



## Appendix A: SAR System performance Check Plots

| <b>Measurement</b> | <b>Liquid</b> | <b>Frequency</b> | <b>Test Date</b> |
|--------------------|---------------|------------------|------------------|
| System Check       | Head          | 835              | 2023/06/26       |
| System Check       | Head          | 900              | 2023/07/13       |
| System Check       | Head          | 1800             | 2023/07/10       |
| System Check       | Head          | 1900             | 2023/07/07       |
| System Check       | Head          | 2450             | 2023/07/06       |
| System Check       | Head          | 2600             | 2023/06/29       |
| System Check       | Head          | 5200             | 2023/07/04       |
| System Check       | Head          | 5400             | 2023/07/04       |
| System Check       | Head          | 5600             | 2023/07/04       |
| System Check       | Head          | 5800             | 2023/07/04       |

## System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 06/26/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 835MHz                     |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

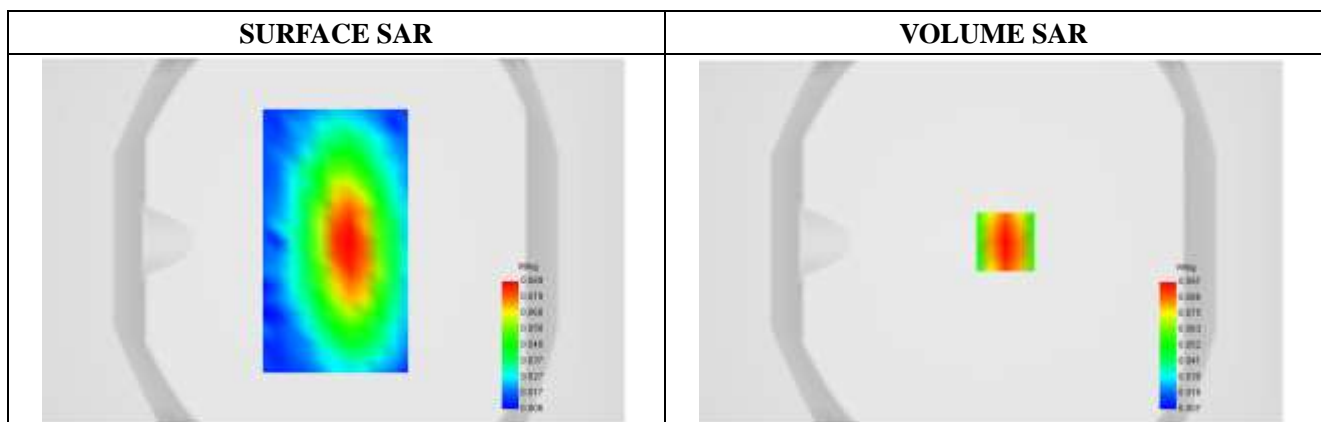
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 835   |
| <b>Relative permittivity (real part)</b> | 41.67 |
| <b>Conductivity (S/m)</b>                | 0.89  |
| <b>Variation (%)</b>                     | 0.34  |

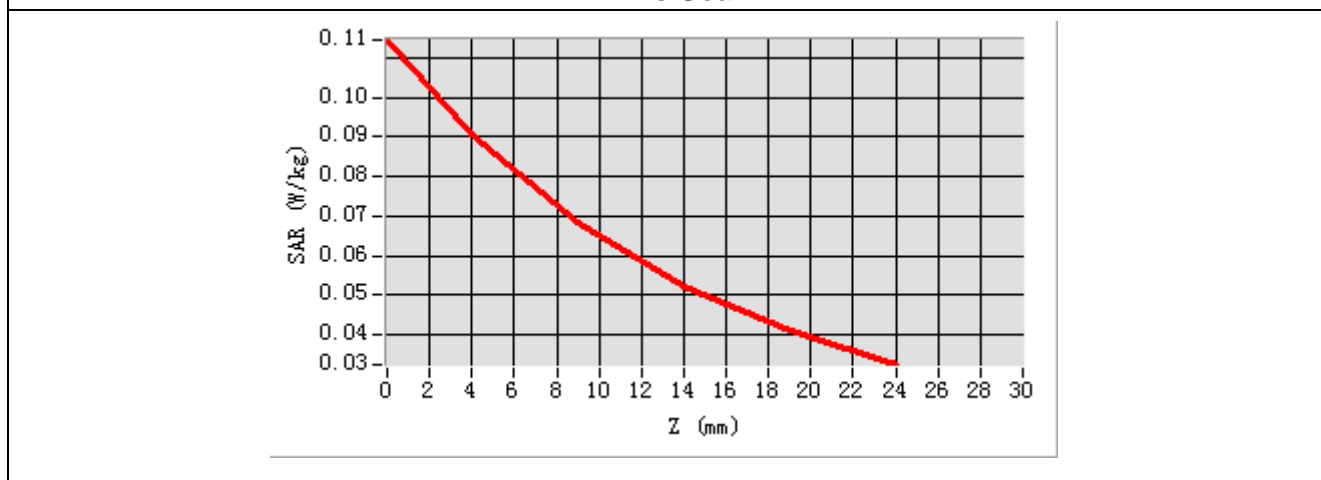
**Maximum location: X=6.00, Y=0.00**

**SAR Peak: 0.11 W/kg**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.061229 |
| <b>SAR 1g (W/Kg)</b>  | 0.092820 |



**Z Axis Scan**



## System Performance Check (900MHz)

Type: Validation measurement

Date of measurement: 06/26/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 900MHz                     |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

