

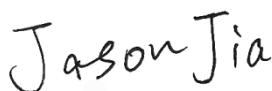


FCC RF Test Report

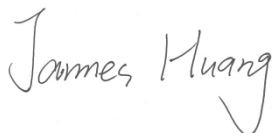
APPLICANT : Elo Touch Solutions, Inc.
EQUIPMENT : Handheld wireless data terminal
BRAND NAME : ELO or 
MODEL NAME : EMC0550C
FCC ID : RBWEMC0550C
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Oct. 19, 2020 and testing was completed on Nov. 24, 2020. 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.



Reviewed by: Jason Jia / Supervisor



Approved by: James Huang / Manager



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TABLE OF CONTENTS

REVISION HISTORY.....	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer.....	5
1.3 Product Feature of Equipment Under Test.....	5
1.4 Product Specification of Equipment Under Test.....	6
1.5 Modification of EUT	7
1.6 Testing Location	8
1.7 Test Software.....	8
1.8 Applicable Standards.....	8
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	9
2.1 Carrier Frequency and Channel	9
2.2 Test Mode.....	10
2.3 Connection Diagram of Test System.....	12
2.4 Support Unit used in test configuration and system	12
2.5 EUT Operation Test Setup	13
2.6 Measurement Results Explanation Example.....	13
3 TEST RESULT	14
3.1 26dB & 99% Occupied Bandwidth Measurement	14
3.2 Maximum Conducted Output Power Measurement	16
3.3 Power Spectral Density Measurement	18
3.4 Unwanted Emissions Measurement.....	21
3.5 AC Conducted Emission Measurement.....	26
3.6 Automatically Discontinue Transmission	28
3.7 Antenna Requirements	29
4 LIST OF MEASURING EQUIPMENT	30
5 UNCERTAINTY OF EVALUATION	31
APPENDIX A. CONDUCTED TEST RESULTS	
APPENDIX B. AC CONDUCTED EMISSION TEST RESULT	
APPENDIX C. RADIATED SPURIOUS EMISSION	
APPENDIX D. DUTY CYCLE PLOTS	
APPENDIX E. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR072709-01E	Rev. 01	Initial issue of report	Dec. 29, 2020

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 0.03 dB at 5457.200 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 7.80 dB at 0.679 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

Elo Touch Solutions, Inc.

670 N. McCarthy Blvd. Suite 100, Milpitas, CA 95035, United States

1.2 Manufacturer

Elo Touch Solutions, Inc.

670 N. McCarthy Blvd. Suite 100, Milpitas, CA 95035, United States

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Handheld wireless data terminal
Brand Name	ELO or 
Model Name	EMC0550C
FCC ID	RBWEMC0550C
EUT supports Radios application	WCDMA/LTE/NFC/GNSS WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT80+VHT80 Bluetooth BR/EDR/LE
IMEI Code	Conducted : N/A Conduction : 866834041596508 Radiation : 866834041613113
HW Version	A01
SW Version	5.0.120+p
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	<SISO Ant.1> <5180 MHz ~ 5240 MHz> 802.11a : 12.21 dBm / 0.0166 W <5260 MHz ~ 5320 MHz> 802.11a : 12.00 dBm / 0.0158 W <5500 MHz ~ 5700 MHz > 802.11a : 11.81 dBm / 0.0152 W <SISO Ant.2> <5180 MHz ~ 5240 MHz> 802.11a : 12.12 dBm / 0.0163 W <5260 MHz ~ 5320 MHz> 802.11a : 12.23 dBm / 0.0167 W <5500 MHz ~ 5700 MHz > 802.11a : 11.87 dBm / 0.0154 W <MIMO Ant.1+2> <5180 MHz ~ 5240 MHz> 802.11n HT20 : 14.71 dBm / 0.0296 W 802.11n HT40 : 13.78 dBm / 0.0239 W 802.11ac VHT20 : 13.29 dBm / 0.0213 W 802.11ac VHT40 : 12.94 dBm / 0.0197 W 802.11ac VHT80 : 12.94 dBm / 0.0197 W <5260 MHz ~ 5320 MHz> 802.11n HT20 : 14.73 dBm / 0.0297 W 802.11n HT40 : 13.78 dBm / 0.0239 W 802.11ac VHT20 : 13.05 dBm / 0.0202 W 802.11ac VHT40 : 12.91 dBm / 0.0195 W 802.11ac VHT80 : 12.88 dBm / 0.0194 W <5500 MHz ~ 5700 MHz > 802.11n HT20 : 14.98 dBm / 0.0315 W 802.11n HT40 : 13.98 dBm / 0.0250 W 802.11ac VHT20 : 13.08 dBm / 0.0203 W 802.11ac VHT40 : 13.09 dBm / 0.0204 W 802.11ac VHT80 : 13.14 dBm / 0.0206 W
99% Occupied Bandwidth	<SISO Ant.1> <5180 MHz ~ 5240 MHz> 802.11a : 17.58 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.48 MHz <5500 MHz ~ 5700 MHz > 802.11a : 17.48 MHz <SISO Ant.2> <5180 MHz ~ 5240 MHz> 802.11a : 17.43 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.58 MHz <5500 MHz ~ 5700 MHz > 802.11a : 17.48 MHz <MIMO Ant.1+2>

	<5180 MHz ~ 5240 MHz> 802.11n HT20 : 18.73 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.76 MHz <5260 MHz ~ 5320 MHz> 802.11n HT20 : 18.73 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.64 MHz <5500 MHz ~ 5700 MHz > 802.11n HT20 : 18.68 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 75.64 MHz											
Antenna Type / Gain	<5150 MHz ~ 5250 MHz> <Ant. 1> : PIFA Antenna with gain 0.61 dBi <Ant. 2> : PIFA Antenna with gain 4.25 dBi Tx Beamforming gain: 5.63dBi <5250 MHz ~ 5350 MHz> <Ant. 1> : PIFA Antenna with gain 0.78 dBi <Ant. 2> : PIFA Antenna with gain 4.51 dBi Tx Beamforming gain: 5.85dBi <5470 MHz ~ 5725 MHz> <Ant. 1> : PIFA Antenna with gain 1.34 dBi <Ant. 2> : PIFA Antenna with gain 4.78 dBi Tx Beamforming gain: 6.24dBi											
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)											
Antenna Function Description	<table><tr><td></td><td>Ant. 1</td><td>Ant. 2</td></tr><tr><td>802.11 a SISO</td><td>V</td><td>V</td></tr><tr><td>802.11 n/ac MIMO/Beamforming</td><td>V</td><td>V</td></tr></table>				Ant. 1	Ant. 2	802.11 a SISO	V	V	802.11 n/ac MIMO/Beamforming	V	V
	Ant. 1	Ant. 2										
802.11 a SISO	V	V										
802.11 n/ac MIMO/Beamforming	V	V										

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 have assessed only 802.11n HT20/ HT40 by referring to their maximum conducted power.
3. 802.11n/ac supports Tx beamforming mode, the power/EIRP of TX BF mode is lower than non-Tx BF mode, so only non-Tx BF test data show in the report
4. The EUT only supports SISO mode for 802.11ac VHT80 + VHT80 mode, the power lower than the Single carrier, so only the RSE were tested and show in the report.

1.5 Modification of EUT

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



1.6 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-KS 03CH05-KS TH01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24a1
2.	CO01-KS	AUDIX	E3	6.2009-8-24

1.8 Applicable Standards

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

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

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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

SISO Mode

Modulation	Data Rate
802.11a	6 Mbps

MIMO Mode

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0

Simultaneous Transmission

802.11ac VHT80 (CH42) + VHT80 (CH106)
802.11ac VHT80 (CH42) + VHT80 (CH155)
802.11ac VHT80 (CH42) + VHT80 (CH58)
802.11ac VHT80M(CH42) + VHT80M(CH106) + BLE + WCDMA 850
802.11g + 802.11a + WCDMA 850

Test Cases	
AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN Link(5G) + Adapter
Remark: For Radiated Test Cases, The tests were performance with Adapter.	



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

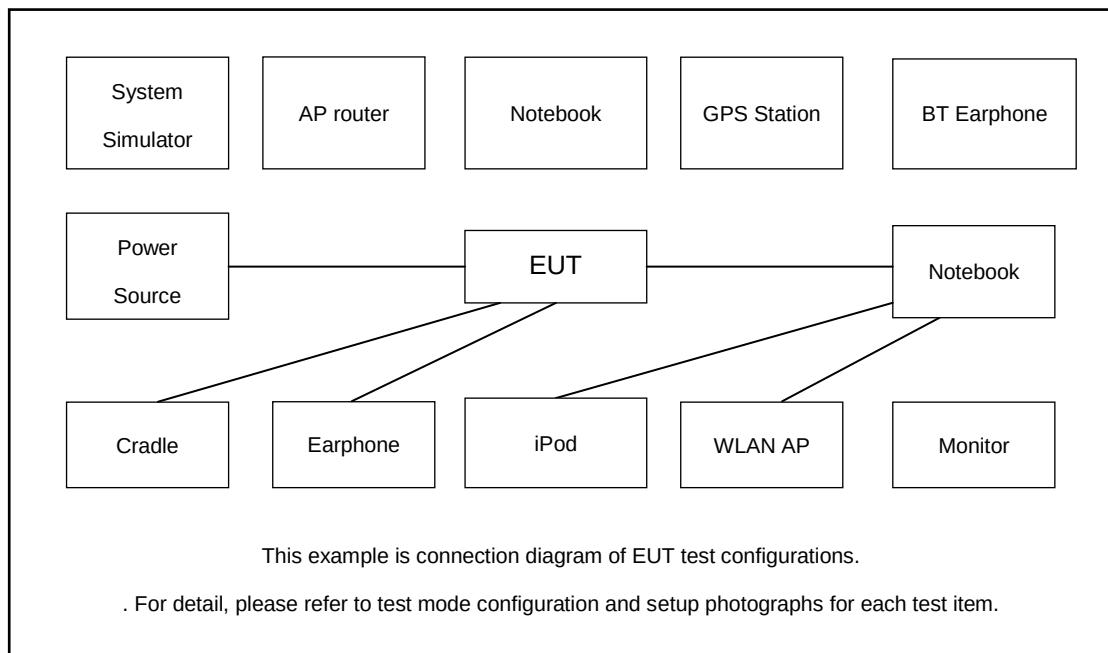
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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	-	-	106
M	Middle	42	58	-
H	High	-	-	-

Ch. #		Band I~IV
		802.11ac VHT80+ VHT80
Ch. #		42+106
		42+155
		42+58

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.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
3.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
4.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
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 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.

Following shows an offset computation example with cable loss 8 dB.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 8 \text{ (dB)}\end{aligned}$$

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.

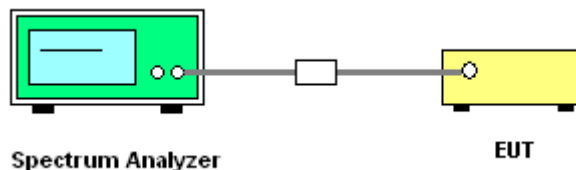
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

