



No. 25T04N001821-011-SAR

1900MHz Dipole (2024)



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E-mail: ctll@chinattl.com http://www.caict.ac.cn



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CALIBRATION
CNAS L0570

CAICT

Client: SAICT

Certificate No: 24J02Z000739

CALIBRATION CERTIFICATE

Object D1900V2 - SN: 5d088

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: September 26, 2024

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|-------------------------|------------|--|-----------------------|
| Power Meter NRP2 | 106276 | 17-May-24 (CTTL, No. J24X04107) | May-25 |
| Power sensor NRP6A | 101369 | 17-May-24 (CTTL, No. J24X04107) | May-25 |
| Reference Probe EX3DV4 | SN 7464 | 22-Jan-24(SPEAG, No. EX-7464_Jan24) | Jan-25 |
| DAE4 | SN 1556 | 03-Jan-24(CTTL-SPEAG, No.24J02Z80002) | Jan-25 |
| Secondary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
| Signal Generator E4438C | MY49071430 | 25-Dec-23 (CTTL, No. J23X13426) | Dec-24 |
| NetworkAnalyzer E5071C | MY46110673 | 25-Dec-23 (CTTL, No. J23X13425) | Dec-24 |
| OCP DAK-3.5(weighted) | 1040 | 22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24) | Jan-25 |

| Calibrated by: | Name | Function | Signature |
|----------------|-------------|--------------------|-----------|
| | Zhao Jing | SAR Test Engineer | |
| Reviewed by: | Lin Jun | SAR Test Engineer | |
| Approved by: | Qi Dianyuan | SAR Project Leader | |

Issued: September 30, 2024

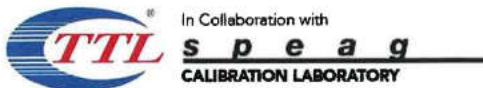
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Certificate No: 24J02Z000739

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Glossary:

| | |
|-------|--------------------------------|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure for The Assessment of Specific Absorption Rate of Human Exposure to Radio Frequency Fields from Hand-held and Body-mounted Wireless Communication Devices- Part 1528: Human Models, Instrumentation and Procedures (Frequency range of 4 MHz to 10 GHz)", October 2020
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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



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Measurement Conditions

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

| | | |
|------------------------------|--------------------------|-------------|
| DASY Version | DASY52 | 52.10.4 |
| Extrapolation | Advanced Extrapolation | |
| Phantom | Triple Flat Phantom 5.1C | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 1900 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 40.0 | 1.40 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 40.6 ± 6 % | 1.39 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | --- | --- |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 9.83 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 39.7 W/kg ± 18.8 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 250 mW input power | 5.19 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 20.9 W/kg ± 18.7 % (k=2) |



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 51.5Ω+ 7.67jΩ |
| Return Loss | - 22.3dB |

General Antenna Parameters and Design

| | |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.100 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point can be measured.

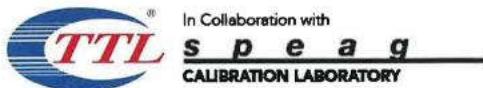
The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feed-point may be damaged.

Additional EUT Data

| | |
|-----------------|-------|
| Manufactured by | SPEAG |
|-----------------|-------|



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DASY5 Validation Report for Head TSL

Date: 2024-09-26

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d088

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 40.63$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(7.64, 7.81, 7.99) @ 1900 MHz; Calibrated: 2024-01-22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.28 V/m; Power Drift = -0.08 dB

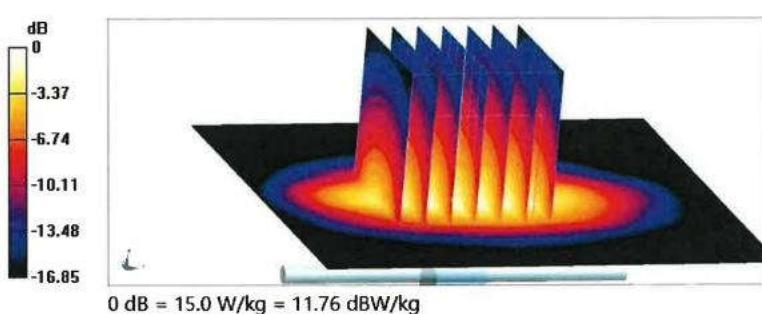
Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 9.83 W/kg; SAR(10 g) = 5.19 W/kg

Smallest distance from peaks to all points 3 dB below = 9.8 mm

Ratio of SAR at M2 to SAR at M1 = 56.7%

Maximum value of SAR (measured) = 15.0 W/kg



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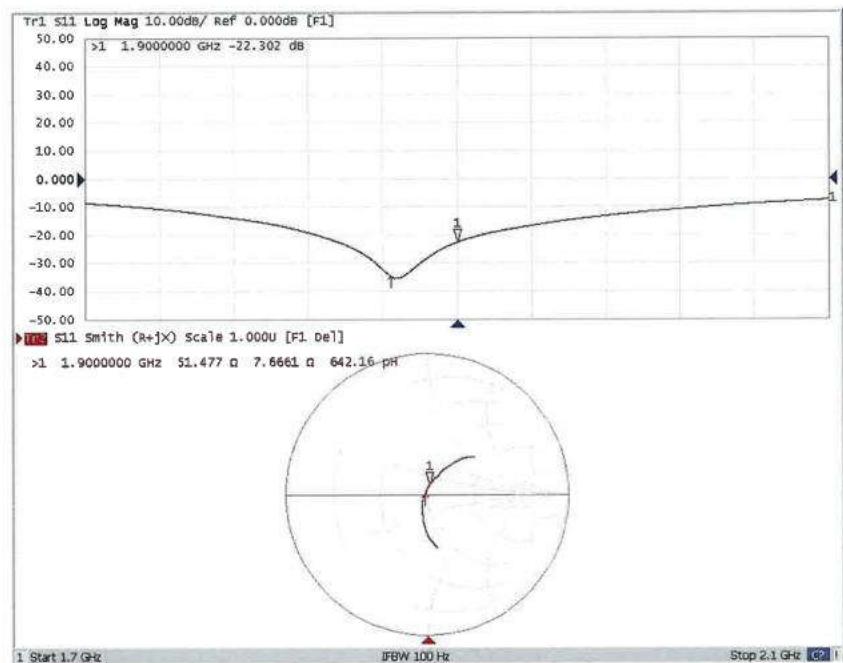
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Impedance Measurement Plot for Head TSL



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No. 25T04N001821-011-SAR

2300MHz Dipole (2024)



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CNAS L0570

CAICT

Client: SAICT

Certificate No: 24J02Z000556

CALIBRATION CERTIFICATE

Object D2300V2 - SN: 1059

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: September 3, 2024

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|-------------------------|------------|--|-----------------------|
| Power Meter NRP2 | 106276 | 17-May-24 (CTTL, No. J24X04107) | May-25 |
| Power sensor NRP6A | 101369 | 17-May-24 (CTTL, No. J24X04107) | May-25 |
| Reference Probe EX3DV4 | SN 7464 | 22-Jan-24(SPEAG, No. EX-7464_Jan24) | Jan-25 |
| DAE4 | SN 1556 | 03-Jan-24(CTTL-SPEAG, No.24J02Z80002) | Jan-25 |
| Secondary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
| Signal Generator E4438C | MY49071430 | 25-Dec-23 (CTTL, No. J23X13426) | Dec-24 |
| NetworkAnalyzer E5071C | MY46110673 | 25-Dec-23 (CTTL, No. J23X13425) | Dec-24 |
| OCP DAK-3.5(weighted) | 1040 | 22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24) | Jan-25 |

| | Name | Function | Signature |
|----------------|-------------|--------------------|-----------|
| Calibrated by: | Zhao Jing | SAR Test Engineer | |
| Reviewed by: | Lin Jun | SAR Test Engineer | |
| Approved by: | Qi Dianyuan | SAR Project Leader | |

Issued: September 13, 2024

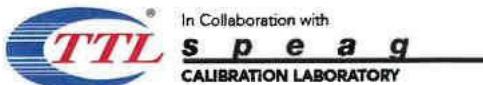
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Glossary:

| | |
|-------|--------------------------------|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure for The Assessment of Specific Absorption Rate of Human Exposure to Radio Frequency Fields from Hand-held and Body-mounted Wireless Communication Devices- Part 1528: Human Models, Instrumentation and Procedures (Frequency range of 4 MHz to 10 GHz)", October 2020
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:
c) DASY4/5 System Handbook

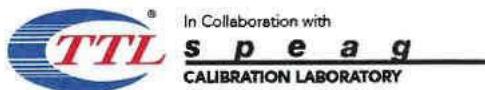
Methods Applied and Interpretation of Parameters:

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

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



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Measurement Conditions

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

| | | |
|------------------------------|--------------------------|-------------|
| DASY Version | DASY52 | 52.10.4 |
| Extrapolation | Advanced Extrapolation | |
| Phantom | Triple Flat Phantom 5.1C | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 2300 MHz \pm 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---------------------|----------------|----------------------|
| Nominal Head TSL parameters | 22.0 °C | 39.5 | 1.67 mho/m |
| Measured Head TSL parameters | (22.0 \pm 0.2) °C | 40.1 \pm 6 % | 1.63 mho/m \pm 6 % |
| Head TSL temperature change during test | <1.0 °C | --- | --- |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|------------------------------|
| SAR measured | 250 mW input power | 12.1 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 49.1 W/kg \pm 18.8 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 250 mW input power | 5.95 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.0 W/kg \pm 18.7 % (k=2) |



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 46.6Ω- 3.58jΩ |
| Return Loss | - 25.8dB |

General Antenna Parameters and Design

| | |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.075 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point can be measured.

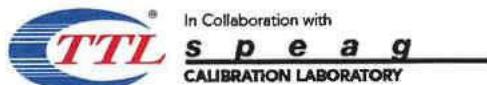
The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feed-point may be damaged.

Additional EUT Data

| | |
|-----------------|-------|
| Manufactured by | SPEAG |
|-----------------|-------|



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DASY5 Validation Report for Head TSL

Date: 2024-09-03

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN: 1059

Communication System: UID 0, CW; Frequency: 2300 MHz

Medium parameters used: $f = 2300$ MHz; $\sigma = 1.632$ S/m; $\epsilon_r = 40.08$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(7.46, 7.6, 7.77) @ 2300 MHz; Calibrated: 2024-01-22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 105.7 V/m; Power Drift = 0.08 dB

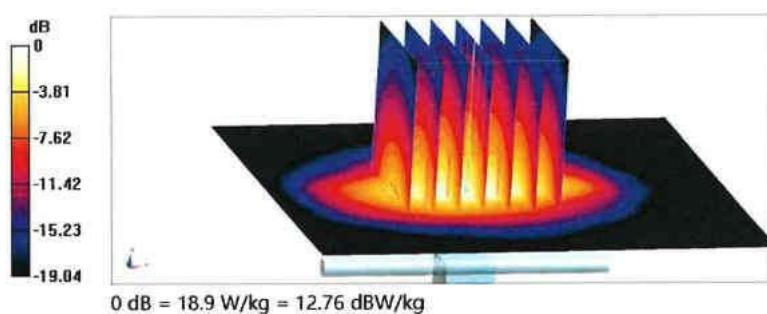
Peak SAR (extrapolated) = 22.1 W/kg

SAR(1 g) = 12.1 W/kg; SAR(10 g) = 5.95 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 55.9%

Maximum value of SAR (measured) = 18.9 W/kg





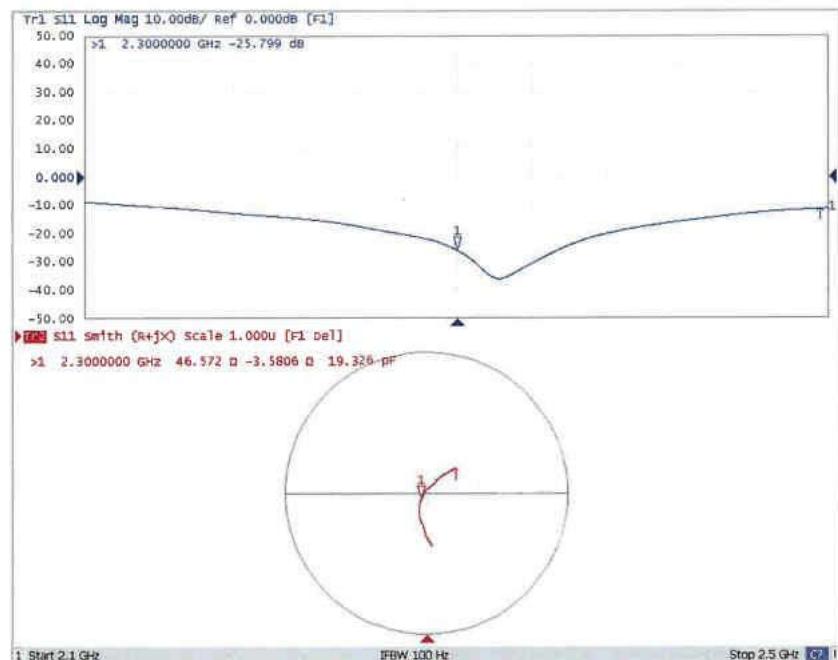
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Impedance Measurement Plot for Head TSL



Certificate No: 24J02Z000556

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No. 25T04N001821-011-SAR

2450MHz Dipole (2024)



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CNAS L0570

CAICT

Client SAICT

Certificate No: 24J02Z000740

CALIBRATION CERTIFICATE

Object D2450V2 - SN: 873

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: September 26, 2024

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

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Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
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| Power sensor NRP6A | 101369 | 17-May-24 (CTTL, No. J24X04107) | May-25 |
| Reference Probe EX3DV4 | SN 7464 | 22-Jan-24(SPEAG, No. EX-7464_Jan24) | Jan-25 |
| DAE4 | SN 1556 | 03-Jan-24(CTTL-SPEAG, No.24J02Z80002) | Jan-25 |
| Secondary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
| Signal Generator E4438C | MY49071430 | 25-Dec-23 (CTTL, No. J23X13426) | Dec-24 |
| NetworkAnalyzer E5071C | MY46110673 | 25-Dec-23 (CTTL, No. J23X13425) | Dec-24 |
| OCP DAK-3.5(weighted) | 1040 | 22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24) | Jan-25 |

| Calibrated by: | Name | Function | Signature |
|----------------|-------------|--------------------|-----------|
| | Zhao Jing | SAR Test Engineer | |
| Reviewed by: | Lin Jun | SAR Test Engineer | |
| Approved by: | Qi Dianyuan | SAR Project Leader | |

Issued: September 30, 2024

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Glossary:

| | |
|-------|--------------------------------|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure for The Assessment of Specific Absorption Rate of Human Exposure to Radio Frequency Fields from Hand-held and Body-mounted Wireless Communication Devices- Part 1528: Human Models, Instrumentation and Procedures (Frequency range of 4 MHz to 10 GHz)", October 2020
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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Measurement Conditions

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

| | | |
|------------------------------|--------------------------|-------------|
| DASY Version | DASY52 | 52.10.4 |
| Extrapolation | Advanced Extrapolation | |
| Phantom | Triple Flat Phantom 5.1C | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 2450 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 39.2 | 1.80 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 39.8 ± 6 % | 1.76 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | --- | --- |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 13.0 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 52.7 W/kg ± 18.8 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 250 mW input power | 6.16 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.8 W/kg ± 18.7 % (k=2) |



No. 25T04N001821-011-SAR



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 53.3Ω+ 1.81jΩ |
| Return Loss | - 28.7dB |

General Antenna Parameters and Design

| | |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.067 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point can be measured.

