

# MEASUREMENT REPORT

## C2PC

**FCC ID** : HD5-CK67X0N

**Applicant** : Honeywell International Inc

**Application Type** : Certification

**Product** : Mobile Computer

**Model No.** : CK67X0N

**Brand Name** : Honeywell

**FCC Classification** : Unlicensed National Information Infrastructure (NII)

**FCC Rule Part(s)** : Part15 Subpart E (Section 15.407)

**Received Date** : November 29, 2024

**Test Date** : November 24, 2024~ December 26, 2024

**Tested By** : *Owen Tsai*

( Owen Tsai )

**Reviewed By** : *Paddy Chen*  
( Paddy Chen )

**Approved By** : *Chenz Ker*  
( Chenz Ker )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 789033 and KDB 291074. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

## Revision History

Report No.	Version	Description	Issue Date	Note
2411TW0118-U6	1.0	Original Report	2025-01-09	

**Note:**

1. The original report is 2405TW0107-U7, the changes are as follows, so the FCC C2PC is executed.
  - (a) Add Cold-Storage (CS) version.
  - (b) Add heather function.
  - (c) Replace uMCP via UFS and memory.
  - (d) New shielding can design for 2nd BT (RF circuit w/o changed.).
2. Original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

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## General Information

<b>Applicant</b>	Honeywell International Inc
<b>Applicant Address</b>	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
<b>Manufacturer</b>	Honeywell International Inc
<b>Manufacturer Address</b>	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
<b>Test Site</b>	MRT Technology (Taiwan) Co., Ltd
<b>Test Site Address</b>	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
<b>MRT FCC Registration No.</b>	291082
<b>FCC Rule Part(s)</b>	Part 15.407

## Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Canada, EU and TELEC Rules.

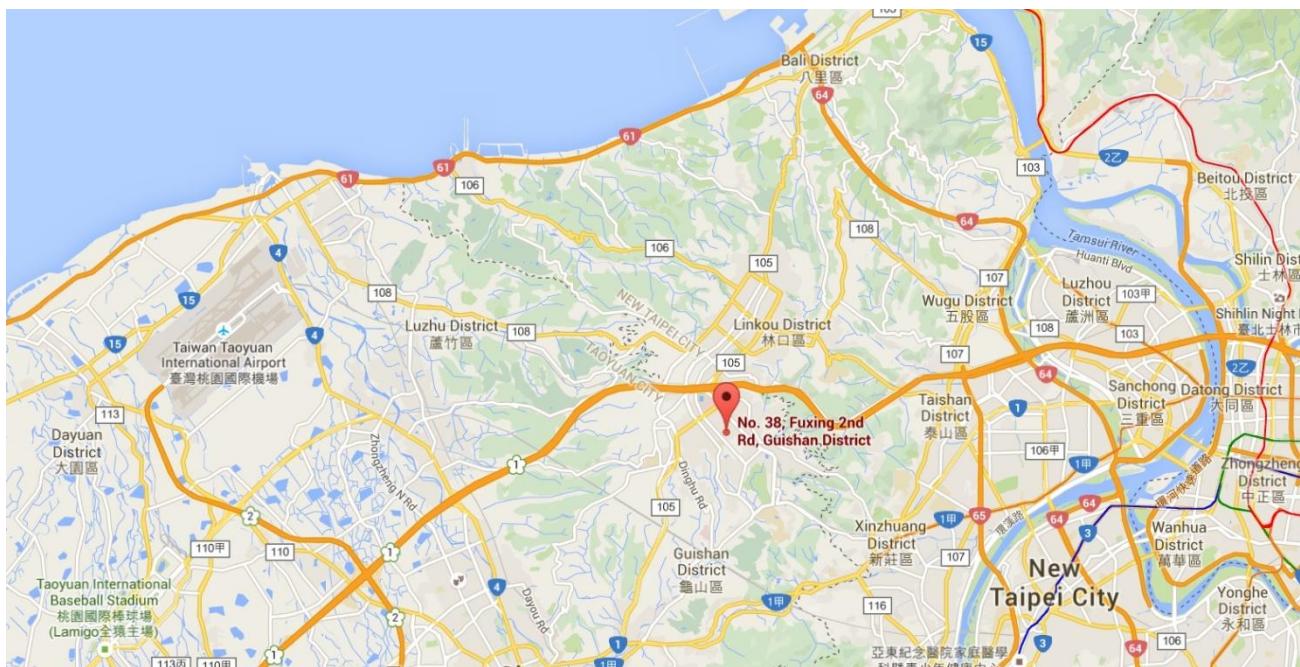
## 1. INTRODUCTION

### 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

### 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

Product Name:	Mobile Computer
Model No.:	CK67X0N
Brand Name:	Honeywell
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	Main BT/BLE : V5.3 dual mode + 2 <sup>nd</sup> BLE: V5.3 Single mode
NFC Specification	13.56MHz
EUT Identification No.:	#24295D8146 (Conducted) #24295D8143 (Radiated)
Accessory	
Battery	Brand: Honeywell MODEL:CK65-BTCS Rating: 3.6Vdc, 5200mAh, 18.7Wh

Note:

1. For other features of this EUT, test report will be issued separately.
2. This product has 3 scanners, 5 keypads, can refer as below:

Scanner	S0703	S0803FR	S0803	--	--
Keypad	Alpha Numeric	Numeric	Large Numeric	53keys Alpha Numeric	42keys Numeric

3. This report selected S0803FR with Alpha Numeric as the main test.

## 2.2. Product Specification Subjective to this Report

Frequency Range:	For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5845MHz, 5865MHz, 5885MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5835MHz, 5875MHz For 802.11ac-VHT80/ax-HE80: 5855MHz For 802.11ac-VHT160/ax-HE160: 5815MHz
Type of Modulation:	802.11a/n/ac: OFDM 802.11ax: OFDMA
Data Rate:	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2402Mbps

Note: For other features of this EUT, test report will be issued separately.

## 2.3. Working Frequencies for this report

802.11a/n-HT20/ac-VHT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
169	5845 MHz	173	5865 MHz	177	5885 MHz

802.11n-HT40/ac-VHT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
167	5835 MHz	175	5875 MHz	--	--

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
171	5855 MHz	--	--	--	--

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
163	5815 MHz	--	--	--	--

## 2.4. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	Tx Paths	Number of spatial streams	Max Antenna Gain (dBi)	Beamforming Directional Gain(dBi)	CDD Directional Gain (dBi)	
						For Power	For PSD
Wi-Fi Antenna							
PIFA	2412 ~ 2462	2	1	3.00	--	3.00	5.67
	5150 ~ 5250	2	1	2.50	--	2.50	5.07
	5250 ~ 5350	2	1	2.40	--	2.40	5.16
	5470 ~ 5725	2	1	2.70	--	2.70	5.42
	5725 ~ 5850	2	1	2.60	--	2.60	5.61
	5850 ~ 5895	2	1	2.60	--	2.60	5.61
	5925 ~ 6425	2	1	3.00	--	3.00	5.86
	6425 ~ 6525	2	1	3.00	--	3.00	5.86
	6525 ~ 6875	2	1	4.00	--	4.00	6.52
	6875 ~ 7125	2	1	3.90	--	3.90	6.81

Remark:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream follows.

- For power spectral density (PSD) measurements on all devices,

$$Directional\ Gain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

- For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB for  $N_{ANT} \leq 4$ ;

