

FCC PART 15E TEST REPORT FOR CERTIFICATION
On Behalf of

Funai Electric R & D (Shenzhen) Co., Ltd.

WiFi module

Model No.: U9W42

FCC ID: 2AU3BU9W42

Prepared for : Funai Electric R & D (Shenzhen) Co., Ltd.

B303 Technology Building II, 1057 Nanhai Road, Nanshan
District, Shenzhen, China 518067

Prepared By : Audix Technology (Shenzhen) Co., Ltd.

No. 6, Kefeng Road, Science & Technology Park,
Nanshan District , Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F20004

Date of Test : Nov.18,2019~Jan.06,2020

Date of Report : Mar.31,2020

TABLE OF CONTENTS

<u>Description</u>	<u>Page</u>
1. SUMMARY OF STANDARDS AND RESULTS	5
1.1. Description of Standards and Results	5
2. GENERAL INFORMATION	6
2.1. Description of Equipment Under Test	6
2.2. Feature of Equipment Under Test	7
2.3. Test Information	8
2.4. Tested Supporting System Details	9
2.5. Block diagram of connection between the EUT and simulators	9
2.6. Test Facility	10
2.7. Measurement Uncertainty (95% confidence levels, k=2).....	10
3. POWER LINE CONDUCTED EMISSION TEST.....	11
3.1. Test Equipments	11
3.2. Block Diagram of Test Setup	11
3.3. Power Line Conducted Emission Test Limits	11
3.4. Configuration of EUT on Test.....	11
3.5. Operating Condition of EUT	12
3.6. Test Procedure	12
3.7. Power Line Conducted Emission Test Results	12
4. RADIATED EMISSION TEST	14
4.1. Test Equipment.....	14
4.2. Block Diagram of Test Setup	15
4.3. Radiated Emission Limit	16
4.4. EUT Configuration on Test	17
4.5. Operating Condition of EUT	17
4.6. Test Procedure	17
4.7. Radiated Emission Test Results.....	19
5. BAND EDGE COMPLIANCE TEST	51
5.1. Test Equipment.....	51
5.2. Limit	51
5.3. Test Procedure	51
5.4. Test Results	51
6. 6dB & 26dB & 99% Bandwidth Test.....	64
6.1. Test Equipment.....	64
6.2. Limit	64
6.3. Test Procedure	64
6.4. Test Results	65
7. OUTPUT POWER TEST	87
7.1. Test Equipment.....	87
7.2. Limit	87
7.3. Test Procedure	87
7.4. Test Results	88
8. EQUIVALENT ISOTROPIC RADIATED POWER TEST.....	102
8.1. Limit	102
8.2. Test Procedure	102
8.3. Test Results	103
9. SPECTRAL DENSITY TEST	104
9.1. Test Equipment.....	104
9.2. Limit	104
9.3. Test Procedure	104
9.4. Test Results	105

10.	FREQUENCY STABILITY MEASUREMENT.....	119
10.1.	Test Equipment.....	119
10.2.	Limit.....	119
10.3.	Test Procedure.....	119
10.4.	Test Result.....	120
11.	ANTENNA REQUIREMENT	125
11.1.	Standard Applicable.....	125
11.2.	Antenna Connected Construction.....	125
12.	DEVIATION TO TEST SPECIFICATIONS.....	126

Appendix A. Photograph of Test

Appendix B. Photo of the EUT

TEST REPORT CERTIFICATION

Applicant : Funai Electric R & D (Shenzhen) Co., Ltd.
Manufacturer : Funai Electric R & D (Shenzhen) Co., Ltd.
Product : WiFi module
FCC ID : 2AU3BU9W42
(A) Model No. : U9W42
(B) Serial No. : N/A
(C) Test Voltage : DC 3.3V

Tested for comply with:
FCC CFR47 Part 15 Subpart E

Test procedure used:
ANSI C63.10: 2013
KDB789033D01

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart E requirements. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements. This report contains data that are not covered by the NVLAP accreditation.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Nov.18,2019~Jan.06,2020 Report of date: Mar.31,2020

Prepared by : Brave Zhang Reviewed by : Sunny Lu
Brave Zhang / Assistant  Sunny Lu / Deputy Manager
Audix Technology (Shenzhen) Co., Ltd.

EMC 部門報告專用章

Stamp only for EMC Dept. Report

Approved & Authorized Signer : Signature: David Jin
David Jin / Deputy General Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Power Line Conducted Emission	FCC Part 15: 15.207 FCC Part 15: 15.407(b)(6)	PASS
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.205 FCC Part 15.407(b)	PASS
Band Edge Compliance	FCC Part 15: 15.407(b) FCC Part 15.205	PASS
6dB&26 &99% Bandwidth Test	FCC Part 15: 15.407(e)	PASS
Output Power Test	FCC Part 15: 15.407(a)(5)	PASS
Equivalent Isotropic Radiated Power Test	FCC Part 15: 15.407(h)(1)	PASS
Power Spectral Density Test	FCC Part 15: 15.407(a)	PASS
Frequency Stability	FCC Part 15: 15.407(a)	PASS
Antenna requirement	FCC Part 15: 15.407(g)	PASS

2. GENERAL INFORMATION

2.1. Description of Equipment Under Test

Applicant	Funai Electric R & D (Shenzhen) Co., Ltd.
Applicant Address	B303 Technology Building II, 1057 Nanhai Road, Nanshan District, Shenzhen, China 518067
Manufacturer	Funai Electric R & D (Shenzhen) Co., Ltd.
Manufacturer Address	B303 Technology Building II, 1057 Nanhai Road, Nanshan District, Shenzhen, China 518067
Factory	Funai (Thailand) Company Limited
Factory Address	835 Moo18, Pakchong-Lumsompung Road, Tambon, Chantuek, Amphur Pakchong, Nakhon Ratchasima 30130, Thailand
Product	WiFi module
Model No.	U9W42
FCC ID	2AU3BU9W42
Sample Type	Prototype production
Date of Receipt	Nov.18,2019
Date of Test	Nov.18,2019~Jan.06,2020
Remark: This report only for WIFI 5GHz.	

2.2.Feature of Equipment Under Test

Product Feature & Specification	
Product	WiFi module
Model No.	U9W42
Radio	IEEE802.11 a/b/g/n/ac; Bluetooth V3.0+EDR; Bluetooth V5.0
Power Source	<input type="checkbox"/> Commercial Power AC 100 ~ 240V
	<input checked="" type="checkbox"/> External Power Source DC 3.3V
	<input type="checkbox"/> Lithium battery DC V, mAh
	<input type="checkbox"/> UM battery DC V
Bluetooth	
Bluetooth Version	V5.0 dual mode
Frequency Range	2402-2480MHz
Type of Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Data Rate	1Mbps, 2Mbps, 3Mbps
Quantity of Channels	79/40
Channel Separation	1MHz/2MHz
2.4GHz Wi-Fi	
Support Modes	802.11b/g/n20/n40
Frequency Range	2412-2462MHz
Type of Modulation	802.11b(DSSS): CCK, QPSK, BPSK; 802.11g/n(OFDM): 64QAM,16QAM, QPSK, BPSK
Data Rate	802.11b: 1/2/5.5/11 Mbps; 802.11g: 6/9/12/18/24/36/48/54 Mbps; 802.11n: up to 300Mbps
Channel Separation	5MHz
5GHz Wi-Fi	
Support Modes	802.11a/n20/n40/ac20/ac40/ac80
Frequency Range	5180-5240MHz, 5745-5825MHz
Type of Modulation	802.11a/n (OFDM): QPSK, BPSK, 16QAM, 64QAM 802.11ac (OFDM): QPSK, BPSK, 16QAM, 64QAM,256QAM
Data Rate	802.11a: 6/9/12/18/24/36/48/54 Mbps; 802.11n: up to 300Mbps; 802.11ac: up to 867Mbps
Channel Separation	5MHz

Antenna System	
Type of Antenna	PCB Antenna
Antenna Peak Gain	Bluetooth Peak Gain: -7.4dBi DTS Band (2400-2483.5MHz) Peak Gain: ANT A: -2.3dBi; ANT B: -1dBi. U-NII-1 Band(5150-5250MHz) Peak Gain: ANT A: 2.9dBi; ANT B: -3.8dBi. U-NII-3 Band (5725-5850MHz) Peak Gain: ANT A: -1.9dBi; ANT B: -4.5dBi.

2.3. Test Information

A special test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mbps)(see Note)	Channel	Frequency (MHz)
IEEE 802.11a	6	Low :CH36	5180
	6	Middle: CH40	5200
	6	High: CH48	5240
	6	Low :CH149	5745
	6	Middle: CH157	5785
	6	High: CH165	5825
IEEE 802.11nHT20	MCS0	Low :CH36	5180
	MCS0	Middle: CH40	5200
	MCS0	High: CH48	5240
	MCS0	Low :CH149	5745
	MCS0	Middle: CH157	5785
	MCS0	High: CH165	5825
IEEE 802.11nHT40	MCS0	Low :CH38	5190
	MCS0	High: CH46	5230
	MCS0	Low :CH151	5755
	MCS0	High: CH159	5795
IEEE 802.11acVHT20	MCS0	Low :CH36	5180
	MCS0	Middle: CH40	5200
	MCS0	High: CH48	5240
	MCS0	Low :CH149	5745
	MCS0	Middle: CH157	5785
	MCS0	High: CH165	5825
IEEE 802.11acVHT40	MCS0	Low :CH38	5190
	MCS0	High: CH46	5230
	MCS0	Low :CH151	5755
	MCS0	High: CH159	5795
IEEE 802.11acVHT80	MCS0	CH42	5210
	MCS0	CH155	5775

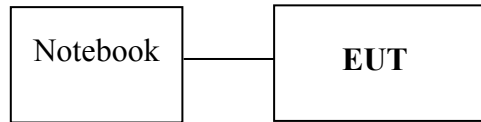
Note: 1. According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

Note: 2. This is MIMO 2*2 device for 5GHz band, test compliance with KDB 662911 D01, for 11a mode ,choose the antenna which has the worse case emission for the radiated emission and band edge test, for 11n/ac mode, test with two antenna transmit simultaneously.

2.4. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Notebook	N/A	acer	ZOW	NVX7C
USB Cable: Shielded, Detachable, 1.0m					

2.5. Block diagram of connection between the EUT and simulators



(EUT: WiFi module)

2.6. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
: No. 6, Kefeng Road, Science & Technology Park,
Nanshan District , Shenzhen, Guangdong, China

EMC Lab. : Certified by Industry Canada
: Registration Number: IC 5183A-1
Valid Date: May.07, 2020

: Certified by DAkkS, Germany
: Registration No: D-PL-12151-01-00
Valid Date: Dec.07, 2021

: Accredited by NVLAP, USA
: NVLAP Code: 200372-0
Valid Date: Mar.31, 2020

: Certified by FCC USA.
: Designation No.: CN5022
Valid Date: Mar.31, 2020

2.7. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.6dB(150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.6dB(30~200MHz, Polarization: H)
	4.0dB(30~200MHz, Polarization: V)
	3.6dB(200M~1GHz, Polarization: H)
	3.8dB(200M~1GHz, Polarization: V)
Uncertainty for Radiation Emission test in 3m chamber	4.6dB(1~6GHz, Distance: 3m)
	4.6dB(6~25GHz, Distance: 3m)
Uncertainty for Radiated Spurious Emission test in RF chamber	3.7dB (30MHz~1000MHz)
	3.3dB (1GHz~26.5MHz)
Uncertainty for Conduction Spurious emission test	2.0dB
Uncertainty for Output power test	0.8dB
Uncertainty for Bandwidth test	83 kHz
Uncertainty for DC power test	0.1%
Uncertainty for test site temperature and humidity	0.6°C
	3%

Note: EMI uncertainty is evaluated by CISPR16-4-2.

The value of measurement uncertainty of EMI is less than U_{CISPR} .

The value is not calculated in the test results.

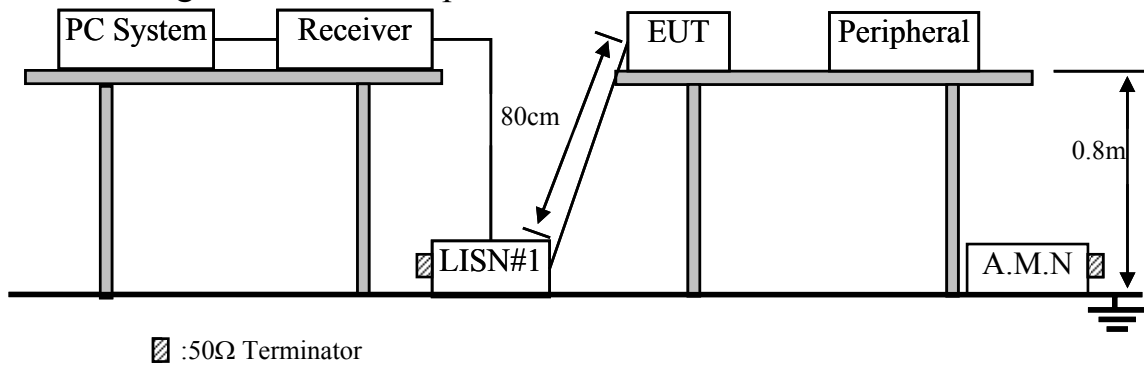
3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# Shielding Room	AUDIX	N/A	N/A	May.17,18	3 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100842	Apr.14,19	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV216	102160	Oct.13,19	1 Year
4.	A.M.N	Kyoritsu	K NW-403D	8-1750-2	Apr.18,19	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.14,19	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.14,19	1 Year
7.	RF Cable	Fujikura	RG55/U	No.2	Apr.13,19	1 Year
8.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

Note: N/A means Not applicable.

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. WiFi module (EUT)

Model No. : U9W42

Serial No. : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT as shown as Section 3.2.
- 3.5.2. Turn on the power of EUT.
- 3.5.3. PC run test software to control EUT work in Tx mode.

3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via AC unit connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.

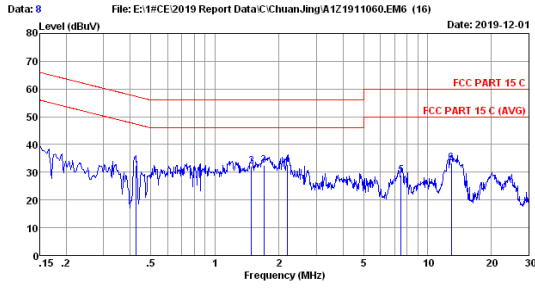
The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

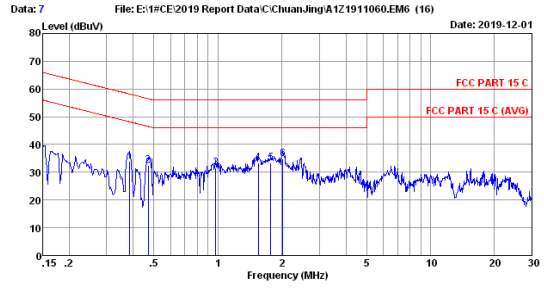
FCC ID: 2AU3BU9W42



Site no :1# Conduction Data No :8
 Dis./Lism :2019 ENV216 L LISN phase:
 Limit :FCC PART 15 C
 Env./Ins. :22.3°C/50% Engineer :Garry
 Power Rating :DC 3.3V
 Test Mode :WiFi 5G TX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.426	9.60	0.05	22.90	32.55	57.33	24.78	QP
2	1.487	9.60	0.06	22.37	32.03	56.00	23.97	QP
3	1.698	9.60	0.07	22.86	32.53	56.00	23.47	QP
4	2.201	9.60	0.07	23.18	32.85	56.00	23.15	QP
5	7.526	9.70	0.12	19.03	28.85	60.00	31.15	QP
6	12.920	9.70	0.14	23.59	33.43	60.00	26.57	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no :1# Conduction Data No :7
 Dis./Lism :2019 ENV216 N LISN phase:
 Limit :FCC PART 15 C
 Env./Ins. :22.3°C/50% Engineer :Garry
 Power Rating :DC 3.3V
 Test Mode :WiFi 5G TX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.385	9.60	0.05	24.30	33.95	58.17	24.22	QP
2	0.471	9.60	0.05	22.85	32.50	56.49	23.99	QP
3	0.979	9.60	0.06	21.94	31.60	56.00	24.40	QP
4	1.552	9.60	0.07	23.55	33.22	56.00	22.78	QP
5	1.772	9.60	0.07	23.63	33.30	56.00	22.70	QP
6	2.023	9.60	0.07	25.21	34.88	56.00	21.12	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For frequency range 30 MHz ~1000MHz (In 3m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(NSA)	AUDIX	N/A	N/A	May.10,19	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.14,19	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR7	101547	Apr.14,19	1 Year
5.	Amplifier	HP	8447D	2648A04738	Apr.14,19	1 Year
6.	Tri-log-Broadband Antenna	SCHWARZBECK	VULB 9168	493	Jul.24,19	1 Year
7.	NSA Cable	HUBER+SUHNER	CFD400NL-LW	No.3	Oct.13,19	1 Year
8.	Coaxial Switch	Anritsu	MP59B	6201397222	Apr.14,19	1 Year
9.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A

Note: N/A means Not applicable.

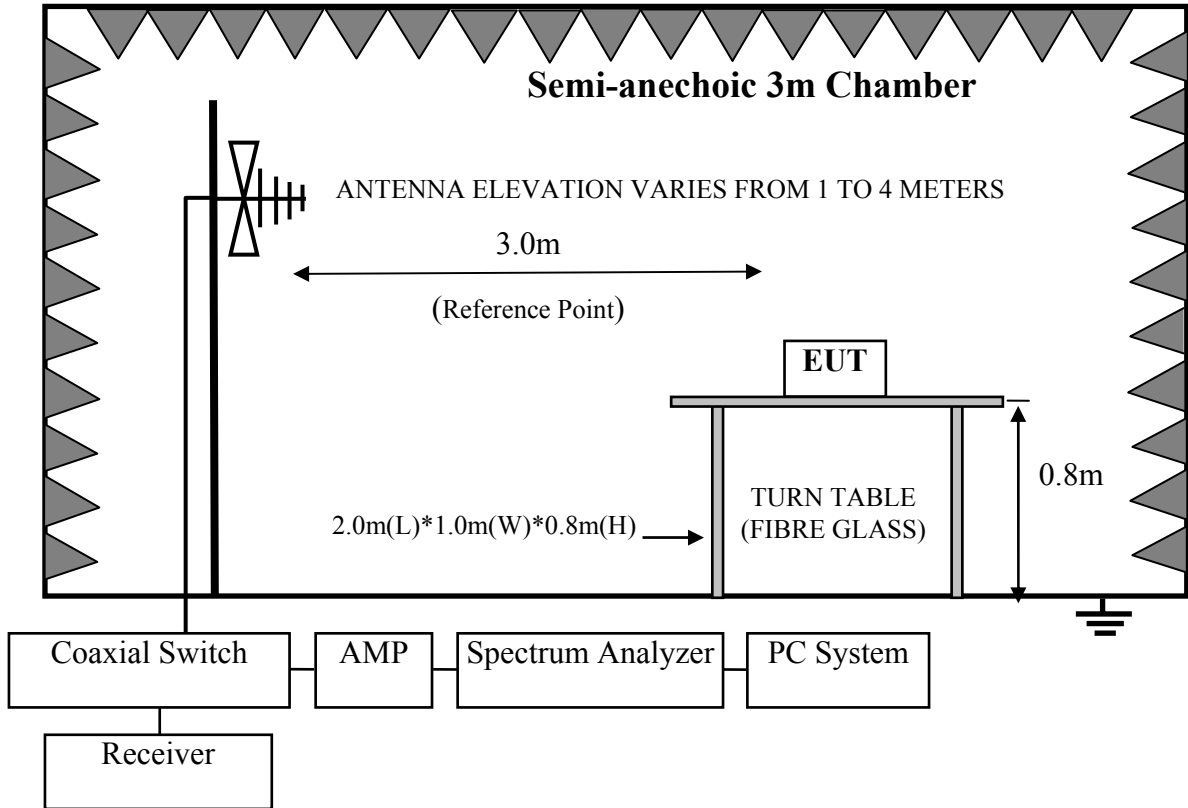
4.1.2. For frequency range 1GHz~40GHz (In 3m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(Svswr)	AUDIX	N/A	N/A	Apr.18,19	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.14,19	1 Year
4.	Horn Antenna	ETC	MCTD 1209	DRH15F03007	Jun.17,19	1 Year
5.	Horn Antenna	ETS	3116	00060089	Dec.02,19	1 Year
6.	Amplifier	Agilent	83017A	MY53270084	Oct.13,19	1 Year
7.	RF Cable	Hubersuhner	SUCOFLEX-106	505238/6	Apr.13,19	1 Year
8.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A

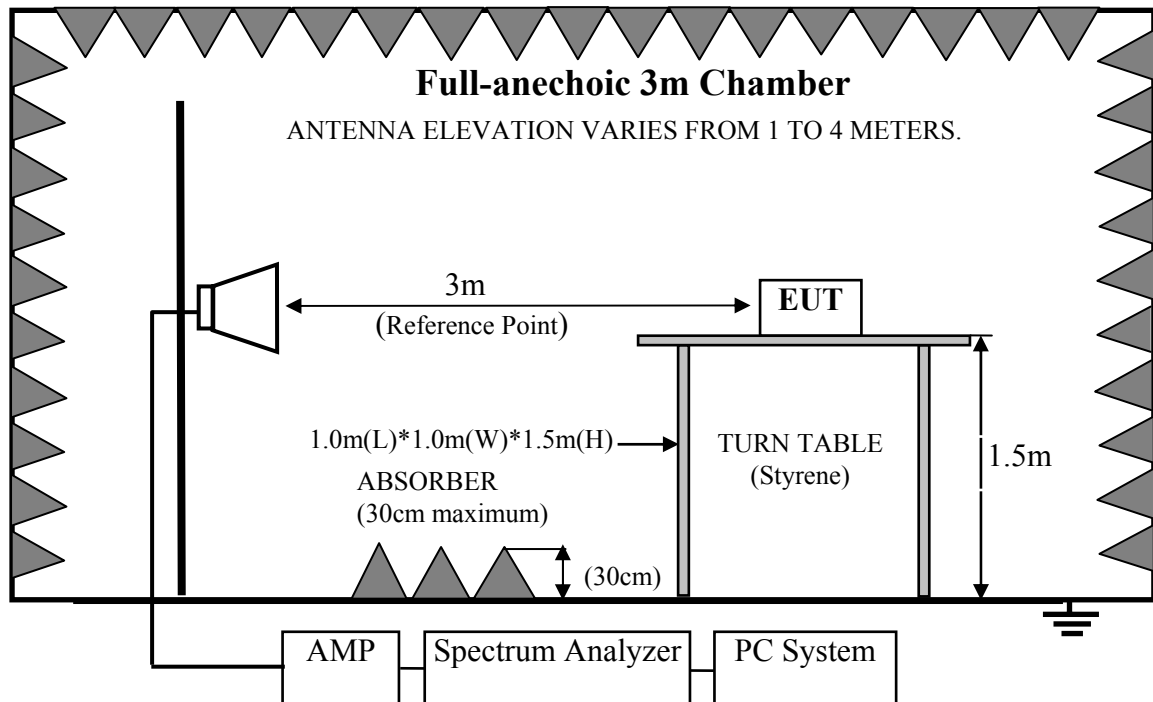
Note: N/A means Not applicable.

4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000MHz



For frequency range 1GHz-40GHz



4.3. Radiated Emission Limit

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 5.725-5.85 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.

Unwanted emissions below 1 GHz and those emissions appearing within 15.205 restricted frequency bands must comply with the general field strength limits set forth in Section 15.209.

4.3.1. 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remarks : (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.3.2. 15.205 Restricted bands of operation

MHz	MHz	MHz	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	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	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)

4.4.EUT Configuration on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

4.4.1.WiFi module (EUT)

Model No. : U9W42

Serial No. : N/A

4.4.2.Support Equipment: As Tested Supporting System Details, in Section 2.2.

4.5.Operating Condition of EUT

4.5.1.Setup the EUT and simulator as shown as Section 4.2.

4.5.2.Turn on the power of all equipments.

4.5.3.Let EUT work in Tx mode.

4.6.Test Procedure

Frequency below 30MHz:

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground for frequency 30MHz~1000MHz, 1.5 meter high above ground for frequency above 1GHz and put the absorbing with 2.4m(L)*2.4m(W)*0.3m(H) on the ground . The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it.EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna for frequency 30MHz~1000MHz, and the Horn antenna is used as receiving antenna for frequency above 1GHz. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2013 on radiated emission Test.

For emissions below 1GHz and those emissions appearing within 15.205 restricted frequency bands use below procedure:

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as test photo indicated.

The bandwidth of the EMI test receiver (R&S ESR7) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

Maximum Peak emission levels are measured by setting the analyzer as follows:

- (a) RBW = 1 MHz.
- (b) VBW \geq 3 MHz.
- (c) Detector = Peak.
- (d) Sweep time = auto.
- (e) Trace mode = max hold.
- (f) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle. For example, at 50% duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

Maximum Average emission levels are measured by setting the analyzer as follows:

- (a) RBW = 1 MHz.
- (b) VBW \geq 3 MHz.
- (c) Detector = power averaging (rms), if $\text{span}/(\# \text{ of points in sweep}) \leq \text{RBW}/2$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.
- (d) Averaging type = power averaging (rms)
As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.
- (e) Sweep time = auto.
- (f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of $1/x$, where x is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—rather than turning on and off with the transmit cycle, at least 100 traces shall be averaged.)
- (g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, a correction factor shall be added to the measurement results prior to comparing to the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
 - If power averaging (rms) mode was used in step (iv) above, the correction factor is $10 \log(1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB must be added to the measured emission levels.
 - If linear voltage averaging mode was used in step (iv) above, the correction factor is $20 \log(1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.
 - If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning on and off with the transmit cycle, no duty cycle correction is required for that emission.

For the emissions above 1GHz and not appearing within 15.205 restricted frequency bands use below procedure:

- (1).The maximum emission at 3m distance was measured and recorded with receive antenna in both vertical and horizontal by rotating the turntable and by lowering the receive antenna.
- (2).The EUT was then removed and replaced with a substitution antenna in the same position and the substitution antenna must have the same polarization with the receive antenna.
- (3). A signal which have the same frequency obtained in step 2 was fed to the substitution, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver, the level of the signal generator was adjusted until the measured field strength level in step 2 was obtained, recorded the level of the signal generator.
- (4).Repeated step 4 with both antenna polarizations
- (5).The spurious emissions is equal to the power supplied by the signal generator and corrections due to the gain of the substitution antenna and the cable loss between the signal generator and the substitution antenna. or use procedure (6).
- (6). Per KDB789033 clause H 2)d.if the test distance is 3m,the $EIRP(dBm)=E(dB\mu v/m)-95.2$
Get the result of all unwanted emission outside the restricted band is less than the $-27dBm/MHz$.