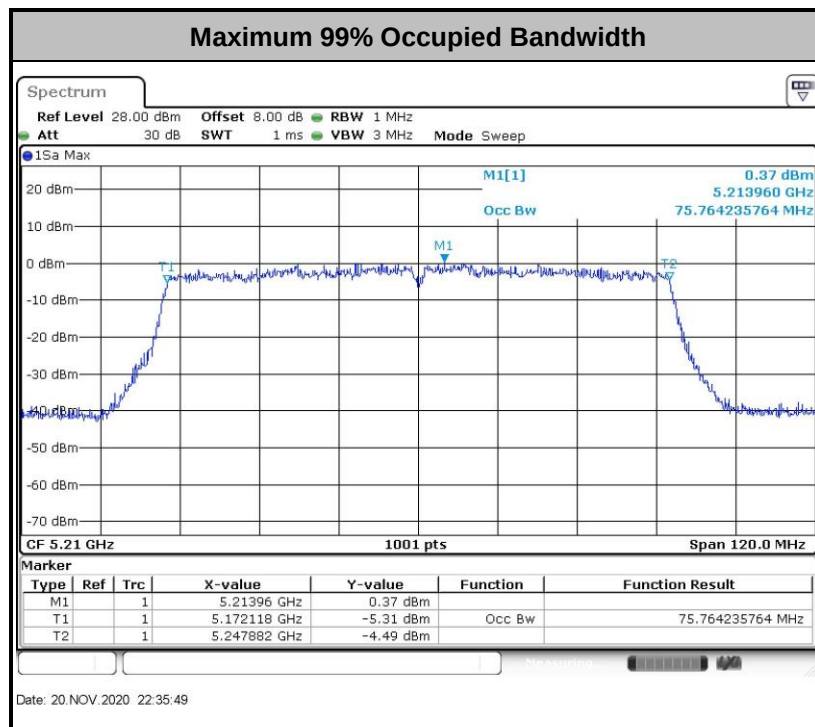
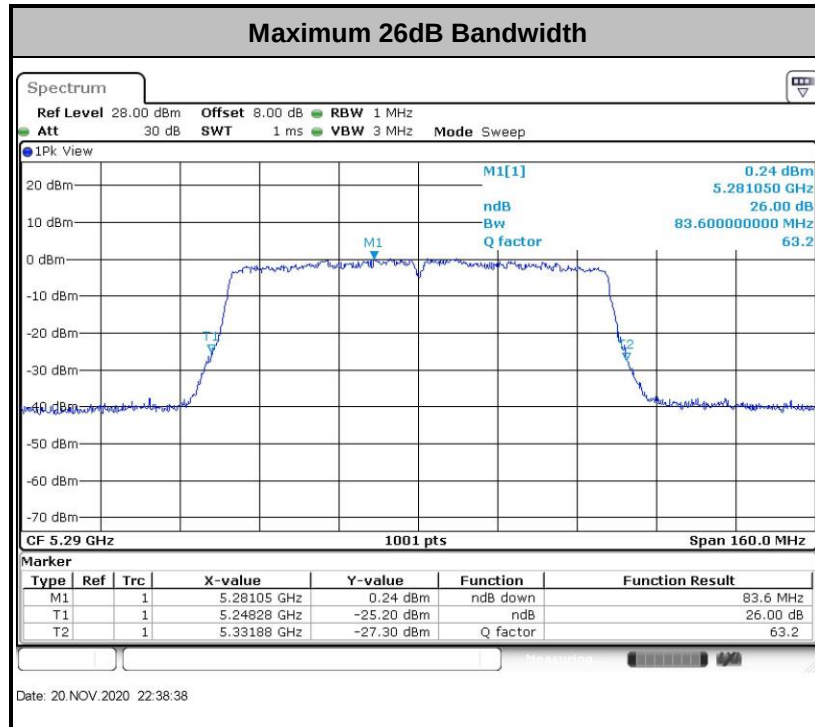
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB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

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

For the 5.47–5.6 GHz and 5.65–5.725 GHz band, the maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% 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.

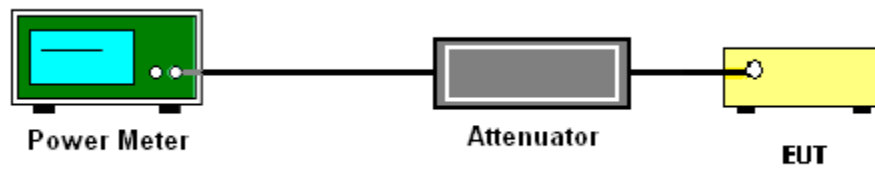
3.2.3 Test Procedures

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.

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

Method SA-2

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

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

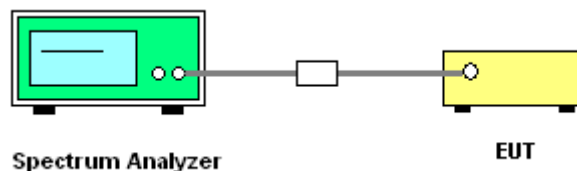
dB if the duty cycle is 25 percent.

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

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

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

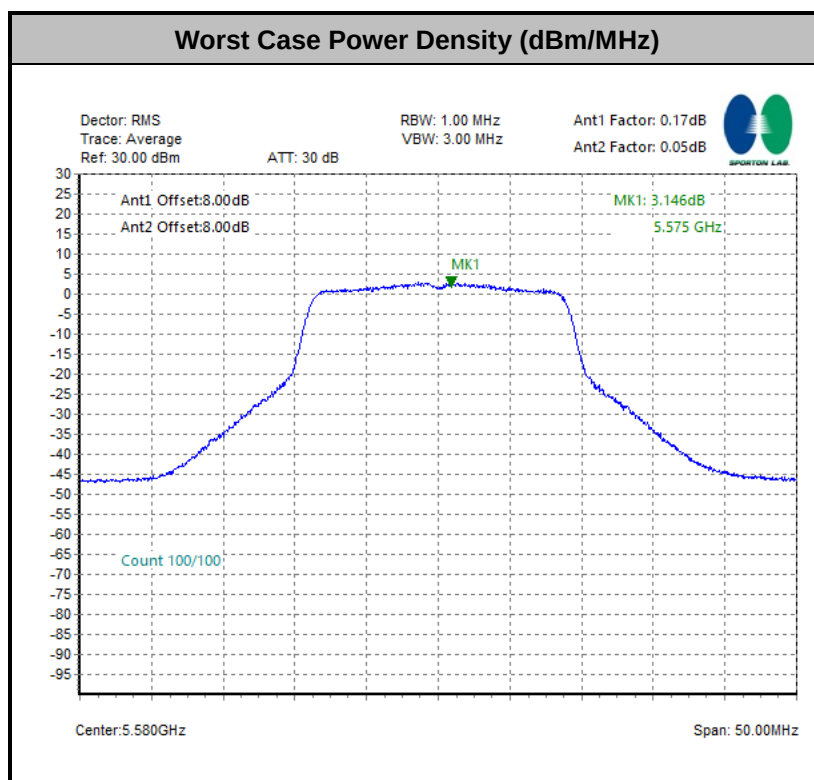
3.3.4 Test Setup





3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

For transmitters operating in the 5470-5600 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	68.3

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

$$\text{EIRP} = E_{\text{Meas}} + 20\log(d_{\text{Meas}}) - 104.8$$

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

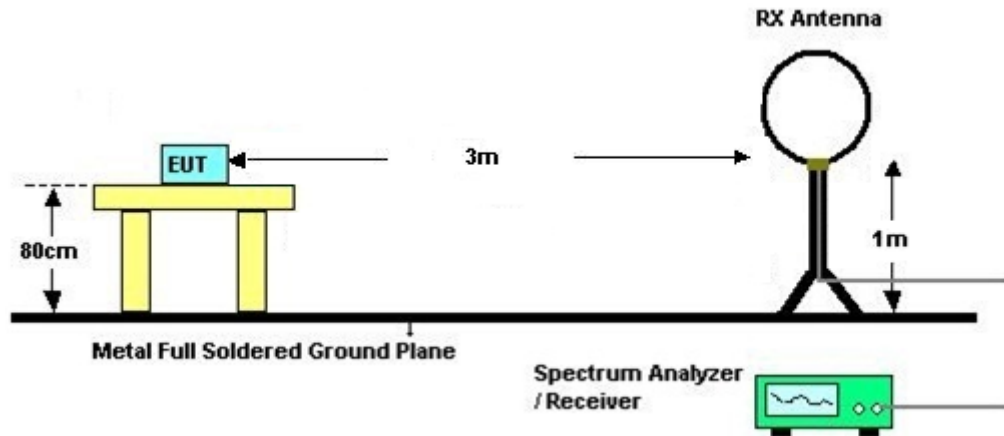
The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

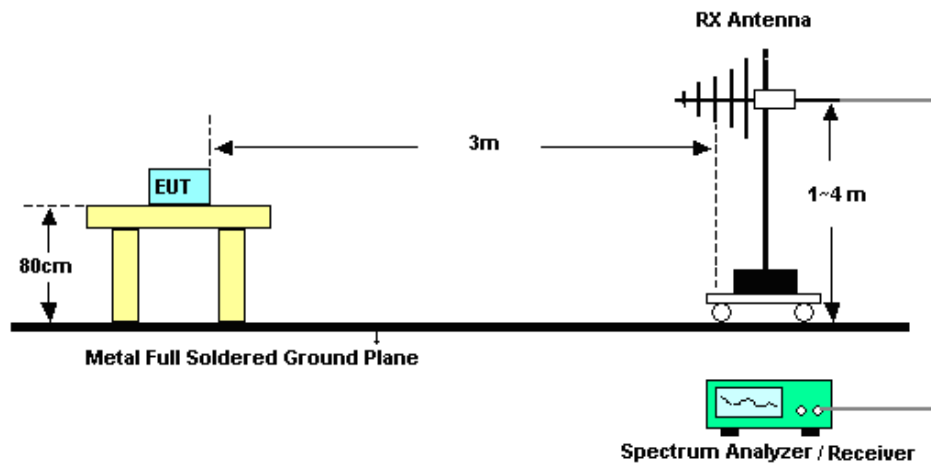
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak 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

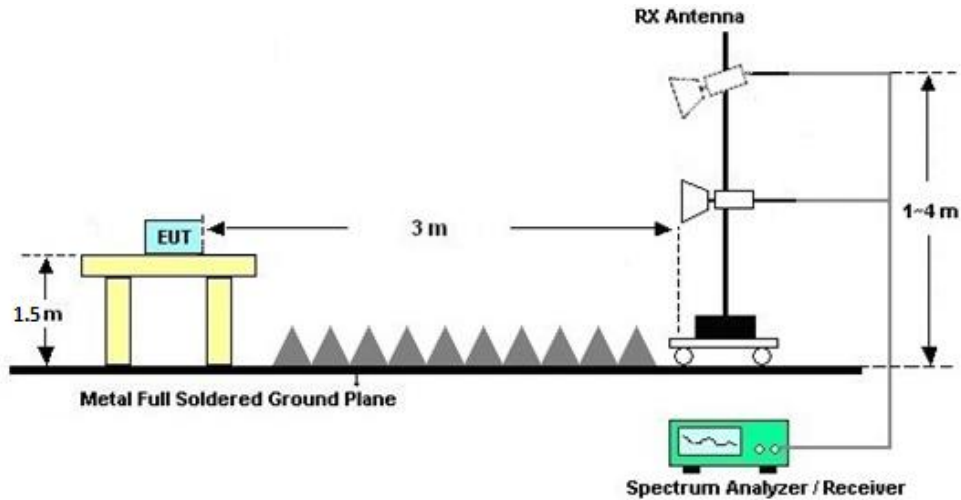
For radiated emissions below 30MHz



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 or 40GHz, whichever is lower)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

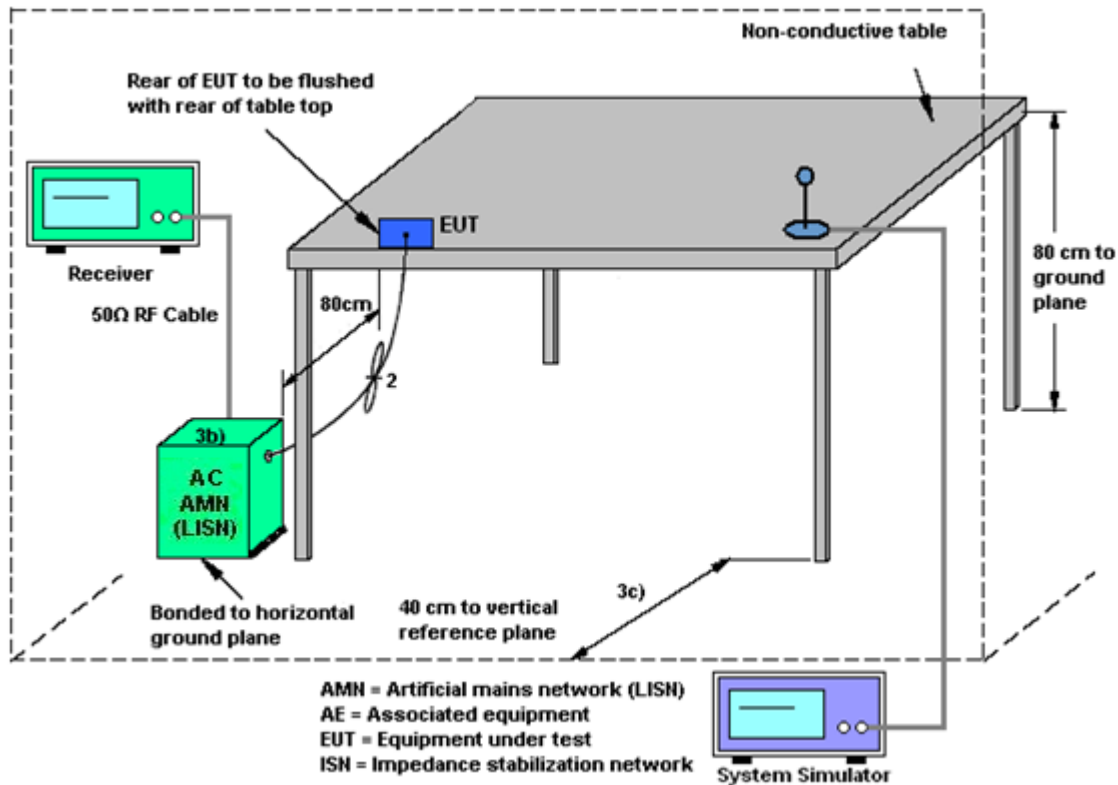
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

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

3.6.3 Test Result of Automatically Discontinue Transmission

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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

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

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

The directional gain "DG" is calculated as following table.

