FCC RF Test Report

APPLICANT	:	OnePlus Technology (Shenzhen) Co., Ltd
EQUIPMENT	:	Smart Phone
BRAND NAME	:	ONEPLUS
MODEL NAME	:	HD1905
FCC ID	:	2ABZ2-EE133
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Jul. 04, 2019 and testing was completed on Aug. 06, 2019. We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Derreck Chen

Reviewed by: Derreck Chen / Supervisor

Eric Shih

Approved by: Eric Shih / Manager

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People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR970213-03E	Rev. 01	Initial issue of report	Sep. 24, 2019

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 6.71 dB at 5147.680 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 16.21 dB at 14.750 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

OnePlus Technology (Shenzhen) Co., Ltd
18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

1.2 Manufacturer

OnePlus Technology (Shenzhen) Co., Ltd
18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	ONEPLUS
Model Name	HD1905
FCC ID	2ABZ2-EE133
EUT supports Radios application	CDMA/EVDO/GSM/GPRS/EGPRS/WCDMA/HSPA/ DC-HSDPA/HSPA+/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ac VHT20/VHT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE GNSS/NFC
IMEI Code	Conducted: 990013830030032 Conduction: 990013830043332 Radiation: 990013830040874
HW Version	14
SW Version	Oxygen OS 10.0.HD65AA
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a variant report for HD1905. The difference between previous and current is changing from single SIM card to dual SIM card, and the model name changed. Since the test result is not affected by the changes, all the test results are leveraged from original report which can be referred to Sporton Report Number FR970213E.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz
Maximum Output Power to Antenna	**MIMO<Ant.1+2>** **<5180 MHz ~ 5240 MHz>** 802.11a : 18.59 dBm / 0.0723 W 802.11n HT20 : 18.53 dBm / 0.0713 W 802.11n HT40 : 18.54 dBm / 0.0714 W 802.11ac VHT20 : 18.49 dBm / 0.0706 W 802.11ac VHT40 : 18.51 dBm / 0.0710 W 802.11ac VHT80 : 17.43 dBm / 0.0553 W **<5260 MHz ~ 5320 MHz>** 802.11a : 18.37 dBm / 0.0687 W 802.11n HT20 : 18.19 dBm / 0.0659 W 802.11n HT40 : 18.11 dBm / 0.0647 W 802.11ac VHT20 : 18.14 dBm / 0.0652 W 802.11ac VHT40 : 18.07 dBm / 0.0641 W 802.11ac VHT80 : 17.46 dBm / 0.0557 W **<5500 MHz ~ 5720 MHz >** 802.11a : 19.21 dBm / 0.0834 W 802.11n HT20 : 19.12 dBm / 0.0817 W 802.11n HT40 : 19.23 dBm / 0.0838 W 802.11ac VHT20 : 19.09 dBm / 0.0811 W 802.11ac VHT40 : 19.20 dBm / 0.0832 W 802.11ac VHT80 : 17.78 dBm / 0.0600 W
99% Occupied Bandwidth	**MIMO<Ant.1+2>** **<5180 MHz ~ 5240 MHz>** 802.11a : 17.53 MHz 802.11n HT20 : 18.73 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.52 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 17.58 MHz 802.11n HT20 : 18.83 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 75.64 MHz **<5500 MHz ~ 5720 MHz >** 802.11a : 17.63 MHz 802.11n HT20 : 18.88 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 75.64 MHz
Antenna Gain / Gain	**<5180 MHz ~ 5240 MHz >** <Ant. 1> : PIFA Antenna with gain -3.00 dBi <Ant. 2> : PIFA Antenna with gain -3.00 dBi **<5260 MHz ~ 5320 MHz >** <Ant. 1> : PIFA Antenna with gain -3.00 dBi <Ant. 2> : PIFA Antenna with gain -3.00 dBi **<5500 MHz ~ 5720 MHz >** <Ant. 1> : PIFA Antenna with gain -3.00 dBi <Ant. 2> : PIFA Antenna with gain -3.00 dBi

Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Function Description	

	Ant. 1	Ant. 2
802.11 a/n/ac SISO	-	-
802.11 a/n/ac MIMO	V	V

Note:

1. For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed only 802.11n HT20/ HT40 by referring to their maximum conducted power.
2. The 5GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ TH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH02-SZ	CN1256	421272

1.7 Applicable Standards

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

- 47 CFR Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5180-5240 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5260-5320 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5720 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 1(Charging from Adapter)
Remark: For Radiated Test Cases, The tests were performed with Adapter and USB cable 1.	

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

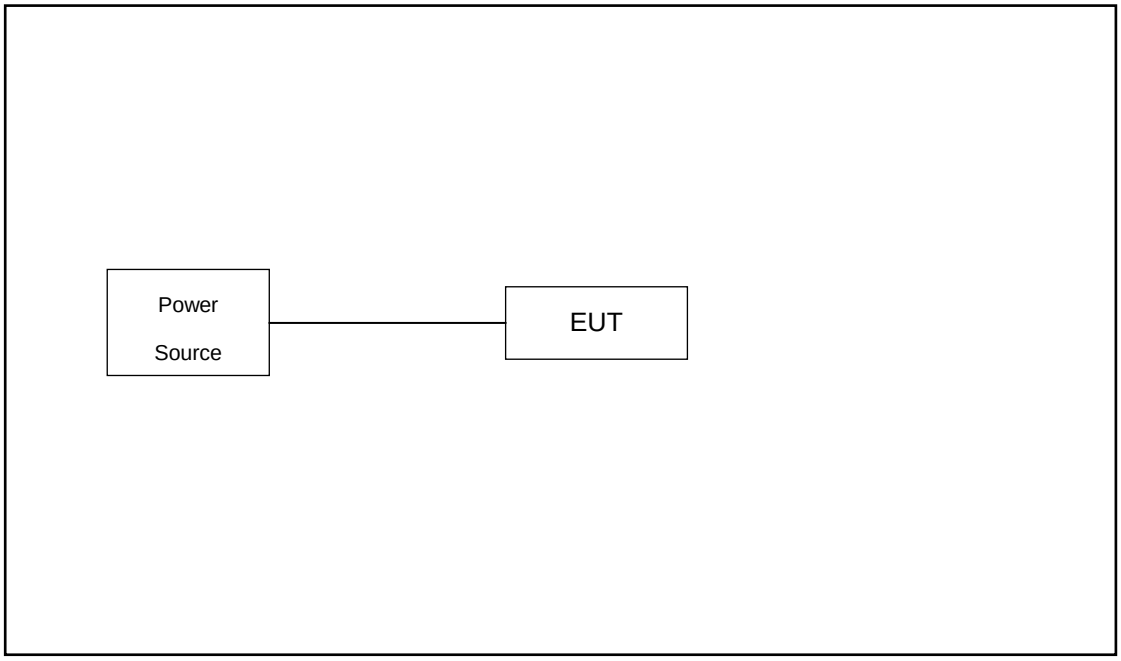
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

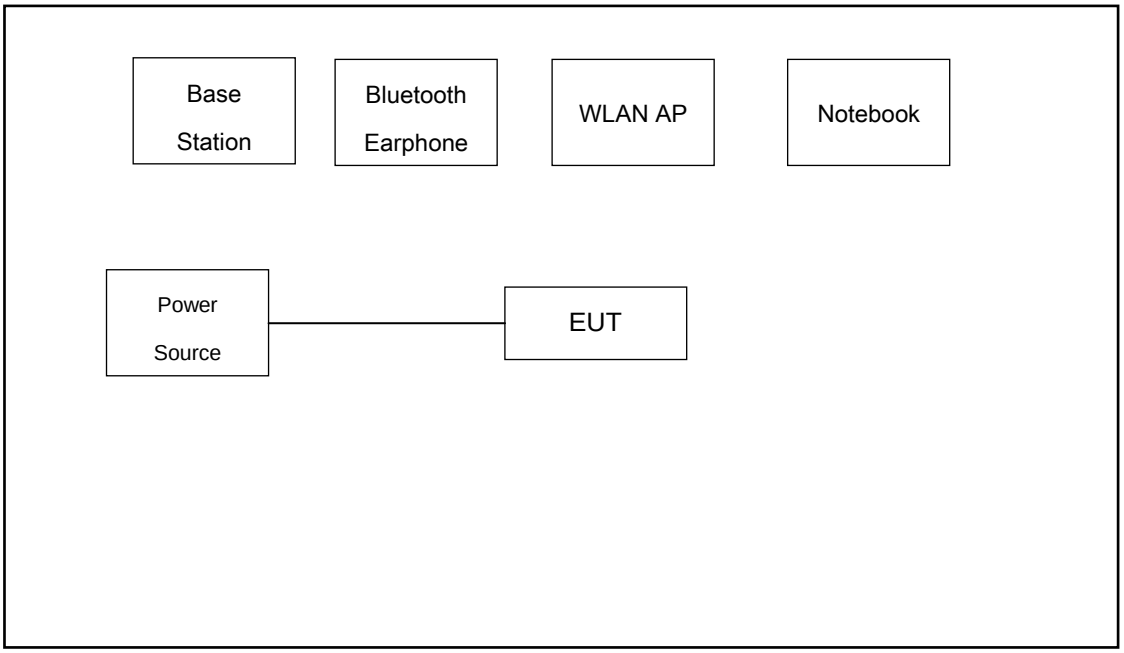
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle		-	-	138

2.3 Connection Diagram of Test System

For Radiation



For Conducted Emission



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
3.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Samsung	EO-MG900	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 6.6 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 6.6 + 10 = 16.6 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

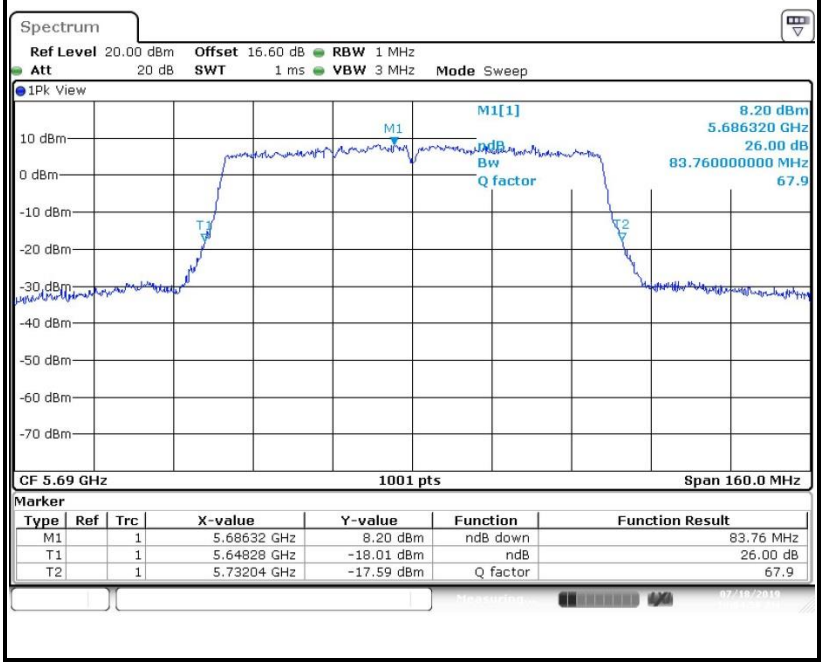
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak 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%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup

