



FCC RF Test Report

APPLICANT : KonnectONE, LLC
EQUIPMENT : 5G MiFi
BRAND NAME : moxee
MODEL NAME : K873HSVL
FCC ID : 2APQU-K873HSVL
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Jun. 17, 2021 ~ Nov. 19, 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.

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.

Jason Jia

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager



Sporton International (Kunshan) Inc.

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR182710C	Rev. 01	Initial issue of report	Dec. 03, 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 7.11 dB at 43.580 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 12.11 dB at 0.168 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(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

KonnnectONE, LLC
40 Lake Bellevue Drive, Suite 350, Bellevue, WA 98005

1.2 Manufacturer

MeiG Smart Technology Co., Ltd
Floor 2, Office Building No.5, Lingxia Road, Fenghuang Community, Fuyong Street, Bao 'an District, Shenzhen

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G MiFi
Brand Name	moxee
Model Name	K873HSVL
FCC ID	2APQU-K873HSVL
HW Version	873_V1.01_PCB
SW Version	K873HSVL_6.0.01_EQ102
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a report for change in FCC ID, there is no difference on the product design, all the test results are leveraged from original FCC ID: 2APJ4-SRT873, report number FR133010C.



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification										
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz									
Maximum Output Power	<p><SISO Ant.1> 802.11a : 13.37 dBm / 0.0217 W</p> <p><SISO Ant.2> 802.11a : 13.14 dBm / 0.0206 W</p> <p><MIMO Ant.1+2> <5745 MHz ~ 5825 MHz> 802.11n HT20 : 16.00 dBm / 0.0398 W 802.11n HT40 : 15.82 dBm / 0.0382 W 802.11ac VHT20: 15.08 dBm / 0.0322 W 802.11ac VHT40: 14.89 dBm / 0.0308 W 802.11ac VHT80: 15.06 dBm / 0.0321 W 802.11ax HE20: 13.20 dBm / 0.0209 W 802.11ax HE40: 12.87 dBm / 0.0194 W 802.11ax HE80: 12.93 dBm / 0.0196 W</p>									
99% Occupied Bandwidth	<p><SISO Ant. 1> 802.11a : 16.88 MHz</p> <p><SISO Ant. 2> 802.11a : 16.93 MHz</p> <p><MIMO Ant.1+2> 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.06 MHz 802.11ac VHT80 : 75.52 MHz 802.11ax HE20: 19.18 MHz 802.11ax HE40: 37.86 MHz 802.11ax HE80: 77.20 MHz</p>									
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> : FPC Antenna with gain 3.10 dBi <Ant. 2> : FPC Antenna with gain 1.90 dBi									
Antenna Function Description	<table border="1"> <thead> <tr> <th></th> <th>Ant. 1</th> <th>Ant. 2</th> </tr> </thead> <tbody> <tr> <td>802.11 a SISO</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n/ac/ax MIMO</td> <td colspan="2">V</td> </tr> </tbody> </table>		Ant. 1	Ant. 2	802.11 a SISO	V	V	802.11 n/ac/ax MIMO	V	
	Ant. 1	Ant. 2								
802.11 a SISO	V	V								
802.11 n/ac/ax MIMO	V									

Note: 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.

1.5 Modification of EUT

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



1.6 Testing Location

<FCC>-KS

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	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 "#n" were 802.11ac VHT80.

2.2 Test Mode

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

Single Mode

Modulation	Data Rate
802.11a	6 Mbps

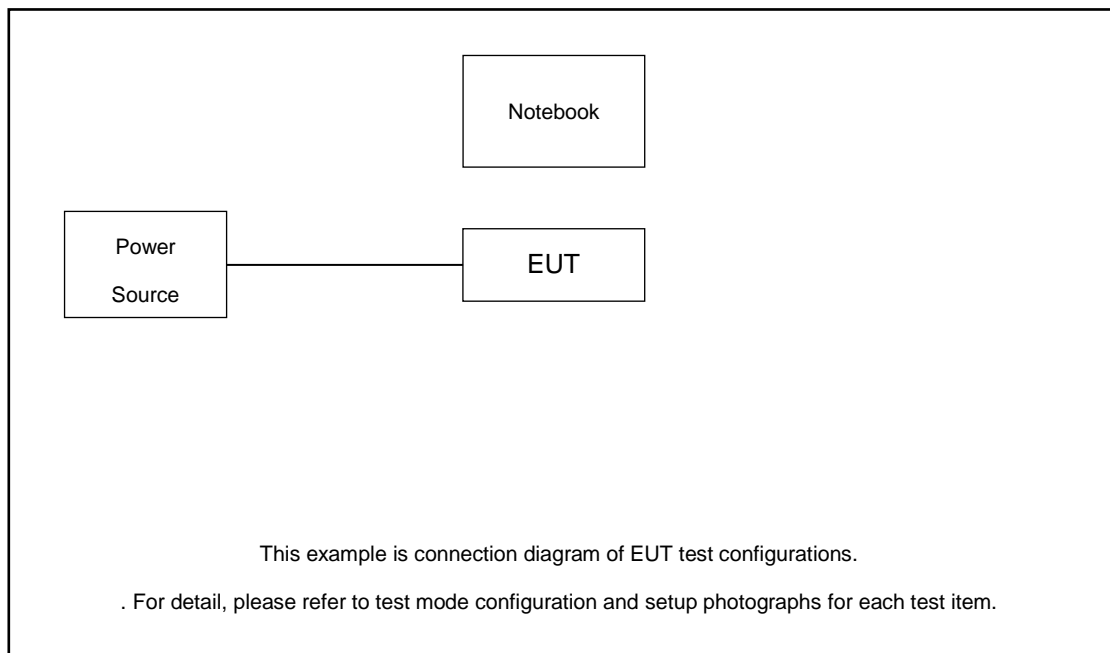
MIMO Mode

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0

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

Ch. #		U-NII-3 : 5725-5850 MHz			
		802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

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.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
2.	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 continuously transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the notebook under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss

Offset = RF cable loss r.

Following shows an offset computation example with cable loss 7.2 dB.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 7.2 \text{ (dB)} \end{aligned}$$

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.

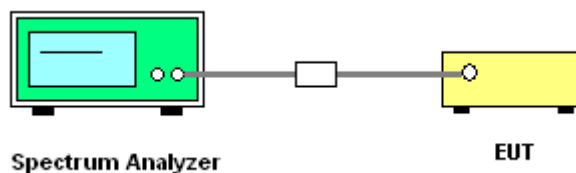
3.1.2 Measuring Instruments

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

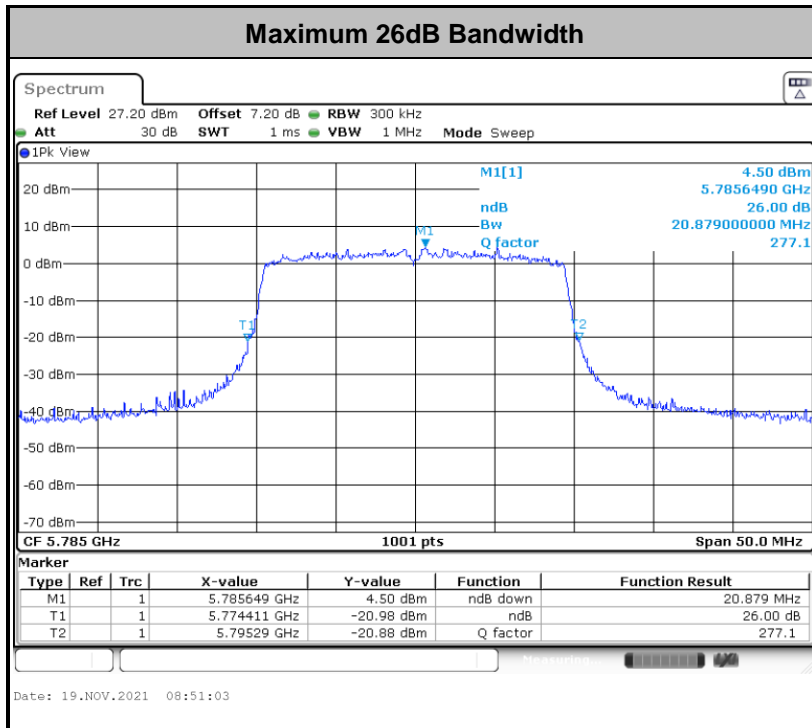
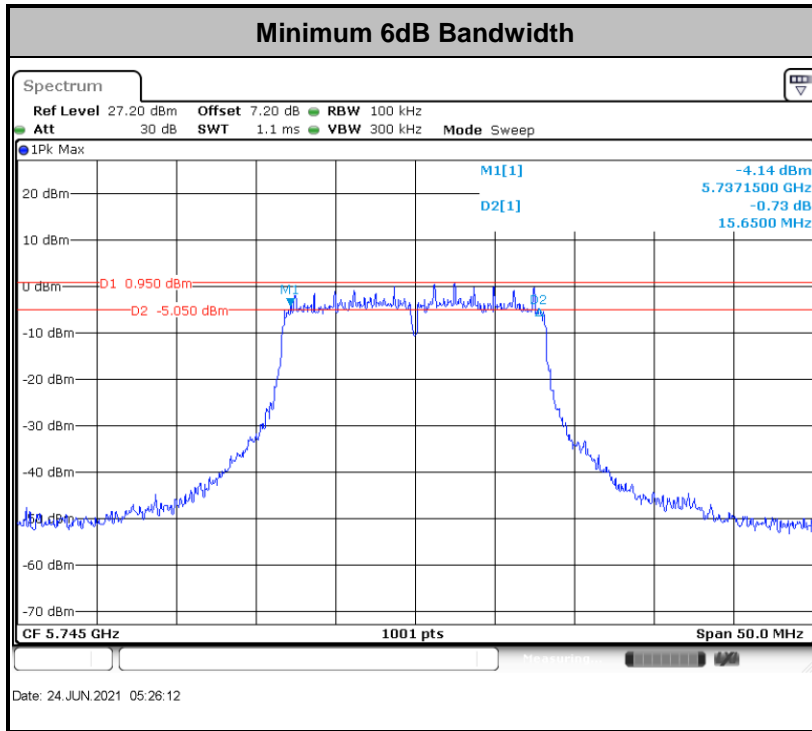


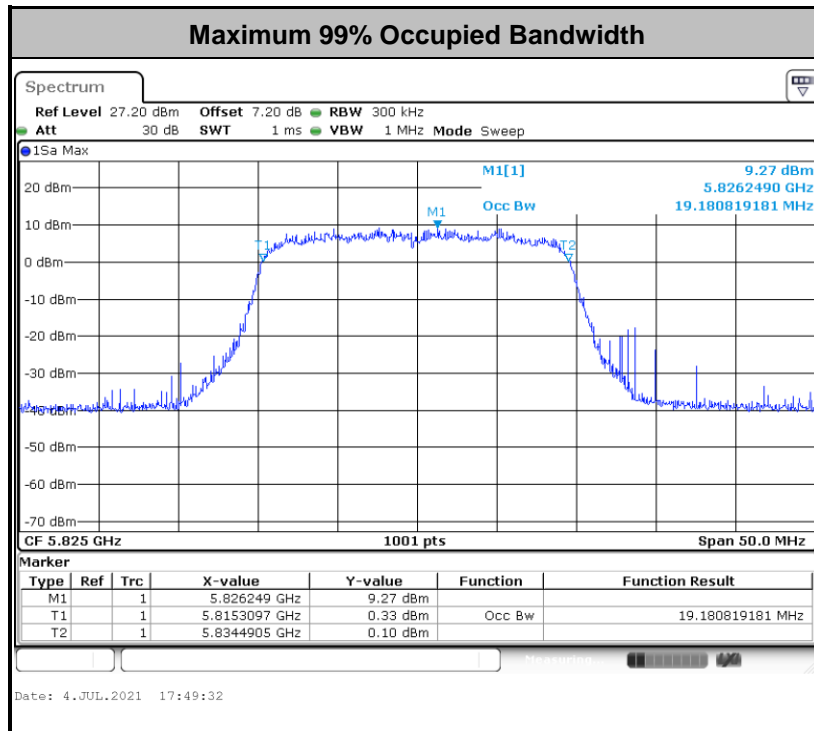
3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.



