



FCC RF Test Report

APPLICANT : OnePlus Technology (shenzhen) Co., Ltd
EQUIPMENT : Smart Phone
BRAND NAME : ONEPLUS
MODEL NAME : ONEPLUS A6013
FCC ID : 2ABZ2-A6013
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Jul. 10, 2018 and testing was completed on Aug. 21, 2018. 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.

Approved by: Eric Shih / Manager



Sporton International (Shenzhen) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR871004-01E	Rev. 01	Initial issue of report	Sep. 05, 2018

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 3.07 dB at 5150.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 18.10 dB at 0.600 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	ONEPLUS A6013
FCC ID	2ABZ2-A6013
EUT supports Radios application	CDMA/EV-DO/GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+/DC-HSDPA/LTE/NFC WLAN2.4GHz 802.11b/g/n HT20/HT40 WLAN2.4GHz 802.11ac VHT20/VHT40 WLAN5GHz 802.11a/n HT20/HT40 WLAN5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
IMEI Code	Conducted: 865208040070859 Radiation: 865208040024997 Conduction: 001002731846536
HW Version	34
SW Version	ONEPLUS A6013_34_180810
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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 : 20.45 dBm / 0.1109 W 802.11n HT20 : 20.46 dBm / 0.1112 W 802.11n HT40 : 20.46 dBm / 0.1112 W 802.11ac VHT20: 20.40 dBm / 0.1096 W 802.11ac VHT40: 20.44 dBm / 0.1107 W 802.11ac VHT80: 19.56 dBm / 0.0904 W <5260 MHz ~ 5320 MHz> 802.11a : 20.60 dBm / 0.1148 W 802.11n HT20 : 20.51 dBm / 0.1125 W 802.11n HT40 : 20.51 dBm / 0.1125 W 802.11ac VHT20: 20.48 dBm / 0.1117 W 802.11ac VHT40: 20.47 dBm / 0.1114 W 802.11ac VHT80: 19.66 dBm / 0.0925 W <5500 MHz ~ 5720 MHz > 802.11a : 20.61 dBm / 0.1151 W 802.11n HT20 : 20.58 dBm / 0.1143 W 802.11n HT40 : 20.60 dBm / 0.1148 W 802.11ac VHT20: 20.49 dBm / 0.1119 W 802.11ac VHT40: 20.54 dBm / 0.1132 W 802.11ac VHT80: 19.61 dBm / 0.0914 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.63 MHz 802.11n HT20 : 18.73 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 75.64 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.63 MHz 802.11n HT20 : 18.83 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.64 MHz <5500 MHz ~ 5720 MHz > 802.11a : 17.73 MHz 802.11n HT20 : 18.93 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 75.76 MHz
Antenna Gain / Gain	<5150 MHz ~ 5250 MHz> <Ant. 1> : PIFA Antenna with gain -3.00 dBi <Ant. 2> : PIFA Antenna with gain -3.00 dBi <5250 MHz ~ 5350 MHz> <Ant. 1> : PIFA Antenna with gain -3.00 dBi <Ant. 2> : PIFA Antenna with gain -3.00 dBi <5470 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	V	V
	802.11 a/n/ac MIMO	V	V

Note:

1. MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.
2. For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing is assessed only 802.11n HT20/ HT40 by referring to their higher conducted power.
3. For SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power.

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 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No. are CN5018 and CN5019.

Test Site	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595		
Test Site No.	Sporton Site No.		FCC Test Firm Registration No.
	TH01-SZ	CO01-SZ	337463

Test Site	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China TEL: +86-755-3320-2398		
Test Site No.	Sporton Site No.		FCC Test Firm Registration No.
	03CH02-SZ		577730

1.7 Applicable Standards

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

- ♦ FCC 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.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link(5G) + USB Cable (Charging from Adapter)
Remark: For Radiated Test Cases, The tests were performed with Adapter, Battery, and USB Cable.	



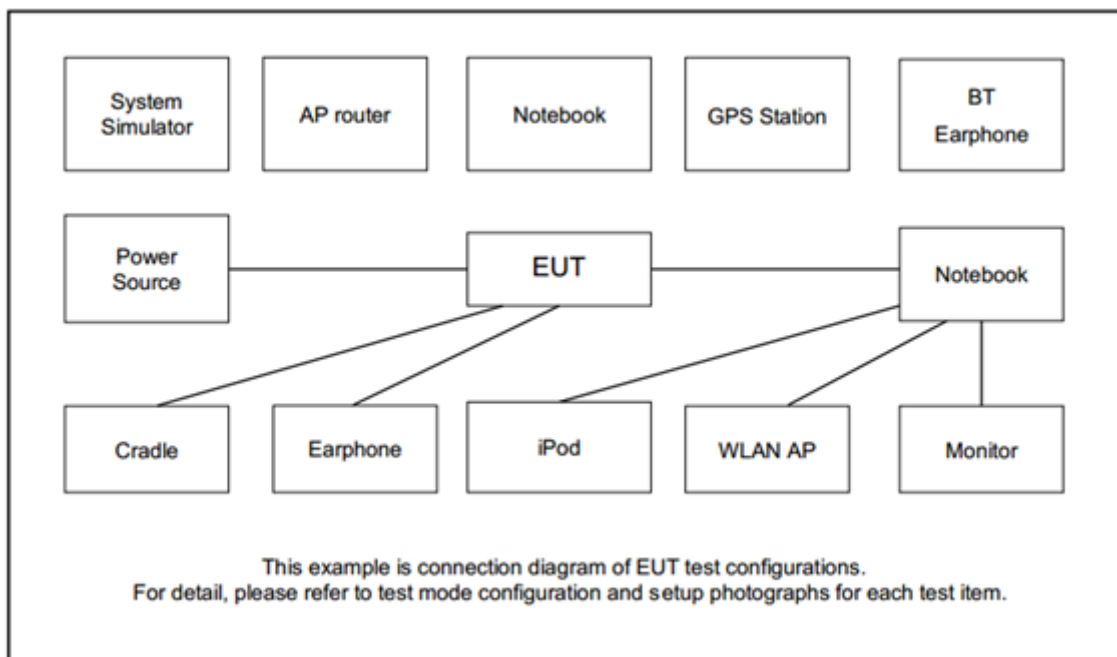
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5720MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

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



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded, 1.8 m
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.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 6.6 + 10 = 16.6 \text{ (dB)}\end{aligned}$$

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.

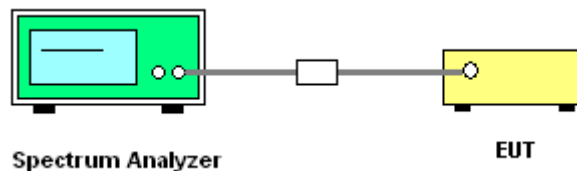
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

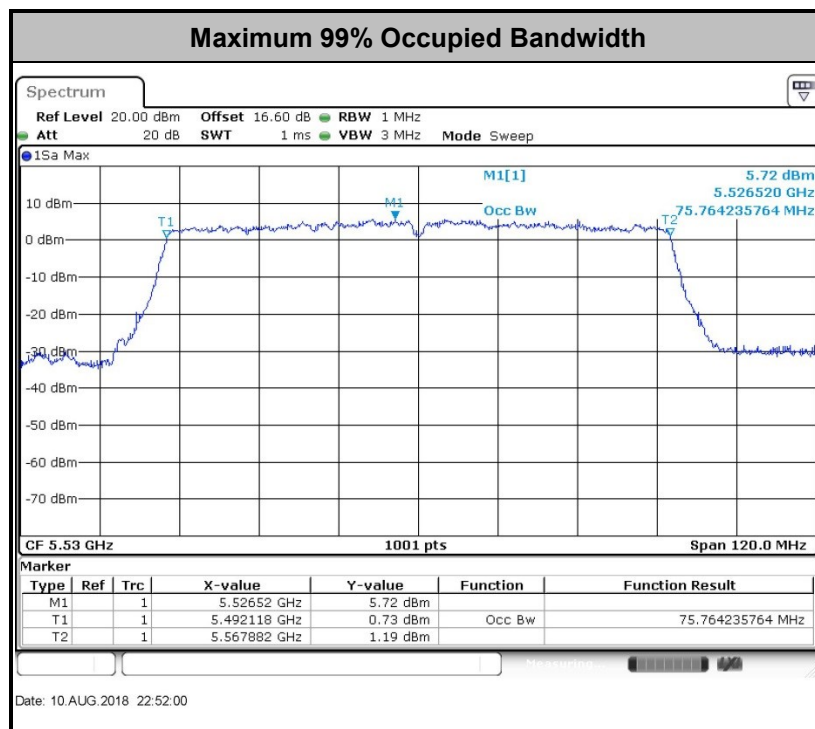
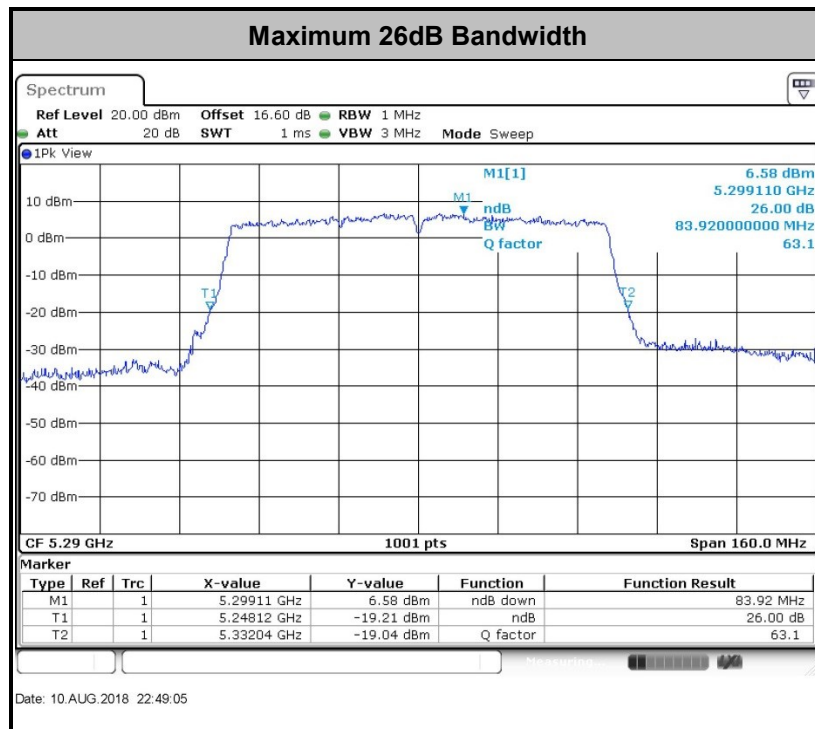
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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) $\geq 3 * RBW$.
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.



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

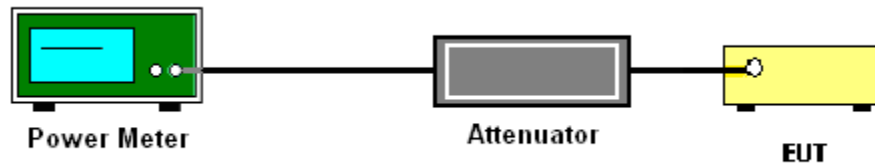
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

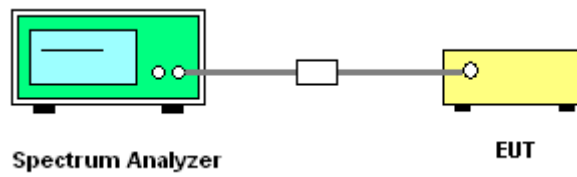
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 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.