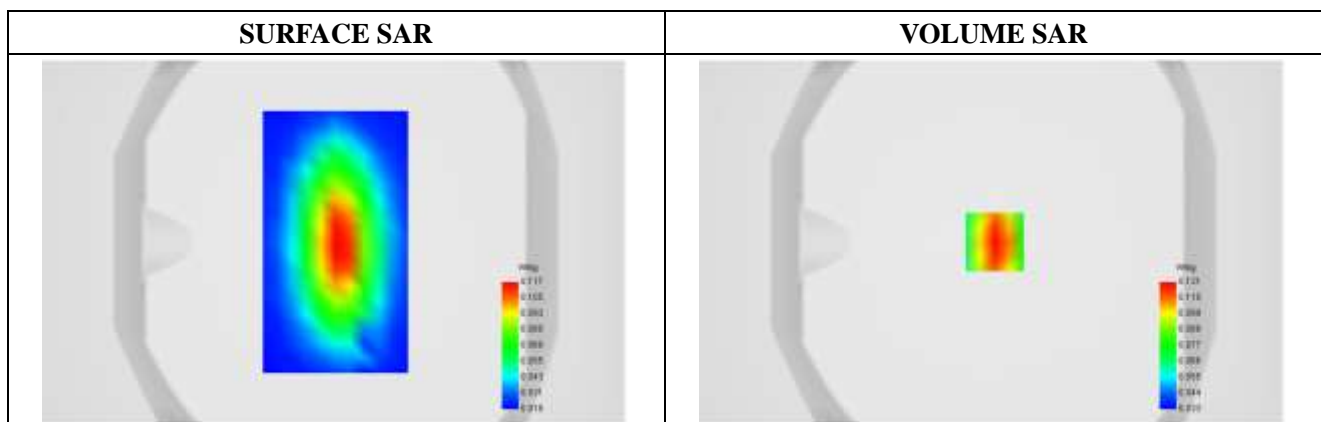
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 900   |
| <b>Relative permittivity (real part)</b> | 40.98 |
| <b>Conductivity (S/m)</b>                | 0.96  |
| <b>Variation (%)</b>                     | -0.23 |

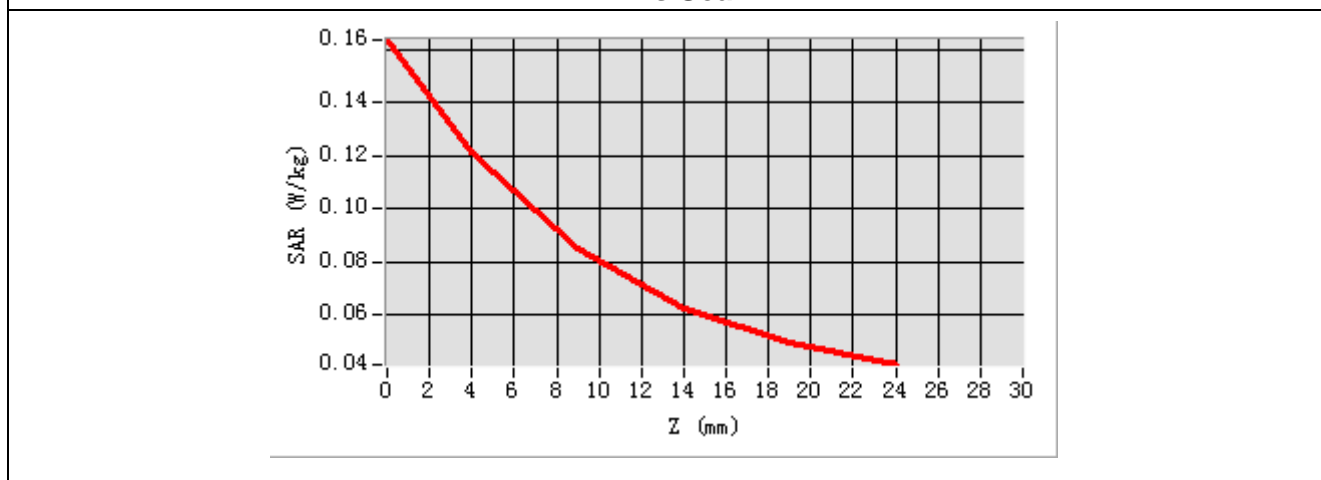
**Maximum location: X=1.00, Y=0.00**

**SAR Peak: 0.16 W/kg**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.076460 |
| <b>SAR 1g (W/Kg)</b>  | 0.115403 |



### Z Axis Scan



## System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 07/10/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 1800MHz                    |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

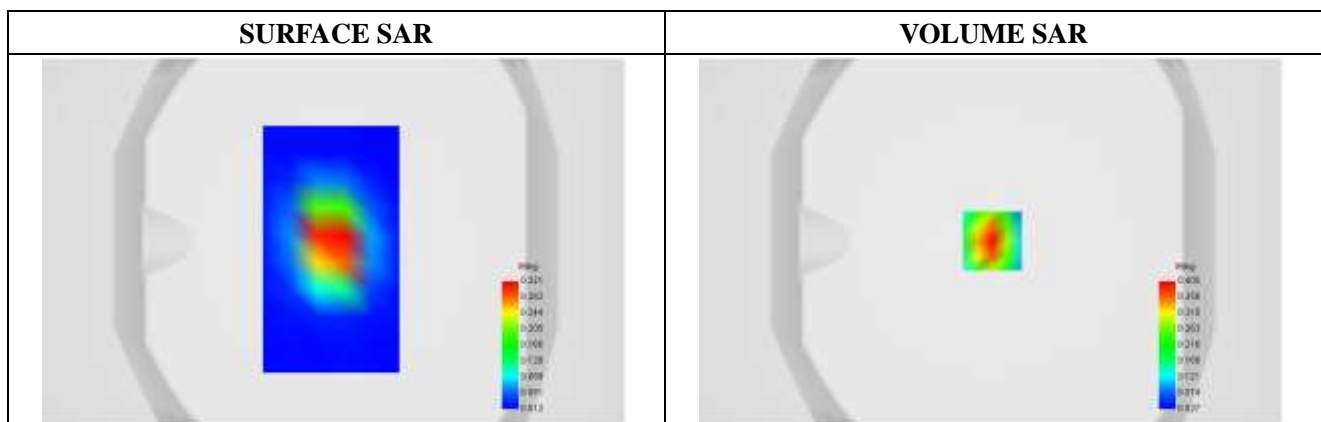
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 1800  |
| <b>Relative permittivity (real part)</b> | 40.27 |
| <b>Conductivity (S/m)</b>                | 1.38  |
| <b>Variation (%)</b>                     | -0.10 |

