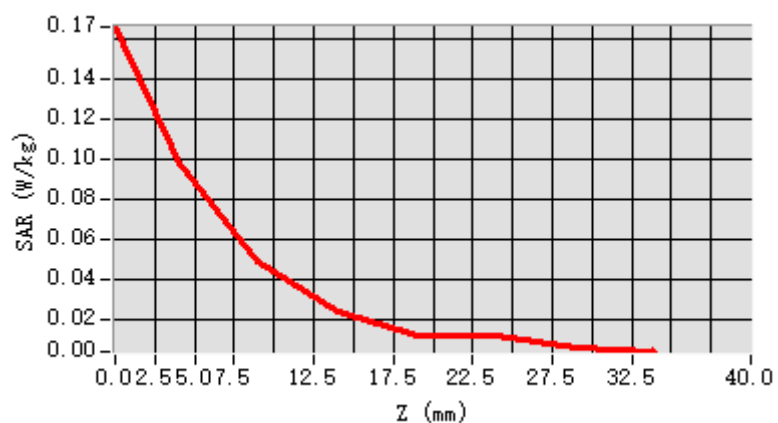
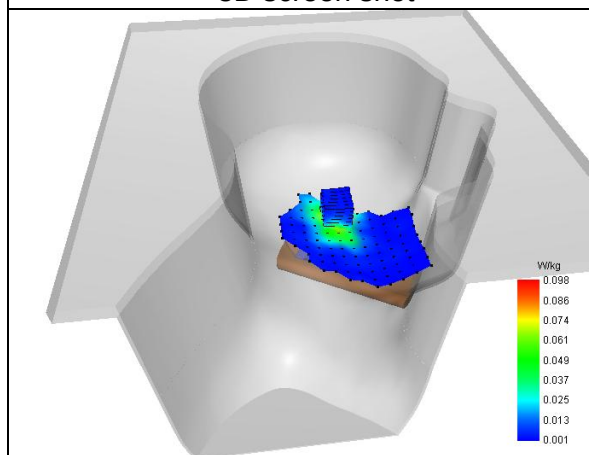


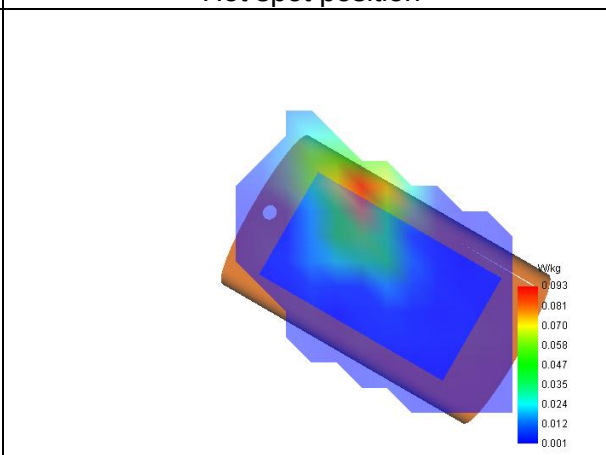


# F. 3D Image

3D screen shot



Hot spot position



## 24# SAR Measurement at ISM (Cheek, Left)

Date of measurement: 26/2/2025

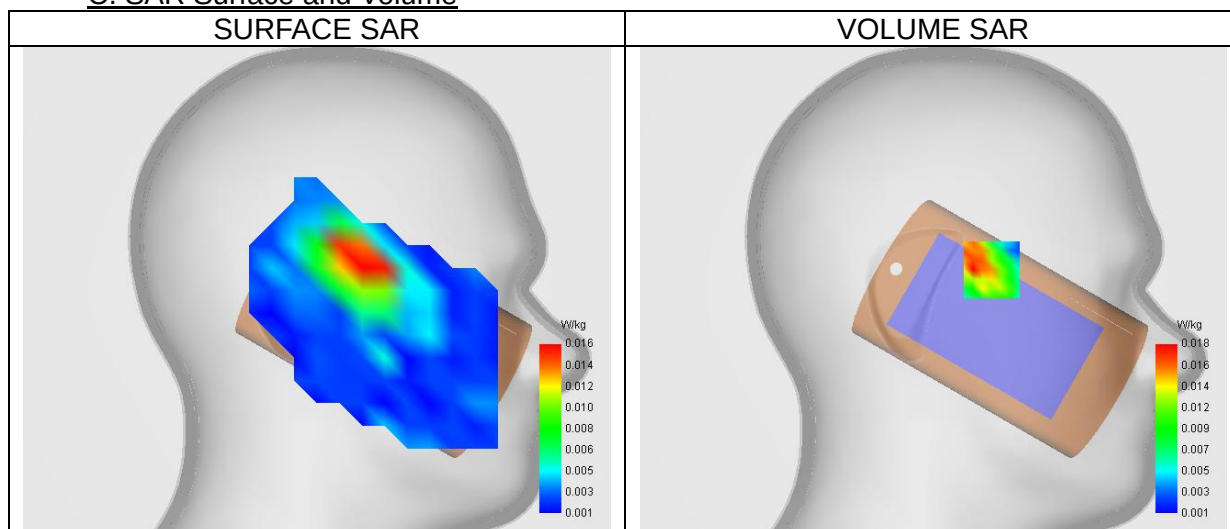
### A. Experimental conditions.

|                    |                                          |
|--------------------|------------------------------------------|
| Probe              | 4024-EPGO-442                            |
| ConvF              | 2.74                                     |
| Area Scan          | dx=12mm dy=12mm, Complete                |
| Zoom Scan          | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom            | Left head                                |
| Device Position    | Cheek                                    |
| Band               | ISM                                      |
| Signal             | IEEE 802.11 b                            |
| Channels/Frequency | Middle (1)/ frequency 2412.00 Mhz        |

### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 2412.00 |
| Relative permittivity (real part)      | 38.25   |
| Relative permittivity (imaginary part) | 12.92   |
| Conductivity (S/m)                     | 1.75    |

### C. SAR Surface and Volume



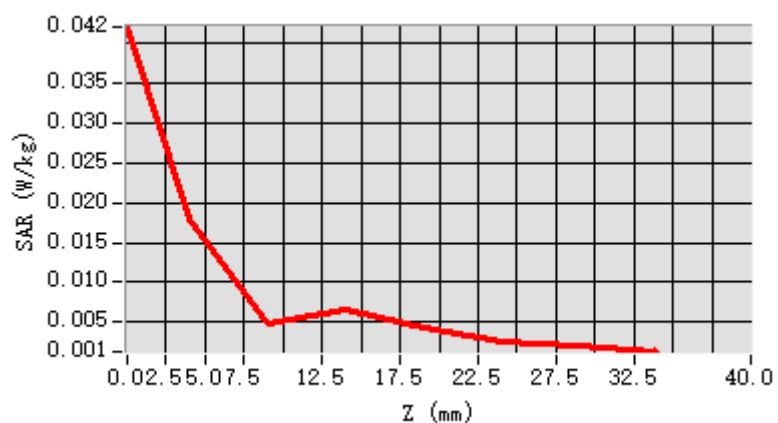
Maximum location: X=-31.00, Y=11.00 ; SAR Peak: 0.03 W/kg

### D. SAR 1g & 10g

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.007 |
| SAR 1g (W/Kg)                                         | 0.016 |
| Variation (%)                                         | 0.99  |
| Horizontal validation criteria: minimum distance (mm) | 11.18 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 60.30 |

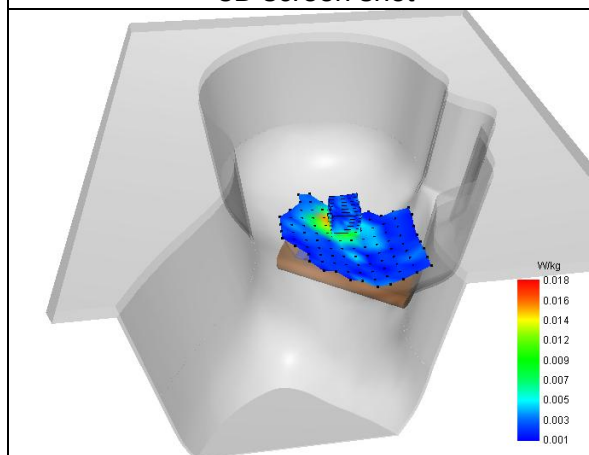
### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.042 | 0.018 | 0.005 | 0.007 | 0.004 | 0.003 | 0.002 |

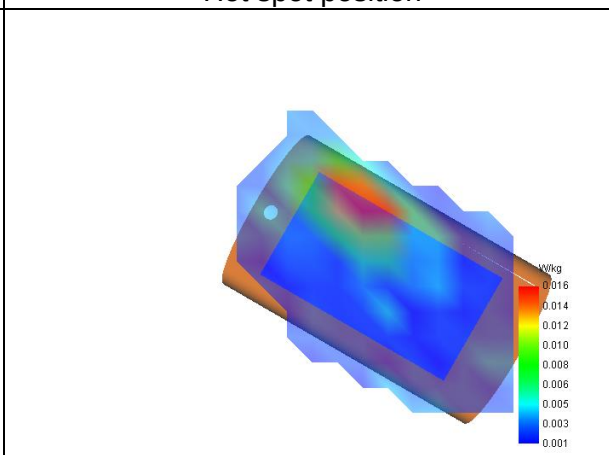


#### F. 3D Image

3D screen shot



Hot spot position



**25# SAR Measurement at ISM (Cheek, Left)**

Date of measurement: 26/2/2025

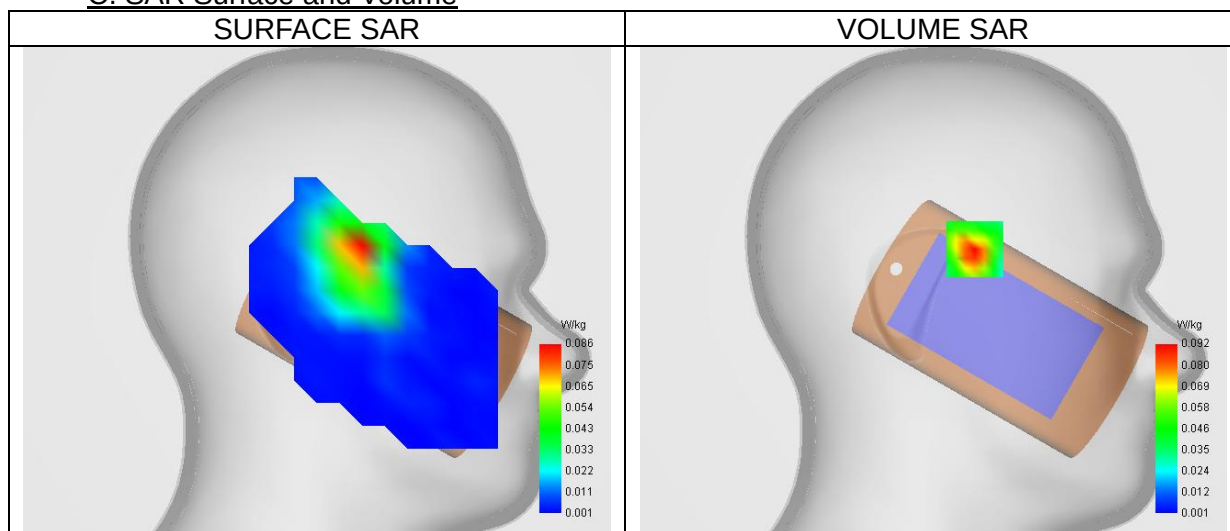
**A. Experimental conditions.**

|                    |                                          |
|--------------------|------------------------------------------|
| Probe              | 4024-EPGO-442                            |
| ConvF              | 2.74                                     |
| Area Scan          | dx=12mm dy=12mm, Complete                |
| Zoom Scan          | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom            | Left head                                |
| Device Position    | Cheek                                    |
| Band               | ISM                                      |
| Signal             | IEEE 802.11 n                            |
| Channels/Frequency | Middle (6)/ frequency 2437.00 Mhz        |

**B. Permittivity**

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 2437.00 |
| Relative permittivity (real part)      | 38.25   |
| Relative permittivity (imaginary part) | 12.92   |
| Conductivity (S/m)                     | 1.75    |

**C. SAR Surface and Volume**



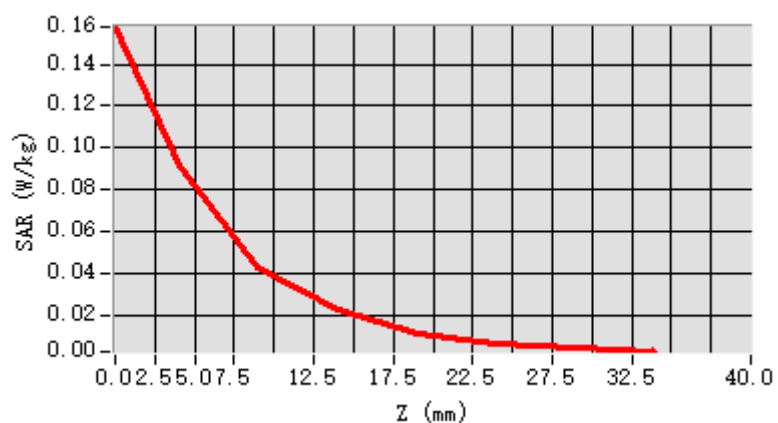
Maximum location: X=-22.00, Y=22.00 ; SAR Peak: 0.16 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.040 |
| SAR 1g (W/Kg)                                         | 0.083 |
| Variation (%)                                         | 0.20  |
| Horizontal validation criteria: minimum distance (mm) | 14.14 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 50.06 |

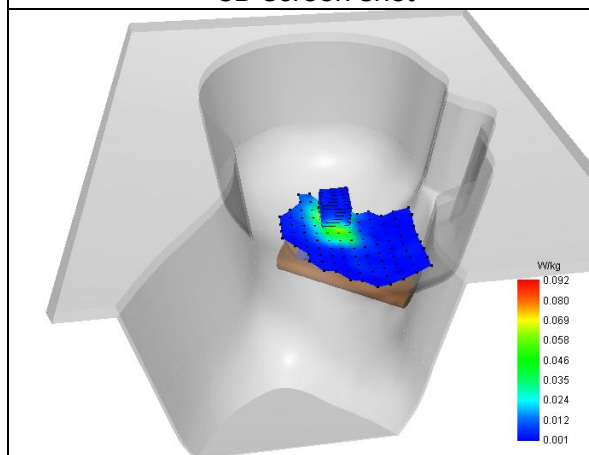
**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.158 | 0.092 | 0.043 | 0.022 | 0.011 | 0.006 | 0.005 |

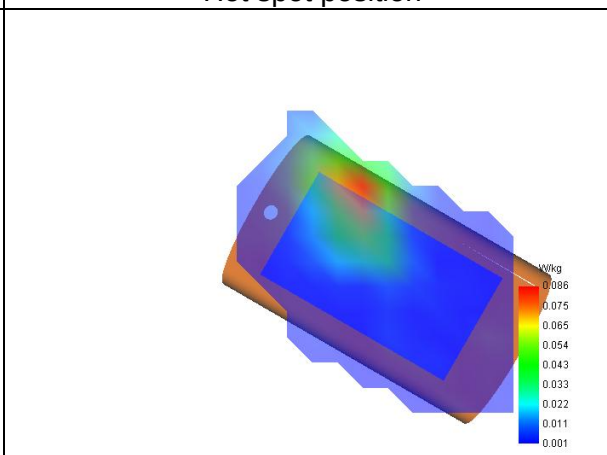


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 26/2/2025

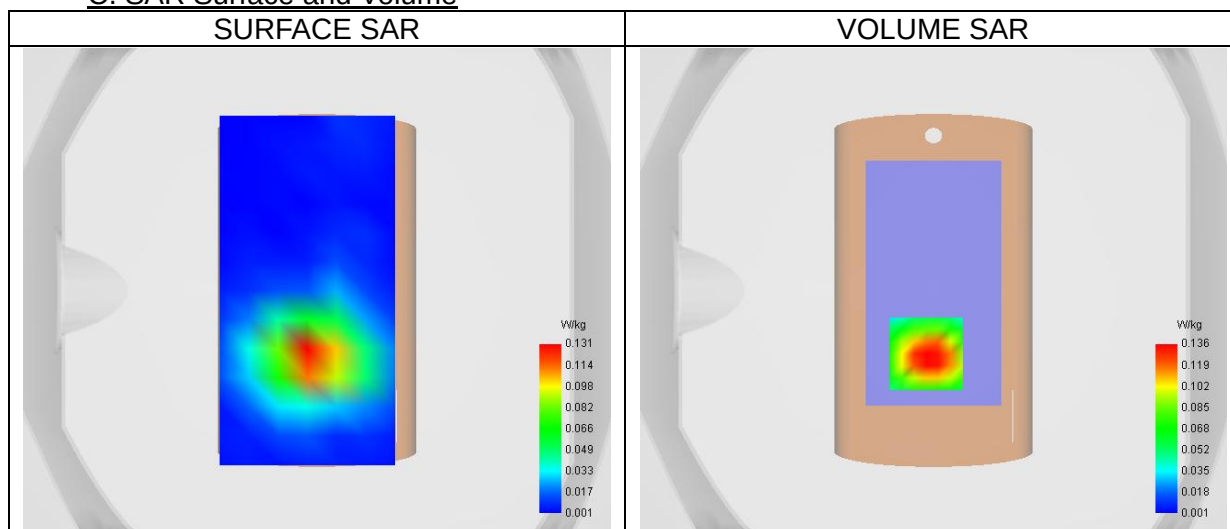
### A. Experimental conditions.

|                    |                                            |
|--------------------|--------------------------------------------|
| Probe              | 4024-EPGO-442                              |
| ConvF              | 2.74                                       |
| Area Scan          | dx=12mm dy=12mm, Complete                  |
| Zoom Scan          | 7x7x7, dx=5mm dy=5mm<br>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)      | 38.25   |
| Relative permittivity (imaginary part) | 12.92   |
| Conductivity (S/m)                     | 1.75    |

### C. SAR Surface and Volume



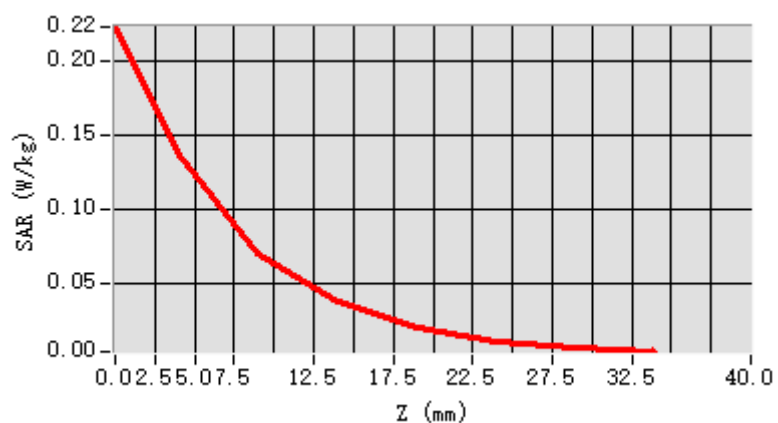
Maximum location: X=-3.00, Y=-26.00 ; SAR Peak: 0.23 W/kg

### D. SAR 1g & 10g

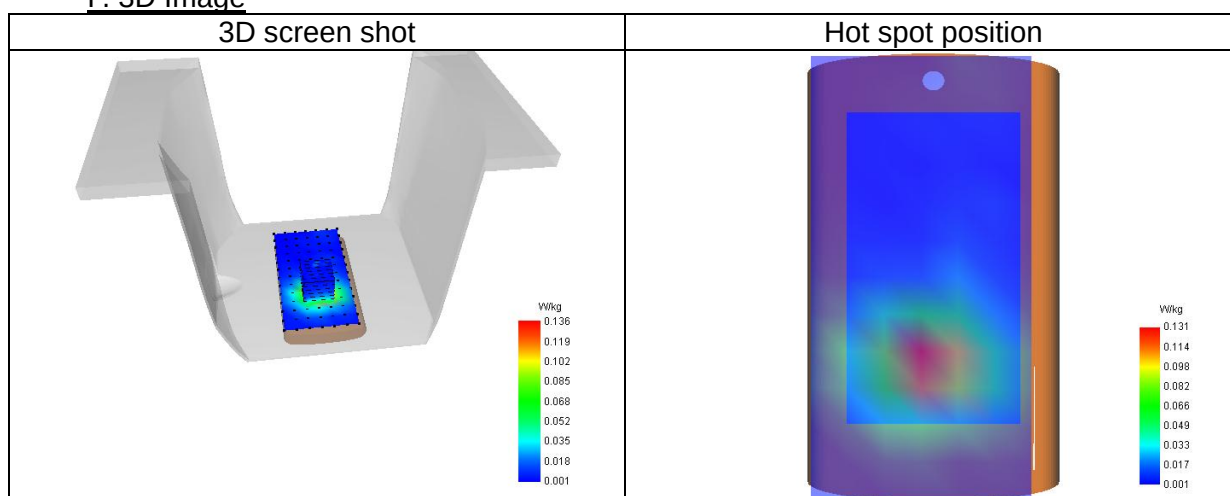
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.065 |
| SAR 1g (W/Kg)                                         | 0.130 |
| Variation (%)                                         | 0.26  |
| Horizontal validation criteria: minimum distance (mm) | 14.14 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 52.02 |

### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.224 | 0.136 | 0.070 | 0.037 | 0.019 | 0.010 | 0.006 |



#### F. 3D Image



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

Date of measurement: 26/2/2025

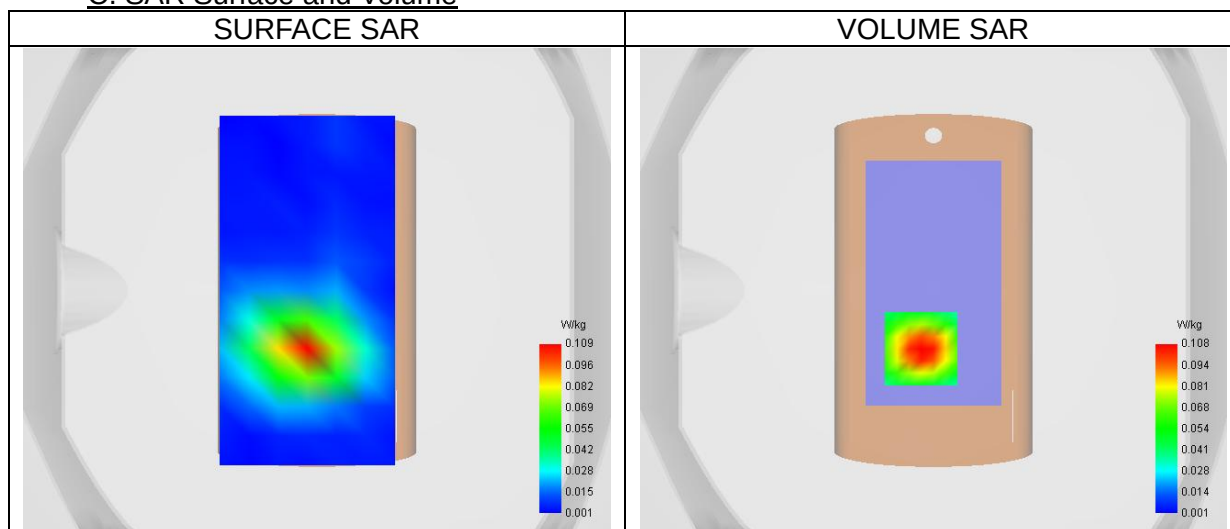
### A. Experimental conditions.

