FCC RF Test Report

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
FCC ID	:	**IHDT56XJ1**
STANDARD	:	**FCC Part 15 Subpart E §15.407**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**

The product was received on May 15, 2018 and testing was completed on May 29, 2018. We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

James Huang

Approved by: James Huang / Manager

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TESTING
NVLAP LAB CODE 600155-0

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR851503E	Rev. 01	Initial issue of report	May 31, 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 3.25 dB at 5725.00 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 7.20 dB at 0.233 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

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
FCC ID	IHDT56XJ1
EUT supports Radios application	CDMA/EVDO/GSM/GPRS/EGPRS/WCDMA/HSPA/ DC-HSDPA/HSPA+(16QAM uplink is not supported)/ LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20/ WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR/Bluetooth v4.2 LE/ Bluetooth v5.0 LE
IMEI Code	Conducted: 355550090015855 Conduction: 355550090016408 Radiation: 355550090015608
HW Version	DVT2
SW Version	fastboot_messi_verizon_oem_vzw_userdebug_8.1.0_ODX28.56_50ee_intcfg-test-keys_vzw
EUT Stage	Identical Prototype

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	**<5180 MHz ~ 5240 MHz>** 802.11a : 17.21 dBm / 0.0526 W 802.11n HT20 : 17.19 dBm / 0.0524 W 802.11n HT40 : 15.45 dBm / 0.0351 W 802.11ac VHT80 : 14.21 dBm / 0.0264 W **<5260 MHz ~ 5320 MHz>** 802.11a : 17.27 dBm / 0.0533 W 802.11n HT20 : 17.27 dBm / 0.0533 W 802.11n HT40 : 15.44 dBm / 0.0350 W 802.11ac VHT80 : 13.69 dBm / 0.0234 W **<5500 MHz ~ 5720 MHz >** 802.11a : 17.18 dBm / 0.0522 W 802.11n HT20 : 17.17 dBm / 0.0521 W 802.11ac VHT40 : 15.43 dBm / 0.0349 W 802.11ac VHT80 : 14.34 dBm / 0.0272 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 18.23 MHz 802.11n HT20 : 19.13 MHz 802.11n HT40 : 37.16 MHz 802.11ac VHT80 : 76.12 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 18.28 MHz 802.11n HT20 : 19.18 MHz 802.11n HT40 : 37.26 MHz 802.11ac VHT80 : 76.12 MHz **<5500 MHz ~ 5720 MHz >** 802.11a : 18.33 MHz 802.11n HT20 : 19.23 MHz 802.11ax VHT40 : 37.26 MHz 802.11ac VHT80 : 76.24 MHz
Antenna Gain / Gain	**<5180 MHz ~ 5240 MHz>** Fixed Internal Antenna with gain -1.50 dBi **<5260 MHz ~ 5320 MHz>** Fixed Internal Antenna with gain -1.40 dBi **<5500 MHz ~ 5720 MHz>** Fixed Internal Antenna with gain -0.80 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11n HT20/11ac VHT20 and 802.11n HT40/11ac VHT40 mode, the test was assessed by referring to the higher conducted power.

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1	**Brand Name**	Motorola (Salom)	**Model Name**	SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA		
AC Adapter 2	**Brand Name**	Motorola (Chenyang)	**Model Name**	SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA		
AC Adapter 3	**Brand Name**	Motorola (Salom)	**Model Name**	SC-51
	Power Rating	I/P: 100-240 Vac, 600mA, O/P: 5Vdc,3000mA or 9Vdc,2000mA or 12Vdc,1500mA		
AC Adapter 4	**Brand Name**	Motorola (Chenyang)	**Model Name**	SC-51
	Power Rating	I/P: 100-240 Vac, 600mA, O/P: 5Vdc,3000mA or 9Vdc,2000mA or 12Vdc,1500mA		
Battery	**Brand Name**	Motorola (Sunwoda)	**Model Name**	JS40
	Power Rating	3.8Vdc,3000mAh	**Type**	Li-ion
USB Cable 1	**Brand Name**	Motorola (Cabletech)	**Model Name**	SKN6473A
	Signal Line Type	1.0 meter, shielded cable, without ferrite core		
USB Cable 2	**Brand Name**	Motorola (Luxshare)	**Model Name**	SKN6473A
	Signal Line Type	1.0 meter, shielded cable, without ferrite core		
Audio Cable	**Brand Name**	Motorola (Luxshare)	**Model Name**	SC18C27844
	Signal Line Type	0.08 meter, shielded cable, without ferrite core		

1.6 Modification of EUT

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

1.7 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton International (Kunshan) Inc.			
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958			
Test Site No.	**Sporton Site No.**			**FCC Test Firm Registration No.**
	TH01-KS	03CH04-KS	CO01-KS	630927

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

1.8 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

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 (X 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.

For U-NII-1 & U-NII-2

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

For U-NII-3

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link(5GHz) + USB Cable 4 (Charging from Adapter 2)
Remark: For Radiated Test Cases, The tests were performance 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

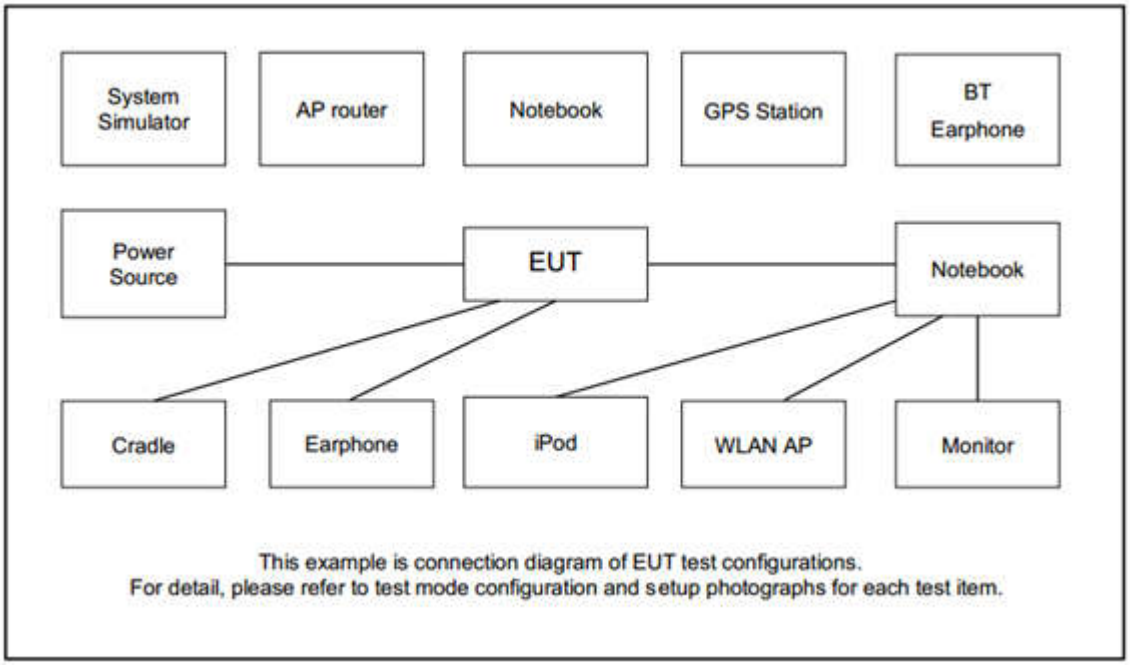
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

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 VHT40	802.11ac VHT40	802.11ac VHT40
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	122
H	High	-	-	-
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-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	G480	PRC4	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
5.	SD Card	Kingston	8GB	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 continuous 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 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.

Offset = RF cable loss

Following shows an offset computation example with cable loss 6.9 dB.

Offset(dB) = RF cable loss(dB).

= 6.9 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

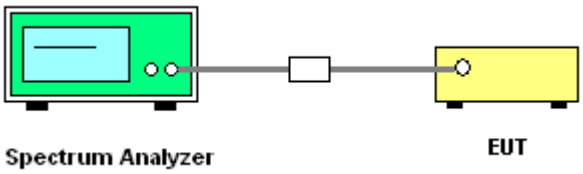
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

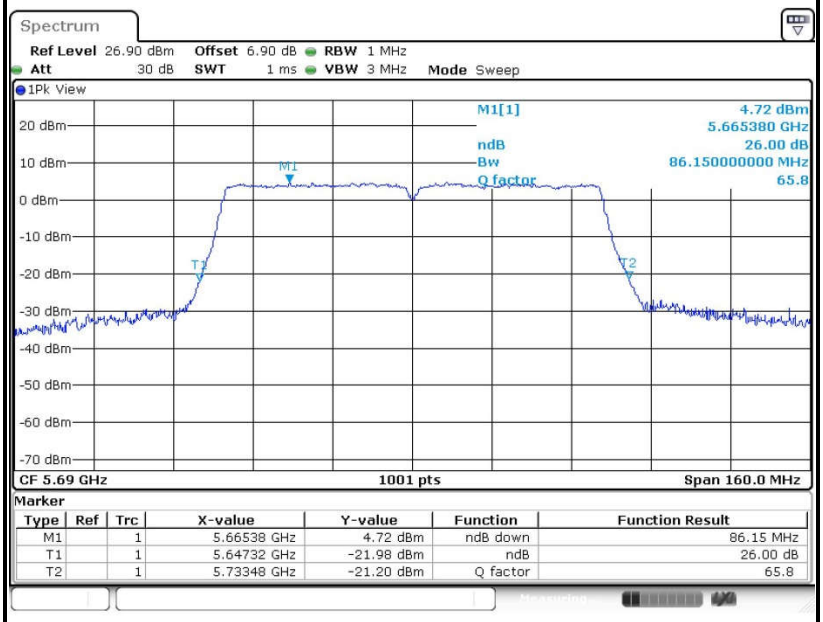
3.1.4 Test Setup



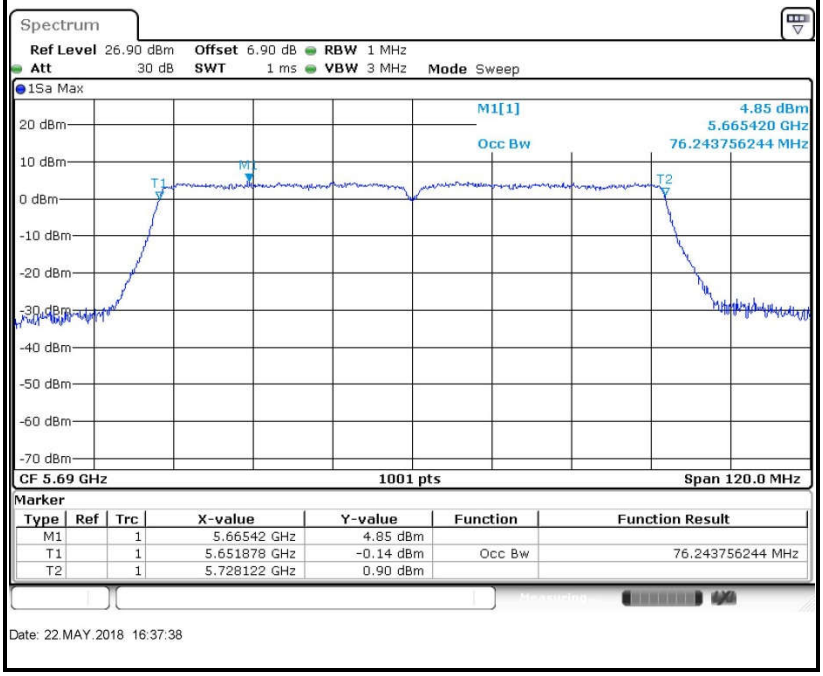
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

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.

