

FCC SAR Test Report

APPLICANT : Zebra Technologies Corporation
EQUIPMENT : Enterprise Tablet
BRAND NAME : ZEBRA
MODEL NAME : ET4010B
FCC ID : UZ7ET4010B
STANDARD : FCC 47 CFR Part 2 (2.1093)

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang

Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



Table of Contents

1. Statement of Compliance	4
2. Administration Data	5
3. Guidance Applied.....	5
4. Equipment Under Test (EUT) Information.....	6
4.1 General Information	6
5. Proximity Sensor Triggering Test.....	8
6. RF Exposure Limits.....	17
6.1 Uncontrolled Environment.....	17
6.2 Controlled Environment.....	17
6.3 RF Exposure limit for above 6GHz	18
7. Specific Absorption Rate (SAR).....	19
7.1 Introduction	19
7.2 SAR Definition.....	19
8. System Description and Setup	20
8.1 E-Field Probe	21
8.2 Data Acquisition Electronics (DAE)	21
8.3 Phantom.....	22
8.4 Device Holder.....	23
9. Measurement Procedures	24
9.1 Spatial Peak SAR Evaluation.....	24
9.2 Power Reference Measurement.....	25
9.3 Area Scan	25
9.4 Zoom Scan.....	26
9.5 Volume Scan Procedures.....	26
9.6 Power Drift Monitoring.....	26
10. Test Equipment List.....	27
11. System Verification	28
11.1 Tissue Simulating Liquids	28
11.2 Tissue Verification	29
11.3 System Performance Check Results	30
11.4 PD System Verification Results	31
12. RF Exposure Positions	32
12.1 SAR Testing for Tablet.....	32
12.2 Miscellaneous Testing Considerations	32
13. Conducted RF Output Power (Unit: dBm).....	33
14. Antenna Location	88
15. SAR Test Results	89
15.1 Body SAR	90
15.2 6GHz PD Test Result	93
15.3 Repeated SAR Measurement	94
16. Simultaneous Transmission Analysis.....	95
16.1 Body Exposure Conditions.....	96
16.2 SPLSR Evaluation and Analysis.....	97
17. Uncertainty Assessment	103
18. References.....	106
Appendix.....	107
Appendix A. Plots of System Performance Check	107
Appendix B. Plots of High SAR Measurement	107
Appendix C. DASYS Calibration Certificate.....	107
Appendix D. Test Setup Photos.....	107

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA550911	Rev. 01	Initial issue of report	Sep. 17, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Zebra Technologies Corporation, Enterprise Tablet, ET4010B**, are as follows.

Highest 1g SAR Summary				
Equipment Class	Frequency Band		Body (Separation 0mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)	
DTS	WLAN	2.4GHz WLAN	1.16	1.44
NII		5GHz WLAN	1.18	1.59
6CD		6GHz WLAN	1.15	1.19
VLP		6GHz WLAN	0.91	1.19
DSS	Bluetooth	2.4GHz Bluetooth	0.20	1.59
DXX	NFC	13.56MHz	<0.10	1.59

Equipment Class	Frequency Band	Measured APD	Scaled PD
		Body (W/m^2)	psPD (W/m^2)
6CD	6GHz WLAN	6.51	7.77
VLP	6GHz WLAN	4.23	
Date of Testing:		2025/8/3 ~ 2025/8/29	

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR) specified in FCC 47 CFR part 2 (2.1093), and Human Exposure to RF Radiation Limits (1.0 mW/cm²=10 W/m²) specified in FCC 47 CFR part 1.1310 and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR04-KS, SAR05-KS	CN1257	314309

Applicant	
Company Name	Zebra Technologies Corporation
Address	3 Overlook Point, Lincolnshire, IL 60069 USA

Manufacturer	
Company Name	Zebra Technologies Corporation
Address	3 Overlook Point, Lincolnshire, IL 60069 USA

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- IEC/IEEE 62209-1528:2020
- IEC TR 63170:2018
- IEC 62479:2010
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

4. Equipment Under Test (EUT) Information

4.1 General Information

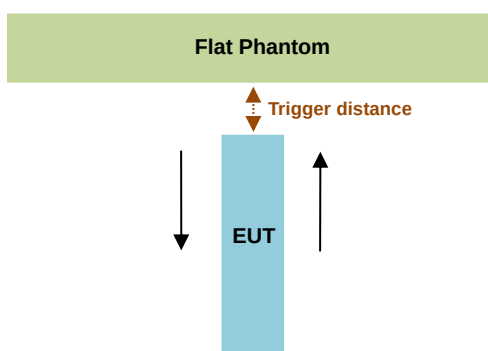
Product Feature & Specification	
Equipment Name	Enterprise Tablet
Brand Name	ZEBRA
Model Name	ET4010B
FCC ID	UZ7ET4010B
S/N	Sample 1: 251565247E0028 Sample 2: 251575247E0001, 251575247E0008 (for NFC only)
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6GHz U-NII 5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII 6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII 7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII 8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	WLAN 2.4GHz 802.11b/g/n HT20 WLAN 2.4GHz 802.11ac/ax VHT20/HE20 WLAN 2.4GHz 802.11be EHT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160 WLAN 5GHz 802.11ax/be HE20/HE40/HE80/HE160/EHT20/EHT40/EHT80/EHT160 WLAN 6GHz 802.11a/ax HE20/HE40/HE80/HE160 WLAN 6GHz 802.11be EHT20/EHT40/EHT80/EHT160/EHT320 Bluetooth BR/EDR/LE NFC: ASK
HW Version	EV1
SW Version	qssi_64-userdebug 15 15-07-16.00-VG-U00-PRD-ERS-04 210 release-keys
MFD	16JUL25
EUT Stage	Identical Prototype
Remark: - This device does not support voice function. - The device supports WLAN2.4GHz MIMO CDD mode for 11b/g/n/ac/ax/be and WLAN5GHz MIMO CDD mode for 11a/n/ac/ax/be and Tx Beamforming mode for 11ax/be. - The device supports WIFI6GHz MIMO CDD mode for 802.11a, and support CDD & SDM & TXBF mode for 802.11ax/be. - The device supports 1S2T (CDD) and 2S2T (SDM) mode; 1S2T: Nss=1, MIMO 2Tx; 2S2T: Nss=2, MIMO 2Tx. - The device implements Proximity sensors/handheld trigger reduced power for SAR compliance at different exposure conditions (body). The device will invoke corresponding work scenarios power level base on frequency bands/antennas. - The device support HBS (High Band Simultaneous) function, when the device WLAN 2.4GHz and WLAN 5GHz (or WLAN 6GHz) transmit at the same time it will limit different output power for simultaneous transmission compliance. - There are two samples: Sample 1 without Scanner and Sample 2 with Scanner. According to the difference, sample 1 was chosen to perform full testing, and the sample 2 are verified the difference with the sample 1.	

Accessories Information				
Battery	Brand Name	Zebra	Model	BT-000528
AC Adapter 1 (TYPE C Wall Charger 1)	Brand Name	Zebra	Part Number	PWR-WUA5V45W1US
Earphone 1 (Wired headset USB-C)	Brand Name	Zebra	Part Number	HDST-USBC-PTT 1-01
Earphone 2 (Rugged Bluetooth Headset)	Brand Name	Zebra	Part Number	HS3100-0TH
Earphone 3 (3.5mm PTT Headset)	Brand Name	Zebra	Part Number	HDST-35MM-PTT 1-02
Earphone 4 (Rugged Headset)	Brand Name	Zebra	Part Number	HS2100-0TH
Earphone 5 (USB-C Wired Earbuds)	Brand Name	Avantree	Part Number	C171
Type C-Audio Cable (Type C to 3.5mm)	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01
3.5mm to 3.5mm audio connector	Brand Name	Zebra	Part Number	CBL-HS2100-3MS1-01
USB Cable 1 (USB-C to C Cable)	Brand Name	Zebra	Part Number	CBL-EC5X-USBC3A-01
USB Cable 2 (USB-A to C Cable)	Brand Name	Zebra	Part Number	CBL-TC5X-USBC2A-01
USB Cable 3 (USB-C to C Cable)	Brand Name	Zebra	Part Number	CBL-TN28-USBC2C-01

5. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance (KDB 616217 D04 section 6.2)>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (7125MHz) and lowest frequency (2450MHz) was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the bottom face, Edge1, and Edge2 of the device are utilized to determine when the device comes in proximity of the user's body at the bottom face, Edge1, and Edge2 of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. When the sensor is active, all WLAN bands reduced power will be active.
4. The sensors used to detect the proximity of the user's body at the bottom face, Edge1, and Edge2 of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).



<Ant6 Frequency Bands>

Proximity Sensor Triggering Distance (mm)				
Position	Bottom Face		Edge 1	
	Moving away	Moving towards	Moving away	Moving towards
Minimum	35	28	35	29

<Ant7 Frequency Bands>

Proximity Sensor Triggering Distance (mm)				
Position	Bottom Face		Edge 2	
	Moving away	Moving towards	Moving away	Moving towards
Minimum	36	28	36	31

<Proximity Sensor Triggering Coverage (KDB 616217 D04 section 6.3)>:

If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and “along the direction of maximum antenna and sensor offset”.

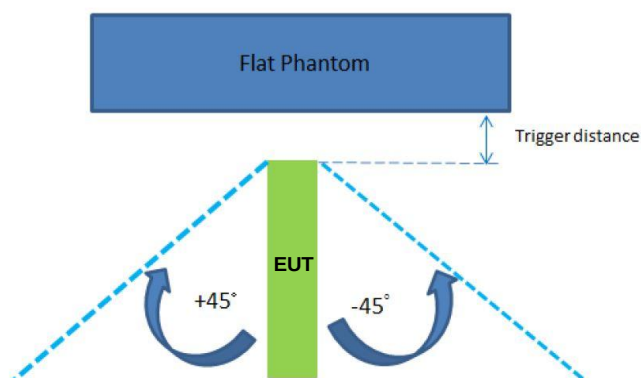
Illustrated in the internal photo exhibit, although the sensor is spatially offset, there is no trigger condition where the antenna is next to the user but the sensor is laterally further away, therefore proximity sensor coverage testing is not required.

This procedure is not required because antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

<Tablet Tilt angle influences to proximity sensor triggering (KDB 616217 D04 section 6.4)>:

The influence of table tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at 29mm at Edge 1 separation for Ant6 bands and 31mm at Edge 2 for Ant7 Bands.

Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.



<Ant6 Frequency Bands>

The Sensor Trigger Distance (mm)	
Position	Edge 1
Minimum	29

<Ant7 Frequency Bands>

The Sensor Trigger Distance (mm)	
Position	Edge 2
Minimum	31

Proximity sensor power reduction

Exposure Position / wireless mode for Ant6	Bottom Face ⁽¹⁾	Edge 1 ⁽¹⁾	Edge 2	Edge 3	Edge 4
WLAN 2.4GHz	10.5 dB	10.5 dB	0 dB	0 dB	0 dB
WLAN 5.2GHz	9.5 dB	9.5 dB	0 dB	0 dB	0 dB
WLAN 5.3GHz	9.5 dB	9.5 dB	0 dB	0 dB	0 dB
WLAN 5.5GHz	10.0 dB	10.0 dB	0 dB	0 dB	0 dB
WLAN 5.8GHz	7.5 dB	7.5 dB	0 dB	0 dB	0 dB
WLAN 6GHz U-NII 5	7.5 dB	7.5 dB	0 dB	0 dB	0 dB
WLAN 6GHz U-NII 6	5.5 dB	5.5 dB	0 dB	0 dB	0 dB
WLAN 6GHz U-NII 7	7.0 dB	7.0 dB	0 dB	0 dB	0 dB
WLAN 6GHz U-NII 8	7.0 dB	7.0 dB	0 dB	0 dB	0 dB

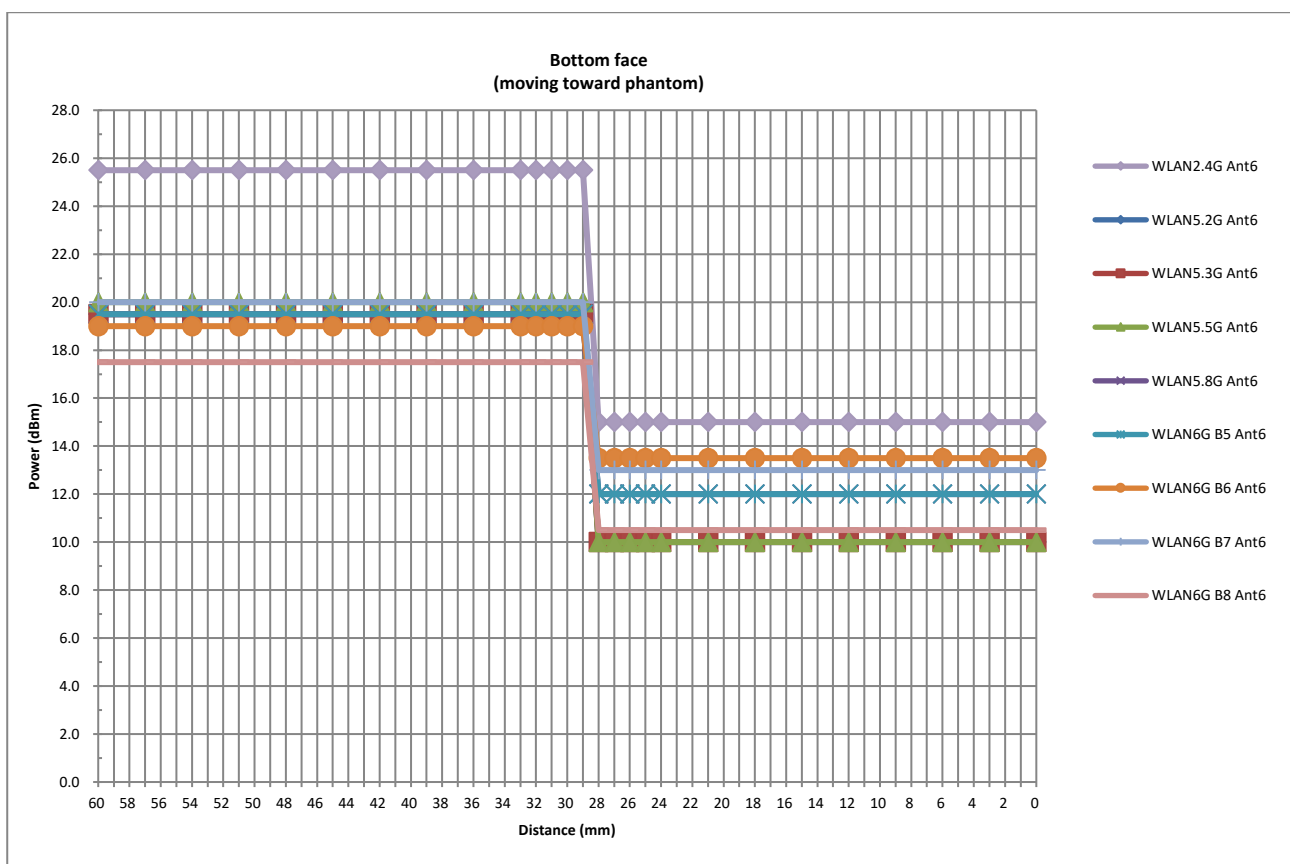
Exposure Position / wireless mode for Ant7	Bottom Face ⁽¹⁾	Edge 1	Edge 2 ⁽¹⁾	Edge 3	Edge 4
WLAN 2.4GHz	10.0 dB	0 dB	10.0 dB	0 dB	0 dB
WLAN 5.2GHz	12.0 dB	0 dB	12.0 dB	0 dB	0 dB
WLAN 5.3GHz	12.0 dB	0 dB	12.0 dB	0 dB	0 dB
WLAN 5.5GHz	11.5 dB	0 dB	11.5 dB	0 dB	0 dB
WLAN 5.8GHz	11.0 dB	0 dB	11.0 dB	0 dB	0 dB
WLAN 6GHz U-NII 5	7.5 dB	0 dB	7.5 dB	0 dB	0 dB
WLAN 6GHz U-NII 6	7.5 dB	0 dB	7.5 dB	0 dB	0 dB
WLAN 6GHz U-NII 7	10.5 dB	0 dB	10.5 dB	0 dB	0 dB
WLAN 6GHz U-NII 8	7.0 dB	0 dB	7.0 dB	0 dB	0 dB

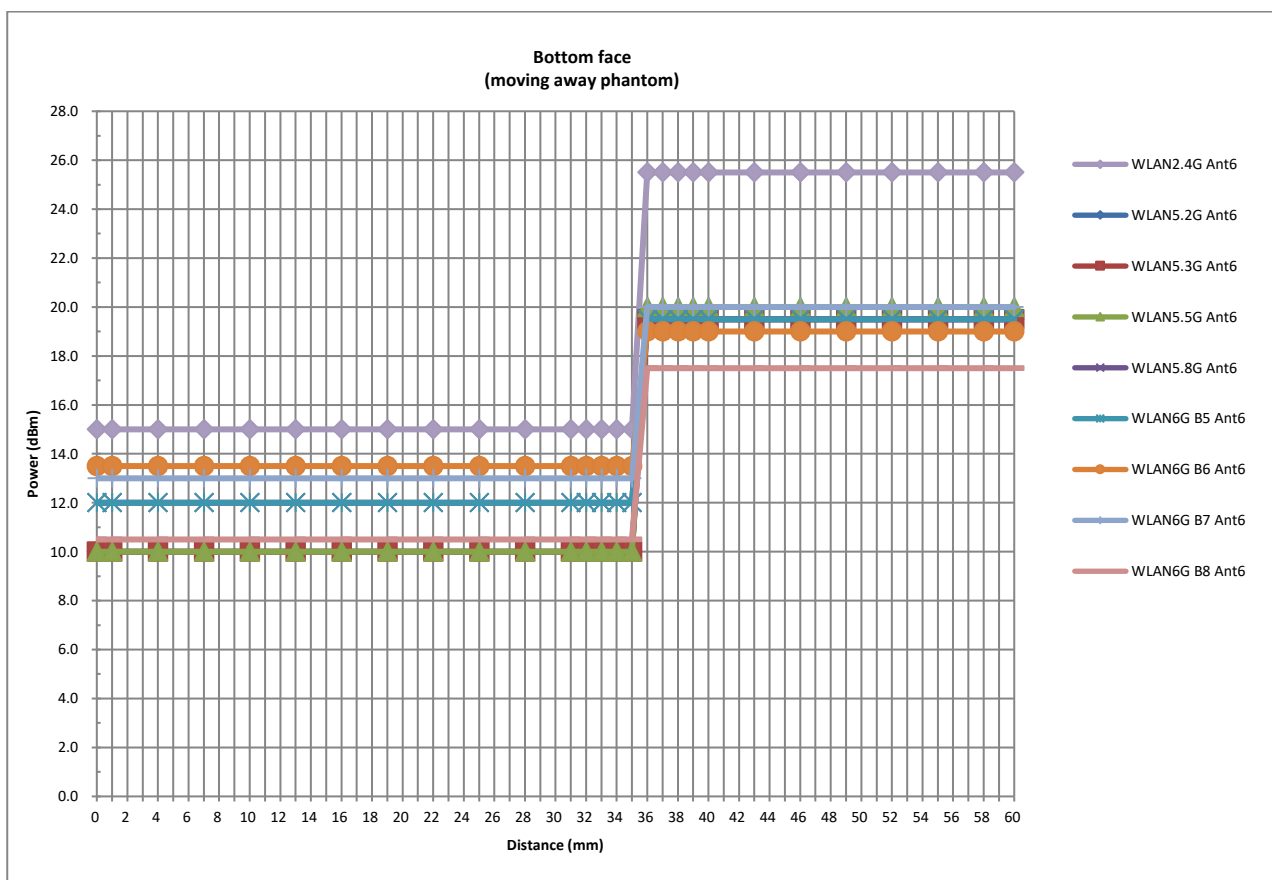
Remark:

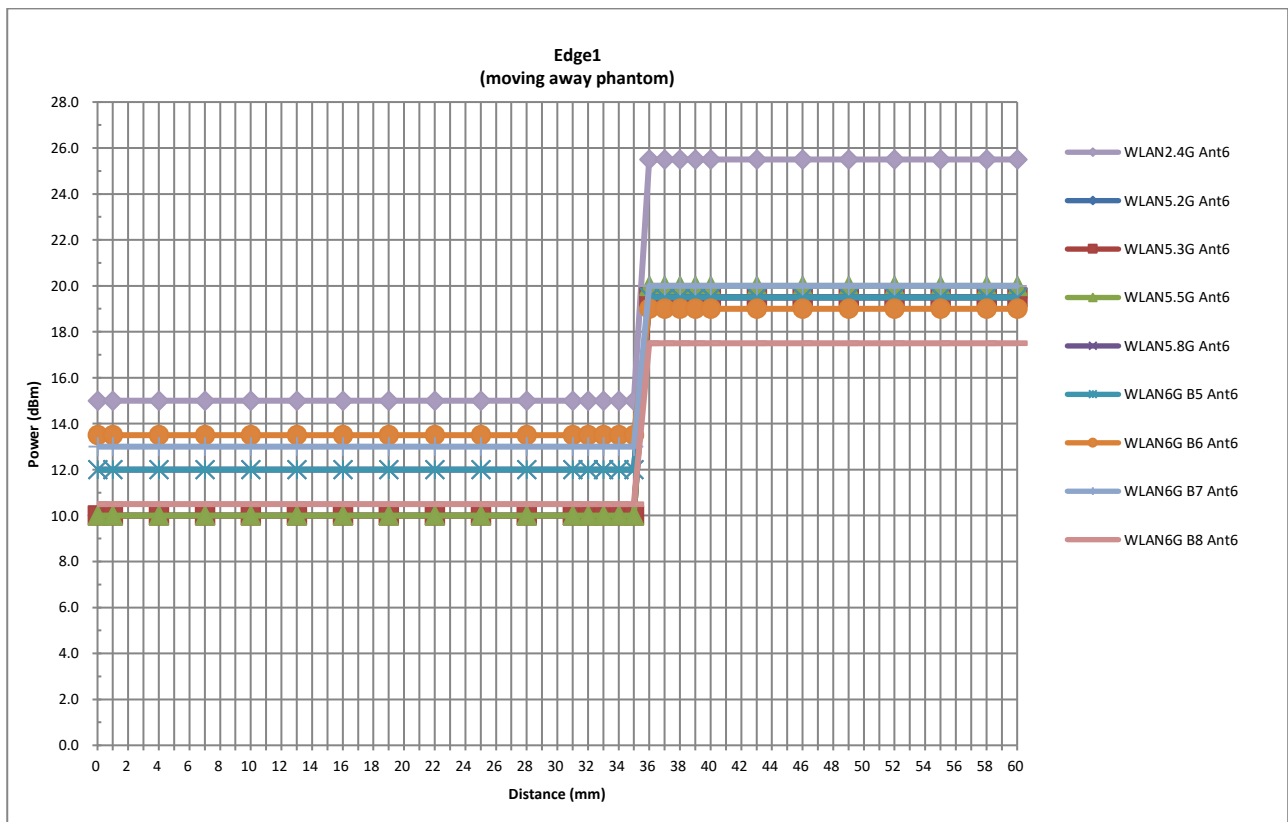
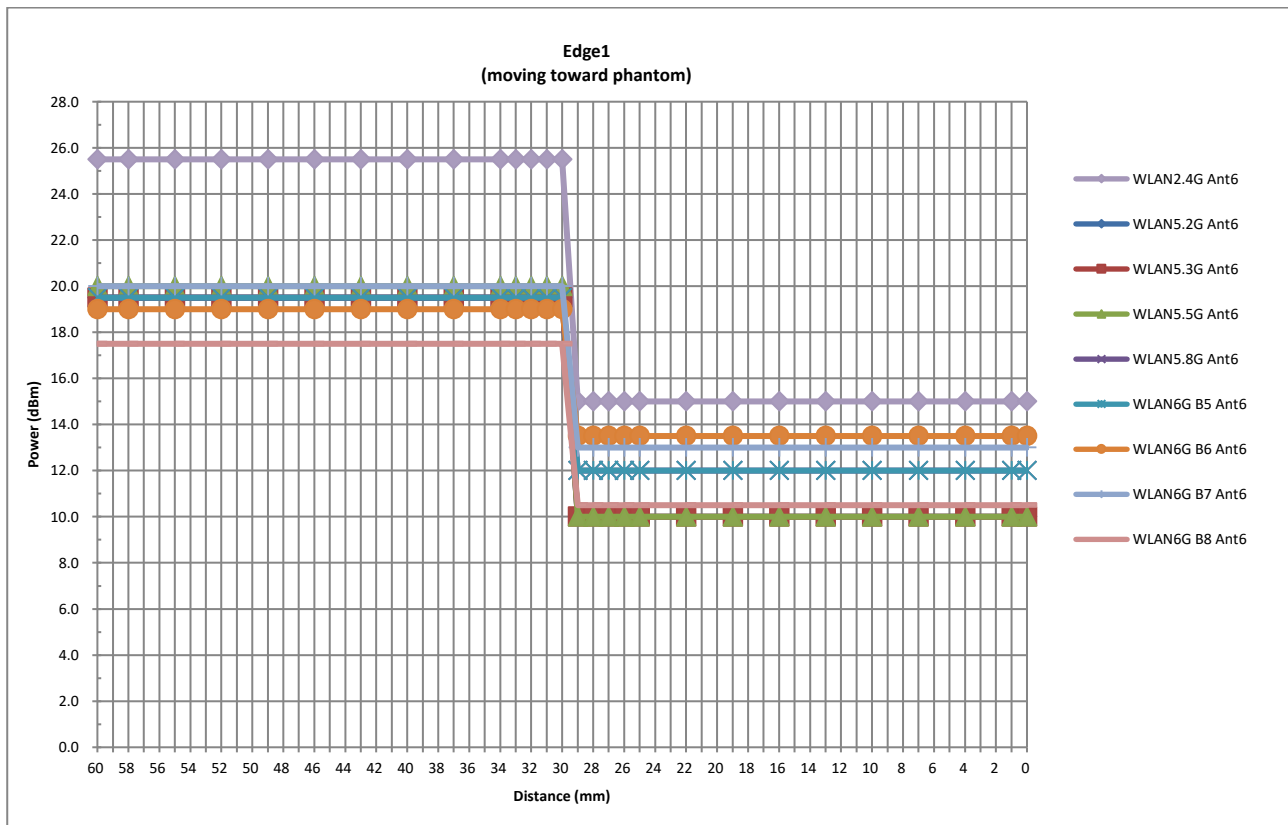
- ⁽¹⁾: Reduced maximum limit applied by activation of proximity sensor.
- Power reduction is not applicable for Bluetooth.
- Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown and described in exhibit "P-Sensor operational description"
- For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
For Ant 6:
 - Bottom Face: 27mm
 - Edge 1: 28mm
For Ant 7:
 - Bottom Face: 27mm
 - Edge 2: 30mm

Power Measurement during Sensor Trigger distance testing

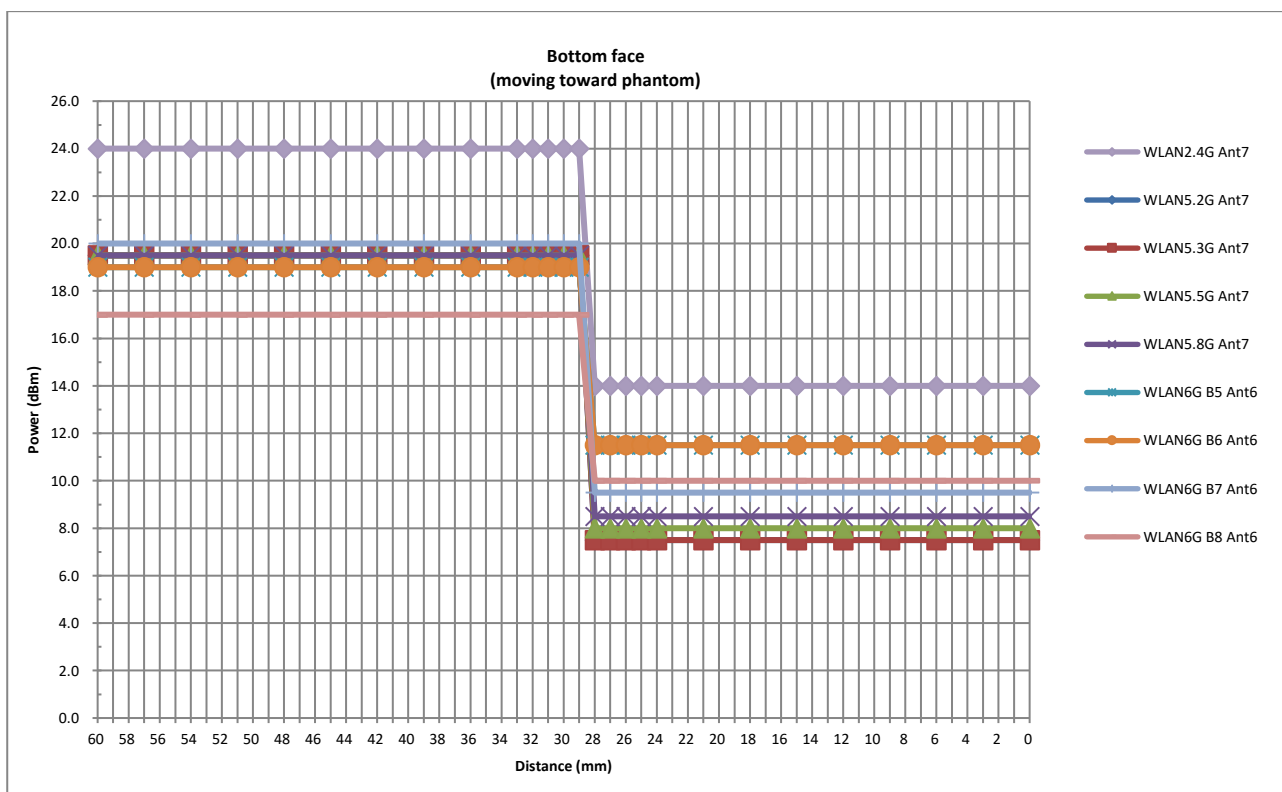
Band/Mode for Ant6	Measured power reduction (dBm)		Reduction Levels (dB)
	w/o power back-off	w/ power back-off	
WLAN 2.4GHz	25.50	15.00	10.5
WLAN 5.2GHz	19.50	10.00	9.5
WLAN 5.3GHz	19.50	10.00	9.5
WLAN 5.5GHz	20.00	10.00	10.0
WLAN 5.8GHz	19.50	12.00	7.5
WLAN 6GHz U-NII 5	19.50	12.00	7.5
WLAN 6GHz U-NII 6	19.00	13.50	5.5
WLAN 6GHz U-NII 7	20.00	13.00	7.0
WLAN 6GHz U-NII 8	17.50	10.50	7.0

