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Accreditation No.: SCS 0108

Client

RF Safety Lab  
Catonsville, USA

Certificate No.

EX-7853\_Nov25

## CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7853

MAR 12/1/25

Calibration procedure(s)

QA CAL-01.v10, QA CAL-12.v10, QA CAL-14.v7, QA CAL-23.v6,  
QA CAL-25.v8, QA CAL-48.v2  
Calibration procedure for dosimetric E-field probes

Calibration date

November 07, 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  $(22 \pm 3)^\circ\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards           | ID         | Calibration Date (Certificate No.)     | Sched. Cal. |
|-----------------------------|------------|----------------------------------------|-------------|
| Power Sensor R&S NRP-33T    | SN: 100967 | 29-Oct-25 (No. Part of L1407)          | Oct-26      |
| N-type mismatch combination | SN: L1119  | 26-Mar-25 (No. 217-04292)              | Mar-26      |
| OCP DAK-12                  | SN: 1016   | 16-Sept-25 (No. OCP-DAK12-1016_Sep25)  | Sep-26      |
| OCP DAK-3.5                 | SN: 1249   | 16-Sept-25 (No. OCP-DAK3.5-1249_Sep25) | Sep-26      |
| Reference Probe EX3DV4      | SN: 7349   | 10-Jan-25 (No. EX3-7349_Jan25)         | Jan-26      |
| DAE4                        | SN: 1301   | 30-Oct-25 (No. DAE4-1301_Oct25)        | Oct-26      |

| Secondary Standards | ID        | Check Date (in house)                 | Sched. Check |
|---------------------|-----------|---------------------------------------|--------------|
| ACAP 2020 Setup 1   | SN: L1404 | 01-Oct-25 (No. IHCK_ACAP2020-1_Oct25) | Oct-26       |
| OCP DAK-12          | SN: 1029  | 27-Feb-25 (No. OCP-DAK12-1029_Feb25)  | Feb-26       |
| OCP DAK-3.5         | SN: 1336  | 09-Dec-24 (No. OCP-DAK3.5-1336_Dec24) | Dec-25       |

|               |                |                       |           |
|---------------|----------------|-----------------------|-----------|
|               | Name           | Function              | Signature |
| Calibrated by | Joanna Lleshaj | Laboratory Technician |           |
| Approved by   | Sven Kühn      | Technical Manager     |           |

Issued: November 07, 2025

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

## Calibration Laboratory of

Schmid & Partner  
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



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## Glossary

|                        |                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                    | tissue simulating liquid                                                                                                                       |
| NORM <sub>x,y,z</sub>  | sensitivity in free space                                                                                                                      |
| ConvF                  | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                     |
| DCP                    | diode compression point                                                                                                                        |
| CF                     | crest factor (1/duty_cycle) of the RF signal                                                                                                   |
| A, B, C, D             | modulation dependent linearization parameters                                                                                                  |
| Polarization $\varphi$ | $\varphi$ rotation around probe axis                                                                                                           |
| Polarization $\theta$  | $\theta$ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis |
| Connector Angle        | information used in DASY system to align probe sensor X to the robot coordinate system                                                         |

## 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-Worn 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"

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\theta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the  $E^2$ -field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

## Parameters of Probe: EX3DV4 - SN:7853

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k = 2) |
|-----------------------------------------------------------|----------|----------|----------|-------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.55     | 0.65     | 0.63     | ±10.1%      |
| DCP (mV) <sup>B</sup>                                     | 107.7    | 110.0    | 109.1    | ±4.7%       |

### Calibration Results for Modulation Response

| UID   | Communication System Name      |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C     | D<br>dB | VR<br>mV | Max<br>dev. | Max<br>Unc <sup>E</sup><br>k = 2 |
|-------|--------------------------------|---|---------|------------------------------|-------|---------|----------|-------------|----------------------------------|
| 0     | Continuous Wave                | X | 0.00    | 0.00                         | 1.00  | 0.00    | 125.3    | ±2.1%       | ±4.7%                            |
|       |                                | Y | 0.00    | 0.00                         | 1.00  |         | 145.1    |             |                                  |
|       |                                | Z | 0.00    | 0.00                         | 1.00  |         | 138.8    |             |                                  |
| 10352 | Pulse (D=10%, T=5 ms)          | X | 0.19    | 59.43                        | 14.74 | 10.00   | 23.0     | ±1.6%       | ±9.6%                            |
|       |                                | Y | 0.16    | 58.90                        | 14.44 |         | 24.0     |             |                                  |
|       |                                | Z | 0.12    | 58.60                        | 14.63 |         | 24.0     |             |                                  |
| 10353 | Pulse (D=20%, T=5 ms)          | X | 0.17    | 62.44                        | 14.77 | 6.99    | 46.0     | ±1.5%       | ±9.6%                            |
|       |                                | Y | 0.15    | 61.91                        | 14.47 |         | 47.0     |             |                                  |
|       |                                | Z | 0.11    | 61.61                        | 14.65 |         | 48.0     |             |                                  |
| 10354 | Pulse (D=40%, T=5 ms)          | X | 0.16    | 65.45                        | 14.81 | 3.98    | 93.0     | ±1.5%       | ±9.6%                            |
|       |                                | Y | 0.14    | 64.92                        | 14.50 |         | 95.0     |             |                                  |
|       |                                | Z | 0.10    | 64.62                        | 14.68 |         | 95.0     |             |                                  |
| 10355 | Pulse (D=60%, T=5 ms)          | X | 0.15    | 67.21                        | 14.83 | 2.22    | 139.0    | ±1.5%       | ±9.6%                            |
|       |                                | Y | 0.13    | 66.68                        | 14.51 |         | 142.0    |             |                                  |
|       |                                | Z | 0.10    | 66.38                        | 14.69 |         | 143.0    |             |                                  |
| 10387 | Random (BW=1 MHz, MOD=QPSK)    | X | 0.01    | 64.33                        | 15.73 | 0.30    | 107.0    | ±1.7%       | ±9.6%                            |
|       |                                | Y | 0.01    | 63.80                        | 15.52 |         | 109.0    |             |                                  |
|       |                                | Z | 0.00    | 63.50                        | 15.61 |         | 110.0    |             |                                  |
| 10388 | Random (BW=10 MHz, MOD=QPSK)   | X | 0.61    | 64.22                        | 13.93 | 0.00    | 113.0    | ±2.5%       | ±9.6%                            |
|       |                                | Y | 0.49    | 63.68                        | 13.76 |         | 116.0    |             |                                  |
|       |                                | Z | 0.51    | 63.38                        | 13.74 |         | 117.0    |             |                                  |
| 10396 | Random (BW=100 kHz, MOD=64QAM) | X | 0.00    | 63.16                        | 17.06 | 1.66    | 81.0     | ±3.3%       | ±9.6%                            |
|       |                                | Y | 0.00    | 79.54                        | 16.70 |         | 83.0     |             |                                  |
|       |                                | Z | 0.01    | 62.32                        | 16.97 |         | 83.0     |             |                                  |
| 10399 | Random (BW=40 MHz, MOD=64QAM)  | X | 1.58    | 63.16                        | 13.08 | 0.00    | 105.0    | ±4.1%       | ±9.6%                            |
|       |                                | Y | 1.41    | 62.62                        | 12.75 |         | 107.0    |             |                                  |
|       |                                | Z | 1.41    | 62.32                        | 12.68 |         | 108.0    |             |                                  |
| 10414 | Random (BW=40 MHz, HIGH PAR)   | X | 1.98    | 60.90                        | 12.97 | 0.00    | 76.0     | ±2.3%       | ±9.6%                            |
|       |                                | Y | 1.76    | 60.36                        | 12.61 |         | 78.0     |             |                                  |
|       |                                | Z | 1.79    | 60.06                        | 12.53 |         | 79.0     |             |                                  |

Note: For details on UID parameters see Appendix

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%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Page 5).

<sup>B</sup> Linearization parameter uncertainty for maximum specified field strength.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

**Parameters of Probe: EX3DV4 - SN:7853****Sensor Model Parameters**

|   | C1<br>fF | C2<br>fF | $\alpha$<br>V <sup>-1</sup> | T1<br>msV <sup>-2</sup> | T2<br>msV <sup>-1</sup> | T3<br>ms | T4<br>V <sup>-2</sup> | T5<br>V <sup>-1</sup> | T6   |
|---|----------|----------|-----------------------------|-------------------------|-------------------------|----------|-----------------------|-----------------------|------|
| x | 9.4      | 68.48    | 33.76                       | 3.22                    | 0.00                    | 4.90     | 0.44                  | 0.00                  | 1.00 |
| y | 8.1      | 58.59    | 33.34                       | 4.88                    | 0.00                    | 4.90     | 0.64                  | 0.00                  | 1.00 |
| z | 8.9      | 64.45    | 33.76                       | 4.42                    | 0.00                    | 4.90     | 0.57                  | 0.00                  | 1.00 |

**Other Probe Parameters**

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle                               | 66.4°      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 12 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

Note: Measurement distance from surface can be increased to 3–4 mm for an Area Scan job.

**Parameters of Probe: EX3DV4 - SN:7853****Calibration Parameter Determined in HSL**

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity <sup>F</sup> (S/m) | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc <sup>H</sup> (k = 2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|--------------------------|
| 750                  | 41.9                               | 0.89                            | 9.29    | 8.95    | 8.92    | 0.37               | 1.27                    | ±11.0%                   |
| 835                  | 41.5                               | 0.90                            | 9.05    | 8.71    | 8.68    | 0.37               | 1.27                    | ±11.0%                   |
| 1750                 | 40.1                               | 1.37                            | 7.68    | 7.40    | 7.37    | 0.36               | 1.27                    | ±11.0%                   |
| 1900                 | 40.0                               | 1.40                            | 7.23    | 6.96    | 6.94    | 0.36               | 1.27                    | ±11.0%                   |
| 2300                 | 39.5                               | 1.67                            | 7.09    | 6.83    | 6.81    | 0.36               | 1.27                    | ±11.0%                   |
| 2450                 | 39.2                               | 1.80                            | 6.94    | 6.68    | 6.66    | 0.36               | 1.27                    | ±11.0%                   |
| 2600                 | 39.0                               | 1.96                            | 7.07    | 6.81    | 6.79    | 0.36               | 1.27                    | ±11.0%                   |
| 3500                 | 37.9                               | 2.91                            | 6.22    | 5.99    | 5.97    | 0.35               | 1.27                    | ±13.1%                   |
| 3700                 | 37.7                               | 3.12                            | 6.20    | 5.97    | 5.95    | 0.35               | 1.27                    | ±13.1%                   |
| 3900                 | 37.5                               | 3.32                            | 6.18    | 5.95    | 5.93    | 0.35               | 1.27                    | ±13.1%                   |

<sup>C</sup> Frequency validity above 300 MHz of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ±110 MHz.

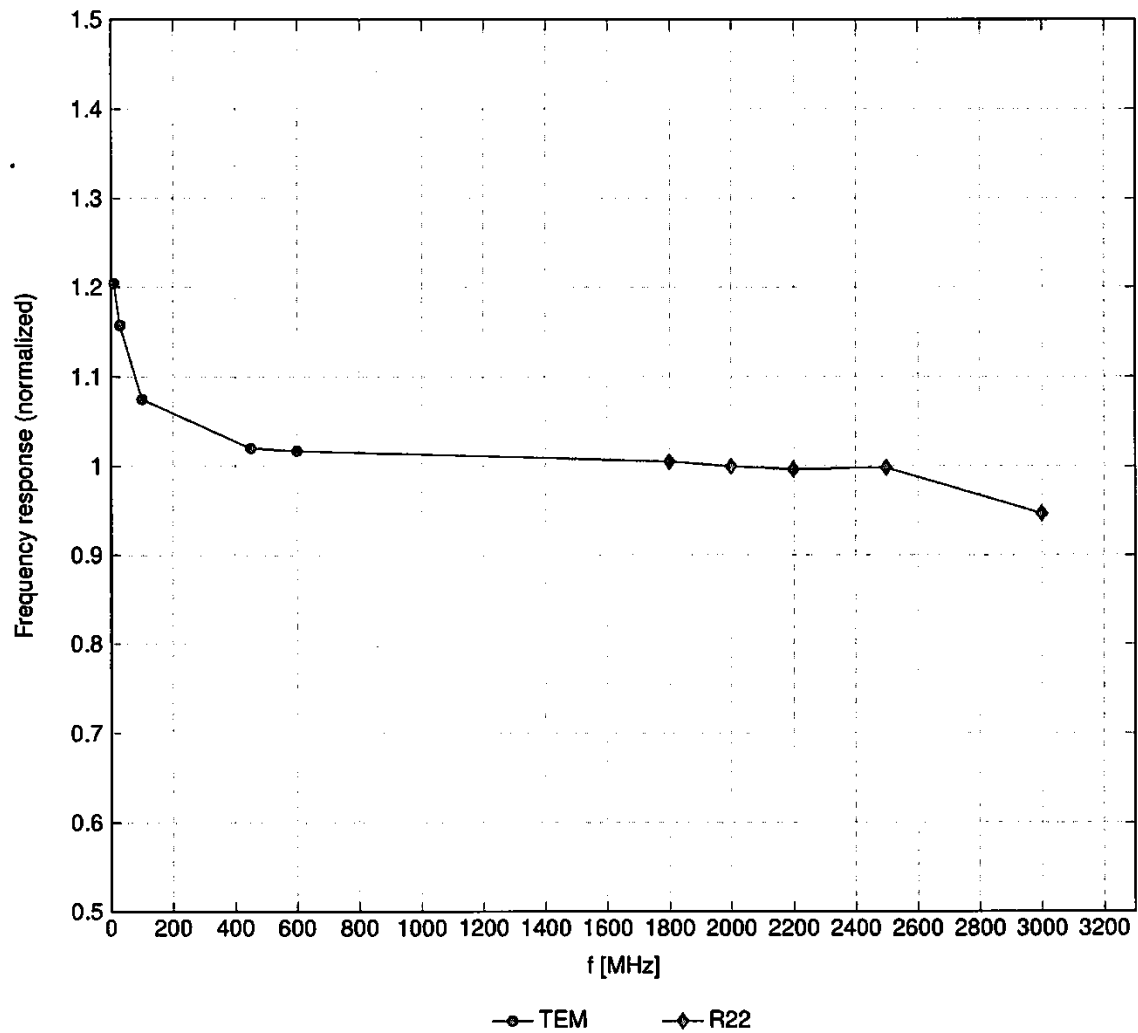
<sup>F</sup> The probes are calibrated using tissue simulating liquids (TSL) that deviate for  $\epsilon$  and  $\sigma$  by less than ±5% from the target values (typically better than ±3%) and are valid for TSL with deviations of up to ±10% if SAR correction is applied.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz and below ±2% for frequencies between 3–6 GHz at any distance larger than half the probe tip diameter from the boundary.

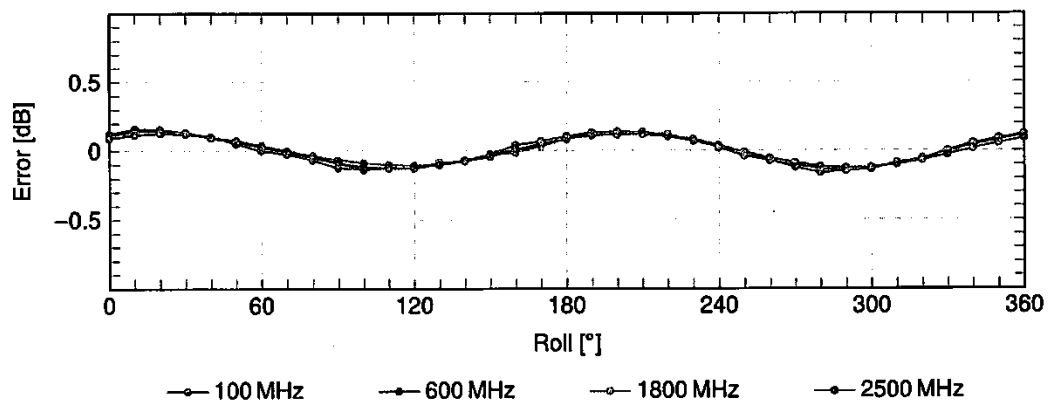
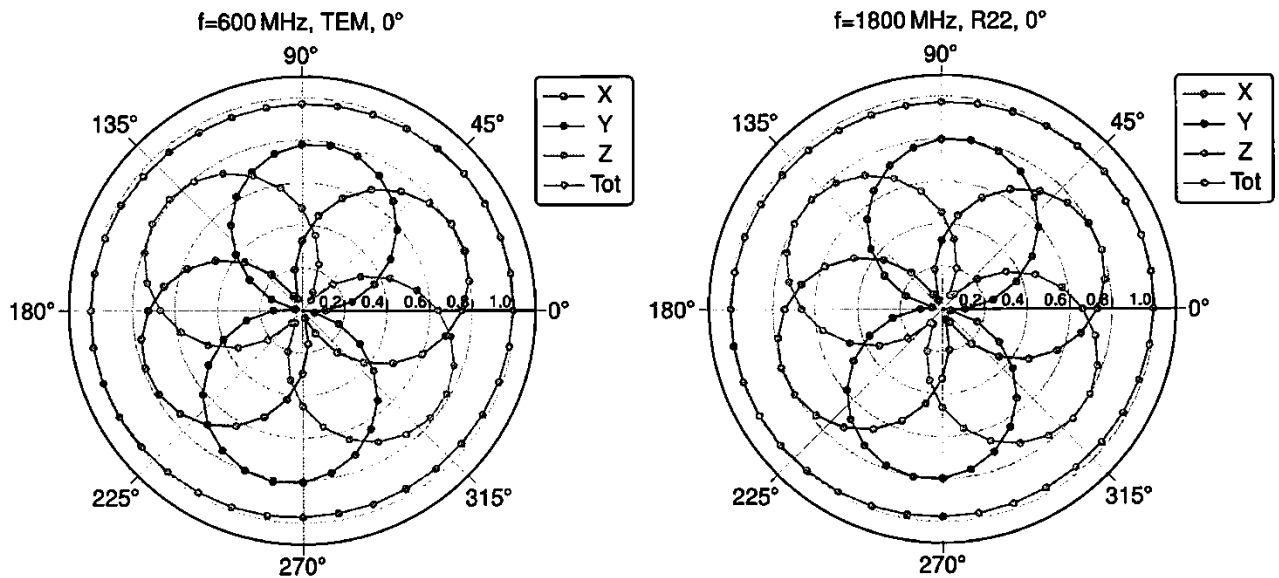
<sup>H</sup> The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. This is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

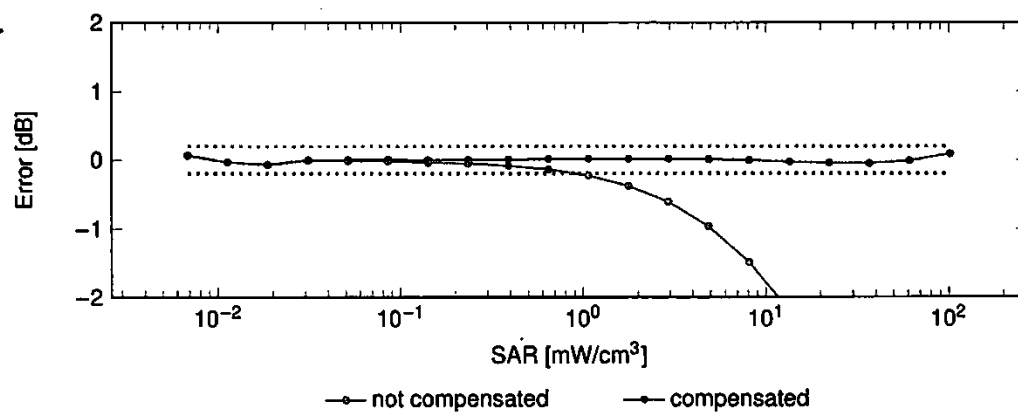
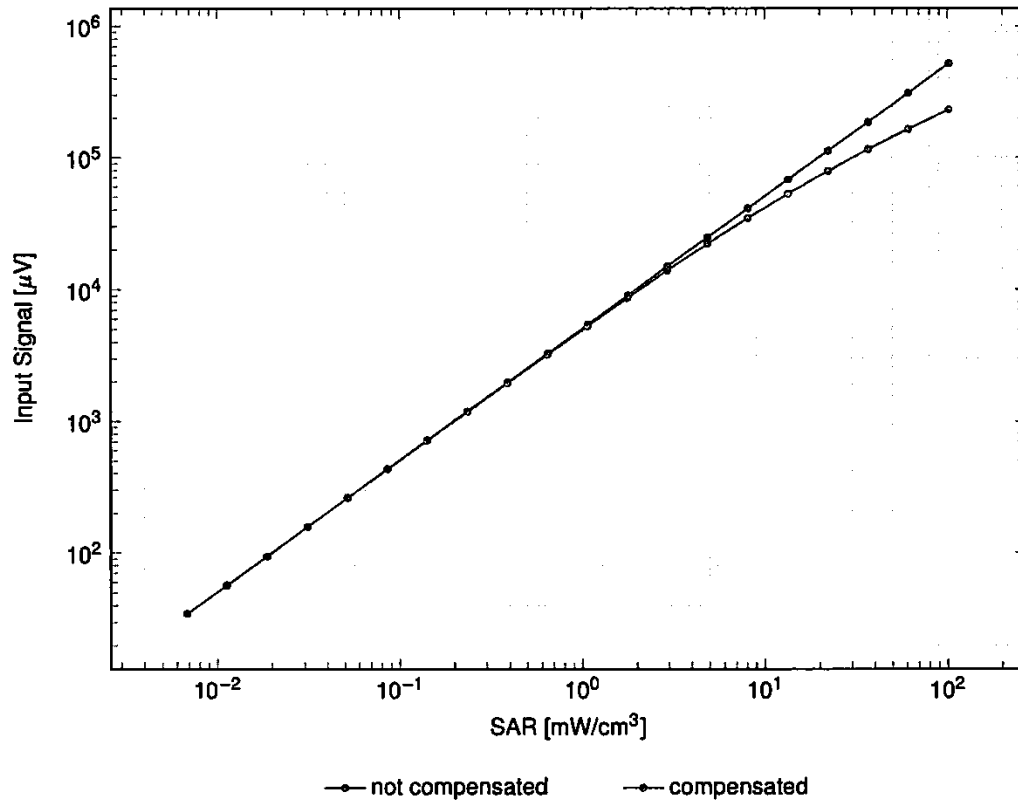
## Frequency Response of E-Field

(TEM-Cell:Ifi1110 EXX, Waveguide:R22)

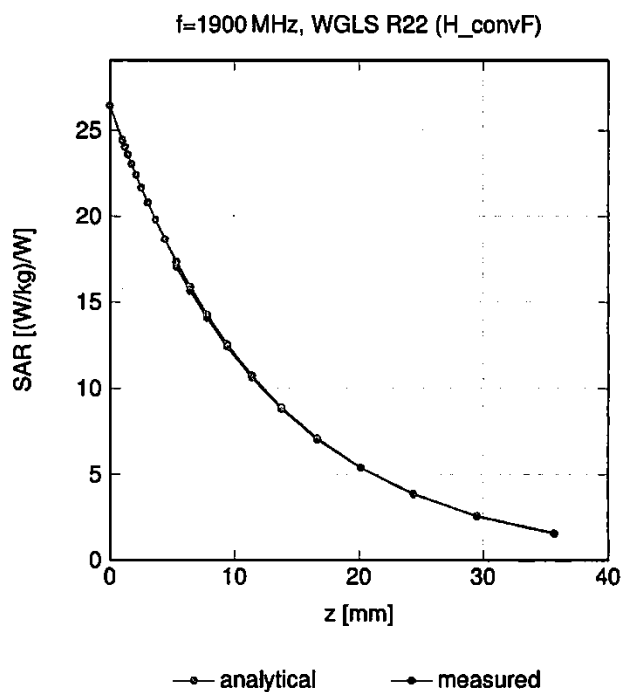


Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

**Receiving Pattern ( $\phi$ ),  $\theta = 0^\circ$** Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

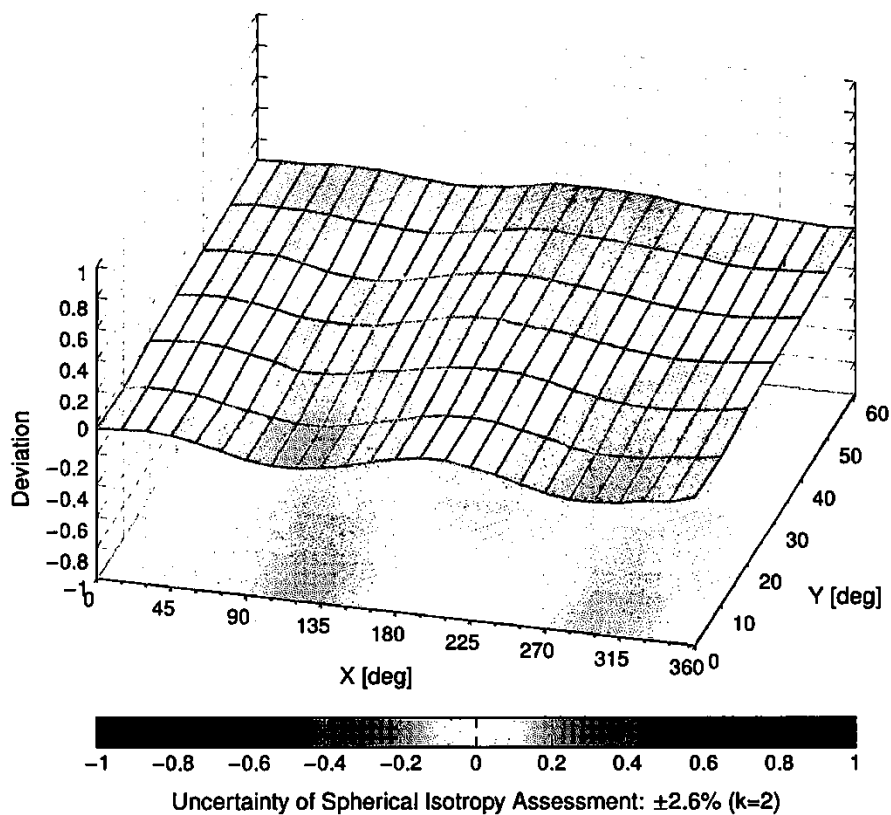
**Dynamic Range  $f(\text{SAR}_{\text{HSL}})$** (TEM cell,  $f_{\text{eval}} = 1900 \text{ MHz}$ )Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900\text{ MHz}$



## Appendix: Modulation Calibration Parameters

| UID   | Rev | Communication System Name                      | Group     | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------|-----------|----------|------------------------|
| 0     |     | Continuous Wave                                | CW        | 0.00     | ±4.7                   |
| 10010 | CAB | Pulse (D=10%, T=100 ms)                        | Test      | 10.00    | ±9.6                   |
| 10011 | CAC | Rel. 99, RMC, QPSK, 5.0 MHz                    | WCDMA     | 2.91     | ±9.6                   |
| 10012 | CAB | DSSS, DBPSK, 1.0 Mbps, 92.5% DC                | WLAN      | 1.87     | ±9.6                   |
| 10013 | CAB | OFDM, BPSK, 6.0 Mbps, 72.1% DC                 | WLAN      | 9.46     | ±9.6                   |
| 10021 | DAC | Voice, GMSK, 1 slot(s)                         | GSM       | 9.39     | ±9.6                   |
| 10023 | DAC | Data, GMSK, 1 slot(s)                          | GSM       | 9.57     | ±9.6                   |
| 10024 | DAC | Data, GMSK, 2 slot(s)                          | GSM       | 6.56     | ±9.6                   |
| 10025 | DAC | Data, 8PSK, 1 slot(s)                          | GSM       | 12.62    | ±9.6                   |
| 10026 | DAC | Data, 8PSK, 2 slot(s)                          | GSM       | 9.55     | ±9.6                   |
| 10027 | DAC | Data, GMSK, 3 slot(s)                          | GSM       | 4.80     | ±9.6                   |
| 10028 | DAC | Data, GMSK, 4 slot(s)                          | GSM       | 3.55     | ±9.6                   |
| 10029 | DAC | Data, 8PSK, 3 slot(s)                          | GSM       | 7.78     | ±9.6                   |
| 10030 | CAA | BR, DH1, GFSK                                  | Bluetooth | 5.30     | ±9.6                   |
| 10031 | CAA | BR, DH3, GFSK                                  | Bluetooth | 1.87     | ±9.6                   |
| 10032 | CAA | BR, DH5, GFSK                                  | Bluetooth | 1.16     | ±9.6                   |
| 10033 | CAA | EDR, DH1, pi/4-DQPSK                           | Bluetooth | 7.74     | ±9.6                   |
| 10034 | CAA | EDR, DH3, pi/4-DQPSK                           | Bluetooth | 4.53     | ±9.6                   |
| 10035 | CAA | EDR, DH5, pi/4-DQPSK                           | Bluetooth | 3.83     | ±9.6                   |
| 10036 | CAA | EDR, DH1, 8-DPSK                               | Bluetooth | 8.01     | ±9.6                   |
| 10037 | CAA | EDR, DH3, 8-DPSK                               | Bluetooth | 4.77     | ±9.6                   |
| 10038 | CAA | EDR, DH5, 8-DPSK                               | Bluetooth | 4.10     | ±9.6                   |
| 10039 | CAB | RC1, 1xRTT                                     | CDMA2000  | 4.57     | ±9.6                   |
| 10048 | CAA | Full Slot, GFSK, 1 slot(s)                     | DECT      | 13.80    | ±9.6                   |
| 10049 | CAA | Double Slot, GFSK, 2 slot(s)                   | DECT      | 10.79    | ±9.6                   |
| 10056 | CAA | TD-SCDMA, QPSK, 1.6 MHz                        | TD-SCDMA  | 11.01    | ±9.6                   |
| 10058 | DAC | Data, 8PSK, 4 slot(s)                          | GSM       | 6.52     | ±9.6                   |
| 10059 | CAB | DSSS, DQPSK, 2.0 Mbps, 87.4% DC                | WLAN      | 2.12     | ±9.6                   |
| 10060 | CAB | HR-DSSS, DQPSK, 5.5 Mbps, 72.7% DC             | WLAN      | 2.83     | ±9.6                   |
| 10061 | CAB | HR-DSSS, DQPSK, 11.0 Mbps, 57.5% DC            | WLAN      | 3.60     | ±9.6                   |
| 10062 | CAE | OFDM, BPSK, 6.0 Mbps, 89.1% DC                 | WLAN      | 8.68     | ±9.6                   |
| 10063 | CAE | OFDM, BPSK, 9.0 Mbps, 85.3% DC                 | WLAN      | 8.63     | ±9.6                   |
| 10064 | CAE | OFDM, QPSK, 12.0 Mbps, 82.0% DC                | WLAN      | 9.09     | ±9.6                   |
| 10065 | CAE | OFDM, QPSK, 18.0 Mbps, 76.0% DC                | WLAN      | 9.00     | ±9.6                   |
| 10066 | CAE | OFDM, 16QAM, 24.0 Mbps, 70.6% DC               | WLAN      | 9.38     | ±9.6                   |
| 10067 | CAE | OFDM, 16QAM, 36.0 Mbps, 62.9% DC               | WLAN      | 10.12    | ±9.6                   |
| 10068 | CAE | OFDM, 64QAM, 48.0 Mbps, 56.6% DC               | WLAN      | 10.24    | ±9.6                   |
| 10069 | CAE | OFDM, 64QAM, 54.0 Mbps, 54.4% DC               | WLAN      | 10.56    | ±9.6                   |
| 10071 | CAB | OFDM, BPSK, 9.0 Mbps, 65.1% DC                 | WLAN      | 9.83     | ±9.6                   |
| 10072 | CAB | OFDM, QPSK, 12.0 Mbps, 60.1% DC                | WLAN      | 9.62     | ±9.6                   |
| 10073 | CAB | OFDM, QPSK, 18.0 Mbps, 53.1% DC                | WLAN      | 9.94     | ±9.6                   |
| 10074 | CAB | OFDM, 16QAM, 24.0 Mbps, 48.5% DC               | WLAN      | 10.30    | ±9.6                   |
| 10075 | CAB | OFDM, 16QAM, 36.0 Mbps, 42.9% DC               | WLAN      | 10.77    | ±9.6                   |
| 10076 | CAB | OFDM, 64QAM, 48.0 Mbps, 39.5% DC               | WLAN      | 10.94    | ±9.6                   |
| 10077 | CAB | OFDM, 64QAM, 54.0 Mbps, 38.5% DC               | WLAN      | 11.00    | ±9.6                   |
| 10081 | CAB | RC3, 1xRTT                                     | CDMA2000  | 3.97     | ±9.6                   |
| 10097 | CAC | Rel. 5 HSDPA, QPSK, 5.0 MHz                    | WCDMA     | 3.98     | ±9.6                   |
| 10098 | CAC | Rel. 6 HSUPA, Subset 2, QPSK, 5.0 MHz          | WCDMA     | 3.98     | ±9.6                   |
| 10100 | CAF | 20.0 MHz, QPSK, 100% RB                        | LTE-FDD   | 5.67     | ±9.6                   |
| 10101 | CAF | 20.0 MHz, 16QAM, 100% RB                       | LTE-FDD   | 6.42     | ±9.6                   |
| 10102 | CAF | 20.0 MHz, 64QAM, 100% RB                       | LTE-FDD   | 6.60     | ±9.6                   |
| 10103 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB  | LTE-TDD   | 9.29     | ±9.6                   |
| 10104 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB | LTE-TDD   | 9.97     | ±9.6                   |
| 10105 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB | LTE-TDD   | 10.01    | ±9.6                   |
| 10108 | CAH | 10.0 MHz, QPSK, 100% RB                        | LTE-FDD   | 5.80     | ±9.6                   |
| 10109 | CAH | 10.0 MHz, 16QAM, 100% RB                       | LTE-FDD   | 6.43     | ±9.6                   |
| 10110 | CAH | 5.0 MHz, QPSK, 100% RB                         | LTE-FDD   | 5.75     | ±9.6                   |
| 10111 | CAH | 5.0 MHz, 16QAM, 100% RB                        | LTE-FDD   | 6.44     | ±9.6                   |
| 10112 | CAH | 10.0 MHz, 64QAM, 100% RB                       | LTE-FDD   | 6.59     | ±9.6                   |
| 10113 | CAH | 5.0 MHz, 64QAM, 100% RB                        | LTE-FDD   | 6.62     | ±9.6                   |
| 10114 | CAE | HT40 Greenfield, MCS0 (13.5 Mbps), 99.7% DC    | WLAN      | 8.10     | ±9.6                   |
| 10115 | CAE | HT40 Greenfield, MCS4 (81.0 Mbps), 99.7% DC    | WLAN      | 8.46     | ±9.6                   |
| 10116 | CAE | HT40 Greenfield, MCS7 (135.0 Mbps), 99.7% DC   | WLAN      | 8.15     | ±9.6                   |