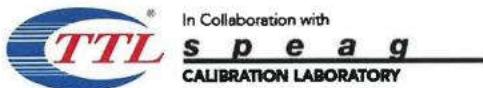
The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feed-point may be damaged.

Additional EUT Data

| | |
|-----------------|-------|
| Manufactured by | SPEAG |
|-----------------|-------|



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DASY5 Validation Report for Head TSL

Date: 2024-09-26

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 873

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.763$ S/m; $\epsilon_r = 39.76$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(7.63, 7.75, 7.92) @ 2450 MHz; Calibrated: 2024-01-22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.57 V/m; Power Drift = 0.02 dB

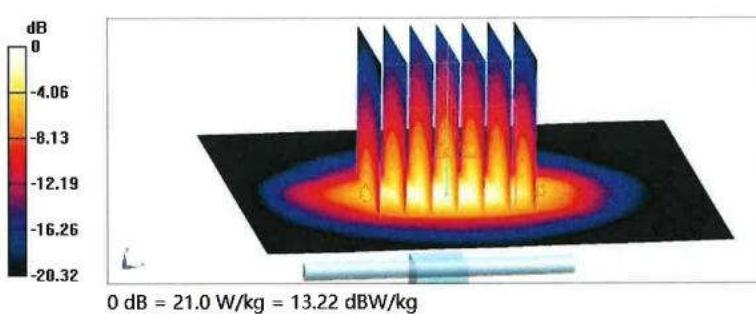
Peak SAR (extrapolated) = 25.3 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.16 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 21.0 W/kg

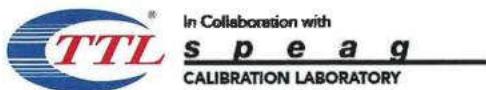


Certificate No: 24J02Z000740

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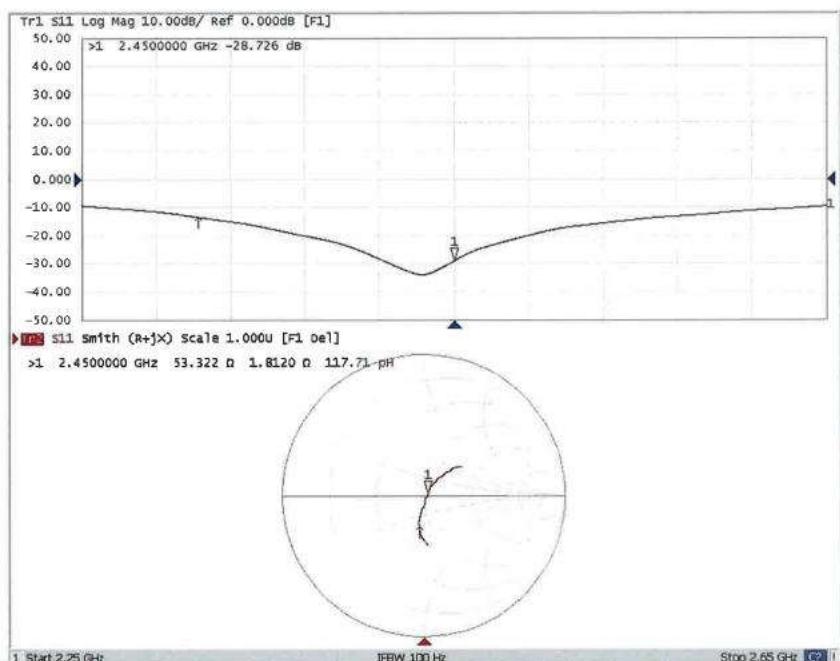
No. 25T04N001821-011-SAR



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Impedance Measurement Plot for Head TSL



Certificate No: 24J02Z000740

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No. 25T04N001821-011-SAR

2550MHz Dipole (2024)

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

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
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C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accreditation No.: SCS 0108

Client **SAICT**
Shenzhen

Certificate No. **D2550V2-1010_Apr24**

CALIBRATION CERTIFICATE

Object **D2550V2 - SN:1010**
Calibration procedure(s) **QA CAL-05.v12**
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date: **April 23, 2024**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date (Certificate No.) | Scheduled Calibration |
|---------------------------------|--------------------|-----------------------------------|------------------------|
| Power meter NRP2 | SN: 104778 | 26-Mar-24 (No. 217-04038/04037) | Mar-25 |
| Power sensor NRP-Z91 | SN: 103244 | 26-Mar-24 (No. 217-04036) | Mar-25 |
| Power sensor NRP-Z91 | SN: 103245 | 26-Mar-24 (No. 217-04037) | Mar-25 |
| Reference 20 dB Attenuator | SN: BH9394 (20k) | 26-Mar-24 (No. 217-04046) | Mar-25 |
| Type-N mismatch combination | SN: 310982 / 06327 | 26-Mar-24 (No. 217-04047) | Mar-25 |
| Reference Probe EX3DV4 | SN: 7349 | 03-Nov-23 (No. EX3-7349_Nov23) | Nov-24 |
| DAE4 | SN: 601 | 30-Jan-24 (No. DAE4-601_Jan24) | Jan-25 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB39512475 | 30-Oct-14 (in house check Oct-22) | In house check: Oct-24 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-22) | In house check: Oct-24 |
| Power sensor HP 8481A | SN: MY41093315 | 07-Oct-15 (in house check Oct-22) | In house check: Oct-24 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-22) | In house check: Oct-24 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-22) | In house check: Oct-24 |

Calibrated by: **Paulo Pina** **Laboratory Technician**

Approved by: **Sven Kühn** **Technical Manager**

Issued: April 23, 2024

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Certificate No: D2550V2-1010_Apr24

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No. 25T04N001821-011-SAR

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



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accreditation No.: **SCS 0108**

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

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

Calibration is Performed According to the Following Standards:

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

Additional Documentation:

- c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TS:* The source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TS parameters:* The measured TS parameters are used to calculate the nominal SAR result.

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



No. 25T04N001821-011-SAR

Measurement Conditions

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

| | | |
|------------------------------|------------------------|-------------|
| DASY Version | DASY52 | V52.10.4 |
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | with Spacer |
| Frequency | 2550 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 39.1 | 1.91 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 37.6 ± 6 % | 1.98 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | --- | --- |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 14.1 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 55.0 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.35 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 25.0 W/kg ± 16.5 % (k=2) |



No. 25T04N001821-011-SAR

Appendix (Additional assessments outside the scope of SCS 0108)
Antenna Parameters with Head TSL

| | |
|--------------------------------------|-------------------------------|
| Impedance, transformed to feed point | 53.3 Ω - 2.9 $j\Omega$ |
| Return Loss | - 27.4 dB |

General Antenna Parameters and Design

| | |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.153 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

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

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

Additional EUT Data

| | |
|-----------------|-------|
| Manufactured by | SPEAG |
|-----------------|-------|

DASY5 Validation Report for Head TSL

Test Laboratory: SPEAG, Zurich, Switzerland

Date: 23.04.2024

DUT: Dipole 2550 MHz; Type: D2550V2; Serial: D2550V2 - SN:1010

Communication System: UID 0 - CW; Frequency: 2550 MHz

Medium parameters used: $f = 2550$ MHz; $\sigma = 1.98$ S/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.85, 7.85, 7.85) @ 2550 MHz; Calibrated: 03.11.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

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

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

Reference Value = 118.6 V/m; Power Drift = 0.05 dB

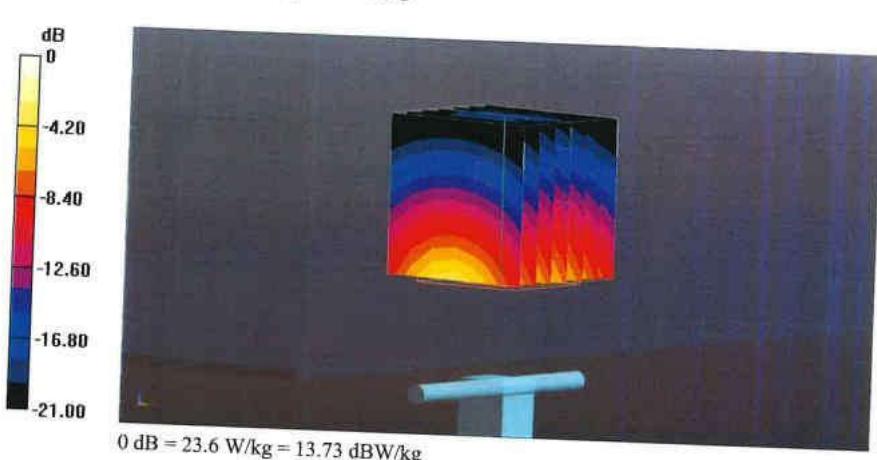
Peak SAR (extrapolated) = 29.0 W/kg

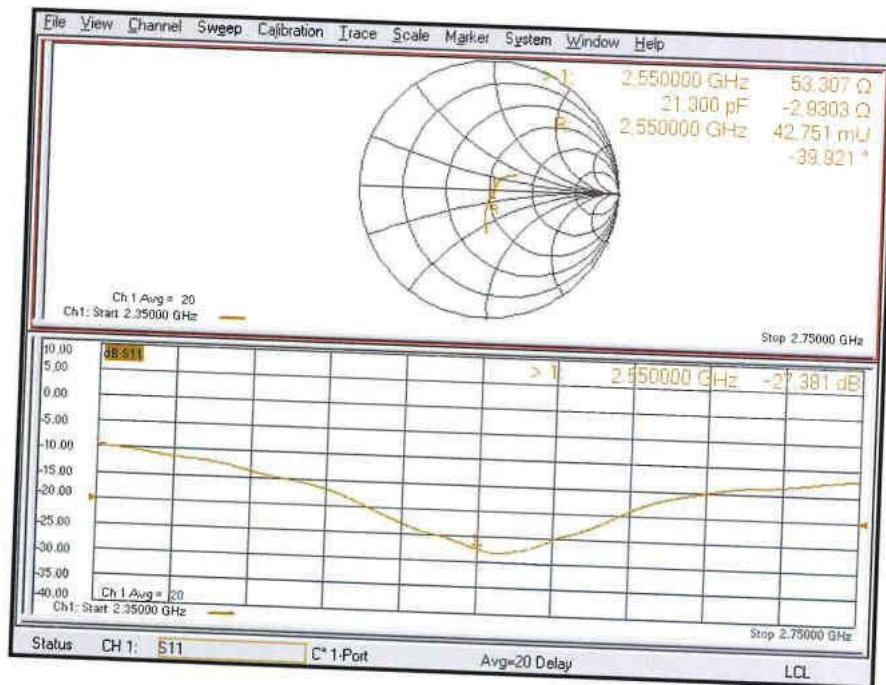
SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.35 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 48.4%

Maximum value of SAR (measured) = 23.6 W/kg



Impedance Measurement Plot for Head TSL



No. 25T04N001821-011-SAR

5GHz Dipole (2025)



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn



Client

SAICT (Shenzhen)

Certificate No: 25J02Z000514

CALIBRATION CERTIFICATE

Object D5GHzV2 - SN: 1238

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: July 30, 2025

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|-------------------------|------------|---|-----------------------|
| Power Meter NRP2 | 106276 | 16-May-25 (CTTL, No. 25J02X003423) | May-26 |
| Power sensor NRP6A | 101369 | 16-May-25 (CTTL, No. 25J02X003423) | May-26 |
| Reference Probe EX3DV4 | SN 7727 | 10-Jul-25(CTTL-SPEAG, No.25J02Z000391) | Jul-26 |
| DAE4 | SN 1588 | 13-Sep-24(CTTL-SPEAG, No. 24J02Z000713) | Sep-25 |
| Secondary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
| Signal Generator E4438C | MY49071430 | 19-Dec-24 (CTTL, No. 24J02X103931) | Dec-25 |
| NetworkAnalyzer E5071C | MY46110673 | 18-Dec-24 (CTTL, No. 24J02X103932) | Dec-25 |
| OCP DAKS | SN 0015 | 09-Oct-24(SPEAG, No. OCP-DAKS-0015_Oct24) | Oct -25 |

| | Name | Function | Signature |
|----------------|-------------|--------------------|-----------|
| Calibrated by: | Zhao Jing | SAR Test Engineer | |
| Reviewed by: | Lin Jun | SAR Test Engineer | |
| Approved by: | Qi Dianyuan | SAR Project Leader | |

Issued: August 8, 2025

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Certificate No: 25J02Z000514

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No. 25T04N001821-011-SAR



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Glossary:

| | |
|-------|--------------------------------|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure for The Assessment of Specific Absorption Rate of Human Exposure to Radio Frequency Fields from Hand-held and Body-mounted Wireless Communication Devices- Part 1528: Human Models, Instrumentation and Procedures (Frequency range of 4 MHz to 10 GHz)", October 2020
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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



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Measurement Conditions

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

| | | | |
|------------------------------|--|----------------------------------|-------------|
| DASY Version | DASY52 | | 52.10.4 |
| Extrapolation | Advanced Extrapolation | | |
| Phantom | Triple Flat Phantom 5.1C | | |
| Distance Dipole Center - TSL | 10 mm | | with Spacer |
| Zoom Scan Resolution | dx, dy = 4 mm, dz = 1.4 mm | Graded Ratio = 1.4 (Z direction) | |
| Frequency | 5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz | | |

Head TSL parameters at 5250MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 35.9 | 4.71 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 36.1 ± 6 % | 4.68 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | — | — |

SAR result with Head TSL at 5250MHz

| | | |
|---|--------------------|------------------------|
| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
| SAR measured | 100 mW input power | 7.78 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 77.9 W/kg ± 24 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 100 mW input power | 2.21 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 22.1 W/kg ± 24 % (k=2) |



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Head TSL parameters at 5600MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|--|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 35.5 | 5.07 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 35.5 ± 6 % | 5.05 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | — | — |

SAR result with Head TSL at 5600MHz

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|------------------------|
| SAR measured | 100 mW input power | 8.23 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 82.3 W/kg ± 24 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 100 mW input power | 2.33 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.3 W/kg ± 24 % (k=2) |

Head TSL parameters at 5750MHz

The following parameters and calculations were applied.

