



FCC RF Test Report

APPLICANT : Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT : Portable Tablet Computer
BRAND NAME : Lenovo
MODEL NAME : Lenovo TB-Q706F
FCC ID : O57TBQ706F
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Jul. 13, 2021 ~ Jul. 27, 2021

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.

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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.

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Approved by: Alex Wang / Manager



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR161617F	Rev. 01	Initial issue of report	Aug. 16, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	6dB, 26dB and 99% Occupied Bandwidth	> 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b)(4)(i) & 15.209(a)	Pass	Under limit 5.38 dB at 5650.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.51 dB at 0.163 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	N/A	N/A	-

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

Lenovo(Shanghai) Electronics Technology Co., Ltd.

Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone

1.2 Manufacturer

Lenovo PC HK Limited

23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Portable Tablet Computer
Brand Name	Lenovo
Model Name	Lenovo TB-Q706F
FCC ID	O57TBQ706F
HW Version	Lenovo TB-Q706F
SW Version	TB-Q706F_RF01_210811
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power	<MIMO Ant.1+2> <5745 MHz ~ 5825 MHz> 802.11a : 22.16 dBm / 0.1644 W 802.11n HT20 : 21.98 dBm / 0.1578 W 802.11n HT40 : 22.01 dBm / 0.1589 W 802.11ac VHT20 : 21.95 dBm / 0.1567 W 802.11ac VHT40 : 21.97 dBm / 0.1574 W 802.11ac VHT80 : 22.09 dBm / 0.1618 W 802.11ax HE20 : 22.07 dBm / 0.1611 W 802.11ax HE40 : 22.05 dBm / 0.1603 W 802.11ax HE80 : 22.20 dBm / 0.1660 W
99% Occupied Bandwidth	<MIMO Ant.1+2> 802.11a : 16.98 MHz 802.11ax HE20 : 19.33 MHz 802.11ax HE40 : 37.96 MHz 802.11ax HE80 : 77.20 MHz
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac/ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)
Antenna Type / Gain	<Ant. 1> : IFA Antenna with gain -0.50 dBi

Antenna Function Description	<Ant. 2> : IFA Antenna with gain -1.50 dBi		
		Ant. 1	Ant. 2
	802.11 a/n/ac/ax SISO/MIMO	V	V

Note:

1. For SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power.
2. For 802.11n HT20 / ac VHT20 / ax HE20 and 802.11n HT40 / ac VHT40 / ax HE40 mode, the whole testing have assessed only ax HE20 / HE40 by referring to their maximum conducted power.
3. For 802.11ac VHT80 / ax HE80 mode, the whole testing have assessed only ax HE80 by referring to their maximum conducted power.

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	CN1257	314309

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

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

Test data subcontracted: conducted test items in section 3.1 ~ 3.3 of this report.



1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24al
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:

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

2 Test Configuration of Equipment Under Test

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz U-NII-3	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155 [#]	5775	165	5825

Note:

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

2.2 Test Mode

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

MIMO Mode

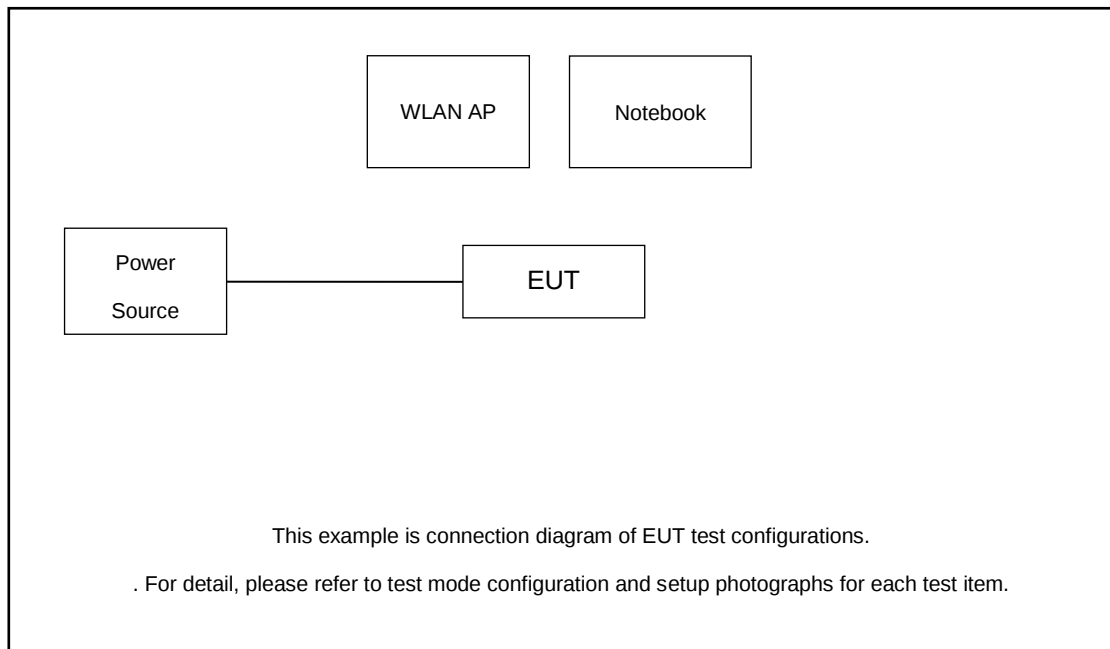
Modulation	Data Rate
802.11a	6 Mbps
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN Link(5G) + USB Cable (Charging from Adapter 2)
Remark: - For Radiated Test Cases, the tests were performed with Sample 1 and Adapter 1. - For Conducted Emission, the tests were performed with the worst accessories in part 15B report.	

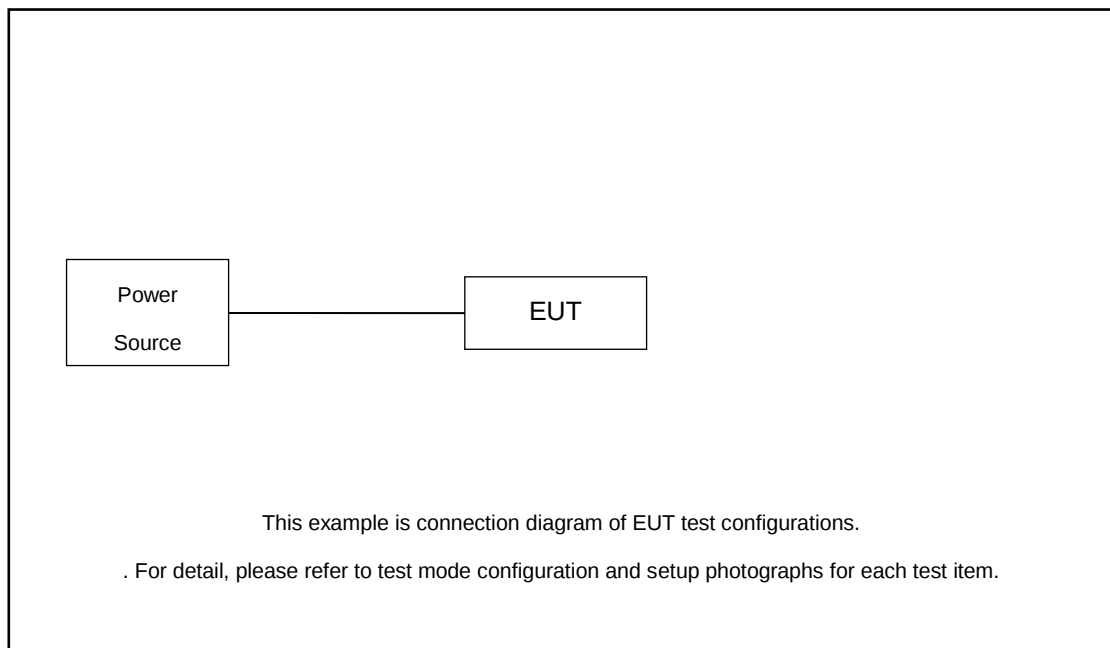
Ch. #		U-NII-3 : 5725-5850 MHz			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

For Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
2.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m

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 + attenuator factor.

Following shows an offset computation example with cable loss 2.8 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 2.8 + 10 = 12.8 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