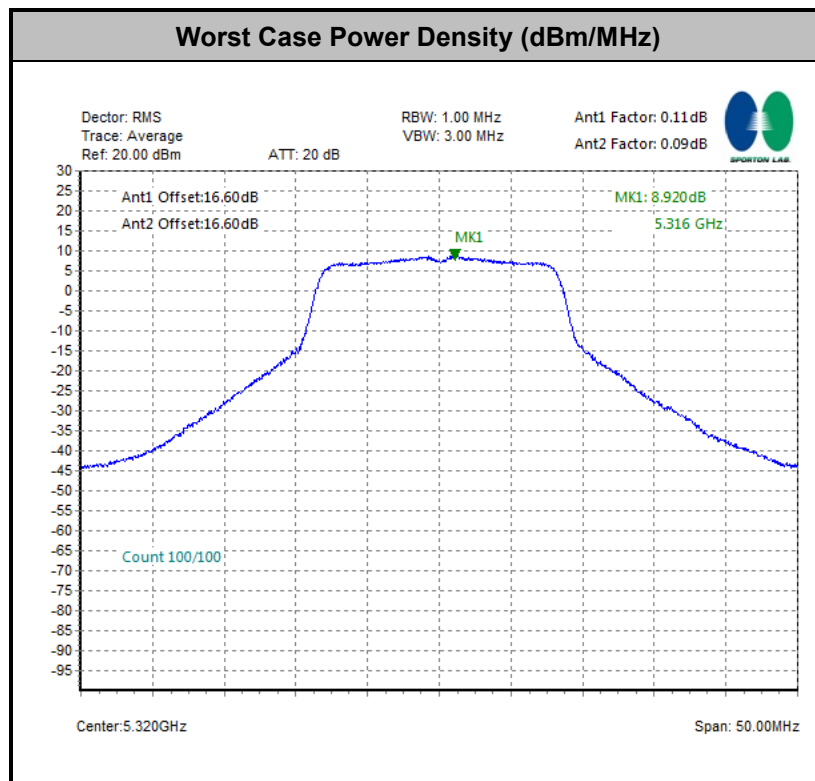
The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of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



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 5470-5725MHz 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.

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

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

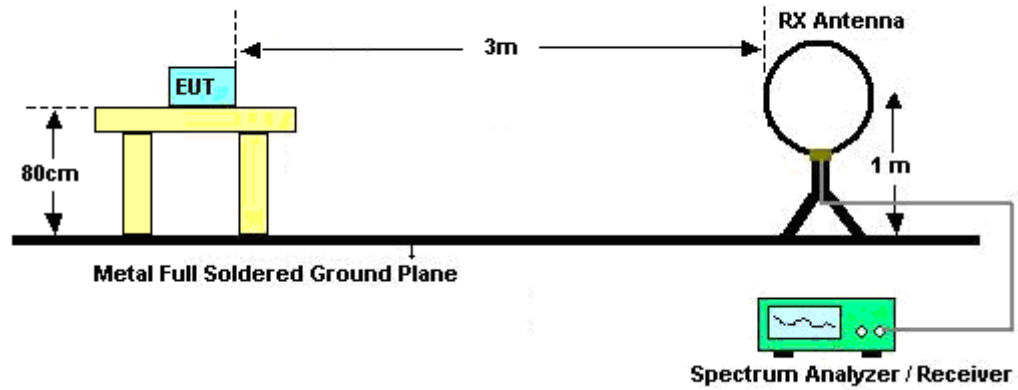
The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

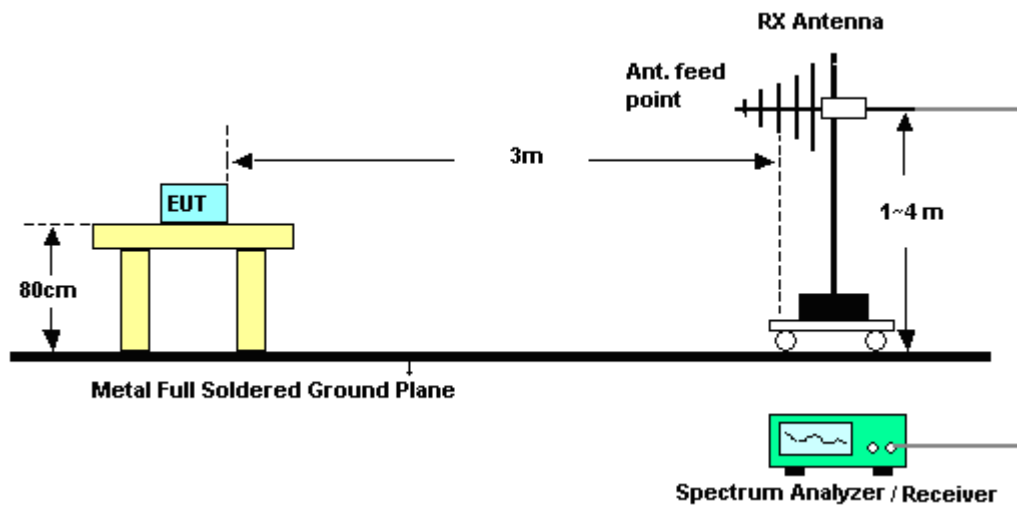
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 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 $\geq$ 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

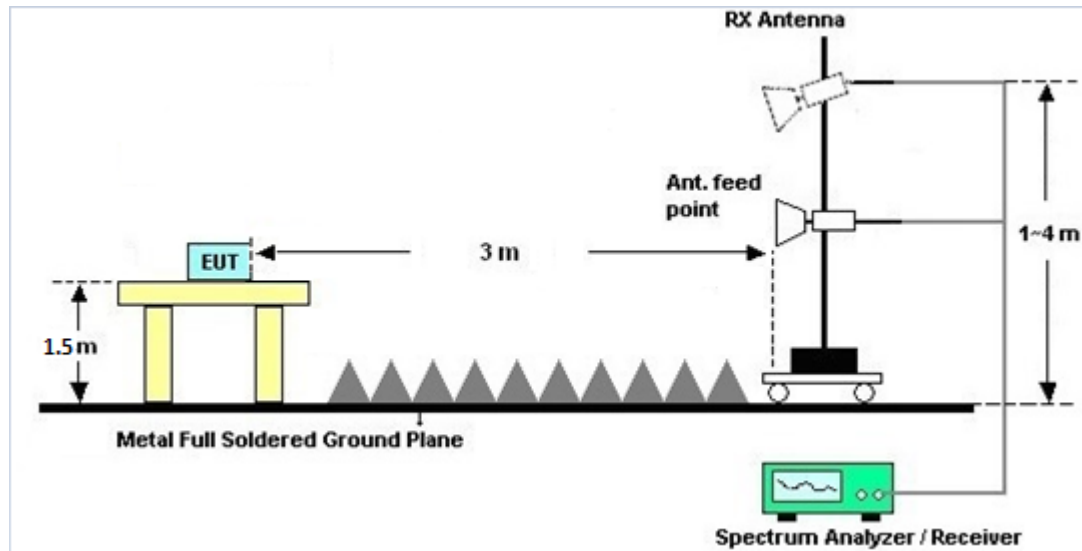
For radiated emissions below 30MHz



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 (dB μ V)	
	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.

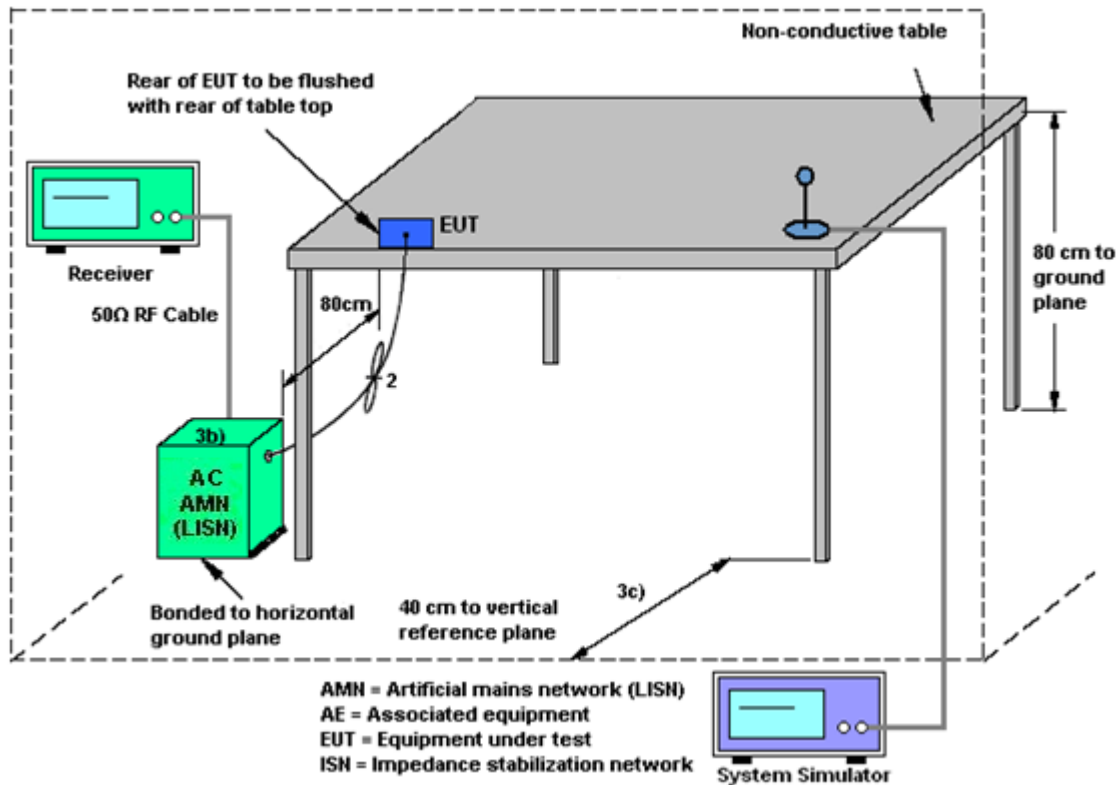
3.5.2 Measuring Instruments

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 = $10 \log(\text{NANT}/\text{NSS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $\text{NANT} \leq 4$.

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>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
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

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)