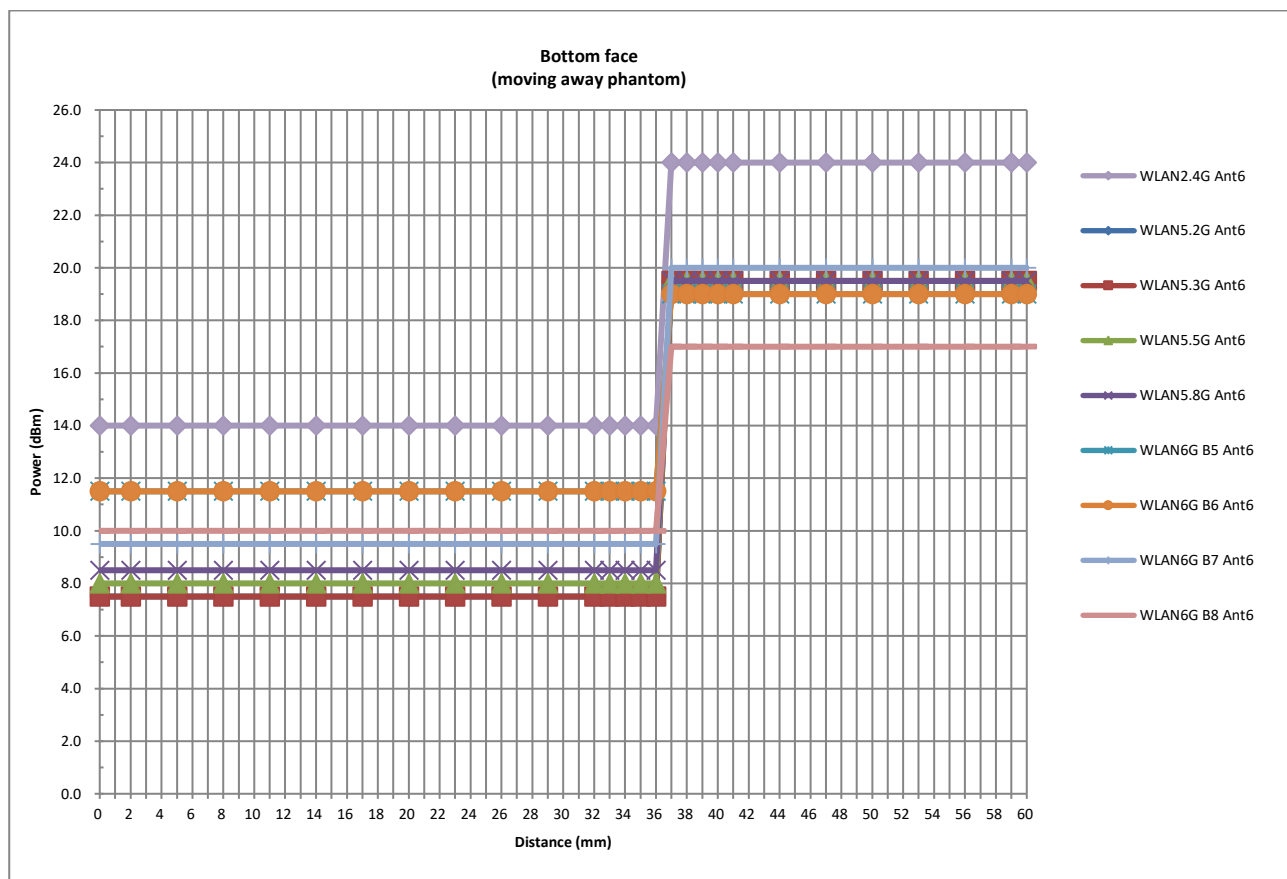


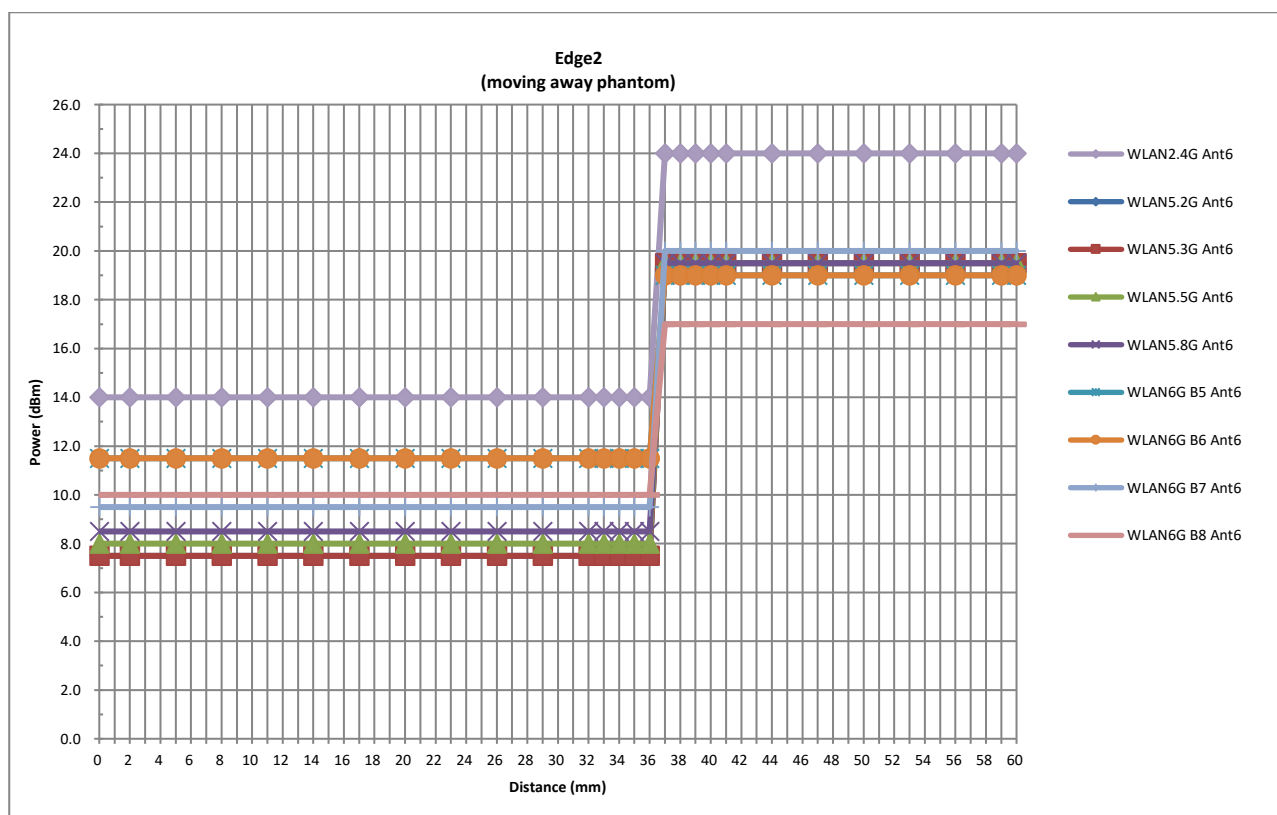
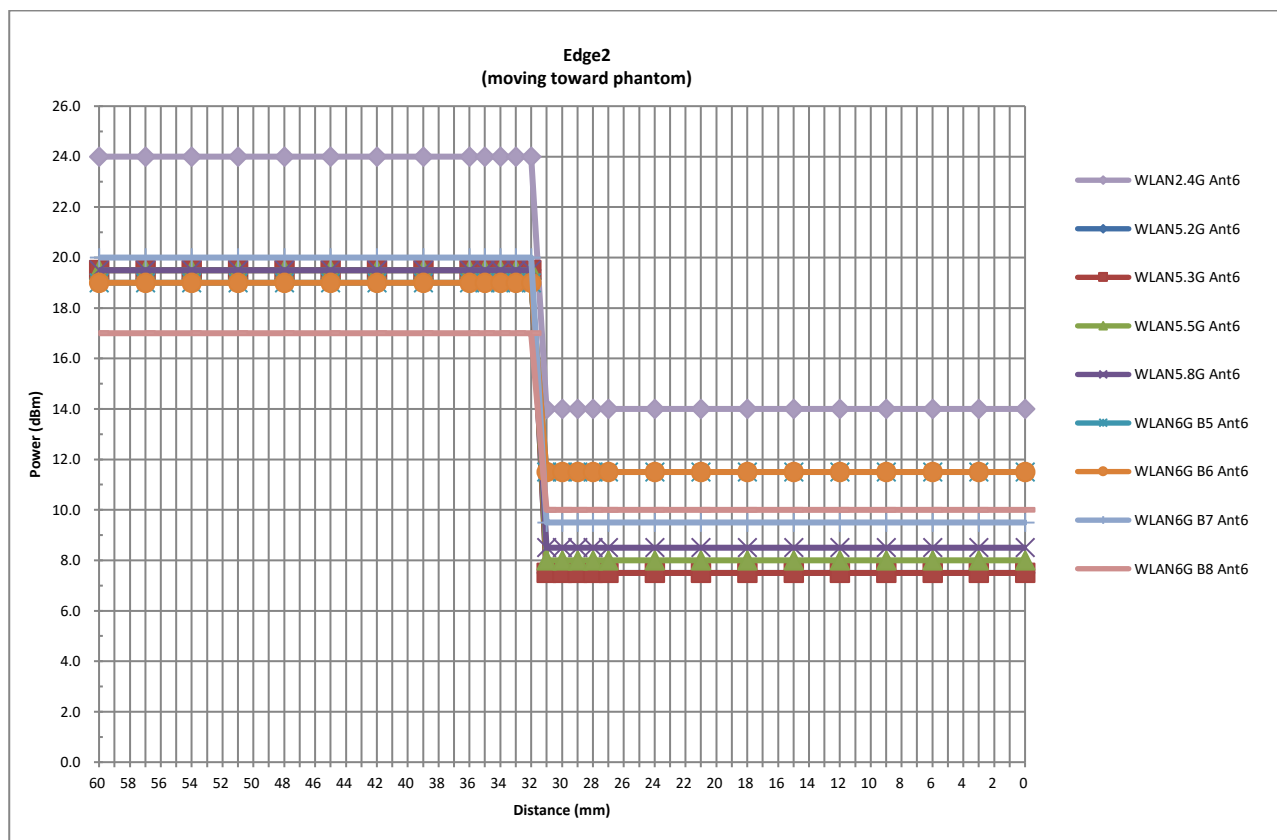




Band/Mode for Ant7	Measured power reduction (dBm)		Reduction Levels (dB)
	w/o power back-off	w/ power back-off	
WLAN 2.4GHz	24.00	14.00	10.0
WLAN 5.2GHz	19.50	7.50	12.0
WLAN 5.3GHz	19.50	7.50	12.0
WLAN 5.5GHz	19.50	8.00	11.5
WLAN 5.8GHz	19.50	8.50	11.0
WLAN 6GHz U-NII 5	19.00	11.50	7.5
WLAN 6GHz U-NII 6	19.00	11.50	7.5
WLAN 6GHz U-NII 7	20.00	9.50	10.5
WLAN 6GHz U-NII 8	17.00	10.00	7.0







6. RF Exposure Limits

6.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

6.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

6.3 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310. The unit of power density evaluation is W/m² or mW/cm².

Peak Spatially Averaged Power Density was evaluated over a square area of 4cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

Note: 1.0 mW/cm² is 10 W/m²

7. Specific Absorption Rate (SAR)

7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

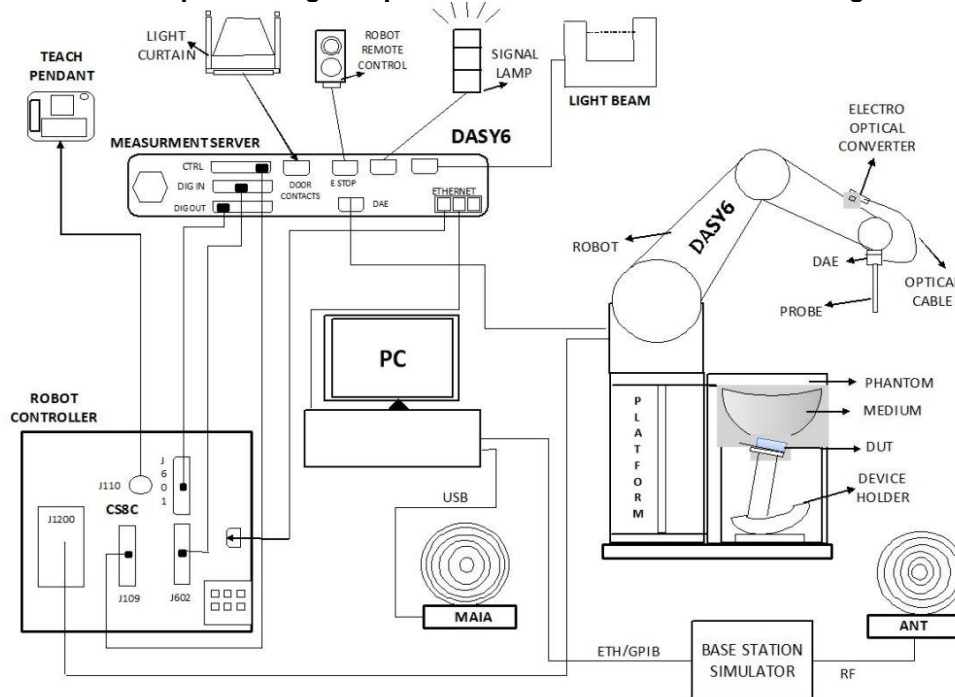
SAR is expressed in units of Watts per kilogram (W/kg)

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

8. System Description and Setup

The DASY system used 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 Win7 or Win10 and the DASY5 or DASY6/8⁽¹⁾ 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.

Note: 1. DASY6 software used: DASY6 mmWave V3.0.0.841 and older generations and used the developed Plane-to-Plane Phase Reconstruction (PTP-PR) Algorithm which was used in PD measurement.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 10 GHz Linearity: ± 0.2 dB (30 MHz – 10 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



Photo of DAE

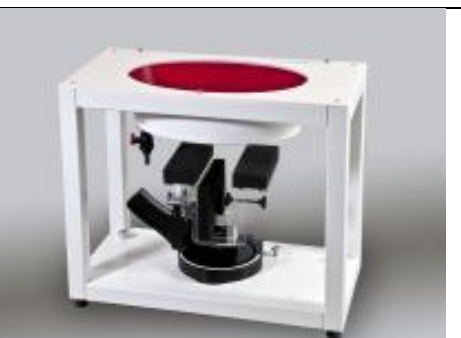
8.3 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices or for evaluating transmitters operating at low frequencies. ELI is fully compatible with standard and all known tissue simulating liquids.

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.



Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

9.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Last Cal.	Due Date
SPEAG	2450MHz System Validation Kit	D2450V2	1095	Feb. 08, 2024	Feb. 06, 2026
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	Sep. 23, 2022	Sep. 21, 2025
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1026	Jan. 28, 2025	Jan. 27, 2026
SPEAG	13MHz System Validation Kit	CLA13	1020	Jun. 05, 2025	Jun. 04, 2026
SPEAG	5G Verification Source	10GHz	2005	Dec. 04, 2024	Dec. 03, 2025
SPEAG	Data Acquisition Electronics	DAE4	1650	Nov. 25, 2024	Nov. 24, 2025
SPEAG	Data Acquisition Electronics	DAE4	1338	Mar. 18, 2025	Mar. 17, 2026
SPEAG	Data Acquisition Electronics	DAE4	1691	Jun. 04, 2025	Jun. 03, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7627	Jul. 01, 2025	Jun. 30, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	May 22, 2025	May 21, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7630	Aug. 22, 2024	Aug. 21, 2025
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9553	Nov. 15, 2025	Nov. 14, 2026
SPEAG	ELI Phantom	ELI V8.0	TP-2135	NCR	NCR
SPEAG	ELI Phantom	ELI V8.0	TP-2151	NCR	NCR
SPEAG	mmWave Phantom	mmWave	1065	NCR	NCR
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	Jul. 02, 2025	Jul. 01, 2026
Beichuang	Thermo-Hygrometer	HTC-1	1959630	May 27, 2025	May 26, 2026
Beichuang	Thermo-Hygrometer	HTC-1	1949251	Jan. 11, 2025	Jan. 10, 2026
Testo	Thermo-Hygrometer	HTC-1	55009	Jan. 02, 2025	Jan. 01, 2026
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Rohde & Schwarz	Signal Generator	SMB100A	100455	Jan. 02, 2025	Jan. 01, 2026
Rohde & Schwarz	Vector Signal Generator	SMBV100A	258305	Jan. 02, 2025	Jan. 01, 2026
Keysight	Preamplifier	83017A	MY57280106	Apr. 18, 2025	Apr. 17, 2026
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	Jul. 02, 2025	Jul. 01, 2026
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	Feb. 24, 2025	Feb. 23, 2026
SPEAG	Dielectric Probe Kit	DAK-12	1170	Sep. 19, 2024	Sep. 18, 2025
Anritsu	Vector Signal Generator	MG3710A	6201682672	Jan. 03, 2025	Jan. 02, 2026
R&S	BLUETOOTH TESTER	CBT	101246	Jul. 03, 2025	Jul. 02, 2026
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	Oct. 11, 2024	Oct. 10, 2025
TES	DIGITAC THERMOMETER	TYPE-K	220305411	Jan. 02, 2025	Jan. 01, 2026
Rohde & Schwarz	Power Meter	NRVD	102081	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Sensor	NRP50S	101385	Oct. 15, 2024	Oct. 14, 2025
ARRA	Power Divider	A3200-2	N/A	Note 1	
mini-circuits	amplifier	ZVE-3W-83+	162601250	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
BONN Elektronik	Power Amplifier	BSA 0125-150	076577A	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	

Note:

- Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
- The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

11. System Verification

11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1.

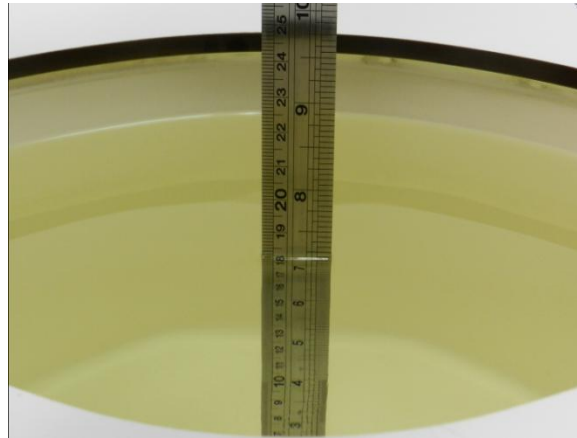


Fig 10.1 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
2450	55.0	0	0	0	0	45.0	1.80	39.2

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
2450	22.7	1.77	39.3	1.8	39.2	-1.67	0.26	±5.0	2025/08/03
2450	22.6	1.76	39.3	1.8	39.2	-2.22	0.26	±5.0	2025/08/17
5250	22.8	4.63	36.3	4.71	35.95	-1.70	0.97	±5.0	2025/08/05
5250	22.7	4.66	36.3	4.71	35.95	-1.06	0.97	±5.0	2025/08/20
5600	22.6	5.06	35.9	5.07	35.5	-0.20	1.13	±5.0	2025/08/08
5600	22.8	5.07	36.0	5.07	35.5	0.00	1.41	±5.0	2025/08/23
5750	22.9	5.2	35.5	5.22	35.35	-0.38	0.42	±5.0	2025/08/10
5750	22.9	5.17	35.5	5.22	35.35	-0.96	0.42	±5.0	2025/08/26
6500	22.6	6.09	34.1	6.07	34.5	0.33	-1.16	±5.0	2025/08/12
6500	22.8	6.08	34.1	6.07	34.5	0.16	-1.16	±5.0	2025/08/29
13	22.7	0.744	56.2	0.75	55.00	-0.80	2.18	±5	2025/08/20

11.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2025/08/03	2450	50.00	D2450V2 - 1095	EX3DV4 - SN7630	DAE4 Sn1650	2.590	52.600	51.800	-1.52	1.260	24.700	25.200	2.02
2025/08/17	2450	50.00	D2450V2 - 1095	EX3DV4 - SN7627	DAE4 Sn1338	2.570	52.600	51.400	-2.28	1.250	24.700	25.000	1.21
2025/08/05	5250	50.00	D5GHzV2 - 1113	EX3DV4 - SN7630	DAE4 Sn1650	3.770	81.500	75.400	-7.48	1.110	23.300	22.200	-4.72
2025/08/20	5250	50.00	D5GHzV2 - 1113	EX3DV4 - SN7627	DAE4 Sn1338	3.800	81.500	76.000	-6.75	1.120	23.300	22.400	-3.86
2025/08/08	5600	50.00	D5GHzV2 - 1113	EX3DV4 - SN7630	DAE4 Sn1650	4.200	82.600	84.000	1.69	1.220	23.700	24.400	2.95
2025/08/23	5600	50.00	D5GHzV2 - 1113	EX3DV4 - SN7627	DAE4 Sn1338	4.210	82.600	84.200	1.94	1.220	23.700	24.400	2.95
2025/08/10	5750	50.00	D5GHzV2 - 1113	EX3DV4 - SN7630	DAE4 Sn1650	3.740	80.800	74.800	-7.43	1.090	23.000	21.800	-5.22
2025/08/26	5750	50.00	D5GHzV2 - 1113	EX3DV4 - SN7627	DAE4 Sn1338	3.730	80.800	74.600	-7.67	1.080	23.000	21.600	-6.09
2025/08/12	6500	50.00	D6.5GHzV2 - 1026	EX3DV4 - SN7706	DAE4 Sn1691	14.600	296.000	292.000	-1.35	2.800	54.800	56.000	2.19
2025/08/29	6500	50.00	D6.5GHzV2 - 1026	EX3DV4 - SN7706	DAE4 Sn1691	14.900	296.000	298.000	0.68	2.760	54.800	55.200	0.73
2025/08/20	13	1000	CLA13 - SN:1020	EX3DV4 - SN7706	DAE4 Sn1691	0.524	0.548	0.524	-4.73	0.329	0.338	0.329	-3.24

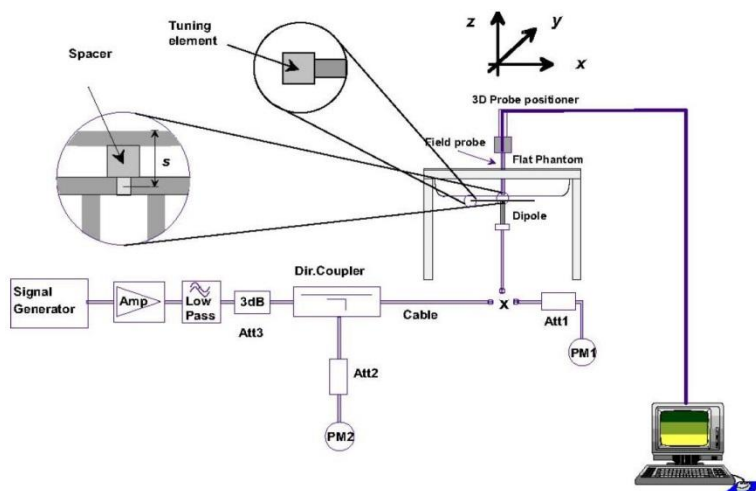


Fig 10.3.1 System Performance Check Setup



Fig 10.3.2 Setup Photo



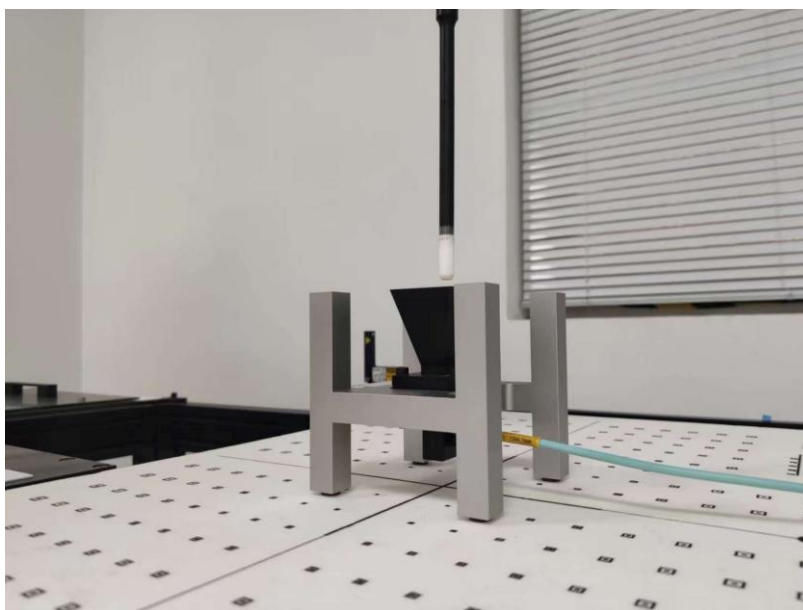
Fig 10.3.3 Setup Photo

11.4 PD System Verification Results

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes.

Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Input Power (mW)	Measured psPDn+ 4 cm ² (W/m ²)	Normalized ⁽¹⁾ psPDn+ 4 cm ² (W/m ²)	Targeted psPDn+ 4 cm ² (W/m ²)	Deviation (dB)	Measured psPDtot+ 4 cm ² (W/m ²)	Normalized ⁽¹⁾ psPDtot+ 4 cm ² (W/m ²)	Targeted psPDtot+ 4 cm ² (W/m ²)	Deviation (dB)	Measured psPDmod+ 4 cm ² (W/m ²)	Normalized ⁽¹⁾ psPDmod+ 4 cm ² (W/m ²)	Targeted psPDmod+ 4 cm ² (W/m ²)	Deviation (dB)	Date
10	10GHz_2005	9553	1650	10	100	96.8	153.4	171	-0.47	97.7	154.8	172	-0.46	101	160.0	177	-0.44	2025/8/15

Note: (1) means the measured PD was normalized to Prad power which can be referred to DASY Calibration Certificate in appendix C.



System Verification Setup Photo



12. RF Exposure Positions

12.1 SAR Testing for Tablet

This device can be used also in full sized tablet exposure conditions, due to its size. Per FCC KDB 616217, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR exclusion threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

12.2 Miscellaneous Testing Considerations

- Evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020.
- Per procedures of KDB Pubs. 447498 and 248227, and applicable product-specific procedures among KDB Pubs.
- Where supported by the test system, also report estimated absorbed (epithelial) power density (for reference purposes only, not specifically for compliance) and estimated incident PD, derived from measured SAR.
- In addition, for the highest SAR test configurations evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method (2 mm closest meas. plane)
 - Adjust measured results per amount that measurement uncertainty exceeds 30 % (see e.g. IEC 62479:2010)

<EUT Setup Photos>

Please refer to Appendix D for the test setup photos.

13. Conducted RF Output Power (Unit: dBm)

<WLAN Conducted Power>

General Note:

1. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. For each frequency band or when MIMO mode was not performed, due to for each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
3. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is $< 1.6\text{W/kg}$ and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
4. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
5. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
6. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
7. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
8. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test position configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is $\leq 0.4\text{ W/kg}$, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is $> 0.4\text{ W/kg}$, 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 $\leq 0.8\text{ W/kg}$ or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is $> 0.8\text{ W/kg}$, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is $\leq 1.2\text{ W/kg}$ or all required channels are tested.
9. Per April 2019 TCB workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)



10. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
11. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
12. When SAR testing for 802.11ax is required
 - a. If the maximum output power is highest for OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
 - b. Otherwise, consider the fully allocated channel for SAR testing
 - c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel
13. 802.11 ax/be supports both full tone size mode and partial tone size mode, after verification on partial tone size mode that partial size tone mode power will not be higher than full tone size mode, therefore, full tone mode power was chosen to be measured in this report.
14. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode.
15. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.
16. The device supports WLAN 2.4GHz/5GHz Tx Beamforming mode for 11ax/be, and the Tx Beamforming power/EIRP is not greater than CDD mode, so conducted power of CDD mode can represent Tx Beamforming mode.
17. For WLAN6GHz SISO & MIMO(CDD) & MIMO(SDM) & TX Beamforming mode of 802.11ax, follow the steps below:
 - 1) For Standard Client, due to WLAN SISO & TX Beamforming mode power level is not greater than WLAN MIMO(SDM) & MIMO(CDD) mode, so conducted power of WLAN SISO & Tx Beamforming mode is not required.
 - 2) For Indoor Client, due to WLAN SISO & MIMO(CDD) & TX Beamforming mode power level is not greater than WLAN MIMO(SDM) mode, so conducted power of WLAN SISO & MIMO(CDD) & Tx Beamforming mode is not required.

【2.4GHz WLAN_Ant 6_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	22.62	23.00	97.04
	6	2437	25.07	25.50	
	11	2462	24.76	25.00	
802.11g 6Mbps	1	2412	17.95	18.00	99.38
	6	2437	20.58	21.00	
	11	2462	17.49	17.50	
802.11n-HT20 MCS0	1	2412	17.68	18.00	100.00
	6	2437	19.69	20.00	
	11	2462	17.24	17.50	
802.11ac-VHT20 MCS0	1	2412	17.77	18.00	100.00
	6	2437	19.76	20.00	
	11	2462	17.33	17.50	
802.11ax-HE20 MCS0	1	2412	17.87	18.00	100.00
	6	2437	19.83	20.00	
	11	2462	17.43	17.50	
802.11be-EHT20 MCS0	1	2412	17.93	18.00	100.00
	6	2437	19.92	20.00	
	11	2462	17.51	18.00	

【2.4GHz WLAN_Ant 6_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	14.58	15.00	97.04
	6	2437	14.16	14.50	
	11	2462	14.16	14.50	
802.11g 6Mbps	1	2412	14.66	15.00	99.38
	6	2437	14.32	14.50	
	11	2462	14.24	14.50	
802.11n-HT20 MCS0	1	2412	14.45	14.50	100.00
	6	2437	14.23	14.50	



802.11ac-VHT20 MCS0	11	2462	14.06	14.50	100.00
	1	2412	14.51	15.00	
	6	2437	14.28	14.50	
	11	2462	14.11	14.50	
802.11ax-HE20 MCS0	1	2412	14.58	15.00	100.00
	6	2437	14.34	14.50	
	11	2462	14.17	14.50	
802.11be-EHT20 MCS0	1	2412	14.64	15.00	100.00
	6	2437	14.38	14.50	
	11	2462	14.23	14.50	

【2.4GHz WLAN_Ant 6_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	13.05	13.50	97.04
	6	2437	12.86	13.00	
	11	2462	12.78	13.00	
802.11g 6Mbps	1	2412	13.06	13.50	99.38
	6	2437	12.82	13.00	
	11	2462	12.75	13.00	
802.11n-HT20 MCS0	1	2412	12.89	13.00	100.00
	6	2437	12.60	13.00	
	11	2462	12.67	13.00	
802.11ac-VHT20 MCS0	1	2412	12.96	13.00	100.00
	6	2437	12.66	13.00	
	11	2462	12.73	13.00	
802.11ax-HE20 MCS0	1	2412	13.02	13.50	100.00
	6	2437	12.73	13.00	
	11	2462	12.78	13.00	
802.11be-EHT20 MCS0	1	2412	13.07	13.50	100.00
	6	2437	12.76	13.00	
	11	2462	12.84	13.00	

【2.4GHz WLAN_Ant 7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	20.48	20.50	97.04
	6	2437	22.93	23.00	
	11	2462	23.86	24.00	
802.11g 6Mbps	1	2412	17.65	18.00	99.38
	6	2437	19.96	20.00	
	11	2462	17.51	18.00	
802.11n-HT20 MCS0	1	2412	17.35	17.50	100.00
	6	2437	19.24	19.50	
	11	2462	17.21	17.50	
802.11ac-VHT20 MCS0	1	2412	17.44	17.50	100.00
	6	2437	19.34	19.50	
	11	2462	17.29	17.50	
802.11ax-HE20 MCS0	1	2412	17.53	18.00	100.00
	6	2437	19.43	19.50	
	11	2462	17.39	17.50	
802.11be-EHT20 MCS0	1	2412	17.63	18.00	100.00
	6	2437	19.53	20.00	
	11	2462	17.45	17.50	

【2.4GHz WLAN_Ant 7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	13.52	14.00	97.04
	6	2437	13.57	14.00	
	11	2462	13.64	14.00	
802.11g 6Mbps	1	2412	13.65	14.00	99.38
	6	2437	13.54	14.00	
	11	2462	13.66	14.00	
802.11n-HT20 MCS0	1	2412	13.44	13.50	100.00



	6	2437	13.27	13.50	
	11	2462	13.43	13.50	
	1	2412	13.50	14.00	
802.11ac-VHT20 MCS0	6	2437	13.32	13.50	100.00
	11	2462	13.51	14.00	
	1	2412	13.61	14.00	
802.11ax-HE20 MCS0	6	2437	13.38	13.50	100.00
	11	2462	13.59	14.00	
	1	2412	13.67	14.00	
802.11be-EHT20 MCS0	6	2437	13.44	13.50	100.00
	11	2462	13.65	14.00	

【2.4GHz WLAN_Ant 7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	11.51	12.00	97.04
	6	2437	11.50	12.00	
	11	2462	11.54	12.00	
802.11g 6Mbps	1	2412	11.55	12.00	99.38
	6	2437	11.46	11.50	
	11	2462	11.51	12.00	
802.11n-HT20 MCS0	1	2412	11.32	11.50	100.00
	6	2437	11.31	11.50	
	11	2462	11.32	11.50	
802.11ac-VHT20 MCS0	1	2412	11.38	11.50	100.00
	6	2437	11.36	11.50	
	11	2462	11.35	11.50	
802.11ax-HE20 MCS0	1	2412	11.44	11.50	100.00
	6	2437	11.41	11.50	
	11	2462	11.40	11.50	
802.11be-EHT20 MCS0	1	2412	11.51	12.00	100.00
	6	2437	11.45	11.50	
	11	2462	11.46	11.50	

【2.4GHz WLAN_Ant 6+7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	24.69	24.90	97.04
	6	2437	27.14	27.40	
	11	2462	27.34	27.50	
802.11g 6Mbps	1	2412	20.81	21.00	99.38
	6	2437	23.29	23.50	
	11	2462	20.51	20.80	
802.11n-HT20 MCS0	1	2412	20.53	20.80	100.00
	6	2437	22.48	22.80	
	11	2462	20.24	20.50	
802.11ac-VHT20 MCS0	1	2412	20.62	20.80	100.00
	6	2437	22.57	22.80	
	11	2462	20.32	20.50	
802.11ax-HE20 MCS0	1	2412	20.71	21.00	100.00
	6	2437	22.64	22.80	
	11	2462	20.42	20.50	
802.11be-EHT20 MCS0	1	2412	20.79	21.00	100.00
	6	2437	22.74	23.00	
	11	2462	20.49	20.80	

【2.4GHz WLAN_Ant 6+7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	17.09	17.50	97.04
	6	2437	16.89	17.30	
	11	2462	16.92	17.30	
802.11g 6Mbps	1	2412	17.19	17.50	99.38
	6	2437	16.95	17.30	
	11	2462	16.97	17.30	



802.11n-HT20 MCS0	1	2412	16.98	17.00	100.00
	6	2437	16.79	17.00	
	11	2462	16.77	17.00	
802.11ac-VHT20 MCS0	1	2412	17.04	17.50	100.00
	6	2437	16.84	17.00	
	11	2462	16.83	17.30	
802.11ax-HE20 MCS0	1	2412	17.13	17.50	100.00
	6	2437	16.90	17.00	
	11	2462	16.90	17.30	
802.11be-EHT20 MCS0	1	2412	17.19	17.50	100.00
	6	2437	16.95	17.00	
	11	2462	16.96	17.30	

【2.4GHz WLAN_Ant 6+7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	1	2412	15.39	15.80	97.04
	6	2437	15.24	15.50	
	11	2462	15.21	15.50	
802.11g 6Mbps	1	2412	15.38	15.80	99.38
	6	2437	15.20	15.30	
	11	2462	15.18	15.50	
802.11n-HT20 MCS0	1	2412	15.19	15.30	100.00
	6	2437	15.01	15.30	
	11	2462	15.06	15.30	
802.11ac-VHT20 MCS0	1	2412	15.25	15.30	100.00
	6	2437	15.07	15.30	
	11	2462	15.10	15.30	
802.11ax-HE20 MCS0	1	2412	15.31	15.60	100.00
	6	2437	15.13	15.30	
	11	2462	15.15	15.30	
802.11be-EHT20 MCS0	1	2412	15.37	15.80	100.00
	6	2437	15.16	15.30	
	11	2462	15.21	15.30	