<CDD Modes>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
Band I	0.61	4.25	4.25	5.63	0.00	0.00
Band II	0.78	4.51	4.51	5.85	0.00	0.00
Band III	1.34	4.78	4.78	6.24	0.00	0.24

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

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 01, 2020	Nov. 20, 2020	Oct. 31, 2021	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 15, 2020	Nov. 20, 2020	Jan. 14, 2021	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 08, 2020	Nov. 20, 2020	Jan. 07, 2021	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz; Max 30dBm	Oct. 17, 2020	Nov. 24, 2020	Oct. 16, 2021	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G, MAX 30dB	Apr. 15, 2020	Nov. 24, 2020	Apr. 14, 2021	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Nov. 24, 2020	Oct. 31, 2021	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May 30, 2020	Nov. 24, 2020	May 29, 2021	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 26, 2020	Nov. 24, 2020	Apr. 25, 2021	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jun. 05, 2020	Nov. 24, 2020	Jun. 04, 2021	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Apr. 14, 2020	Nov. 24, 2020	Apr. 13, 2021	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 08, 2020	Nov. 24, 2020	Jan. 07, 2021	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	1Ghz-18Ghz	Oct. 17, 2020	Nov. 24, 2020	Oct. 16, 2021	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 17, 2020	Nov. 24, 2020	Oct. 16, 2021	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 24, 2020	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 24, 2020	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 24, 2020	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 14, 2020	Nov. 05, 2020	Apr. 13, 2021	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2020	Nov. 05, 2020	Oct. 16, 2021	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Oct. 17, 2020	Nov. 05, 2020	Oct. 16, 2021	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2020	Nov. 05, 2020	Oct. 16, 2021	Conduction (CO01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.9dB
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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% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Appendix A. Conducted Test Results

Test Engineer:	Albert Shi	Temperature:	21~25	°C
Test Date:	2020/11/20	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	17.43	17.38	23.13	23.03	-	-	22.41	22.40	
11a	6Mbps	1	44	5220	17.43	17.43	23.73	22.63	-	-	22.41	22.41	
11a	6Mbps	1	48	5240	17.58	17.43	24.23	24.38	-	-	22.45	22.41	
HT20	MCS0	2	36	5180	18.63	18.63	24.38	24.38	-	-	22.70		
HT20	MCS0	2	44	5220	18.63	18.73	25.28	24.38	-	-	22.70		
HT20	MCS0	2	48	5240	18.58	18.58	24.33	24.38	-	-	22.69		
HT40	MCS0	2	38	5190	36.56	36.56	41.90	41.90	-	-	23.01		
HT40	MCS0	2	46	5230	36.56	36.56	41.63	41.45	-	-	23.01		
VHT80	MCS0	2	42	5210	75.76	75.76	83.12	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
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	0.08	0.08	12.21	12.02		24.00	24.00	0.61	4.25	Pass
11a	6Mbps	1	44	5220	0.08	0.08	11.77	12.12		24.00	24.00	0.61	4.25	Pass
11a	6Mbps	1	48	5240	0.08	0.08	11.79	11.97		24.00	24.00	0.61	4.25	Pass
HT20	MCS0	2	36	5180	0.17	0.05	11.79	11.61	14.71	24.00		4.25		Pass
HT20	MCS0	2	44	5220	0.17	0.05	11.62	11.72	14.68	24.00		4.25		Pass
HT20	MCS0	2	48	5240	0.17	0.05	11.73	11.51	14.63	24.00		4.25		Pass
HT40	MCS0	2	38	5190	0.16	0.16	10.91	10.61	13.78	24.00		4.25		Pass
HT40	MCS0	2	46	5230	0.16	0.16	10.85	10.51	13.70	24.00		4.25		Pass
VHT20	MCS0	2	36	5180	0.10	0.06	10.23	10.32	13.29	24.00		4.25		Pass
VHT20	MCS0	2	44	5220	0.10	0.06	10.14	10.07	13.12	24.00		4.25		Pass
VHT20	MCS0	2	48	5240	0.10	0.06	10.15	10.23	13.20	24.00		4.25		Pass
VHT40	MCS0	2	38	5190	0.16	0.16	10.03	9.82	12.94	24.00		4.25		Pass
VHT40	MCS0	2	46	5230	0.16	0.16	9.93	9.78	12.87	24.00		4.25		Pass
VHT80	MCS0	2	42	5210	0.30	0.30	10.07	9.78	12.94	24.00		4.25		Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	0.08	0.08	0.14	0.28		11.00	11.00	0.61	4.25	Pass
11a	6Mbps	1	44	5220	0.08	0.08	-0.57	0.11		11.00	11.00	0.61	4.25	Pass
11a	6Mbps	1	48	5240	0.08	0.08	-0.40	-0.39		11.00	11.00	0.61	4.25	Pass
HT20	MCS0	2	36	5180	0.17	0.05			2.22	11.00	5.63			Pass
HT20	MCS0	2	44	5220	0.17	0.05			2.00	11.00	5.63			Pass
HT20	MCS0	2	48	5240	0.17	0.05			2.71	11.00	5.63			Pass
HT40	MCS0	2	38	5190	0.16	0.16			-1.63	11.00	5.63			Pass
HT40	MCS0	2	46	5230	0.16	0.16			-1.67	11.00	5.63			Pass
VHT80	MCS0	2	42	5210	0.30	0.30			-5.17	11.00	5.63			Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	52	5260	17.48	17.53	24.38	23.63	23.43	23.44	29.43	29.44	23.98	23.98	
11a	6Mbps	1	60	5300	17.48	17.58	23.83	24.28	23.43	23.45	29.43	29.45	23.98	23.98	
11a	6Mbps	1	64	5320	17.43	17.43	23.93	23.83	23.41	23.41	29.41	29.41	23.98	23.98	
HT20	MCS0	2	52	5260	18.68	18.53	24.88	25.28	23.68		29.68		23.98		
HT20	MCS0	2	60	5300	18.58	18.53	24.78	24.68	23.68		29.68		23.98		
HT20	MCS0	2	64	5320	18.63	18.73	24.68	24.98	23.70		29.70		23.98		
HT40	MCS0	2	54	5270	36.46	36.46	41.63	41.90	23.98		30.00		23.98		
HT40	MCS0	2	62	5310	36.46	36.56	41.81	41.63	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.64	75.64	83.60	83.12	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	0.08	0.08	12.00	12.23		23.98	23.98	0.78	4.51	26.99	Pass
11a	6Mbps	1	60	5300	0.08	0.08	11.86	12.14		23.98	23.98	0.78	4.51	26.99	Pass
11a	6Mbps	1	64	5320	0.08	0.08	11.96	12.19		23.98	23.98	0.78	4.51	26.99	Pass
HT20	MCS0	2	52	5260	0.17	0.05	11.72	11.72	14.73	23.98		4.51		26.99	Pass
HT20	MCS0	2	60	5300	0.17	0.05	11.80	11.64	14.73	23.98		4.51		26.99	Pass
HT20	MCS0	2	64	5320	0.17	0.05	11.66	11.72	14.70	23.98		4.51		26.99	Pass
HT40	MCS0	2	54	5270	0.16	0.16	10.80	10.74	13.78	23.98		4.51		26.99	Pass
HT40	MCS0	2	62	5310	0.16	0.16	10.71	10.50	13.62	23.98		4.51		26.99	Pass
VHT20	MCS0	2	52	5260	0.10	0.06	10.01	10.07	13.05	23.98		4.51		26.99	Pass
VHT20	MCS0	2	60	5300	0.10	0.06	9.71	10.22	12.98	23.98		4.51		26.99	Pass
VHT20	MCS0	2	64	5320	0.10	0.06	9.90	10.06	12.99	23.98		4.51		26.99	Pass
VHT40	MCS0	2	54	5270	0.16	0.16	9.88	9.92	12.91	23.98		4.51		26.99	Pass
VHT40	MCS0	2	62	5310	0.16	0.16	9.95	9.83	12.90	23.98		4.51		26.99	Pass
VHT80	MCS0	2	58	5290	0.30	0.30	10.14	9.58	12.88	23.98		4.51		26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	52	5260	0.08	0.08	-0.10	0.03		11.00	11.00	0.78	4.51	Pass
11a	6Mbps	1	60	5300	0.08	0.08	-0.11	0.38		11.00	11.00	0.78	4.51	Pass
11a	6Mbps	1	64	5320	0.08	0.08	-0.29	-0.14		11.00	11.00	0.78	4.51	Pass
HT20	MCS0	2	52	5260	0.17	0.05			2.36	11.00		5.85		Pass
HT20	MCS0	2	60	5300	0.17	0.05			2.80	11.00		5.85		Pass
HT20	MCS0	2	64	5320	0.17	0.05			2.39	11.00		5.85		Pass
HT40	MCS0	2	54	5270	0.16	0.16			-1.53	11.00		5.85		Pass
HT40	MCS0	2	62	5310	0.16	0.16			-1.53	11.00		5.85		Pass
VHT80	MCS0	2	58	5290	0.30	0.30			-5.19	11.00		5.85		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	100	5500	17.33	17.43	23.73	24.13	23.39	23.41	29.39	29.41	23.98	23.98	
11a	6Mbps	1	116	5580	17.48	17.48	24.33	24.18	23.43	23.43	29.43	29.43	23.98	23.98	
11a	6Mbps	1	140	5700	17.43	17.48	24.23	23.83	23.41	23.43	29.41	29.43	23.98	23.98	
HT20	MCS0	2	100	5500	18.58	18.68	24.98	25.38	23.69		29.69		23.98		
HT20	MCS0	2	116	5580	18.53	18.63	24.63	24.48	23.68		29.68		23.98		
HT20	MCS0	2	140	5700	18.58	18.63	24.58	24.83	23.69		29.69		23.98		
HT40	MCS0	2	102	5510	36.46	36.46	41.72	41.72	23.98		30.00		23.98		
HT40	MCS0	2	110	5550	36.56	36.56	41.72	41.54	23.98		30.00		23.98		
HT40	MCS0	2	134	5670	36.46	36.46	41.72	41.54	23.98		30.00		23.98		
VHT80	MCS0	2	106	5530	75.52	75.52	82.48	82.48	23.98		30.00		23.98		
VHT80	MCS0	2	122	5610	75.64	75.64	82.48	83.28	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC Band III															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.08	0.08	11.81	11.70		23.98	23.98	1.34	4.78	26.99	Pass
11a	6Mbps	1	116	5580	0.08	0.08	11.69	11.87		23.98	23.98	1.34	4.78	26.99	Pass
11a	6Mbps	1	140	5700	0.08	0.08	11.67	11.77		23.98	23.98	1.34	4.78	26.99	Pass
HT20	MCS0	2	100	5500	0.17	0.05	11.97	11.98	14.98	23.98		4.78		26.99	Pass
HT20	MCS0	2	116	5580	0.17	0.05	12.11	11.71	14.92	23.98		4.78		26.99	Pass
HT20	MCS0	2	140	5700	0.17	0.05	11.97	11.94	14.96	23.98		4.78		26.99	Pass
HT40	MCS0	2	102	5510	0.16	0.16	10.93	10.64	13.80	23.98		4.78		26.99	Pass
HT40	MCS0	2	110	5550	0.16	0.16	10.82	10.92	13.88	23.98		4.78		26.99	Pass
HT40	MCS0	2	134	5670	0.16	0.16	10.73	11.19	13.98	23.98		4.78		26.99	Pass
VHT20	MCS0	2	100	5500	0.10	0.06	9.60	10.08	12.86	23.98		4.78		26.99	Pass
VHT20	MCS0	2	116	5580	0.10	0.06	9.95	10.18	13.08	23.98		4.78		26.99	Pass
VHT20	MCS0	2	140	5700	0.10	0.06	10.01	10.08	13.06	23.98		4.78		26.99	Pass
VHT40	MCS0	2	102	5510	0.16	0.16	9.81	9.75	12.79	23.98		4.78		26.99	Pass
VHT40	MCS0	2	110	5550	0.16	0.16	9.94	9.90	12.93	23.98		4.78		26.99	Pass
VHT40	MCS0	2	134	5670	0.16	0.16	9.88	10.27	13.09	23.98		4.78		26.99	Pass
VHT80	MCS0	2	106	5530	0.30	0.30	10.09	10.17	13.14	23.98		4.78		26.99	Pass
VHT80	MCS0	2	122	5610	0.30	0.30	9.69	10.13	12.93	23.98		4.78		26.99	Pass