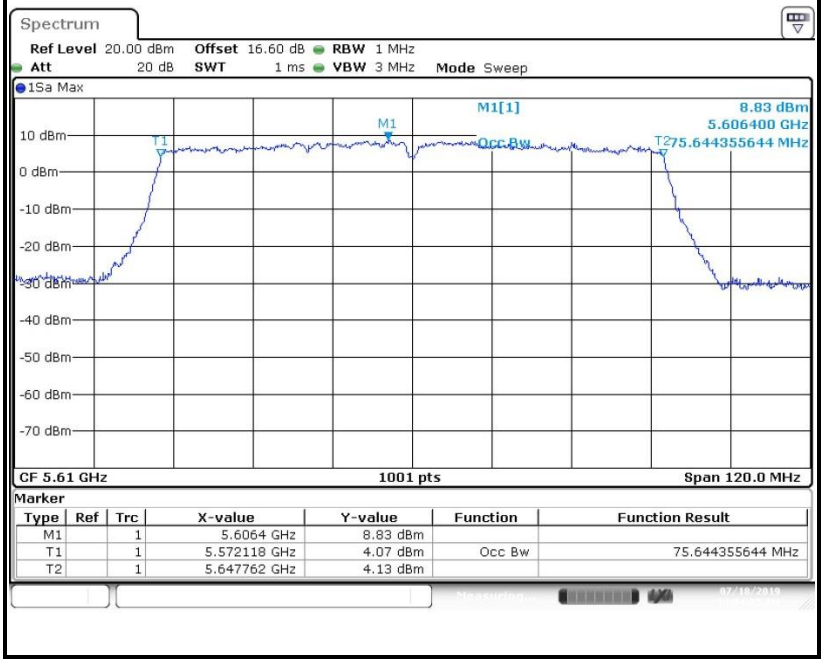
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

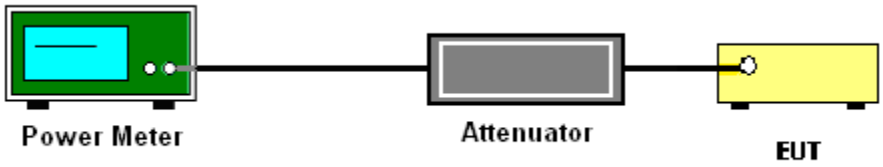
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

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

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

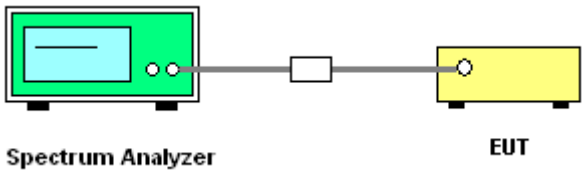
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
-

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (a): Measure and sum the spectra across the outputs.

   The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

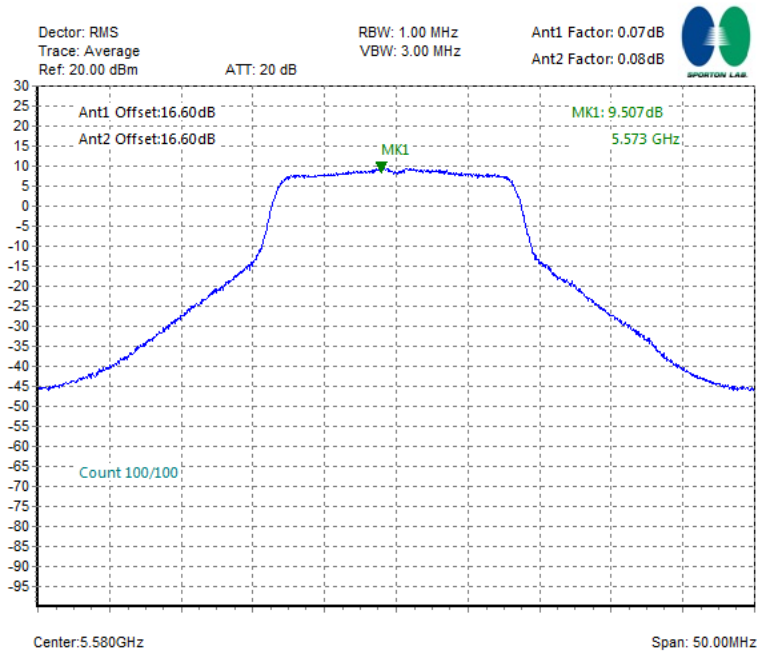
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

EIRP (dBm)	Field Strength at 3m (dBµV/m)
- 27	68.2

Note: The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBµV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

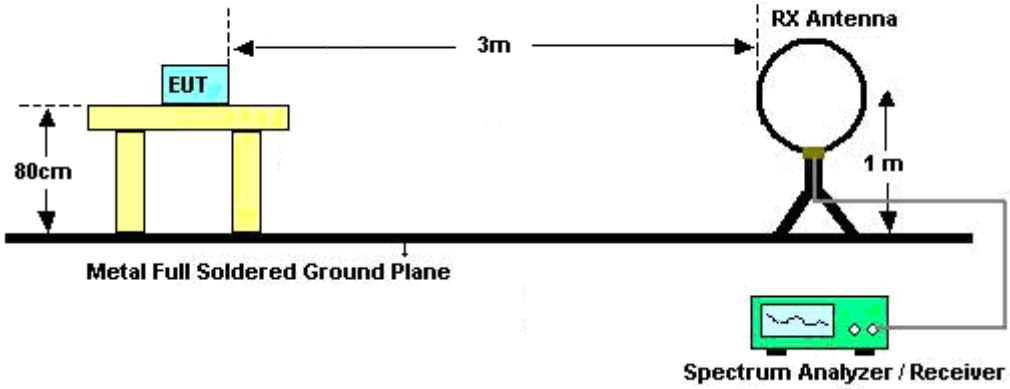
   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

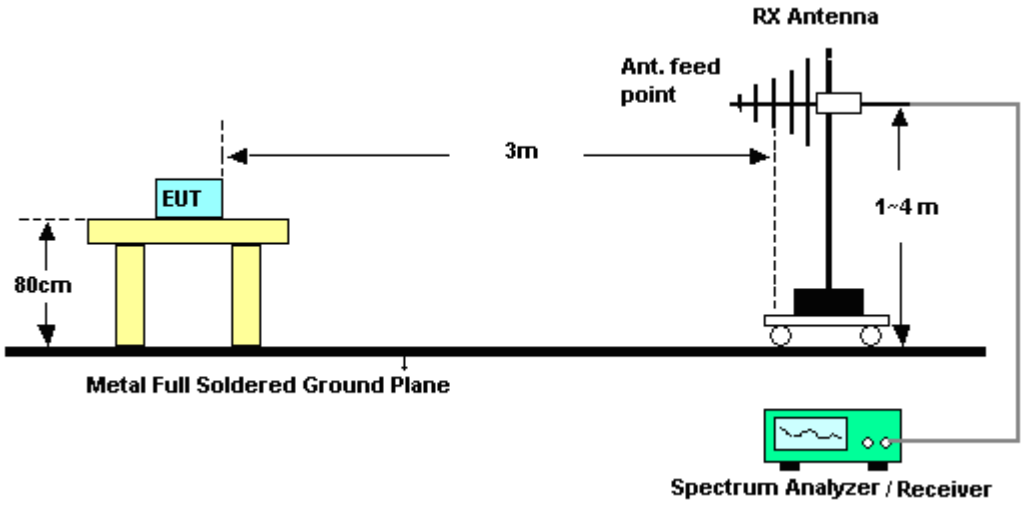
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

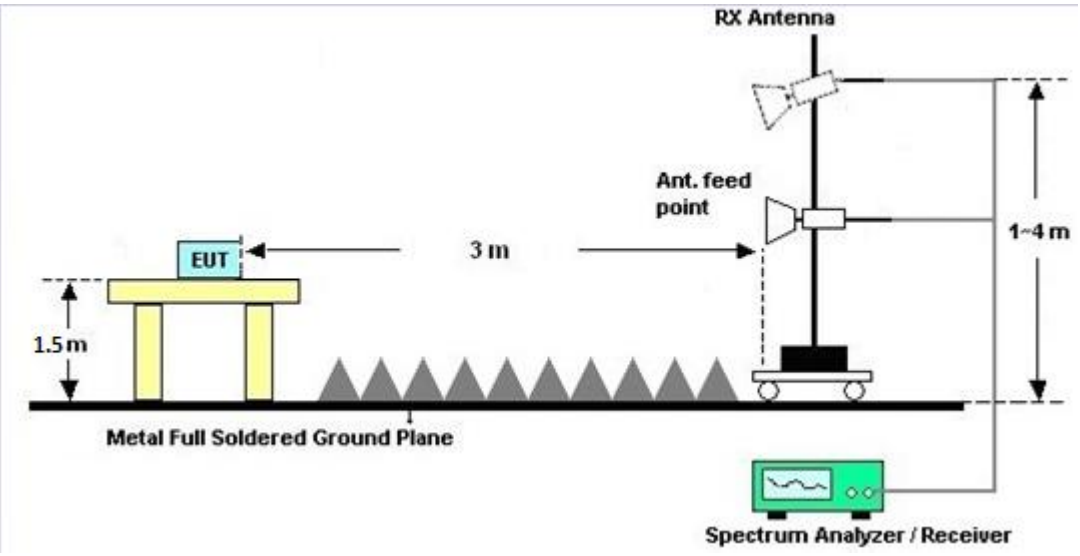
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

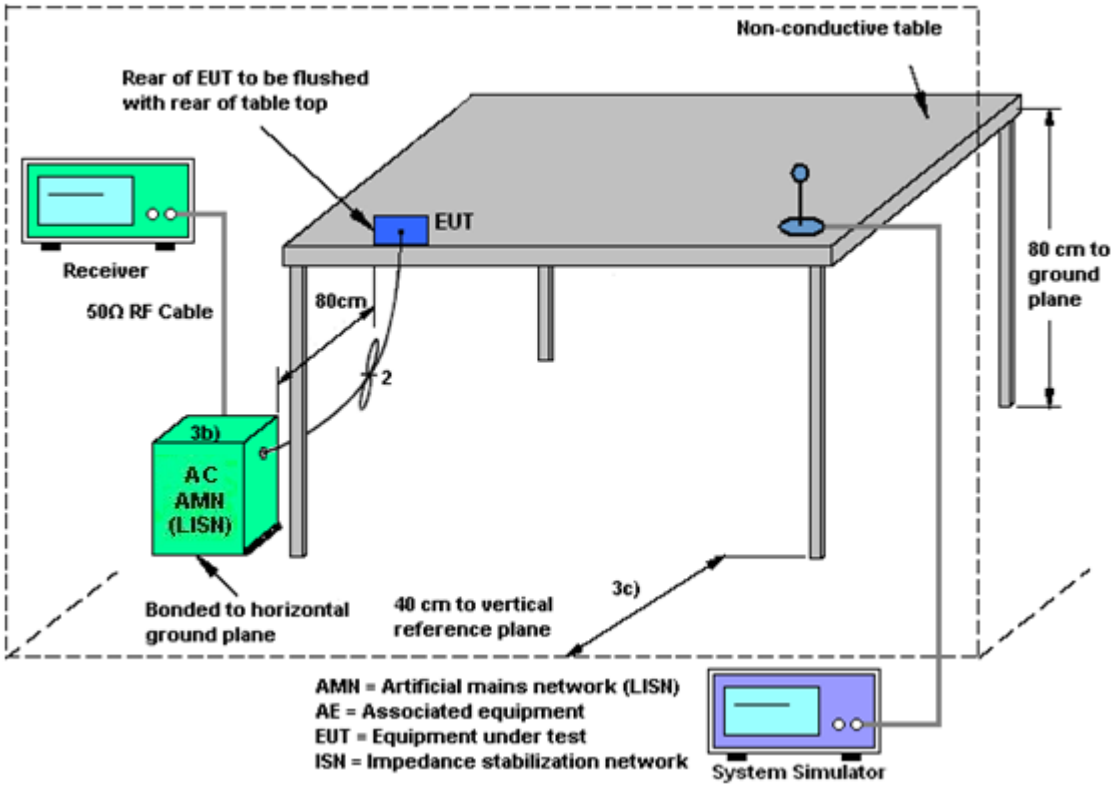
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

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

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain GANT is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

<CDD Modes>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	-3.00	-3.00	-3.00	0.01	0.00	0.00
Band II	-3.00	-3.00	-3.00	0.01	0.00	0.00
Band III	-3.00	-3.00	-3.00	0.01	0.00	0.00