【5.2GHz WLAN_Ant 6_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	16.91	17.00	98.97
	40	5200	19.23	19.50	
	44	5220	18.88	19.00	
	48	5240	16.60	17.00	
802.11n-HT20 MCS0	36	5180	16.63	17.00	100.00
	40	5200	19.03	19.50	
	44	5220	18.75	19.00	
	48	5240	16.23	16.50	
802.11n-HT40 MCS0	38	5190	16.88	17.00	100.00
	46	5230	16.65	17.00	
802.11ac-VHT20 MCS0	36	5180	16.72	17.00	100.00
	40	5200	19.09	19.50	
	44	5220	18.78	19.00	
	48	5240	16.29	16.50	
802.11ac-VHT40 MCS0	38	5190	16.94	17.00	100.00
	46	5230	16.75	17.00	
802.11ac-VHT80 MCS0	42	5210	16.70	17.00	100.00
802.11ax-HE20 MCS0	36	5180	16.78	17.00	100.00
	40	5200	19.17	19.50	
	44	5220	18.83	19.00	
	48	5240	16.37	16.50	
802.11ax-HE40 MCS0	38	5190	17.02	17.50	100.00
	46	5230	16.83	17.00	
802.11ax-HE80 MCS0	42	5210	16.77	17.00	100.00
802.11be-EHT20 MCS0	36	5180	16.84	17.00	100.00
	40	5200	19.23	19.50	
	44	5220	18.88	19.00	
	48	5240	16.44	16.50	
802.11be-EHT40 MCS0	38	5190	17.08	17.50	100.00
	46	5230	16.89	17.00	
802.11be-EHT80 MCS0	42	5210	16.84	17.00	100.00

**[5.2GHz WLAN_Ant 6_Standalone]**

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	9.69	10.00	98.97
	40	5200	9.62	10.00	
	44	5220	9.41	9.50	
	48	5240	9.47	9.50	
802.11n-HT20 MCS0	36	5180	9.46	9.50	100.00
	40	5200	9.41	9.50	
	44	5220	9.33	9.50	
	48	5240	9.40	9.50	
802.11n-HT40 MCS0	38	5190	9.44	9.50	100.00
	46	5230	9.39	9.50	
802.11ac-VHT20 MCS0	36	5180	9.52	10.00	100.00
	40	5200	9.47	9.50	
	44	5220	9.38	9.50	
	48	5240	9.44	9.50	
802.11ac-VHT40 MCS0	38	5190	9.49	9.50	100.00
	46	5230	9.43	9.50	
802.11ac-VHT80 MCS0	42	5210	9.42	9.50	100.00
802.11ax-HE20 MCS0	36	5180	9.56	10.00	100.00
	40	5200	9.53	10.00	
	44	5220	9.44	9.50	
	48	5240	9.47	9.50	
802.11ax-HE40 MCS0	38	5190	9.55	10.00	100.00
	46	5230	9.47	9.50	
802.11ax-HE80 MCS0	42	5210	9.47	9.50	100.00
802.11be-EHT20 MCS0	36	5180	9.61	10.00	100.00
	40	5200	9.60	10.00	
	44	5220	9.48	9.50	
	48	5240	9.53	10.00	
802.11be-EHT40 MCS0	38	5190	9.63	10.00	100.00
	46	5230	9.53	10.00	
802.11be-EHT80 MCS0	42	5210	9.52	10.00	100.00

[5.2GHz WLAN_Ant 6_Simultaneous]

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	7.29	7.50	98.97
	40	5200	7.31	7.50	
	44	5220	7.15	7.50	
	48	5240	7.21	7.50	
802.11n-HT20 MCS0	36	5180	7.12	7.50	100.00
	40	5200	7.17	7.50	
	44	5220	7.04	7.50	
	48	5240	7.10	7.50	
802.11n-HT40 MCS0	38	5190	7.31	7.50	100.00
	46	5230	7.14	7.50	
802.11ac-VHT20 MCS0	36	5180	7.19	7.50	100.00
	40	5200	7.21	7.50	
	44	5220	7.09	7.50	
	48	5240	7.12	7.50	
802.11ac-VHT40 MCS0	38	5190	7.37	7.50	100.00
	46	5230	7.18	7.50	
802.11ac-VHT80 MCS0	42	5210	7.22	7.50	100.00
802.11ax-HE20 MCS0	36	5180	7.25	7.50	100.00
	40	5200	7.24	7.50	
	44	5220	7.13	7.50	
	48	5240	7.17	7.50	
802.11ax-HE40 MCS0	38	5190	7.41	7.50	100.00
	46	5230	7.22	7.50	
802.11ax-HE80 MCS0	42	5210	7.27	7.50	100.00
802.11be-EHT20 MCS0	36	5180	7.31	7.50	100.00
	40	5200	7.29	7.50	
	44	5220	7.15	7.50	
	48	5240	7.21	7.50	
802.11be-EHT40 MCS0	38	5190	7.45	7.50	100.00
	46	5230	7.27	7.50	
802.11be-EHT80 MCS0	42	5210	7.33	7.50	100.00

**【5.2GHz WLAN_Ant 6_HBS】**

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	Not Required	14.5	98.97
	40	5200		14.5	98.97
	44	5220		14.5	98.97
	48	5240		14.5	98.97
802.11n-HT20 MCS0	36	5180		14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11n-HT40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ac-VHT20 MCS0	36	5180		14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11ac-VHT40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ac-VHT80 MCS0	42	5210	14.33	14.5	100
802.11ax-HE20 MCS0	36	5180	Not Required	14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11ax-HE40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ax-HE80 MCS0	42	5210		14.5	100
	36	5180		14.5	100
802.11be-EHT20 MCS0	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
	38	5190		14.5	100
802.11be-EHT40 MCS0	46	5230		14.5	100
	42	5210		14.5	100
802.11be-EHT80 MCS0	42	5210		14.5	100

【5.2GHz WLAN_Ant 7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	17.05	17.50	99.32
	40	5200	19.00	19.00	
	44	5220	19.16	19.50	
	48	5240	17.18	17.50	
802.11n-HT20 MCS0	36	5180	16.79	17.00	100.00
	40	5200	18.81	19.00	
	44	5220	18.88	19.00	
	48	5240	16.80	17.00	
802.11n-HT40 MCS0	38	5190	16.75	17.00	100.00
	46	5230	16.71	17.00	
802.11ac-VHT20 MCS0	36	5180	16.89	17.00	100.00
	40	5200	18.87	19.00	
	44	5220	18.93	19.00	
	48	5240	16.86	17.00	
802.11ac-VHT40 MCS0	38	5190	16.83	17.00	100.00
	46	5230	16.80	17.00	
802.11ac-VHT80 MCS0	42	5210	16.90	17.00	100.00
802.11ax-HE20 MCS0	36	5180	16.95	17.00	100.00
	40	5200	18.91	19.00	
	44	5220	18.98	19.00	
	48	5240	16.94	17.00	
802.11ax-HE40 MCS0	38	5190	16.90	17.00	100.00
	46	5230	16.88	17.00	
802.11ax-HE80 MCS0	42	5210	16.99	17.00	100.00
802.11be-EHT20 MCS0	36	5180	17.04	17.50	100.00



	40	5200	18.96	19.00	
	44	5220	19.03	19.50	
	48	5240	17.02	17.50	
802.11be-EHT40 MCS0	38	5190	16.97	17.00	100.00
	46	5230	16.98	17.00	
802.11be-EHT80 MCS0	42	5210	17.06	17.50	100.00

【5.2GHz WLAN_Ant 7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 7		Duty Cycle %
			Average Power (dBm)	Tune-Up Limit	
802.11a 6Mbps	36	5180	7.08	7.50	99.32
	40	5200	7.26	7.50	
	44	5220	7.24	7.50	
	48	5240	7.32	7.50	
802.11n-HT20 MCS0	36	5180	6.87	7.00	100.00
	40	5200	6.96	7.00	
	44	5220	7.01	7.50	
	48	5240	6.95	7.00	
802.11n-HT40 MCS0	38	5190	6.79	7.00	100.00
	46	5230	6.92	7.00	
802.11ac-VHT20 MCS0	36	5180	6.99	7.00	100.00
	40	5200	7.01	7.50	
	44	5220	7.10	7.50	
802.11ac-VHT40 MCS0	48	5240	7.10	7.50	100.00
	38	5190	6.88	7.00	
802.11ac-VHT80 MCS0	46	5230	7.04	7.50	100.00
	42	5210	7.00	7.50	
802.11ax-HE20 MCS0	36	5180	7.07	7.50	100.00
	40	5200	7.02	7.50	
	44	5220	7.12	7.50	
	48	5240	7.18	7.50	
802.11ax-HE40 MCS0	38	5190	6.91	7.00	100.00
	46	5230	7.07	7.50	
802.11ax-HE80 MCS0	42	5210	7.03	7.50	100.00
802.11be-EHT20 MCS0	36	5180	7.11	7.50	100.00
	40	5200	7.19	7.50	
	44	5220	7.23	7.50	
	48	5240	7.21	7.50	
802.11be-EHT40 MCS0	38	5190	6.99	7.00	100.00
	46	5230	7.11	7.50	
802.11be-EHT80 MCS0	42	5210	7.16	7.50	100.00

【5.2GHz WLAN_Ant 7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 7		Duty Cycle %
			Average Power (dBm)	Tune-Up Limit	
802.11a 6Mbps	36	5180	5.46	5.50	99.32
	40	5200	5.72	6.00	
	44	5220	5.68	6.00	
	48	5240	5.76	6.00	
802.11n-HT20 MCS0	36	5180	5.30	5.50	100.00
	40	5200	5.34	5.50	
	44	5220	5.38	5.50	
	48	5240	5.39	5.50	
802.11n-HT40 MCS0	38	5190	5.24	5.50	100.00
	46	5230	5.30	5.50	
802.11ac-VHT20 MCS0	36	5180	5.37	5.50	100.00
	40	5200	5.38	5.50	
	44	5220	5.41	5.50	
	48	5240	5.50	6.00	
802.11ac-VHT40 MCS0	38	5190	5.27	5.50	100.00
	46	5230	5.38	5.50	
802.11ac-VHT80 MCS0	42	5210	5.31	5.50	100.00
802.11ax-HE20 MCS0	36	5180	5.51	6.00	100.00
	40	5200	5.40	5.50	
	44	5220	5.48	5.50	
	48	5240	5.54	6.00	
802.11ax-HE40 MCS0	38	5190	5.30	5.50	100.00
	46	5230	5.47	5.50	



802.11ax-HE80 MCS0	42	5210	5.35	5.50	100.00
802.11be-EHT20 MCS0	36	5180	5.53	6.00	100.00
	40	5200	5.53	6.00	
	44	5220	5.69	6.00	
	48	5240	5.57	6.00	
802.11be-EHT40 MCS0	38	5190	5.45	5.50	100.00
	46	5230	5.53	6.00	
802.11be-EHT80 MCS0	42	5210	5.39	5.50	100.00

【5.2GHz WLAN_Ant 7_HBS】

Mode	Channel	Frequency (MHz)	Average Power (dBm)	Ant 7	
				Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	Not Required	14.5	99.32
	40	5200		14.5	99.32
	44	5220		14.5	99.32
	48	5240		14.5	99.32
802.11n-HT20 MCS0	36	5180		14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11n-HT40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ac-VHT20 MCS0	36	5180		14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11ac-VHT40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ac-VHT80 MCS0	42	5210	14.01	14.5	100
802.11ax-HE20 MCS0	36	5180	Not Required	14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11ax-HE40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11ax-HE80 MCS0	42	5210		14.5	100
802.11be-EHT20 MCS0	36	5180		14.5	100
	40	5200		14.5	100
	44	5220		14.5	100
	48	5240		14.5	100
802.11be-EHT40 MCS0	38	5190		14.5	100
	46	5230		14.5	100
802.11be-EHT80 MCS0	42	5210		14.5	100

【5.2GHz WLAN_Ant 6+7_Full Power】

Mode	Channel	Frequency (MHz)	Average Power (dBm)	Ant 6+7	
				Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	19.99	20.30	99.32
	40	5200	22.13	22.30	
	44	5220	22.03	22.30	
	48	5240	19.91	20.30	
802.11n-HT20 MCS0	36	5180	19.72	20.00	100.00
	40	5200	21.93	22.30	
	44	5220	21.83	22.00	
	48	5240	19.53	19.80	
802.11n-HT40 MCS0	38	5190	19.83	20.00	100.00
	46	5230	19.69	20.00	
802.11ac-VHT20 MCS0	36	5180	19.82	20.00	100.00
	40	5200	21.99	22.30	
	44	5220	21.87	22.00	
	48	5240	19.59	19.80	
802.11ac-VHT40 MCS0	38	5190	19.90	20.00	100.00
	46	5230	19.79	20.00	
802.11ac-VHT80 MCS0	42	5210	19.81	20.00	100.00



802.11ax-HE20 MCS0	36	5180	19.88	20.00	100.00
	40	5200	22.05	22.30	
	44	5220	21.92	22.00	
	48	5240	19.67	19.80	
802.11ax-HE40 MCS0	38	5190	19.97	20.30	100.00
	46	5230	19.87	20.00	
802.11ax-HE80 MCS0	42	5210	19.89	20.00	100.00
802.11be-EHT20 MCS0	36	5180	19.95	20.30	100.00
	40	5200	22.11	22.30	
	44	5220	21.97	22.30	
	48	5240	19.75	20.00	
802.11be-EHT40 MCS0	38	5190	20.04	20.30	100.00
	46	5230	19.95	20.00	
802.11be-EHT80 MCS0	42	5210	19.96	20.30	100.00

【5.2GHz WLAN_Ant 6+7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	11.59	11.90	99.32
	40	5200	11.61	11.90	
	44	5220	11.47	11.60	
	48	5240	11.54	11.60	
802.11n-HT20 MCS0	36	5180	11.37	11.40	100.00
	40	5200	11.37	11.40	
	44	5220	11.33	11.60	
	48	5240	11.36	11.40	
802.11n-HT40 MCS0	38	5190	11.32	11.40	100.00
	46	5230	11.34	11.40	
802.11ac-VHT20 MCS0	36	5180	11.45	11.80	100.00
	40	5200	11.42	11.60	
	44	5220	11.40	11.60	
	48	5240	11.44	11.60	
802.11ac-VHT40 MCS0	38	5190	11.39	11.40	100.00
	46	5230	11.41	11.60	
802.11ac-VHT80 MCS0	42	5210	11.39	11.60	100.00
802.11ax-HE20 MCS0	36	5180	11.50	11.90	100.00
	40	5200	11.46	11.90	
	44	5220	11.44	11.60	
	48	5240	11.48	11.60	
802.11ax-HE40 MCS0	38	5190	11.44	11.80	100.00
	46	5230	11.44	11.60	
802.11ax-HE80 MCS0	42	5210	11.43	11.60	100.00
802.11be-EHT20 MCS0	36	5180	11.55	11.90	100.00
	40	5200	11.57	11.90	
	44	5220	11.51	11.60	
	48	5240	11.53	11.90	
802.11be-EHT40 MCS0	38	5190	11.52	11.80	100.00
	46	5230	11.50	11.90	
802.11be-EHT80 MCS0	42	5210	11.51	11.90	100.00

【5.2GHz WLAN_Ant 6+7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	9.48	9.60	99.32
	40	5200	9.60	9.80	
	44	5220	9.49	9.80	
	48	5240	9.56	9.80	
802.11n-HT20 MCS0	36	5180	9.31	9.60	100.00
	40	5200	9.36	9.60	
	44	5220	9.30	9.60	
	48	5240	9.34	9.60	
802.11n-HT40 MCS0	38	5190	9.41	9.60	100.00
	46	5230	9.33	9.60	
802.11ac-VHT20 MCS0	36	5180	9.38	9.60	100.00
	40	5200	9.40	9.60	
	44	5220	9.34	9.60	
	48	5240	9.40	9.80	
802.11ac-VHT40 MCS0	38	5190	9.46	9.60	100.00



	46	5230	9.38	9.60	
802.11ac-VHT80 MCS0	42	5210	9.38	9.60	100.00
802.11ax-HE20 MCS0	36	5180	9.48	9.80	100.00
	40	5200	9.43	9.60	
	44	5220	9.39	9.60	
	48	5240	9.44	9.80	
802.11ax-HE40 MCS0	38	5190	9.49	9.60	100.00
	46	5230	9.44	9.60	
802.11ax-HE80 MCS0	42	5210	9.43	9.60	100.00
802.11be-EHT20 MCS0	36	5180	9.52	9.80	100.00
	40	5200	9.51	9.80	
	44	5220	9.49	9.80	
	48	5240	9.48	9.80	
802.11be-EHT40 MCS0	38	5190	9.57	9.60	100.00
	46	5230	9.50	9.80	
802.11be-EHT80 MCS0	42	5210	9.48	9.60	100.00

【5.2GHz WLAN_Ant 6+7_HBS】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	36	5180	Not Required	17.5	99.32
	40	5200		17.5	99.32
	44	5220		17.5	99.32
	48	5240		17.5	99.32
802.11n-HT20 MCS0	36	5180		17.5	100
	40	5200		17.5	100
	44	5220		17.5	100
	48	5240		17.5	100
802.11n-HT40 MCS0	38	5190		17.5	100
	46	5230		17.5	100
802.11ac-VHT20 MCS0	36	5180		17.5	100
	40	5200		17.5	100
	44	5220		17.5	100
	48	5240		17.5	100
802.11ac-VHT40 MCS0	38	5190		17.5	100
	46	5230		17.5	100
802.11ac-VHT80 MCS0	42	5210	17.17	17.5	100
802.11ax-HE20 MCS0	36	5180	Not Required	17.5	100
	40	5200		17.5	100
	44	5220		17.5	100
	48	5240		17.5	100
802.11ax-HE40 MCS0	38	5190		17.5	100
	46	5230		17.5	100
802.11ax-HE80 MCS0	42	5210		17.5	100
802.11be-EHT20 MCS0	36	5180		17.5	100
	40	5200		17.5	100
	44	5220		17.5	100
	48	5240		17.5	100
802.11be-EHT40 MCS0	38	5190		17.5	100
	46	5230		17.5	100
802.11be-EHT80 MCS0	42	5210		17.5	100

**【5.3GHz WLAN_Ant 6_Full Power】**

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	16.63	17.00	98.97
	56	5280	18.61	19.00	
	60	5300	18.85	19.00	
	64	5320	17.39	17.50	
802.11n-HT20 MCS0	52	5260	16.32	16.50	100.00
	56	5280	19.22	19.50	
	60	5300	19.25	19.50	
	64	5320	16.96	17.00	
802.11n-HT40 MCS0	54	5270	16.75	17.00	100.00
	62	5310	17.11	17.50	
802.11ac-VHT20 MCS0	52	5260	16.41	16.50	100.00
	56	5280	19.28	19.50	
	60	5300	19.32	19.50	
	64	5320	17.04	17.50	
802.11ac-VHT40 MCS0	54	5270	16.81	17.00	100.00
	62	5310	17.17	17.50	
802.11ac-VHT80 MCS0	58	5290	17.09	17.50	100.00
802.11ac-VHT160 MCS0	50	5250	15.06	15.50	100.00
802.11ax-HE20 MCS0	52	5260	16.47	16.50	100.00
	56	5280	19.31	19.50	
	60	5300	19.35	19.50	
	64	5320	17.11	17.50	
802.11ax-HE40 MCS0	54	5270	16.87	17.00	100.00
	62	5310	17.25	17.50	
802.11ax-HE80 MCS0	58	5290	17.19	17.50	100.00
802.11ax-HE160 MCS0	50	5250	15.09	15.50	100.00
802.11be-EHT20 MCS0	52	5260	16.55	17.00	100.00
	56	5280	19.36	19.50	
	60	5300	19.42	19.50	
	64	5320	17.19	17.50	
802.11be-EHT40 MCS0	54	5270	16.95	17.00	100.00
	62	5310	17.31	17.50	
802.11be-EHT80 MCS0	58	5290	17.27	17.50	100.00
802.11be-EHT160 MCS0	50	5250	15.11	15.50	100.00

【5.3GHz WLAN_Ant 6_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	9.66	10.00	98.97
	56	5280	9.88	10.00	
	60	5300	9.82	10.00	
	64	5320	10.11	10.50	
802.11n-HT20 MCS0	52	5260	9.44	9.50	100.00
	56	5280	9.66	10.00	
	60	5300	9.71	10.00	
	64	5320	9.89	10.00	
802.11n-HT40 MCS0	54	5270	9.82	10.00	100.00
	62	5310	9.87	10.00	
802.11ac-VHT20 MCS0	52	5260	9.49	9.50	100.00
	56	5280	9.78	10.00	
	60	5300	9.77	10.00	
	64	5320	9.98	10.00	
802.11ac-VHT40 MCS0	54	5270	9.87	10.00	100.00
	62	5310	9.93	10.00	
802.11ac-VHT80 MCS0	58	5290	9.22	9.50	100.00
802.11ac-VHT160 MCS0	50	5250	9.53	10.00	100.00
802.11ax-HE20 MCS0	52	5260	9.55	10.00	100.00
	56	5280	9.88	10.00	
	60	5300	9.83	10.00	
	64	5320	10.05	10.50	
802.11ax-HE40 MCS0	54	5270	9.91	10.00	100.00
	62	5310	9.99	10.00	
802.11ax-HE80 MCS0	58	5290	9.28	9.50	100.00
802.11ax-HE160 MCS0	50	5250	9.57	10.00	100.00
802.11be-EHT20 MCS0	52	5260	9.59	10.00	100.00
	56	5280	9.94	10.00	



802.11be-EHT40 MCS0	60	5300	9.88	10.00	100.00
	64	5320	10.11	10.50	
	54	5270	9.95	10.00	
	62	5310	10.05	10.50	
802.11be-EHT80 MCS0	58	5290	9.34	9.50	100.00
802.11be-EHT160 MCS0	50	5250	9.61	10.00	100.00

【5.3GHz WLAN_Ant 6_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	7.47	7.50	98.97
	56	5280	7.75	8.00	
	60	5300	7.72	8.00	
	64	5320	7.77	8.00	
802.11n-HT20 MCS0	52	5260	7.33	7.50	100.00
	56	5280	7.42	7.50	
	60	5300	7.47	7.50	
	64	5320	7.49	7.50	
802.11n-HT40 MCS0	54	5270	7.47	7.50	100.00
	62	5310	7.75	8.00	
802.11ac-VHT20 MCS0	52	5260	7.37	7.50	100.00
	56	5280	7.48	7.50	
	60	5300	7.59	8.00	
	64	5320	7.56	8.00	
802.11ac-VHT40 MCS0	54	5270	7.58	8.00	100.00
	62	5310	7.81	8.00	
802.11ac-VHT80 MCS0	58	5290	7.34	7.50	100.00
802.11ac-VHT160 MCS0	50	5250	7.45	7.50	100.00
802.11ax-HE20 MCS0	52	5260	7.41	7.50	100.00
	56	5280	7.57	8.00	
	60	5300	7.65	8.00	
	64	5320	7.62	8.00	
802.11ax-HE40 MCS0	54	5270	7.62	8.00	100.00
	62	5310	7.87	8.00	
802.11ax-HE80 MCS0	58	5290	7.39	7.50	100.00
802.11ax-HE160 MCS0	50	5250	7.52	8.00	100.00
802.11be-EHT20 MCS0	52	5260	7.47	7.50	100.00
	56	5280	7.62	8.00	
	60	5300	7.71	8.00	
	64	5320	7.69	8.00	
802.11be-EHT40 MCS0	54	5270	7.69	8.00	100.00
	62	5310	7.94	8.00	
802.11be-EHT80 MCS0	58	5290	7.44	7.50	100.00
802.11be-EHT160 MCS0	50	5250	7.58	8.00	100.00

【5.3GHz WLAN_Ant 6_HBS】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	Not Required	14	98.97
	56	5280		14	98.97
	60	5300		14	98.97
	64	5320		14	98.97
802.11n-HT20 MCS0	52	5260		14	100
	56	5280		14	100
	60	5300		14	100
	64	5320		14	100
802.11n-HT40 MCS0	54	5270		14	100
	62	5310		14	100
802.11ac-VHT20 MCS0	52	5260		14	100
	56	5280		14	100
	60	5300		14	100
	64	5320		14	100
802.11ac-VHT40 MCS0	54	5270		14	100
	62	5310		14	100
802.11ac-VHT80 MCS0	58	5290		14	100



802.11ac-VHT160 MCS0	50	5250	13.78	14	100
802.11ax-HE20 MCS0	52	5260	Not Required	14	100
	56	5280		14	100
	60	5300		14	100
	64	5320		14	100
802.11ax-HE40 MCS0	54	5270		14	100
	62	5310		14	100
802.11ax-HE80 MCS0	58	5290		14	100
802.11ax-HE160 MCS0	50	5250		14	100
802.11be-EHT20 MCS0	52	5260		14	100
	56	5280		14	100
	60	5300		14	100
	64	5320		14	100
802.11be-EHT40 MCS0	54	5270		14	100
	62	5310		14	100
802.11be-EHT80 MCS0	58	5290		14	100
802.11be-EHT160 MCS0	50	5250		14	100

【5.3GHz WLAN_Ant 7_Full Power】

			Ant 7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	16.97	17.00	99.32
	56	5280	18.42	18.50	
	60	5300	18.40	18.50	
	64	5320	16.47	16.50	
802.11n-HT20 MCS0	52	5260	16.73	17.00	100.00
	56	5280	19.14	19.50	
	60	5300	19.03	19.50	
	64	5320	16.17	16.50	
802.11n-HT40 MCS0	54	5270	16.72	17.00	100.00
	62	5310	16.45	16.50	
802.11ac-VHT20 MCS0	52	5260	16.81	17.00	100.00
	56	5280	19.19	19.50	
	60	5300	19.08	19.50	
	64	5320	16.25	16.50	
802.11ac-VHT40 MCS0	54	5270	16.81	17.00	100.00
	62	5310	16.54	17.00	
802.11ac-VHT80 MCS0	58	5290	16.72	17.00	100.00
802.11ac-VHT160 MCS0	50	5250	15.18	15.50	100.00
802.11ax-HE20 MCS0	52	5260	16.87	17.00	100.00
	56	5280	19.25	19.50	
	60	5300	19.12	19.50	
	64	5320	16.32	16.50	
802.11ax-HE40 MCS0	54	5270	16.90	17.00	100.00
	62	5310	16.63	17.00	
802.11ax-HE80 MCS0	58	5290	16.78	17.00	100.00
802.11ax-HE160 MCS0	50	5250	15.21	15.50	100.00
802.11be-EHT20 MCS0	52	5260	16.96	17.00	100.00
	56	5280	19.30	19.50	
	60	5300	19.19	19.50	
	64	5320	16.41	16.50	
802.11be-EHT40 MCS0	54	5270	16.97	17.00	100.00
	62	5310	16.71	17.00	
802.11be-EHT80 MCS0	58	5290	16.84	17.00	100.00
802.11be-EHT160 MCS0	50	5250	15.22	15.50	100.00

【5.3GHz WLAN_Ant 7_Standalone】

			Ant 7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	7.43	7.50	99.32
	56	5280	7.35	7.50	
	60	5300	7.11	7.50	
	64	5320	7.05	7.50	
802.11n-HT20 MCS0	52	5260	7.12	7.50	100.00
	56	5280	7.10	7.50	
	60	5300	6.77	7.00	



802.11n-HT40 MCS0	64	5320	6.79	7.00	100.00
	54	5270	7.03	7.50	
	62	5310	6.85	7.00	
802.11ac-VHT20 MCS0	52	5260	7.18	7.50	100.00
	56	5280	7.16	7.50	
	60	5300	6.83	7.00	
	64	5320	6.81	7.00	
802.11ac-VHT40 MCS0	54	5270	7.12	7.50	100.00
	62	5310	6.91	7.00	
802.11ac-VHT80 MCS0	58	5290	7.10	7.50	100.00
802.11ac-VHT160 MCS0	50	5250	6.86	7.00	100.00
802.11ax-HE20 MCS0	52	5260	7.22	7.50	100.00
	56	5280	7.24	7.50	
	60	5300	6.90	7.00	
	64	5320	6.86	7.00	
802.11ax-HE40 MCS0	54	5270	7.20	7.50	100.00
	62	5310	7.01	7.50	
802.11ax-HE80 MCS0	58	5290	7.17	7.50	100.00
802.11ax-HE160 MCS0	50	5250	6.89	7.00	100.00
802.11be-EHT20 MCS0	52	5260	7.26	7.50	100.00
	56	5280	7.27	7.50	
	60	5300	6.92	7.00	
	64	5320	6.92	7.00	
802.11be-EHT40 MCS0	54	5270	7.28	7.50	100.00
	62	5310	7.19	7.50	
802.11be-EHT80 MCS0	58	5290	7.33	7.50	100.00
802.11be-EHT160 MCS0	50	5250	6.92	7.00	100.00

【5.3GHz WLAN_Ant 7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	5.89	6.00	99.32
	56	5280	5.81	6.00	
	60	5300	5.49	5.50	
	64	5320	5.41	5.50	
802.11n-HT20 MCS0	52	5260	5.48	5.50	100.00
	56	5280	5.53	6.00	
	60	5300	5.11	5.50	
	64	5320	5.15	5.50	
802.11n-HT40 MCS0	54	5270	5.45	5.50	100.00
	62	5310	5.30	5.50	
802.11ac-VHT20 MCS0	52	5260	5.51	6.00	100.00
	56	5280	5.58	6.00	
	60	5300	5.18	5.50	
	64	5320	5.20	5.50	
802.11ac-VHT40 MCS0	54	5270	5.57	6.00	100.00
	62	5310	5.33	5.50	
802.11ac-VHT80 MCS0	58	5290	5.52	6.00	100.00
802.11ac-VHT160 MCS0	50	5250	5.15	5.50	100.00
802.11ax-HE20 MCS0	52	5260	5.56	6.00	100.00
	56	5280	5.60	6.00	
	60	5300	5.22	5.50	
	64	5320	5.24	5.50	
802.11ax-HE40 MCS0	54	5270	5.66	6.00	100.00
	62	5310	5.41	5.50	
802.11ax-HE80 MCS0	58	5290	5.55	6.00	100.00
802.11ax-HE160 MCS0	50	5250	5.27	5.50	100.00
802.11be-EHT20 MCS0	52	5260	5.60	6.00	100.00
	56	5280	5.71	6.00	
	60	5300	5.26	5.50	
	64	5320	5.28	5.50	
802.11be-EHT40 MCS0	54	5270	5.72	6.00	100.00
	62	5310	5.55	6.00	
802.11be-EHT80 MCS0	58	5290	5.75	6.00	100.00
802.11be-EHT160 MCS0	50	5250	5.38	5.50	100.00

**【5.3GHz WLAN_Ant 7_HBS】**

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	Not Required	14.5	99.32
	56	5280		14.5	99.32
	60	5300		14.5	99.32
	64	5320		14.5	99.32
802.11n-HT20 MCS0	52	5260		14.5	100
	56	5280		14.5	100
	60	5300		14.5	100
	64	5320		14.5	100
802.11n-HT40 MCS0	54	5270		14.5	100
	62	5310		14.5	100
802.11ac-VHT20 MCS0	52	5260		14.5	100
	56	5280		14.5	100
	60	5300		14.5	100
	64	5320		14.5	100
802.11ac-VHT40 MCS0	54	5270		14.5	100
	62	5310		14.5	100
802.11ac-VHT80 MCS0	58	5290		14.5	100
802.11ac-VHT160 MCS0	50	5250	14.05	14.5	100
802.11ax-HE20 MCS0	52	5260	Not Required	14.5	100
	56	5280		14.5	100
	60	5300		14.5	100
	64	5320		14.5	100
802.11ax-HE40 MCS0	54	5270		14.5	100
	62	5310		14.5	100
802.11ax-HE80 MCS0	58	5290		14.5	100
802.11ax-HE160 MCS0	50	5250		14.5	100
802.11be-EHT20 MCS0	52	5260		14.5	100
	56	5280		14.5	100
	60	5300		14.5	100
	64	5320		14.5	100
802.11be-EHT40 MCS0	54	5270		14.5	100
	62	5310		14.5	100
802.11be-EHT80 MCS0	58	5290		14.5	100
802.11be-EHT160 MCS0	50	5250		14.5	100

【5.3GHz WLAN_Ant 6+7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	19.82	20.00	99.32
	56	5280	21.53	21.80	
	60	5300	21.64	21.80	
	64	5320	19.97	20.00	
802.11n-HT20 MCS0	52	5260	19.54	19.80	100.00
	56	5280	22.19	22.50	
	60	5300	22.15	22.50	
	64	5320	19.59	19.80	
802.11n-HT40 MCS0	54	5270	19.75	20.00	100.00
	62	5310	19.80	20.00	
802.11ac-VHT20 MCS0	52	5260	19.62	19.80	100.00
	56	5280	22.25	22.50	
	60	5300	22.21	22.50	
	64	5320	19.67	20.00	
802.11ac-VHT40 MCS0	54	5270	19.82	20.00	100.00
	62	5310	19.88	20.30	
802.11ac-VHT80 MCS0	58	5290	19.92	20.30	100.00
802.11ac-VHT160 MCS0	50	5250	18.13	18.50	100.00
802.11ax-HE20 MCS0	52	5260	19.68	19.80	100.00
	56	5280	22.29	22.50	
	60	5300	22.25	22.50	
	64	5320	19.74	20.00	



