



FCC RF Test Report

APPLICANT : Honor Device Co.,Ltd.
EQUIPMENT : Smart Phone
BRAND NAME : HONOR
MODEL NAME : FNE-NX9
FCC ID : 2AYGCFNE-NX9
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : May 26, 2022 ~ Jul. 05, 2022

We, Sporton International Inc. (Kunshan), 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 Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**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
FR242802F	Rev. 01	Initial issue of report	Jul. 08, 2022

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 8.31 dB at 5631.200 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 8.67 dB at 0.150 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

Honor Device Co.,Ltd.

Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

1.2 Manufacturer

Honor Device Co.,Ltd.

Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	HONOR
Model Name	FNE-NX9
FCC ID	2AYGCFNE-NX9
IMEI Code	Conducted: 865911060050962/865911060054162 Conduction: 865911060030063/865911060037068 Radiation: 865911060029461/865911060036466
HW Version	HN2FNEM02
SW Version	6.1.0.116(C900E100R1P1)
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> 802.11a : 21.10 dBm / 0.1288 W 802.11n HT20 : 20.00 dBm / 0.1000 W 802.11n HT40 : 17.17 dBm / 0.0521 W 802.11ac VHT20: 20.04 dBm / 0.1009 W 802.11ac VHT40: 17.23 dBm / 0.0528 W 802.11ac VHT80: 16.24 dBm / 0.0421 W 802.11ax HE20 : 20.05 dBm / 0.1012 W 802.11ax HE40 : 17.52 dBm / 0.0565 W 802.11ax HE80 : 16.28 dBm / 0.0425 W
99% Occupied Bandwidth	<MIMO Ant. 1+2> 802.11a : 16.38 MHz 802.11ax HE20 : 18.83 MHz 802.11ax HE40 : 37.76 MHz 802.11ax HE80 : 76.84 MHz
Antenna Type / Gain	<Ant. 1> : Built-in Antenna with gain -0.70 dBi



	<Ant. 2> : Built-in Antenna with gain 0 dBi		
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac/ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)		
Antenna Function Description		Ant. 1	Ant. 2
	802.11 a/n/ac/ax SISO/MIMO	V	V

Note:

1. WLAN 5G Ant. 1/2 corresponding to EUT Photo Ant. 7/11.
2. WLAN 5G Ant. 1/2 support SISO and CDD MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to the higher normal conducted power.
3. For 802.11n/ac/ax 20/40/80 mode, the whole testing have assessed only 802.11ax 20/40/80 by referring to their maximum conducted power.
4. 802.11ax support OFDMA full RU tone and partial RU tone.

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
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.
	TH01 -KS 03CH05-KS	CN1257	314309



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

Test Firm	Sporton International Inc. (Shenzhen)		
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.
	CO01-SZ	CN1256	421272

Test data subcontracted: conducted test items in section 3.5 of this report.

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24a1
2.	CO01-SZ	AUDIX	E3	6.120613b

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)
5745-5825 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.

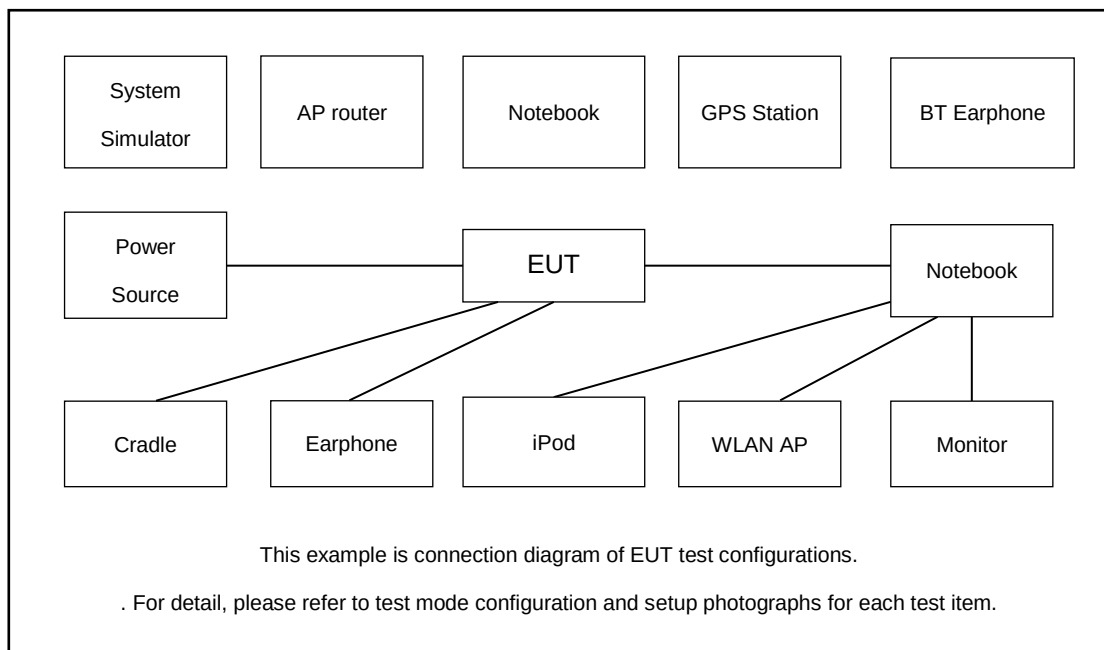
MIMO Mode

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

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle+ Bluetooth Link+ WLAN Link(5G)+ USB Cable 1(Charging from Adapter 3)+ Battery 1
Remark: For Radiated Test Cases, The tests were performance with Adapter3 and USB Cable1.	

Ch. #		U-NII-3 : 5745-5825 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



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station(LTE)	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
3.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
4.	NOTE BOOK	Lenovo	E540	N/A	FCC DoC	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit.

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 7.0 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 7.0 + 10 = 17.0 \text{ (dB)}\end{aligned}$$

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.

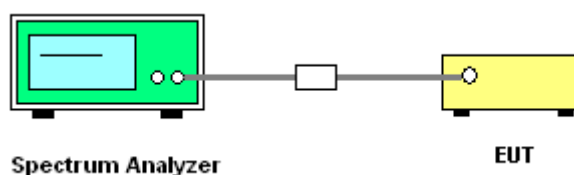
3.1.2 Measuring Instruments

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. For 6dB BW, Set RBW = 100kHz.
For 26dB BW, Set RBW = approximately 1% of the emission bandwidth.
For 99% OBW, Set RBW = 1% to 5% of the OBW.
3. For 26dB BW, Set the VBW > RBW.
For 6dB BW & 99% OBW, 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

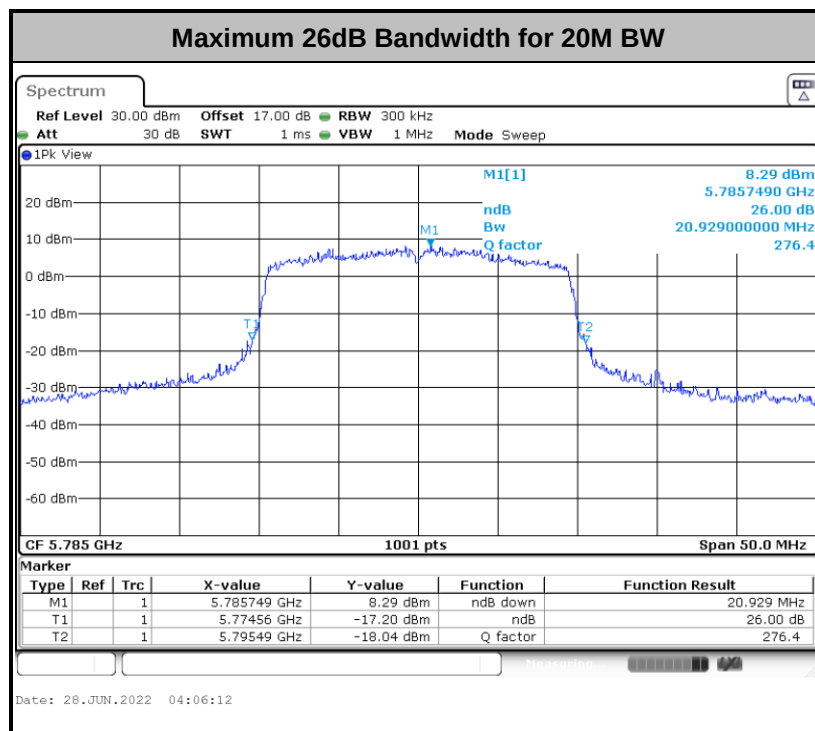
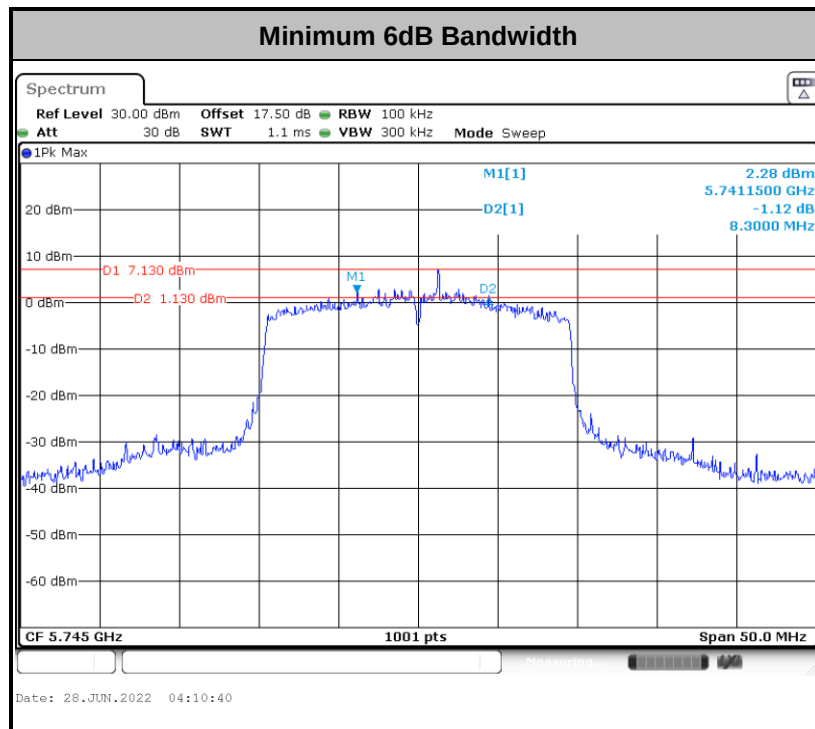