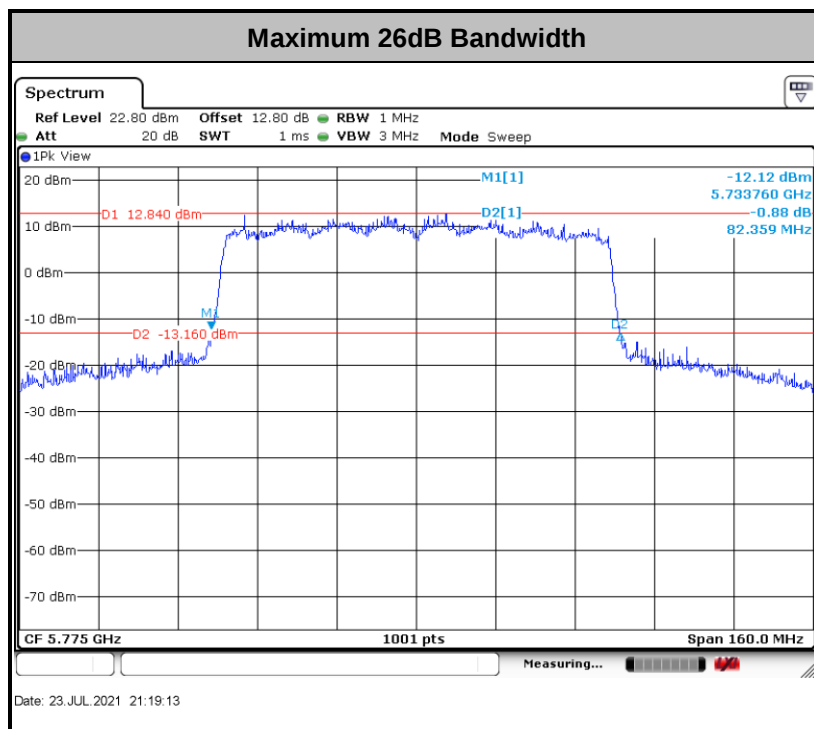
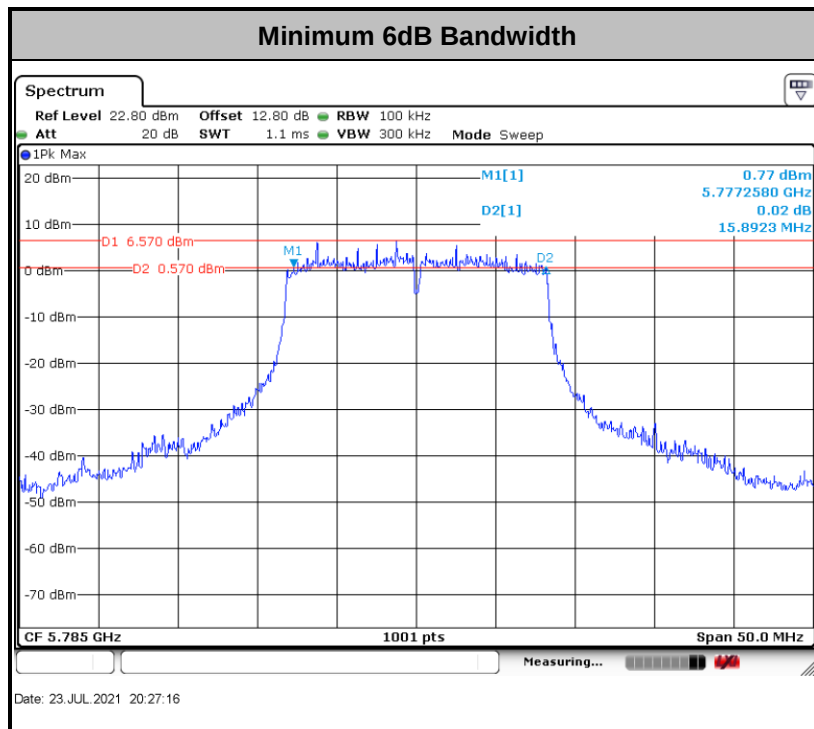
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section C) Emission bandwidth for the band 5.725-5.85GHz
2. Set RBW = 100kHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

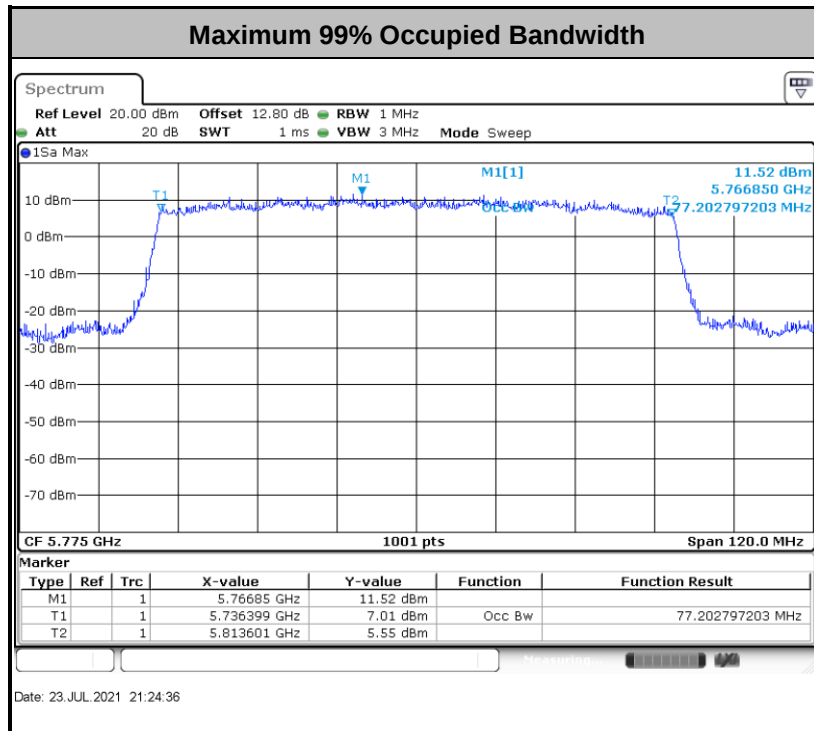
3.1.4 Test Setup



3.1.5 Test Result of 6dB 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

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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.

3.2.2 Measuring Instruments

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

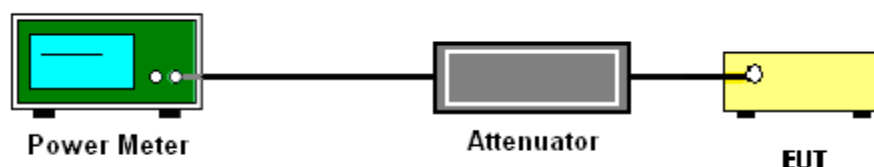
3.2.3 Test Procedures

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

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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).

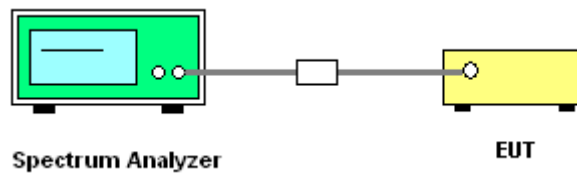
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW $\geq$ 1 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(500\text{kHz}/\text{RBW})$ to the test result.
- 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 (c): Measure and add $10 \log(N_{\text{ANT}})$ dB.

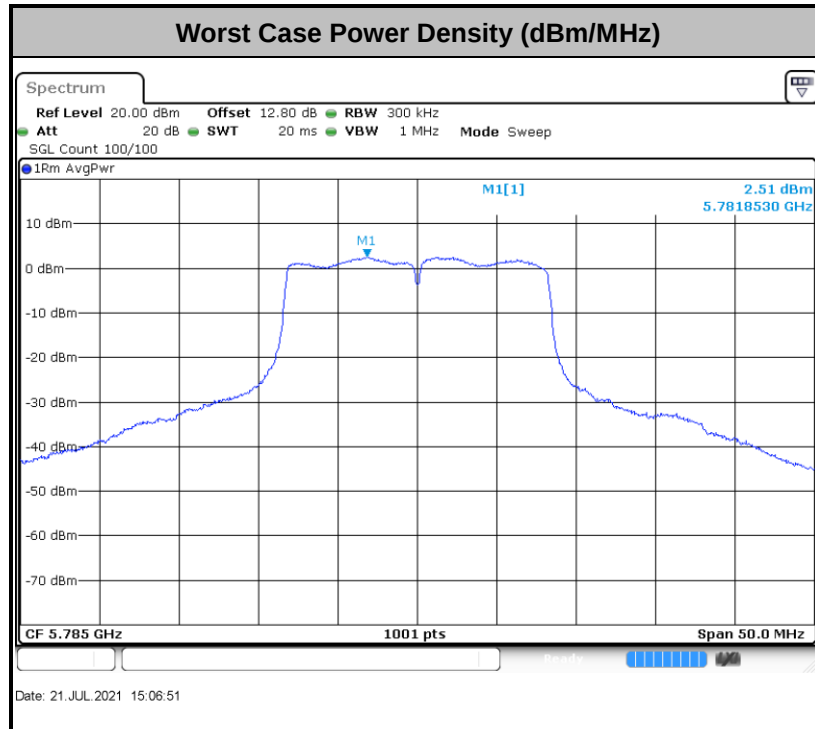
With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity $10 \log(N_{\text{ANT}})$ dB is added to each spectrum value before comparing to the emission limit. The addition of $10 \log(N_{\text{ANT}})$ dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{\text{ANT}}^{\text{th}}$ of the PSD limit.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

3.4 Unwanted 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 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

- (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.

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

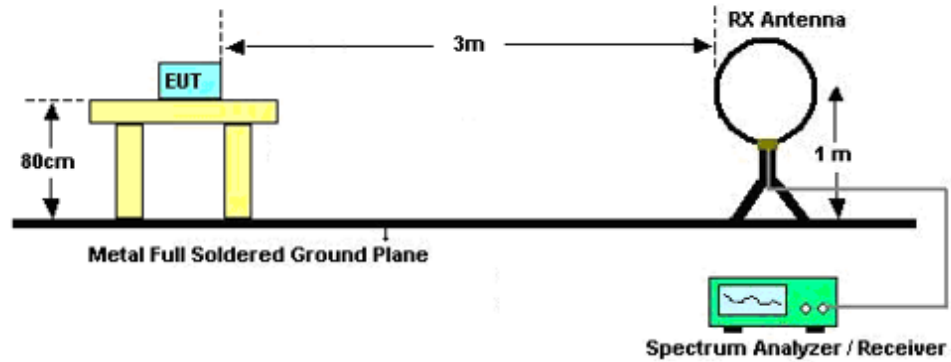
The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