We had checked frequency range that is 30MHz to 10th harmonic (40GHz) and no any emissions were found from 18GHz to 40GHz, so the radiated emission from 18GHz to 40GHz were not record.

4.7.Radiated Emission Test Results

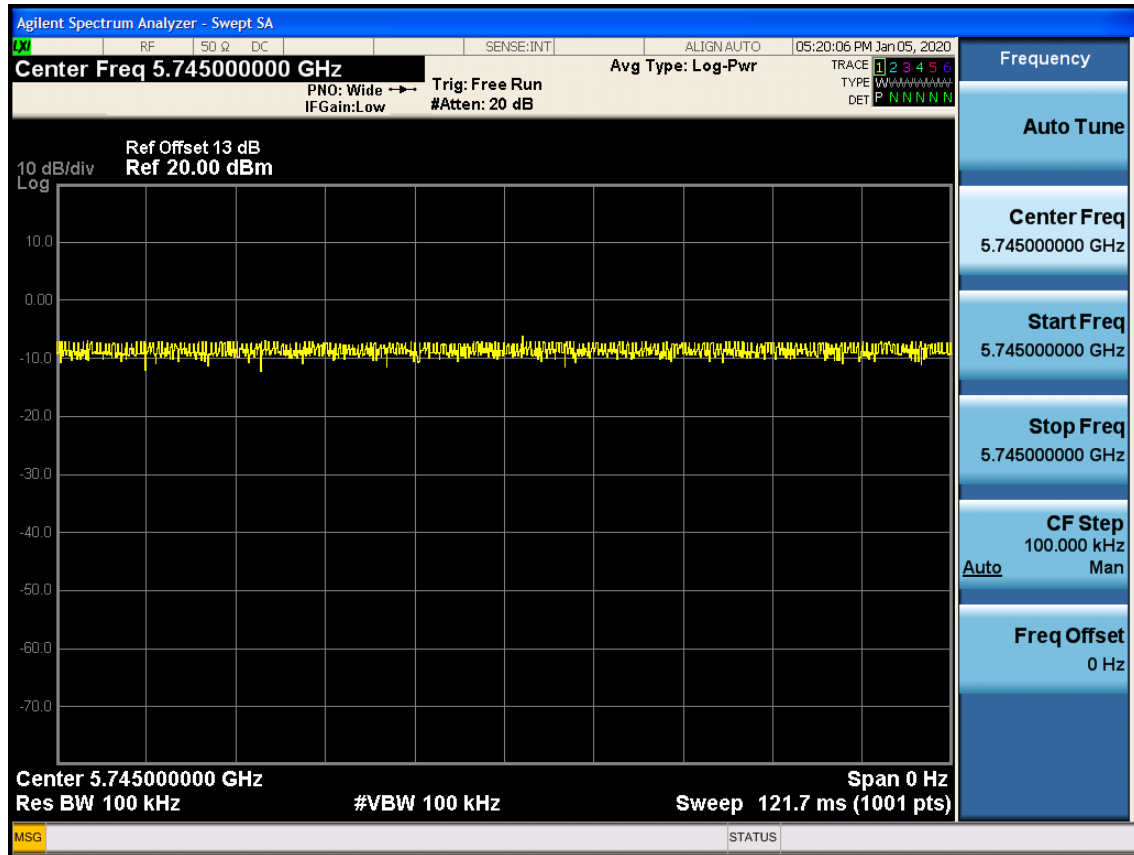
PASS.

All the emissions from 30MHz to 1 GHz were comply with 15.209 limits.

All other emission comply with 15.407 (b)(1) requirements.

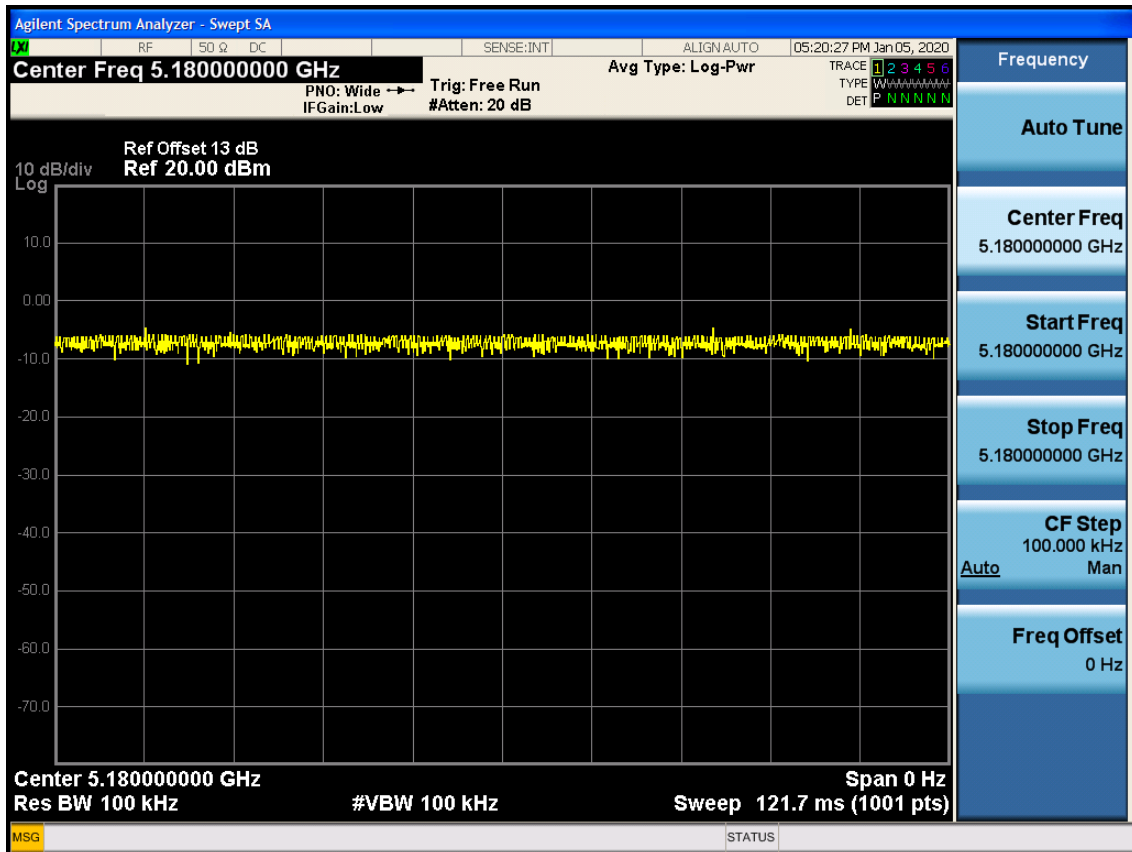
Note: The emissions (9kHz~30MHz) not reported for there is no emission be found.

Duty cycle
U-NII-1 Band:



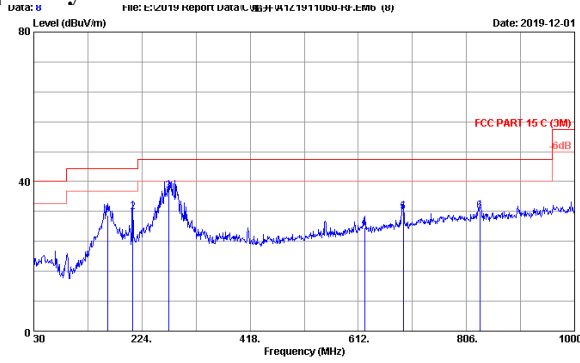
Note: The duty cycle of the test signal is 100%.

U-NII-3 Band:



Note: The duty cycle of the test signal is 100%.

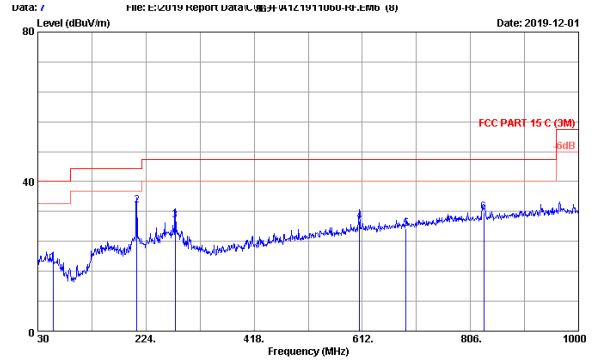
Frequency: 30MHz~1GHz



Date: 2019-12-01
 Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2019 VULB9168-493 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 22.4°C/53% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : WIFI 5G TX

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	161.920	19.60	1.28	10.18	31.06	43.50	12.44	QP
2	207.510	17.00	1.47	13.34	31.81	43.50	11.69	QP
3	271.530	19.07	1.71	16.60	37.38	46.00	8.62	QP
4	623.640	26.22	2.71	-1.27	27.66	46.00	18.34	QP
5	692.510	27.00	2.85	1.93	31.78	46.00	14.22	QP
6	830.250	28.70	3.24	0.04	31.98	46.00	14.02	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

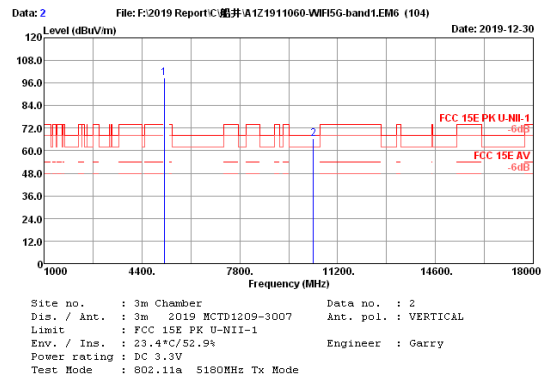
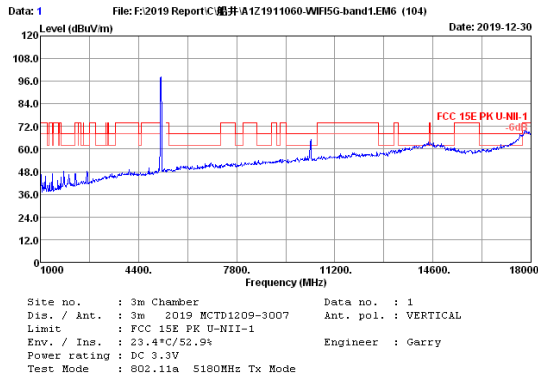


Date: 2019-12-01
 Site no. : 3m Chamber Data no. : 7
 Dis. / Ant. : 3m 2019 VULB9168-493 Ant. pol. : VERTICAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 22.4°C/53% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : WIFI 5G TX

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	57.160	19.80	0.71	-2.26	18.25	40.00	21.75	QP
2	207.510	17.00	1.47	15.23	33.70	43.50	9.80	QP
3	276.380	19.24	1.72	8.70	29.66	46.00	16.34	QP
4	607.150	25.88	2.67	0.95	29.50	46.00	16.50	QP
5	690.570	27.00	2.85	-2.55	27.30	46.00	18.70	QP
6	830.250	28.70	3.24	-0.05	31.89	46.00	14.11	QP

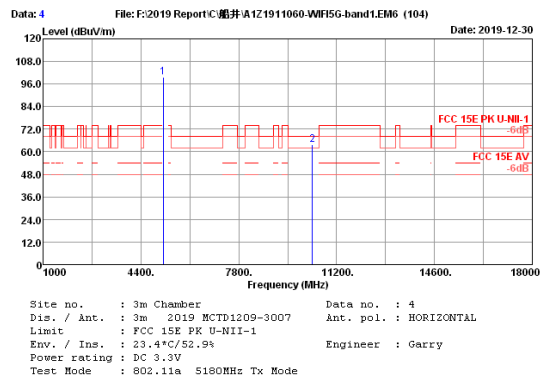
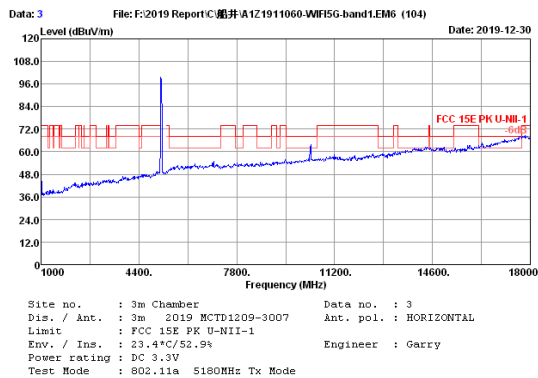
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency: 1GHz~18GHz U-NII-1 Band:



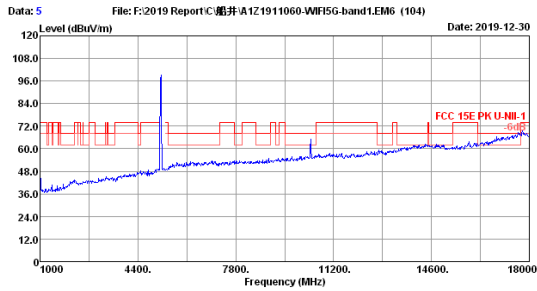
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	95.58	34.36	98.91	68.20	1.82	Peak
2	10360.00	38.30	5.99	56.74	34.65	66.38	68.20	1.82	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

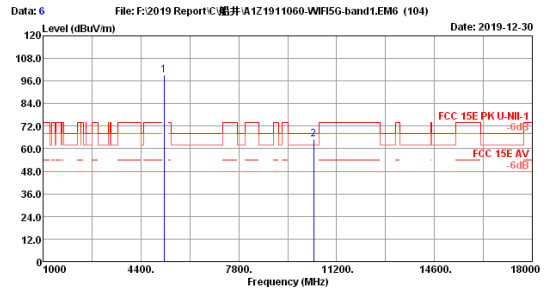


No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	96.19	34.36	99.52	68.20	4.40	Peak
2	10360.00	38.30	5.99	54.16	34.65	63.80	68.20	4.40	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



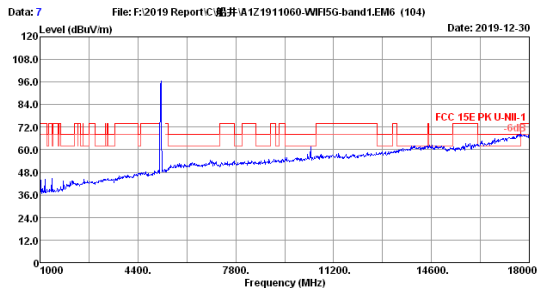
Site no. : 3m Chamber Data no. : 5
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5200MHz Tx Mode



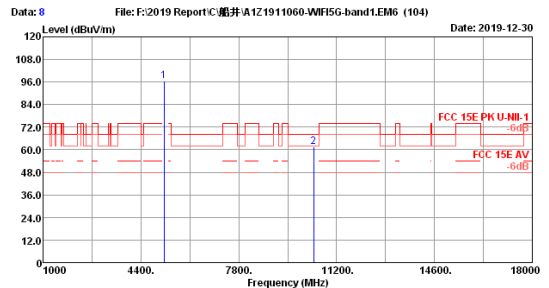
Site no. : 3m Chamber Data no. : 6
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	95.90	34.36	99.25			Peak
2	10400.00	38.30	6.00	55.25	34.64	64.91	68.20	3.29	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



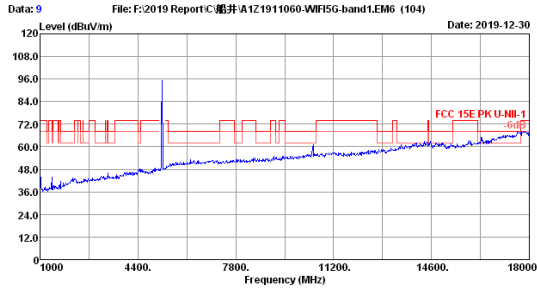
Site no. : 3m Chamber Data no. : 7
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5200MHz Tx Mode



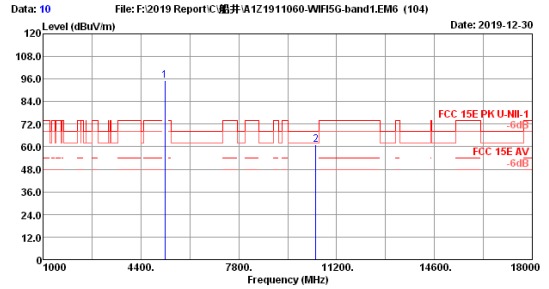
Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	95.03	34.36	96.38			Peak
2	10400.00	38.30	6.00	51.80	34.64	61.46	68.20	6.74	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



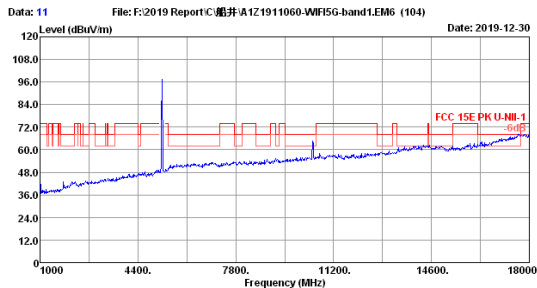
Site no. : 3m Chamber Data no. : 9
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode



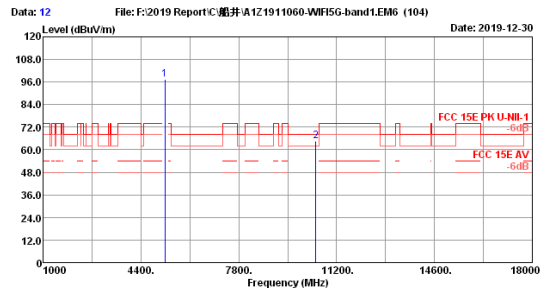
Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	91.65	34.35	95.26	-----	-----	Peak
2	10480.00	38.38	6.03	51.35	34.60	61.16	68.20	7.04	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



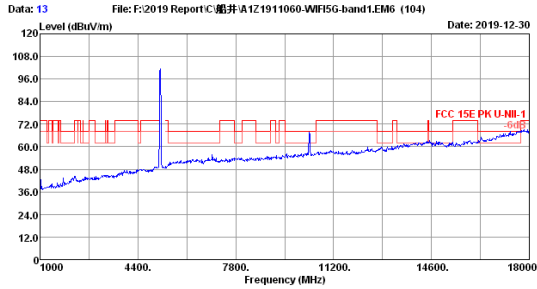
Site no. : 3m Chamber Data no. : 11
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode



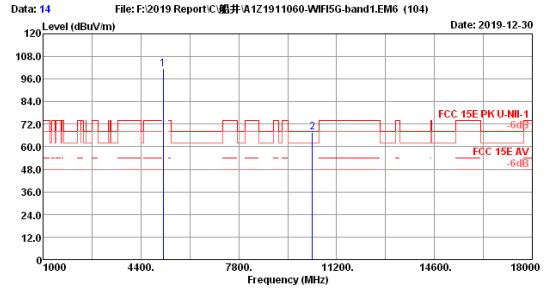
Site no. : 3m Chamber Data no. : 12
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	93.85	34.35	97.26	-----	-----	Peak
2	10480.00	38.38	6.03	54.91	34.60	64.72	68.20	3.48	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



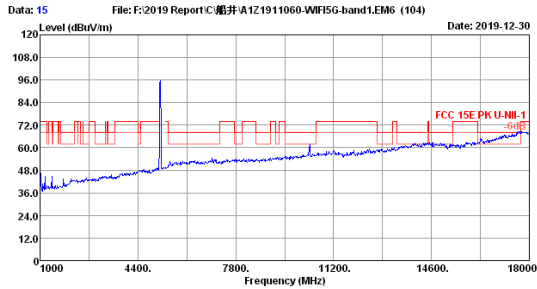
Site no. : 3m Chamber Data no. : 13
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode



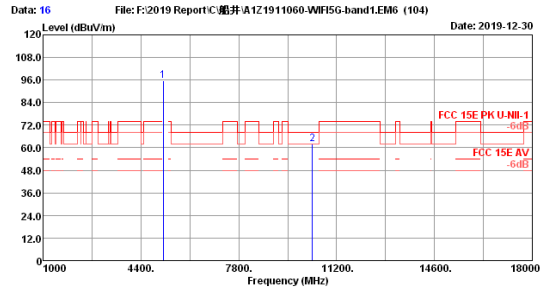
Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	98.00	34.36	101.33	68.20	0.62	Peak
2	10360.00	38.30	5.99	57.94	34.65	67.98	68.20	0.62	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



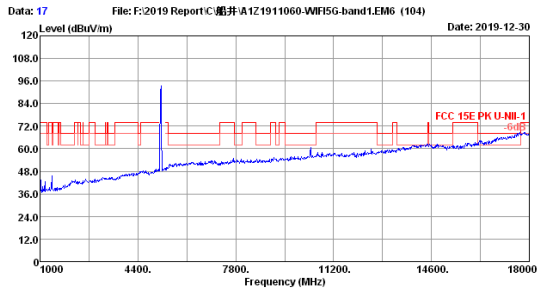
Site no. : 3m Chamber Data no. : 15
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode



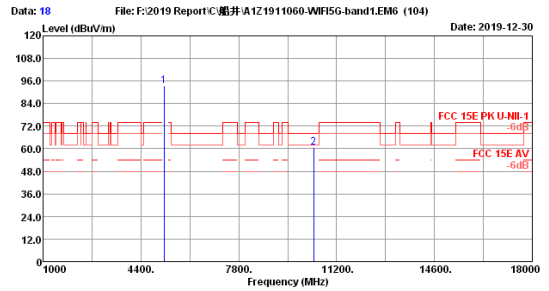
Site no. : 3m Chamber Data no. : 16
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	92.10	34.36	95.43	68.20	6.10	Peak
2	10360.00	38.30	5.99	52.46	34.65	62.10	68.20	6.10	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



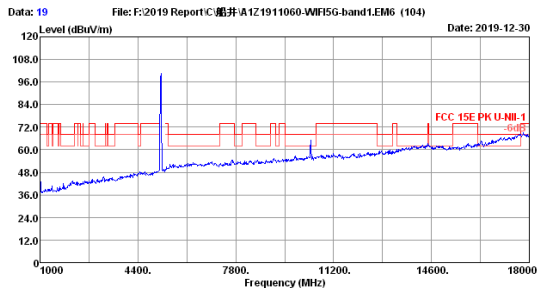
Site no. : 3m Chamber Data no. : 17
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S200MHz Tx Mode



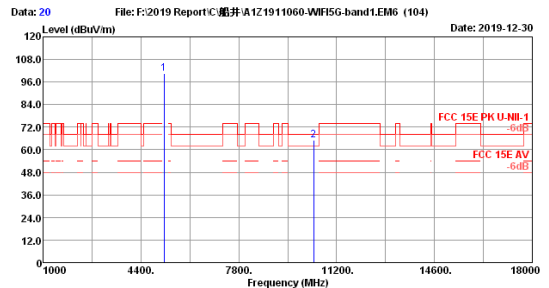
Site no. : 3m Chamber Data no. : 18
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	90.28	34.36	93.63	68.20	7.47	Peak
2	10400.00	38.30	6.00	51.07	34.64	60.73	68.20	7.47	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



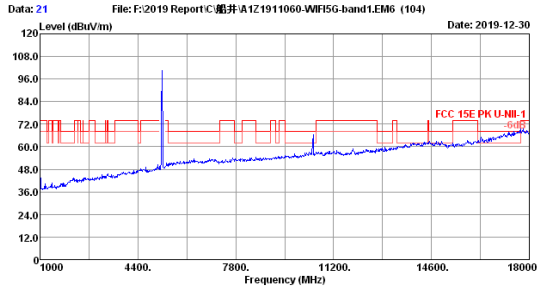
Site no. : 3m Chamber Data no. : 19
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S200MHz Tx Mode



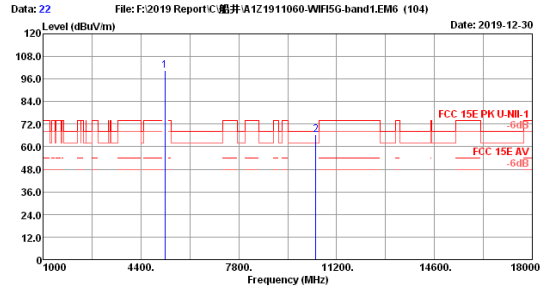
Site no. : 3m Chamber Data no. : 20
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	97.33	34.36	100.68	68.20	2.93	Peak
2	10400.00	38.30	6.00	55.61	34.64	65.27	68.20	2.93	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



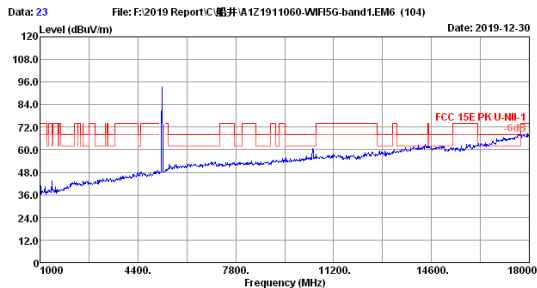
Site no. : 3m Chamber Data no. : 21
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S240MHz Tx Mode



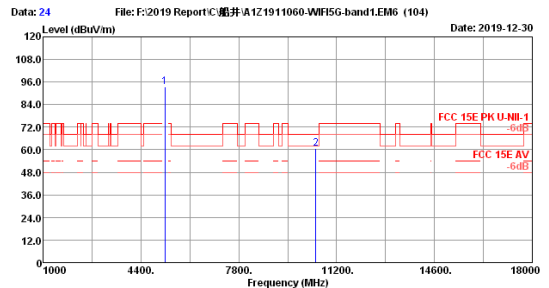
Site no. : 3m Chamber Data no. : 22
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	97.28	34.35	100.69	68.20	1.70	Peak
2	10480.00	38.38	6.03	56.69	34.60	66.50	68.20	1.70	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



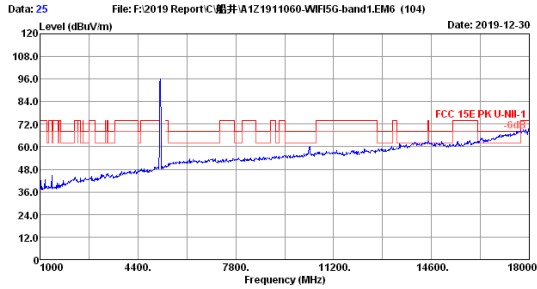
Site no. : 3m Chamber Data no. : 23
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S240MHz Tx Mode



