



FCC RF Test Report

APPLICANT : ASUSTeK COMPUTER INC.
EQUIPMENT : ASUS Phone(Mobile Phone)
BRAND NAME : ASUS
MODEL NAME : ASUS_X017DA
FCC ID : MSQX017DA
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Nov. 04, 2017 and testing was completed on Feb. 24, 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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Guangdong Province 518055 China**



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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	FCC ≤ 24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	FCC ≤ 11 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) 15.209(a)	Pass	Under limit 4.61 dB at 5350.320 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 4.96 dB at 0.48 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

ASUSTeK COMPUTER INC.
4F, No. 150, LI-TE RD., PEITOU, TAIPEI, TAIWAN

1.2 Manufacturer

Wingtech Mobile Communications Co, Ltd.
Floor 1st-3rd, Yinfeng Building, No.5097 Luosha Road, Luohu District, Shenzhen

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_X017DA
FCC ID	MSQX017DA
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR/Bluetooth v4.0 LE Bluetooth v4.1 LE/Bluetooth v4.2 LE
IMEI Code	Conducted: 353746090026767/353746090026775 Conduction: 353746090027161/353746090027179 Radiation: 353746090030728/353746090030736
HW Version	89199_1_XX
SW Version	NMF26X.WW_Phone-14.0400.1702.001-20171109
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. There are two samples, the two samples have different suppliers for eMCP/LCD/camera/Battery, except for the supplier of these components, all the other features are the same, the differences will not affect RF features, so we assessed sample 1 to perform full test.



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 ~ 5700 MHz
Maximum Output Power to Antenna	<p><5180 MHz ~ 5240 MHz> 802.11a : 14.83 dBm / 0.0304 W 802.11n HT20 : 10.84 dBm / 0.0121 W 802.11n HT40 : 10.74 dBm / 0.0119 W 802.11ac VHT20 : 8.58 dBm / 0.0072 W 802.11ac VHT40 : 6.97 dBm / 0.0050 W 802.11ac VHT80 : 6.60 dBm / 0.0046 W</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 14.48 dBm / 0.0281 W 802.11n HT20 : 10.67 dBm / 0.0117 W 802.11n HT40 : 10.76 dBm / 0.0119 W 802.11ac VHT20 : 8.41 dBm / 0.0069 W 802.11ac VHT40 : 6.79 dBm / 0.0048 W 802.11ac VHT80 : 6.36 dBm / 0.0043 W</p> <p><5500 MHz ~ 5700 MHz > 802.11a : 14.49 dBm / 0.0281 W 802.11n HT20 : 10.64 dBm / 0.0116 W 802.11n HT40 : 10.48 dBm / 0.0112 W 802.11ac VHT20 : 8.50 dBm / 0.0071 W 802.11ac VHT40 : 6.83 dBm / 0.0048 W 802.11ac VHT80 : 6.49 dBm / 0.0045 W</p>
99% Occupied Bandwidth	<p><5180 MHz ~ 5240 MHz> 802.11a : 17.63 MHz 802.11n HT20 : 18.83 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.64 MHz</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 17.78 MHz 802.11n HT20 : 18.88 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.76 MHz</p> <p><5500 MHz ~ 5700 MHz > 802.11a : 17.68 MHz 802.11n HT20 : 18.83 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 75.76 MHz</p>



Standards-related Product Specification	
Antenna Gain / Gain	<p><5180 MHz ~ 5240 MHz> PIFA Antenna with gain 1.20 dBi</p> <p><5260 MHz ~ 5320 MHz> PIFA Antenna with gain 0.40 dBi</p> <p><5500 MHz ~ 5700 MHz> PIFA Antenna with gain -0.50 dBi</p>
Type of Modulation	<p>802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)</p> <p>802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)</p>

Note:

1. WLAN operation in 5600 MHz ~ 5650 MHz is notched.
2. For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing assessed only 802.11n HT20/ 11n HT40 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	251365

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.
	03CH03-SZ		577730

Note: The test site complies with ANSI C63.4 2014 requirement.

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
- 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

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: conducted emission (150 kHz to 30 MHz) and radiated 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 were recorded in this report.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 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)
5250-5350 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)
5470-5725 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

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 mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

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



Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

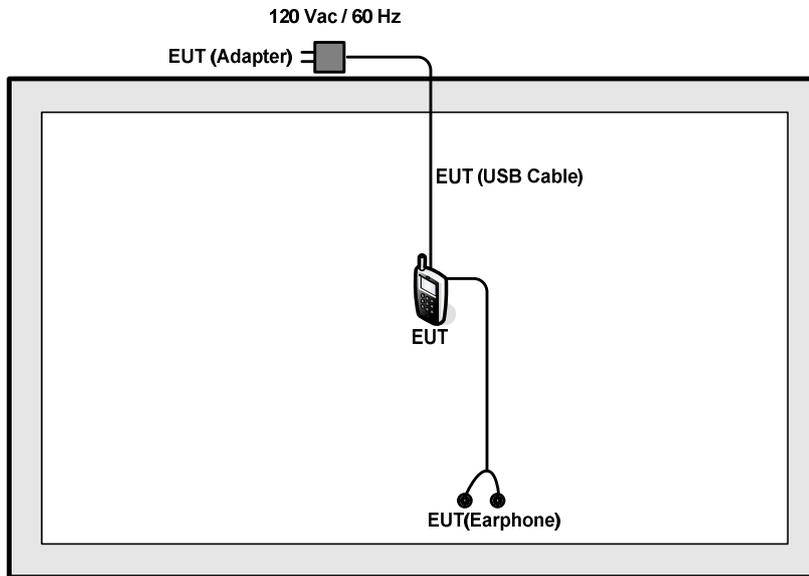
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

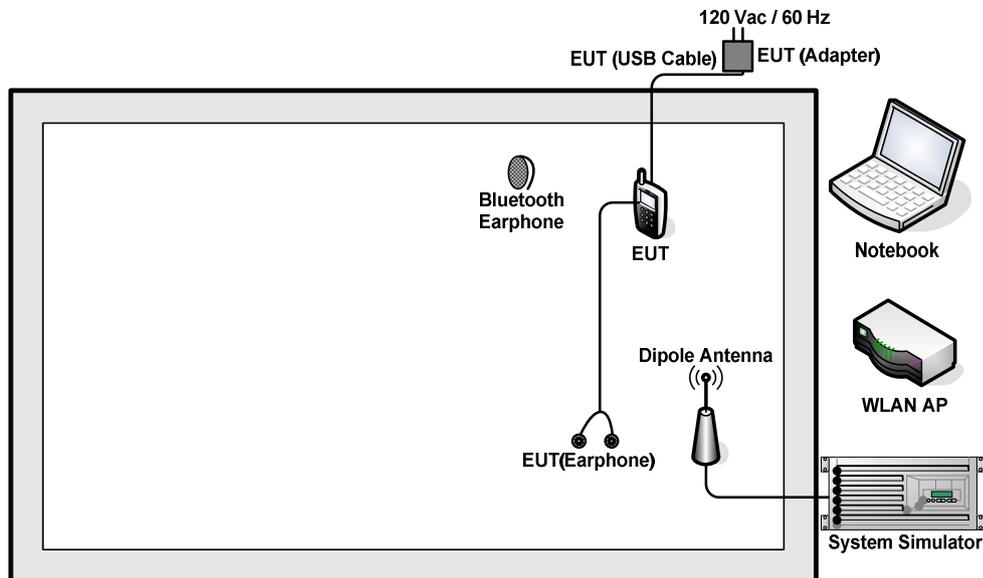
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

2.3 Connection Diagram of Test System

< Radiated Emission Mode >



< AC Conducted Emission Mode >



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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	Dlink	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	PYAHS-107W	N/A	N/A
5.	SD Card	N/A	MicroSD HC	FCC DoC	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 6.3 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 6.3 + 10 = 16.3 \text{ (dB)} \end{aligned}$$

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.

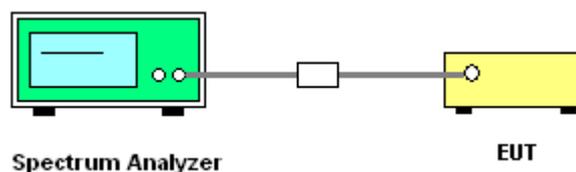
3.1.2 Measuring Instruments

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.

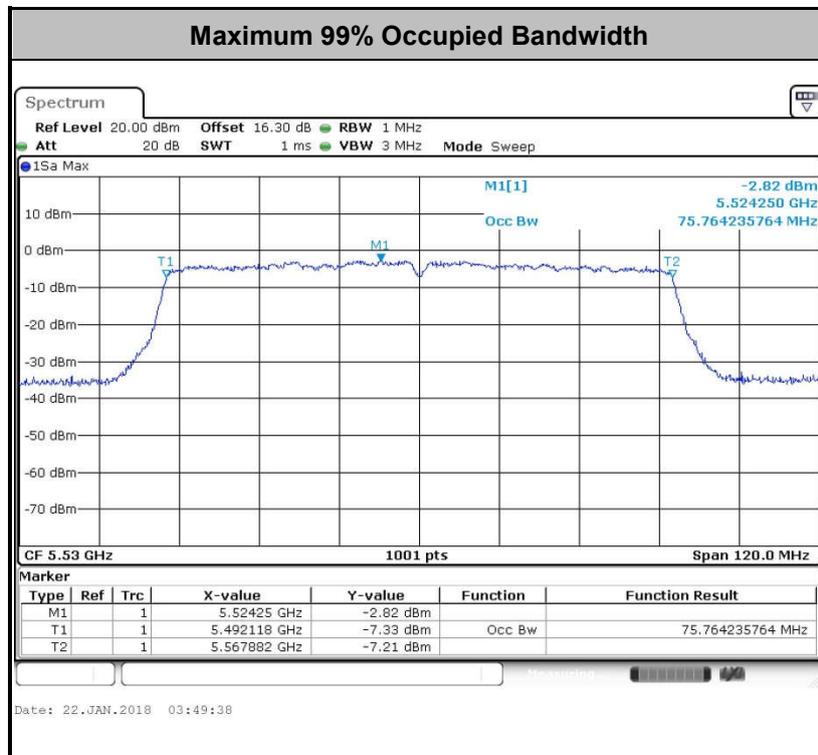
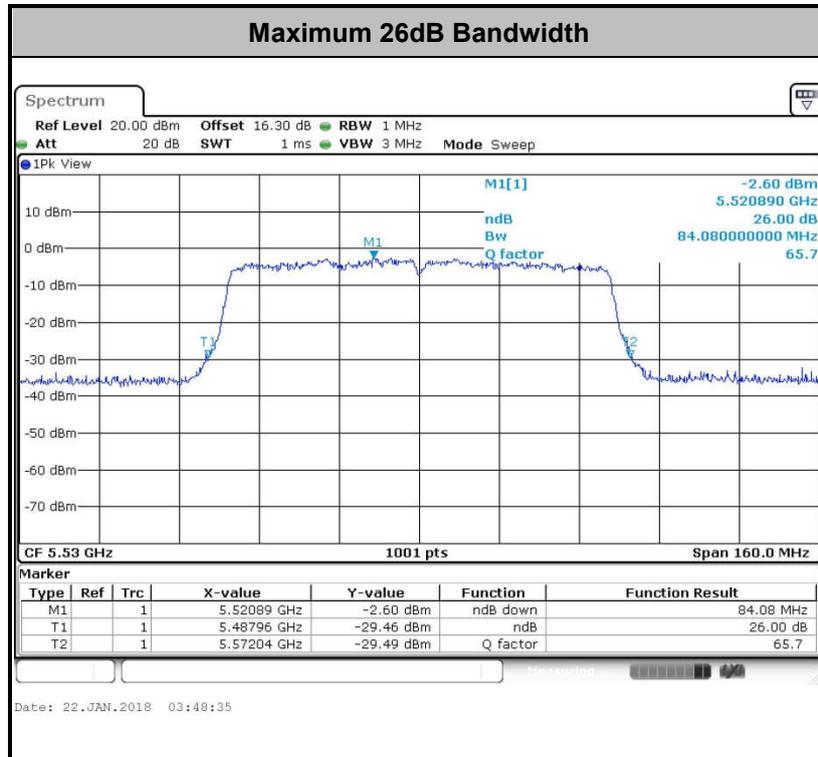
3.1.4 Test Setup





3.1.5 Test Result of 26dB & 99% Occupied Bandwidth Plots

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 $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

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

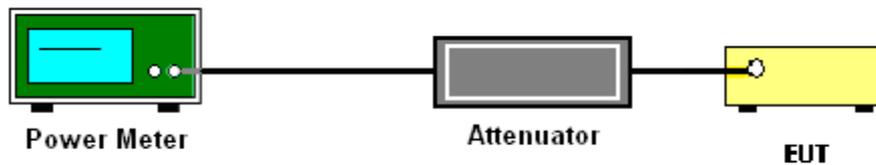
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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.