2. All messages of antenna were declared by manufacturer.

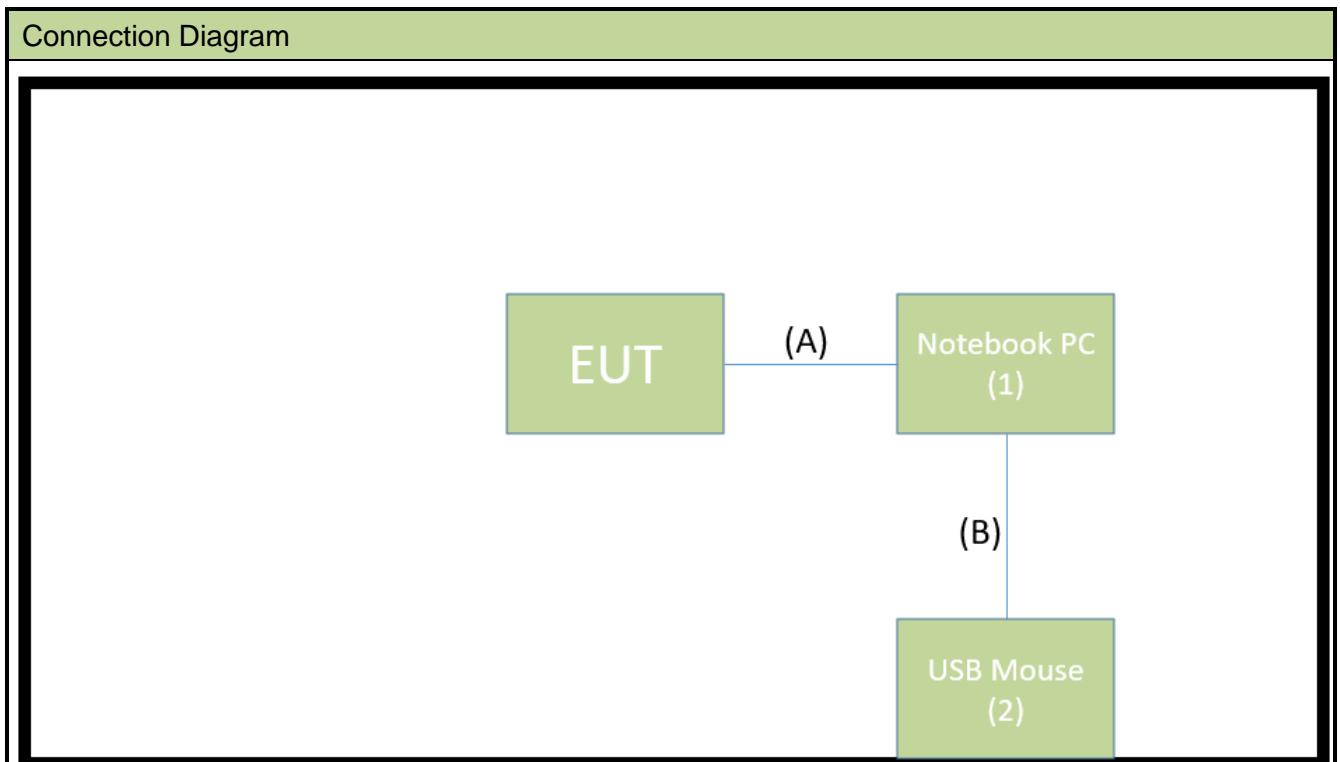
Test Mode	Tx Paths	CDD Mode	Beamforming Mode
802.11b/g/n (DTS)	2	√	X
802.11ax (DTS)	2	√	X
802.11a/n (NII)	2	√	X
802.11ac/ax (NII)	2	√	X
802.11ax (6CD)	2	√	X

## 2.5. Test Mode

CDD Mode
Mode 1: Transmit by 802.11a_ (6Mbps) (CDD mode)
Mode 2: Transmit by 802.11ac-VHT20_ (MCS0) (CDD mode)
Mode 3: Transmit by 802.11ac-VHT40_ (MCS0) (CDD mode)
Mode 4: Transmit by 802.11ac-VHT80_ (MCS0) (CDD mode)
Mode 5: Transmit by 802.11ac-VHT160_ (MCS0) (CDD mode)
Mode 6: Transmit by 802.11ax-HE20_ (MCS0) (CDD mode)
Mode 7: Transmit by 802.11ax-HE40_ (MCS0) (CDD mode)
Mode 8: Transmit by 802.11ax-HE80_ (MCS0) (CDD mode)
Mode 9: Transmit by 802.11ax-HE160_ (MCS0) (CDD mode)
Mode 10: Transmit by 802.11ax-HE20_26Tone_RU0 (CDD mode)
Mode 11: Transmit by 802.11ax-HE20_26Tone_RU8 (CDD mode)
Mode 12: Transmit by 802.11ax-HE20_52Tone_RU74 (CDD mode)
Mode 13: Transmit by 802.11ax-HE20_52Tone_RU77 (CDD mode)
Mode 14: Transmit by 802.11ax-HE20_106Tone_RU106 (CDD mode)
Mode 15: Transmit by 802.11ax-HE20_106Tone_RU107 (CDD mode)
Mode 16: Transmit by 802.11ax-HE20_242Tone_RU122 (CDD mode)
Remark:
1. For Radiated emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.
2. Due to the same modulation between 802.11n and 802.11ac, so 802.11n-HT20 and HT40 are covered by 802.11ac-VHT20 and VHT40 in this report, meanwhile, power level for 802.11n-HT20 and HT40 will not be greater than 802.11ac-VHT20 and VHT40.

## 2.6. Configuration of Test System

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



Signal Cable Type		Signal Cable Description
A	USB Cable	Shielded, 1.0m
B	USB Mouse Cable	Shielded, 1.8m

## 2.7. Test System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	P65F	N/A
2	USB Mouse	Logitech	M90	N/A

## 2.8. Description of Test Software

The test utility software used during testing was “QRCT”, the version is ver4.0-00209.

Note: Final power setting please refer to operational description.

## 2.9. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.407
- KDB 789033 D02v02r01
- KDB 291074 D02v01
- KDB 662911 D01v02r01
- ANSI C63.10-2013

## 2.10. Duty Cycle

5GHz (NII) operation is possible in 20MHz, 40MHz, 80MHz and 160MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11a	99.76%
802.11ac-VHT20	99.35%
802.11ac-VHT40	99.08%
802.11ac-VHT80	98.46%
802.11ac-VHT160	99.09%
802.11ax-HE20	99.27%
802.11ax-HE40	98.76%
802.11ax-HE80	97.63%
802.11ax-HE160	98.38%

## **2.11. Test Configuration**

The device was tested per the guidance of KDB 789033 D02v02r01.ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

## **2.12. EMI Suppression Device(s)/Modifications**

No EMI suppression device(s) were added and/or no modifications were made during testing.

## **2.13. Labeling Requirements**

### Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlets supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

### 3. DESCRIPTION OF TEST

#### 3.1. Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 789033 D02v02r01 were used in the measurement.

#### 3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

### 3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remotecontrolled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

## 4. ANTENNA REQUIREMENTS

KDB 291074 DR01: An Indoor Access point in the U-NII-4 band (5.850-5.895 GHz) and U-NII -3 & -4 span channels must use an integrated antenna

- The antenna of the device is built in and locked inside the enclosure.

## 5. TEST EQUIPMENT CALIBRATION DATE

### Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2025/4/21
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2025/3/5
Cable	Rosnol	N1C50-RG400-B 1C50-500CM	MRTTWE00013	1 year	2025/6/14

### Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Acitive Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2025/5/7
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00086	1 year	2025/11/5
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2025/5/20
Broadband Preamplifier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2025/5/14
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2025/3/26
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2025/3/21
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2025/3/5
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2025/6/20
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00034	1 year	2025/6/25
Cable	HUBERSUHNER	EMC105-NM-NM -3000	MRTTWE00035	1 year	2025/6/25
Temperature/Humidity Meter	TFA	35.1083	MRTTWA00050	1 year	2025/6/2

### Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2025/9/24
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2025/8/12
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2025/3/12
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2025/6/6

### Test Software

Software	Version	Function
e3	9.160520a	EMI Test Software

## 6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): 150kHz~30MHz: $\pm 2.53\text{dB}$
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): 9kHz ~ 1GHz: $\pm 4.25\text{dB}$ 1GHz ~ 40GHz: $\pm 4.45\text{dB}$
Conducted Power (Carrier Power / Power Density)
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): $\pm 0.84\text{dB}$
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): $\pm 2.65\text{ dB}$
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): $\pm 3.3\%$
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): $\pm 0.82^\circ\text{C} / \pm 3\%$
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_{c(y)}$ ): $\pm 78.4\text{Hz}$

## 7. TEST RESULT

### 7.1. Summary

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)	26dB Bandwidth	N/A	Conducted	N/A	Section 7.2
15.407(e)	6dB Bandwidth	$\geq 500\text{kHz}$		N/A	Section 7.3
15.407(a)(3)(ii)	Maximum Conducted Output Power	Refer to section 7.4		Pass (22.31dBm @EIRP)	Section 7.4
15.407(a)(3)(ii) (12)	Peak Power Spectral Density	Refer to section 7.5		N/A	Section 7.5
15.407(g)	Frequency Stability	N/A		N/A	Section 7.6
15.407(b)(5)	Undesirable Emissions	Refer to Section 7.7	Radiated	Pass (46.46dBuV/m@Peak)	Section 7.7
15.205, 15.209 15.407( b)(5)(i), (8), (9)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restrictedbands must meet theradiated limits detailed in15.209		Pass (64.30dBuV/m@Peak)	Section 7.8
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	N/A	Section 7.9