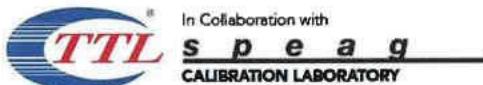
| | Temperature | Permittivity | Conductivity |
|--|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 35.4 | 5.22 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 35.3 ± 6 % | 5.22 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | — | — |

SAR result with Head TSL at 5750MHz

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|------------------------|
| SAR measured | 100 mW input power | 7.84 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 78.3 W/kg ± 24 % (k=2) |
| SAR averaged over 10 cm ³ (10 g) of Head TSL | Condition | |
| SAR measured | 100 mW input power | 2.19 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 21.9 W/kg ± 24 % (k=2) |



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 5250MHz

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 47.5Ω- 1.78jΩ |
| Return Loss | - 30.0dB |

Antenna Parameters with Head TSL at 5600MHz

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 50.8Ω+ 3.94jΩ |
| Return Loss | - 28.0dB |

Antenna Parameters with Head TSL at 5750MHz

| | |
|--------------------------------------|---------------|
| Impedance, transformed to feed point | 53.6Ω+ 2.94jΩ |
| Return Loss | - 26.9dB |

General Antenna Parameters and Design

| | |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.097 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point can be measured.

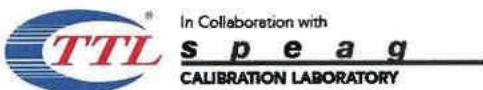
The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feed-point may be damaged.

Additional EUT Data

| | |
|-----------------|-------|
| Manufactured by | SPEAG |
|-----------------|-------|



No. 25T04N001821-011-SAR



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DASY5 Validation Report for Head TSL

Date: 2025-07-30

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1238

Communication System: CW; Frequency: 5250 MHz, Frequency: 5600 MHz,

Frequency: 5750 MHz

Medium parameters used: $f = 5250 \text{ MHz}$; $\sigma = 4.677 \text{ S/m}$; $\epsilon_r = 36.08$; $\rho = 1000 \text{ kg/m}^3$

Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.054 \text{ S/m}$; $\epsilon_r = 35.47$; $\rho = 1000 \text{ kg/m}^3$

Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.218 \text{ S/m}$; $\epsilon_r = 35.25$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Center Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7727; ConvF(5.6, 5.6, 5.6) @ 5250 MHz; ConvF(5, 5, 5) @ 5600 MHz; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2025-07-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 70.78 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 30.8 W/kg

SAR(1 g) = 7.78 W/kg; SAR(10 g) = 2.21 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 65.7%

Maximum value of SAR (measured) = 18.0 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 70.59 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 35.0 W/kg

SAR(1 g) = 8.23 W/kg; SAR(10 g) = 2.33 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 63.4%

Maximum value of SAR (measured) = 19.6 W/kg

Certificate No: 25J02Z000514

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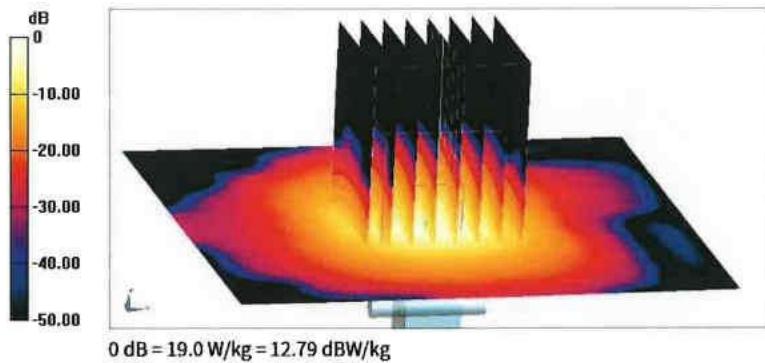
No. 25T04N001821-011-SAR



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn <http://www.caict.ac.cn>



**Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 68.50 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 33.8 W/kg
SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.19 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 63.1%
Maximum value of SAR (measured) = 19.0 W/kg**



Certificate No: 25J02Z000514

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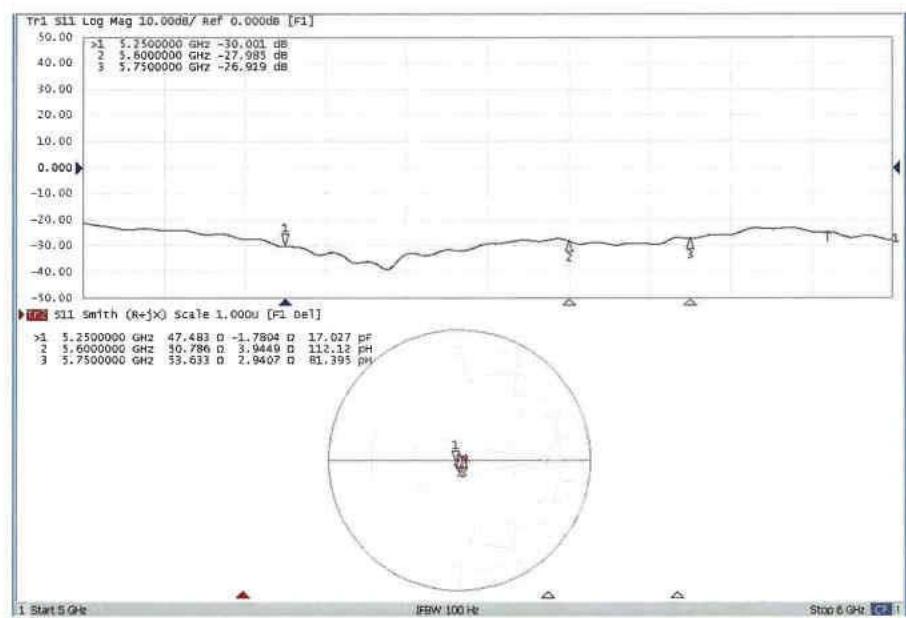
No. 25T04N001821-011-SAR



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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Impedance Measurement Plot for Head TSL



Certificate No: 25J02Z000514

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ANNEX J: Extended Calibration SAR Dipole

Referring to KDB865664 D01, if dipoles are verified in return loss (<-20dBm, within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Justification of Extended Calibration SAR Dipole D835V2 - serial no. 4d057 (2021)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2021-10-18 | -27.5 | / | 49.8 | / | -4.19 | / |
| 2022-10-18 | -26.8 | 2.5 | 51.4 | 1.6 | -3.97 | 0.22 |

Justification of Extended Calibration SAR Dipole D1900V2 - serial no. 5d088 (2021)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2021-10-18 | -22.6 | / | 53.7 | / | 6.80 | / |
| 2022-10-18 | -22.2 | 1.8 | 54.6 | 0.9 | 6.93 | 0.13 |

Justification of Extended Calibration SAR Dipole D2300V2 - serial no. 1059 (2021)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2021-09-22 | -26.5 | / | 48.6 | / | -4.46 | / |
| 2022-09-22 | -25.8 | 2.6 | 49.8 | 1.2 | -4.32 | 0.14 |

Justification of Extended Calibration SAR Dipole D2450V2 - serial no. 873 (2021)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2021-10-21 | -28.8 | / | 53.6 | / | 1.26 | / |
| 2022-10-20 | -28.1 | 2.4 | 54.9 | 1.3 | 1.43 | 0.17 |

Justification of Extended Calibration SAR Dipole D2550V2 - serial no. 1010 (2021)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2021-05-21 | -26.8 | / | 52.8 | / | -3.80 | / |
| 2022-05-20 | -26.3 | 1.9 | 53.6 | 0.8 | -3.64 | 0.16 |
| 2023-05-20 | -25.9 | 3.4 | 54.1 | 1.3 | -3.57 | 0.23 |



No. 25T04N001821-011-SAR

Justification of Extended Calibration SAR Dipole D2300V2 - serial no. 1059 (2024)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2024/9/3 | -25.8 | / | 46.6 | / | -3.58 | / |
| 2025/9/2 | -24.4 | 5.4 | 47.3 | 0.7 | -3.45 | 0.13 |

Justification of Extended Calibration SAR Dipole D2550V2 - serial no. 1010 (2024)

| Head | | | | | | |
|---------------------|------------------|-----------|----------------------|-------------|----------------------------|--------------|
| Date of Measurement | Return-Loss (dB) | Delta (%) | Real Impedance (ohm) | Delta (ohm) | Imaginary Impedance (johm) | Delta (johm) |
| 2024/4/23 | -27.4 | / | 53.3 | / | -2.90 | / |
| 2025/4/22 | -26.6 | 2.9 | 54.2 | 0.90 | -2.73 | 0.17 |

The Return-Loss is <-20dB, and within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the value result should support extended calibration.



No. 25T04N001821-011-SAR

ANNEX K: Sensor Triggering Data Summary

Per FCC KDB Publication 616217 D04, this device was tested by the manufacturer to determine the proximity sensor triggering distances for all applicable sides and edges of the device. The measured output power at distances within ± 5 mm of the triggering points (or until touching the phantom) is included for back side and each applicable edge per Step i) in Section 6.2 of the KDB. The technical descriptions in the filing contain the complete set of triggering data required by Section 6 of FCC KDB Publication 616217 D04.

To ensure all production units are compliant, it is necessary to test SAR at a distance 1 mm less than the smallest distance between the device and SAR phantom with the device at the maximum output power (without power reduction). These SAR tests are included in addition to the SAR tests for the device touching the SAR phantom (at the reduced output power level).

The operational description contains information explaining how this device remains compliant in the event of a sensor malfunction.



No. 25T04N001821-011-SAR

WWAN Antenna:

Rear Side

Moving device toward the phantom:

| sensor triggered (Yes or No) | | | | | | | | | | | |
|------------------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Distance(mm) | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| Main antenna | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes |

Moving device away from the phantom:

| sensor triggered (Yes or No) | | | | | | | | | | | |
|------------------------------|-----|-----|-----|-----|-----|-----|----|----|----|----|----|
| Distance(mm) | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Main antenna | Yes | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |

Based on the most conservative measured triggering distance of 25 mm, additional SAR measurements were required at 24 mm in the rear side.

Top Side

Moving device toward the phantom:

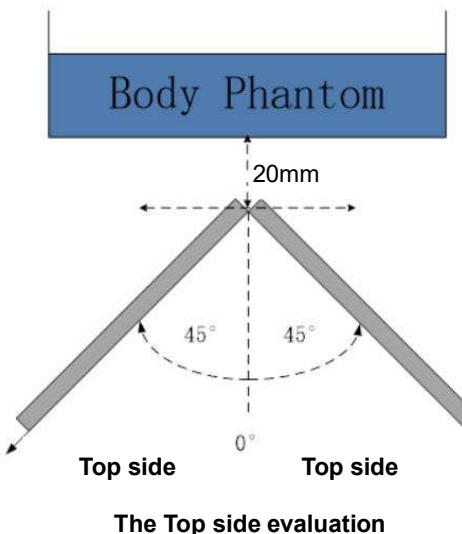
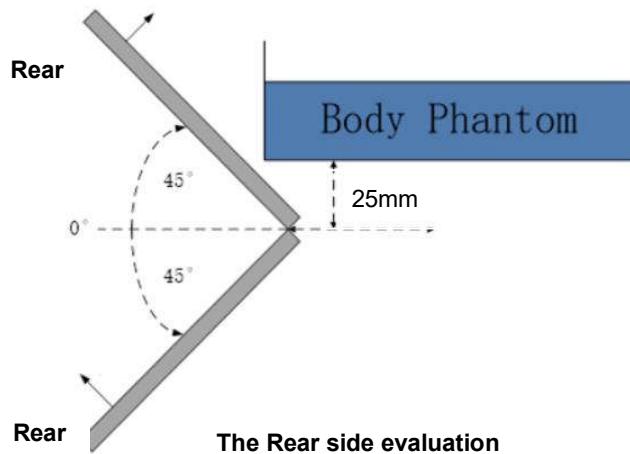
| sensor triggered (Yes or No) | | | | | | | | | | | |
|------------------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Distance(mm) | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 |
| Main antenna | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes |

Moving device away from the phantom:

| sensor triggered (Yes or No) | | | | | | | | | | | |
|------------------------------|-----|-----|-----|-----|-----|-----|----|----|----|----|----|
| Distance(mm) | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| Main antenna | Yes | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |

Based on the most conservative measured triggering distance of 20 mm, additional SAR measurements were required at 19 mm in the top side

The influence of table tilt angles to proximity sensor triggering is determined by positioning each edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distance by rotating the device around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ or more from the vertical position at 0° .