|                    |                                          |
|--------------------|------------------------------------------|
| Probe              | 4024-EPGO-442                            |
| ConvF              | 2.74                                     |
| Area Scan          | dx=12mm dy=12mm, Complete                |
| Zoom Scan          | 7x7x7,dx=5mm dy=5mm<br>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)      | 38.25   |
| Relative permittivity (imaginary part) | 12.92   |
| Conductivity (S/m)                     | 1.75    |

### C. SAR Surface and Volume



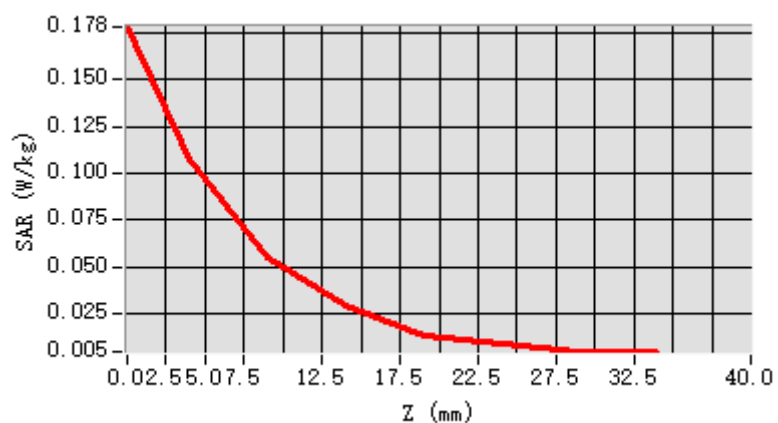
Maximum location: X=-5.00, Y=-24.00 ; SAR Peak: 0.18 W/kg

### D. SAR 1g & 10g

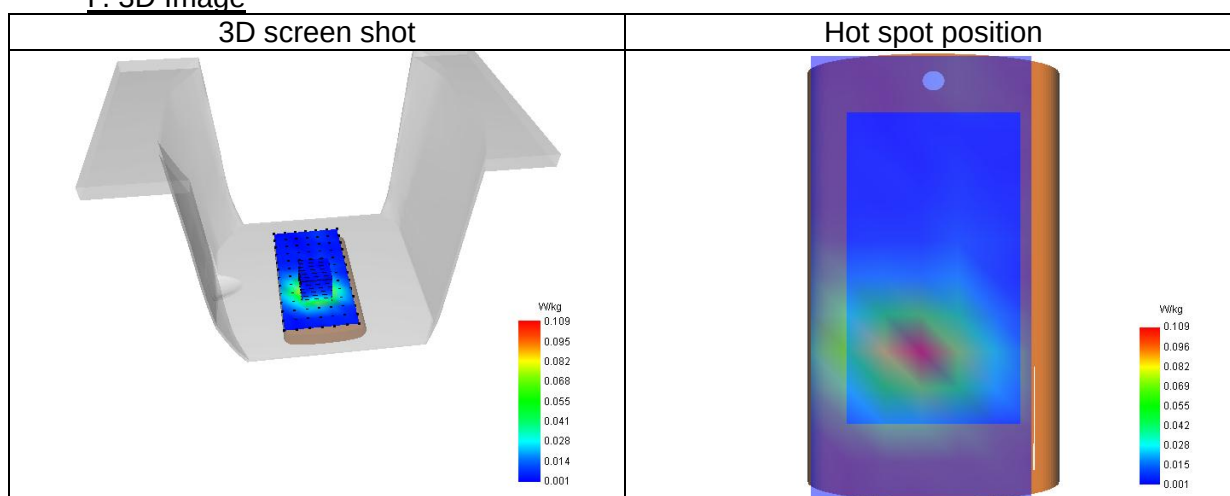
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.050 |
| SAR 1g (W/Kg)                                         | 0.101 |
| Variation (%)                                         | 0.94  |
| Horizontal validation criteria: minimum distance (mm) | 15.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 50.70 |

### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.178 | 0.108 | 0.055 | 0.029 | 0.014 | 0.009 | 0.005 |



#### F. 3D Image



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

Date of measurement: 26/2/2025

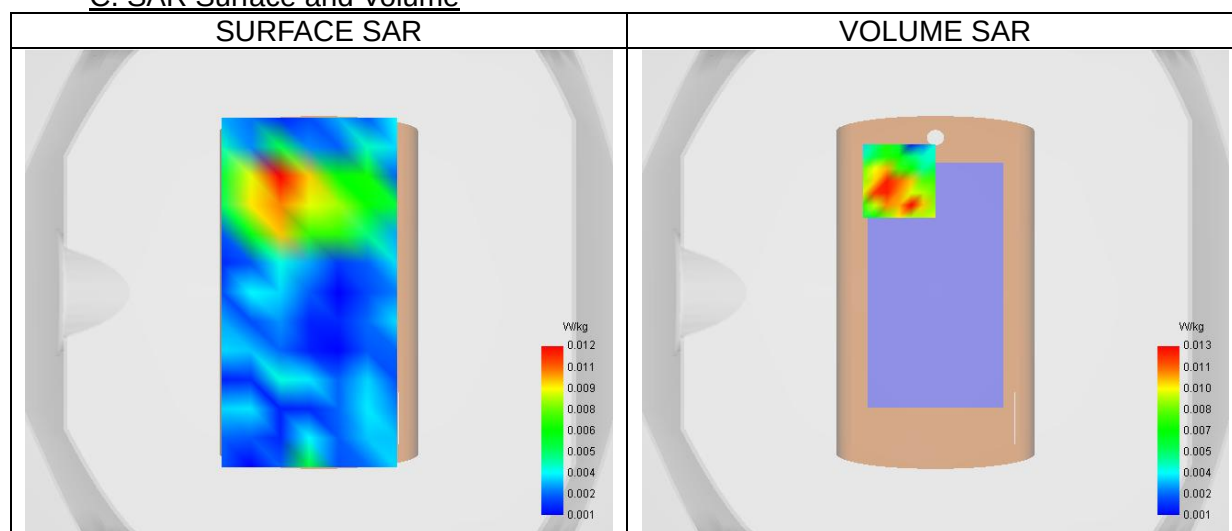
### A. Experimental conditions.

|                    |                                          |
|--------------------|------------------------------------------|
| Probe              | 4024-EPGO-442                            |
| ConvF              | 2.74                                     |
| Area Scan          | dx=12mm dy=12mm, Complete                |
| Zoom Scan          | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom            | Validation plane                         |
| Device Position    | Body                                     |
| Band               | ISM                                      |
| Signal             | IEEE 802.11 b                            |
| Channels/Frequency | Middle (1)/ frequency 2412.00 Mhz        |

### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 2412.00 |
| Relative permittivity (real part)      | 38.25   |
| Relative permittivity (imaginary part) | 12.92   |
| Conductivity (S/m)                     | 1.75    |

### C. SAR Surface and Volume



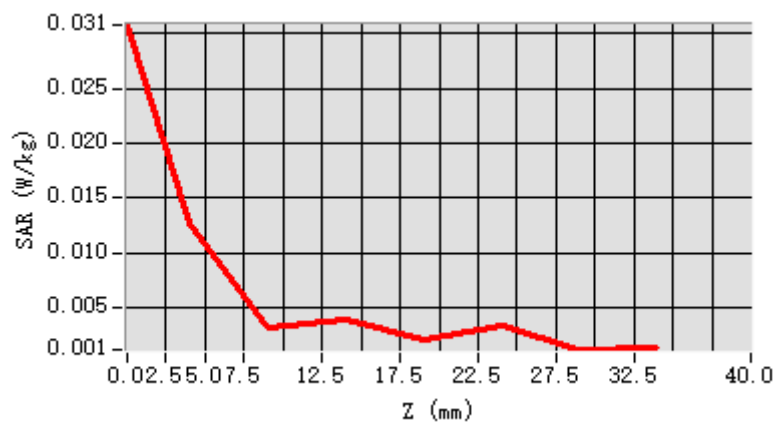
Maximum location: X=-15.00, Y=46.00 ; SAR Peak: 0.02 W/kg

### D. SAR 1g & 10g

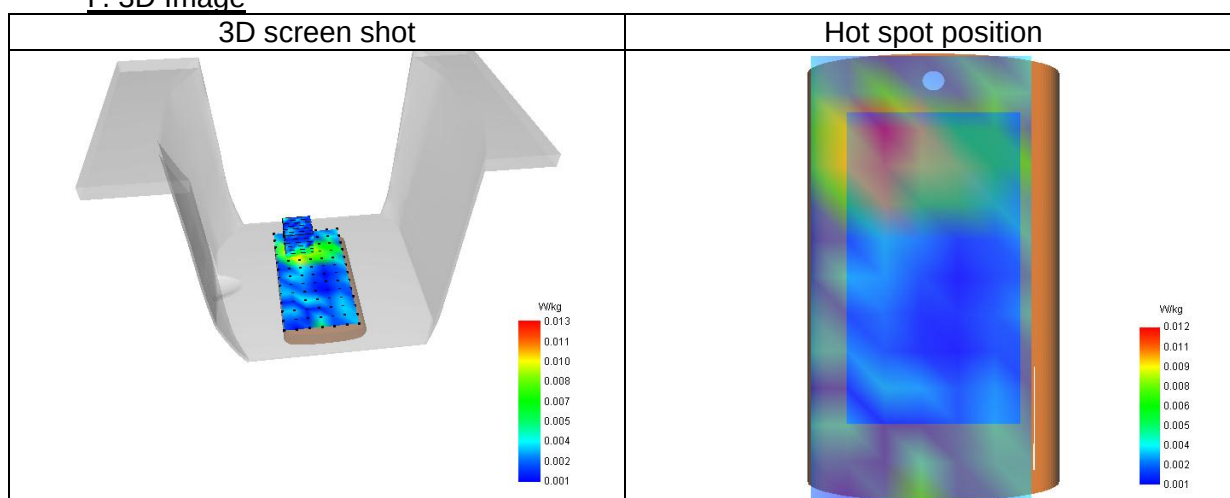
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.005 |
| SAR 1g (W/Kg)                                         | 0.012 |
| Variation (%)                                         | 0.18  |
| Horizontal validation criteria: minimum distance (mm) | 15.81 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 62.88 |

### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.031 | 0.013 | 0.003 | 0.004 | 0.002 | 0.003 | 0.001 |



#### F. 3D Image



29# SAR Measurement at LTE band 2 (Cheek, Left)

Date of measurement: 2/3/2025

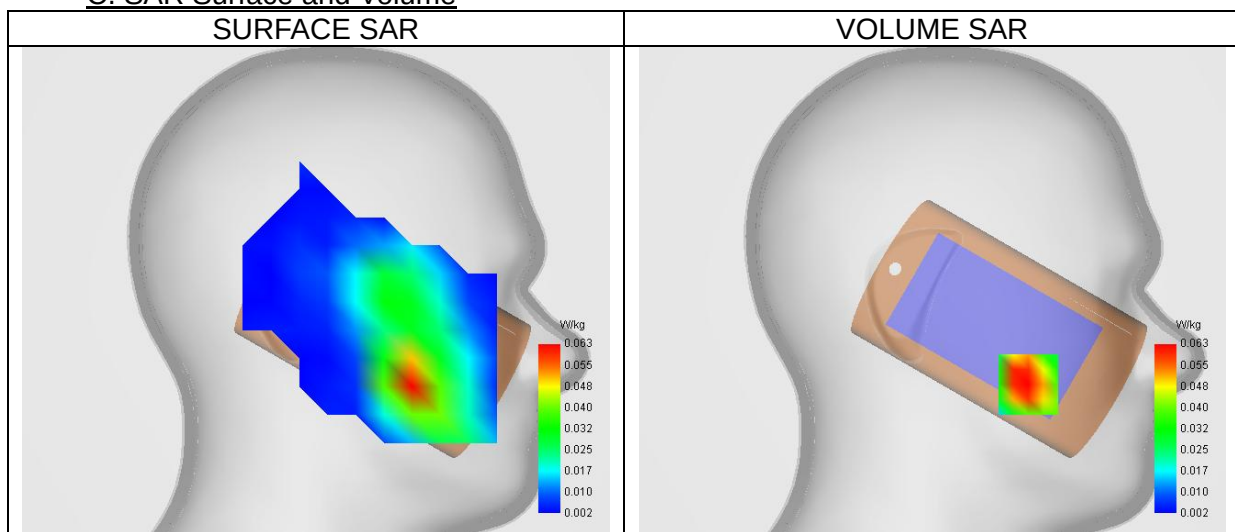
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.57                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 38.36   |
| Relative permittivity (imaginary part) | 13.67   |
| Conductivity (S/m)                     | 1.43    |

C. SAR Surface and Volume



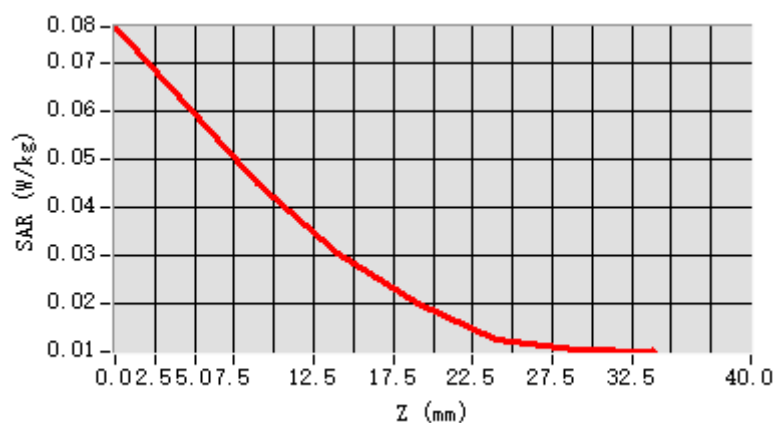
Maximum location: X=-51.00, Y=-50.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.036 |
| SAR 1g (W/Kg)                                         | 0.061 |
| Variation (%)                                         | 3.68  |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 71.77 |

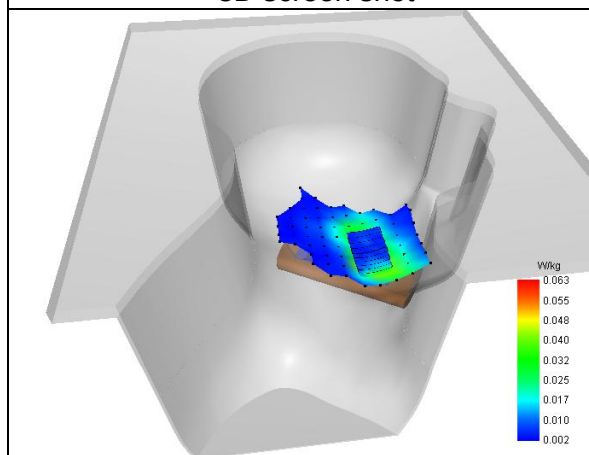
E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.078 | 0.063 | 0.045 | 0.030 | 0.020 | 0.012 | 0.010 |

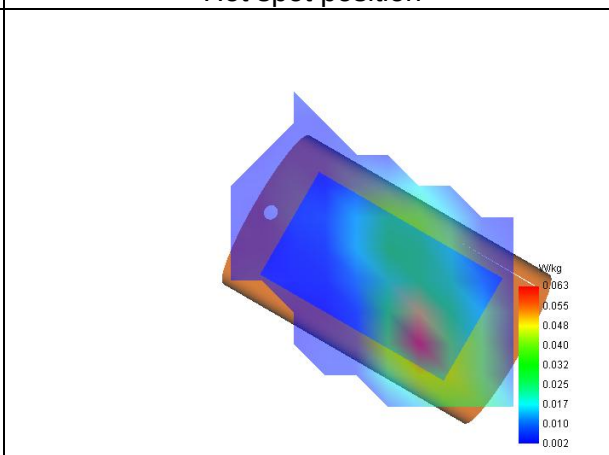


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 2/3/2025

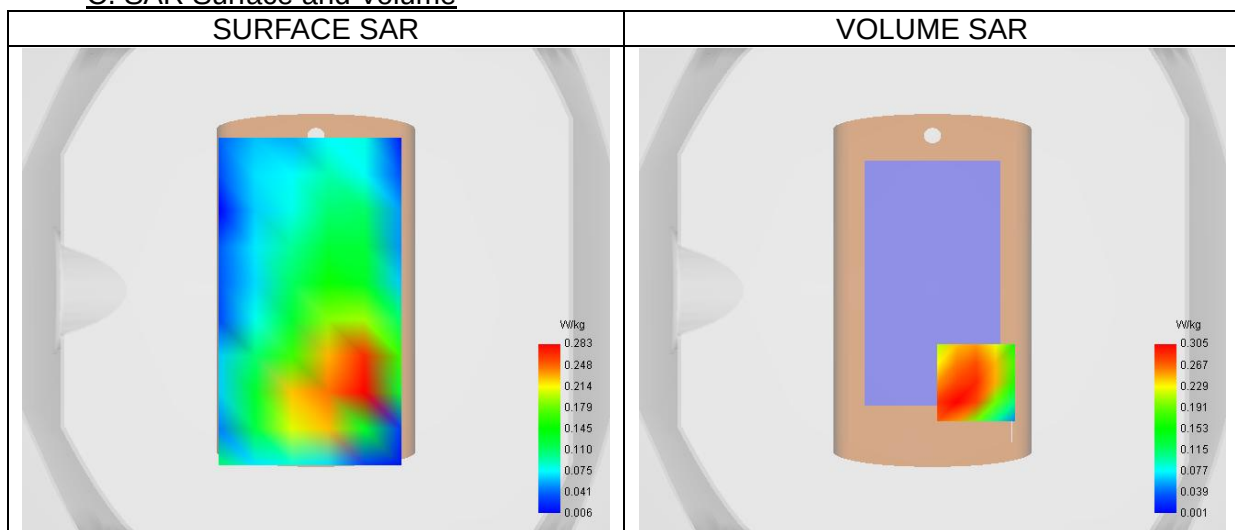
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.57                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 38.36   |
| Relative permittivity (imaginary part) | 13.67   |
| Conductivity (S/m)                     | 1.43    |

#### C. SAR Surface and Volume



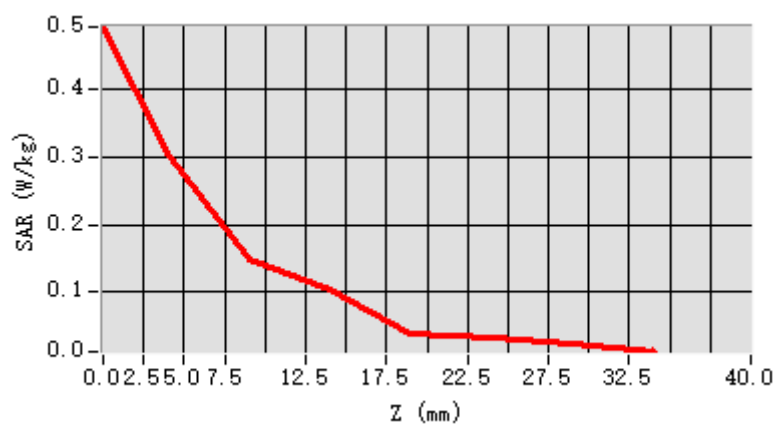
Maximum location: X=18.00, Y=-38.00 ; SAR Peak: 0.47 W/kg

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

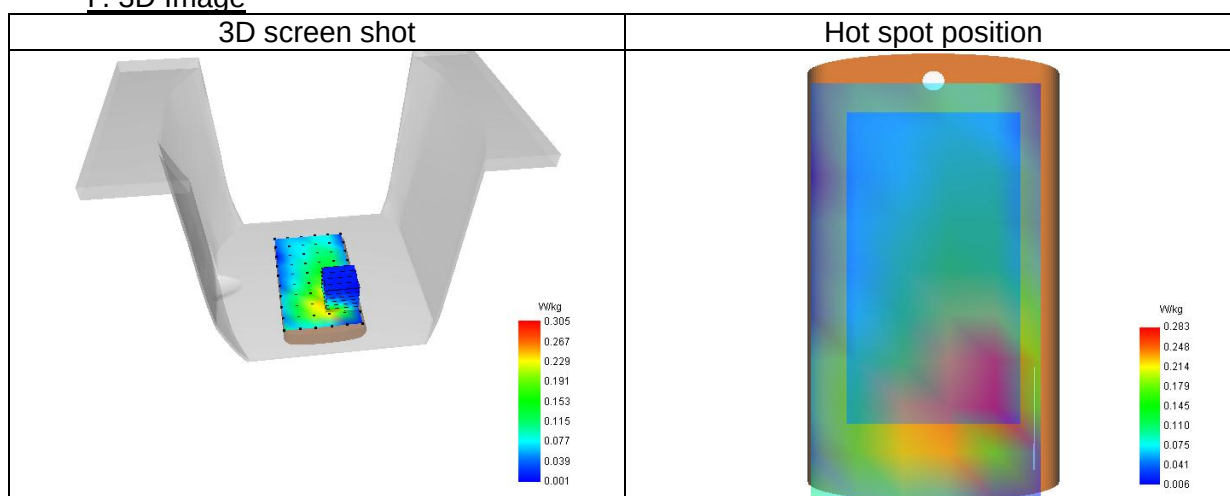
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.147 |
| SAR 1g (W/Kg)                                         | 0.292 |
| Variation (%)                                         | 0.17  |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 57.77 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.493 | 0.305 | 0.150 | 0.103 | 0.038 | 0.033 | 0.022 |



#### F. 3D Image



31# SAR Measurement at LTE band 4 (Cheek, Left)