3.2.4 Test Setup

For normal channel:



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.

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

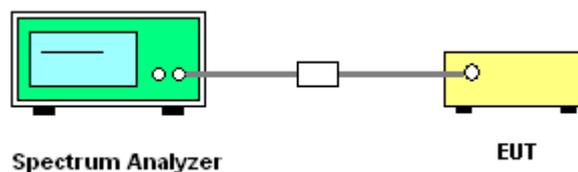
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

Method SA-2

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

1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
 - 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.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

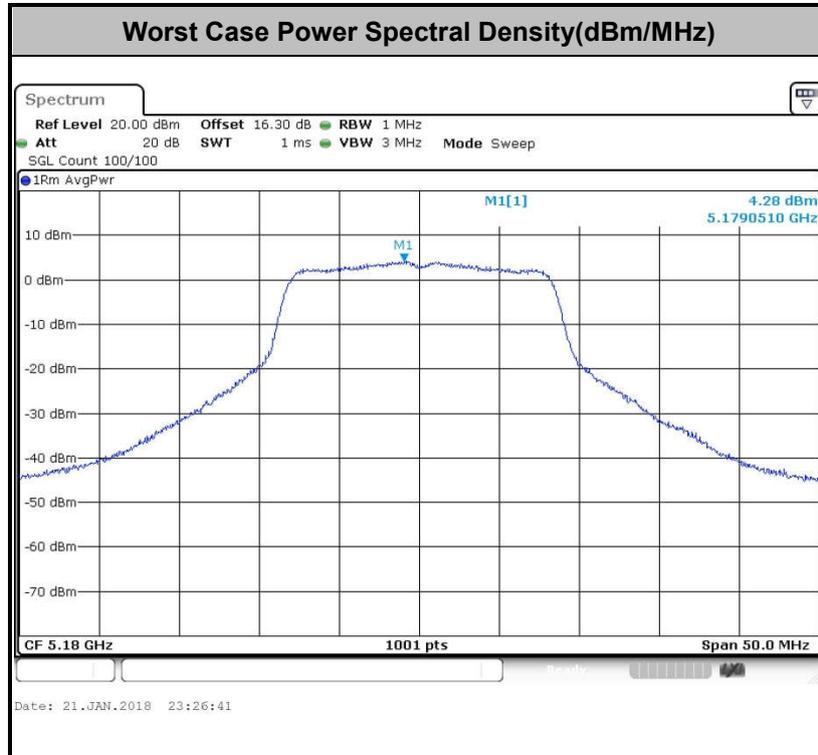
3.3.4 Test Setup





3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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



3.4 Unwanted Radiated Emission 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 5470-5725MHz 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

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

$$E = \frac{1000000\sqrt{30P}}{3} \text{ } \mu\text{V/m, where P is the eirp (Watts)}$$



EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D01 v01r04 G)2)c)

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.³
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.⁴

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).



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

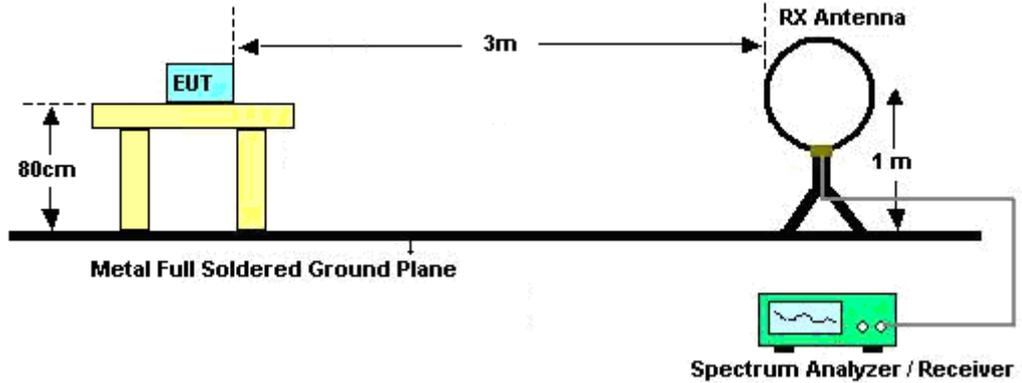
- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



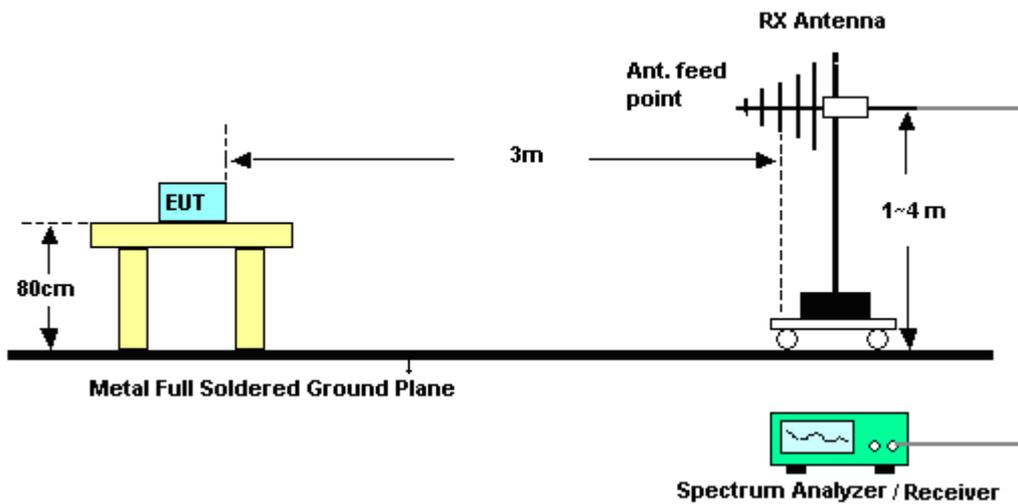
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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

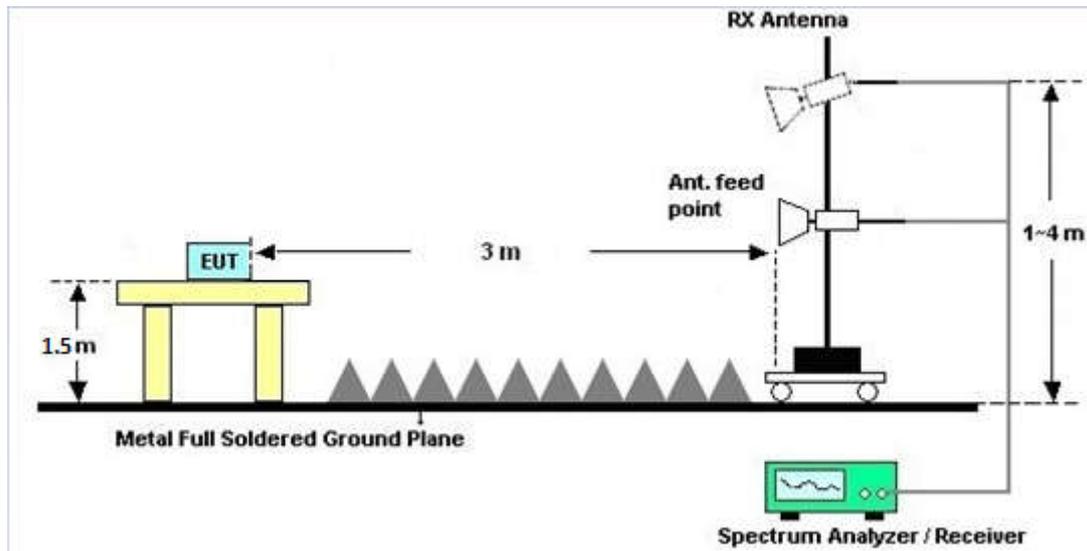
For radiated emissions below 30MHz



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.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.4.7 Duty Cycle

Please refer to Appendix C.

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

Please refer to Appendix B.



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.

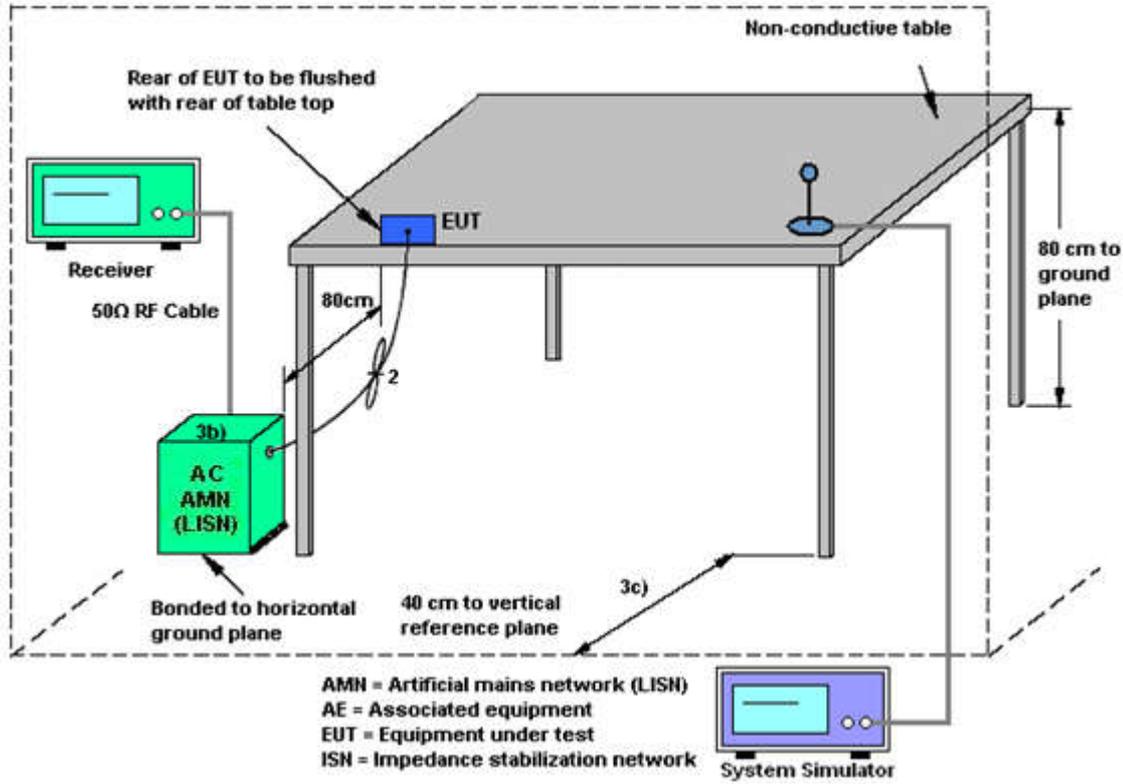
3.5.2 Measuring Instruments

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.