For 20MHz:

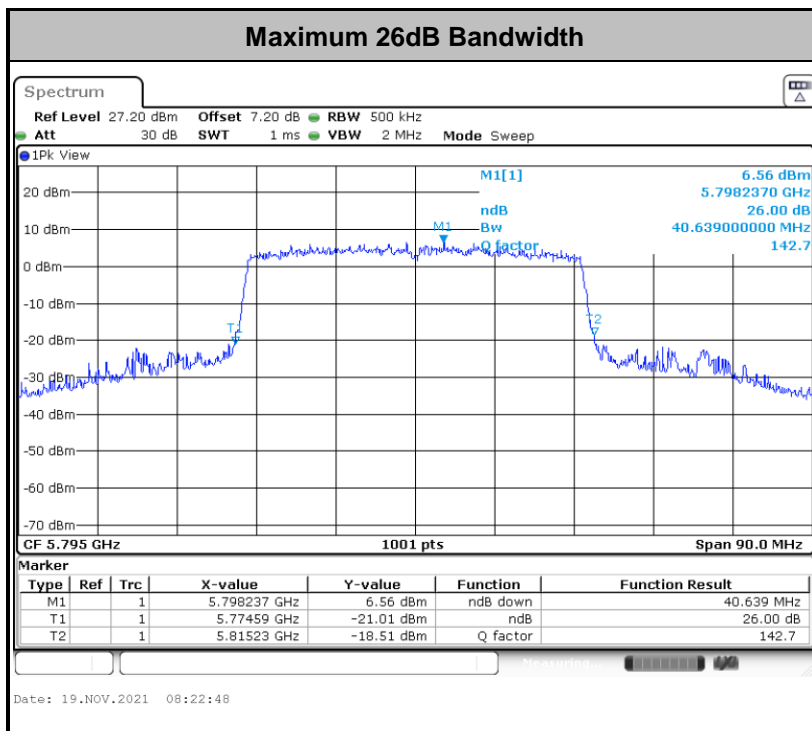
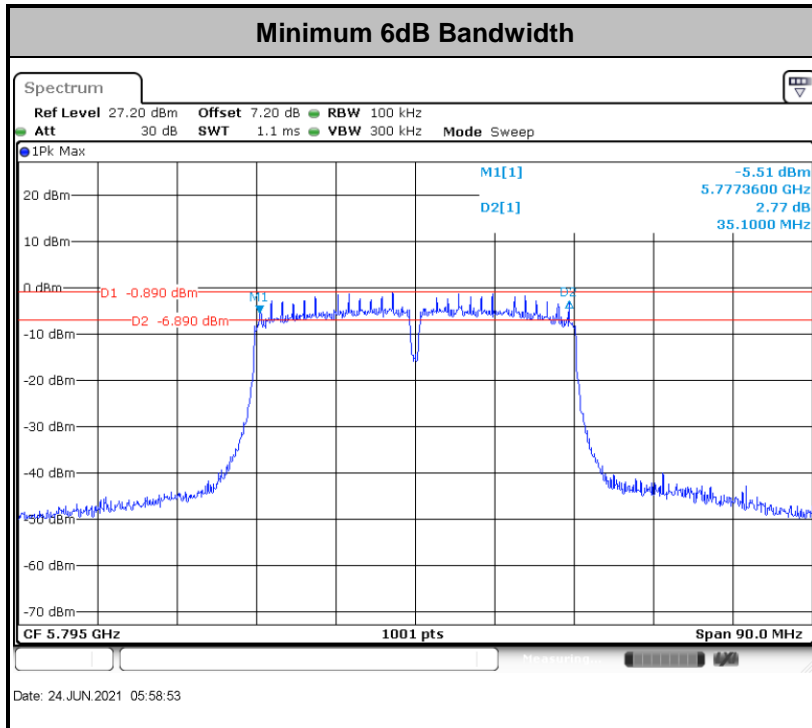


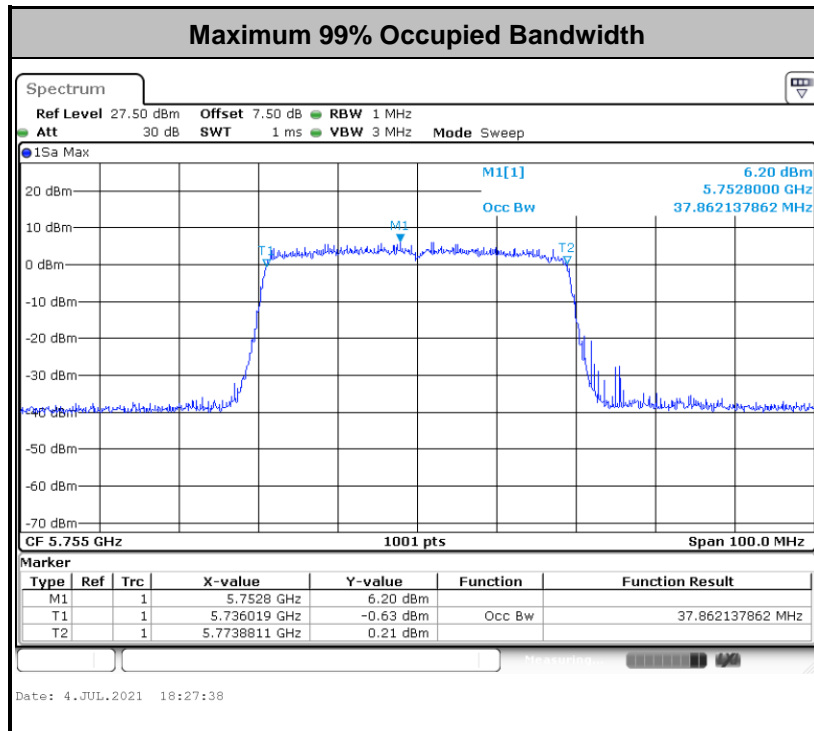


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



For 40MHz:

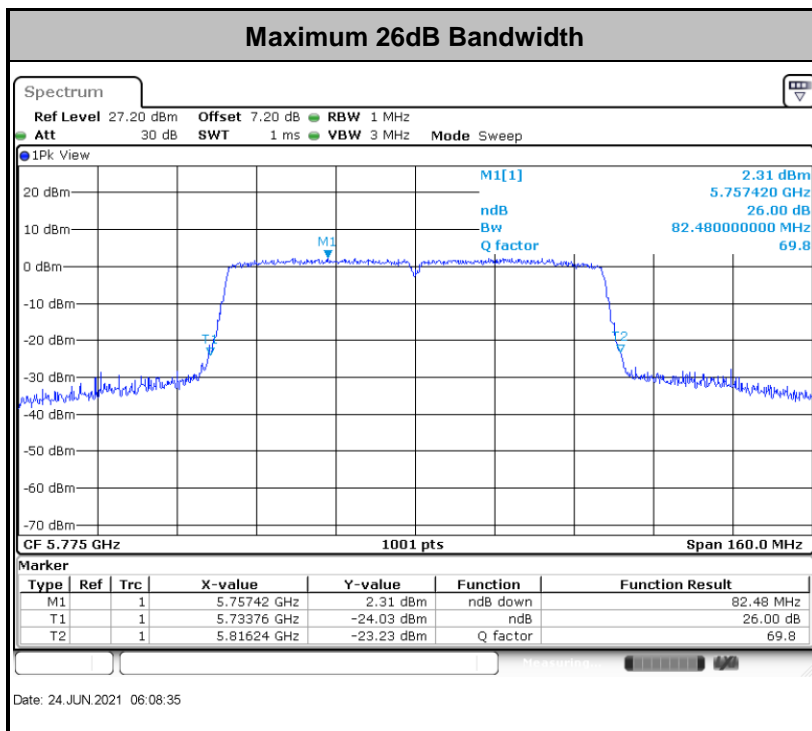
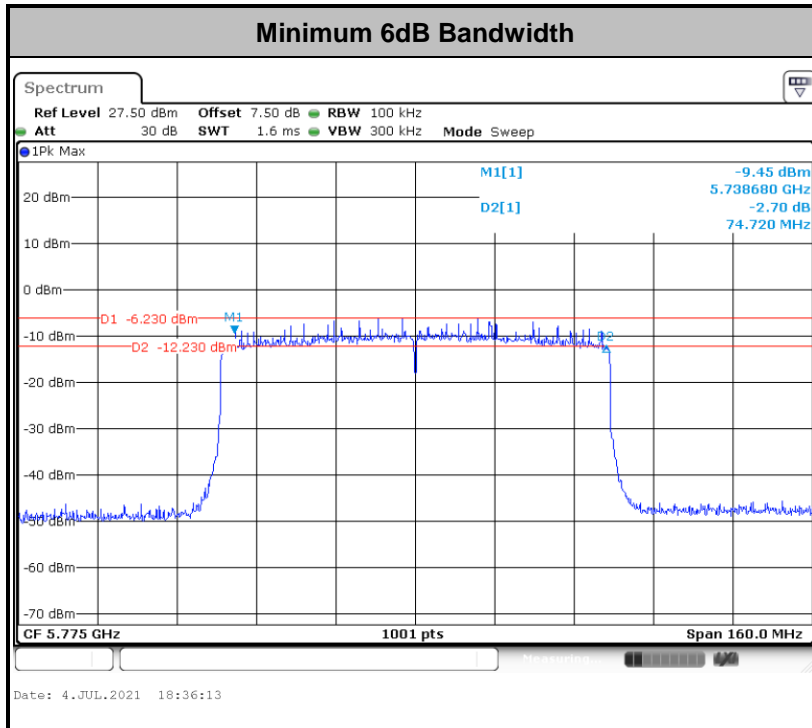


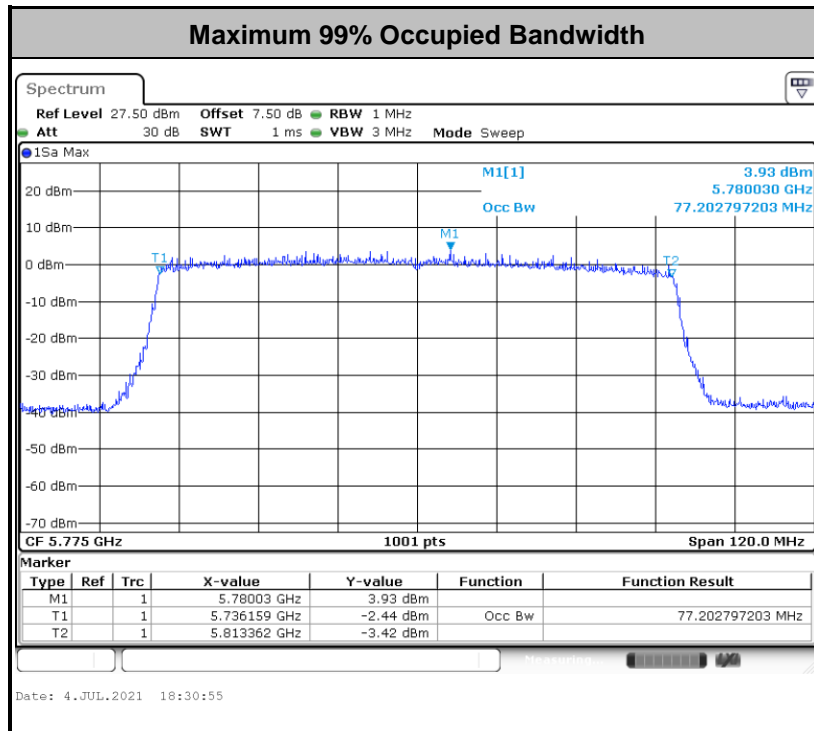


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



For 80MHz:





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.

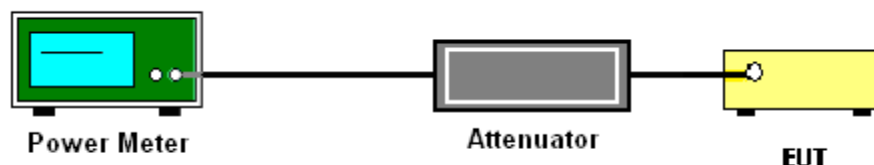
3.2.3 Test Procedures

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.

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).

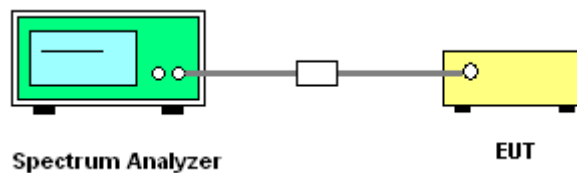
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW \geq 1 MHz.
- Number of points in sweep \geq 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(500\text{kHz}/\text{RBW})$ 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 $10 \log(N_{ANT})$ 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 $10 \log(N_{ANT})$ dB is added to each spectrum value before comparing to the emission limit. The addition of $10 \log(N_{ANT})$ dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{ANT}^{\text{th}}$ of the PSD limit.

