

System check at 5800 MHz

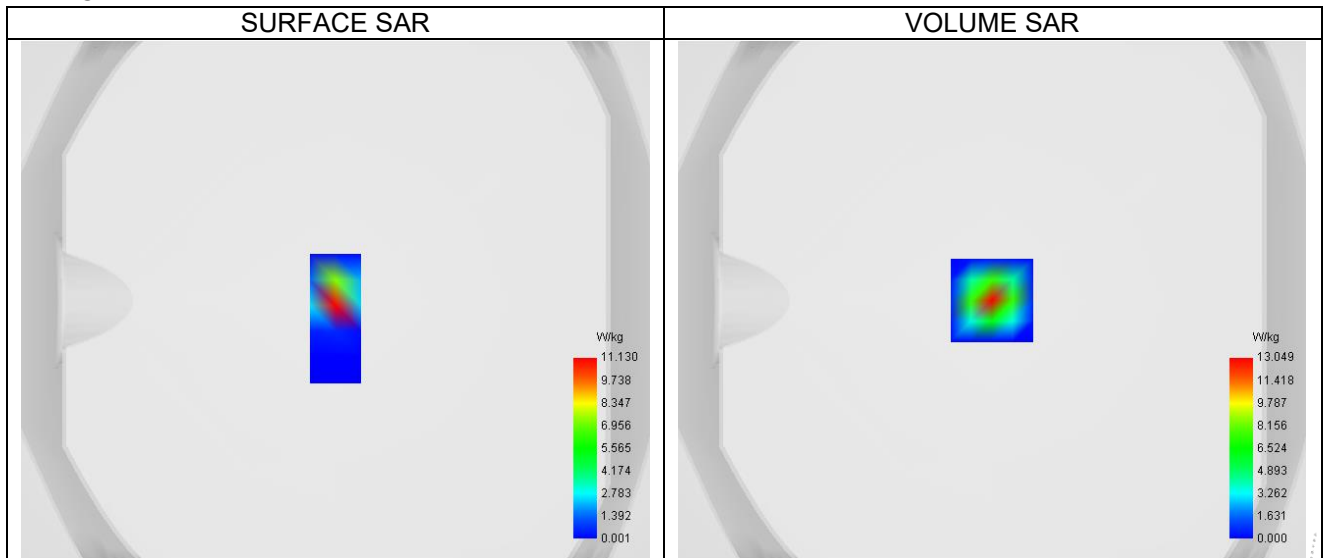
## A. Experimental conditions.

Probe	SN EPGO373
ConvF	21.00
Area Scan	dx=10mm dy=10mm, Adaptative 2 max
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)

## B. Permittivity

Frequency (MHz)	5800.000
Relative permittivity (real part)	48.200
Relative permittivity (imaginary part)	18.620
Conductivity (S/m)	6.000

## C. SAR Surface and Volume



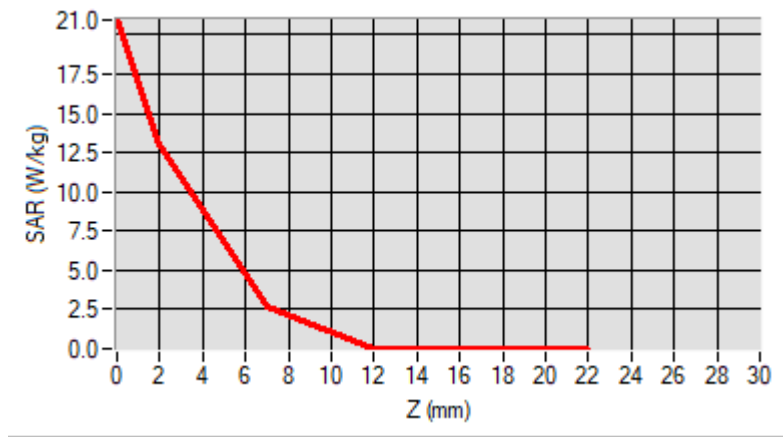
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 22.11 W/kg

## D. SAR 1g &amp; 10g

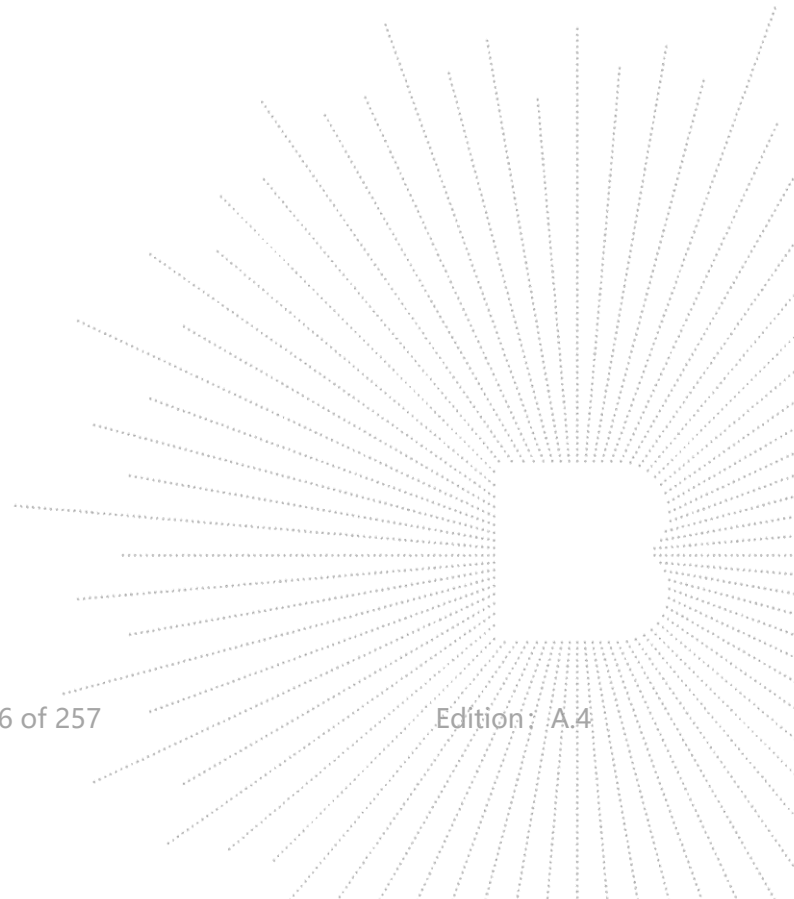
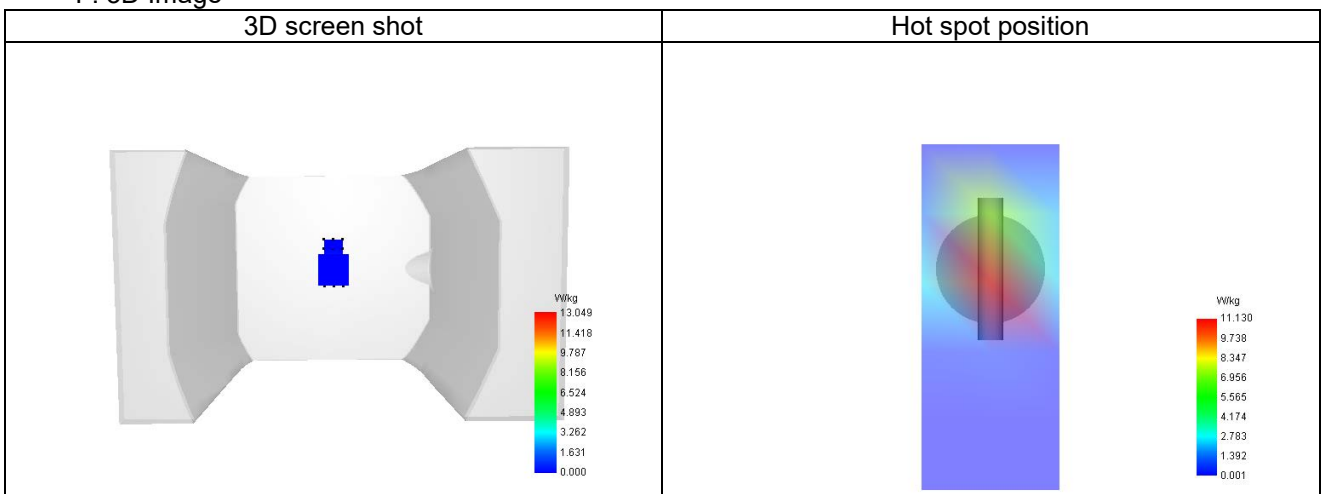
SAR 10g (W/Kg)	2.063
SAR 1g (W/Kg)	6.847
Variation (%)	0.430
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000

## E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00
SAR (W/Kg)	20.951	13.049	2.674	0.012	0.003



## F. 3D Image



## 15.2 SAR Test Graph Results

SAR plots for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination according to FCC KDB 865664 D02

### Plot 1

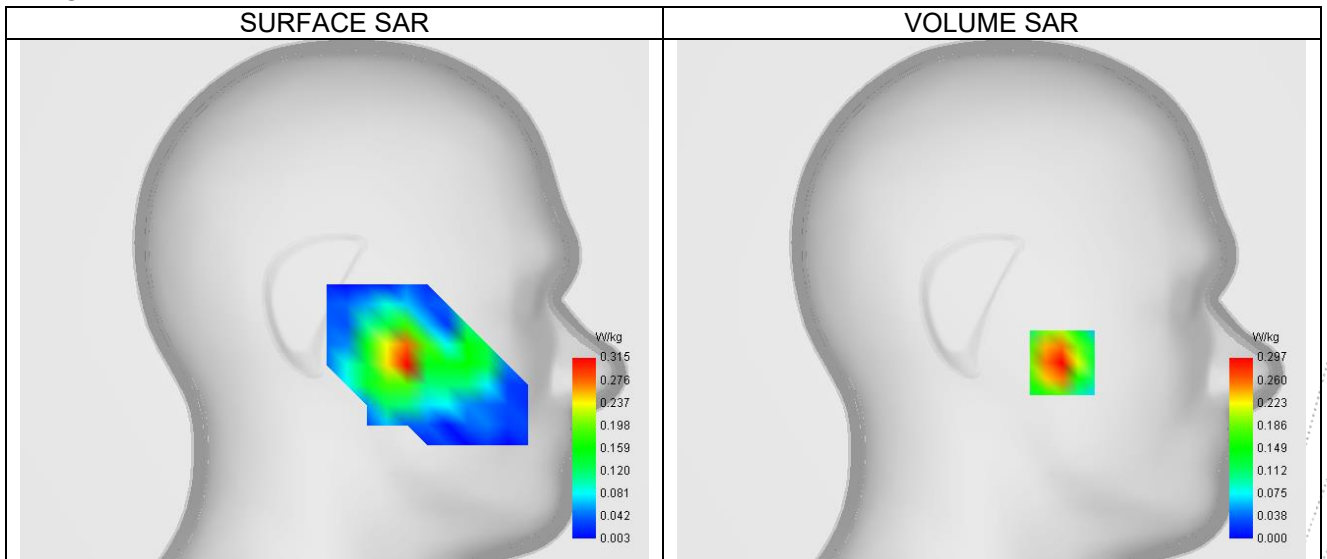
#### A. Experimental conditions.

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low (128)
Signal	TDMA (Crest factor: 8.0)

#### B. Permittivity

Frequency (MHz)	824.200
Relative permittivity (real part)	41.500
Relative permittivity (imaginary part)	19.400
Conductivity (S/m)	0.902

#### C. SAR Surface and Volume



Maximum location: X=-35.00, Y=-31.00 ; SAR Peak: 0.46 W/kg

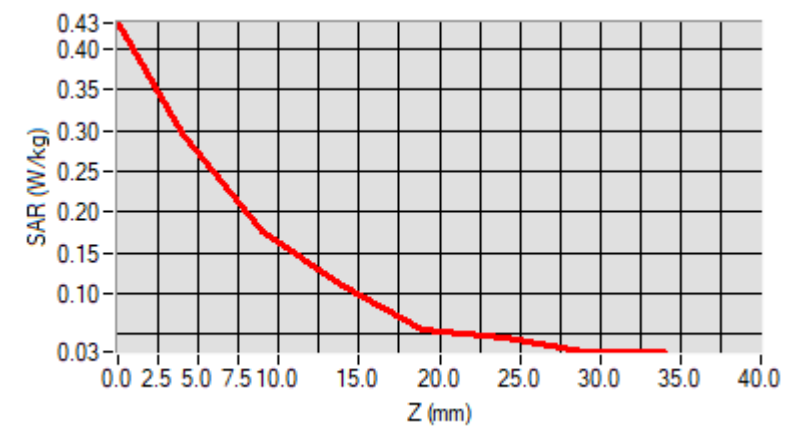
#### D. SAR 1g & 10g

SAR 10g (W/Kg)	0.146
SAR 1g (W/Kg)	0.274
Variation (%)	1.020
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.628471

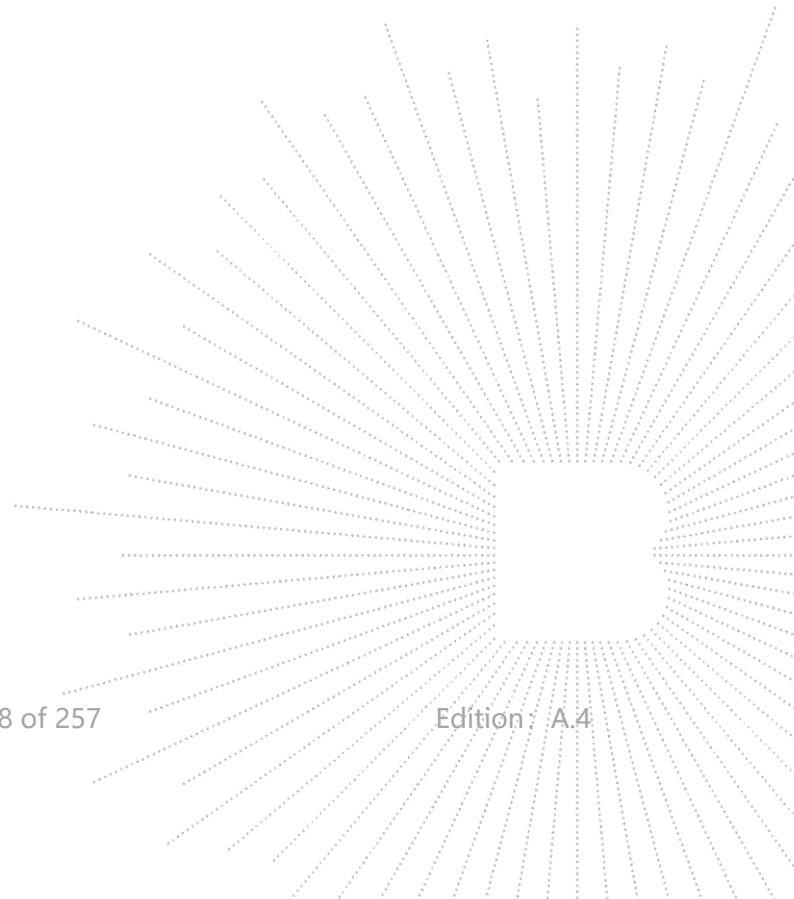
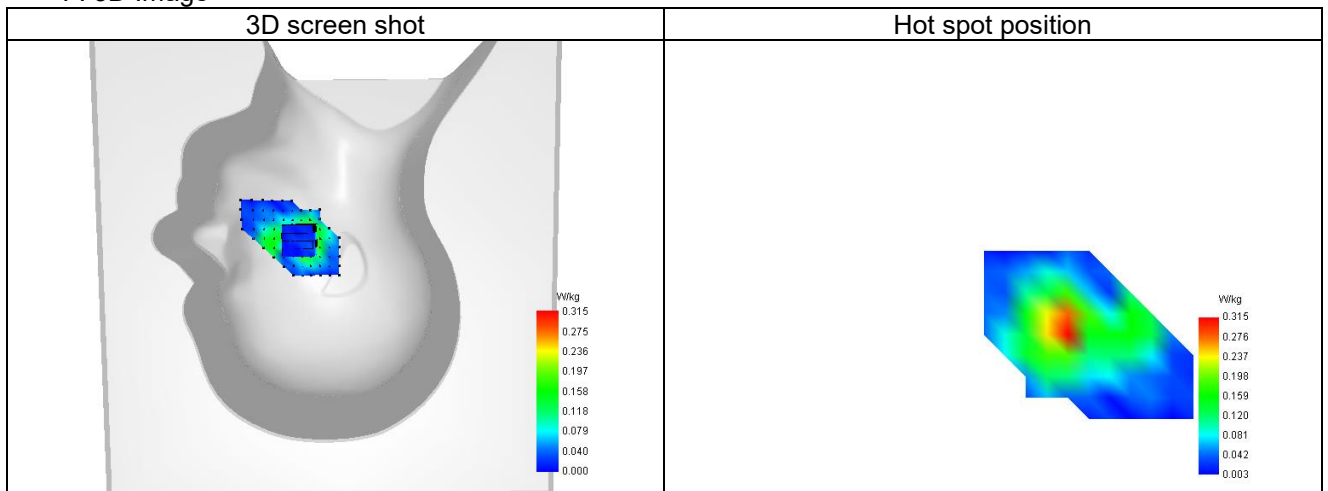
#### E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
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SAR (W/Kg)	0.432	0.297	0.177	0.110	0.055	0.047	0.028
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## F. 3D Image



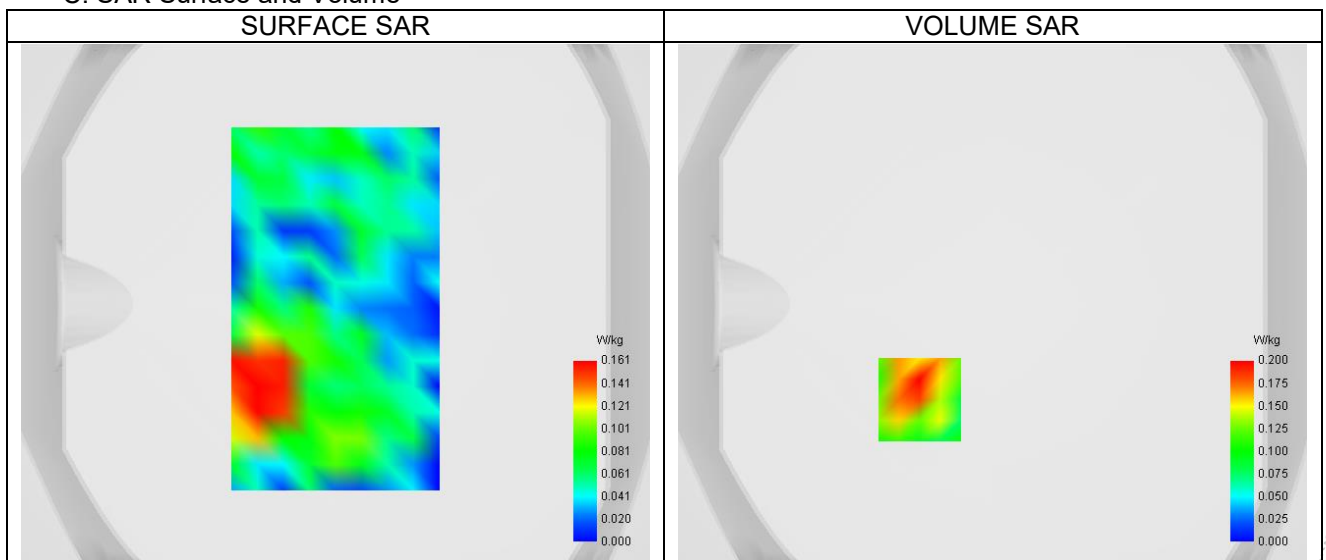
## Plot 2

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle (190)
Signal	TDMA (Crest factor: 8.0)

**B. Permittivity**

Frequency (MHz)	836.600
Relative permittivity (real part)	41.500
Relative permittivity (imaginary part)	19.400
Conductivity (S/m)	0.902

**C. SAR Surface and Volume**


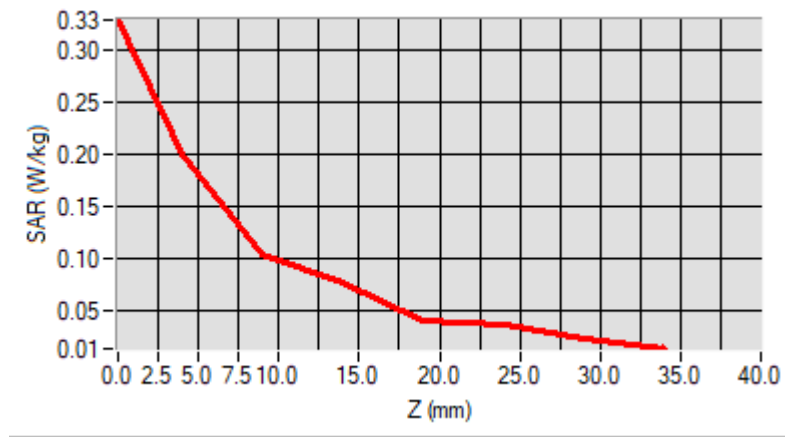
Maximum location: X=-28.00, Y=-37.00 ; SAR Peak: 0.35 W/kg

**D. SAR 1g & 10g**

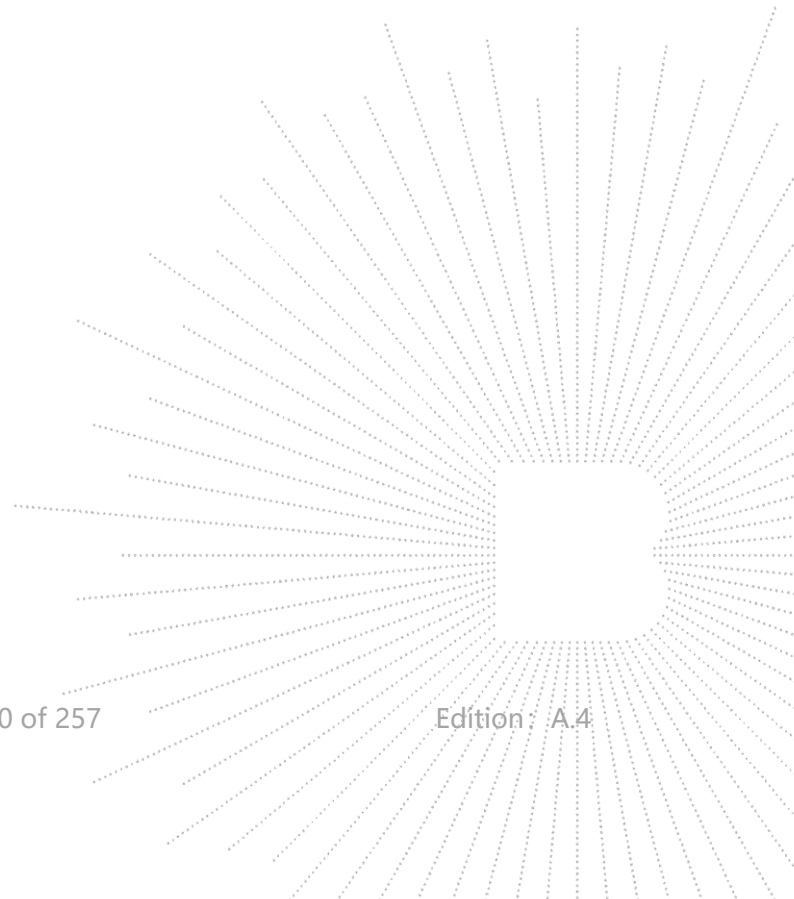
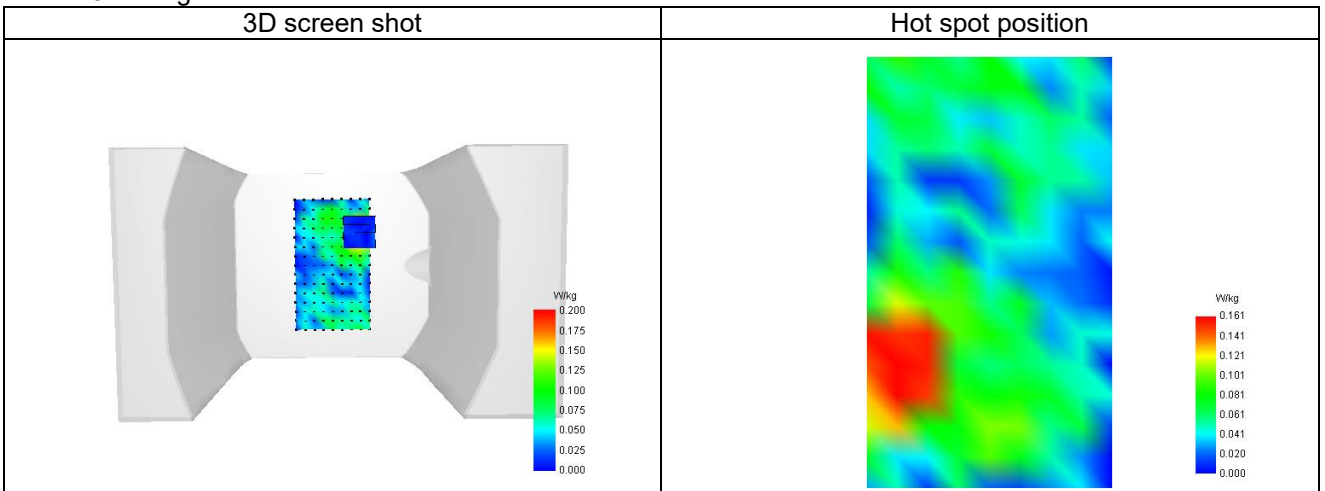
SAR 10g (W/Kg)	0.105
SAR 1g (W/Kg)	0.183
Variation (%)	0.490
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	60.390233

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.330	0.200	0.104	0.076	0.040	0.036	0.022



## F. 3D Image



## Plot 3

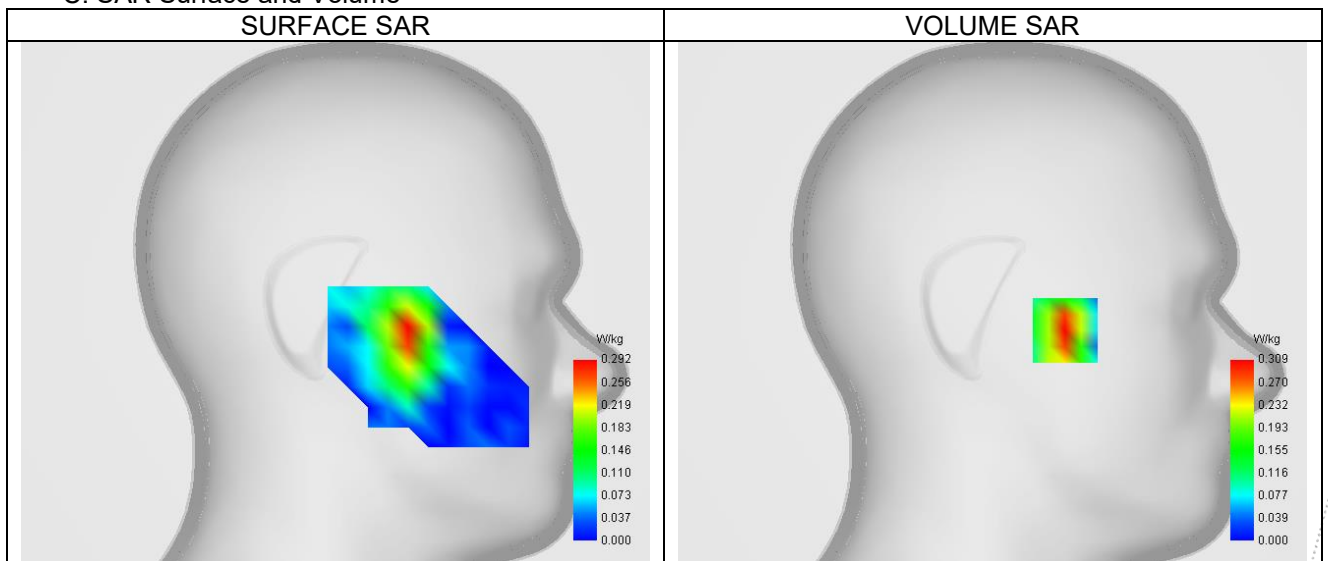
### A. Experimental conditions.

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle (661)
Signal	TDMA (Crest factor: 8.0)

### B. Permittivity

Frequency (MHz)	1880.000
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

### C. SAR Surface and Volume



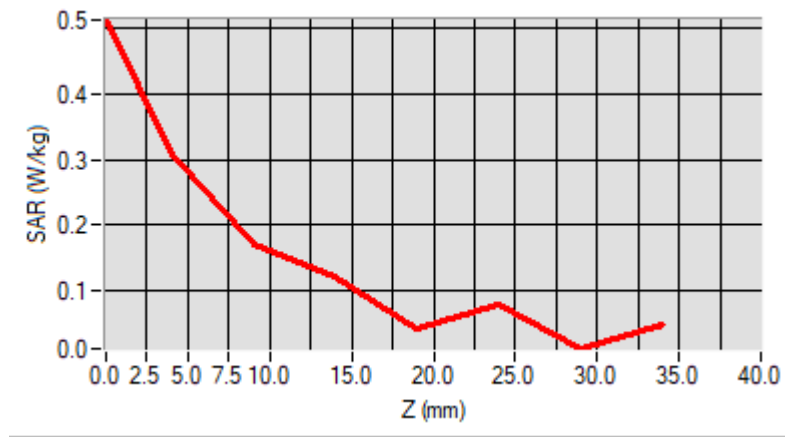
Maximum location: X=-36.00, Y=-14.00 ; SAR Peak: 0.51 W/kg

### D. SAR 1g & 10g

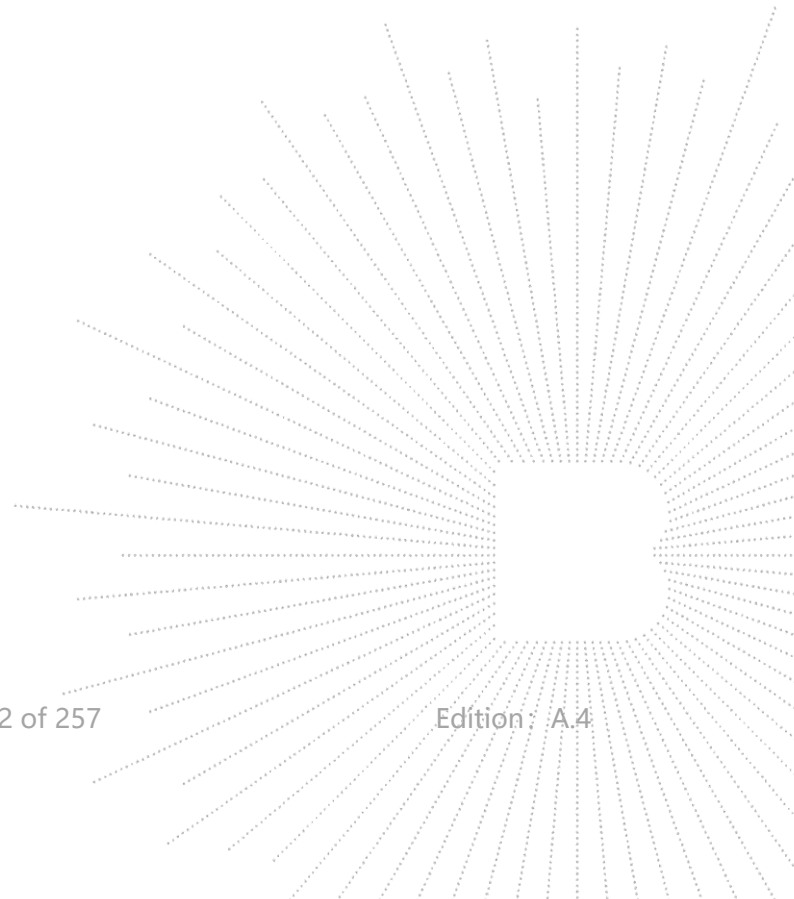
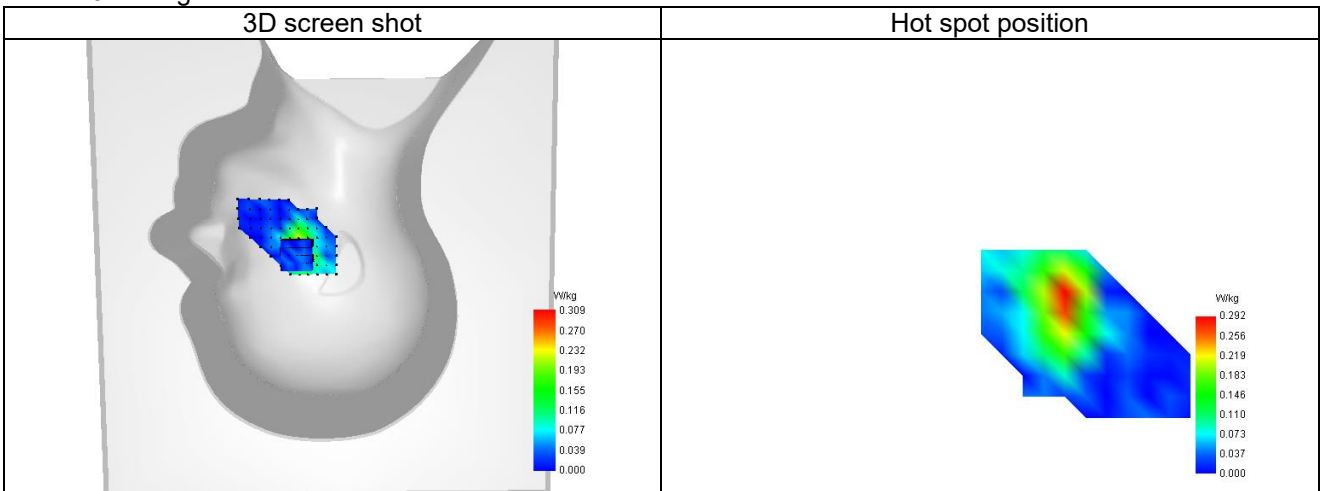
SAR 10g (W/Kg)	0.150
SAR 1g (W/Kg)	0.291
Variation (%)	-1.360
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.555637