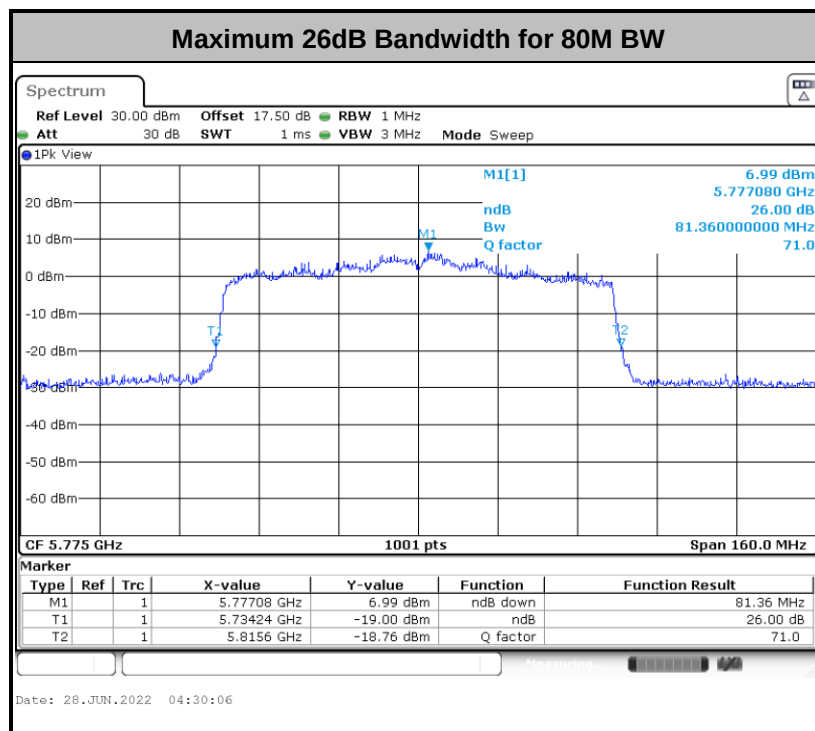
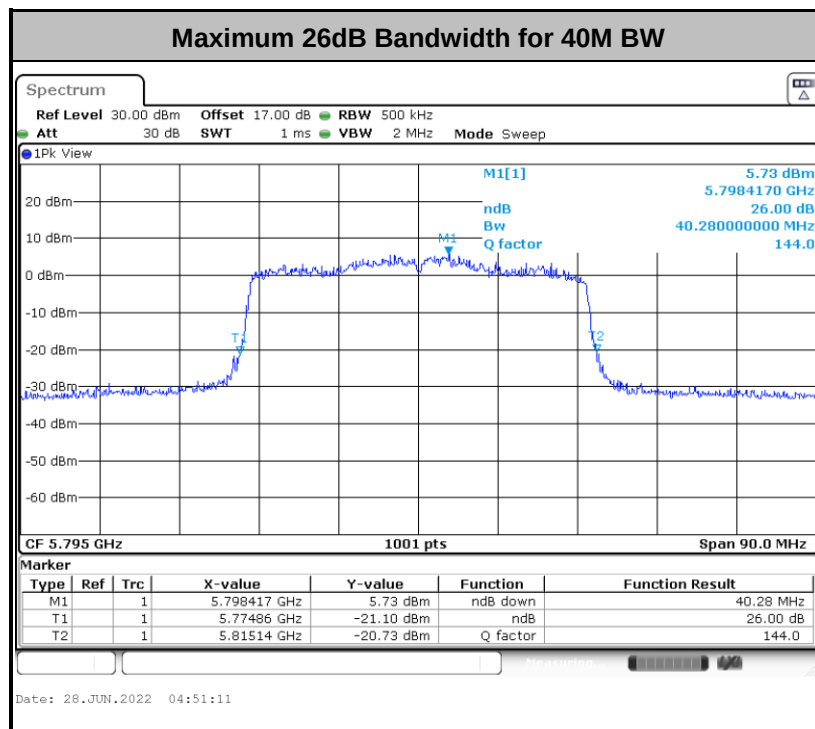
3.1.5 Test Result of 6dB Bandwidth

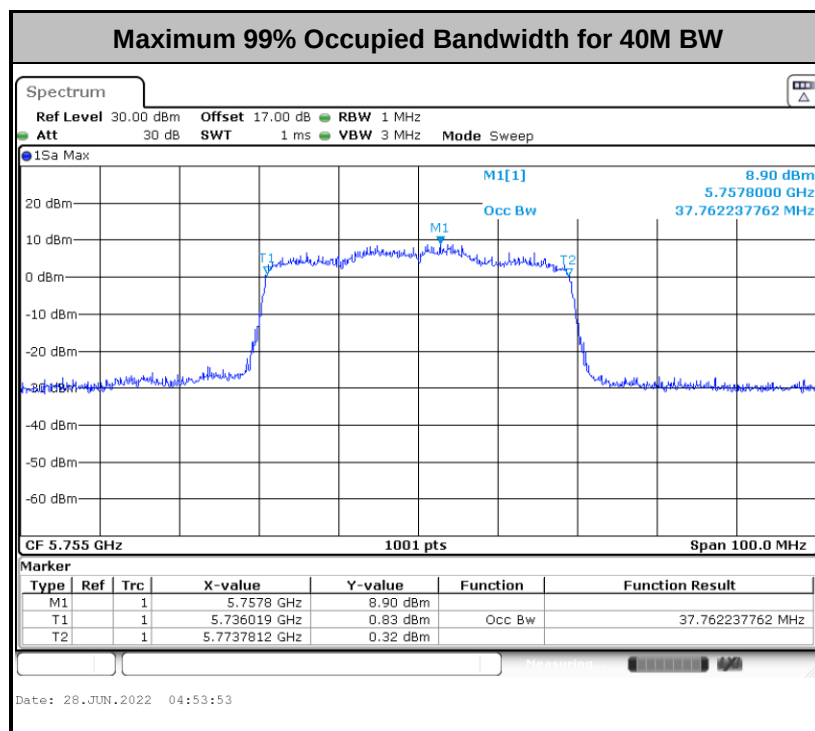
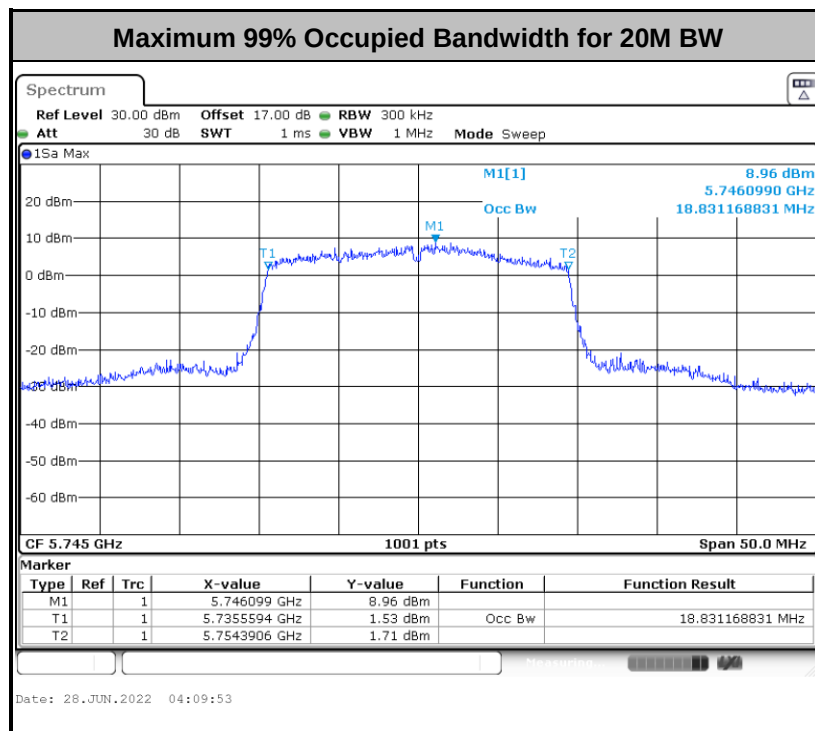
Please refer to Appendix A.

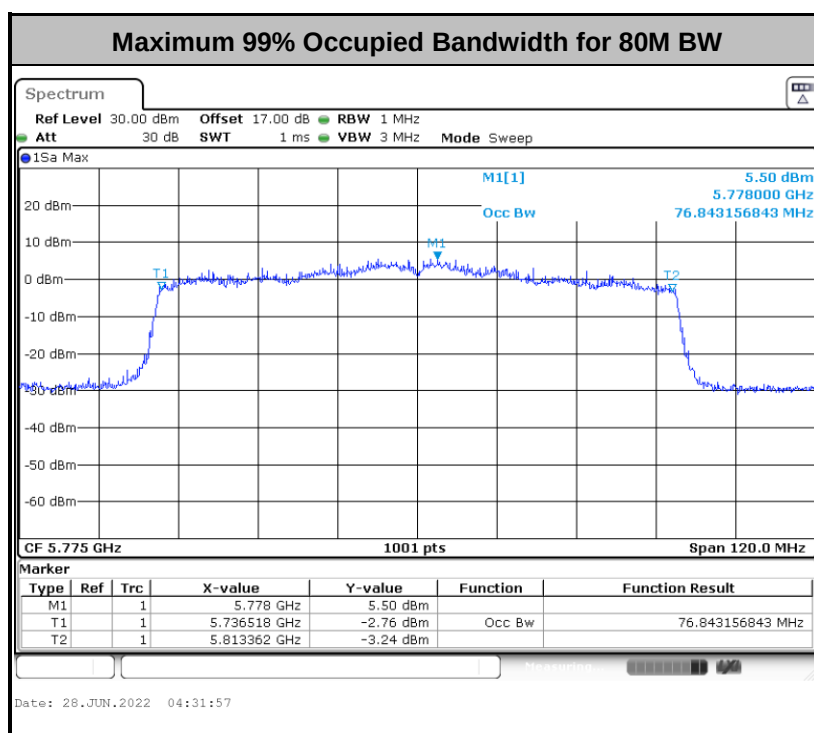


<CDD Mode>









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.

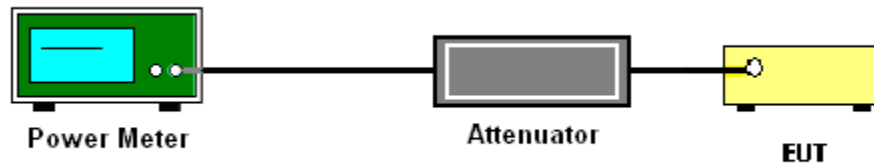
3.2.3 Test Procedures

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.
4. For MIMO mode, the measure-and-sum technique should be used for measuring the in-band transmit power of a device.

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).