3.3.4 Test Setup

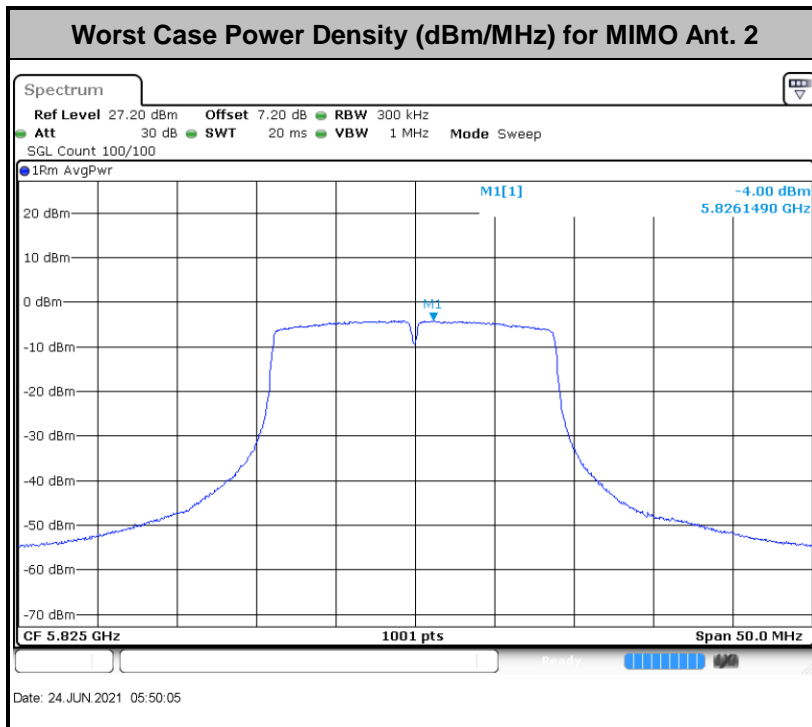
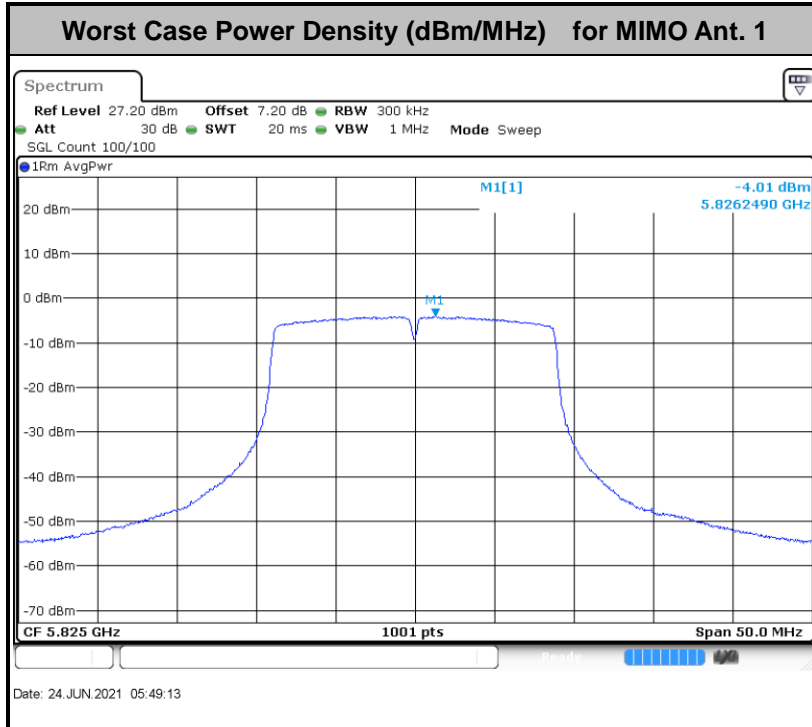




3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<CDD Modes>



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.

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

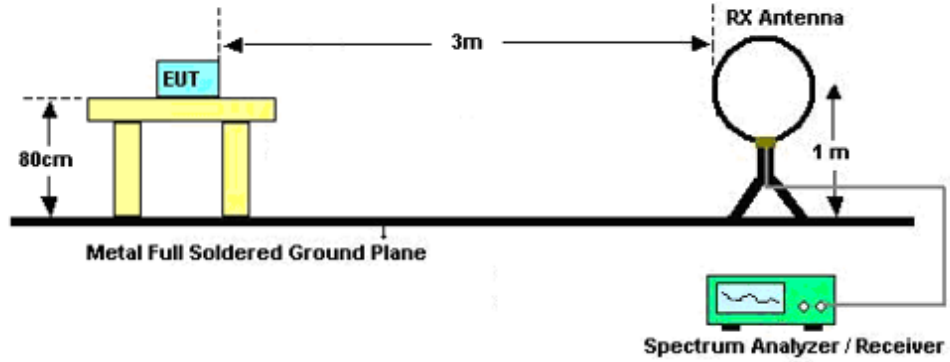


3.4.3 Test Procedures

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

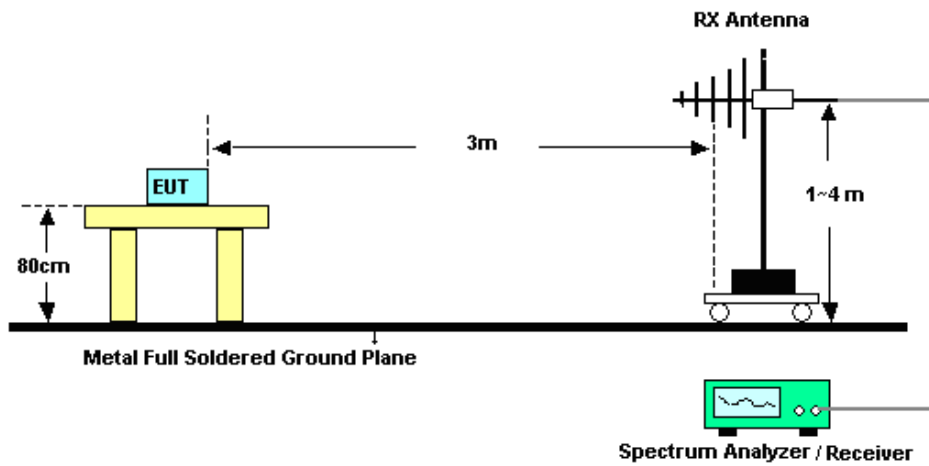
3.4.4 Test Setup

For radiated emissions below 30MHz



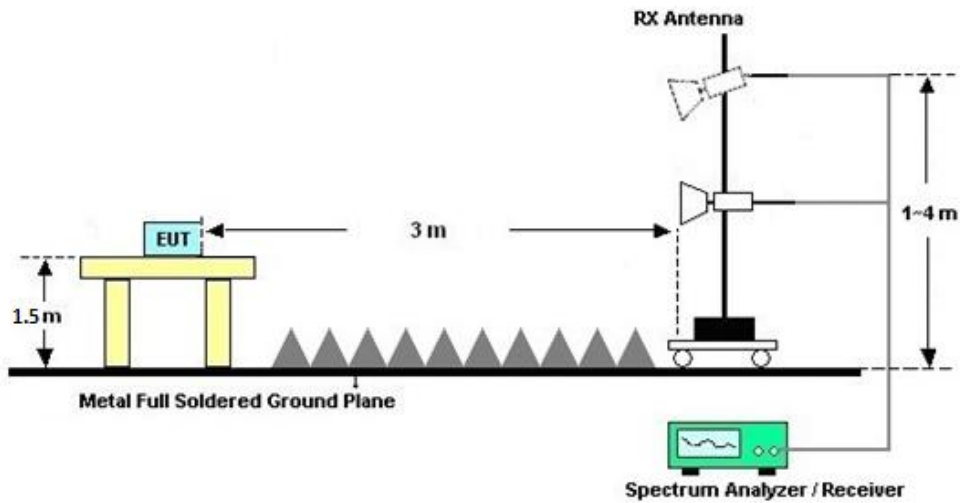
For radiated emissions from 30MHz to 1GHz

<CDD Mode>



For radiated emissions above 1GHz

<CDD Mode>



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 (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

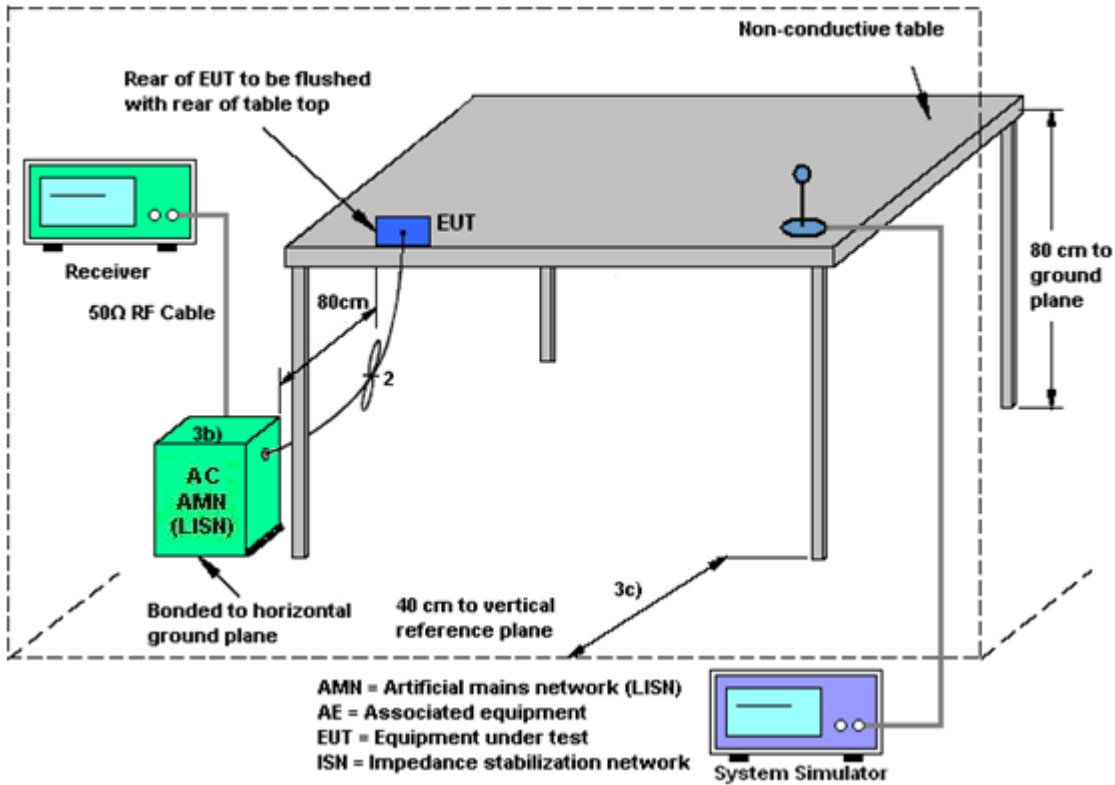
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 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 = GANT + Array Gain, where Array Gain is as follows.

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

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 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 IV	3.10	1.90	3.10	5.53	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	101040	10Hz~40GHz	Nov. 01, 2020	Jun. 17, 2021~ Nov. 19, 2021	Oct. 31, 2021	Conducted (TH01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 31, 2021		Oct. 30, 2022	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 07, 2021	Jun. 17, 2021~ Nov. 19, 2021	Jan. 06, 2022	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 07, 2021	Jun. 17, 2021~ Nov. 19, 2021	Jan. 06, 2022	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 17, 2020	Jul. 22, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Apr. 13, 2021	Jul. 22, 2021	Apr. 12, 2022	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Jul. 22, 2021	Oct. 31, 2021	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 04, 2021	Jul. 22, 2021	Jun. 03, 2022	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 24, 2021	Jul. 22, 2021	Apr. 23, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2020	Jul. 22, 2021	Nov. 09, 2021	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Apr. 12, 2021	Jul. 22, 2021	Apr. 11, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 07, 2021	Jul. 22, 2021	Jan. 06, 2022	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	1Ghz-18Ghz	Oct. 17, 2020	Jul. 22, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 17, 2020	Jul. 22, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 22, 2021	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 22, 2021	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 22, 2021	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Jul. 10, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2020	Jul. 10, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 17, 2020	Jul. 10, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2020	Jul. 10, 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))	2.9dB
---	-------

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
---	-------

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

Test Engineer:	albert shi	Temperature:	21~25	°C
Test Date:	2021/6/17~2021/9/28	Relative Humidity:	51~54	%

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	1	149	5745	16.88	16.88	19.13	18.93	15.65	16.30	0.5	0.5	Pass
11a	6Mbps	1	157	5785	16.88	16.93	19.03	19.13	15.80	16.30	0.5	0.5	Pass
11a	6Mbps	1	165	5825	16.83	16.88	18.93	18.93	16.05	16.30	0.5	0.5	Pass
HT20	MCS0	2	149	5745	17.88	17.88	19.93	20.18	16.75	16.20	0.5		Pass
HT20	MCS0	2	157	5785	18.03	18.03	20.03	20.48	16.75	16.15	0.5		Pass
HT20	MCS0	2	165	5825	17.88	17.93	20.28	19.93	16.85	17.30	0.5		Pass
HT40	MCS0	2	151	5755	36.06	36.06	40.55	39.74	35.37	35.37	0.5		Pass
HT40	MCS0	2	159	5795	36.06	36.06	40.64	40.64	35.10	35.19	0.5		Pass
VHT80	MCS0	2	155	5775	75.52	75.52	82.48	82.32	75.36	75.04	0.5		Pass
HE20	MCS0	2	149	5745	19.13	19.18	20.68	20.73	18.35	18.65	0.5		Pass
HE20	MCS0	2	157	5785	19.13	19.18	20.58	20.88	18.20	17.40	0.5		Pass
HE20	MCS0	2	165	5825	19.18	19.13	20.73	20.63	18.70	18.00	0.5		Pass
HE40	MCS0	2	151	5755	37.76	37.86	40.37	40.55	37.53	37.44	0.5		Pass
HE40	MCS0	2	159	5795	37.86	37.76	40.19	40.37	36.81	36.36	0.5		Pass
HE80	MCS0	2	155	5775	77.20	77.20	81.84	82.00	74.72	76.64	0.5		Pass

