHENZHEN GUANGDONG, CHINA
MVG COMOSAR DOSIMETRIC E-FIELD PROBE
SERIAL NO.: 0725-EPGO-448**

Calibrated at MVG**Z.I. de la pointe du diable****Technopôle Brest Iroise – 295 avenue Alexis de Rochon****29280 PLOUZANE - FRANCE****Calibration date: 04/15/2025**

Accreditations #2-6789
Scope available on www.cofrac.fr

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Summary:

This document presents the method and results from an accredited COMOSAR Dosimetric E-Field Probe calibration performed at MVG, using the CALIPROBE test bench, for use with a MVG COMOSAR system only. The test results covered by accreditation are traceable to the International System of Units (SI).

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COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

	<i>Name</i>	<i>Function</i>	<i>Date</i>	<i>Signature</i>
<i>Prepared by :</i>	Pedro Ruiz	Technical Manager	4/18/2025	
<i>Checked & approved by:</i>	Pedro Ruiz	Technical Manager	4/18/2025	
<i>Authorized by:</i>	Kim Rutkowski	Quality Manager	4/23/2025	Signed by: 2B98B547AD1743* ...

	<i>Customer Name</i>
<i>Distribution :</i>	SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

<i>Issue</i>	<i>Name</i>	<i>Date</i>	<i>Modifications</i>
A	Pedro Ruiz	4/18/2025	Initial release

DocuSign Envelope ID: 8D8CB647-C2B4-4414-A550-C6E3F74EB7AD



COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

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COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

1 DEVICE UNDER TEST

Device Under Test	
Device Type	COMOSAR DOSIMETRIC E FIELD PROBE
Manufacturer	MVG
Model	SSE2
Serial Number	0725-EPGO-448
Product Condition (new / used)	New
Frequency Range of Probe	0.15 GHz-7.5GHz
Resistance of Three Dipoles at Connector	Dipole 1: R1=0.191 MΩ Dipole 2: R2=0.212 MΩ Dipole 3: R3=0.208 MΩ

2 PRODUCT DESCRIPTION**2.1 GENERAL INFORMATION**

MVG's COMOSAR E field Probes are built in accordance to the IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards.



Figure 1 – MVG COMOSAR Dosimetric E field Probe

Probe Length	330 mm
Length of Individual Dipoles	2 mm
Maximum external diameter	8 mm
Probe Tip External Diameter	2.5 mm
Distance between dipoles / probe extremity	1 mm

3 MEASUREMENT METHOD

The IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards provide recommended practices for the probe calibrations, including the performance characteristics of interest and methods by which to assess their effect. All calibrations / measurements performed meet the fore-mentioned standards.

3.1 SENSITIVITY

The sensitivity factors of the three dipoles were determined using a two step calibration method (air and tissue simulating liquid) using waveguides as outlined in the standards for frequency range 600-7500MHz and using the calorimeter cell method (transfer method) as outlined in the standards for frequency 150-450 MHz.

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COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

3.2 LINEARITY

The evaluation of the linearity was done in free space using the waveguide, performing a power sweep to cover the SAR range 0.01W/kg to 100W/kg.

3.3 ISOTROPY

The axial isotropy was evaluated by exposing the probe to a reference wave from a standard dipole with the dipole mounted under the flat phantom in the test configuration suggested for system validations and checks. The probe was rotated along its main axis from 0 to 360 degrees in 15-degree steps. The hemispherical isotropy is determined by inserting the probe in a thin plastic box filled with tissue-equivalent liquid, with the plastic box illuminated with the fields from a half wave dipole. The dipole is rotated about its axis (0°–180°) in 15° increments. At each step the probe is rotated about its axis (0°–360°).

3.4 BOUNDARY EFFECT

The boundary effect is defined as the deviation between the SAR measured data and the expected exponential decay in the liquid when the probe is oriented normal to the interface. To evaluate this effect, the liquid filled flat phantom is exposed to fields from either a reference dipole or waveguide. With the probe normal to the phantom surface, the peak spatial average SAR is measured and compared to the analytical value at the surface.