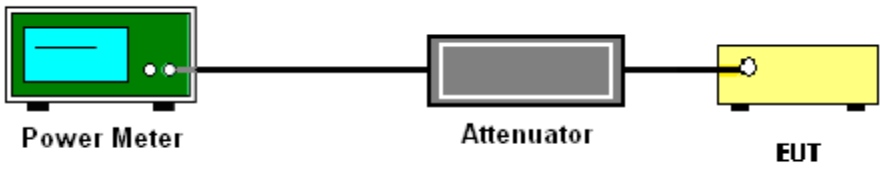
3.2.3 Test Procedures

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



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.

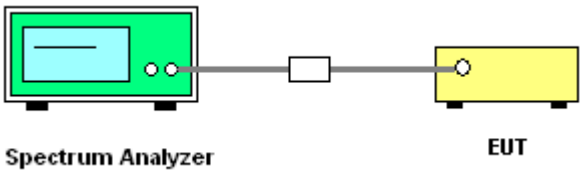
 # Method SA-2 #

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

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

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

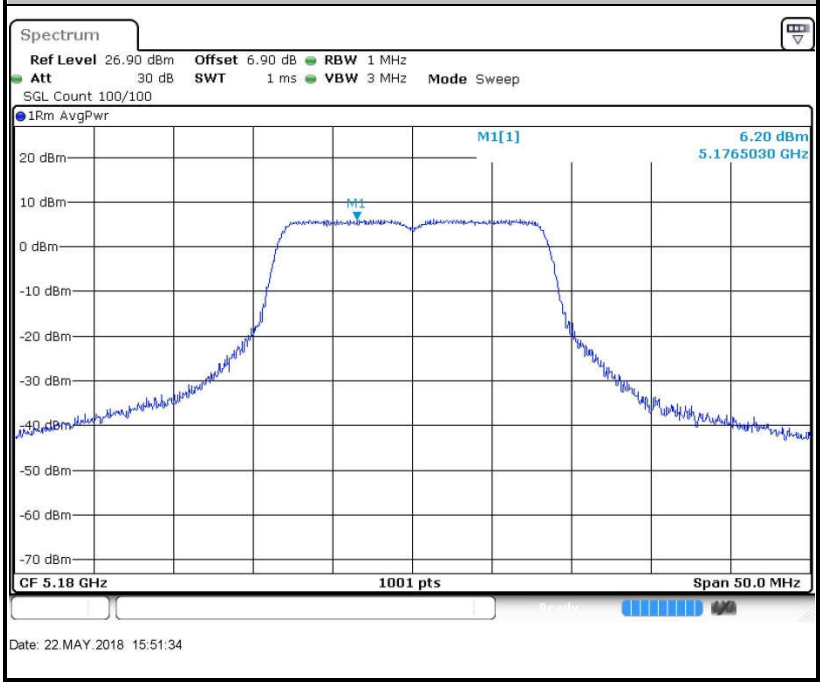
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

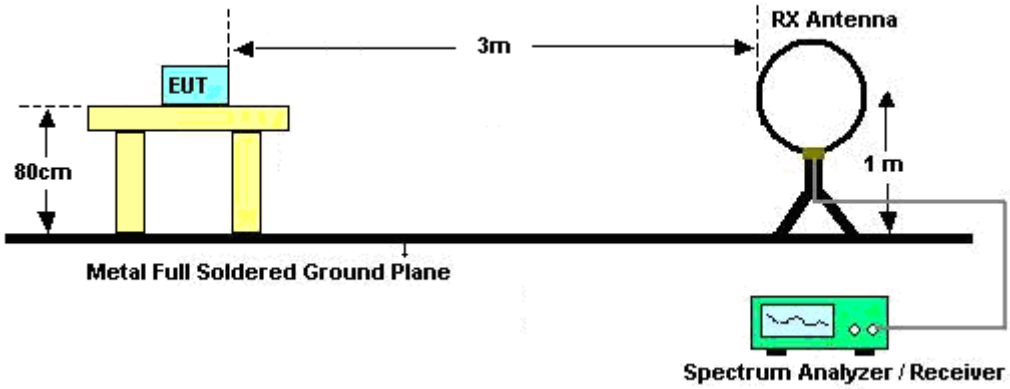
   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

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

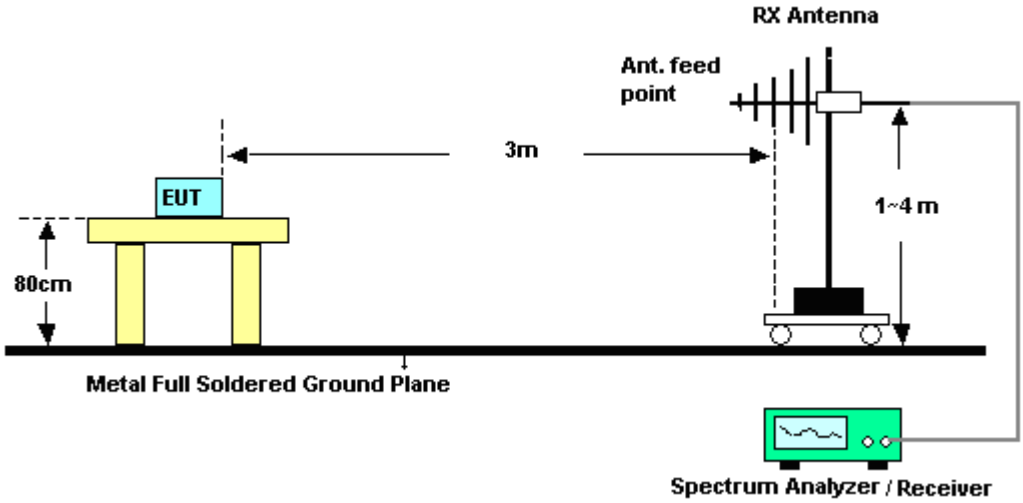
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting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

3.4.4 Test Setup

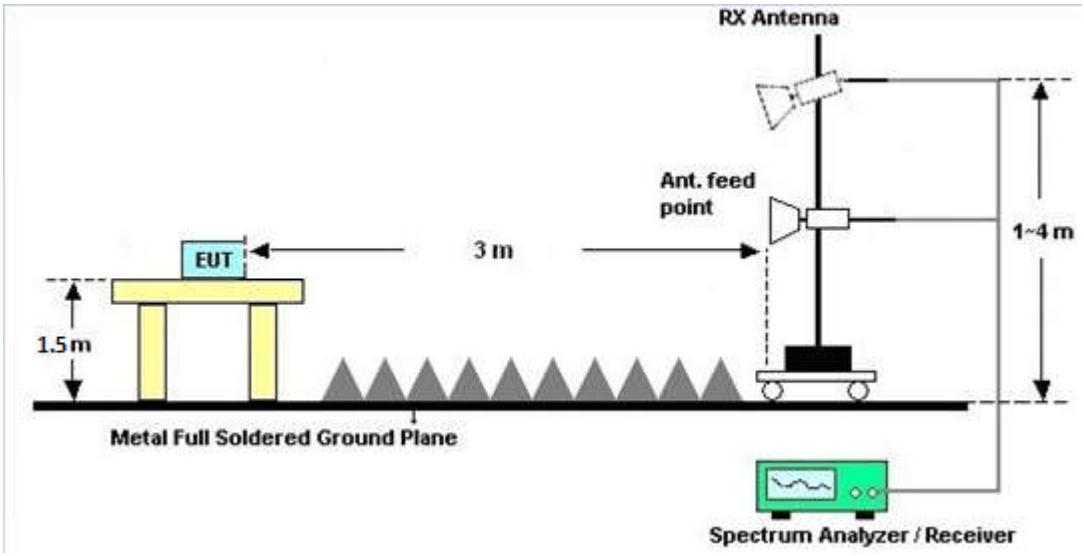
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

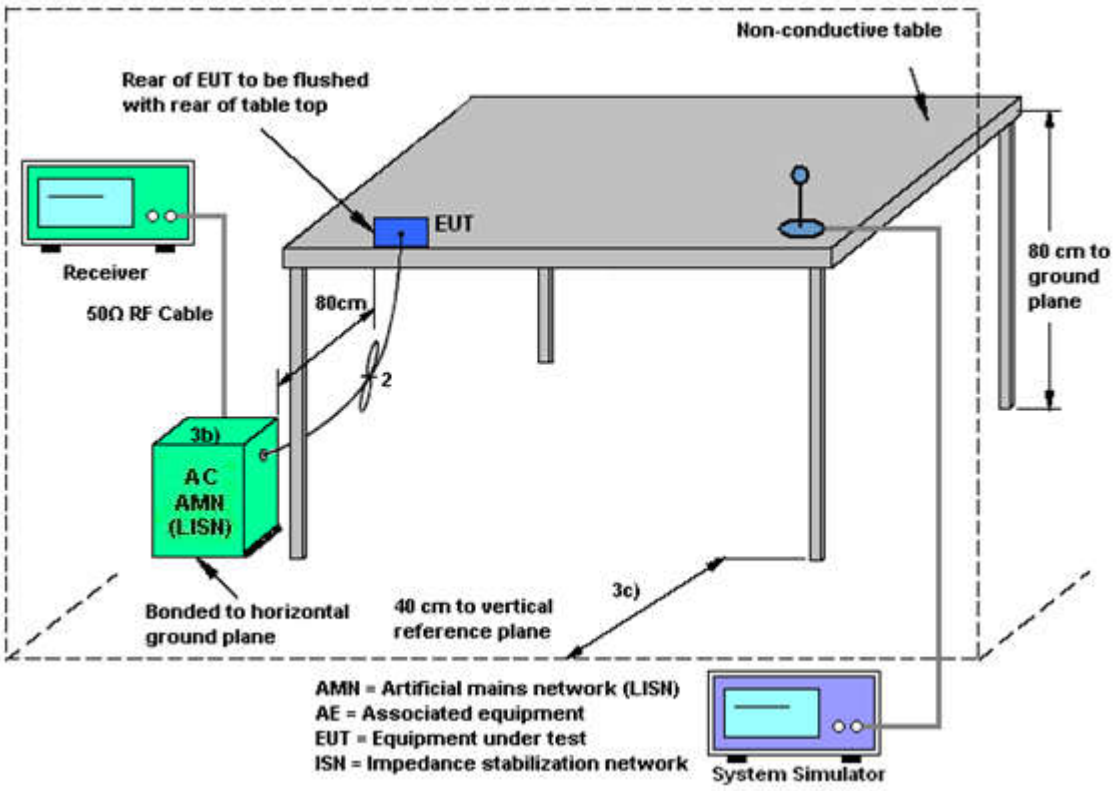
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

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

3.6.3 Test Result of Automatically Discontinue Transmission

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 08, 2017	May 22, 2018	Aug. 07, 2018	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 18, 2018	May 22, 2018	Jan. 17, 2019	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 18, 2018	May 22, 2018	Jan. 17, 2019	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Aug.08, 2017	May 29, 2018	Aug.07, 2018	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44G,MAX 30dB	Apr.17, 2018	May 29, 2018	Apr. 16, 2019	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 22, 2017	May 29, 2018	Oct.21, 2018	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz-2GHz	Jan. 29, 2018	May 29, 2018	Jan. 28, 2019	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 21, 2017	May 29, 2018	Oct. 20, 2018	Radiation (03CH02-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Feb. 07, 2018	May 29, 2018	Feb.06, 2019	Radiation (03CH02-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	100MHz-18GHz	Apr.17,2018	May 29, 2018	Apr.16,2019	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug.07,2017	May 29, 2018	Aug.06,2018	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A02384	1GHz~26.5GHz	Oct. 12, 2017	May 29, 2018	Oct. 11, 2018	Radiation (03CH02-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Oct. 12, 2017	May 29, 2018	Oct. 11, 2018	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	May 29, 2018	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	May 29, 2018	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	May 29, 2018	NCR	Radiation (03CH02-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 19, 2018	May 25, 2018	Apr. 18, 2019	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2017	May 25, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2017	May 25, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2017	May 25, 2018	Oct. 11, 2018	Conduction (CO01-KS)