| UID   | Rev | Communication System Name                     | Group   | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------------|---------|----------|------------------------|
| 10117 | CAE | HT40 Mixed, MCS0 (13.5 Mbps), 99.7% DC        | WLAN    | 8.07     | ±9.6                   |
| 10118 | CAE | HT40 Mixed, MCS4 (81.0 Mbps), 99.7% DC        | WLAN    | 8.59     | ±9.6                   |
| 10119 | CAE | HT40 Mixed, MCS7 (135.0 Mbps), 99.7% DC       | WLAN    | 8.13     | ±9.6                   |
| 10140 | CAF | 15.0 MHz, 16QAM, 100% RB                      | LTE-FDD | 6.49     | ±9.6                   |
| 10141 | CAF | 15.0 MHz, 64QAM, 100% RB                      | LTE-FDD | 6.53     | ±9.6                   |
| 10142 | CAF | 3.0 MHz, QPSK, 100% RB                        | LTE-FDD | 5.73     | ±9.6                   |
| 10143 | CAF | 3.0 MHz, 16QAM, 100% RB                       | LTE-FDD | 6.35     | ±9.6                   |
| 10144 | CAF | 3.0 MHz, 64QAM, 100% RB                       | LTE-FDD | 6.65     | ±9.6                   |
| 10145 | CAG | 1.4 MHz, QPSK, 100% RB                        | LTE-FDD | 5.76     | ±9.6                   |
| 10146 | CAG | 1.4 MHz, 16QAM, 100% RB                       | LTE-FDD | 6.41     | ±9.6                   |
| 10147 | CAG | 1.4 MHz, 64QAM, 100% RB                       | LTE-FDD | 6.72     | ±9.6                   |
| 10149 | CAF | 20.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.42     | ±9.6                   |
| 10150 | CAF | 20.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.60     | ±9.6                   |
| 10151 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB  | LTE-TDD | 9.28     | ±9.6                   |
| 10152 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB | LTE-TDD | 9.92     | ±9.6                   |
| 10153 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB | LTE-TDD | 10.05    | ±9.6                   |
| 10154 | CAH | 10.0 MHz, QPSK, 50% RB                        | LTE-FDD | 5.75     | ±9.6                   |
| 10155 | CAH | 10.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.43     | ±9.6                   |
| 10156 | CAH | 5.0 MHz, QPSK, 50% RB                         | LTE-FDD | 5.79     | ±9.6                   |
| 10157 | CAH | 5.0 MHz, 16QAM, 50% RB                        | LTE-FDD | 6.49     | ±9.6                   |
| 10158 | CAH | 10.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.62     | ±9.6                   |
| 10159 | CAH | 5.0 MHz, 64QAM, 50% RB                        | LTE-FDD | 6.56     | ±9.6                   |
| 10160 | CAF | 15.0 MHz, QPSK, 50% RB                        | LTE-FDD | 5.82     | ±9.6                   |
| 10161 | CAF | 15.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.43     | ±9.6                   |
| 10162 | CAF | 15.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.58     | ±9.6                   |
| 10166 | CAG | 1.4 MHz, QPSK, 50% RB                         | LTE-FDD | 5.46     | ±9.6                   |
| 10167 | CAG | 1.4 MHz, 16QAM, 50% RB                        | LTE-FDD | 6.21     | ±9.6                   |
| 10168 | CAG | 1.4 MHz, 64QAM, 50% RB                        | LTE-FDD | 6.79     | ±9.6                   |
| 10169 | CAF | 20.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.73     | ±9.6                   |
| 10170 | CAF | 20.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10171 | AAF | 20.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.49     | ±9.6                   |
| 10172 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.21     | ±9.6                   |
| 10173 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB   | LTE-TDD | 9.48     | ±9.6                   |
| 10174 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB   | LTE-TDD | 10.25    | ±9.6                   |
| 10175 | CAH | 10.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.72     | ±9.6                   |
| 10176 | CAH | 10.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10177 | CAJ | 5.0 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10178 | CAH | 5.0 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.52     | ±9.6                   |
| 10179 | CAH | 10.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.50     | ±9.6                   |
| 10180 | CAH | 5.0 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10181 | CAF | 15.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.72     | ±9.6                   |
| 10182 | CAF | 15.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10183 | AAE | 15.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.50     | ±9.6                   |
| 10184 | CAF | 3.0 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10185 | CAF | 3.0 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.51     | ±9.6                   |
| 10186 | AAF | 3.0 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10187 | CAG | 1.4 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10188 | CAG | 1.4 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.52     | ±9.6                   |
| 10189 | AAG | 1.4 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10193 | CAE | HT20 Greenfield, MCS0 (6.5 Mbps), 99.4% DC    | WLAN    | 8.09     | ±9.6                   |
| 10194 | CAE | HT20 Greenfield, MCS4 (39.0 Mbps), 99.5% DC   | WLAN    | 8.12     | ±9.6                   |
| 10195 | CAE | HT20 Greenfield, MCS7 (65.0 Mbps), 99.5% DC   | WLAN    | 8.21     | ±9.6                   |
| 10196 | CAE | HT20 Mixed, MCS0 (6.5 Mbps), 99.4% DC         | WLAN    | 8.10     | ±9.6                   |
| 10197 | CAE | HT20 Mixed, MCS4 (39.0 Mbps), 99.5% DC        | WLAN    | 8.13     | ±9.6                   |
| 10198 | CAE | HT20 Mixed, MCS7 (65.0 Mbps), 99.5% DC        | WLAN    | 8.27     | ±9.6                   |
| 10219 | CAE | HT20 Mixed, MCS0 (7.2 Mbps), 99.3% DC         | WLAN    | 8.03     | ±9.6                   |
| 10220 | CAE | HT20 Mixed, MCS4 (43.3 Mbps), 99.4% DC        | WLAN    | 8.13     | ±9.6                   |
| 10221 | CAE | HT20 Mixed, MCS7 (72.2 Mbps), 99.4% DC        | WLAN    | 8.27     | ±9.6                   |
| 10222 | CAE | HT40 Mixed, MCS0 (15.0 Mbps), 99.7% DC        | WLAN    | 8.06     | ±9.6                   |
| 10223 | CAE | HT40 Mixed, MCS4 (90.0 Mbps), 99.7% DC        | WLAN    | 8.48     | ±9.6                   |
| 10224 | CAE | HT40 Mixed, MCS7 (150.0 Mbps), 99.7% DC       | WLAN    | 8.08     | ±9.6                   |
| 10225 | CAC | Rel. 7 HSPA+, 16QAM, 5.0 MHz                  | WCDMA   | 5.97     | ±9.6                   |
| 10226 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.49     | ±9.6                   |
| 10227 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 10.26    | ±9.6                   |
| 10228 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB     | LTE-TDD | 9.22     | ±9.6                   |
| 10229 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.48     | ±9.6                   |

| UID   | Rev | Communication System Name                        | Group    | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------------|----------|----------|------------------------|
| 10230 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 10.25    | ±9.6                   |
| 10231 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB        | LTE-TDD  | 9.19     | ±9.6                   |
| 10232 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.48     | ±9.6                   |
| 10233 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 10.25    | ±9.6                   |
| 10234 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB        | LTE-TDD  | 9.21     | ±9.6                   |
| 10235 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 9.48     | ±9.6                   |
| 10236 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 10.25    | ±9.6                   |
| 10237 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.21     | ±9.6                   |
| 10238 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 9.48     | ±9.6                   |
| 10239 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 10.25    | ±9.6                   |
| 10240 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.21     | ±9.6                   |
| 10241 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.82     | ±9.6                   |
| 10242 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.86     | ±9.6                   |
| 10243 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.46     | ±9.6                   |
| 10244 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.06    | ±9.6                   |
| 10245 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.06    | ±9.6                   |
| 10246 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.30     | ±9.6                   |
| 10247 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.91     | ±9.6                   |
| 10248 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.09    | ±9.6                   |
| 10249 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.29     | ±9.6                   |
| 10250 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 9.81     | ±9.6                   |
| 10251 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 10.17    | ±9.6                   |
| 10252 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.24     | ±9.6                   |
| 10253 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 9.90     | ±9.6                   |
| 10254 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 10.14    | ±9.6                   |
| 10255 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.20     | ±9.6                   |
| 10256 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.96     | ±9.6                   |
| 10257 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 10.08    | ±9.6                   |
| 10258 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.34     | ±9.6                   |
| 10259 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.98     | ±9.6                   |
| 10260 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.97     | ±9.6                   |
| 10261 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.24     | ±9.6                   |
| 10262 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.83     | ±9.6                   |
| 10263 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 10.16    | ±9.6                   |
| 10264 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.23     | ±9.6                   |
| 10265 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 9.92     | ±9.6                   |
| 10266 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.07    | ±9.6                   |
| 10267 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.30     | ±9.6                   |
| 10268 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.06    | ±9.6                   |
| 10269 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.13    | ±9.6                   |
| 10270 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.58     | ±9.6                   |
| 10274 | CAC | Rel. 6 HSUPA Subset 2, beta_d 0, QPSK, 5.0 MHz   | WCDMA    | 4.87     | ±9.6                   |
| 10275 | CAC | Rel. 6 HSUPA Subset 2, beta_d 15, QPSK, 5.0 MHz  | WCDMA    | 3.96     | ±9.6                   |
| 10290 | AAB | RC1, SO55, Full frame rate, 1xRTT                | CDMA2000 | 3.91     | ±9.6                   |
| 10291 | AAB | RC3, SO55, Full frame rate, 1xRTT                | CDMA2000 | 3.46     | ±9.6                   |
| 10292 | AAB | RC3, SO32, Full frame rate, SCH0 disabled, 1xRTT | CDMA2000 | 3.39     | ±9.6                   |
| 10293 | AAB | RC3, SO3, Full frame rate, 1xRTT                 | CDMA2000 | 3.50     | ±9.6                   |
| 10295 | AAB | RC3, SO3, 1/8 frame rate, 1xRTT                  | CDMA2000 | 12.49    | ±9.6                   |
| 10297 | AAE | 20.0 MHz, QPSK, 50% RB                           | LTE-FDD  | 5.81     | ±9.6                   |
| 10298 | AAE | 3.0 MHz, QPSK, 50% RB                            | LTE-FDD  | 5.72     | ±9.6                   |
| 10299 | AAE | 3.0 MHz, 16QAM, 50% RB                           | LTE-FDD  | 6.39     | ±9.6                   |
| 10300 | AAE | 3.0 MHz, 64QAM, 50% RB                           | LTE-FDD  | 6.60     | ±9.6                   |
| 10301 | AAA | PUSC, 29:18, QPSK, 5.0 ms, 18 TRAF SYM           | WiMAX    | 12.03    | ±9.6                   |
| 10302 | AAA | PUSC, 29:18, QPSK, 5.0 ms, 15 TRAF SYM           | WiMAX    | 12.57    | ±9.6                   |
| 10303 | AAA | PUSC, 31:15, 64QAM, 5.0 ms, 15 TRAF SYM          | WiMAX    | 12.52    | ±9.6                   |
| 10304 | AAA | PUSC, 29:18, 64QAM, 5.0 ms, 18 TRAF SYM          | WiMAX    | 11.86    | ±9.6                   |
| 10305 | AAA | PUSC, 31:15, 64QAM, 10.0 ms, 15 TRAF SYM         | WiMAX    | 15.24    | ±9.6                   |
| 10306 | AAA | PUSC, 29:18, 64QAM, 10.0 ms, 18 TRAF SYM         | WiMAX    | 14.67    | ±9.6                   |
| 10307 | AAA | PUSC, 29:18, QPSK, 10.0 ms, 18 TRAF SYM          | WiMAX    | 14.49    | ±9.6                   |
| 10308 | AAA | PUSC, 29:18, 16QAM, 10.0 ms, 18 TRAF SYM         | WiMAX    | 14.46    | ±9.6                   |
| 10309 | AAA | AMC 2x3, 29:18, 16QAM, 10.0 ms, 18 TRAF SYM      | WiMAX    | 14.58    | ±9.6                   |
| 10310 | AAA | AMC 2x3, 29:18, QPSK, 10.0 ms, 18 TRAF SYM       | WiMAX    | 14.57    | ±9.6                   |
| 10311 | AAE | 15.0 MHz, QPSK, 100% RB                          | LTE-FDD  | 6.06     | ±9.6                   |
| 10315 | AAB | DSSS, DBPSK, 1.0 Mbps, 96.0% DC                  | WLAN     | 1.71     | ±9.6                   |
| 10316 | AAB | OFDM, BPSK, 6.0 Mbps, 95.9% DC                   | WLAN     | 8.36     | ±9.6                   |
| 10317 | AAE | OFDM, BPSK, 6.0 Mbps, 95.9% DC                   | WLAN     | 8.36     | ±9.6                   |

| UID   | Rev | Communication System Name                                   | Group    | PAR (dB) | Unc <sup>E</sup> $k = 2$ |
|-------|-----|-------------------------------------------------------------|----------|----------|--------------------------|
| 10352 | AAA | Pulse (D=10%, T=5 ms)                                       | Generic  | 10.00    | ±9.6                     |
| 10353 | AAA | Pulse (D=20%, T=5 ms)                                       | Generic  | 6.99     | ±9.6                     |
| 10354 | AAA | Pulse (D=40%, T=5 ms)                                       | Generic  | 3.98     | ±9.6                     |
| 10355 | AAA | Pulse (D=60%, T=5 ms)                                       | Generic  | 2.22     | ±9.6                     |
| 10356 | AAA | Pulse (D=80%, T=5 ms)                                       | Generic  | 0.97     | ±9.6                     |
| 10387 | AAA | Random (BW=1 MHz, MOD=QPSK)                                 | Generic  | 5.10     | ±9.6                     |
| 10388 | AAA | Random (BW=10 MHz, MOD=QPSK)                                | Generic  | 5.22     | ±9.6                     |
| 10396 | AAA | Random (BW=100 kHz, MOD=64QAM)                              | Generic  | 6.27     | ±9.6                     |
| 10399 | AAA | Random (BW=40 MHz, MOD=64QAM)                               | Generic  | 6.27     | ±9.6                     |
| 10400 | AAF | VHT20, MCS5 (52.0 Mbps), 99.0% DC                           | WLAN     | 8.37     | ±9.6                     |
| 10401 | AAF | VHT40, MCS5 (108.0 Mbps), 96.7% DC                          | WLAN     | 8.60     | ±9.6                     |
| 10402 | AAF | VHT80, MCS5 (234.0 Mbps), 99.0% DC                          | WLAN     | 8.53     | ±9.6                     |
| 10403 | AAB | Rev. 0, 1xEV-DO                                             | CDMA2000 | 3.76     | ±9.6                     |
| 10404 | AAB | Rev. A, 1xEV-DO                                             | CDMA2000 | 3.77     | ±9.6                     |
| 10406 | AAB | RC3, SO32, Full frame rate, SCH0 enabled, 1xRTT             | CDMA2000 | 5.22     | ±9.6                     |
| 10410 | AAH | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 4, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10414 | AAA | Random (BW=40 MHz, HIGH PAR)                                | Generic  | 8.54     | ±9.6                     |
| 10415 | AAA | DSSS, DBPSK, 1.0 Mbps, 99.9% DC                             | WLAN     | 1.54     | ±9.6                     |
| 10416 | AAA | OFDM, BPSK, 6.0 Mbps, 99.9% DC                              | WLAN     | 8.23     | ±9.6                     |
| 10417 | AAD | OFDM, BPSK, 6.0 Mbps, 99.9% DC                              | WLAN     | 8.23     | ±9.6                     |
| 10418 | AAA | OFDM (LTF), BPSK, 6.0 Mbps, 99.8% DC                        | WLAN     | 8.14     | ±9.6                     |
| 10419 | AAA | OFDM (STF), BPSK, 6.0 Mbps, 99.8% DC                        | WLAN     | 8.19     | ±9.6                     |
| 10422 | AAD | HT20 Greenfield, MCS0 (7.2 Mbps), 99.3% DC                  | WLAN     | 8.32     | ±9.6                     |
| 10423 | AAD | HT20 Greenfield, MCS4 (43.3 Mbps), 99.3% DC                 | WLAN     | 8.47     | ±9.6                     |
| 10424 | AAD | HT20 Greenfield, MCS7 (72.2 Mbps), 99.3% DC                 | WLAN     | 8.40     | ±9.6                     |
| 10425 | AAD | HT40 Greenfield, MCS0 (15.0 Mbps), 99.2% DC                 | WLAN     | 8.41     | ±9.6                     |
| 10426 | AAD | HT40 Greenfield, MCS4 (90.0 Mbps), 99.2% DC                 | WLAN     | 8.45     | ±9.6                     |
| 10427 | AAD | HT40 Greenfield, MCS7 (150.0 Mbps), 99.2% DC                | WLAN     | 8.41     | ±9.6                     |
| 10430 | AAE | 5.0 MHz, 64-QAM, 100% RB                                    | LTE-FDD  | 8.28     | ±9.6                     |
| 10431 | AAE | 10.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.38     | ±9.6                     |
| 10432 | AAD | 15.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.34     | ±9.6                     |
| 10433 | AAD | 20.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.34     | ±9.6                     |
| 10434 | AAB | BS Test Model 1, 64 DPCH, 64QAM, 5.0 MHz (DL)               | WCDMA    | 8.60     | ±9.6                     |
| 10435 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10447 | AAE | 5.0 MHz, 64-QAM, 100% RB                                    | LTE-FDD  | 7.56     | ±9.6                     |
| 10448 | AAE | 10.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.53     | ±9.6                     |
| 10449 | AAD | 15.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.51     | ±9.6                     |
| 10450 | AAD | 20.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.48     | ±9.6                     |
| 10451 | AAB | BS Test Model 1, 64 DPCH, Clipping 44%, 64QAM, 5.0 MHz (DL) | WCDMA    | 7.59     | ±9.6                     |
| 10456 | AAD | VHT160, MCS5 (58.5 Mbps), 99.0% DC                          | WLAN     | 8.63     | ±9.6                     |
| 10457 | AAB | Rel. 5 DC-HSDPA, QPSK, 10.0 MHz                             | WCDMA    | 6.62     | ±9.6                     |
| 10458 | AAA | Rev. B, 2 carriers, 1xEV-DO                                 | CDMA2000 | 6.55     | ±9.6                     |
| 10459 | AAA | Rev. B, 3 carriers, 1xEV-DO                                 | CDMA2000 | 8.25     | ±9.6                     |
| 10460 | AAB | Rel. 99, AMR, QPSK, 5.0 MHz                                 | WCDMA    | 2.39     | ±9.6                     |
| 10461 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10462 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.30     | ±9.6                     |
| 10463 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.56     | ±9.6                     |
| 10464 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10465 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.32     | ±9.6                     |
| 10466 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.57     | ±9.6                     |
| 10467 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10468 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.32     | ±9.6                     |
| 10469 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.56     | ±9.6                     |
| 10470 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10471 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10472 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10473 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10474 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10475 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10477 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10478 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10479 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB                 | LTE-TDD  | 7.74     | ±9.6                     |
| 10480 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.18     | ±9.6                     |
| 10481 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.45     | ±9.6                     |
| 10482 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB                 | LTE-TDD  | 7.71     | ±9.6                     |
| 10483 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.39     | ±9.6                     |

| UID   | Rev | Communication System Name                      | Group   | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------|---------|----------|------------------------|
| 10484 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.47     | ±9.6                   |
| 10485 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB    | LTE-TDD | 7.59     | ±9.6                   |
| 10486 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.38     | ±9.6                   |
| 10487 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.60     | ±9.6                   |
| 10488 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.70     | ±9.6                   |
| 10489 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.31     | ±9.6                   |
| 10490 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10491 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.74     | ±9.6                   |
| 10492 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.41     | ±9.6                   |
| 10493 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.55     | ±9.6                   |
| 10494 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.74     | ±9.6                   |
| 10495 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.37     | ±9.6                   |
| 10496 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10497 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.67     | ±9.6                   |
| 10498 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.40     | ±9.6                   |
| 10499 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.68     | ±9.6                   |
| 10500 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.67     | ±9.6                   |
| 10501 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.44     | ±9.6                   |
| 10502 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.52     | ±9.6                   |
| 10503 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.72     | ±9.6                   |
| 10504 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.31     | ±9.6                   |
| 10505 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10506 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.74     | ±9.6                   |
| 10507 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.36     | ±9.6                   |
| 10508 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.55     | ±9.6                   |
| 10509 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.99     | ±9.6                   |
| 10510 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.49     | ±9.6                   |
| 10511 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.51     | ±9.6                   |
| 10512 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.74     | ±9.6                   |
| 10513 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.42     | ±9.6                   |
| 10514 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.45     | ±9.6                   |
| 10515 | AAA | DSSS, DQPSK, 2.0 Mbps, 99.0% DC                | WLAN    | 1.58     | ±9.6                   |
| 10516 | AAA | HR-DSSS, DQPSK, 5.5 Mbps, 99.2% DC             | WLAN    | 1.57     | ±9.6                   |
| 10517 | AAA | HR-DSSS, DQPSK, 11.0 Mbps, 99.0% DC            | WLAN    | 1.58     | ±9.6                   |
| 10518 | AAD | OFDM, BPSK, 9.0 Mbps, 98.9% DC                 | WLAN    | 8.23     | ±9.6                   |
| 10519 | AAD | OFDM, QPSK, 12.0 Mbps, 99.0% DC                | WLAN    | 8.39     | ±9.6                   |
| 10520 | AAD | OFDM, QPSK, 18.0 Mbps, 99.0% DC                | WLAN    | 8.12     | ±9.6                   |
| 10521 | AAD | OFDM, 16QAM, 24.0 Mbps, 99.0% DC               | WLAN    | 7.97     | ±9.6                   |
| 10522 | AAD | OFDM, 16QAM, 36.0 Mbps, 99.0% DC               | WLAN    | 8.45     | ±9.6                   |
| 10523 | AAD | OFDM, 64QAM, 48.0 Mbps, 99.0% DC               | WLAN    | 8.08     | ±9.6                   |
| 10524 | AAD | OFDM, 64QAM, 54.0 Mbps, 99.0% DC               | WLAN    | 8.27     | ±9.6                   |
| 10525 | AAD | VHT20, MCS0 (6.5 Mbps), 98.9% DC               | WLAN    | 8.36     | ±9.6                   |
| 10526 | AAD | VHT20, MCS1 (13.0 Mbps), 99.0% DC              | WLAN    | 8.42     | ±9.6                   |
| 10527 | AAD | VHT20, MCS2 (19.5 Mbps), 99.0% DC              | WLAN    | 8.21     | ±9.6                   |
| 10528 | AAD | VHT20, MCS3 (26.0 Mbps), 99.0% DC              | WLAN    | 8.36     | ±9.6                   |
| 10529 | AAD | VHT20, MCS4 (39.0 Mbps), 99.0% DC              | WLAN    | 8.36     | ±9.6                   |
| 10531 | AAD | VHT20, MCS6 (58.5 Mbps), 99.0% DC              | WLAN    | 8.43     | ±9.6                   |
| 10532 | AAD | VHT20, MCS7 (65.0 Mbps), 99.0% DC              | WLAN    | 8.29     | ±9.6                   |
| 10533 | AAD | VHT20, MCS8 (78.0 Mbps), 99.0% DC              | WLAN    | 8.38     | ±9.6                   |
| 10534 | AAD | VHT40, MCS0 (13.5 Mbps), 98.9% DC              | WLAN    | 8.45     | ±9.6                   |
| 10535 | AAD | VHT40, MCS1 (27.0 Mbps), 98.8% DC              | WLAN    | 8.45     | ±9.6                   |
| 10536 | AAD | VHT40, MCS2 (40.5 Mbps), 98.8% DC              | WLAN    | 8.32     | ±9.6                   |
| 10537 | AAD | VHT40, MCS3 (54.0 Mbps), 98.7% DC              | WLAN    | 8.44     | ±9.6                   |
| 10538 | AAD | VHT40, MCS4 (81.0 Mbps), 98.5% DC              | WLAN    | 8.54     | ±9.6                   |
| 10540 | AAD | VHT40, MCS6 (121.5 Mbps), 98.3% DC             | WLAN    | 8.39     | ±9.6                   |
| 10541 | AAD | VHT40, MCS7 (135.0 Mbps), 98.3% DC             | WLAN    | 8.46     | ±9.6                   |
| 10542 | AAD | VHT40, MCS8 (162.0 Mbps), 98.1% DC             | WLAN    | 8.65     | ±9.6                   |
| 10543 | AAD | VHT40, MCS9 (180.0 Mbps), 98.0% DC             | WLAN    | 8.65     | ±9.6                   |
| 10544 | AAD | VHT80, MCS0 (29.3 Mbps), 99.0% DC              | WLAN    | 8.47     | ±9.6                   |
| 10545 | AAD | VHT80, MCS1 (58.5 Mbps), 99.0% DC              | WLAN    | 8.55     | ±9.6                   |
| 10546 | AAD | VHT80, MCS2 (87.8 Mbps), 99.0% DC              | WLAN    | 8.35     | ±9.6                   |
| 10547 | AAD | VHT80, MCS3 (117.0 Mbps), 99.0% DC             | WLAN    | 8.49     | ±9.6                   |
| 10548 | AAD | VHT80, MCS4 (175.5 Mbps), 99.0% DC             | WLAN    | 8.37     | ±9.6                   |
| 10550 | AAD | VHT80, MCS6 (263.3 Mbps), 99.0% DC             | WLAN    | 8.38     | ±9.6                   |
| 10551 | AAD | VHT80, MCS7 (292.5 Mbps), 99.0% DC             | WLAN    | 8.50     | ±9.6                   |
| 10552 | AAD | VHT80, MCS8 (351.0 Mbps), 99.0% DC             | WLAN    | 8.42     | ±9.6                   |

| UID   | Rev | Communication System Name               | Group | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------|-------|----------|------------------------|
| 10553 | AAD | VHT80, MCS9 (390.0 Mbps), 99.0% DC      | WLAN  | 8.45     | ±9.6                   |
| 10554 | AAE | VHT160, MCS0 (58.5 Mbps), 99.0% DC      | WLAN  | 8.48     | ±9.6                   |
| 10555 | AAE | VHT160, MCS1 (117.0 Mbps), 99.0% DC     | WLAN  | 8.47     | ±9.6                   |
| 10556 | AAE | VHT160, MCS2 (175.5 Mbps), 99.0% DC     | WLAN  | 8.50     | ±9.6                   |
| 10557 | AAE | VHT160, MCS3 (234.0 Mbps), 99.0% DC     | WLAN  | 8.52     | ±9.6                   |
| 10558 | AAE | VHT160, MCS4 (351.0 Mbps), 99.0% DC     | WLAN  | 8.61     | ±9.6                   |
| 10560 | AAE | VHT160, MCS6 (526.5 Mbps), 99.0% DC     | WLAN  | 8.73     | ±9.6                   |
| 10561 | AAE | VHT160, MCS7 (585.0 Mbps), 99.0% DC     | WLAN  | 8.56     | ±9.6                   |
| 10562 | AAE | VHT160, MCS8 (702.0 Mbps), 99.0% DC     | WLAN  | 8.69     | ±9.6                   |
| 10563 | AAE | VHT160, MCS9 (780.0 Mbps), 99.0% DC     | WLAN  | 8.77     | ±9.6                   |
| 10564 | AAA | OFDM, BPSK, 9.0 Mbps, 98.9% DC          | WLAN  | 8.25     | ±9.6                   |
| 10565 | AAA | OFDM, QPSK, 12.0 Mbps, 99.0% DC         | WLAN  | 8.45     | ±9.6                   |
| 10566 | AAA | OFDM, QPSK, 18.0 Mbps, 99.0% DC         | WLAN  | 8.13     | ±9.6                   |
| 10567 | AAA | OFDM, 16QAM, 24.0 Mbps, 99.0% DC        | WLAN  | 8.00     | ±9.6                   |
| 10568 | AAA | OFDM, 16QAM, 36.0 Mbps, 99.0% DC        | WLAN  | 8.37     | ±9.6                   |
| 10569 | AAA | OFDM, 64QAM, 48.0 Mbps, 99.0% DC        | WLAN  | 8.10     | ±9.6                   |
| 10570 | AAA | OFDM, 64QAM, 54.0 Mbps, 99.0% DC        | WLAN  | 8.30     | ±9.6                   |
| 10571 | AAA | DSSS, DQPSK, 1.0 Mbps, 90.0% DC         | WLAN  | 1.99     | ±9.6                   |
| 10572 | AAA | DSSS, DQPSK, 2.0 Mbps, 90.0% DC         | WLAN  | 1.99     | ±9.6                   |
| 10573 | AAA | HR-DSSS, DQPSK, 5.5 Mbps, 90.1% DC      | WLAN  | 1.98     | ±9.6                   |
| 10574 | AAA | HR-DSSS, DQPSK, 11.0 Mbps, 90.3% DC     | WLAN  | 1.98     | ±9.6                   |
| 10575 | AAA | OFDM, BPSK, 6.0 Mbps, 89.9% DC          | WLAN  | 8.59     | ±9.6                   |
| 10576 | AAA | OFDM, BPSK, 9.0 Mbps, 89.9% DC          | WLAN  | 8.60     | ±9.6                   |
| 10577 | AAA | OFDM, QPSK, 12.0 Mbps, 90.0% DC         | WLAN  | 8.70     | ±9.6                   |
| 10578 | AAA | OFDM, QPSK, 18.0 Mbps, 90.0% DC         | WLAN  | 8.49     | ±9.6                   |
| 10579 | AAA | OFDM, 16QAM, 24.0 Mbps, 90.0% DC        | WLAN  | 8.36     | ±9.6                   |
| 10580 | AAA | OFDM, 16QAM, 36.0 Mbps, 90.0% DC        | WLAN  | 8.76     | ±9.6                   |
| 10581 | AAA | OFDM, 64QAM, 48.0 Mbps, 90.0% DC        | WLAN  | 8.35     | ±9.6                   |
| 10582 | AAA | OFDM, 64QAM, 54.0 Mbps, 90.0% DC        | WLAN  | 8.67     | ±9.6                   |
| 10583 | AAD | OFDM, BPSK, 6.0 Mbps, 89.9% DC          | WLAN  | 8.59     | ±9.6                   |
| 10584 | AAD | OFDM, BPSK, 9.0 Mbps, 89.9% DC          | WLAN  | 8.60     | ±9.6                   |
| 10585 | AAD | OFDM, QPSK, 12.0 Mbps, 90.0% DC         | WLAN  | 8.70     | ±9.6                   |
| 10586 | AAD | OFDM, QPSK, 18.0 Mbps, 90.0% DC         | WLAN  | 8.49     | ±9.6                   |
| 10587 | AAD | OFDM, 16QAM, 24.0 Mbps, 90.0% DC        | WLAN  | 8.36     | ±9.6                   |
| 10588 | AAD | OFDM, 16QAM, 36.0 Mbps, 90.0% DC        | WLAN  | 8.76     | ±9.6                   |
| 10589 | AAD | OFDM, 64QAM, 48.0 Mbps, 90.0% DC        | WLAN  | 8.35     | ±9.6                   |
| 10590 | AAD | OFDM, 64QAM, 54.0 Mbps, 90.0% DC        | WLAN  | 8.67     | ±9.6                   |
| 10591 | AAD | HT20 Mixed, MCS0 (6.5 Mbps), 89.9% DC   | WLAN  | 8.63     | ±9.6                   |
| 10592 | AAD | HT20 Mixed, MCS1 (13.0 Mbps), 90.0% DC  | WLAN  | 8.79     | ±9.6                   |
| 10593 | AAD | HT20 Mixed, MCS2 (19.5 Mbps), 90.0% DC  | WLAN  | 8.64     | ±9.6                   |
| 10594 | AAD | HT20 Mixed, MCS3 (26.0 Mbps), 90.0% DC  | WLAN  | 8.74     | ±9.6                   |
| 10595 | AAD | HT20 Mixed, MCS4 (39.0 Mbps), 90.0% DC  | WLAN  | 8.74     | ±9.6                   |
| 10596 | AAD | HT20 Mixed, MCS5 (52.0 Mbps), 90.0% DC  | WLAN  | 8.71     | ±9.6                   |
| 10597 | AAD | HT20 Mixed, MCS6 (58.5 Mbps), 90.0% DC  | WLAN  | 8.72     | ±9.6                   |
| 10598 | AAD | HT20 Mixed, MCS7 (65.0 Mbps), 90.0% DC  | WLAN  | 8.50     | ±9.6                   |
| 10599 | AAD | HT40 Mixed, MCS0 (13.5 Mbps), 89.9% DC  | WLAN  | 8.79     | ±9.6                   |
| 10600 | AAD | HT40 Mixed, MCS1 (27.0 Mbps), 89.7% DC  | WLAN  | 8.88     | ±9.6                   |
| 10601 | AAD | HT40 Mixed, MCS2 (40.5 Mbps), 89.6% DC  | WLAN  | 8.82     | ±9.6                   |
| 10602 | AAD | HT40 Mixed, MCS3 (54.0 Mbps), 89.4% DC  | WLAN  | 8.94     | ±9.6                   |
| 10603 | AAD | HT40 Mixed, MCS4 (81.0 Mbps), 89.2% DC  | WLAN  | 9.03     | ±9.6                   |
| 10604 | AAD | HT40 Mixed, MCS5 (108.0 Mbps), 88.9% DC | WLAN  | 8.76     | ±9.6                   |
| 10605 | AAD | HT40 Mixed, MCS6 (121.5 Mbps), 88.8% DC | WLAN  | 8.97     | ±9.6                   |
| 10606 | AAD | HT40 Mixed, MCS7 (135.0 Mbps), 88.7% DC | WLAN  | 8.82     | ±9.6                   |
| 10607 | AAD | VHT20, MCS0 (6.5 Mbps), 89.9% DC        | WLAN  | 8.64     | ±9.6                   |
| 10608 | AAD | VHT20, MCS1 (13.0 Mbps), 90.0% DC       | WLAN  | 8.77     | ±9.6                   |
| 10609 | AAD | VHT20, MCS2 (19.5 Mbps), 90.0% DC       | WLAN  | 8.57     | ±9.6                   |
| 10610 | AAD | VHT20, MCS3 (26.0 Mbps), 90.0% DC       | WLAN  | 8.78     | ±9.6                   |
| 10611 | AAD | VHT20, MCS4 (39.0 Mbps), 90.0% DC       | WLAN  | 8.70     | ±9.6                   |
| 10612 | AAD | VHT20, MCS5 (52.0 Mbps), 90.0% DC       | WLAN  | 8.77     | ±9.6                   |
| 10613 | AAD | VHT20, MCS6 (58.5 Mbps), 90.0% DC       | WLAN  | 8.94     | ±9.6                   |
| 10614 | AAD | VHT20, MCS7 (65.0 Mbps), 90.0% DC       | WLAN  | 8.59     | ±9.6                   |
| 10615 | AAD | VHT20, MCS8 (78.0 Mbps), 90.0% DC       | WLAN  | 8.82     | ±9.6                   |
| 10616 | AAD | VHT40, MCS0 (13.5 Mbps), 89.9% DC       | WLAN  | 8.82     | ±9.6                   |
| 10617 | AAD | VHT40, MCS1 (27.0 Mbps), 89.7% DC       | WLAN  | 8.81     | ±9.6                   |
| 10618 | AAD | VHT40, MCS2 (40.5 Mbps), 89.6% DC       | WLAN  | 8.58     | ±9.6                   |
| 10619 | AAD | VHT40, MCS3 (54.0 Mbps), 89.4% DC       | WLAN  | 8.86     | ±9.6                   |

| UID   | Rev | Communication System Name                  | Group     | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------|-----------|----------|------------------------|
| 10620 | AAD | VHT40, MCS4 (81.0 Mbps), 89.2% DC          | WLAN      | 8.87     | ±9.6                   |
| 10621 | AAD | VHT40, MCS5 (108.0 Mbps), 88.9% DC         | WLAN      | 8.77     | ±9.6                   |
| 10622 | AAD | VHT40, MCS6 (121.5 Mbps), 88.8% DC         | WLAN      | 8.68     | ±9.6                   |
| 10623 | AAD | VHT40, MCS7 (135.0 Mbps), 88.6% DC         | WLAN      | 8.82     | ±9.6                   |
| 10624 | AAD | VHT40, MCS8 (162.0 Mbps), 88.4% DC         | WLAN      | 8.96     | ±9.6                   |
| 10625 | AAD | VHT40, MCS9 (180.0 Mbps), 88.2% DC         | WLAN      | 8.96     | ±9.6                   |
| 10626 | AAD | VHT80, MCS0 (29.3 Mbps), 90.0% DC          | WLAN      | 8.83     | ±9.6                   |
| 10627 | AAD | VHT80, MCS1 (58.5 Mbps), 90.0% DC          | WLAN      | 8.88     | ±9.6                   |
| 10628 | AAD | VHT80, MCS2 (87.8 Mbps), 90.0% DC          | WLAN      | 8.71     | ±9.6                   |
| 10629 | AAD | VHT80, MCS3 (117.0 Mbps), 90.0% DC         | WLAN      | 8.85     | ±9.6                   |
| 10630 | AAD | VHT80, MCS4 (175.5 Mbps), 90.0% DC         | WLAN      | 8.72     | ±9.6                   |
| 10631 | AAD | VHT80, MCS5 (234.0 Mbps), 90.0% DC         | WLAN      | 8.81     | ±9.6                   |
| 10632 | AAD | VHT80, MCS6 (263.3 Mbps), 90.0% DC         | WLAN      | 8.74     | ±9.6                   |
| 10633 | AAD | VHT80, MCS7 (292.5 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10634 | AAD | VHT80, MCS8 (351.0 Mbps), 90.0% DC         | WLAN      | 8.80     | ±9.6                   |
| 10635 | AAD | VHT80, MCS9 (390.0 Mbps), 90.0% DC         | WLAN      | 8.81     | ±9.6                   |
| 10636 | AAE | VHT160, MCS0 (58.5 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10637 | AAE | VHT160, MCS1 (117.0 Mbps), 90.0% DC        | WLAN      | 8.79     | ±9.6                   |
| 10638 | AAE | VHT160, MCS2 (175.5 Mbps), 90.0% DC        | WLAN      | 8.86     | ±9.6                   |
| 10639 | AAE | VHT160, MCS3 (234.0 Mbps), 90.0% DC        | WLAN      | 8.85     | ±9.6                   |
| 10640 | AAE | VHT160, MCS4 (351.0 Mbps), 90.0% DC        | WLAN      | 8.98     | ±9.6                   |
| 10641 | AAE | VHT160, MCS5 (468.0 Mbps), 90.0% DC        | WLAN      | 9.06     | ±9.6                   |
| 10642 | AAE | VHT160, MCS6 (526.5 Mbps), 90.0% DC        | WLAN      | 9.06     | ±9.6                   |
| 10643 | AAE | VHT160, MCS7 (585.0 Mbps), 90.0% DC        | WLAN      | 8.89     | ±9.6                   |
| 10644 | AAE | VHT160, MCS8 (702.0 Mbps), 90.0% DC        | WLAN      | 9.05     | ±9.6                   |
| 10645 | AAE | VHT160, MCS9 (780.0 Mbps), 90.0% DC        | WLAN      | 9.11     | ±9.6                   |
| 10646 | AAH | 5.0 MHz, QPSK, UL/DL CFG: 2, SSC: 4, 1 RB  | LTE-TDD   | 11.96    | ±9.6                   |
| 10647 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 2, SSC: 7, 1 RB | LTE-TDD   | 11.96    | ±9.6                   |
| 10648 | AAA | RC8, SO75, 1xAdvanced                      | CDMA2000  | 3.45     | ±9.6                   |
| 10670 | AAA | LE, Test, GFSK                             | Bluetooth | 2.19     | ±9.6                   |
| 10671 | AAC | ET20, MCS0 (8.6 Mbps), 90.0% DC            | WLAN      | 9.09     | ±9.6                   |
| 10672 | AAC | ET20, MCS1 (17.0 Mbps), 90.0% DC           | WLAN      | 8.57     | ±9.6                   |
| 10673 | AAC | ET20, MCS2 (26.0 Mbps), 90.0% DC           | WLAN      | 8.78     | ±9.6                   |
| 10674 | AAC | ET20, MCS3 (34.0 Mbps), 90.0% DC           | WLAN      | 8.74     | ±9.6                   |
| 10675 | AAC | ET20, MCS4 (52.0 Mbps), 90.0% DC           | WLAN      | 8.90     | ±9.6                   |
| 10676 | AAC | ET20, MCS5 (69.0 Mbps), 90.0% DC           | WLAN      | 8.77     | ±9.6                   |
| 10677 | AAC | ET20, MCS6 (77.0 Mbps), 90.0% DC           | WLAN      | 8.73     | ±9.6                   |
| 10678 | AAC | ET20, MCS7 (86.0 Mbps), 90.0% DC           | WLAN      | 8.78     | ±9.6                   |
| 10679 | AAC | ET20, MCS8 (103.0 Mbps), 90.0% DC          | WLAN      | 8.89     | ±9.6                   |
| 10680 | AAC | ET20, MCS9 (115.0 Mbps), 90.0% DC          | WLAN      | 8.80     | ±9.6                   |
| 10681 | AAC | ET20, MCS10 (122.0 Mbps), 90.0% DC         | WLAN      | 8.62     | ±9.6                   |
| 10682 | AAC | ET20, MCS11 (135.0 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10683 | AAC | ET20, MCS0 (8.6 Mbps), 100.0% DC           | WLAN      | 8.42     | ±9.6                   |
| 10684 | AAC | ET20, MCS1 (17.0 Mbps), 100.0% DC          | WLAN      | 8.26     | ±9.6                   |
| 10685 | AAC | ET20, MCS2 (26.0 Mbps), 100.0% DC          | WLAN      | 8.33     | ±9.6                   |
| 10686 | AAC | ET20, MCS3 (34.0 Mbps), 100.0% DC          | WLAN      | 8.28     | ±9.6                   |
| 10687 | AAC | ET20, MCS4 (52.0 Mbps), 100.0% DC          | WLAN      | 8.45     | ±9.6                   |
| 10688 | AAC | ET20, MCS5 (69.0 Mbps), 100.0% DC          | WLAN      | 8.29     | ±9.6                   |
| 10689 | AAC | ET20, MCS6 (77.0 Mbps), 100.0% DC          | WLAN      | 8.55     | ±9.6                   |
| 10690 | AAC | ET20, MCS7 (86.0 Mbps), 100.0% DC          | WLAN      | 8.29     | ±9.6                   |
| 10691 | AAC | ET20, MCS8 (103.0 Mbps), 100.0% DC         | WLAN      | 8.25     | ±9.6                   |
| 10692 | AAC | ET20, MCS9 (115.0 Mbps), 100.0% DC         | WLAN      | 8.29     | ±9.6                   |
| 10693 | AAC | ET20, MCS10 (122.0 Mbps), 100.0% DC        | WLAN      | 8.25     | ±9.6                   |
| 10694 | AAC | ET20, MCS11 (135.0 Mbps), 100.0% DC        | WLAN      | 8.57     | ±9.6                   |
| 10695 | AAC | ET40, MCS0 (17.2 Mbps), 89.8% DC           | WLAN      | 8.78     | ±9.6                   |
| 10696 | AAC | ET40, MCS1 (34.0 Mbps), 89.8% DC           | WLAN      | 8.91     | ±9.6                   |
| 10697 | AAC | ET40, MCS2 (52.0 Mbps), 89.7% DC           | WLAN      | 8.61     | ±9.6                   |
| 10698 | AAC | ET40, MCS3 (69.0 Mbps), 89.7% DC           | WLAN      | 8.89     | ±9.6                   |
| 10699 | AAC | ET40, MCS4 (103.0 Mbps), 89.9% DC          | WLAN      | 8.82     | ±9.6                   |
| 10700 | AAC | ET40, MCS5 (138.0 Mbps), 89.8% DC          | WLAN      | 8.73     | ±9.6                   |
| 10701 | AAC | ET40, MCS6 (155.0 Mbps), 89.8% DC          | WLAN      | 8.86     | ±9.6                   |
| 10702 | AAC | ET40, MCS7 (172.0 Mbps), 89.8% DC          | WLAN      | 8.70     | ±9.6                   |
| 10703 | AAC | ET40, MCS8 (207.0 Mbps), 89.8% DC          | WLAN      | 8.82     | ±9.6                   |
| 10704 | AAC | ET40, MCS9 (229.0 Mbps), 89.8% DC          | WLAN      | 8.56     | ±9.6                   |
| 10705 | AAC | ET40, MCS10 (258.0 Mbps), 89.8% DC         | WLAN      | 8.69     | ±9.6                   |
| 10706 | AAC | ET40, MCS11 (267.0 Mbps), 89.8% DC         | WLAN      | 8.66     | ±9.6                   |

