



MEASUREMENT REPORT

FCC PART 15 Subpart E- WLAN 802.11a/n/ac

FCC ID: 2AP48CT1800

APPLICANT: Centron Design Co., Ltd.

Application Type: Certification

Product: Wireless Streaming Station

Model No.: CT1800, HS770, NM240, NJ340

Trademark: 

FCC Classification: Unlicensed National Information Infrastructure (UNII)

FCC Rule Part(s): Part 15 Subpart E (Section 15.407)

Test Procedure(s): ANSI C63.10-2013, KDB 789033 D02v02r01, KDB 662911 D01v02r01

Received Date: December 23, 2019

Test Date: March 19, 2020 ~ April 1, 2020

Tested By : 

(Peter Syu)

Reviewed By : 

(Paddy Chen)

Approved By : 

(Chenz Ker)



The test results relate only to the tested samples.

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 D02v02r01. 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
1912TW1201-U5	1.0	Original Report	2020-05-15	

CONTENTS

Description	Page
§2.1033 General Information	5
1. INTRODUCTION	6
1.1. Scope	6
1.2. MRT Test Location	6
2. PRODUCT INFORMATION	7
2.1. Equipment Description.....	7
2.2. Operation Frequencies and Channel List.....	8
2.3. Test Mode	10
2.4. Test Software.....	10
2.5. Device Capabilities	11
2.6. Test Configuration	11
2.7. EMI Suppression Device(s)/Modifications	11
2.8. Labeling Requirements.....	11
3. DESCRIPTION OF TEST	12
3.1. Evaluation Procedure	12
3.2. AC Line Conducted Emissions	12
3.3. Radiated Emissions.....	13
4. ANTENNA REQUIREMENTS.....	14
5. TEST EQUIPMENT CALIBRATION DATE.....	15
6. MEASUREMENT UNCERTAINTY.....	16
7. TEST RESULT	17
7.1. Summary.....	17
7.2. 26dB Bandwidth Measurement.....	18
7.2.1. Test Limit	18
7.2.2. Test Procedure used.....	18
7.2.3. Test Setting.....	18
7.2.4. Test Setup	18
7.2.5. Test Result.....	19
7.3. 6dB Bandwidth Measurement.....	24
7.3.1. Test Limit	24
7.3.2. Test Procedure used.....	24
7.3.3. Test Setting.....	24

7.3.4.	Test Setup	24
7.3.5.	Test Result.....	25
7.4.	Output Power Measurement.....	30
7.4.1.	Test Limit	30
7.4.2.	Test Procedure Used	31
7.4.3.	Test Setting.....	32
7.4.4.	Test Setup	32
7.4.5.	Test Result.....	33
7.5.	Transmit Power Control	37
7.5.1.	Test Limit	37
7.5.2.	Test Procedure Used	37
7.5.3.	Test Setting.....	37
7.5.4.	Test Setup	37
7.5.5.	Test Result.....	38
7.6.	Power Spectral Density Measurement.....	39
7.6.1.	Test Limit	39
7.6.2.	Test Procedure Used	39
7.6.3.	Test Setting.....	40
7.6.4.	Test Setup	40
7.6.5.	Test Result.....	41
7.7.	Radiated Spurious Emission Measurement	47
7.7.1.	Test Limit	47
7.7.2.	Test Procedure Used	47
7.7.3.	Test Setting.....	47
7.7.4.	Test Setup	49
7.7.5.	Test Result.....	51
7.8.	Radiated Restricted Band Edge Measurement	89
7.8.1.	Test Limit	89
7.8.2.	Test Result.....	92
7.9.	AC Conducted Emissions Measurement	122
7.9.1.	Test Limit	122
7.9.2.	Test Procedure	122
7.9.3.	Test Setup	123
7.9.4.	Test Result.....	124
8.	CONCLUSION	128

§2.1033 General Information

Applicant	Centron Design Co., Ltd.
Applicant Address	2F-3, No. 15, Ln 360, Sec. 1, Neihu Rd., Neihu Dist., Taipei City 114, Taiwan
Manufacturer	Centron Design Co., Ltd.
Manufacturer Address	2F-3, No. 15, Ln 360, Sec. 1, Neihu Rd., Neihu Dist., Taipei City 114, Taiwan
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15 Subpart E (Section 15.407)
Test Device Serial No.	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification	Unlicensed National Information Infrastructure (UNII)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Fuxing Rd., Taoyuan, Taiwan (R.O.C)

- 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.
- MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
- 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 Taiwan, EU and TELEC Rules.

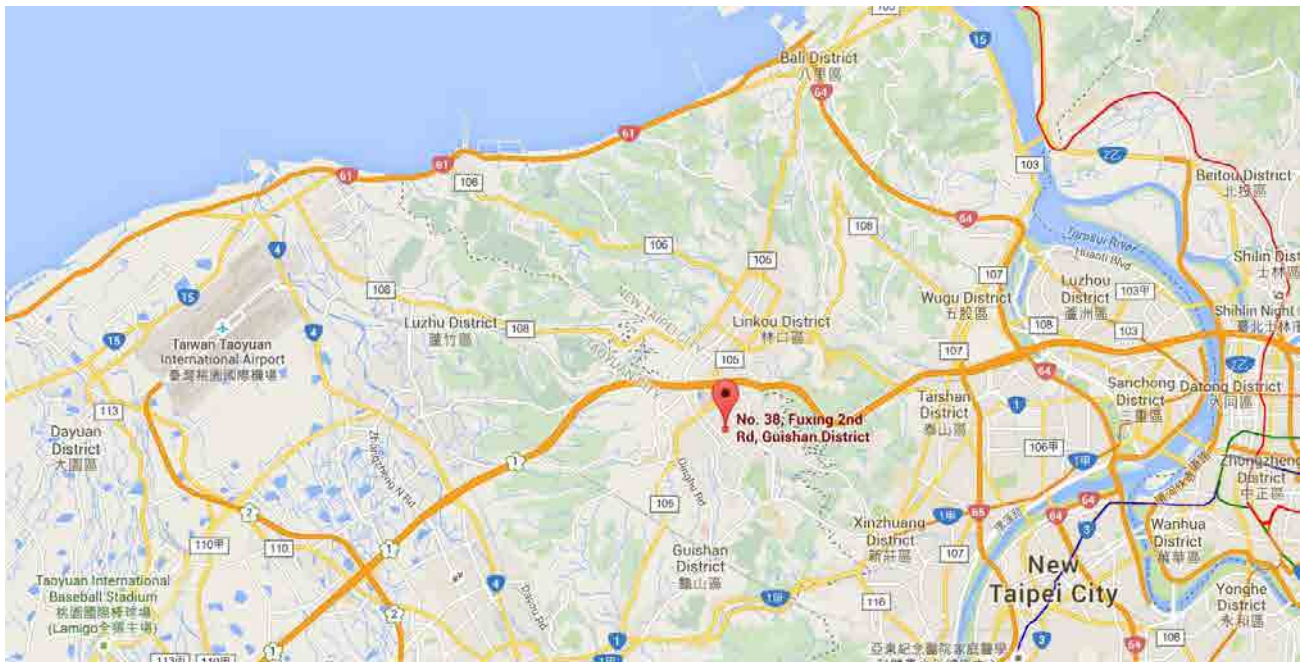
1. INTRODUCTION

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 Industry Canada 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	Wireless Streaming Station
Model No.	CT1800, HS770, NM240, NJ340
Trademark	CENTRON DESIGN
Supports Radios Spec.	2.4G: 802.11b/g/n-20/n-40 5G: 802.11a/n-20/ac-20n/n-40/ac-40/ac-80, Band 1, 4 Bluetooth Dual Mode: V2.1+EDR/ V4.0 LE
Wi-Fi Specification	802.11a/n/ac
Frequency Range	5GHz: For 802.11a/n-HT20/ac-VHT-20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ ac-VHT40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5775MHz
Maximum Output Power	802.11a: 16.42 dBm 802.11n-HT20: 15.45 dBm 802.11ac-VHT20: 15.40 dBm 802.11n-HT40: 15.41 dBm 802.11ac-VHT40: 15.11 dBm 802.11ac-VHT80: 14.17 dBm
Modulation Type	802.11a/n-20/ac-20/n-40/ac-40/ac-80: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Adapter	MFR: Sunny Electronics Corp. Model No: SYS1561-1005 Input: AC 100-240V~1.0A, 50-60Hz Output: DC 5V, 2A

Note:

1. Model Difference: The difference of models only for marketing different, the other RF hardware was the same. (declared by the manufacturer)
2. The test was performed base on CT1800.

2.2. Operation Frequencies and Channel List

802.11 n-HT20/ ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11 n-HT40/ ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz
159	5795 MHz	--	--	--	--

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz	--	--

Duty Cycle

Test Mode	Duty Cycle
802.11a	100%
802.11n-HT20	100%
802.11ac-VHT20	100%
802.11n-HT40	100%
802.11ac-VHT40	100%
802.11ac-VHT80	100%



2.3. Test Mode

Test Mode	Mode 1: Transmit by 802.11a
	Mode 2: Transmit by 802.11n-HT20
	Mode 3: Transmit by 802.11ac-VHT20
	Mode 4: Transmit by 802.11n-HT40
	Mode 5: Transmit by 802.11ac-VHT40
	Mode 6: Transmit by 802.11ac-VHT80

Note: When 802.11ac-20 / 802.11ac-40 at the lowest rate, modulation type (BPSK 1/2) and 802.11n-20/802.11n-40 were the same. It has been verified that the conducted power 802.11n-20 / 802.11n-40 were almost the same, so only evaluated 802.11n-20 / 802.11n-40.

2.4. Test Software

The test utility software used during testing was “REALTEK 11ac 8821AU USB WLAN”.

2.5. Device Capabilities

This device contains the following capabilities:

2.4GHz WLAN (DTS) and 5GHz WLAN (NII).

Note: 5GHz (NII) operation is possible in 20MHz, 40MHz and 80MHz 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, and detector = average per the guidance of Section B)2)b) of KDB 789033 D02v02r01. 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:

2.6. Test Configuration

This 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.

2.7. EMI Suppression Device(s)/Modifications

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

2.8. 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 pamphlet 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 for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 789033 were used in the measurement of the device.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 9'x4'x3' 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.

Line conducted emissions test results are shown in Section 7.10.

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 turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, 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. An 80cm 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

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the **Wireless Streaming Station**, is permanently attached.
- There are no provisions for connection to an external antenna.

Conclusion:

The EUT unit complies with the requirement of §15.203.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Dongguan RF electronic technology Co.,LTD	RF11C00762S	FPCB	4.0dBi

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2020/4/25
Cable	Rosnol	N1C50-RG400-B 1C50-500CM	MRTTWE00013	1 year	2020/6/18
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2021/3/25

Radiated Emissions – AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2020/6/4
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2021/3/25
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2020/4/29
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2020/4/22
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2020/4/23
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2020/4/24
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2020/4/24
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2020/4/22
Cable	Rosnol	K1K50-UP0264- K1K50-4M	MRTTWE00012	1 year	2020/6/18

Conducted Test Equipment – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2020/10/2
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2020/7/11
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2021/3/26

Test Software

Software	Version	Function
e3	9.160520a	EMI Test Software
EMI	V3	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 $k = 2$.

Conducted Emission- Power Line
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.15MHz~30MHz: $\pm 2.53\text{dB}$
Radiated Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~30MHz: $\pm 3.92\text{dB}$ 30MHz~1GHz: $\pm 4.25\text{dB}$ 1GHz~18GHz: $\pm 4.40\text{dB}$ 18GHz~40GHz: $\pm 4.45\text{dB}$
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$
Conducted Power
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% ($U=2U_c(y)$): 3.3%
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C}$ / $\pm 3\%$
DC Voltage
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.3\%$

7. TEST RESULT

7.1. Summary

Company Name: Wireless Streaming Station
FCC ID: 2AP48CT1800
Model No.: CT1800, HS770, NM240, NJ340
Data Rate(s) Tested: 6Mbps ~ 54Mbps (a);
6.5/7.2Mbps ~ 65/72.2Mbps (n-HT20);
13.5/15.0Mbps ~ 135/150Mbps (n-HT40);
6.5/7.2Mbps ~ 78/86.7Mbps (ac-VHT20MHz);
13.5/15.0Mbps ~ 180/200Mbps (ac-VHT40MHz);
29.3/32.5Mbps ~ 390/433.3Mbps (ac-VHT80MHz)

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)	26dB Bandwidth	N/A	Conducted	Pass	Section 7.2
15.407(e)	6dB Bandwidth	≥ 500kHz		Pass	Section 7.3
15.407(a)(1)(i), (2), (3)	Maximum Conducted Output Power	Refer to Section 7.5		Pass	Section 7.5
15.407(h)(1)	Transmit Power Control	≤ 24 dBm		N/A	Section 7.6
15.407(a)(1)(i), (2), (3), (5)	Power Spectral Density	Refer to Section 7.7		Pass	Section 7.7
15.407(b)(1), (4)	Undesirable Emissions	≤ -27dBm/MHz EIRP ≤ -17dBm/MHz EIRP	Radiated	Pass	Section 7.8 & 7.9
15.205, 15.209 15.407(b)(5), (6), (7)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		Pass	
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.10

Notes:

- 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.
- All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.
- 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.

7.2. 26dB Bandwidth Measurement

7.2.1. Test Limit

N/A

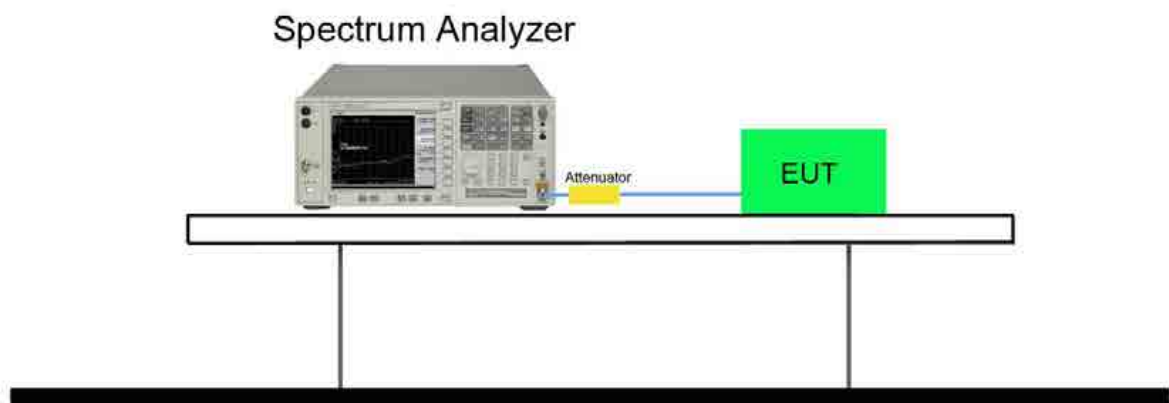
7.2.2. Test Procedure used

KDB 789033 D02v02r01 - Section C.1

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

Product	Wireless Streaming Station	Test Engineer	Peter
Test Site	SR2	Test Date	2020/3/17
Test Item	26dB Bandwidth		

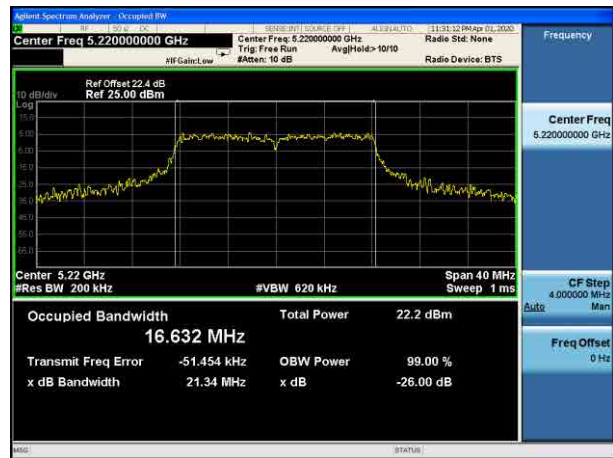
Test Mode	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	36	5180	20.900	16.519
802.11a	44	5220	21.340	16.632
802.11a	48	5240	22.220	16.610
802.11a	149	5745	20.250	16.606
802.11a	157	5785	20.350	16.576
802.11a	165	5825	20.550	16.597
802.11n-HT20	36	5180	21.000	17.742
802.11n-HT20	44	5220	21.050	17.757
802.11n-HT20	48	5240	21.080	17.737
802.11n-HT20	149	5745	21.030	17.697
802.11n-HT20	157	5785	21.030	17.738
802.11n-HT20	165	5825	21.180	17.733
802.11n-HT40	38	5190	42.940	36.282
802.11n-HT40	46	5230	42.390	36.321
802.11n-HT40	151	5755	42.260	36.338
802.11n-HT40	159	5795	42.790	36.274
802.11ac-VHT80	42	5210	80.750	74.936
802.11ac-VHT80	155	5775	80.690	74.904

802.11a 26dB Bandwidth & 99% Bandwidth

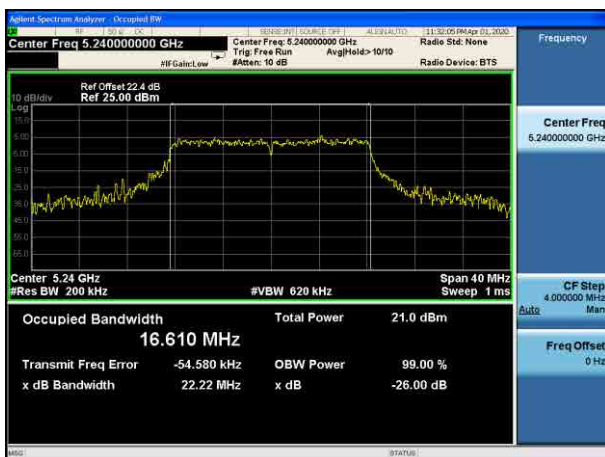
Channel 36 (5180MHz)



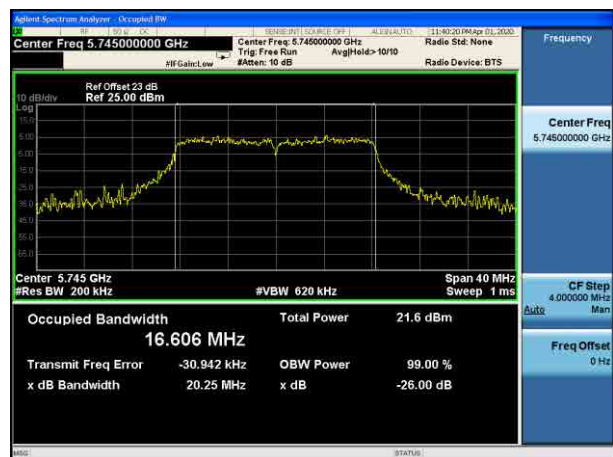
Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT20 26dB Bandwidth & 99% Bandwidth

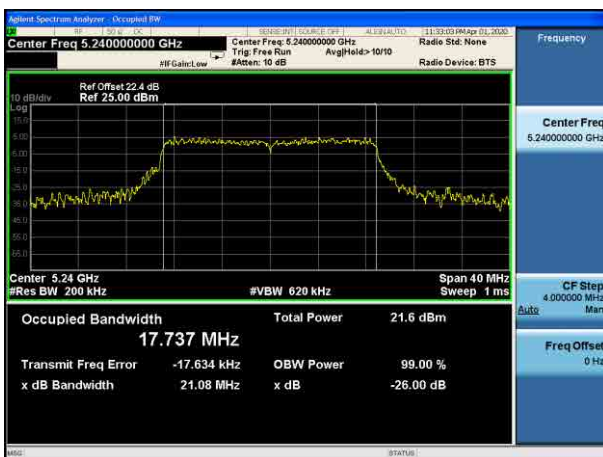
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



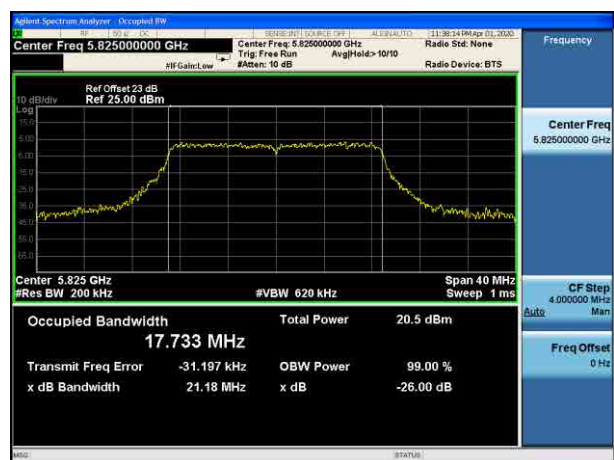
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT40 26dB Bandwidth & 99% Bandwidth

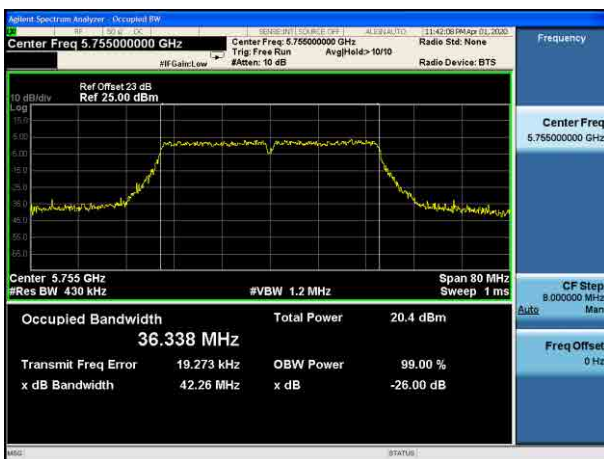
Channel 38 (5190MHz)



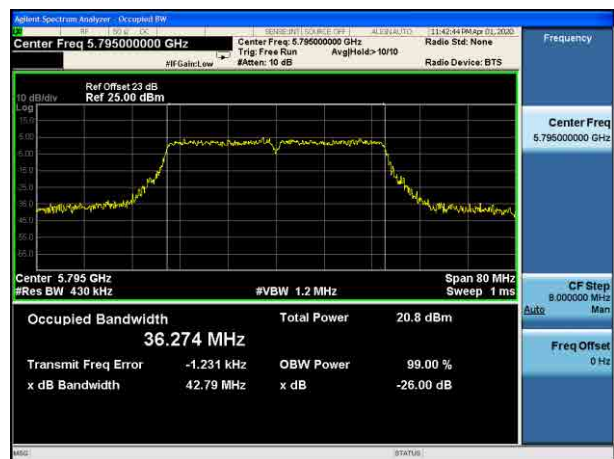
Channel 46 (5230MHz)



Channel 151 (5755MHz)

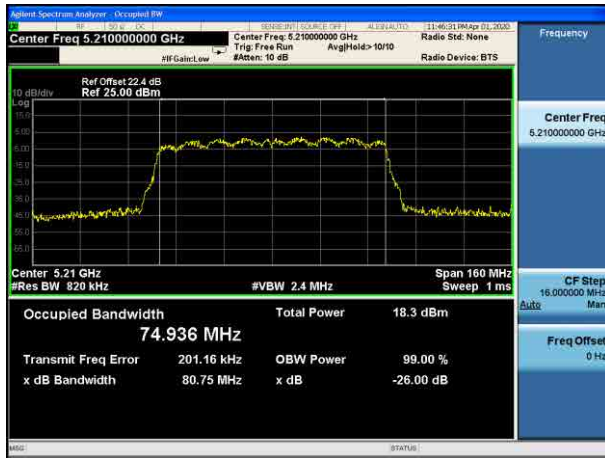


Channel 159 (5795MHz)

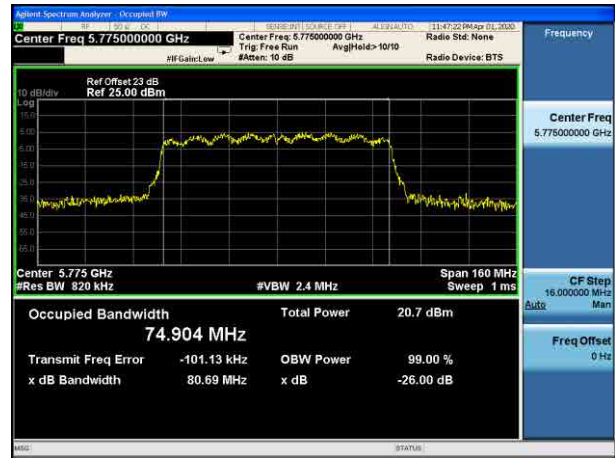


802.11ac-VHT80 26dB Bandwidth & 99% Bandwidth

Channel 42 (5210MHz)



Channel 155 (5775MHz)



7.3. 6dB Bandwidth Measurement

7.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

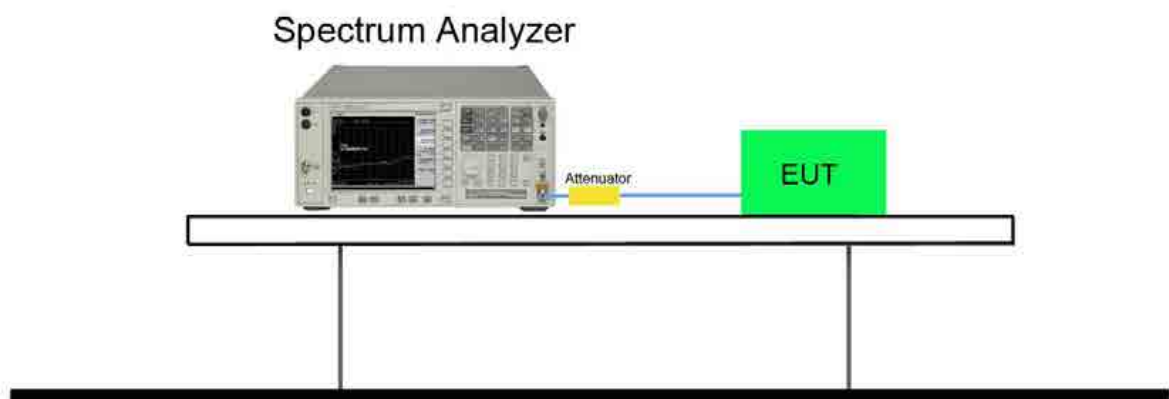
7.3.2. Test Procedure used

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 $\geq 3 \times$ 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. Test Result

Product	Wireless Streaming Station	Test Engineer	Peter
Test Site	SR2	Test Date	2020/4/1
Test Item	6dB Bandwidth		

Test Mode	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	149	5745	16.560	≥ 0.5	Pass
802.11a	157	5785	16.500	≥ 0.5	Pass
802.11a	165	5825	16.570	≥ 0.5	Pass
802.11n-HT20	149	5745	17.760	≥ 0.5	Pass
802.11n-HT20	157	5785	17.760	≥ 0.5	Pass
802.11n-HT20	165	5825	17.830	≥ 0.5	Pass
802.11n-HT40	151	5755	36.560	≥ 0.5	Pass
802.11n-HT40	159	5795	36.530	≥ 0.5	Pass
802.11ac-VHT80	155	5775	75.180	≥ 0.5	Pass

802.11a 6dB Bandwidth

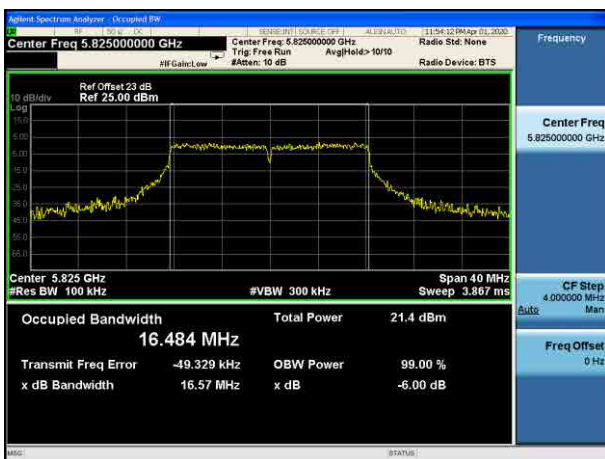
Channel 149 (5745MHz)



Channel 157 (5785MHz)

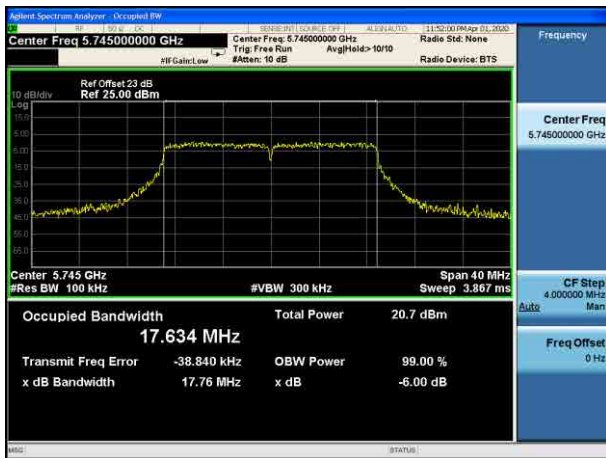


Channel 165 (5825MHz)

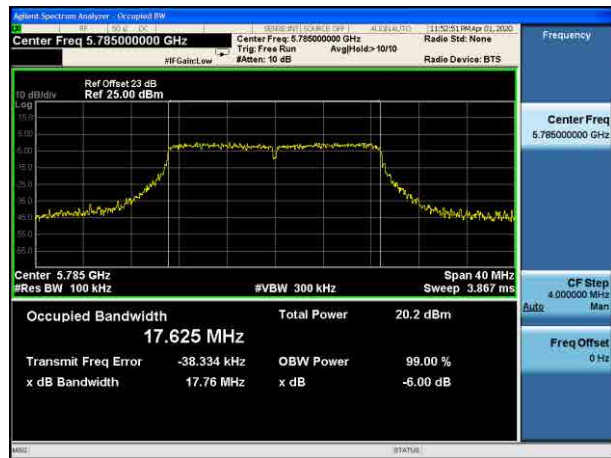


802.11n-HT20 6dB Bandwidth

Channel 149 (5745MHz)



Channel 157 (5785MHz)

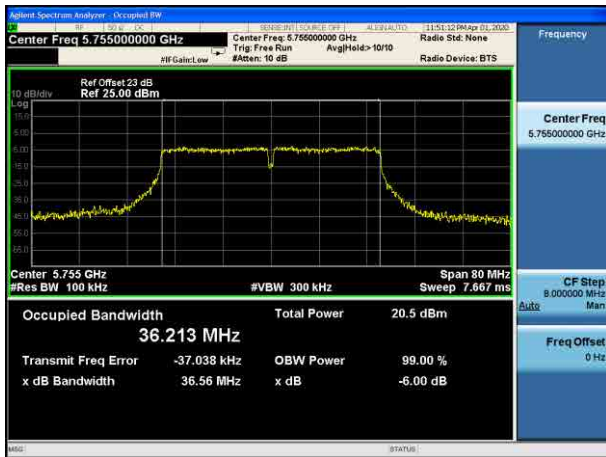


Channel 165 (5825MHz)

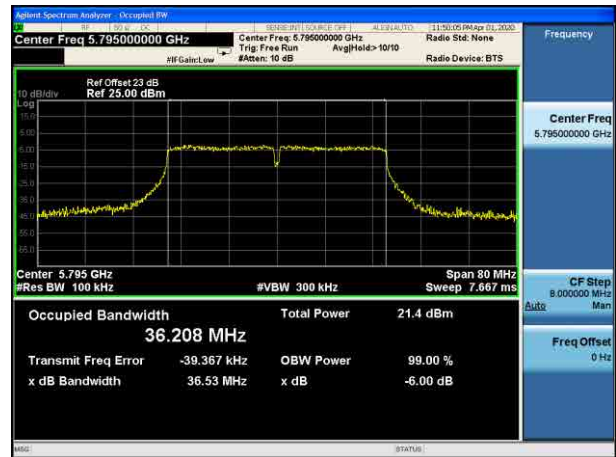


802.11n-HT40 6dB Bandwidth

Channel 151 (5755MHz)

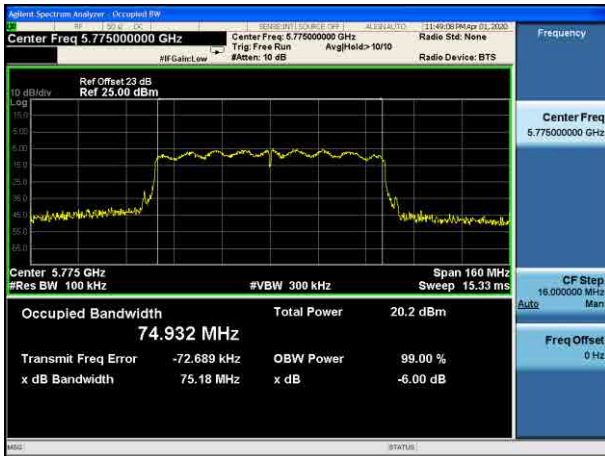


Channel 159 (5795MHz)



802.11ac-VHT80 6dB Bandwidth

Channel 155 (5775MHz)



7.4. Output Power Measurement

7.4.1. Test Limit

For FCC Power Measurement Limit

For client operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 250mW.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (23.98dBm) or $11\text{dBm} + 10 \log(26\text{dB BW})$.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

For IC Power Measurement Limit

For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW (23.01dBm) or $10 + 10 \cdot \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed 250 mW (23.98dBm) or $11 + 10 \log_{10} B$, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W (30dBm) or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

For the 5.725-5.85 GHz band, the maximum conducted output power shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Max Conducted Output Power Limit Calculation as below:

For U-NII-1 (5150-5250MHz)
24dBm for Client Device

For U-NII-3 (5725-5850MHz)
30dBm for Client Device

EIRP Limit Calculation as below:

For U-NII-1 (5150-5250MHz)
36dBm with 6dBi Antenna Gain

For U-NII-3 (5725-5850MHz)
36dBm with 6dBi Antenna Gain

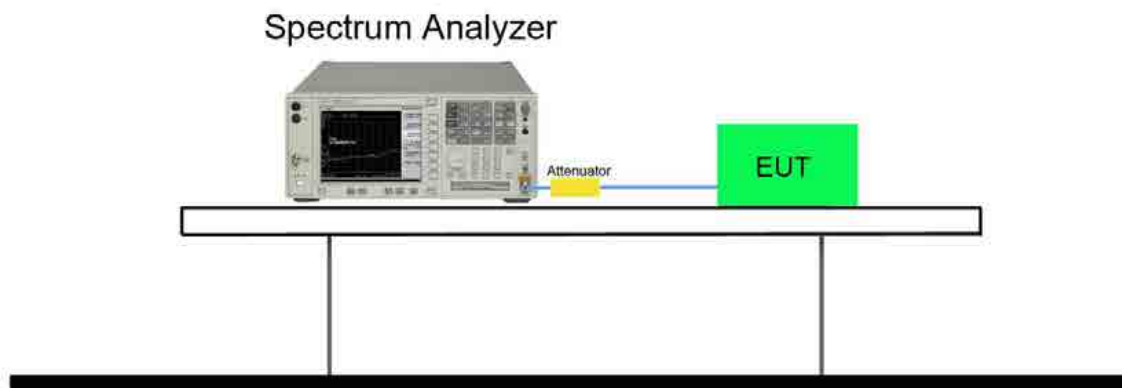
7.4.2. Test Procedure Used

KDB 789033 D02v02r01 - 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. The trace was averaged over 100 traces to obtain the final measured average power.