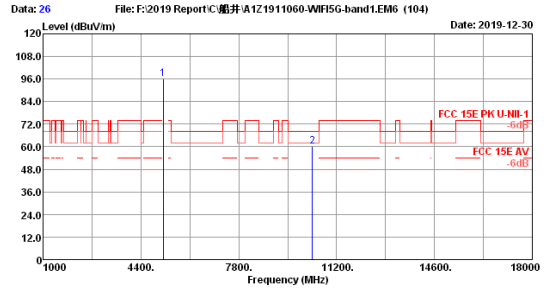
Site no. : 3m Chamber Data no. : 24
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 S240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	90.00	34.35	93.41	68.20	7.64	Peak
2	10480.00	38.38	6.03	50.75	34.60	60.56	68.20	7.64	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



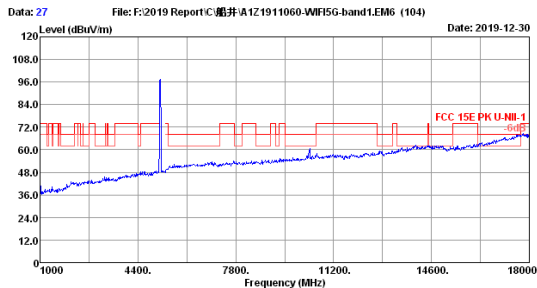
Site no. : 3m Chamber Data no. : 25
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode



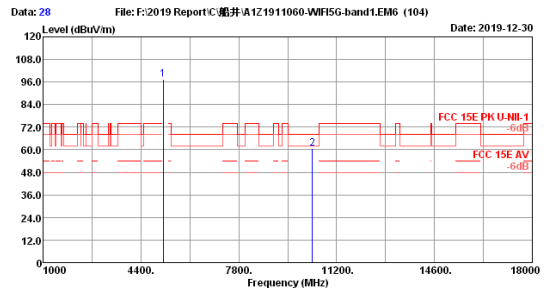
Site no. : 3m Chamber Data no. : 26
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	92.86	34.36	96.19	-----	-----	Peak
2	10360.00	38.30	5.99	50.56	34.65	60.20	68.20	8.00	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



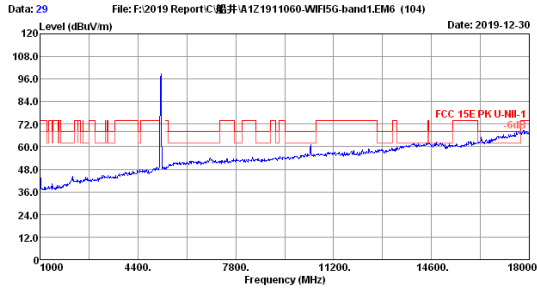
Site no. : 3m Chamber Data no. : 27
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode



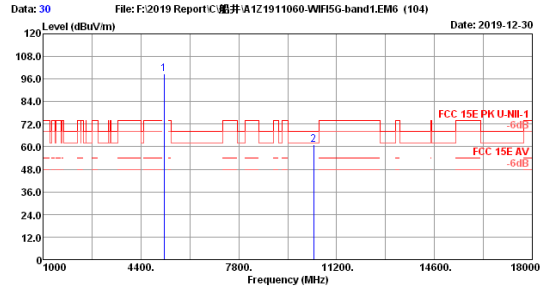
Site no. : 3m Chamber Data no. : 28
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	33.28	4.41	93.93	34.36	97.26	-----	-----	Peak
2	10360.00	38.30	5.99	51.07	34.65	60.71	68.20	7.49	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



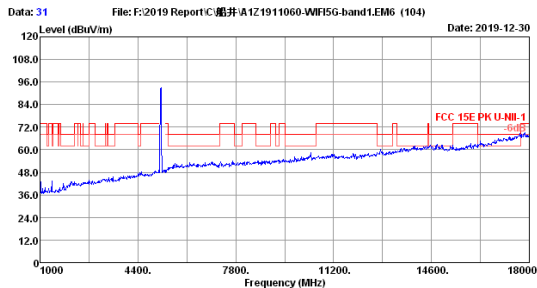
Site no. : 3m Chamber Data no. : 29
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5200MHz Tx Mode



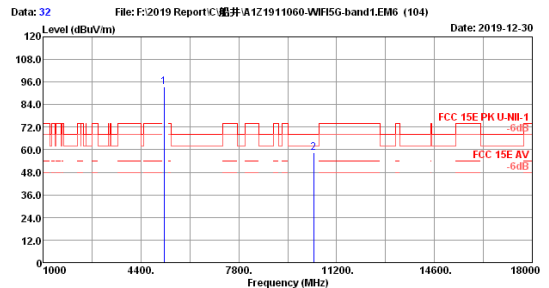
Site no. : 3m Chamber Data no. : 30
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	95.61	34.36	98.96	-----	-----	Peak
2	10400.00	38.30	6.00	51.42	34.64	61.08	68.20	7.12	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



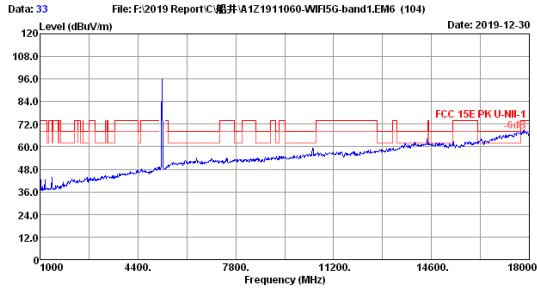
Site no. : 3m Chamber Data no. : 31
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5200MHz Tx Mode



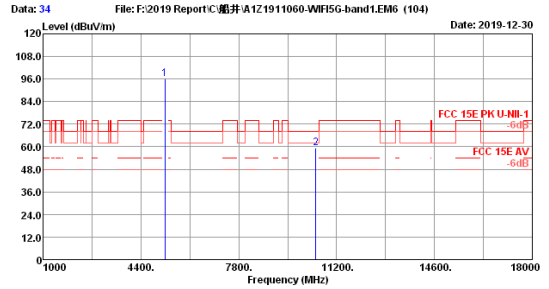
Site no. : 3m Chamber Data no. : 32
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5200MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	33.30	4.41	89.90	34.36	93.25	-----	-----	Peak
2	10400.00	38.30	6.00	48.98	34.64	58.64	68.20	9.56	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



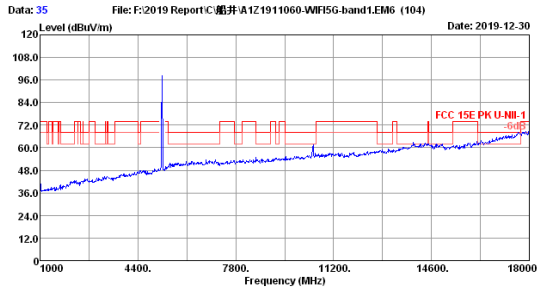
Site no. : 3m Chamber Data no. : 33
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 S240MHz Tx Mode



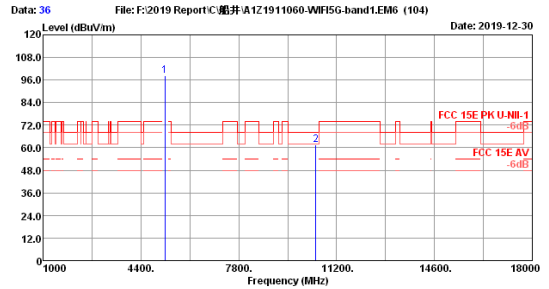
Site no. : 3m Chamber Data no. : 34
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 S240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	92.62	34.35	96.03	68.20	8.84	Peak
2	10480.00	38.38	6.03	49.55	34.60	59.36	68.20	8.84	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



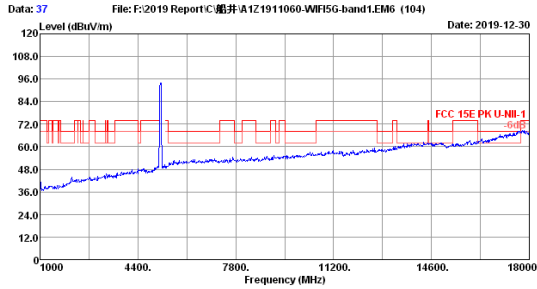
Site no. : 3m Chamber Data no. : 35
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 S240MHz Tx Mode



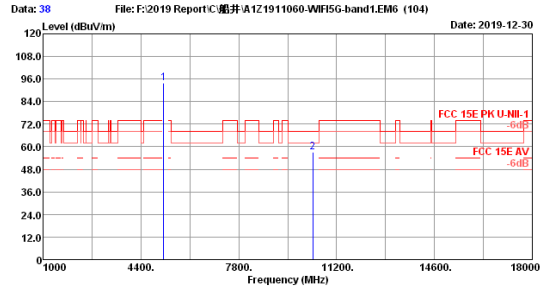
Site no. : 3m Chamber Data no. : 36
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 S240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	33.33	4.43	95.02	34.35	96.43	68.20	6.79	Peak
2	10480.00	38.38	6.03	51.60	34.60	61.41	68.20	6.79	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



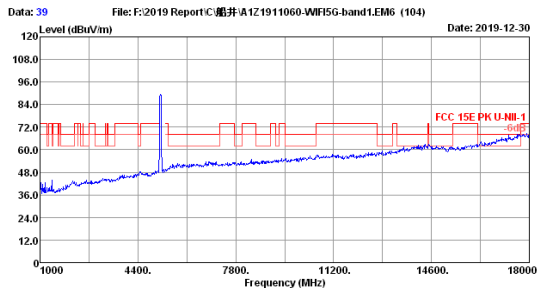
Site no. : 3m Chamber Data no. : 37
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode



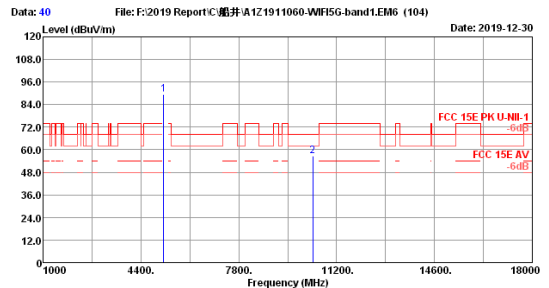
Site no. : 3m Chamber Data no. : 38
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5190.00	33.28	4.41	90.47	34.36	93.80			Peak
2	10380.00	38.30	5.99	47.45	34.64	57.10	68.20	11.10	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



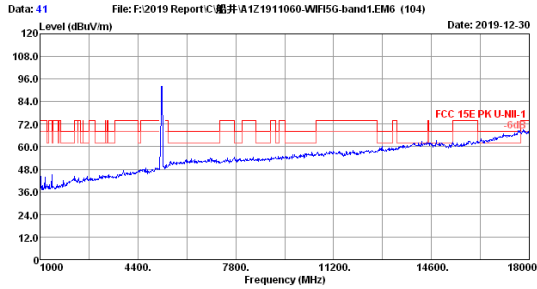
Site no. : 3m Chamber Data no. : 39
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode



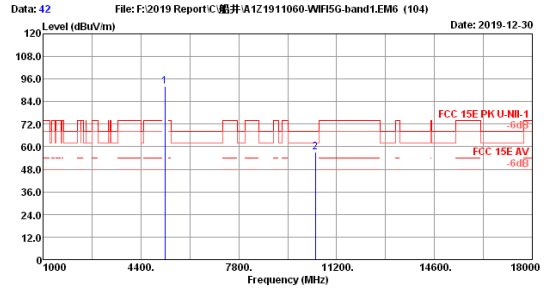
Site no. : 3m Chamber Data no. : 40
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5190.00	33.28	4.41	86.17	34.36	89.50			Peak
2	10380.00	38.30	5.99	46.94	34.64	56.59	68.20	11.61	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



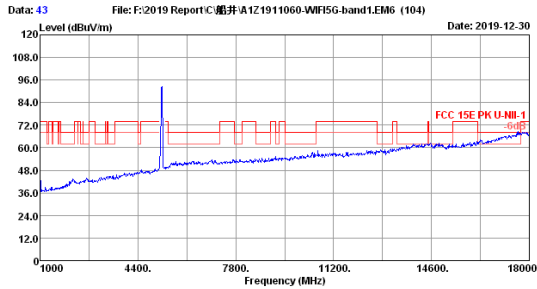
Site no. : 3m Chamber Data no. : 41
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 S230MHz Tx Mode



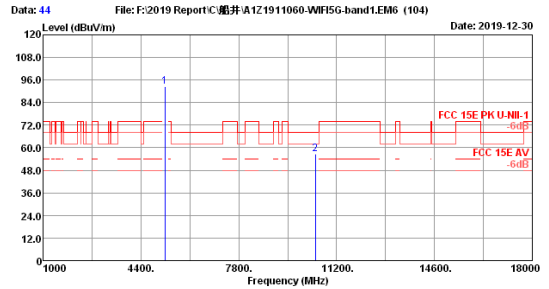
Site no. : 3m Chamber Data no. : 42
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 S230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5230.00	33.33	4.43	88.68	34.35	92.09	-----	-----	Peak
2	10460.00	38.35	6.02	47.39	34.62	57.14	68.20	11.06	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



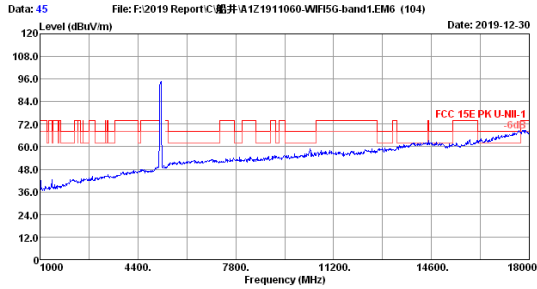
Site no. : 3m Chamber Data no. : 43
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 S230MHz Tx Mode



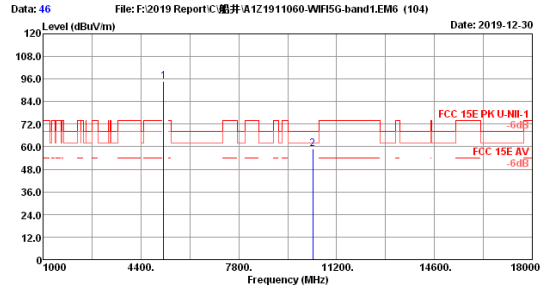
Site no. : 3m Chamber Data no. : 44
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 S230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5230.00	33.33	4.43	89.35	34.35	92.76	-----	-----	Peak
2	10460.00	38.35	6.02	46.96	34.62	56.71	68.20	11.49	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



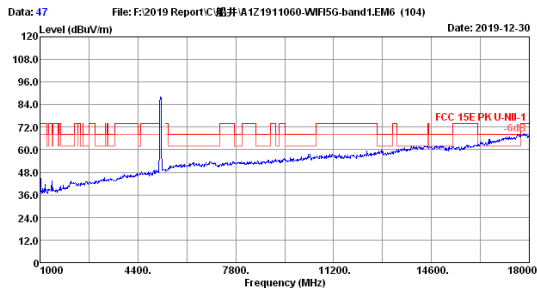
Site no. : 3m Chamber Data no. : 45
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode



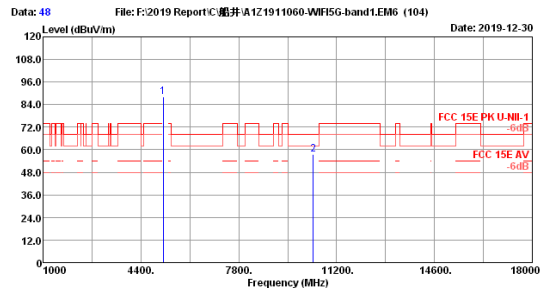
Site no. : 3m Chamber Data no. : 46
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5190.00	33.28	4.41	91.61	34.36	94.94	-----	-----	Peak
2	10390.00	38.30	5.99	49.38	34.64	59.03	68.20	9.17	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



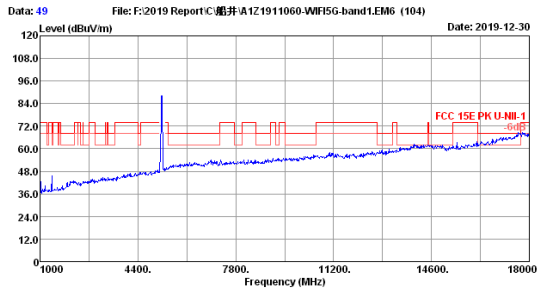
Site no. : 3m Chamber Data no. : 47
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode



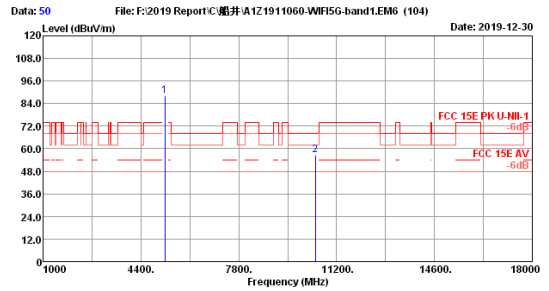
Site no. : 3m Chamber Data no. : 48
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5190.00	33.28	4.41	84.68	34.36	88.01	-----	-----	Peak
2	10390.00	38.30	5.99	48.09	34.64	57.74	68.20	10.46	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



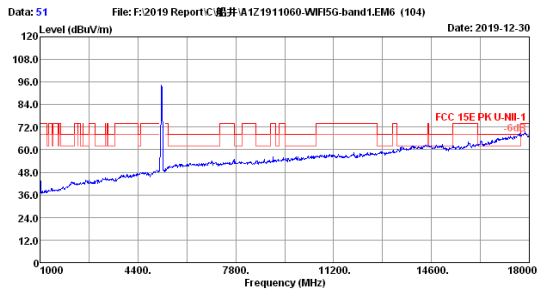
Site no. : 3m Chamber Data no. : 49
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode



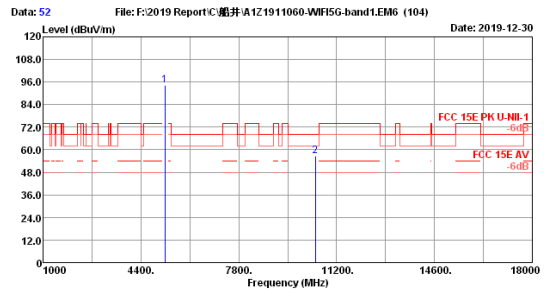
Site no. : 3m Chamber Data no. : 50
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5230.00	33.33	4.43	84.93	34.35	88.94	68.20	11.57	Peak
2	10460.00	38.35	6.02	46.88	34.62	56.63	68.20	11.57	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



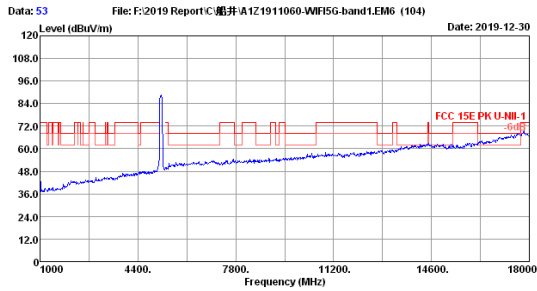
Site no. : 3m Chamber Data no. : 51
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode



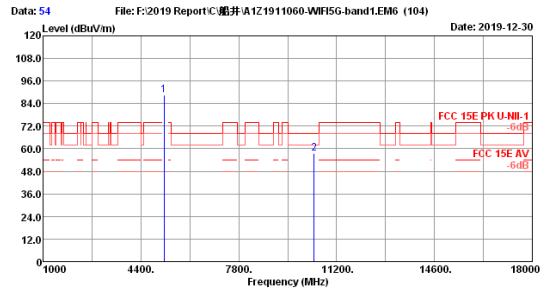
Site no. : 3m Chamber Data no. : 52
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5230.00	33.33	4.43	91.04	34.35	94.45	68.20	11.43	Peak
2	10460.00	38.35	6.02	47.02	34.62	56.77	68.20	11.43	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



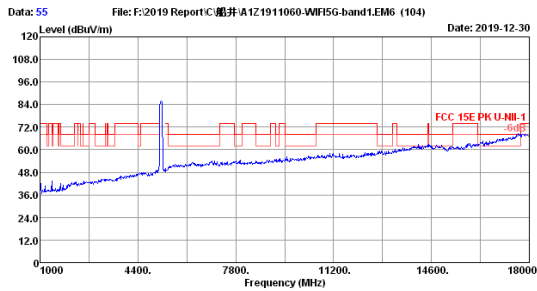
Site no. : 3m Chamber Data no. : 53
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode



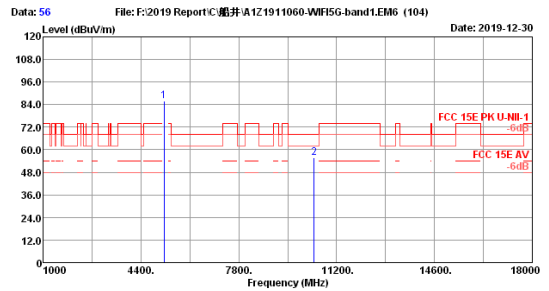
Site no. : 3m Chamber Data no. : 54
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5210.00	33.32	4.42	85.06	34.36	88.44			Peak
2	10420.00	38.32	6.01	47.89	34.63	57.53	68.20	10.67	Peak

Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 55
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

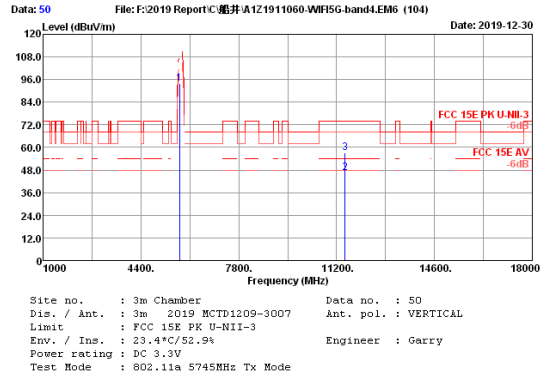
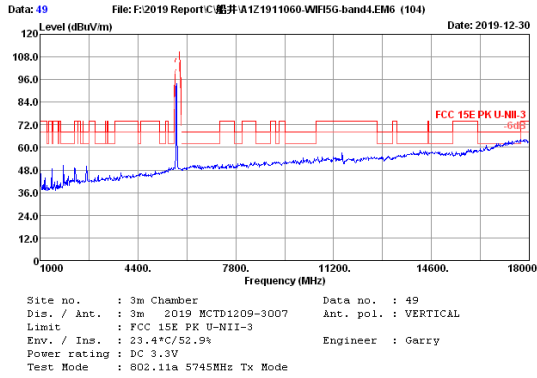


Site no. : 3m Chamber Data no. : 56
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5210.00	33.32	4.42	82.61	34.36	85.99			Peak
2	10420.00	38.32	6.01	46.14	34.63	55.84	68.20	12.36	Peak

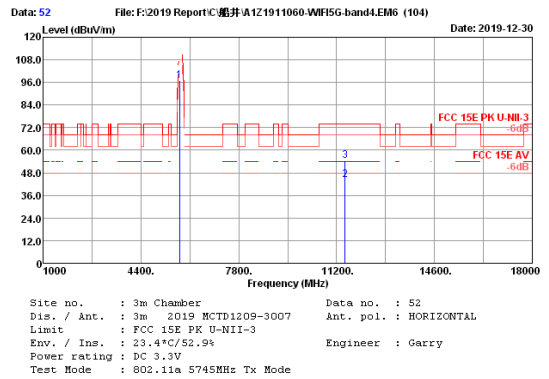
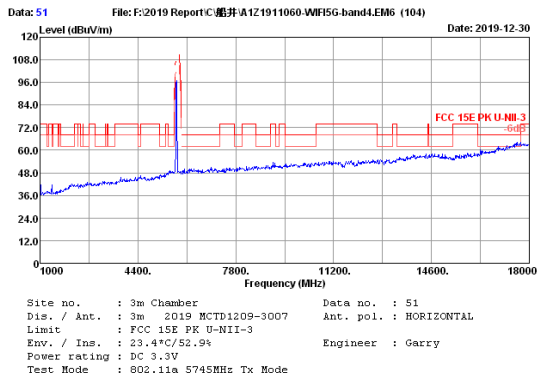
Remarks: 1. Emission Level* Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

U-NII-3 Band:



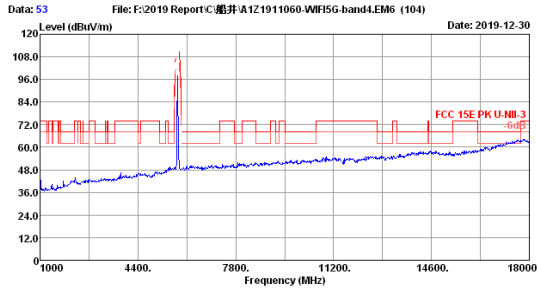
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	88.52	34.25	93.93	74.00	19.93	Peak
2	11490.00	38.32	6.29	36.21	34.40	46.42	54.00	7.58	Average
3	11490.00	38.32	6.29	46.75	34.40	56.96	74.00	17.04	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

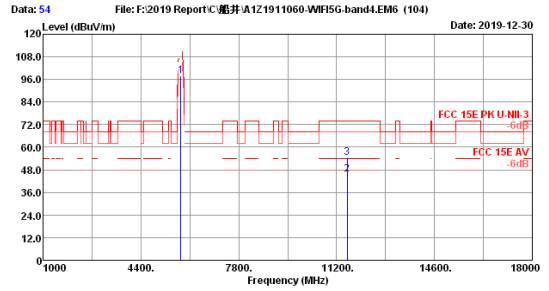


No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	91.37	34.25	96.78	74.00	22.78	Peak
2	11490.00	38.32	6.29	34.15	34.40	44.36	54.00	9.64	Average
3	11490.00	38.32	6.29	44.13	34.40	54.34	74.00	19.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



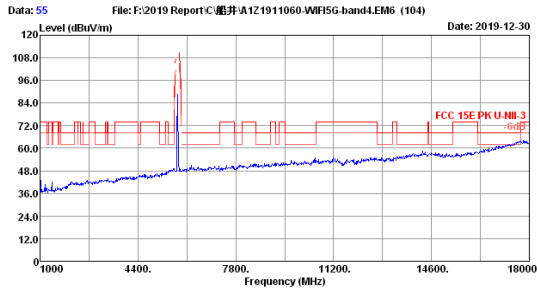
Site no. : 3m Chamber Data no. : 53
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5785MHz Tx Mode



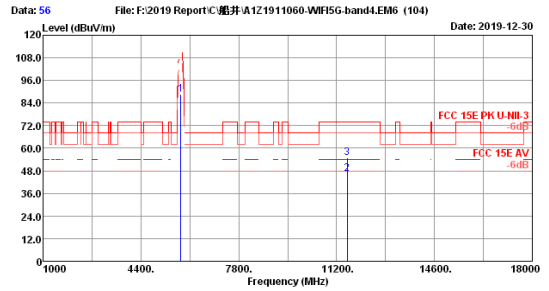
Site no. : 3m Chamber Data no. : 54
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5785MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	92.41	34.24	97.61	---	---	Peak
2	11570.00	38.30	6.31	35.26	34.40	45.47	54.00	8.53	Average
3	11570.00	38.30	6.31	44.14	34.40	54.35	74.00	19.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