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. 19, 2018	Aug. 10, 2018	Apr. 18, 2019	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2017	Aug. 10, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2017	Aug. 10, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhonggroup	LP-150U	H2014081803	-40~+150°C	Dec. 26, 2017	Aug. 10, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 19, 2018	Jul. 24, 2018	Apr. 18, 2019	Radiation (03CH02-SZ)
Spectrum Analyzer	R&S	FSV40	101041	10kHz~40GHz; Max 30dBm	Oct. 19, 2017	Jul. 24, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 14, 2018	Jul. 24, 2018	May 13, 2019	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	May 10, 2018	Jul. 24, 2018	May 09, 2019	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Dec. 13, 2017	Jul. 24, 2018	Dec. 12, 2018	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Mar. 30, 2018	Jul. 24, 2018	Mar. 29, 2019	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 19, 2017	Jul. 24, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1707137	1GHz~18GHz	Oct. 19, 2017	Jul. 24, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 19, 2017	Jul. 24, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1988315	18GHz~40GHz	Jul. 27, 2017	Jul. 24, 2018	Jul. 26, 2018	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 24, 2018	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 24, 2018	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 24, 2018	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2017	Aug. 21, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Dec. 26, 2017	Aug. 21, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Nov. 01, 2017	Aug. 21, 2018	Oct. 31, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 18, 2018	Aug. 21, 2018	Jul. 17, 2019	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.6 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.0 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.0 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.4 dB
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Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hayden Chen	Temperature:	21~25	°C
Test Date:	2018/8/10	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	17.53	17.48	23.18	22.18	-		22.43		
11a	6Mbps	2	44	5220	17.63	17.48	24.43	22.58	-		22.43		
11a	6Mbps	2	48	5240	17.58	17.48	24.68	22.93	-		22.43		
HT20	MCS0	2	36	5180	18.73	18.63	24.83	24.28	-		22.70		
HT20	MCS0	2	44	5220	18.73	18.63	25.28	24.53	-		22.70		
HT20	MCS0	2	48	5240	18.73	18.68	25.08	24.18	-		22.71		
HT40	MCS0	2	38	5190	36.56	36.46	41.81	41.81	-		23.01		
HT40	MCS0	2	46	5230	36.66	36.46	41.63	41.90	-		23.01		
VHT80	MCS0	2	42	5210	75.64	75.52	83.12	82.16	-		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	1	36	5180	0.08	0.08	17.30	17.30		24.00	24.00	-3.00	-3.00	Pass
11a	6Mbps	1	44	5220	0.08	0.08	17.48	17.30		24.00	24.00	-3.00	-3.00	Pass
11a	6Mbps	1	48	5240	0.08	0.08	17.34	17.53		24.00	24.00	-3.00	-3.00	Pass
HT20	MCS0	1	36	5180	0.08	0.08	17.26	17.38		24.00	24.00	-3.00	-3.00	Pass
HT20	MCS0	1	44	5220	0.08	0.08	17.44	17.31		24.00	24.00	-3.00	-3.00	Pass
HT20	MCS0	1	48	5240	0.08	0.08	17.40	17.27		24.00	24.00	-3.00	-3.00	Pass
HT40	MCS0	1	38	5190	0.16	0.16	17.41	17.34		24.00	24.00	-3.00	-3.00	Pass
HT40	MCS0	1	46	5230	0.16	0.16	17.49	17.33		24.00	24.00	-3.00	-3.00	Pass
VHT20	MCS0	1	36	5180	0.07	0.08	17.16	17.24		24.00	24.00	-3.00	-3.00	Pass
VHT20	MCS0	1	44	5220	0.07	0.08	17.35	17.18		24.00	24.00	-3.00	-3.00	Pass
VHT20	MCS0	1	48	5240	0.07	0.08	17.37	17.16		24.00	24.00	-3.00	-3.00	Pass
VHT40	MCS0	1	38	5190	0.17	0.18	17.29	17.16		24.00	24.00	-3.00	-3.00	Pass
VHT40	MCS0	1	46	5230	0.17	0.18	17.30	17.18		24.00	24.00	-3.00	-3.00	Pass
VHT80	MCS0	1	42	5210	0.32	0.34	16.41	16.13		24.00	24.00	-3.00	-3.00	Pass
11a	6Mbps	2	36	5180	0.11	0.09	17.35	17.37	20.37	24.00		-3.00		Pass
11a	6Mbps	2	44	5220	0.11	0.09	17.53	17.34	20.44	24.00		-3.00		Pass
11a	6Mbps	2	48	5240	0.11	0.09	17.43	17.45	20.45	24.00		-3.00		Pass
HT20	MCS0	2	36	5180	0.10	0.09	17.31	17.41	20.37	24.00		-3.00		Pass
HT20	MCS0	2	44	5220	0.10	0.09	17.52	17.37	20.46	24.00		-3.00		Pass
HT20	MCS0	2	48	5240	0.10	0.09	17.51	17.34	20.44	24.00		-3.00		Pass
HT40	MCS0	2	38	5190	0.16	0.16	17.45	17.36	20.41	24.00		-3.00		Pass
HT40	MCS0	2	46	5230	0.16	0.16	17.51	17.39	20.46	24.00		-3.00		Pass
VHT20	MCS0	2	36	5180	0.17	0.15	17.29	17.34	20.32	24.00		-3.00		Pass
VHT20	MCS0	2	44	5220	0.17	0.15	17.49	17.29	20.40	24.00		-3.00		Pass
VHT20	MCS0	2	48	5240	0.17	0.15	17.48	17.28	20.39	24.00		-3.00		Pass
VHT40	MCS0	2	38	5190	0.30	0.33	17.44	17.34	20.40	24.00		-3.00		Pass
VHT40	MCS0	2	46	5230	0.30	0.33	17.48	17.37	20.44	24.00		-3.00		Pass
VHT80	MCS0	2	42	5210	0.57	0.58	16.69	16.40	19.56	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	0.11	0.09			8.76	11.00	0.01			Pass	
11a	6Mbps	2	44	5220	0.11	0.09			8.64	11.00	0.01			Pass	
11a	6Mbps	2	48	5240	0.11	0.09			8.74	11.00	0.01			Pass	
HT20	MCS0	2	36	5180	0.10	0.09			8.49	11.00	0.01			Pass	
HT20	MCS0	2	44	5220	0.10	0.09			8.24	11.00	0.01			Pass	
HT20	MCS0	2	48	5240	0.10	0.09			7.87	11.00	0.01			Pass	
HT40	MCS0	2	38	5190	0.16	0.16			4.90	11.00	0.01			Pass	
HT40	MCS0	2	46	5230	0.16	0.16			4.87	11.00	0.01			Pass	
VHT80	MCS0	2	42	5210	0.57	0.58			1.42	11.00	0.01			Pass	

TEST RESULTS DATA
26dB and 99% OBW

Band II															
Mod.	Data Rate	N _{TX}	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	17.58	17.53	24.93	22.93	23.44		29.44		23.98		
11a	6Mbps	2	60	5300	17.63	17.43	25.18	22.93	23.41		29.41		23.98		
11a	6Mbps	2	64	5320	17.53	17.48	25.18	22.98	23.43		29.43		23.98		
HT20	MCS0	2	52	5260	18.78	18.63	25.48	24.53	23.70		29.70		23.98		
HT20	MCS0	2	60	5300	18.83	18.73	25.08	24.58	23.73		29.73		23.98		
HT20	MCS0	2	64	5320	18.83	18.73	25.77	24.63	23.73		29.73		23.98		
HT40	MCS0	2	54	5270	36.56	36.46	41.54	41.99	23.98		30.00		23.98		
HT40	MCS0	2	62	5310	36.56	36.46	41.63	41.99	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.64	75.52	83.92	82.96	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	1	52	5260	0.08	0.08	17.48	17.55		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	1	60	5300	0.08	0.08	17.44	17.28		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	1	64	5320	0.08	0.08	17.43	17.35		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	52	5260	0.08	0.08	17.43	17.40		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	60	5300	0.08	0.08	17.35	17.35		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	64	5320	0.08	0.08	17.41	17.41		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	54	5270	0.16	0.16	17.44	17.47		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	62	5310	0.16	0.16	17.38	17.48		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	52	5260	0.07	0.08	17.33	17.33		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	60	5300	0.07	0.08	17.23	17.16		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	64	5320	0.07	0.08	17.26	17.27	23.98	23.98	-3.00	-3.00	26.99	Pass	
VHT40	MCS0	1	54	5270	0.17	0.18	17.26	17.31	23.98	23.98	-3.00	-3.00	26.99	Pass	
VHT40	MCS0	1	62	5310	0.17	0.18	17.20	17.29	23.98	23.98	-3.00	-3.00	26.99	Pass	
VHT80	MCS0	1	58	5290	0.32	0.34	16.36	16.35	23.98	23.98	-3.00	-3.00	26.99	Pass	
11a	6Mbps	2	52	5260	0.11	0.09	17.56	17.62	20.60	23.98		-3.00		26.99	Pass
11a	6Mbps	2	60	5300	0.11	0.09	17.50	17.38	20.45	23.98		-3.00		26.99	Pass
11a	6Mbps	2	64	5320	0.11	0.09	17.48	17.40	20.45	23.98		-3.00		26.99	Pass
HT20	MCS0	2	52	5260	0.10	0.09	17.54	17.45	20.51	23.98		-3.00		26.99	Pass
HT20	MCS0	2	60	5300	0.10	0.09	17.43	17.40	20.43	23.98		-3.00		26.99	Pass
HT20	MCS0	2	64	5320	0.10	0.09	17.48	17.48	20.49	23.98		-3.00		26.99	Pass
HT40	MCS0	2	54	5270	0.16	0.16	17.49	17.52	20.51	23.98		-3.00		26.99	Pass
HT40	MCS0	2	62	5310	0.16	0.16	17.44	17.51	20.48	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	52	5260	0.17	0.15	17.51	17.43	20.48	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	60	5300	0.17	0.15	17.42	17.27	20.35	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	64	5320	0.17	0.15	17.41	17.37	20.40	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	54	5270	0.30	0.33	17.42	17.49	20.47	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	62	5310	0.30	0.33	17.35	17.48	20.43	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	58	5290	0.57	0.58	16.65	16.65	19.66	23.98		-3.00		26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II														
Mod.	Data Rate	N _{TX}	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	0.11	0.09			8.73	11.00	0.01			Pass
11a	6Mbps	2	60	5300	0.11	0.09			8.02	11.00	0.01			Pass
11a	6Mbps	2	64	5320	0.11	0.09			8.92	11.00	0.01			Pass
HT20	MCS0	2	52	5260	0.10	0.09			7.80	11.00	0.01			Pass
HT20	MCS0	2	60	5300	0.10	0.09			8.19	11.00	0.01			Pass
HT20	MCS0	2	64	5320	0.10	0.09			7.71	11.00	0.01			Pass
HT40	MCS0	2	54	5270	0.16	0.16			5.25	11.00	0.01			Pass
HT40	MCS0	2	62	5310	0.16	0.16			4.81	11.00	0.01			Pass
VHT80	MCS0	2	58	5290	0.57	0.58			1.39	11.00	0.01			Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III															
Mod.	Data Rate	N _{Tx}	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	17.38	24.93	22.58	23.40		29.40		23.98		
11a	6Mbps	2	116	5580	17.58	17.48	24.43	22.98	23.43		29.43		23.98		
11a	6Mbps	2	140	5700	17.73	17.53	24.98	23.08	23.44		29.44		23.98		
11a	6Mbps	2	144	5720	17.63	17.48	25.18	23.18	23.43		29.43		23.98		
HT20	MCS0	2	100	5500	18.83	18.58	25.97	24.58	23.69		29.69		23.98		
HT20	MCS0	2	116	5580	18.78	18.68	25.23	24.78	23.71		29.71		23.98		
HT20	MCS0	2	140	5700	18.93	18.63	26.32	24.48	23.70		29.70		23.98		
HT20	MCS0	2	144	5720	18.83	18.63	26.02	24.28	23.70		29.70		23.98		
HT40	MCS0	2	102	5510	36.66	36.46	41.81	41.81	23.98		30.00		23.98		
HT40	MCS0	2	110	5550	36.56	36.56	41.63	41.99	23.98		30.00		23.98		
HT40	MCS0	2	134	5670	36.56	36.46	41.81	42.08	23.98		30.00		23.98		
HT40	MCS0	2	142	5710	36.66	36.46	41.99	42.08	23.98		30.00		23.98		
VHT80	MCS0	2	106	5530	75.76	75.52	83.76	82.80	23.98		30.00		23.98		
VHT80	MCS0	2	122	5610	75.64	75.52	83.76	82.64	23.98		30.00		23.98		
VHT80	MCS0	2	138	5690	75.64	75.52	82.96	83.12	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