Based on the above evaluation, we come to the conclusion that the sensor triggering is not released and normal maximum output power is not restored within the $\pm 45^\circ$ range at the smallest sensor triggering test distance declared by manufacturer.



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ANNEX L: Spot Check Test

As the test lab for T6721 from Shanghai Sunmi Technology Co., Ltd., we, Shenzhen Academy of Information and Communications Technology, declare on our sole responsibility that, according to "Product Change Description" provided by applicant, only the Spot check test should be performed. The test results are as below.

L.1. Internal Identification of EUT used during the spot check test

| EUT ID* | IMEI | HW Version | SW Version | Receipt Date |
|---------|-----------------|------------|---|--------------|
| UT02aa | 868189062376266 | Bgf6e | SP6611A_769_CS_patchbuild_20250326091858640 | 2025-08-08 |
| UT04aa | 868189062376241 | Bgf6e | SP6611A_769_CS_patchbuild_20250326091858640 | 2025-08-08 |
| UT05aa | 868189062375904 | Bgf6e | SP6611A_769_CS_patchbuild_20250326091858640 | 2025-08-08 |
| UT06aa | 868189062375987 | Bgf6e | SP6611A_769_CS_patchbuild_20250326091858640 | 2025-08-08 |



No. 25T04N001821-011-SAR

L.2. Tissue Simulating Liquids and System Check

Table L.1: Dielectric Performance of Head Tissue Simulating Liquid

| Measurement Date (yyyy-mm-dd) | Type | Frequency (MHz) | Conductivity σ (S/m) | Drift (%) | Permittivity ϵ | Drift (%) |
|-------------------------------|------|-----------------|-----------------------------|-----------|-------------------------|-----------|
| 2025-09-02 | Head | 750 | 0.885 | -0.56 | 41.16 | -2.00 |
| 2025-09-05 | Head | 835 | 0.916 | 1.78 | 40.52 | -2.36 |
| 2025-08-29 | Head | 1750 | 1.353 | -1.24 | 40.61 | 1.27 |
| 2025-08-29 | Head | 1900 | 1.416 | 1.14 | 39.32 | -1.70 |
| 2025-09-03 | Head | 2300 | 1.658 | -0.72 | 39.94 | 1.11 |
| 2025-09-06 | Head | 2450 | 1.838 | 2.11 | 38.70 | -1.28 |
| 2025-09-03 | Head | 2550 | 1.917 | 0.37 | 38.15 | -2.43 |
| 2025-09-09 | Head | 5250 | 4.809 | 2.10 | 35.27 | -1.75 |

Table L.2: System Check of Head

| Measurement Date | Frequency (MHz) | Target value (W/kg) | | Measured value (W/kg) | | Deviation (%) | |
|------------------|-----------------|---------------------|-------|-----------------------|-----------------|---------------|-------|
| | | 1 g | 10 g | / | Normalize to 1W | 1 g | 10 g |
| 2025-09-02 | 750 | 8.48 | 5.63 | 0.414 | 0.276 | 8.28 | 5.52 |
| 2025-09-05 | 835 | 9.59 | 6.40 | 0.497 | 0.325 | 9.94 | 6.50 |
| 2025-08-29 | 1750 | 36.50 | 19.50 | 1.76 | 0.962 | 35.20 | 19.24 |
| 2025-08-29 | 1900 | 39.70 | 20.90 | 2.08 | 1.08 | 41.60 | 21.60 |
| 2025-09-03 | 2300 | 49.10 | 24.00 | 2.40 | 1.18 | 48.00 | 23.60 |
| 2025-09-06 | 2450 | 52.70 | 24.80 | 2.75 | 1.28 | 55.00 | 25.60 |
| 2025-09-03 | 2550 | 55.00 | 25.00 | 2.87 | 1.29 | 57.40 | 25.80 |
| 2025-09-09 | 5250 | 77.90 | 22.10 | 3.99 | 1.12 | 79.80 | 22.40 |



L.3. Measurement results

| Power Level | RF Exposure Conditions | Frequency Band | Channel Number | Frequency (MHz) | Mode/RB | Test Position | Distance | Note | Figure No. | EUT Measured Power (dBm) | Tune up (dBm) | Measured SAR 1g (W/kg) | Calculated SAR 1g (W/kg) | Measured SAR 10g (W/kg) | Calculated SAR 10g (W/kg) | Power Drift |
|-------------|------------------------|----------------|----------------|-----------------|-----------|---------------|----------|----------------------|------------|--------------------------|---------------|------------------------|--------------------------|-------------------------|---------------------------|-------------|
| C1 | Body | GSM850 | 251 | 848,8 | GPRS(3TX) | Rear | 0mm | Original Data | \ | 25,86 | 26,0 | 0,983 | 1.02 | 0,587 | 0.61 | 0,07 |
| C1 | Body | GSM850 | 251 | 848,8 | GPRS(3TX) | Rear | 0mm | Spot check Data - C5 | \ | 25,86 | 26,0 | 0,787 | 0.81 | 0,458 | 0.47 | 0,06 |
| C1 | Body | GSM850 | 251 | 848,8 | GPRS(3TX) | Rear | 0mm | Spot check Data - C7 | \ | 25,86 | 26,0 | 0,766 | 0.79 | 0,442 | 0.46 | 0,12 |
| C1 | Body | WCDMA Band 2 | 9400 | 1880,0 | RMC | Rear | 0mm | Original Data | \ | 17,57 | 18,5 | 0,991 | 1.23 | 0,562 | 0.70 | 0,01 |
| C1 | Body | WCDMA Band 2 | 9400 | 1880,0 | RMC | Rear | 0mm | Spot check Data - C5 | \ | 17,57 | 18,5 | 0,995 | 1.23 | 0,549 | 0.68 | 0,06 |
| C1 | Body | WCDMA Band 2 | 9400 | 1880,0 | RMC | Rear | 0mm | Spot check Data - C7 | \ | 17,57 | 18,5 | 0,753 | 0.93 | 0,393 | 0.49 | -0,06 |
| C1 | Body | WCDMA Band 4 | 1513 | 1752,6 | RMC | Rear | 0mm | Original Data | \ | 17,45 | 18,5 | 0,956 | 1.22 | 0,504 | 0.64 | 0,05 |
| C1 | Body | WCDMA Band 4 | 1513 | 1752,6 | RMC | Rear | 0mm | Spot check Data - C5 | \ | 17,45 | 18,5 | 0,663 | 0.84 | 0,356 | 0.45 | -0,01 |
| C1 | Body | WCDMA Band 4 | 1513 | 1752,6 | RMC | Rear | 0mm | Spot check Data - C7 | \ | 17,45 | 18,5 | 0,588 | 0.75 | 0,308 | 0.39 | -0,05 |
| C1 | Body | WCDMA Band 5 | 4233 | 846,6 | RMC | Rear | 0mm | Original Data | \ | 21,73 | 22,5 | 0,916 | 1.09 | 0,546 | 0.65 | 0,09 |
| C1 | Body | WCDMA Band 5 | 4233 | 846,6 | RMC | Rear | 0mm | Spot check Data - C5 | \ | 21,73 | 22,5 | 0,646 | 0.77 | 0,370 | 0.44 | 0,08 |
| C1 | Body | WCDMA Band 5 | 4233 | 846,6 | RMC | Rear | 0mm | Spot check Data - C7 | \ | 21,73 | 22,5 | 0,496 | 0.59 | 0,278 | 0.33 | 0,11 |
| C1 | Body | LTE Band 7 | 20850 | 2510,0 | 1RB99 | Rear | 0mm | Original Data | \ | 15,49 | 16,5 | 1,090 | 1.38 | 0,516 | 0.65 | -0,06 |
| C1 | Body | LTE Band 7 | 20850 | 2510,0 | 1RB99 | Rear | 0mm | Spot check Data - C4 | \ | 15,49 | 16,5 | 0,465 | 0.59 | 0,227 | 0.29 | 0,06 |
| C1 | Body | LTE Band 7 | 20850 | 2510,0 | 1RB99 | Rear | 0mm | Spot check Data - C6 | \ | 15,49 | 16,5 | 0,509 | 0.64 | 0,218 | 0.28 | 0,15 |
| C1 | Body | LTE Band 12 | 23095 | 707,5 | 1RB24 | Rear | 0mm | Original Data | \ | 22,79 | 23,5 | 0,983 | 1.16 | 0,615 | 0.72 | 0,02 |
| C1 | Body | LTE Band 12 | 23095 | 707,5 | 1RB24 | Rear | 0mm | Spot check Data - C5 | \ | 22,79 | 23,5 | 0,723 | 0.85 | 0,411 | 0.48 | 0,06 |
| C1 | Body | LTE Band 12 | 23095 | 707,5 | 1RB24 | Rear | 0mm | Spot check Data - C7 | \ | 22,79 | 23,5 | 0,682 | 0.80 | 0,390 | 0.46 | -0,14 |
| B1 | Body | LTE Band 13 | 23230 | 782,0 | 1RB24 | Rear | 0mm | Original Data | \ | 23,98 | 24,5 | 0,739 | 0.83 | 0,455 | 0.51 | 0,19 |
| B1 | Body | LTE Band 13 | 23230 | 782,0 | 1RB24 | Rear | 0mm | Spot check Data - C5 | \ | 23,98 | 24,5 | 0,618 | 0.70 | 0,354 | 0.40 | 0,09 |
| B1 | Body | LTE Band 13 | 23230 | 782,0 | 1RB24 | Rear | 0mm | Spot check Data - C7 | \ | 23,98 | 24,5 | 0,487 | 0.55 | 0,281 | 0.32 | 0,19 |
| B1 | Body | LTE Band 14 | 23330 | 793,0 | 1RB24 | Rear | 0mm | Original Data | \ | 23,84 | 24,5 | 0,919 | 1.07 | 0,529 | 0.62 | 0,19 |
| B1 | Body | LTE Band 14 | 23330 | 793,0 | 1RB24 | Rear | 0mm | Spot check Data - C5 | \ | 23,84 | 24,5 | 0,512 | 0.60 | 0,297 | 0.35 | 0,02 |
| B1 | Body | LTE Band 14 | 23330 | 793,0 | 1RB24 | Rear | 0mm | Spot check Data - C7 | \ | 23,84 | 24,5 | 0,465 | 0.54 | 0,266 | 0.31 | -0,16 |
| C1 | Body | LTE Band 25 | 26140 | 1860,0 | 1RB0 | Rear | 0mm | Original Data | \ | 17,02 | 18,0 | 0,937 | 1.17 | 0,539 | 0.66 | 0,01 |
| C1 | Body | LTE Band 25 | 26140 | 1860,0 | 1RB0 | Rear | 0mm | Spot check Data - C5 | \ | 17,02 | 18,0 | 0,693 | 0.87 | 0,383 | 0.48 | 0,06 |
| C1 | Body | LTE Band 25 | 26140 | 1860,0 | 1RB0 | Rear | 0mm | Spot check Data - C7 | \ | 17,02 | 18,0 | 0,555 | 0.70 | 0,298 | 0.37 | 0,01 |
| C1 | Body | LTE Band 26 | 26965 | 841,5 | 1RB0 | Rear | 0mm | Original Data | \ | 22,32 | 23,0 | 1,080 | 1.26 | 0,652 | 0.76 | 0,04 |
| C1 | Body | LTE Band 26 | 26965 | 841,5 | 1RB0 | Rear | 0mm | Spot check Data - C5 | \ | 22,32 | 23,0 | 0,666 | 0.78 | 0,384 | 0.45 | 0,08 |
| C1 | Body | LTE Band 26 | 26965 | 841,5 | 1RB0 | Rear | 0mm | Spot check Data - C7 | \ | 22,32 | 23,0 | 0,552 | 0.65 | 0,313 | 0.37 | 0,19 |
| C1 | Body | LTE Band 30 | 27710 | 2310,0 | 1RB24 | Rear | 0mm | Original Data | \ | 15,78 | 16,5 | 0,938 | 1.11 | 0,510 | 0.60 | 0,07 |
| C1 | Body | LTE Band 30 | 27710 | 2310,0 | 1RB24 | Rear | 0mm | Spot check Data - C5 | \ | 15,78 | 16,5 | 0,670 | 0.79 | 0,356 | 0.42 | 0,06 |
| C1 | Body | LTE Band 30 | 27710 | 2310,0 | 1RB24 | Rear | 0mm | Spot check Data - C7 | \ | 15,78 | 16,5 | 0,537 | 0.63 | 0,263 | 0.31 | -0,11 |
| C1 | Body | LTE Band 66 | 132322 | 1745,0 | 1RB0 | Rear | 0mm | Original Data | \ | 18,73 | 19,5 | 1,080 | 1.30 | 0,580 | 0.69 | 0,01 |
| C1 | Body | LTE Band 66 | 132322 | 1745,0 | 1RB0 | Rear | 0mm | Spot check Data - C5 | \ | 18,73 | 19,5 | 0,632 | 0.75 | 0,342 | 0.41 | 0,09 |
| C1 | Body | LTE Band 66 | 132322 | 1745,0 | 1RB0 | Rear | 0mm | Spot check Data - C7 | \ | 18,73 | 19,5 | 0,623 | 0.74 | 0,319 | 0.38 | -0,13 |
| C1 | Body | LTE Band 71 | 133372 | 688,0 | 1RB50 | Rear | 0mm | Original Data | \ | 22,98 | 24,0 | 1,020 | 1.29 | 0,623 | 0.79 | 0,08 |
| C1 | Body | LTE Band 71 | 133372 | 688,0 | 1RB50 | Rear | 0mm | Spot check Data - C5 | \ | 22,98 | 24,0 | 0,676 | 0.85 | 0,398 | 0.50 | 0,09 |
| C1 | Body | LTE Band 71 | 133372 | 688,0 | 1RB50 | Rear | 0mm | Spot check Data - C7 | \ | 22,98 | 24,0 | 0,662 | 0.84 | 0,378 | 0.48 | 0,08 |
| C1 | Body | LTE Band 41 | 40620 | 2593,0 | 1RB50 | Rear | 0mm | Original Data | \ | 17,21 | 18,0 | 0,966 | 1.16 | 0,462 | 0.55 | -0,07 |
| C1 | Body | LTE Band 41 | 40620 | 2593,0 | 1RB50 | Rear | 0mm | Spot check Data - C4 | \ | 17,21 | 18,0 | 0,723 | 0.87 | 0,355 | 0.43 | 0,12 |
| C1 | Body | LTE Band 41 | 40620 | 2593,0 | 1RB50 | Rear | 0mm | Spot check Data - C6 | \ | 17,21 | 18,0 | 0,719 | 0.86 | 0,346 | 0.42 | 0,04 |
| / | Body | Bluetooth | 78 | 2480,0 | GFSK | Rear | 0mm | Original Data | \ | 10,52 | 11,5 | <0,01 | <0,01 | <0,01 | <0,01 | / |
| / | Body | Bluetooth | 78 | 2480,0 | GFSK | Rear | 0mm | Spot check Data - C5 | \ | 10,52 | 11,5 | <0,01 | <0,01 | <0,01 | <0,01 | / |
| / | Body | Bluetooth | 78 | 2480,0 | GFSK | Rear | 0mm | Spot check Data - C7 | \ | 10,52 | 11,5 | <0,01 | <0,01 | <0,01 | <0,01 | / |
| / | Body | WLAN 2,4GHz | 11 | 2462,0 | 802,11b | Rear | 0mm | Original Data | \ | 15,76 | 16,5 | 0,048 | 0.06 | 0,023 | 0.03 | 0,06 |
| / | Body | WLAN 2,4GHz | 11 | 2462,0 | 802,11b | Rear | 0mm | Spot check Data - C5 | \ | 15,76 | 16,5 | 0,062 | 0.07 | 0,029 | 0.03 | -0,04 |
| / | Body | WLAN 2,4GHz | 11 | 2462,0 | 802,11b | Rear | 0mm | Spot check Data - C7 | \ | 15,76 | 16,5 | 0,049 | 0.06 | 0,024 | 0.03 | -0,01 |
| / | Body | U-NII-2A | 64 | 5320,0 | 802,11a | Rear | 0mm | Original Data | \ | 14,01 | 15,0 | 0,142 | 0.18 | 0,064 | 0.08 | 0,03 |
| / | Body | U-NII-2A | 64 | 5320,0 | 802,11a | Rear | 0mm | Spot check Data - C5 | \ | 14,01 | 15,0 | 0,166 | 0.21 | 0,067 | 0.08 | 0,05 |
| / | Body | U-NII-2A | 64 | 5320,0 | 802,11a | Rear | 0mm | Spot check Data - C7 | \ | 14,01 | 15,0 | 0,207 | 0.26 | 0,084 | 0.11 | 0,07 |