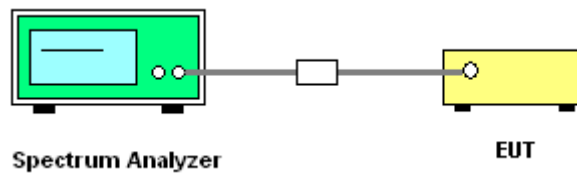
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW $\geq$ 1 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10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

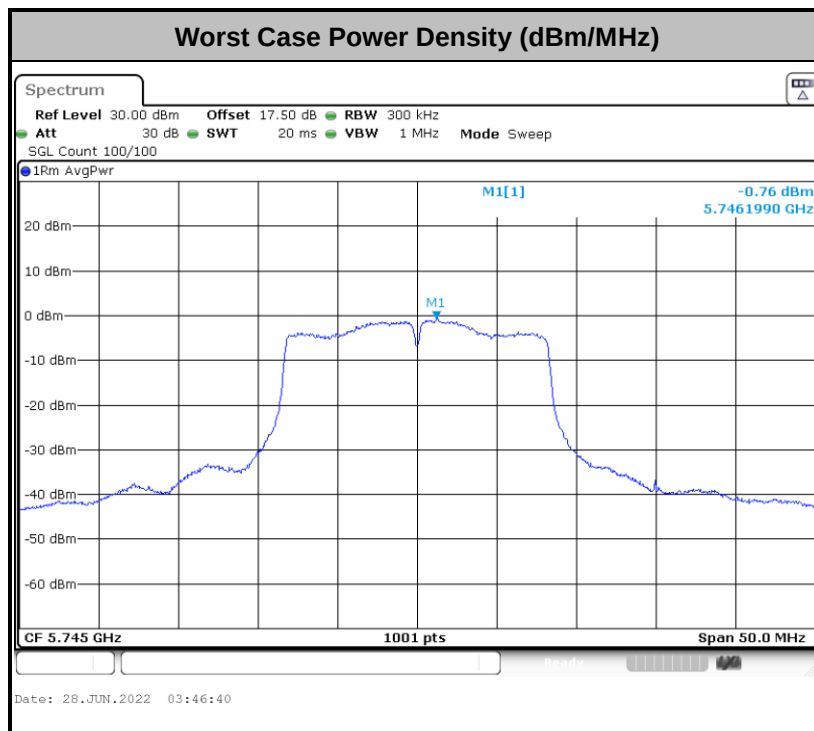




3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<CDD Modes>



Note: Average Power Density (dB) = Measured value +Duty Factor+10lg2

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) ANSI C63.10-2013 clause 12.7.3 note 97

As specified by regulatory requirements, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit. However, an out-of-band emission that complies with both the average and peak general regulatory limits is not required to satisfy the peak emission limit.

3.4.2 Measuring Instruments

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

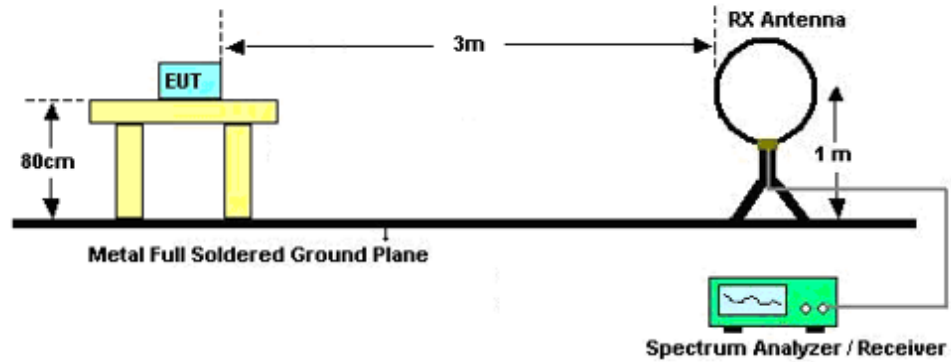


3.4.3 Test Procedures

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.

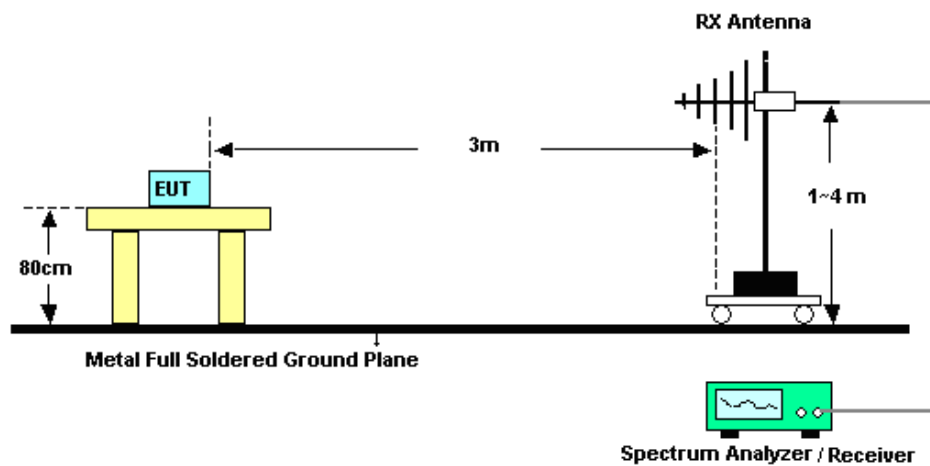
3.4.4 Test Setup

For radiated emissions below 30MHz



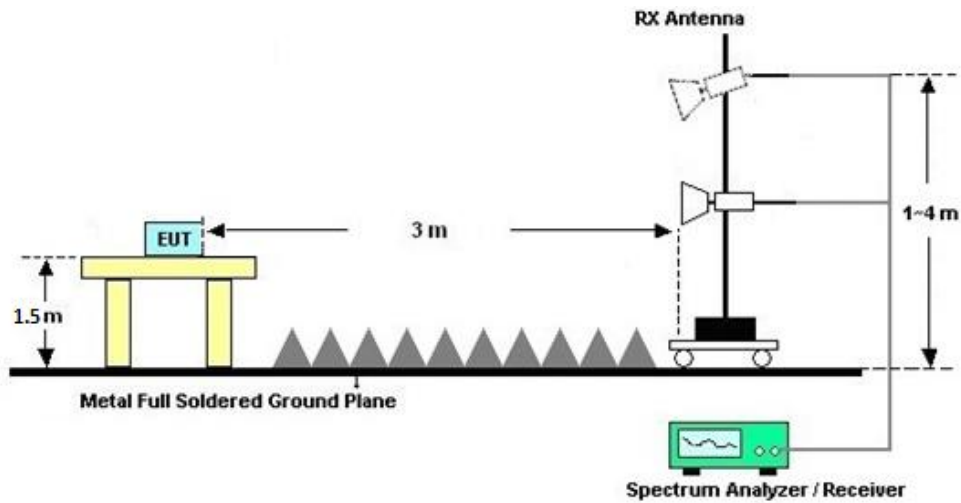
For radiated emissions from 30MHz to 1GHz

<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 (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.

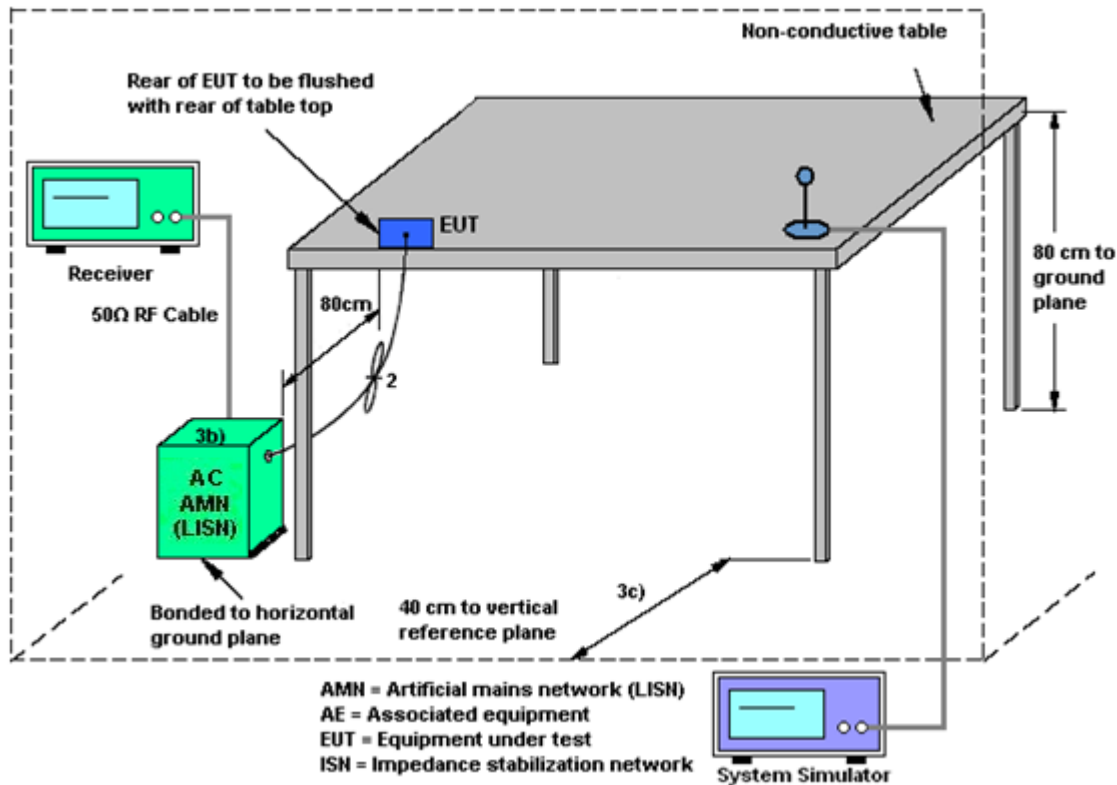
3.5.2 Measuring Instruments

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	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	-0.70	0.00	0.00	2.67	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	Oct. 14, 2021	Jun. 27, 2022~ Jun. 28, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Jun. 27, 2022~ Jun. 28, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Jun. 27, 2022~ Jun. 28, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz; Max 30dBm	Oct. 16, 2021	Jul. 05, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471084	10Hz~44G, MAX 30dB	Jul. 12, 2021	Jul. 05, 2022	Jul. 11, 2022	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Jul. 05, 2022	Oct. 29, 2022	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 03, 2022	Jul. 05, 2022	Jun. 02, 2023	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 08, 2021	Jul. 05, 2022	Nov. 07, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jul. 05, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	380826	9KHz~1GHz	Jul. 30, 2021	Jul. 05, 2022	Jul. 09, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Jul. 05, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	1Ghz~18Ghz	Oct. 16, 2021	Jul. 05, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 16, 2021	Jul. 05, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 05, 2022	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 05, 2022	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 05, 2022	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Sep. 01, 2021	May 26, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 01, 2021	May 26, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 29, 2021	May 26, 2022	Oct. 28, 2022	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 14, 2021	May 26, 2022	Jul. 13, 2022	Conduction (CO01-SZ)

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
---	--------

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
---	-------

----- THE END -----



Appendix A. Conducted Test Results

A1. Conducted Test Results

Test Engineer:	Kib shi	Temperature:	21~25	°C
Test Date:	2022/6/27~2022/06/28	Relative Humidity:	51~54	%