### E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.513	0.309	0.171	0.121	0.043	0.078	0.011



## F. 3D Image





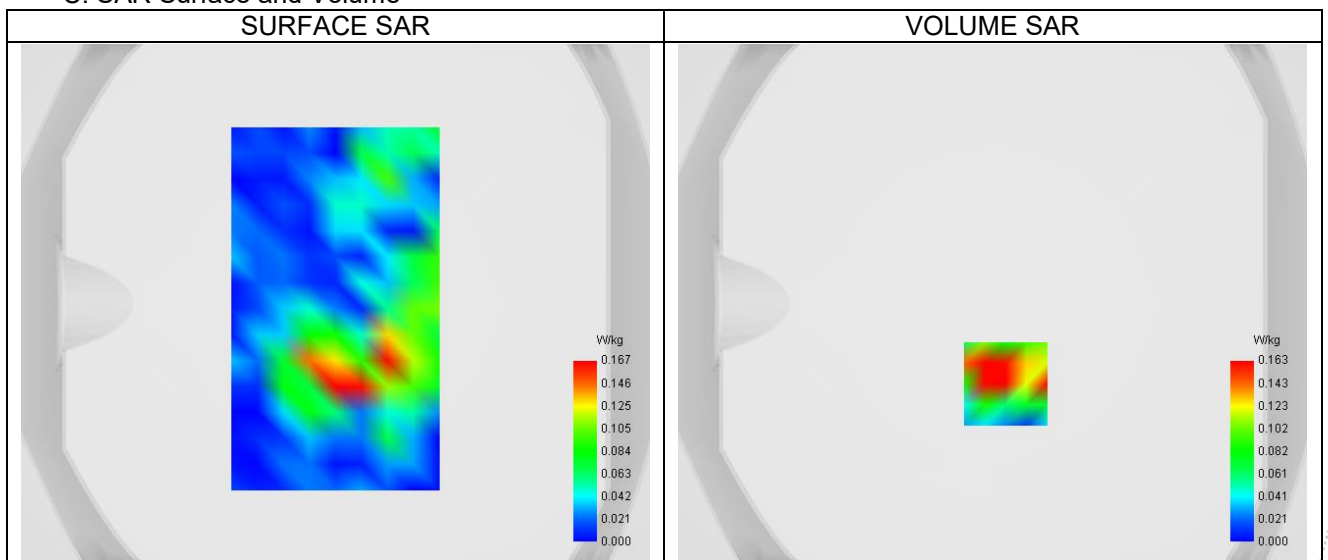
## Plot 4

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle (661)
Signal	TDMA (Crest factor: 8.0)

**B. Permittivity**

Frequency (MHz)	1880.000
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

**C. SAR Surface and Volume**


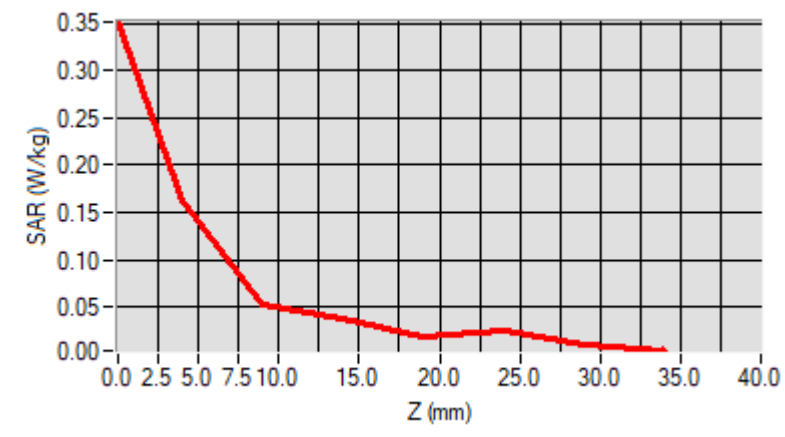
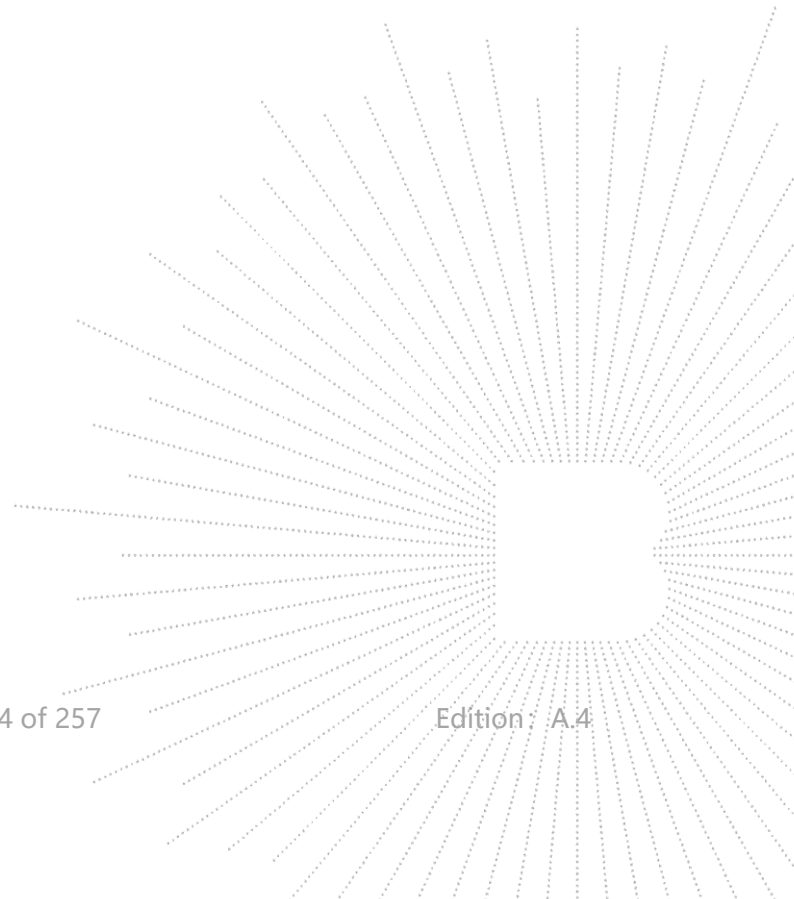
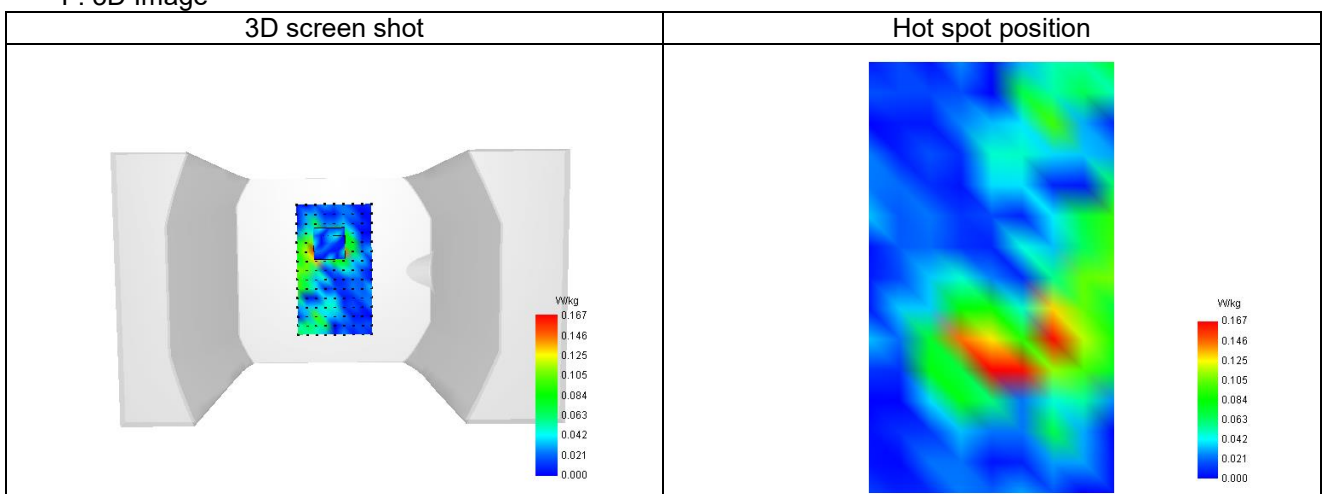
Maximum location: X=5.00, Y=-31.00 ; SAR Peak: 0.34 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.077
SAR 1g (W/Kg)	0.159
Variation (%)	-2.580
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	57.224002

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.351	0.163	0.053	0.038	0.020	0.026	0.009


**F. 3D Image**


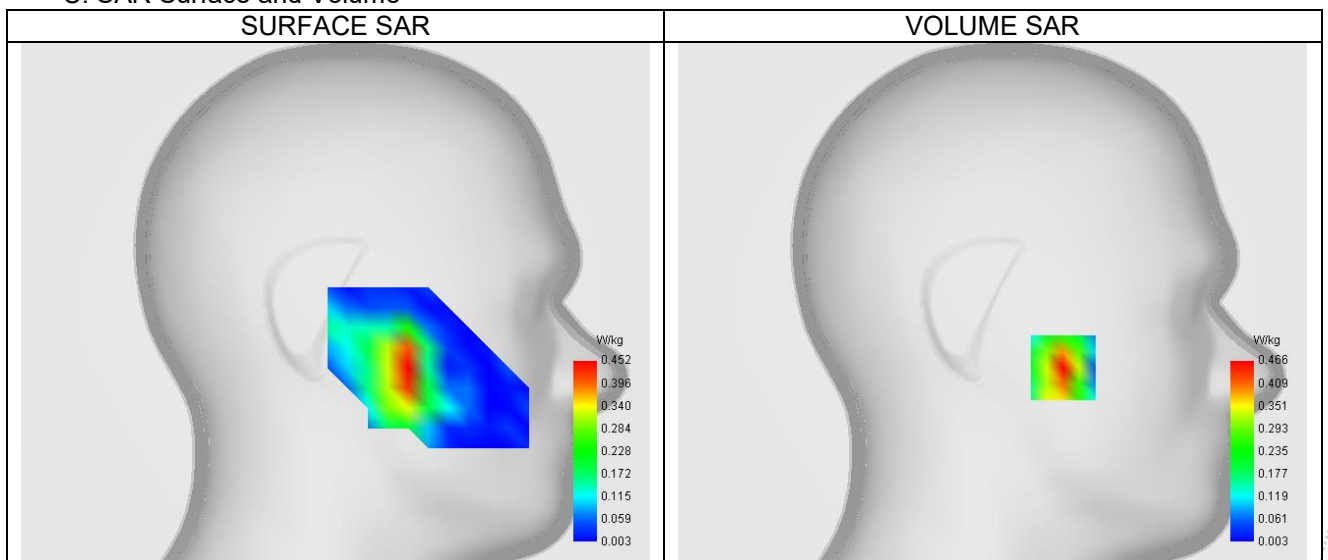
## Plot 5

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Band2_WCDMA1900
Channels	High (9538)
Signal	WCDMA (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1907.600
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

**C. SAR Surface and Volume**


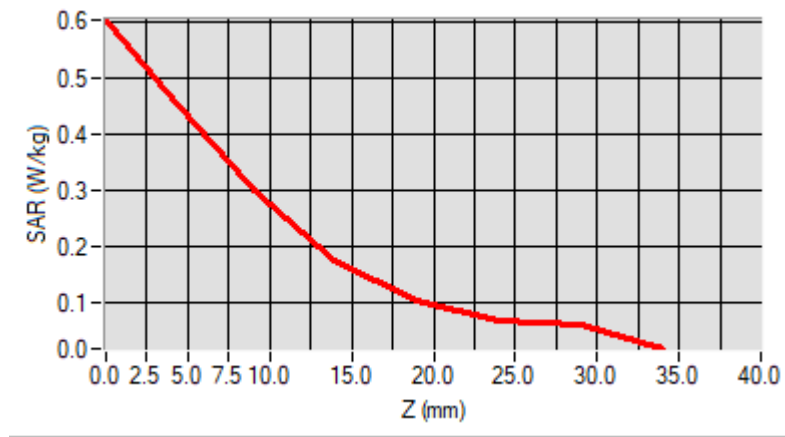
Maximum location: X=-35.00, Y=-32.00 ; SAR Peak: 0.73 W/kg

**D. SAR 1g & 10g**

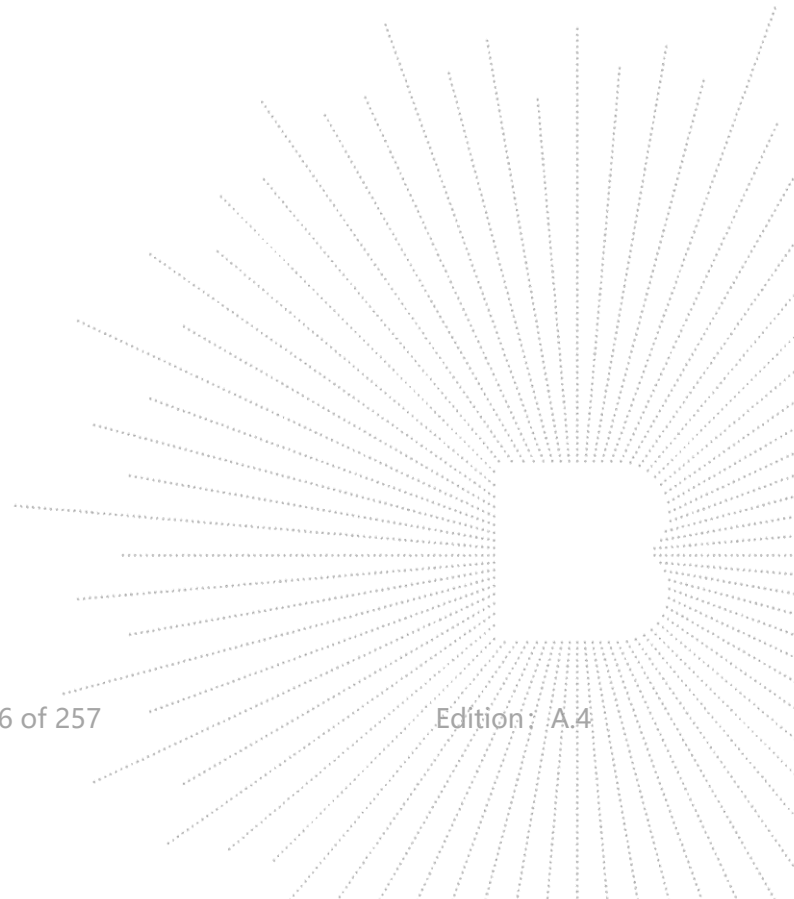
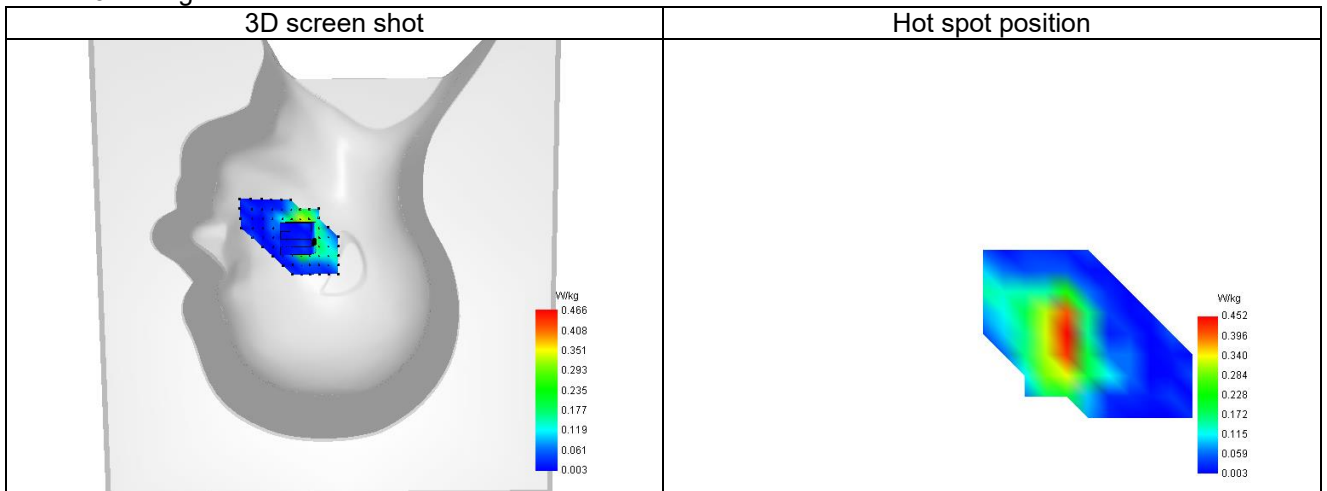
SAR 10g (W/Kg)	0.223
SAR 1g (W/Kg)	0.422
Variation (%)	-1.100
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	64.532694

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.605	0.466	0.301	0.176	0.101	0.068	0.058



## F. 3D Image



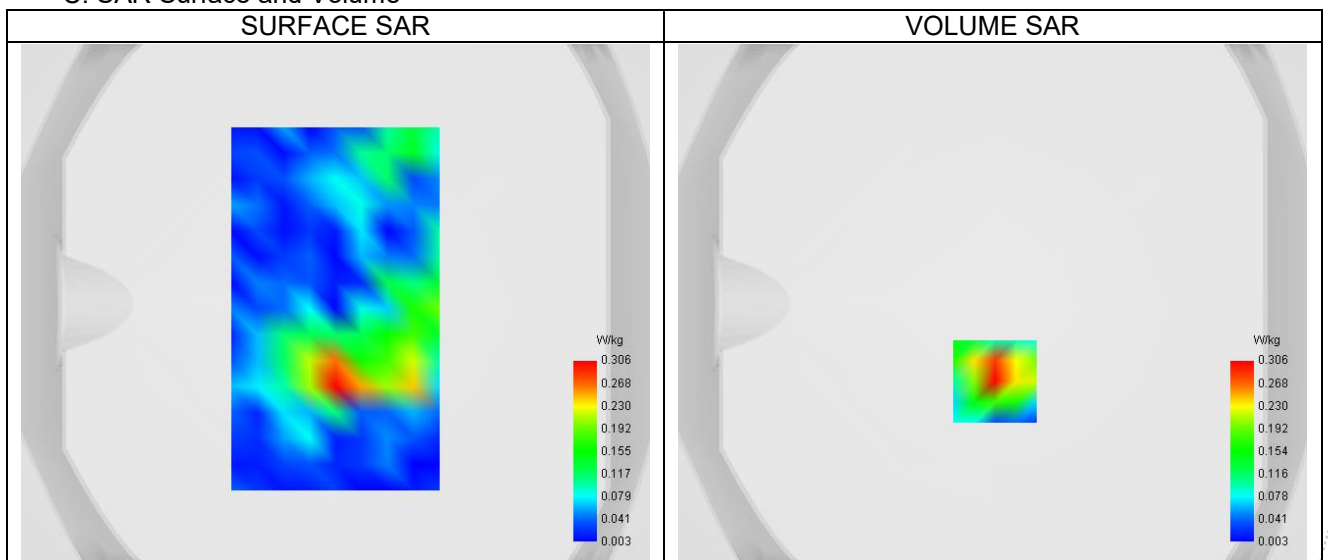
## Plot 6

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band2_WCDMA1900
Channels	High (9538)
Signal	WCDMA (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1907.600
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

**C. SAR Surface and Volume**


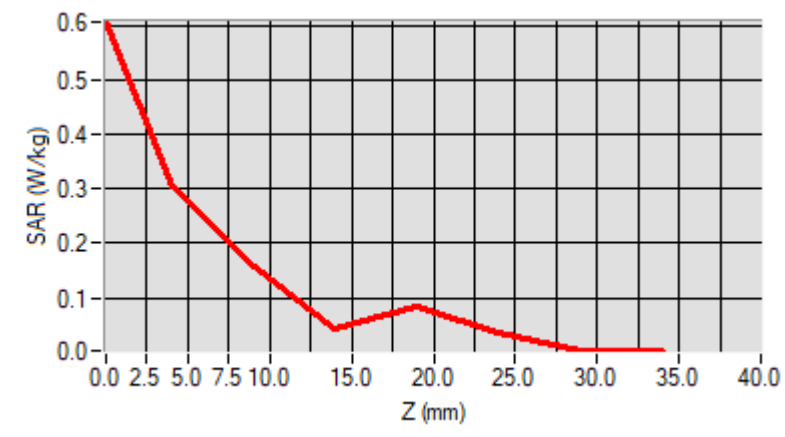
Maximum location: X=1.00, Y=-30.00 ; SAR Peak: 0.59 W/kg

**D. SAR 1g & 10g**

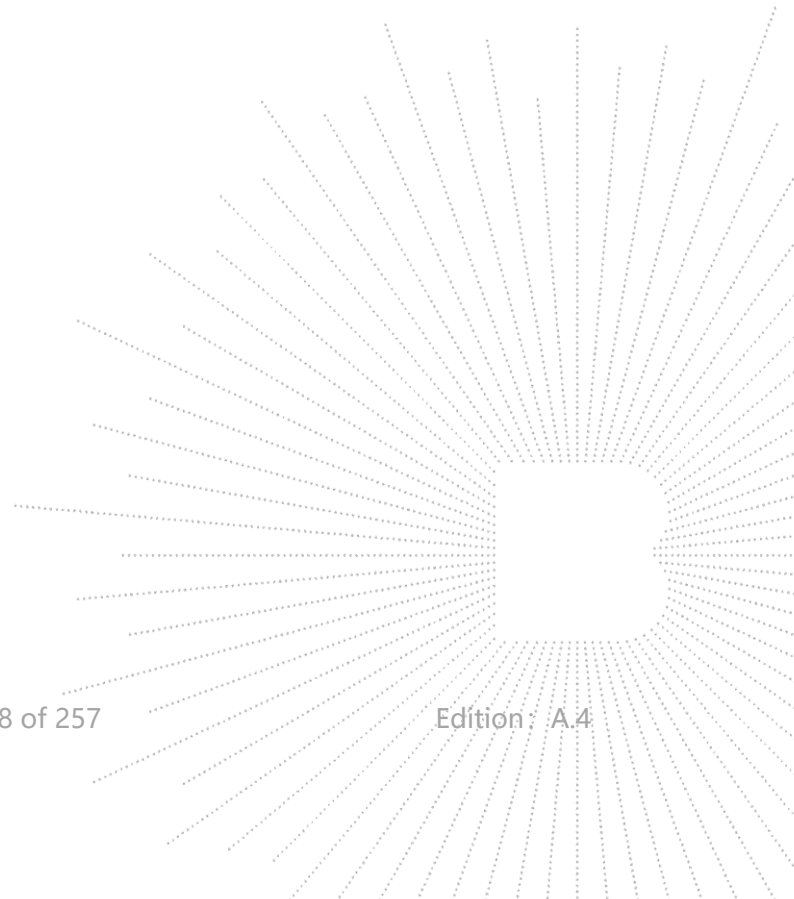
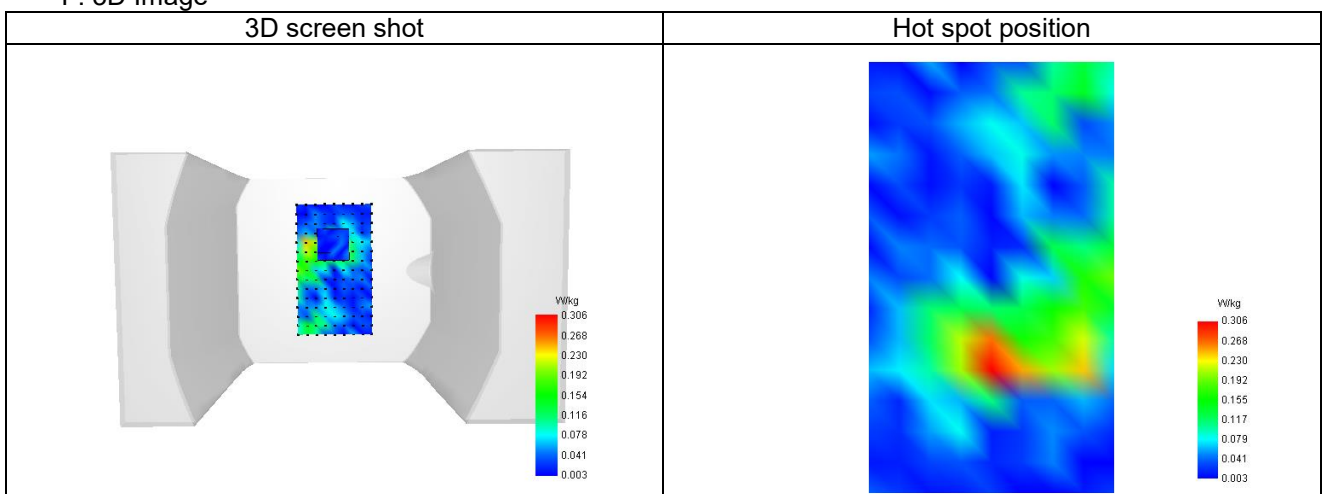
SAR 10g (W/Kg)	0.144
SAR 1g (W/Kg)	0.299
Variation (%)	0.510
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	51.636405

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.606	0.306	0.158	0.045	0.086	0.036	0.003



## F. 3D Image



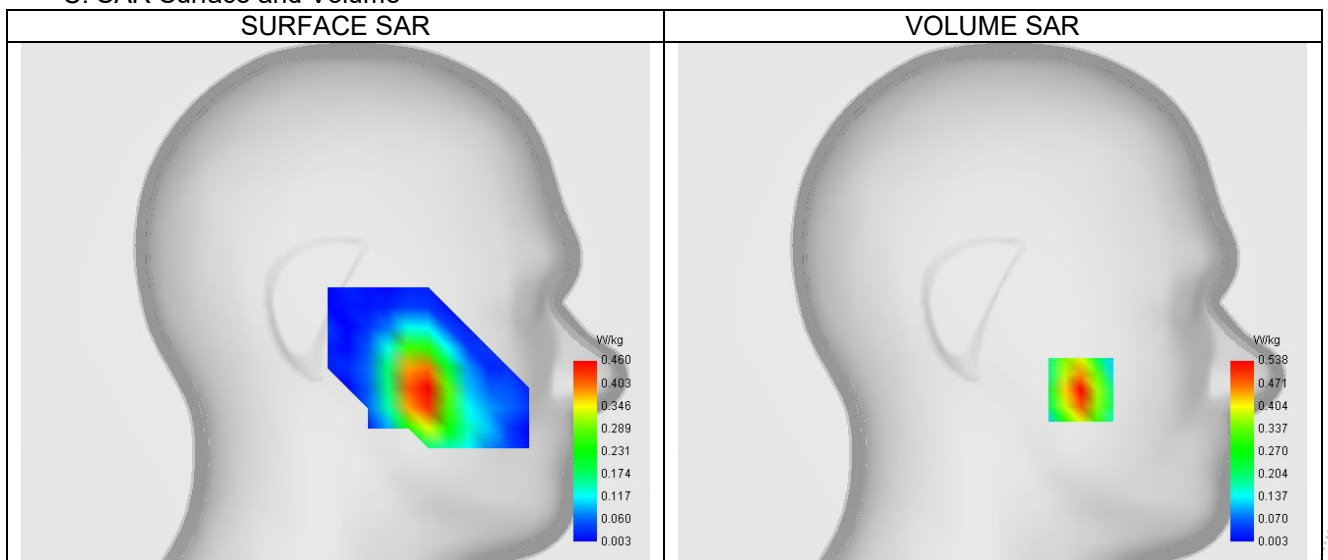
## Plot 7

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.35
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Band4_WCDMA1700
Channels	Low (1312)
Signal	WCDMA (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1712.400
Relative permittivity (real part)	40.116
Relative permittivity (imaginary part)	14.136
Conductivity (S/m)	1.361

**C. SAR Surface and Volume**


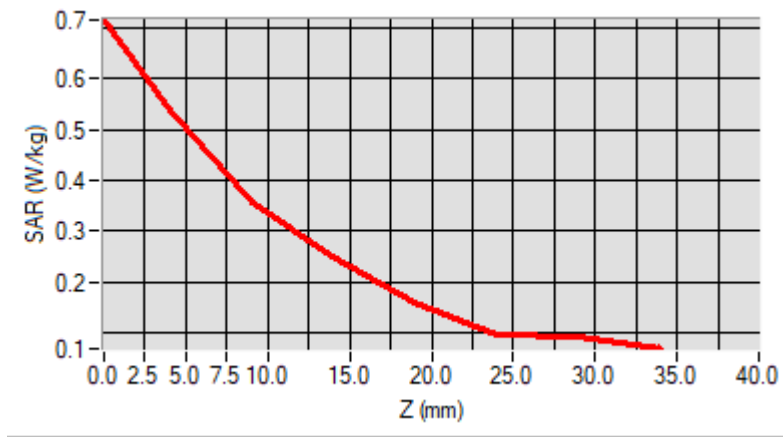
Maximum location: X=-44.00, Y=-43.00 ; SAR Peak: 0.72 W/kg

**D. SAR 1g & 10g**

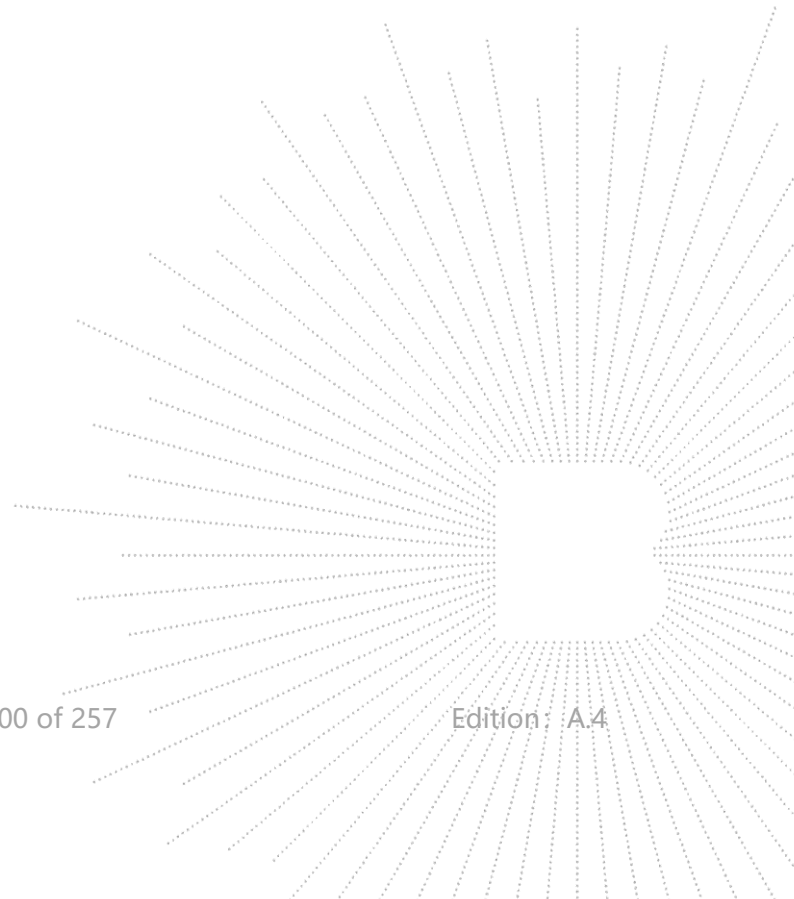
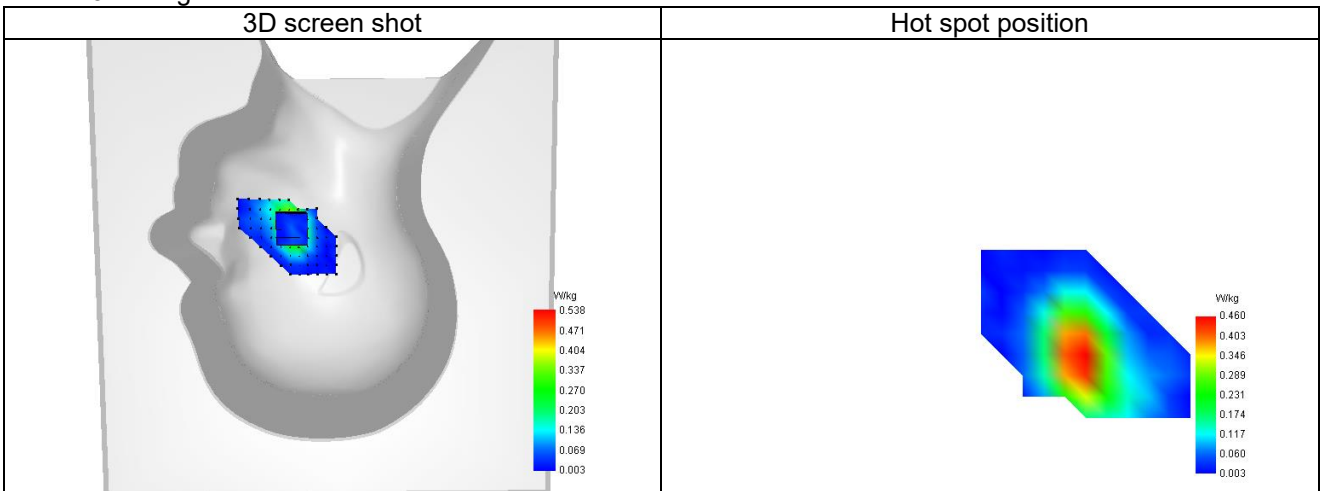
SAR 10g (W/Kg)	0.284
SAR 1g (W/Kg)	0.488
Variation (%)	-3.940
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	66.083077