TEST RESULTS DATA
Average Power Table

Band IV														
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	149	5745	0.08	0.05	13.29	13.14		30.00	30.00	3.10	1.90	Pass
11a	6Mbps	1	157	5785	0.08	0.05	13.34	12.76		30.00	30.00	3.10	1.90	Pass
11a	6Mbps	1	165	5825	0.08	0.05	13.37	12.31		30.00	30.00	3.10	1.90	Pass
HT20	MCS0	2	149	5745	0.00	0.00	12.86	13.11	16.00	30.00		3.10		Pass
HT20	MCS0	2	157	5785	0.00	0.00	13.07	12.89	15.99	30.00		3.10		Pass
HT20	MCS0	2	165	5825	0.00	0.00	13.02	12.56	15.81	30.00		3.10		Pass
HT40	MCS0	2	151	5755	0.00	0.00	12.61	12.93	15.78	30.00		3.10		Pass
HT40	MCS0	2	159	5795	0.00	0.00	12.82	12.79	15.82	30.00		3.10		Pass
VHT20	MCS0	2	149	5745	0.00	0.00	11.98	12.03	15.02	30.00		3.10		Pass
VHT20	MCS0	2	157	5785	0.00	0.00	12.06	12.07	15.08	30.00		3.10		Pass
VHT20	MCS0	2	165	5825	0.00	0.00	12.04	11.68	14.87	30.00		3.10		Pass
VHT40	MCS0	2	151	5755	0.00	0.00	11.75	11.99	14.88	30.00		3.10		Pass
VHT40	MCS0	2	159	5795	0.00	0.00	11.91	11.84	14.89	30.00		3.10		Pass
VHT80	MCS0	2	155	5775	0.00	0.00	12.02	12.07	15.06	30.00		3.10		Pass
HE20	MCS0	2	149	5745	0.00	0.00	9.58	10.25	12.94	30.00		3.10		Pass
HE20	26RU	2	149	5745	0.00	0.00	1.02	0.49	3.77	30.00		3.10		Pass
HE20	52RU	2	149	5745	0.00	0.00	1.49	1.61	4.56	30.00		3.10		Pass
HE20	106RU	2	149	5745	0.00	0.00	6.45	6.64	9.56	30.00		3.10		Pass
HE20	MCS0	2	157	5785	0.00	0.00	9.73	10.18	12.97	30.00		3.10		Pass
HE20	26RU	2	157	5785	0.00	0.00	1.06	0.85	3.96	30.00		3.10		Pass
HE20	52RU	2	157	5785	0.00	0.00	1.83	1.80	4.83	30.00		3.10		Pass
HE20	106RU	2	157	5785	0.00	0.00	6.51	6.63	9.58	30.00		3.10		Pass
HE20	MCS0	2	165	5825	0.00	0.00	10.32	10.05	13.20	30.00		3.10		Pass
HE20	26RU	2	165	5825	0.00	0.00	1.12	1.01	4.07	30.00		3.10		Pass
HE20	52RU	2	165	5825	0.00	0.00	0.49	1.83	4.22	30.00		3.10		Pass
HE20	106RU	2	165	5825	0.00	0.00	6.39	6.56	9.49	30.00		3.10		Pass
HE40	MCS0	2	151	5755	0.00	0.00	9.66	10.06	12.87	30.00		3.10		Pass
HE40	242RU	2	151	5755	0.00	0.00	6.20	6.00	9.11	30.00		3.10		Pass
HE40	MCS0	2	159	5795	0.00	0.00	9.77	9.73	12.76	30.00		3.10		Pass
HE40	242RU	2	159	5795	0.00	0.00	6.03	6.10	9.08	30.00		3.10		Pass
HE80	MCS0	2	155	5775	0.00	0.00	9.79	10.04	12.93	30.00		3.10		Pass
HE80	484RU	2	155	5775	0.00	0.00	6.80	6.92	9.87	30.00		3.10		Pass

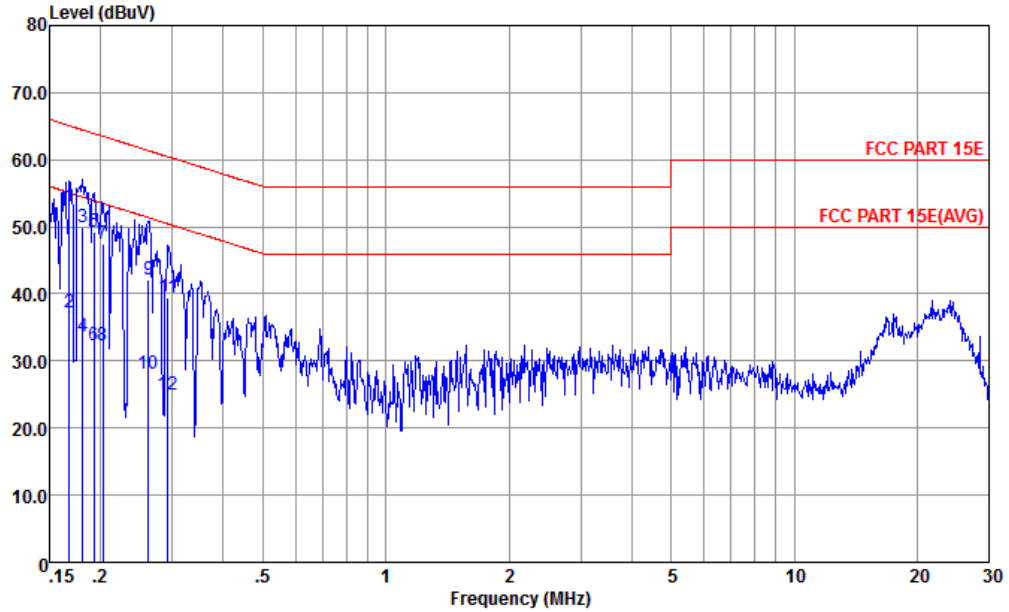
TEST RESULTS DATA
Power Spectral Density

Band IV																
Mod.	Data Rate	NTX	CH.	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	1	149	5745	0.08	0.05	2.22	2.22	-1.74	-1.76		30.00	30.00	3.10	1.90	Pass
11a	6Mbps	1	157	5785	0.08	0.05	2.22	2.22	-1.49	-2.18		30.00	30.00	3.10	1.90	Pass
11a	6Mbps	1	165	5825	0.08	0.05	2.22	2.22	-1.46	-2.65		30.00	30.00	3.10	1.90	Pass
HT20	MCS0	2	149	5745	0.00	0.00	2.22					0.66	30.00	5.53		Pass
HT20	MCS0	2	157	5785	0.00	0.00	2.22					0.84	30.00	5.53		Pass
HT20	MCS0	2	165	5825	0.00	0.00	2.22					1.23	30.00	5.53		Pass
HT40	MCS0	2	151	5755	0.00	0.00	2.22					-2.68	30.00	5.53		Pass
HT40	MCS0	2	159	5795	0.00	0.00	2.22					-1.91	30.00	5.53		Pass
VHT80	MCS0	2	155	5775	0.00	0.00	2.22					-6.62	30.00	5.53		Pass
HE20	MCS0	2	149	5745	0.00	0.00	2.22					-1.92	30.00	5.53		Pass
HE20	26RU	2	149	5745	0.00	0.00	2.22					-2.69	30.00	5.53		Pass
HE20	52RU	2	149	5745	0.00	0.00	2.22					-2.76	30.00	5.53		Pass
HE20	106RU	2	149	5745	0.00	0.00	2.22					-2.51	30.00	5.53		Pass
HE20	MCS0	2	157	5785	0.00	0.00	2.22					-2.12	30.00	5.53		Pass
HE20	26RU	2	157	5785	0.00	0.00	2.22					-2.29	30.00	5.53		Pass
HE20	52RU	2	157	5785	0.00	0.00	2.22					-2.70	30.00	5.53		Pass
HE20	106RU	2	157	5785	0.00	0.00	2.22					-2.58	30.00	5.53		Pass
HE20	MCS0	2	165	5825	0.00	0.00	2.22					-1.82	30.00	5.53		Pass
HE20	26RU	2	165	5825	0.00	0.00	2.22					-2.44	30.00	5.53		Pass
HE20	52RU	2	165	5825	0.00	0.00	2.22					-2.09	30.00	5.53		Pass
HE20	106RU	2	165	5825	0.00	0.00	2.22					-2.39	30.00	5.53		Pass
HE40	MCS0	2	151	5755	0.00	0.00	2.22					-4.71	30.00	5.53		Pass
HE40	242 RU	2	151	5755	0.00	0.00	2.22					-5.62	30.00	5.53		Pass
HE40	MCS0	2	159	5795	0.00	0.00	2.22					-4.86	30.00	5.53		Pass
HE40	242 RU	2	159	5795	0.00	0.00	2.22					-5.61	30.00	5.53		Pass
HE80	MCS0	2	155	5775	0.00	0.00	2.22					-7.61	30.00	5.53		Pass
HE80	484 RU	2	155	5775	0.00	0.00	2.22					-7.84	30.00	5.53		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 :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

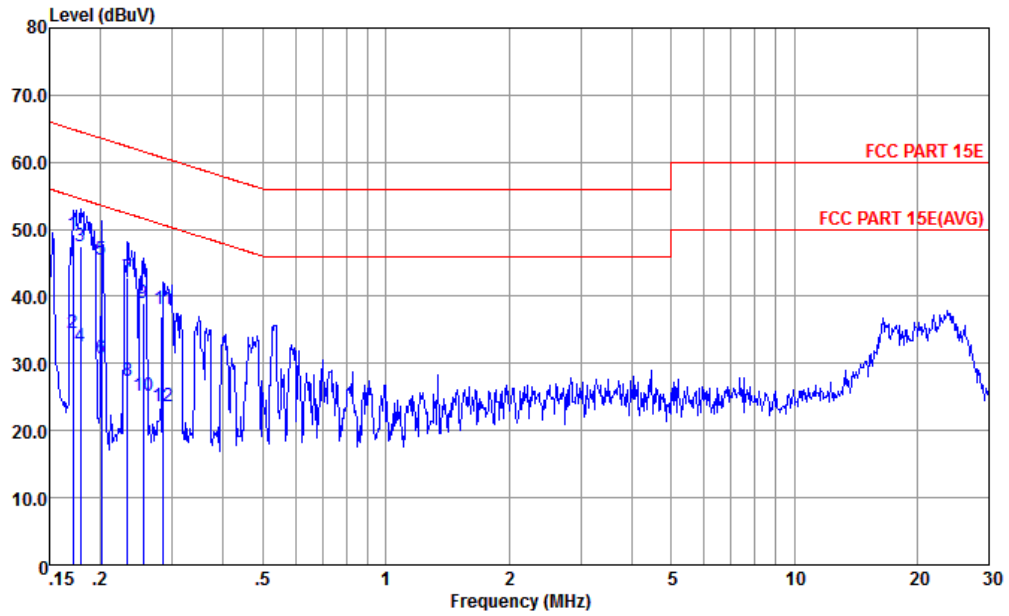


Site : CO01-KS
 Condition : FCC PART 15E TWO-LISN-CN02-L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1 *	0.168	52.97	-12.11	65.08	32.90	9.64	10.43	QP
2	0.168	37.27	-17.81	55.08	17.20	9.64	10.43	Average
3	0.181	49.95	-14.51	64.46	29.91	9.64	10.40	QP
4	0.181	33.65	-20.81	54.46	13.61	9.64	10.40	Average
5	0.192	49.22	-14.71	63.93	29.20	9.64	10.38	QP
6	0.192	32.22	-21.71	53.93	12.20	9.64	10.38	Average
7	0.203	47.51	-15.98	63.49	27.51	9.64	10.36	QP
8	0.203	32.21	-21.28	53.49	12.21	9.64	10.36	Average
9	0.262	42.17	-19.21	61.38	22.20	9.64	10.33	QP
10	0.262	28.17	-23.21	51.38	8.20	9.64	10.33	Average
11	0.292	39.45	-21.01	60.46	19.50	9.64	10.31	QP
12	0.292	25.05	-25.41	50.46	5.10	9.64	10.31	Average



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 *	0.171	49.17	-15.73	64.90	28.90	9.84	10.43	QP
2	0.171	34.47	-20.43	54.90	14.20	9.84	10.43	Average
3	0.179	47.57	-16.98	64.55	27.31	9.85	10.41	QP
4	0.179	32.57	-21.98	54.55	12.31	9.85	10.41	Average
5	0.201	45.45	-18.13	63.58	25.20	9.89	10.36	QP
6	0.201	30.85	-22.73	53.58	10.60	9.89	10.36	Average
7	0.233	42.70	-19.65	62.35	22.51	9.85	10.34	QP
8	0.233	27.40	-24.95	52.35	7.21	9.85	10.34	Average
9	0.255	39.06	-22.54	61.60	18.90	9.83	10.33	QP
10	0.255	25.26	-26.34	51.60	5.10	9.83	10.33	Average
11	0.285	38.22	-22.46	60.68	18.11	9.80	10.31	QP
12	0.285	23.72	-26.96	50.68	3.61	9.80	10.31	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