Date of measurement: 19/3/2025

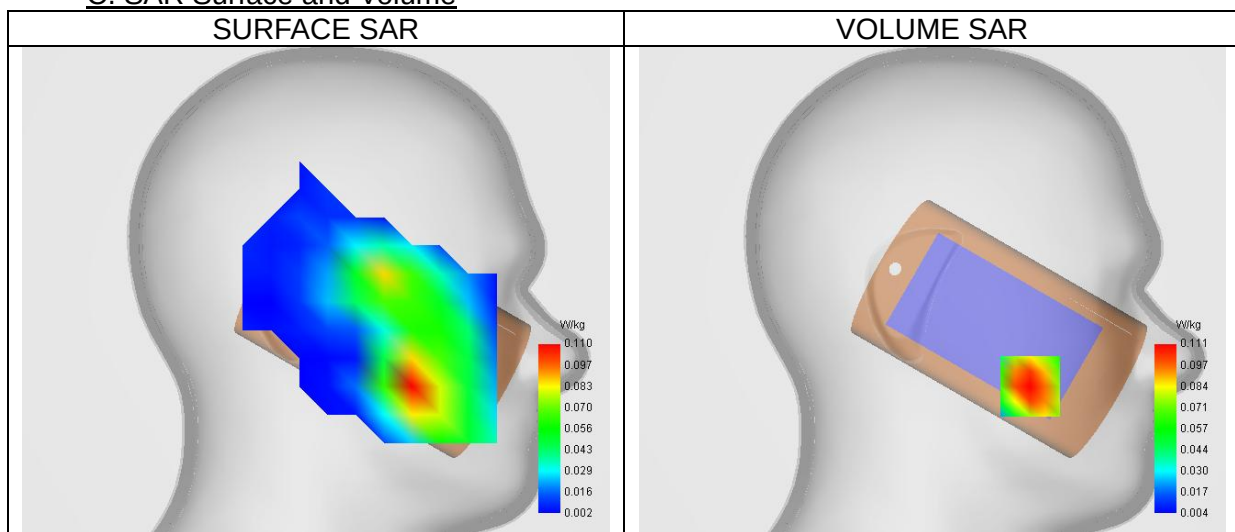
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 39.38   |
| Relative permittivity (imaginary part) | 13.70   |
| Conductivity (S/m)                     | 1.32    |

C. SAR Surface and Volume



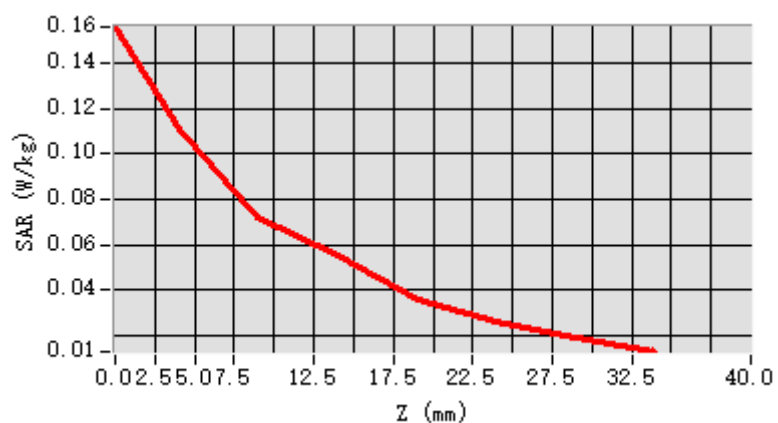
Maximum location: X=-52.00, Y=-51.00 ; SAR Peak: 0.16 W/kg

D. SAR 1g & 10g

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.066 |
| SAR 1g (W/Kg)                                         | 0.107 |
| Variation (%)                                         | -2.42 |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 66.28 |

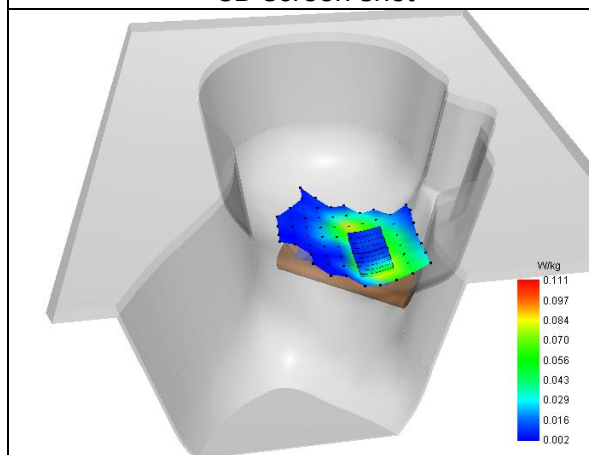
E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.156 | 0.111 | 0.072 | 0.055 | 0.036 | 0.026 | 0.019 |

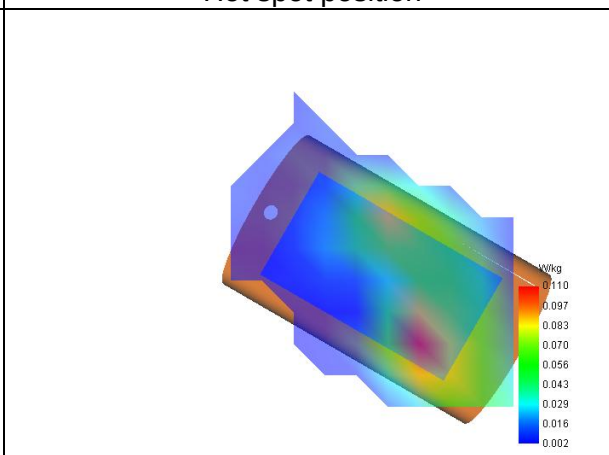


# F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 19/3/2025

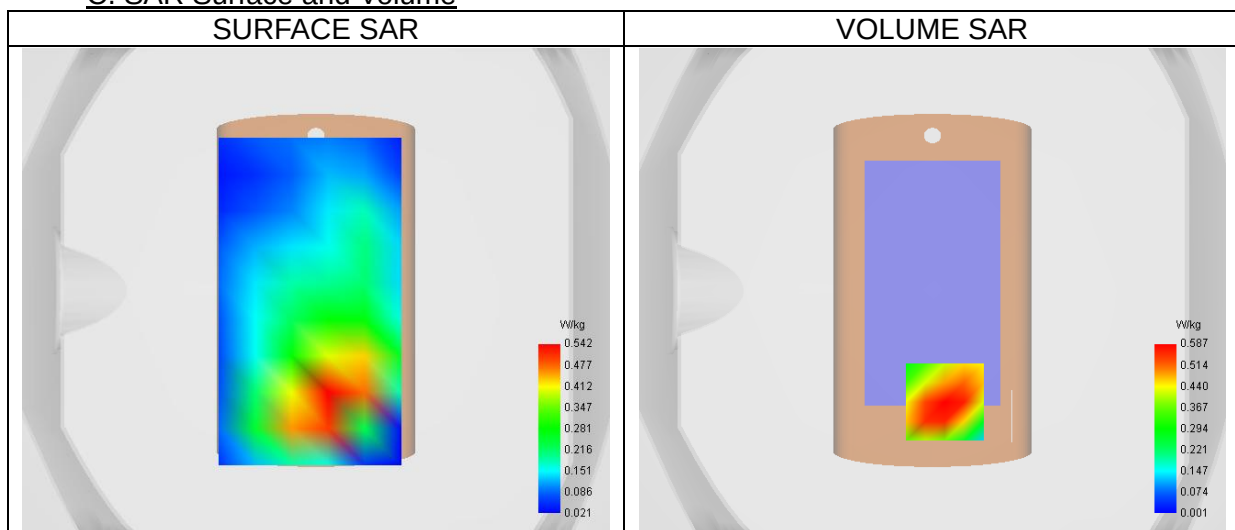
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 39.38   |
| Relative permittivity (imaginary part) | 13.70   |
| Conductivity (S/m)                     | 1.32    |

#### C. SAR Surface and Volume



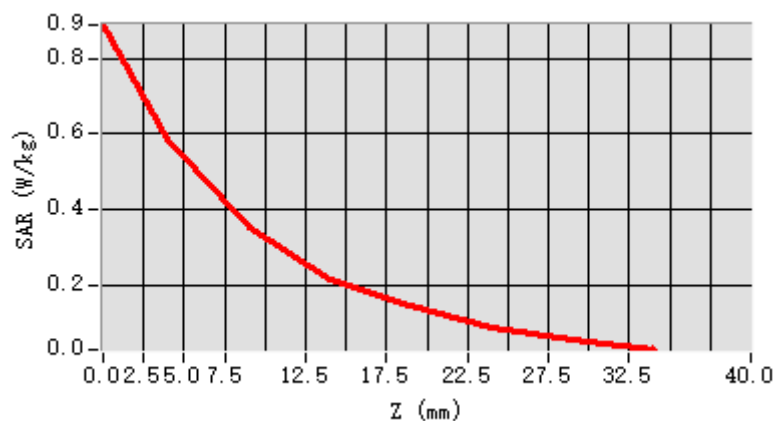
Maximum location: X=5.00, Y=-46.00 ; SAR Peak: 0.91 W/kg

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

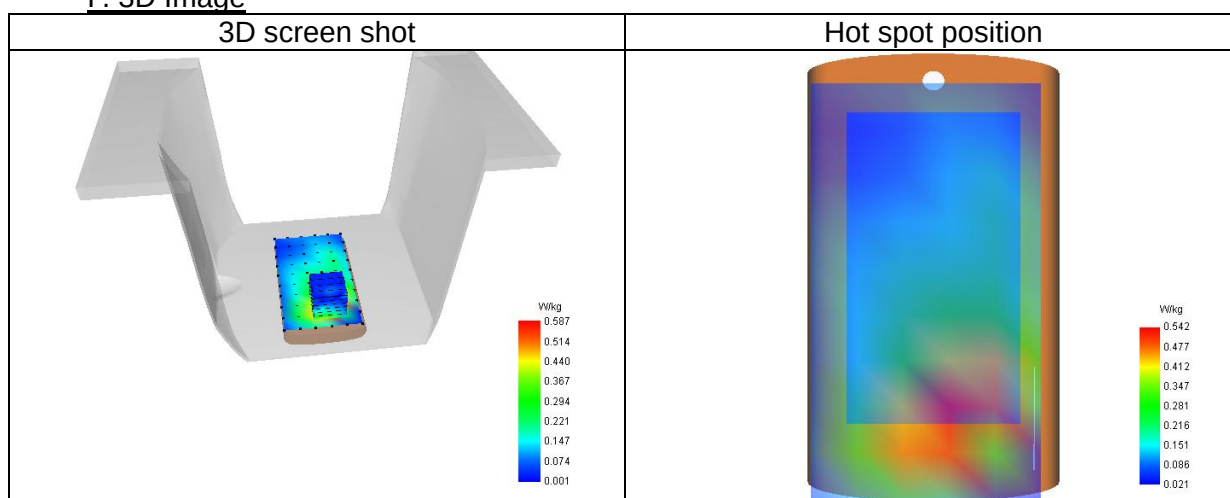
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.327 |
| SAR 1g (W/Kg)                                         | 0.579 |
| Variation (%)                                         | -0.70 |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 60.27 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.888 | 0.587 | 0.354 | 0.218 | 0.146 | 0.089 | 0.055 |



#### F. 3D Image



### 33# SAR Measurement at LTE band 5 (Cheek, Left)

Date of measurement: 1/3/2025

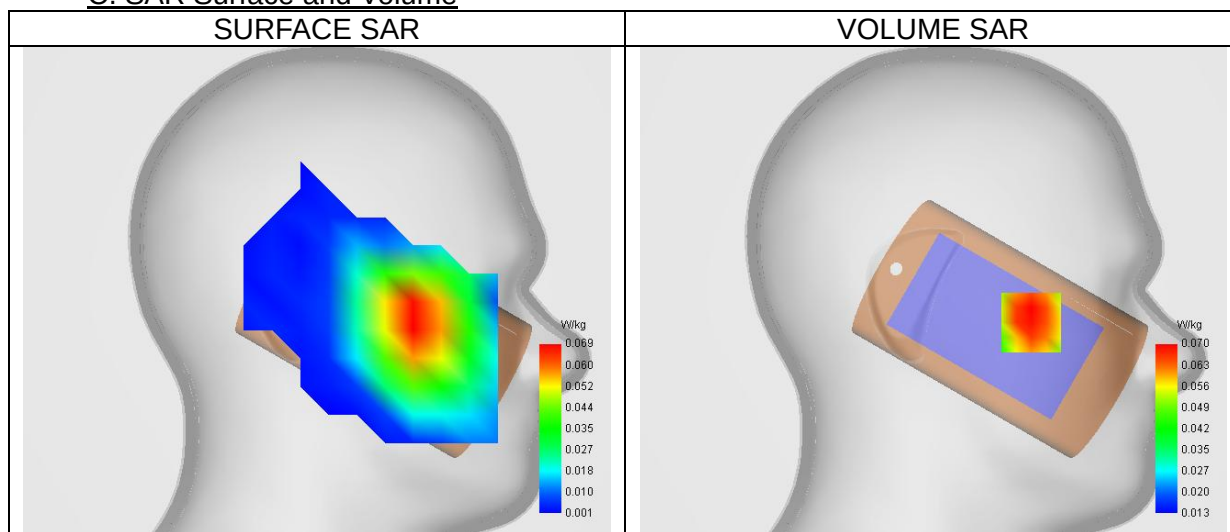
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 41.56  |
| Relative permittivity (imaginary part) | 19.49  |
| Conductivity (S/m)                     | 0.91   |

#### C. SAR Surface and Volume



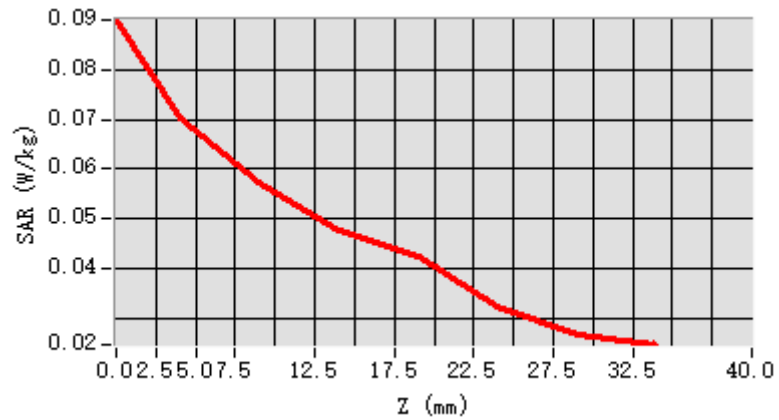
Maximum location: X=-52.00, Y=-17.00 ; SAR Peak: 0.08 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.054 |
| SAR 1g (W/Kg)                                         | 0.069 |
| Variation (%)                                         | -2.06 |
| Horizontal validation criteria: minimum distance (mm) | 0.00  |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 0.00  |

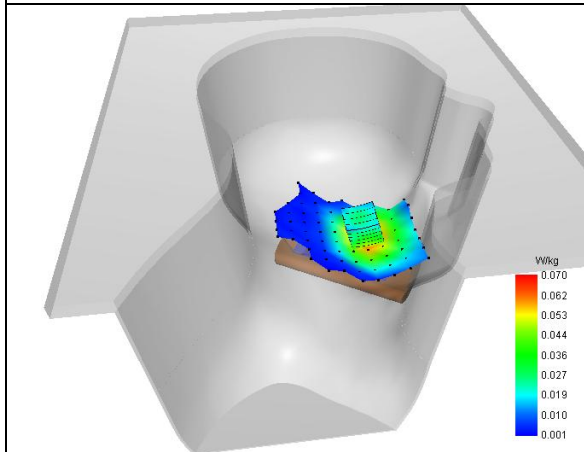
#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.090 | 0.070 | 0.057 | 0.048 | 0.043 | 0.033 | 0.027 |

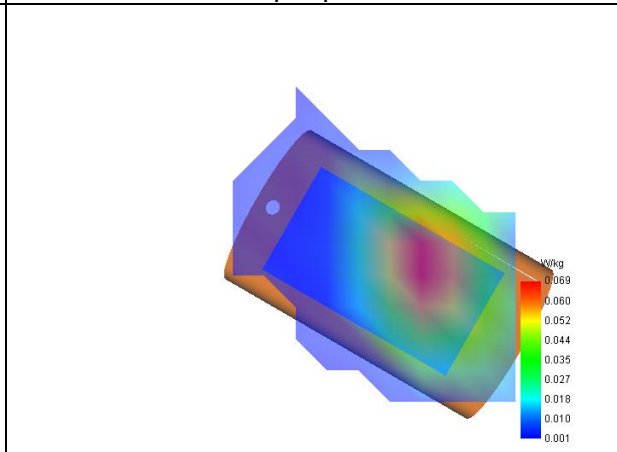


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 1/3/2025

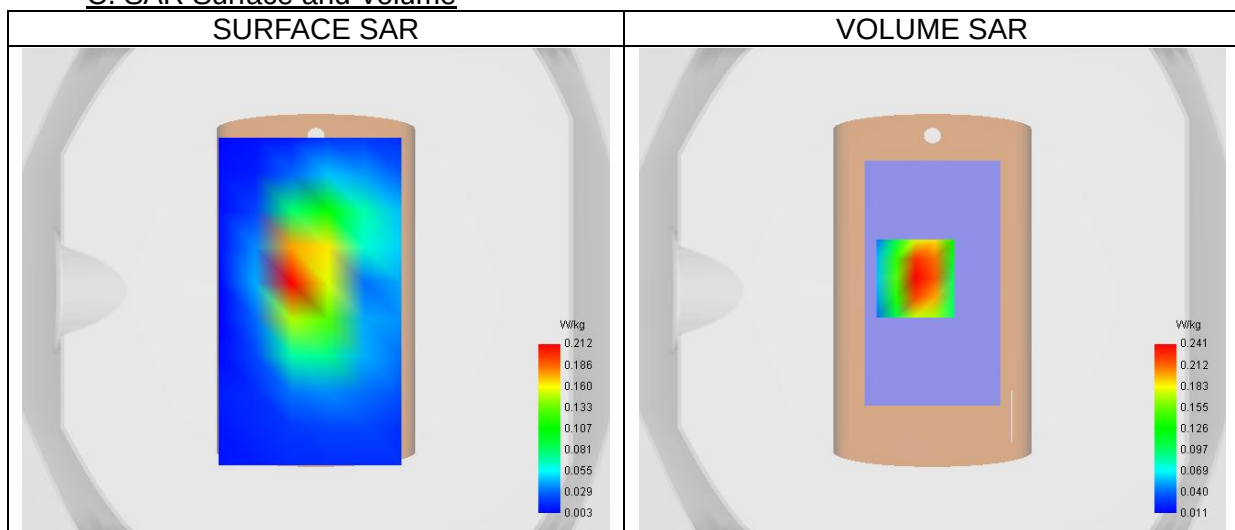
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 41.56  |
| Relative permittivity (imaginary part) | 19.49  |
| Conductivity (S/m)                     | 0.91   |

#### C. SAR Surface and Volume



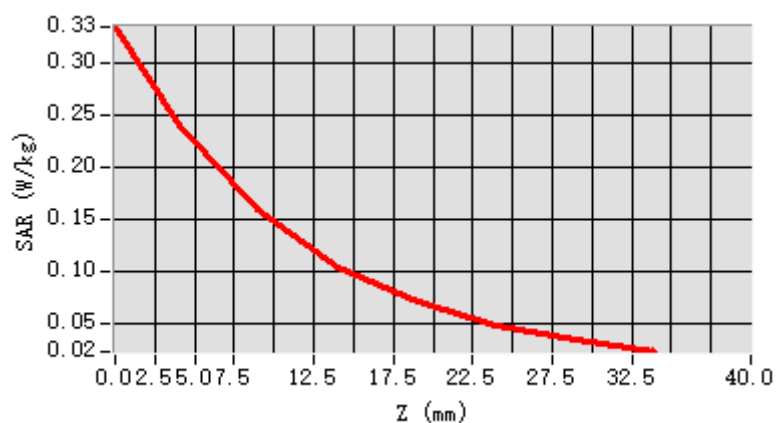
Maximum location: X=-7.00, Y=5.00 ; SAR Peak: 0.36 W/kg

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

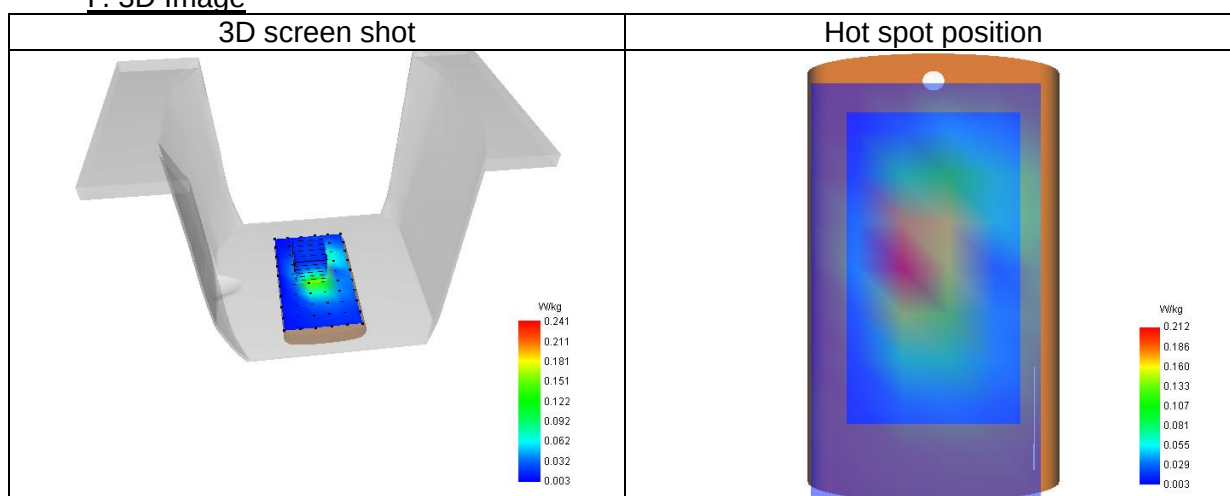
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.134 |
| SAR 1g (W/Kg)                                         | 0.233 |
| Variation (%)                                         | -0.15 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 66.04 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.334 | 0.241 | 0.159 | 0.103 | 0.071 | 0.048 | 0.033 |