| UID   | Rev | Communication System Name                        | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------------|---------------|----------|------------------------|
| 10707 | AAC | ET40, MCS0 (17.2 Mbps), 99.8% DC                 | WLAN          | 8.32     | ±9.6                   |
| 10708 | AAC | ET40, MCS1 (34.0 Mbps), 99.7% DC                 | WLAN          | 8.55     | ±9.6                   |
| 10709 | AAC | ET40, MCS2 (52.0 Mbps), 99.7% DC                 | WLAN          | 8.33     | ±9.6                   |
| 10710 | AAC | ET40, MCS3 (69.0 Mbps), 99.7% DC                 | WLAN          | 8.29     | ±9.6                   |
| 10711 | AAC | ET40, MCS4 (103.0 Mbps), 99.8% DC                | WLAN          | 8.39     | ±9.6                   |
| 10712 | AAC | ET40, MCS5 (138.0 Mbps), 99.8% DC                | WLAN          | 8.67     | ±9.6                   |
| 10713 | AAC | ET40, MCS6 (155.0 Mbps), 99.8% DC                | WLAN          | 8.33     | ±9.6                   |
| 10714 | AAC | ET40, MCS7 (172.0 Mbps), 99.8% DC                | WLAN          | 8.26     | ±9.6                   |
| 10715 | AAC | ET40, MCS8 (207.0 Mbps), 99.8% DC                | WLAN          | 8.45     | ±9.6                   |
| 10716 | AAC | ET40, MCS9 (229.0 Mbps), 99.8% DC                | WLAN          | 8.30     | ±9.6                   |
| 10717 | AAC | ET40, MCS10 (258.0 Mbps), 99.8% DC               | WLAN          | 8.48     | ±9.6                   |
| 10718 | AAC | ET40, MCS11 (267.0 Mbps), 99.8% DC               | WLAN          | 8.24     | ±9.6                   |
| 10719 | AAC | ET80, MCS0 (36.0 Mbps), 90.0% DC                 | WLAN          | 8.81     | ±9.6                   |
| 10720 | AAC | ET80, MCS1 (72.1 Mbps), 90.0% DC                 | WLAN          | 8.87     | ±9.6                   |
| 10721 | AAC | ET80, MCS2 (108.1 Mbps), 90.0% DC                | WLAN          | 8.76     | ±9.6                   |
| 10722 | AAC | ET80, MCS3 (144.1 Mbps), 90.0% DC                | WLAN          | 8.55     | ±9.6                   |
| 10723 | AAC | ET80, MCS4 (216.2 Mbps), 90.0% DC                | WLAN          | 8.70     | ±9.6                   |
| 10724 | AAC | ET80, MCS5 (288.2 Mbps), 90.0% DC                | WLAN          | 8.90     | ±9.6                   |
| 10725 | AAC | ET80, MCS6 (324.4 Mbps), 90.0% DC                | WLAN          | 8.74     | ±9.6                   |
| 10726 | AAC | ET80, MCS7 (360.3 Mbps), 90.0% DC                | WLAN          | 8.72     | ±9.6                   |
| 10727 | AAC | ET80, MCS8 (432.4 Mbps), 90.0% DC                | WLAN          | 8.66     | ±9.6                   |
| 10728 | AAC | ET80, MCS9 (480.4 Mbps), 90.0% DC                | WLAN          | 8.65     | ±9.6                   |
| 10729 | AAC | ET80, MCS10 (540.4 Mbps), 90.0% DC               | WLAN          | 8.64     | ±9.6                   |
| 10730 | AAC | ET80, MCS11 (72.0 Mbps), 90.0% DC                | WLAN          | 8.67     | ±9.6                   |
| 10731 | AAC | ET80, MCS0 (36.0 Mbps), 100.0% DC                | WLAN          | 8.42     | ±9.6                   |
| 10732 | AAC | ET80, MCS1 (72.1 Mbps), 100.0% DC                | WLAN          | 8.46     | ±9.6                   |
| 10733 | AAC | ET80, MCS2 (108.1 Mbps), 100.0% DC               | WLAN          | 8.40     | ±9.6                   |
| 10734 | AAC | ET80, MCS3 (144.1 Mbps), 100.0% DC               | WLAN          | 8.25     | ±9.6                   |
| 10735 | AAC | ET80, MCS4 (216.2 Mbps), 100.0% DC               | WLAN          | 8.33     | ±9.6                   |
| 10736 | AAC | ET80, MCS5 (288.2 Mbps), 100.0% DC               | WLAN          | 8.27     | ±9.6                   |
| 10737 | AAC | ET80, MCS6 (324.4 Mbps), 100.0% DC               | WLAN          | 8.36     | ±9.6                   |
| 10738 | AAC | ET80, MCS7 (360.3 Mbps), 100.0% DC               | WLAN          | 8.42     | ±9.6                   |
| 10739 | AAC | ET80, MCS8 (432.4 Mbps), 100.0% DC               | WLAN          | 8.29     | ±9.6                   |
| 10740 | AAC | ET80, MCS9 (480.4 Mbps), 100.0% DC               | WLAN          | 8.48     | ±9.6                   |
| 10741 | AAC | ET80, MCS10 (540.4 Mbps), 100.0% DC              | WLAN          | 8.40     | ±9.6                   |
| 10742 | AAC | ET80, MCS11 (600.5 Mbps), 100.0% DC              | WLAN          | 8.43     | ±9.6                   |
| 10743 | AAC | ET160, MCS0 (72.0 Mbps), 88.2% DC                | WLAN          | 8.94     | ±9.6                   |
| 10744 | AAC | ET160, MCS1 (144.0 Mbps), 87.1% DC               | WLAN          | 9.16     | ±9.6                   |
| 10745 | AAC | ET160, MCS2 (216.0 Mbps), 87.4% DC               | WLAN          | 8.93     | ±9.6                   |
| 10746 | AAC | ET160, MCS3 (282.0 Mbps), 87.1% DC               | WLAN          | 9.11     | ±9.6                   |
| 10747 | AAC | ET160, MCS4 (432.0 Mbps), 87.4% DC               | WLAN          | 9.04     | ±9.6                   |
| 10748 | AAC | ET160, MCS5 (576.0 Mbps), 86.8% DC               | WLAN          | 8.93     | ±9.6                   |
| 10749 | AAC | ET160, MCS6 (649.0 Mbps), 86.7% DC               | WLAN          | 8.90     | ±9.6                   |
| 10750 | AAC | ET160, MCS7 (721.0 Mbps), 86.7% DC               | WLAN          | 8.79     | ±9.6                   |
| 10751 | AAC | ET160, MCS8 (865.0 Mbps), 86.3% DC               | WLAN          | 8.82     | ±9.6                   |
| 10752 | AAC | ET160, MCS9 (961.0 Mbps), 86.3% DC               | WLAN          | 8.81     | ±9.6                   |
| 10753 | AAC | ET160, MCS10 (1081.0 Mbps), 86.7% DC             | WLAN          | 9.00     | ±9.6                   |
| 10754 | AAC | ET160, MCS11 (1201.0 Mbps), 86.7% DC             | WLAN          | 8.94     | ±9.6                   |
| 10755 | AAC | ET160, MCS0 (72.0 Mbps), 98.0% DC                | WLAN          | 8.64     | ±9.6                   |
| 10756 | AAC | ET160, MCS1 (144.0 Mbps), 96.8% DC               | WLAN          | 8.77     | ±9.6                   |
| 10757 | AAC | ET160, MCS2 (216.0 Mbps), 97.1% DC               | WLAN          | 8.77     | ±9.6                   |
| 10758 | AAC | ET160, MCS3 (282.0 Mbps), 96.8% DC               | WLAN          | 8.69     | ±9.6                   |
| 10759 | AAC | ET160, MCS4 (432.0 Mbps), 97.1% DC               | WLAN          | 8.58     | ±9.6                   |
| 10760 | AAC | ET160, MCS5 (576.0 Mbps), 96.5% DC               | WLAN          | 8.49     | ±9.6                   |
| 10761 | AAC | ET160, MCS6 (649.0 Mbps), 96.3% DC               | WLAN          | 8.58     | ±9.6                   |
| 10762 | AAC | ET160, MCS7 (721.0 Mbps), 96.3% DC               | WLAN          | 8.49     | ±9.6                   |
| 10763 | AAC | ET160, MCS8 (865.0 Mbps), 95.9% DC               | WLAN          | 8.53     | ±9.6                   |
| 10764 | AAC | ET160, MCS9 (961.0 Mbps), 95.9% DC               | WLAN          | 8.54     | ±9.6                   |
| 10765 | AAC | ET160, MCS10 (1081.0 Mbps), 96.3% DC             | WLAN          | 8.54     | ±9.6                   |
| 10766 | AAC | ET160, MCS11 (1201.0 Mbps), 96.3% DC             | WLAN          | 8.51     | ±9.6                   |
| 10767 | AAG | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 99.9% DC, 1 RB   | 5G NR FR1 TDD | 7.99     | ±9.6                   |
| 10768 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10769 | AAD | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10770 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10771 | AAD | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10772 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.23     | ±9.6                   |

| UID   | Rev | Communication System Name                            | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------------|---------------|----------|------------------------|
| 10773 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.03     | ±9.6                   |
| 10774 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10775 | AAF | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB    | 5G NR FR1 TDD | 8.31     | ±9.6                   |
| 10776 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10777 | AAC | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10778 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10779 | AAC | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.42     | ±9.6                   |
| 10780 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.38     | ±9.6                   |
| 10781 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.38     | ±9.6                   |
| 10782 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.43     | ±9.6                   |
| 10783 | AAG | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 8.31     | ±9.6                   |
| 10784 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.29     | ±9.6                   |
| 10785 | AAD | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10786 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10787 | AAD | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.44     | ±9.6                   |
| 10788 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10789 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10790 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10791 | AAG | CP-OFDM, 5.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB       | 5G NR FR1 TDD | 7.83     | ±9.6                   |
| 10792 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.92     | ±9.6                   |
| 10793 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.95     | ±9.6                   |
| 10794 | AAE | CP-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.82     | ±9.6                   |
| 10795 | AAD | CP-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.84     | ±9.6                   |
| 10796 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.82     | ±9.6                   |
| 10797 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10798 | AAE | CP-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.89     | ±9.6                   |
| 10799 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.93     | ±9.6                   |
| 10801 | AAF | CP-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.89     | ±9.6                   |
| 10802 | AAE | CP-OFDM, 90.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.87     | ±9.6                   |
| 10803 | AAF | CP-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB    | 5G NR FR1 TDD | 7.93     | ±9.6                   |
| 10805 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10806 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10809 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10810 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10812 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10817 | AAG | CP-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10818 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10819 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.33     | ±9.6                   |
| 10820 | AAE | CP-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10821 | AAD | CP-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10822 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10823 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |
| 10824 | AAE | CP-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10825 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10827 | AAF | CP-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.42     | ±9.6                   |
| 10828 | AAE | CP-OFDM, 90.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.43     | ±9.6                   |
| 10829 | AAF | CP-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10830 | AAE | CP-OFDM, 10.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.63     | ±9.6                   |
| 10831 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.73     | ±9.6                   |
| 10832 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.74     | ±9.6                   |
| 10833 | AAD | CP-OFDM, 25.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10834 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.75     | ±9.6                   |
| 10835 | AAF | CP-OFDM, 40.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10836 | AAE | CP-OFDM, 50.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.66     | ±9.6                   |
| 10837 | AAF | CP-OFDM, 60.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.68     | ±9.6                   |
| 10839 | AAF | CP-OFDM, 80.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10840 | AAE | CP-OFDM, 90.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.67     | ±9.6                   |
| 10841 | AAF | CP-OFDM, 100.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB    | 5G NR FR1 TDD | 7.71     | ±9.6                   |
| 10843 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.49     | ±9.6                   |
| 10844 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10846 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10854 | AAE | CP-OFDM, 10.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10855 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |
| 10856 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10857 | AAD | CP-OFDM, 25.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10858 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |

| UID   | Rev | Communication System Name                                 | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------------------------|---------------|----------|------------------------|
| 10859 | AAF | CP-OFDM, 40.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10860 | AAE | CP-OFDM, 50.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10861 | AAF | CP-OFDM, 60.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10863 | AAF | CP-OFDM, 80.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10864 | AAE | CP-OFDM, 90.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10865 | AAF | CP-OFDM, 100.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB      | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10866 | AAF | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB      | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10868 | AAF | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 5.89     | ±9.6                   |
| 10869 | AAE | DFT-s-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10870 | AAE | DFT-s-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 5.86     | ±9.6                   |
| 10871 | AAE | DFT-s-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB    | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10872 | AAE | DFT-s-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB | 5G NR FR2 TDD | 6.52     | ±9.6                   |
| 10873 | AAE | DFT-s-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB    | 5G NR FR2 TDD | 6.61     | ±9.6                   |
| 10874 | AAE | DFT-s-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB | 5G NR FR2 TDD | 6.65     | ±9.6                   |
| 10875 | AAE | CP-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 7.78     | ±9.6                   |
| 10876 | AAE | CP-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.39     | ±9.6                   |
| 10877 | AAE | CP-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB       | 5G NR FR2 TDD | 7.95     | ±9.6                   |
| 10878 | AAE | CP-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB    | 5G NR FR2 TDD | 8.41     | ±9.6                   |
| 10879 | AAE | CP-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB       | 5G NR FR2 TDD | 8.12     | ±9.6                   |
| 10880 | AAE | CP-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB    | 5G NR FR2 TDD | 8.38     | ±9.6                   |
| 10881 | AAE | DFT-s-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB      | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10882 | AAE | DFT-s-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB   | 5G NR FR2 TDD | 5.96     | ±9.6                   |
| 10883 | AAE | DFT-s-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 6.57     | ±9.6                   |
| 10884 | AAE | DFT-s-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 6.53     | ±9.6                   |
| 10885 | AAE | DFT-s-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 6.61     | ±9.6                   |
| 10886 | AAE | DFT-s-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 6.65     | ±9.6                   |
| 10887 | AAE | CP-OFDM, 50.0 MHz, QPSK, 120 kHz, 99.9% DC, 1 RB          | 5G NR FR2 TDD | 7.78     | ±9.6                   |
| 10888 | AAE | CP-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB      | 5G NR FR2 TDD | 8.35     | ±9.6                   |
| 10889 | AAE | CP-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 8.02     | ±9.6                   |
| 10890 | AAE | CP-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.40     | ±9.6                   |
| 10891 | AAE | CP-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 8.13     | ±9.6                   |
| 10892 | AAE | CP-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.41     | ±9.6                   |
| 10897 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB         | 5G NR FR1 TDD | 5.66     | ±9.6                   |
| 10898 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.67     | ±9.6                   |
| 10899 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.67     | ±9.6                   |
| 10900 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10901 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10902 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10903 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10904 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10905 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10906 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10907 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB      | 5G NR FR1 TDD | 5.78     | ±9.6                   |
| 10908 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.93     | ±9.6                   |
| 10909 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.96     | ±9.6                   |
| 10910 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.83     | ±9.6                   |
| 10911 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.93     | ±9.6                   |
| 10912 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10913 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10914 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.85     | ±9.6                   |
| 10915 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.83     | ±9.6                   |
| 10916 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.87     | ±9.6                   |
| 10917 | AAD | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB    | 5G NR FR1 TDD | 5.94     | ±9.6                   |
| 10918 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB     | 5G NR FR1 TDD | 5.86     | ±9.6                   |
| 10919 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.86     | ±9.6                   |
| 10920 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.87     | ±9.6                   |
| 10921 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10922 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.82     | ±9.6                   |
| 10923 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10924 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10925 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.95     | ±9.6                   |
| 10926 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10927 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.94     | ±9.6                   |
| 10928 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 1 RB                   | 5G NR FR1 FDD | 5.52     | ±9.6                   |
| 10929 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 1 RB                  | 5G NR FR1 FDD | 5.52     | ±9.6                   |
| 10930 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 1 RB                  | 5G NR FR1 FDD | 5.52     | ±9.6                   |

| UID   | Rev | Communication System Name                   | Group         | PAR (dB) | Unc <sup>E</sup> $k = 2$ |
|-------|-----|---------------------------------------------|---------------|----------|--------------------------|
| 10931 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                     |
| 10932 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                     |
| 10933 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                     |
| 10934 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                     |
| 10935 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                     |
| 10936 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 50% RB   | 5G NR FR1 FDD | 5.90     | ±9.6                     |
| 10937 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.77     | ±9.6                     |
| 10938 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.90     | ±9.6                     |
| 10939 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.82     | ±9.6                     |
| 10940 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.89     | ±9.6                     |
| 10941 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.83     | ±9.6                     |
| 10942 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.85     | ±9.6                     |
| 10943 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.95     | ±9.6                     |
| 10944 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 100% RB  | 5G NR FR1 FDD | 5.81     | ±9.6                     |
| 10945 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.85     | ±9.6                     |
| 10946 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.83     | ±9.6                     |
| 10947 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.87     | ±9.6                     |
| 10948 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.94     | ±9.6                     |
| 10949 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.87     | ±9.6                     |
| 10950 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.94     | ±9.6                     |
| 10951 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.92     | ±9.6                     |
| 10978 | AAA | BDR, 1.0 MHz, 76.7% DC                      | ULLA          | 1.16     | ±9.6                     |
| 10979 | AAA | HDR4, 2.0 MHz, 25.1% DC                     | ULLA          | 8.58     | ±9.6                     |
| 10980 | AAA | HDR8, 4.0 MHz, 16.5% DC                     | ULLA          | 10.32    | ±9.6                     |
| 10981 | AAA | HDRp4, 2.0 MHz, 89.0% DC                    | ULLA          | 3.19     | ±9.6                     |
| 10982 | AAA | HDRp8, 4.0 MHz, 90.3% DC                    | ULLA          | 3.43     | ±9.6                     |
| 11013 | AAB | EHT320, MCS1 (272.0 Mbps), 100.0% DC        | WLAN          | 8.47     | ±9.6                     |
| 11014 | AAB | EHT320, MCS2 (408.0 Mbps), 100.0% DC        | WLAN          | 8.45     | ±9.6                     |
| 11015 | AAB | EHT320, MCS3 (544.0 Mbps), 100.0% DC        | WLAN          | 8.44     | ±9.6                     |
| 11016 | AAB | EHT320, MCS4 (817.0 Mbps), 100.0% DC        | WLAN          | 8.44     | ±9.6                     |
| 11017 | AAB | EHT320, MCS5 (1089.0 Mbps), 100.0% DC       | WLAN          | 8.41     | ±9.6                     |
| 11018 | AAB | EHT320, MCS6 (1225.0 Mbps), 100.0% DC       | WLAN          | 8.40     | ±9.6                     |
| 11019 | AAB | EHT320, MCS7 (1361.0 Mbps), 100.0% DC       | WLAN          | 8.29     | ±9.6                     |
| 11020 | AAB | EHT320, MCS8 (1633.0 Mbps), 100.0% DC       | WLAN          | 8.27     | ±9.6                     |
| 11021 | AAB | EHT320, MCS9 (1815.0 Mbps), 100.0% DC       | WLAN          | 8.46     | ±9.6                     |
| 11022 | AAB | EHT320, MCS10 (2042.0 Mbps), 100.0% DC      | WLAN          | 8.36     | ±9.6                     |
| 11023 | AAB | EHT320, MCS11 (2269.0 Mbps), 100.0% DC      | WLAN          | 8.09     | ±9.6                     |
| 11024 | AAB | EHT320, MCS12 (2450.0 Mbps), 100.0% DC      | WLAN          | 8.42     | ±9.6                     |
| 11025 | AAB | EHT320, MCS13 (2722.0 Mbps), 100.0% DC      | WLAN          | 8.37     | ±9.6                     |
| 11026 | AAB | EHT320, MCS0 (136.0 Mbps), 100.0% DC        | WLAN          | 8.39     | ±9.6                     |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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

Accreditation No.: SCS 0108

Client

RF Safety Lab  
Catonsville, USA

Certificate No.

EX-7857\_Dec25

## CALIBRATION CERTIFICATE

Object EX3DV4 - SN:7857

Calibration procedure(s) QA CAL-01.v10, QA CAL-12.v10, QA CAL-14.v7, QA CAL-23.v6,  
QA CAL-25.v8, QA CAL-48.v2  
Calibration procedure for dosimetric E-field probes

Calibration date December 09, 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  $(22 \pm 3)^\circ\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards           | ID         | Calibration Date (Certificate No.)     | Sched. Cal. |
|-----------------------------|------------|----------------------------------------|-------------|
| Power Sensor R&S NRP40T     | SN: 101861 | 29-Apr-25 (No. 2025-001450)            | Apr-26      |
| N-type mismatch combination | SN: L1119  | 26-Mar-25 (No. 217-04292)              | Mar-26      |
| OCP DAK-12                  | SN: 1016   | 16-Sept-25 (No. OCP-DAK12-1016_Sep25)  | Sep-26      |
| OCP DAK-3.5                 | SN: 1249   | 16-Sept-25 (No. OCP-DAK3.5-1249_Sep25) | Sep-26      |
| Reference Probe EX3DV4      | SN: 7349   | 10-Jan-25 (No. EX3-7349_Jan25)         | Jan-26      |
| DAE4                        | SN: 1301   | 30-Oct-25 (No. DAE4-1301_Oct25)        | Oct-26      |

| Secondary Standards | ID        | Check Date (in house)                 | Sched. Check |
|---------------------|-----------|---------------------------------------|--------------|
| ACAP 2020 Setup 1   | SN: L1404 | 01-Oct-25 (No. IHCK_ACAP2020-1_Oct25) | Oct-26       |
| OCP DAK-12          | SN: 1029  | 27-Feb-25 (No. OCP-DAK12-1029_Feb25)  | Feb-26       |
| OCP DAK-3.5         | SN: 1336  | 09-Dec-24 (No. OCP-DAK3.5-1336_Dec24) | Dec-25       |

|                                                                                                                 | Name           | Function              | Signature |
|-----------------------------------------------------------------------------------------------------------------|----------------|-----------------------|-----------|
| Calibrated by                                                                                                   | Joanna Lieshaj | Laboratory Technician |           |
| Approved by                                                                                                     | Sven Kühn      | Technical Manager     |           |
| Issued: December 09, 2025                                                                                       |                |                       |           |
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## Calibration Laboratory of

Schmid & Partner  
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



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## Glossary

|                        |                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                    | tissue simulating liquid                                                                                                                       |
| NORM <sub>x,y,z</sub>  | sensitivity in free space                                                                                                                      |
| ConvF                  | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                     |
| DCP                    | diode compression point                                                                                                                        |
| CF                     | crest factor (1/duty_cycle) of the RF signal                                                                                                   |
| A, B, C, D             | modulation dependent linearization parameters                                                                                                  |
| Polarization $\varphi$ | $\varphi$ rotation around probe axis                                                                                                           |
| Polarization $\theta$  | $\theta$ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis |
| Connector Angle        | information used in DASY system to align probe sensor X to the robot coordinate system                                                         |

## 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-Worn 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"

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\theta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

## Parameters of Probe: EX3DV4 - SN:7857

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k = 2) |
|-----------------------------------------------------------|----------|----------|----------|-------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.65     | 0.60     | 0.65     | ±10.1%      |
| DCP (mV) <sup>B</sup>                                     | 107.9    | 107.2    | 105.8    | ±4.7%       |

### Calibration Results for Modulation Response

| UID   | Communication System Name      |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C     | D<br>dB | VR<br>mV | Max<br>dev. | Max<br>Unc <sup>E</sup><br>k = 2 |
|-------|--------------------------------|---|---------|------------------------------|-------|---------|----------|-------------|----------------------------------|
| 0     | Continuous Wave                | X | 0.00    | 0.00                         | 1.00  | 0.00    | 131.7    | ±1.7%       | ±4.7%                            |
|       |                                | Y | 0.00    | 0.00                         | 1.00  |         | 121.4    |             |                                  |
|       |                                | Z | 0.00    | 0.00                         | 1.00  |         | 133.5    |             |                                  |
| 10352 | Pulse (D=10%, T=5 ms)          | X | 0.28    | 60.07                        | 14.86 | 10.00   | 23.0     | ±2.0%       | ±9.6%                            |
|       |                                | Y | 0.36    | 59.56                        | 14.19 |         | 24.0     |             |                                  |
|       |                                | Z | 0.28    | 62.70                        | 15.85 |         | 24.0     |             |                                  |
| 10353 | Pulse (D=20%, T=5 ms)          | X | 0.25    | 63.08                        | 14.94 | 6.99    | 46.0     | ±1.6%       | ±9.6%                            |
|       |                                | Y | 0.34    | 62.57                        | 14.25 |         | 47.0     |             |                                  |
|       |                                | Z | 0.26    | 65.71                        | 15.88 |         | 48.0     |             |                                  |
| 10354 | Pulse (D=40%, T=5 ms)          | X | 0.22    | 66.09                        | 15.02 | 3.98    | 92.0     | ±1.5%       | ±9.6%                            |
|       |                                | Y | 0.31    | 65.58                        | 14.31 |         | 95.0     |             |                                  |
|       |                                | Z | 0.24    | 68.72                        | 15.92 |         | 97.0     |             |                                  |
| 10355 | Pulse (D=60%, T=5 ms)          | X | 0.20    | 67.85                        | 15.09 | 2.22    | 138.0    | ±1.6%       | ±9.6%                            |
|       |                                | Y | 0.29    | 67.34                        | 14.36 |         | 142.0    |             |                                  |
|       |                                | Z | 0.23    | 70.48                        | 15.94 |         | 144.0    |             |                                  |
| 10387 | Random (BW=1 MHz, MOD=QPSK)    | X | 0.00    | 64.97                        | 16.64 | 0.45    | 105.0    | ±1.1%       | ±9.6%                            |
|       |                                | Y | 0.01    | 64.46                        | 15.72 |         | 108.0    |             |                                  |
|       |                                | Z | 0.00    | 67.60                        | 16.89 |         | 110.0    |             |                                  |
| 10388 | Random (BW=10 MHz, MOD=QPSK)   | X | 0.52    | 64.86                        | 14.29 | 0.00    | 111.0    | ±3.0%       | ±9.6%                            |
|       |                                | Y | 0.59    | 64.35                        | 13.76 |         | 114.0    |             |                                  |
|       |                                | Z | 0.79    | 67.49                        | 15.17 |         | 117.0    |             |                                  |
| 10396 | Random (BW=100 kHz, MOD=64QAM) | X | 0.00    | 63.80                        | 17.76 | 1.40    | 82.0     | ±1.8%       | ±9.6%                            |
|       |                                | Y | 0.02    | 63.29                        | 16.88 |         | 84.0     |             |                                  |
|       |                                | Z | 0.00    | 66.43                        | 17.96 |         | 86.0     |             |                                  |
| 10399 | Random (BW=40 MHz, MOD=64QAM)  | X | 1.68    | 63.80                        | 13.03 | 0.00    | 103.0    | ±3.9%       | ±9.6%                            |
|       |                                | Y | 1.67    | 63.29                        | 12.79 |         | 106.0    |             |                                  |
|       |                                | Z | 2.03    | 66.43                        | 14.61 |         | 109.0    |             |                                  |
| 10414 | Random (BW=40 MHz, HIGH PAR)   | X | 1.90    | 61.53                        | 12.96 | 0.00    | 73.0     | ±2.8%       | ±9.6%                            |
|       |                                | Y | 1.90    | 61.02                        | 12.73 |         | 76.0     |             |                                  |
|       |                                | Z | 2.49    | 64.16                        | 14.57 |         | 78.0     |             |                                  |

Note: For details on UID parameters see Appendix

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%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Linearization parameter uncertainty for maximum specified field strength.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## Parameters of Probe: EX3DV4 - SN:7857

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$V^{-1}$ | T1<br>$msV^{-2}$ | T2<br>$msV^{-1}$ | T3<br>ms | T4<br>$V^{-2}$ | T5<br>$V^{-1}$ | T6   |
|---|----------|----------|----------------------|------------------|------------------|----------|----------------|----------------|------|
| x | 7.2      | 52.12    | 33.37                | 2.78             | 0.00             | 4.90     | 0.50           | 0.00           | 1.00 |
| y | 7.5      | 54.11    | 33.38                | 3.11             | 0.00             | 4.90     | 0.35           | 0.00           | 1.00 |
| z | 8.6      | 62.79    | 34.28                | 1.92             | 0.00             | 4.90     | 0.39           | 0.00           | 1.00 |

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle                               | 24.1°      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 12 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Note:** Measurement distance from surface can be increased to 3–4 mm for an *Area Scan* job.

## Parameters of Probe: EX3DV4 - SN:7857

### Calibration Parameter Determined in HSL

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity <sup>F</sup> (S/m) | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc <sup>H</sup> (k = 2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|--------------------------|
| 300                  | 45.3                               | 0.87                            | 11.15   | 11.15   | 11.15   | 0.09               | 1.00                    | ±13.3%                   |
| 900                  | 41.5                               | 0.97                            | 8.89    | 8.87    | 8.37    | 0.36               | 1.27                    | ±11.0%                   |
| 1450                 | 40.5                               | 1.20                            | 7.56    | 7.54    | 7.11    | 0.36               | 1.27                    | ±11.0%                   |
| 1750                 | 40.1                               | 1.37                            | 7.51    | 7.49    | 7.07    | 0.35               | 1.27                    | ±11.0%                   |
| 1900                 | 40.0                               | 1.40                            | 7.19    | 7.17    | 6.77    | 0.35               | 1.27                    | ±11.0%                   |
| 2300                 | 39.5                               | 1.67                            | 6.99    | 6.97    | 6.58    | 0.35               | 1.27                    | ±11.0%                   |
| 2450                 | 39.2                               | 1.80                            | 6.80    | 6.79    | 6.40    | 0.35               | 1.27                    | ±11.0%                   |
| 2600                 | 39.0                               | 1.96                            | 6.87    | 6.85    | 6.47    | 0.34               | 1.27                    | ±11.0%                   |
| 5250                 | 35.9                               | 4.71                            | 5.17    | 5.15    | 4.86    | 0.31               | 1.27                    | ±13.1%                   |
| 5600                 | 35.5                               | 5.07                            | 4.73    | 4.72    | 4.45    | 0.28               | 1.27                    | ±13.1%                   |
| 5750                 | 35.4                               | 5.22                            | 4.80    | 4.78    | 4.52    | 0.26               | 1.27                    | ±13.1%                   |
| 5850                 | 35.2                               | 5.32                            | 4.69    | 4.67    | 4.41    | 0.25               | 1.27                    | ±13.1%                   |

<sup>C</sup> Frequency validity above 300 MHz of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ±110 MHz.

<sup>F</sup> The probes are calibrated using tissue simulating liquids (TSL) that deviate for  $\epsilon$  and  $\sigma$  by less than ±5% from the target values (typically better than ±3%) and are valid for TSL with deviations of up to ±10% if SAR correction is applied.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz and below ±2% for frequencies between 3–6 GHz at any distance larger than half the probe tip diameter from the boundary.

<sup>H</sup> The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. This is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

**Parameters of Probe: EX3DV4 - SN:7857****Calibration Parameter Determined in HSL**

| <b>f (MHz)<sup>C</sup></b> | <b>Relative Permittivity<sup>F</sup></b> | <b>Conductivity<sup>F</sup> (S/m)</b> | <b>ConvF X</b> | <b>ConvF Y</b> | <b>ConvF Z</b> | <b>Alpha<sup>G</sup></b> | <b>Depth<sup>G</sup> (mm)</b> | <b>Unc<sup>H</sup> (k = 2)</b> |
|----------------------------|------------------------------------------|---------------------------------------|----------------|----------------|----------------|--------------------------|-------------------------------|--------------------------------|
| 6500                       | 34.5                                     | 6.07                                  | 5.08           | 5.07           | 4.78           | 0.20                     | 1.27                          | ±18.6%                         |
| 8000                       | 32.7                                     | 7.84                                  | 5.67           | 5.65           | 5.33           | 0.20                     | 1.27                          | ±18.6%                         |

<sup>C</sup> Frequency validity is -600/+700 MHz at 6.5 GHz, ±700 MHz at or above 7 GHz, and ±150 MHz at 9.85 GHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

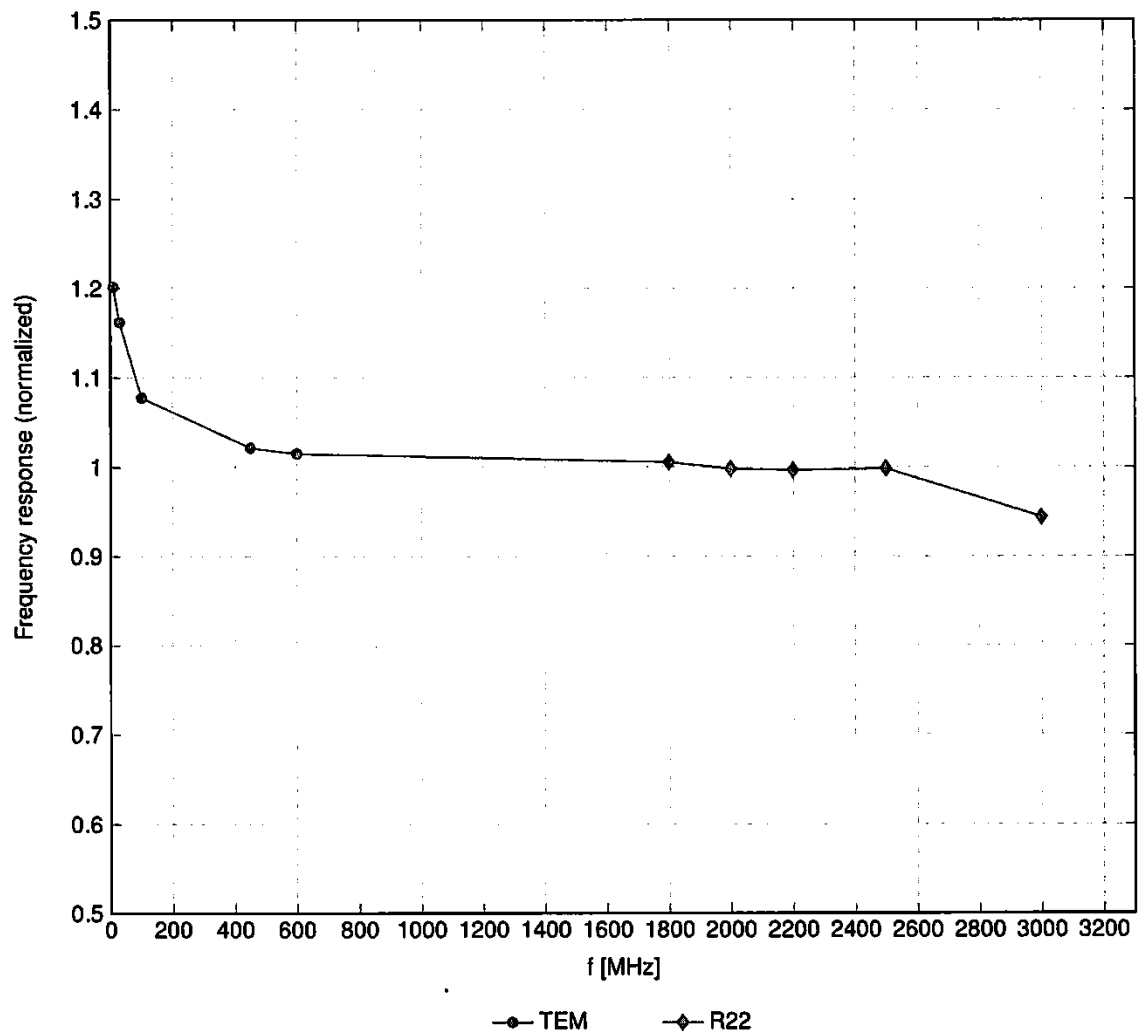
<sup>F</sup> The probes are calibrated using tissue simulating liquids (TSL) that deviate for  $\epsilon$  and  $\sigma$  by less than ±10% from the target values (typically better than ±6%) and are valid for TSL with deviations of up to ±10%.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz; below ±2% for frequencies between 3–6 GHz; and below ±4% for frequencies between 6–10 GHz at any distance larger than half the probe tip diameter from the boundary.