UNII 3 - 5725~5850MHz

ANT 1 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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5604	58.16	-10.14	68.3	41.4	35.47	12.05	30.76	103	115	P	H
		5698.4	57.6	-46.52	104.12	40.69	35.59	12.12	30.8	103	115	P	H
		5716.4	57.55	-52.34	109.89	40.61	35.62	12.13	30.81	103	115	P	H
		5722.4	57.97	-58.4	116.37	40.99	35.65	12.15	30.82	103	115	P	H
		5746	106.32	-	-	89.31	35.68	12.16	30.83	103	115	P	H
		5746	98.92	-	-	81.91	35.68	12.16	30.83	103	115	A	H
		5617.6	58.65	-9.65	68.3	41.88	35.48	12.06	30.77	297	40	P	V
		5693.6	57.76	-42.82	100.58	40.85	35.59	12.12	30.8	297	40	P	V
		5719.2	57.86	-52.82	110.68	40.87	35.65	12.15	30.81	297	40	P	V
		5724.8	57.09	-64.75	121.84	40.11	35.65	12.15	30.82	297	40	P	V
		5740	103.66	-	-	86.64	35.68	12.16	30.82	297	40	P	V
		5740	95.56	-	-	78.54	35.68	12.16	30.82	297	40	A	V
802.11a CH 165 5825MHz		5850.4	58.34	-63.05	121.39	41.09	35.87	12.25	30.87	100	111	P	H
		5869.6	58.97	-47.84	106.81	41.69	35.9	12.26	30.88	100	111	P	H
		5875.6	58.82	-46.03	104.85	41.54	35.89	12.28	30.89	100	111	P	H
		5999.2	58.14	-10.16	68.3	40.86	35.83	12.38	30.93	100	111	P	H
		5830	107.57	-	-	90.35	35.84	12.24	30.86	100	111	P	H
		5830	99.82	-	-	82.6	35.84	12.24	30.86	100	111	A	H
		5852.4	56.86	-59.97	116.83	39.61	35.87	12.25	30.87	298	300	P	V
		5867.2	59.19	-48.29	107.48	41.91	35.9	12.26	30.88	298	300	P	V
		5921.6	58.02	-12.79	70.81	40.73	35.87	12.32	30.9	298	300	P	V
		5995.6	57.66	-10.64	68.3	40.38	35.83	12.38	30.93	298	300	P	V
		5830	104.68	-	-	87.46	35.84	12.24	30.86	298	300	P	V
		5830	97.3	-	-	80.08	35.84	12.24	30.86	298	300	A	V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Path Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include test results for channels 149, 157, and 165, and a Remark section.



ANT 2 WIFI 802.11a (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		5642	58.64	-9.66	68.3	41.83	35.5	12.08	30.77	108	10	P	H
		5675.6	56.86	-30.42	87.28	39.99	35.56	12.1	30.79	108	10	P	H
		5715.6	58	-51.67	109.67	41.06	35.62	12.13	30.81	108	10	P	H
		5724.8	58.2	-63.64	121.84	41.22	35.65	12.15	30.82	108	10	P	H
		5746	102.67	-	-	85.66	35.68	12.16	30.83	108	10	P	H
		5746	94.87	-	-	77.86	35.68	12.16	30.83	108	10	A	H
		5612.4	57.81	-10.49	68.3	41.06	35.47	12.05	30.77	101	111	P	V
		5669.6	57.3	-25.54	82.84	40.43	35.56	12.1	30.79	101	111	P	V
		5705.2	59.43	-47.33	106.76	42.49	35.62	12.13	30.81	101	111	P	V
		5723.6	56.86	-62.25	119.11	39.88	35.65	12.15	30.82	101	111	P	V
		5740	98.06	-	-	81.04	35.68	12.16	30.82	101	111	P	V
		5740	90.62	-	-	73.6	35.68	12.16	30.82	101	111	A	V
802.11a CH 165 5825MHz		5850.4	57.82	-63.57	121.39	40.57	35.87	12.25	30.87	100	8	P	H
		5866.4	58.35	-49.36	107.71	41.07	35.9	12.26	30.88	100	8	P	H
		5922.4	59.74	-10.48	70.22	42.45	35.87	12.32	30.9	100	8	P	H
		5963.6	58.17	-10.13	68.3	40.88	35.85	12.35	30.91	100	8	P	H
		5824	103.21	-	-	85.99	35.84	12.24	30.86	100	8	P	H
		5824	95.4	-	-	78.18	35.84	12.24	30.86	100	8	A	H
		5851.6	57.21	-61.44	118.65	39.96	35.87	12.25	30.87	381	99	P	V
		5869.2	57.53	-49.39	106.92	40.25	35.9	12.26	30.88	381	99	P	V
		5907.6	57.85	-23.29	81.14	40.55	35.88	12.31	30.89	381	99	P	V
		5929.2	58.83	-9.47	68.3	41.54	35.87	12.32	30.9	381	99	P	V
		5818	98.34	-	-	81.17	35.81	12.22	30.86	381	99	P	V
	5818	90.41	-	-	73.24	35.81	12.22	30.86	381	99	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 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). Rows include channels 149 (5745MHz), 157 (5785MHz), and 165 (5825MHz) with their respective test results.

Remark
1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		5628.8	56.41	-11.89	68.3	41.88	34.75	12.06	32.28	111	117	P	H
		5690.8	56.64	-41.88	98.52	41.81	34.97	12.12	32.26	111	117	P	H
		5716.8	56.24	-53.77	110.01	41.34	35.03	12.13	32.26	111	117	P	H
		5723.2	57	-61.2	118.2	42.03	35.08	12.15	32.26	111	117	P	H
		5746	104.52	-	-	89.47	35.14	12.16	32.25	111	117	P	H
		5746	96.77	-	-	81.72	35.14	12.16	32.25	111	117	A	H
		5609.2	55.71	-12.59	68.3	41.24	34.7	12.05	32.28	278	81	P	V
		5698	56.24	-47.59	103.83	41.41	34.97	12.12	32.26	278	81	P	V
		5715.6	55.92	-53.75	109.67	41.02	35.03	12.13	32.26	278	81	P	V
		5724.4	55.61	-65.32	120.93	40.64	35.08	12.15	32.26	278	81	P	V
		5746	101.49	-	-	86.44	35.14	12.16	32.25	278	81	P	V
		5746	94.27	-	-	79.22	35.14	12.16	32.25	278	81	A	V
802.11n HT20 CH 165 5825MHz		5853.6	55.58	-58.51	114.09	40.18	35.37	12.26	32.23	105	109	P	H
		5871.6	56.02	-50.23	106.25	40.58	35.38	12.28	32.22	105	109	P	H
		5922.8	56.65	-13.27	69.92	41.12	35.43	12.32	32.22	105	109	P	H
		5961.2	57.04	-11.26	68.3	41.43	35.47	12.35	32.21	105	109	P	H
		5818	105.59	-	-	90.29	35.32	12.22	32.24	105	109	P	H
		5818	97.58	-	-	82.28	35.32	12.22	32.24	105	109	A	H
		5850.8	55.48	-65	120.48	40.11	35.35	12.25	32.23	301	73	P	V
		5860	56.7	-52.8	109.5	41.3	35.37	12.26	32.23	301	73	P	V
		5922.4	56.48	-13.74	70.22	40.95	35.43	12.32	32.22	301	73	P	V
		5945.2	56.85	-11.45	68.3	41.28	35.45	12.34	32.22	301	73	P	V
		5824	102.68	-	-	87.35	35.33	12.24	32.24	301	73	P	V
		5824	94.5	-	-	79.17	35.33	12.24	32.24	301	73	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

Table with 14 columns: 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). Rows include test results for channels 149, 157, and 165.



UNII 3 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

Table with 14 columns: 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). Rows include frequency measurements from 5650 to 5938 MHz and 5758 MHz with various levels and antenna factors.



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)
802.11n HT40 CH 159 5795MHz		5642.8	55.73	-12.57	68.3	41.11	34.81	12.08	32.27	105	65	P	H
		5669.2	56.44	-26.11	82.55	41.68	34.92	12.1	32.26	105	65	P	H
		5712.8	55.54	-53.35	108.89	40.64	35.03	12.13	32.26	105	65	P	H
		5721	54.64	-58.54	113.18	39.67	35.08	12.15	32.26	105	65	P	H
		5853.2	55.41	-59.59	115	40.04	35.35	12.25	32.23	105	65	P	H
		5858.4	55.88	-54.07	109.95	40.48	35.37	12.26	32.23	105	65	P	H
		5876	56.16	-48.4	104.56	40.72	35.38	12.28	32.22	105	65	P	H
		5970.8	56.52	-11.78	68.3	40.91	35.47	12.35	32.21	105	65	P	H
		5782	101.83	-	-	86.63	35.25	12.19	32.24	105	65	P	H
		5782	101.83	-	-	86.63	35.25	12.19	32.24	105	65	A	H
		5636.4	56.12	-12.18	68.3	41.5	34.81	12.08	32.27	305	65	P	V
		5660.8	55.72	-20.6	76.32	41.04	34.86	12.09	32.27	305	65	P	V
		5715.6	54.76	-54.91	109.67	39.86	35.03	12.13	32.26	305	65	P	V
		5724.8	54.27	-67.57	121.84	39.3	35.08	12.15	32.26	305	65	P	V
		5853.2	55.21	-59.79	115	39.84	35.35	12.25	32.23	305	65	P	V
		5867.2	56.02	-51.46	107.48	40.62	35.37	12.26	32.23	305	65	P	V
		5910	56.36	-23.01	79.37	40.85	35.42	12.31	32.22	305	65	P	V
		5936.8	56.4	-11.9	68.3	40.87	35.43	12.32	32.22	305	65	P	V
	5800	99.07	-	-	83.8	35.3	12.21	32.24	305	65	P	V	
	5800	90.87	-	-	75.6	35.3	12.21	32.24	305	65	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

Table with 14 columns: 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). Rows include data for 802.11n HT40 CH 151 and CH 159 at various frequencies.

Remark
1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



UNII 3 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

Table with 14 columns: 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). Rows include frequency measurements from 5618 to 5794 MHz.

Remark
1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



UNII 3 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

Table with 14 columns: 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). It contains two rows of test data and a Remark section.



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		5644	55	-13.3	68.3	40.38	34.81	12.08	32.27	111	115	P	H
		5670.8	55.99	-27.74	83.73	41.23	34.92	12.1	32.26	111	115	P	H
		5703.2	54.93	-51.27	106.2	40.03	35.03	12.13	32.26	111	115	P	H
		5724.8	54.49	-67.35	121.84	39.52	35.08	12.15	32.26	111	115	P	H
		5746	105.83	-	-	90.78	35.14	12.16	32.25	111	115	P	H
		5746	96.88	-	-	81.83	35.14	12.16	32.25	111	115	A	H
		5606.4	56.32	-11.98	68.3	41.85	34.7	12.05	32.28	328	77	P	V
		5684.8	55.52	-38.57	94.09	40.69	34.97	12.12	32.26	328	77	P	V
		5709.2	54.97	-52.91	107.88	40.07	35.03	12.13	32.26	328	77	P	V
		5721.6	53.97	-60.58	114.55	39	35.08	12.15	32.26	328	77	P	V
		5746	103.87	-	-	88.82	35.14	12.16	32.25	328	77	P	V
		5746	94.99	-	-	79.94	35.14	12.16	32.25	328	77	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)
802.11ax HE20 Full CH 165 5825MHz		5854.8	54.92	-56.44	111.36	39.52	35.37	12.26	32.23	104	67	P	H
		5860.4	55.38	-54.01	109.39	39.98	35.37	12.26	32.23	104	67	P	H
		5894	56.69	-34.51	91.2	41.22	35.4	12.29	32.22	104	67	P	H
		5954	56.47	-11.83	68.3	40.89	35.45	12.34	32.21	104	67	P	H
		5818	107.08	-	-	91.78	35.32	12.22	32.24	104	67	P	H
		5818	97.4	-	-	82.1	35.32	12.22	32.24	104	67	A	H
		5850.4	54.74	-66.65	121.39	39.37	35.35	12.25	32.23	292	76	P	V
		5858.4	55.48	-54.47	109.95	40.08	35.37	12.26	32.23	292	76	P	V
		5906	56.42	-25.9	82.32	40.91	35.42	12.31	32.22	292	76	P	V
		5941.2	56.49	-11.81	68.3	40.92	35.45	12.34	32.22	292	76	P	V
		5818	104.13	-	-	88.83	35.32	12.22	32.24	292	76	P	V
		5818	95.01	-	-	79.71	35.32	12.22	32.24	292	76	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



UNII 3 5725~5850MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

Table with 14 columns: 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). Rows include test results for channels 149, 157, and 165.