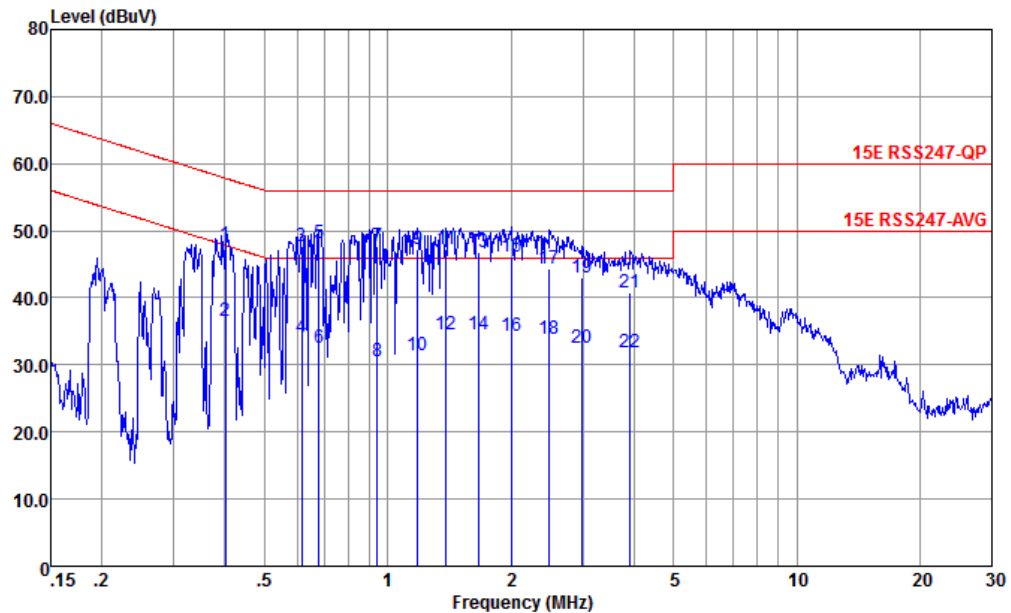
TEST RESULTS DATA
Power Spectral Density

Band III														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	100	5500	0.08	0.08	-0.06	0.16		11.00	11.00	1.34	4.78	Pass
11a	6Mbps	1	116	5580	0.08	0.08	-0.33	-0.44		11.00	11.00	1.34	4.78	Pass
11a	6Mbps	1	140	5700	0.08	0.08	-0.10	-0.34		11.00	11.00	1.34	4.78	Pass
HT20	MCS0	2	100	5500	0.17	0.05			2.70	10.76	6.24			Pass
HT20	MCS0	2	116	5580	0.17	0.05			3.15	10.76	6.24			Pass
HT20	MCS0	2	140	5700	0.17	0.05			2.50	10.76	6.24			Pass
HT40	MCS0	2	102	5510	0.16	0.16			-1.67	10.76	6.24			Pass
HT40	MCS0	2	110	5550	0.16	0.16			-1.61	10.76	6.24			Pass
HT40	MCS0	2	134	5670	0.16	0.16			-1.72	10.76	6.24			Pass
VHT80	MCS0	2	106	5530	0.30	0.30			-5.04	10.76	6.24			Pass
VHT80	MCS0	2	122	5610	0.30	0.30			-4.84	10.76	6.24			Pass



Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos Zhang	Temperature :	25.3~25.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



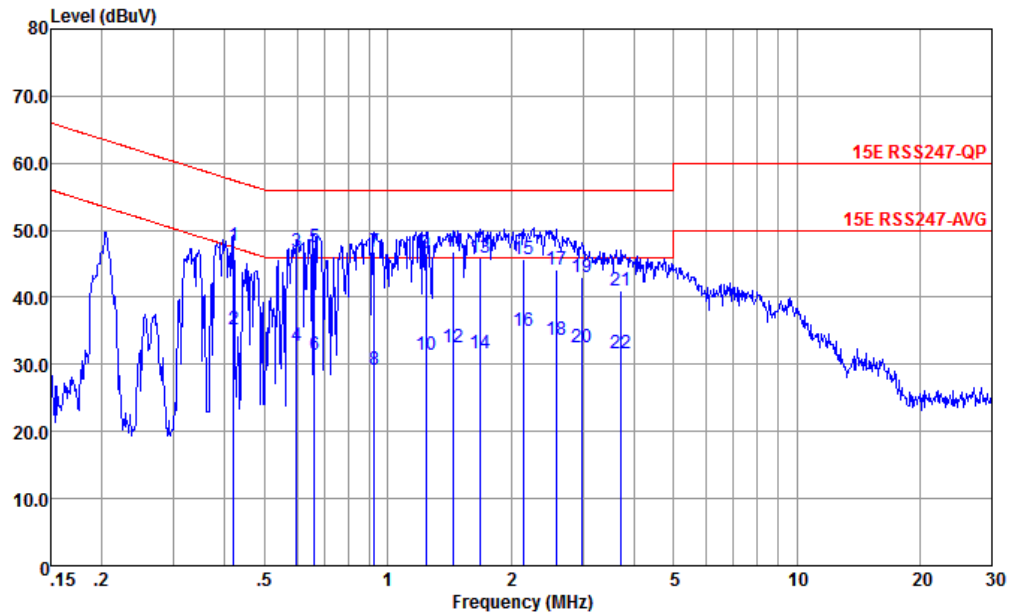
Site : CO01-KS

Condition : 15E RSS247-QP TWO-LISN-CN02-L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.402	48.01	-9.80	57.81	28.09	9.65	10.27	QP
2	0.402	36.51	-21.30	57.81	16.59	9.65	10.27	Average
3	0.617	47.79	-8.21	56.00	27.89	9.66	10.24	QP
4	0.617	34.19	-21.81	56.00	14.29	9.66	10.24	Average
5 *	0.679	48.20	-7.80	56.00	28.30	9.66	10.24	QP
6	0.679	32.50	-23.50	56.00	12.60	9.66	10.24	Average
7	0.943	47.74	-8.26	56.00	27.80	9.70	10.24	QP
8	0.943	30.54	-25.46	56.00	10.60	9.70	10.24	Average
9	1.184	47.20	-8.80	56.00	27.20	9.77	10.23	QP
10	1.184	31.50	-24.50	56.00	11.50	9.77	10.23	Average
11	1.388	47.35	-8.65	56.00	27.30	9.82	10.23	QP
12	1.388	34.55	-21.45	56.00	14.50	9.82	10.23	Average
13	1.662	46.70	-9.30	56.00	26.60	9.87	10.23	QP
14	1.662	34.60	-21.40	56.00	14.50	9.87	10.23	Average
15	2.012	46.07	-9.93	56.00	25.90	9.94	10.23	QP
16	2.012	34.37	-21.63	56.00	14.20	9.94	10.23	Average
17	2.487	44.44	-11.56	56.00	24.21	10.00	10.23	QP
18	2.487	33.87	-22.13	56.00	13.64	10.00	10.23	Average
19	2.993	42.90	-13.10	56.00	22.60	10.06	10.24	QP
20	2.993	32.50	-23.50	56.00	12.20	10.06	10.24	Average
21	3.922	40.71	-15.29	56.00	20.30	10.16	10.25	QP
22	3.922	31.91	-24.09	56.00	11.50	10.16	10.25	Average



Test Engineer :	Amos Zhang	Temperature :	25.3~25.2℃
		Relative Humidity :	38~40%
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 : 15E RSS247-QP TWO-LISN-CN02-N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.419	47.61	-9.85	57.46	27.60	9.75	10.26	QP
2	0.419	35.31	-22.15	57.46	15.30	9.75	10.26	Average
3	0.598	46.76	-9.24	56.00	26.79	9.73	10.24	QP
4	0.598	32.76	-23.24	56.00	12.79	9.73	10.24	Average
5 *	0.661	47.46	-8.54	56.00	27.49	9.73	10.24	QP
6	0.661	31.46	-24.54	56.00	11.49	9.73	10.24	Average
7	0.928	46.85	-9.15	56.00	26.90	9.71	10.24	QP
8	0.928	29.15	-26.85	56.00	9.20	9.71	10.24	Average
9	1.242	46.61	-9.39	56.00	26.60	9.78	10.23	QP
10	1.242	31.51	-24.49	56.00	11.50	9.78	10.23	Average
11	1.449	46.85	-9.15	56.00	26.80	9.82	10.23	QP
12	1.449	32.55	-23.45	56.00	12.50	9.82	10.23	Average
13	1.680	46.00	-10.00	56.00	25.90	9.87	10.23	QP
14	1.680	31.70	-24.30	56.00	11.60	9.87	10.23	Average
15	2.155	45.78	-10.22	56.00	25.60	9.95	10.23	QP
16	2.155	34.98	-21.02	56.00	14.80	9.95	10.23	Average
17	2.581	44.16	-11.84	56.00	23.90	10.02	10.24	QP
18	2.581	33.56	-22.44	56.00	13.30	10.02	10.24	Average
19	2.993	43.11	-12.89	56.00	22.80	10.07	10.24	QP
20	2.993	32.61	-23.39	56.00	12.30	10.07	10.24	Average
21	3.700	41.00	-15.00	56.00	20.60	10.15	10.25	QP
22	3.700	31.60	-24.40	56.00	11.20	10.15	10.25	Average

