

# TEST REPORT

**Applicant** Play For Dream (Shanghai)  
Technologies Co., Ltd.

**FCC ID** 2BMM9-MRD3A0

**Product** PLAY FOR DREAM MR

**Brand** PLAY FOR DREAM

**Model** PFDM D3

**Report No.** R2411A1737-S1V4

**Issue Date** April 3, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528-2013, IEC/IEEE 62209-1528:2020, ANSI C95.1: 1992, IEEE C95.1: 1991**. The test results show that the equipment tested can demonstrate the compliance with the requirements as documented in this report.



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| Version                                                                                                                                                                                                                           | Revision Description     | Issue Date        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------|
| Rev.0                                                                                                                                                                                                                             | Initial issue of report. | January 15, 2025  |
| Rev.1                                                                                                                                                                                                                             | Update description.      | January 17, 2025  |
| Rev.2                                                                                                                                                                                                                             | Update description.      | January 17, 2025  |
| Rev.3                                                                                                                                                                                                                             | Update description.      | February 14, 2025 |
| Rev.4                                                                                                                                                                                                                             | Update description.      | April 3, 2025     |
| Note: This revised report (Report No.: R2411A1737-S1V4) supersedes and replaces the previously issued report (Report No.: R2411A1737-S1V3). Please discard or destroy the previously issued report and dispose of it accordingly. |                          |                   |

# 1 Test Laboratory

## 1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

## 1.2 Test Facility

### FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

### A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

## 1.3 Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.  
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City: Shanghai  
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## 1.4 Laboratory Environment

|                                                                                                                                                                                                 |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Temperature                                                                                                                                                                                     | Min. = 18°C, Max. = 25°C |
| Relative humidity                                                                                                                                                                               | Min. = 20%, Max. = 80%   |
| Ground system resistance                                                                                                                                                                        | < 0.5 $\Omega$           |
| Ambient noise is checked and found very low and in compliance with requirement of standards.<br>Reflection of surrounding objects is minimized and in compliance with requirement of standards. |                          |

## 2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) and PD found during testing for the EUT are as follows:

Table 1: Highest Reported SAR and PD

| Mode                                                                                                                                                                                                                                                                                                                                                                                                                         | Highest Reported SAR (W/kg)                      |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                              | Head SAR 1g(0mm)                                 | Extremity SAR 10g(0mm) |
| Wi-Fi 2.4GHz                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.236                                            | 0.973                  |
| Wi-Fi 5GHz                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.504                                            | 1.243                  |
| Wi-Fi 6GHz                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.107                                            | 0.292                  |
| Bluetooth                                                                                                                                                                                                                                                                                                                                                                                                                    | NA                                               | NA                     |
| nRF 2.4GHz                                                                                                                                                                                                                                                                                                                                                                                                                   | NA                                               | NA                     |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                                         | Highest PD (W/m <sup>2</sup> @4cm <sup>2</sup> ) |                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                              | Test Distance: 2 mm                              | Test Distance: 1/5 mm  |
| Wi-Fi 6GHz                                                                                                                                                                                                                                                                                                                                                                                                                   | 6.433                                            | 3.405                  |
| Date of Testing: November 25, 2024 ~ December 28, 2024                                                                                                                                                                                                                                                                                                                                                                       |                                                  |                        |
| Date of Sample Received: November 19, 2024                                                                                                                                                                                                                                                                                                                                                                                   |                                                  |                        |
| Note:                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                  |                        |
| 1. The device is in compliance with Uncontrolled Environment /General Population exposure limits (1.6 W/kg for Head SAR 1g, 4.0 W/kg for Extremity SAR 10g, 10 W/m <sup>2</sup> @4 cm <sup>2</sup> for PD) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, FCC 47 CFR Part 1 1.1310, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and IEC/IEEE 62209-1528:2020. |                                                  |                        |
| 2. Stand-alone SAR evaluation is not required for Bluetooth and nRF 2.4GHz, more details information see section 10.2.                                                                                                                                                                                                                                                                                                       |                                                  |                        |
| 3. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.                                                                                                                                  |                                                  |                        |

Table 2: Highest Simultaneous Transmission SAR

| Exposure Configuration                                                                     | Head SAR 1g(0mm) | Extremity SAR 10g(0mm) |
|--------------------------------------------------------------------------------------------|------------------|------------------------|
| Highest Simultaneous Transmission SAR (W/kg)                                               | 1.444            | 2.322                  |
| Note: The detail for simultaneous transmission consideration is described in chapter 10.5. |                  |                        |

### 3 Description of Equipment Under Test

#### Client Information

|                      |                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------|
| Applicant            | Play For Dream (Shanghai) Technologies Co., Ltd.                                              |
| Applicant address    | Room 501, Building No 3, Caosong Road No.1, Xingiao Town, Songjiang District, Shanghai, China |
| Manufacturer         | Play For Dream (Shanghai) Technologies Co., Ltd.                                              |
| Manufacturer address | Room 501, Building No 3, Caosong Road No.1, Xingiao Town, Songjiang District, Shanghai, China |

#### General Technologies

|                                                                                                                   |                                                                            |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| EUT Stage                                                                                                         | Identical Prototype                                                        |
| Model                                                                                                             | PFDM D3                                                                    |
| Lab internal SN                                                                                                   | R2411A1737/S01                                                             |
| Hardware Version                                                                                                  | 4.0                                                                        |
| Software Version                                                                                                  | D3_DEV_3.0.1.290                                                           |
| Antenna Type                                                                                                      | Internal Antenna                                                           |
| <b>EUT Accessory</b>                                                                                              |                                                                            |
| Adapter                                                                                                           | Manufacturer: Shenzhen Kosun Industrial Co., Ltd.<br>Model: 623005         |
| Data Cable                                                                                                        | Manufacturer: Shenzhen Zhishang Technology Co., LTD<br>1200±20mm, Shielded |
| Note:                                                                                                             |                                                                            |
| 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. |                                                                            |

## Wireless Technology and Frequency Range

| Wireless Technology |                                                                                                              | Modulation              | Operating mode                                                                                                                                          | Tx (MHz)                                                 | Rx (MHz)                                                 |
|---------------------|--------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Wi-Fi               | 2.4GHz                                                                                                       | DSSS, OFDM              | 802.11b/g/n HT20/ax HE20/be EHT20                                                                                                                       | 2412 ~ 2462                                              | 2412 ~ 2462                                              |
|                     |                                                                                                              | OFDM                    | 802.11n HT40/ax HE40/be EHT40                                                                                                                           | 2422 ~ 2452                                              | 2422 ~ 2452                                              |
|                     | 5GHz                                                                                                         | OFDM; OFDMA             | 802.11a<br>802.11n HT20/ HT40<br>802.11ac VHT20/ VHT40/ VHT80/<br>VHT160<br>802.11ax HE20/ HE40/ HE80/ HE160<br>802.11be EHT20/ EHT40/ EHT80/<br>EHT160 | 5150 ~ 5250<br>5250 ~ 5350<br>5470 ~ 5725<br>5725 ~ 5850 | 5150 ~ 5250<br>5250 ~ 5350<br>5470 ~ 5725<br>5725 ~ 5850 |
|                     | 6GHz                                                                                                         | OFDMA                   | 802.11ax HE20/ HE40/ HE80/ HE160<br>802.11be-EHT20/ EHT40/ EHT80/<br>EHT160/ EHT320                                                                     | 5925 ~ 6425<br>6425 ~ 6525<br>6525 ~ 6875<br>6875 ~ 7125 | 5925 ~ 6425<br>6425 ~ 6525<br>6525 ~ 6875<br>6875 ~ 7125 |
|                     | Does this device support MIMO <input checked="" type="checkbox"/> Yes (2TX, 2RX) <input type="checkbox"/> No |                         |                                                                                                                                                         |                                                          |                                                          |
| nRF                 | 2.4GHz                                                                                                       | GFSK                    | --                                                                                                                                                      | 2402 ~2480                                               | 2402 ~2480                                               |
| Bluetooth           | 2.4GHz                                                                                                       | Version 5.3 BR/EDR + LE |                                                                                                                                                         | 2402 ~2480                                               | 2402 ~2480                                               |



## 4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with

FCC 47 CFR § 2.1093

FCC 47 CFR Part 1 1.1310

ANSI C95.1: 1992

IEEE C95.1: 1991,

IEEE 1528- 2013

IEC 62479:2010

IEC/IEEE 62209-1528:2020

IEC/IEEE 63195-1:2022 (Not within Eurofins TA's scope of A2LA accreditation)

DASY8 MODULE SAR SYSTEM HANDBOOK

DASY8 MODULE mmWAVE SYSTEM HANDBOOK

the following FCC Published RF exposure KDB procedures:

KDB 248227 D01 802.11Wi-Fi SAR v02r02

KDB 447498 D01 General RF Exposure Guidance v06

KDB 690783 D01 SAR Listings on Grants v01r03

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

KDB 865664 D02 RF Exposure Reporting v01r02

KDB 388624 D01 Pre-Approval Guidance v13

KDB 388624 D02 Pre-Approval Guidance List v18r06

## 5 Operational Conditions during Test

### 5.1 SAR test evaluation

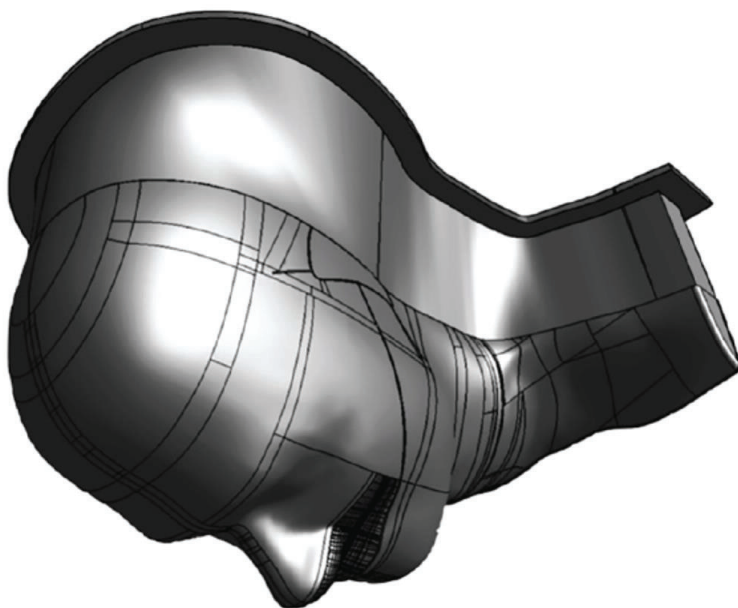
According to KDB 447498 D01 V06 Appendix A, the maximum output power of ANT2 (2.4GHz:2402MHz~2480MHz) is 8 dBm (the exemption threshold for head SAR is 10 dBm ; the exemption threshold for extremity SAR is 14 dBm ;). Therefore, ANT2 can be exempted from testing.

According to Appendix A of KDB 447498 D01 V06, the transmit power of ANT0 and ANT1 is greater than the exemption threshold. Therefore, ANT0 and ANT1 shall be tested as section 5.2 and section 5.3.

### 5.2 SAR test evaluation for head exposure

This device belongs to the face-worn exposure equipment, Head mounted devices are designed to be used on the face, particularly the eye regions. Since the device worn in front of the face, SAR testing was performed in a face-down phantom to evaluate all head use case conditions. SAR was evaluated with a separation distance of 0 mm between the device and face down phantom.

The SAM face-down phantom shown below is recommended for devices where the exposure is at the front side of the head. It is the same as the SAM phantom specified, but oriented with the front of the face facing downward. This phantom is truncated along a plane behind the ear reference point. Above this plane, an upper extension is added to ensure that the tissue-equivalent medium liquid is deep enough to measure in the relevant regions of the SAM phantom. The upper extension is flanged, to allow measurement probe access. The shell thickness shall be  $2\text{ mm} \pm 0,2\text{ mm}$  (not including the upper extension). The phantom is filled with head tissue-equivalent medium. The same phantom could be used for some transmitters mounted on eyeglasses or eyewear. If the psSAR location is in the eye region, the user shall either show that the tissueequivalent medium provides conservative exposure or propose an alternative medium.



### 5.3 SAR test evaluation for extremity exposure

This device may also be exposed to extremity, such as hands. Therefore, it is necessary to assess the compliance of the product under extremity exposure conditions. However, since this device is an irregular one, based on the positions of the antennas, we have evaluated the points (TS1 – TS9) under the worst exposure conditions and conducted tests on these points or surfaces. The tests were carried out at the relatively most conservative distance (0 mm). Even though the device will not be continuously held in hands during use.

### 5.4 Test position summary

Based on the distance between the antenna position and the device's surface, the descriptions of the test surfaces or points are as follows.:

| TS1          | TS2          | TS3               | TS4       | TS5        | TS6       | TS7       | TS8         | TS9         | TS10                       |
|--------------|--------------|-------------------|-----------|------------|-----------|-----------|-------------|-------------|----------------------------|
| For Ant0     | For Ant0     | For Ant0 and Ant1 | For Ant0  | For Ant1   | For Ant0  | For Ant1  | For Ant0    | For Ant1    | For Ant0 and Ant1          |
| Bottom Edge1 | Bottom Edge2 | Bottom Edge3      | Left Edge | Right Edge | Top Edge1 | Top Edge2 | Front Edge1 | Front Edge2 | All points towards to face |
| 0mm          | 0mm          | 0mm               | 0mm       | 0mm        | 0mm       | 0mm       | 0mm         | 0mm         | 0mm                        |

TS1: This surface is the one on the local surface (the left side of the Bottom surface) that is closest to the antenna 0.

TS2: This surface is the one on the local surface (the right side of the Bottom surface) that is closest to the antenna 1.

TS3: This surface is the one on the local surface (the front side of the Bottom surface) that is closest to the antenna 0 and antenna 1.

TS4: This surface is the one on the local surface (left side) that is closest to the antenna 0.

TS5: This surface is the one on the local surface (right side) that is closest to the antenna 1.

TS6: This point is the one on the local surface (the left side of the Top surface) that is closest to the antenna 0.

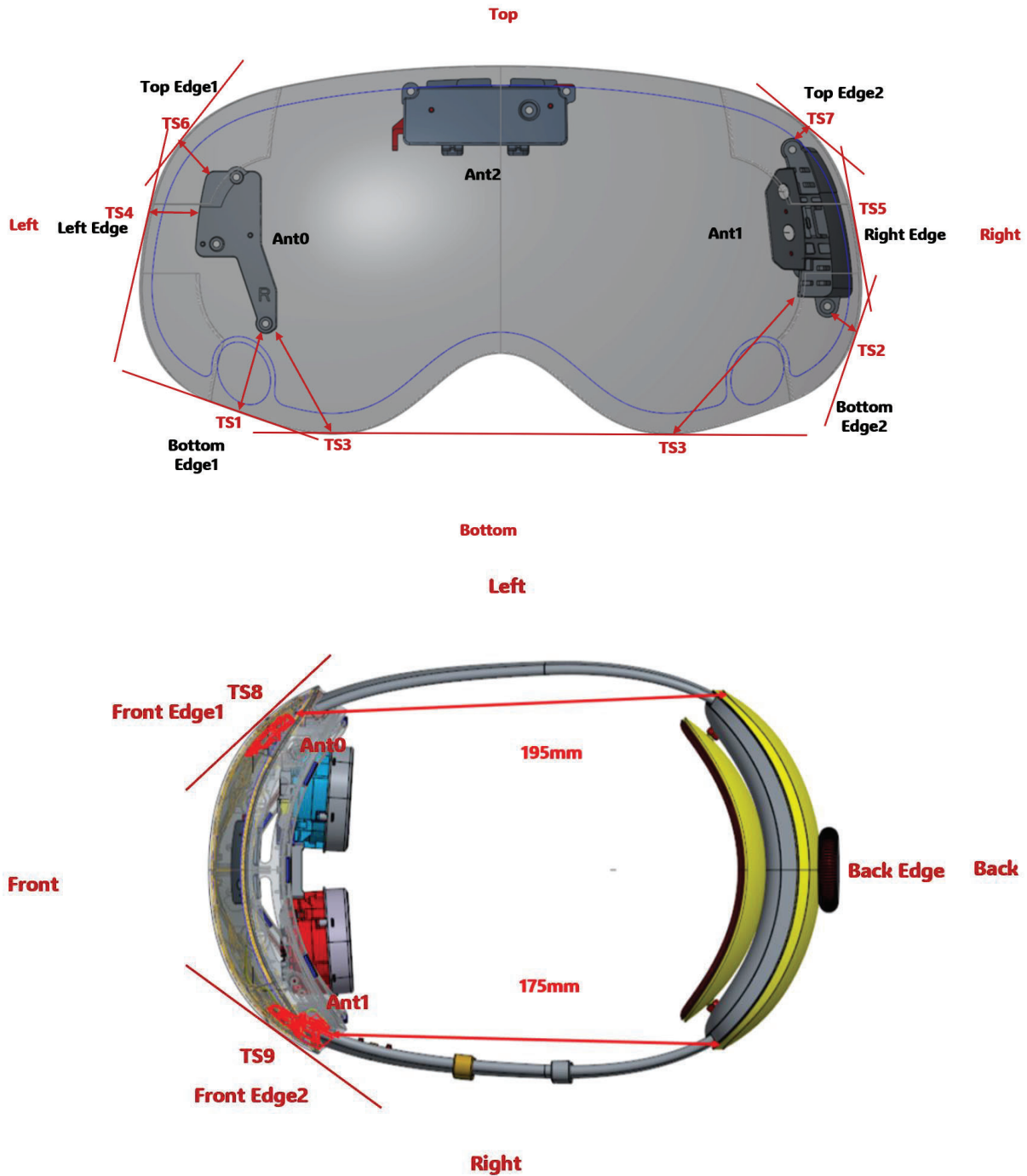
TS7: This point is the one on the local surface (the right side of the Top surface) that is closest to the antenna 1.

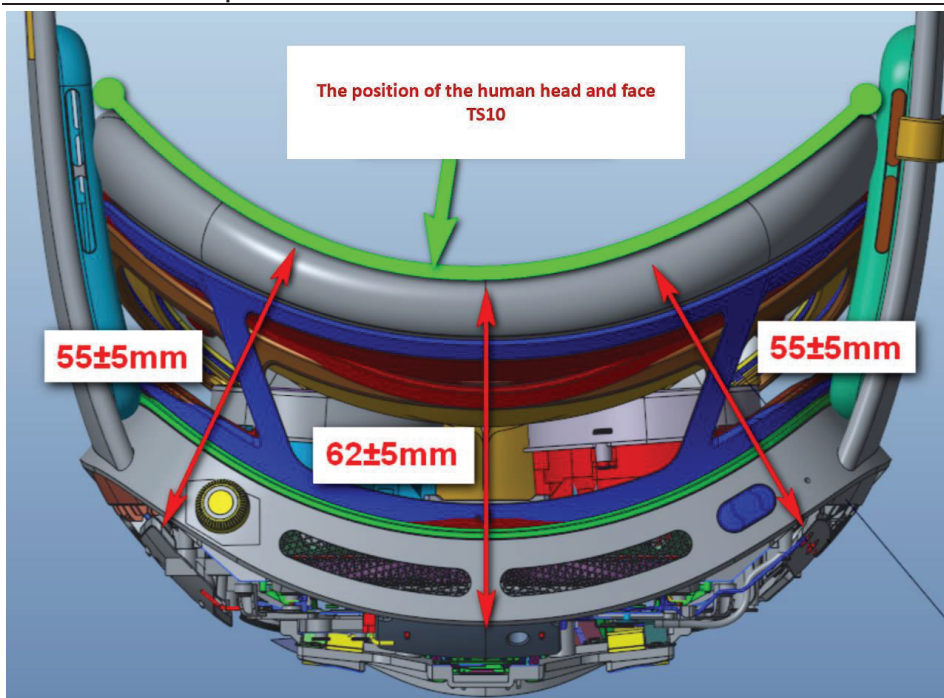
TS8: This surface is the one on the spectacle lens surface (the left side of the Front side) that is closest to antenna 0.

TS9: This surface is the one on the spectacle lens surface (the right side of the Front surface) that is closest to antenna 1.

TS10: The facial exposure conditions, covering all points on the curved surface. The face down model is used to test all the points of facial exposure.

Back edge: Since there is no radio frequency module on the back surface of the device and it is far from the antenna position, it is exempted from testing.





## 5.5 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is  $\geq 0.80$  W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was  $> 1.20$  or when the original or repeated measurement was  $\geq 1.45$  W/kg ( $\sim 10\%$  from the 1-g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was  $\geq 1.5$  W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .
- 4) Repeated measurements are not required when the original highest measured SAR is  $< 0.80$  W/kg

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.



## 5.6 Test Configuration

### 5.2.1 Wi-Fi Test Configuration

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; These are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported SAR* for the *initial test position* is:

- $\leq 0.4$  W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported SAR* is  $\leq 0.8$  W/kg or all required test positions are tested.
  - ✧ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - ✧ When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported SAR* is  $> 0.8$  W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported SAR* is  $\leq 1.2$  W/kg or all required test channels are considered.
  - ✧ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel

bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

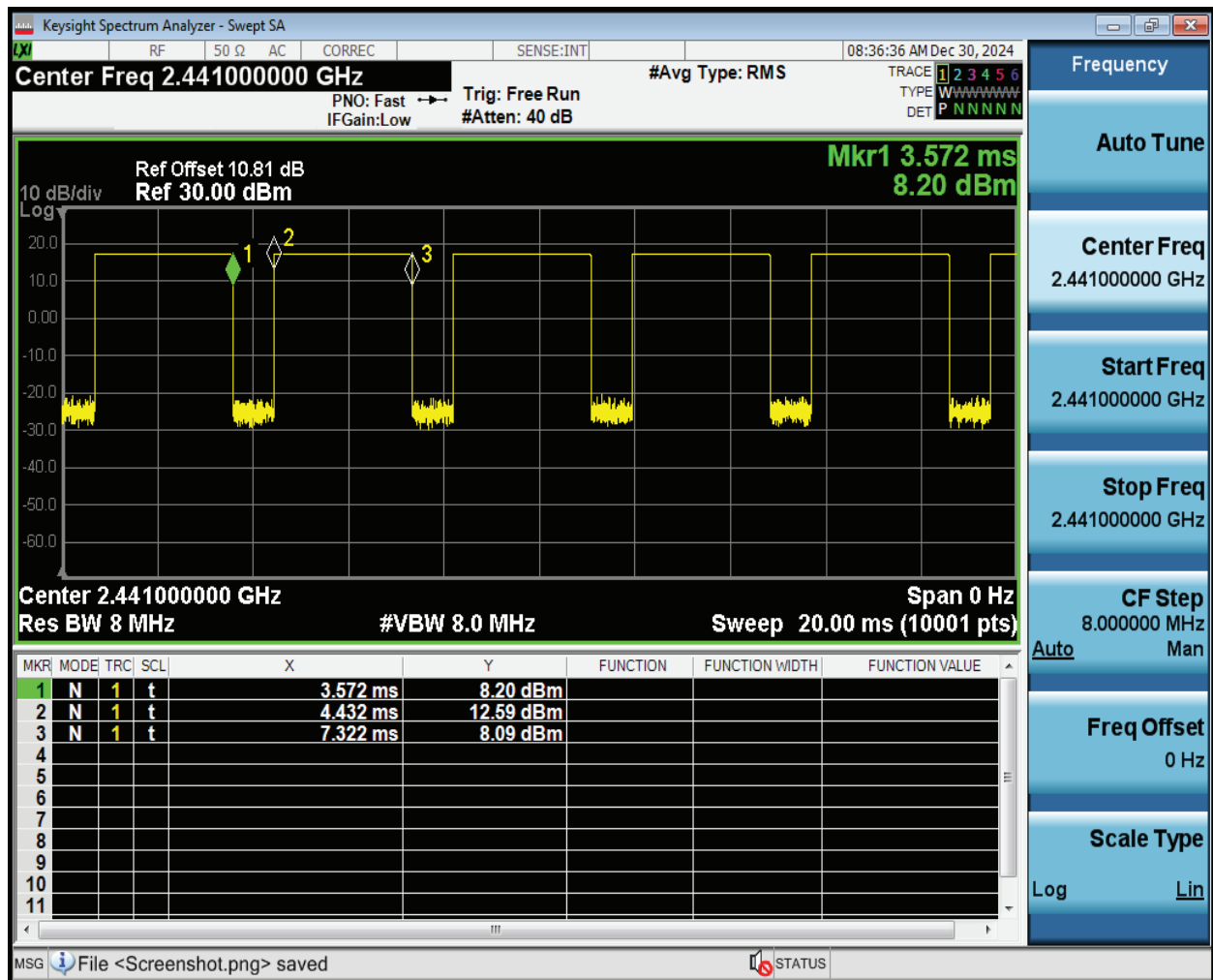
According to 201904 TCBC workshop KDB 248227 D01 can be used for SAR initial test configurations and test reduction for 802.11ax.

KDB 248227 D01 section 5.3.2 a) should be applied for SAR test configuration selection with maximum output power. The 802.11ax should be considered as the highest 801.11 mode for the appropriate frequency bands.

## 5.2.2 Bluetooth Test Configuration

For Bluetooth SAR testing, Bluetooth engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hopping off and data rate set for DH5.

The SAR measurement takes full account of the Bluetooth duty cycle and is reflected in the report, and the duty factor of the device is as follow:



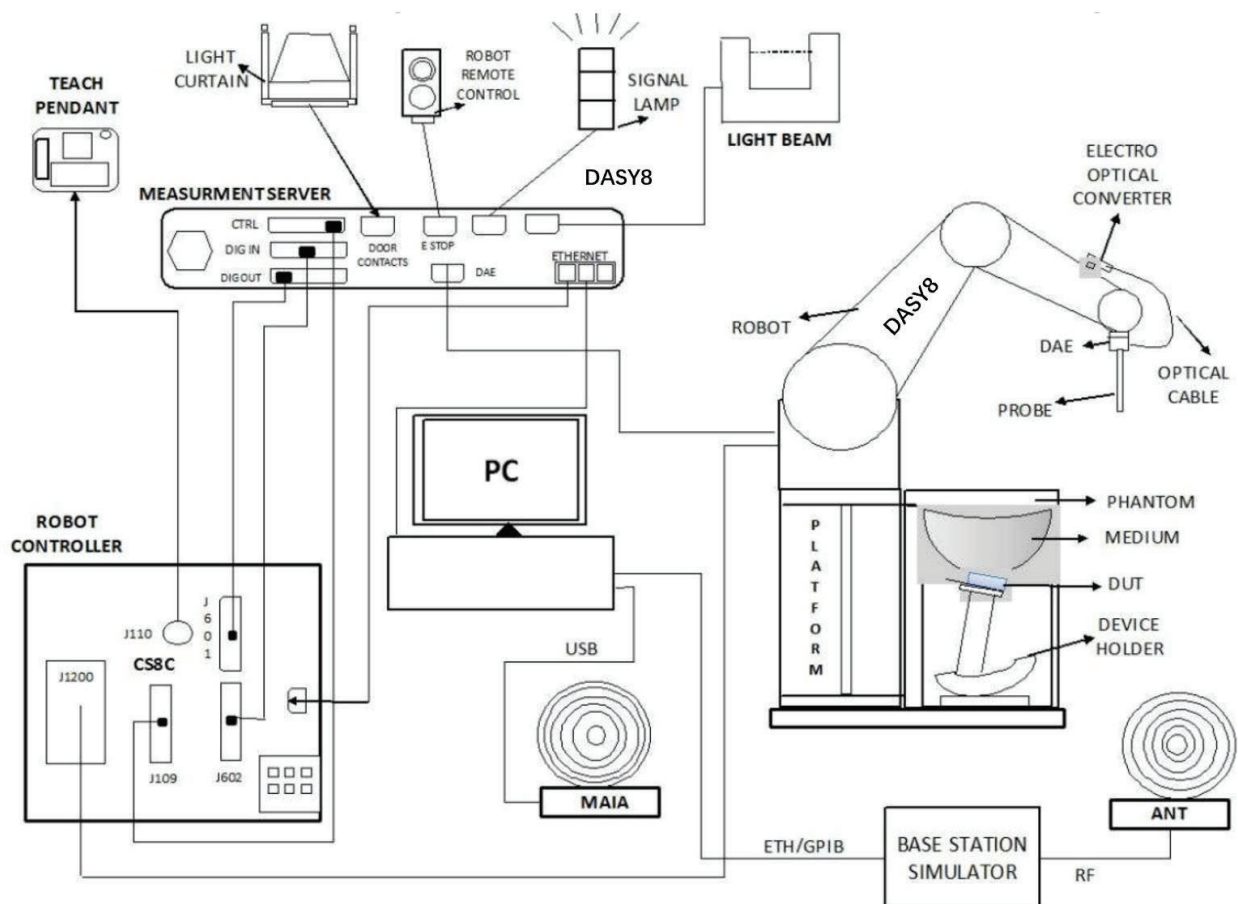
Note: Duty factor= Ton (ms)/ T(on+off) (ms)=77%



## 6 Test System Configuration

### 6.1 Test System Set-up

The DASY system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the

probe positioning.

- A computer running Windows 10 64-bit Operating System and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

## 6.2 Probe Specification

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

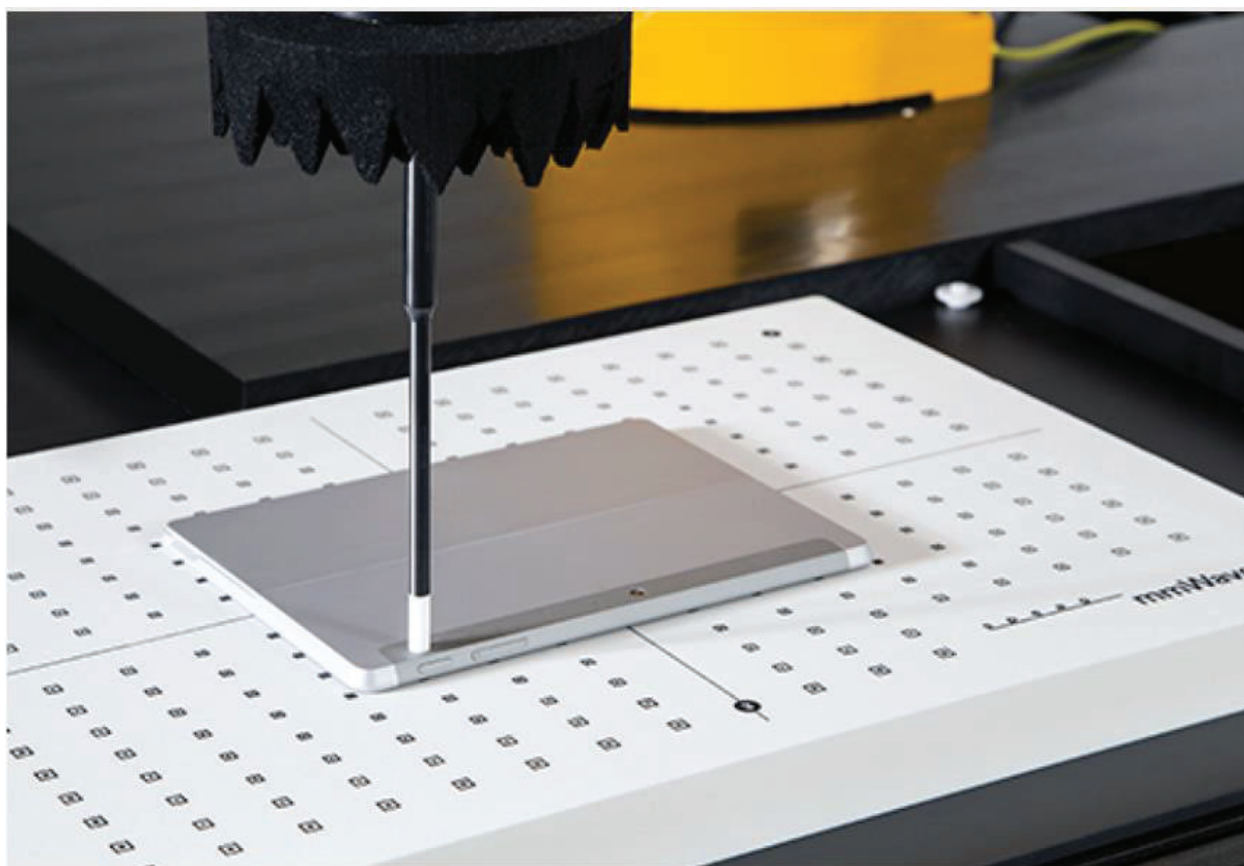
### EX3DV4 Probe Specification

|               |                                                                                                                                                                                                            |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction  | Symmetrical design with triangular core<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE)                                                |
| Calibration   | ISO/IEC 17025 calibration<br>service available                                                                                                                                                             |
| Frequency     | 10 MHz to > 6 GHz<br>Linearity: $\pm 0.2$ dB<br>(30 MHz to 6 GHz)                                                                                                                                          |
| Directivity   | $\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)                                                                                           |
| Dynamic Range | 10 $\mu$ W/g to > 100 mW/g Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ W/g)                                                                                                                        |
| Dimensions    | Overall length: 330 mm (Tip: 20 mm)<br>Tip diameter: 2.5 mm (Body: 12 mm)<br>Typical distance from probe tip to dipole centers: 1 mm                                                                       |
| Application   | High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%. |



## EUmmWV4 Probe Specification

|                 |                                                                                                                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range | 750MHz-110GHz                                                                                                                                                                                                                                                    |
| Dynamic Range   | < 50-3000V/m (up to 10000V/m with additional PER-10 voltage divider)                                                                                                                                                                                             |
| Dimensions      | Probe Overall Length: 320 mm<br>Probe Body Diameter: 8 mm<br>Probe Tip Length: 23 mm<br>Probe Tip Diameter: Encapsulation 8 mm<br>Distance from Probe Tip to Sensor X Calibration Point: 1.5 mm<br>Distance from Probe Tip to Sensor Y Calibration Point: 1.5 mm |
| Applications    | E-field measurements of 5G devices and other mm-wave transmitters operating above 10 GHz in < 2 mm distance from device (free-space)<br>Power density, H-field and far-field analysis using total field reconstruction                                           |
| Compatibility   | DASY8: Full file compatibility                                                                                                                                                                                                                                   |



## 6.3 SAR Measurement Procedure

### 6.3.1 SAR test using flat/head phantom

#### Fast Area Scan

Fast Area Scan is a novel scan available in DASY8. The sensor voltages are sampled continuously while the robot is moving which reduces the scan duration to <30 s for most configurations.

The Fast Area Scan provides an easy, time efficient and accurate way to define the optimal power reference location. The location of the power reference and power drift measurements for the subsequent Area, Fast Volume and Zoom Scans will be automatically set at the maximum of the Fast Area Scan.

The Fast Area Scan is mainly used to assess psSAR1g/10g values:

- 1) The post processing algorithm used for regular Area Scans is applied to Fast Area Scans as well to compute psSAR1g/10 values.
- 2) The measured pattern of the given test configuration is compared to the ones measured previously in the project. If a similar pattern shape (matching configuration) is found, a scaling factor defined as difference in amplitude of the two configurations is computed. The Area Scan and Zoom Scan results available for the matching configuration are then scaled to assess the psSAR1g/10g of the measured configuration.