Note:

Configuration 4: C4

Configuration 5: C5

Configuration 6: C6

Configuration 7: C7

L.4. Measurement Uncertainty

Table L.3: Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

| No. | Error Description | Type | Uncertainty value | Probably Distribution | Div. | (Ci) 1g | (Ci) 10g | Std. Unc. (1g) | Std. Unc. (10g) | Degree of freedom |
|--|--|------|-------------------|-----------------------|------------|--------------|--------------|----------------|-----------------|-------------------|
| Measurement system | | | | | | | | | | |
| 1 | Probe calibration | B | 13.0 | N | 2 | 1 | 1 | 6.5 | 6.5 | ∞ |
| 2 | Axial isotropy | B | 4.7 | R | $\sqrt{3}$ | $\sqrt{0.5}$ | $\sqrt{0.5}$ | 4.3 | 4.3 | ∞ |
| 3 | Hemispherical isotropy | B | 9.6 | R | $\sqrt{3}$ | 1 | 1 | 4.8 | 4.8 | ∞ |
| 4 | Boundary effect | B | 1.1 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 5 | Linearity | B | 4.7 | R | $\sqrt{3}$ | 1 | 1 | 2.7 | 2.7 | ∞ |
| 6 | Detection limit | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 7 | Modulation response | B | 4.0 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| 8 | Readout electronics | B | 1.0 | N | 1 | 1 | 1 | 1.0 | 1.0 | ∞ |
| 9 | Response time | B | 0.8 | R | $\sqrt{3}$ | 1 | 1 | 0.5 | 0.5 | ∞ |
| 10 | Integration time | B | 1.7 | R | $\sqrt{3}$ | 1 | 1 | 1.0 | 1.0 | ∞ |
| 11 | RF ambient conditions-noise | B | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 12 | RF ambient conditions-reflection | B | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 13 | Probe positioned mech. restrictions | B | 0.35 | R | $\sqrt{3}$ | 1 | 1 | 0.2 | 0.2 | ∞ |
| 14 | Probe positioning with respect to phantom shell | B | 2.9 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 15 | Post-processing | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Test sample related | | | | | | | | | | |
| 16 | Test sample positioning | A | 3.3 | N | 1 | 1 | 1 | 3.3 | 3.3 | 5 |
| 17 | Device holder uncertainty | A | 3.4 | N | 1 | 1 | 1 | 3.4 | 3.4 | 5 |
| 18 | Power scaling | B | 0 | R | $\sqrt{3}$ | 1 | 1 | 0 | 0 | ∞ |
| 19 | Drift of output power | B | 5.0 | R | $\sqrt{3}$ | 1 | 1 | 2.9 | 2.9 | ∞ |
| Phantom and set-up | | | | | | | | | | |
| 20 | Phantom uncertainty | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 21 | Algorithm for correcting SAR for deviations in permittivity and conductivity | B | 1.9 | N | 1 | 1 | 0.84 | 1.9 | 1.6 | ∞ |
| 22 | Liquid conductivity (target) | B | 5.0 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.8 | 1.2 | ∞ |
| 23 | Liquid conductivity (meas.) | A | 1.3 | N | 1 | 0.64 | 0.43 | 0.83 | 0.56 | 9 |
| 24 | Liquid permittivity (target) | B | 5.0 | R | $\sqrt{3}$ | 0.6 | 0.49 | 1.7 | 1.4 | ∞ |
| 25 | Liquid permittivity (meas.) | A | 1.6 | N | 1 | 0.6 | 0.49 | 0.96 | 0.78 | 9 |
| Combined standard uncertainty, $u_c' = \sqrt{\sum_{i=1}^{25} c_i^2 u_i^2}$ | | | | | | | | 11.7 | 11.5 | 95.5 |
| Expanded uncertainty (Confidence interval of 95 %), $u_e = 2u_c'$ | | | | | | | | 23.4 | 23.0 | |

Table L.4: Measurement Uncertainty for Normal SAR Tests (3GHz~6GHz)

| No. | Error Description | Type | Uncertainty value | Probably Distribution | Div. | (Ci) 1g | (Ci) 10g | Std. Unc. (1g) | Std. Unc. (10g) | Degree of freedom |
|---|--|------|-------------------|-----------------------|------------|--------------|--------------|----------------|-----------------|-------------------|
| Measurement system | | | | | | | | | | |
| 1 | Probe calibration | B | 14.0 | N | 2 | 1 | 1 | 7.0 | 7.0 | ∞ |
| 2 | Axial isotropy | B | 4.7 | R | $\sqrt{3}$ | $\sqrt{0.5}$ | $\sqrt{0.5}$ | 4.3 | 4.3 | ∞ |
| 3 | Hemispherical isotropy | B | 9.6 | R | $\sqrt{3}$ | 1 | 1 | 4.8 | 4.8 | ∞ |
| 4 | Boundary effect | B | 1.1 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 5 | Linearity | B | 4.7 | R | $\sqrt{3}$ | 1 | 1 | 2.7 | 2.7 | ∞ |
| 6 | Detection limit | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 7 | modulation response | B | 4.0 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| 8 | Readout electronics | B | 1.0 | N | 1 | 1 | 1 | 1.0 | 1.0 | ∞ |
| 9 | Response time | B | 0.0 | R | $\sqrt{3}$ | 1 | 1 | 0.0 | 0.0 | ∞ |
| 10 | Integration time | B | 1.7 | R | $\sqrt{3}$ | 1 | 1 | 1.0 | 1.0 | ∞ |
| 11 | RF ambient conditions-noise | B | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 12 | RF ambient conditions-reflection | B | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 13 | Probe positioned mech. Restrictions | B | 0.35 | R | $\sqrt{3}$ | 1 | 1 | 0.2 | 0.2 | ∞ |
| 14 | Probe positioning with respect to phantom shell | B | 2.9 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 15 | Post-processing | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Test sample related | | | | | | | | | | |
| 16 | Test sample positioning | A | 3.3 | N | 1 | 1 | 1 | 3.3 | 3.3 | 5 |
| 17 | Device holder uncertainty | A | 3.4 | N | 1 | 1 | 1 | 3.4 | 3.4 | 5 |
| 18 | Power scaling | B | 0 | R | $\sqrt{3}$ | 1 | 1 | 0 | 0 | ∞ |
| 19 | Drift of output power | B | 5.0 | R | $\sqrt{3}$ | 1 | 1 | 2.9 | 2.9 | ∞ |
| Phantom and set-up | | | | | | | | | | |
| 20 | Phantom uncertainty | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 21 | Algorithm for correcting SAR for deviations in permittivity and conductivity | B | 1.9 | N | 1 | 1 | 0.84 | 1.9 | 1.6 | ∞ |
| 22 | Liquid conductivity (target) | B | 5.0 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.8 | 1.2 | ∞ |
| 23 | Liquid conductivity (meas.) | A | 1.3 | N | 1 | 0.64 | 0.43 | 0.83 | 0.56 | 9 |
| 24 | Liquid permittivity (target) | B | 5.0 | R | $\sqrt{3}$ | 0.6 | 0.49 | 1.7 | 1.4 | ∞ |
| 25 | Liquid permittivity (meas.) | A | 1.6 | N | 1 | 0.6 | 0.49 | 0.96 | 0.78 | 9 |
| Combined standard uncertainty, $u_c = \sqrt{\sum_{i=1}^{25} c_i^2 u_i^2}$ | | | | | | | | 12.0 | 11.8 | 95.5 |
| Expanded uncertainty (Confidence interval of 95 %), $u_e = 2u_c$ | | | | | | | | 24.0 | 23.6 | |



No. 25T04N001821-011-SAR

L.5. List of Main instruments

| No. | Name | Type | Serial Number | Calibration Date | Valid Period |
|-----|-----------------------|---------|---------------|------------------|--------------|
| 01 | Network analyzer | E5071C | MY46103759 | 2024-11-12 | One year |
| 02 | Dielectric probe | 85070E | MY44300317 | / | / |
| 03 | Power meter | E4418B | MY50000366 | 2024-12-09 | One year |
| 04 | Power sensor | E9304A | MY50000188 | 2024-12-09 | One year |
| 05 | Power meter | NRP | 102603 | 2024-12-17 | One year |
| 06 | Power sensor | NRP-Z51 | 102211 | 2024-12-17 | One year |
| 07 | Signal Generator | E8257D | MY47461211 | 2025-01-10 | One year |
| 08 | Amplifier | VTL5400 | 0404 | / | / |
| 09 | E-field Probe | EX3DV4 | 7621 | 2025-07-25 | One year |
| 10 | DAE | DAE4 | 786 | 2024-12-12 | One year |
| 11 | Dipole Validation Kit | D750V3 | 1163 | 2025-07-28 | Three years |
| 12 | Dipole Validation Kit | D835V2 | 4d057 | 2024-09-26 | Three years |
| 13 | Dipole Validation Kit | D1750V2 | 1152 | 2025-08-01 | Three years |
| 14 | Dipole Validation Kit | D1900V2 | 5d088 | 2024-09-26 | Three years |
| 15 | Dipole Validation Kit | D2300V2 | 1059 | 2024-09-03 | Three years |
| 16 | Dipole Validation Kit | D2450V2 | 873 | 2024-09-26 | Three years |
| 17 | Dipole Validation Kit | D2550V2 | 1010 | 2024-04-23 | Three years |
| 18 | Dipole Validation Kit | D5GHzV2 | 1238 | 2025-07-30 | Three years |
| 19 | BTS | CMW500 | 152499 | 2025-07-11 | One year |
| 20 | Thermometer | 51II | 99250045 | 2024-11-21 | One year |



No. 25T04N001821-011-SAR

L.6. Graph Results for Spot Check

GSM 850 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|----------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | GSM 850 | GSM, 10027-DAC | 848.800, 251 | 9.21 | 0.929 | 40.4 |

Hardware Setup

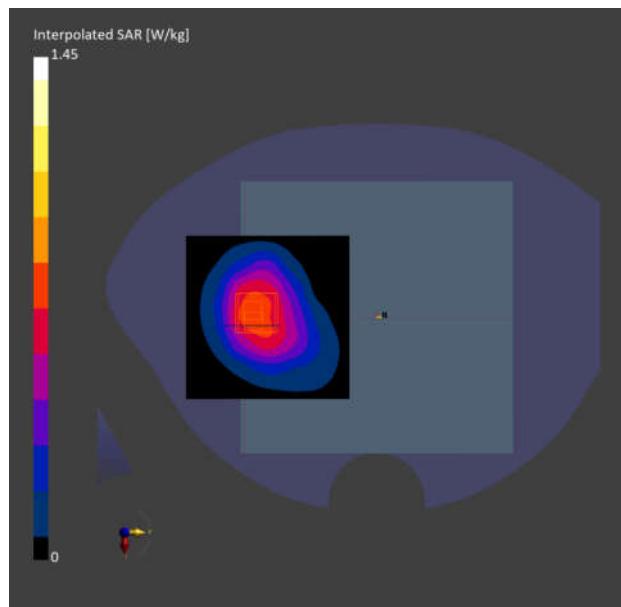
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 835MHz-Head Charge:2025-09-05 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-05 | 2025-09-05 |
| psSAR1g [W/Kg] | 0.830 | 0.787 |
| psSAR10g [W/Kg] | 0.538 | 0.458 |
| Power Drift [dB] | 0.06 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 53.2 |
| Dist 3dB Peak [mm] | | 12.8 |





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WCDMA Band 2 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|--------|------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 2 | WCDMA, 10011-CAC | 1880.000, 9400 | 7.75 | 1.40 | 39.4 |