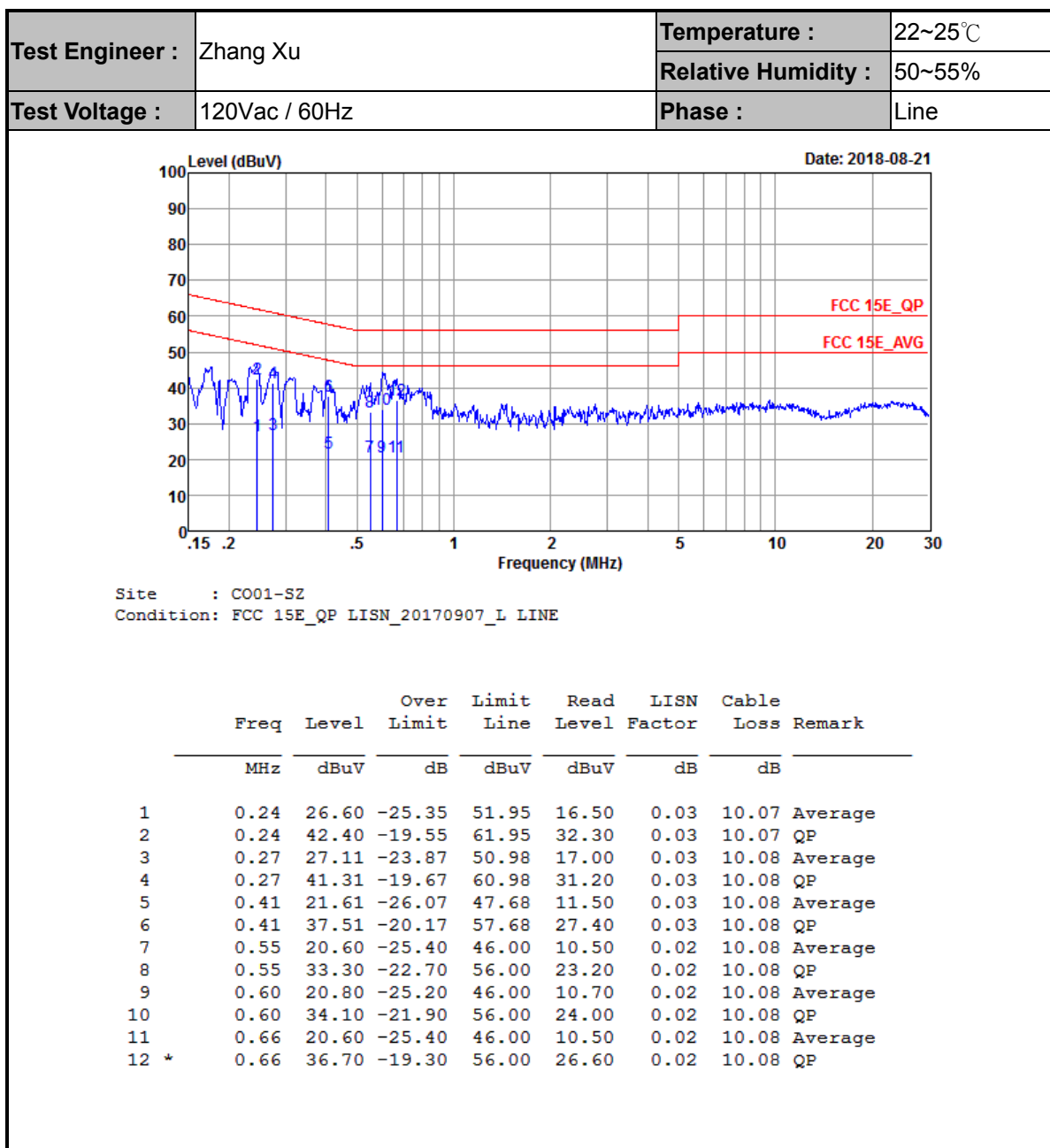
FCC Band III															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.08	0.08	17.29	17.80		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	1	116	5580	0.08	0.08	17.23	17.59		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	1	140	5700	0.08	0.08	17.33	17.44		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	1	144	5720	0.08	0.08	17.40	17.49		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	100	5500	0.08	0.08	17.28	17.67		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	116	5580	0.08	0.08	17.26	17.47		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	140	5700	0.08	0.08	17.31	17.42		23.98	23.98	-3.00	-3.00	26.99	Pass
HT20	MCS0	1	144	5720	0.08	0.08	17.40	17.39		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	102	5510	0.16	0.16	17.38	17.68		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	110	5550	0.16	0.16	17.40	17.70		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	134	5670	0.16	0.16	17.36	17.38		23.98	23.98	-3.00	-3.00	26.99	Pass
HT40	MCS0	1	142	5710	0.16	0.16	17.48	17.53		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	100	5500	0.07	0.08	17.09	17.57		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	116	5580	0.07	0.08	17.11	17.36		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	140	5700	0.07	0.08	17.22	17.29		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT20	MCS0	1	144	5720	0.07	0.08	17.29	17.32		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT40	MCS0	1	102	5510	0.17	0.18	17.20	17.46		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT40	MCS0	1	110	5550	0.17	0.18	17.20	17.51		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT40	MCS0	1	134	5670	0.17	0.18	17.22	17.22		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT40	MCS0	1	142	5710	0.17	0.18	17.31	17.35		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT80	MCS0	1	106	5530	0.32	0.34	16.20	16.36		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT80	MCS0	1	122	5610	0.32	0.34	16.15	16.27		23.98	23.98	-3.00	-3.00	26.99	Pass
VHT80	MCS0	1	138	5690	0.32	0.34	16.19	16.38		23.98	23.98	-3.00	-3.00	26.99	Pass
11a	6Mbps	2	100	5500	0.11	0.09	17.37	17.83	20.61	23.98		-3.00		26.99	Pass
11a	6Mbps	2	116	5580	0.11	0.09	17.32	17.62	20.48	23.98		-3.00		26.99	Pass
11a	6Mbps	2	140	5700	0.11	0.09	17.40	17.51	20.46	23.98		-3.00		26.99	Pass
11a	6Mbps	2	144	5720	0.11	0.09	17.47	17.53	20.51	23.98		-3.00		26.99	Pass
HT20	MCS0	2	100	5500	0.10	0.09	17.36	17.77	20.58	23.98		-3.00		26.99	Pass
HT20	MCS0	2	116	5580	0.10	0.09	17.32	17.50	20.42	23.98		-3.00		26.99	Pass
HT20	MCS0	2	140	5700	0.10	0.09	17.39	17.47	20.44	23.98		-3.00		26.99	Pass
HT20	MCS0	2	144	5720	0.10	0.09	17.45	17.45	20.46	23.98		-3.00		26.99	Pass
HT40	MCS0	2	102	5510	0.16	0.16	17.42	17.70	20.57	23.98		-3.00		26.99	Pass
HT40	MCS0	2	110	5550	0.16	0.16	17.43	17.75	20.60	23.98		-3.00		26.99	Pass
HT40	MCS0	2	134	5670	0.16	0.16	17.40	17.44	20.43	23.98		-3.00		26.99	Pass
HT40	MCS0	2	142	5710	0.16	0.16	17.54	17.57	20.56	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	100	5500	0.17	0.15	17.28	17.68	20.49	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	116	5580	0.17	0.15	17.27	17.46	20.37	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	140	5700	0.17	0.15	17.35	17.40	20.38	23.98		-3.00		26.99	Pass
VHT20	MCS0	2	144	5720	0.17	0.15	17.43	17.44	20.44	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	102	5510	0.30	0.33	17.36	17.66	20.52	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	110	5550	0.30	0.33	17.37	17.69	20.54	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	134	5670	0.30	0.33	17.36	17.41	20.40	23.98		-3.00		26.99	Pass
VHT40	MCS0	2	142	5710	0.30	0.33	17.52	17.53	20.54	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	106	5530	0.57	0.58	16.51	16.69	19.61	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	122	5610	0.57	0.58	16.49	16.60	19.56	23.98		-3.00		26.99	Pass
VHT80	MCS0	2	138	5690	0.57	0.58	16.48	16.71	19.61	23.98		-3.00		26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III														
Mod.	Data Rate	N _{TX}	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	0.11	0.09			8.69	11.00	0.01			Pass
11a	6Mbps	2	116	5580	0.11	0.09			8.17	11.00	0.01			Pass
11a	6Mbps	2	140	5700	0.11	0.09			7.21	11.00	0.01			Pass
11a	6Mbps	2	144	5720	0.11	0.09			8.06	11.00	0.01			Pass
HT20	MCS0	2	100	5500	0.10	0.09			8.27	11.00	0.01			Pass
HT20	MCS0	2	116	5580	0.10	0.09			8.41	11.00	0.01			Pass
HT20	MCS0	2	140	5700	0.10	0.09			7.28	11.00	0.01			Pass
HT20	MCS0	2	144	5720	0.10	0.09			8.02	11.00	0.01			Pass
HT40	MCS0	2	102	5510	0.16	0.16			3.31	11.00	0.01			Pass
HT40	MCS0	2	110	5550	0.16	0.16			5.17	11.00	0.01			Pass
HT40	MCS0	2	134	5670	0.16	0.16			4.21	11.00	0.01			Pass
HT40	MCS0	2	142	5710	0.16	0.16			3.76	11.00	0.01			Pass
VHT80	MCS0	2	106	5530	0.57	0.58			-0.05	11.00	0.01			Pass
VHT80	MCS0	2	122	5610	0.57	0.58			1.46	11.00	0.01			Pass
VHT80	MCS0	2	138	5690	0.57	0.58			1.58	11.00	0.01			Pass

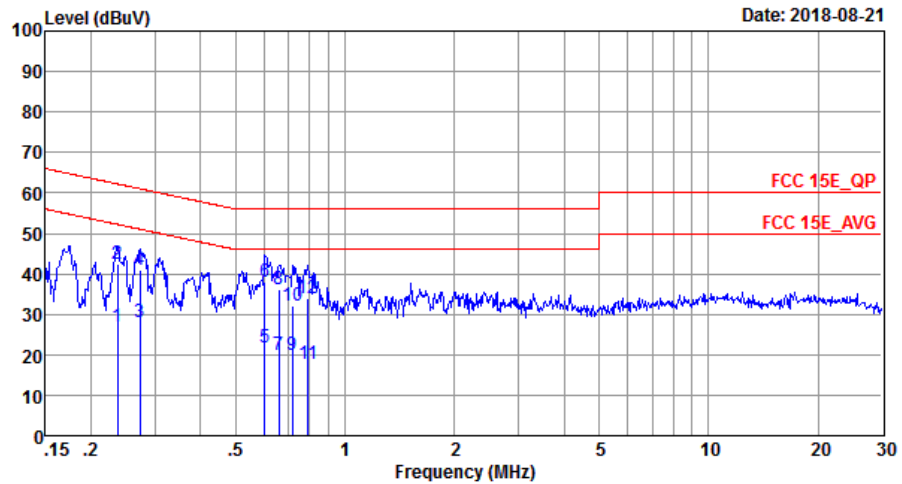


Appendix B. AC Conducted Emission Test Results





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



Site : C001-SZ
Condition: FCC 15E_QP LISN_20170907_N NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.24	26.80	-25.42	52.22	16.70	0.03	10.07	Average
2	0.24	42.50	-19.72	62.22	32.40	0.03	10.07	QP
3	0.27	27.91	-23.12	51.03	17.80	0.03	10.08	Average
4	0.27	41.01	-20.02	61.03	30.90	0.03	10.08	QP
5	0.60	21.90	-24.10	46.00	11.80	0.02	10.08	Average
6 *	0.60	37.90	-18.10	56.00	27.80	0.02	10.08	QP
7	0.66	20.10	-25.90	46.00	10.00	0.02	10.08	Average
8	0.66	36.30	-19.70	56.00	26.20	0.02	10.08	QP
9	0.72	19.90	-26.10	46.00	9.80	0.02	10.08	Average
10	0.72	32.10	-23.90	56.00	22.00	0.02	10.08	QP
11	0.79	17.81	-28.19	46.00	7.70	0.03	10.08	Average
12	0.79	33.91	-22.09	56.00	23.80	0.03	10.08	QP



Appendix C. Radiated Spurious Emission

Test Engineer :	Xiaoshi Tan	Temperature :	24~25°C
		Relative Humidity :	48~49%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5104	48.28	-25.72	74	38.24	31.76	9.96	31.68	169	46	P	H
		5149.76	40.21	-13.79	54	30.08	31.79	10.01	31.67	169	46	A	H
	*	5180	103.15	-	-	92.97	31.81	10.03	31.66	169	46	P	H
	*	5180	96.15	-	-	85.97	31.81	10.03	31.66	169	46	A	H
		5122.2	47.56	-26.44	74	37.48	31.77	9.98	31.67	264	99	P	V
		5149.76	38.08	-15.92	54	27.95	31.79	10.01	31.67	264	99	A	V
	*	5180	96.09	-	-	85.91	31.81	10.03	31.66	264	99	P	V
	*	5180	89.57	-	-	79.39	31.81	10.03	31.66	264	99	A	V
802.11a CH 44 5220MHz		5098.54	47.24	-26.76	74	37.2	31.76	9.96	31.68	133	46	P	H
		5148.2	38.59	-15.41	54	28.46	31.79	10.01	31.67	133	46	A	H
	*	5220	103.25	-	-	93	31.83	10.07	31.65	133	46	P	H
	*	5220	97.24	-	-	86.99	31.83	10.07	31.65	133	46	A	H
		5454	47.56	-26.44	74	36.92	31.97	10.28	31.61	133	46	P	H
		5452.8	38.68	-15.32	54	28.04	31.97	10.28	31.61	133	46	A	H
		5112.06	47	-27	74	36.95	31.77	9.96	31.68	274	346	P	V
		5107.9	38.13	-15.87	54	28.08	31.77	9.96	31.68	274	346	A	V
	*	5220	96.16	-	-	85.91	31.83	10.07	31.65	274	346	P	V
	*	5220	90.32	-	-	80.07	31.83	10.07	31.65	274	346	A	V
		5445.6	46.7	-27.3	74	36.06	31.97	10.28	31.61	274	346	P	V
		5454	38.52	-15.48	54	27.88	31.97	10.28	31.61	274	346	A	V