7.4.4. Test Setup



7.4.5. Test Result

Product	Wireless Streaming Station	Test Engineer	Peter
Test Site	SR2	Test Date	2020/3/17
Test Item	Output Power		

802.11a										
Channel No.	Frequency (MHz)	Average Power								Required Limit (dBm)
		For different Data Rate (Mbps)								
		6	9	12	18	24	36	48	54	
36	5180	15.81	--	--	--	--	--	--	--	≤ 24
44	5220	16.24	16.18	16.12	16.09	16.05	16.02	16.00	15.99	≤ 24
48	5240	16.10	--	--	--	--	--	--	--	≤ 24
149	5745	16.28	--	--	--	--	--	--	--	≤ 30
157	5785	16.26	16.20	16.14	15.98	15.93	15.91	15.89	15.87	≤ 30
165	5825	16.42	--	--	--	--	--	--	--	≤ 30

802.11n-20M										
Channel No.	Frequency (MHz)	Average Power								Required Limit (dBm)
		For different Data Rate (Mbps)								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
36	5180	15.18	--	--	--	--	--	--	--	≤ 24
44	5220	15.45	15.41	15.38	15.35	15.34	15.30	15.22	15.16	≤ 24
48	5240	15.40	--	--	--	--	--	--	--	≤ 24
149	5745	14.92	--	--	--	--	--	--	--	≤ 30
157	5785	15.10	14.98	14.85	14.72	14.65	14.62	14.57	14.55	≤ 30
165	5825	15.12	--	--	--	--	--	--	--	≤ 30

802.11ac-20M										
Channel No.	Frequency (MHz)	Average Power								Required Limit (dBm)
		For different Data Rate (Mbps)								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
36	5180	15.13	--	--	--	--	--	--	--	≤ 24
44	5220	15.31	15.28	15.26	15.23	15.21	15.16	15.12	15.09	≤ 24
48	5240	15.37	--	--	--	--	--	--	--	≤ 24
149	5745	14.85	--	--	--	--	--	--	--	≤ 30
157	5785	14.61	14.58	14.55	14.53	14.51	14.48	14.45	14.43	≤ 30
165	5825	15.18	--	--	--	--	--	--	--	≤ 30

802.11n-40M										
Channel No.	Frequency (MHz)	Average Power								Required Limit (dBm)
		For different Data Rate (Mbps)								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
38	5190	13.28	--	--	--	--	--	--	--	≤ 24
46	5230	15.41	15.33	15.24	15.18	15.08	15.05	15.00	14.98	≤ 24
151	5755	14.75	--	--	--	--	--	--	--	≤ 30
159	5795	14.86	14.83	14.81	14.78	14.77	14.71	14.64	14.60	≤ 30

802.11ac-40M										
Channel No.	Frequency (MHz)	Average Power								Required Limit (dBm)
		For different Data Rate (Mbps)								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
38	5190	13.34	--	--	--	--	--	--	--	≤ 24
46	5230	15.11	15.08	15.06	15.04	15.03	15.00	14.96	14.93	≤ 24
151	5755	14.16	--	--	--	--	--	--	--	≤ 30
159	5795	14.90	14.86	14.81	14.79	14.78	14.75	14.67	14.63	≤ 30

802.11ac-80M												
Channel No.	Frequency (MHz)	Average Power										Required Limit (dBm)
		For different Data Rate (Mbps)										
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	
42	5210	12.65	12.59	12.54	12.46	12.40	12.36	12.31	12.28	12.22	12.19	≤ 24
155	5775	14.17	14.13	14.09	14.02	13.98	13.96	13.94	13.93	13.90	13.88	≤ 30

Note: Output power =Reading value on Spectrum Analyzer + duty cycle factor + cable loss °

E.I.R.P Power

Test Mode	Channel No.	Freq. (MHz)	Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
11a	36	5180	15.81	15.81	≤ 24	19.81	≤ 30	Pass
11a	44	5220	16.24	16.24	≤ 24	20.24	≤ 30	Pass
11a	48	5240	16.10	16.10	≤ 24	20.10	≤ 30	Pass
11a	149	5745	16.28	16.28	≤ 30	20.28	≤ 36	Pass
11a	157	5785	16.26	16.26	≤ 30	20.26	≤ 36	Pass
11a	165	5825	16.42	16.42	≤ 30	20.42	≤ 36	Pass
11n-HT20	36	5180	15.18	15.18	≤ 24	19.18	≤ 30	Pass
11n-HT20	44	5220	15.45	15.45	≤ 24	19.45	≤ 30	Pass
11n-HT20	48	5240	15.40	15.40	≤ 24	19.40	≤ 30	Pass
11n-HT20	149	5745	14.92	14.92	≤ 30	18.92	≤ 36	Pass
11n-HT20	157	5785	15.10	15.10	≤ 30	19.10	≤ 36	Pass
11n-HT20	165	5825	15.12	15.12	≤ 30	19.12	≤ 36	Pass
11ac-VHT20	36	5180	15.13	15.13	≤ 24	19.13	≤ 30	Pass
11ac-VHT20	44	5220	15.31	15.31	≤ 24	19.31	≤ 30	Pass
11ac-VHT20	48	5240	15.37	15.37	≤ 24	19.37	≤ 30	Pass
11ac-VHT20	149	5745	14.85	14.85	≤ 30	18.85	≤ 36	Pass
11ac-VHT20	157	5785	14.61	14.61	≤ 30	18.61	≤ 36	Pass
11ac-VHT20	165	5825	15.18	15.18	≤ 30	19.18	≤ 36	Pass
11n-HT40	38	5190	13.28	13.28	≤ 24	17.28	≤ 30	Pass
11n-HT40	46	5230	15.41	15.41	≤ 24	19.41	≤ 30	Pass
11n-HT40	151	5755	14.75	14.75	≤ 30	18.75	≤ 36	Pass
11n-HT40	159	5795	14.86	14.86	≤ 30	18.86	≤ 36	Pass
11ac-VHT40	38	5190	13.34	13.34	≤ 24	17.34	≤ 30	Pass
11ac-VHT40	46	5230	15.11	15.11	≤ 24	19.11	≤ 30	Pass
11ac-VHT40	151	5755	14.16	14.16	≤ 30	18.16	≤ 36	Pass
11ac-VHT40	159	5795	14.90	14.90	≤ 30	18.90	≤ 36	Pass
11ac-VHT80	42	5210	12.65	12.65	≤ 24	16.65	≤ 30	Pass
11ac-VHT80	155	5775	14.17	14.17	≤ 30	18.17	≤ 36	Pass

Note1: Average power = Reading value on Spectrum Analyzer + duty cycle factor + cable loss.

Note2: E.I.R.P Power = Total Average Power (dBm) + Antenna Gain (dBi).

Note3: Antenna Gain: 4.0dBi.

7.5. Transmit Power Control

7.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

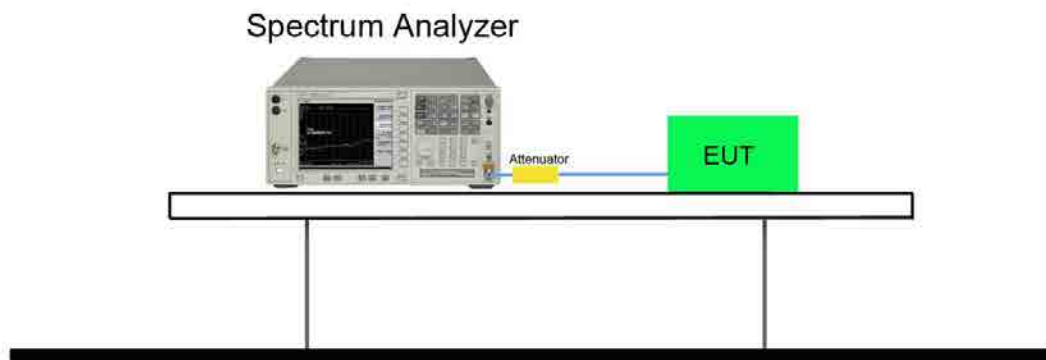
7.5.2. Test Procedure Used

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

7.5.3. 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. The trace was averaged over 100 traces to obtain the final measured average power.

7.5.4. Test Setup



7.5.5. Test Result

Note: TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

7.6. Power Spectral Density Measurement

7.6.1. Test Limit

For FCC Power Spectral Density Limit

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

For IC Power Spectral Density Limit

For the band 5.15-5.25 GHz, the e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For the 5.725-5.85 GHz band, the power spectral density shall not exceed 30 dBm in any 500 kHz band.

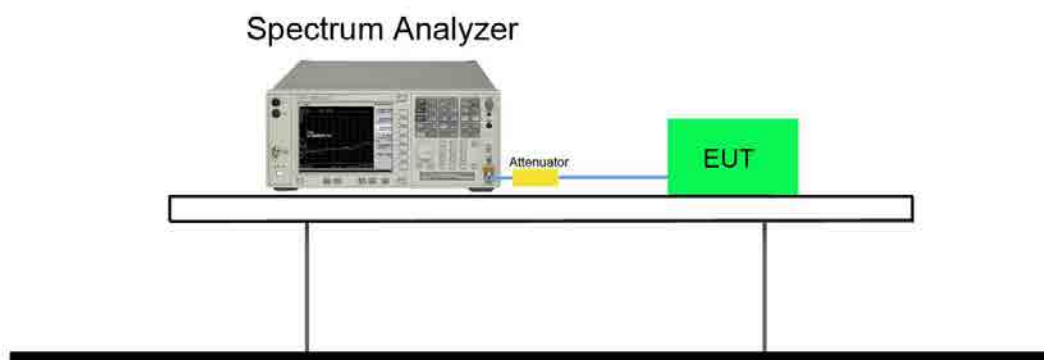
7.6.2. Test Procedure Used

KDB 789033 D02v02r01 - Section F

7.6.3. 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, if measurement bandwidth of Maximum PSD is specified in 500 kHz,
4. RBW = 100 kHz
5. VBW = 3MHz
6. Number of sweep points $\geq 2 \times (\text{span} / \text{RBW})$
7. Detector = power averaging (Average)
8. Sweep time = auto
9. Trigger = free run
10. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
11. Add $10 \cdot \log(1/x)$, 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 $10 \cdot \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
12. When the measurement bandwidth of Maximum PSD is specified in 500 kHz, add a constant factor $10 \cdot \log(500\text{kHz}/100\text{kHz}) = 7$ dB to the measured result

7.6.4. Test Setup



7.6.5. Test Result

Product	Wireless Streaming Station	Test Engineer	Peter
Test Site	SR2	Test Date	2020/4/1
Test Item	Power Spectral Density		

For FCC bands (UNII-1)

Test Mode	Channel No.	Freq. (MHz)	PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm /MHz)	Result
11a	36	5180	6.331	100%	6.331	≤ 11	Pass
11a	44	5220	7.173	100%	7.173	≤ 11	Pass
11a	48	5240	6.351	100%	6.351	≤ 11	Pass
11n-HT20	36	5180	5.663	100%	5.663	≤ 11	Pass
11n-HT20	44	5220	5.827	100%	5.827	≤ 11	Pass
11n-HT20	48	5240	6.075	100%	6.075	≤ 11	Pass
11n-HT40	38	5190	0.300	100%	0.300	≤ 11	Pass
11n-HT40	46	5230	2.415	100%	2.415	≤ 11	Pass
11ac-VHT80	42	5210	-2.504	100%	-2.504	≤ 11	Pass

Note: Total PSD (dBm/MHz) = PSD (dBm/MHz) + $10 \cdot \log(1/\text{duty cycle})$.

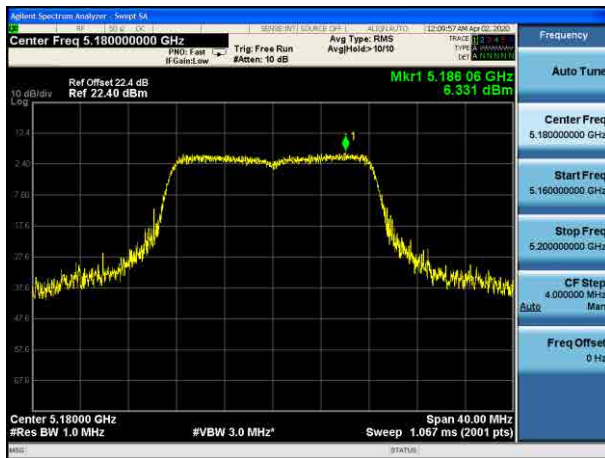
For FCC bands (UNII-3)

Test Mode	Channel No.	Freq. (MHz)	PSD (dBm/500kHz)	Duty Cycle (%)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Result
11a	149	5745	3.230	100%	3.230	≤ 30	Pass
11a	157	5785	3.994	100%	3.994	≤ 30	Pass
11a	165	5825	3.678	100%	3.678	≤ 30	Pass
11n-HT20	149	5745	2.558	100%	2.558	≤ 30	Pass
11n-HT20	157	5785	2.237	100%	2.237	≤ 30	Pass
11n-HT20	165	5825	2.118	100%	2.118	≤ 30	Pass
11n-HT40	151	5755	-1.049	100%	-1.049	≤ 30	Pass
11n-HT40	159	5795	-0.962	100%	-0.962	≤ 30	Pass
11ac-VHT80	155	5775	-3.334	100%	-3.334	≤ 30	Pass

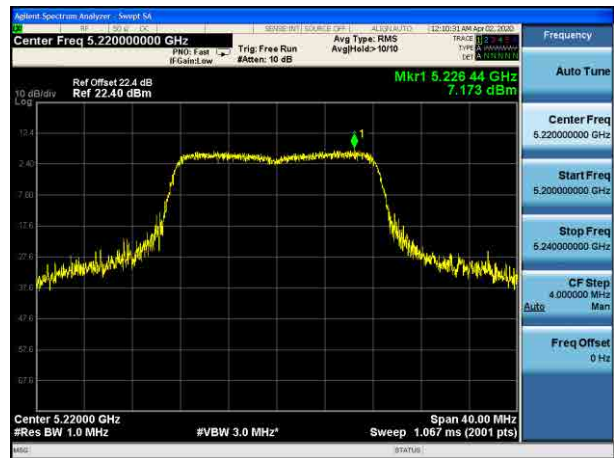
Note: Total PSD (dBm/500kHz) = PSD (dBm/500kHz) + $10 \cdot \log(1/\text{duty cycle})$.

802.11a Power Spectral Density

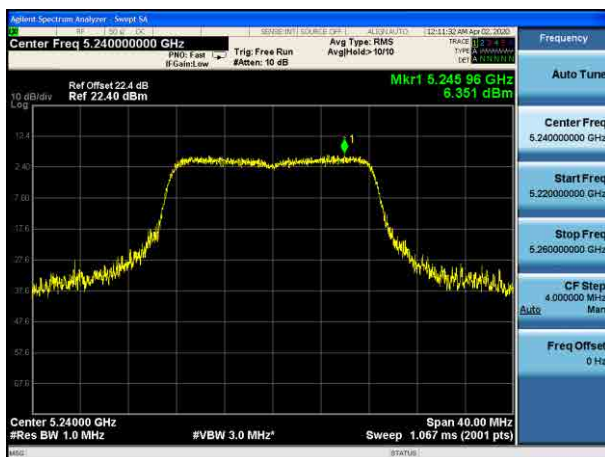
Channel 36 (5180MHz)



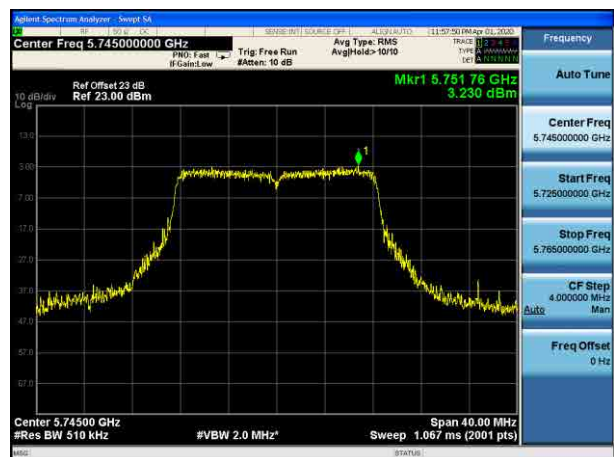
Channel 44 (5220MHz)



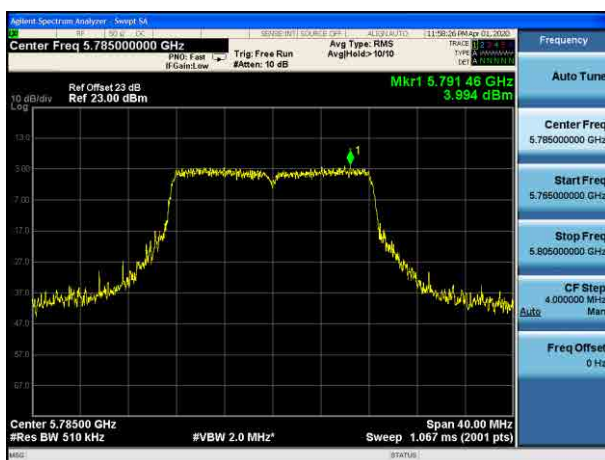
Channel 48 (5240MHz)



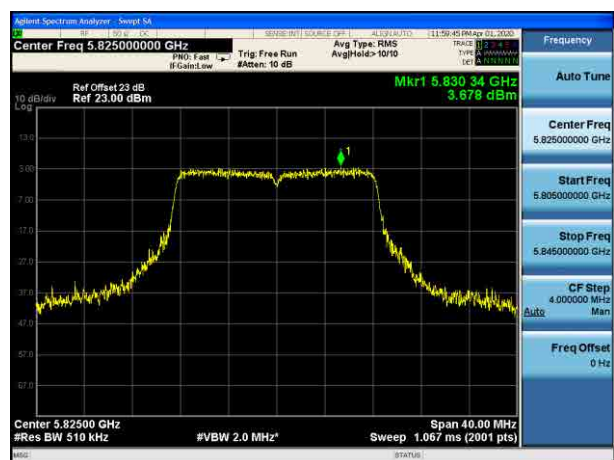
Channel 149 (5745MHz)



Channel 157 (5785MHz)

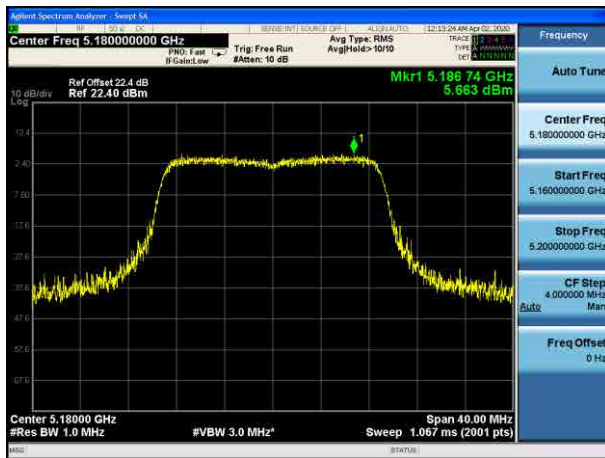


Channel 165 (5825MHz)

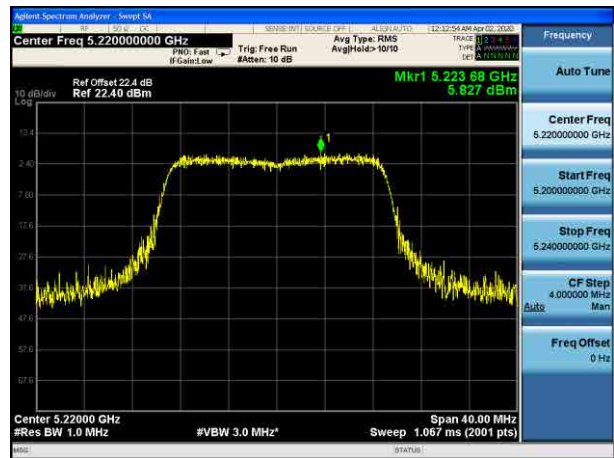


802.11n-HT20 Power Spectral Density

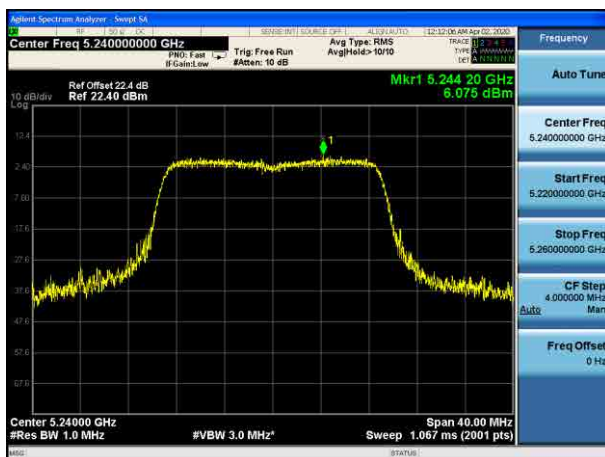
Channel 36 (5180MHz)



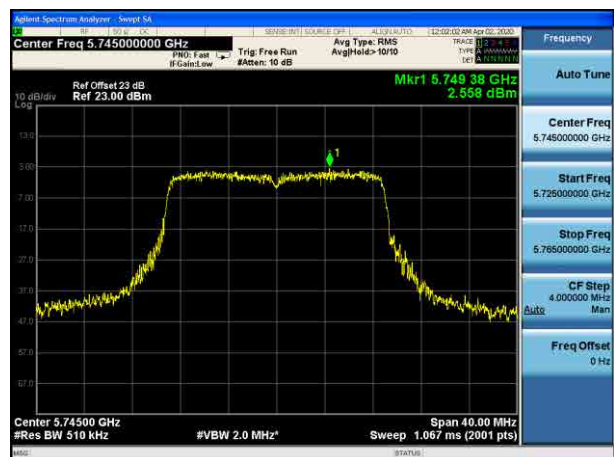
Channel 44 (5220MHz)



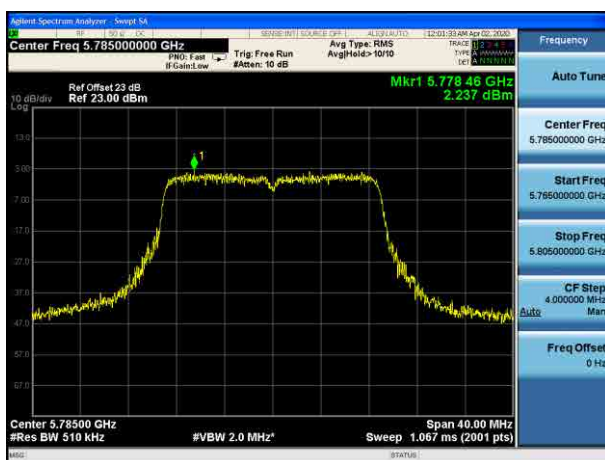
Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)

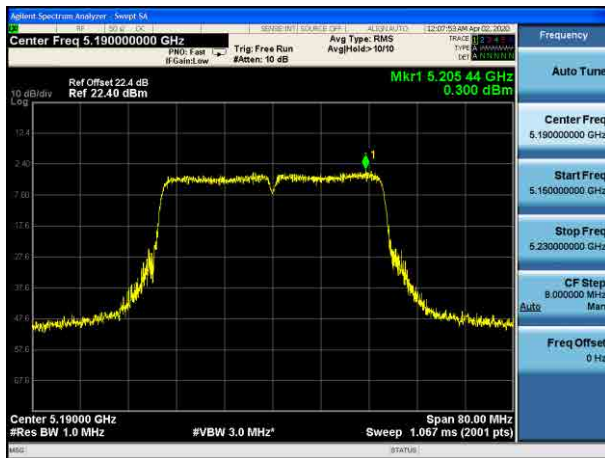


Channel 165 (5825MHz)

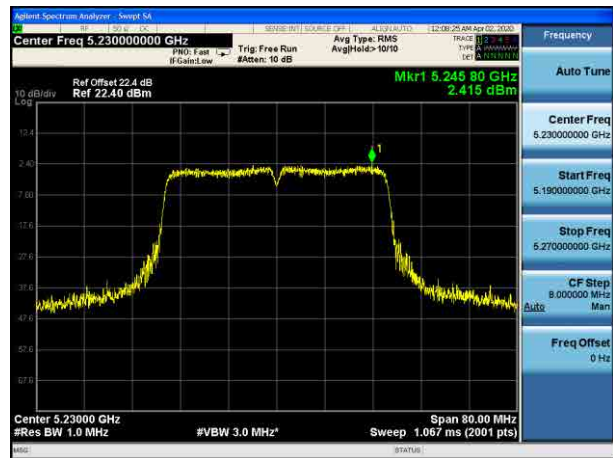


802.11n-HT40 Power Spectral Density

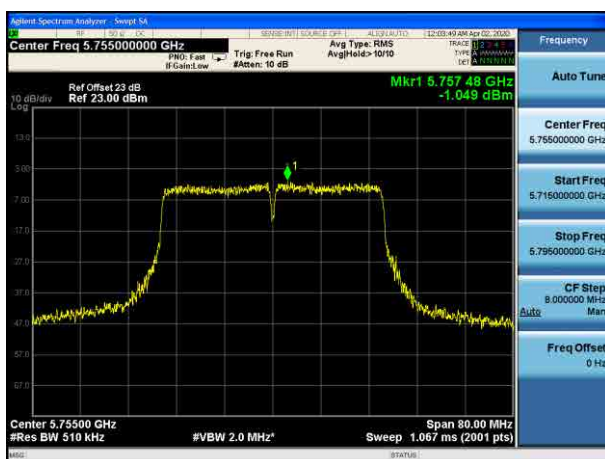
Channel 38 (5190MHz)



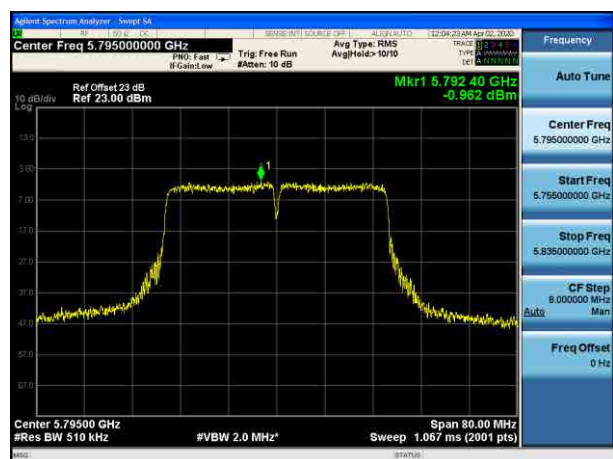
Channel 46 (5230MHz)

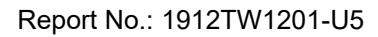


Channel 151 (5755MHz)



Channel 159 (5795MHz)





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 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/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

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

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 = 120 kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

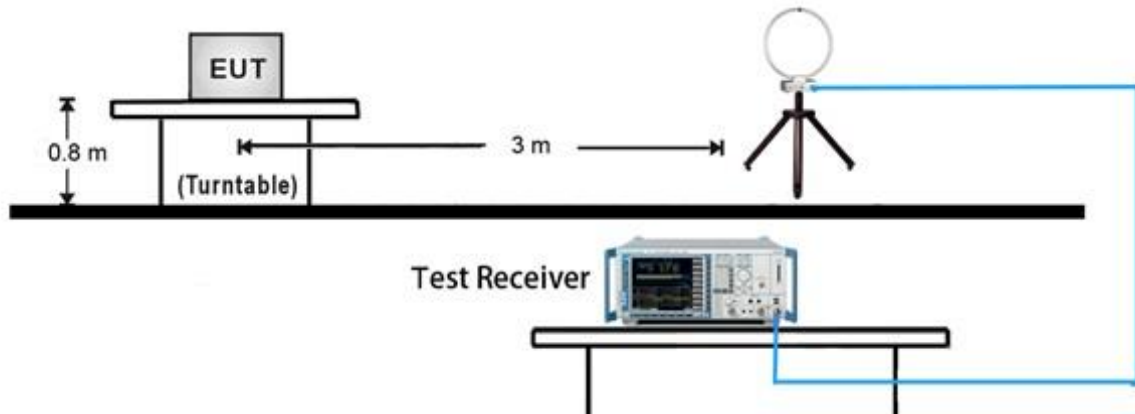
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (Average)
5. Number of measurement points = 1001 (Number of points must be $> 2 \times \text{span/RBW}$)
6. Sweep time = auto
7. Trace was averaged over at 100 sweeps

Quasi-Peak & Average Measurements below 30MHz

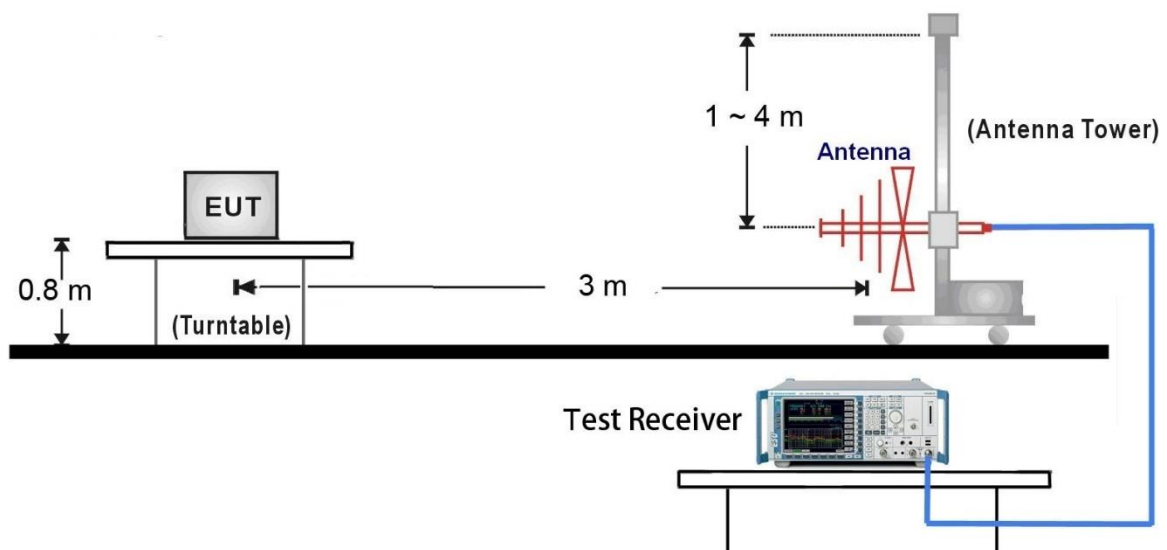
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 200Hz for 9kHz to 150kHz frequency; RBW = 9kHz for 0.15MHz to 30MHz frequency
4. Detector = CISPR quasi-peak or power average (Average)
5. Sweep time = auto couple
6. Trace was allowed to stabilize

7.7.4. Test Setup

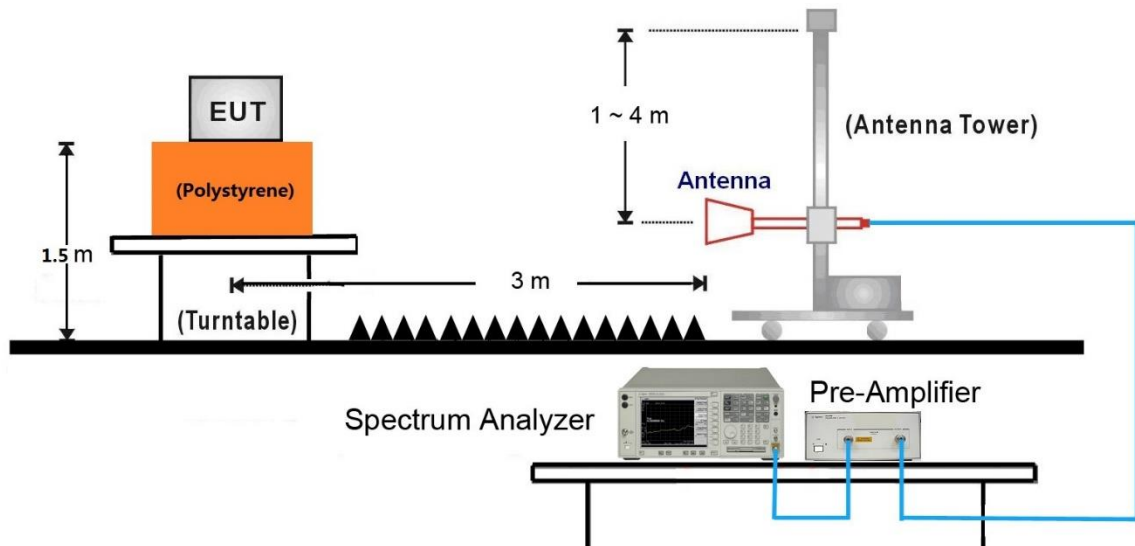
9kHz ~ 30MHz Test Setup:



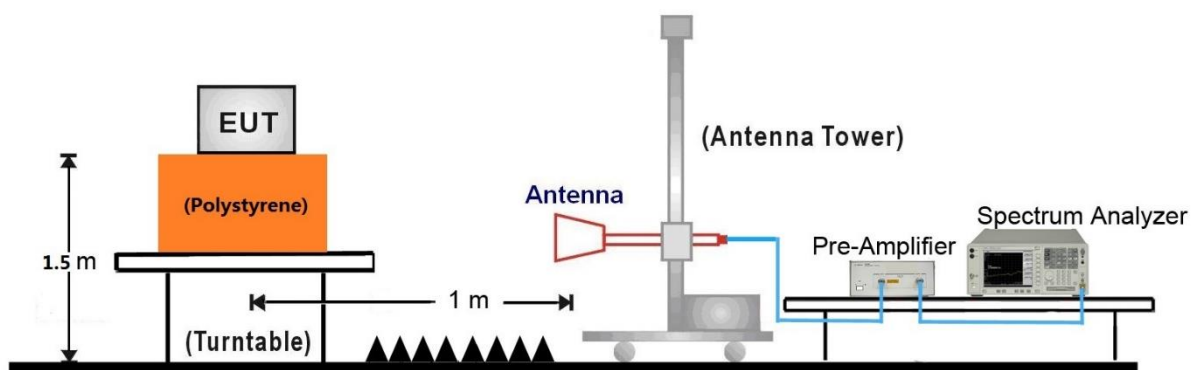
30MHz ~ 1GHz Test Setup:



1GHz ~18GHz Test Setup:

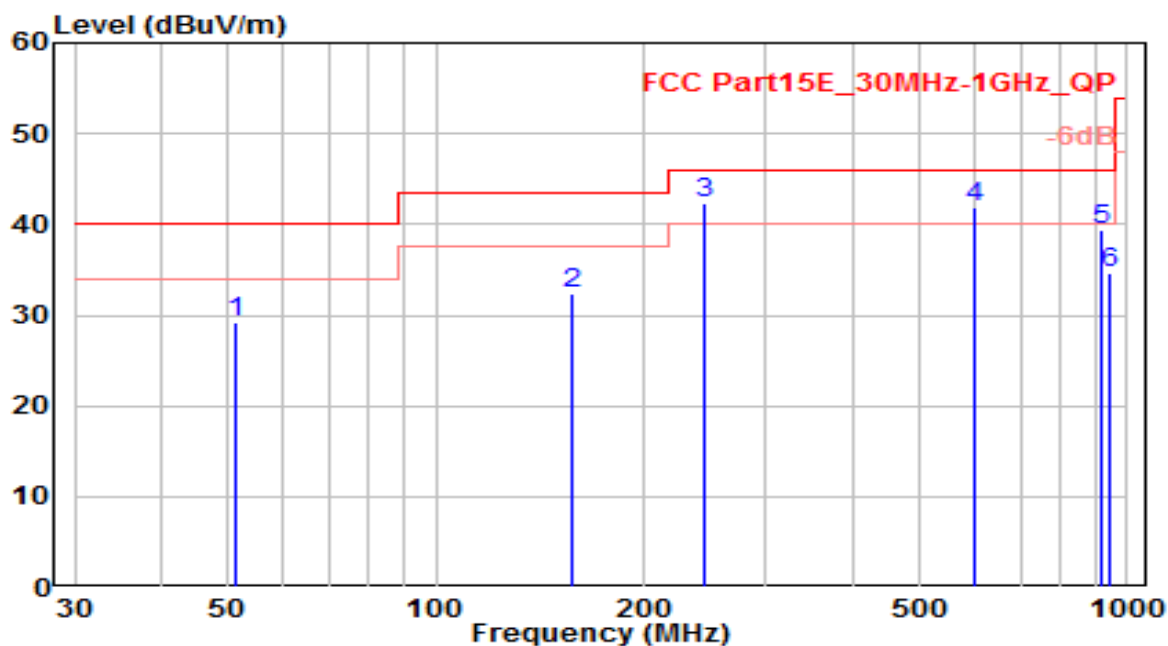


18GHz ~40GHz Test Setup:



7.7.5. Test Result

EUT	Wireless Streaming Station	Date of Test	2020-04-01
Factor	VULB 9162	Temp. / Humidity	24°C /69%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_RX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

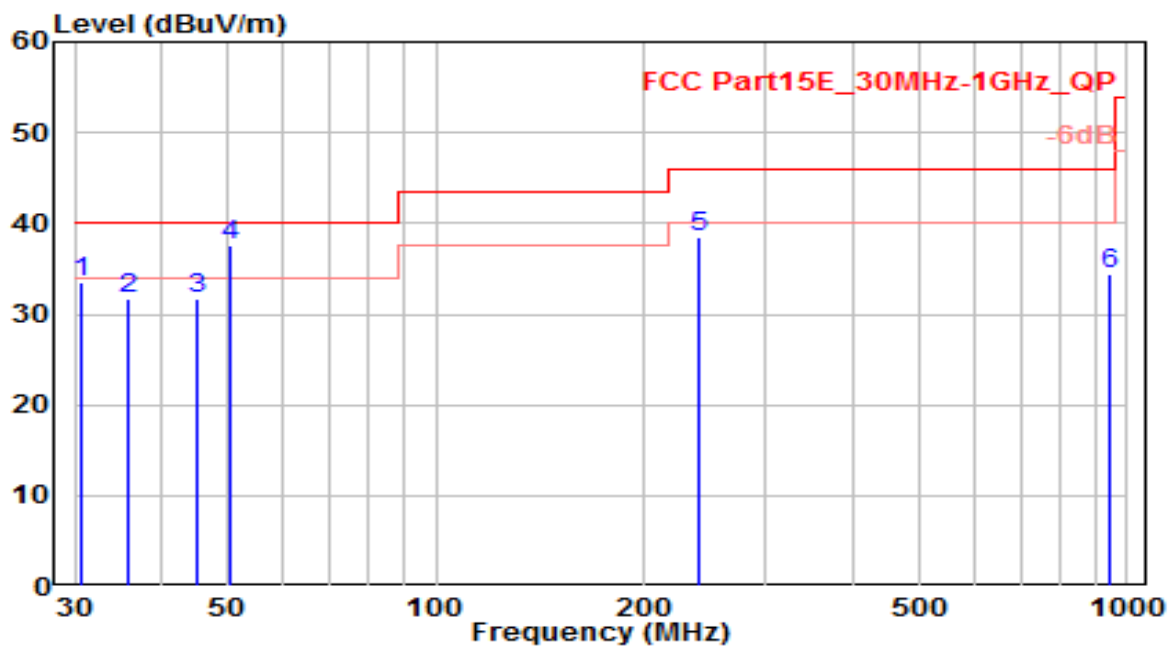


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	51.124	7.75	21.48	29.23	-10.77	40.00	150	400	QP
2	157.332	16.26	16.03	32.29	-11.21	43.50	200	160	QP
3	* 244.856	22.08	20.37	42.45	-3.55	46.00	100	280	QP
4	599.947	14.43	27.50	41.93	-4.07	46.00	300	65	QP
5	919.628	7.90	31.58	39.48	-6.52	46.00	400	125	QP
6	946.478	2.80	31.74	34.54	-11.46	46.00	100	45	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (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	Wireless Streaming Station	Date of Test	2020-04-01
Factor	VULB 9162	Temp. / Humidity	24°C /69%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_RX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

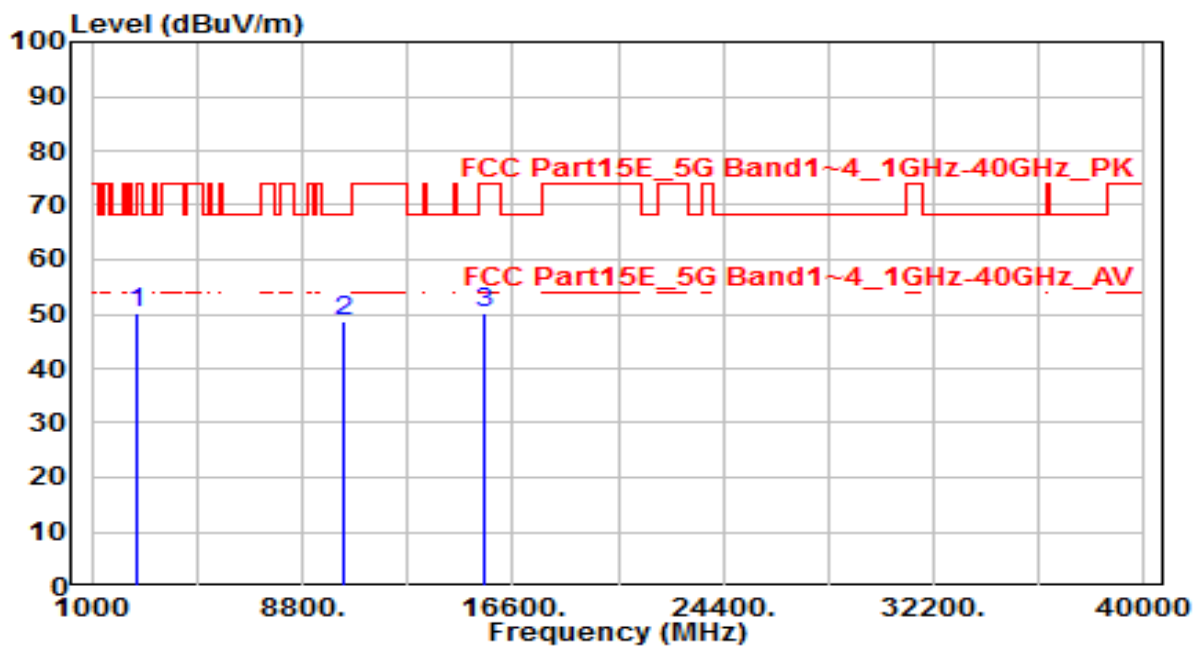


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	30.635	15.37	18.13	33.50	-6.50	40.00	100	-40	QP
2	35.968	12.45	19.34	31.79	-8.21	40.00	100	-40	QP
3	45.252	10.21	21.42	31.63	-8.37	40.00	100	-40	QP
4	* 50.441	16.11	21.58	37.69	-2.31	40.00	100	-40	QP
5	240.856	18.33	20.23	38.56	-7.44	46.00	100	-40	QP
6	946.999	2.60	31.74	34.34	-11.66	46.00	100	175	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

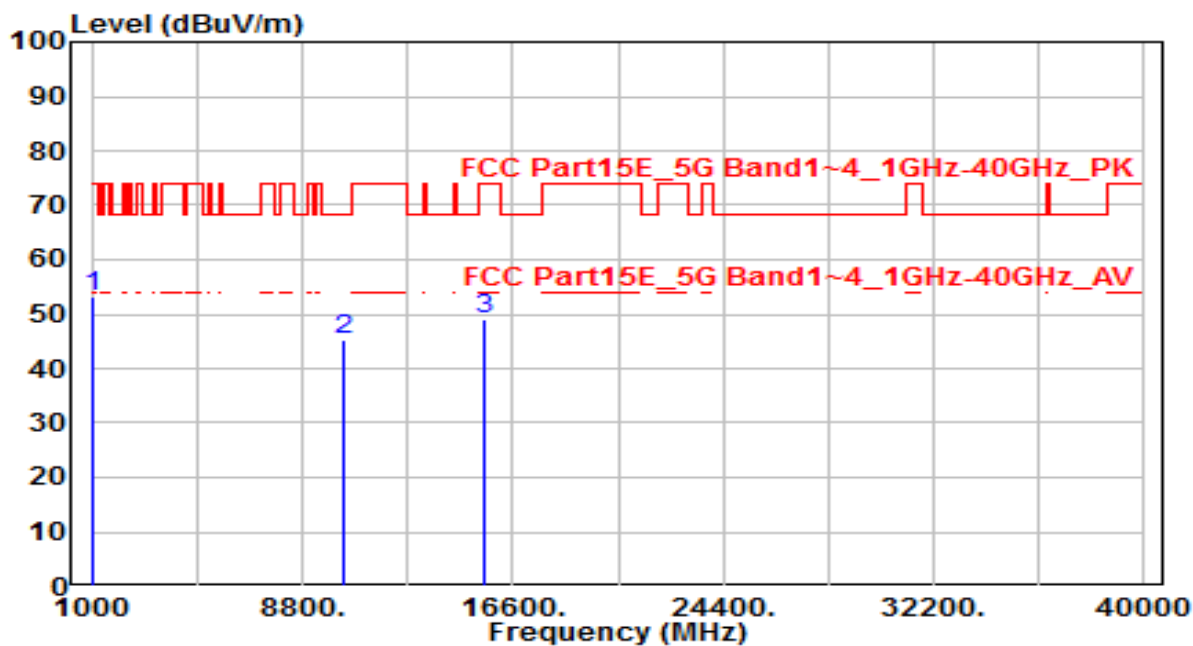


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2633.546	52.55	-2.41	50.14	-18.06	68.20	150	400	Peak
2		10360.000	32.15	16.42	48.57	-19.63	68.20	150	400	Peak
3		15540.000	29.28	20.91	50.20	-23.80	74.00	150	400	Peak

Note:

1. " *" , means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

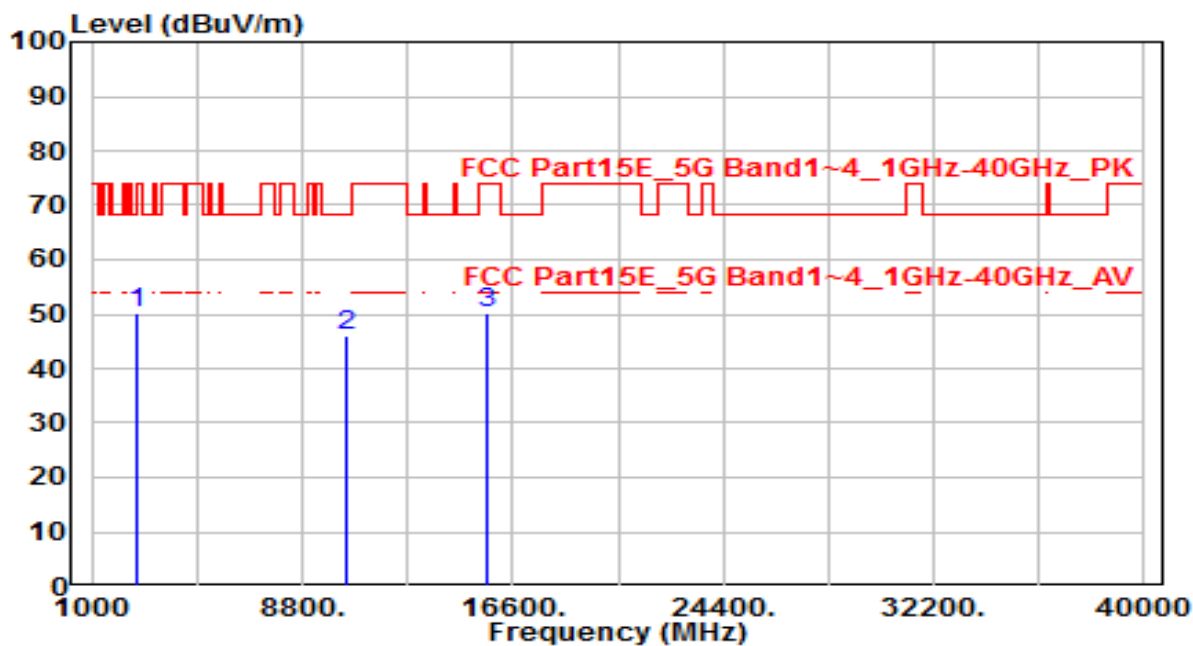


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	1054.654	60.56	-7.26	53.30	-20.70	74.00	150	400	Peak
2		10360.000	28.85	16.42	45.27	-22.93	68.20	150	400	Peak
3		15540.000	27.97	20.91	48.88	-25.12	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

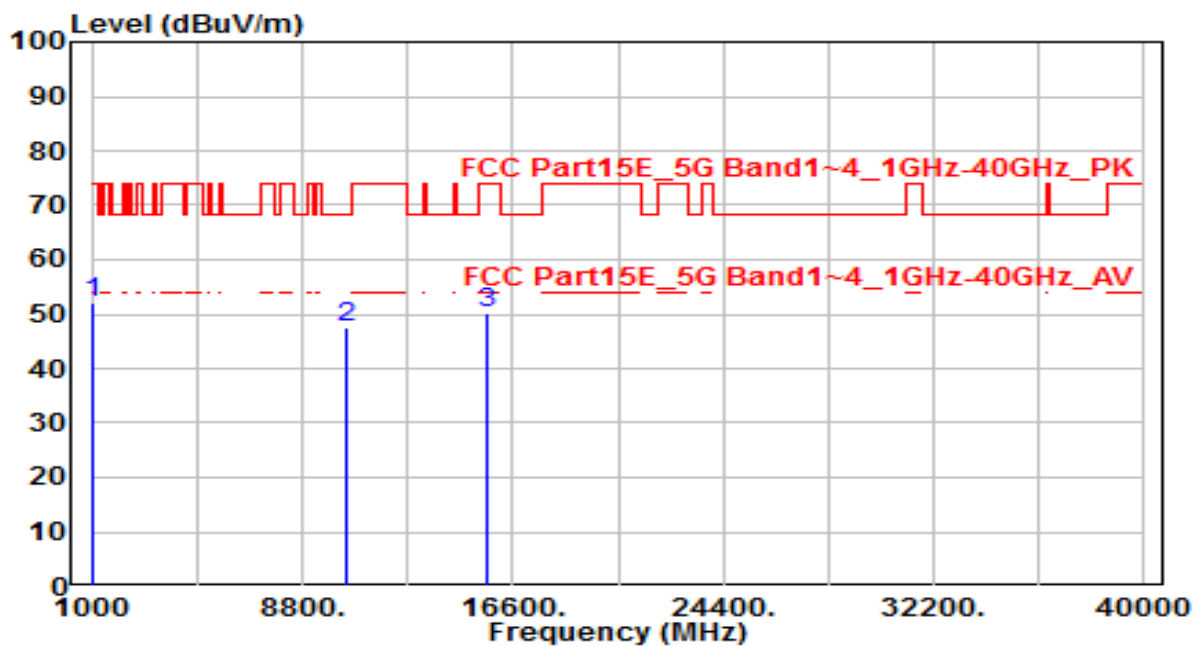


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2633.540	52.78	-2.41	50.37	-17.83	68.20	150	400	Peak
2		10440.000	29.46	16.68	46.14	-22.06	68.20	150	400	Peak
3		15660.000	29.47	20.81	50.28	-23.72	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

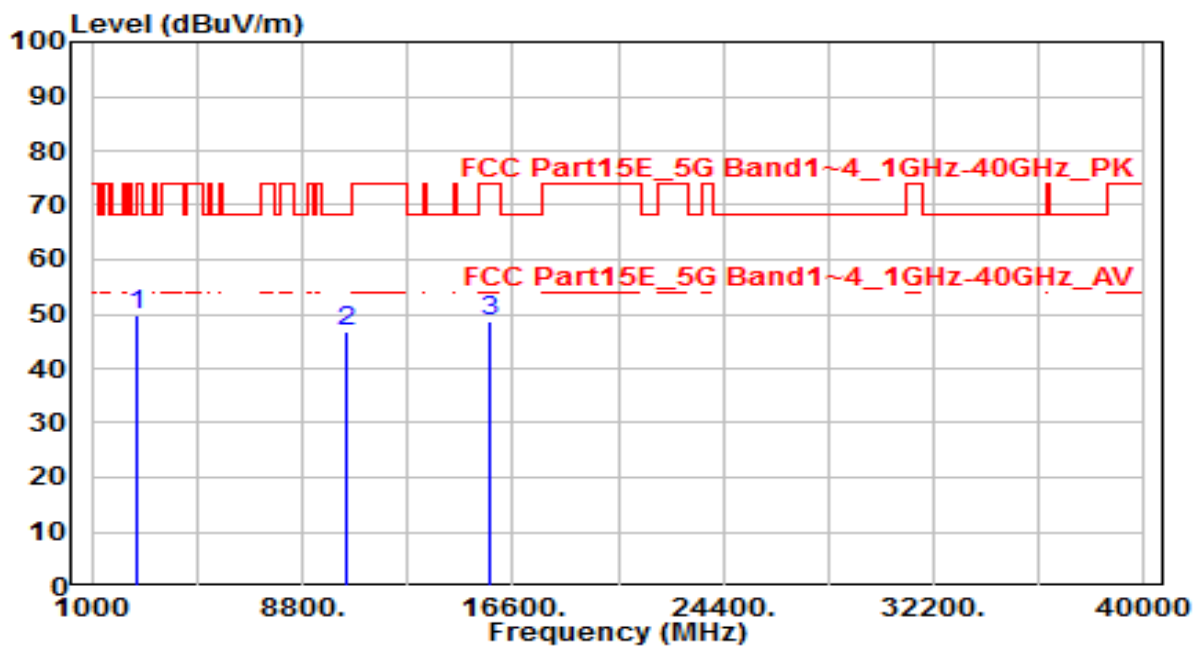


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.534	59.35	-7.26	52.09	-21.91	74.00	150	400	Peak
2	* 10440.000	30.95	16.68	47.63	-20.57	68.20	150	400	Peak
3	15660.000	29.22	20.81	50.03	-23.97	74.00	150	400	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

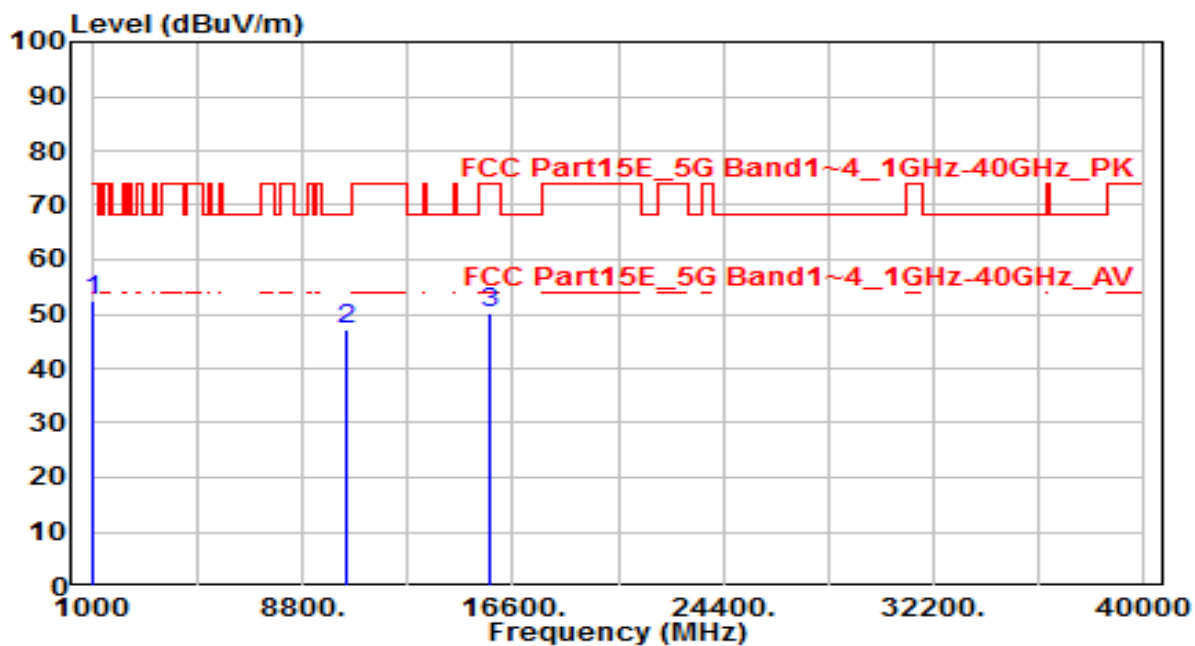


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2633.654	52.35	-2.41	49.94	-18.26	68.20	150	400	Peak
2	10480.000	29.87	16.81	46.68	-21.52	68.20	150	400	Peak
3	15720.000	27.91	20.76	48.66	-25.34	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

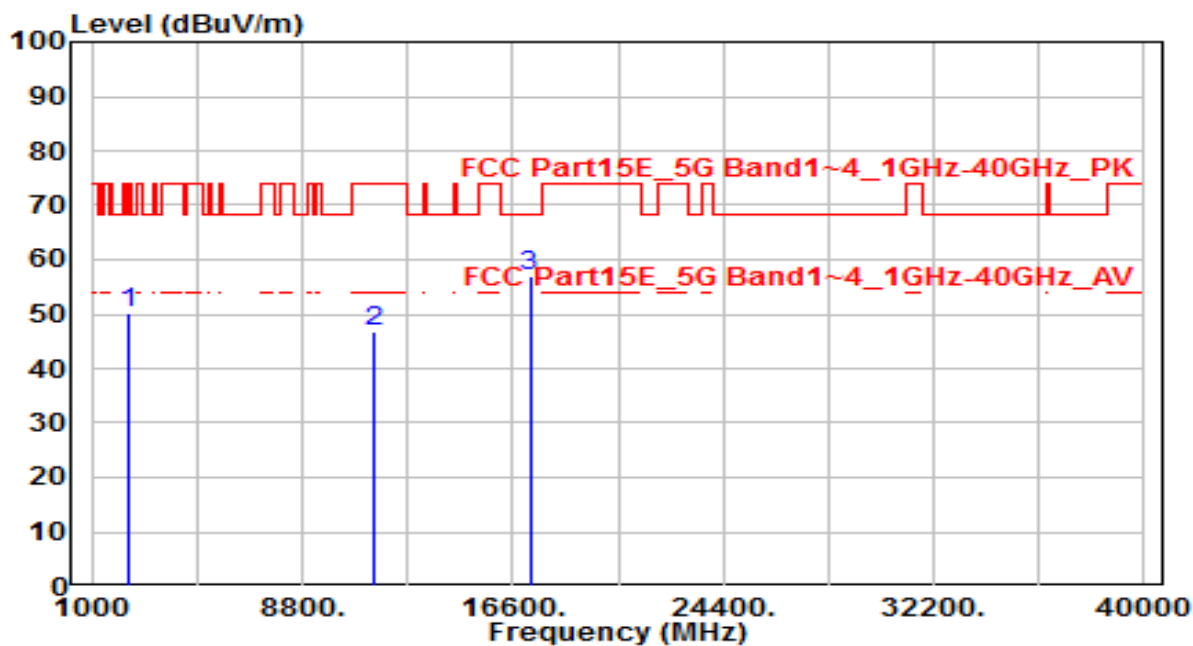


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.350	59.63	-7.26	52.36	-21.64	74.00	150	400	Peak
2	* 10480.000	30.41	16.81	47.21	-20.99	68.20	150	400	Peak
3	15720.000	29.35	20.76	50.11	-23.89	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

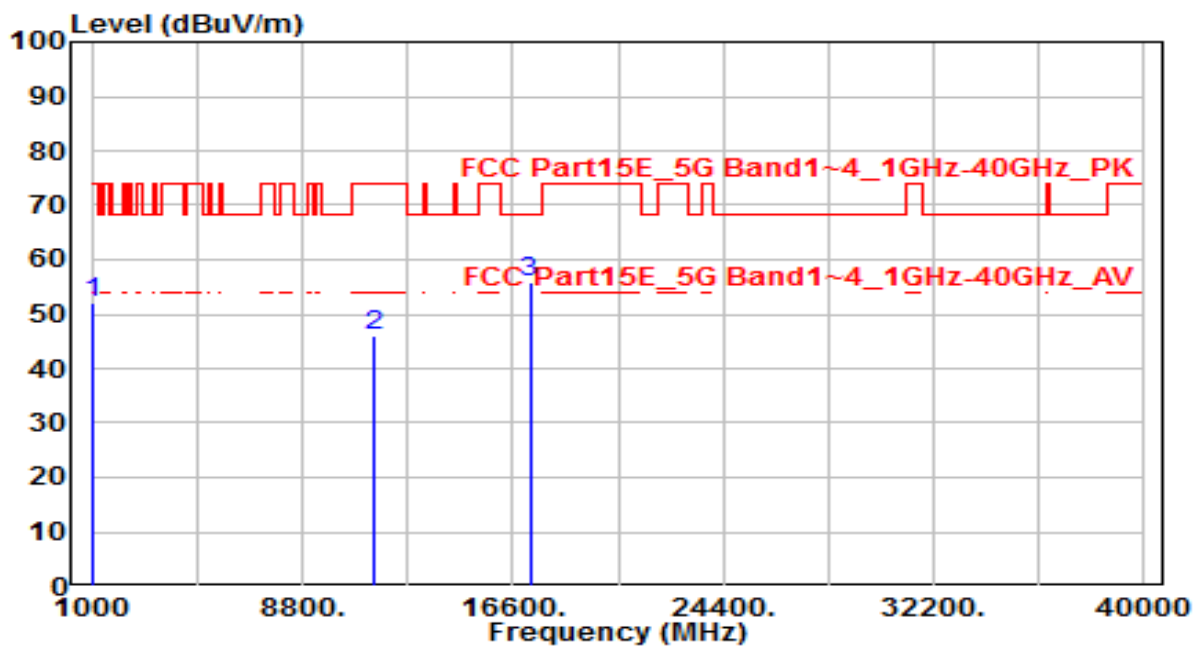


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2361.534	52.86	-2.86	50.01	-23.99	74.00	150	400	Peak
2	11490.000	28.58	18.04	46.62	-27.38	74.00	150	400	Peak
3	* 17235.000	29.17	27.73	56.90	-11.30	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

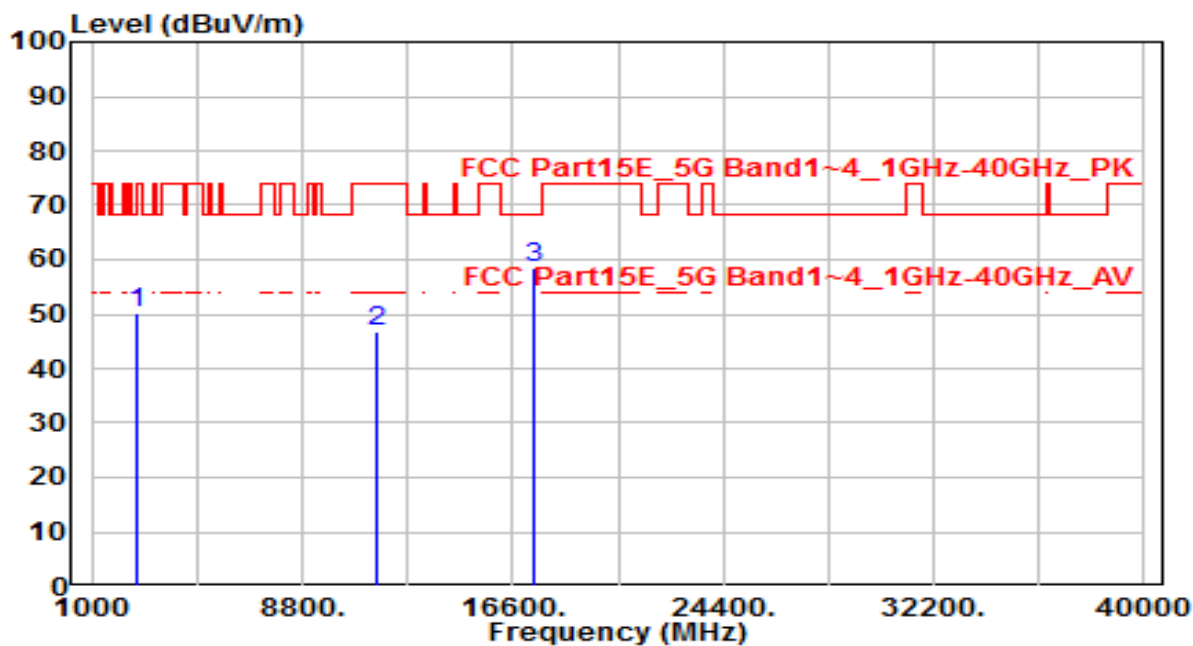


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.635	59.38	-7.26	52.12	-21.88	74.00	150	400	Peak
2	11490.000	28.17	18.04	46.21	-27.79	74.00	150	400	Peak
3	* 17235.000	28.26	27.73	56.00	-12.20	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

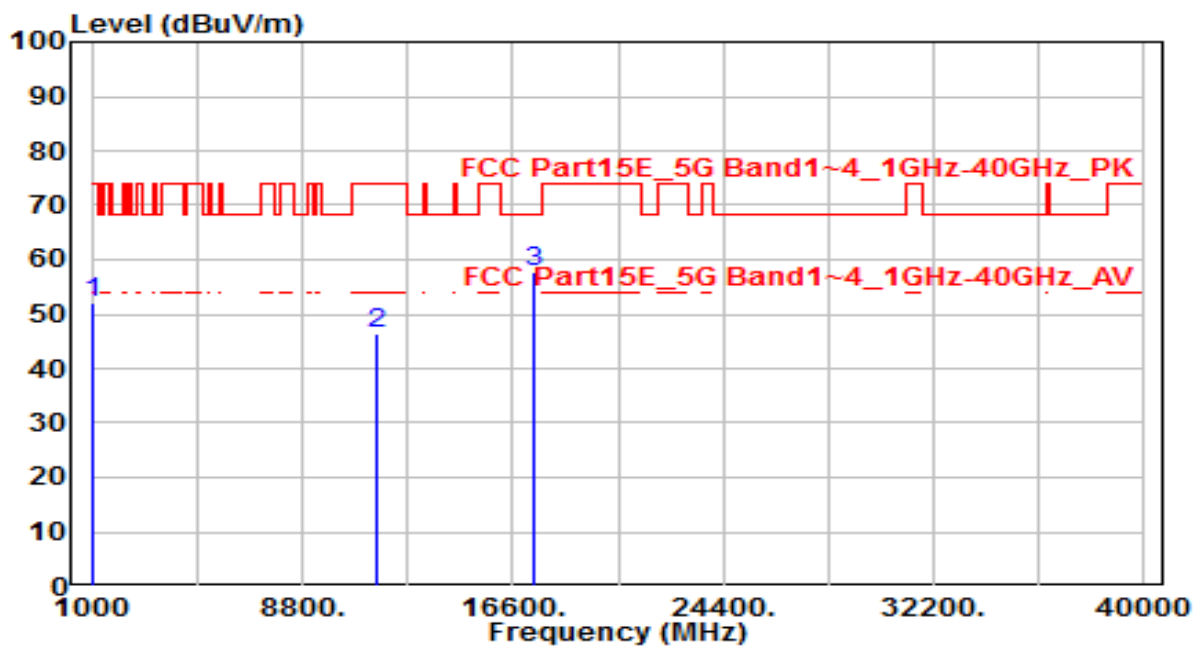


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2630.543	52.68	-2.41	50.28	-17.92	68.20	150	400	Peak
2	11570.000	28.92	18.02	46.94	-27.06	74.00	150	400	Peak
3	* 17355.000	29.53	28.87	58.40	-9.80	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