Notes:

- 1) Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 3) Output power test was verified over all data rates of each mode (data refers to operational description), and then choose the maximum power output (low data rate) for final test of each channel.
- 4) For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

## 7.2. 26dB Bandwidth Measurement

### 7.2.1. Test Limit

N/A

### 7.2.2. Test Procedure used

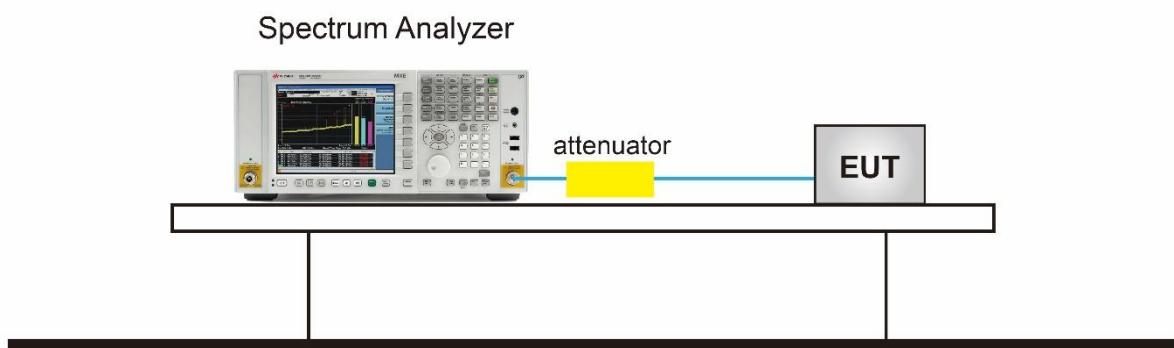
K DB 789033 D02v02r01- Section II)C.1) (26dB Bandwidth)

KDB 789033 D02v02r01- Section II)D) (99% Bandwidth)

### 7.2.3. Test Setting

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW  $\geq$  3 $\times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.

### 7.2.4. Test Setup



### 7.2.5. Test Result

Note: Reference original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

## 7.3. 6dB Bandwidth Measurement

### 7.3.1. Test Limit

The minimum 6dBbandwidth shall be at least 500 kHz.

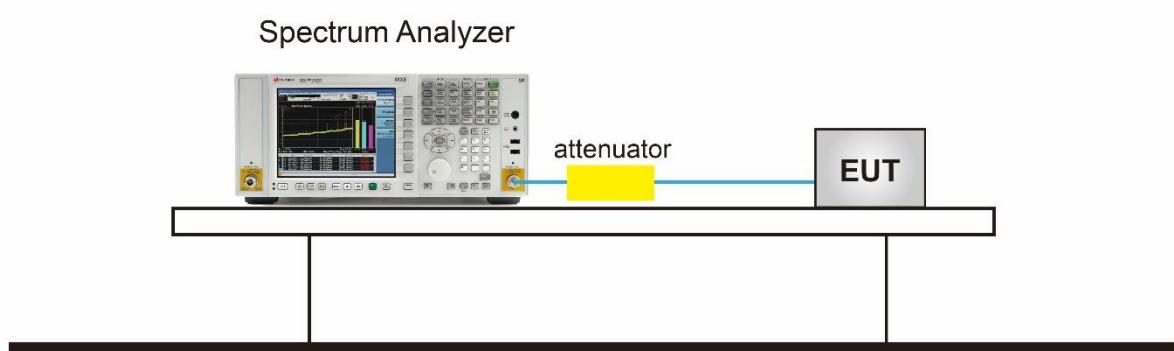
### 7.3.2. Test Procedure used

KDB 789033 D02v02r01- Section C.2

### 7.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW  $3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 7.3.4. Test Setup



### 7.3.5. TestResult

Note: Reference original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

## 7.4. Output Power Measurement

### 7.4.1. Test Limit

For an indoor access point (Client) operating in the 5.850-5.895 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Indoor access points operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

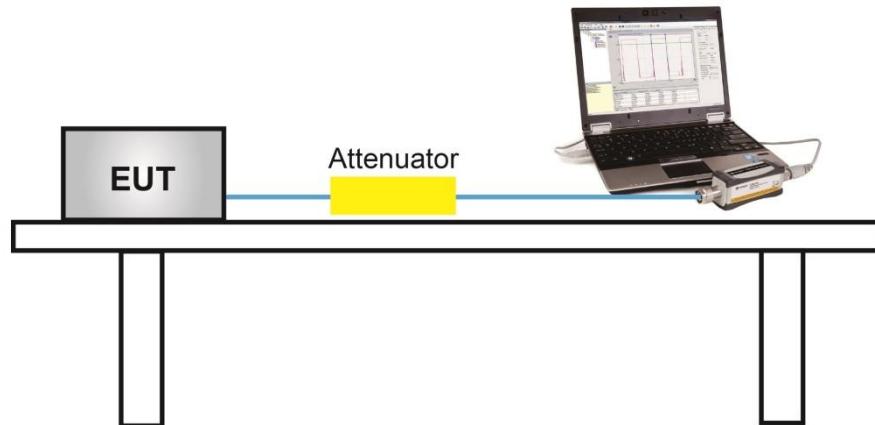
### 7.4.2. Test Procedure Used

KDB 789033D02v02r01- Section E)3)b) Method PM-G

### 7.4.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

### 7.4.4. Test Setup



### 7.4.5. Test Result

Product	Mobile Computer			Test Engineer	Owen			
Test Site	SR6			Test Date	2024/12/26			
Test Mode	CDD Mode							

Test Mode	Data Rate	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant Gain (dBi)	Total EIRP Power (dBm)	Average Power Limit (dBm)	Result
11a	6Mbps	169	5845	14.87	14.13	2.60	20.13	≤ 30.00	Pass
11a	6Mbps	173	5865	14.84	14.52	2.60	20.29	≤ 30.00	Pass
11a	6Mbps	177	5885	14.91	14.52	2.60	20.33	≤ 30.00	Pass
11ac-VHT20	MCS0	169	5845	14.96	14.44	2.60	20.32	≤ 30.00	Pass
11ac-VHT20	MCS0	173	5865	14.77	13.99	2.60	20.01	≤ 30.00	Pass
11ac-VHT20	MCS0	177	5885	14.79	14.55	2.60	20.28	≤ 30.00	Pass
11ac-VHT40	MCS0	167	5835	16.38	16.33	2.60	21.97	≤ 30.00	Pass
11ac-VHT40	MCS0	175	5875	16.46	16.61	2.60	22.15	≤ 30.00	Pass
11ac-VHT80	MCS0	171	5855	16.47	16.20	2.60	21.95	≤ 30.00	Pass
11ac-VHT160	MCS0	163	5815	16.00	15.42	2.60	21.33	≤ 30.00	Pass
11ax-HE20	MCS0	169	5845	14.84	14.06	2.60	20.08	≤ 30.00	Pass
11ax-HE 20	MCS0	173	5865	14.97	14.29	2.60	20.25	≤ 30.00	Pass
11ax-HE 20	MCS0	177	5885	14.87	14.31	2.60	20.21	≤ 30.00	Pass
11ax-HE 40	MCS0	167	5835	16.61	16.42	2.60	22.13	≤ 30.00	Pass
11ax-HE 40	MCS0	175	5875	16.74	16.65	2.60	22.31	≤ 30.00	Pass
11ax-HE 80	MCS0	171	5855	16.41	16.12	2.60	21.88	≤ 30.00	Pass
11ax-HE 160	MCS0	163	5815	16.16	15.52	2.60	21.46	≤ 23.98	Pass

Note 1:

The Total Average Power (dBm) =  $10 \times \log \{10^{(\text{Ant 0 Average Power /10})} + 10^{(\text{Ant 1 Average Power /10})}\}$ .

Note 2:

For 5725 - 5850MHz Bands: Average Power Limit (dBm) = 30 dBm.

## 7.5. Power Spectral Density Measurement

### 7.5.1. Test Limit

For an indoor access point operating in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band.