Fast Area Scans default grid settings are the same as Area Scans. They are described in Table(a) and Table (b)

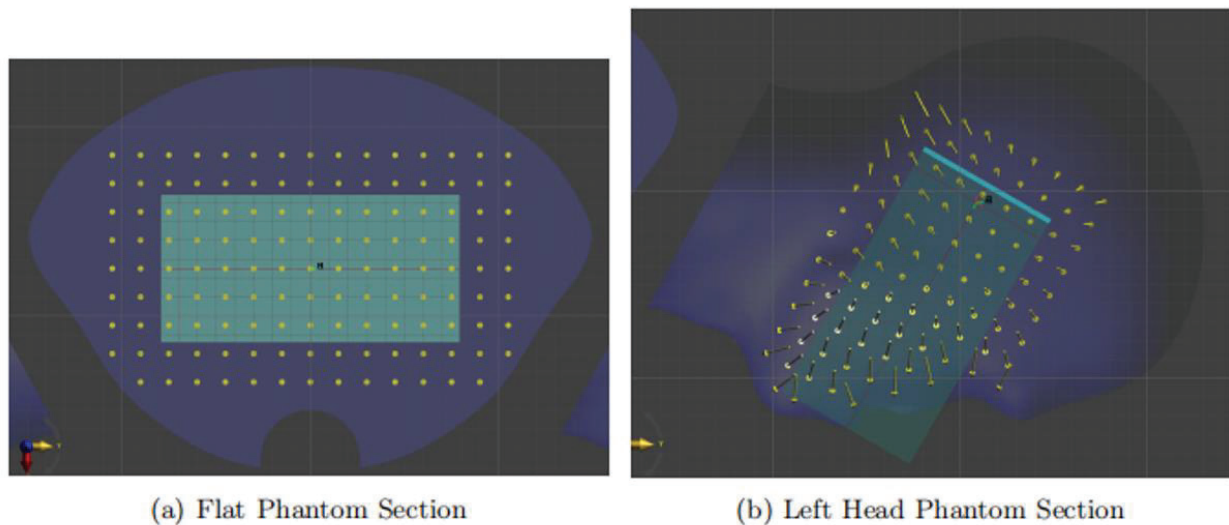
#### Area Scan

Area Scans are used to determine the peak location of the measured field before doing a finer measurement around the hotspot. Peak location can be found accurately even on coarse grids using the advanced interpolation routines implemented in DASY8. Area Scans measure a two dimensional volume covering the full device under test area. DASY8 uses Fast Averaged SAR algorithm to compute the 1g and 10g of simulated tissue from the Area Scan.

DASY8 automatically generates Area Scan grid settings based on device dimensions. The scan extent is defined by the device dimensions plus additional 15 mm on each side.

For Flat phantom sections both the device under test and the area scan are centered around the phantom device reference point. For Left Head and Right Head phantom sections, Area Scans are anchored to the ERP (Ear Reference Point) and oriented along the Ear Mouth line. The device under test position on this line is given by the speaker position which is always placed at the ERP. The scans extents are defined by the device height and width increased by 15 mm on each side.

Figure (a) and Figure (b) show a typical area scan grid for Flat and Left Head phantom sections.



### Measurement Grid for Area Scans

Table A describe the Area Scan grid extents used in Flat, Left Head and Right Head phantom sections.

Area Scan grid steps and distance sensor to surface are defined in Table B. Please note that the settings are sufficient to determine accurately the position of the maximum SAR. For accurate psSAR estimation, finer settings might be used.

Table A: Area Scan Grid Extents in Flat, Left Head and Right Head Phantom Sections

| Section           | Position    | Extent X<br>[mm] | Extent Y<br>[mm] |
|-------------------|-------------|------------------|------------------|
| Flat              | TOP         | Width + 30       | Height + 30      |
| Flat              | BOTTOM      | Width + 30       | Height + 30      |
| Flat              | EDGE TOP    | Thickness + 30   | Width + 30       |
| Flat              | EDGE BOTTOM | Thickness + 30   | Width + 30       |
| Flat              | EDGE LEFT   | Thickness + 30   | Height + 30      |
| Flat              | EDGE RIGHT  | Thickness + 30   | Height + 30      |
| Left / Right Head | CHEEK       | Width + 30       | Height + 30      |
| Left / Right Head | TILT        | Width + 30       | Height + 30      |

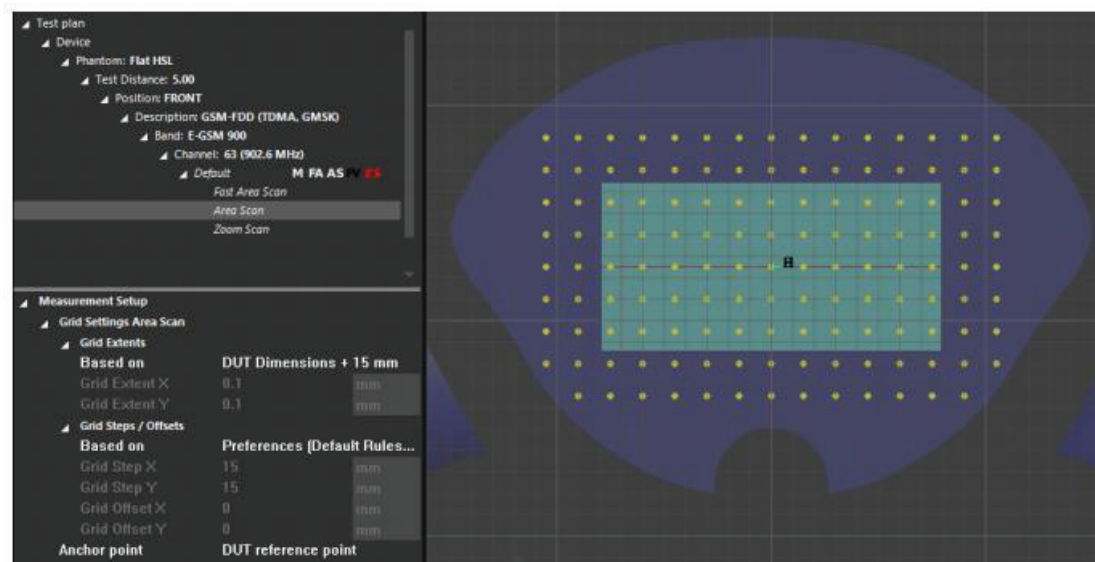


**Table B: Area Scan Grid Steps in Flat, Left Head and Right Head Phantom Sections**

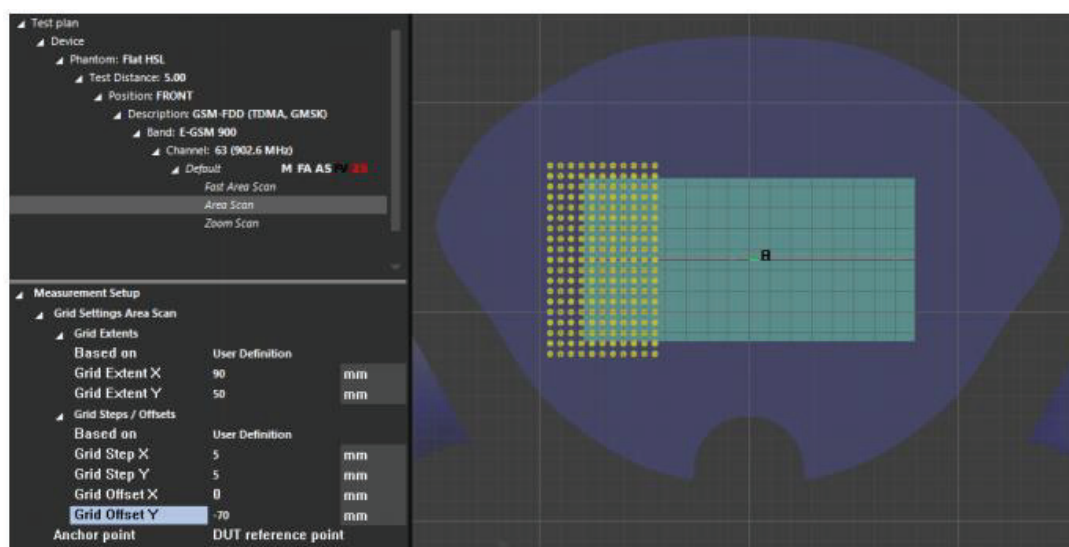
| f<br>[GHz] | d sensor-surface<br>[mm] | Step X, Y<br>[mm] |
|------------|--------------------------|-------------------|
| 0 - 2      | 3                        | 15                |
| 2 - 3      | 3                        | 15                |
| 3 - 4      | 3                        | 10                |
| 4 - 6      | 3                        | 10                |
| 6 - 7      | 3                        | 8.5               |
| 7 - 8      | 3                        | 7.5               |
| 8 - 9      | 3                        | 6.5               |
| 9 - 10     | 3                        | 6                 |

In DASY8 user defined grid settings can be applied as well. In the scan properties of the measurement the grid extent, grid step and grid offset can be changed after changing the default selection 'DUT dimensions + 15 mm' to 'User defined' (see Figure (c) and Figure (d)).

**Figure (c): Default grid settings based on DUT dimensions.**



**Figure (d): Grid settings as specified by the user**



## Fast Volume Scan

Fast Volume Scans are 3D scans used to assess the peak spatial SAR values within an averaging volume containing 1g and 10g of simulated tissue. It is compatible with any phantom. For regular phantoms, the measurement grid is generated by projecting a plane onto the phantom surface as for Area and Zoom scans. For specific phantoms, the measurement grid is generated by a conformal offset to the phantom surface at the desired distances. The grid extents can be set by the end user to cover the DUT dimensions or the whole measurable area of the phantom.

The grid extents are defined as for the area scan. The number of measured layers and the spacing between the points are optimized based on measurement frequency as shown in Table C.

Table C: Fast Volume Scan Grid Settings

| Frequency [GHz] | Phantom Type | d sensor-surface [mm] | Step X, Y [mm] |
|-----------------|--------------|-----------------------|----------------|
| 0 - 4           | Regular      | 2, 5, 8, 15           | 10             |
| 0 - 4           | Specific     | 3, 7, 15              | 10             |
| 4 - 10          | Regular      | 2, 5, 8, 15           | 5              |
| 4 - 10          | Specific     | 3, 7, 15              | 5              |

For regular phantoms, the grid extents are based on the DUT dimensions as for the Area Scans (see Area Scan).

## Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1g and 10g of simulated tissue. Zoom scans measure a three dimensional volume (cube). The bottom face of the cube is centered on the maximum of the preceding Area Scan in the same measurement group. For maxima at border of the phantom, Auto extend zoom scan when maxima on boundary feature can be enabled in Application Preferences \_x001D\_ Scan Settings with Administrator access level.

Zoom Scans can be performed in two different modes:

(1) Smart Mode: the grid settings are adjusted on the fly based on the distribution being measured to fulfill to the IEC/IEEE 62209-1528 criteria on grid resolution. This is the recommended operating mode.

(2) Custom Mode: the user specifies the grid settings to be used.

In both modes, Zoom Scans are always anchored to the peak location of the preceding Fast Area / Area / Fast Volume Scan. The sensor distance to the surface depends on the probe type used during measurement: 1.4 mm for EX probes and 3 mm for ES probes.

The Smart Zoom Scan is the highly recommended measurement mode as it minimizes the number of measured points, ensures that all standard requirements are met and guarantees that the uncertainty budget provided by SPEAG is always valid.

In this mode, a 2D Scan on a fine grid resolution of 30 mm x 30 mm with grid step of 5 mm is performed before each Zoom Scan at the maximum location of the preceding Area Scan. The 3 dB

requirement of the IEC/IEEE 62209-1528 standard is then calculated. Based on these measurements, the zoom grid parameters are determined:

- (1) the grid step in XY-planes (planes parallel to phantom surface) for the following Zoom Scan is determined to ensure minimal number of points while meeting the requirements for DASY's uncertainty budget and the 3 dB requirement of the IEC/IEEE 62209-1528 standard.
- (2) the grid step normal to the surface, is also determined to ensure minimal number of z-planes while meeting the requirements for DASY's uncertainty budget and the requirements of IEC/IEEE 62209-1528 standard.

The Zoom Scan is then performed with the optimized grid settings computed above. In all cases, the grid steps will not exceed the ones presented in Table D.

Table D: Default Zoom Scan Grid Settings

| Frequency<br>[GHz] | Extend XYZ<br>[mm] | Step XY<br>[mm] | Step Z<br>[mm] | Graded | Grading Ratio<br>[mm] |
|--------------------|--------------------|-----------------|----------------|--------|-----------------------|
| 0 - 2              | 30 x 30 x 30       | 6               | 1.5            | Yes    | 1.5                   |
| 2 - 3              | 30 x 30 x 30       | 5               | 1.5            | Yes    | 1.5                   |
| 3 - 4              | 28 x 28 x 28       | 5               | 1.4            | Yes    | 1.5                   |
| 4 - 5              | 25 x 25 x 25       | 4               | 1.4            | Yes    | 1.4                   |
| 5 - 6              | 22 x 22 x 22       | 4               | 1.4            | Yes    | 1.4                   |
| 6 - 7              | 22 x 22 x 22       | 3.4             | 1.4            | Yes    | 1.4                   |
| 7 - 8              | 22 x 22 x 22       | 3               | 1.4            | Yes    | 1.4                   |
| 8 - 9              | 22 x 22 x 22       | 2.7             | 1.3            | Yes    | 1.4                   |
| 9 - 10             | 22 x 22 x 22       | 2.4             | 1.2            | Yes    | 1.4                   |

In Custom mode, the user can specify the grid settings to be used. This mode can be useful for trouble shooting purposes. A warning will be issued if the specified settings do not fulfill the DASY's uncertainty budget and the 3 dB requirement of IEC/IEEE 62209-1528 standard.

### Power Monitoring Scan

Power monitoring scans are used to monitor the power drift of the device under test. The local SAR strength is measured at a reference position at the beginning and at the end of the scan. The power drift is computed using the below formula:

$$P_{\text{drift}}[\text{dB}] = 10 \cdot \log_{10}(\text{SAR beginning} / \text{SAR end})$$

Power monitoring scans are available for fully integrated in Area and Zoom Scans. They can be enabled in Application Preferences\_x001D\_Scan Settings. For Area Scans, the reference point is defined as the maximum location of the preceding Fast Scan. A Fast Scan will be automatically performed if none has been performed and power monitoring is enabled. For Zoom Scans, it is defined at the first point of the measured grid. If the power drifts more than 5%, the SAR will be retested.



### 6.3.2 SAR test using face down phantom

In cDASY6 V6.8+, following measurement scan types are supported for specific phantoms:

- Fast Area Scan (FA)
- Area Scan (AS)
- Fast Volume Scan (VS)
- Zoom Scan (ZS)

The fast area (FA) scan and area scan (AS) are only supported in SAM Twin Chin-20 Phantom, and do not differ in any way from their normal implementation in the SAM phantom.

The volume scan (VS) is supported by all phantoms (regular as well as specific) and is the only scan mode supported for Wrist and Ankle phantoms.

The zoom scan (ZS) is supported in all phantoms except the Wrist and Ankle phantom.

#### Fast Volume Scan

Fast Volume Scans are used to assess the 1g and 10g peak spatial-average SAR (psSAR) in the simulated tissue-equivalent medium. The extent of measurement grids is set by the user according to test device dimensions or the entire measurable region of the phantom. To support measurements in any phantom shape, such as specific phantoms, the measurement grids are conformal to the phantom surface, at a fixed offset from the surface. The measurement grids at larger distances from the surface are also conformal to the grid layer closest to the phantom surface, with a fixed offset distance between layers. The number of measured layers and grid resolution used for Fast Volume Scan, shown in below Table, are optimized according to phantom type and measurement frequency.

| Frequency   | Phantom Type                                                                                                       | No. of Layers | d sensor-surface<br>(mm) | Step X, Y<br>(mm) |
|-------------|--------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|-------------------|
| Up-to 4 GHz | <ul style="list-style-type: none"> <li>• SAM Chin 20</li> <li>• Head-stand / Facedown</li> <li>• WBDuke</li> </ul> | 3             | 3,7,15                   | 10                |
| 4-6 GHz     | <ul style="list-style-type: none"> <li>• SAM Chin 20</li> <li>• Head-stand / Facedown</li> <li>• WBDuke</li> </ul> | 3             | 3,7,15                   | 5                 |
| Up-to 4 GHz | <ul style="list-style-type: none"> <li>• Wrist</li> <li>• Ankle</li> </ul>                                         | 3             | 3,6,10                   | 5                 |
| 4-6 GHz     | <ul style="list-style-type: none"> <li>• Wrist</li> <li>• Ankle</li> </ul>                                         | 3             | 3,5,7                    | 5                 |

#### Zoom Scan

Zoom Scans are used to assess the 1g and 10g peak spatial-average SAR within a cubic volume in the simulated tissue-equivalent medium. The post-processing algorithm used for regular (i.e., Twin SAM and ELI) and specific phantoms are identical.

For the set of specific phantoms (Head Stand, Face down and WBDuke), the minimum conformal distance ( $d_{\text{sensor surface}}$ ) is limited to 3mm, so as to avoid the boundary effect, as the probe may approach the phantom surface at larger probe angles for these phantoms.

## 6.4 PD Measurement Procedure

The measurements to be performed are selected in the Project Overview window. DASY8 supports five different scan types:

- **Fast Area Scan** – a measurement scan where sensor voltages are sampled continuously while the robot is moving – is used to determine the radiation pattern and the E-field maximum location.
- **Generic Scan** – a flexible measurement scan – is used to measure the E-field on a 1D, 2D, or 3D grid. The PD, valid in the far-field only, is calculated as  $S = E^2 / 120 \cdot \pi$ .
- **5G Scan** – a fine resolution scan performed on two different planes – is used to reconstruct the E and H-fields as well as the PD on the measurement plane; the average PD is derived from this measurement.

- **Forward Transform Scan** – a fine resolution scan performed on three different planes – is used to reconstruct the E- and H- fields as well as the PD. In addition to the 5G Scan, the PD can be evaluated on any surface in the half space above the measurement plane.

Forward Transform (FT) Scans are also used as input of the MEO (Maximum Exposure Optimizer) option which assesses the maximized spatial averaged power density (mpsPD) for phased array antennas with a complex codebook from a reduced set of measurements.

- **Time-Averaged Scan** – a measurement scan where sensor voltages are sampled continuously at a fixed probe location – is used for compliance testing of devices that can monitor the transmitted power during a certain time interval.

## 7 Main Test Equipment

| Name of Equipment             | Manufacturer | Type/Model      | Serial Number   | Software Version | Last Cal.  | Cal. Due Date |
|-------------------------------|--------------|-----------------|-----------------|------------------|------------|---------------|
| Network Analyzer              | Agilent      | E5071B          | MY42404014      | /                | 2024-05-07 | 2025-05-06    |
| Dielectric Probe Kit          | SPEAG        | DAK-12          | 1171            | /                | 2024-07-15 | 2025-07-14    |
| Dielectric Probe Kit          | SPEAG        | DAK-3.5         | 1332            | /                | 2024-07-15 | 2025-07-14    |
| Power Meter                   | Agilent      | E4417A          | GB41291714      | /                | 2024-05-07 | 2025-05-06    |
| Power Sensor                  | Agilent      | N8481H          | MY50350004      | /                | 2024-05-07 | 2025-05-06    |
| Power Sensor                  | Agilent      | E9327A          | US40441622      | /                | 2024-05-07 | 2025-05-06    |
| Signal Generator              | KEYSIGHT     | N5182B-X07      | MY51350303      | /                | 2024-12-02 | 2025-12-01    |
| Dual Directional Coupler      | UCL          | UCL-DDC05 6G-S  | 20010600118     | /                | /          | /             |
| KEYSIGHT                      | 87300B       | US55141494      | KEYSIGHT        | /                | /          | /             |
| Amplifier                     | R&S          | SCU18F          | 101022          | /                | /          | /             |
| Wireless Communication Tester | R&S          | CMW 500         | 146734          | /                | 2024-05-07 | 2025-05-06    |
| E-field Probe                 | SPEAG        | EX3DV4          | 7689            | /                | 2024-06-04 | 2025-06-03    |
| DAE                           | SPEAG        | DAE4            | 1291            | /                | 2024-04-12 | 2025-04-11    |
| PD Probe                      | SPEAG        | EUmmWV4         | 9642            | /                | 2024-07-10 | 2025-07-09    |
| 5G Verification Source 10GHz  | SPEAG        | 5G Veri10       | 1054            | /                | 2022-09-09 | 2025-09-08    |
| Validation Kit 2450MHz        | SPEAG        | D2450V2         | 786             | /                | 2023-09-12 | 2026-09-11    |
| Validation Kit 5GHz           | SPEAG        | D5GHzV2         | 1203            | /                | 2022-12-09 | 2025-12-08    |
| Validation Kit 6.5GHz         | SPEAG        | D6.5GHzV2       | 1046            | /                | 2024-10-07 | 2027-10-06    |
| Test Software for Tissue      | SPEAG        | /               | /               | DAK 3.0.4.1      | /          | /             |
| Temperature Probe             | Auden        | DTM3000         | 3905            | /                | 2024-12-03 | 2025-12-02    |
| Twin ELI Phantom              | SPEAG        | ELI v4.0        | 1179            | /                | /          | /             |
| Hygrothermograph              | Anymetr      | HTC - 1         | TA2024A034      | /                | 2024-05-06 | 2025-05-05    |
| TX90 XL                       | SPEAG        | Staubli TX90 XL | /               | /                | /          | /             |
| DASY5 Test System             | SPEAG        | TX90 XLspeag    | F08/5AH5A1/A/01 | 52.10.4.15 27    | /          | /             |
| DASY8 Module SAR Test System  | SPEAG        | TX2-90 XLspe    | /               | 16.2.4.252 4     | /          | /             |
| Tissue test software          | SPEAG        | DAK 3.0.4.1     | /               | 3.0.4.1          | /          | /             |

## 8 Tissue Dielectric Parameter Measurements & System Check

### 8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within  $\pm 2^\circ\text{C}$  of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

#### Target values

| Frequency (MHz) | $\epsilon_r$ | $\sigma(\text{s/m})$ |
|-----------------|--------------|----------------------|
| 2450            | 39.2         | 1.80                 |
| 5250            | 35.9         | 4.71                 |
| 5600            | 35.5         | 5.07                 |
| 5750            | 35.4         | 5.22                 |
| 6500            | 34.5         | 6.07                 |

#### Measurements results

| Frequency (MHz) | Test Date  | Temp $^\circ\text{C}$ | Measured Dielectric Parameters |                      | Target Dielectric Parameters |                      | Limit (Within $\pm 5\%$ ) |                  |
|-----------------|------------|-----------------------|--------------------------------|----------------------|------------------------------|----------------------|---------------------------|------------------|
|                 |            |                       | $\epsilon_r$                   | $\sigma(\text{s/m})$ | $\epsilon_r$                 | $\sigma(\text{s/m})$ | Dev $\epsilon_r(\%)$      | Dev $\sigma(\%)$ |
| 2450            | 2024/12/26 | 21.5                  | 40.76                          | 1.78                 | 39.2                         | 1.80                 | 3.98                      | -1.11            |
| 5250            | 2024/12/26 | 21.5                  | 34.65                          | 4.49                 | 35.9                         | 4.71                 | -3.48                     | -4.67            |
| 5600            | 2024/12/28 | 21.5                  | 34.02                          | 4.87                 | 35.9                         | 4.71                 | -5.24                     | 3.40             |
| 5750            | 2024/12/3  | 21.5                  | 33.77                          | 5.05                 | 35.4                         | 5.22                 | -4.60                     | -3.26            |
| 6500            | 2024/12/7  | 21.5                  | 32.49                          | 5.91                 | 34.5                         | 6.07                 | -5.83                     | -2.64            |
| 6500            | 2024/12/9  | 21.5                  | 32.48                          | 5.94                 | 34.5                         | 6.07                 | -5.86                     | -2.14            |
| 6500            | 2024/12/27 | 21.5                  | 32.48                          | 5.96                 | 34.5                         | 6.07                 | -5.86                     | -1.81            |

Note: The depth of tissue-equivalent liquid in a phantom must be  $\geq 15.0$  cm.

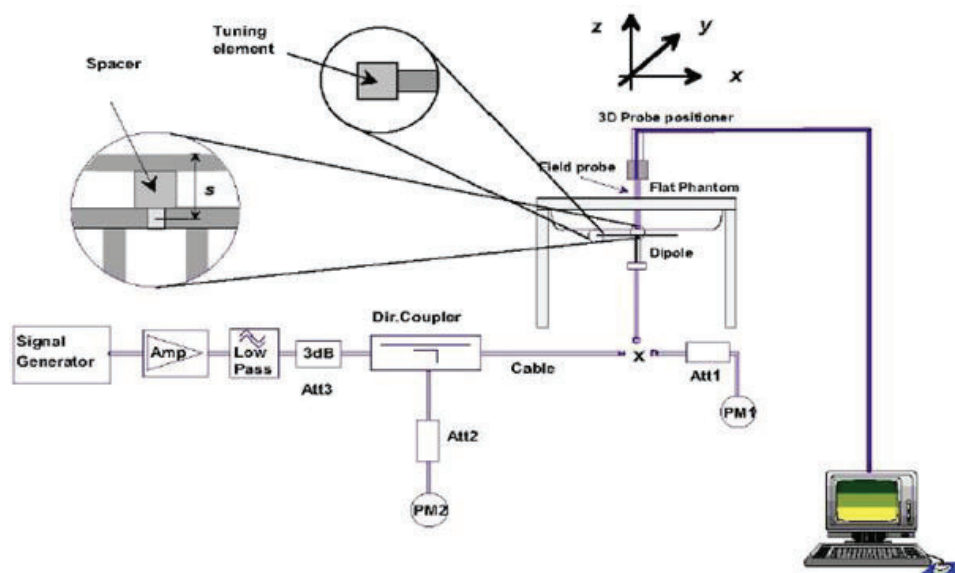
## 8.2 System Check

Note: The test data in this report is jointly completed by DASY5 and DASY8, and only the measurement procedure/set up of the DASY8 test system is put in this report.

### 8.2.1 System Check Configuration

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Check setup



Picture 2 Setup Photo

### Justification for Extended SAR Dipole Calibrations

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss ( $>20$  dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

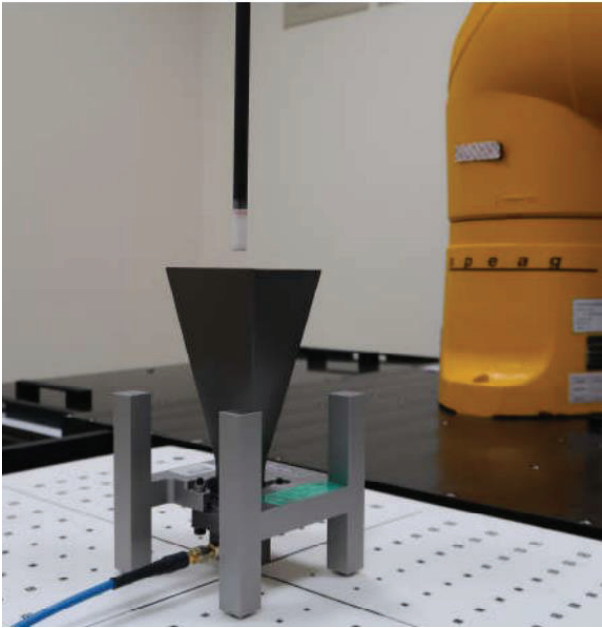
| Dipole                                |             | Date of Measurement | Return Loss (dB) | $\Delta$ % | Impedance ( $\Omega$ ) |                |           |                |
|---------------------------------------|-------------|---------------------|------------------|------------|------------------------|----------------|-----------|----------------|
|                                       |             |                     |                  |            | Real                   | $\Delta\Omega$ | Imaginary | $\Delta\Omega$ |
| Dipole D5GHzV2 (5250 MHz)<br>SN: 1203 | Head Liquid | 12/9/2022           | 29.0             | /          | 48.5                   | /              | -3.20     | /              |
|                                       |             | 12/8/2023           | 28.4             | -2.1       | 48.4                   | -0.1           | -3.4      | -0.2           |
| Dipole D5GHzV2 (5600 MHz)<br>SN: 1203 | Head Liquid | 12/9/2022           | 30.4             | /          | 51.7                   | /              | 2.60      | /              |
|                                       |             | 12/8/2023           | 30.5             | 0.3%       | 51.5                   | -0.2           | 2.4       | -0.2           |
| Dipole D5GHzV2 (5750 MHz)<br>SN: 1203 | Head Liquid | 12/9/2022           | 25.3             | /          | 53.6                   | /              | 4.30      | /              |
|                                       |             | 12/8/2023           | 25.7             | 1.6%       | 53.1                   | -0.5           | 4.7       | 0.4            |

### 8.2.2 SAR&APD System Check Results

| Frequency (MHz) | Test Date  | Temp $^{\circ}\text{C}$ | 250mW Measured SAR <sub>1g</sub> (W/kg)                 | 1W Normalized SAR <sub>1g</sub> (W/kg)                 | 1W Target SAR <sub>1g</sub> (W/kg)                 | $\Delta$ % (Limit $\pm 10\%$ ) | Plot No. |
|-----------------|------------|-------------------------|---------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|--------------------------------|----------|
| 2450            | 2024/12/26 | 21.5                    | 13.52                                                   | 54.80                                                  | 52.60                                              | 4.18                           | 1        |
| Frequency (MHz) | Test Date  | Temp $^{\circ}\text{C}$ | 100mW Measured SAR <sub>1g</sub> (W/kg)                 | 1W Normalized SAR <sub>1g</sub> (W/kg)                 | 1W Target SAR <sub>1g</sub> (W/kg)                 | $\Delta$ % (Limit $\pm 10\%$ ) | Plot No. |
| 5250            | 2024/12/26 | 21.5                    | 7.54                                                    | 75.40                                                  | 77.70                                              | -2.96                          | 2        |
| 5600            | 2024/12/28 | 21.5                    | 7.67                                                    | 76.70                                                  | 80.30                                              | -4.48                          | 3        |
| 5750            | 2024/12/3  | 21.5                    | 7.66                                                    | 76.60                                                  | 76.80                                              | -0.26                          | 4        |
| 6500            | 2024/12/7  | 21.5                    | 30.40                                                   | 304.00                                                 | 291.00                                             | 4.47                           | 5        |
| 6500            | 2024/12/9  | 21.5                    | 30.34                                                   | 303.40                                                 | 291.00                                             | 4.26                           | 6        |
| 6500            | 2024/12/27 | 21.5                    | 30.35                                                   | 303.50                                                 | 291.00                                             | 4.30                           | 7        |
| Frequency (MHz) | Test Date  | Temp $^{\circ}\text{C}$ | 100mW Measured 4cm <sup>2</sup> APD (W/m <sup>2</sup> ) | 1W Normalized 4cm <sup>2</sup> APD (W/m <sup>2</sup> ) | 1W Target 4cm <sup>2</sup> APD (W/m <sup>2</sup> ) | Limit For APD ( $\pm 10\%$ )   | Plot No. |
| 6500            | 2024/12/7  | 22.0                    | 128                                                     | 1280                                                   | 1330                                               | -4                             | 8        |

Note: Target Values used derive from the calibration certificate data storage and evaluation.

8.2.3 PD System Cheek Result



| Frequency (GHz) | 5G Verification Source | Test Date | Distance (mm) | Measured 4cm <sup>2</sup> (W/m <sup>2</sup> ) | Targeted 4cm <sup>2</sup> (W/m <sup>2</sup> ) | Deviation (dB) | Plot No. |
|-----------------|------------------------|-----------|---------------|-----------------------------------------------|-----------------------------------------------|----------------|----------|
| 10              | 10GHz-                 | 2024/12/7 | 10            | 51.6                                          | 50                                            | 0.03           | 9        |



## 9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

### 9.1 WLAN Mode

#### 9.1.1 Wi-Fi 2.4GHz Mode

| Wi-Fi 2.4GHz<br>Ant0<br>Mode | Channel<br>/Frequency (MHz) | Maximum Output Power (dBm) |              |
|------------------------------|-----------------------------|----------------------------|--------------|
|                              |                             | Tune-up                    | Meas.        |
| 802.11b<br>(1M)              | 1/2412                      | 17.00                      | <b>16.42</b> |
|                              | 6/2437                      | 17.00                      | 16.11        |
|                              | 11/2462                     | 17.00                      | 16.26        |
| 802.11g<br>(6M)              | 1/2412                      | 10.50                      | 9.09         |
|                              | 6/2437                      | 17.00                      | 15.61        |
|                              | 11/2462                     | 13.50                      | 12.38        |
| 802.11n-HT20<br>(MCS0)       | 1/2412                      | 9.50                       | 7.84         |
|                              | 6/2437                      | 17.00                      | 15.65        |
|                              | 11/2462                     | 11.50                      | 10.43        |
| 802.11n-HT40<br>(MCS0)       | 3/2422                      | 8.50                       | 6.72         |
|                              | 6/2437                      | 17.00                      | 15.76        |
|                              | 9/2452                      | 6.50                       | 5.49         |
| 802.11ax-HE20<br>(MCS0)      | 1/2412                      | 14.50                      | 13.32        |
|                              | 6/2437                      | 17.00                      | 16.28        |
|                              | 11/2462                     | 16.50                      | 15.77        |
| 802.11ax-HE40<br>(MCS0)      | 3/2422                      | 13.50                      | 12.04        |
|                              | 6/2437                      | 17.00                      | 16.24        |
|                              | 9/2452                      | 11.50                      | 10.96        |
| 802.11be EHT20<br>(MCS0)     | 1/2412                      | 17.00                      | 16.65        |
|                              | 6/2437                      | 17.00                      | 16.36        |
|                              | 11/2462                     | 16.50                      | 15.83        |
| 802.11be EHT40<br>(MCS0)     | 3/2422                      | 12.50                      | 10.95        |
|                              | 6/2437                      | 17.00                      | 16.04        |
|                              | 9/2452                      | 11.50                      | 10.71        |

Note: Initial test configuration is 802.11b mode.

| Wi-Fi 2.4GHz<br>Ant1                              | Channel<br>/Frequency (MHz) | Maximum Output Power (dBm) |              |
|---------------------------------------------------|-----------------------------|----------------------------|--------------|
|                                                   |                             | Tune-up                    | Meas.        |
| Mode                                              |                             |                            |              |
| 802.11b<br>(1M)                                   | 1/2412                      | 18.00                      | 16.92        |
|                                                   | 6/2437                      | 18.00                      | 17.11        |
|                                                   | 11/2462                     | 18.00                      | <b>17.43</b> |
| 802.11g<br>(6M)                                   | 1/2412                      | 11.00                      | 10.37        |
|                                                   | 6/2437                      | 18.00                      | 16.38        |
|                                                   | 11/2462                     | 14.00                      | 13.24        |
| 802.11n-HT20<br>(MCS0)                            | 1/2412                      | 10.00                      | 9.35         |
|                                                   | 6/2437                      | 18.00                      | 16.48        |
|                                                   | 11/2462                     | 12.00                      | 11.20        |
| 802.11n-HT40<br>(MCS0)                            | 3/2422                      | 9.00                       | 7.84         |
|                                                   | 6/2437                      | 18.00                      | 16.80        |
|                                                   | 9/2452                      | 7.00                       | 6.04         |
| 802.11ax-HE20<br>(MCS0)                           | 1/2412                      | 15.50                      | 14.52        |
|                                                   | 6/2437                      | 18.00                      | 17.22        |
|                                                   | 11/2462                     | 17.50                      | 16.84        |
| 802.11ax-HE40<br>(MCS0)                           | 3/2422                      | 14.00                      | 13.53        |
|                                                   | 6/2437                      | 18.00                      | 17.42        |
|                                                   | 9/2452                      | 12.00                      | 11.47        |
| 802.11be EHT20<br>(MCS0)                          | 1/2412                      | 18.00                      | 17.12        |
|                                                   | 6/2437                      | 18.00                      | 17.10        |
|                                                   | 11/2462                     | 17.50                      | 16.92        |
| 802.11be EHT40<br>(MCS0)                          | 3/2422                      | 13.00                      | 12.37        |
|                                                   | 6/2437                      | 18.00                      | 17.30        |
|                                                   | 9/2452                      | 12.00                      | 11.35        |
| Note: Initial test configuration is 802.11b mode. |                             |                            |              |

| Wi-Fi 2.4GHz<br>MIMO                              | Channel<br>/Frequency (MHz) | Maximum Output Power (dBm) |              |       |       |
|---------------------------------------------------|-----------------------------|----------------------------|--------------|-------|-------|
|                                                   |                             | Tune-up                    | Meas.        | Ant 0 | Ant 1 |
| Mode                                              |                             |                            |              |       |       |
| 802.11b<br>(1M)                                   | 1/2412                      | 21.50                      | 21.20        | 17.87 | 18.48 |
|                                                   | 6/2437                      | 21.50                      | 20.15        | 16.82 | 17.44 |
|                                                   | 11/2462                     | 21.50                      | <b>21.22</b> | 17.72 | 18.65 |
| 802.11g<br>(6M)                                   | 1/2412                      | 14.00                      | 12.64        | 8.95  | 10.22 |
|                                                   | 6/2437                      | 20.00                      | 18.82        | 15.40 | 16.18 |
|                                                   | 11/2462                     | 17.00                      | 15.75        | 12.25 | 13.18 |
| 802.11n-HT20<br>(MCS0)                            | 1/2412                      | 13.00                      | 11.59        | 7.78  | 9.26  |
|                                                   | 6/2437                      | 20.00                      | 18.94        | 15.49 | 16.32 |
|                                                   | 11/2462                     | 15.00                      | 13.76        | 10.33 | 11.14 |
| 802.11n-HT40<br>(MCS0)                            | 3/2422                      | 11.50                      | 10.24        | 6.59  | 7.79  |
|                                                   | 6/2437                      | 20.00                      | 19.24        | 15.64 | 16.74 |
|                                                   | 9/2452                      | 10.00                      | 8.73         | 5.47  | 5.96  |
| 802.11ax VHT20<br>(MCS0)                          | 1/2412                      | 18.00                      | 16.97        | 13.35 | 14.50 |
|                                                   | 6/2437                      | 21.00                      | 19.99        | 16.20 | 17.64 |
|                                                   | 11/2462                     | 20.00                      | 19.35        | 15.72 | 16.88 |
| 802.11ax VHT40<br>(MCS0)                          | 3/2422                      | 17.00                      | 15.83        | 11.94 | 13.55 |
|                                                   | 6/2437                      | 21.00                      | 20.01        | 16.10 | 17.74 |
|                                                   | 9/2452                      | 15.00                      | 14.21        | 10.85 | 11.52 |
| 802.11be EHT20<br>(MCS0)                          | 1/2412                      | 21.00                      | 20.14        | 16.52 | 17.67 |
|                                                   | 6/2437                      | 21.00                      | 20.01        | 16.17 | 17.69 |
|                                                   | 11/2462                     | 20.00                      | 19.37        | 15.68 | 16.94 |
| 802.11be EHT40<br>(MCS0)                          | 3/2422                      | 16.00                      | 14.68        | 10.80 | 12.40 |
|                                                   | 6/2437                      | 21.00                      | 19.85        | 15.90 | 17.61 |
|                                                   | 9/2452                      | 15.00                      | 14.01        | 10.65 | 11.33 |
| Note: Initial test configuration is 802.11b mode. |                             |                            |              |       |       |