#### F. 3D Image



**35# SAR Measurement at LTE band 7 (Cheek, Left)**

Date of measurement: 22/3/2025

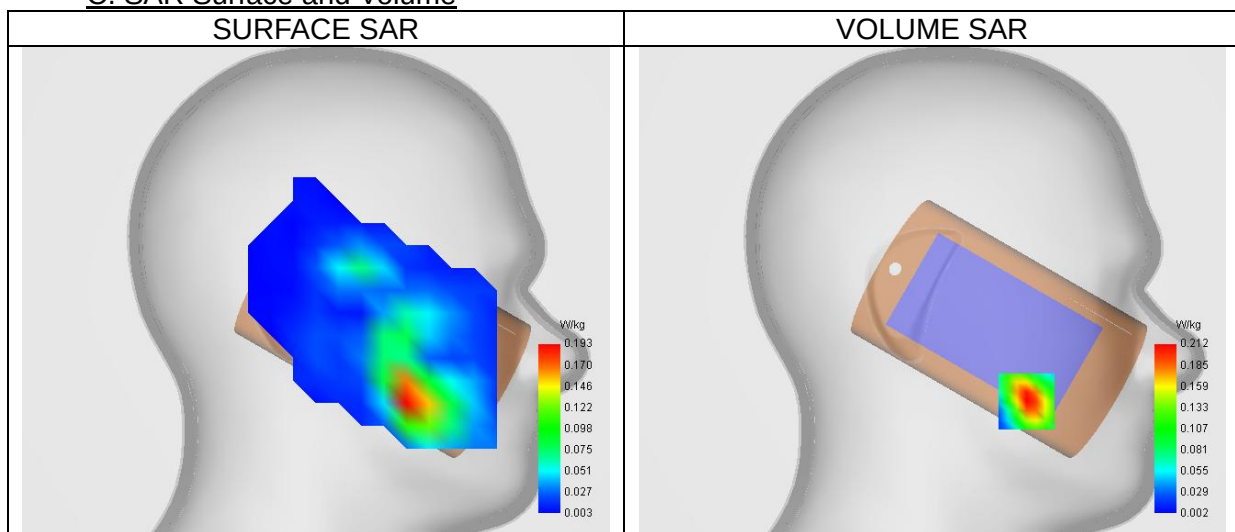
**A. Experimental conditions.**

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Probe                                          | 4024-EPGO-442                            |
| ConvF                                          | 2.51                                     |
| Area Scan                                      | dx=12mm dy=12mm, Complete                |
| Zoom Scan                                      | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom                                        | Left head                                |
| Device Position                                | Cheek                                    |
| 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)      | 39.47   |
| Relative permittivity (imaginary part) | 13.61   |
| Conductivity (S/m)                     | 1.92    |

**C. SAR Surface and Volume**



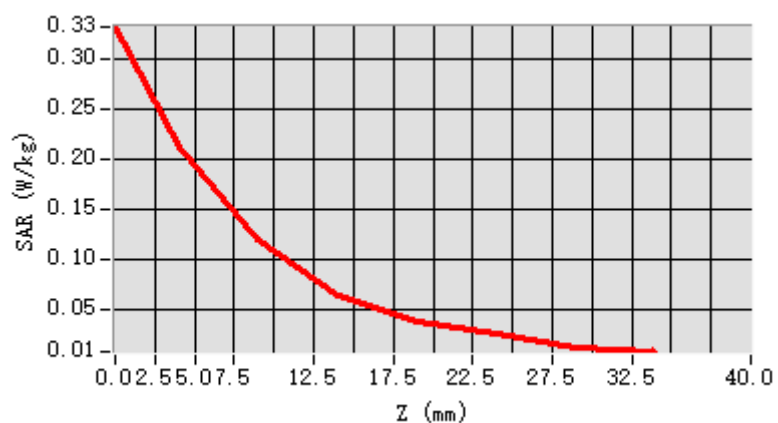
Maximum location: X=-50.00, Y=-59.00 ; SAR Peak: 0.33 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.097 |
| SAR 1g (W/Kg)                                         | 0.193 |
| Variation (%)                                         | 1.01  |
| Horizontal validation criteria: minimum distance (mm) | 10.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 56.61 |

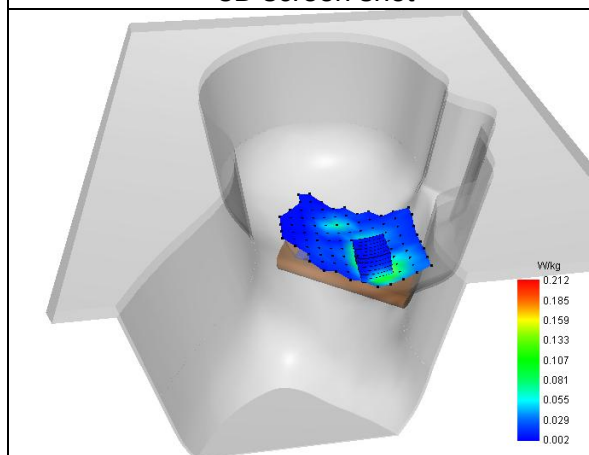
**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.331 | 0.212 | 0.120 | 0.065 | 0.039 | 0.026 | 0.014 |

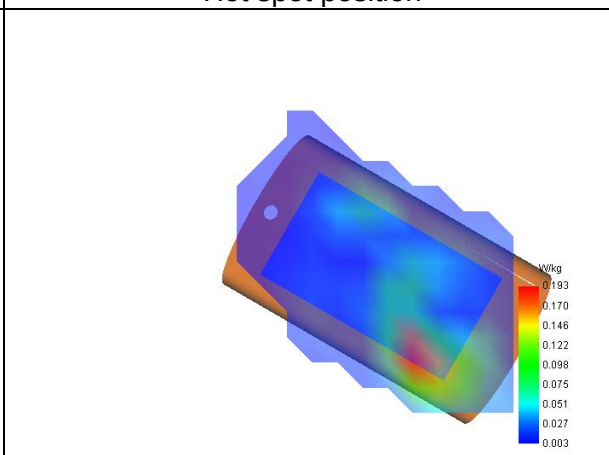


### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 22/3/2025

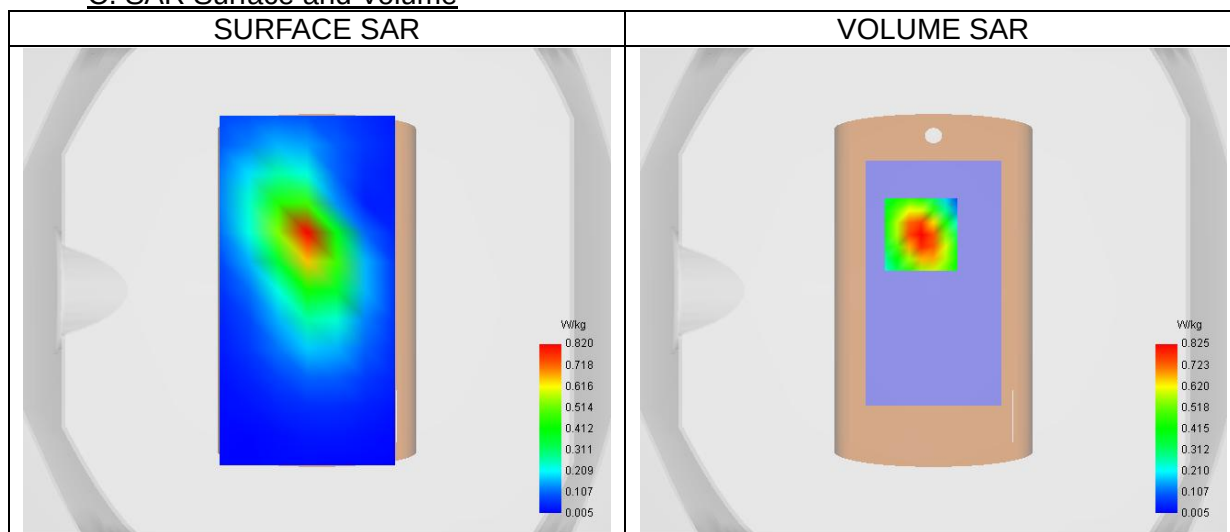
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=12mm dy=12mm, Complete                  |
| Zoom Scan                                      | 7x7x7, dx=5mm dy=5mm<br>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)                      | 2530.00                                    |

#### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 2535.00 |
| Relative permittivity (real part)      | 39.47   |
| Relative permittivity (imaginary part) | 13.61   |
| Conductivity (S/m)                     | 1.92    |

#### C. SAR Surface and Volume



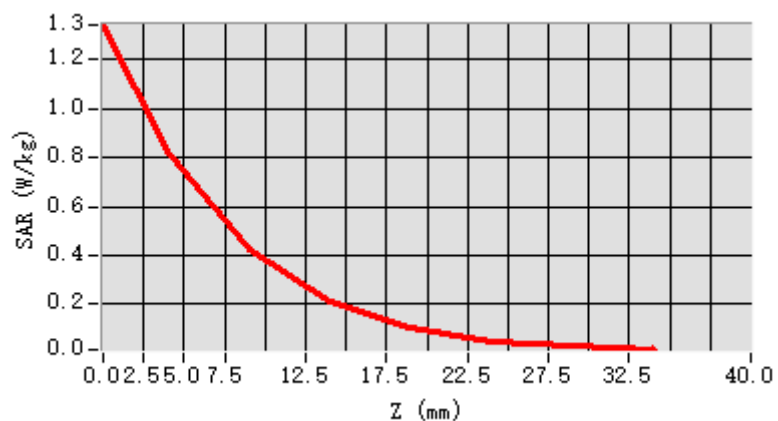
Maximum location: X=-5.00, Y=23.00 ; SAR Peak: 1.33 W/kg

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

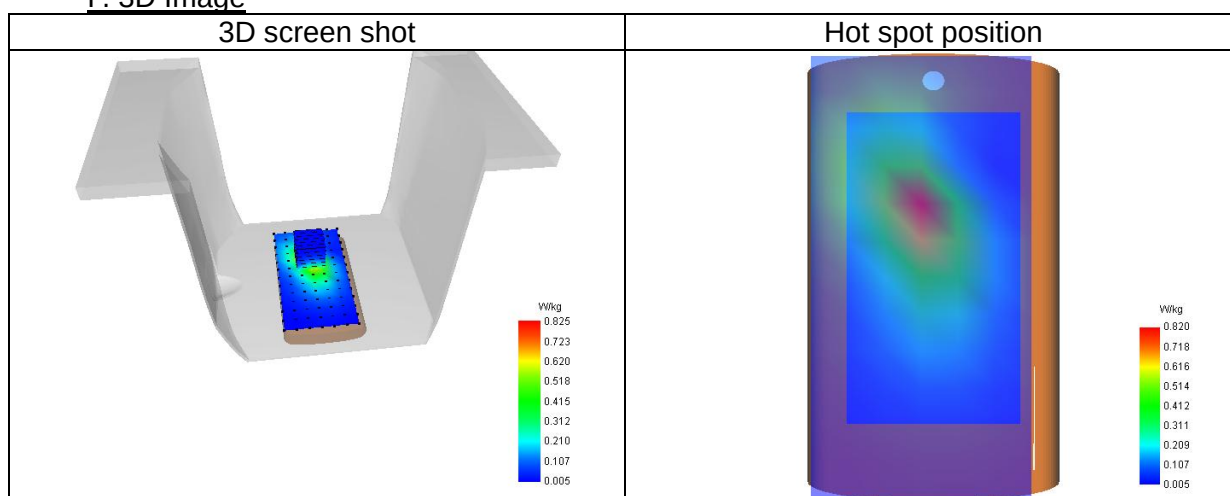
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.373 |
| SAR 1g (W/Kg)                                         | 0.762 |
| Variation (%)                                         | -0.72 |
| Horizontal validation criteria: minimum distance (mm) | 14.14 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 51.41 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 1.343 | 0.825 | 0.424 | 0.215 | 0.107 | 0.050 | 0.028 |



#### F. 3D Image



**37# SAR Measurement at LTE band 12 (Cheek, Left)**

Date of measurement: 8/3/2025

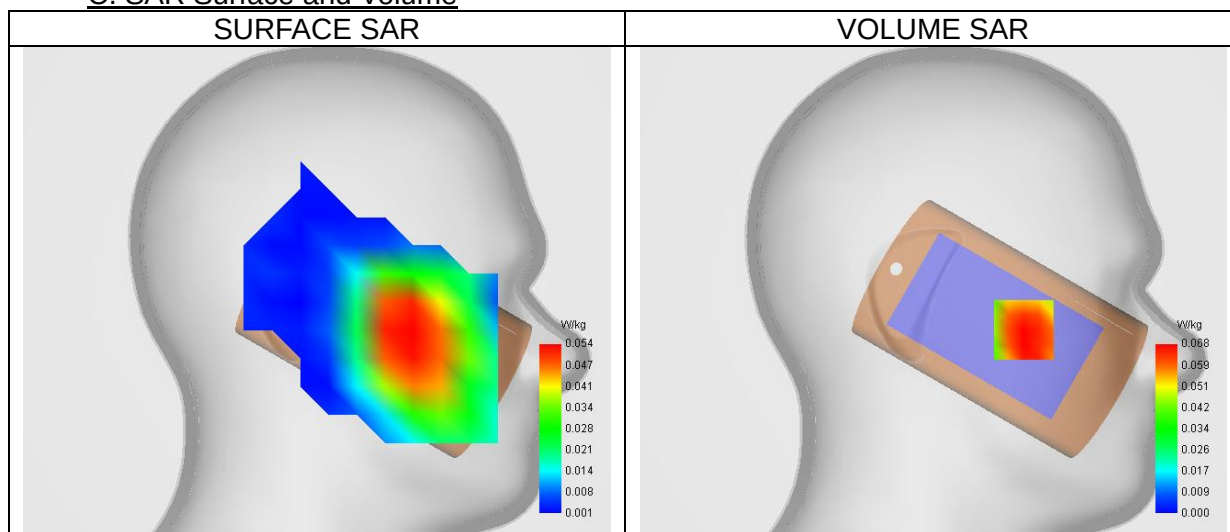
**A. Experimental conditions.**

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.42                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 41.39  |
| Relative permittivity (imaginary part) | 21.98  |
| Conductivity (S/m)                     | 0.86   |

**C. SAR Surface and Volume**



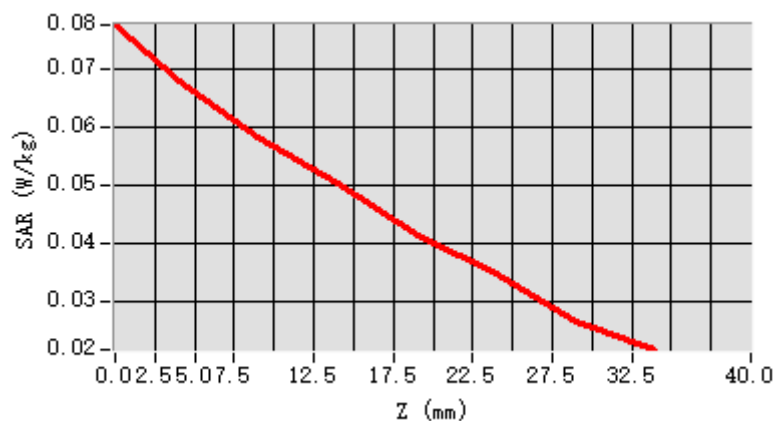
Maximum location: X=-48.00, Y=-21.00 ; SAR Peak: 0.08 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.052 |
| SAR 1g (W/Kg)                                         | 0.067 |
| Variation (%)                                         | -3.18 |
| Horizontal validation criteria: minimum distance (mm) | 0.00  |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 0.00  |

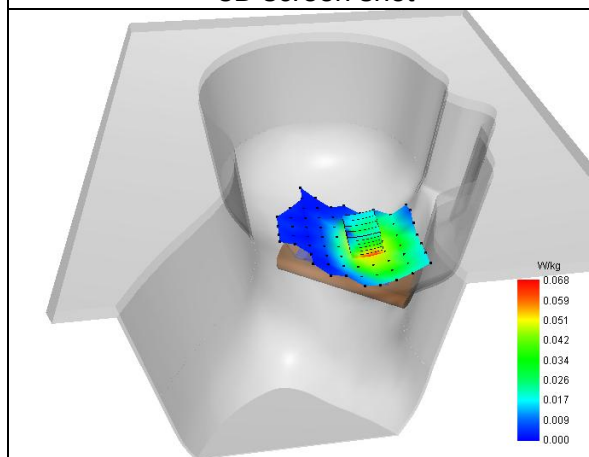
**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.077 | 0.068 | 0.058 | 0.050 | 0.042 | 0.035 | 0.027 |

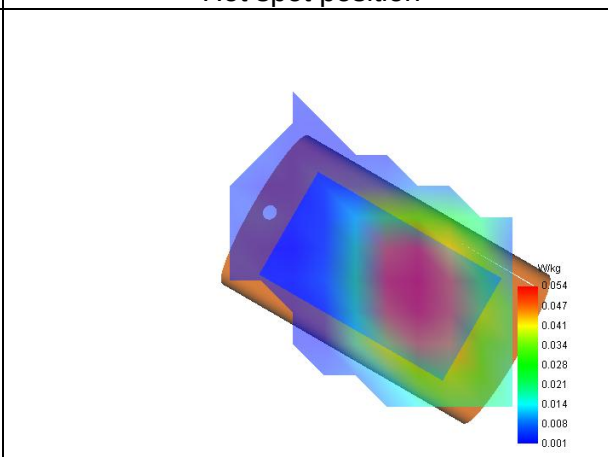


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 8/3/2025

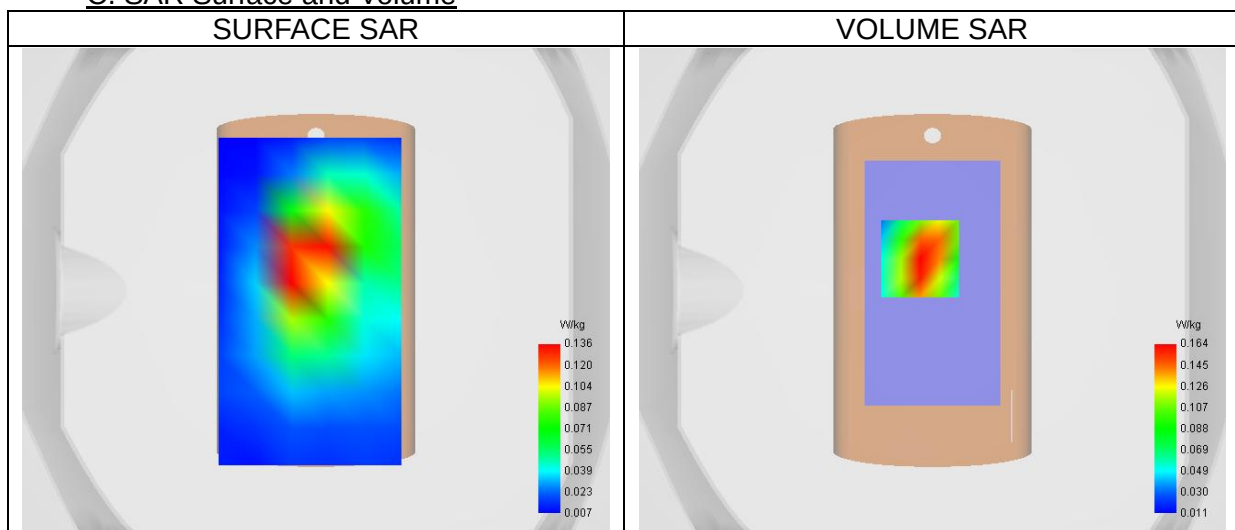
**A. Experimental conditions.**

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.42                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 41.39  |
| Relative permittivity (imaginary part) | 21.98  |
| Conductivity (S/m)                     | 0.86   |

**C. SAR Surface and Volume**



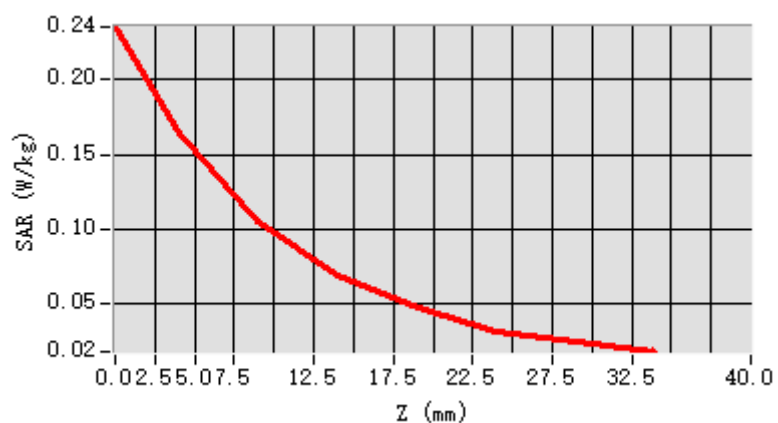
Maximum location: X=-5.00, Y=13.00 ; SAR Peak: 0.24 W/kg

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

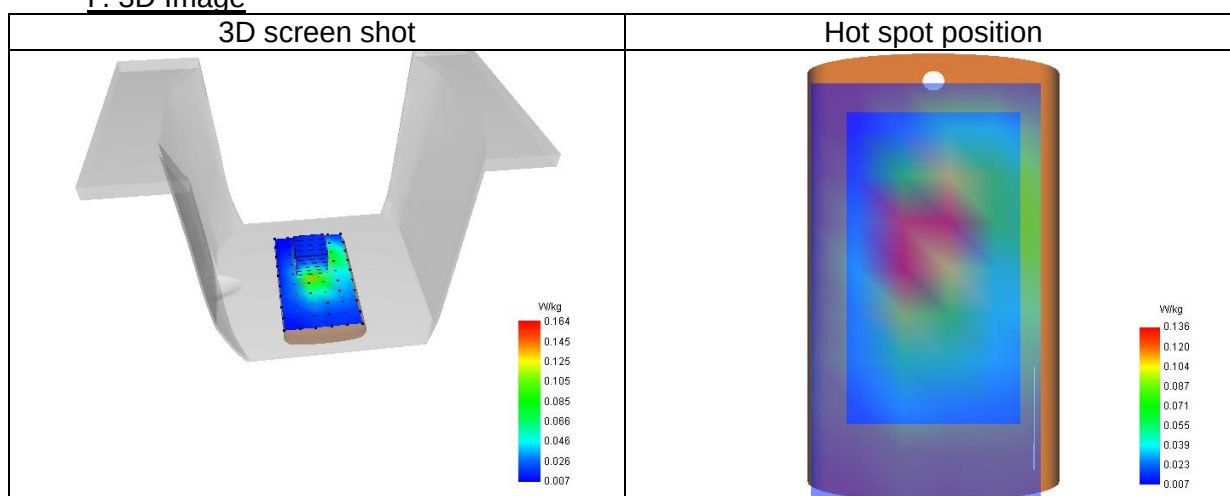
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.091 |
| SAR 1g (W/Kg)                                         | 0.155 |
| Variation (%)                                         | -1.27 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 63.37 |