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.716	0.538	0.355	0.250	0.161	0.096	0.091



## F. 3D Image





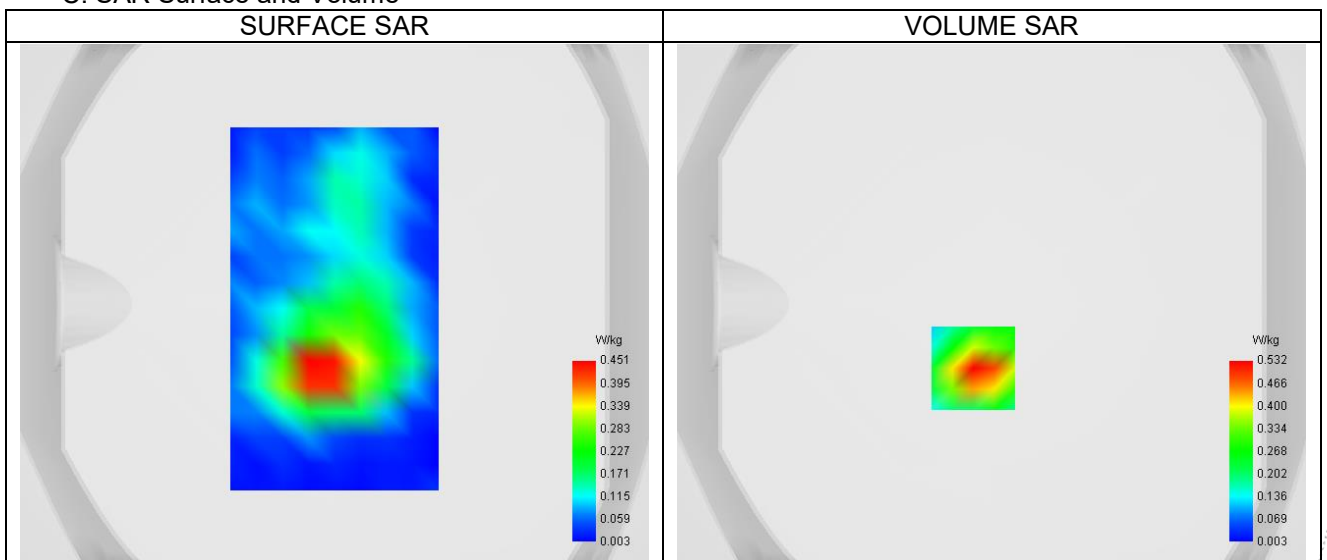
## Plot 8

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.35
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band4_WCDMA1700
Channels	Low (1312)
Signal	WCDMA (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1712.400
Relative permittivity (real part)	40.116
Relative permittivity (imaginary part)	14.136
Conductivity (S/m)	1.361

**C. SAR Surface and Volume**


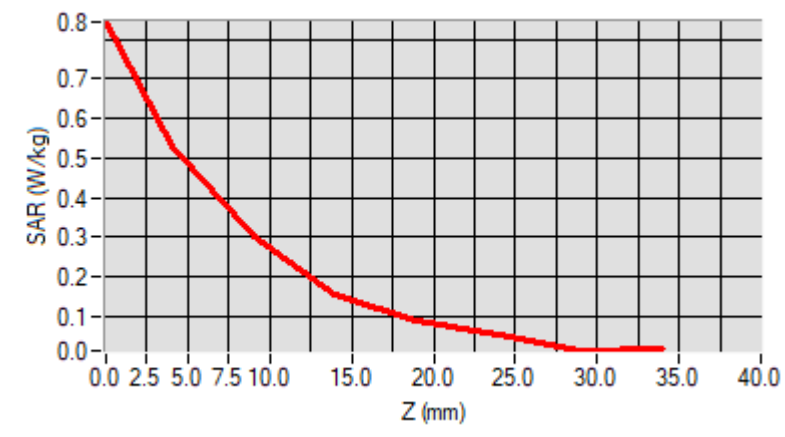
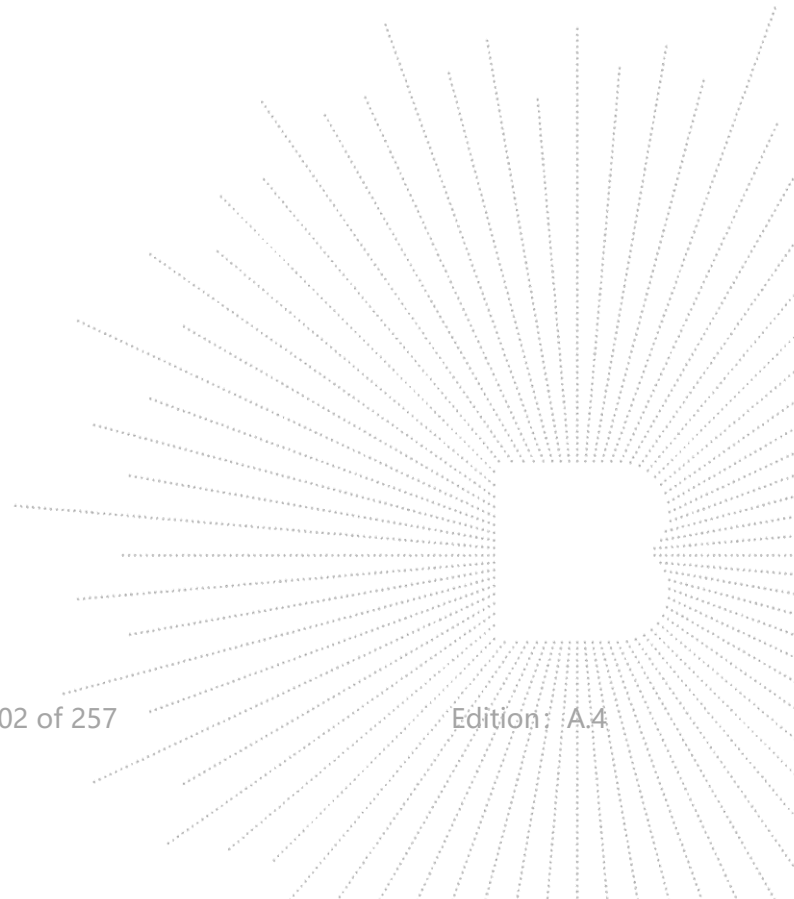
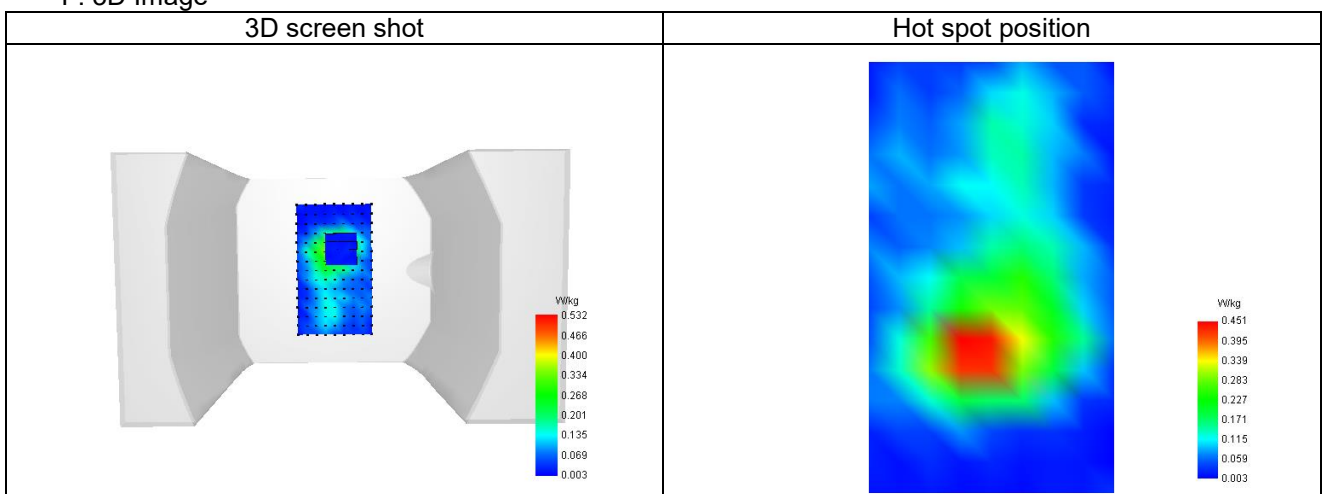
Maximum location: X=-7.00, Y=-25.00 ; SAR Peak: 0.84 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.252
SAR 1g (W/Kg)	0.499
Variation (%)	1.380
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	56.512802

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.845	0.532	0.301	0.153	0.087	0.053	0.012


**F. 3D Image**


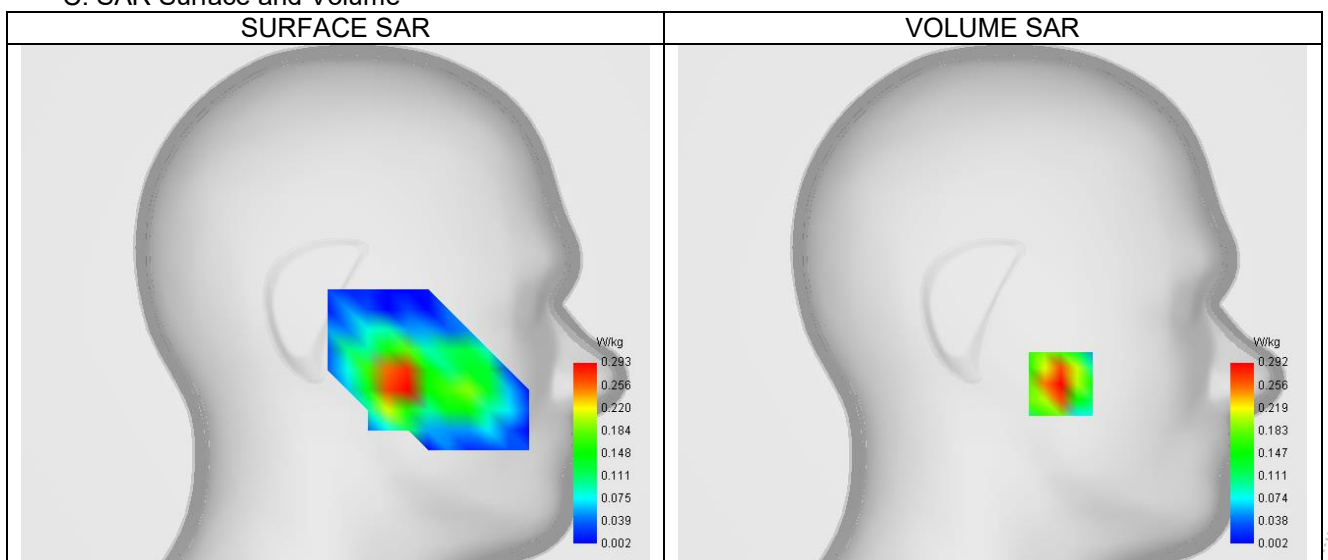
## Plot 9

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Band5_WCDMA850
Channels	Low (4132)
Signal	WCDMA (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	826.400
Relative permittivity (real part)	42.285
Relative permittivity (imaginary part)	20.226
Conductivity (S/m)	0.940

**C. SAR Surface and Volume**


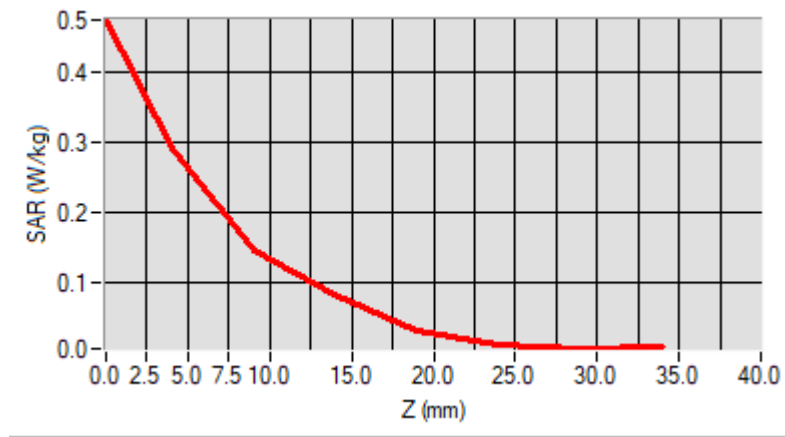
Maximum location: X=-34.00, Y=-39.00 ; SAR Peak: 0.50 W/kg

**D. SAR 1g & 10g**

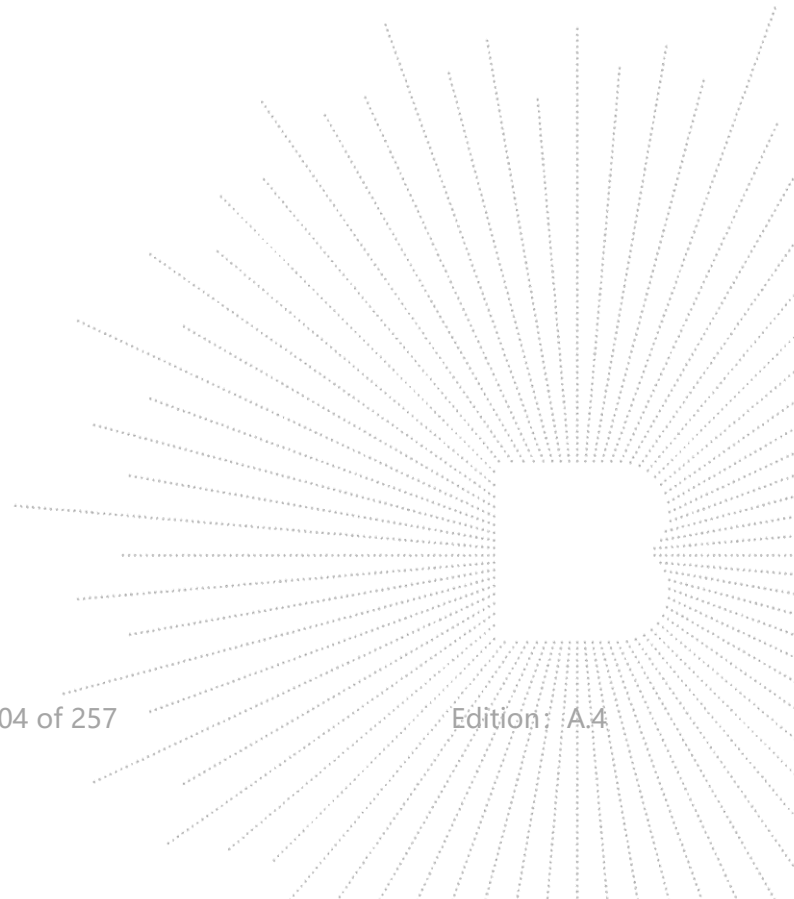
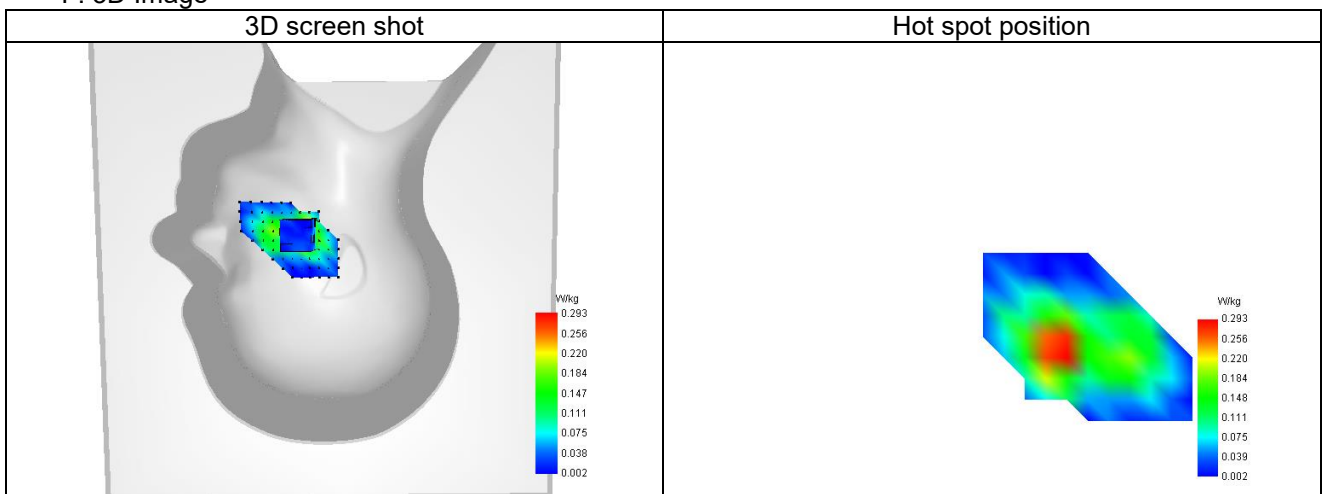
SAR 10g (W/Kg)	0.147
SAR 1g (W/Kg)	0.285
Variation (%)	-2.630
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.331369

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.473	0.292	0.147	0.083	0.031	0.013	0.007



## F. 3D Image



## Plot 10

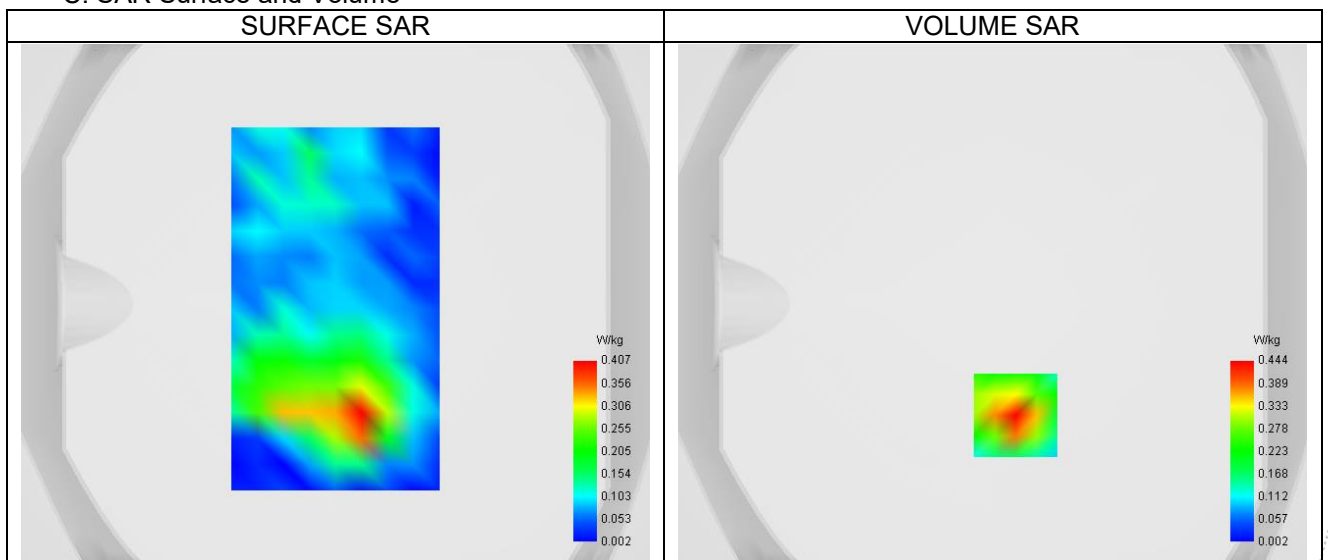
### A. Experimental conditions.

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band5_WCDMA850
Channels	Low (4132)
Signal	WCDMA (Crest factor: 1.0)

### B. Permittivity

Frequency (MHz)	826.400
Relative permittivity (real part)	42.285
Relative permittivity (imaginary part)	20.226
Conductivity (S/m)	0.940

### C. SAR Surface and Volume



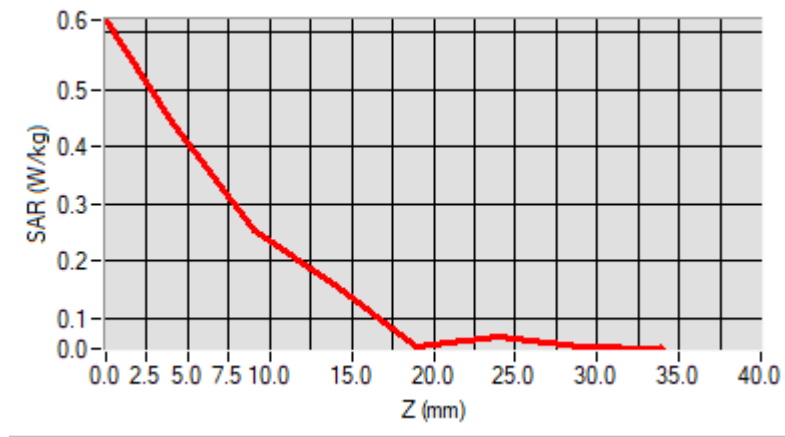
Maximum location: X=9.00, Y=-43.00 ; SAR Peak: 0.69 W/kg

### D. SAR 1g & 10g

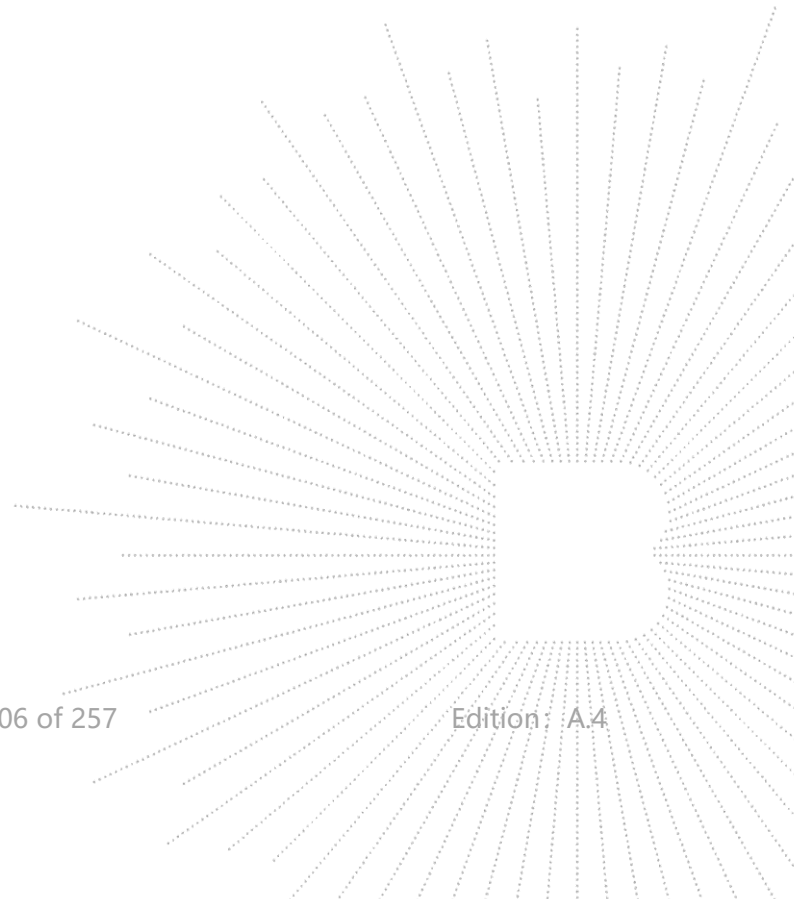
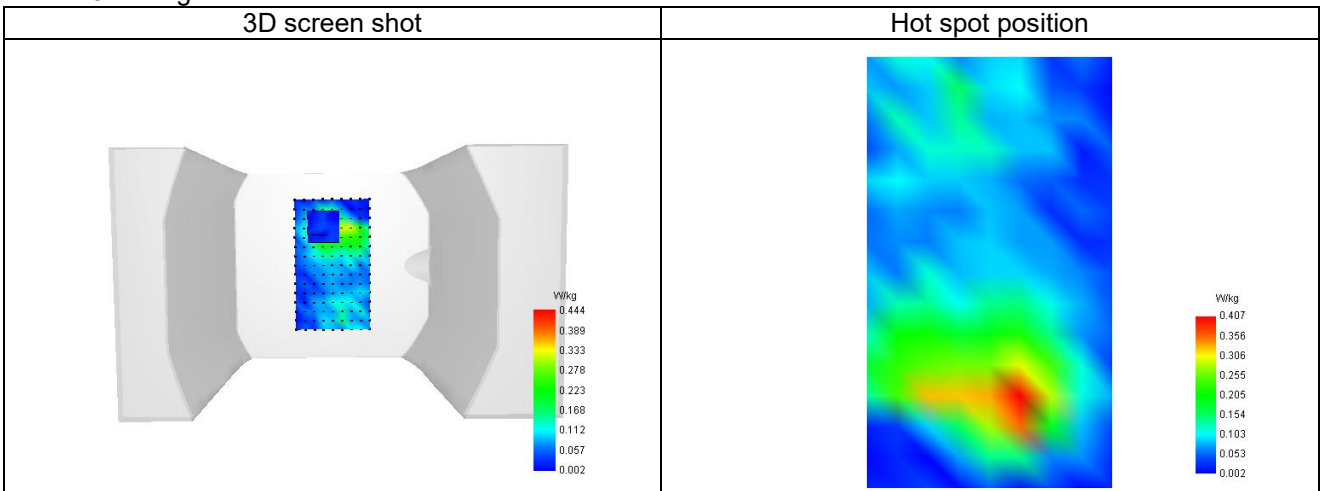
SAR 10g (W/Kg)	0.212
SAR 1g (W/Kg)	0.415
Variation (%)	-1.110
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	56.810973

### E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.621	0.444	0.252	0.160	0.049	0.068	0.050



## F. 3D Image



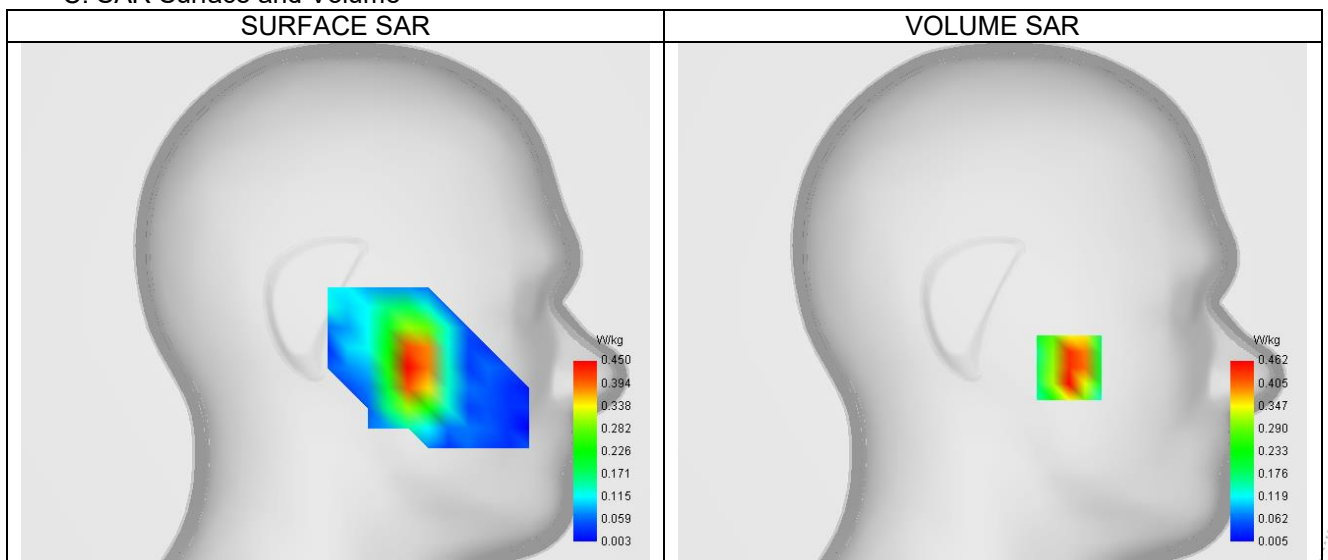
## Plot 11

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 2
Channels	Low (18700)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1860.000
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

**C. SAR Surface and Volume**


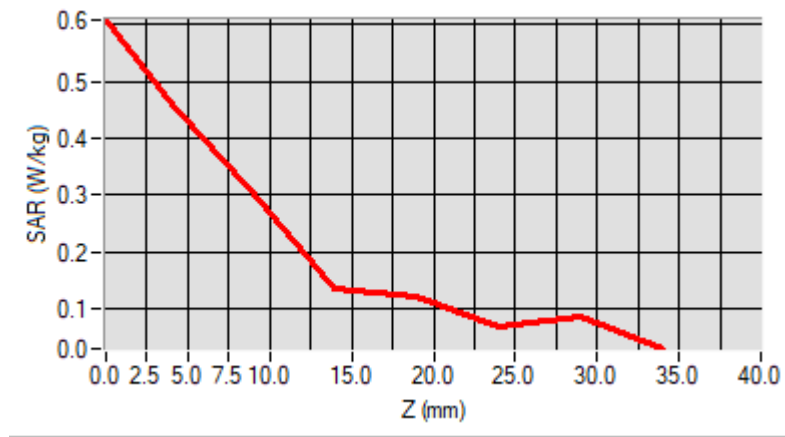
Maximum location: X=-38.00, Y=-32.00 ; SAR Peak: 0.77 W/kg

**D. SAR 1g & 10g**

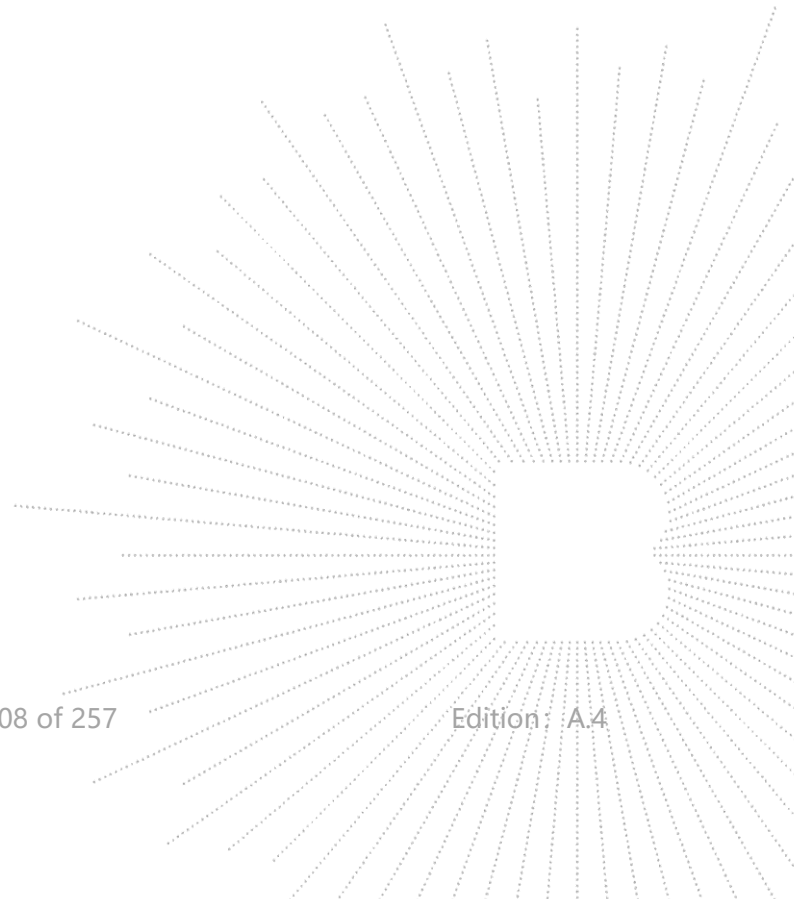
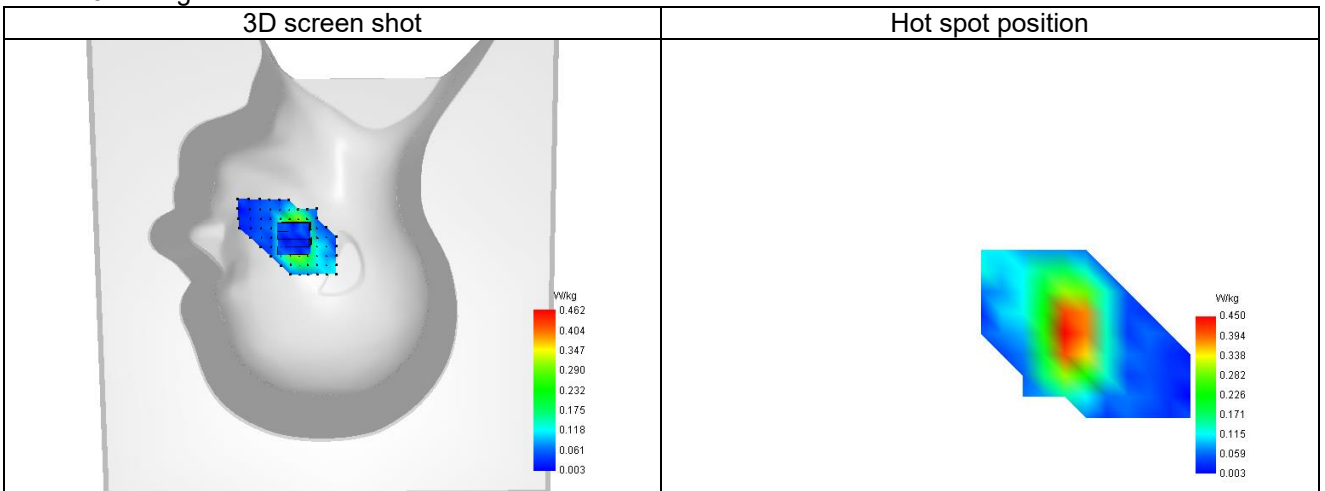
SAR 10g (W/Kg)	0.245
SAR 1g (W/Kg)	0.435
Variation (%)	2.620
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	62.200227