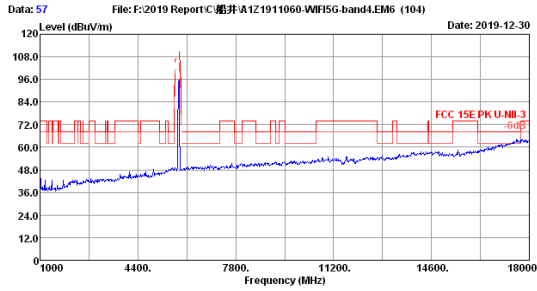
Site no. : 3m Chamber Data no. : 55
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5785MHz Tx Mode



Site no. : 3m Chamber Data no. : 56
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5785MHz Tx Mode

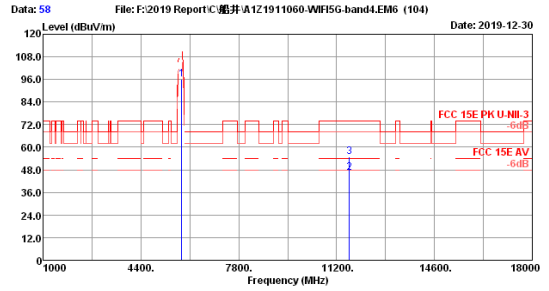
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	83.28	34.24	88.68	---	---	Peak
2	11570.00	38.30	6.31	36.28	34.40	46.49	54.00	7.51	Average
3	11570.00	38.30	6.31	44.51	34.40	54.72	74.00	19.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 57
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5825MHz Tx Mode

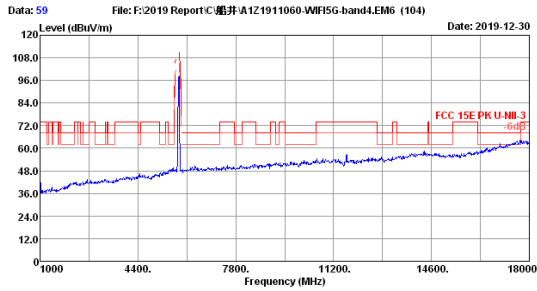


File: F:\2019 Report\C\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 58
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5825MHz Tx Mode

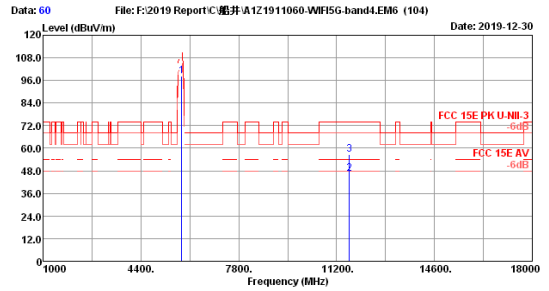
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading factor (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	90.85	34.23	96.16	---	---	Peak
2	11650.00	38.30	6.32	36.47	34.40	46.69	54.00	7.31	Average
3	11650.00	38.30	6.32	44.65	34.40	54.87	74.00	19.13	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 59
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5825MHz Tx Mode



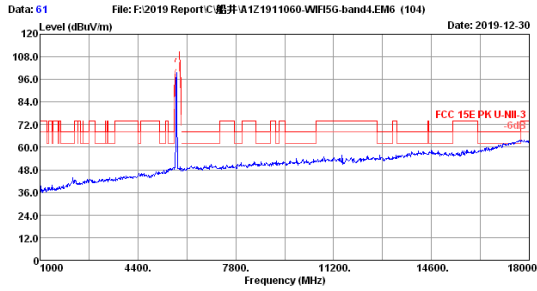
File: F:\2019 Report\C\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 60
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5825MHz Tx Mode

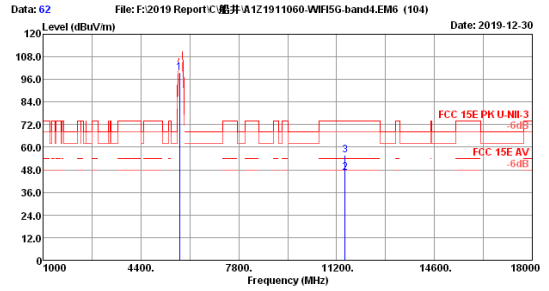
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading factor (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	93.15	34.23	98.46	---	---	Peak
2	11650.00	38.30	6.32	36.47	34.40	46.69	54.00	7.31	Average
3	11650.00	38.30	6.32	46.61	34.40	56.83	74.00	17.17	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

FCC ID: 2AU3BU9W42



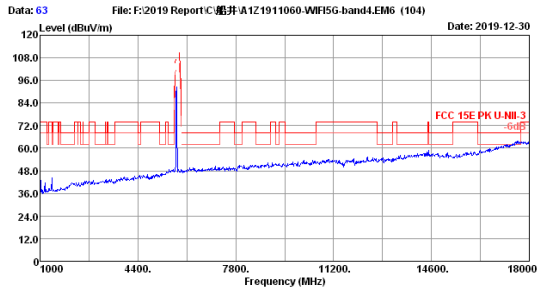
Site no. : 3m Chamber Data no. : 61
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode



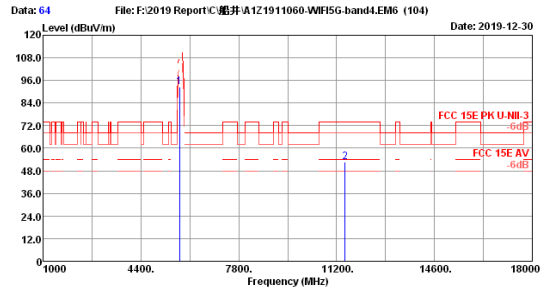
Site no. : 3m Chamber Data no. : 62
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	94.34	34.25	99.75	---	---	Peak
2	11490.00	38.32	6.29	36.44	34.40	46.65	54.00	7.35	Average
3	11490.00	38.32	6.29	45.61	34.40	55.82	74.00	18.18	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



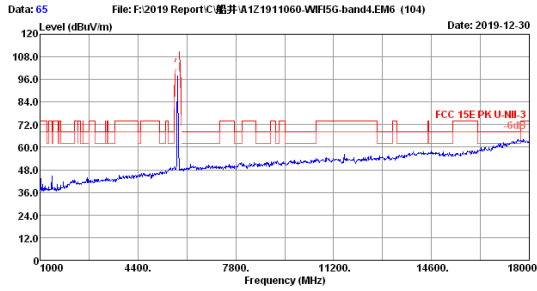
Site no. : 3m Chamber Data no. : 63
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode



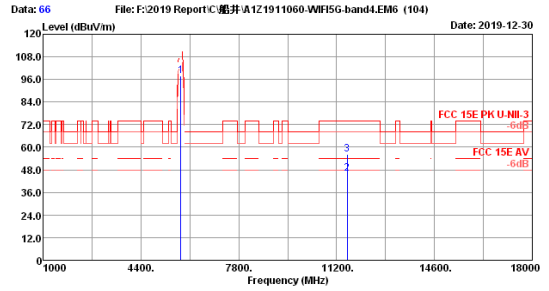
Site no. : 3m Chamber Data no. : 64
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	86.93	34.25	92.34	---	---	Peak
2	11490.00	38.32	6.29	42.28	34.40	52.49	74.00	21.51	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



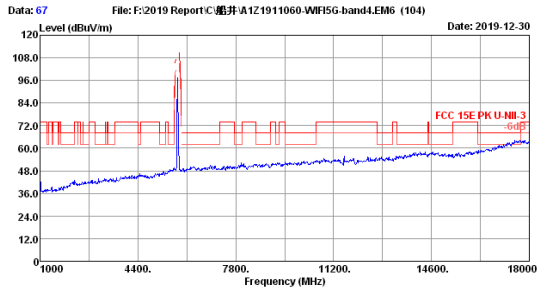
Site no. : 3m Chamber Data no. : 65
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5785MHz Tx Mode



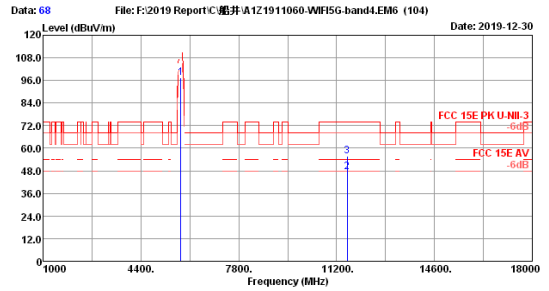
Site no. : 3m Chamber Data no. : 66
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5785MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	92.42	34.24	97.62	---	---	Peak
2	11570.00	38.30	6.31	35.97	34.40	46.08	54.00	7.92	Average
3	11570.00	38.30	6.31	46.05	34.40	56.26	74.00	17.74	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



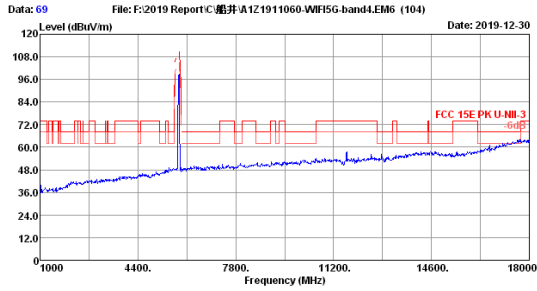
Site no. : 3m Chamber Data no. : 67
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5785MHz Tx Mode



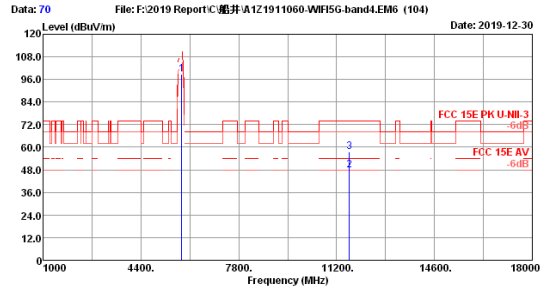
Site no. : 3m Chamber Data no. : 68
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5785MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	92.04	34.24	97.44	---	---	Peak
2	11570.00	38.30	6.31	37.16	34.40	47.37	54.00	6.63	Average
3	11570.00	38.30	6.31	45.37	34.40	55.58	74.00	18.42	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



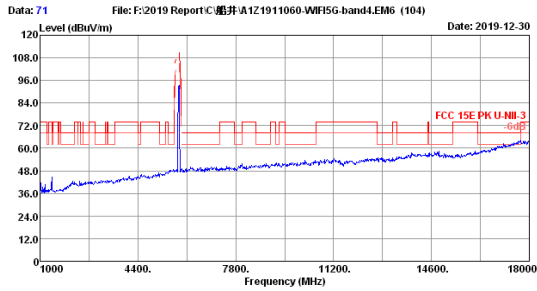
Site no. : 3m Chamber Data no. : 69
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode



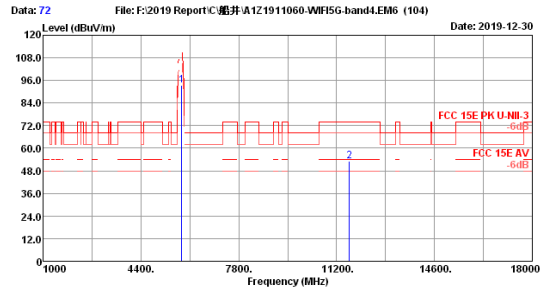
Site no. : 3m Chamber Data no. : 70
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	93.56	34.23	98.67	---	---	Peak
2	11650.00	38.30	6.32	37.69	34.40	47.91	54.00	6.09	Average
3	11650.00	38.30	6.32	47.30	34.40	57.52	74.00	16.48	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



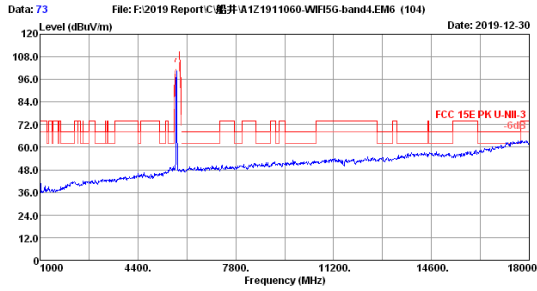
Site no. : 3m Chamber Data no. : 71
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode



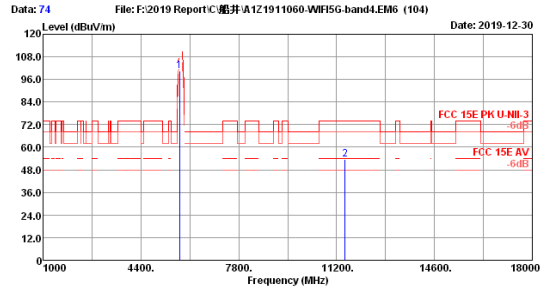
Site no. : 3m Chamber Data no. : 72
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	88.04	34.23	93.35	---	---	Peak
2	11650.00	38.30	6.32	43.02	34.40	53.24	74.00	20.76	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



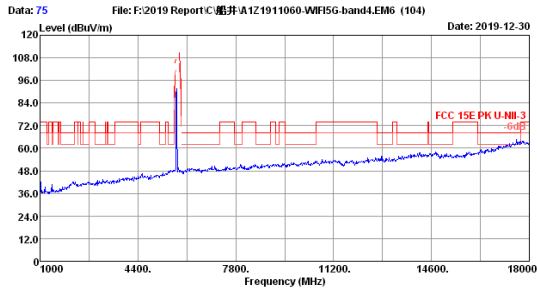
Site no. : 3m Chamber Data no. : 73
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode



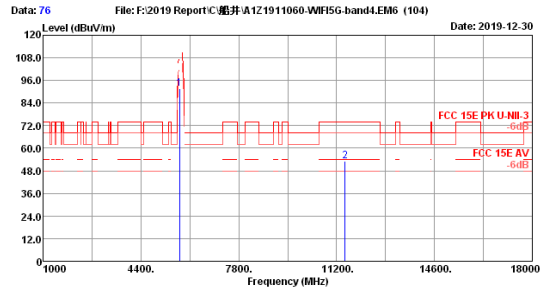
Site no. : 3m Chamber Data no. : 74
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	95.30	34.25	100.71	74.00	26.71	Peak
2	11490.00	38.32	6.29	43.32	34.40	53.53	74.00	20.47	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 75
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode

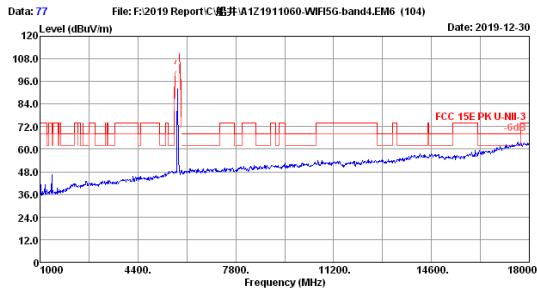


Site no. : 3m Chamber Data no. : 76
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode

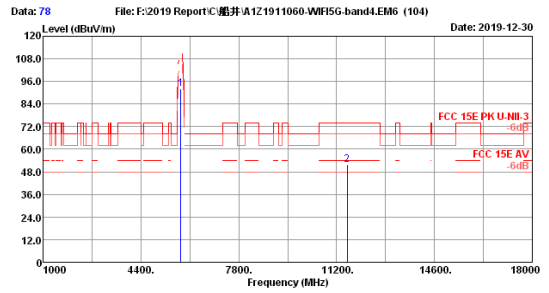
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	35.05	4.61	86.42	34.25	91.83	74.00	17.83	Peak
2	11490.00	38.32	6.29	42.78	34.40	52.99	74.00	21.01	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

FCC ID: 2AU3BU9W42



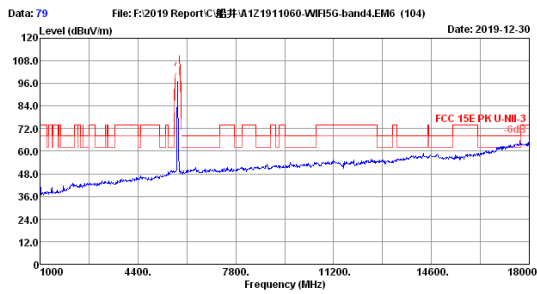
Site no. : 3m Chamber Data no. : 77
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5785MHz Tx Mode



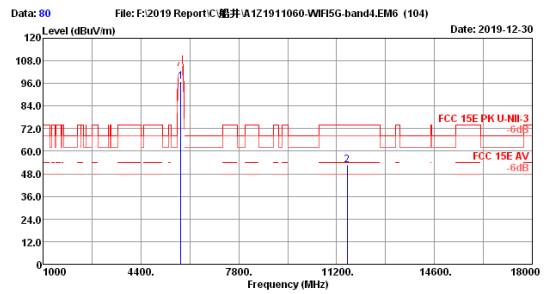
Site no. : 3m Chamber Data no. : 78
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5785MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	86.69	34.24	92.09	-----	-----	Peak
2	11570.00	38.30	6.31	41.78	34.40	51.99	74.00	22.01	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



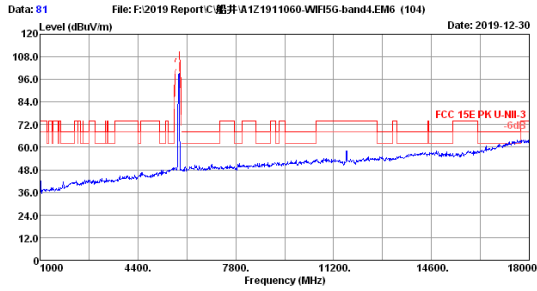
Site no. : 3m Chamber Data no. : 79
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5785MHz Tx Mode



Site no. : 3m Chamber Data no. : 80
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5785MHz Tx Mode

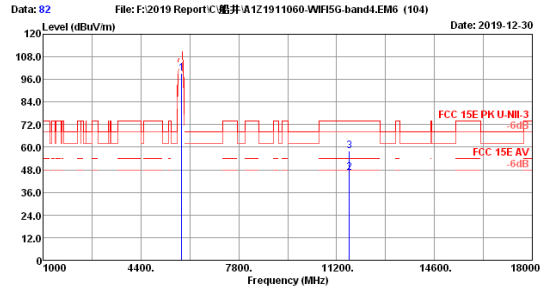
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	35.02	4.62	91.60	34.24	97.00	-----	-----	Peak
2	11570.00	38.30	6.31	42.53	34.40	52.74	74.00	21.26	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 81
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode

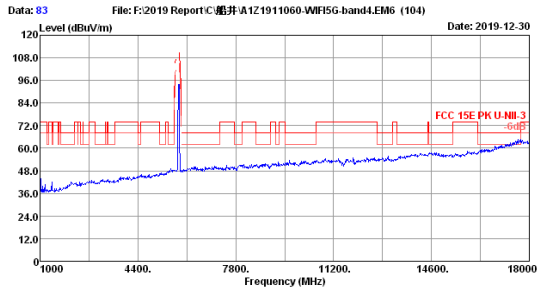


File: F:\2019 Report\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 82
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode

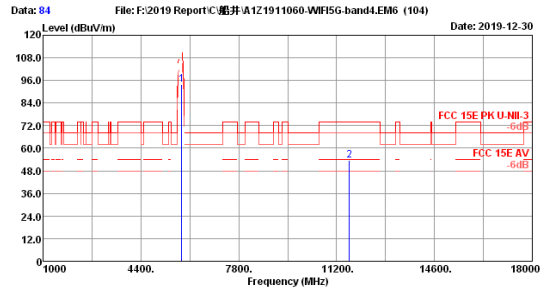
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	93.03	34.23	99.14	72.00	7.53	Peak
2	11650.00	38.30	6.32	36.25	34.40	46.47	54.00	7.53	Average
3	11650.00	38.30	6.32	47.73	34.40	57.95	74.00	16.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 83
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode

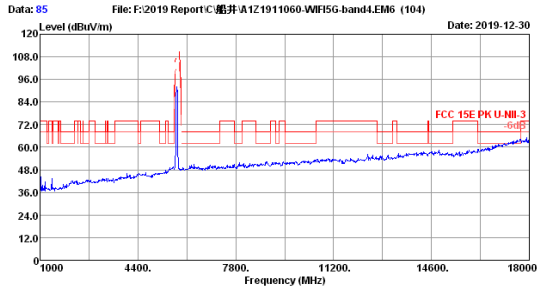


File: F:\2019 Report\船井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

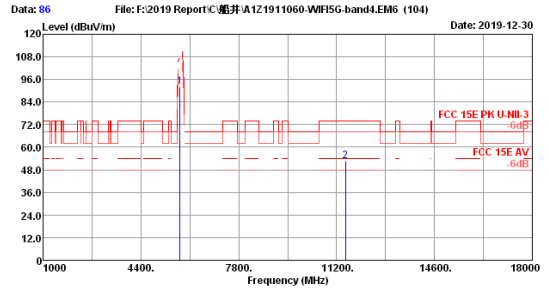
Site no. : 3m Chamber Data no. : 84
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	34.90	4.64	88.77	34.23	94.08	72.00	20.27	Peak
2	11650.00	38.30	6.32	43.51	34.40	53.73	74.00	20.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



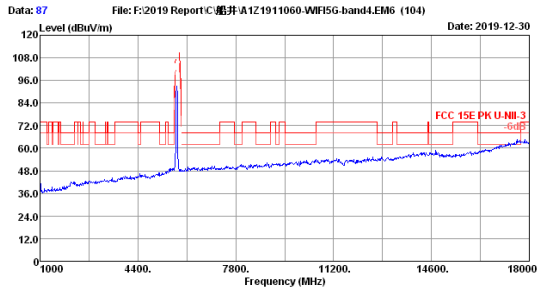
Site no. : 3m Chamber Data no. : 85
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode



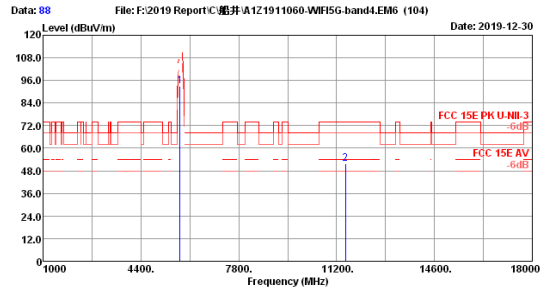
Site no. : 3m Chamber Data no. : 86
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5755.00	35.03	4.61	86.76	34.25	92.15	74.00	18.15	Peak
2	11510.00	38.30	6.29	42.36	34.40	52.55	74.00	21.45	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 87
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode

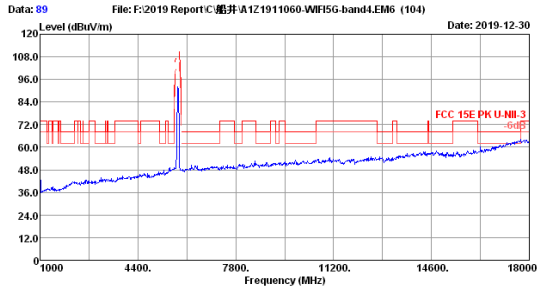


Site no. : 3m Chamber Data no. : 88
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode

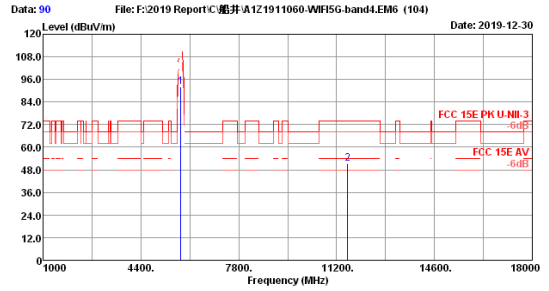
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5755.00	35.03	4.61	87.81	34.25	93.20	74.00	19.20	Peak
2	11510.00	38.30	6.29	41.81	34.40	52.00	74.00	22.00	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

FCC ID: 2AU3BU9W42



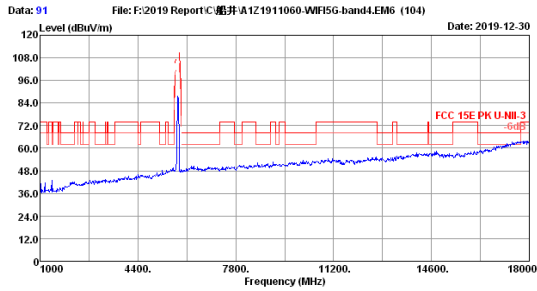
Site no. : 3m Chamber Data no. : 89
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode



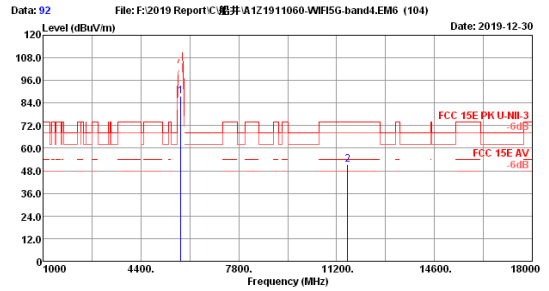
Site no. : 3m Chamber Data no. : 90
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5795.00	35.00	4.63	86.90	34.24	92.29	74.00	18.29	Peak
2	11590.00	38.30	6.31	41.27	34.40	51.48	74.00	22.52	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



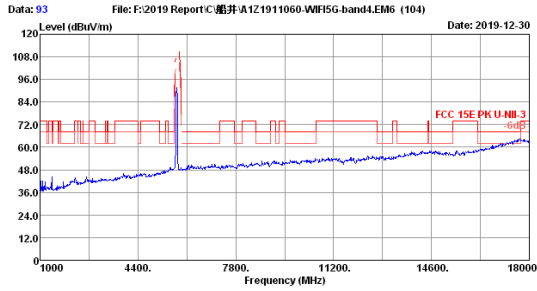
Site no. : 3m Chamber Data no. : 91
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode



Site no. : 3m Chamber Data no. : 92
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode

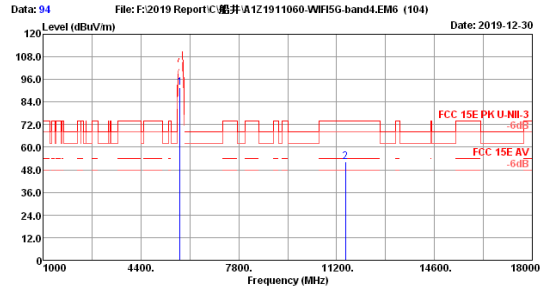
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5795.00	35.00	4.63	82.47	34.24	87.86	74.00	13.86	Peak
2	11590.00	38.30	6.31	41.26	34.40	51.47	74.00	22.53	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C\鼎井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 93
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode