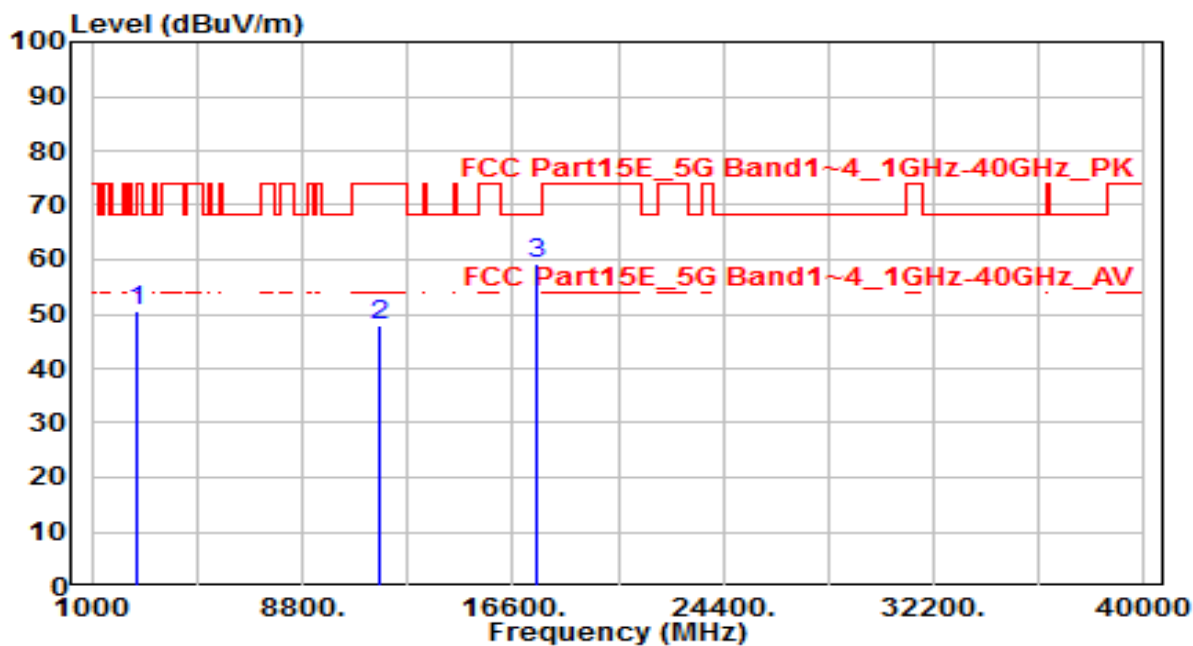


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1053.354	59.24	-7.27	51.97	-22.03	74.00	150	400	Peak
2	11570.000	28.36	18.02	46.37	-27.63	74.00	150	400	Peak
3	* 17355.000	28.91	28.87	57.78	-10.42	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

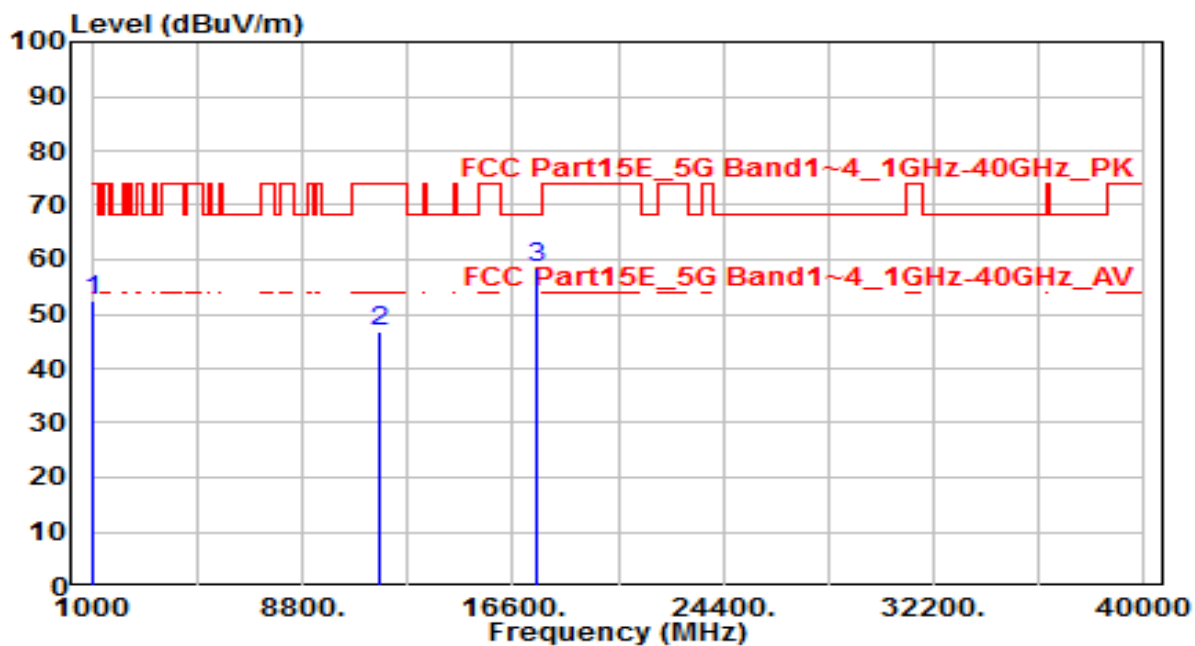


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2629.546	52.82	-2.40	50.42	-17.78	68.20	150	400	Peak
2	11650.000	29.86	17.98	47.84	-26.16	74.00	150	400	Peak
3	* 17475.000	29.24	30.00	59.24	-8.96	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

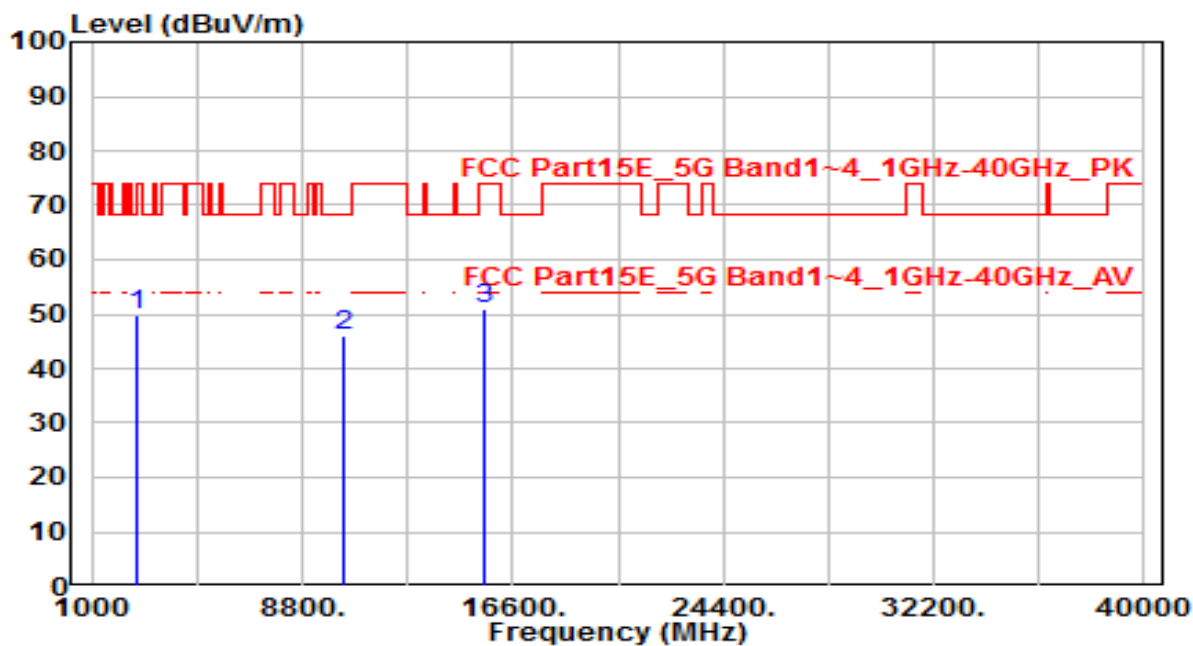


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1055.564	59.86	-7.26	52.61	-21.39	74.00	150	400	Peak
2	11650.000	28.87	17.98	46.85	-27.15	74.00	150	400	Peak
3	* 17475.000	28.39	30.00	58.39	-9.81	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

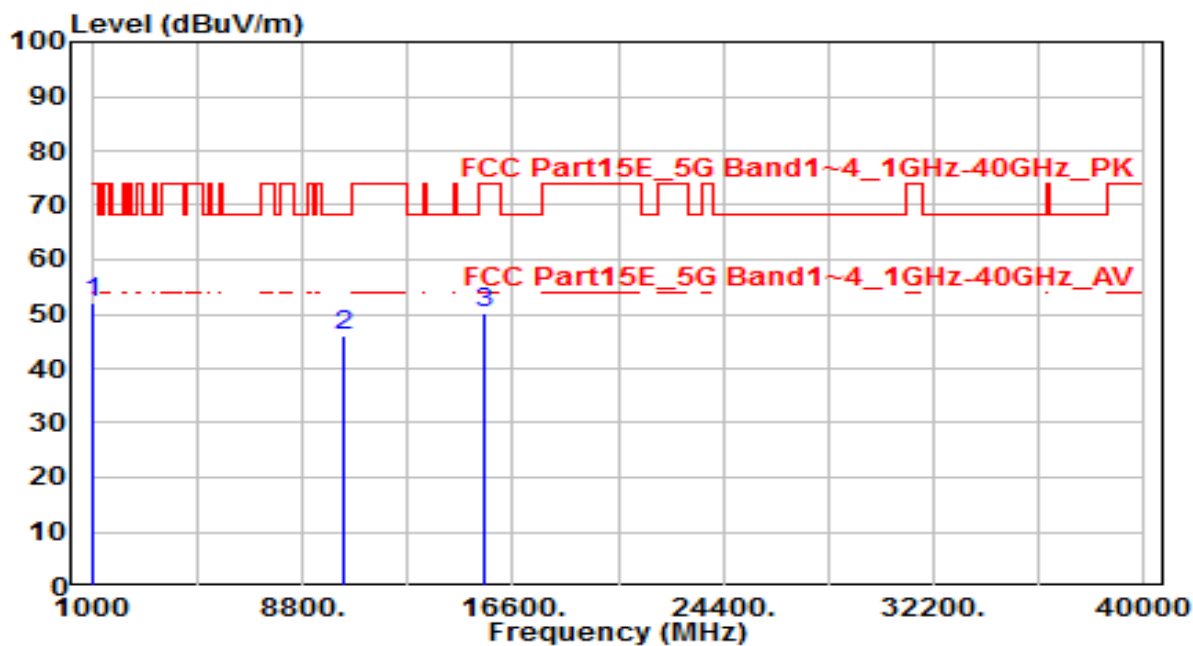


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2630.543	52.16	-2.41	49.76	-18.44	68.20	150	400	Peak
2		10360.000	29.57	16.42	45.99	-22.21	68.20	150	400	Peak
3		15540.000	30.19	20.91	51.10	-22.90	74.00	150	400	Peak

Note:

1. " *" , means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

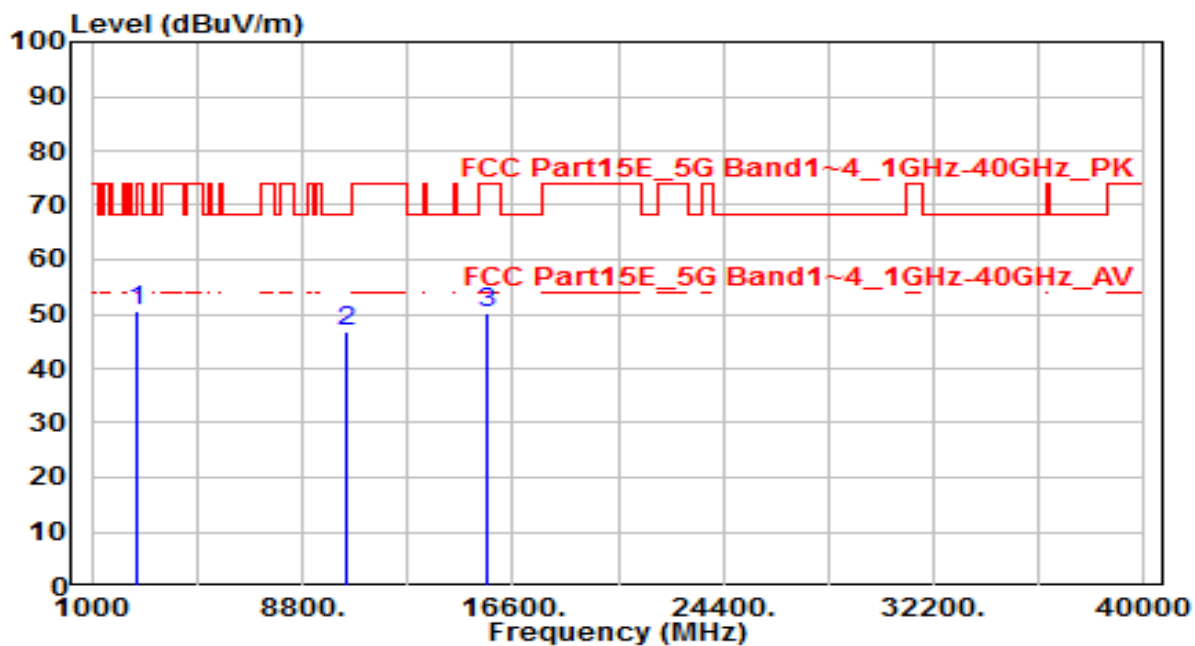


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	1054.365	59.35	-7.26	52.09	-21.91	74.00	150	400	Peak
2		10360.000	29.81	16.42	46.23	-21.97	68.20	150	400	Peak
3		15540.000	29.39	20.91	50.31	-23.69	74.00	150	400	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

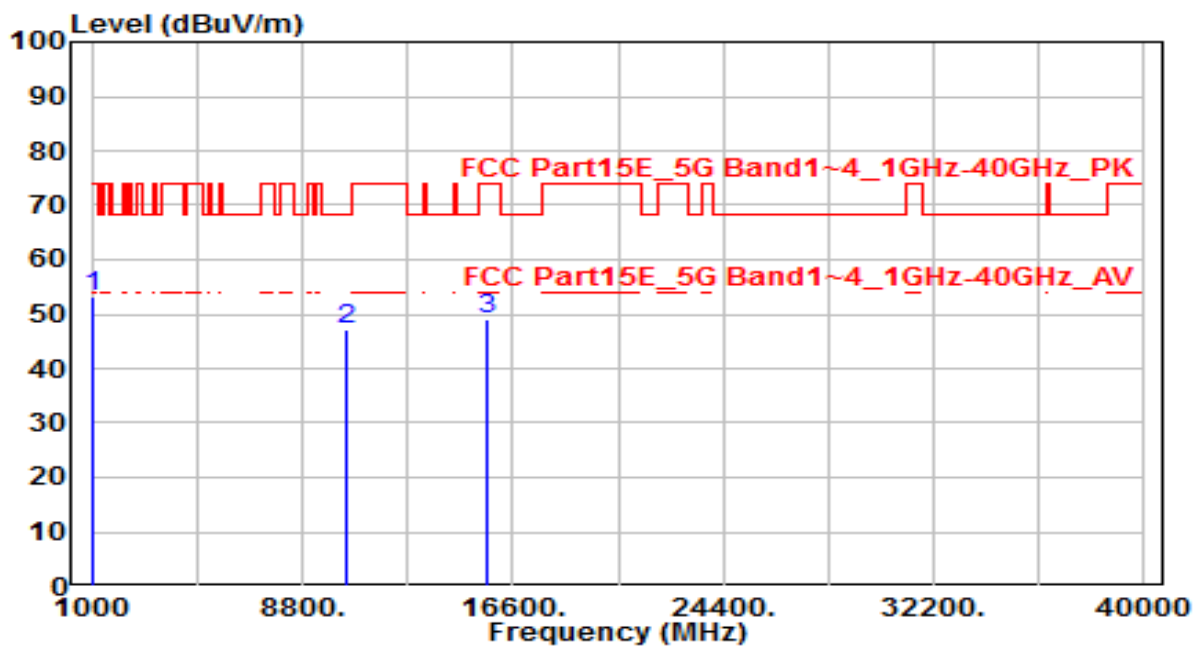


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2630.545	52.86	-2.41	50.46	-17.74	68.20	150	400	Peak
2	10440.000	29.95	16.68	46.62	-21.58	68.20	150	400	Peak
3	15660.000	29.26	20.81	50.07	-23.93	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

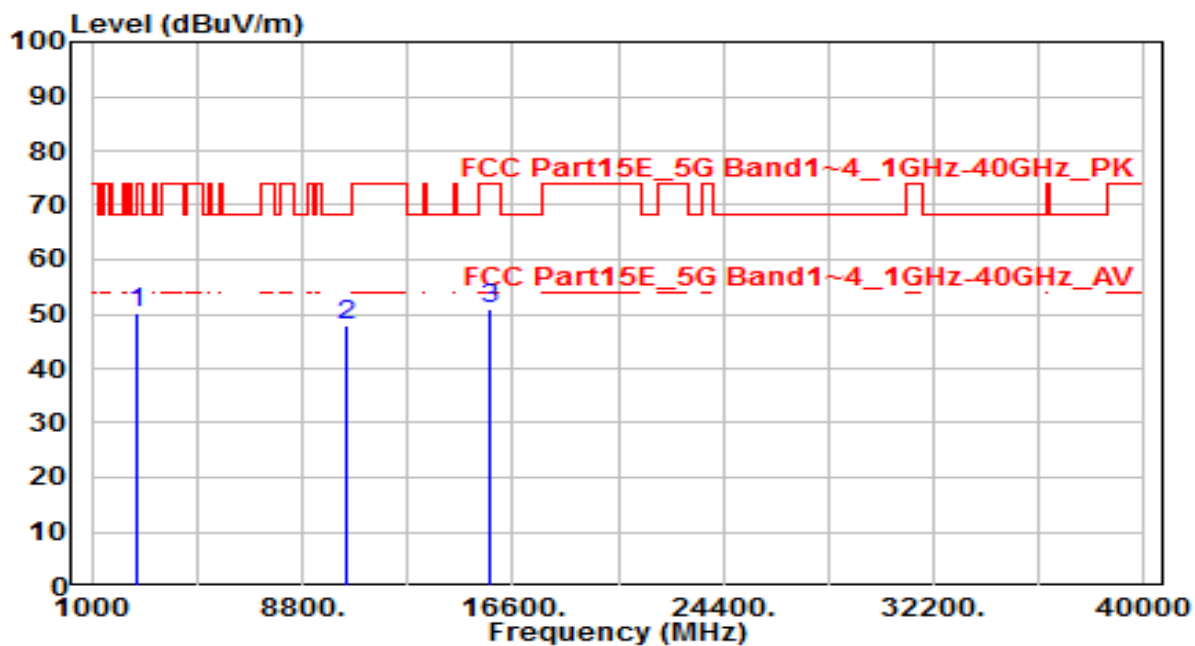


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	1053.534	60.52	-7.27	53.25	-20.75	74.00	150	400	Peak
2		10440.000	30.52	16.68	47.20	-21.00	68.20	150	400	Peak
3		15660.000	28.27	20.81	49.08	-24.92	74.00	150	400	Peak

Note:

1. " *" , means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

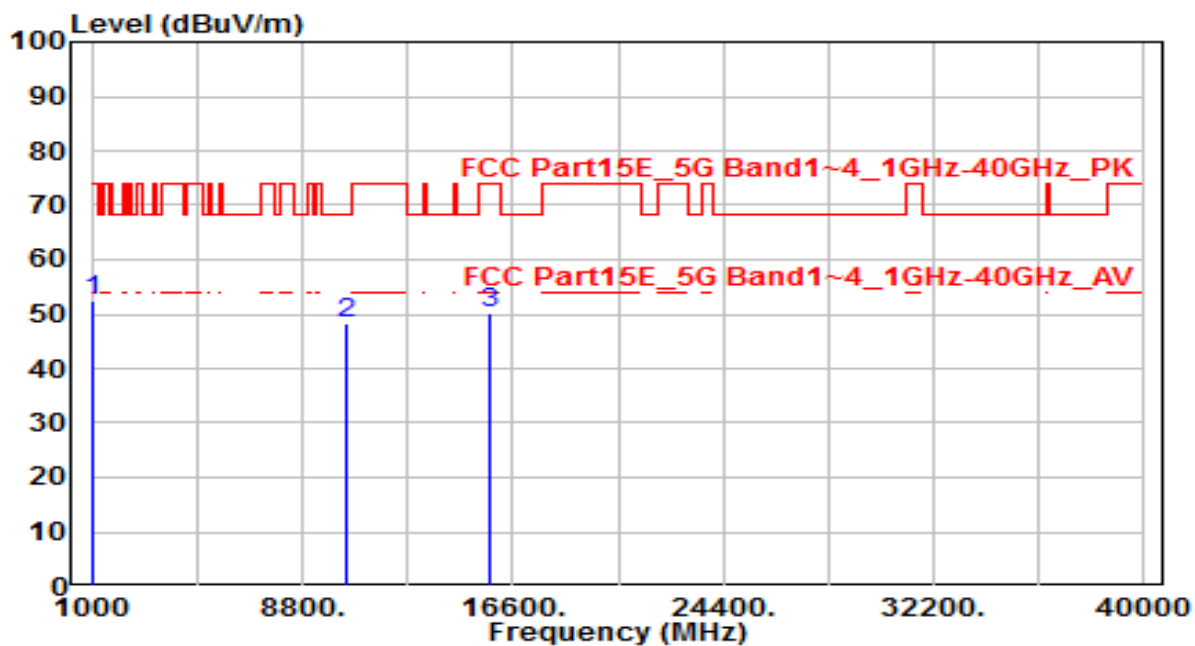


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2631.546	52.56	-2.41	50.16	-18.04	68.20	150	400	Peak
2	10480.000	30.98	16.81	47.79	-20.41	68.20	150	400	Peak
3	15720.000	30.18	20.76	50.94	-23.06	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

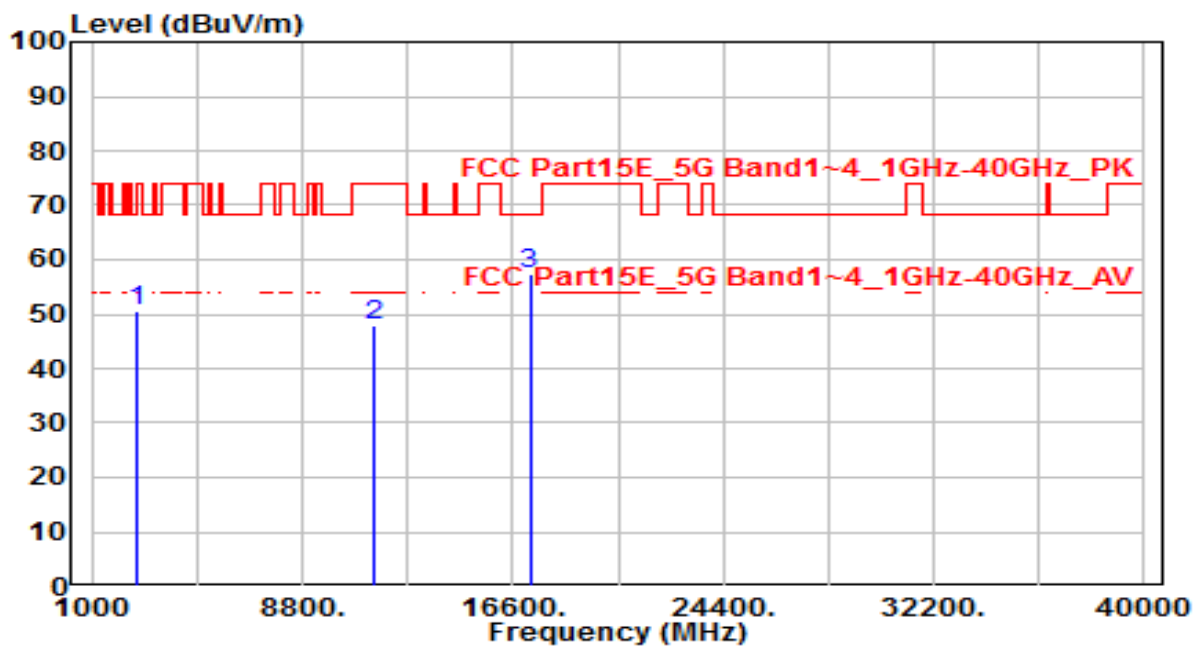


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1052.354	59.59	-7.27	52.32	-21.68	74.00	150	400	Peak
2	* 10480.000	31.59	16.81	48.40	-19.80	68.20	150	400	Peak
3	15720.000	29.29	20.76	50.05	-23.95	74.00	150	400	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

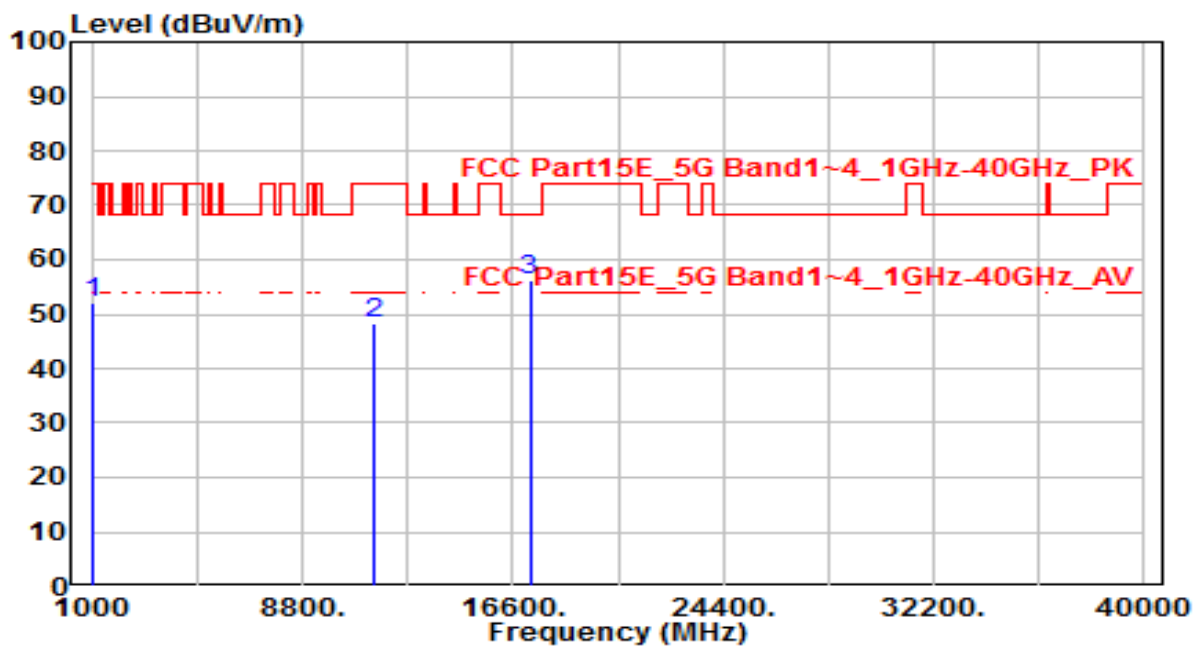


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2630.543	52.84	-2.41	50.44	-17.76	68.20	150	400	Peak
2	11490.000	29.92	18.04	47.96	-26.04	74.00	150	400	Peak
3	* 17235.000	29.75	27.73	57.49	-10.71	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

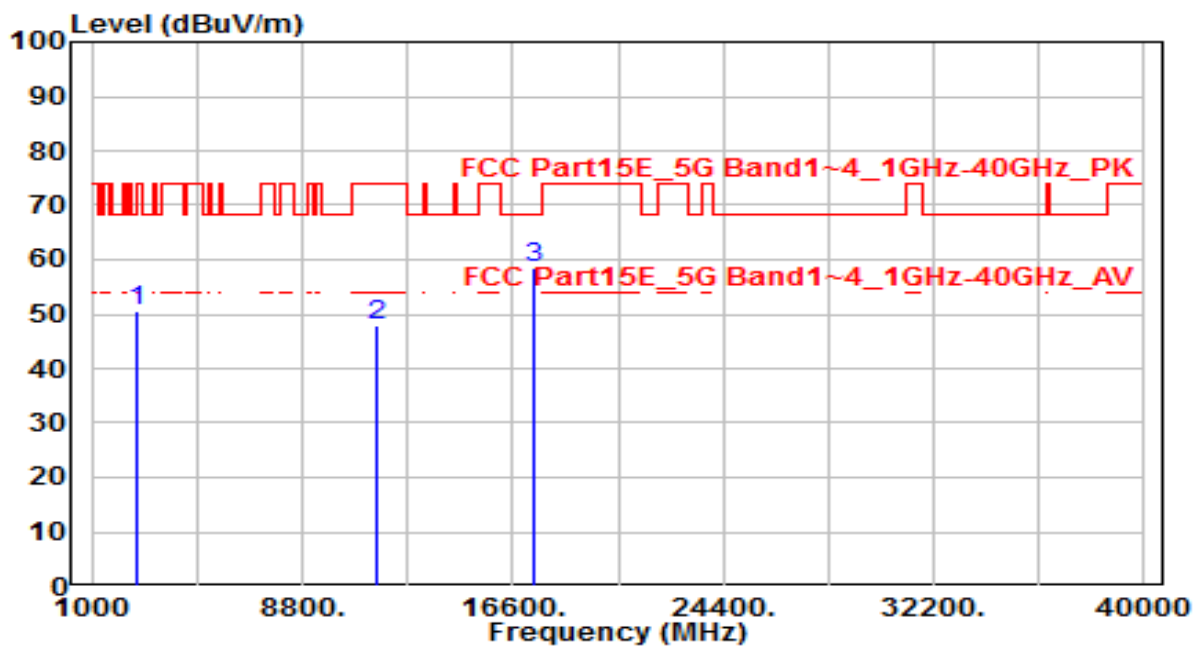


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1053.385	59.33	-7.27	52.06	-21.94	74.00	150	400	Peak
2	11490.000	30.28	18.04	48.32	-25.68	74.00	150	400	Peak
3	* 17235.000	28.54	27.73	56.27	-11.93	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

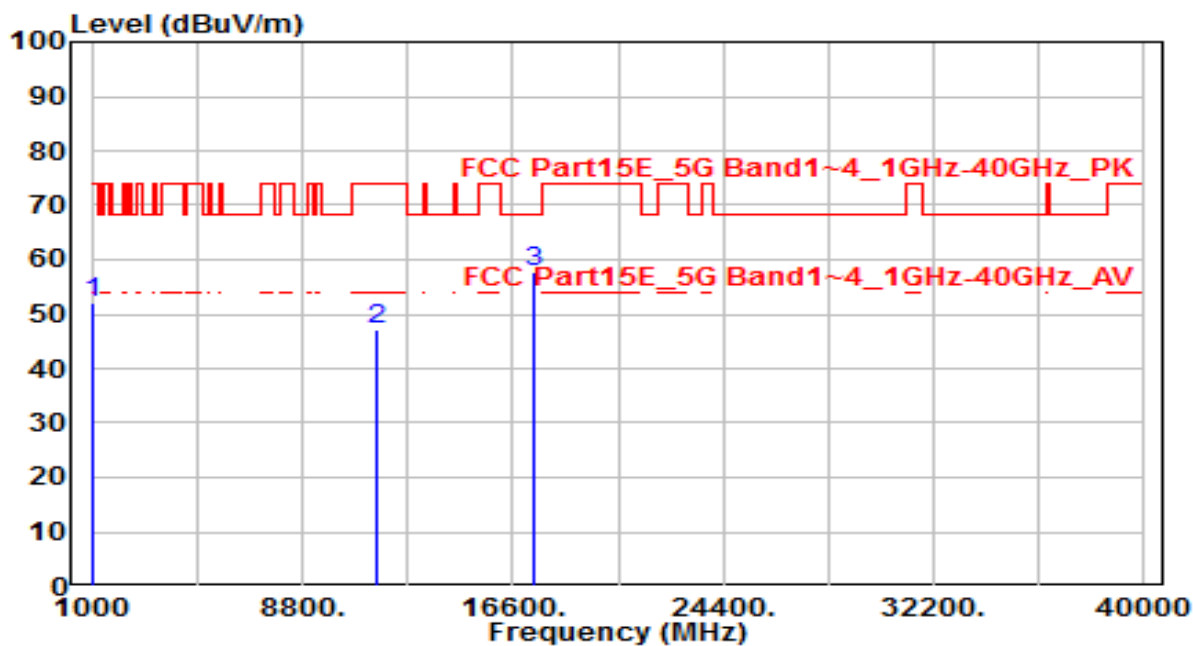


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2631.546	52.97	-2.41	50.56	-17.64	68.20	150	400	Peak
2	11570.000	29.88	18.02	47.89	-26.11	74.00	150	400	Peak
3	* 17355.000	29.51	28.87	58.38	-9.82	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

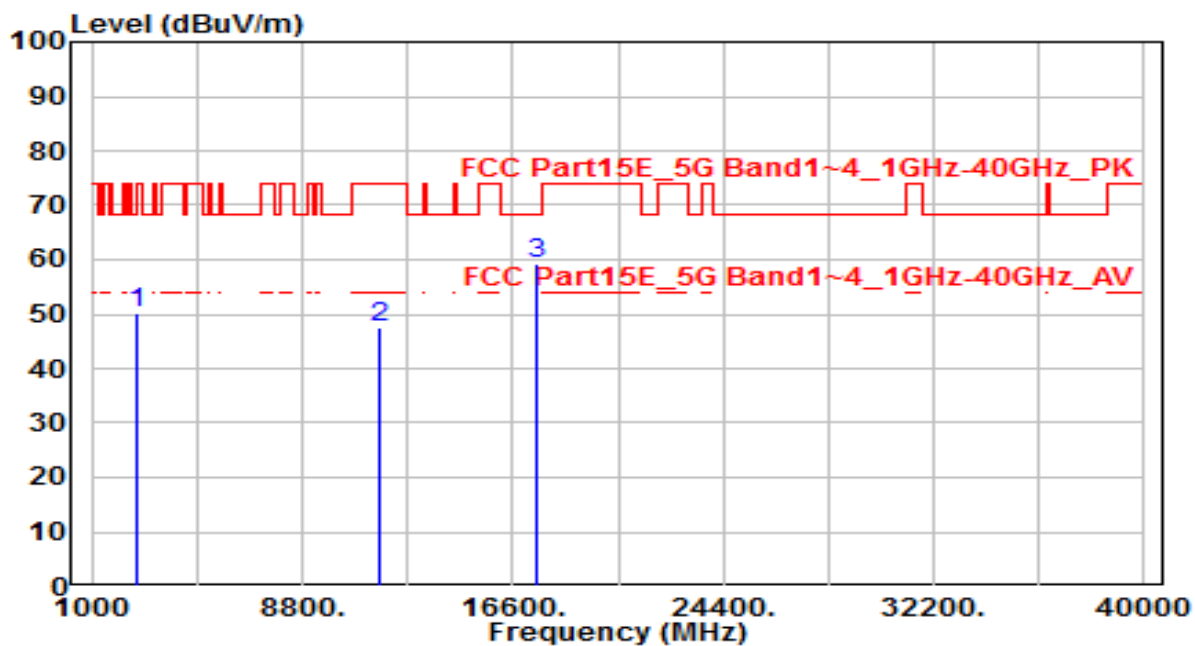


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.354	59.37	-7.26	52.11	-21.89	74.00	150	400	Peak
2	11570.000	29.14	18.02	47.15	-26.85	74.00	150	400	Peak
3	* 17355.000	28.71	28.87	57.58	-10.62	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