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802.11a Ant 1 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier 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		5147.2	57.53	-16.47	74	42.34	34.62	11.18	30.61	100	270	P	H
		5101.76	46.77	-7.23	54	31.69	34.55	11.13	30.6	100	270	A	H
	*	5182	95.82	-	-	80.56	34.67	11.21	30.62	100	270	P	H
		5182	88.24	-	-	72.98	34.67	11.21	30.62	100	270	A	H
		5131.36	56.52	-17.48	74	41.36	34.6	11.16	30.6	156	217	P	V
		5117.44	46.77	-7.23	54	31.64	34.58	11.15	30.6	156	217	A	V
	*	5176	95.25	-	-	79.99	34.67	11.21	30.62	156	217	P	V
		5176	88	-	-	72.74	34.67	11.21	30.62	156	217	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 Ant 1 (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	43.41	-24.89	68.3	50.37	37.59	16.13	60.68	100	360	P	H
		10360	42.99	-25.31	68.3	49.95	37.59	16.13	60.68	100	360	P	V
802.11a CH 44 5220MHz		10440	43.97	-24.33	68.3	50.79	37.65	16.19	60.66	100	360	P	H
		10440	43.77	-24.53	68.3	50.59	37.65	16.19	60.66	100	360	P	V
802.11a CH 48 5240MHz		10480	43.53	-24.77	68.3	50.25	37.69	16.24	60.65	100	360	P	H
		10480	44.13	-24.17	68.3	50.85	37.69	16.24	60.65	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11a Ant 2 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		5148.64	56.71	-17.29	74	41.52	34.62	11.18	30.61	113	345	P	H
		5148.96	46.62	-7.38	54	31.43	34.62	11.18	30.61	113	345	A	H
	*	5176	102	-	-	86.74	34.67	11.21	30.62	113	345	P	H
		5176	94.95	-	-	79.69	34.67	11.21	30.62	113	345	A	H
		5100.8	56.39	-17.61	74	41.31	34.55	11.13	30.6	101	333	P	V
		5112.16	46.37	-7.63	54	31.24	34.58	11.15	30.6	101	333	A	V
	*	5182	97.62	-	-	82.36	34.67	11.21	30.62	101	333	P	V
		5182	90.3	-	-	75.04	34.67	11.21	30.62	101	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11a Ant 2 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10358.36	42.96	-25.34	68.3	49.95	37.58	16.11	60.68	300	0	P	H
		10358.36	44.09	-24.21	68.3	51.08	37.58	16.11	60.68	300	0	P	V
802.11a CH 44 5220MHz		10440	43.78	-24.52	68.3	50.6	37.65	16.19	60.66	300	0	P	H
		10440	43.85	-24.45	68.3	50.67	37.65	16.19	60.66	300	0	P	V
802.11a CH 48 5240MHz		10480	44.27	-24.03	68.3	50.99	37.69	16.24	60.65	100	360	P	H
		10480	43.99	-24.31	68.3	50.71	37.69	16.24	60.65	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 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5115.52	56.6	-17.4	74	41.47	34.58	11.15	30.6	100	360	P	H
		5149.96	47.2	-6.8	54	32.01	34.62	11.18	30.61	100	360	A	H
	*	5176	101.96	-	-	86.7	34.67	11.21	30.62	100	360	P	H
		5176	94.33	-	-	79.07	34.67	11.21	30.62	100	360	A	H
		5111.04	56.78	-17.22	74	41.65	34.58	11.15	30.6	105	340	P	V
		5128.16	47.13	-6.87	54	31.97	34.6	11.16	30.6	105	340	A	V
	*	5176	99.82	-	-	84.56	34.67	11.21	30.62	105	340	P	V
		5176	92.33	-	-	77.07	34.67	11.21	30.62	105	340	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10360	43.6	-24.7	68.3	50.56	37.59	16.13	60.68	300	0	P	H
		10360	43.75	-24.55	68.3	50.71	37.59	16.13	60.68	300	0	P	V
802.11n HT20 CH 44 5220MHz		10438.44	43.23	-25.07	68.3	50.05	37.65	16.19	60.66	100	360	P	H
		10440	43.91	-24.39	68.3	50.73	37.65	16.19	60.66	100	360	P	V
802.11n HT20 CH 48 5240MHz		10478.47	43.98	-24.32	68.3	50.7	37.69	16.24	60.65	100	360	P	H
		10478.47	43.33	-24.97	68.3	50.05	37.69	16.24	60.65	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 HT40 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148	60.8	-13.2	74	45.61	34.62	11.18	30.61	105	337	P	H
		5150	52.92	-1.08	54	37.73	34.62	11.18	30.61	105	337	A	H
	*	5188	99.94	-	-	84.68	34.67	11.21	30.62	105	337	P	H
		5188	92.72	-	-	77.46	34.67	11.21	30.62	105	337	A	H
		5377.86	55.12	-18.88	74	39.7	34.7	11.41	30.69	105	337	P	H
		5397.3	45.81	-8.19	54	30.37	34.7	11.43	30.69	105	337	A	H
		5146.56	59	-15	74	43.81	34.62	11.18	30.61	100	329	P	V
		5149.6	49.82	-4.18	54	34.63	34.62	11.18	30.61	100	329	A	V
	*	5200	97.62	-	-	82.32	34.7	11.23	30.63	100	329	P	V
		5200	90.51	-	-	75.21	34.7	11.23	30.63	100	329	A	V
		5392.62	55.21	-18.79	74	39.79	34.7	11.41	30.69	100	329	P	V
		5369.4	46.13	-7.87	54	30.72	34.7	11.4	30.69	100	329	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10378.38	44.41	-23.89	68.3	51.32	37.61	16.15	60.67	300	0	P	H
		10378.38	43.74	-24.56	68.3	50.65	37.61	16.15	60.67	300	0	P	V
802.11n HT40 CH 46 5230MHz		10458.46	42.69	-25.61	68.3	49.48	37.66	16.21	60.66	100	360	P	H
		10458.46	43.87	-24.43	68.3	50.66	37.66	16.21	60.66	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 802.11ac VHT80 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5142.08	61.41	-12.59	74	46.22	34.62	11.18	30.61	125	360	P	H
		5138.4	52.77	-1.23	54	37.62	34.6	11.16	30.61	125	360	A	H
	*	5218	96.4	-	-	81.08	34.7	11.25	30.63	125	360	P	H
		5218	89.93	-	-	74.61	34.7	11.25	30.63	125	360	A	H
		5378.4	55	-19	74	39.58	34.7	11.41	30.69	125	360	P	H
		5375.52	46.34	-7.66	54	30.93	34.7	11.4	30.69	125	360	A	H
		5134.56	58.86	-15.14	74	43.71	34.6	11.16	30.61	109	333	P	V
		5139.68	50.25	-3.75	54	35.06	34.62	11.18	30.61	109	333	A	V
	*	5218	93.43	-	-	78.11	34.7	11.25	30.63	109	333	P	V
		5218	86.53	-	-	71.21	34.7	11.25	30.63	109	333	A	V
		5383.44	55.9	-18.1	74	40.48	34.7	11.41	30.69	109	333	P	V
		5386.32	46.43	-7.57	54	31.01	34.7	11.41	30.69	109	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT80 Ant 1+2 (Harmonic @ 3m)**

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80		10418.42	44.44	-23.86	68.3	51.3	37.63	16.18	60.67	300	0	P	H
CH 42 5210MHz		10418.42	43.25	-25.05	68.3	50.11	37.63	16.18	60.67	300	0	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 Ant 1 (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 64 5320MHz		5394	55.24	-18.76	74	39.82	34.7	11.41	30.69	100	278	P	H
		5357.2	45.39	-8.61	54	29.99	34.7	11.38	30.68	100	278	A	H
	*	5320	96.52	-	-	81.14	34.7	11.35	30.67	100	278	P	H
		5320	88.88	-	-	73.5	34.7	11.35	30.67	100	278	A	H
		5352	55.81	-18.19	74	40.41	34.7	11.38	30.68	100	295	P	V
		5394.2	45.31	-8.69	54	29.89	34.7	11.41	30.69	100	295	A	V
	*	5320	95.97	-	-	80.59	34.7	11.35	30.67	100	295	P	V
		5320	89.1	-	-	73.72	34.7	11.35	30.67	100	295	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 Ant 1 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	44.14	-24.16	68.3	50.81	37.71	16.27	60.65	100	360	P	H
		10520	44.87	-23.43	68.3	51.54	37.71	16.27	60.65	100	360	P	V
802.11a CH 60 5300MHz		10600	43.85	-30.15	74	50.39	37.74	16.35	60.63	100	360	P	H
		10600	43.85	-30.15	74	50.39	37.74	16.35	60.63	100	360	P	V
802.11a CH 64 5320MHz		10640	43.83	-30.17	74	50.3	37.76	16.39	60.62	300	0	P	H
		10640	44.74	-29.26	74	51.21	37.76	16.39	60.62	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11a Ant 2 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 64 5320MHz		5354	55.09	-18.91	74	39.69	34.7	11.38	30.68	120	13	P	H
		5350.1	45.31	-8.69	54	29.91	34.7	11.38	30.68	120	13	A	H
	*	5320	102.25	-	-	86.87	34.7	11.35	30.67	120	13	P	H
		5320	94.77	-	-	79.39	34.7	11.35	30.67	120	13	A	H
		5370.3	55.34	-18.66	74	39.93	34.7	11.4	30.69	113	340	P	V
		5352.1	44.74	-9.26	54	29.34	34.7	11.38	30.68	113	340	A	V
	*	5320	96.74	-	-	81.36	34.7	11.35	30.67	113	340	P	V
		5320	89.41	-	-	74.03	34.7	11.35	30.67	113	340	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 Ant 2 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	44.76	-23.54	68.3	51.43	37.71	16.27	60.65	100	360	P	H
		10520	44.85	-23.45	68.3	51.52	37.71	16.27	60.65	100	360	P	V
802.11a CH 60 5300MHz		10600	44.38	-29.62	74	50.92	37.74	16.35	60.63	300	0	P	H
		10600	44.35	-29.65	74	50.89	37.74	16.35	60.63	300	0	P	V
802.11a CH 64 5320MHz		10640	43.21	-30.79	74	49.68	37.76	16.39	60.62	100	360	P	H
		10640	43.37	-30.63	74	49.84	37.76	16.39	60.62	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 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 64 5320MHz		5384.4	56.17	-17.83	74	40.75	34.7	11.41	30.69	101	10	P	H
		5350.2	46.02	-7.98	54	30.62	34.7	11.38	30.68	101	10	A	H
	*	5320	103.33	-	-	87.95	34.7	11.35	30.67	101	10	P	H
		5320	96.64	-	-	81.26	34.7	11.35	30.67	101	10	A	H
		5358.7	55.86	-18.14	74	40.46	34.7	11.38	30.68	296	98	P	V
		5350	45.24	-8.76	54	29.84	34.7	11.38	30.68	296	98	A	V
	*	5326	99.54	-	-	84.16	34.7	11.35	30.67	296	98	P	V
		5326	92.19	-	-	76.81	34.7	11.35	30.67	296	98	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20		10520	43.05	-25.25	68.3	49.72	37.71	16.27	60.65	100	360	P	H
CH 52 5260MHz		10520	45.87	-22.43	68.3	52.54	37.71	16.27	60.65	100	360	P	V
802.11n HT20		10600	44.2	-29.8	74	50.74	37.74	16.35	60.63	300	0	P	H
CH 60 5300MHz		10600	44.1	-29.9	74	50.64	37.74	16.35	60.63	300	0	P	V
802.11n HT20		10638.63	43.38	-30.62	74	49.85	37.76	16.39	60.62	100	360	P	H
CH 64 5320MHz		10638.63	43.15	-30.85	74	49.62	37.76	16.39	60.62	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 HT40 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 62 5310MHz		5121.6	57	-17	74	41.87	34.58	11.15	30.6	110	344	P	H
		5132.48	47.48	-6.52	54	32.32	34.6	11.16	30.6	110	344	A	H
	*	5302	100.47	-	-	85.1	34.7	11.33	30.66	110	344	P	H
		5302	93.43	-	-	78.06	34.7	11.33	30.66	110	344	A	H
		5349.96	56.5	-11.8	68.3	41.1	34.7	11.38	30.68	110	344	P	H
		5350.14	49.31	-4.69	54	33.91	34.7	11.38	30.68	110	344	A	H
		5108.32	56.64	-17.36	74	41.51	34.58	11.15	30.6	100	332	P	V
		5105.92	47.41	-6.59	54	32.28	34.58	11.15	30.6	100	332	A	V
	*	5308	97.84	-	-	82.48	34.7	11.33	30.67	100	332	P	V
		5308	91.8	-	-	76.44	34.7	11.33	30.67	100	332	A	V
		5350.14	56.75	-17.25	74	41.35	34.7	11.38	30.68	100	332	P	V
		5350.14	47.48	-6.52	54	32.08	34.7	11.38	30.68	100	332	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		10540	43.14	-25.16	68.3	49.78	37.71	16.29	60.64	100	360	P	H
		10540	44.17	-24.13	68.3	50.81	37.71	16.29	60.64	100	360	P	V
802.11n HT40 CH 62 5310MHz		10620	43.81	-30.19	74	50.31	37.75	16.37	60.62	100	360	P	H
		10620	44.21	-29.79	74	50.71	37.75	16.37	60.62	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 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5121.44	57.48	-16.52	74	42.35	34.58	11.15	30.6	123	351	P	H
		5115.84	48.01	-5.99	54	32.88	34.58	11.15	30.6	123	351	A	H
	*	5284	95.69	-	-	80.33	34.7	11.31	30.65	123	351	P	H
		5284	88.82	-	-	73.46	34.7	11.31	30.65	123	351	A	H
		5359.4	59.04	-14.96	74	43.64	34.7	11.38	30.68	123	351	P	H
		5350.3	50.43	-3.57	54	35.03	34.7	11.38	30.68	123	351	A	H
		5106.72	57.13	-16.87	74	42	34.58	11.15	30.6	284	118	P	V
		5101.44	47.98	-6.02	54	32.9	34.55	11.13	30.6	284	118	A	V
	*	5290	93.89	-	-	78.54	34.7	11.31	30.66	284	118	P	V
		5290	85.47	-	-	70.12	34.7	11.31	30.66	284	118	A	V
		5355.4	57.05	-16.95	74	41.65	34.7	11.38	30.68	284	118	P	V
		5351.4	49	-5	54	33.6	34.7	11.38	30.68	284	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 Ant 1+2 (Harmonic @ 3m)**