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.609	0.462	0.300	0.136	0.120	0.068	0.086



## F. 3D Image





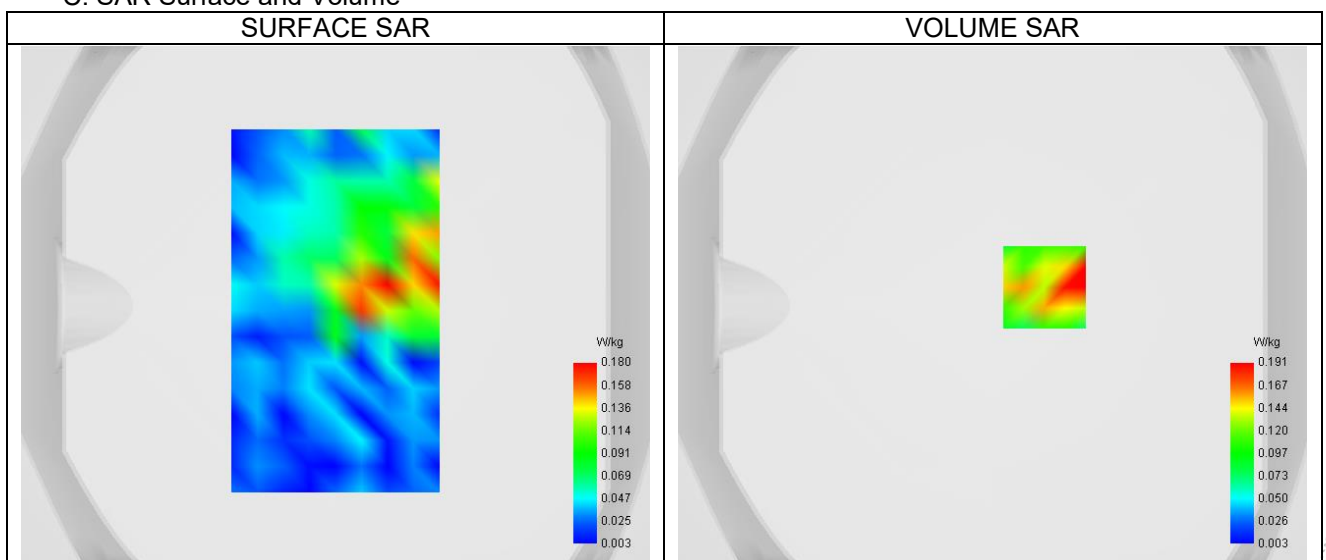
## Plot 12

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.27
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Channels	Low (18700)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

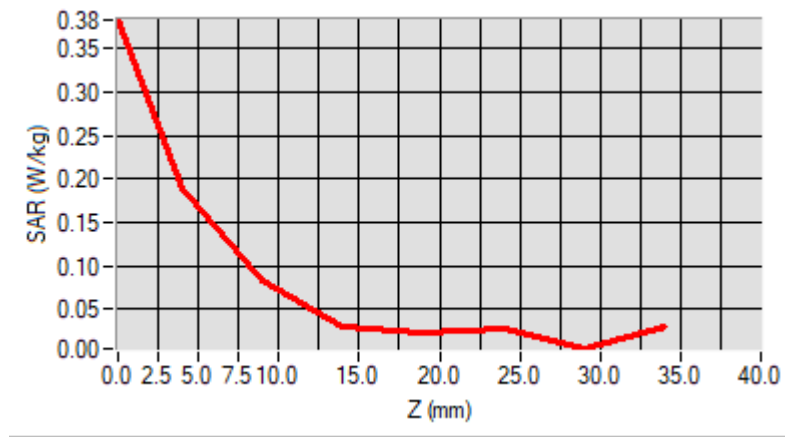
Frequency (MHz)	1860.000
Relative permittivity (real part)	40.000
Relative permittivity (imaginary part)	13.408
Conductivity (S/m)	1.400

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

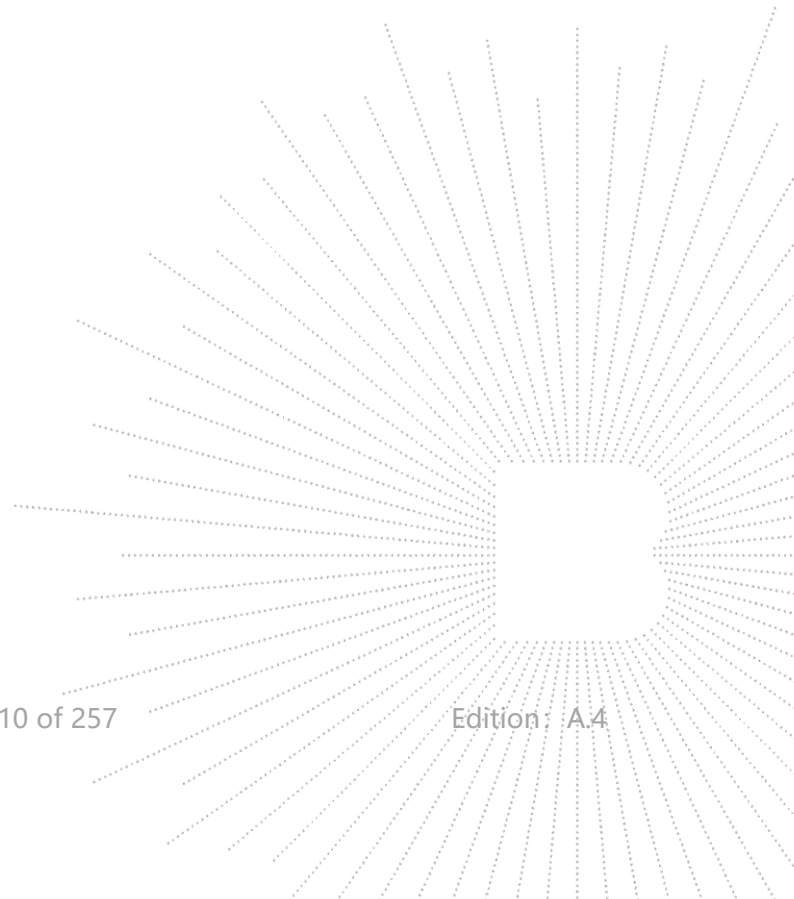
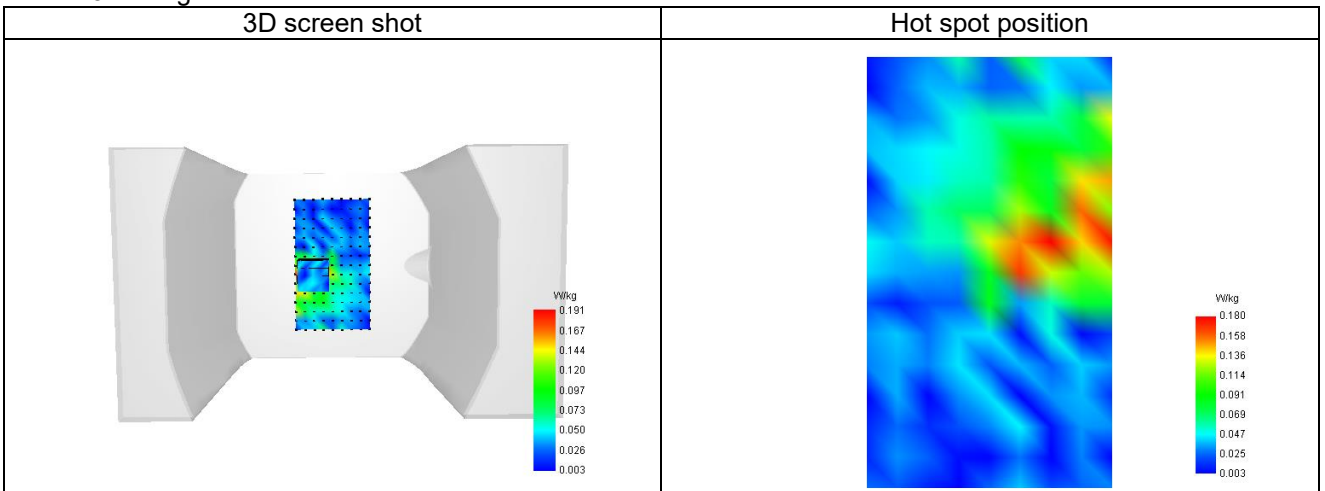
SAR 10g (W/Kg)	0.105
SAR 1g (W/Kg)	0.195
Variation (%)	1.630
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	33.066077

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.383	0.191	0.084	0.030	0.024	0.027	0.005



## F. 3D Image



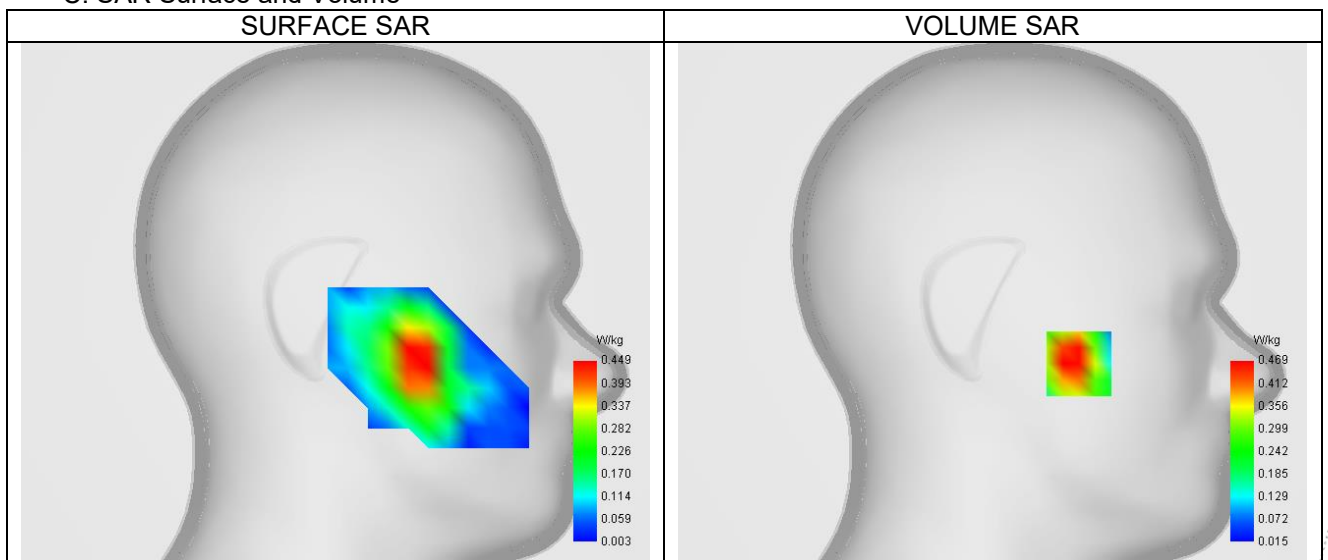
## Plot 13

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.35
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 4
Channels	Middle (20175)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1732.500
Relative permittivity (real part)	40.116
Relative permittivity (imaginary part)	14.136
Conductivity (S/m)	1.361

**C. SAR Surface and Volume**


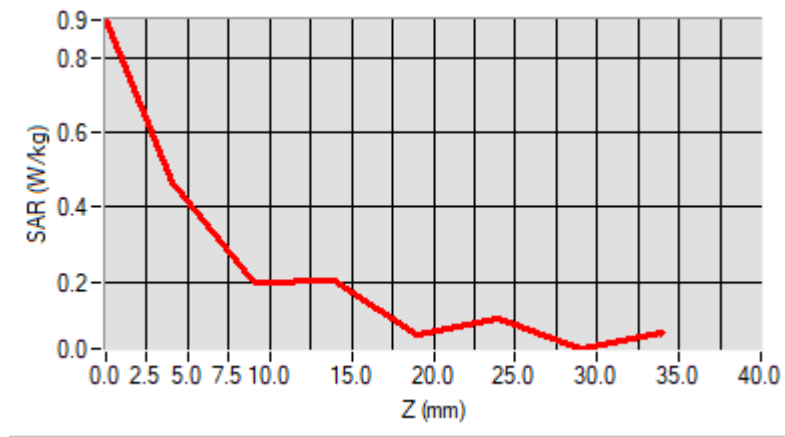
Maximum location: X=-43.00, Y=-30.00 ; SAR Peak: 0.73 W/kg

**D. SAR 1g & 10g**

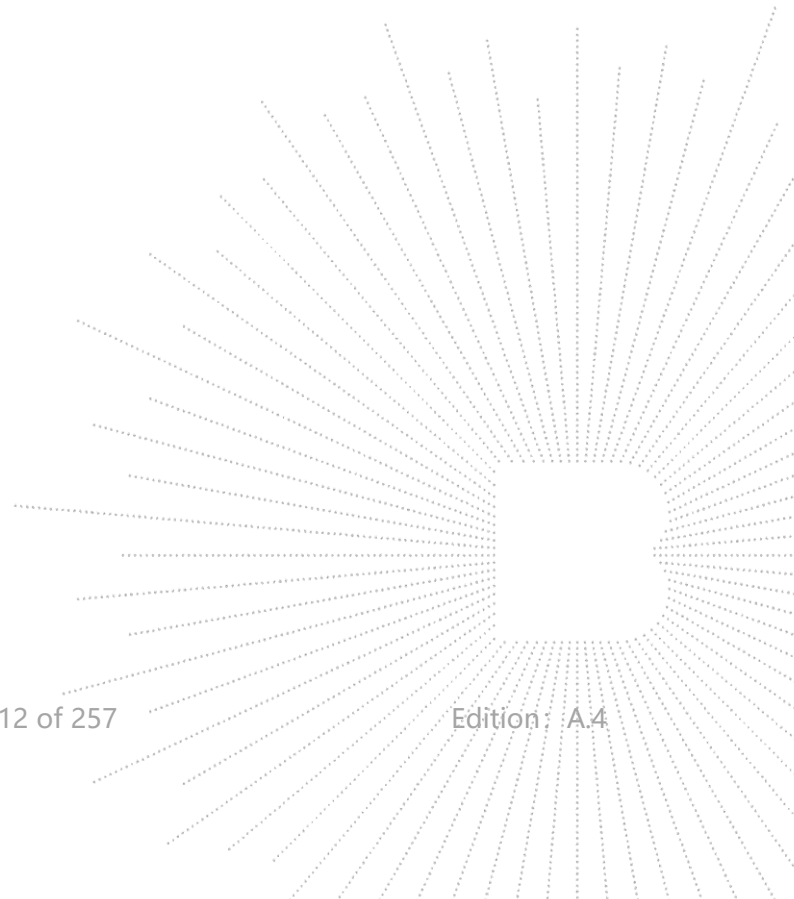
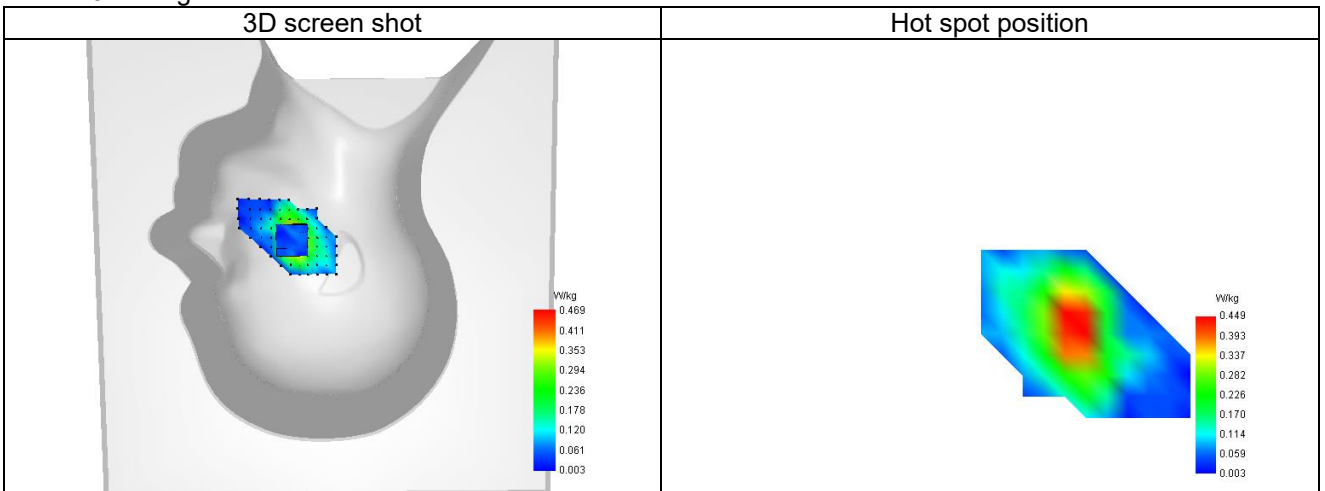
SAR 10g (W/Kg)	0.274
SAR 1g (W/Kg)	0.464
Variation (%)	-3.580
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	62.330189

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.899	0.469	0.197	0.203	0.063	0.101	0.023



## F. 3D Image



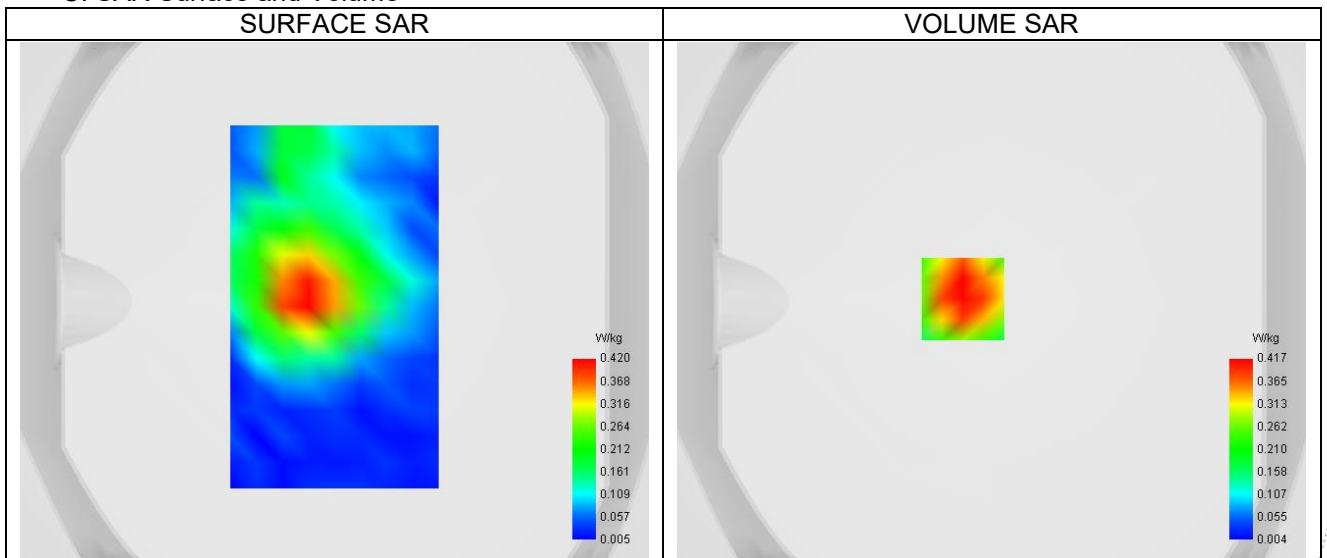
## Plot 14

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.35
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels	Middle (20175)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	1732.500
Relative permittivity (real part)	40.116
Relative permittivity (imaginary part)	14.136
Conductivity (S/m)	1.361

**C. SAR Surface and Volume**


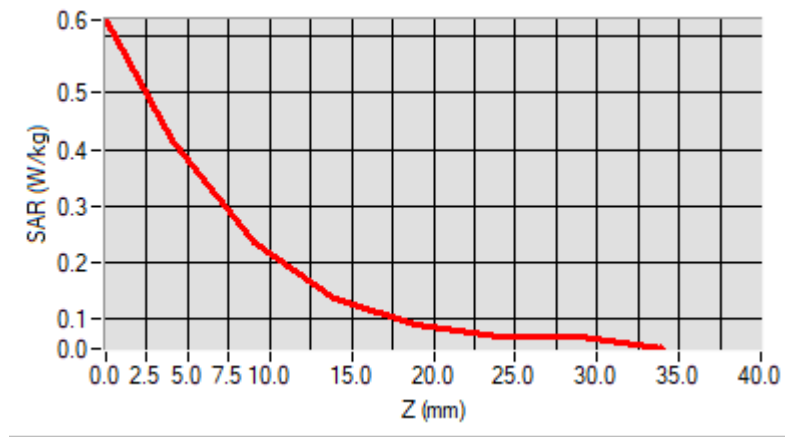
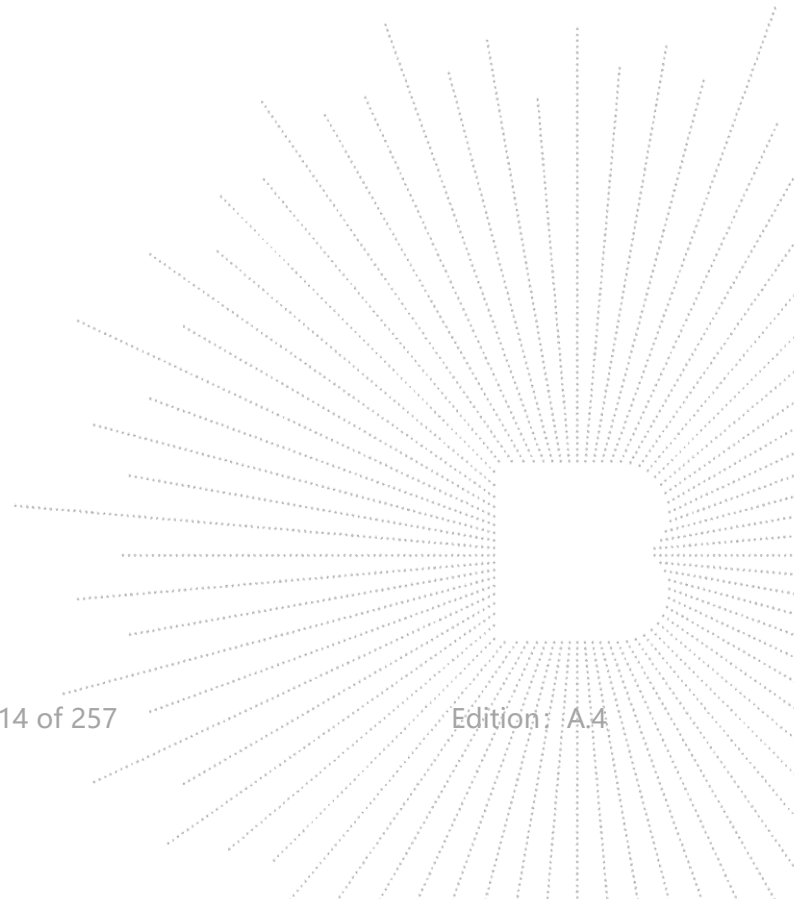
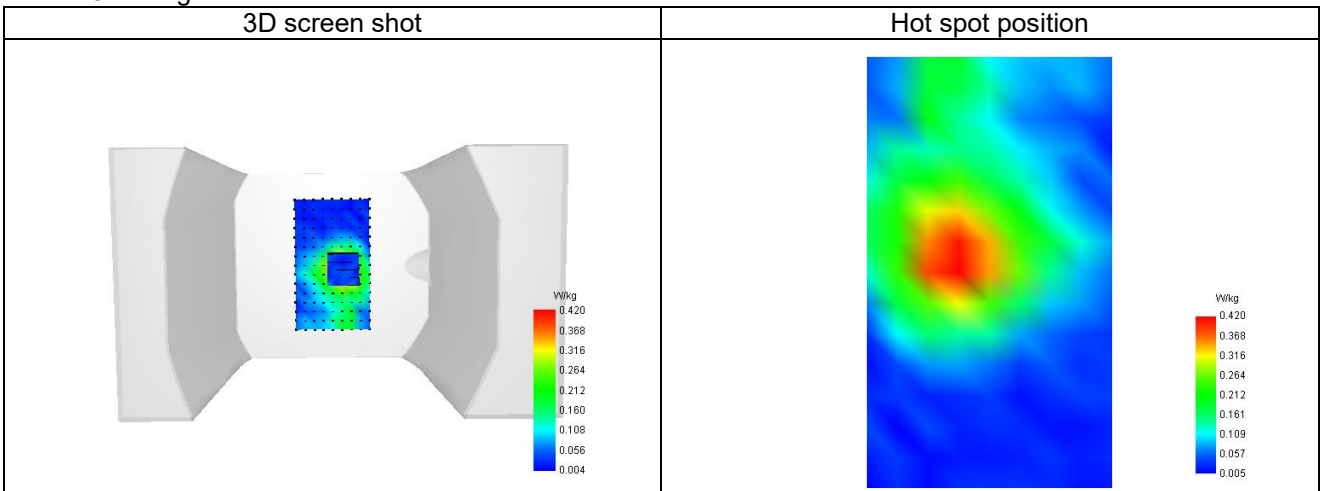
Maximum location: X=-11.00, Y=1.00 ; SAR Peak: 0.72 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.242
SAR 1g (W/Kg)	0.421
Variation (%)	-1.590
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	56.566904

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.629	0.417	0.237	0.136	0.091	0.068	0.069


**F. 3D Image**


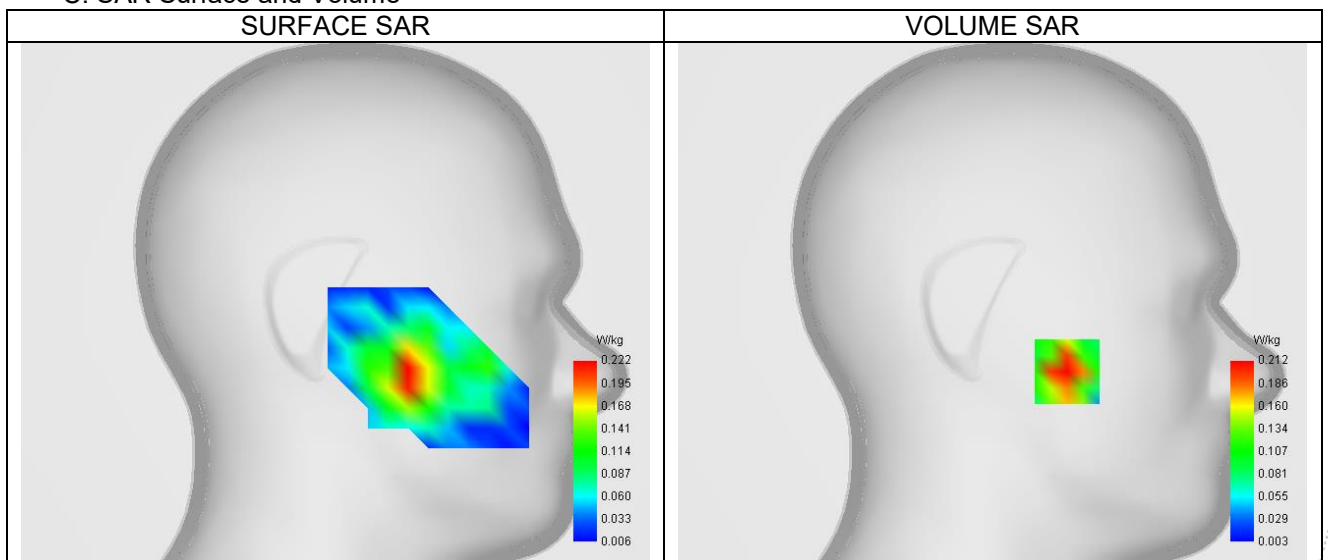
## Plot 15

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 5
Channels	High (20600)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

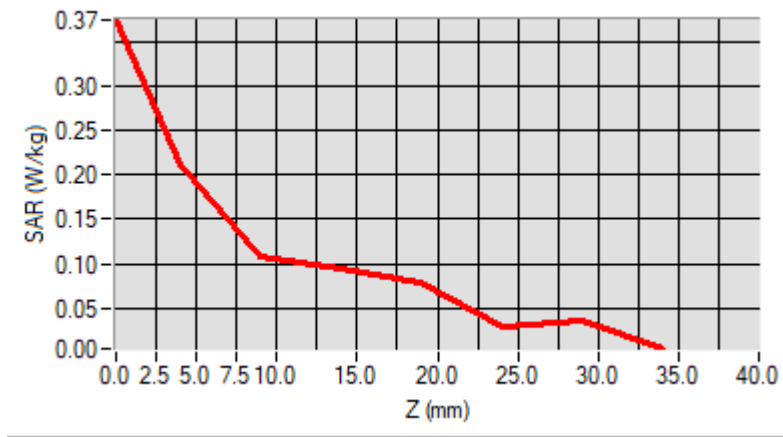
Frequency (MHz)	848.300
Relative permittivity (real part)	42.285
Relative permittivity (imaginary part)	20.225
Conductivity (S/m)	0.940

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

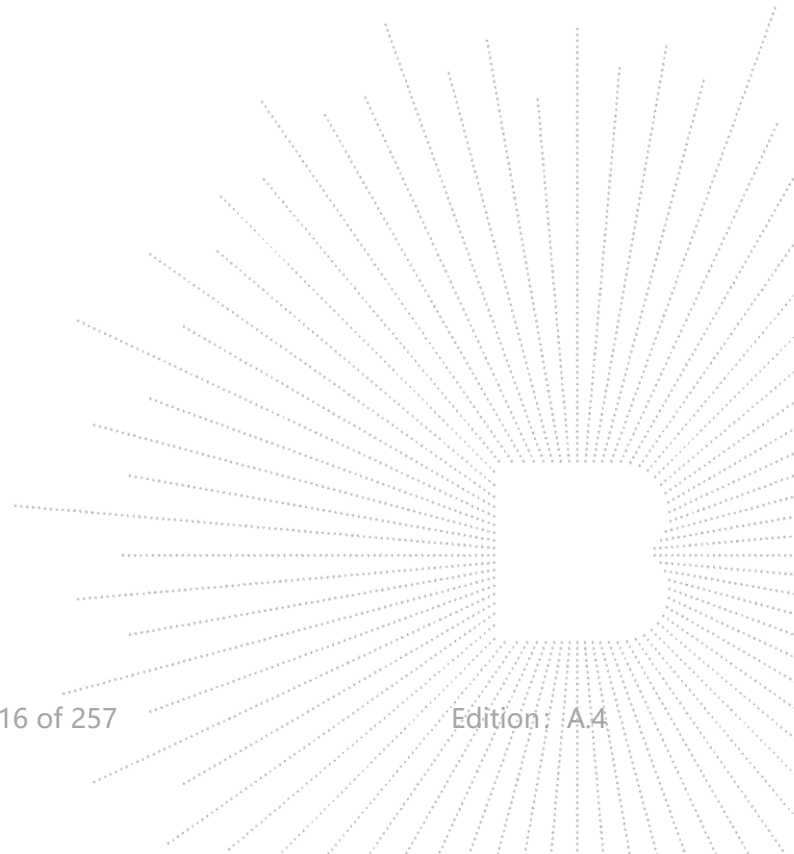
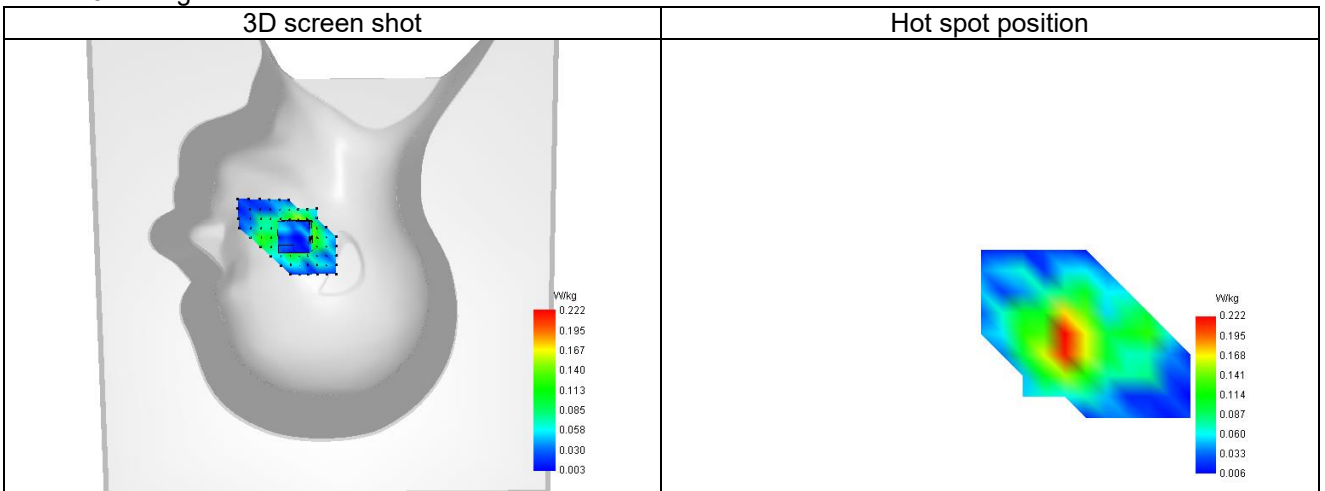
SAR 10g (W/Kg)	0.115
SAR 1g (W/Kg)	0.217
Variation (%)	-3.290
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	50.592989