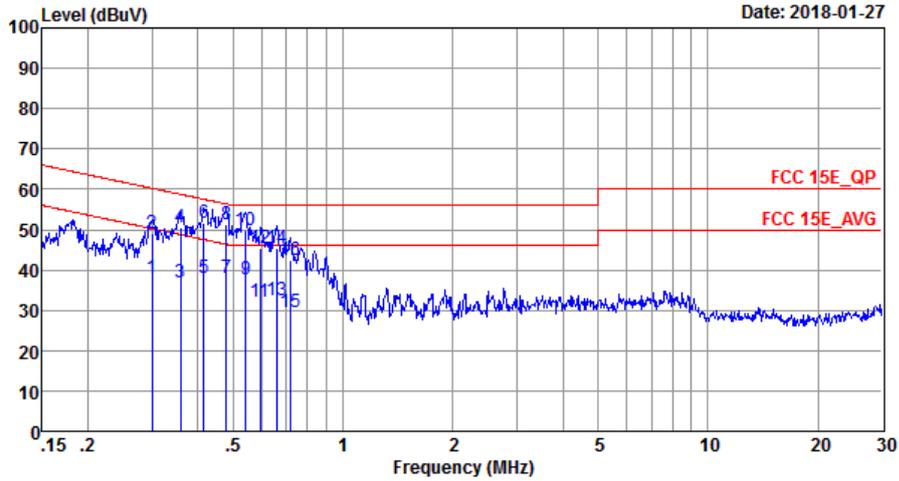
3.5.4 Test Setup





3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~25°C
Test Engineer :	Peng Wang	Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 1(Charging from Adapter 1) + Earphone + SIM 1		

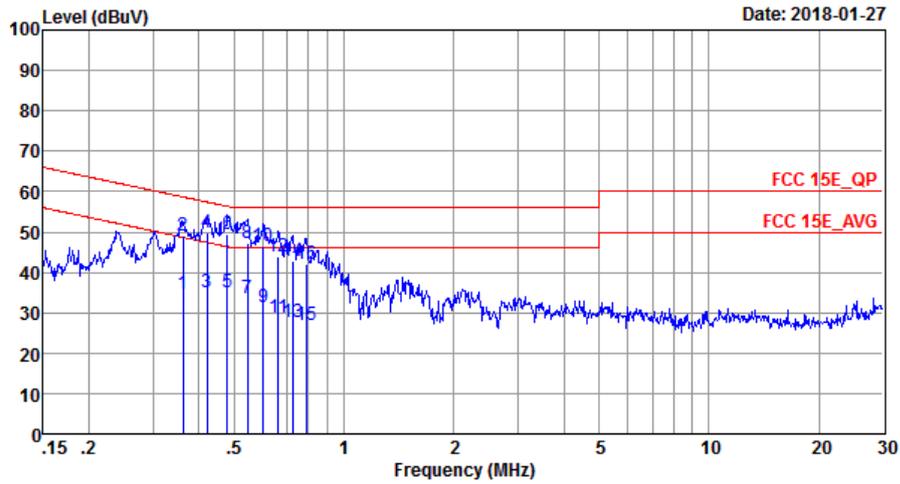


Site : C001-SZ
 Condition: FCC 15E_QP LISN_20170907_L LINE
 Mode : Mode 1
 IMEI : 353746090027161/353746090027179

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.30	38.01	-12.23	50.24	27.90	0.03	10.08	Average
2	0.30	48.91	-11.33	60.24	38.80	0.03	10.08	QP
3	0.36	37.01	-11.73	48.74	26.90	0.03	10.08	Average
4	0.36	50.51	-8.23	58.74	40.40	0.03	10.08	QP
5	0.41	38.11	-9.44	47.55	28.00	0.03	10.08	Average
6	0.41	51.61	-5.94	57.55	41.50	0.03	10.08	QP
7	0.48	38.10	-8.26	46.36	28.00	0.02	10.08	Average
8 *	0.48	51.40	-4.96	56.36	41.30	0.02	10.08	QP
9	0.54	37.60	-8.40	46.00	27.50	0.02	10.08	Average
10	0.54	49.90	-6.10	56.00	39.80	0.02	10.08	QP
11	0.59	32.00	-14.00	46.00	21.90	0.02	10.08	Average
12	0.59	45.40	-10.60	56.00	35.30	0.02	10.08	QP
13	0.66	32.40	-13.60	46.00	22.30	0.02	10.08	Average
14	0.66	45.50	-10.50	56.00	35.40	0.02	10.08	QP
15	0.72	29.60	-16.40	46.00	19.50	0.02	10.08	Average
16	0.72	42.60	-13.40	56.00	32.50	0.02	10.08	QP



Test Mode :	Mode 1	Temperature :	22~25°C
Test Engineer :	Peng Wang	Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 1(Charging from Adapter 1) + Earphone + SIM 1		



Site : CO01-SZ
 Condition: FCC 15E_QP LISN_20170907_N NEUTRAL

Mode : Mode 1
 IMEI : 353746090027161/353746090027179

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.36	34.60	-14.09	48.69	24.50	0.02	10.08	Average
2	0.36	48.90	-9.79	58.69	38.80	0.02	10.08	QP
3	0.42	35.10	-12.32	47.42	25.00	0.02	10.08	Average
4	0.42	49.80	-7.62	57.42	39.70	0.02	10.08	QP
5	0.48	34.90	-11.46	46.36	24.80	0.02	10.08	Average
6 *	0.48	49.60	-6.76	56.36	39.50	0.02	10.08	QP
7	0.54	33.50	-12.50	46.00	23.40	0.02	10.08	Average
8	0.54	47.20	-8.80	56.00	37.10	0.02	10.08	QP
9	0.60	31.30	-14.70	46.00	21.20	0.02	10.08	Average
10	0.60	46.50	-9.50	56.00	36.40	0.02	10.08	QP
11	0.66	28.90	-17.10	46.00	18.80	0.02	10.08	Average
12	0.66	44.00	-12.00	56.00	33.90	0.02	10.08	QP
13	0.72	27.80	-18.20	46.00	17.70	0.02	10.08	Average
14	0.72	42.70	-13.30	56.00	32.60	0.02	10.08	QP
15	0.79	27.11	-18.89	46.00	17.00	0.03	10.08	Average
16	0.79	42.21	-13.79	56.00	32.10	0.03	10.08	QP



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

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 20, 2017	Jan. 21, 2018~ Jan. 22, 2018	Apr. 19, 2018	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2017	Jan. 21, 2018~ Jan. 22, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2017	Jan. 21, 2018~ Jan. 22, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 20, 2017	Feb. 24, 2018	Apr. 19, 2018	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 20, 2017	Feb. 24, 2018	Apr. 19, 2018	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 14, 2017	Feb. 24, 2018	May 13, 2018	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	May 14, 2017	Feb. 24, 2018	May 13, 2018	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Jul. 09, 2017	Feb. 24, 2018	Jul. 08, 2018	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz-40GHz	Jun. 16, 2017	Feb. 24, 2018	Jun. 15, 2018	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 19, 2017	Feb. 24, 2018	Oct. 18, 2018	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1943528	1GHz~18GHz	Oct. 19, 2017	Feb. 24, 2018	Oct. 18, 2018	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5G Hz	Dec. 27, 2017	Feb. 24, 2018	Dec. 26, 2018	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 18, 2017	Feb. 24, 2018	Jul. 17, 2018	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Feb. 24, 2018	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 24, 2018	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 24, 2018	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2017	Jan. 27, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Dec. 26, 2017	Jan. 27, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Dec. 26, 2017	Jan. 27, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 19, 2017	Jan. 27, 2018	Jul. 18, 2018	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% ($U = 2Uc(y)$)	2.6dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.6dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Rain Wang	Temperature:	24~26	°C
Test Date:	2018/1/21~2018/1/22	Relative Humidity:	50~53	%