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

U-NII-3 MIMO												
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		
11a	6Mbps	2	149	5745	16.38	16.38	18.83	18.78	15.35	15.15	0.5	Pass
11a	6Mbps	2	157	5785	16.38	16.38	18.83	18.78	15.10	15.05	0.5	Pass
11a	6Mbps	2	165	5825	16.33	16.38	18.68	18.83	15.10	15.10	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	17.43	18.66	21.10	30.00		0.00		Pass
11a	6Mbps	2	157	5785	17.32	18.60	21.02	30.00		0.00		Pass
11a	6Mbps	2	165	5825	17.20	18.53	20.93	30.00		0.00		Pass
HT20	MCS0	2	149	5745	16.64	17.31	20.00	30.00		0.00		Pass
HT20	MCS0	2	157	5785	16.69	17.11	19.92	30.00		0.00		Pass
HT20	MCS0	2	165	5825	16.72	17.04	19.89	30.00		0.00		Pass
HT40	MCS0	2	151	5755	13.63	14.64	17.17	30.00		0.00		Pass
HT40	MCS0	2	159	5795	13.40	14.26	16.86	30.00		0.00		Pass
VHT20	MCS0	2	149	5745	16.74	17.30	20.04	30.00		0.00		Pass
VHT20	MCS0	2	157	5785	16.76	17.10	19.94	30.00		0.00		Pass
VHT20	MCS0	2	165	5825	16.81	17.03	19.93	30.00		0.00		Pass
VHT40	MCS0	2	151	5755	13.74	14.66	17.23	30.00		0.00		Pass
VHT40	MCS0	2	159	5795	13.46	14.35	16.94	30.00		0.00		Pass
VHT80	MCS0	2	155	5775	12.90	13.53	16.24	30.00		0.00		Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-3 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	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	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	2.22		0.32	1.46	4.47	30.00		2.67		Pass
11a	6Mbps	2	157	5785	2.22		-0.34	0.77	3.78	30.00		2.67		Pass
11a	6Mbps	2	165	5825	2.22		-0.40	0.63	3.64	30.00		2.67		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 10 log (n)

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

U-NII-3 MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	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		
HE20	MCS0	2	149	5745	Full	18.83	18.78	20.68	20.88	16.45	8.30	0.5	Pass
HE20	MCS0	2	157	5785	Full	18.83	18.78	20.93	20.78	11.16	15.90	0.5	Pass
HE20	MCS0	2	165	5825	Full	18.83	18.83	20.68	20.68	14.35	16.00	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.76	37.76	40.28	40.01	35.10	35.19	0.5	Pass
HE40	MCS0	2	159	5795	Full	37.66	37.76	40.28	40.19	35.10	35.37	0.5	Pass
HE80	MCS0	2	155	5775	Full	76.84	76.84	81.20	81.36	68.80	71.36	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	16.75	17.32	20.05	30.00		0.00		Pass
HE20	MCS0	2	149	5745	26/0	9.34	9.42	12.39	30.00		0.00		Pass
HE20	MCS0	2	149	5745	52/37	12.29	12.33	15.32	30.00		0.00		Pass
HE20	MCS0	2	149	5745	106/53	13.36	13.34	16.36	30.00		0.00		Pass
HE20	MCS0	2	157	5785	Full	16.79	17.12	19.97	30.00		0.00		Pass
HE20	MCS0	2	157	5785	26/4	9.23	9.68	12.47	30.00		0.00		Pass
HE20	MCS0	2	157	5785	52/38	12.39	13.07	15.75	30.00		0.00		Pass
HE20	MCS0	2	157	5785	106/53	13.44	13.59	16.53	30.00		0.00		Pass
HE20	MCS0	2	165	5825	Full	16.89	17.05	19.98	30.00		0.00		Pass
HE20	MCS0	2	165	5825	26/8	9.35	10.28	12.85	30.00		0.00		Pass
HE20	MCS0	2	165	5825	52/40	12.30	12.80	15.57	30.00		0.00		Pass
HE20	MCS0	2	165	5825	106/54	13.25	13.30	16.29	30.00		0.00		Pass
HE40	MCS0	2	151	5755	Full	13.96	15.00	17.52	30.00		0.00		Pass
HE40	MCS0	2	151	5755	242/61	13.37	13.70	16.55	30.00		0.00		Pass
HE40	MCS0	2	159	5795	Full	13.62	14.60	17.15	30.00		0.00		Pass
HE40	MCS0	2	159	5795	242/62	13.25	13.50	16.39	30.00		0.00		Pass
HE80	MCS0	2	155	5775	Full	12.96	13.55	16.28	30.00		0.00		Pass
HE80	MCS0	2	155	5775	484/65	13.22	13.22	16.23	30.00		0.00		Pass

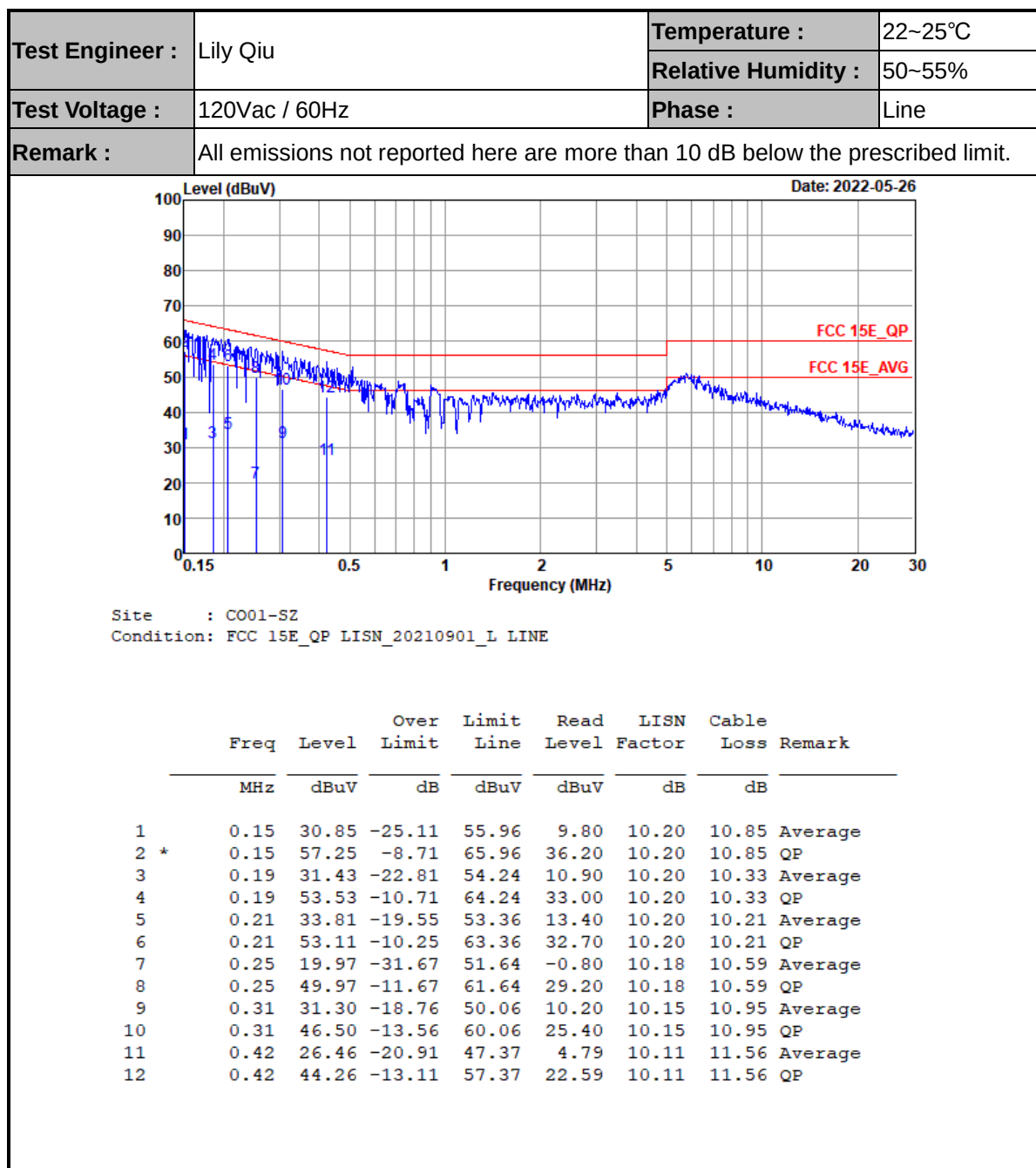
TEST RESULTS DATA
Power Spectral Density

U-NII-3 MIMO															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	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	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	2.22		-1.33	-0.11	2.90	30.00		2.67		Pass
HE20	MCS0	2	149	5745	26/0	2.22		0.10	0.09	3.11	30.00		2.67		Pass
HE20	MCS0	2	149	5745	52/37	2.22		-0.39	0.04	3.05	30.00		2.67		Pass
HE20	MCS0	2	149	5745	106/53	2.22		-1.72	-1.68	1.33	30.00		2.67		Pass
HE20	MCS0	2	157	5785	Full	2.22		-1.26	-0.86	2.15	30.00		2.67		Pass
HE20	MCS0	2	157	5785	26/4	2.22		0.19	0.11	3.20	30.00		2.67		Pass
HE20	MCS0	2	157	5785	52/38	2.22		-0.10	0.57	3.58	30.00		2.67		Pass
HE20	MCS0	2	157	5785	106/53	2.22		-1.97	-1.85	1.16	30.00		2.67		Pass
HE20	MCS0	2	165	5825	Full	2.22		-1.48	-0.47	2.54	30.00		2.67		Pass
HE20	MCS0	2	165	5825	26/8	2.22		0.30	0.84	3.85	30.00		2.67		Pass
HE20	MCS0	2	165	5825	52/40	2.22		0.47	0.67	3.68	30.00		2.67		Pass
HE20	MCS0	2	165	5825	106/54	2.22		-1.63	-1.52	1.49	30.00		2.67		Pass
HE40	MCS0	2	151	5755	Full	2.22		-6.26	-5.85	-2.84	30.00		2.67		Pass
HE40	MCS0	2	151	5755	242/61	2.22		-5.21	-5.35	-2.20	30.00		2.67		Pass
HE40	MCS0	2	159	5795	Full	2.22		-7.10	-6.44	-3.43	30.00		2.67		Pass
HE40	MCS0	2	159	5795	242/62	2.22		-6.28	-6.02	-3.01	30.00		2.67		Pass
HE80	MCS0	2	155	5775	Full	2.22		-9.69	-9.12	-6.11	30.00		2.67		Pass
HE80	MCS0	2	155	5775	484/65	2.22		-9.16	-9.17	-6.15	30.00		2.67		Pass
HE80	MCS0	2	155	5775	484/66	2.22		-9.00	-8.81	-5.80	30.00		2.67		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 10 log (n)