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80		10580	44.01	-24.29	68.3	50.57	37.73	16.34	60.63	100	360	P	H
CH 58 5290MHz		10580	45.13	-23.17	68.3	51.69	37.73	16.34	60.63	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 Ant 1 (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		5420.72	56.04	-17.96	74	40.59	34.7	11.45	30.7	100	285	P	H
		5466.96	56.29	-12.01	68.3	40.81	34.7	11.5	30.72	100	285	P	H
		5459.28	45.65	-8.35	54	30.19	34.7	11.48	30.72	100	285	A	H
	*	5500	95.57	-	-	80.07	34.7	11.53	30.73	100	285	P	H
		5500	87.15	-	-	71.65	34.7	11.53	30.73	100	285	A	H
		5449.36	56.44	-17.56	74	40.97	34.7	11.48	30.71	104	304	P	V
		5467.44	54.58	-13.72	68.3	39.1	34.7	11.5	30.72	104	304	P	V
		5457.52	45.62	-8.38	54	30.16	34.7	11.48	30.72	104	304	A	V
	*	5494	97.67	-	-	82.19	34.7	11.51	30.73	104	304	P	V
		5494	90.08	-	-	74.6	34.7	11.51	30.73	104	304	A	V
802.11a CH 140 5700MHz		5733.4	56.34	-11.96	68.3	40.33	35.08	11.75	30.82	100	241	P	H
	*	5698	94.43	-	-	78.55	34.97	11.71	30.8	100	241	P	H
		5698	86.88	-	-	71	34.97	11.71	30.8	100	241	A	H
		5761.88	56.92	-11.38	68.3	40.79	35.19	11.78	30.84	110	248	P	V
	*	5704	96.82	-	-	80.87	35.03	11.73	30.81	110	248	P	V
		5704	90.5	-	-	74.55	35.03	11.73	30.81	110	248	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11a Ant 1 (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		10999	44.15	-29.85	74	50.07	37.9	16.72	60.54	100	360	P	H
		10999	43.01	-30.99	74	48.93	37.9	16.72	60.54	100	360	P	V
802.11a CH 116 5580MHz		11159.16	42.95	-31.05	74	48.6	38	16.85	60.5	300	0	P	H
		11160	42.66	-31.34	74	48.31	38	16.85	60.5	300	0	P	V
802.11a CH 140 5700MHz		11399.39	44.55	-29.45	74	49.84	38.14	17.02	60.45	100	360	P	H
		11399.39	44.64	-29.36	74	49.93	38.14	17.02	60.45	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11a Ant 2 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		5438.48	55.49	-18.51	74	40.04	34.7	11.46	30.71	114	16	P	H
		5467.44	55.55	-12.75	68.3	40.07	34.7	11.5	30.72	114	16	P	H
		5459.44	45.52	-8.48	54	30.06	34.7	11.48	30.72	114	16	A	H
	*	5500	101.45	-	-	85.95	34.7	11.53	30.73	114	16	P	H
		5500	94.18	-	-	78.68	34.7	11.53	30.73	114	16	A	H
		5404.24	55.66	-18.34	74	40.23	34.7	11.43	30.7	104	299	P	V
		5468.72	54.82	-13.48	68.3	39.34	34.7	11.5	30.72	104	299	P	V
		5456.88	45.06	-8.94	54	29.6	34.7	11.48	30.72	104	299	A	V
	*	5500	96.48	-	-	80.98	34.7	11.53	30.73	104	299	P	V
		5500	89.19	-	-	73.69	34.7	11.53	30.73	104	299	A	V
802.11a CH 140 5700MHz		5732.68	56.48	-11.82	68.3	40.47	35.08	11.75	30.82	100	23	P	H
	*	5698	101.57	-	-	85.69	34.97	11.71	30.8	100	23	P	H
		5698	94.26	-	-	78.38	34.97	11.71	30.8	100	23	A	H
		5725.8	56.58	-11.72	68.3	40.57	35.08	11.75	30.82	113	291	P	V
	*	5704	99.57	-	-	83.62	35.03	11.73	30.81	113	291	P	V
		5704	92.2	-	-	76.25	35.03	11.73	30.81	113	291	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11a Ant 2 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		10999	43.38	-30.62	74	49.3	37.9	16.72	60.54	100	360	P	H
		10999	43.71	-30.29	74	49.63	37.9	16.72	60.54	100	360	P	V
802.11a CH 116 5580MHz		11159.16	44.28	-29.72	74	49.93	38	16.85	60.5	100	360	P	H
		11159.16	44.76	-29.24	74	50.41	38	16.85	60.5	100	360	P	V
802.11a CH 140 5700MHz		11139.13	44.4	-29.6	74	50.11	37.98	16.82	60.51	100	360	P	H
		11139.13	43.93	-30.07	74	49.64	37.98	16.82	60.51	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 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5455.76	56.78	-17.22	74	41.32	34.7	11.48	30.72	105	353	P	H
		5460.56	55.32	-12.98	68.3	39.86	34.7	11.48	30.72	105	353	P	H
		5460	45.97	-8.03	54	30.51	34.7	11.48	30.72	105	353	A	H
	*	5500	103.43	-	-	87.93	34.7	11.53	30.73	105	353	P	H
		5500	96.13	-	-	80.63	34.7	11.53	30.73	105	353	A	H
		5446	56.7	-17.3	74	41.23	34.7	11.48	30.71	100	299	P	V
		5469.84	55.86	-12.44	68.3	40.38	34.7	11.5	30.72	100	299	P	V
		5453.04	45.71	-8.29	54	30.24	34.7	11.48	30.71	100	299	A	V
	*	5506	100.83	-	-	85.33	34.7	11.53	30.73	100	299	P	V
		5506	94.16	-	-	78.66	34.7	11.53	30.73	100	299	A	V
802.11n HT20 CH 140 5700MHz		5741.4	57.31	-10.99	68.3	41.24	35.14	11.76	30.83	109	245	P	H
	*	5698	102.2	-	-	86.32	34.97	11.71	30.8	109	245	P	H
		5698	95.45	-	-	79.57	34.97	11.71	30.8	109	245	A	H
		5742.44	56.79	-11.51	68.3	40.72	35.14	11.76	30.83	100	290	P	V
	*	5698	103.49	-	-	87.61	34.97	11.71	30.8	100	290	P	V
		5698	96.53	-	-	80.65	34.97	11.71	30.8	100	290	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		10999	44.3	-29.7	74	50.22	37.9	16.72	60.54	300	0	P	H
		10999	44.09	-29.91	74	50.01	37.9	16.72	60.54	300	0	P	V
802.11n HT20 CH 116 5580MHz		11159.16	43.28	-30.72	74	48.93	38	16.85	60.5	100	360	P	H
		11159.16	42.93	-31.07	74	48.58	38	16.85	60.5	100	360	P	V
802.11n HT20 CH 140 5700MHz		11399.39	43.56	-30.44	74	48.85	38.14	17.02	60.45	100	360	P	H
		11399.39	44.41	-29.59	74	49.7	38.14	17.02	60.45	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 HT40 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5459.12	56.23	-17.77	74	40.77	34.7	11.48	30.72	117	358	P	H
		5468.08	57.8	-10.5	68.3	42.32	34.7	11.5	30.72	117	358	P	H
		5460	47.34	-6.66	54	31.88	34.7	11.48	30.72	117	358	A	H
	*	5518	97.61	-	-	82.1	34.7	11.55	30.74	117	358	P	H
		5518	91.11	-	-	75.6	34.7	11.55	30.74	117	358	A	H
		5738.6	57.32	-10.98	68.3	41.24	35.14	11.76	30.82	117	358	P	H
		5413.84	55.8	-18.2	74	40.35	34.7	11.45	30.7	100	301	P	V
		5468.88	58.45	-9.85	68.3	42.97	34.7	11.5	30.72	100	301	P	V
		5449.68	46.57	-7.43	54	31.1	34.7	11.48	30.71	100	301	A	V
	*	5506	99.49	-	-	83.99	34.7	11.53	30.73	100	301	P	V
		5506	92.84	-	-	77.34	34.7	11.53	30.73	100	301	A	V
		5751.48	58.09	-10.21	68.3	42.02	35.14	11.76	30.83	100	301	P	V
802.11n HT40 CH 134 5670MHz		5459.28	56.55	-17.45	74	41.09	34.7	11.48	30.72	101	359	P	H
		5469.04	55.39	-12.91	68.3	39.91	34.7	11.5	30.72	101	359	P	H
		5447.12	47.72	-6.28	54	32.25	34.7	11.48	30.71	101	359	A	H
	*	5656	99.57	-	-	83.81	34.86	11.68	30.78	101	359	P	H
		5656	93.42	-	-	77.66	34.86	11.68	30.78	101	359	A	H
		5730.76	56.38	-11.92	68.3	40.37	35.08	11.75	30.82	101	359	P	H
		5387.28	56.26	-17.74	74	40.84	34.7	11.41	30.69	101	309	P	V
		5468.72	55.92	-12.38	68.3	40.44	34.7	11.5	30.72	101	309	P	V
		5447.12	47.54	-6.46	54	32.07	34.7	11.48	30.71	101	309	A	V
	*	5662	100.48	-	-	84.72	34.86	11.68	30.78	101	309	P	V
		5662	92.8	-	-	77.04	34.86	11.68	30.78	101	309	A	V
		5729.88	56.45	-11.85	68.3	40.44	35.08	11.75	30.82	101	309	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 Ant 1+2 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40		11019.02	44.47	-29.53	74	50.37	37.91	16.73	60.54	100	360	P	H
CH 102 5510MHz		11019.02	43.82	-30.18	74	49.72	37.91	16.73	60.54	100	360	P	V
802.11n HT40		11100	43.8	-30.2	74	49.56	37.96	16.8	60.52	100	360	P	H
CH 110 5550MHz		11100	43.74	-30.26	74	49.5	37.96	16.8	60.52	100	360	P	V
802.11n HT40		11340	44.28	-29.72	74	49.68	38.1	16.97	60.47	100	360	P	H
CH 134 5670MHz		11340	45.29	-28.71	74	50.69	38.1	16.97	60.47	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 Ant 1+2 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5423.28	56.3	-17.7	74	40.85	34.7	11.45	30.7	100	266	P	H
		5461.84	55.05	-13.25	68.3	39.59	34.7	11.48	30.72	100	266	P	H
		5448.56	46.79	-7.21	54	31.32	34.7	11.48	30.71	100	266	A	H
	*	5524	87.47	-	-	71.96	34.7	11.55	30.74	100	266	P	H
		5524	87.47	-	-	71.96	34.7	11.55	30.74	100	266	A	H
		5738.04	56.43	-11.87	68.3	40.35	35.14	11.76	30.82	100	266	P	H
		5454.64	56.09	-17.91	74	40.62	34.7	11.48	30.71	100	314	P	V
		5460.56	55.26	-13.04	68.3	39.8	34.7	11.48	30.72	100	314	P	V
		5458.32	46.98	-7.02	54	31.52	34.7	11.48	30.72	100	314	A	V
	*	5536	90.85	-	-	75.33	34.7	11.56	30.74	100	314	P	V
		5536	83.93	-	-	68.41	34.7	11.56	30.74	100	314	A	V
		5740.28	56.44	-11.86	68.3	40.36	35.14	11.76	30.82	100	314	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 Ant 1+2 (Harmonic @ 3m)**

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80		11060	44.16	-29.84	74	49.98	37.94	16.77	60.53	100	360	P	H
CH 106 5530MHz		11060	44.67	-29.33	74	50.49	37.94	16.77	60.53	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Simultaneous Transmission

802.11ac VHT(80M+80M)

WIFI 802.11ac VHT(80M+80M)CH42+CH106 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) CH 42 5210MHz		5127.52	57.6	-16.4	74	42.44	34.6	11.16	30.6	100	182	P	H
		5135.04	49.55	-4.45	54	34.4	34.6	11.16	30.61	100	182	A	H
		5206	90.83	-	-	75.53	34.7	11.23	30.63	100	182	P	H
	*	5206	83.65	-	-	68.35	34.7	11.23	30.63	100	182	A	H
		5359.32	55.79	-18.21	74	40.39	34.7	11.38	30.68	100	182	P	H
		5396.04	47.29	-6.71	54	31.85	34.7	11.43	30.69	100	182	A	H
		5129.92	59.18	-14.82	74	44.02	34.6	11.16	30.6	105	222	P	V
		5143.84	49.37	-4.63	54	34.18	34.62	11.18	30.61	105	222	A	V
		5218	91.83	-	-	76.51	34.7	11.25	30.63	105	222	P	V
	*	5218	83.91	-	-	68.59	34.7	11.25	30.63	105	222	A	V
		5396.76	54.98	-19.02	74	39.54	34.7	11.43	30.69	105	222	P	V
		5396.04	47.33	-6.67	54	31.89	34.7	11.43	30.69	105	222	A	V
802.11ac VHT(80M+80M) CH 106 5530MHz		5458.16	60.48	-13.52	74	45.02	34.7	11.48	30.72	108	13	P	H
	*	5463.44	61.62	-6.68	68.3	46.14	34.7	11.5	30.72	108	13	P	H
		5457.2	53.97	-0.03	54	38.51	34.7	11.48	30.72	108	13	A	H
		5530	95.74	-	-	80.23	34.7	11.55	30.74	108	13	P	H
		5530	88.63	-	-	73.12	34.7	11.55	30.74	108	13	A	H
		5742.68	56.34	-11.96	68.3	40.27	35.14	11.76	30.83	108	13	P	H
		5458.64	58.7	-15.3	74	43.24	34.7	11.48	30.72	100	296	P	V
	*	5466.48	58.31	-9.99	68.3	42.83	34.7	11.5	30.72	100	296	P	V
		5457.04	50.09	-3.91	54	34.63	34.7	11.48	30.72	100	296	A	V
		5542	91.64	-	-	76.12	34.7	11.56	30.74	100	296	P	V
		5542	84.62	-	-	69.1	34.7	11.56	30.74	100	296	A	V
		5731.56	56.88	-11.42	68.3	40.87	35.08	11.75	30.82	100	296	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT(80M+80M)