<sup>H</sup> The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. This is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

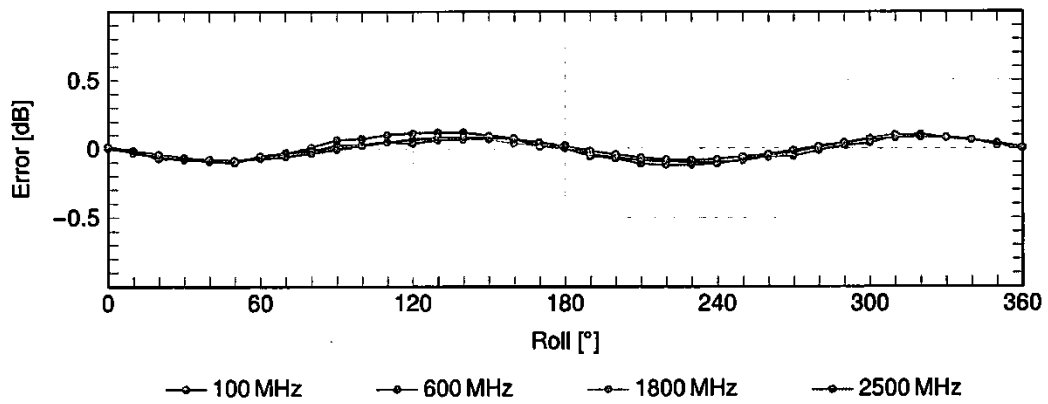
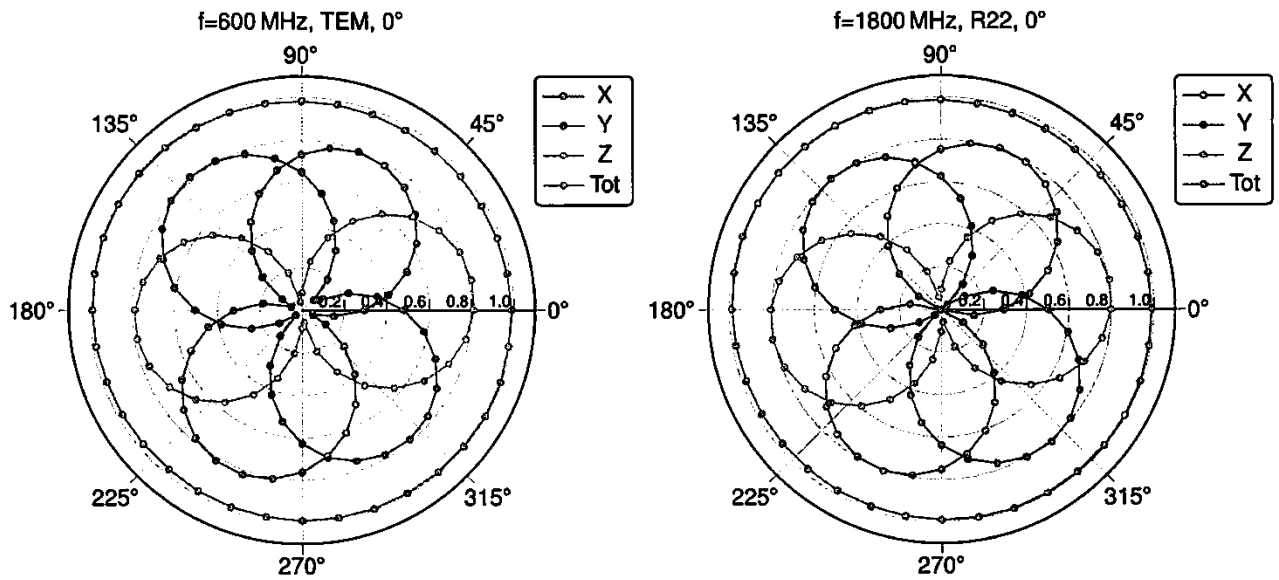
## Frequency Response of E-Field

(TEM-Cell:ifl110 EXX, Waveguide:R22)

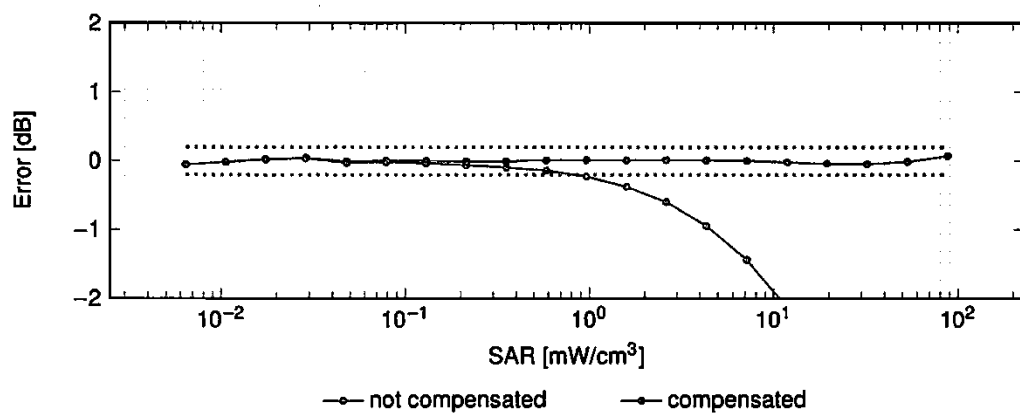
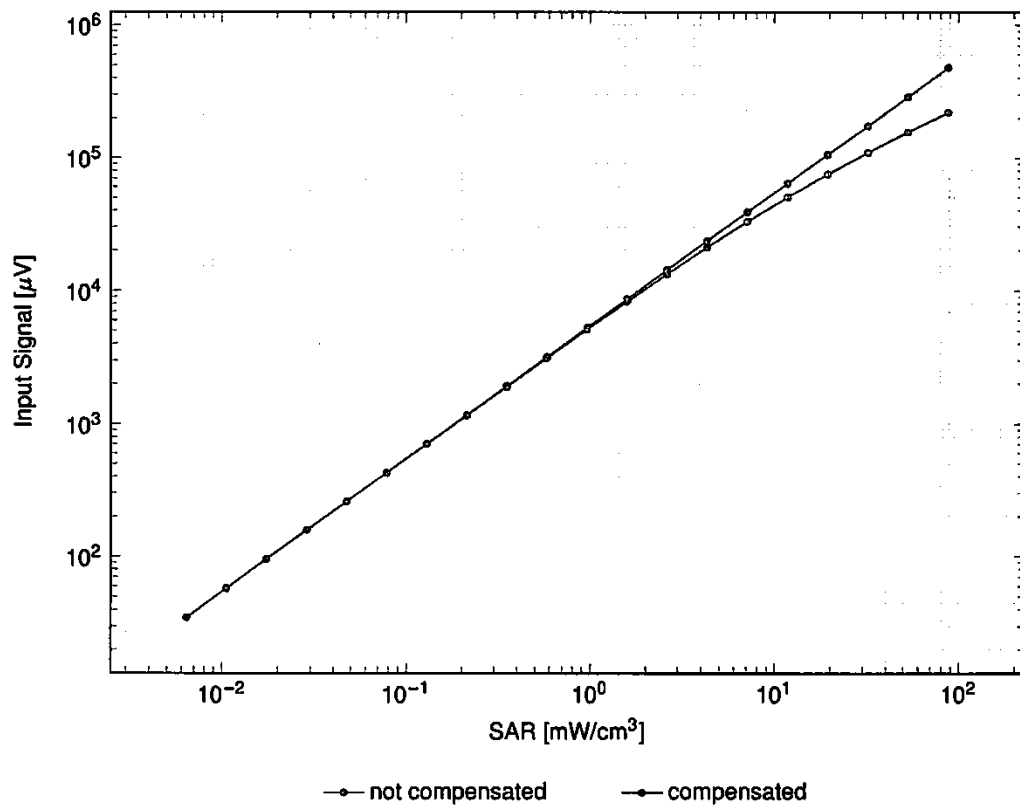


Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

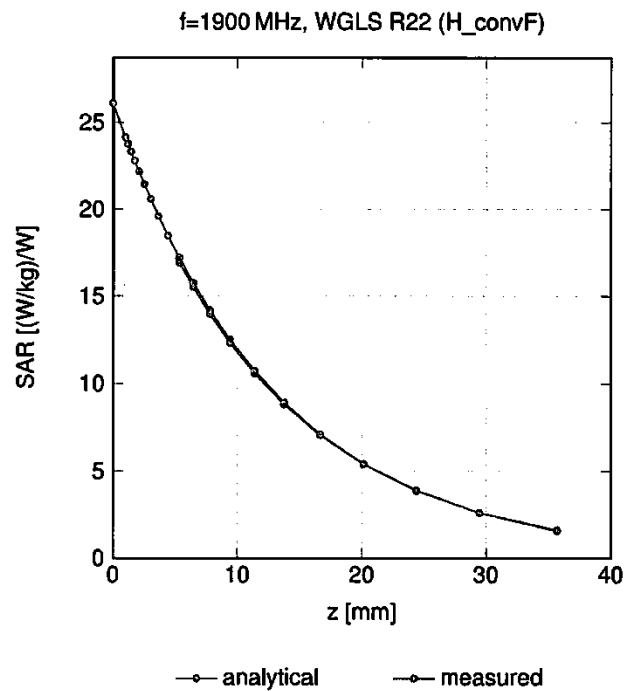
### Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

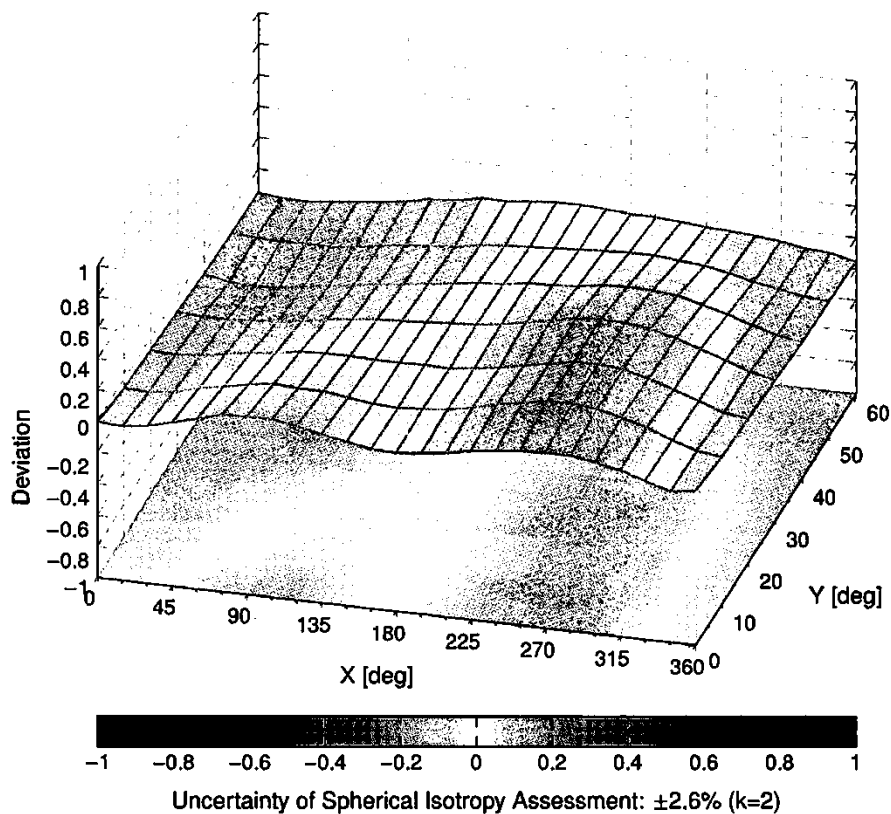
**Dynamic Range  $f(\text{SAR}_{\text{HSL}})$** (TEM cell,  $f_{\text{eval}} = 1900\text{MHz}$ )Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900\text{ MHz}$



## Appendix: Modulation Calibration Parameters

| UID   | Rev | Communication System Name                      | Group     | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------|-----------|----------|------------------------|
| 0     |     | Continuous Wave                                | CW        | 0.00     | ±4.7                   |
| 10010 | CAB | Pulse (D=10%, T=100 ms)                        | Test      | 10.00    | ±9.6                   |
| 10011 | CAC | Rel. 99, RMC, QPSK, 5.0 MHz                    | WCDMA     | 2.91     | ±9.6                   |
| 10012 | CAB | DSSS, DBPSK, 1.0 Mbps, 92.5% DC                | WLAN      | 1.87     | ±9.6                   |
| 10013 | CAB | OFDM, BPSK, 6.0 Mbps, 72.1% DC                 | WLAN      | 9.46     | ±9.6                   |
| 10021 | DAC | Voice, GMSK, 1 slot(s)                         | GSM       | 9.39     | ±9.6                   |
| 10023 | DAC | Data, GMSK, 1 slot(s)                          | GSM       | 9.57     | ±9.6                   |
| 10024 | DAC | Data, GMSK, 2 slot(s)                          | GSM       | 6.56     | ±9.6                   |
| 10025 | DAC | Data, 8PSK, 1 slot(s)                          | GSM       | 12.62    | ±9.6                   |
| 10026 | DAC | Data, 8PSK, 2 slot(s)                          | GSM       | 9.55     | ±9.6                   |
| 10027 | DAC | Data, GMSK, 3 slot(s)                          | GSM       | 4.80     | ±9.6                   |
| 10028 | DAC | Data, GMSK, 4 slot(s)                          | GSM       | 3.55     | ±9.6                   |
| 10029 | DAC | Data, 8PSK, 3 slot(s)                          | GSM       | 7.78     | ±9.6                   |
| 10030 | CAA | BR, DH1, GFSK                                  | Bluetooth | 5.30     | ±9.6                   |
| 10031 | CAA | BR, DH3, GFSK                                  | Bluetooth | 1.87     | ±9.6                   |
| 10032 | CAA | BR, DH5, GFSK                                  | Bluetooth | 1.16     | ±9.6                   |
| 10033 | CAA | EDR, DH1, pi/4-DQPSK                           | Bluetooth | 7.74     | ±9.6                   |
| 10034 | CAA | EDR, DH3, pi/4-DQPSK                           | Bluetooth | 4.53     | ±9.6                   |
| 10035 | CAA | EDR, DH5, pi/4-DQPSK                           | Bluetooth | 3.83     | ±9.6                   |
| 10036 | CAA | EDR, DH1, 8-DPSK                               | Bluetooth | 8.01     | ±9.6                   |
| 10037 | CAA | EDR, DH3, 8-DPSK                               | Bluetooth | 4.77     | ±9.6                   |
| 10038 | CAA | EDR, DH5, 8-DPSK                               | Bluetooth | 4.10     | ±9.6                   |
| 10039 | CAB | RC1, 1xRTT                                     | CDMA2000  | 4.57     | ±9.6                   |
| 10048 | CAA | Full Slot, GFSK, 1 slot(s)                     | DECT      | 13.80    | ±9.6                   |
| 10049 | CAA | Double Slot, GFSK, 2 slot(s)                   | DECT      | 10.79    | ±9.6                   |
| 10056 | CAA | TD-SCDMA, QPSK, 1.6 MHz                        | TD-SCDMA  | 11.01    | ±9.6                   |
| 10058 | DAC | Data, 8PSK, 4 slot(s)                          | GSM       | 6.52     | ±9.6                   |
| 10059 | CAB | DSSS, DQPSK, 2.0 Mbps, 87.4% DC                | WLAN      | 2.12     | ±9.6                   |
| 10060 | CAB | HR-DSSS, DQPSK, 5.5 Mbps, 72.7% DC             | WLAN      | 2.83     | ±9.6                   |
| 10061 | CAB | HR-DSSS, DQPSK, 11.0 Mbps, 57.5% DC            | WLAN      | 3.60     | ±9.6                   |
| 10062 | CAE | OFDM, BPSK, 6.0 Mbps, 89.1% DC                 | WLAN      | 8.68     | ±9.6                   |
| 10063 | CAE | OFDM, BPSK, 9.0 Mbps, 85.3% DC                 | WLAN      | 8.63     | ±9.6                   |
| 10064 | CAE | OFDM, QPSK, 12.0 Mbps, 82.0% DC                | WLAN      | 9.09     | ±9.6                   |
| 10065 | CAE | OFDM, QPSK, 18.0 Mbps, 76.0% DC                | WLAN      | 9.00     | ±9.6                   |
| 10066 | CAE | OFDM, 16QAM, 24.0 Mbps, 70.6% DC               | WLAN      | 9.38     | ±9.6                   |
| 10067 | CAE | OFDM, 16QAM, 36.0 Mbps, 62.9% DC               | WLAN      | 10.12    | ±9.6                   |
| 10068 | CAE | OFDM, 64QAM, 48.0 Mbps, 56.6% DC               | WLAN      | 10.24    | ±9.6                   |
| 10069 | CAE | OFDM, 64QAM, 54.0 Mbps, 54.4% DC               | WLAN      | 10.56    | ±9.6                   |
| 10071 | CAB | OFDM, BPSK, 9.0 Mbps, 65.1% DC                 | WLAN      | 9.83     | ±9.6                   |
| 10072 | CAB | OFDM, QPSK, 12.0 Mbps, 60.1% DC                | WLAN      | 9.62     | ±9.6                   |
| 10073 | CAB | OFDM, QPSK, 18.0 Mbps, 53.1% DC                | WLAN      | 9.94     | ±9.6                   |
| 10074 | CAB | OFDM, 16QAM, 24.0 Mbps, 48.5% DC               | WLAN      | 10.30    | ±9.6                   |
| 10075 | CAB | OFDM, 16QAM, 36.0 Mbps, 42.9% DC               | WLAN      | 10.77    | ±9.6                   |
| 10076 | CAB | OFDM, 64QAM, 48.0 Mbps, 39.5% DC               | WLAN      | 10.94    | ±9.6                   |
| 10077 | CAB | OFDM, 64QAM, 54.0 Mbps, 38.5% DC               | WLAN      | 11.00    | ±9.6                   |
| 10081 | CAB | RC3, 1xRTT                                     | CDMA2000  | 3.97     | ±9.6                   |
| 10097 | CAC | Rel. 5 HSDPA, QPSK, 5.0 MHz                    | WCDMA     | 3.98     | ±9.6                   |
| 10098 | CAC | Rel. 6 HSUPA, Subset 2, QPSK, 5.0 MHz          | WCDMA     | 3.98     | ±9.6                   |
| 10100 | CAF | 20.0 MHz, QPSK, 100% RB                        | LTE-FDD   | 5.67     | ±9.6                   |
| 10101 | CAF | 20.0 MHz, 16QAM, 100% RB                       | LTE-FDD   | 6.42     | ±9.6                   |
| 10102 | CAF | 20.0 MHz, 64QAM, 100% RB                       | LTE-FDD   | 6.60     | ±9.6                   |
| 10103 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB  | LTE-TDD   | 9.29     | ±9.6                   |
| 10104 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB | LTE-TDD   | 9.97     | ±9.6                   |
| 10105 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB | LTE-TDD   | 10.01    | ±9.6                   |
| 10108 | CAH | 10.0 MHz, QPSK, 100% RB                        | LTE-FDD   | 5.80     | ±9.6                   |
| 10109 | CAH | 10.0 MHz, 16QAM, 100% RB                       | LTE-FDD   | 6.43     | ±9.6                   |
| 10110 | CAH | 5.0 MHz, QPSK, 100% RB                         | LTE-FDD   | 5.75     | ±9.6                   |
| 10111 | CAH | 5.0 MHz, 16QAM, 100% RB                        | LTE-FDD   | 6.44     | ±9.6                   |
| 10112 | CAH | 10.0 MHz, 64QAM, 100% RB                       | LTE-FDD   | 6.59     | ±9.6                   |
| 10113 | CAH | 5.0 MHz, 64QAM, 100% RB                        | LTE-FDD   | 6.62     | ±9.6                   |
| 10114 | CAE | HT40 Greenfield, MCS0 (13.5 Mbps), 99.7% DC    | WLAN      | 8.10     | ±9.6                   |
| 10115 | CAE | HT40 Greenfield, MCS4 (81.0 Mbps), 99.7% DC    | WLAN      | 8.46     | ±9.6                   |
| 10116 | CAE | HT40 Greenfield, MCS7 (135.0 Mbps), 99.7% DC   | WLAN      | 8.15     | ±9.6                   |

| UID   | Rev | Communication System Name                     | Group   | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------------|---------|----------|------------------------|
| 10117 | CAE | HT40 Mixed, MCS0 (13.5 Mbps), 99.7% DC        | WLAN    | 8.07     | ±9.6                   |
| 10118 | CAE | HT40 Mixed, MCS4 (81.0 Mbps), 99.7% DC        | WLAN    | 8.59     | ±9.6                   |
| 10119 | CAE | HT40 Mixed, MCS7 (135.0 Mbps), 99.7% DC       | WLAN    | 8.13     | ±9.6                   |
| 10140 | CAF | 15.0 MHz, 16QAM, 100% RB                      | LTE-FDD | 6.49     | ±9.6                   |
| 10141 | CAF | 15.0 MHz, 64QAM, 100% RB                      | LTE-FDD | 6.53     | ±9.6                   |
| 10142 | CAF | 3.0 MHz, QPSK, 100% RB                        | LTE-FDD | 5.73     | ±9.6                   |
| 10143 | CAF | 3.0 MHz, 16QAM, 100% RB                       | LTE-FDD | 6.35     | ±9.6                   |
| 10144 | CAF | 3.0 MHz, 64QAM, 100% RB                       | LTE-FDD | 6.65     | ±9.6                   |
| 10145 | CAG | 1.4 MHz, QPSK, 100% RB                        | LTE-FDD | 5.76     | ±9.6                   |
| 10146 | CAG | 1.4 MHz, 16QAM, 100% RB                       | LTE-FDD | 6.41     | ±9.6                   |
| 10147 | CAG | 1.4 MHz, 64QAM, 100% RB                       | LTE-FDD | 6.72     | ±9.6                   |
| 10149 | CAF | 20.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.42     | ±9.6                   |
| 10150 | CAF | 20.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.60     | ±9.6                   |
| 10151 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB  | LTE-TDD | 9.28     | ±9.6                   |
| 10152 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB | LTE-TDD | 9.92     | ±9.6                   |
| 10153 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB | LTE-TDD | 10.05    | ±9.6                   |
| 10154 | CAH | 10.0 MHz, QPSK, 50% RB                        | LTE-FDD | 5.75     | ±9.6                   |
| 10155 | CAH | 10.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.43     | ±9.6                   |
| 10156 | CAH | 5.0 MHz, QPSK, 50% RB                         | LTE-FDD | 5.79     | ±9.6                   |
| 10157 | CAH | 5.0 MHz, 16QAM, 50% RB                        | LTE-FDD | 6.49     | ±9.6                   |
| 10158 | CAH | 10.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.62     | ±9.6                   |
| 10159 | CAH | 5.0 MHz, 64QAM, 50% RB                        | LTE-FDD | 6.56     | ±9.6                   |
| 10160 | CAF | 15.0 MHz, QPSK, 50% RB                        | LTE-FDD | 5.82     | ±9.6                   |
| 10161 | CAF | 15.0 MHz, 16QAM, 50% RB                       | LTE-FDD | 6.43     | ±9.6                   |
| 10162 | CAF | 15.0 MHz, 64QAM, 50% RB                       | LTE-FDD | 6.58     | ±9.6                   |
| 10166 | CAG | 1.4 MHz, QPSK, 50% RB                         | LTE-FDD | 5.46     | ±9.6                   |
| 10167 | CAG | 1.4 MHz, 16QAM, 50% RB                        | LTE-FDD | 6.21     | ±9.6                   |
| 10168 | CAG | 1.4 MHz, 64QAM, 50% RB                        | LTE-FDD | 6.79     | ±9.6                   |
| 10169 | CAF | 20.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.73     | ±9.6                   |
| 10170 | CAF | 20.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10171 | AAF | 20.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.49     | ±9.6                   |
| 10172 | CAH | 20.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.21     | ±9.6                   |
| 10173 | CAH | 20.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB   | LTE-TDD | 9.48     | ±9.6                   |
| 10174 | CAH | 20.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB   | LTE-TDD | 10.25    | ±9.6                   |
| 10175 | CAH | 10.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.72     | ±9.6                   |
| 10176 | CAH | 10.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10177 | CAJ | 5.0 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10178 | CAH | 5.0 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.52     | ±9.6                   |
| 10179 | CAH | 10.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.50     | ±9.6                   |
| 10180 | CAH | 5.0 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10181 | CAF | 15.0 MHz, QPSK, 1 RB                          | LTE-FDD | 5.72     | ±9.6                   |
| 10182 | CAF | 15.0 MHz, 16QAM, 1 RB                         | LTE-FDD | 6.52     | ±9.6                   |
| 10183 | AAE | 15.0 MHz, 64QAM, 1 RB                         | LTE-FDD | 6.50     | ±9.6                   |
| 10184 | CAF | 3.0 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10185 | CAF | 3.0 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.51     | ±9.6                   |
| 10186 | AAF | 3.0 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10187 | CAG | 1.4 MHz, QPSK, 1 RB                           | LTE-FDD | 5.73     | ±9.6                   |
| 10188 | CAG | 1.4 MHz, 16QAM, 1 RB                          | LTE-FDD | 6.52     | ±9.6                   |
| 10189 | AAG | 1.4 MHz, 64QAM, 1 RB                          | LTE-FDD | 6.50     | ±9.6                   |
| 10193 | CAE | HT20 Greenfield, MCS0 (6.5 Mbps), 99.4% DC    | WLAN    | 8.09     | ±9.6                   |
| 10194 | CAE | HT20 Greenfield, MCS4 (39.0 Mbps), 99.5% DC   | WLAN    | 8.12     | ±9.6                   |
| 10195 | CAE | HT20 Greenfield, MCS7 (65.0 Mbps), 99.5% DC   | WLAN    | 8.21     | ±9.6                   |
| 10196 | CAE | HT20 Mixed, MCS0 (6.5 Mbps), 99.4% DC         | WLAN    | 8.10     | ±9.6                   |
| 10197 | CAE | HT20 Mixed, MCS4 (39.0 Mbps), 99.5% DC        | WLAN    | 8.13     | ±9.6                   |
| 10198 | CAE | HT20 Mixed, MCS7 (65.0 Mbps), 99.5% DC        | WLAN    | 8.27     | ±9.6                   |
| 10219 | CAE | HT20 Mixed, MCS0 (7.2 Mbps), 99.3% DC         | WLAN    | 8.03     | ±9.6                   |
| 10220 | CAE | HT20 Mixed, MCS4 (43.3 Mbps), 99.4% DC        | WLAN    | 8.13     | ±9.6                   |
| 10221 | CAE | HT20 Mixed, MCS7 (72.2 Mbps), 99.4% DC        | WLAN    | 8.27     | ±9.6                   |
| 10222 | CAE | HT40 Mixed, MCS0 (15.0 Mbps), 99.7% DC        | WLAN    | 8.06     | ±9.6                   |
| 10223 | CAE | HT40 Mixed, MCS4 (90.0 Mbps), 99.7% DC        | WLAN    | 8.48     | ±9.6                   |
| 10224 | CAE | HT40 Mixed, MCS7 (150.0 Mbps), 99.7% DC       | WLAN    | 8.08     | ±9.6                   |
| 10225 | CAC | Rel. 7 HSPA+, 16QAM, 5.0 MHz                  | WCDMA   | 5.97     | ±9.6                   |
| 10226 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.49     | ±9.6                   |
| 10227 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 10.26    | ±9.6                   |
| 10228 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB     | LTE-TDD | 9.22     | ±9.6                   |
| 10229 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB    | LTE-TDD | 9.48     | ±9.6                   |

| UID   | Rev | Communication System Name                        | Group    | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------------|----------|----------|------------------------|
| 10230 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 10.25    | ±9.6                   |
| 10231 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB        | LTE-TDD  | 9.19     | ±9.6                   |
| 10232 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.48     | ±9.6                   |
| 10233 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 10.25    | ±9.6                   |
| 10234 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB        | LTE-TDD  | 9.21     | ±9.6                   |
| 10235 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 9.48     | ±9.6                   |
| 10236 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 10.25    | ±9.6                   |
| 10237 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.21     | ±9.6                   |
| 10238 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 9.48     | ±9.6                   |
| 10239 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 1 RB      | LTE-TDD  | 10.25    | ±9.6                   |
| 10240 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 1 RB       | LTE-TDD  | 9.21     | ±9.6                   |
| 10241 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.82     | ±9.6                   |
| 10242 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.86     | ±9.6                   |
| 10243 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.46     | ±9.6                   |
| 10244 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.06    | ±9.6                   |
| 10245 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.06    | ±9.6                   |
| 10246 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.30     | ±9.6                   |
| 10247 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.91     | ±9.6                   |
| 10248 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 10.09    | ±9.6                   |
| 10249 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB      | LTE-TDD  | 9.29     | ±9.6                   |
| 10250 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 9.81     | ±9.6                   |
| 10251 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 10.17    | ±9.6                   |
| 10252 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.24     | ±9.6                   |
| 10253 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 9.90     | ±9.6                   |
| 10254 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 50% RB    | LTE-TDD  | 10.14    | ±9.6                   |
| 10255 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 50% RB     | LTE-TDD  | 9.20     | ±9.6                   |
| 10256 | CAC | 1.4 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.96     | ±9.6                   |
| 10257 | CAC | 1.4 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 10.08    | ±9.6                   |
| 10258 | CAC | 1.4 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.34     | ±9.6                   |
| 10259 | CAE | 3.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.98     | ±9.6                   |
| 10260 | CAE | 3.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.97     | ±9.6                   |
| 10261 | CAE | 3.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.24     | ±9.6                   |
| 10262 | CAH | 5.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.83     | ±9.6                   |
| 10263 | CAH | 5.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 10.16    | ±9.6                   |
| 10264 | CAH | 5.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB     | LTE-TDD  | 9.23     | ±9.6                   |
| 10265 | CAH | 10.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 9.92     | ±9.6                   |
| 10266 | CAH | 10.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.07    | ±9.6                   |
| 10267 | CAH | 10.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.30     | ±9.6                   |
| 10268 | CAG | 15.0 MHz, 16QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.06    | ±9.6                   |
| 10269 | CAG | 15.0 MHz, 64QAM, UL/DL CFG: 1, SSC: 4, 100% RB   | LTE-TDD  | 10.13    | ±9.6                   |
| 10270 | CAG | 15.0 MHz, QPSK, UL/DL CFG: 1, SSC: 4, 100% RB    | LTE-TDD  | 9.58     | ±9.6                   |
| 10274 | CAC | Rel. 6 HSUPA Subset 2, beta_d 0, QPSK, 5.0 MHz   | WCDMA    | 4.87     | ±9.6                   |
| 10275 | CAC | Rel. 6 HSUPA Subset 2, beta_d 15, QPSK, 5.0 MHz  | WCDMA    | 3.96     | ±9.6                   |
| 10290 | AAB | RC1, SO55, Full frame rate, 1xRTT                | CDMA2000 | 3.91     | ±9.6                   |
| 10291 | AAB | RC3, SO55, Full frame rate, 1xRTT                | CDMA2000 | 3.46     | ±9.6                   |
| 10292 | AAB | RC3, SO32, Full frame rate, SCH0 disabled, 1xRTT | CDMA2000 | 3.39     | ±9.6                   |
| 10293 | AAB | RC3, SO3, Full frame rate, 1xRTT                 | CDMA2000 | 3.50     | ±9.6                   |
| 10295 | AAB | RC3, SO3, 1/8 frame rate, 1xRTT                  | CDMA2000 | 12.49    | ±9.6                   |
| 10297 | AAE | 20.0 MHz, QPSK, 50% RB                           | LTE-FDD  | 5.81     | ±9.6                   |
| 10298 | AAE | 3.0 MHz, QPSK, 50% RB                            | LTE-FDD  | 5.72     | ±9.6                   |
| 10299 | AAE | 3.0 MHz, 16QAM, 50% RB                           | LTE-FDD  | 6.39     | ±9.6                   |
| 10300 | AAE | 3.0 MHz, 64QAM, 50% RB                           | LTE-FDD  | 6.60     | ±9.6                   |
| 10301 | AAA | PUSC, 29:18, QPSK, 5.0 ms, 18 TRAF SYM           | WiMAX    | 12.03    | ±9.6                   |
| 10302 | AAA | PUSC, 29:18, QPSK, 5.0 ms, 15 TRAF SYM           | WiMAX    | 12.57    | ±9.6                   |
| 10303 | AAA | PUSC, 31:15, 64QAM, 5.0 ms, 15 TRAF SYM          | WiMAX    | 12.52    | ±9.6                   |
| 10304 | AAA | PUSC, 29:18, 64QAM, 5.0 ms, 18 TRAF SYM          | WiMAX    | 11.86    | ±9.6                   |
| 10305 | AAA | PUSC, 31:15, 64QAM, 10.0 ms, 15 TRAF SYM         | WiMAX    | 15.24    | ±9.6                   |
| 10306 | AAA | PUSC, 29:18, 64QAM, 10.0 ms, 18 TRAF SYM         | WiMAX    | 14.67    | ±9.6                   |
| 10307 | AAA | PUSC, 29:18, QPSK, 10.0 ms, 18 TRAF SYM          | WiMAX    | 14.49    | ±9.6                   |
| 10308 | AAA | PUSC, 29:18, 16QAM, 10.0 ms, 18 TRAF SYM         | WiMAX    | 14.46    | ±9.6                   |
| 10309 | AAA | AMC 2x3, 29:18, 16QAM, 10.0 ms, 18 TRAF SYM      | WiMAX    | 14.58    | ±9.6                   |
| 10310 | AAA | AMC 2x3, 29:18, QPSK, 10.0 ms, 18 TRAF SYM       | WiMAX    | 14.57    | ±9.6                   |
| 10311 | AAE | 15.0 MHz, QPSK, 100% RB                          | LTE-FDD  | 6.06     | ±9.6                   |
| 10315 | AAB | DSSS, DBPSK, 1.0 Mbps, 96.0% DC                  | WLAN     | 1.71     | ±9.6                   |
| 10316 | AAB | OFDM, BPSK, 6.0 Mbps, 95.9% DC                   | WLAN     | 8.36     | ±9.6                   |
| 10317 | AAE | OFDM, BPSK, 6.0 Mbps, 95.9% DC                   | WLAN     | 8.36     | ±9.6                   |