**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.236 | 0.164 | 0.104 | 0.068 | 0.047 | 0.031 | 0.024 |



### F. 3D Image



### 39# SAR Measurement at LTE band 17 (Cheek, Left)

Date of measurement: 8/3/2025

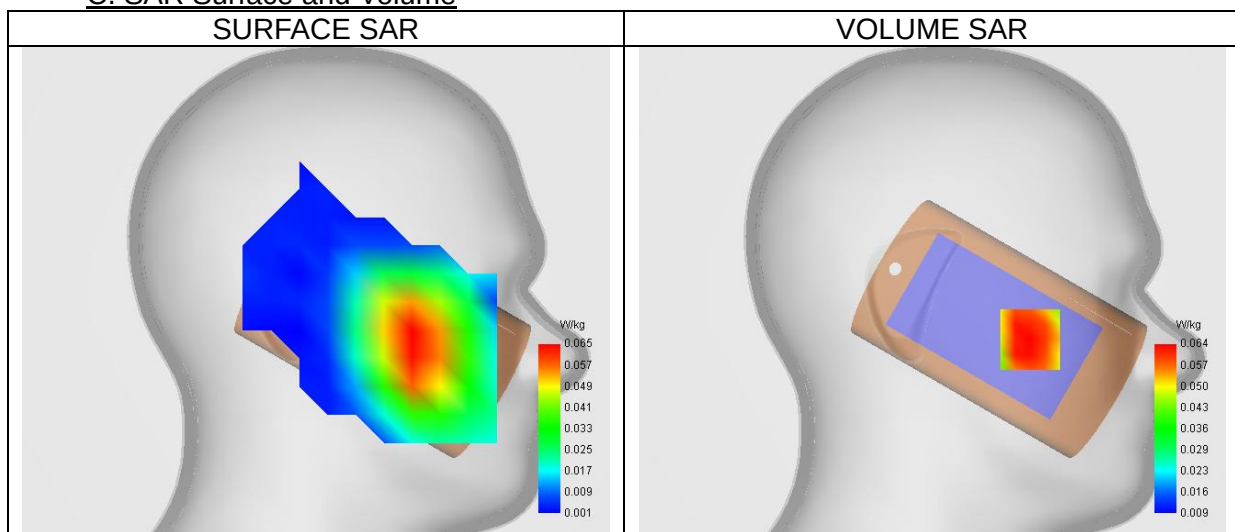
#### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.42                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 41.38  |
| Relative permittivity (imaginary part) | 21.92  |
| Conductivity (S/m)                     | 0.86   |

#### C. SAR Surface and Volume



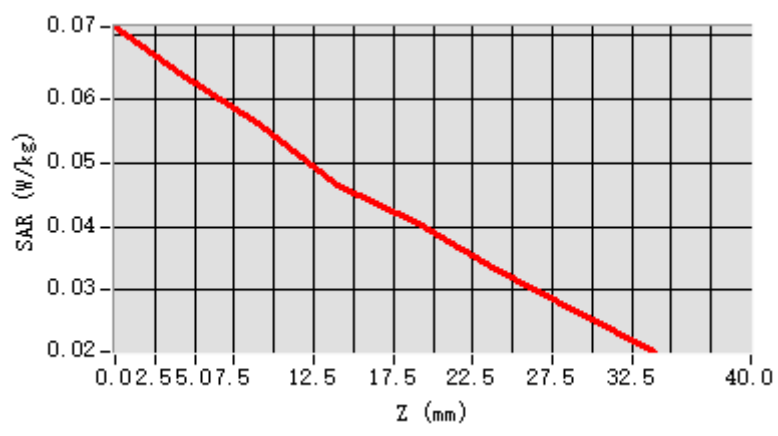
Maximum location: X=-52.00, Y=-26.00 ; SAR Peak: 0.08 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.050 |
| SAR 1g (W/Kg)                                         | 0.063 |
| Variation (%)                                         | 2.87  |
| Horizontal validation criteria: minimum distance (mm) | 11.57 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 51.32 |

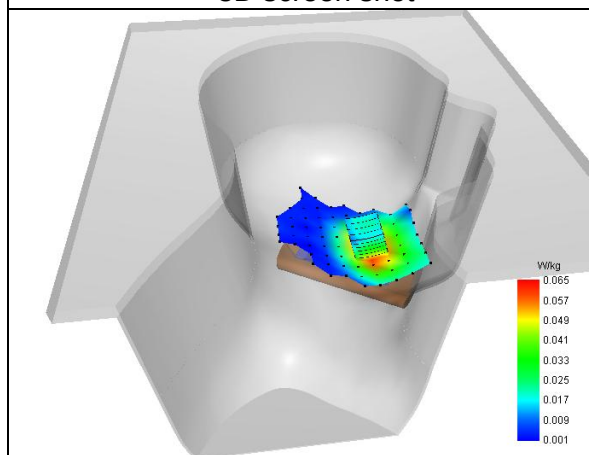
#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.071 | 0.064 | 0.056 | 0.047 | 0.041 | 0.033 | 0.027 |

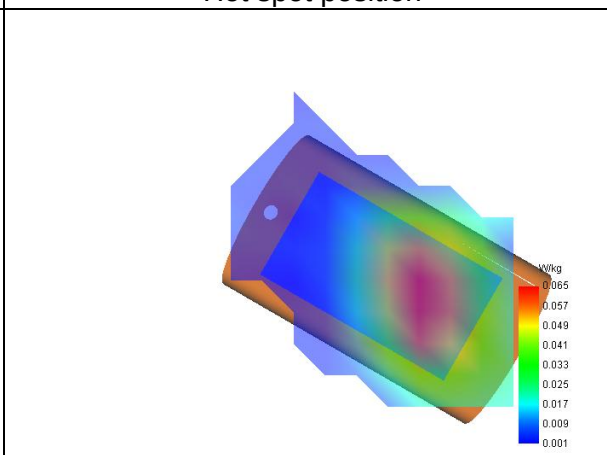


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 8/3/2025

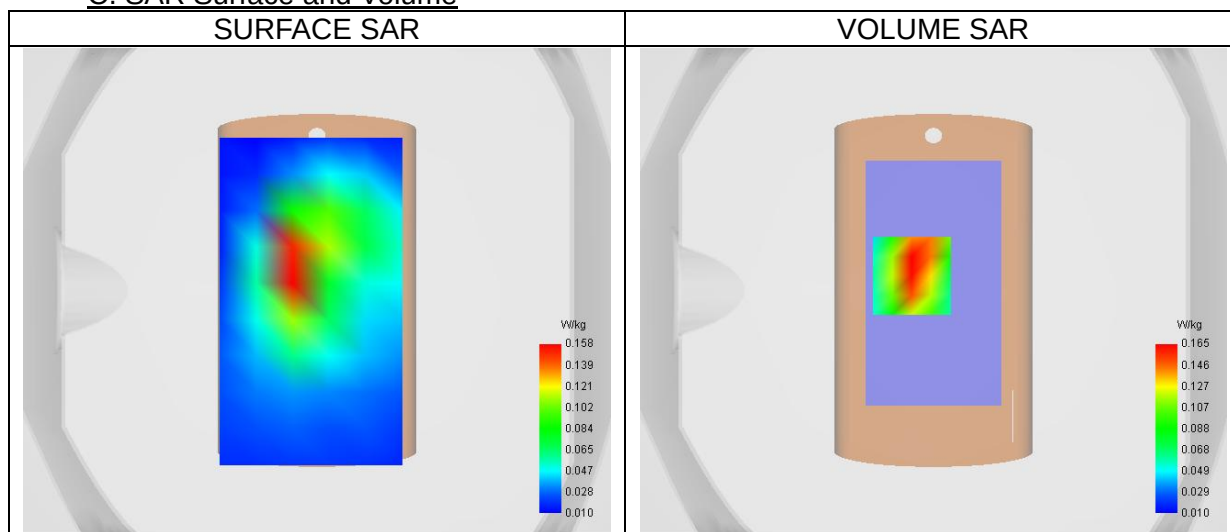
##### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.42                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 41.38  |
| Relative permittivity (imaginary part) | 21.92  |
| Conductivity (S/m)                     | 0.86   |

##### C. SAR Surface and Volume



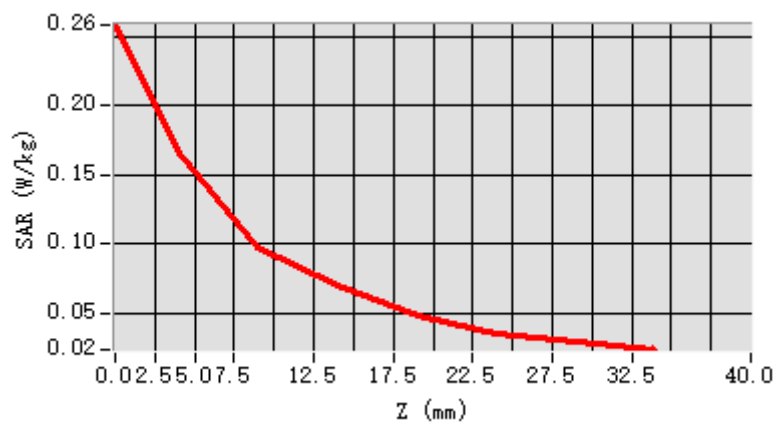
Maximum location: X=-9.00, Y=6.00 ; SAR Peak: 0.25 W/kg

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

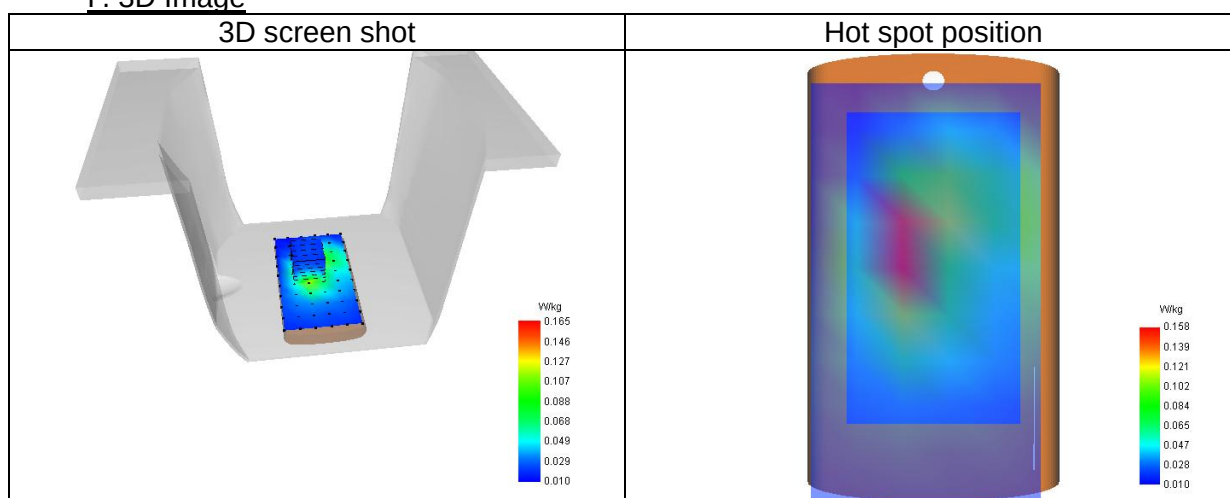
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.093 |
| SAR 1g (W/Kg)                                         | 0.159 |
| Variation (%)                                         | -0.73 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 64.83 |

##### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.258 | 0.165 | 0.097 | 0.069 | 0.048 | 0.036 | 0.029 |



#### F. 3D Image



#### 41# SAR Measurement at LTE band 25 (Cheek, Left)

Date of measurement: 2/3/2025

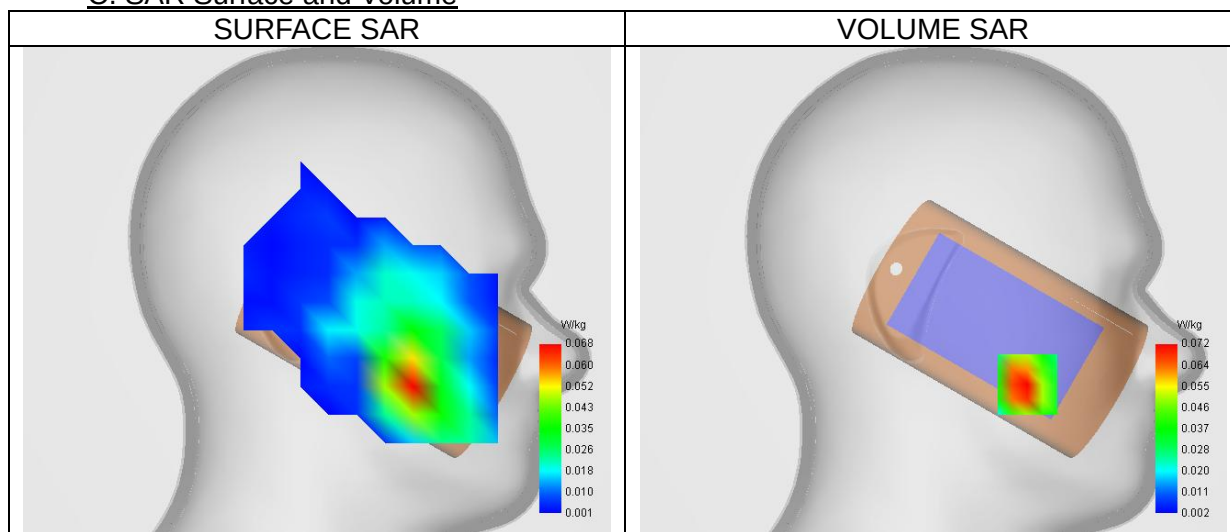
##### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.57                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| Band                                           | LTE band 25                                |
| Signal                                         | LTE FDD                                    |
| Channel Center [EARFCN] / Channel Center [MHz] | Middle (26365)/ frequency 1882.50 Mhz      |
| Cell Bandwidth                                 | 20 Mhz                                     |
| Modulation                                     | SC-OFDM - QPSK                             |
| Middle TX Frequency (MHz)                      | 1882.50                                    |

##### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 1882.50 |
| Relative permittivity (real part)      | 38.34   |
| Relative permittivity (imaginary part) | 13.68   |
| Conductivity (S/m)                     | 1.43    |

##### C. SAR Surface and Volume



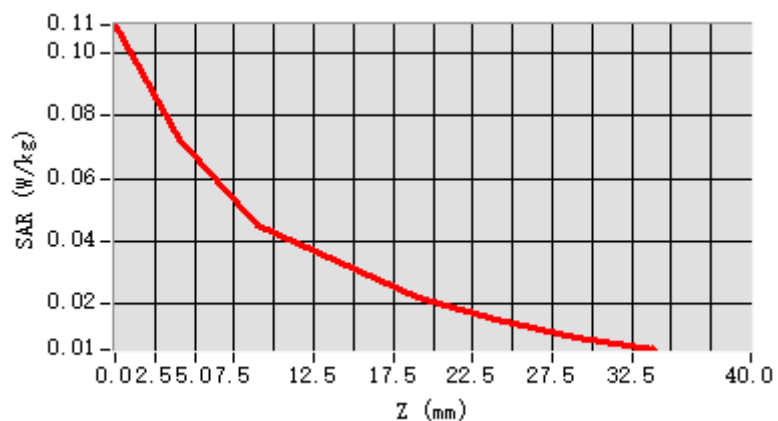
Maximum location: X=-50.00, Y=-50.00 ; SAR Peak: 0.11 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.040 |
| SAR 1g (W/Kg)                                         | 0.073 |
| Variation (%)                                         | -0.66 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 65.38 |

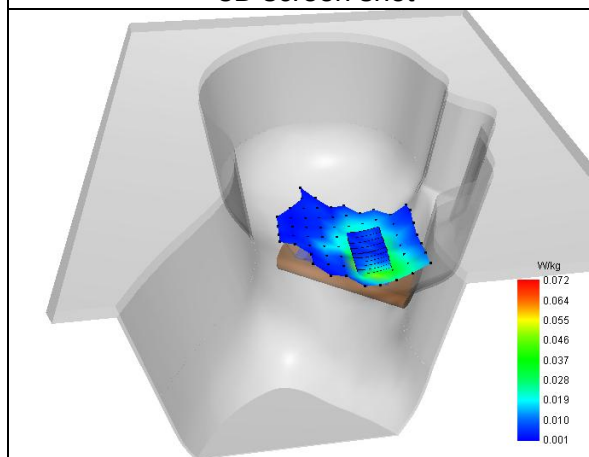
##### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.109 | 0.072 | 0.045 | 0.033 | 0.022 | 0.015 | 0.010 |

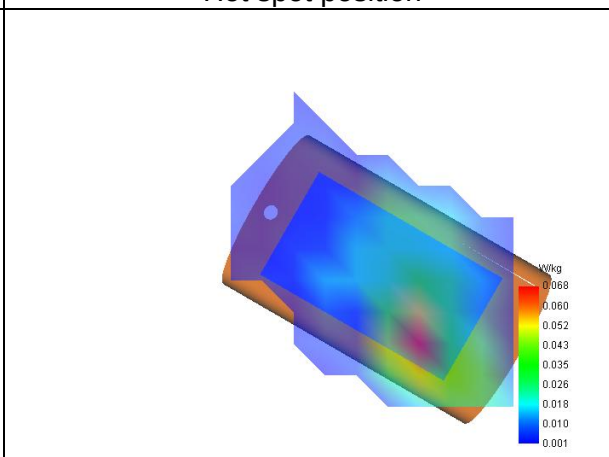


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 2/3/2025

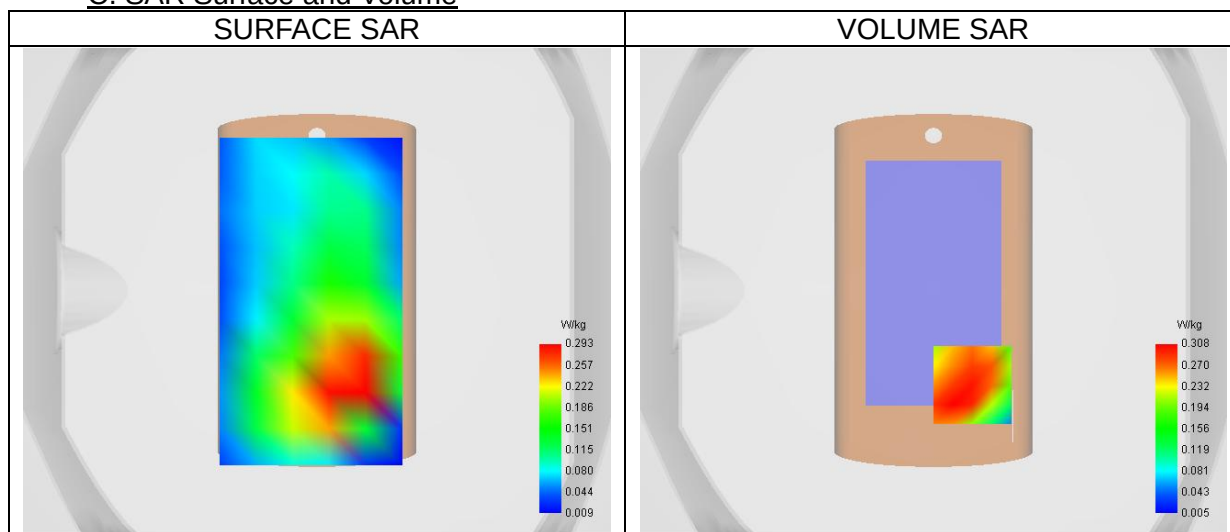
##### A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.57                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Validation plane                           |
| Device Position                                | Body                                       |
| Band                                           | LTE band 25                                |
| Signal                                         | LTE FDD                                    |
| Channel Center [EARFCN] / Channel Center [MHz] | Middle (26365)/ frequency 1882.50 Mhz      |
| Cell Bandwidth                                 | 20 Mhz                                     |
| Modulation                                     | SC-OFDM - QPSK                             |
| Middle TX Frequency (MHz)                      | 1882.50                                    |

##### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 1882.50 |
| Relative permittivity (real part)      | 38.34   |
| Relative permittivity (imaginary part) | 13.68   |
| Conductivity (S/m)                     | 1.43    |

##### C. SAR Surface and Volume



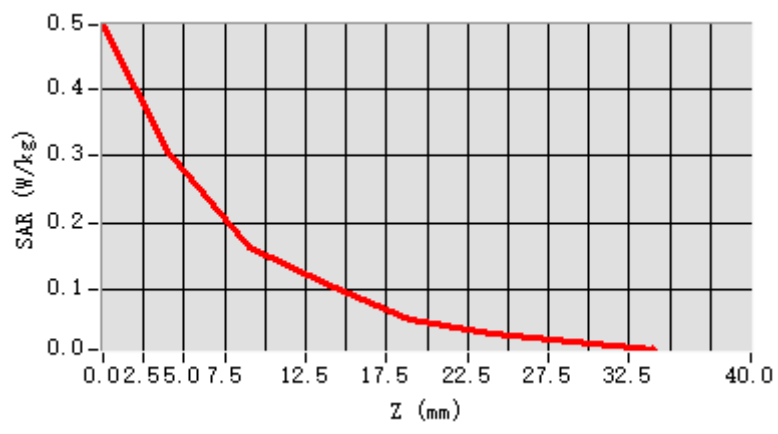
Maximum location: X=16.00, Y=-39.00 ; SAR Peak: 0.48 W/kg

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

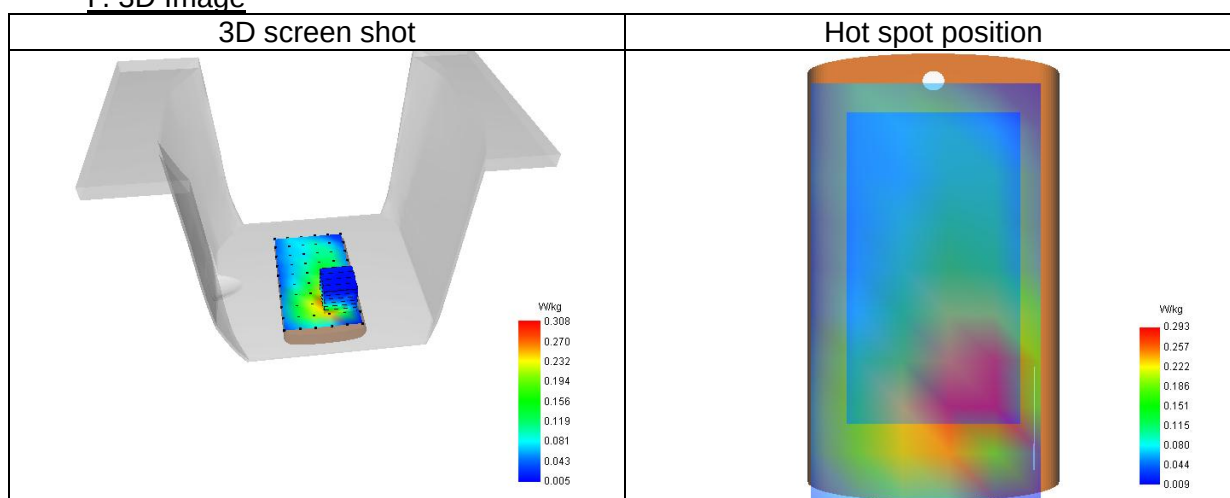
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.165 |
| SAR 1g (W/Kg)                                         | 0.303 |
| Variation (%)                                         | 1.75  |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 58.76 |

##### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.496 | 0.308 | 0.163 | 0.107 | 0.057 | 0.034 | 0.022 |



#### F. 3D Image



43# SAR Measurement at LTE band 26A (Cheek, Left)

Date of measurement: 1/3/2025

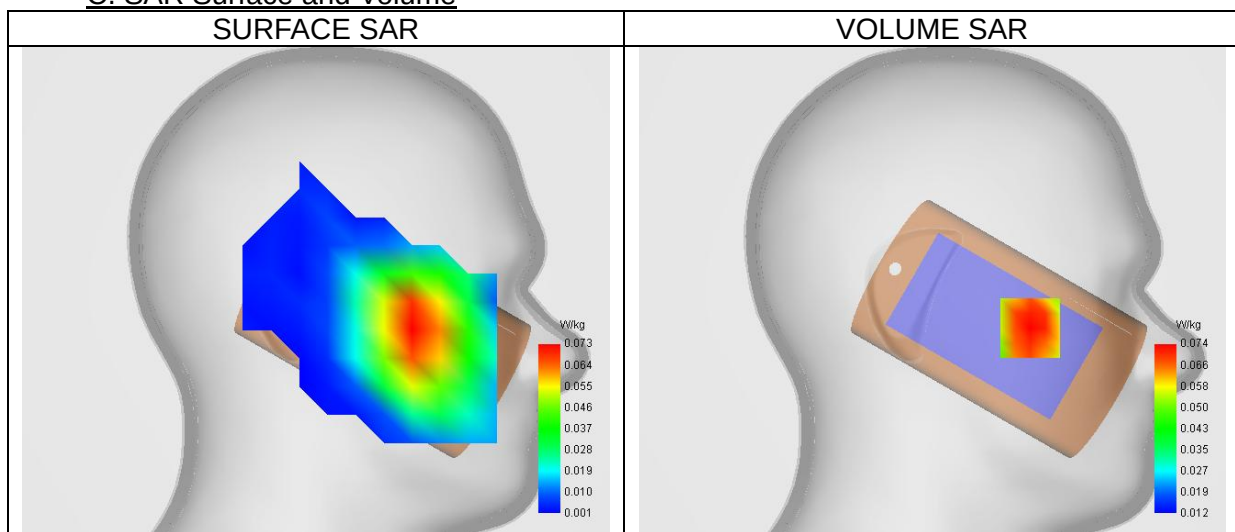
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| Band                                           | LTE band 26A                               |
| 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)      | 41.82  |
| Relative permittivity (imaginary part) | 19.47  |
| Conductivity (S/m)                     | 0.89   |

C. SAR Surface and Volume



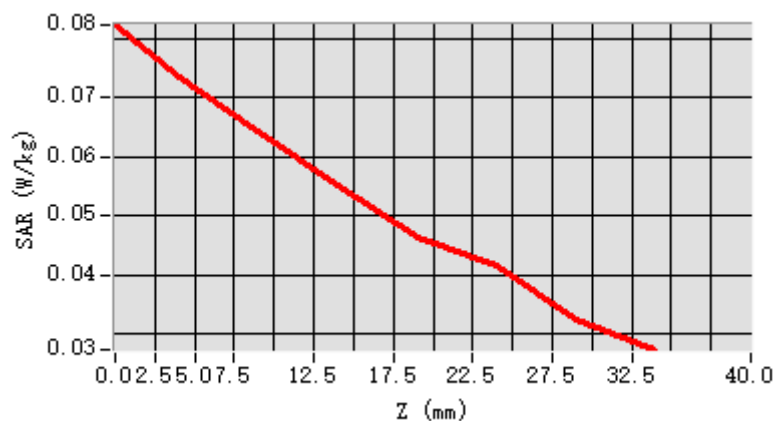
Maximum location: X=-52.00, Y=-20.00 ; SAR Peak: 0.10 W/kg

D. SAR 1g & 10g

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.056 |
| SAR 1g (W/Kg)                                         | 0.073 |
| Variation (%)                                         | -4.20 |
| Horizontal validation criteria: minimum distance (mm) | 11.74 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 41.05 |

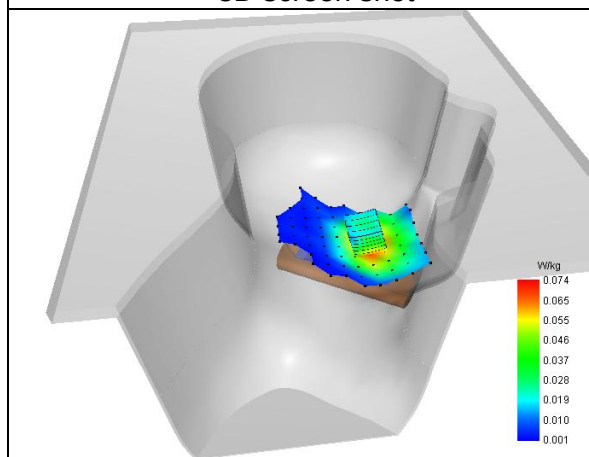
E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.082 | 0.074 | 0.064 | 0.055 | 0.046 | 0.042 | 0.033 |

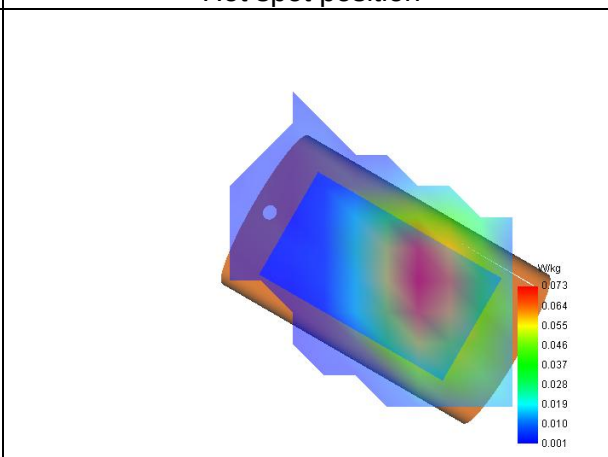


#### F. 3D Image

3D screen shot



Hot spot position



44# SAR Measurement at LTE band 26B (Cheek, Left)

Date of measurement: 1/3/2025

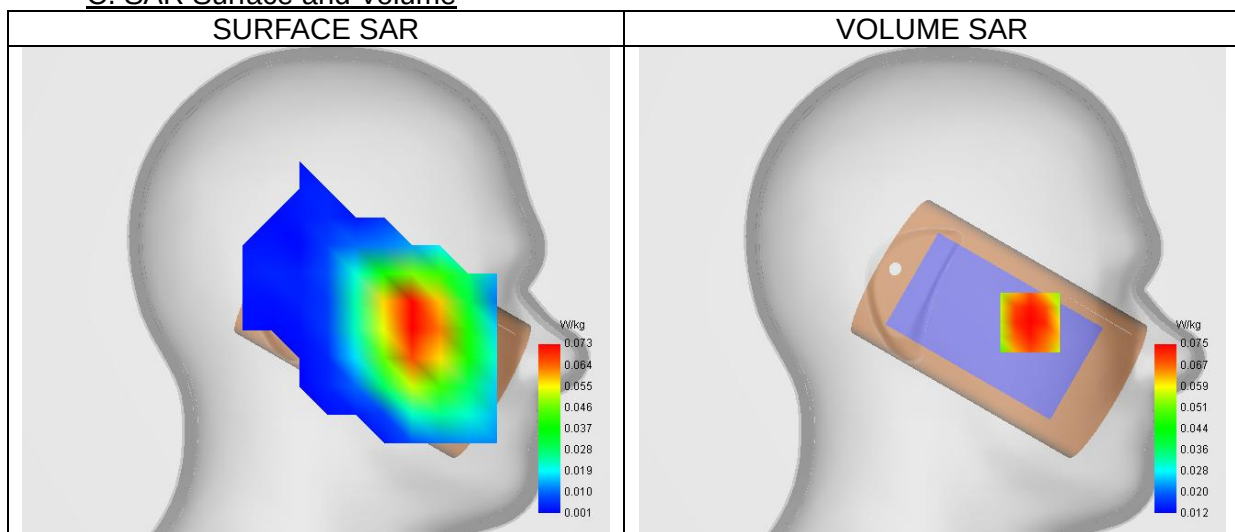
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| Band                                           | LTE band 26B                               |
| 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)      | 41.61  |
| Relative permittivity (imaginary part) | 19.48  |
| Conductivity (S/m)                     | 0.90   |

C. SAR Surface and Volume



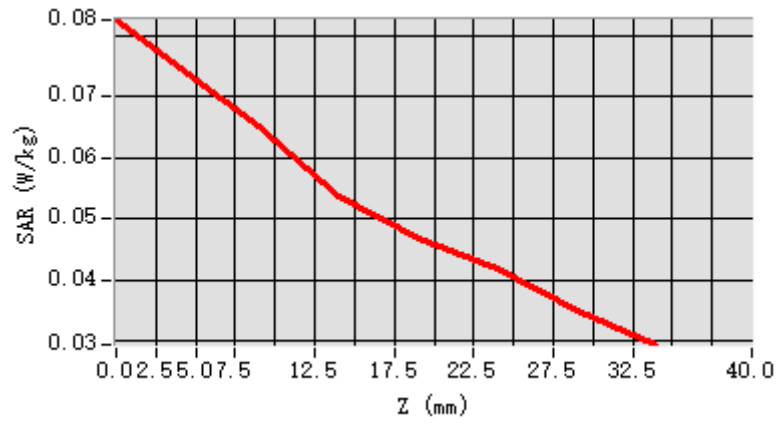
Maximum location: X=-52.00, Y=-17.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

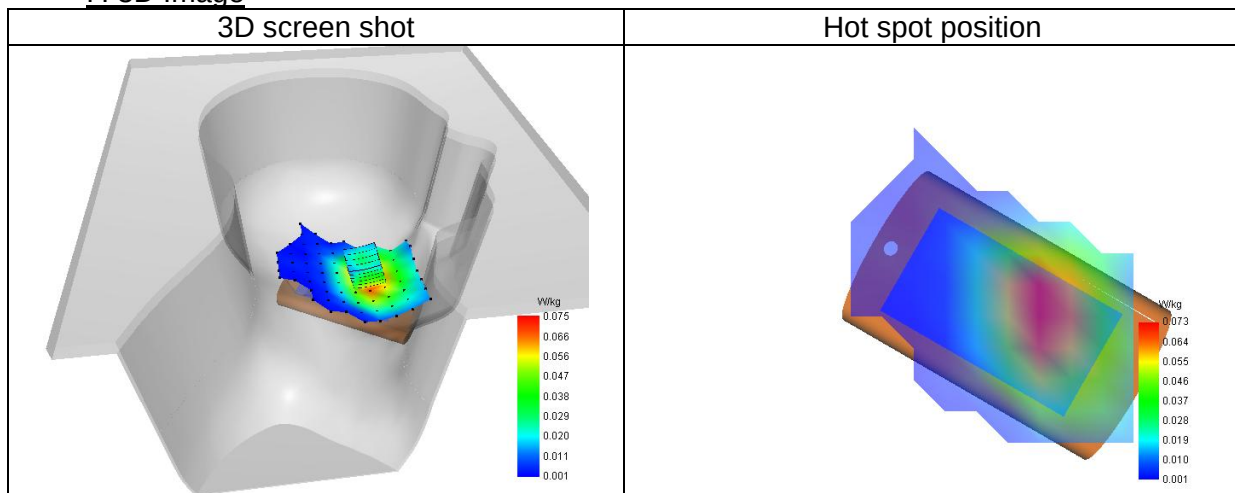
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.058 |
| SAR 1g (W/Kg)                                         | 0.073 |
| Variation (%)                                         | 1.06  |
| Horizontal validation criteria: minimum distance (mm) | 11.74 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 41.05 |

E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.083 | 0.075 | 0.065 | 0.054 | 0.047 | 0.042 | 0.035 |



#### F. 3D Image



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

Date of measurement: 1/3/2025

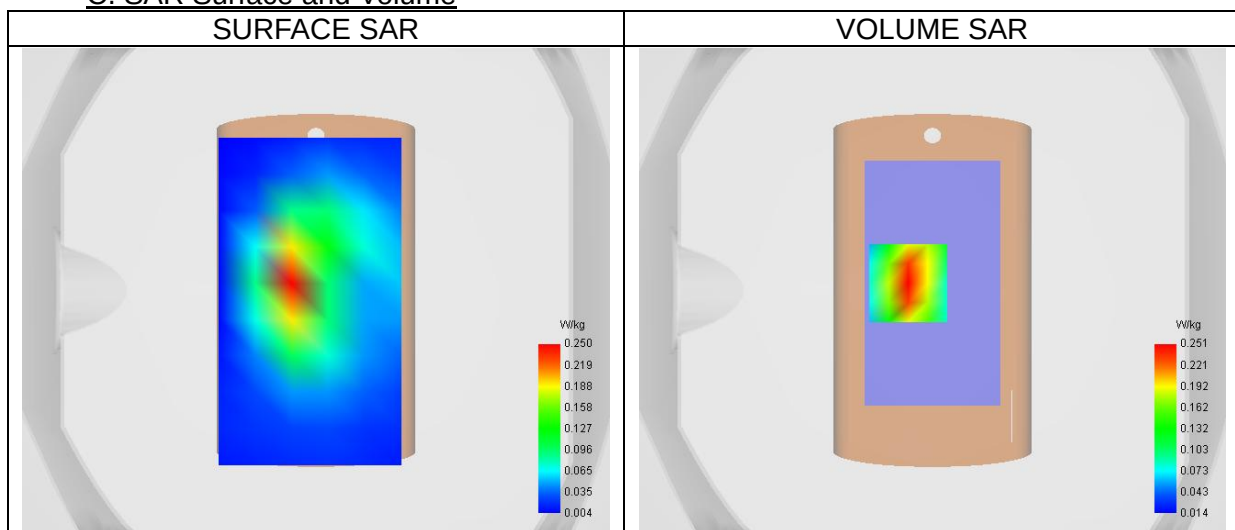
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Validation plane                           |
| Device Position                                | Body                                       |
| Band                                           | LTE band 26A                               |
| 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)      | 41.82  |
| Relative permittivity (imaginary part) | 19.47  |
| Conductivity (S/m)                     | 0.89   |

C. SAR Surface and Volume



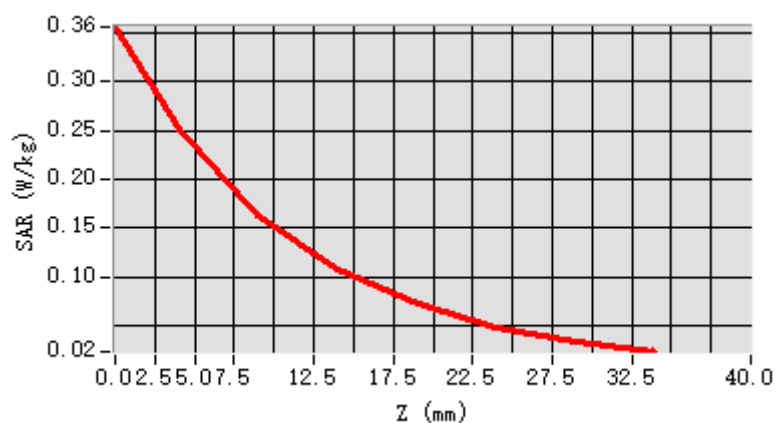
Maximum location: X=-10.00, Y=3.00 ; SAR Peak: 0.36 W/kg

D. SAR 1g & 10g

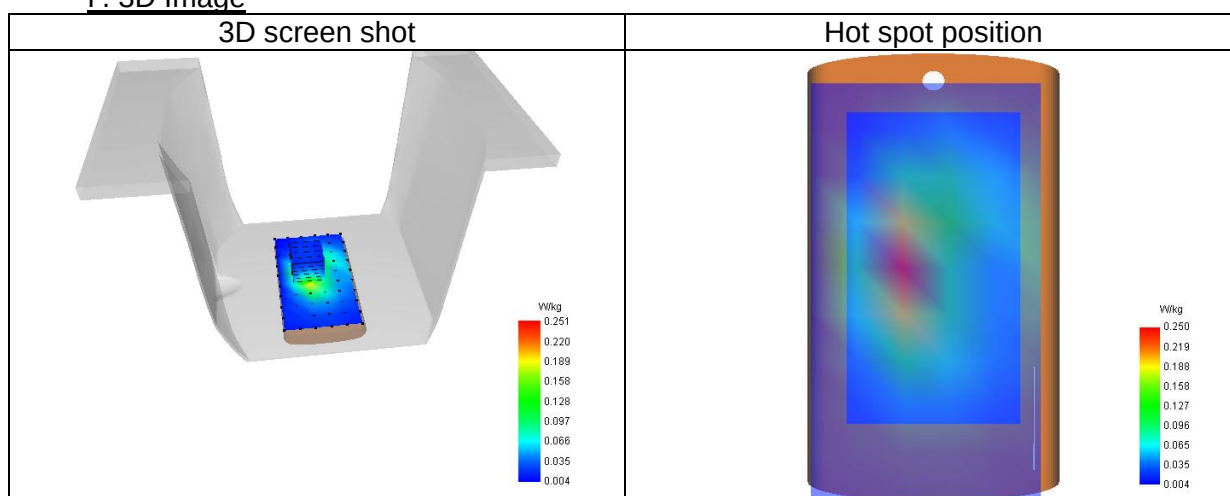
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.136 |
| SAR 1g (W/Kg)                                         | 0.234 |
| Variation (%)                                         | -1.39 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| 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) | 0.356 | 0.251 | 0.162 | 0.107 | 0.072 | 0.048 | 0.034 |



#### F. 3D Image



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

Date of measurement: 1/3/2025

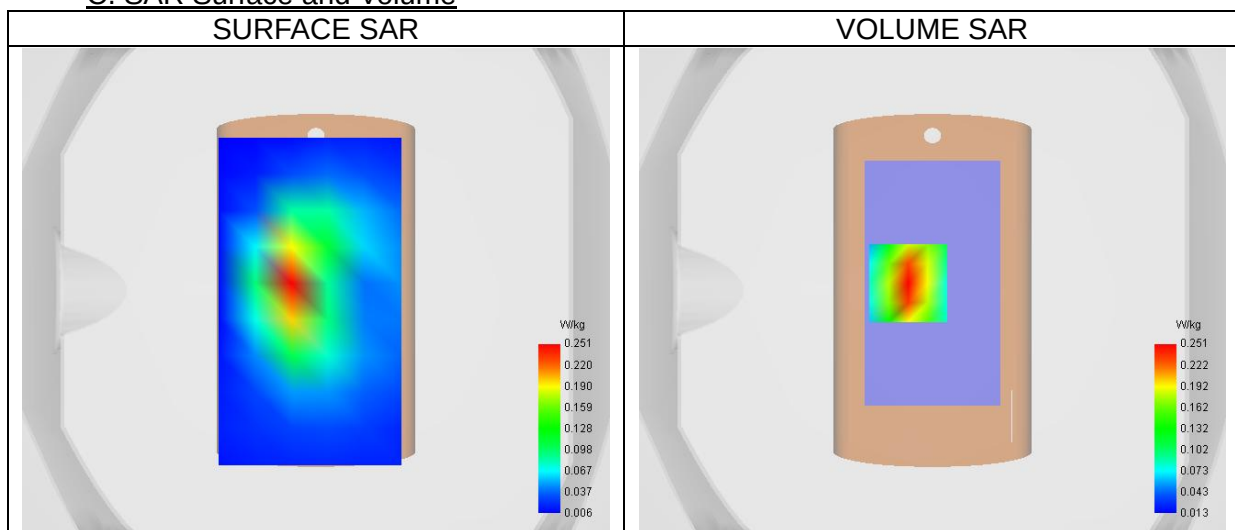
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.34                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Validation plane                           |
| Device Position                                | Body                                       |
| Band                                           | LTE band 26B                               |
| 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)      | 41.61  |
| Relative permittivity (imaginary part) | 19.48  |
| Conductivity (S/m)                     | 0.90   |

C. SAR Surface and Volume



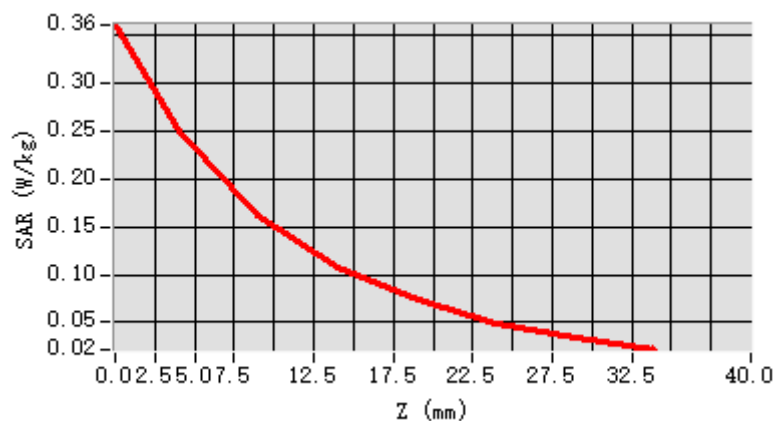
Maximum location: X=-10.00, Y=3.00 ; SAR Peak: 0.36 W/kg

D. SAR 1g & 10g

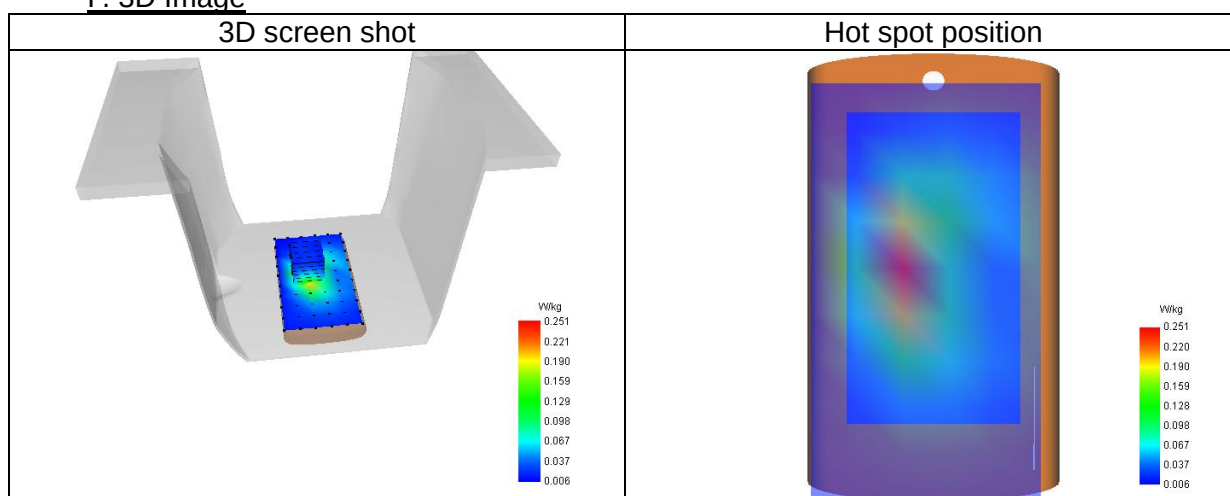
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.136 |
| SAR 1g (W/Kg)                                         | 0.235 |
| Variation (%)                                         | -4.81 |
| Horizontal validation criteria: minimum distance (mm) | 16.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 64.16 |

E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.361 | 0.251 | 0.161 | 0.107 | 0.075 | 0.048 | 0.035 |



#### F. 3D Image



#### 47# SAR Measurement at LTE band 41 (Cheek, Left)

Date of measurement: 22/3/2025

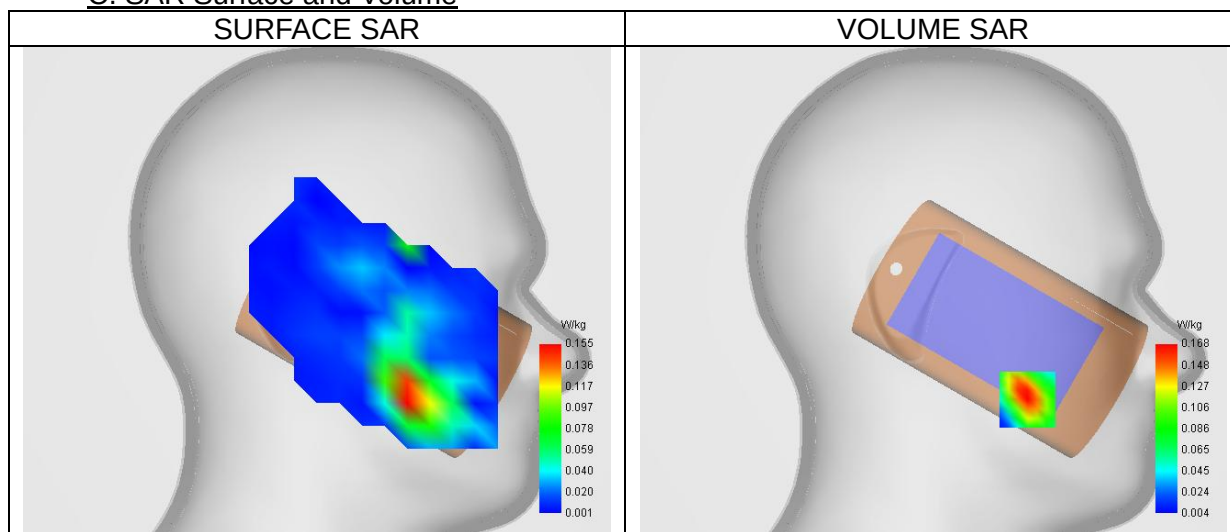
##### A. Experimental conditions.