### 9.1.2 nRF 2.4GHz Mode

| nRF 2.4GHz<br>Ant2 | Frequency (MHz) | Maximum Output Power (dBm) |       |
|--------------------|-----------------|----------------------------|-------|
|                    |                 | Tune-up                    | Meas. |
|                    | 2402            | 8.00                       | 7.20  |
|                    | 2440            | 8.00                       | 7.13  |
|                    | 2480            | 8.00                       | 7.03  |

### 9.1.3 Wi-Fi 5GHz Mode

| 5GHz Wi-Fi<br>(U-NII-1) Ant0                           | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|--------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                        |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                                            | 36/5180                | 18.00                      | 17.23        |
|                                                        | 40/5200                | 18.00                      | 17.37        |
|                                                        | 48/5240                | 18.00                      | 16.85        |
| 802.11nHT20(MCS0)                                      | 36/5180                | 18.00                      | 17.23        |
|                                                        | 40/5200                | 18.00                      | 17.37        |
|                                                        | 48/5240                | 18.00                      | 16.85        |
| 802.11nHT40(MCS0)                                      | 38/5190                | 18.00                      | <b>16.80</b> |
|                                                        | 46/5230                | 18.00                      | 16.43        |
| 802.11ac-VHT20(MCS0)                                   | 36/5180                | 17.00                      | 16.18        |
|                                                        | 40/5200                | 17.00                      | 16.30        |
|                                                        | 48/5240                | 17.00                      | 15.80        |
| 802.11ac-VHT40(MCS0)                                   | 38/5190                | 17.00                      | 16.97        |
|                                                        | 46/5230                | 17.00                      | 16.51        |
| 802.11ac-VHT80(MCS0)                                   | 42/5210                | 16.00                      | 15.01        |
| 802.11ac-VHT160<br>(MCS0)                              | 50/5250                | 13.00                      | 11.46        |
| 802.11ax-HE20(MCS0)                                    | 36/5180                | 18.00                      | 17.31        |
|                                                        | 40/5200                | 18.00                      | 17.53        |
|                                                        | 48/5240                | 18.00                      | 16.98        |
| 802.11ax-HE40(MCS0)                                    | 38/5190                | 18.00                      | 16.90        |
|                                                        | 46/5230                | 18.00                      | 16.46        |
| 802.11ax-HE80(MCS0)                                    | 42/5210                | 17.00                      | 16.29        |
| 802.11ax-HE160(MCS0)                                   | 50/5250                | 13.00                      | 11.75        |
| 802.11be-EHT20(MCS0)                                   | 36/5180                | 18.00                      | 17.38        |
|                                                        | 40/5200                | 18.00                      | 17.49        |
|                                                        | 48/5240                | 18.00                      | 17.04        |
| 802.11be-EHT40(MCS0)                                   | 38/5190                | 18.00                      | 17.85        |
|                                                        | 46/5230                | 18.00                      | 17.43        |
| 802.11be-EHT80(MCS0)                                   | 42/5210                | 17.00                      | 16.37        |
| 802.11be-EHT160(MCS0)                                  | 50/5250                | 13.00                      | 11.31        |
| Note. Initial test configuration is 802.11n HT40 mode. |                        |                            |              |

| 5GHz Wi-Fi<br>(U-NII-2A) Ant0                           | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|---------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                         |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                                             | 52/5260                | 18.00                      | 16.63        |
|                                                         | 56/5280                | 18.00                      | 16.54        |
|                                                         | 64/5320                | 18.00                      | 16.36        |
| 802.11nHT20(MCS0)                                       | 52/5260                | 18.00                      | 16.89        |
|                                                         | 56/5280                | 18.00                      | 16.75        |
|                                                         | 64/5320                | 18.00                      | 16.62        |
| 802.11nHT40(MCS0)                                       | 54/5270                | 17.00                      | 15.19        |
|                                                         | 62/5310                | 17.00                      | 15.33        |
| 802.11ac-VHT20(MCS0)                                    | 52/5260                | 17.00                      | 15.87        |
|                                                         | 56/5280                | 17.00                      | 15.82        |
|                                                         | 64/5320                | 17.00                      | 15.83        |
| 802.11ac-VHT40(MCS0)                                    | 54/5270                | 17.00                      | 15.37        |
|                                                         | 62/5310                | 17.00                      | 15.49        |
| 802.11ac-VHT80(MCS0)                                    | 58/5290                | 16.00                      | 14.27        |
| 802.11ax-HE20(MCS0)                                     | 52/5260                | 18.00                      | 17.04        |
|                                                         | 56/5280                | 18.00                      | 16.94        |
|                                                         | 64/5320                | 18.00                      | 16.77        |
| 802.11ax-HE40(MCS0)                                     | 54/5270                | 18.00                      | <b>16.70</b> |
|                                                         | 62/5310                | 18.00                      | 16.61        |
| 802.11ax-HE80(MCS0)                                     | 58/5290                | 17.00                      | 15.66        |
| 802.11be-EHT20(MCS0)                                    | 52/5260                | 18.00                      | 16.92        |
|                                                         | 56/5280                | 18.00                      | 16.92        |
|                                                         | 64/5320                | 18.00                      | 16.74        |
| 802.11be-EHT40(MCS0)                                    | 54/5270                | 18.00                      | 17.40        |
|                                                         | 62/5310                | 18.00                      | 17.48        |
| 802.11be-EHT80(MCS0)                                    | 58/5290                | 17.00                      | 15.69        |
| Note. Initial test configuration is 802.11ax HE40 mode. |                        |                            |              |

| 5GHz Wi-Fi<br>(U-NII-2C) Ant0 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|-------------------------------|------------------------|----------------------------|--------------|
|                               |                        | Tune-up                    | Meas.        |
| 802.11a<br>(6M)               | 100/5500               | 17.50                      | <b>16.85</b> |
|                               | 116/5580               | 17.50                      | 16.64        |
|                               | 140/5700               | 17.50                      | 16.82        |
|                               | 144/5720               | 17.50                      | 15.91        |
| 802.11nHT20<br>(MCS0)         | 100/5500               | 16.50                      | 15.96        |
|                               | 116/5580               | 16.50                      | 15.76        |
|                               | 140/5700               | 16.50                      | 15.93        |
|                               | 144/5720               | 16.50                      | 14.98        |
| 802.11nHT40<br>(MCS0)         | 102/5510               | 15.00                      | 14.41        |
|                               | 110/5550               | 15.00                      | 14.55        |
|                               | 134/5670               | 15.00                      | 14.13        |
|                               | 142/5710               | 15.00                      | 14.05        |
| 802.11ac-VHT20<br>(MCS0)      | 100/5500               | 17.00                      | 15.98        |
|                               | 116/5580               | 17.00                      | 15.91        |
|                               | 140/5700               | 17.00                      | 16.03        |
|                               | 144/5720               | 16.50                      | 15.14        |
| 802.11ac-VHT40<br>(MCS0)      | 102/5510               | 15.00                      | 14.45        |
|                               | 110/5550               | 15.00                      | 14.64        |
|                               | 134/5670               | 15.00                      | 14.22        |
|                               | 142/5710               | 15.00                      | 14.12        |
| 802.11ac-VHT80<br>(MCS0)      | 106/5530               | 16.00                      | 14.98        |
|                               | 122/5610               | 16.00                      | 14.53        |
|                               | 138/5690               | 16.00                      | 14.70        |
| 802.11ac-VHT160<br>(MCS0)     | 114/5570               | 15.00                      | 14.68        |
| 802.11ax-HE20(MCS0)           | 100/5500               | 16.50                      | 15.12        |
|                               | 116/5580               | 16.50                      | 14.84        |
|                               | 140/5700               | 16.50                      | 15.05        |
|                               | 144/5720               | 16.00                      | 14.08        |
| 802.11ax-HE40(MCS0)           | 102/5510               | 15.00                      | 14.52        |
|                               | 110/5550               | 15.00                      | 14.68        |
|                               | 134/5670               | 15.00                      | 14.24        |
|                               | 142/5710               | 15.00                      | 14.09        |
| 802.11ax-HE80(MCS0)           | 106/5530               | 16.00                      | 15.17        |
|                               | 122/5610               | 16.00                      | 14.76        |
|                               | 138/5690               | 16.00                      | 14.87        |
| 802.11ax-HE160(MCS0)          | 114/5570               | 15.00                      | 14.68        |
| 802.11be-EHT20(MCS0)          | 100/5500               | 17.50                      | 17.05        |
|                               | 116/5580               | 17.50                      | 16.86        |
|                               | 140/5700               | 17.50                      | 16.97        |



|                                                   |          |       |       |
|---------------------------------------------------|----------|-------|-------|
|                                                   | 144/5720 | 17.50 | 15.83 |
| 802.11be-EHT40(MCS0)                              | 102/5510 | 16.00 | 15.42 |
|                                                   | 110/5550 | 16.00 | 15.48 |
|                                                   | 134/5670 | 16.00 | 15.02 |
|                                                   | 142/5710 | 16.00 | 14.96 |
| 802.11be-EHT80(MCS0)                              | 106/5530 | 17.00 | 16.23 |
|                                                   | 122/5610 | 17.00 | 15.94 |
|                                                   | 138/5690 | 17.00 | 15.91 |
| 802.11be-EHT160(MCS0)                             | 114/5570 | 15.00 | 13.99 |
| Note. Initial test configuration is 802.11a mode. |          |       |       |

| 5GHz Wi-Fi<br>(U-NII-3) Ant0 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|------------------------------|------------------------|----------------------------|--------------|
|                              |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                  | 144/5720               | 11.00                      | 9.97         |
|                              | 149/5745               | 17.00                      | 15.85        |
|                              | 157/5785               | 17.00                      | 15.94        |
|                              | 165/5825               | 17.00                      | 16.30        |
| 802.11nHT20(MCS0)            | 144/5720               | 11.00                      | 9.63         |
|                              | 149/5745               | 17.00                      | 16.00        |
|                              | 157/5785               | 17.00                      | 16.17        |
|                              | 165/5825               | 17.00                      | 16.34        |
| 802.11nHT40(MCS0)            | 144/5720               | 5.00                       | 4.24         |
|                              | 151/5755               | 17.00                      | 16.66        |
|                              | 159/5795               | 17.00                      | <b>16.83</b> |
| 802.11ac-VHT20(MCS0)         | 144/5720               | 11.00                      | 9.79         |
|                              | 149/5745               | 17.00                      | 16.06        |
|                              | 157/5785               | 17.00                      | 16.23        |
|                              | 165/5825               | 17.00                      | 16.34        |
| 802.11ac-VHT40(MCS0)         | 142/5710               | 5.00                       | 4.38         |
|                              | 151/5755               | 17.00                      | 16.64        |
|                              | 159/5795               | 17.00                      | 16.90        |
| 802.11ac-VHT80(MCS0)         | 138/5690               | 3.00                       | 1.91         |
|                              | 155/5775               | 16.00                      | 15.33        |
| 802.11ax-HE20(MCS0)          | 144/5720               | 11.00                      | 9.15         |
|                              | 149/5745               | 17.00                      | 16.03        |
|                              | 157/5785               | 17.00                      | 16.23        |
|                              | 165/5825               | 17.00                      | 16.32        |
| 802.11ax-HE40(MCS0)          | 142/5710               | 6.00                       | 5.03         |
|                              | 151/5755               | 17.00                      | 16.50        |
|                              | 159/5795               | 17.00                      | 16.82        |
| 802.11ac-VHT80(MCS0)         | 138/5690               | 3.00                       | 2.80         |
|                              | 155/5775               | 17.00                      | 16.53        |
| 802.11be-EHT20(MCS0)         | 144/5720               | 11.00                      | 10.89        |

|                                                        |          |       |       |
|--------------------------------------------------------|----------|-------|-------|
|                                                        | 149/5745 | 17.00 | 15.86 |
|                                                        | 157/5785 | 17.00 | 16.41 |
|                                                        | 165/5825 | 17.00 | 16.21 |
| 802.11be-EHT40(MCS0)                                   | 142/5710 | 6.50  | 5.91  |
|                                                        | 151/5755 | 17.00 | 16.69 |
|                                                        | 159/5795 | 17.00 | 16.57 |
| 802.11be-EHT80(MCS0)                                   | 138/5690 | 4.00  | 3.73  |
|                                                        | 155/5775 | 16.00 | 15.13 |
| Note. Initial test configuration is 802.11n HT40 mode. |          |       |       |

| 5GHz Wi-Fi<br>(U-NII-1) Ant1                           | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|--------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                        |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                                            | 36/5180                | 18.00                      | 16.99        |
|                                                        | 40/5200                | 18.00                      | 16.91        |
|                                                        | 48/5240                | 18.00                      | 16.96        |
| 802.11nHT20(MCS0)                                      | 36/5180                | 18.00                      | 17.35        |
|                                                        | 40/5200                | 18.00                      | 17.30        |
|                                                        | 48/5240                | 18.00                      | 17.32        |
| 802.11nHT40(MCS0)                                      | 38/5190                | 18.00                      | <b>16.83</b> |
|                                                        | 46/5230                | 18.00                      | 16.68        |
| 802.11ac-VHT20(MCS0)                                   | 36/5180                | 17.00                      | 16.16        |
|                                                        | 40/5200                | 17.00                      | 16.08        |
|                                                        | 48/5240                | 17.00                      | 16.28        |
| 802.11ac-VHT40(MCS0)                                   | 38/5190                | 17.00                      | 16.77        |
|                                                        | 46/5230                | 17.00                      | 16.70        |
| 802.11ac-VHT80(MCS0)                                   | 42/5210                | 16.00                      | 14.88        |
| 802.11ac-VHT160<br>(MCS0)                              | 50/5250                | 13.00                      | 11.96        |
| 802.11ax-HE20(MCS0)                                    | 36/5180                | 18.00                      | 17.32        |
|                                                        | 40/5200                | 18.00                      | 17.30        |
|                                                        | 48/5240                | 18.00                      | 17.32        |
| 802.11ax-HE40(MCS0)                                    | 38/5190                | 18.00                      | 16.75        |
|                                                        | 46/5230                | 18.00                      | 16.72        |
| 802.11ax-HE80(MCS0)                                    | 42/5210                | 17.00                      | 16.22        |
| 802.11ax-HE160(MCS0)                                   | 50/5250                | 13.00                      | 12.27        |
| 802.11be-EHT20(MCS0)                                   | 36/5180                | 18.00                      | 17.18        |
|                                                        | 40/5200                | 18.00                      | 17.20        |
|                                                        | 48/5240                | 18.00                      | 17.23        |
| 802.11be-EHT40(MCS0)                                   | 38/5190                | 18.00                      | 17.77        |
|                                                        | 46/5230                | 18.00                      | 17.62        |
| 802.11be-EHT80(MCS0)                                   | 42/5210                | 17.00                      | 16.20        |
| 802.11be-EHT160(MCS0)                                  | 50/5250                | 13.00                      | 11.53        |
| Note. Initial test configuration is 802.11n HT40 mode. |                        |                            |              |

| 5GHz Wi-Fi<br>(U-NII-2A) Ant1                           | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|---------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                         |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                                             | 52/5260                | 18.00                      | 16.58        |
|                                                         | 56/5280                | 18.00                      | 16.39        |
|                                                         | 64/5320                | 17.50                      | 15.74        |
| 802.11nHT20(MCS0)                                       | 52/5260                | 18.00                      | 16.94        |
|                                                         | 56/5280                | 18.00                      | 16.82        |
|                                                         | 64/5320                | 18.00                      | 15.98        |
| 802.11nHT40(MCS0)                                       | 54/5270                | 17.00                      | 15.24        |
|                                                         | 62/5310                | 17.00                      | 14.99        |
| 802.11ac-VHT20(MCS0)                                    | 52/5260                | 17.00                      | 15.87        |
|                                                         | 56/5280                | 17.00                      | 15.71        |
|                                                         | 64/5320                | 17.00                      | 15.11        |
| 802.11ac-VHT40(MCS0)                                    | 54/5270                | 17.00                      | 15.18        |
|                                                         | 62/5310                | 17.00                      | 14.91        |
| 802.11ac-VHT80(MCS0)                                    | 58/5290                | 16.00                      | 14.38        |
| 802.11ax-HE20(MCS0)                                     | 52/5260                | 18.00                      | 17.09        |
|                                                         | 56/5280                | 18.00                      | 16.96        |
|                                                         | 64/5320                | 18.00                      | 16.63        |
| 802.11ax-HE40(MCS0)                                     | 54/5270                | 18.00                      | 17.33        |
|                                                         | 62/5310                | 18.00                      | <b>17.47</b> |
| 802.11ax-HE80(MCS0)                                     | 58/5290                | 17.00                      | 16.20        |
| 802.11be-EHT20(MCS0)                                    | 52/5260                | 18.00                      | 16.85        |
|                                                         | 56/5280                | 18.00                      | 16.71        |
|                                                         | 64/5320                | 17.50                      | 15.90        |
| 802.11be-EHT40(MCS0)                                    | 54/5270                | 18.00                      | 17.23        |
|                                                         | 62/5310                | 18.00                      | 16.79        |
| 802.11be-EHT80(MCS0)                                    | 58/5290                | 17.00                      | 15.53        |
| Note. Initial test configuration is 802.11ax HE80 mode. |                        |                            |              |

| 5GHz Wi-Fi<br>(U-NII-2C) Ant1 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|-------------------------------|------------------------|----------------------------|--------------|
|                               |                        | Tune-up                    | Meas.        |
| 802.11a<br>(6M)               | 100/5500               | 17.50                      | 16.95        |
|                               | 116/5580               | 17.50                      | <b>17.24</b> |
|                               | 140/5700               | 17.50                      | 16.81        |
|                               | 144/5720               | 17.50                      | 15.85        |
| 802.11nHT20<br>(MCS0)         | 100/5500               | 16.50                      | 15.98        |
|                               | 116/5580               | 16.50                      | 16.16        |
|                               | 140/5700               | 16.50                      | 15.75        |
|                               | 144/5720               | 16.50                      | 14.77        |
| 802.11nHT40<br>(MCS0)         | 102/5510               | 15.00                      | 14.86        |
|                               | 110/5550               | 15.00                      | 14.51        |
|                               | 134/5670               | 15.00                      | 14.05        |
|                               | 142/5710               | 15.00                      | 14.03        |
| 802.11ac-VHT20<br>(MCS0)      | 100/5500               | 17.00                      | 15.92        |
|                               | 116/5580               | 17.00                      | 16.11        |
|                               | 140/5700               | 17.00                      | 15.77        |
|                               | 144/5720               | 16.50                      | 14.77        |
| 802.11ac-VHT40<br>(MCS0)      | 102/5510               | 15.00                      | 14.80        |
|                               | 110/5550               | 15.00                      | 14.45        |
|                               | 134/5670               | 15.00                      | 14.05        |
|                               | 142/5710               | 15.00                      | 14.09        |
| 802.11ac-VHT80<br>(MCS0)      | 106/5530               | 16.00                      | 15.08        |
|                               | 122/5610               | 16.00                      | 14.80        |
|                               | 138/5690               | 16.00                      | 14.63        |
| 802.11ac-VHT160<br>(MCS0)     | 114/5570               | 15.00                      | 13.99        |
| 802.11ax-HE20(MCS0)           | 100/5500               | 16.50                      | 15.03        |
|                               | 116/5580               | 16.50                      | 15.21        |
|                               | 140/5700               | 16.50                      | 14.92        |
|                               | 144/5720               | 16.00                      | 13.80        |
| 802.11ax-HE40(MCS0)           | 102/5510               | 15.00                      | 14.77        |
|                               | 110/5550               | 15.00                      | 14.41        |
|                               | 134/5670               | 15.00                      | 14.05        |
|                               | 142/5710               | 15.00                      | 13.95        |
| 802.11ax-HE80(MCS0)           | 106/5530               | 16.00                      | 15.18        |
|                               | 122/5610               | 16.00                      | 14.93        |
|                               | 138/5690               | 16.00                      | 14.76        |
| 802.11ax-HE160(MCS0)          | 114/5570               | 15.00                      | 14.14        |
| 802.11be-EHT20(MCS0)          | 100/5500               | 17.50                      | 16.89        |
|                               | 116/5580               | 17.50                      | 17.23        |
|                               | 140/5700               | 17.50                      | 16.78        |

|                                                   |          |       |       |
|---------------------------------------------------|----------|-------|-------|
|                                                   | 144/5720 | 17.50 | 15.61 |
| 802.11be-EHT40(MCS0)                              | 102/5510 | 16.00 | 15.63 |
|                                                   | 110/5550 | 16.00 | 15.32 |
|                                                   | 134/5670 | 16.00 | 14.90 |
|                                                   | 142/5710 | 16.00 | 14.84 |
| 802.11be-EHT80(MCS0)                              | 106/5530 | 17.00 | 16.19 |
|                                                   | 122/5610 | 17.00 | 15.91 |
|                                                   | 138/5690 | 17.00 | 15.56 |
| 802.11be-EHT160(MCS0)                             | 114/5570 | 15.00 | 13.56 |
| Note. Initial test configuration is 802.11a mode. |          |       |       |

| 5GHz Wi-Fi<br>(U-NII-3) Ant1 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|------------------------------|------------------------|----------------------------|--------------|
|                              |                        | Tune-up                    | Meas.        |
| 802.11a(6M)                  | 144/5720               | 11.00                      | 9.96         |
|                              | 149/5745               | 18.00                      | 16.81        |
|                              | 157/5785               | 18.00                      | 17.23        |
|                              | 165/5825               | 18.00                      | 17.46        |
| 802.11nHT20(MCS0)            | 144/5720               | 11.00                      | 9.44         |
|                              | 149/5745               | 18.00                      | 16.87        |
|                              | 157/5785               | 18.00                      | 17.21        |
|                              | 165/5825               | 18.00                      | 17.39        |
| 802.11nHT40(MCS0)            | 144/5720               | 5.00                       | 4.35         |
|                              | 151/5755               | 18.00                      | 17.18        |
|                              | 159/5795               | 18.00                      | <b>17.56</b> |
| 802.11ac-VHT20(MCS0)         | 144/5720               | 11.00                      | 9.46         |
|                              | 149/5745               | 17.00                      | 15.90        |
|                              | 157/5785               | 17.00                      | 16.19        |
|                              | 165/5825               | 17.00                      | 16.35        |
| 802.11ac-VHT40(MCS0)         | 142/5710               | 5.00                       | 4.34         |
|                              | 151/5755               | 17.00                      | 16.55        |
|                              | 159/5795               | 17.00                      | 16.92        |
| 802.11ac-VHT80(MCS0)         | 138/5690               | 3.00                       | 1.77         |
|                              | 155/5775               | 16.00                      | 15.33        |
| 802.11ax-HE20(MCS0)          | 144/5720               | 11.00                      | 8.92         |
|                              | 149/5745               | 18.00                      | 16.98        |
|                              | 157/5785               | 18.00                      | 17.27        |
|                              | 165/5825               | 18.00                      | 17.40        |
| 802.11ax-HE40(MCS0)          | 142/5710               | 6.00                       | 4.95         |
|                              | 151/5755               | 18.00                      | 17.57        |
|                              | 159/5795               | 18.00                      | 17.90        |
| 802.11ac-VHT80(MCS0)         | 138/5690               | 3.00                       | 2.58         |
|                              | 155/5775               | 17.00                      | 16.51        |
| 802.11be-EHT20(MCS0)         | 144/5720               | 11.00                      | 10.79        |

|                                                        |          |       |       |
|--------------------------------------------------------|----------|-------|-------|
|                                                        | 149/5745 | 18.00 | 16.80 |
|                                                        | 157/5785 | 18.00 | 17.12 |
|                                                        | 165/5825 | 18.00 | 17.40 |
| 802.11be-EHT40(MCS0)                                   | 142/5710 | 6.50  | 5.90  |
|                                                        | 151/5755 | 18.00 | 17.43 |
|                                                        | 159/5795 | 18.00 | 17.81 |
| 802.11be-EHT80(MCS0)                                   | 138/5690 | 17.00 | 16.50 |
|                                                        | 155/5775 | 17.00 | 16.50 |
| Note. Initial test configuration is 802.11n HT40 mode. |          |       |       |

| 5GHz Wi-Fi<br>U-NII-1                             | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |       |       |
|---------------------------------------------------|------------------------|----------------------------|--------------|-------|-------|
|                                                   |                        | Tune-up                    | Meas.        | Ant0  | Ant1  |
| 802.11a(6M)                                       | 36/5180                | 21.00                      | <b>20.12</b> | 17.23 | 16.99 |
|                                                   | 40/5200                | 21.00                      | 20.12        | 17.37 | 16.91 |
|                                                   | 48/5240                | 21.00                      | 19.88        | 16.85 | 16.96 |
| 802.11nHT20(MCS0)                                 | 36/5180                | 21.00                      | 20.17        | 17.23 | 17.35 |
|                                                   | 40/5200                | 21.00                      | 20.19        | 17.37 | 17.30 |
|                                                   | 48/5240                | 21.00                      | 19.91        | 16.85 | 17.32 |
| 802.11nHT40(MCS0)                                 | 38/5190                | 21.00                      | 19.76        | 16.80 | 16.83 |
|                                                   | 46/5230                | 21.00                      | 19.49        | 16.43 | 16.68 |
| 802.11ac-VHT20(MCS0)                              | 36/5180                | 20.00                      | 19.05        | 16.18 | 16.16 |
|                                                   | 40/5200                | 20.00                      | 19.03        | 16.30 | 16.08 |
|                                                   | 48/5240                | 20.00                      | 18.85        | 15.80 | 16.28 |
| 802.11ac-VHT40(MCS0)                              | 38/5190                | 20.00                      | 19.72        | 16.97 | 16.77 |
|                                                   | 46/5230                | 20.00                      | 19.50        | 16.51 | 16.70 |
| 802.11ac-VHT80(MCS0)                              | 42/5210                | 19.00                      | 17.88        | 15.01 | 14.88 |
| 802.11ac-VHT160 (MCS0)                            | 50/5250                | 13.00                      | 11.82        | 11.46 | 11.96 |
| 802.11ax-HE20(MCS0)                               | 36/5180                | 21.00                      | 20.13        | 17.31 | 17.32 |
|                                                   | 40/5200                | 21.00                      | 20.15        | 17.53 | 17.30 |
|                                                   | 48/5240                | 21.00                      | 19.99        | 16.98 | 17.32 |
| 802.11ax-HE40(MCS0)                               | 38/5190                | 21.00                      | 19.74        | 16.90 | 16.75 |
|                                                   | 46/5230                | 21.00                      | 19.48        | 16.46 | 16.72 |
| 802.11ax-HE80(MCS0)                               | 42/5210                | 20.00                      | 19.11        | 16.29 | 16.22 |
| 802.11ax-HE160(MCS0)                              | 50/5250                | 16.00                      | 14.89        | 11.75 | 12.27 |
| 802.11be-EHT20(MCS0)                              | 36/5180                | 21.00                      | 20.09        | 17.38 | 17.18 |
|                                                   | 40/5200                | 21.00                      | 20.12        | 17.49 | 17.20 |
|                                                   | 48/5240                | 21.00                      | 20.00        | 17.04 | 17.23 |
| 802.11be-EHT40(MCS0)                              | 38/5190                | 21.00                      | 20.80        | 17.85 | 17.77 |
|                                                   | 46/5230                | 21.00                      | 20.50        | 17.43 | 17.62 |
| 802.11be-EHT80(MCS0)                              | 42/5210                | 20.00                      | 19.20        | 16.37 | 16.20 |
| 802.11be-EHT160(MCS0)                             | 50/5250                | 16.00                      | 14.26        | 11.31 | 11.53 |
| Note. Initial test configuration is 802.11a mode. |                        |                            |              |       |       |

| 5GHz Wi-Fi<br>(U-NII-2A) | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |       |       |       |
|--------------------------|------------------------|----------------------------|-------|-------|-------|
|                          |                        | Tune-up                    | Meas. | Ant0  | Ant1  |
| 802.11a(6M)              | 52/5260                | 21.00                      | 19.68 | 16.63 | 16.58 |
|                          | 56/5280                | 21.00                      | 19.57 | 16.54 | 16.39 |
|                          | 64/5320                | 21.00                      | 19.15 | 16.36 | 15.74 |
| 802.11nHT20(MCS0)        | 52/5260                | 21.00                      | 19.71 | 16.89 | 16.94 |
|                          | 56/5280                | 21.00                      | 19.59 | 16.75 | 16.82 |
|                          | 64/5320                | 21.00                      | 19.15 | 16.62 | 15.98 |
| 802.11nHT40(MCS0)        | 54/5270                | 20.00                      | 18.24 | 15.19 | 15.24 |
|                          | 62/5310                | 20.00                      | 18.03 | 15.33 | 14.99 |
| 802.11ac-VHT20(MCS0)     | 52/5260                | 20.00                      | 18.67 | 15.87 | 15.87 |
|                          | 56/5280                | 20.00                      | 18.60 | 15.82 | 15.71 |
|                          | 64/5320                | 20.00                      | 18.21 | 15.83 | 15.11 |
| 802.11ac-VHT40(MCS0)     | 54/5270                | 20.00                      | 18.20 | 15.37 | 15.18 |
|                          | 62/5310                | 20.00                      | 18.04 | 15.49 | 14.91 |
| 802.11ac-VHT80(MCS0)     | 58/5290                | 19.00                      | 17.26 | 14.27 | 14.38 |
| 802.11ax-HE20(MCS0)      | 52/5260                | 21.00                      | 19.77 | 17.04 | 17.09 |
|                          | 56/5280                | 21.00                      | 19.66 | 16.94 | 16.96 |
|                          | 64/5320                | 21.00                      | 19.18 | 16.77 | 16.63 |
| 802.11ax-HE40(MCS0)      | 54/5270                | 21.00                      | 19.31 | 16.70 | 17.33 |
|                          | 62/5310                | 21.00                      | 19.15 | 16.61 | 17.47 |
| 802.11ax-HE80(MCS0)      | 58/5290                | 20.00                      | 18.43 | 15.66 | 16.20 |
| 802.11be-EHT20(MCS0)     | 52/5260                | 21.00                      | 19.81 | 16.92 | 16.85 |
|                          | 56/5280                | 21.00                      | 19.64 | 16.92 | 16.71 |
|                          | 64/5320                | 21.00                      | 19.13 | 16.74 | 15.90 |
| 802.11be-EHT40(MCS0)     | 54/5270                | 21.00                      | 20.35 | 17.40 | 17.23 |
|                          | 62/5310                | 21.00                      | 20.17 | 17.48 | 16.79 |
| 802.11be-EHT80(MCS0)     | 58/5290                | 20.00                      | 18.51 | 15.69 | 15.53 |

| 5GHz Wi-Fi<br>U-NII-2C | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |       |       |       |
|------------------------|------------------------|----------------------------|-------|-------|-------|
|                        |                        | Tune-up                    | Meas. | Ant0  | Ant1  |
| 802.11a<br>(6M)        | 100/5500               | 21.00                      | 19.81 | 16.85 | 16.95 |
|                        | 116/5580               | 21.00                      | 19.82 | 16.64 | 17.24 |
|                        | 140/5700               | 21.00                      | 19.63 | 16.82 | 16.81 |
|                        | 144/5720               | 20.50                      | 18.67 | 15.91 | 15.85 |
| 802.11nHT20<br>(MCS0)  | 100/5500               | 20.00                      | 18.81 | 15.96 | 15.98 |
|                        | 116/5580               | 20.00                      | 18.84 | 15.76 | 16.16 |
|                        | 140/5700               | 20.00                      | 18.66 | 15.93 | 15.75 |
|                        | 144/5720               | 19.50                      | 17.66 | 14.98 | 14.77 |
| 802.11nHT40<br>(MCS0)  | 102/5510               | 19.00                      | 17.53 | 14.41 | 14.86 |
|                        | 110/5550               | 19.00                      | 17.49 | 14.55 | 14.51 |
|                        | 134/5670               | 19.00                      | 17.01 | 14.13 | 14.05 |
|                        | 142/5710               | 18.50                      | 16.92 | 14.05 | 14.03 |

