

MEASUREMENT REPORT

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

FCC ID: 2AQ5W-K430

APPLICANT: Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch

Application Type: Certification

Product: Mobile Computing Device with Keyboard

Model No.: K430

Trademark: AMobile

FCC Classification: Unlicensed National Information Infrastructure (NII)

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

Test Procedure(s): ANSI C63.10-2013

Received Date: November 5, 2020

Test Date: December 15, 2020 ~ December 31, 2020

Tested By : Peter Syu

(Peter Syu)

Reviewed By : Paddy Chen

(Paddy Chen)

Approved By : Chenz Ker

(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 ANSI C63.10 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
2011TW7401-U5	1.0	Original Report	2021-01-22	

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§2.1033 General Information

Applicant	Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch
Applicant Address	8F.-3, No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Manufacturer	Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch
Manufacturer Address	8F.-3, No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, 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.	#1 ☐ 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.

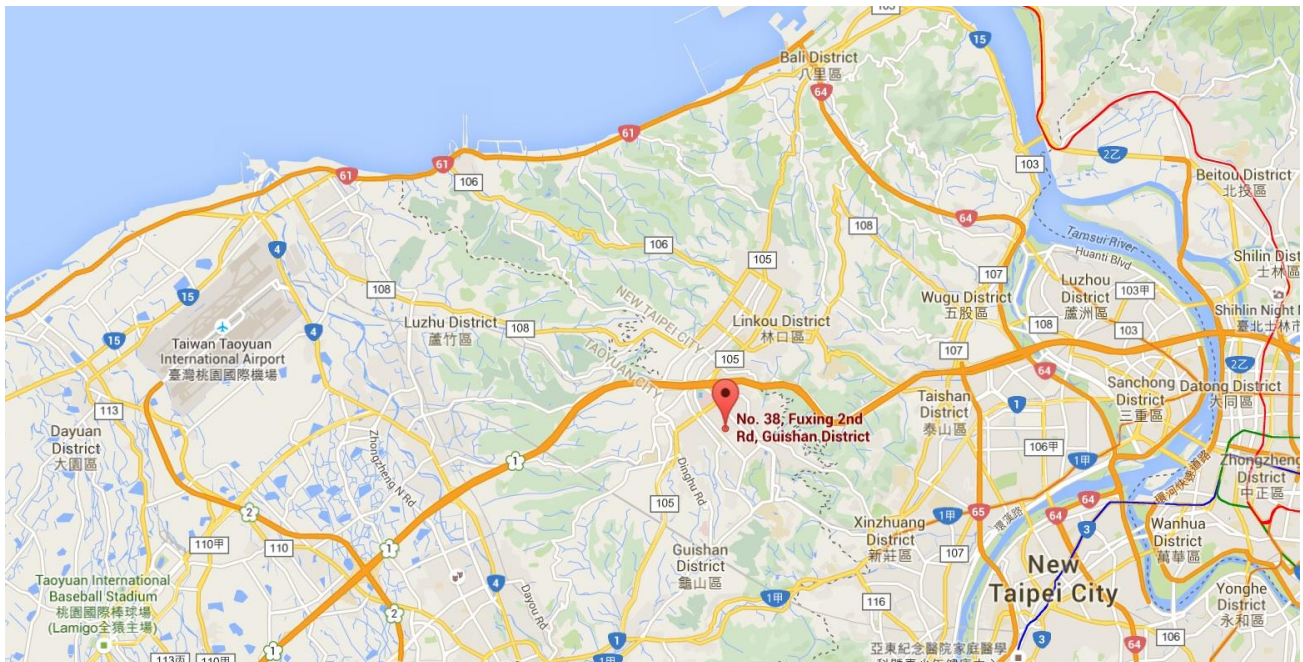
1. INTRODUCTION

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	Mobile Computing Device with Keyboard
Model No.	K430
Brand Name	AMobile
Supports Radios Spec.	WLAN: 2.4G: 802.11b/g/n-20/n-40 5G: 802.11a/n-20/ac-20/n-40/ac-40/ac-80, Band 1,4 Bluetooth Dual Mode: V5.0 NFC 13.56MHz WWAN: 2G: GPRS/EGPRS 850, GPRS/EGPRS 1900 4G: FDD Band 2, 4, 5, 12, 17; TDD Band 38, 41
Wi-Fi Specification	802.11a/n/ac (1TX / 1RX)
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: 12.94dBm 802.11n-HT20: 12.70dBm 802.11ac-VHT20: 12.56dBm 802.11n-HT40: 12.02dBm 802.11ac-VHT40: 12.04dBm 802.11ac-VHT80: 8.99dBm
Modulation Type	802.11a/n-20/ac-20/n-40/ac-40/ac-80: OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM)

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	--	--	--	--

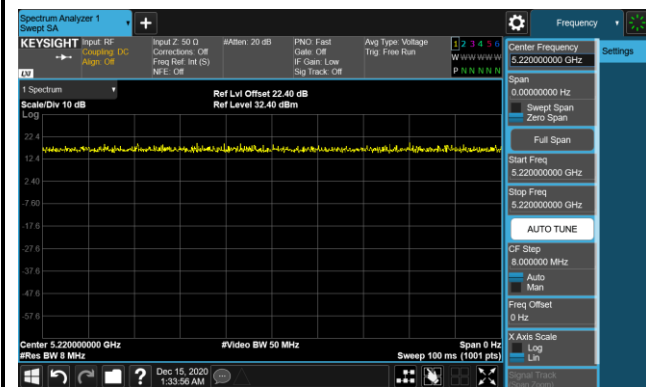
802.11ac-VHT80

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

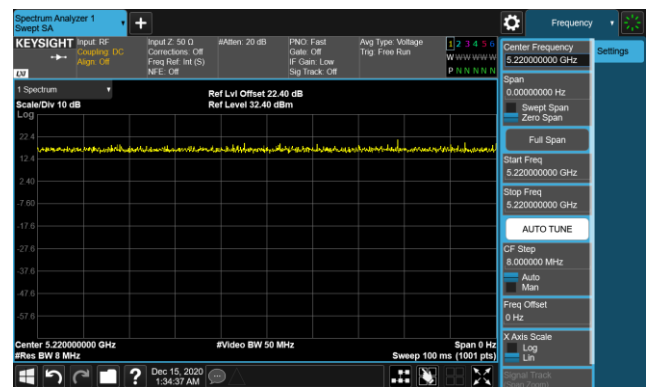
Duty Cycle

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%

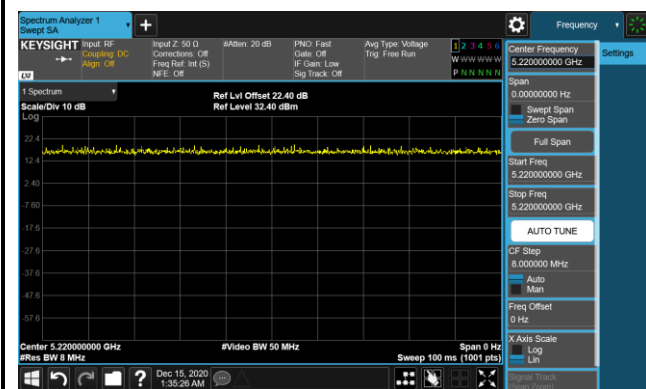
802.11a



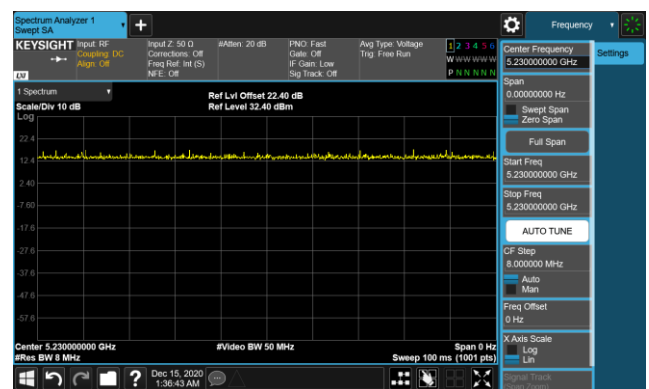
802.11n-HT20



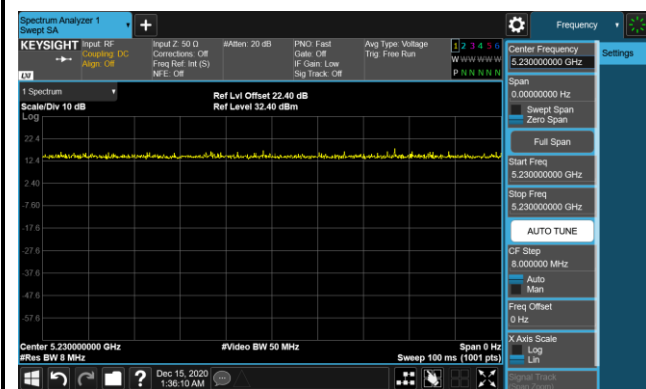
802.11ac-VHT20



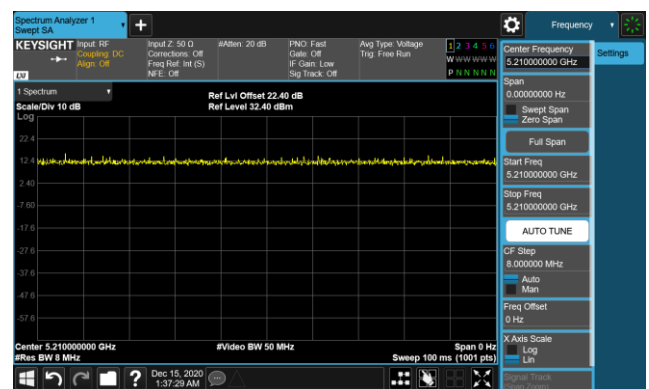
802.11n-HT40



802.11ac-VHT40



802.11ac-VHT80



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

2.4. Test Software

The test utility software used during testing was “MTK Engineering Mod”.

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 **Mobile Computing Device with Keyboard**, 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	Shenzhen Haotiancheng Wireless Technology Co., Ltd.	3452271000150M	FPCB	1.5dBi

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	2021/3/26
Cable	Rosnol	N1C50-RG400-B 1C50-500CM	MRTTWE00013	1 year	2021/6/21
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	2021/10/5
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2021/3/25
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2021/4/27
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2021/4/24
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2021/4/24
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2021/4/24
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2021/4/24
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2021/6/16
Cable	Rosnol	K1K50-UP0264- K1K50-4M	MRTTWE00012	1 year	2021/6/21

Conducted Test Equipment – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/14
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/7/14
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: Mobile Computing Device with Keyboard
Model No.: K430
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	$\geq 500\text{kHz}$		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	$\leq 24\text{ dBm}$		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	$\leq -27\text{dBm/MHz EIRP}$ $\leq -17\text{dBm/MHz EIRP}$	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:

- 1) Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
- 2) 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.
- 3) 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

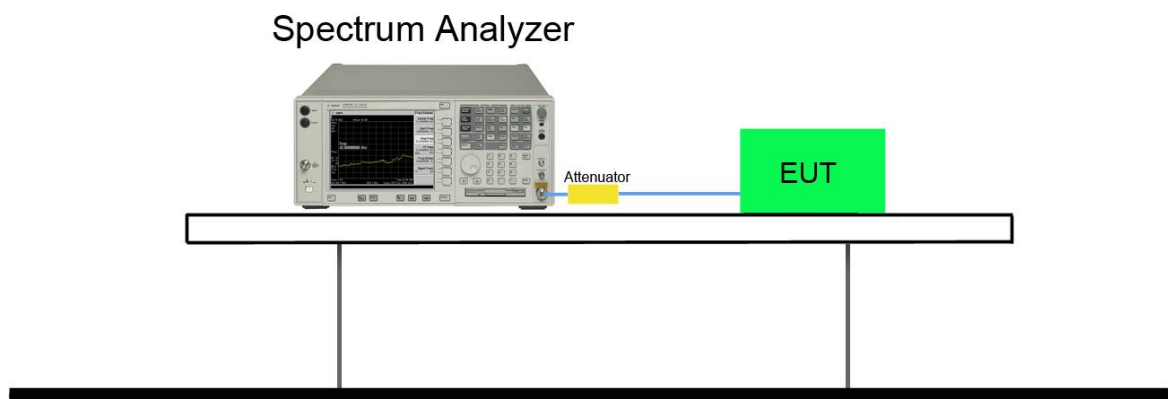
7.2.2. Test Procedure used

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	Mobile Computing Device with Keyboard	Test Engineer	Eric
Test Site	SR2	Test Date	2020/12/30
Test Item	26dB Bandwidth		

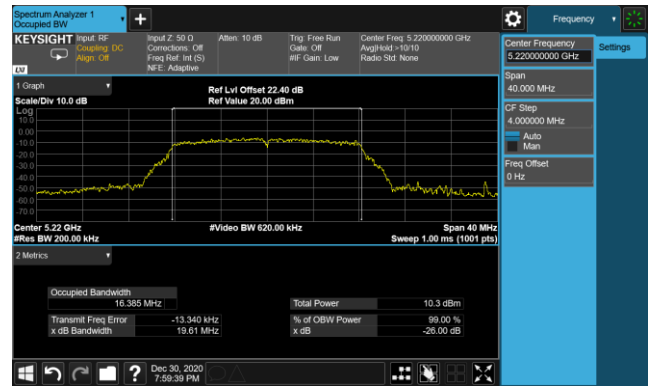
Test Mode	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	36	5180	19.580	16.488
802.11a	44	5220	19.610	16.385
802.11a	48	5240	19.940	16.437
802.11a	149	5745	19.530	16.399
802.11a	157	5785	19.580	16.386
802.11a	165	5825	19.420	16.409
802.11n-HT20	36	5180	20.150	17.559
802.11n-HT20	44	5220	20.160	17.579
802.11n-HT20	48	5240	20.010	17.515
802.11n-HT20	149	5745	19.760	17.539
802.11n-HT20	157	5785	19.930	17.608
802.11n-HT20	165	5825	19.920	17.570
802.11n-HT40	38	5190	40.080	30.610
802.11n-HT40	46	5230	40.240	36.006
802.11n-HT40	151	5755	39.820	36.018
802.11n-HT40	159	5795	39.550	35.939
802.11ac-VHT80	42	5210	79.980	75.375
802.11ac-VHT80	155	5775	80.250	75.180

802.11a 26dB Bandwidth & 99% Bandwidth

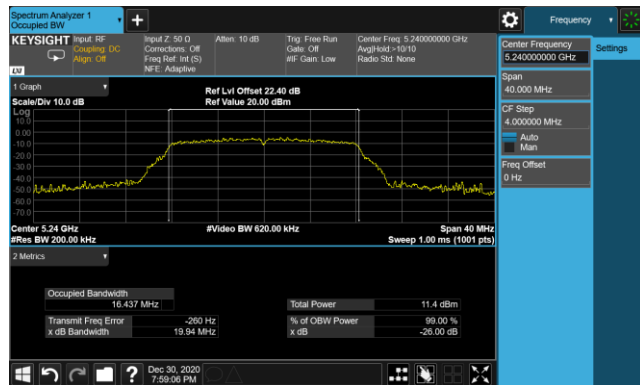
Channel 36 (5180MHz)



Channel 44 (5220MHz)



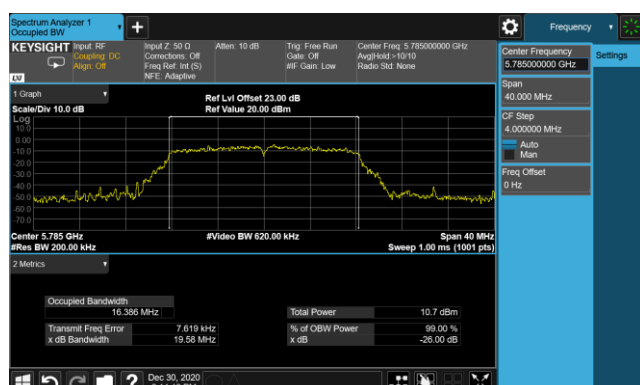
Channel 48 (5240MHz)



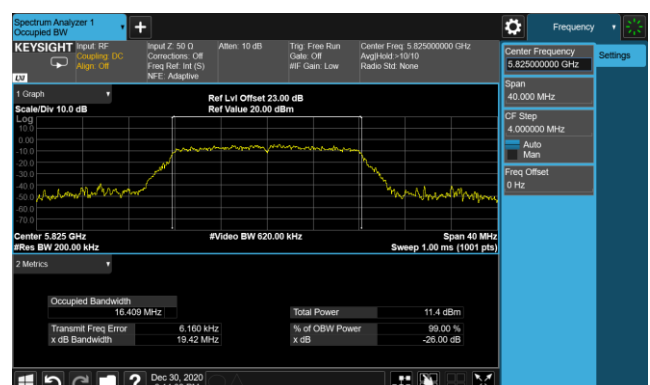
Channel 149 (5745MHz)



Channel 157 (5785MHz)

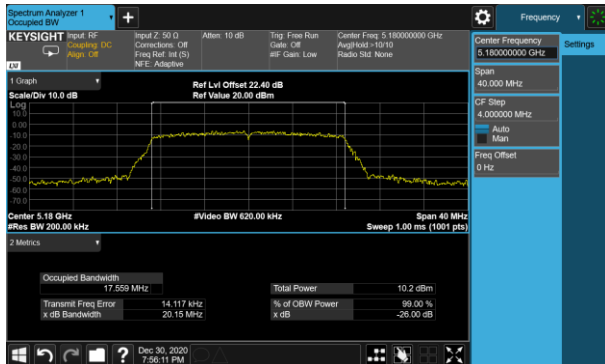


Channel 165 (5825MHz)

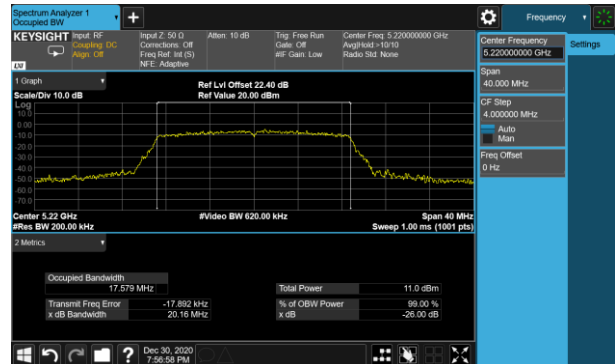


802.11n-HT20 26dB Bandwidth & 99% Bandwidth

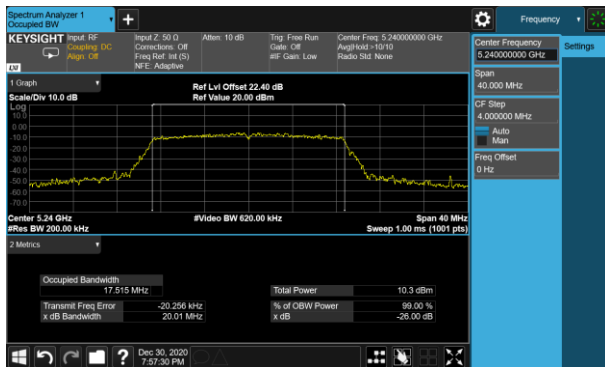
Channel 36 (5180MHz)



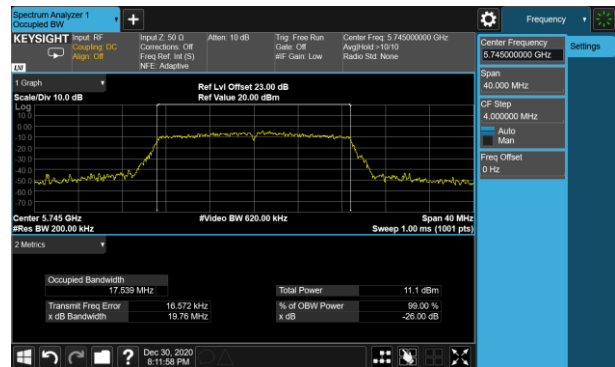
Channel 44 (5220MHz)



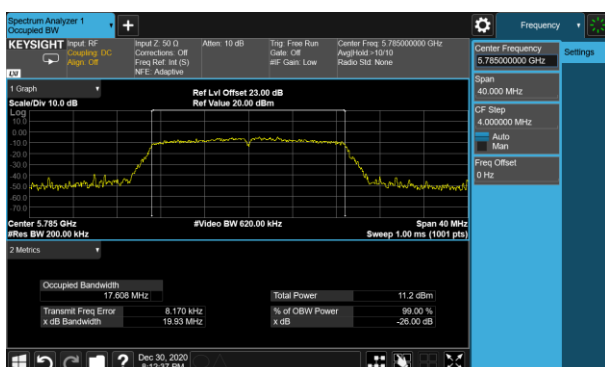
Channel 48 (5240MHz)



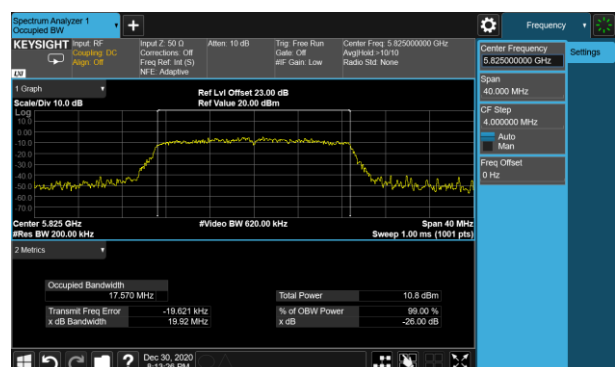
Channel 149 (5745MHz)



Channel 157 (5785MHz)

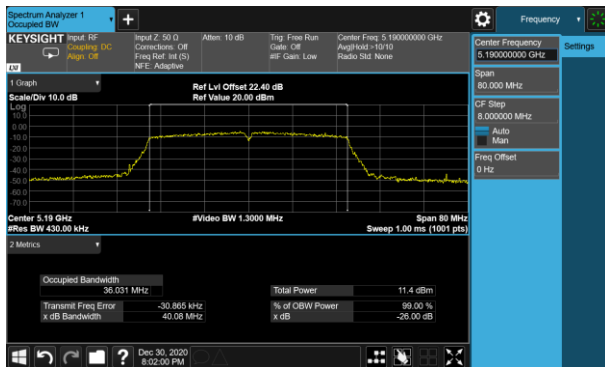


Channel 165 (5825MHz)

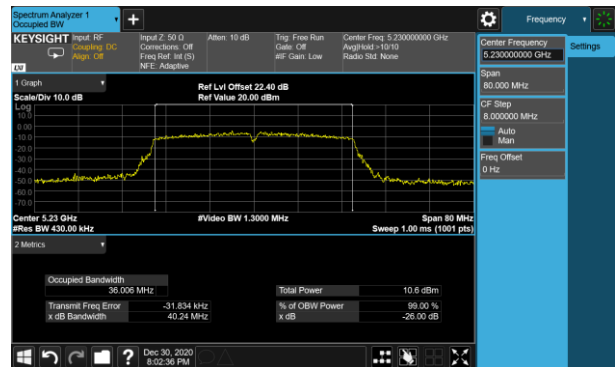


802.11n-HT40 26dB Bandwidth & 99% Bandwidth

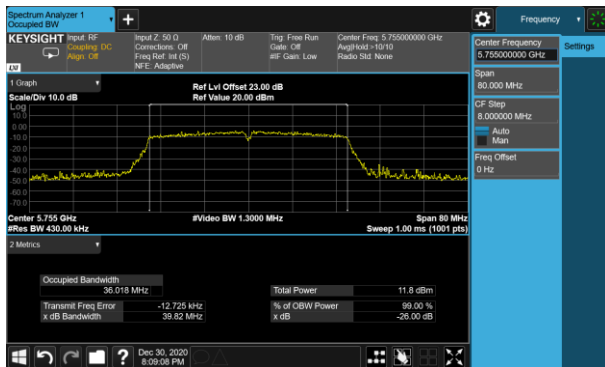
Channel 38 (5190MHz)



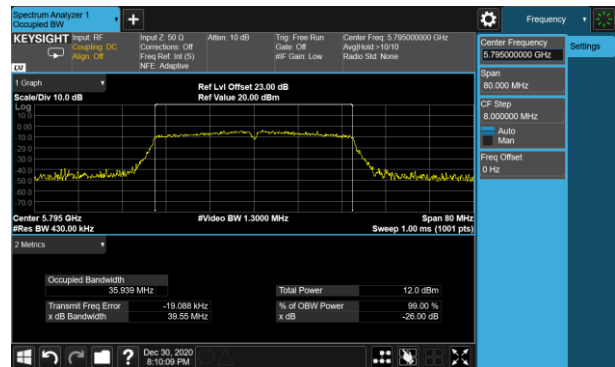
Channel 46 (5230MHz)



Channel 151 (5755MHz)

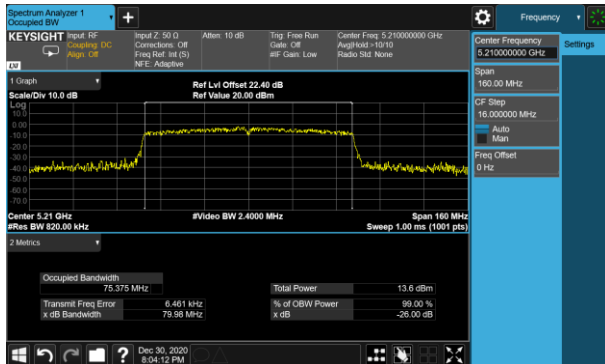


Channel 159 (5795MHz)

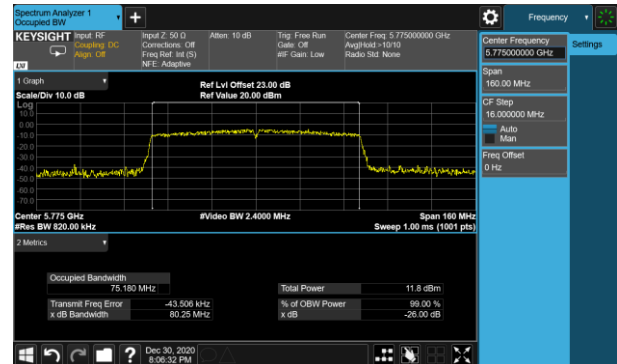


802.11ac-VHT80 26dB Bandwidth & 99% Bandwidth

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.

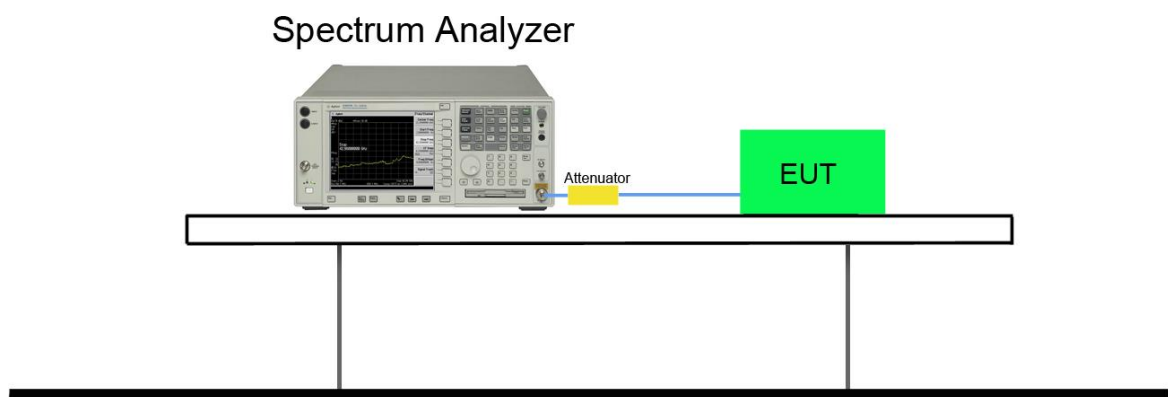
7.3.2. Test Procedure used

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



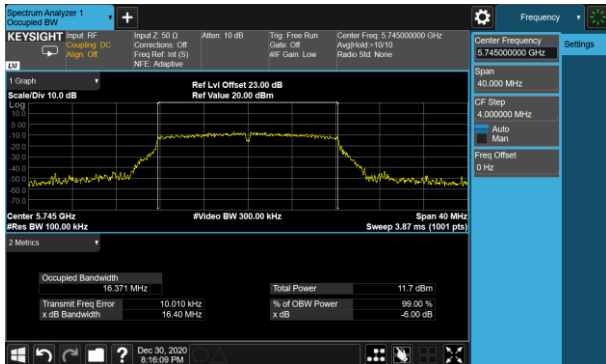
7.3.5. Test Result

Product	Mobile Computing Device with Keyboard	Test Engineer	Eric
Test Site	SR2	Test Date	2020/12/30
Test Item	6dB Bandwidth		

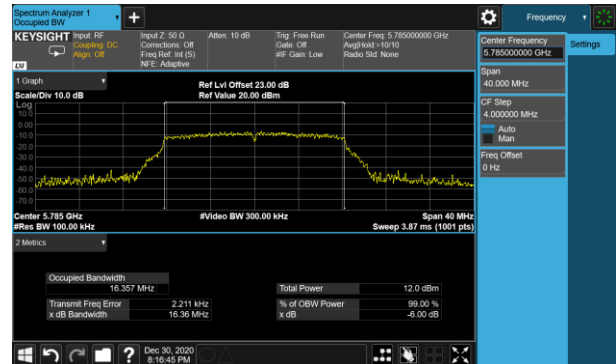
Test Mode	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	149	5745	16.400	≥ 0.5	Pass
802.11a	157	5785	16.360	≥ 0.5	Pass
802.11a	165	5825	16.340	≥ 0.5	Pass
802.11n-HT20	149	5745	17.610	≥ 0.5	Pass
802.11n-HT20	157	5785	17.590	≥ 0.5	Pass
802.11n-HT20	165	5825	17.560	≥ 0.5	Pass
802.11n-HT40	151	5755	36.120	≥ 0.5	Pass
802.11n-HT40	159	5795	36.160	≥ 0.5	Pass
802.11ac-VHT80	155	5775	75.520	≥ 0.5	Pass

802.11a 6dB Bandwidth

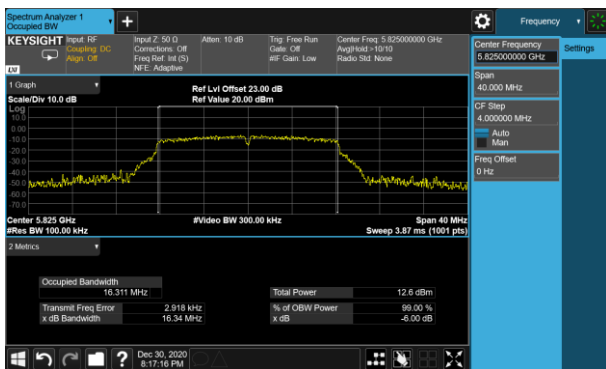
Channel 149 (5745MHz)



Channel 157 (5785MHz)

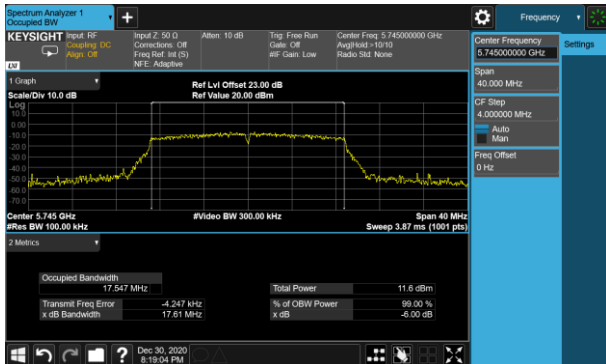


Channel 165 (5825MHz)

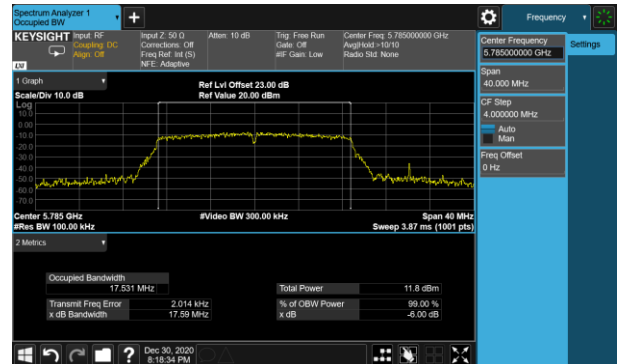


802.11n-HT20 6dB Bandwidth

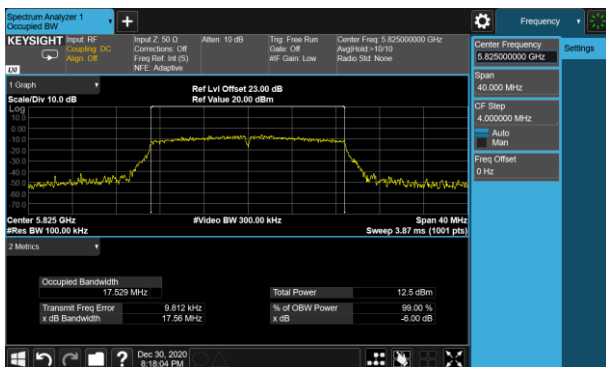
Channel 149 (5745MHz)



Channel 157 (5785MHz)

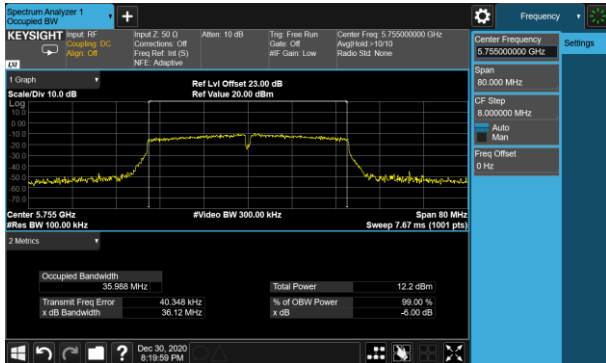


Channel 165 (5825MHz)

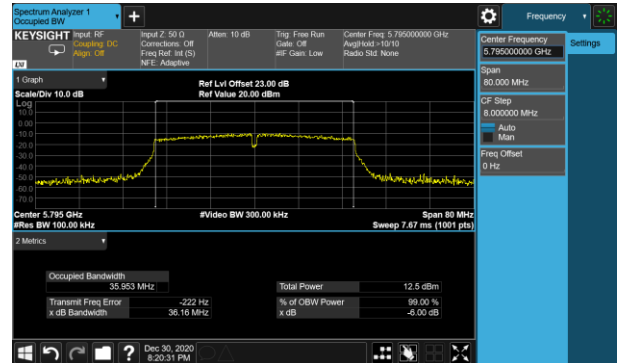


802.11n-HT40 6dB Bandwidth

Channel 151 (5755MHz)

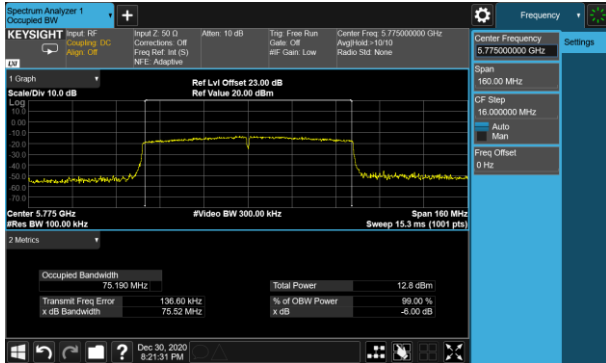


Channel 159 (5795MHz)



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.