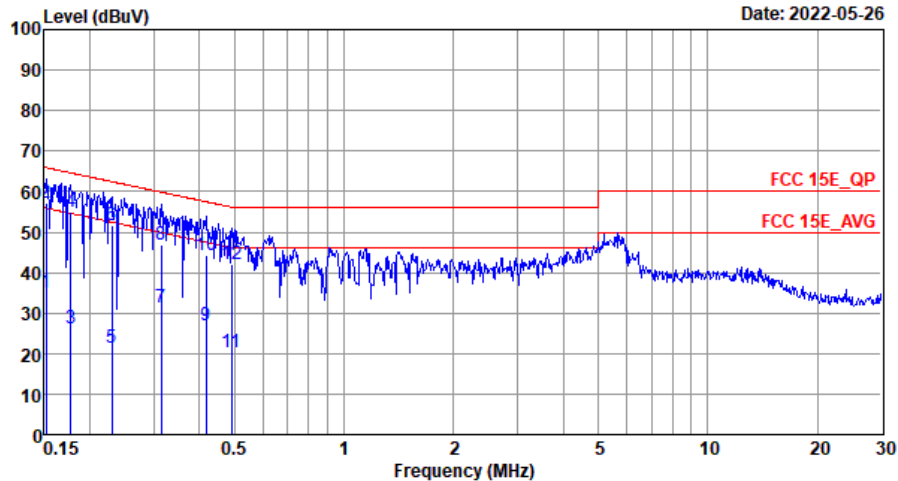


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Lily Qiu	Temperature :	22~25°C
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20210901_N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.15	35.14	-20.77	55.91	14.00	10.31	10.83	Average
2 *	0.15	57.24	-8.67	65.91	36.10	10.31	10.83	QP
3	0.18	26.22	-28.37	54.59	5.50	10.29	10.43	Average
4	0.18	55.02	-9.57	64.59	34.30	10.29	10.43	QP
5	0.23	21.48	-30.96	52.44	0.80	10.26	10.42	Average
6	0.23	51.58	-10.86	62.44	30.90	10.26	10.42	QP
7	0.31	31.49	-18.35	49.84	10.29	10.20	11.00	Average
8	0.31	46.89	-12.95	59.84	25.69	10.20	11.00	QP
9	0.42	27.12	-20.39	47.51	5.40	10.19	11.53	Average
10	0.42	44.32	-13.19	57.51	22.60	10.19	11.53	QP
11	0.49	20.32	-25.82	46.14	-1.70	10.19	11.83	Average
12	0.49	42.22	-13.92	56.14	20.20	10.19	11.83	QP

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

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		5640.8	51.54	-16.76	68.3	42.13	34.87	11.05	36.51	106	118	P	H
		5692.4	63.11	-36.59	99.7	53.61	34.93	11.13	36.56	106	118	P	H
		5713.2	76	-33	109	66.47	34.95	11.16	36.58	106	118	P	H
		5724.4	81.46	-39.47	120.93	71.91	34.97	11.18	36.6	106	118	P	H
		5746	115.13	-	-	105.55	34.99	11.21	36.62	106	118	P	H
		5746	107.7	-	-	98.12	34.99	11.21	36.62	106	118	A	H
		5634.4	48.97	-19.33	68.3	39.56	34.87	11.05	36.51	303	80	P	V
		5699.2	58.43	-46.28	104.71	48.93	34.93	11.13	36.56	303	80	P	V
		5719.6	69.3	-41.49	110.79	59.77	34.97	11.16	36.6	303	80	P	V
		5724.8	78.19	-43.65	121.84	68.64	34.97	11.18	36.6	303	80	P	V
		5740	110.03	-	-	100.48	34.99	11.18	36.62	303	80	P	V
		5740	103.05	-	-	93.5	34.99	11.18	36.62	303	80	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		5824	113.62	-	-	103.92	35.09	11.31	36.7	100	116	P	H
		5824	105.72	-	-	96.02	35.09	11.31	36.7	100	116	A	H
		5852.8	78.71	-37.21	115.92	68.99	35.11	11.33	36.72	100	116	P	H
		5857.2	73.98	-36.3	110.28	64.25	35.13	11.34	36.74	100	116	P	H
		5876.8	63.15	-40.81	103.96	53.39	35.16	11.36	36.76	100	116	P	H
		5966	50.53	-17.77	68.3	40.68	35.26	11.43	36.84	100	116	P	H
		5824	111.09	-	-	101.39	35.09	11.31	36.7	345	65	P	V
		5824	103.67	-	-	93.97	35.09	11.31	36.7	345	65	A	V
		5850.8	72.75	-47.73	120.48	63.03	35.11	11.33	36.72	345	65	P	V
		5855.6	69.49	-41.24	110.73	59.76	35.13	11.34	36.74	345	65	P	V
		5875.2	57	-48.15	105.15	47.24	35.16	11.36	36.76	345	65	P	V
		5948.8	49.07	-19.23	68.3	39.24	35.24	11.42	36.83	345	65	P	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)

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		11488	47.29	-26.71	74	59.23	38.19	16.35	66.48	300	0	P	H
		17230	53.02	-15.28	68.3	56.03	41.71	20.15	64.87	300	0	P	H
		11488	48.98	-25.02	74	60.92	38.19	16.35	66.48	100	0	P	V
		17241	57.21	-11.09	68.3	60.21	41.71	20.16	64.87	100	0	P	V
802.11a CH 157 5785MHz		11565	46.49	-27.51	74	58.29	38.23	16.4	66.43	300	0	P	H
		11565	48.18	-25.82	74	59.98	38.23	16.4	66.43	100	0	P	V
802.11a CH 165 5825MHz		11653	46.5	-27.5	74	58.09	38.29	16.46	66.34	300	0	P	H
		11653	49.05	-24.95	74	60.64	38.29	16.46	66.34	100	0	P	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_Full (Band Edge @ 3m)

WIFI Ant. 0+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)
802.11ax HE20 Full CH 149 5745MHz		5648.8	50.59	-17.71	68.3	41.15	34.87	11.08	36.51	100	116	P	H
		5700	66.07	-39.23	105.3	56.57	34.93	11.13	36.56	100	116	P	H
		5719.6	72.81	-37.98	110.79	63.28	34.97	11.16	36.6	100	116	P	H
		5724.8	82.46	-39.38	121.84	72.91	34.97	11.18	36.6	100	116	P	H
		5746	112.56	-	-	102.98	34.99	11.21	36.62	100	116	P	H
		5746	105.13	-	-	95.55	34.99	11.21	36.62	100	116	A	H
		5635.2	48.22	-20.08	68.3	38.81	34.87	11.05	36.51	372	70	P	V
		5699.2	57.06	-47.65	104.71	47.56	34.93	11.13	36.56	372	70	P	V
		5720	69.36	-41.54	110.9	59.83	34.97	11.16	36.6	372	70	P	V
		5724.4	74.67	-46.26	120.93	65.12	34.97	11.18	36.6	372	70	P	V
		5746	109.27	-	-	99.69	34.99	11.21	36.62	372	70	P	V
		5746	101.17	-	-	91.59	34.99	11.21	36.62	372	70	A	V



WIFI Ant. 0+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)
802.11ax HE20 Full CH 165 5825MHz		5830	113.35	-	-	103.65	35.09	11.31	36.7	100	116	P	H
		5830	104.35	-	-	94.65	35.09	11.31	36.7	100	116	A	H
		5850	74.11	-48.19	122.3	64.39	35.11	11.33	36.72	100	116	P	H
		5857.6	71.08	-39.09	110.17	61.35	35.13	11.34	36.74	100	116	P	H
		5879.2	58.97	-43.21	102.18	49.21	35.16	11.36	36.76	100	116	P	H
		5925.2	49.23	-19.07	68.3	39.42	35.22	11.4	36.81	100	116	P	H
		5824	109.48	-	-	99.78	35.09	11.31	36.7	344	66	P	V
		5824	101.89	-	-	92.19	35.09	11.31	36.7	344	66	A	V
		5850	68.3	-54	122.3	58.58	35.11	11.33	36.72	344	66	P	V
		5855.6	68.02	-42.71	110.73	58.29	35.13	11.34	36.74	344	66	P	V
		5875.6	52.36	-52.49	104.85	42.6	35.16	11.36	36.76	344	66	P	V
		5926	49.45	-18.85	68.3	39.64	35.22	11.4	36.81	344	66	P	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 Full (Harmonic @ 3m)

WIFI Ant. 0+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)
802.11ax		11490	45.16	-28.84	74	57.1	38.19	16.35	66.48	300	0	P	H
HE20 Full		17241	52.44	-15.86	68.3	55.44	41.71	20.16	64.87	300	0	P	H
CH 149		11488	46.62	-27.38	74	58.56	38.19	16.35	66.48	100	0	P	V
5745MHz		17241	57.19	-11.11	68.3	60.19	41.71	20.16	64.87	100	0	P	V
802.11ax		11565	44.53	-29.47	74	56.33	38.23	16.4	66.43	300	0	P	H
HE20 Full		11570	45.64	-28.36	74	57.42	38.24	16.4	66.42	100	0	P	V
CH 157		17351	54.51	-13.79	68.3	57.5	41.62	20.24	64.85	100	0	P	V
5785MHz													
802.11ax		11653	46.38	-27.62	74	57.97	38.29	16.46	66.34	300	0	P	H
HE20 Full		11650	47.95	-26.05	74	59.57	38.28	16.46	66.36	100	0	P	V
CH 165		17472	55.1	-13.2	68.3	58.08	41.53	20.32	64.83	100	0	P	V
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 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		5639.2	48.84	-19.46	68.3	39.43	34.87	11.05	36.51	109	114	P	H
		5659.2	49.17	-25.96	75.13	39.73	34.89	11.08	36.53	109	114	P	H
		5718.4	52.25	-58.2	110.45	42.72	34.97	11.16	36.6	109	114	P	H
		5724	50.46	-69.56	120.02	40.91	34.97	11.18	36.6	109	114	P	H
		5734	112.34	-	-	102.79	34.97	11.18	36.6	109	114	P	H
		5734	105.65	-	-	96.1	34.97	11.18	36.6	109	114	A	H
		5625.6	47.75	-20.55	68.3	38.37	34.84	11.03	36.49	397	73	P	V
		5674.4	47.72	-38.68	86.4	38.25	34.91	11.11	36.55	397	73	P	V
		5714.4	48.26	-61.07	109.33	38.73	34.95	11.16	36.58	397	73	P	V
		5724.4	54.86	-66.07	120.93	45.31	34.97	11.18	36.6	397	73	P	V
		5740	108.47	-	-	98.92	34.99	11.18	36.62	397	73	P	V
		5740	99.99	-	-	90.44	34.99	11.18	36.62	397	73	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 Partial 26/8 CH 165 5825MHz		5836	110.63	-	-	100.91	35.09	11.33	36.7	100	261	P	H
		5836	94.01	-	-	84.29	35.09	11.33	36.7	100	261	A	H
		5850.8	51.85	-68.63	120.48	42.13	35.11	11.33	36.72	100	261	P	H
		5871.6	49.44	-56.81	106.25	39.7	35.16	11.34	36.76	100	261	P	H
		5890.8	50.82	-42.75	93.57	41.05	35.18	11.36	36.77	100	261	P	H
		5929.6	49.98	-18.32	68.3	40.17	35.22	11.4	36.81	100	261	P	H
		5836	107.36	-	-	97.64	35.09	11.33	36.7	360	76	P	V
		5836	100.41	-	-	90.69	35.09	11.33	36.7	360	76	A	V
		5851.6	48.78	-69.87	118.65	39.06	35.11	11.33	36.72	360	76	P	V
		5865.2	49.82	-58.22	108.04	40.09	35.13	11.34	36.74	360	76	P	V
		5893.6	50.12	-41.38	91.5	40.33	35.18	11.38	36.77	360	76	P	V
		5946	50.02	-18.28	68.3	40.19	35.24	11.42	36.83	360	76	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