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.374	0.212	0.107	0.095	0.080	0.030	0.036



## F. 3D Image





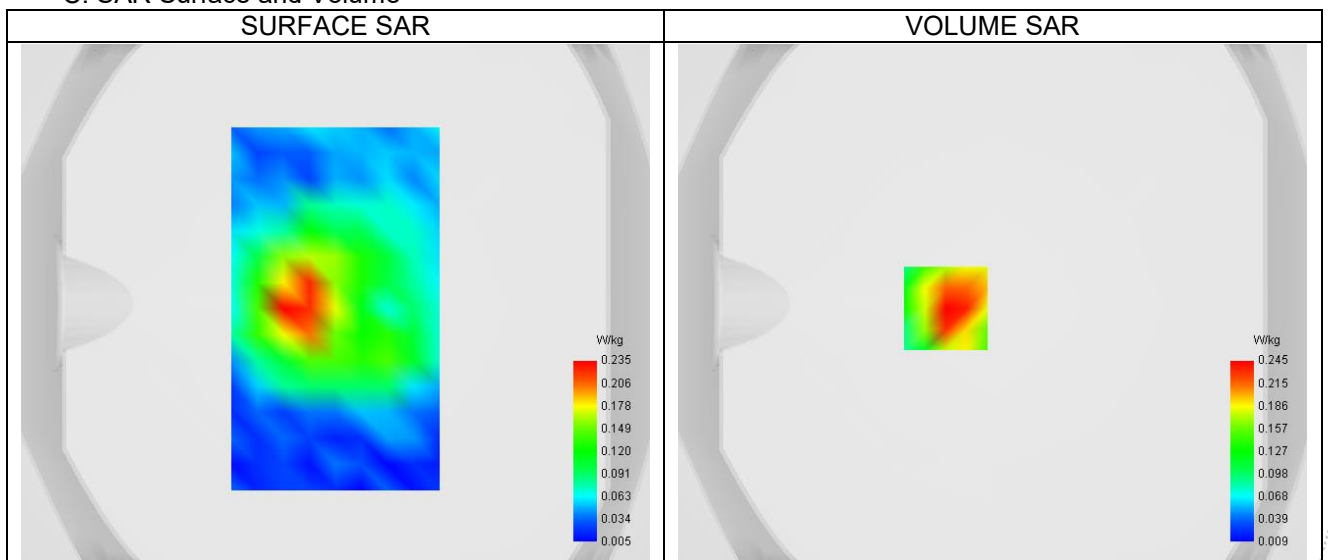
## Plot 16

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.01
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels	High (20600)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

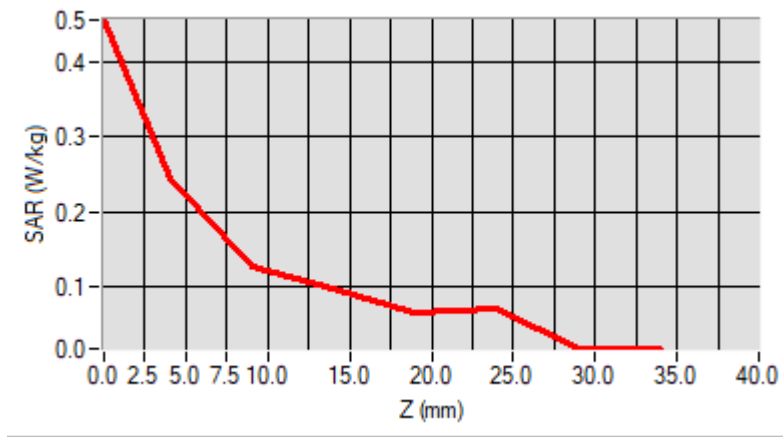
Frequency (MHz)	848.300
Relative permittivity (real part)	42.285
Relative permittivity (imaginary part)	20.225
Conductivity (S/m)	0.940

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

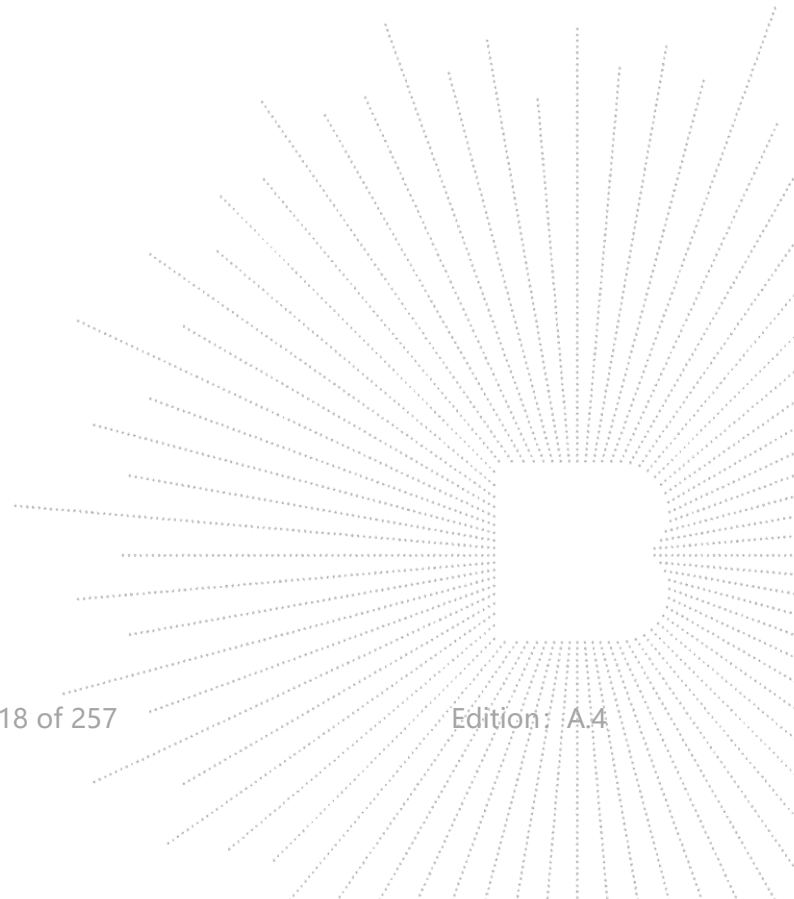
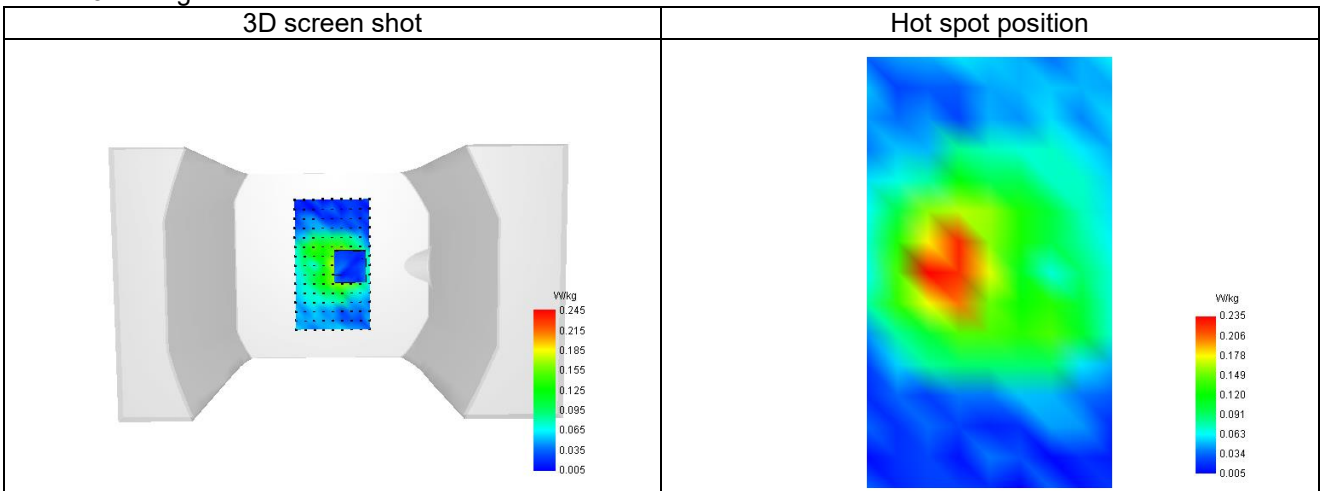
SAR 10g (W/Kg)	0.141
SAR 1g (W/Kg)	0.257
Variation (%)	3.540
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	52.363635

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.456	0.245	0.128	0.098	0.064	0.072	0.017



F. 3D Image



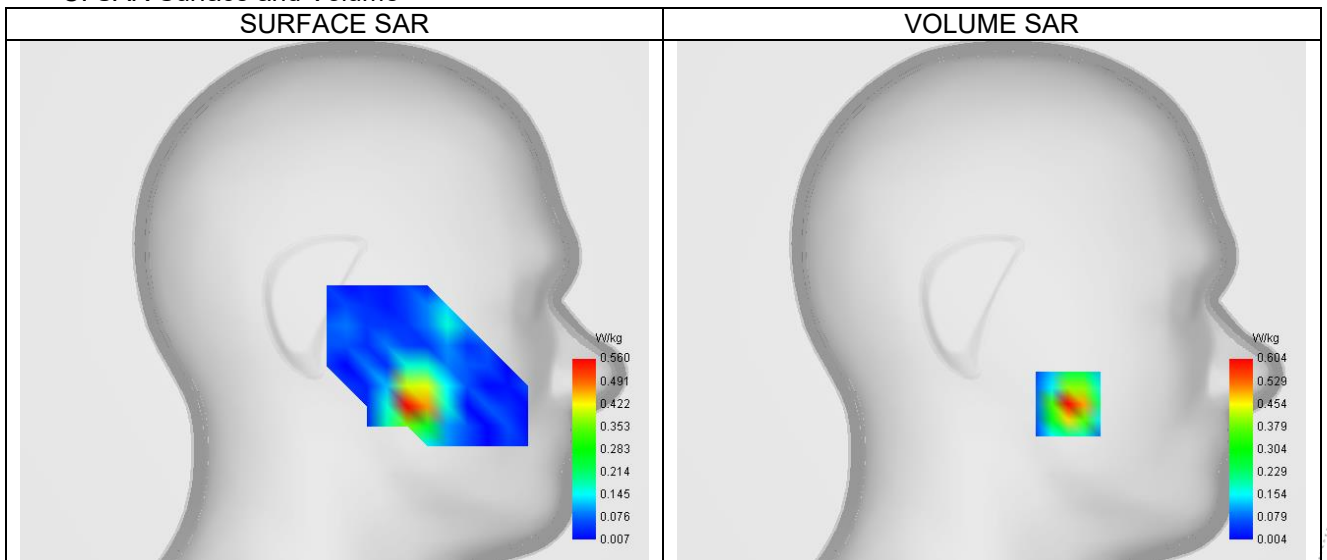
## Plot 17

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.63
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 7
Channels	Middle (21100)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	2535.000
Relative permittivity (real part)	39.087
Relative permittivity (imaginary part)	13.418
Conductivity (S/m)	1.890

**C. SAR Surface and Volume**


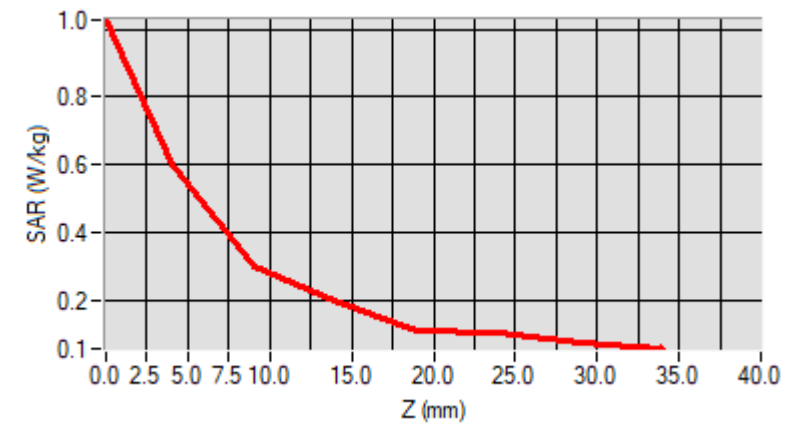
Maximum location: X=-38.00, Y=-51.00 ; SAR Peak: 1.02 W/kg

**D. SAR 1g & 10g**

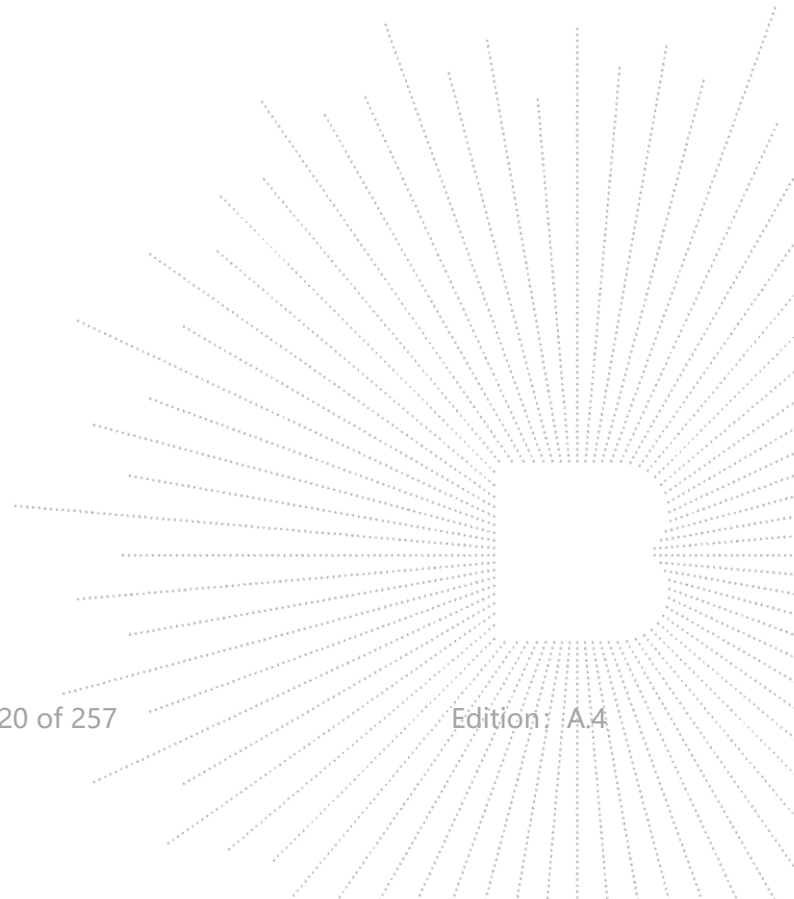
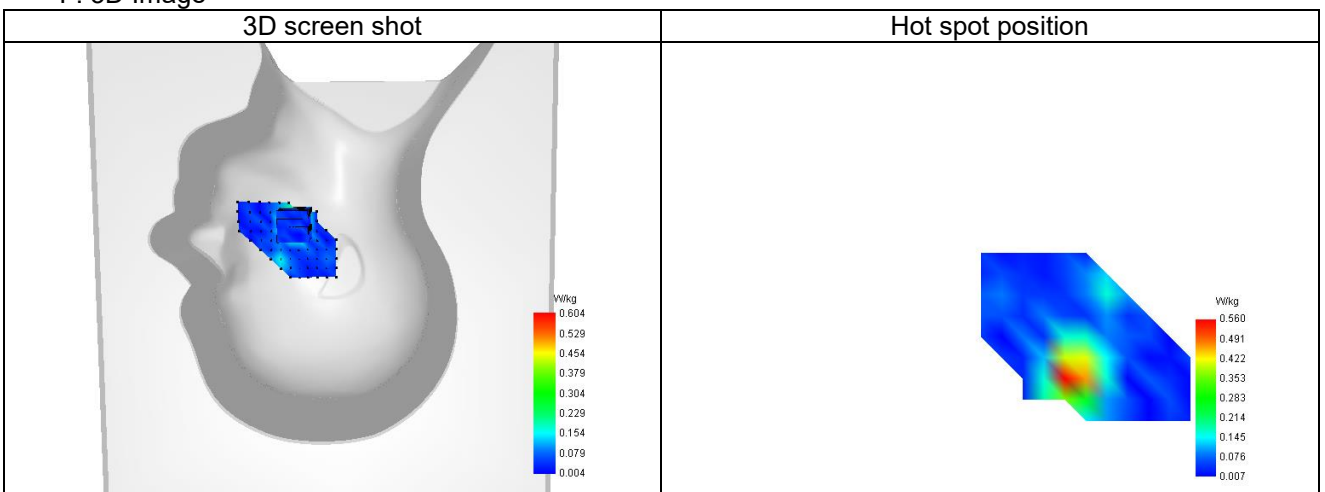
SAR 10g (W/Kg)	0.250
SAR 1g (W/Kg)	0.543
Variation (%)	-3.590
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.350311

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.027	0.604	0.304	0.199	0.115	0.110	0.075



## F. 3D Image



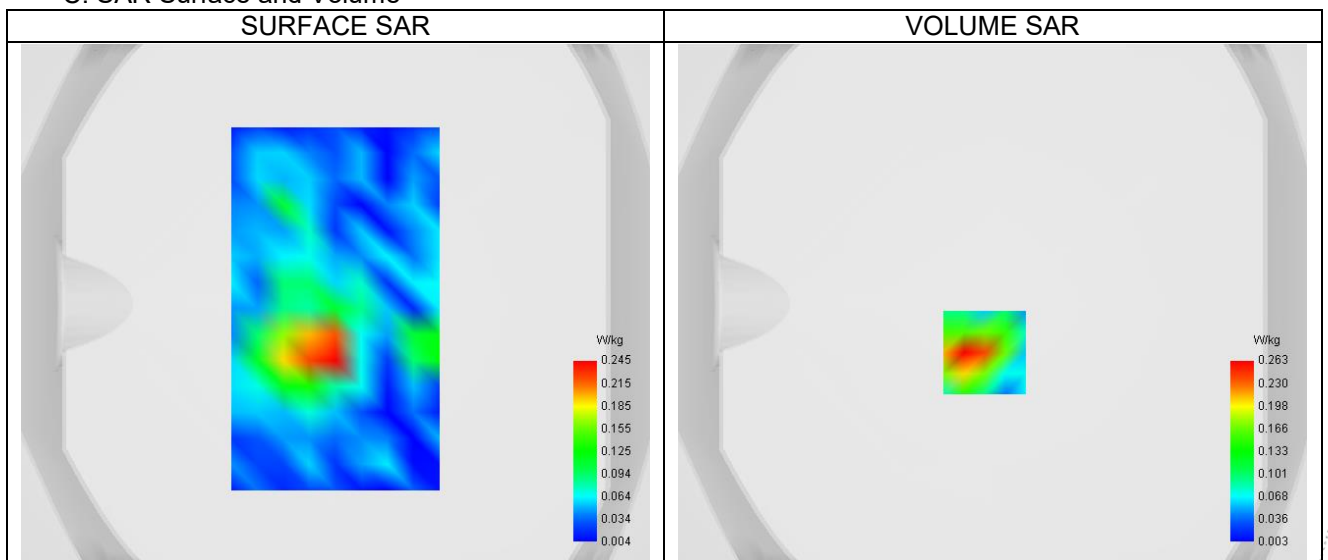
## Plot 18

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.63
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Channels	Middle (21100)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

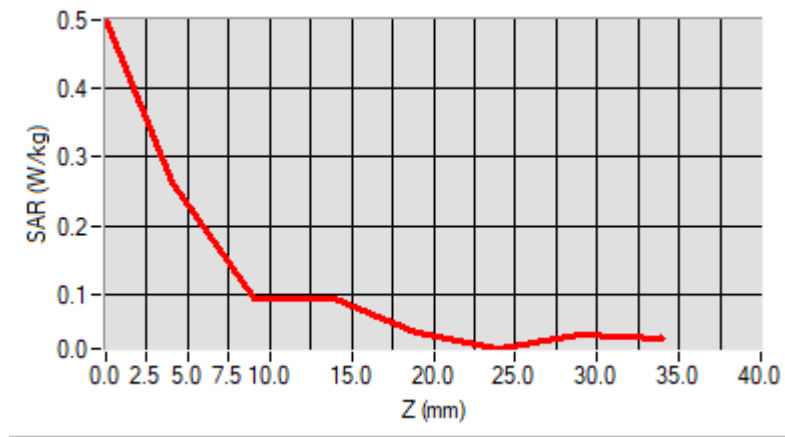
Frequency (MHz)	2535.000
Relative permittivity (real part)	39.087
Relative permittivity (imaginary part)	13.418
Conductivity (S/m)	1.890

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

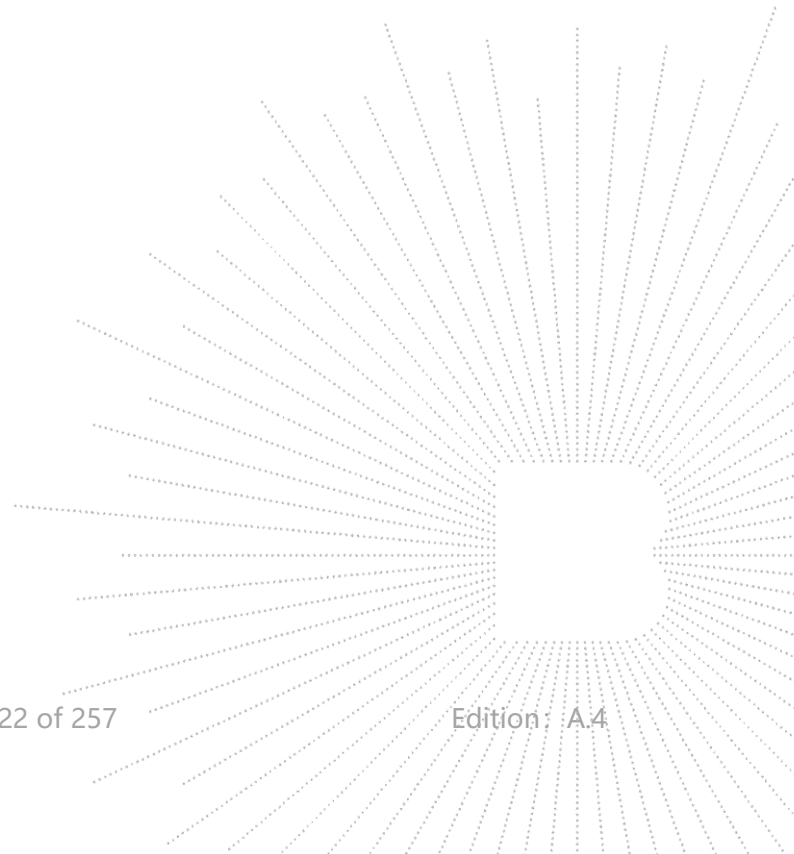
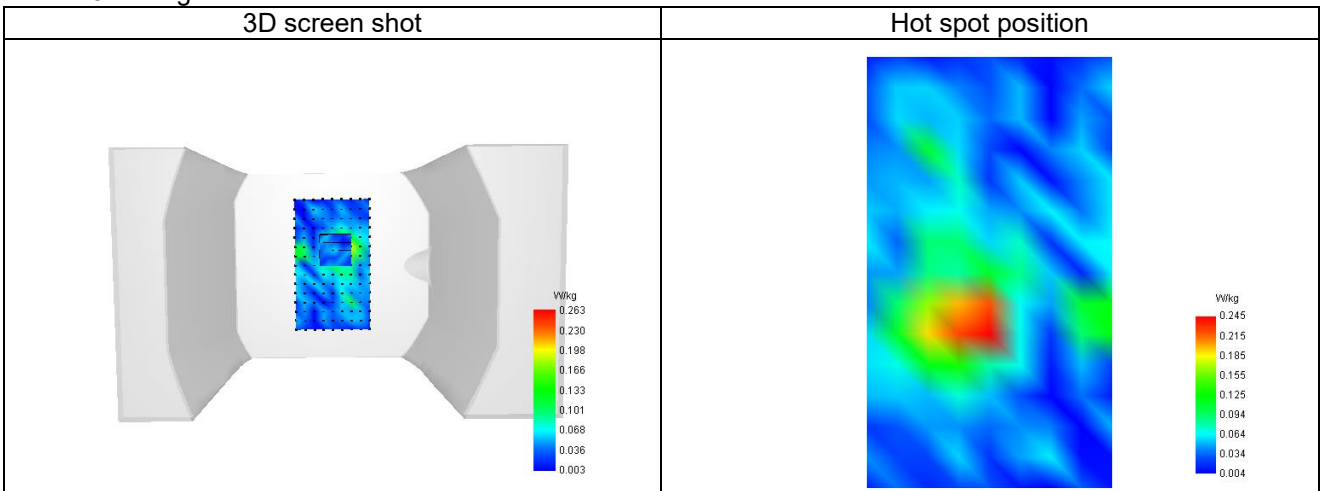
SAR 10g (W/Kg)	0.125
SAR 1g (W/Kg)	0.250
Variation (%)	-3.860
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.406079

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.498	0.263	0.096	0.095	0.045	0.022	0.042



## F. 3D Image



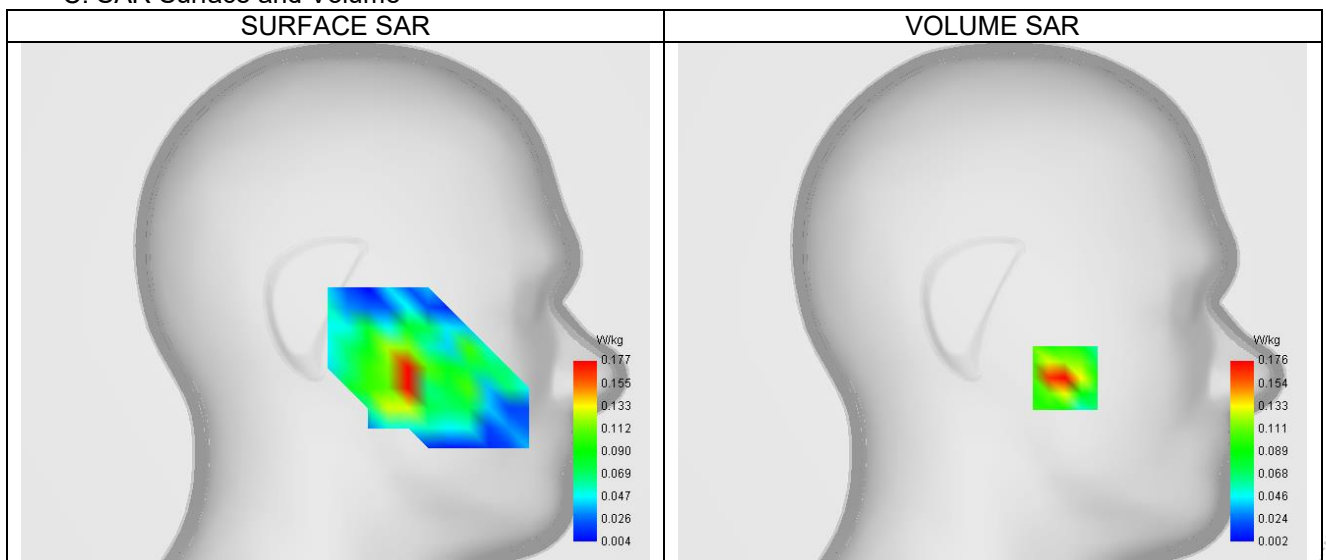
## Plot 19

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.96
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 12
Channels	Middle (23095)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	707.500
Relative permittivity (real part)	42.127
Relative permittivity (imaginary part)	23.264
Conductivity (S/m)	0.914

**C. SAR Surface and Volume**


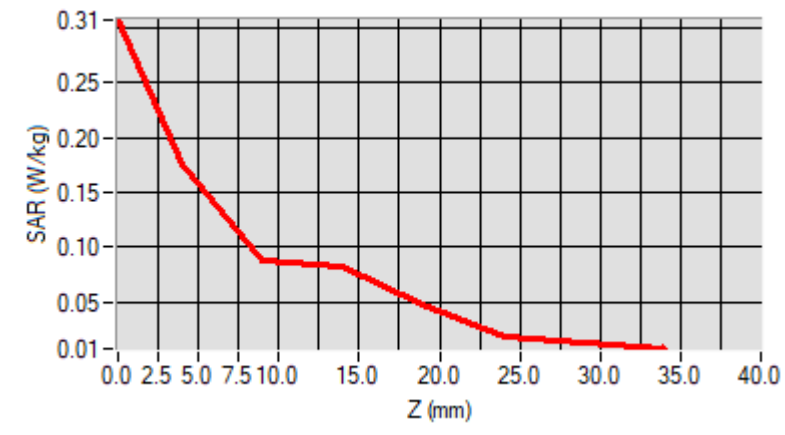
Maximum location: X=-36.00, Y=-37.00 ; SAR Peak: 0.34 W/kg

**D. SAR 1g & 10g**

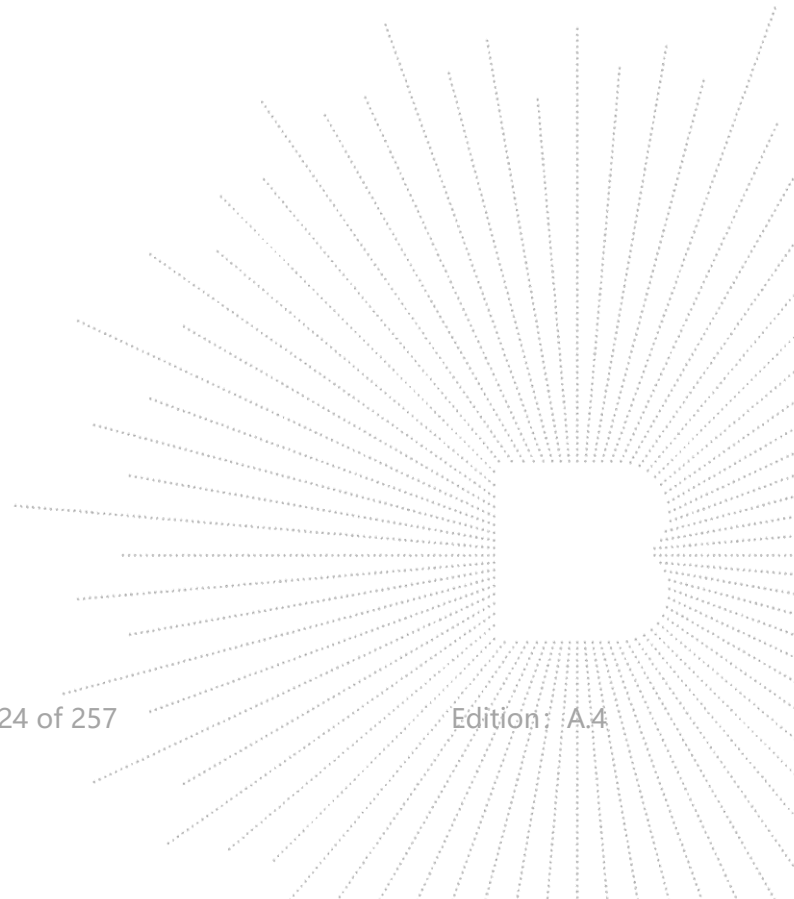
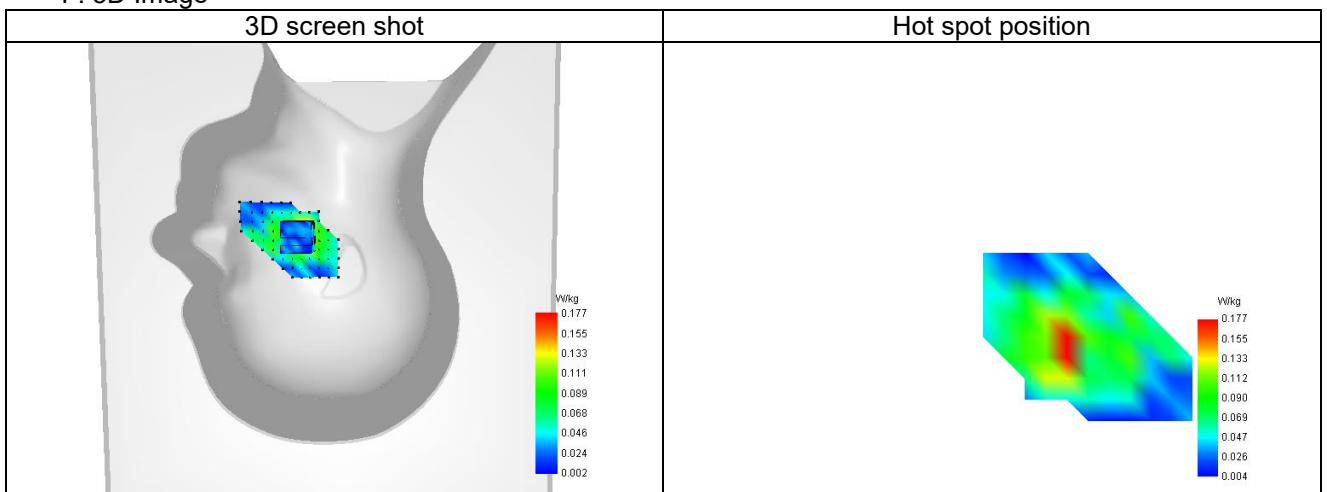
SAR 10g (W/Kg)	0.093
SAR 1g (W/Kg)	0.179
Variation (%)	-2.490
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.169749