802.11ax-HE40 MCS0	54	5270	19.90	20.00	100.00
	62	5310	19.96	20.30	
802.11ax-HE80 MCS0	58	5290	20.00	20.30	100.00
802.11ax-HE160 MCS0	50	5250	18.16	18.50	100.00
802.11be-EHT20 MCS0	52	5260	19.77	20.00	100.00
	56	5280	22.34	22.50	
	60	5300	22.32	22.50	
	64	5320	19.83	20.00	
802.11be-EHT40 MCS0	54	5270	19.97	20.00	100.00
	62	5310	20.03	20.30	
802.11be-EHT80 MCS0	58	5290	20.07	20.30	100.00
802.11be-EHT160 MCS0	50	5250	18.18	18.50	100.00

【5.3GHz WLAN_Ant 6+7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	11.70	11.90	99.32
	56	5280	11.81	11.90	
	60	5300	11.69	11.90	
	64	5320	11.86	12.30	
802.11n-HT20 MCS0	52	5260	11.44	11.60	100.00
	56	5280	11.58	11.90	
	60	5300	11.49	11.80	
	64	5320	11.62	11.80	
802.11n-HT40 MCS0	54	5270	11.66	11.90	100.00
	62	5310	11.63	11.80	
802.11ac-VHT20 MCS0	52	5260	11.50	11.60	100.00
	56	5280	11.67	11.90	
	60	5300	11.55	11.80	
	64	5320	11.69	11.80	
802.11ac-VHT40 MCS0	54	5270	11.72	11.90	100.00
	62	5310	11.69	11.80	
802.11ac-VHT80 MCS0	58	5290	11.30	11.60	100.00
802.11ac-VHT160 MCS0	50	5250	11.41	11.80	100.00
802.11ax-HE20 MCS0	52	5260	11.55	11.90	100.00
	56	5280	11.77	11.90	
	60	5300	11.62	11.80	
	64	5320	11.75	12.10	
802.11ax-HE40 MCS0	54	5270	11.77	11.90	100.00
	62	5310	11.76	11.90	
802.11ax-HE80 MCS0	58	5290	11.36	11.60	100.00
802.11ax-HE160 MCS0	50	5250	11.44	11.80	100.00
802.11be-EHT20 MCS0	52	5260	11.59	11.90	100.00
	56	5280	11.82	11.90	
	60	5300	11.66	11.80	
	64	5320	11.81	12.10	
802.11be-EHT40 MCS0	54	5270	11.83	11.90	100.00
	62	5310	11.86	12.30	
802.11be-EHT80 MCS0	58	5290	11.46	11.60	100.00
802.11be-EHT160 MCS0	50	5250	11.48	11.80	100.00

【5.3GHz WLAN_Ant 6+7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	9.76	9.80	99.32
	56	5280	9.90	10.10	
	60	5300	9.76	9.90	
	64	5320	9.76	9.90	
802.11n-HT20 MCS0	52	5260	9.51	9.60	100.00
	56	5280	9.59	9.80	
	60	5300	9.46	9.60	
	64	5320	9.49	9.60	
802.11n-HT40 MCS0	54	5270	9.59	9.60	100.00
	62	5310	9.71	9.90	
802.11ac-VHT20 MCS0	52	5260	9.55	9.80	100.00
	56	5280	9.64	9.80	
	60	5300	9.56	9.90	
	64	5320	9.55	9.90	



802.11ac-VHT40 MCS0	54	5270	9.70	10.10	100.00
	62	5310	9.75	9.90	
802.11ac-VHT80 MCS0	58	5290	9.53	9.80	100.00
802.11ac-VHT160 MCS0	50	5250	9.46	9.60	100.00
802.11ax-HE20 MCS0	52	5260	9.59	9.80	100.00
	56	5280	9.71	10.10	
	60	5300	9.61	9.90	
	64	5320	9.60	9.90	
802.11ax-HE40 MCS0	54	5270	9.76	10.10	100.00
	62	5310	9.82	9.90	
802.11ax-HE80 MCS0	58	5290	9.58	9.80	100.00
802.11ax-HE160 MCS0	50	5250	9.55	9.90	100.00
802.11be-EHT20 MCS0	52	5260	9.65	9.80	100.00
	56	5280	9.78	10.10	
	60	5300	9.67	9.90	
	64	5320	9.66	9.90	
802.11be-EHT40 MCS0	54	5270	9.83	10.10	100.00
	62	5310	9.92	10.10	
802.11be-EHT80 MCS0	58	5290	9.69	9.80	100.00
802.11be-EHT160 MCS0	50	5250	9.63	9.90	100.00

【5.3GHz WLAN_Ant 6+7_HBS】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	52	5260	Not Required	17.3	99.32
	56	5280		17.3	99.32
	60	5300		17.3	99.32
	64	5320		17.3	99.32
802.11n-HT20 MCS0	52	5260		17.3	100
	56	5280		17.3	100
	60	5300		17.3	100
	64	5320		17.3	100
802.11n-HT40 MCS0	54	5270		17.3	100
	62	5310		17.3	100
802.11ac-VHT20 MCS0	52	5260		17.3	100
	56	5280		17.3	100
	60	5300		17.3	100
	64	5320		17.3	100
802.11ac-VHT40 MCS0	54	5270		17.3	100
	62	5310		17.3	100
802.11ac-VHT80 MCS0	58	5290		17.3	100
802.11ac-VHT160 MCS0	50	5250	16.87	17.3	100
802.11ax-HE20 MCS0	52	5260	Not Required	17.3	100
	56	5280		17.3	100
	60	5300		17.3	100
	64	5320		17.3	100
802.11ax-HE40 MCS0	54	5270		17.3	100
	62	5310		17.3	100
802.11ax-HE80 MCS0	58	5290		17.3	100
802.11ax-HE160 MCS0	50	5250		17.3	100
802.11be-EHT20 MCS0	52	5260		17.3	100
	56	5280		17.3	100
	60	5300		17.3	100
	64	5320		17.3	100
802.11be-EHT40 MCS0	54	5270		17.3	100
	62	5310		17.3	100
802.11be-EHT80 MCS0	58	5290		17.3	100
802.11be-EHT160 MCS0	50	5250		17.3	100



【5.5GHz WLAN_Ant 6_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	16.92	17.00	98.97
	116	5580	19.45	19.50	
	124	5620	18.78	19.00	
	132	5660	18.90	19.00	
	144	5720	18.93	19.00	
802.11n-HT20 MCS0	100	5500	16.52	17.00	100.00
	116	5580	19.32	19.50	
	124	5620	19.18	19.50	
	132	5660	19.25	19.50	
	144	5720	19.34	19.50	
802.11n-HT40 MCS0	102	5510	16.87	17.00	100.00
	110	5550	19.33	19.50	
	126	5630	19.24	19.50	
	134	5670	16.97	17.00	
	142	5710	19.22	19.50	
802.11ac-VHT20 MCS0	100	5500	19.61	20.00	100.00
	116	5580	19.36	19.50	
	124	5620	19.22	19.50	
	132	5660	19.32	19.50	
	144	5720	19.39	19.50	
802.11ac-VHT40 MCS0	102	5510	16.94	17.00	100.00
	110	5550	19.37	19.50	
	126	5630	19.29	19.50	
	134	5670	17.07	17.50	
	142	5710	19.29	19.50	
802.11ac-VHT80 MCS0	106	5530	17.00	17.50	100.00
	122	5610	17.16	17.50	
	138	5690	18.85	19.00	
802.11ac-VHT160 MCS0	114	5570	16.69	17.00	100.00
802.11ax-HE20 MCS0	100	5500	16.70	17.00	100.00
	116	5580	19.42	19.50	
	124	5620	19.29	19.50	
	132	5660	19.37	19.50	
	144	5720	19.43	19.50	
802.11ax-HE40 MCS0	102	5510	17.04	17.50	100.00
	110	5550	19.41	19.50	
	126	5630	19.35	19.50	
	134	5670	17.13	17.50	
	142	5710	19.35	19.50	
802.11ax-HE80 MCS0	106	5530	17.06	17.50	100.00
	122	5610	17.23	17.50	
	138	5690	19.31	19.50	
802.11ax-HE160 MCS0	114	5570	16.79	17.00	100.00
802.11be-EHT20 MCS0	100	5500	16.79	17.00	100.00
	116	5580	19.46	19.50	
	124	5620	19.34	19.50	
	132	5660	19.42	19.50	
	144	5720	19.46	19.50	
802.11be-EHT40 MCS0	102	5510	17.14	17.50	100.00
	110	5550	19.45	19.50	
	126	5630	19.42	19.50	
	134	5670	17.21	17.50	
	142	5710	19.38	19.50	
802.11be-EHT80 MCS0	106	5530	17.13	17.50	100.00
	122	5610	17.30	17.50	
	138	5690	18.89	19.00	
802.11be-EHT160 MCS0	114	5570	16.88	17.00	100.00



【5.5GHz WLAN_Ant 6_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	9.67	10.00	98.97
	116	5580	9.77	10.00	
	124	5620	9.69	10.00	
	132	5660	9.76	10.00	
	144	5720	9.80	10.00	
802.11n-HT20 MCS0	100	5500	9.48	9.50	100.00
	116	5580	9.65	10.00	
	124	5620	9.57	10.00	
	132	5660	9.64	10.00	
	144	5720	9.66	10.00	
802.11n-HT40 MCS0	102	5510	9.67	10.00	100.00
	110	5550	9.70	10.00	
	126	5630	9.66	10.00	
	134	5670	9.70	10.00	
	142	5710	9.74	10.00	
802.11ac-VHT20 MCS0	100	5500	9.54	10.00	100.00
	116	5580	9.70	10.00	
	124	5620	9.62	10.00	
	132	5660	9.70	10.00	
	144	5720	9.49	9.50	
802.11ac-VHT40 MCS0	102	5510	9.72	10.00	100.00
	110	5550	9.73	10.00	
	126	5630	9.68	10.00	
	134	5670	9.74	10.00	
	142	5710	9.78	10.00	
802.11ac-VHT80 MCS0	106	5530	9.64	10.00	100.00
	122	5610	9.77	10.00	
	138	5690	9.72	10.00	
802.11ac-VHT160 MCS0	114	5570	8.95	9.00	100.00
802.11ax-HE20 MCS0	100	5500	9.58	10.00	100.00
	116	5580	9.74	10.00	
	124	5620	9.66	10.00	
	132	5660	9.72	10.00	
	144	5720	9.76	10.00	
802.11ax-HE40 MCS0	102	5510	9.78	10.00	100.00
	110	5550	9.76	10.00	
	126	5630	9.74	10.00	
	134	5670	9.79	10.00	
	142	5710	9.82	10.00	
802.11ax-HE80 MCS0	106	5530	9.69	10.00	100.00
	122	5610	9.82	10.00	
	138	5690	9.78	10.00	
802.11ax-HE160 MCS0	114	5570	9.01	9.50	100.00
802.11be-EHT20 MCS0	100	5500	9.62	10.00	100.00
	116	5580	9.78	10.00	
	124	5620	9.70	10.00	
	132	5660	9.77	10.00	
	144	5720	9.81	10.00	
802.11be-EHT40 MCS0	102	5510	9.81	10.00	100.00
	110	5550	9.80	10.00	
	126	5630	9.78	10.00	
	134	5670	9.83	10.00	
	142	5710	9.87	10.00	
802.11be-EHT80 MCS0	106	5530	9.75	10.00	100.00
	122	5610	9.88	10.00	
	138	5690	9.84	10.00	
802.11be-EHT160 MCS0	114	5570	9.05	9.50	100.00



【5.5GHz WLAN_Ant 6_Simultaneous】

			Ant 6		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	7.72	8.00	98.97
	116	5580	7.97	8.00	
	124	5620	7.93	8.00	
	132	5660	8.03	8.50	
	144	5720	8.05	8.50	
802.11n-HT20 MCS0	100	5500	7.62	8.00	100.00
	116	5580	7.82	8.00	
	124	5620	7.84	8.00	
	132	5660	7.77	8.00	
	144	5720	7.82	8.00	
802.11n-HT40 MCS0	102	5510	7.79	8.00	100.00
	110	5550	7.88	8.00	
	126	5630	7.98	8.00	
	134	5670	7.91	8.00	
	142	5710	7.93	8.00	
802.11ac-VHT20 MCS0	100	5500	7.68	8.00	100.00
	116	5580	7.87	8.00	
	124	5620	7.89	8.00	
	132	5660	7.82	8.00	
	144	5720	7.86	8.00	
802.11ac-VHT40 MCS0	102	5510	7.88	8.00	100.00
	110	5550	7.94	8.00	
	126	5630	8.02	8.50	
	134	5670	7.96	8.00	
	142	5710	8.00	8.50	
802.11ac-VHT80 MCS0	106	5530	7.89	8.00	100.00
	122	5610	8.06	8.50	
	138	5690	8.05	8.50	
802.11ac-VHT160 MCS0	114	5570	7.31	7.50	100.00
802.11ax-HE20 MCS0	100	5500	7.74	8.00	100.00
	116	5580	7.93	8.00	
	124	5620	7.95	8.00	
	132	5660	7.89	8.00	
	144	5720	7.91	8.00	
802.11ax-HE40 MCS0	102	5510	7.91	8.00	100.00
	110	5550	7.99	8.00	
	126	5630	8.08	8.50	
	134	5670	8.02	8.50	
	142	5710	8.04	8.50	
802.11ax-HE80 MCS0	106	5530	7.96	8.00	100.00
	122	5610	8.07	8.50	
	138	5690	8.11	8.50	
802.11ax-HE160 MCS0	114	5570	7.37	7.50	100.00
802.11be-EHT20 MCS0	100	5500	7.79	8.00	100.00
	116	5580	7.98	8.00	
	124	5620	8.01	8.50	
	132	5660	7.95	8.00	
	144	5720	7.96	8.00	
802.11be-EHT40 MCS0	102	5510	7.95	8.00	100.00
	110	5550	8.05	8.50	
	126	5630	8.13	8.50	
	134	5670	8.07	8.50	
	142	5710	8.09	8.50	
802.11be-EHT80 MCS0	106	5530	8.00	8.50	100.00
	122	5610	8.13	8.50	
	138	5690	8.15	8.50	
802.11be-EHT160 MCS0	114	5570	7.18	7.50	100.00



【5.5GHz WLAN_Ant 6_HBS】

			Ant 6		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	Not Required	14.5	98.97
	116	5580		14.5	98.97
	124	5620		14.5	98.97
	132	5660		14.5	98.97
	144	5720		14.5	98.97
802.11n-HT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11n-HT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ac-VHT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11ac-VHT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ac-VHT80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11ac-VHT160 MCS0	114	5570	14.19	14.5	100
802.11ax-HE20 MCS0	100	5500	Not Required	14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11ax-HE40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ax-HE80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11ax-HE160 MCS0	114	5570		14.5	100
802.11be-EHT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11be-EHT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11be-EHT80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11be-EHT160 MCS0	114	5570		14.5	100



【5.5GHz WLAN_Ant 7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	16.95	17.00	99.32
	116	5580	19.16	19.50	
	124	5620	18.82	19.00	
	132	5660	18.78	19.00	
	144	5720	18.80	19.00	
802.11n-HT20 MCS0	100	5500	16.75	17.00	100.00
	116	5580	18.94	19.00	
	124	5620	18.94	19.00	
	132	5660	18.95	19.00	
	144	5720	18.89	19.00	
802.11n-HT40 MCS0	102	5510	16.78	17.00	100.00
	110	5550	18.88	19.00	
	126	5630	18.99	19.00	
	134	5670	16.88	17.00	
	142	5710	18.87	19.00	
802.11ac-VHT20 MCS0	100	5500	16.81	17.00	100.00
	116	5580	18.97	19.00	
	124	5620	18.99	19.00	
	132	5660	19.01	19.50	
	144	5720	18.96	19.00	
802.11ac-VHT40 MCS0	102	5510	16.88	17.00	100.00
	110	5550	18.92	19.00	
	126	5630	19.02	19.50	
	134	5670	16.97	17.00	
	142	5710	18.94	19.00	
802.11ac-VHT80 MCS0	106	5530	16.92	17.00	100.00
	122	5610	16.92	17.00	
	138	5690	18.54	19.00	
802.11ac-VHT160 MCS0	114	5570	16.36	16.50	100.00
802.11ax-HE20 MCS0	100	5500	16.91	17.00	100.00
	116	5580	19.01	19.50	
	124	5620	19.03	19.50	
	132	5660	19.05	19.50	
	144	5720	19.00	19.50	
802.11ax-HE40 MCS0	102	5510	16.97	17.00	100.00
	110	5550	18.96	19.00	
	126	5630	19.05	19.50	
	134	5670	17.07	17.50	
	142	5710	18.98	19.00	
802.11ax-HE80 MCS0	106	5530	16.98	17.00	100.00
	122	5610	16.98	17.00	
	138	5690	19.06	19.50	
802.11ax-HE160 MCS0	114	5570	16.45	16.50	100.00
802.11be-EHT20 MCS0	100	5500	16.98	17.00	100.00
	116	5580	19.04	19.50	
	124	5620	19.11	19.50	
	132	5660	19.09	19.50	
	144	5720	19.03	19.50	
802.11be-EHT40 MCS0	102	5510	17.07	17.50	100.00
	110	5550	19.01	19.50	
	126	5630	19.10	19.50	
	134	5670	17.14	17.50	
	142	5710	19.03	19.50	
802.11be-EHT80 MCS0	106	5530	17.07	17.50	100.00
	122	5610	17.04	17.50	
	138	5690	18.57	19.00	
802.11be-EHT160 MCS0	114	5570	16.53	17.00	100.00



【5.5GHz WLAN_Ant 7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	7.42	7.50	99.32
	116	5580	7.37	7.50	
	124	5620	7.28	7.50	
	132	5660	7.33	7.50	
	144	5720	7.24	7.50	
802.11n-HT20 MCS0	100	5500	7.19	7.50	100.00
	116	5580	7.40	7.50	
	124	5620	7.30	7.50	
	132	5660	7.39	7.50	
	144	5720	7.28	7.50	
802.11n-HT40 MCS0	102	5510	7.33	7.50	100.00
	110	5550	7.37	7.50	
	126	5630	7.35	7.50	
	134	5670	7.39	7.50	
	142	5710	7.31	7.50	
802.11ac-VHT20 MCS0	100	5500	7.29	7.50	100.00
	116	5580	7.45	7.50	
	124	5620	7.35	7.50	
	132	5660	7.45	7.50	
	144	5720	7.30	7.50	
802.11ac-VHT40 MCS0	102	5510	7.41	7.50	100.00
	110	5550	7.44	7.50	
	126	5630	7.38	7.50	
	134	5670	7.49	7.50	
	142	5710	7.44	7.50	
802.11ac-VHT80 MCS0	106	5530	7.43	7.50	100.00
	122	5610	7.43	7.50	
	138	5690	7.44	7.50	
802.11ac-VHT160 MCS0	114	5570	6.72	7.00	100.00
802.11ax-HE20 MCS0	100	5500	7.33	7.50	100.00
	116	5580	7.55	8.00	
	124	5620	7.41	7.50	
	132	5660	7.49	7.50	
	144	5720	7.45	7.50	
802.11ax-HE40 MCS0	102	5510	7.47	7.50	100.00
	110	5550	7.52	8.00	
	126	5630	7.40	7.50	
	134	5670	7.54	8.00	
	142	5710	7.49	7.50	
802.11ax-HE80 MCS0	106	5530	7.48	7.50	100.00
	122	5610	7.51	8.00	
	138	5690	7.47	7.50	
802.11ax-HE160 MCS0	114	5570	6.70	7.00	100.00
802.11be-EHT20 MCS0	100	5500	7.35	7.50	100.00
	116	5580	7.57	8.00	
	124	5620	7.47	7.50	
	132	5660	7.50	8.00	
	144	5720	7.60	8.00	
802.11be-EHT40 MCS0	102	5510	7.56	8.00	100.00
	110	5550	7.55	8.00	
	126	5630	7.49	7.50	
	134	5670	7.58	8.00	
	142	5710	7.56	8.00	
802.11be-EHT80 MCS0	106	5530	7.56	8.00	100.00
	122	5610	7.63	8.00	
	138	5690	7.57	8.00	
802.11be-EHT160 MCS0	114	5570	6.82	7.00	100.00



【5.5GHz WLAN_Ant 7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	5.69	6.00	99.32
	116	5580	5.72	6.00	
	124	5620	5.64	6.00	
	132	5660	5.66	6.00	
	144	5720	5.59	6.00	
802.11n-HT20 MCS0	100	5500	5.53	6.00	100.00
	116	5580	5.80	6.00	
	124	5620	5.70	6.00	
	132	5660	5.81	6.00	
	144	5720	5.68	6.00	
802.11n-HT40 MCS0	102	5510	5.78	6.00	100.00
	110	5550	5.79	6.00	
	126	5630	5.81	6.00	
	134	5670	5.73	6.00	
	142	5710	5.72	6.00	
802.11ac-VHT20 MCS0	100	5500	5.67	6.00	100.00
	116	5580	5.87	6.00	
	124	5620	5.73	6.00	
	132	5660	5.84	6.00	
	144	5720	5.70	6.00	
802.11ac-VHT40 MCS0	102	5510	5.89	6.00	100.00
	110	5550	5.90	6.00	
	126	5630	5.81	6.00	
	134	5670	5.85	6.00	
	142	5710	5.77	6.00	
802.11ac-VHT80 MCS0	106	5530	5.81	6.00	100.00
	122	5610	5.79	6.00	
	138	5690	5.85	6.00	
802.11ac-VHT160 MCS0	114	5570	5.12	5.50	100.00
802.11ax-HE20 MCS0	100	5500	5.69	6.00	100.00
	116	5580	5.90	6.00	
	124	5620	5.79	6.00	
	132	5660	5.88	6.00	
	144	5720	5.85	6.00	
802.11ax-HE40 MCS0	102	5510	5.93	6.00	100.00
	110	5550	5.91	6.00	
	126	5630	5.86	6.00	
	134	5670	5.90	6.00	
	142	5710	5.81	6.00	
802.11ax-HE80 MCS0	106	5530	5.88	6.00	100.00
	122	5610	5.85	6.00	
	138	5690	5.89	6.00	
802.11ax-HE160 MCS0	114	5570	5.12	5.50	100.00
802.11be-EHT20 MCS0	100	5500	5.77	6.00	100.00
	116	5580	5.93	6.00	
	124	5620	5.83	6.00	
	132	5660	5.96	6.00	
	144	5720	6.06	6.50	
802.11be-EHT40 MCS0	102	5510	5.94	6.00	100.00
	110	5550	5.93	6.00	
	126	5630	5.89	6.00	
	134	5670	5.92	6.00	
	142	5710	5.90	6.00	
802.11be-EHT80 MCS0	106	5530	5.96	6.00	100.00
	122	5610	5.97	6.00	
	138	5690	5.97	6.00	
802.11be-EHT160 MCS0	114	5570	5.22	5.50	100.00



【5.5GHz WLAN_Ant 7_HBS】

			Ant 7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	Not Required	14.5	99.32
	116	5580		14.5	99.32
	124	5620		14.5	99.32
	132	5660		14.5	99.32
	144	5720		14.5	99.32
802.11n-HT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11n-HT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ac-VHT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11ac-VHT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ac-VHT80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11ac-VHT160 MCS0	114	5570	14.06	14.5	100
802.11ax-HE20 MCS0	100	5500	Not Required	14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11ax-HE40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11ax-HE80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11ax-HE160 MCS0	114	5570		14.5	100
802.11be-EHT20 MCS0	100	5500		14.5	100
	116	5580		14.5	100
	124	5620		14.5	100
	132	5660		14.5	100
	144	5720		14.5	100
802.11be-EHT40 MCS0	102	5510		14.5	100
	110	5550		14.5	100
	126	5630		14.5	100
	134	5670		14.5	100
	142	5710		14.5	100
802.11be-EHT80 MCS0	106	5530		14.5	100
	122	5610		14.5	100
	138	5690		14.5	100
802.11be-EHT160 MCS0	114	5570		14.5	100



【5.5GHz WLAN_Ant 6+7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	19.95	20.00	99.32
	116	5580	22.32	22.50	
	124	5620	21.81	22.00	
	132	5660	21.85	22.00	
	144	5720	21.88	22.00	
802.11n-HT20 MCS0	100	5500	19.65	20.00	100.00
	116	5580	22.14	22.30	
	124	5620	22.07	22.30	
	132	5660	22.11	22.30	
	144	5720	22.13	22.30	
802.11n-HT40 MCS0	102	5510	19.84	20.00	100.00
	110	5550	22.12	22.30	
	126	5630	22.13	22.30	
	134	5670	19.94	20.00	
	142	5710	22.06	22.30	
802.11ac-VHT20 MCS0	100	5500	19.72	20.00	100.00
	116	5580	22.18	22.30	
	124	5620	22.12	22.30	
	132	5660	22.18	22.50	
	144	5720	22.19	22.30	
802.11ac-VHT40 MCS0	102	5510	19.92	20.00	100.00
	110	5550	22.16	22.30	
	126	5630	22.17	22.50	
	134	5670	20.03	20.30	
	142	5710	22.13	22.30	
802.11ac-VHT80 MCS0	106	5530	19.97	20.30	100.00
	122	5610	20.05	20.30	
	138	5690	21.71	22.00	
802.11ac-VHT160 MCS0	114	5570	19.54	19.80	100.00
802.11ax-HE20 MCS0	100	5500	19.82	20.00	100.00
	116	5580	22.23	22.50	
	124	5620	22.17	22.50	
	132	5660	22.22	22.50	
	144	5720	22.23	22.50	
802.11ax-HE40 MCS0	102	5510	20.02	20.30	100.00
	110	5550	22.20	22.30	
	126	5630	22.21	22.50	
	134	5670	20.11	20.50	
	142	5710	22.18	22.30	
802.11ax-HE80 MCS0	106	5530	20.03	20.30	100.00
	122	5610	20.12	20.30	
	138	5690	22.20	22.50	
802.11ax-HE160 MCS0	114	5570	19.63	19.80	100.00
802.11be-EHT20 MCS0	100	5500	19.90	20.00	100.00
	116	5580	22.27	22.50	
	124	5620	22.24	22.50	
	132	5660	22.27	22.50	
	144	5720	22.26	22.50	
802.11be-EHT40 MCS0	102	5510	20.12	20.50	100.00
	110	5550	22.25	22.50	
	126	5630	22.27	22.50	
	134	5670	20.19	20.50	
	142	5710	22.22	22.50	
802.11be-EHT80 MCS0	106	5530	20.11	20.50	100.00
	122	5610	20.18	20.50	
	138	5690	21.74	22.00	
802.11be-EHT160 MCS0	114	5570	19.72	20.00	100.00



【5.5GHz WLAN_Ant 6+7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	11.70	11.90	99.32
	116	5580	11.75	11.90	
	124	5620	11.66	11.90	
	132	5660	11.73	11.90	
	144	5720	11.72	11.90	
802.11n-HT20 MCS0	100	5500	11.49	11.60	100.00
	116	5580	11.68	11.90	
	124	5620	11.59	11.90	
	132	5660	11.67	11.90	
	144	5720	11.64	11.90	
802.11n-HT40 MCS0	102	5510	11.67	11.90	100.00
	110	5550	11.70	11.90	
	126	5630	11.67	11.90	
	134	5670	11.71	11.90	
	142	5710	11.70	11.90	
802.11ac-VHT20 MCS0	100	5500	11.57	11.90	100.00
	116	5580	11.73	11.90	
	124	5620	11.64	11.90	
	132	5660	11.73	11.90	
	144	5720	11.54	11.60	
802.11ac-VHT40 MCS0	102	5510	11.73	11.90	100.00
	110	5550	11.74	11.90	
	126	5630	11.69	11.90	
	134	5670	11.77	11.90	
	142	5710	11.78	11.90	
802.11ac-VHT80 MCS0	106	5530	11.68	11.90	100.00
	122	5610	11.77	11.90	
	138	5690	11.74	11.90	
802.11ac-VHT160 MCS0	114	5570	10.99	11.10	100.00
802.11ax-HE20 MCS0	100	5500	11.61	11.90	100.00
	116	5580	11.79	12.10	
	124	5620	11.69	11.90	
	132	5660	11.76	11.90	
	144	5720	11.77	11.90	
802.11ax-HE40 MCS0	102	5510	11.79	11.90	100.00
	110	5550	11.79	12.10	
	126	5630	11.74	11.90	
	134	5670	11.82	12.10	
	142	5710	11.82	11.90	
802.11ax-HE80 MCS0	106	5530	11.73	11.90	100.00
	122	5610	11.83	12.10	
	138	5690	11.79	11.90	
802.11ax-HE160 MCS0	114	5570	11.02	11.40	100.00
802.11be-EHT20 MCS0	100	5500	11.64	11.90	100.00
	116	5580	11.82	12.10	
	124	5620	11.74	11.90	
	132	5660	11.79	12.10	
	144	5720	11.85	12.10	
802.11be-EHT40 MCS0	102	5510	11.84	12.10	100.00
	110	5550	11.83	12.10	
	126	5630	11.79	11.90	
	134	5670	11.86	12.10	
	142	5710	11.88	12.10	
802.11be-EHT80 MCS0	106	5530	11.80	12.10	100.00
	122	5610	11.91	12.10	
	138	5690	11.86	12.10	
802.11be-EHT160 MCS0	114	5570	11.09	11.40	100.00



【5.5GHz WLAN_Ant 6+7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	9.83	10.10	99.32
	116	5580	10.00	10.10	
	124	5620	9.94	10.10	
	132	5660	10.01	10.40	
	144	5720	10.00	10.40	
802.11n-HT20 MCS0	100	5500	9.71	10.10	100.00
	116	5580	9.94	10.10	
	124	5620	9.91	10.10	
	132	5660	9.91	10.10	
	144	5720	9.89	10.10	
802.11n-HT40 MCS0	102	5510	9.91	10.10	100.00
	110	5550	9.97	10.10	
	126	5630	10.04	10.10	
	134	5670	9.97	10.10	
	142	5710	9.97	10.10	
802.11ac-VHT20 MCS0	100	5500	9.80	10.10	100.00
	116	5580	9.99	10.10	
	124	5620	9.95	10.10	
	132	5660	9.95	10.10	
	144	5720	9.92	10.10	
802.11ac-VHT40 MCS0	102	5510	10.01	10.10	100.00
	110	5550	10.05	10.10	
	126	5630	10.06	10.40	
	134	5670	10.04	10.10	
	142	5710	10.04	10.40	
802.11ac-VHT80 MCS0	106	5530	9.98	10.10	100.00
	122	5610	10.05	10.40	
	138	5690	10.10	10.40	
802.11ac-VHT160 MCS0	114	5570	9.36	9.60	100.00
802.11ax-HE20 MCS0	100	5500	9.85	10.10	100.00
	116	5580	10.04	10.10	
	124	5620	10.01	10.10	
	132	5660	10.01	10.10	
	144	5720	10.01	10.10	
802.11ax-HE40 MCS0	102	5510	10.04	10.10	100.00
	110	5550	10.08	10.10	
	126	5630	10.12	10.40	
	134	5670	10.10	10.40	
	142	5710	10.08	10.40	
802.11ax-HE80 MCS0	106	5530	10.05	10.10	100.00
	122	5610	10.11	10.40	
	138	5690	10.15	10.40	
802.11ax-HE160 MCS0	114	5570	9.40	9.60	100.00
802.11be-EHT20 MCS0	100	5500	9.91	10.10	100.00
	116	5580	10.09	10.10	
	124	5620	10.07	10.40	
	132	5660	10.08	10.10	
	144	5720	10.12	10.30	
802.11be-EHT40 MCS0	102	5510	10.07	10.10	100.00
	110	5550	10.13	10.40	
	126	5630	10.16	10.40	
	134	5670	10.14	10.40	
	142	5710	10.14	10.40	
802.11be-EHT80 MCS0	106	5530	10.11	10.40	100.00
	122	5610	10.19	10.40	
	138	5690	10.21	10.40	
802.11be-EHT160 MCS0	114	5570	9.32	9.60	100.00



【5.5GHz WLAN_Ant 6+7_HBS】

			Ant 6+7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	100	5500	Not Required	17.5	99.32
	116	5580		17.5	99.32
	124	5620		17.5	99.32
	132	5660		17.5	99.32
	144	5720		17.5	99.32
802.11n-HT20 MCS0	100	5500		17.5	100
	116	5580		17.5	100
	124	5620		17.5	100
	132	5660		17.5	100
	144	5720		17.5	100
802.11n-HT40 MCS0	102	5510		17.5	100
	110	5550		17.5	100
	126	5630		17.5	100
	134	5670		17.5	100
	142	5710		17.5	100
802.11ac-VHT20 MCS0	100	5500		17.5	100
	116	5580		17.5	100
	124	5620		17.5	100
	132	5660		17.5	100
	144	5720		17.5	100
802.11ac-VHT40 MCS0	102	5510		17.5	100
	110	5550		17.5	100
	126	5630		17.5	100
	134	5670		17.5	100
	142	5710		17.5	100
802.11ac-VHT80 MCS0	106	5530		17.5	100
	122	5610		17.5	100
	138	5690		17.5	100
802.11ac-VHT160 MCS0	114	5570	17.14	17.5	100
802.11ax-HE20 MCS0	100	5500	Not Required	17.5	100
	116	5580		17.5	100
	124	5620		17.5	100
	132	5660		17.5	100
	144	5720		17.5	100
802.11ax-HE40 MCS0	102	5510		17.5	100
	110	5550		17.5	100
	126	5630		17.5	100
	134	5670		17.5	100
	142	5710		17.5	100
802.11ax-HE80 MCS0	106	5530		17.5	100
	122	5610		17.5	100
	138	5690		17.5	100
802.11ax-HE160 MCS0	114	5570		17.5	100
802.11be-EHT20 MCS0	100	5500		17.5	100
	116	5580		17.5	100
	124	5620		17.5	100
	132	5660		17.5	100
	144	5720		17.5	100
802.11be-EHT40 MCS0	102	5510		17.5	100
	110	5550		17.5	100
	126	5630		17.5	100
	134	5670		17.5	100
	142	5710		17.5	100
802.11be-EHT80 MCS0	106	5530		17.5	100
	122	5610		17.5	100
	138	5690		17.5	100
802.11be-EHT160 MCS0	114	5570		17.5	100