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 18, 2019	Jul. 18, 2019~ Aug. 06, 2019	Apr. 17, 2020	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 22, 2018	Jul. 18, 2019~ Aug. 06, 2019	Dec. 21, 2019	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 22, 2018	Jul. 18, 2019~ Aug. 06, 2019	Dec. 21, 2019	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	Jul. 20, 2019~ Aug. 04, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 29, 2019	Jul. 20, 2019~ Aug. 04, 2019	May 28, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jun. 05, 2019	Jul. 20, 2019~ Aug. 04, 2019	Jun. 04, 2020	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 07, 2019	Jul. 20, 2019~ Aug. 04, 2019	Jan. 06, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 18, 2019	Jul. 20, 2019~ Aug. 04, 2019	Jul. 17, 2020	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Mar. 30, 2019	Jul. 20, 2019~ Aug. 04, 2019	Mar. 29, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2018	Jul. 20, 2019~ Aug. 04, 2019	Oct. 17, 2019	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1707137	1GHz~18GHz	Oct. 20, 2018	Jul. 20, 2019~ Aug. 04, 2019	Oct. 19, 2019	Radiation (03CH02-SZ)
Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 18, 2018	Jul. 20, 2019~ Aug. 04, 2019	Oct. 17, 2019	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 20, 2019~ Aug. 04, 2019	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 20, 2019~ Aug. 04, 2019	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 20, 2019~ Aug. 04, 2019	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 23, 2018	Jul. 23, 2019	Dec. 22, 2019	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 18, 2018	Jul. 23, 2019	Oct. 17, 2019	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Dec. 23, 2018	Jul. 23, 2019	Dec. 22, 2019	Conduction (CO01-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 23, 2019	NCR	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.6 dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.4dB**

Appendix A. Conducted Test Results

Report Number : FR970213-03E

Test Engineer:	Zhang Jiang	Temperature:	21~25	°C
Test Date:	2019/7/18~2019/08/06	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	17.48	17.53	23.03	21.98	-		22.43			
11a	6Mbps	2	44	5220	17.53	17.48	23.08	22.48	-		22.43			
11a	6Mbps	2	48	5240	17.53	17.53	23.73	22.58	-		22.44			
HT20	MCS0	2	36	5180	18.63	18.73	24.43	23.98	-		22.70			
HT20	MCS0	2	44	5220	18.68	18.73	24.38	23.38	-		22.71			
HT20	MCS0	2	48	5240	18.63	18.73	24.03	23.88	-		22.70			
HT40	MCS0	2	38	5190	36.56	36.46	41.72	41.81	-		23.01			
HT40	MCS0	2	46	5230	36.56	36.46	41.45	41.81	-		23.01			
VHT80	MCS0	2	42	5210	75.52	75.52	83.44	82.80	-		23.01			

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	0.07	0.08	15.11	16.00	18.59	24.00		-3.00			Pass
11a	6Mbps	2	44	5220	0.07	0.08	14.88	15.74	18.34	24.00		-3.00			Pass
11a	6Mbps	2	48	5240	0.07	0.08	14.90	15.78	18.37	24.00		-3.00			Pass
HT20	MCS0	2	36	5180	0.10	0.08	15.06	15.93	18.53	24.00		-3.00			Pass
HT20	MCS0	2	44	5220	0.10	0.08	14.77	15.63	18.23	24.00		-3.00			Pass
HT20	MCS0	2	48	5240	0.10	0.08	14.83	15.69	18.29	24.00		-3.00			Pass
HT40	MCS0	2	38	5190	0.17	0.16	15.04	15.96	18.54	24.00		-3.00			Pass
HT40	MCS0	2	46	5230	0.17	0.16	14.86	15.56	18.24	24.00		-3.00			Pass
VHT20	MCS0	2	36	5180	0.16	0.16	15.02	15.90	18.49	24.00		-3.00			Pass
VHT20	MCS0	2	44	5220	0.16	0.16	14.72	15.59	18.19	24.00		-3.00			Pass
VHT20	MCS0	2	48	5240	0.16	0.16	14.79	15.65	18.25	24.00		-3.00			Pass
VHT40	MCS0	2	38	5190	0.29	0.30	15.02	15.92	18.51	24.00		-3.00			Pass
VHT40	MCS0	2	46	5230	0.29	0.30	14.84	15.50	18.20	24.00		-3.00			Pass
VHT80	MCS0	2	42	5210	0.57	0.60	13.97	14.82	17.43	24.00		-3.00			Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	0.07	0.08			8.92	11.00		0.01			Pass
11a	6Mbps	2	44	5220	0.07	0.08			8.60	11.00		0.01			Pass
11a	6Mbps	2	48	5240	0.07	0.08			8.70	11.00		0.01			Pass
HT20	MCS0	2	36	5180	0.10	0.08			8.42	11.00		0.01			Pass
HT20	MCS0	2	44	5220	0.10	0.08			8.15	11.00		0.01			Pass
HT20	MCS0	2	48	5240	0.10	0.08			8.22	11.00		0.01			Pass
HT40	MCS0	2	38	5190	0.17	0.16			7.01	11.00		0.01			Pass
HT40	MCS0	2	46	5230	0.17	0.16			6.44	11.00		0.01			Pass
VHT80	MCS0	2	42	5210	0.57	0.60			2.71	11.00		0.01			Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	52	5260	17.53	17.53	23.28	22.58	23.44		29.44		23.98		
11a	6Mbps	2	60	5300	17.58	17.53	23.38	22.48	23.44		29.44		23.98		
11a	6Mbps	2	64	5320	17.58	17.53	23.58	22.58	23.44		29.44		23.98		
HT20	MCS0	2	52	5260	18.68	18.73	24.18	23.78	23.71		29.71		23.98		
HT20	MCS0	2	60	5300	18.68	18.73	23.93	23.48	23.71		29.71		23.98		
HT20	MCS0	2	64	5320	18.83	18.78	25.18	24.13	23.74		29.74		23.98		
HT40	MCS0	2	54	5270	36.66	36.46	41.63	41.90	23.98		30.00		23.98		
HT40	MCS0	2	62	5310	36.56	36.46	41.45	41.36	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.64	75.52	83.12	83.12	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	0.07	0.08	14.72	15.44	18.10	23.98		-3.00		26.99	Pass
11a	6Mbps	2	60	5300	0.07	0.08	14.65	15.57	18.14	23.98		-3.00		26.99	Pass
11a	6Mbps	2	64	5320	0.07	0.08	14.82	15.84	18.37	23.98		-3.00		26.99	Pass
HT20	MCS0	2	52	5260	0.10	0.08	14.72	15.48	18.13	23.98		-3.00		26.99	Pass
HT20	MCS0	2	60	5300	0.10	0.08	14.64	15.58	18.14	23.98		-3.00		26.99	Pass
HT20	MCS0	2	64	5320	0.10	0.08	14.70	15.61	18.19	23.98		-3.00		26.99	Pass
HT40	MCS0	2	54	5270	0.17	0.16	14.75	15.41	18.11	23.98		-3.00		26.99	Pass
HT40	MCS0	2	62	5310	0.17	0.16	14.67	15.39	18.06	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	52	5260	0.16	0.16	14.69	15.42	18.08	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	60	5300	0.16	0.16	14.58	15.55	18.10	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	64	5320	0.16	0.16	14.63	15.58	18.14	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	54	5270	0.29	0.30	14.74	15.35	18.07	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	62	5310	0.29	0.30	14.66	15.38	18.05	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	58	5290	0.57	0.60	14.07	14.80	17.46	23.98		-3.00		26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	0.07	0.08			8.20	11.00		0.01			Pass
11a	6Mbps	2	60	5300	0.07	0.08			8.62	11.00		0.01			Pass
11a	6Mbps	2	64	5320	0.07	0.08			8.78	11.00		0.01			Pass
HT20	MCS0	2	52	5260	0.10	0.08			7.82	11.00		0.01			Pass
HT20	MCS0	2	60	5300	0.10	0.08			7.66	11.00		0.01			Pass
HT20	MCS0	2	64	5320	0.10	0.08			7.61	11.00		0.01			Pass
HT40	MCS0	2	54	5270	0.17	0.16			6.02	11.00		0.01			Pass
HT40	MCS0	2	62	5310	0.17	0.16			6.46	11.00		0.01			Pass
VHT80	MCS0	2	58	5290	0.57	0.60			2.65	11.00		0.01			Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	100	5500	17.53	17.53	23.13	23.38	23.44		29.44		23.98		
11a	6Mbps	2	116	5580	17.53	17.58	23.33	23.23	23.44		29.44		23.98		
11a	6Mbps	2	140	5700	17.63	17.58	24.08	22.98	23.45		29.45		23.98		
11a	6Mbps	2	144	5720	17.63	17.58	24.18	22.78	23.45		29.45		23.98		
HT20	MCS0	2	100	5500	18.73	18.88	25.23	24.68	23.73		29.73		23.98		
HT20	MCS0	2	116	5580	18.88	18.68	24.93	24.68	23.71		29.71		23.98		
HT20	MCS0	2	140	5700	18.88	18.78	25.28	24.53	23.74		29.74		23.98		
HT20	MCS0	2	144	5720	18.83	18.78	25.23	24.98	23.74		29.74		23.98		
HT40	MCS0	2	102	5510	36.56	36.56	41.54	41.90	23.98		30.00		23.98		
HT40	MCS0	2	110	5550	36.66	36.46	41.63	41.63	23.98		30.00		23.98		
HT40	MCS0	2	134	5670	36.66	36.46	41.63	41.81	23.98		30.00		23.98		
HT40	MCS0	2	142	5710	36.66	36.46	41.72	41.81	23.98		30.00		23.98		
VHT80	MCS0	2	106	5530	75.64	75.52	82.96	82.80	23.98		30.00		23.98		
VHT80	MCS0	2	122	5610	75.64	75.52	83.12	82.80	23.98		30.00		23.98		
VHT80	MCS0	2	138	5690	75.64	75.52	83.76	83.12	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