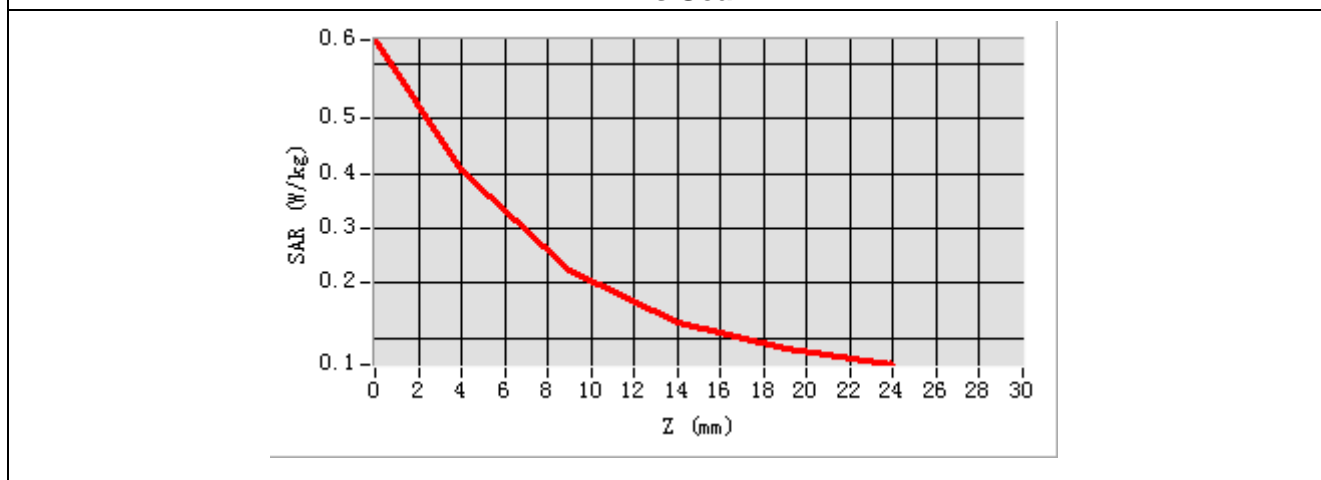
Maximum location: X=0.00, Y=0.00

SAR Peak: 0.63 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.200795 |
| <b>SAR 1g (W/Kg)</b>  | 0.377388 |



### Z Axis Scan



## System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 07/07/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 1900MHz                    |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

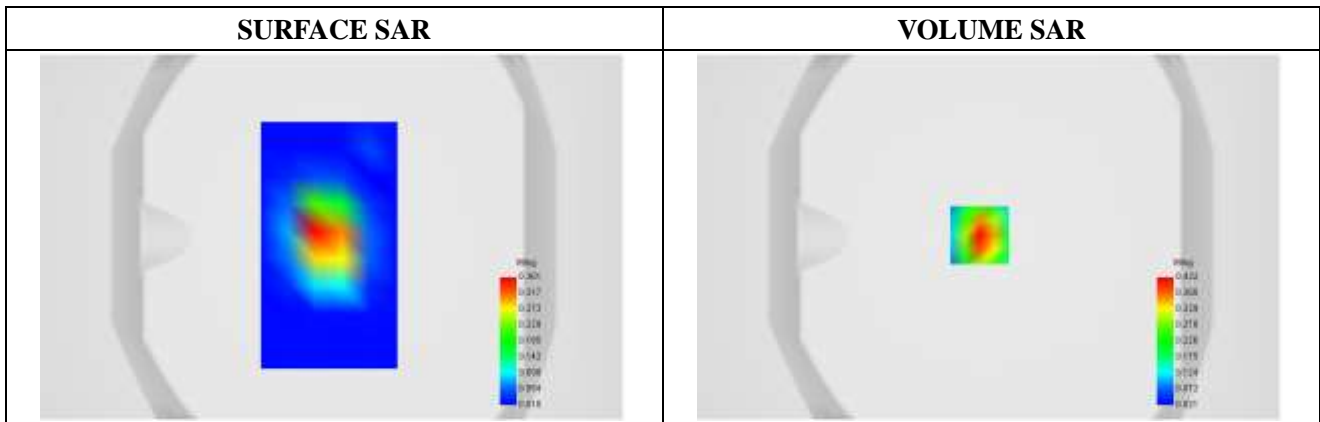
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 1900  |
| <b>Relative permittivity (real part)</b> | 40.51 |
| <b>Conductivity (S/m)</b>                | 1.43  |
| <b>Variation (%)</b>                     | 0.44  |