【5.8GHz WLAN_Ant 6_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	17.09	17.50	98.97
	157	5785	19.37	19.50	
	165	5825	16.87	17.00	
802.11n-HT20 MCS0	149	5745	17.04	17.50	100.00
	157	5785	19.31	19.50	
	165	5825	16.89	17.00	
802.11n-HT40 MCS0	151	5755	17.14	17.50	100.00
	159	5795	17.00	17.50	
802.11ac-VHT20 MCS0	149	5745	17.10	17.50	100.00
	157	5785	19.36	19.50	
	165	5825	16.97	17.00	
802.11ac-VHT40 MCS0	151	5755	17.20	17.50	100.00
	159	5795	17.07	17.50	
802.11ac-VHT80 MCS0	155	5775	17.18	17.50	100.00
802.11ax-HE20 MCS0	149	5745	17.19	17.50	100.00
	157	5785	19.41	19.50	
	165	5825	17.07	17.50	
802.11ax-HE40 MCS0	151	5755	17.27	17.50	100.00
	159	5795	17.15	17.50	
802.11ax-HE80 MCS0	155	5775	17.25	17.50	100.00
802.11be-EHT20 MCS0	149	5745	17.28	17.50	100.00
	157	5785	19.45	19.50	
	165	5825	17.17	17.50	
802.11be-EHT40 MCS0	151	5755	17.36	17.50	100.00
	159	5795	17.24	17.50	
802.11be-EHT80 MCS0	155	5775	17.31	17.50	100.00

【5.8GHz WLAN_Ant 6_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	11.86	12.00	98.97
	157	5785	11.79	12.00	
	165	5825	11.67	12.00	
802.11n-HT20 MCS0	149	5745	11.66	12.00	100.00
	157	5785	11.58	12.00	
	165	5825	11.45	11.50	
802.11n-HT40 MCS0	151	5755	11.75	12.00	100.00
	159	5795	11.68	12.00	
802.11ac-VHT20 MCS0	149	5745	11.71	12.00	100.00
	157	5785	11.65	12.00	
	165	5825	11.48	11.50	
802.11ac-VHT40 MCS0	151	5755	11.80	12.00	100.00
	159	5795	11.72	12.00	
802.11ac-VHT80 MCS0	155	5775	11.75	12.00	100.00
802.11ax-HE20 MCS0	149	5745	11.76	12.00	100.00
	157	5785	11.71	12.00	
	165	5825	11.52	12.00	
802.11ax-HE40 MCS0	151	5755	11.84	12.00	100.00
	159	5795	11.78	12.00	
802.11ax-HE80 MCS0	155	5775	11.81	12.00	100.00
802.11be-EHT20 MCS0	149	5745	11.83	12.00	100.00
	157	5785	11.74	12.00	
	165	5825	11.56	12.00	
802.11be-EHT40 MCS0	151	5755	11.88	12.00	100.00
	159	5795	11.83	12.00	
802.11be-EHT80 MCS0	155	5775	11.87	12.00	100.00



【5.8GHz WLAN_Ant 6_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	10.58	11.00	98.97
	157	5785	10.46	10.50	
	165	5825	10.37	10.50	
802.11n-HT20 MCS0	149	5745	10.44	10.50	100.00
	157	5785	10.25	10.50	
	165	5825	10.16	10.50	
802.11n-HT40 MCS0	151	5755	10.50	11.00	100.00
	159	5795	10.42	10.50	
802.11ac-VHT20 MCS0	149	5745	10.49	10.50	100.00
	157	5785	10.30	10.50	
	165	5825	10.19	10.50	
802.11ac-VHT40 MCS0	151	5755	10.55	11.00	100.00
	159	5795	10.46	10.50	
802.11ac-VHT80 MCS0	155	5775	10.40	10.50	100.00
802.11ax-HE20 MCS0	149	5745	10.54	11.00	100.00
	157	5785	10.34	10.50	
	165	5825	10.25	10.50	
802.11ax-HE40 MCS0	151	5755	10.60	11.00	100.00
	159	5795	10.51	11.00	
802.11ax-HE80 MCS0	155	5775	10.46	10.50	100.00
802.11be-EHT20 MCS0	149	5745	10.59	11.00	100.00
	157	5785	10.37	10.50	
	165	5825	10.29	10.50	
802.11be-EHT40 MCS0	151	5755	10.65	11.00	100.00
	159	5795	10.54	11.00	
802.11be-EHT80 MCS0	155	5775	10.51	11.00	100.00

【5.8GHz WLAN_Ant 6_HBS】

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	Not Required	15	98.97
	157	5785		15	98.97
	165	5825		15	98.97
802.11n-HT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11n-HT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ac-VHT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11ac-VHT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ac-VHT80 MCS0	155	5775	14.56	15	100
802.11ax-HE20 MCS0	149	5745	Not Required	15	100
	157	5785		15	100
	165	5825		15	100
802.11ax-HE40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ax-HE80 MCS0	155	5775		15	100
802.11be-EHT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11be-EHT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11be-EHT80 MCS0	155	5775		15	100



【5.8GHz WLAN_Ant 7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	17.25	17.50	99.32
	157	5785	19.28	19.50	
	165	5825	17.20	17.50	
802.11n-HT20 MCS0	149	5745	17.03	17.50	100.00
	157	5785	19.05	19.50	
	165	5825	16.87	17.00	
802.11n-HT40 MCS0	151	5755	16.99	17.00	100.00
	159	5795	16.92	17.00	
802.11ac-VHT20 MCS0	149	5745	17.09	17.50	100.00
	157	5785	19.10	19.50	
	165	5825	16.93	17.00	
802.11ac-VHT40 MCS0	151	5755	17.06	17.50	100.00
	159	5795	16.98	17.00	
802.11ac-VHT80 MCS0	155	5775	17.06	17.50	100.00
802.11ax-HE20 MCS0	149	5745	17.16	17.50	100.00
	157	5785	19.16	19.50	
	165	5825	17.02	17.50	
802.11ax-HE40 MCS0	151	5755	17.15	17.50	100.00
	159	5795	17.08	17.50	
802.11ax-HE80 MCS0	155	5775	17.15	17.50	100.00
802.11be-EHT20 MCS0	149	5745	17.24	17.50	100.00
	157	5785	19.21	19.50	
	165	5825	17.08	17.50	
802.11be-EHT40 MCS0	151	5755	17.21	17.50	100.00
	159	5795	17.18	17.50	
802.11be-EHT80 MCS0	155	5775	17.24	17.50	100.00

【5.8GHz WLAN_Ant 7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	8.38	8.50	99.32
	157	5785	8.34	8.50	
	165	5825	8.44	8.50	
802.11n-HT20 MCS0	149	5745	8.16	8.50	100.00
	157	5785	8.15	8.50	
	165	5825	8.12	8.50	
802.11n-HT40 MCS0	151	5755	8.17	8.50	100.00
	159	5795	8.11	8.50	
802.11ac-VHT20 MCS0	149	5745	8.22	8.50	100.00
	157	5785	8.26	8.50	
	165	5825	8.18	8.50	
802.11ac-VHT40 MCS0	151	5755	8.21	8.50	100.00
	159	5795	8.24	8.50	
802.11ac-VHT80 MCS0	155	5775	8.12	8.50	100.00
802.11ax-HE20 MCS0	149	5745	8.29	8.50	100.00
	157	5785	8.28	8.50	
	165	5825	8.29	8.50	
802.11ax-HE40 MCS0	151	5755	8.29	8.50	100.00
	159	5795	8.30	8.50	
802.11ax-HE80 MCS0	155	5775	8.18	8.50	100.00
802.11be-EHT20 MCS0	149	5745	8.48	8.50	100.00
	157	5785	8.31	8.50	
	165	5825	8.35	8.50	
802.11be-EHT40 MCS0	151	5755	8.36	8.50	100.00
	159	5795	8.36	8.50	
802.11be-EHT80 MCS0	155	5775	8.30	8.50	100.00



【5.8GHz WLAN_Ant 7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	6.82	7.00	99.32
	157	5785	6.68	7.00	
	165	5825	6.80	7.00	
802.11n-HT20 MCS0	149	5745	6.55	7.00	100.00
	157	5785	6.57	7.00	
	165	5825	6.52	7.00	
802.11n-HT40 MCS0	151	5755	6.59	7.00	100.00
	159	5795	6.51	7.00	
802.11ac-VHT20 MCS0	149	5745	6.61	7.00	100.00
	157	5785	6.59	7.00	
	165	5825	6.54	7.00	
802.11ac-VHT40 MCS0	151	5755	6.63	7.00	100.00
	159	5795	6.57	7.00	
802.11ac-VHT80 MCS0	155	5775	6.58	7.00	100.00
802.11ax-HE20 MCS0	149	5745	6.65	7.00	100.00
	157	5785	6.62	7.00	
	165	5825	6.63	7.00	
802.11ax-HE40 MCS0	151	5755	6.69	7.00	100.00
	159	5795	6.67	7.00	
802.11ax-HE80 MCS0	155	5775	6.64	7.00	100.00
802.11be-EHT20 MCS0	149	5745	6.92	7.00	100.00
	157	5785	6.71	7.00	
	165	5825	6.75	7.00	
802.11be-EHT40 MCS0	151	5755	6.72	7.00	100.00
	159	5795	6.74	7.00	
802.11be-EHT80 MCS0	155	5775	6.76	7.00	100.00

【5.8GHz WLAN_Ant 7_HBS】

Mode	Channel	Frequency (MHz)	Ant 7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	Not Required	15	99.32
	157	5785		15	99.32
	165	5825		15	99.32
802.11n-HT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11n-HT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ac-VHT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11ac-VHT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ac-VHT80 MCS0	155	5775	14.52	15	100
802.11ax-HE20 MCS0	149	5745	Not Required	15	100
	157	5785		15	100
	165	5825		15	100
802.11ax-HE40 MCS0	151	5755		15	100
	159	5795		15	100
802.11ax-HE80 MCS0	155	5775		15	100
802.11be-EHT20 MCS0	149	5745		15	100
	157	5785		15	100
	165	5825		15	100
802.11be-EHT40 MCS0	151	5755		15	100
	159	5795		15	100
802.11be-EHT80 MCS0	155	5775		15	100



【5.8GHz WLAN_Ant 6+7_Full Power】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	20.18	20.50	99.32
	157	5785	22.34	22.50	
	165	5825	20.05	20.30	
802.11n-HT20 MCS0	149	5745	20.05	20.50	100.00
	157	5785	22.19	22.50	
	165	5825	19.89	20.00	
802.11n-HT40 MCS0	151	5755	20.08	20.30	100.00
	159	5795	19.97	20.30	
802.11ac-VHT20 MCS0	149	5745	20.11	20.50	100.00
	157	5785	22.24	22.50	
	165	5825	19.96	20.00	
802.11ac-VHT40 MCS0	151	5755	20.14	20.50	100.00
	159	5795	20.04	20.30	
802.11ac-VHT80 MCS0	155	5775	20.13	20.50	100.00
802.11ax-HE20 MCS0	149	5745	20.19	20.50	100.00
	157	5785	22.30	22.50	
	165	5825	20.06	20.50	
802.11ax-HE40 MCS0	151	5755	20.22	20.50	100.00
	159	5795	20.13	20.50	
802.11ax-HE80 MCS0	155	5775	20.21	20.50	100.00
802.11be-EHT20 MCS0	149	5745	20.27	20.50	100.00
	157	5785	22.34	22.50	
	165	5825	20.14	20.50	
802.11be-EHT40 MCS0	151	5755	20.30	20.50	100.00
	159	5795	20.22	20.50	
802.11be-EHT80 MCS0	155	5775	20.29	20.50	100.00

【5.8GHz WLAN_Ant 6+7_Standalone】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	13.47	13.60	99.32
	157	5785	13.41	13.60	
	165	5825	13.36	13.60	
802.11n-HT20 MCS0	149	5745	13.26	13.60	100.00
	157	5785	13.21	13.60	
	165	5825	13.11	13.30	
802.11n-HT40 MCS0	151	5755	13.33	13.60	100.00
	159	5795	13.26	13.60	
802.11ac-VHT20 MCS0	149	5745	13.32	13.60	100.00
	157	5785	13.29	13.60	
	165	5825	13.15	13.30	
802.11ac-VHT40 MCS0	151	5755	13.38	13.60	100.00
	159	5795	13.33	13.60	
802.11ac-VHT80 MCS0	155	5775	13.31	13.60	100.00
802.11ax-HE20 MCS0	149	5745	13.37	13.60	100.00
	157	5785	13.34	13.60	
	165	5825	13.21	13.60	
802.11ax-HE40 MCS0	151	5755	13.43	13.60	100.00
	159	5795	13.39	13.60	
802.11ax-HE80 MCS0	155	5775	13.37	13.60	100.00
802.11be-EHT20 MCS0	149	5745	13.48	13.60	100.00
	157	5785	13.37	13.60	
	165	5825	13.26	13.60	
802.11be-EHT40 MCS0	151	5755	13.48	13.60	100.00
	159	5795	13.44	13.60	
802.11be-EHT80 MCS0	155	5775	13.45	13.60	100.00

【5.8GHz WLAN_Ant 6+7_Simultaneous】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	12.10	12.50	99.32
	157	5785	11.98	12.10	
	165	5825	11.95	12.10	
802.11n-HT20 MCS0	149	5745	11.93	12.10	100.00
	157	5785	11.80	12.10	
	165	5825	11.72	12.10	
802.11n-HT40 MCS0	151	5755	11.98	12.50	100.00
	159	5795	11.90	12.10	
802.11ac-VHT20 MCS0	149	5745	11.98	12.10	100.00
	157	5785	11.84	12.10	
	165	5825	11.75	12.10	
802.11ac-VHT40 MCS0	151	5755	12.03	12.50	100.00
	159	5795	11.95	12.10	
802.11ac-VHT80 MCS0	155	5775	11.91	12.10	100.00
802.11ax-HE20 MCS0	149	5745	12.03	12.50	100.00
	157	5785	11.88	12.10	
	165	5825	11.82	12.10	
802.11ax-HE40 MCS0	151	5755	12.08	12.50	100.00
	159	5795	12.01	12.50	
802.11ax-HE80 MCS0	155	5775	11.97	12.10	100.00
802.11be-EHT20 MCS0	149	5745	12.14	12.50	100.00
	157	5785	11.92	12.10	
	165	5825	11.88	12.10	
802.11be-EHT40 MCS0	151	5755	12.13	12.50	100.00
	159	5795	12.05	12.50	
802.11be-EHT80 MCS0	155	5775	12.04	12.50	100.00

【5.8GHz WLAN_Ant 6+7_HBS】

Mode	Channel	Frequency (MHz)	Ant 6+7		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	149	5745	Not Required	18	99.32
	157	5785		18	99.32
	165	5825		18	99.32
802.11n-HT20 MCS0	149	5745		18	100
	157	5785		18	100
	165	5825		18	100
802.11n-HT40 MCS0	151	5755		18	100
	159	5795		18	100
802.11ac-VHT20 MCS0	149	5745		18	100
	157	5785		18	100
	165	5825		18	100
802.11ac-VHT40 MCS0	151	5755		18	100
	159	5795		18	100
802.11ac-VHT80 MCS0	155	5775	17.51	18	100
802.11ax-HE20 MCS0	149	5745	Not Required	18	100
	157	5785		18	100
	165	5825		18	100
802.11ax-HE40 MCS0	151	5755		18	100
	159	5795		18	100
802.11ax-HE80 MCS0	155	5775		18	100
802.11be-EHT20 MCS0	149	5745		18	100
	157	5785		18	100
	165	5825		18	100
802.11be-EHT40 MCS0	151	5755		18	100
	159	5795		18	100
802.11be-EHT80 MCS0	155	5775		18	100



<WLAN 6GHz> standard client

【6GHz WLAN_Full Power】

	Band	Mode	Channel	Frequency (MHz)	Ant 6 For Default / Full Power		Ant 7 For Default / Full Power		Ant 6+7 For Default / Full Power		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN 6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	19.26	19.50	19.20	19.50	22.25	22.50	98.97
			49	6195	19.32	19.50	19.40	19.50	22.38	22.50	
			93	6415	19.25	19.50	19.19	19.50	22.24	22.50	
		802.11ax-HE20 MCS0	1	5955	19.31	19.50	19.08	19.50	22.21	22.50	100.00
			49	6195	19.13	19.50	19.20	19.50	22.18	22.50	
			93	6415	19.12	19.50	19.09	19.50	22.12	22.50	
		802.11ax-HE40 MCS0	3	5965	19.28	19.50	19.09	19.50	22.20	22.50	100.00
			51	6205	19.20	19.50	19.15	19.50	22.19	22.50	
			91	6405	19.11	19.50	19.06	19.50	22.10	22.50	
		802.11ax-HE80 MCS0	7	5985	18.92	19.00	18.51	19.00	21.73	22.00	100.00
			55	6225	18.73	19.00	18.81	19.00	21.78	22.00	
			87	6385	18.68	19.00	18.54	19.00	21.62	22.00	
		802.11ax-HE160 MCS0	15	6025	17.69	18.00	17.12	17.50	20.42	20.80	100.00
			47	6185	17.32	17.50	17.31	17.50	20.33	20.50	
			1	5955	19.36	19.50	19.11	19.50	22.25	22.50	100.00
		802.11be-EHT20 MCS0	49	6195	19.18	19.50	19.25	19.50	22.23	22.50	
			93	6415	19.17	19.50	19.14	19.50	22.17	22.50	
		802.11be-EHT40 MCS0	3	5965	19.32	19.50	19.13	19.50	22.24	22.50	100.00
			51	6205	19.26	19.50	19.18	19.50	22.23	22.50	
			91	6405	19.15	19.50	19.00	19.50	22.09	22.50	
		802.11be-EHT80 MCS0	7	5985	18.97	19.00	18.54	19.00	21.77	22.00	100.00
			55	6225	18.76	19.00	18.85	19.00	21.82	22.00	
			87	6385	18.73	19.00	18.58	19.00	21.67	22.00	
		802.11be-EHT160 MCS0	15	6025	17.73	18.00	17.16	17.50	20.46	20.80	100.00
			47	6185	17.36	17.50	17.35	17.50	20.37	20.50	
			79	6345	17.27	17.50	17.00	17.50	20.15	20.50	
		802.11be-EHT320 MCS0	31	6105	18.83	19.00	18.32	18.50	21.59	21.80	100.00
			63	6265	18.86	19.00	18.84	19.00	21.86	22.00	
			95	6425	18.82	19.00	18.86	19.00	21.85	22.00	
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	19.67	20.00	19.63	20.00	22.67	23.00	98.97
			149	6695	19.63	20.00	19.59	20.00	22.63	23.00	
			173	6815	19.80	20.00	19.36	19.50	22.60	22.80	
		802.11ax-HE20 MCS0	117	6535	19.37	19.50	19.43	19.50	22.41	22.50	100.00
			149	6695	19.23	19.50	19.39	19.50	22.32	22.50	
			173	6815	19.08	19.50	19.05	19.50	22.08	22.50	
		802.11ax-HE40 MCS0	123	6565	19.38	19.50	19.45	19.50	22.43	22.50	100.00
			147	6685	19.29	19.50	19.39	19.50	22.35	22.50	
			179	6845	19.22	19.50	19.01	19.50	22.13	22.50	
		802.11ax-HE80 MCS0	135	6625	18.72	19.00	18.73	19.00	21.74	22.00	100.00
			151	6705	18.73	19.00	18.88	19.00	21.82	22.00	
			167	6785	18.72	19.00	18.87	19.00	21.81	22.00	
		802.11ax-HE160 MCS0	143	6665	17.37	17.50	17.35	17.50	20.37	20.50	100.00
		802.11be-EHT20 MCS0	117	6535	19.41	19.50	19.48	19.50	22.46	22.50	100.00
			149	6695	19.27	19.50	19.43	19.50	22.36	22.50	
			173	6815	19.11	19.50	19.09	19.50	22.11	22.50	
		802.11be-EHT40 MCS0	123	6565	19.13	19.50	19.11	19.50	22.13	22.50	100.00
			147	6685	19.31	19.50	19.44	19.50	22.39	22.50	
			179	6845	19.27	19.50	19.06	19.50	22.18	22.50	
		802.11be-EHT80 MCS0	135	6625	18.75	19.00	18.76	19.00	21.77	22.00	100.00
			151	6705	18.79	19.00	18.94	19.00	21.88	22.00	
			167	6785	18.76	19.00	18.92	19.00	21.85	22.00	
		802.11be-EHT160 MCS0	143	6665	17.42	17.50	17.39	17.50	20.42	20.50	100.00



【6GHz WLAN_Standalone】

	Band	Mode	Channel	Frequency (MHz)	Ant 6 Standalone		Ant 7 Standalone		Ant 6+7 Standalone		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN 6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	12.00	Not Required	11.00	Not Required	14.50	98.97
			49	6195		12.00		11.00		14.50	
			93	6415		12.00		11.00		14.50	
		802.11ax-HE20 MCS0	1	5955		12.00		11.00		14.50	100.00
			49	6195		12.00		11.00		14.50	
			93	6415		12.00		11.00		14.50	
		802.11ax-HE40 MCS0	3	5965		12.00		11.00		14.50	100.00
			51	6205		12.00		11.00		14.50	
			91	6405		12.00		11.00		14.50	
		802.11ax-HE80 MCS0	7	5985		12.00		11.00		14.50	100.00
			55	6225		12.00		11.00		14.50	
			87	6385		12.00		11.00		14.50	
		802.11ax-HE160 MCS0	15	6025		12.00		11.00		14.50	100.00
			47	6185		12.00		11.00		14.50	
		802.11be-EHT20 MCS0	1	5955		12.00		11.00		14.50	100.00
			49	6195		12.00		11.00		14.50	
			93	6415		12.00		11.00		14.50	
		802.11be-EHT40 MCS0	3	5965		12.00		11.00		14.50	100.00
			51	6205		12.00		11.00		14.50	
			91	6405		12.00		11.00		14.50	
		802.11be-EHT80 MCS0	7	5985		12.00		11.00		14.50	100.00
			55	6225		12.00		11.00		14.50	
			87	6385		12.00		11.00		14.50	
		802.11be-EHT160 MCS0	15	6025		12.00		11.00		14.50	100.00
			47	6185		12.00		11.00		14.50	
			79	6345		12.00		11.00		14.50	
		802.11be-EHT320 MCS0	31	6105	11.66	12.00	10.76	11.00	14.24	14.50	100.00
			63	6265	11.71	12.00	10.73	11.00	14.26	14.50	
			95	6425	11.73	12.00	11.26	11.50	14.51	14.80	
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	Not Require	13.00	Not Require	9.50	Not Require	14.60	98.97
			149	6695		13.00		9.50		14.60	
			173	6815		13.00		9.50		14.60	
		802.11ax-HE20 MCS0	117	6535		13.00		9.50		14.60	100.00
			149	6695		13.00		9.50		14.60	
			173	6815		13.00		9.50		14.60	
		802.11ax-HE40 MCS0	123	6565		13.00		9.50		14.60	100.00
			147	6685		13.00		9.50		14.60	
			179	6845		13.00		9.50		14.60	
		802.11ax-HE80 MCS0	135	6625		13.00		9.50		14.60	100.00
			151	6705		13.00		9.50		14.60	
			167	6785		13.00		9.50		14.60	
		802.11ax-HE160 MCS0	143	6665		13.00		9.50		14.60	100.00
			117	6535		13.00		9.50		14.60	
		802.11be-EHT20 MCS0	149	6695		13.00		9.50		14.60	100.00
			173	6815		13.00		9.50		14.60	
			123	6565		13.00		9.50		14.60	
		802.11be-EHT40 MCS0	147	6685		13.00		9.50		14.60	100.00
			179	6845		13.00		9.50		14.60	
			135	6625		13.00		9.50		14.60	
		802.11be-EHT80 MCS0	151	6705		13.00		9.50		14.60	100.00
			167	6785		13.00		9.50		14.60	
			143	6665		13.00		9.50		14.60	
		802.11be-EHT160 MCS0	143	6665		13.00		9.50		14.60	100.00
			117	6535		13.00		9.50		14.60	



【6GHz WLAN_DBS&HBS】

	Band	Mode	Channel	Frequency (MHz)	Ant 6 DBS&HBS		Ant 7 DBS&HBS		Ant 6+7 DBS&HBS		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN 6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	10.50	Not Required	9.50	Not Required	13.00	98.97
			49	6195		10.50		9.50		13.00	
			93	6415		10.50		9.50		13.00	
		802.11ax-HE20 MCS0	1	5955		10.50		9.50		13.00	100.00
			49	6195		10.50		9.50		13.00	
			93	6415		10.50		9.50		13.00	
		802.11ax-HE40 MCS0	3	5965		10.50		9.50		13.00	100.00
			51	6205		10.50		9.50		13.00	
			91	6405		10.50		9.50		13.00	
		802.11ax-HE80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.50		9.50		13.00	
			87	6385		10.50		9.50		13.00	
		802.11ax-HE160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.50		9.50		13.00	
			79	6345		10.50		9.50		13.00	
		802.11be-EHT20 MCS0	1	5955		10.50		9.50		13.00	100.00
			49	6195		10.50		9.50		13.00	
			93	6415		10.50		9.50		13.00	
		802.11be-EHT40 MCS0	3	5965		10.50		9.50		13.00	100.00
			51	6205		10.50		9.50		13.00	
			91	6405		10.50		9.50		13.00	
		802.11be-EHT80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.50		9.50		13.00	
			87	6385		10.50		9.50		13.00	
		802.11be-EHT160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.50		9.50		13.00	
			79	6345		10.50		9.50		13.00	
		802.11be-EHT320 MCS0	31	6105	10.07	10.50	9.12	9.50	12.63	13.00	100.00
			63	6265	10.14	10.50	9.11	9.50	12.67	13.00	
			95	6425	10.12	10.50	9.66	10.00	12.91	13.30	
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	Not Require	11.50	Not Require	8.00	Not Require	13.10	98.97
			149	6695		11.50		8.00		13.10	
			173	6815		11.50		8.00		13.10	
		802.11ax-HE20 MCS0	117	6535		11.50		8.00		13.10	100.00
			149	6695		11.50		8.00		13.10	
			173	6815		11.50		8.00		13.10	
		802.11ax-HE40 MCS0	123	6565		11.50		8.00		13.10	100.00
			147	6685		11.50		8.00		13.10	
			179	6845		11.50		8.00		13.10	
		802.11ax-HE80 MCS0	135	6625		11.50		8.00		13.10	100.00
			151	6705		11.50		8.00		13.10	
			167	6785		11.50		8.00		13.10	
		802.11ax-HE160 MCS0	143	6665		11.50		8.00		13.10	100.00
			117	6535		11.50		8.00		13.10	
			149	6695		11.50		8.00		13.10	
		802.11be-EHT20 MCS0	123	6565		11.50		8.00		13.10	100.00
			147	6685		11.50		8.00		13.10	
			179	6845		11.50		8.00		13.10	
		802.11be-EHT40 MCS0	123	6565		11.50		8.00		13.10	100.00
			147	6685		11.50		8.00		13.10	
			179	6845		11.50		8.00		13.10	
		802.11be-EHT80 MCS0	135	6625		11.50		8.00		13.10	100.00
			151	6705		11.50		8.00		13.10	
			167	6785		11.50		8.00		13.10	
		802.11be-EHT160 MCS0	143	6665		11.50		8.00		13.10	100.00
			143	6665		11.50		8.00		13.10	



<WLAN6GHz> indoor client

【6GHz WLAN_Full Power】

	Band	Mode	Channel	Frequency (MHz)	Ant 6 For Default / Full Power		Ant 7 For Default / Full Power		Ant 6+7 For Default / Full Power		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN 6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	3.79	4.00	3.67	4.00	6.75	7.00	98.97
			49	6195	3.56	4.00	3.79	4.00	6.69	7.00	
			93	6415	4.29	4.50	4.05	4.50	7.19	7.50	
		802.11ax-HE20 MCS0	1	5955	7.22	7.50	7.75	8.00	10.50	10.80	100.00
			49	6195	6.94	7.00	7.67	8.00	10.33	10.50	
			93	6415	7.21	7.50	7.89	8.00	10.57	10.80	
		802.11ax-HE40 MCS0	3	5965	10.32	10.50	9.95	10.00	13.15	13.30	100.00
			51	6205	10.18	10.50	10.19	10.50	13.20	13.50	
			91	6405	10.65	11.00	10.72	11.00	13.70	14.00	
		802.11ax-HE80 MCS0	7	5985	13.28	13.50	12.85	13.00	16.08	16.30	100.00
			55	6225	12.99	13.00	13.15	13.50	16.08	16.30	
			87	6385	13.17	13.50	13.26	13.50	16.23	16.50	
		802.11ax-HE160 MCS0	15	6025	15.85	16.00	15.32	15.50	18.60	18.80	100.00
			47	6185	15.33	15.50	15.55	16.00	18.45	18.80	
		802.11be-EHT20 MCS0	1	5955	7.25	7.50	7.80	8.00	10.54	10.80	100.00
			49	6195	6.96	7.00	7.70	8.00	10.36	10.50	
			93	6415	7.24	7.50	7.93	8.00	10.61	10.80	
		802.11be-EHT40 MCS0	3	5965	10.35	10.50	9.99	10.00	13.18	13.30	100.00
			51	6205	10.22	10.50	10.24	10.50	13.24	13.50	
			91	6405	10.67	11.00	10.75	11.00	13.72	14.00	
		802.11be-EHT80 MCS0	7	5985	13.31	13.50	12.89	13.00	16.12	16.30	100.00
			55	6225	13.03	13.50	13.18	13.50	16.12	16.50	
			87	6385	13.20	13.50	13.30	13.50	16.26	16.50	
		802.11be-EHT160 MCS0	15	6025	15.91	16.00	15.38	15.50	18.66	18.80	100.00
			47	6185	15.35	15.50	15.59	16.00	18.48	18.80	
			79	6345	15.77	16.00	15.75	16.00	18.77	19.00	
		802.11be-EHT320 MCS0	31	6105	18.83	19.00	18.32	18.50	21.59	21.80	100.00
			63	6265	17.71	18.00	18.05	18.50	20.89	21.30	
			95	6425	18.33	18.50	18.38	18.50	21.37	21.50	
	UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	4.68	5.00	4.95	5.00	7.83	8.00	98.97
			105	6475	4.75	5.00	5.02	5.50	7.90	8.30	
			113	6515	4.89	5.00	4.56	5.00	7.74	8.00	
		802.11ax-HE20 MCS0	97	6435	7.15	7.50	7.91	8.00	10.56	10.80	100.00
			105	6475	8.49	8.50	8.45	8.50	11.48	11.50	
			113	6515	8.42	8.50	8.44	8.50	11.44	11.50	
		802.11ax-HE40 MCS0	99	6445	11.28	11.50	11.39	11.50	14.35	14.50	100.00
			115	6525	10.52	11.00	10.43	10.50	13.49	13.80	
		802.11ax-HE80 MCS0	103	6465	14.23	14.50	14.34	14.50	17.30	17.50	100.00
			119	6545	13.33	13.50	13.42	13.50	16.39	16.50	
		802.11ax-HE160 MCS0	111	6505	16.11	16.50	16.23	16.50	19.18	19.50	100.00
		802.11be-EHT20 MCS0	97	6435	7.17	7.50	7.93	8.00	10.58	10.80	100.00
			105	6475	8.52	9.00	8.48	8.50	11.51	11.80	
			113	6515	8.45	8.50	8.47	8.50	11.47	11.50	
		802.11be-EHT40 MCS0	99	6445	11.32	11.50	11.41	11.50	14.38	14.50	100.00
			107	6485	11.48	11.50	11.47	11.50	14.49	14.50	
			115	6525	10.55	11.00	10.48	10.50	13.53	13.80	
		802.11be-EHT80 MCS0	103	6465	14.25	14.50	14.38	14.50	17.33	17.50	100.00
			119	6545	13.35	13.50	13.48	13.50	16.43	16.50	
		802.11be-EHT160 MCS0	111	6505	16.13	16.50	16.29	16.50	19.22	19.50	100.00
		802.11be-EHT320 MCS0	127	6585	18.85	19.00	18.70	19.00	21.79	22.00	100.00
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	4.54	5.00	4.30	4.50	7.44	7.80	98.97
			149	6695	4.35	4.50	4.96	5.00	7.68	7.80	
			173	6815	4.52	5.00	5.05	5.50	7.81	8.30	
		802.11ax-HE20 MCS0	117	6535	8.28	8.50	8.09	8.50	11.20	11.50	100.00