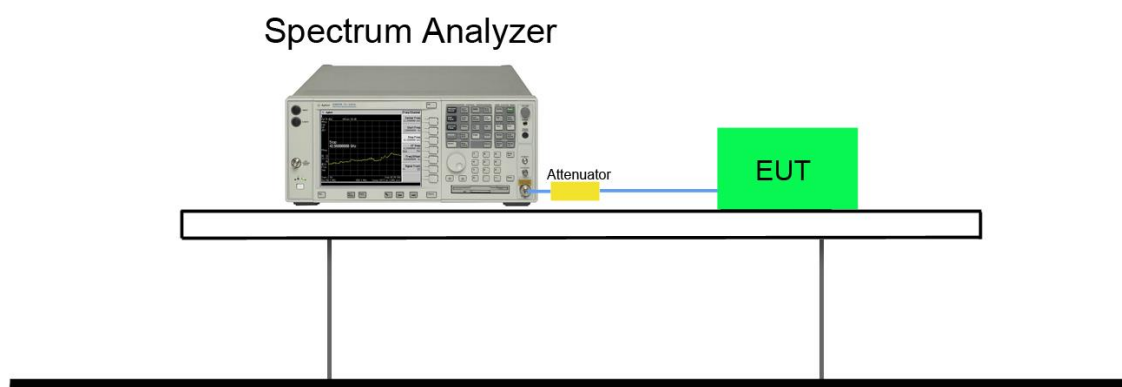
7.4.2. Test Procedure Used

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	Mobile Computing Device with Keyboard	Test Engineer	Eric
Test Site	SR2	Test Date	2020/12/15
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	11.24	--	--	--	--	--	--	--	≤ 24
44	5220	12.94	12.93	12.92	12.91	12.90	12.66	12.41	12.23	≤ 24
48	5240	11.87	--	--	--	--	--	--	--	≤ 24
149	5745	11.95	--	--	--	--	--	--	--	≤ 30
157	5785	11.60	11.59	11.58	11.57	11.56	11.55	11.53	11.52	≤ 30
165	5825	11.67	--	--	--	--	--	--	--	≤ 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	11.15	--	--	--	--	--	--	--	≤ 24
44	5220	12.08	12.07	12.05	12.03	12.01	12.00	11.98	11.97	≤ 24
48	5240	12.39	--	--	--	--	--	--	--	≤ 24
149	5745	12.70	--	--	--	--	--	--	--	≤ 30
157	5785	12.29	12.28	12.27	12.26	12.25	12.24	12.23	12.22	≤ 30
165	5825	12.32	--	--	--	--	--	--	--	≤ 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	MCS8	MCS9	
36	5180	11.00	--	--	--	--	--	--	--	--	--	≤ 24
44	5220	12.16	12.15	12.14	12.13	12.12	12.11	12.10	12.09	12.08	12.07	≤ 24
48	5240	12.42	--	--	--	--	--	--	--	--	--	≤ 24
149	5745	12.45	--	--	--	--	--	--	--	--	--	≤ 30
157	5785	12.56	12.55	12.54	12.53	12.52	12.51	12.50	12.49	12.48	12.47	≤ 30
165	5825	12.32	--	--	--	--	--	--	--	--	--	≤ 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	10.59	--	--	--	--	--	--	--	≤ 24
46	5230	12.02	11.75	11.53	11.31	11.12	11.10	11.09	11.08	≤ 24
151	5755	11.40	--	--	--	--	--	--	--	≤ 30
159	5795	10.75	10.74	10.73	10.71	10.69	10.65	10.63	10.61	≤ 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	MCS8	MCS9	
38	5190	10.54	--	--	--	--	--	--	--	--	--	≤ 24
46	5230	12.04	12.03	12.02	12.01	12.00	11.99	11.98	11.97	11.95	11.94	≤ 24
151	5755	11.48	--	--	--	--	--	--	--	--	--	≤ 30
159	5795	11.39	11.30	11.03	10.96	10.74	10.72	10.70	10.69	10.67	10.65	≤ 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	7.51	7.45	7.40	7.33	7.22	7.21	7.20	7.19	7.18	7.17	≤ 24
155	5775	8.99	8.98	8.97	8.95	8.94	8.90	8.88	8.75	8.70	8.67	≤ 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	11.24	11.24	≤ 24	12.74	≤ 30	Pass
11a	44	5220	12.94	12.94	≤ 24	14.44	≤ 30	Pass
11a	48	5240	11.87	11.87	≤ 24	13.37	≤ 30	Pass
11a	149	5745	11.95	11.95	≤ 30	13.45	≤ 36	Pass
11a	157	5785	11.60	11.60	≤ 30	13.10	≤ 36	Pass
11a	165	5825	11.67	11.67	≤ 30	13.17	≤ 36	Pass
11n-HT20	36	5180	11.15	11.15	≤ 24	12.65	≤ 30	Pass
11n-HT20	44	5220	12.08	12.08	≤ 24	13.58	≤ 30	Pass
11n-HT20	48	5240	12.39	12.39	≤ 24	13.89	≤ 30	Pass
11n-HT20	149	5745	12.70	12.70	≤ 30	14.20	≤ 36	Pass
11n-HT20	157	5785	12.29	12.29	≤ 30	13.79	≤ 36	Pass
11n-HT20	165	5825	12.32	12.32	≤ 30	13.82	≤ 36	Pass
11ac-VHT20	36	5180	11.00	11.00	≤ 24	12.50	≤ 30	Pass
11ac-VHT20	44	5220	12.16	12.16	≤ 24	13.66	≤ 30	Pass
11ac-VHT20	48	5240	12.42	12.42	≤ 24	13.92	≤ 30	Pass
11ac-VHT20	149	5745	12.45	12.45	≤ 30	13.95	≤ 36	Pass
11ac-VHT20	157	5785	12.56	12.56	≤ 30	14.06	≤ 36	Pass
11ac-VHT20	165	5825	12.32	12.32	≤ 30	13.82	≤ 36	Pass
11n-HT40	38	5190	10.59	10.59	≤ 24	12.09	≤ 30	Pass
11n-HT40	46	5230	12.02	12.02	≤ 24	13.52	≤ 30	Pass
11n-HT40	151	5755	11.40	11.40	≤ 30	12.90	≤ 36	Pass
11n-HT40	159	5795	10.75	10.75	≤ 30	12.25	≤ 36	Pass
11ac-VHT40	38	5190	10.54	10.54	≤ 24	12.04	≤ 30	Pass
11ac-VHT40	46	5230	12.04	12.04	≤ 24	13.54	≤ 30	Pass
11ac-VHT40	151	5755	11.48	11.48	≤ 30	12.98	≤ 36	Pass
11ac-VHT40	159	5795	11.39	11.39	≤ 30	12.89	≤ 36	Pass
11ac-VHT80	42	5210	7.51	7.51	≤ 24	9.01	≤ 30	Pass
11ac-VHT80	155	5775	8.99	8.99	≤ 30	10.49	≤ 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: 1.5dBi.

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.

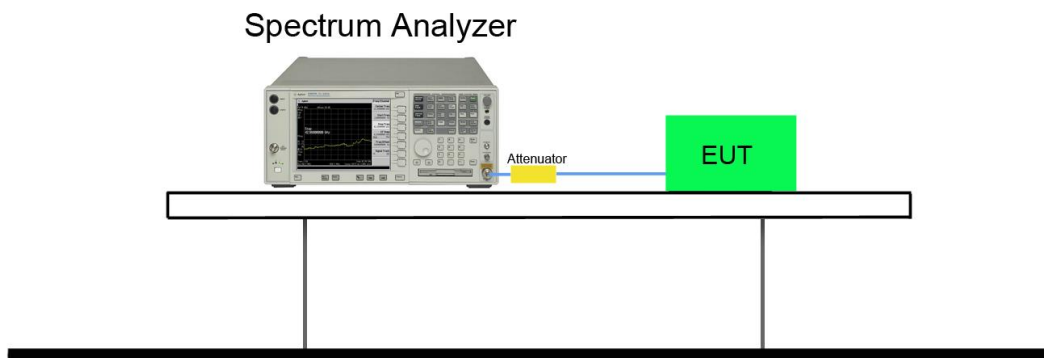
7.5.2. Test Procedure Used

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.

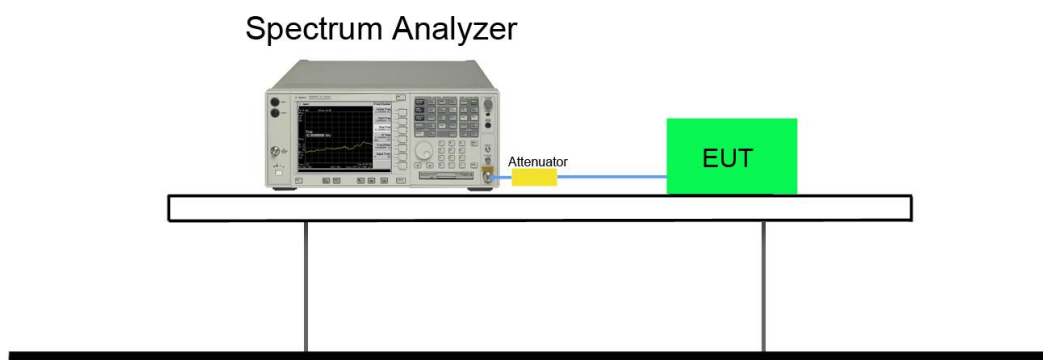
7.6.2. Test Procedure Used

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	Mobile Computing Device with Keyboard	Test Engineer	Eric
Test Site	SR2	Test Date	2020/12/30
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	1.767	100%	1.767	≤ 11	Pass
11a	44	5220	5.069	100%	5.069	≤ 11	Pass
11a	48	5240	5.119	100%	5.119	≤ 11	Pass
11n-HT20	36	5180	1.739	100%	1.739	≤ 11	Pass
11n-HT20	44	5220	4.616	100%	4.616	≤ 11	Pass
11n-HT20	48	5240	4.822	100%	4.822	≤ 11	Pass
11n-HT40	38	5190	-2.437	100%	-2.437	≤ 11	Pass
11n-HT40	46	5230	1.715	100%	1.715	≤ 11	Pass
11ac-VHT80	42	5210	-7.707	100%	-7.707	≤ 11	Pass

Note: Total PSD (dBm/MHz) = PSD (dBm/MHz) + 10*log(1/duty cycle).

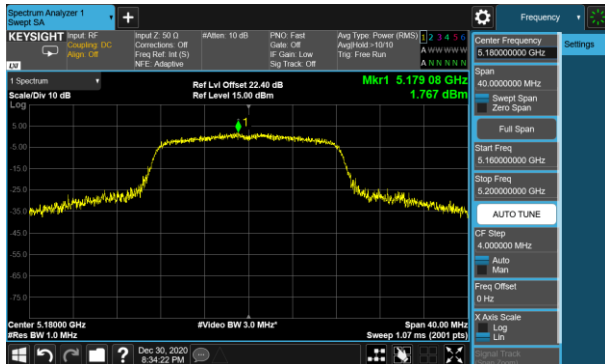
For FCC bands (UNII-3)

Test Mode	Channel No.	Freq. (MHz)	PSD	Duty Cycle (%)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Result
11a	149	5745	2.096	100%	2.096	≤ 30	Pass
11a	157	5785	2.131	100%	2.131	≤ 30	Pass
11a	165	5825	2.773	100%	2.773	≤ 30	Pass
11n-HT20	149	5745	1.742	100%	1.742	≤ 30	Pass
11n-HT20	157	5785	1.955	100%	1.955	≤ 30	Pass
11n-HT20	165	5825	2.059	100%	2.059	≤ 30	Pass
11n-HT40	151	5755	-1.567	100%	-1.567	≤ 30	Pass
11n-HT40	159	5795	-1.042	100%	-1.042	≤ 30	Pass
11ac-VHT80	155	5775	-7.583	100%	-7.583	≤ 30	Pass

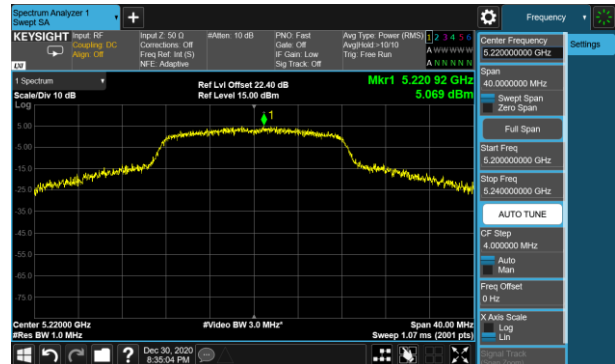
Note: Total PSD (dBm/500kHz) = PSD (dBm/1000kHz) + $10 \cdot \log(1/\text{duty cycle})$ + $10 \cdot \log(500\text{kHz}/1000\text{kHz})$.

802.11a Power Spectral Density

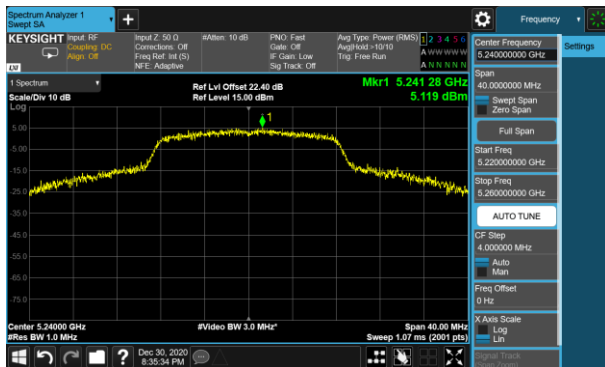
Channel 36 (5180MHz)



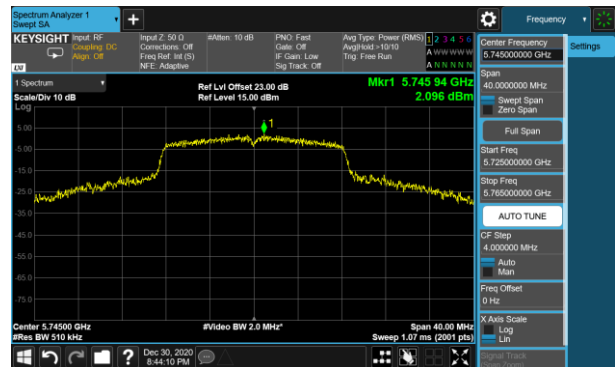
Channel 44 (5220MHz)



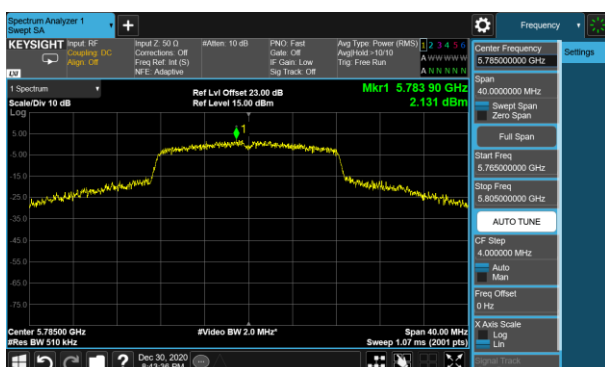
Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)

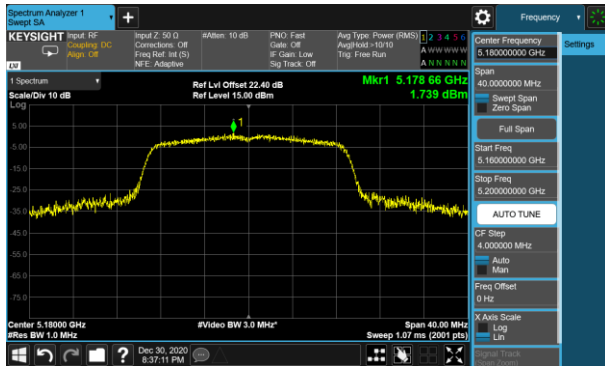


Channel 165 (5825MHz)

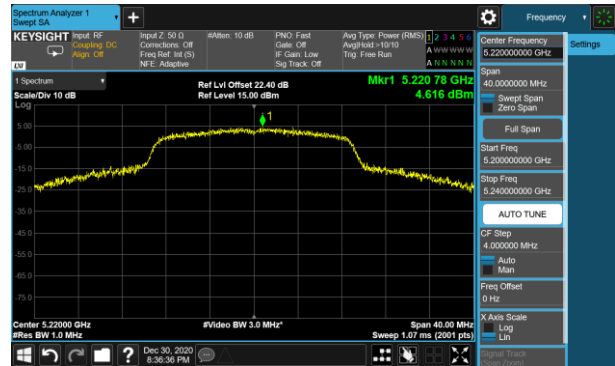


802.11n-HT20 Power Spectral Density

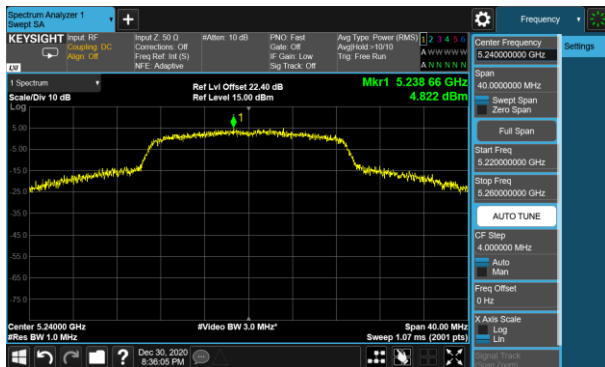
Channel 36 (5180MHz)



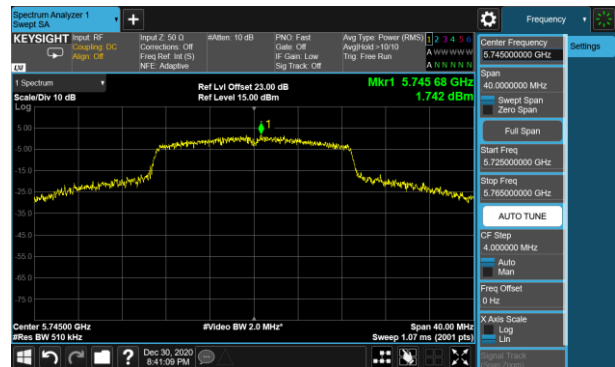
Channel 44 (5220MHz)



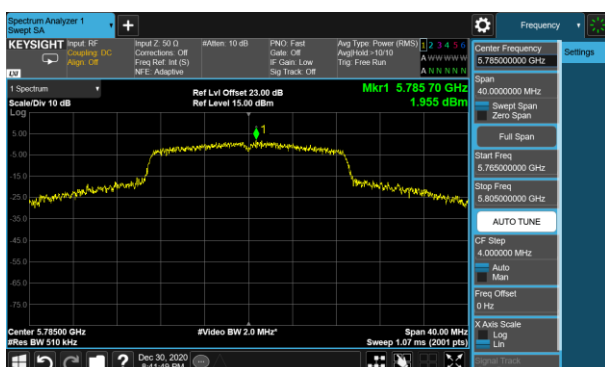
Channel 48 (5240MHz)



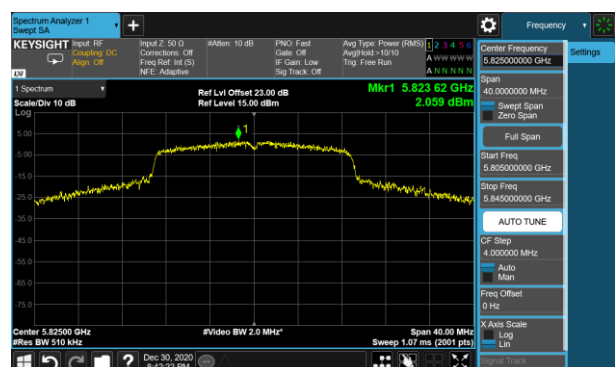
Channel 149 (5745MHz)



Channel 157 (5785MHz)

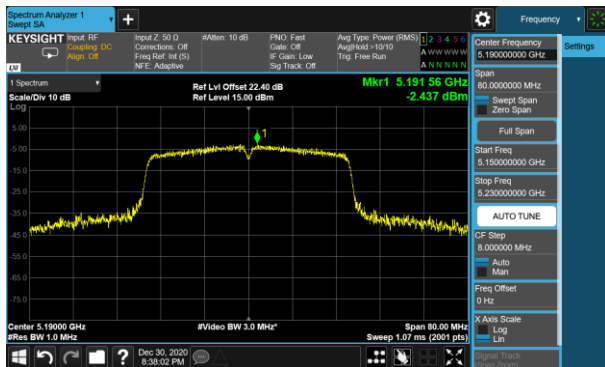


Channel 165 (5825MHz)

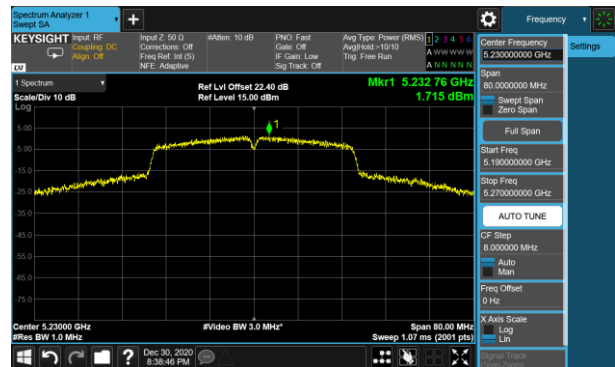


802.11n-HT40 Power Spectral Density

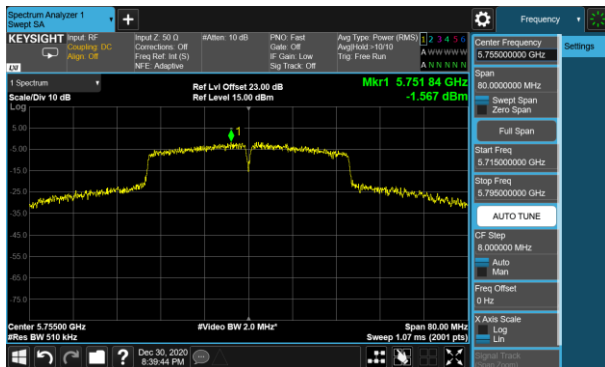
Channel 38 (5190MHz)



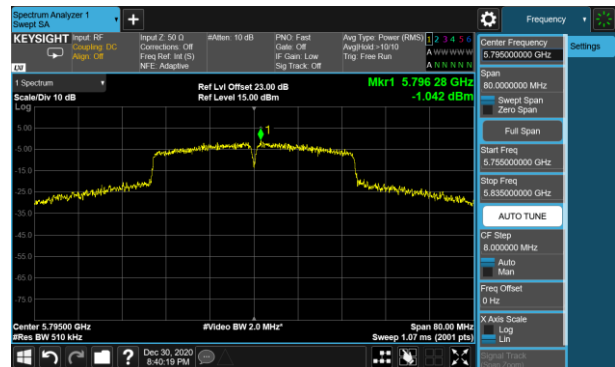
Channel 46 (5230MHz)



Channel 151 (5755MHz)

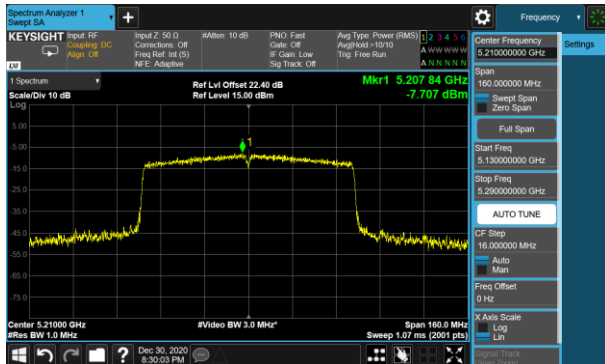


Channel 159 (5795MHz)

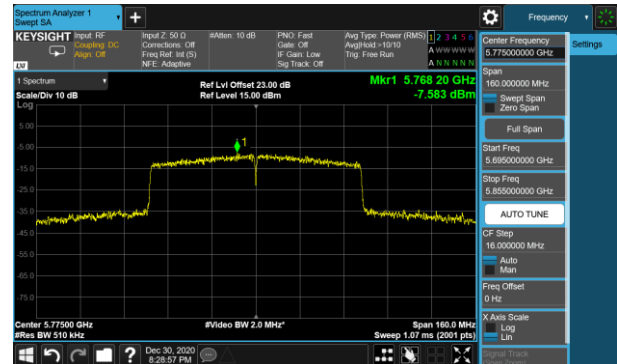


802.11ac-VHT80 Power Spectral Density

Channel 42 (5210MHz)



Channel 155 (5775MHz)



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)

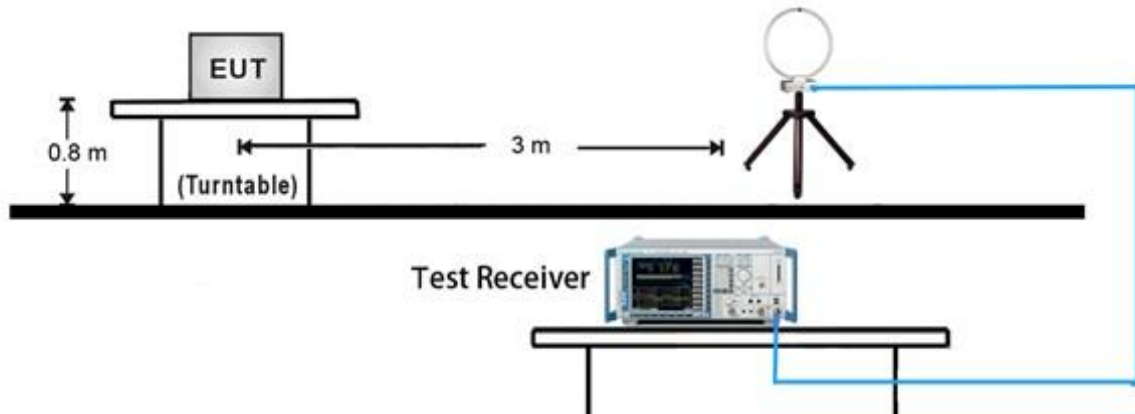
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (Average)
5. Number of measurement points = 1001 (Number of points must be $> 2 \times \text{span/RBW}$)
6. Sweep time = auto
7. Trace was averaged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

Quasi-Peak & Average Measurements below 30MHz

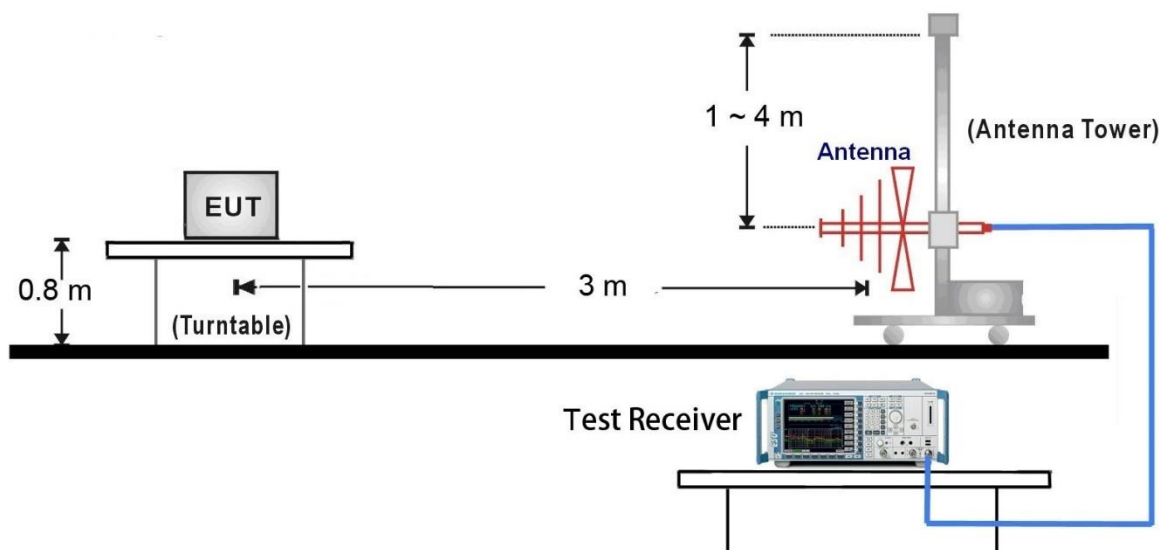
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 200Hz for 9kHz to 150kHz frequency; RBW = 9kHz for 0.15MHz to 30MHz frequency
4. Detector = CISPR quasi-peak or power average (Average)
5. Sweep time = auto couple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

7.7.4. Test Setup

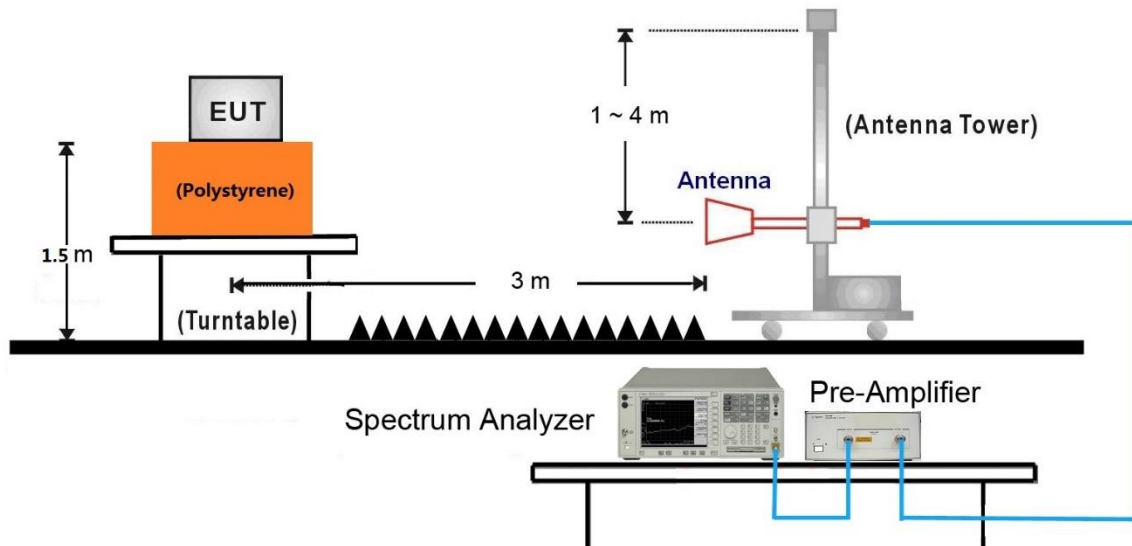
9kHz ~ 30MHz Test Setup:



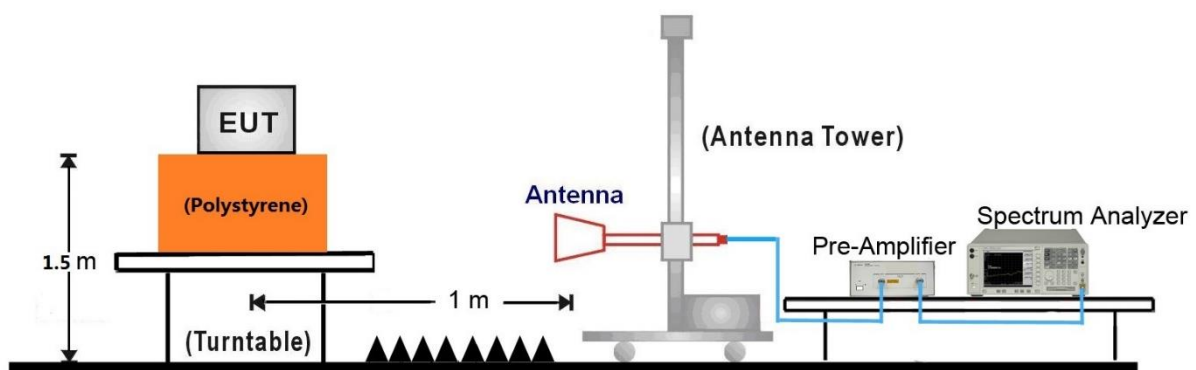
30MHz ~ 1GHz Test Setup:



1GHz ~18GHz Test Setup:

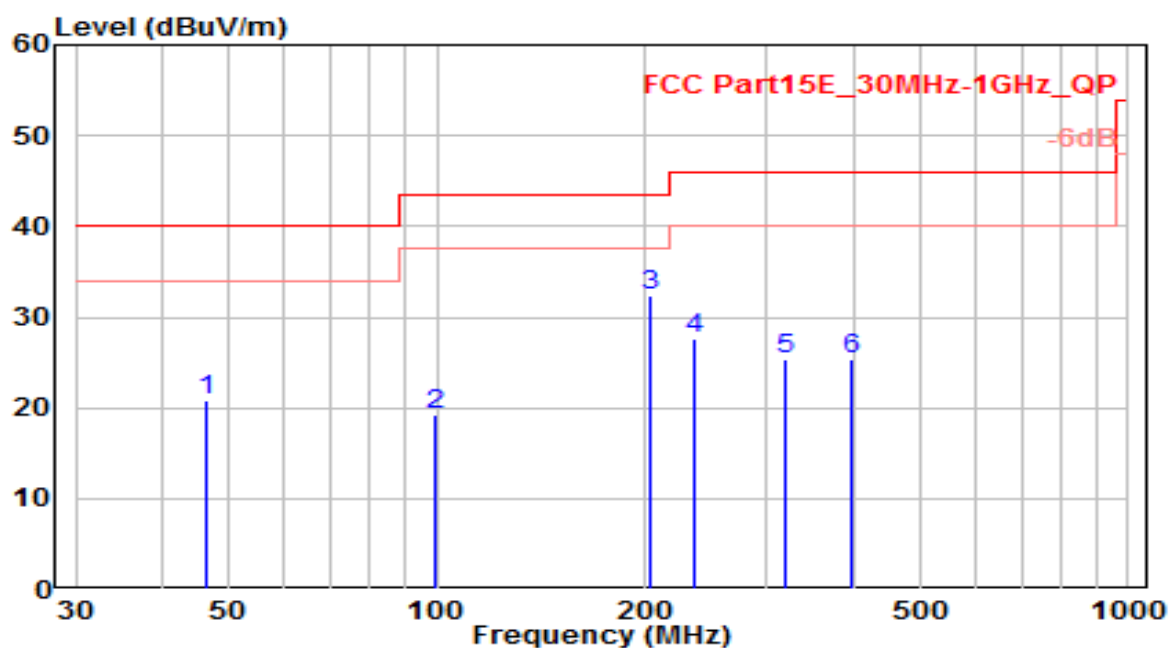


18GHz ~40GHz Test Setup:



7.7.5. Test Result

EUT	Mobile Computing Device with Keyboard	Date of Test	2020-12-30
Factor	VULB 9162	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

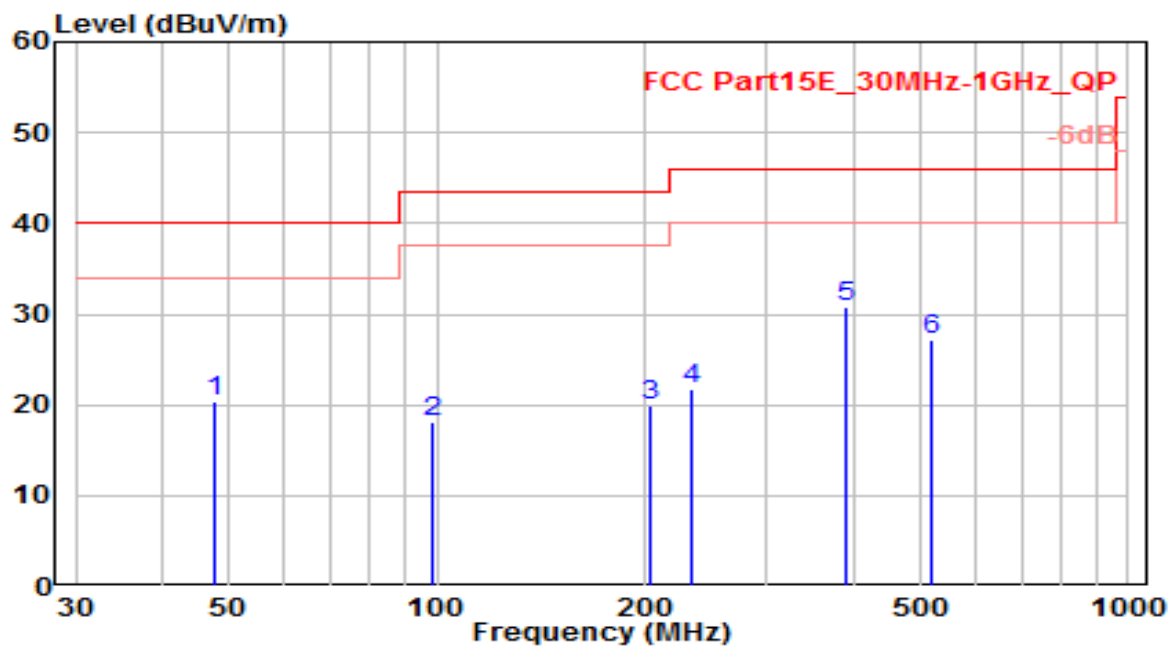


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	46.290	-1.09	21.87	20.78	-19.22	40.00	100	10	QP
2	99.684	0.07	19.11	19.18	-24.32	43.50	100	135	QP
3	* 203.180	13.36	19.10	32.46	-11.04	43.50	100	205	QP
4	235.640	7.62	19.97	27.59	-18.41	46.00	100	150	QP
5	320.165	3.26	22.20	25.46	-20.54	46.00	100	210	QP
6	398.560	1.26	24.04	25.30	-20.70	46.00	100	300	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-30
Factor	VULB 9162	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

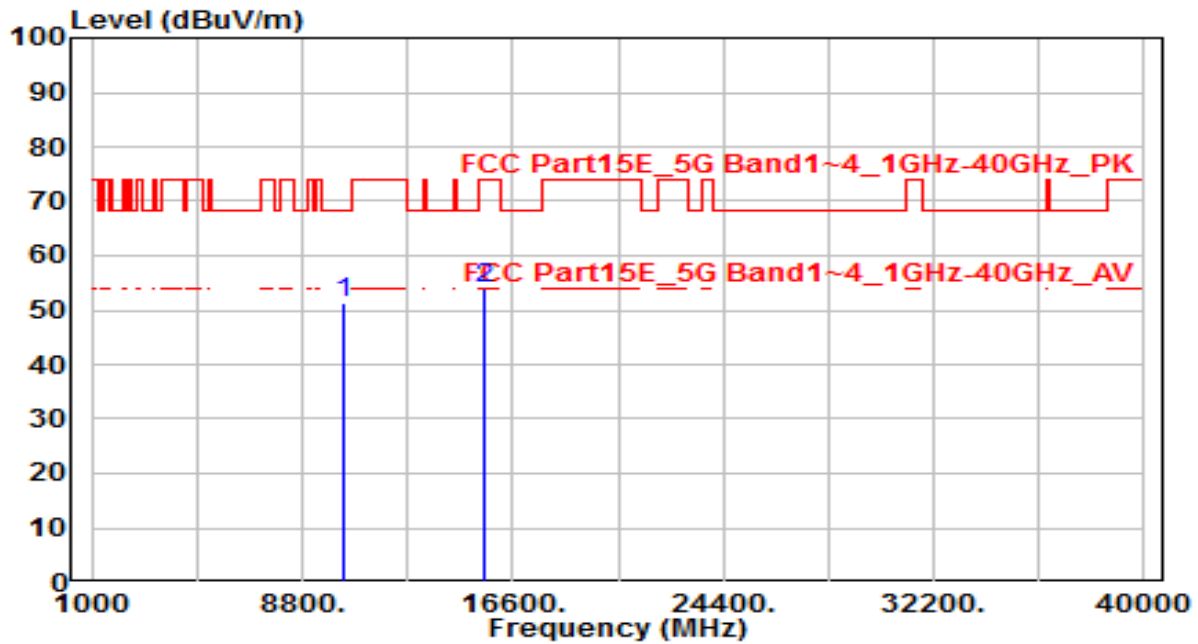


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	47.620	-1.47	21.93	20.47	-19.53	40.00	100	10	QP
2	98.240	-0.77	18.78	18.01	-25.49	43.50	100	110	QP
3	202.650	0.86	19.13	19.99	-23.51	43.50	100	300	QP
4	233.421	1.85	19.85	21.70	-24.30	46.00	100	210	QP
5	* 390.650	6.86	23.90	30.77	-15.23	46.00	100	210	QP
6	521.220	0.66	26.47	27.13	-18.87	46.00	100	300	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

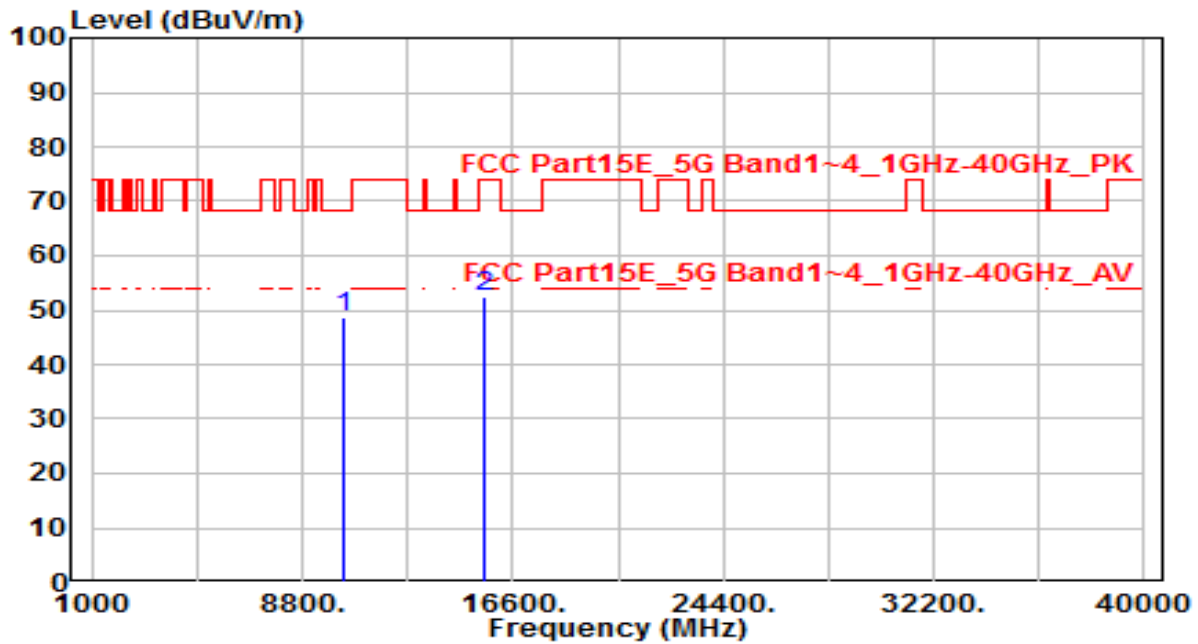


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10360.000	34.55	16.59	51.14	-17.06	68.20	150	0	Peak
2		15540.000	32.43	21.38	53.81	-20.19	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

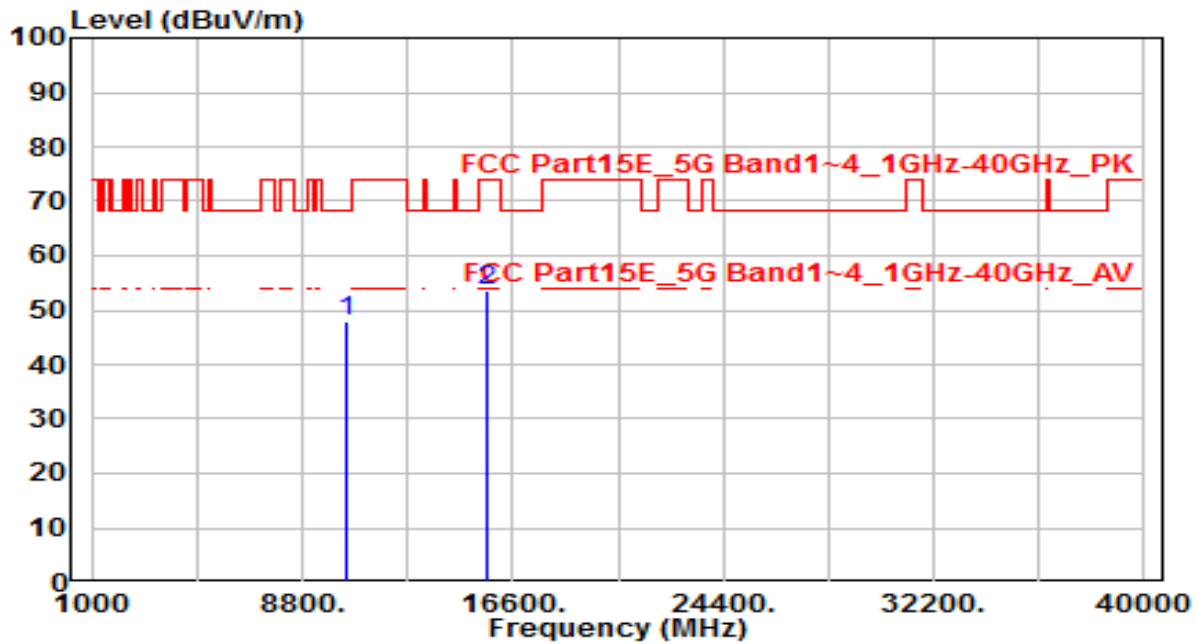


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10360.000	31.95	16.59	48.54	-19.66	68.20	150	0	Peak
2		15540.000	31.16	21.38	52.55	-21.45	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

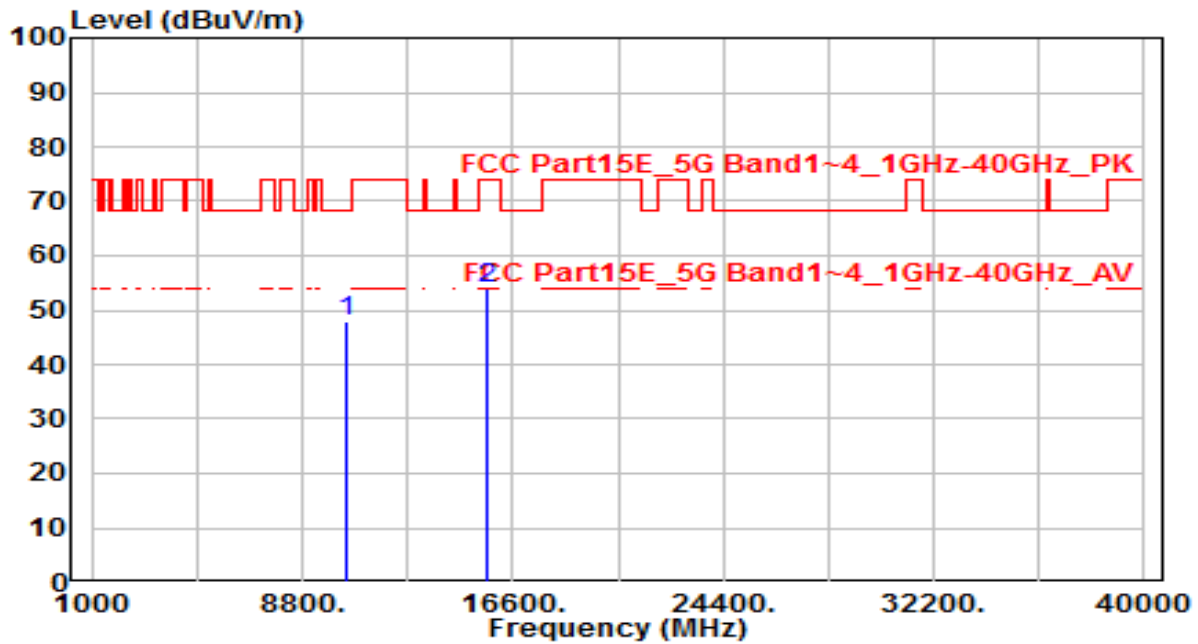


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10440.000	31.00	16.86	47.86	-20.34	68.20	150	0	Peak
2		15660.000	32.31	21.18	53.50	-20.50	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

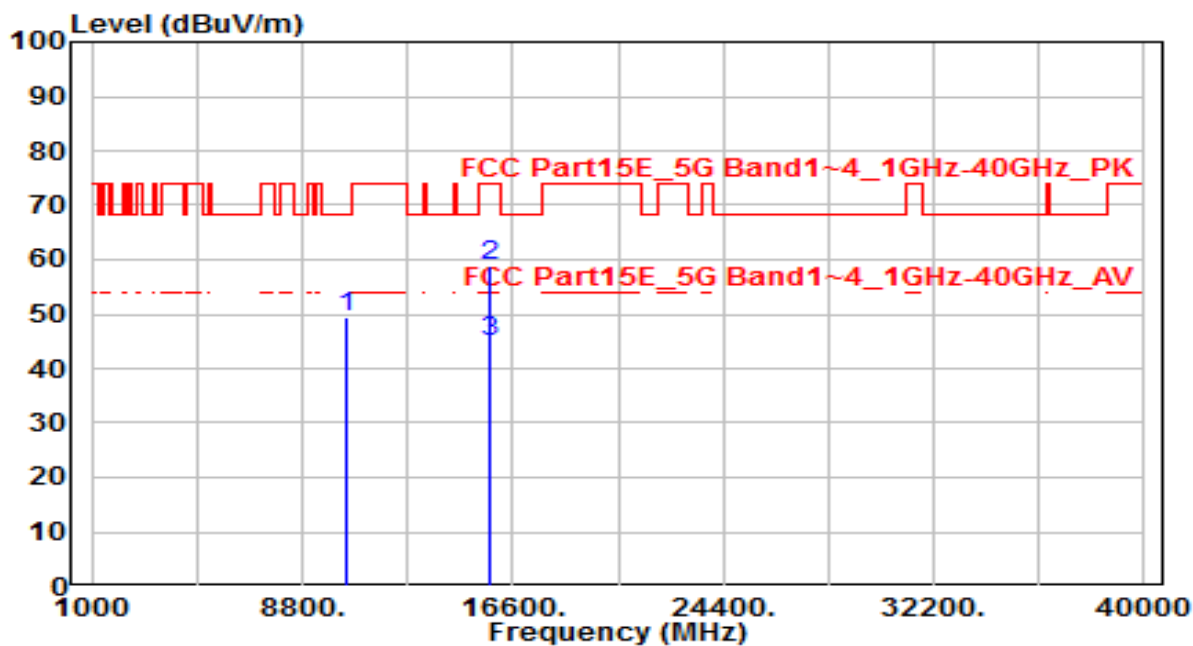


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10440.000	30.98	16.86	47.85	-20.35	68.20	150	0	Peak
2	* 15660.000	32.75	21.18	53.93	-20.07	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

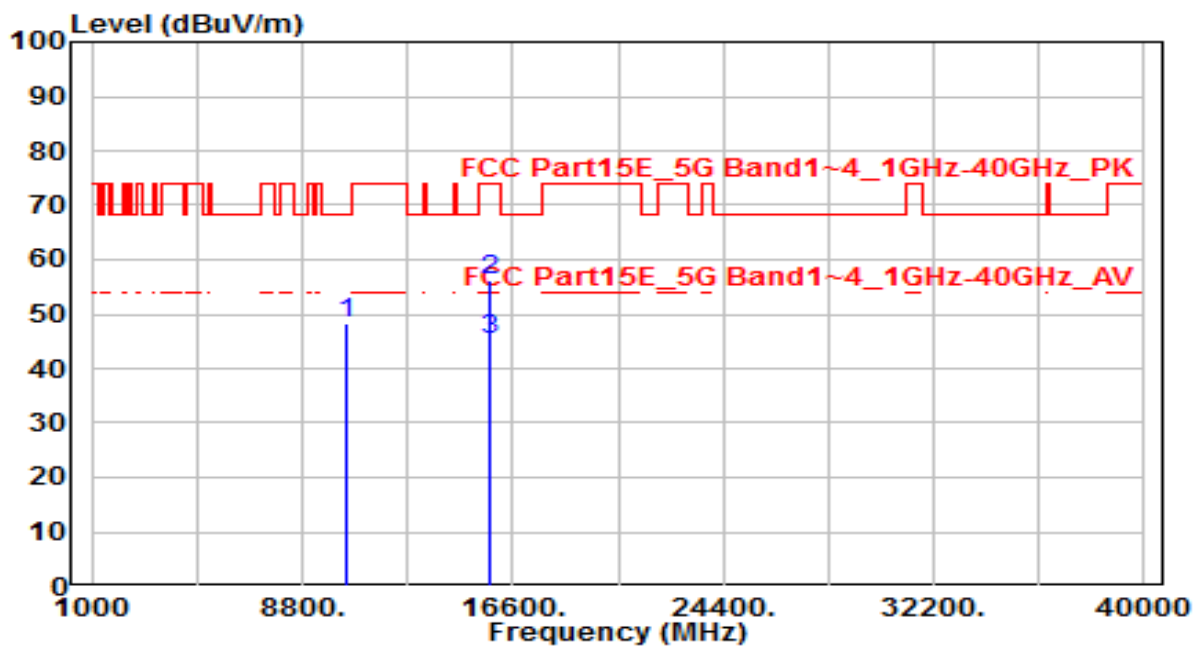


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10480.000	32.43	17.00	49.43	-18.77	68.20	150	0	Peak
2	* 15720.000	37.92	21.08	59.00	-15.00	74.00	150	0	Peak
3	* 15720.000	23.68	21.08	44.76	-9.24	54.00	150	0	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

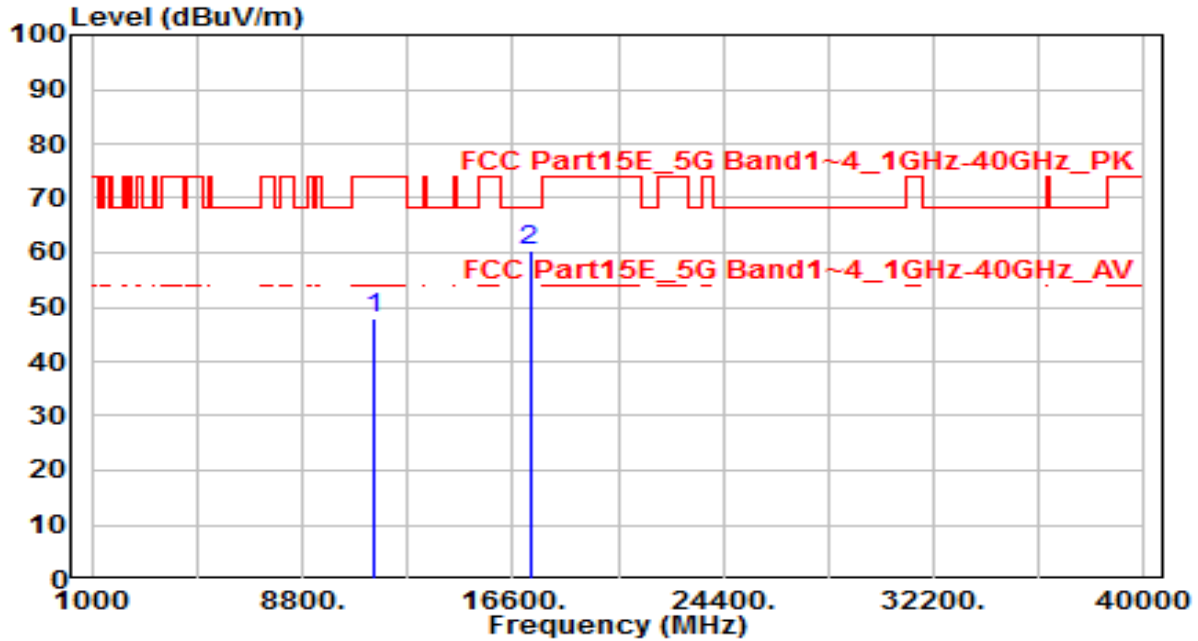


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10480.000	31.13	17.00	48.13	-20.07	68.20	150	0	Peak
2	* 15720.000	34.99	21.08	56.07	-17.93	74.00	150	0	Peak
3	* 15720.000	24.36	21.08	45.44	-8.56	54.00	150	0	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

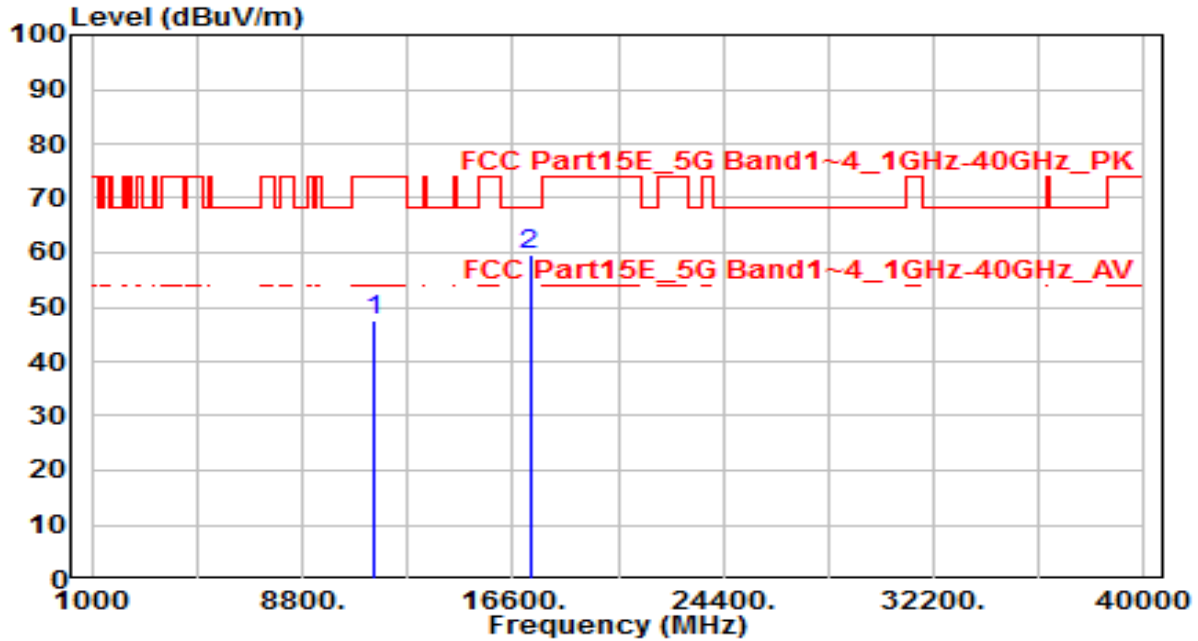


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11490.000	29.31	18.44	47.75	-26.25	74.00	150	0	Peak
2	* 17235.000	32.56	27.97	60.53	-7.67	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

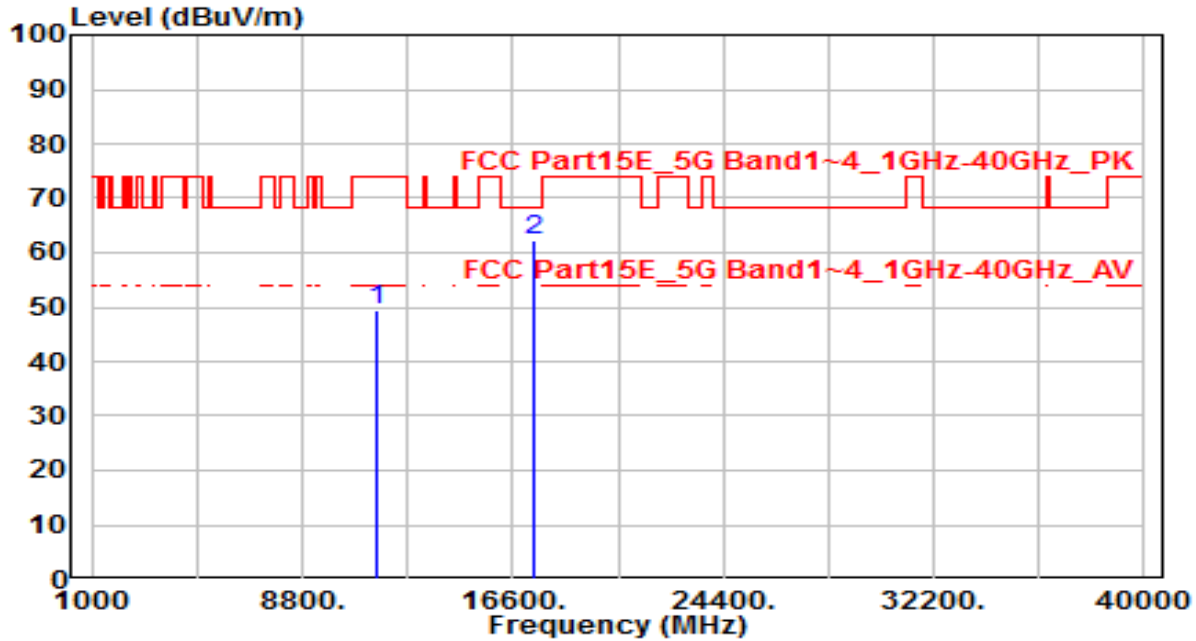


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11490.000	29.11	18.44	47.55	-26.45	74.00	150	0	Peak
2	* 17235.000	31.50	27.97	59.48	-8.72	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

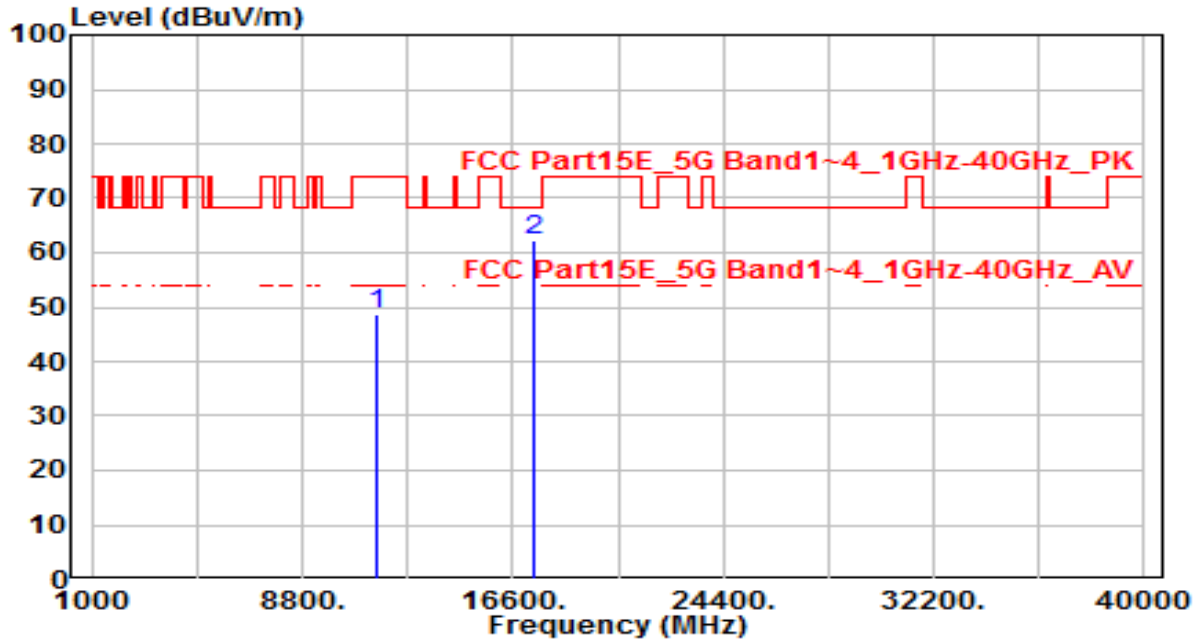


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11570.000	30.94	18.36	49.30	-24.70	74.00	150	0	Peak
2	* 17355.000	33.20	29.18	62.38	-5.82	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