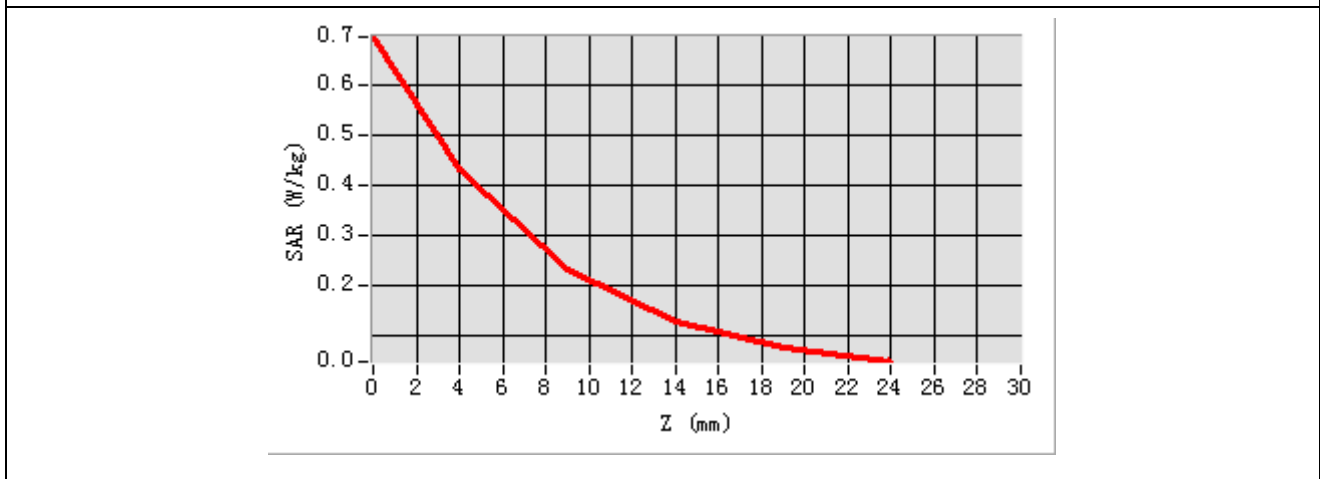
Maximum location: X=-6.00, Y=1.00

SAR Peak: 0.69 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.210932 |
| <b>SAR 1g (W/Kg)</b>  | 0.409420 |



### Z Axis Scan



## System Performance Check (2450MHz)

Type: Validation measurement

Date of measurement: 07/06/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 7x7x7,dx=5mm dy=5mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 2450MHz                    |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

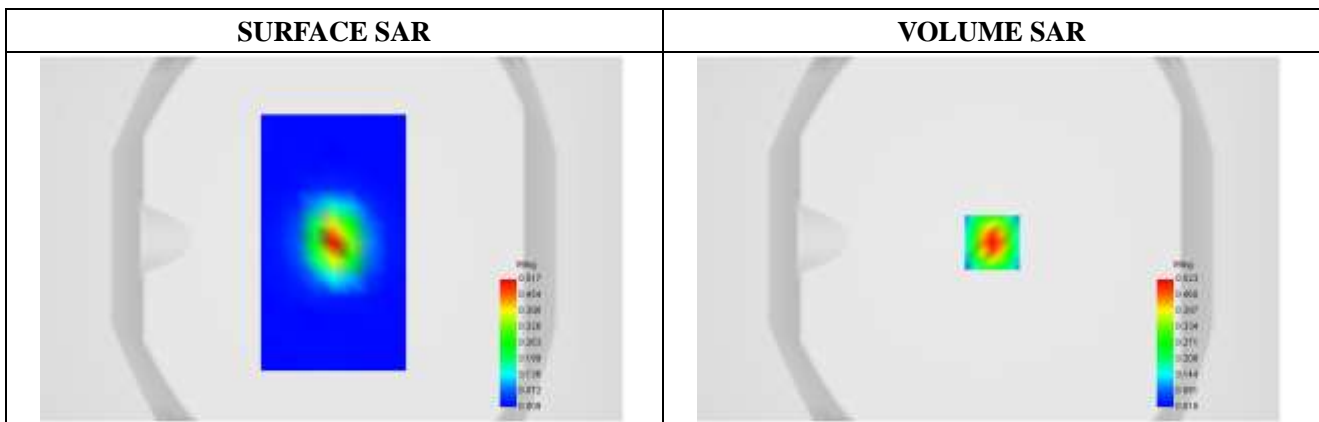
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 2450  |
| <b>Relative permittivity (real part)</b> | 40.07 |
| <b>Conductivity (S/m)</b>                | 1.81  |
| <b>Variation (%)</b>                     | 0.27  |

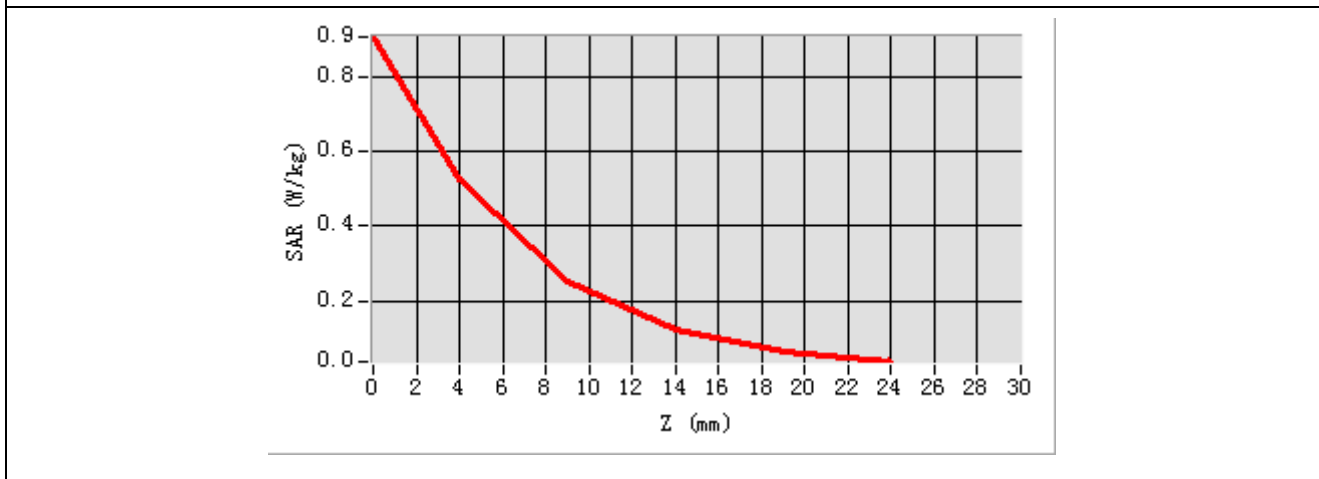
Maximum location: X=1.00, Y=-2.00

SAR Peak: 0.92 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.225739 |
| <b>SAR 1g (W/Kg)</b>  | 0.487835 |