UNII 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		5636	55.63	-12.67	68.3	41.01	34.81	12.08	32.27	101	111	P	H
		5700	56.05	-49.25	105.3	41.22	34.97	12.12	32.26	101	111	P	H
		5702	56.66	-49.2	105.86	41.76	35.03	12.13	32.26	101	111	P	H
		5722.4	55.58	-60.79	116.37	40.61	35.08	12.15	32.26	101	111	P	H
		5734	106.71	-	-	91.74	35.08	12.15	32.26	101	111	P	H
		5734	100.35	-	-	85.38	35.08	12.15	32.26	101	111	A	H
		5604.8	55.36	-12.94	68.3	40.89	34.7	12.05	32.28	315	76	P	V
		5698	56.13	-47.7	103.83	41.3	34.97	12.12	32.26	315	76	P	V
		5708.4	55.96	-51.69	107.65	41.06	35.03	12.13	32.26	315	76	P	V
		5723.6	55.4	-63.71	119.11	40.43	35.08	12.15	32.26	315	76	P	V
		5740	104.23	-	-	89.18	35.14	12.16	32.25	315	76	P	V
		5740	97.31	-	-	82.26	35.14	12.16	32.25	315	76	A	V
802.11ax HE20 Partial 26/8 CH 165 5825MHz		5851.2	57.37	-62.19	119.56	42	35.35	12.25	32.23	110	113	P	H
		5858.8	56.75	-53.08	109.83	41.35	35.37	12.26	32.23	110	113	P	H
		5900.4	57.32	-29.14	86.46	41.85	35.4	12.29	32.22	110	113	P	H
		5965.2	57.26	-11.04	68.3	41.65	35.47	12.35	32.21	110	113	P	H
		5836	104.53	-	-	89.2	35.33	12.24	32.24	110	113	P	H
		5836	98.49	-	-	83.16	35.33	12.24	32.24	110	113	A	H
		5853.2	56.13	-58.87	115	40.76	35.35	12.25	32.23	317	80	P	V
		5869.6	56.98	-49.83	106.81	41.57	35.37	12.26	32.22	317	80	P	V
		5888	57.24	-38.41	95.65	41.77	35.4	12.29	32.22	317	80	P	V
		5926.8	56.98	-11.32	68.3	41.45	35.43	12.32	32.22	317	80	P	V
		5836	102.87	-	-	87.54	35.33	12.24	32.24	317	80	P	V
		5836	95.07	-	-	79.74	35.33	12.24	32.24	317	80	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11ax HE20_Partial 52 (Band Edge @ 3m)

Table with 14 columns: 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). Rows include data for 802.11ax HE20 Partial 52/37 CH 149 5745MHz and 802.11ax HE20 Partial 52/40 CH 165 5825MHz.

Remark
1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



UNII 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		5638.8	56.26	-12.04	68.3	41.64	34.81	12.08	32.27	103	115	P	H
		5668.4	57.48	-24.47	81.95	42.72	34.92	12.1	32.26	103	115	P	H
		5714.4	56.11	-53.22	109.33	41.21	35.03	12.13	32.26	103	115	P	H
		5722.4	55.19	-61.18	116.37	40.22	35.08	12.15	32.26	103	115	P	H
		5740	107.61	-	-	92.56	35.14	12.16	32.25	103	115	P	H
		5740	99.26	-	-	84.21	35.14	12.16	32.25	103	115	A	H
		5642	55.9	-12.4	68.3	41.28	34.81	12.08	32.27	312	73	P	V
		5653.2	55.71	-14.97	70.68	41.03	34.86	12.09	32.27	312	73	P	V
		5710.8	56.23	-52.1	108.33	41.33	35.03	12.13	32.26	312	73	P	V
		5724.8	55.71	-66.13	121.84	40.74	35.08	12.15	32.26	312	73	P	V
		5740	103.86	-	-	88.81	35.14	12.16	32.25	312	73	P	V
		5740	96.76	-	-	81.71	35.14	12.16	32.25	312	73	A	V
802.11ax HE20 Partial 106/54 CH 165 5825MHz		5854.8	56.34	-55.02	111.36	40.94	35.37	12.26	32.23	100	112	P	H
		5863.6	57.34	-51.15	108.49	41.94	35.37	12.26	32.23	100	112	P	H
		5892.4	57.27	-35.12	92.39	41.8	35.4	12.29	32.22	100	112	P	H
		5982.4	57.01	-11.29	68.3	41.37	35.48	12.37	32.21	100	112	P	H
		5830	105.21	-	-	89.88	35.33	12.24	32.24	100	112	P	H
		5830	96.81	-	-	81.48	35.33	12.24	32.24	100	112	A	H
		5854.8	56.07	-55.29	111.36	40.67	35.37	12.26	32.23	300	70	P	V
		5861.2	58.32	-50.84	109.16	42.92	35.37	12.26	32.23	300	70	P	V
		5878.8	57.48	-45	102.48	42.04	35.38	12.28	32.22	300	70	P	V
		5942.4	57.3	-11	68.3	41.73	35.45	12.34	32.22	300	70	P	V
		5830	99.43	-	-	84.1	35.33	12.24	32.24	300	70	P	V
		5830	91.56	-	-	76.23	35.33	12.24	32.24	300	70	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11ax HE40_Full (Band Edge @ 3m)

Table with 14 columns: 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). Rows include frequency data for 802.11ax HE40 Full CH 151 5755MHz.



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		5610	56.25	-12.05	68.3	41.78	34.7	12.05	32.28	101	115	P	H
		5676	55.06	-32.52	87.58	40.3	34.92	12.1	32.26	101	115	P	H
		5712	54.88	-53.78	108.66	39.98	35.03	12.13	32.26	101	115	P	H
		5721.6	53.66	-60.89	114.55	38.69	35.08	12.15	32.26	101	115	P	H
		5853.6	53.96	-60.13	114.09	38.56	35.37	12.26	32.23	101	115	P	H
		5864.4	55.2	-53.07	108.27	39.8	35.37	12.26	32.23	101	115	P	H
		5918.4	55.8	-17.37	73.17	40.29	35.42	12.31	32.22	101	115	P	H
		5938	57.01	-11.29	68.3	41.48	35.43	12.32	32.22	101	115	P	H
		5788	101.71	-	-	86.44	35.3	12.21	32.24	101	115	P	H
		5788	93.26	-	-	77.99	35.3	12.21	32.24	101	115	A	H
		5629.6	54.55	-13.75	68.3	40.02	34.75	12.06	32.28	321	74	P	V
		5674.4	54.86	-31.54	86.4	40.1	34.92	12.1	32.26	321	74	P	V
		5714.4	56.39	-52.94	109.33	41.49	35.03	12.13	32.26	321	74	P	V
		5722	55.44	-60.02	115.46	40.47	35.08	12.15	32.26	321	74	P	V
		5850.4	54.91	-66.48	121.39	39.54	35.35	12.25	32.23	321	74	P	V
		5862	55.34	-53.6	108.94	39.94	35.37	12.26	32.23	321	74	P	V
		5913.6	56.71	-20	76.71	41.2	35.42	12.31	32.22	321	74	P	V
		5958	57.24	-11.06	68.3	41.63	35.47	12.35	32.21	321	74	P	V
	5800	98.53	-	-	83.26	35.3	12.21	32.24	321	74	P	V	
	5800	90.2	-	-	74.93	35.3	12.21	32.24	321	74	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11ax HE40_Full (Harmonic @ 3m)

Table with 14 columns: 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). Rows include test results for 802.11ax HE40 Full CH 151 5755MHz and CH 159 5795MHz.



UNII 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		5613.2	55.69	-12.61	68.3	41.22	34.7	12.05	32.28	104	112	P	H
		5694	56.27	-44.61	100.88	41.44	34.97	12.12	32.26	104	112	P	H
		5716	57.56	-52.22	109.78	42.66	35.03	12.13	32.26	104	112	P	H
		5724.8	56.72	-65.12	121.84	41.75	35.08	12.15	32.26	104	112	P	H
		5850	55.87	-66.43	122.3	40.5	35.35	12.25	32.23	104	112	P	H
		5867.6	56.53	-50.84	107.37	41.13	35.37	12.26	32.23	104	112	P	H
		5904.4	58.14	-25.37	83.51	42.67	35.4	12.29	32.22	104	112	P	H
		5928	56.93	-11.37	68.3	41.4	35.43	12.32	32.22	104	112	P	H
		5752	100.89	-	-	85.77	35.19	12.18	32.25	104	112	P	H
		5752	91.5	-	-	76.38	35.19	12.18	32.25	104	112	A	H
		5608	56.05	-12.25	68.3	41.58	34.7	12.05	32.28	297	74	P	V
		5682	56.28	-35.74	92.02	41.52	34.92	12.1	32.26	297	74	P	V
		5716	56.52	-53.26	109.78	41.62	35.03	12.13	32.26	297	74	P	V
		5720	55.17	-55.73	110.9	40.2	35.08	12.15	32.26	297	74	P	V
		5852.4	55.74	-61.09	116.83	40.37	35.35	12.25	32.23	297	74	P	V
		5867.2	57.02	-50.46	107.48	41.62	35.37	12.26	32.23	297	74	P	V
		5880.4	57.09	-44.2	101.29	41.65	35.38	12.28	32.22	297	74	P	V
		5989.2	56.48	-11.82	68.3	40.84	35.48	12.37	32.21	297	74	P	V
		5752	97.63	-	-	82.51	35.19	12.18	32.25	297	74	P	V
		5752	88.73	-	-	73.61	35.19	12.18	32.25	297	74	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)
802.11ax HE40 Partial 242/62 CH 159 5795MHz		5630	56.61	-11.69	68.3	42.08	34.75	12.06	32.28	100	114	P	H
		5669.2	56.73	-25.82	82.55	41.97	34.92	12.1	32.26	100	114	P	H
		5716	55.81	-53.97	109.78	40.91	35.03	12.13	32.26	100	114	P	H
		5722	55.25	-60.21	115.46	40.28	35.08	12.15	32.26	100	114	P	H
		5854	57.32	-55.86	113.18	41.92	35.37	12.26	32.23	100	114	P	H
		5872.4	57.15	-48.88	106.03	41.71	35.38	12.28	32.22	100	114	P	H
		5904.8	58.11	-25.1	83.21	42.6	35.42	12.31	32.22	100	114	P	H
		5930.8	57.64	-10.66	68.3	42.11	35.43	12.32	32.22	100	114	P	H
		5800	100.53	-	-	85.26	35.3	12.21	32.24	100	114	P	H
		5800	91.64	-	-	76.37	35.3	12.21	32.24	100	114	A	H
		5606	56.19	-12.11	68.3	41.72	34.7	12.05	32.28	307	72	P	V
		5687.2	55.86	-40	95.86	41.03	34.97	12.12	32.26	307	72	P	V
		5713.6	56.23	-52.88	109.11	41.33	35.03	12.13	32.26	307	72	P	V
		5724	55.6	-64.42	120.02	40.63	35.08	12.15	32.26	307	72	P	V
		5853.2	56.03	-58.97	115	40.66	35.35	12.25	32.23	307	72	P	V
		5864.8	56.5	-51.65	108.15	41.1	35.37	12.26	32.23	307	72	P	V
		5916.8	58.81	-15.54	74.35	43.3	35.42	12.31	32.22	307	72	P	V
		5939.6	56.57	-11.73	68.3	41	35.45	12.34	32.22	307	72	P	V
	5800	97.25	-	-	81.98	35.3	12.21	32.24	307	72	P	V	
	5800	89.12	-	-	73.85	35.3	12.21	32.24	307	72	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 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		5618.4	54.97	-13.33	68.3	40.44	34.75	12.06	32.28	100	116	P	H
		5690.151	55.22	-42.82	98.04	40.39	34.97	12.12	32.26	100	116	P	H
		5700	55.22	-50.08	105.3	40.39	34.97	12.12	32.26	100	116	P	H
		5723.6	54.95	-64.16	119.11	39.98	35.08	12.15	32.26	100	116	P	H
		5852	56.08	-61.66	117.74	40.71	35.35	12.25	32.23	100	116	P	H
		5858.8	56.81	-53.02	109.83	41.41	35.37	12.26	32.23	100	116	P	H
		5905.6	56.86	-25.76	82.62	41.35	35.42	12.31	32.22	100	116	P	H
		5964.8	57.1	-11.2	68.3	41.49	35.47	12.35	32.21	100	116	P	H
		5788	98.27	-	-	83	35.3	12.21	32.24	100	116	P	H
		5788	89.91	-	-	74.64	35.3	12.21	32.24	100	116	A	H
		5600.4	54.54	-13.76	68.3	40.07	34.7	12.05	32.28	309	76	P	V
		5673.2	55.29	-30.22	85.51	40.53	34.92	12.1	32.26	309	76	P	V
		5701.6	54.89	-50.86	105.75	39.99	35.03	12.13	32.26	309	76	P	V
		5720	54.34	-56.56	110.9	39.37	35.08	12.15	32.26	309	76	P	V
		5854.4	55.28	-56.99	112.27	39.88	35.37	12.26	32.23	309	76	P	V
		5872.4	55.1	-50.93	106.03	39.66	35.38	12.28	32.22	309	76	P	V
		5885.6	55.77	-41.66	97.43	40.33	35.38	12.28	32.22	309	76	P	V
		5927.2	56.64	-11.66	68.3	41.11	35.43	12.32	32.22	309	76	P	V
		5788	96.25	-	-	80.98	35.3	12.21	32.24	309	76	P	V
	5788	87.07	-	-	71.8	35.3	12.21	32.24	309	76	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII 3 5725~5850MHz
WIFI 802.11ax HE80_Full (Harmonic @ 3m)

Table with 14 columns: 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). Contains two data rows and a Remark section.