802.11a CH 48 5240MHz		5081.12	47.24	-26.76	74	37.23	31.75	9.94	31.68	139	46	P	H
		5126.36	38.1	-15.9	54	28.01	31.78	9.98	31.67	139	46	A	H
	*	5240	103.75	-	-	93.46	31.84	10.1	31.65	139	46	P	H
	*	5240	97.18	-	-	86.89	31.84	10.1	31.65	139	46	A	H
		5370	48.08	-25.92	74	37.58	31.92	10.21	31.63	139	46	P	H
		5459.52	38.4	-15.6	54	27.76	31.97	10.28	31.61	139	46	A	H
		5124.28	47.57	-26.43	74	37.48	31.78	9.98	31.67	262	347	P	V
		5105.3	38.03	-15.97	54	27.99	31.76	9.96	31.68	262	347	A	V
	*	5240	96.73	-	-	86.44	31.84	10.1	31.65	262	347	P	V
	*	5240	90.39	-	-	80.1	31.84	10.1	31.65	262	347	A	V
		5453.52	47.15	-26.85	74	36.51	31.97	10.28	31.61	262	347	P	V
		5450.88	38.43	-15.57	54	27.79	31.97	10.28	31.61	262	347	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	49.69	-24.31	74	51.69	39.27	14.58	55.85	152	260	P	H
		15540	50.92	-23.08	74	51.2	39.02	17.43	56.73	189	238	P	H
		10360	50.43	-23.57	74	52.43	39.27	14.58	55.85	152	260	P	V
		15540	49.79	-24.21	74	50.07	39.02	17.43	56.73	189	238	P	V
802.11a CH 44 5220MHz		10440	49.89	-24.11	74	51.79	39.33	14.65	55.88	150	230	P	H
		15660	49.94	-24.06	74	50.2	38.73	17.5	56.49	160	225	P	H
		10440	50.56	-23.44	74	52.46	39.33	14.65	55.88	150	230	P	V
		15660	50.15	-23.85	74	50.41	38.73	17.5	56.49	160	225	P	V
802.11a CH 48 5240MHz		10480	50.73	-23.27	74	52.58	39.38	14.67	55.9	150	289	P	H
		15720	49.26	-24.74	74	49.5	38.56	17.55	56.35	150	291	P	H
		10480	50.89	-23.11	74	52.74	39.38	14.67	55.9	150	289	P	V
		15720	49.69	-24.31	74	49.93	38.56	17.55	56.35	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)
802.11n HT20 CH 36 5180MHz		5145.08	48.11	-25.89	74	37.98	31.79	10.01	31.67	120	48	P	H
		5149.5	40.33	-13.67	54	30.2	31.79	10.01	31.67	120	48	A	H
	*	5180	102.04	-	-	91.86	31.81	10.03	31.66	120	48	P	H
	*	5180	95.28	-	-	85.1	31.81	10.03	31.66	120	48	A	H
		5149.76	47.23	-26.77	74	37.1	31.79	10.01	31.67	205	163	P	V
		5138.84	37.99	-16.01	54	27.87	31.78	10.01	31.67	205	163	A	V
	*	5180	95	-	-	84.82	31.81	10.03	31.66	205	163	P	V
	*	5180	88.7	-	-	78.52	31.81	10.03	31.66	205	163	A	V
802.11n HT20 CH 44 5220MHz		5111.8	47.59	-26.41	74	37.54	31.77	9.96	31.68	110	50	P	H
		5150	38.31	-15.69	54	28.18	31.79	10.01	31.67	110	50	A	H
	*	5220	102.6	-	-	92.35	31.83	10.07	31.65	110	50	P	H
	*	5220	96.45	-	-	86.2	31.83	10.07	31.65	110	50	A	H
		5411.76	47.63	-26.37	74	37.07	31.95	10.23	31.62	110	50	P	H
		5452.8	38.49	-15.51	54	27.85	31.97	10.28	31.61	110	50	A	H
		5055.64	47.42	-26.58	74	37.46	31.74	9.91	31.69	214	166	P	V
		5102.18	37.97	-16.03	54	27.93	31.76	9.96	31.68	214	166	A	V
	*	5220	95.74	-	-	85.49	31.83	10.07	31.65	214	166	P	V
	*	5220	88.8	-	-	78.55	31.83	10.07	31.65	214	166	A	V
		5400.96	47.58	-26.42	74	37.03	31.94	10.23	31.62	214	166	P	V
		5454.24	38.35	-15.65	54	27.71	31.97	10.28	31.61	214	166	A	V



802.11n HT20 CH 48 5240MHz		5136.76	47.81	-26.19	74	37.72	31.78	9.98	31.67	104	49	P	H
		5085.54	37.89	-16.11	54	27.88	31.75	9.94	31.68	104	49	A	H
	*	5240	103.32	-	-	93.03	31.84	10.1	31.65	104	49	P	H
	*	5240	96.88	-	-	86.59	31.84	10.1	31.65	104	49	A	H
		5355.36	48.17	-25.83	74	37.7	31.91	10.19	31.63	104	49	P	H
		5452.56	38.41	-15.59	54	27.77	31.97	10.28	31.61	104	49	A	H
		5112.84	47.21	-26.79	74	37.14	31.77	9.98	31.68	113	221	P	V
		5078.52	37.81	-16.19	54	27.8	31.75	9.94	31.68	113	221	A	V
	*	5240	96.05	-	-	85.76	31.84	10.1	31.65	113	221	P	V
	*	5240	89.29	-	-	79	31.84	10.1	31.65	113	221	A	V
		5443.92	46.88	-27.12	74	36.25	31.96	10.28	31.61	113	221	P	V
		5459.04	38.26	-15.74	54	27.62	31.97	10.28	31.61	113	221	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 HT20 CH 36 5180MHz		10360	50.35	-23.65	74	52.35	39.27	14.58	55.85	152	260	P	H
		15540	50.14	-23.86	74	50.42	39.02	17.43	56.73	189	238	P	H
		10360	50.2	-23.8	74	52.2	39.27	14.58	55.85	152	260	P	V
		15540	50.73	-23.27	74	51.01	39.02	17.43	56.73	189	238	P	V
802.11n HT20 CH 44 5220MHz		10440	50.55	-23.45	74	52.45	39.33	14.65	55.88	150	230	P	H
		15660	50.07	-23.93	74	50.33	38.73	17.5	56.49	160	225	P	H
		10440	50.54	-23.46	74	52.44	39.33	14.65	55.88	150	230	P	V
		15660	50.04	-23.96	74	50.3	38.73	17.5	56.49	160	225	P	V
802.11n HT20 CH 48 5240MHz		10480	50.28	-23.72	74	52.13	39.38	14.67	55.9	150	289	P	H
		15720	50.91	-23.09	74	51.15	38.56	17.55	56.35	150	291	P	H
		10480	50.85	-23.15	74	52.7	39.38	14.67	55.9	150	289	P	V
		15720	49.59	-24.41	74	49.83	38.56	17.55	56.35	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		5145.34	54.01	-19.99	74	43.88	31.79	10.01	31.67	111	50	P	H
		5150	46.74	-7.26	54	36.61	31.79	10.01	31.67	111	50	A	H
	*	5190	100.44	-	-	90.24	31.81	10.05	31.66	111	50	P	H
	*	5190	94.9	-	-	84.7	31.81	10.05	31.66	111	50	A	H
		5399.24	47.98	-26.02	74	37.43	31.94	10.23	31.62	111	50	P	H
		5414.08	40.25	-13.75	54	29.67	31.95	10.25	31.62	111	50	A	H
		5147.68	50.44	-23.56	74	40.31	31.79	10.01	31.67	216	170	P	V
		5148.46	43.56	-10.44	54	33.43	31.79	10.01	31.67	216	170	A	V
	*	5190	93.64	-	-	83.44	31.81	10.05	31.66	216	170	P	V
	*	5190	88.3	-	-	78.1	31.81	10.05	31.66	216	170	A	V
		5400.08	46.98	-27.02	74	36.43	31.94	10.23	31.62	216	170	P	V
		5448.8	39.14	-14.86	54	28.5	31.97	10.28	31.61	216	170	A	V
		5104.78	47.42	-26.58	74	37.38	31.76	9.96	31.68	108	51	P	H
802.11n HT40 CH 46 5230MHz		5148.2	38.91	-15.09	54	28.78	31.79	10.01	31.67	108	51	A	H
	*	5230	100.2	-	-	89.94	31.84	10.07	31.65	108	51	P	H
	*	5230	94.06	-	-	83.8	31.84	10.07	31.65	108	51	A	H
		5356.32	47.49	-26.51	74	37.02	31.91	10.19	31.63	108	51	P	H
		5457.36	39.58	-14.42	54	28.94	31.97	10.28	31.61	108	51	A	H
		5059.28	47.08	-26.92	74	37.12	31.74	9.91	31.69	319	29	P	V
		5049.4	38.88	-15.12	54	28.93	31.73	9.91	31.69	319	29	A	V
	*	5230	94.21	-	-	83.95	31.84	10.07	31.65	319	29	P	V
	*	5230	88.31	-	-	78.05	31.84	10.07	31.65	319	29	A	V
		5453.28	47.21	-26.79	74	36.57	31.97	10.28	31.61	319	29	P	V
		5460	39.29	-14.71	54	28.65	31.97	10.28	31.61	319	29	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 HT40 CH 38 5190MHz		10380	49.03	-24.97	74	51.02	39.28	14.59	55.86	149	58	P	H
		15570	48.19	-25.81	74	48.48	38.93	17.44	56.66	149	58	P	H
		10380	48.46	-25.54	74	50.45	39.28	14.59	55.86	133	56	P	V
		15570	48.84	-25.16	74	49.13	38.93	17.44	56.66	133	56	P	V
802.11n HT40 CH 46 5230MHz		10460	48.94	-25.06	74	50.82	39.35	14.65	55.88	126	57	P	H
		15690	48.9	-25.1	74	49.15	38.64	17.53	56.42	126	57	P	H
		10460	48.72	-25.28	74	50.6	39.35	14.65	55.88	150	225	P	V
		15690	48.37	-25.63	74	48.62	38.64	17.53	56.42	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		5145.86	55.85	-18.15	74	45.72	31.79	31.67	10.01	130	49	P	H
		5150	50.93	-3.07	54	40.8	31.79	31.67	10.01	130	49	A	H
	*	5210	96.37	-	-	86.15	31.83	31.66	10.05	130	49	P	H
	*	5210	91.29	-	-	81.07	31.83	31.66	10.05	130	49	A	H
		5438.4	48.09	-25.91	74	37.46	31.96	31.61	10.28	130	49	P	H
		5454	40.74	-13.26	54	30.1	31.97	31.61	10.28	130	49	A	H
		5141.18	48.49	-25.51	74	38.36	31.79	10.01	31.67	193	177	P	V
		5138.58	42.67	-11.33	54	32.55	31.78	10.01	31.67	193	177	A	V
	*	5210	86.4	-	-	76.18	31.83	10.05	31.66	193	177	P	V
	*	5210	80.98	-	-	70.76	31.83	10.05	31.66	193	177	A	V
		5362.8	47.04	-26.96	74	36.54	31.92	10.21	31.63	193	177	P	V
		5454.24	40.97	-13.03	54	30.33	31.97	10.28	31.61	193	177	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	49.09	-24.91	74	51.01	39.32	14.63	55.87	150	32	P	H
VHT80		15630	49.41	-24.59	74	49.68	38.77	17.48	56.52	150	32	P	H
CH 42		10420	49.6	-24.4	74	51.52	39.32	14.63	55.87	130	69	P	V
5210MHz		15630	49.92	-24.08	74	50.19	38.77	17.48	56.52	130	69	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		5039.78	47.17	-26.83	74	37.22	31.73	9.91	31.69	118	47	P	H
		5143.78	38.07	-15.93	54	27.94	31.79	10.01	31.67	118	47	A	H
	*	5260	103.65	-	-	93.34	31.86	10.1	31.65	118	47	P	H
	*	5260	97.86	-	-	87.55	31.86	10.1	31.65	118	47	A	H
		5411.52	47.36	-26.64	74	36.8	31.95	10.23	31.62	118	47	P	H
		5445.36	38.5	-15.5	54	27.87	31.96	10.28	31.61	118	47	A	H
		5046.8	47.06	-26.94	74	37.11	31.73	9.91	31.69	262	347	P	V
		5083.98	38.02	-15.98	54	28.01	31.75	9.94	31.68	262	347	A	V
	*	5260	97.14	-	-	86.83	31.86	10.1	31.65	262	347	P	V
	*	5260	90.81	-	-	80.5	31.86	10.1	31.65	262	347	A	V
		5377.92	47.49	-26.51	74	36.97	31.93	10.21	31.62	262	347	P	V
		5456.4	38.38	-15.62	54	27.74	31.97	10.28	31.61	262	347	A	V
802.11a CH 60 5300MHz		5066.5	48.81	-25.19	74	38.81	31.74	9.94	31.68	159	53	P	H
		5053.9	40.18	-13.82	54	30.23	31.73	9.91	31.69	159	53	A	H
	*	5300	103.45	-	-	93.07	31.88	10.14	31.64	159	53	P	H
	*	5300	96.53	-	-	86.15	31.88	10.14	31.64	159	53	A	H
		5449.2	47.81	-26.19	74	37.17	31.97	10.28	31.61	159	53	P	H
		5350.8	39.44	-14.56	54	28.97	31.91	10.19	31.63	159	53	A	H
		5143.15	49.76	-24.24	74	39.63	31.79	10.01	31.67	112	163	P	V
		5080.15	40.05	-13.95	54	30.04	31.75	9.94	31.68	112	163	A	V
	*	5300	96	-	-	85.62	31.88	10.14	31.64	112	163	P	V
	*	5300	88.27	-	-	77.89	31.88	10.14	31.64	112	163	A	V
		5380.56	47.06	-26.94	74	36.54	31.93	10.21	31.62	112	163	P	V
		5460	39.09	-14.91	54	28.45	31.97	10.28	31.61	112	163	A	V