**Z Axis Scan**



## System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 06/29/2023

### A. Experimental conditions.

|                        |                            |
|------------------------|----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403       |
| <b>Area Scan</b>       | dx=8mm dy=8mm              |
| <b>Zoom Scan</b>       | 7x7x7,dx=5mm dy=5mm dz=5mm |
| <b>Phantom</b>         | Validation plane           |
| <b>Device Position</b> | Dipole                     |
| <b>Band</b>            | 2600MHz                    |
| <b>Channels</b>        | Middle                     |
| <b>Signal</b>          | CW(Crest factor: 1.0)      |

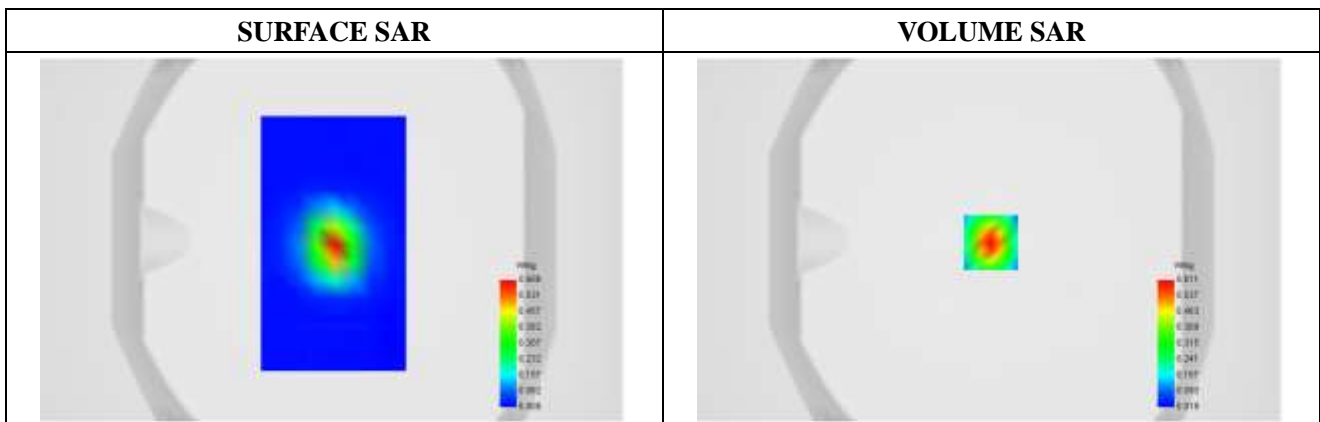
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 2600  |
| <b>Relative permittivity (real part)</b> | 39.12 |
| <b>Conductivity (S/m)</b>                | 1.94  |
| <b>Variation (%)</b>                     | 0.27  |

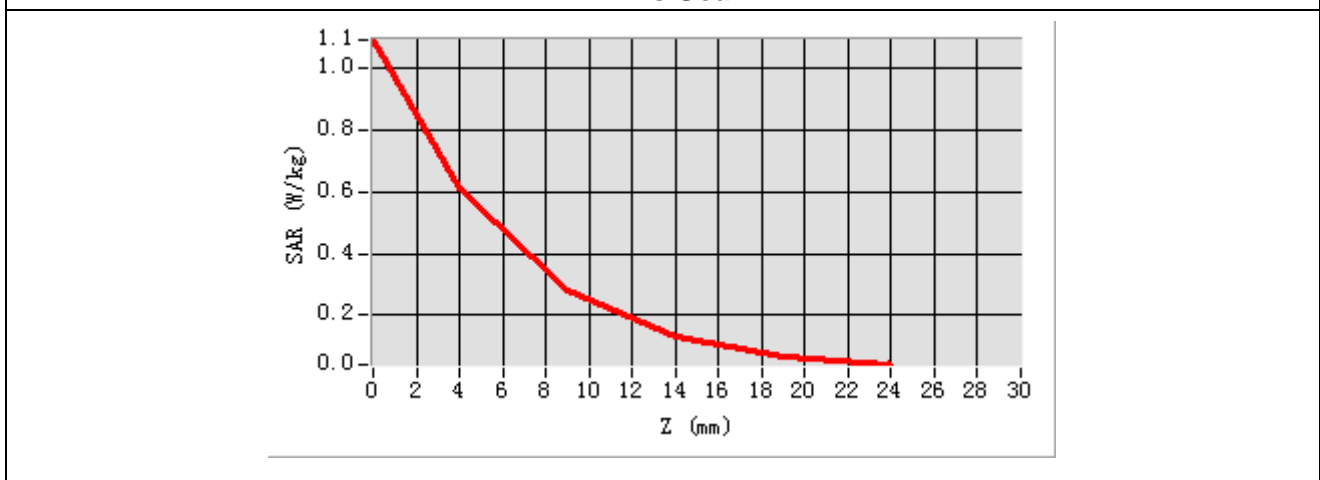
Maximum location: X=0.00, Y=-1.00

SAR Peak: 1.10 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.269052 |
| <b>SAR 1g (W/Kg)</b>  | 0.581759 |



### Z Axis Scan



## System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 07/04/2023

### A. Experimental conditions.

|                        |                             |
|------------------------|-----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403        |
| <b>Area Scan</b>       | dx=8mm dy=8mm               |
| <b>Zoom Scan</b>       | 7x7x12,dx=4mm dy=4mm dz=2mm |
| <b>Phantom</b>         | Validation plane            |
| <b>Device Position</b> | Dipole                      |
| <b>Band</b>            | 5200MHz                     |
| <b>Channels</b>        | Middle                      |
| <b>Signal</b>          | CW(Crest factor: 1.0)       |