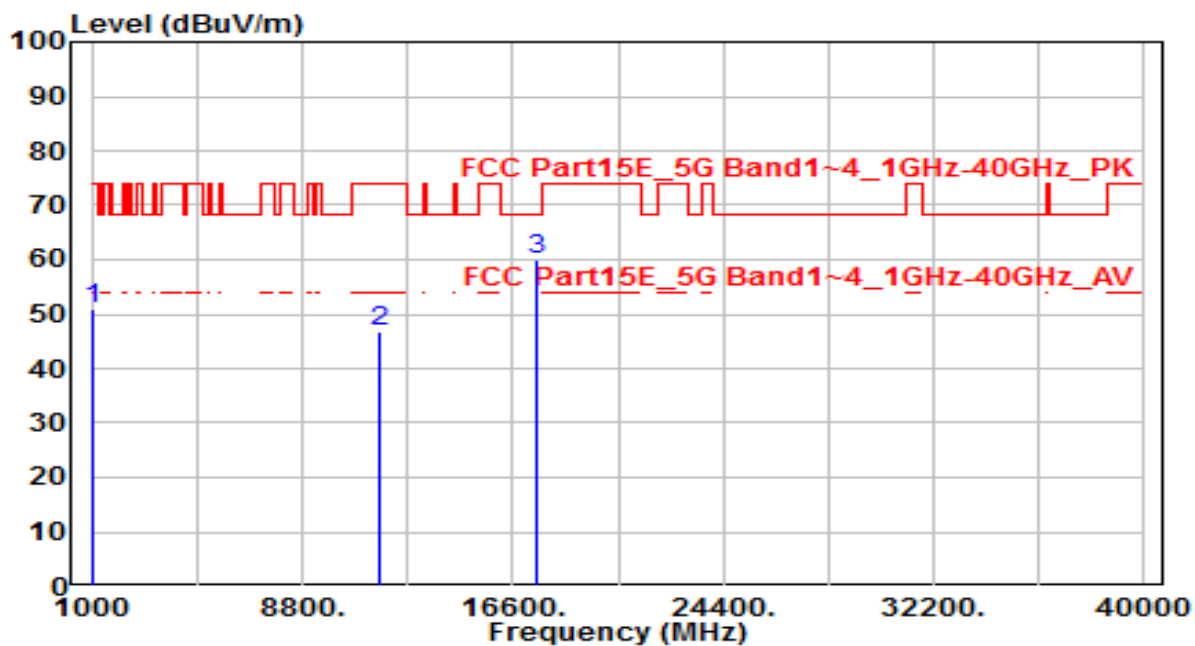


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2630.546	52.65	-2.41	50.25	-17.95	68.20	150	400	Peak
2	11650.000	29.55	17.98	47.53	-26.47	74.00	150	400	Peak
3	* 17475.000	29.18	30.00	59.18	-9.02	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

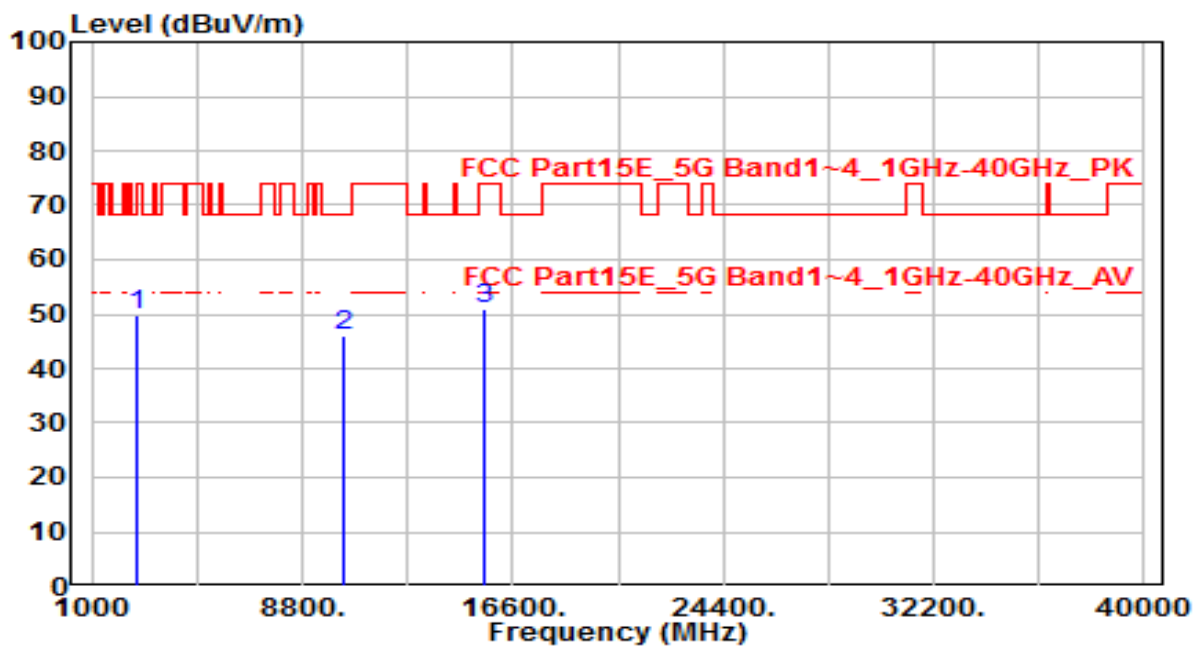


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1053.354	58.09	-7.27	50.82	-23.18	74.00	150	400	Peak
2	11650.000	28.91	17.98	46.89	-27.11	74.00	150	400	Peak
3	* 17475.000	29.94	30.00	59.94	-8.26	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

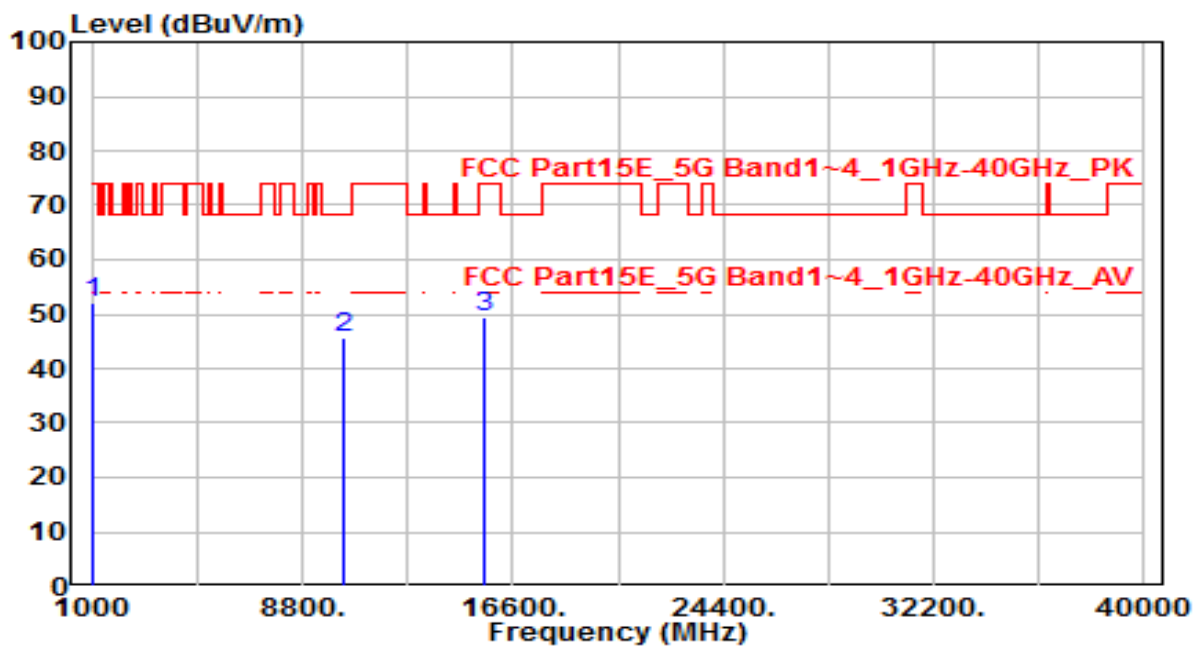


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2632.541	52.12	-2.41	49.71	-18.49	68.20	150	400	Peak
2	10380.000	29.52	16.48	46.00	-22.20	68.20	150	400	Peak
3	15570.000	30.17	20.89	51.06	-22.94	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

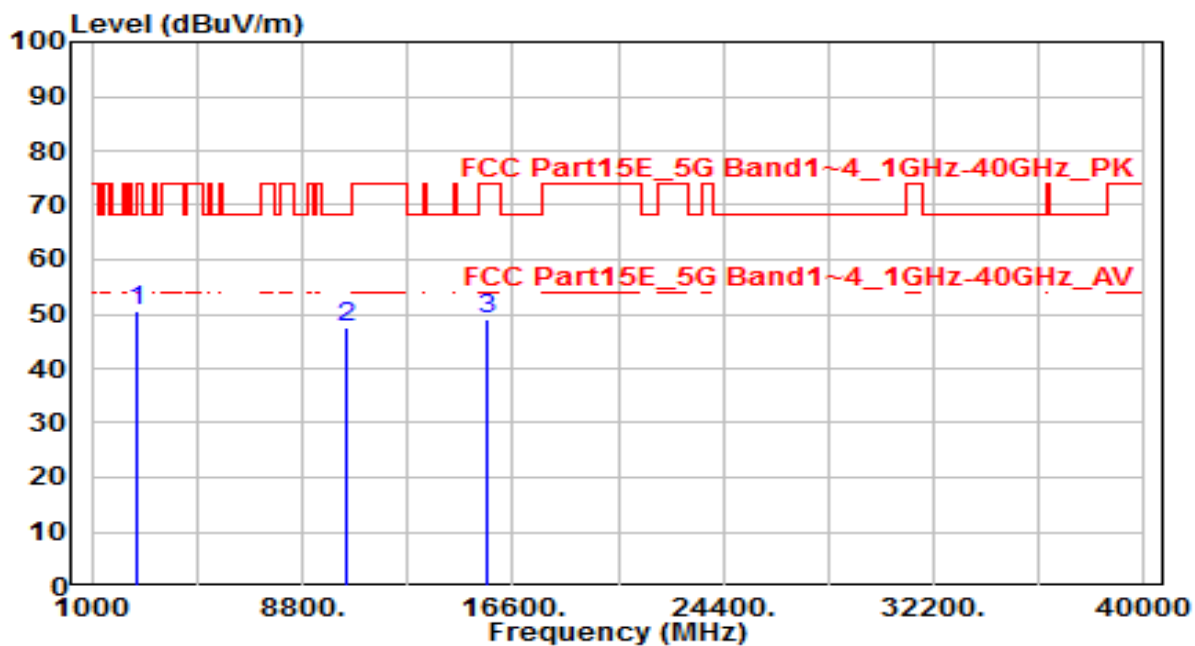


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	1054.635	59.46	-7.26	52.20	-21.80	74.00	150	400	Peak
2		10380.000	29.35	16.48	45.83	-22.37	68.20	150	400	Peak
3		15570.000	28.54	20.89	49.43	-24.57	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 46_ANT 0	Test Voltage	AC 120V/60Hz

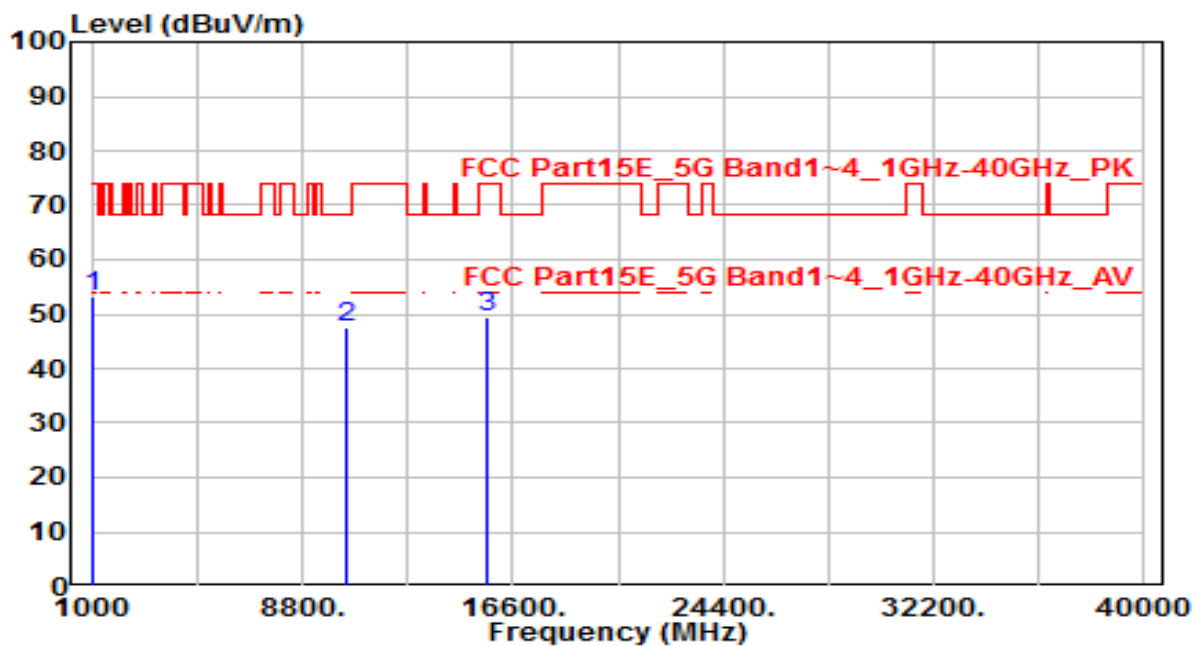


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2631.543	52.88	-2.41	50.47	-17.73	68.20	150	400	Peak
2	10460.000	30.83	16.74	47.57	-20.63	68.20	150	400	Peak
3	15690.000	28.38	20.78	49.16	-24.84	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 46_ANT 0	Test Voltage	AC 120V/60Hz

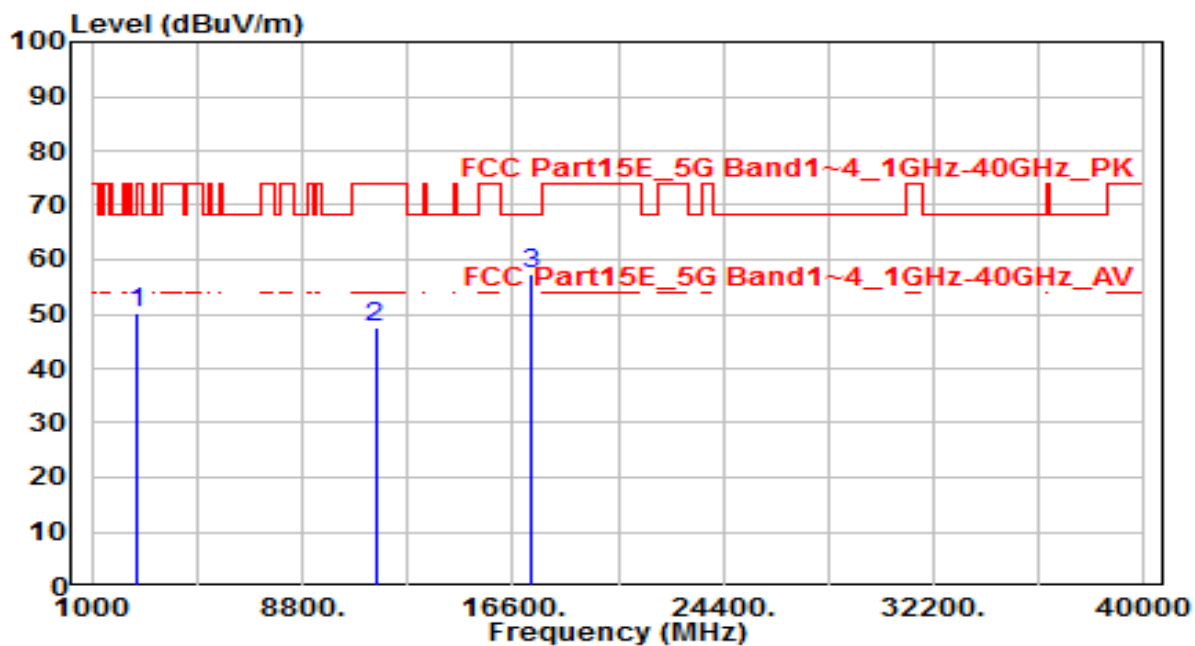


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1053.543	60.59	-7.27	53.32	-20.68	74.00	150	400	Peak
2	* 10460.000	30.87	16.74	47.61	-20.59	68.20	150	400	Peak
3	15690.000	28.64	20.78	49.42	-24.58	74.00	150	400	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

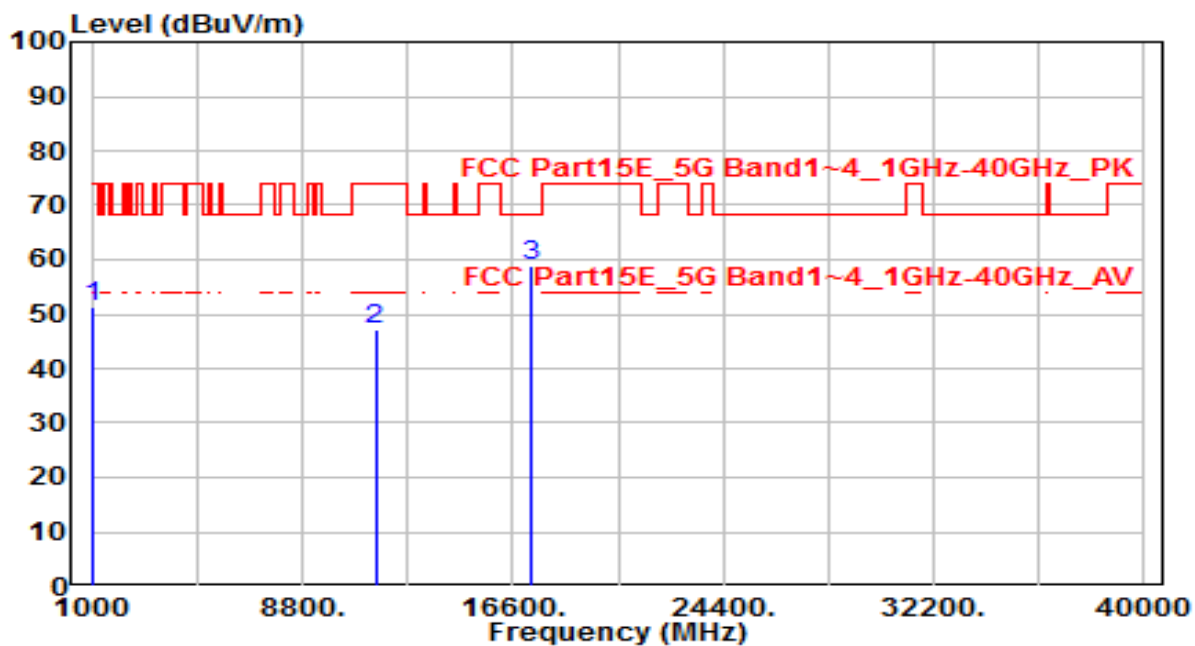


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2629.450	52.66	-2.40	50.25	-17.95	68.20	150	400	Peak
2	11510.000	29.68	18.05	47.73	-26.27	74.00	150	400	Peak
3	* 17265.000	29.43	28.02	57.45	-10.75	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

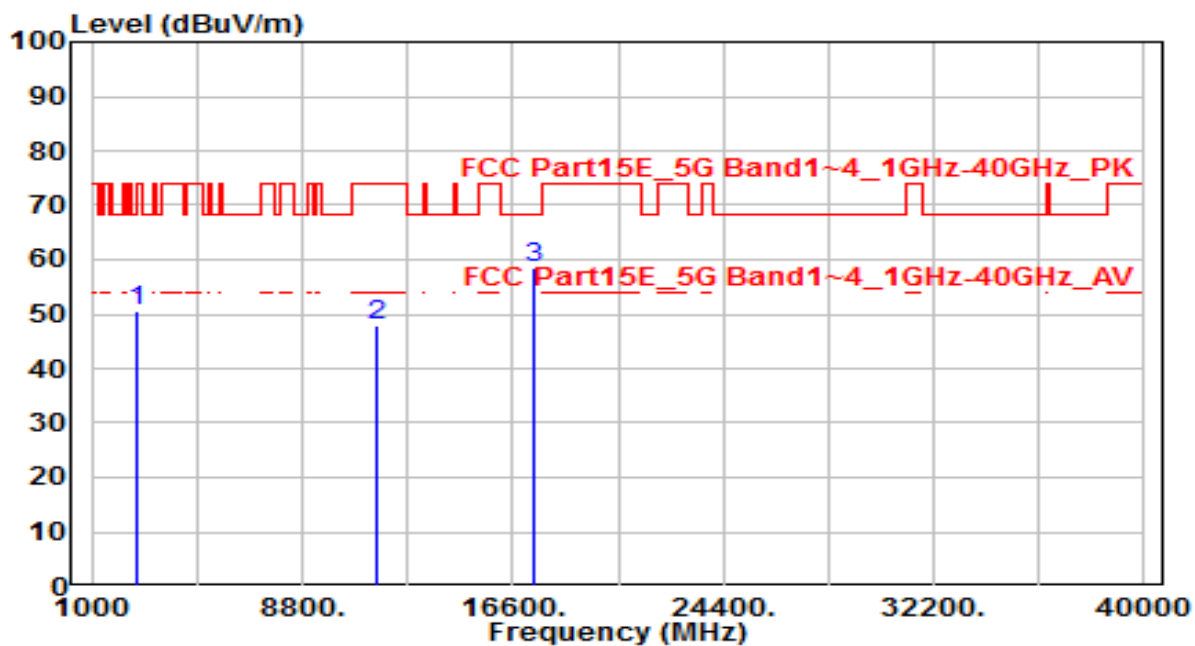


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1053.534	58.56	-7.27	51.29	-22.71	74.00	150	400	Peak
2	11510.000	28.96	18.05	47.00	-27.00	74.00	150	400	Peak
3	* 17265.000	30.69	28.02	58.71	-9.49	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

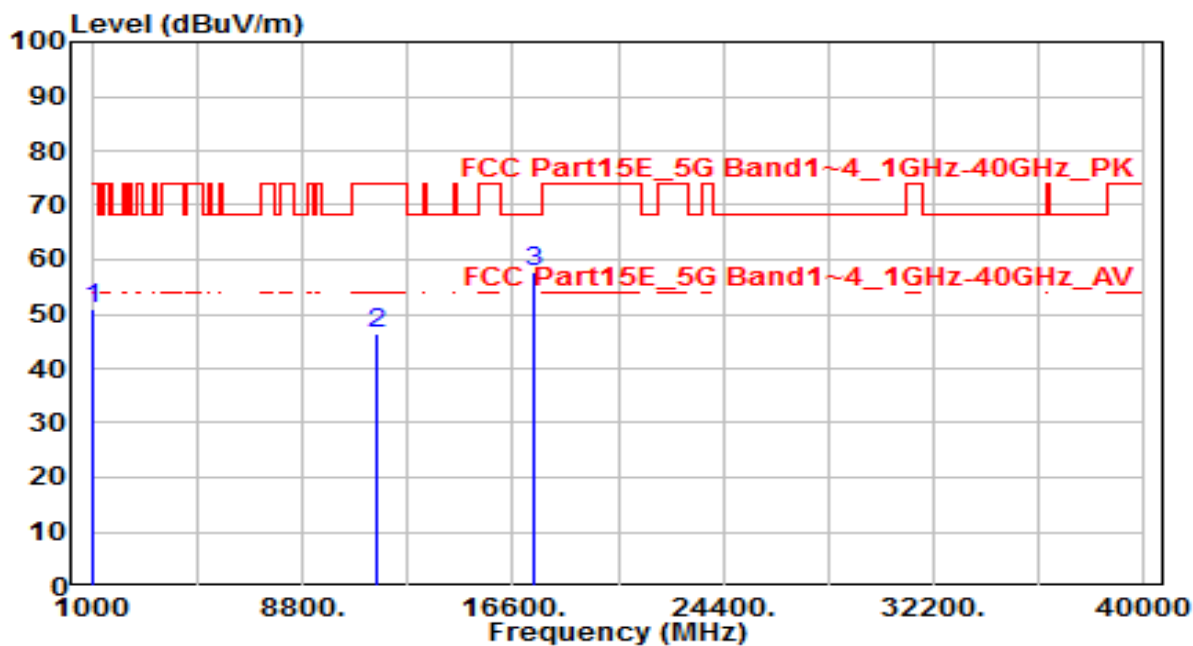


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2631.534	52.86	-2.41	50.46	-17.74	68.20	150	400	Peak
2	11590.000	29.90	18.01	47.91	-26.09	74.00	150	400	Peak
3	* 17385.000	29.47	29.15	58.62	-9.58	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

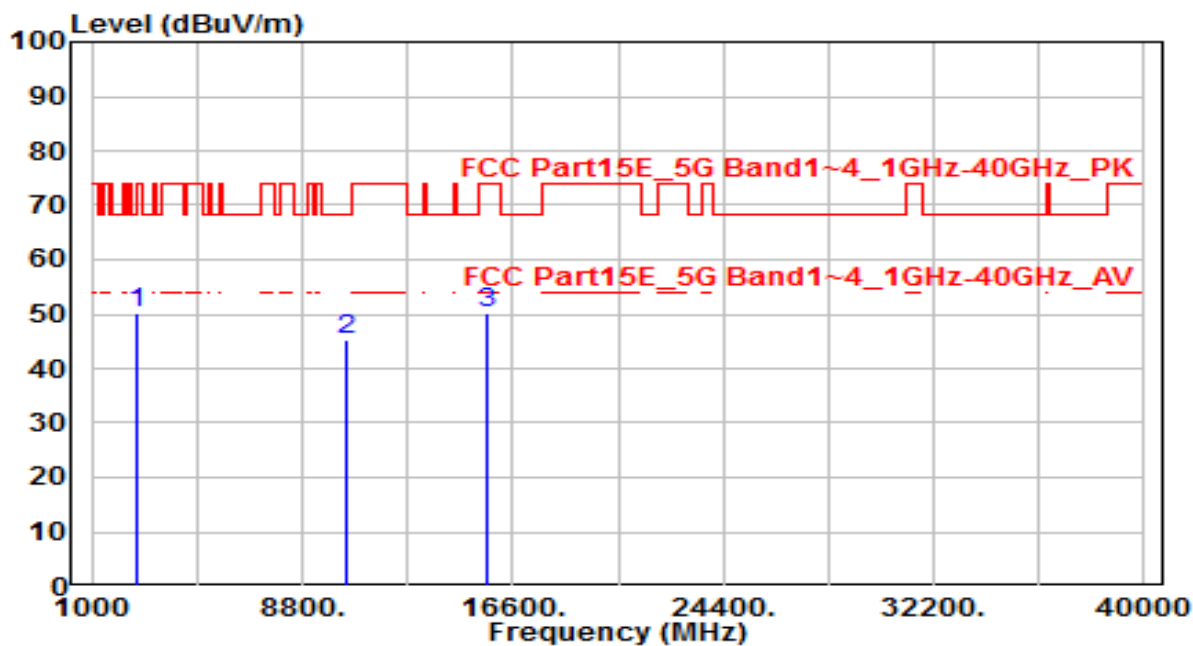


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.854	58.35	-7.26	51.09	-22.91	74.00	150	400	Peak
2	11590.000	28.25	18.01	46.26	-27.74	74.00	150	400	Peak
3	* 17385.000	28.76	29.15	57.91	-10.29	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

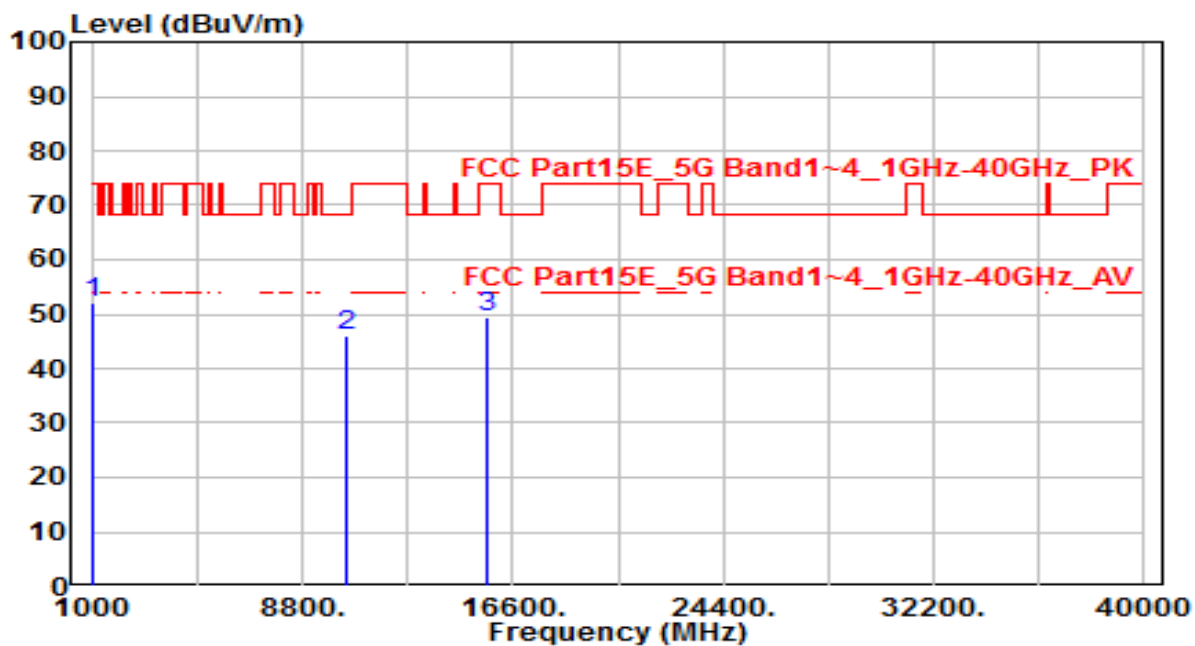


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 2631.543	52.54	-2.41	50.13	-18.07	68.20	150	400	Peak
2	10420.000	28.75	16.61	45.36	-22.84	68.20	150	400	Peak
3	15630.000	29.40	20.84	50.24	-23.76	74.00	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

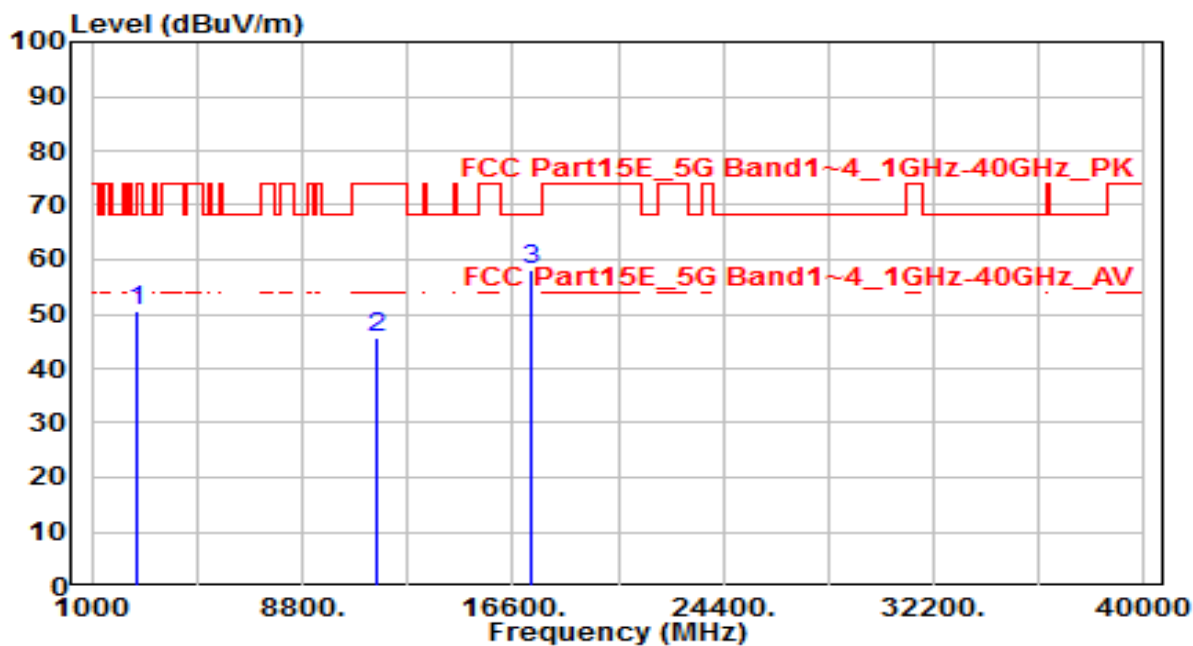


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	1054.534	59.48	-7.26	52.22	-21.78	74.00	150	400	Peak
2		10420.000	29.59	16.61	46.21	-21.99	68.20	150	400	Peak
3		15630.000	28.52	20.84	49.36	-24.64	74.00	150	400	Peak

Note:

1. " *" , means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz

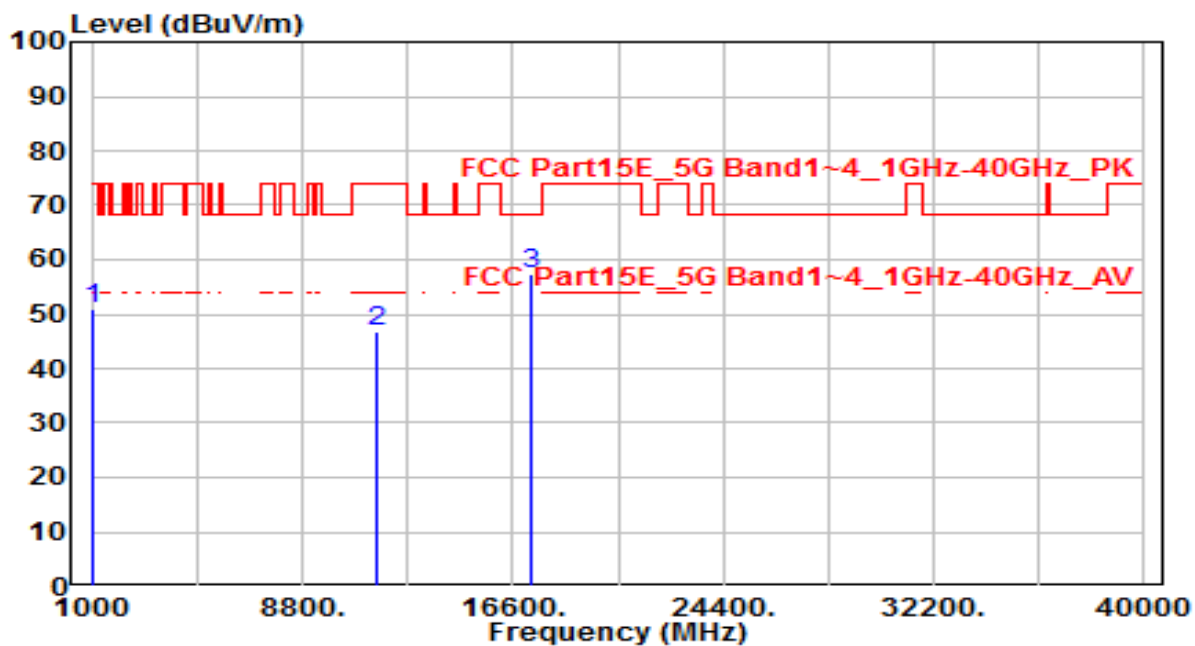


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	2630.540	52.86	-2.41	50.46	-17.74	68.20	150	400	Peak
2	11550.000	27.81	18.03	45.83	-28.17	74.00	150	400	Peak
3	* 17325.000	29.39	28.58	57.98	-10.22	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz



No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1054.867	58.13	-7.26	50.87	-23.13	74.00	150	400	Peak
2	11550.000	28.94	18.03	46.97	-27.03	74.00	150	400	Peak
3	* 17325.000	28.96	28.58	57.55	-10.65	68.20	150	400	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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.