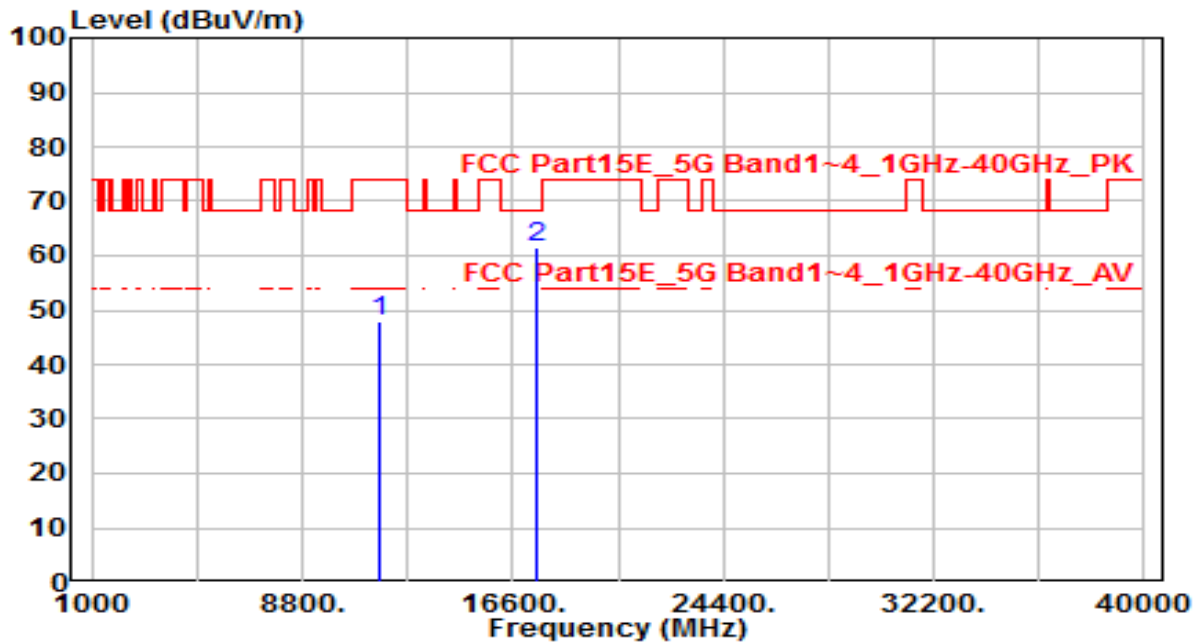


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11570.000	30.39	18.36	48.75	-25.25	74.00	150	0	Peak
2	* 17355.000	32.99	29.18	62.17	-6.03	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

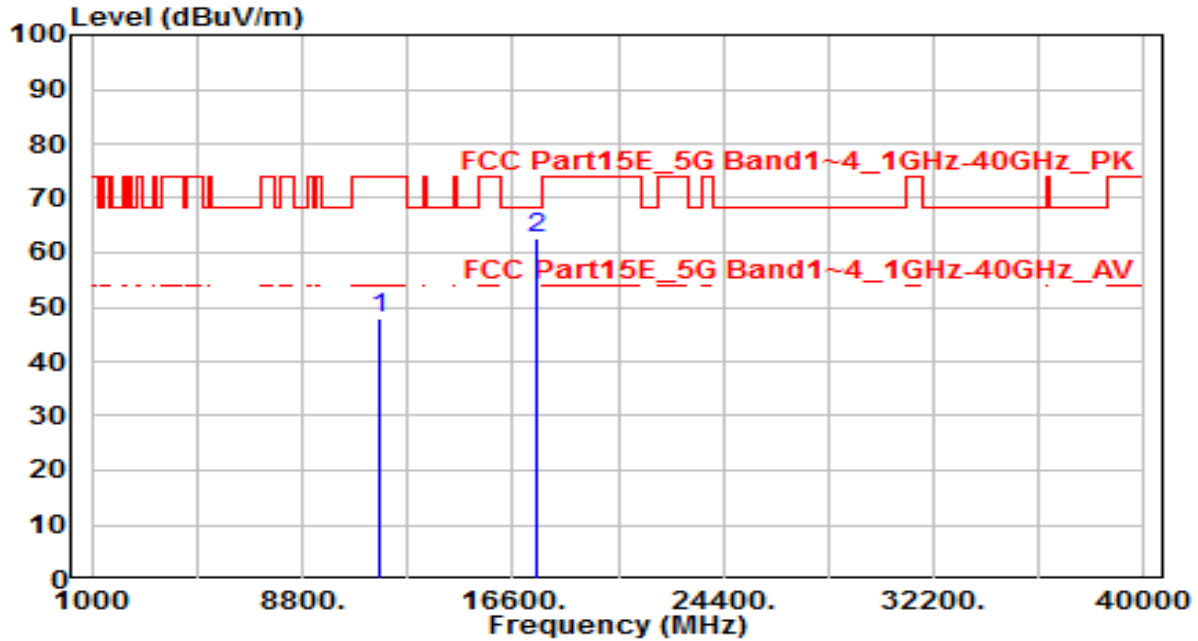


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11650.000	29.65	18.26	47.91	-26.09	74.00	150	0	Peak
2	* 17475.000	30.97	30.39	61.36	-6.84	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

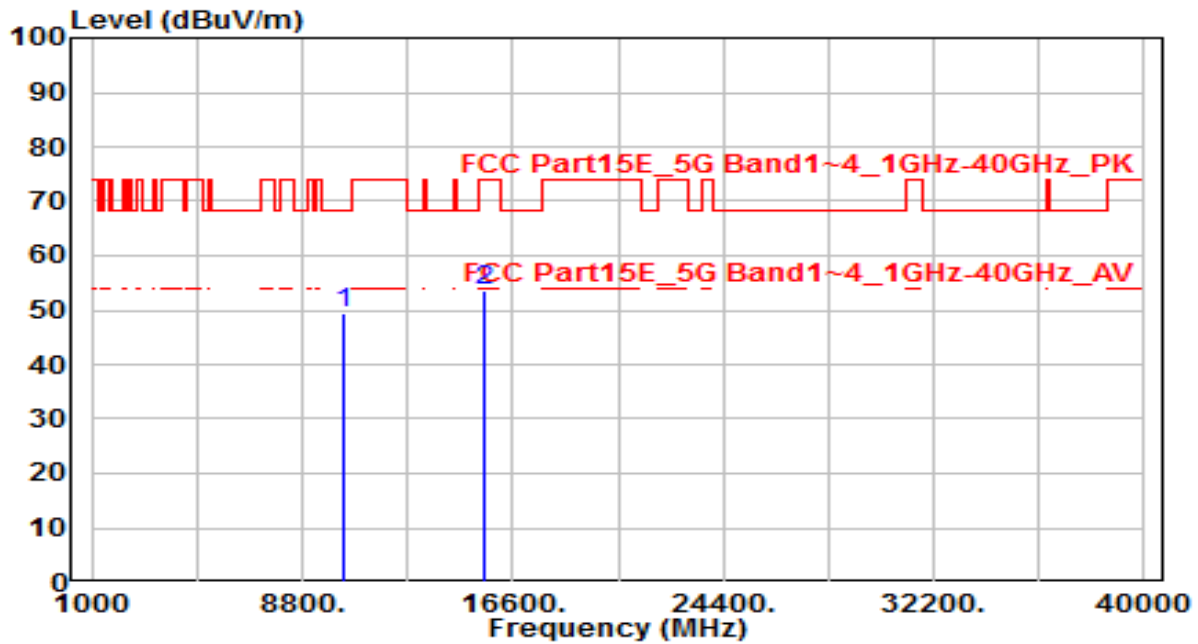


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11650.000	29.75	18.26	48.01	-25.99	74.00	150	0	Peak
2	* 17475.000	32.07	30.39	62.46	-5.74	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

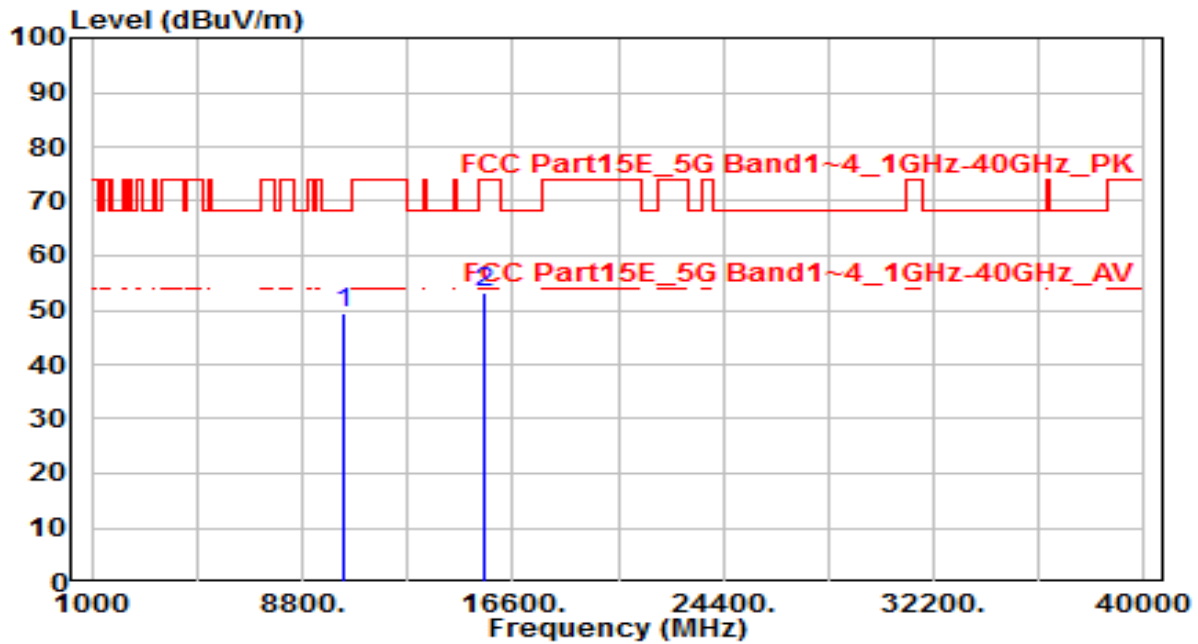


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10360.000	32.93	16.59	49.53	-18.67	68.20	150	0	Peak
2		15540.000	32.05	21.38	53.43	-20.57	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

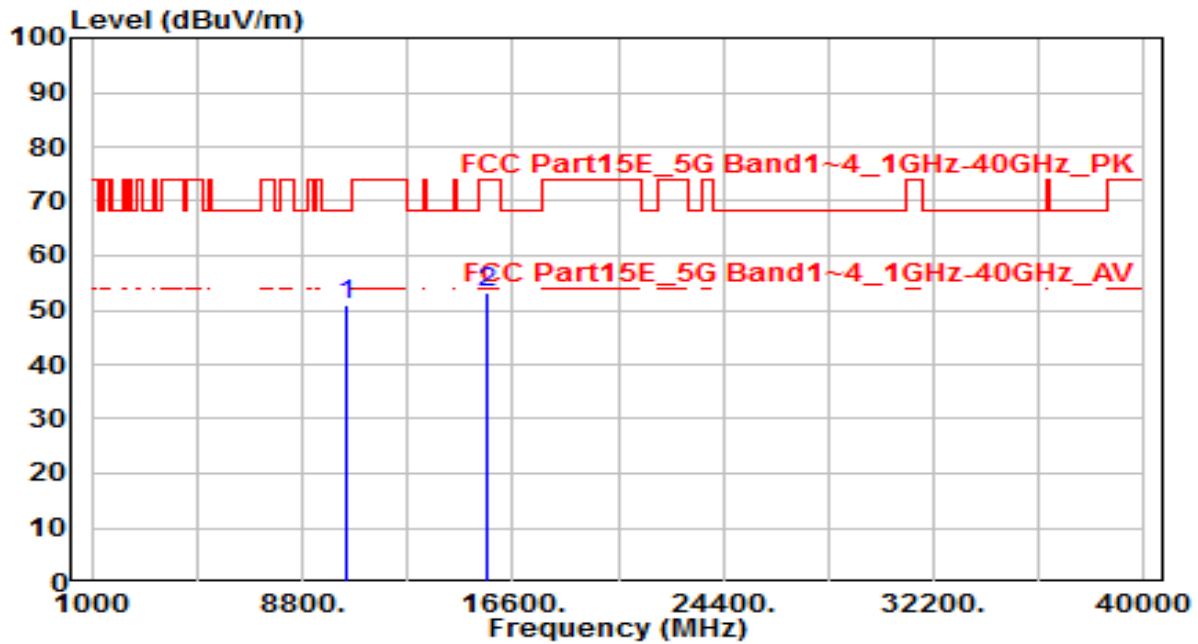


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10360.000	32.69	16.59	49.28	-18.92	68.20	150	0	Peak
2		15540.000	32.01	21.38	53.39	-20.61	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

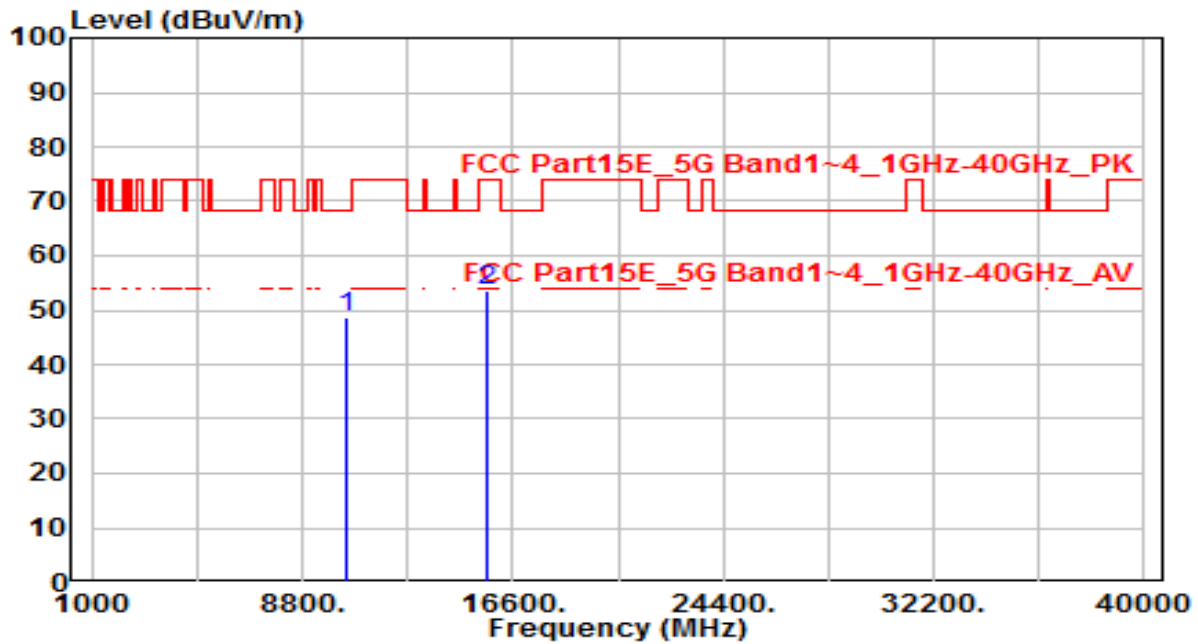


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10440.000	34.01	16.86	50.87	-17.33	68.20	150	0	Peak
2		15660.000	32.19	21.18	53.37	-20.63	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 44_ANT 0	Test Voltage	AC 120V/60Hz

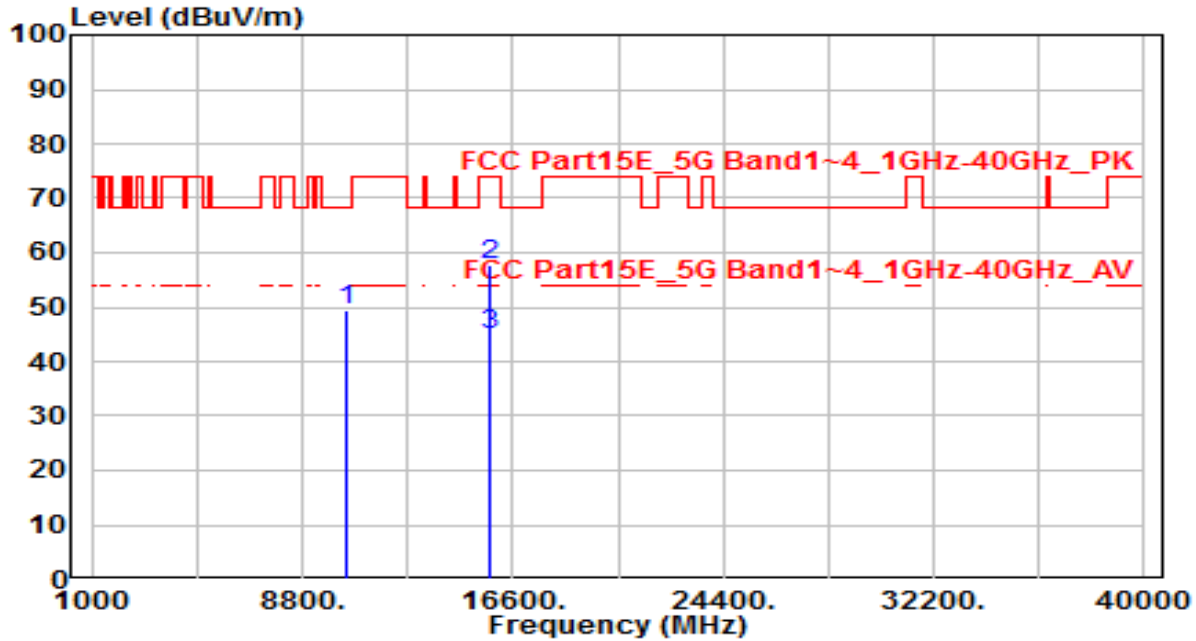


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10440.000	31.66	16.86	48.52	-19.68	68.20	150	0	Peak
2		15660.000	32.45	21.18	53.63	-20.37	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

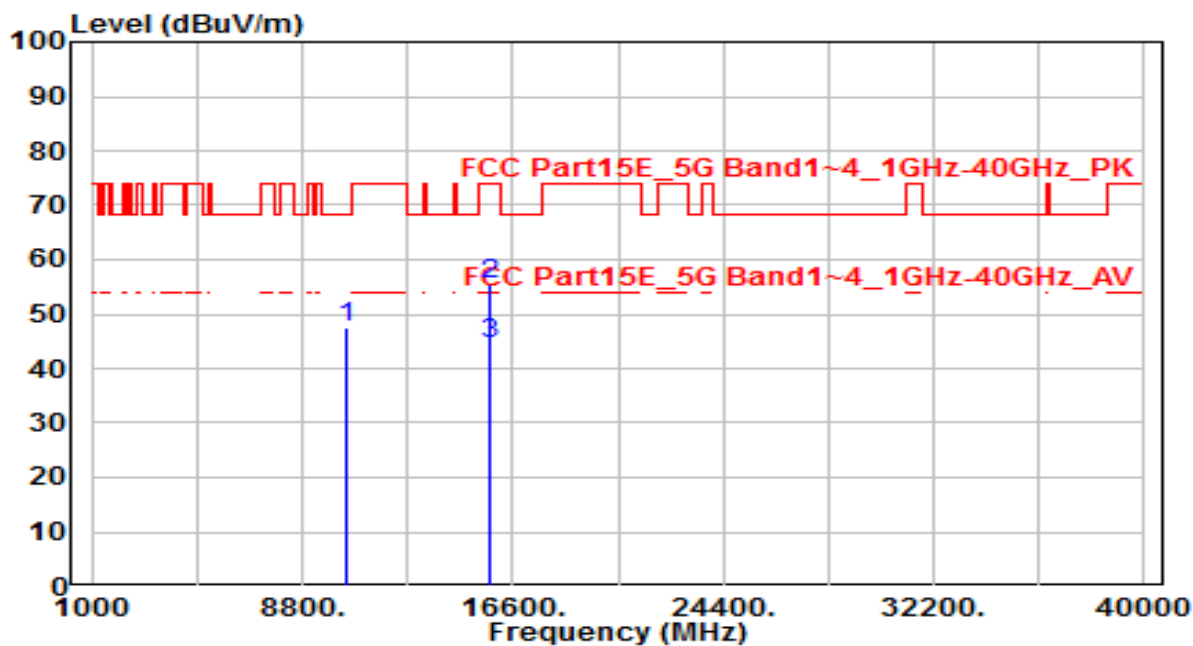


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10480.000	32.53	17.00	49.53	-18.67	68.20	150	0	Peak
2	* 15720.000	36.48	21.08	57.56	-16.44	74.00	150	0	Peak
3	* 15720.000	23.65	21.08	44.73	-9.27	54.00	150	0	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 48_ANT 0	Test Voltage	AC 120V/60Hz

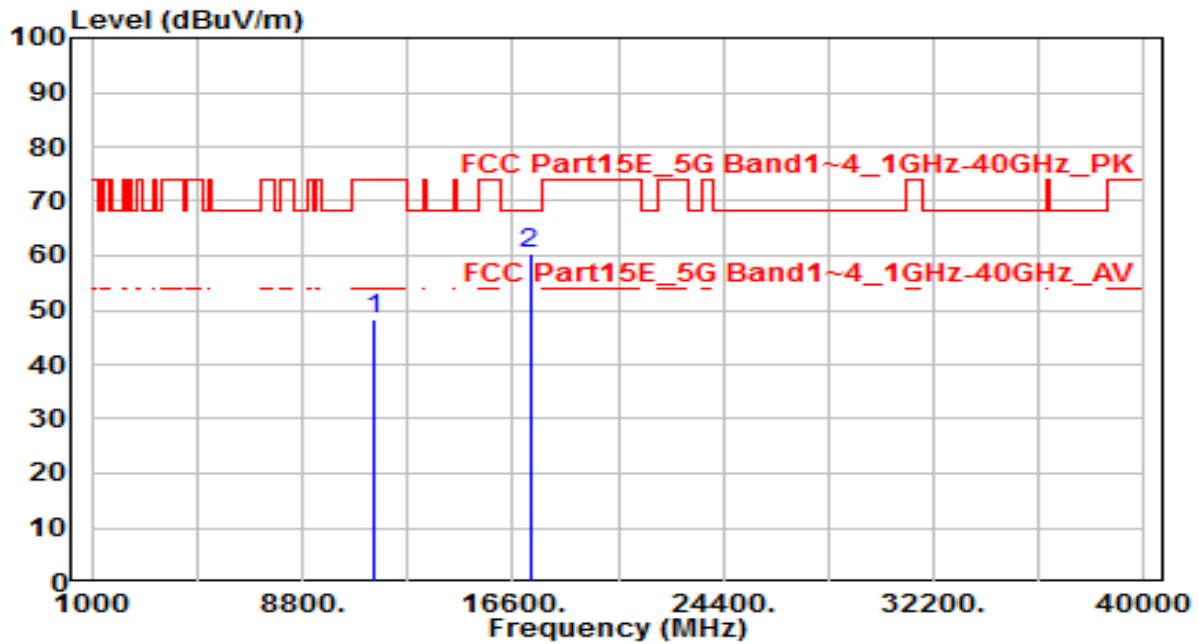


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10480.000	30.61	17.00	47.61	-20.59	68.20	150	0	Peak
2	* 15720.000	34.21	21.08	55.29	-18.71	74.00	150	0	Peak
3	* 15720.000	23.48	21.08	44.56	-9.44	54.00	150	0	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

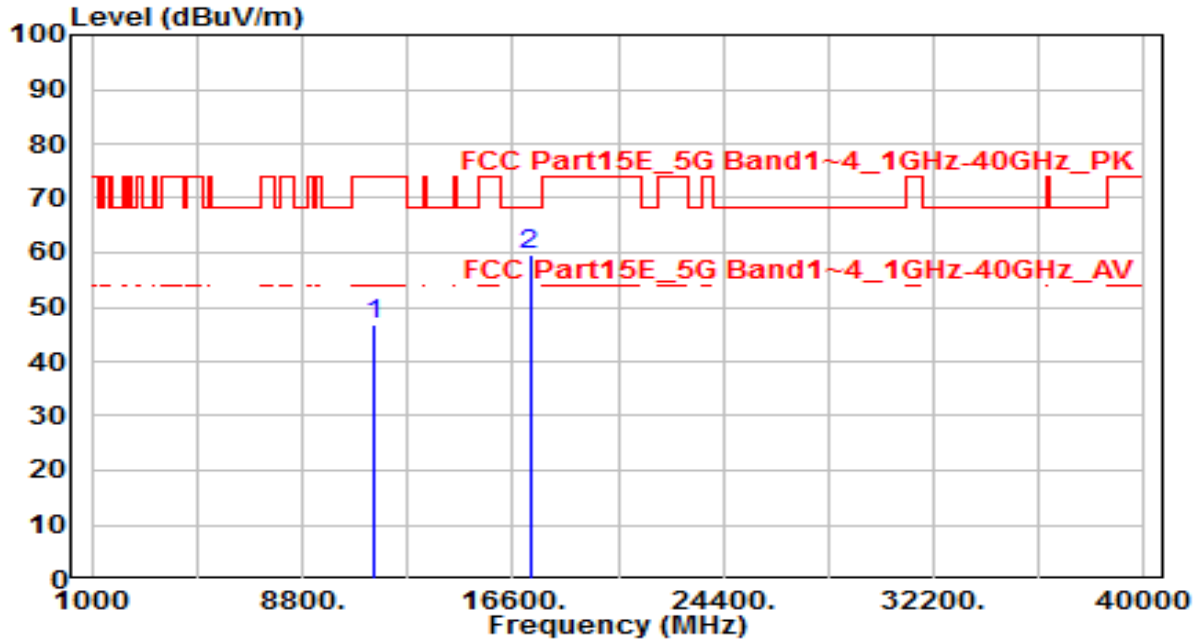


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11490.000	29.85	18.44	48.29	-25.71	74.00	150	0	Peak
2	* 17235.000	32.42	27.97	60.39	-7.81	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

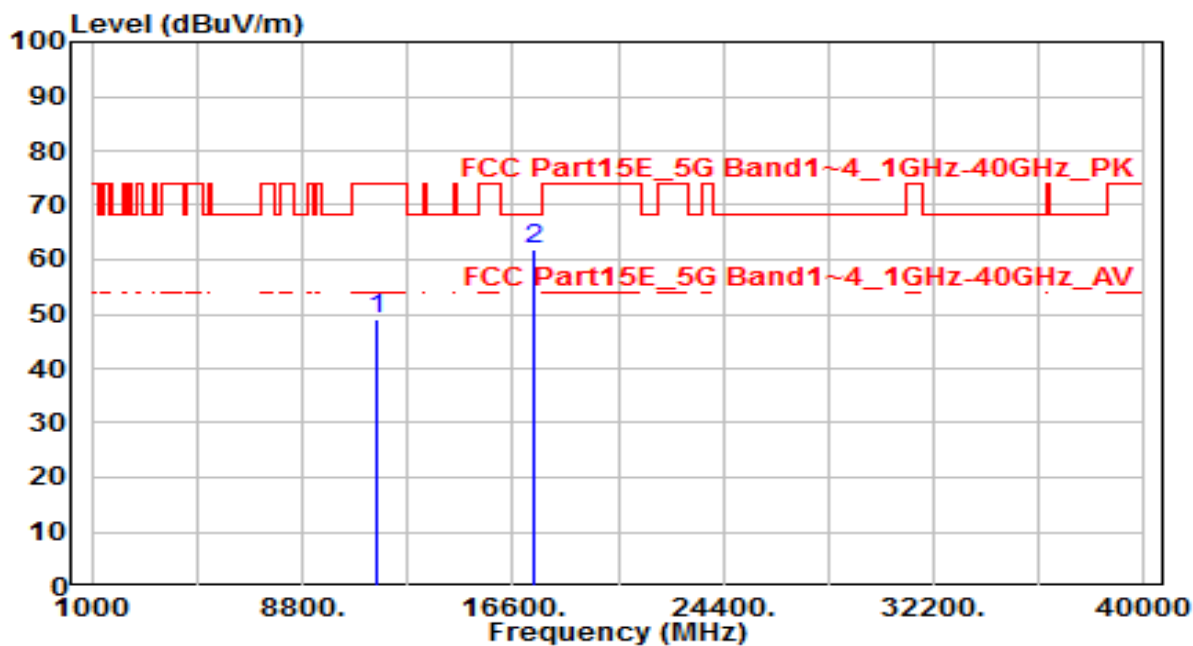


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11490.000	28.53	18.44	46.97	-27.03	74.00	150	0	Peak
2	* 17235.000	31.80	27.97	59.77	-8.43	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

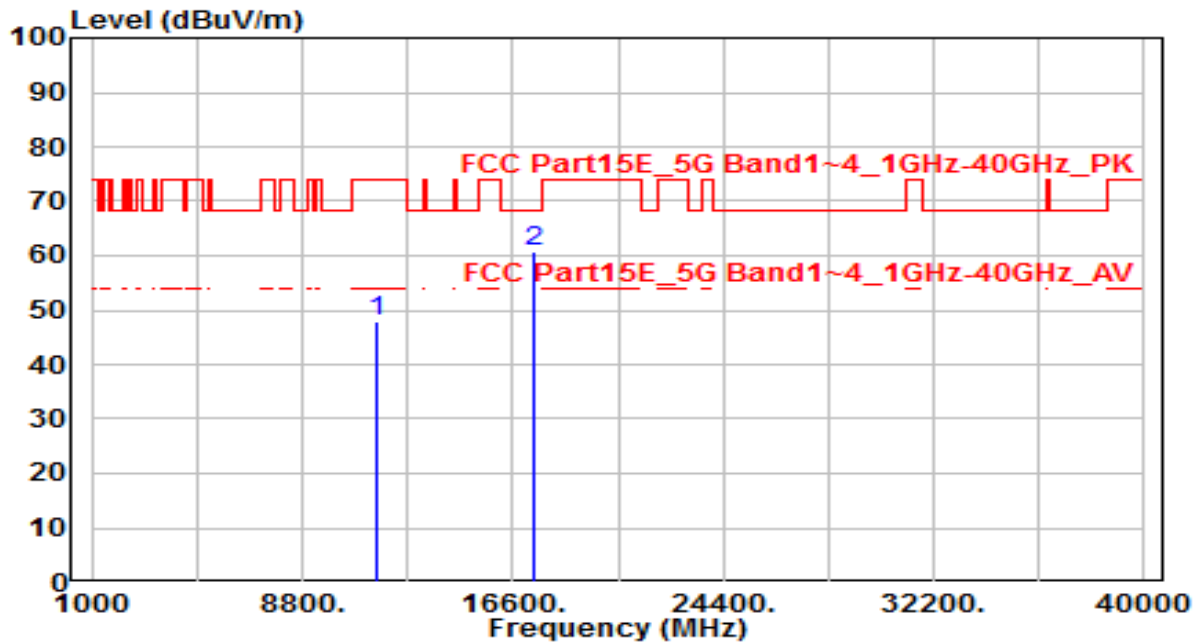


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11570.000	30.75	18.36	49.11	-24.89	74.00	150	0	Peak
2	* 17355.000	32.52	29.18	61.71	-6.49	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 157_ANT 0	Test Voltage	AC 120V/60Hz

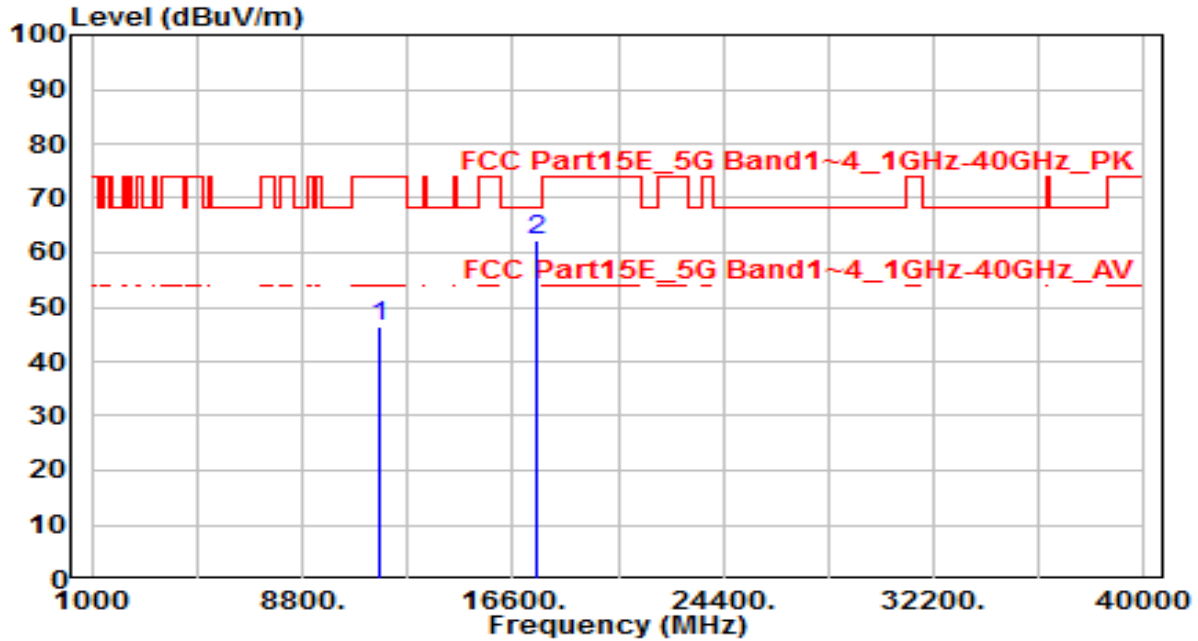


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11570.000	29.54	18.36	47.90	-26.10	74.00	150	0	Peak
2	* 17355.000	31.76	29.18	60.94	-7.26	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