		802.11ax-HE40 MCS0	149	6695	7.84	8.00	8.28	8.50	11.08	11.30	100.00
			173	6815	8.14	8.50	8.55	9.00	11.36	11.80	
			123	6565	10.42	10.50	10.58	11.00	13.51	13.80	
			147	6685	10.35	10.50	10.81	11.00	13.60	13.80	
		802.11ax-HE80 MCS0	179	6845	11.24	11.50	11.56	12.00	14.41	14.80	100.00
			135	6625	13.75	14.00	14.11	14.50	16.94	17.30	
			151	6705	13.71	14.00	14.22	14.50	16.98	17.30	
		802.11ax-HE160 MCS0	167	6785	13.54	14.00	14.07	14.50	16.82	17.30	100.00
			143	6665	16.17	16.50	16.61	17.00	19.41	19.80	
		802.11be-EHT20 MCS0	117	6535	8.32	8.50	8.12	8.50	11.23	11.50	100.00
			149	6695	7.86	8.00	8.32	8.50	11.11	11.30	
			173	6815	8.32	8.50	8.12	8.50	11.23	11.50	
		802.11be-EHT40 MCS0	123	6565	10.45	10.50	10.64	11.00	13.56	13.80	100.00
			147	6685	10.39	10.50	10.85	11.00	13.64	13.80	
			179	6845	11.28	11.50	11.60	12.00	14.45	14.80	
		802.11be-EHT80 MCS0	135	6625	13.79	14.00	14.16	14.50	16.99	17.30	100.00
			151	6705	13.74	14.00	14.27	14.50	17.02	17.30	
			167	6785	13.59	14.00	14.12	14.50	16.87	17.30	
		802.11be-EHT160 MCS0	143	6665	16.22	16.50	16.64	17.00	19.45	19.80	100.00
		802.11be-EHT320 MCS0	159	6745	18.84	19.00	18.97	19.00	21.92	22.00	100.00
	UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895	4.68	5.00	6.15	6.50	8.49	8.80	98.97
			209	6995	5.08	5.50	4.87	5.00	7.99	8.30	
			229	7095	4.58	5.00	4.69	5.00	7.65	8.00	
			233	7115	4.65	5.00	4.72	5.00	7.70	8.00	
		802.11ax-HE20 MCS0	189	6895	8.68	9.00	9.07	9.50	11.89	12.30	100.00
			209	6995	8.81	9.00	8.59	9.00	11.71	12.00	
			229	7095	8.39	8.50	8.45	8.50	11.43	11.50	
			233	7115	-2.75	-2.50	-2.59	-2.50	0.34	0.50	
		802.11ax-HE40 MCS0	195	6925	11.52	12.00	11.38	11.50	14.46	14.80	100.00
			211	7005	11.47	11.50	10.91	11.00	14.21	14.30	
		802.11ax-HE80 MCS0	227	7085	11.01	11.50	10.94	11.00	13.99	14.30	100.00
			199	6945	14.36	14.50	14.09	14.50	17.24	17.50	
			215	7025	13.95	14.00	13.32	13.50	16.66	16.80	
		802.11ax-HE160 MCS0	207	6985	17.14	17.50	16.65	17.00	19.91	20.30	100.00
		802.11be-EHT20 MCS0	189	6895	8.71	9.00	9.09	9.50	11.91	12.30	100.00
			209	6995	8.83	9.00	8.62	9.00	11.74	12.00	
			229	7095	8.42	8.50	8.48	8.50	11.46	11.50	
			233	7115	-2.72	-2.50	-2.51	-2.50	0.40	0.50	
		802.11be-EHT40 MCS0	195	6925	11.54	12.00	11.43	11.50	14.50	14.80	100.00
			211	7005	11.49	11.50	10.92	11.00	14.22	14.30	
			227	7085	11.02	11.50	10.97	11.00	14.01	14.30	
		802.11be-EHT80 MCS0	199	6945	14.39	14.50	14.11	14.50	17.26	17.50	100.00
			215	7025	13.97	14.00	13.38	13.50	16.70	16.80	
		802.11be-EHT160 MCS0	207	6985	17.17	17.50	16.67	17.00	19.94	20.30	100.00
		802.11be-EHT320 MCS0	191	6905	16.39	16.50	16.60	17.00	19.51	19.80	100.00



【6GHz WLAN_Standalone】

					Ant 6 Standalone		Ant 7 Standalone		Ant 6+7 Standalone		Duty Cycle %			
	Band	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit				
WLAN6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	4.00	Not Required	4.00	Not Required	7.00	98.97			
			49	6195		4.00		4.00		7.00				
			93	6415		4.50		4.50		7.50				
		802.11ax-HE20 MCS0	1	5955		7.50		8.00		10.80	100.00			
			49	6195		7.00		8.00		10.50				
			93	6415		7.50		8.00		10.80				
		802.11ax-HE40 MCS0	3	5965		10.50		10.00		13.30	100.00			
			51	6205		10.50		10.50		13.50				
			91	6405		11.00		11.00		14.00				
		802.11ax-HE80 MCS0	7	5985		12.00		11.00		14.50	100.00			
			55	6225		12.00		11.00		14.50				
			87	6385		12.00		11.00		14.50				
		802.11ax-HE160 MCS0	15	6025		12.00		11.00		14.50	100.00			
			47	6185		12.00		11.00		14.50				
			79	6345		12.00		11.00		14.50				
		802.11be-EHT20 MCS0	1	5955		7.50		8.00		10.80	100.00			
			49	6195		7.00		8.00		10.50				
			93	6415		7.50		8.00		10.80				
		802.11be-EHT40 MCS0	3	5965		10.50		10.00		13.30	100.00			
			51	6205		10.50		10.50		13.50				
			91	6405		11.00		11.00		14.00				
		802.11be-EHT80 MCS0	7	5985		12.00		11.00		14.50	100.00			
			55	6225		12.00		11.00		14.50				
			87	6385		12.00		11.00		14.50				
		802.11be-EHT160 MCS0	15	6025		12.00		11.00		14.50	100.00			
			47	6185		12.00		11.00		14.50				
			79	6345		12.00		11.00		14.50				
		802.11be-EHT320 MCS0	31	6105	11.66	12.00	10.76	11.00	14.24	14.50	100.00			
			63	6265	11.71	12.00	10.73	11.00	14.26	14.50				
			95	6425	11.73	12.00	11.26	11.50	14.51	14.80				
	UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	Not Required	5.00	Not Required	5.00	Not Required	8.00	98.97			
			105	6475		5.00		5.50		8.30				
			113	6515		5.00		5.00		8.00				
		802.11ax-HE20 MCS0	97	6435		7.50		8.00		10.80	100.00			
			105	6475		8.50		8.50		11.50				
			113	6515		8.50		8.50		11.50				
		802.11ax-HE40 MCS0	99	6445		11.50		11.50		14.50	100.00			
			115	6525		11.00		10.50		13.80				
			103	6465		13.50		11.50		15.60				
		802.11ax-HE80 MCS0	119	6545		13.50		11.50		15.60	100.00			
			111	6505		Not Required		13.50		11.50		15.60	100.00	
			111	6505		Not Required		13.50		11.50		15.60	100.00	
		802.11be-EHT20 MCS0	97	6435		7.50		8.00		10.80	100.00			
			105	6475		9.00		8.50		11.80				
			113	6515		8.50		8.50		11.50				
		802.11be-EHT40 MCS0	99	6445		11.50		11.50		14.50	100.00			
			107	6485		11.50		11.50		14.50				
			115	6525		11.00		10.50		13.80				
		802.11be-EHT80 MCS0	103	6465		13.50		11.50		15.60	100.00			
			119	6545		13.50		11.50		15.60				
			111	6505		13.50		11.50		15.60		100.00		
		802.11be-EHT160 MCS0	111	6505		13.50		11.50		15.60	100.00			
		802.11be-EHT320 MCS0	127	6585		13.21		13.50		11.14	11.50	15.31	15.60	100.00
		UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117		6535		Not Require		5.00	Not Require	4.50	Not Require	7.80
	149			6695		4.50				5.00		7.80		
	173			6815		5.00				5.50		8.30		
	802.11ax-HE20 MCS0		117	6535		8.50				8.50		11.50		100.00
			149	6695	8.00	8.50	11.30							



		802.11ax-HE40 MCS0	173	6815		8.50		9.00		11.80	100.00
			123	6565		10.50		9.50		13.80	
			147	6685		10.50		9.50		13.80	
			179	6845		11.50		9.50		14.60	
		802.11ax-HE80 MCS0	135	6625		13.00		9.50		14.60	100.00
			151	6705		13.00		9.50		14.60	
			167	6785		13.00		9.50		14.60	
		802.11ax-HE160 MCS0	143	6665		13.00		9.50		14.60	100.00
		802.11be-EHT20 MCS0	117	6535		8.50		8.50		11.50	
			149	6695		8.00		8.50		11.30	
			173	6815		8.50		8.50		11.50	
		802.11be-EHT40 MCS0	123	6565		10.50		9.50		13.80	100.00
			147	6685		10.50		9.50		13.80	
			179	6845		11.50		9.50		14.60	
		802.11be-EHT80 MCS0	135	6625		13.00		9.50		14.60	100.00
			151	6705		13.00		9.50		14.60	
			167	6785		13.00		9.50		14.60	
		802.11be-EHT160 MCS0	143	6665		13.00		9.50		14.60	100.00
		802.11be-EHT320 MCS0	159	6745		12.70		9.50		14.60	
			159	6745		13.00		9.41		14.37	
	UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895		5.00		6.50		8.80	98.97
			209	6995		5.50		5.00		8.30	
			229	7095		5.00		5.00		8.00	
			233	7115		5.00		5.00		8.00	
		802.11ax-HE20 MCS0	189	6895		9.00		9.50		12.30	100.00
			209	6995		9.00		9.00		12.00	
			229	7095		8.50		8.50		11.50	
			233	7115		-2.50		-2.50		0.50	
		802.11ax-HE40 MCS0	195	6925		10.50		10.00		13.30	100.00
			211	7005		10.50		10.00		13.30	
			227	7085		10.50		10.00		13.30	
		802.11ax-HE80 MCS0	199	6945	Not Require	10.50	Not Require	10.00	Not Require	13.30	100.00
		802.11ax-HE160 MCS0	215	7025		10.50		10.00		13.30	
			207	6985		10.50		10.00		13.30	
		802.11be-EHT20 MCS0	189	6895		9.00		9.50		12.30	100.00
			209	6995		9.00		9.00		12.00	
			229	7095		8.50		8.50		11.50	
			233	7115		-2.50		-2.50		0.50	
		802.11be-EHT40 MCS0	195	6925		10.50		10.00		13.30	100.00
			211	7005		10.50		10.00		13.30	
			227	7085		10.50		10.00		13.30	
		802.11be-EHT80 MCS0	199	6945		10.50		10.00		13.30	100.00
			215	7025		10.50		10.00		13.30	
		802.11be-EHT160 MCS0	207	6985		10.50		10.00		13.30	100.00
		802.11be-EHT320 MCS0	191	6905		10.22		9.52		12.89	



【6GHz WLAN_DBS&HBS】

	Band	Mode	Channel	Frequency (MHz)	Ant 6 DBS&HBS		Ant 7 DBS&HBS		Ant 6+7 DBS&HBS		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	4.00	Not Required	4.00	Not Required	7.00	98.97
			49	6195		4.00		4.00		7.00	
			93	6415		4.50		4.50		7.50	
		802.11ax-HE20 MCS0	1	5955		7.50		8.00		10.80	100.00
			49	6195		7.00		8.00		10.50	
			93	6415		7.50		8.00		10.80	
		802.11ax-HE40 MCS0	3	5965		10.50		9.50		13.00	100.00
			51	6205		10.50		9.50		13.00	
			91	6405		10.50		9.50		13.00	
		802.11ax-HE80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.50		9.50		13.00	
			87	6385		10.50		9.50		13.00	
		802.11ax-HE160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.50		9.50		13.00	
		802.11be-EHT20 MCS0	1	5955		7.50		8.00		10.80	100.00
			49	6195		7.00		8.00		10.50	
			93	6415		7.50		8.00		10.80	
		802.11be-EHT40 MCS0	3	5965		10.50		9.50		13.00	100.00
			51	6205		10.50		9.50		13.00	
			91	6405		10.50		9.50		13.00	
		802.11be-EHT80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.50		9.50		13.00	
			87	6385		10.50		9.50		13.00	
		802.11be-EHT160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.50		9.50		13.00	
			79	6345		10.50		9.50		13.00	
		802.11be-EHT320 MCS0	31	6105	10.07	10.50	9.12	9.50	12.63	13.00	100.00
			63	6265	10.14	10.50	9.11	9.50	12.67	13.00	
			95	6425	10.12	10.50	9.66	10.00	12.91	13.30	
	UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	Not Required	5.00	Not Required	5.00	Not Required	8.00	98.97
			105	6475		5.00		5.50		8.30	
			113	6515		5.00		5.00		8.00	
		802.11ax-HE20 MCS0	97	6435		7.50		8.00		10.80	100.00
			105	6475		8.50		8.50		11.50	
			113	6515		8.50		8.50		11.50	
		802.11ax-HE40 MCS0	99	6445		11.50		10.00		14.10	100.00
			115	6525		11.00		10.00		13.80	
			103	6465		12.00		10.00		14.10	
		802.11ax-HE80 MCS0	119	6545		12.00		10.00		14.10	100.00
			111	6505		12.00		10.00		14.10	
			111	6505		12.00		10.00		14.10	
		802.11be-EHT20 MCS0	97	6435		7.50		8.00		10.80	100.00
			105	6475		9.00		8.50		11.80	
			113	6515		8.50		8.50		11.50	
		802.11be-EHT40 MCS0	99	6445		11.50		10.00		14.10	100.00
			107	6485		11.50		10.00		14.10	
			115	6525		11.00		10.00		13.80	
		802.11be-EHT80 MCS0	103	6465		12.00		10.00		14.10	100.00
			119	6545		12.00		10.00		14.10	
		802.11be-EHT160 MCS0	111	6505		12.00		10.00		14.10	100.00
		802.11be-EHT320 MCS0	127	6585	11.57	12.00	9.59	10.00	13.70	14.10	100.00
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	Not Require	5.00	Not Require	4.50	Not Require	7.80	98.97
			149	6695		4.50		5.00		7.80	
			173	6815		5.00		5.50		8.30	
		802.11ax-HE20 MCS0	117	6535		8.50		8.00		11.50	100.00
			149	6695		8.00		8.00		11.30	



		802.11ax-HE40 MCS0	173	6815		8.50		8.00		11.80	100.00
			123	6565		10.50		8.00		13.10	
			147	6685		10.50		8.00		13.10	
			179	6845		11.50		8.00		13.10	
		802.11ax-HE80 MCS0	135	6625		11.50		8.00		13.10	100.00
			151	6705		11.50		8.00		13.10	
			167	6785		11.50		8.00		13.10	
		802.11ax-HE160 MCS0	143	6665		11.50		8.00		13.10	100.00
		802.11be-EHT20 MCS0	117	6535		8.50		8.00		11.50	
			149	6695		8.00		8.00		11.30	
			173	6815		8.50		8.00		11.50	
		802.11be-EHT40 MCS0	123	6565		10.50		8.00		13.10	100.00
			147	6685		10.50		8.00		13.10	
			179	6845		11.50		8.00		13.10	
		802.11be-EHT80 MCS0	135	6625		11.50		8.00		13.10	100.00
			151	6705		11.50		8.00		13.10	
			167	6785		11.50		8.00		13.10	
		802.11be-EHT160 MCS0	143	6665		11.50		8.00		13.10	100.00
		802.11be-EHT320 MCS0	159	6745		11.14		8.00		12.80	
			159	6745		11.50		8.00		13.10	
	UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895		5.00		6.50		8.80	98.97
			209	6995		5.50		5.00		8.30	
			229	7095		5.00		5.00		8.00	
			233	7115		5.00		5.00		8.00	
		802.11ax-HE20 MCS0	189	6895		9.00		8.50		11.80	100.00
			209	6995		9.00		8.50		11.80	
			229	7095		8.50		8.50		11.50	
			233	7115		-2.50		-2.50		0.50	
		802.11ax-HE40 MCS0	195	6925		9.00		8.50		11.80	100.00
			211	7005		9.00		8.50		11.80	
			227	7085		9.00		8.50		11.80	
		802.11ax-HE80 MCS0	199	6945		9.00		8.50		11.80	100.00
			215	7025		9.00		8.50		11.80	
		802.11ax-HE160 MCS0	207	6985		9.00		8.50		11.80	100.00
		802.11be-EHT20 MCS0	189	6895		9.00		8.50		11.80	100.00
			209	6995		9.00		8.50		11.80	
			229	7095		8.50		8.50		11.50	
			233	7115		-2.50		-2.50		0.50	
		802.11be-EHT40 MCS0	195	6925		9.00		8.50		11.80	100.00
			211	7005		9.00		8.50		11.80	
			227	7085		9.00		8.50		11.80	
		802.11be-EHT80 MCS0	199	6945		9.00		8.50		11.80	100.00
			215	7025		9.00		8.50		11.80	
		802.11be-EHT160 MCS0	207	6985		9.00		8.50		11.80	100.00
		802.11be-EHT320 MCS0	191	6905	8.67	9.00	8.12	8.50	11.39	11.80	100.00



Very Low Power

					Ant 6 For Default / Full Power		Ant 7 For Default / Full Power		Ant 6+7 For Default / Full Power		Duty Cycle %	
	Band	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit		
WLAN6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	-0.22	0.00	0.20	0.50	3.01	3.30	98.97	
			49	6195	-0.33	0.00	0.00	0.50	2.85	3.30		
			93	6415	-0.10	0.00	0.22	0.50	3.08	3.30		
		802.11ax-HE20 MCS0	1	5955	2.50	3.00	2.56	3.00	5.54	6.00	100.00	
			49	6195	2.57	3.00	2.80	3.00	5.70	6.00		
			93	6415	3.11	3.50	3.03	3.50	6.08	6.50		
		802.11ax-HE40 MCS0	3	5965	6.58	7.00	5.81	6.00	9.22	9.50	100.00	
			51	6205	6.24	6.50	5.96	6.00	9.11	9.30		
			91	6405	5.92	6.00	6.61	7.00	9.29	9.50		
		802.11ax-HE80 MCS0	7	5985	10.23	10.50	9.15	9.50	12.73	13.00	100.00	
			55	6225	9.71	10.00	9.68	10.00	12.71	13.00		
			87	6385	9.87	10.00	9.79	10.00	12.84	13.00		
		802.11ax-HE160 MCS0	15	6025	10.02	10.50	9.29	9.50	12.68	13.00	100.00	
			47	6185	9.75	10.00	9.78	10.00	12.78	13.00		
		802.11be-EHT20 MCS0	1	5955	2.57	3.00	2.61	3.00	5.60	6.00	100.00	
			49	6195	2.65	3.00	2.88	3.00	5.78	6.00		
			93	6415	3.19	3.50	3.07	3.50	6.14	6.50		
		802.11be-EHT40 MCS0	3	5965	6.64	7.00	5.86	6.00	9.28	9.50	100.00	
			51	6205	6.31	6.50	5.99	6.00	9.16	9.30		
			91	6405	5.97	6.00	6.69	7.00	9.36	9.50		
		802.11be-EHT80 MCS0	7	5985	10.29	10.50	9.18	9.50	12.78	13.00	100.00	
			55	6225	9.78	10.00	9.75	10.00	12.78	13.00		
			87	6385	9.95	10.00	9.84	10.00	12.91	13.00		
		802.11be-EHT160 MCS0	15	6025	10.05	10.50	9.34	9.50	12.72	13.00	100.00	
			47	6185	9.78	10.00	9.83	10.00	12.82	13.00		
			79	6345	9.68	10.00	9.63	10.00	12.67	13.00		
		802.11be-EHT320 MCS0	31	6105	10.12	10.50	9.68	10.00	12.92	13.30	100.00	
			63	6265	9.99	10.00	9.55	10.00	12.79	13.00		
			95	6425	9.96	10.00	9.93	10.00	12.96	13.00		
		UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	0.12	0.50	0.18	0.50	3.17	3.50	98.97
				105	6475	0.97	1.00	0.45	0.50	3.73	3.80	
				113	6515	0.22	0.50	0.19	0.50	3.22	3.50	
			802.11ax-HE20 MCS0	97	6435	3.40	3.50	3.43	3.50	6.43	6.50	100.00
				105	6475	3.58	4.00	3.46	3.50	6.53	6.80	
				113	6515	3.61	4.00	3.09	3.50	6.37	6.80	
			802.11ax-HE40 MCS0	99	6445	6.00	6.50	6.87	7.00	9.47	9.80	100.00
				115	6525	5.69	6.00	5.49	5.50	8.60	8.80	
			802.11ax-HE80 MCS0	103	6465	10.51	11.00	10.52	11.00	13.53	14.00	100.00
				119	6545	10.54	11.00	10.56	11.00	13.56	14.00	
			802.11ax-HE160 MCS0	111	6505	10.74	11.00	10.65	11.00	13.71	14.00	100.00
			802.11be-EHT20 MCS0	97	6435	3.49	3.50	3.48	3.50	6.50	6.50	100.00
				105	6475	3.64	4.00	3.51	4.00	6.59	7.00	
	113			6515	3.67	4.00	3.15	3.50	6.43	6.80		
	802.11be-EHT40 MCS0		99	6445	6.08	6.50	6.95	7.00	9.55	9.80	100.00	
			107	6485	6.21	6.50	6.99	7.00	9.63	9.80		
			115	6525	5.76	6.00	5.53	6.00	8.66	9.00		
	802.11be-EHT80 MCS0		103	6465	10.57	11.00	10.59	11.00	13.59	14.00	100.00	
			119	6545	10.58	11.00	10.61	11.00	13.61	14.00		
	802.11be-EHT160 MCS0		111	6505	10.77	11.00	10.73	11.00	13.76	14.00	100.00	
	802.11be-EHT320 MCS0		127	6585	10.51	11.00	10.63	11.00	13.58	14.00	100.00	
	UNII 7 (6.525-6.885GHz)		802.11a 6Mbps	117	6535	0.25	0.50	0.62	1.00	3.45	3.80	98.97
				149	6695	0.02	0.50	0.58	1.00	3.32	3.80	
				173	6815	-0.47	0.00	0.16	0.50	2.87	3.30	
		802.11ax-HE20 MCS0	117	6535	3.54	4.00	3.27	3.50	6.42	6.80	100.00	
			149	6695	3.54	4.00	3.56	4.00	6.56	7.00		

		802.11ax-HE40 MCS0	173	6815	3.12	3.50	3.12	3.50	6.13	6.50	100.00
			123	6565	5.47	5.50	5.91	6.00	8.71	8.80	
			147	6685	5.58	6.00	6.82	7.00	9.25	9.50	
			179	6845	5.27	5.50	5.73	6.00	8.52	8.80	
		802.11ax-HE80 MCS0	135	6625	10.03	10.50	10.20	10.50	13.13	13.50	100.00
			151	6705	10.05	10.50	10.41	10.50	13.24	13.50	
			167	6785	9.91	10.00	10.28	10.50	13.11	13.30	
		802.11ax-HE160 MCS0	143	6665	9.84	10.00	10.16	10.50	13.01	13.30	100.00
		802.11be-EHT20 MCS0	117	6535	3.61	4.00	3.29	3.50	6.46	6.80	100.00
			149	6695	3.56	4.00	3.62	4.00	6.60	7.00	
			173	6815	3.19	3.50	3.17	3.50	6.19	6.50	
		802.11be-EHT40 MCS0	123	6565	5.56	6.00	5.95	6.00	8.77	9.00	100.00
			147	6685	5.67	6.00	6.88	7.00	9.33	9.50	
			179	6845	5.32	5.50	5.79	6.00	8.57	8.80	
		802.11be-EHT80 MCS0	135	6625	10.12	10.50	10.26	10.50	13.20	13.50	100.00
			151	6705	10.08	10.50	10.49	10.50	13.30	13.50	
			167	6785	9.99	10.00	10.31	10.50	13.16	13.30	
		802.11be-EHT160 MCS0	143	6665	9.88	10.00	10.22	10.50	13.06	13.30	100.00
		802.11be-EHT320 MCS0	159	6745	9.75	10.00	10.26	10.50	13.02	13.30	100.00
	UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895	0.15	0.50	0.59	1.00	3.39	3.80	98.97
			209	6995	0.48	0.50	0.23	0.50	3.37	3.50	
			229	7095	0.91	1.00	1.10	1.50	4.02	4.30	
			233	7115	0.72	1.00	1.01	1.50	3.88	4.30	
		802.11ax-HE20 MCS0	189	6895	3.34	3.50	3.26	3.50	6.31	6.50	100.00
			209	6995	3.89	4.00	3.55	4.00	6.73	7.00	
			229	7095	3.93	4.00	3.93	4.00	6.94	7.00	
			233	7115	-2.75	-2.50	-2.59	-2.50	0.34	0.50	
		802.11ax-HE40 MCS0	195	6925	7.01	7.50	6.74	7.00	9.89	10.30	100.00
			211	7005	7.21	7.50	6.65	7.00	9.95	10.30	
			227	7085	7.51	8.00	6.99	7.00	10.27	10.50	
		802.11ax-HE80 MCS0	199	6945	10.71	11.00	10.55	11.00	13.64	14.00	100.00
			215	7025	11.08	11.50	10.51	11.00	13.81	14.30	
		802.11ax-HE160 MCS0	207	6985	10.65	11.00	10.37	10.50	13.52	13.80	100.00
		802.11be-EHT20 MCS0	189	6895	3.42	3.50	3.35	3.50	6.40	6.50	100.00
			209	6995	3.91	4.00	3.59	4.00	6.76	7.00	
			229	7095	3.98	4.00	3.99	4.00	7.00	7.00	
			233	7115	-2.72	-2.50	-2.51	-2.50	0.40	0.50	
		802.11be-EHT40 MCS0	195	6925	7.07	7.50	6.83	7.00	9.96	10.30	100.00
			211	7005	7.27	7.50	6.68	7.00	10.00	10.30	
			227	7085	7.57	8.00	7.02	7.50	10.31	10.80	
		802.11be-EHT80 MCS0	199	6945	10.77	11.00	10.63	11.00	13.71	14.00	100.00
			215	7025	11.15	11.50	10.59	11.00	13.89	14.30	
		802.11be-EHT160 MCS0	207	6985	10.69	11.00	10.46	10.50	13.59	13.80	100.00
		802.11be-EHT320 MCS0	191	6905	10.51	11.00	10.64	11.00	13.59	14.00	100.00



	Band	Mode	Channel	Frequency (MHz)	Ant 6 Standalone		Ant 7 Standalone		Ant 6+7 Standalone		Duty Cycle %
					Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	0.00	Not Required	0.50	Not Required	3.30	99.32
			49	6195		0.00		0.50		3.30	
			93	6415		0.00		0.50		3.30	
		802.11ax-HE20 MCS0	1	5955		3.00		3.00		6.00	100.00
			49	6195		3.00		3.00		6.00	
			93	6415		3.50		3.50		6.50	
		802.11ax-HE40 MCS0	3	5965		7.00		6.00		9.50	100.00
			51	6205		6.50		6.00		9.30	
			91	6405		6.00		7.00		9.50	
		802.11ax-HE80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.00		10.00		13.00	
			87	6385		10.00		10.00		13.00	
		802.11ax-HE160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.00		10.00		13.00	
		802.11be-EHT20 MCS0	1	5955		3.00		3.00		6.00	100.00
			49	6195		3.00		3.00		6.00	
			93	6415		3.50		3.50		6.50	
		802.11be-EHT40 MCS0	3	5965		7.00		6.00		9.50	100.00
			51	6205		6.50		6.00		9.30	
			91	6405		6.00		7.00		9.50	
		802.11be-EHT80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.00		10.00		13.00	
			87	6385		10.00		10.00		13.00	
		802.11be-EHT160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.00		10.00		13.00	
			79	6345		10.00		10.00		13.00	
		802.11be-EHT320 MCS0	31	6105		10.12		10.00		12.92	100.00
			63	6265		9.99		10.00		12.79	
			95	6425		9.96		10.00		12.96	
	UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	Not Required	0.50	Not Required	0.50	Not Required	3.50	99.32
			105	6475		1.00		0.50		3.80	
			113	6515		0.50		0.50		3.50	
		802.11ax-HE20 MCS0	97	6435		3.50		3.50		6.50	100.00
			105	6475		4.00		3.50		6.80	
			113	6515		4.00		3.50		6.80	
		802.11ax-HE40 MCS0	99	6445		6.50		7.00		9.80	100.00
			115	6525		6.00		5.50		8.80	
		802.11ax-HE80 MCS0	103	6465		11.00		11.00		14.00	100.00
			119	6545		11.00		11.00		14.00	
		802.11ax-HE160 MCS0	111	6505		11.00		11.00		14.00	100.00
		802.11be-EHT20 MCS0	97	6435		3.50		3.50		6.50	100.00
			105	6475		4.00		4.00		7.00	
			113	6515		4.00		3.50		6.80	
		802.11be-EHT40 MCS0	99	6445		6.50		7.00		9.80	100.00
			107	6485		6.50		7.00		9.80	
			115	6525		6.00		6.00		9.00	
		802.11be-EHT80 MCS0	103	6465		11.00		11.00		14.00	100.00
			119	6545		11.00		11.00		14.00	
		802.11be-EHT160 MCS0	111	6505		11.00		11.00		14.00	100.00
		802.11be-EHT320 MCS0	127	6585		10.51		11.00		13.58	100.00
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	Not Require	0.50	Not Require	1.00	Not Require	3.80	99.32
			149	6695		0.50		1.00		3.80	
			173	6815		0.00		0.50		3.30	
		802.11ax-HE20 MCS0	117	6535		4.00		3.50		6.80	100.00
			149	6695		4.00		4.00		7.00	
			173	6815		3.50		3.50		6.50	
		802.11ax-HE40 MCS0	123	6565		5.50		6.00		8.80	100.00



		802.11ax-HE80 MCS0	147	6685		6.00		7.00		9.50	100.00
			179	6845		5.50		6.00		8.80	
			135	6625		10.50		9.50		13.00	
			151	6705		10.50		9.50		13.00	
			167	6785		10.00		9.50		12.80	
		802.11ax-HE160 MCS0	143	6665	10.00	9.50	12.80	100.00			
		802.11be-EHT20 MCS0	117	6535	4.00	3.50	6.80	100.00			
			149	6695	4.00	4.00	7.00				
			173	6815	3.50	3.50	6.50				
		802.11be-EHT40 MCS0	123	6565	6.00	6.00	9.00	100.00			
			147	6685	6.00	7.00	9.50				
			179	6845	5.50	6.00	8.80				
		802.11be-EHT80 MCS0	135	6625	10.50	9.50	13.00	100.00			
			151	6705	10.50	9.50	13.00				
			167	6785	10.00	9.50	12.80				
		802.11be-EHT160 MCS0	143	6665	10.00	9.50	12.80	100.00			
		802.11be-EHT320 MCS0	159	6745	9.75	10.00	9.41	9.50	12.59	12.80	100.00
		UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895		0.50		1.00		3.80
	209			6995	0.50		0.50		3.50		
	229			7095	1.00		1.50		4.30		
	233			7115	1.00		1.50		4.30		
	802.11ax-HE20 MCS0		189	6895		3.50		3.50		6.50	100.00
			209	6995		4.00		4.00		7.00	
			229	7095		4.00		4.00		7.00	
	802.11ax-HE40 MCS0		233	7115		-2.50		-2.50		0.50	100.00
			195	6925		7.50		7.00		10.30	
			211	7005		7.50		7.00		10.30	
	802.11ax-HE80 MCS0		227	7085	8.00	7.00	10.50	100.00			
			199	6945	10.50	10.00	13.30				
			215	7025	10.50	10.00	13.30				
	802.11ax-HE160 MCS0		207	6985	10.50	10.00	13.30	100.00			
	802.11be-EHT20 MCS0		189	6895	3.50	3.50	6.50	100.00			
			209	6995	4.00	4.00	7.00				
			229	7095	4.00	4.00	7.00				
			233	7115	-2.50	-2.50	0.50				
	802.11be-EHT40 MCS0		195	6925	7.50	7.00	10.30	100.00			
			211	7005	7.50	7.00	10.30				
			227	7085	8.00	7.50	10.80				
	802.11be-EHT80 MCS0		199	6945	10.50	10.00	13.30	100.00			
			215	7025	10.50	10.00	13.30				
	802.11be-EHT160 MCS0		207	6985	10.50	10.00	13.30	100.00			
	802.11be-EHT320 MCS0		191	6905	10.22	10.50	9.52	10.00	12.89	13.30	100.00