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Probe                                          | 4024-EPGO-442                            |
| ConvF                                          | 2.51                                     |
| Area Scan                                      | dx=12mm dy=12mm, Complete                |
| Zoom Scan                                      | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom                                        | Left head                                |
| Device Position                                | Cheek                                    |
| 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)      | 39.19   |
| Relative permittivity (imaginary part) | 13.78   |
| Conductivity (S/m)                     | 1.98    |

##### C. SAR Surface and Volume



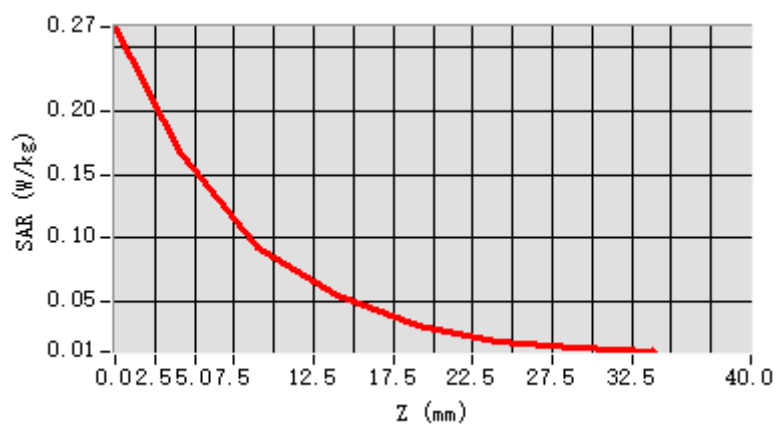
Maximum location: X=-50.00, Y=-58.00 ; SAR Peak: 0.26 W/kg

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

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.076 |
| SAR 1g (W/Kg)                                         | 0.155 |
| Variation (%)                                         | 3.84  |
| Horizontal validation criteria: minimum distance (mm) | 11.18 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 54.99 |

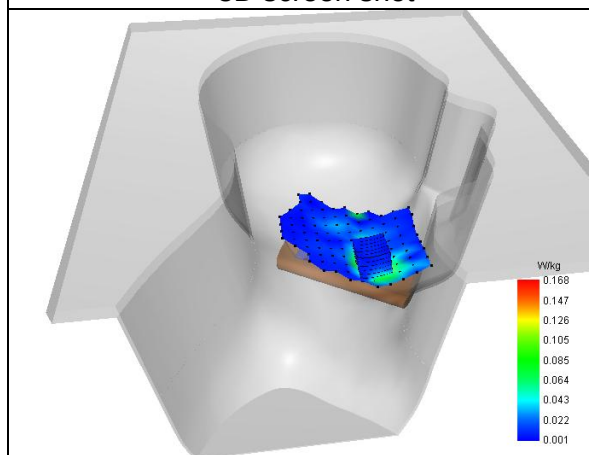
##### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.265 | 0.168 | 0.092 | 0.055 | 0.032 | 0.019 | 0.014 |

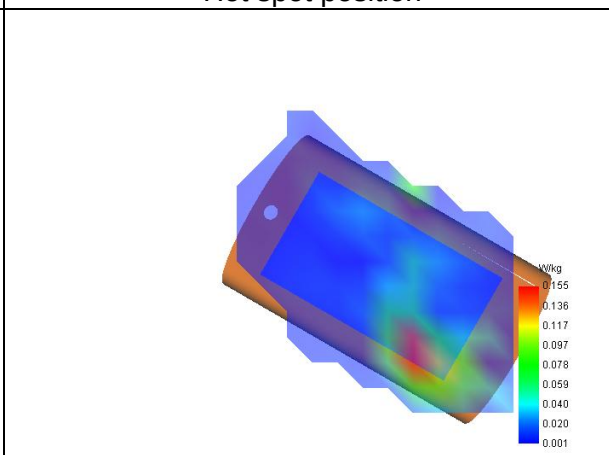


### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 22/3/2025

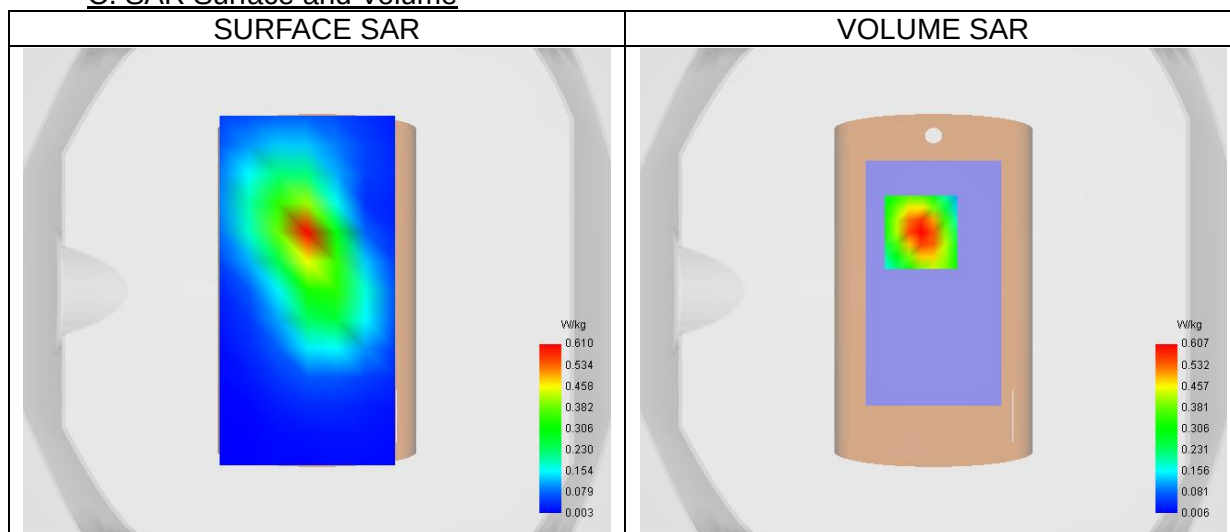
**A. Experimental conditions.**

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=12mm dy=12mm, Complete                  |
| Zoom Scan                                      | 7x7x7, dx=5mm dy=5mm<br>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)      | 39.19   |
| Relative permittivity (imaginary part) | 13.78   |
| Conductivity (S/m)                     | 1.98    |

**C. SAR Surface and Volume**



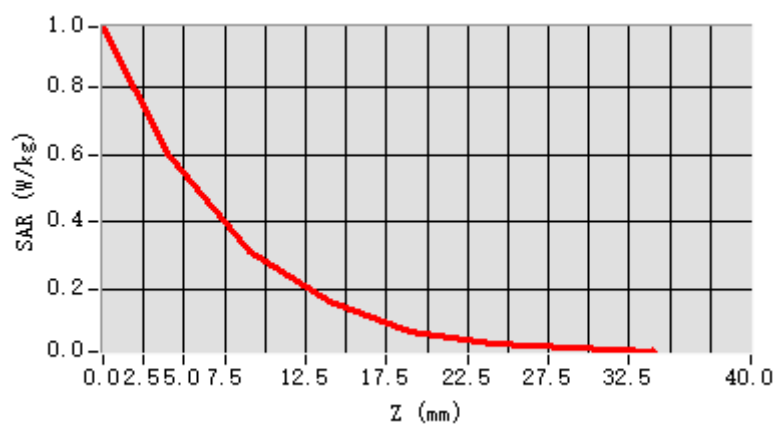
Maximum location: X=-5.00, Y=24.00 ; SAR Peak: 0.97 W/kg

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

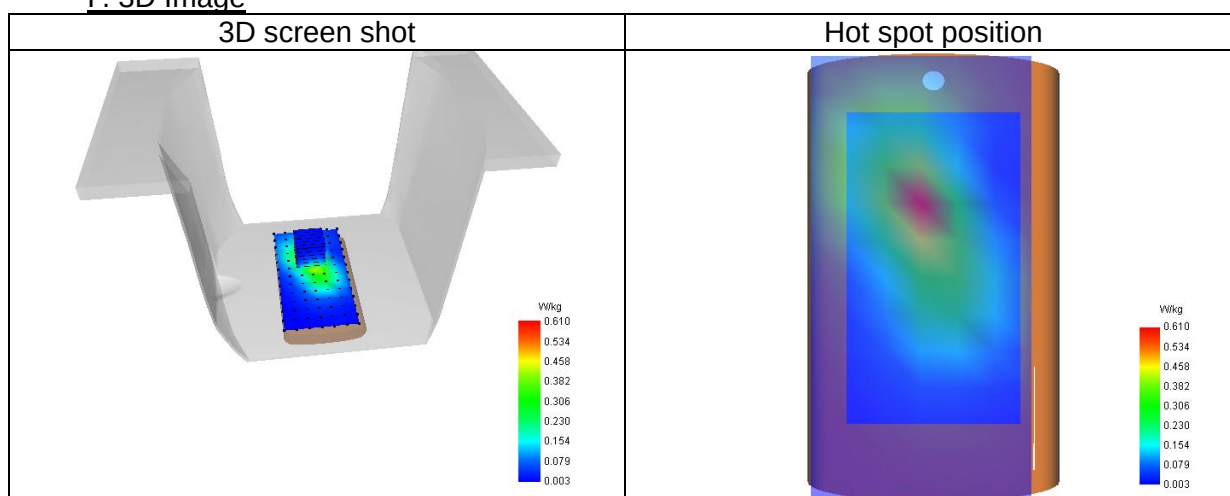
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.275 |
| SAR 1g (W/Kg)                                         | 0.559 |
| Variation (%)                                         | 1.99  |
| Horizontal validation criteria: minimum distance (mm) | 14.14 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 51.30 |

**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.981 | 0.607 | 0.311 | 0.161 | 0.076 | 0.039 | 0.024 |



### F. 3D Image



49# SAR Measurement at LTE band 66 (Cheek, Left)

Date of measurement: 19/3/2025

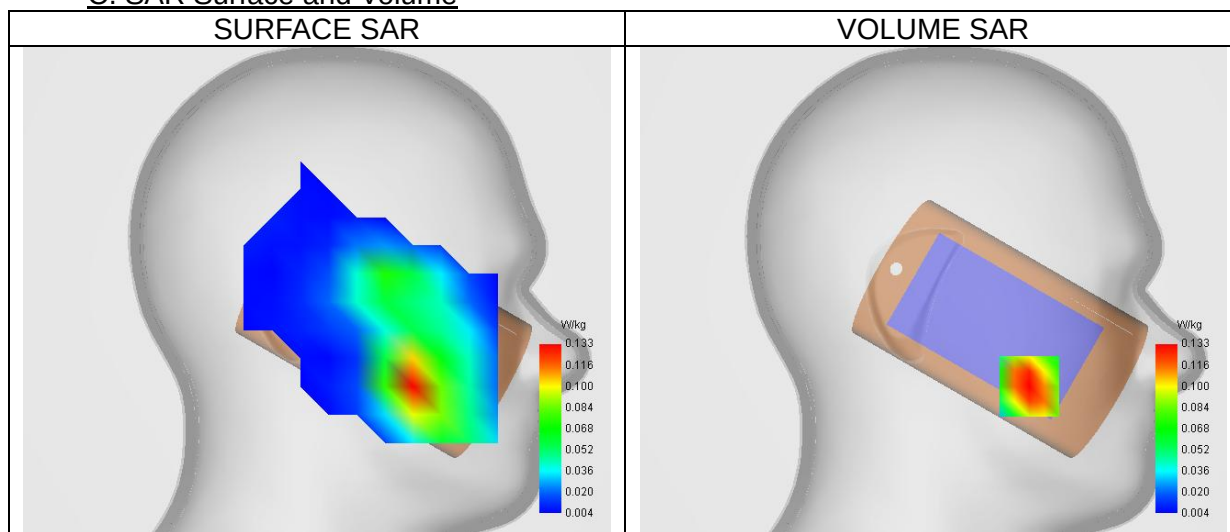
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>dz=5.0mm, Complete |
| Phantom                                        | Left head                                  |
| Device Position                                | Cheek                                      |
| 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)      | 39.31   |
| Relative permittivity (imaginary part) | 13.70   |
| Conductivity (S/m)                     | 1.33    |

C. SAR Surface and Volume



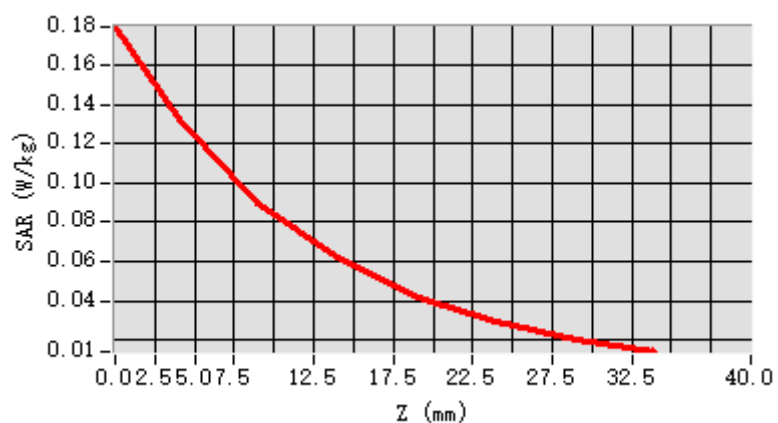
Maximum location: X=-51.00, Y=-51.00 ; SAR Peak: 0.19 W/kg

D. SAR 1g & 10g

|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.077 |
| SAR 1g (W/Kg)                                         | 0.126 |
| Variation (%)                                         | -2.99 |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 67.54 |

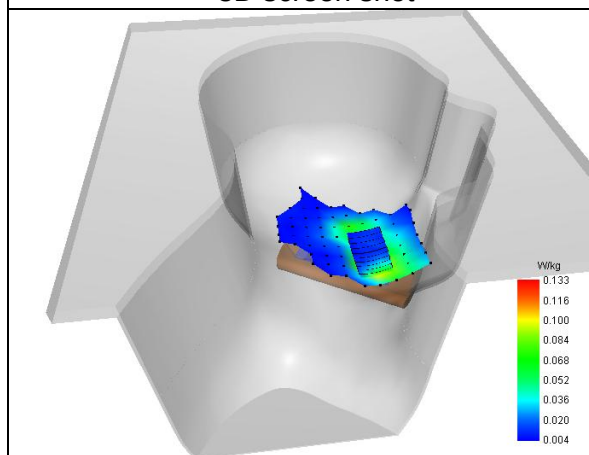
E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.179 | 0.133 | 0.089 | 0.063 | 0.041 | 0.029 | 0.020 |

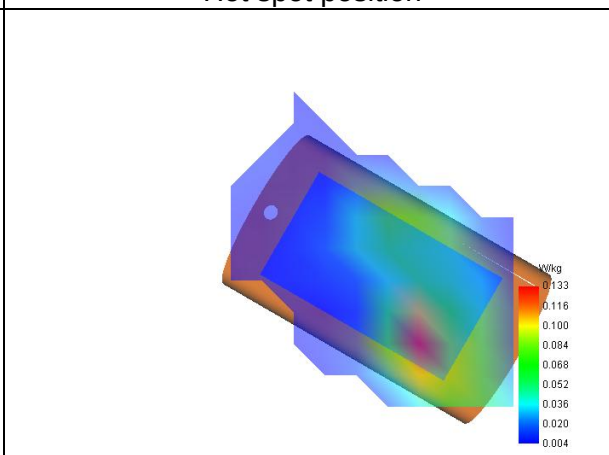


#### F. 3D Image

3D screen shot



Hot spot position



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

Date of measurement: 19/3/2025

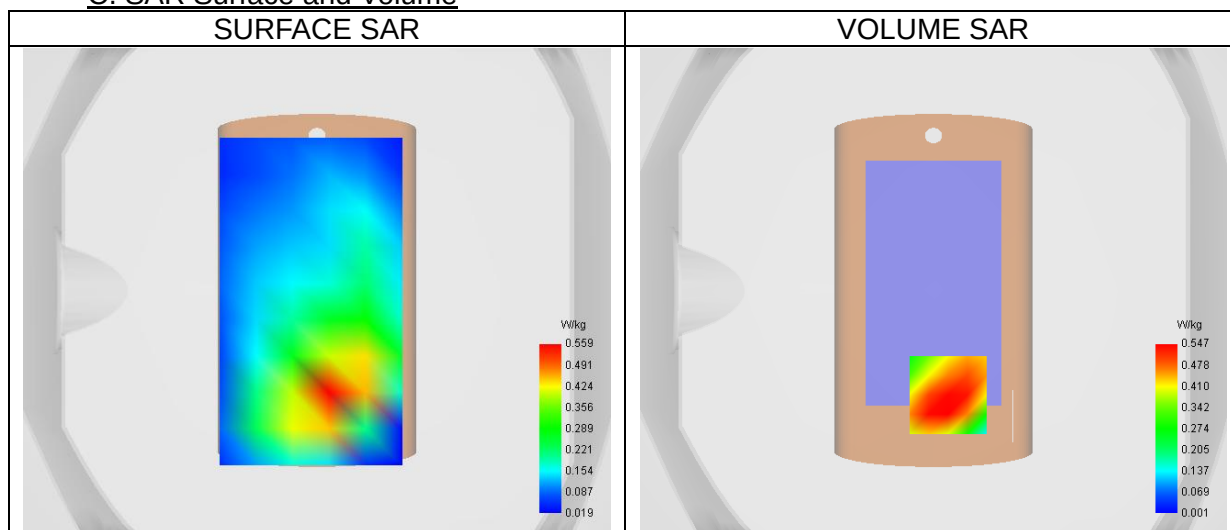
A. Experimental conditions.

