FCC RADIO TEST REPORT

FCC ID	:	**O57TBJ616F**
Equipment	:	**Portable Tablet Computer**
Brand Name	:	**Lenovo**
Model Name	:	**Lenovo TB-J616F**
Applicant	:	**Lenovo(Shanghai) Electronics Technology Co., Ltd. Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone**
Manufacturer	:	**Lenovo PC HK Limited 23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, P.R.China**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on May 03, 2021 and testing was started from May 06, 2021 and completed on May 22, 2021. We, Sporton International Inc. Wensan Laboratory, 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 Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan

Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **5**
1.1 Product Feature of Equipment Under Test 5
1.2 Product Specification of Equipment Under Test 5
1.3 Modification of EUT 5
1.4 Testing Location 6
1.5 Applicable Standards 6
2 Test Configuration of Equipment Under Test **7**
2.1 Carrier Frequency and Channel 7
2.2 Test Mode 8
2.3 Connection Diagram of Test System 9
2.4 Support Unit used in test configuration and system 9
2.5 EUT Operation Test Setup 9
2.6 Measurement Results Explanation Example 10
3 Test Result **11**
3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement 11
3.2 Maximum Conducted Output Power Measurement 14
3.3 Power Spectral Density Measurement 15
3.4 Unwanted Emissions Measurement 17
3.5 AC Conducted Emission Measurement 22
3.6 Automatically Discontinue Transmission 24
3.7 Antenna Requirements 25
4 List of Measuring Equipment **26**
5 Uncertainty of Evaluation **28**
Appendix A. Conducted Test Results
Appendix B. AC Conducted Emission Test Result
Appendix C. Radiated Spurious Emission
Appendix D. Radiated Spurious Emission Plots
Appendix E. Duty Cycle Plots
Appendix F. Setup Photographs

History of this test report

Report No.	Version	Description	Issued Date
FR142608E	01	Initial issue of report	Jun. 01, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 3.14 dB at 18000 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 18.09 dB at 0.620 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 15.407(a)	Antenna Requirement	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.

Reviewed by: Danny Lee
Report Producer: Dara Chiu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Portable Tablet Computer
Brand Name	Lenovo
Model Name	Lenovo TB-J616F
FCC ID	O57TBJ616F
Sample 1	1st source (refer to the PED)
Sample 2	2nd source (refer to the PED)
Sample 3	3rd source (refer to the PED)
Sample 4	4rd source (refer to the PED)
Sample 5	5rd source (refer to the PED)
EUT supports Radios application	GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM
HW Version	Lenovo Tablet TB-J616F
SW Version	Lenovo Tablet TB-J616F_RF01_210415
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer.

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	802.11a: 15.90 dBm / 0.0389 W 802.11n HT20: 14.90 dBm / 0.0309 W 802.11n HT40: 14.80 dBm / 0.0302 W 802.11ac VHT20: 13.90 dBm / 0.0245 W 802.11ac VHT40: 13.90 dBm / 0.0245 W 802.11ac VHT80: 13.90 dBm / 0.0245 W
99% Occupied Bandwidth	802.11a: 16.65 MHz 802.11n HT20: 17.75 MHz 802.11n HT40: 36.40 MHz 802.11ac VHT80: 76.32 MHz
Antenna Type / Gain	IFA Antenna with gain -4.50 dBi
Type of Modulation	802.11a/n : OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ac : OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

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

1.4 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan
Test Site No.	**Sporton Site No.**
	TH05-HY, CO07-HY, 03CH15-HY

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

FCC designation No.: TW3786

1.5 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- 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. The TAF code is not including all the FCC KDB listed without accreditation.

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 (Y 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 Band 4 (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.

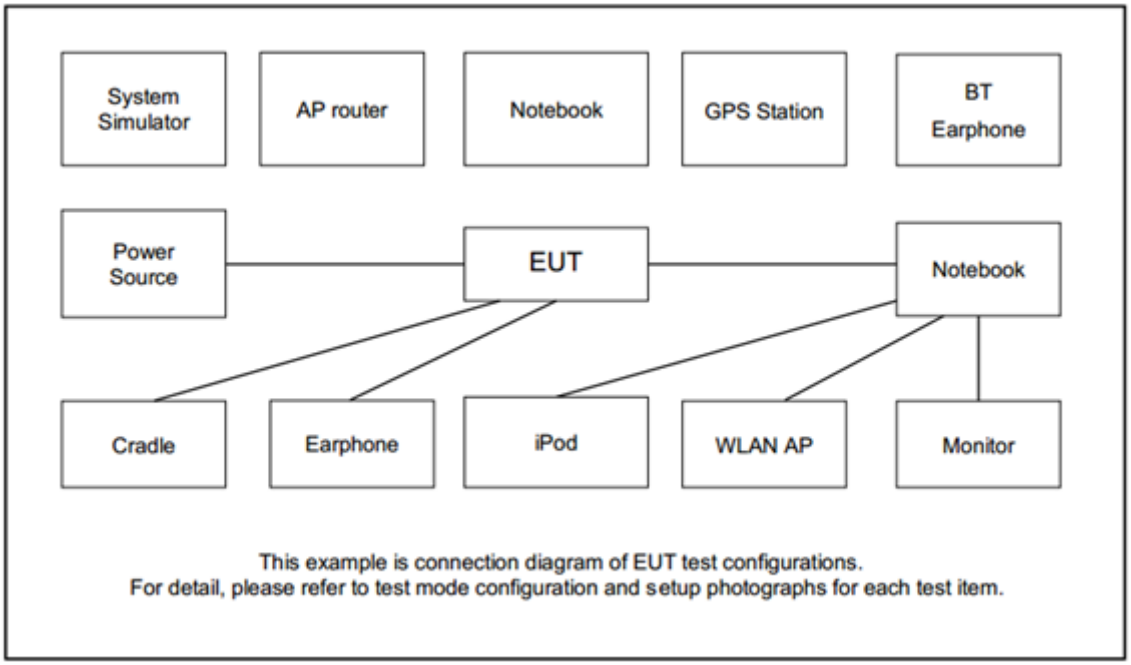
Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (5GHz) Link + SD Card + Keyboard + USB Cable 1 (Charging from Adapter 1) for Sample 3
Remark: For Radiated Test Cases, the tests were performed with Adapter 1, USB Cable 1 and Sample 1.	

Ch. #		Band IV：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	-

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Lenovo	LBH301	FCC DoC	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude 3400	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

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 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

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.

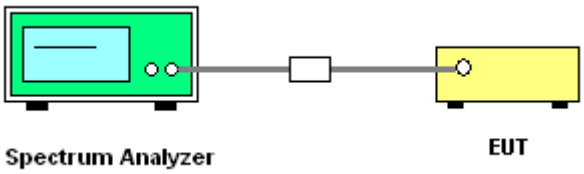
3.1.2 Measuring Instruments

See list of measuring equipment 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 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW ≥ 3 x 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.

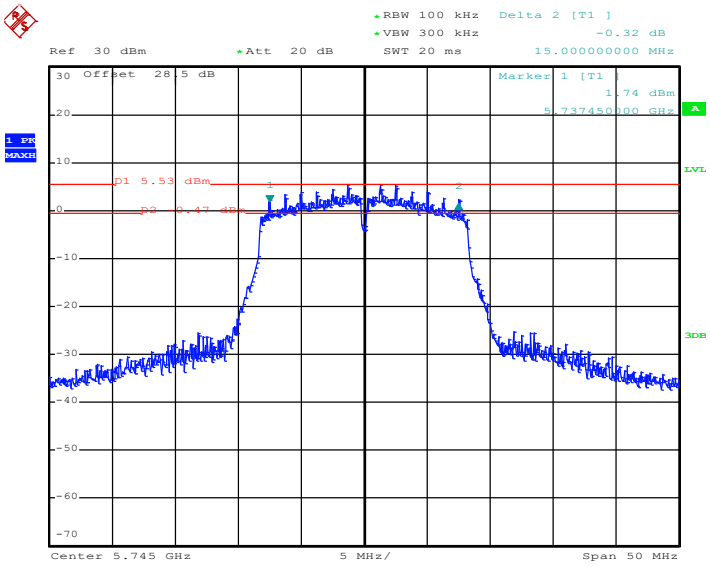
3.1.4 Test Setup



3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

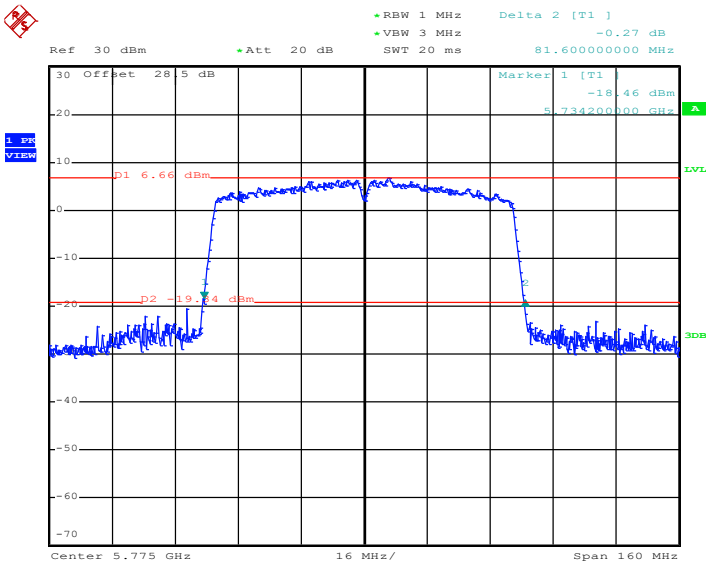
Please refer to Appendix A.

Minimum 6dB Bandwidth



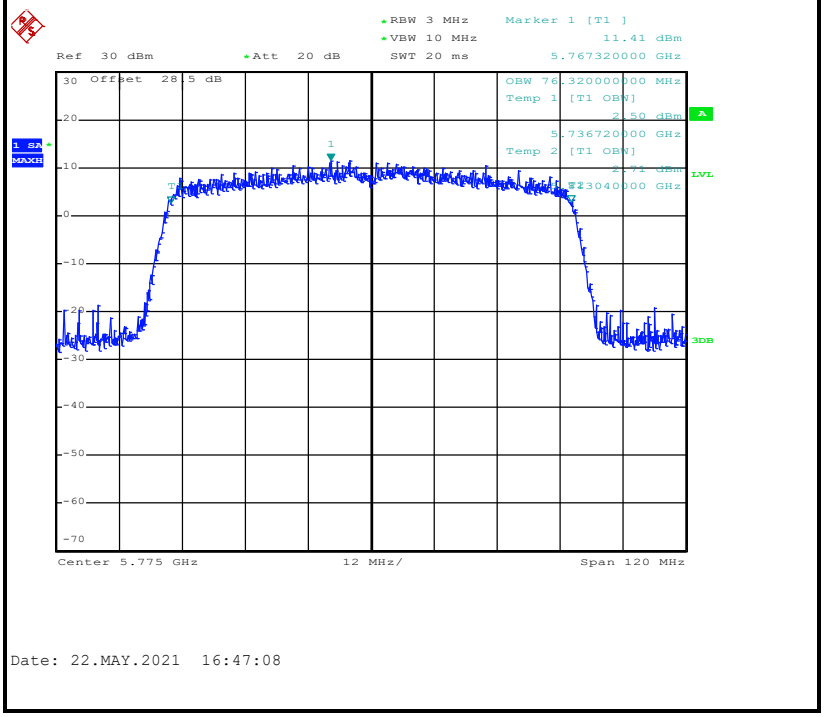
Date: 22.MAY.2021 16:03:20

Maximum 26dB Bandwidth



Date: 22.MAY.2021 16:44:25

Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

See list of measuring equipment of this test report.