|                          |          |       |       |       |       |
|--------------------------|----------|-------|-------|-------|-------|
| 802.11ac-VHT20<br>(MCS0) | 100/5500 | 20.00 | 18.83 | 15.98 | 15.92 |
|                          | 116/5580 | 20.00 | 18.84 | 15.91 | 16.11 |
|                          | 140/5700 | 20.00 | 18.67 | 16.03 | 15.77 |
|                          | 144/5720 | 19.50 | 17.67 | 15.14 | 14.77 |
| 802.11ac-VHT40<br>(MCS0) | 102/5510 | 19.00 | 17.54 | 14.45 | 14.80 |
|                          | 110/5550 | 19.00 | 17.47 | 14.64 | 14.45 |
|                          | 134/5670 | 19.00 | 17.01 | 14.22 | 14.05 |
|                          | 142/5710 | 18.50 | 16.91 | 14.12 | 14.09 |
| 802.11ac-VHT80<br>(MCS0) | 106/5530 | 19.00 | 17.91 | 14.98 | 15.08 |
|                          | 122/5610 | 19.00 | 17.56 | 14.53 | 14.80 |
|                          | 138/5690 | 19.00 | 17.56 | 14.70 | 14.63 |
| 802.11ac-VHT160 (MCS0)   | 114/5570 | 18.00 | 17.08 | 14.68 | 13.99 |
| 802.11ax-HE20(MCS0)      | 100/5500 | 19.50 | 17.92 | 15.12 | 15.03 |
|                          | 116/5580 | 19.50 | 17.91 | 14.84 | 15.21 |
|                          | 140/5700 | 19.50 | 17.84 | 15.05 | 14.92 |
|                          | 144/5720 | 18.50 | 16.63 | 14.08 | 13.80 |
| 802.11ax-HE40(MCS0)      | 102/5510 | 18.50 | 17.51 | 14.52 | 14.77 |
|                          | 110/5550 | 18.50 | 17.43 | 14.68 | 14.41 |
|                          | 134/5670 | 18.50 | 17.03 | 14.24 | 14.05 |
|                          | 142/5710 | 18.50 | 16.80 | 14.09 | 13.95 |
| 802.11ax-HE80(MCS0)      | 106/5530 | 19.50 | 18.05 | 15.17 | 15.18 |
|                          | 122/5610 | 19.50 | 17.68 | 14.76 | 14.93 |
|                          | 138/5690 | 19.50 | 17.60 | 14.87 | 14.76 |
| 802.11ax-HE160(MCS0)     | 114/5570 | 18.00 | 17.35 | 14.68 | 14.14 |
| 802.11be-EHT20(MCS0)     | 100/5500 | 21.00 | 19.78 | 17.05 | 16.89 |
|                          | 116/5580 | 21.00 | 19.78 | 16.86 | 17.23 |
|                          | 140/5700 | 21.00 | 19.78 | 16.97 | 16.78 |
|                          | 144/5720 | 21.00 | 19.78 | 15.83 | 15.61 |
| 802.11be-EHT40(MCS0)     | 102/5510 | 21.00 | 19.90 | 15.42 | 15.63 |
|                          | 110/5550 | 21.00 | 19.90 | 15.48 | 15.32 |
|                          | 134/5670 | 21.00 | 19.90 | 15.02 | 14.90 |
|                          | 142/5710 | 21.00 | 19.90 | 14.96 | 14.84 |
| 802.11be-EHT80(MCS0)     | 106/5530 | 20.00 | 19.68 | 16.23 | 16.19 |
|                          | 122/5610 | 20.00 | 19.68 | 15.94 | 15.91 |
|                          | 138/5690 | 20.00 | 19.68 | 15.91 | 15.56 |
| 802.11be-EHT160(MCS0)    | 114/5570 | 19.50 | 18.48 | 13.99 | 13.56 |

| 5GHz Wi-Fi<br>U-NII-3 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |       |       |       |
|-----------------------|------------------------|----------------------------|-------|-------|-------|
|                       |                        | Tune-up                    | Meas. | Ant0  | Ant1  |
| 802.11a(6M)           | 144/5720               | 14.00                      | 12.73 | 9.97  | 9.96  |
|                       | 149/5745               | 21.00                      | 19.71 | 15.85 | 16.81 |
|                       | 157/5785               | 21.00                      | 20.07 | 15.94 | 17.23 |
|                       | 165/5825               | 21.00                      | 20.16 | 16.30 | 17.46 |



|                      |          |       |       |       |       |
|----------------------|----------|-------|-------|-------|-------|
| 802.11nHT20(MCS0)    | 144/5720 | 14.00 | 12.24 | 9.63  | 9.44  |
|                      | 149/5745 | 21.00 | 19.71 | 16.00 | 16.87 |
|                      | 157/5785 | 21.00 | 20.09 | 16.17 | 17.21 |
|                      | 165/5825 | 21.00 | 20.15 | 16.34 | 17.39 |
| 802.11nHT40(MCS0)    | 144/5720 | 9.00  | 7.18  | 4.24  | 4.35  |
|                      | 151/5755 | 21.00 | 20.54 | 16.66 | 17.18 |
|                      | 159/5795 | 21.00 | 20.79 | 16.83 | 17.56 |
| 802.11ac-VHT20(MCS0) | 144/5720 | 14.00 | 12.27 | 9.79  | 9.46  |
|                      | 149/5745 | 20.00 | 18.78 | 16.06 | 15.90 |
|                      | 157/5785 | 20.00 | 19.09 | 16.23 | 16.19 |
|                      | 165/5825 | 20.00 | 19.19 | 16.34 | 16.35 |
| 802.11ac-VHT40(MCS0) | 142/5710 | 9.00  | 7.17  | 4.38  | 4.34  |
|                      | 151/5755 | 20.00 | 19.50 | 16.64 | 16.55 |
|                      | 159/5795 | 20.00 | 19.77 | 16.90 | 16.92 |
| 802.11ac-VHT80(MCS0) | 138/5690 | 3.00  | 1.87  | 1.91  | 1.77  |
|                      | 155/5775 | 19.00 | 18.24 | 15.33 | 15.33 |
| 802.11ax-HE20(MCS0)  | 144/5720 | 13.00 | 11.71 | 9.15  | 8.92  |
|                      | 149/5745 | 21.00 | 19.77 | 16.03 | 16.98 |
|                      | 157/5785 | 21.00 | 20.06 | 16.23 | 17.27 |
|                      | 165/5825 | 21.00 | 20.19 | 16.32 | 17.40 |
| 802.11ax-HE40(MCS0)  | 142/5710 | 9.00  | 7.89  | 5.03  | 4.95  |
|                      | 151/5755 | 21.00 | 20.44 | 16.50 | 17.57 |
|                      | 159/5795 | 20.00 | 18.07 | 16.82 | 17.90 |
| 802.11ac-VHT80(MCS0) | 138/5690 | 7.00  | 5.60  | 2.80  | 2.58  |
|                      | 155/5775 | 20.00 | 19.35 | 16.53 | 16.51 |
| 802.11be-EHT20(MCS0) | 144/5720 | 15.00 | 13.53 | 10.89 | 10.79 |
|                      | 149/5745 | 21.00 | 19.76 | 15.86 | 16.80 |
|                      | 157/5785 | 21.00 | 20.06 | 16.41 | 17.12 |
|                      | 165/5825 | 19.00 | 18.11 | 16.21 | 17.40 |
| 802.11be-EHT40(MCS0) | 142/5710 | 18.00 | 17.39 | 5.91  | 5.90  |
|                      | 151/5755 | 21.00 | 20.30 | 16.69 | 17.43 |
|                      | 159/5795 | 21.00 | 20.51 | 16.57 | 17.81 |
| 802.11be-EHT80(MCS0) | 138/5690 | 18.00 | 17.30 | 3.73  | 16.50 |
|                      | 155/5775 | 18.00 | 16.74 | 15.13 | 16.50 |

### 9.1.4 Wi-Fi 6GHz Mode

| 6GHz Wi-Fi<br>(U-NII-5) Ant0                              | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|-----------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                           |                        | Tune-up                    | Meas.        |
| 802.11ax-HE20(MCS0)                                       | 1/5955                 | 8.00                       | 6.39         |
|                                                           | 45/6175                | 8.00                       | 7.14         |
|                                                           | 93/6415                | 8.00                       | 7.12         |
| 802.11ax-HE40(MCS0)                                       | 3/5965                 | 11.50                      | 10.53        |
|                                                           | 43/6165                | 11.50                      | 10.30        |
|                                                           | 91/6405                | 11.50                      | 10.41        |
| 802.11ax-HE80(MCS0)                                       | 7/5985                 | 11.50                      | 10.71        |
|                                                           | 39/6145                | 11.50                      | 10.28        |
|                                                           | 87/6385                | 11.50                      | 10.41        |
| 802.11ax-HE160(MCS0)                                      | 15/6025                | 11.50                      | 11.20        |
|                                                           | 47/6185                | 11.50                      | 11.29        |
|                                                           | 79/6345                | 11.50                      | 11.04        |
| 802.11be-EHT20(MCS0)                                      | 1/5955                 | 8.00                       | 6.40         |
|                                                           | 45/6175                | 8.00                       | 7.17         |
|                                                           | 93/6415                | 8.00                       | 7.14         |
| 802.11be-EHT40(MCS0)                                      | 3/5965                 | 11.50                      | 10.36        |
|                                                           | 43/6165                | 11.50                      | 10.12        |
|                                                           | 91/6405                | 11.50                      | 10.17        |
| 802.11be-EHT80(MCS0)                                      | 7/5985                 | 11.50                      | 10.66        |
|                                                           | 39/6145                | 11.50                      | 10.24        |
|                                                           | 87/6385                | 11.50                      | 10.34        |
| 802.11be-EHT160(MCS0)                                     | 15/6025                | 11.50                      | 10.53        |
|                                                           | 47/6185                | 11.50                      | 10.69        |
|                                                           | 79/6345                | 11.50                      | 10.32        |
| 802.11be-EHT320(MCS0)                                     | 63/6265                | 11.50                      | <b>11.19</b> |
| Note. Initial test configuration is 802.11be-EHT160 mode. |                        |                            |              |

| 6GHz Wi-Fi<br>(U-NII-6)Ant0 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |             |
|-----------------------------|------------------------|----------------------------|-------------|
|                             |                        | Tune-up                    | Meas.       |
| 802.11ax-HE20(MCS0)         | 97/6435                | 8.00                       | 7.21        |
|                             | 105/6475               | 8.00                       | 6.49        |
|                             | 113/6515               | 8.00                       | 7.13        |
| 802.11ax-HE40(MCS0)         | 99/6445                | 9.00                       | 8.26        |
|                             | 107/6485               | 9.00                       | 8.49        |
|                             | 115/6525               | 9.00                       | 7.88        |
| 802.11ax-HE80(MCS0)         | 103/6465               | 10.00                      | 9.26        |
|                             | 119/6545               | 10.00                      | 8.84        |
| 802.11ax-HE160(MCS0)        | 111/6505               | 10.00                      | <b>9.80</b> |
| 802.11be-EHT20(MCS0)        | 97/6435                | 8.00                       | 7.22        |

|                                                          |          |       |      |
|----------------------------------------------------------|----------|-------|------|
|                                                          | 105/6475 | 8.00  | 6.53 |
|                                                          | 113/6515 | 8.00  | 7.15 |
| 802.11be-EHT40(MCS0)                                     | 99/6445  | 9.00  | 8.02 |
|                                                          | 107/6485 | 9.00  | 8.09 |
|                                                          | 115/6525 | 9.00  | 8.18 |
| 802.11be-EHT80(MCS0)                                     | 103/6465 | 10.00 | 9.47 |
|                                                          | 119/6545 | 10.00 | 8.94 |
| 802.11be-EHT160(MCS0)                                    | 111/6505 | 10.00 | 9.68 |
| Note. Initial test configuration is 802.11ax-HE160 mode. |          |       |      |

| 6GHz Wi-Fi<br>(U-NII-7)Ant0                              | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|----------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                          |                        | Tune-up                    | Meas.        |
| 802.11ax-HE20(MCS0)                                      | 117/6535               | 8.00                       | 6.81         |
|                                                          | 149/6695               | 8.00                       | 7.39         |
|                                                          | 185/6875               | 8.00                       | 7.77         |
| 802.11ax-HE40(MCS0)                                      | 123/6565               | 9.50                       | 8.57         |
|                                                          | 147/6685               | 9.50                       | 8.90         |
|                                                          | 179/6845               | 9.50                       | 8.39         |
|                                                          | 187/6885               | 9.50                       | 8.82         |
| 802.11ax-HE80(MCS0)                                      | 135/6625               | 9.50                       | 8.45         |
|                                                          | 151/6705               | 9.50                       | 8.76         |
|                                                          | 183/6865               | 9.50                       | 8.82         |
| 802.11ax-HE160(MCS0)                                     | 143/6665               | 10.50                      | <b>10.16</b> |
|                                                          | 175/6825               | 10.50                      | 9.89         |
| 802.11be-EHT20(MCS0)                                     | 117/6535               | 8.00                       | 6.80         |
|                                                          | 149/6695               | 8.00                       | 7.39         |
|                                                          | 185/6875               | 8.00                       | 7.80         |
| 802.11be-EHT40(MCS0)                                     | 123/6565               | 9.50                       | 8.42         |
|                                                          | 147/6685               | 9.50                       | 8.92         |
|                                                          | 179/6845               | 9.50                       | 8.38         |
|                                                          | 187/6885               | 9.50                       | 8.53         |
| 802.11be-EHT80(MCS0)                                     | 135/6625               | 9.50                       | 8.53         |
|                                                          | 151/6705               | 9.50                       | 8.74         |
|                                                          | 183/6865               | 9.50                       | 8.81         |
| 802.11be-EHT160(MCS0)                                    | 143/6665               | 10.00                      | 9.44         |
|                                                          | 175/6825               | 10.00                      | 9.27         |
| 802.11be-EHT320(MCS0)                                    | 127/6585               | 10.00                      | 9.06         |
| Note. Initial test configuration is 802.11ax-HE160 mode. |                        |                            |              |

| 6GHz Wi-Fi<br>(U-NII-8)Ant0                              | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|----------------------------------------------------------|------------------------|----------------------------|--------------|
|                                                          |                        | Tune-up                    | Meas.        |
| 802.11ax-HE20(MCS0)                                      | 189/6895               | 8.00                       | 7.59         |
|                                                          | 209/6995               | 8.00                       | 7.45         |
|                                                          | 229/7095               | 8.00                       | 7.81         |
| 802.11ax-HE40(MCS0)                                      | 203/6965               | 9.50                       | 8.62         |
|                                                          | 227/7085               | 9.50                       | 9.08         |
| 802.11ax-HE80(MCS0)                                      | 199/6945               | 9.50                       | 8.58         |
|                                                          | 215/7025               | 9.50                       | 8.29         |
| 802.11ax-HE160(MCS0)                                     | 207/6985               | 10.50                      | <b>10.03</b> |
| 802.11be-EHT20(MCS0)                                     | 189/6895               | 8.00                       | 7.64         |
|                                                          | 209/6995               | 8.00                       | 7.46         |
|                                                          | 229/7095               | 8.00                       | 7.65         |
| 802.11be-EHT40(MCS0)                                     | 203/6965               | 9.50                       | 8.31         |
|                                                          | 227/7085               | 9.50                       | 8.90         |
| 802.11be-EHT80(MCS0)                                     | 199/6945               | 9.50                       | 8.72         |
|                                                          | 215/7025               | 9.50                       | 8.67         |
| 802.11be-EHT160(MCS0)                                    | 207/6985               | 10.50                      | 9.41         |
| 802.11be-EHT320(MCS0)                                    | 191/6905               | 10.00                      | 9.57         |
| Note. Initial test configuration is 802.11ax-HE160 mode. |                        |                            |              |

| 6GHz Wi-Fi<br>(U-NII-5) Ant1 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |
|------------------------------|------------------------|----------------------------|--------------|
|                              |                        | Tune-up                    | Meas.        |
| 802.11ax-HE20(MCS0)          | 1/5955                 | 8.00                       | 6.25         |
|                              | 45/6175                | 8.00                       | 5.79         |
|                              | 93/6415                | 8.00                       | 6.37         |
| 802.11ax-HE40(MCS0)          | 3/5965                 | 11.50                      | 10.50        |
|                              | 43/6165                | 11.50                      | 9.87         |
|                              | 91/6405                | 11.50                      | 10.27        |
| 802.11ax-HE80(MCS0)          | 7/5985                 | 11.50                      | 10.52        |
|                              | 39/6145                | 11.50                      | 9.79         |
|                              | 87/6385                | 11.50                      | 10.10        |
| 802.11ax-HE160(MCS0)         | 15/6025                | 11.50                      | 11.13        |
|                              | 47/6185                | 11.50                      | 10.54        |
|                              | 79/6345                | 11.50                      | <b>11.15</b> |
| 802.11be-EHT20(MCS0)         | 1/5955                 | 8.00                       | 6.32         |
|                              | 45/6175                | 8.00                       | 5.87         |
|                              | 93/6415                | 8.00                       | 6.43         |
| 802.11be-EHT40(MCS0)         | 3/5965                 | 11.50                      | 10.24        |
|                              | 43/6165                | 11.50                      | 9.66         |
|                              | 91/6405                | 11.50                      | 10.07        |
| 802.11be-EHT80(MCS0)         | 7/5985                 | 11.50                      | 10.56        |

|                                                          |         |       |       |
|----------------------------------------------------------|---------|-------|-------|
|                                                          | 39/6145 | 11.50 | 9.58  |
|                                                          | 87/6385 | 11.50 | 10.06 |
| 802.11be-EHT160(MCS0)                                    | 15/6025 | 11.50 | 10.23 |
|                                                          | 47/6185 | 11.50 | 10.04 |
|                                                          | 79/6345 | 11.50 | 10.42 |
| 802.11be-EHT320(MCS0)                                    | 63/6265 | 11.00 | 10.82 |
| Note. Initial test configuration is 802.11ax-HE160 mode. |         |       |       |

| 6GHz Wi-Fi<br>(U-NII-6)Ant1                              | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |             |
|----------------------------------------------------------|------------------------|----------------------------|-------------|
|                                                          |                        | Tune-up                    | Meas.       |
| 802.11ax-HE20(MCS0)                                      | 97/6435                | 8.00                       | 6.64        |
|                                                          | 105/6475               | 8.00                       | 6.40        |
|                                                          | 113/6515               | 8.00                       | 6.41        |
| 802.11ax-HE40(MCS0)                                      | 99/6445                | 9.00                       | 7.96        |
|                                                          | 107/6485               | 9.00                       | 7.98        |
|                                                          | 115/6525               | 9.00                       | 8.31        |
| 802.11ax-HE80(MCS0)                                      | 103/6465               | 10.00                      | 8.61        |
|                                                          | 119/6545               | 10.00                      | 8.89        |
| 802.11ax-HE160(MCS0)                                     | 111/6505               | 10.00                      | <b>9.73</b> |
| 802.11be-EHT20(MCS0)                                     | 97/6435                | 8.00                       | 6.68        |
|                                                          | 105/6475               | 8.00                       | 6.43        |
|                                                          | 113/6515               | 8.00                       | 6.44        |
| 802.11be-EHT40(MCS0)                                     | 99/6445                | 9.00                       | 7.61        |
|                                                          | 107/6485               | 9.00                       | 7.59        |
|                                                          | 115/6525               | 9.00                       | 8.06        |
| 802.11be-EHT80(MCS0)                                     | 103/6465               | 10.00                      | 8.92        |
|                                                          | 119/6545               | 10.00                      | 9.07        |
| 802.11be-EHT160(MCS0)                                    | 111/6505               | 10.00                      | 9.42        |
| Note. Initial test configuration is 802.11ax-HE160 mode. |                        |                            |             |

| 6GHz Wi-Fi<br>(U-NII-7)Ant1 | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |       |
|-----------------------------|------------------------|----------------------------|-------|
|                             |                        | Tune-up                    | Meas. |
| 802.11ax-HE20(MCS0)         | 117/6535               | 8.00                       | 6.33  |
|                             | 149/6695               | 8.00                       | 6.33  |
|                             | 185/6875               | 8.00                       | 6.47  |
| 802.11ax-HE40(MCS0)         | 123/6565               | 9.50                       | 8.36  |
|                             | 147/6685               | 9.50                       | 8.56  |
|                             | 179/6845               | 9.50                       | 8.38  |
|                             | 187/6885               | 9.50                       | 8.16  |
| 802.11ax-HE80(MCS0)         | 135/6625               | 9.50                       | 8.34  |
|                             | 151/6705               | 9.50                       | 8.15  |
|                             | 183/6865               | 9.50                       | 8.11  |
| 802.11ax-HE160(MCS0)        | 143/6665               | 10.00                      | 9.26  |

|                                                          |          |       |             |
|----------------------------------------------------------|----------|-------|-------------|
|                                                          | 175/6825 | 10.00 | <b>9.42</b> |
| 802.11be-EHT20(MCS0)                                     | 117/6535 | 8.00  | 6.36        |
|                                                          | 149/6695 | 8.00  | 6.41        |
|                                                          | 185/6875 | 8.00  | 6.50        |
| 802.11be-EHT40(MCS0)                                     | 123/6565 | 9.50  | 8.21        |
|                                                          | 147/6685 | 9.50  | 8.39        |
|                                                          | 179/6845 | 9.50  | 8.17        |
|                                                          | 187/6885 | 9.50  | 7.85        |
| 802.11be-EHT80(MCS0)                                     | 135/6625 | 9.50  | 8.38        |
|                                                          | 151/6705 | 9.50  | 8.18        |
|                                                          | 183/6865 | 9.50  | 7.97        |
| 802.11be-EHT160(MCS0)                                    | 143/6665 | 10.00 | 8.58        |
|                                                          | 175/6825 | 10.00 | 8.72        |
| 802.11be-EHT320(MCS0)                                    | 127/6585 | 9.50  | 8.95        |
| Note. Initial test configuration is 802.11ax-HE160 mode. |          |       |             |

| 6GHz Wi-Fi<br>(U-NII-8)Ant1                              | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |             |
|----------------------------------------------------------|------------------------|----------------------------|-------------|
|                                                          |                        | Tune-up                    | Meas.       |
| 802.11ax-HE20(MCS0)                                      | 189/6895               | 8.00                       | 6.34        |
|                                                          | 209/6995               | 8.00                       | 6.65        |
|                                                          | 229/7095               | 8.00                       | 6.92        |
| 802.11ax-HE40(MCS0)                                      | 203/6965               | 9.50                       | 8.13        |
|                                                          | 227/7085               | 9.50                       | 8.09        |
| 802.11ax-HE80(MCS0)                                      | 199/6945               | 9.50                       | 8.41        |
|                                                          | 215/7025               | 9.50                       | 8.08        |
| 802.11ax-HE160(MCS0)                                     | 207/6985               | 10.00                      | <b>9.44</b> |
| 802.11be-EHT20(MCS0)                                     | 189/6895               | 8.00                       | 6.34        |
|                                                          | 209/6995               | 8.00                       | 6.65        |
|                                                          | 229/7095               | 8.00                       | 6.84        |
| 802.11be-EHT40(MCS0)                                     | 203/6965               | 9.50                       | 7.95        |
|                                                          | 227/7085               | 9.50                       | 7.77        |
| 802.11be-EHT80(MCS0)                                     | 199/6945               | 9.50                       | 8.34        |
|                                                          | 215/7025               | 9.50                       | 8.06        |
| 802.11be-EHT160(MCS0)                                    | 207/6985               | 10.00                      | 9.06        |
| 802.11be-EHT320(MCS0)                                    | 191/6905               | 9.50                       | 8.85        |
| Note. Initial test configuration is 802.11ax-HE160 mode. |                        |                            |             |

| 6GHz Wi-Fi<br>U-NII-5 MIMO                                | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |       |       |
|-----------------------------------------------------------|------------------------|----------------------------|--------------|-------|-------|
|                                                           |                        | Tune-up                    | Meas.        | Ant0  | Ant1  |
| 802.11ax-HE20<br>(MCS0)                                   | 1/5955                 | 4.00                       | 3.09         | 0.16  | 0.00  |
|                                                           | 45/6175                | 4.00                       | 3.35         | 0.02  | 0.64  |
|                                                           | 93/6415                | 4.00                       | 3.58         | 0.92  | 0.19  |
| 802.11ax-HE40<br>(MCS0)                                   | 3/5965                 | 8.00                       | 6.58         | 3.63  | 3.50  |
|                                                           | 43/6165                | 8.00                       | 6.54         | 4.07  | 2.91  |
|                                                           | 91/6405                | 8.00                       | 7.18         | 4.58  | 3.72  |
| 802.11ax-HE80<br>(MCS0)                                   | 7/5985                 | 11.00                      | 9.65         | 6.89  | 6.38  |
|                                                           | 39/6145                | 11.00                      | 9.51         | 7.14  | 5.75  |
|                                                           | 87/6385                | 11.00                      | 10.08        | 7.43  | 6.67  |
| 802.11ax-HE160<br>(MCS0)                                  | 15/6025                | 13.00                      | 11.98        | 9.13  | 8.80  |
|                                                           | 47/6185                | 13.00                      | 11.99        | 9.35  | 8.57  |
|                                                           | 79/6345                | 13.00                      | 12.63        | 9.72  | 9.52  |
| 802.11be-EHT20<br>(MCS0)                                  | 1/5955                 | 4.00                       | 3.08         | 0.15  | -0.01 |
|                                                           | 45/6175                | 4.00                       | 3.36         | 0.01  | 0.67  |
|                                                           | 93/6415                | 4.00                       | 3.59         | 0.95  | 0.18  |
| 802.11be-EHT40<br>(MCS0)                                  | 3/5965                 | 8.00                       | 6.33         | 3.36  | 3.28  |
|                                                           | 43/6165                | 8.00                       | 6.22         | 3.69  | 2.68  |
|                                                           | 91/6405                | 8.00                       | 6.93         | 4.32  | 3.48  |
| 802.11be-EHT80<br>(MCS0)                                  | 7/5985                 | 11.00                      | 9.69         | 6.83  | 6.52  |
|                                                           | 39/6145                | 11.00                      | 9.62         | 7.17  | 5.96  |
|                                                           | 87/6385                | 11.00                      | 10.14        | 7.43  | 6.81  |
| 802.11be-EHT160<br>(MCS0)                                 | 15/6025                | 13.00                      | 11.44        | 8.77  | 8.06  |
|                                                           | 47/6185                | 13.00                      | 11.48        | 8.98  | 7.88  |
|                                                           | 79/6345                | 13.00                      | 12.03        | 9.20  | 8.83  |
| 802.11be-EHT320 (MCS0)                                    | 63/6265                | 16.00                      | <b>15.71</b> | 12.75 | 12.64 |
| Note. Initial test configuration is 802.11be-EHT320 mode. |                        |                            |              |       |       |

| 6GHz Wi-Fi<br>U-NII-6 MIMO | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |      |      |
|----------------------------|------------------------|----------------------------|--------------|------|------|
|                            |                        | Tune-up                    | Meas.        | Ant0 | Ant1 |
| 802.11ax-HE20<br>(MCS0)    | 97/6435                | 5.00                       | 3.76         | 0.68 | 0.82 |
|                            | 105/6475               | 5.00                       | 3.78         | 0.75 | 0.78 |
|                            | 113/6515               | 5.00                       | 3.88         | 0.91 | 0.82 |
| 802.11ax-HE40<br>(MCS0)    | 99/6445                | 8.00                       | 7.29         | 4.44 | 4.12 |
|                            | 107/6485               | 8.00                       | 7.17         | 4.44 | 3.87 |
|                            | 115/6525               | 8.00                       | 7.09         | 4.29 | 3.85 |
| 802.11ax-HE80<br>(MCS0)    | 103/6465               | 11.00                      | 9.66         | 6.80 | 6.50 |
|                            | 119/6545               | 11.00                      | 9.79         | 7.11 | 6.43 |
| 802.11ax-HE160 (MCS0)      | 111/6505               | 13.00                      | <b>12.36</b> | 9.67 | 9.01 |
| 802.11be-EHT20<br>(MCS0)   | 97/6435                | 5.00                       | 3.79         | 0.67 | 0.88 |
|                            | 105/6475               | 5.00                       | 3.78         | 0.72 | 0.82 |

|                                                          |          |       |       |      |      |
|----------------------------------------------------------|----------|-------|-------|------|------|
|                                                          | 113/6515 | 5.00  | 3.86  | 0.86 | 0.84 |
| 802.11be-EHT40<br>(MCS0)                                 | 99/6445  | 8.00  | 7.08  | 4.21 | 3.93 |
|                                                          | 107/6485 | 8.00  | 6.96  | 4.24 | 3.63 |
|                                                          | 115/6525 | 8.00  | 6.86  | 4.11 | 3.58 |
| 802.11be-EHT80<br>(MCS0)                                 | 103/6465 | 11.00 | 9.74  | 6.80 | 6.66 |
|                                                          | 119/6545 | 11.00 | 9.89  | 7.14 | 6.60 |
| 802.11be-EHT160 (MCS0)                                   | 111/6505 | 13.00 | 11.72 | 9.09 | 8.30 |
| Note. Initial test configuration is 802.11ax-HE160 mode. |          |       |       |      |      |

| 6GHz Wi-Fi<br>U-NII-7 MIMO                                | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |       |       |
|-----------------------------------------------------------|------------------------|----------------------------|--------------|-------|-------|
|                                                           |                        | Tune-up                    | Meas.        | Ant0  | Ant1  |
| 802.11ax-HE20<br>(MCS0)                                   | 117/6535               | 5.00                       | 3.92         | 0.62  | 1.18  |
|                                                           | 149/6695               | 5.00                       | 4.29         | 0.89  | 1.63  |
|                                                           | 185/6875               | 5.00                       | 3.89         | 0.72  | 1.04  |
| 802.11ax-HE40<br>(MCS0)                                   | 123/6565               | 8.00                       | 7.00         | 4.23  | 3.73  |
|                                                           | 147/6685               | 8.00                       | 7.20         | 4.58  | 3.77  |
|                                                           | 179/6845               | 8.00                       | 7.43         | 4.74  | 4.08  |
|                                                           | 187/6885               | 8.00                       | 7.40         | 4.78  | 3.95  |
| 802.11ax-HE80<br>(MCS0)                                   | 135/6625               | 11.00                      | 10.13        | 7.48  | 6.72  |
|                                                           | 151/6705               | 11.00                      | 10.12        | 7.69  | 6.43  |
|                                                           | 183/6865               | 11.00                      | 10.15        | 7.90  | 6.21  |
| 802.11ax-HE160<br>(MCS0)                                  | 143/6665               | 13.00                      | 12.86        | 10.25 | 9.40  |
|                                                           | 175/6825               | 13.00                      | 12.80        | 10.37 | 9.12  |
| 802.11be-EHT20<br>(MCS0)                                  | 117/6535               | 5.00                       | 3.91         | 0.67  | 1.11  |
|                                                           | 149/6695               | 5.00                       | 4.32         | 0.91  | 1.68  |
|                                                           | 185/6875               | 5.00                       | 3.88         | 0.67  | 1.07  |
| 802.11be-EHT40<br>(MCS0)                                  | 123/6565               | 8.00                       | 6.81         | 4.10  | 3.47  |
|                                                           | 147/6685               | 8.00                       | 7.05         | 4.52  | 3.50  |
|                                                           | 179/6845               | 8.00                       | 7.26         | 4.60  | 3.86  |
|                                                           | 187/6885               | 8.00                       | 7.24         | 4.62  | 3.80  |
| 802.11be-EHT80<br>(MCS0)                                  | 135/6625               | 11.00                      | 10.19        | 7.51  | 6.82  |
|                                                           | 151/6705               | 11.00                      | 10.19        | 7.69  | 6.59  |
|                                                           | 183/6865               | 11.00                      | 10.23        | 7.83  | 6.52  |
| 802.11be-EHT160<br>(MCS0)                                 | 143/6665               | 13.00                      | 12.21        | 9.71  | 8.63  |
|                                                           | 175/6825               | 13.00                      | 12.21        | 9.84  | 8.46  |
| 802.11be-EHT320 (MCS0)                                    | 127/6585               | 15.00                      | <b>14.03</b> | 11.21 | 10.95 |
| Note. Initial test configuration is 802.11be-EHT320 mode. |                        |                            |              |       |       |



| 6GHz Wi-Fi<br>U-NII-8 MIMO                                | Channel<br>/Freq.(MHz) | Maximum Output Power (dBm) |              |       |       |
|-----------------------------------------------------------|------------------------|----------------------------|--------------|-------|-------|
|                                                           |                        | Tune-up                    | Meas.        | Ant0  | Ant1  |
| 802.11ax-HE20<br>(MCS0)                                   | 189/6895               | 5.00                       | 3.81         | 0.69  | 0.91  |
|                                                           | 209/6995               | 5.00                       | 3.97         | 0.50  | 1.37  |
|                                                           | 229/7095               | 5.00                       | 4.67         | 1.31  | 1.98  |
| 802.11ax-HE40<br>(MCS0)                                   | 203/6965               | 8.00                       | 7.05         | 4.44  | 3.59  |
|                                                           | 227/7085               | 8.00                       | 7.63         | 5.29  | 3.82  |
| 802.11ax-HE80<br>(MCS0)                                   | 199/6945               | 11.00                      | 9.73         | 7.30  | 6.04  |
|                                                           | 215/7025               | 11.00                      | 10.45        | 7.96  | 6.84  |
| 802.11ax-HE160 (MCS0)                                     | 207/6985               | 13.00                      | 12.75        | 10.09 | 9.36  |
| 802.11be-EHT20<br>(MCS0)                                  | 189/6895               | 5.00                       | 3.82         | 0.64  | 0.97  |
|                                                           | 209/6995               | 5.00                       | 3.89         | 0.35  | 1.36  |
|                                                           | 229/7095               | 5.00                       | 4.59         | 1.13  | 1.98  |
| 802.11be-EHT40<br>(MCS0)                                  | 203/6965               | 8.00                       | 6.90         | 4.33  | 3.41  |
|                                                           | 227/7085               | 8.00                       | 7.48         | 5.16  | 3.64  |
| 802.11be-EHT80<br>(MCS0)                                  | 199/6945               | 11.00                      | 9.75         | 7.21  | 6.22  |
|                                                           | 215/7025               | 11.00                      | 10.51        | 7.99  | 6.94  |
| 802.11be-EHT160 (MCS0)                                    | 207/6985               | 13.00                      | 12.12        | 9.44  | 8.75  |
| 802.11be-EHT320 (MCS0)                                    | 191/6905               | 15.00                      | <b>13.90</b> | 10.98 | 10.62 |
| Note. Initial test configuration is 802.11be-EHT320 mode. |                        |                            |              |       |       |