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
¹ 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	8.25 - 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	(²)
13.36 - 13.41	--	--	--

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For FCC 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 IC transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to KDB 789033 D02v02r01 G2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

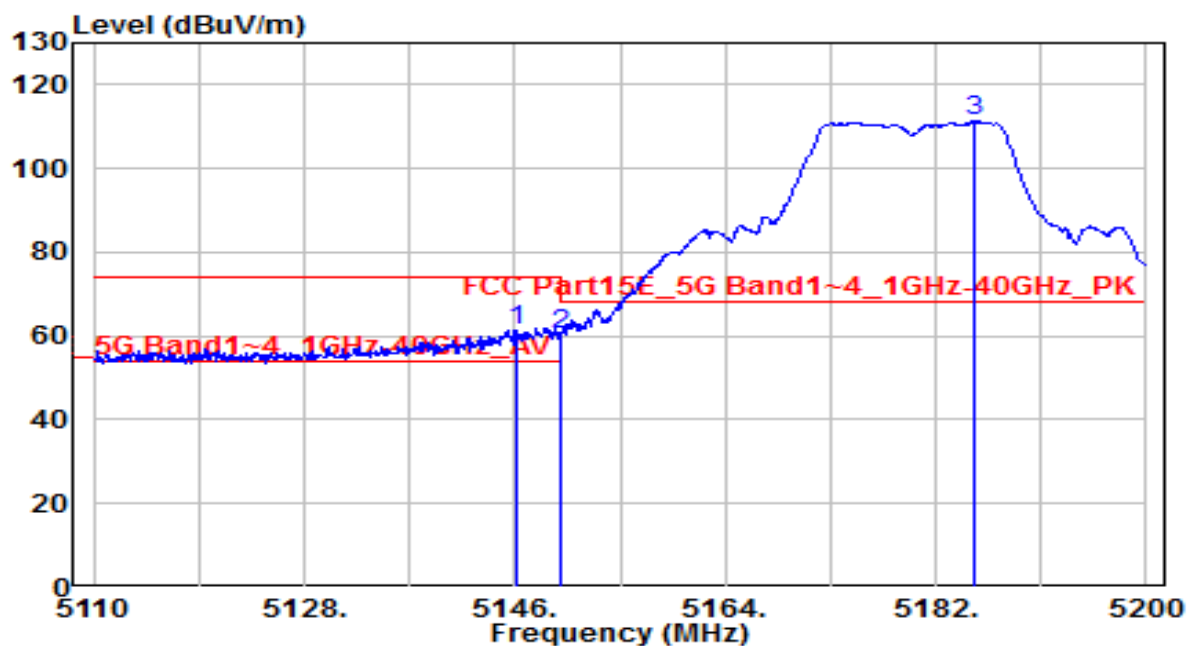
All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC-Radiated emission limits; general requirements.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/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

7.8.2. Test Result

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

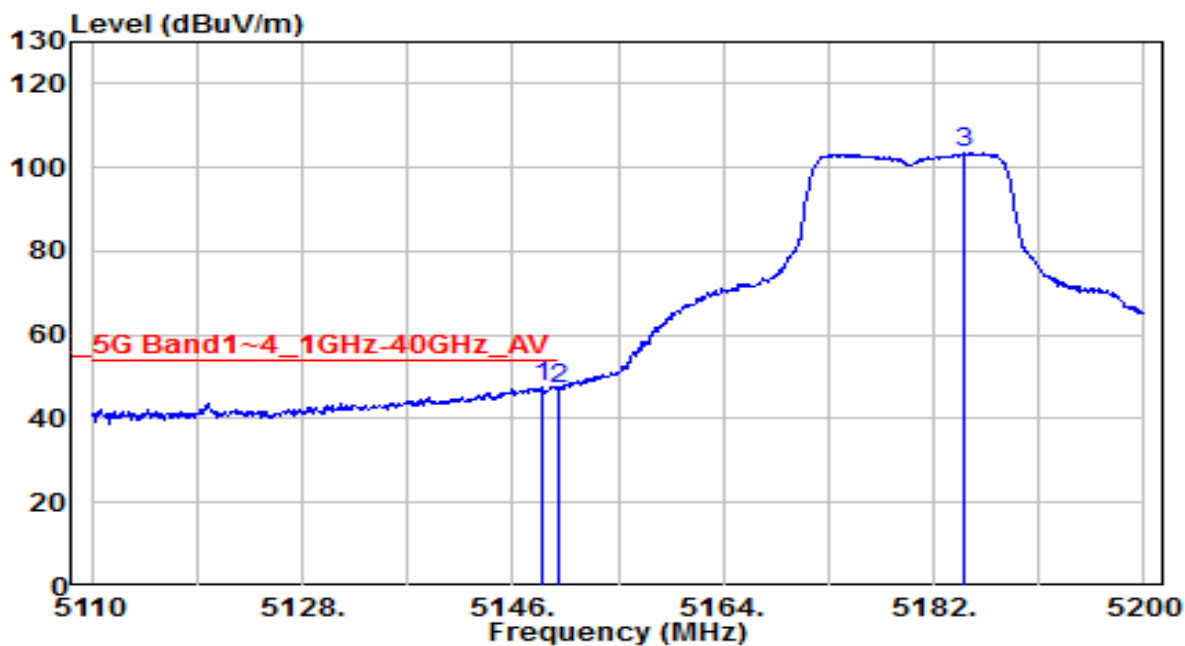


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5146.090	57.56	3.64	61.21	-12.79	74.00	255	200	Peak
2		5149.960	56.70	3.65	60.35	-13.65	74.00	255	200	Peak
3		5185.330	107.56	3.67	111.23	N/A	N/A	255	200	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

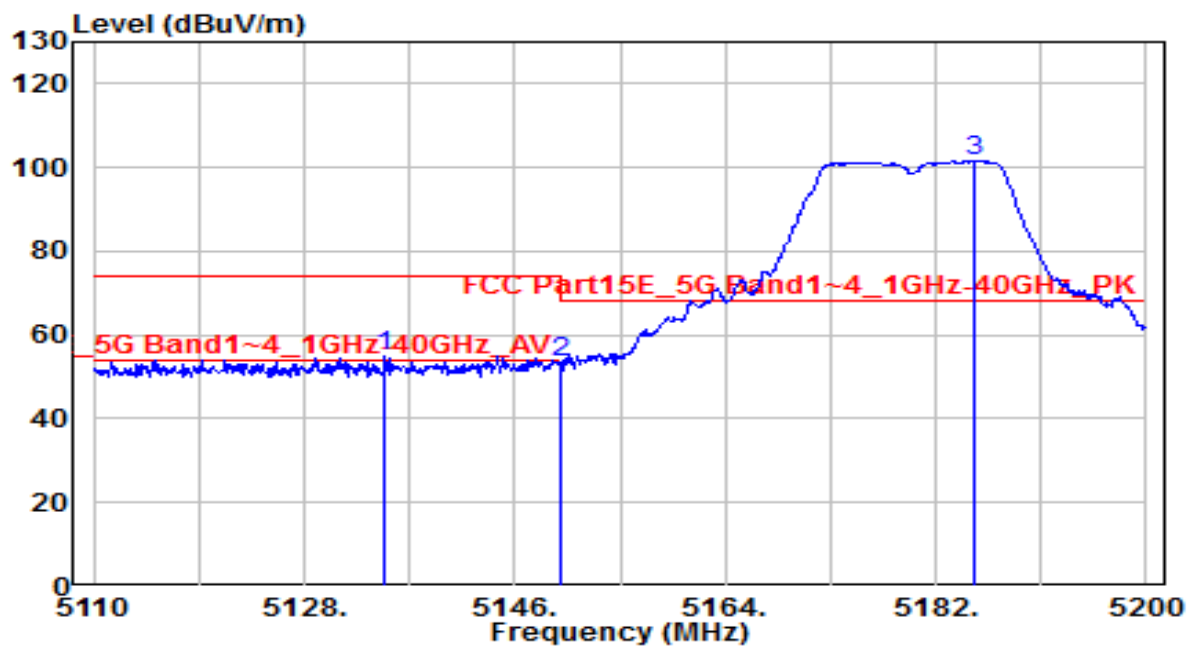


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.430	43.90	3.64	47.54	-6.46	54.00	255	200	Average
2		5150.000	43.51	3.65	47.16	-6.84	54.00	255	200	Average
3		5184.700	99.88	3.67	103.55	N/A	N/A	255	200	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

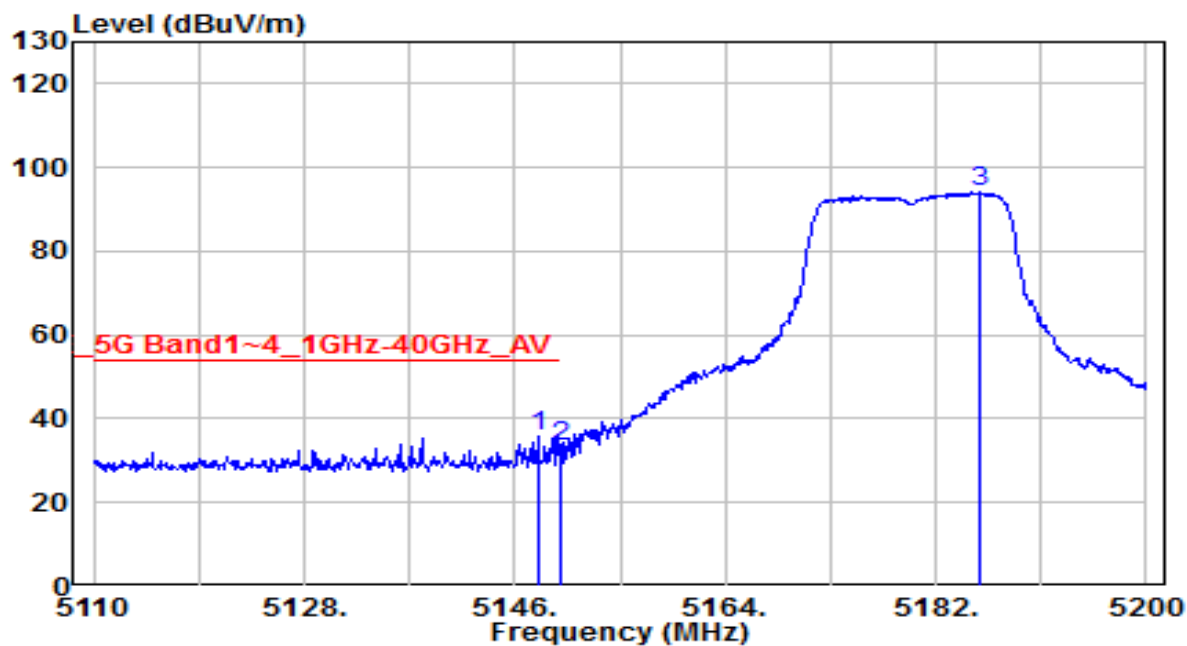


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5134.840	51.35	3.64	54.99	-19.01	74.00	110	140	Peak
2	* 5150.000	49.71	3.65	53.36	-14.84	68.20	110	140	Peak
3	5185.330	97.99	3.67	101.66	N/A	N/A	110	140	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

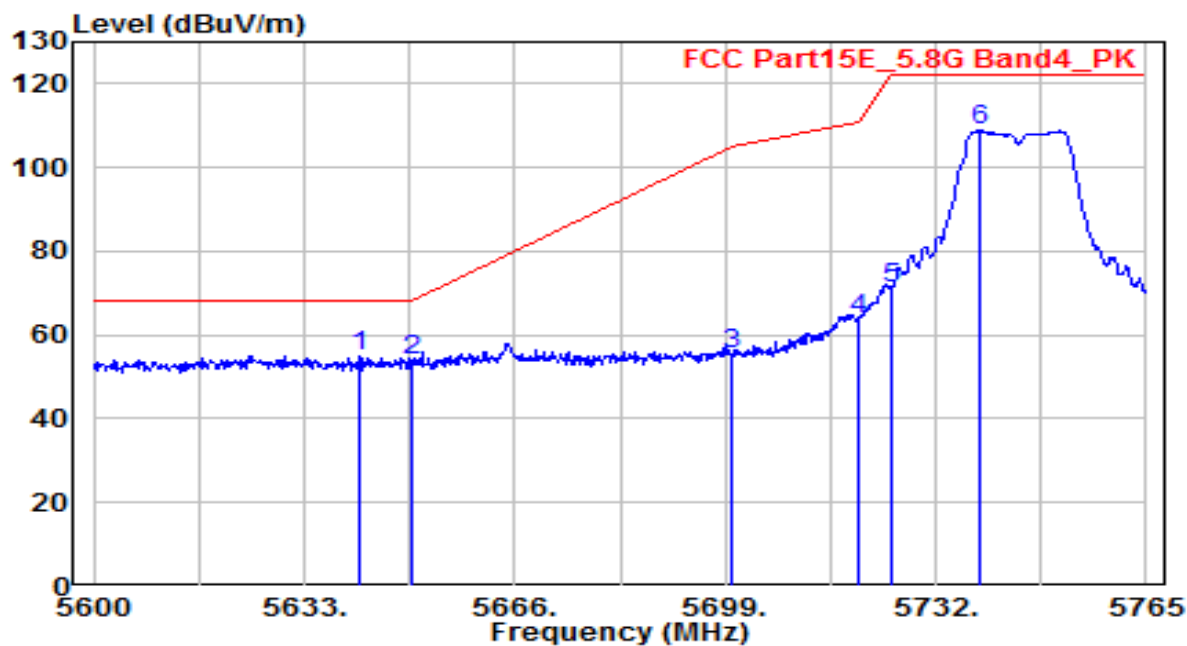


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.070	32.29	3.64	35.94	-18.06	54.00	110	140	Average
2		5150.000	29.51	3.65	33.15	-20.85	54.00	110	140	Average
3		5185.870	90.41	3.67	94.08	N/A	N/A	110	140	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

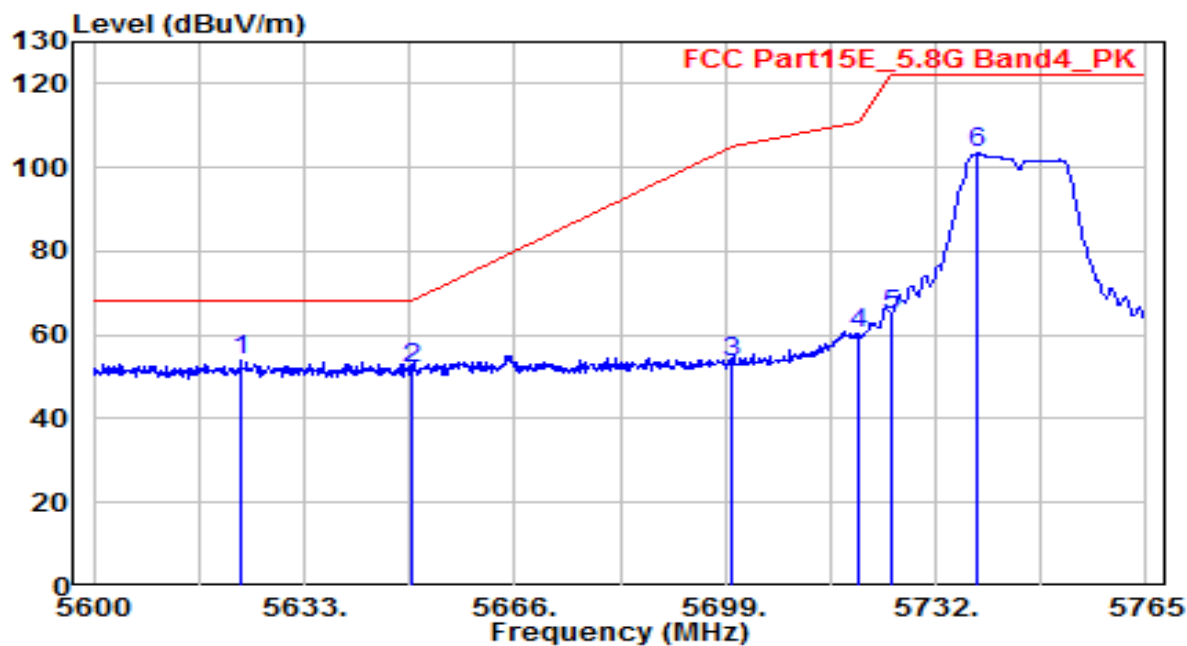


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5641.745	50.48	4.41	54.89	-13.31	68.20	295	230	Peak
2	5650.000	49.43	4.45	53.88	-14.32	68.20	295	230	Peak
3	5700.000	50.79	4.64	55.43	-49.77	105.20	295	230	Peak
4	5720.000	58.87	4.71	63.59	-47.21	110.80	295	230	Peak
5	5725.000	66.62	4.73	71.35	-50.85	122.20	295	230	Peak
6	5738.930	104.01	4.79	108.80	-13.40	122.20	295	230	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

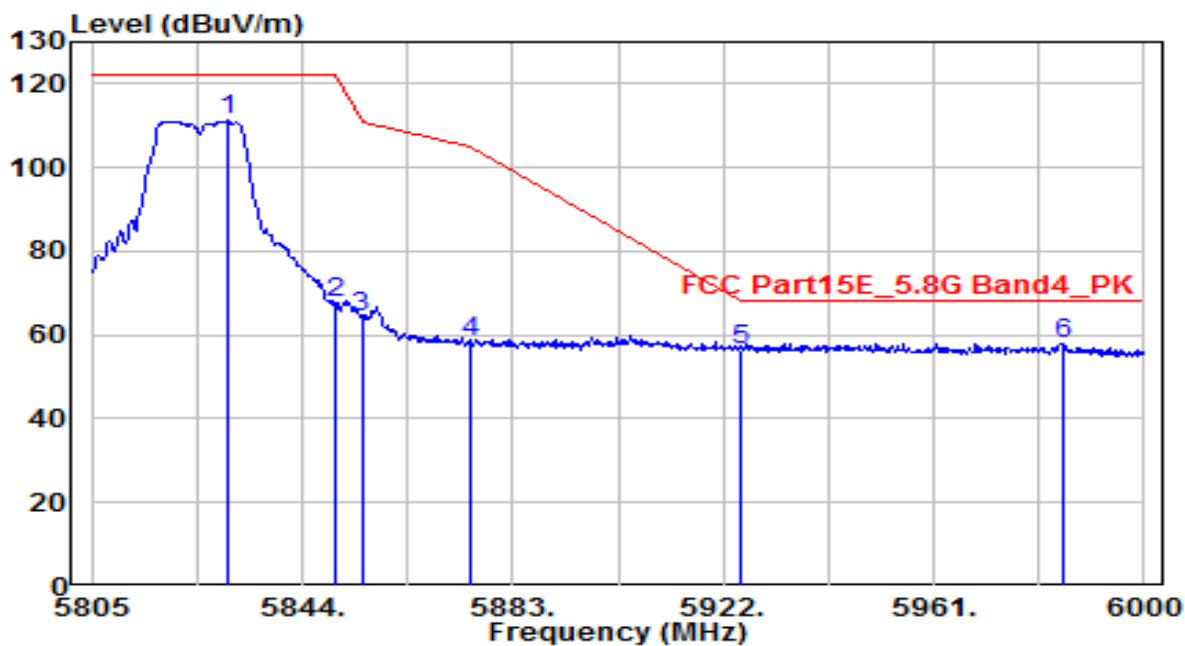


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5623.100	49.50	4.34	53.85	-14.35	68.20	225	145	Peak
2		5650.000	47.57	4.45	52.01	-16.19	68.20	225	145	Peak
3		5700.000	48.76	4.64	53.39	-51.81	105.20	225	145	Peak
4		5720.000	55.52	4.71	60.23	-50.57	110.80	225	145	Peak
5		5725.000	60.26	4.73	65.00	-57.20	122.20	225	145	Peak
6		5738.600	98.59	4.79	103.37	-18.83	122.20	225	145	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

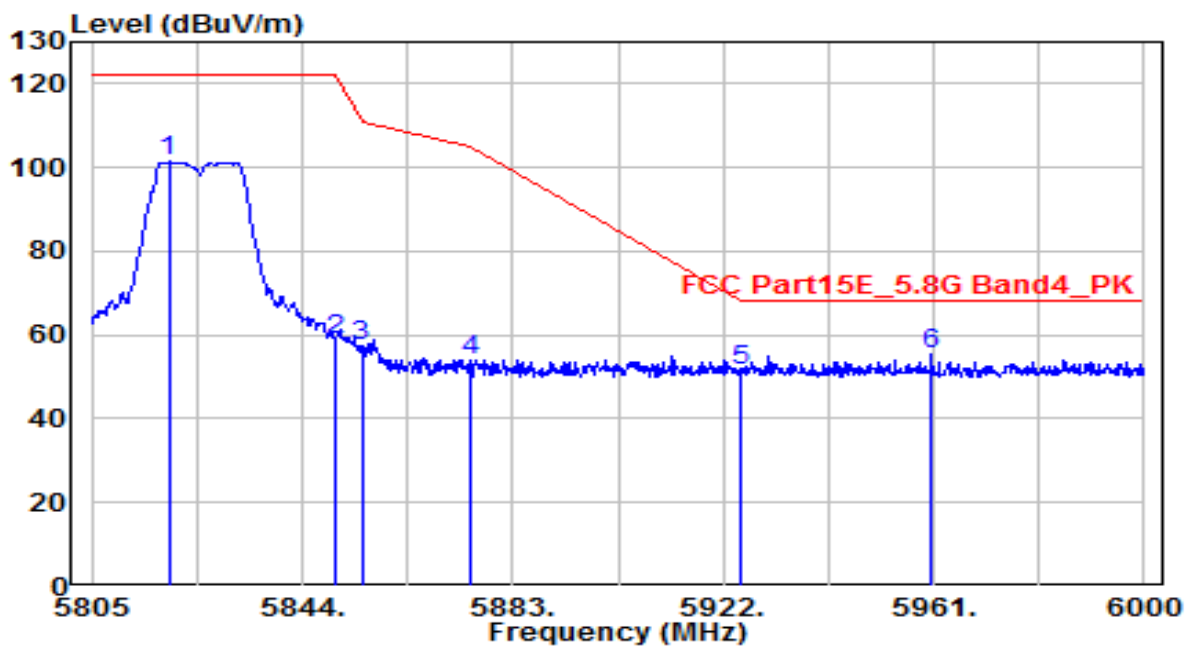


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5830.350	106.01	5.14	111.15	-11.05	122.20	275	225	Peak
2	5850.000	62.42	5.21	67.63	-54.57	122.20	275	225	Peak
3	5855.000	59.06	5.23	64.29	-46.51	110.80	275	225	Peak
4	5875.000	52.93	5.31	58.24	-46.96	105.20	275	225	Peak
5	5925.000	51.04	5.50	56.54	-11.66	68.20	275	225	Peak
6	* 5984.790	52.28	5.73	58.01	-10.19	68.20	275	225	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

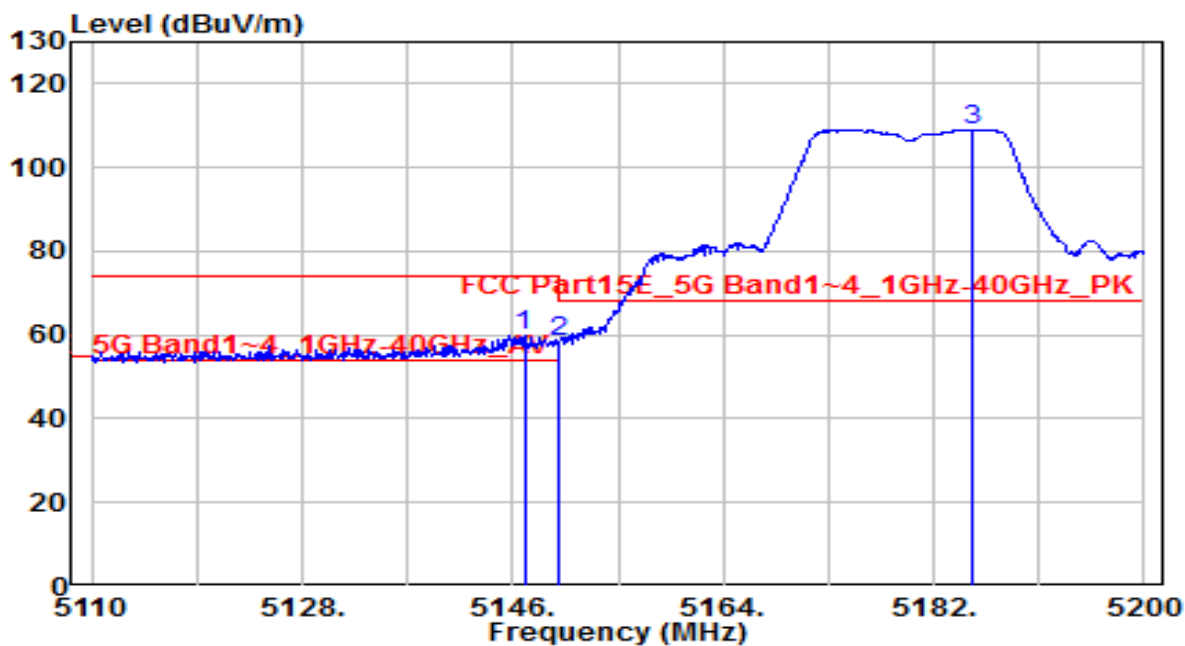


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5819.235	96.34	5.10	101.43	-20.77	122.20	190	170	Peak
2	5850.000	53.81	5.21	59.02	-63.18	122.20	190	170	Peak
3	5855.000	52.00	5.23	57.24	-53.56	110.80	190	170	Peak
4	5875.000	48.42	5.31	53.73	-51.47	105.20	190	170	Peak
5	5925.000	46.03	5.50	51.53	-16.67	68.20	190	170	Peak
6	* 5960.610	49.90	5.64	55.54	-12.66	68.20	190	170	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

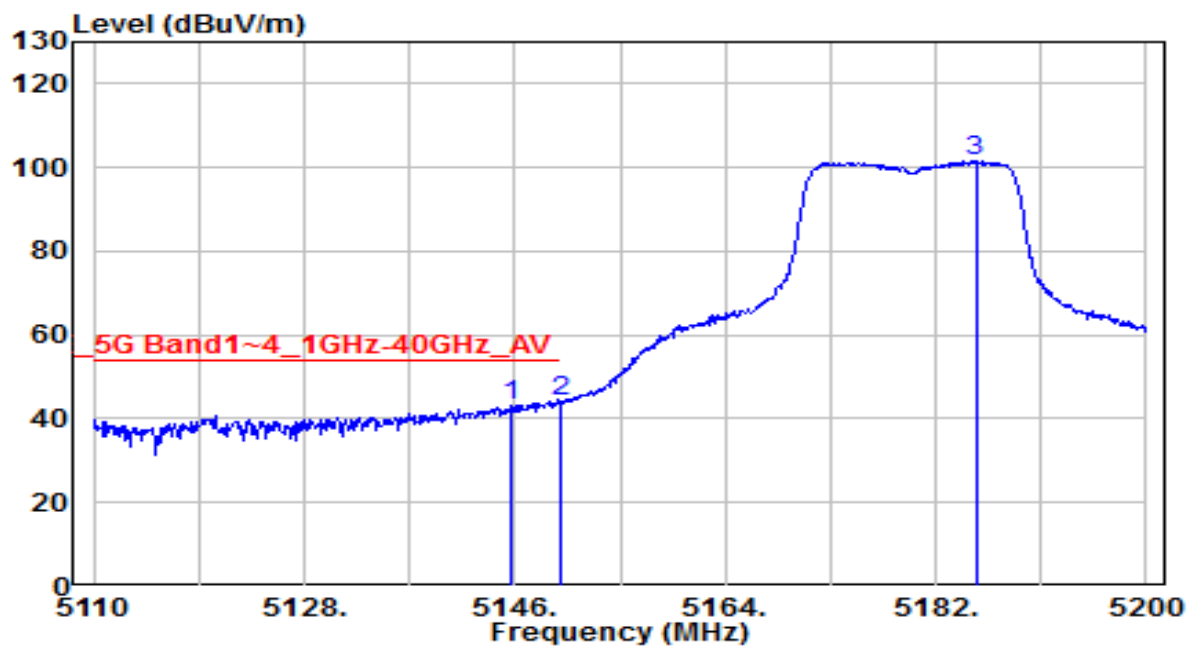


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5146.990	56.15	3.64	59.79	-14.21	74.00	310	225	Peak
2	* 5150.000	54.88	3.65	58.53	-9.67	68.20	310	225	Peak
3	5185.330	105.36	3.67	109.03	N/A	N/A	310	225	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

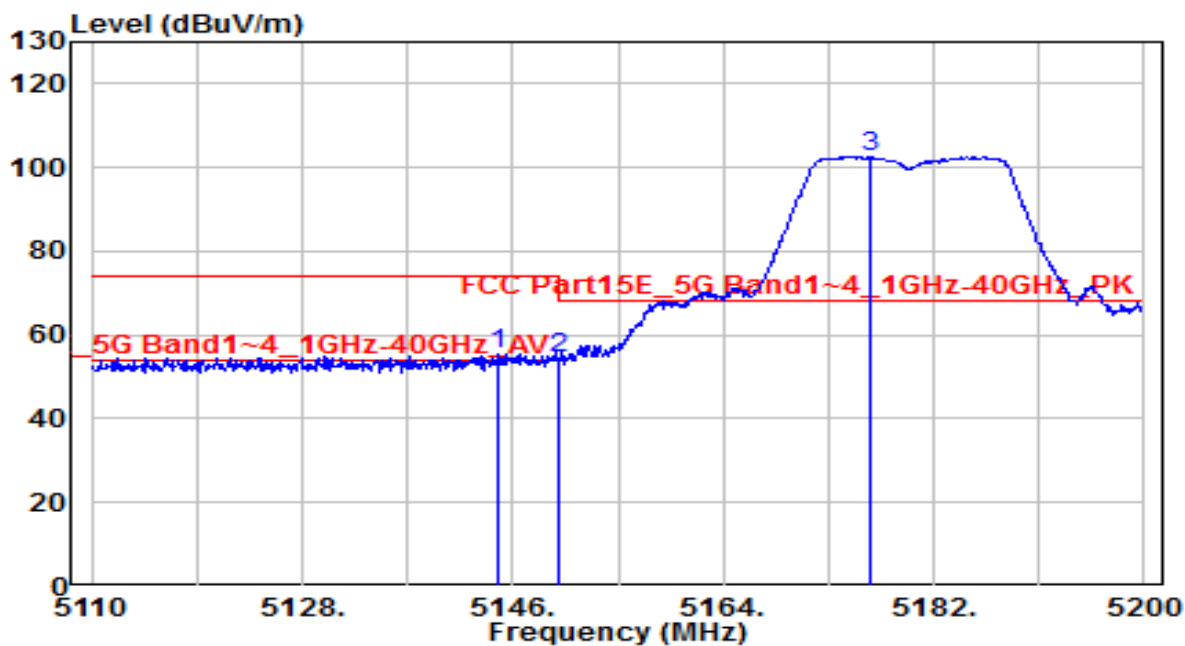


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5145.730	39.45	3.64	43.09	-10.91	54.00	310	225	Average
2	* 5150.000	40.30	3.65	43.95	-10.05	54.00	310	225	Average
3	5185.420	97.83	3.67	101.50	N/A	N/A	310	225	Average

Note:

1. " *" , means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

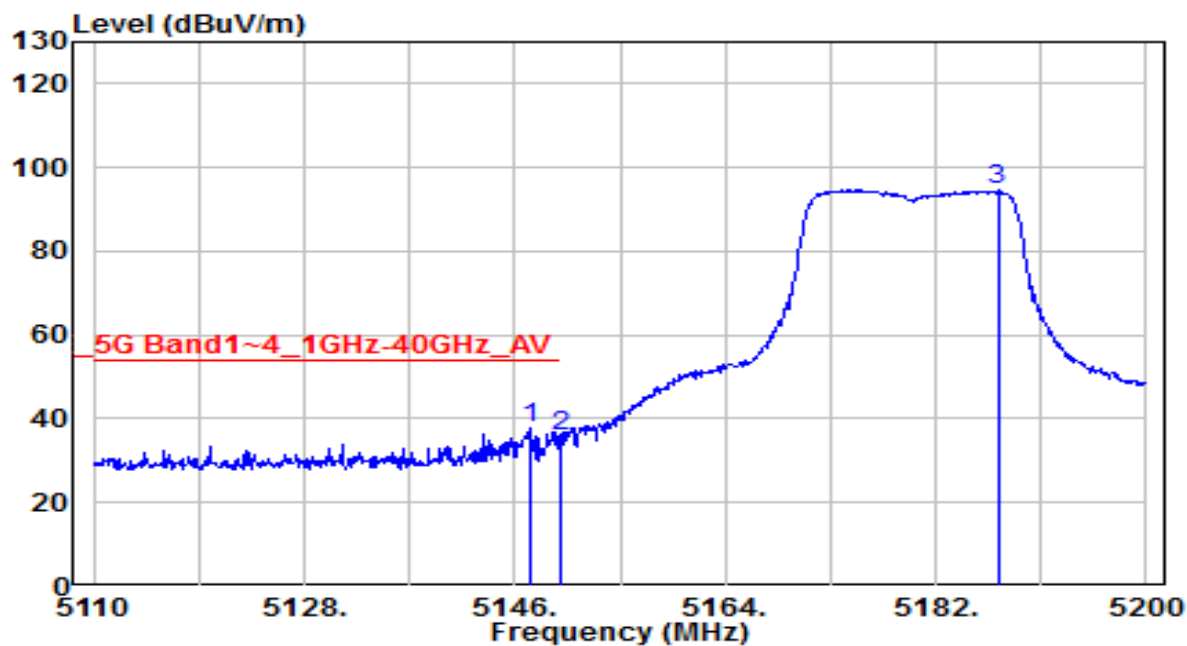


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5144.830	51.93	3.64	55.57	-18.43	74.00	235	195	Peak
2	* 5150.000	50.74	3.65	54.39	-13.81	68.20	235	195	Peak
3	5176.690	98.86	3.66	102.52	N/A	N/A	235	195	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