UNII 3 5725~5850MHz
WIFI 802.11ax HE80_Partial 484 (Band Edge @ 3m)

Table with 14 columns: 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). Rows include frequency measurements from 5619.6 to 5740 MHz.

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		5640.4	55.28	-13.02	68.3	40.66	34.81	12.08	32.27	101	114	P	H
		5682.8	60.08	-32.53	92.61	45.32	34.92	12.1	32.26	101	114	P	H
		5718	58.25	-52.09	110.34	43.28	35.08	12.15	32.26	101	114	P	H
		5724.8	59.3	-62.54	121.84	44.33	35.08	12.15	32.26	101	114	P	H
		5854.4	55.51	-56.76	112.27	40.11	35.37	12.26	32.23	101	114	P	H
		5870.4	62.33	-44.26	106.59	46.92	35.37	12.26	32.22	101	114	P	H
		5885.2	57.24	-40.49	97.73	41.8	35.38	12.28	32.22	101	114	P	H
		5954	56.86	-11.44	68.3	41.28	35.45	12.34	32.21	101	114	P	H
		5788	100.89	-	-	85.62	35.3	12.21	32.24	101	114	P	H
		5788	90.6	-	-	75.33	35.3	12.21	32.24	101	114	A	H
		5646.8	55.88	-12.42	68.3	41.26	34.81	12.08	32.27	265	66	P	V
		5667.6	56.22	-25.14	81.36	41.46	34.92	12.1	32.26	265	66	P	V
		5711.6	56.21	-52.34	108.55	41.31	35.03	12.13	32.26	265	66	P	V
		5722.4	57.52	-58.85	116.37	42.55	35.08	12.15	32.26	265	66	P	V
		5852.4	55.79	-61.04	116.83	40.42	35.35	12.25	32.23	265	66	P	V
		5855.2	56.87	-53.97	110.84	41.47	35.37	12.26	32.23	265	66	P	V
		5903.2	56.47	-27.92	84.39	41	35.4	12.29	32.22	265	66	P	V
		5987.6	57.13	-11.17	68.3	41.49	35.48	12.37	32.21	265	66	P	V
	5788	96	-	-	80.73	35.3	12.21	32.24	265	66	P	V	
	5788	86.87	-	-	71.6	35.3	12.21	32.24	265	66	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11ax HE20 Partial 52 (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 HE20 Partial 52 LF		43.58	32.89	-7.11	40	46.95	17.82	1	32.88	100	0	P	H
		129.91	24.53	-18.97	43.5	37.9	17.74	1.73	32.84	-	-	P	H
		301.6	22.43	-23.57	46	32.43	20.25	2.65	32.9	-	-	P	H
		492.69	23.67	-22.33	46	28.7	24.36	3.39	32.78	-	-	P	H
		680.87	26.34	-19.66	46	29.33	25.78	3.99	32.76	-	-	P	H
		953.44	27.94	-18.06	46	27.57	27.93	4.72	32.28	-	-	P	H
		136.7	26.96	-16.54	43.5	40.35	17.66	1.78	32.83	-	-	P	V
		326.82	25.94	-20.06	46	35.24	20.85	2.75	32.9	-	-	P	V
		535.37	25.19	-20.81	46	28.83	25.49	3.53	32.66	-	-	P	V
		574.17	25.74	-20.26	46	28.92	25.71	3.66	32.55	-	-	P	V
		785.63	26.86	-19.14	46	28.36	26.78	4.28	32.56	-	-	P	V
		831.22	30.04	-15.96	46	31.11	27.09	4.4	32.56	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	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”.

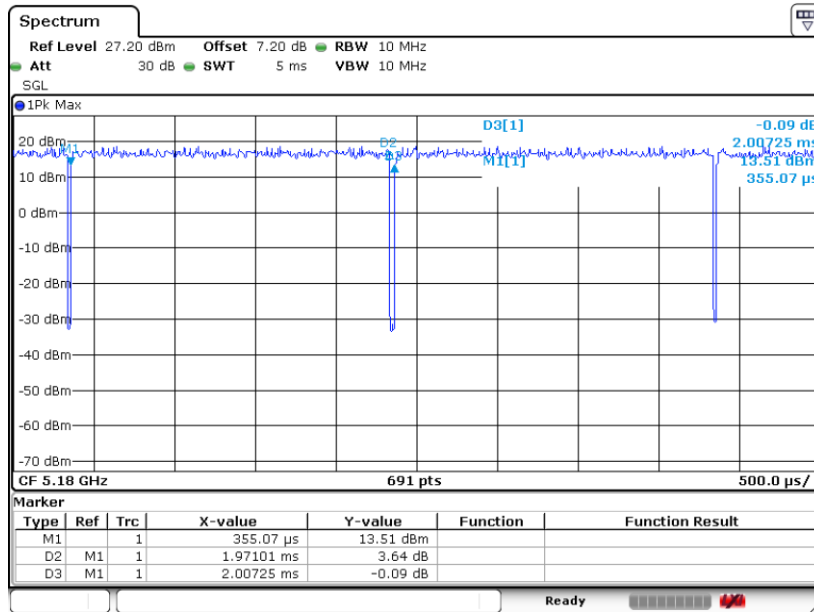


Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1	802.11a	98.19	-	-	10Hz
2	802.11a	98.91			10Hz
1+2(1)	802.11n HT20	100	-	-	10Hz
1+2(1)	802.11n HT40	100	-	-	10Hz
1+2(1)	802.11ac VHT80	100	-	-	10Hz
1+2(1)	802.11ax HE20	100	-	-	10Hz
1+2(1)	802.11ax HE40	100	-	-	10Hz
1+2(1)	802.11ax HE80	100	-	-	10Hz
1+2(1)	802.11ax HE20-RU26	97.53	4.58	0.22	0.24KHz
1+2(1)	802.11ax HE20-RU52	98.32	-	-	10Hz
1+2(1)	802.11ax HE20-RU106	95.91	4.75	0.21	0.22KHz
1+2(1)	802.11ax HE40-RU242	98.19	-	-	10Hz
1+2(1)	802.11ax HE80-RU484	98.19	-	-	10Hz