## 9.2 MRU Mode

| 2.4GHz Wi-Fi<br>Mode     | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|--------------------------|------------------------|-------------------|----------------------------|---------|-------|-------|-------|
|                          |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)    | 3/2422                 | 52+106            | LOW                        | 15.00   | 14.09 | 10.87 | 11.28 |
|                          | 201860                 |                   | HIGH                       | 14.50   | 13.54 | 10.56 | 10.50 |
| 802.11be-EHT40 (MCS0)    | 3/2422                 | 106+26            | LOW                        | 15.00   | 14.04 | 10.83 | 11.22 |
|                          | 201860                 |                   | HIGH                       | 14.50   | 13.40 | 10.38 | 10.39 |
| 5GHz Wi-Fi<br>U-NII-1    | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                          |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)    | 38/5190                | 52+106            | LOW                        | 18.00   | 16.76 | 13.54 | 13.94 |
|                          | 46/5230                |                   | HIGH                       | 18.00   | 16.81 | 13.83 | 13.76 |
| 802.11be-EHT40 (MCS0)    | 36/5180                | 106+26            | LOW                        | 20.00   | 19.20 | 16.52 | 15.84 |
|                          | 48/5240                |                   | HIGH                       | 20.00   | 18.74 | 15.86 | 15.60 |
| 802.11be-EHT80 (MCS0)    | 42/5210                | 484+242           | LOW                        | 20.00   | 18.76 | 15.88 | 15.61 |
|                          | 42/5210                |                   | HIGH                       | 20.00   | 18.58 | 15.72 | 15.40 |
| 802.11be-EHT80 (MCS0)    | 42/5210                | 484+484punc242    | HIGH                       | 20.00   | 18.61 | 15.81 | 15.38 |
| 802.11be-EHT80 (MCS0)    | 42/5210                | 484punc242+484    | LOW                        | 20.00   | 18.57 | 15.70 | 15.42 |
| 5GHz Wi-Fi<br>(U-NII-2A) | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                          |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)    | 54/5270                | 52+26             | LOW                        | 18.00   | 16.77 | 13.91 | 13.62 |
|                          | 62/5310                |                   | HIGH                       | 18.00   | 16.73 | 14.44 | 12.85 |
| 802.11be-EHT40 (MCS0)    | 54/5270                | 106+26            | LOW                        | 20.00   | 18.82 | 15.89 | 15.73 |
|                          | 62/5310                |                   | HIGH                       | 20.00   | 18.67 | 16.30 | 14.91 |
| 802.11be-EHT80 (MCS0)    | 58/5290                | 484+242           | LOW                        | 20.00   | 18.68 | 15.86 | 15.48 |
|                          | 58/5290                |                   | HIGH                       | 20.00   | 18.34 | 15.54 | 15.10 |
| 802.11be-EHT80 (MCS0)    | 58/5290                | 484punc242+484    | LOW                        | 20.00   | 18.14 | 15.17 | 15.09 |
| 802.11be-EHT80 (MCS0)    | 58/5290                | 484+484punc242    | HIGH                       | 20.00   | 18.28 | 15.31 | 15.23 |
| 802.11be-EHT160 (MCS0)   | 50/5250                | 996punc242+996    | LOW                        | 18.00   | 17.02 | 14.33 | 13.65 |
| 802.11be-EHT160 (MCS0)   | 50/5250                | 996+996punc242    | HIGH                       | 18.00   | 17.22 | 14.46 | 13.94 |
| 802.11be-EHT160 (MCS0)   | 50/5250                | 996+484           | LOW                        | 18.00   | 16.98 | 14.20 | 13.72 |
|                          | 50/5250                |                   | HIGH                       | 18.00   | 17.00 | 14.26 | 13.70 |
| 802.11be-EHT160 (MCS0)   | 50/5250                | 996punc484+996    | LOW                        | 18.00   | 16.85 | 14.08 | 13.58 |
| 802.11be-EHT160 (MCS0)   | 50/5250                | 996+996punc484    | HIGH                       | 18.00   | 17.21 | 14.43 | 13.95 |

| 5GHz Wi-Fi<br>U-NII-2C        | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|-------------------------------|------------------------|-------------------|----------------------------|---------|-------|-------|-------|
|                               |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)         | 102/5510               | 52+26             | LOW                        | 18.00   | 17.27 | 14.35 | 14.16 |
|                               | 134/5670               |                   | HIGH                       | 18.00   | 17.60 | 14.62 | 14.57 |
| 802.11be-EHT40 (MCS0)         | 102/5510               | 106+26            | LOW                        | 18.00   | 17.17 | 14.25 | 14.07 |
|                               | 134/5670               |                   | HIGH                       | 18.00   | 17.57 | 14.57 | 14.54 |
| 802.11be-EHT80 (MCS0)         | 106/5530               | 484+242           | LOW                        | 20.00   | 18.10 | 15.03 | 15.16 |
|                               | 106/5530               |                   | HIGH                       | 20.00   | 18.14 | 15.04 | 15.22 |
| 802.11be-EHT80 (MCS0)         | 106/5530               | 484+484punc242    | HIGH                       | 20.00   | 18.04 | 14.95 | 15.11 |
| 802.11be-EHT80 (MCS0)         | 106/5530               | 484punc242+484    | LOW                        | 20.00   | 18.08 | 14.96 | 15.18 |
| 802.11be-EHT160 (MCS0)        | 114/5570               | 996+484           | LOW                        | 18.00   | 17.03 | 14.35 | 13.66 |
|                               | 114/5570               |                   | HIGH                       | 18.00   | 16.92 | 14.14 | 13.66 |
| 802.11be-EHT160 (MCS0)        | 114/5570               | 996+996punc242    | HIGH                       | 18.00   | 16.76 | 14.05 | 13.42 |
| 802.11be-EHT160 (MCS0)        | 114/5570               | 996punc242+996    | LOW                        | 18.00   | 16.75 | 14.01 | 13.45 |
| 802.11be-EHT160 (MCS0)        | 114/5570               | 996+996punc484    | HIGH                       | 18.00   | 16.92 | 14.23 | 13.57 |
| 802.11be-EHT160 (MCS0)        | 114/5570               | 996punc484+996    | LOW                        | 18.00   | 16.87 | 14.08 | 13.63 |
| 5GHz Wi-Fi<br>U-NII-3         | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                               |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)         | 151/5755               | 52+26             | LOW                        | 21.00   | 20.11 | 17.15 | 17.06 |
|                               | 159/5795               |                   | HIGH                       | 21.00   | 20.19 | 17.32 | 17.03 |
| 802.11be-EHT40 (MCS0)         | 151/5755               | 106+26            | LOW                        | 21.00   | 19.98 | 17.04 | 16.90 |
|                               | 159/5795               |                   | HIGH                       | 21.00   | 20.11 | 17.24 | 16.95 |
| 802.11be-EHT80 (MCS0)         | 155/5775               | 484+242           | LOW                        | 20.00   | 18.69 | 15.78 | 15.58 |
|                               | 155/5775               |                   | HIGH                       | 20.00   | 18.74 | 15.87 | 15.58 |
| 802.11be-EHT80 (MCS0)         | 155/5775               | 484+484punc242    | HIGH                       | 20.00   | 18.69 | 15.80 | 15.57 |
| 802.11be-EHT80 (MCS0)         | 155/5775               | 484punc242+484    | LOW                        | 20.00   | 18.71 | 15.83 | 15.56 |
| 6GHz Wi-Fi<br>U-NII-5         | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                               |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)         | 03/5965                | 52+26             | LOW                        | 0.00    | -1.20 | -3.65 | -4.85 |
|                               | 91/6405                |                   | HIGH                       | 0.00    | -1.21 | -3.53 | -5.03 |
| 802.11be-EHT40 (MCS0)         | 03/5965                | 106+26            | LOW                        | 2.00    | 0.89  | -1.54 | -2.79 |
|                               | 91/6405                |                   | HIGH                       | 2.00    | 0.73  | -1.56 | -3.14 |
| 802.11be-EHT80 (MCS0)         | 7/5985                 | 484+242           | LOW                        | 9.00    | 8.15  | 4.80  | 5.45  |
|                               | 87/6385                |                   | HIGH                       | 9.00    | 8.32  | 5.22  | 5.39  |
| 802.11be-EHT(80-20)<br>(MCS0) | 7/5985                 | 242+484           | 3                          | 9.00    | 8.09  | 4.80  | 5.35  |
|                               | 87/6385                |                   | 2                          | 9.00    | 8.12  | 5.07  | 5.15  |
| 802.11be-EHT160 (MCS0)        | 15/6025                | 996+484           | LOW                        | 12.50   | 10.86 | 8.12  | 7.56  |
|                               | 79/6345                |                   | HIGH                       | 12.50   | 10.82 | 8.14  | 7.46  |
| 802.11be-EHT160-20)<br>(MCS0) | 15/6025                | 242+484+996       | 1                          | 12.50   | 11.07 | 8.29  | 7.82  |
|                               | 79/6345                |                   | 8                          | 12.50   | 10.95 | 8.25  | 7.61  |
| 802.11be-EHT160-40)<br>(MCS0) | 15/6025                | 484+996           | 1                          | 12.50   | 11.05 | 8.26  | 7.80  |
|                               | 79/6345                |                   | 4                          | 12.50   | 10.96 | 8.26  | 7.62  |

| 802.11be-EHT320 (MCS0)          | 31/6105                | 996+996+996+484   | LOW                        | 15.00   | 13.65 | 10.88 | 10.38 |
|---------------------------------|------------------------|-------------------|----------------------------|---------|-------|-------|-------|
|                                 | 63/6265                |                   | HIGH                       | 15.00   | 14.44 | 11.17 | 11.68 |
| 802.11be-EHT(320-40)<br>(MCS0)  | 31/6105                | 484+996*3         | 1                          | 15.00   | 13.69 | 10.89 | 10.45 |
|                                 | 63/6265                |                   | 8                          | 15.00   | 14.58 | 11.32 | 11.81 |
| 802.11be-EHT(320-80)<br>(MCS0)  | 31/6105                | 996x3             | 1                          | 15.00   | 13.61 | 10.78 | 10.41 |
|                                 | 63/6265                |                   | 4                          | 15.00   | 13.53 | 10.24 | 10.79 |
| 802.11be-EHT(320-120)<br>(MCS0) | 31/6105                | 996x2+484         | 8                          | 15.00   | 13.50 | 10.45 | 10.52 |
|                                 | 63/6265                |                   | 5                          | 15.00   | 13.81 | 10.56 | 11.02 |
| 6GHz Wi-Fi<br>U-NII-6           | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                                 |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)           | 99/6445                | 52+26             | LOW                        | 0.00    | -0.79 | -3.02 | -4.75 |
|                                 | 107/6485               |                   | HIGH                       | 0.00    | -0.38 | -2.69 | -4.22 |
| 802.11be-EHT40 (MCS0)           | 99/6445                | 106+26            | LOW                        | 2.00    | 1.15  | -1.10 | -2.78 |
|                                 | 107/6485               |                   | HIGH                       | 2.00    | 0.58  | -1.72 | -3.28 |
| 802.11be-EHT80 (MCS0)           | 103/6465               | 484+242           | LOW                        | 9.00    | 8.46  | 5.84  | 5.01  |
|                                 | 103/6465               |                   | HIGH                       | 9.00    | 8.37  | 5.75  | 4.93  |
| 802.11be-EHT(80-20)<br>(MCS0)   | 103/6465               | 242+484           | 3                          | 9.00    | 8.34  | 5.68  | 4.94  |
|                                 | 103/6465               |                   | 2                          | 9.00    | 8.38  | 5.73  | 4.97  |
| 802.11be-EHT160 (MCS0)          | 111/6505               | 996+484           | LOW                        | 12.50   | 10.76 | 7.72  | 7.78  |
|                                 | 111/6505               |                   | HIGH                       | 12.50   | 10.72 | 7.60  | 7.82  |
| 802.11be-EHT160-20)<br>(MCS0)   | 111/6505               | 242+484+996       | 1                          | 12.50   | 11.82 | 8.72  | 8.89  |
|                                 | 111/6505               |                   | 8                          | 12.50   | 11.83 | 8.75  | 8.89  |
| 802.11be-EHT160-40)<br>(MCS0)   | 111/6505               | 484+996           | 1                          | 12.50   | 10.96 | 7.83  | 8.06  |
|                                 | 111/6505               |                   | 4                          | 12.50   | 10.97 | 7.93  | 7.99  |
| 6GHz Wi-Fi<br>U-NII-7           | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                                 |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)           | 115/6525               | 52+26             | LOW                        | 0.00    | -0.46 | -2.80 | -4.26 |
|                                 | 179/6845               |                   | HIGH                       | 0.00    | -0.33 | -3.28 | -3.40 |
| 802.11be-EHT40 (MCS0)           | 115/6525               | 106+26            | LOW                        | 2.00    | 1.55  | -0.82 | -2.21 |
|                                 | 179/6845               |                   | HIGH                       | 2.00    | 0.57  | -2.43 | -2.46 |
| 802.11be-EHT80 (MCS0)           | 119/6545               | 484+242           | LOW                        | 9.00    | 8.58  | 5.89  | 5.23  |
|                                 | 183/6865               |                   | HIGH                       | 9.00    | 7.85  | 4.94  | 4.73  |
| 802.11be-EHT(80-20)<br>(MCS0)   | 119/6545               | 242+484           | 3                          | 9.00    | 8.47  | 5.71  | 5.20  |
|                                 | 183/6865               |                   | 2                          | 9.00    | 8.04  | 5.13  | 4.92  |
| 802.11be-EHT160 (MCS0)          | 143/6665               | 996+484           | LOW                        | 12.50   | 10.83 | 7.85  | 7.78  |
|                                 | 175/6825               |                   | HIGH                       | 12.50   | 10.81 | 7.99  | 7.61  |
| 802.11be-EHT160-20)<br>(MCS0)   | 143/6665               | 242+484+996       | 1                          | 12.50   | 12.16 | 9.07  | 9.23  |
|                                 | 175/6825               |                   | 8                          | 12.50   | 11.94 | 9.15  | 8.70  |
| 802.11be-EHT160-40)<br>(MCS0)   | 143/6665               | 484+996           | 1                          | 12.50   | 10.98 | 8.05  | 7.89  |
|                                 | 175/6825               |                   | 4                          | 12.50   | 11.13 | 8.30  | 7.94  |
| 802.11be-EHT320 (MCS0)          | 159/6745               | 996+996+996+484   | LOW                        | 15.00   | 13.28 | 10.21 | 10.33 |
|                                 | 127/6585               |                   | HIGH                       | 15.00   | 13.49 | 10.41 | 10.55 |
| 802.11be-EHT(320-40)            | 159/6745               | 484+996*3         | 1                          | 15.00   | 13.43 | 10.40 | 10.43 |

| (MCS0)                          | 127/6585               |                   | 8                          | 15.00   | 13.70 | 10.60 | 10.77 |
|---------------------------------|------------------------|-------------------|----------------------------|---------|-------|-------|-------|
| 802.11be-EHT(320-80)            | 159/6745               | 996x3             | 1                          | 15.00   | 13.30 | 10.31 | 10.27 |
| (MCS0)                          | 127/6585               |                   | 4                          | 15.00   | 13.65 | 10.57 | 10.70 |
| 802.11be-EHT(320-120)           | 159/6745               | 996x2+484         | 8                          | 15.00   | 13.43 | 10.43 | 10.41 |
| (MCS0)                          | 127/6585               |                   | 5                          | 15.00   | 13.86 | 10.82 | 10.87 |
| 6GHz Wi-Fi<br>U-NII-8           | Channel<br>/Freq.(MHz) | RU Size<br>(Tone) | Maximum Output Power (dBm) |         |       |       |       |
|                                 |                        |                   | RU Index                   | Tune-up | Meas. | Ant0  | Ant1  |
| 802.11be-EHT40 (MCS0)           | 187/6885               | 52+26             | LOW                        | 0.00    | -0.52 | -3.53 | -3.54 |
|                                 | 227/7085               |                   | HIGH                       | 0.00    | -0.50 | -2.64 | -4.60 |
| 802.11be-EHT40 (MCS0)           | 187/6885               | 106+26            | LOW                        | 2.00    | 1.44  | -1.49 | -1.66 |
|                                 | 227/7085               |                   | HIGH                       | 2.00    | 1.41  | -0.77 | -2.63 |
| 802.11be-EHT80 (MCS0)           | 199/6945               | 484+242           | LOW                        | 9.00    | 7.73  | 4.28  | 5.11  |
|                                 | 215/7025               |                   | HIGH                       | 9.00    | 7.97  | 5.04  | 4.87  |
| 802.11be-EHT(80-20)<br>(MCS0)   | 199/6945               | 242+484           | 3                          | 9.00    | 7.77  | 4.33  | 5.15  |
|                                 | 215/7025               |                   | 2                          | 9.00    | 7.99  | 5.03  | 4.93  |
| 802.11be-EHT160 (MCS0)          | 207/6985               | 996+484           | LOW                        | 12.50   | 10.98 | 7.78  | 8.15  |
|                                 | 207/6985               |                   | HIGH                       | 12.50   | 11.13 | 7.90  | 8.32  |
| 802.11be-EHT160-20)<br>(MCS0)   | 207/6985               | 242+484+996       | 1                          | 12.50   | 11.24 | 8.06  | 8.39  |
|                                 | 207/6985               |                   | 8                          | 12.50   | 11.23 | 8.04  | 8.40  |
| 802.11be-EHT160-40)<br>(MCS0)   | 207/6985               | 484+996           | 1                          | 12.50   | 11.21 | 8.03  | 8.36  |
|                                 | 207/6985               |                   | 4                          | 12.50   | 11.26 | 8.07  | 8.42  |
| 802.11be-EHT320 (MCS0)          | 191/6905               | 996+996+996+484   | LOW                        | 15.00   | 13.64 | 10.48 | 10.78 |
|                                 | 191/6905               |                   | HIGH                       | 15.00   | 13.56 | 10.42 | 10.67 |
| 802.11be-EHT(320-40)<br>(MCS0)  | 191/6905               | 484+996*3         | 1                          | 15.00   | 13.57 | 10.40 | 10.71 |
|                                 | 191/6905               |                   | 8                          | 15.00   | 13.59 | 10.43 | 10.73 |
| 802.11be-EHT(320-80)<br>(MCS0)  | 191/6905               | 996x3             | 1                          | 15.00   | 13.49 | 10.33 | 10.63 |
|                                 | 191/6905               |                   | 4                          | 15.00   | 13.60 | 10.48 | 10.70 |
| 802.11be-EHT(320-120)<br>(MCS0) | 191/6905               | 996x2+484         | 8                          | 15.00   | 13.87 | 10.67 | 11.05 |
|                                 | 191/6905               |                   | 5                          | 15.00   | 13.97 | 10.83 | 11.08 |

### 9.3 Bluetooth Mode

| Bluetooth     | Conducted Power(dBm)    |                |                | Tune-up Limit<br>(dBm) |
|---------------|-------------------------|----------------|----------------|------------------------|
|               | Channel/Frequency (MHz) |                |                |                        |
|               | Ch 0/2402 MHz           | Ch 39/2441 MHz | Ch 78/2480 MHz |                        |
| GFSK          | 5.37                    | 6.18           | 4.79           | 9.00                   |
| $\pi/4$ DQPSK | 2.54                    | 3.14           | 1.72           | 7.00                   |
| 8DPSK         | 2.28                    | 3.00           | 1.73           | 7.00                   |
| Bluetooth LE  | Ch 0/2402 MHz           | Ch 19/2440 MHz | Ch 39/2480 MHz | Tune-up Limit<br>(dBm) |
| GFSK(1M)      | 4.24                    | 5.26           | 3.90           | 9.00                   |
| GFSK(2M)      | 1.73                    | 2.53           | 1.15           | 9.00                   |
| GFSK(S=2)     | 4.07                    | 4.88           | 3.51           | 9.00                   |
| GFSK(S=8)     | 5.65                    | 6.51           | 5.07           | 9.00                   |

## 10 Test Results

### 10.1 EUT Antenna Locations

The Detailed Antenna Locations Refer to Chapter 5.4.

| Distance of the Antenna to the EUT Surface/Edge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                 |                 |               |                |               |               |                  |                  |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------|-----------------|---------------|----------------|---------------|---------------|------------------|------------------|------------------|
| Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Back Side | Front Side1-TS8 | Front Side2-TS9 | Left Edge-TS4 | Right Edge-TS5 | Top Edge1-TS6 | Top Edge2-TS7 | Bottom Edge1-TS1 | Bottom Edge2-TS2 | Bottom Edge3-TS3 |
| Wi-Fi 2.4GHz/ 5GHz / Bluetooth Antenna (ANT0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | > 25mm    | < 25mm          | > 25mm          | < 25mm        | > 25mm         | < 25mm        | > 25mm        | < 25mm           | > 25mm           | < 25mm           |
| Wi-Fi 2.4GHz/ 5GHz Antenna (ANT1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | > 25mm    | > 25mm          | < 25mm          | > 25mm        | < 25mm         | > 25mm        | < 25mm        | > 25mm           | < 25mm           | < 25mm           |
| nRF 2.4GHz Antenna (ANT2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | > 25mm    | < 25mm          | < 25mm          | > 25mm        | > 25mm         | < 25mm        | < 25mm        | > 25mm           | > 25mm           | > 25mm           |
| Positions for SAR Tests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                 |                 |               |                |               |               |                  |                  |                  |
| Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Back Side | Front Side1-TS8 | Front Side2-TS9 | Left Edge-TS4 | Right Edge-TS5 | Top Edge1-TS6 | Top Edge2-TS7 | Bottom Edge1-TS1 | Bottom Edge2-TS2 | Bottom Edge3-TS3 |
| Wi-Fi 2.4GHz/ 5GHz / Bluetooth Antenna (ANT0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A       | Yes             | N/A             | Yes           | N/A            | Yes           | N/A           | Yes              | N/A              | Yes              |
| Wi-Fi 2.4GHz/ 5GHz Antenna (ANT1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N/A       | N/A             | Yes             | N/A           | Yes            | N/A           | Yes           | N/A              | Yes              | Yes              |
| nRF 2.4GHz Antenna (ANT2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A       | Yes             | Yes             | N/A           | N/A            | Yes           | Yes           | N/A              | N/A              | N/A              |
| <p>Note:</p> <p>1. Per KDB 941225 D06, SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.</p> <p>2. Per FCC KDB 447498 D01, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:</p> <p>a) <math>\leq 0.8</math> W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is <math>\leq 100</math> MHz</p> <p>b) <math>\leq 0.6</math> W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.</p> <p>c) <math>\leq 0.4</math> W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is <math>\geq 200</math> MHz.</p> |           |                 |                 |               |                |               |               |                  |                  |                  |

## 10.2 Standalone SAR Test Exclusion Considerations

Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for product specific 10-g SAR

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Per KDB 447498 D01, when the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

| Band       | Configuration | Distance (mm) | MAX Power (dBm) | Frequency (MHz) | Ratio | Evaluation |
|------------|---------------|---------------|-----------------|-----------------|-------|------------|
| Bluetooth  | Head SAR      | 0             | 9.00            | 2480            | 2.50  | No         |
|            | Extremity SAR | 0             | 9.00            | 2480            | 2.50  | No         |
| nRF 2.4GHz | Head SAR      | 0             | 8.00            | 2480            | 1.99  | No         |
|            | Extremity SAR | 0             | 8.00            | 2480            | 1.99  | No         |



### 10.3 SAR & APD Test Results

Note:

1. The value with blue color is the maximum SAR Value of each test band.
2. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is  $\leq 0.8$  W/kg or all required test position are tested.
3. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is  $\leq 1.2$  W/kg or all required channels are tested.
4. SAR assessment for 6G-7.2G is according to IEC/IEEE 62209-1528:2020
5. FCC Guidance for portable devices, TCBC workshop October 2020 and CBC workshop October 2022: Interim procedures allow for SAR measurement using the 2020 version of IEC/IEEE 62209-1528:2020 supplemented with absorbed(epithelial) power density derived from SAR measurements.
6. Where supported by the test system, also report estimated absorbed (epithelial) power density (for reference purposes only, not specifically for compliance) derived from measured SAR, and estimated incident PD.

#### Head SAR (by face down phantom)

| Band              | Antenna | Test Position | Dist. (mm) | Mode          | Duty Cycle | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/Kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|-------------------|---------|---------------|------------|---------------|------------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| Wi-Fi<br>2.4GHz   | ANT0    | TS10          | 0          | 802.11b       | 100.0%     | 1/2412          | 18.00         | 17.23                | 0.198                 | -0.036           | 1.19           | 0.236               | 10       |
|                   | ANT1    | TS10          | 0          | 802.11b       | 100.0%     | 11/2462         | 18.50         | 18.30                | 0.030                 | 0.100            | 1.05           | 0.031               | /        |
| Wi-Fi<br>U-NII-2A | ANT0    | TS10          | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.063                 | -0.174           | 1.35           | 0.085               | /        |
|                   | ANT1    | TS10          | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 0.112                 | 0.037            | 1.13           | 0.127               | /        |
| Wi-Fi<br>U-NII-2C | ANT0    | TS10          | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.434                 | -0.156           | 1.16           | 0.504               | 11       |
|                   | ANT1    | TS10          | 0          | 802.11a       | 100.0%     | 116/5580        | 17.50         | 17.24                | 0.132                 | 0.045            | 1.06           | 0.140               | /        |
| Wi-Fi<br>U-NII-3  | ANT0    | TS10          | 0          | 802.11nHT40   | 100.0%     | 159/5795        | 18.00         | 17.75                | 0.043                 | 0.020            | 1.06           | 0.046               | /        |
|                   | ANT1    | TS10          | 0          | 802.11nHT40   | 100.0%     | 159/5795        | 18.50         | 18.07                | 0.159                 | -0.170           | 1.10           | 0.176               | /        |

| Band             | Antenna | Test Position | Dist. (mm) | Mode            | Duty Cycle | Ch./ Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/Kg) | Measured APD (W/m <sup>2</sup> ) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/Kg) | Report APD (W/m <sup>2</sup> ) | Plot No. |
|------------------|---------|---------------|------------|-----------------|------------|------------------|---------------|----------------------|-----------------------|----------------------------------|------------------|----------------|---------------------|--------------------------------|----------|
| Wi-Fi<br>U-NII-5 | ANT0    | TS10          | 0          | 802.11be EHT320 | 100.0%     | 63/6265          | 11.50         | 11.19                | 0.015                 | 0.142                            | 0.010            | 1.07           | 0.016               | 0.153                          | /        |
|                  | ANT1    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 79/6345          | 11.50         | 11.15                | 0.033                 | 0.248                            | -0.049           | 1.08           | 0.036               | 0.269                          | /        |
| Wi-Fi<br>U-NII-6 | ANT0    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 111/6505         | 10.00         | 9.80                 | 0.102                 | 0.782                            | 0.027            | 1.05           | 0.107               | 0.819                          | 12       |
|                  | ANT1    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 111/6505         | 10.00         | 9.73                 | 0.041                 | 0.329                            | 0.011            | 1.06           | 0.044               | 0.350                          | /        |
| Wi-Fi<br>U-NII-7 | ANT0    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 143/6665         | 10.50         | 10.16                | 0.051                 | 0.463                            | 0.029            | 1.08           | 0.055               | 0.501                          | /        |
|                  | ANT1    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 175/6825         | 10.00         | 9.42                 | 0.007                 | 0.015                            | 0.049            | 1.14           | 0.008               | 0.017                          | /        |
| Wi-Fi<br>U-NII-8 | ANT0    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 207/6985         | 10.50         | 10.03                | 0.034                 | 0.312                            | -0.040           | 1.11           | 0.038               | 0.348                          | /        |
|                  | ANT1    | TS10          | 0          | 802.11ax HE160  | 100.0%     | 207/6985         | 10.00         | 9.44                 | 0.051                 | 0.457                            | 0.100            | 1.14           | 0.058               | 0.520                          | /        |

### Extremity SAR

| Band              | Antenna | Test Position    | Dist. (mm) | Mode          | Duty Cycle | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR10g (W/Kg) | Power Drift (dB) | Scaling Factor | Report SAR10g (W/kg) | Plot No. |
|-------------------|---------|------------------|------------|---------------|------------|-----------------|---------------|----------------------|------------------------|------------------|----------------|----------------------|----------|
| Wi-Fi<br>2.4GHz   | ANT0    | Back Side        | 0          | 802.11b       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side1-TS8  | 0          | 802.11b       | 100.0%     | 1/2412          | 17.00         | 16.42                | 0.612                  | -0.060           | 1.14           | 0.699                | /        |
|                   |         | Left Edge-TS4    | 0          | 802.11b       | 100.0%     | 1/2412          | 17.00         | 16.42                | 0.043                  | 0.100            | 1.14           | 0.049                | /        |
|                   |         | Right Edge-TS5   | 0          | 802.11b       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Top Edge1-TS6    | 0          | 802.11b       | 100.0%     | 1/2412          | 17.00         | 16.42                | 0.034                  | 0.073            | 1.14           | 0.038                | /        |
|                   |         | Bottom Edge1-TS1 | 0          | 802.11b       | 100.0%     | 1/2412          | 17.00         | 16.42                | 0.069                  | 0.040            | 1.14           | 0.079                | /        |
|                   |         | Bottom Edge3-TS3 | 0          | 802.11b       | 100.0%     | 1/2412          | 17.00         | 16.42                | 0.042                  | 0.015            | 1.14           | 0.048                | /        |
|                   | ANT1    | Back Side        | 0          | 802.11b       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side2-TS9  | 0          | 802.11b       | 100.0%     | 11/2462         | 18.00         | 17.43                | 0.853                  | -0.070           | 1.14           | 0.973                | 13       |
|                   |         | Left Edge-TS4    | 0          | 802.11b       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Right Edge-TS5   | 0          | 802.11b       | 100.0%     | 11/2462         | 18.00         | 17.43                | 0.556                  | 0.050            | 1.14           | 0.634                | /        |
|                   |         | Top Edge2-TS7    | 0          | 802.11b       | 100.0%     | 11/2462         | 18.00         | 17.43                | 0.031                  | 0.020            | 1.14           | 0.035                | /        |
|                   |         | Bottom Edge2-TS2 | 0          | 802.11b       | 100.0%     | 11/2462         | 18.00         | 17.43                | 0.263                  | 0.038            | 1.14           | 0.300                | /        |
|                   |         | Bottom Edge3-TS3 | 0          | 802.11b       | 100.0%     | 11/2462         | 18.00         | 17.43                | 0.164                  | -0.020           | 1.14           | 0.187                | /        |
| Wi-Fi<br>U-NII-2A | ANT0    | Back Side        | 0          | 802.11ax-HE40 | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side1-TS8  | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.455                  | -0.100           | 1.35           | 0.614                | /        |
|                   |         | Left Edge-TS4    | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.115                  | 0.124            | 1.35           | 0.155                | /        |
|                   |         | Right Edge-TS5   | 0          | 802.11ax-HE40 | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Top Edge1-TS6    | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.065                  | 0.100            | 1.35           | 0.088                | /        |
|                   |         | Bottom Edge1-TS1 | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.072                  | 0.100            | 1.35           | 0.097                | /        |
|                   |         | Bottom Edge3-TS3 | 0          | 802.11ax-HE40 | 100.0%     | 54/5270         | 18.00         | 16.70                | 0.009                  | 0.013            | 1.35           | 0.012                | /        |
|                   | ANT1    | Back Side        | 0          | 802.11ax-HE40 | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side2-TS9  | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 1.100                  | -0.050           | 1.13           | 1.243                | 14       |
|                   |         | Left Edge-TS4    | 0          | 802.11ax-HE40 | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Right Edge-TS5   | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 0.673                  | 0.090            | 1.13           | 0.760                | /        |
|                   |         | Top Edge2-TS7    | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 0.083                  | 0.017            | 1.13           | 0.094                | /        |
|                   |         | Bottom Edge2-TS2 | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 0.082                  | 0.100            | 1.13           | 0.093                | /        |
|                   |         | Bottom Edge3-TS3 | 0          | 802.11ax-HE40 | 100.0%     | 62/5310         | 18.00         | 17.47                | 0.046                  | 0.040            | 1.13           | 0.052                | /        |
| Wi-Fi<br>U-NII-2C | ANT0    | Back Side        | 0          | 802.11a       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side1-TS8  | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.497                  | 0.050            | 1.16           | 0.577                | /        |
|                   |         | Left Edge-TS4    | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.075                  | 0.031            | 1.16           | 0.087                | /        |
|                   |         | Right Edge-TS5   | 0          | 802.11a       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Top Edge1-TS6    | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.021                  | 0.100            | 1.16           | 0.024                | /        |
|                   |         | Bottom Edge1-TS1 | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.041                  | -0.060           | 1.16           | 0.048                | /        |
|                   |         | Bottom Edge3-TS3 | 0          | 802.11a       | 100.0%     | 100/5500        | 17.50         | 16.85                | 0.010                  | 0.032            | 1.16           | 0.011                | /        |
|                   | ANT1    | Back Side        | 0          | 802.11a       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |
|                   |         | Front Side2-TS9  | 0          | 802.11a       | 100.0%     | 116/5580        | 17.50         | 17.24                | 0.873                  | -0.030           | 1.06           | 0.927                | /        |
|                   |         | Left Edge-TS4    | 0          | 802.11a       | 100.0%     | N/A             | N/A           | N/A                  | N/A                    | N/A              | N/A            | N/A                  | /        |

**SAR Test Report**
**Report No.: R2411A1737-S1V4**

|                  |      |                  |   |             |        |          |       |       |       |        |      |       |   |
|------------------|------|------------------|---|-------------|--------|----------|-------|-------|-------|--------|------|-------|---|
| Wi-Fi<br>U-NII-3 |      | Right Edge-TS5   | 0 | 802.11a     | 100.0% | 116/5580 | 17.50 | 17.24 | 0.641 | 0.010  | 1.06 | 0.681 | / |
|                  |      | Top Edge2-TS7    | 0 | 802.11a     | 100.0% | 116/5580 | 17.50 | 17.24 | 0.048 | -0.041 | 1.06 | 0.051 | / |
|                  |      | Bottom Edge2-TS2 | 0 | 802.11a     | 100.0% | 116/5580 | 17.50 | 17.24 | 0.083 | 0.100  | 1.06 | 0.088 | / |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11a     | 100.0% | 116/5580 | 17.50 | 17.24 | 0.049 | 0.065  | 1.06 | 0.052 | / |
|                  | ANT0 | Back Side        | 0 | 802.11nHT40 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | / |
|                  |      | Front Side1-TS8  | 0 | 802.11nHT40 | 100.0% | 159/5795 | 17.00 | 16.83 | 0.516 | 0.060  | 1.04 | 0.537 | / |
|                  |      | Left Edge-TS4    | 0 | 802.11nHT40 | 100.0% | 159/5795 | 17.00 | 16.83 | 0.102 | 0.081  | 1.04 | 0.106 | / |
|                  |      | Right Edge-TS5   | 0 | 802.11nHT40 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | / |
|                  |      | Top Edge1-TS6    | 0 | 802.11nHT40 | 100.0% | 159/5795 | 17.00 | 16.83 | 0.034 | 0.099  | 1.04 | 0.035 | / |
|                  |      | Bottom Edge1-TS1 | 0 | 802.11nHT40 | 100.0% | 159/5795 | 17.00 | 16.83 | 0.087 | 0.023  | 1.04 | 0.090 | / |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11nHT40 | 100.0% | 159/5795 | 17.00 | 16.83 | 0.017 | 0.190  | 1.04 | 0.017 | / |
|                  | ANT1 | Back Side        | 0 | 802.11nHT40 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | / |
|                  |      | Front Side2-TS9  | 0 | 802.11nHT40 | 100.0% | 159/5795 | 18.00 | 17.56 | 0.873 | 0.090  | 1.11 | 0.966 | / |
|                  |      | Left Edge-TS4    | 0 | 802.11nHT40 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | / |
|                  |      | Right Edge-TS5   | 0 | 802.11nHT40 | 100.0% | 159/5795 | 18.00 | 17.56 | 0.585 | 0.060  | 1.11 | 0.647 | / |
|                  |      | Top Edge2-TS7    | 0 | 802.11nHT40 | 100.0% | 159/5795 | 18.00 | 17.56 | 0.073 | 0.100  | 1.11 | 0.081 | / |
|                  |      | Bottom Edge2-TS2 | 0 | 802.11nHT40 | 100.0% | 159/5795 | 18.00 | 17.56 | 0.063 | 0.065  | 1.11 | 0.070 | / |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11nHT40 | 100.0% | 159/5795 | 18.00 | 17.56 | 0.025 | -0.022 | 1.11 | 0.028 | / |

| Band             | Antenna | Test Position    | Dist. (mm) | Mode            | Duty Cycle | Ch./Freq. (MHz) | Tune -up (dBm) | Measured power (dBm) | Measured SAR10g (W/Kg) | Measured APD (W/m <sup>2</sup> ) | Power Drift (dB) | Scaling Factor | Report SAR10g (W/Kg) | Report APD (W/m <sup>2</sup> ) | Plot No. |
|------------------|---------|------------------|------------|-----------------|------------|-----------------|----------------|----------------------|------------------------|----------------------------------|------------------|----------------|----------------------|--------------------------------|----------|
| Wi-Fi<br>U-NII-5 | ANT0    | Back Side        | 0          | 802.11be EHT320 | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Front Side1-TS8  | 0          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50          | 11.19                | 0.196                  | 4.710                            | -0.010           | 1.07           | 0.211                | 5.058                          | /        |
|                  |         | Left Edge-TS4    | 0          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50          | 11.19                | 0.070                  | 1.560                            | -0.130           | 1.07           | 0.075                | 1.675                          | /        |
|                  |         | Right Edge-TS5   | 0          | 802.11be EHT320 | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Top Edge1-TS6    | 0          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50          | 11.19                | 0.008                  | 0.181                            | -0.132           | 1.07           | 0.009                | 0.194                          | /        |
|                  |         | Bottom Edge1-TS1 | 0          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50          | 11.19                | 0.052                  | 1.120                            | 0.011            | 1.07           | 0.056                | 1.203                          | /        |
|                  |         | Bottom Edge3-TS3 | 0          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50          | 11.19                | 0.004                  | 0.084                            | 0.029            | 1.07           | 0.004                | 0.090                          | /        |
|                  | ANT1    | Back Side        | 0          | 802.11ax-HE160  | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Front Side2-TS9  | 0          | 802.11ax-HE160  | 100.0%     | 79/6345         | 11.50          | 11.15                | 0.192                  | 4.480                            | -0.030           | 1.08           | 0.208                | 4.856                          | /        |
|                  |         | Left Edge-TS4    | 0          | 802.11ax-HE160  | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Right Edge-TS5   | 0          | 802.11ax-HE160  | 100.0%     | 79/6345         | 11.50          | 11.15                | 0.128                  | 3.040                            | -0.070           | 1.08           | 0.139                | 3.295                          | /        |
|                  |         | Top Edge2-TS7    | 0          | 802.11ax-HE160  | 100.0%     | 79/6345         | 11.50          | 11.15                | 0.018                  | 0.400                            | -0.063           | 1.08           | 0.020                | 0.434                          | /        |
|                  |         | Bottom Edge2-TS2 | 0          | 802.11ax-HE160  | 100.0%     | 79/6345         | 11.50          | 11.15                | 0.011                  | 0.293                            | -0.180           | 1.08           | 0.012                | 0.318                          | /        |
|                  |         | Bottom Edge3-TS3 | 0          | 802.11ax-HE160  | 100.0%     | 79/6345         | 11.50          | 11.15                | 0.005                  | 0.108                            | 0.041            | 1.08           | 0.005                | 0.117                          | /        |
| Wi-Fi<br>U-NII-6 | ANT0    | Back Side        | 0          | 802.11ax-HE160  | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Front Side1-TS8  | 0          | 802.11ax-HE160  | 100.0%     | 111/6505        | 10.00          | 9.80                 | 0.239                  | 5.730                            | -0.080           | 1.05           | 0.250                | 6.000                          | /        |
|                  |         | Left Edge-TS4    | 0          | 802.11ax-HE160  | 100.0%     | 111/6505        | 10.00          | 9.80                 | 0.080                  | 1.780                            | 0.170            | 1.05           | 0.084                | 1.864                          | /        |
|                  |         | Right Edge-TS5   | 0          | 802.11ax-HE160  | 100.0%     | N/A             | N/A            | N/A                  | N/A                    | N/A                              | N/A              | N/A            | N/A                  | N/A                            | /        |
|                  |         | Top Edge1-TS6    | 0          | 802.11ax-HE160  | 100.0%     | 111/6505        | 10.00          | 9.80                 | 0.020                  | 0.433                            | -0.106           | 1.05           | 0.021                | 0.453                          | /        |
|                  |         | Bottom Edge1-TS1 | 0          | 802.11ax-HE160  | 100.0%     | 111/6505        | 10.00          | 9.80                 | 0.045                  | 1.030                            | 0.025            | 1.05           | 0.047                | 1.079                          | /        |
|                  |         | Bottom Edge3-TS3 | 0          | 802.11ax-HE160  | 100.0%     | 111/6505        | 10.00          | 9.80                 | 0.008                  | 0.175                            | 0.030            | 1.05           | 0.008                | 0.183                          | /        |