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.307	0.176	0.088	0.083	0.048	0.019	0.012



## F. 3D Image





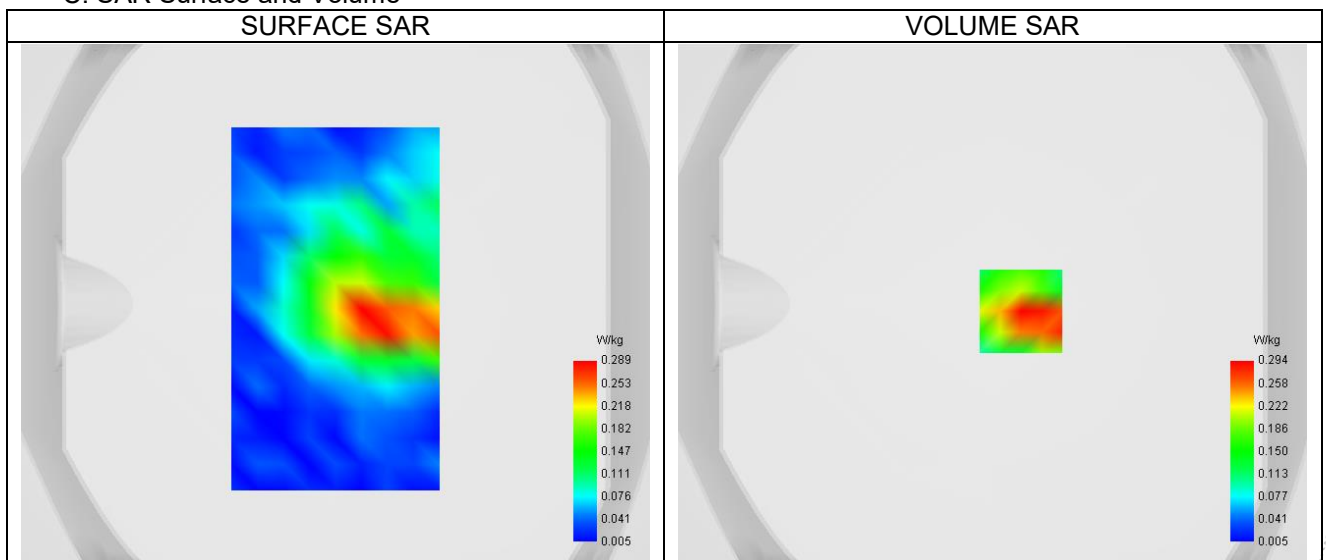
## Plot 20

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.96
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels	Middle (23095)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	707.500
Relative permittivity (real part)	42.127
Relative permittivity (imaginary part)	23.264
Conductivity (S/m)	0.914

**C. SAR Surface and Volume**


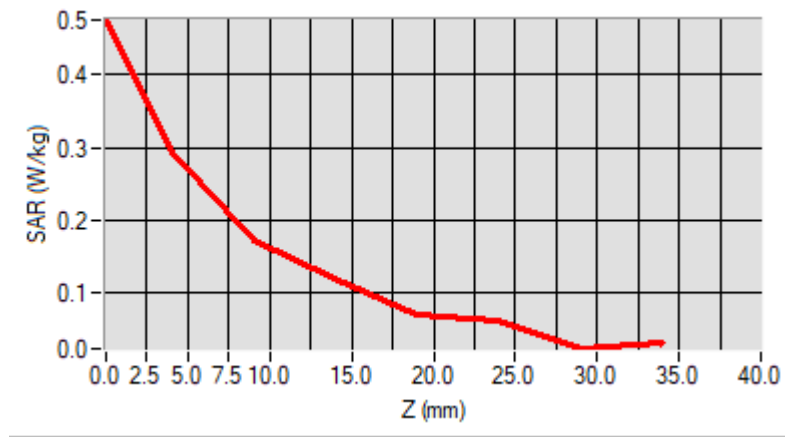
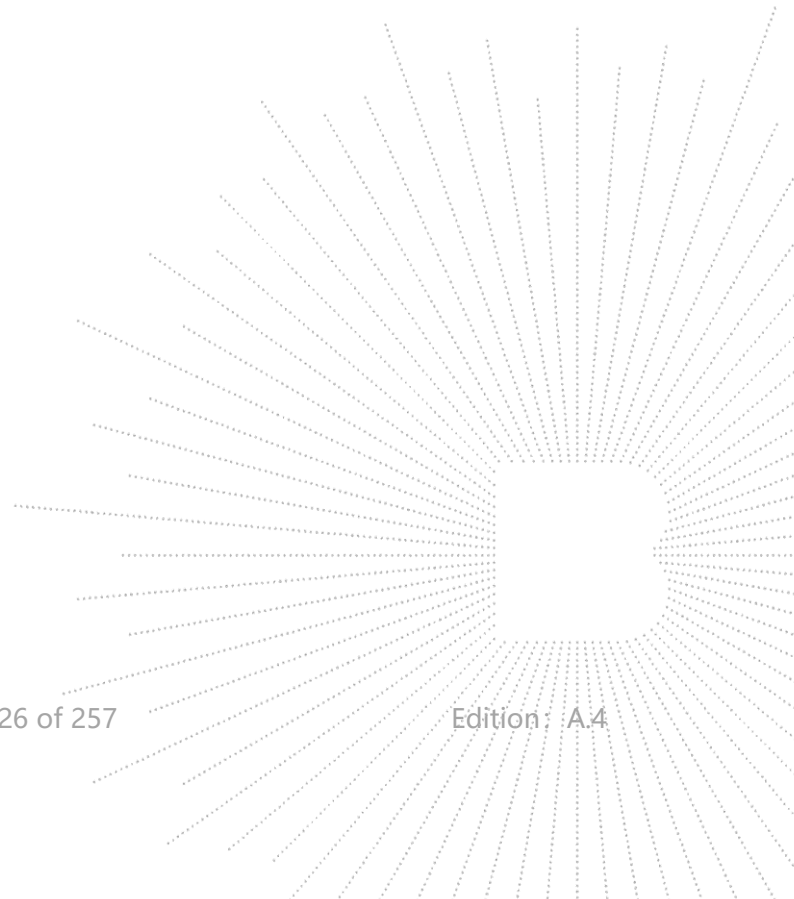
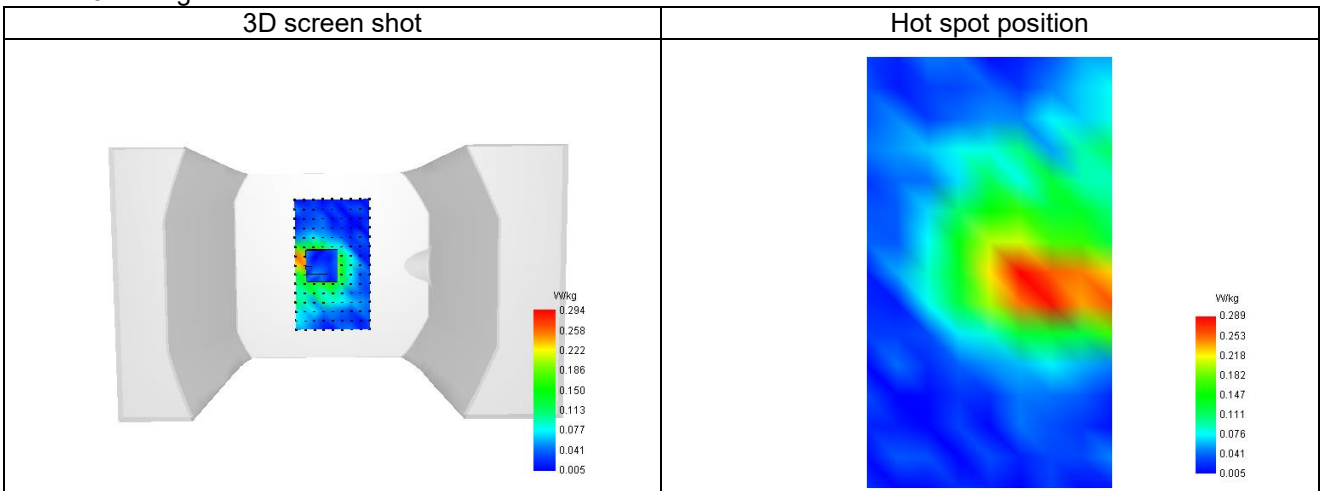
Maximum location: X=11.00, Y=-3.00 ; SAR Peak: 0.50 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.160
SAR 1g (W/Kg)	0.289
Variation (%)	4.910
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.276030

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.476	0.294	0.172	0.120	0.070	0.062	0.024


**F. 3D Image**


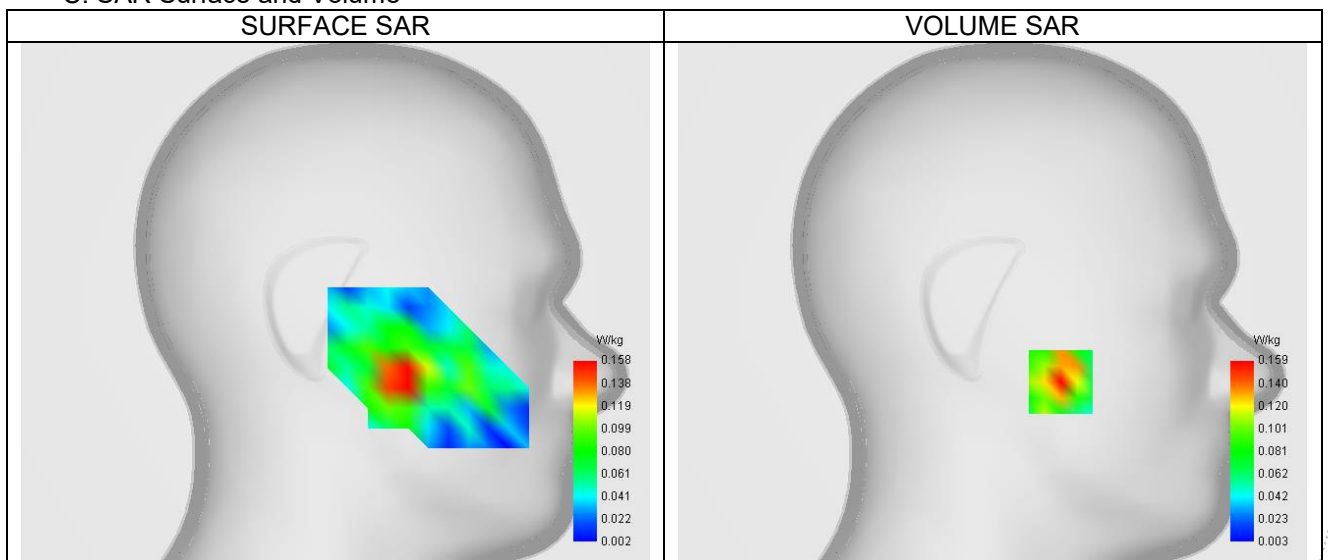
## Plot 21

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.96
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 17
Channels	High (23800)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	711.000
Relative permittivity (real part)	42.113
Relative permittivity (imaginary part)	23.152
Conductivity (S/m)	0.913

**C. SAR Surface and Volume**


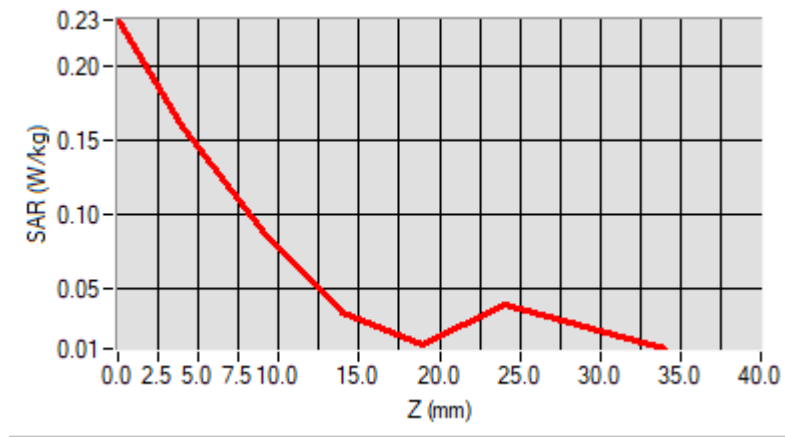
Maximum location: X=-34.00, Y=-39.00 ; SAR Peak: 0.28 W/kg

**D. SAR 1g & 10g**

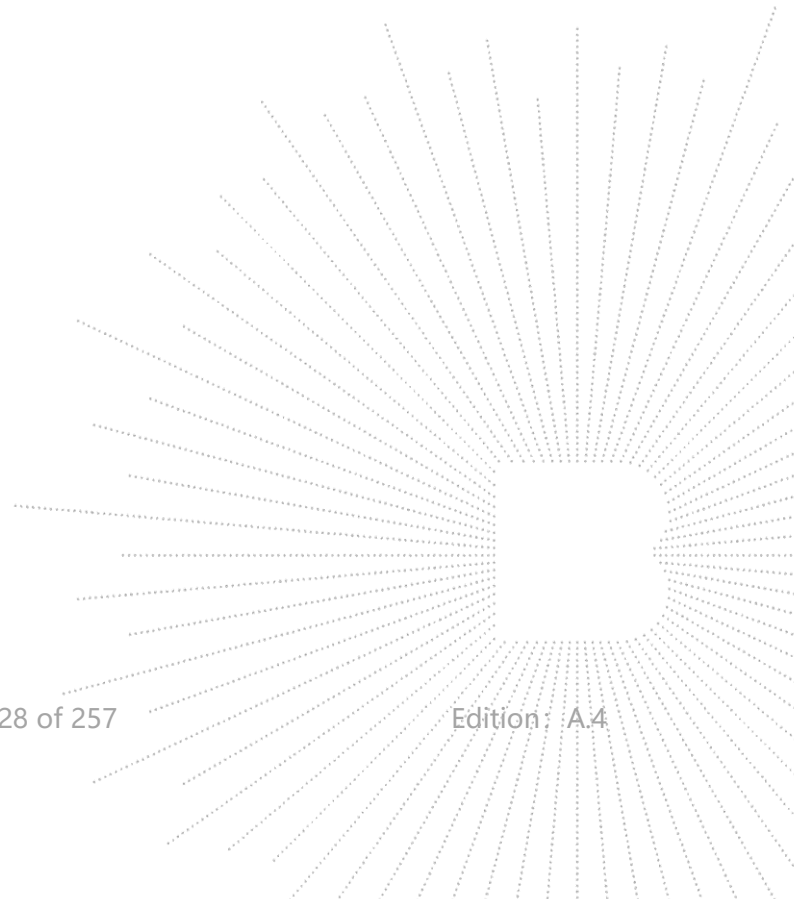
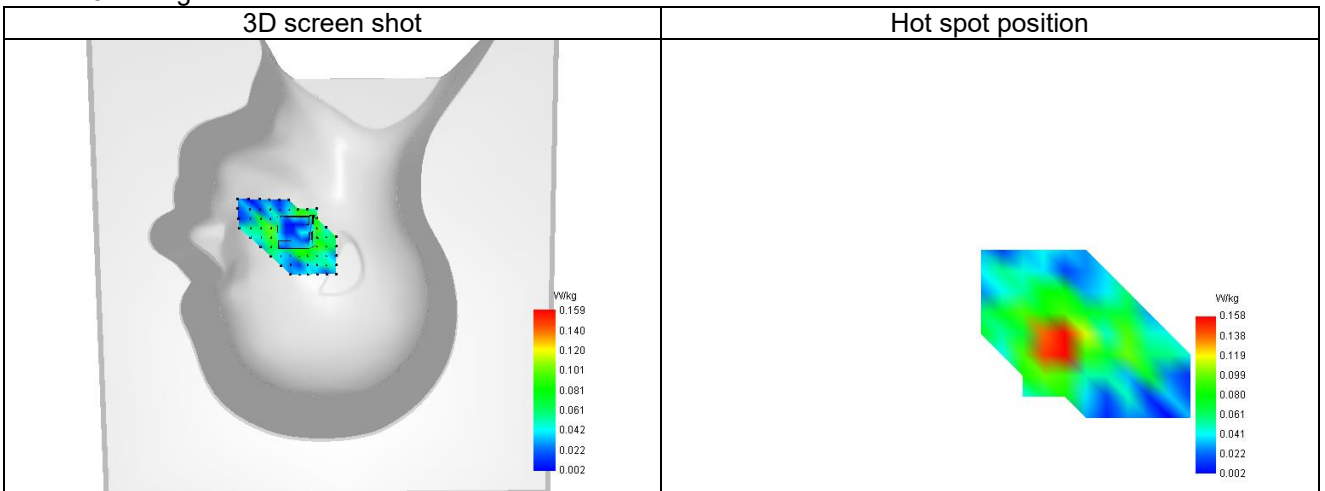
SAR 10g (W/Kg)	0.085
SAR 1g (W/Kg)	0.152
Variation (%)	4.140
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.987653

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.230	0.159	0.089	0.034	0.012	0.040	0.024



## F. 3D Image



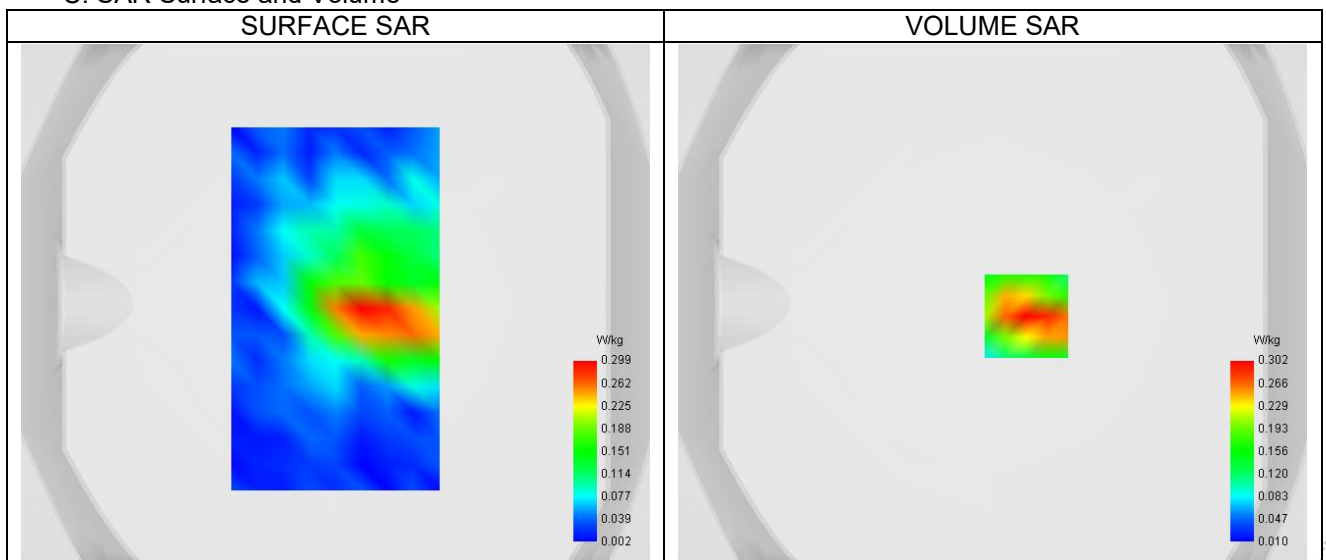
## Plot 22

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.96
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Channels	Middle (23800)
Signal	LTE (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	710.000
Relative permittivity (real part)	42.113
Relative permittivity (imaginary part)	23.152
Conductivity (S/m)	0.913

**C. SAR Surface and Volume**


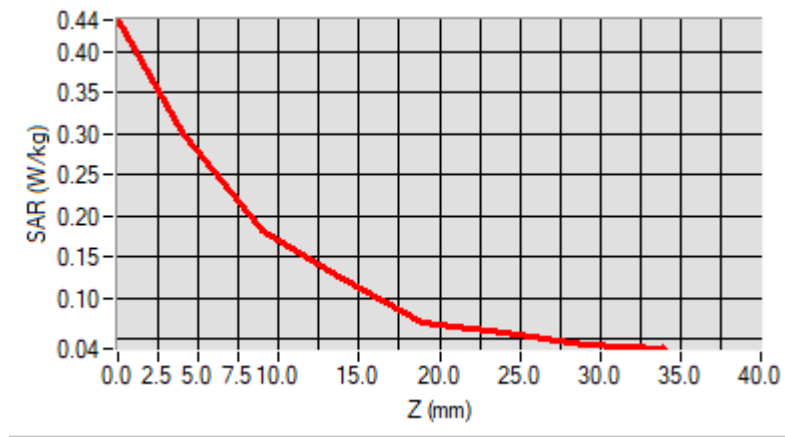
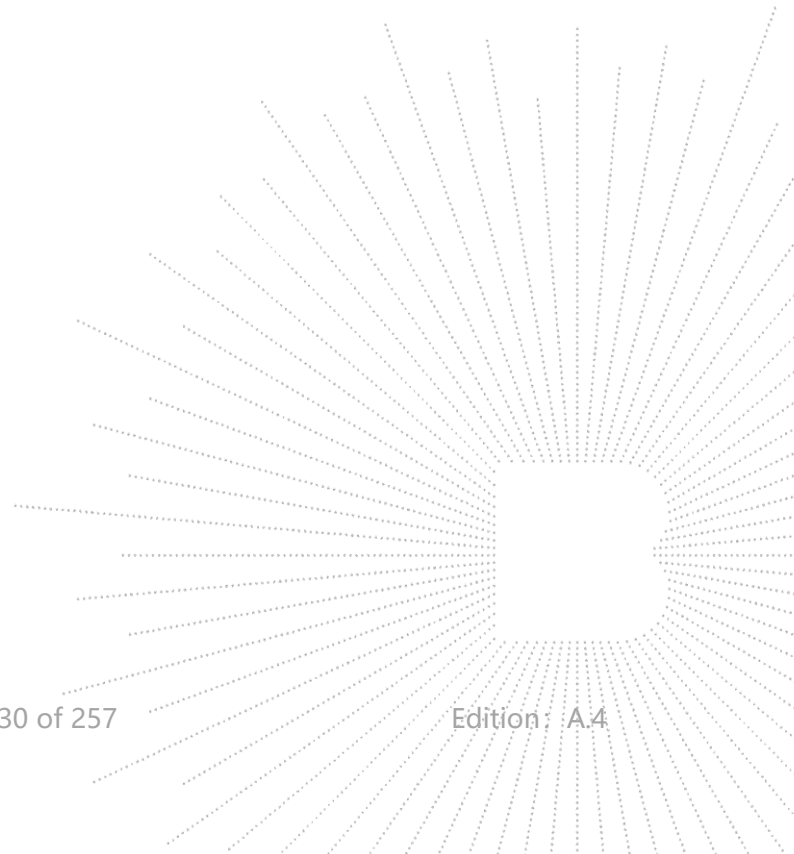
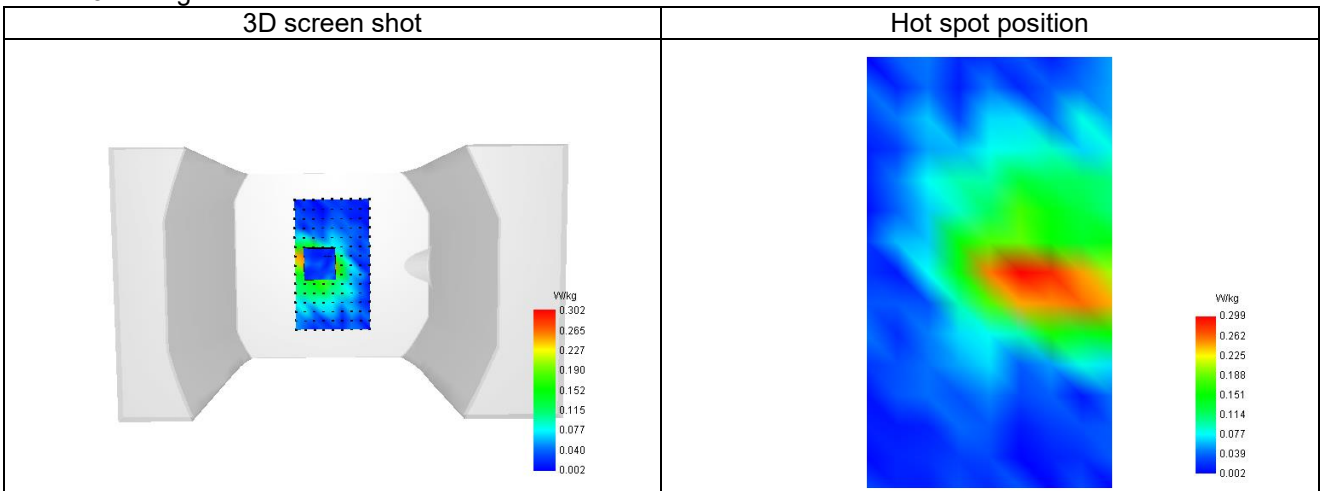
Maximum location: X=13.00, Y=-5.00 ; SAR Peak: 0.47 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.164
SAR 1g (W/Kg)	0.289
Variation (%)	0.440
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	60.377800

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.439	0.302	0.183	0.123	0.069	0.057	0.043


**F. 3D Image**


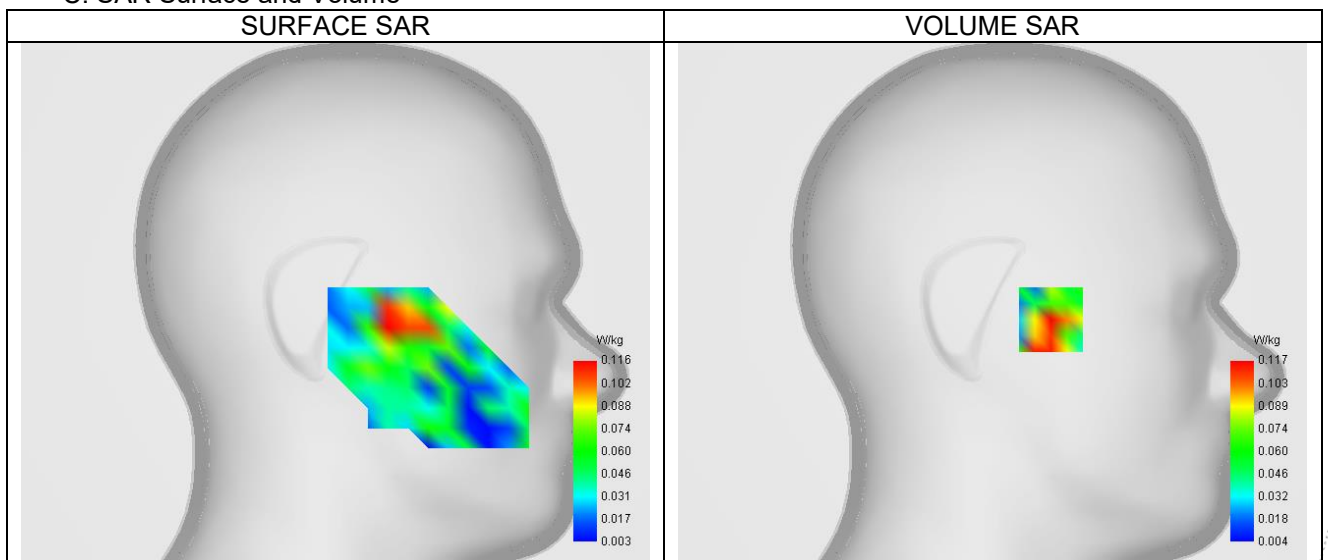
## Plot 23

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.96
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Bluetooth
Channels	Low (00)
Signal	Bluetooth (Crest factor: 1.0)

**B. Permittivity**

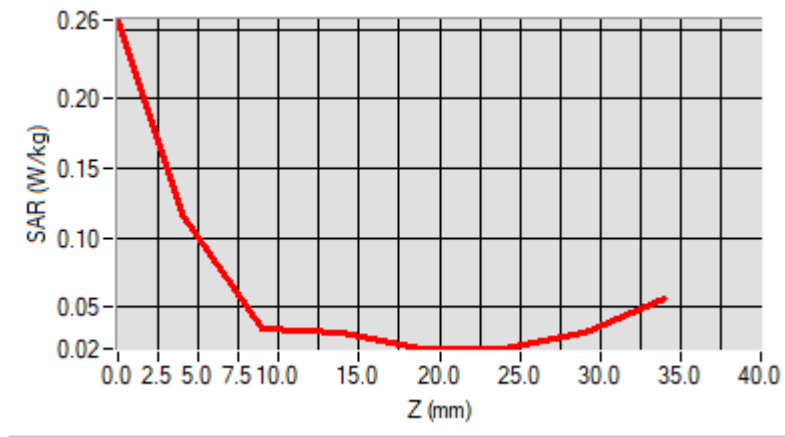
Frequency (MHz)	2402.000
Relative permittivity (real part)	39.202
Relative permittivity (imaginary part)	13.219
Conductivity (S/m)	1.799

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

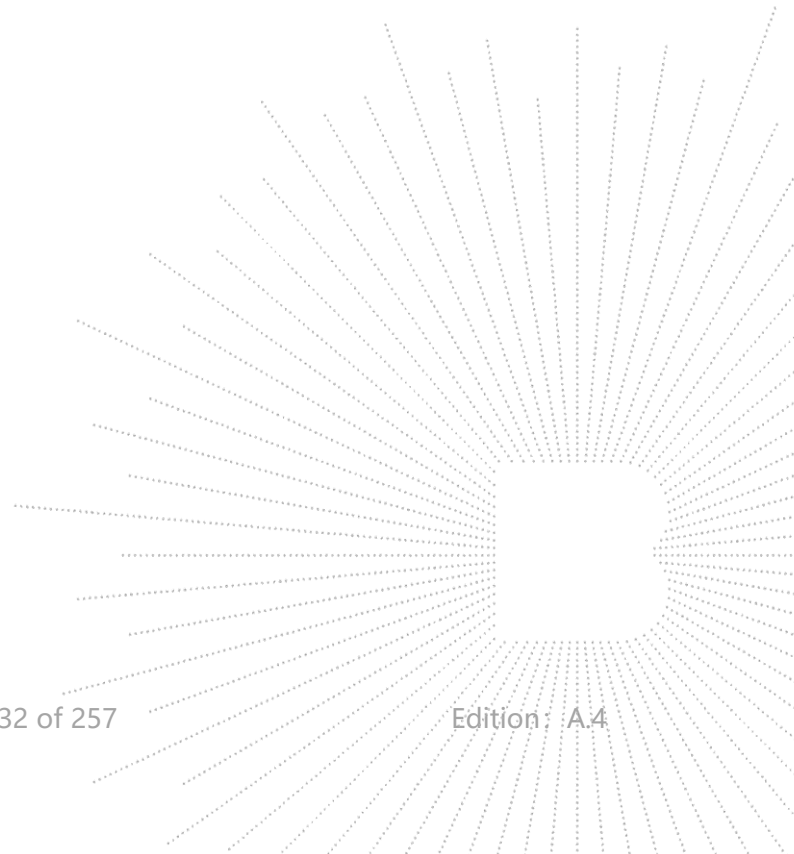
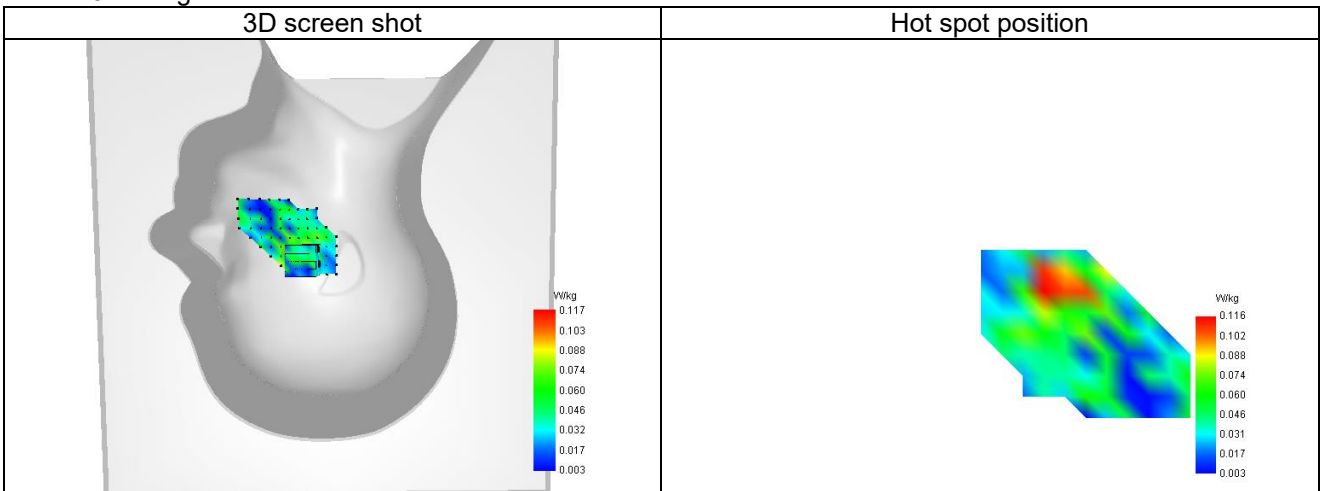
SAR 10g (W/Kg)	0.057
SAR 1g (W/Kg)	0.114
Variation (%)	1.550
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	29.648067