WIFI 802.11ac VHT(80M+80M)CH42+CH106 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M)		10420	44.15	-24.15	68.3	51.01	37.63	16.18	60.67	300	0	P	H
CH 42 5210MHz		10420	44.13	-24.17	68.3	50.99	37.63	16.18	60.67	300	0	P	V
802.11ac VHT(80M+80M)		11060	43.44	-30.56	74	49.26	37.94	16.77	60.53	300	0	P	H
CH 106 5530MHz		11060	43.59	-30.41	74	49.41	37.94	16.77	60.53	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT(80M+80M)CH42+CH155 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) CH 42 5210MHz		5106.24	57.73	-16.27	74	42.6	34.58	11.15	30.6	100	181	P	H
		5147.84	49.46	-4.54	54	34.27	34.62	11.18	30.61	100	181	A	H
		5224	90.92	-	-	75.6	34.7	11.25	30.63	100	181	P	H
	*	5224	83.67	-	-	68.35	34.7	11.25	30.63	100	181	A	H
		5360.4	55.64	-18.36	74	40.24	34.7	11.38	30.68	100	181	P	H
		5371.92	47.26	-6.74	54	31.85	34.7	11.4	30.69	100	181	A	H
		5143.36	57.91	-16.09	74	42.72	34.62	11.18	30.61	104	221	P	V
		5148.96	49.18	-4.82	54	33.99	34.62	11.18	30.61	104	221	A	V
		5212	91.52	-	-	76.2	34.7	11.25	30.63	104	221	P	V
	*	5212	83.81	-	-	68.49	34.7	11.25	30.63	104	221	A	V
		5383.62	55.38	-18.62	74	39.96	34.7	11.41	30.69	104	221	P	V
		5396.76	47.1	-6.9	54	31.66	34.7	11.43	30.69	104	221	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) CH 155 5775MHz		5642.8	56.79	-11.51	68.3	41.09	34.81	11.66	30.77	100	360	P	H
		5694	67.16	-33.72	100.88	51.28	34.97	11.71	30.8	100	360	P	H
		5711.6	69.66	-38.89	108.55	53.71	35.03	11.73	30.81	100	360	P	H
		5723.6	68.72	-50.39	119.11	52.71	35.08	11.75	30.82	100	360	P	H
		5850	60.35	-61.95	122.3	44.01	35.35	11.86	30.87	100	360	P	H
		5856	61.69	-48.93	110.62	45.32	35.37	11.88	30.88	100	360	P	H
		5886	57.92	-39.21	97.13	41.54	35.38	11.89	30.89	100	360	P	H
		5940	57.01	-11.29	68.3	40.51	35.45	11.96	30.91	100	360	P	H
		5770	97.2	-	-	81	35.25	11.79	30.84	100	360	P	H
		5770	89.51	-	-	73.31	35.25	11.79	30.84	100	360	A	H
		5600	56.09	-12.21	68.3	40.52	34.7	11.63	30.76	100	298	P	V
		5699.2	65.67	-39.04	104.71	49.79	34.97	11.71	30.8	100	298	P	V
		5711.2	67.04	-41.4	108.44	51.09	35.03	11.73	30.81	100	298	P	V
		5720.2	66.34	-45.02	111.36	50.32	35.08	11.75	30.81	100	298	P	V
		5850.8	59.92	-60.56	120.48	43.58	35.35	11.86	30.87	100	298	P	V
		5856.8	59.52	-50.88	110.4	43.15	35.37	11.88	30.88	100	298	P	V
		5877.6	57.22	-46.15	103.37	40.84	35.38	11.89	30.89	100	298	P	V
		5938.4	57.56	-10.74	68.3	41.1	35.43	11.94	30.91	100	298	P	V
		5764	94.88	-	-	78.75	35.19	11.78	30.84	100	298	P	V
		5764	87.48	-	-	71.35	35.19	11.78	30.84	100	298	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT(80M+80M)

WIFI 802.11ac VHT(80M+80M)CH42+CH155 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M)		10420	43.92	-24.38	68.3	50.78	37.63	16.18	60.67	300	0	P	H
CH 42 5210MHz		10420	43.73	-24.57	68.3	50.59	37.63	16.18	60.67	300	0	P	V
802.11ac VHT(80M+80M)		11550	44.63	-29.37	74	49.62	38.27	17.13	60.39	300	0	P	H
CH 155 5775MHz		11550	44.44	-29.56	74	49.43	38.27	17.13	60.39	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT(80M+80M)CH42+CH58 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) CH 42 5210MHz		5137.76	57.57	-16.43	74	42.42	34.6	11.16	30.61	100	180	P	H
		5144.64	49.43	-4.57	54	34.24	34.62	11.18	30.61	100	180	A	H
		5218	90.39	-	-	75.07	34.7	11.25	30.63	100	180	P	H
	*	5218	82.76	-	-	67.44	34.7	11.25	30.63	100	180	A	H
		5361.66	55.61	-18.39	74	40.2	34.7	11.4	30.69	100	180	P	H
		5385.78	47.35	-6.65	54	31.93	34.7	11.41	30.69	100	180	A	H
		5137.28	58.76	-15.24	74	43.61	34.6	11.16	30.61	109	218	P	V
		5147.84	49.39	-4.61	54	34.2	34.62	11.18	30.61	109	218	A	V
		5218	90.69	-	-	75.37	34.7	11.25	30.63	109	218	P	V
	*	5218	83.04	-	-	67.72	34.7	11.25	30.63	109	218	A	V
		5385.42	55.59	-18.41	74	40.17	34.7	11.41	30.69	109	218	P	V
		5360.76	47.26	-6.74	54	31.85	34.7	11.4	30.69	109	218	A	V
802.11ac VHT(80M+80M) CH 58 5290MHz		5109.12	57.46	-16.54	74	42.33	34.58	11.15	30.6	100	3	P	H
	*	5130.24	49.03	-4.97	54	33.87	34.6	11.16	30.6	100	3	A	H
		5296	97.08	-	-	81.71	34.7	11.33	30.66	100	3	P	H
		5296	88.76	-	-	73.39	34.7	11.33	30.66	100	3	A	H
		5355	61.54	-12.46	74	46.14	34.7	11.38	30.68	100	3	P	H
		5355.9	52.84	-1.16	54	37.44	34.7	11.38	30.68	100	3	A	H
		5111.36	58.8	-15.2	74	43.67	34.58	11.15	30.6	300	107	P	V
	*	5124.48	48.54	-5.46	54	33.38	34.6	11.16	30.6	300	107	A	V
		5272	94.18	-	-	78.83	34.7	11.3	30.65	300	107	P	V
		5272	86.23	-	-	70.88	34.7	11.3	30.65	300	107	A	V
		5357.4	57.73	-16.27	74	42.33	34.7	11.38	30.68	300	107	P	V
		5355.1	49.75	-4.25	54	34.35	34.7	11.38	30.68	300	107	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT(80M+80M)

WIFI 802.11ac VHT(80M+80M)CH42+CH58 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M)		10420	43.79	-24.51	68.3	50.65	37.63	16.18	60.67	300	0	P	H
CH 42 5210MHz		10420	42.98	-25.32	68.3	49.84	37.63	16.18	60.67	300	31	P	V
802.11ac VHT(80M+80M)		10580	43.47	-24.83	68.3	50.03	37.73	16.34	60.63	300	0	P	H
CH 58 5290MHz		10580	43.62	-24.68	68.3	50.18	37.73	16.34	60.63	300	31	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												


Emission below 1GHz
WIFI 802.11ac VHT(80M+80M) (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) LF		32.91	21.29	-18.71	40	30.06	23.51	0.76	33.04	-	-	P	H
		122.15	23.57	-19.93	43.5	37.37	17.6	1.66	33.06	-	-	P	H
		200.72	25.9	-17.6	43.5	41.53	15.11	2.16	32.9	100	20	P	H
		337.49	22.2	-23.8	46	32.07	20.11	2.8	32.78	-	-	P	H
		658.56	24.17	-21.83	46	26.3	26.53	3.92	32.58	-	-	P	H
		933.07	28.12	-17.88	46	25.21	30.37	4.67	32.13	-	-	P	H
		32.91	30.97	-9.03	40	39.74	23.51	0.76	33.04	100	0	P	V
		49.4	29.5	-10.5	40	46.67	14.89	1.04	33.1	-	-	P	V
		124.09	27.18	-16.32	43.5	40.96	17.6	1.67	33.05	-	-	P	V
		200.72	29.41	-14.09	43.5	45.04	15.11	2.16	32.9	-	-	P	V
		565.44	24.74	-21.26	46	28.46	25.52	3.63	32.87	-	-	P	V
		935.98	27.93	-18.07	46	24.9	30.48	4.68	32.13	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



802.11ac VHT(80M+80M) & BLE & WCDMA 850

802.11ac VHT(80M+80M) CH42+CH106 & BLE CH39 & RSS132 WCDMA 850-M (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 39 2480MHz		2489.02	55.63	-18.37	74	47.44	32.1	7.67	31.58	151	96	P	H
		2483.5	47.62	-6.38	54	39.44	32.12	7.64	31.58	151	96	A	H
		2480	95.99	-	-	87.81	32.12	7.64	31.58	151	96	P	H
	*	2480	94.3	-	-	86.12	32.12	7.64	31.58	151	96	A	H
		2496.76	55.97	-18.03	74	47.76	32.1	7.67	31.56	105	285	P	V
		2495.86	47.39	-6.61	54	39.18	32.1	7.67	31.56	105	285	A	V
		2480	92.61	-	-	84.43	32.12	7.64	31.58	105	285	P	V
	*	2480	90.97	-	-	82.79	32.12	7.64	31.58	105	285	A	V
802.11ac VHT(80M+80M) CH 42 5210MHz		5134.88	58.51	-15.49	74	43.36	34.6	11.16	30.61	100	185	P	H
	*	5136	49.27	-4.73	54	34.12	34.6	11.16	30.61	100	185	P	H
		5206	90.12	-	-	74.82	34.7	11.23	30.63	100	185	A	H
		5206	82.69	-	-	67.39	34.7	11.23	30.63	100	185	P	H
		5358.96	55.52	-18.48	74	40.12	34.7	11.38	30.68	100	185	A	H
		5379.48	47.22	-6.78	54	31.8	34.7	11.41	30.69	100	185	P	H
		5134.08	57.78	-16.22	74	42.63	34.6	11.16	30.61	319	212	P	V
	*	5149.92	48.78	-5.22	54	33.59	34.62	11.18	30.61	319	212	P	V
		5200	89.75	-	-	74.45	34.7	11.23	30.63	319	212	A	V
		5200	82.39	-	-	67.09	34.7	11.23	30.63	319	212	P	V
		5374.62	55.33	-18.67	74	39.92	34.7	11.4	30.69	319	212	A	V
		5398.74	47.05	-6.95	54	31.62	34.7	11.43	30.7	319	212	P	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT(80M+80M) CH 106 5530MHz		5457.68	60.52	-13.48	74	45.06	34.7	11.48	30.72	100	180	P	H
	*	5469.52	62.81	-5.49	68.3	47.33	34.7	11.5	30.72	100	180	P	H
		5455.44	53.71	-0.29	54	38.24	34.7	11.48	30.71	100	180	A	H
		5536	95.96	-	-	80.44	34.7	11.56	30.74	100	180	P	H
		5536	89.11	-	-	73.59	34.7	11.56	30.74	100	180	A	H
		5751.8	57.28	-11.02	68.3	41.14	35.19	11.78	30.83	100	180	P	H
		5458.48	58.86	-15.14	74	43.4	34.7	11.48	30.72	100	118	P	V
	*	5466.32	58.35	-9.95	68.3	42.87	34.7	11.5	30.72	100	118	P	V
		5455.12	52.71	-1.29	54	37.24	34.7	11.48	30.71	100	118	A	V
		5536	93.42	-	-	77.9	34.7	11.56	30.74	100	118	P	V
		5536	86.56	-	-	71.04	34.7	11.56	30.74	100	118	A	V
		5757	56.92	-11.38	68.3	40.78	35.19	11.78	30.83	100	118	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