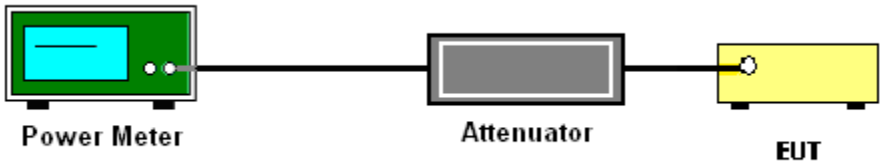
3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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

See list of measuring equipment 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.

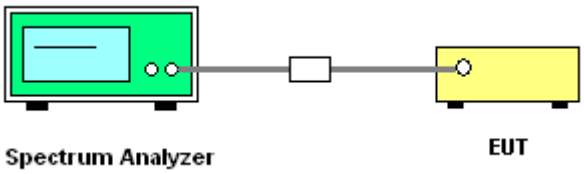
 # Method SA-3 #

(power averaging (rms) detection with max hold):

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time ≤ (number of points in sweep) × 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.
  Detector = power averaging (rms).
- Trace mode = max hold.
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

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

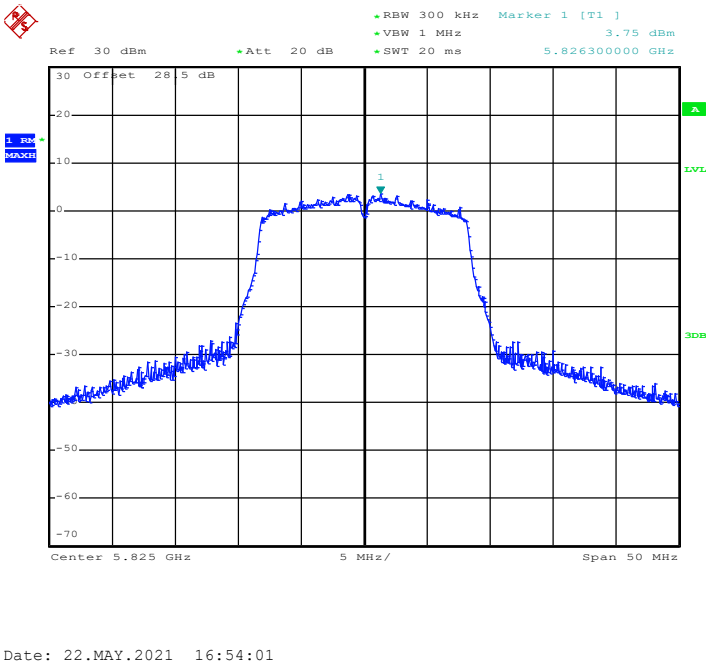
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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

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

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of −27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.2 Measuring Instruments

See list of measuring equipment 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 1000 MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

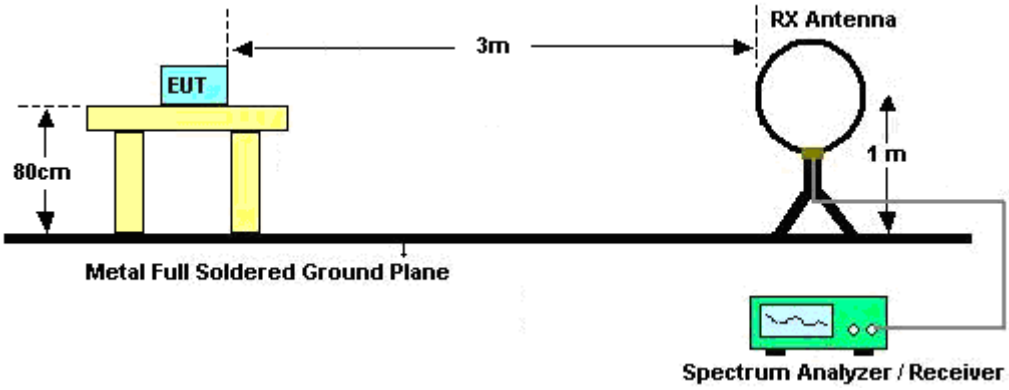
   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz 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 1 GHz, 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.

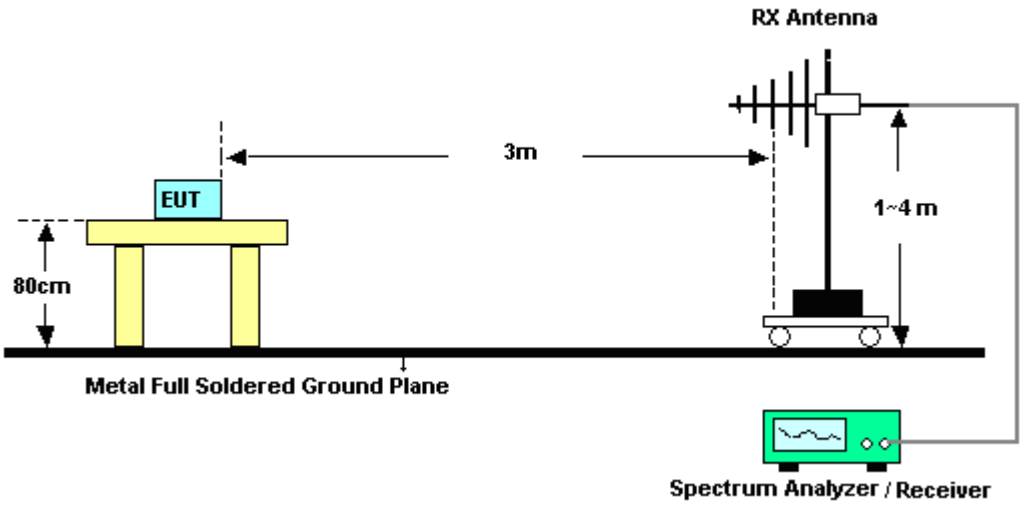
7. For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

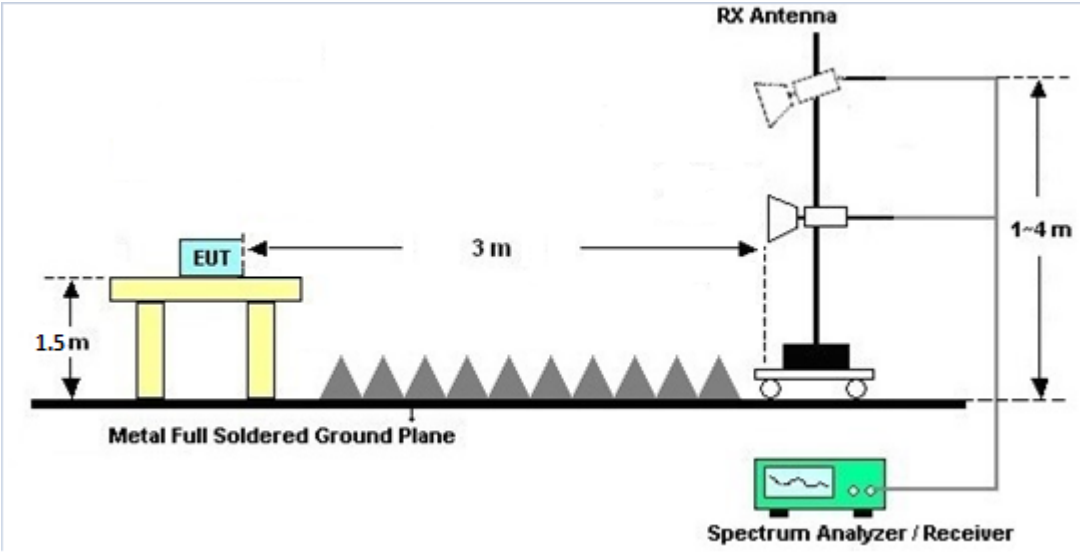
For radiated emissions below 30MHz



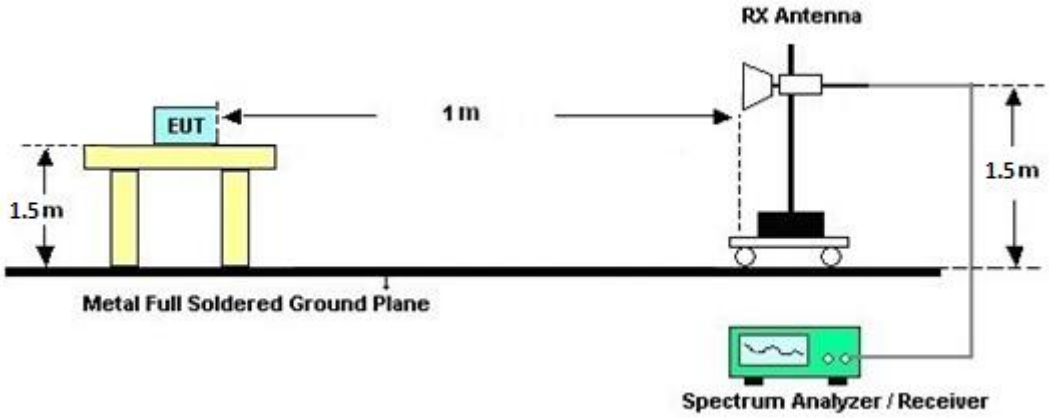
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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 alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

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.