802.11a CH 64 5320MHz	*	5320	103.93	-	-	93.52	31.89	10.16	31.64	115	48	P	H
	*	5320	97.01	-	-	86.6	31.89	10.16	31.64	115	48	A	H
		5355.36	48.83	-25.17	74	38.36	31.91	10.19	31.63	115	48	P	H
		5350.08	39.96	-14.04	54	29.49	31.91	10.19	31.63	115	48	A	H
	*	5320	94.56	-	-	84.15	31.89	10.16	31.64	104	171	P	V
	*	5320	86.54	-	-	76.13	31.89	10.16	31.64	104	171	A	V
		5414.08	48.01	-25.99	74	37.43	31.95	10.25	31.62	104	171	P	V
		5445.6	38.93	-15.07	54	28.29	31.97	10.28	31.61	104	171	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	50.16	-23.84	74	51.95	39.42	14.7	55.91	150	220	P	H
		15780	50.17	-23.83	74	50.39	38.44	17.59	56.25	159	345	P	H
		10520	50.9	-23.1	74	52.69	39.42	14.7	55.91	150	220	P	V
		15780	49.98	-24.02	74	50.2	38.44	17.59	56.25	159	345	P	V
802.11a CH 60 5300MHz		10600	50.63	-23.37	74	52.29	39.52	14.76	55.94	185	215	P	H
		15900	49.27	-24.73	74	49.45	38.15	17.68	56.01	196	190	P	H
		10600	50.95	-23.05	74	52.61	39.52	14.76	55.94	185	215	P	V
		15900	49.36	-24.64	74	49.54	38.15	17.68	56.01	196	190	P	V
802.11a CH 64 5320MHz		10640	50.76	-23.24	74	52.36	39.57	14.79	55.96	152	135	P	H
		15960	48.97	-25.03	74	49.15	37.98	17.71	55.87	173	245	P	H
		10640	50.18	-23.82	74	51.78	39.57	14.79	55.96	152	135	P	V
		15960	49.13	-24.87	74	49.31	37.98	17.71	55.87	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)
802.11n HT20 CH 52 5260MHz		5013.52	47.31	-26.69	74	37.4	31.71	9.89	31.69	117	49	P	H
		5108.94	37.95	-16.05	54	27.9	31.77	9.96	31.68	117	49	A	H
	*	5260	104	-	-	93.69	31.86	10.1	31.65	117	49	P	H
	*	5260	97.21	-	-	86.9	31.86	10.1	31.65	117	49	A	H
		5426.64	47.47	-26.53	74	36.89	31.95	10.25	31.62	117	49	P	H
		5451.6	38.48	-15.52	54	27.84	31.97	10.28	31.61	117	49	A	H
		5142.22	47.7	-26.3	74	37.57	31.79	10.01	31.67	104	167	P	V
		5079.04	37.98	-16.02	54	27.97	31.75	9.94	31.68	104	167	A	V
	*	5260	95.24	-	-	84.93	31.86	10.1	31.65	104	167	P	V
	*	5260	88.81	-	-	78.5	31.86	10.1	31.65	104	167	A	V
		5455.92	47.47	-26.53	74	36.83	31.97	10.28	31.61	104	167	P	V
		5444.4	38.37	-15.63	54	27.74	31.96	10.28	31.61	104	167	A	V
802.11n HT20 CH 60 5300MHz		5044.45	46.85	-27.15	74	36.9	31.73	9.91	31.69	117	48	P	H
		5050.05	38.04	-15.96	54	28.09	31.73	9.91	31.69	117	48	A	H
	*	5300	102.72	-	-	92.34	31.88	10.14	31.64	117	48	P	H
	*	5300	96.98	-	-	86.6	31.88	10.14	31.64	117	48	A	H
		5442.48	47.6	-26.4	74	36.97	31.96	10.28	31.61	117	48	P	H
		5357.04	39.12	-14.88	54	28.65	31.91	10.19	31.63	117	48	A	H
		5066.5	46.78	-27.22	74	36.78	31.74	9.94	31.68	125	219	P	V
		5072.1	37.98	-16.02	54	27.97	31.75	9.94	31.68	125	219	A	V
	*	5300	95.46	-	-	85.08	31.88	10.14	31.64	125	219	P	V
	*	5300	89.04	-	-	78.66	31.88	10.14	31.64	125	219	A	V
		5375.76	47.56	-26.44	74	37.05	31.92	10.21	31.62	125	219	P	V
		5454.48	38.42	-15.58	54	27.78	31.97	10.28	31.61	125	219	A	V



802.11n HT20 CH 64 5320MHz	*	5320	103.65	-	-	93.24	31.89	10.16	31.64	144	48	P	H
	*	5320	96.92	-	-	86.51	31.89	10.16	31.64	144	48	A	H
		5350.4	49.32	-24.68	74	38.85	31.91	10.19	31.63	144	48	P	H
		5358.72	39.57	-14.43	54	29.1	31.91	10.19	31.63	144	48	A	H
	*	5320	95.71	-	-	85.3	31.89	10.16	31.64	121	220	P	V
	*	5320	88.97	-	-	78.56	31.89	10.16	31.64	121	220	A	V
		5379.36	48.07	-25.93	74	37.55	31.93	10.21	31.62	121	220	P	V
		5459.04	38.34	-15.66	54	27.7	31.97	10.28	31.61	121	220	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 HT20 CH 52 5260MHz		10520	50.49	-23.51	74	52.28	39.42	14.7	55.91	150	220	P	H
		15780	50.24	-23.76	74	50.46	38.44	17.59	56.25	159	345	P	H
		10520	50.09	-23.91	74	51.88	39.42	14.7	55.91	150	220	P	V
		15780	49.74	-24.26	74	49.96	38.44	17.59	56.25	159	345	P	V
802.11n HT20 CH 60 5300MHz		10600	50.92	-23.08	74	52.58	39.52	14.76	55.94	185	215	P	H
		15900	50.04	-23.96	74	50.22	38.15	17.68	56.01	196	190	P	H
		10600	50.91	-23.09	74	52.57	39.52	14.76	55.94	185	215	P	V
		15900	49.18	-24.82	74	49.36	38.15	17.68	56.01	196	190	P	V
802.11n HT20 CH 64 5320MHz		10640	49.58	-24.42	74	51.18	39.57	14.79	55.96	152	135	P	H
		15960	48.86	-25.14	74	49.04	37.98	17.71	55.87	152	135	P	H
		10640	49.56	-24.44	74	51.16	39.57	14.79	55.96	103	58	P	V
		15960	49.28	-24.72	74	49.46	37.98	17.71	55.87	103	58	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)
802.11n HT40 CH 54 5270MHz		5101.4	47.4	-26.6	74	37.36	31.76	9.96	31.68	112	50	P	H
		5040.82	38.84	-15.16	54	28.89	31.73	9.91	31.69	112	50	A	H
	*	5270	100.7	-	-	90.37	31.86	10.12	31.65	112	50	P	H
	*	5270	94.11	-	-	83.78	31.86	10.12	31.65	112	50	A	H
		5439.84	48.54	-25.46	74	37.91	31.96	10.28	31.61	112	50	P	H
		5447.52	39.26	-14.74	54	28.62	31.97	10.28	31.61	112	50	A	H
		5146.64	47.57	-26.43	74	37.44	31.79	10.01	31.67	330	12	P	V
		5061.1	38.78	-15.22	54	28.82	31.74	9.91	31.69	330	12	A	V
	*	5270	95.3	-	-	84.97	31.86	10.12	31.65	330	12	P	V
	*	5270	88.83	-	-	78.5	31.86	10.12	31.65	330	12	A	V
		5442.48	48.59	-25.41	74	37.96	31.96	10.28	31.61	330	12	P	V
		5452.32	38.96	-15.04	54	28.32	31.97	10.28	31.61	330	12	A	V
802.11n HT40 CH 62 5310MHz		5101.85	47.68	-26.32	74	37.64	31.76	9.96	31.68	100	51	P	H
		5086.45	39.09	-14.91	54	29.08	31.75	9.94	31.68	100	51	A	H
	*	5310	100.15	-	-	89.76	31.89	10.14	31.64	100	51	P	H
	*	5310	93.81	-	-	83.42	31.89	10.14	31.64	100	51	A	H
		5354.16	52.61	-21.39	74	42.14	31.91	10.19	31.63	100	51	P	H
		5353.92	45.09	-8.91	54	34.62	31.91	10.19	31.63	100	51	A	H
		5068.25	46.96	-27.04	74	36.96	31.74	9.94	31.68	311	12	P	V
		5092.75	38.78	-15.22	54	28.74	31.76	9.96	31.68	311	12	A	V
	*	5310	94.04	-	-	83.65	31.89	10.14	31.64	311	12	P	V
	*	5310	87.39	-	-	77	31.89	10.14	31.64	311	12	A	V
		5350.08	50.97	-23.03	74	40.5	31.91	10.19	31.63	311	12	P	V
		5350.56	41.85	-12.15	54	31.38	31.91	10.19	31.63	311	12	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 HT40 CH 54 5270MHz		10540	49.57	-24.43	74	51.33	39.44	14.72	55.92	168	345	P	H
		15810	49.89	-24.11	74	50.1	38.36	17.61	56.18	168	345	P	H
		10540	48.02	-25.98	74	49.78	39.44	14.72	55.92	150	220	P	V
		15810	49.27	-24.73	74	49.48	38.36	17.61	56.18	150	220	P	V
802.11n HT40 CH 62 5310MHz		10620	49.58	-24.42	74	51.21	39.54	14.78	55.95	160	100	P	H
		15930	49.13	-24.87	74	49.3	38.07	17.7	55.94	160	100	P	H
		10620	49.82	-24.18	74	51.45	39.54	14.78	55.95	157	254	P	V
		15930	48.75	-25.25	74	48.92	38.07	17.7	55.94	157	254	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		5082.16	47.76	-26.24	74	37.75	31.75	9.94	31.68	144	50	P	H
		5113.88	42.3	-11.7	54	32.23	31.77	9.98	31.68	144	50	A	H
	*	5290	96.31	-	-	85.94	31.87	10.14	31.64	144	50	P	H
	*	5290	91	-	-	80.63	31.87	10.14	31.64	144	50	A	H
		5351.76	53.19	-20.81	74	42.72	31.91	10.19	31.63	144	50	P	H
		5359.92	48.36	-5.64	54	37.89	31.91	10.19	31.63	144	50	A	H
		5026.52	48.7	-25.3	74	38.78	31.72	9.89	31.69	118	202	P	V
		5053.04	42	-12	54	32.05	31.73	9.91	31.69	118	202	A	V
	*	5290	88.14	-	-	77.77	31.87	10.14	31.64	118	202	P	V
	*	5290	81.54	-	-	71.17	31.87	10.14	31.64	118	202	A	V
		5354.88	48.68	-25.32	74	38.21	31.91	10.19	31.63	118	202	P	V
		5351.28	42.48	-11.52	54	32.01	31.91	10.19	31.63	118	202	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	49.68	-24.32	74	51.38	39.5	14.74	55.94	122	58	P	H
VHT80		15870	49.43	-24.57	74	49.62	38.19	17.66	56.04	122	58	P	H
CH 58		10580	49.94	-24.06	74	51.64	39.5	14.74	55.94	169	81	P	V
5290MHz		15870	48.71	-25.29	74	48.9	38.19	17.66	56.04	169	81	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		5466.64	50.15	-23.85	74	39.48	31.98	10.3	31.61	100	51	P	H
		5467.44	42.22	-11.78	54	31.55	31.98	10.3	31.61	100	51	A	H
	*	5500	105.86	-	-	95.14	32	10.32	31.6	100	51	P	H
	*	5500	97.21	-	-	86.49	32	10.32	31.6	100	51	A	H
		5414.96	48.58	-25.42	74	38	31.95	10.25	31.62	100	204	P	V
		5470	39.73	-14.27	54	29.06	31.98	10.3	31.61	100	204	A	V
	*	5500	96	-	-	85.28	32	10.32	31.6	100	204	P	V
	*	5500	89.2	-	-	78.48	32	10.32	31.6	100	204	A	V
802.11a CH 116 5580MHz		5355.76	46.67	-27.33	74	36.2	31.91	10.19	31.63	123	49	P	H
		5461.6	39.17	-14.83	54	28.53	31.97	10.28	31.61	123	49	A	H
	*	5580	106.7	-	-	95.79	32.12	10.39	31.6	123	49	P	H
	*	5580	99.4	-	-	88.49	32.12	10.39	31.6	123	49	A	H
		5764.055	47.96	-26.04	74	36.52	32.47	10.57	31.6	123	49	P	H
		5737.91	40.42	-13.58	54	29.04	32.43	10.55	31.6	123	49	A	H
		5395.36	47.22	-26.78	74	36.67	31.94	10.23	31.62	100	205	P	V
		5455.6	38.92	-15.08	54	28.28	31.97	10.28	31.61	100	205	A	V
	*	5580	93.97	-	-	83.06	32.12	10.39	31.6	100	205	P	V
	*	5580	87.8	-	-	76.89	32.12	10.39	31.6	100	205	A	V
		5752.715	47.93	-26.07	74	36.51	32.47	10.55	31.6	100	205	P	V
		5751.77	40.17	-13.83	54	28.75	32.47	10.55	31.6	100	205	A	V