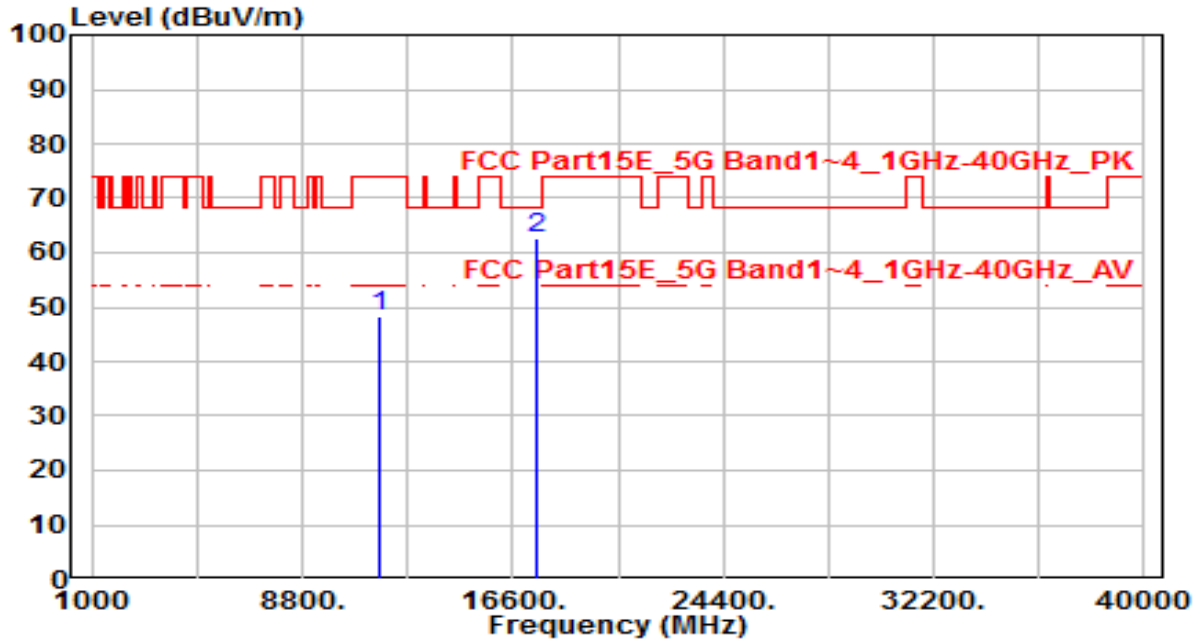


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11650.000	28.24	18.26	46.50	-27.50	74.00	150	0	Peak
2	* 17475.000	31.76	30.39	62.14	-6.06	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

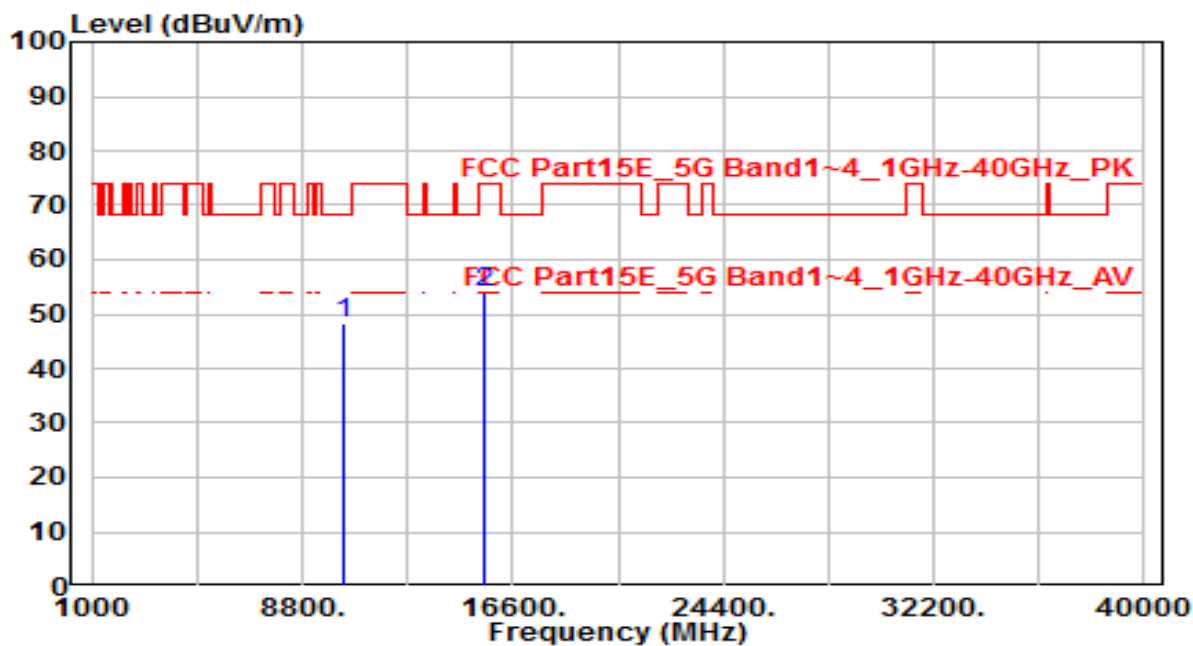


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11650.000	29.86	18.26	48.12	-25.88	74.00	150	0	Peak
2	* 17475.000	32.25	30.39	62.64	-5.56	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

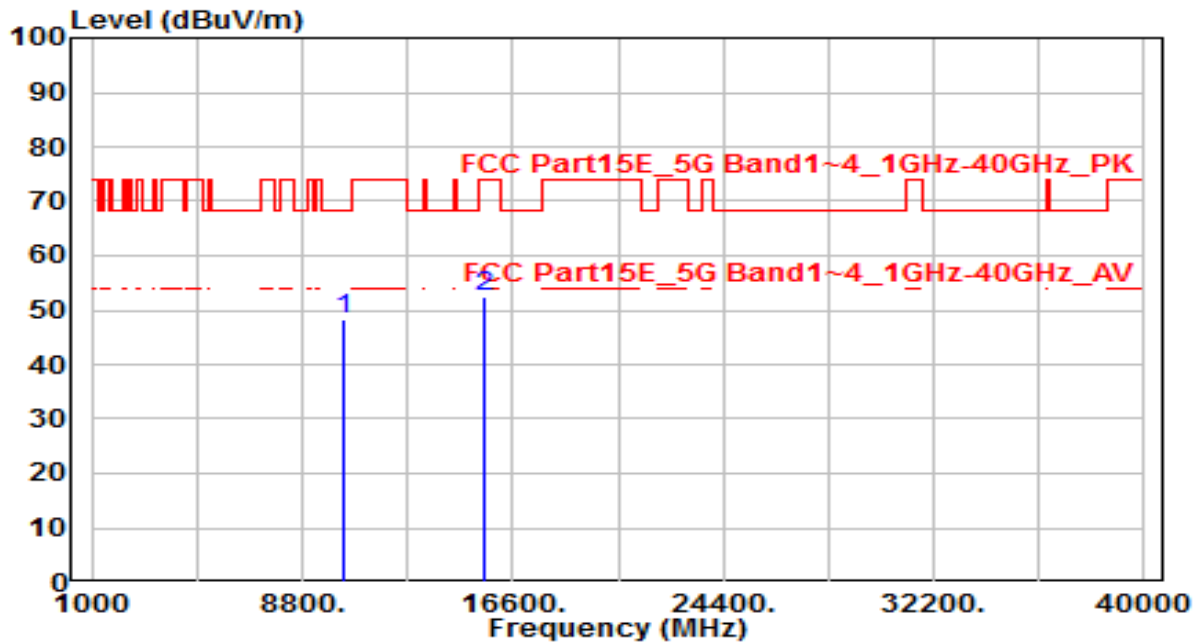


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10380.000	31.48	16.66	48.14	-20.06	68.20	150	0	Peak
2		15570.000	32.56	21.33	53.89	-20.11	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

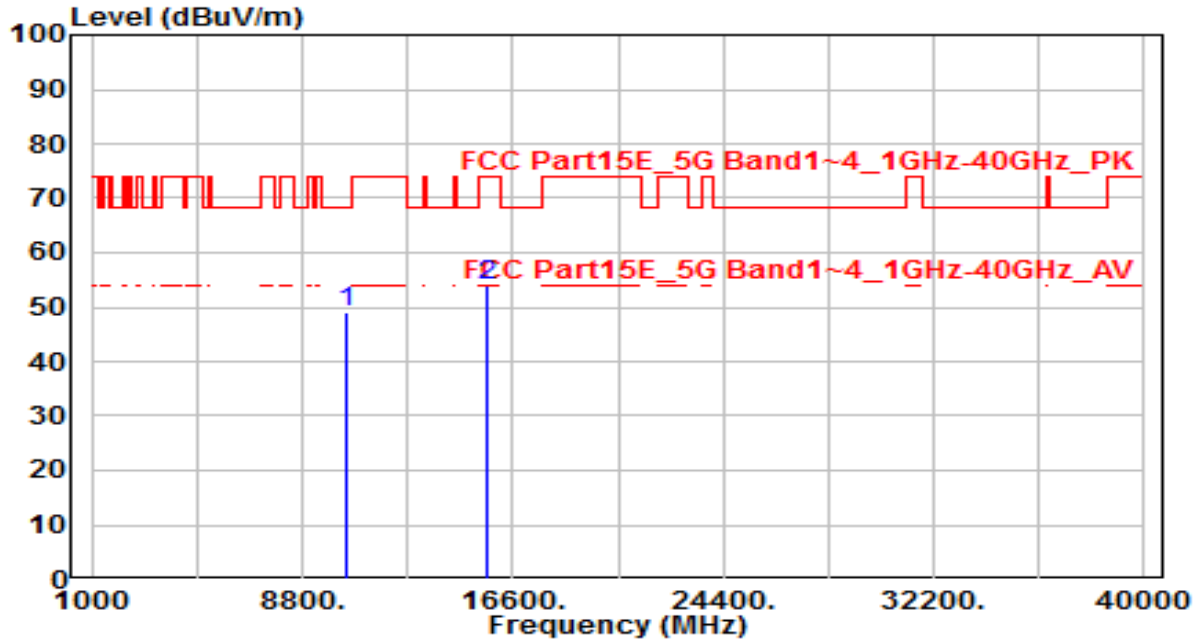


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10380.000	31.65	16.66	48.31	-19.89	68.20	150	0	Peak
2		15570.000	31.15	21.33	52.48	-21.52	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 46_ANT 0	Test Voltage	AC 120V/60Hz

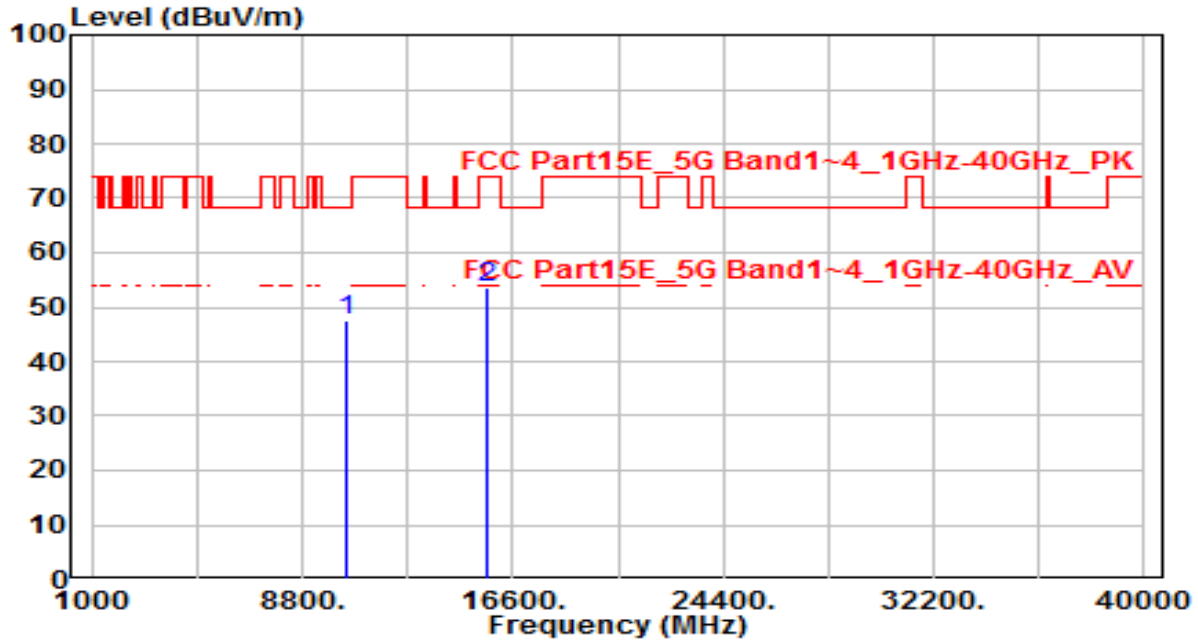


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10460.000	32.17	16.93	49.10	-19.10	68.20	150	0	Peak
2		15690.000	32.82	21.13	53.95	-20.05	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 46_ANT 0	Test Voltage	AC 120V/60Hz

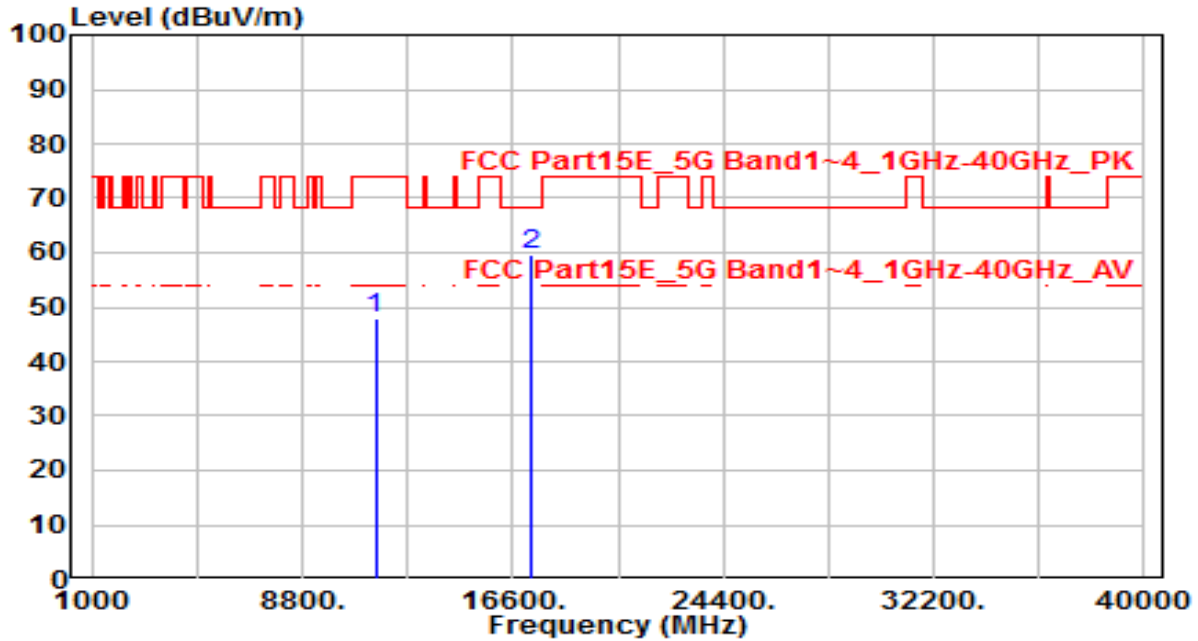


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10460.000	30.56	16.93	47.50	-20.70	68.20	150	0	Peak
2	* 15690.000	32.60	21.13	53.73	-20.27	74.00	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

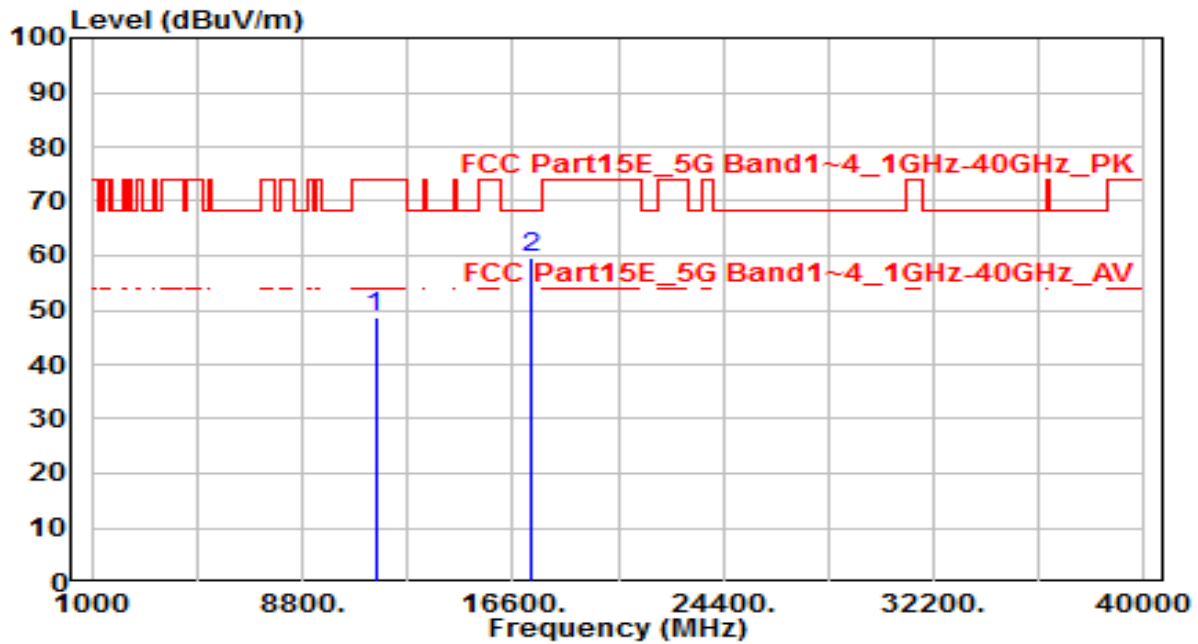


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11510.000	29.50	18.44	47.94	-26.06	74.00	150	0	Peak
2	* 17265.000	31.26	28.28	59.54	-8.66	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

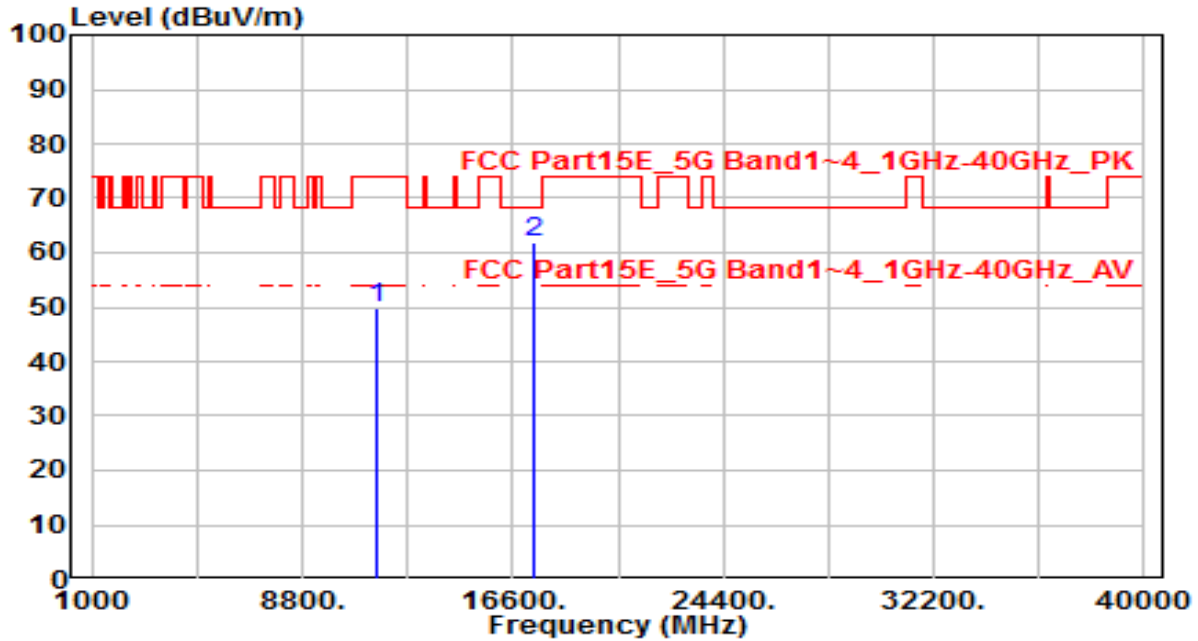


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11510.000	30.33	18.44	48.77	-25.23	74.00	150	0	Peak
2	* 17265.000	31.40	28.28	59.67	-8.53	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

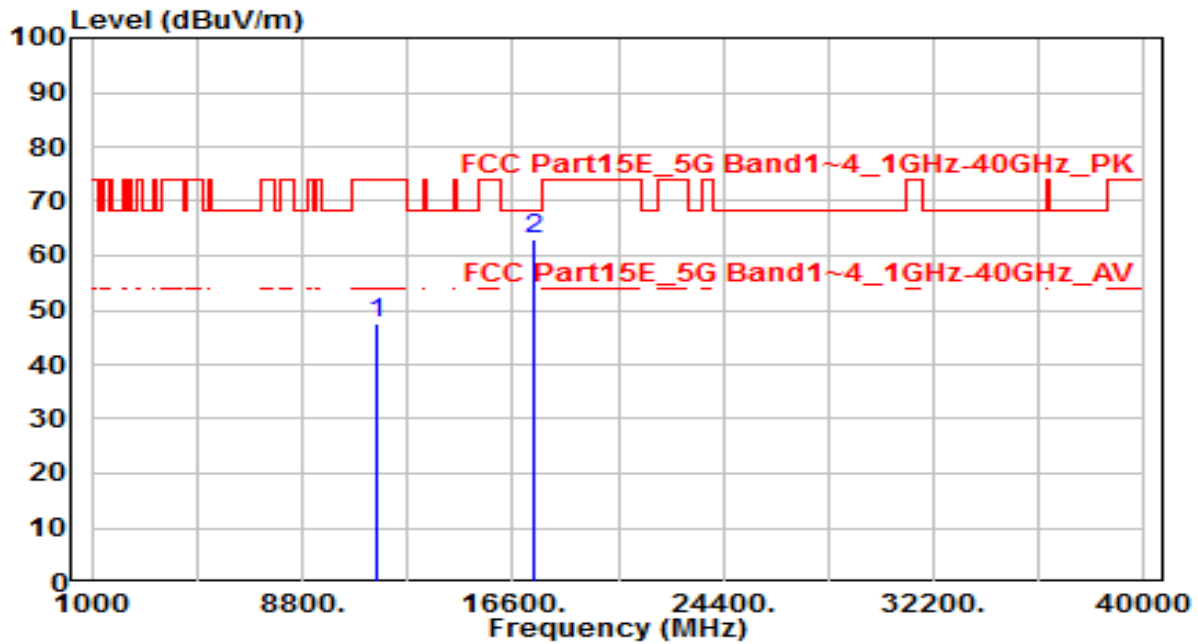


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11590.000	31.29	18.34	49.63	-24.37	74.00	150	0	Peak
2	* 17385.000	32.30	29.48	61.78	-6.42	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

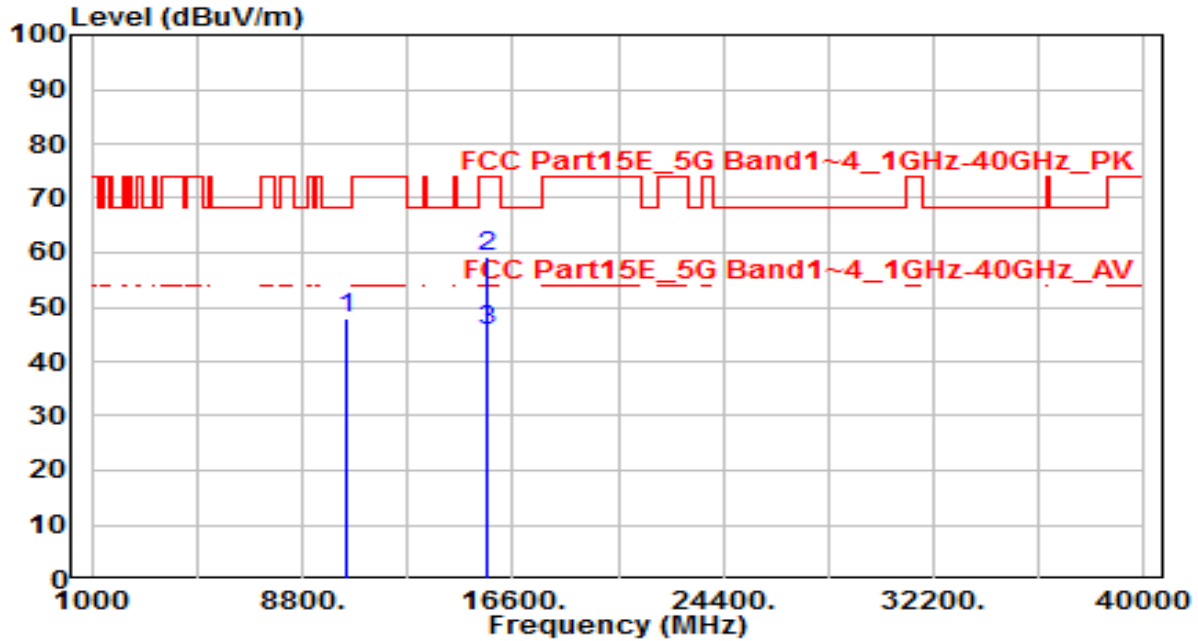


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11590.000	29.33	18.34	47.67	-26.33	74.00	150	0	Peak
2	* 17385.000	33.41	29.48	62.90	-5.30	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

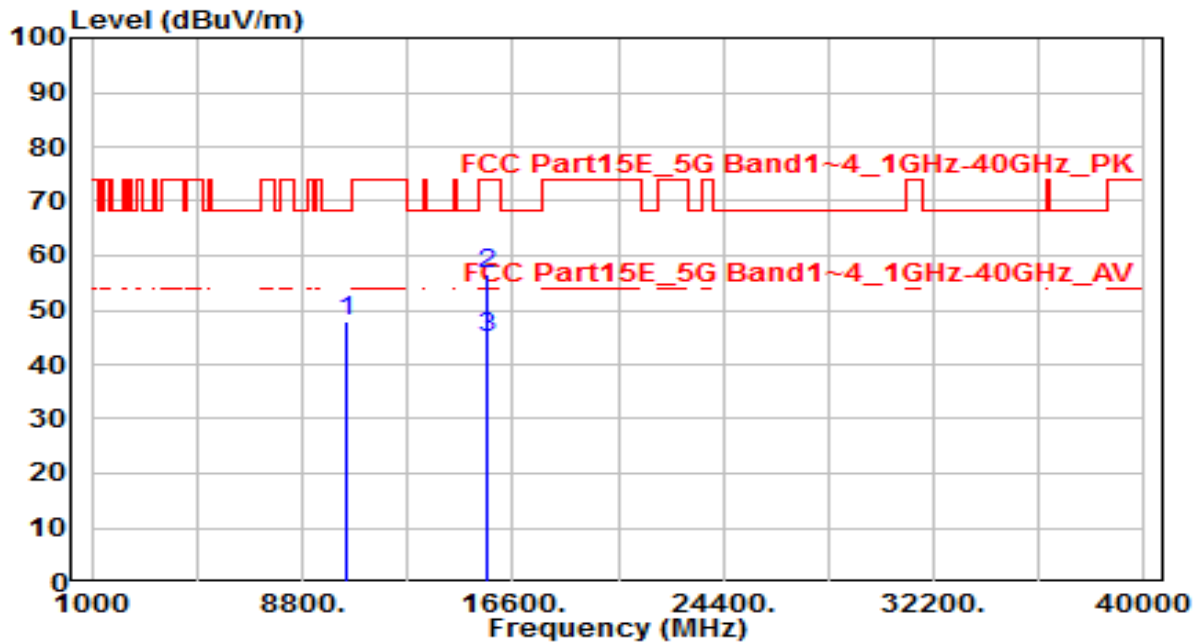


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10420.000	31.20	16.80	47.99	-20.21	68.20	150	0	Peak
2	* 15630.000	37.84	21.23	59.07	-14.93	74.00	150	20	Peak
3	* 15630.000	24.59	21.23	45.82	-8.18	54.00	150	20	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

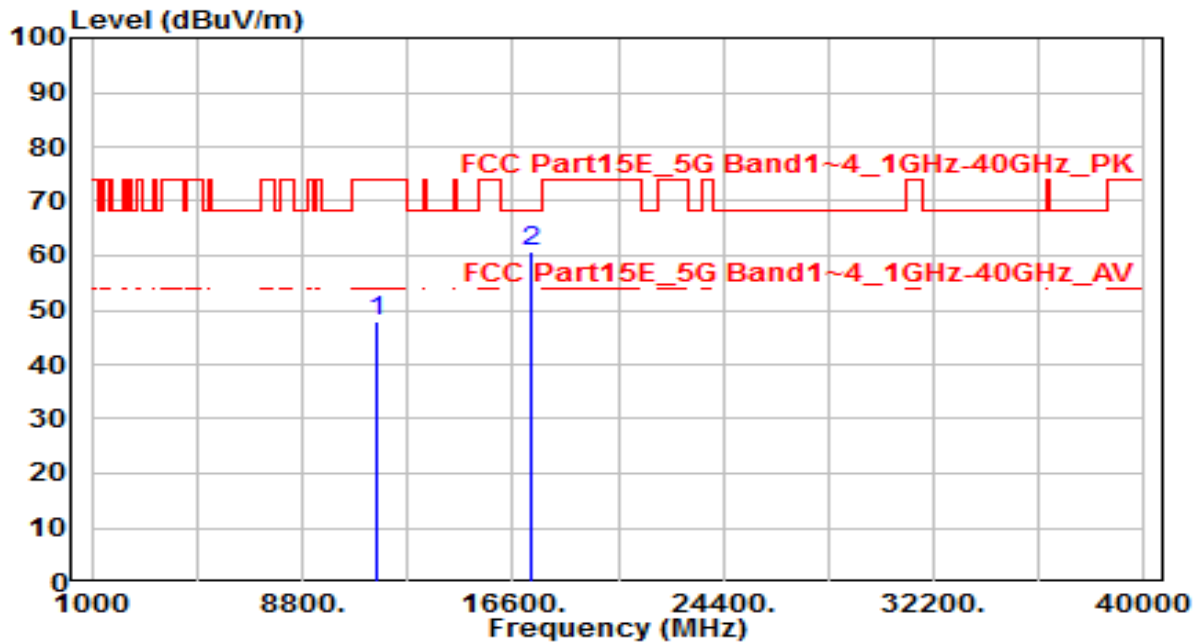


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	10420.000	31.13	16.80	47.93	-20.27	68.20	150	0	Peak
2	* 15630.000	35.49	21.23	56.72	-17.28	74.00	150	110	Peak
3	* 15630.000	23.68	21.23	44.91	-9.09	54.00	150	110	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz

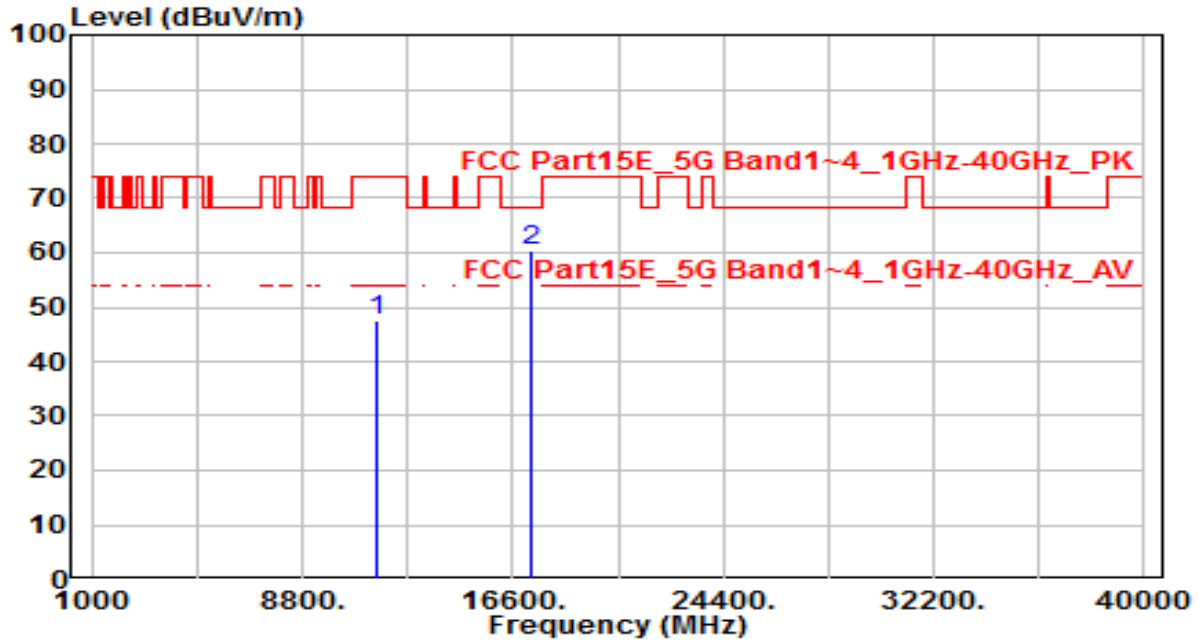


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11550.000	29.71	18.39	48.10	-25.90	74.00	150	0	Peak
2	* 17325.000	32.04	28.88	60.92	-7.28	68.20	150	0	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_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	11550.000	29.16	18.39	47.55	-26.45	74.00	150	0	Peak
2	* 17325.000	31.53	28.88	60.41	-7.79	68.20	150	0	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.

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 G)2)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.