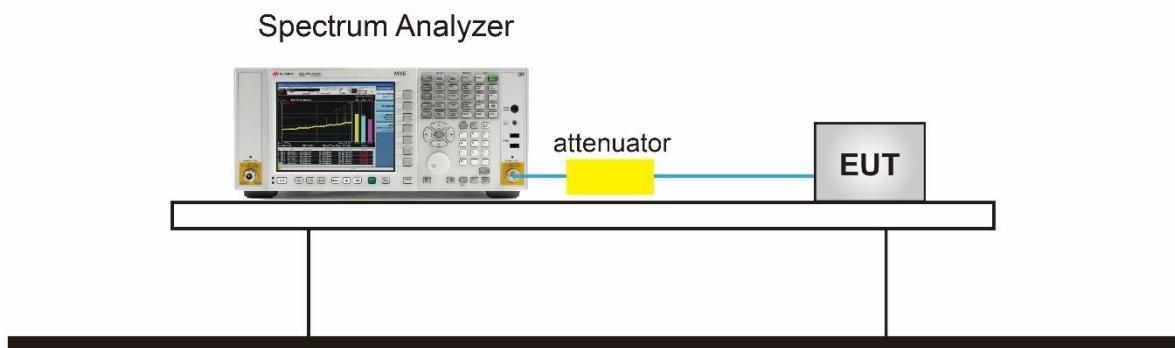
### 7.5.2. Test Procedure Used

KDB 789033 D02v02r01-SectionF

### 7.5.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points  $\geq 2 \times (\text{span} / \text{RBW})$
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add  $10 \times \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add  $10 \times \log(1/0.25) = 6$  dB if the duty cycle is 25 percent.

### 7.5.4. Test Setup



### 7.5.5. Test Result

Note: Reference original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

## 7.6. Frequency Stability Measurement

### 7.6.1. Test Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 7.6.2. Test Procedure

#### Frequency Stability Under Temperature Variations:

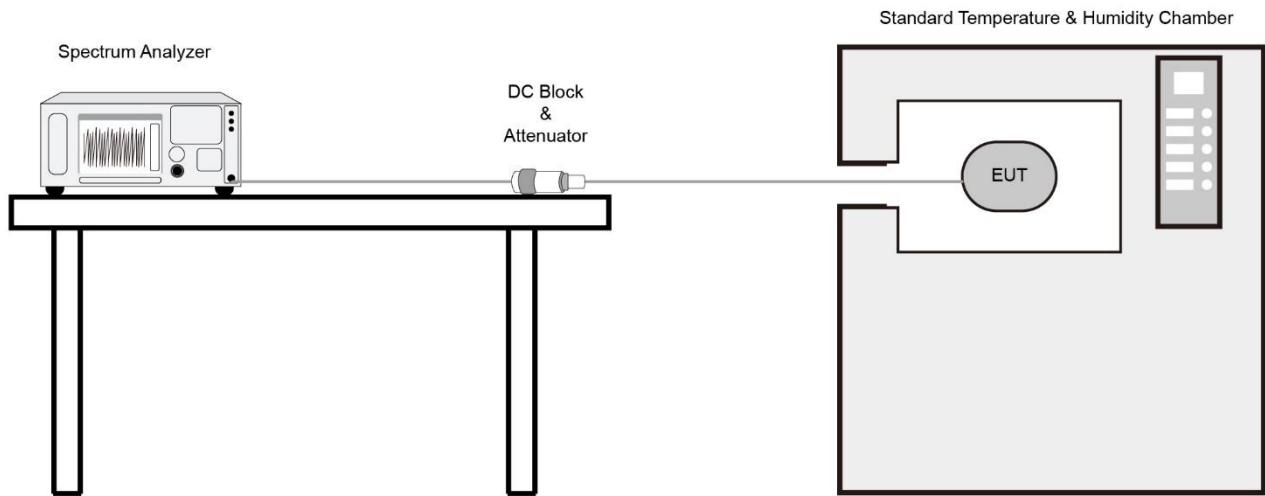
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

#### Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### 7.6.3. Test Procedure



#### **7.6.4. Test Result**

Note: Reference original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

## 7.7. Radiated Spurious Emission Measurement

### 7.7.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### 7.7.2. Test Procedure Used

KDB 789033 D02v02r01- Section G

### 7.7.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
>1000 MHz	1 MHz

**Quasi-Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

**Peak Measurements above 1GHz**

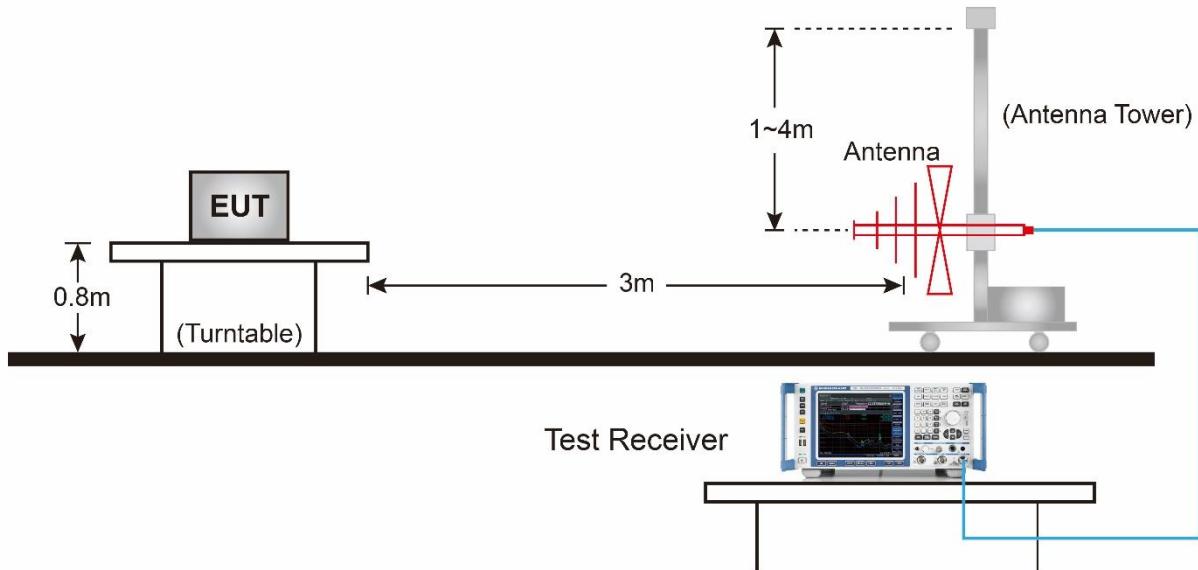
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Average Measurements above 1GHz (Method VB)**

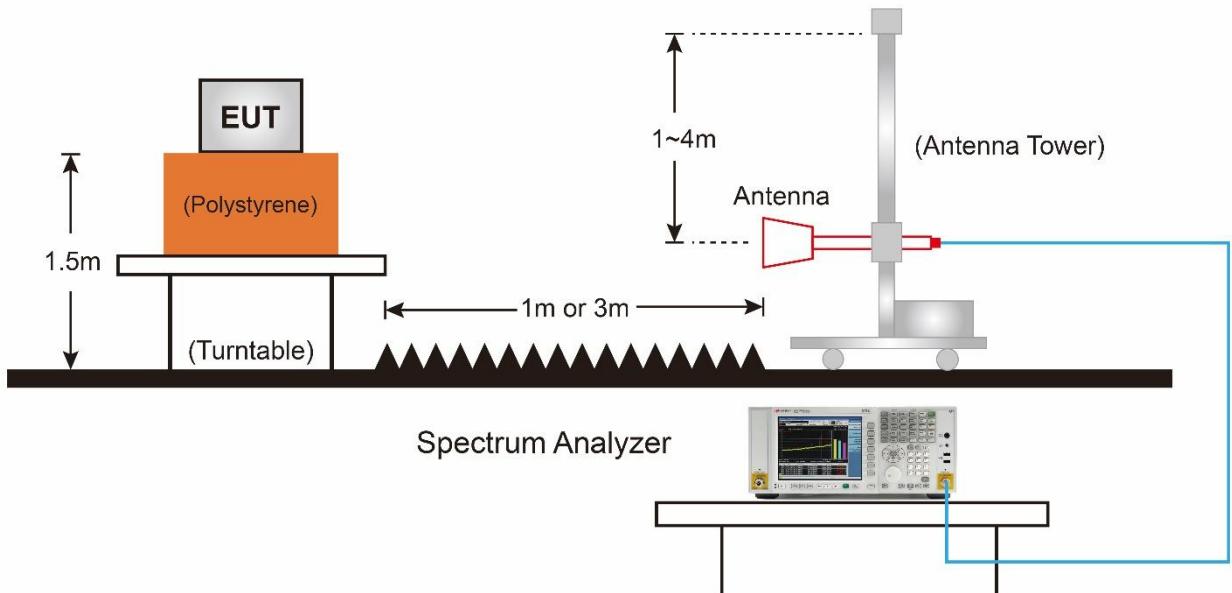
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set  $VBW \geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### 7.7.4. Test Setup