**SAR Test Report**
**Report No.: R2411A1737-S1V4**

|                  |      |                  |   |                |        |          |       |       |       |       |        |      |       |       |    |
|------------------|------|------------------|---|----------------|--------|----------|-------|-------|-------|-------|--------|------|-------|-------|----|
|                  | ANT1 | Back Side        | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Front Side2-TS9  | 0 | 802.11ax-HE160 | 100.0% | 111/6505 | 10.00 | 9.73  | 0.127 | 2.920 | -0.020 | 1.06 | 0.135 | 3.107 | /  |
|                  |      | Left Edge-TS4    | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Right Edge-TS5   | 0 | 802.11ax-HE160 | 100.0% | 111/6505 | 10.00 | 9.73  | 0.089 | 2.110 | -0.050 | 1.06 | 0.095 | 2.245 | /  |
|                  |      | Top Edge2-TS7    | 0 | 802.11ax-HE160 | 100.0% | 111/6505 | 10.00 | 9.73  | 0.013 | 0.290 | -0.081 | 1.06 | 0.014 | 0.309 | /  |
|                  |      | Bottom Edge2-TS2 | 0 | 802.11ax-HE160 | 100.0% | 111/6505 | 10.00 | 9.73  | 0.016 | 0.394 | -0.013 | 1.06 | 0.017 | 0.419 | /  |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11ax-HE160 | 100.0% | 111/6505 | 10.00 | 9.73  | 0.004 | 0.101 | 0.025  | 1.06 | 0.004 | 0.107 | /  |
| Wi-Fi<br>U-NII-7 | ANT0 | Back Side        | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Front Side1-TS8  | 0 | 802.11ax-HE160 | 100.0% | 143/6665 | 10.50 | 10.16 | 0.270 | 6.500 | -0.070 | 1.08 | 0.292 | 7.029 | 15 |
|                  |      | Left Edge-TS4    | 0 | 802.11ax-HE160 | 100.0% | 143/6665 | 10.50 | 10.16 | 0.100 | 2.240 | 0.054  | 1.08 | 0.108 | 2.422 | /  |
|                  |      | Right Edge-TS5   | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Top Edge1-TS6    | 0 | 802.11ax-HE160 | 100.0% | 143/6665 | 10.50 | 10.16 | 0.024 | 0.517 | 0.025  | 1.08 | 0.026 | 0.559 | /  |
|                  |      | Bottom Edge1-TS1 | 0 | 802.11ax-HE160 | 100.0% | 143/6665 | 10.50 | 10.16 | 0.072 | 1.550 | -0.028 | 1.08 | 0.078 | 1.676 | /  |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11ax-HE160 | 100.0% | 143/6665 | 10.50 | 10.16 | 0.010 | 0.213 | 0.011  | 1.08 | 0.011 | 0.230 | /  |
|                  | ANT1 | Back Side        | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Front Side2-TS9  | 0 | 802.11ax-HE160 | 100.0% | 175/6825 | 10.00 | 9.42  | 0.136 | 3.160 | 0.090  | 1.14 | 0.155 | 3.611 | /  |
|                  |      | Left Edge-TS4    | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Right Edge-TS5   | 0 | 802.11ax-HE160 | 100.0% | 175/6825 | 10.00 | 9.42  | 0.124 | 2.930 | -0.010 | 1.14 | 0.142 | 3.349 | /  |
|                  |      | Top Edge2-TS7    | 0 | 802.11ax-HE160 | 100.0% | 175/6825 | 10.00 | 9.42  | 0.013 | 0.285 | 0.042  | 1.14 | 0.015 | 0.326 | /  |
|                  |      | Bottom Edge2-TS2 | 0 | 802.11ax-HE160 | 100.0% | 175/6825 | 10.00 | 9.42  | 0.023 | 0.462 | -0.140 | 1.14 | 0.026 | 0.528 | /  |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11ax-HE160 | 100.0% | 175/6825 | 10.00 | 9.42  | 0.004 | 0.080 | 0.028  | 1.14 | 0.005 | 0.091 | /  |
| Wi-Fi<br>U-NII-8 | ANT0 | Back Side        | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Front Side1-TS8  | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.50 | 10.03 | 0.195 | 4.810 | -0.050 | 1.11 | 0.217 | 5.360 | /  |
|                  |      | Left Edge-TS4    | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.50 | 10.03 | 0.089 | 1.950 | 0.100  | 1.11 | 0.099 | 2.173 | /  |
|                  |      | Right Edge-TS5   | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Top Edge1-TS6    | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.50 | 10.03 | 0.016 | 0.361 | -0.091 | 1.11 | 0.018 | 0.402 | /  |
|                  |      | Bottom Edge1-TS1 | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.50 | 10.03 | 0.046 | 0.456 | 0.024  | 1.11 | 0.051 | 0.508 | /  |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.50 | 10.03 | 0.008 | 0.078 | 0.070  | 1.11 | 0.009 | 0.087 | /  |
|                  | ANT1 | Back Side        | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Front Side2-TS9  | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.00 | 9.44  | 0.138 | 2.790 | 0.015  | 1.14 | 0.157 | 3.174 | /  |
|                  |      | Left Edge-TS4    | 0 | 802.11ax-HE160 | 100.0% | N/A      | N/A   | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | N/A   | /  |
|                  |      | Right Edge-TS5   | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.00 | 9.44  | 0.151 | 3.570 | 0.050  | 1.14 | 0.172 | 4.061 | /  |
|                  |      | Top Edge2-TS7    | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.00 | 9.44  | 0.014 | 0.311 | -0.048 | 1.14 | 0.016 | 0.354 | /  |
|                  |      | Bottom Edge2-TS2 | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.00 | 9.44  | 0.024 | 0.506 | -0.025 | 1.14 | 0.027 | 0.576 | /  |
|                  |      | Bottom Edge3-TS3 | 0 | 802.11ax-HE160 | 100.0% | 207/6985 | 10.00 | 9.44  | 0.006 | 0.074 | -0.010 | 1.14 | 0.007 | 0.084 | /  |

### Estimated SAR

| Band       | Configuration | Frequency (MHz) | Maximum Power (dBm) | Separation Distance (mm) | Estimated SAR (W/kg) |
|------------|---------------|-----------------|---------------------|--------------------------|----------------------|
| Bluetooth  | Head SAR      | 2480            | 9.00                | 5                        | 0.334                |
|            | Extremity SAR | 2480            | 9.00                | 5                        | 0.133                |
| nRF 2.4GHz | Head SAR      | 2480            | 8.00                | 5                        | 0.265                |
|            | Extremity SAR | 2480            | 8.00                | 5                        | 0.106                |

For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 based on the formula below.  

$$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x] \text{ W/kg}$$
for test separation distances  $\leq 50$  mm; where  $x = 7.5$  for 1-g SAR, and  $x = 18.75$  for 10-g SAR.

## 10.4 PD Test Results

- The value with blue color is the maximum PD Value of each test band.
- FCC Guidance for portable devices, TCBC workshop October 2020 and CBC workshop October 2022: Interim procedures allow for SAR measurement using the 2020 version of IEC/IEEE 62209-1528:2020 supplemented with measured incident PD for highest SAR configuration.
- PD exposure is considered with two distances: 2mm (compliant distance) and  $\lambda/5$ .
- According to DASY8 MODULE mmWAVE SYSTEM HANDBOOK and IEC/IEEE 63195:2020.  
DASY8 Module mmWave V3.0 features the Equivalent Source Reconstruction (ESR) method to compute the incident PD values averaged over an area of 1 cm<sup>2</sup> and 4 cm<sup>2</sup>. With this method, the reconstruction uncertainty (REC) is below 0.6 dB for  $d > \lambda/25$ , corresponding to a test distance of 2 mm at 6 GHz. The REC value 0.6dB is valid if the following conditions on the grid resolution ( $\ell_{grid}$ ) and grid extent ( $v_{grid}$ ) are met. The grid is based on  $\lambda$  per DASY8 MODULE mmWAVE SYSTEM HANDBOOK and IEC/IEEE 63195: 2020.
- Per FCC guidance and equipment manufacturer guidance, power density results were scaled by IEC 62479: 2020 for the measurement uncertainty > 30%. The uncertainty of the assessment method shall be determined by calculating the expanded uncertainty using a confidence interval of 95 % (see IEC 62479:2010). In this report, the total expanded uncertainty of 1.99 (1.58%) is used for scaling factor, which is larger than the maximum default uncertainty value of 30 %, so a penalty value shall be added to the assessment result before comparison with the limit.

| Band          | Antenna | Test Position   | Dist. (mm) | Mode            | Duty Cycle | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Normal psPD (W/m <sup>2</sup> ) | Total psPD (W/m <sup>2</sup> ) | Power Drift [dB] | Measurement Uncertainty Scaling Factor | Tune up Scaling Factor | Scaled Normal psPD (W/m <sup>2</sup> ) | Scaled Total psPD (W/m <sup>2</sup> ) | Plot No. |
|---------------|---------|-----------------|------------|-----------------|------------|-----------------|---------------|----------------------|---------------------------------|--------------------------------|------------------|----------------------------------------|------------------------|----------------------------------------|---------------------------------------|----------|
| Wi-Fi U-NII-5 | ANT0    | Front Side1-TS8 | 2          | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50         | 11.19                | 1.350                           | 2.840                          | -0.178           | 1.280                                  | 1.07                   | 1.856                                  | 3.904                                 | /        |
|               |         | Front Side1-TS8 | 9.9        | 802.11be EHT320 | 100.0%     | 63/6265         | 11.50         | 11.19                | 0.735                           | 1.190                          | -0.142           | 1.280                                  | 1.07                   | 1.010                                  | 1.636                                 | /        |
| Wi-Fi U-NII-6 | ANT0    | Front Side1-TS8 | 2          | 802.11ax HE160  | 100.0%     | 111/6505        | 10.00         | 9.80                 | 2.430                           | 4.360                          | -0.047           | 1.280                                  | 1.05                   | 3.257                                  | 5.844                                 | /        |
|               |         | Front Side1-TS8 | 9.2        | 802.11ax HE160  | 100.0%     | 111/6505        | 10.00         | 9.80                 | 1.360                           | 1.980                          | 0.078            | 1.280                                  | 1.05                   | 1.823                                  | 2.654                                 | /        |
| Wi-Fi U-NII-7 | ANT0    | Front Side1-TS8 | 2          | 802.11ax HE160  | 100.0%     | 143/6665        | 10.50         | 10.16                | 2.430                           | 4.540                          | 0.030            | 1.280                                  | 1.08                   | 3.364                                  | 6.284                                 | 16       |
|               |         | Front Side1-TS8 | 9          | 802.11ax HE160  | 100.0%     | 143/6665        | 10.50         | 10.16                | 1.630                           | 2.460                          | 0.040            | 1.280                                  | 1.08                   | 2.256                                  | 3.405                                 | /        |
| Wi-Fi U-NII-8 | ANT0    | Front Side1-TS8 | 2          | 802.11ax HE160  | 100.0%     | 207/6985        | 10.50         | 10.03                | 2.120                           | 4.510                          | -0.038           | 1.280                                  | 1.11                   | 3.024                                  | 6.433                                 | /        |
|               |         | Front Side1-TS8 | 8.5        | 802.11ax HE160  | 100.0%     | 207/6985        | 10.50         | 10.03                | 1.560                           | 2.260                          | 0.110            | 1.280                                  | 1.11                   | 2.225                                  | 3.223                                 | /        |

## 10.5 Simultaneous Transmission Analysis

| Simultaneous Transmission Configurations                                                                 | Head SAR | Extremity SAR |
|----------------------------------------------------------------------------------------------------------|----------|---------------|
| nRF 2.4GHz ANT2 + Bluetooth ANT0                                                                         | Yes      | Yes           |
| Wi-Fi 2.4GHz ANT0 + Wi-Fi 2.4GHz ANT1+ nRF 2.4GHz ANT2                                                   | Yes      | Yes           |
| Wi-Fi 5GHz ANT0 + Wi-Fi 5GHz ANT1 + nRF 2.4GHz ANT2 + Bluetooth ANT0                                     | Yes      | Yes           |
| Wi-Fi 6GHz ANT0 + Wi-Fi 6GHz ANT1 + nRF 2.4GHz ANT2 + Bluetooth ANT0                                     | Yes      | Yes           |
| Wi-Fi 2.4GHz ANT0 + Wi-Fi 2.4GHz ANT1 + Wi-Fi 5GHz ANT0 + Wi-Fi 5GHz ANT1 + nRF 2.4GHz ANT2              | Yes      | Yes           |
| Wi-Fi 2.4GHz ANT0 + Wi-Fi 2.4GHz ANT1 + Wi-Fi 6GHz ANT0 +Wi-Fi 6GHz ANT1 + nRF 2.4GHz ANT2               | Yes      | Yes           |
| Wi-Fi 5GHz ANT0 + Wi-Fi 5GHz ANT1 + Wi-Fi 6GHz ANT0 + Wi-Fi 6GHz ANT1 + nRF 2.4GHz ANT2 + Bluetooth ANT0 | Yes      | Yes           |
| Wi-Fi 5GHz ANT0 + Wi-Fi 5GHz ANT1 + nRF 2.4GHz ANT2 + Bluetooth ANT0                                     | Yes      | Yes           |

### General Note:

Per KDB 447498 D01 ,TER<1.

Address all applicable simultaneous transmission conditions using the compliance condition  $TER \leq 1$ , where TER (total exposure ratio) in this context is defined as:

$$TER = \sum_{k=1}^{N_s} \left( \frac{SAR_k}{SAR_{lim}} \right) + \sum_{k=1}^{N_f} \left( \frac{MPE_{field, k}}{MPE_{field, lim}} \right)^2 + \sum_{k=1}^{N_{PD}} \left( \frac{MPE_{PD, k}}{MPE_{PD, lim}} \right)$$

with  $N_s$ ,  $N_f$ , and  $N_{PD}$  referring to sources requiring SAR, field-MPE, or PD-MPE, respectively,  $k$  referring to measured or estimated values for the source  $k$ , and “lim” to the corresponding applicable compliance limit.

### The Maximum SAR Value (ANT0)

| SAR <sub>1g</sub> (W/kg) |      | Wi-Fi 5GHz |          |         |                        | Wi-Fi 6GHz |         |         |         |                        |
|--------------------------|------|------------|----------|---------|------------------------|------------|---------|---------|---------|------------------------|
|                          |      | U-NII-2A   | U-NII-2C | U-NII-3 | MAX. SAR <sub>1g</sub> | U-NII-5    | U-NII-6 | U-NII-7 | U-NII-8 | MAX. SAR <sub>1g</sub> |
| Head SAR                 | TS10 | 0.085      | 0.504    | 0.046   | 0.504                  | 0.016      | 0.107   | 0.055   | 0.038   | 0.107                  |

| SAR <sub>10g</sub> (W/kg) |                  | Wi-Fi 5GHz |          |         |                         | Wi-Fi 6GHz |         |         |         |                         |
|---------------------------|------------------|------------|----------|---------|-------------------------|------------|---------|---------|---------|-------------------------|
|                           |                  | U-NII-2A   | U-NII-2C | U-NII-3 | MAX. SAR <sub>10g</sub> | U-NII-5    | U-NII-6 | U-NII-7 | U-NII-8 | MAX. SAR <sub>10g</sub> |
| Extremity SAR             | Back Side        | N/A        | N/A      | N/A     | N/A                     | N/A        | N/A     | N/A     | N/A     | N/A                     |
|                           | Front Side1-TS8  | 0.614      | 0.577    | 0.537   | 0.614                   | 0.211      | 0.250   | 0.292   | 0.217   | 0.292                   |
|                           | Left Edge-TS4    | 0.155      | 0.087    | 0.106   | 0.155                   | 0.075      | 0.084   | 0.108   | 0.099   | 0.108                   |
|                           | Right Edge-TS5   | N/A        | N/A      | N/A     | N/A                     | N/A        | N/A     | N/A     | N/A     | N/A                     |
|                           | Top Edge1-TS6    | 0.088      | 0.024    | 0.035   | 0.088                   | 0.009      | 0.021   | 0.026   | 0.018   | 0.026                   |
|                           | Bottom Edge1-TS1 | 0.097      | 0.048    | 0.090   | 0.097                   | 0.056      | 0.047   | 0.078   | 0.051   | 0.078                   |
|                           | Bottom Edge3-TS3 | 0.012      | 0.011    | 0.017   | 0.017                   | 0.004      | 0.008   | 0.011   | 0.009   | 0.011                   |

### The Maximum SAR Value (ANT1)

| SAR <sub>1g</sub> (W/kg) |      | Wi-Fi 5GHz |          |         |                        | Wi-Fi 6GHz |         |         |         |                        |
|--------------------------|------|------------|----------|---------|------------------------|------------|---------|---------|---------|------------------------|
|                          |      | U-NII-2A   | U-NII-2C | U-NII-3 | MAX. SAR <sub>1g</sub> | U-NII-5    | U-NII-6 | U-NII-7 | U-NII-8 | MAX. SAR <sub>1g</sub> |
| Head SAR                 | TS10 | 0.127      | 0.140    | 0.176   | 0.176                  | 0.036      | 0.044   | 0.008   | 0.058   | 0.058                  |

| SAR <sub>10g</sub> (W/kg) |                  | Wi-Fi 5GHz |          |         |                         | Wi-Fi 6GHz |         |         |         |                         |
|---------------------------|------------------|------------|----------|---------|-------------------------|------------|---------|---------|---------|-------------------------|
|                           |                  | U-NII-2A   | U-NII-2C | U-NII-3 | MAX. SAR <sub>10g</sub> | U-NII-5    | U-NII-6 | U-NII-7 | U-NII-8 | MAX. SAR <sub>10g</sub> |
| Extremity SAR             | Back Side        | N/A        | N/A      | N/A     | N/A                     | N/A        | N/A     | N/A     | N/A     | N/A                     |
|                           | Front Side2-TS9  | 1.243      | 0.927    | 0.966   | 1.243                   | 0.208      | 0.135   | 0.155   | 0.157   | 0.208                   |
|                           | Left Edge-TS4    | N/A        | N/A      | N/A     | N/A                     | N/A        | N/A     | N/A     | N/A     | N/A                     |
|                           | Right Edge-TS5   | 0.760      | 0.681    | 0.647   | 0.760                   | 0.139      | 0.095   | 0.142   | 0.172   | 0.172                   |
|                           | Top Edge2-TS7    | 0.094      | 0.051    | 0.081   | 0.094                   | 0.020      | 0.014   | 0.015   | 0.016   | 0.020                   |
|                           | Bottom Edge2-TS2 | 0.093      | 0.088    | 0.070   | 0.093                   | 0.012      | 0.017   | 0.026   | 0.027   | 0.027                   |
|                           | Bottom Edge3-TS3 | 0.052      | 0.052    | 0.028   | 0.052                   | 0.005      | 0.004   | 0.005   | 0.007   | 0.007                   |



### About Wi-Fi / nRF 2.4GHz and Bluetooth Antenna for SAR

| SAR <sub>1g</sub> (W/kg) |      | Wi-Fi 2.4GHz |       | Wi-Fi 5GHz |       | Wi-Fi 6GHz |       | Bluetooth | nRF 2.4GHz | MAX. $\Sigma$ SAR <sub>1g</sub> |           |             |
|--------------------------|------|--------------|-------|------------|-------|------------|-------|-----------|------------|---------------------------------|-----------|-------------|
|                          |      | ANT0         | ANT1  | ANT0       | ANT1  | ANT0       | ANT1  | ANT0      | ANT2       |                                 |           |             |
|                          |      | 1            | 2     | 3          | 4     | 5          | 6     | 7         | 8          | 1+2+3+4+8                       | 1+2+5+6+8 | 3+4+5+6+7+8 |
| Head SAR                 | TS10 | 0.236        | 0.031 | 0.504      | 0.176 | 0.107      | 0.058 | 0.334     | 0.265      | 1.212                           | 0.697     | 1.444       |

Note:

1. The value with blue color is the maximum  $\Sigma$ SAR<sub>1g</sub> Value.

| SAR <sub>10g</sub> (W/kg) |                  | Wi-Fi 2.4GHz |       | Wi-Fi 5GHz |       | Wi-Fi 6GHz |       | Bluetooth | nRF 2.4GHz | MAX. $\Sigma$ SAR <sub>10g</sub> |           |             |
|---------------------------|------------------|--------------|-------|------------|-------|------------|-------|-----------|------------|----------------------------------|-----------|-------------|
|                           |                  | ANT0         | ANT1  | ANT0       | ANT1  | ANT0       | ANT1  | ANT0      | ANT2       |                                  |           |             |
|                           |                  | 1            | 2     | 3          | 4     | 5          | 6     | 7         | 8          | 1+2+3+4+8                        | 1+2+5+6+8 | 3+4+5+6+7+8 |
| Extremity SAR             | Back Side        | N/A          | N/A   | N/A        | N/A   | N/A        | N/A   | N/A       | N/A        | N/A                              | N/A       | N/A         |
|                           | Front Side1-TS8  | 0.699        | N/A   | 0.614      | N/A   | 0.292      | N/A   | 0.133     | 0.106      | 1.419                            | 1.097     | 1.145       |
|                           | Front Side2-TS9  | N/A          | 0.973 | N/A        | 1.243 | N/A        | 0.208 | N/A       | 0.106      | 2.322                            | 1.287     | 1.557       |
|                           | Left Edge-TS4    | 0.049        | N/A   | 0.155      | N/A   | 0.108      | N/A   | 0.133     | N/A        | 0.204                            | 0.157     | 0.396       |
|                           | Right Edge-TS5   | N/A          | 0.634 | N/A        | 0.760 | N/A        | 0.172 | N/A       | N/A        | 1.394                            | 0.806     | 0.932       |
|                           | Top Edge1-TS6    | 0.038        | N/A   | 0.088      | N/A   | 0.026      | N/A   | 0.133     | 0.106      | 0.232                            | 0.170     | 0.353       |
|                           | Top Edge2-TS7    | N/A          | 0.035 | N/A        | 0.094 | N/A        | 0.020 | N/A       | 0.106      | 0.235                            | 0.161     | 0.220       |
|                           | Bottom Edge1-TS1 | 0.079        | N/A   | 0.097      | N/A   | 0.078      | N/A   | 0.133     | N/A        | 0.176                            | 0.157     | 0.308       |
|                           | Bottom Edge2-TS2 | N/A          | 0.300 | N/A        | 0.093 | N/A        | 0.027 | N/A       | N/A        | 0.393                            | 0.327     | 0.120       |
|                           | Bottom Edge3-TS3 | 0.048        | 0.187 | 0.017      | 0.052 | 0.011      | 0.007 | 0.133     | N/A        | 0.304                            | 0.253     | 0.220       |

Note:

1. The value with blue color is the maximum  $\Sigma$ SAR<sub>10g</sub> Value.

MAX.  $\Sigma$ SAR<sub>1g</sub> = 1.444 W/kg < 1.6 W/kg and MAX.  $\Sigma$ SAR<sub>10g</sub> = 2.322 W/kg < 4 W/kg,

so the Simultaneous transmission SAR with volume scan are not required for Wi-Fi / nRF 2.4GHz and Bluetooth Antenna.

### About Wi-Fi Antenna and Bluetooth Antenna for PD

| Test Position |                 | SUM SAR <sub>10g</sub> (W/kg) |           | Wi-Fi 6GHz ANT1        |          | TER  |
|---------------|-----------------|-------------------------------|-----------|------------------------|----------|------|
|               |                 | Max. (1+2+5+8, 3+4+5+7+8)     | SAR Ratio | PD (W/m <sup>2</sup> ) | PD Ratio |      |
| Extremity SAR | Front Side1-TS8 | 1.145                         | 0.29      | 6.433                  | 0.64     | 0.98 |
|               | Front Side2-TS9 | 1.349                         | 0.34      |                        |          |      |

Note:

SAR Ratio = SAR<sub>10g</sub> / SAR<sub>10g</sub> Limit

SAR<sub>10g</sub> Limit = 4.0 W/kg

PD Ratio = PD / PD Limit

PD Limit = 10 W/m<sup>2</sup>

Thus TER = SAR Ratio + PD Ratio < 1, it is compliant with IEC/IEEE 62209-1528:2020, so the limit is kept.

# 11 Measurement Uncertainty

## For SAR

Measurement uncertainty evaluation template for DUT SAR test (Frequency band: 300MHz - 3GHz range)

| Symbol                               | Error Description                                    | Uncertainty value    | Probability Distribution | Div.       | ci (1 g) | ci (10 g) | Standard uncertainty (1 g) | Standard uncertainty (10 g) |
|--------------------------------------|------------------------------------------------------|----------------------|--------------------------|------------|----------|-----------|----------------------------|-----------------------------|
| <b>Measurement System Errors</b>     |                                                      |                      |                          |            |          |           |                            |                             |
| CF                                   | Probe Calibration                                    | $\pm 12.0\%$         | N                        | 2          | 1        | 1         | $\pm 6.0\%$                | $\pm 6.0\%$                 |
| CF <sub>drift</sub>                  | Probe Calibration Drift                              | $\pm 1.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| LIN                                  | Probe Linearity                                      | $\pm 4.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 2.7\%$                | $\pm 2.7\%$                 |
| BBS                                  | Broadband Signal                                     | $\pm 3.0\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.7\%$                | $\pm 1.7\%$                 |
| ISO                                  | Probe Isotropy                                       | $\pm 7.6\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 4.4\%$                | $\pm 4.4\%$                 |
| DAE                                  | Data Acquisition                                     | $\pm 0.3\%$          | N                        | 1          | 1        | 1         | $\pm 0.3\%$                | $\pm 0.3\%$                 |
| AMB                                  | RF Ambient                                           | $\pm 1.8\%$          | N                        | 1          | 1        | 1         | $\pm 1.8\%$                | $\pm 1.8\%$                 |
| $\Delta_{sys}$                       | Probe Positioning                                    | $\pm 0.006\text{mm}$ | N                        | 1          | 0.14     | 0.14      | $\pm 0.10\%$               | $\pm 0.10\%$                |
| DAT                                  | Data Processing                                      | $\pm 1.2\%$          | N                        | 1          | 1        | 1         | $\pm 1.2\%$                | $\pm 1.2\%$                 |
| <b>Phantom and Device Errors</b>     |                                                      |                      |                          |            |          |           |                            |                             |
| LIQ( $\sigma$ )                      | Conductivity (meas.) <sup>DAK</sup>                  | $\pm 2.5\%$          | N                        | 1          | 0.78     | 0.71      | $\pm 2.0\%$                | $\pm 1.8\%$                 |
| LIQ( $T_{\sigma}$ )                  | Conductivity (temp.) <sup>BB</sup>                   | $\pm 3.3\%$          | R                        | $\sqrt{3}$ | 0.78     | 0.71      | $\pm 1.5\%$                | $\pm 1.4\%$                 |
| EPS                                  | Phantom Permittivity                                 | $\pm 14.0\%$         | R                        | $\sqrt{3}$ | 0        | 0         | $\pm 0\%$                  | $\pm 0\%$                   |
| DIS                                  | Distance DUT - TSL                                   | $\pm 2.0\%$          | N                        | 1          | 2        | 2         | $\pm 4.0\%$                | $\pm 4.0\%$                 |
| D <sub>xyz</sub>                     | Device Positioning                                   | $\pm 1.0\%$          | N                        | 1          | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| H                                    | Device Holder                                        | $\pm 3.6\%$          | N                        | 1          | 1        | 1         | $\pm 3.6\%$                | $\pm 3.6\%$                 |
| MOD                                  | DUT Modulation <sup>m</sup>                          | $\pm 2.4\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.4\%$                | $\pm 1.4\%$                 |
| TAS                                  | Time-average SAR                                     | $\pm 1.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| RF <sub>drift</sub>                  | DUT drift                                            | $\pm 2.5\%$          | N                        | 1          | 1        | 1         | $\pm 2.5\%$                | $\pm 2.5\%$                 |
| VAL                                  | Val Antenna Unc. <sup>val</sup>                      | $\pm 0.0\%$          | N                        | 1          | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| P <sub>in</sub>                      | Unc. In accepted power (validation measurement only) | $\pm 0.0\%$          | N                        | 1          | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| <b>Correction to the SAR results</b> |                                                      |                      |                          |            |          |           |                            |                             |
| C( $\epsilon$ , $\sigma$ )           | Deviation to Target                                  | $\pm 1.9\%$          | N                        | 1          | 1        | 0.84      | $\pm 1.9\%$                | $\pm 1.6\%$                 |
| C(R)                                 | SAR scaling <sup>p</sup>                             | $\pm 0\%$            | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| u( $\Delta$ SAR)                     | Combined Uncertainty                                 |                      |                          |            |          |           | $\pm 10.9\%$               | $\pm 10.9\%$                |
| U                                    | Expanded Uncertainty                                 |                      |                          |            |          |           | $\pm 21.9\%$               | $\pm 21.8\%$                |

## Measurement uncertainty evaluation template for DUT SAR test (Frequency band: 3GHz - 6GHz range)

| Symbol                               | Error Description                                    | Uncertainty value    | Probability Distribution | Div.       | ci (1 g) | ci (10 g) | Standard uncertainty (1 g) | Standard uncertainty (10 g) |
|--------------------------------------|------------------------------------------------------|----------------------|--------------------------|------------|----------|-----------|----------------------------|-----------------------------|
| <b>Measurement System Errors</b>     |                                                      |                      |                          |            |          |           |                            |                             |
| CF                                   | Probe Calibration                                    | $\pm 13.1\%$         | N                        | 2          | 1        | 1         | $\pm 6.55\%$               | $\pm 6.55\%$                |
| CF <sub>drift</sub>                  | Probe Calibration Drift                              | $\pm 1.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| LIN                                  | Probe Linearity                                      | $\pm 4.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 2.7\%$                | $\pm 2.7\%$                 |
| BBS                                  | Broadband Signal                                     | $\pm 2.6\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.5\%$                | $\pm 1.5\%$                 |
| ISO                                  | Probe Isotropy                                       | $\pm 7.6\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 4.4\%$                | $\pm 4.4\%$                 |
| DAE                                  | Data Acquisition                                     | $\pm 0.3\%$          | N                        | 1          | 1        | 1         | $\pm 0.3\%$                | $\pm 0.3\%$                 |
| AMB                                  | RF Ambient                                           | $\pm 1.8\%$          | N                        | 1          | 1        | 1         | $\pm 1.8\%$                | $\pm 1.8\%$                 |
| $\Delta_{sys}$                       | Probe Positioning                                    | $\pm 0.005\text{mm}$ | N                        | 1          | 0.29     | 0.29      | $\pm 0.15\%$               | $\pm 0.15\%$                |
| DAT                                  | Data Processing                                      | $\pm 2.3\%$          | N                        | 1          | 1        | 1         | $\pm 2.3\%$                | $\pm 2.3\%$                 |
| <b>Phantom and Device Errors</b>     |                                                      |                      |                          |            |          |           |                            |                             |
| LIQ( $\sigma$ )                      | Conductivity (meas.) <sup>DAK</sup>                  | $\pm 2.5\%$          | N                        | 1          | 0.78     | 0.71      | $\pm 2.0\%$                | $\pm 1.8\%$                 |
| LIQ( $T_{\sigma}$ )                  | Conductivity (temp.) <sup>BB</sup>                   | $\pm 3.4\%$          | R                        | $\sqrt{3}$ | 0.78     | 0.71      | $\pm 1.5\%$                | $\pm 1.4\%$                 |
| EPS                                  | Phantom Permittivity                                 | $\pm 14.0\%$         | R                        | $\sqrt{3}$ | 0.25     | 0.25      | $\pm 2.0\%$                | $\pm 2.0\%$                 |
| DIS                                  | Distance DUT - TSL                                   | $\pm 2.0\%$          | N                        | 1          | 2        | 2         | $\pm 4.0\%$                | $\pm 4.0\%$                 |
| D <sub>xyz</sub>                     | Device Positioning                                   | $\pm 1.0\%$          | N                        | 1          | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| H                                    | Device Holder                                        | $\pm 3.6\%$          | N                        | 1          | 1        | 1         | $\pm 3.6\%$                | $\pm 3.6\%$                 |
| MOD                                  | DUT Modulation <sup>m</sup>                          | $\pm 2.4\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.4\%$                | $\pm 1.4\%$                 |
| TAS                                  | Time-average SAR                                     | $\pm 1.7\%$          | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 1.0\%$                | $\pm 1.0\%$                 |
| RF <sub>drift</sub>                  | DUT drift                                            | $\pm 2.5\%$          | N                        | 1          | 1        | 1         | $\pm 2.5\%$                | $\pm 2.5\%$                 |
| VAL                                  | Val Antenna Unc. <sup>val</sup>                      | $\pm 0.0\%$          | N                        | 1          | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| P <sub>in</sub>                      | Unc. In accepted power (validation measurement only) | $\pm 0.0\%$          | N                        | 1          | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| <b>Correction to the SAR results</b> |                                                      |                      |                          |            |          |           |                            |                             |
| C( $\epsilon$ , $\sigma$ )           | Deviation to Target                                  | $\pm 1.9\%$          | N                        | 1          | 1        | 0.84      | $\pm 1.9\%$                | $\pm 1.6\%$                 |
| C(R)                                 | SAR scaling <sup>p</sup>                             | $\pm 0\%$            | R                        | $\sqrt{3}$ | 1        | 1         | $\pm 0\%$                  | $\pm 0\%$                   |
| u( $\Delta$ SAR)                     | Combined Uncertainty                                 |                      |                          |            |          |           | $\pm 11.6\%$               | $\pm 11.5\%$                |
| U                                    | Expanded Uncertainty                                 |                      |                          |            |          |           | $\pm 23.2\%$               | $\pm 23.0\%$                |