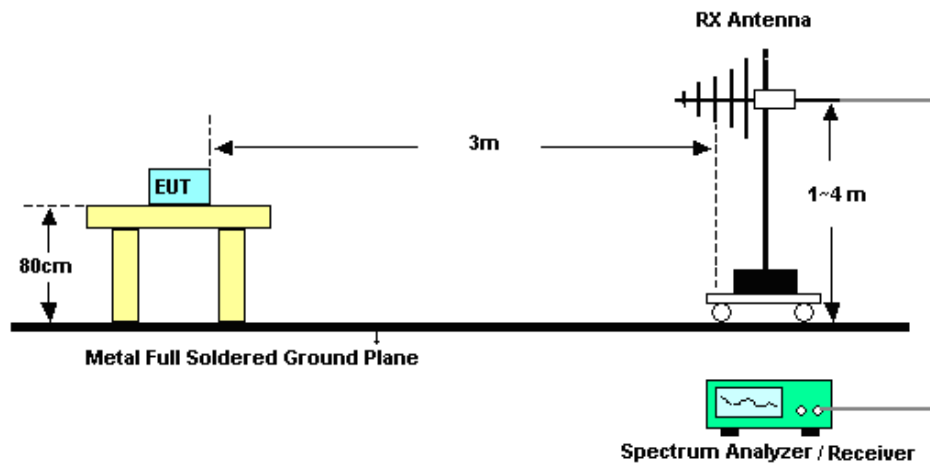
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
(1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold(2) Procedure for Peak Unwanted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

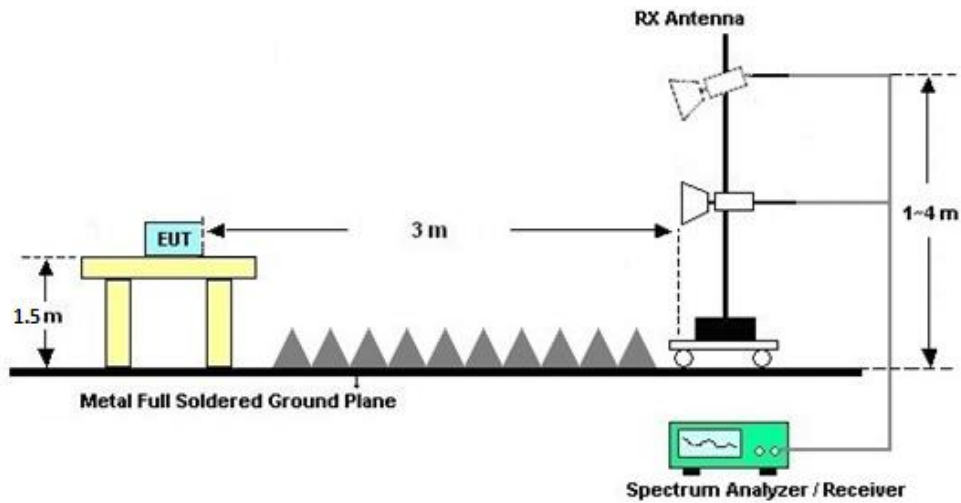
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated 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 Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Unwanted Radiated Emission (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.

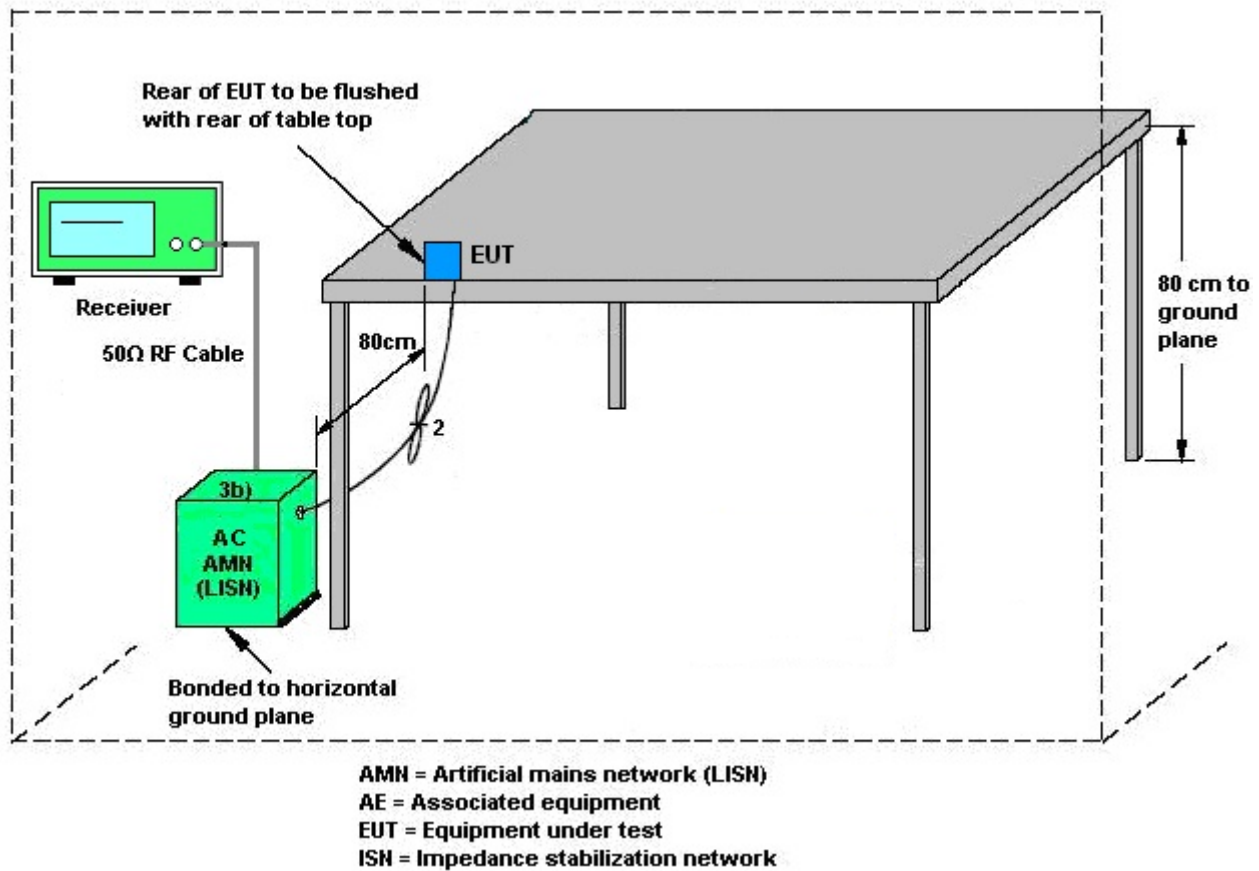
3.5.2 Measuring Instruments

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 Antenna Requirements

3.6.1 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.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

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

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

For power, the directional gain G_{ANT} 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 IV	-0.50	-1.50	-0.50	2.02	0.00	0.00

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Jul. 21, 2021~ Jul. 23, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Jul. 21, 2021~ Jul. 23, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Jul. 21, 2021~ Jul. 23, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
EMI Test Receiver	Keysight	N9038A	MY564000 04	3Hz~8.5GHz; Max 30dBm	Oct. 17, 2020	Jul. 13, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY551502 44	10Hz~44G, MAX 30dB	Apr. 13, 2021	Jul. 13, 2021	Apr. 12, 2022	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Jul. 13, 2021	Oct. 31, 2021	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 04, 2021	Jul. 13, 2021	Jun. 03, 2022	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 24, 2021	Jul. 13, 2021	Apr. 23, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2020	Jul. 13, 2021	Nov. 09, 2021	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Apr. 12, 2021	Jul. 13, 2021	Apr. 11, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 07, 2021	Jul. 13, 2021	Jan. 06, 2022	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	1Ghz-18Ghz	Oct. 17, 2020	Jul. 13, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY532703 16	500MHz~26.5GHz	Oct. 17, 2020	Jul. 13, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F1040900 04	N/A	NCR	Jul. 13, 2021	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 13, 2021	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 13, 2021	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Jul. 27, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2020	Jul. 27, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 17, 2020	Jul. 27, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2020	Jul. 27, 2021	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% ($U = 2Uc(y)$)	2.94dB
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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
---	-------

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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----- THE END -----



Appendix A. Conducted Test Results

Report Number : FR161617F

Test Engineer:	Liu Qiu Qiu	Temperature:	24~26	°C
Test Date:	2021/7/21~2021/7/23	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

Band IV													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)		Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	16.98	16.93	21.34	20.34	16.04	15.94	0.5		Pass
11a	6Mbps	2	157	5785	16.98	16.93	21.13	20.24	16.29	15.89	0.5		Pass
11a	6Mbps	2	165	5825	16.93	16.93	21.04	20.39	16.09	15.94	0.5		Pass
HE20	MCS0	2	149	5745	19.23	19.33	23.24	22.14	18.44	18.74	0.5		Pass
HE20	MCS0	2	157	5785	19.23	19.28	30.44	22.09	17.69	18.59	0.5		Pass
HE20	MCS0	2	165	5825	19.18	19.28	22.73	22.14	17.59	18.89	0.5		Pass
HE40	MCS0	2	151	5755	37.86	37.96	41.56	41.29	36.88	36.79	0.5		Pass
HE40	MCS0	2	159	5795	37.86	37.96	41.47	41.11	36.52	36.34	0.5		Pass
HE80	MCS0	2	155	5775	77.08	77.20	82.36	81.56	75.80	75.80	0.5		Pass