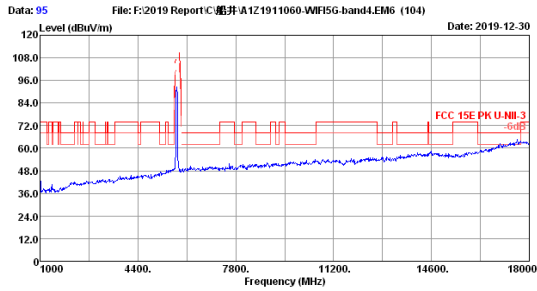


File: F:\2019 Report\C\鼎井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 94
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode

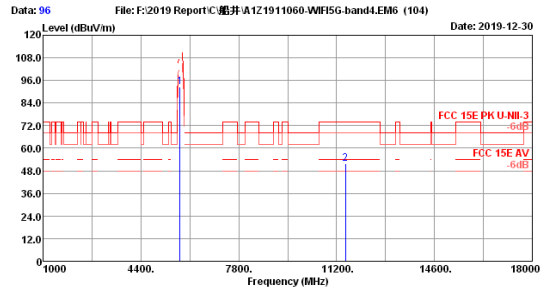
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5755.00	35.03	4.61	86.06	34.25	91.45	74.00	17.45	Peak
2	11510.00	38.30	6.29	42.18	34.40	52.37	74.00	21.63	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C\鼎井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 95
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode

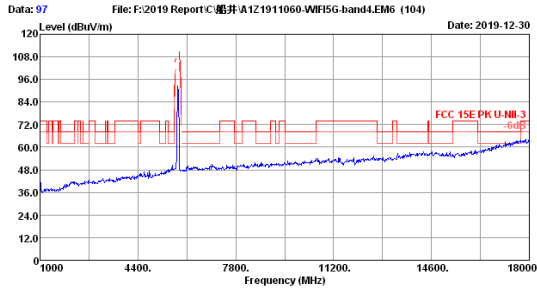


File: F:\2019 Report\C\鼎井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

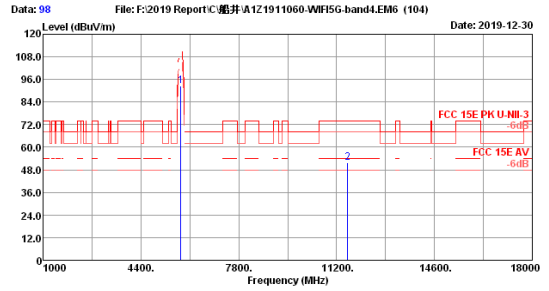
Site no. : 3m Chamber Data no. : 96
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5755.00	35.03	4.61	87.28	34.25	92.67	74.00	18.67	Peak
2	11510.00	38.30	6.29	41.72	34.40	51.91	74.00	22.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



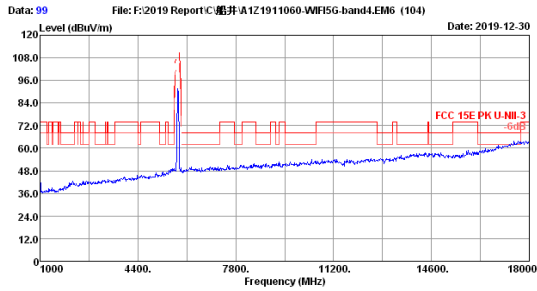
Site no. : 3m Chamber Data no. : 97
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode



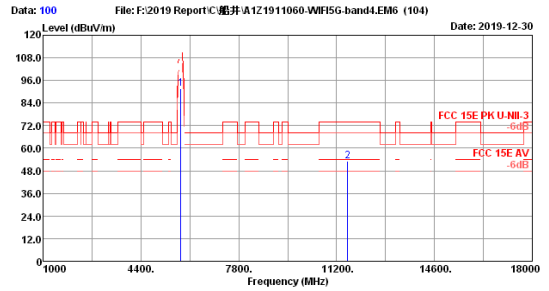
Site no. : 3m Chamber Data no. : 98
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5795.00	35.00	4.63	86.94	34.24	92.33	74.00	18.33	Peak
2	11590.00	38.30	6.31	41.51	34.40	51.72	74.00	-22.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 99
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode

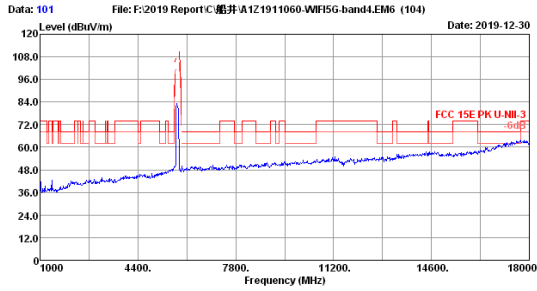


Site no. : 3m Chamber Data no. : 100
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode

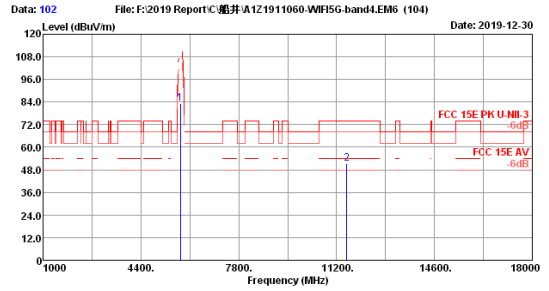
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5795.00	35.00	4.63	86.47	34.24	91.86	74.00	17.86	Peak
2	11590.00	38.30	6.31	42.73	34.40	52.94	74.00	-21.06	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

FCC ID: 2AU3BU9W42



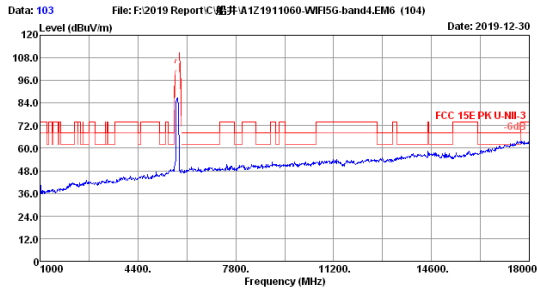
Site no. : 3m Chamber Data no. : 101
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode



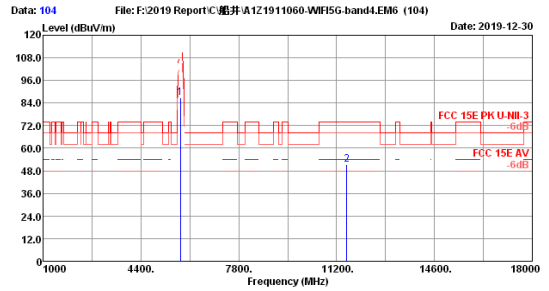
Site no. : 3m Chamber Data no. : 102
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5775.00	35.02	4.62	77.94	34.24	83.34	74.00	22.67	Peak
2	11550.00	38.30	6.30	41.13	34.40	51.33	74.00	22.67	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 103
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode



Site no. : 3m Chamber Data no. : 104
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5775.00	35.02	4.62	81.42	34.24	86.82	74.00	22.85	Peak
2	11550.00	38.30	6.30	40.95	34.40	51.15	74.00	22.85	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

5. BAND EDGE COMPLIANCE TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Jun.30,19	1 Year
2.	Amplifier	Agilent	8449B	3008A02495	Apr.23,19	1 Year
3.	Horn Antenna	ETC	MCTD 1209	DRH15F03007	Jun.17,19	1 Year
4.	RF Cable	EMCI	EMC102-KM-KM 3500	170702	May.13,19	1 Year

5.2. Limit

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5250 MHz shall not exceed -27 dBm/MHz e.i.r.p.

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

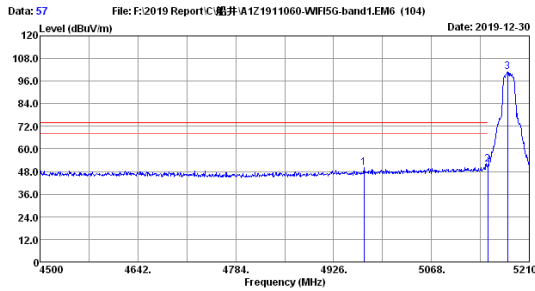
5.3. Test Procedure

1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO
5. Per KDB789033 clause H 2)d).if the test distance is 3m,the EIRP(dBm)=E(dBuv/m)-95.2
Get the final compare with limit.

5.4. Test Results

Pass (The testing data was attached in the next pages.)

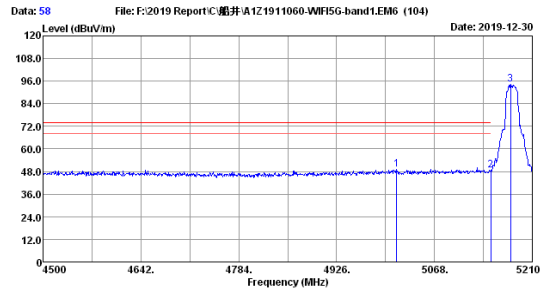
U-NII-1 Band:



Site no. : 3m Chamber Data no. : 57
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4970.02	32.85	4.33	47.48	34.40	50.26	74.00	23.74	Peak
2	5150.00	33.25	4.39	48.51	34.37	51.78	74.00	22.22	Peak
3	5178.76	33.28	4.41	97.44	34.36	100.77	-----	-----	Peak

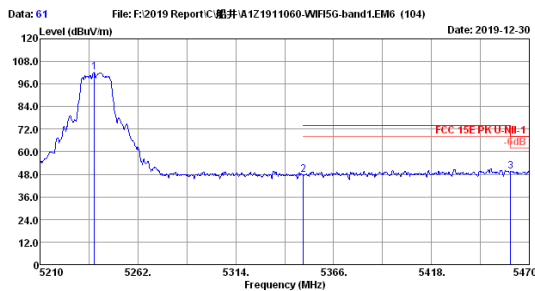
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 58
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5013.33	33.03	4.35	46.30	34.40	49.28	74.00	24.72	Peak
2	5150.00	33.25	4.39	45.43	34.37	48.70	74.00	25.30	Peak
3	5178.76	33.28	4.41	90.90	34.36	94.23	-----	-----	Peak

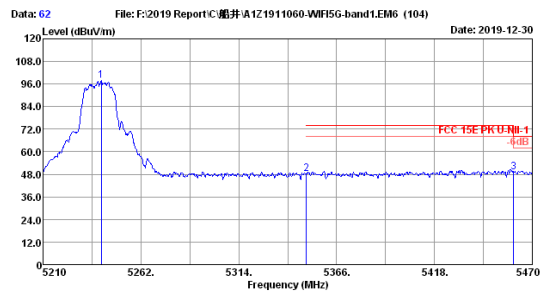
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 61
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5238.86	33.33	4.43	96.73	34.35	102.14	-----	-----	Peak
2	5350.00	33.65	4.47	44.10	34.33	47.89	74.00	26.11	Peak
3	5460.00	34.45	4.50	44.93	34.31	49.57	68.20	18.63	Peak

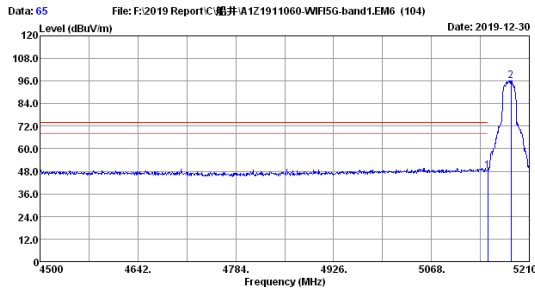
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 62
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11a 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.94	33.33	4.43	94.27	34.35	97.68	-----	-----	Peak
2	5350.00	33.65	4.47	44.63	34.33	48.42	74.00	25.58	Peak
3	5460.00	34.45	4.50	44.54	34.31	49.18	68.20	19.02	Peak

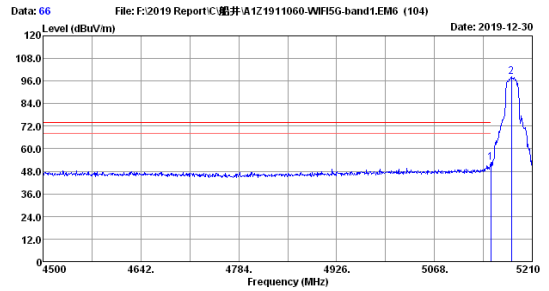
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 65
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	45.11	34.37	48.38	74.00	25.62	Peak
2	5183.79	33.28	4.41	92.85	34.36	96.18			Peak

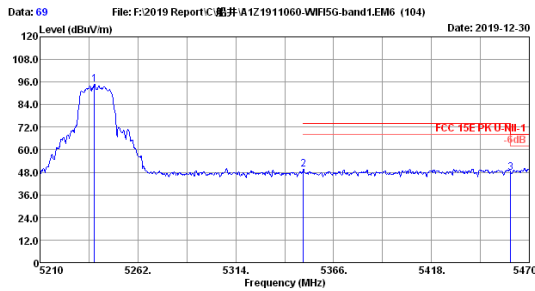
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 66
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	49.31	34.37	52.58	74.00	21.42	Peak
2	5179.47	33.28	4.41	95.03	34.36	98.36			Peak

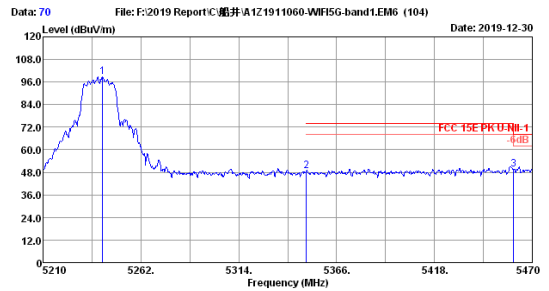
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 69
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5238.06	33.33	4.43	91.45	34.35	94.66			Peak
2	5350.00	33.65	4.47	45.62	34.33	49.41	74.00	24.59	Peak
3	5460.00	34.45	4.50	43.30	34.31	47.94	68.20	20.26	Peak

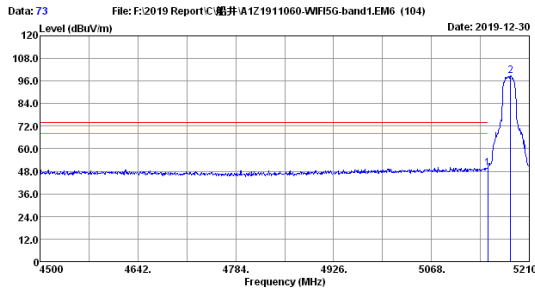
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 70
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5241.72	33.35	4.43	95.38	34.35	98.81			Peak
2	5350.00	33.65	4.47	44.86	34.33	48.65	74.00	25.35	Peak
3	5460.00	34.45	4.50	45.01	34.31	49.65	68.20	18.55	Peak

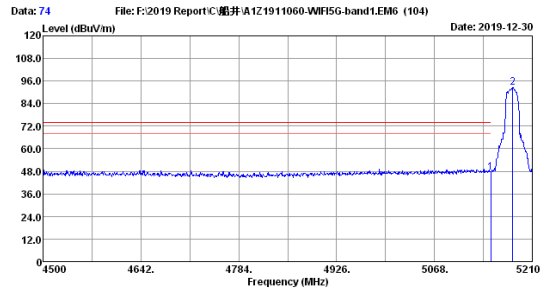
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 73
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	46.49	34.37	49.76	74.00	24.24	Peak
2	5183.02	33.28	4.41	95.40	34.36	90.79			Peak

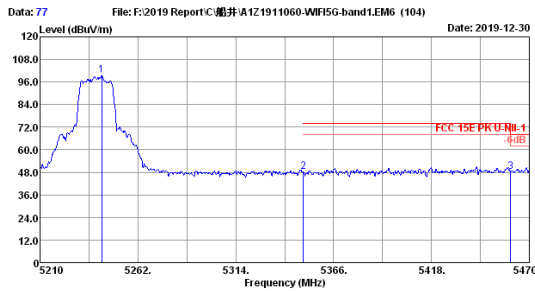
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 74
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5180MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	44.21	34.37	47.48	74.00	26.52	Peak
2	5181.60	33.28	4.41	89.94	34.36	92.67			Peak

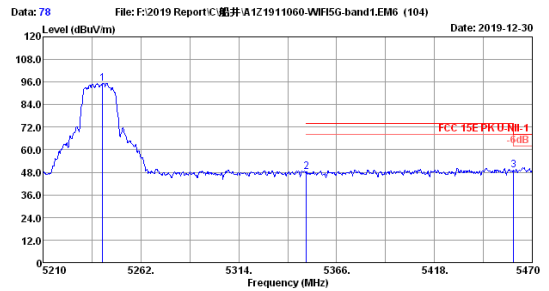
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 77
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5242.76	33.35	4.43	96.27	34.35	99.70			Peak
2	5350.00	33.65	4.47	44.30	34.33	48.09	74.00	25.91	Peak
3	5460.00	34.45	4.50	43.78	34.31	48.42	68.20	19.78	Peak

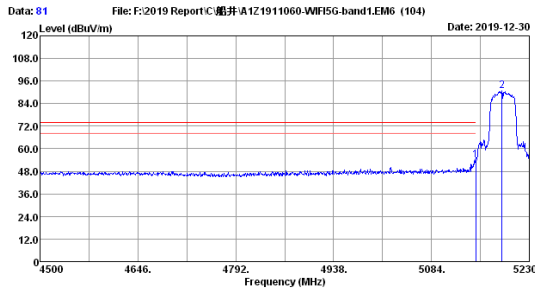
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 78
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5240MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5241.72	33.35	4.43	91.93	34.35	95.36			Peak
2	5350.00	33.65	4.47	44.26	34.33	48.05	74.00	25.95	Peak
3	5460.00	34.45	4.50	44.48	34.31	49.12	68.20	19.08	Peak

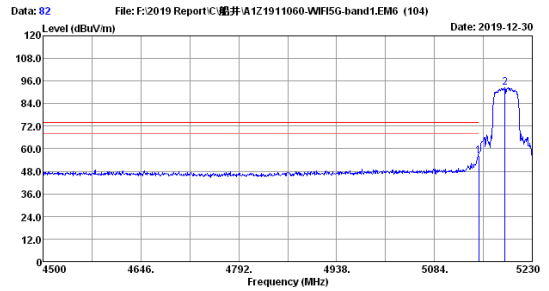
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C_船井A121911060-WIFI5G-band1.EM6 (104) Date: 2019-12-30
 Site no. : 3m Chamber Data no. : 81
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	50.81	34.37	54.08	74.00	19.92	Peak
2	5189.12	33.28	4.41	87.29	34.36	90.62			Peak

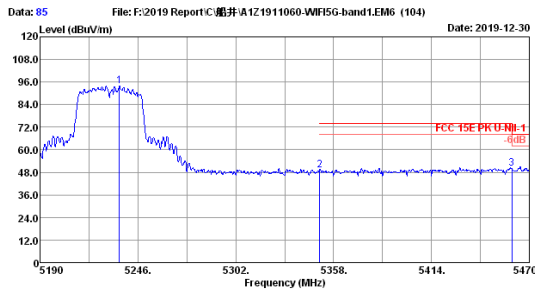
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C_船井A121911060-WIFI5G-band1.EM6 (104) Date: 2019-12-30
 Site no. : 3m Chamber Data no. : 82
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	52.91	34.37	56.18	74.00	17.82	Peak
2	5189.12	33.28	4.41	89.41	34.36	92.74			Peak

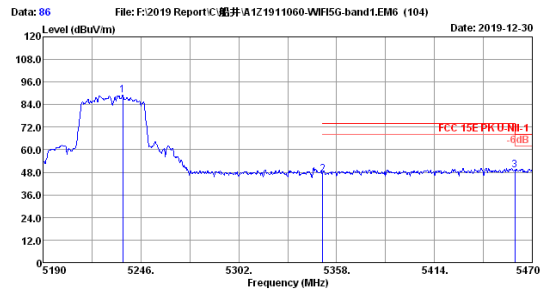
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C_船井A121911060-WIFI5G-band1.EM6 (104) Date: 2019-12-30
 Site no. : 3m Chamber Data no. : 85
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5235.36	33.33	4.43	90.52	34.35	93.93			Peak
2	5350.00	33.65	4.47	45.40	34.33	49.19	74.00	24.81	Peak
3	5460.00	34.45	4.50	45.48	34.31	50.12	68.20	18.08	Peak

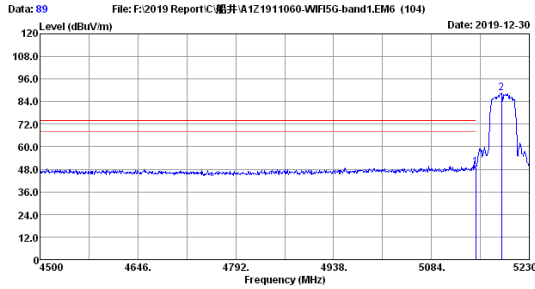
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2019 Report\C_船井A121911060-WIFI5G-band1.EM6 (104) Date: 2019-12-30
 Site no. : 3m Chamber Data no. : 86
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5235.64	33.33	4.43	85.53	34.35	88.94			Peak
2	5350.00	33.65	4.47	43.08	34.33	46.87	74.00	27.13	Peak
3	5460.00	34.45	4.50	44.29	34.31	48.93	68.20	19.27	Peak

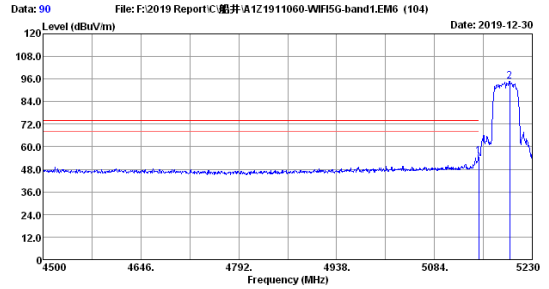
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 89
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	45.95	34.37	49.22	74.00	24.78	Peak
2	5188.39	33.28	4.41	85.01	34.36	89.34			Peak

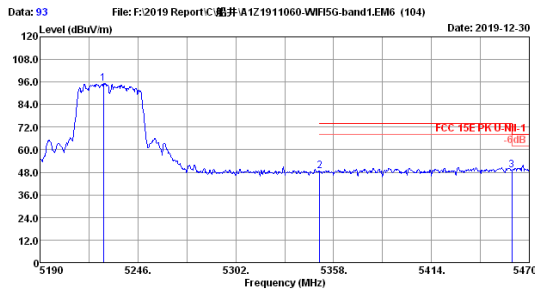
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 90
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5190MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	51.49	34.37	54.76	74.00	19.24	Peak
2	5196.42	33.30	4.41	91.25	34.36	94.60			Peak

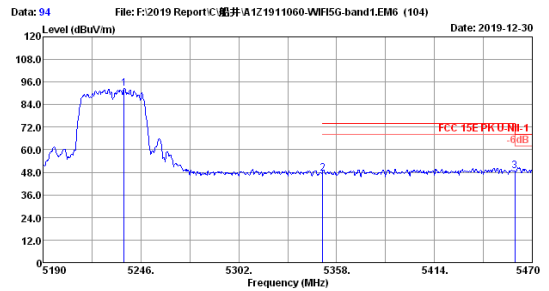
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 93
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5226.40	33.33	4.43	91.75	34.35	95.16			Peak
2	5350.00	33.65	4.47	44.79	34.33	48.58	74.00	25.42	Peak
3	5460.00	34.45	4.50	44.59	34.31	49.23	68.20	18.97	Peak

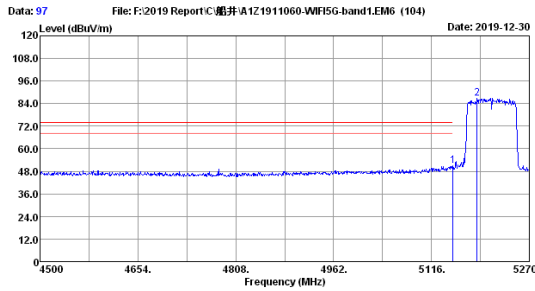
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 94
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5230MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5226.40	33.33	4.43	89.35	34.35	92.76			Peak
2	5350.00	33.65	4.47	43.61	34.33	47.40	74.00	26.60	Peak
3	5460.00	34.45	4.50	44.28	34.31	48.92	68.20	19.28	Peak

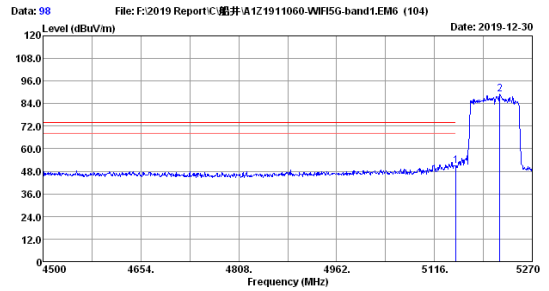
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 97
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	47.44	34.37	50.71	74.00	23.29	Peak
2	5187.61	33.28	4.41	83.45	34.36	86.78			Peak

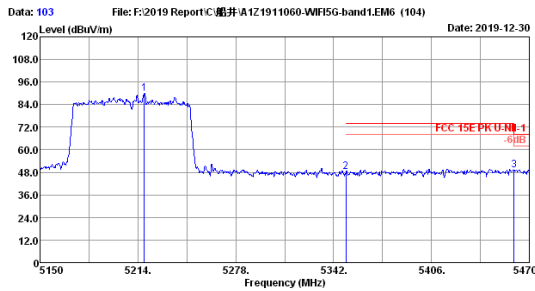
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 98
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	33.25	4.39	47.56	34.37	50.83	74.00	23.17	Peak
2	5219.18	33.32	4.42	85.79	34.36	89.11			Peak

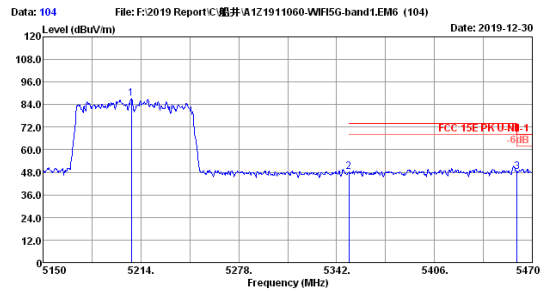
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 103
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5218.16	33.32	4.42	86.61	34.36	89.99			Peak
2	5350.00	33.65	4.47	44.44	34.33	48.23	74.00	25.77	Peak
3	5460.00	34.45	4.50	44.67	34.31	49.31	68.20	18.89	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