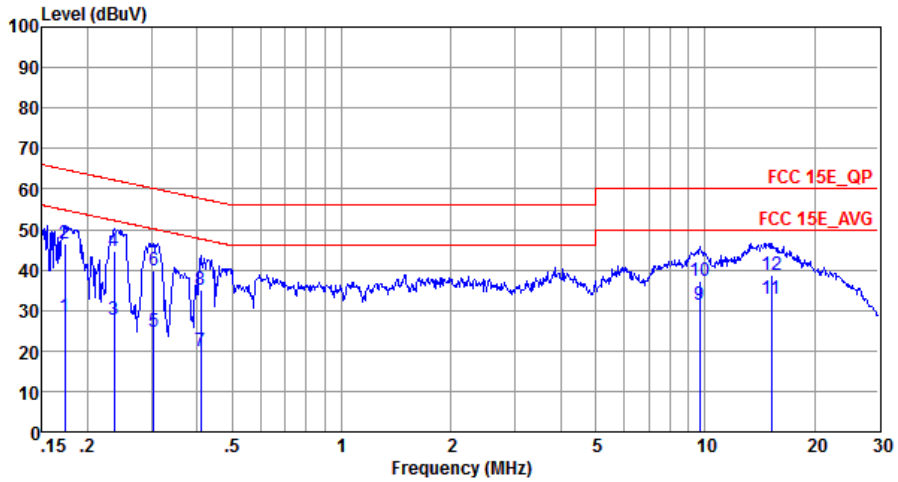
FCC Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	0.07	0.08	15.20	16.69	19.02	23.98		-3.00		26.99	Pass
11a	6Mbps	2	116	5580	0.07	0.08	15.10	17.08	19.21	23.98		-3.00		26.99	Pass
11a	6Mbps	2	140	5700	0.07	0.08	15.02	16.27	18.70	23.98		-3.00		26.99	Pass
11a	6Mbps	2	144	5720	0.07	0.08	14.84	16.15	18.55	23.98		-3.00		26.99	Pass
HT20	MCS0	2	100	5500	0.10	0.08	15.05	16.43	18.80	23.98		-3.00		26.99	Pass
HT20	MCS0	2	116	5580	0.10	0.08	14.99	17.00	19.12	23.98		-3.00		26.99	Pass
HT20	MCS0	2	140	5700	0.10	0.08	14.86	16.12	18.54	23.98		-3.00		26.99	Pass
HT20	MCS0	2	144	5720	0.10	0.08	14.66	16.07	18.43	23.98		-3.00		26.99	Pass
HT40	MCS0	2	102	5510	0.17	0.16	15.03	16.63	18.92	23.98		-3.00		26.99	Pass
HT40	MCS0	2	110	5550	0.17	0.16	15.20	17.04	19.23	23.98		-3.00		26.99	Pass
HT40	MCS0	2	134	5670	0.17	0.16	15.06	16.28	18.73	23.98		-3.00		26.99	Pass
HT40	MCS0	2	142	5710	0.17	0.16	14.88	15.98	18.48	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	100	5500	0.16	0.16	15.00	16.38	18.75	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	116	5580	0.16	0.16	14.98	16.96	19.09	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	140	5700	0.16	0.16	14.83	16.09	18.51	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	144	5720	0.16	0.16	14.63	16.06	18.41	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	102	5510	0.29	0.30	14.97	16.56	18.85	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	110	5550	0.29	0.30	15.18	17.00	19.20	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	134	5670	0.29	0.30	15.00	16.23	18.67	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	142	5710	0.29	0.30	14.84	15.94	18.44	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	106	5530	0.57	0.60	14.38	14.88	17.65	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	122	5610	0.57	0.60	14.52	15.00	17.78	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	138	5690	0.57	0.60	14.34	14.60	17.48	23.98		-3.00		26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	0.07	0.08			9.27	11.00		0.01			Pass
11a	6Mbps	2	116	5580	0.07	0.08			9.51	11.00		0.01			Pass
11a	6Mbps	2	140	5700	0.07	0.08			8.89	11.00		0.01			Pass
11a	6Mbps	2	144	5720	0.07	0.08			8.86	11.00		0.01			Pass
HT20	MCS0	2	100	5500	0.10	0.08			8.66	11.00		0.01			Pass
HT20	MCS0	2	116	5580	0.10	0.08			8.97	11.00		0.01			Pass
HT20	MCS0	2	140	5700	0.10	0.08			8.44	11.00		0.01			Pass
HT20	MCS0	2	144	5720	0.10	0.08			8.41	11.00		0.01			Pass
HT40	MCS0	2	102	5510	0.17	0.16			7.31	11.00		0.01			Pass
HT40	MCS0	2	110	5550	0.17	0.16			7.71	11.00		0.01			Pass
HT40	MCS0	2	134	5670	0.17	0.16			7.13	11.00		0.01			Pass
HT40	MCS0	2	142	5710	0.17	0.16			6.88	11.00		0.01			Pass
VHT80	MCS0	2	106	5530	0.57	0.60			3.80	11.00		0.01			Pass
VHT80	MCS0	2	122	5610	0.57	0.60			3.74	11.00		0.01			Pass
VHT80	MCS0	2	138	5690	0.57	0.60			3.55	11.00		0.01			Pass

Appendix B. AC Conducted Emission Test Results

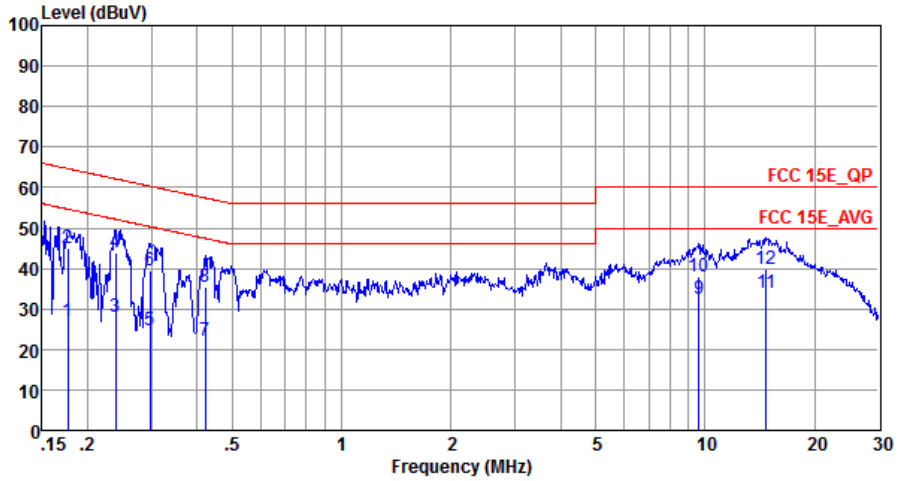
Test Engineer :	LiuDaLin	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20180719_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.17	28.59	-26.22	54.81	18.40	0.03	10.16	Average
2		0.17	46.59	-18.22	64.81	36.40	0.03	10.16	QP
3		0.24	27.49	-24.73	52.22	17.30	0.03	10.16	Average
4		0.24	44.79	-17.43	62.22	34.60	0.03	10.16	QP
5		0.30	24.60	-25.55	50.15	14.40	0.03	10.17	Average
6		0.30	39.80	-20.35	60.15	29.60	0.03	10.17	QP
7		0.41	19.80	-27.84	47.64	9.60	0.03	10.17	Average
8		0.41	35.20	-22.44	57.64	25.00	0.03	10.17	QP
9		9.65	31.50	-18.50	50.00	20.89	0.35	10.26	Average
10		9.65	37.40	-22.60	60.00	26.79	0.35	10.26	QP
11	*	15.23	33.00	-17.00	50.00	22.20	0.53	10.27	Average
12		15.23	38.90	-21.10	60.00	28.10	0.53	10.27	QP

Test Engineer :	LiuDaLin	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20180719_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.18	26.99	-27.65	54.64	16.80	0.03	10.16	Average
2		0.18	45.19	-19.45	64.64	35.00	0.03	10.16	QP
3		0.24	28.19	-23.94	52.13	18.00	0.03	10.16	Average
4		0.24	43.89	-18.24	62.13	33.70	0.03	10.16	QP
5		0.30	24.60	-25.72	50.32	14.40	0.03	10.17	Average
6		0.30	39.40	-20.92	60.32	29.20	0.03	10.17	QP
7		0.42	22.19	-25.23	47.42	12.00	0.02	10.17	Average
8		0.42	35.59	-21.83	57.42	25.40	0.02	10.17	QP
9		9.60	32.31	-17.69	50.00	21.90	0.15	10.26	Average
10		9.60	38.11	-21.89	60.00	27.70	0.15	10.26	QP
11	*	14.75	33.79	-16.21	50.00	23.20	0.32	10.27	Average
12		14.75	39.89	-20.11	60.00	29.30	0.32	10.27	QP