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.257	0.117	0.035	0.032	0.020	0.021	0.031



## F. 3D Image





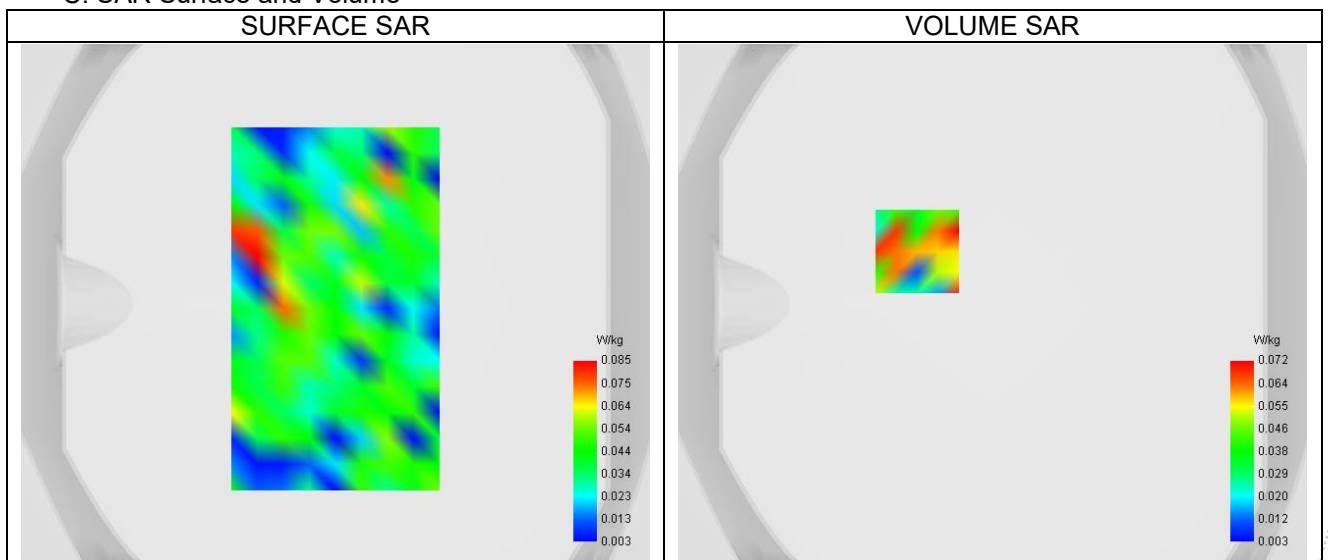
## Plot 24

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.96
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Bluetooth
Channels	Low (00)
Signal	Bluetooth (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	2402.000
Relative permittivity (real part)	39.202
Relative permittivity (imaginary part)	13.219
Conductivity (S/m)	1.799

**C. SAR Surface and Volume**


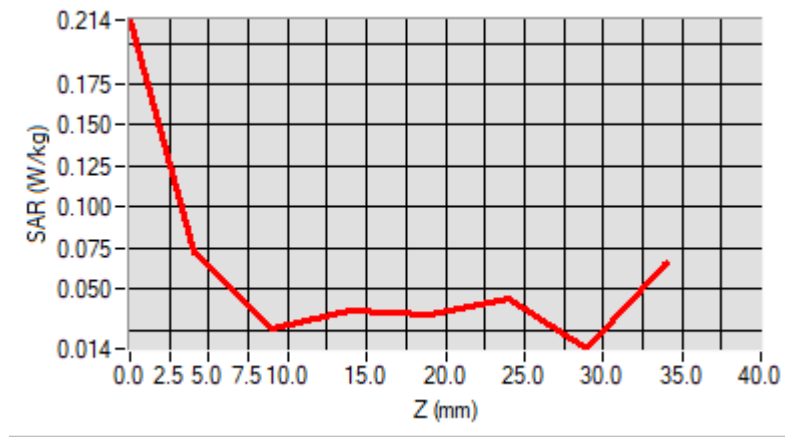
Maximum location: X=-29.00, Y=20.00 ; SAR Peak: 0.20 W/kg

**D. SAR 1g & 10g**

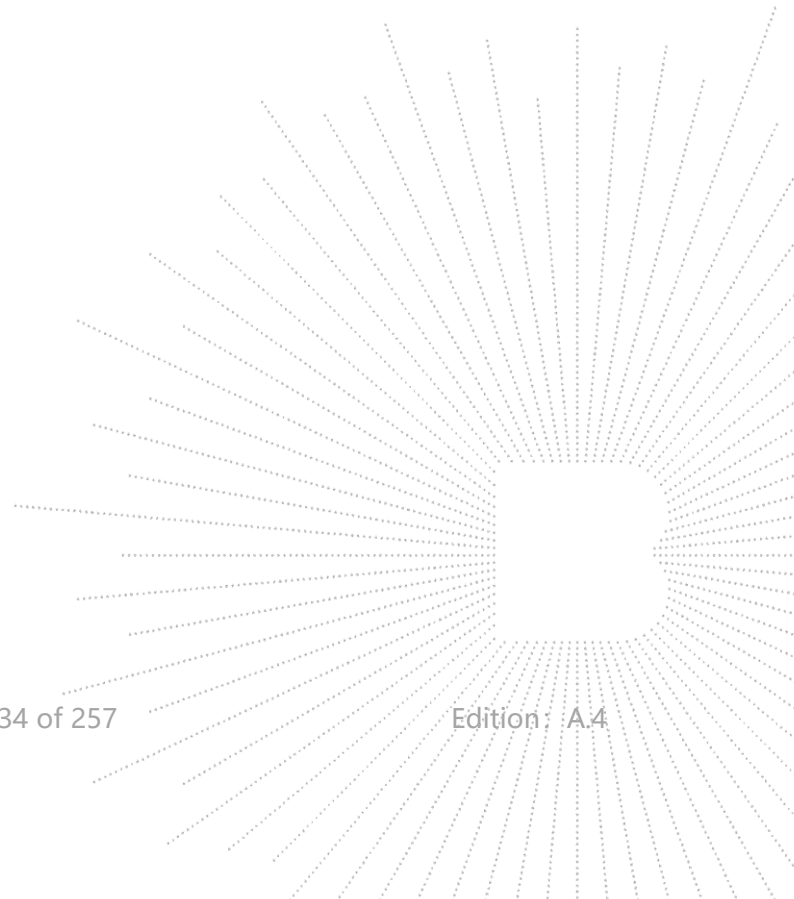
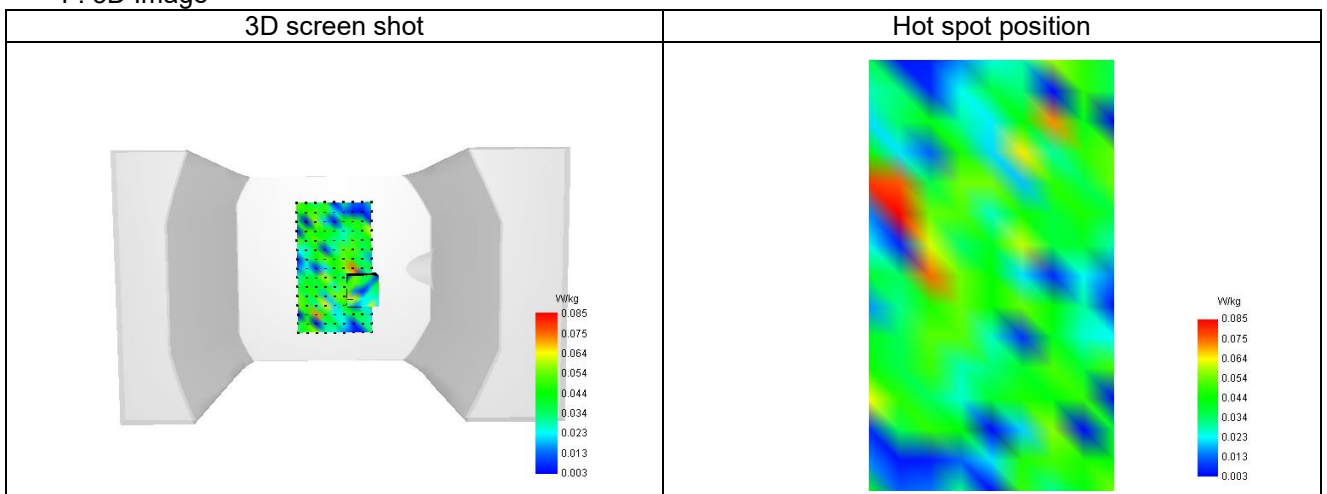
SAR 10g (W/Kg)	0.046
SAR 1g (W/Kg)	0.077
Variation (%)	0.820
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	44.015132

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.214	0.072	0.026	0.037	0.034	0.044	0.014



## F. 3D Image



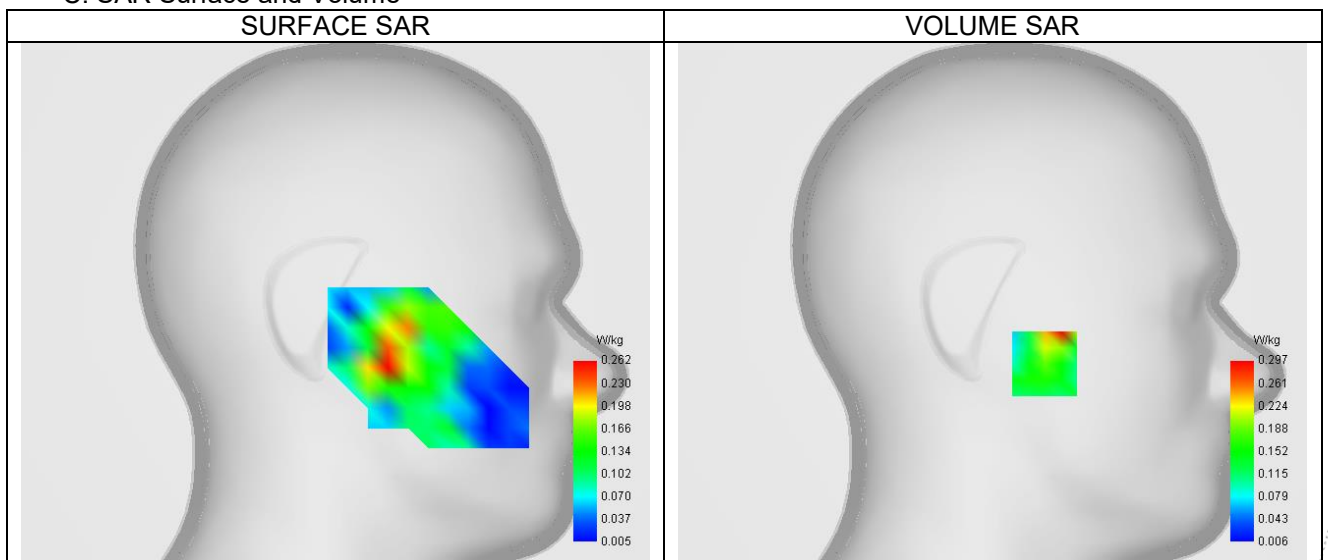
## Plot 25

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.96
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	IEEE 802.11b ISM
Channels	High (11)
Signal	IEEE802.b (Crest factor: 1.0)

**B. Permittivity**

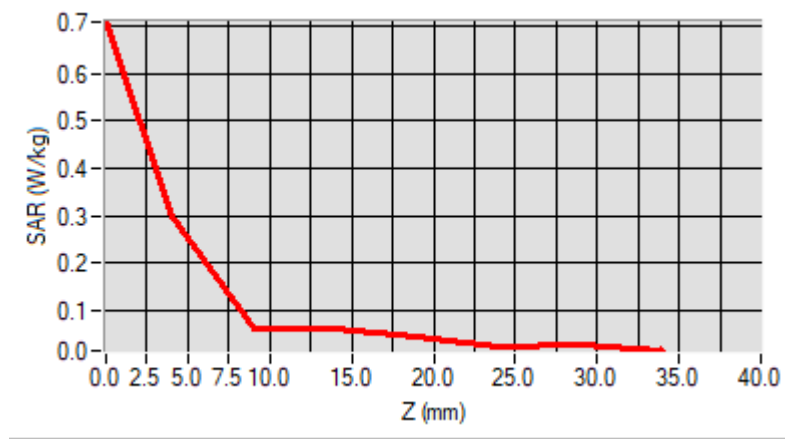
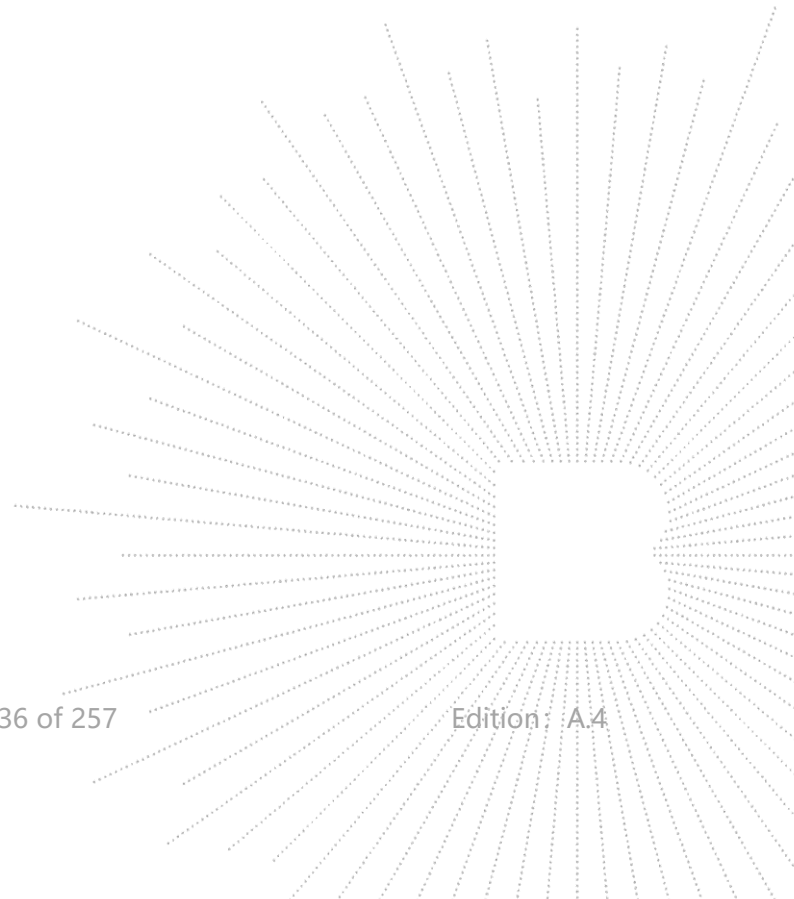
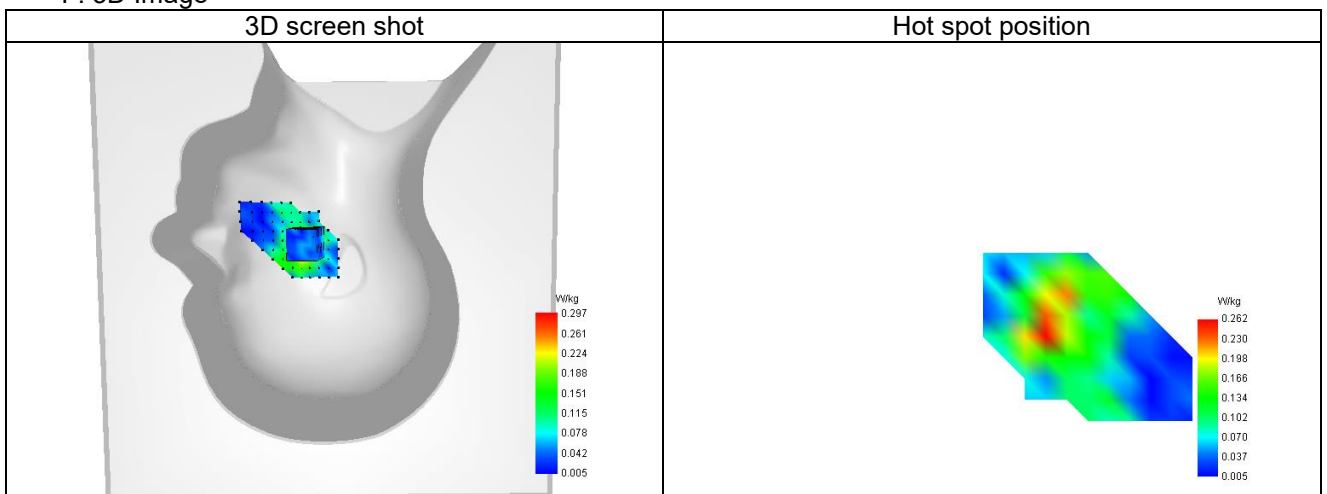
Frequency (MHz)	2462.000
Relative permittivity (real part)	39.226
Relative permittivity (imaginary part)	13.207
Conductivity (S/m)	1.788

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.127
SAR 1g (W/Kg)	0.254
Variation (%)	-1.700
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	49.003442

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.709	0.297	0.062	0.062	0.044	0.023	0.029


**F. 3D Image**


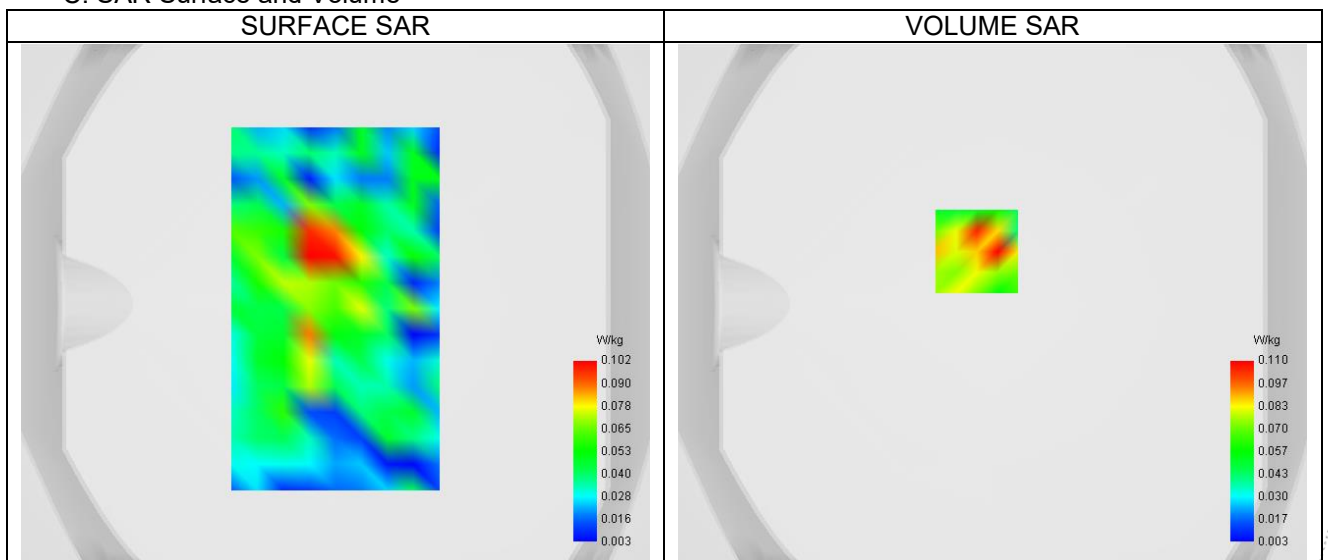
## Plot 26

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	3.96
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11b ISM
Channels	High (11)
Signal	IEEE802.b (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	2437.000
Relative permittivity (real part)	39.226
Relative permittivity (imaginary part)	13.207
Conductivity (S/m)	1.788

**C. SAR Surface and Volume**


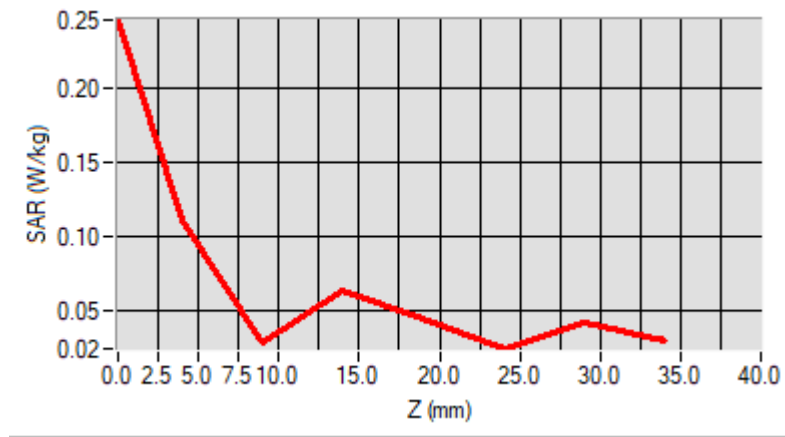
Maximum location: X=-6.00, Y=20.00 ; SAR Peak: 0.25 W/kg

**D. SAR 1g & 10g**

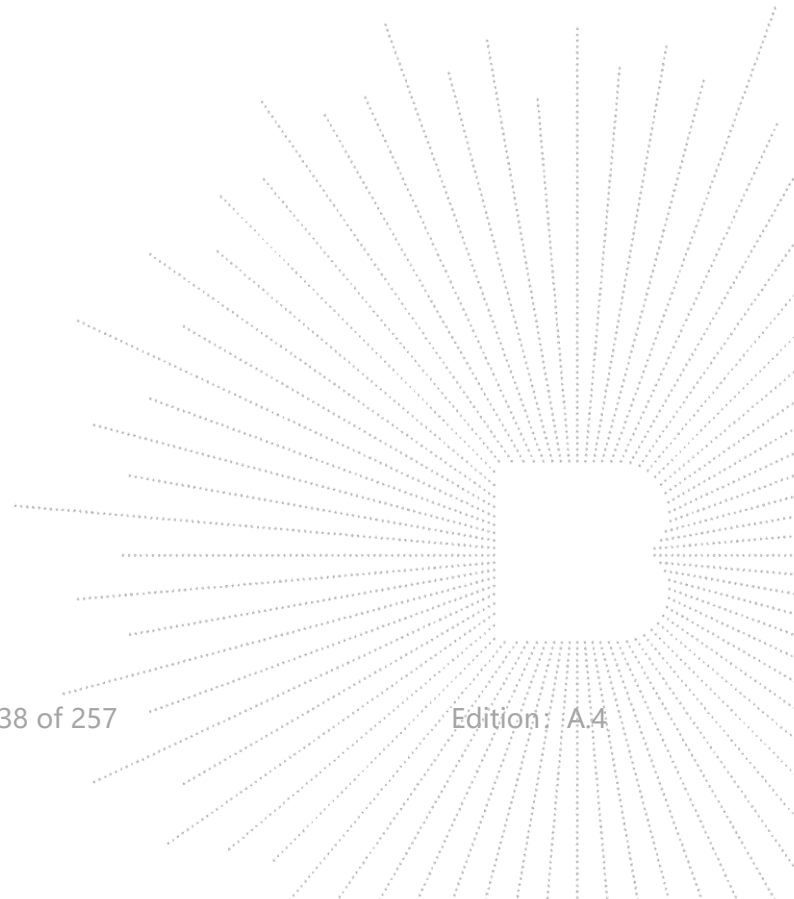
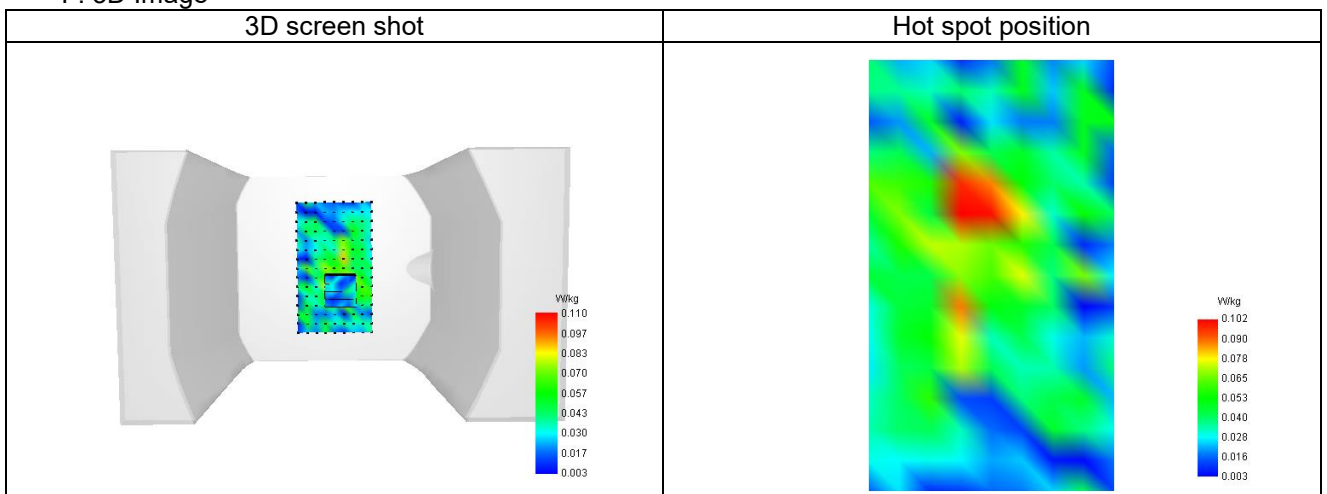
SAR 10g (W/Kg)	0.054
SAR 1g (W/Kg)	0.109
Variation (%)	3.850
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	28.569054

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.245	0.110	0.028	0.064	0.045	0.024	0.041



## F. 3D Image



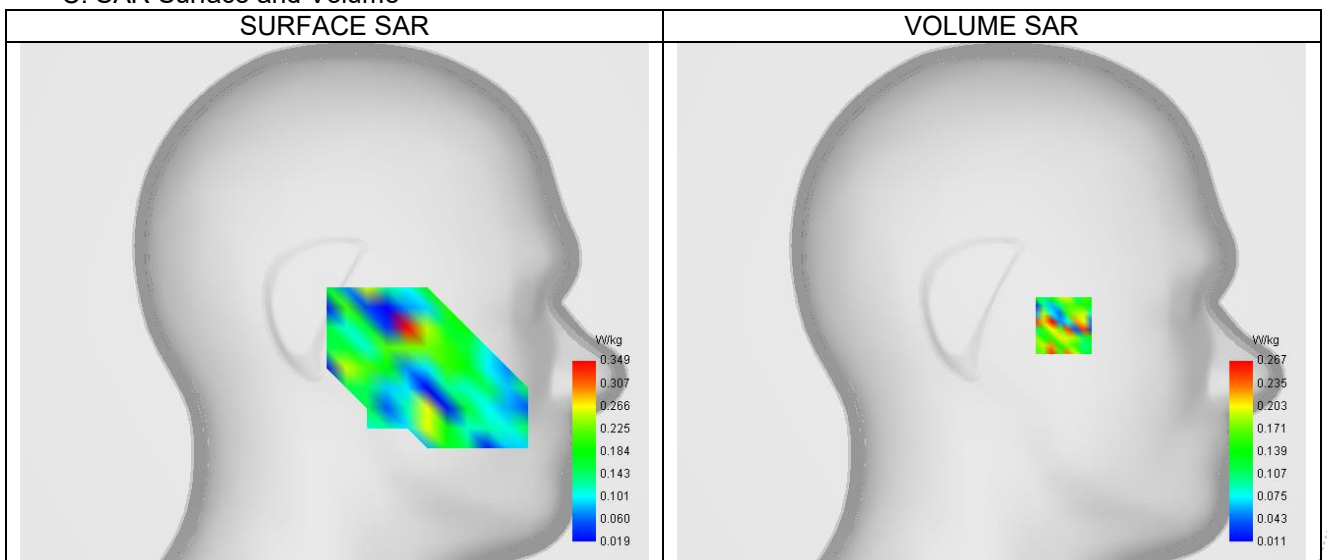
## Plot 27

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.92
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	8x8x7,dx=4mm dy=4mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	IEEE 802.11a
Channels	Middle (48)
Signal	IEEE802.a (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	5240.000
Relative permittivity (real part)	35.650
Relative permittivity (imaginary part)	16.250
Conductivity (S/m)	4.965

**C. SAR Surface and Volume**


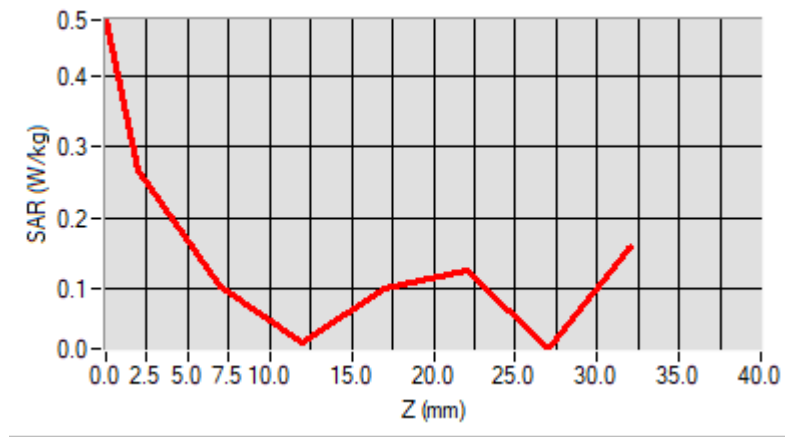
Maximum location: X=-38.00, Y=-13.00 ; SAR Peak: 0.69 W/kg

**D. SAR 1g & 10g**

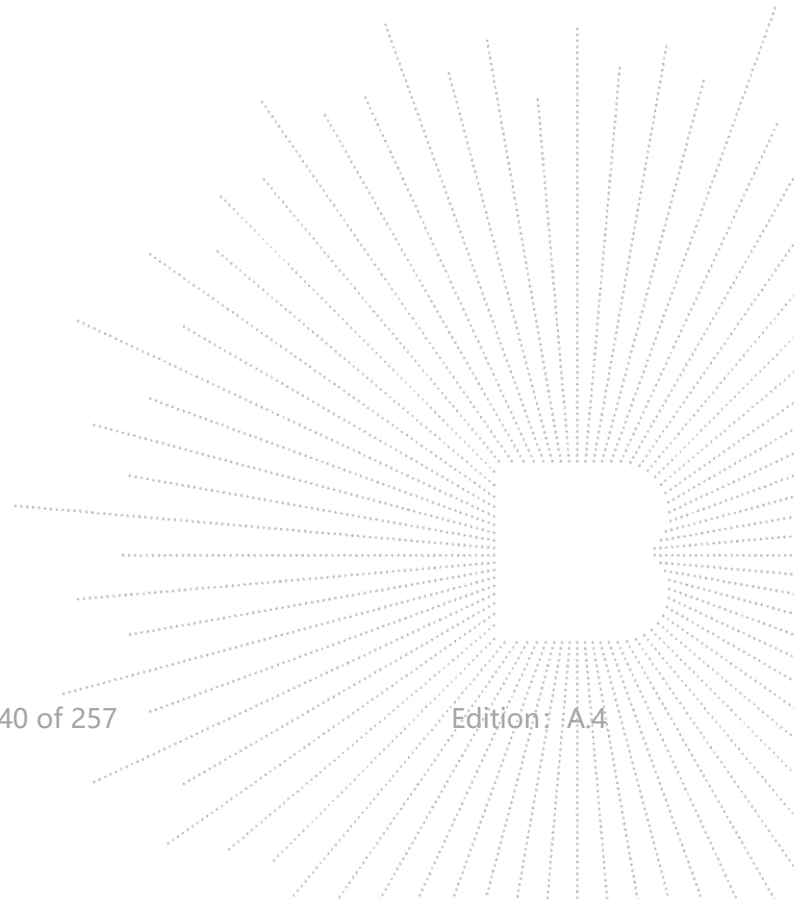
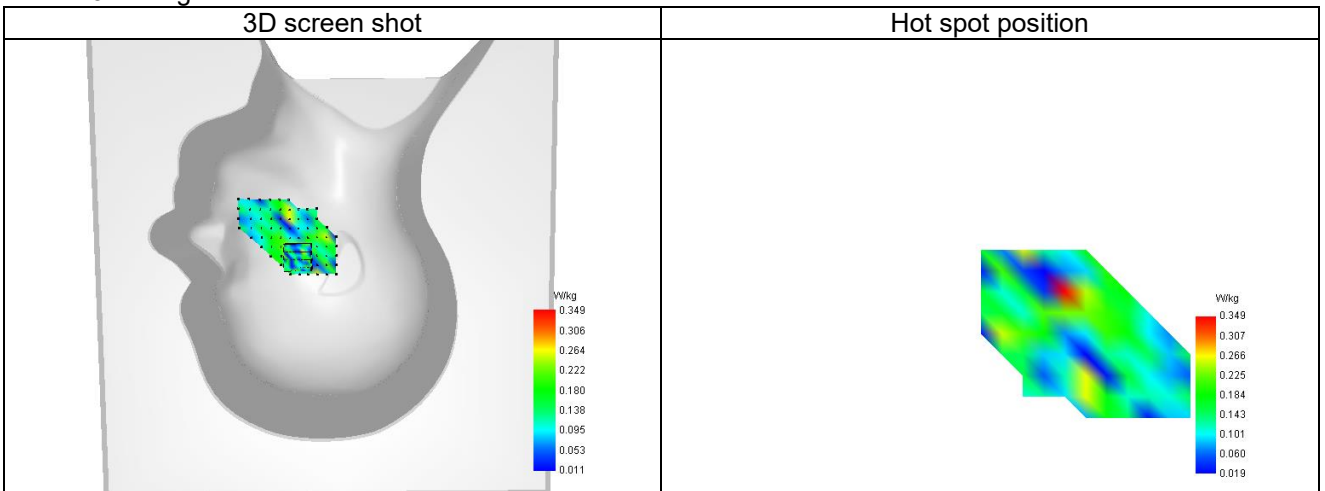
SAR 10g (W/Kg)	0.129
SAR 1g (W/Kg)	0.173
Variation (%)	2.050
Horizontal validation criteria: minimum distance (mm)	4.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	31.843177