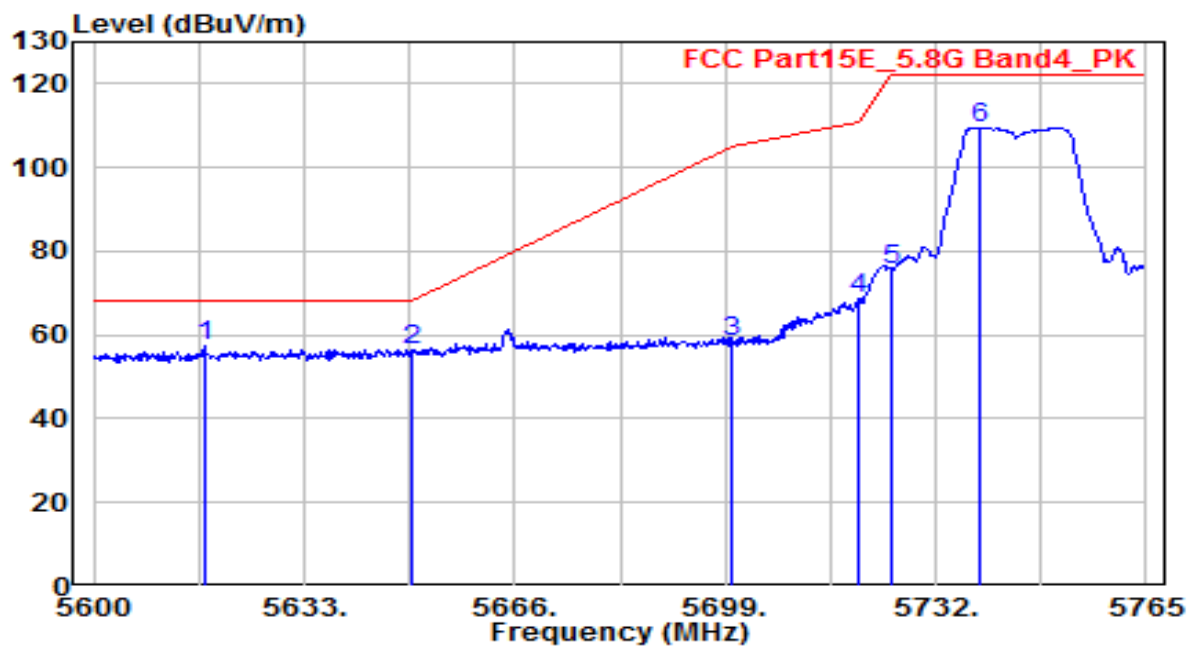


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5147.260	34.18	3.64	37.83	-16.17	54.00	235	195	Average
2		5150.000	32.26	3.65	35.91	-18.09	54.00	235	195	Average
3		5187.310	90.88	3.67	94.55	N/A	N/A	235	195	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

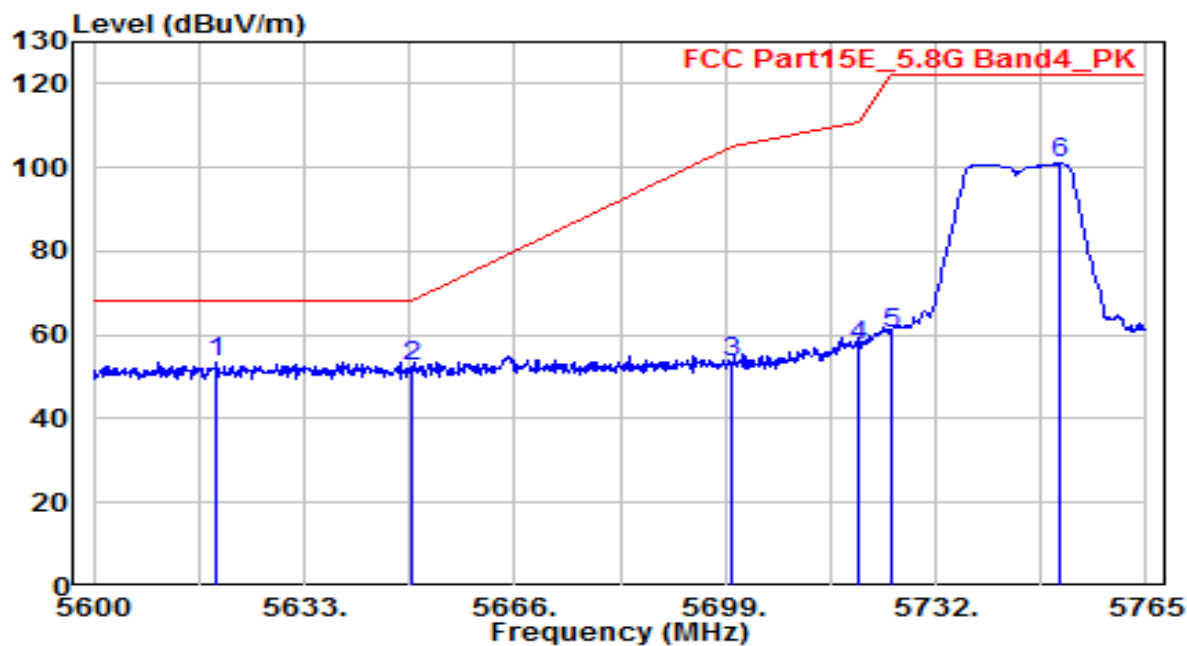


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5617.325	52.98	4.32	57.30	-10.90	68.20	260	210	Peak
2		5650.000	52.07	4.45	56.52	-11.68	68.20	260	210	Peak
3		5700.000	53.74	4.64	58.38	-46.82	105.20	260	210	Peak
4		5720.000	63.81	4.71	68.52	-42.28	110.80	260	210	Peak
5		5725.070	70.71	4.73	75.45	-46.75	122.20	260	210	Peak
6		5739.095	104.76	4.79	109.55	-12.65	122.20	260	210	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

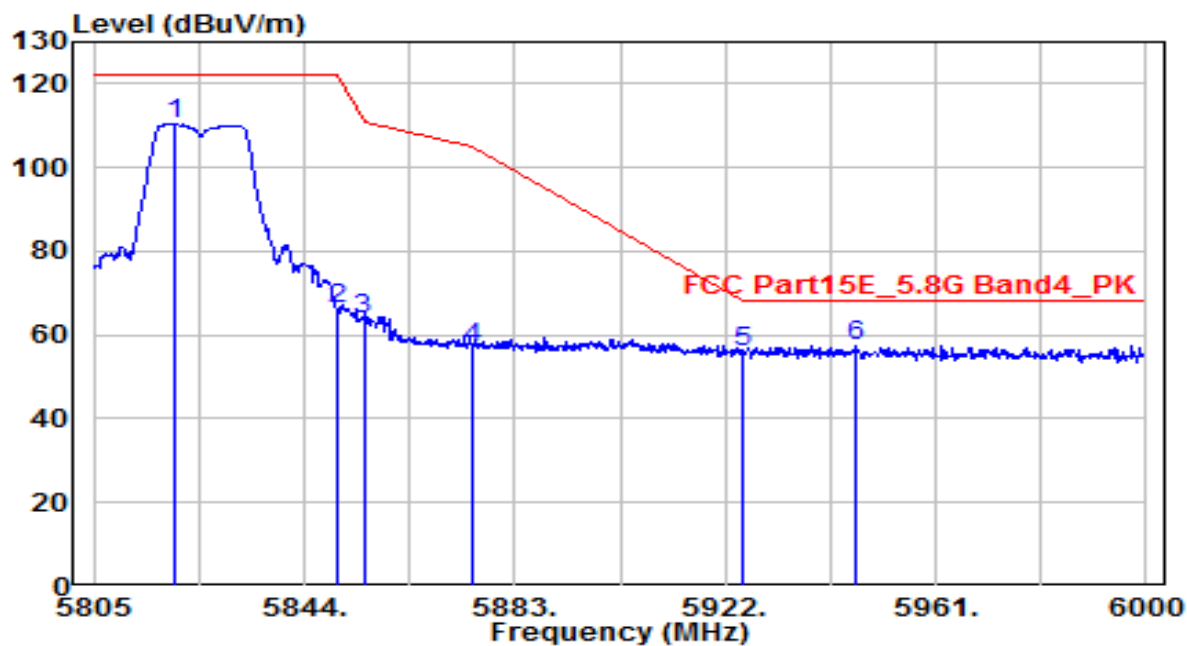


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5619.140	49.01	4.33	53.34	-14.86	68.20	220	145	Peak
2		5650.000	48.00	4.45	52.45	-15.75	68.20	220	145	Peak
3		5700.000	48.71	4.64	53.35	-51.85	105.20	220	145	Peak
4		5720.000	52.87	4.71	57.59	-53.21	110.80	220	145	Peak
5		5725.000	55.81	4.73	60.55	-61.65	122.20	220	145	Peak
6		5751.305	96.11	4.84	100.94	-21.26	122.20	220	145	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

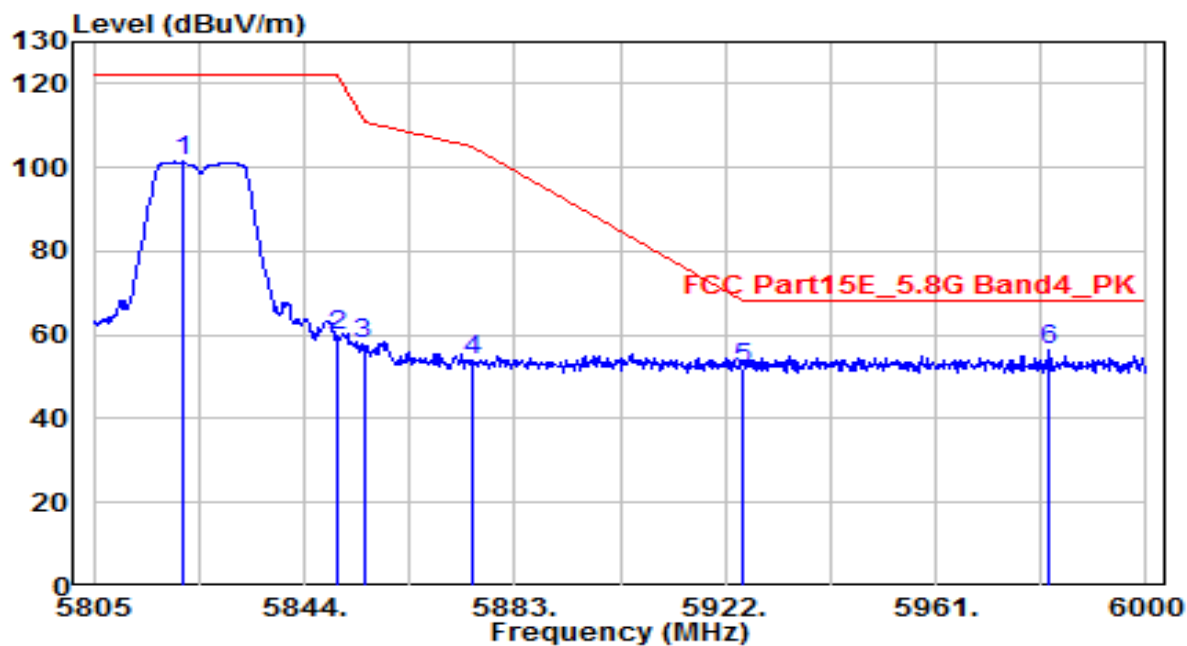


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5819.820	105.32	5.10	110.42	-11.78	122.20	240	210	Peak
2	5850.000	61.25	5.21	66.46	-55.74	122.20	240	210	Peak
3	5855.000	58.38	5.23	63.61	-47.19	110.80	240	210	Peak
4	5875.000	51.70	5.31	57.01	-48.19	105.20	240	210	Peak
5	5925.000	50.32	5.50	55.82	-12.38	68.20	240	210	Peak
6	* 5946.180	51.74	5.58	57.32	-10.88	68.20	240	210	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-20_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

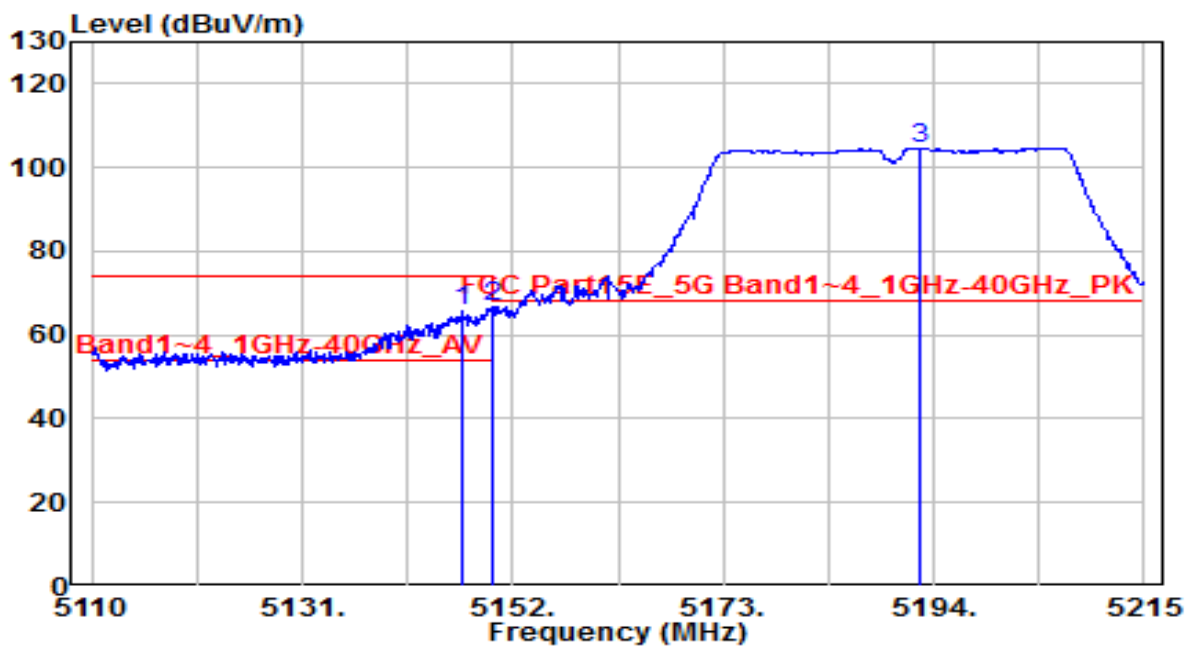


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5821.575	96.27	5.10	101.37	-20.83	122.20	170	165	Peak
2	5850.000	54.49	5.21	59.71	-62.49	122.20	170	165	Peak
3	5855.000	52.70	5.23	57.94	-52.86	110.80	170	165	Peak
4	5875.000	48.49	5.31	53.80	-51.40	105.20	170	165	Peak
5	5925.000	46.58	5.50	52.08	-16.12	68.20	170	165	Peak
6	* 5982.060	50.65	5.72	56.37	-11.83	68.20	170	165	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

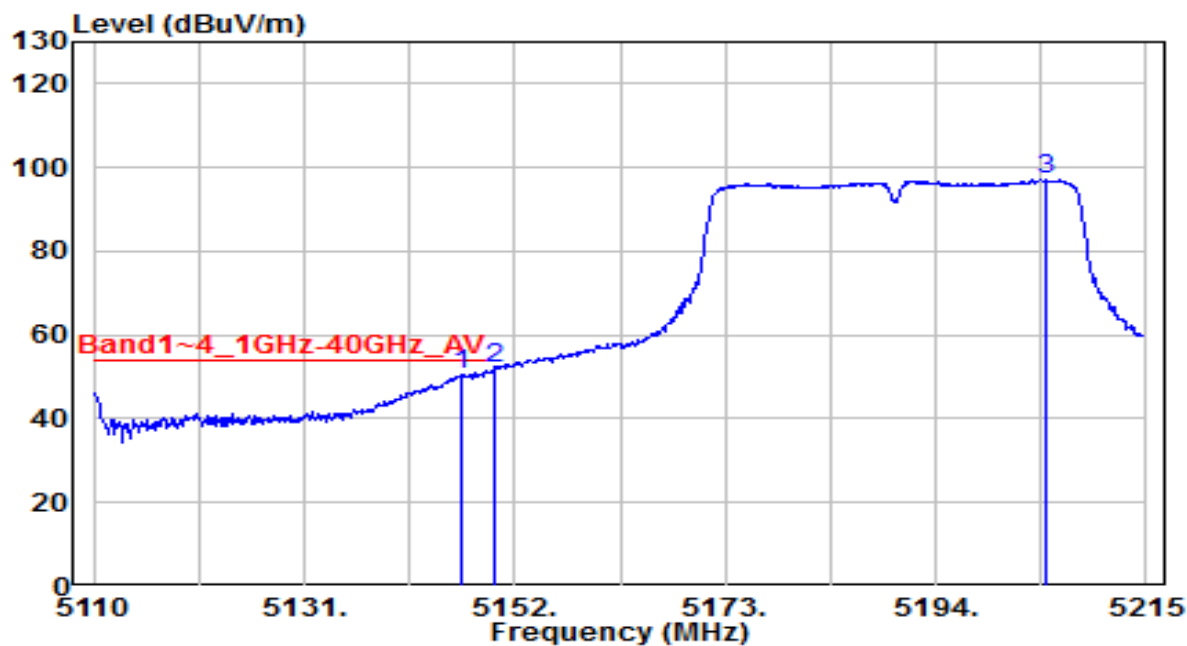


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5146.960	61.95	3.64	65.59	-8.41	74.00	260	210	Peak
2	* 5150.000	63.04	3.65	66.68	-1.52	68.20	260	210	Peak
3	5192.635	101.06	3.67	104.73	N/A	N/A	260	210	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

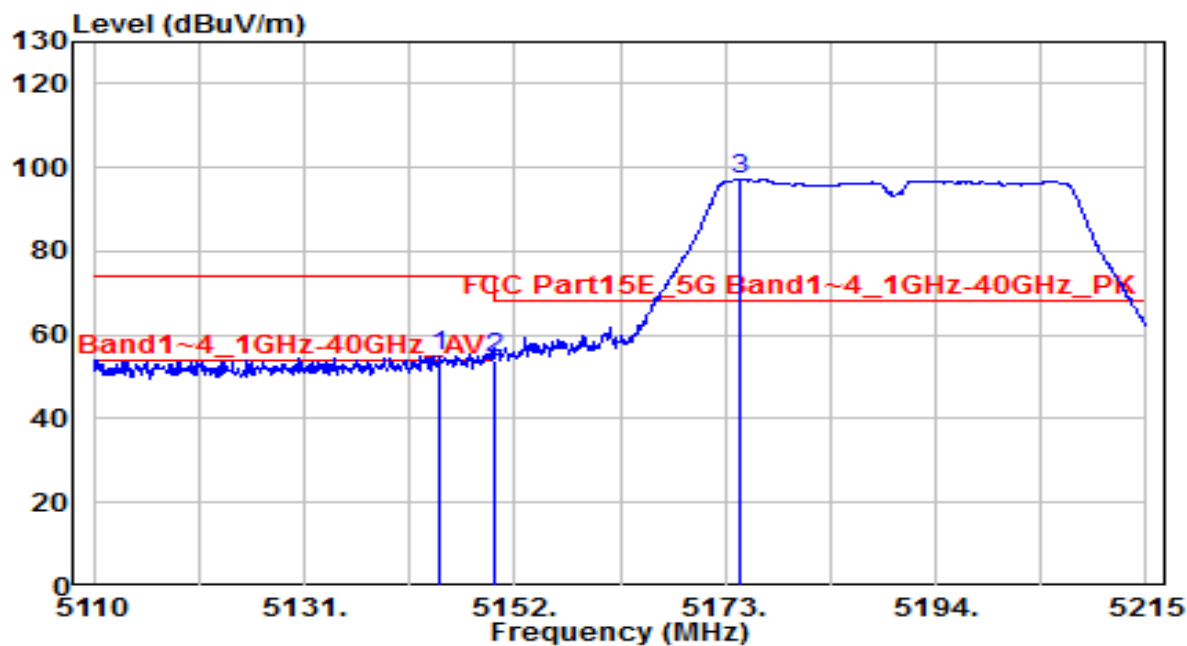


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5146.750	47.11	3.64	50.75	-3.25	54.00	260	210	Average
2	* 5150.000	48.57	3.65	52.21	-1.79	54.00	260	210	Average
3	5205.130	93.39	3.68	97.07	N/A	N/A	260	210	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

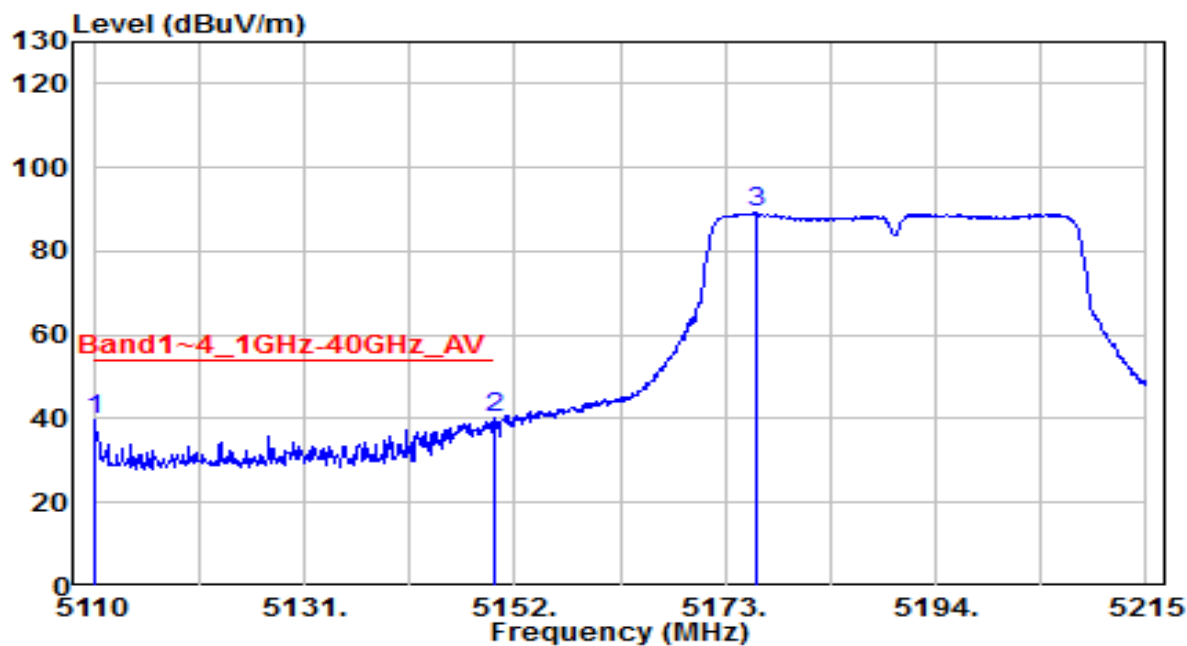


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5144.545	51.42	3.64	55.06	-18.94	74.00	245	185	Peak
2	* 5150.000	50.56	3.65	54.21	-13.99	68.20	245	185	Peak
3	5174.470	93.42	3.66	97.08	N/A	N/A	245	185	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

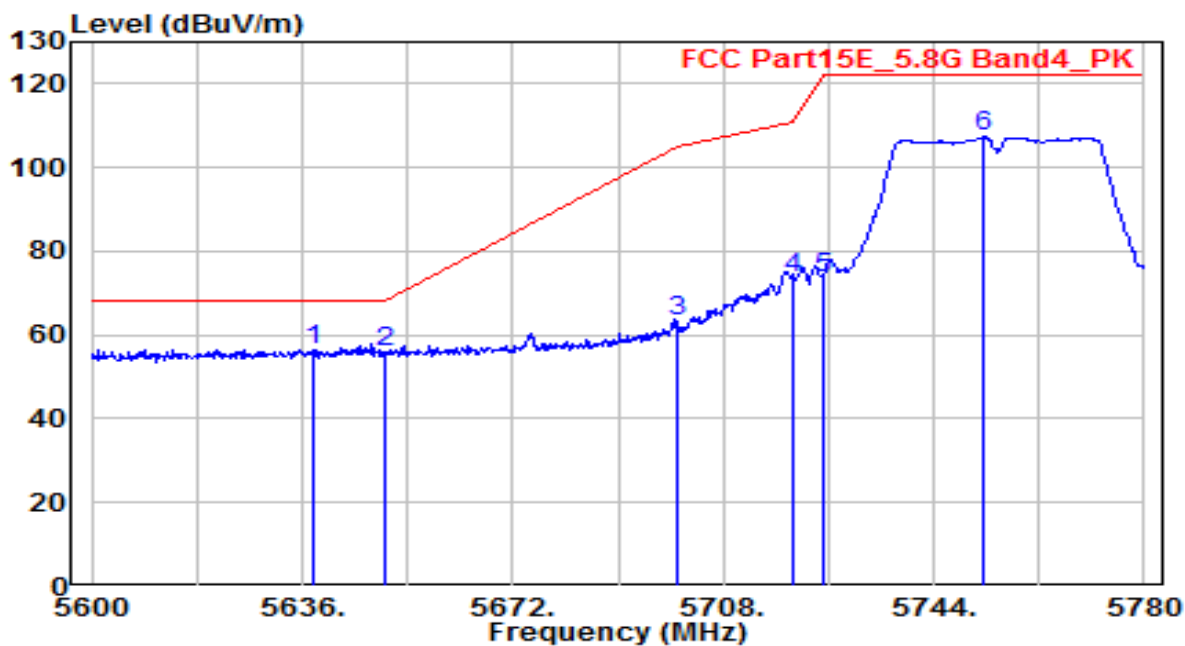


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5110.000	36.03	3.62	39.65	-14.35	54.00	245	185	Average
2	* 5150.000	36.35	3.65	39.99	-14.01	54.00	245	185	Average
3	5176.150	85.43	3.66	89.10	N/A	N/A	245	185	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

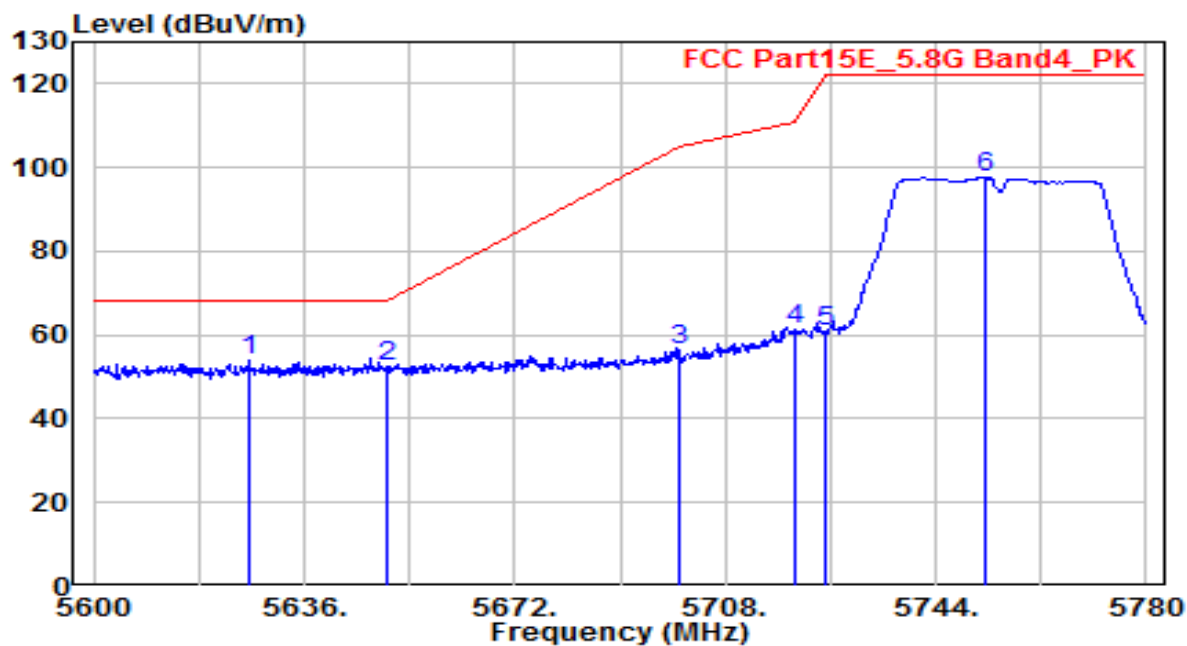


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5637.980	52.18	4.40	56.58	-11.62	68.20	230	210	Peak
2		5650.000	51.38	4.45	55.82	-12.38	68.20	230	210	Peak
3		5700.000	58.67	4.64	63.31	-41.89	105.20	230	210	Peak
4		5720.000	68.96	4.71	73.67	-37.13	110.80	230	210	Peak
5		5725.000	69.00	4.73	73.73	-48.47	122.20	230	210	Peak
6		5752.640	102.54	4.84	107.38	-14.82	122.20	230	210	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

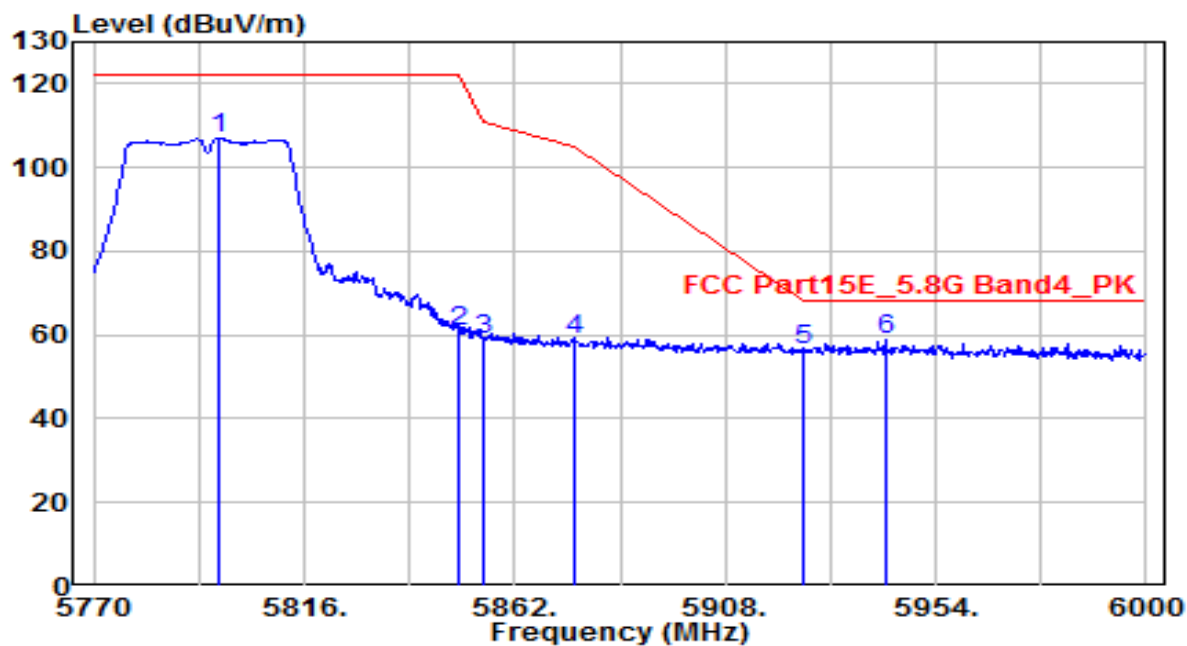


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5626.460	49.50	4.36	53.86	-14.34	68.20	225	145	Peak
2	5650.000	48.21	4.45	52.65	-15.55	68.20	225	145	Peak
3	5700.000	51.81	4.64	56.45	-48.75	105.20	225	145	Peak
4	5720.000	56.50	4.71	61.21	-49.59	110.80	225	145	Peak
5	5725.000	55.86	4.73	60.59	-61.61	122.20	225	145	Peak
6	5752.640	92.98	4.84	97.82	-24.38	122.20	225	145	Peak

Note:

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

EUT	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

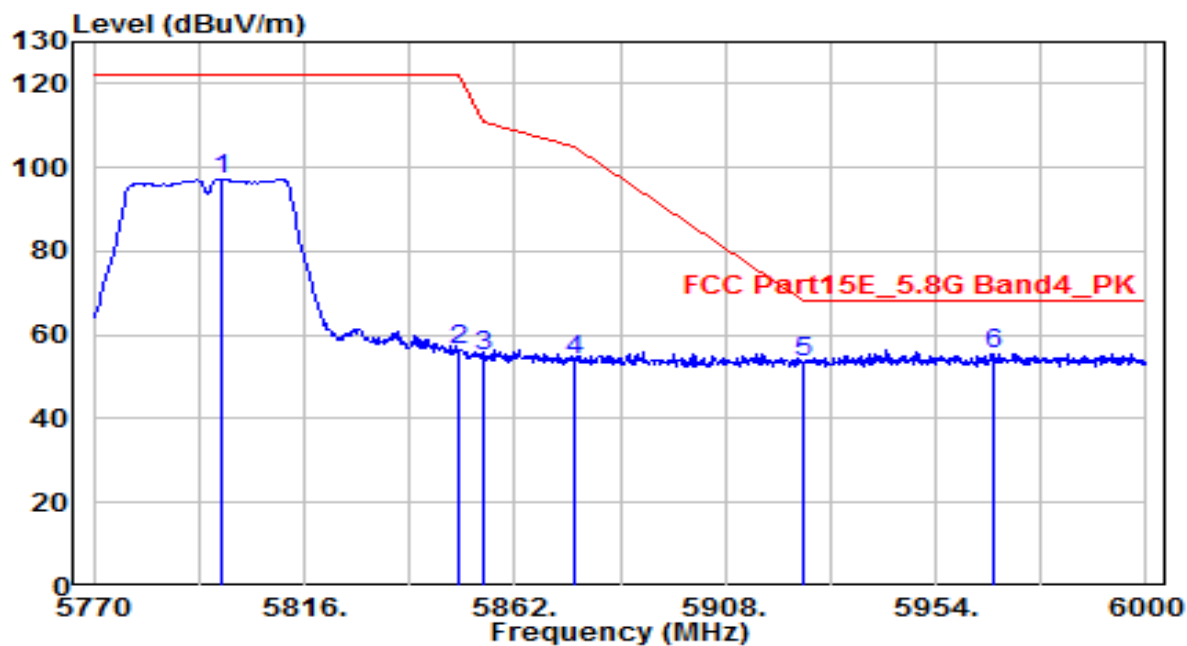


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5797.600	101.90	5.01	106.91	-15.29	122.20	230	205	Peak
2	5850.000	55.86	5.21	61.07	-61.13	122.20	230	205	Peak
3	5855.000	53.60	5.23	58.84	-51.96	110.80	230	205	Peak
4	5875.000	53.37	5.31	58.68	-46.52	105.20	230	205	Peak
5	5925.000	51.00	5.50	56.51	-11.69	68.20	230	205	Peak
6	* 5942.960	53.25	5.57	58.82	-9.38	68.20	230	205	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11n-40_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