TEST RESULTS DATA
Average Power Table

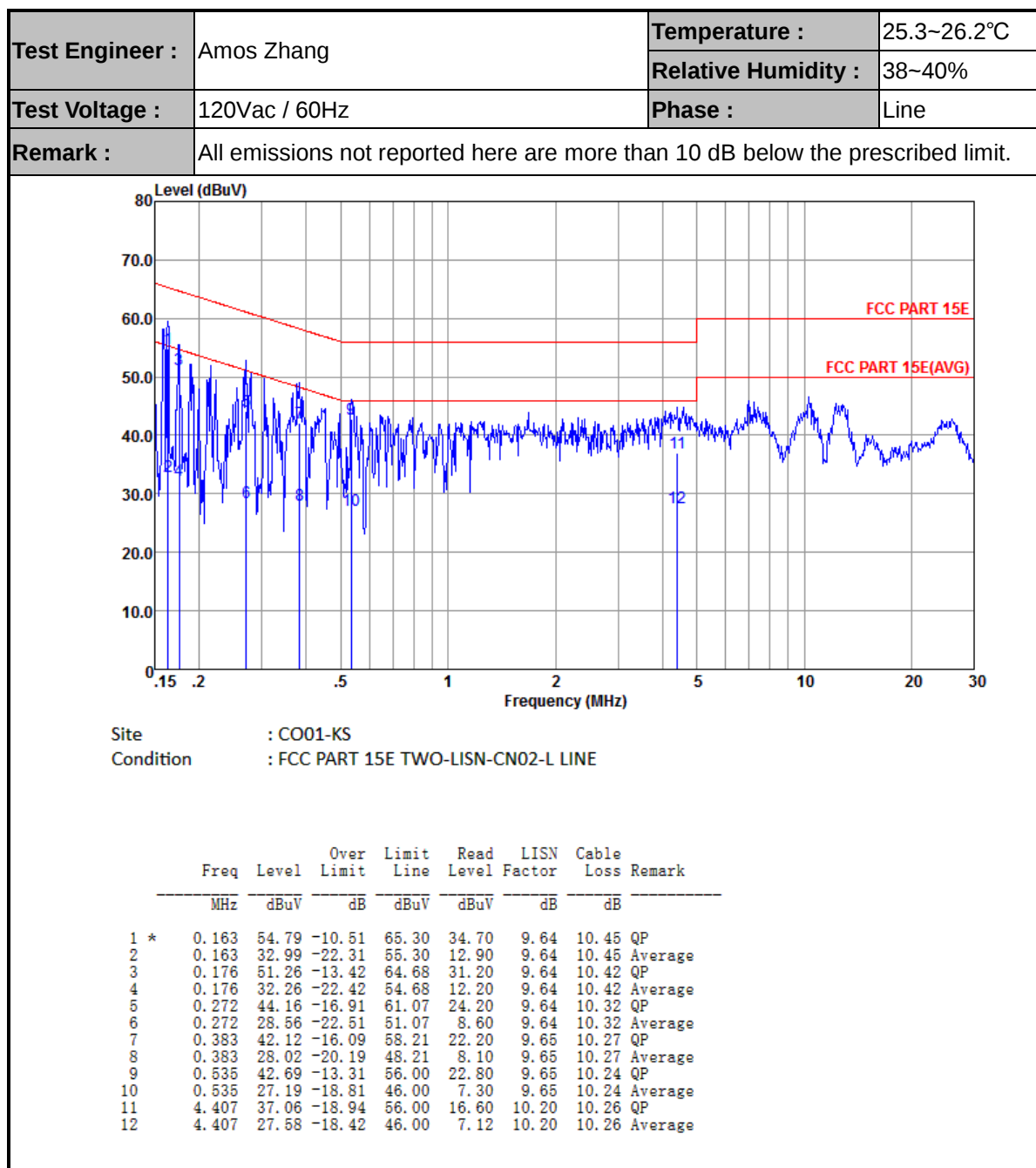
Band IV																
Mod.	Data Rate	N _{TX}	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	149	Full	5745	0.04	0.04	19.44	18.83	22.16	30.00		-0.50			Pass
11a	6Mbps	2	157	Full	5785	0.04	0.04	19.46	18.51	22.02	30.00		-0.50			Pass
11a	6Mbps	2	165	Full	5825	0.04	0.04	18.80	18.56	21.69	30.00		-0.50			Pass
HT20	MCS0	2	149	Full	5745	0.00	0.00	19.25	18.66	21.98	30.00		-0.50			Pass
HT20	MCS0	2	157	Full	5785	0.00	0.00	19.36	18.32	21.88	30.00		-0.50			Pass
HT20	MCS0	2	165	Full	5825	0.00	0.00	18.60	18.40	21.51	30.00		-0.50			Pass
HT40	MCS0	2	151	Full	5755	0.00	0.00	19.50	18.44	22.01	30.00		-0.50			Pass
HT40	MCS0	2	159	Full	5795	0.00	0.00	19.20	18.51	21.88	30.00		-0.50			Pass
VHT20	MCS0	2	149	Full	5745	0.00	0.00	19.23	18.63	21.95	30.00		-0.50			Pass
VHT20	MCS0	2	157	Full	5785	0.00	0.00	19.27	18.29	21.82	30.00		-0.50			Pass
VHT20	MCS0	2	165	Full	5825	0.00	0.00	18.56	18.32	21.45	30.00		-0.50			Pass
VHT40	MCS0	2	151	Full	5755	0.00	0.00	19.48	18.37	21.97	30.00		-0.50			Pass
VHT40	MCS0	2	159	Full	5795	0.00	0.00	19.17	18.49	21.85	30.00		-0.50			Pass
VHT80	MCS0	2	155	Full	5775	0.00	0.00	19.53	18.58	22.09	30.00		-0.50			Pass
HE20	MCS0	2	149	Full	5745	0.00	0.00	19.27	18.84	22.07	30.00		-0.50			Pass
HE20	MCS0	2	149	26/0	5745	0.00	0.00	10.13	10.75	13.46	30.00		-0.50			Pass
HE20	MCS0	2	149	52/37	5745	0.00	0.00	12.36	13.70	16.09	30.00		-0.50			Pass
HE20	MCS0	2	149	106/53	5745	0.00	0.00	15.60	16.63	19.16	30.00		-0.50			Pass
HE20	MCS0	2	157	Full	5785	0.00	0.00	19.38	18.50	21.97	30.00		-0.50			Pass
HE20	MCS0	2	165	Full	5825	0.00	0.00	18.63	18.56	21.61	30.00		-0.50			Pass
HE20	MCS0	2	165	26/8	5825	0.00	0.00	8.42	9.61	12.07	30.00		-0.50			Pass
HE20	MCS0	2	165	52/40	5825	0.00	0.00	11.23	12.58	14.97	30.00		-0.50			Pass
HE20	MCS0	2	165	106/54	5825	0.00	0.00	14.81	16.12	18.52	30.00		-0.50			Pass
HE40	MCS0	2	151	Full	5755	0.00	0.00	19.52	18.50	22.05	30.00		-0.50			Pass
HE40	MCS0	2	151	242/61	5755	0.00	0.00	16.56	17.15	19.88	30.00		-0.50			Pass
HE40	MCS0	2	159	Full	5795	0.00	0.00	19.24	18.58	21.93	30.00		-0.50			Pass
HE40	MCS0	2	159	242/62	5795	0.00	0.00	15.95	16.96	19.49	30.00		-0.50			Pass
HE80	MCS0	2	155	Full	5775	0.00	0.00	19.64	18.69	22.20	30.00		-0.50			Pass
HE80	MCS0	2	155	484/65	5775	0.00	0.00	16.95	17.39	20.19	30.00		-0.50			Pass
HE80	MCS0	2	155	484/66	5775	0.00	0.00	17.07	17.58	20.34	30.00		-0.50			Pass

TEST RESULTS DATA
Power Spectral Density

Band IV																	
Mod.	Data Rate	N _{TX}	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	Full	5745	0.04	0.04	2.22				7.67	30.00		2.02		Pass
11a	6Mbps	2	157	Full	5785	0.04	0.04	2.22				7.78	30.00		2.02		Pass
11a	6Mbps	2	165	Full	5825	0.04	0.04	2.22				7.10	30.00		2.02		Pass
HE20	MCS0	2	149	Full	5745	0.00	0.00	2.22				6.95	30.00		2.02		Pass
HE20	MCS0	2	149	26/0	5745	0.00	0.00	2.22				6.88	30.00		2.02		Pass
HE20	MCS0	2	149	52/37	5745	0.00	0.00	2.22				6.92	30.00		2.02		Pass
HE20	MCS0	2	149	106/53	5745	0.00	0.00	2.22				6.76	30.00		2.02		Pass
HE20	MCS0	2	157	Full	5785	0.00	0.00	2.22				6.86	30.00		2.02		Pass
HE20	MCS0	2	165	Full	5825	0.00	0.00	2.22				6.39	30.00		2.02		Pass
HE20	MCS0	2	165	26/8	5825	0.00	0.00	2.22				5.97	30.00		2.02		Pass
HE20	MCS0	2	165	52/40	5825	0.00	0.00	2.22				6.03	30.00		2.02		Pass
HE20	MCS0	2	165	106/54	5825	0.00	0.00	2.22				6.17	30.00		2.02		Pass
HE40	MCS0	2	151	Full	5755	0.00	0.00	2.22				4.12	30.00		2.02		Pass
HE40	MCS0	2	151	242/61	5755	0.00	0.00	2.22				3.77	30.00		2.02		Pass
HE40	MCS0	2	159	Full	5795	0.00	0.00	2.22				3.93	30.00		2.02		Pass
HE40	MCS0	2	159	242/62	5795	0.00	0.00	2.22				3.77	30.00		2.02		Pass
HE80	MCS0	2	155	Full	5775	0.00	0.00	2.22				1.45	30.00		2.02		Pass
HE80	MCS0	2	155	484/65	5775	0.00	0.00	2.22				1.04	30.00		2.02		Pass
HE80	MCS0	2	155	484/66	5775	0.00	0.00	2.22				1.39	30.00		2.02		Pass