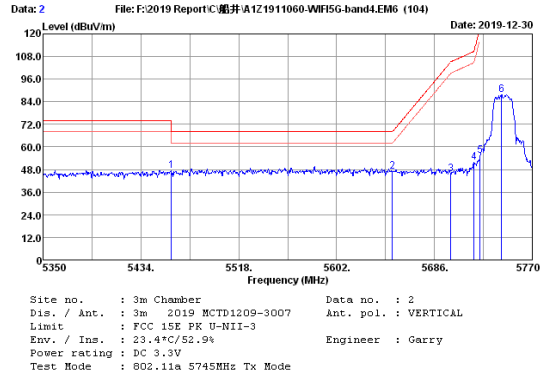
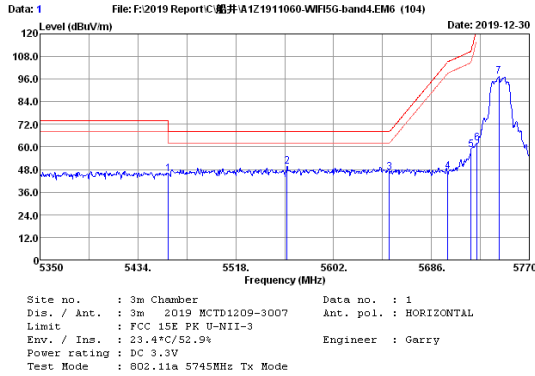


Site no. : 3m Chamber Data no. : 104
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-1
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 S210MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5207.92	33.32	4.42	83.64	34.36	87.02			Peak
2	5350.00	33.65	4.47	44.27	34.33	48.06	74.00	25.94	Peak
3	5460.00	34.45	4.50	43.70	34.31	48.34	68.20	19.86	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

U-NII-3 Band:

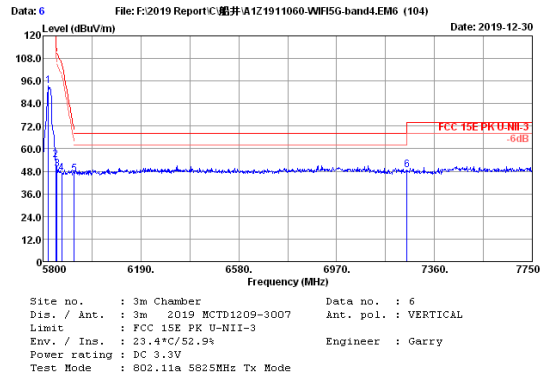
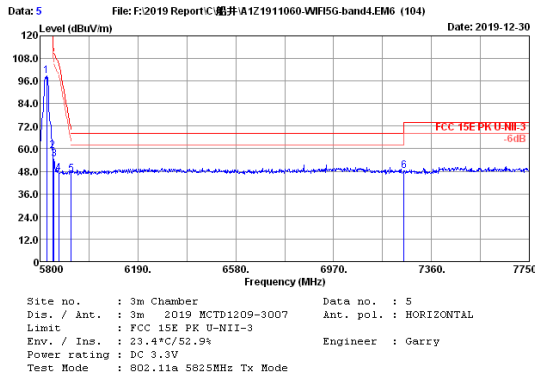


No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	40.98	34.31	45.62	68.20	22.58	Peak
2	5562.10	35.10	4.54	44.29	34.29	49.64	68.20	18.56	Peak
3	5650.00	35.14	4.58	41.17	34.27	46.62	68.20	21.58	Peak
4	5700.00	35.10	4.59	41.33	34.26	46.76	105.20	58.44	Peak
5	5720.00	35.07	4.60	53.04	34.25	58.46	110.80	52.34	Peak
6	5725.00	35.07	4.60	56.46	34.25	61.88	122.80	60.92	Peak
7	5743.96	35.05	4.61	91.81	34.25	97.22	-----	-----	Peak

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	42.58	34.31	47.22	68.20	20.98	Peak
2	5650.00	35.14	4.58	41.44	34.27	46.89	68.20	21.31	Peak
3	5700.00	35.10	4.59	40.15	34.26	45.88	105.20	59.62	Peak
4	5720.00	35.07	4.60	46.35	34.25	51.77	110.80	59.03	Peak
5	5725.00	35.07	4.60	49.77	34.25	55.19	122.80	67.61	Peak
6	5743.96	35.05	4.61	82.38	34.25	87.79	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

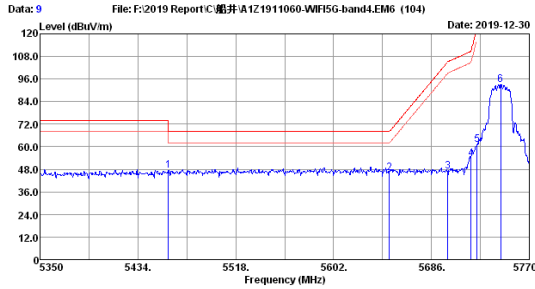


No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5827.30	34.90	4.64	93.33	34.23	98.64	-----	-----	Peak
2	5850.00	34.85	4.65	53.73	34.23	59.00	122.20	63.20	Peak
3	5855.00	34.80	4.65	49.29	34.23	54.51	110.80	56.29	Peak
4	5875.00	34.75	4.66	41.62	34.22	46.81	105.20	59.39	Peak
5	5925.00	34.70	4.68	41.31	34.21	46.48	68.20	21.72	Peak
6	7250.00	36.25	5.12	41.35	34.55	48.17	68.20	20.03	Peak

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5821.45	34.90	4.64	88.28	34.23	93.59	-----	-----	Peak
2	5850.00	34.85	4.65	48.61	34.23	53.88	122.20	68.32	Peak
3	5855.00	34.80	4.65	43.78	34.23	49.00	110.80	61.80	Peak
4	5875.00	34.75	4.66	41.74	34.22	46.93	105.20	58.27	Peak
5	5925.00	34.70	4.68	41.34	34.21	46.51	68.20	21.69	Peak
6	7250.00	36.25	5.12	41.68	34.55	48.50	68.20	19.70	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

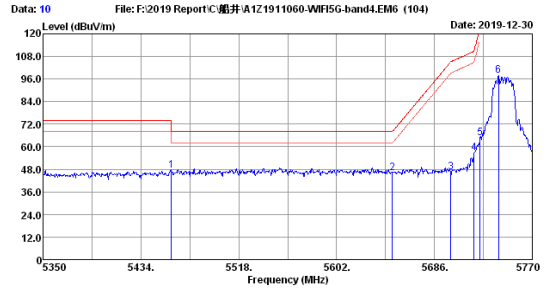


File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 9
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	42.73	34.31	47.37	68.20	20.83	Peak
2	5650.00	35.14	4.58	40.53	34.27	45.98	68.20	22.22	Peak
3	5700.00	35.10	4.59	41.63	34.26	47.06	105.20	58.14	Peak
4	5720.00	35.07	4.60	47.98	34.25	53.40	110.80	57.40	Peak
5	5725.00	35.07	4.60	55.54	34.25	60.96	122.80	61.84	Peak
6	5745.64	35.05	4.61	87.61	34.25	93.02	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

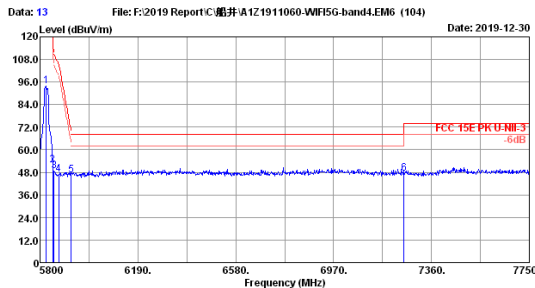


File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5745MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	42.93	34.31	47.57	68.20	20.63	Peak
2	5650.00	35.14	4.58	40.51	34.27	45.96	68.20	22.24	Peak
3	5700.00	35.10	4.59	41.18	34.26	46.61	105.20	58.59	Peak
4	5720.00	35.07	4.60	51.28	34.25	56.70	110.80	54.10	Peak
5	5725.00	35.07	4.60	59.37	34.25	64.79	122.80	58.01	Peak
6	5741.02	35.05	4.61	92.30	34.25	97.71	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

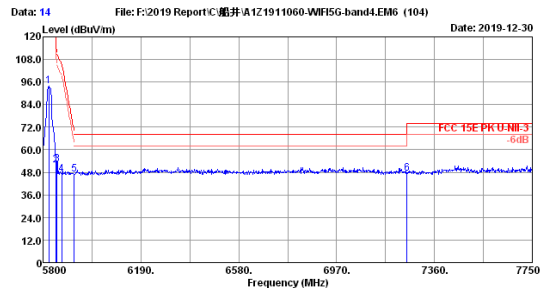


File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 13
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.35	34.90	4.64	88.67	34.23	93.98	-----	-----	Peak
2	5850.00	34.85	4.65	46.69	34.23	51.96	122.20	70.24	Peak
3	5855.00	34.80	4.65	43.48	34.23	48.70	110.80	62.10	Peak
4	5875.00	34.75	4.66	41.63	34.22	46.82	105.20	58.38	Peak
5	5925.00	34.70	4.68	41.28	34.21	46.45	68.20	21.75	Peak
6	7250.00	36.25	5.12	40.57	34.55	47.39	68.20	20.61	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

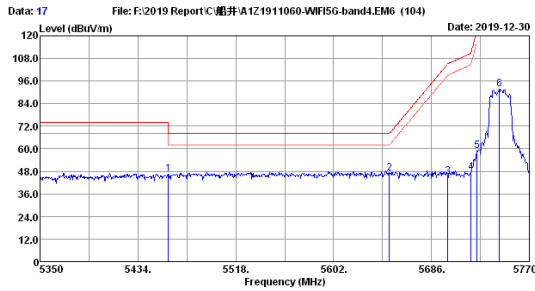


File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104) Date: 2019-12-30

Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11nHT20 5825MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5823.40	34.90	4.64	88.71	34.23	94.02	-----	-----	Peak
2	5850.00	34.85	4.65	46.49	34.23	51.76	122.20	70.44	Peak
3	5855.00	34.80	4.65	46.84	34.23	52.06	110.80	58.74	Peak
4	5875.00	34.75	4.66	41.70	34.22	46.89	105.20	58.31	Peak
5	5925.00	34.70	4.68	41.95	34.21	47.12	68.20	21.08	Peak
6	7250.00	36.25	5.12	40.65	34.55	47.47	68.20	20.73	Peak

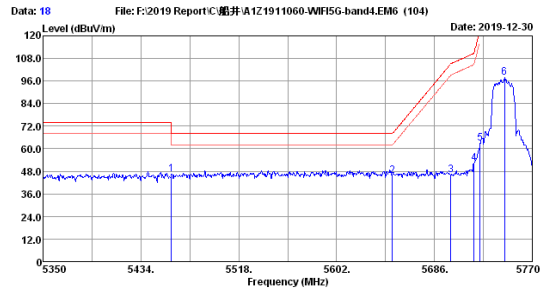
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WF15G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode
 Data no. : 17
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.83	34.31	46.47	68.20	21.73	Peak
2	5550.00	35.14	4.58	41.48	34.27	46.93	68.20	21.27	Peak
3	5700.00	35.10	4.59	39.75	34.26	45.18	105.20	60.02	Peak
4	5720.00	35.07	4.60	41.93	34.25	47.35	110.80	63.45	Peak
5	5725.00	35.07	4.60	53.32	34.25	58.74	122.80	64.06	Peak
6	5744.38	35.05	4.61	86.46	34.25	91.87	-----	-----	Peak

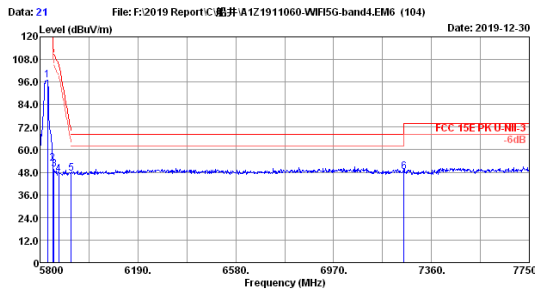
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WF15G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5745MHz Tx Mode
 Data no. : 18
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.82	34.31	46.46	68.20	21.74	Peak
2	5550.00	35.14	4.58	40.34	34.27	45.79	68.20	22.41	Peak
3	5700.00	35.10	4.59	40.77	34.26	46.20	105.20	59.00	Peak
4	5720.00	35.07	4.60	46.92	34.25	52.34	110.80	58.46	Peak
5	5725.00	35.07	4.60	57.57	34.25	62.99	122.80	59.81	Peak
6	5746.06	35.05	4.61	92.58	34.25	97.99	-----	-----	Peak

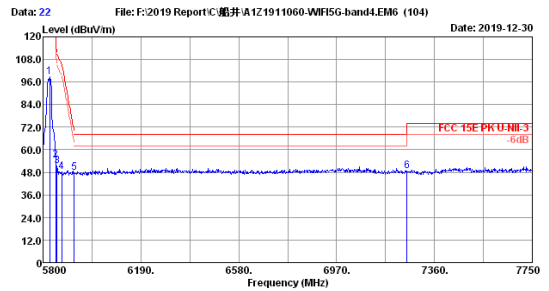
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WF15G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode
 Data no. : 21
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5829.25	34.90	4.64	91.85	34.23	97.16	-----	-----	Peak
2	5850.00	34.85	4.65	47.60	34.23	52.87	122.20	69.33	Peak
3	5855.00	34.80	4.65	44.19	34.23	49.41	110.80	61.39	Peak
4	5875.00	34.75	4.66	41.86	34.22	47.05	105.20	58.15	Peak
5	5925.00	34.70	4.68	42.34	34.21	47.51	68.20	20.69	Peak
6	7250.00	36.25	5.12	41.24	34.55	48.06	68.20	20.14	Peak

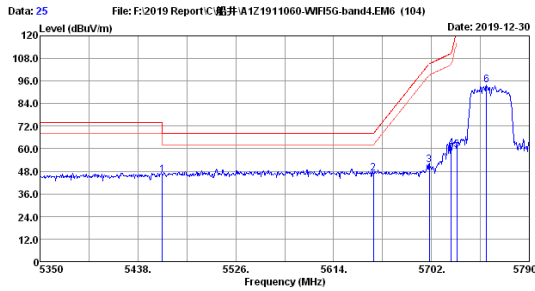
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WF15G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT20 5825MHz Tx Mode
 Data no. : 22
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5827.30	34.90	4.64	93.56	34.23	98.87	-----	-----	Peak
2	5850.00	34.85	4.65	49.18	34.23	54.45	122.20	67.75	Peak
3	5855.00	34.80	4.65	45.96	34.23	51.18	110.80	59.62	Peak
4	5875.00	34.75	4.66	42.95	34.22	48.14	105.20	57.06	Peak
5	5925.00	34.70	4.68	42.69	34.21	47.86	68.20	20.34	Peak
6	7250.00	36.25	5.12	41.94	34.55	48.76	68.20	19.44	Peak

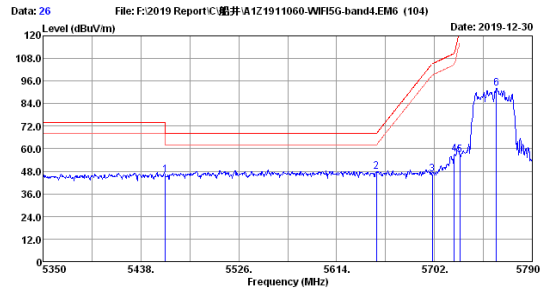
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode
 Data no. : 25
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.35	34.31	45.99	68.20	22.21	Peak
2	5650.00	35.14	4.58	41.31	34.27	46.76	68.20	21.44	Peak
3	5700.00	35.10	4.59	46.14	34.26	51.57	105.20	53.63	Peak
4	5720.00	35.07	4.60	55.00	34.25	60.42	110.80	50.38	Peak
5	5725.00	35.07	4.60	53.90	34.25	59.32	122.80	63.48	Peak
6	5751.72	35.03	4.61	88.68	34.25	94.07	-----	-----	Peak

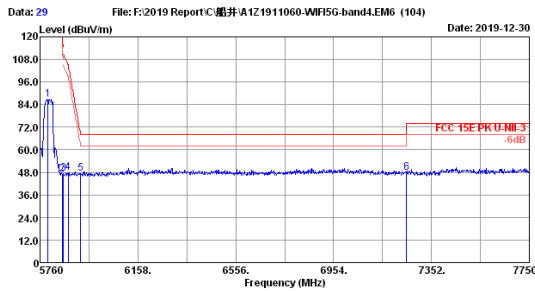
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5755MHz Tx Mode
 Data no. : 26
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.62	34.31	46.26	68.20	21.94	Peak
2	5650.00	35.14	4.58	42.54	34.27	47.99	68.20	20.21	Peak
3	5700.00	35.10	4.59	41.12	34.26	46.55	105.20	58.65	Peak
4	5720.00	35.07	4.60	51.52	34.25	56.94	110.80	53.86	Peak
5	5725.00	35.07	4.60	51.41	34.25	56.83	122.80	65.97	Peak
6	5757.88	35.03	4.61	86.87	34.25	92.26	-----	-----	Peak

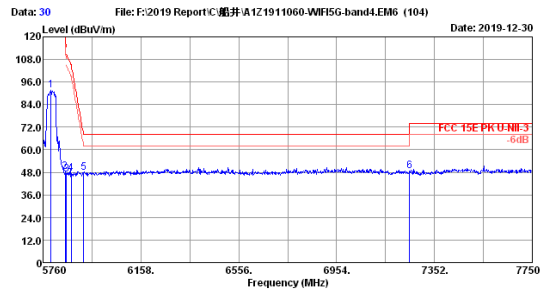
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode
 Data no. : 29
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5791.04	35.00	4.63	81.56	34.24	86.95	-----	-----	Peak
2	5850.00	34.85	4.65	41.51	34.23	46.78	122.20	75.42	Peak
3	5855.00	34.80	4.65	42.02	34.23	47.24	110.80	63.56	Peak
4	5875.00	34.75	4.66	42.73	34.22	47.92	105.20	57.28	Peak
5	5925.00	34.70	4.68	42.24	34.21	47.41	68.20	20.79	Peak
6	7250.00	36.25	5.12	40.85	34.55	47.67	68.20	20.53	Peak

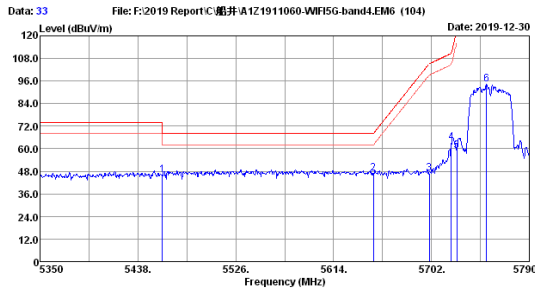
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11nHT40 5795MHz Tx Mode
 Data no. : 30
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5791.04	35.00	4.63	86.12	34.24	91.51	-----	-----	Peak
2	5850.00	34.85	4.65	42.92	34.23	48.19	122.20	74.01	Peak
3	5855.00	34.80	4.65	41.62	34.23	46.84	110.80	63.96	Peak
4	5875.00	34.75	4.66	41.98	34.22	47.17	105.20	58.03	Peak
5	5925.00	34.70	4.68	42.49	34.21	47.66	68.20	20.54	Peak
6	7250.00	36.25	5.12	41.75	34.55	48.57	68.20	19.63	Peak

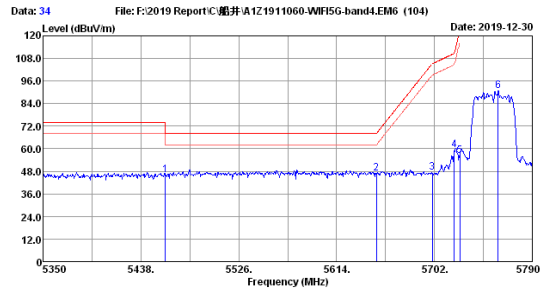
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode
 Data no. : 33
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.20	34.31	45.84	68.20	22.36	Peak
2	5650.00	35.14	4.58	41.33	34.27	46.78	68.20	21.42	Peak
3	5700.00	35.10	4.59	41.52	34.26	46.95	105.20	58.25	Peak
4	5720.00	35.07	4.60	58.04	34.25	63.46	110.80	47.34	Peak
5	5725.00	35.07	4.60	53.58	34.25	59.00	122.80	63.80	Peak
6	5751.72	35.03	4.61	88.86	34.25	94.25	-----	-----	Peak

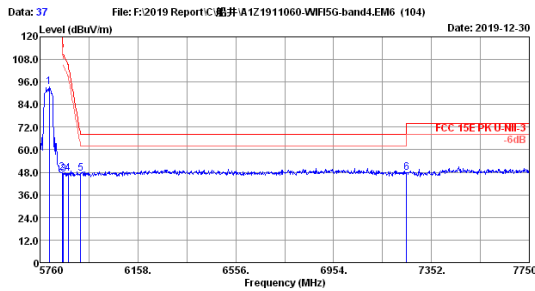
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5755MHz Tx Mode
 Data no. : 34
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.23	34.31	45.87	68.20	22.33	Peak
2	5650.00	35.14	4.58	41.62	34.27	47.07	68.20	21.13	Peak
3	5700.00	35.10	4.59	41.86	34.26	47.29	105.20	57.91	Peak
4	5720.00	35.07	4.60	53.74	34.25	59.16	110.80	51.64	Peak
5	5725.00	35.07	4.60	50.90	34.25	56.32	122.80	66.48	Peak
6	5759.20	35.03	4.61	85.40	34.25	90.79	-----	-----	Peak

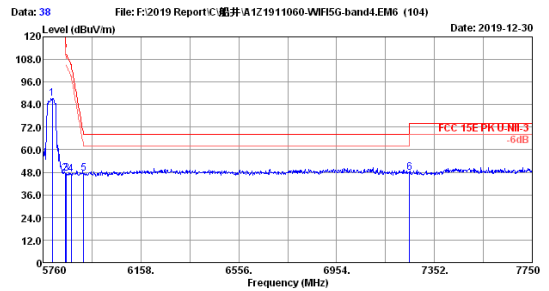
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode
 Data no. : 37
 Ant. pol. : VERTICAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5797.81	35.00	4.63	88.16	34.24	93.55	-----	-----	Peak
2	5850.00	34.85	4.65	42.54	34.23	47.81	122.20	74.39	Peak
3	5855.00	34.80	4.65	41.78	34.23	47.00	110.80	63.80	Peak
4	5875.00	34.75	4.66	42.20	34.22	47.39	105.20	57.81	Peak
5	5925.00	34.70	4.68	42.00	34.21	47.17	68.20	21.03	Peak
6	7250.00	36.25	5.12	40.90	34.55	47.72	68.20	20.48	Peak

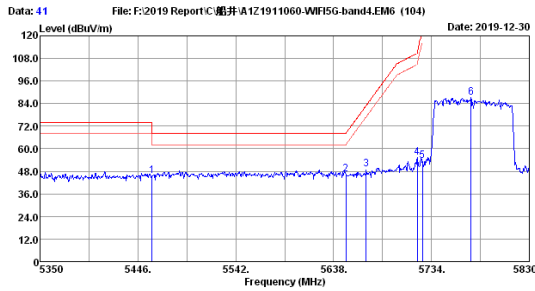
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Date: 2019-12-30
 File: F:\2019 Report\C...井A121911060-WIFI5G-band4.EM6 (104)
 Site no. : 3m Chamber
 Dis. / Ant. : 3m 2019 MCTD1209-3007
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9%
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT40 5795MHz Tx Mode
 Data no. : 38
 Ant. pol. : HORIZONTAL
 Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5797.81	35.00	4.63	82.01	34.24	87.40	-----	-----	Peak
2	5850.00	34.85	4.65	42.08	34.23	47.35	122.20	74.85	Peak
3	5855.00	34.80	4.65	42.26	34.23	47.48	110.80	63.32	Peak
4	5875.00	34.75	4.66	41.58	34.22	46.77	105.20	58.43	Peak
5	5925.00	34.70	4.68	42.38	34.21	47.55	68.20	20.65	Peak
6	7250.00	36.25	5.12	40.88	34.55	47.70	68.20	20.50	Peak

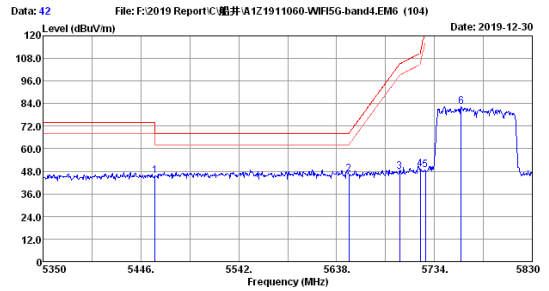
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 41
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	40.97	34.31	45.61	68.20	22.59	Peak
2	5650.00	35.14	4.58	41.16	34.27	46.61	68.20	21.59	Peak
3	5670.00	35.12	4.58	43.62	34.26	49.06	83.00	33.94	Peak
4	5720.00	35.07	4.60	49.78	34.25	55.20	110.80	55.60	Peak
5	5725.00	35.07	4.60	48.37	34.25	53.79	122.80	69.01	Peak
6	5772.88	35.02	4.62	81.77	34.24	87.17	-----	-----	Peak

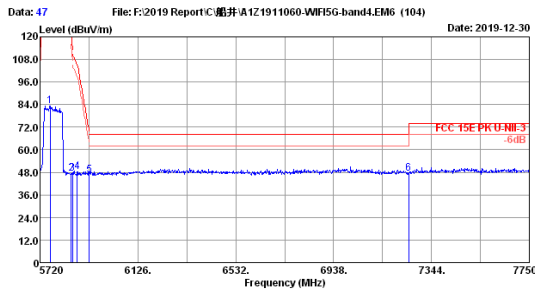
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 42
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.00	34.45	4.50	41.07	34.31	45.71	68.20	22.49	Peak
2	5650.00	35.14	4.58	41.15	34.27	46.60	68.20	21.60	Peak
3	5700.00	35.10	4.59	42.43	34.26	47.86	105.20	57.34	Peak
4	5720.00	35.07	4.60	43.51	34.25	48.93	110.80	61.87	Peak
5	5725.00	35.07	4.60	43.35	34.25	48.77	122.80	74.03	Peak
6	5760.40	35.03	4.61	76.83	34.25	82.22	-----	-----	Peak

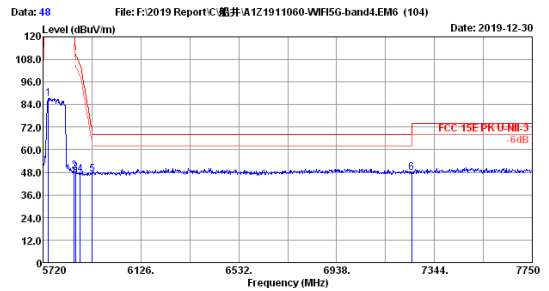
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 47
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5762.63	35.03	4.61	77.92	34.25	83.21	-----	-----	Peak
2	5850.00	34.85	4.65	42.00	34.23	47.27	122.20	74.93	Peak
3	5855.00	34.80	4.65	42.17	34.23	47.39	110.80	63.41	Peak
4	5875.00	34.75	4.66	43.28	34.22	48.47	105.20	56.73	Peak
5	5925.00	34.70	4.68	41.48	34.21	46.65	68.20	21.55	Peak
6	7250.00	36.25	5.12	40.42	34.55	47.24	68.20	20.96	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 48
 Dis. / Ant. : 3m 2019 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC 15E PK U-NII-3
 Env. / Ins. : 23.4°C/52.9% Engineer : Garry
 Power rating : DC 3.3V
 Test Mode : 802.11acVHT80 5775MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5742.33	35.05	4.61	81.98	34.25	87.39	-----	-----	Peak
2	5850.00	34.85	4.65	43.36	34.23	48.63	122.20	73.57	Peak
3	5855.00	34.80	4.65	42.58	34.23	47.80	110.80	63.00	Peak
4	5875.00	34.75	4.66	41.83	34.22	47.02	105.20	58.18	Peak
5	5925.00	34.70	4.68	41.83	34.21	47.00	68.20	21.20	Peak
6	7250.00	36.25	5.12	41.05	34.55	47.67	68.20	20.33	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

6. 6dB & 26dB & 99% Bandwidth Test

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Jun.30,19	1 Year
2.	Attenuator	Agilent	8491B	MY39269201	Oct.13,19	1 Year
3.	RF Cable	EMCI	EMC102-KM-KM 3500	170702	May.13,19	1 Year

6.2. Limit

6dB Bandwidth should be not less than 500kHz

6.3. Test Procedure

26dB Bandwidth:

Use the test method described in ANSI C63.10 clause 12.4.1:

- (a) Set RBW = approximately 1% of the emission bandwidth.
- (b) Set the VBW > RBW.
- (c) Detector = Peak.
- (d) Trace mode = max hold.
- (e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6dB Bandwidth:

Use the test method described in 789033 D02 v02r01:

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 kHz for the band 5.725–5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- (a) Set RBW = 100 kHz.
- (b) Set the video bandwidth (VBW) ≥ 3 RBW.
- (c) Detector = Peak.
- (d) Trace mode = max hold
- (e) Sweep = auto couple
- (f) Allow the trace to stabilize
- (g) 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

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described in this section. For devices that use channel aggregation refer to III.A and III.C for determining emission bandwidth.