802.11a CH 140 5700MHz	*	5700	106.2	-	-	94.96	32.34	10.5	31.6	100	43	P	H
	*	5700	99.73	-	-	88.49	32.34	10.5	31.6	100	43	A	H
		5728.6	56.15	-17.85	74	44.83	32.4	10.52	31.6	100	43	P	H
		5725	48.84	-5.16	54	37.52	32.4	10.52	31.6	100	43	A	H
	*	5700	98.29	-	-	87.05	32.34	10.5	31.6	100	270	P	V
	*	5700	90.73	-	-	79.49	32.34	10.5	31.6	100	270	A	V
		5725.64	49.97	-24.03	74	38.65	32.4	10.52	31.6	100	270	P	V
		5725.08	42.52	-11.48	54	31.2	32.4	10.52	31.6	100	270	A	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	50.83	-23.17	74	51.88	40	15.05	56.1	163	230	P	H
		16500	49.31	-24.69	74	48.55	39	17.81	56.05	178	296	P	H
		11000	50.28	-23.72	74	51.33	40	15.05	56.1	163	230	P	V
		16500	49.69	-24.31	74	48.93	39	17.81	56.05	178	296	P	V
802.11a CH 116 5580MHz		11160	50.62	-23.38	74	51.32	40.03	15.12	55.85	170	200	P	H
		16740	50.42	-23.58	74	48.99	39.77	17.83	56.17	156	350	P	H
		11160	50.71	-23.29	74	51.41	40.03	15.12	55.85	170	200	P	V
		16740	50.21	-23.79	74	48.78	39.77	17.83	56.17	156	350	P	V
802.11a CH 140 5700MHz		11400	50.78	-23.22	74	50.96	40.08	15.23	55.49	157	285	P	H
		17100	50.26	-23.74	74	47.7	41.02	17.92	56.38	165	246	P	H
		11400	49.99	-24.01	74	50.17	40.08	15.23	55.49	157	285	P	V
		17100	50.03	-23.97	74	47.47	41.02	17.92	56.38	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)
802.11n HT20 CH 100 5500MHz		5442.48	49.25	-24.75	74	38.62	31.96	10.28	31.61	144	48	P	H
		5466	40.62	-13.38	54	29.95	31.98	10.3	31.61	144	48	A	H
	*	5500	104.2	-	-	93.48	32	10.32	31.6	144	48	P	H
	*	5500	97.38	-	-	86.66	32	10.32	31.6	144	48	A	H
		5456.4	48.36	-25.64	74	37.72	31.97	10.28	31.61	160	105	P	V
		5468.72	39.08	-14.92	54	28.41	31.98	10.3	31.61	160	105	A	V
	*	5500	96.76	-	-	86.04	32	10.32	31.6	160	105	P	V
	*	5500	90.02	-	-	79.3	32	10.32	31.6	160	105	A	V
802.11n HT20 CH 116 5580MHz		5427.28	48.16	-25.84	74	37.57	31.95	10.25	31.61	168	41	P	H
		5445.76	38.44	-15.56	54	27.8	31.97	10.28	31.61	168	41	A	H
	*	5580	104.2	-	-	93.29	32.12	10.39	31.6	168	41	P	H
	*	5580	98.01	-	-	87.1	32.12	10.39	31.6	168	41	A	H
		5751.14	47.66	-26.34	74	36.28	32.43	10.55	31.6	168	41	P	H
		5741.06	39.3	-14.7	54	27.92	32.43	10.55	31.6	168	41	A	H
		5445.28	47.51	-26.49	74	36.88	31.96	10.28	31.61	172	99	P	V
		5462.8	38.45	-15.55	54	27.78	31.98	10.3	31.61	172	99	A	V
	*	5580	96.54	-	-	85.63	32.12	10.39	31.6	172	99	P	V
	*	5580	90.01	-	-	79.1	32.12	10.39	31.6	172	99	A	V
		5760.905	47.9	-26.1	74	36.48	32.47	10.55	31.6	172	99	P	V
		5734.76	39.03	-14.97	54	27.68	32.43	10.52	31.6	172	99	A	V



802.11n HT20 CH 140 5700MHz	*	5700	105.28	-	-	94.04	32.34	10.5	31.6	104	49	P	H
	*	5700	99.04	-	-	87.8	32.34	10.5	31.6	104	49	A	H
		5725.16	57.26	-16.74	74	45.94	32.4	10.52	31.6	104	49	P	H
		5725	48.49	-5.51	54	37.17	32.4	10.52	31.6	104	49	A	H
	*	5700	97.14	-	-	85.9	32.34	10.5	31.6	115	103	P	V
	*	5700	90.74	-	-	79.5	32.34	10.5	31.6	115	103	A	V
		5757.24	50.04	-23.96	74	38.62	32.47	10.55	31.6	115	103	P	V
		5725.08	41.44	-12.56	54	30.12	32.4	10.52	31.6	115	103	A	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 HT20 CH 100 5500MHz		11000	49.37	-24.63	74	50.42	40	15.05	56.1	132	64	P	H
		16650	49.58	-24.42	74	48.39	39.5	17.82	56.13	132	64	P	H
		11000	50.37	-23.63	74	51.42	40	15.05	56.1	180	350	P	V
		16650	49.28	-24.72	74	48.09	39.5	17.82	56.13	180	350	P	V
802.11n HT20 CH 116 5580MHz		11160	49.52	-24.48	74	50.22	40.03	15.12	55.85	166	89	P	H
		16740	48.96	-25.04	74	47.53	39.77	17.83	56.17	166	89	P	H
		11160	49.15	-24.85	74	49.85	40.03	15.12	55.85	156	350	P	V
		16740	48.56	-25.44	74	47.13	39.77	17.83	56.17	156	350	P	V
802.11n HT20 CH 140 5700MHz		11400	48.59	-25.41	74	48.77	40.08	15.23	55.49	165	246	P	H
		17100	49.61	-24.39	74	47.05	41.02	17.92	56.38	165	246	P	H
		11400	49.54	-24.46	74	49.72	40.08	15.23	55.49	157	285	P	V
		17100	49.47	-24.53	74	46.91	41.02	17.92	56.38	157	285	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)
802.11n HT40 CH 102 5510MHz		5462.32	56.38	-17.62	74	45.74	31.97	31.61	10.28	110	49	P	H
		5469.76	49.11	-4.89	54	38.44	31.98	31.61	10.3	110	49	A	H
	*	5510	101.44	-	-	90.72	32	31.6	10.32	110	49	P	H
	*	5510	93.52	-	-	82.8	32	31.6	10.32	110	49	A	H
		5759.015	49.27	-24.73	74	37.85	32.47	31.6	10.55	110	49	P	H
		5738.855	41.26	-12.74	54	29.88	32.43	31.6	10.55	110	49	A	H
		5469.52	53.5	-20.5	74	42.83	31.98	10.3	31.61	323	11	P	V
		5470	45.56	-8.44	54	34.89	31.98	10.3	31.61	323	11	A	V
	*	5510	93.2	-	-	82.48	32	10.32	31.6	323	11	P	V
	*	5510	87.24	-	-	76.52	32	10.32	31.6	323	11	A	V
		5742.005	48.32	-25.68	74	36.94	32.43	10.55	31.6	323	11	P	V
		5733.185	39.75	-14.25	54	28.43	32.4	10.52	31.6	323	11	A	V
802.11n HT40 CH 110 5550MHz		5467.36	49.08	-24.92	74	38.41	31.98	10.3	31.61	106	51	P	H
		5469.52	40.04	-13.96	54	29.37	31.98	10.3	31.61	106	51	A	H
	*	5550	101.01	-	-	90.16	32.09	10.36	31.6	106	51	P	H
	*	5550	94.87	-	-	84.02	32.09	10.36	31.6	106	51	A	H
		5725.31	48.99	-25.01	74	37.67	32.4	10.52	31.6	106	51	P	H
		5751.455	39.86	-14.14	54	28.48	32.43	10.55	31.6	106	51	A	H
		5411.2	47.92	-26.08	74	37.37	31.94	10.23	31.62	314	11	P	V
		5463.52	39.2	-14.8	54	28.53	31.98	10.3	31.61	314	11	A	V
	*	5550	93.61	-	-	82.76	32.09	10.36	31.6	314	11	P	V
	*	5550	87.41	-	-	76.56	32.09	10.36	31.6	314	11	A	V
		5740.115	47.89	-26.11	74	36.51	32.43	10.55	31.6	314	11	P	V
		5750.51	39.74	-14.26	54	28.36	32.43	10.55	31.6	314	11	A	V