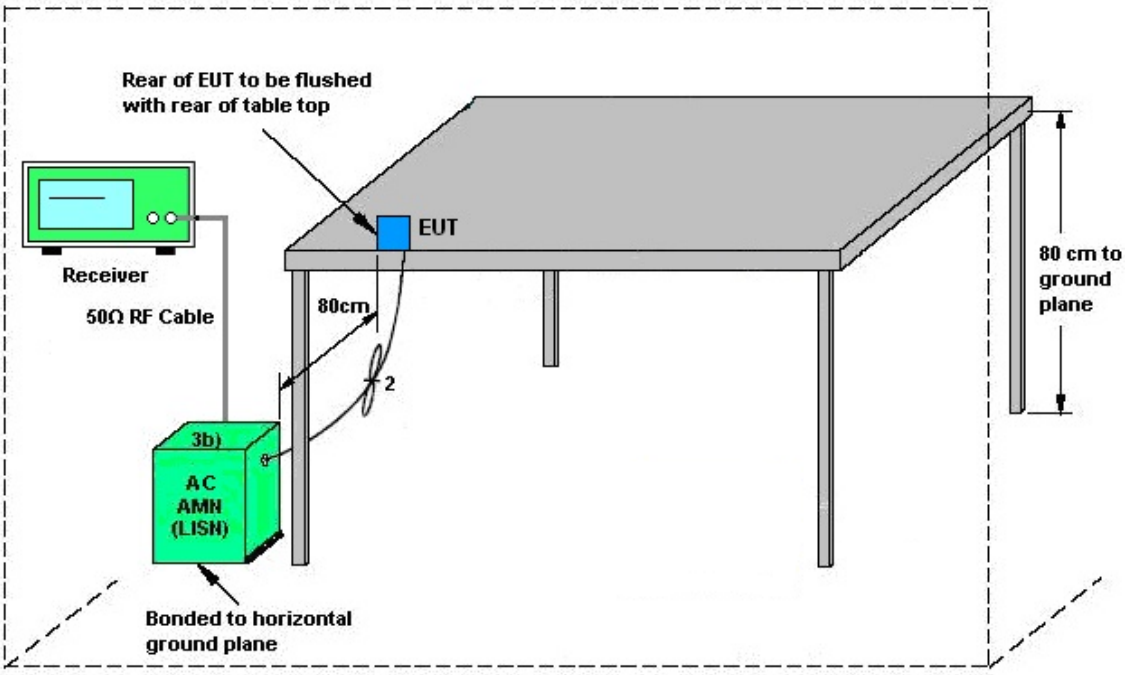
3.5.2 Measuring Instruments

See list of measuring equipment 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 shall 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



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	May 13, 2021	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	May 13, 2021	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Nov. 02, 2020	May 13, 2021	Nov. 01, 2021	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	N/A	May 13, 2021	N/A	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Feb. 01, 2021	May 13, 2021	Jan. 31, 2022	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 11, 2020	May 13, 2021	Sep. 10, 2021	Conduction (CO07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	May 14, 2021 ~ May 19, 2021	Jul. 13, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 08, 2021	May 14, 2021 ~ May 19, 2021	Feb. 07, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Nov. 03, 2020	May 14, 2021 ~ May 19, 2021	Nov. 02, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Dec. 02, 2020	May 14, 2021 ~ May 19, 2021	Dec. 01, 2021	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	May 14, 2021 ~ May 19, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55006	1GHz~18GHz	May 06, 2021	May 14, 2021 ~ May 19, 2021	May 05, 2022	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2020	May 14, 2021 ~ May 19, 2021	Aug. 20, 2021	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Oct. 27, 2020	May 14, 2021 ~ May 19, 2021	Oct. 26, 2021	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Nov. 02, 2020	May 14, 2021 ~ May 19, 2021	Nov. 01, 2021	Radiation (03CH15-HY
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 23, 2020	May 14, 2021 ~ May 19, 2021	Oct. 22, 2021	Radiation (03CH15-HY
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	May 14, 2021 ~ May 19, 2021	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	May 14, 2021 ~ May 19, 2021	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	May 14, 2021 ~ May 19, 2021	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 16, 2020	May 14, 2021 ~ May 19, 2021	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 22, 2021	May 14, 2021 ~ May 19, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 22, 2021	May 14, 2021 ~ May 19, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	May 14, 2021 ~ May 19, 2021	Mar. 10, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-15 30-6000-40ST	SN4	1.53GHz Low Pass Filter	Jul. 03, 2020	May 14, 2021 ~ May 19, 2021	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000-40ST	SN6	6.75GHz High Pass Filter	Jul. 01, 2020	May 14, 2021 ~ May 19, 2021	Jun. 30, 2021	Radiation (03CH15-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 16, 2020	May 06, 2021 ~ May 22, 2021	Dec. 15, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jan. 21, 2021	May 06, 2021 ~ May 22, 2021	Jan. 20, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	May 06, 2021 ~ May 22, 2021	Mar. 16, 2022	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.3

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.9

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Mina Liu	Temperature:	21~25	°C
Test Date:	2021/5/6~2021/05/22	Relative Humidity:	51~54	%

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

Band IV single antenna												
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	1	149	5745	16.60	-	24.55	-	15.00	-	0.5	Pass
11a	6Mbps	1	157	5785	16.65	-	25.65	-	15.05	-	0.5	Pass
11a	6Mbps	1	165	5825	16.65	-	28.70	-	15.10	-	0.5	Pass
HT20	MCS0	1	149	5745	17.75	-	29.35	-	15.05	-	0.5	Pass
HT20	MCS0	1	157	5785	17.65	-	28.60	-	15.10	-	0.5	Pass
HT20	MCS0	1	165	5825	17.70	-	28.75	-	15.00	-	0.5	Pass
HT40	MCS0	1	151	5755	36.40	-	60.03	-	34.92	-	0.5	Pass
HT40	MCS0	1	159	5795	36.40	-	64.71	-	34.92	-	0.5	Pass
VHT80	MCS0	1	155	5775	76.32	-	81.60	-	74.88	-	0.5	Pass

Report Number : FR142608E

TEST RESULTS DATA
Average Power Table

Band IV single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	15.90	-	30.00	-	-4.50	-	Pass
11a	6Mbps	1	157	5785	15.70	-	30.00	-	-4.50	-	Pass
11a	6Mbps	1	165	5825	15.70	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	149	5745	14.90	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	157	5785	14.90	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	165	5825	14.80	-	30.00	-	-4.50	-	Pass
HT40	MCS0	1	151	5755	14.80	-	30.00	-	-4.50	-	Pass
HT40	MCS0	1	159	5795	14.70	-	30.00	-	-4.50	-	Pass
VHT20	MCS0	1	149	5745	13.80	-	30.00	-	-4.50	-	Pass
VHT20	MCS0	1	157	5785	13.90	-	30.00	-	-4.50	-	Pass
VHT20	MCS0	1	165	5825	13.80	-	30.00	-	-4.50	-	Pass
VHT40	MCS0	1	151	5755	13.90	-	30.00	-	-4.50	-	Pass
VHT40	MCS0	1	159	5795	13.80	-	30.00	-	-4.50	-	Pass
VHT80	MCS0	1	155	5775	13.90	-	30.00	-	-4.50	-	Pass

Report Number : FR142608E

TEST RESULTS DATA
Power Spectral Density

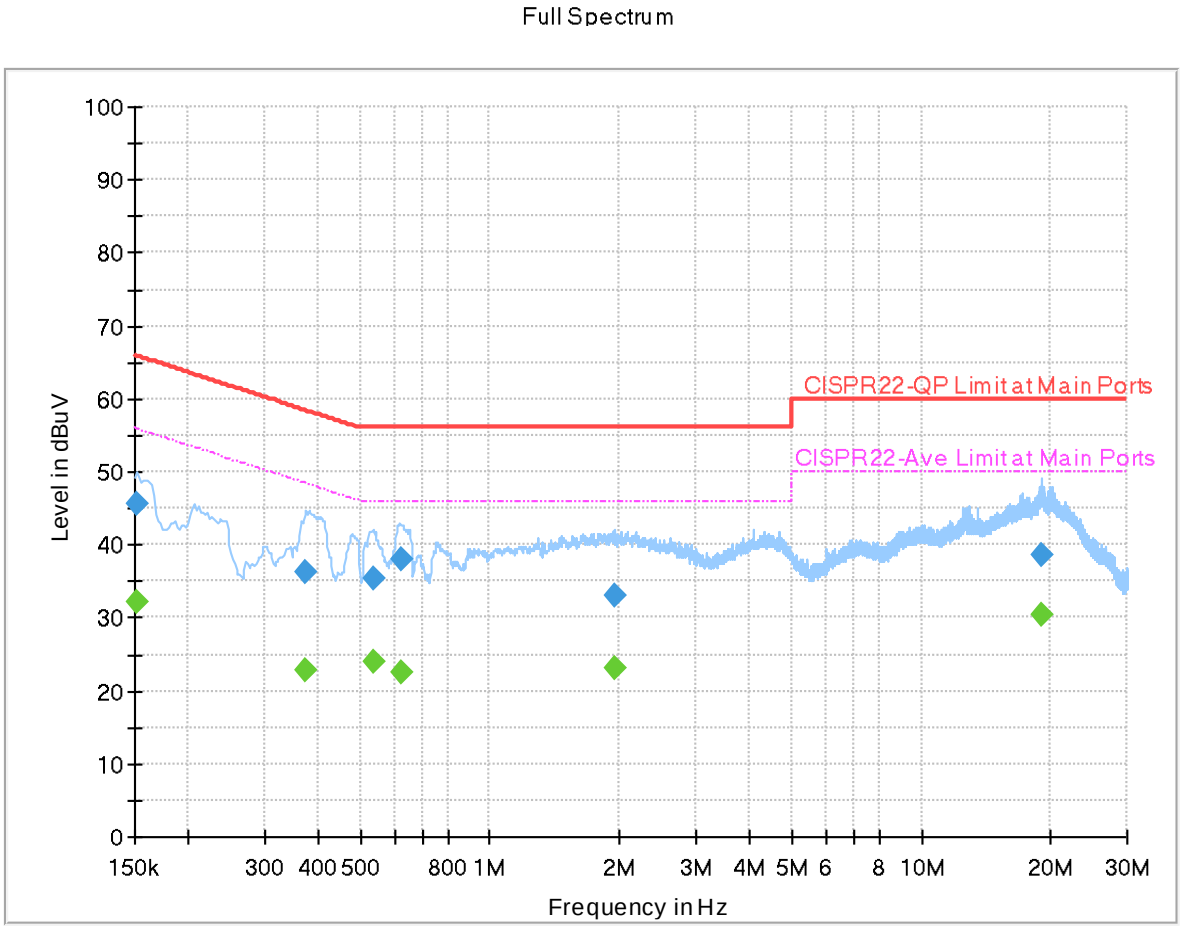
Band IV single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)		Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	2.22	-	5.67	-	30.00	-	-4.50	-	Pass
11a	6Mbps	1	157	5785	2.22	-	5.93	-	30.00	-	-4.50	-	Pass
11a	6Mbps	1	165	5825	2.22	-	5.97	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	149	5745	2.22	-	5.91	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	157	5785	2.22	-	5.66	-	30.00	-	-4.50	-	Pass
HT20	MCS0	1	165	5825	2.22	-	5.68	-	30.00	-	-4.50	-	Pass
HT40	MCS0	1	151	5755	2.22	-	2.77	-	30.00	-	-4.50	-	Pass
HT40	MCS0	1	159	5795	2.22	-	2.66	-	30.00	-	-4.50	-	Pass
VHT80	MCS0	1	155	5775	2.22	-	-1.19	-	30.00	-	-4.50	-	Pass

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	**Temperature :**	23~26℃
		Relative Humidity :	40~50%