Below 1GHz Test Setup:

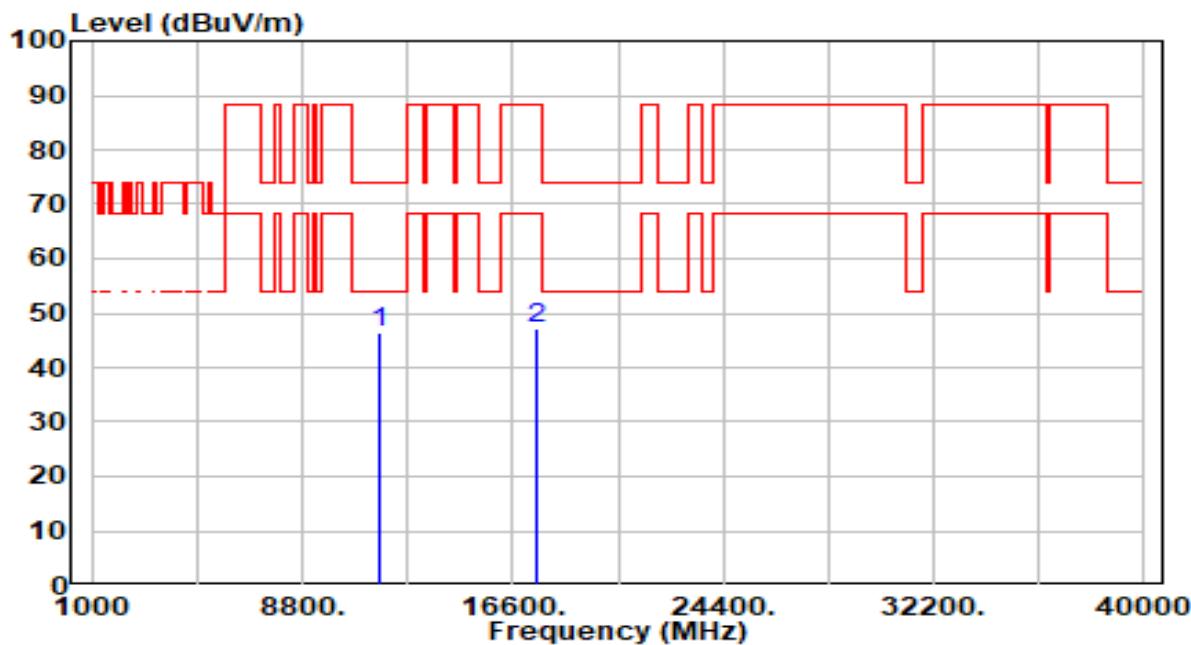


Above 1GHz Test Setup:



### 7.7.5. Test Result

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E & BBHA 9170	Temp. / Humidity	21°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ac-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

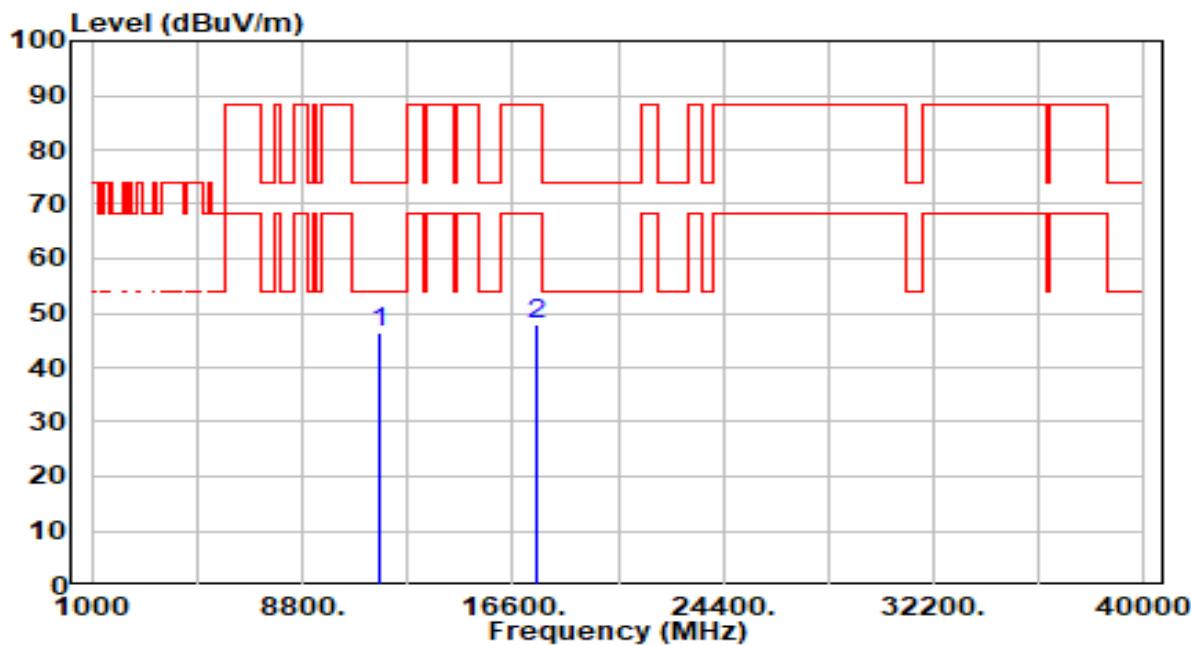


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1 *	11630.000	41.09	5.37	46.46	-27.54	74.00	100	60	Peak
2	17445.000	42.23	4.97	47.20	-41.00	88.20	100	134	Peak

Note:

1. \*\*, means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E & BBHA 9170	Temp. / Humidity	21°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ac-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

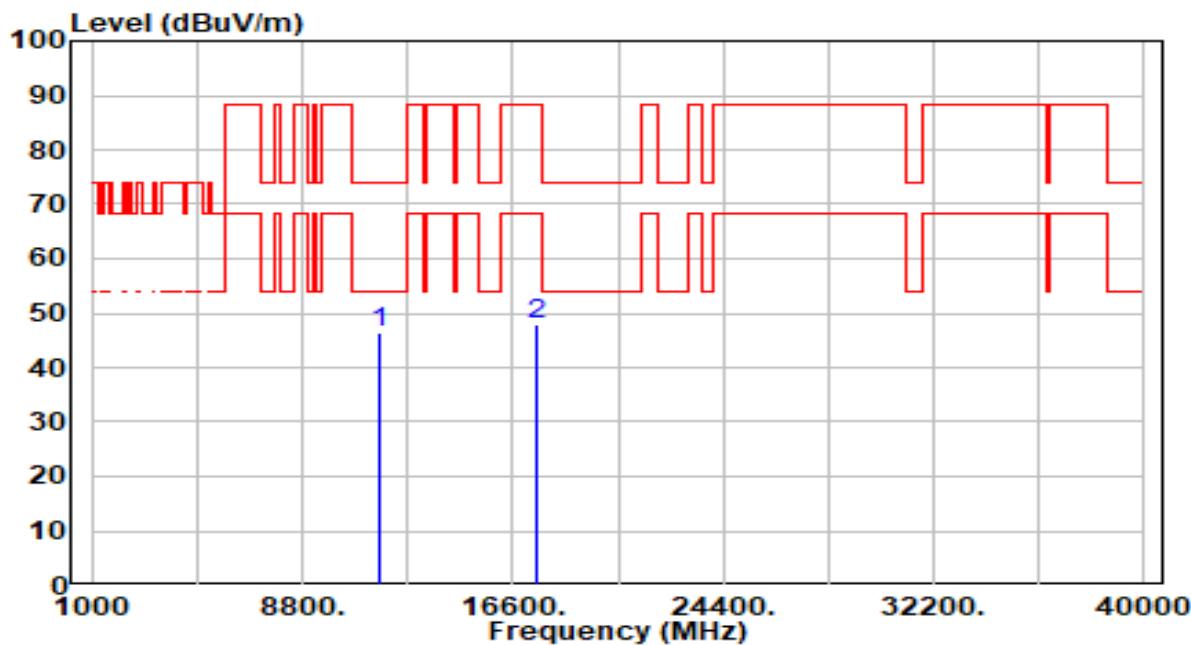


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 11630.000	40.96	5.37	46.33	-27.67	74.00	100	269	Peak
2	17445.000	42.83	4.97	47.80	-40.40	88.20	300	0	Peak

Note:

1. " \*", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E & BBHA 9170	Temp. / Humidity	21°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ax-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

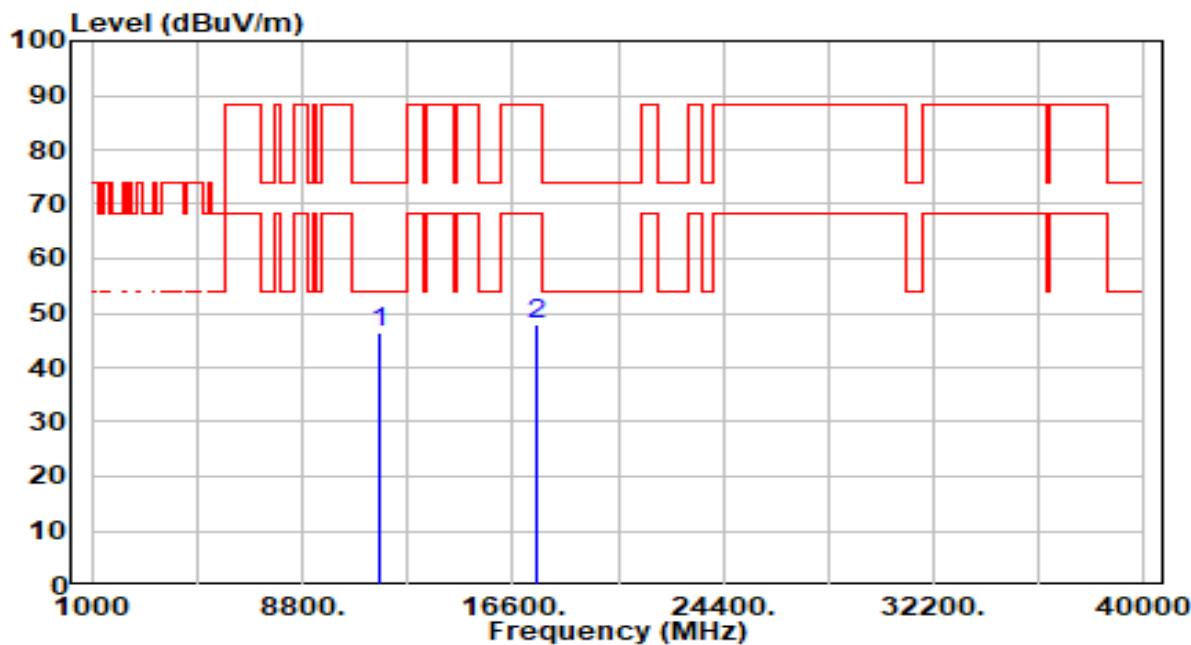


No	Frequency (MHz)	Reading (dB <sub>UV</sub> )	C.F (dB/m)	Measurement (dB <sub>UV</sub> /m)	Margin (dB)	Limit (dB <sub>UV</sub> /m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 11630.000	40.96	5.37	46.33	-27.67	74.00	100	33	Peak
2	17445.000	42.83	4.97	47.80	-40.40	88.20	300	176	Peak

Note:

1. " \*", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dB<sub>UV</sub>/m) = Reading(dB<sub>UV</sub>) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E & BBHA 9170	Temp. / Humidity	21°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ax-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC



No	Frequency (MHz)	Reading (dB <sub>UV</sub> )	C.F (dB/m)	Measurement (dB <sub>UV</sub> /m)	Margin (dB)	Limit (dB <sub>UV</sub> /m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 11630.000	40.96	5.37	46.33	-27.67	74.00	100	142	Peak
2	17445.000	42.83	4.97	47.80	-40.40	88.20	300	341	Peak

**Note:**

1. " \*", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dB<sub>UV</sub>/m) = Reading(dB<sub>UV</sub>) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 7.8. Radiated Restricted Band Edge Measurement

### 7.8.1. Test Limit

#### For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42-16.423	399.9 - 410	4.5-5.15
<sup>1</sup> 0.495 - 0.505	16.69475-16.69525	608 - 614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960 - 1240	7.25-7.75
4.125-4.128	25.5 -25.67	1300 - 1427	8.025 - 8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660 - 1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123 - 138	2200 - 2300	14.47-14.5
8.291-8.294	149.9-150.05	2310 - 2390	15.35-16.2
8.362-8.366	156.52475-156.525	2483.5 - 2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690 - 2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260 - 3267	23.6-24.0
12.29-12.293	167.72-173.2	3332 - 3339	31.2-31.8
12.51975-12.52025	240 - 285	3345.8 - 3358	36.43-36.5
12.57675-12.57725	322-335.4	3600 - 4400	( <sup>2</sup> )
13.36-13.41	--	--	--

#### For 15.407(b) requirement:

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

For an indoor access point, all emissions at or above 5.895GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above 5.925GHz.

For indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of  $-27 \text{ dBm/MHz}$  at 5.65 GHz increasing linearly to  $10 \text{ dBm/MHz}$  at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of  $15.6 \text{ dBm/MHz}$  at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of  $27 \text{ dBm/MHz}$  at 5.725 GHz.

$E [\text{dB}\mu\text{V/m}] = \text{EIRP} [\text{dBm}] + 95.2$ , for example,  $-27 \text{ dBm/MHz} = 68.2 \text{ dB}\mu\text{V/m}$ .

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	$2400/F \text{ (kHz)}$	300
0.490 - 1.705	$24000/F \text{ (kHz)}$	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### 7.8.2. Test Procedure Used

KDB 789033 D02v02r01- Section G

### 7.8.3. Test Setting

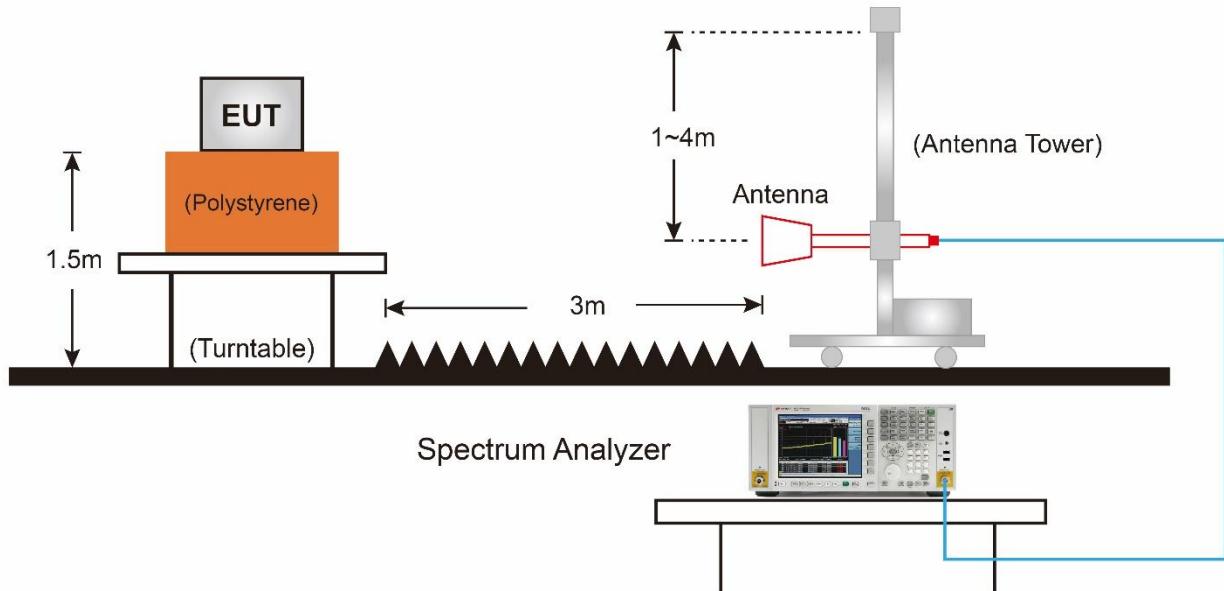
#### Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### Average Measurements above 1GHz (Method VB)