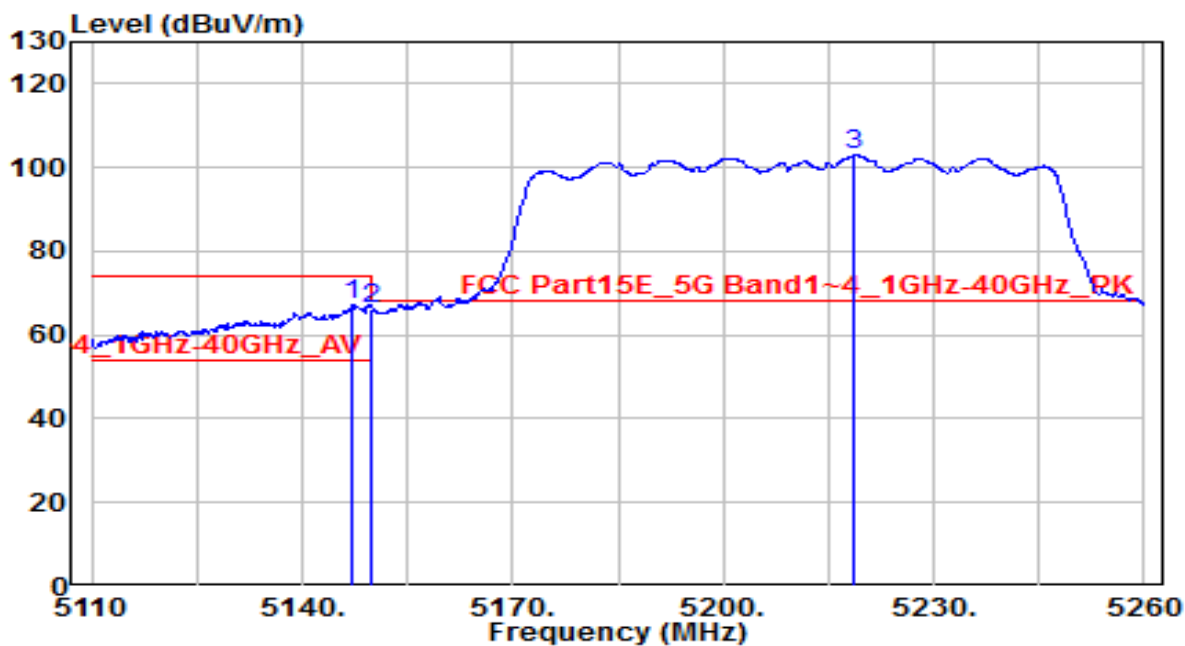


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5798.060	92.29	5.01	97.30	-24.90	122.20	215	145	Peak
2	5850.000	51.08	5.21	56.29	-65.91	122.20	215	145	Peak
3	5855.000	49.52	5.23	54.75	-56.05	110.80	215	145	Peak
4	5875.000	48.81	5.31	54.12	-51.08	105.20	215	145	Peak
5	5925.000	47.87	5.50	53.37	-14.83	68.20	215	145	Peak
6	* 5966.880	49.99	5.66	55.65	-12.55	68.20	215	145	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

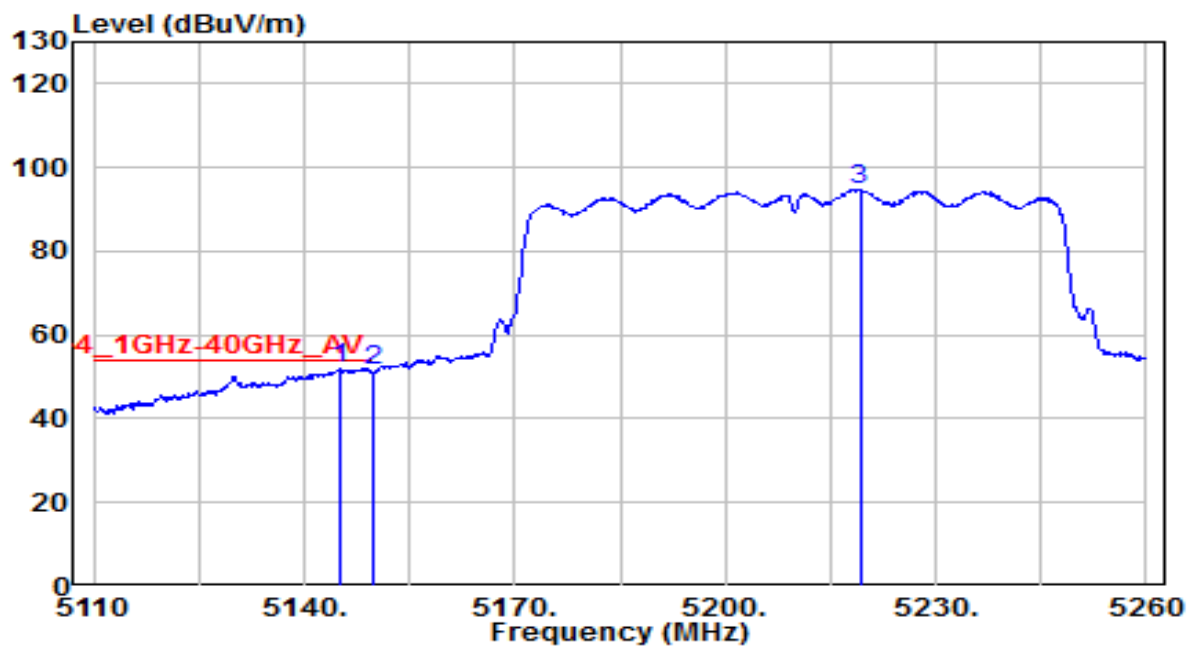


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5147.050	63.49	3.64	67.14	-6.86	74.00	225	200	Peak
2	* 5150.000	62.66	3.65	66.30	-1.90	68.20	225	200	Peak
3	5218.750	99.16	3.69	102.85	N/A	N/A	225	200	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

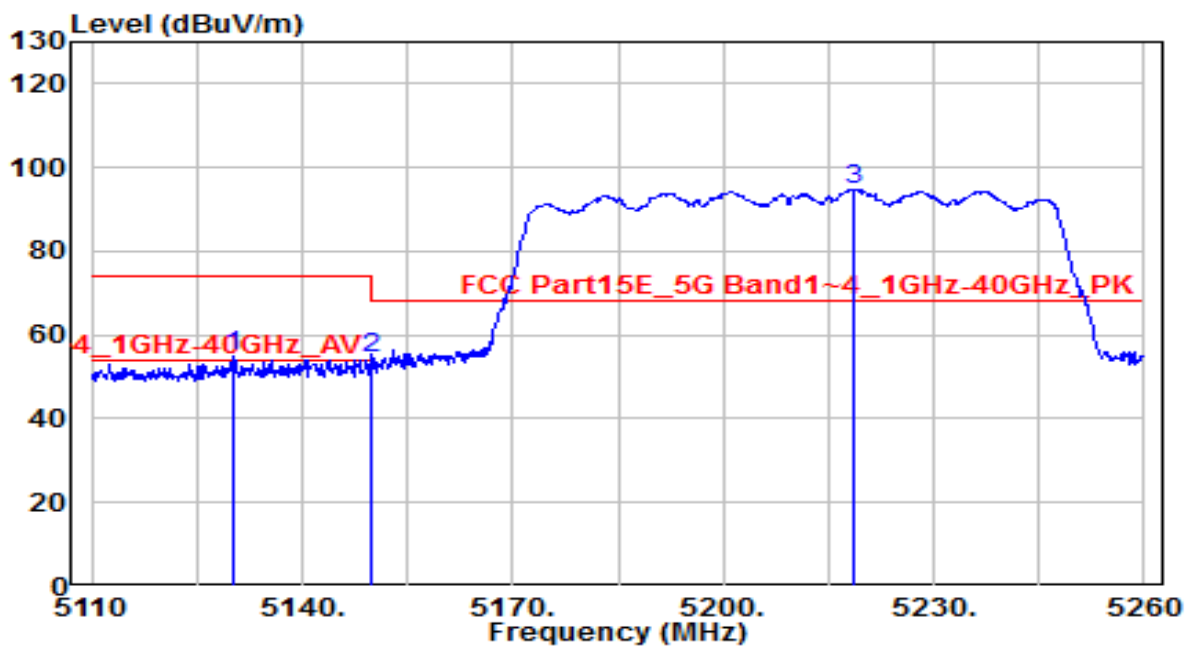


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5144.950	48.18	3.64	51.82	-2.18	54.00	225	200	Average
2	* 5150.000	47.84	3.65	51.48	-2.52	54.00	225	200	Average
3	5219.200	91.16	3.69	94.85	N/A	N/A	225	200	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

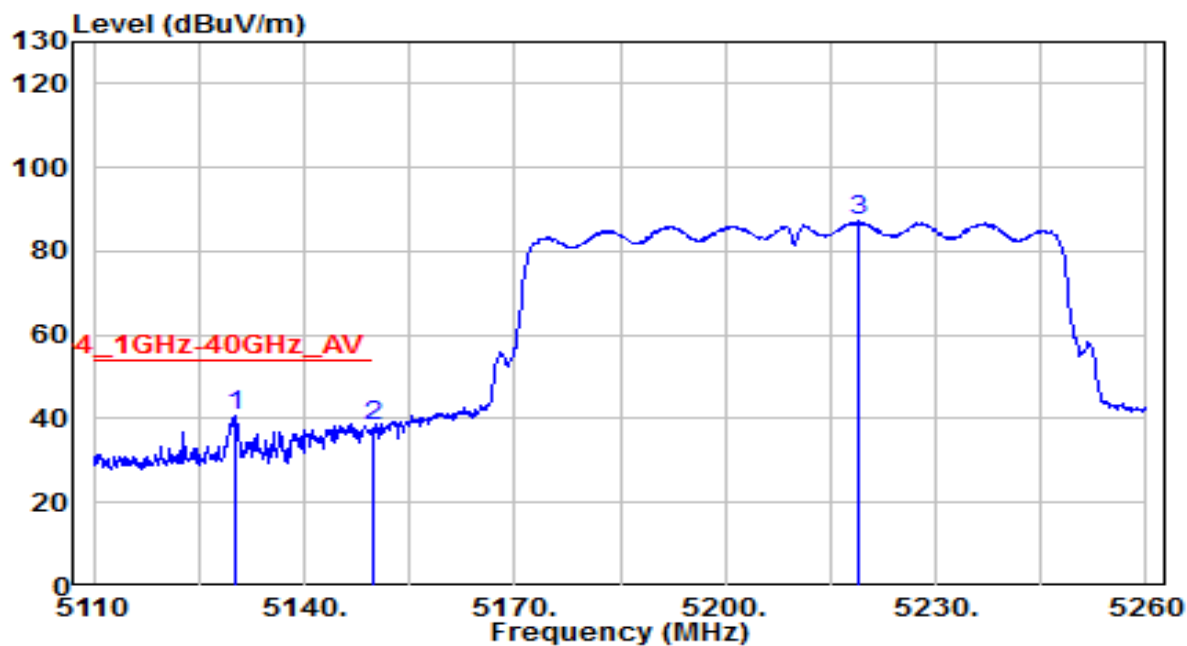


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5130.250	51.46	3.63	55.09	-18.91	74.00	240	190	Peak
2	* 5150.000	50.67	3.65	54.31	-13.89	68.20	240	190	Peak
3	5218.600	91.12	3.69	94.81	N/A	N/A	240	190	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

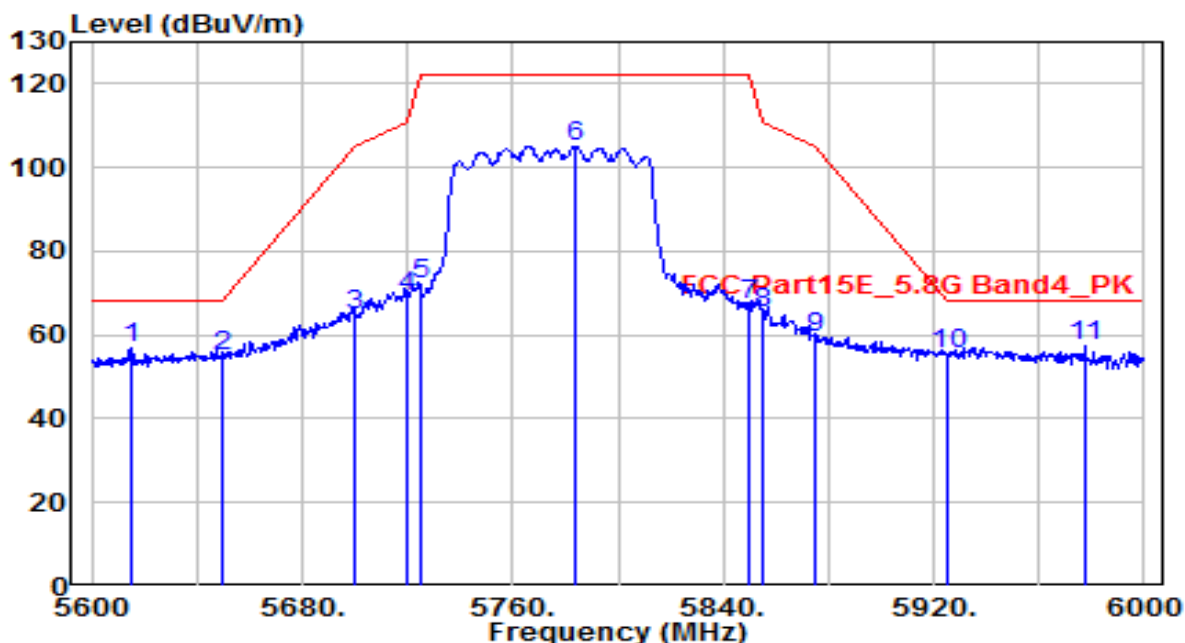


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5130.100	36.96	3.63	40.59	-13.41	54.00	240	190	Average
2		5150.000	34.47	3.65	38.11	-15.89	54.00	240	190	Average
3		5218.900	83.42	3.69	87.11	N/A	N/A	240	190	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz

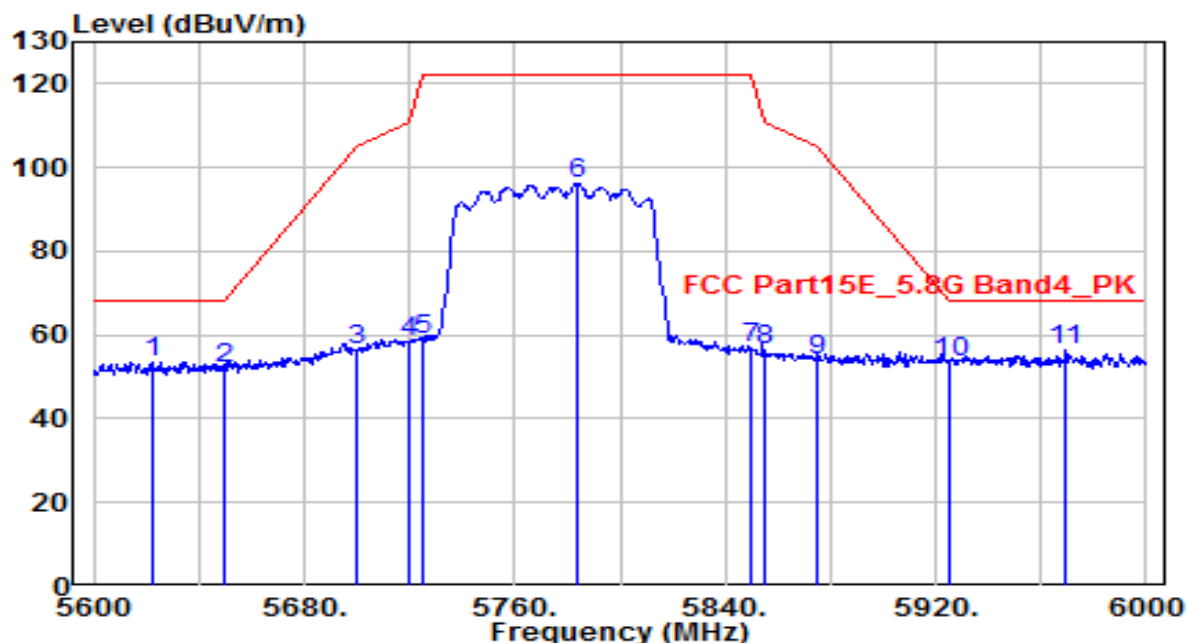


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5614.800	52.48	4.31	56.79	-11.41	68.20	230	210	Peak
2	5650.000	50.68	4.45	55.13	-13.07	68.20	230	210	Peak
3	5700.000	59.97	4.64	64.61	-40.59	105.20	230	210	Peak
4	5720.000	64.27	4.71	68.99	-41.81	110.80	230	210	Peak
5	5725.000	67.21	4.73	71.95	-50.25	122.20	230	210	Peak
6	5783.600	100.14	4.96	105.10	-17.10	122.20	230	210	Peak
7	5850.000	61.88	5.21	67.09	-55.11	122.20	230	210	Peak
8	5855.000	60.23	5.23	65.46	-45.34	110.80	230	210	Peak
9	5875.000	54.29	5.31	59.60	-45.60	105.20	230	210	Peak
10	5925.000	49.91	5.50	55.41	-12.79	68.20	230	210	Peak
11	* 5977.600	51.55	5.70	57.26	-10.94	68.20	230	210	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	Wireless Streaming Station	Date of Test	2020-03-27
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	802.11ac-80_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz



No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5622.800	49.20	4.34	53.55	-14.65	68.20	220	145	Peak
2	5650.000	47.69	4.45	52.14	-16.06	68.20	220	145	Peak
3	5700.000	51.86	4.64	56.49	-48.71	105.20	220	145	Peak
4	5720.000	53.51	4.71	58.23	-52.57	110.80	220	145	Peak
5	5725.000	54.03	4.73	58.76	-63.44	122.20	220	145	Peak
6	5783.600	91.15	4.96	96.11	-26.09	122.20	220	145	Peak
7	5850.000	51.79	5.21	57.00	-65.20	122.20	220	145	Peak
8	5855.000	51.08	5.23	56.31	-54.49	110.80	220	145	Peak
9	5875.000	48.86	5.31	54.17	-51.03	105.20	220	145	Peak
10	5925.000	47.93	5.50	53.43	-14.77	68.20	220	145	Peak
11	* 5969.200	50.72	5.67	56.39	-11.81	68.20	220	145	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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.

7.9. AC Conducted Emissions Measurement

7.9.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ 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.

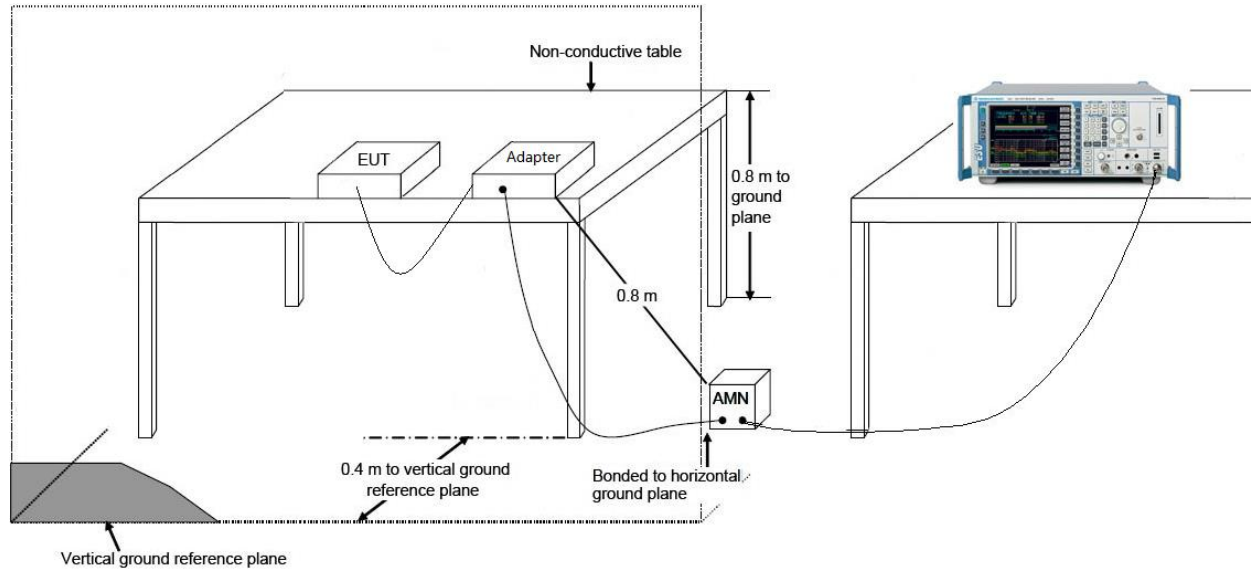
7.9.2. Test Procedure

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.

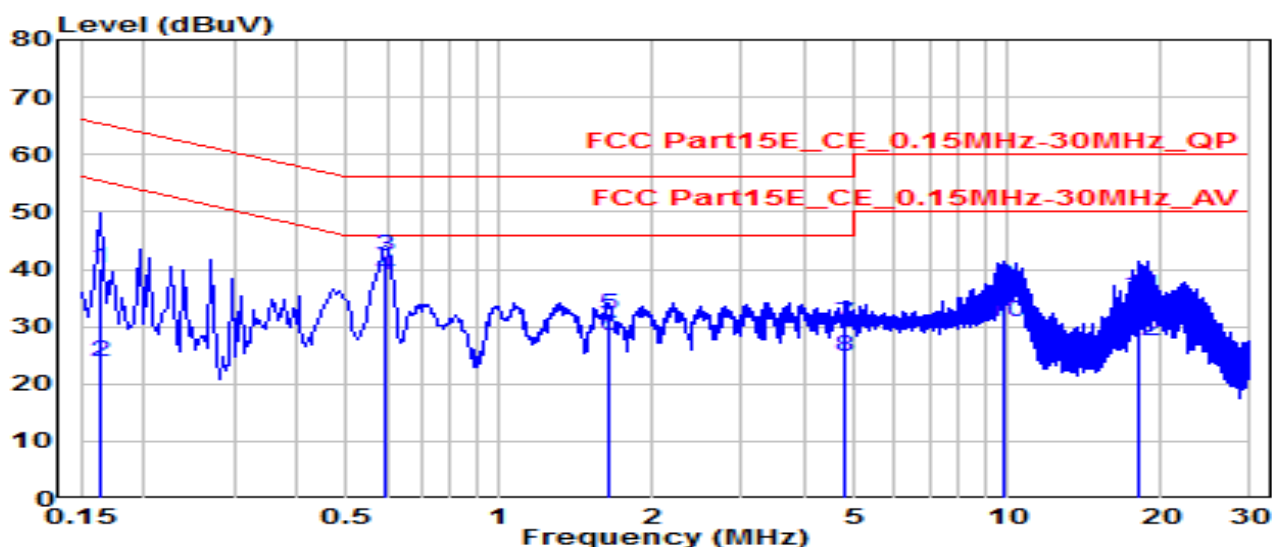
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.9.3. Test Setup



7.9.4. Test Result

EUT	Wireless Streaming Station	Date of Test	2020-03-19
Factor	CE_ENV216-L1	Temp. / Humidity	24.1°C /60%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 120V/60Hz

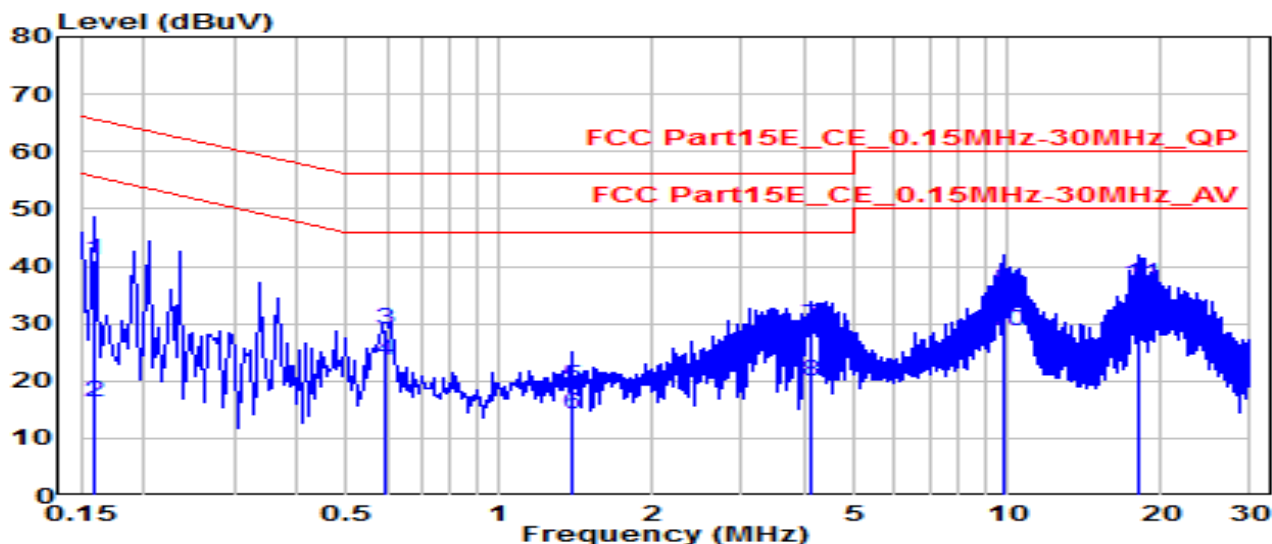


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.163	30.48	9.59	40.06	-25.22	65.28	QP
2		0.163	14.31	9.59	23.90	-31.39	55.28	Average
3	*	0.595	32.79	9.61	42.40	-13.60	56.00	QP
4	*	0.595	29.26	9.61	38.87	-7.13	46.00	Average
5		1.648	22.30	9.68	31.98	-24.02	56.00	QP
6		1.648	18.69	9.68	28.37	-17.63	46.00	Average
7		4.807	20.66	9.74	30.40	-25.60	56.00	QP
8		4.807	15.14	9.74	24.88	-21.12	46.00	Average
9		9.860	27.14	9.87	37.01	-22.99	60.00	QP
10		9.860	20.84	9.87	30.70	-19.30	50.00	Average
11		18.234	25.22	9.97	35.19	-24.81	60.00	QP
12		18.234	17.63	9.97	27.59	-22.41	50.00	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	Wireless Streaming Station	Date of Test	2020-03-19
Factor	CE_ENV216-N	Temp. / Humidity	24.1°C /60%
Polarity	Neutral	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 120V/60Hz

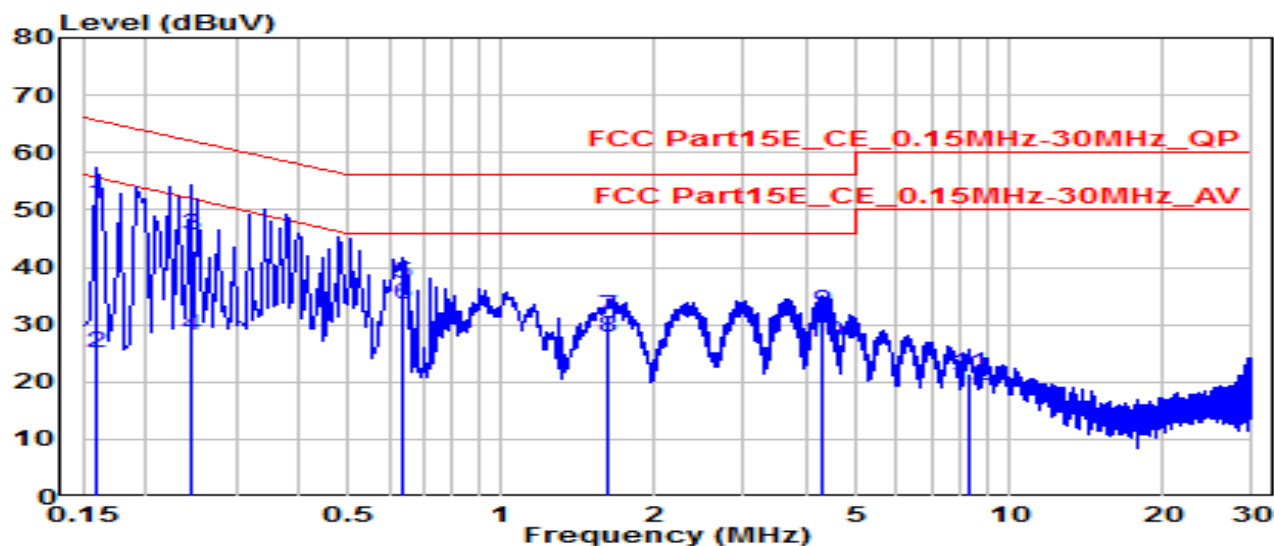


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	0.159	31.52	9.61	41.13	-24.39	65.52	QP
2	0.159	6.64	9.61	16.25	-39.26	55.52	Average
3	0.595	19.23	9.62	28.85	-27.15	56.00	QP
4	0.595	13.80	9.62	23.42	-22.58	46.00	Average
5	1.383	9.22	9.67	18.89	-37.11	56.00	QP
6	1.383	4.61	9.67	14.28	-31.72	46.00	Average
7	4.096	19.74	9.72	29.46	-26.54	56.00	QP
8	4.096	10.09	9.72	19.81	-26.19	46.00	Average
9	9.856	26.02	9.89	35.90	-24.10	60.00	QP
10	9.856	18.79	9.89	28.68	-21.32	50.00	Average
11	* 18.189	26.75	10.02	36.77	-23.23	60.00	QP
12	* 18.189	19.64	10.02	29.66	-20.34	50.00	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	Wireless Streaming Station	Date of Test	2020-04-01
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	23.6°C /55%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 240V/60Hz

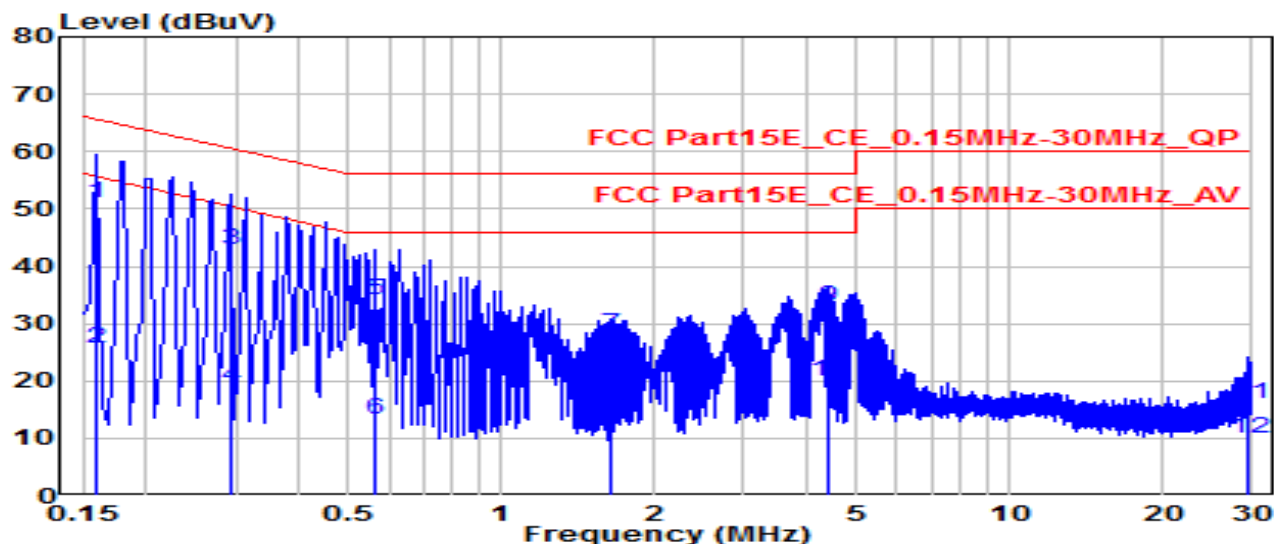


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	*	0.159	41.33	9.59	50.92	-14.60	65.52	QP
2		0.159	15.45	9.59	25.05	-30.47	55.52	Average
3		0.244	35.99	9.61	45.61	-16.34	61.94	QP
4		0.244	18.43	9.61	28.05	-23.90	51.94	Average
5		0.636	27.58	9.62	37.20	-18.80	56.00	QP
6	*	0.636	23.85	9.62	33.46	-12.54	46.00	Average
7		1.612	21.68	9.68	31.36	-24.64	56.00	QP
8		1.612	18.14	9.68	27.82	-18.18	46.00	Average
9		4.254	22.72	9.73	32.45	-23.55	56.00	QP
10		4.254	17.09	9.73	26.82	-19.18	46.00	Average
11		8.299	11.65	9.83	21.47	-38.53	60.00	QP
12		8.299	9.64	9.83	19.46	-30.54	50.00	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	Wireless Streaming Station	Date of Test	2020-04-01
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	23.6°C /55%
Polarity	Neutral	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 240V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	*	0.159	41.41	9.61	51.02	-14.50	65.52	QP
2		0.159	16.18	9.61	25.79	-29.72	55.52	Average
3		0.294	33.19	9.61	42.80	-17.61	60.41	QP
4		0.294	9.54	9.61	19.15	-31.26	50.41	Average
5		0.564	24.60	9.62	34.22	-21.78	56.00	QP
6		0.564	3.57	9.62	13.19	-32.81	46.00	Average
7		1.639	18.42	9.68	28.10	-27.90	56.00	QP
8		1.639	7.88	9.68	17.56	-28.44	46.00	Average
9		4.398	23.18	9.72	32.90	-23.10	56.00	QP
10	*	4.398	10.29	9.72	20.01	-25.99	46.00	Average
11		29.514	5.79	10.17	15.96	-44.04	60.00	QP
12		29.514	-0.17	10.17	10.00	-40.00	50.00	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wireless Streaming Station, Model Number: CT1800, HS770, NM240, NJ340** is in compliance with Part 15E of the FCC Rules.

_____ The End _____