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))	2.3dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.2dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.2dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.7dB

Report Number : FR851503E

Test Engineer:	Silent Hai	Temperature:	21~25	°C
Test Date:	2018/5/22	Relative Humidity:	51~55	%

Report Number : FR851503E

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	18.18	24.08	-	22.60		
11a	6Mbps	1	44	5220	18.23	24.73	-	22.61		
11a	6Mbps	1	48	5240	18.23	24.08	-	22.61		
HT20	MCS0	1	36	5180	19.13	25.28	-	22.82		
HT20	MCS0	1	44	5220	19.13	25.33	-	22.82		
HT20	MCS0	1	48	5240	19.13	25.18	-	22.82		
HT40	MCS0	1	38	5190	37.16	43.61	-	23.01		
HT40	MCS0	1	46	5230	37.16	43.34	-	23.01		
VHT80	MCS0	1	42	5210	76.12	85.51	-	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	98.28	17.21	24.00	-1.50		Pass
11a	6Mbps	1	44	5220	98.28	17.10	24.00	-1.50		Pass
11a	6Mbps	1	48	5240	98.28	17.05	24.00	-1.50		Pass
HT20	MCS0	1	36	5180	98.14	17.19	24.00	-1.50		Pass
HT20	MCS0	1	44	5220	98.14	17.11	24.00	-1.50		Pass
HT20	MCS0	1	48	5240	98.14	17.10	24.00	-1.50		Pass
HT40	MCS0	1	38	5190	96.33	15.34	24.00	-1.50		Pass
HT40	MCS0	1	46	5230	96.33	15.45	24.00	-1.50		Pass
VHT20	MCS0	1	36	5180	98.16	17.13	24.00	-1.50		Pass
VHT20	MCS0	1	44	5220	98.16	17.07	24.00	-1.50		Pass
VHT20	MCS0	1	48	5240	98.16	16.97	24.00	-1.50		Pass
VHT40	MCS0	1	38	5190	96.35	15.33	24.00	-1.50		Pass
VHT40	MCS0	1	46	5230	96.35	15.45	24.00	-1.50		Pass
VHT80	MCS0	1	42	5210	92.75	14.21	24.00	-1.50		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
11a	6Mbps	1	36	5180	0.08	6.28	11.00	-1.50		Pass
11a	6Mbps	1	44	5220	0.08	6.03	11.00	-1.50		Pass
11a	6Mbps	1	48	5240	0.08	6.14	11.00	-1.50		Pass
HT20	MCS0	1	36	5180	0.08	6.11	11.00	-1.50		Pass
HT20	MCS0	1	44	5220	0.08	5.84	11.00	-1.50		Pass
HT20	MCS0	1	48	5240	0.08	5.77	11.00	-1.50		Pass
HT40	MCS0	1	38	5190	0.16	1.05	11.00	-1.50		Pass
HT40	MCS0	1	46	5230	0.16	1.23	11.00	-1.50		Pass
VHT80	MCS0	1	42	5210	0.33	-2.65	11.00	-1.50		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	18.28	24.78	23.62	29.62	23.98	
11a	6M bps	1	60	5300	18.23	23.98	23.61	29.61	23.98	
11a	6M bps	1	64	5320	18.23	24.38	23.61	29.61	23.98	
HT20	MCS 0	1	52	5260	19.18	25.13	23.83	29.83	23.98	
HT20	MCS 0	1	60	5300	19.18	25.38	23.83	29.83	23.98	
HT20	MCS 0	1	64	5320	19.13	25.23	23.82	29.82	23.98	
HT40	MCS 0	1	54	5270	37.16	43.43	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	37.26	43.52	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	76.12	85.35	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
11a	6M bps	1	52	5260	98.28	17.03	23.98	-1.40	26.99	Pass
11a	6M bps	1	60	5300	98.28	17.27	23.98	-1.40	26.99	Pass
11a	6M bps	1	64	5320	98.28	17.23	23.98	-1.40	26.99	Pass
HT20	MCS 0	1	52	5260	98.14	17.12	23.98	-1.40	26.99	Pass
HT20	MCS 0	1	60	5300	98.14	17.26	23.98	-1.40	26.99	Pass
HT20	MCS 0	1	64	5320	98.14	17.27	23.98	-1.40	26.99	Pass
HT40	MCS 0	1	54	5270	96.33	15.23	23.98	-1.40	26.99	Pass
HT40	MCS 0	1	62	5310	96.33	15.44	23.98	-1.40	26.99	Pass
VHT20	MCS 0	1	52	5260	98.16	17.04	23.98	-1.40	26.99	Pass
VHT20	MCS 0	1	60	5300	98.16	17.15	23.98	-1.40	26.99	Pass
VHT20	MCS 0	1	64	5320	98.16	17.23	23.98	-1.40	26.99	Pass
VHT40	MCS 0	1	54	5270	96.35	15.19	23.98	-1.40	26.99	Pass
VHT40	MCS 0	1	62	5310	96.35	15.42	23.98	-1.40	26.99	Pass
VHT80	MCS 0	1	58	5290	92.75	13.69	23.98	-1.40	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.08	6.20	11.00	-1.40		Pass
11a	6M bps	1	60	5300	0.08	6.23	11.00	-1.40		Pass
11a	6M bps	1	64	5320	0.08	6.26	11.00	-1.40		Pass
HT20	MCS 0	1	52	5260	0.08	5.93	11.00	-1.40		Pass
HT20	MCS 0	1	60	5300	0.08	5.91	11.00	-1.40		Pass
HT20	MCS 0	1	64	5320	0.08	6.10	11.00	-1.40		Pass
HT40	MCS 0	1	54	5270	0.16	1.02	11.00	-1.40		Pass
HT40	MCS 0	1	62	5310	0.16	1.18	11.00	-1.40		Pass
VHT80	MCS 0	1	58	5290	0.33	-2.89	11.00	-1.40		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	100	5500	18.23	24.98	23.61	29.61	23.98	
11a	6M bps	1	116	5580	18.28	24.73	23.62	29.62	23.98	
11a	6M bps	1	140	5700	18.23	25.28	23.61	29.61	23.98	
11a	6Mbps	1	144	5720	18.33	25.38	23.63	29.63	23.98	
HT20	MCS 0	1	100	5500	19.13	25.08	23.82	29.82	23.98	
HT20	MCS 0	1	116	5580	19.23	25.38	23.84	29.84	23.98	
HT20	MCS 0	1	140	5700	19.23	25.72	23.84	29.84	23.98	
HT20	MCS0	1	144	5720	19.23	26.17	23.84	29.84	23.98	
VHT40	MCS 0	1	102	5510	37.26	43.61	23.98	30.00	23.98	
VHT40	MCS 0	1	110	5550	37.26	43.61	23.98	30.00	23.98	
VHT40	MCS 0	1	134	5670	37.16	43.52	23.98	30.00	23.98	
VHT40	MCS0	1	142	5710	37.26	43.88	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	76.00	85.67	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	76.12	85.51	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	76.24	86.15	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

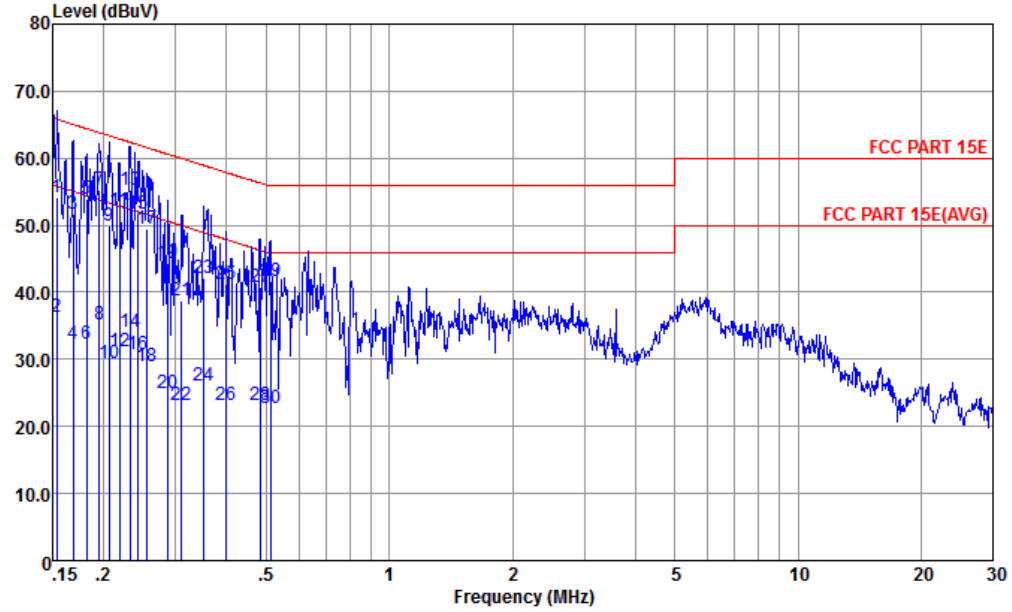
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.08	17.07	23.98	-0.80	26.99	Pass
11a	6M bps	1	116	5580	0.08	17.18	23.98	-0.80	26.99	Pass
11a	6M bps	1	140	5700	0.08	17.03	23.98	-0.80	26.99	Pass
11a	6Mbps	1	144	5720	0.08	16.90	23.98	-0.80	26.99	Pass
HT20	MCS 0	1	100	5500	0.08	17.17	23.98	-0.80	26.99	Pass
HT20	MCS 0	1	116	5580	0.08	17.16	23.98	-0.80	26.99	Pass
HT20	MCS 0	1	140	5700	0.08	16.67	23.98	-0.80	26.99	Pass
HT20	MCS0	1	144	5720	0.08	16.94	23.98	-0.80	26.99	Pass
HT40	MCS 0	1	102	5510	0.16	15.42	23.98	-0.80	26.99	Pass
HT40	MCS 0	1	110	5550	0.16	15.38	23.98	-0.80	26.99	Pass
HT40	MCS 0	1	134	5670	0.16	15.30	23.98	-0.80	26.99	Pass
HT40	MCS0	1	142	5710	0.16	15.41	23.98	-0.80	26.99	Pass
VHT20	MCS 0	1	100	5500	0.08	17.12	23.98	-0.80	26.99	Pass
VHT20	MCS 0	1	116	5580	0.08	17.13	23.98	-0.80	26.99	Pass
VHT20	MCS 0	1	140	5700	0.08	17.14	23.98	-0.80	26.99	Pass
VHT20	MCS0	1	144	5720	0.08	17.04	23.98	-0.80	26.99	Pass
VHT40	MCS 0	1	102	5510	0.16	15.43	23.98	-0.80	26.99	Pass
VHT40	MCS 0	1	110	5550	0.16	15.37	23.98	-0.80	26.99	Pass
VHT40	MCS 0	1	134	5670	0.16	15.38	23.98	-0.80	26.99	Pass
VHT40	MCS0	1	142	5710	0.16	12.92	23.98	-0.80	26.99	Pass
VHT80	MCS 0	1	106	5530	0.33	14.34	23.98	-0.80	26.99	Pass
VHT80	MCS 0	1	122	5610	0.33	14.18	23.98	-0.80	26.99	Pass
VHT80	MCS0	1	138	5690	0.33	14.16	23.98	-0.80	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.08	6.03	11.00	-0.80		Pass
11a	6M bps	1	116	5580	0.08	6.09	11.00	-0.80		Pass
11a	6M bps	1	140	5700	0.08	6.11	11.00	-0.80		Pass
11a	6Mbps	1	144	5720	0.08	5.86	11.00	-0.80		Pass
HT20	MCS 0	1	100	5500	0.08	6.08	11.00	-0.80		Pass
HT20	MCS 0	1	116	5580	0.08	5.77	11.00	-0.80		Pass
HT20	MCS 0	1	140	5700	0.08	5.79	11.00	-0.80		Pass
HT20	MCS0	1	144	5720	0.08	5.59	11.00	-0.80		Pass
VHT40	MCS 0	1	102	5510	0.16	1.41	11.00	-0.80		Pass
VHT40	MCS 0	1	110	5550	0.16	1.08	11.00	-0.80		Pass
VHT40	MCS0	1	142	5710	0.16	0.87	11.00	-0.80		Pass
VHT40	MCS0	1	142	5710	0.16	1.02	11.00	-0.80		Pass
VHT80	MCS 0	1	106	5530	0.33	-2.93	11.00	-0.80		Pass
VHT80	MCS 0	1	122	5610	0.33	-3.04	11.00	-0.80		Pass
VHT80	MCS0	1	138	5690	0.33	-3.20	11.00	-0.80		Pass