WIFI 802.11ax HE20_Partial 26 (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 Partial 26/0		11488	45.41	-28.59	74	57.35	38.19	16.35	66.48	300	0	P	H
CH 149 5745MHz		11488	46.09	-27.91	74	58.03	38.19	16.35	66.48	100	0	P	V
802.11ax HE20 Partial 26/4		11565	45.03	-28.97	74	56.83	38.23	16.4	66.43	300	0	P	H
CH 157 5785MHz		11565	47	-27	74	58.8	38.23	16.4	66.43	100	0	P	V
802.11ax HE20 Partial 26/8		11653	45.06	-28.94	74	56.65	38.29	16.46	66.34	300	0	P	H
CH 165 5825MHz		11653	45.44	-28.56	74	57.03	38.29	16.46	66.34	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		5641.6	49	-19.3	68.3	39.59	34.87	11.05	36.51	104	114	P	H
		5681.2	51.05	-40.38	91.43	41.58	34.91	11.11	36.55	104	114	P	H
		5718.4	54.65	-55.8	110.45	45.12	34.97	11.16	36.6	104	114	P	H
		5724.4	56.78	-64.15	120.93	47.23	34.97	11.18	36.6	104	114	P	H
		5740	116.63	-	-	107.08	34.99	11.18	36.62	104	114	P	H
		5740	107.24	-	-	97.69	34.99	11.18	36.62	104	114	A	H
		5606	49.82	-18.48	68.3	40.48	34.82	11	36.48	276	79	P	V
		5659.6	48.86	-26.57	75.43	39.42	34.89	11.08	36.53	276	79	P	V
		5717.6	58.69	-51.54	110.23	49.16	34.97	11.16	36.6	276	79	P	V
		5724.4	53.81	-67.12	120.93	44.26	34.97	11.18	36.6	276	79	P	V
		5740	107.76	-	-	98.21	34.99	11.18	36.62	276	79	P	V
		5740	101.67	-	-	92.12	34.99	11.18	36.62	276	79	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 Partial 52/40 CH 165 5825MHz		5830	112.78	-	-	103.08	35.09	11.31	36.7	105	114	P	H
		5830	105.51	-	-	95.81	35.09	11.31	36.7	105	114	P	H
		5851.6	54.99	-63.66	118.65	45.27	35.11	11.33	36.72	105	114	P	H
		5860	52.49	-57.01	109.5	42.76	35.13	11.34	36.74	105	114	P	H
		5905.2	50.56	-32.35	82.91	40.77	35.2	11.38	36.79	105	114	P	H
		5991.2	49.12	-19.18	68.3	39.23	35.3	11.47	36.88	105	114	A	H
		5830	108.48	-	-	98.78	35.09	11.31	36.7	284	79	P	V
		5830	100.94	-	-	91.24	35.09	11.31	36.7	284	79	P	V
		5854.4	50.73	-61.54	112.27	41.01	35.13	11.33	36.74	284	79	P	V
		5858	50.06	-60	110.06	40.33	35.13	11.34	36.74	284	79	P	V
		5904.4	49.49	-34.02	83.51	39.7	35.18	11.38	36.77	284	79	P	V
		5954	49.82	-18.48	68.3	39.98	35.24	11.43	36.83	284	79	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

WIFI 802.11ax HE20_Partial 52 (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 Partial 52/37 CH 149 5745MHz		11488	45.8	-28.2	74	57.74	38.19	16.35	66.48	300	0	P	H
		11477	48.22	-25.78	74	60.19	38.17	16.34	66.48	100	0	P	V
802.11ax HE20 Partial 52/38 CH 157 5785MHz		11565	45.89	-28.11	74	57.69	38.23	16.4	66.43	300	0	P	H
		11565	45.98	-28.02	74	57.78	38.23	16.4	66.43	100	0	P	V
802.11ax HE20 Partial 52/40 CH 165 5825MHz		11653	46.5	-27.5	74	58.09	38.29	16.46	66.34	300	0	P	H
		11664	48.51	-25.49	74	60.1	38.29	16.46	66.34	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		5616.4	47.83	-20.47	68.3	38.45	34.84	11.03	36.49	103	118	P	H
		5693.2	49.4	-50.89	100.29	39.9	34.93	11.13	36.56	103	118	P	H
		5719.6	65.66	-45.13	110.79	56.13	34.97	11.16	36.6	103	118	P	H
		5722	70.01	-45.45	115.46	60.46	34.97	11.18	36.6	103	118	P	H
		5740	111.86	-	-	102.31	34.99	11.18	36.62	103	118	P	H
		5740	105.28	-	-	95.73	34.99	11.18	36.62	103	118	A	H
		5619.2	47	-21.3	68.3	37.62	34.84	11.03	36.49	395	70	P	V
		5696.4	49.23	-53.42	102.65	39.73	34.93	11.13	36.56	395	70	P	V
		5718.8	62.13	-48.43	110.56	52.6	34.97	11.16	36.6	395	70	P	V
		5724.3	66.06	-54.64	120.7	56.51	34.97	11.18	36.6	395	70	P	V
		5740	108.57	-	-	99.02	34.99	11.18	36.62	395	70	P	V
		5740	100.39	-	-	90.84	34.99	11.18	36.62	395	70	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 Partial 106/54 CH 165 5825MHz		5830	112.17	-	-	102.47	35.09	11.31	36.7	100	114	P	H
		5830	105.19	-	-	95.49	35.09	11.31	36.7	100	114	A	H
		5850	68.69	-53.61	122.3	58.97	35.11	11.33	36.72	100	114	P	H
		5855.2	59.93	-50.91	110.84	50.2	35.13	11.34	36.74	100	114	P	H
		5898.4	50.68	-37.27	87.95	40.89	35.18	11.38	36.77	100	114	P	H
		5939.2	49.55	-18.75	68.3	39.72	35.24	11.42	36.83	100	114	P	H
		5830	108.71	-	-	99.01	35.09	11.31	36.7	282	72	P	V
		5830	97.9	-	-	88.2	35.09	11.31	36.7	282	72	A	V
		5850.8	56.22	-64.26	120.48	46.5	35.11	11.33	36.72	282	72	P	V
		5856	52.34	-58.28	110.62	42.61	35.13	11.34	36.74	282	72	P	V
		5899.2	49.61	-37.74	87.35	39.82	35.18	11.38	36.77	282	72	P	V
		5961.2	49.29	-19.01	68.3	39.44	35.26	11.43	36.84	282	72	P	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