Hardware Setup

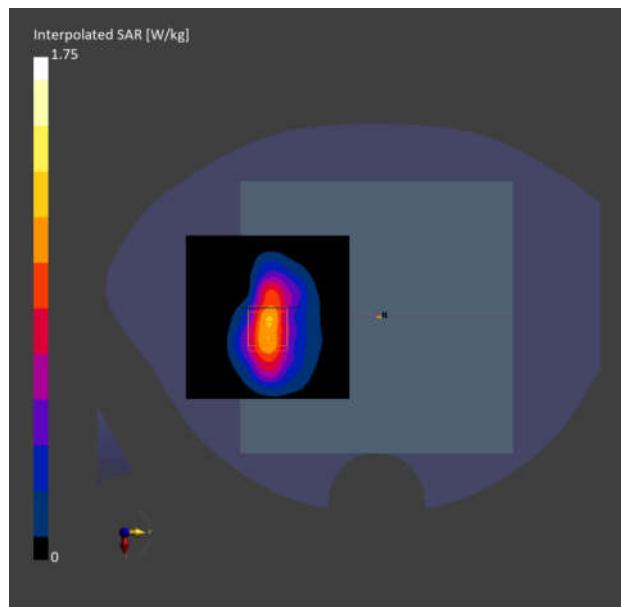
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1900MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 0.973 | 0.995 |
| psSAR10g [W/Kg] | 0.530 | 0.549 |
| Power Drift [dB] | 0.07 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 51.4 |
| Dist 3dB Peak [mm] | | 8.2 |





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WCDMA Band 4 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|--------|------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 4 | WCDMA, 10011-CAC | 1752.600, 1513 | 8.05 | 1.36 | 40.6 |

Hardware Setup

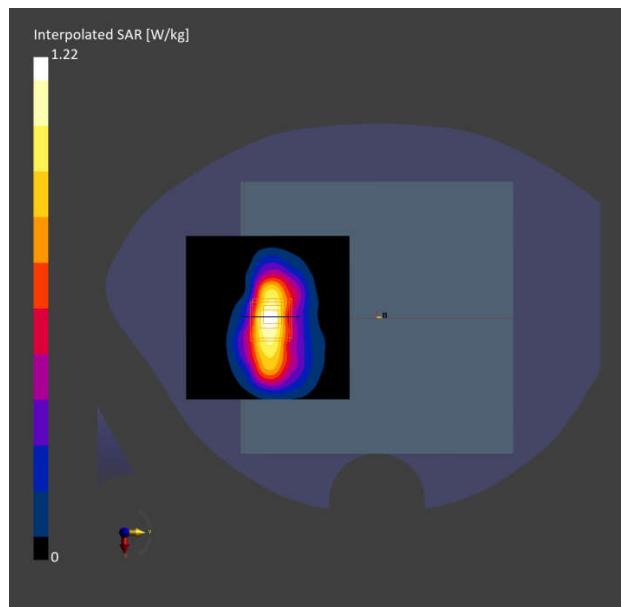
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1750MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 0.632 | 0.663 |
| psSAR10g [W/Kg] | 0.339 | 0.356 |
| Power Drift [dB] | 0.10 | -0.01 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 51.6 |
| Dist 3dB Peak [mm] | | 9.1 |





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WCDMA Band 5 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|--------|------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 5 | WCDMA, 10011-CAC | 846.600, 4233 | 9.21 | 0.927 | 40.4 |

Hardware Setup

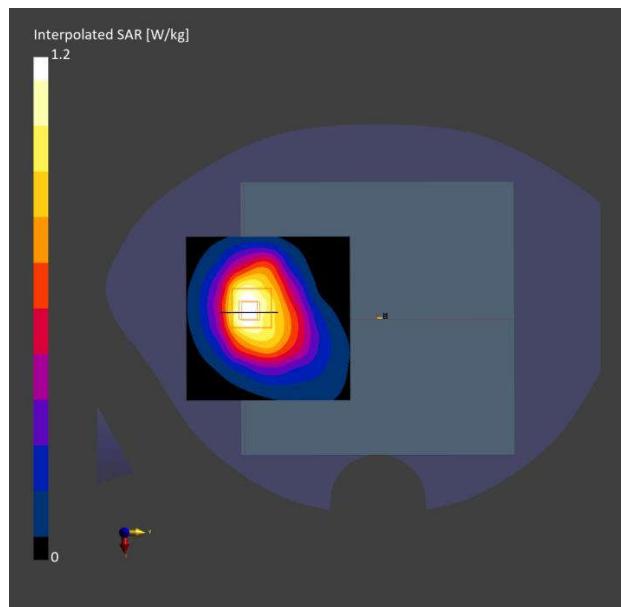
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 835MHz-Head Charge:2025-09-05 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-05 | 2025-09-05 |
| psSAR1g [W/Kg] | 0.588 | 0.646 |
| psSAR10g [W/Kg] | 0.385 | 0.370 |
| Power Drift [dB] | -0.07 | 0.08 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 50.8 |
| Dist 3dB Peak [mm] | | 11.7 |





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LTE Band 7 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|--------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 7 | LTE-FDD, 10169-CAF | 2510.000, 20850 | 7.16 | 1.87 | 38.3 |

Hardware Setup

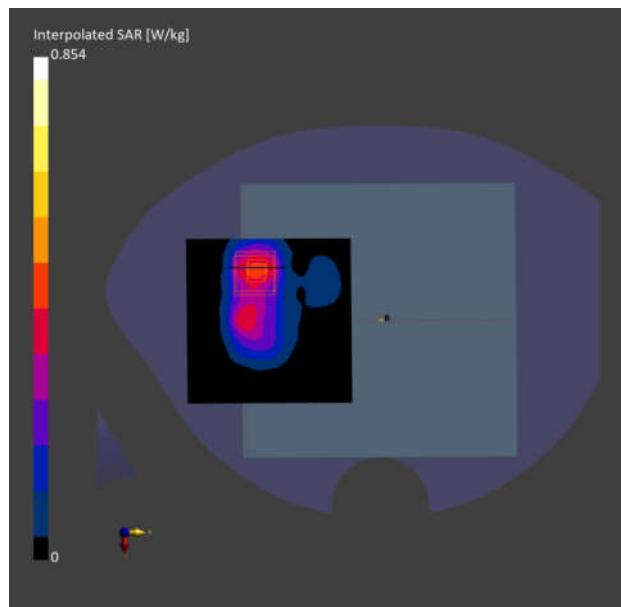
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2550MHz-Head Charge:2025-09-03 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-03 | 2025-09-03 |
| psSAR1g [W/Kg] | 0.469 | 0.509 |
| psSAR10g [W/Kg] | 0.187 | 0.218 |
| Power Drift [dB] | -0.04 | 0.15 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 54.1 |
| Dist 3dB Peak [mm] | | 9.4 |





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LTE Band 12 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 12 | LTE-FDD, 10175-CAH | 707.500, 23095 | 9.65 | 0.861 | 41.7 |

Hardware Setup

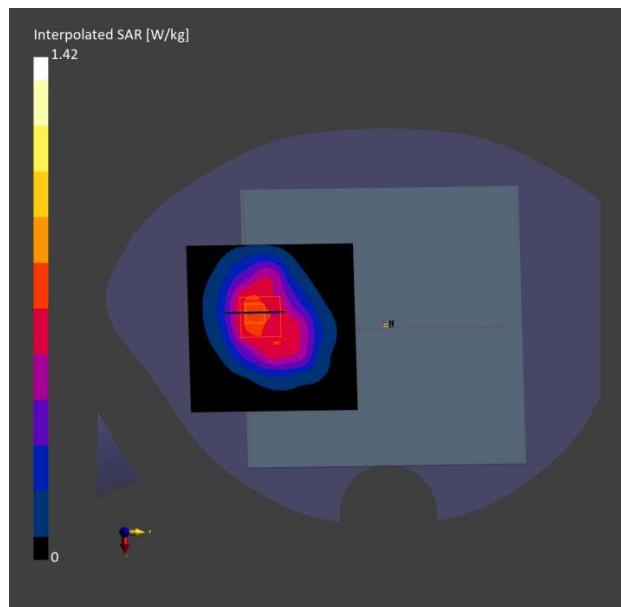
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 750MHz-Head Charge:2025-09-02 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-02 | 2025-09-02 |
| psSAR1g [W/Kg] | 0.679 | 0.723 |
| psSAR10g [W/Kg] | 0.461 | 0.411 |
| Power Drift [dB] | -0.06 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 47.1 |
| Dist 3dB Peak [mm] | | 12.8 |





No. 25T04N001821-011-SAR

LTE Band 13 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 13 | LTE-FDD, 10175-CAH | 782.000, 23230 | 9.65 | 0.905 | 40.8 |

Hardware Setup

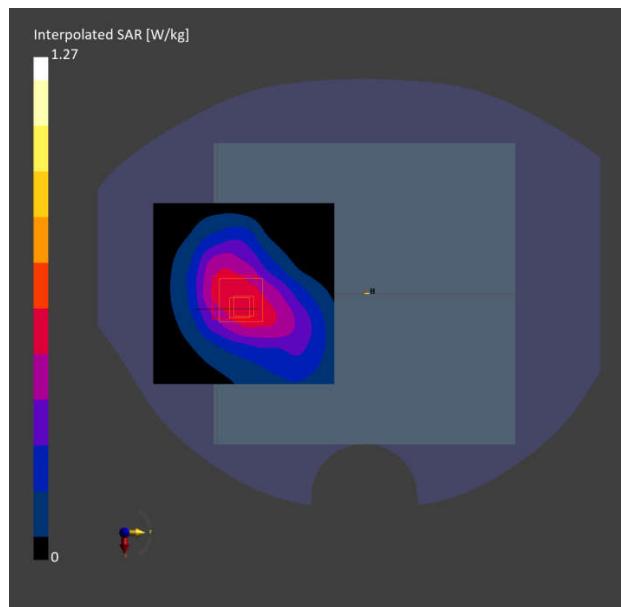
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 750MHz-Head Charge:2025-09-02 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-02 | 2025-09-02 |
| psSAR1g [W/Kg] | 0.529 | 0.618 |
| psSAR10g [W/Kg] | 0.367 | 0.354 |
| Power Drift [dB] | -0.02 | 0.09 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 42.3 |
| Dist 3dB Peak [mm] | | 14.4 |





No. 25T04N001821-011-SAR

LTE Band 14 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 14 | LTE-FDD, 10175-CAH | 793.000, 23330 | 9.65 | 0.912 | 40.8 |

Hardware Setup

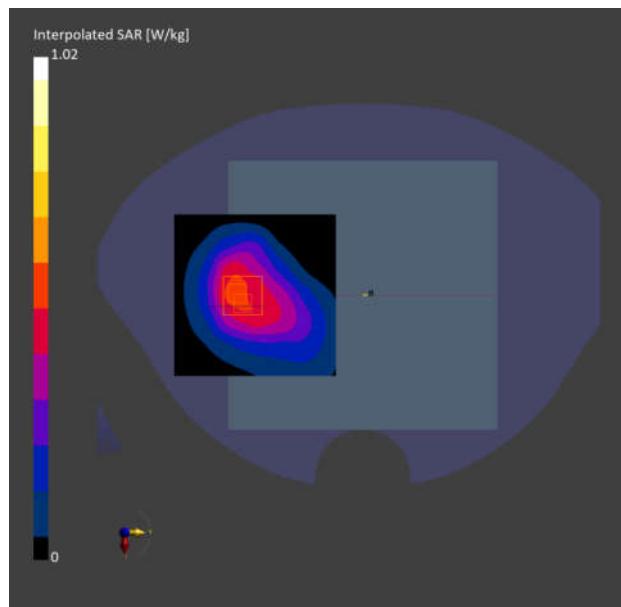
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 750MHz-Head Charge:2025-09-02 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-02 | 2025-09-02 |
| psSAR1g [W/Kg] | 0.484 | 0.512 |
| psSAR10g [W/Kg] | 0.324 | 0.297 |
| Power Drift [dB] | 0.06 | 0.02 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 43.9 |
| Dist 3dB Peak [mm] | | 15.1 |





No. 25T04N001821-011-SAR

LTE Band 25 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 25 | LTE-FDD, 10169-CAF | 1860.000, 26140 | 7.75 | 1.38 | 39.5 |

Hardware Setup

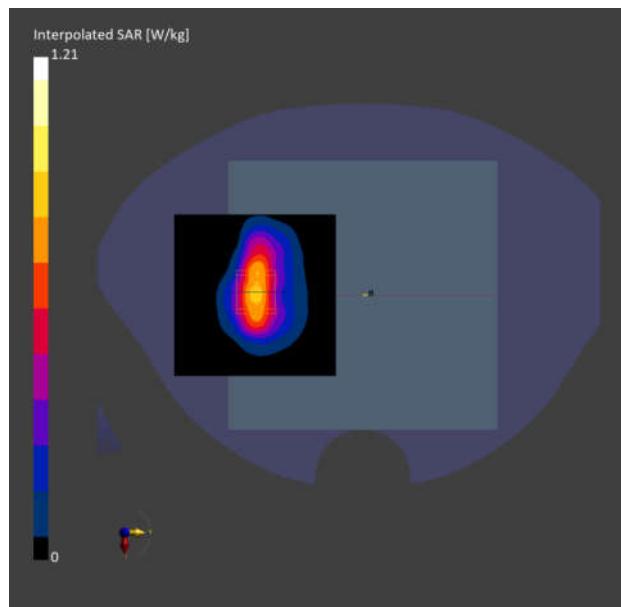
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1900MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 0.695 | 0.693 |
| psSAR10g [W/Kg] | 0.378 | 0.383 |
| Power Drift [dB] | -0.02 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 54.5 |
| Dist 3dB Peak [mm] | | 10.8 |





No. 25T04N001821-011-SAR

LTE Band 26 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 26 | LTE-FDD, 10181-CAF | 841.500, 26965 | 9.21 | 0.922 | 40.4 |