| UID   | Rev | Communication System Name                                   | Group    | PAR (dB) | Unc <sup>E</sup> $k = 2$ |
|-------|-----|-------------------------------------------------------------|----------|----------|--------------------------|
| 10352 | AAA | Pulse (D=10%, T=5 ms)                                       | Generic  | 10.00    | ±9.6                     |
| 10353 | AAA | Pulse (D=20%, T=5 ms)                                       | Generic  | 6.99     | ±9.6                     |
| 10354 | AAA | Pulse (D=40%, T=5 ms)                                       | Generic  | 3.98     | ±9.6                     |
| 10355 | AAA | Pulse (D=60%, T=5 ms)                                       | Generic  | 2.22     | ±9.6                     |
| 10356 | AAA | Pulse (D=80%, T=5 ms)                                       | Generic  | 0.97     | ±9.6                     |
| 10387 | AAA | Random (BW=1 MHz, MOD=QPSK)                                 | Generic  | 5.10     | ±9.6                     |
| 10388 | AAA | Random (BW=10 MHz, MOD=QPSK)                                | Generic  | 5.22     | ±9.6                     |
| 10396 | AAA | Random (BW=100 kHz, MOD=64QAM)                              | Generic  | 6.27     | ±9.6                     |
| 10399 | AAA | Random (BW=40 MHz, MOD=64QAM)                               | Generic  | 6.27     | ±9.6                     |
| 10400 | AAF | VHT20, MCS5 (52.0 Mbps), 99.0% DC                           | WLAN     | 8.37     | ±9.6                     |
| 10401 | AAF | VHT40, MCS5 (108.0 Mbps), 96.7% DC                          | WLAN     | 8.60     | ±9.6                     |
| 10402 | AAF | VHT80, MCS5 (234.0 Mbps), 99.0% DC                          | WLAN     | 8.53     | ±9.6                     |
| 10403 | AAB | Rev. 0, 1xEV-DO                                             | CDMA2000 | 3.76     | ±9.6                     |
| 10404 | AAB | Rev. A, 1xEV-DO                                             | CDMA2000 | 3.77     | ±9.6                     |
| 10406 | AAB | RC3, SC32, Full frame rate, SCH0 enabled, 1xRTT             | CDMA2000 | 5.22     | ±9.6                     |
| 10410 | AAH | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 4, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10414 | AAA | Random (BW=40 MHz, HIGH PAR)                                | Generic  | 8.54     | ±9.6                     |
| 10415 | AAA | DSSS, DBPSK, 1.0 Mbps, 99.9% DC                             | WLAN     | 1.54     | ±9.6                     |
| 10416 | AAA | OFDM, BPSK, 6.0 Mbps, 99.9% DC                              | WLAN     | 8.23     | ±9.6                     |
| 10417 | AAD | OFDM, BPSK, 6.0 Mbps, 99.9% DC                              | WLAN     | 8.23     | ±9.6                     |
| 10418 | AAA | OFDM (LTF), BPSK, 6.0 Mbps, 99.8% DC                        | WLAN     | 8.14     | ±9.6                     |
| 10419 | AAA | OFDM (STF), BPSK, 6.0 Mbps, 99.8% DC                        | WLAN     | 8.19     | ±9.6                     |
| 10422 | AAD | HT20 Greenfield, MCS0 (7.2 Mbps), 99.3% DC                  | WLAN     | 8.32     | ±9.6                     |
| 10423 | AAD | HT20 Greenfield, MCS4 (43.3 Mbps), 99.3% DC                 | WLAN     | 8.47     | ±9.6                     |
| 10424 | AAD | HT20 Greenfield, MCS7 (72.2 Mbps), 99.3% DC                 | WLAN     | 8.40     | ±9.6                     |
| 10425 | AAD | HT40 Greenfield, MCS0 (15.0 Mbps), 99.2% DC                 | WLAN     | 8.41     | ±9.6                     |
| 10426 | AAD | HT40 Greenfield, MCS4 (90.0 Mbps), 99.2% DC                 | WLAN     | 8.45     | ±9.6                     |
| 10427 | AAD | HT40 Greenfield, MCS7 (150.0 Mbps), 99.2% DC                | WLAN     | 8.41     | ±9.6                     |
| 10430 | AAE | 5.0 MHz, 64-QAM, 100% RB                                    | LTE-FDD  | 8.28     | ±9.6                     |
| 10431 | AAE | 10.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.38     | ±9.6                     |
| 10432 | AAD | 15.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.34     | ±9.6                     |
| 10433 | AAD | 20.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 8.34     | ±9.6                     |
| 10434 | AAB | BS Test Model 1, 64 DPCH, 64QAM, 5.0 MHz (DL)               | WCDMA    | 8.60     | ±9.6                     |
| 10435 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10447 | AAE | 5.0 MHz, 64-QAM, 100% RB                                    | LTE-FDD  | 7.56     | ±9.6                     |
| 10448 | AAE | 10.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.53     | ±9.6                     |
| 10449 | AAD | 15.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.51     | ±9.6                     |
| 10450 | AAD | 20.0 MHz, 64-QAM, 100% RB                                   | LTE-FDD  | 7.48     | ±9.6                     |
| 10451 | AAB | BS Test Model 1, 64 DPCH, Clipping 44%, 64QAM, 5.0 MHz (DL) | WCDMA    | 7.59     | ±9.6                     |
| 10456 | AAD | VHT160, MCS5 (58.5 Mbps), 99.0% DC                          | WLAN     | 8.63     | ±9.6                     |
| 10457 | AAB | Rel. 5 DC-HSDPA, QPSK, 10.0 MHz                             | WCDMA    | 6.62     | ±9.6                     |
| 10458 | AAA | Rev. B, 2 carriers, 1xEV-DO                                 | CDMA2000 | 6.55     | ±9.6                     |
| 10459 | AAA | Rev. B, 3 carriers, 1xEV-DO                                 | CDMA2000 | 8.25     | ±9.6                     |
| 10460 | AAB | Rel. 99, AMR, QPSK, 5.0 MHz                                 | WCDMA    | 2.39     | ±9.6                     |
| 10461 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10462 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.30     | ±9.6                     |
| 10463 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.56     | ±9.6                     |
| 10464 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10465 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.32     | ±9.6                     |
| 10466 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.57     | ±9.6                     |
| 10467 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                   | LTE-TDD  | 7.82     | ±9.6                     |
| 10468 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.32     | ±9.6                     |
| 10469 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 8.56     | ±9.6                     |
| 10470 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10471 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10472 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10473 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 1 RB                  | LTE-TDD  | 7.82     | ±9.6                     |
| 10474 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10475 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10477 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.32     | ±9.6                     |
| 10478 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 1 RB                 | LTE-TDD  | 8.57     | ±9.6                     |
| 10479 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB                 | LTE-TDD  | 7.74     | ±9.6                     |
| 10480 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.18     | ±9.6                     |
| 10481 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.45     | ±9.6                     |
| 10482 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB                 | LTE-TDD  | 7.71     | ±9.6                     |
| 10483 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB                | LTE-TDD  | 8.39     | ±9.6                     |

| UID   | Rev | Communication System Name                      | Group   | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------|---------|----------|------------------------|
| 10484 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.47     | ±9.6                   |
| 10485 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB    | LTE-TDD | 7.59     | ±9.6                   |
| 10486 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.38     | ±9.6                   |
| 10487 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 8.60     | ±9.6                   |
| 10488 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.70     | ±9.6                   |
| 10489 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.31     | ±9.6                   |
| 10490 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10491 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.74     | ±9.6                   |
| 10492 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.41     | ±9.6                   |
| 10493 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.55     | ±9.6                   |
| 10494 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 50% RB   | LTE-TDD | 7.74     | ±9.6                   |
| 10495 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.37     | ±9.6                   |
| 10496 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 50% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10497 | AAC | 1.4 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.67     | ±9.6                   |
| 10498 | AAC | 1.4 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.40     | ±9.6                   |
| 10499 | AAC | 1.4 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.68     | ±9.6                   |
| 10500 | AAD | 3.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.67     | ±9.6                   |
| 10501 | AAD | 3.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.44     | ±9.6                   |
| 10502 | AAD | 3.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.52     | ±9.6                   |
| 10503 | AAG | 5.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB   | LTE-TDD | 7.72     | ±9.6                   |
| 10504 | AAG | 5.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.31     | ±9.6                   |
| 10505 | AAG | 5.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 8.54     | ±9.6                   |
| 10506 | AAG | 10.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.74     | ±9.6                   |
| 10507 | AAG | 10.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.36     | ±9.6                   |
| 10508 | AAG | 10.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.55     | ±9.6                   |
| 10509 | AAF | 15.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.99     | ±9.6                   |
| 10510 | AAF | 15.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.49     | ±9.6                   |
| 10511 | AAF | 15.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.51     | ±9.6                   |
| 10512 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 0, SSC: 7, 100% RB  | LTE-TDD | 7.74     | ±9.6                   |
| 10513 | AAG | 20.0 MHz, 16QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.42     | ±9.6                   |
| 10514 | AAG | 20.0 MHz, 64QAM, UL/DL CFG: 0, SSC: 7, 100% RB | LTE-TDD | 8.45     | ±9.6                   |
| 10515 | AAA | DSSS, DQPSK, 2.0 Mbps, 99.0% DC                | WLAN    | 1.58     | ±9.6                   |
| 10516 | AAA | HR-DSSS, DQPSK, 5.5 Mbps, 99.2% DC             | WLAN    | 1.57     | ±9.6                   |
| 10517 | AAA | HR-DSSS, DQPSK, 11.0 Mbps, 99.0% DC            | WLAN    | 1.58     | ±9.6                   |
| 10518 | AAD | OFDM, BPSK, 9.0 Mbps, 98.9% DC                 | WLAN    | 8.23     | ±9.6                   |
| 10519 | AAD | OFDM, QPSK, 12.0 Mbps, 99.0% DC                | WLAN    | 8.39     | ±9.6                   |
| 10520 | AAD | OFDM, QPSK, 18.0 Mbps, 99.0% DC                | WLAN    | 8.12     | ±9.6                   |
| 10521 | AAD | OFDM, 16QAM, 24.0 Mbps, 99.0% DC               | WLAN    | 7.97     | ±9.6                   |
| 10522 | AAD | OFDM, 16QAM, 36.0 Mbps, 99.0% DC               | WLAN    | 8.45     | ±9.6                   |
| 10523 | AAD | OFDM, 64QAM, 48.0 Mbps, 99.0% DC               | WLAN    | 8.08     | ±9.6                   |
| 10524 | AAD | OFDM, 64QAM, 54.0 Mbps, 99.0% DC               | WLAN    | 8.27     | ±9.6                   |
| 10525 | AAD | VHT20, MCS0 (6.5 Mbps), 98.9% DC               | WLAN    | 8.36     | ±9.6                   |
| 10526 | AAD | VHT20, MCS1 (13.0 Mbps), 99.0% DC              | WLAN    | 8.42     | ±9.6                   |
| 10527 | AAD | VHT20, MCS2 (19.5 Mbps), 99.0% DC              | WLAN    | 8.21     | ±9.6                   |
| 10528 | AAD | VHT20, MCS3 (26.0 Mbps), 99.0% DC              | WLAN    | 8.36     | ±9.6                   |
| 10529 | AAD | VHT20, MCS4 (39.0 Mbps), 99.0% DC              | WLAN    | 8.36     | ±9.6                   |
| 10531 | AAD | VHT20, MCS5 (58.5 Mbps), 99.0% DC              | WLAN    | 8.43     | ±9.6                   |
| 10532 | AAD | VHT20, MCS7 (65.0 Mbps), 99.0% DC              | WLAN    | 8.29     | ±9.6                   |
| 10533 | AAD | VHT20, MCS8 (78.0 Mbps), 99.0% DC              | WLAN    | 8.38     | ±9.6                   |
| 10534 | AAD | VHT40, MCS0 (13.5 Mbps), 98.9% DC              | WLAN    | 8.45     | ±9.6                   |
| 10535 | AAD | VHT40, MCS1 (27.0 Mbps), 98.8% DC              | WLAN    | 8.45     | ±9.6                   |
| 10536 | AAD | VHT40, MCS2 (40.5 Mbps), 98.8% DC              | WLAN    | 8.32     | ±9.6                   |
| 10537 | AAD | VHT40, MCS3 (54.0 Mbps), 98.7% DC              | WLAN    | 8.44     | ±9.6                   |
| 10538 | AAD | VHT40, MCS4 (81.0 Mbps), 98.5% DC              | WLAN    | 8.54     | ±9.6                   |
| 10540 | AAD | VHT40, MCS6 (121.5 Mbps), 98.3% DC             | WLAN    | 8.39     | ±9.6                   |
| 10541 | AAD | VHT40, MCS7 (135.0 Mbps), 98.3% DC             | WLAN    | 8.46     | ±9.6                   |
| 10542 | AAD | VHT40, MCS8 (162.0 Mbps), 98.1% DC             | WLAN    | 8.65     | ±9.6                   |
| 10543 | AAD | VHT40, MCS9 (180.0 Mbps), 98.0% DC             | WLAN    | 8.65     | ±9.6                   |
| 10544 | AAD | VHT80, MCS0 (29.3 Mbps), 99.0% DC              | WLAN    | 8.47     | ±9.6                   |
| 10545 | AAD | VHT80, MCS1 (58.5 Mbps), 99.0% DC              | WLAN    | 8.55     | ±9.6                   |
| 10546 | AAD | VHT80, MCS2 (87.8 Mbps), 99.0% DC              | WLAN    | 8.35     | ±9.6                   |
| 10547 | AAD | VHT80, MCS3 (117.0 Mbps), 99.0% DC             | WLAN    | 8.49     | ±9.6                   |
| 10548 | AAD | VHT80, MCS4 (175.5 Mbps), 99.0% DC             | WLAN    | 8.37     | ±9.6                   |
| 10550 | AAD | VHT80, MCS6 (263.3 Mbps), 99.0% DC             | WLAN    | 8.38     | ±9.6                   |
| 10551 | AAD | VHT80, MCS7 (292.5 Mbps), 99.0% DC             | WLAN    | 8.50     | ±9.6                   |
| 10552 | AAD | VHT80, MCS8 (351.0 Mbps), 99.0% DC             | WLAN    | 8.42     | ±9.6                   |

| UID   | Rev | Communication System Name               | Group | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------|-------|----------|------------------------|
| 10553 | AAE | VHT80, MCS9 (390.0 Mbps), 99.0% DC      | WLAN  | 8.45     | ±9.6                   |
| 10554 | AAE | VHT160, MCS0 (58.5 Mbps), 99.0% DC      | WLAN  | 8.48     | ±9.6                   |
| 10555 | AAE | VHT160, MCS1 (117.0 Mbps), 99.0% DC     | WLAN  | 8.47     | ±9.6                   |
| 10556 | AAE | VHT160, MCS2 (175.5 Mbps), 99.0% DC     | WLAN  | 8.50     | ±9.6                   |
| 10557 | AAE | VHT160, MCS3 (234.0 Mbps), 99.0% DC     | WLAN  | 8.52     | ±9.6                   |
| 10558 | AAE | VHT160, MCS4 (351.0 Mbps), 99.0% DC     | WLAN  | 8.61     | ±9.6                   |
| 10560 | AAE | VHT160, MCS6 (526.5 Mbps), 99.0% DC     | WLAN  | 8.73     | ±9.6                   |
| 10561 | AAE | VHT160, MCS7 (585.0 Mbps), 99.0% DC     | WLAN  | 8.56     | ±9.6                   |
| 10562 | AAE | VHT160, MCS8 (702.0 Mbps), 99.0% DC     | WLAN  | 8.69     | ±9.6                   |
| 10563 | AAE | VHT160, MCS9 (780.0 Mbps), 99.0% DC     | WLAN  | 8.77     | ±9.6                   |
| 10564 | AAA | OFDM, BPSK, 9.0 Mbps, 98.9% DC          | WLAN  | 8.25     | ±9.6                   |
| 10565 | AAA | OFDM, QPSK, 12.0 Mbps, 99.0% DC         | WLAN  | 8.45     | ±9.6                   |
| 10566 | AAA | OFDM, QPSK, 18.0 Mbps, 99.0% DC         | WLAN  | 8.13     | ±9.6                   |
| 10567 | AAA | OFDM, 16QAM, 24.0 Mbps, 99.0% DC        | WLAN  | 8.00     | ±9.6                   |
| 10568 | AAA | OFDM, 16QAM, 36.0 Mbps, 99.0% DC        | WLAN  | 8.37     | ±9.6                   |
| 10569 | AAA | OFDM, 64QAM, 48.0 Mbps, 99.0% DC        | WLAN  | 8.10     | ±9.6                   |
| 10570 | AAA | OFDM, 64QAM, 54.0 Mbps, 99.0% DC        | WLAN  | 8.30     | ±9.6                   |
| 10571 | AAA | DSSS, DQPSK, 1.0 Mbps, 90.0% DC         | WLAN  | 1.99     | ±9.6                   |
| 10572 | AAA | DSSS, DQPSK, 2.0 Mbps, 90.0% DC         | WLAN  | 1.99     | ±9.6                   |
| 10573 | AAA | HR-DSSS, DQPSK, 5.5 Mbps, 90.1% DC      | WLAN  | 1.98     | ±9.6                   |
| 10574 | AAA | HR-DSSS, DQPSK, 11.0 Mbps, 90.3% DC     | WLAN  | 1.98     | ±9.6                   |
| 10575 | AAA | OFDM, BPSK, 6.0 Mbps, 89.9% DC          | WLAN  | 8.59     | ±9.6                   |
| 10576 | AAA | OFDM, BPSK, 9.0 Mbps, 89.9% DC          | WLAN  | 8.60     | ±9.6                   |
| 10577 | AAA | OFDM, QPSK, 12.0 Mbps, 90.0% DC         | WLAN  | 8.70     | ±9.6                   |
| 10578 | AAA | OFDM, QPSK, 18.0 Mbps, 90.0% DC         | WLAN  | 8.49     | ±9.6                   |
| 10579 | AAA | OFDM, 16QAM, 24.0 Mbps, 90.0% DC        | WLAN  | 8.36     | ±9.6                   |
| 10580 | AAA | OFDM, 16QAM, 36.0 Mbps, 90.0% DC        | WLAN  | 8.76     | ±9.6                   |
| 10581 | AAA | OFDM, 64QAM, 48.0 Mbps, 90.0% DC        | WLAN  | 8.35     | ±9.6                   |
| 10582 | AAA | OFDM, 64QAM, 54.0 Mbps, 90.0% DC        | WLAN  | 8.67     | ±9.6                   |
| 10583 | AAD | OFDM, BPSK, 6.0 Mbps, 89.9% DC          | WLAN  | 8.59     | ±9.6                   |
| 10584 | AAD | OFDM, BPSK, 9.0 Mbps, 89.9% DC          | WLAN  | 8.60     | ±9.6                   |
| 10585 | AAD | OFDM, QPSK, 12.0 Mbps, 90.0% DC         | WLAN  | 8.70     | ±9.6                   |
| 10586 | AAD | OFDM, QPSK, 18.0 Mbps, 90.0% DC         | WLAN  | 8.49     | ±9.6                   |
| 10587 | AAD | OFDM, 16QAM, 24.0 Mbps, 90.0% DC        | WLAN  | 8.36     | ±9.6                   |
| 10588 | AAD | OFDM, 16QAM, 36.0 Mbps, 90.0% DC        | WLAN  | 8.76     | ±9.6                   |
| 10589 | AAD | OFDM, 64QAM, 48.0 Mbps, 90.0% DC        | WLAN  | 8.35     | ±9.6                   |
| 10590 | AAD | OFDM, 64QAM, 54.0 Mbps, 90.0% DC        | WLAN  | 8.67     | ±9.6                   |
| 10591 | AAD | HT20 Mixed, MCS0 (6.5 Mbps), 89.9% DC   | WLAN  | 8.63     | ±9.6                   |
| 10592 | AAD | HT20 Mixed, MCS1 (13.0 Mbps), 90.0% DC  | WLAN  | 8.79     | ±9.6                   |
| 10593 | AAD | HT20 Mixed, MCS2 (19.5 Mbps), 90.0% DC  | WLAN  | 8.64     | ±9.6                   |
| 10594 | AAD | HT20 Mixed, MCS3 (26.0 Mbps), 90.0% DC  | WLAN  | 8.74     | ±9.6                   |
| 10595 | AAD | HT20 Mixed, MCS4 (39.0 Mbps), 90.0% DC  | WLAN  | 8.74     | ±9.6                   |
| 10596 | AAD | HT20 Mixed, MCS5 (52.0 Mbps), 90.0% DC  | WLAN  | 8.71     | ±9.6                   |
| 10597 | AAD | HT20 Mixed, MCS6 (58.5 Mbps), 90.0% DC  | WLAN  | 8.72     | ±9.6                   |
| 10598 | AAD | HT20 Mixed, MCS7 (65.0 Mbps), 90.0% DC  | WLAN  | 8.50     | ±9.6                   |
| 10599 | AAD | HT40 Mixed, MCS0 (13.5 Mbps), 89.9% DC  | WLAN  | 8.79     | ±9.6                   |
| 10600 | AAD | HT40 Mixed, MCS1 (27.0 Mbps), 89.7% DC  | WLAN  | 8.88     | ±9.6                   |
| 10601 | AAD | HT40 Mixed, MCS2 (40.5 Mbps), 89.6% DC  | WLAN  | 8.82     | ±9.6                   |
| 10602 | AAD | HT40 Mixed, MCS3 (54.0 Mbps), 89.4% DC  | WLAN  | 8.94     | ±9.6                   |
| 10603 | AAD | HT40 Mixed, MCS4 (81.0 Mbps), 89.2% DC  | WLAN  | 9.03     | ±9.6                   |
| 10604 | AAD | HT40 Mixed, MCS5 (108.0 Mbps), 88.9% DC | WLAN  | 8.76     | ±9.6                   |
| 10605 | AAD | HT40 Mixed, MCS6 (121.5 Mbps), 88.8% DC | WLAN  | 8.97     | ±9.6                   |
| 10606 | AAD | HT40 Mixed, MCS7 (135.0 Mbps), 88.7% DC | WLAN  | 8.82     | ±9.6                   |
| 10607 | AAD | VHT20, MCS0 (6.5 Mbps), 89.9% DC        | WLAN  | 8.64     | ±9.6                   |
| 10608 | AAD | VHT20, MCS1 (13.0 Mbps), 90.0% DC       | WLAN  | 8.77     | ±9.6                   |
| 10609 | AAD | VHT20, MCS2 (19.5 Mbps), 90.0% DC       | WLAN  | 8.57     | ±9.6                   |
| 10610 | AAD | VHT20, MCS3 (26.0 Mbps), 90.0% DC       | WLAN  | 8.78     | ±9.6                   |
| 10611 | AAD | VHT20, MCS4 (39.0 Mbps), 90.0% DC       | WLAN  | 8.70     | ±9.6                   |
| 10612 | AAD | VHT20, MCS5 (52.0 Mbps), 90.0% DC       | WLAN  | 8.77     | ±9.6                   |
| 10613 | AAD | VHT20, MCS6 (58.5 Mbps), 90.0% DC       | WLAN  | 8.94     | ±9.6                   |
| 10614 | AAD | VHT20, MCS7 (65.0 Mbps), 90.0% DC       | WLAN  | 8.59     | ±9.6                   |
| 10615 | AAD | VHT20, MCS8 (78.0 Mbps), 90.0% DC       | WLAN  | 8.82     | ±9.6                   |
| 10616 | AAD | VHT40, MCS0 (13.5 Mbps), 89.9% DC       | WLAN  | 8.82     | ±9.6                   |
| 10617 | AAD | VHT40, MCS1 (27.0 Mbps), 89.7% DC       | WLAN  | 8.81     | ±9.6                   |
| 10618 | AAD | VHT40, MCS2 (40.5 Mbps), 89.6% DC       | WLAN  | 8.58     | ±9.6                   |
| 10619 | AAD | VHT40, MCS3 (54.0 Mbps), 89.4% DC       | WLAN  | 8.86     | ±9.6                   |

| UID   | Rev | Communication System Name                  | Group     | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------|-----------|----------|------------------------|
| 10620 | AAD | VHT40, MCS4 (81.0 Mbps), 89.2% DC          | WLAN      | 8.87     | ±9.6                   |
| 10621 | AAD | VHT40, MCS5 (108.0 Mbps), 88.9% DC         | WLAN      | 8.77     | ±9.6                   |
| 10622 | AAD | VHT40, MCS6 (121.5 Mbps), 88.8% DC         | WLAN      | 8.68     | ±9.6                   |
| 10623 | AAD | VHT40, MCS7 (135.0 Mbps), 88.6% DC         | WLAN      | 8.82     | ±9.6                   |
| 10624 | AAD | VHT40, MCS8 (162.0 Mbps), 88.4% DC         | WLAN      | 8.96     | ±9.6                   |
| 10625 | AAD | VHT40, MCS9 (180.0 Mbps), 88.2% DC         | WLAN      | 8.96     | ±9.6                   |
| 10626 | AAD | VHT80, MCS0 (29.3 Mbps), 90.0% DC          | WLAN      | 8.83     | ±9.6                   |
| 10627 | AAD | VHT80, MCS1 (58.5 Mbps), 90.0% DC          | WLAN      | 8.88     | ±9.6                   |
| 10628 | AAD | VHT80, MCS2 (87.8 Mbps), 90.0% DC          | WLAN      | 8.71     | ±9.6                   |
| 10629 | AAD | VHT80, MCS3 (117.0 Mbps), 90.0% DC         | WLAN      | 8.85     | ±9.6                   |
| 10630 | AAD | VHT80, MCS4 (175.5 Mbps), 90.0% DC         | WLAN      | 8.72     | ±9.6                   |
| 10631 | AAD | VHT80, MCS5 (234.0 Mbps), 90.0% DC         | WLAN      | 8.81     | ±9.6                   |
| 10632 | AAD | VHT80, MCS6 (263.3 Mbps), 90.0% DC         | WLAN      | 8.74     | ±9.6                   |
| 10633 | AAD | VHT80, MCS7 (292.5 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10634 | AAD | VHT80, MCS8 (351.0 Mbps), 90.0% DC         | WLAN      | 8.80     | ±9.6                   |
| 10635 | AAD | VHT80, MCS9 (390.0 Mbps), 90.0% DC         | WLAN      | 8.81     | ±9.6                   |
| 10636 | AAE | VHT160, MCS0 (58.5 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10637 | AAE | VHT160, MCS1 (117.0 Mbps), 90.0% DC        | WLAN      | 8.79     | ±9.6                   |
| 10638 | AAE | VHT160, MCS2 (175.5 Mbps), 90.0% DC        | WLAN      | 8.86     | ±9.6                   |
| 10639 | AAE | VHT160, MCS3 (234.0 Mbps), 90.0% DC        | WLAN      | 8.85     | ±9.6                   |
| 10640 | AAE | VHT160, MCS4 (351.0 Mbps), 90.0% DC        | WLAN      | 8.98     | ±9.6                   |
| 10641 | AAE | VHT160, MCS5 (468.0 Mbps), 90.0% DC        | WLAN      | 9.06     | ±9.6                   |
| 10642 | AAE | VHT160, MCS6 (526.5 Mbps), 90.0% DC        | WLAN      | 9.06     | ±9.6                   |
| 10643 | AAE | VHT160, MCS7 (585.0 Mbps), 90.0% DC        | WLAN      | 8.89     | ±9.6                   |
| 10644 | AAE | VHT160, MCS8 (702.0 Mbps), 90.0% DC        | WLAN      | 9.05     | ±9.6                   |
| 10645 | AAE | VHT160, MCS9 (780.0 Mbps), 90.0% DC        | WLAN      | 9.11     | ±9.6                   |
| 10646 | AAH | 5.0 MHz, QPSK, UL/DL CFG: 2, SSC: 4, 1 RB  | LTE-TDD   | 11.96    | ±9.6                   |
| 10647 | AAG | 20.0 MHz, QPSK, UL/DL CFG: 2, SSC: 7, 1 RB | LTE-TDD   | 11.96    | ±9.6                   |
| 10648 | AAA | RC8, SO75, 1xAdvanced                      | CDMA2000  | 3.45     | ±9.6                   |
| 10670 | AAA | LE, Test, GFSK                             | Bluetooth | 2.19     | ±9.6                   |
| 10671 | AAC | ET20, MCS0 (8.6 Mbps), 90.0% DC            | WLAN      | 9.09     | ±9.6                   |
| 10672 | AAC | ET20, MCS1 (17.0 Mbps), 90.0% DC           | WLAN      | 8.57     | ±9.6                   |
| 10673 | AAC | ET20, MCS2 (26.0 Mbps), 90.0% DC           | WLAN      | 8.78     | ±9.6                   |
| 10674 | AAC | ET20, MCS3 (34.0 Mbps), 90.0% DC           | WLAN      | 8.74     | ±9.6                   |
| 10675 | AAC | ET20, MCS4 (52.0 Mbps), 90.0% DC           | WLAN      | 8.90     | ±9.6                   |
| 10676 | AAC | ET20, MCS5 (69.0 Mbps), 90.0% DC           | WLAN      | 8.77     | ±9.6                   |
| 10677 | AAC | ET20, MCS6 (77.0 Mbps), 90.0% DC           | WLAN      | 8.73     | ±9.6                   |
| 10678 | AAC | ET20, MCS7 (86.0 Mbps), 90.0% DC           | WLAN      | 8.78     | ±9.6                   |
| 10679 | AAC | ET20, MCS8 (103.0 Mbps), 90.0% DC          | WLAN      | 8.89     | ±9.6                   |
| 10680 | AAC | ET20, MCS9 (115.0 Mbps), 90.0% DC          | WLAN      | 8.80     | ±9.6                   |
| 10681 | AAC | ET20, MCS10 (122.0 Mbps), 90.0% DC         | WLAN      | 8.62     | ±9.6                   |
| 10682 | AAC | ET20, MCS11 (135.0 Mbps), 90.0% DC         | WLAN      | 8.83     | ±9.6                   |
| 10683 | AAC | ET20, MCS0 (8.6 Mbps), 100.0% DC           | WLAN      | 8.42     | ±9.6                   |
| 10684 | AAC | ET20, MCS1 (17.0 Mbps), 100.0% DC          | WLAN      | 8.26     | ±9.6                   |
| 10685 | AAC | ET20, MCS2 (26.0 Mbps), 100.0% DC          | WLAN      | 8.33     | ±9.6                   |
| 10686 | AAC | ET20, MCS3 (34.0 Mbps), 100.0% DC          | WLAN      | 8.28     | ±9.6                   |
| 10687 | AAC | ET20, MCS4 (52.0 Mbps), 100.0% DC          | WLAN      | 8.45     | ±9.6                   |
| 10688 | AAC | ET20, MCS5 (69.0 Mbps), 100.0% DC          | WLAN      | 8.29     | ±9.6                   |
| 10689 | AAC | ET20, MCS6 (77.0 Mbps), 100.0% DC          | WLAN      | 8.55     | ±9.6                   |
| 10690 | AAC | ET20, MCS7 (86.0 Mbps), 100.0% DC          | WLAN      | 8.29     | ±9.6                   |
| 10691 | AAC | ET20, MCS8 (103.0 Mbps), 100.0% DC         | WLAN      | 8.25     | ±9.6                   |
| 10692 | AAC | ET20, MCS9 (115.0 Mbps), 100.0% DC         | WLAN      | 8.29     | ±9.6                   |
| 10693 | AAC | ET20, MCS10 (122.0 Mbps), 100.0% DC        | WLAN      | 8.25     | ±9.6                   |
| 10694 | AAC | ET20, MCS11 (135.0 Mbps), 100.0% DC        | WLAN      | 8.57     | ±9.6                   |
| 10695 | AAC | ET40, MCS0 (17.2 Mbps), 89.8% DC           | WLAN      | 8.78     | ±9.6                   |
| 10696 | AAC | ET40, MCS1 (34.0 Mbps), 89.8% DC           | WLAN      | 8.91     | ±9.6                   |
| 10697 | AAC | ET40, MCS2 (52.0 Mbps), 89.7% DC           | WLAN      | 8.61     | ±9.6                   |
| 10698 | AAC | ET40, MCS3 (69.0 Mbps), 89.7% DC           | WLAN      | 8.89     | ±9.6                   |
| 10699 | AAC | ET40, MCS4 (103.0 Mbps), 89.9% DC          | WLAN      | 8.82     | ±9.6                   |
| 10700 | AAC | ET40, MCS5 (138.0 Mbps), 89.8% DC          | WLAN      | 8.73     | ±9.6                   |
| 10701 | AAC | ET40, MCS6 (155.0 Mbps), 89.8% DC          | WLAN      | 8.86     | ±9.6                   |
| 10702 | AAC | ET40, MCS7 (172.0 Mbps), 89.8% DC          | WLAN      | 8.70     | ±9.6                   |
| 10703 | AAC | ET40, MCS8 (207.0 Mbps), 89.8% DC          | WLAN      | 8.82     | ±9.6                   |
| 10704 | AAC | ET40, MCS9 (229.0 Mbps), 89.8% DC          | WLAN      | 8.56     | ±9.6                   |
| 10705 | AAC | ET40, MCS10 (258.0 Mbps), 89.8% DC         | WLAN      | 8.69     | ±9.6                   |
| 10706 | AAC | ET40, MCS11 (267.0 Mbps), 89.8% DC         | WLAN      | 8.66     | ±9.6                   |

| UID   | Rev | Communication System Name                        | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|--------------------------------------------------|---------------|----------|------------------------|
| 10707 | AAC | ET40, MCS0 (17.2 Mbps), 99.8% DC                 | WLAN          | 8.32     | ±9.6                   |
| 10708 | AAC | ET40, MCS1 (34.0 Mbps), 99.7% DC                 | WLAN          | 8.55     | ±9.6                   |
| 10709 | AAC | ET40, MCS2 (52.0 Mbps), 99.7% DC                 | WLAN          | 8.33     | ±9.6                   |
| 10710 | AAC | ET40, MCS3 (69.0 Mbps), 99.7% DC                 | WLAN          | 8.29     | ±9.6                   |
| 10711 | AAC | ET40, MCS4 (103.0 Mbps), 99.8% DC                | WLAN          | 8.39     | ±9.6                   |
| 10712 | AAC | ET40, MCS5 (136.0 Mbps), 99.8% DC                | WLAN          | 8.67     | ±9.6                   |
| 10713 | AAC | ET40, MCS6 (155.0 Mbps), 99.8% DC                | WLAN          | 8.33     | ±9.6                   |
| 10714 | AAC | ET40, MCS7 (172.0 Mbps), 99.8% DC                | WLAN          | 8.26     | ±9.6                   |
| 10715 | AAC | ET40, MCS8 (207.0 Mbps), 99.8% DC                | WLAN          | 8.45     | ±9.6                   |
| 10716 | AAC | ET40, MCS9 (229.0 Mbps), 99.8% DC                | WLAN          | 8.30     | ±9.6                   |
| 10717 | AAC | ET40, MCS10 (258.0 Mbps), 99.8% DC               | WLAN          | 8.48     | ±9.6                   |
| 10718 | AAC | ET40, MCS11 (267.0 Mbps), 99.8% DC               | WLAN          | 8.24     | ±9.6                   |
| 10719 | AAC | ET80, MCS0 (36.0 Mbps), 90.0% DC                 | WLAN          | 8.81     | ±9.6                   |
| 10720 | AAC | ET80, MCS1 (72.1 Mbps), 90.0% DC                 | WLAN          | 8.87     | ±9.6                   |
| 10721 | AAC | ET80, MCS2 (108.1 Mbps), 90.0% DC                | WLAN          | 8.76     | ±9.6                   |
| 10722 | AAC | ET80, MCS3 (144.1 Mbps), 90.0% DC                | WLAN          | 8.55     | ±9.6                   |
| 10723 | AAC | ET80, MCS4 (216.2 Mbps), 90.0% DC                | WLAN          | 8.70     | ±9.6                   |
| 10724 | AAC | ET80, MCS5 (288.2 Mbps), 90.0% DC                | WLAN          | 8.90     | ±9.6                   |
| 10725 | AAC | ET80, MCS6 (324.4 Mbps), 90.0% DC                | WLAN          | 8.74     | ±9.6                   |
| 10726 | AAC | ET80, MCS7 (360.3 Mbps), 90.0% DC                | WLAN          | 8.72     | ±9.6                   |
| 10727 | AAC | ET80, MCS8 (432.4 Mbps), 90.0% DC                | WLAN          | 8.66     | ±9.6                   |
| 10728 | AAC | ET80, MCS9 (480.4 Mbps), 90.0% DC                | WLAN          | 8.65     | ±9.6                   |
| 10729 | AAC | ET80, MCS10 (540.4 Mbps), 90.0% DC               | WLAN          | 8.64     | ±9.6                   |
| 10730 | AAC | ET80, MCS11 (72.0 Mbps), 90.0% DC                | WLAN          | 8.67     | ±9.6                   |
| 10731 | AAC | ET80, MCS0 (36.0 Mbps), 100.0% DC                | WLAN          | 8.42     | ±9.6                   |
| 10732 | AAC | ET80, MCS1 (72.1 Mbps), 100.0% DC                | WLAN          | 8.46     | ±9.6                   |
| 10733 | AAC | ET80, MCS2 (108.1 Mbps), 100.0% DC               | WLAN          | 8.40     | ±9.6                   |
| 10734 | AAC | ET80, MCS3 (144.1 Mbps), 100.0% DC               | WLAN          | 8.25     | ±9.6                   |
| 10735 | AAC | ET80, MCS4 (216.2 Mbps), 100.0% DC               | WLAN          | 8.33     | ±9.6                   |
| 10736 | AAC | ET80, MCS5 (288.2 Mbps), 100.0% DC               | WLAN          | 8.27     | ±9.6                   |
| 10737 | AAC | ET80, MCS6 (324.4 Mbps), 100.0% DC               | WLAN          | 8.36     | ±9.6                   |
| 10738 | AAC | ET80, MCS7 (360.3 Mbps), 100.0% DC               | WLAN          | 8.42     | ±9.6                   |
| 10739 | AAC | ET80, MCS8 (432.4 Mbps), 100.0% DC               | WLAN          | 8.29     | ±9.6                   |
| 10740 | AAC | ET80, MCS9 (480.4 Mbps), 100.0% DC               | WLAN          | 8.48     | ±9.6                   |
| 10741 | AAC | ET80, MCS10 (540.4 Mbps), 100.0% DC              | WLAN          | 8.40     | ±9.6                   |
| 10742 | AAC | ET80, MCS11 (600.5 Mbps), 100.0% DC              | WLAN          | 8.43     | ±9.6                   |
| 10743 | AAC | ET160, MCS0 (72.0 Mbps), 88.2% DC                | WLAN          | 8.94     | ±9.6                   |
| 10744 | AAC | ET160, MCS1 (144.0 Mbps), 87.1% DC               | WLAN          | 9.16     | ±9.6                   |
| 10745 | AAC | ET160, MCS2 (216.0 Mbps), 87.4% DC               | WLAN          | 8.93     | ±9.6                   |
| 10746 | AAC | ET160, MCS3 (282.0 Mbps), 87.1% DC               | WLAN          | 9.11     | ±9.6                   |
| 10747 | AAC | ET160, MCS4 (432.0 Mbps), 87.4% DC               | WLAN          | 9.04     | ±9.6                   |
| 10748 | AAC | ET160, MCS5 (576.0 Mbps), 86.8% DC               | WLAN          | 8.93     | ±9.6                   |
| 10749 | AAC | ET160, MCS6 (649.0 Mbps), 86.7% DC               | WLAN          | 8.90     | ±9.6                   |
| 10750 | AAC | ET160, MCS7 (721.0 Mbps), 86.7% DC               | WLAN          | 8.79     | ±9.6                   |
| 10751 | AAC | ET160, MCS8 (865.0 Mbps), 86.3% DC               | WLAN          | 8.82     | ±9.6                   |
| 10752 | AAC | ET160, MCS9 (961.0 Mbps), 86.3% DC               | WLAN          | 8.81     | ±9.6                   |
| 10753 | AAC | ET160, MCS10 (1081.0 Mbps), 86.7% DC             | WLAN          | 9.00     | ±9.6                   |
| 10754 | AAC | ET160, MCS11 (1201.0 Mbps), 86.7% DC             | WLAN          | 8.94     | ±9.6                   |
| 10755 | AAC | ET160, MCS0 (72.0 Mbps), 98.0% DC                | WLAN          | 8.64     | ±9.6                   |
| 10756 | AAC | ET160, MCS1 (144.0 Mbps), 96.8% DC               | WLAN          | 8.77     | ±9.6                   |
| 10757 | AAC | ET160, MCS2 (216.0 Mbps), 97.1% DC               | WLAN          | 8.77     | ±9.6                   |
| 10758 | AAC | ET160, MCS3 (282.0 Mbps), 96.8% DC               | WLAN          | 8.69     | ±9.6                   |
| 10759 | AAC | ET160, MCS4 (432.0 Mbps), 97.1% DC               | WLAN          | 8.58     | ±9.6                   |
| 10760 | AAC | ET160, MCS5 (576.0 Mbps), 96.5% DC               | WLAN          | 8.49     | ±9.6                   |
| 10761 | AAC | ET160, MCS6 (649.0 Mbps), 96.3% DC               | WLAN          | 8.58     | ±9.6                   |
| 10762 | AAC | ET160, MCS7 (721.0 Mbps), 96.3% DC               | WLAN          | 8.49     | ±9.6                   |
| 10763 | AAC | ET160, MCS8 (865.0 Mbps), 95.9% DC               | WLAN          | 8.53     | ±9.6                   |
| 10764 | AAC | ET160, MCS9 (961.0 Mbps), 95.9% DC               | WLAN          | 8.54     | ±9.6                   |
| 10765 | AAC | ET160, MCS10 (1081.0 Mbps), 96.3% DC             | WLAN          | 8.54     | ±9.6                   |
| 10766 | AAC | ET160, MCS11 (1201.0 Mbps), 96.3% DC             | WLAN          | 8.51     | ±9.6                   |
| 10767 | AAG | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 99.9% DC, 1 RB   | 5G NR FR1 TDD | 7.99     | ±9.6                   |
| 10768 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10769 | AAD | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10770 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10771 | AAD | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10772 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB | 5G NR FR1 TDD | 8.23     | ±9.6                   |