The boundary effect uncertainty can be estimated according to the following uncertainty approximation formula based on linear and exponential extrapolations between the surface and $d_{be} + d_{step}$ along lines that are approximately normal to the surface:

$$SAR_{uncertainty} [\%] = \Delta SAR_{be} \frac{(d_{be} + d_{step})^2}{2d_{step}} \frac{(e^{-d_{be}/\delta})}{\delta/2} \text{ for } (d_{be} + d_{step}) < 10 \text{ mm}$$

where

$SAR_{uncertainty}$	is the uncertainty in percent of the probe boundary effect
d_{be}	is the distance between the surface and the closest <i>zoom-scan</i> measurement point, in millimetre
Δ_{step}	is the separation distance between the first and second measurement points that are closest to the phantom surface, in millimetre, assuming the boundary effect at the second location is negligible
δ	is the minimum penetration depth in millimetres of the head tissue-equivalent liquids defined in this standard, i.e., $\delta \approx 14$ mm at 3 GHz;
ΔSAR_{be}	in percent of SAR is the deviation between the measured SAR value, at the distance d_{be} from the boundary, and the analytical SAR value.

The measured worst case boundary effect $SAR_{uncertainty}[\%]$ for scanning distances larger than 4mm is 1.0% Limit, 2%).

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COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

3.5 PROBE MODULATION RESPONSE

MVG's probe were evaluated experimentally with various modulated signal and the deviation from CW response were found neglectable in the used power range of the probe. So the correction to taking into account the linearization parameters for different modulation is null, therefore the CW factor given in this report can be used whatever the measured modulation

4 MEASUREMENT UNCERTAINTY

The guidelines outlined in the IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards were followed to generate the measurement uncertainty associated with a SAR probe calibration using the waveguide or calorimetric cell technique depending on the frequency.

The estimated expanded uncertainty (k=2) in calibration for SAR (W/kg) is +/-11% for the frequency range 150-450MHz.

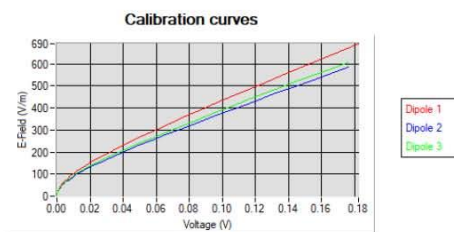
The estimated expanded uncertainty (k=2) in calibration for SAR (W/kg) is +/-14% for the frequency range 600-7500MHz.

5 CALIBRATION RESULTS

Ambient condition	
Liquid Temperature	20 +/- 1 °C
Lab Temperature	20 +/- 1 °C
Lab Humidity	30-70 %

5.1 CALIBRATION IN AIR

The following curve represents the measurement in waveguide of the voltage picked up by the probe toward the E-field generated inside the waveguide.



From this curve, the sensitivity in air is calculated using the below formula.

$$E^2 = \sum_{i=1}^3 \frac{V_i (1 + V_i / DCP_i)}{Norm_i}$$

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COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.108.1.25.BES.A

where

V_i =voltage readings on the 3 channels of the probe

DCPi=diode compression point given below for the 3 channels of the probe

Normi=dipole sensitivity given below for the 3 channels of the probe

Normx dipole 1 ($\mu\text{V}/(\text{V}/\text{m})^2$)	Normy dipole 2 ($\mu\text{V}/(\text{V}/\text{m})^2$)	Normz dipole 3 ($\mu\text{V}/(\text{V}/\text{m})^2$)
1.03	1.37	1.26

DCP dipole 1 (mV)	DCP dipole 2 (mV)	DCP dipole 3 (mV)
109	107	108

5.2 CALIBRATION IN LIQUID

The calorimeter cell or the waveguide is used to determine the calibration in liquid using the formula below.

$$\text{ConvF} = \frac{E_{\text{liquid}}^2}{E_{\text{air}}^2}$$

The E-field in the liquid is determined from the SAR measurement according to the below formula.

$$E_{\text{liquid}}^2 = \frac{\rho \text{ SAR}}{\sigma}$$

where

σ =the conductivity of the liquid

ρ =the volumetric density of the liquid

SAR=the SAR measured from the formula that depends on the setup used. The SAR formulas are given below

For the calorimeter cell (150-450 MHz), the formula is:

$$\text{SAR} = c \frac{dT}{dt}$$

where

c =the specific heat for the liquid

dT/dt =the temperature rises over the time

For the waveguide setup (600-75000 MHz), the formula is:

$$\text{SAR} = \frac{4P_{\text{W}}}{ab\delta} e^{-\frac{2z}{\delta}}$$

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