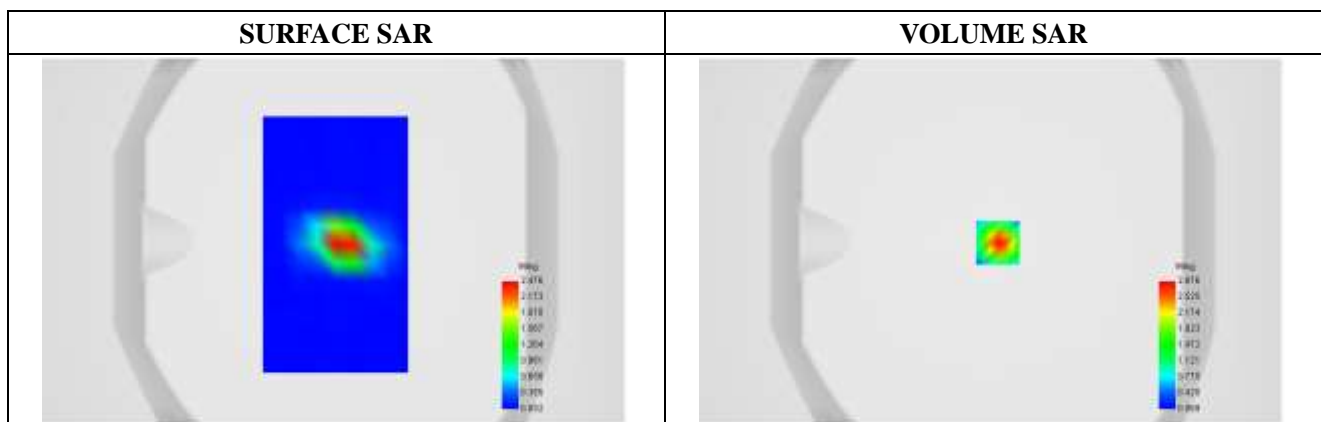
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 5200  |
| <b>Relative permittivity (real part)</b> | 36.23 |
| <b>Conductivity (S/m)</b>                | 4.61  |
| <b>Variation (%)</b>                     | 0.39  |

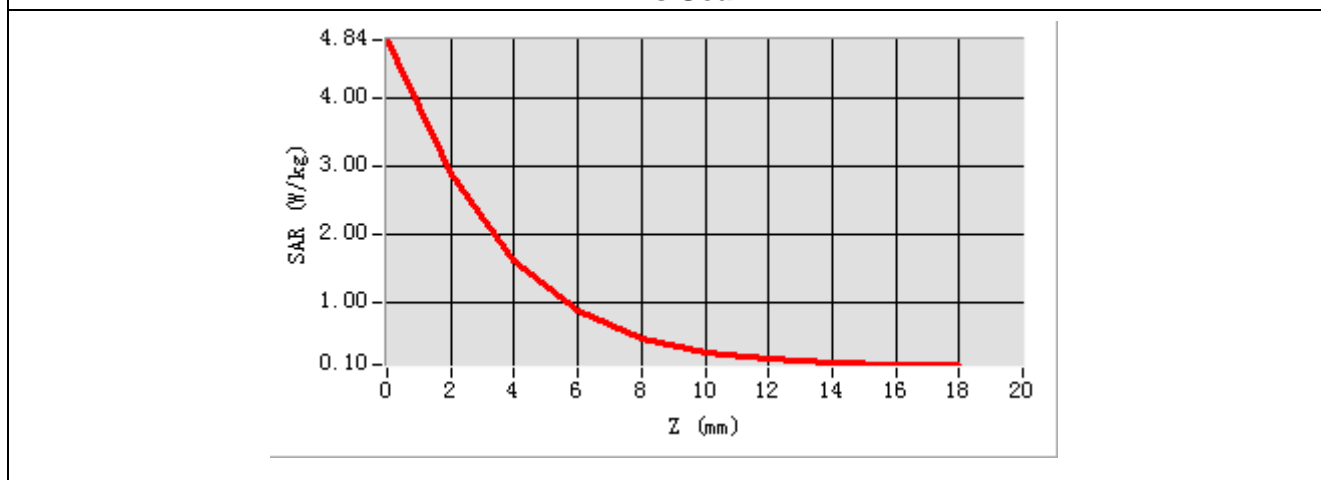
**Maximum location: X=3.00, Y=-1.00**

**SAR Peak: 4.95 W/kg**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.546970 |
| <b>SAR 1g (W/Kg)</b>  | 1.589888 |



### Z Axis Scan





## System Performance Check (5400MHz)

Type: Validation measurement

Date of measurement: 07/04/2023

### A. Experimental conditions.

|                        |                             |
|------------------------|-----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403        |
| <b>Area Scan</b>       | dx=8mm dy=8mm               |
| <b>Zoom Scan</b>       | 7x7x12,dx=4mm dy=4mm dz=2mm |
| <b>Phantom</b>         | Validation plane            |
| <b>Device Position</b> | Dipole                      |
| <b>Band</b>            | 5400MHz                     |
| <b>Channels</b>        | Middle                      |
| <b>Signal</b>          | CW(Crest factor: 1.0)       |