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos Zhang	Temperature :	26.1~26.2℃
		Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Line

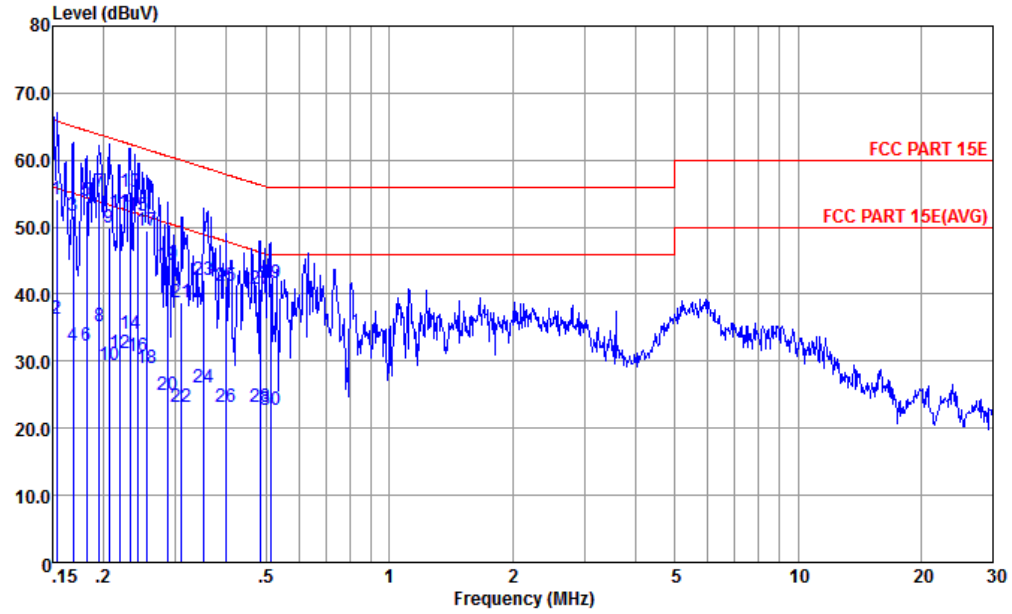


Site : CO01-KS
Condition : FCC PART 15E LISN-L-171013-060103 LINE

mode : Mode 1
: 355550090016408 #18

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.153	54.07	-11.75	65.82	43.30	0.16	10.61	QP
2		0.153	36.37	-19.45	55.82	25.60	0.16	10.61	Average
3		0.169	51.63	-13.40	65.03	40.90	0.18	10.55	QP
4		0.169	32.33	-22.70	55.03	21.60	0.18	10.55	Average
5		0.182	53.90	-10.52	64.42	43.20	0.19	10.51	QP
6		0.182	32.30	-22.12	54.42	21.60	0.19	10.51	Average
7		0.195	55.16	-8.64	63.80	44.49	0.20	10.47	QP
8		0.195	35.26	-18.54	53.80	24.59	0.20	10.47	Average
9		0.206	49.96	-13.40	63.36	39.31	0.20	10.45	QP
10		0.206	29.46	-23.90	53.36	18.81	0.20	10.45	Average
11		0.219	52.15	-10.73	62.88	41.49	0.21	10.45	QP
12		0.219	31.25	-21.63	52.88	20.59	0.21	10.45	Average
13	*	0.233	55.15	-7.20	62.35	44.50	0.21	10.44	QP
14		0.233	34.15	-18.20	52.35	23.50	0.21	10.44	Average
15		0.243	51.75	-10.25	62.00	41.10	0.21	10.44	QP
16		0.243	30.85	-21.15	52.00	20.20	0.21	10.44	Average
17		0.255	49.45	-12.15	61.60	38.79	0.22	10.44	QP

Test Engineer :	Amos Zhang	Temperature :	26.1~26.2℃
		Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Line

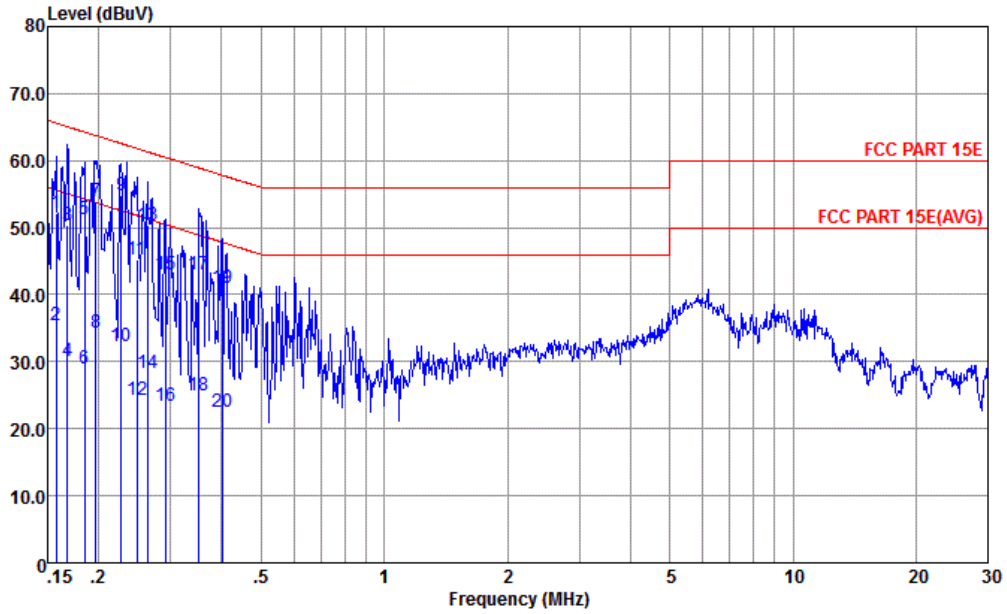


Site : CO01-KS
Condition : FCC PART 15E LISN-L-171013-060103 LINE

mode : Mode 1
: 355550090016408 #18

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	0.255	28.95	-22.65	51.60	18.29	0.22	10.44	Average
19	0.288	44.25	-16.34	60.59	33.60	0.22	10.43	QP
20	0.288	24.85	-25.74	50.59	14.20	0.22	10.43	Average
21	0.310	38.85	-21.12	59.97	28.20	0.23	10.42	QP
22	0.310	23.25	-26.72	49.97	12.60	0.23	10.42	Average
23	0.352	42.15	-16.76	58.91	31.49	0.24	10.42	QP
24	0.352	26.15	-22.76	48.91	15.49	0.24	10.42	Average
25	0.400	41.25	-16.61	57.86	30.59	0.25	10.41	QP
26	0.400	23.15	-24.71	47.86	12.49	0.25	10.41	Average
27	0.484	40.88	-15.39	56.27	30.30	0.26	10.32	QP
28	0.484	23.08	-23.19	46.27	12.50	0.26	10.32	Average
29	0.513	41.75	-14.25	56.00	31.20	0.26	10.29	QP
30	0.513	22.78	-23.22	46.00	12.23	0.26	10.29	Average

Test Engineer :	Amos Zhang	**Temperature :**	26.1~26.2℃
		Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-N-171013-060103 NEUTRAL

mode : Mode 1
: 355550090016408 #18

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.157	52.07	-13.53	65.60	41.20	0.28	10.59	QP
2		0.157	35.37	-20.23	55.60	24.50	0.28	10.59	Average
3		0.168	50.33	-14.75	65.08	39.50	0.28	10.55	QP
4		0.168	30.03	-25.05	55.08	19.20	0.28	10.55	Average
5		0.184	51.28	-13.00	64.28	40.50	0.28	10.50	QP
6		0.184	28.98	-25.30	54.28	18.20	0.28	10.50	Average
7		0.197	53.95	-9.81	63.76	43.20	0.28	10.47	QP
8		0.197	34.35	-19.41	53.76	23.60	0.28	10.47	Average
9	*	0.227	54.93	-7.64	62.57	44.20	0.28	10.45	QP
10		0.227	32.33	-20.24	52.57	21.60	0.28	10.45	Average
11		0.248	45.32	-16.50	61.82	34.60	0.28	10.44	QP
12		0.248	24.22	-27.60	51.82	13.50	0.28	10.44	Average
13		0.263	50.32	-11.02	61.34	39.60	0.28	10.44	QP
14		0.263	28.22	-23.12	51.34	17.50	0.28	10.44	Average
15		0.291	43.01	-17.49	60.50	32.30	0.28	10.43	QP
16		0.291	23.31	-27.19	50.50	12.60	0.28	10.43	Average
17		0.352	42.90	-16.01	58.91	32.19	0.29	10.42	QP
18		0.352	24.90	-24.01	48.91	14.19	0.29	10.42	Average
19		0.402	40.89	-16.92	57.81	30.20	0.29	10.40	QP
20		0.402	22.59	-25.22	47.81	11.90	0.29	10.40	Average

Appendix C. Radiated Spurious Emission

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		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5150	57.33	-16.67	74	46.73	31.98	8.17	29.55	100	62	P	H
		5150	46.92	-7.08	54	36.32	31.98	8.17	29.55	100	62	A	H
	*	5180	106.96	-	-	96.27	32.02	8.22	29.55	100	62	P	H
	*	5180	99.43	-	-	88.74	32.02	8.22	29.55	100	62	A	H
		5126.36	53.61	-20.39	74	43.05	31.96	8.15	29.55	387	105	P	V
		5150	44.46	-9.54	54	33.86	31.98	8.17	29.55	387	105	A	V
	*	5180	104.79	-	-	94.1	32.02	8.22	29.55	387	105	P	V
	*	5180	97.11	-	-	86.42	32.02	8.22	29.55	387	105	A	V
802.11a CH 44 5220MHz		5075.14	52.03	-21.97	74	41.59	31.9	8.08	29.54	106	330	P	H
		5145.6	42.19	-11.81	54	31.59	31.98	8.17	29.55	106	330	A	H
	*	5220	104.54	-	-	93.79	32.06	8.25	29.56	106	330	P	H
	*	5220	97	-	-	86.25	32.06	8.25	29.56	106	330	A	H
		5426.68	51.22	-22.78	74	40.14	32.3	8.36	29.58	106	330	P	H
		5452.72	41.91	-12.09	54	30.7	32.34	8.46	29.59	106	330	A	H
		5023.14	52.45	-21.55	74	42.13	31.84	8.01	29.53	400	105	P	V
		5145.6	41.76	-12.24	54	31.16	31.98	8.17	29.55	400	105	A	V
	*	5220	104.02	-	-	93.27	32.06	8.25	29.56	400	105	P	V
	*	5220	96.42	-	-	85.67	32.06	8.25	29.56	400	105	A	V
		5366.48	52.85	-21.15	74	41.88	32.24	8.3	29.57	400	105	P	V
		5452.72	41.54	-12.46	54	30.33	32.34	8.46	29.59	400	105	A	V