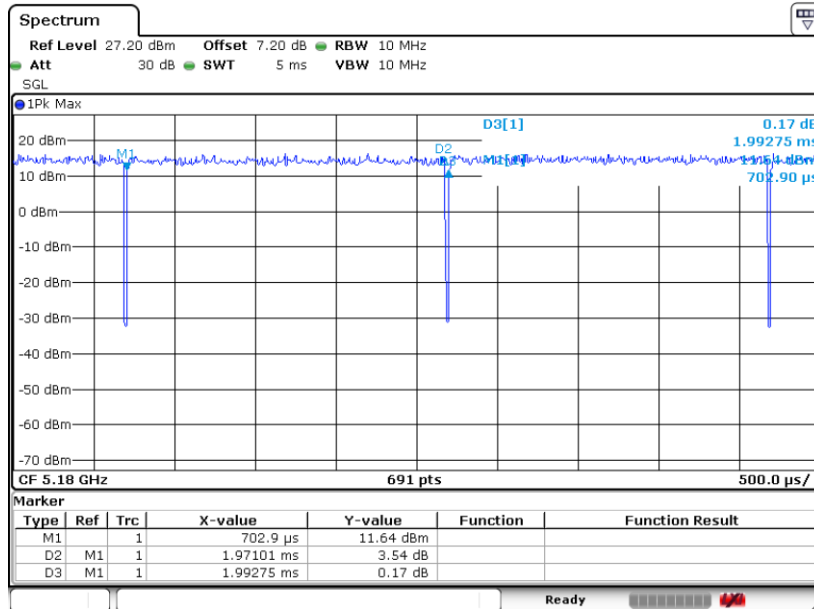


802.11a Ant 1



Date: 17 JUN 2021 02:07:46

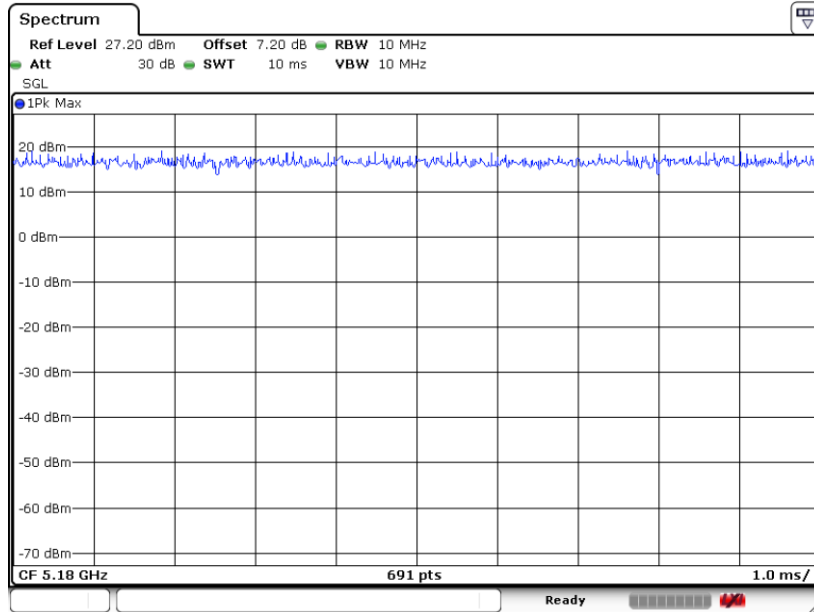
802.11a Ant 2



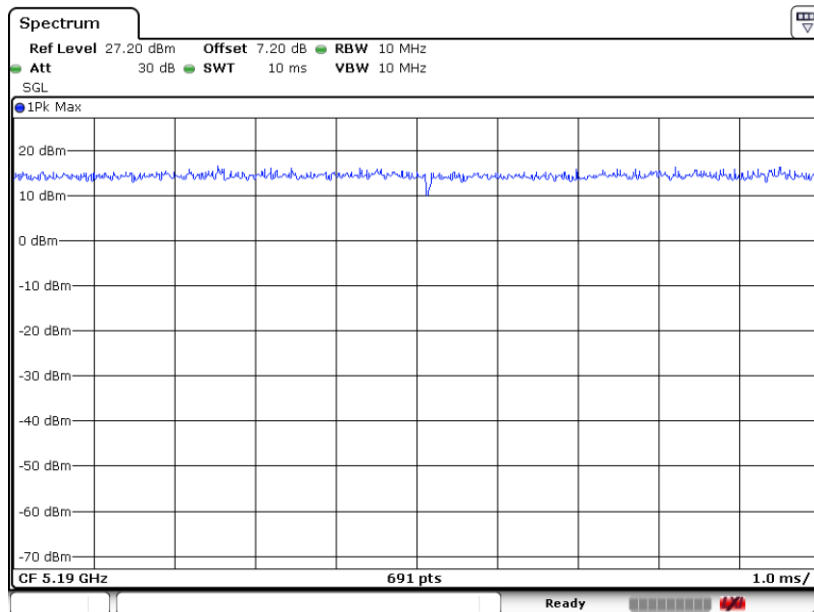
Date: 17 JUN 2021 02:08:51



802.11n HT20

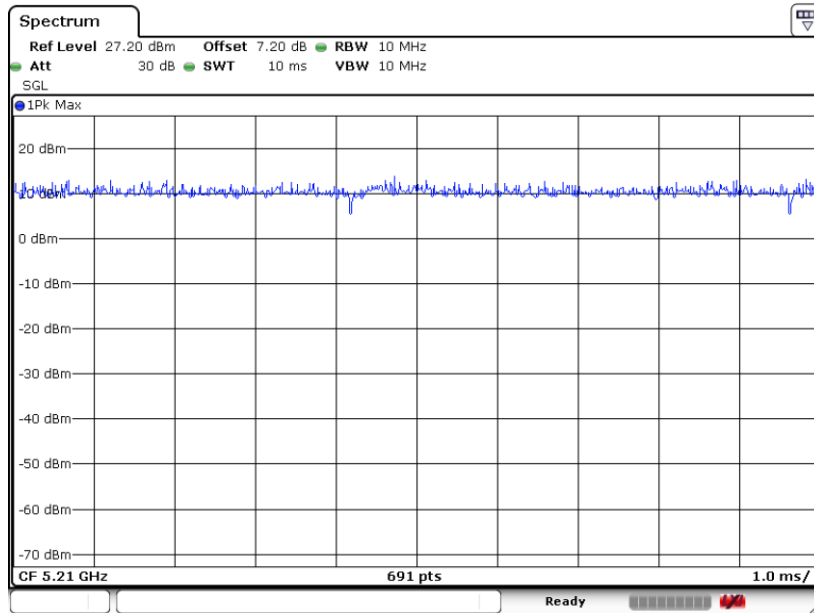


802.11n HT40

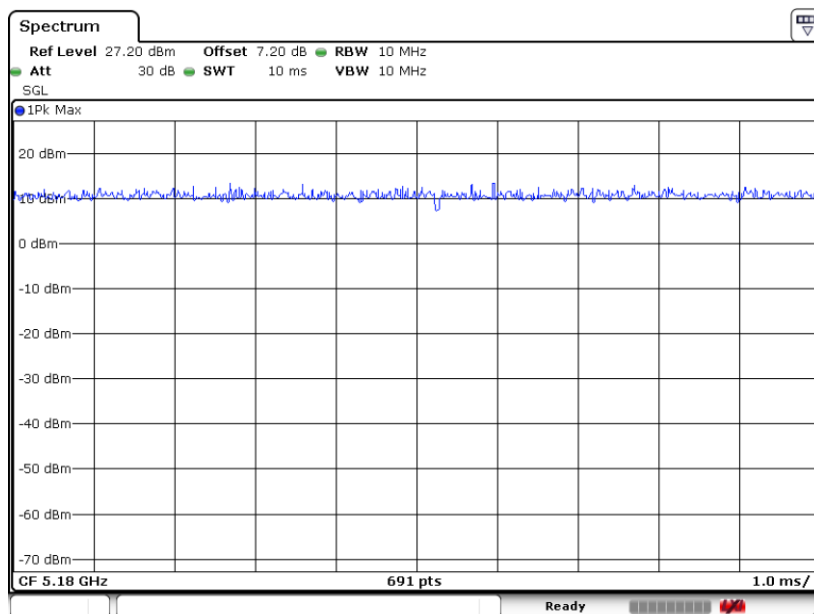




802.11ac VHT80

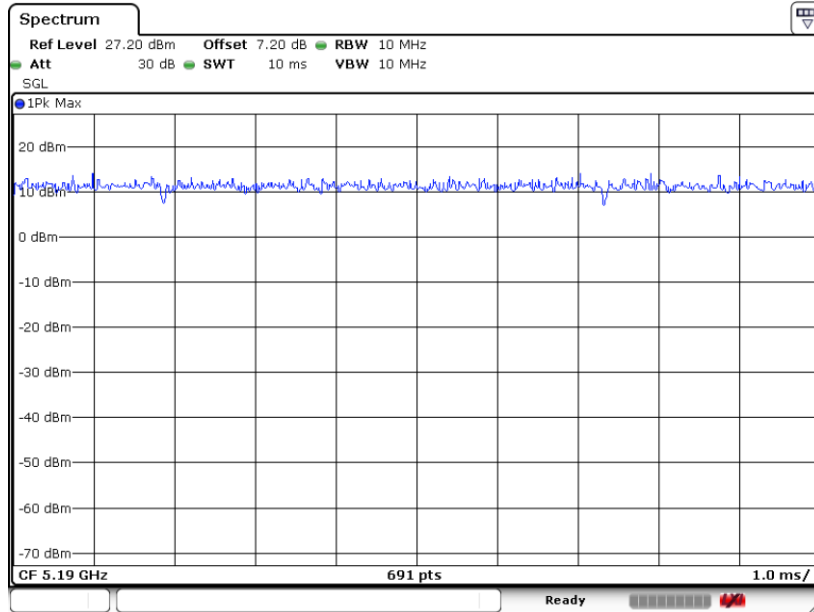


802.11ax HE20

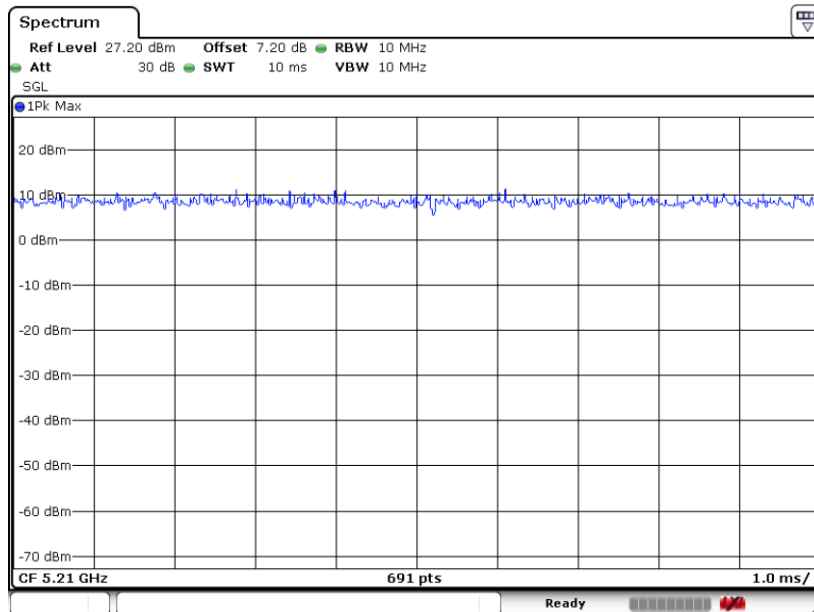




802.11ax HE40

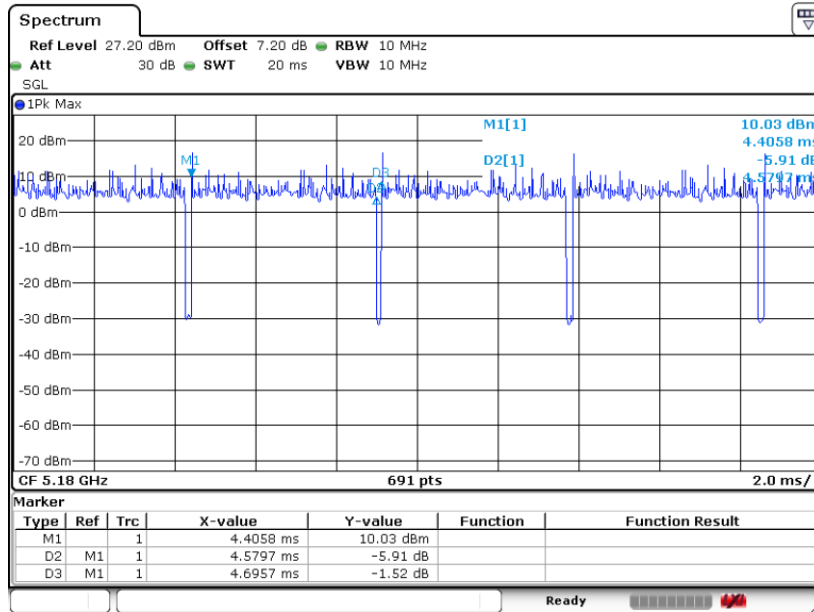


802.11ax HE80



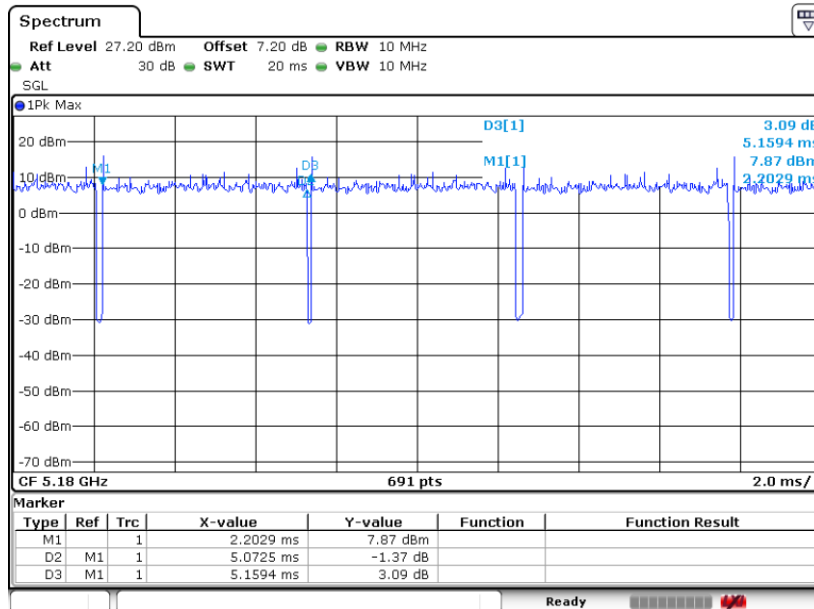


802. 11ax HE20-RU26



Date: 7.JUL.2021 08:05:09

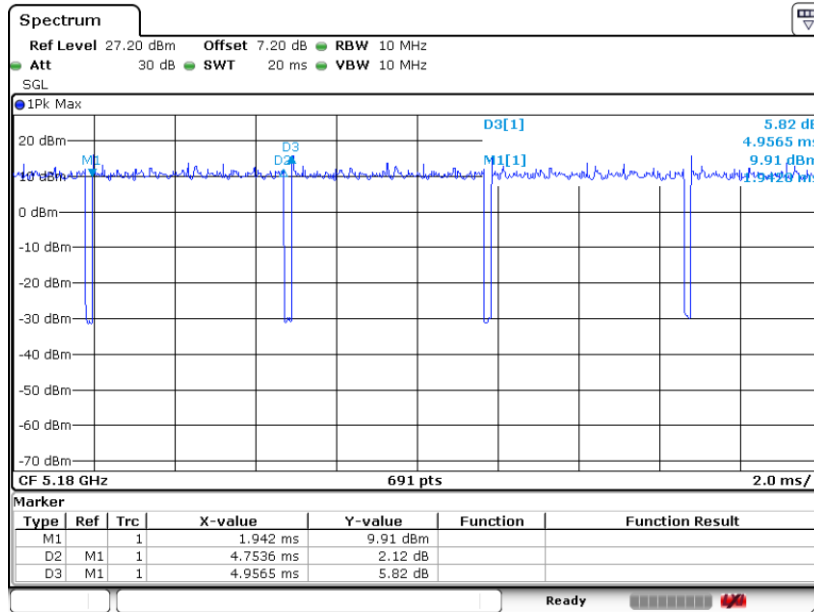
802. 11ax HE20-RU52



Date: 7.JUL.2021 08:51:47

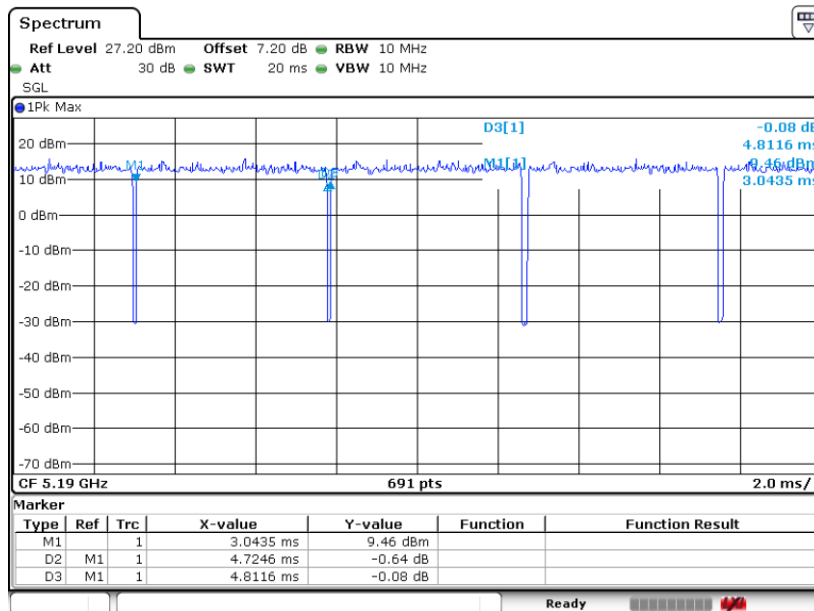


802.11ax HE20-RU106



Date: 7.JUL.2021 09:00:19

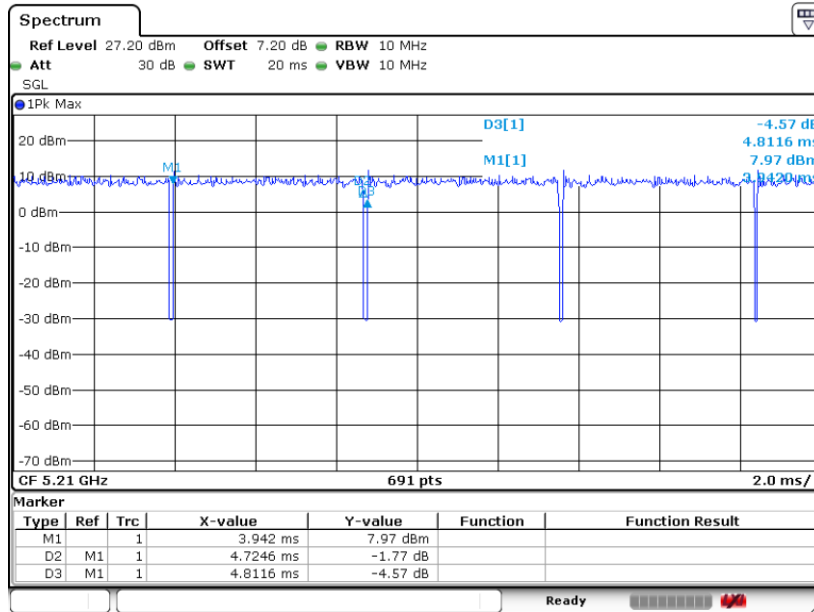
802.11ax HE40-RU242



Date: 7.JUL.2021 14:34:15



802.11ax HE80-RU484



Date: 7.JUL.2021 14:29:05