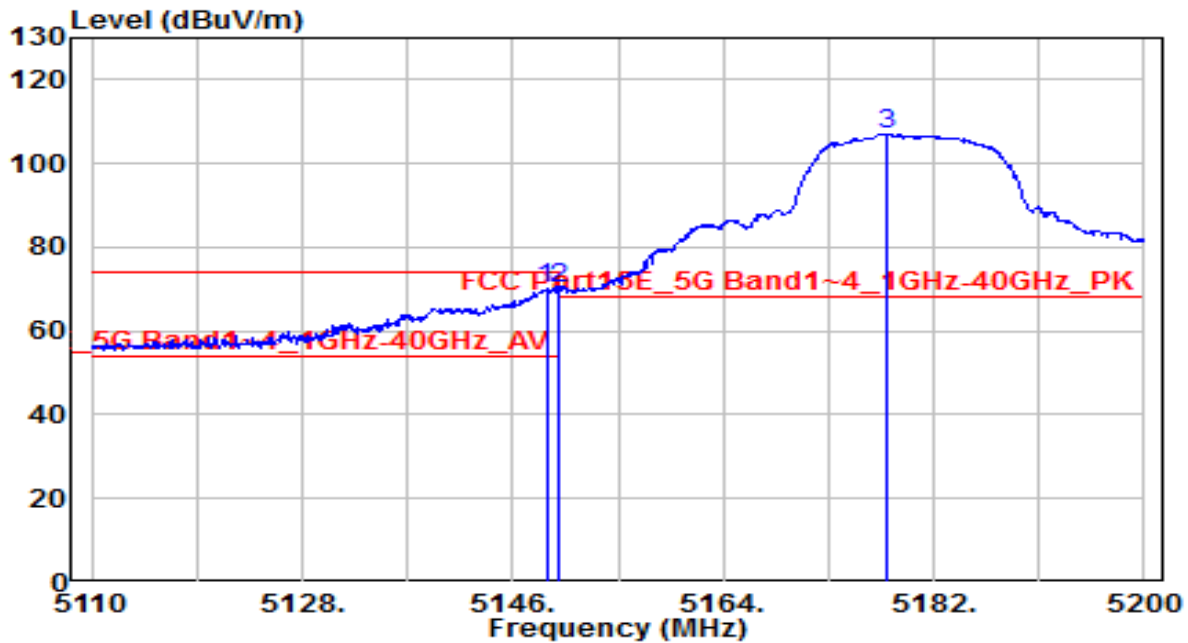
All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

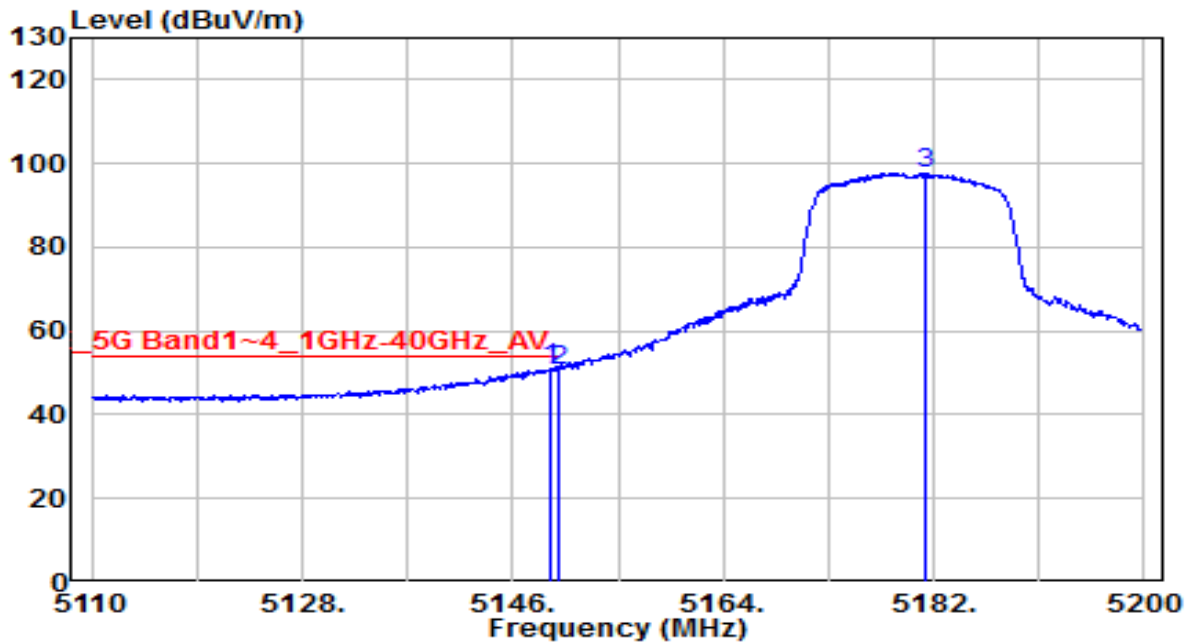


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5148.880	66.09	3.90	69.99	-4.01	74.00	150	20	Peak
2	* 5150.000	66.38	3.91	70.28	-3.72	74.00	150	20	Peak
3	5178.040	103.12	3.94	107.06	N/A	N/A	150	20	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

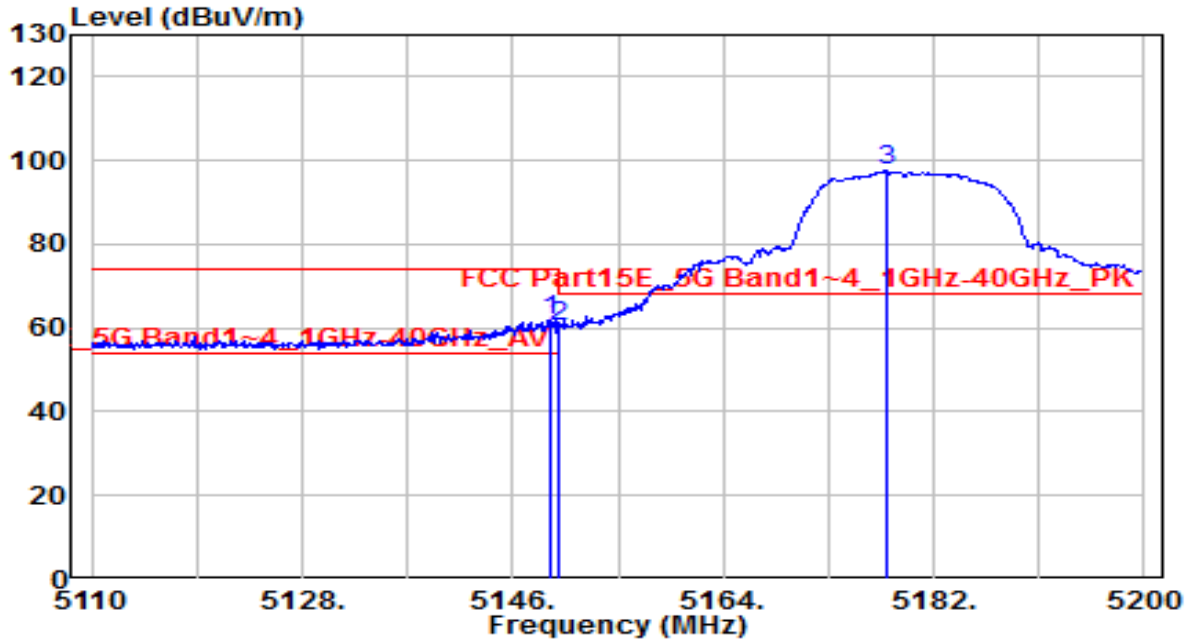


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.240	47.35	3.91	51.26	-2.74	54.00	150	20	Average
2		5150.000	46.79	3.91	50.69	-3.31	54.00	150	20	Average
3		5181.280	93.88	3.94	97.82	N/A	N/A	150	20	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

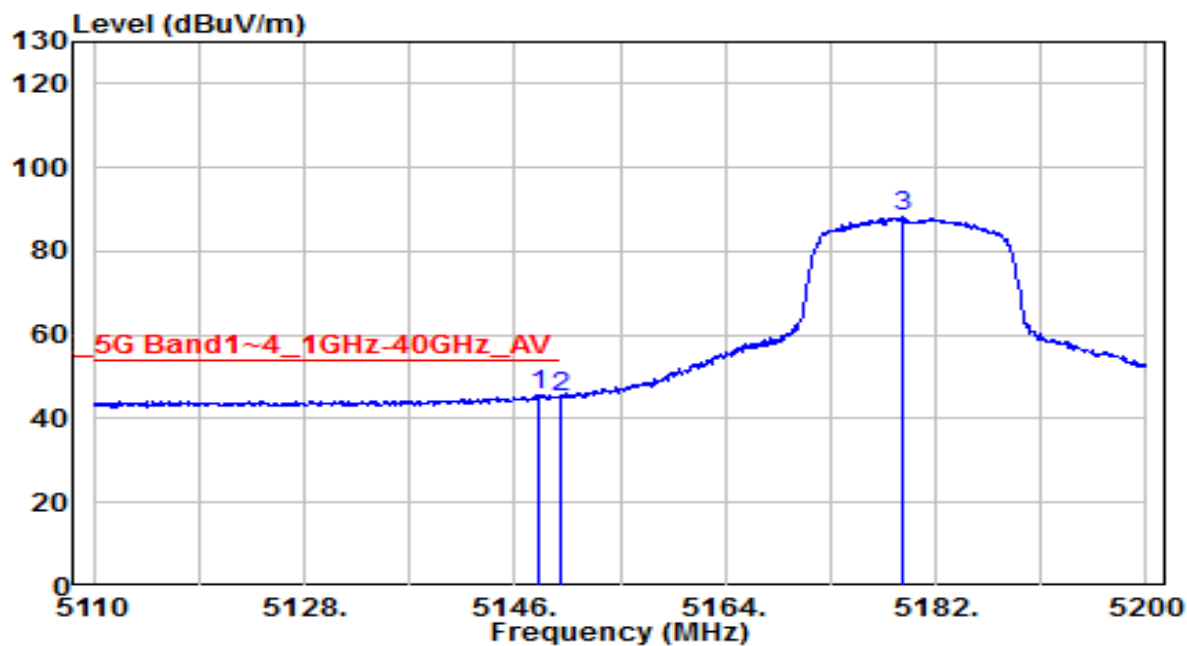


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.240	57.83	3.91	61.74	-12.26	74.00	150	10	Peak
2		5150.000	56.58	3.91	60.48	-13.52	74.00	150	10	Peak
3		5177.950	93.53	3.94	97.46	N/A	N/A	150	10	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

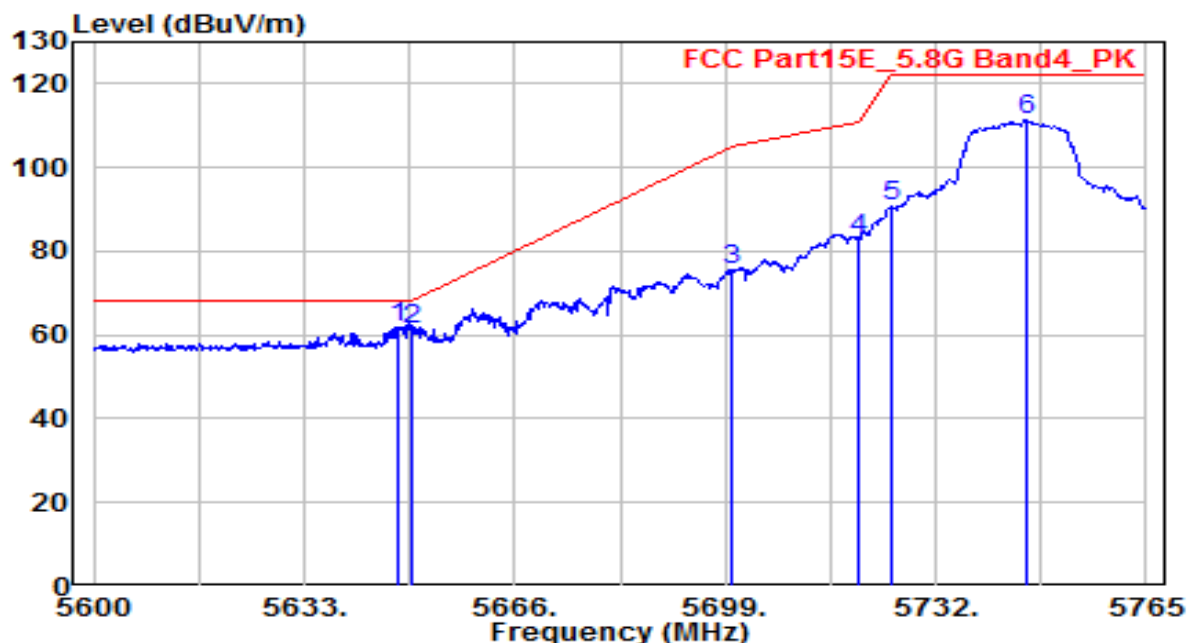


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.070	41.63	3.90	45.53	-8.47	54.00	150	10	Average
2		5150.000	41.46	3.91	45.37	-8.63	54.00	150	10	Average
3		5179.120	84.19	3.94	88.13	N/A	N/A	150	10	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

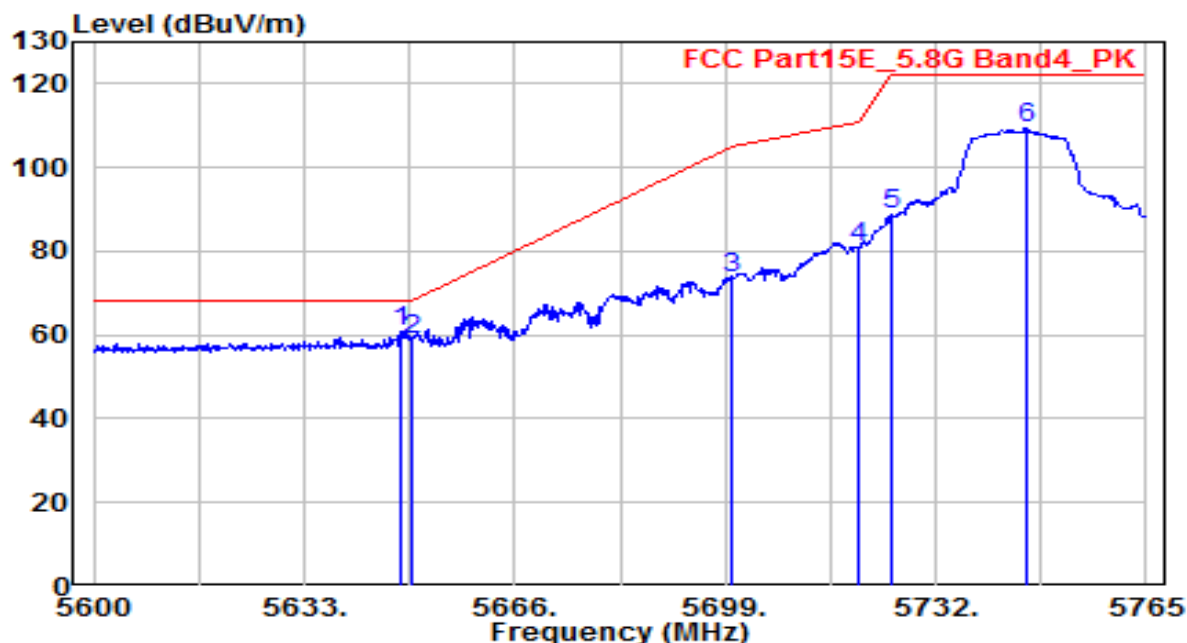


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5647.850	57.25	4.75	62.00	-6.20	68.20	110	290	Peak
2		5650.000	56.57	4.76	61.33	-6.87	68.20	110	290	Peak
3		5700.000	70.43	4.92	75.35	-29.85	105.20	110	290	Peak
4		5720.000	78.12	4.98	83.10	-27.70	110.80	110	290	Peak
5		5725.000	85.62	5.00	90.62	-31.58	122.20	110	290	Peak
6		5746.190	106.24	5.07	111.31	-10.89	122.20	110	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

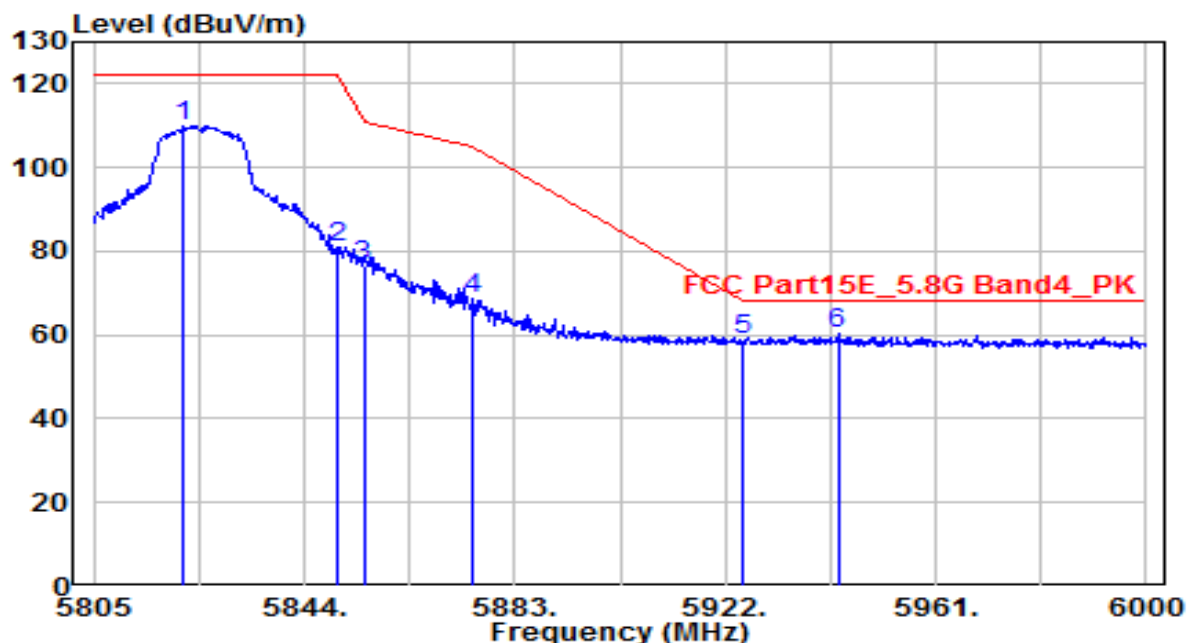


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5648.015	56.21	4.75	60.96	-7.24	68.20	200	290	Peak
2	5650.000	54.17	4.76	58.93	-9.27	68.20	200	290	Peak
3	5700.000	68.72	4.92	73.64	-31.56	105.20	200	290	Peak
4	5720.000	75.95	4.98	80.94	-29.86	110.80	200	290	Peak
5	5725.000	83.63	5.00	88.63	-33.57	122.20	200	290	Peak
6	5746.190	104.24	5.07	109.31	-12.89	122.20	200	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

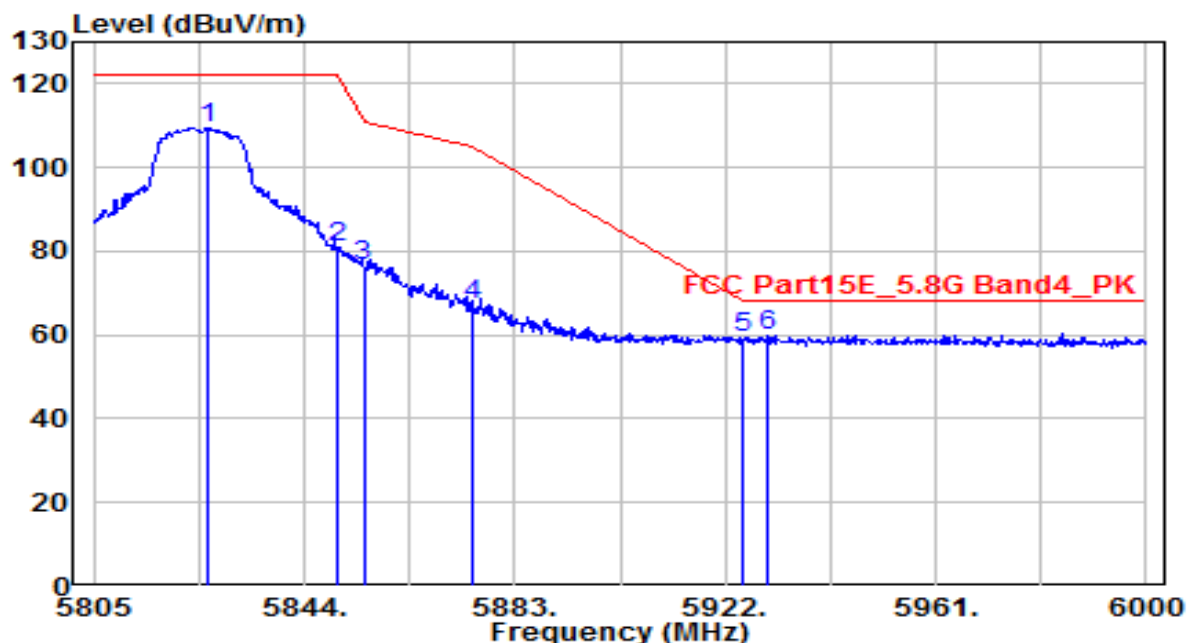


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5821.770	104.80	5.31	110.12	-12.08	122.20	190	30	Peak
2	5850.000	75.46	5.40	80.87	-41.33	122.20	190	30	Peak
3	5855.000	71.11	5.42	76.53	-34.27	110.80	190	30	Peak
4	5875.000	63.11	5.49	68.59	-36.61	105.20	190	30	Peak
5	5925.000	53.45	5.65	59.10	-9.10	68.20	190	30	Peak
6	* 5942.865	54.56	5.70	60.27	-7.93	68.20	190	30	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11a_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

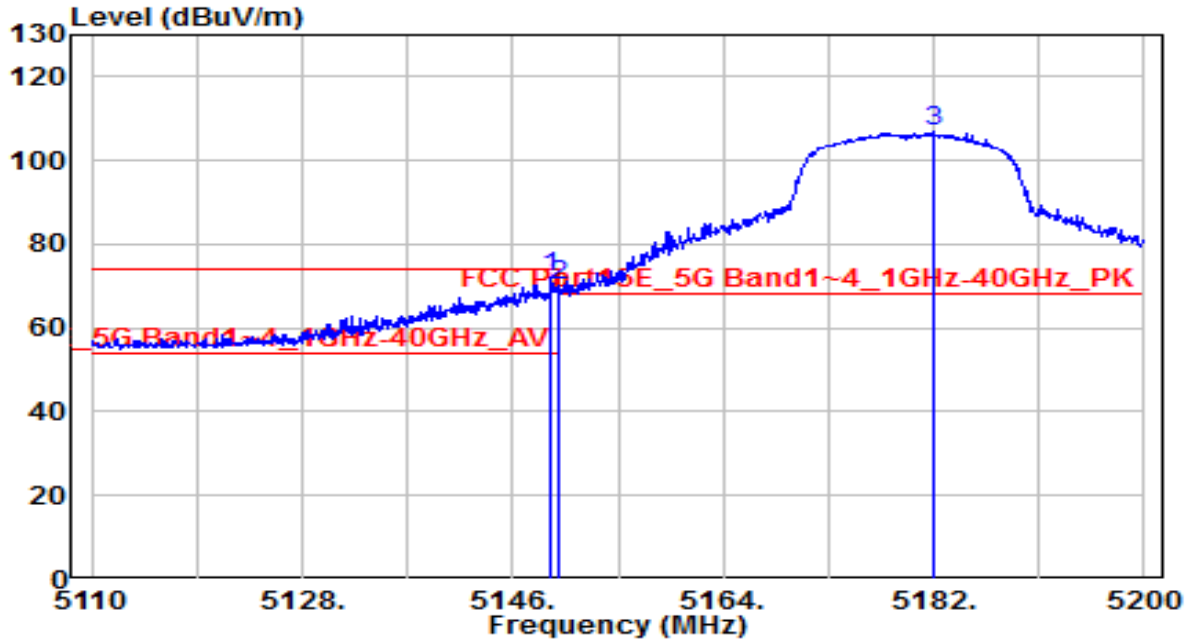


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5826.060	104.21	5.33	109.53	-12.67	122.20	200	300	Peak
2	5850.000	75.36	5.40	80.77	-41.43	122.20	200	300	Peak
3	5855.000	70.94	5.42	76.36	-34.44	110.80	200	300	Peak
4	5875.000	61.58	5.49	67.06	-38.14	105.20	200	300	Peak
5	5925.000	53.57	5.65	59.21	-8.99	68.20	200	300	Peak
6	* 5929.800	54.29	5.66	59.95	-8.25	68.20	200	300	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

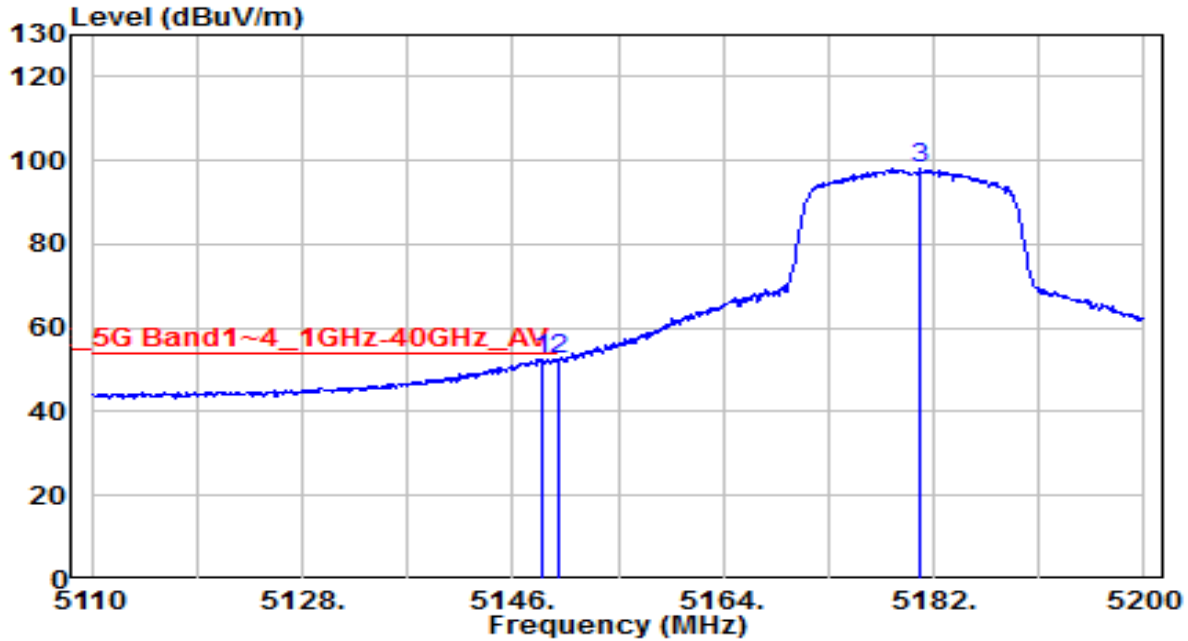


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.240	67.97	3.91	71.87	-2.13	74.00	150	20	Peak
2		5150.000	66.47	3.91	70.37	-3.63	74.00	150	20	Peak
3		5181.910	102.80	3.94	106.74	N/A	N/A	150	20	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

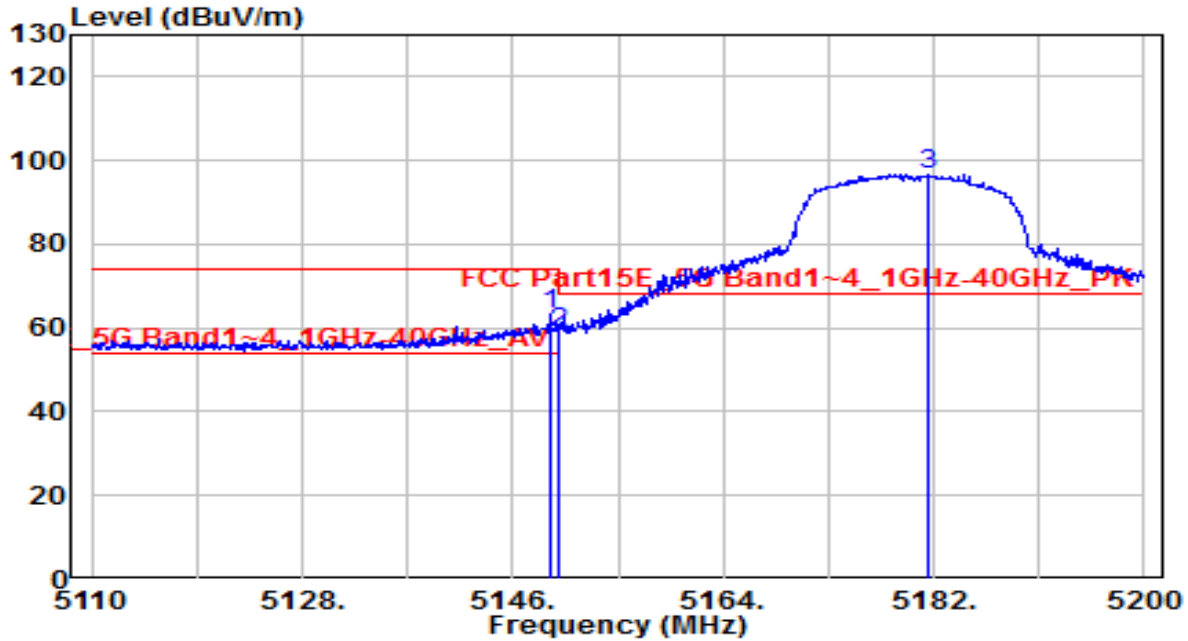


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.610	48.82	3.90	52.73	-1.27	54.00	150	20	Average
2		5150.000	48.75	3.91	52.66	-1.34	54.00	150	20	Average
3		5180.920	93.95	3.94	97.89	N/A	N/A	150	20	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

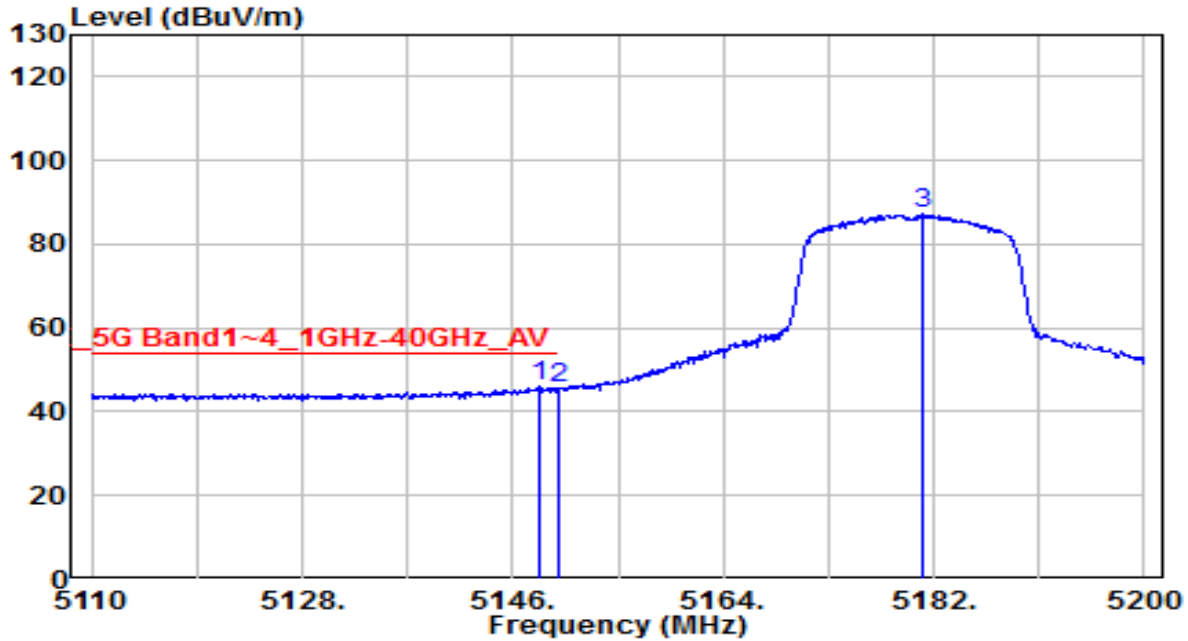


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.150	59.19	3.91	63.09	-10.91	74.00	150	10	Peak
2		5150.000	55.09	3.91	59.00	-15.00	74.00	150	10	Peak
3		5181.550	92.89	3.94	96.82	N/A	N/A	150	10	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band1_CH 36_ANT 0	Test Voltage	AC 120V/60Hz