Appendix C. Radiated Spurious Emission

Test Engineer :	XiaoshiTan	**Temperature :**	24~25°C
		Relative Humidity :	48~49%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5148.2	48.05	-25.95	74	39.96	31.25	10.01	33.17	145	60	P	H
		5147.94	38.69	-15.31	54	30.6	31.25	10.01	33.17	145	60	A	H
	*	5180	100.65	-	-	92.5	31.28	10.03	33.16	145	60	P	H
		5180	94.43	-	-	86.28	31.28	10.03	33.16	145	60	A	H
		5451.04	46.2	-27.8	74	37.56	31.47	10.28	33.11	145	60	P	H
		5458.32	37.05	-16.95	54	28.41	31.47	10.28	33.11	145	60	A	H
		5103.22	49.29	-24.71	74	41.29	31.22	9.96	33.18	124	169	P	V
		5122.2	38.47	-15.53	54	30.43	31.23	9.98	33.17	124	169	A	V
	*	5180	97.41	-	-	89.26	31.28	10.03	33.16	124	169	P	V
		5180	90.2	-	-	82.05	31.28	10.03	33.16	124	169	A	V
		5457.2	46.1	-27.9	74	37.46	31.47	10.28	33.11	124	169	P	V
		5456.64	36.98	-17.02	54	28.34	31.47	10.28	33.11	124	169	A	V
802.11a CH 44 5220MHz		5011.7	48.37	-25.63	74	40.54	31.16	9.87	33.2	145	58	P	H
		5062.4	37.13	-16.87	54	29.22	31.19	9.91	33.19	145	58	P	H
	*	5220	101.84	-	-	93.63	31.3	10.07	33.16	145	58	P	H
		5220	95.33	-	-	87.12	31.3	10.07	33.16	145	58	A	H
		5389.2	46.05	-27.95	74	37.52	31.42	10.23	33.12	145	58	P	H
		5452.8	37.11	-16.89	54	28.47	31.47	10.28	33.11	145	58	A	H
		5036.66	48.3	-25.7	74	40.43	31.17	9.89	33.19	137	324	P	V
		5060.32	37.74	-16.26	54	29.83	31.19	9.91	33.19	137	324	P	V
	*	5220	98.12	-	-	89.91	31.3	10.07	33.16	137	324	P	V
		5220	89.48	-	-	81.27	31.3	10.07	33.16	137	324	A	V
		5436.96	45.99	-28.01	74	37.39	31.46	10.25	33.11	137	324	P	V
		5459.04	37.03	-16.97	54	28.39	31.47	10.28	33.11	137	324	A	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11a CH 48 5240MHz		5129.74	48.53	-25.47	74	40.48	31.24	9.98	33.17	148	62	P	H
		5057.2	37.7	-16.3	54	29.79	31.19	9.91	33.19	148	62	A	H
	*	5240	101.33	-	-	93.07	31.31	10.1	33.15	148	62	P	H
		5240	95.52	-	-	87.26	31.31	10.1	33.15	148	62	A	H
		5383	46.05	-27.95	74	37.54	31.42	10.21	33.12	148	62	P	H
		5452.72	37.05	-16.95	54	28.41	31.47	10.28	33.11	148	62	A	H
		5056.16	48.43	-25.57	74	40.52	31.19	9.91	33.19	148	333	P	V
		5061.1	37.91	-16.09	54	30	31.19	9.91	33.19	148	333	A	V
	*	5240	96.18	-	-	87.92	31.31	10.1	33.15	148	333	P	V
		5240	89.32	-	-	81.06	31.31	10.1	33.15	148	333	A	V
		5412.4	46.58	-27.42	74	38.03	31.44	10.23	33.12	148	333	P	V
		5458.32	37.02	-16.98	54	28.38	31.47	10.28	33.11	148	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	46.06	-22.14	68.2	50.63	39.84	14.58	58.99	152	260	P	H
		15540	47.24	-26.76	74	49.88	38.86	17.43	58.93	189	238	P	H
		10360	45.23	-22.97	68.2	49.8	39.84	14.58	58.99	152	260	P	V
		15540	47.72	-26.28	74	50.36	38.86	17.43	58.93	189	238	P	V
802.11a CH 44 5220MHz		10440	46.08	-22.12	68.2	50.42	39.93	14.65	58.92	150	230	P	H
		15660	47.43	-26.57	74	50.66	38.33	17.5	59.06	160	225	P	H
		10440	46.05	-22.15	68.2	50.39	39.93	14.65	58.92	150	230	P	V
		15660	47.96	-26.04	74	51.19	38.33	17.5	59.06	160	225	P	V
802.11a CH 48 5240MHz		10480	47.13	-21.07	68.2	51.33	39.99	14.67	58.86	150	289	P	H
		15720	46.69	-27.31	74	50.24	38.02	17.55	59.12	150	291	P	H
		10480	46.4	-21.8	68.2	50.6	39.99	14.67	58.86	150	289	P	V
		15720	45.15	-28.85	74	48.7	38.02	17.55	59.12	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5115.18	47.9	-26.1	74	39.87	31.23	9.98	33.18	124	67	P	H
		5138.32	39.61	-14.39	54	31.53	31.24	10.01	33.17	124	67	A	H
	*	5180	103.3	-	-	95.15	31.28	10.03	33.16	124	67	P	H
		5180	96.58	-	-	88.43	31.28	10.03	33.16	124	67	A	H
802.11n		5403.72	46.25	-27.75	74	37.71	31.43	10.23	33.12	124	67	P	H
HT20		5459.44	38.05	-15.95	54	29.41	31.47	10.28	33.11	124	67	A	H
CH 36		5014.3	48.11	-25.89	74	40.26	31.16	9.89	33.2	107	177	P	V
5180MHz		5131.82	39.2	-14.8	54	31.15	31.24	9.98	33.17	107	177	A	V
	*	5180	100.74	-	-	92.59	31.28	10.03	33.16	107	177	P	V
		5180	93.4	-	-	85.25	31.28	10.03	33.16	107	177	A	V
		5432.28	45.72	-28.28	74	37.12	31.46	10.25	33.11	107	177	P	V
		5449.08	37.82	-16.18	54	29.18	31.47	10.28	33.11	107	177	A	V
		5133.9	48.98	-25.02	74	40.93	31.24	9.98	33.17	174	71	P	H
		5075.14	38.98	-15.02	54	31.01	31.21	9.94	33.18	174	71	A	H
	*	5220	101.24	-	-	93.03	31.3	10.07	33.16	174	71	P	H
		5220	94.22	-	-	86.01	31.3	10.07	33.16	174	71	A	H
802.11n		5389.92	47	-27	74	38.47	31.42	10.23	33.12	174	71	P	H
HT20		5456.64	37.9	-16.1	54	29.26	31.47	10.28	33.11	174	71	A	H
CH 44		5114.4	47.51	-26.49	74	39.48	31.23	9.98	33.18	160	75	P	V
5220MHz		5119.08	38.84	-15.16	54	30.8	31.23	9.98	33.17	160	75	A	V
	*	5220	97.99	-	-	89.78	31.3	10.07	33.16	160	75	P	V
		5220	91.12	-	-	82.91	31.3	10.07	33.16	160	75	A	V
		5363.76	45.44	-28.56	74	36.95	31.41	10.21	33.13	160	75	P	V
		5438.64	37.7	-16.3	54	29.07	31.46	10.28	33.11	160	75	A	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
		5074.88	48.29	-25.71	74	40.32	31.21	9.94	33.18	208	63	P	H
		5118.3	39.14	-14.86	54	31.1	31.23	9.98	33.17	208	63	A	H
	*	5240	100.04	-	-	91.78	31.31	10.1	33.15	208	63	P	H
		5240	92.77	-	-	84.51	31.31	10.1	33.15	208	63	A	H
802.11n		5448.24	45.26	-28.74	74	36.62	31.47	10.28	33.11	208	63	P	H
HT20		5448	37.63	-16.37	54	28.99	31.47	10.28	33.11	208	63	A	H
CH 48		5093.08	47.92	-26.08	74	39.92	31.22	9.96	33.18	331	182	P	V
5240MHz		5062.4	38.98	-15.02	54	31.07	31.19	9.91	33.19	331	182	A	V
	*	5240	97.13	-	-	88.87	31.31	10.1	33.15	331	182	P	V
		5240	88.95	-	-	80.69	31.31	10.1	33.15	331	182	A	V
		5434.8	46.93	-27.07	74	38.33	31.46	10.25	33.11	331	182	P	V
		5456.64	37.74	-16.26	54	29.1	31.47	10.28	33.11	331	182	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10360	46.54	-21.66	68.2	51.11	39.84	14.58	58.99	152	260	P	H
HT20		15540	46.9	-27.1	74	49.54	38.86	17.43	58.93	189	238	P	H
CH 36		10360	46.85	-21.35	68.2	51.42	39.84	14.58	58.99	152	260	P	V
5180MHz		15540	46.27	-27.73	74	48.91	38.86	17.43	58.93	189	238	P	V
802.11n		10440	47.68	-20.52	68.2	52.02	39.93	14.65	58.92	150	230	P	H
HT20		15660	46.89	-27.11	74	50.12	38.33	17.5	59.06	160	225	P	H
CH 44		10440	46.89	-21.31	68.2	51.23	39.93	14.65	58.92	150	230	P	V
5220MHz		15660	47.08	-26.92	74	50.31	38.33	17.5	59.06	160	225	P	V
802.11n		10480	47.35	-20.85	68.2	51.55	39.99	14.67	58.86	150	289	P	H
HT20		15720	47.12	-26.88	74	50.67	38.02	17.55	59.12	150	291	P	H
CH 48		10480	47.33	-20.87	68.2	51.53	39.99	14.67	58.86	150	289	P	V
5240MHz		15720	46.92	-27.08	74	50.47	38.02	17.55	59.12	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.76	52.32	-21.68	74	44.23	31.25	10.01	33.17	155	50	P	H
		5150	44.4	-9.6	54	36.31	31.25	10.01	33.17	335	69	A	H
	*	5190	98.89	-	-	90.72	31.28	10.05	33.16	335	69	P	H
		5190	91.76	-	-	83.59	31.28	10.05	33.16	335	69	A	H
		5455.24	46.42	-27.58	74	37.78	31.47	10.28	33.11	335	69	P	H
		5456.64	38.53	-15.47	54	29.89	31.47	10.28	33.11	335	69	A	H
		5141.7	48.04	-25.96	74	39.95	31.25	10.01	33.17	252	198	P	V
		5146.38	41.1	-12.9	54	33.01	31.25	10.01	33.17	252	198	A	V
	*	5190	94.41	-	-	86.24	31.28	10.05	33.16	252	198	P	V
		5190	88.01	-	-	79.84	31.28	10.05	33.16	252	198	A	V
		5459.72	46.56	-27.44	74	37.92	31.47	10.28	33.11	252	198	P	V
		5450.48	38.42	-15.58	54	29.78	31.47	10.28	33.11	252	198	A	V
802.11n HT40 CH 46 5230MHz		5022.62	47.88	-26.12	74	40.01	31.17	9.89	33.19	210	148	P	H
		5088.66	39.83	-14.17	54	31.83	31.22	9.96	33.18	210	148	A	H
	*	5230	99.78	-	-	91.55	31.31	10.07	33.15	210	148	P	H
		5230	92.43	-	-	84.2	31.31	10.07	33.15	210	148	A	H
		5425.92	46.79	-27.21	74	38.21	31.44	10.25	33.11	210	148	P	H
		5460	38.52	-15.48	54	29.88	31.47	10.28	33.11	210	148	A	H
		5068.64	48.04	-25.96	74	40.09	31.19	9.94	33.18	252	198	P	V
		5053.56	39.75	-14.25	54	31.85	31.18	9.91	33.19	252	198	A	V
	*	5230	93.7	-	-	85.47	31.31	10.07	33.15	252	198	P	V
		5230	87.08	-	-	78.85	31.31	10.07	33.15	252	198	A	V
		5443.44	46.35	-27.65	74	37.72	31.46	10.28	33.11	252	198	P	V
		5457.84	38.54	-15.46	54	29.9	31.47	10.28	33.11	252	198	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10380	46.95	-21.25	68.2	51.46	39.87	14.59	58.97	150	360	P	H
HT40		15570	47.09	-26.91	74	49.91	38.71	17.44	58.97	155	360	P	H
CH 38		10380	46.41	-21.79	68.2	50.92	39.87	14.59	58.97	150	360	P	V
5190MHz		15570	47.02	-26.98	74	49.84	38.71	17.44	58.97	155	360	P	V
802.11n		10460	47.63	-20.57	68.2	51.93	39.95	14.65	58.9	150	360	P	H
HT40		15690	46.25	-27.75	74	49.64	38.17	17.53	59.09	150	225	P	H
CH 46		10460	46.74	-21.46	68.2	51.04	39.95	14.65	58.9	150	360	P	V
5230MHz		15690	46.19	-27.81	74	49.58	38.17	17.53	59.09	150	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5147.68	52.35	-21.65	74	44.26	31.25	10.01	33.17	251	58	P	H
		5147.68	47.29	-6.71	54	39.2	31.25	10.01	33.17	251	58	A	H
	*	5210	94.99	-	-	86.8	31.3	10.05	33.16	251	58	P	H
		5210	88.66	-	-	80.47	31.3	10.05	33.16	251	58	A	H
		5406.72	45.49	-28.51	74	36.95	31.43	10.23	33.12	251	58	P	H
		5413.92	39.45	-14.55	54	30.88	31.44	10.25	33.12	251	58	A	H
		5147.16	51.78	-22.22	74	43.69	31.25	10.01	33.17	355	107	P	V
		5148.2	45.3	-8.7	54	37.21	31.25	10.01	33.17	355	107	A	V
	*	5210	91.26	-	-	83.07	31.3	10.05	33.16	355	107	P	V
		5210	86.45	-	-	78.26	31.3	10.05	33.16	355	107	A	V
		5457.6	45.41	-28.59	74	36.77	31.47	10.28	33.11	355	107	P	V
		5384.16	39.42	-14.58	54	30.91	31.42	10.21	33.12	355	107	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10420	46.97	-21.23	68.2	51.36	39.91	14.63	58.93	150	230	P	H
VHT80		15630	46.29	-27.71	74	49.45	38.4	17.48	59.04	160	225	P	H
CH 42		10420	47.55	-20.65	68.2	51.94	39.91	14.63	58.93	150	230	P	V
5210MHz		15630	46.44	-27.56	74	49.6	38.4	17.48	59.04	160	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5139.1	47.88	-26.12	74	39.8	31.24	10.01	33.17	133	62	P	H
		5059.54	38.36	-15.64	54	30.45	31.19	9.91	33.19	133	62	A	H
	*	5260	101.16	-	-	92.87	31.34	10.1	33.15	133	62	P	H
		5260	94.49	-	-	86.2	31.34	10.1	33.15	133	62	A	H
		5383.68	48.08	-25.92	74	39.57	31.42	10.21	33.12	133	62	P	H
		5455.44	37.09	-16.91	54	28.45	31.47	10.28	33.11	133	62	A	H
		5061.36	47.76	-26.24	74	39.85	31.19	9.91	33.19	136	333	P	V
		5062.66	38.13	-15.87	54	30.19	31.19	9.94	33.19	136	333	A	V
	*	5260	93.57	-	-	85.28	31.34	10.1	33.15	136	333	P	V
		5260	88.64	-	-	80.35	31.34	10.1	33.15	136	333	A	V
		5428.08	45.76	-28.24	74	37.18	31.44	10.25	33.11	136	333	P	V
		5454.72	37	-17	54	28.36	31.47	10.28	33.11	136	333	A	V
802.11a CH 60 5300MHz		5026.95	48.74	-25.26	74	40.87	31.17	9.89	33.19	142	59	P	H
		5062.3	38.22	-15.78	54	30.31	31.19	9.91	33.19	142	59	A	H
	*	5300	101.8	-	-	93.44	31.36	10.14	33.14	142	59	P	H
		5300	93.71	-	-	85.35	31.36	10.14	33.14	142	59	A	H
		5434.8	46.6	-27.4	74	38	31.46	10.25	33.11	142	59	P	H
		5453.04	37.04	-16.96	54	28.4	31.47	10.28	33.11	142	59	A	H
		5026.95	48.84	-25.16	74	40.97	31.17	9.89	33.19	133	326	P	V
		5058.45	38.23	-15.77	54	30.32	31.19	9.91	33.19	133	326	A	V
	*	5300	93.1	-	-	84.74	31.36	10.14	33.14	133	326	P	V
		5300	88.5	-	-	80.14	31.36	10.14	33.14	133	326	A	V
		5448	47	-27	74	38.36	31.47	10.28	33.11	133	326	P	V
		5459.04	36.95	-17.05	54	28.31	31.47	10.28	33.11	133	326	A	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11a CH 64 5320MHz	*	5320	100.11	-	-	91.72	31.37	10.16	33.14	139	61	P	H
		5320	93.6	-	-	85.21	31.37	10.16	33.14	139	61	A	H
		5440.96	46.92	-27.08	74	38.29	31.46	10.28	33.11	139	61	P	H
		5351.04	37.46	-16.54	54	29	31.4	10.19	33.13	139	61	A	H
	*	5320	93.95	-	-	85.56	31.37	10.16	33.14	359	331	P	V
		5320	88.02	-	-	79.63	31.37	10.16	33.14	359	331	A	V
		5394.4	46.97	-27.03	74	38.44	31.42	10.23	33.12	359	331	P	V
		5453.28	37	-17	54	28.36	31.47	10.28	33.11	359	331	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	47	-21.2	68.2	51.09	40.03	14.7	58.82	150	220	P	H
		15780	46.76	-27.24	74	50.56	37.79	17.59	59.18	159	345	P	H
		10520	46.93	-21.27	68.2	51.02	40.03	14.7	58.82	150	220	P	V
		15780	46.64	-27.36	74	50.44	37.79	17.59	59.18	159	345	P	V
802.11a CH 60 5300MHz		10600	46.05	-27.95	74	49.89	40.13	14.76	58.73	185	215	P	H
		15900	45.87	-28.13	74	50.23	37.26	17.68	59.3	196	190	P	H
		10600	47.3	-26.7	74	51.14	40.13	14.76	58.73	185	215	P	V
		15900	46.22	-27.78	74	50.58	37.26	17.68	59.3	196	190	P	V
802.11a CH 64 5320MHz		10640	46.35	-27.65	74	50.08	40.17	14.79	58.69	152	135	P	H
		15960	45.3	-28.7	74	50.01	36.95	17.71	59.37	173	245	P	H
		10640	46.43	-27.57	74	50.16	40.17	14.79	58.69	152	135	P	V
		15960	45.06	-28.94	74	49.77	36.95	17.71	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5048.65	48.69	-25.31	74	40.79	31.18	9.91	33.19	279	325	P	H
		5110.6	39.14	-14.86	54	31.13	31.23	9.96	33.18	279	325	A	H
	*	5260	100.78	-	-	92.49	31.34	10.1	33.15	279	325	P	H
		5260	92.25	-	-	83.96	31.34	10.1	33.15	279	325	A	H
802.11n		5452.8	46.4	-27.6	74	37.76	31.47	10.28	33.11	279	325	P	H
HT20		5449.68	38.17	-15.83	54	29.53	31.47	10.28	33.11	279	325	A	H
CH 52		5120.4	48.52	-25.48	74	40.48	31.23	9.98	33.17	106	168	P	V
5260MHz		5093.45	39.03	-14.97	54	31.03	31.22	9.96	33.18	106	168	A	V
	*	5260	95.36	-	-	87.07	31.34	10.1	33.15	106	168	P	V
		5260	87.96	-	-	79.67	31.34	10.1	33.15	106	168	A	V
		5382.96	47.84	-26.16	74	39.33	31.42	10.21	33.12	106	168	P	V
		5459.52	37.88	-16.12	54	29.24	31.47	10.28	33.11	106	168	A	V
		5030.1	47.27	-26.73	74	39.4	31.17	9.89	33.19	151	328	P	H
		5022.4	39.12	-14.88	54	31.25	31.17	9.89	33.19	151	328	A	H
	*	5300	100.73	-	-	92.37	31.36	10.14	33.14	151	328	P	H
		5300	94.8	-	-	86.44	31.36	10.14	33.14	151	328	A	H
802.11n		5362.08	46.47	-27.53	74	38	31.41	10.19	33.13	151	328	P	H
HT20		5456.88	38.08	-15.92	54	29.44	31.47	10.28	33.11	151	328	A	H
CH 60		5143.15	47.53	-26.47	74	39.44	31.25	10.01	33.17	400	319	P	V
5300MHz		5080.15	39.04	-14.96	54	31.07	31.21	9.94	33.18	400	319	A	V
	*	5300	96.12	-	-	87.76	31.36	10.14	33.14	400	319	P	V
		5300	88.46	-	-	80.1	31.36	10.14	33.14	400	319	A	V
		5381.04	46.5	-27.5	74	37.99	31.42	10.21	33.12	400	319	P	V
		5456.4	37.97	-16.03	54	29.33	31.47	10.28	33.11	400	319	A	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
	*	5320	100.31	-	-	91.92	31.37	10.16	33.14	234	47	P	H
		5320	92.91	-	-	84.52	31.37	10.16	33.14	234	47	A	H
802.11n		5429.12	47.58	-26.42	74	38.98	31.46	10.25	33.11	234	47	P	H
HT20		5355.84	38.25	-15.75	54	29.79	31.4	10.19	33.13	234	47	A	H
CH 64	*	5320	93.29	-	-	84.9	31.37	10.16	33.14	400	337	P	V
5320MHz		5320	85.02	-	-	76.63	31.37	10.16	33.14	400	337	A	V
		5445.12	47.26	-26.74	74	38.63	31.46	10.28	33.11	400	337	P	V
		5454.88	37.82	-16.18	54	29.18	31.47	10.28	33.11	400	337	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10520	47.6	-20.6	68.2	51.69	40.03	14.7	58.82	150	220	P	H
HT20		15780	46.98	-27.02	74	50.78	37.79	17.59	59.18	159	345	P	H
CH 52		10520	46.1	-22.1	68.2	50.19	40.03	14.7	58.82	150	220	P	V
5260MHz		15780	46.57	-27.43	74	50.37	37.79	17.59	59.18	159	345	P	V
802.11n		10600	46.13	-27.87	74	49.97	40.13	14.76	58.73	185	215	P	H
HT20		15900	45.57	-28.43	74	49.93	37.26	17.68	59.3	196	190	P	H
CH 60		10600	47.15	-26.85	74	50.99	40.13	14.76	58.73	185	215	P	V
5300MHz		15900	46.61	-27.39	74	50.97	37.26	17.68	59.3	196	190	P	V
802.11n		10640	46.85	-27.15	74	50.58	40.17	14.79	58.69	152	135	P	H
HT20		15960	46.18	-27.82	74	50.89	36.95	17.71	59.37	173	245	P	H
CH 64		10640	46.96	-27.04	74	50.69	40.17	14.79	58.69	152	135	P	V
5320MHz		15960	46.22	-27.78	74	50.93	36.95	17.71	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5131.25	48.69	-25.31	74	40.64	31.24	9.98	33.17	285	301	P	H
		5068.25	40.03	-13.97	54	32.08	31.19	9.94	33.18	285	301	A	H
	*	5270	99.33	-	-	91.02	31.34	10.12	33.15	285	301	P	H
		5270	93.91	-	-	85.6	31.34	10.12	33.15	285	301	A	H
802.11n		5432.88	47.3	-26.7	74	38.7	31.46	10.25	33.11	285	301	P	H
HT40		5453.52	38.74	-15.26	54	30.1	31.47	10.28	33.11	285	301	A	H