99% Occupied bandwidth:

Use the test method described in ANSI C63.10 Section 6.9.2:

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.4. Test Results

U-NII-1 Band:

EUT: WiFi module		
M/N: U9W42		
Test date: 2019-11-18	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

26dB bandwidth:

Test Mode	Frequency (MHz)	26dB Bandwidth (MHz)		Limit (KHz)
		ANT A	ANT B	
11a	5180	24.94	25.71	N/A
	5200	24.42	25.58	N/A
	5240	25.55	26.80	N/A
11n HT20	5180	20.02	21.64	N/A
	5200	20.02	22.70	N/A
	5240	20.57	22.26	N/A
11n HT40	5190	40.30	40.12	N/A
	5230	40.19	40.00	N/A
11ac VHT20	5180	19.97	20.11	N/A
	5200	19.92	20.18	N/A
	5240	20.03	20.08	N/A
11ac VHT40	5190	40.65	40.08	N/A
	5230	40.59	40.20	N/A
11ac VHT80	5210	80.70	80.27	N/A
Conclusion: PASS				

99% Occupied bandwidth:

Test Mode	Frequency (MHz)	99% bandwidth (MHz)		Limit (KHz)
		ANT A	ANT B	
11a	5180	16.753	16.677	N/A
	5200	16.730	16.790	N/A
	5240	16.818	16.801	N/A
11n HT20	5180	17.602	17.631	N/A
	5200	17.612	17.646	N/A
	5240	17.618	17.644	N/A
11n HT40	5190	36.194	36.190	N/A
	5230	36.195	36.192	N/A
11ac VHT20	5180	17.534	17.592	N/A
	5200	17.551	17.601	N/A
	5240	17.540	17.624	N/A
11ac VHT40	5190	36.198	36.073	N/A
	5230	36.142	36.079	N/A
11ac VHT80	5210	75.751	75.714	N/A
Conclusion: PASS				

U-NII-3 Band:

EUT: WiFi module		
M/N: U9W42		
Test date: 2019-11-18~2020-01-05	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

6dB bandwidth:

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (KHz)
		ANT A	ANT B	
11a	5745	15.17	15.01	≥ 500
	5785	15.16	15.13	≥ 500
	5825	15.18	14.48	≥ 500
11n HT20	5745	15.11	15.12	≥ 500
	5785	15.12	15.70	≥ 500
	5825	15.10	15.16	≥ 500
11n HT40	5755	35.23	35.75	≥ 500
	5795	35.23	35.75	≥ 500
11ac VHT20	5745	15.13	15.15	≥ 500
	5785	15.17	15.15	≥ 500
	5825	15.09	15.14	≥ 500
11ac VHT40	5755	35.23	35.23	≥ 500
	5795	35.23	35.23	≥ 500
11ac VHT80	5775	75.87	75.89	≥ 500

Conclusion: PASS

26dB bandwidth:

Test Mode	Frequency (MHz)	26dB Bandwidth (MHz)		Limit (KHz)
		ANT A	ANT B	
11a	5745	21.08	20.25	N/A
	5785	20.81	19.90	N/A
	5825	20.41	20.51	N/A
11n HT20	5745	19.45	19.93	N/A
	5785	19.56	19.33	N/A
	5825	19.65	19.71	N/A
11n HT40	5755	39.47	39.20	N/A
	5795	39.25	39.38	N/A
11ac VHT20	5745	19.72	19.63	N/A
	5785	19.73	19.66	N/A
	5825	19.74	19.73	N/A
11ac VHT40	5755	39.06	38.67	N/A
	5795	38.63	39.06	N/A
11ac VHT80	5775	78.78	78.94	N/A

Conclusion: PASS

99% Occupied bandwidth:

Test Mode	Frequency (MHz)	99% bandwidth (MHz)		Limit (KHz)
		ANT A	ANT B	
11a	5745	16.391	16.407	N/A
	5785	16.383	16.420	N/A
	5825	16.370	16.369	N/A
11n HT20	5745	17.579	17.556	N/A
	5785	17.569	17.563	N/A
	5825	17.550	17.558	N/A
11n HT40	5755	36.029	36.027	N/A
	5795	36.073	36.105	N/A
11ac VHT20	5745	17.570	17.582	N/A
	5785	17.498	17.553	N/A
	5825	17.509	17.489	N/A
11ac VHT40	5755	35.996	36.012	N/A
	5795	36.014	36.019	N/A
11ac VHT80	5775	75.853	75.585	N/A

Conclusion: PASS

U-NII-1 Band:
26dB bandwidth & 99% Occupied bandwidth

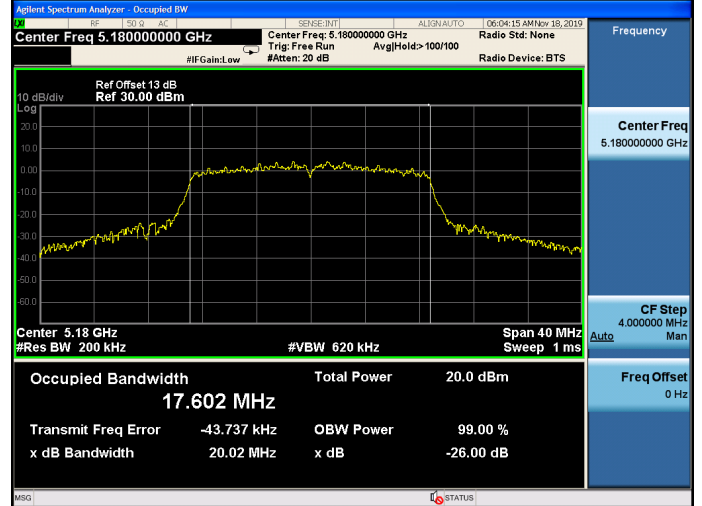
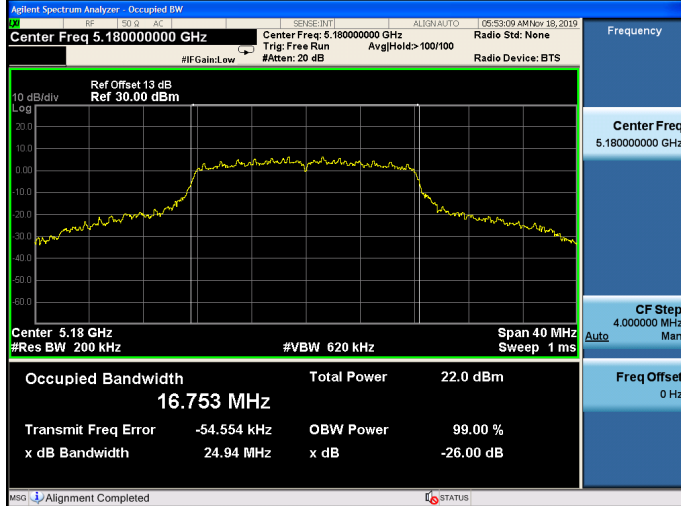
ANT A

11a

11n HT20

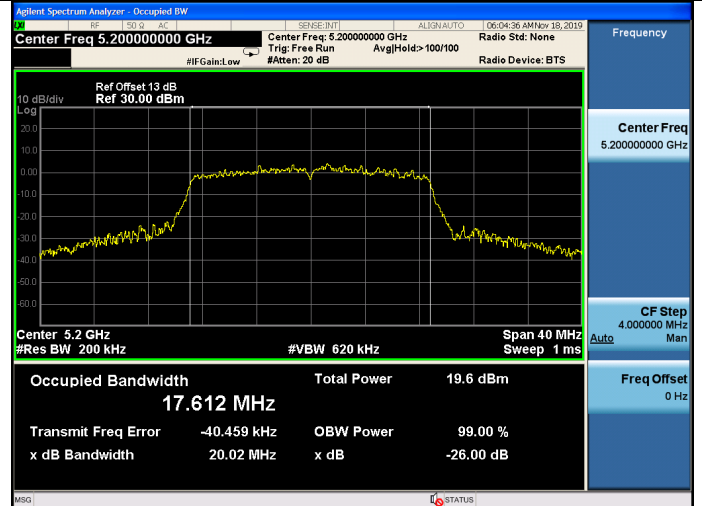
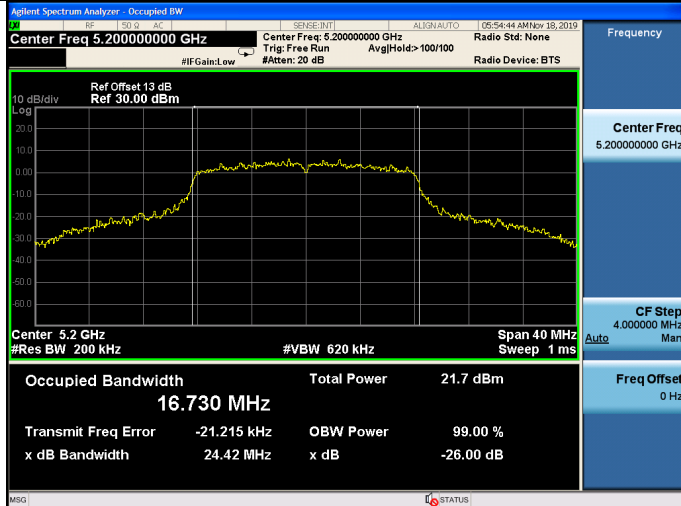
5180MHz

5180MHz



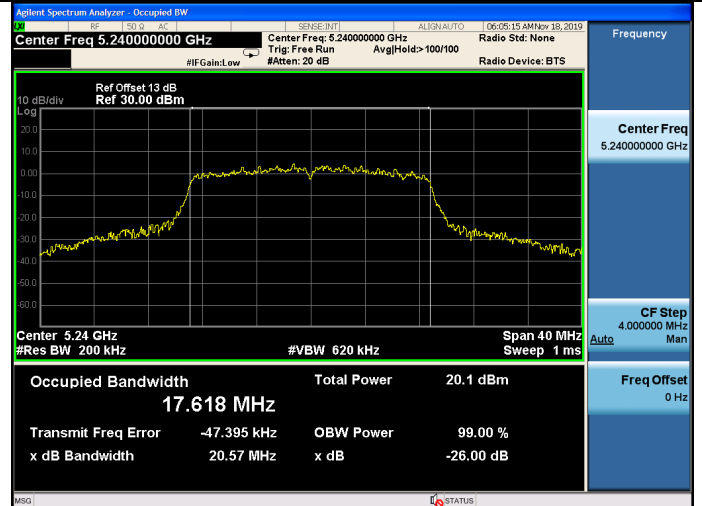
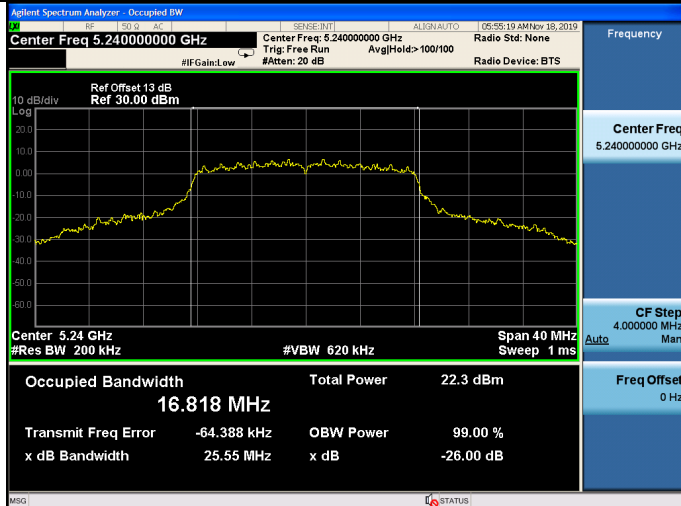
5200MHz

5200MHz



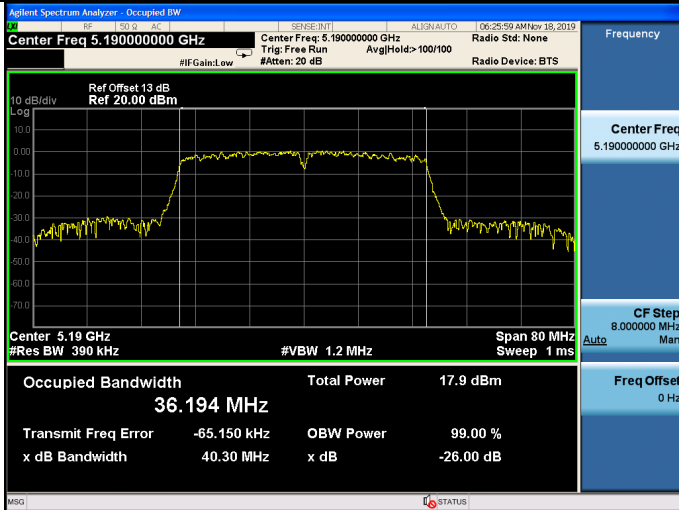
5240MHz

5240MHz

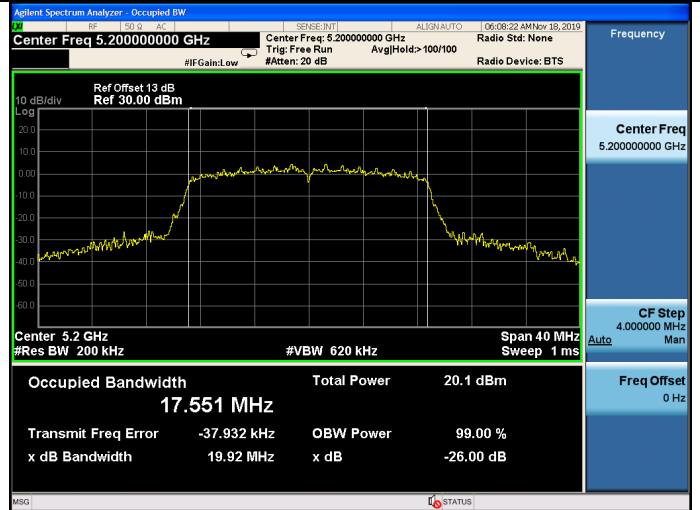


11n HT40

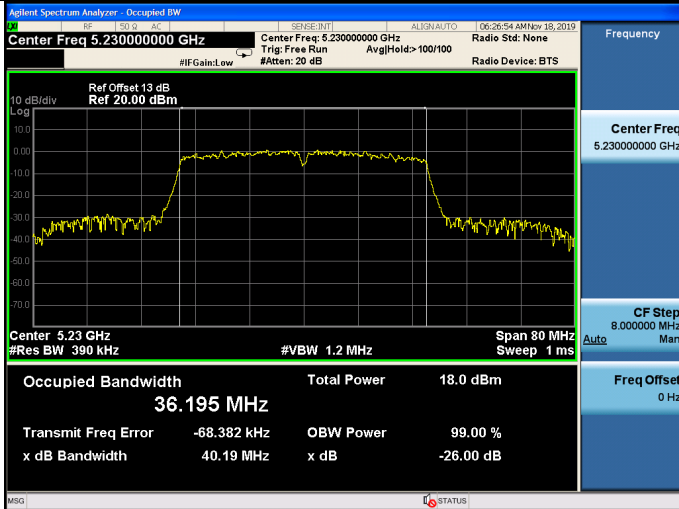
5190MHz



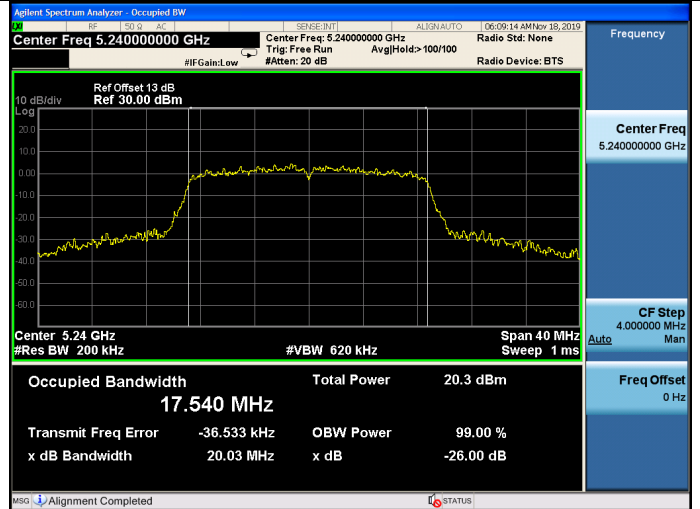
5200MHz



5230MHz

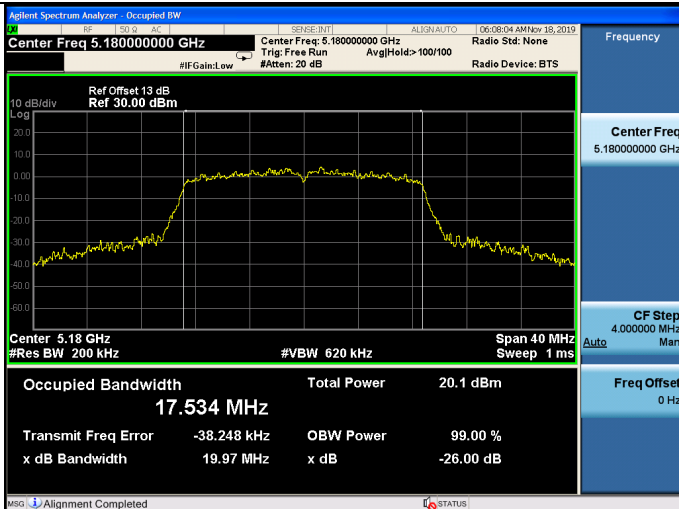


5240MHz



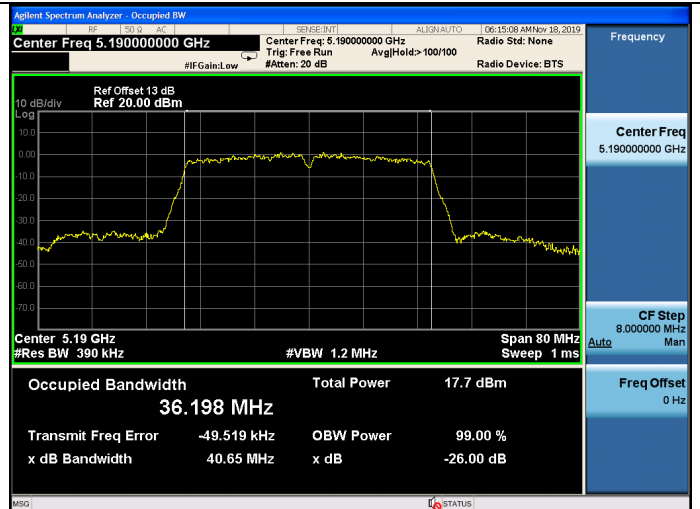
11ac VHT20

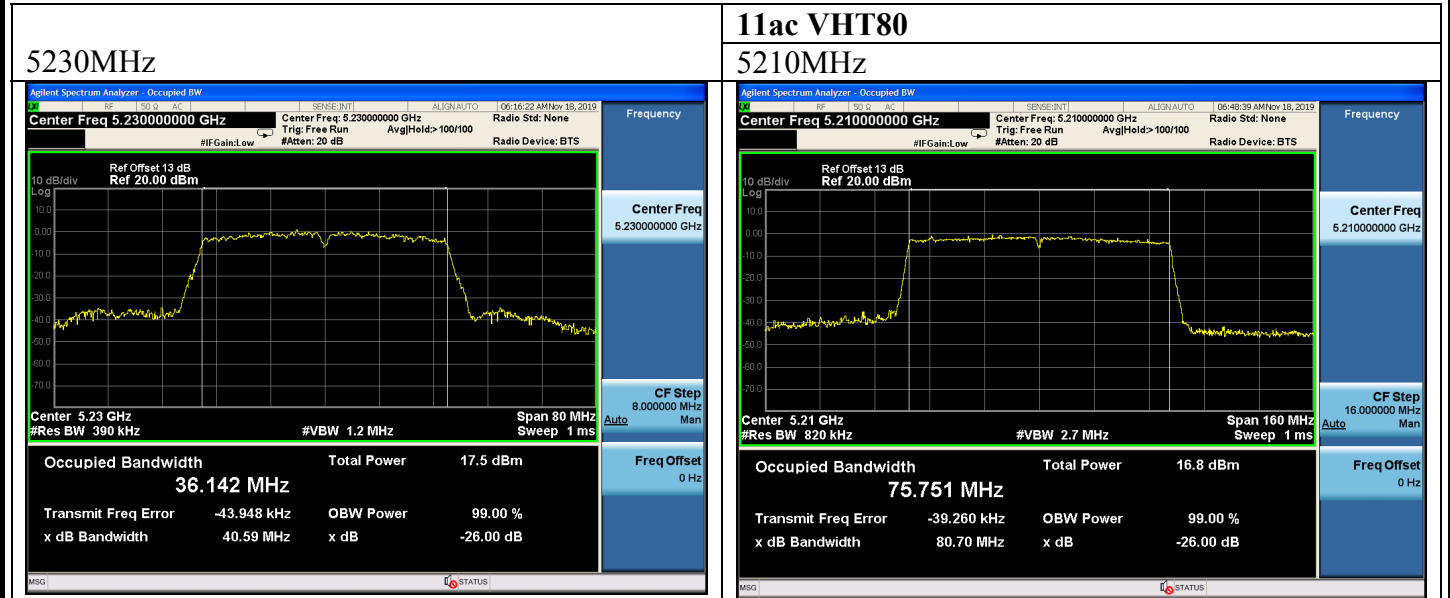
5180MHz



11ac VHT40

5190MHz





U-NII-1 Band:

26dB bandwidth

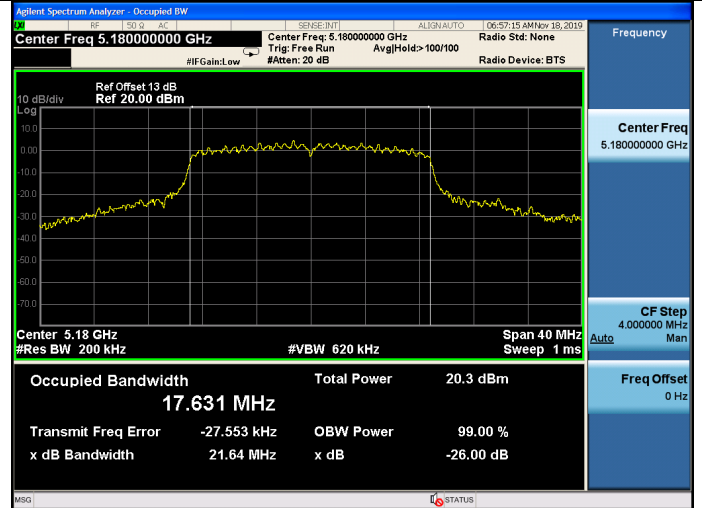
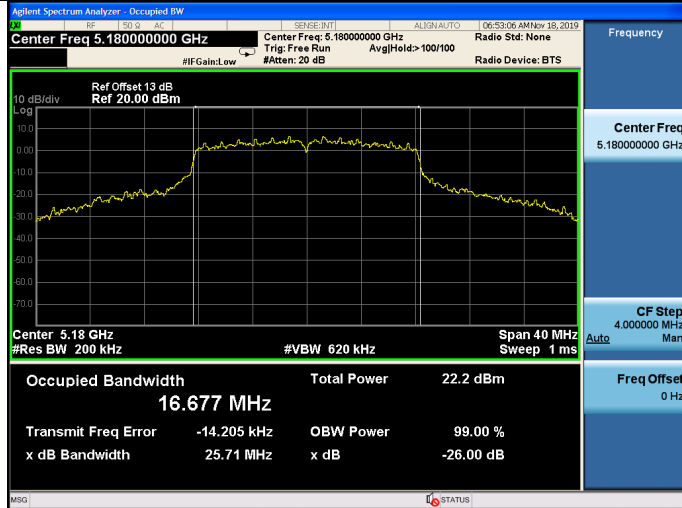
ANT B