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)		
11a	6Mbps	1	36	5180	17.58	23.58	-	22.45		
11a	6Mbps	1	44	5220	17.63	24.48	-	22.46		
11a	6Mbps	1	48	5240	17.63	24.58	-	22.46		
HT20	MCS0	1	36	5180	18.78	24.43	-	22.74		
HT20	MCS0	1	44	5220	18.83	25.08	-	22.75		
HT20	MCS0	1	48	5240	18.83	25.23	-	22.75		
HT40	MCS0	1	38	5190	36.56	41.72	-	23.01		
HT40	MCS0	1	46	5230	36.56	41.54	-	23.01		
VHT80	MCS0	1	42	5210	75.64	83.44	-	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
11a	6Mbps	1	36	5180	0.27	14.42	24.00	1.20		Pass
11a	6Mbps	1	44	5220	0.27	14.83	24.00	1.20		Pass
11a	6Mbps	1	48	5240	0.27	14.67	24.00	1.20		Pass
HT20	MCS0	1	36	5180	0.34	10.55	24.00	1.20		Pass
HT20	MCS0	1	44	5220	0.34	10.81	24.00	1.20		Pass
HT20	MCS0	1	48	5240	0.34	10.84	24.00	1.20		Pass
HT40	MCS0	1	38	5190	0.45	10.61	24.00	1.20		Pass
HT40	MCS0	1	46	5230	0.45	10.74	24.00	1.20		Pass
VHT20	MCS0	1	36	5180	0.21	8.32	24.00	1.20		Pass
VHT20	MCS0	1	44	5220	0.21	8.58	24.00	1.20		Pass
VHT20	MCS0	1	48	5240	0.21	8.51	24.00	1.20		Pass
VHT40	MCS0	1	38	5190	0.57	6.66	24.00	1.20		Pass
VHT40	MCS0	1	46	5230	0.57	6.97	24.00	1.20		Pass
VHT80	MCS0	1	42	5210	0.77	6.60	24.00	1.20		Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
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
11a	6Mbps	1	36	5180	0.27	4.55	11.00	1.20		Pass
11a	6Mbps	1	44	5220	0.27	4.13	11.00	1.20		Pass
11a	6Mbps	1	48	5240	0.27	4.53	11.00	1.20		Pass
HT20	MCS0	1	36	5180	0.34	-0.31	11.00	1.20		Pass
HT20	MCS0	1	44	5220	0.34	-0.09	11.00	1.20		Pass
HT20	MCS0	1	48	5240	0.34	-0.09	11.00	1.20		Pass
HT40	MCS0	1	38	5190	0.45	-3.60	11.00	1.20		Pass
HT40	MCS0	1	46	5230	0.45	-3.21	11.00	1.20		Pass
VHT80	MCS0	1	42	5210	0.77	-10.60	11.00	1.20		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
11a	6M bps	1	52	5260	17.58	24.33	23.45	29.45	23.98	
11a	6M bps	1	60	5300	17.78	24.13	23.50	29.50	23.98	
11a	6M bps	1	64	5320	17.58	24.33	23.45	29.45	23.98	
HT20	MCS 0	1	52	5260	18.78	25.23	23.74	29.74	23.98	
HT20	MCS 0	1	60	5300	18.88	24.58	23.76	29.76	23.98	
HT20	MCS 0	1	64	5320	18.78	25.33	23.74	29.74	23.98	
HT40	MCS 0	1	54	5270	36.56	41.72	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.56	41.81	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	75.76	83.60	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band II										
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
11a	6M bps	1	52	5260	0.27	14.48	23.98	0.40	26.99	Pass
11a	6M bps	1	60	5300	0.27	14.33	23.98	0.40	26.99	Pass
11a	6M bps	1	64	5320	0.27	14.24	23.98	0.40	26.99	Pass
HT20	MCS 0	1	52	5260	0.34	10.67	23.98	0.40	26.99	Pass
HT20	MCS 0	1	60	5300	0.34	10.61	23.98	0.40	26.99	Pass
HT20	MCS 0	1	64	5320	0.34	10.44	23.98	0.40	26.99	Pass
HT40	MCS 0	1	54	5270	0.45	10.76	23.98	0.40	26.99	Pass
HT40	MCS 0	1	62	5310	0.45	10.42	23.98	0.40	26.99	Pass
VHT20	MCS 0	1	52	5260	0.21	8.41	23.98	0.40	26.99	Pass
VHT20	MCS 0	1	60	5300	0.21	8.15	23.98	0.40	26.99	Pass
VHT20	MCS 0	1	64	5320	0.21	8.02	23.98	0.40	26.99	Pass
VHT40	MCS 0	1	54	5270	0.57	6.79	23.98	0.40	26.99	Pass
VHT40	MCS 0	1	62	5310	0.57	6.59	23.98	0.40	26.99	Pass
VHT80	MCS 0	1	58	5290	0.77	6.36	23.98	0.40	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
11a	6M bps	1	52	5260	0.27	4.12	11.00	0.40		Pass
11a	6M bps	1	60	5300	0.27	3.87	11.00	0.40		Pass
11a	6M bps	1	64	5320	0.27	3.65	11.00	0.40		Pass
HT20	MCS 0	1	52	5260	0.34	-0.28	11.00	0.40		Pass
HT20	MCS 0	1	60	5300	0.34	-0.23	11.00	0.40		Pass
HT20	MCS 0	1	64	5320	0.34	-0.59	11.00	0.40		Pass
HT40	MCS 0	1	54	5270	0.45	-3.32	11.00	0.40		Pass
HT40	MCS 0	1	62	5310	0.45	-3.77	11.00	0.40		Pass
VHT80	MCS 0	1	58	5290	0.77	-10.49	11.00	0.40		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
11a	6M bps	1	100	5500	17.63	24.63	23.46	29.46	23.98	
11a	6M bps	1	116	5580	17.58	23.73	23.45	29.45	23.98	
11a	6M bps	1	140	5700	17.68	23.98	23.48	29.48	23.98	
HT20	MCS 0	1	100	5500	18.83	24.48	23.75	29.75	23.98	
HT20	MCS 0	1	116	5580	18.68	25.28	23.71	29.71	23.98	
HT20	MCS 0	1	140	5700	18.78	25.03	23.74	29.74	23.98	
HT40	MCS 0	1	102	5510	36.56	41.81	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	42.08	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.66	41.90	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	75.76	84.08	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
11a	6M bps	1	100	5500	0.27	14.49	23.98	-0.50	26.99	Pass
11a	6M bps	1	116	5580	0.27	14.33	23.98	-0.50	26.99	Pass
11a	6M bps	1	140	5700	0.27	14.40	23.98	-0.50	26.99	Pass
HT20	MCS 0	1	100	5500	0.34	10.64	23.98	-0.50	26.99	Pass
HT20	MCS 0	1	116	5580	0.34	10.37	23.98	-0.50	26.99	Pass
HT20	MCS 0	1	140	5700	0.34	10.55	23.98	-0.50	26.99	Pass
HT40	MCS 0	1	102	5510	0.45	10.48	23.98	-0.50	26.99	Pass
HT40	MCS 0	1	110	5550	0.45	10.23	23.98	-0.50	26.99	Pass
HT40	MCS 0	1	134	5670	0.45	10.38	23.98	-0.50	26.99	Pass
VHT20	MCS 0	1	100	5500	0.21	8.50	23.98	-0.50	26.99	Pass
VHT20	MCS 0	1	116	5580	0.21	8.13	23.98	-0.50	26.99	Pass
VHT20	MCS 0	1	140	5700	0.21	8.22	23.98	-0.50	26.99	Pass
VHT40	MCS 0	1	102	5510	0.57	6.83	23.98	-0.50	26.99	Pass
VHT40	MCS 0	1	110	5550	0.57	6.51	23.98	-0.50	26.99	Pass
VHT40	MCS 0	1	134	5670	0.57	6.57	23.98	-0.50	26.99	Pass
VHT80	MCS 0	1	106	5530	0.77	6.49	23.98	-0.50	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
11a	6M bps	1	100	5500	0.27	3.65	11.00	-0.50		Pass
11a	6M bps	1	116	5580	0.27	3.82	11.00	-0.50		Pass
11a	6M bps	1	140	5700	0.27	3.20	11.00	-0.50		Pass
HT20	MCS 0	1	100	5500	0.34	-0.55	11.00	-0.50		Pass
HT20	MCS 0	1	116	5580	0.34	-0.34	11.00	-0.50		Pass
HT20	MCS 0	1	140	5700	0.34	-1.06	11.00	-0.50		Pass
HT40	MCS 0	1	102	5510	0.45	-3.69	11.00	-0.50		Pass
HT40	MCS 0	1	110	5550	0.45	-3.66	11.00	-0.50		Pass
HT40	MCS 0	1	134	5670	0.45	-3.88	11.00	-0.50		Pass
VHT80	MCS 0	1	106	5530	0.77	-10.68	11.00	-0.50		Pass



Appendix B. Radiated Spurious Emission

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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5148.2	51.16	-22.84	74	42.45	32.02	8.77	32.08	100	294	P	H
		5150	44.48	-9.52	54	35.77	32.02	8.77	32.08	100	294	A	H
	*	5180	106.28	-	-	97.52	32.05	8.81	32.1	100	294	P	H
	*	5180	99.86	-	-	91.1	32.05	8.81	32.1	100	294	A	H
		5139.1	49.6	-24.4	74	40.88	32.01	8.77	32.06	100	127	P	V
		5150	42.55	-11.45	54	33.84	32.02	8.77	32.08	100	127	A	V
	*	5180	103.18	-	-	94.42	32.05	8.81	32.1	100	127	P	V
	*	5180	96.58	-	-	87.82	32.05	8.81	32.1	100	127	A	V
802.11a CH 44 5220MHz		5130	50.3	-23.7	74	41.58	32.01	8.77	32.06	151	298	P	H
		5002.08	40.7	-13.3	54	32.11	31.9	8.67	31.98	151	298	A	H
	*	5220	106.05	-	-	97.25	32.07	8.84	32.11	151	298	P	H
	*	5220	98.97	-	-	90.17	32.07	8.84	32.11	151	298	A	H
		5429.48	49.56	-24.44	74	40.49	32.25	9.09	32.27	151	298	P	H
		5458.04	40	-14	54	30.93	32.26	9.09	32.28	151	298	A	H
		5034.06	49.83	-24.17	74	41.23	31.93	8.67	32	100	127	P	V
		5001.56	40.71	-13.29	54	32.12	31.9	8.67	31.98	100	127	A	V
	*	5220	102.37	-	-	93.57	32.07	8.84	32.11	100	127	P	V
	*	5220	96.63	-	-	87.83	32.07	8.84	32.11	100	127	A	V
		5454.68	48.73	-25.27	74	39.66	32.26	9.09	32.28	100	127	P	V
		5456.92	39.97	-14.03	54	30.9	32.26	9.09	32.28	100	127	A	V



802.11a CH 48 5240MHz		5098.54	49.89	-24.11	74	41.22	31.98	8.74	32.05	145	297	P	H
		5015.6	40.59	-13.41	54	31.99	31.91	8.67	31.98	145	297	A	H
	*	5240	105.41	-	-	96.57	32.09	8.88	32.13	145	297	P	H
	*	5240	98.78	-	-	89.94	32.09	8.88	32.13	145	297	A	H
		5354.16	49.35	-24.65	74	40.37	32.18	9.02	32.22	145	297	P	H
		5459.44	39.99	-14.01	54	30.92	32.26	9.09	32.28	145	297	A	H
		5048.88	50.33	-23.67	74	41.7	31.94	8.7	32.01	121	128	P	V
		5001.3	40.74	-13.26	54	32.15	31.9	8.67	31.98	121	128	A	V
	*	5240	102.29	-	-	93.45	32.09	8.88	32.13	121	128	P	V
	*	5240	95.86	-	-	87.02	32.09	8.88	32.13	121	128	A	V
		5435.92	48.69	-25.31	74	39.62	32.25	9.09	32.27	121	128	P	V
		5442.92	40	-14	54	30.93	32.25	9.09	32.27	121	128	A	V
Remark	<p>1. No other spurious found.</p> <p>2. All results are PASS against Peak and Average limit line.</p>												



Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	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	49.77	-24.23	74	59.38	39.61	11.63	60.85	152	260	P	H
		15540	47.2	-26.8	74	57.64	37.81	13.9	62.15	189	238	P	H
		10360	49.36	-24.64	74	58.97	39.61	11.63	60.85	152	260	P	V
		15540	47.62	-26.38	74	58.06	37.81	13.9	62.15	189	238	P	V
802.11a CH 44 5220MHz		10440	49.15	-24.85	74	58.54	39.75	11.66	60.8	150	230	P	H
		15660	47.84	-26.16	74	58.58	37.5	13.96	62.2	160	225	P	H
		10440	49.11	-24.89	74	58.5	39.75	11.66	60.8	150	230	P	V
		15660	48.07	-25.93	74	58.81	37.5	13.96	62.2	160	225	P	V
802.11a CH 48 5240MHz		10480	48.93	-25.07	74	58.16	39.86	11.67	60.76	150	289	P	H
		15720	48.46	-25.54	74	59.4	37.32	13.98	62.24	150	291	P	H
		10480	49.48	-24.52	74	58.71	39.86	11.67	60.76	150	289	P	V
		15720	48.12	-25.88	74	59.06	37.32	13.98	62.24	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	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		5139.1	50.28	-23.72	74	41.56	32.01	8.77	32.06	100	293	P	H
		5150	42.05	-11.95	54	33.34	32.02	8.77	32.08	100	293	A	H
	*	5180	102.38	-	-	93.62	32.05	8.81	32.1	100	293	P	H
	*	5180	95.44	-	-	86.68	32.05	8.81	32.1	100	293	A	H
		5144.82	50.17	-23.83	74	41.46	32.02	8.77	32.08	139	55	P	V
		5146.12	41.23	-12.77	54	32.52	32.02	8.77	32.08	139	55	A	V
	*	5180	98.73	-	-	89.97	32.05	8.81	32.1	139	55	P	V
	5180	92.31	-	-	83.55	32.05	8.81	32.1	139	55	A	V	
802.11n HT20 CH 44 5220MHz		5025.48	50.17	-23.83	74	41.57	31.93	8.67	32	100	291	P	H
		5010.66	40.86	-13.14	54	32.26	31.91	8.67	31.98	100	291	A	H
	*	5220	102.13	-	-	93.33	32.07	8.84	32.11	100	291	P	H
	*	5220	95.59	-	-	86.79	32.07	8.84	32.11	100	291	A	H
		5443.2	48.38	-25.62	74	39.31	32.25	9.09	32.27	100	291	P	H
		5458.88	40.12	-13.88	54	31.05	32.26	9.09	32.28	100	291	A	H
		5004.42	49.42	-24.58	74	40.82	31.91	8.67	31.98	138	53	P	V
		5003.64	40.71	-13.29	54	32.11	31.91	8.67	31.98	138	53	A	V
	*	5220	98.88	-	-	90.08	32.07	8.84	32.11	138	53	P	V
	*	5220	91.96	-	-	83.16	32.07	8.84	32.11	138	53	A	V
		5391.12	48.33	-25.67	74	39.29	32.21	9.06	32.23	138	53	P	V
	5459.72	40.04	-13.96	54	30.97	32.26	9.09	32.28	138	53	A	V	



802.11n HT20 CH 48 5240MHz		5002.08	49.73	-24.27	74	41.14	31.9	8.67	31.98	214	296	P	H
		5004.94	40.64	-13.36	54	32.04	31.91	8.67	31.98	214	296	A	H
	*	5240	101.57	-	-	92.73	32.09	8.88	32.13	214	296	P	H
	*	5240	94.98	-	-	86.14	32.09	8.88	32.13	214	296	A	H
		5457.76	48.98	-25.02	74	39.91	32.26	9.09	32.28	214	296	P	H
		5447.12	40.26	-13.74	54	31.18	32.26	9.09	32.27	214	296	A	H
		5049.4	50.79	-23.21	74	42.16	31.94	8.7	32.01	137	53	P	V
		5024.7	40.68	-13.32	54	32.08	31.93	8.67	32	137	53	A	V
	*	5240	97.81	-	-	88.97	32.09	8.88	32.13	137	53	P	V
	*	5240	91.75	-	-	82.91	32.09	8.88	32.13	137	53	A	V
		5447.96	48.38	-25.62	74	39.3	32.26	9.09	32.27	137	53	P	V
		5454.68	40.1	-13.9	54	31.03	32.26	9.09	32.28	137	53	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	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		10360	49.27	-24.73	74	58.88	39.61	11.63	60.85	152	260	P	H
		15540	47.13	-26.87	74	57.57	37.81	13.9	62.15	189	238	P	H
5180MHz		10360	48.92	-25.08	74	58.53	39.61	11.63	60.85	152	260	P	V
		15540	46.98	-27.02	74	57.42	37.81	13.9	62.15	189	238	P	V
802.11n HT20 CH 44		10440	49.46	-24.54	74	58.85	39.75	11.66	60.8	150	230	P	H
		15660	47.72	-26.28	74	58.46	37.5	13.96	62.2	160	225	P	H
		10440	49.18	-24.82	74	58.57	39.75	11.66	60.8	150	230	P	V
		15660	48.15	-25.85	74	58.89	37.5	13.96	62.2	160	225	P	V
802.11n HT20 CH 48		10480	49.31	-24.69	74	58.54	39.86	11.67	60.76	150	289	P	H
		15720	47.42	-26.58	74	58.36	37.32	13.98	62.24	150	291	P	H
		10480	48.76	-25.24	74	57.99	39.86	11.67	60.76	150	289	P	V
		15720	47.36	-26.64	74	58.3	37.32	13.98	62.24	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	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		5147.94	52.1	-21.9	74	43.39	32.02	8.77	32.08	136	208	P	H	
		5150	44.54	-9.46	54	35.83	32.02	8.77	32.08	136	208	A	H	
	*	5190	100.85	-	-	92.09	32.05	8.81	32.1	136	208	P	H	
	*	5190	92.3	-	-	83.54	32.05	8.81	32.1	136	208	A	H	
		5442.36	49.31	-24.69	74	40.24	32.25	9.09	32.27	136	208	P	H	
		5445.44	40.65	-13.35	54	31.58	32.25	9.09	32.27	136	208	A	H	
		5027.56	50.24	-23.76	74	41.64	31.93	8.67	32	112	8	P	V	
		5149.5	42.28	-11.72	54	33.57	32.02	8.77	32.08	112	8	A	V	
	*	5190	94.9	-	-	86.14	32.05	8.81	32.1	112	8	P	V	
	*	5190	87.22	-	-	78.46	32.05	8.81	32.1	112	8	A	V	
		5459.16	48.8	-25.2	74	39.73	32.26	9.09	32.28	112	8	P	V	
		5440.96	40.62	-13.38	54	31.55	32.25	9.09	32.27	112	8	A	V	
	802.11n HT40 CH 46 5230MHz		5015.86	49.63	-24.37	74	41.03	31.91	8.67	31.98	100	208	P	H
			5114.14	41.54	-12.46	54	32.86	31.99	8.74	32.05	100	208	A	H
*		5230	101.77	-	-	92.97	32.09	8.84	32.13	100	208	P	H	
*		5230	93.33	-	-	84.53	32.09	8.84	32.13	100	208	A	H	
		5410.8	48.96	-25.04	74	39.93	32.22	9.06	32.25	100	208	P	H	
		5458.8	40.7	-13.3	54	31.63	32.26	9.09	32.28	100	208	A	H	
		5068.38	50.1	-23.9	74	41.48	31.95	8.7	32.03	110	18	P	V	
		5069.94	41.44	-12.56	54	32.82	31.95	8.7	32.03	110	18	A	V	
*		5230	96	-	-	87.2	32.09	8.84	32.13	110	18	P	V	
*		5230	87.45	-	-	78.65	32.09	8.84	32.13	110	18	A	V	
	5436.96	48.8	-25.2	74	39.73	32.25	9.09	32.27	110	18	P	V		
	5444.64	40.72	-13.28	54	31.65	32.25	9.09	32.27	110	18	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	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	49.61	-24.39	74	59.17	39.64	11.64	60.84	150	360	P	H
		15570	46.06	-27.94	74	56.58	37.72	13.92	62.16	155	360	P	H
		10380	49.2	-24.8	74	58.76	39.64	11.64	60.84	150	360	P	V
		15570	47.69	-26.31	74	58.21	37.72	13.92	62.16	155	360	P	V
802.11n HT40 CH 46 5230MHz		10460	48.6	-25.4	74	57.93	39.79	11.67	60.79	150	360	P	H
		15690	46.72	-27.28	74	57.55	37.41	13.98	62.22	150	225	P	H
		10460	48.26	-25.74	74	57.59	39.79	11.67	60.79	150	360	P	V
		15690	47.55	-26.45	74	58.38	37.41	13.98	62.22	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	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		5133.12	52.24	-21.76	74	43.52	32.01	8.77	32.06	125	208	P	H
		5146.12	41.94	-12.06	54	33.23	32.02	8.77	32.08	125	208	A	H
	*	5210	94.38	-	-	85.58	32.07	8.84	32.11	125	208	P	H
	*	5210	85.78	-	-	76.98	32.07	8.84	32.11	125	208	A	H
		5424.96	48.98	-25.02	74	39.96	32.23	9.06	32.27	125	208	P	H
		5436.96	40.6	-13.4	54	31.53	32.25	9.09	32.27	125	208	A	H
		5141.96	49.78	-24.22	74	41.05	32.02	8.77	32.06	108	19	P	V
		5048.62	41.29	-12.71	54	32.66	31.94	8.7	32.01	108	19	A	V
	*	5210	88.61	-	-	79.81	32.07	8.84	32.11	108	19	P	V
	*	5210	79.97	-	-	71.17	32.07	8.84	32.11	108	19	A	V
		5410.56	48.54	-25.46	74	39.51	32.22	9.06	32.25	108	19	P	V
	5452.08	40.66	-13.34	54	31.59	32.26	9.09	32.28	108	19	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)

Table with 14 columns: WIFI Ant. 1, 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). Rows include data for 802.11ac, VHT80, CH 42, and 5210MHz, and a Remark section.



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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5036.75	49.84	-24.16	74	41.21	31.93	8.7	32	140	296	P	H
		5019.25	40.57	-13.43	54	31.99	31.91	8.67	32	140	296	A	H
	*	5260	106.17	-	-	97.33	32.11	8.88	32.15	140	296	P	H
	*	5260	99	-	-	90.16	32.11	8.88	32.15	140	296	A	H
		5427.12	48.5	-25.5	74	39.45	32.23	9.09	32.27	140	296	P	H
		5459.04	40.45	-13.55	54	31.38	32.26	9.09	32.28	140	296	A	H
		5003.5	49.85	-24.15	74	41.25	31.91	8.67	31.98	116	128	P	V
		5000.35	40.72	-13.28	54	32.13	31.9	8.67	31.98	116	128	A	V
	*	5260	101.89	-	-	93.05	32.11	8.88	32.15	116	128	P	V
	*	5260	95.23	-	-	86.39	32.11	8.88	32.15	116	128	A	V
		5413.92	49	-25	74	39.96	32.23	9.06	32.25	116	128	P	V
		5456.64	40.15	-13.85	54	31.08	32.26	9.09	32.28	116	128	A	V
802.11a CH 60 5300MHz		5018.46	48.56	-25.44	74	42.26	32.9	7.15	33.75	156	4	P	H
		5029.9	37.08	-16.92	54	30.77	32.91	7.15	33.75	156	4	A	H
	*	5300	105.51	-	-	98.74	32.96	7.38	33.57	156	4	P	H
	*	5300	97.31	-	-	90.54	32.96	7.38	33.57	156	4	A	H
		5378.88	48.3	-25.7	74	41.45	32.98	7.39	33.52	156	4	P	H
		5351.76	37.05	-16.95	54	30.22	32.97	7.39	33.53	156	4	A	H
		5109.98	48.81	-25.19	74	42.43	32.92	7.16	33.7	154	284	P	V
		5148.46	38	-16	54	31.48	32.93	7.26	33.67	154	284	A	V
	*	5300	111.37	-	-	104.6	32.96	7.38	33.57	154	284	P	V
	*	5300	104.57	-	-	97.8	32.96	7.38	33.57	154	284	A	V
		5372.64	50.83	-23.17	74	44	32.97	7.39	33.53	154	284	P	V
		5353.68	40.7	-13.3	54	33.87	32.97	7.39	33.53	154	284	A	V