CH 54		5032.55	48.17	-25.83	74	40.3	31.17	9.89	33.19	150	67	P	V
5270MHz		5092.75	39.96	-14.04	54	31.96	31.22	9.96	33.18	150	67	A	V
	*	5270	93.11	-	-	84.8	31.34	10.12	33.15	150	67	P	V
		5270	86.61	-	-	78.3	31.34	10.12	33.15	150	67	A	V
		5451.12	46.44	-27.56	74	37.8	31.47	10.28	33.11	150	67	P	V
		5456.4	38.61	-15.39	54	29.97	31.47	10.28	33.11	150	67	A	V
		5005.6	48.16	-25.84	74	40.33	31.16	9.87	33.2	236	64	P	H
		5079.45	39.81	-14.19	54	31.84	31.21	9.94	33.18	236	64	A	H
	*	5310	98.34	-	-	89.97	31.37	10.14	33.14	236	64	P	H
		5310	90.87	-	-	82.5	31.37	10.14	33.14	236	64	A	H
802.11n		5351.52	46.89	-27.11	74	38.43	31.4	10.19	33.13	236	64	P	H
HT40		5350.32	40.01	-13.99	54	31.55	31.4	10.19	33.13	236	64	A	H
CH 62		5100.1	48.66	-25.34	74	40.66	31.22	9.96	33.18	338	178	P	V
5310MHz		5072.8	39.8	-14.2	54	31.83	31.21	9.94	33.18	338	178	A	V
	*	5310	92.62	-	-	84.25	31.37	10.14	33.14	338	178	P	V
		5310	86.62	-	-	78.25	31.37	10.14	33.14	338	178	A	V
		5387.52	46.97	-27.03	74	38.44	31.42	10.23	33.12	338	178	P	V
		5456.4	38.61	-15.39	54	29.97	31.47	10.28	33.11	150	67	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10540	46.19	-22.01	68.2	50.22	40.05	14.72	58.8	150	220	P	H
HT40		15810	46.5	-27.5	74	50.46	37.64	17.61	59.21	168	345	P	H
CH 54		10540	46.77	-21.43	68.2	50.8	40.05	14.72	58.8	150	220	P	V
5270MHz		15810	47.38	-26.62	74	51.34	37.64	17.61	59.21	168	345	P	V
802.11n		10620	47.12	-26.88	74	50.9	40.15	14.78	58.71	150	220	P	H
HT40		15930	46.34	-27.66	74	50.86	37.11	17.7	59.33	160	100	P	H
CH 62		10620	46.54	-27.46	74	50.32	40.15	14.78	58.71	150	220	P	V
5310MHz		15930	46.83	-27.17	74	51.35	37.11	17.7	59.33	160	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5059.8	47.78	-26.22	74	39.87	31.19	9.91	33.19	249	58	P	H
		5014.3	41.21	-12.79	54	33.36	31.16	9.89	33.2	249	58	A	H
	*	5290	95.73	-	-	87.38	31.35	10.14	33.14	249	58	P	H
		5290	87.56	-	-	79.21	31.35	10.14	33.14	249	58	A	H
		5350.32	50.58	-23.42	74	42.12	31.4	10.19	33.13	249	58	P	H
		5352.96	45.11	-8.89	54	36.65	31.4	10.19	33.13	249	58	A	H
		5120.12	48.17	-25.83	74	40.13	31.23	9.98	33.17	343	126	P	V
		5017.42	41.32	-12.68	54	33.46	31.16	9.89	33.19	343	126	A	V
	*	5290	90.96	-	-	82.61	31.35	10.14	33.14	343	126	P	V
		5290	81.94	-	-	73.59	31.35	10.14	33.14	343	126	A	V
		5355.12	47.91	-26.09	74	39.45	31.4	10.19	33.13	343	126	P	V
		5360.88	40.97	-13.03	54	32.5	31.41	10.19	33.13	343	126	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10580	46.56	-21.64	68.2	50.46	40.11	14.74	58.75	160	360	P	H
VHT80		15870	47.87	-26.13	74	52.16	37.33	17.66	59.28	160	0	P	H
CH 58		10580	46	-22.2	68.2	49.9	40.11	14.74	58.75	160	360	P	V
5290MHz		15870	46.75	-27.25	74	51.04	37.33	17.66	59.28	160	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5455.44	47.49	-26.51	74	38.85	31.47	10.28	33.11	227	54	P	H
		5466	47.42	-20.78	68.2	38.75	31.48	10.3	33.11	227	54	P	H
		5459.92	37.65	-16.35	54	29.01	31.47	10.28	33.11	227	54	A	H
	*	5500	100.22	-	-	91.5	31.5	10.32	33.1	227	54	P	H
		5500	94.93	-	-	86.21	31.5	10.32	33.1	227	54	A	H
		5435.76	46.01	-27.99	74	37.41	31.46	10.25	33.11	387	334	P	V
		5467.6	45.01	-23.19	68.2	36.34	31.48	10.3	33.11	387	334	P	V
		5459.44	37.09	-16.91	54	28.45	31.47	10.28	33.11	387	334	A	V
	*	5500	95.12	-	-	86.4	31.5	10.32	33.1	387	334	P	V
		5500	89.78	-	-	81.06	31.5	10.32	33.1	387	334	A	V
802.11a CH 116 5580MHz		5457.52	46.94	-27.06	74	38.3	31.47	10.28	33.11	131	57	P	H
		5463.28	45.13	-23.07	68.2	36.46	31.48	10.3	33.11	131	57	P	H
		5459.68	37.1	-16.9	54	28.46	31.47	10.28	33.11	131	57	A	H
	*	5580	101.08	-	-	92.24	31.55	10.39	33.1	131	57	P	H
		5580	94.53	-	-	85.69	31.55	10.39	33.1	131	57	A	H
		5753.03	47.42	-20.78	68.2	38.1	31.87	10.55	33.1	131	57	P	H
		5360.56	46.98	-27.02	74	38.51	31.41	10.19	33.13	372	345	P	V
		5460.16	45.12	-23.08	68.2	36.48	31.47	10.28	33.11	372	345	P	V
		5457.28	37.04	-16.96	54	28.4	31.47	10.28	33.11	372	345	A	V
	*	5580	97.61	-	-	88.77	31.55	10.39	33.1	372	345	P	V
		5580	90.09	-	-	81.25	31.55	10.39	33.1	372	345	A	V
		5754.29	47.24	-20.96	68.2	37.92	31.87	10.55	33.1	372	345	P	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11a CH 140 5700MHz	*	5700	102.63	-	-	93.51	31.72	10.5	33.1	124	55	P	H
		5700	95.64	-	-	86.52	31.72	10.5	33.1	124	55	A	H
		5727.48	48.44	-19.76	68.2	39.23	31.79	10.52	33.1	124	55	P	H
	*	5700	94.24	-	-	85.12	31.72	10.5	33.1	336	305	P	V
		5700	89.27	-	-	80.15	31.72	10.5	33.1	336	305	A	V
		5726.2	48.27	-19.93	68.2	39.06	31.79	10.52	33.1	336	305	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	47.21	-26.79	74	49.87	40.59	15.05	58.3	163	230	P	H
		16500	46.6	-21.6	68.2	48.69	38.94	17.81	58.84	178	296	P	H
		11000	47.6	-26.4	74	50.26	40.59	15.05	58.3	163	230	P	V
		16500	46.44	-21.76	68.2	48.53	38.94	17.81	58.84	178	296	P	V
802.11a CH 116 5580MHz		11160	46.31	-27.69	74	48.5	40.8	15.12	58.11	170	200	P	H
		16740	46.95	-21.25	68.2	47.77	39.93	17.83	58.58	156	350	P	H
		11160	46.54	-27.46	74	48.73	40.8	15.12	58.11	170	200	P	V
		16740	47.48	-20.72	68.2	48.3	39.93	17.83	58.58	156	350	P	V
802.11a CH 140 5700MHz		11400	47.28	-26.72	74	48.82	41.08	15.23	57.85	157	285	P	H
		17100	47.37	-20.83	68.2	46.01	41.6	17.92	58.16	165	246	P	H
		11400	46.68	-27.32	74	48.22	41.08	15.23	57.85	157	285	P	V
		17100	47.22	-20.98	68.2	45.86	41.6	17.92	58.16	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5438.64	46.36	-27.64	74	37.73	31.46	10.28	33.11	229	66	P	H
		5462	46.95	-21.25	68.2	38.31	31.47	10.28	33.11	229	66	P	H
		5455.6	38.19	-15.81	54	29.55	31.47	10.28	33.11	229	66	A	H
802.11n	*	5500	99.6	-	-	90.88	31.5	10.32	33.1	229	66	P	H
HT20		5500	91.41	-	-	82.69	31.5	10.32	33.1	229	66	A	H
CH 100		5441.04	46.48	-27.52	74	37.85	31.46	10.28	33.11	196	316	P	V
5500MHz		5463.76	45.28	-22.92	68.2	36.61	31.48	10.3	33.11	229	66	P	V
		5459.6	38	-16	54	29.36	31.47	10.28	33.11	196	316	A	V
	*	5500	93.03	-	-	84.31	31.5	10.32	33.1	196	316	P	V
		5500	87.17	-	-	78.45	31.5	10.32	33.1	196	216	A	V
		5442.4	46.22	-27.78	74	37.59	31.46	10.28	33.11	140	98	P	H
		5469.28	45.69	-22.51	68.2	37.02	31.48	10.3	33.11	140	98	P	H
		5456.56	37.91	-16.09	54	29.27	31.47	10.28	33.11	140	98	A	H
	*	5580	101.63	-	-	92.79	31.55	10.39	33.1	140	98	P	H
802.11n		5580	94.47	-	-	85.63	31.55	10.39	33.1	140	98	A	H
HT20		5755.23	46.83	-21.37	68.2	37.51	31.87	10.55	33.1	140	98	P	H
CH 116		5444.32	47.73	-26.27	74	39.1	31.46	10.28	33.11	145	203	P	V
5580MHz		5463.76	45.63	-22.57	68.2	36.96	31.48	10.3	33.11	145	203	P	V
		5446.48	37.75	-16.25	54	29.11	31.47	10.28	33.11	145	203	A	V
	*	5580	93.11	-	-	84.27	31.55	10.39	33.1	145	203	P	V
		5580	86.38	-	-	77.54	31.55	10.39	33.1	145	203	A	V
		5742.63	47.09	-21.11	68.2	37.81	31.83	10.55	33.1	145	203	P	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
	*	5700	99.95	-	-	90.83	31.72	10.5	33.1	336	205	P	H
802.11n		5700	92.7	-	-	83.58	31.72	10.5	33.1	336	205	A	H
HT20		5728.52	47.4	-20.8	68.2	38.19	31.79	10.52	33.1	336	205	P	H
CH 140	*	5700	95.99	-	-	86.87	31.72	10.5	33.1	248	154	P	V
5700MHz		5700	88.74	-	-	79.62	31.72	10.5	33.1	248	154	A	V
		5763.4	47.16	-21.04	68.2	37.82	31.87	10.57	33.1	248	154	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		11000	46.84	-27.16	74	49.5	40.59	15.05	58.3	163	230	P	H
HT20		16500	46.73	-21.47	68.2	48.82	38.94	17.81	58.84	178	296	P	H
CH 100		11000	47.33	-26.67	74	49.99	40.59	15.05	58.3	163	230	P	V
5500MHz		16500	47.16	-21.04	68.2	49.25	38.94	17.81	58.84	178	296	P	V
802.11n		11160	46.02	-27.98	74	48.21	40.8	15.12	58.11	170	200	P	H
HT20		16740	47.71	-20.49	68.2	48.53	39.93	17.83	58.58	156	350	P	H
CH 116		11160	46.94	-27.06	74	49.13	40.8	15.12	58.11	170	200	P	V
5580MHz		16740	46	-22.2	68.2	46.82	39.93	17.83	58.58	156	350	P	V
802.11n		11400	46.34	-27.66	74	47.88	41.08	15.23	57.85	157	285	P	H
HT20		17100	47.48	-20.72	68.2	46.12	41.6	17.92	58.16	165	246	P	H
CH 140		11400	46.67	-27.33	74	48.21	41.08	15.23	57.85	157	285	P	V
5700MHz		17100	46.88	-21.32	68.2	45.52	41.6	17.92	58.16	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5414.8	45.76	-28.24	74	37.19	31.44	10.25	33.12	112	57	P	H
		5467.12	51.98	-16.22	68.2	43.31	31.48	10.3	33.11	112	57	P	H
		5458.24	39.14	-14.86	54	30.5	31.47	10.28	33.11	112	57	A	H
	*	5510	98.12	-	-	89.4	31.5	10.32	33.1	112	57	P	H
802.11n		5510	89.93	-	-	81.21	31.5	10.32	33.1	112	57	A	H
HT40		5735.39	47.76	-20.44	68.2	38.51	31.83	10.52	33.1	112	57	P	H
CH 102		5422.96	46.51	-27.49	74	37.94	31.44	10.25	33.12	387	325	P	V
5510MHz		5466.88	48.23	-19.97	68.2	39.56	31.48	10.3	33.11	387	325	P	V
		5459.92	38.37	-15.63	54	29.73	31.47	10.28	33.11	387	325	A	V
	*	5510	92.91	-	-	84.19	31.5	10.32	33.1	387	325	P	V
		5510	86.31	-	-	77.59	31.5	10.32	33.1	387	325	A	V
		5752.715	46.59	-21.61	68.2	37.27	31.87	10.55	33.1	387	325	P	V
		5435.92	46.18	-27.82	74	37.58	31.46	10.25	33.11	236	58	P	H
		5465.92	45.74	-22.46	68.2	37.07	31.48	10.3	33.11	236	58	P	H
		5449.84	38.6	-15.4	54	29.96	31.47	10.28	33.11	236	58	A	H
	*	5550	98.14	-	-	89.34	31.54	10.36	33.1	236	58	P	H
802.11n		5550	89.87	-	-	81.07	31.54	10.36	33.1	236	58	A	H
HT40		5747.67	46.07	-22.13	68.2	36.79	31.83	10.55	33.1	236	58	P	H
CH 110		5449.12	45.26	-28.74	74	36.62	31.47	10.28	33.11	384	329	P	V
5550MHz		5468.8	44.75	-23.45	68.2	36.08	31.48	10.3	33.11	384	329	P	V
		5450.56	38.23	-15.77	54	29.59	31.47	10.28	33.11	384	329	A	V
	*	5550	91.34	-	-	82.54	31.54	10.36	33.1	384	329	P	V
		5550	85.16	-	-	76.36	31.54	10.36	33.1	384	329	A	V
		5738.85	47.22	-20.98	68.2	37.94	31.83	10.55	33.1	384	329	P	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
		5431.2	45.8	-28.2	74	37.2	31.46	10.25	33.11	230	60	P	H
		5466.9	46.81	-21.39	68.2	38.14	31.48	10.3	33.11	230	60	P	H
		5448	38.43	-15.57	54	29.79	31.47	10.28	33.11	230	60	A	H
	*	5670	98.86	-	-	89.8	31.68	10.48	33.1	230	60	P	H
802.11n		5670	90.61	-	-	81.55	31.68	10.48	33.1	230	60	A	H
HT40		5726.67	47.99	-20.21	68.2	38.78	31.79	10.52	33.1	230	60	P	H
CH 134		5453.6	46.37	-27.63	74	37.73	31.47	10.28	33.11	381	318	P	V
5670MHz		5466.9	44.18	-24.02	68.2	35.51	31.48	10.3	33.11	381	318	P	V
		5459.9	38.12	-15.88	54	29.48	31.47	10.28	33.11	381	318	P	V
	*	5670	93.61	-	-	84.55	31.68	10.48	33.1	381	318	P	V
		5670	86	-	-	76.94	31.68	10.48	33.1	381	318	A	V
		5740.15	48.02	-20.18	68.2	38.74	31.83	10.55	33.1	381	318	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		11020	46.71	-27.29	74	49.32	40.61	15.06	58.28	170	230	P	H
HT40		16530	46.23	-21.97	68.2	48.14	39.08	17.81	58.8	160	300	P	H
CH 102		11020	46.15	-27.85	74	48.76	40.61	15.06	58.28	170	230	P	V
5510MHz		16530	46.75	-21.45	68.2	48.66	39.08	17.81	58.8	160	300	P	V
802.11n		11100	47.11	-26.89	74	49.49	40.71	15.1	58.19	150	200	P	H
HT40		16650	46.15	-22.05	68.2	47.42	39.58	17.82	58.67	180	350	P	H
CH 110		11100	47.13	-26.87	74	49.51	40.71	15.1	58.19	150	200	P	V
5550MHz		16650	46.43	-21.77	68.2	47.7	39.58	17.82	58.67	180	350	P	V
802.11n		11340	47.42	-26.58	74	49.14	41	15.21	57.93	200	360	P	H
HT40		17010	46.53	-21.67	68.2	45.85	41.1	17.86	58.28	200	360	P	H
CH 134		11340	47.26	-26.74	74	48.98	41	15.21	57.93	200	360	P	V
5670MHz		17010	46.83	-21.37	68.2	46.15	41.1	17.86	58.28	200	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5458.48	51.53	-22.47	74	42.89	31.47	10.28	33.11	223	70	P	H
		5467.36	53.2	-15	68.2	44.53	31.48	10.3	33.11	223	70	P	H
		5452.72	45.72	-8.28	54	37.08	31.47	10.28	33.11	223	70	A	H
	*	5530	94.6	-	-	85.84	31.52	10.34	33.1	223	70	P	H
802.11ac		5530	84.91	-	-	76.15	31.52	10.34	33.1	223	70	A	H
VHT80		5733.81	47.23	-20.97	68.2	38.02	31.79	10.52	33.1	223	70	P	H
CH 106		5456.56	48.24	-25.76	74	39.6	31.47	10.28	33.11	384	342	P	V
5530MHz		5469.76	47.99	-20.21	68.2	39.32	31.48	10.3	33.11	384	342	P	V
		5453.44	42.18	-11.82	54	33.54	31.47	10.28	33.11	384	342	A	V
	*	5530	88.17	-	-	79.41	31.52	10.34	33.1	384	342	P	V
		5530	81.02	-	-	72.26	31.52	10.34	33.1	384	342	A	V
		5741.69	47.72	-20.48	68.2	38.44	31.83	10.55	33.1	384	342	P	V
		5454.64	45.56	-28.44	74	36.92	31.47	10.28	33.11	223	59	P	H
		5468.32	46.15	-22.05	68.2	37.48	31.48	10.3	33.11	223	59	P	H
		5452.96	39.46	-14.54	54	30.82	31.47	10.28	33.11	223	59	A	H
	*	5610	93.95	-	-	85.06	31.58	10.41	33.1	223	59	P	H
802.11ac		5610	85.47	-	-	76.58	31.58	10.41	33.1	223	59	A	H
VHT80		5742.07	47.63	-20.57	68.2	38.35	31.83	10.55	33.1	223	59	P	H
CH 122		5410.72	46.46	-27.54	74	37.92	31.43	10.23	33.12	233	359	P	V
5610MHz		5465.2	45.39	-22.81	68.2	36.72	31.48	10.3	33.11	233	359	P	V
		5458.24	39.43	-14.57	54	30.79	31.47	10.28	33.11	233	359	A	V
	*	5610	87.1	-	-	78.21	31.58	10.41	33.1	233	359	P	V
		5610	79.95	-	-	71.06	31.58	10.41	33.1	233	359	A	V
		5759.92	46.52	-21.68	68.2	37.2	31.87	10.55	33.1	233	359	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11060	46.05	-27.95	74	48.54	40.67	15.07	58.23	150	200	P	H
VHT80		16590	46.34	-21.86	68.2	47.98	39.29	17.82	58.75	180	350	P	H
CH 106		11060	47.1	-26.9	74	49.59	40.67	15.07	58.23	150	200	P	V
5530MHz		16590	46.59	-21.61	68.2	48.23	39.29	17.82	58.75	180	350	P	V
802.11ac		11220	46.47	-27.53	74	48.52	40.86	15.15	58.06	200	360	P	H
VHT80		16830	46.78	-21.42	68.2	47.14	40.29	17.84	58.49	200	360	P	H
CH 122		11220	46.89	-27.11	74	48.94	40.86	15.15	58.06	200	360	P	V
5610MHz		16830	46.57	-21.63	68.2	46.93	40.29	17.84	58.49	200	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11a (*Harmonic @ 3m*)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 144 5720MHz		11440	46.38	-27.62	74	47.83	41.12	15.25	57.82	157	285	P	H
		17160	47.44	-20.76	68.2	45.55	42	17.95	58.06	165	246	P	H
		11440	47.16	-26.84	74	48.61	41.12	15.25	57.82	157	285	P	V
		17160	46.96	-21.24	68.2	45.07	42	17.95	58.06	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11n HT20 (*Harmonic* @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		11440	46.85	-27.15	74	48.3	41.12	15.25	57.82	157	285	P	H
HT20		17160	46.72	-21.48	68.2	44.83	42	17.95	58.06	165	246	P	H
CH 144		11440	47.51	-26.49	74	48.96	41.12	15.25	57.82	157	285	P	V
5720MHz		17160	47.01	-21.19	68.2	45.12	42	17.95	58.06	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11n HT40 (*Harmonic* @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		11420	47.05	-26.95	74	48.54	41.1	15.24	57.83	157	285	P	H
HT40		17130	47.08	-21.12	68.2	45.45	41.8	17.94	58.11	165	246	P	H
CH 142		11420	46.35	-27.65	74	47.84	41.1	15.24	57.83	157	285	P	V
5710MHz		17130	47.02	-21.18	68.2	45.39	41.8	17.94	58.11	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (*Harmonic* @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11380	47.36	-26.64	74	48.95	41.06	15.22	57.87	157	285	P	H
VHT80		17070	46.71	-21.49	68.2	45.61	41.4	17.91	58.21	165	246	P	H
CH 138		11380	47.35	-26.65	74	48.94	41.06	15.22	57.87	157	285	P	V
5690MHz		17070	47.04	-21.16	68.2	45.94	41.4	17.91	58.21	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 LF		30	25.93	-14.07	40	31.87	24.8	0.56	31.3	100	0	P	H
		80.44	20.97	-19.03	40	38.24	13.4	0.93	31.6	-	-	P	H
		131.85	23.67	-19.83	43.5	36.5	17.46	1.19	31.48	-	-	P	H
		231.76	23.61	-22.39	46	36.96	16.62	1.59	31.56	-	-	P	H
		331.67	23.52	-22.48	46	32.77	20.17	1.92	31.34	-	-	P	H
		882.63	29.15	-16.85	46	28.42	28.91	3.28	31.46	-	-	P	H
		30	29.55	-10.45	40	35.49	24.8	0.56	31.3	100	42	P	V
		81.41	22.58	-17.42	40	39.7	13.54	0.94	31.6	-	-	P	V
		130.88	26.88	-16.62	43.5	39.72	17.45	1.19	31.48	-	-	P	V
		240.49	24.51	-21.49	46	36.88	17.64	1.62	31.63	-	-	P	V
		566.41	26.83	-19.17	46	30.5	25.15	2.59	31.41	-	-	P	V
		912.7	29.86	-16.14	46	28.77	29.2	3.34	31.45	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