802.11a CH 48 5240MHz		5081.12	52.11	-21.89	74	41.67	31.9	8.08	29.54	100	331	P	H
		5145.6	41.94	-12.06	54	31.34	31.98	8.17	29.55	100	331	A	H
	*	5240	104.27	-	-	93.5	32.08	8.25	29.56	100	331	P	H
	*	5240	96.75	-	-	85.98	32.08	8.25	29.56	100	331	A	H
		5447.4	52.04	-21.96	74	40.87	32.34	8.41	29.58	100	331	P	H
		5452.72	42.02	-11.98	54	30.81	32.34	8.46	29.59	100	331	A	H
		5094.38	52.5	-21.5	74	42.02	31.92	8.1	29.54	398	97	P	V
		5145.34	41.78	-12.22	54	31.18	31.98	8.17	29.55	398	97	A	V
	*	5240	104.87	-	-	94.1	32.08	8.25	29.56	398	97	P	V
	*	5240	97.32	-	-	86.55	32.08	8.25	29.56	398	97	A	V
		5396.44	52.56	-21.44	74	41.55	32.28	8.31	29.58	398	97	P	V
		5452.72	41.43	-12.57	54	30.22	32.34	8.46	29.59	398	97	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	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		10360	44.38	-23.92	68.3	60.12	38.47	11.94	66.15	100	360	P	H
CH 36 5180MHz		10360	44.52	-23.78	68.3	60.26	38.47	11.94	66.15	100	360	P	V
802.11a		10440	45.01	-23.29	68.3	60.5	38.52	12.09	66.1	100	360	P	H
CH 44 5220MHz		10440	44.75	-23.55	68.3	60.24	38.52	12.09	66.1	100	360	P	V
802.11a		10480	44.91	-23.39	68.3	60.21	38.56	12.21	66.07	100	360	P	H
CH 48 5240MHz		10480	44.79	-23.51	68.3	60.09	38.56	12.21	66.07	100	360	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)
		5145.86	57.58	-16.42	74	46.98	31.98	8.17	29.55	100	360	P	H
		5150	45.35	-8.65	54	34.75	31.98	8.17	29.55	100	360	A	H
802.11n	*	5180	103.82	-	-	93.13	32.02	8.22	29.55	100	360	P	H
HT20	*	5180	96.28	-	-	85.59	32.02	8.22	29.55	100	360	A	H
CH 36		5145.34	56.65	-17.35	74	46.05	31.98	8.17	29.55	387	103	P	V
5180MHz		5150	45.62	-8.38	54	35.02	31.98	8.17	29.55	387	103	A	V
	*	5180	105.03	-	-	94.34	32.02	8.22	29.55	387	103	P	V
	*	5180	97.37	-	-	86.68	32.02	8.22	29.55	387	103	A	V
		5055.38	52.64	-21.36	74	42.24	31.88	8.06	29.54	100	360	P	H
		5145.6	42.09	-11.91	54	31.49	31.98	8.17	29.55	100	360	A	H
	*	5220	104.25	-	-	93.5	32.06	8.25	29.56	100	360	P	H
	*	5220	96.55	-	-	85.8	32.06	8.25	29.56	100	360	A	H
802.11n		5423.6	50.5	-23.5	74	39.42	32.3	8.36	29.58	100	360	P	H
HT20		5452.72	41.84	-12.16	54	30.63	32.34	8.46	29.59	100	360	A	H
CH 44		5040.3	51.28	-22.72	74	40.91	31.86	8.04	29.53	400	103	P	V
5220MHz		5145.6	41.65	-12.35	54	31.05	31.98	8.17	29.55	400	103	A	V
	*	5220	104.29	-	-	93.54	32.06	8.25	29.56	400	103	P	V
	*	5220	96.32	-	-	85.57	32.06	8.25	29.56	400	103	A	V
		5448.8	50.19	-23.81	74	38.97	32.34	8.46	29.58	400	103	P	V
		5452.72	41.46	-12.54	54	30.25	32.34	8.46	29.59	400	103	A	V

		5097.76	51.92	-22.08	74	41.44	31.92	8.1	29.54	111	338	P	H
		5145.6	41.73	-12.27	54	31.13	31.98	8.17	29.55	111	338	A	H
	*	5240	104.05	-	-	93.28	32.08	8.25	29.56	111	338	P	H
	*	5240	96.28	-	-	85.51	32.08	8.25	29.56	111	338	A	H
802.11n		5369.84	50.65	-23.35	74	39.68	32.24	8.3	29.57	111	338	P	H
HT20		5452.72	41.8	-12.2	54	30.59	32.34	8.46	29.59	111	338	A	H
CH 48		5040.82	51.93	-22.07	74	41.56	31.86	8.04	29.53	397	103	P	V
5240MHz		5145.6	41.61	-12.39	54	31.01	31.98	8.17	29.55	397	103	A	V
	*	5240	104.15	-	-	93.38	32.08	8.25	29.56	397	103	P	V
	*	5240	96.58	-	-	85.81	32.08	8.25	29.56	397	103	A	V
		5458.32	51.28	-22.72	74	40.07	32.34	8.46	29.59	397	103	P	V
		5452.72	41.34	-12.66	54	30.13	32.34	8.46	29.59	397	103	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	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10360	44.61	-23.69	68.3	60.35	38.47	11.94	66.15	100	360	P	H
HT20 CH 36 5180MHz		10360	43.82	-24.48	68.3	59.56	38.47	11.94	66.15	100	360	P	V
802.11n		10440	44.46	-23.84	68.3	59.95	38.52	12.09	66.1	100	360	P	H
HT20 CH 44 5220MHz		10440	44.2	-24.1	68.3	59.69	38.52	12.09	66.1	100	360	P	V
802.11n		10480	44.55	-23.75	68.3	59.85	38.56	12.21	66.07	100	180	P	H
HT20 CH 48 5240MHz		10480	45.15	-23.15	68.3	60.45	38.56	12.21	66.07	100	180	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		5148.2	57.26	-16.74	74	46.66	31.98	8.17	29.55	100	360	P	H
		5150	47.33	-6.67	54	36.73	31.98	8.17	29.55	100	360	A	H
	*	5190	98.85	-	-	88.16	32.02	8.22	29.55	100	360	P	H
	*	5190	92.13	-	-	81.44	32.02	8.22	29.55	100	360	A	H
		5358.64	50.52	-23.48	74	39.57	32.22	8.3	29.57	100	360	P	H
		5452.72	42.46	-11.54	54	31.25	32.34	8.46	29.59	100	360	A	H
		5148.98	53.94	-20.06	74	43.34	31.98	8.17	29.55	385	101	P	V
		5149.5	46.73	-7.27	54	36.13	31.98	8.17	29.55	385	101	A	V
	*	5190	99.83	-	-	89.14	32.02	8.22	29.55	385	101	P	V
	*	5190	93.29	-	-	82.6	32.02	8.22	29.55	385	101	A	V
		5396.16	51.56	-22.44	74	40.55	32.28	8.31	29.58	385	101	P	V
		5450.2	42.47	-11.53	54	31.26	32.34	8.46	29.59	385	101	A	V
802.11n HT40 CH 46 5230MHz		5057.98	51.46	-22.54	74	41.06	31.88	8.06	29.54	100	332	P	H
		5023.66	43.59	-10.41	54	33.27	31.84	8.01	29.53	100	332	A	H
	*	5230	99.16	-	-	88.39	32.08	8.25	29.56	100	332	P	H
	*	5230	92.45	-	-	81.68	32.08	8.25	29.56	100	332	A	H
		5427.8	50.39	-23.61	74	39.31	32.3	8.36	29.58	100	332	P	H
		5452.72	43.18	-10.82	54	31.97	32.34	8.46	29.59	100	332	A	H
		5070.2	50.85	-23.15	74	40.45	31.88	8.06	29.54	356	101	P	V
		5114.92	43.38	-10.62	54	32.85	31.94	8.13	29.54	356	101	A	V
	*	5230	100.38	-	-	89.61	32.08	8.25	29.56	356	101	P	V
	*	5230	93.47	-	-	82.7	32.08	8.25	29.56	356	101	A	V
		5456.08	50.14	-23.86	74	38.93	32.34	8.46	29.59	356	101	P	V
		5458.04	42.41	-11.59	54	31.2	32.34	8.46	29.59	356	101	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		10380	44.83	-23.47	68.3	60.51	38.48	11.98	66.14	100	360	P	H
HT40 CH 38 5190MHz		10380	44.08	-24.22	68.3	59.76	38.48	11.98	66.14	100	0	P	V
802.11n		10460	44.06	-24.24	68.3	59.49	38.53	12.13	66.09	100	29	P	H
HT40 CH 46 5230MHz		10460	44.28	-24.02	68.3	59.71	38.53	12.13	66.09	100	179	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		5137.02	55.24	-18.76	74	44.68	31.96	8.15	29.55	101	334	P	H
		5145.34	46.62	-7.38	54	36.02	31.98	8.17	29.55	101	334	A	H
	*	5210	96.78	-	-	86.04	32.06	8.24	29.56	101	334	P	H
	*	5210	89.54	-	-	78.8	32.06	8.24	29.56	101	334	A	H
		5457.48	51.03	-22.97	74	39.82	32.34	8.46	29.59	101	334	P	H
		5452.72	43.43	-10.57	54	32.22	32.34	8.46	29.59	101	334	A	H
		5146.9	54.83	-19.17	74	44.23	31.98	8.17	29.55	397	99	P	V
		5144.82	46	-8	54	35.4	31.98	8.17	29.55	397	99	A	V
	*	5210	96.95	-	-	86.21	32.06	8.24	29.56	397	99	P	V
	*	5210	90.19	-	-	79.45	32.06	8.24	29.56	397	99	A	V
		5426.68	51.62	-22.38	74	40.54	32.3	8.36	29.58	397	99	P	V
		5452.72	43.02	-10.98	54	31.81	32.34	8.46	29.59	397	99	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	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	44.47	-23.83	68.3	60.02	38.51	12.06	66.12	100	360	P	H
VHT80 CH 42 5210MHz		10420	44.59	-23.71	68.3	60.14	38.51	12.06	66.12	100	360	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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5130.22	52.07	-21.93	74	41.51	31.96	8.15	29.55	100	337	P	H
		5145.52	41.85	-12.15	54	31.25	31.98	8.17	29.55	100	337	A	H
	*	5260	103.97	-	-	93.15	32.12	8.26	29.56	100	337	P	H
	*	5260	96.47	-	-	85.65	32.12	8.26	29.56	100	337	A	H
		5459.52	51.78	-22.22	74	40.57	32.34	8.46	29.59	100	337	P	H
		5452.8	41.91	-12.09	54	30.7	32.34	8.46	29.59	100	337	A	H
		5119.34	52.57	-21.43	74	42.05	31.94	8.13	29.55	397	98	P	V
		5145.52	41.9	-12.1	54	31.3	31.98	8.17	29.55	397	98	A	V
	*	5260	105.14	-	-	94.32	32.12	8.26	29.56	397	98	P	V
	*	5260	97.58	-	-	86.76	32.12	8.26	29.56	397	98	A	V
		5391.6	51.5	-22.5	74	40.52	32.26	8.3	29.58	397	98	P	V
		5452.8	41.54	-12.46	54	30.33	32.34	8.46	29.59	397	98	A	V
802.11a CH 60 5300MHz		5116.96	51.96	-22.04	74	41.43	31.94	8.13	29.54	102	337	P	H
		5145.52	41.71	-12.29	54	31.11	31.98	8.17	29.55	102	337	A	H
	*	5300	105.2	-	-	94.34	32.16	8.27	29.57	102	337	P	H
	*	5300	96.95	-	-	86.09	32.16	8.27	29.57	102	337	A	H
		5389.44	52.04	-21.96	74	41.06	32.26	8.3	29.58	102	337	P	H
		5350.08	42.21	-11.79	54	31.27	32.22	8.29	29.57	102	337	A	H
		5014.28	52.23	-21.77	74	41.95	31.82	7.99	29.53	368	104	P	V
		5145.52	41.69	-12.31	54	31.09	31.98	8.17	29.55	368	104	A	V
	*	5300	104.32	-	-	93.46	32.16	8.27	29.57	368	104	P	V
	*	5300	96.8	-	-	85.94	32.16	8.27	29.57	368	104	A	V
		5430.48	51.13	-22.87	74	39.98	32.32	8.41	29.58	368	104	P	V
		5452.8	41.88	-12.12	54	30.67	32.34	8.46	29.59	368	104	A	V