802.11a CH 64 5320MHz	*	5320	103.5	-	-	94.56	32.15	8.97	32.18	105	297	P	H
	*	5320	97.6	-	-	88.66	32.15	8.97	32.18	105	297	A	H
		5352.64	50.88	-23.12	74	41.9	32.18	9.02	32.22	105	297	P	H
		5350.08	42.67	-11.33	54	33.69	32.18	9.02	32.22	105	297	A	H
	*	5320	98.56	-	-	89.62	32.15	8.97	32.18	102	105	P	V
	*	5320	93.16	-	-	84.22	32.15	8.97	32.18	102	105	A	V
		5354.08	49.3	-24.7	74	40.32	32.18	9.02	32.22	102	105	P	V
		5350.08	40.64	-13.36	54	31.66	32.18	9.02	32.22	102	105	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	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	49.28	-24.72	74	58.4	39.9	11.69	60.71	150	220	P	H
		15780	48.01	-25.99	74	59.06	37.18	14.03	62.26	159	345	P	H
		10520	49.34	-24.66	74	58.46	39.9	11.69	60.71	150	220	P	V
		15780	49.03	-24.97	74	60.08	37.18	14.03	62.26	159	345	P	V
802.11a CH 60 5300MHz		10600	49.91	-24.09	74	58.8	39.92	11.71	60.52	185	215	P	H
		15900	48.65	-25.35	74	60.01	36.87	14.09	62.32	196	190	P	H
		10600	49.62	-24.38	74	58.51	39.92	11.71	60.52	185	215	P	V
		15900	48.46	-25.54	74	59.82	36.87	14.09	62.32	196	190	P	V
802.11a CH 64 5320MHz		10640	49.88	-24.12	74	58.67	39.93	11.73	60.45	152	135	P	H
		15960	48.15	-25.85	74	59.68	36.69	14.13	62.35	173	245	P	H
		10640	50.79	-23.21	74	59.58	39.93	11.73	60.45	152	135	P	V
		15960	47.84	-26.16	74	59.37	36.69	14.13	62.35	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	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		5029.05	49.71	-24.29	74	41.11	31.93	8.67	32	131	296	P	H
		5025.2	40.78	-13.22	54	32.18	31.93	8.67	32	131	296	A	H
	*	5260	102.37	-	-	93.53	32.11	8.88	32.15	131	296	P	H
	*	5260	96.01	-	-	87.17	32.11	8.88	32.15	131	296	A	H
		5450.16	49.59	-24.41	74	40.52	32.26	9.09	32.28	131	296	P	H
		5453.04	40.3	-13.7	54	31.23	32.26	9.09	32.28	131	296	A	H
		5033.25	50.06	-23.94	74	41.46	31.93	8.67	32	139	102	P	V
		5003.5	40.64	-13.36	54	32.04	31.91	8.67	31.98	139	102	A	V
	*	5260	95.18	-	-	86.34	32.11	8.88	32.15	139	102	P	V
	*	5260	88.69	-	-	79.85	32.11	8.88	32.15	139	102	A	V
		5419.44	48.65	-25.35	74	39.61	32.23	9.06	32.25	139	102	P	V
		5456.4	39.94	-14.06	54	30.87	32.26	9.09	32.28	139	102	A	V
802.11n HT20 CH 60 5300MHz		5035.35	48.71	-25.29	74	40.11	31.93	8.67	32	226	295	P	H
		5000.7	40.59	-13.41	54	32	31.9	8.67	31.98	226	295	A	H
	*	5300	101.62	-	-	92.73	32.14	8.93	32.18	226	295	P	H
	*	5300	94.77	-	-	85.88	32.14	8.93	32.18	226	295	A	H
		5372.88	49.18	-24.82	74	40.19	32.19	9.02	32.22	226	295	P	H
		5455.92	40.11	-13.89	54	31.04	32.26	9.09	32.28	226	295	A	H
		5067.9	50.52	-23.48	74	41.9	31.95	8.7	32.03	133	104	P	V
		5001.05	40.57	-13.43	54	31.98	31.9	8.67	31.98	133	104	A	V
	*	5300	95.9	-	-	87.01	32.14	8.93	32.18	133	104	P	V
	*	5300	89.85	-	-	80.96	32.14	8.93	32.18	133	104	A	V
	5427.36	48.64	-25.36	74	39.59	32.23	9.09	32.27	133	104	P	V	
	5459.52	40	-14	54	30.93	32.26	9.09	32.28	133	104	A	V	



802.11n HT20 CH 64 5320MHz	*	5320	101.16	-	-	92.22	32.15	8.97	32.18	100	296	P	H
	*	5320	94.37	-	-	85.43	32.15	8.97	32.18	100	296	A	H
		5452	49	-25	74	39.93	32.26	9.09	32.28	100	296	P	H
		5350.08	40.35	-13.65	54	31.37	32.18	9.02	32.22	100	296	A	H
	*	5320	95.93	-	-	86.99	32.15	8.97	32.18	126	104	P	V
	*	5320	89.39	-	-	80.45	32.15	8.97	32.18	126	104	A	V
		5452.16	48.65	-25.35	74	39.58	32.26	9.09	32.28	126	104	P	V
		5458.56	39.93	-14.07	54	30.86	32.26	9.09	32.28	126	104	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 2 5250~5350MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	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		10520	49.17	-24.83	74	58.29	39.9	11.69	60.71	150	220	P	H
		15780	47.58	-26.42	74	58.63	37.18	14.03	62.26	159	345	P	H
5260MHz		10520	49.16	-24.84	74	58.28	39.9	11.69	60.71	150	220	P	V
		15780	47.86	-26.14	74	58.91	37.18	14.03	62.26	159	345	P	V
802.11n HT20 CH 60		10600	50.17	-23.83	74	59.06	39.92	11.71	60.52	185	215	P	H
		15900	46.98	-27.02	74	58.34	36.87	14.09	62.32	196	190	P	H
		10600	49.7	-24.3	74	58.59	39.92	11.71	60.52	185	215	P	V
		15900	46.52	-27.48	74	57.88	36.87	14.09	62.32	196	190	P	V
802.11n HT20 CH 64		10640	50.59	-23.41	74	59.38	39.93	11.73	60.45	152	135	P	H
		15960	46.84	-27.16	74	58.37	36.69	14.13	62.35	173	245	P	H
		10640	50.26	-23.74	74	59.05	39.93	11.73	60.45	152	135	P	V
		15960	47.47	-26.53	74	59	36.69	14.13	62.35	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	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		5046.02	50.31	-23.69	74	41.68	31.94	8.7	32.01	100	209	P	H	
		5004.68	41.41	-12.59	54	32.81	31.91	8.67	31.98	100	209	A	H	
	*	5270	101.83	-	-	92.99	32.11	8.88	32.15	100	209	P	H	
	*	5270	93.21	-	-	84.37	32.11	8.88	32.15	100	209	A	H	
		5352	48.94	-25.06	74	39.96	32.18	9.02	32.22	100	209	P	H	
		5350.8	41.04	-12.96	54	32.06	32.18	9.02	32.22	100	209	A	H	
		5076.18	50.28	-23.72	74	41.6	31.97	8.74	32.03	100	18	P	V	
		5074.88	41.69	-12.31	54	33.05	31.97	8.7	32.03	100	18	A	V	
	*	5270	97.02	-	-	88.18	32.11	8.88	32.15	100	18	P	V	
	*	5270	88.73	-	-	79.89	32.11	8.88	32.15	100	18	A	V	
		5393.28	48.46	-25.54	74	39.42	32.21	9.06	32.23	100	18	P	V	
		5452.32	40.87	-13.13	54	31.8	32.26	9.09	32.28	100	18	A	V	
	802.11n HT40 CH 62 5310MHz		5006.65	49.95	-24.05	74	41.35	31.91	8.67	31.98	102	210	P	H
			5042	41.75	-12.25	54	33.12	31.94	8.7	32.01	102	210	A	H
*		5310	101.81	-	-	92.87	32.15	8.97	32.18	102	210	P	H	
*		5310	92.88	-	-	83.94	32.15	8.97	32.18	102	210	A	H	
		5358.48	55.13	-18.87	74	46.15	32.18	9.02	32.22	102	210	P	H	
		5350.32	49.39	-4.61	54	40.41	32.18	9.02	32.22	102	210	A	H	
		5056	49.12	-24.88	74	40.48	31.95	8.7	32.01	141	14	P	V	
		5053.55	41.45	-12.55	54	32.82	31.94	8.7	32.01	141	14	A	V	
*		5310	97.65	-	-	88.71	32.15	8.97	32.18	141	14	P	V	
*		5310	88.49	-	-	79.55	32.15	8.97	32.18	141	14	A	V	
	5353.92	53.21	-20.79	74	44.23	32.18	9.02	32.22	141	14	P	V		
	5350	45.65	-8.35	54	36.67	32.18	9.02	32.22	141	14	A	V		
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