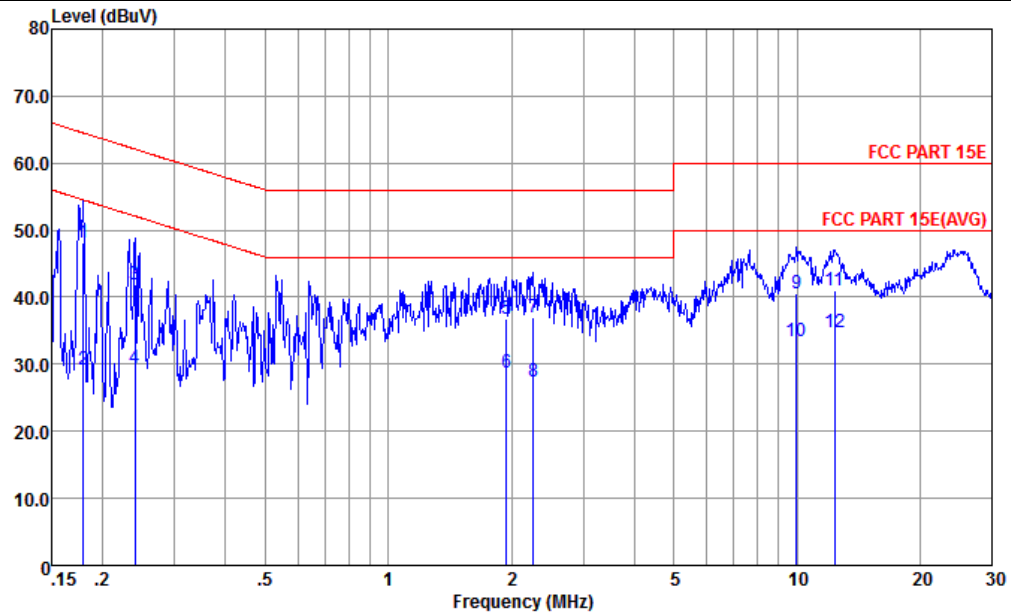


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		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 : FCC PART 15E TWO-LISN-CN02-N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.180	48.06	-16.44	64.50	27.79	9.86	10.41	QP
2	0.180	29.16	-25.34	54.50	8.89	9.86	10.41	Average
3	0.240	41.78	-20.30	62.08	21.59	9.85	10.34	QP
4	0.240	29.38	-22.70	52.08	9.19	9.85	10.34	Average
5	1.949	36.75	-19.25	56.00	16.60	9.92	10.23	QP
6	1.949	28.75	-17.25	46.00	8.60	9.92	10.23	Average
7	2.261	37.00	-19.00	56.00	16.80	9.97	10.23	QP
8	2.261	27.50	-18.50	46.00	7.30	9.97	10.23	Average
9	9.966	40.49	-19.51	60.00	19.60	10.55	10.34	QP
10	9.966	33.49	-16.51	50.00	12.60	10.55	10.34	Average
11	12.384	41.08	-18.92	60.00	19.90	10.81	10.37	QP
12 *	12.384	34.81	-15.19	50.00	13.63	10.81	10.37	Average

Note:

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



Appendix C. Radiated Spurious Emission

Band 3 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5618.4	56.36	-11.94	68.3	40.32	34.75	12.06	30.77	100	240	P	H
		5668.8	56.63	-25.62	82.25	40.4	34.92	12.1	30.79	100	240	P	H
		5718.8	65.41	-45.15	110.56	48.99	35.08	12.15	30.81	100	240	P	H
		5722	66.9	-48.56	115.46	50.49	35.08	12.15	30.82	100	240	P	H
		5746	108.17	-	-	91.7	35.14	12.16	30.83	100	240	P	H
		5746	101.09	-	-	84.62	35.14	12.16	30.83	100	240	A	H
		5608.8	56.21	-12.09	68.3	40.23	34.7	12.05	30.77	294	330	P	V
		5657.2	56.07	-17.58	73.65	39.9	34.86	12.09	30.78	294	330	P	V
		5718	63.06	-47.28	110.34	46.64	35.08	12.15	30.81	294	330	P	V
		5723.6	68.61	-50.5	119.11	52.2	35.08	12.15	30.82	294	330	P	V
		5752	107.29	-	-	90.75	35.19	12.18	30.83	294	330	P	V
		5752	100.56	-	-	84.02	35.19	12.18	30.83	294	330	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)
802.11a CH 165 5825MHz		5850	62.04	-60.26	122.3	45.31	35.35	12.25	30.87	105	115	P	H
		5856	58.08	-52.54	110.62	41.33	35.37	12.26	30.88	105	115	P	H
		5916	56.69	-18.25	74.94	39.86	35.42	12.31	30.9	105	115	P	H
		5991.2	57.95	-10.35	68.3	41	35.5	12.38	30.93	105	115	P	H
		5824	110.36	-	-	93.65	35.33	12.24	30.86	105	115	P	H
		5824	103.45	-	-	86.74	35.33	12.24	30.86	105	115	A	H
		5850	58.72	-63.58	122.3	41.99	35.35	12.25	30.87	278	326	P	V
		5855.2	57.47	-53.37	110.84	40.72	35.37	12.26	30.88	278	326	P	V
		5904	56.65	-27.15	83.8	39.85	35.4	12.29	30.89	278	326	P	V
		5982	57.59	-10.71	68.3	40.66	35.48	12.37	30.92	278	326	P	V
		5824	110.17	-	-	93.46	35.33	12.24	30.86	278	326	P	V
		5824	102.48	-	-	85.77	35.33	12.24	30.86	278	326	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11489.48	45.55	-28.45	74	50.17	38.19	17.62	60.43	300	0	P	H
		11489.48	47.92	-26.08	74	52.54	38.19	17.62	60.43	300	0	P	V
802.11a CH 157 5785MHz		11569.56	45.85	-28.15	74	50.25	38.3	17.68	60.38	300	0	P	H
		11569.56	48.07	-25.93	74	52.47	38.3	17.68	60.38	300	0	P	V
802.11a CH 165 5825MHz		11649.64	45.3	-28.7	74	49.52	38.39	17.72	60.33	300	0	P	H
		11649.64	48.05	-25.95	74	52.27	38.39	17.72	60.33	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE20_Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5618.8	55.47	-12.83	68.3	39.43	34.75	12.06	30.77	100	138	P	H
		5654	55.15	-16.12	71.27	38.98	34.86	12.09	30.78	100	138	P	H
		5719.6	70.21	-40.58	110.79	53.79	35.08	12.15	30.81	100	138	P	H
		5720	69.79	-41.11	110.9	53.37	35.08	12.15	30.81	100	138	P	H
		5752	111.73	-	-	95.19	35.19	12.18	30.83	100	138	P	H
		5752	104.27	-	-	87.73	35.19	12.18	30.83	100	138	A	H
		5624	55.67	-12.63	68.3	39.63	34.75	12.06	30.77	282	323	P	V
		5694.8	56.12	-45.35	101.47	39.83	34.97	12.12	30.8	282	323	P	V
		5715.6	65.15	-44.52	109.67	48.8	35.03	12.13	30.81	282	323	P	V
		5723.6	72.07	-47.04	119.11	55.66	35.08	12.15	30.82	282	323	P	V
		5746	109.9	-	-	93.43	35.14	12.16	30.83	282	323	P	V
		5746	102.99	-	-	86.52	35.14	12.16	30.83	282	323	A	V
802.11ax HE20 Full CH 165 5825MHz		5851.2	63.69	-55.87	119.56	46.96	35.35	12.25	30.87	100	110	P	H
		5854.8	62.46	-48.9	111.36	45.71	35.37	12.26	30.88	100	110	P	H
		5903.2	56.91	-27.48	84.39	40.11	35.4	12.29	30.89	100	110	P	H
		5962.4	56.8	-11.5	68.3	39.89	35.47	12.35	30.91	100	110	P	H
		5824	113.52	-	-	96.81	35.33	12.24	30.86	100	110	P	H
		5824	103.03	-	-	86.32	35.33	12.24	30.86	100	110	A	H
		5852	63.58	-54.16	117.74	46.85	35.35	12.25	30.87	273	325	P	V
		5854.8	59.25	-52.11	111.36	42.5	35.37	12.26	30.88	273	325	P	V
		5921.2	56.48	-14.62	71.1	39.65	35.42	12.31	30.9	273	325	P	V
		5928	56.42	-11.88	68.3	39.57	35.43	12.32	30.9	273	325	P	V
		5824	109.41	-	-	92.7	35.33	12.24	30.86	273	325	P	V
		5824	101.88	-	-	85.17	35.33	12.24	30.86	273	325	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE20 Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full		11489.48	44.83	-29.17	74	49.45	38.19	17.62	60.43	300	0	P	H
CH 149 5745MHz		11490	47.92	-26.08	74	52.54	38.19	17.62	60.43	300	0	P	V
802.11ax HE20 Full		11569.56	45.39	-28.61	74	49.79	38.3	17.68	60.38	300	0	P	H
CH 157 5785MHz		11569.56	47.3	-26.7	74	51.7	38.3	17.68	60.38	300	0	P	V
802.11ax HE20 Full		11649.64	44.57	-29.43	74	48.79	38.39	17.72	60.33	300	0	P	H
CH 165 5825MHz		11649.64	46.06	-27.94	74	50.28	38.39	17.72	60.33	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE20_Partial 26 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 149 5745MHz		5622.4	56.41	-11.89	68.3	40.37	34.75	12.06	30.77	100	115	P	H
		5691.2	55.35	-43.46	98.81	39.06	34.97	12.12	30.8	100	115	P	H
		5718.8	69.45	-41.11	110.56	53.03	35.08	12.15	30.81	100	115	P	H
		5724	73.5	-46.52	120.02	57.09	35.08	12.15	30.82	100	115	P	H
		5734	119.95	-	-	103.54	35.08	12.15	30.82	100	115	P	H
		5734	112.43	-	-	96.02	35.08	12.15	30.82	100	115	A	H
		5610.8	56.13	-12.17	68.3	40.15	34.7	12.05	30.77	300	317	P	V
		5688.4	55.86	-40.88	96.74	39.57	34.97	12.12	30.8	300	317	P	V
		5716	70.16	-39.62	109.78	53.81	35.03	12.13	30.81	300	317	P	V
		5724.4	72.69	-48.24	120.93	56.28	35.08	12.15	30.82	300	317	P	V
		5740	118.19	-	-	101.71	35.14	12.16	30.82	300	317	P	V
		5740	110.74	-	-	94.26	35.14	12.16	30.82	300	317	A	V
802.11ax HE20 Partial 26/8 CH 165 5825MHz		5850.8	62.55	-57.93	120.48	45.82	35.35	12.25	30.87	100	245	P	H
		5858.8	57.14	-52.69	109.83	40.39	35.37	12.26	30.88	100	245	P	H
		5886	56.17	-40.96	97.13	39.4	35.38	12.28	30.89	100	245	P	H
		5969.2	57.42	-10.88	68.3	40.52	35.47	12.35	30.92	100	245	P	H
		5836	118.06	-	-	101.36	35.33	12.24	30.87	100	245	P	H
		5836	110.72	-	-	94.02	35.33	12.24	30.87	100	245	A	H
		5853.2	63.02	-51.98	115	46.29	35.35	12.25	30.87	298	323	P	V
		5856.8	61.08	-49.32	110.4	44.33	35.37	12.26	30.88	298	323	P	V
		5879.2	56.34	-45.84	102.18	39.57	35.38	12.28	30.89	298	323	P	V
		5951.2	57.02	-11.28	68.3	40.14	35.45	12.34	30.91	298	323	P	V