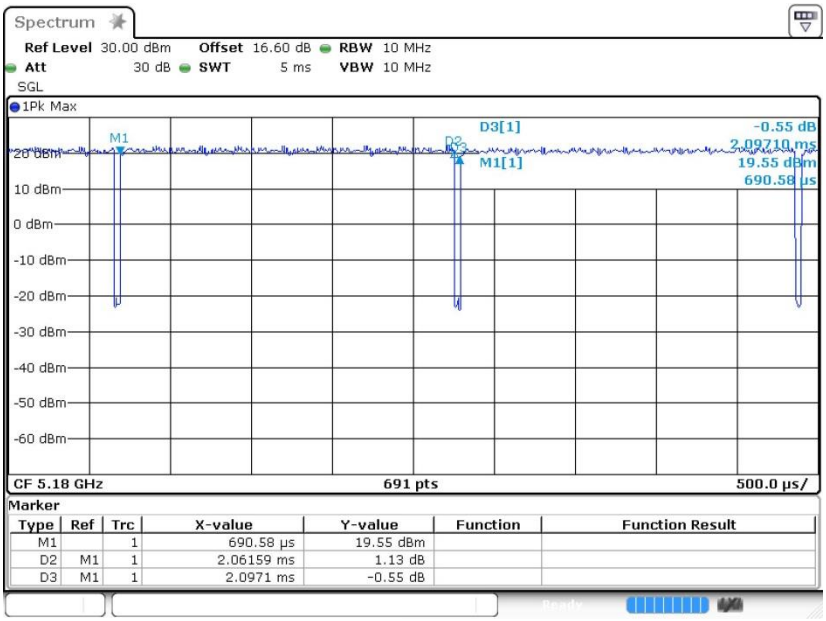
Both peak and average measured complies with the limit line, so test result is "PASS".