| UID   | Rev | Communication System Name                            | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|------------------------------------------------------|---------------|----------|------------------------|
| 10773 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.03     | ±9.6                   |
| 10774 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.02     | ±9.6                   |
| 10775 | AAF | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB    | 5G NR FR1 TDD | 8.31     | ±9.6                   |
| 10776 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10777 | AAC | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10778 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10779 | AAC | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.42     | ±9.6                   |
| 10780 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.38     | ±9.6                   |
| 10781 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.38     | ±9.6                   |
| 10782 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.43     | ±9.6                   |
| 10783 | AAG | CP-OFDM, 5.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 8.31     | ±9.6                   |
| 10784 | AAE | CP-OFDM, 10.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.29     | ±9.6                   |
| 10785 | AAD | CP-OFDM, 15.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10786 | AAE | CP-OFDM, 20.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10787 | AAD | CP-OFDM, 25.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.44     | ±9.6                   |
| 10788 | AAE | CP-OFDM, 30.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10789 | AAF | CP-OFDM, 40.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10790 | AAE | CP-OFDM, 50.0 MHz, QPSK, 15 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10791 | AAG | CP-OFDM, 5.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB       | 5G NR FR1 TDD | 7.83     | ±9.6                   |
| 10792 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.92     | ±9.6                   |
| 10793 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.95     | ±9.6                   |
| 10794 | AAE | CP-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.82     | ±9.6                   |
| 10795 | AAD | CP-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.84     | ±9.6                   |
| 10796 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.82     | ±9.6                   |
| 10797 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 8.01     | ±9.6                   |
| 10798 | AAE | CP-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.89     | ±9.6                   |
| 10799 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.93     | ±9.6                   |
| 10801 | AAF | CP-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.89     | ±9.6                   |
| 10802 | AAE | CP-OFDM, 90.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.87     | ±9.6                   |
| 10803 | AAF | CP-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB    | 5G NR FR1 TDD | 7.93     | ±9.6                   |
| 10805 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10806 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10809 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10810 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10812 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10817 | AAG | CP-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10818 | AAE | CP-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10819 | AAD | CP-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.33     | ±9.6                   |
| 10820 | AAE | CP-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.30     | ±9.6                   |
| 10821 | AAD | CP-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10822 | AAE | CP-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10823 | AAF | CP-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |
| 10824 | AAE | CP-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.39     | ±9.6                   |
| 10825 | AAF | CP-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10827 | AAF | CP-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.42     | ±9.6                   |
| 10828 | AAE | CP-OFDM, 90.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.43     | ±9.6                   |
| 10829 | AAF | CP-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10830 | AAE | CP-OFDM, 10.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.63     | ±9.6                   |
| 10831 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.73     | ±9.6                   |
| 10832 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.74     | ±9.6                   |
| 10833 | AAD | CP-OFDM, 25.0 MHz, QPSK, 60 kHz, 99.9% DC, 1 RB      | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10834 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.75     | ±9.6                   |
| 10835 | AAF | CP-OFDM, 40.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10836 | AAE | CP-OFDM, 50.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.66     | ±9.6                   |
| 10837 | AAF | CP-OFDM, 60.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.68     | ±9.6                   |
| 10839 | AAF | CP-OFDM, 80.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.70     | ±9.6                   |
| 10840 | AAE | CP-OFDM, 90.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB     | 5G NR FR1 TDD | 7.67     | ±9.6                   |
| 10841 | AAF | CP-OFDM, 100.0 MHz, QPSK, 60 kHz, 100.0% DC, 1 RB    | 5G NR FR1 TDD | 7.71     | ±9.6                   |
| 10843 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.49     | ±9.6                   |
| 10844 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10846 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 50% RB   | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10854 | AAE | CP-OFDM, 10.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10855 | AAD | CP-OFDM, 15.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |
| 10856 | AAE | CP-OFDM, 20.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10857 | AAD | CP-OFDM, 25.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.35     | ±9.6                   |
| 10858 | AAE | CP-OFDM, 30.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB  | 5G NR FR1 TDD | 8.36     | ±9.6                   |

| UID   | Rev | Communication System Name                                 | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|-----------------------------------------------------------|---------------|----------|------------------------|
| 10859 | AAF | CP-OFDM, 40.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.34     | ±9.6                   |
| 10860 | AAE | CP-OFDM, 50.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10861 | AAF | CP-OFDM, 60.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.40     | ±9.6                   |
| 10863 | AAF | CP-OFDM, 80.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10864 | AAE | CP-OFDM, 90.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB       | 5G NR FR1 TDD | 8.37     | ±9.6                   |
| 10865 | AAF | CP-OFDM, 100.0 MHz, QPSK, 60 kHz, 100.0% DC, 100% RB      | 5G NR FR1 TDD | 8.41     | ±9.6                   |
| 10866 | AAF | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB      | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10868 | AAF | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB   | 5G NR FR1 TDD | 5.89     | ±9.6                   |
| 10869 | AAE | DFT-s-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10870 | AAE | DFT-s-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 5.86     | ±9.6                   |
| 10871 | AAE | DFT-s-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB    | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10872 | AAE | DFT-s-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB | 5G NR FR2 TDD | 6.52     | ±9.6                   |
| 10873 | AAE | DFT-s-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB    | 5G NR FR2 TDD | 6.61     | ±9.6                   |
| 10874 | AAE | DFT-s-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB | 5G NR FR2 TDD | 6.65     | ±9.6                   |
| 10875 | AAE | CP-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 7.78     | ±9.6                   |
| 10876 | AAE | CP-OFDM, 100.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.39     | ±9.6                   |
| 10877 | AAE | CP-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB       | 5G NR FR2 TDD | 7.95     | ±9.6                   |
| 10878 | AAE | CP-OFDM, 100.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB    | 5G NR FR2 TDD | 8.41     | ±9.6                   |
| 10879 | AAE | CP-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB       | 5G NR FR2 TDD | 8.12     | ±9.6                   |
| 10880 | AAE | CP-OFDM, 100.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB    | 5G NR FR2 TDD | 8.38     | ±9.6                   |
| 10881 | AAE | DFT-s-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 1 RB      | 5G NR FR2 TDD | 5.75     | ±9.6                   |
| 10882 | AAE | DFT-s-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB   | 5G NR FR2 TDD | 5.96     | ±9.6                   |
| 10883 | AAE | DFT-s-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 6.57     | ±9.6                   |
| 10884 | AAE | DFT-s-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 6.53     | ±9.6                   |
| 10885 | AAE | DFT-s-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB     | 5G NR FR2 TDD | 6.61     | ±9.6                   |
| 10886 | AAE | DFT-s-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB  | 5G NR FR2 TDD | 6.65     | ±9.6                   |
| 10887 | AAE | CP-OFDM, 50.0 MHz, QPSK, 120 kHz, 99.9% DC, 1 RB          | 5G NR FR2 TDD | 7.78     | ±9.6                   |
| 10888 | AAE | CP-OFDM, 50.0 MHz, QPSK, 120 kHz, 100.0% DC, 100% RB      | 5G NR FR2 TDD | 8.35     | ±9.6                   |
| 10889 | AAE | CP-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 8.02     | ±9.6                   |
| 10890 | AAE | CP-OFDM, 50.0 MHz, 16QAM, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.40     | ±9.6                   |
| 10891 | AAE | CP-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 1 RB        | 5G NR FR2 TDD | 8.13     | ±9.6                   |
| 10892 | AAE | CP-OFDM, 50.0 MHz, 64QAM, 120 kHz, 100.0% DC, 100% RB     | 5G NR FR2 TDD | 8.41     | ±9.6                   |
| 10897 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 99.9% DC, 1 RB         | 5G NR FR1 TDD | 5.66     | ±9.6                   |
| 10898 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.67     | ±9.6                   |
| 10899 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.67     | ±9.6                   |
| 10900 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10901 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10902 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10903 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10904 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10905 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10906 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 1 RB       | 5G NR FR1 TDD | 5.68     | ±9.6                   |
| 10907 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB      | 5G NR FR1 TDD | 5.78     | ±9.6                   |
| 10908 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.93     | ±9.6                   |
| 10909 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.96     | ±9.6                   |
| 10910 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.83     | ±9.6                   |
| 10911 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.93     | ±9.6                   |
| 10912 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10913 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10914 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.85     | ±9.6                   |
| 10915 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.83     | ±9.6                   |
| 10916 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB     | 5G NR FR1 TDD | 5.87     | ±9.6                   |
| 10917 | AAD | DFT-s-OFDM, 100.0 MHz, QPSK, 30 kHz, 100.0% DC, 50% RB    | 5G NR FR1 TDD | 5.94     | ±9.6                   |
| 10918 | AAE | DFT-s-OFDM, 5.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB     | 5G NR FR1 TDD | 5.86     | ±9.6                   |
| 10919 | AAC | DFT-s-OFDM, 10.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.86     | ±9.6                   |
| 10920 | AAB | DFT-s-OFDM, 15.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.87     | ±9.6                   |
| 10921 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10922 | AAB | DFT-s-OFDM, 25.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.82     | ±9.6                   |
| 10923 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10924 | AAD | DFT-s-OFDM, 40.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10925 | AAC | DFT-s-OFDM, 50.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.95     | ±9.6                   |
| 10926 | AAD | DFT-s-OFDM, 60.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.84     | ±9.6                   |
| 10927 | AAD | DFT-s-OFDM, 80.0 MHz, QPSK, 30 kHz, 100.0% DC, 100% RB    | 5G NR FR1 TDD | 5.94     | ±9.6                   |
| 10928 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 1 RB                   | 5G NR FR1 FDD | 5.52     | ±9.6                   |
| 10929 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 1 RB                  | 5G NR FR1 FDD | 5.52     | ±9.6                   |
| 10930 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 1 RB                  | 5G NR FR1 FDD | 5.52     | ±9.6                   |

| UID   | Rev | Communication System Name                   | Group         | PAR (dB) | Unc <sup>E</sup> k = 2 |
|-------|-----|---------------------------------------------|---------------|----------|------------------------|
| 10931 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                   |
| 10932 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                   |
| 10933 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                   |
| 10934 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                   |
| 10935 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 1 RB    | 5G NR FR1 FDD | 5.51     | ±9.6                   |
| 10936 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 50% RB   | 5G NR FR1 FDD | 5.90     | ±9.6                   |
| 10937 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.77     | ±9.6                   |
| 10938 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.90     | ±9.6                   |
| 10939 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.82     | ±9.6                   |
| 10940 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.89     | ±9.6                   |
| 10941 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.83     | ±9.6                   |
| 10942 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.85     | ±9.6                   |
| 10943 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 50% RB  | 5G NR FR1 FDD | 5.95     | ±9.6                   |
| 10944 | AAD | DFT-s-OFDM, 5.0 MHz, QPSK, 15 kHz, 100% RB  | 5G NR FR1 FDD | 5.81     | ±9.6                   |
| 10945 | AAD | DFT-s-OFDM, 10.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.85     | ±9.6                   |
| 10946 | AAC | DFT-s-OFDM, 15.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.83     | ±9.6                   |
| 10947 | AAC | DFT-s-OFDM, 20.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.87     | ±9.6                   |
| 10948 | AAC | DFT-s-OFDM, 25.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.94     | ±9.6                   |
| 10949 | AAC | DFT-s-OFDM, 30.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.87     | ±9.6                   |
| 10950 | AAC | DFT-s-OFDM, 40.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.94     | ±9.6                   |
| 10951 | AAD | DFT-s-OFDM, 50.0 MHz, QPSK, 15 kHz, 100% RB | 5G NR FR1 FDD | 5.92     | ±9.6                   |
| 10978 | AAA | BDR, 1.0 MHz, 76.7% DC                      | ULLA          | 1.16     | ±9.6                   |
| 10979 | AAA | HDR4, 2.0 MHz, 25.1% DC                     | ULLA          | 8.58     | ±9.6                   |
| 10980 | AAA | HDR8, 4.0 MHz, 16.5% DC                     | ULLA          | 10.32    | ±9.6                   |
| 10981 | AAA | HDRp4, 2.0 MHz, 89.0% DC                    | ULLA          | 3.19     | ±9.6                   |
| 10982 | AAA | HDRp8, 4.0 MHz, 90.3% DC                    | ULLA          | 3.43     | ±9.6                   |
| 11013 | AAB | EHT320, MCS1 (272.0 Mbps), 100.0% DC        | WLAN          | 8.47     | ±9.6                   |
| 11014 | AAB | EHT320, MCS2 (408.0 Mbps), 100.0% DC        | WLAN          | 8.45     | ±9.6                   |
| 11015 | AAB | EHT320, MCS3 (544.0 Mbps), 100.0% DC        | WLAN          | 8.44     | ±9.6                   |
| 11016 | AAB | EHT320, MCS4 (817.0 Mbps), 100.0% DC        | WLAN          | 8.44     | ±9.6                   |
| 11017 | AAB | EHT320, MCS5 (1089.0 Mbps), 100.0% DC       | WLAN          | 8.41     | ±9.6                   |
| 11018 | AAB | EHT320, MCS6 (1225.0 Mbps), 100.0% DC       | WLAN          | 8.40     | ±9.6                   |
| 11019 | AAB | EHT320, MCS7 (1361.0 Mbps), 100.0% DC       | WLAN          | 8.29     | ±9.6                   |
| 11020 | AAB | EHT320, MCS8 (1633.0 Mbps), 100.0% DC       | WLAN          | 8.27     | ±9.6                   |
| 11021 | AAB | EHT320, MCS9 (1815.0 Mbps), 100.0% DC       | WLAN          | 8.46     | ±9.6                   |
| 11022 | AAB | EHT320, MCS10 (2042.0 Mbps), 100.0% DC      | WLAN          | 8.36     | ±9.6                   |
| 11023 | AAB | EHT320, MCS11 (2269.0 Mbps), 100.0% DC      | WLAN          | 8.09     | ±9.6                   |
| 11024 | AAB | EHT320, MCS12 (2450.0 Mbps), 100.0% DC      | WLAN          | 8.42     | ±9.6                   |
| 11025 | AAB | EHT320, MCS13 (2722.0 Mbps), 100.0% DC      | WLAN          | 8.37     | ±9.6                   |
| 11026 | AAB | EHT320, MCS0 (136.0 Mbps), 100.0% DC        | WLAN          | 8.39     | ±9.6                   |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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

Client **RF Safety Lab**  
Catonsville, USA

Certificate No. **CLA13-1041\_Oct24**

## CALIBRATION CERTIFICATE

Object **CLA13 - SN: 1041**

Calibration procedure(s) **QA CAL-15.v11**  
*MPRS 10/21/24*  
Calibration Procedure for SAR Validation Sources below 700 MHz

Calibration date: **October 11, 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 ( $22 \pm 3$ )°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. 217-04036/04037) | 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: CC2552 (20x)   | 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: 3877           | 10-Jan-24 (No. EX3-3877_Jan24)  | Jan-25                |
| DAE4                        | SN: 654            | 15-Jan-24 (No. DAE4-654_Jan24)  | Jan-25                |

| Secondary Standards             | ID #             | Check Date (in house)             | Scheduled Check        |
|---------------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP2                | SN: 107193       | 08-Nov-21 (in house check Dec-22) | In house check: Dec-24 |
| Power sensor NRP-Z91            | SN: 100922       | 15-Dec-09 (in house check Dec-22) | In house check: Dec-24 |
| Power sensor NRP-Z91            | SN: 100418       | 01-Jan-04 (in house check Dec-22) | In house check: Dec-24 |
| RF generator HP 8648C           | SN: US3642U01700 | 04-Aug-99 (in house check Jun-24) | In house check: Jun-26 |
| Network Analyzer Agilent E8358A | SN: US41080477   | 31-Mar-14 (in house check Sep-24) | In house check: Sep-26 |

|                |                    |                                   |                                 |
|----------------|--------------------|-----------------------------------|---------------------------------|
| Calibrated by: | Name<br>Paulo Pina | Function<br>Laboratory Technician | Signature<br><i>[Signature]</i> |
| Approved by:   | Sven Kühn          | Technical Manager                 | <i>[Signature]</i>              |

Issued: October 14, 2024

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

**Glossary:**

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / 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 TSL:* 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 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%.

## Measurement Conditions

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

|                             |                                  |                                  |
|-----------------------------|----------------------------------|----------------------------------|
| <b>DASY Version</b>         | DASY5                            | V52.10.4                         |
| <b>Extrapolation</b>        | Advanced Extrapolation           |                                  |
| <b>Phantom</b>              | ELI4 Flat Phantom                | Shell thickness: $2 \pm 0.2$ mm  |
| <b>EUT Positioning</b>      | Touch Position                   |                                  |
| <b>Zoom Scan Resolution</b> | $dx, dy = 4.0$ mm, $dz = 1.4$ mm | Graded Ratio = 1.4 (Z direction) |
| <b>Frequency</b>            | $13$ MHz $\pm 1$ MHz             |                                  |

## Head TSL parameters

The following parameters and calculations were applied.

|                                                | Temperature         | Permittivity   | Conductivity           |
|------------------------------------------------|---------------------|----------------|------------------------|
| <b>Nominal Head TSL parameters</b>             | $22.0$ °C           | 55.0           | $0.75$ mho/m           |
| <b>Measured Head TSL parameters</b>            | $(22.0 \pm 0.2)$ °C | $53.1 \pm 6$ % | $0.72$ mho/m $\pm 6$ % |
| <b>Head TSL temperature change during test</b> | $< 0.5$ °C          | ----           | ----                   |

## SAR result with Head TSL

|                                                                       |                  |                                                              |
|-----------------------------------------------------------------------|------------------|--------------------------------------------------------------|
| <b>SAR averaged over <math>1\text{ cm}^3</math> (1 g) of Head TSL</b> | Condition        |                                                              |
| SAR measured                                                          | 1 W input power  | $0.446$ W/kg                                                 |
| SAR for nominal Head TSL parameters                                   | normalized to 1W | <b><math>0.457</math> W/kg <math>\pm 18.4</math> % (k=2)</b> |

|                                                                         |                  |                                                              |
|-------------------------------------------------------------------------|------------------|--------------------------------------------------------------|
| <b>SAR averaged over <math>10\text{ cm}^3</math> (10 g) of Head TSL</b> | condition        |                                                              |
| SAR measured                                                            | 1 W input power  | $0.289$ W/kg                                                 |
| SAR for nominal Head TSL parameters                                     | normalized to 1W | <b><math>0.296</math> W/kg <math>\pm 18.0</math> % (k=2)</b> |

## Appendix (Additional assessments outside the scope of SCS 0108)

### Antenna Parameters with Head TSL

|                                      |                             |
|--------------------------------------|-----------------------------|
| Impedance, transformed to feed point | $54.5 \Omega - 0.9 j\Omega$ |
| Return Loss                          | - 27.1 dB                   |

### Additional EUT Data

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

## DASY5 Validation Report for Head TSL

Date: 11.10.2024

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: CLA13; Type: CLA13; Serial: CLA13 - SN: 1041**

Communication System: UID 0 - CW; Frequency: 13 MHz

Medium parameters used:  $f = 13 \text{ MHz}$ ;  $\sigma = 0.72 \text{ S/m}$ ;  $\epsilon_r = 53.1$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN3877; ConvF(15.33, 15.33, 15.33) @ 13 MHz; Calibrated: 10.01.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 15.01.2024
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: TP:2034
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

**CLA Calibration for HSL-LF Tissue/CLA-13, touch configuration, Pin=1W/Zoom Scan, dist=1.4mm (8x10x8)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 28.80 V/m; Power Drift = 0.05 dB

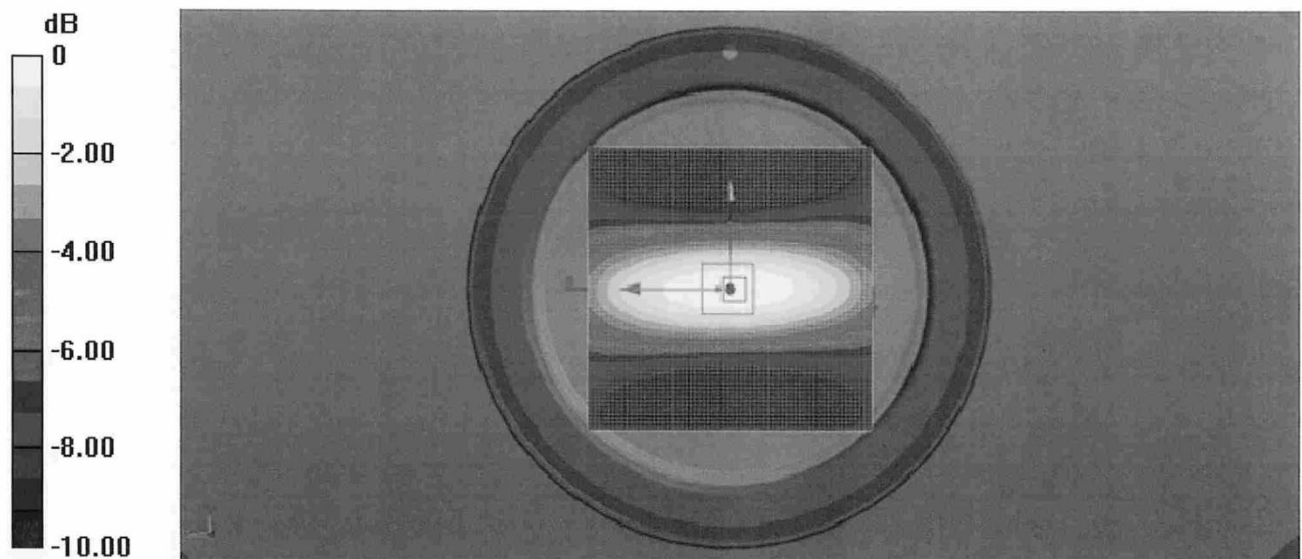
Peak SAR (extrapolated) = 0.947 W/kg

**SAR(1 g) = 0.446 W/kg; SAR(10 g) = 0.289 W/kg**

Smallest distance from peaks to all points 3 dB below = 19.9 mm

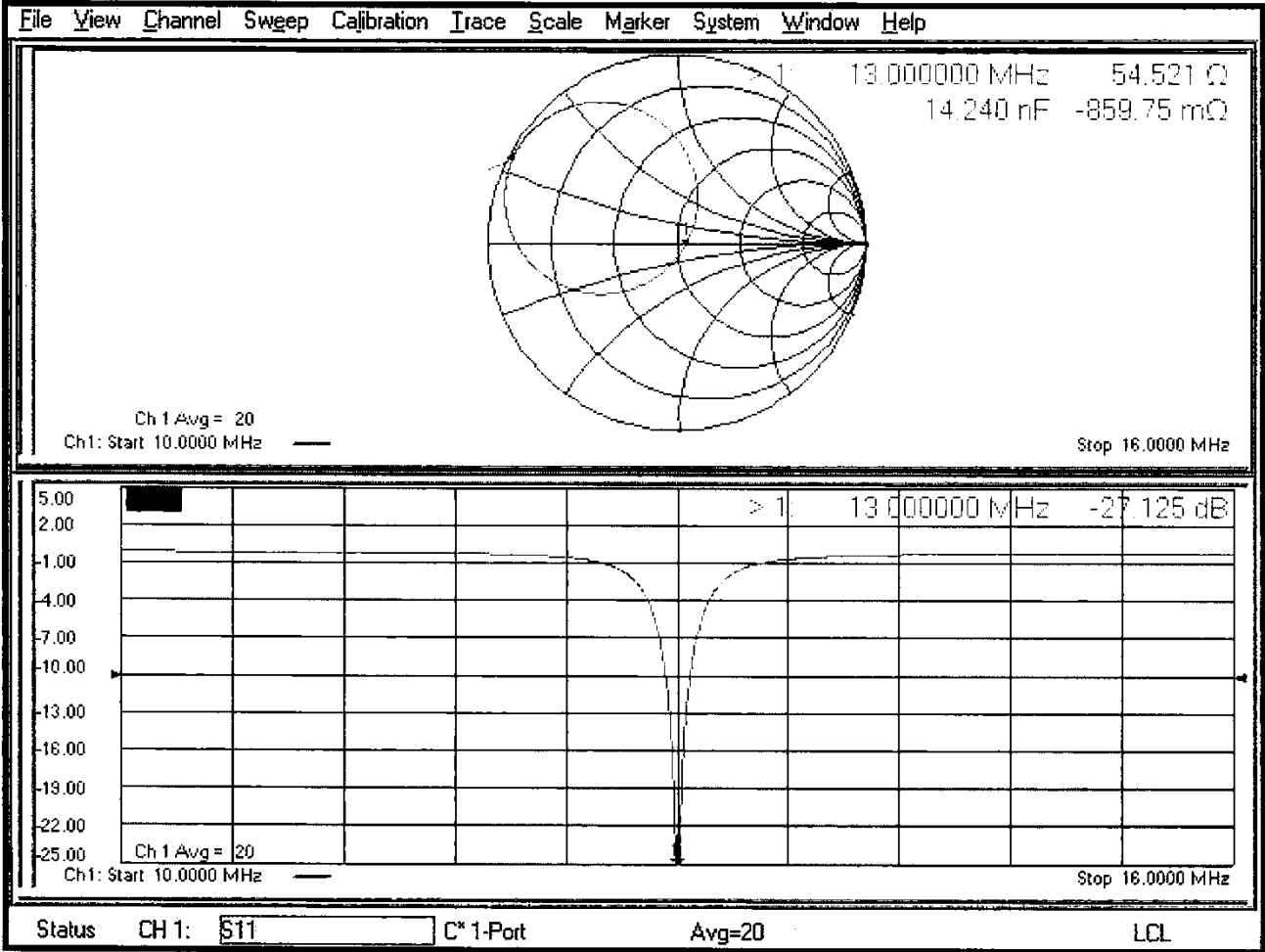
Ratio of SAR at M2 to SAR at M1 = 78.3%

Maximum value of SAR (measured) = 0.687 W/kg



0 dB = 0.687 W/kg = -1.63 dBW/kg

Impedance Measurement Plot for Head TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

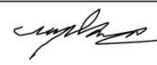
Object: CLA13 – SN: 1041  
Description: SAR Validation Source at 13 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 07/30/2025

### Equipment List

| Manufacturer    | Model                | Description                                                        | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|--------------------------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                                            | 101202         | 9/12/24          | 9/12/25         |     |
| Rohde & Schwarz | ZN-Z135              | VNA Calibration Kit                                                | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581657      | 8/28/23          | 8/28/25         |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581662      | 8/28/23          | 8/28/25         |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662223      | 9/28/23          | 9/28/25         |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662212      | 9/28/23          | 9/28/25         |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)                                | -              |                  |                 | ✓   |
| Maury-Micro     | 360D                 | 10dB RF Fixed Attenuator (DC - 18 GHz) + Short Circuit Termination | 7799           | 12/28/24         | 12/28/25        |     |
| Huber+Suhner    | SF126                | High Performance RF Cable                                          | 570292/126     |                  |                 | ✓   |
| Mini-Circuits   | VLK-8400+            | Coaxial Low Pass Filter (DC - 8.4 GHz)                             | -              |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power                     | 1839           | 9/4/24           | 9/4/25          |     |
| SPEAG           | DAK-12               | DAK-12 Dielectric Probe                                            | 1194           | 10/14/24         | 10/14/25        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                                              | 7836           | 9/12/24          | 9/12/25         |     |
| Anritsu         | MA24118A             | Microwave USB Power Sensor (10MHz - 18 GHz)                        | 2123431        | 1/13/25          | 1/13/26         |     |
| Rohde & Schwarz | SMCV100B             | R&S SMCV100B Vector Signal Generator (VSG)                         | 103882         | 12/21/23         | 12/19/25        |     |
| Mini-Circuits   | CBL-6FT-SMNM+        | Precision Test Cable SMA/N (DC - 18 GHz)                           | 3318           |                  |                 | ✓   |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  ( $k=2$ )

|              | Name          | Function          | Signature                                                                             |
|--------------|---------------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | Yue Li        | Engineer          |  |
| Approved By: | Phuong Nguyen | Technical Manager |  |



Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

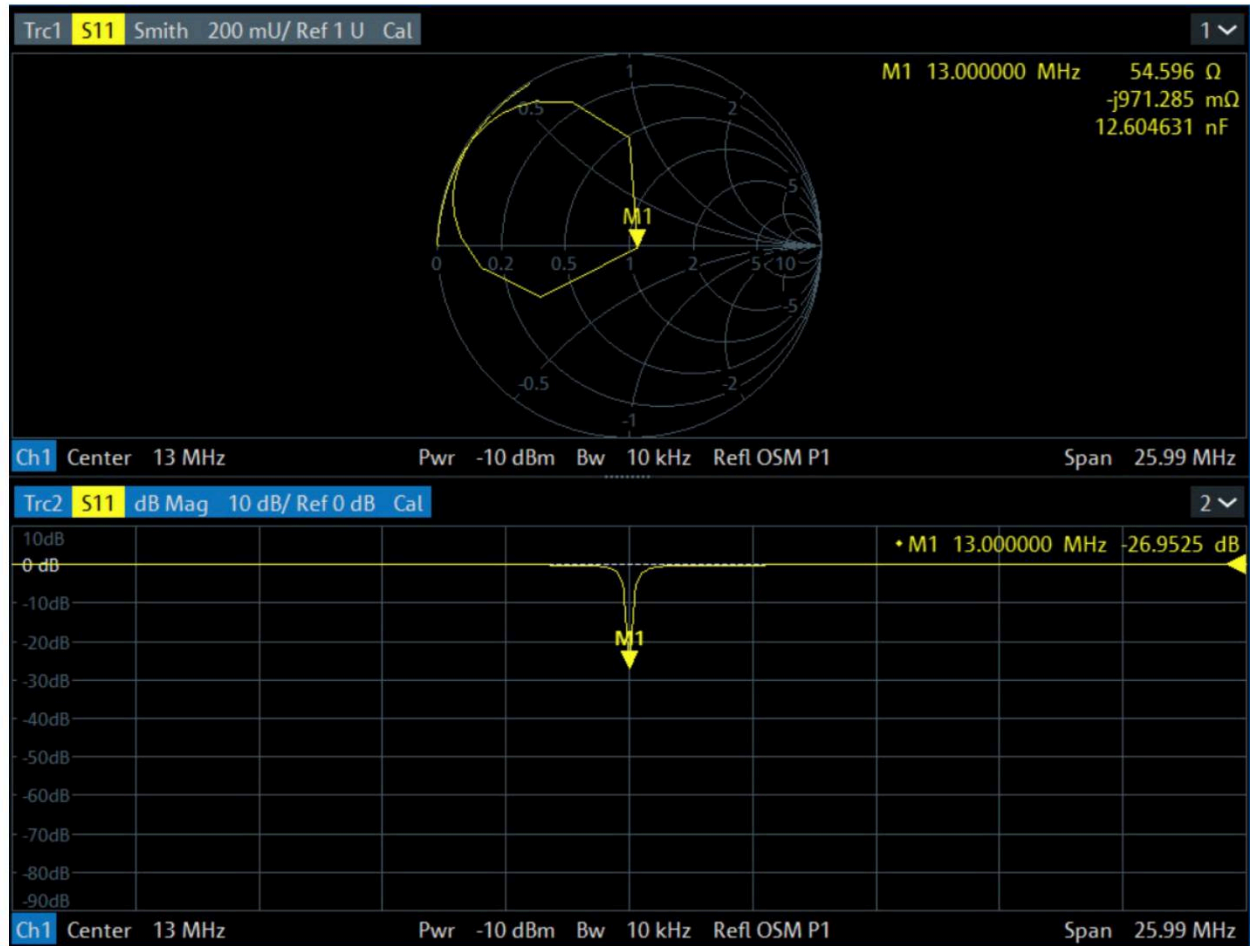
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date   | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Dev (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Dev (%) | Cert Head Impedance (Ohm) - Real | Previous Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Previous Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Previous Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Dev (%) | PASS/FAIL | Note                             |
|-----------|------------|---------------------|------------|-------------------------------------|---------------------------------------|----------------|--------------------------------------|----------------------------------------|-----------------|----------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|--------------------------------|---------------------|-----------|----------------------------------|
| 1041      | 13         | 11/13/2024          | 10/11/2024 |                                     |                                       |                |                                      |                                        |                 | 54.5                             | 54.5                                 | 53.0                                 | -1.5                                  | -0.9                                  | -0.9                                      | -3.5                                      | -2.6                                       | -27.1                      | -27.1                          | -27.0                          | 2.10%               | PASS      | In-house check after Calibration |
| 1041      | 13         | 7/30/2025           | 10/11/2024 | 0.457                               | 0.13                                  | -0.62%         | 0.296                                | 0.08                                   | -5.30%          | 54.5                             | 53.0                                 | 54.6                                 | 1.6                                   | -0.9                                  | -3.5                                      | -1.0                                      | 2.5                                        | -27.1                      | -27.0                          | -27.0                          | 1.10%               | PASS      | -                                |



### Impedance and Return-Loss Measurement Plot for Head TSL





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Client **RF Safety Lab**  
**Catonsville, USA**

Certificate No. **D750V3-1235\_Oct23**

## CALIBRATION CERTIFICATE

Object **D750V3 - SN:1235**

Calibration procedure(s) **QA CAL-05.v12**  
**Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **October 11, 2023**

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 ( $22 \pm 3$ )°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         | 30-Mar-23 (No. 217-03804/03805) | Mar-24                |
| Power sensor NRP-Z91        | SN: 103244         | 30-Mar-23 (No. 217-03804)       | Mar-24                |
| Power sensor NRP-Z91        | SN: 103245         | 30-Mar-23 (No. 217-03805)       | Mar-24                |
| Reference 20 dB Attenuator  | SN: BH9394 (20k)   | 30-Mar-23 (No. 217-03809)       | Mar-24                |
| Type-N mismatch combination | SN: 310982 / 06327 | 30-Mar-23 (No. 217-03810)       | Mar-24                |
| Reference Probe EX3DV4      | SN: 7349           | 10-Jan-23 (No. EX3-7349_Jan23)  | Jan-24                |
| DAE4                        | SN: 601            | 03-Oct-23 (No. DAE4-601_Oct23)  | Oct-24                |

| 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** **Function**  
**Laboratory Technician**

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

Signature

Issued: October 12, 2023

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Accreditation No.: **SCS 0108**

**Glossary:**

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / 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 TSL:* 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 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%.