		5836	118.37	-	-	101.67	35.33	12.24	30.87	298	323	P	V
		5836	111.06	-	-	94.36	35.33	12.24	30.87	298	323	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE20_Partial 52 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 52/37 CH 149 5745MHz		5614.8	55.45	-12.85	68.3	39.47	34.7	12.05	30.77	100	117	P	H
		5652	55.92	-13.87	69.79	39.75	34.86	12.09	30.78	100	117	P	H
		5719.6	70.21	-40.58	110.79	53.79	35.08	12.15	30.81	100	117	P	H
		5724	75.3	-44.72	120.02	58.89	35.08	12.15	30.82	100	117	P	H
		5734	117.96	-	-	101.55	35.08	12.15	30.82	100	117	P	H
		5734	110.43	-	-	94.02	35.08	12.15	30.82	100	117	A	H
		5634.4	55.99	-12.31	68.3	39.87	34.81	12.08	30.77	335	322	P	V
		5656.8	55.68	-17.67	73.35	39.51	34.86	12.09	30.78	335	322	P	V
		5712.8	61.42	-47.47	108.89	45.07	35.03	12.13	30.81	335	322	P	V
		5723.2	68.93	-49.27	118.2	52.52	35.08	12.15	30.82	335	322	P	V
		5740	114.97	-	-	98.49	35.14	12.16	30.82	335	322	P	V
		5740	107.51	-	-	91.03	35.14	12.16	30.82	335	322	A	V
802.11ax HE20 Partial 52/40 CH 165 5825MHz		5851.2	69.75	-49.81	119.56	53.02	35.35	12.25	30.87	100	113	P	H
		5856.4	56.94	-53.57	110.51	40.19	35.37	12.26	30.88	100	113	P	H
		5921.6	56.71	-14.1	70.81	39.86	35.43	12.32	30.9	100	113	P	H
		5925.6	57.21	-11.09	68.3	40.36	35.43	12.32	30.9	100	113	P	H
		5836	116.69	-	-	99.99	35.33	12.24	30.87	100	113	P	H
		5836	109.06	-	-	92.36	35.33	12.24	30.87	100	113	A	H
		5852.4	61.45	-55.38	116.83	44.72	35.35	12.25	30.87	304	323	P	V
		5873.2	56.84	-48.96	105.8	40.06	35.38	12.28	30.88	304	323	P	V
		5877.6	56.88	-46.49	103.37	40.11	35.38	12.28	30.89	304	323	P	V
		5986.4	56.71	-11.59	68.3	39.78	35.48	12.37	30.92	304	323	P	V



		5836	115.25	-	-	98.55	35.33	12.24	30.87	304	323	P	V
		5836	108.06	-	-	91.36	35.33	12.24	30.87	304	323	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE20_Partial 106 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 149 5745MHz		5613.6	55.73	-12.57	68.3	39.75	34.7	12.05	30.77	100	115	P	H
		5686	55.62	-39.35	94.97	39.33	34.97	12.12	30.8	100	115	P	H
		5720	60.43	-50.47	110.9	44.01	35.08	12.15	30.81	100	115	P	H
		5724.8	73.64	-48.2	121.84	57.23	35.08	12.15	30.82	100	115	P	H
		5734	114.22	-	-	97.81	35.08	12.15	30.82	100	115	P	H
		5734	106.44	-	-	90.03	35.08	12.15	30.82	100	115	A	H
		5647.2	55.29	-13.01	68.3	39.18	34.81	12.08	30.78	319	324	P	V
		5657.6	55.89	-18.06	73.95	39.72	34.86	12.09	30.78	319	324	P	V
		5719.6	70.52	-40.27	110.79	54.1	35.08	12.15	30.81	319	324	P	V
		5723.2	72.49	-45.71	118.2	56.08	35.08	12.15	30.82	319	324	P	V
		5740	112.54	-	-	96.06	35.14	12.16	30.82	319	324	P	V
		5740	104.84	-	-	88.36	35.14	12.16	30.82	319	324	A	V
802.11ax HE20 Partial 106/54 CH 165 5825MHz		5851.2	66.81	-52.75	119.56	50.08	35.35	12.25	30.87	106	113	P	H
		5860.8	63.35	-45.92	109.27	46.6	35.37	12.26	30.88	106	113	P	H
		5890.8	56.29	-37.28	93.57	39.49	35.4	12.29	30.89	106	113	P	H
		5950.8	56.67	-11.63	68.3	39.79	35.45	12.34	30.91	106	113	P	H
		5836	114.16	-	-	97.46	35.33	12.24	30.87	106	113	P	H
		5836	106.73	-	-	90.03	35.33	12.24	30.87	106	113	A	H
		5851.2	58.93	-60.63	119.56	42.2	35.35	12.25	30.87	307	323	P	V
		5856.8	61.01	-49.39	110.4	44.26	35.37	12.26	30.88	307	323	P	V
		5915.6	56.13	-19.1	75.23	39.3	35.42	12.31	30.9	307	323	P	V
		5938	57.07	-11.23	68.3	40.23	35.43	12.32	30.91	307	323	P	V