802.11n HT40 CH 134 5670MHz		5464.45	47.78	-26.22	74	37.11	31.98	10.3	31.61	106	51	P	H
		5444.85	39.42	-14.58	54	28.79	31.96	10.28	31.61	106	51	A	H
	*	5670	101.7	-	-	90.51	32.31	10.48	31.6	106	51	P	H
	*	5670	95.29	-	-	84.1	32.31	10.48	31.6	106	51	A	H
		5732.45	54.33	-19.67	74	43.01	32.4	10.52	31.6	106	51	P	H
		5727.375	46.75	-7.25	54	35.43	32.4	10.52	31.6	106	51	A	H
		5438.2	47.92	-26.08	74	37.29	31.96	10.28	31.61	298	13	P	V
		5465.15	39.47	-14.53	54	28.8	31.98	10.3	31.61	298	13	A	V
	*	5670	93.23	-	-	82.04	32.31	10.48	31.6	298	13	P	V
	*	5670	86.69	-	-	75.5	32.31	10.48	31.6	298	13	A	V
		5733.85	49.05	-24.95	74	37.73	32.4	10.52	31.6	298	13	P	V
		5728.775	40.7	-13.3	54	29.38	32.4	10.52	31.6	298	13	A	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 HT40 CH 102 5510MHz		11020	49.82	-24.18	74	50.83	40	15.06	56.07	170	230	P	H
		16530	49.07	-24.93	74	48.22	39.11	17.81	56.07	170	230	P	H
		11020	50.09	-23.91	74	51.1	40	15.06	56.07	133	65	P	V
		16530	48.77	-25.23	74	47.92	39.11	17.81	56.07	133	65	P	V
802.11n HT40 CH 110 5550MHz		11100	50.14	-23.86	74	50.97	40.02	15.1	55.95	136	89	P	H
		16650	49.88	-24.12	74	48.69	39.5	17.82	56.13	136	89	P	H
		11100	49.02	-24.98	74	49.85	40.02	15.1	55.95	158	224	P	V
		16650	49.75	-24.25	74	48.56	39.5	17.82	56.13	158	224	P	V
802.11n HT40 CH 134 5670MHz		11340	48.42	-25.58	74	48.73	40.07	15.21	55.59	158	71	P	H
		17010	49.15	-24.85	74	46.93	40.67	17.86	56.31	158	71	P	H
		11340	49.85	-24.15	74	50.16	40.07	15.21	55.59	200	360	P	V
		17010	49.84	-24.16	74	47.62	40.67	17.86	56.31	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)
802.11ac VHT80 CH 106 5530MHz		5453.92	56.08	-17.92	74	45.44	31.97	31.61	10.28	136	56	P	H
		5453.68	49.73	-4.27	54	39.09	31.97	31.61	10.28	136	56	A	H
	*	5530	95.9	-	-	85.13	32.03	31.6	10.34	136	56	P	H
	*	5530	90.9	-	-	80.13	32.03	31.6	10.34	136	56	A	H
		5745.785	48.62	-25.38	74	37.24	32.43	31.6	10.55	136	56	P	H
		5743.265	41.89	-12.11	54	30.51	32.43	31.6	10.55	136	56	A	H
		5452.48	47.65	-26.35	74	37.01	31.97	10.28	31.61	220	98	P	V
		5465.92	41.66	-12.34	54	30.99	31.98	10.3	31.61	220	98	A	V
	*	5530	87.19	-	-	76.42	32.03	10.34	31.6	220	98	P	V
	*	5530	82.2	-	-	71.43	32.03	10.34	31.6	220	98	A	V
		5757.125	47.97	-26.03	74	36.55	32.47	10.55	31.6	220	98	P	V
		5753.975	42.46	-11.54	54	31.04	32.47	10.55	31.6	220	98	A	V
802.11ac VHT80 CH 122 5610MHz		5446.24	48.11	-25.89	74	37.47	31.97	10.28	31.61	168	53	P	H
		5465.2	41.12	-12.88	54	30.45	31.98	10.3	31.61	168	53	A	H
	*	5610	96.8	-	-	85.8	32.19	10.41	31.6	168	53	P	H
	*	5610	91.47	-	-	80.47	32.19	10.41	31.6	168	53	A	H
		5726.255	49.21	-24.79	74	37.89	32.4	10.52	31.6	168	53	P	H
		5725.625	43.45	-10.55	54	32.13	32.4	10.52	31.6	168	53	A	H
		5392.96	46.6	-27.4	74	36.06	31.93	10.23	31.62	200	110	P	V
		5454.16	40.7	-13.3	54	30.06	31.97	10.28	31.61	200	110	A	V
	*	5610	88.93	-	-	77.93	32.19	10.41	31.6	200	110	P	V
	*	5610	82.25	-	-	71.25	32.19	10.41	31.6	200	110	A	V
		5739.8	48.54	-25.46	74	37.16	32.43	10.55	31.6	200	110	P	V
		5738.225	42.35	-11.65	54	30.97	32.43	10.55	31.6	200	110	A	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	47.37	-26.63	74	48.29	40.01	15.07	56	126	84	P	H
VHT80		16590	49.76	-24.24	74	48.76	39.28	17.82	56.1	126	84	P	H
CH 106		11060	48.43	-25.57	74	49.35	40.01	15.07	56	139	80	P	V
5530MHz		16590	49.33	-24.67	74	48.33	39.28	17.82	56.1	139	80	P	V
802.11ac		11220	49.78	-24.22	74	50.36	40.04	15.15	55.77	150	360	P	H
VHT80		16830	49.33	-24.67	74	47.66	40.05	17.84	56.22	150	360	P	H
CH 122		11220	49.85	-24.15	74	50.43	40.04	15.15	55.77	136	52	P	V
5610MHz		16830	49.38	-24.62	74	47.71	40.05	17.84	56.22	136	52	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 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 144 5720MHz		11440	50.03	-23.97	74	50.13	40.09	15.25	55.44	150	360	P	H
		17160	50.2	-23.8	74	47.39	41.3	17.95	56.44	150	0	P	H
		11440	49.83	-24.17	74	49.93	40.09	15.25	55.44	150	360	P	V
		17160	50	-24	74	47.19	41.3	17.95	56.44	150	0	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 HT20 CH 144 5720MHz		11440	50.68	-23.32	74	50.78	40.09	15.25	55.44	150	360	P	H
		17160	50.57	-23.43	74	47.76	41.3	17.95	56.44	150	0	P	H
		11440	50.69	-23.31	74	50.79	40.09	15.25	55.44	150	360	P	V
		17160	50.54	-23.46	74	47.73	41.3	17.95	56.44	150	0	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 HT40 CH 142 5710MHz		11420	50.55	-23.45	74	50.69	40.08	15.24	55.46	157	285	P	H
		17130	50.82	-23.18	74	48.13	41.16	17.94	56.41	165	246	P	H
		11420	50.29	-23.71	74	50.43	40.08	15.24	55.46	157	285	P	V
		17130	50.65	-23.35	74	47.96	41.16	17.94	56.41	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	50.63	-23.37	74	50.85	40.08	15.22	55.52	150	360	P	H
VHT80		17070	50.98	-23.02	74	48.54	40.88	17.91	56.35	150	0	P	H
CH 138		11380	50.08	-23.92	74	50.3	40.08	15.22	55.52	150	360	P	V
5690MHz		17070	50.73	-23.27	74	48.29	40.88	17.91	56.35	150	0	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		30.97	22.67	-17.33	40	30.08	24.62	0.57	32.6			P	H
		63.95	19.33	-20.67	40	38.56	12.5	0.82	32.55			P	H
		157.07	31.66	-11.84	43.5	46.03	16.36	1.31	32.04	100	222	P	H
		191.99	26.14	-17.36	43.5	40.86	15.26	1.43	31.41			P	H
		694.45	27.84	-18.16	46	31.39	25.2	2.85	31.6			P	H
		967.99	30.44	-23.56	54	30.95	27.28	3.42	31.21			P	H
		30	28.14	-11.86	40	34.98	25.2	0.56	32.6	111	221	P	V
		56.19	27.49	-12.51	40	46	13.22	0.77	32.5			P	V
		127.97	19.69	-23.81	43.5	32.64	18.04	1.17	32.16			P	V
		161.92	29.69	-13.81	43.5	44.16	16.2	1.32	31.99			P	V
		668.26	28.29	-17.71	46	31.89	25.2	2.8	31.6			P	V
		967.02	30.08	-23.92	54	30.58	27.27	3.42	31.19			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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		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)

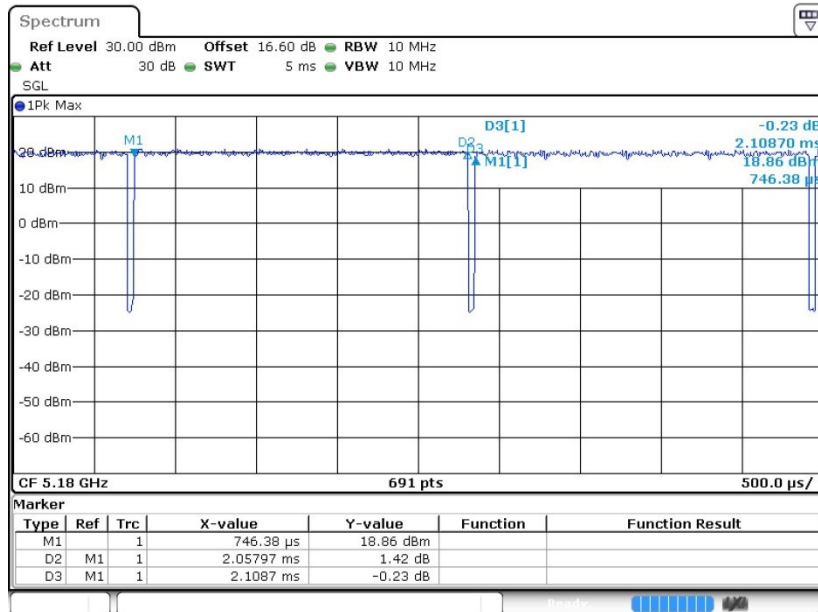
= -10.46(dB)

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

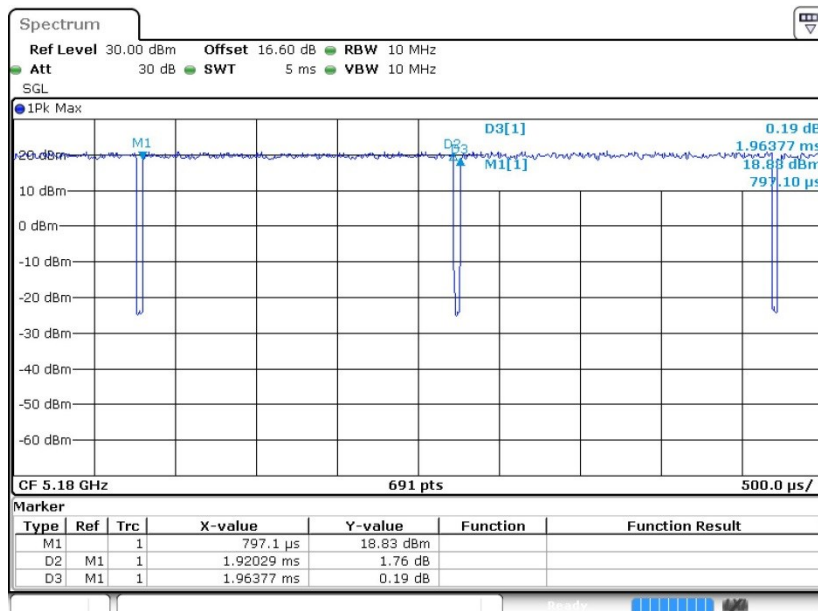
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1+2	802.11a	97.59	2.058	0.486	1KHz
1+2	802.11n HT20	97.79	1.920	0.521	1KHz
1+2	802.11n HT40	96.46	0.946	1.057	3KHz
1+2	802.11ac VHT80	87.62	0.257	3.898	10KHz

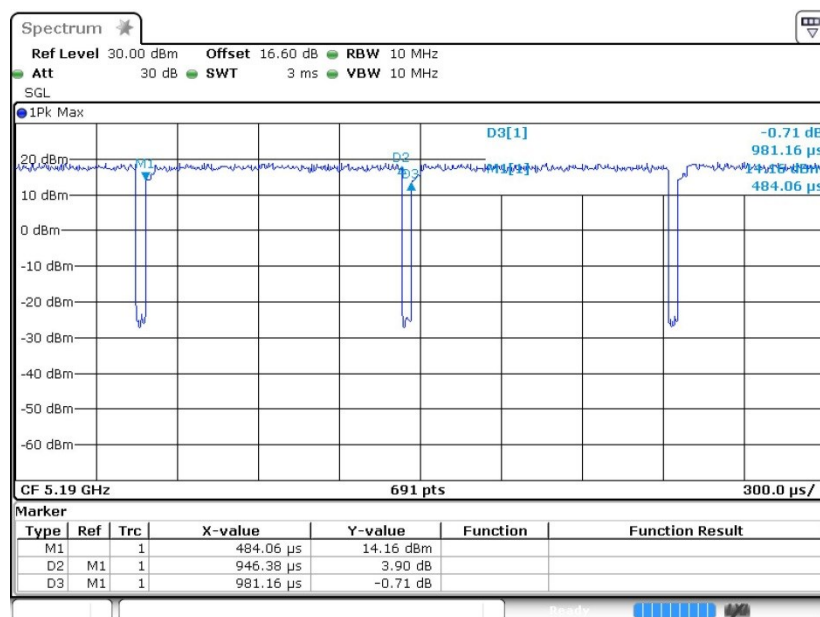
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80