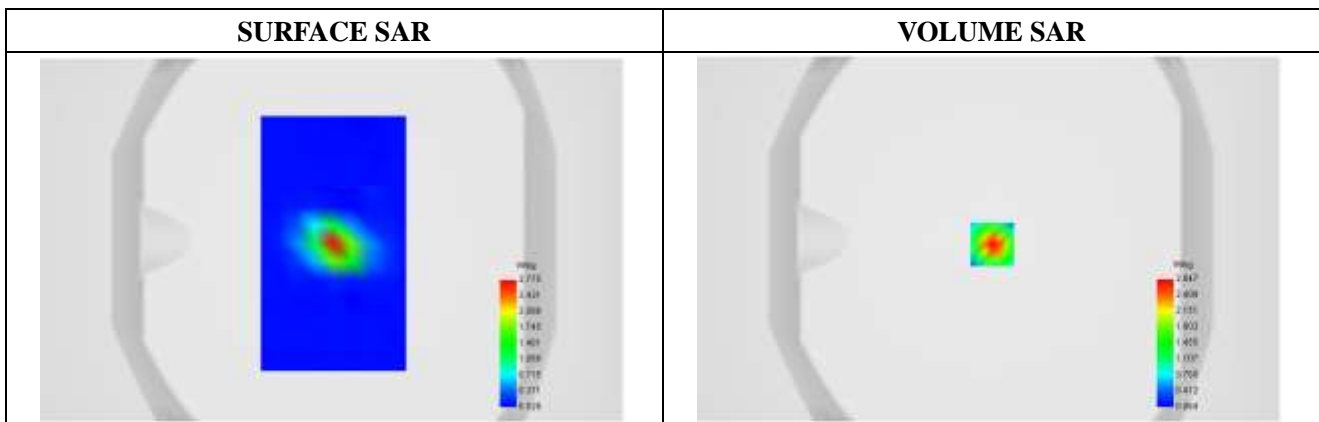
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 5400  |
| <b>Relative permittivity (real part)</b> | 35.71 |
| <b>Conductivity (S/m)</b>                | 4.93  |
| <b>Variation (%)</b>                     | -0.62 |

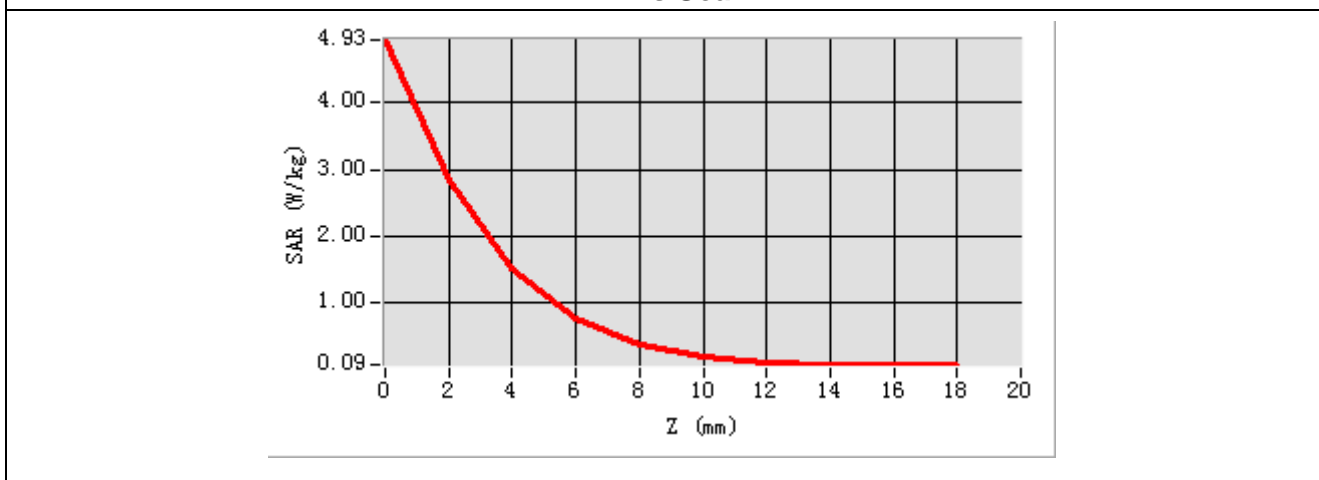
Maximum location: X=1.00, Y=-3.00

SAR Peak: 5.00 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.539162 |
| <b>SAR 1g (W/Kg)</b>  | 1.593025 |



**Z Axis Scan**



## System Performance Check (5600MHz)

Type: Validation measurement

Date of measurement: 07/05/2023

### A. Experimental conditions.

|                        |                             |
|------------------------|-----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403        |
| <b>Area Scan</b>       | dx=8mm dy=8mm               |
| <b>Zoom Scan</b>       | 7x7x12,dx=4mm dy=4mm dz=2mm |
| <b>Phantom</b>         | Validation plane            |
| <b>Device Position</b> | Dipole                      |
| <b>Band</b>            | 5600MHz                     |
| <b>Channels</b>        | Middle                      |
| <b>Signal</b>          | CW(Crest factor: 1.0)       |

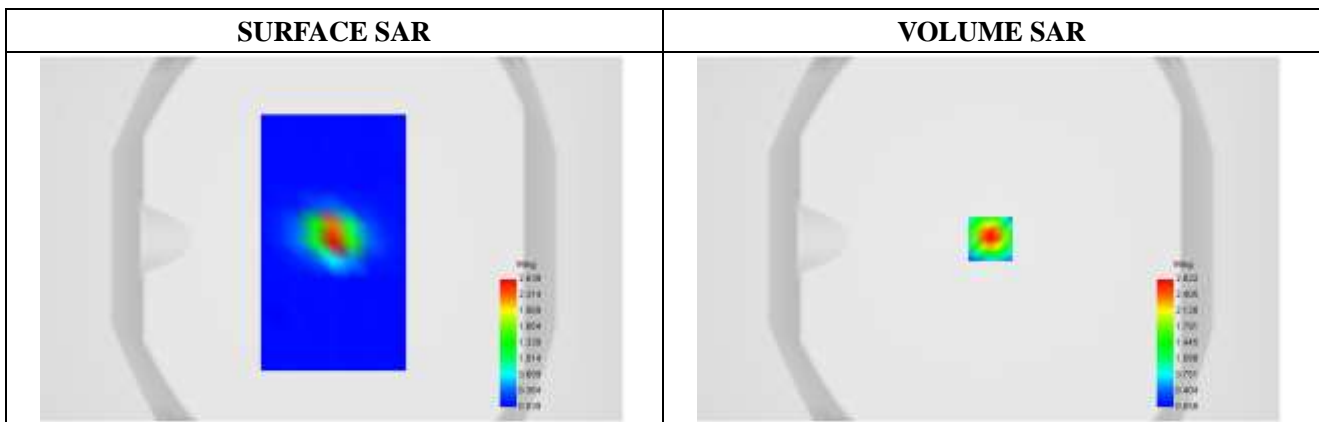
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 5600  |
| <b>Relative permittivity (real part)</b> | 35.86 |
| <b>Conductivity (S/m)</b>                | 5.13  |
| <b>Variation (%)</b>                     | -0.40 |