WIFI 802.11ax HE20_Partial 106 (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 Partial 106/53 CH 149 5745MHz		11488	45.89	-28.11	74	57.83	38.19	16.35	66.48	300	0	P	H
		11488	46.34	-27.66	74	58.28	38.19	16.35	66.48	100	0	P	V
802.11ax HE20 Partial 106/54 CH 157 5785MHz		11565	45.02	-28.98	74	56.82	38.23	16.4	66.43	300	0	P	H
		11565	46.51	-27.49	74	58.31	38.23	16.4	66.43	100	0	P	V
802.11ax HE20 Partial 106/54 CH 165 5825MHz		11653	45.76	-28.24	74	57.35	38.29	16.46	66.34	300	0	P	H
		11653	46.62	-27.38	74	58.21	38.29	16.46	66.34	100	0	P	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		5640.8	49.27	-19.03	68.3	39.86	34.87	11.05	36.51	107	113	P	H
		5697.2	66.1	-37.14	103.24	56.6	34.93	11.13	36.56	107	113	P	H
		5718.4	74.83	-35.62	110.45	65.3	34.97	11.16	36.6	107	113	P	H
		5721.2	75.59	-38.05	113.64	66.06	34.97	11.16	36.6	107	113	P	H
		5746	110.67	-	-	101.09	34.99	11.21	36.62	107	113	P	H
		5746	101.68	-	-	92.1	34.99	11.21	36.62	107	113	A	H
		5852	48.91	-68.83	117.74	39.19	35.11	11.33	36.72	107	113	P	H
		5860.4	49.15	-60.24	109.39	39.42	35.13	11.34	36.74	107	113	P	H
		5906.4	48.92	-33.11	82.03	39.13	35.2	11.38	36.79	107	113	P	H
		5959.6	49.39	-18.91	68.3	39.54	35.26	11.43	36.84	107	113	P	H
		5622.4	48.78	-19.52	68.3	39.4	34.84	11.03	36.49	337	77	P	V
		5683.2	56.05	-36.85	92.9	46.58	34.91	11.11	36.55	337	77	P	V
		5720	67.21	-43.69	110.9	57.68	34.97	11.16	36.6	337	77	P	V
		5720.8	71.33	-41.39	112.72	61.8	34.97	11.16	36.6	337	77	P	V
		5740	105	-	-	95.45	34.99	11.18	36.62	337	77	P	V
		5740	96.66	-	-	87.11	34.99	11.18	36.62	337	77	A	V
		5850.8	49.57	-70.91	120.48	39.85	35.11	11.33	36.72	337	77	P	V
		5864	49.12	-59.26	108.38	39.39	35.13	11.34	36.74	337	77	P	V
		5905.2	51.11	-31.8	82.91	41.32	35.2	11.38	36.79	337	77	P	V
		5990.4	50.4	-17.9	68.3	40.51	35.3	11.47	36.88	337	77	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		5646.8	48.89	-19.41	68.3	39.45	34.87	11.08	36.51	100	113	P	H
		5696.8	50.05	-52.89	102.94	40.55	34.93	11.13	36.56	100	113	P	H
		5717.2	64.17	-45.95	110.12	54.64	34.95	11.16	36.58	100	113	P	H
		5721.2	62.66	-50.98	113.64	53.13	34.97	11.16	36.6	100	113	P	H
		5800	109.22	-	-	99.55	35.05	11.29	36.67	100	113	P	H
		5800	101.41	-	-	91.74	35.05	11.29	36.67	100	113	A	H
		5850.8	53.88	-66.6	120.48	44.16	35.11	11.33	36.72	100	113	P	H
		5865.6	55.41	-52.52	107.93	45.68	35.13	11.34	36.74	100	113	P	H
		5905.6	51.3	-31.32	82.62	41.51	35.2	11.38	36.79	100	113	P	H
		5926	48.87	-19.43	68.3	39.06	35.22	11.4	36.81	100	113	P	H
		5601.6	47.71	-20.59	68.3	38.37	34.82	11	36.48	285	80	P	V
		5699.6	48.42	-56.59	105.01	38.92	34.93	11.13	36.56	285	80	P	V
		5710	48.46	-59.64	108.1	38.93	34.95	11.16	36.58	285	80	P	V
		5720	48.14	-62.76	110.9	38.61	34.97	11.16	36.6	285	80	P	V
		5800	103.36	-	-	93.69	35.05	11.29	36.67	285	80	P	V
		5800	96.24	-	-	86.57	35.05	11.29	36.67	285	80	A	V
		5850	50.73	-71.57	122.3	41.01	35.11	11.33	36.72	285	80	P	V
		5867.6	49.8	-57.57	107.37	40.07	35.13	11.34	36.74	285	80	P	V
		5884.8	49.83	-48.19	98.02	40.07	35.16	11.36	36.76	285	80	P	V
		5946	49.64	-18.66	68.3	39.81	35.24	11.42	36.83	285	80	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		11510	45.61	-28.39	74	57.52	38.2	16.37	66.48	300	0	P	H
CH 151 5755MHz		11510	45.42	-28.58	74	57.33	38.2	16.37	66.48	100	0	P	V
802.11ax HE40 Full		11587	44.82	-29.18	74	56.56	38.25	16.41	66.4	300	0	P	H
CH 159 5795MHz		11587	45.8	-28.2	74	57.54	38.25	16.41	66.4	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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 262/61 CH 151 5755MHz		5640.8	49.27	-19.03	68.3	39.86	34.87	11.05	36.51	107	113	P	H
		5697.2	66.1	-37.14	103.24	56.6	34.93	11.13	36.56	107	113	P	H
		5718.4	74.83	-35.62	110.45	65.3	34.97	11.16	36.6	107	113	P	H
		5721.2	75.59	-38.05	113.64	66.06	34.97	11.16	36.6	107	113	P	H
		5746	110.67	-	-	101.09	34.99	11.21	36.62	107	113	P	H
		5746	101.68	-	-	92.1	34.99	11.21	36.62	107	113	A	H
		5852	48.91	-68.83	117.74	39.19	35.11	11.33	36.72	107	113	P	H
		5860.4	49.15	-60.24	109.39	39.42	35.13	11.34	36.74	107	113	P	H
		5906.4	48.92	-33.11	82.03	39.13	35.2	11.38	36.79	107	113	P	H
		5959.6	49.39	-18.91	68.3	39.54	35.26	11.43	36.84	107	113	P	H
		5622.4	48.78	-19.52	68.3	39.4	34.84	11.03	36.49	337	77	P	V
		5683.2	56.05	-36.85	92.9	46.58	34.91	11.11	36.55	337	77	P	V
		5720	67.21	-43.69	110.9	57.68	34.97	11.16	36.6	337	77	P	V
		5720.8	71.33	-41.39	112.72	61.8	34.97	11.16	36.6	337	77	P	V
		5740	105	-	-	95.45	34.99	11.18	36.62	337	77	P	V
		5740	96.66	-	-	87.11	34.99	11.18	36.62	337	77	A	V
		5850.8	49.57	-70.91	120.48	39.85	35.11	11.33	36.72	337	77	P	V
		5864	49.12	-59.26	108.38	39.39	35.13	11.34	36.74	337	77	P	V
		5905.2	51.11	-31.8	82.91	41.32	35.2	11.38	36.79	337	77	P	V
		5990.4	50.4	-17.9	68.3	40.51	35.3	11.47	36.88	337	77	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 262/62 CH 159 5795MHz		5646.8	48.89	-19.41	68.3	39.45	34.87	11.08	36.51	100	113	P	H
		5696.8	50.05	-52.89	102.94	40.55	34.93	11.13	36.56	100	113	P	H
		5717.2	64.17	-45.95	110.12	54.64	34.95	11.16	36.58	100	113	P	H
		5721.2	62.66	-50.98	113.64	53.13	34.97	11.16	36.6	100	113	P	H
		5800	109.22	-	-	99.55	35.05	11.29	36.67	100	113	P	H
		5800	101.41	-	-	91.74	35.05	11.29	36.67	100	113	A	H
		5850.8	53.88	-66.6	120.48	44.16	35.11	11.33	36.72	100	113	P	H
		5865.6	55.41	-52.52	107.93	45.68	35.13	11.34	36.74	100	113	P	H
		5905.6	51.3	-31.32	82.62	41.51	35.2	11.38	36.79	100	113	P	H
		5926	48.87	-19.43	68.3	39.06	35.22	11.4	36.81	100	113	P	H
		5601.6	47.71	-20.59	68.3	38.37	34.82	11	36.48	285	80	P	V
		5699.6	48.42	-56.59	105.01	38.92	34.93	11.13	36.56	285	80	P	V
		5710	48.46	-59.64	108.1	38.93	34.95	11.16	36.58	285	80	P	V
		5720	48.14	-62.76	110.9	38.61	34.97	11.16	36.6	285	80	P	V
		5800	103.36	-	-	93.69	35.05	11.29	36.67	285	80	P	V
		5800	96.24	-	-	86.57	35.05	11.29	36.67	285	80	A	V
		5850	50.73	-71.57	122.3	41.01	35.11	11.33	36.72	285	80	P	V
		5867.6	49.8	-57.57	107.37	40.07	35.13	11.34	36.74	285	80	P	V
		5884.8	49.83	-48.19	98.02	40.07	35.16	11.36	36.76	285	80	P	V
		5946	49.64	-18.66	68.3	39.81	35.24	11.42	36.83	285	80	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

WIFI 802.11ax HE40_Partial 242 (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 Partial 262/61 CH 151 5755MHz		11510	45.61	-28.39	74	57.52	38.2	16.37	66.48	300	0	P	H
		11510	45.42	-28.58	74	57.33	38.2	16.37	66.48	100	0	P	V
802.11ax HE40 Partial 262/62 CH 159 5795MHz		11587	44.82	-29.18	74	56.56	38.25	16.41	66.4	300	0	P	H
		11587	45.8	-28.2	74	57.54	38.25	16.41	66.4	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		5648	59.64	-8.66	68.3	50.2	34.87	11.08	36.51	100	117	P	H
		5681.2	75.86	-15.57	91.43	66.39	34.91	11.11	36.55	100	117	P	H
		5717.6	73.71	-36.52	110.23	64.18	34.97	11.16	36.6	100	117	P	H
		5721.2	74.05	-39.59	113.64	64.52	34.97	11.16	36.6	100	117	P	H
		5788	105.86	-	-	96.22	35.05	11.26	36.67	100	117	P	H
		5788	98.19	-	-	88.55	35.05	11.26	36.67	100	117	A	H
		5850	63.59	-58.71	122.3	53.87	35.11	11.33	36.72	100	117	P	H
		5860.8	59.5	-49.77	109.27	49.77	35.13	11.34	36.74	100	117	P	H
		5884.4	59.4	-38.92	98.32	49.64	35.16	11.36	36.76	100	117	P	H
		5941.2	53.29	-15.01	68.3	43.46	35.24	11.42	36.83	100	117	P	H
		5646.4	53.72	-14.58	68.3	44.28	34.87	11.08	36.51	299	81	P	V
		5690.4	49.52	-48.7	98.22	40.02	34.93	11.13	36.56	299	81	P	V
		5718	68.3	-42.04	110.34	58.77	34.97	11.16	36.6	299	81	P	V
		5721.6	68.85	-45.7	114.55	59.3	34.97	11.18	36.6	299	81	P	V
		5782	100.45	-	-	90.81	35.03	11.26	36.65	299	81	P	V
		5782	92.8	-	-	83.16	35.03	11.26	36.65	299	81	A	V
		5850.4	58.54	-62.85	121.39	48.82	35.11	11.33	36.72	299	81	P	V
		5872.8	61.28	-44.64	105.92	51.54	35.16	11.34	36.76	299	81	P	V
		5875.2	56.77	-48.38	105.15	47.01	35.16	11.36	36.76	299	81	P	V
		5932	50.74	-17.56	68.3	40.91	35.22	11.42	36.81	299	81	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		11554	45.42	-28.58	74	57.23	38.23	16.39	66.43	300	0	P	H
CH 155 5775MHz		11554	46.58	-27.42	74	58.39	38.23	16.39	66.43	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

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		5631.2	59.99	-8.31	68.3	50.59	34.84	11.05	36.49	119	116	P	H
		5696.4	68.78	-33.87	102.65	59.28	34.93	11.13	36.56	119	116	P	H
		5718.4	82.11	-28.34	110.45	72.58	34.97	11.16	36.6	119	116	P	H
		5720.4	75.93	-35.88	111.81	66.4	34.97	11.16	36.6	119	116	P	H
		5770	107.07	-	-	97.45	35.03	11.24	36.65	119	116	P	H
		5770	97.94	-	-	88.32	35.03	11.24	36.65	119	116	A	H
		5850.4	70.19	-51.2	121.39	60.47	35.11	11.33	36.72	119	116	P	H
		5873.2	57.9	-47.9	105.8	48.16	35.16	11.34	36.76	119	116	P	H
		5882.8	62.5	-37.01	99.51	52.74	35.16	11.36	36.76	119	116	P	H
		5931.6	51.16	-17.14	68.3	41.33	35.22	11.42	36.81	119	116	P	H
		5648	54.38	-13.92	68.3	44.94	34.87	11.08	36.51	392	70	P	V
		5696	60.5	-41.85	102.35	51	34.93	11.13	36.56	392	70	P	V
		5719.2	68.9	-41.78	110.68	59.37	34.97	11.16	36.6	392	70	P	V
		5724.8	70.44	-51.4	121.84	60.89	34.97	11.18	36.6	392	70	P	V
		5758	102.69	-	-	93.1	35.01	11.21	36.63	392	70	P	V
		5758	94.73	-	-	85.14	35.01	11.21	36.63	392	70	A	V
		5850.8	48.72	-71.76	120.48	39	35.11	11.33	36.72	392	70	P	V
		5868.4	67.03	-40.12	107.15	57.3	35.13	11.34	36.74	392	70	P	V
		5886.4	55.43	-41.41	96.84	45.67	35.16	11.36	36.76	392	70	P	V
		5928.4	50.21	-18.09	68.3	40.4	35.22	11.4	36.81	392	70	P	V
Remark	3. No other spurious found. 4. 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		5648	59.64	-8.66	68.3	50.2	34.87	11.08	36.51	100	117	P	H
		5681.2	75.86	-15.57	91.43	66.39	34.91	11.11	36.55	100	117	P	H
		5717.6	73.71	-36.52	110.23	64.18	34.97	11.16	36.6	100	117	P	H
		5721.2	74.05	-39.59	113.64	64.52	34.97	11.16	36.6	100	117	P	H
		5788	105.86	-	-	96.22	35.05	11.26	36.67	100	117	P	H
		5788	98.19	-	-	88.55	35.05	11.26	36.67	100	117	A	H
		5850	63.59	-58.71	122.3	53.87	35.11	11.33	36.72	100	117	P	H
		5860.8	59.5	-49.77	109.27	49.77	35.13	11.34	36.74	100	117	P	H
		5884.4	59.4	-38.92	98.32	49.64	35.16	11.36	36.76	100	117	P	H
		5941.2	53.29	-15.01	68.3	43.46	35.24	11.42	36.83	100	117	P	H
		5646.4	53.72	-14.58	68.3	44.28	34.87	11.08	36.51	299	81	P	V
		5690.4	49.52	-48.7	98.22	40.02	34.93	11.13	36.56	299	81	P	V
		5718	68.3	-42.04	110.34	58.77	34.97	11.16	36.6	299	81	P	V
		5721.6	68.85	-45.7	114.55	59.3	34.97	11.18	36.6	299	81	P	V
		5782	100.45	-	-	90.81	35.03	11.26	36.65	299	81	P	V
		5782	92.8	-	-	83.16	35.03	11.26	36.65	299	81	A	V
		5850.4	58.54	-62.85	121.39	48.82	35.11	11.33	36.72	299	81	P	V
		5872.8	61.28	-44.64	105.92	51.54	35.16	11.34	36.76	299	81	P	V
		5875.2	56.77	-48.38	105.15	47.01	35.16	11.36	36.76	299	81	P	V
		5932	50.74	-17.56	68.3	40.91	35.22	11.42	36.81	299	81	P	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												