**E. Z Axis Scan**

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.481	0.267	0.102	0.022	0.098	0.125	0.014



## F. 3D Image





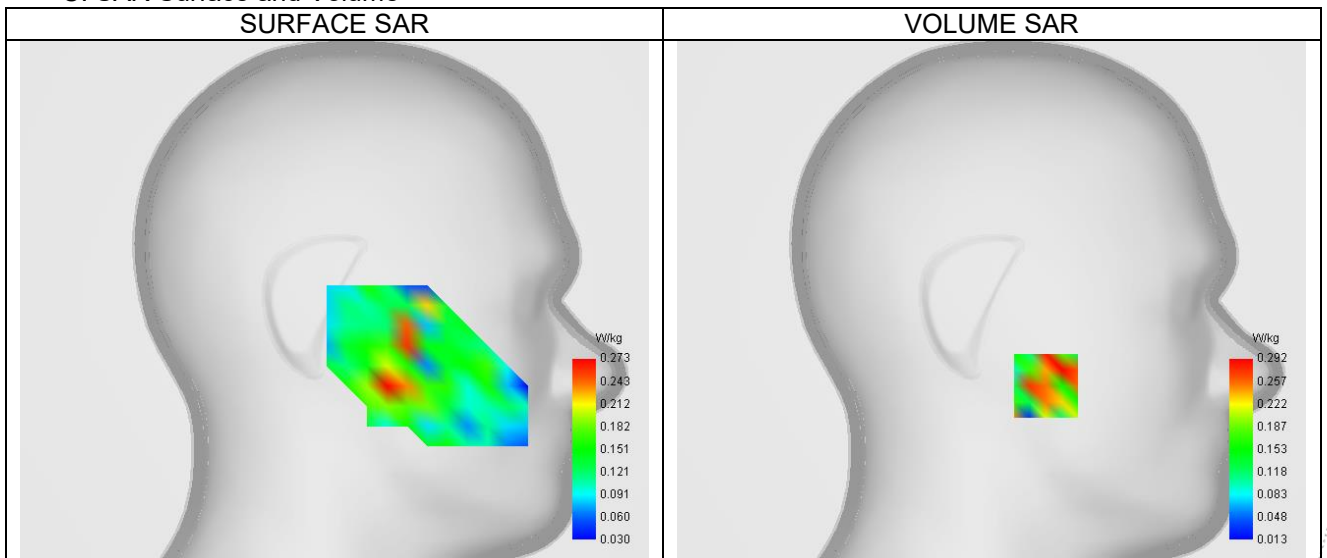
## Plot 28

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.92
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	IEEE 802.11a
Channels	High (48)
Signal	IEEE802.a (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	5240.000
Relative permittivity (real part)	35.650
Relative permittivity (imaginary part)	16.250
Conductivity (S/m)	4.965

**C. SAR Surface and Volume**


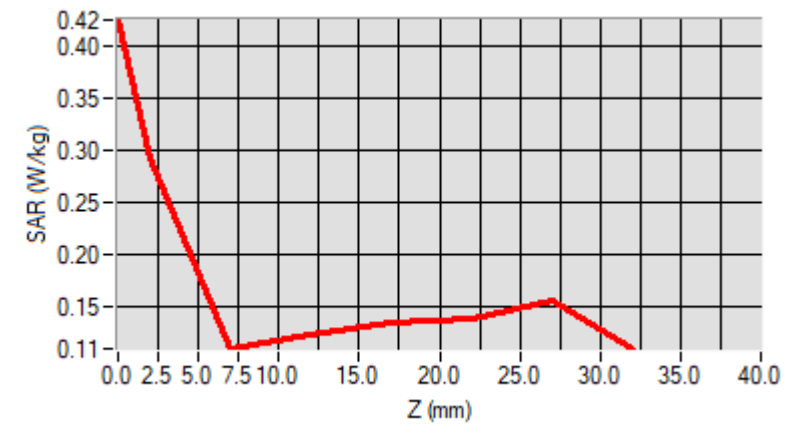
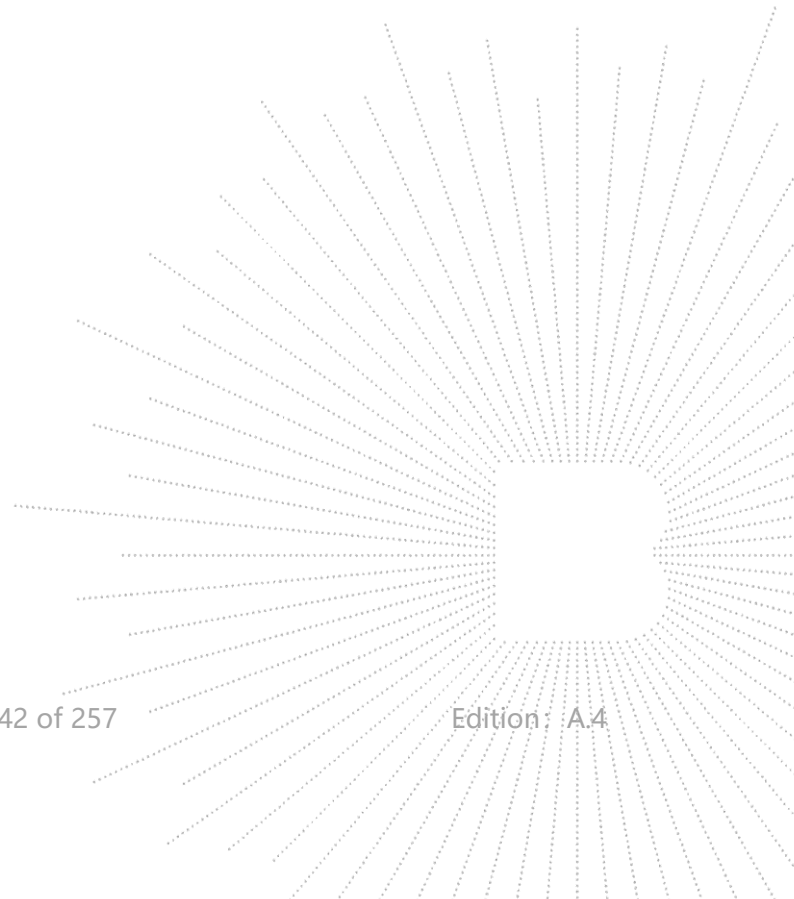
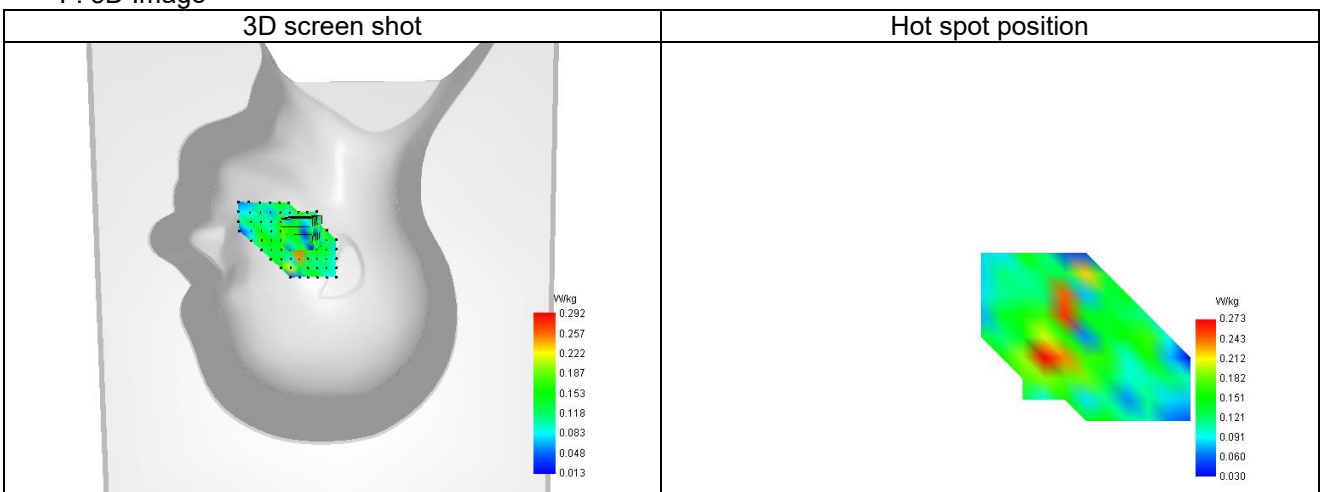
Maximum location: X=-27.00, Y=-42.00 ; SAR Peak: 0.66 W/kg

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.178
SAR 1g (W/Kg)	0.292
Variation (%)	-2.920
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	91.982459

**E. Z Axis Scan**

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.425	0.292	0.109	0.122	0.133	0.138	0.155


**F. 3D Image**


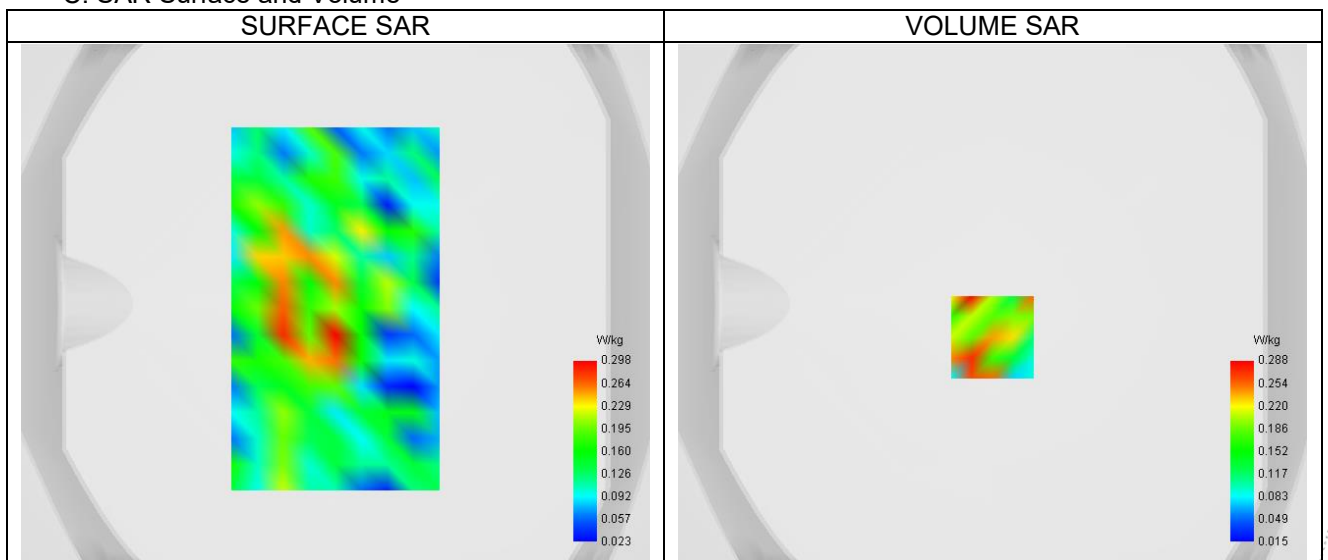
## Plot 29

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.92
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a
Channels	Low (149)
Signal	IEEE802.a (Crest factor: 1.0)

**B. Permittivity**

Frequency (MHz)	5745.000
Relative permittivity (real part)	35.650
Relative permittivity (imaginary part)	16.250
Conductivity (S/m)	4.965

**C. SAR Surface and Volume**


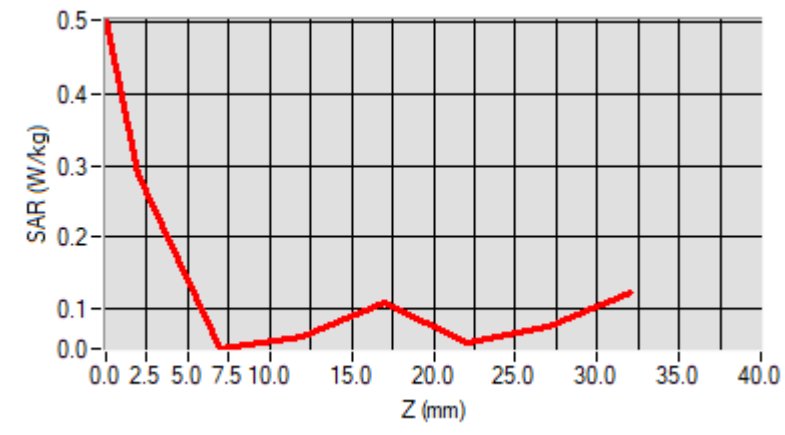
Maximum location: X=0.00, Y=-13.00 ; SAR Peak: 0.46 W/kg

**D. SAR 1g & 10g**

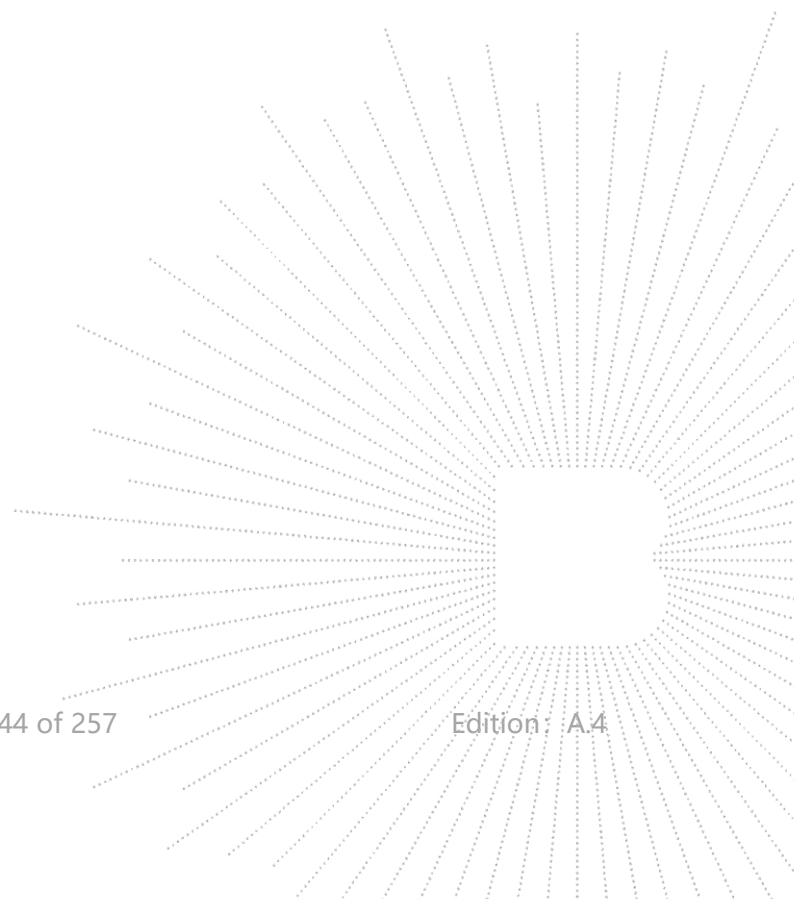
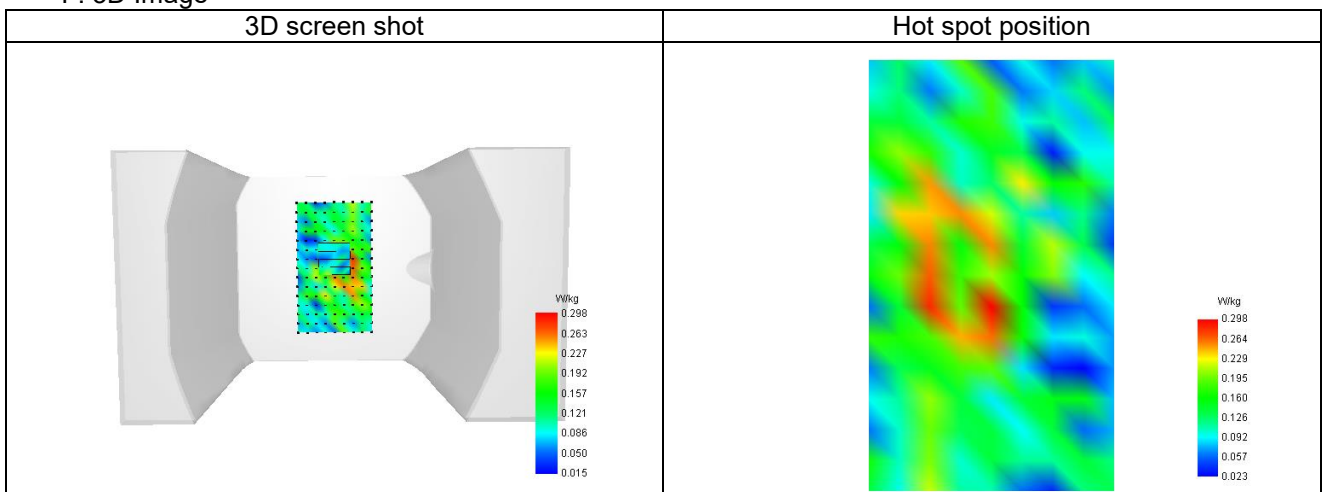
SAR 10g (W/Kg)	0.150
SAR 1g (W/Kg)	0.206
Variation (%)	4.250
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.037075

**E. Z Axis Scan**

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.503	0.288	0.045	0.062	0.110	0.053	0.076



## F. 3D Image



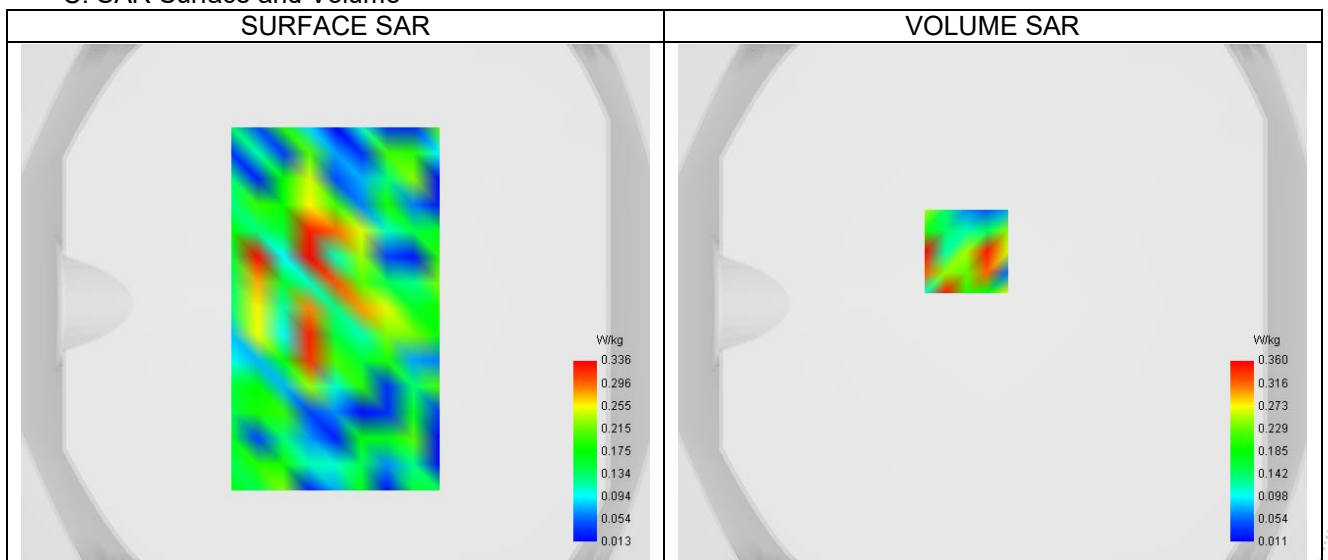
## Plot 30

**A. Experimental conditions.**

Probe	SN 25/22 EPG0373
ConvF	2.92
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a
Channels	Low (149)
Signal	IEEE802.a (Crest factor: 1.0)

**B. Permittivity**

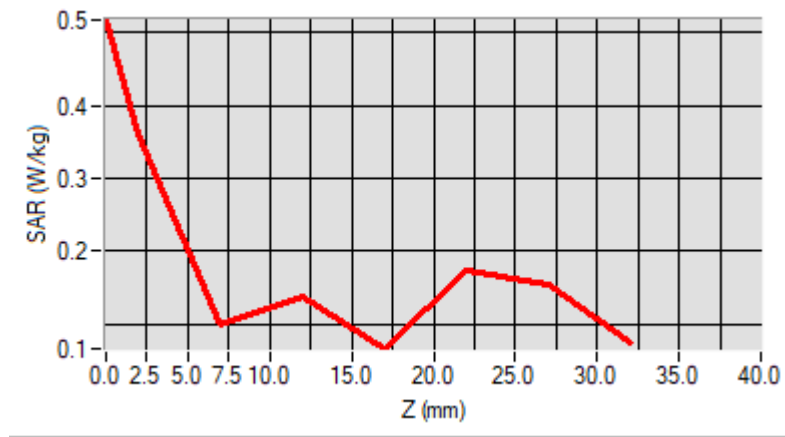
Frequency (MHz)	5745.000
Relative permittivity (real part)	35.650
Relative permittivity (imaginary part)	16.250
Conductivity (S/m)	4.965

**C. SAR Surface and Volume**

**D. SAR 1g & 10g**

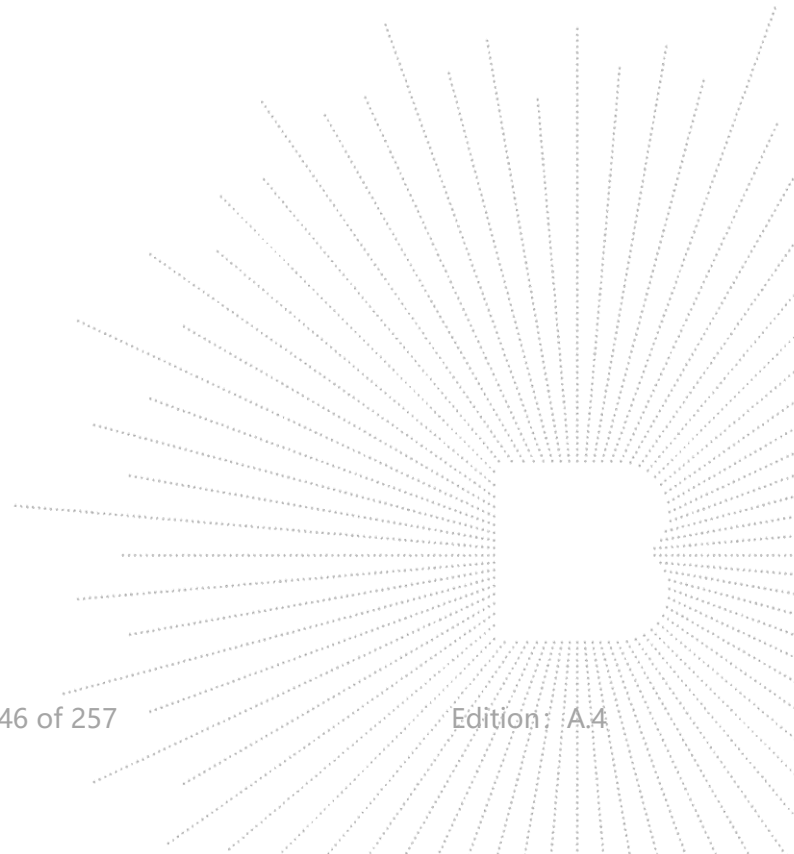
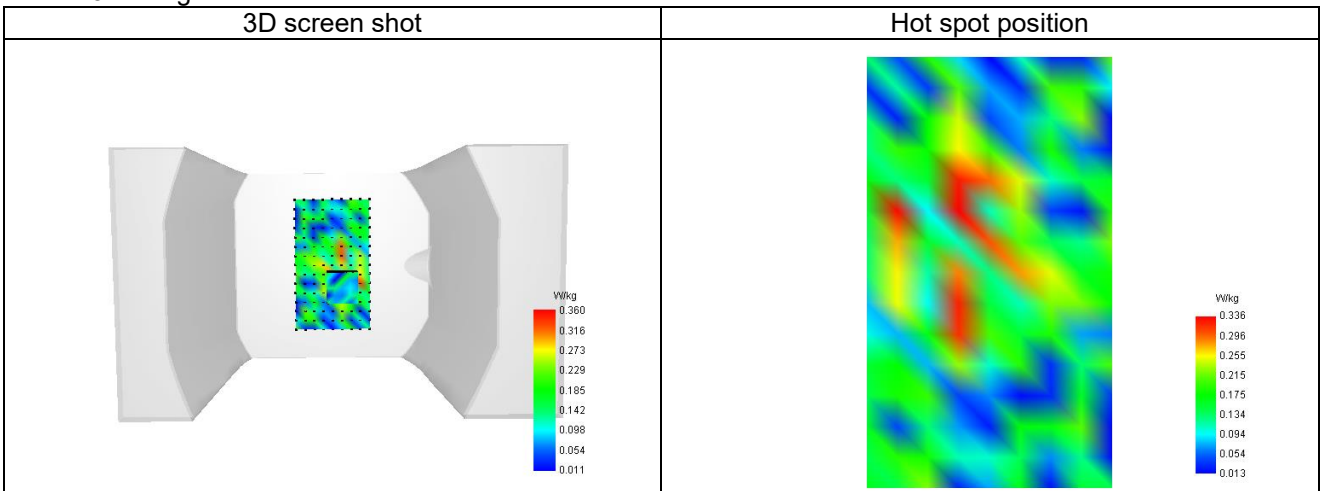
SAR 10g (W/Kg)	0.168
SAR 1g (W/Kg)	0.233
Variation (%)	0.190
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	91.255199

**E. Z Axis Scan**

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.517	0.360	0.100	0.137	0.067	0.175	0.156

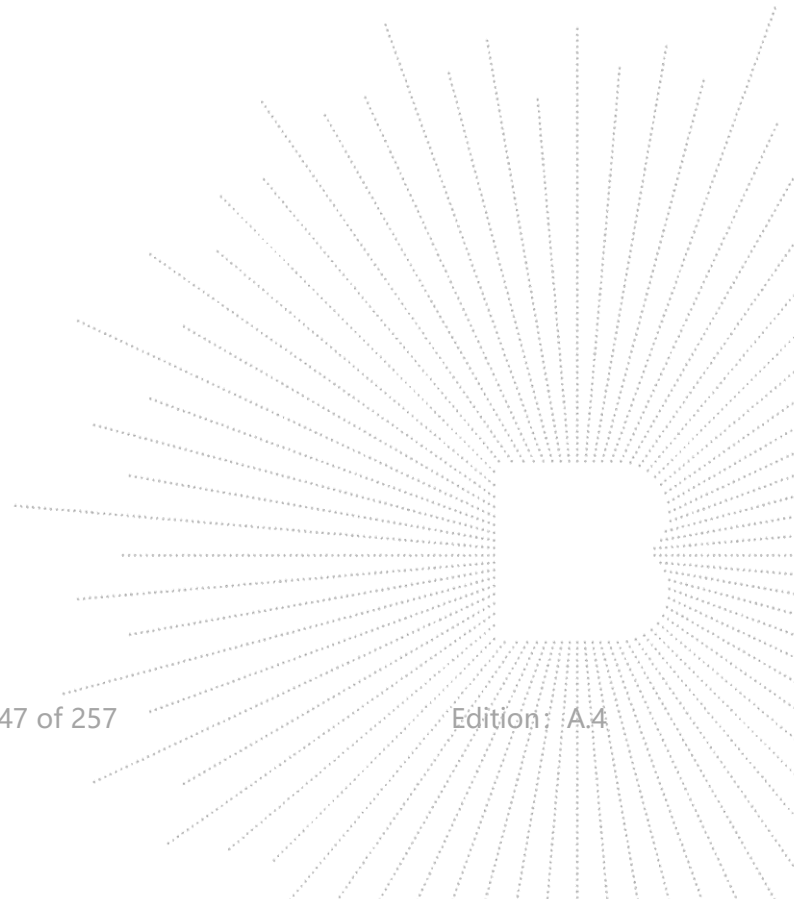


## F. 3D Image



**16. CALIBRATION CERTIFICATES**

**Probe-EPGO373 Calibration Certificate**  
**SID835Dipole Calibration Certificate**  
**SID900Dipole Calibration Certificate**  
**SID1800Dipole Calibration Certificate**  
**SID2100Dipole Calibration Certificate**  
**SID2450Dipole Calibration Certificate**  
**SID2600Dipole Calibration Certificate**  
**SID5000Dipole Calibration Certificate**



**COMOSAR E-Field Probe Calibration Report**

Ref : ACR.180.5.22.BES.A

**SHENZHEN BCTC TECHNOLOGY CO., LTD.**  
1 ~2/ F, NO. B FACTORY BUILDING, PENGZHOU INDUSTRIAL  
PARK, FUYUAN 1ST ROAD,  
TANGWEI COMMUNITY, FUHAI STREET, BAO'AN DISTRICT,  
SHENZHEN, GUANGDONG, CHINA  
**MVG COMOSAR DOSIMETRIC E-FIELD PROBE**  
SERIAL NO.: SN 25/22 EPG0373

Calibrated at MVG  
Z.I. de la pointe du diable  
Technopôle Brest Iroise – 295 avenue Alexis de Rochon  
29280 PLOUZANE - FRANCE

Calibration date: 06/29/2022



Accreditations #2-6789  
Scope available on [www.cofrac.fr](http://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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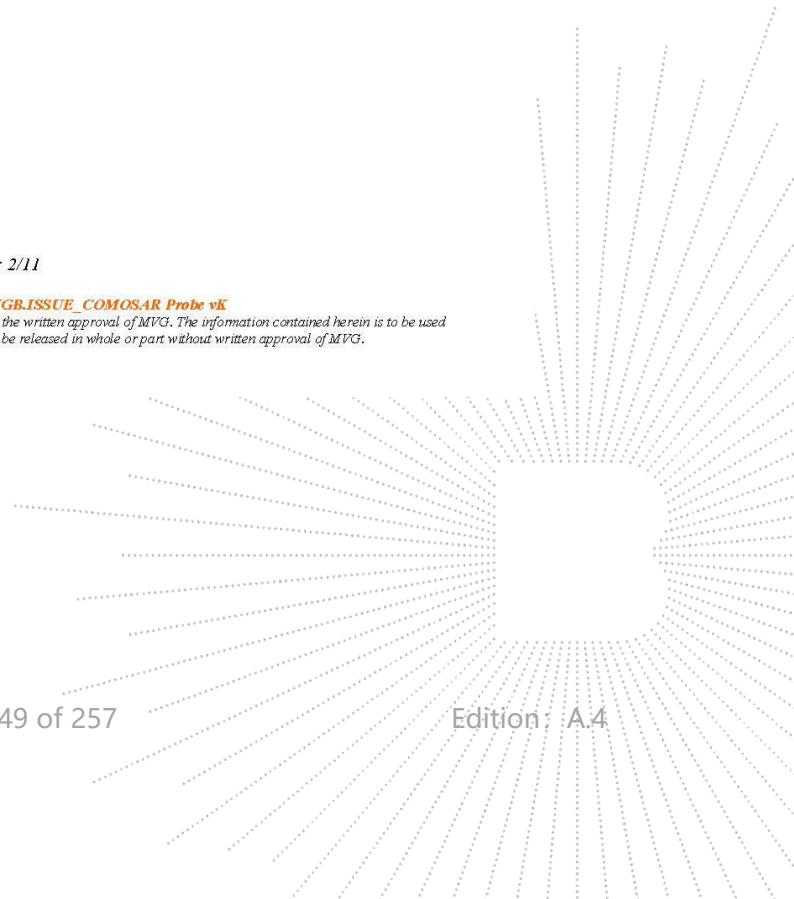


	<i>Name</i>	<i>Function</i>	<i>Date</i>	<i>Signature</i>
<i>Prepared by:</i>	Jérôme Le Gall	Measurement Responsible	6/30/2022	
<i>Checked &amp; approved by:</i>	Jérôme Luc	Technical Manager	6/30/2022	
<i>Authorized by:</i>	Yann Toutain	Laboratory Director	6/30/2022	

2022.06.30  
13:38:42 +02'00'

	<i>Customer Name</i>
<i>Distribution :</i>	Shenzhen BCTC Technology Co., Ltd.

<i>Issue</i>	<i>Name</i>	<i>Date</i>	<i>Modifications</i>
A	Jérôme Le Gall	6/30/2022	Initial release




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