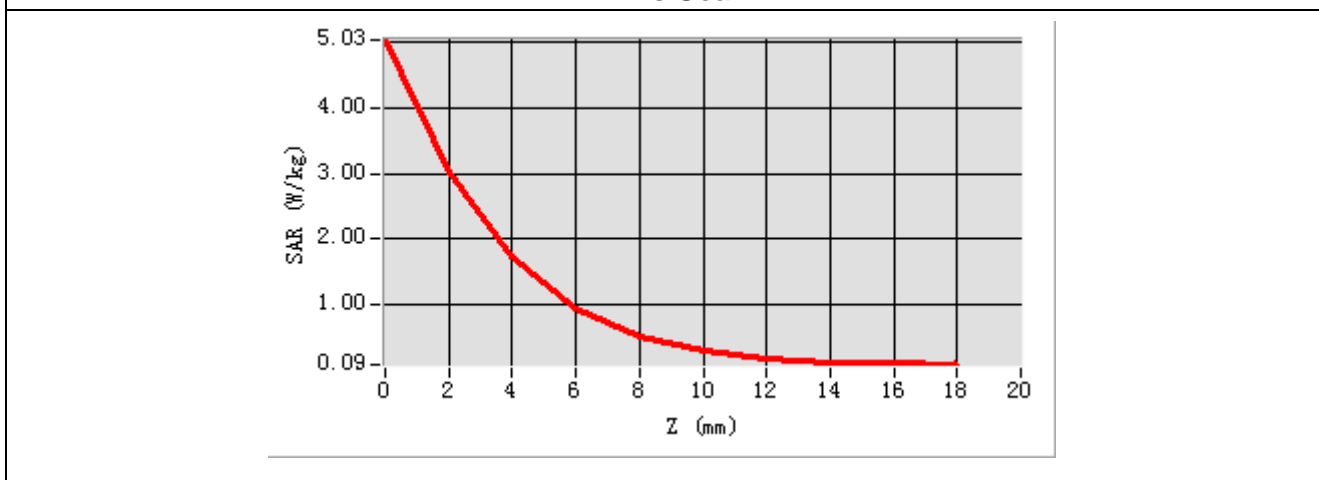
Maximum location: X=0.00, Y=0.00

SAR Peak: 5.10 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.574206 |
| <b>SAR 1g (W/Kg)</b>  | 1.647658 |



### Z Axis Scan



## System Performance Check (5800MHz)

Type: Validation measurement

Date of measurement: 07/05/2023

### A. Experimental conditions.

|                        |                             |
|------------------------|-----------------------------|
| <b>E-Field Probe</b>   | SATIMO 0523-EPGO-403        |
| <b>Area Scan</b>       | dx=8mm dy=8mm               |
| <b>Zoom Scan</b>       | 7x7x12,dx=4mm dy=4mm dz=2mm |
| <b>Phantom</b>         | Validation plane            |
| <b>Device Position</b> | Dipole                      |
| <b>Band</b>            | 5800MHz                     |
| <b>Channels</b>        | Middle                      |
| <b>Signal</b>          | CW(Crest factor: 1.0)       |

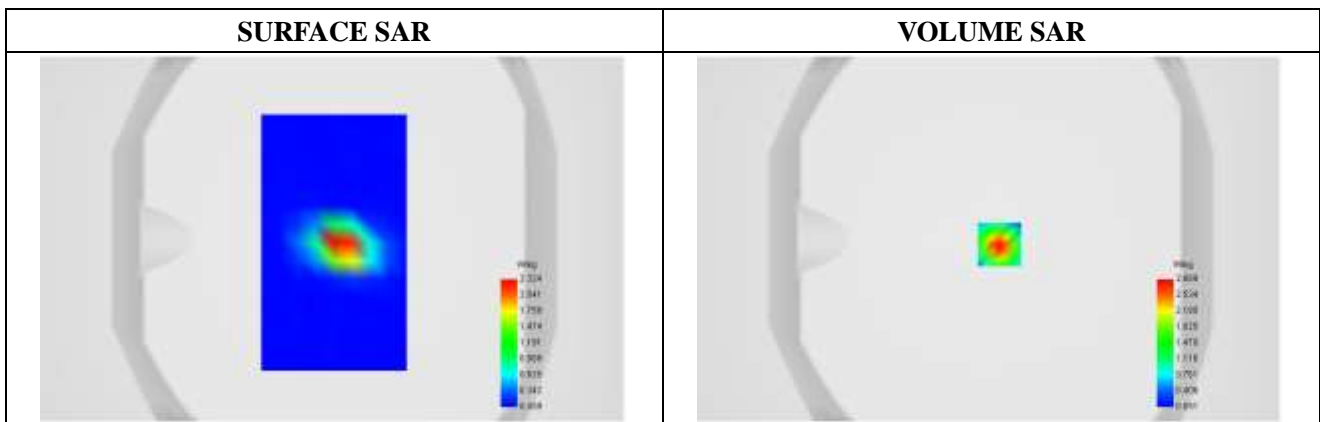
### B. SAR Measurement Results

|  |       |
|--|-------|
| <b>Frequency (MHz)</b>                   | 5800  |
| <b>Relative permittivity (real part)</b> | 35.53 |
| <b>Conductivity (S/m)</b>                | 5.38  |
| <b>Variation (%)</b>                     | -0.88 |

Maximum location: X=5.00, Y=-3.00

SAR Peak: 5.23 W/kg

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.595692 |
| <b>SAR 1g (W/Kg)</b>  | 1.718042 |



### Z Axis Scan