					Ant 6 DBS HBS Simultaneous(Sensor on)		Ant 7 DBS HBS Simultaneous(Sensor on)		Ant 6+7 DBS HBS Simultaneous(Sensor on)		Duty Cycle %
	Band	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
WLAN6GHz	UNII 5 (5.925-6.425GHz)	802.11a 6Mbps	1	5955	Not Required	0.00	Not Required	0.50	Not Required	3.30	99.32
			49	6195		0.00		0.50		3.30	
			93	6415		0.00		0.50		3.30	
		802.11ax-HE20 MCS0	1	5955		3.00		3.00		6.00	100.00
			49	6195		3.00		3.00		6.00	
			93	6415		3.50		3.50		6.50	
		802.11ax-HE40 MCS0	3	5965		7.00		6.00		9.50	100.00
			51	6205		6.50		6.00		9.30	
			91	6405		6.00		7.00		9.50	
		802.11ax-HE80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.00		9.50		12.80	
			87	6385		10.00		9.50		12.80	
		802.11ax-HE160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.00		9.50		12.80	
		802.11be-EHT20 MCS0	1	5955		3.00		3.00		6.00	100.00
			49	6195		3.00		3.00		6.00	
			93	6415		3.50		3.50		6.50	
		802.11be-EHT40 MCS0	3	5965		7.00		6.00		9.50	100.00
			51	6205		6.50		6.00		9.30	
			91	6405		6.00		7.00		9.50	
		802.11be-EHT80 MCS0	7	5985		10.50		9.50		13.00	100.00
			55	6225		10.00		9.50		12.80	
			87	6385		10.00		9.50		12.80	
		802.11be-EHT160 MCS0	15	6025		10.50		9.50		13.00	100.00
			47	6185		10.00		9.50		12.80	
			79	6345		10.00		9.50		12.80	
		802.11be-EHT320 MCS0	31	6105	10.07	10.50	9.12	9.50	12.63	13.00	100.00
			63	6265	9.99	10.00	9.11	9.50	12.58	12.80	
			95	6425	9.96	10.00	9.66	10.00	12.82	13.00	
	UNII 6 (6.425-6.525GHz)	802.11a 6Mbps	97	6435	Not Required	0.50	Not Required	0.50	Not Required	3.50	99.32
			105	6475		1.00		0.50		3.80	
			113	6515		0.50		0.50		3.50	
		802.11ax-HE20 MCS0	97	6435		3.50		3.50		6.50	100.00
			105	6475		4.00		3.50		6.80	
			113	6515		4.00		3.50		6.80	
		802.11ax-HE40 MCS0	99	6445		6.50		7.00		9.80	100.00
			115	6525		6.00		5.50		8.80	
			103	6465		11.00		10.00		13.50	
		802.11ax-HE80 MCS0	119	6545		11.00		10.00		13.50	100.00
		802.11ax-HE160 MCS0	111	6505		11.00		10.00		13.50	100.00
		802.11be-EHT20 MCS0	97	6435		3.50		3.50		6.50	100.00
			105	6475		4.00		4.00		7.00	
			113	6515		4.00		3.50		6.80	
		802.11be-EHT40 MCS0	99	6445		6.50		7.00		9.80	100.00
			107	6485		6.50		7.00		9.80	
			115	6525		6.00		6.00		9.00	
		802.11be-EHT80 MCS0	103	6465		11.00		10.00		13.50	100.00
			119	6545		11.00		10.00		13.50	
		802.11be-EHT160 MCS0	111	6505		11.00		10.00		13.50	100.00
		802.11be-EHT320 MCS0	127	6585	10.51	11.00	9.59	10.00	13.08	13.50	100.00
	UNII 7 (6.525-6.885GHz)	802.11a 6Mbps	117	6535	Not Require	0.50	Not Require	1.00	Not Require	3.80	99.32
			149	6695		0.50		1.00		3.80	
			173	6815		0.00		0.50		3.30	
		802.11ax-HE20 MCS0	117	6535		4.00		3.50		6.80	100.00

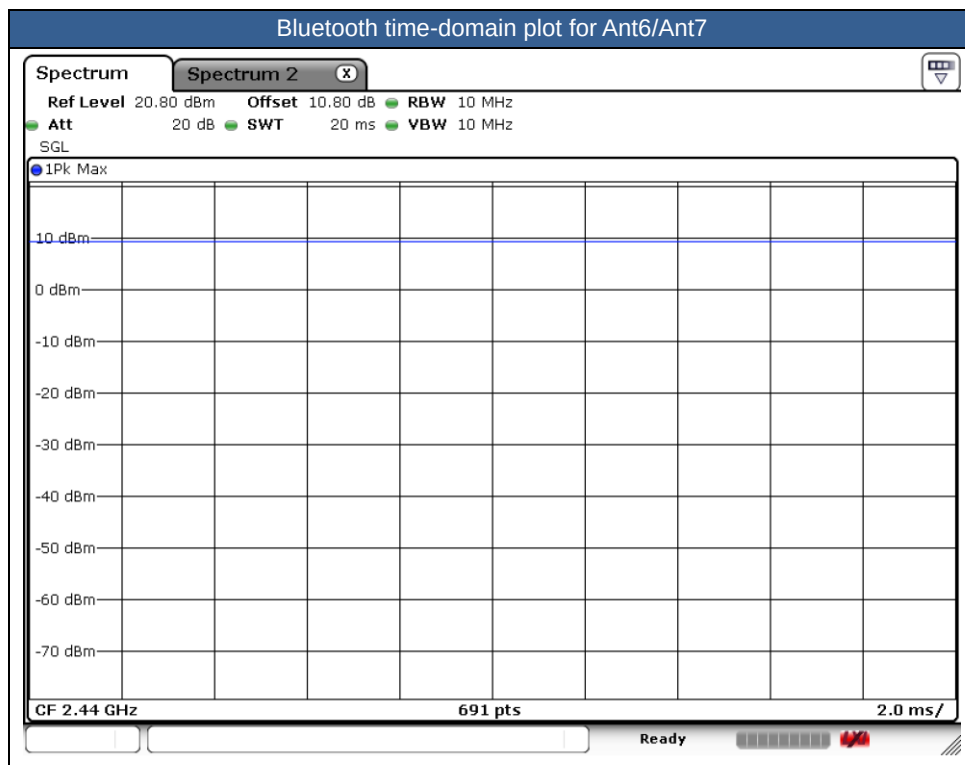


			149	6695		4.00		4.00		7.00				
			173	6815		3.50		3.50		6.50				
			123	6565		5.50		6.00		8.80				
			147	6685		6.00		7.00		9.50				
		802.11ax-HE40 MCS0	179	6845	5.50	6.00	8.80	100.00						
			135	6625	10.50	8.00	12.40	100.00						
			151	6705	10.50	8.00	12.40							
			167	6785	10.00	8.00	12.10							
		802.11ax-HE160 MCS0	143	6665	10.00	8.00	12.10	100.00						
		802.11be-EHT20 MCS0	117	6535	4.00	3.50	6.80	100.00						
			149	6695	4.00	4.00	7.00							
			173	6815	3.50	3.50	6.50							
		802.11be-EHT40 MCS0	123	6565	6.00	6.00	9.00	100.00						
			147	6685	6.00	7.00	9.50							
			179	6845	5.50	6.00	8.80							
		802.11be-EHT80 MCS0	135	6625	10.50	8.00	12.40	100.00						
			151	6705	10.50	8.00	12.40							
			167	6785	10.00	8.00	12.10							
		802.11be-EHT160 MCS0	143	6665	10.00	8.00	12.10	100.00						
		802.11be-EHT320 MCS0	159	6745	9.75	10.00	7.82	8.00	11.90	12.10	100.00			
	UNII 8 (6.885-7.125GHz)	802.11a 6Mbps	189	6895	Not Require	0.50	Not Require	1.00	Not Require	3.80	99.32			
			209	6995		0.50		0.50		3.50				
			229	7095		1.00		1.50		4.30				
			233	7115		1.00		1.50		4.30				
		802.11ax-HE20 MCS0	189	6895		3.50		3.50		6.50	100.00			
			209	6995		4.00		4.00		7.00				
			229	7095		4.00		4.00		7.00				
			233	7115		-2.50		-2.50		0.50				
		802.11ax-HE40 MCS0	195	6925		7.50		7.00		10.30	100.00			
			211	7005		7.50		7.00		10.30				
			227	7085		8.00		7.00		10.50				
		802.11ax-HE80 MCS0	199	6945		9.00		8.50		11.80	100.00			
			215	7025		9.00		8.50		11.80				
		802.11ax-HE160 MCS0	207	6985		9.00		8.50		11.80	100.00			
		802.11be-EHT20 MCS0	189	6895		3.50		3.50		6.50	100.00			
			209	6995		4.00		4.00		7.00				
			229	7095		4.00		4.00		7.00				
			233	7115		-2.50		-2.50		0.50				
		802.11be-EHT40 MCS0	195	6925		7.50		7.00		10.30	100.00			
			211	7005		7.50		7.00		10.30				
			227	7085		8.00		7.50		10.80				
		802.11be-EHT80 MCS0	199	6945		9.00		8.50		11.80	100.00			
			215	7025		9.00		8.50		11.80				
		802.11be-EHT160 MCS0	207	6985		9.00		8.50		11.80	100.00			
		802.11be-EHT320 MCS0	191	6905		8.67		9.00		8.12	8.50	11.39	11.80	100.00

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 100% for Ant6/Ant7, as following figure, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 84.8%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.





<Bluetooth_Ant 6_Full Power>

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
BR / EDR 1Mbps	0	2402	7.29	9	77.02
	39	2441	8.57	9	77.02
	78	2480	8.08	9	77.02
BR / EDR 2Mbps	0	2402	6.19	8	30.79
	39	2441	7.85	8	30.79
	78	2480	7.43	8	30.79
BR / EDR 3Mbps	0	2402	6.17	8	30.79
	39	2441	7.94	8	30.79
	78	2480	7.44	8	30.79
LE 125kbps	0	2402	7.87	9.5	82.62
	19	2440	9.02	9.5	82.62
	39	2480	8.36	9.5	82.62
LE 500kbps	0	2402	7.85	9.5	57.14
	19	2440	9.09	9.5	57.14
	39	2480	8.48	9.5	57.14
LE 1Mbps	0	2402	7.97	9.5	62.96
	19	2440	9.29	9.5	62.96
	39	2480	8.5	9.5	62.96
LE 2Mbps	0	2402	8	9.5	33.33
	19	2440	9.21	9.5	33.33
	39	2480	8.53	9.5	33.33
BT6.0 GFSK 1Mbps	2	2404	9.17	10	100
	38	2440	10.14	10.5	100
	76	2478	9.45	10	100
BT6.0 GFSK 2Mbps	2	2404	9.26	10	100
	38	2440	10.22	10.5	100
	76	2478	9.51	10	100
BT6.0 ASK 1Mbps	2	2404	9.21	10	100
	38	2440	10.17	10.5	100
	76	2478	9.47	10	100

<Bluetooth_Ant 6_Standalone>

Mode	Channel	Frequency (MHz)	Ant 6		
			Average Power (dBm)	Tune-Up Limit	Duty Cycle %
BR / EDR 1Mbps	0	2402	7.29	9	77.02
	39	2441	8.57	9	77.02
	78	2480	8.08	9	77.02
BR / EDR 2Mbps	0	2402	6.19	8	30.79
	39	2441	7.85	8	30.79
	78	2480	7.43	8	30.79
BR / EDR 3Mbps	0	2402	6.17	8	30.79
	39	2441	7.94	8	30.79
	78	2480	7.44	8	30.79
LE 125kbps	0	2402	7.87	9.5	82.62
	19	2440	9.02	9.5	82.62
	39	2480	8.36	9.5	82.62
LE 500kbps	0	2402	7.85	9.5	57.14
	19	2440	9.09	9.5	57.14
	39	2480	8.48	9.5	57.14
LE 1Mbps	0	2402	7.97	9.5	62.96
	19	2440	9.29	9.5	62.96
	39	2480	8.5	9.5	62.96
LE 2Mbps	0	2402	8	9.5	33.33
	19	2440	9.21	9.5	33.33
	39	2480	8.53	9.5	33.33
BT6.0 GFSK 1Mbps	2	2404	9.17	10	100
	38	2440	10.14	10.5	100



BT6.0 GFSK 2Mbps	76	2478	9.45	10	100
	2	2404	9.26	10	100
	38	2440	10.22	10.5	100
BT6.0 ASK 1Mbps	76	2478	9.51	10	100
	2	2404	9.21	10	100
	38	2440	10.17	10.5	100
	76	2478	9.47	10	100

<Bluetooth_Ant 7_Full Power>					
			Ant 7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
BR / EDR 1Mbps	0	2402	6.31	8	76.83
	39	2441	8	8	76.83
	78	2480	7.76	8	76.83
BR / EDR 2Mbps	0	2402	5.99	7	30.9
	39	2441	7.96	8	30.9
	78	2480	7.64	8	30.9
BR / EDR 3Mbps	0	2402	6	8	30.73
	39	2441	7.99	8	30.73
	78	2480	7.67	8	30.73
LE 125kbps	0	2402	6.87	8	82.85
	19	2440	8.74	9	82.85
	39	2480	8.1	9	82.85
LE 500kbps	0	2402	6.9	8	57.14
	19	2440	8.69	9	57.14
	39	2480	8.09	9	57.14
LE 1Mbps	0	2402	6.98	8	62.83
	19	2440	8.78	9	62.83
	39	2480	8.28	9	62.83
LE 2Mbps	0	2402	6.94	8	33.5
	19	2440	8.67	9	33.5
	39	2480	8.44	9	33.5
BT6.0 GFSK 1Mbps	2	2404	9.42	10	100
	38	2440	10.31	10.5	100
	76	2478	9.97	10	100
BT6.0 GFSK 2Mbps	2	2404	9.48	10	100
	38	2440	10.37	10.5	100
	76	2478	10.03	10.5	100
BT6.0 ASK 1Mbps	2	2404	9.44	10	100
	38	2440	10.35	10.5	100
	76	2478	10.01	10.5	100



<Bluetooth_Ant 7_Standalone>					
			Ant 7		
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-Up Limit	Duty Cycle %
BR / EDR 1Mbps	0	2402	6.31	8	76.83
	39	2441	8	8	76.83
	78	2480	7.76	8	76.83
BR / EDR 2Mbps	0	2402	5.99	7	30.9
	39	2441	7.96	8	30.9
	78	2480	7.64	8	30.9
BR / EDR 3Mbps	0	2402	6	8	30.73
	39	2441	7.99	8	30.73
	78	2480	7.67	8	30.73
LE 125kbps	0	2402	6.87	8	82.85
	19	2440	8.74	9	82.85
	39	2480	8.1	9	82.85
LE 500kbps	0	2402	6.9	8	57.14
	19	2440	8.69	9	57.14
	39	2480	8.09	9	57.14
LE 1Mbps	0	2402	6.98	8	62.83
	19	2440	8.78	9	62.83
	39	2480	8.28	9	62.83
LE 2Mbps	0	2402	6.94	8	33.5
	19	2440	8.67	9	33.5
	39	2480	8.44	9	33.5
BT6.0 GFSK 1Mbps	2	2404	9.42	10	100
	38	2440	10.31	10.5	100
	76	2478	9.97	10	100
BT6.0 GFSK 2Mbps	2	2404	9.48	10	100
	38	2440	10.37	10.5	100
	76	2478	10.03	10.5	100
BT6.0 ASK 1Mbps	2	2404	9.44	10	100
	38	2440	10.35	10.5	100
	76	2478	10.01	10.5	100

14. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

<SAR test exclusion table>

General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(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 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Exposure Position	Wireless Interface	BT ANT 6	BT ANT 7	2.4GHz WLAN ANT 6	2.4GHz WLAN ANT 7	5GHz WLAN ANT 6	5GHz WLAN ANT 7	6GHz WLAN ANT 6	6GHz WLAN ANT 7
	Calculated Frequency (MHz)	2480.0	2480.0	2462.0	2462.0	5825.0	5825.0	5985.0	5985.0
	Maximum power (dBm)	10.5	10.5	25.5	24	20	19.5	20	20
	Maximum rated power(mW)	11.0	11.0	355.0	251.0	100.0	89.0	100.0	100.0
Bottom Face	Separation distance(mm)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	exclusion threshold	2.7	2.7	2.7	2.7	1.4	1.4	1.3	1.3
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0	57.0	5.0	57.0	5.0	57.0	5.0	57.0
	exclusion threshold	2.7	279.6	2.7	280.2	1.4	221.5	1.3	219.9
	Testing required?	Yes	No	Yes	No	Yes	No	Yes	No
Edge 2	Separation distance(mm)	99.7	5.0	99.7	5.0	99.7	5.0	99.7	5.0
	exclusion threshold	811.7	2.7	812.6	2.7	713.4	1.4	710.5	1.3
	Testing required?	No	Yes	No	Yes	No	Yes	No	Yes
Edge 3	Separation distance(mm)	150.8	106.0	150.8	106.0	150.8	106.0	150.8	106.0
	exclusion threshold	1787.1	912.3	1787.9	913.2	1695.9	810.9	1693.1	807.9
	Testing required?	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	128.3	253.4	128.3	253.4	128.3	253.4	128.3	253.4
	exclusion threshold	1313.6	3060.0	1314.5	3060.0	1209.8	3060.0	1206.7	3060.0
	Testing required?	No	No	No	No	No	No	No	No

15. SAR Test Results

General Note:

- Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - For SAR testing of Bluetooth signal with 84.8% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *84.8%".
 - For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
- Per KDB 447498 D01v06, 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:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 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
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
- Standalone body SAR testing for NFC will be performed with active mode and max power mode by test software with 100% duty cycle at 0mm separation distance.
- SAR test tissue-simulating liquid parameter: refer to IEC/IEEE 62209-1528: 2020.
- Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factors.
- Per October 2020 TCB Workshop Interim procedures, start instead with a minimum of 5 test channels across the full band, then adapt and apply conducted power and SAR test reduction procedures of KDB Pub. 248227 v02r02.
- For testing the WLAN 6GHz of this DUT, the selection of test channels was based on FCC guidance, with five channels selected across the entire WLAN 6GHz Bands. For the U-NII-5/U-NII-7 band supporting Standard AP mode and indoor Client mode, the higher output mode was measured among the selected channels.
- For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. Further simplification chose the worse SAR value and the worst scaling factor from each transmit chain perform reported SAR calculation conservatively. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain.
- Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
- WLAN 6GHz is categorized into three classes: Standard Client, Indoor Client and VLP (Very Low Power). Since the power level of Standard Client and Indoor Client is not less than power VLP (Very Low Power), so SAR for Standard Client and Indoor Client is evaluated more conservatively than VLP (Very Low Power) SAR. However, VLP (Very Low Power) SAR still spot-checks the worst-case SAR of Standard Client and Indoor Client.

WLAN/Bluetooth Note:

- Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
- Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
- 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 ≤ 0.8 W/kg or all required test position are tested.
- 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 ≤ 1.2 W/kg or all required channels are tested.
- During SAR testing the WLAN transmission was verified using a spectrum analyzer.
- 802.11ax/be supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
- The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode.
- For each antenna, transmit power in SISO operation is larger than or equal to the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode. So WLAN SAR testing was performed on SISO antenna, MIMO SAR base on standalone SAR summed together as MIMO SAR.

Power Density General Notes:

1. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Batteries are fully charged at the beginning of the measurements.
3. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
4. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
5. The device was 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.
6. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor.
7. Per April 2021 TCB Workshop and KDB 388624 D02v18r08, For the highest SAR test configurations also measure incident PD (total) using power-density reconstruction method in 2 mm closest measurement plane.
8. Per October 2020 TCB Workshop, PTP-PR algorithm was used during psPD measurement and calculations.
9. The measurement procedure consists of measuring the PD_{inc} at two different distances: 2 mm (compliance distance) and $\lambda/5$. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPD_n fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1 dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

$$10 \cdot \log_{10} \frac{iPD_n(2mm)}{iPD_n(\lambda/5)} \geq -1$$

15.1 Body SAR

[WLAN 2.4GHz_5GHz SAR]

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 6	Standalone	1	2412	Without Scanner	14.58	15.00	1.102	97.04	1.031	-0.02	0.965	1.096
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 6	Standalone	6	2437	Without Scanner	14.16	14.50	1.081	97.04	1.031	0.03	0.938	1.045
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 6	Standalone	11	2462	Without Scanner	14.16	14.50	1.081	97.04	1.031	0.05	0.926	1.032
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 6	Simultaneous	1	2412	Without Scanner	13.05	13.50	1.109	97.04	1.031	0.01	0.673	0.769
	WLAN2.4GHz	802.11b 1Mbps	Edge1	0mm	Ant 6	Standalone	1	2412	Without Scanner	14.58	15.00	1.102	97.04	1.031	0.06	0.309	0.351
	WLAN2.4GHz	802.11b 1Mbps	Edge1	0mm	Ant 6	Simultaneous	1	2412	Without Scanner	13.05	13.50	1.109	97.04	1.031	0.02	0.219	0.250
	WLAN2.4GHz	802.11b 1Mbps	Edge2	0mm	Ant 6	Full Power	6	2437	Without Scanner	25.07	25.50	1.104	97.04	1.031	0.09	0.066	0.075
	WLAN2.4GHz	802.11b 1Mbps	Edge3	0mm	Ant 6	Full Power	6	2437	Without Scanner	25.07	25.50	1.104	97.04	1.031	-0.01	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Edge4	0mm	Ant 6	Full Power	6	2437	Without Scanner	25.07	25.50	1.104	97.04	1.031	-0.06	0.247	0.281
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	27mm	Ant 6	Full Power	6	2437	Without Scanner	25.07	25.50	1.104	97.04	1.031	-0.04	0.099	0.113
	WLAN2.4GHz	802.11b 1Mbps	Edge1	28mm	Ant 6	Full Power	6	2437	Without Scanner	25.07	25.50	1.104	97.04	1.031	-0.08	0.093	0.106
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 6	Standalone	1	2412	With Scanner	14.58	15.00	1.102	97.04	1.031	-0.19	0.777	0.883
01	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Standalone	11	2462	Without Scanner	13.64	14.00	1.086	97.04	1.031	0.06	1.040	1.164
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Standalone	1	2412	Without Scanner	13.52	14.00	1.117	97.04	1.031	-0.18	1.010	1.163
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Standalone	6	2437	Without Scanner	13.57	14.00	1.104	97.04	1.031	0.03	0.812	0.924
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Simultaneous	11	2462	Without Scanner	11.54	12.00	1.112	97.04	1.031	0.09	0.623	0.714
	WLAN2.4GHz	802.11b 1Mbps	Edge1	0mm	Ant 7	Full Power	11	2462	Without Scanner	23.86	24.00	1.033	97.04	1.031	-0.06	0.046	0.049
	WLAN2.4GHz	802.11b 1Mbps	Edge2	0mm	Ant 7	Standalone	11	2462	Without Scanner	13.64	14.00	1.086	97.04	1.031	-0.08	0.304	0.340
	WLAN2.4GHz	802.11b 1Mbps	Edge2	0mm	Ant 7	Simultaneous	11	2462	Without Scanner	11.54	12.00	1.112	97.04	1.031	0.04	0.196	0.225
	WLAN2.4GHz	802.11b 1Mbps	Edge3	0mm	Ant 7	Full Power	11	2462	Without Scanner	23.86	24.00	1.033	97.04	1.031	0.06	0.104	0.111
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	27mm	Ant 7	Full Power	11	2462	Without Scanner	23.86	24.00	1.033	97.04	1.031	-0.05	0.435	0.463
	WLAN2.4GHz	802.11b 1Mbps	Edge2	30mm	Ant 7	Full Power	11	2462	Without Scanner	23.86	24.00	1.033	97.04	1.031	0.05	0.592	0.630
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Standalone	11	2462	With Scanner	13.64	14.00	1.086	97.04	1.031	0.01	0.987	1.105
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0mm	Ant 7	Standalone	11	2462	With Scanner	13.64	14.00	1.086	97.04	1.031	0.01	0.987	1.105
02	WLAN5GHz	802.11be-EHT40 MCS0	Bottom Face	0mm	Ant 6	Standalone	62	5310	Without Scanner	10.05	10.50	1.109	100.0	1.0	0.01	1.060	1.176
	WLAN5GHz	802.11ax-HE160 MCS0	Bottom Face	0mm	Ant 6	Simultaneous	50	5250	Without Scanner	7.52	8.00	1.117	100.0	1.0	0.03	0.653	0.729
	WLAN5GHz	802.11be-EHT40 MCS0	Edge1	0mm	Ant 6	Standalone	62	5310	Without Scanner	10.05	10.50	1.109	100.0	1.0	-0.19	0.831	0.922
	WLAN5GHz	802.11ax-HE160 MCS0	Edge1	0mm	Ant 6	Simultaneous	50	5250	Without Scanner	7.52	8.00	1.117	100.0	1.0	-0.01	0.443	0.495
	WLAN5GHz	802.11n-HT20 MCS0	Bottom Face	27mm	Ant 6	Full Power	60	5300	Without Scanner	19.25	19.50	1.059	100.0	1.0	0.03	0.291	0.308
	WLAN5GHz	802.11n-HT20 MCS0	Edge1	28mm	Ant 6	Full Power	60	5300	Without Scanner	19.25	19.50	1.059	100.0	1.0	0.07	0.104	0.110
	WLAN5GHz	802.11be-EHT40 MCS0	Bottom Face	0mm	Ant 6	Standalone	54	5270	Without Scanner	9.95	10.00	1.012	100.0	1.0	0.06	0.962	0.974
	WLAN5GHz	802.11be-EHT40 MCS0	Edge1	0mm	Ant 6	Standalone	54	5270	Without Scanner	9.95	10.00	1.012	100.0	1.0	-0.01	0.812	0.822
	WLAN5GHz	802.11be-EHT40 MCS0	Bottom Face	0mm	Ant 6	Standalone	62	5310	With Scanner	10.05	10.50	1.109	100.0	1.0	0.01	0.925	1.026
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Standalone	58	5290	Without Scanner	7.10	7.50	1.096	100.0	1.0	0.06	1.010	1.107
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Simultaneous	58	5290	Without Scanner	5.52	6.00	1.117	100.0	1.0	0.03	0.569	0.636
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge2	0mm	Ant 7	Standalone	58	5290	Without Scanner	7.10	7.50	1.096	100.0	1.0	0.14	0.314	0.344
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge2	0mm	Ant 7	Simultaneous	58	5290	Without Scanner	5.52	6.00	1.117	100.0	1.0	0.06	0.215	0.240



FCC SAR Test Report

Report No. : FA550911

	WLAN5GHz	802.11n-HT20 MCS0	Bottom Face	27mm	Ant 7	Full Power	56	5280	Without Scanner	19.14	19.50	1.086	100.0	1.0	-0.02	0.501	0.544
	WLAN5GHz	802.11n-HT20 MCS0	Edge2	30mm	Ant 7	Full Power	56	5280	Without Scanner	19.14	19.50	1.086	100.0	1.0	-0.11	0.429	0.466
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Standalone	58	5290	With Scanner	7.10	7.50	1.096	100.0	1.0	0.08	1.010	1.107
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	122	5610	Without Scanner	9.77	10.00	1.054	100.0	1.0	-0.05	1.080	1.138
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	106	5530	Without Scanner	9.64	10.00	1.086	100.0	1.0	-0.16	1.040	1.129
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	138	5690	Without Scanner	9.72	10.00	1.067	100.0	1.0	-0.11	1.020	1.088
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Simultaneous	122	5610	Without Scanner	8.06	8.50	1.107	100.0	1.0	0.03	0.659	0.730
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge1	0mm	Ant 6	Standalone	122	5610	Without Scanner	9.77	10.00	1.054	100.0	1.0	0.00	0.576	0.607
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge1	0mm	Ant 6	Simultaneous	122	5610	Without Scanner	8.06	8.50	1.107	100.0	1.0	0.01	0.365	0.404
	WLAN5GHz	802.11ac-VHT20 MCS0	Bottom Face	27mm	Ant 6	Full Power	100	5500	Without Scanner	19.61	20.00	1.094	100.0	1.0	0.02	0.147	0.161
	WLAN5GHz	802.11ac-VHT20 MCS0	Edge1	28mm	Ant 6	Full Power	100	5500	Without Scanner	19.61	20.00	1.094	100.0	1.0	-0.16	0.146	0.160
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	122	5610	With Scanner	9.77	10.00	1.054	100.0	1.0	0.08	1.010	1.065
03	WLAN5GHz	802.11ax-HE80 MCS0	Bottom Face	0mm	Ant 7	Standalone	122	5610	Without Scanner	7.51	8.00	1.119	100.0	1.0	0.06	1.030	1.153
	WLAN5GHz	802.11ax-HE80 MCS0	Bottom Face	0mm	Ant 7	Standalone	138	5690	Without Scanner	7.47	7.50	1.007	100.0	1.0	0.10	0.996	1.003
	WLAN5GHz	802.11ax-HE80 MCS0	Bottom Face	0mm	Ant 7	Standalone	106	5530	Without Scanner	7.48	7.50	1.005	100.0	1.0	-0.04	0.988	0.993
	WLAN5GHz	802.11be-EHT20 MCS0	Bottom Face	0mm	Ant 7	Simultaneous	144	5720	Without Scanner	6.06	6.50	1.107	100.0	1.0	0.00	0.611	0.676
	WLAN5GHz	802.11ax-HE80 MCS0	Edge2	0mm	Ant 7	Standalone	122	5610	Without Scanner	7.51	8.00	1.119	100.0	1.0	-0.13	0.289	0.323
	WLAN5GHz	802.11be-EHT20 MCS0	Edge2	0mm	Ant 7	Simultaneous	144	5720	Without Scanner	6.06	6.50	1.107	100.0	1.0	-0.04	0.211	0.234
	WLAN5GHz	802.11ax-HE80 MCS0	Bottom Face	27mm	Ant 7	Full Power	138	5690	Without Scanner	19.06	19.50	1.107	100.0	1.0	0.09	0.501	0.555
	WLAN5GHz	802.11ax-HE80 MCS0	Edge2	30mm	Ant 7	Full Power	138	5690	Without Scanner	19.06	19.50	1.107	100.0	1.0	0.04	0.438	0.485
	WLAN5GHz	802.11ax-HE80 MCS0	Bottom Face	0mm	Ant 7	Standalone	122	5610	With Scanner	7.51	8.00	1.119	100.0	1.0	0.02	1.010	1.130
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	155	5775	Without Scanner	11.75	12.00	1.059	100.0	1.0	0.08	1.000	1.059
	WLAN5GHz	802.11be-EHT80 MCS0	Bottom Face	0mm	Ant 6	Simultaneous	155	5775	Without Scanner	10.51	11.00	1.119	100.0	1.0	-0.03	0.698	0.781
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge1	0mm	Ant 6	Standalone	155	5775	Without Scanner	11.75	12.00	1.059	100.0	1.0	-0.15	0.645	0.683
	WLAN5GHz	802.11be-EHT80 MCS0	Edge1	0mm	Ant 6	Simultaneous	155	5775	Without Scanner	10.51	11.00	1.119	100.0	1.0	0.04	0.457	0.511
	WLAN5GHz	802.11a 6Mbps	Bottom Face	27mm	Ant 6	Full Power	157	5785	Without Scanner	19.37	19.50	1.03	98.97	1.01	-0.02	0.173	0.180
	WLAN5GHz	802.11a 6Mbps	Edge1	28mm	Ant 6	Full Power	157	5785	Without Scanner	19.37	19.50	1.03	98.97	1.01	0.06	0.107	0.111
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 6	Standalone	155	5775	With Scanner	11.75	12.00	1.059	100.0	1.0	0.03	0.950	1.006
04	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Standalone	155	5775	Without Scanner	8.12	8.50	1.091	100.0	1.0	-0.07	1.010	1.102
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Simultaneous	155	5775	Without Scanner	6.58	7.00	1.102	100.0	1.0	0.03	0.606	0.668
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge2	0mm	Ant 7	Standalone	155	5775	Without Scanner	8.12	8.50	1.091	100.0	1.0	-0.19	0.615	0.671
	WLAN5GHz	802.11ac-VHT80 MCS0	Edge2	0mm	Ant 7	Simultaneous	155	5775	Without Scanner	6.58	7.00	1.102	100.0	1.0	-0.06	0.435	0.479
	WLAN5GHz	802.11a 6Mbps	Bottom Face	27mm	Ant 7	Full Power	157	5785	Without Scanner	19.28	19.50	1.052	99.32	1.007	0.02	0.515	0.546
	WLAN5GHz	802.11a 6Mbps	Edge2	30mm	Ant 7	Full Power	157	5785	Without Scanner	19.28	19.50	1.052	99.32	1.007	0.06	0.423	0.448
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0mm	Ant 7	Standalone	155	5775	With Scanner	8.12	8.50	1.091	100.0	1.0	-0.02	1.010	1.102

[WLAN 6GHz SAR]