## 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 | 15 mm                  | with Spacer |
| Zoom Scan Resolution         | dx, dy, dz = 5 mm      |             |
| Frequency                    | 750 MHz $\pm$ 1 MHz    |             |

## Head TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Head TSL parameters             | 22.0 °C             | 41.9           | 0.89 mho/m           |
| Measured Head TSL parameters            | (22.0 $\pm$ 0.2) °C | 42.2 $\pm$ 6 % | 0.89 mho/m $\pm$ 6 % |
| Head TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Head TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 2.17 W/kg                    |
| SAR for nominal Head TSL parameters                   | normalized to 1W   | 8.69 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 1.42 W/kg                    |
| SAR for nominal Head TSL parameters                     | normalized to 1W   | 5.69 W/kg $\pm$ 16.5 % (k=2) |

## Body TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Body TSL parameters             | 22.0 °C             | 55.5           | 0.96 mho/m           |
| Measured Body TSL parameters            | (22.0 $\pm$ 0.2) °C | 55.5 $\pm$ 6 % | 0.95 mho/m $\pm$ 6 % |
| Body TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Body TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 2.16 W/kg                    |
| SAR for nominal Body TSL parameters                   | normalized to 1W   | 8.72 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 1.42 W/kg                    |
| SAR for nominal Body TSL parameters                     | normalized to 1W   | 5.73 W/kg $\pm$ 16.5 % (k=2) |

## Appendix (Additional assessments outside the scope of SCS 0108)

### Antenna Parameters with Head TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 54.3 $\Omega$ - 1.0 j $\Omega$ |
| Return Loss                          | - 27.5 dB                      |

### Antenna Parameters with Body TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 50.1 $\Omega$ - 3.3 j $\Omega$ |
| Return Loss                          | - 29.7 dB                      |

### General Antenna Parameters and Design

|                                  |          |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.043 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

Date: 11.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1235**

Communication System: UID 0 - CW; Frequency: 750 MHz

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.89 \text{ S/m}$ ;  $\epsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.11, 10.11, 10.11) @ 750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

**Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 60.95 V/m; Power Drift = -0.09 dB

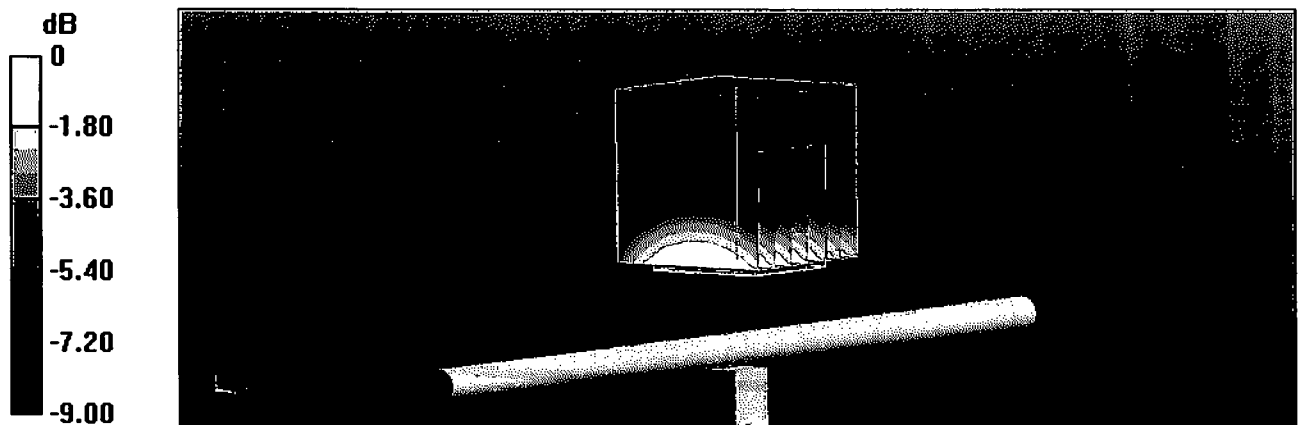
Peak SAR (extrapolated) = 3.31 W/kg

**SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.42 W/kg**

Smallest distance from peaks to all points 3 dB below = 17 mm

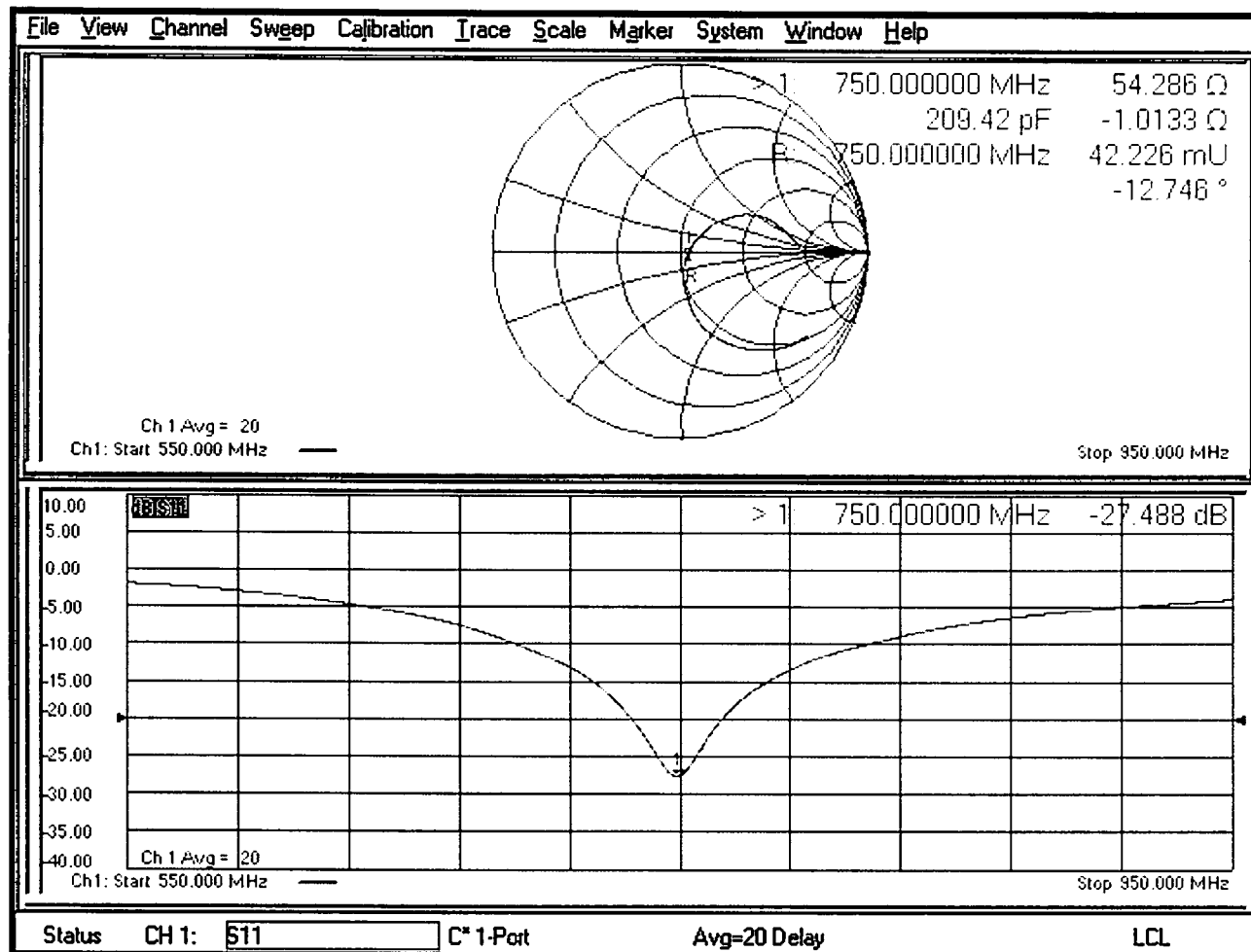
Ratio of SAR at M2 to SAR at M1 = 65.5%

Maximum value of SAR (measured) = 2.90 W/kg



0 dB = 2.90 W/kg = 4.62 dBW/kg

## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 09.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1235**

Communication System: UID 0 - CW; Frequency: 750 MHz

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.95 \text{ S/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.23, 10.23, 10.23) @ 750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

### **Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 55.70 V/m; Power Drift = 0.02 dB

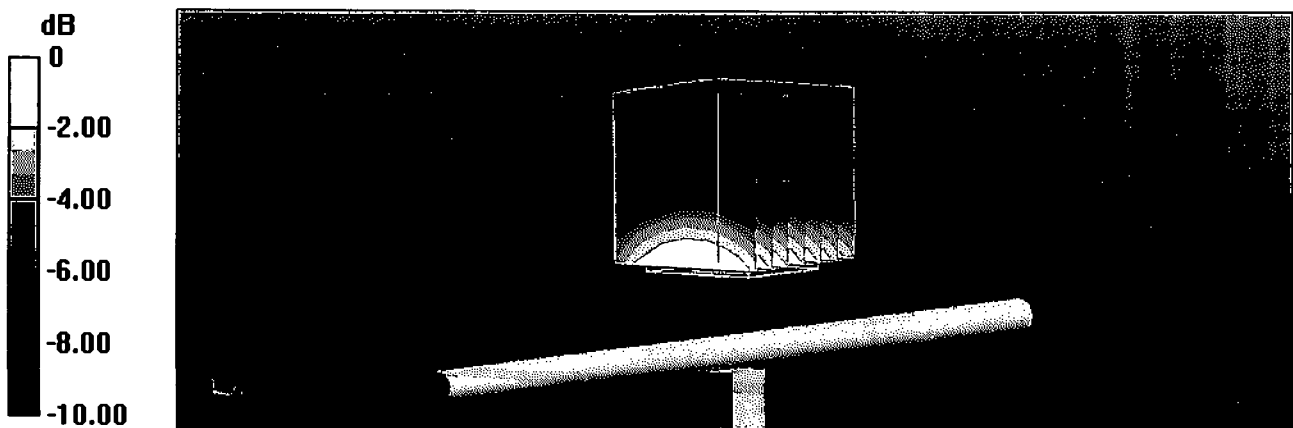
Peak SAR (extrapolated) = 3.30 W/kg

**SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.42 W/kg**

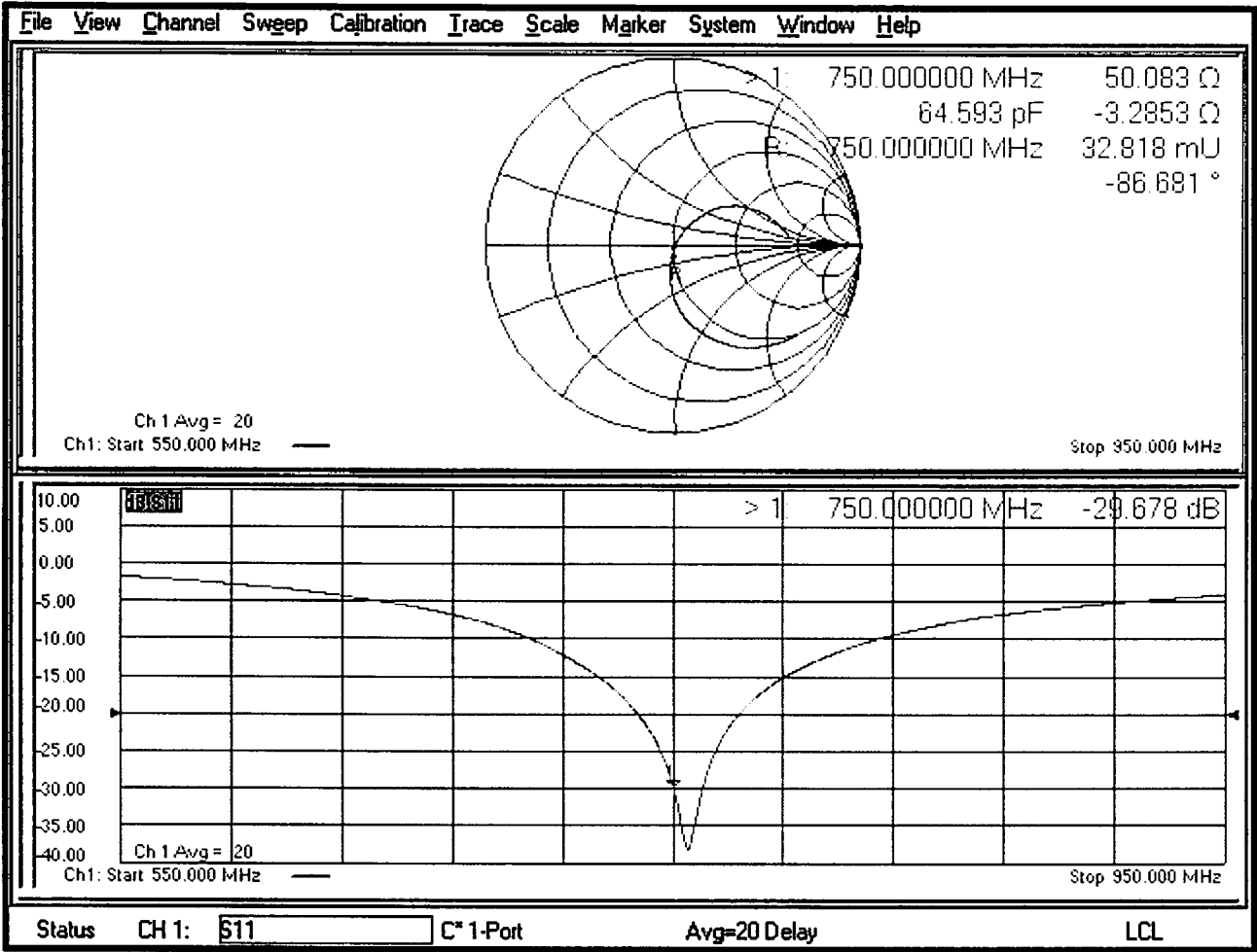
Smallest distance from peaks to all points 3 dB below = 16 mm

Ratio of SAR at M2 to SAR at M1 = 66%

Maximum value of SAR (measured) = 2.89 W/kg



Impedance Measurement Plot for Body TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

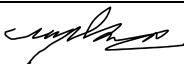
Object: D750V3 – SN: 1235  
Description: SAR Validation Dipole at 750 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 11/7/2024

### Equipment List

| Manufacturer    | Model                | Description                                    | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                        | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                            | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                   | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)            | -              |                  |                 | ✓   |
| Mini-Circuits   | BW-N20W20+           | 20dB RF Fixed Attenuator (DC - 18 GHz)         | -              |                  |                 | ✓   |
| Mini-Circuits   | NF-SF50+             | RF Adapter N Male to SMA Female (DC - 18 GHz)  | -              |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power | 1839           | 8/14/2024        | 8/14/2025       |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                       | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                          | 7836           | 3/15/2024        | 3/15/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                               | 4341           | 1/5/2024         | 1/5/2025        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  ( $k=2$ )

|              | Name          | Function          | Signature                                                                             |
|--------------|---------------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | Yue Li        | Engineer          |  |
| Approved By: | Phuong Nguyen | Technical Manager |  |



Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

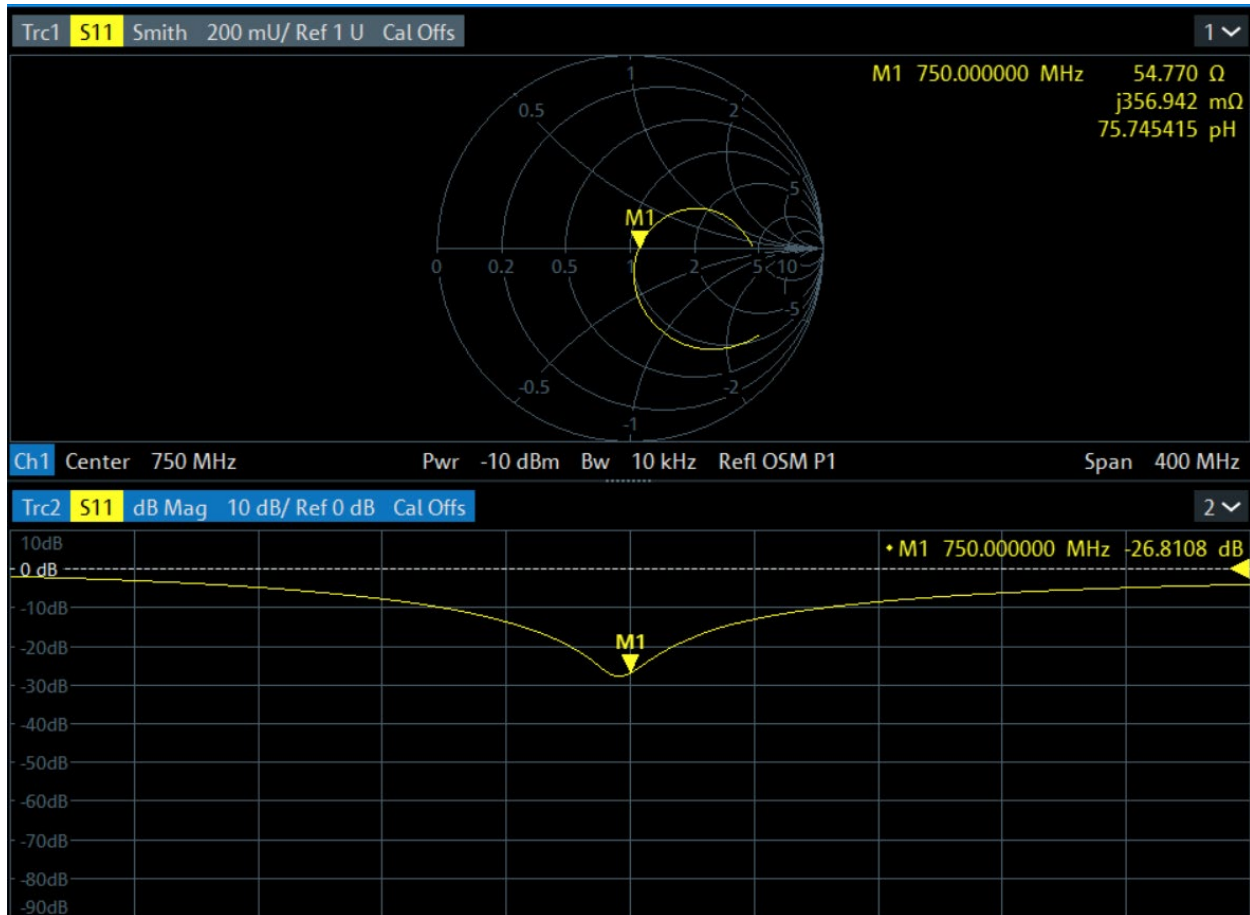
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date   | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Deviation (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Deviation (%) | Cert Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Deviation (%) | PASS/FAIL |
|-----------|------------|---------------------|------------|-------------------------------------|---------------------------------------|----------------------|--------------------------------------|----------------------------------------|-----------------------|----------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|---------------------------|-----------|
| 1235      | 750        | 11/7/2024           | 10/11/2023 | 8.69                                | 0.44                                  | 0.80%                | 5.69                                 | 0.29                                   | 1.34%                 | 54.3                             | 54.8                                 | 0.5                                   | -1.0                                  | 0.4                                       | 1.4                                        | -27.5                      | -26.8                          | 17.22%                    | PASS      |



## Impedance and Return-Loss Measurement Plot for Head TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

Object: D750V3 – SN: 1235  
Description: SAR Validation Dipole at 750 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 07/30/2025

### Equipment List

| Manufacturer    | Model                | Description                                                        | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|--------------------------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                                            | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                                    | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581662      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662212      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)                                | -              |                  |                 | ✓   |
| Maury-Micro     | 360D                 | 10dB RF Fixed Attenuator (DC - 18 GHz) + Short Circuit Termination | 7799           | 12/28/2024       | 12/28/2025      |     |
| Huber+Suhner    | SF126                | High Performance RF Cable                                          | 570292/126     |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power                     | 1844           | 11/6/2024        | 11/6/2025       |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                                           | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                                              | 7853           | 11/7/2024        | 11/7/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                                                   | 4341           | 1/9/2025         | 1/9/2026        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  (k=2)

|              | Name | Function          | Signature                                                                             |
|--------------|------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | YL   | Engineer          |  |
| Approved By: | PN   | Technical Manager |  |

Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

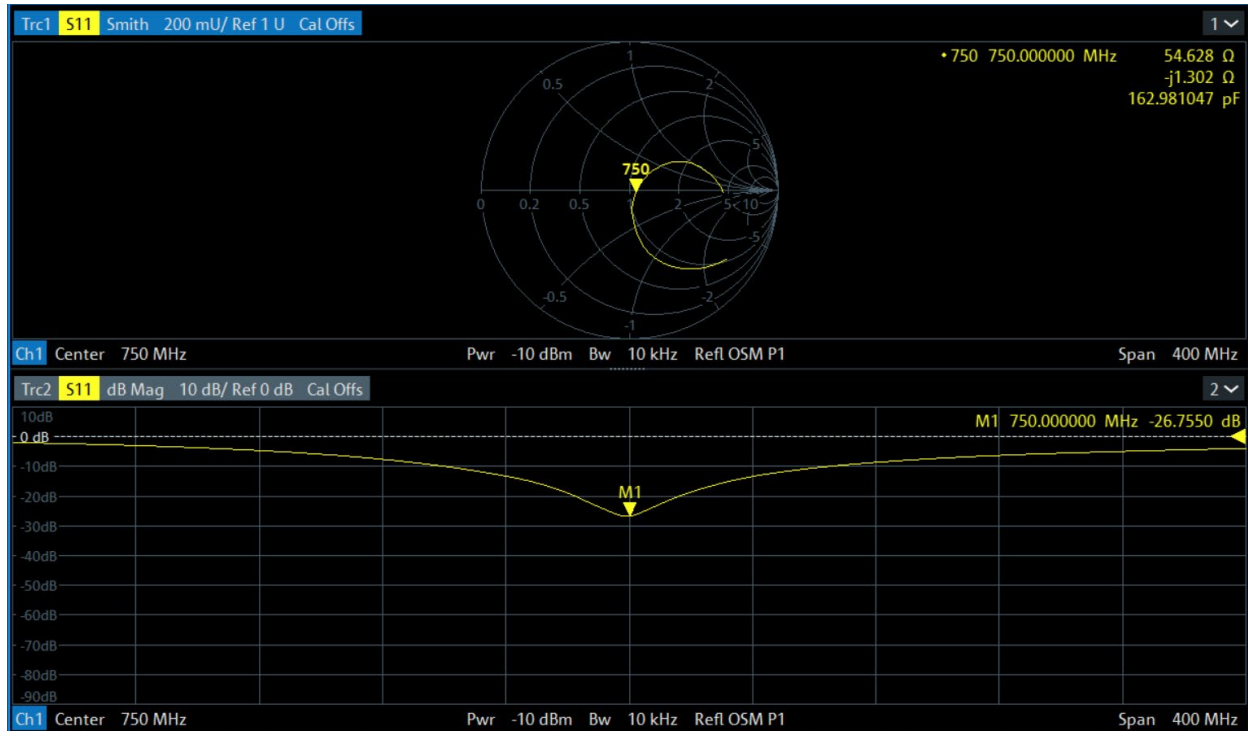
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date   | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Dev (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Dev(%) | Cert Head Impedance (Ohm) - Real | Previous Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Previous Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Previous Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Dev (%) | PASS/FAIL |
|-----------|------------|---------------------|------------|-------------------------------------|---------------------------------------|----------------|--------------------------------------|----------------------------------------|----------------|----------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|--------------------------------|---------------------|-----------|
| 1235      | 750        | 11/7/2024           | 10/11/2023 | 8.69                                | 0.44                                  | 0.80%          | 5.69                                 | 0.29                                   | 1.34%          | 54.3                             | 54.3                                 | 54.8                                 | 0.5                                   | -1.0                                  | -1.0                                      | 0.4                                       | 1.4                                        | -27.5                      | -27.5                          | -26.8                          | 17.22%              | PASS      |
| 1235      | 750        | 7/30/2025           | 10/11/2023 | 8.69                                | 0.42                                  | -4.25%         | 5.69                                 | 0.27                                   | -3.92%         | 54.3                             | 54.8                                 | 54.6                                 | -0.2                                  | -1.0                                  | 0.4                                       | -1.3                                      | -1.7                                       | -27.5                      | -26.8                          | -26.8                          | 1.04%               | PASS      |



## Impedance and Return-Loss Measurement Plot for Head TSL





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

Client **RF Safety Lab**  
**Catonsville, USA**

Certificate No. **D835V2-4d311\_Oct23**

## CALIBRATION CERTIFICATE

Object **D835V2 - SN:4d311**

Calibration procedure(s) **QA CAL-05.v12**  
**Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

*MAR 11/20/23*

Calibration date: **October 09, 2023**

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 ( $22 \pm 3$ )°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         | 30-Mar-23 (No. 217-03804/03805) | Mar-24                |
| Power sensor NRP-Z91        | SN: 103244         | 30-Mar-23 (No. 217-03804)       | Mar-24                |
| Power sensor NRP-Z91        | SN: 103245         | 30-Mar-23 (No. 217-03805)       | Mar-24                |
| Reference 20 dB Attenuator  | SN: BH9394 (20k)   | 30-Mar-23 (No. 217-03809)       | Mar-24                |
| Type-N mismatch combination | SN: 310982 / 06327 | 30-Mar-23 (No. 217-03810)       | Mar-24                |
| Reference Probe EX3DV4      | SN: 7349           | 10-Jan-23 (No. EX3-7349_Jan23)  | Jan-24                |
| DAE4                        | SN: 900            | 09-Aug-23 (No. DAE4-900_Aug23)  | Aug-24                |
| DAE4                        | SN: 601            | 03-Oct-23 (No. DAE4-601_Oct23)  | Oct-24                |

| 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**

Signature

Issued: October 11, 2023

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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

Accreditation No.: **SCS 0108**

### Glossary:

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / 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 TSL:* 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 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%.

## 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 | 15 mm                  | with Spacer |
| Zoom Scan Resolution         | dx, dy, dz = 5 mm      |             |
| Frequency                    | 835 MHz $\pm$ 1 MHz    |             |

## Head TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Head TSL parameters             | 22.0 °C             | 41.5           | 0.90 mho/m           |
| Measured Head TSL parameters            | (22.0 $\pm$ 0.2) °C | 42.0 $\pm$ 6 % | 0.92 mho/m $\pm$ 6 % |
| Head TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Head TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 2.49 W/kg                    |
| SAR for nominal Head TSL parameters                   | normalized to 1W   | 9.82 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 1.61 W/kg                    |
| SAR for nominal Head TSL parameters                     | normalized to 1W   | 6.37 W/kg $\pm$ 16.5 % (k=2) |

## Body TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Body TSL parameters             | 22.0 °C             | 55.2           | 0.97 mho/m           |
| Measured Body TSL parameters            | (22.0 $\pm$ 0.2) °C | 55.3 $\pm$ 6 % | 0.98 mho/m $\pm$ 6 % |
| Body TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Body TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 2.50 W/kg                    |
| SAR for nominal Body TSL parameters                   | normalized to 1W   | 9.93 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 1.64 W/kg                    |
| SAR for nominal Body TSL parameters                     | normalized to 1W   | 6.52 W/kg $\pm$ 16.5 % (k=2) |

## Appendix (Additional assessments outside the scope of SCS 0108)

### Antenna Parameters with Head TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 49.9 $\Omega$ - 2.4 j $\Omega$ |
| Return Loss                          | - 32.5 dB                      |

### Antenna Parameters with Body TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 46.2 $\Omega$ - 6.0 j $\Omega$ |
| Return Loss                          | - 22.7 dB                      |

### General Antenna Parameters and Design

|                                  |          |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.392 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

Date: 03.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d311**

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.92 \text{ S/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(9.69, 9.69, 9.69) @ 835 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn900; Calibrated: 09.08.2023
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

**Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 64.08 V/m; Power Drift = -0.06 dB

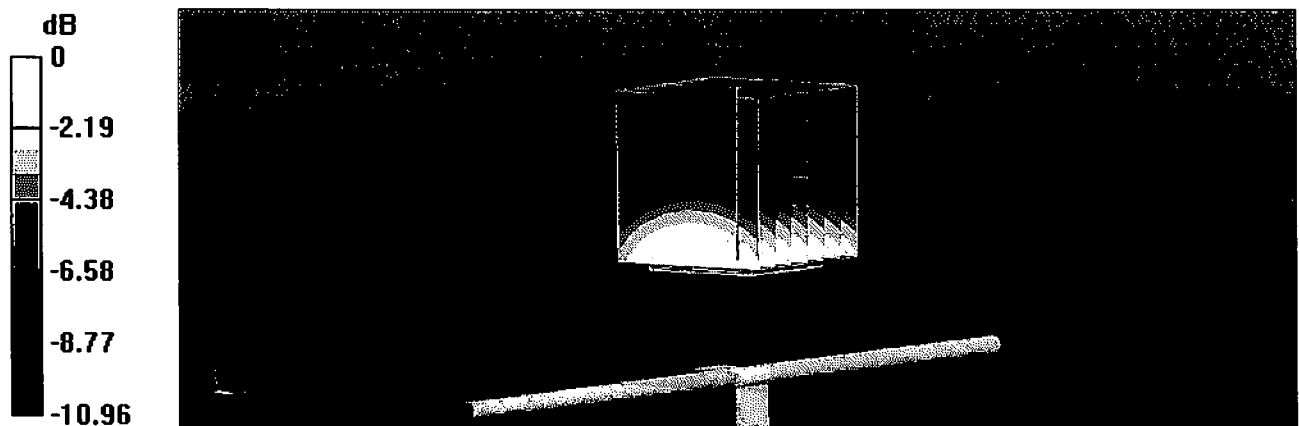
Peak SAR (extrapolated) = 3.72 W/kg

**SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.61 W/kg**

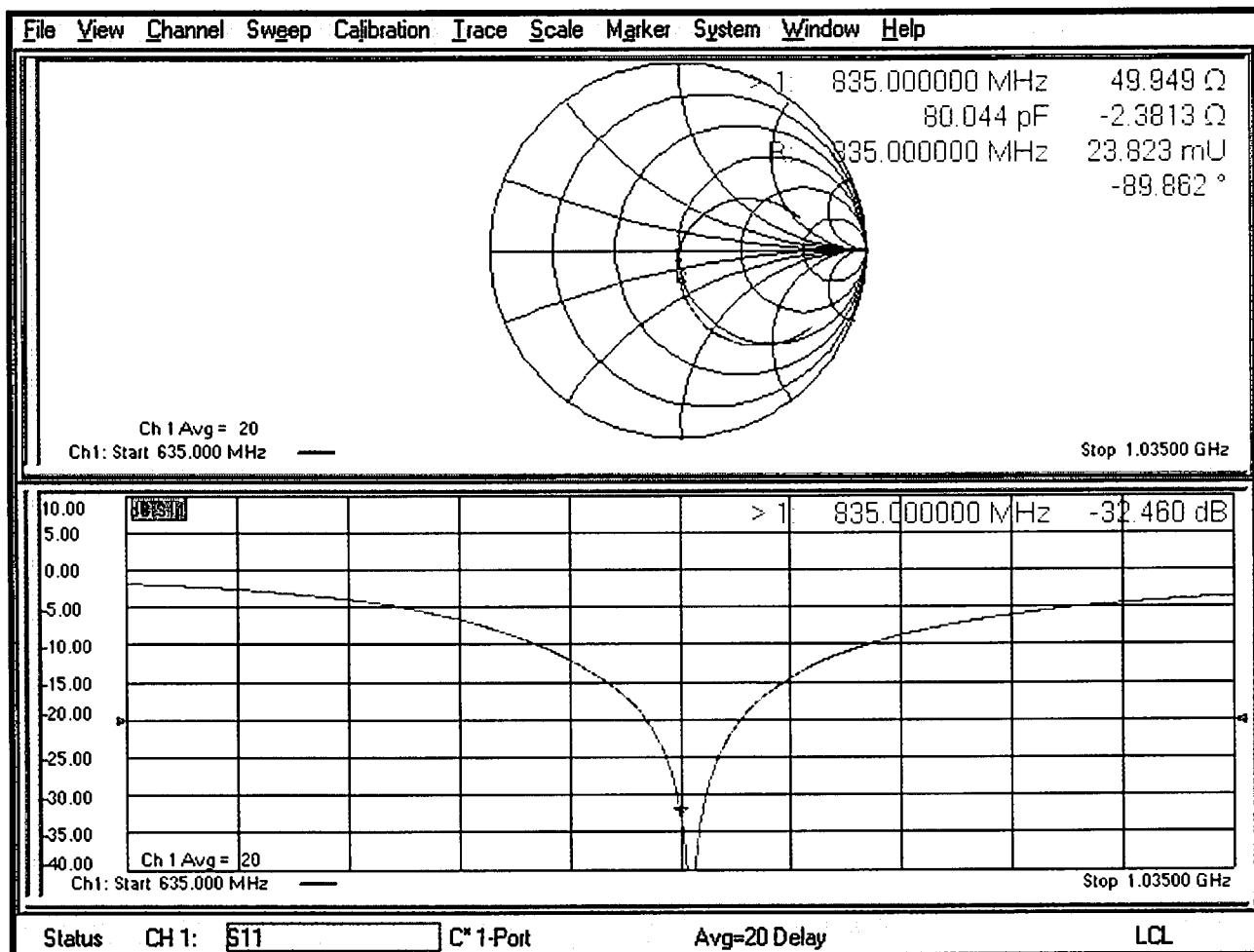
Smallest distance from peaks to all points 3 dB below = 16 mm

Ratio of SAR at M2 to SAR at M1 = 66.5%

Maximum value of SAR (measured) = 3.30 W/kg



## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 09.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d311**

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.98 \text{ S/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

**Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 58.74 V/m; Power Drift = -0.06 dB

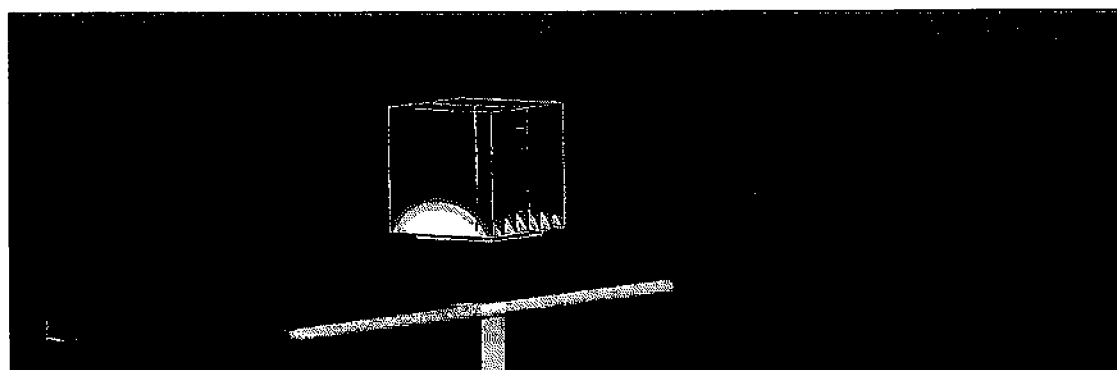
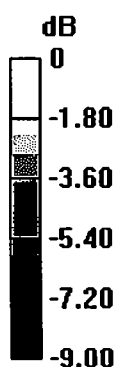
Peak SAR (extrapolated) = 3.68 W/kg

**SAR(1 g) = 2.50 W/kg; SAR(10 g) = 1.64 W/kg**

Smallest distance from peaks to all points 3 dB below = 15.1 mm

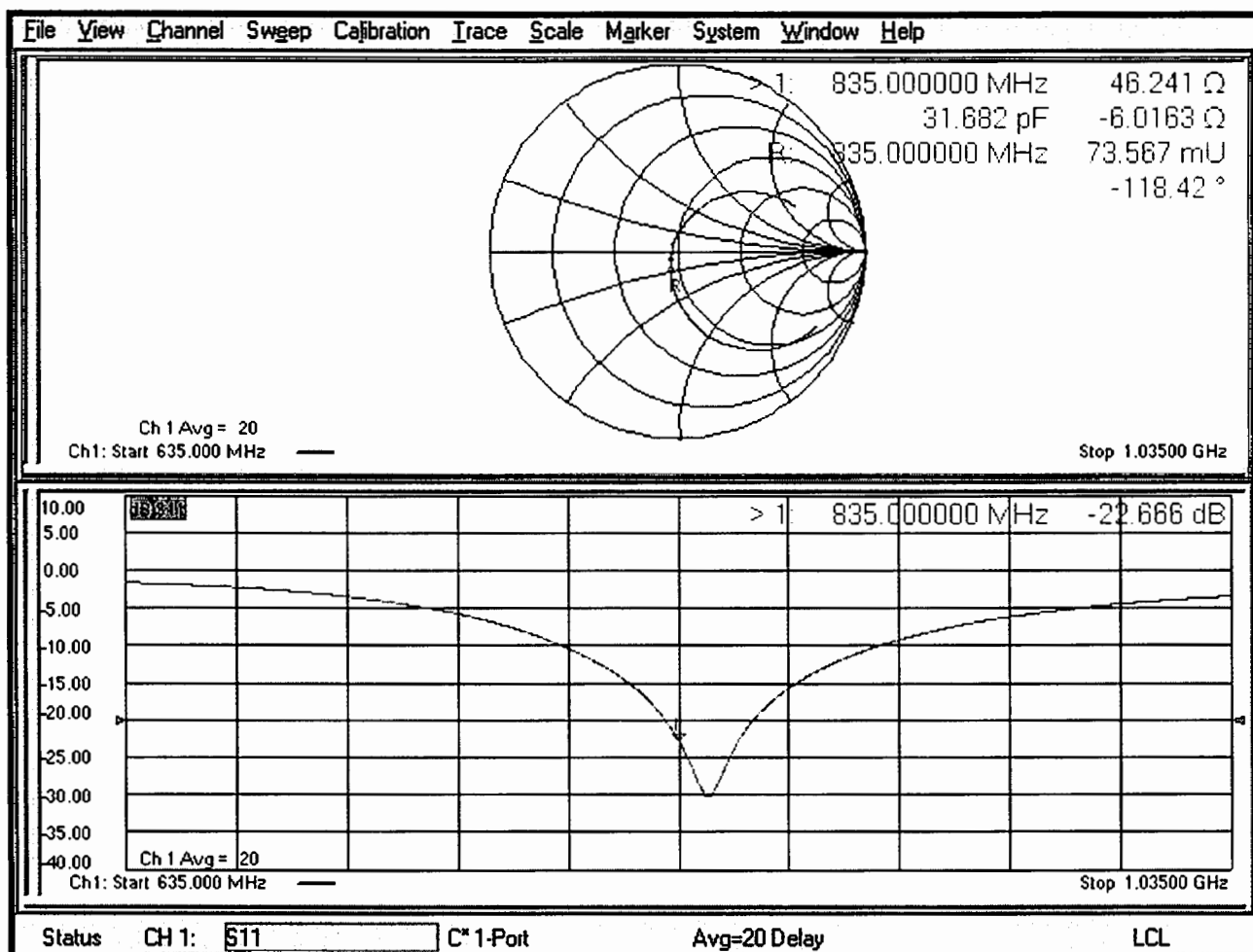
Ratio of SAR at M2 to SAR at M1 = 68.2%

Maximum value of SAR (measured) = 3.30 W/kg



0 dB = 3.30 W/kg = 5.19 dBW/kg

## Impedance Measurement Plot for Body TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

Object: D835V2 – SN: 4d311  
Description: SAR Validation Dipole at 835 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 11/7/2024