Hardware Setup

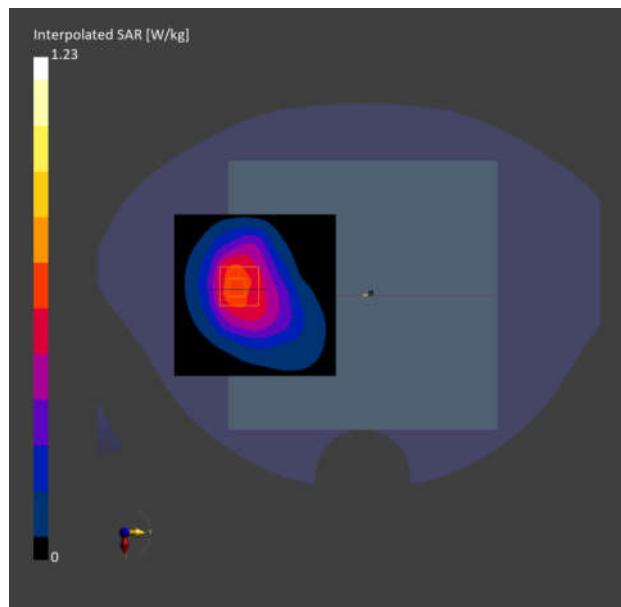
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 835MHz-Head Charge:2025-09-05 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-05 | 2025-09-05 |
| psSAR1g [W/Kg] | 0.609 | 0.666 |
| psSAR10g [W/Kg] | 0.401 | 0.384 |
| Power Drift [dB] | -0.03 | 0.08 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 51.3 |
| Dist 3dB Peak [mm] | | 13.7 |





No. 25T04N001821-011-SAR

LTE Band 30 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 30 | LTE-FDD, 10175-CAH | 2310.000, 27710 | 7.57 | 1.67 | 39.9 |

Hardware Setup

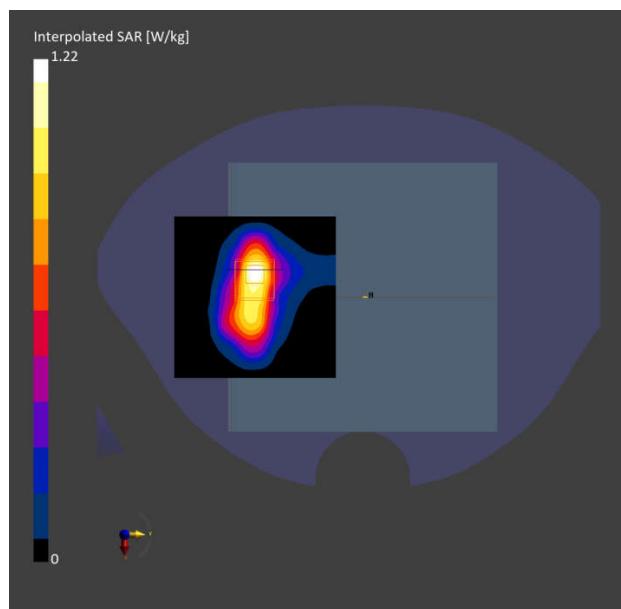
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2300MHz-Head Charge:2025-09-03 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-03 | 2025-09-03 |
| psSAR1g [W/Kg] | 0.636 | 0.670 |
| psSAR10g [W/Kg] | 0.318 | 0.356 |
| Power Drift [dB] | -0.02 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 53.8 |
| Dist 3dB Peak [mm] | | 11.2 |





No. 25T04N001821-011-SAR

LTE Band 66 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 66 | LTE-FDD, 10169-CAF | 1745.000, 132322 | 8.05 | 1.35 | 40.6 |

Hardware Setup

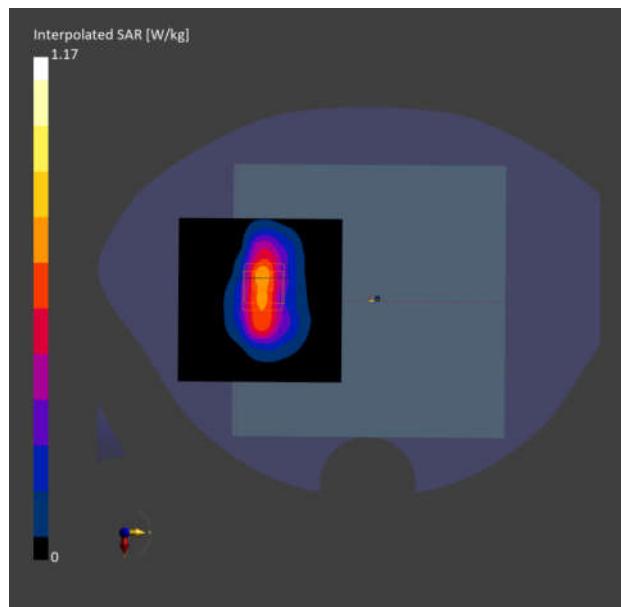
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1750MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 0.607 | 0.632 |
| psSAR10g [W/Kg] | 0.331 | 0.342 |
| Power Drift [dB] | -0.14 | 0.09 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 51.0 |
| Dist 3dB Peak [mm] | | 10.2 |





No. 25T04N001821-011-SAR

LTE Band 71 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 71 | LTE-FDD, 10169-CAF | 688.000, 133372 | 9.65 | 0.852 | 41.9 |

Hardware Setup

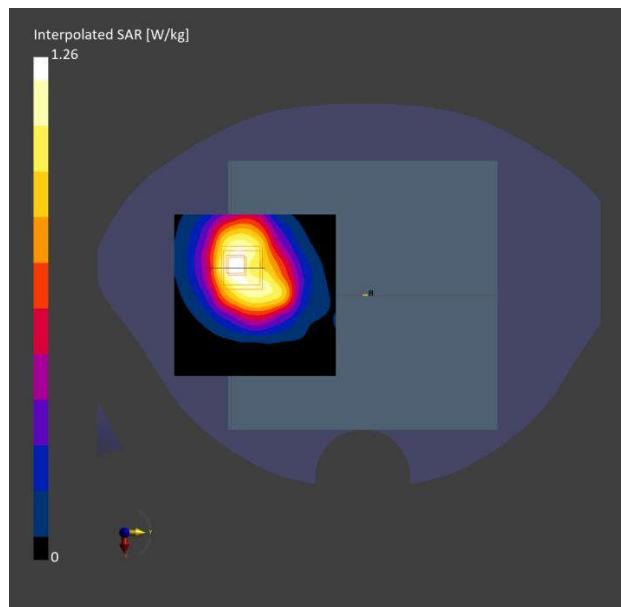
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 750MHz-Head Charge:2025-09-02 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm] | 15.0 x 15.0 | 8.0 x 8.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-02 | 2025-09-02 |
| psSAR1g [W/Kg] | 0.640 | 0.676 |
| psSAR10g [W/Kg] | 0.431 | 0.398 |
| Power Drift [dB] | -0.13 | 0.09 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 50.2 |
| Dist 3dB Peak [mm] | | 12.2 |





No. 25T04N001821-011-SAR

LTE Band 41 Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | Band 41 | LTE-TDD, 10435-AAG | 2593.000, 40620 | 7.16 | 1.97 | 38.0 |

Hardware Setup

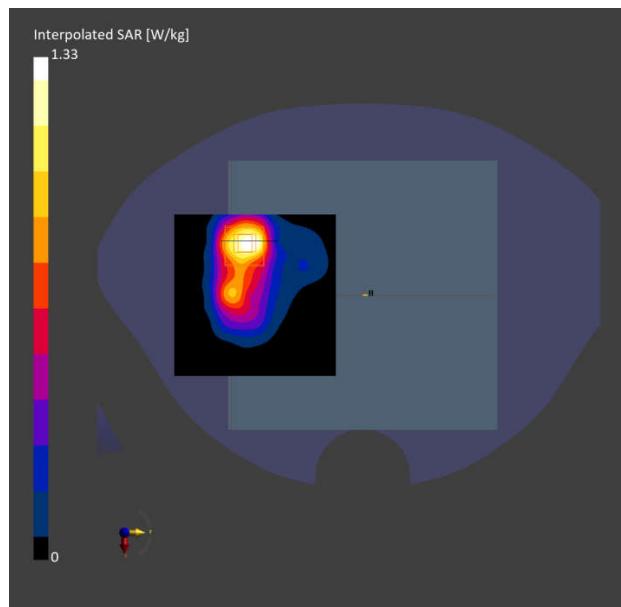
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2550MHz-Head Charge:2025-09-03 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-03 | 2025-09-03 |
| psSAR1g [W/Kg] | 0.621 | 0.723 |
| psSAR10g [W/Kg] | 0.304 | 0.355 |
| Power Drift [dB] | 0.08 | 0.12 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 52.2 |
| Dist 3dB Peak [mm] | | 11.2 |





No. 25T04N001821-011-SAR

WLAN 2.4GHz Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | WLAN 2.4GHz | WLAN, 10415-AAA | 2462.000, 11 | 7.32 | 1.85 | 38.7 |

Hardware Setup

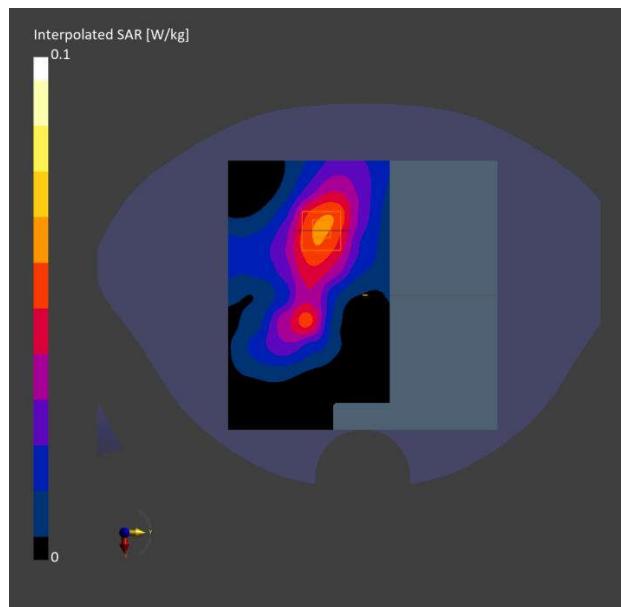
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2450MHz-Head Charge:2025-09-06 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 150.0 x 90.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | Y | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-06 | 2025-09-06 |
| psSAR1g [W/Kg] | 0.063 | 0.062 |
| psSAR10g [W/Kg] | 0.030 | 0.029 |
| Power Drift [dB] | -0.13 | -0.04 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 46.0 |
| Dist 3dB Peak [mm] | | 10.2 |





No. 25T04N001821-011-SAR

WLAN 5GHz Body

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-----------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | BACK, 0.00 | WLAN 5GHz | WLAN, 10317-AAE | 5320.000, 64 | 5.20 | 4.90 | 35.1 |

Hardware Setup

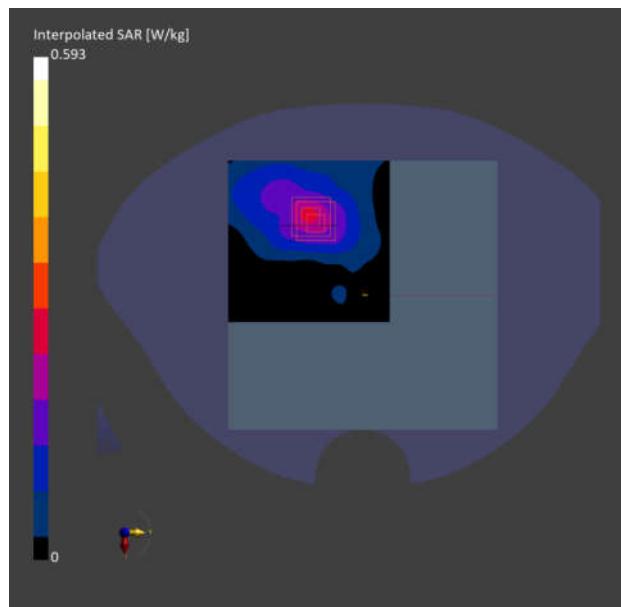
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 5250MHz-Head Charge:2025-09-09 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 90.0 x 90.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 4.0 x 4.0 x 1.4 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.4 |
| MAIA | Y | N/A |
| Surface Detection | VMS + 6p | VMS + 6p |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-09 | 2025-09-09 |
| psSAR1g [W/Kg] | 0.194 | 0.207 |
| psSAR10g [W/Kg] | 0.082 | 0.084 |
| Power Drift [dB] | -0.03 | 0.07 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 22.7 |
| Dist 3dB Peak [mm] | | 10.8 |





No. 25T04N001821-011-SAR

L.7. System Check Results for Spot Check

750MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D750 | CW, 0- | 750.0, 50 | 9.65 | 0.885 | 41.2 |

Hardware Setup

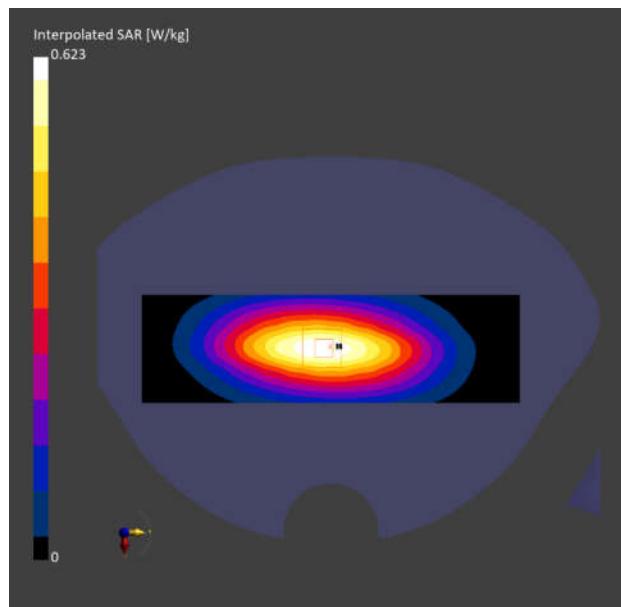
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 750MHz-Head Charge:2025-09-02 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-02 | 2025-09-02 |
| psSAR1g [W/Kg] | 0.423 | 0.414 |
| psSAR10g [W/Kg] | 0.281 | 0.276 |
| Power Drift [dB] | -0.09 | -0.04 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 62.0 |
| Dist 3dB Peak [mm] | | 17.9 |