802.11n HT40 CH 62 5310MHz		5093.1	46.71	-27.29	74	38.04	31.98	8.74	32.05	123	307	P	H
		5071.4	38.88	-15.12	54	30.26	31.95	8.7	32.03	123	307	A	H
	*	5310	99.55	-	-	90.61	32.15	8.97	32.18	123	307	P	H
	*	5310	92.15	-	-	83.21	32.15	8.97	32.18	123	307	A	H
		5350.08	54.48	-19.52	74	45.5	32.18	9.02	32.22	123	307	P	H
		5350.32	48.44	-5.56	54	39.46	32.18	9.02	32.22	123	307	A	H
		5074.55	46.56	-27.44	74	37.92	31.97	8.7	32.03	151	36	P	V
		5050.4	38.97	-15.03	54	30.34	31.94	8.7	32.01	151	36	A	V
	*	5310	93.54	-	-	84.6	32.15	8.97	32.18	151	36	P	V
	*	5310	86.63	-	-	77.69	32.15	8.97	32.18	151	36	A	V
		5351.76	49.41	-24.59	74	40.43	32.18	9.02	32.22	151	36	P	V
		5351.04	42.61	-11.39	54	33.63	32.18	9.02	32.22	151	36	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	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	49.42	-24.58	74	58.48	39.91	11.7	60.67	150	220	P	H
HT40		15810	47.07	-26.93	74	58.21	37.09	14.05	62.28	168	345	P	H
CH 54		10540	48.8	-25.2	74	57.86	39.91	11.7	60.67	150	220	P	V
5270MHz		15810	47	-27	74	58.14	37.09	14.05	62.28	168	345	P	V
802.11n		10620	49.58	-24.42	74	58.42	39.92	11.73	60.49	150	220	P	H
HT40		15930	46.02	-27.98	74	57.47	36.78	14.11	62.34	160	100	P	H
CH 62		10620	48.86	-25.14	74	57.7	39.92	11.73	60.49	150	220	P	V
5310MHz		15930	46.17	-27.83	74	57.62	36.78	14.11	62.34	160	100	P	V
802.11n		10620	49.05	-24.95	74	57.89	39.92	11.73	60.49	120	230	P	H
HT40		15930	46.23	-27.77	74	57.68	36.78	14.11	62.34	230	150	P	H
CH 62		10620	47.61	-26.39	74	56.45	39.92	11.73	60.49	120	230	P	V
5310MHz		15930	45.03	-28.97	74	56.48	36.78	14.11	62.34	230	150	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	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		5013	50.59	-23.41	74	41.99	31.91	8.67	31.98	104	210	P	H
		5127.14	41.58	-12.42	54	32.86	32.01	8.77	32.06	104	210	A	H
	*	5290	93.97	-	-	85.08	32.13	8.93	32.17	104	210	P	H
	*	5290	85.53	-	-	76.64	32.13	8.93	32.17	104	210	A	H
		5352.72	53.39	-20.61	74	44.41	32.18	9.02	32.22	104	210	P	H
		5350.08	45.84	-8.16	54	36.86	32.18	9.02	32.22	104	210	A	H
		5088.14	50.5	-23.5	74	41.82	31.97	8.74	32.03	136	18	P	V
		5049.14	41.53	-12.47	54	32.9	31.94	8.7	32.01	136	18	A	V
	*	5290	89.76	-	-	80.87	32.13	8.93	32.17	136	18	P	V
	*	5290	80.75	-	-	71.86	32.13	8.93	32.17	136	18	A	V
		5362.08	51.71	-22.29	74	42.72	32.19	9.02	32.22	136	18	P	V
		5350.56	42.18	-11.82	54	33.2	32.18	9.02	32.22	136	18	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	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		10580	49.89	-24.11	74	58.82	39.92	11.71	60.56	185	215	P	H
		15870	47.23	-26.77	74	58.56	36.91	14.07	62.31	196	190	P	H
		10580	49.24	-24.76	74	58.17	39.92	11.71	60.56	170	232	P	V
		15870	47.02	-26.98	74	58.35	36.91	14.07	62.31	190	130	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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5458.32	49.54	-24.46	74	40.47	32.26	9.09	32.28	100	294	P	H
		5470	41.56	-12.44	54	32.45	32.27	9.12	32.28	100	294	A	H
	*	5500	101.52	-	-	92.4	32.3	9.12	32.3	214	295	P	H
	*	5500	95.38	-	-	86.26	32.3	9.12	32.3	214	295	A	H
		5424.4	48.75	-25.25	74	39.73	32.23	9.06	32.27	122	102	P	V
		5469.2	40.51	-13.49	54	31.4	32.27	9.12	32.28	122	102	A	V
	*	5500	98.17	-	-	89.05	32.3	9.12	32.3	122	102	P	V
	*	5500	91.02	-	-	81.9	32.3	9.12	32.3	122	102	A	V
802.11a CH 116 5580MHz		5468.56	49.02	-24.98	74	39.91	32.27	9.12	32.28	100	294	P	H
		5441.92	40.04	-13.96	54	30.97	32.25	9.09	32.27	100	294	A	H
	*	5580	100.69	-	-	91.38	32.3	9.17	32.16	100	294	P	H
	*	5580	94.87	-	-	85.56	32.3	9.17	32.16	100	294	A	H
		5731.61	49.04	-24.96	74	39.4	32.3	9.28	31.94	100	294	P	H
		5751.455	40.18	-13.82	54	30.52	32.3	9.3	31.94	100	294	A	H
		5429.68	48.8	-25.2	74	39.73	32.25	9.09	32.27	116	60	P	V
		5455.36	39.88	-14.12	54	30.81	32.26	9.09	32.28	116	60	A	V
	*	5580	97.62	-	-	88.31	32.3	9.17	32.16	116	60	P	V
	*	5580	91.54	-	-	82.23	32.3	9.17	32.16	116	60	A	V
		5753.03	49.23	-24.77	74	39.57	32.3	9.3	31.94	116	60	P	V
		5754.92	40.18	-13.82	54	30.52	32.3	9.3	31.94	116	60	A	V



802.11a CH 140 5700MHz	*	5700	101.86	-	-	92.29	32.3	9.28	32.01	100	294	P	H
	*	5700	95.17	-	-	85.6	32.3	9.28	32.01	100	294	A	H
		5727.48	54.41	-19.59	74	44.81	32.3	9.28	31.98	100	294	P	H
		5725.08	44.86	-9.14	54	35.26	32.3	9.28	31.98	100	294	A	H
	*	5700	101.21	-	-	91.64	32.3	9.28	32.01	147	63	P	V
	*	5700	94.1	-	-	84.53	32.3	9.28	32.01	147	63	A	V
		5727.4	51.05	-22.95	74	41.45	32.3	9.28	31.98	147	63	P	V
		5725.16	44.15	-9.85	54	34.55	32.3	9.28	31.98	147	63	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 3 - 5470~5725MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	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	50.87	-23.13	74	58.67	40	11.86	59.66	163	230	P	H
		16500	50.94	-23.06	74	60.29	37.5	14.41	61.26	178	296	P	H
		11000	49.5	-24.5	74	57.3	40	11.86	59.66	163	230	P	V
		16500	50.29	-23.71	74	59.64	37.5	14.41	61.26	178	296	P	V
802.11a CH 116 5580MHz		11160	49.89	-24.11	74	57.51	40.1	11.93	59.65	170	200	P	H
		16740	50.13	-23.87	74	57.4	38.85	14.57	60.69	156	350	P	H
		11160	49.9	-24.1	74	57.52	40.1	11.93	59.65	170	200	P	V
		16740	50.58	-23.42	74	57.85	38.85	14.57	60.69	161	0	P	V
802.11a CH 140 5700MHz		11400	50.1	-23.9	74	57.48	40.24	12.02	59.64	157	285	P	H
		17100	52.88	-21.12	74	57.56	40.64	14.76	60.08	165	246	P	H
		17100	46.3	-7.7	54	50.98	40.64	14.76	60.08	165	246	A	H
		11400	50.01	-23.99	74	57.39	40.24	12.02	59.64	157	285	P	V
		17100	52.33	-21.67	74	57.01	40.64	14.76	60.08	165	246	P	V
		17100	46.68	-7.32	54	51.36	40.64	14.76	60.08	165	246	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 (Band Edge @ 3m)

WIFI Ant. 1	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		5409.04	49.5	-24.5	74	40.47	32.22	9.06	32.25	123	296	P	H
		5458.8	40.64	-13.36	54	31.57	32.26	9.09	32.28	123	296	A	H
	*	5500	98.48	-	-	89.36	32.3	9.12	32.3	123	296	P	H
	*	5500	92.45	-	-	83.33	32.3	9.12	32.3	123	296	A	H
		5439.76	50.06	-23.94	74	40.99	32.25	9.09	32.27	107	59	P	V
		5469.36	40.35	-13.65	54	31.24	32.27	9.12	32.28	107	59	A	V
	*	5500	94.21	-	-	85.09	32.3	9.12	32.3	107	59	P	V
		5500	87.26	-	-	78.14	32.3	9.12	32.3	107	59	A	V
802.11n HT20 CH 116 5580MHz		5461.36	49.43	-24.57	74	40.36	32.26	9.09	32.28	101	295	P	H
		5460.88	40.31	-13.69	54	31.24	32.26	9.09	32.28	101	295	A	H
	*	5580	98.16	-	-	88.85	32.3	9.17	32.16	101	295	P	H
	*	5580	91.01	-	-	81.7	32.3	9.17	32.16	101	295	A	H
		5740.745	48.46	-25.54	74	38.8	32.3	9.3	31.94	101	295	P	H
		5755.55	40.36	-13.64	54	30.7	32.3	9.3	31.94	101	295	A	H
		5412.64	48.29	-25.71	74	39.25	32.23	9.06	32.25	119	61	P	V
		5459.68	40.16	-13.84	54	31.09	32.26	9.09	32.28	119	61	A	V
	*	5580	94	-	-	84.69	32.3	9.17	32.16	119	61	P	V
	*	5580	87.28	-	-	77.97	32.3	9.17	32.16	119	61	A	V
		5753.66	48.97	-25.03	74	39.31	32.3	9.3	31.94	119	61	P	V
	5757.125	40.43	-13.57	54	30.73	32.3	9.3	31.9	119	61	A	V	



802.11n HT20 CH 140 5700MHz	*	5700	98.67	-	-	89.1	32.3	9.28	32.01	117	296	P	H
	*	5700	92.54	-	-	82.97	32.3	9.28	32.01	117	296	A	H
		5728.76	49.64	-24.36	74	40.04	32.3	9.28	31.98	117	296	P	H
		5725.32	42.51	-11.49	54	32.91	32.3	9.28	31.98	117	296	A	H
	*	5700	95.17	-	-	85.6	32.3	9.28	32.01	100	60	P	V
	*	5700	89.22	-	-	79.65	32.3	9.28	32.01	100	60	A	V
		5728.84	49.89	-24.11	74	40.29	32.3	9.28	31.98	100	60	P	V
		5725.08	41.26	-12.74	54	31.66	32.3	9.28	31.98	100	60	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 3 - 5470~5725MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	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		11000	49.89	-24.11	74	57.69	40	11.86	59.66	163	230	P	H
		16500	47.65	-26.35	74	57	37.5	14.41	61.26	178	296	P	H
CH 100 5500MHz		11000	49.23	-24.77	74	57.03	40	11.86	59.66	163	230	P	V
		16500	48.19	-25.81	74	57.54	37.5	14.41	61.26	178	296	P	V
802.11n HT20 CH 116 5580MHz		11160	50.15	-23.85	74	57.77	40.1	11.93	59.65	170	200	P	H
		16740	49.07	-24.93	74	56.34	38.85	14.57	60.69	156	350	P	H
		11160	49.19	-24.81	74	56.81	40.1	11.93	59.65	170	200	P	V
		16740	49.59	-24.41	74	56.86	38.85	14.57	60.69	156	350	P	V
802.11n HT20 CH 140 5700MHz		11400	49.59	-24.41	74	56.97	40.24	12.02	59.64	157	285	P	H
		17100	50.56	-23.44	74	55.24	40.64	14.76	60.08	165	246	P	H
		11400	50.99	-23.01	74	58.37	40.24	12.02	59.64	157	285	P	V
		17100	50.9	-23.1	74	55.58	40.64	14.76	60.08	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	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		5469.76	55.19	-18.81	74	46.08	32.27	9.12	32.28	100	195	P	H
		5470	48.43	-5.57	54	39.32	32.27	9.12	32.28	100	195	A	H
	*	5510	98.1	-	-	88.92	32.3	9.14	32.26	100	195	P	H
	*	5510	89.88	-	-	80.7	32.3	9.14	32.26	100	195	A	H
		5734.445	48.39	-25.61	74	38.75	32.3	9.28	31.94	100	195	P	H
		5760.275	40.93	-13.07	54	31.23	32.3	9.3	31.9	100	195	A	H
		5470	53.65	-20.35	74	44.54	32.27	9.12	32.28	125	14	P	V
		5470	46.37	-7.63	54	37.26	32.27	9.12	32.28	125	14	A	V
	*	5510	95.76	-	-	86.58	32.3	9.14	32.26	125	14	P	V
	*	5510	87.14	-	-	77.96	32.3	9.14	32.26	125	14	A	V
		5760.905	48.2	-25.8	74	38.5	32.3	9.3	31.9	125	14	P	V
		5730.98	40.97	-13.03	54	31.33	32.3	9.28	31.94	125	14	A	V
802.11n HT40 CH 110 5550MHz		5446.48	48.97	-25.03	74	39.89	32.26	9.09	32.27	137	194	P	H
		5468.32	41.11	-12.89	54	32	32.27	9.12	32.28	137	194	A	H
	*	5550	98.4	-	-	89.16	32.3	9.17	32.23	137	194	P	H
	*	5550	89.36	-	-	80.12	32.3	9.17	32.23	137	194	A	H
		5742.005	48.87	-25.13	74	39.21	32.3	9.3	31.94	137	194	P	H
		5743.895	41.1	-12.9	54	31.44	32.3	9.3	31.94	137	194	A	H
		5460.16	48.93	-25.07	74	39.86	32.26	9.09	32.28	125	15	P	V
		5462.32	40.95	-13.05	54	31.88	32.26	9.09	32.28	125	15	A	V
	*	5550	95.65	-	-	86.41	32.3	9.17	32.23	125	15	P	V
	*	5550	86.4	-	-	77.16	32.3	9.17	32.23	125	15	A	V
	5740.43	48.39	-25.61	74	38.73	32.3	9.3	31.94	125	15	P	V	
	5743.265	40.97	-13.03	54	31.31	32.3	9.3	31.94	125	15	A	V	