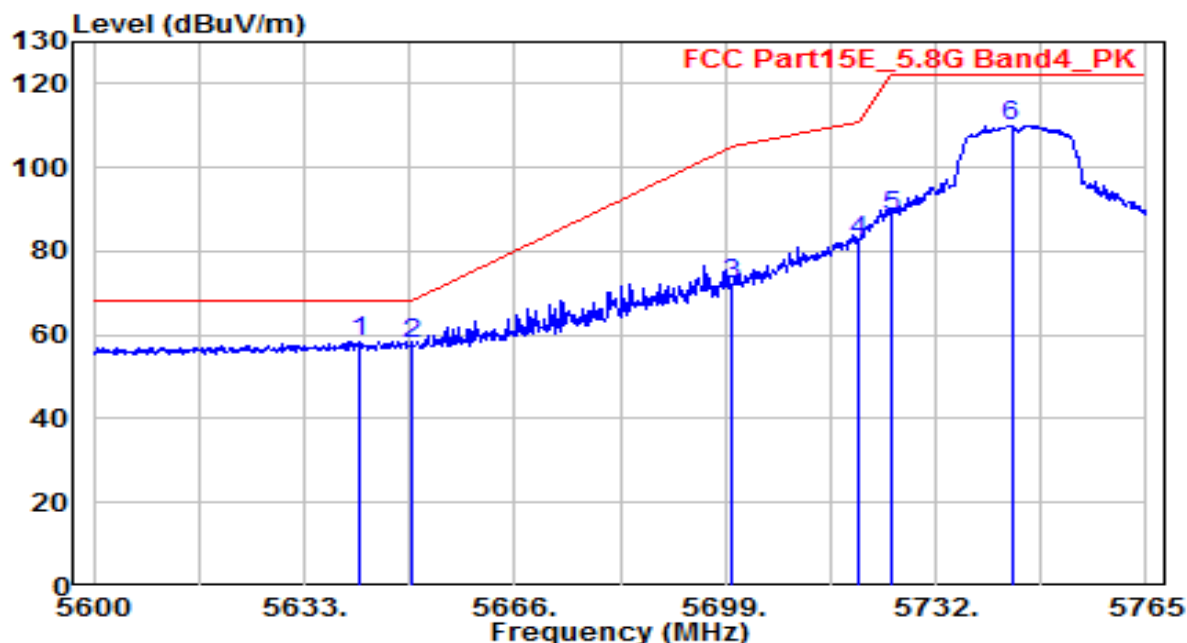


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.250	42.00	3.90	45.90	-8.10	54.00	150	10	Average
2		5150.000	41.70	3.91	45.61	-8.39	54.00	150	10	Average
3		5181.010	83.23	3.94	87.17	N/A	N/A	150	10	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

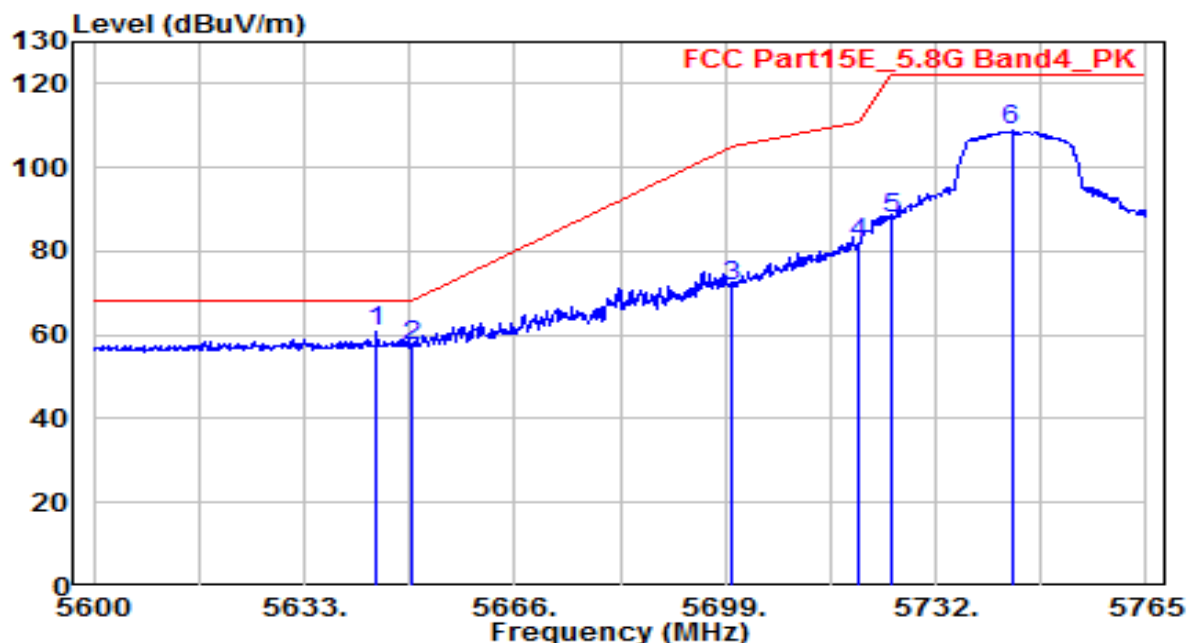


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5641.580	53.80	4.73	58.52	-9.68	68.20	110	290	Peak
2		5650.000	52.95	4.76	57.70	-10.50	68.20	110	290	Peak
3		5700.000	67.21	4.92	72.13	-33.07	105.20	110	290	Peak
4		5720.000	77.48	4.98	82.46	-28.34	110.80	110	290	Peak
5		5725.000	83.14	5.00	88.14	-34.06	122.20	110	290	Peak
6		5743.880	105.04	5.06	110.10	-12.10	122.20	110	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 149_ANT 0	Test Voltage	AC 120V/60Hz

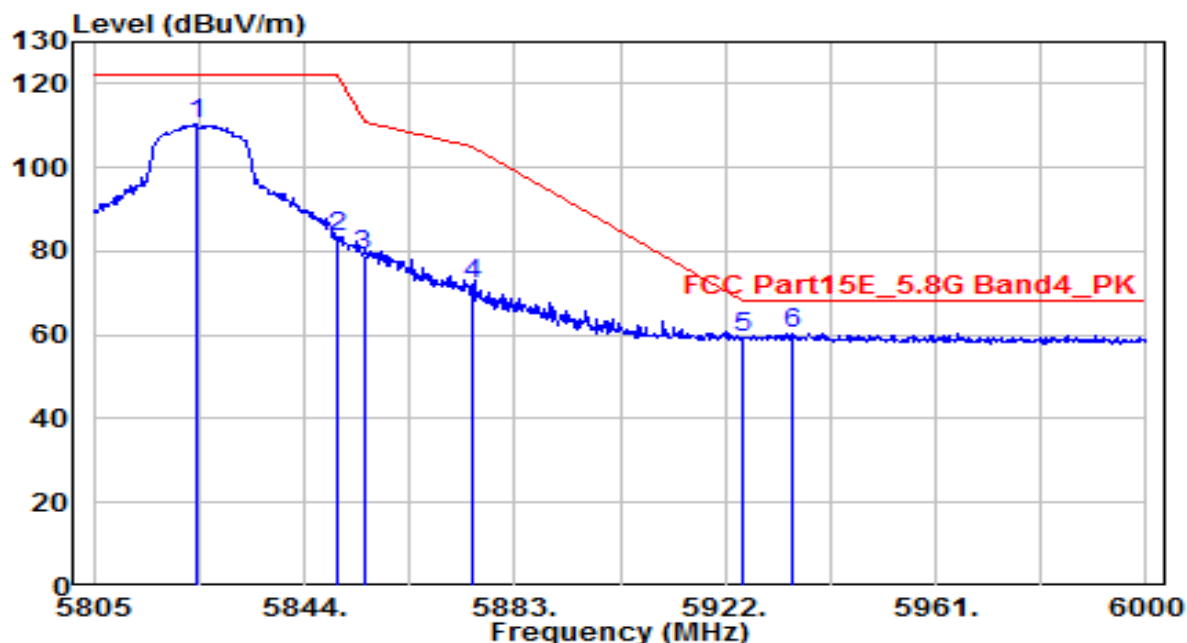


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5644.385	56.20	4.74	60.94	-7.26	68.20	200	290	Peak
2		5650.000	52.87	4.76	57.63	-10.57	68.20	200	290	Peak
3		5700.000	66.88	4.92	71.80	-33.40	105.20	200	290	Peak
4		5720.000	76.72	4.98	81.70	-29.10	110.80	200	290	Peak
5		5725.000	83.03	5.00	88.03	-34.17	122.20	200	290	Peak
6		5743.880	103.75	5.06	108.81	-13.39	122.20	200	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

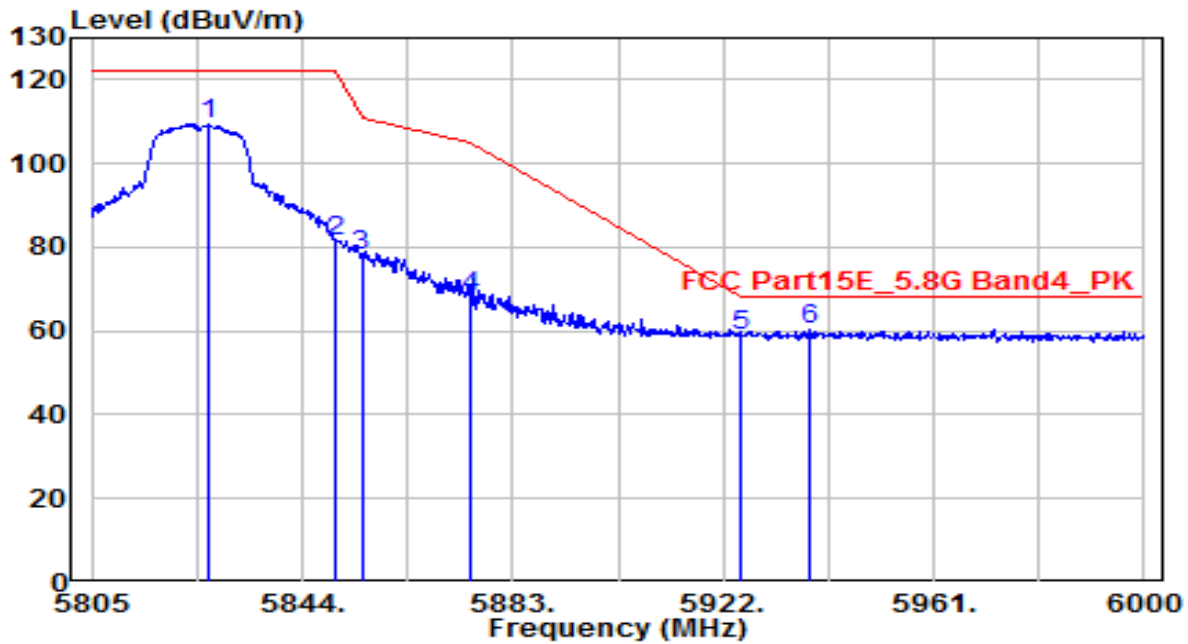


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5823.915	105.09	5.32	110.41	-11.79	122.20	190	30	Peak
2	5850.000	77.93	5.40	83.34	-38.86	122.20	190	30	Peak
3	5855.000	73.63	5.42	79.05	-31.75	110.80	190	30	Peak
4	5875.000	66.80	5.49	72.29	-32.91	105.20	190	30	Peak
5	5925.000	53.57	5.65	59.22	-8.98	68.20	190	30	Peak
6	* 5934.480	54.74	5.68	60.41	-7.79	68.20	190	30	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-20MHz_TX_Band4_CH 165_ANT 0	Test Voltage	AC 120V/60Hz

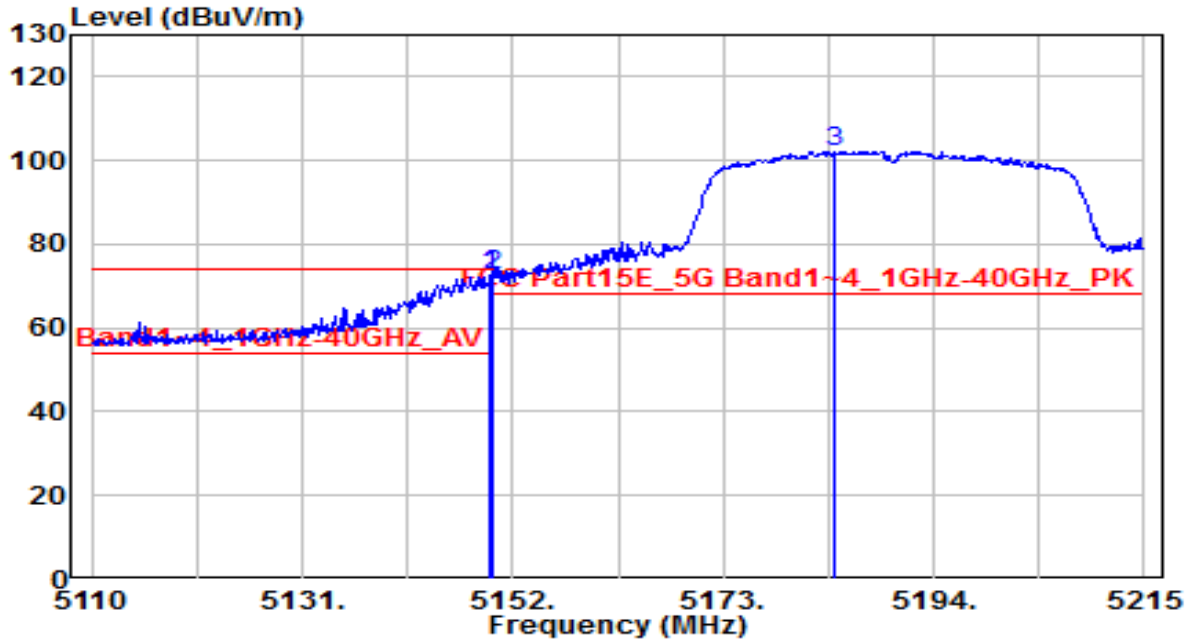


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5826.450	104.21	5.33	109.54	-12.66	122.20	200	300	Peak
2	5850.000	75.87	5.40	81.27	-40.93	122.20	200	300	Peak
3	5855.000	72.62	5.42	78.04	-32.76	110.80	200	300	Peak
4	5875.000	62.91	5.49	68.39	-36.81	105.20	200	300	Peak
5	5925.000	53.12	5.65	58.76	-9.44	68.20	200	300	Peak
6	* 5937.990	54.59	5.69	60.28	-7.92	68.20	200	300	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

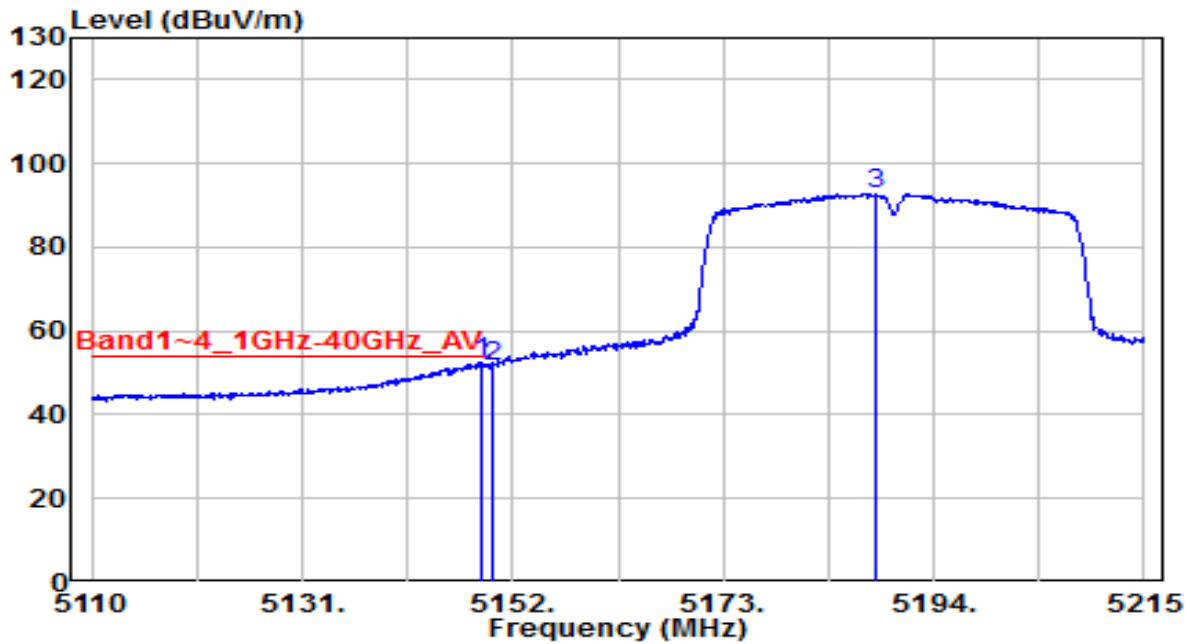


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.690	68.88	3.91	72.78	-1.22	74.00	150	20	Peak
2		5150.000	68.70	3.91	72.61	-1.39	74.00	150	20	Peak
3		5184.130	98.33	3.94	102.27	N/A	N/A	150	20	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

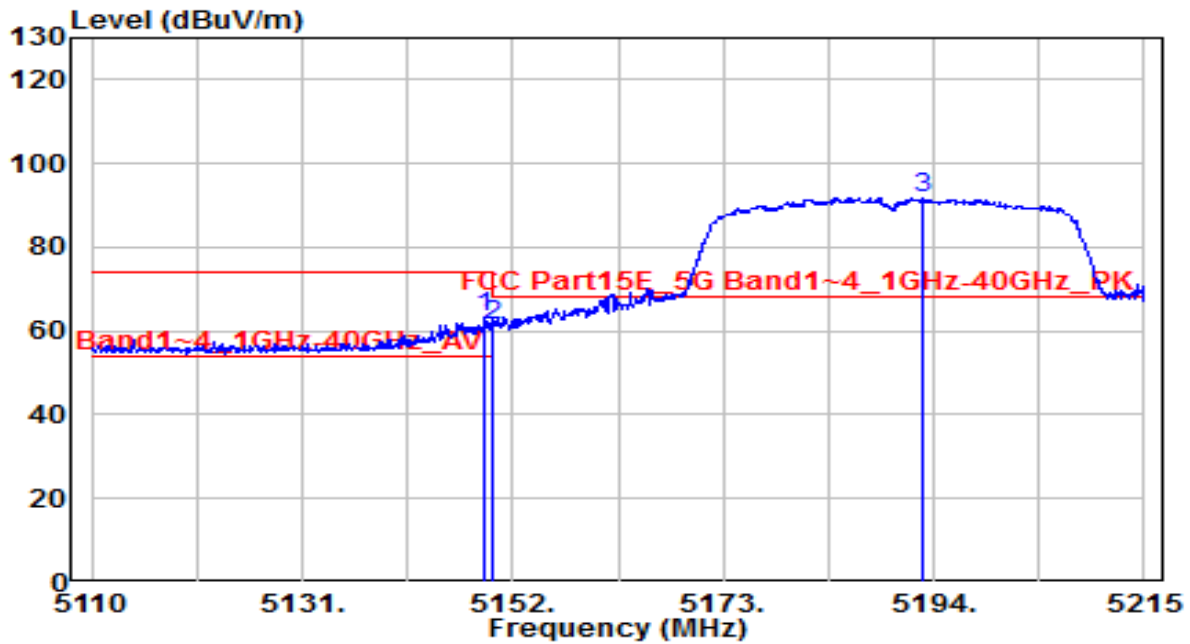


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.955	48.41	3.90	52.31	-1.69	54.00	150	20	Average
2		5150.000	47.79	3.91	51.70	-2.30	54.00	150	20	Average
3		5188.225	88.68	3.95	92.63	N/A	N/A	150	20	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

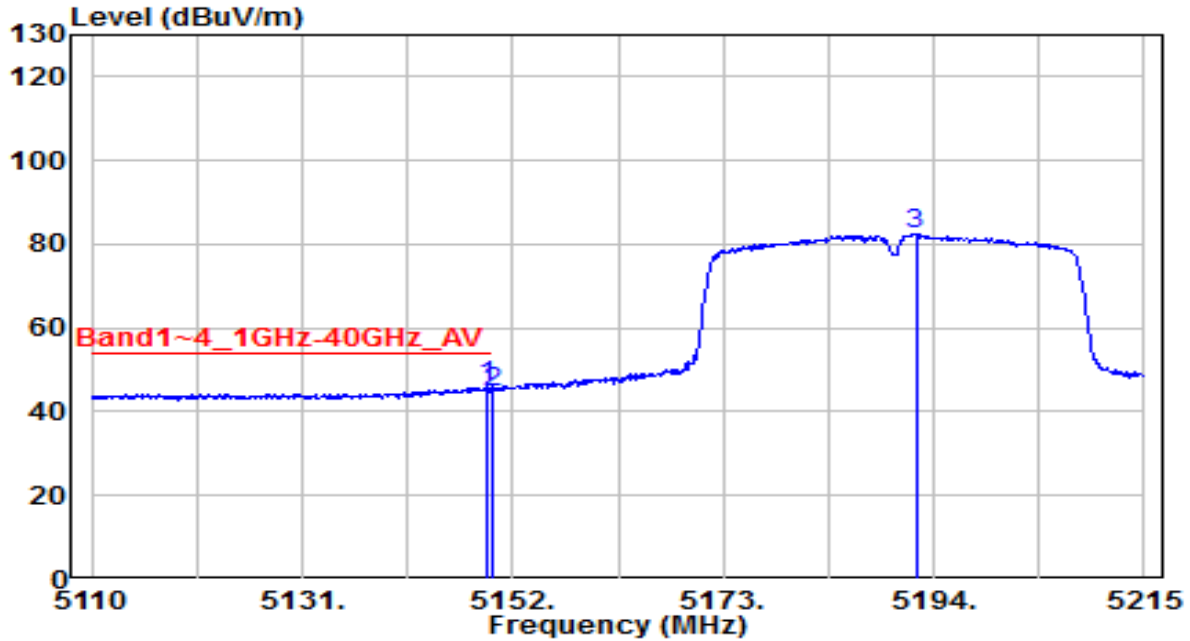


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.270	59.54	3.91	63.45	-10.55	74.00	150	10	Peak
2		5150.000	57.42	3.91	61.33	-12.67	74.00	150	10	Peak
3		5192.950	87.93	3.95	91.88	N/A	N/A	150	10	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band1_CH 38_ANT 0	Test Voltage	AC 120V/60Hz

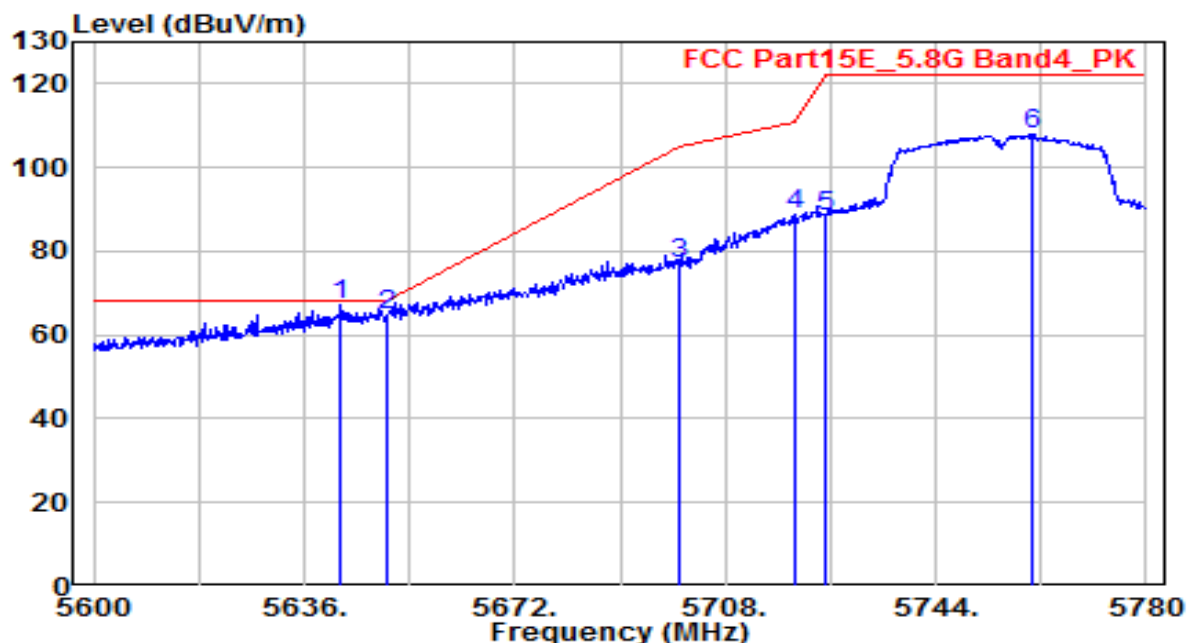


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5149.375	42.04	3.91	45.95	-8.05	54.00	150	10	Average
2		5150.000	40.77	3.91	44.68	-9.32	54.00	150	10	Average
3		5192.215	78.35	3.95	82.30	N/A	N/A	150	10	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

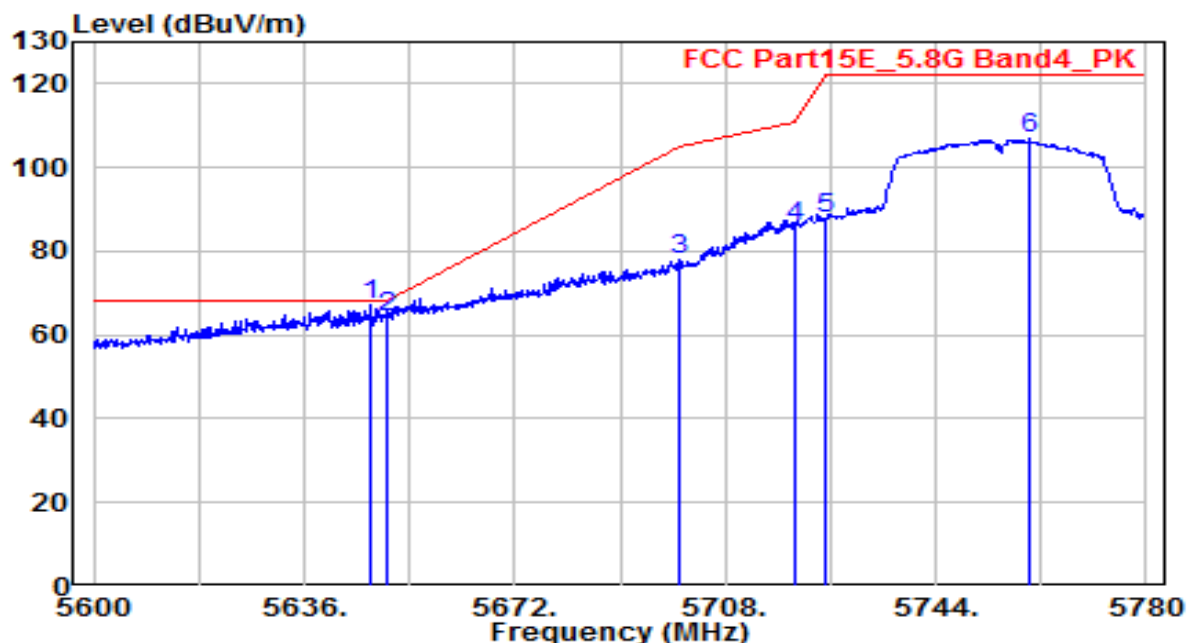


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5642.120	62.41	4.73	67.14	-1.06	68.20	110	290	Peak
2		5650.000	59.86	4.76	64.61	-3.59	68.20	110	290	Peak
3		5700.000	72.15	4.92	77.07	-28.13	105.20	110	290	Peak
4		5720.000	83.69	4.98	88.68	-22.12	110.80	110	290	Peak
5		5725.000	83.51	5.00	88.51	-33.69	122.20	110	290	Peak
6		5760.380	102.82	5.11	107.93	-14.27	122.20	110	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 151_ANT 0	Test Voltage	AC 120V/60Hz

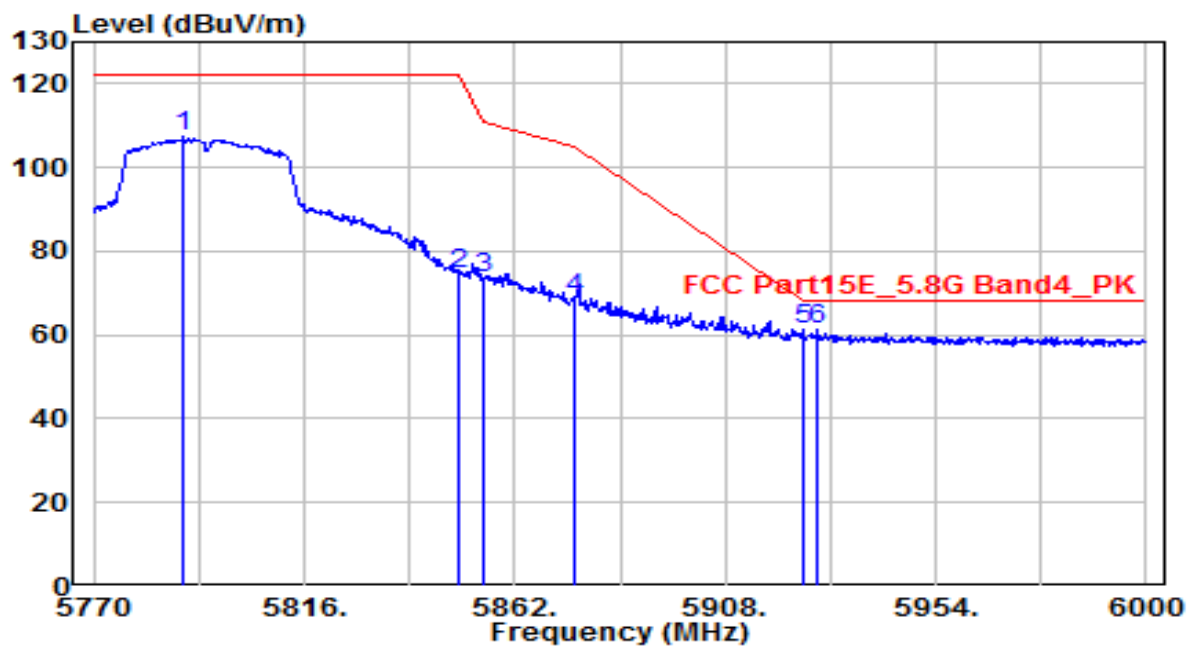


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5647.340	62.32	4.75	67.06	-1.14	68.20	200	280	Peak
2	5650.000	59.57	4.76	64.32	-3.88	68.20	200	280	Peak
3	5700.000	72.88	4.92	77.80	-27.40	105.20	200	280	Peak
4	5720.000	80.80	4.98	85.78	-25.02	110.80	200	280	Peak
5	5725.000	82.82	5.00	87.82	-34.38	122.20	200	280	Peak
6	5760.200	101.59	5.11	106.70	-15.50	122.20	200	280	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

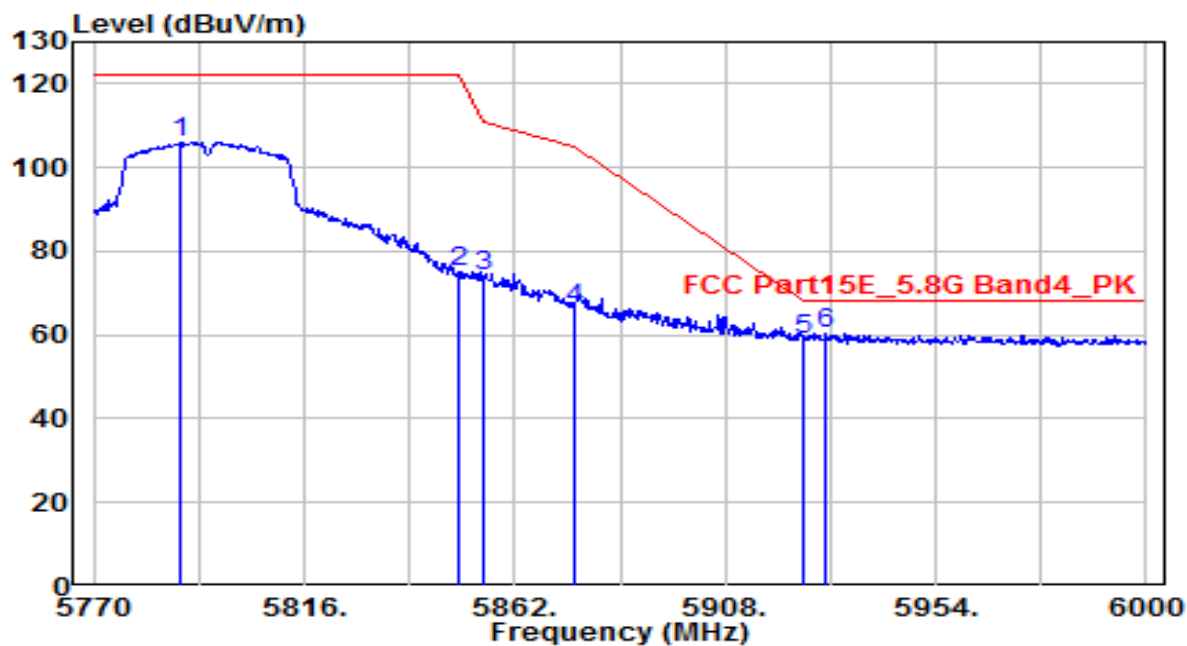


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5789.780	102.07	5.21	107.27	-14.93	122.20	215	30	Peak
2	5850.000	69.13	5.40	74.53	-47.67	122.20	215	30	Peak
3	5855.000	68.18	5.42	73.60	-37.20	110.80	215	30	Peak
4	5875.000	63.09	5.49	68.58	-36.62	105.20	215	30	Peak
5	* 5925.000	55.71	5.65	61.36	-6.84	68.20	215	30	Peak
6	5928.240	55.56	5.66	61.22	-6.98	68.20	215	30	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11n-40MHz_TX_Band4_CH 159_ANT 0	Test Voltage	AC 120V/60Hz