Validation 750MHz 50mW



No. 25T04N001821-011-SAR

835MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D835 | CW, 0- | 835.0, 50 | 9.21 | 0.916 | 40.5 |

Hardware Setup

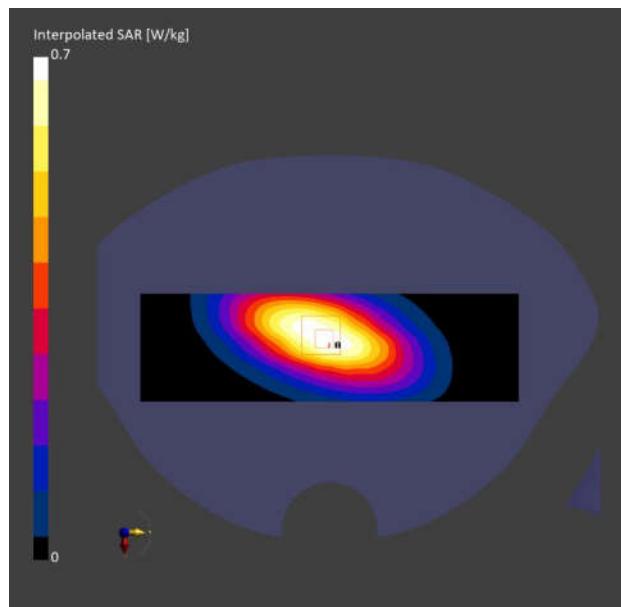
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|-------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 835MHz-Head Charge:2025-09-05 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | n/a | Yes |
| Grading Ratio | n/a | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-05 | 2025-09-05 |
| psSAR1g [W/Kg] | 0.484 | 0.497 |
| psSAR10g [W/Kg] | 0.318 | 0.325 |
| Power Drift [dB] | 0.09 | 0.13 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 61.6 |
| Dist 3dB Peak [mm] | | 16.4 |



Validation 835MHz 50mW



No. 25T04N001821-011-SAR

1750MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D1750 | CW, 0- | 1750.0, 50 | 8.05 | 1.35 | 40.6 |

Hardware Setup

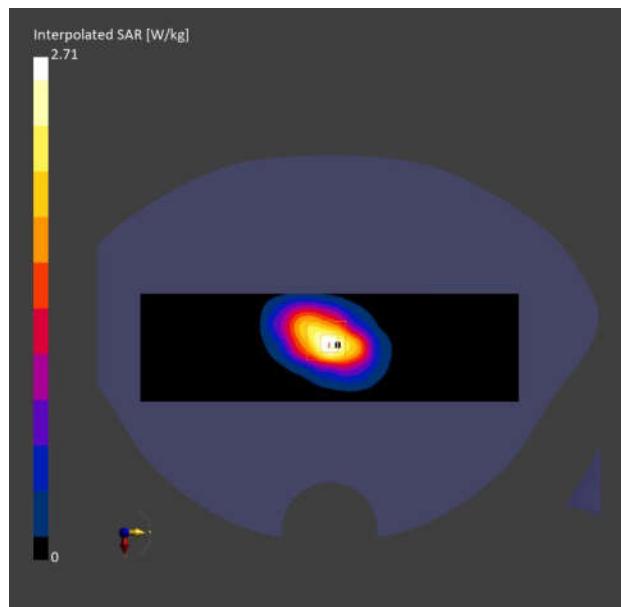
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1750MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 1.81 | 1.76 |
| psSAR10g [W/Kg] | 0.970 | 0.962 |
| Power Drift [dB] | -0.12 | -0.08 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 53.3 |
| Dist 3dB Peak [mm] | | 10.8 |



Validation 1750MHz 50mW



No. 25T04N001821-011-SAR

1900MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D1900 | CW, 0- | 1900.0, 50 | 7.75 | 1.42 | 39.3 |

Hardware Setup

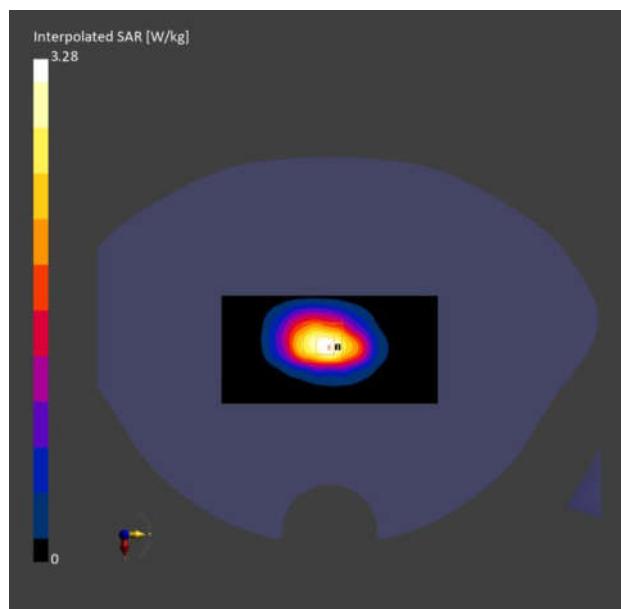
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 1900MHz-Head Charge:2025-08-29 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-08-29 | 2025-08-29 |
| psSAR1g [W/Kg] | 2.01 | 2.08 |
| psSAR10g [W/Kg] | 1.03 | 1.08 |
| Power Drift [dB] | 0.13 | 0.05 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 53.5 |
| Dist 3dB Peak [mm] | | 9.6 |



Validation 1900MHz 50mW



No. 25T04N001821-011-SAR

2300MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D2300 | CW, 0- | 2300.0, 50 | 7.57 | 1.66 | 39.9 |

Hardware Setup

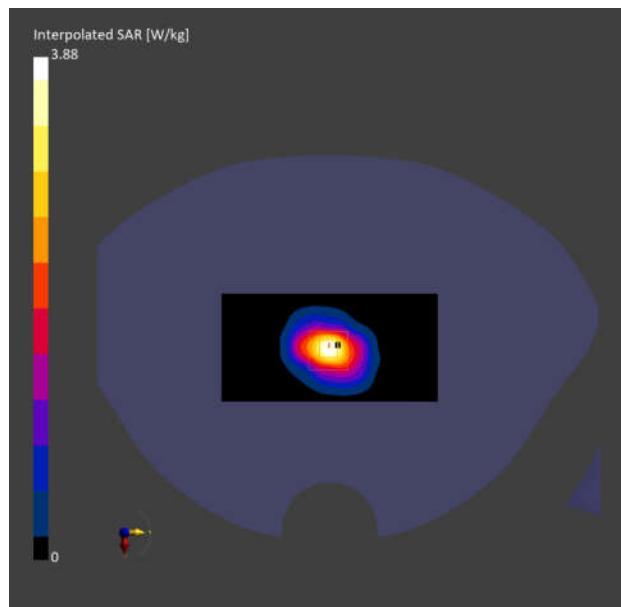
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2300MHz-Head Charge:2025-09-03 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-03 | 2025-09-03 |
| psSAR1g [W/Kg] | 2.47 | 2.40 |
| psSAR10g [W/Kg] | 1.21 | 1.18 |
| Power Drift [dB] | -0.12 | -0.05 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 50.8 |
| Dist 3dB Peak [mm] | | 9.7 |



Validation 2300MHz 50mW



No. 25T04N001821-011-SAR

2450MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D2450 | CW, 0- | 2450.0, 50 | 7.32 | 1.84 | 38.7 |

Hardware Setup

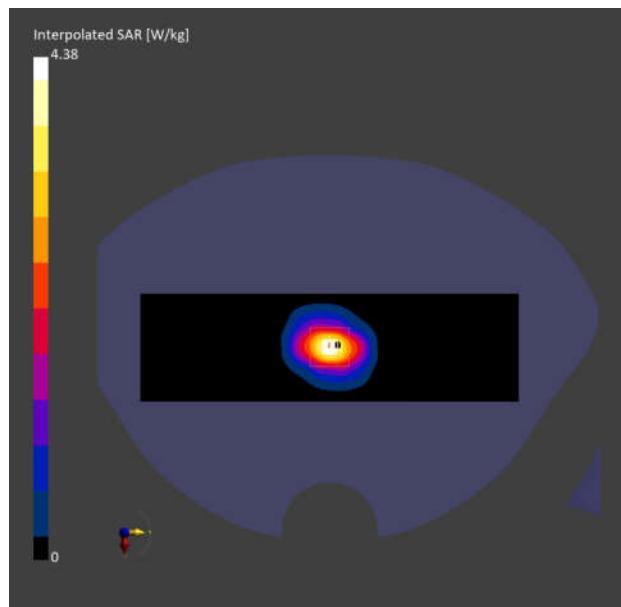
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2450MHz-Head Charge:2025-09-06 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-06 | 2025-09-06 |
| psSAR1g [W/Kg] | 2.69 | 2.75 |
| psSAR10g [W/Kg] | 1.25 | 1.28 |
| Power Drift [dB] | 0.09 | 0.17 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 48.0 |
| Dist 3dB Peak [mm] | | 9.4 |



Validation 2450MHz 50mW



No. 25T04N001821-011-SAR

2550MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D2550 | CW, 0- | 2550.0, 50 | 7.16 | 1.92 | 38.2 |

Hardware Setup

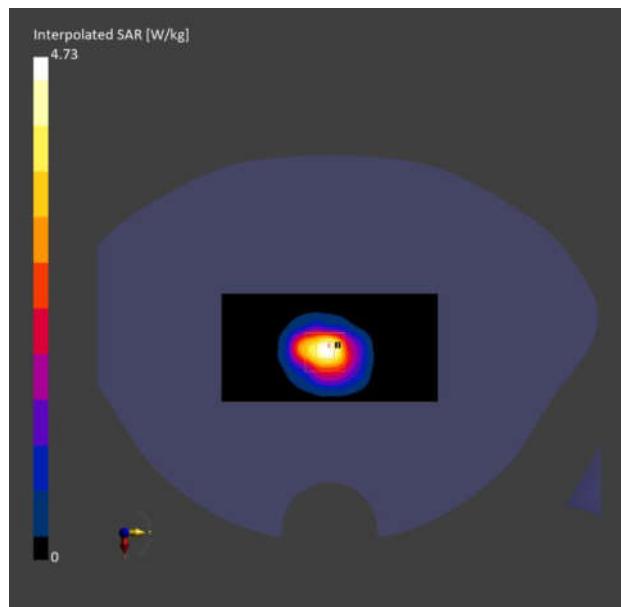
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 2550MHz-Head Charge:2025-09-03 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|--------------|--------------------|
| Grid Extents [mm] | 60.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 5.0 x 5.0 x 5.0 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.5 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-03 | 2025-09-03 |
| psSAR1g [W/Kg] | 2.82 | 2.87 |
| psSAR10g [W/Kg] | 1.24 | 1.29 |
| Power Drift [dB] | 0.11 | 0.06 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 48.8 |
| Dist 3dB Peak [mm] | | 9.4 |



Validation 2550MHz 50mW



No. 25T04N001821-011-SAR

5250MHz

Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL | FRONT, 10.00 | D5GHz | CW, 0- | 5250.0, 25 | 5.20 | 4.81 | 35.3 |

Hardware Setup

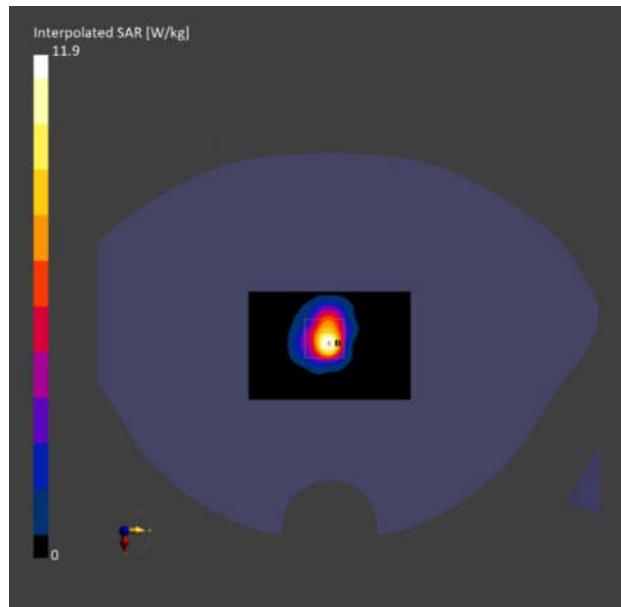
| Phantom | TSL, Measured Date | Probe, Calibration Date | DAE, Calibration Date |
|---|--------------------------------|-----------------------------|------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2130 | 5250MHz-Head Charge:2025-09-09 | EX3DV4 - SN7621, 2025-07-25 | DAE4 Sn786, 2024-12-12 |

Scans Setup

| | Area Scan | Zoom Scan |
|---------------------|-------------|--------------------|
| Grid Extents [mm] | 60.0 x 90.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm] | 10.0 x 10.0 | 4.0 x 4.0 x 1.4 |
| Sensor Surface [mm] | 3.0 | 1.4 |
| Graded Grid | N/A | Yes |
| Grading Ratio | N/A | 1.4 |
| MAIA | N/A | N/A |
| Surface Detection | All points | All points |
| Scan Method | Measured | Measured |

Measurement Results

| | Area Scan | Zoom Scan |
|---------------------|---------------|---------------|
| Date | 2025-09-09 | 2025-09-09 |
| psSAR1g [W/Kg] | 3.90 | 3.99 |
| psSAR10g [W/Kg] | 1.08 | 1.12 |
| Power Drift [dB] | 0.12 | 0.08 |
| Power Scaling | Disabled | Disabled |
| Scaling Factor [dB] | | |
| TSL Correction | No correction | No correction |
| M2/M1 [%] | | 63.3 |
| Dist 3dB Peak [mm] | | 7.8 |



Validation 5250MHz 50mW

*****END OF REPORT*****