802.11n HT40 CH 134 5670MHz		5440.65	47.83	-26.17	74	38.76	32.25	9.09	32.27	150	194	P	H
		5447.65	40.9	-13.1	54	31.82	32.26	9.09	32.27	150	194	A	H
	*	5670	98.08	-	-	88.58	32.3	9.25	32.05	150	194	P	H
	*	5670	89.53	-	-	80.03	32.3	9.25	32.05	150	194	A	H
		5731.05	49.78	-24.22	74	40.14	32.3	9.28	31.94	150	194	P	H
		5734.375	41.62	-12.38	54	31.98	32.3	9.28	31.94	150	194	A	H
		5438.2	48.93	-25.07	74	39.86	32.25	9.09	32.27	107	20	P	V
		5441	41.09	-12.91	54	32.02	32.25	9.09	32.27	107	20	A	V
	*	5670	94.9	-	-	85.4	32.3	9.25	32.05	107	20	P	V
	*	5670	86.25	-	-	76.75	32.3	9.25	32.05	107	20	A	V
		5742.075	49.06	-24.94	74	39.4	32.3	9.3	31.94	107	20	P	V
		5730	41.44	-12.56	54	31.84	32.3	9.28	31.98	107	20	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	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	50.07	-23.93	74	57.85	40.01	11.87	59.66	170	230	P	H
HT40		16530	47.68	-26.32	74	56.73	37.69	14.44	61.18	160	300	P	H
CH 102		11020	49.34	-24.66	74	57.12	40.01	11.87	59.66	170	230	P	V
5510MHz		16530	47.8	-26.2	74	56.85	37.69	14.44	61.18	160	300	P	V
802.11n		11100	49.31	-24.69	74	57	40.06	11.9	59.65	150	200	P	H
HT40		16650	49.4	-24.6	74	57.42	38.37	14.5	60.89	180	350	P	H
CH 110		11100	49.4	-24.6	74	57.09	40.06	11.9	59.65	150	200	P	V
5550MHz		16650	48.45	-25.55	74	56.47	38.37	14.5	60.89	180	350	P	V
802.11n		11340	49.46	-24.54	74	56.91	40.2	11.99	59.64	195	335	P	H
HT40		17010	49.99	-24.01	74	54.98	40.36	14.72	60.07	205	310	P	H
CH 134		11340	49.87	-24.13	74	57.32	40.2	11.99	59.64	205	325	P	V
5670MHz		17010	50.24	-23.76	74	55.23	40.36	14.72	60.07	185	290	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	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		5444.32	50.14	-23.86	74	41.07	32.25	9.09	32.27	150	193	P	H
		5469.76	42.29	-11.71	54	33.18	32.27	9.12	32.28	150	193	A	H
	*	5530	91.12	-	-	81.91	32.3	9.14	32.23	150	193	P	H
	*	5530	83.18	-	-	73.97	32.3	9.14	32.23	150	193	A	H
		5760.275	48.79	-25.21	74	39.09	32.3	9.3	31.9	150	193	P	H
		5759.33	40.96	-13.04	54	31.26	32.3	9.3	31.9	150	193	A	H
		5468.56	49.26	-24.74	74	40.15	32.27	9.12	32.28	100	15	P	V
		5467.84	41.31	-12.69	54	32.2	32.27	9.12	32.28	100	15	A	V
	*	5530	88.07	-	-	78.86	32.3	9.14	32.23	100	15	P	V
	*	5530	80.22	-	-	71.01	32.3	9.14	32.23	100	15	A	V
		5764.37	49.1	-24.9	74	39.4	32.3	9.3	31.9	100	15	P	V
	5725.625	41	-13	54	31.4	32.3	9.28	31.98	100	15	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)

Table with 14 columns: WIFI Ant. 1, 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). Rows include 802.11ac, VHT80, CH 106, 5530MHz and a Remark section.



Emission below 1GHz
WIFI 802.11n HT40 (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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 LF		30	24.66	-15.34	40	30	26.7	0.56	32.6	-	-	P	H
		162.89	32.22	-11.28	43.5	45.59	17.24	1.33	31.94	100	155	P	H
		213.33	31.28	-12.22	43.5	45.05	16.25	1.52	31.54	-	-	P	H
		232.73	31.66	-14.34	46	44.72	17.17	1.59	31.82	-	-	P	H
		418.97	26.17	-19.83	46	30.17	25.58	2.17	31.75	-	-	P	H
		930.16	31.75	-14.25	46	30.52	29.05	3.36	31.18	-	-	P	H
		30	24.16	-15.84	40	29.5	26.7	0.56	32.6	-	-	P	V
		72.68	23.6	-16.4	40	41.29	13.94	0.87	32.5	-	-	P	V
		168.71	25.57	-17.93	43.5	39.08	16.98	1.34	31.83	-	-	P	V
		208.48	27.38	-16.12	43.5	41.3	16.02	1.5	31.44	-	-	P	V
		400.54	26.93	-19.07	46	30.73	25.98	2.12	31.9	-	-	P	V
		861.29	31.17	-14.83	46	31.66	28.19	3.23	31.91	100	122	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	Peak or Average
H/V	Horizontal or Vertical



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		(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

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

For Peak Limit @ 2390MHz:

- 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)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- 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)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

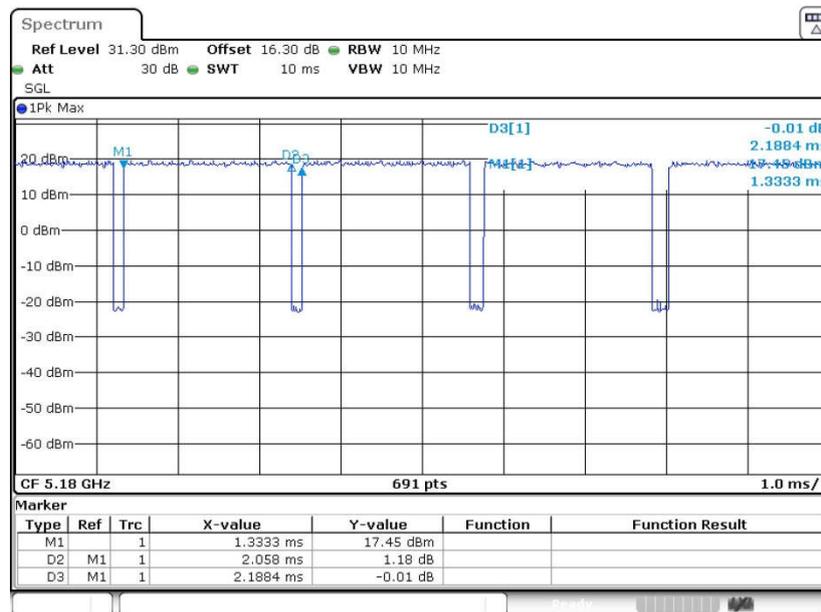
Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix C. Duty Cycle Plots

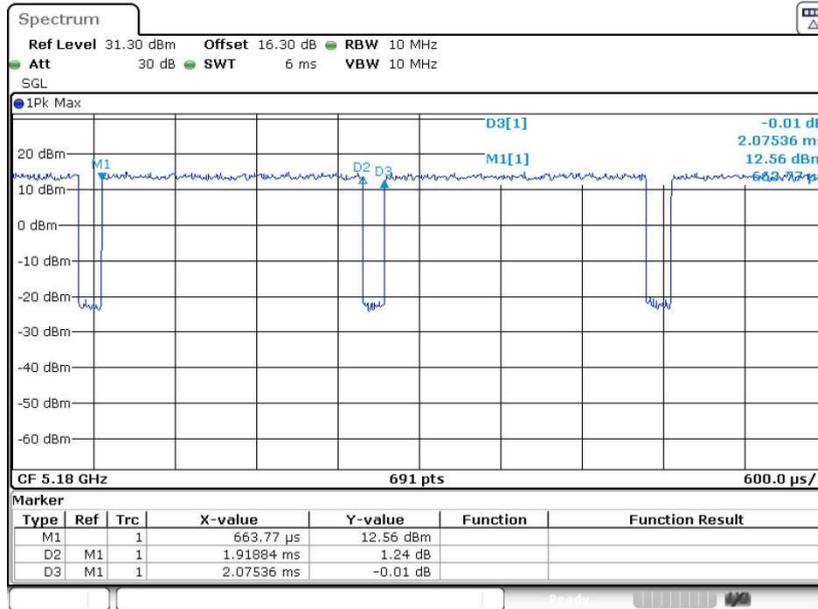
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	94.04	2.058	0.486	1 kHz
802.11n HT20	92.46	1.919	0.521	1 kHz
802.11n HT40	90.10	0.949	1.053	3 kHz
802.11ac VHT80	83.77	0.464	2.156	3 KHz

802.11a

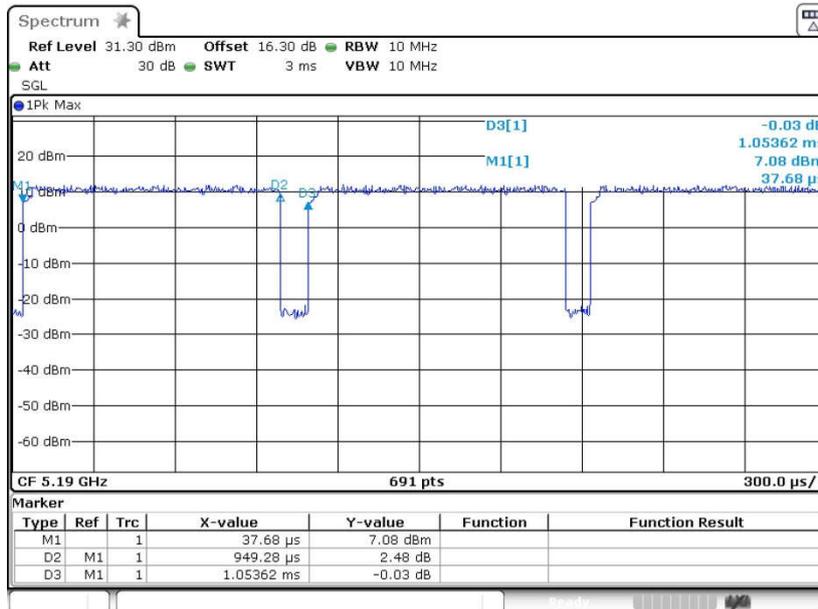




802.11n HT20



802.11n HT40





802.11ac VHT80