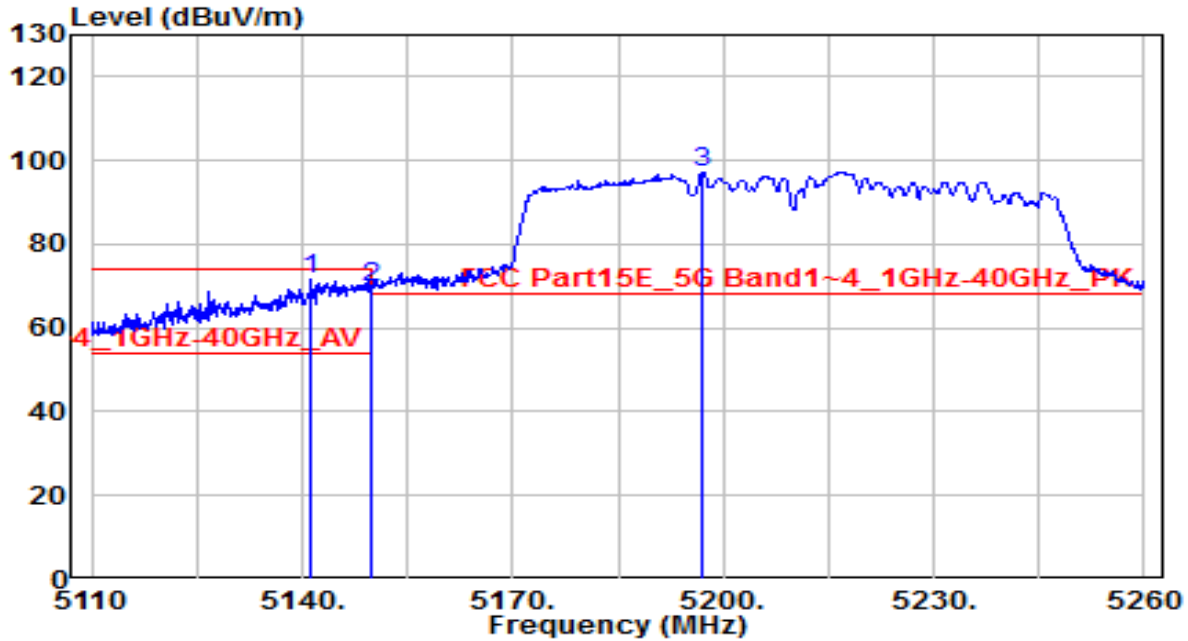


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5788.860	100.91	5.21	106.11	-16.09	122.20	190	280	Peak
2	5850.000	69.41	5.40	74.81	-47.39	122.20	190	280	Peak
3	5855.000	68.67	5.42	74.09	-36.71	110.80	190	280	Peak
4	5875.000	60.92	5.49	66.41	-38.79	105.20	190	280	Peak
5	5925.000	53.13	5.65	58.77	-9.43	68.20	190	280	Peak
6	* 5930.080	54.90	5.66	60.56	-7.64	68.20	190	280	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

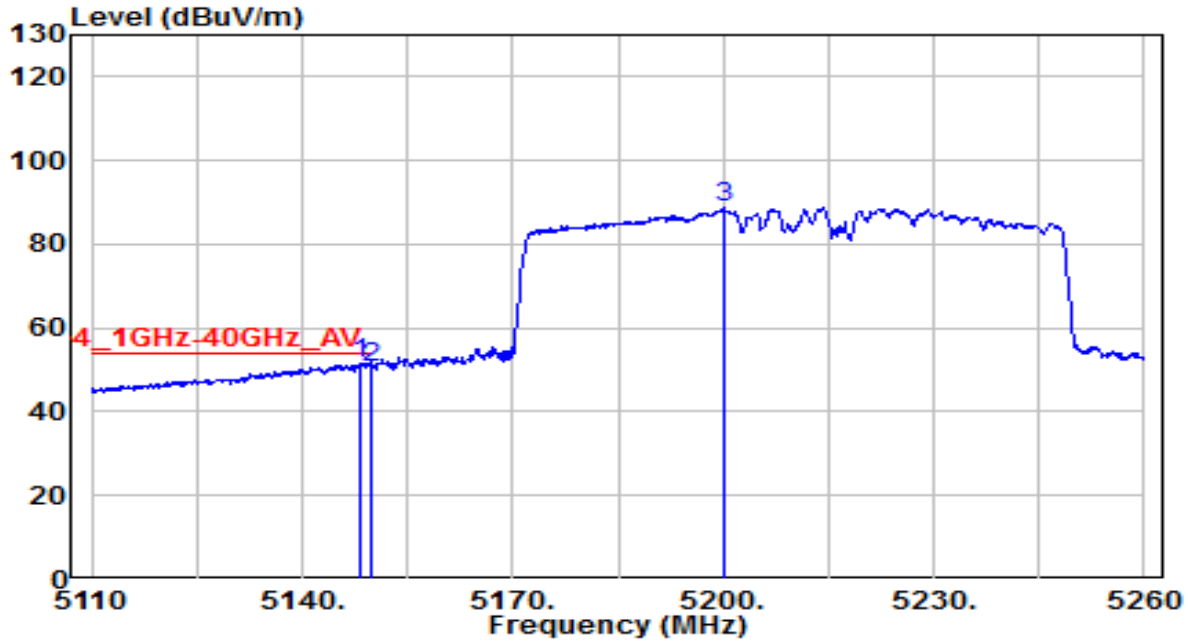


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5141.350	67.54	3.90	71.44	-2.56	74.00	160	35	Peak
2		5150.000	65.78	3.91	69.69	-4.31	74.00	160	35	Peak
3		5196.850	93.07	3.95	97.03	N/A	N/A	160	35	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

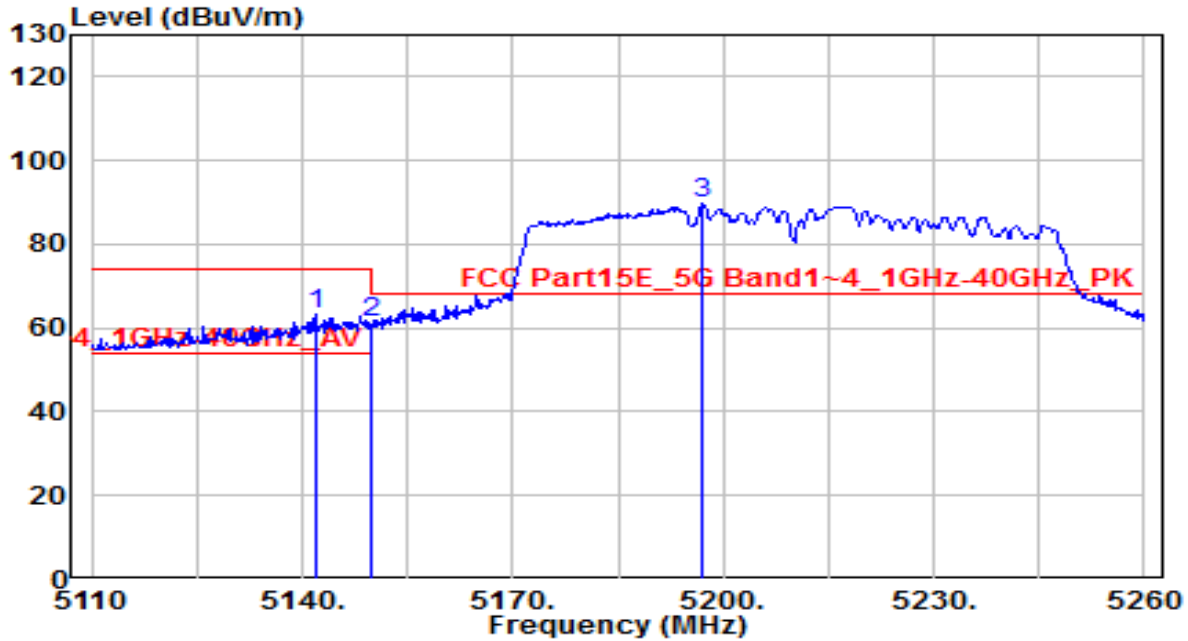


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5148.100	47.82	3.90	51.72	-2.28	54.00	160	35	Average
2		5150.000	46.79	3.91	50.70	-3.30	54.00	160	35	Average
3		5200.000	84.75	3.96	88.71	N/A	N/A	160	35	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

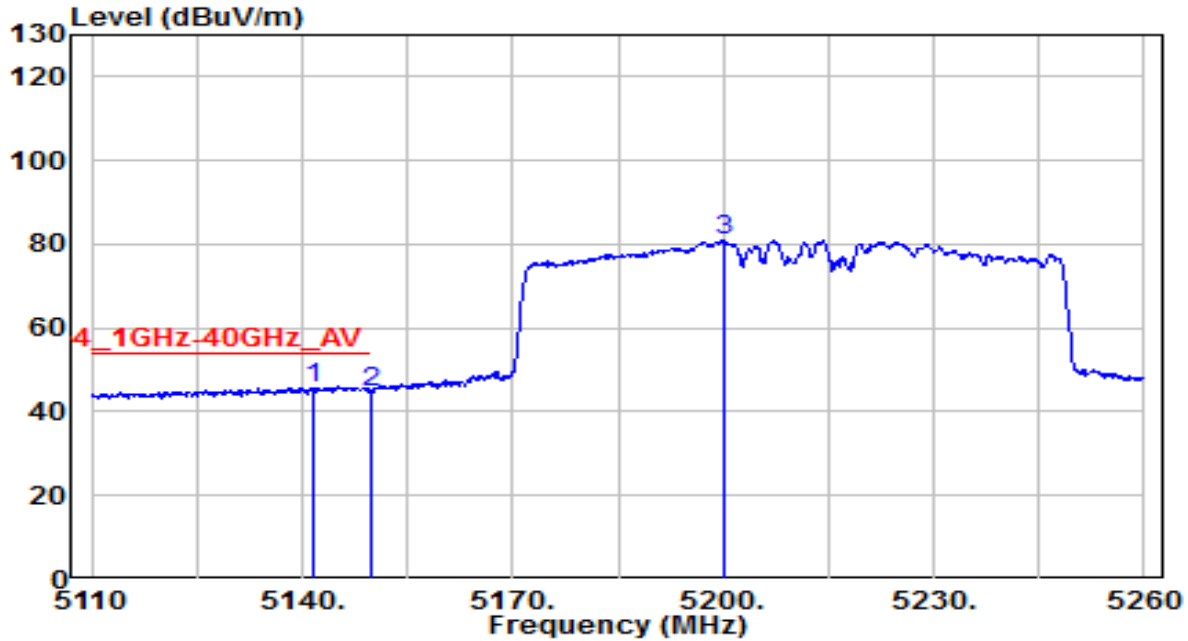


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5141.800	59.31	3.90	63.21	-10.79	74.00	200	40	Peak
2		5150.000	57.59	3.91	61.50	-12.50	74.00	200	40	Peak
3		5197.150	85.84	3.96	89.79	N/A	N/A	200	40	Peak

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band1_CH 42_ANT 0	Test Voltage	AC 120V/60Hz

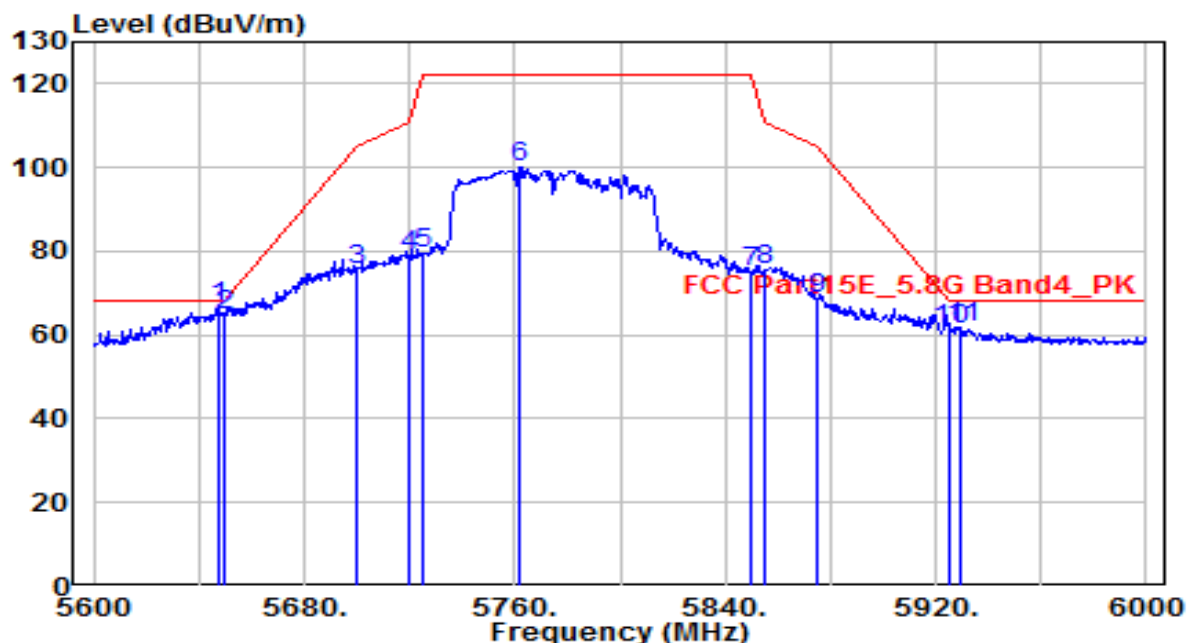


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5141.650	41.74	3.90	45.63	-8.37	54.00	200	40	Average
2		5150.000	40.98	3.91	44.89	-9.11	54.00	200	40	Average
3		5200.000	77.22	3.96	81.18	N/A	N/A	200	40	Average

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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_TX_Band4_CH 155_ANT 0	Test Voltage	AC 120V/60Hz

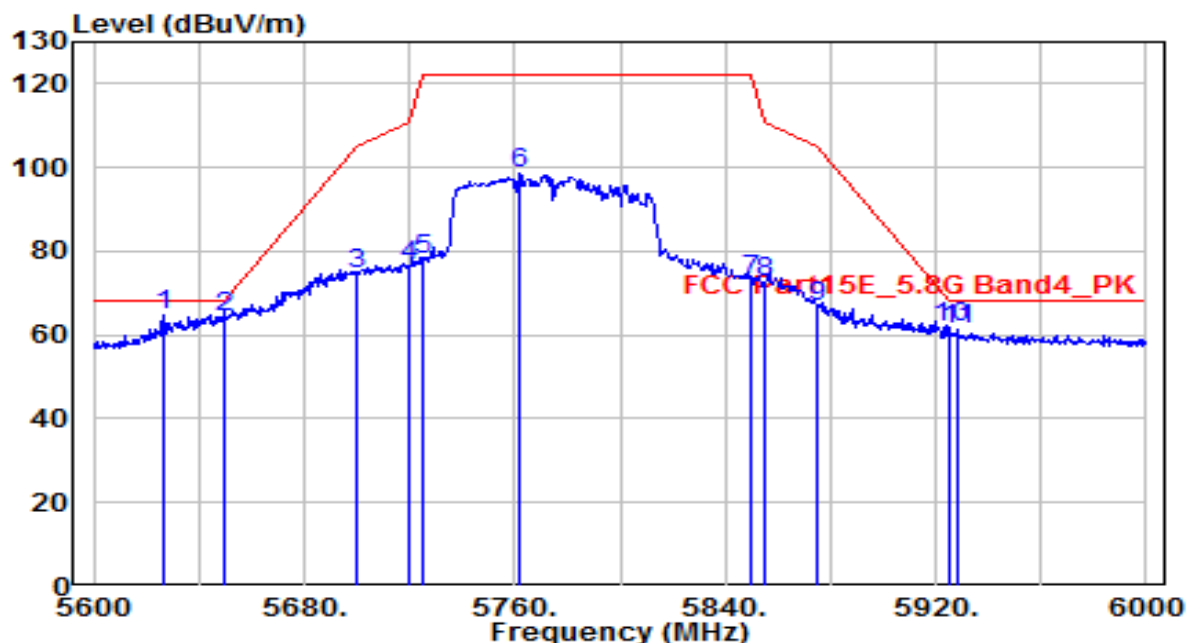


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5647.200	62.05	4.75	66.80	-1.40	68.20	110	290	Peak
2		5650.000	60.07	4.76	64.82	-3.38	68.20	110	290	Peak
3		5700.000	70.39	4.92	75.31	-29.89	105.20	110	290	Peak
4		5720.000	73.95	4.98	78.93	-31.87	110.80	110	290	Peak
5		5725.000	74.70	5.00	79.70	-42.50	122.20	110	290	Peak
6		5762.000	95.10	5.12	100.22	-21.98	122.20	110	290	Peak
7		5850.000	69.67	5.40	75.08	-47.12	122.20	110	290	Peak
8		5855.000	70.13	5.42	75.55	-35.25	110.80	110	290	Peak
9		5875.000	63.21	5.49	68.70	-36.50	105.20	110	290	Peak
10		5925.000	55.89	5.65	61.53	-6.67	68.20	110	290	Peak
11		5929.600	56.31	5.66	61.97	-6.23	68.20	110	290	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-26
Factor	BBHA 9120D	Temp. / Humidity	24°C /65%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	802.11ac-80MHz_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	*	5626.400	60.14	4.68	64.82	-3.38	68.20	200	290	Peak
2		5650.000	59.71	4.76	64.47	-3.73	68.20	200	290	Peak
3		5700.000	69.63	4.92	74.55	-30.65	105.20	200	290	Peak
4		5720.000	71.47	4.98	76.45	-34.35	110.80	200	290	Peak
5		5725.000	72.81	5.00	77.81	-44.39	122.20	200	290	Peak
6		5762.000	93.42	5.12	98.54	-23.66	122.20	200	290	Peak
7		5850.000	67.74	5.40	73.15	-49.05	122.20	200	290	Peak
8		5855.000	67.34	5.42	72.76	-38.04	110.80	200	290	Peak
9		5875.000	61.09	5.49	66.58	-38.62	105.20	200	290	Peak
10		5925.000	55.98	5.65	61.63	-6.57	68.20	200	290	Peak
11		5928.400	55.66	5.66	61.31	-6.89	68.20	200	290	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.

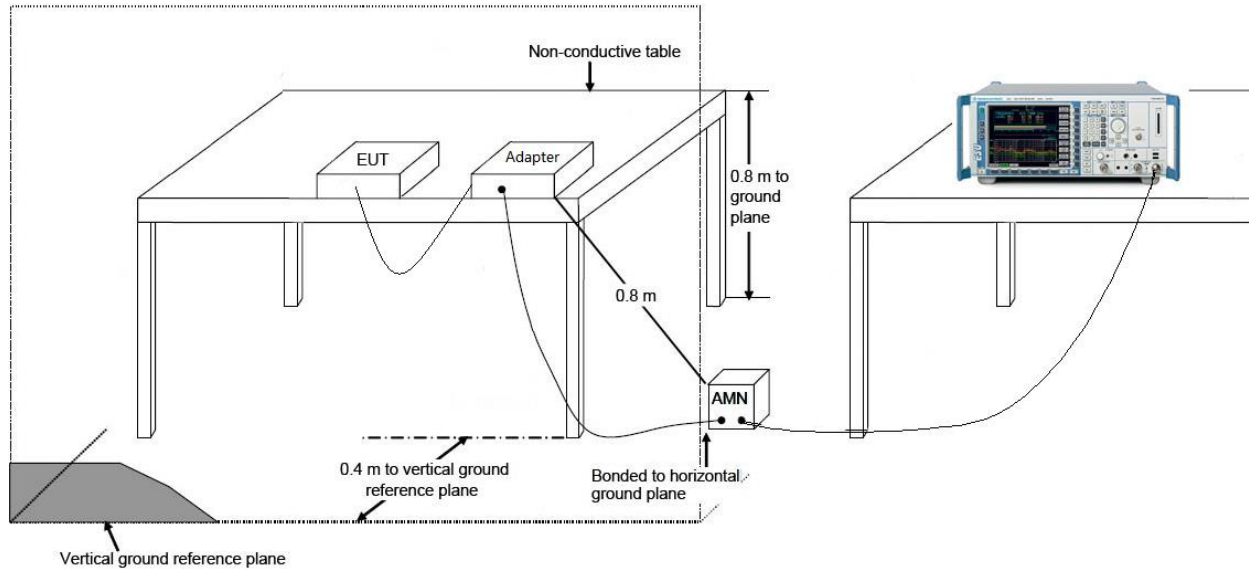
7.9.2. Test Procedure

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.

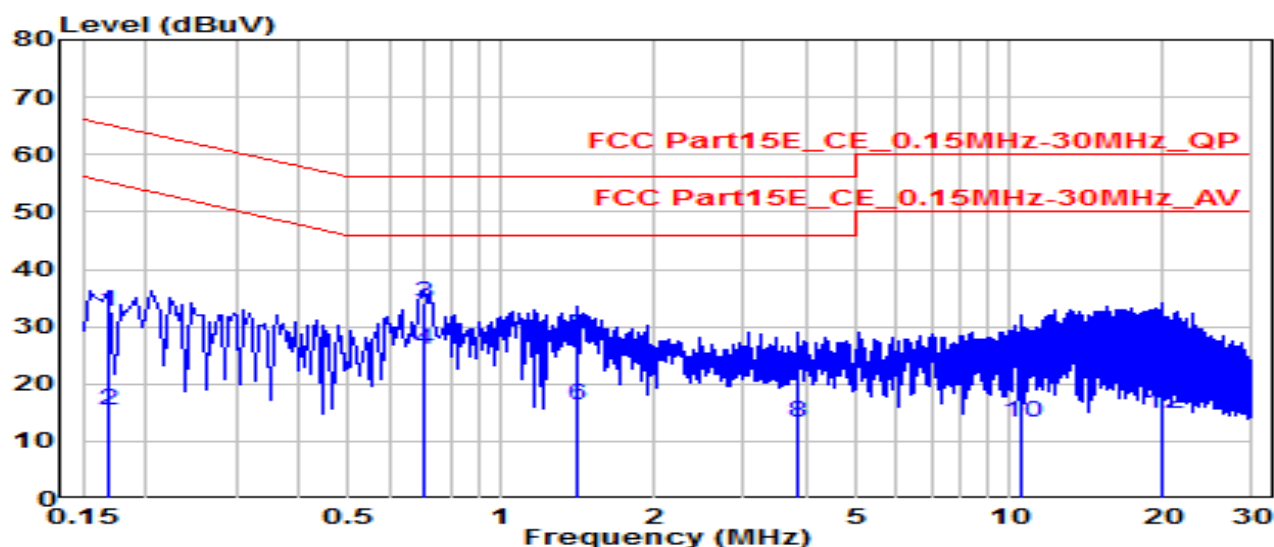
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.9.3. Test Setup



7.9.4. Test Result

EUT	Mobile Computing Device with Keyboard	Date of Test	2020-12-31
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	19.8°C /47%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 120V/60Hz

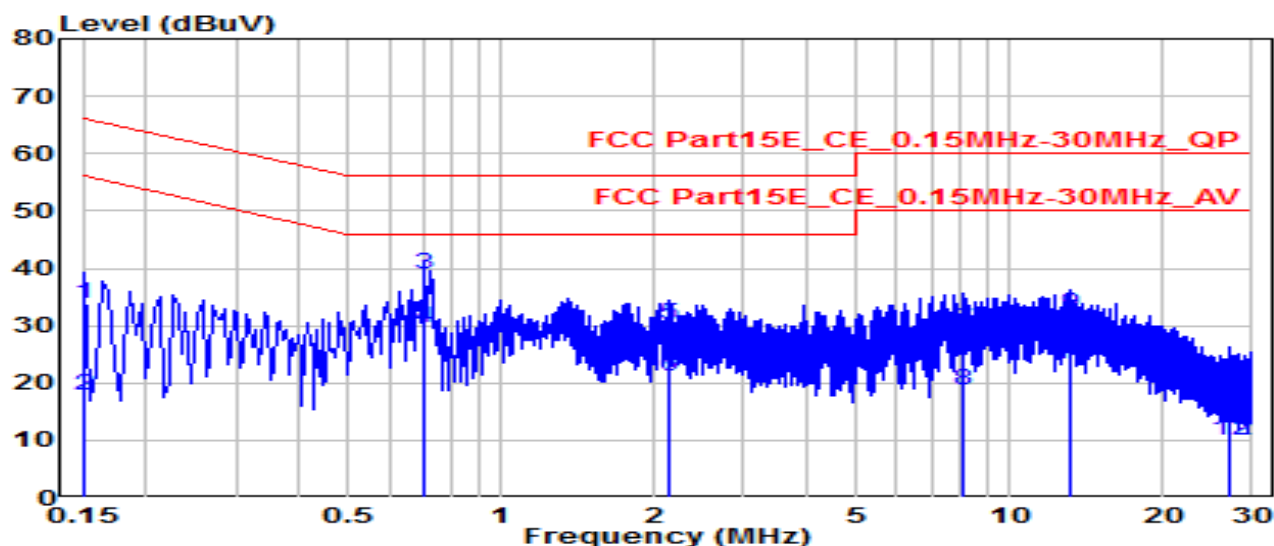


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	0.168	23.07	9.61	32.68	-32.38	65.06	QP
2	0.168	5.70	9.61	15.31	-39.75	55.06	Average
3	* 0.708	24.51	9.64	34.16	-21.84	56.00	QP
4	* 0.708	16.43	9.64	26.07	-19.93	46.00	Average
5	1.401	18.85	9.67	28.52	-27.48	56.00	QP
6	1.401	6.78	9.67	16.45	-29.55	46.00	Average
7	3.813	11.50	9.72	21.22	-34.78	56.00	QP
8	3.813	3.60	9.72	13.32	-32.68	46.00	Average
9	10.544	13.92	9.89	23.80	-36.20	60.00	QP
10	10.544	3.38	9.89	13.27	-36.73	50.00	Average
11	20.016	16.38	9.99	26.37	-33.63	60.00	QP
12	20.016	4.70	9.99	14.69	-35.31	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-31
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	19.8°C /47%
Polarity	Neutral	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 120V/60Hz

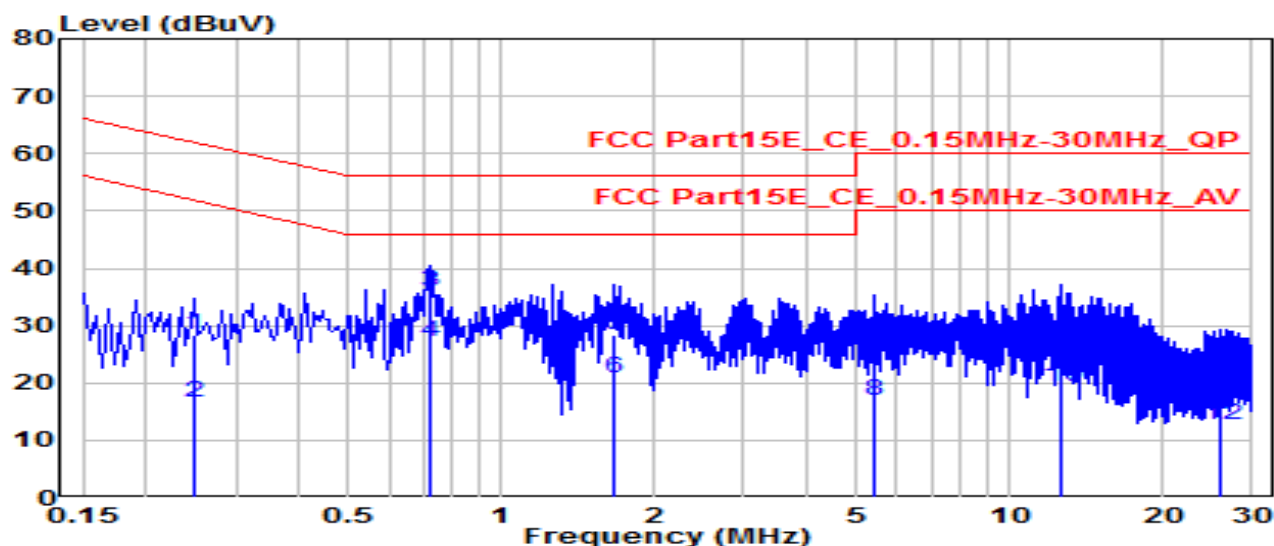


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.150	24.28	9.62	33.90	-32.10	66.00	QP
2		0.150	8.22	9.62	17.84	-38.16	56.00	Average
3	*	0.708	29.18	9.65	38.83	-17.17	56.00	QP
4	*	0.708	19.89	9.65	29.54	-16.46	46.00	Average
5		2.148	20.42	9.69	30.11	-25.89	56.00	QP
6		2.148	11.54	9.69	21.23	-24.77	46.00	Average
7		8.119	19.46	9.84	29.30	-30.70	60.00	QP
8		8.119	8.89	9.84	18.73	-31.27	50.00	Average
9		13.113	22.04	9.94	31.98	-28.02	60.00	QP
10		13.113	13.38	9.94	23.33	-26.67	50.00	Average
11		27.102	8.10	10.18	18.28	-41.72	60.00	QP
12		27.102	-0.19	10.18	9.99	-40.01	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-31
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	19.8°C /47%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	802.11n20_TX_Band1_CH44_Ant 0	Test Voltage	AC 240V/60Hz

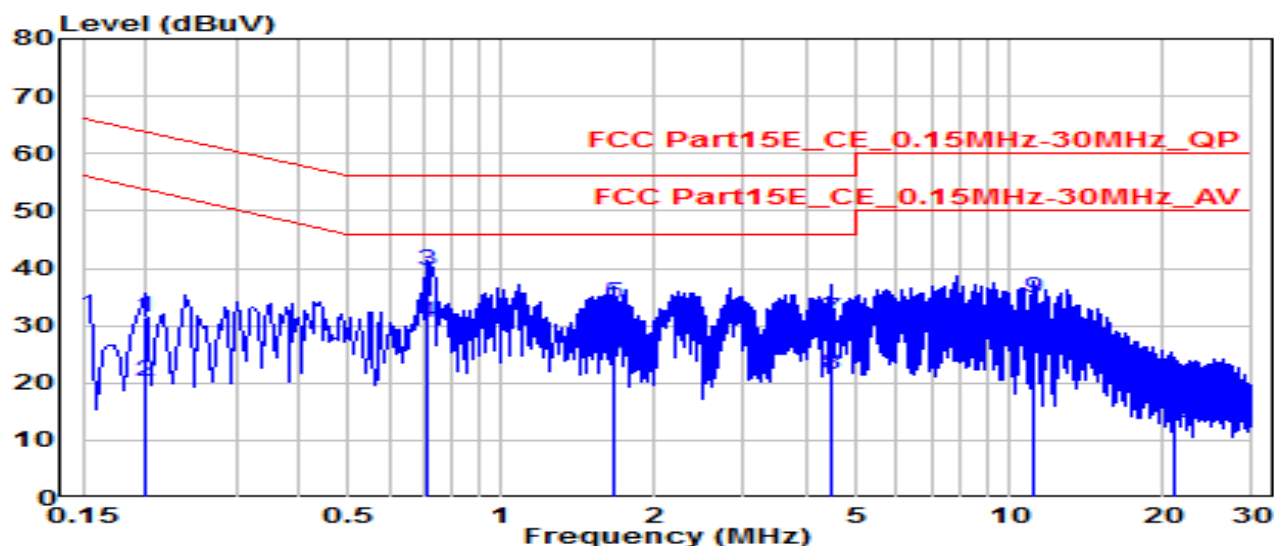


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.249	18.77	9.62	28.38	-33.41	61.79	QP
2		0.249	6.95	9.62	16.56	-35.23	51.79	Average
3	*	0.726	26.23	9.64	35.88	-20.12	56.00	QP
4	*	0.726	17.67	9.64	27.32	-18.68	46.00	Average
5		1.657	18.69	9.68	28.37	-27.63	56.00	QP
6		1.657	11.10	9.68	20.78	-25.22	46.00	Average
7		5.419	15.41	9.75	25.16	-34.84	60.00	QP
8		5.419	7.30	9.75	17.05	-32.95	50.00	Average
9		12.587	17.59	9.91	27.49	-32.51	60.00	QP
10		12.587	9.29	9.91	19.20	-30.80	50.00	Average
11		26.108	10.70	10.06	20.76	-39.24	60.00	QP
12		26.108	2.57	10.06	12.63	-37.37	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	Mobile Computing Device with Keyboard	Date of Test	2020-12-31
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	19.8°C /47%
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		0.199	21.65	9.62	31.28	-32.36	63.63	QP
2		0.199	10.64	9.62	20.27	-33.36	53.63	Average
3	*	0.717	29.93	9.65	39.59	-16.41	56.00	QP
4	*	0.717	20.69	9.65	30.35	-15.65	46.00	Average
5		1.662	24.03	9.68	33.71	-22.29	56.00	QP
6		1.662	15.02	9.68	24.71	-21.29	46.00	Average
7		4.434	21.49	9.74	31.23	-24.77	56.00	QP
8		4.434	11.57	9.74	21.31	-24.69	46.00	Average
9		11.151	24.73	9.91	34.64	-25.36	60.00	QP
10		11.151	17.82	9.91	27.73	-22.27	50.00	Average
11		21.001	9.63	10.08	19.72	-40.28	60.00	QP
12		21.001	2.96	10.08	13.04	-36.96	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 **Mobile Computing Device with Keyboard, Model Number: K430** is in compliance with Part 15E of the FCC Rules.

_____ The End _____