EUT Information

Report NO :	142608
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

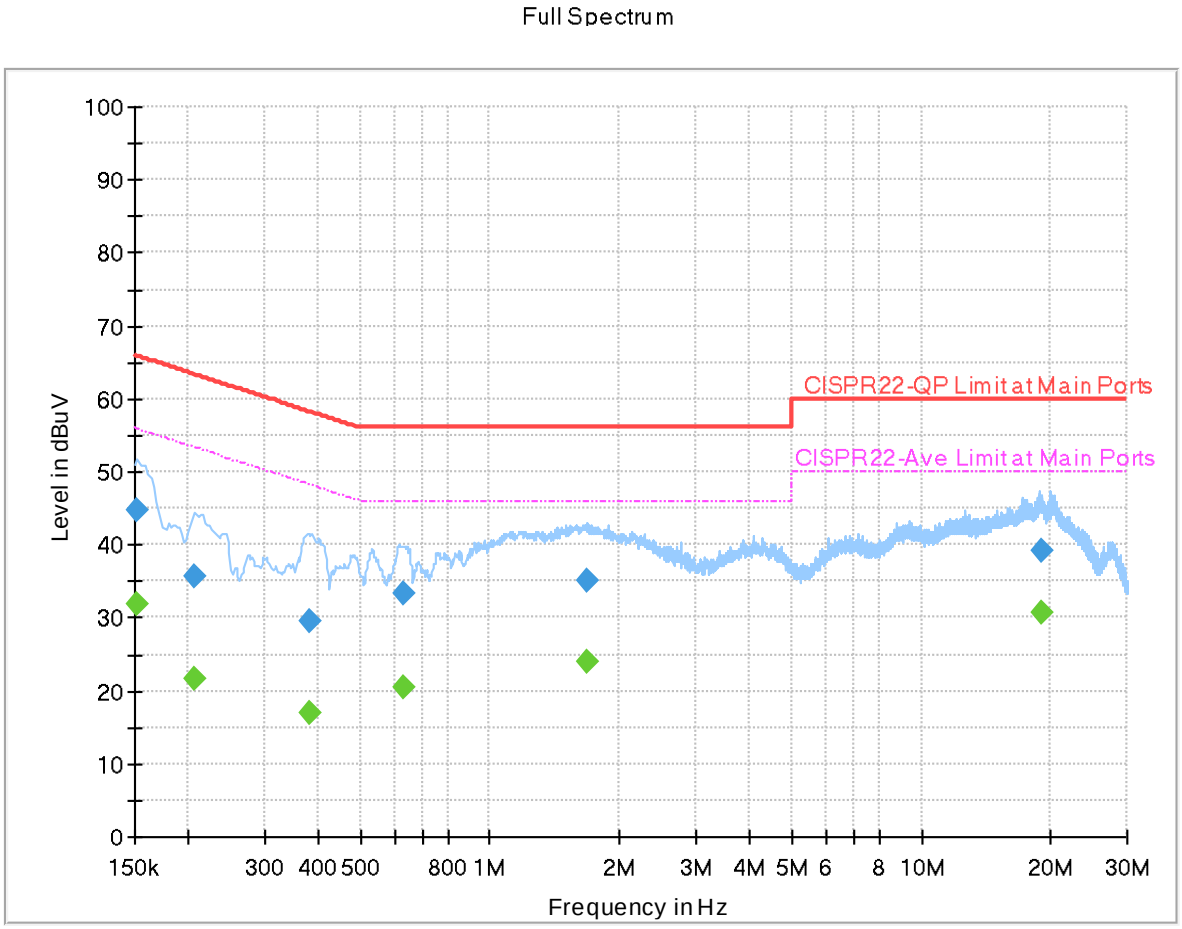


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.25	55.88	23.63	L1	OFF	20.0
0.152250	45.52	---	65.88	20.36	L1	OFF	20.0
0.375000	---	22.73	48.39	25.66	L1	OFF	20.0
0.375000	36.17	---	58.39	22.22	L1	OFF	20.0
0.534750	---	23.93	46.00	22.07	L1	OFF	20.0
0.534750	35.52	---	56.00	20.48	L1	OFF	20.0
0.620250	---	22.52	46.00	23.48	L1	OFF	20.0
0.620250	37.91	---	56.00	18.09	L1	OFF	20.0
1.938750	---	23.12	46.00	22.88	L1	OFF	20.0
1.938750	33.07	---	56.00	22.93	L1	OFF	20.0
18.933000	---	30.38	50.00	19.62	L1	OFF	20.2
18.933000	38.72	---	60.00	21.28	L1	OFF	20.2

EUT Information

Report NO :	142608
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	31.76	55.88	24.12	N	OFF	20.0
0.152250	44.60	---	65.88	21.28	N	OFF	20.0
0.206250	---	21.53	53.36	31.83	N	OFF	20.0
0.206250	35.68	---	63.36	27.68	N	OFF	20.0
0.381750	---	16.97	48.24	31.27	N	OFF	20.0
0.381750	29.58	---	58.24	28.66	N	OFF	20.0
0.629250	---	20.46	46.00	25.54	N	OFF	20.0
0.629250	33.19	---	56.00	22.81	N	OFF	20.0
1.675500	---	23.99	46.00	22.01	N	OFF	20.0
1.675500	35.15	---	56.00	20.85	N	OFF	20.0
18.924000	---	30.60	50.00	19.40	N	OFF	20.3
18.924000	39.17	---	60.00	20.83	N	OFF	20.3

Appendix C. Radiated Spurious Emission

Test Engineer :	Leo Lee, Mancy Chou, and Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

Band 4 - 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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5630.8	51.89	-16.31	68.2	39.9	31.66	10.41	30.08	185	246	P	H
		5690.6	52.7	-45.57	98.27	40.65	31.7	10.48	30.13	185	246	P	H
		5719.4	64.03	-46.6	110.63	51.93	31.74	10.51	30.15	185	246	P	H
		5723.2	66.88	-51.22	118.1	54.76	31.75	10.52	30.15	185	246	P	H
	*	5745	105.91	-	-	93.75	31.79	10.54	30.17	185	246	P	H
	*	5745	98.4	-	-	86.24	31.79	10.54	30.17	185	246	A	H
													H
													H
		5633.2	51.5	-16.7	68.2	39.5	31.67	10.42	30.09	160	268	P	V
		5694.6	55.69	-45.53	101.22	43.64	31.7	10.48	30.13	160	268	P	V
		5719.6	65.13	-45.56	110.69	53.03	31.74	10.51	30.15	160	268	P	V
		5724.8	69.98	-51.76	121.74	57.86	31.75	10.52	30.15	160	268	P	V
	*	5745	107.77	-	-	95.61	31.79	10.54	30.17	160	268	P	V
	*	5745	100.04	-	-	87.88	31.79	10.54	30.17	160	268	A	V
													V
													V

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)
802.11a CH 157 5785MHz		5626.2	52.12	-16.08	68.2	40.14	31.65	10.41	30.08	169	244	P	H
		5660.2	51.59	-24.18	75.77	39.55	31.7	10.45	30.11	169	244	P	H
		5714.2	52.14	-57.04	109.18	40.04	31.73	10.51	30.14	169	244	P	H
		5722	51.65	-63.71	115.36	39.55	31.74	10.51	30.15	169	244	P	H
	*	5785	105.26	-	-	93.08	31.8	10.58	30.2	169	244	P	H
	*	5785	97.96	-	-	85.78	31.8	10.58	30.2	169	244	A	H
		5849.96	51.2	-83	134.2	38.81	32	10.63	30.24	169	244	P	H
		5873.125	51.92	-53.8	105.72	39.48	32.05	10.65	30.26	169	244	P	H
		5907.77	51.84	-29.07	80.91	39.32	32.12	10.68	30.28	169	244	P	H
		5938.52	51.31	-16.89	68.2	38.74	32.18	10.7	30.31	169	244	P	H
													H
													H
		5608.2	51.29	-16.91	68.2	39.35	31.62	10.39	30.07	164	269	P	V
		5696.6	52.27	-50.42	102.69	40.21	31.7	10.49	30.13	164	269	P	V
		5705.2	52.31	-54.35	106.66	40.24	31.71	10.5	30.14	164	269	P	V
		5724.2	52.45	-67.93	120.38	40.33	31.75	10.52	30.15	164	269	P	V
	*	5785	106.45	-	-	94.27	31.8	10.58	30.2	164	269	P	V
	*	5785	99.11	-	-	86.93	31.8	10.58	30.2	164	269	A	V
		5852.215	51.37	-65.78	117.15	38.97	32	10.64	30.24	164	269	P	V
		5859.39	51.99	-57.58	109.57	39.58	32.02	10.64	30.25	164	269	P	V
		5900.39	51.92	-34.45	86.37	39.43	32.1	10.67	30.28	164	269	P	V
		5936.265	52.25	-15.95	68.2	39.68	32.17	10.7	30.3	164	269	P	V
													V
													V