### Equipment List

| Manufacturer    | Model                | Description                                    | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                        | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                            | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                   | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)            | -              |                  |                 | ✓   |
| Mini-Circuits   | BW-N20W20+           | 20dB RF Fixed Attenuator (DC - 18 GHz)         | -              |                  |                 | ✓   |
| Mini-Circuits   | NF-SF50+             | RF Adapter N Male to SMA Female (DC - 18 GHz)  | -              |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power | 1839           | 8/14/2024        | 8/14/2025       |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                       | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                          | 7836           | 3/15/2024        | 3/15/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                               | 4341           | 1/5/2024         | 1/5/2025        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  ( $k=2$ )

|              | Name          | Function          | Signature                                                                             |
|--------------|---------------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | Yue Li        | Engineer          |  |
| Approved By: | Phuong Nguyen | Technical Manager |  |

Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

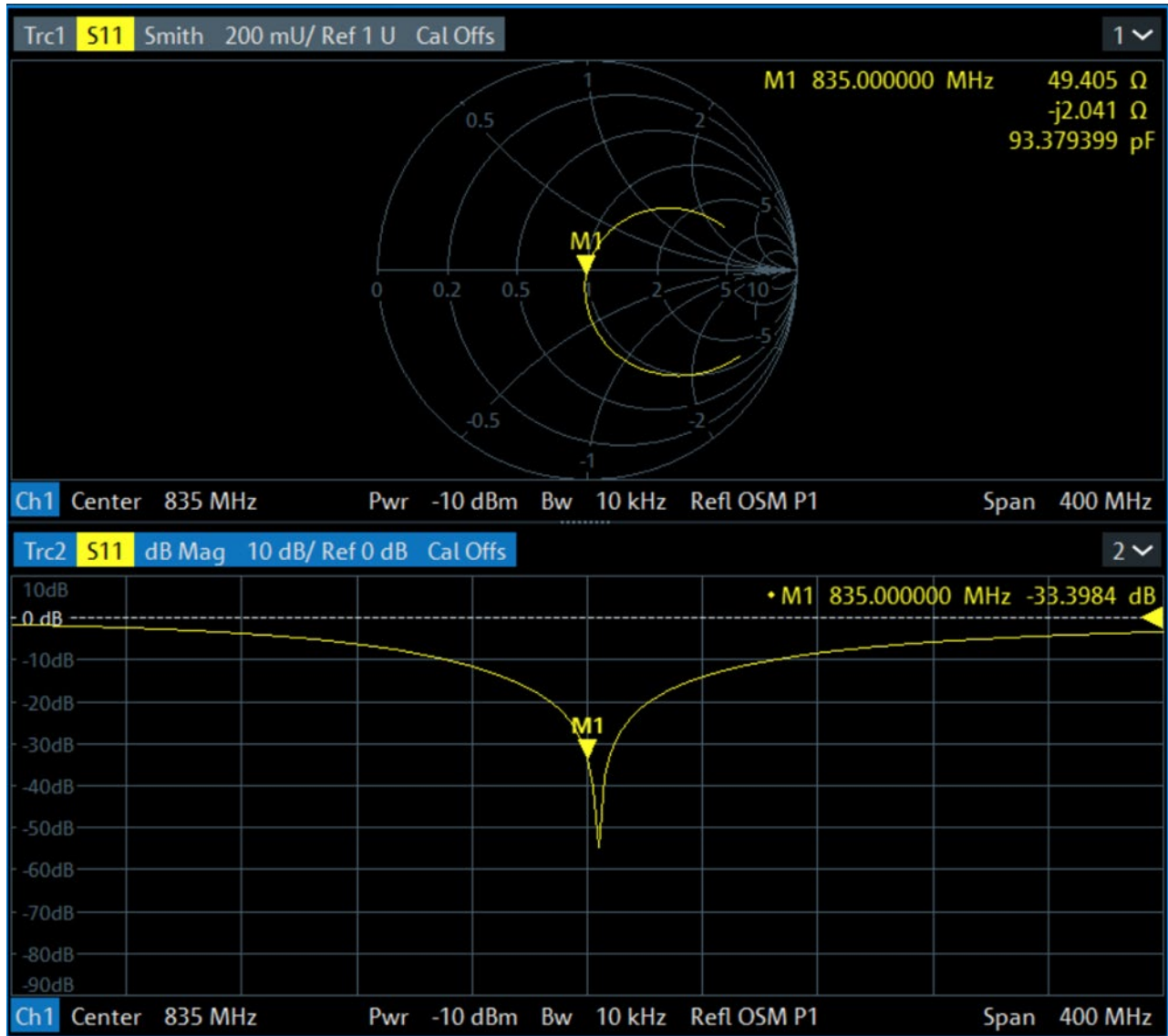
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date  | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Deviation (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Deviation (%) | Cert Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Deviation (%) | PASS/FAIL |
|-----------|------------|---------------------|-----------|-------------------------------------|---------------------------------------|----------------------|--------------------------------------|----------------------------------------|-----------------------|----------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|---------------------------|-----------|
| 4d311     | 835        | 11/7/2024           | 10/9/2023 | 9.82                                | 0.53                                  | 7.48%                | 6.37                                 | 0.35                                   | 8.06%                 | 49.9                             | 49.4                                 | -0.5                                  | -2.4                                  | -2.0                                      | 0.4                                        | -32.5                      | -33.4                          | -18.68%                   | PASS      |



Impedance and Return-Loss Measurement Plot for Head TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

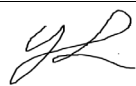
Object: D835V2 – SN: 4d311  
Description: SAR Validation Dipole at 835 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 07/29/2025

### Equipment List

| Manufacturer    | Model                | Description                                                        | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|--------------------------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                                            | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                                    | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581662      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662212      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)                                | -              |                  |                 | ✓   |
| Maury-Micro     | 360D                 | 10dB RF Fixed Attenuator (DC - 18 GHz) + Short Circuit Termination | 7799           | 12/28/2024       | 12/28/2025      |     |
| Huber+Suhner    | SF126                | High Performance RF Cable                                          | 570292/126     |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power                     | 1839           | 9/4/2024         | 9/4/2025        |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                                           | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                                              | 7836           | 9/12/2024        | 9/12/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                                                   | 4341           | 1/9/2025         | 1/9/2026        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  (k=2)

|              | Name | Function          | Signature                                                                             |
|--------------|------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | YL   | Engineer          |  |
| Approved By: | PN   | Technical Manager |  |



Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

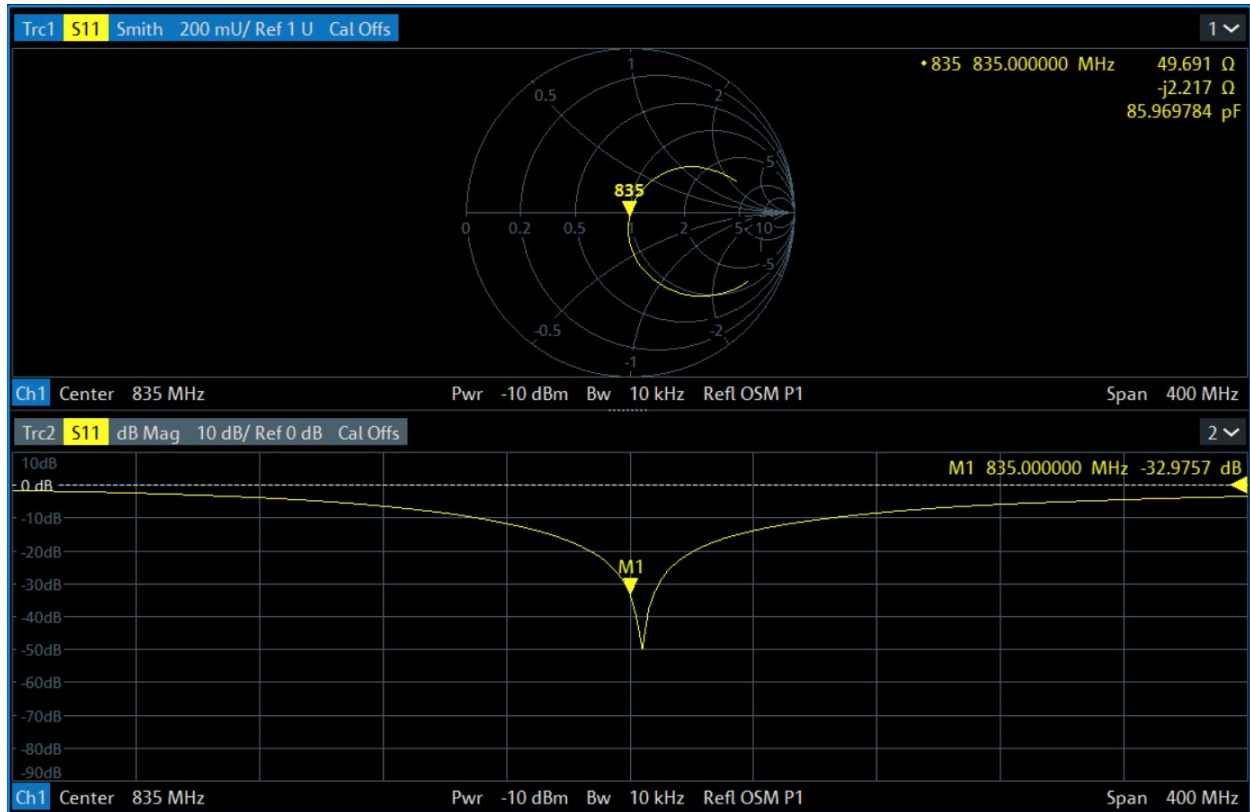
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date  | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Dev (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Dev (%) | Cert Head Impedance (Ohm) - Real | Previous Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Previous Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Previous Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Dev (%) | PASS/FAIL |
|-----------|------------|---------------------|-----------|-------------------------------------|---------------------------------------|----------------|--------------------------------------|----------------------------------------|-----------------|----------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|--------------------------------|---------------------|-----------|
| 4d311     | 835        | 11/7/2024           | 10/9/2023 | 9.82                                | 0.53                                  | 7.48%          | 6.37                                 | 0.35                                   | 8.06%           | 49.9                             | 49.9                                 | 49.4                                 | -0.5                                  | -2.4                                  | -2.4                                      | -2.0                                      | 0.4                                        | -32.5                      | -32.5                          | -33.4                          | -18.68%             | PASS      |
| 4d311     | 835        | 7/29/2025           | 10/9/2023 | 9.82                                | 0.51                                  | 3.01%          | 6.37                                 | 0.33                                   | 3.05%           | 49.9                             | 49.4                                 | 49.7                                 | 0.3                                   | -2.4                                  | -2.0                                      | -2.2                                      | -0.2                                       | -32.5                      | -33.4                          | -33.0                          | 10.26%              | PASS      |



## Impedance and Return-Loss Measurement Plot for Head TSL



✓ KOK  
11/15/2023

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



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

Client **RF Safety Lab**  
**Catonsville, USA**

Certificate No. **D1750V2-1205\_Oct23**

## CALIBRATION CERTIFICATE

Object **D1750V2 - SN:1205**

Calibration procedure(s) **QA CAL-05.v12**  
**Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **October 11, 2023**

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 ( $22 \pm 3$ )°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         | 30-Mar-23 (No. 217-03804/03805)   | Mar-24                 |
| Power sensor NRP-Z91            | SN: 103244         | 30-Mar-23 (No. 217-03804)         | Mar-24                 |
| Power sensor NRP-Z91            | SN: 103245         | 30-Mar-23 (No. 217-03805)         | Mar-24                 |
| Reference 20 dB Attenuator      | SN: BH9394 (20k)   | 30-Mar-23 (No. 217-03809)         | Mar-24                 |
| Type-N mismatch combination     | SN: 310982 / 06327 | 30-Mar-23 (No. 217-03810)         | Mar-24                 |
| Reference Probe EX3DV4          | SN: 7349           | 10-Jan-23 (No. EX3-7349_Jan23)    | Jan-24                 |
| DAE4                            | SN: 601            | 03-Oct-23 (No. DAE4-601_Oct23)    | Oct-24                 |
| DAE4                            | SN: 900            | 09-Aug-23 (No. DAE4-900_Aug23)    | Aug-24                 |
| 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** **Paulo Pina** **Paulo Pina**  
Name Function Laboratory Technician

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

Signature

Issued: October 12, 2023

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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

Accreditation No.: **SCS 0108**

### Glossary:

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / 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 TSL:* 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 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%.

## 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                  | with Spacer |
| Zoom Scan Resolution         | dx, dy, dz = 5 mm      |             |
| Frequency                    | 1750 MHz $\pm$ 1 MHz   |             |

## Head TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Head TSL parameters             | 22.0 °C             | 40.1           | 1.37 mho/m           |
| Measured Head TSL parameters            | (22.0 $\pm$ 0.2) °C | 40.3 $\pm$ 6 % | 1.35 mho/m $\pm$ 6 % |
| Head TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Head TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 9.04 W/kg                    |
| SAR for nominal Head TSL parameters                   | normalized to 1W   | 36.5 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 4.77 W/kg                    |
| SAR for nominal Head TSL parameters                     | normalized to 1W   | 19.2 W/kg $\pm$ 16.5 % (k=2) |

## Body TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Body TSL parameters             | 22.0 °C             | 53.4           | 1.49 mho/m           |
| Measured Body TSL parameters            | (22.0 $\pm$ 0.2) °C | 53.9 $\pm$ 6 % | 1.46 mho/m $\pm$ 6 % |
| Body TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Body TSL

|                                                       |                    |                              |
|-------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL | Condition          |                              |
| SAR measured                                          | 250 mW input power | 9.19 W/kg                    |
| SAR for nominal Body TSL parameters                   | normalized to 1W   | 37.3 W/kg $\pm$ 17.0 % (k=2) |

|                                                         |                    |                              |
|---------------------------------------------------------|--------------------|------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL | condition          |                              |
| SAR measured                                            | 250 mW input power | 4.90 W/kg                    |
| SAR for nominal Body TSL parameters                     | normalized to 1W   | 19.8 W/kg $\pm$ 16.5 % (k=2) |

## Appendix (Additional assessments outside the scope of SCS 0108)

### Antenna Parameters with Head TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 46.6 $\Omega$ + 3.9 j $\Omega$ |
| Return Loss                          | - 25.4 dB                      |

### Antenna Parameters with Body TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 41.9 $\Omega$ + 3.3 j $\Omega$ |
| Return Loss                          | - 20.4 dB                      |

### General Antenna Parameters and Design

|                                  |          |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.214 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

Date: 04.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1205**

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.35$  S/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.76, 8.76, 8.76) @ 1750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn900; Calibrated: 09.08.2023
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; 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 = 106.8 V/m; Power Drift = -0.06 dB

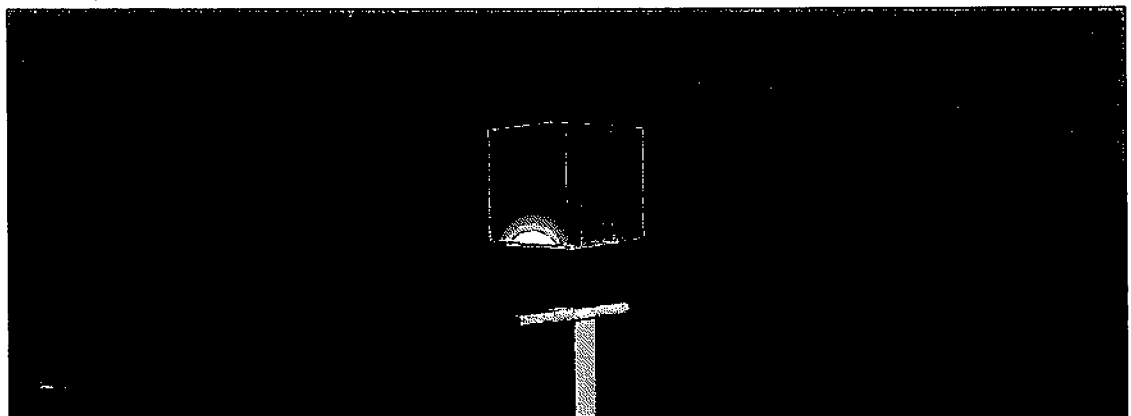
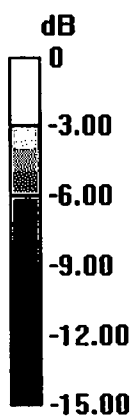
Peak SAR (extrapolated) = 16.8 W/kg

**SAR(1 g) = 9.04 W/kg; SAR(10 g) = 4.77 W/kg**

Smallest distance from peaks to all points 3 dB below = 10 mm

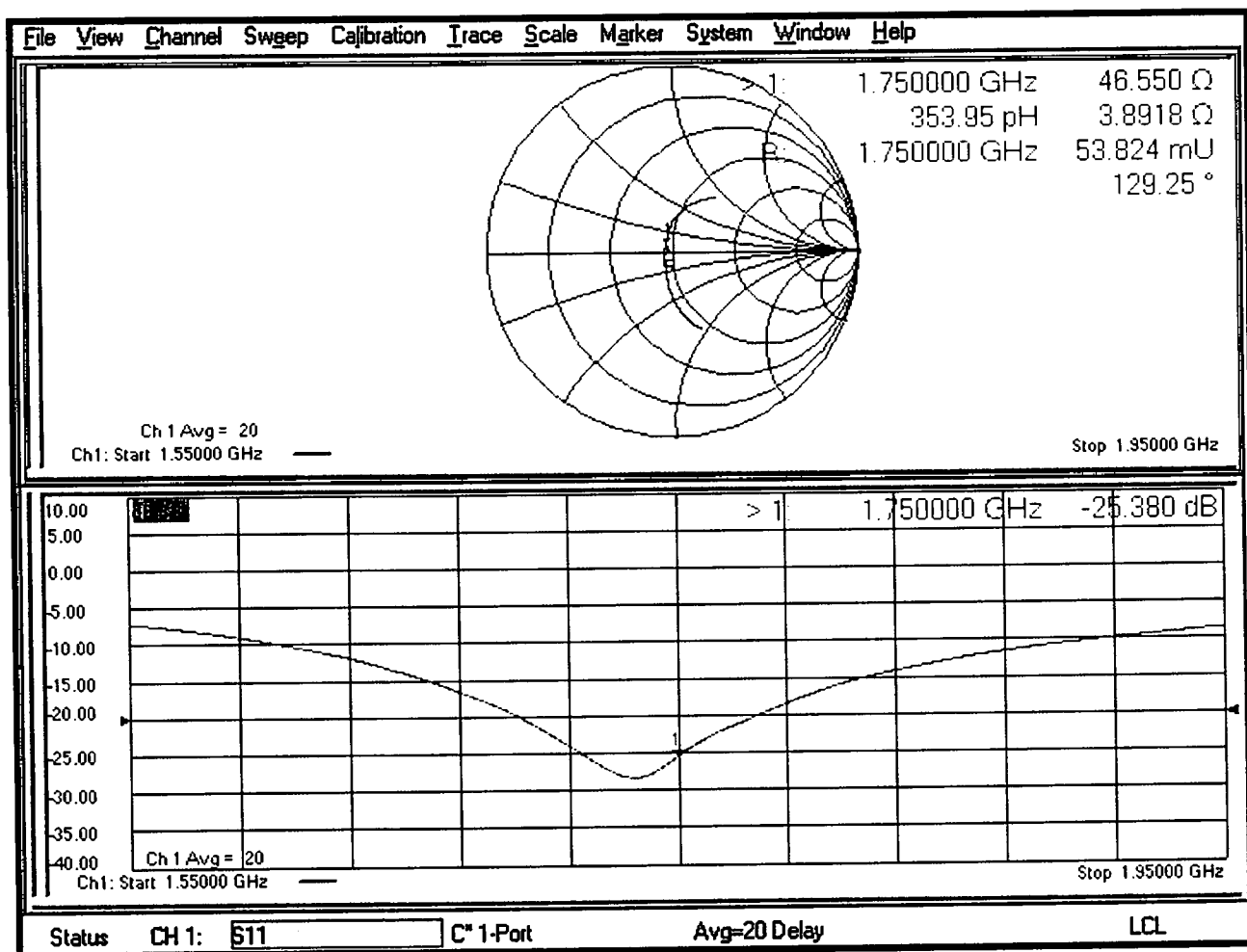
Ratio of SAR at M2 to SAR at M1 = 54.1%

Maximum value of SAR (measured) = 14.0 W/kg



0 dB = 14.0 W/kg = 11.46 dBW/kg

# Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 11.10.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1205**

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.46$  S/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

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

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

Reference Value = 103.4 V/m; Power Drift = 0.00 dB

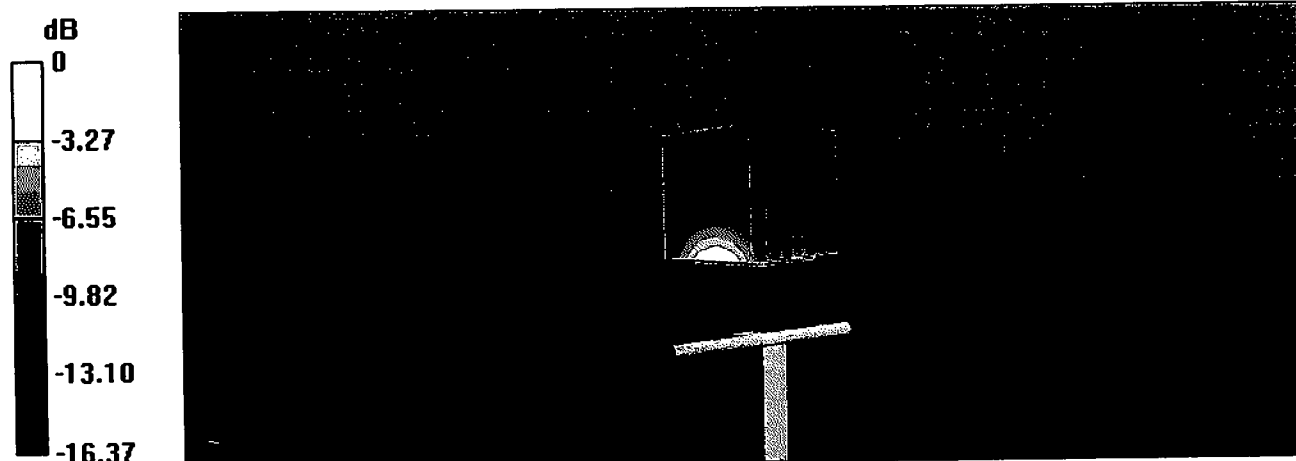
Peak SAR (extrapolated) = 16.7 W/kg

**SAR(1 g) = 9.19 W/kg; SAR(10 g) = 4.90 W/kg**

Smallest distance from peaks to all points 3 dB below = 9.2 mm

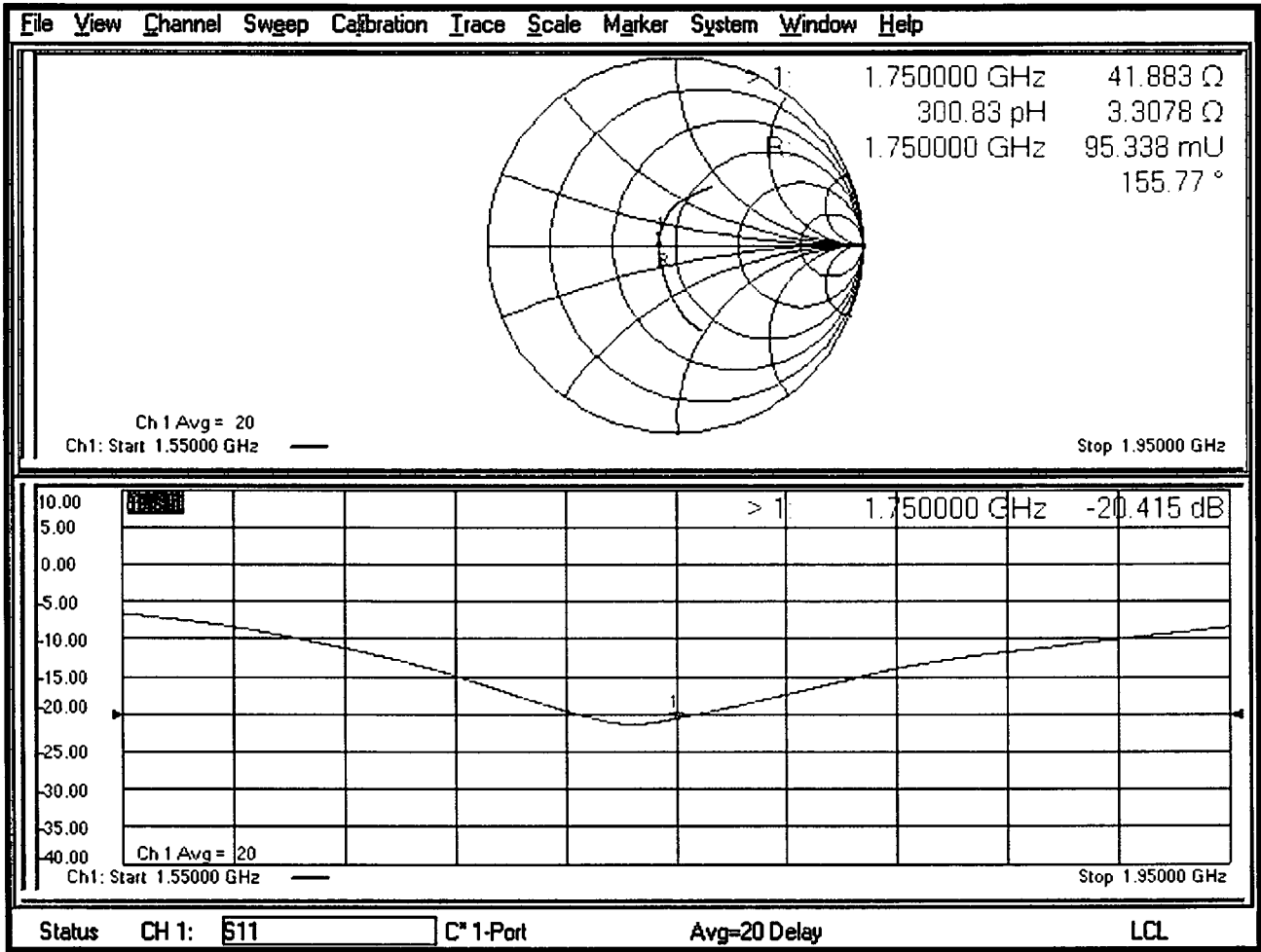
Ratio of SAR at M2 to SAR at M1 = 56.1%

Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.50 dBW/kg

Impedance Measurement Plot for Body TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

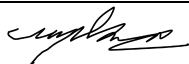
Object: D1750V2 – SN: 1205  
Description: SAR Validation Dipole at 1750 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 11/7/2024

### Equipment List

| Manufacturer    | Model                | Description                                    | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                        | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                            | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                   | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)            | -              |                  |                 | ✓   |
| Mini-Circuits   | BW-N20W20+           | 20dB RF Fixed Attenuator (DC - 18 GHz)         | -              |                  |                 | ✓   |
| Mini-Circuits   | NF-SF50+             | RF Adapter N Male to SMA Female (DC - 18 GHz)  | -              |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power | 1839           | 8/14/2024        | 8/14/2025       |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                       | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                          | 7836           | 3/15/2024        | 3/15/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                               | 4341           | 1/5/2024         | 1/5/2025        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  ( $k=2$ )

|              | Name          | Function          | Signature                                                                             |
|--------------|---------------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | Yue Li        | Engineer          |  |
| Approved By: | Phuong Nguyen | Technical Manager |  |

Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

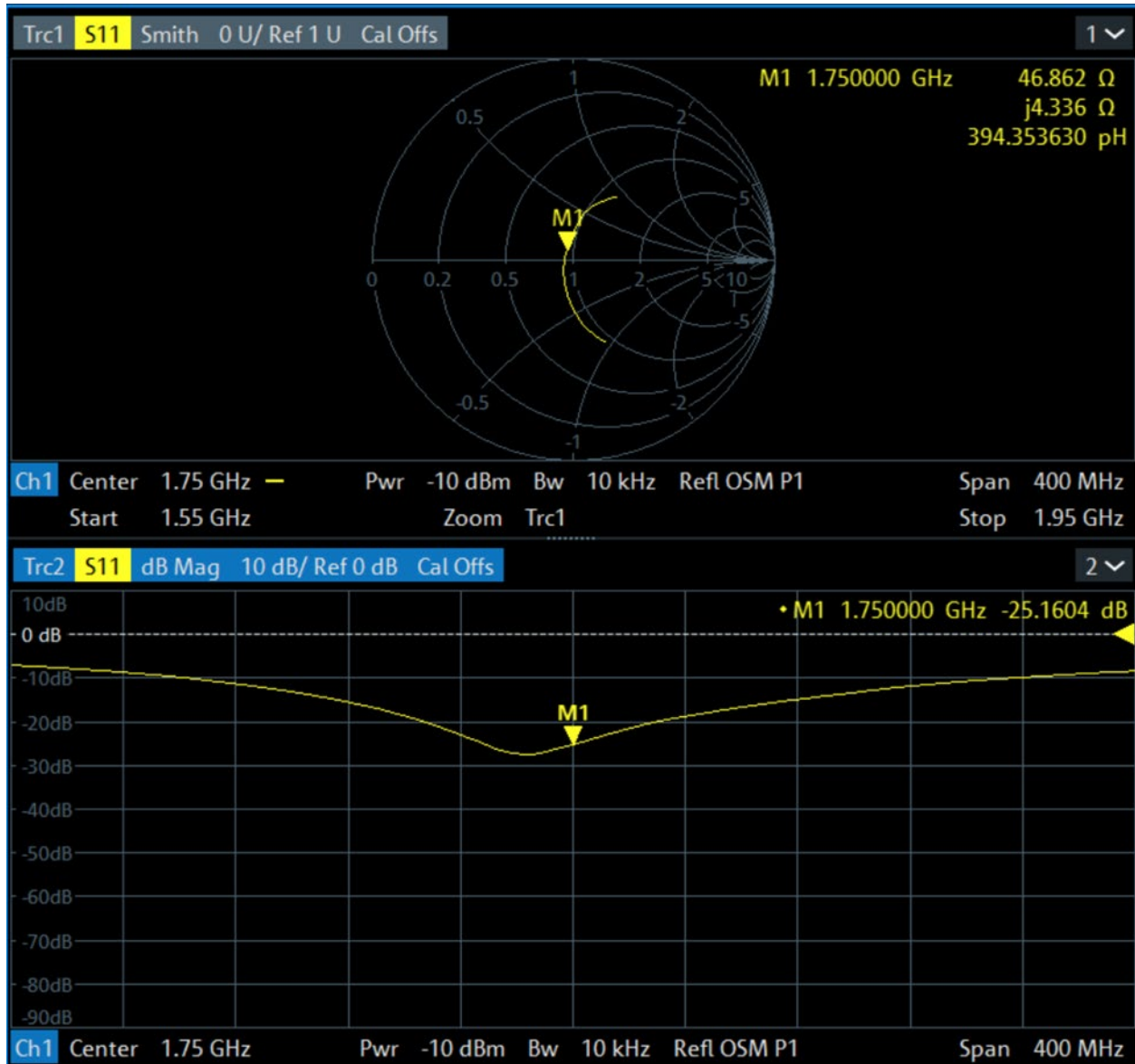
1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date   | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Deviation (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Deviation (%) | Cert Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Deviation (%) | PASS/FAIL |
|-----------|------------|---------------------|------------|-------------------------------------|---------------------------------------|----------------------|--------------------------------------|----------------------------------------|-----------------------|----------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|---------------------------|-----------|
| 1205      | 1750       | 11/7/2024           | 10/11/2023 | 36.5                                | 1.80                                  | -1.60%               | 19.2                                 | 0.96                                   | 0.07%                 | 46.6                             | 46.9                                 | 0.3                                   | 3.9                                   | 4.3                                       | 0.4                                        | -25.4                      | -25.2                          | 5.68%                     | PASS      |



Impedance and Return-Loss Measurement Plot for Head TSL



## IN-HOUSE SAR VERIFICATION SOURCE CALIBRATION EXTENSION

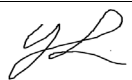
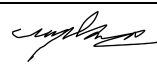
Object: D1750V2 – SN: 1205  
Description: SAR Validation Dipole at 1750 MHz  
Procedure (s): Procedure for SAR Verification Source Calibration Extension  
In-house Check Date: 7/30/2025

### Equipment List

| Manufacturer    | Model                | Description                                                        | Serial Number  | Calibration Date | Calibration Due | CBT |
|-----------------|----------------------|--------------------------------------------------------------------|----------------|------------------|-----------------|-----|
| Rohde & Schwarz | ZNL20                | Vector Network Analyzer                                            | 101202         | 9/12/2024        | 9/12/2025       |     |
| Rohde & Schwarz | ZN-Z135              | Calibration Kit                                                    | 5000-309192839 | 10/31/24         | 10/31/26        |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581657      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4040                 | Ambient Thermometer                                                | 230581662      | 8/28/2023        | 8/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662223      | 9/28/2023        | 9/28/2025       |     |
| Control Company | 4352                 | Long Stem Liquid Thermometer                                       | 230662212      | 9/28/2023        | 9/28/2025       |     |
| Micro-Coax      | UFB205A-0-0240-30x30 | SMA M-F RF test Cable (DC - 18 GHz)                                | -              |                  |                 | ✓   |
| Maury-Micro     | 360D                 | 10dB RF Fixed Attenuator (DC - 18 GHz) + Short Circuit Termination | 7799           | 12/28/2024       | 12/28/2025      |     |
| Huber+Suhner    | SF126                | High Performance RF Cable                                          | 570292/126     |                  |                 | ✓   |
| SPEAG           | DAE4ip               | Data Acquisition Electronics with Integ. Power                     | 1839           | 9/4/2024         | 9/4/2025        |     |
| SPEAG           | DAK-3.5              | DAK-3.5 Dielectric Probe                                           | 1349           | 9/2/2024         | 9/2/2025        |     |
| SPEAG           | EX3DV4               | SAR Measurement Probe                                              | 7836           | 9/12/2024        | 9/12/2025       |     |
| SPEAG           | Powersource1         | Signal Generator                                                   | 4341           | 1/9/2025         | 1/9/2026        |     |

CBT: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

Measurement Uncertainty =  $\pm 27\%$  (k=2)

|              | Name          | Function          | Signature                                                                             |
|--------------|---------------|-------------------|---------------------------------------------------------------------------------------|
| Tested By:   | Yue Li        | Engineer          |  |
| Approved By: | Phuong Nguyen | Technical Manager |  |

Per FCC KDB Publication 865664 D01, dipole can have longer calibration intervals of up to three years when it is demonstrated that the SAR target, impedance and return loss of the dipole have remained stable according to the following requirements:

1. Measured SAR does not deviate from the calibrated SAR value by more than 10%.
2. Return loss does not deviate by more than 20% from the previous measurement (i.e. value in dB x 0.2) and meet the required minimum return-loss.
3. Real and imaginary part of the impedance do not deviate by more than 5  $\Omega$  from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have an extended calibration interval:

| Dipole SN | Freq (MHz) | In-house Check Date | Cal Date   | Head SAR target (1g) @ 30dBm (W/kg) | Measured Head SAR (1g) @ 17dBm (W/kg) | 1g SAR Dev (%) | Head SAR target (10g) @ 30dBm (W/kg) | Measured Head SAR (10g) @ 17dBm (W/kg) | 10g SAR Dev (%) | Cert Head Impedance (Ohm) - Real | Previous Head Impedance (Ohm) - Real | Measured Head Impedance (Ohm) - Real | Head Impedance Deviation (Ohm) - Real | Cert Head Impedance (Ohm) - Imaginary | Previous Head Impedance (Ohm) - Imaginary | Measured Head Impedance (Ohm) - Imaginary | Head Impedance Deviation (Ohm) - Imaginary | Cert Head Return Loss (dB) | Previous Head Return Loss (dB) | Measured Head Return Loss (dB) | Return Loss Dev (%) | PASS/FAIL |
|-----------|------------|---------------------|------------|-------------------------------------|---------------------------------------|----------------|--------------------------------------|----------------------------------------|-----------------|----------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|----------------------------|--------------------------------|--------------------------------|---------------------|-----------|
| 1205      | 1750       | 11/7/2024           | 10/11/2023 | 36.5                                | 1.80                                  | -1.60%         | 19.2                                 | 0.96                                   | 0.07%           | 46.6                             | 46.6                                 | 46.9                                 | 0.3                                   | 3.9                                   | 3.9                                       | 4.3                                       | 0.4                                        | -25.4                      | -25.4                          | -25.2                          | 5.68%               | PASS      |
| 1205      | 1750       | 7/30/2025           | 10/11/2023 | 36.5                                | 1.83                                  | 0.04%          | 19.2                                 | 0.98                                   | 2.05%           | 46.6                             | 46.9                                 | 47.0                                 | 0.1                                   | 3.9                                   | 4.3                                       | 3.9                                       | -0.4                                       | -25.4                      | -25.2                          | -25.9                          | -15.04%             | PASS      |



## Impedance and Return-Loss Measurement Plot for Head TSL