802.11a CH 64 5320MHz	*	5320	106.66	-	-	95.77	32.18	8.28	29.57	100	62	P	H
	*	5320	98.99	-	-	88.1	32.18	8.28	29.57	100	62	A	H
		5352.96	56.93	-17.07	74	45.99	32.22	8.29	29.57	100	62	P	H
		5350.08	44.66	-9.34	54	33.72	32.22	8.29	29.57	100	62	A	H
	*	5320	105.04	-	-	94.15	32.18	8.28	29.57	388	104	P	V
	*	5320	97.23	-	-	86.34	32.18	8.28	29.57	388	104	A	V
		5352.96	54.69	-19.31	74	43.75	32.22	8.29	29.57	388	104	P	V
		5350.08	43.43	-10.57	54	32.49	32.22	8.29	29.57	388	104	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	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		10520	43.99	-24.31	68.3	59.17	38.58	12.28	66.04	100	360	P	H
CH 52 5260MHz		10520	44.18	-24.12	68.3	59.36	38.58	12.28	66.04	100	360	P	V
802.11a		10600	45.53	-22.77	68.3	60.4	38.64	12.47	65.98	100	93	P	H
CH 60 5300MHz		10600	45.14	-23.16	68.3	60.01	38.64	12.47	65.98	100	326	P	V
802.11a		10640	45.93	-28.07	74	60.67	38.67	12.55	65.96	100	360	P	H
CH 64 5320MHz		10640	45.14	-28.86	74	59.88	38.67	12.55	65.96	100	360	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		5066.64	51.66	-22.34	74	41.26	31.88	8.06	29.54	120	331	P	H
		5145.52	41.62	-12.38	54	31.02	31.98	8.17	29.55	120	331	A	H
	*	5260	103.99	-	-	93.17	32.12	8.26	29.56	120	331	P	H
	*	5260	96.27	-	-	85.45	32.12	8.26	29.56	120	331	A	H
		5426.64	51.5	-22.5	74	40.42	32.3	8.36	29.58	120	331	P	H
		5452.8	41.87	-12.13	54	30.66	32.34	8.46	29.59	120	331	A	H
		5134.64	52.24	-21.76	74	41.68	31.96	8.15	29.55	396	104	P	V
		5145.52	41.61	-12.39	54	31.01	31.98	8.17	29.55	396	104	A	V
	*	5260	104.54	-	-	93.72	32.12	8.26	29.56	396	104	P	V
	*	5260	96.87	-	-	86.05	32.12	8.26	29.56	396	104	A	V
		5385.36	50.31	-23.69	74	39.33	32.26	8.3	29.58	396	104	P	V
		5452.8	41.53	-12.47	54	30.32	32.34	8.46	29.59	396	104	A	V
802.11n HT20 CH 60 5300MHz		5106.76	51.62	-22.38	74	41.09	31.94	8.13	29.54	100	333	P	H
		5145.52	41.65	-12.35	54	31.05	31.98	8.17	29.55	100	333	A	H
	*	5300	104.01	-	-	93.15	32.16	8.27	29.57	100	333	P	H
	*	5300	96.21	-	-	85.35	32.16	8.27	29.57	100	333	A	H
		5359.44	52.19	-21.81	74	41.24	32.22	8.3	29.57	100	333	P	H
		5350.08	42.22	-11.78	54	31.28	32.22	8.29	29.57	100	333	A	H
		5059.84	52.56	-21.44	74	42.16	31.88	8.06	29.54	369	99	P	V
		5145.86	41.72	-12.28	54	31.12	31.98	8.17	29.55	369	99	A	V
	*	5300	104.9	-	-	94.04	32.16	8.27	29.57	369	99	P	V
	*	5300	97.27	-	-	86.41	32.16	8.27	29.57	369	99	A	V
		5368.32	51.12	-22.88	74	40.15	32.24	8.3	29.57	369	99	P	V
		5452.8	42.18	-11.82	54	30.97	32.34	8.46	29.59	369	99	A	V

802.11n HT20 CH 64 5320MHz	*	5320	104.14	-	-	93.25	32.18	8.28	29.57	100	332	P	H
	*	5320	96.51	-	-	85.62	32.18	8.28	29.57	100	332	A	H
		5350.24	58.45	-15.55	74	47.51	32.22	8.29	29.57	100	332	P	H
		5350.08	44.44	-9.56	54	33.5	32.22	8.29	29.57	100	332	A	H
	*	5320	103.89	-	-	93	32.18	8.28	29.57	389	96	P	V
	*	5320	96.44	-	-	85.55	32.18	8.28	29.57	389	96	A	V
		5350.56	52.72	-21.28	74	41.78	32.22	8.29	29.57	389	96	P	V
		5350.08	42.9	-11.1	54	31.96	32.22	8.29	29.57	389	96	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	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10520	44.08	-24.22	68.3	59.26	38.58	12.28	66.04	100	180	P	H
HT20 CH 52 5260MHz		10520	45.18	-23.12	68.3	60.36	38.58	12.28	66.04	100	180	P	V
802.11n		10600	44.69	-23.61	68.3	59.56	38.64	12.47	65.98	100	360	P	H
HT20 CH 60 5300MHz		10600	46.35	-21.95	68.3	61.22	38.64	12.47	65.98	100	0	P	V
802.11n		10640	45.42	-28.58	74	60.16	38.67	12.55	65.96	100	360	P	H
HT20 CH 64 5320MHz		10640	45.98	-28.02	74	60.72	38.67	12.55	65.96	100	121	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		5090.44	51.69	-22.31	74	41.21	31.92	8.1	29.54	103	332	P	H
		5000.34	43.31	-10.69	54	33.05	31.8	7.99	29.53	103	332	A	H
	*	5270	98.72	-	-	87.89	32.12	8.27	29.56	103	332	P	H
	*	5270	91.87	-	-	81.04	32.12	8.27	29.56	103	332	A	H
		5453.76	50.62	-23.38	74	39.41	32.34	8.46	29.59	103	332	P	H
		5452.8	42.91	-11.09	54	31.7	32.34	8.46	29.59	103	332	A	H
		5127.16	51.46	-22.54	74	40.9	31.96	8.15	29.55	391	96	P	V
		5125.8	43.26	-10.74	54	32.7	31.96	8.15	29.55	391	96	A	V
	*	5270	100.62	-	-	89.79	32.12	8.27	29.56	391	96	P	V
	*	5270	92.7	-	-	81.87	32.12	8.27	29.56	391	96	A	V
		5392.32	50.56	-23.44	74	39.58	32.26	8.3	29.58	391	96	P	V
		5453.04	42.99	-11.01	54	31.78	32.34	8.46	29.59	391	96	A	V
802.11n HT40 CH 62 5310MHz		5124.1	52.38	-21.62	74	41.84	31.96	8.13	29.55	100	336	P	H
		5049.64	43.56	-10.44	54	33.2	31.86	8.04	29.54	100	336	A	H
	*	5310	99.75	-	-	88.86	32.18	8.28	29.57	100	336	P	H
	*	5310	92.47	-	-	81.58	32.18	8.28	29.57	100	336	A	H
		5351.52	58.28	-15.72	74	47.34	32.22	8.29	29.57	100	336	P	H
		5351.04	49.33	-4.67	54	38.39	32.22	8.29	29.57	100	336	A	H
		5087.72	52.09	-21.91	74	41.65	31.9	8.08	29.54	387	97	P	V
		5095.88	43.63	-10.37	54	33.15	31.92	8.1	29.54	387	97	A	V
	*	5310	101.11	-	-	90.22	32.18	8.28	29.57	387	97	P	V
	*	5310	93.92	-	-	83.03	32.18	8.28	29.57	387	97	A	V
		5351.04	60.45	-13.55	74	49.51	32.22	8.29	29.57	387	97	P	V
		5350.08	50.64	-3.36	54	39.7	32.22	8.29	29.57	387	97	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	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	43.45	-24.85	68.3	58.56	38.6	12.32	66.03	100	284	P	H
HT40 CH 54 5270MHz		10540	44.29	-24.01	68.3	59.4	38.6	12.32	66.03	100	138	P	V
802.11n		10620	46.18	-27.82	74	60.98	38.66	12.51	65.97	100	360	P	H
HT40 CH 62 5310MHz		10620	45.57	-28.43	74	60.37	38.66	12.51	65.97	100	360	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		5129.44	53.46	-20.54	74	43.32	35.41	7.99	33.26	157	61	P	H
		5129.28	44.21	-9.79	54	34.07	35.41	7.99	33.26	157	61	A	H
	*	5308	95.83	-	-	85.64	35.27	8.15	33.23	157	61	P	H
	*	5308	88.66	-	-	78.47	35.27	8.15	33.23	157	61	A	H
		5357.3	59.44	-14.56	74	49.21	35.23	8.22	33.22	157	61	P	H
	!	5354.4	50.28	-3.72	54	40.05	35.23	8.22	33.22	157	61	A	H
		5133.12	53.16	-20.84	74	43.02	35.41	7.99	33.26	396	118	P	V
		5145.76	44.05	-9.95	54	33.92	35.39	7.99	33.25	396	118	A	V
	*	5324	93.94	-	-	83.74	35.26	8.17	33.23	396	118	P	V
	*	5324	86.92	-	-	76.72	35.26	8.17	33.23	396	118	A	V
		5354.4	57.02	-16.98	74	46.79	35.23	8.22	33.22	396	118	P	V
	!	5352	47.29	-6.71	54	37.06	35.23	8.22	33.22	396	118	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		10580	45.34	-22.96	68.3	60.28	38.63	12.43	66	100	360	P	H
VHT80 CH 58 5290MHz		10580	44.76	-23.54	68.3	59.7	38.63	12.43	66	100	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 802.11a (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		5459.44	54.3	-19.7	74	43.09	32.34	8.46	29.59	106	62	P	H
		5469.68	60.39	-7.81	68.2	49.11	32.36	8.51	29.59	106	62	P	H
		5452.72	44.03	-9.97	54	32.82	32.34	8.46	29.59	106	62	A	H
	*	5500	106.72	-	-	95.35	32.4	8.56	29.59	106	62	P	H
	*	5500	99.21	-	-	87.84	32.4	8.56	29.59	106	62	A	H
		5368.88	52.83	-21.17	74	41.86	32.24	8.3	29.57	400	111	P	V
		5470	58.61	-9.59	68.2	47.33	32.36	8.51	29.59	400	111	P	V
		5452.88	42.43	-11.57	54	31.22	32.34	8.46	29.59	400	111	A	V
	*	5500	105.97	-	-	94.6	32.4	8.56	29.59	400	111	P	V
	*	5500	98.51	-	-	87.14	32.4	8.56	29.59	400	111	A	V
802.11a CH 116 5580MHz		5434.24	53.14	-20.86	74	41.99	32.32	8.41	29.58	100	64	P	H
		5465.92	52.38	-15.82	68.2	41.15	32.36	8.46	29.59	100	64	P	H
		5452.72	43.05	-10.95	54	31.84	32.34	8.46	29.59	100	64	A	H
	*	5580	107.28	-	-	95.64	32.47	8.8	29.63	100	64	P	H
	*	5580	99.55	-	-	87.91	32.47	8.8	29.63	100	64	A	H
		5758.385	51.83	-16.37	68.2	40.07	32.66	8.81	29.71	100	64	P	H
		5457.52	52.13	-21.87	74	40.92	32.34	8.46	29.59	389	116	P	V
		5469.76	51.92	-16.28	68.2	40.64	32.36	8.51	29.59	389	116	P	V
		5452.96	42.69	-11.31	54	31.48	32.34	8.46	29.59	389	116	A	V
	*	5580	106.6	-	-	94.96	32.47	8.8	29.63	389	116	P	V
	*	5580	98.74	-	-	87.1	32.47	8.8	29.63	389	116	A	V
		5747.045	52.72	-15.48	68.2	40.96	32.64	8.81	29.69	389	116	P	V