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)
	*	5825	104.49	-	-	92.19	31.9	10.62	30.22	174	246	P	H
	*	5825	97.38	-	-	85.08	31.9	10.62	30.22	174	246	A	H
		5850.6	58.31	-62.52	120.83	45.91	32	10.64	30.24	174	246	P	H
		5858	58.06	-51.9	109.96	45.65	32.02	10.64	30.25	174	246	P	H
		5909.2	52.86	-27	79.86	40.34	32.12	10.68	30.28	174	246	P	H
		5948.2	51.14	-17.06	68.2	38.55	32.2	10.7	30.31	174	246	P	H
													H
802.11a													H
CH 165	*	5825	106.36	-	-	94.06	31.9	10.62	30.22	144	268	P	V
5825MHz	*	5825	98.44	-	-	86.14	31.9	10.62	30.22	144	268	A	V
		5853.8	58.64	-54.9	113.54	46.23	32.01	10.64	30.24	144	268	P	V
		5856.4	56.86	-53.55	110.41	44.46	32.01	10.64	30.25	144	268	P	V
		5881.2	53.69	-46.9	100.59	41.23	32.06	10.66	30.26	144	268	P	V
		5945	51.67	-16.53	68.2	39.09	32.19	10.7	30.31	144	268	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	49.63	-24.37	74	55.38	40.09	15.03	60.87	100	0	P	H
		17235	49.38	-18.82	68.2	48.58	40.87	18.48	58.55	100	0	P	H
		18000	60.38	-13.62	74	49.58	49	19.04	57.24	100	214	P	H
		18000	50.86	-3.14	54	40.06	49	19.04	57.24	100	214	A	H
		11490	49.91	-24.09	74	55.66	40.09	15.03	60.87	100	0	P	V
		17235	50.48	-17.72	68.2	49.68	40.87	18.48	58.55	100	0	P	V
		17978	60.56	-13.44	74	50.22	48.6	19.03	57.29	300	324	P	V
		17978	50.75	-3.25	54	40.41	48.6	19.03	57.29	300	324	A	V
802.11a CH 157 5785MHz		11570	48.74	-25.26	74	54.58	40.03	15.07	60.94	100	0	P	H
		17355	50.65	-17.55	68.2	48.96	41.6	18.57	58.48	100	0	P	H
		18000	59.95	-14.05	74	49.15	49	19.04	57.24	100	247	P	H
		18000	50.12	-3.88	54	39.32	49	19.04	57.24	100	247	A	H
		11570	49.05	-24.95	74	54.89	40.03	15.07	60.94	100	0	P	V
		17355	50.55	-17.65	68.2	48.86	41.6	18.57	58.48	100	0	P	V
		17989	60.18	-13.82	74	49.62	48.8	19.03	57.27	300	312	P	V
		17989	50.39	-3.61	54	39.83	48.8	19.03	57.27	300	312	A	V
802.11a CH 165 5825MHz		11650	48.83	-25.17	74	55.05	39.7	14.5	61.03	100	0	P	H
		17475	53.3	-14.9	68.2	50.27	42.78	17.89	58.41	100	0	P	H
		17989	60.16	-13.84	74	49.6	48.8	18.23	57.27	100	216	P	H
		17989	50.54	-3.46	54	39.98	48.8	18.23	57.27	100	216	A	H
		11650	48.85	-25.15	74	55.07	39.7	14.5	61.03	100	0	P	V
		17475	52.67	-15.53	68.2	49.64	42.78	17.89	58.41	100	0	P	V
		17989	59.59	-14.41	74	49.03	48.8	18.23	57.27	100	321	P	V
		17989	50	-4	54	39.44	48.8	18.23	57.27	300	321	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5630.2	51.02	-17.18	68.2	39.03	31.66	10.41	30.08	201	246	P	H
		5694.2	57.96	-42.96	100.92	45.91	31.7	10.48	30.13	201	246	P	H
		5720	64.04	-46.76	110.8	51.94	31.74	10.51	30.15	201	246	P	H
		5724	69.03	-50.89	119.92	56.91	31.75	10.52	30.15	201	246	P	H
	*	5745	105.39	-	-	93.23	31.79	10.54	30.17	201	246	P	H
	*	5745	97.72	-	-	85.56	31.79	10.54	30.17	201	246	A	H
802.11n													H
HT20													H
CH 149		5629	52.15	-16.05	68.2	40.16	31.66	10.41	30.08	121	261	P	V
5745MHz		5694.6	60.91	-40.31	101.22	48.86	31.7	10.48	30.13	121	261	P	V
		5713.2	64.75	-44.15	108.9	52.66	31.73	10.5	30.14	121	261	P	V
		5724	67	-52.92	119.92	54.88	31.75	10.52	30.15	121	261	P	V
	*	5745	107.26	-	-	95.1	31.79	10.54	30.17	121	261	P	V
	*	5745	99.08	-	-	86.92	31.79	10.54	30.17	121	261	A	V
													V
													V

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)
		5648.8	51.75	-16.45	68.2	39.72	31.7	10.43	30.1	186	243	P	H
		5658.8	52.28	-22.46	74.74	40.24	31.7	10.44	30.1	186	243	P	H
		5717	51.29	-58.67	109.96	39.2	31.73	10.51	30.15	186	243	P	H
		5723.8	54.4	-65.06	119.46	42.28	31.75	10.52	30.15	186	243	P	H
	*	5785	104.66	-	-	92.48	31.8	10.58	30.2	186	243	P	H
	*	5785	96.99	-	-	84.81	31.8	10.58	30.2	186	243	A	H
		5849.96	50.73	-83.47	134.2	38.34	32	10.63	30.24	186	243	P	H
		5864.105	52.16	-56.09	108.25	39.74	32.03	10.64	30.25	186	243	P	H
		5876.2	51.55	-52.76	104.31	39.11	32.05	10.65	30.26	186	243	P	H
		5945.695	51.52	-16.68	68.2	38.94	32.19	10.7	30.31	186	243	P	H
802.11n													H
HT20													H
CH 157		5635.2	52.21	-15.99	68.2	40.21	31.67	10.42	30.09	140	268	P	V
5785MHz		5699.8	52.56	-52.49	105.05	40.5	31.7	10.49	30.13	140	268	P	V
		5717.8	55.07	-55.11	110.18	42.97	31.74	10.51	30.15	140	268	P	V
		5720.8	54.1	-58.52	112.62	42	31.74	10.51	30.15	140	268	P	V
	*	5785	105.62	-	-	93.44	31.8	10.58	30.2	140	268	P	V
	*	5785	98.41	-	-	86.23	31.8	10.58	30.2	140	268	A	V
		5852.01	52.93	-64.69	117.62	40.53	32	10.64	30.24	140	268	P	V
		5869.23	52.94	-53.87	106.81	40.51	32.04	10.65	30.26	140	268	P	V
		5889.73	52.3	-41.97	94.27	39.83	32.08	10.66	30.27	140	268	P	V
		5948.975	51.57	-16.63	68.2	38.98	32.2	10.7	30.31	140	268	P	V
													V
													V

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)
802.11n HT20 CH 165 5825MHz	*	5825	104.6	-	-	92.3	31.9	10.62	30.22	156	293	P	H
	*	5825	96.92	-	-	84.62	31.9	10.62	30.22	156	293	A	H
		5852.4	63.57	-53.16	116.73	51.17	32	10.64	30.24	156	293	P	H
		5855.4	62.17	-48.52	110.69	49.77	32.01	10.64	30.25	156	293	P	H
		5898.4	54.57	-33.28	87.85	42.08	32.1	10.67	30.28	156	293	P	H
		5930.2	53.29	-14.91	68.2	40.74	32.16	10.69	30.3	156	293	P	H
													H
													H
	*	5825	106.26	-	-	93.96	31.9	10.62	30.22	264	259	P	V
	*	5825	98.28	-	-	85.98	31.9	10.62	30.22	264	259	A	V
		5851.8	65.12	-52.98	118.1	52.72	32	10.64	30.24	264	259	P	V
		5855.2	63.76	-46.98	110.74	51.36	32.01	10.64	30.25	264	259	P	V
		5881.2	57.44	-43.15	100.59	44.98	32.06	10.66	30.26	264	259	P	V
		5937	53.52	-14.68	68.2	40.95	32.17	10.7	30.3	264	259	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	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		11490	49.31	-24.69	74	55.06	40.09	15.03	60.87	100	0	P	H
		17235	50.24	-17.96	68.2	49.44	40.87	18.48	58.55	100	0	P	H
		17989	59.73	-14.27	74	49.17	48.8	19.03	57.27	100	241	P	H
		17989	50.05	-3.95	54	39.49	48.8	19.03	57.27	100	241	A	H
		11490	49.4	-24.6	74	55.15	40.09	15.03	60.87	100	0	P	V
		17235	49.32	-18.88	68.2	48.52	40.87	18.48	58.55	100	0	P	V
		18000	60.27	-13.73	74	49.47	49	19.04	57.24	300	351	P	V
		18000	50.44	-3.56	54	39.64	49	19.04	57.24	300	351	A	V
802.11n HT20 CH 157 5785MHz		11570	48.7	-25.3	74	54.54	40.03	15.07	60.94	100	0	P	H
		17355	50.29	-17.91	68.2	48.6	41.6	18.57	58.48	100	0	P	H
		17989	59.44	-14.56	74	48.88	48.8	19.03	57.27	100	230	P	H
		17989	49.62	-4.38	54	39.06	48.8	19.03	57.27	100	230	A	H
		11570	48.86	-25.14	74	54.7	40.03	15.07	60.94	100	0	P	V
		17355	50.27	-17.93	68.2	48.58	41.6	18.57	58.48	100	0	P	V
		18000	59.12	-14.88	74	48.32	49	19.04	57.24	300	306	P	V
		18000	49.39	-4.61	54	38.59	49	19.04	57.24	300	306	A	V
802.11n HT20 CH 165 5825MHz		11650	48.38	-25.62	74	54.6	39.7	15.11	61.03	100	0	P	H
		17475	52.26	-15.94	68.2	49.23	42.78	18.66	58.41	100	0	P	H
		18000	59.35	-14.65	74	48.55	49	19.04	57.24	100	245	P	H
		18000	49.55	-4.45	54	38.75	49	19.04	57.24	100	245	A	H
		11650	48.17	-25.83	74	54.39	39.7	15.11	61.03	100	0	P	V
		17475	51.46	-16.74	68.2	48.43	42.78	18.66	58.41	100	0	P	V
		17989	58.83	-15.17	74	48.27	48.8	19.03	57.27	300	342	P	V
		17989	48.99	-5.01	54	38.43	48.8	19.03	57.27	300	342	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5648.4	56.51	-11.69	68.2	44.48	31.7	10.43	30.1	180	246	P	H
		5698.6	66.15	-38.02	104.17	54.09	31.7	10.49	30.13	180	246	P	H
		5717.8	73.01	-37.17	110.18	60.91	31.74	10.51	30.15	180	246	P	H
		5725	76.94	-45.26	122.2	64.82	31.75	10.52	30.15	180	246	P	H
	*	5755	105.7	-	-	93.52	31.8	10.55	30.17	180	246	P	H
	*	5755	97.93	-	-	85.75	31.8	10.55	30.17	180	246	A	H
		5851.19	56.32	-63.17	119.49	43.92	32	10.64	30.24	180	246	P	H
		5863.08	59.01	-49.53	108.54	46.59	32.03	10.64	30.25	180	246	P	H
		5881.12	54.87	-45.78	100.65	42.41	32.06	10.66	30.26	180	246	P	H
		5941.185	52.64	-15.56	68.2	40.07	32.18	10.7	30.31	180	246	P	H
802.11n													H
HT40													H
CH 151		5632	56.61	-11.59	68.2	44.62	31.66	10.42	30.09	245	265	P	V
5755MHz		5697	66.74	-36.25	102.99	54.68	31.7	10.49	30.13	245	265	P	V
		5719.4	77.45	-33.18	110.63	65.35	31.74	10.51	30.15	245	265	P	V
		5723	80.8	-36.84	117.64	68.68	31.75	10.52	30.15	245	265	P	V
	*	5755	106.83	-	-	94.65	31.8	10.55	30.17	245	265	P	V
	*	5755	99.83	-	-	87.65	31.8	10.55	30.17	245	265	A	V
		5851.805	57.73	-60.35	118.08	45.33	32	10.64	30.24	245	265	P	V
		5863.9	60.04	-48.27	108.31	47.62	32.03	10.64	30.25	245	265	P	V
		5887.475	56.26	-39.68	95.94	43.8	32.07	10.66	30.27	245	265	P	V
		5946.925	53.38	-14.82	68.2	40.8	32.19	10.7	30.31	245	265	P	V
													V
													V