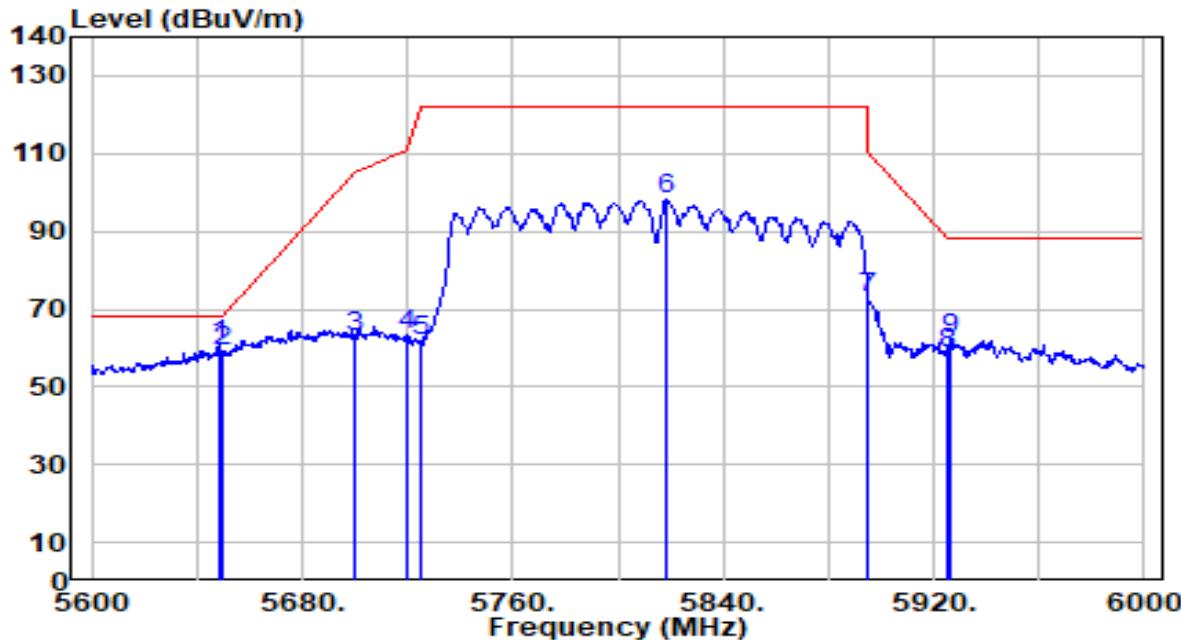
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set  $\text{VBW} \leq \text{RBW}/100$  (i.e., 10 kHz) but not less than 10 Hz. If the EUT duty cycle is  $< 98\%$ , set  $\text{VBW} \geq 1/T$ .
4. Detector = Peak
5. Sweep time = auto
6. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98% duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of  $1/x$ , where  $x$  is the duty cycle.

#### 7.8.4. Test Setup



### 7.8.5. Test Result

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E	Temp. / Humidity	21°C / 61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ac-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

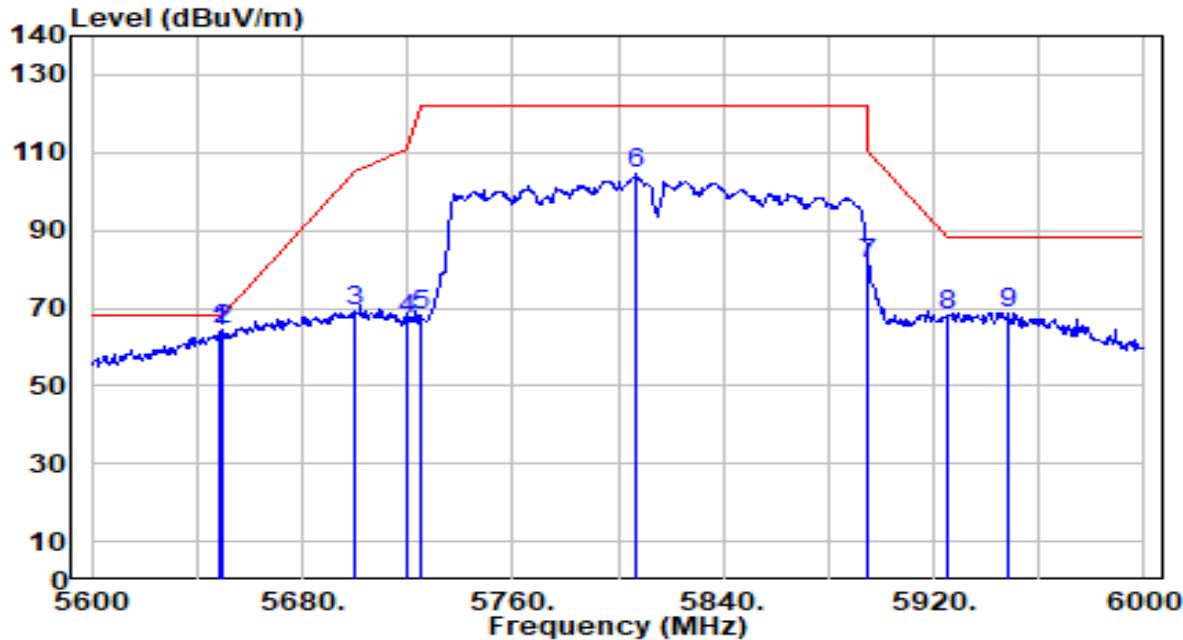


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5648.400	59.02	1.53	60.55	-7.65	68.20	275	80	Peak
2	5650.000	57.77	1.54	59.31	-8.89	68.20	275	80	Peak
3	5700.000	60.96	1.78	62.73	-42.47	105.20	275	80	Peak
4	5720.000	61.46	1.87	63.33	-47.47	110.80	275	80	Peak
5	5725.000	59.81	1.89	61.70	-60.50	122.20	275	80	Peak
6	5818.400	95.91	2.25	98.16	N/A	N/A	275	80	Peak
7	5895.000	70.75	2.26	73.02	-37.18	110.20	275	80	Peak
8	5925.000	56.28	2.27	58.55	-29.65	88.20	275	80	Peak
9	5926.400	59.94	2.27	62.20	-26.00	88.20	275	80	Peak

Note:

1. \*\*, means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E	Temp. / Humidity	21°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ac-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

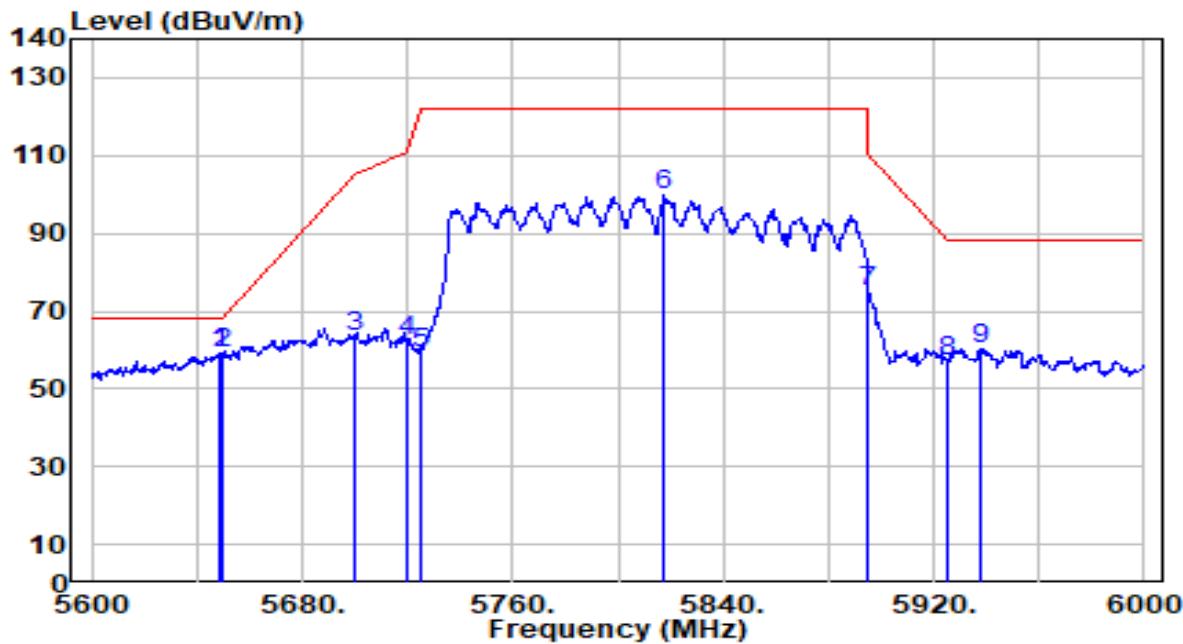


No	Frequency (MHz)	Reading (dB <sub>UV</sub> )	C.F (dB/m)	Measurement (dB <sub>UV</sub> /m)	Margin (dB)	Limit (dB <sub>UV</sub> /m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5648.800	62.63	1.54	64.16	-4.04	68.20	200	114	Peak
2 *	5650.000	62.76	1.54	64.30	-3.90	68.20	200	114	Peak
3	5700.000	67.47	1.78	69.25	-35.95	105.20	200	114	Peak
4	5720.000	65.49	1.87	67.35	-43.45	110.80	200	114	Peak
5	5725.000	66.08	1.89	67.97	-54.23	122.20	200	114	Peak
6	5807.200	102.19	2.25	104.44	N/A	N/A	200	114	Peak
7	5895.000	78.93	2.26	81.19	-29.01	110.20	200	114	Peak
8	5925.000	65.79	2.27	68.06	-20.14	88.20	200	114	Peak
9	5948.400	66.66	2.27	68.94	-19.26	88.20	200	114	Peak