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Measured APD (W/m ²)
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	127	6585	Without Scanner	13.21	13.50	1.069	100.0	1.0	0.09	0.962	1.028	5.590
05	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	31	6105	Without Scanner	11.66	12.00	1.081	100.0	1.0	0.18	1.060	1.146	6.510
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	63	6265	Without Scanner	11.71	12.00	1.069	100.0	1.0	0.01	1.030	1.101	6.310
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	95	6425	Without Scanner	11.73	12.00	1.064	100.0	1.0	0.02	0.987	1.050	6.070
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	159	6745	Without Scanner	12.70	13.00	1.072	100.0	1.0	-0.09	1.050	1.126	6.010
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	191	6905	Without Scanner	10.22	10.50	1.067	100.0	1.0	0.01	1.010	1.078	6.340
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Simultaneous	127	6585	Without Scanner	11.57	12.00	1.104	100.0	1.0	-0.03	0.710	0.784	4.310
	WLAN6GHz	802.11be-EHT320 MCS0	Edge1	0mm	Ant 6	Standalone	127	6585	Without Scanner	13.21	13.50	1.069	100.0	1.0	0.05	0.745	0.796	4.580
	WLAN6GHz	802.11be-EHT320 MCS0	Edge1	0mm	Ant 6	Simultaneous	127	6585	Without Scanner	11.57	12.00	1.104	100.0	1.0	0.01	0.531	0.586	3.210
	WLAN6GHz	802.11a 6Mbps	Bottom Face	27mm	Ant 6	Full Power	173	6815	Without Scanner	19.80	20.00	1.047	98.97	1.01	0.01	0.196	0.207	1.250
	WLAN6GHz	802.11a 6Mbps	Edge1	28mm	Ant 6	Full Power	173	6815	Without Scanner	19.80	20.00	1.047	98.97	1.01	0.05	0.183	0.194	1.110
	WLAN6GHz	802.11be-EHT320 MCS0	Edge1	0mm	Ant 6	Standalone	31	6105	Without Scanner	11.66	12.00	1.081	100.0	1.0	0.01	0.714	0.772	4.320
	WLAN6GHz VLP	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	127	6585	Without Scanner	10.51	11	1.119	100	1	0.08	0.511	0.572	2.830
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 6	Standalone	31	6105	With Scanner	11.66	12.00	1.081	100.0	1.0	-0.03	0.989	1.069	6.200
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	95	6425	Without Scanner	11.26	11.50	1.057	100.0	1.0	-0.03	1.010	1.068	5.540
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	31	6105	Without Scanner	10.76	11.00	1.057	100.0	1.0	0.02	0.981	1.037	5.310
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	63	6265	Without Scanner	10.73	11.00	1.064	100.0	1.0	-0.08	1.030	1.096	5.740
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	127	6585	Without Scanner	11.14	11.5	1.086	100	1	100.000	0.03	0.965	1.048
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	159	6745	Without Scanner	9.41	9.5	1.021	100	1	100.000	0.01	1.031	1.052
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	191	6905	Without Scanner	9.52	10.00	1.117	100.0	1.0	0.07	1.010	1.128	5.310
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Simultaneous	95	6425	Without Scanner	9.66	10.00	1.081	100.0	1.0	-0.03	0.603	0.652	3.810
	WLAN6GHz	802.11be-EHT320 MCS0	Edge2	0mm	Ant 7	Standalone	95	6425	Without Scanner	11.26	11.50	1.057	100.0	1.0	0.05	0.654	0.691	3.650
	WLAN6GHz	802.11be-EHT320 MCS0	Edge2	0mm	Ant 7	Simultaneous	95	6425	Without Scanner	9.66	10.00	1.081	100.0	1.0	-0.03	0.489	0.529	2.750
	WLAN6GHz	802.11a 6Mbps	Bottom Face	27mm	Ant 7	Full Power	173	6815	Without Scanner	19.36	19.50	1.033	100.0	1.0	0.01	0.122	0.126	0.671
	WLAN6GHz	802.11a 6Mbps	Edge2	30mm	Ant 7	Full Power	173	6815	Without Scanner	19.36	19.50	1.033	100.0	1.0	-0.09	0.123	0.127	0.692
	WLAN6GHz	802.11be-EHT320 MCS0	Edge2	0mm	Ant 7	Standalone	31	6105	Without Scanner	10.76	11.00	1.057	100.0	1.0	-0.02	0.578	0.611	3.450
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	159	6745	With Scanner	10.57	11.00	1.104	100.0	1.0	-0.07	0.976	1.078	5.640
	WLAN6GHz VLP	802.11be-EHT320 MCS0	Bottom Face	0mm	Ant 7	Standalone	127	6585	Without Scanner	10.63	11	1.089	100	1	0.08	0.834	0.908	4.230

**【Bluetooth SAR】**

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	GFSK 2Mbps	Bottom Face	0mm	Ant 6	Standalone	38	2440	Without Scanner	10.37	10.5	1.03	100	0.848	-0.01	0.071	0.062
	Bluetooth	GFSK 2Mbps	Edge1	0mm	Ant 6	Standalone	38	2440	Without Scanner	10.37	10.5	1.03	100	0.848	-0.17	0.028	0.024
	Bluetooth	GFSK 2Mbps	Bottom Face	0mm	Ant 6	Standalone	38	2440	With Scanner	10.37	10.5	1.03	100	0.848	0.08	0.058	0.051
06	Bluetooth	GFSK 2Mbps	Bottom Face	0mm	Ant 7	Standalone	38	2440	Without Scanner	10.37	10.5	1.03	100	0.848	0.06	0.232	0.203
	Bluetooth	GFSK 2Mbps	Edge2	0mm	Ant 7	Standalone	38	2440	Without Scanner	10.37	10.5	1.03	100	0.848	0.13	0.001	0.001
	Bluetooth	GFSK 2Mbps	Bottom Face	0mm	Ant 7	Standalone	38	2440	With Scanner	10.37	10.5	1.03	100	0.848	-0.03	0.217	0.190

NFC SAR

Plot No.	Band	Mode	Test Position	Gap (mm)	Freq. (MHz)	Sample	Power Drift (dB)	Measured 1g SAR (W/kg)
	NFC	ASK	Bottom Face	0mm	13.56	With Scanner	0	<0.001
	NFC	ASK	Edge 1	0mm	13.56	With Scanner	0	<0.001
	NFC	ASK	Edge 2	0mm	13.56	With Scanner	0	<0.001
	NFC	ASK	Edge 3	0mm	13.56	With Scanner	0	<0.001
	NFC	ASK	Edge 4	0mm	13.56	With Scanner	0	<0.001



15.2 6GHz PD Test Result

WLAN PD

Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (A)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	31	6105	11.66	0.0625	4.23	0.6	3.75	4.38
WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	10mm	Ant 6	Standalone	without Scanner	31	6105	11.66	0.25	3.71		2.14	2.46
WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	191	6905	10.22	0.0625	3.33	-0.2	2.99	4.18
WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	8.59mm	Ant 6	Standalone	without Scanner	191	6905	10.22	0.25	3.45		1.45	1.92

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (A)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	31	6105	11.66	12.00	1.081	100	1.000	0.0625	1.5535	-0.08	3.75	6.30	4.38	7.36
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	63	6265	11.71	12.00	1.069	100	1.000	0.0625	1.5535	0.03	3.29	5.46	3.97	6.59
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	95	6425	11.73	12.00	1.064	100	1.000	0.0625	1.5535	0.14	3.05	5.04	3.5	5.79
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	127	6585	13.21	13.50	1.069	100	1.000	0.0625	1.5535	0.09	3.5	5.81	4.45	7.39
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	159	6745	12.70	13.00	1.072	100	1.000	0.0625	1.5535	-0.12	3.05	5.08	4.19	6.97
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	without Scanner	191	6905	10.22	10.50	1.067	100	1.000	0.0625	1.5535	0.02	2.99	4.95	4.18	6.93
	WLAN6GHz	802.11a 6Mbps	Bottom face	27mm	Ant 6	Full Power	without Scanner	173	6815	19.80	20.00	1.047	98.97	1.010	0.0625	1.5535	0.01	0.612	1.01	0.655	1.08
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 6	Standalone	With Scanner	127	6585	13.21	13.50	1.069	100	1.000	0.0625	1.5535	0.02	3.21	5.33	4.16	6.91
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	31	6105	10.76	11.00	1.057	100	1.000	0.0625	1.5535	0.01	3.99	6.55	4.52	7.42
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	63	6265	10.73	11.00	1.064	100	1.000	0.0625	1.5535	0.01	2.7	4.46	3.91	6.46
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	95	6425	11.26	11.50	1.057	100	1.000	0.0625	1.5535	-0.07	3.22	5.29	4.22	6.93
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	127	6585	9.41	9.50	1.021	100	1.000	0.0625	1.5535	0.04	3.33	5.28	4.56	7.23
01	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	159	6745	10.57	11.00	1.104	100	1.000	0.0625	1.5535	-0.12	3.21	5.51	4.53	7.77
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	without Scanner	191	6905	9.52	10.00	1.117	100	1.000	0.0625	1.5535	0.12	2.66	4.62	3.2	5.55
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face-Top	2mm	Ant 7	Standalone	without Scanner	159	6745	10.57	11.00	1.104	100	1.000	0.0625	1.5535	-0.12	2.47	4.24	3.75	6.43
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face-Left	2mm	Ant 7	Standalone	without Scanner	159	6745	10.57	11.00	1.104	100	1.000	0.0625	1.5535	0.06	1.45	2.49	1.65	2.83
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face-Right	2mm	Ant 7	Standalone	without Scanner	159	6745	10.57	11.00	1.104	100	1.000	0.0625	1.5535	-0.09	1.23	2.11	1.46	2.50
	WLAN6GHz	802.11a 6Mbps	Bottom face	27mm	Ant 7	Full Power	without Scanner	173	6815	19.36	19.50	1.033	100	1.000	0.0625	1.5535	0.08	1.7	2.73	1.84	2.95
	WLAN6GHz	802.11be-EHT320 MCS0	Bottom face	2mm	Ant 7	Standalone	With Scanner	159	6745	10.57	11.00	1.104	100	1.000	0.0625	1.5535	0.03	1.56	2.68	2.07	3.55

**15.3 Repeated SAR Measurement**

【Repeat SAR 1g - FCC】

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Ratio
1st	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0.0	Ant 7	Standalone	11	2462	Without Scanner	13.64	14.00	1.086	97.04	1.031	0.06	1.040	1.164	-
2nd	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0.0	Ant 7	Standalone	11	2462	Without Scanner	13.64	14.00	1.086	97.04	1.031	0.09	1.010	1.131	1.03
1st	WLAN5GHz	802.11be-EHT40 MCS0	Bottom Face	0.0	Ant 6	Standalone	62	5310	Without Scanner	10.05	10.50	1.109	100.0	1.0	0.01	1.060	1.176	-
2nd	WLAN5GHz	802.11be-EHT40 MCS0	Bottom Face	0.0	Ant 6	Standalone	62	5310	Without Scanner	10.05	10.50	1.109	100.0	1.0	-0.02	0.989	1.097	1.07
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0.0	Ant 6	Standalone	122	5610	Without Scanner	9.77	10.00	1.054	100.0	1.0	-0.05	1.080	1.138	-
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0.0	Ant 6	Standalone	122	5610	Without Scanner	9.77	10.00	1.054	100.0	1.0	0.09	1.030	1.086	1.05
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0.0	Ant 7	Standalone	155	5775	Without Scanner	8.12	8.50	1.091	100.0	1.0	-0.07	1.010	1.102	-
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Face	0.0	Ant 7	Standalone	155	5775	Without Scanner	8.12	8.50	1.091	100.0	1.0	0.03	0.994	1.084	1.02
1st	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0.0	Ant 6	Standalone	31	6105	Without Scanner	11.66	12.00	1.081	100.0	1.0	0.18	1.060	1.146	-
2nd	WLAN6GHz	802.11be-EHT320 MCS0	Bottom Face	0.0	Ant 6	Standalone	31	6105	Without Scanner	11.66	12.00	1.081	100.0	1.0	0.01	1.030	1.113	1.03

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR 1.45W/kg , only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Touch Computer
		Body
1.	WLAN2.4GHz + Bluetooth	Yes
2.	WLAN5GHz + Bluetooth	Yes
3.	WLAN6GHz + Bluetooth	Yes
4.	WLAN5.2GHz/5.3GHz + WLAN6GHz	Yes
5.	WLAN2.4GHz + WLAN5GHz	Yes
6.	WLAN2.4GHz + WLAN6GHz	Yes
7.	WLAN5.2GHz/5.3GHz + WLAN5.5GHz/5.8GHz	Yes
8.	WLAN2.4GHz + WLAN5GHz + Bluetooth	Yes
9.	WLAN2.4GHz + WLAN6GHz + Bluetooth	Yes
10.	WLAN5.2GHz/5.3GHz + WLAN6GHz + Bluetooth	Yes
11.	WLAN5.2GHz/5.3GHz + WLAN5.5GHz/5.8GHz + Bluetooth	Yes
12.	WLAN2.4GHz + Bluetooth + NFC	Yes
13.	WLAN5GHz + Bluetooth+ NFC	Yes
14.	WLAN6GHz + Bluetooth+ NFC	Yes
15.	WLAN5GHz + WLAN6GHz+ NFC	Yes
16.	WLAN2.4GHz + WLAN5GHz+ NFC	Yes
17.	WLAN2.4GHz + WLAN6GHz+ NFC	Yes
18.	WLAN2.4GHz + WLAN5GHz + Bluetooth+ NFC	Yes
19.	WLAN2.4GHz + WLAN6GHz + Bluetooth+ NFC	Yes
20.	WLAN5.2GHz/5.3GHz + WLAN6GHz + Bluetooth+ NFC	Yes
21.	WLAN5.2GHz/5.3GHz + WLAN5.5GHz/5.8GHz + Bluetooth + NFC	Yes

General Note:

- According to the EUT characteristic, when WLAN 2.4GHz and Bluetooth share the same antenna path and cannot transmit simultaneously; when WLAN2.4GHz Ant 7 and Bluetooth Ant 6 are located on different antennas, they can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 6GHz can transmit simultaneously.
- The Bluetooth can transmit in SISO mode only and they have no MIMO mode.
- According to the EUT characteristic, WLAN 5GHz/WLAN 6GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz/WLAN 6GHz and WLAN 2.4GHz can transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- All licensed modes share the same antenna part and cannot transmit simultaneously.
- The reported SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
 - The SPLSR calculated results please refer to section 16.2.

16.1 Body Exposure Conditions

Exposure Position	1	2	3	4	5	6	7	8	9	2+7+9 Summed 1g SAR (W/kg)	3+4+7+9 Summed 1g SAR (W/kg)	3+4+8+9 Summed 1g SAR (W/kg)	5+6+7+9 Summed 1g SAR (W/kg)	5+6+8+9 Summed 1g SAR (W/kg)	No
	2.4GHz WLAN Ant 6 1g SAR (W/kg)	2.4GHz WLAN Ant 7 1g SAR (W/kg)	5GHz WLAN Ant 6 1g SAR (W/kg)	5GHz WLAN Ant 7 1g SAR (W/kg)	6GHz WLAN Ant 6 1g SAR (W/kg)	6GHz WLAN Ant 7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)	NFC 1g SAR (W/kg)						
Bottom Face at 0mm	1.096	1.164	1.176	1.153	1.146	1.137	0.062	0.203	0	1.23	2.39	2.53	2.35	2.49	Case 1&2&3&4
Bottom Face at 27mm	0.113	0.463	0.308	0.555	0.207	0.126				0.46	0.86	0.86	0.33	0.33	
Edge1 at 0mm	0.351	0.049	0.922		0.796		0.024		0	0.07	0.95	0.92	0.82	0.80	
Edge1 at 28mm	0.106		0.160		0.194				0	0.00	0.16	0.16	0.19	0.19	
Edge2 at 0mm	0.075	0.340		0.671		0.691		0.001	0	0.34	0.67	0.67	0.69	0.69	
Edge2 at 30mm		0.63		0.485		0.127				0.63	0.49	0.49	0.13	0.13	

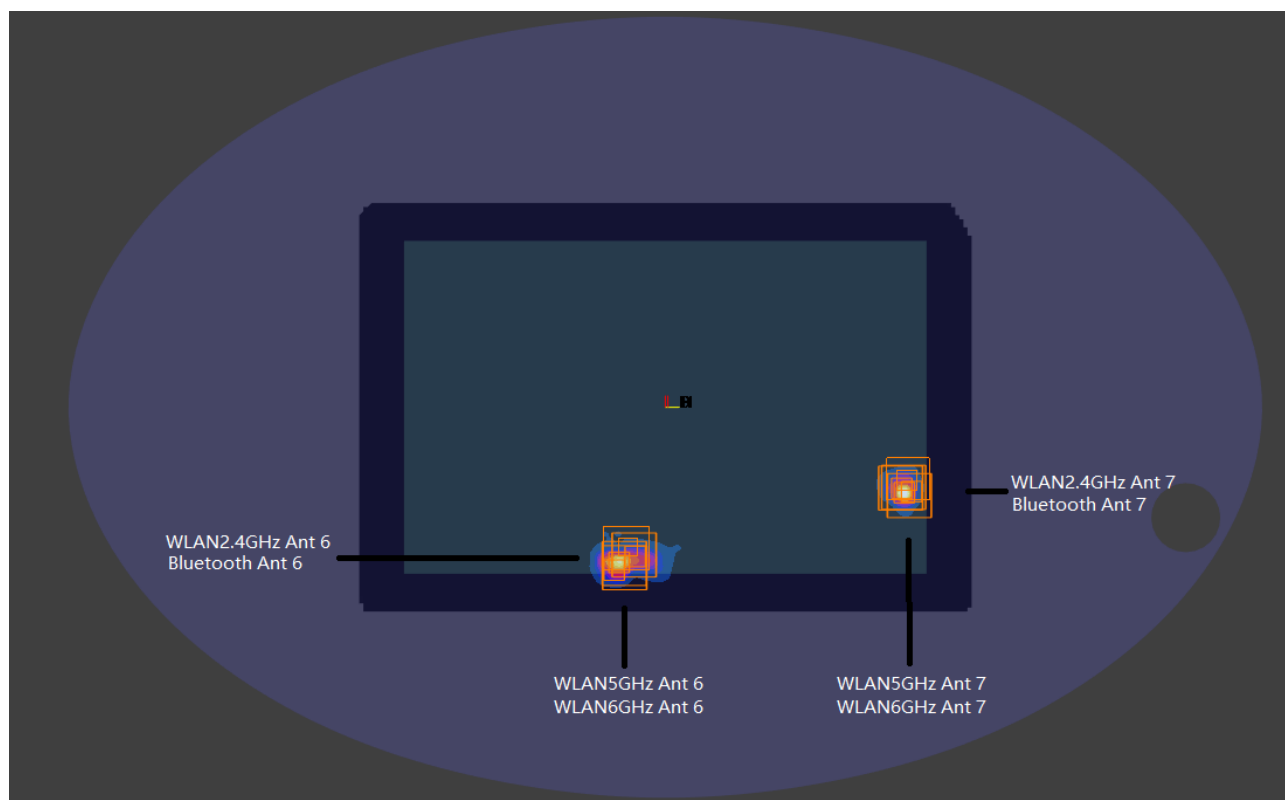
Exposure Position	1	2	3	4	5	6	7	8	9	2+3+4+7+9 Summed 1g SAR (W/kg)	1+2+3+4+9 Summed 1g SAR (W/kg)	2+5+6+7+9 Summed 1g SAR (W/kg)	1+2+5+6+9 Summed 1g SAR (W/kg)	No
	2.4GHz WLAN Ant 6 1g SAR (W/kg)	2.4GHz WLAN Ant 7 1g SAR (W/kg)	5GHz WLAN Ant 6 1g SAR (W/kg)	5GHz WLAN Ant 7 1g SAR (W/kg)	6GHz WLAN Ant 6 1g SAR (W/kg)	6GHz WLAN Ant 7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)	NFC 1g SAR (W/kg)					
Bottom Face at 0mm	0.769	0.714	0.781	0.676	0.784	0.652	0.062	0.203	0	2.23	2.94	2.21	2.92	Case 5&6&7&8
Bottom Face at 27mm	0.113	0.463	0.308	0.555	0.207	0.126				1.33	1.44	0.80	0.91	
Edge1 at 0mm	0.250	0.049	0.511		0.586		0.024		0	0.58	0.81	0.66	0.89	
Edge1 at 28mm	0.106		0.160		0.194				0	0.16	0.27	0.19	0.30	
Edge2 at 0mm	0.075	0.225		0.479		0.529		0.001	0	0.70	0.78	0.75	0.83	
Edge2 at 30mm		0.630		0.485		0.127				1.12	1.12	0.76	0.76	

Exposure Position	1	2	3	4	5	6	7	8	9	1+2+3+4+7+9 Summed 1g SAR (W/kg)	1+2+3+4+8+9 Summed 1g SAR (W/kg)	1+2+5+6+7+9 Summed 1g SAR (W/kg)	1+2+5+6+8+9 Summed 1g SAR (W/kg)	No
	5.2&5.3GHz WLAN Ant 6 1g SAR (W/kg)	5.2&5.3GHz WLAN Ant 7 1g SAR (W/kg)	5.5&5.8GHz WLAN Ant 6 1g SAR (W/kg)	5.5&5.8GHz WLAN Ant 7 1g SAR (W/kg)	6GHz WLAN Ant 6 1g SAR (W/kg)	6GHz WLAN Ant 7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)	NFC 1g SAR (W/kg)					
Bottom Face at 0mm	0.729	0.636	0.781	0.676	0.784	0.652	0.062	0.203	0	2.88	3.03	2.86	3.00	Case 9&10&11&12
Bottom Face at 27mm	0.308	0.544	0.180	0.555	0.207	0.126				1.59	1.59	1.19	1.19	
Edge1 at 0mm	0.495		0.511		0.586		0.024		0	1.03	1.01	1.11	1.08	
Edge1 at 28mm	0.110		0.160		0.194				0	0.27	0.27	0.30	0.30	
Edge2 at 0mm		0.240		0.479		0.529		0.001	0	0.72	0.72	0.77	0.77	
Edge2 at 30mm		0.466		0.485		0.127				0.95	0.95	0.59	0.59	

16.2 SPLSR Evaluation and Analysis

General Note:

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR_1 + SAR_2) \cdot 1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, WIFI 5GHz/6GHz was summed algebraically with the BT for the purposes of hybrid SPLSR combination and they are share the same antenna.
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.



Bottom face WLAN 0mm



	Band	Position	SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					(mm)	X	Y	Z				
Case 1	5GHz WLAN Ant 6	Bottom face	1.176	1.238	0mm	74.9	-25.6	-177	145.3	2.39	0.03	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5GHz WLAN Ant 7	Bottom face	1.153	1.153	0mm	42.2	116	-177	134.4	2.39	0.03	Not required
	5GHz WLAN Ant 6	Bottom face	1.176	1.238	0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	5GHz WLAN Ant 7	Bottom face	1.153	1.153	0mm	42.2	116	-177				
Case 2	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5GHz WLAN Ant 6	Bottom face	1.176	1.176	0mm	74.9	-25.6	-177	145.3	2.53	0.03	Not required
	5GHz WLAN Ant 7	Bottom face	1.153	1.356	0mm	42.2	116	-177				
	Bluetooth Ant 7	Bottom face	0.203		0mm				143.5	2.53	0.03	Not required
	5GHz WLAN Ant 6	Bottom face	1.176	1.176	0mm	74.9	-25.6	-177				
	5GHz WLAN Ant 7	Bottom face	1.153	1.356	0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm	37.7	113	-177				
Case 3	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	6GHz WLAN Ant 6	Bottom face	1.146	1.208	0mm	71.7	-30.5	-177	146.4	2.35	0.02	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	6GHz WLAN Ant 7	Bottom face	1.137	1.137	0mm	42	112.9	-177	131.4	2.35	0.03	Not required
	6GHz WLAN Ant 6	Bottom face	1.146	1.208	0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
Case 4	6GHz WLAN Ant 7	Bottom face	1.137	1.137	0mm	42	112.9	-177				
	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	6GHz WLAN Ant 6	Bottom face	1.146	1.146	0mm	71.7	-30.5	-177	146.4	2.49	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	1.137	1.34	0mm	42	112.9	-177				
	Bluetooth Ant 7	Bottom face	0.203		0mm				147.5	2.49	0.03	Not required
	6GHz WLAN Ant 6	Bottom face	1.146	1.146	0mm	71.7	-30.5	-177				
Case 5	6GHz WLAN Ant 7	Bottom face	1.137	1.34	0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm	37.7	113	-177				
	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5GHz WLAN Ant 6	Bottom face	0.781	0.843	0mm	74.9	-25.6	-177	150.7	2.23	0.02	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm	39.9	121	-177	145.3	2.23	0.02	Not required
	5GHz WLAN Ant 7	Bottom face	0.676		0mm							
	5GHz WLAN Ant 6	Bottom face	0.781	0.843	0mm	74.9	-25.6	-177				
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm				139.7	2.23	0.02	Not required
	5GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	5GHz WLAN Ant 6	Bottom face	0.781	0.843	0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
Case 6	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm	39.9	121	-177	134.4	2.23	0.02	Not required
	5GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	5GHz WLAN Ant 6	Bottom face	0.781	0.843	0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.55	0mm	73.8	-8	-177	133.4	2.94	0.04	Not required
	5GHz WLAN Ant 6	Bottom face	0.781		0mm							
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm	39.9	121	-177				



FCC SAR Test Report

Report No. : FA550911

	5GHz WLAN Ant 7	Bottom face	0.676		0mm							
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.55	0mm	73.8	-8	-177				
	5GHz WLAN Ant 6	Bottom face	0.781		0mm				128.0	2.94	0.04	Not required
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm							
	5GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.55	0mm				150.7	2.94	0.03	Not required
	5GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm	39.9	121	-177				
	5GHz WLAN Ant 7	Bottom face	0.676		0mm							
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.55	0mm				145.3	2.94	0.03	Not required
	5GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.39	0mm							
	5GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
Case 7	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	6GHz WLAN Ant 6	Bottom face	0.784	0.846	0mm	71.7	-30.5	-177				
	Bluetooth Ant 6	Bottom face	0.062		0mm				154.8	2.21	0.02	Not required
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm	39.9	121	-177				
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	6GHz WLAN Ant 6	Bottom face	0.784	0.846	0mm	71.7	-30.5	-177				
	Bluetooth Ant 6	Bottom face	0.062		0mm				146.4	2.21	0.02	Not required
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm							
	6GHz WLAN Ant 7	Bottom face	0.652		0mm	42	112.9	-177				
	6GHz WLAN Ant 6	Bottom face	0.784	0.846	0mm				139.7	2.21	0.02	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm	39.9	121	-177				
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	6GHz WLAN Ant 6	Bottom face	0.784	0.846	0mm				131.4	2.21	0.03	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm							
	6GHz WLAN Ant 7	Bottom face	0.652		0mm	42	112.9	-177				
Case 8	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.553	0mm	73.8	-8	-177				
	6GHz WLAN Ant 6	Bottom face	0.784		0mm				133.4	2.92	0.04	Not required
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm	39.9	121	-177				
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.553	0mm	73.8	-8	-177				
	6GHz WLAN Ant 6	Bottom face	0.784		0mm				125.0	2.92	0.04	Not required
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm							
	6GHz WLAN Ant 7	Bottom face	0.652		0mm	42	112.9	-177				
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.553	0mm							
	6GHz WLAN Ant 6	Bottom face	0.784		0mm	71.7	-30.5	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm	39.9	121	-177				
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	2.4GHz WLAN Ant 6	Bottom face	0.769	1.553	0mm				154.8	2.92	0.03	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm	71.7	-30.5	-177				
	2.4GHz WLAN Ant 7	Bottom face	0.714	1.366	0mm				146.4	2.92	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm	42	112.9	-177				
Case 9	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5.3GHz WLAN Ant 6	Bottom face	0.729		0mm	74.9	-25.6	-177				
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781	1.572	0mm				145.3	2.88	0.03	Not required
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm	42.2	116	-177				
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							



FCC SAR Test Report

Report No. : FA550911

	5.3GHz WLAN Ant 6	Bottom face	0.729	1.572	0mm	74.9	-25.6	-177	145.3	2.88	0.03	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm							
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.572	0mm				145.3	2.88	0.03	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm	42.2	116	-177				
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.572	0mm				145.3	2.88	0.03	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm							
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.572	0mm				134.4	2.88	0.04	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm	42.2	116	-177				
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.572	0mm				134.4	2.88	0.04	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.312	0mm							
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
Case 10	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm	42.2	116	-177	145.3	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.51	0mm	74.9	-25.6	-177				
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm	42.2	116	-177	145.3	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.51	0mm							
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm				145.3	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	Bluetooth Ant 7	Bottom face	0.203		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.51	0mm	74.9	-25.6	-177				
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm				145.3	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm	42.2	116	-177				
	Bluetooth Ant 7	Bottom face	0.203		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.51	0mm							
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm				143.5	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm	37.7	113	-177				



FCC SAR Test Report

Report No. : FA550911

	5.3GHz WLAN Ant 6	Bottom face	0.729	1.51	0mm	74.9	-25.6	-177	143.5	3.03	0.04	Not required
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.515	0mm							
	5.5&5.8GHz WLAN Ant 7	Bottom face	0.676		0mm							
	Bluetooth Ant 7	Bottom face	0.203	1.51	0mm	37.7	113	-177				
	5.3GHz WLAN Ant 6	Bottom face	0.729		0mm							
	5.5&5.8GHz WLAN Ant 6	Bottom face	0.781		0mm	74.9	-25.6	-177				
Case 11	Band	Position	SAR (W/kg)	Summed	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
						X	Y	Z				
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.575	0mm	74.9	-25.6	-177	145.3	2.86	0.03	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.288	0mm	42.2	116	-177	142.4	2.86	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.575	0mm	74.9	-25.6	-177	149.4	2.86	0.03	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.288	0mm	42.2	116	-177	146.4	2.86	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.575	0mm	71.7	-30.5	-177	134.4	2.86	0.04	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.288	0mm	42.2	116	-177	131.4	2.86	0.04	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.575	0mm				142.4	3.00	0.04	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	Bluetooth Ant 6	Bottom face	0.062		0mm	69.8	-15.5	-177				
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.491	0mm	42.2	116	-177	149.4	3.00	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	5.3GHz WLAN Ant 6	Bottom face	0.729	1.513	0mm	74.9	-25.6	-177	145.3	3.00	0.04	Not required
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	Bluetooth Ant 7	Bottom face	0.203		0mm							
Case 12	5.3GHz WLAN Ant 7	Bottom face	0.636	1.491	0mm	42.2	116	-177	142.4	3.00	0.04	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	Bluetooth Ant 7	Bottom face	0.203	1.513	0mm				145.3	3.00	0.04	Not required
	5.3GHz WLAN Ant 6	Bottom face	0.729		0mm	74.9	-25.6	-177				
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							
	5.3GHz WLAN Ant 7	Bottom face	0.636	1.491	0mm	42.2	116	-177	149.4	3.00	0.03	Not required
	6GHz WLAN Ant 7	Bottom face	0.652		0mm							
	Bluetooth Ant 7	Bottom face	0.203	1.513	0mm				142.4	3.00	0.04	Not required
	5.3GHz WLAN Ant 6	Bottom face	0.729		0mm	74.9	-25.6	-177				
	6GHz WLAN Ant 6	Bottom face	0.784		0mm							



6GHz WLAN Ant 6	Bottom face	0.784		0mm								
5.3GHz WLAN Ant 7	Bottom face	0.636		0mm								
6GHz WLAN Ant 7	Bottom face	0.652	1.491	0mm	42	112.9	-177					
Bluetooth Ant 7	Bottom face	0.203		0mm								
5.3GHz WLAN Ant 6	Bottom face	0.729	1.513	0mm								
6GHz WLAN Ant 6	Bottom face	0.784		0mm	71.7	-30.5	-177					
5.3GHz WLAN Ant 7	Bottom face	0.636		0mm								
6GHz WLAN Ant 7	Bottom face	0.652	1.491	0mm								
Bluetooth Ant 7	Bottom face	0.203		0mm	37.7	113	-177					
5.3GHz WLAN Ant 6	Bottom face	0.729	1.513	0mm	74.9	-25.6	-177					
6GHz WLAN Ant 6	Bottom face	0.784		0mm								
5.3GHz WLAN Ant 7	Bottom face	0.636		0mm								
6GHz WLAN Ant 7	Bottom face	0.652	1.491	0mm								
Bluetooth Ant 7	Bottom face	0.203		0mm	37.7	113	-177					
5.3GHz WLAN Ant 6	Bottom face	0.729	1.513	0mm								
6GHz WLAN Ant 6	Bottom face	0.784		0mm	71.7	-30.5	-177					

Test Engineer : Martin Li, Varus Wang, Light Wang, Ricky Gu

17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Uncertainty Budget According to IEC/IEEE 62209-1528 (Frequency band: 4 MHz - 10 GHz range)							
Error Description	Uncert. Value (±%)	Prob. Dist.	Div.	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System errors							
Probe calibration	18.6	N	2	1	1	9.3	9.3
Probe calibration drift	1.7	R	1.732	1	1	1.0	1.0
Probe linearity and detection Limit	4.7	R	1.732	1	1	2.7	2.7
Broadband signal	2.8	R	1.732	1	1	1.6	1.6
Probe isotropy	7.6	R	1.732	1	1	4.4	4.4
Other probe and data acquisition errors	2.4	N	1	1	1	2.4	2.4
RF ambient and noise	1.8	N	1	1	1	1.8	1.8
Probe positioning errors	0.006	N	1	0.5	0.5	0.0	0.0
Data processing errors	4.0	N	1	1	1	4.0	4.0
Phantom and Device Errors							
Measurement of phantom conductivity (σ)	2.5	N	1	0.78	0.71	2.0	1.8
Temperature effects (medium)	5.4	R	1.732	0.78	0.71	2.4	2.2
Shell permittivity	14.0	R	1.732	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	2.0	N	1	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	1.0	N	1	1	1	1.0	1.0
Device holder effects	3.6	N	1	1	1	3.6	3.6
Effect of operating mode on probe sensitivity	2.4	R	1.732	1	1	1.4	1.4
Time-average SAR	1.7	R	1.732	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	2.5	N	1	1	1	2.5	2.5
Validation antenna uncertainty (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Correction to the SAR results							
Phantom deviation from target (ϵ', σ)	1.9	N	1	1	0.84	1.9	1.6
SAR scaling	0.0	R	1.732	1	1	0.0	0.0
Combined Std. Uncertainty						14.5%	14.4%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.8%

SAR Uncertainty Budget for frequency range 4MHz to 10GHz

cDASY6 Module mmWave Uncertainty Budget Evaluation Distances to the Antennas $\lambda/2\pi$ In Compliance with IEC TR 63170					
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Uncertainty terms dependent on the measurement system					
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependence	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dependent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68

PD Uncertainty Budget

18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [8] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] IEC/IEEE 62209-1528:2020, "Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)", Oct. 2020
- [11] IEC 62479:2010 Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
- [12] IEC TR 63170: 2018 Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 GHz
- [13] SPEAG DASY6 System Handbook
- [14] SPEAG DASY6 Application Note (Interim Procedures for Devices Operating at 6-10 GHz)

Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR Measurement

Appendix C. DASY Calibration Certificate

Appendix D. Test Setup Photos

-----THE END-----