802.11a CH 140 5700MHz	*	5700	106.24	-	-	94.5	32.59	8.82	29.67	100	65	P	H
	*	5700	98.61	-	-	86.87	32.59	8.82	29.67	100	65	A	H
		5725.08	62.6	-5.6	68.2	50.84	32.62	8.82	29.68	100	65	P	H
	*	5700	106.21	-	-	94.47	32.59	8.82	29.67	390	120	P	V
	*	5700	98.61	-	-	86.87	32.59	8.82	29.67	390	120	A	V
		5727.88	61.64	-6.56	68.2	49.88	32.62	8.82	29.68	390	120	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	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		11000	45.87	-28.13	74	59.3	38.93	13.34	65.7	100	360	P	H
CH 100 5500MHz		11000	45.36	-28.64	74	58.79	38.93	13.34	65.7	100	133	P	V
802.11a		11160	46.99	-27.01	74	60.33	39.05	13.19	65.58	100	275	P	H
CH 116 5580MHz		11160	45.58	-28.42	74	58.92	39.05	13.19	65.58	100	360	P	V
802.11a		11400	46.52	-27.48	74	59.71	39.23	12.99	65.41	100	360	P	H
CH 140 5700MHz		11400	46.1	-27.9	74	59.29	39.23	12.99	65.41	100	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 802.11n 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)
		5452.08	50.88	-23.12	74	39.67	32.34	8.46	29.59	100	1	P	H
		5470	57.32	-10.88	68.2	46.04	32.36	8.51	29.59	100	1	P	H
		5452.72	42.91	-11.09	54	31.7	32.34	8.46	29.59	100	1	A	H
802.11n	*	5500	103.84	-	-	92.47	32.4	8.56	29.59	100	1	P	H
HT20	*	5500	96.09	-	-	84.72	32.4	8.56	29.59	100	1	A	H
CH 100		5454.16	50.9	-23.1	74	39.69	32.34	8.46	29.59	400	110	P	V
5500MHz		5465.68	57.93	-10.27	68.2	46.7	32.36	8.46	29.59	400	110	P	V
		5452.72	42.43	-11.57	54	31.22	32.34	8.46	29.59	400	110	A	V
	*	5500	105.45	-	-	94.08	32.4	8.56	29.59	400	110	P	V
	*	5500	97.83	-	-	86.46	32.4	8.56	29.59	400	110	A	V
		5453.68	50.16	-23.84	74	38.95	32.34	8.46	29.59	100	313	P	H
		5468.32	50.2	-18	68.2	38.92	32.36	8.51	29.59	100	313	P	H
		5452.96	42.09	-11.91	54	30.88	32.34	8.46	29.59	100	313	A	H
	*	5580	104.83	-	-	93.19	32.47	8.8	29.63	100	313	P	H
802.11n	*	5580	97.27	-	-	85.63	32.47	8.8	29.63	100	313	A	H
HT20		5759.33	51.13	-17.07	68.2	39.37	32.66	8.81	29.71	100	313	P	H
CH 116		5446.24	50.7	-23.3	74	39.53	32.34	8.41	29.58	388	112	P	V
5580MHz		5465.44	50.35	-17.85	68.2	39.12	32.36	8.46	29.59	388	112	P	V
		5452.72	42.3	-11.7	54	31.09	32.34	8.46	29.59	388	112	A	V
	*	5580	105.9	-	-	94.26	32.47	8.8	29.63	388	112	P	V
	*	5580	98.29	-	-	86.65	32.47	8.8	29.63	388	112	A	V
		5740.115	51.96	-16.24	68.2	40.2	32.64	8.81	29.69	388	112	P	V

802.11n HT20 CH 140 5700MH	*	5700	104.32	-	-	92.58	32.59	8.82	29.67	101	1	P	H
		5700	96.38	-	-	84.64	32.59	8.82	29.67	101	1	A	H
	!	5725	64.25	-3.95	68.2	52.49	32.62	8.82	29.68	101	1	P	H
	*	5700	105.79	-	-	94.05	32.59	8.82	29.67	390	119	P	V
		5700	97.98	-	-	86.24	32.59	8.82	29.67	390	119	A	V
	!	5725	64.95	-3.25	68.2	53.19	32.62	8.82	29.68	390	119	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		11000	47.45	-26.55	74	60.88	38.93	13.34	65.7	100	360	P	H
HT20 CH 100 5500MHz		11000	46.19	-27.81	74	59.62	38.93	13.34	65.7	100	0	P	V
802.11n		11160	46.79	-27.21	74	60.13	39.05	13.19	65.58	100	360	P	H
HT20 CH 116 5580MHz		11160	46.58	-27.42	74	59.92	39.05	13.19	65.58	100	0	P	V
802.11n		11400	46.49	-27.51	74	59.68	39.23	12.99	65.41	100	360	P	H
HT20 CH 140 5700MHz		11400	45.93	-28.07	74	59.12	39.23	12.99	65.41	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (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)
		5459.44	56.18	-17.82	74	44.97	32.34	8.46	29.59	106	315	P	H
		5468.8	60.28	-7.92	68.2	49	32.36	8.51	29.59	106	315	P	H
		5459.92	46.02	-7.98	54	34.81	32.34	8.46	29.59	106	315	A	H
	*	5510	101.03	-	-	89.63	32.4	8.6	29.6	106	315	P	H
802.11ac	*	5510	93.61	-	-	82.21	32.4	8.6	29.6	106	315	A	H
VHT40		5738.225	51.93	-16.27	68.2	40.17	32.64	8.81	29.69	106	315	P	H
CH 102		5453.92	53.56	-20.44	74	42.35	32.34	8.46	29.59	397	112	P	V
5510MHz		5467.36	57.12	-11.08	68.2	45.84	32.36	8.51	29.59	397	112	P	V
		5459.68	44.94	-9.06	54	33.73	32.34	8.46	29.59	397	112	A	V
	*	5510	102.65	-	-	91.25	32.4	8.6	29.6	397	112	P	V
	*	5510	95.19	-	-	83.79	32.4	8.6	29.6	397	112	A	V
		5733.5	51.76	-16.44	68.2	40.01	32.62	8.82	29.69	397	112	P	V
		5442.16	52.25	-21.75	74	41.1	32.32	8.41	29.58	100	62	P	H
		5469.04	52.29	-15.91	68.2	41.01	32.36	8.51	29.59	100	62	P	H
		5452.48	45.07	-8.93	54	33.86	32.34	8.46	29.59	100	62	A	H
	*	5550	104.59	-	-	93.05	32.45	8.7	29.61	100	62	P	H
802.11ac	*	5550	96.41	-	-	84.87	32.45	8.7	29.61	100	62	A	H
VHT40		5765	52.41	-15.79	68.2	40.65	32.66	8.81	29.71	100	62	P	H
CH 110		5418.4	52.36	-21.64	74	41.28	32.3	8.36	29.58	369	112	P	V
5550MHz		5468.08	51.35	-16.85	68.2	40.07	32.36	8.51	29.59	369	112	P	V
		5452.72	43.87	-10.13	54	32.66	32.34	8.46	29.59	369	112	A	V
	*	5550	103.09	-	-	91.55	32.45	8.7	29.61	369	112	P	V
	*	5550	95.55	-	-	84.01	32.45	8.7	29.61	369	112	A	V
		5729.09	52.11	-16.09	68.2	40.35	32.62	8.82	29.68	369	112	P	V