		5830	113.22	-	-	96.51	35.33	12.24	30.86	307	323	P	V
		5830	104.83	-	-	88.12	35.33	12.24	30.86	307	323	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE40_Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5636	55.41	-12.89	68.3	39.29	34.81	12.08	30.77	101	108	P	H
		5700	62.7	-42.6	105.3	46.41	34.97	12.12	30.8	101	108	P	H
		5714	72.26	-36.96	109.22	55.91	35.03	12.13	30.81	101	108	P	H
		5723.2	74.73	-43.47	118.2	58.32	35.08	12.15	30.82	101	108	P	H
		5752	109.36	-	-	92.82	35.19	12.18	30.83	101	108	P	H
		5752	101.43	-	-	84.89	35.19	12.18	30.83	101	108	A	H
		5853.2	56.12	-58.88	115	39.39	35.35	12.25	30.87	101	108	P	H
		5859.6	57.94	-51.67	109.61	41.19	35.37	12.26	30.88	101	108	P	H
		5876.4	57.41	-46.85	104.26	40.64	35.38	12.28	30.89	101	108	P	H
		5946.4	57.4	-10.9	68.3	40.52	35.45	12.34	30.91	101	108	P	H
		5608.4	55.12	-13.18	68.3	39.14	34.7	12.05	30.77	273	326	P	V
		5697.6	66.01	-37.52	103.53	49.72	34.97	12.12	30.8	273	326	P	V
		5720	70.11	-40.79	110.9	53.69	35.08	12.15	30.81	273	326	P	V
		5724.8	74.81	-47.03	121.84	58.4	35.08	12.15	30.82	273	326	P	V
		5752	108.75	-	-	92.21	35.19	12.18	30.83	273	326	P	V
		5752	100.53	-	-	83.99	35.19	12.18	30.83	273	326	A	V
		5854	56.08	-57.1	113.18	39.32	35.37	12.26	30.87	273	326	P	V
		5870.8	56.99	-49.48	106.47	40.21	35.38	12.28	30.88	273	326	P	V
		5898.4	56.42	-31.53	87.95	39.62	35.4	12.29	30.89	273	326	P	V
		5939.2	56.98	-11.32	68.3	40.1	35.45	12.34	30.91	273	326	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5604.4	54.98	-13.32	68.3	38.99	34.7	12.05	30.76	101	247	P	H
		5669.6	56.53	-26.31	82.84	40.3	34.92	12.1	30.79	101	247	P	H
		5716	55.94	-53.84	109.78	39.59	35.03	12.13	30.81	101	247	P	H
		5722.8	57	-60.28	117.28	40.59	35.08	12.15	30.82	101	247	P	H
		5806	107.69	-	-	91	35.32	12.22	30.85	101	247	P	H
		5806	100.62	-	-	83.93	35.32	12.22	30.85	101	247	A	H
		5851.6	59.91	-58.74	118.65	43.18	35.35	12.25	30.87	101	247	P	H
		5855.2	59.31	-51.53	110.84	42.56	35.37	12.26	30.88	101	247	P	H
		5897.2	57.01	-31.82	88.83	40.21	35.4	12.29	30.89	101	247	P	H
		5952	57.02	-11.28	68.3	40.14	35.45	12.34	30.91	101	247	P	H
		5625.6	55.74	-12.56	68.3	39.7	34.75	12.06	30.77	290	328	P	V
		5667.6	55.94	-25.42	81.36	39.71	34.92	12.1	30.79	290	328	P	V
		5704.4	56.18	-50.35	106.53	39.83	35.03	12.13	30.81	290	328	P	V
		5723.2	56.69	-61.51	118.2	40.28	35.08	12.15	30.82	290	328	P	V
		5794	108.19	-	-	91.52	35.3	12.21	30.84	290	328	P	V
		5794	100.24	-	-	83.57	35.3	12.21	30.84	290	328	A	V
		5853.2	61.21	-53.79	115	44.48	35.35	12.25	30.87	290	328	P	V
		5856.4	57.61	-52.9	110.51	40.86	35.37	12.26	30.88	290	328	P	V
		5904.8	56.5	-26.71	83.21	39.66	35.42	12.31	30.89	290	328	P	V
		5928.8	56.49	-11.81	68.3	39.64	35.43	12.32	30.9	290	328	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE40_Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full		11509.5	43.94	-30.06	74	48.54	38.2	17.63	60.43	100	360	P	H
CH 151 5755MHz		11509.5	43.87	-30.13	74	48.47	38.2	17.63	60.43	100	360	P	V
802.11ax HE40 Full		11589.58	45.04	-28.96	74	49.4	38.32	17.69	60.37	300	0	P	H
CH 159 5795MHz		11589.58	46.01	-27.99	74	50.37	38.32	17.69	60.37	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE40_Partial 242 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/61 CH 151 5755MHz		5603.6	56.06	-12.24	68.3	40.07	34.7	12.05	30.76	100	115	P	H
		5690	67.81	-30.12	97.93	51.52	34.97	12.12	30.8	100	115	P	H
		5720	76.29	-34.61	110.9	59.87	35.08	12.15	30.81	100	115	P	H
		5724.8	80.95	-40.89	121.84	64.54	35.08	12.15	30.82	100	115	P	H
		5740	112.71	-	-	96.23	35.14	12.16	30.82	100	115	P	H
		5740	105.49	-	-	89.01	35.14	12.16	30.82	100	115	A	H
		5854.4	55.27	-57	112.27	38.51	35.37	12.26	30.87	100	115	P	H
		5868.4	56.64	-50.51	107.15	39.89	35.37	12.26	30.88	100	115	P	H
		5922.8	56.27	-13.65	69.92	39.42	35.43	12.32	30.9	100	115	P	H
		5974.4	56.59	-11.71	68.3	39.66	35.48	12.37	30.92	100	115	P	H
		5630	55.76	-12.54	68.3	39.72	34.75	12.06	30.77	316	322	P	V
		5683.6	65.71	-27.49	93.2	49.42	34.97	12.12	30.8	316	322	P	V
		5719.2	72.13	-38.55	110.68	55.71	35.08	12.15	30.81	316	322	P	V
		5724.4	80.9	-40.03	120.93	64.49	35.08	12.15	30.82	316	322	P	V
		5752	111.51	-	-	94.97	35.19	12.18	30.83	316	322	P	V
		5752	103.9	-	-	87.36	35.19	12.18	30.83	316	322	A	V
		5851.2	54.77	-64.79	119.56	38.04	35.35	12.25	30.87	316	322	P	V
		5858.4	56.29	-53.66	109.95	39.54	35.37	12.26	30.88	316	322	P	V
		5875.6	57.24	-47.61	104.85	40.47	35.38	12.28	30.89	316	322	P	V
		5980.4	58.24	-10.06	68.3	41.31	35.48	12.37	30.92	316	322	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/62 CH 159 5795MHz		5613.6	55.36	-12.94	68.3	39.38	34.7	12.05	30.77	100	246	P	H
		5686.4	56.12	-39.15	95.27	39.83	34.97	12.12	30.8	100	246	P	H
		5702.4	58.3	-47.67	105.97	41.94	35.03	12.13	30.8	100	246	P	H
		5722.4	54.97	-61.4	116.37	38.56	35.08	12.15	30.82	100	246	P	H
		5800	112.66	-	-	96	35.3	12.21	30.85	100	246	P	H
		5800	103.86	-	-	87.2	35.3	12.21	30.85	100	246	A	H
		5850.8	56.55	-63.93	120.48	39.82	35.35	12.25	30.87	100	246	P	H
		5874.8	58	-47.36	105.36	41.23	35.38	12.28	30.89	100	246	P	H
		5875.2	62.13	-43.02	105.15	45.36	35.38	12.28	30.89	100	246	P	H
		5942.8	56.3	-12	68.3	39.42	35.45	12.34	30.91	100	246	P	H
		5648	55.48	-12.82	68.3	39.37	34.81	12.08	30.78	317	322	P	V
		5698.8	58.55	-45.87	104.42	42.26	34.97	12.12	30.8	317	322	P	V
		5707.6	57.37	-50.06	107.43	41.02	35.03	12.13	30.81	317	322	P	V
		5723.2	56.17	-62.03	118.2	39.76	35.08	12.15	30.82	317	322	P	V
		5812	110.32	-	-	93.63	35.32	12.22	30.85	317	322	P	V
		5812	101.43	-	-	84.74	35.32	12.22	30.85	317	322	A	V
		5850.8	63.42	-57.06	120.48	46.69	35.35	12.25	30.87	317	322	P	V
		5854.8	56.75	-54.61	111.36	40	35.37	12.26	30.88	317	322	P	V
		5916	56.38	-18.56	74.94	39.55	35.42	12.31	30.9	317	322	P	V
		5950.4	56.32	-11.98	68.3	39.44	35.45	12.34	30.91	317	322	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE80_Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5650	62.92	-5.38	68.3	46.75	34.86	12.09	30.78	100	242	P	H
		5695.2	72.19	-29.57	101.76	55.9	34.97	12.12	30.8	100	242	P	H
		5700.4	73.64	-31.77	105.41	57.35	34.97	12.12	30.8	100	242	P	H
		5720	72.87	-38.03	110.9	56.45	35.08	12.15	30.81	100	242	P	H
		5764	106.53	-	-	90	35.19	12.18	30.84	100	242	P	H
		5764	98.39	-	-	81.86	35.19	12.18	30.84	100	242	A	H
		5852	70.41	-47.33	117.74	53.68	35.35	12.25	30.87	100	242	P	H
		5859.6	67.31	-42.3	109.61	50.56	35.37	12.26	30.88	100	242	P	H
		5874.8	63.51	-41.85	105.36	46.74	35.38	12.28	30.89	100	242	P	H
		5933.6	57.33	-10.97	68.3	40.49	35.43	12.32	30.91	100	242	P	H
		5649.6	61.66	-6.64	68.3	45.49	34.86	12.09	30.78	287	327	P	V
		5695.2	69.29	-32.47	101.76	53	34.97	12.12	30.8	287	327	P	V
		5718.4	72.06	-38.39	110.45	55.64	35.08	12.15	30.81	287	327	P	V
		5724.8	70.95	-50.89	121.84	54.54	35.08	12.15	30.82	287	327	P	V
		5764	107.47	-	-	90.94	35.19	12.18	30.84	287	327	P	V
		5764	99.79	-	-	83.26	35.19	12.18	30.84	287	327	A	V
		5851.3	68.29	-51.05	119.34	51.56	35.35	12.25	30.87	287	327	P	V
		5858	67.31	-42.75	110.06	50.56	35.37	12.26	30.88	287	327	P	V
		5874.8	63.66	-41.7	105.36	46.89	35.38	12.28	30.89	287	327	P	V
		5933.2	56.32	-11.98	68.3	39.48	35.43	12.32	30.91	287	327	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE80_Full (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full		11549.54	44.44	-29.56	74	48.9	38.27	17.66	60.39	100	360	P	H
CH 155 5775MHz		11549.54	46.12	-27.88	74	50.58	38.27	17.66	60.39	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5725~5850MHz