802.11ac VHT(80M+80M)CH42+CH106 & BLE CH39 & RSS132 WCDMA 850-M (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 39 2480MHz		4962	50.75	-23.25	74	65.4	34.38	10.98	60.01	106	160	P	H
		4962	47.21	-6.79	54	61.86	34.38	10.98	60.01	106	160	P	H
		7440	42.68	-31.32	74	53.8	35.91	13.51	60.54	300	0	A	H
		4962	49.05	-24.95	74	63.7	34.38	10.98	60.01	300	0	P	V
		7440	42.54	-31.46	74	53.66	35.91	13.51	60.54	300	0	P	V
802.11ac VHT(80M+80M) CH 42 5210MHz		10418.42	43.84	-24.46	68.3	50.7	37.63	16.18	60.67	300	0	P	H
		10420	43.77	-24.53	68.3	50.63	37.63	16.18	60.67	300	0	P	V
802.11ac VHT(80M+80M) CH 106 5530MHz		11060	44.22	-29.78	74	50.04	37.94	16.77	60.53	300	0	P	H
		11059.05	43.57	-30.43	74	49.39	37.94	16.77	60.53	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz &2.4GHz 2400~2483.5MHz &WCDMA 850

WIFI 802.11g Ant 1&WIFI 802.11a Ant 2 &WCDMA 850-M (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.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 11 ANT 1 2462MHz		2378.38	56.01	-17.99	74	48.04	32.15	7.47	31.65	130	92	P	H
		2389.69	45	-9	54	36.95	32.2	7.5	31.65	130	92	A	H
	*	2412	102.37	-	-	94.31	32.18	7.53	31.65	130	92	P	H
		2412	94.45	-	-	86.39	32.18	7.53	31.65	130	92	A	H
		2332.88	56.13	-17.87	74	48.4	32.02	7.38	31.67	119	304	P	V
		2389.56	44.84	-9.16	54	36.79	32.2	7.5	31.65	119	304	A	V
	*	2412	97.46	-	-	89.4	32.18	7.53	31.65	119	304	P	V
		2410	89.3	-	-	81.24	32.18	7.53	31.65	119	304	A	V
802.11a CH 36 ANT 2 5180MHz		5147.52	63.49	-10.51	74	48.3	34.62	11.18	30.61	101	360	P	H
		5149.98	52.79	-1.21	54	37.6	34.62	11.18	30.61	101	360	A	H
	*	5182	110.47	-	-	95.21	34.67	11.21	30.62	101	360	P	H
		5182	103.32	-	-	88.06	34.67	11.21	30.62	101	360	A	H
		5149.76	60.12	-13.88	74	44.93	34.62	11.18	30.61	100	343	P	V
		5149.98	49.65	-4.35	54	34.46	34.62	11.18	30.61	100	343	A	V
		5182	104.34	-	-	89.08	34.67	11.21	30.62	100	343	P	V
	*	5182	96.56	-	-	81.3	34.67	11.21	30.62	100	343	A	V
Remark	3. No other spurious found.												
	4. All results are PASS against Peak and Average limit line.												



WIFI 802.11g Ant 1&WIFI 802.11a Ant 2 &WCDMA 850-M (Harmonic @ 3m)

WIFI Ant.	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)
802.11g		4824	42.73	-31.27	74	57.66	34.31	10.8	60.04	300	0	P	H
CH 11		7386	43.28	-30.72	74	54.43	35.92	13.46	60.53	300	0	P	H
ANT 1		4824	40.89	-33.11	74	55.82	34.31	10.8	60.04	300	360	P	V
2462MHz		7386	43.05	-30.95	74	54.2	35.92	13.46	60.53	300	360	P	V
802.11a		10360	44.23	-24.07	68.3	51.19	37.59	16.13	60.68	300	0	P	H
CH 36													
ANT 2		10360	44.64	-23.66	68.3	51.6	37.59	16.13	60.68	300	0	P	V
5180MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Note symbol**

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



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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

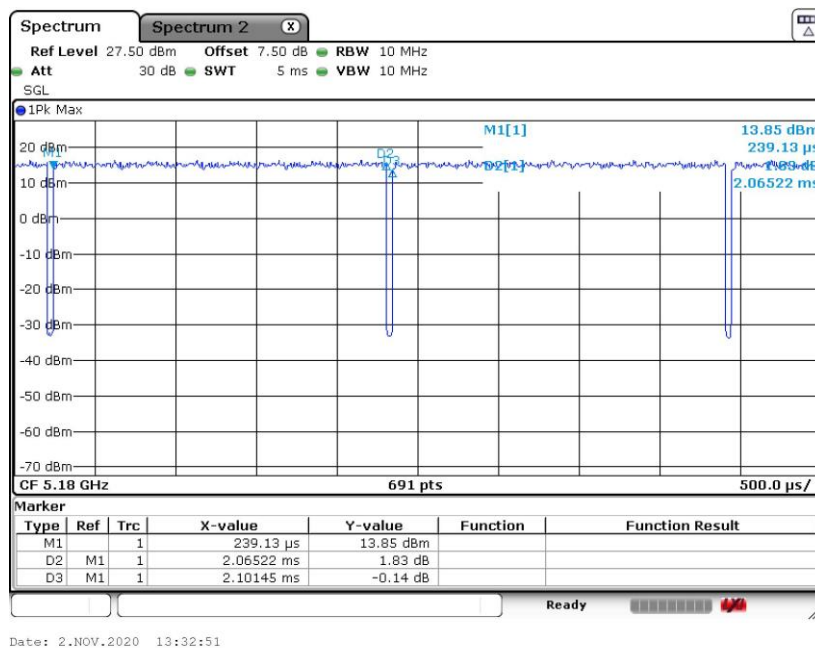
Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1	802.11a	98.28	-	-	10Hz
2	802.11a	98.28	-	-	10Hz
1+2	802.11n HT20	98.16	-	-	10Hz
1+2	802.11n HT40	96.32	0.949	1.053	1.1kHz
1+2	802.11ac VHT80	93.28	0.462	2.163	2.2kHz

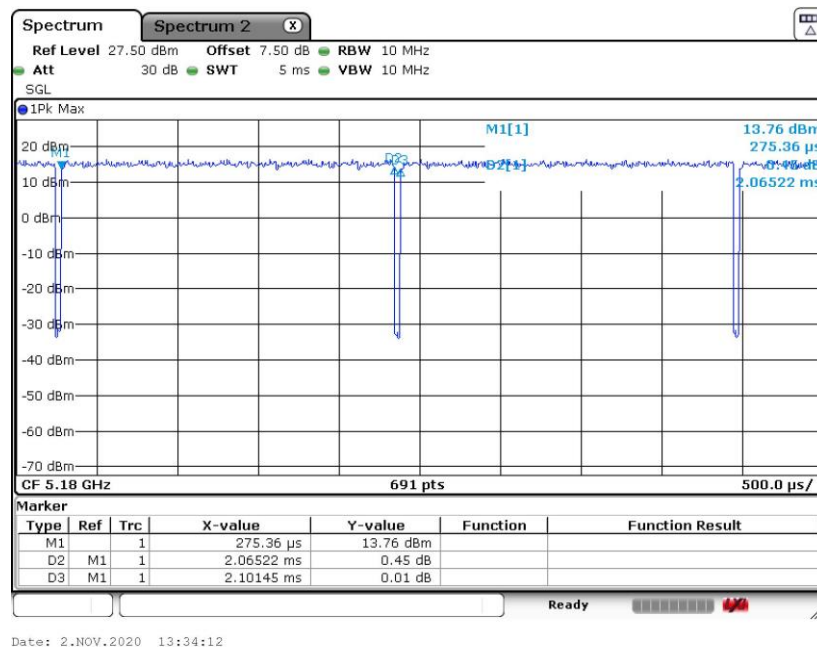
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802.11a



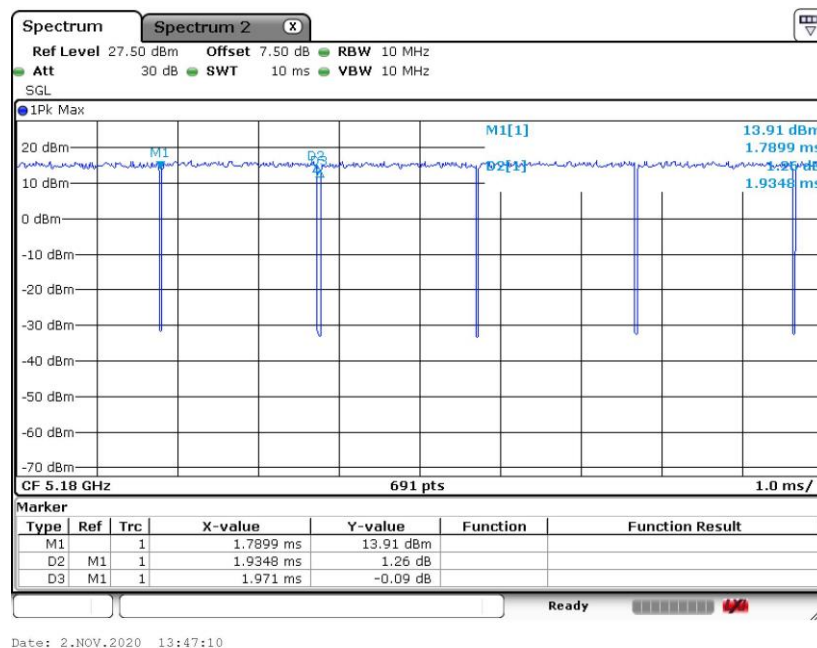
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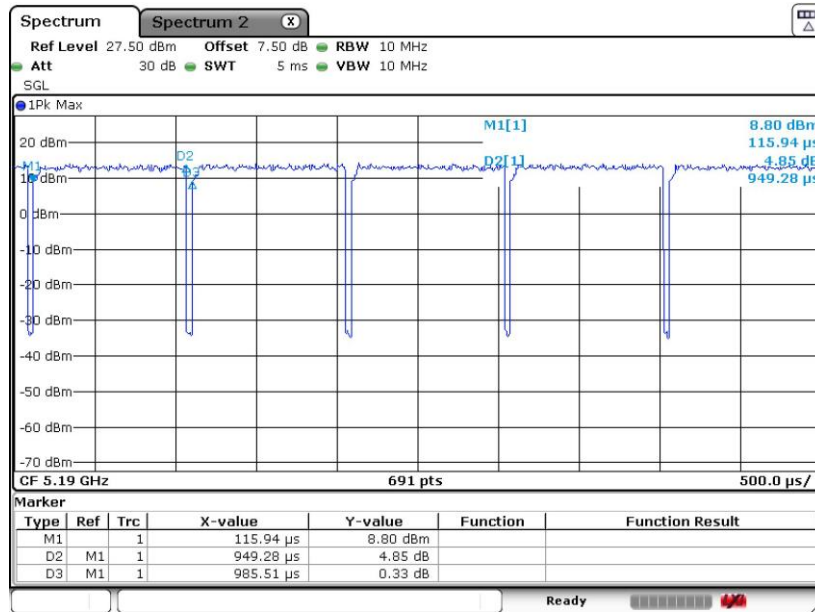


MIMO <Ant. 1+2>

802.11n HT20

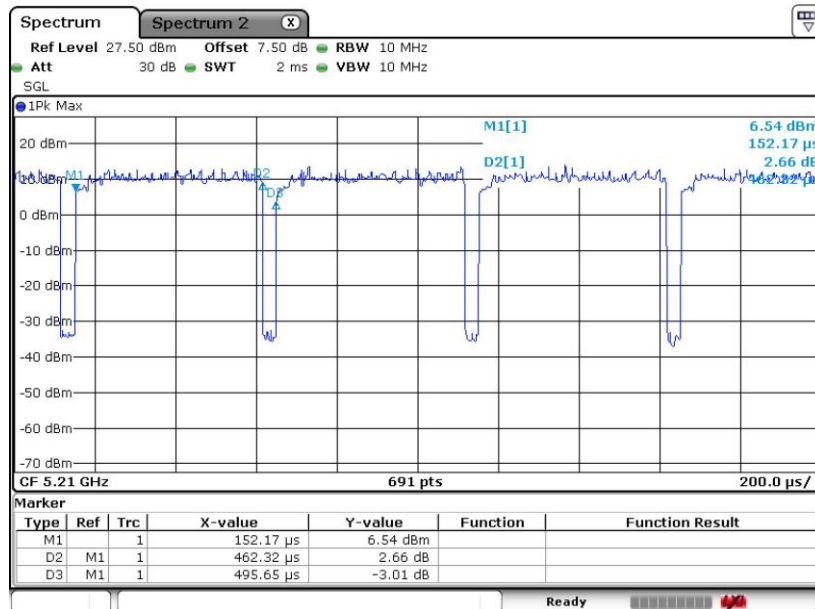


802.11n HT40



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802.11ac VHT80



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