11a

11n HT20

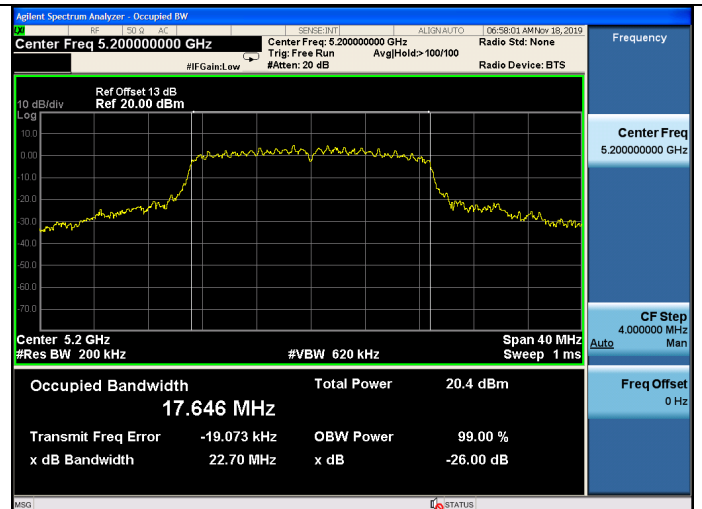
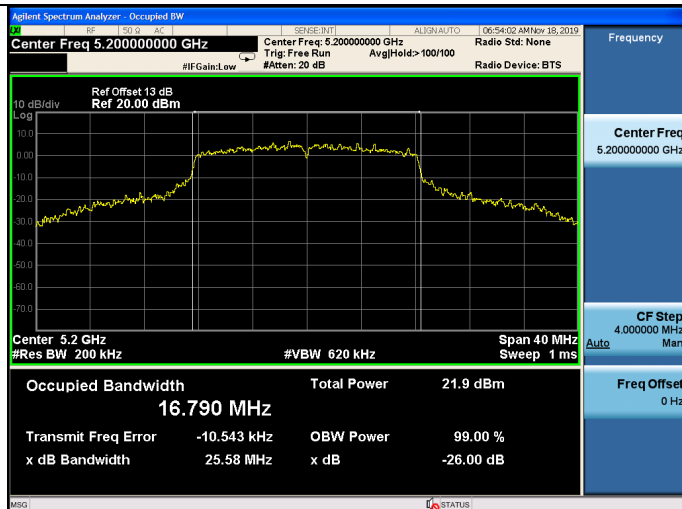
5180MHz

5180MHz



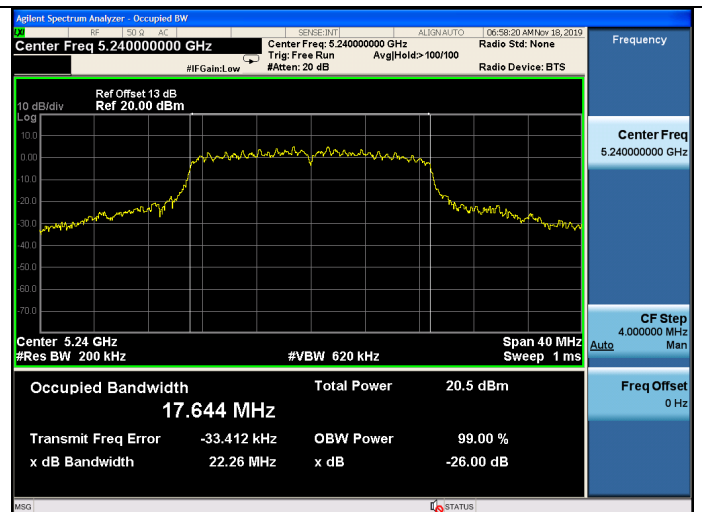
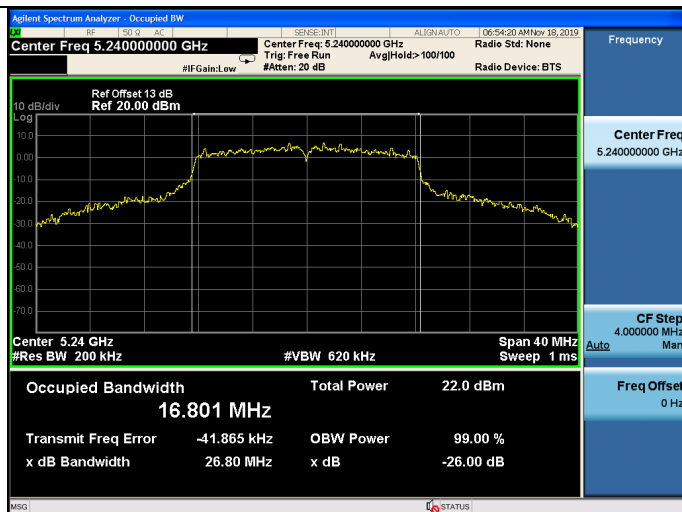
5200MHz

5200MHz



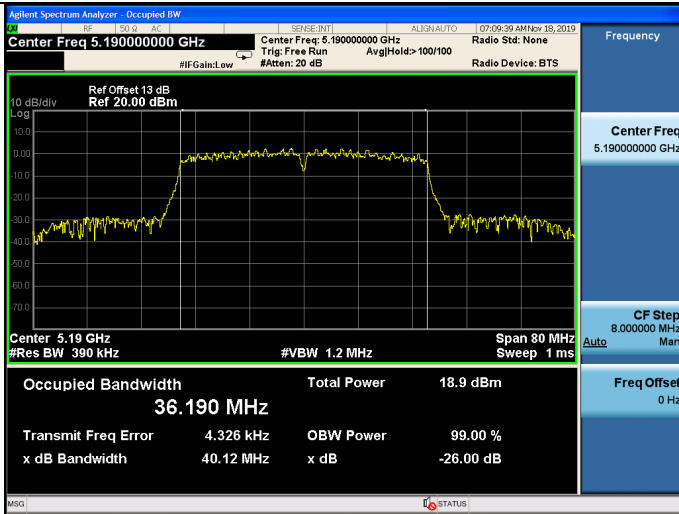
5240MHz

5240MHz

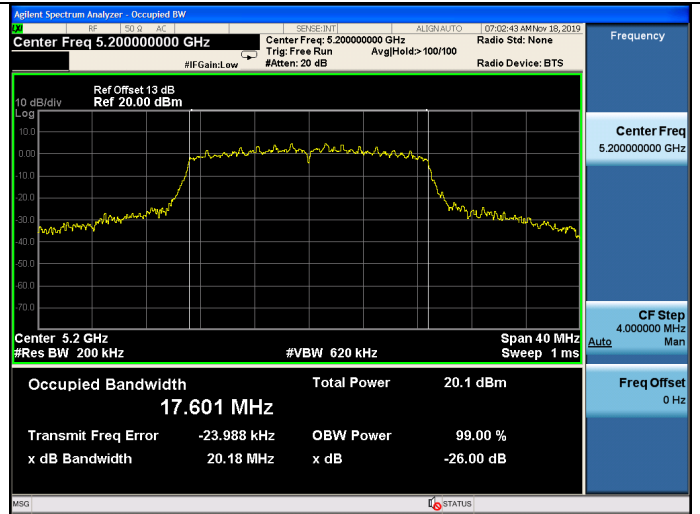


11n HT40

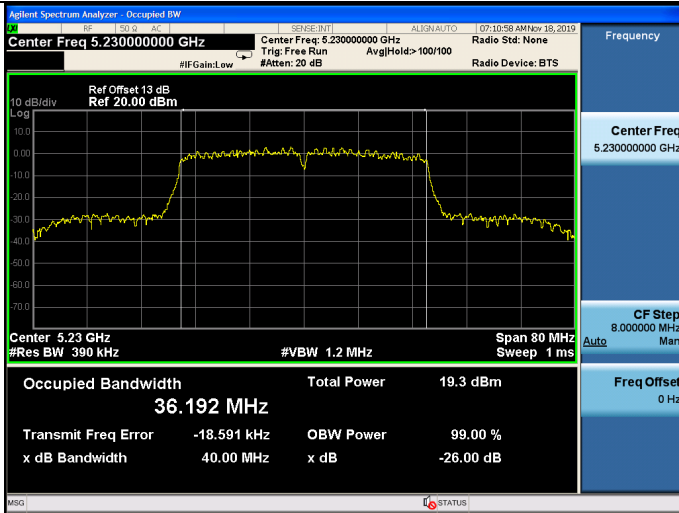
5190MHz



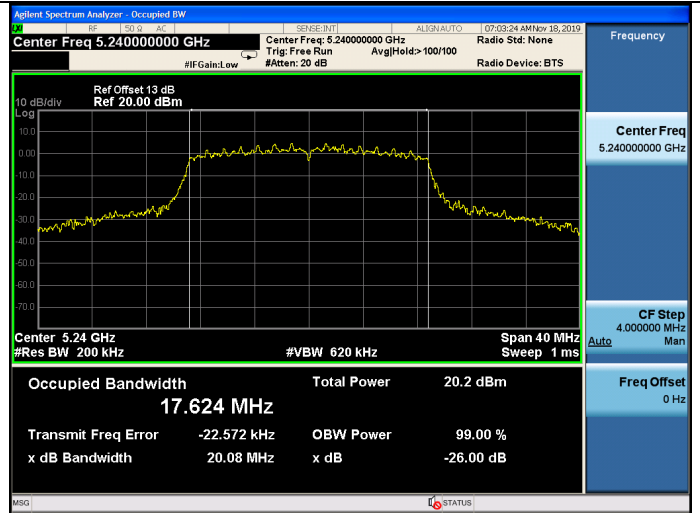
5200MHz



5230MHz

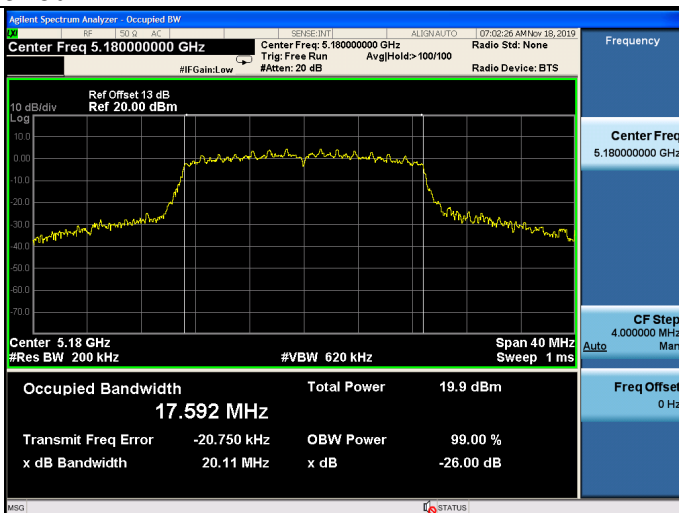


5240MHz



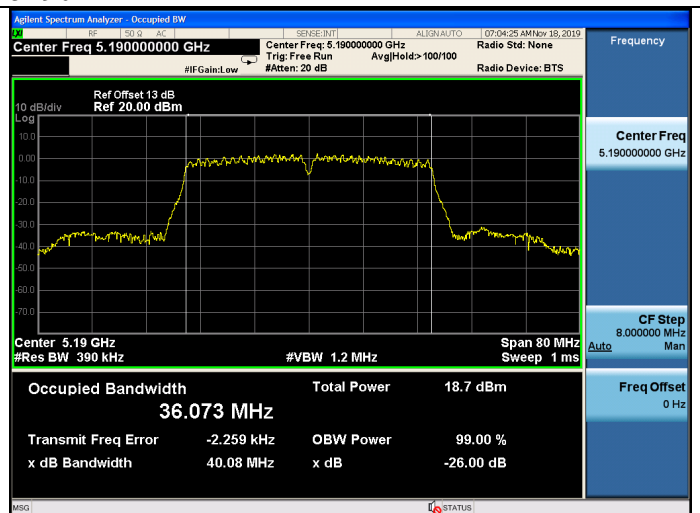
11ac VHT20

5180MHz



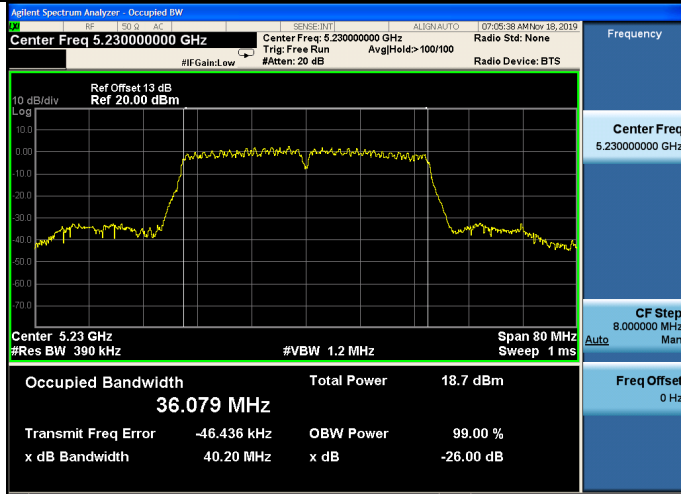
11ac VHT40

5190MHz

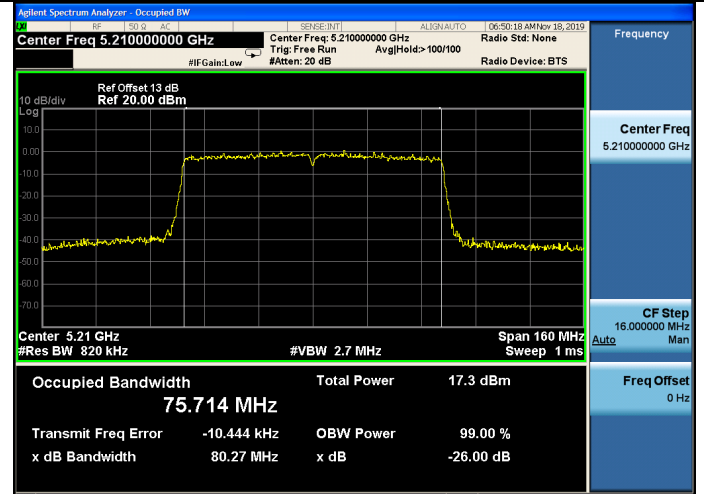


11ac VHT80

5230MHz



5210MHz



U-NII-3 Band:

6dB bandwidth

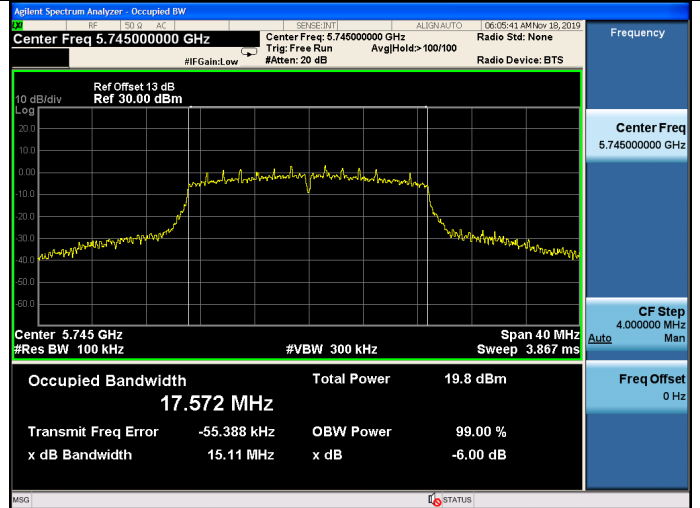
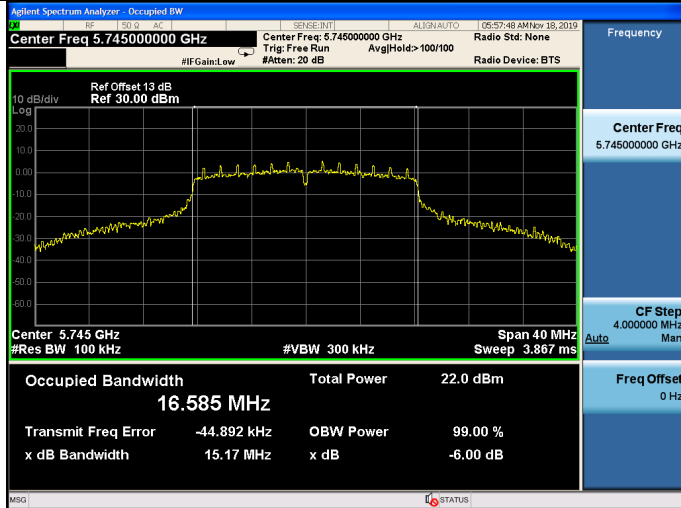
ANT A

11a

11n HT20

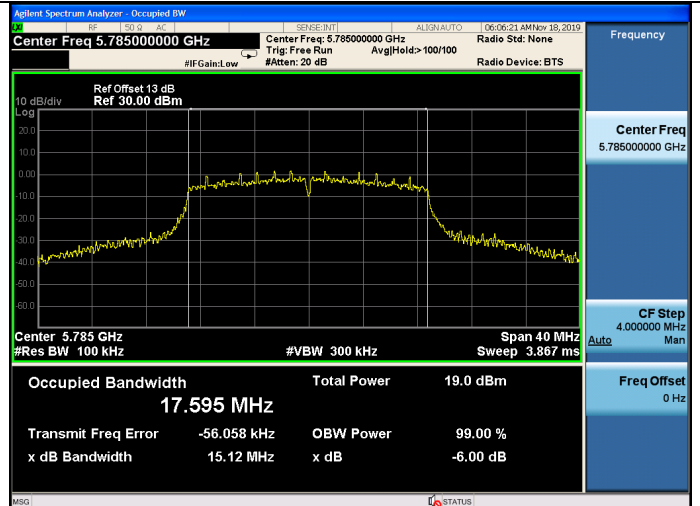
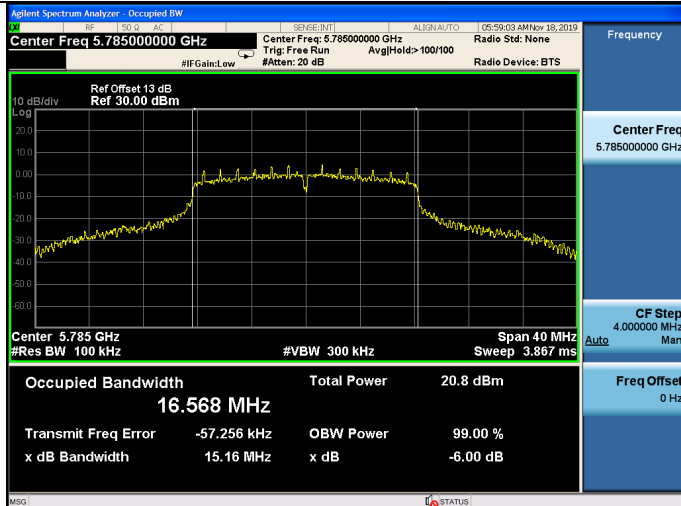
5745MHz

5745MHz



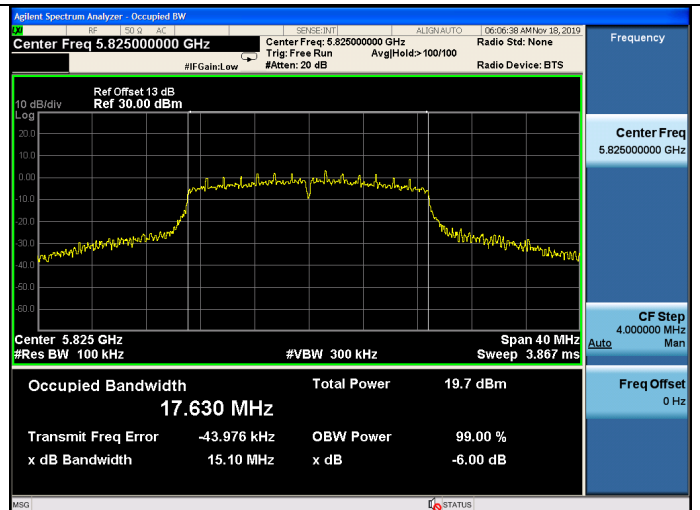
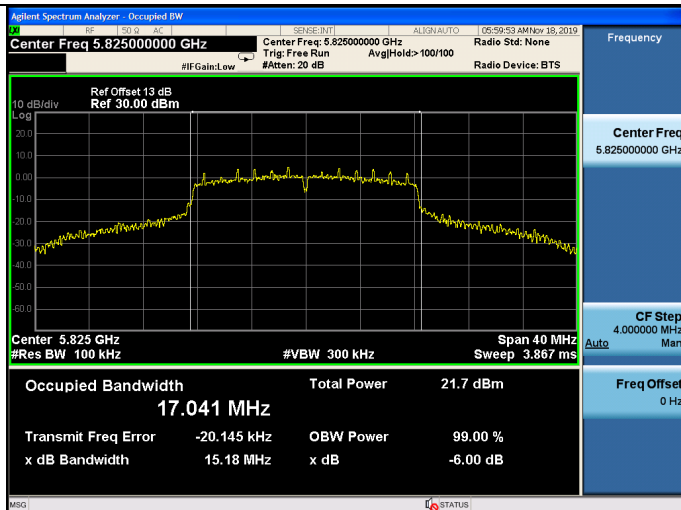
5785MHz

5785MHz



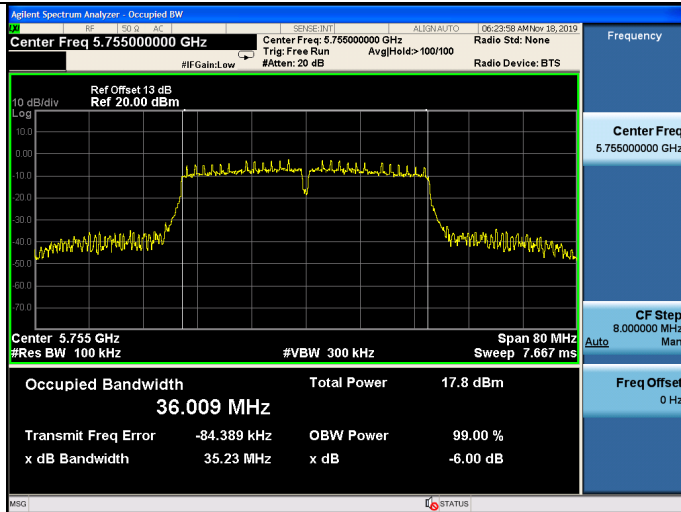
5825MHz

5825MHz

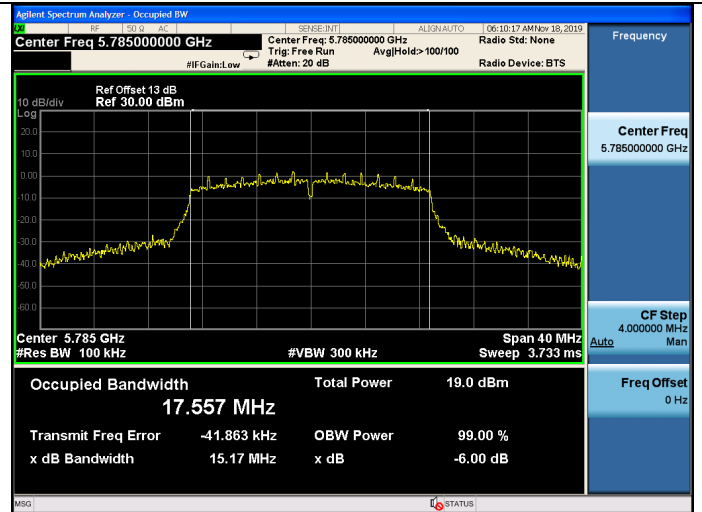


11n HT40

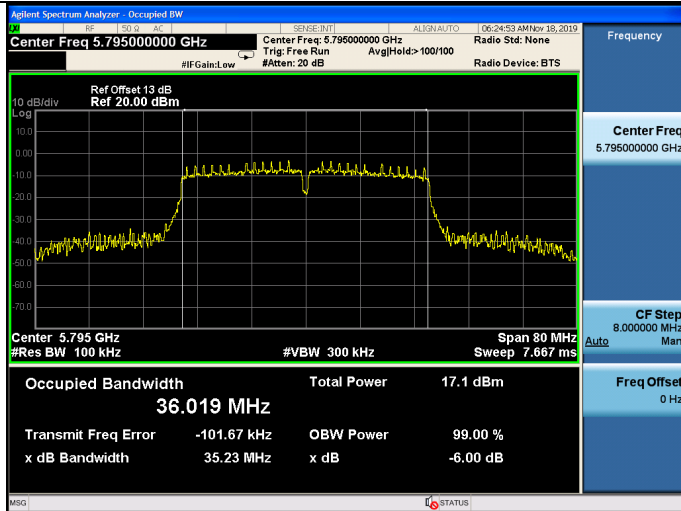
5755MHz



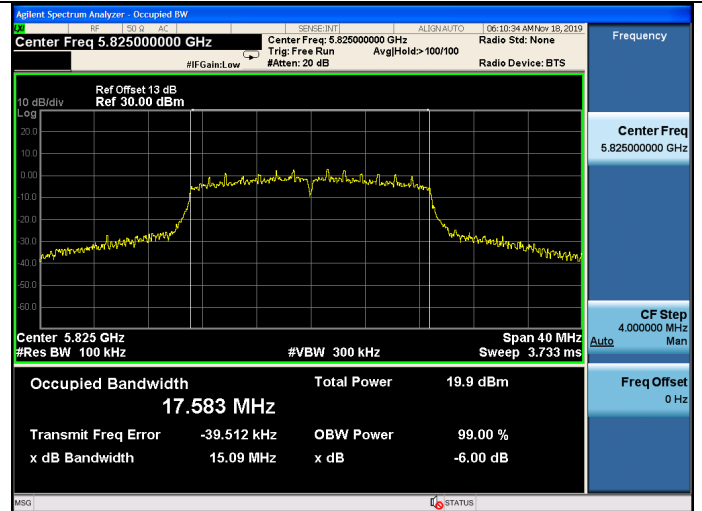
5785MHz



5795MHz

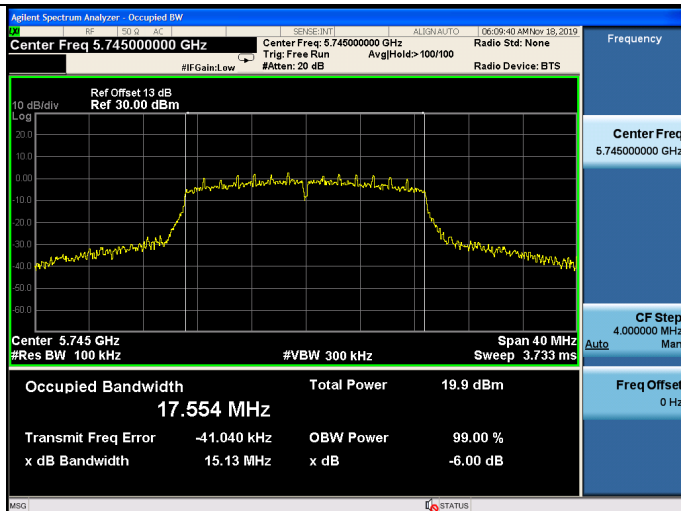


5825MHz



11ac VHT20

5745MHz



11ac VHT40

5755MHz