Note:

1. " \*\*", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dB<sub>UV</sub>/m) = Reading(dB<sub>UV</sub>) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E	Temp. / Humidity	21°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ax-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC

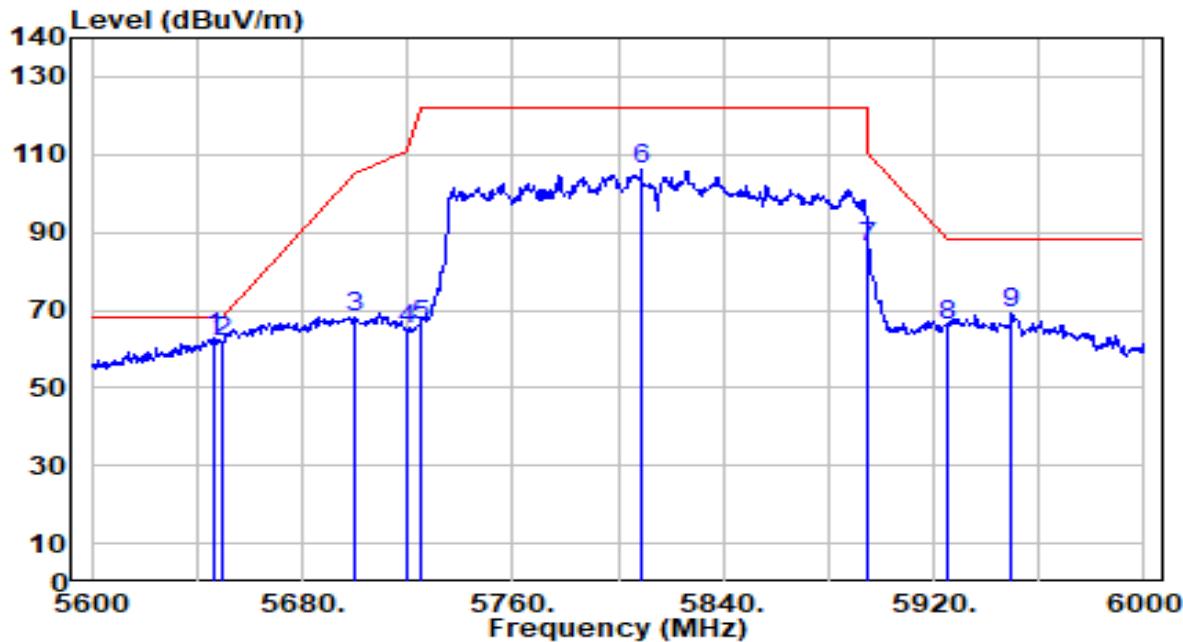


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5648.400	57.46	1.53	58.99	-9.21	68.20	275	79	Peak
2 *	5650.000	57.83	1.54	59.37	-8.83	68.20	275	79	Peak
3	5700.000	61.48	1.78	63.26	-41.94	105.20	275	79	Peak
4	5720.000	60.39	1.87	62.26	-48.54	110.80	275	79	Peak
5	5725.000	57.51	1.89	59.40	-62.80	122.20	275	79	Peak
6	5817.200	97.80	2.25	100.04	N/A	N/A	275	79	Peak
7	5895.000	72.50	2.26	74.76	-35.44	110.20	275	79	Peak
8	5925.000	54.60	2.27	56.87	-31.33	88.20	275	79	Peak
9	5938.000	58.06	2.27	60.33	-27.87	88.20	275	79	Peak

Note:

1. \*\*, means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Mobile Computer	Date of Test	2024-12-24
Factor	DRH18-E	Temp. / Humidity	21°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Yang
Test Mode	802.11ax-160MHz_TX_Band4_CH 163_ANT 0+1	Test Voltage	By Notebook PC



No	Frequency (MHz)	Reading (dB <sub>UV</sub> )	C.F (dB/m)	Measurement (dB <sub>UV</sub> /m)	Margin (dB)	Limit (dB <sub>UV</sub> /m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5646.400	61.24	1.53	62.76	-5.44	68.20	200	111	Peak
2	5650.000	60.19	1.54	61.73	-6.47	68.20	200	111	Peak
3	5700.000	66.26	1.78	68.04	-37.16	105.20	200	111	Peak
4	5720.000	63.05	1.87	64.92	-45.88	110.80	200	111	Peak
5	5725.000	63.92	1.89	65.82	-56.38	122.20	200	111	Peak
6	5808.800	103.92	2.25	106.16	N/A	N/A	200	111	Peak
7	5895.000	83.68	2.26	85.94	-24.26	110.20	200	111	Peak
8	5925.000	63.71	2.27	65.98	-22.22	88.20	200	111	Peak
9	5949.600	67.00	2.27	69.27	-18.93	88.20	200	111	Peak

Note:

1. \*\*, means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dB<sub>UV</sub>/m) = Reading(dB<sub>UV</sub>) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 7.9. AC Conducted Emissions Measurement

### 7.9.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dB $\mu$ V)	AV (dB $\mu$ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

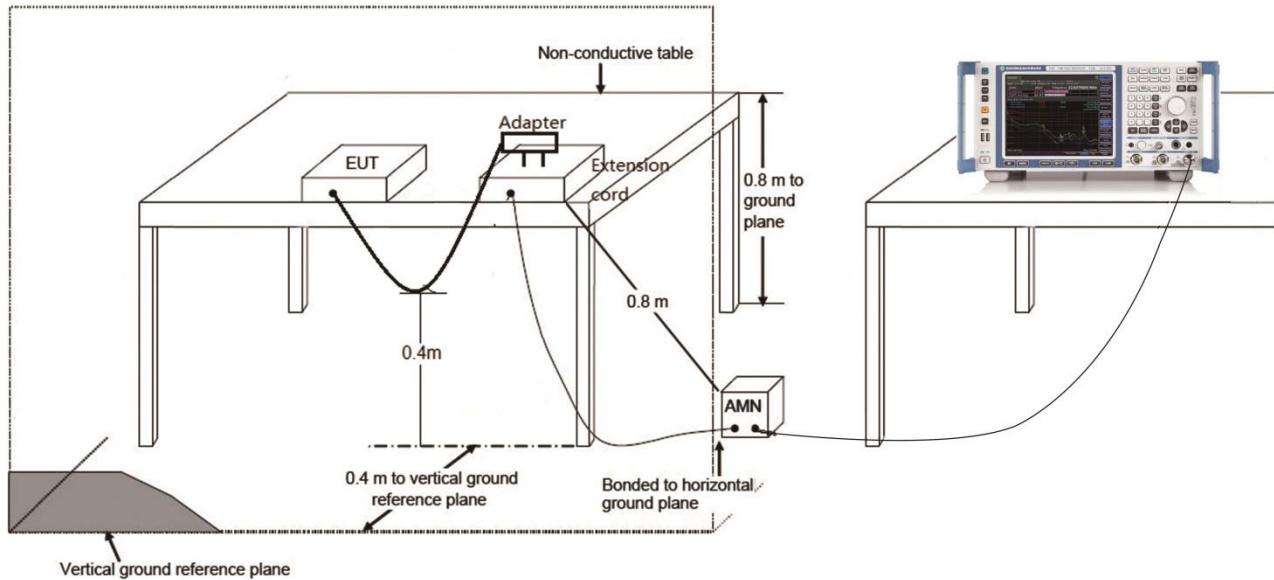
### 7.9.2. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 789033 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

### 7.9.3. Test Setup



#### 7.9.4. Test Result

Note: Reference original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

## 8. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15E of the FCC Rules.

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The End

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## **Appendix A : Test Setup Photograph**

Refer to "2411TW0118-UT" file.

## **Appendix B : EUT Photograph**

Refer to "2411TW0118-UE" file.

## **Appendix C : Internal Photograph**

Refer to "2411TW0118-UI" file.