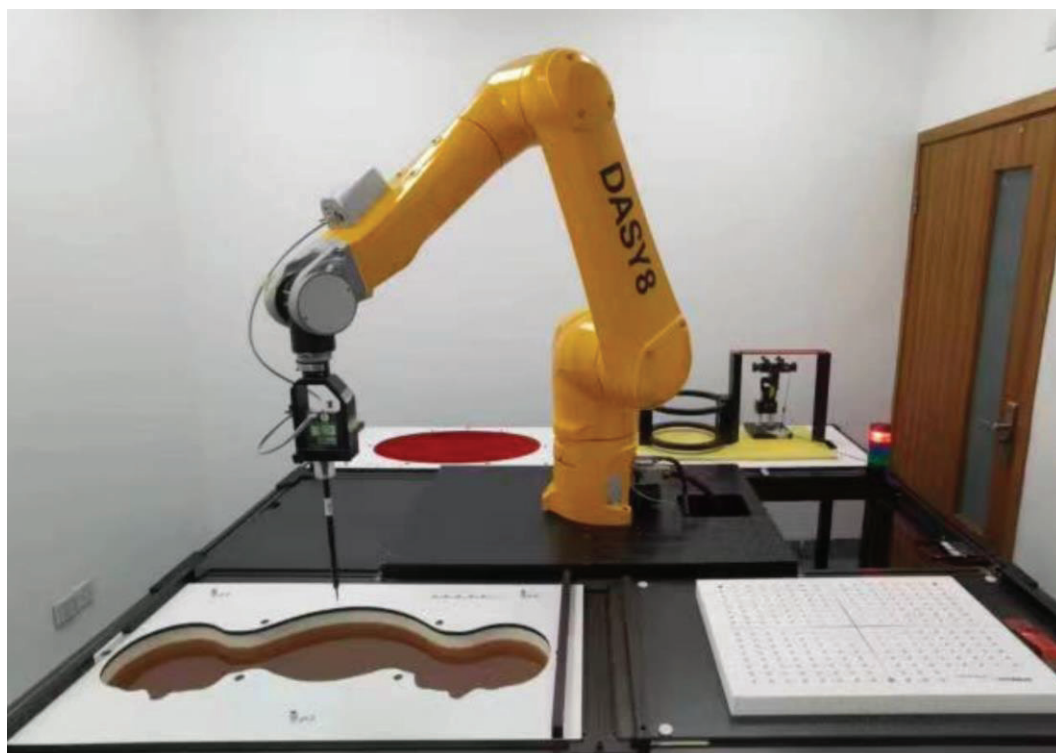
# For PD

| DASY8 Uncertainty Budget for PD (avg $\geq 1 \text{ cm}^2$ )            |                                                       |           |                 |            |      |                              |          |
|-------------------------------------------------------------------------|-------------------------------------------------------|-----------|-----------------|------------|------|------------------------------|----------|
| Evaluation Distances to the Antennas $\leq \lambda/5$                   |                                                       |           |                 |            |      |                              |          |
| Error Description                                                       |                                                       | Unc.value | Probab. Distri. | Div        | (Ci) | Std.Unc. ( $\pm \text{dB}$ ) | (vi)veff |
| <b>Uncertainty terms dependent on the measurement system</b>            |                                                       |           |                 |            |      |                              | $\infty$ |
| CAL                                                                     | Calibration                                           | 0.98      | N               | 1          | 1    | 0.98                         | $\infty$ |
| COR                                                                     | Probe correction                                      | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| FRS                                                                     | Frequency response ( $\text{BW} \leq 1 \text{ GHz}$ ) | 0.2       | R               | $\sqrt{3}$ | 1    | 0.12                         | $\infty$ |
| SCC                                                                     | Sensor cross coupling                                 | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| ISO                                                                     | Isotropy                                              | 0.5       | R               | $\sqrt{3}$ | 1    | 0.29                         | $\infty$ |
| LIN                                                                     | Linearity                                             | 0.2       | R               | $\sqrt{3}$ | 1    | 0.12                         | $\infty$ |
| PSC                                                                     | Probe scattering                                      | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| PPO                                                                     | Probe positioning offset                              | 0.3       | R               | $\sqrt{3}$ | 1    | 0.17                         | $\infty$ |
| PPR                                                                     | Probe positioning repeatability                       | 0.04      | R               | $\sqrt{3}$ | 1    | 0.02                         | $\infty$ |
| SMO                                                                     | Sensor mechanical offset                              | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| PSR                                                                     | Probe spatial resolution                              | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| FLD                                                                     | Field impedance dependence                            | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| APD                                                                     | Amplitude and phase drift                             | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| APN                                                                     | Amplitude and phase noise                             | 0.04      | R               | $\sqrt{3}$ | 1    | 0.02                         | $\infty$ |
| TR                                                                      | Measurement area truncation                           | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| DAQ                                                                     | Data acquisition                                      | 0.03      | N               | 1          | 1    | 0.03                         | $\infty$ |
| SMP                                                                     | Sampling                                              | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| REC                                                                     | Field reconstruction                                  | 0.6       | R               | $\sqrt{3}$ | 1    | 0.35                         | $\infty$ |
| TRA                                                                     | FTE/MEO                                               | 0(0.7)    | R               | $\sqrt{3}$ | 1    | 0 (0.4)                      | $\infty$ |
| SCA                                                                     | Power density scaling                                 | -         | R               | $\sqrt{3}$ | 1    | -                            | $\infty$ |
| SAV                                                                     | Spatial averaging                                     | 0.1       | R               | $\sqrt{3}$ | 1    | 0.06                         | $\infty$ |
| SDL                                                                     | System detection limit                                | 0.04      | R               | $\sqrt{3}$ | 1    | 0.02                         | $\infty$ |
| <b>Uncertainty terms dependent on the DUT and environmental factors</b> |                                                       |           |                 |            |      |                              |          |
| PC                                                                      | Probe coupling with DUT                               | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| MOD                                                                     | Modulation response                                   | 0.4       | R               | $\sqrt{3}$ | 1    | 0.23                         | $\infty$ |
| IT                                                                      | Integration time                                      | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| RT                                                                      | Response time                                         | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| DH                                                                      | Device holder influenc                                | 0.1       | R               | $\sqrt{3}$ | 1    | 0.06                         | $\infty$ |
| DA                                                                      | DUT alignment                                         | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| AC                                                                      | RF ambient conditions                                 | 0.04      | R               | $\sqrt{3}$ | 1    | 0.02                         | $\infty$ |
| AR                                                                      | Ambient reflections                                   | 0.04      | R               | $\sqrt{3}$ | 1    | 0.02                         | $\infty$ |
| MSI                                                                     | Immunity / secondary reception                        | 0         | R               | $\sqrt{3}$ | 1    | 0                            | $\infty$ |
| DRI                                                                     | Drift of the DUT                                      | -         | R               | $\sqrt{3}$ | 1    | -                            | $\infty$ |
| Combined Std Uncertainty                                                |                                                       |           |                 |            |      | 1.24                         |          |
| Expanded Std Uncertainty (95%)                                          |                                                       |           |                 |            |      | 1.99                         |          |

## ANNEX A: Test Layout



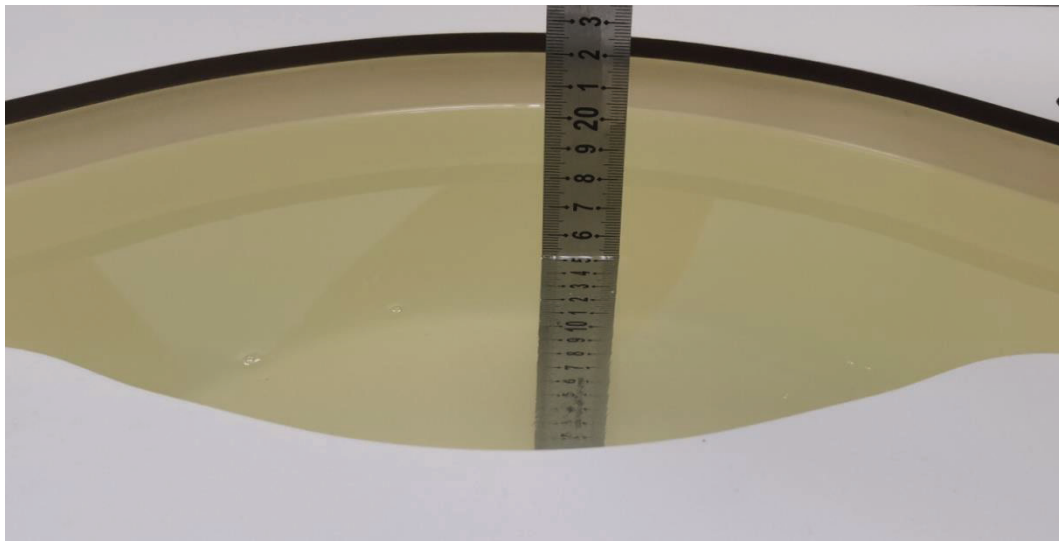
DASY 5 test system



DASY 8 test system

**Tissue Simulating Liquids**

For the measurement of the field distribution inside the flat phantom with DASY, the phantom must be filled with around 25 liters of homogeneous tissue simulating liquid. For SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is  $>15$  cm, which is shown as below.



Picture 3: Liquid depth in the flat Phantom

## ANNEX B: System Check Results

### Plot 1 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2

Date: 2024/12/26

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.78$  S/m;  $\epsilon_r = 40.76$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.62, 8.01, 8.14); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 14.01 W/kg

**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.461V/m; Power Drift = 0.06 dB

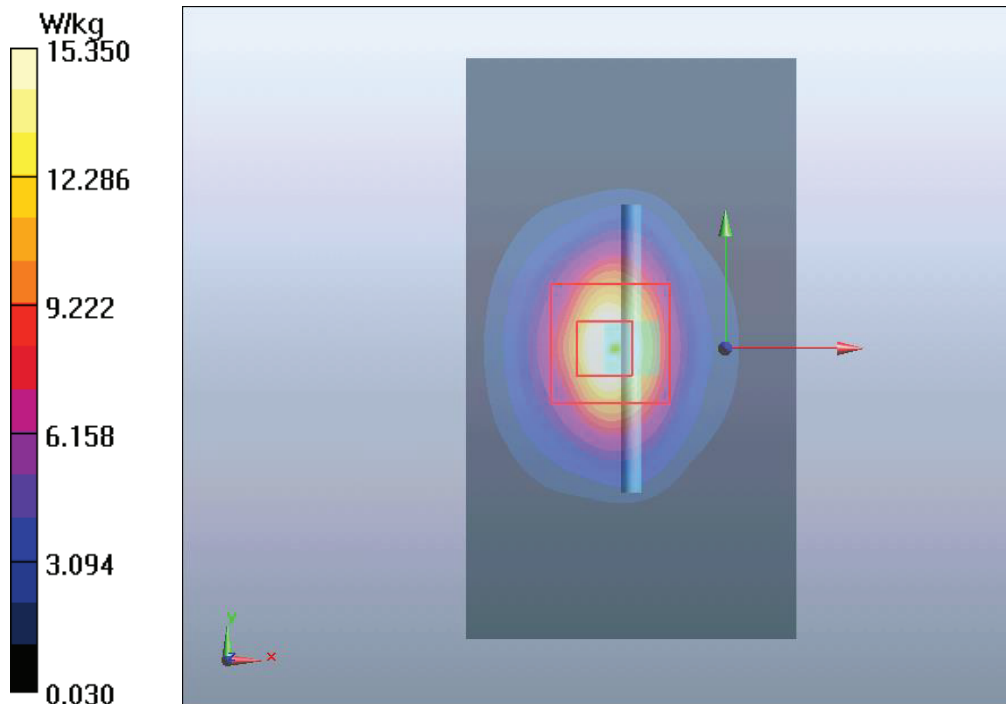
Peak SAR (extrapolated) = 28.46 W/kg

**SAR(1 g) = 13.52 W/kg; SAR(10 g) = 6.17 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 50.1%

Maximum value of SAR (measured) = 15.35 W/kg



**Plot 2 System Performance Check at 5250 MHz TSL**

**DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2024/12/26

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.49$  S/m;  $\epsilon_r = 34.65$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.87, 6.17, 6.27); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 9.14 W/kg

**d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 36.428 V/m; Power Drift = -0.15 dB

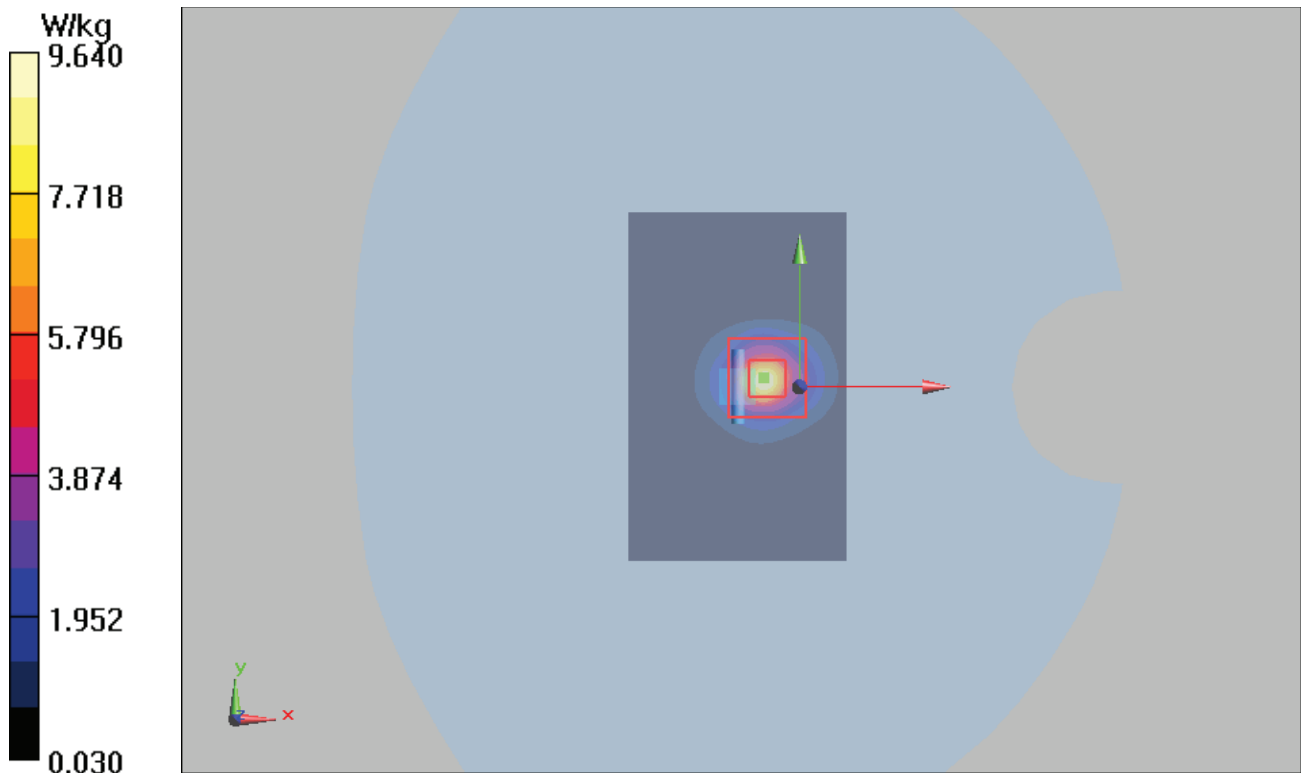
Peak SAR (extrapolated) = 50.15 W/kg

**SAR(1 g) = 7.54 W/kg; SAR(10 g) = 2.27 W/kg**

Smallest distance from peaks to all points 3 dB below = 7 mm

Ratio of SAR at M2 to SAR at M1 = 65.3%

Maximum value of SAR (measured) = 9.64 W/kg





### Plot 3 System Performance Check at 5600 MHz TSL

**DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2024/12/28

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 4.87$  S/m;  $\epsilon_r = 34.02$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.33, 5.60, 5.70); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.25 W/kg

**d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 23.142 V/m; Power Drift = -0.028 dB

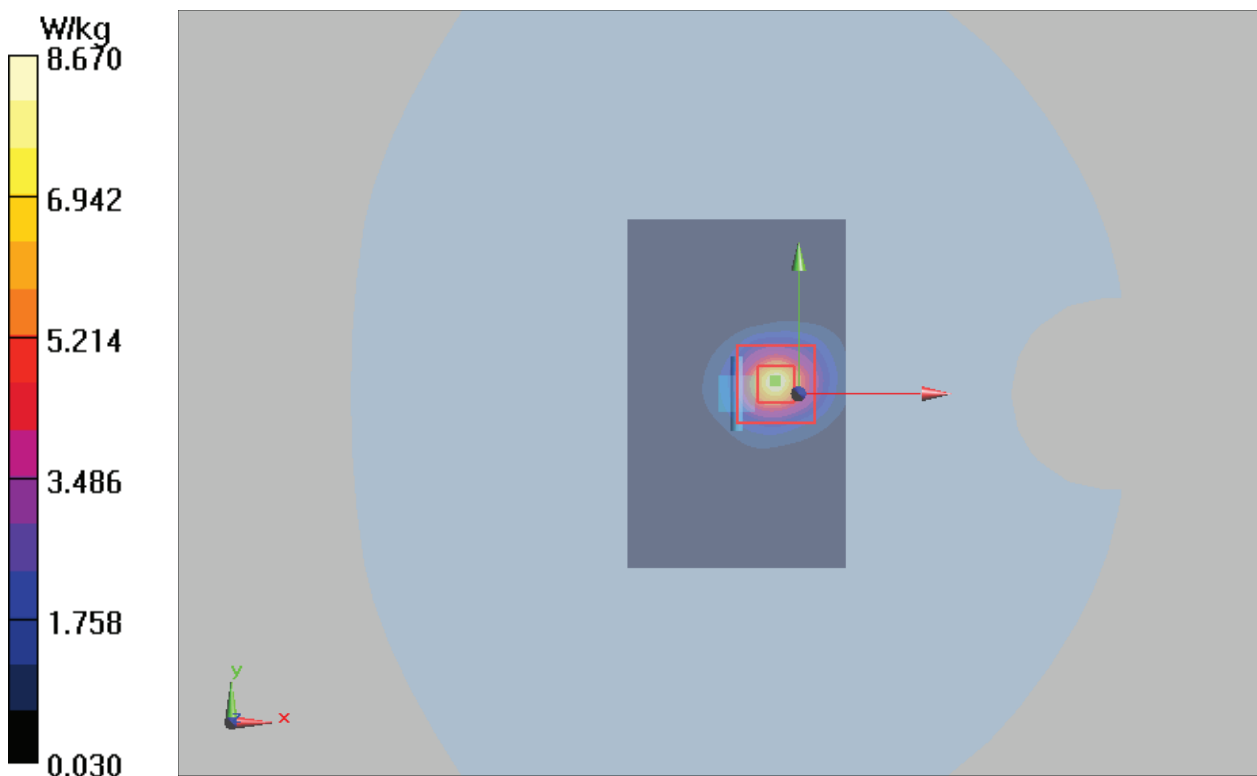
Peak SAR (extrapolated) = 22.9 W/kg

**SAR(1 g) = 7.67 W/kg; SAR(10 g) = 2.27 W/kg**

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 61.9%

Maximum value of SAR (measured) = 8.67 W/kg



**Plot 4 System Performance Check at 5750 MHz TSL**

**DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2024/12/2

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.05$  S/m;  $\epsilon_r = 33.77$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.31, 5.59, 5.68); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 W/kg

**d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 25.26 V/m; Power Drift = 0.044 dB

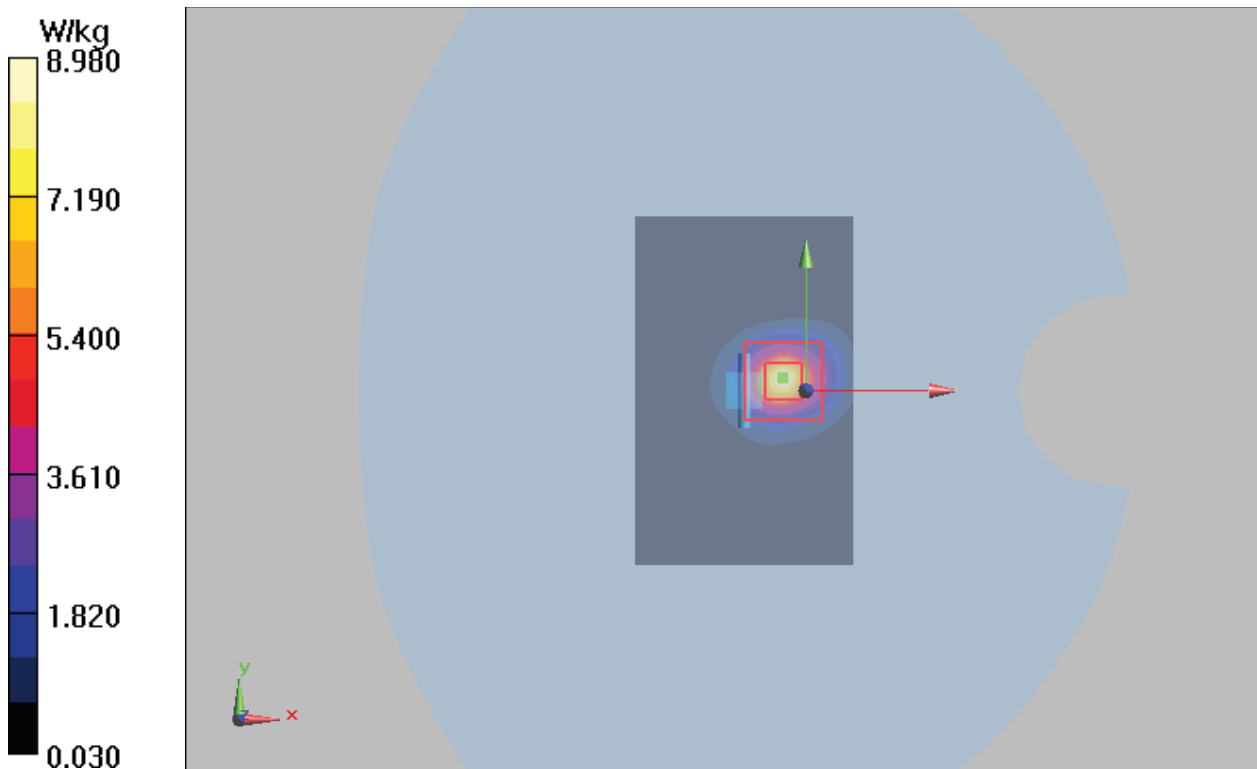
Peak SAR (extrapolated) = 23.4 W/kg

**SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.27 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.8 mm

Ratio of SAR at M2 to SAR at M1 = 59.4%

Maximum value of SAR (measured) = 8.98 W/kg



## Plot 5 System Performance Check at 6500 MHz TSL

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm] | IMEI | DUT Type |
|---------------------|-----------------|------|----------|
| Device,             | 16 x 6 x 300    | 1046 | -        |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL            | 5.00                         |      | CW, 0--    | 6500.0, 0                       | 6.03              | 5.91                   | 32.49            |

### Hardware Setup

| Phantom                                 | TSL, Measured  | Probe, Calibration Date     | DAE, Calibration Date   |
|-----------------------------------------|----------------|-----------------------------|-------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2072 | HBBL-600-10000 | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

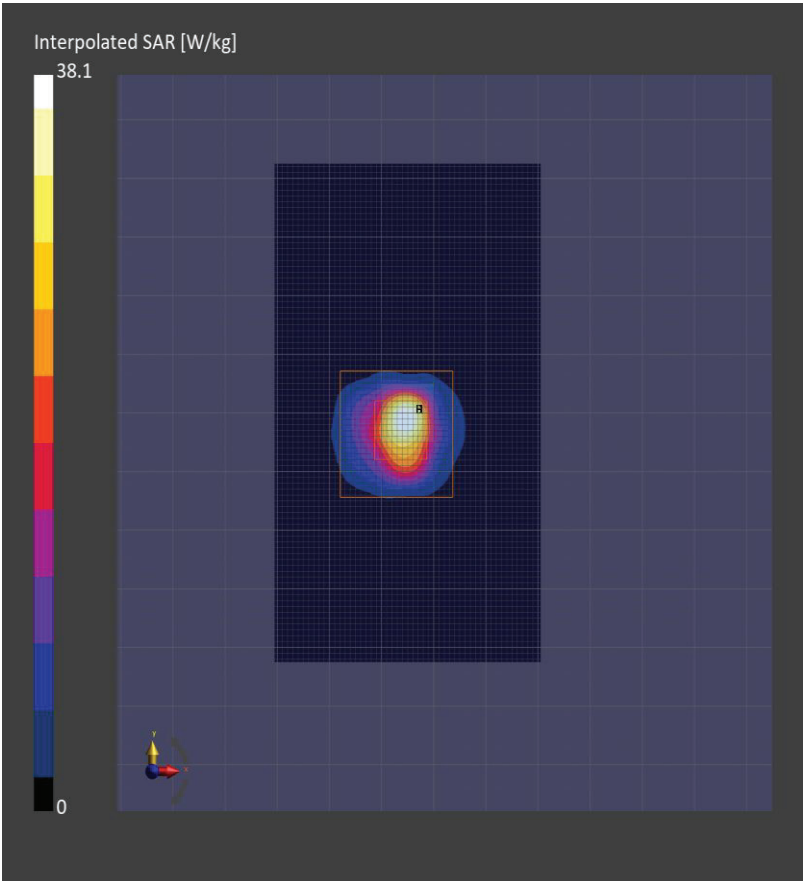
### Scans Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 51.0 x 85.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]     | 8.5 x 8.5   | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | n/a         | Yes                |
| Grading Ratio       | n/a         | 1.4                |
| MAIA                | N/A         | N/A                |
| Surface Detection   | VMS + 6p    | All points         |
| Scan Method         | Measured    | Measured           |

### Measurement Results

|                  | Area Scan  | Zoom Scan  |
|------------------|------------|------------|
| Date             | 2024-12-07 | 2024-12-07 |
| psSAR1g [W/Kg]   | 23.6       | 30.4       |
| psSAR10g [W/Kg]  | 5.14       | 5.79       |
| Power Drift [dB] | -0.02      | -0.09      |
| Power Scaling    | Disabled   | Disabled   |

|                     |               |               |
|---------------------|---------------|---------------|
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 55.2          |
| Dist 3dB Peak [mm]  |               | 4.8           |



## Plot 6 System Performance Check at 6500 MHz TSL

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm] | IMEI | DUT Type |
|---------------------|-----------------|------|----------|
| Device,             | 16 x 6 x 300    | 1046 | -        |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL            | ,                            |      | CW, 0--    | 6500.0, 0                       | 5.95              | 5.94                   | 32.48            |

### Hardware Setup

| Phantom                                 | TSL, Measured Date | Probe, Calibration Date     | DAE, Calibration Date   |
|-----------------------------------------|--------------------|-----------------------------|-------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2072 | HBBL-600-10000     | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

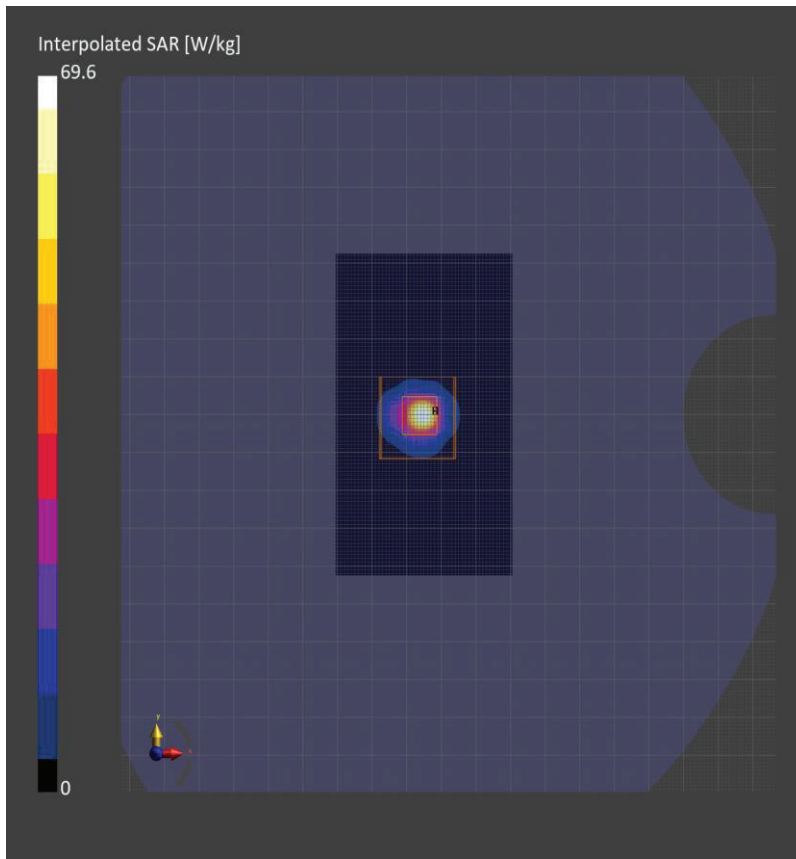
### Scans Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 51.0 x 85.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]     | 8.5 x 8.5   | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | n/a         | Yes                |
| Grading Ratio       | n/a         | 1.4                |
| MAIA                | N/A         | N/A                |
| Surface Detection   | VMS + 6p    | All points         |
| Scan Method         | Measured    | Measured           |

### Measurement Results

|                  | Area Scan  | Zoom Scan  |
|------------------|------------|------------|
| Date             | 2024-12-09 | 2024-12-09 |
| psSAR1g [W/Kg]   | 24.65      | 30.34      |
| psSAR10g [W/Kg]  | 4.77       | 5.22       |
| Power Drift [dB] | 0.04       | 0.02       |

|                     |               |               |
|---------------------|---------------|---------------|
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 52.6          |
| Dist 3dB Peak [mm]  |               | 4.8           |



## Plot 7 System Performance Check at 6500 MHz TSL

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm] | IMEI | DUT Type |
|---------------------|-----------------|------|----------|
| Device,             | 16 x 6 x 300    | 1046 | -        |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL            | ,                            |      | CW, 0--    | 6500.0, 0                       | 5.95              | 5.96                   | 32.48            |

### Hardware Setup

| Phantom                                 | TSL, Measured Date | Probe, Calibration Date     | DAE, Calibration Date   |
|-----------------------------------------|--------------------|-----------------------------|-------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2072 | HBBL-600-10000     | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

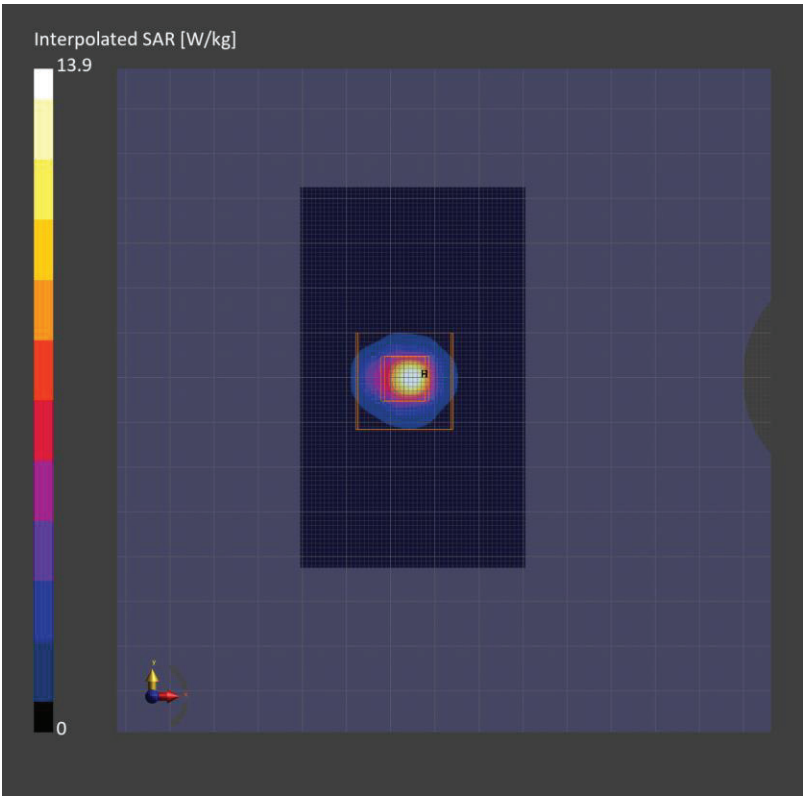
### Scans Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 51.0 x 85.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]     | 8.5 x 8.5   | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | n/a         | Yes                |
| Grading Ratio       | n/a         | 1.4                |
| MAIA                | N/A         | N/A                |
| Surface Detection   | VMS + 6p    | All points         |
| Scan Method         | Measured    | Measured           |

### Measurement Results

|                  | Area Scan  | Zoom Scan  |
|------------------|------------|------------|
| Date             | 2024-12-27 | 2024-12-27 |
| psSAR1g [W/Kg]   | 24.68      | 30.35      |
| psSAR10g [W/Kg]  | 4.75       | 5.27       |
| Power Drift [dB] | -0.03      | -0.01      |

|                     |               |               |
|---------------------|---------------|---------------|
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 51.8          |
| Dist 3dB Peak [mm]  |               | 5.0           |





## Plot 8 Measurement Report for Device, CW, Channel 0 (6500.000 MHz)

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm] | IMEI | DUT Type |
|---------------------|-----------------|------|----------|
| Device,             | N/A x N/A x N/A |      | -        |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|------|------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL            | ,                            |      | CW, 0--    | 6500.000, 0                     | 5.85              | 5.94                   | 32.48            |

### Hardware Setup

| Phantom                                 | TSL, Measured Date | Probe, Calibration Date     | DAE, Calibration Date   |
|-----------------------------------------|--------------------|-----------------------------|-------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2072 | HBBL-600-10000     | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

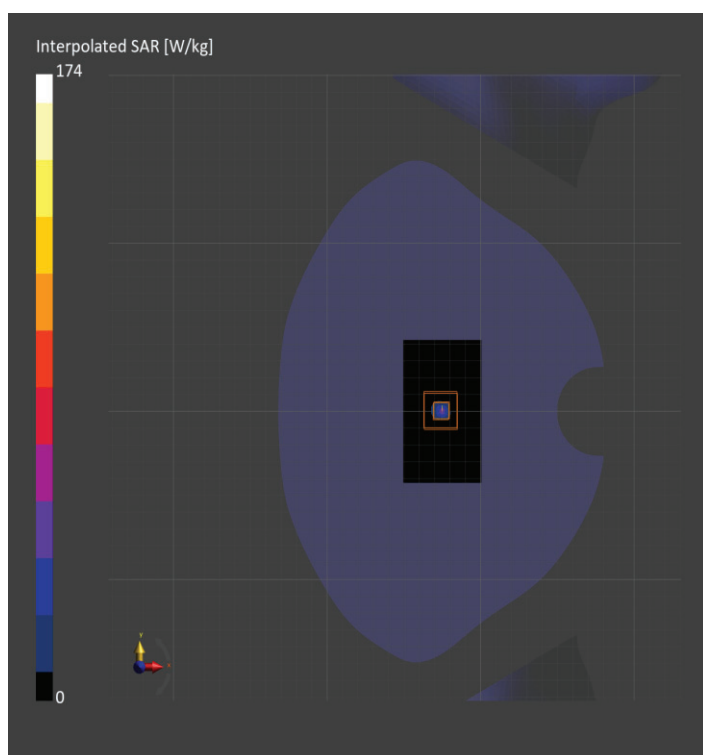
### Scans Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 51.0 x 85.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]     | 8.5 x 8.5   | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | N/A         | Yes                |
| Grading Ratio       | N/A         | 1.4                |
| MAIA                | N/A         | N/A                |
| Surface Detection   | VMS + 6p    | VMS + 6p           |
| Scan Method         | Measured    | Measured           |