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)
		5628	51.14	-17.06	68.2	39.15	31.66	10.41	30.08	179	245	P	H
		5689.4	53.86	-43.52	97.38	41.81	31.7	10.48	30.13	179	245	P	H
		5715.6	58.61	-50.96	109.57	46.52	31.73	10.51	30.15	179	245	P	H
		5720.2	57.27	-53.99	111.26	45.17	31.74	10.51	30.15	179	245	P	H
	*	5795	102.1	-	-	89.91	31.8	10.59	30.2	179	245	P	H
	*	5795	94.59	-	-	82.4	31.8	10.59	30.2	179	245	A	H
		5854.47	58.9	-53.11	112.01	46.5	32.01	10.64	30.25	179	245	P	H
		5861.44	58.18	-50.81	108.99	45.77	32.02	10.64	30.25	179	245	P	H
		5885.63	56.26	-41.05	97.31	43.8	32.07	10.66	30.27	179	245	P	H
		5944.67	51.59	-16.61	68.2	39.01	32.19	10.7	30.31	179	245	P	H
802.11n													H
HT40													H
CH 159		5615.2	52.61	-15.59	68.2	40.65	31.63	10.4	30.07	252	259	P	V
5795MHz		5698.4	55.8	-48.22	104.02	43.74	31.7	10.49	30.13	252	259	P	V
		5715.6	61.5	-48.07	109.57	49.41	31.73	10.51	30.15	252	259	P	V
		5720.4	60.47	-51.24	111.71	48.37	31.74	10.51	30.15	252	259	P	V
	*	5795	102.71	-	-	90.52	31.8	10.59	30.2	252	259	P	V
	*	5795	95.26	-	-	83.07	31.8	10.59	30.2	252	259	A	V
		5854.675	58.93	-52.61	111.54	46.53	32.01	10.64	30.25	252	259	P	V
		5867.385	59.14	-48.19	107.33	46.71	32.03	10.65	30.25	252	259	P	V
		5882.76	57.36	-42.08	99.44	44.9	32.07	10.66	30.27	252	259	P	V
		5948.975	52.17	-16.03	68.2	39.58	32.2	10.7	30.31	252	259	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5644.4	53.31	-14.89	68.2	41.28	31.69	10.43	30.09	193	246	P	H
		5691.2	57.54	-41.17	98.71	45.49	31.7	10.48	30.13	193	246	P	H
		5716.2	61.47	-48.27	109.74	49.38	31.73	10.51	30.15	193	246	P	H
		5721.2	60.12	-53.42	113.54	48.02	31.74	10.51	30.15	193	246	P	H
	*	5775	97.91	-	-	85.73	31.8	10.57	30.19	193	246	P	H
	*	5775	90.14	-	-	77.96	31.8	10.57	30.19	193	246	A	H
		5852.42	58.53	-58.15	116.68	46.13	32	10.64	30.24	193	246	P	H
		5868.615	61.04	-45.95	106.99	48.61	32.04	10.65	30.26	193	246	P	H
		5889.525	56.58	-37.84	94.42	44.11	32.08	10.66	30.27	193	246	P	H
		5939.34	52.09	-16.11	68.2	39.52	32.18	10.7	30.31	193	246	P	H
802.11ac													H
VHT80													H
CH 155		5649.2	55.49	-12.71	68.2	43.46	31.7	10.43	30.1	250	268	P	V
5775MHz		5695.4	63.18	-38.63	101.81	51.13	31.7	10.48	30.13	250	268	P	V
		5719.6	62.78	-47.91	110.69	50.68	31.74	10.51	30.15	250	268	P	V
		5722.6	62.74	-53.99	116.73	50.63	31.75	10.51	30.15	250	268	P	V
	*	5775	99.93	-	-	87.75	31.8	10.57	30.19	250	268	P	V
	*	5775	92.7	-	-	80.52	31.8	10.57	30.19	250	268	A	V
		5855.085	61.99	-48.79	110.78	49.59	32.01	10.64	30.25	250	268	P	V
		5869.025	63.05	-43.82	106.87	50.62	32.04	10.65	30.26	250	268	P	V
		5883.58	59.21	-39.62	98.83	46.75	32.07	10.66	30.27	250	268	P	V
		5940.98	52.12	-16.08	68.2	39.55	32.18	10.7	30.31	250	268	P	V
													V
													V

Remark

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

Emission above 18GHz

WIFI 802.11n HT40 (SHF @ 3m)

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)
802.11n HT40 SHF		20288	37.52	-36.48	74	42.64	38.56	11.22	54.9	150	0	P	H
		35732	46.21	-21.99	68.2	44.26	42.05	18.6	58.7	150	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		22840	40.09	-33.91	74	43.16	38.76	12.4	54.23	150	0	P	V
		35578	46.15	-22.05	68.2	44.23	42.02	18.6	58.7	150	0	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

WIFI 802.11n HT40 (LF @ 3m)

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)
802.11n HT40 LF		31.94	22.2	-17.8	40	30.37	23.65	0.69	32.51	-	-	P	H
		152.22	25	-18.5	43.5	38.79	16.94	1.77	32.5	-	-	P	H
		237.58	28.03	-17.97	46	41.36	16.85	2.23	32.41	-	-	P	H
		479.11	24.52	-21.48	46	30.44	23.61	2.98	32.51	-	-	P	H
		655.65	27.55	-18.45	46	30.17	26.25	3.5	32.37	-	-	P	H
		830.25	32.61	-13.39	46	32.41	28.21	3.98	31.99	100	0	P	H
													H
													H
													H
													H
													H
													H
		33.88	31.61	-8.39	40	40.7	22.72	0.72	32.53	100	0	P	V
		156.1	21.8	-21.7	43.5	35.85	16.66	1.79	32.5	-	-	P	V
		241.46	22.44	-23.56	46	35.31	17.3	2.24	32.41	-	-	P	V
		395.69	22.83	-23.17	46	30.77	21.78	2.7	32.42	-	-	P	V
		567.38	25.9	-20.1	46	29.17	26.03	3.27	32.57	-	-	P	V
		876.81	30.61	-15.39	46	29.29	28.97	4.1	31.75	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. 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. Radiated Spurious Emission Plots

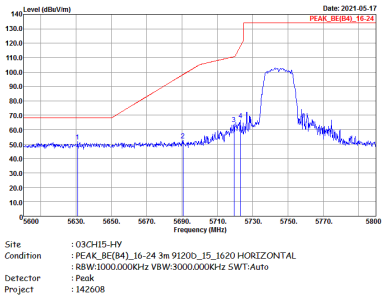
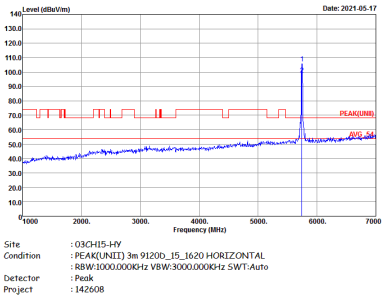
Test Engineer :	Leo Lee, Mancy Chou, and Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

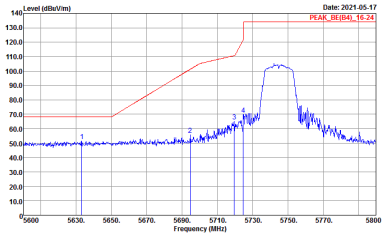
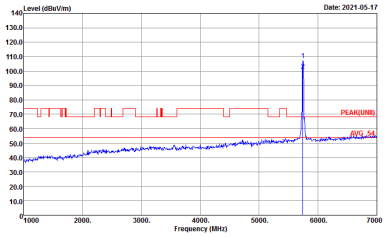
Note symbol

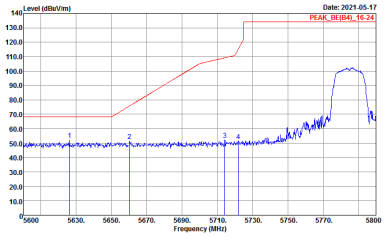
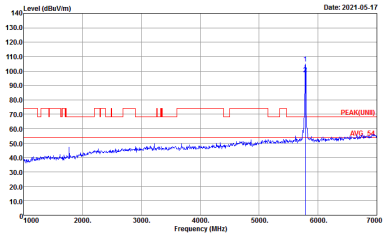
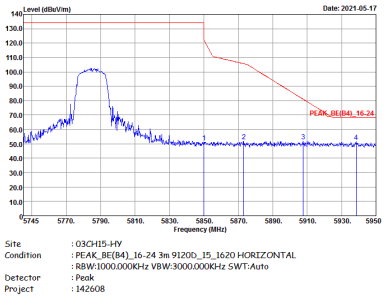
-L	**Low channel location**
-R	**High channel location**

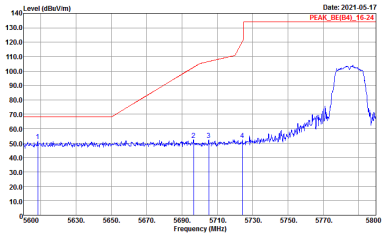
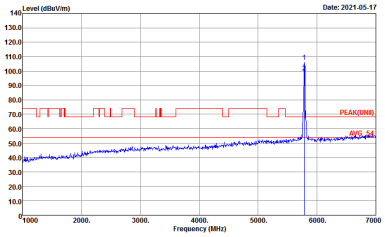
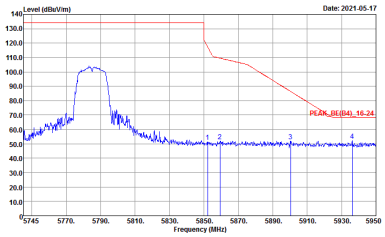
Band 4 - 5725~5850MHz

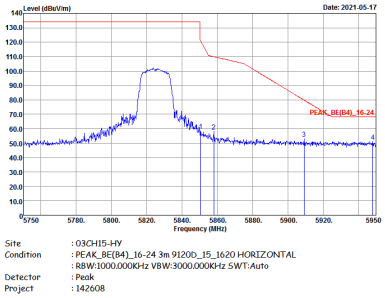
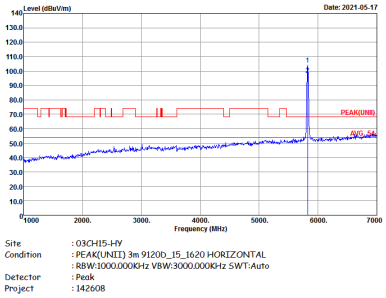
WIFI 802.11a (Band Edge @ 3m)

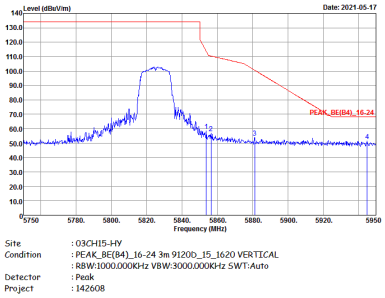
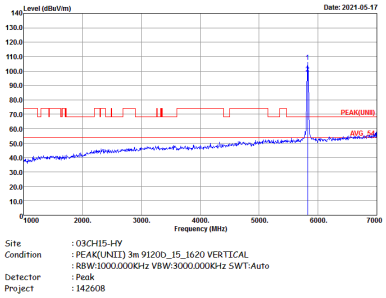
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