		5411.6	51	-23	74	39.97	32.3	8.31	29.58	101	2	P	H
		5468.65	51.78	-16.42	68.2	40.5	32.36	8.51	29.59	101	2	P	H
		5452.55	42.72	-11.28	54	31.51	32.34	8.46	29.59	101	2	A	H
	*	5670	100.28	-	-	88.54	32.57	8.83	29.66	101	2	P	H
802.11ac	*	5670	93.07	-	-	81.33	32.57	8.83	29.66	101	2	A	H
VHT40		5725.94	54.2	-14	68.2	42.44	32.62	8.82	29.68	101	2	P	H
CH 134		5403.55	50.73	-23.27	74	39.72	32.28	8.31	29.58	392	120	P	V
5670MHz		5462.35	51.9	-16.3	68.2	40.69	32.34	8.46	29.59	392	120	P	V
		5452.9	42.74	-11.26	54	31.53	32.34	8.46	29.59	392	120	A	V
	*	5670	102.68	-	-	90.94	32.57	8.83	29.66	392	120	P	V
	*	5670	95.56	-	-	83.82	32.57	8.83	29.66	392	120	A	V
		5735.39	53.89	-14.31	68.2	42.12	32.64	8.82	29.69	392	120	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 VHT40 (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		11020	47.31	-26.69	74	60.74	38.94	13.32	65.69	100	360	P	H
VHT40 CH 102 5510MHz		11020	46.74	-27.26	74	60.17	38.94	13.32	65.69	100	360	P	V
802.11ac		11100	46.09	-27.91	74	59.47	39	13.25	65.63	100	360	P	H
VHT40 CH 110 5550MHz		11100	46.9	-27.1	74	60.28	39	13.25	65.63	100	360	P	V
802.11ac		11340	45.94	-28.06	74	59.18	39.18	13.04	65.46	100	360	P	H
VHT40 CH 134 5670MHz		11340	46.1	-27.9	74	59.34	39.18	13.04	65.46	100	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	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		5442.4	56.51	-17.49	74	45.36	32.32	8.41	29.58	100	312	P	H
		5466.4	58.08	-10.12	68.2	46.8	32.36	8.51	29.59	100	312	P	H
		5459.92	48.45	-5.55	54	37.24	32.34	8.46	29.59	100	312	A	H
	*	5530	97.06	-	-	85.6	32.42	8.65	29.61	100	312	P	H
	*	5530	89.3	-	-	77.84	32.42	8.65	29.61	100	312	A	H
		5727.515	52.65	-15.55	68.2	40.89	32.62	8.82	29.68	100	312	P	H
		5458.48	55	-19	74	43.79	32.34	8.46	29.59	394	107	P	V
		5466.64	55.77	-12.43	68.2	44.49	32.36	8.51	29.59	394	107	P	V
		5457.28	47.66	-6.34	54	36.45	32.34	8.46	29.59	394	107	A	V
	*	5530	99.05	-	-	87.59	32.42	8.65	29.61	394	107	P	V
	*	5530	91.23	-	-	79.77	32.42	8.65	29.61	394	107	A	V
		5727.83	51.87	-16.33	68.2	40.11	32.62	8.82	29.68	394	107	P	V
802.11ac VHT80 CH 122 5610MHz		5399.68	51.81	-22.19	74	40.8	32.28	8.31	29.58	100	319	P	H
		5460.4	50.78	-17.42	68.2	39.57	32.34	8.46	29.59	100	319	P	H
		5452.72	43.73	-10.27	54	32.52	32.34	8.46	29.59	100	319	A	H
	*	5610	97.16	-	-	85.45	32.5	8.85	29.64	100	319	P	H
	*	5610	89.5	-	-	77.79	32.5	8.85	29.64	100	319	A	H
		5739.485	52.77	-15.43	68.2	41.01	32.64	8.81	29.69	100	319	P	H
		5444.56	51.3	-22.7	74	40.15	32.32	8.41	29.58	400	110	P	V
		5466.16	50.99	-17.21	68.2	39.71	32.36	8.51	29.59	400	110	P	V
		5457.04	43.1	-10.9	54	31.89	32.34	8.46	29.59	400	110	A	V
	*	5610	98.53	-	-	86.82	32.5	8.85	29.64	400	110	P	V
	*	5610	91.16	-	-	79.45	32.5	8.85	29.64	400	110	A	V
		5737.28	52.45	-15.75	68.2	40.69	32.64	8.81	29.69	400	110	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11060	46.56	-27.44	74	59.96	38.98	13.28	65.66	100	360	P	H
VHT80 CH 106 5530MHz		11060	46.58	-27.42	74	59.98	38.98	13.28	65.66	100	360	P	V
802.11ac		11220	46.24	-27.76	74	59.55	39.09	13.15	65.55	100	360	P	H
VHT80 CH 122 5610MHz		11220	47.32	-26.68	74	60.63	39.09	13.15	65.55	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11a (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 144 5720MHz	*	5720	105.92	-	-	94.16	32.62	8.82	29.68	100	358	P	H
	*	5720	98.33	-	-	86.57	32.62	8.82	29.68	100	358	A	H
	*	5720	107.91	-	-	96.15	32.62	8.82	29.68	387	120	P	V
	*	5720	100.39	-	-	88.63	32.62	8.82	29.68	387	120	A	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	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		11440	45.57	-28.43	74	58.75	39.25	12.96	65.39	100	360	P	H
CH 144 5720MHz		11440	45.79	-28.21	74	58.97	39.25	12.96	65.39	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11n 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		5720	105.85	-	-	94.09	32.62	8.82	29.68	100	359	P	H
HT20		5720	97.82	-	-	86.06	32.62	8.82	29.68	100	359	A	H
CH 144		5720	108.01	-	-	96.25	32.62	8.82	29.68	386	119	P	V
5720MHz		5720	100.06	-	-	88.3	32.62	8.82	29.68	386	119	A	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 VHT20 (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		11440	46.46	-27.54	74	59.64	39.25	12.96	65.39	100	360	P	H
VHT20 CH 144 5720MHz		11440	45.59	-28.41	74	58.77	39.25	12.96	65.39	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT40 (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	*	5710	100.76	-	-	89.01	32.61	8.82	29.68	100	298	P	H
VHT40	*	5710	93.7	-	-	81.95	32.61	8.82	29.68	100	298	A	H
CH 142	*	5710	103.58	-	-	91.83	32.61	8.82	29.68	389	120	P	V
5710MHz	*	5710	96.08	-	-	84.33	32.61	8.82	29.68	389	120	A	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 VHT40 (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		11420	45.78	-28.22	74	58.97	39.24	12.97	65.4	100	360	P	H
VHT40 CH 142 5710MHz		11420	46.45	-27.55	74	59.64	39.24	12.97	65.4	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac 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	*	5690	97.02	-	-	85.27	32.59	8.83	29.67	100	358	P	H
VHT80	*	5690	89.55	-	-	77.8	32.59	8.83	29.67	100	358	A	H
CH 138	*	5690	99.27	-	-	87.52	32.59	8.83	29.67	388	119	P	V
5690MHz	*	5690	91.89	-	-	80.14	32.59	8.83	29.67	388	119	A	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	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	46.73	-27.27	74	59.94	39.21	13	65.42	100	360	P	H
VHT80 CH 138 5690MHz		11380	45.85	-28.15	74	59.06	39.21	13	65.42	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11n HT20 (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 HT20 LF		32.91	23.5	-16.5	40	30.38	23.55	0.61	31.04	-	-	P	H
		132.82	17.98	-25.52	43.5	30.2	17.36	1.25	30.83	-	-	P	H
		256.01	29.9	-16.1	46	39.9	19.5	1.74	31.24	-	-	P	H
		267.65	30.16	-15.84	46	40.19	19.5	1.78	31.31	100	214	P	H
		466.5	25.86	-20.14	46	32.01	23.06	2.39	31.6	-	-	P	H
		728.4	25.61	-20.39	46	26.52	26.93	3	30.84	-	-	P	H
		34.85	28.87	-11.13	40	36.79	22.45	0.63	31	-	-	P	V
		45.52	30.7	-9.3	40	44.74	16.65	0.73	31.42	100	269	P	V
		58.13	29.35	-10.65	40	47.82	12.26	0.83	31.56	-	-	P	V
		168.71	25.31	-18.19	43.5	39.13	15.74	1.41	30.97	-	-	P	V
		258.92	29.97	-16.03	46	39.59	19.88	1.75	31.25	-	-	P	V
		462.62	27.95	-18.05	46	34.19	22.98	2.38	31.6	-	-	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 **not under limit 6dB**.
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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

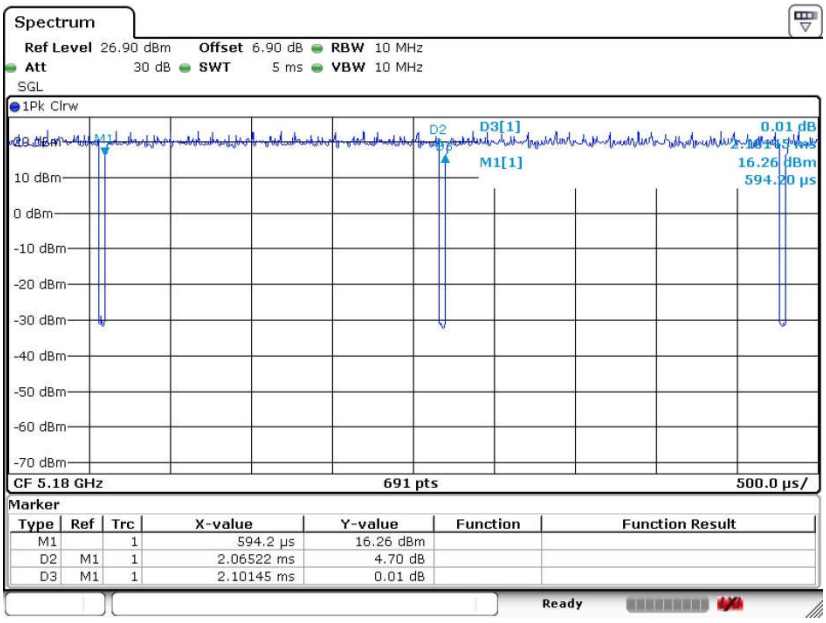
= -10.46(dB)

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

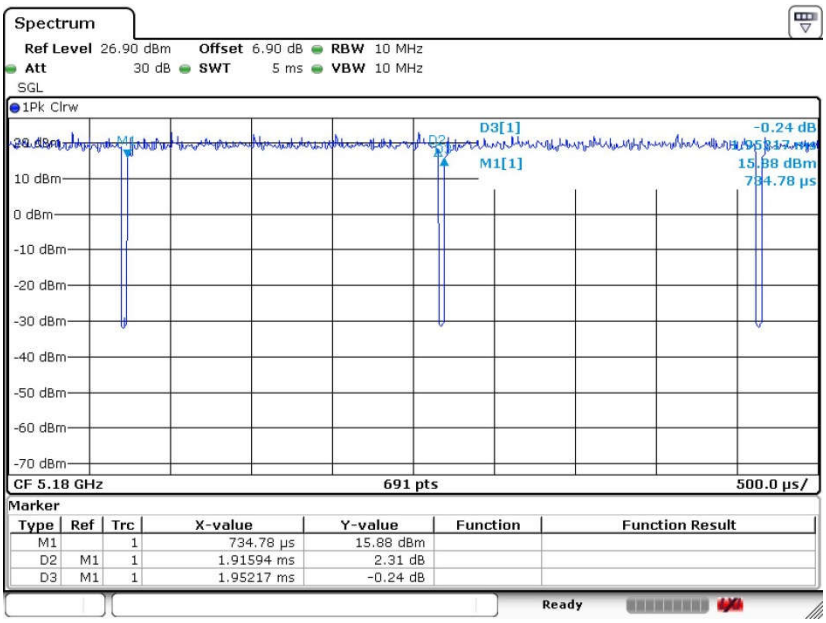
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	98.28	-	-	10Hz
802.11n HT20	98.14	-	-	10Hz
802.11n HT40	96.33	0.951	1.052	3kHz
802.11ac VHT40	96.35	0.955	1.047	3kHz
802.11ac VHT80	92.75	0.464	2.156	3kHz

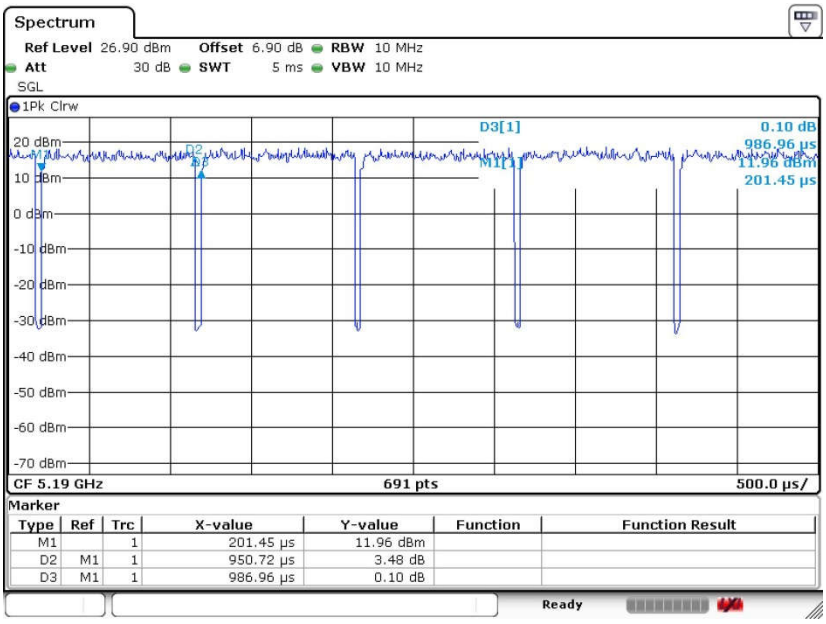
802.11a



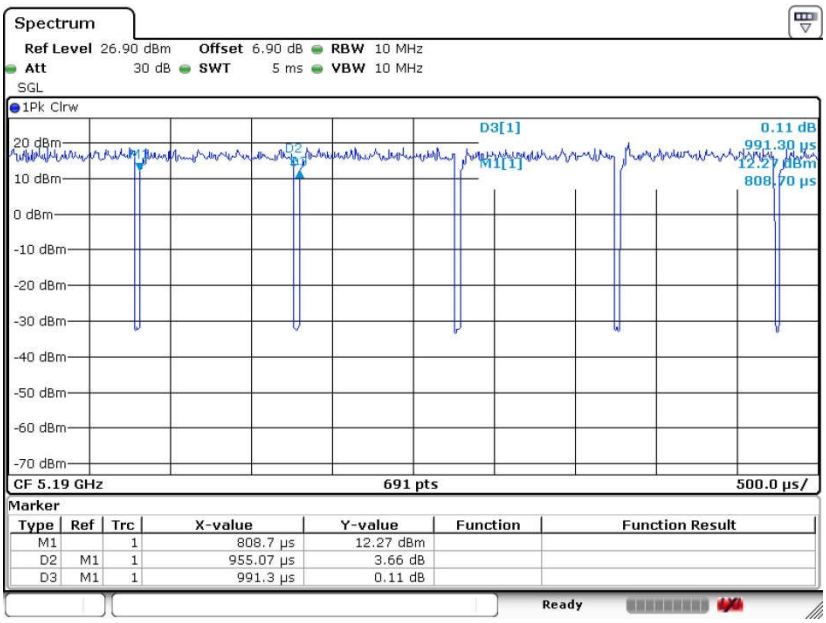
802.11HT20



802.11n HT40



802.11ac VHT40



802.11ac VHT80