### Measurement Results

|                 | Area Scan  | Zoom Scan  |
|-----------------|------------|------------|
| Date            | 2024-12-07 | 2024-12-07 |
| psSAR1g [W/kg]  | 24.7       | 28.1       |
| psSAR10g [W/kg] | 4.78       | 5.25       |

|                           |               |               |
|---------------------------|---------------|---------------|
| psAPD (1.0cm2, sq) [W/m2] |               | 281           |
| psAPD (4.0cm2, sq) [W/m2] |               | 128           |
| Power Drift [dB]          | -0.02         | 0.01          |
| Power Scaling             | Disabled      | Disabled      |
| Scaling Factor [dB]       |               |               |
| TSL Correction            | No correction | No correction |
| M2/M1 [%]                 |               | 52.6          |
| Dist 3dB Peak [mm]        |               | 4.8           |



## Plot 9 Measurement Report for Device, BACK, Validation band, CW, Channel 10000 (10000.0 MHz)

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm]       | IMEI | DUT Type |
|---------------------|-----------------------|------|----------|
| Device,             | 100.0 x 100.0 x 172.0 | 1054 | -        |

### Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band            | Group, UID | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|-----------------|------------|---------------------------------|-------------------|
| 5G              | BACK, 10.00                  | Validation band | CW, 0--    | 10000.0, 10000                  | 1.0               |

### Hardware Setup

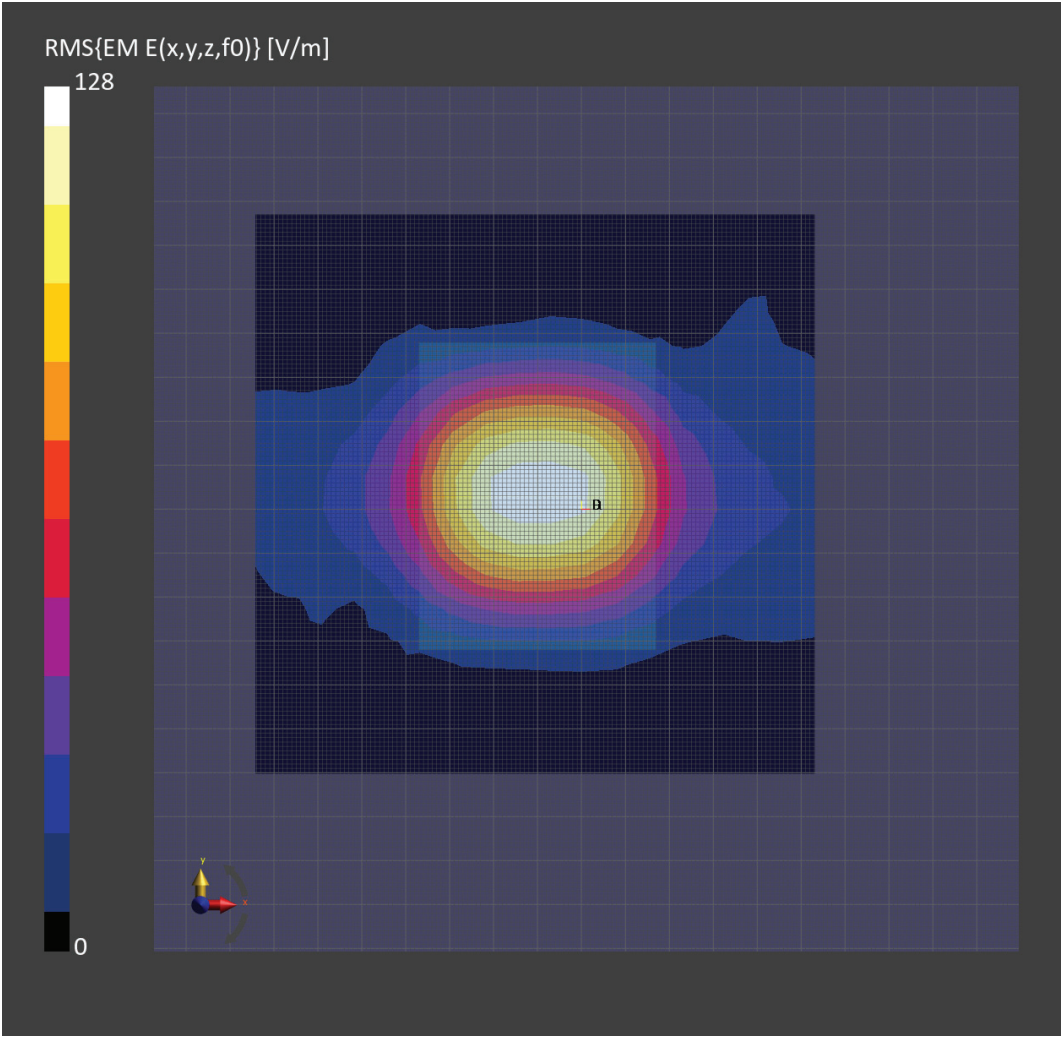
| Phantom       | Medium | Probe, Calibration Date               | DAE, Calibration Date   |
|---------------|--------|---------------------------------------|-------------------------|
| mmWave - xxxx | Air -  | EUmmWV4 - SN9642_F1-55GHz, 2024-07-10 | DAE4 Sn1291, 2024-04-12 |

### Scans Setup

|                     |               |
|---------------------|---------------|
| Scan Type           | 5G Scan       |
| Grid Extents [mm]   | 120.0 x 120.0 |
| Grid Steps [lambda] | 0.25 x 0.25   |
| Sensor Surface [mm] | 10.0          |
| MAIA                | Y             |

### Measurement Results

|                              |            |
|------------------------------|------------|
| Scan Type                    | 5G Scan    |
| Date                         | 2024-12-07 |
| Avg. Area [cm <sup>2</sup> ] | 1.00       |
| psPDn+ [W/m <sup>2</sup> ]   | 51.2       |
| psPDtot+ [W/m <sup>2</sup> ] | 51.3       |
| psPDmod+ [W/m <sup>2</sup> ] | 51.6       |
| E <sub>max</sub> [V/m]       | 126        |
| Power Drift [dB]             | 0.03       |



## ANNEX C: Highest Graph Results

Plot 10 Measurement Report for Device, DEFAULT, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps), Channel 1 (2412.000 MHz)

### Device Under Test Properties

|                     |                     |      |          |
|---------------------|---------------------|------|----------|
| Model, Manufacturer | Dimensions [mm]     | IMEI | DUT Type |
| Device,             | 170.0 x 90.0 x 60.0 |      | Other    |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band        | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-------------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Facedown, HSL        | DEFAULT, 0.00                | WLAN 2.4GHz | WLAN, 10012-CAB | 2412.000, 1                     | 7.62              | 1.79                   | 41.0             |

### Hardware Setup

| Phantom                   | TSL, Measured Date             | Probe, Calibration Date     | DAE, Calibration Date   |
|---------------------------|--------------------------------|-----------------------------|-------------------------|
| SAM-FaceDown V10.0 - xxxx | HBBL-600-10000 Charge:xxxx, -- | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

### Scans Setup

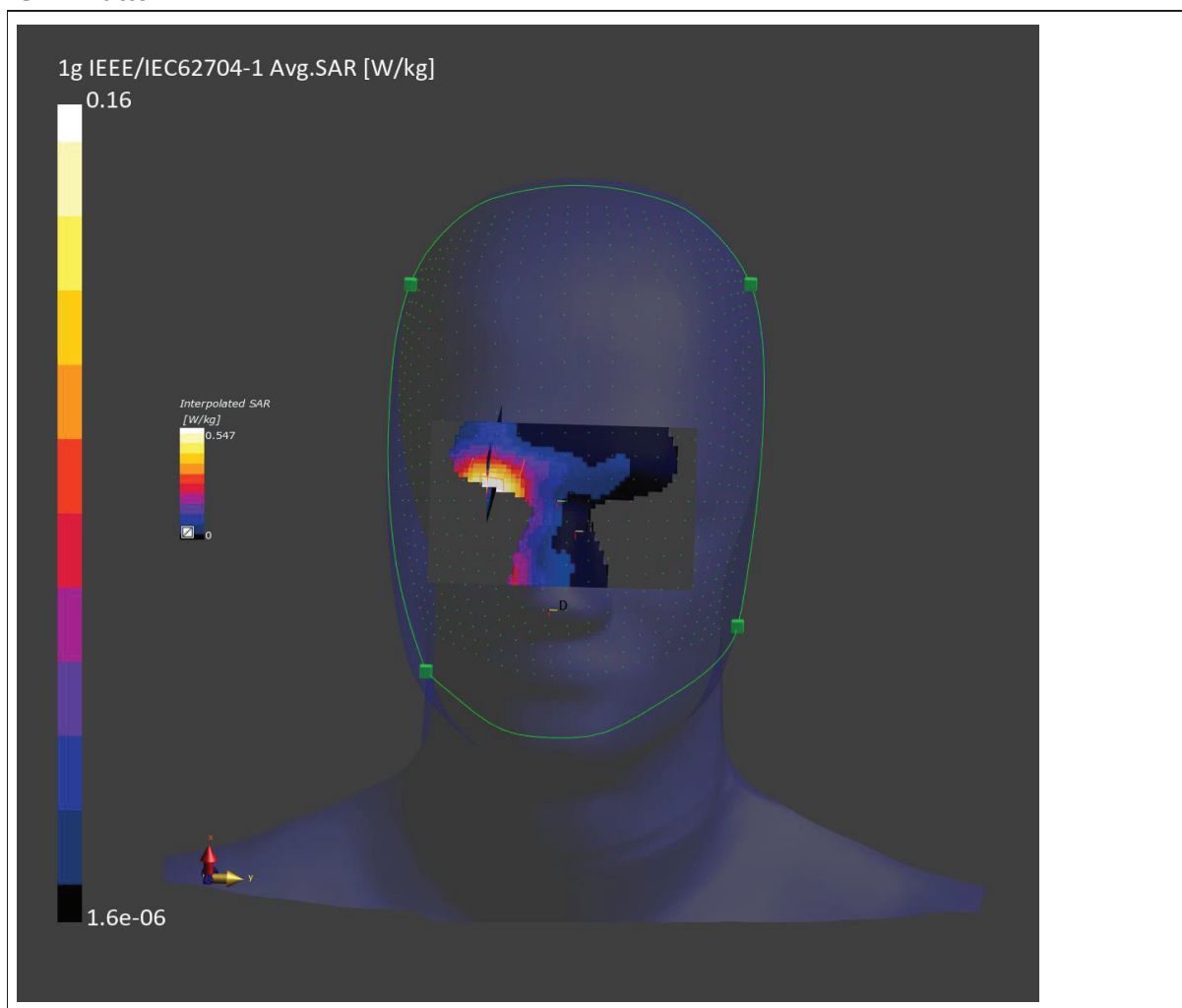
|                     | FastVolume Scan | Zoom Scan          |
|---------------------|-----------------|--------------------|
| Grid Extents [mm]   | 190 x 120       | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0     | 5.0 x 5.0 x 1.5    |
| Sensor Surface [mm] | 3.0             | 3.0                |
| Graded Grid         | N/A             | Yes                |
| Grading Ratio       | N/A             | 1.5                |
| MAIA                | Y               | N/A                |
| Surface Detection   | VMS             | VMS + 6p           |
| Scan Method         | Measured        | Measured           |

### Measurement Results

|      | FastVolume Scan | Zoom Scan  |
|------|-----------------|------------|
| Date | 2024-12-28      | 2024-12-28 |

|                     |               |               |
|---------------------|---------------|---------------|
| psSAR1g [W/Kg]      | 0.160         | 0.198         |
| psSAR10g [W/Kg]     | 0.082         | 0.075         |
| Power Drift [dB]    | -1.68         | -0.36         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 77.3          |
| Dist 3dB Peak [mm]  |               | 6.6           |

## SAR Pattern



## Plot 11 Measurement Report for Device, DEFAULT, WLAN 5GHz, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps), Channel 100 (5500.000 MHz)

### Device Under Test Properties

|                     |                     |      |          |
|---------------------|---------------------|------|----------|
| Model, Manufacturer | Dimensions [mm]     | IMEI | DUT Type |
| Device,             | 170.0 x 90.0 x 60.0 |      | Other    |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band      | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|-----------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Facedown, HSL        | DEFAULT, 0.00                | WLAN 5GHz | WLAN, 10062-CAE | 5500.000, 100                   | 5.33              | 4.88                   | 35.8             |

### Hardware Setup

| Phantom                   | TSL, Measured Date             | Probe, Calibration Date     | DAE, Calibration Date   |
|---------------------------|--------------------------------|-----------------------------|-------------------------|
| SAM-FaceDown V10.0 - xxxx | HBBL-600-10000 Charge:xxxx, -- | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

### Scans Setup

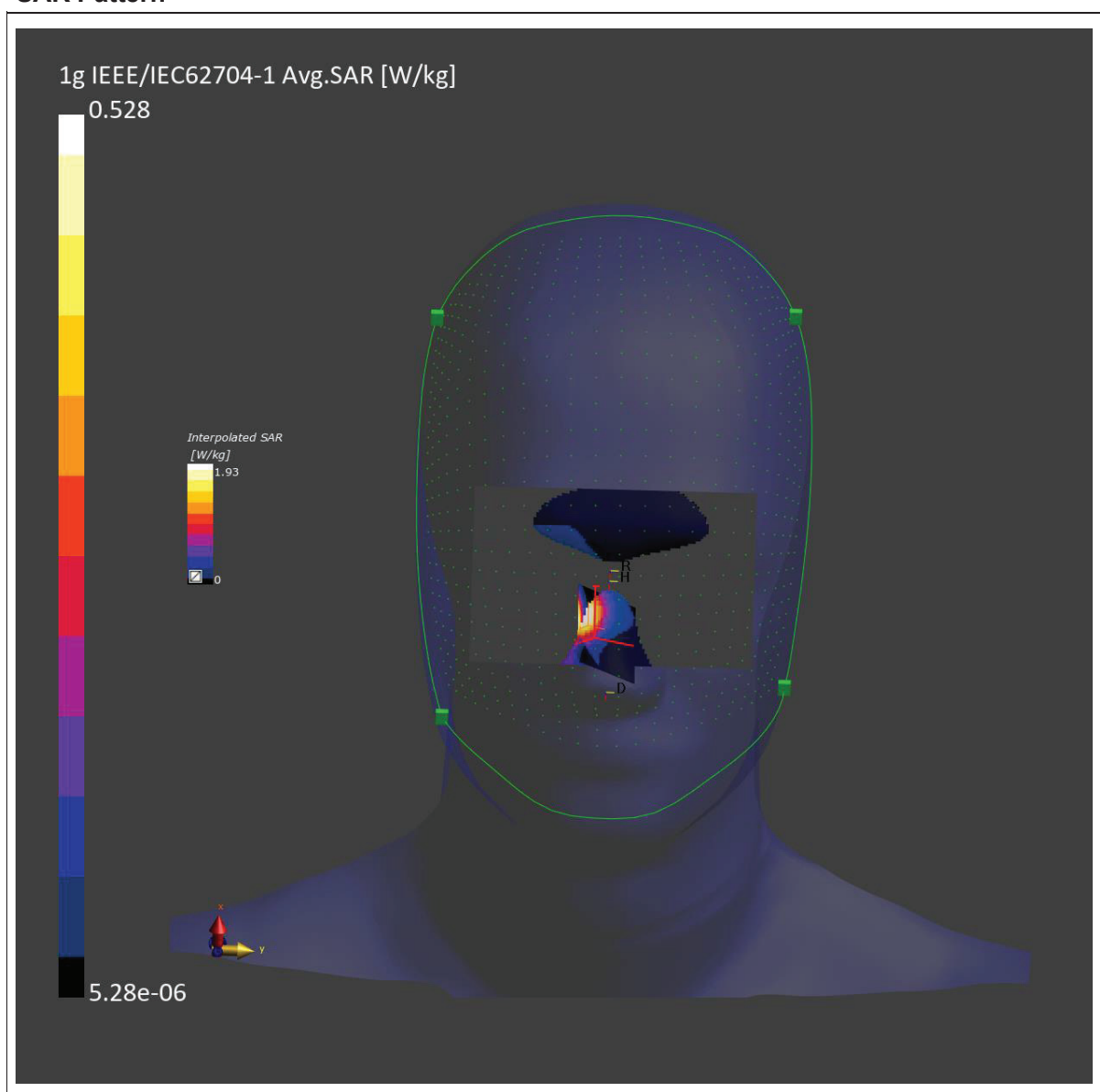
|                     | FastVolume Scan | Zoom Scan          |
|---------------------|-----------------|--------------------|
| Grid Extents [mm]   | 190 x 120       | 24.0 x 24.0 x 24.0 |
| Grid Steps [mm]     | 10.0 x 10.0     | 4.0 x 4.0 x 1.4    |
| Sensor Surface [mm] | 3.0             | 3.0                |
| Graded Grid         | N/A             | Yes                |
| Grading Ratio       | N/A             | 1.4                |
| MAIA                | Y               | Y                  |
| Surface Detection   | VMS             | VMS                |
| Scan Method         | Measured        | Measured           |

### Measurement Results

|                | FastVolume Scan | Zoom Scan  |
|----------------|-----------------|------------|
| Date           | 2024-12-28      | 2024-12-28 |
| psSAR1g [W/Kg] | 0.528           | 0.434      |

|                     |               |               |
|---------------------|---------------|---------------|
| psSAR10g [W/Kg]     | 0.162         | 0.120         |
| Power Drift [dB]    | -0.21         | -1.56         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 58.6          |
| Dist 3dB Peak [mm]  |               | 5.7           |

## SAR Pattern





## Plot 12 Measurement Report for Device, DEFAULT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.000 MHz)

### Device Under Test Properties

|                     |                     |      |          |
|---------------------|---------------------|------|----------|
| Model, Manufacturer | Dimensions [mm]     | IMEI | DUT Type |
| Device,             | 170.0 x 90.0 x 60.0 |      | Other    |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Facedown, HSL        | DEFAULT, 0.00                | U-NII-6 | WLAN, 10743-AAC | 6505.000, 111                   | 6.03              | 6.39                   | 33.6             |

### Hardware Setup

|                           |                                |                             |                         |
|---------------------------|--------------------------------|-----------------------------|-------------------------|
| Phantom                   | TSL, Measured Date             | Probe, Calibration Date     | DAE, Calibration Date   |
| SAM-FaceDown V10.0 - xxxx | HBBL-600-10000 Charge:xxxx, -- | EX3DV4 - SN7689, 2024-06-04 | DAE4 Sn1291, 2024-04-12 |

### Scans Setup

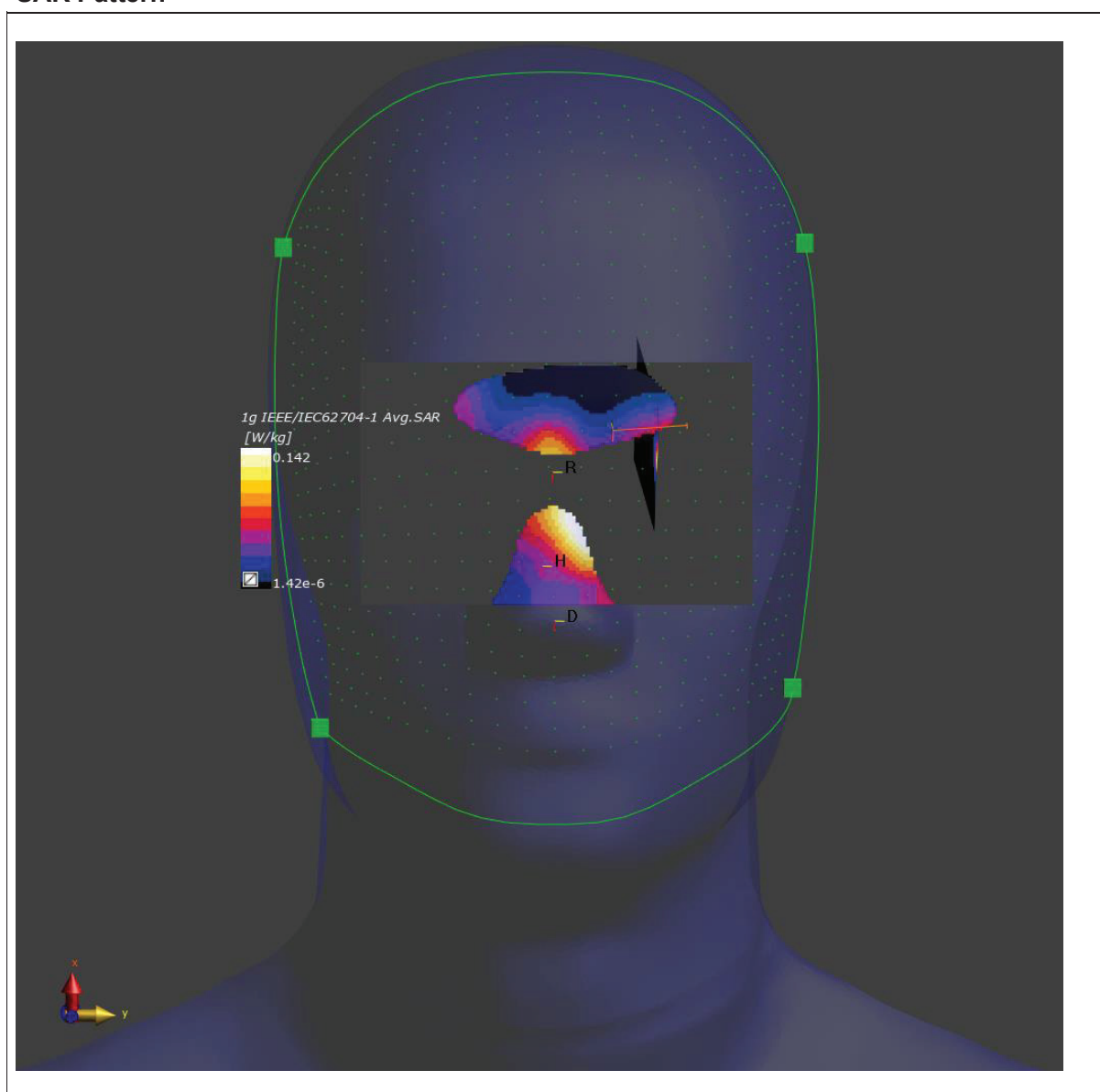
|                     | FastVolume Scan | Zoom Scan          |
|---------------------|-----------------|--------------------|
| Grid Extents [mm]   | 190 x 120       | 24.0 x 24.0 x 24.0 |
| Grid Steps [mm]     | 10.0 x 10.0     | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0             | 3.0                |
| Graded Grid         | N/A             | Yes                |
| Grading Ratio       | N/A             | 1.4                |
| MAIA                | Y               | Y                  |
| Surface Detection   | VMS             | VMS + 6p           |
| Scan Method         | Measured        | Measured           |

### Measurement Results

|                | FastVolume Scan | Zoom Scan  |
|----------------|-----------------|------------|
| Date           | 2024-12-28      | 2024-12-28 |
| psSAR1g [W/Kg] | 0.043           | 0.102      |

|                     |               |               |
|---------------------|---------------|---------------|
| psSAR10g [W/Kg]     | 0.020         | 0.045         |
| Power Drift [dB]    | 0.100         | 0.027         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.4          |
| Dist 3dB Peak [mm]  |               | 5.1           |

## SAR Pattern



**Plot 13 802.11b Front Side2-TS9 0mm High**

Date: 2024/12/26

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2462$  MHz;  $\sigma = 1.796$  S/m;  $\epsilon_r = 38.612$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.62, 8.01, 8.14); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**802.11b Front Side 0mm/High/Area Scan (12x12x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 2.71 W/kg

**802.11b Front Side 0mm/High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.585 V/m; Power Drift = -0.07 dB

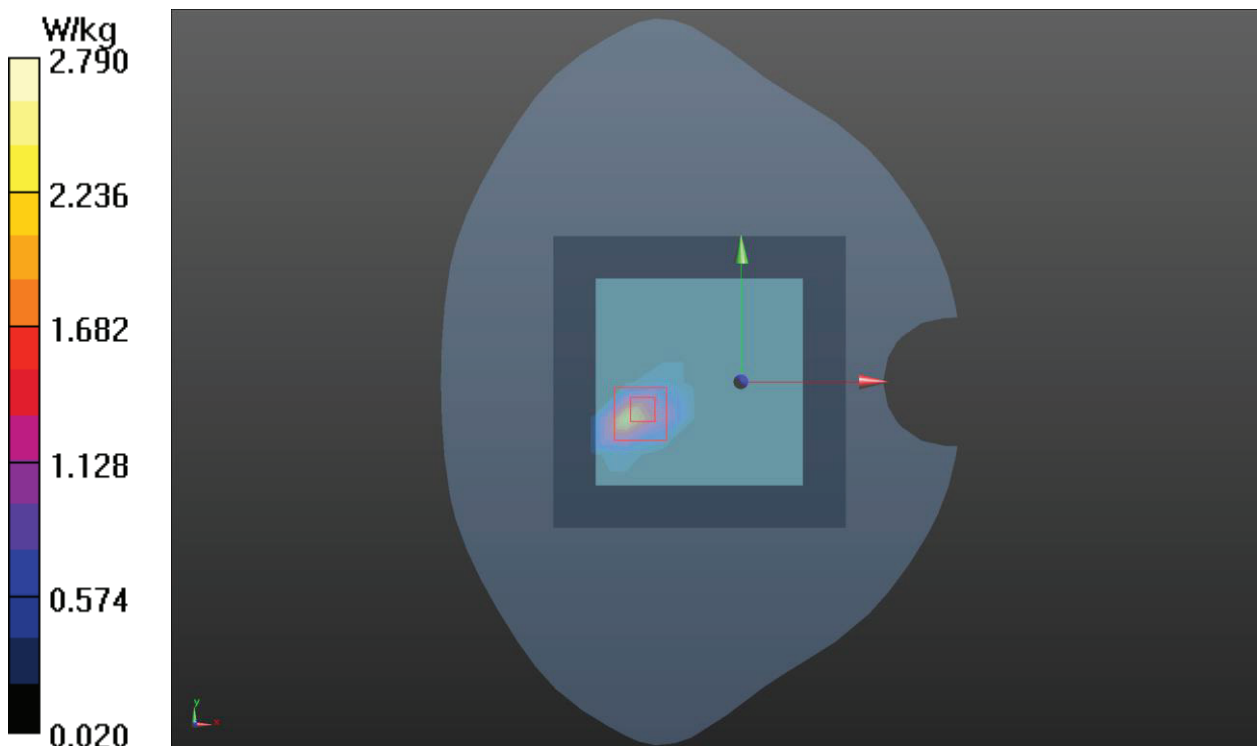
Peak SAR (extrapolated) = 4.73 W/kg

**SAR(1 g) = 2.64 W/kg; SAR(10 g) = 0.853 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 45.7%

Maximum value of SAR (measured) = 2.79 W/kg



**Plot 14 802.11ax HE40 Front Side2-TS9 0mm High**

Date: 2024/12/26

Communication System: UID 0, 802.11ax HE40 (0); Frequency: 5310 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5310$  MHz;  $\sigma = 4.831$  S/m;  $\epsilon_r = 35.798$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.87, 6.17, 6.27); Calibrated: 2024/6/4

Electronics: DAE4 Sn1291; Calibrated: 2024/4/12

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**802.11ax HE40 Front Side 0mm/High/Area Scan (14x21x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 4.86 W/kg

**802.11ax HE40 Front Side 0mm/High/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.178 V/m; Power Drift = -0.050 dB

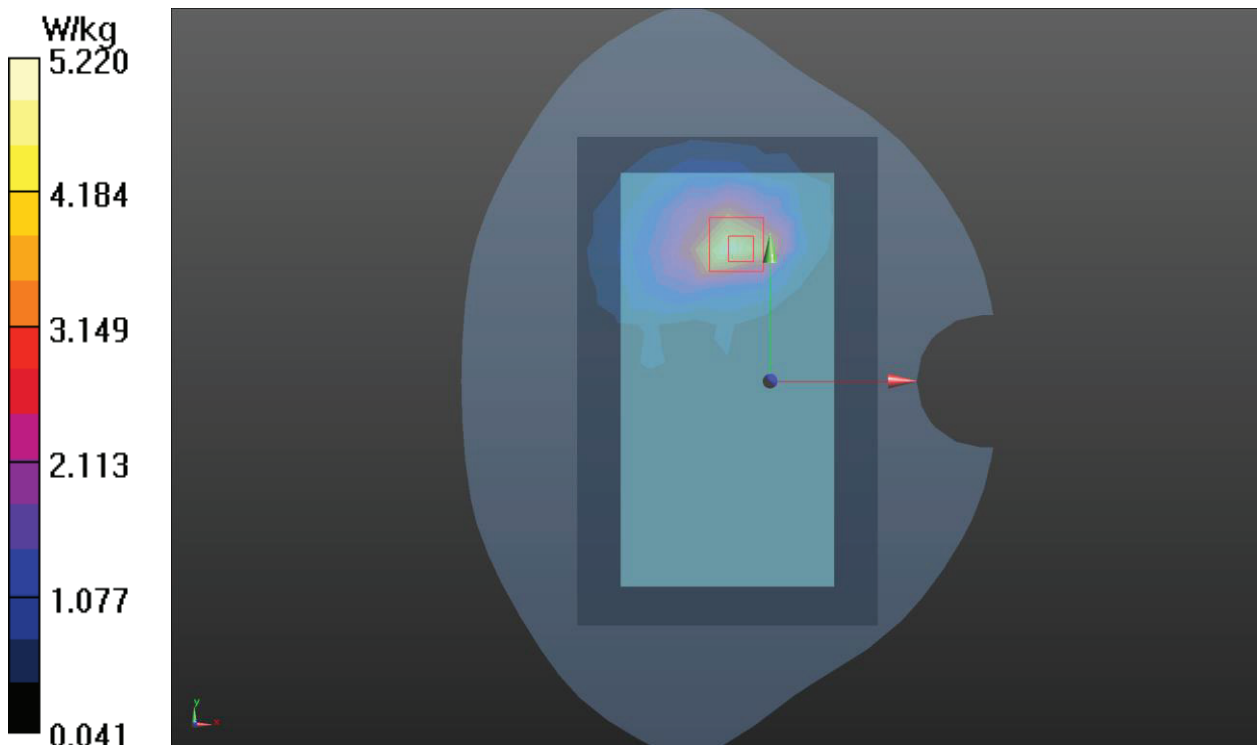
Peak SAR (extrapolated) = 6.73 W/kg

**SAR(1 g) = 4.73 W/kg; SAR(10 g) = 1.10 W/kg**

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 41.3%

Maximum value of SAR (measured) = 5.22 W/kg



## Plot 15 Measurement Report for Device, Front Side1-TS8, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 143 (6665.000 MHz)

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm]     | IMEI | DUT Type |
|---------------------|---------------------|------|----------|
| Device,             | 170.0 x 90.0 x 60.0 |      | Phone    |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity |
|----------------------|------------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|
| Flat, HSL            | FRONT, 0.00                  | U-NII-7 | WLAN, 10743-AAC | 6665.000, 143                   | 6.03              | 6.39                   | 33.6             |

### Hardware Setup

| Phantom                                 | TSL, Measured Date                | Probe, Calibration Date        | DAE, Calibration Date      |
|-----------------------------------------|-----------------------------------|--------------------------------|----------------------------|
| Twin-SAM V8.0 (30deg probe tilt) - 2072 | HBBL-600-10000<br>Charge:xxxx, -- | EX3DV4 - SN7689,<br>2024-06-04 | DAE4 Sn1291,<br>2024-04-12 |

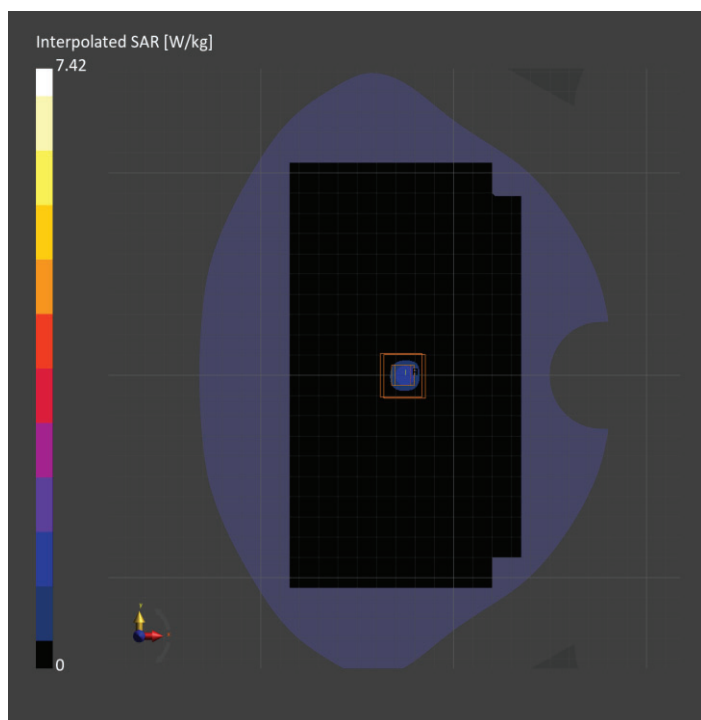
### Scans Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 24.0 x 24.0 x 24.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 3.4 x 3.4 x 1.4    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | N/A           | Yes                |
| Grading Ratio       | N/A           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface Detection   | VMS + 6p      | VMS + 6p           |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|      | Area Scan  | Zoom Scan  |
|------|------------|------------|
| Date | 2024-12-07 | 2024-12-07 |

|                                                     |               |               |
|-----------------------------------------------------|---------------|---------------|
| psSAR1g [W/kg]                                      | 1.13          | 1.27          |
| psSAR10g [W/kg]                                     | 0.271         | 0.270         |
| psAPD (1.0cm <sup>2</sup> , sq) [W/m <sup>2</sup> ] |               | 12.7          |
| psAPD (4.0cm <sup>2</sup> , sq) [W/m <sup>2</sup> ] |               | 6.50          |
| Power Drift [dB]                                    | 0.02          | -0.07         |
| Power Scaling                                       | Disabled      | Disabled      |
| Scaling Factor [dB]                                 |               |               |
| TSL Correction                                      | No correction | No correction |
| M2/M1 [%]                                           |               | 51.9          |
| Dist 3dB Peak [mm]                                  |               | 5.5           |



## Plot 16 Measurement Report for Device, FRONT, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 143 (6665.0 MHz)

### Device Under Test Properties

| Model, Manufacturer | Dimensions [mm]       | IMEI | DUT Type |
|---------------------|-----------------------|------|----------|
| Device,             | 270.0 x 188.0 x 110.0 |      |          |

### Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|---------|-----------------|---------------------------------|-------------------|
| 5G              | FRONT, 2.00                  | U-NII-7 | WLAN, 10743-AAC | 6665.0, 143                     | 1.0               |

### Hardware Setup

| Phantom       | Medium | Probe, Calibration Date               | DAE, Calibration Date   |
|---------------|--------|---------------------------------------|-------------------------|
| mmWave - xxxx | Air -  | EUmmWV4 - SN9642_F1-55GHz, 2024-07-10 | DAE4 Sn1291, 2024-04-12 |

### Scans Setup

|                     |               |
|---------------------|---------------|
| Scan Type           | 5G Scan       |
| Grid Extents [mm]   | 90.0 x 90.0   |
| Grid Steps [lambda] | 0.003 x 0.003 |
| Sensor Surface [mm] | 2.0           |
| MAIA                | Y             |

### Measurement Results

|                              |            |
|------------------------------|------------|
| Scan Type                    | 5G Scan    |
| Date                         | 2024-12-07 |
| Avg. Area [cm <sup>2</sup> ] | 4.00       |
| psPDn+ [W/m <sup>2</sup> ]   | 2.43       |
| psPDtot+ [W/m <sup>2</sup> ] | 4.54       |
| psPDmod+ [W/m <sup>2</sup> ] | 5.81       |
| E <sub>max</sub> [V/m]       | 61.9       |
| Power Drift [dB]             | 0.03       |