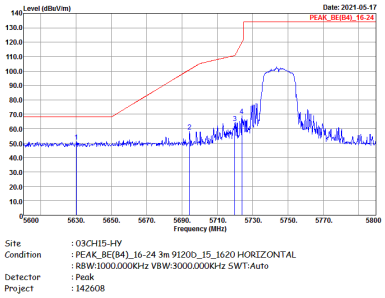
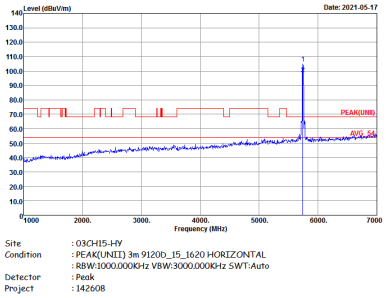
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	Left blank

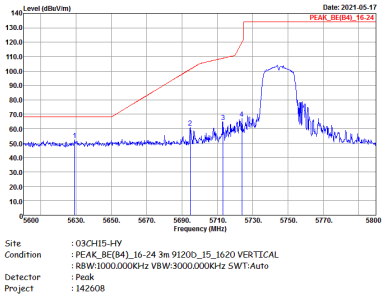
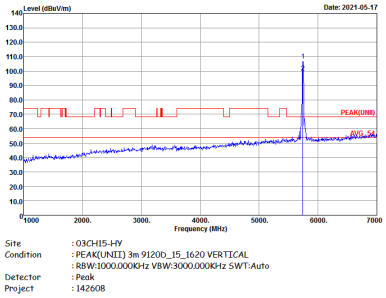
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

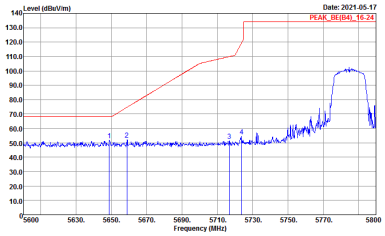
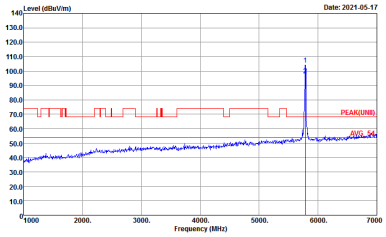
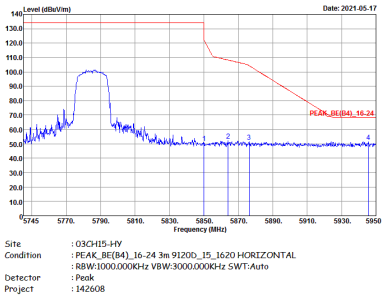
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak		

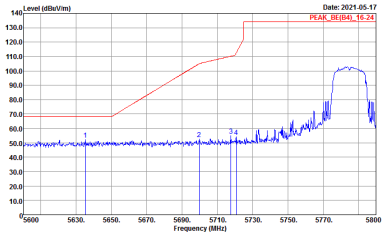
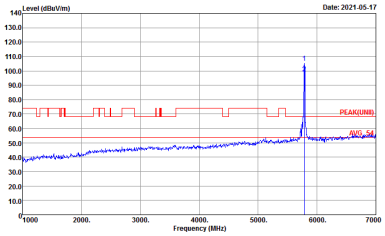
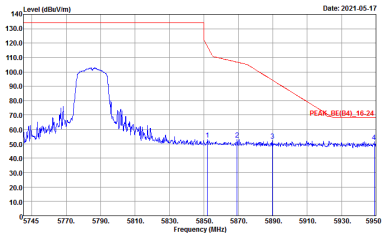
Band 4 5725~5850MHz

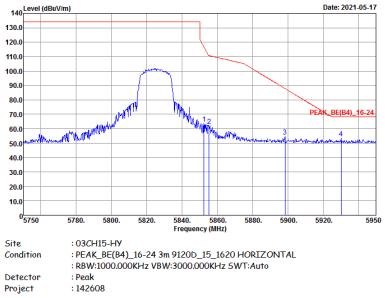
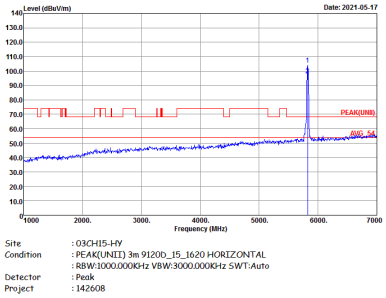
WIFI 802.11n HT20 (Band Edge @ 3m)

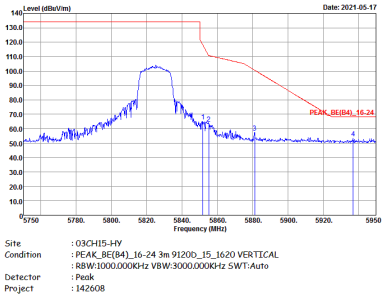
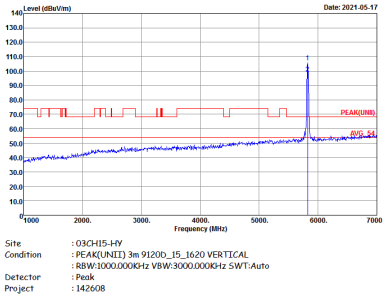
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

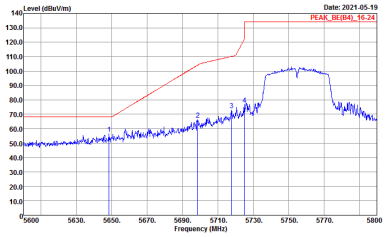
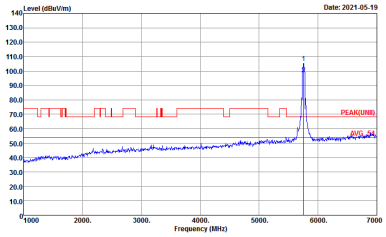
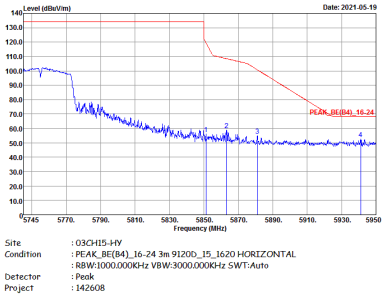
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	Left blank

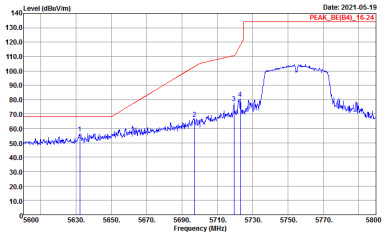
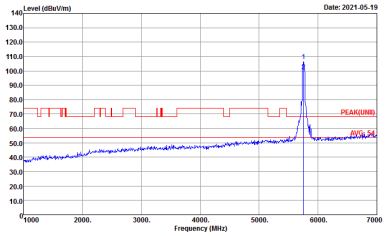
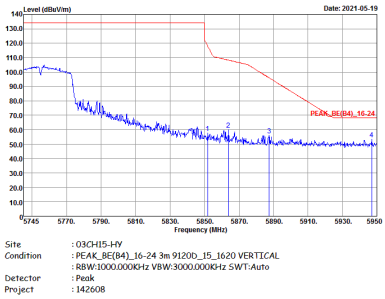
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

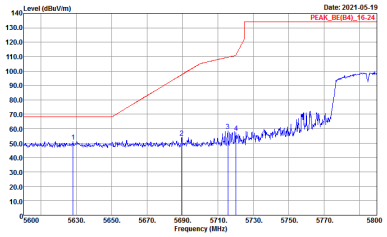
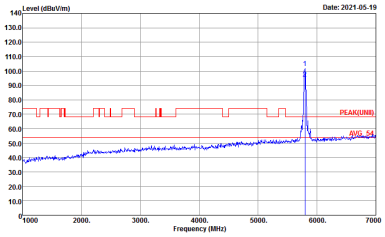
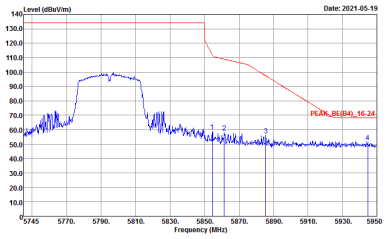
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak		

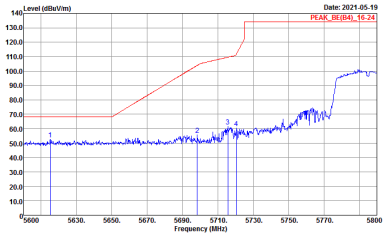
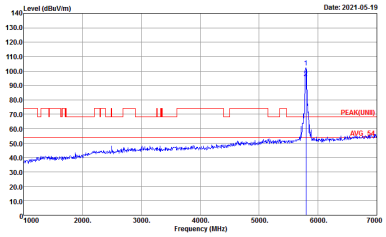
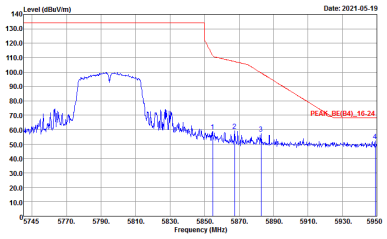
Band 4 5725~5850MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

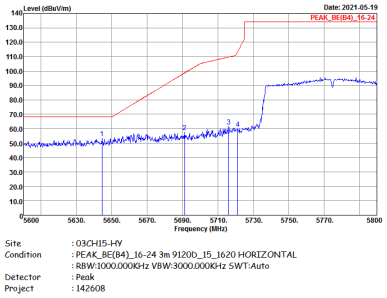
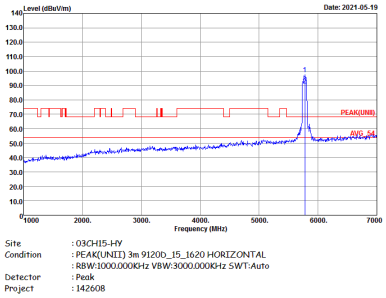
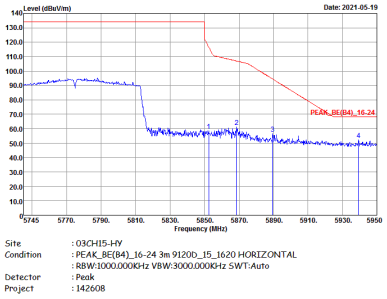
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

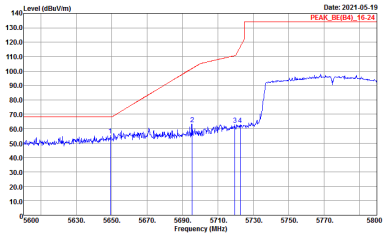
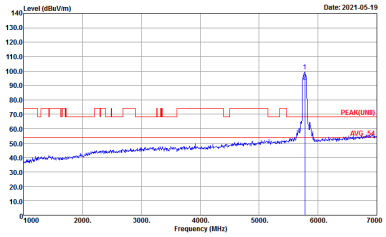
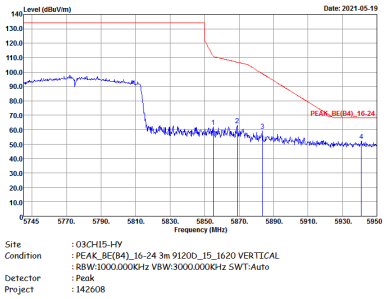
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 142608	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