WIFI 802.11ax HE80_Partial 484 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Partial 484/65 CH 155 5775MHz		5648.4	58.13	-10.17	68.3	42.02	34.81	12.08	30.78	100	247	P	H
		5686.8	74.09	-21.47	95.56	57.8	34.97	12.12	30.8	100	247	P	H
		5713.6	78.96	-30.15	109.11	62.61	35.03	12.13	30.81	100	247	P	H
		5723.2	78.15	-40.05	118.2	61.74	35.08	12.15	30.82	100	247	P	H
		5770	108.3	-	-	91.7	35.25	12.19	30.84	100	247	P	H
		5770	100.66	-	-	84.06	35.25	12.19	30.84	100	247	A	H
		5851.2	73.6	-45.96	119.56	56.87	35.35	12.25	30.87	100	247	P	H
		5861.6	62.36	-46.69	109.05	45.61	35.37	12.26	30.88	100	247	P	H
		5912.8	58.43	-18.87	77.3	41.6	35.42	12.31	30.9	100	247	P	H
		5948	56.89	-11.41	68.3	40.01	35.45	12.34	30.91	100	247	P	H
		5622	58.12	-10.18	68.3	42.08	34.75	12.06	30.77	292	323	P	V
		5696.8	70.47	-32.47	102.94	54.18	34.97	12.12	30.8	292	323	P	V
		5716.8	74.46	-35.55	110.01	58.11	35.03	12.13	30.81	292	323	P	V
		5724.4	75.03	-45.9	120.93	58.62	35.08	12.15	30.82	292	323	P	V
		5740	107.03	-	-	90.55	35.14	12.16	30.82	292	323	P	V
		5740	98.52	-	-	82.04	35.14	12.16	30.82	292	323	A	V
		5850.8	55.01	-65.47	120.48	38.28	35.35	12.25	30.87	292	323	P	V
		5870.8	55.92	-50.55	106.47	39.14	35.38	12.28	30.88	292	323	P	V
		5884.8	57.72	-40.3	98.02	40.95	35.38	12.28	30.89	292	323	P	V
		5988.4	56.83	-11.47	68.3	39.91	35.48	12.37	30.93	292	323	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)
802.11ax HE80 Partial 484/66 CH 155 5775MHz		5649.98	61.84	-6.46	68.3	45.67	34.86	12.09	30.78	108	247	P	H
		5663.2	67.64	-10.46	78.1	51.47	34.86	12.09	30.78	108	247	P	H
		5715.6	78.47	-31.2	109.67	62.12	35.03	12.13	30.81	108	247	P	H
		5722	76.64	-38.82	115.46	60.23	35.08	12.15	30.82	108	247	P	H
		5782	108.63	-	-	92.03	35.25	12.19	30.84	108	247	P	H
		5782	100.95	-	-	84.35	35.25	12.19	30.84	108	247	A	H
		5850.4	65.33	-56.06	121.39	48.6	35.35	12.25	30.87	108	247	P	H
		5861.6	62.85	-46.2	109.05	46.1	35.37	12.26	30.88	108	247	P	H
		5878.4	65.22	-37.55	102.77	48.45	35.38	12.28	30.89	108	247	P	H
		5990	56.35	-11.95	68.3	39.4	35.5	12.38	30.93	108	247	P	H
		5616.4	58.33	-9.97	68.3	42.29	34.75	12.06	30.77	287	326	P	V
		5678	69.02	-20.04	89.06	52.79	34.92	12.1	30.79	287	326	P	V
		5719.2	62.72	-47.96	110.68	46.3	35.08	12.15	30.81	287	326	P	V
		5721.6	66.73	-47.82	114.55	50.32	35.08	12.15	30.82	287	326	P	V
		5794	108.83	-	-	92.16	35.3	12.21	30.84	287	326	P	V
		5794	100.18	-	-	83.51	35.3	12.21	30.84	287	326	A	V
		5850.8	69.09	-51.39	120.48	52.36	35.35	12.25	30.87	287	326	P	V
		5860	68.3	-41.2	109.5	51.55	35.37	12.26	30.88	287	326	P	V
		5878.8	64	-38.48	102.48	47.23	35.38	12.28	30.89	287	326	P	V
		5952	56.73	-11.57	68.3	39.85	35.45	12.34	30.91	287	326	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11ax HE80_ (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	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)
802.11ax HE80 LF		36.79	31.63	-8.37	40	41.87	21.7	0.8	32.74	100	360	P	H
		56.19	30.29	-9.71	40	48.31	14.04	1.12	33.18	-	-	P	H
		100.81	19.18	-24.32	43.5	32.47	18.09	1.52	32.9	-	-	P	H
		164.83	19.15	-24.35	43.5	32.93	17.15	1.96	32.89	-	-	P	H
		543.13	27.84	-18.16	46	31.2	25.71	3.56	32.63	-	-	P	H
		603.27	29.6	-16.4	46	32.84	25.52	3.75	32.51	-	-	P	H
		30	22.84	-17.16	40	29.33	25.5	0.71	32.7	-	-	P	V
		130.88	21.42	-22.08	43.5	34.79	17.73	1.74	32.84	-	-	P	V
		275.41	22.18	-23.82	46	32.84	19.81	2.53	33	-	-	P	V
		468.44	26.03	-19.97	46	31.53	23.93	3.31	32.74	-	-	P	V
		656.62	28.26	-17.74	46	31.19	25.87	3.91	32.71	-	-	P	V
		930.16	30.35	-15.65	46	30.37	27.7	4.66	32.38	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	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. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path 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:

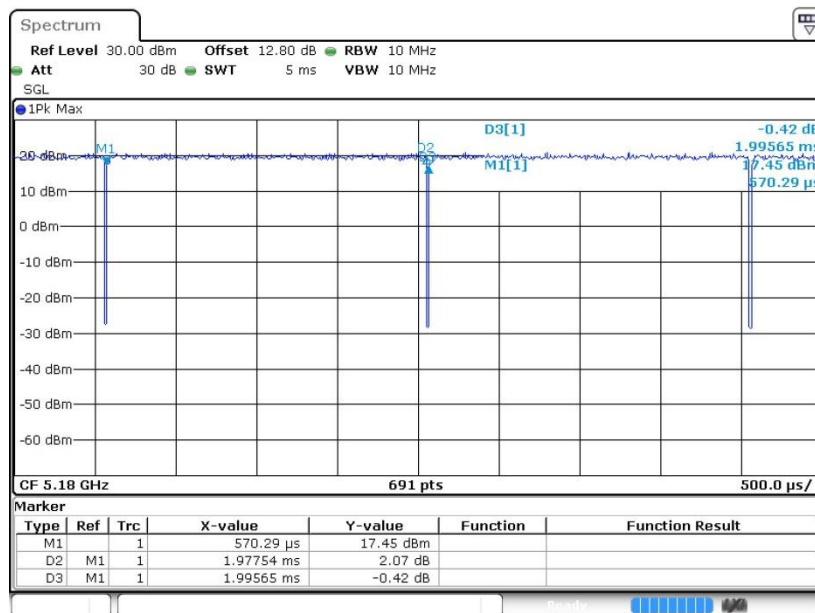
1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -10.46(dB)

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

Appendix D. Duty Cycle Plots

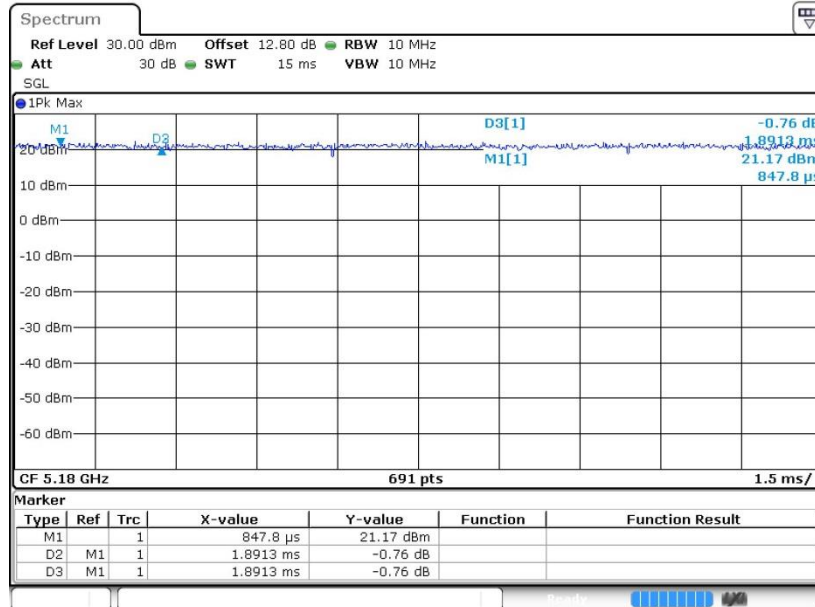
Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1+2	802.11a	99.09	-	-	10Hz
1+2	802.11ax HE20	100	-	-	10Hz
1+2	802.11ax HE40	100	-	-	10Hz
1+2	802.11ax HE80	100	-	-	10Hz

802.11a

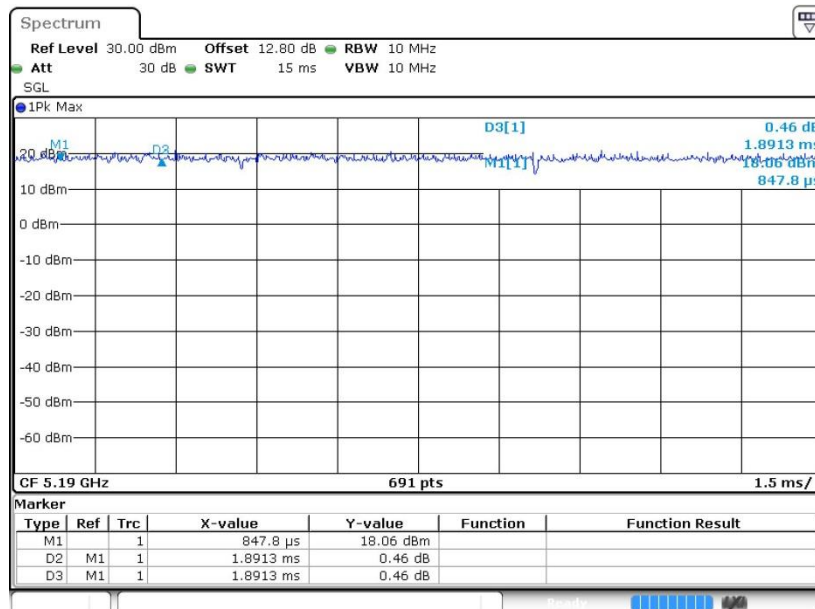




802.11ax HE20



802.11ax HE40





802.11ax HE80