Appendix D. Duty Cycle Plots

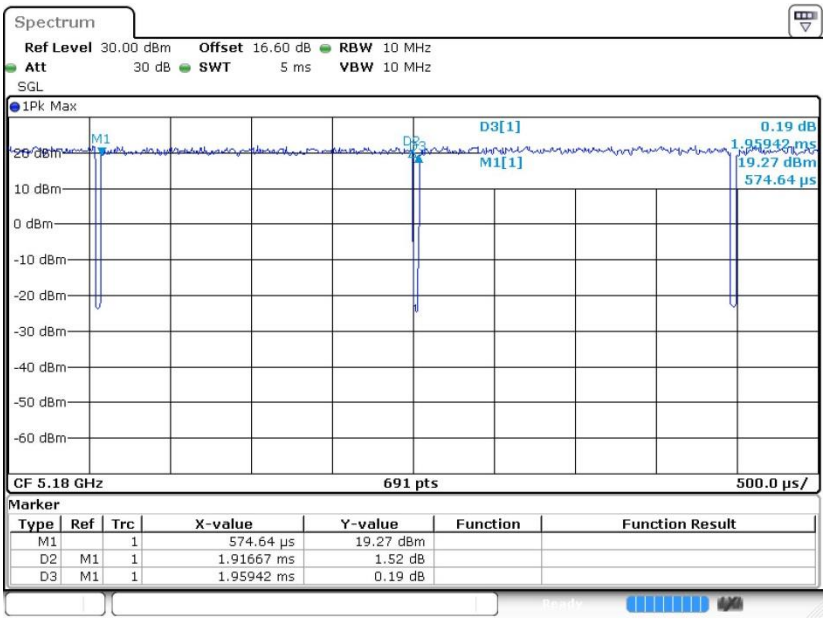
Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1+2	802.11a	98.31	-	-	10Hz
1+2	802.11n HT20	97.82	1.917	0.522	1KHz
1+2	802.11n HT40	96.10	0.947	1.056	3KHz
1+2	802.11acVHT80	87.62	0.257	3.898	10KHZ

Ant.1+2

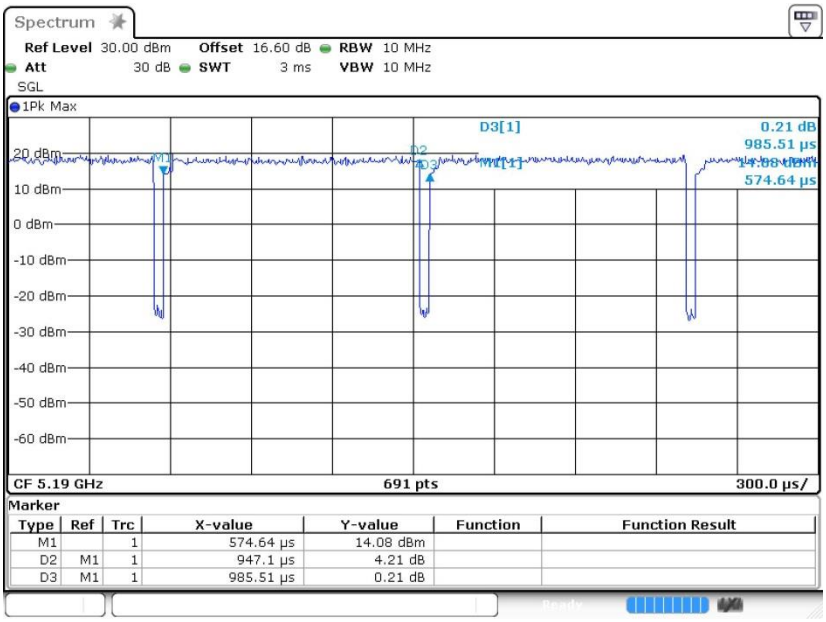
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80