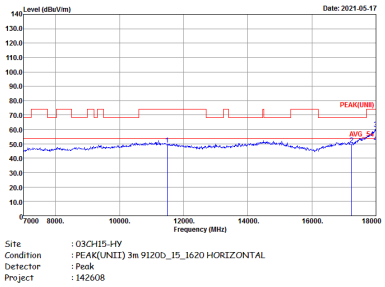
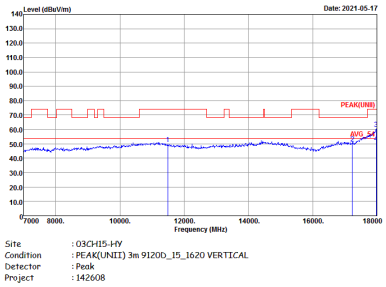
WIFI 802.11ac VHT80 (Band Edge @ 3m)

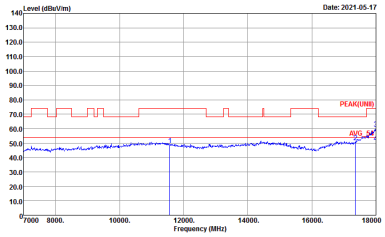
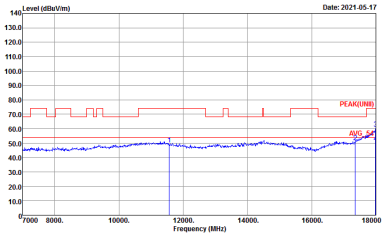
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

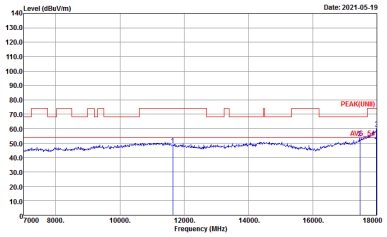
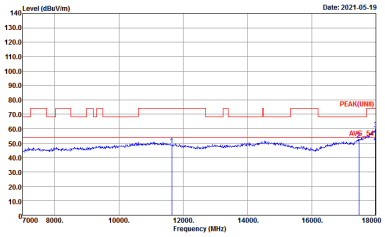
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

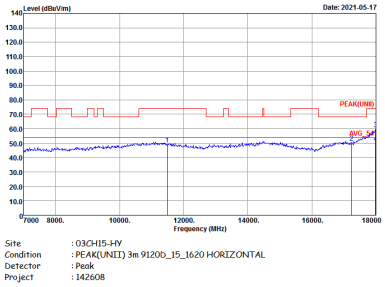
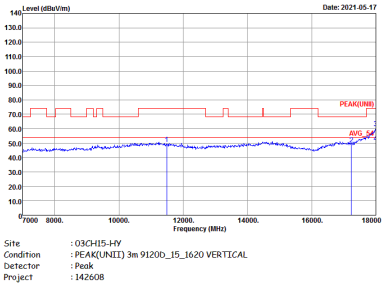
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

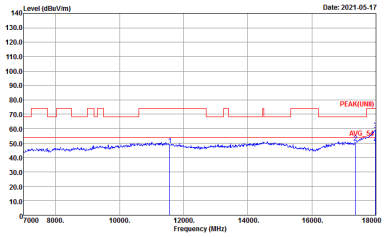
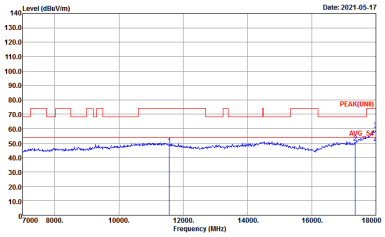
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

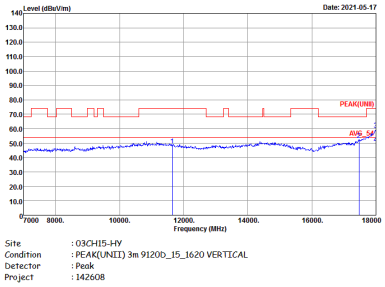
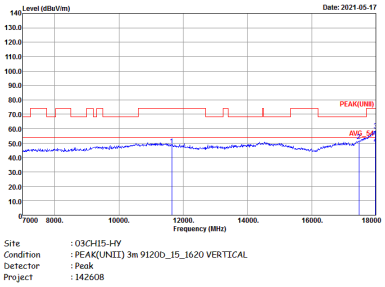
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 9120D_15_1620 HORIZONTAL Detector : Peak Project : 142608	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 9120D_15_1620 VERTICAL Detector : Peak Project : 142608

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

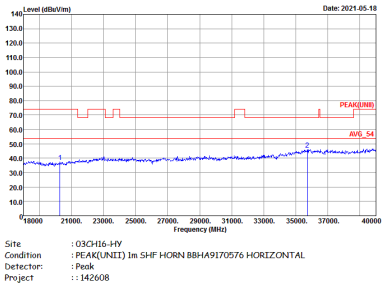
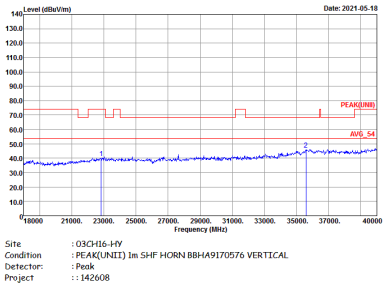
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.		

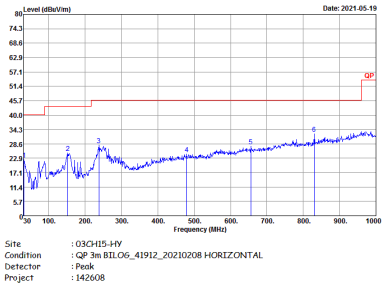
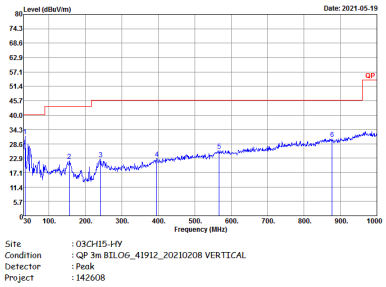
Emission above 18GHz

5GHz WIFI 802.11n HT40 (SHF)

WIFI	5GHz WIFI	
ANT	802.11n HT40 SHF	
1	Horizontal	Vertical
QP / Peak		

Emission below 1GHz

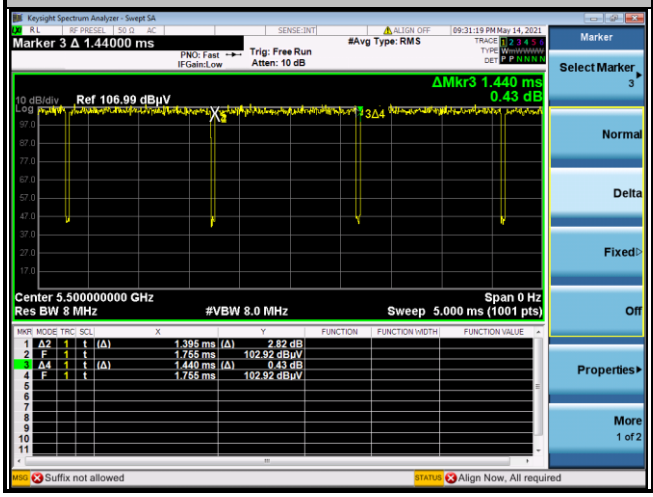
5GHz WIFI 802.11n HT40 (LF)

WIFI	5GHz WIFI	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak		

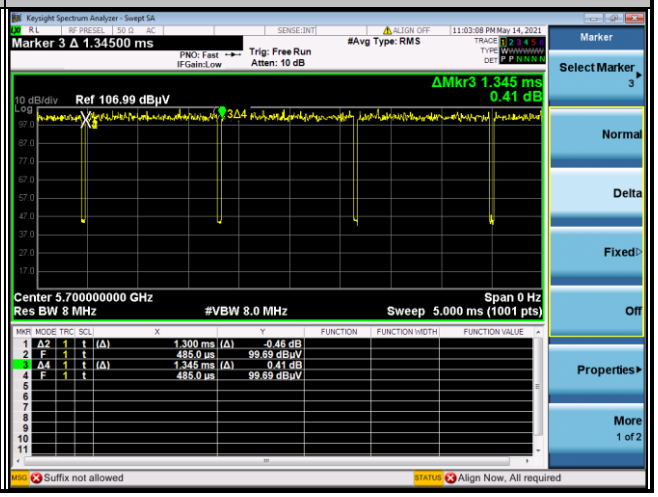
Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11a	96.88	1395	0.72	1kHz	0.14
5GHz 802.11n HT20	96.65	1300	0.77	1kHz	0.15
5GHz 802.11n HT40	93.51	648	1.54	3kHz	0.29
5GHz 802.11ac VHT80	88.89	320	3.13	10kHz	0.51

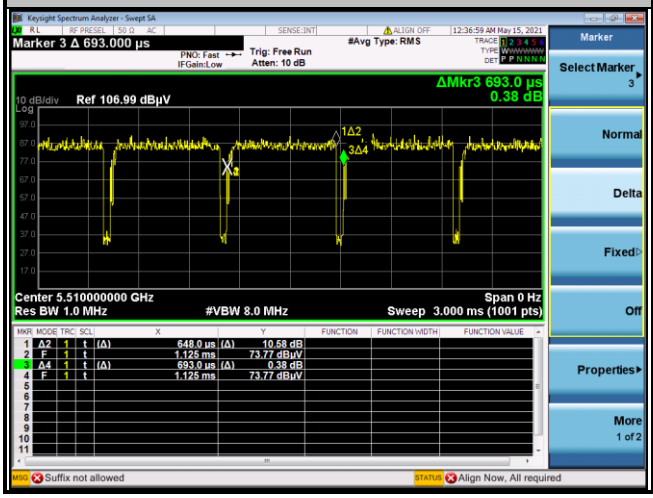
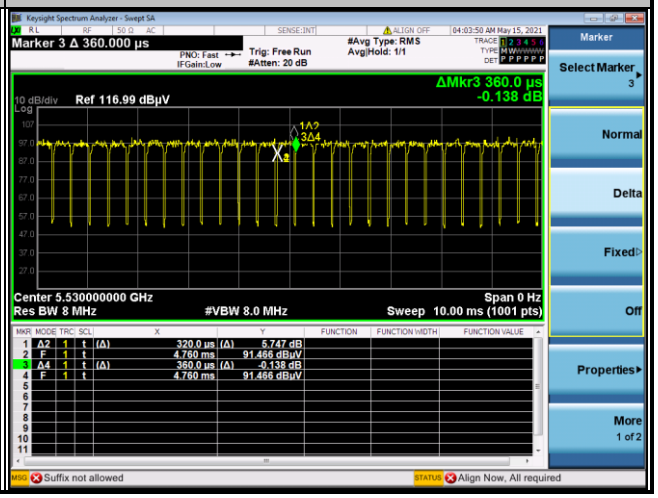
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80