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| Probe                                          | 4024-EPGO-442                              |
| ConvF                                          | 2.51                                       |
| Area Scan                                      | dx=15mm dy=15mm, Complete                  |
| Zoom Scan                                      | 5x5x7, dx=8mm dy=8mm<br>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)      | 39.31   |
| Relative permittivity (imaginary part) | 13.70   |
| Conductivity (S/m)                     | 1.33    |

C. SAR Surface and Volume



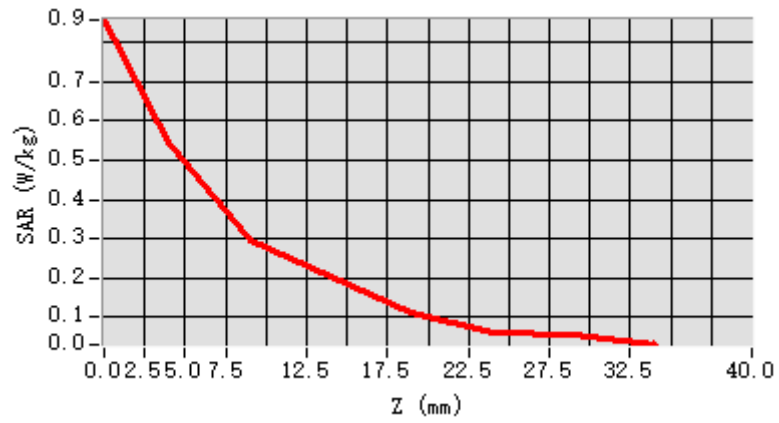
Maximum location: X=6.00, Y=-43.00 ; SAR Peak: 0.85 W/kg

D. SAR 1g & 10g

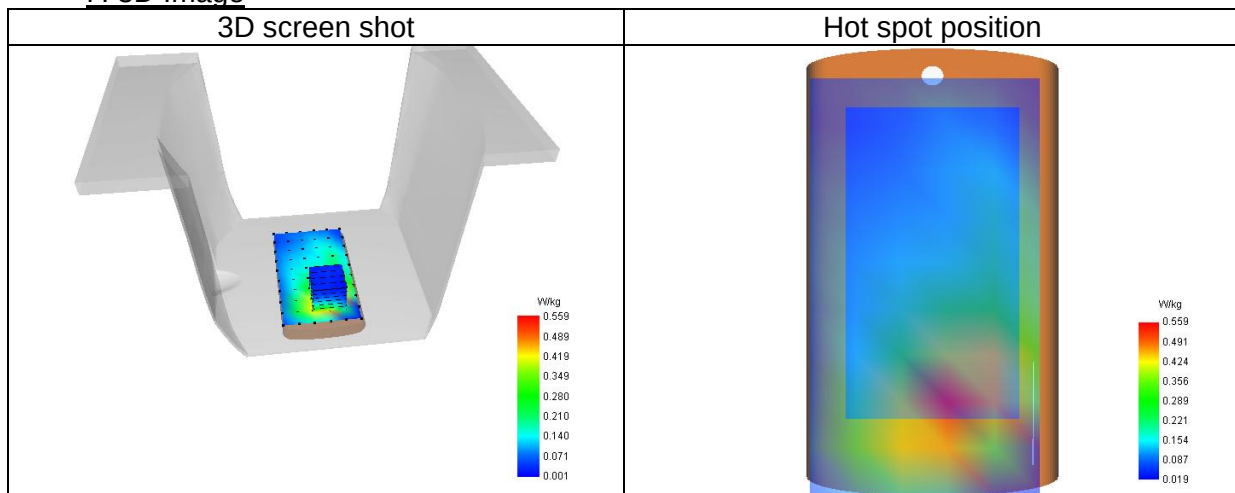
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.303 |
| SAR 1g (W/Kg)                                         | 0.539 |
| Variation (%)                                         | -4.95 |
| Horizontal validation criteria: minimum distance (mm) | 17.89 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 61.25 |

E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.858 | 0.547 | 0.295 | 0.203 | 0.115 | 0.063 | 0.057 |



#### F. 3D Image



51# SAR Measurement at NR band 78 (Cheek, Left)

Date of measurement: 24/2/2025

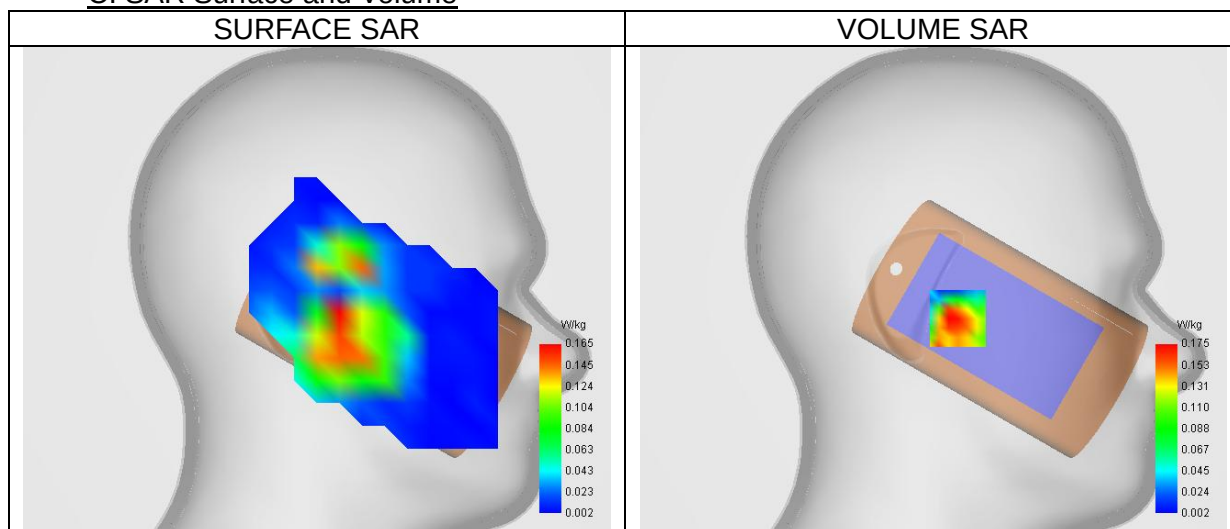
A. Experimental conditions.

|                                                        |                                          |
|--------------------------------------------------------|------------------------------------------|
| Probe                                                  | 4024-EPGO-442                            |
| ConvF                                                  | 2.15                                     |
| Area Scan                                              | dx=12mm dy=12mm, Complete                |
| Zoom Scan                                              | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom                                                | Left head                                |
| Device Position                                        | Cheek                                    |
| Band                                                   | NR band 78                               |
| Signal                                                 | NR TDD                                   |
| Channel Center [NR-ARFCN] / Channel Center [MHz]       | Middle (636666)/ frequency 3549.99 Mhz   |
| Cell Bandwidth                                         | 100 Mhz                                  |
| Modulation                                             | CP-OFDM - QPSK                           |
| subcarrier spacing (SCS)                               | 30 kHz                                   |
| Middle TX Frequency (MHz)                              | 3549.99                                  |
| pattern/periodicity/DL Dur/DL Sym/UL Dur/UL Sym/CG Sym | not Specified                            |

B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 3549.99 |
| Relative permittivity (real part)      | 37.10   |
| Relative permittivity (imaginary part) | 14.53   |
| Conductivity (S/m)                     | 2.88    |

C. SAR Surface and Volume



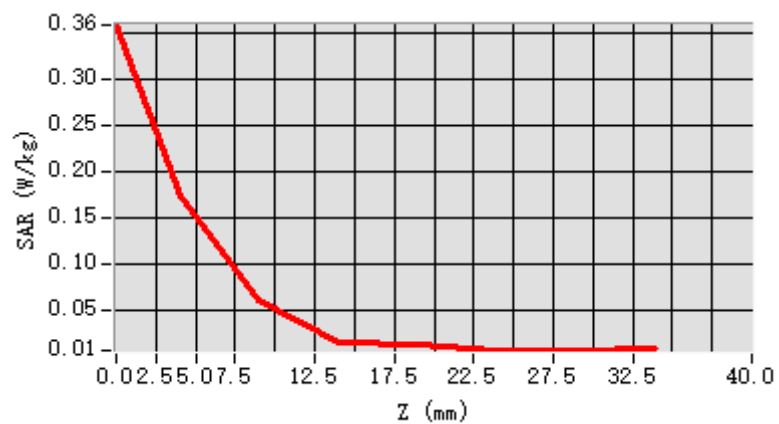
Maximum location: X=-13.00, Y=-15.00 ; SAR Peak: 0.34 W/kg

D. SAR 1g & 10g

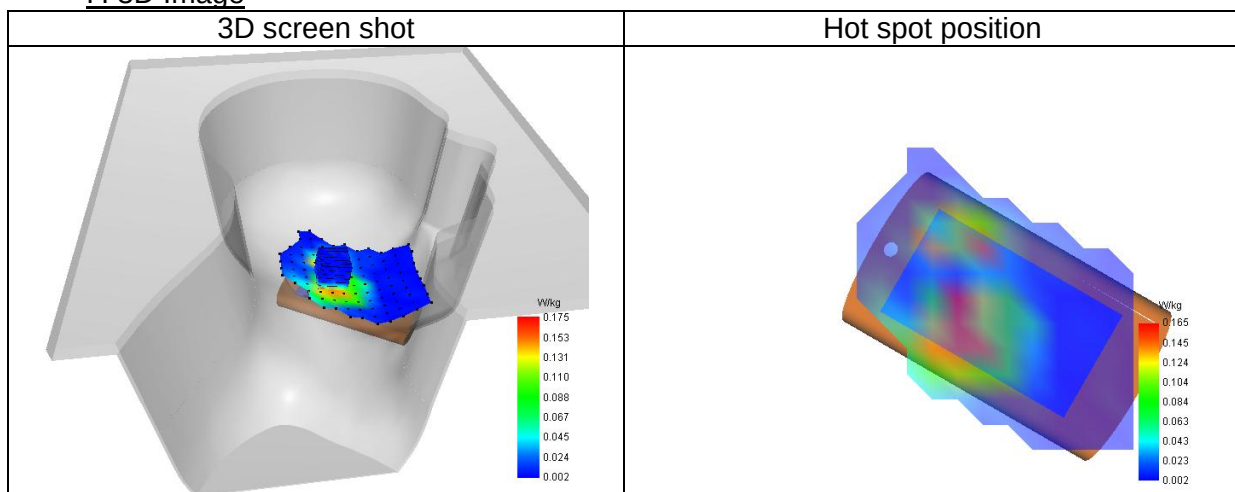
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.063 |
| SAR 1g (W/Kg)                                         | 0.160 |
| Variation (%)                                         | -3.03 |
| Horizontal validation criteria: minimum distance (mm) | 10.00 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 42.16 |

E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.359 | 0.175 | 0.060 | 0.014 | 0.012 | 0.005 | 0.006 |



#### F. 3D Image



**52# SAR Measurement at NR band 78 (Body, Validation Plane)**

Date of measurement: 24/2/2025

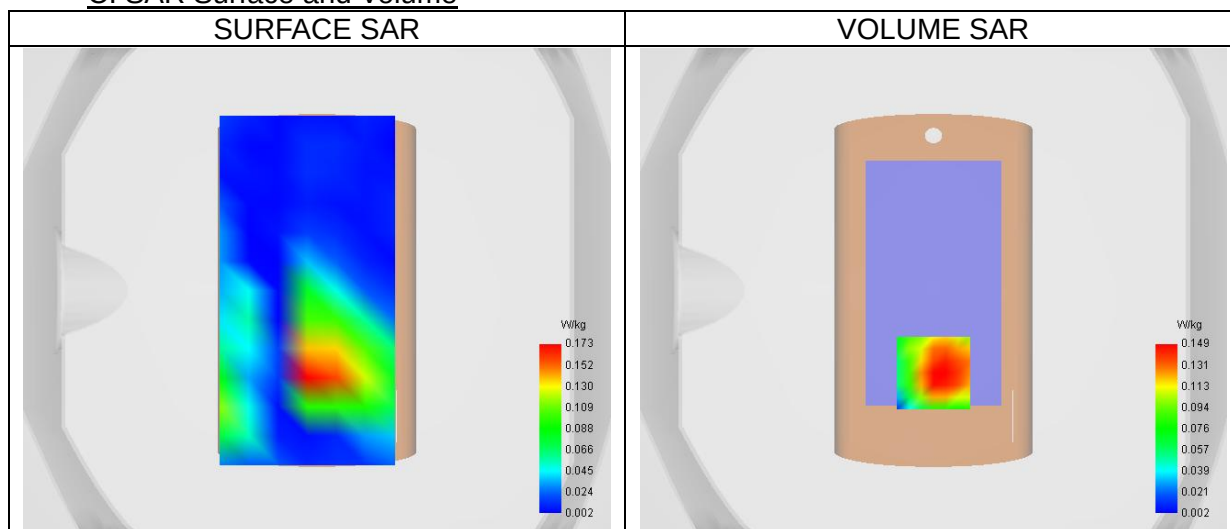
**A. Experimental conditions.**

|                                                        |                                          |
|--------------------------------------------------------|------------------------------------------|
| Probe                                                  | 4024-EPGO-442                            |
| ConvF                                                  | 2.15                                     |
| Area Scan                                              | dx=12mm dy=12mm, Complete                |
| Zoom Scan                                              | 7x7x7,dx=5mm dy=5mm<br>dz=5.0mm,Complete |
| Phantom                                                | Validation plane                         |
| Device Position                                        | Body                                     |
| Band                                                   | NR band 78                               |
| Signal                                                 | NR TDD                                   |
| Channel Center [NR-ARFCN] / Channel Center [MHz]       | Middle (636666)/ frequency 3549.99 Mhz   |
| Cell Bandwidth                                         | 100 Mhz                                  |
| Modulation                                             | CP-OFDM - QPSK                           |
| subcarrier spacing (SCS)                               | 30 kHz                                   |
| Middle TX Frequency (MHz)                              | 3549.99                                  |
| pattern/periodicity/DL Dur/DL Sym/UL Dur/UL Sym/CG Sym | not Specified                            |

**B. Permittivity**

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 3549.99 |
| Relative permittivity (real part)      | 37.10   |
| Relative permittivity (imaginary part) | 14.53   |
| Conductivity (S/m)                     | 2.88    |

**C. SAR Surface and Volume**



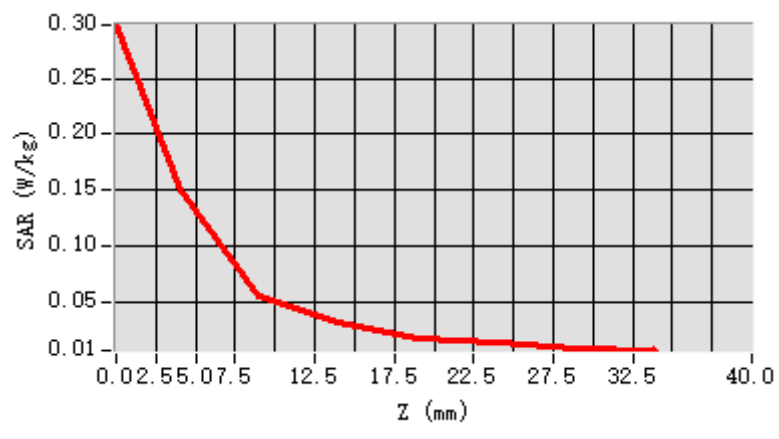
Maximum location: X=0.00, Y=-34.00 ; SAR Peak: 0.27 W/kg

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

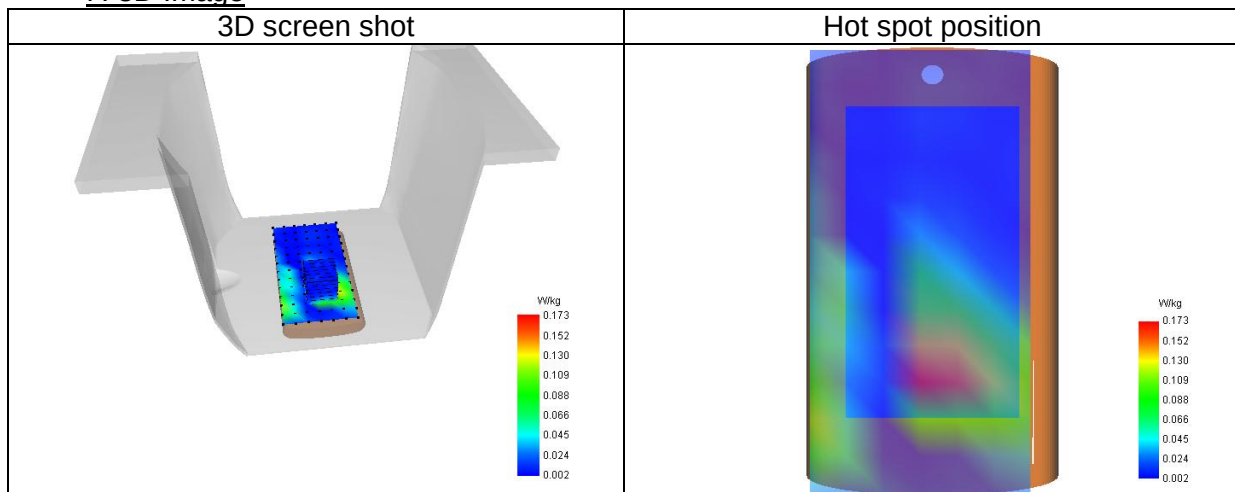
|                                                       |       |
|-------------------------------------------------------|-------|
| SAR 10g (W/Kg)                                        | 0.067 |
| SAR 1g (W/Kg)                                         | 0.143 |
| Variation (%)                                         | 0.85  |
| Horizontal validation criteria: minimum distance (mm) | 18.03 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 45.25 |

**E. Z Axis Scan**

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.298 | 0.149 | 0.055 | 0.031 | 0.016 | 0.013 | 0.008 |



#### F. 3D Image



## 14. Appendix D. Calibration Certificate

| Table of contents                        |
|------------------------------------------|
| E Field Probe - 4024-EPGO-442            |
| 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 |
| 2600 MHz Dipole - SN 03/15 DIP 2G600-356 |
| 3500 MHz Dipole - SN 09/12 DIP 3G500-360 |
| 5000-6000 MHz Dipole - SN 13/14 WGA 33   |

DocuSign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



## COMOSAR E-Field Probe Calibration Report

Ref : ACR.278.12.24.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.: 4024-EPGO-442

Calibrated at MVG

Z.I. de la pointe du diable

Technopôle Brest Iroise – 295 avenue Alexis de Rochon  
29280 PLOUZANE - FRANCE

Calibration date: 10/04/2024



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

The use of the Cofrac brand and the accreditation references is prohibited from any reproduction.

#### 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).

DocuSign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



## COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.278.12.24.BES.A

|                        | Name          | Function                | Date      | Signature |
|------------------------|---------------|-------------------------|-----------|-----------|
| Prepared by :          | Cyrille ONNEE | Measurement Responsible | 10/4/2024 |           |
| Checked & approved by: | Pedro Ruiz    | Technical Manager       | 10/4/2024 |           |
| Authorized by:         | Pedro Ruiz    | Laboratory Director     | 10/4/2024 |           |

Assinado por:

Pedro RUIZ

29093B31C46F428...

|                | Customer Name                                       |
|----------------|-----------------------------------------------------|
| Distribution : | SHENZHEN NTEK<br>TESTING<br>TECHNOLOGY<br>CO., LTD. |

| Issue | Name          | Date      | Modifications   |
|-------|---------------|-----------|-----------------|
| A     | Cyrille ONNEE | 10/4/2024 | Initial release |
|       |               |           |                 |
|       |               |           |                 |
|       |               |           |                 |

Docusign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



**COMOSAR E-FIELD PROBE CALIBRATION REPORT**

Ref: ACR.278.12.24.BES.A

**TABLE OF CONTENTS**

|     |                                 |   |
|-----|---------------------------------|---|
| 1   | Device Under Test .....         | 4 |
| 2   | Product Description .....       | 4 |
| 2.1 | General Information .....       | 4 |
| 3   | Measurement Method .....        | 4 |
| 3.1 | Sensitivity .....               | 4 |
| 3.2 | Linearity .....                 | 5 |
| 3.3 | Isotropy .....                  | 5 |
| 3.4 | Boundary Effect .....           | 5 |
| 3.5 | Probe Modulation Response ..... | 6 |
| 4   | Measurement Uncertainty .....   | 6 |
| 5   | Calibration Results .....       | 6 |
| 5.1 | Calibration in air .....        | 6 |
| 5.2 | Calibration in liquid .....     | 7 |
| 6   | Verification Results .....      | 9 |
| 7   | List of Equipment .....         | 9 |

DocuSign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



## COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.278.12.24.BES.A

## 1 DEVICE UNDER TEST

| Device Under Test                        |                                                                         |
|------------------------------------------|-------------------------------------------------------------------------|
| Device Type                              | COMOSAR DOSIMETRIC E FIELD PROBE                                        |
| Manufacturer                             | MVG                                                                     |
| Model                                    | SSE2                                                                    |
| Serial Number                            | 4024-EPGO-442                                                           |
| Product Condition (new / used)           | New                                                                     |
| Frequency Range of Probe                 | 0.15 GHz-7.5GHz                                                         |
| Resistance of Three Dipoles at Connector | Dipole 1: R1=0.206 MΩ<br>Dipole 2: R2=0.223 MΩ<br>Dipole 3: R3=0.235 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.

Docusign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



## COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.278.12.24.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 0.01 W/kg to 100 W/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:

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

where

$SAR_{uncertainty}$  is the uncertainty in percent of the probe boundary effect

$d_{be}$  is the distance between the surface and the closest *zoom-scan* measurement point, in millimetre

$\Delta_{step}$  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

$\delta$  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;

$\Delta SAR_{be}$  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%).

Docusign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



## COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.278.12.24.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.

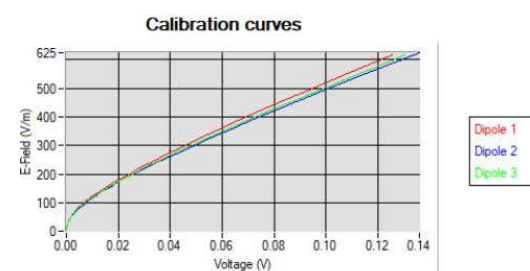
The estimated expanded uncertainty (k=2) in calibration for SAR (W/kg) is +/-14% for the frequency range 600-7500MHz.

### 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.

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

Page: 6/10

Template ACR.DDD.N.YY.MVGB.ISSUE COMOSAR Probe vM

This document shall not be reproduced, except in full or in part, without the written approval of MVG. The information contained herein is to be used only for the purpose for which it is submitted and is not to be released in whole or part without written approval of MVG.

Docusign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



**COMOSAR E-FIELD PROBE CALIBRATION REPORT**

Ref: ACR.278.12.24.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<br>1 ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) | Normy dipole<br>2 ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) | Normz dipole<br>3 ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) |
|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| 0.73                                                      | 0.79                                                      | 0.78                                                      |

| DCP dipole 1<br>(mV) | DCP dipole 2<br>(mV) | DCP dipole 3<br>(mV) |
|----------------------|----------------------|----------------------|
| 105                  | 109                  | 103                  |

## 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

$\sigma$ =the conductivity of the liquid

$\rho$ =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:

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

Page: 7/10

**Template ACR.DDD.N.YY.MVGB.ISSUE COMOSAR Probe vM**

*This document shall not be reproduced, except in full or in part, without the written approval of MVG. The information contained herein is to be used only for the purpose for which it is submitted and is not to be released in whole or part without written approval of MVG.*

DocuSign Envelope ID: 223C1A7C-4751-4B95-8502-1618DC0951E3



# COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.278.12.24.BES.A

where

a=the larger cross-sectional of the waveguide

b=the smaller cross-sectional of the waveguide

$\delta$ =the skin depth for the liquid in the waveguide

Pw=the power delivered to the liquid

The below table summarize the ConvF for the calibrated liquid. The curves give examples for the measured SAR depending on the voltage in some liquid.

| Liquid | Frequency (MHz*) | ConvF |
|--------|------------------|-------|
| HL750  | 750              | 2.42  |
| HL850  | 835              | 2.34  |
| HL900  | 900              | 2.24  |
| HL1800 | 1800             | 2.51  |
| HL1900 | 1900             | 2.57  |
| HL2000 | 2000             | 2.64  |
| HL2300 | 2300             | 2.73  |
| HL2450 | 2450             | 2.74  |
| HL2600 | 2600             | 2.51  |
| HL3300 | 3300             | 2.11  |
| HL3500 | 3500             | 2.15  |
| HL3700 | 3700             | 2.08  |
| HL3900 | 3900             | 2.27  |
| HL4200 | 4200             | 2.39  |
| HL4600 | 4600             | 2.30  |
| HL4900 | 4900             | 2.13  |
| HL5200 | 5200             | 1.89  |
| HL5400 | 5400             | 1.97  |
| HL5600 | 5600             | 1.88  |
| HL5800 | 5800             | 1.90  |

(\*) Frequency validity is +/-50MHz below 600MHz, +/-100MHz from 600MHz to 6GHz and +/-700MHz above 6GHz