UNII-35725~5850MHz

WIFI 802.11ax HE80_Partial 484 (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 Partial 484/65 CH 155 5775MHz		11554	45.19	-28.81	74	57	38.23	16.39	66.43	300	0	P	H
		11554	46.83	-27.17	74	58.64	38.23	16.39	66.43	100	0	P	V
802.11ax HE80 Partial 484/66 CH 155 5775MHz		11554	45.42	-28.58	74	57.23	38.23	16.39	66.43	300	0	P	H
		11554	46.58	-27.42	74	58.39	38.23	16.39	66.43	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11ax HE80_Partial 242 (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 Partial LF		30.97	20.88	-19.12	40	27.99	24.98	0.71	32.8	-	-	P	H
		149.31	26.42	-17.08	43.5	39.86	17.51	1.85	32.8	-	-	P	H
		303.54	24.97	-21.03	46	34.92	20.29	2.66	32.9	-	-	P	H
		560.59	25.24	-20.76	46	28.39	25.82	3.61	32.58	-	-	P	H
		727.43	28.22	-17.78	46	30.7	26.14	4.13	32.75	-	-	P	H
		862.26	29.46	-16.54	46	30.3	27.25	4.48	32.57	-	-	P	H
		48.43	29.2	-10.8	40	45.35	15.77	1.05	32.97	-	-	P	V
		64.92	26.8	-13.2	40	45.39	13.3	1.21	33.1	-	-	P	V
		131.85	25.13	-18.37	43.5	38.51	17.72	1.74	32.84	-	-	P	V
		319.06	22.95	-23.05	46	32.47	20.66	2.72	32.9	-	-	P	V
		558.65	25.88	-20.12	46	29.02	25.83	3.61	32.58	-	-	P	V
		768.17	28.89	-17.11	46	30.63	26.65	4.24	32.63	-	-	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:

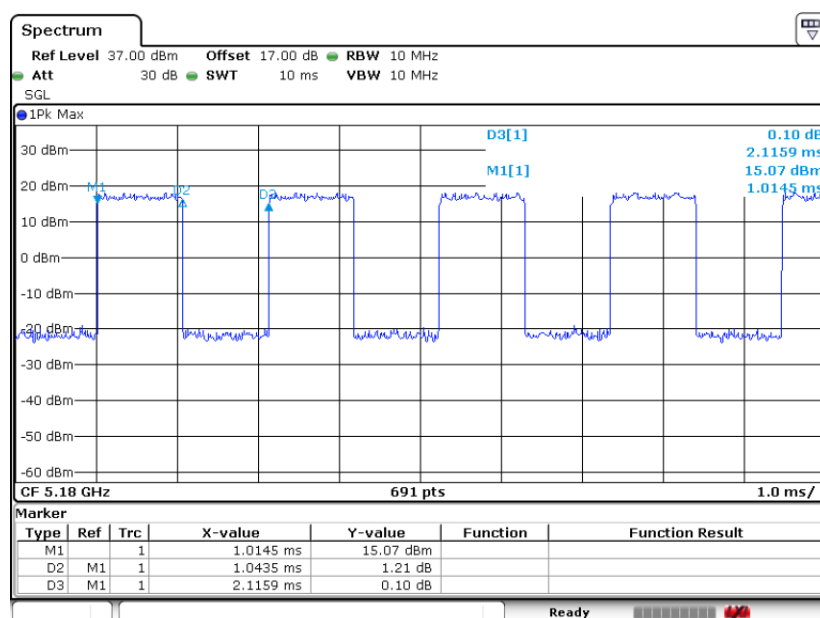
1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -10.46(dB)

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

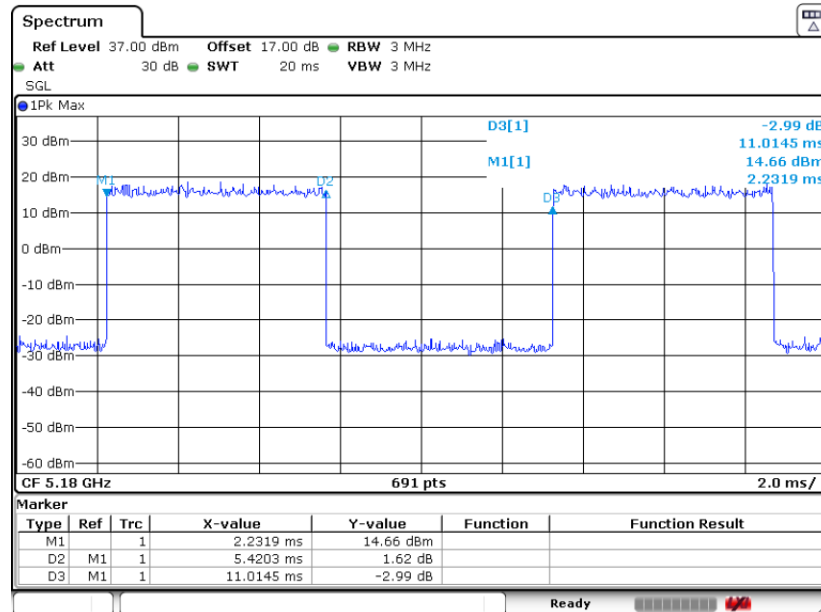
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1+2	802.11a	49.32	1.044	0.958	1KHz
1+2	802.11ax HE20	49.21	5.420	0.184	0.2KHz
1+2	802.11ax HE40	57.94	5.449	0.184	0.2KHz
1+2	802.11ax HE80	54.17	5.362	0.186	0.2KHz
1+2	802.11ax HE160	69.49	4.522	0.221	0.24KHz

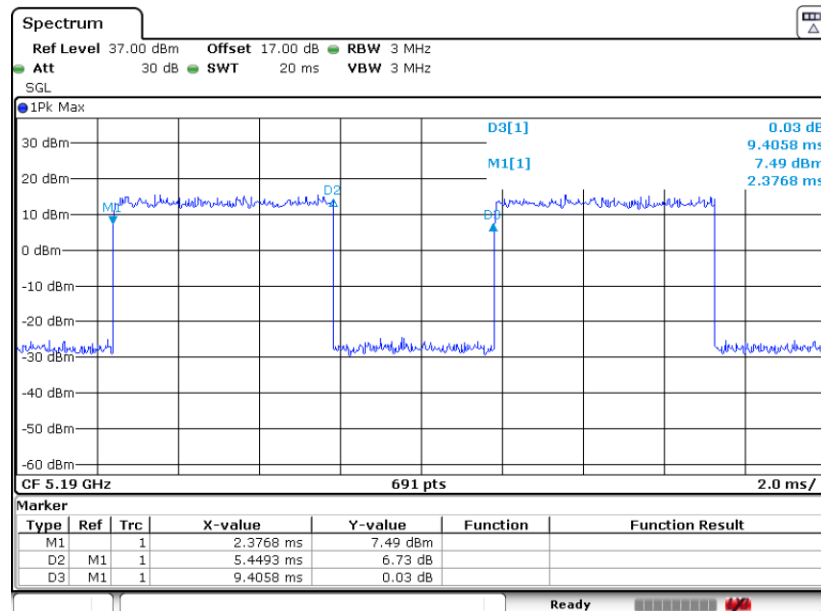
802.11a



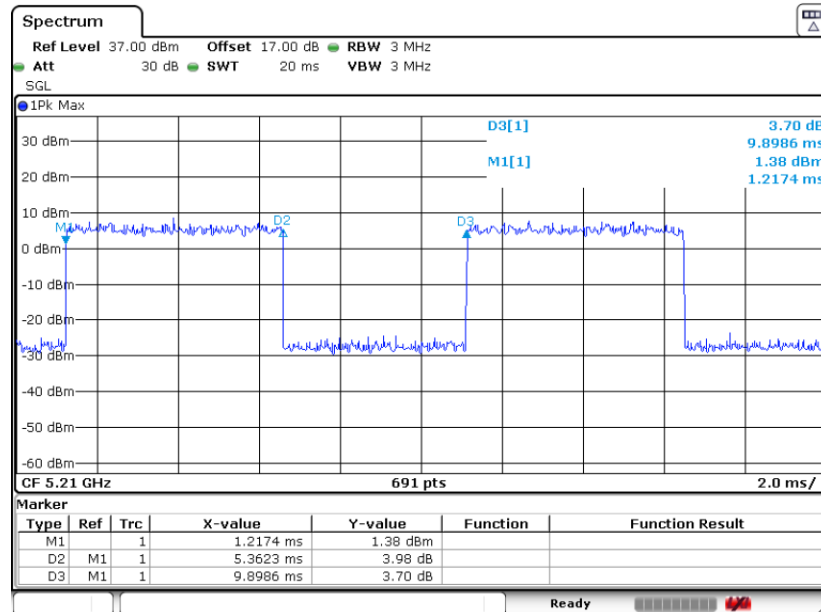
802.11ax HE20



802.11ax HE40



802.11ax HE80



802.11ax HE160

