



FCC RADIO TEST REPORT

FCC ID : 2AFZZ117SY
Equipment : Mobile Phone
Brand Name : Redmi
Model Name : 2201117SY
Applicant : Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle
Road, Haidian District, Beijing, China, 100085
Manufacturer : Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle
Road, Haidian District, Beijing, China, 100085
Standard : FCC Part 15 Subpart E §15.407

The product was received on Dec. 01, 2021 and testing was performed from Dec. 09, 2021 to Dec. 23, 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 from 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



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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	9.37 dB under the limit at 17967.000 MHz
3.5	15.207	AC Conducted Emission	Pass	9.80 dB under the limit at 0.152 MHz
3.6	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 product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Danny Lee
Report Producer: Lucy Wu



1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, FM Receiver, NFC, and GNSS.

Product Feature	
Sample 1	6G+128GB with Battery 1
Sample 2	8G+128GB with Battery 2
Sample 3	6G+64GB with Battery 1
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS/Glonass/BDS/Galileo/SBAS : PIFA Antenna NFC: Planar Antenna FM: Using earphone as Antenna

Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	-1.46

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

1.2 Modification of EUT

No modifications made to the EUT during the testing.



1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

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

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 TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, CO07-HY, 03CH16-HY

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

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications declared by 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 the test items were validated and recorded in accordance with the standards without any modification during the testing.
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, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Z plane as worst plane.
- 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 with "*" are 802.11n HT40 and 802.11ac VHT40.
- 2. The above Frequency and Channel with "#" are 802.11ac VHT80.

2.2 Test Mode

The final test modes consider the modulation and the worst data rates as shown in the table below.

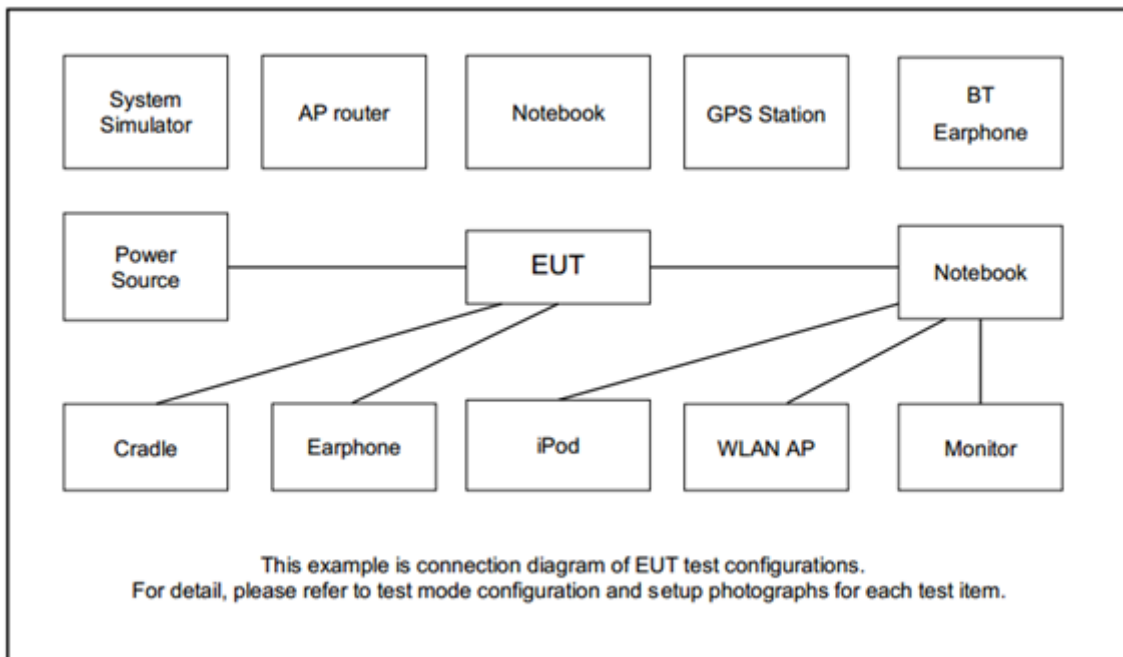
Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : LTE Band 4 Idle + Bluetooth Link + WLAN (5GHz) Link + NFC On + Earphone + USB Cable 1 (Data Link with Notebook) for Sample 1
Remark:	
1. For Radiated Test Cases, the tests were performed with USB Cable 2 and Sample 1. 2. Data Link with Notebook means data application transferred mode between EUT and Notebook.	

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

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by 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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY700A2029	N/A	N/A
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
4.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0m	N/A
5.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m
6.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
7.	Earphone	MI	EM023	N/A	Unshielded, 1.2m	N/A

2.5 EUT Operation Test Setup

The RF test items, make the EUT (SW: 11 RP1A.200720.011) 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.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

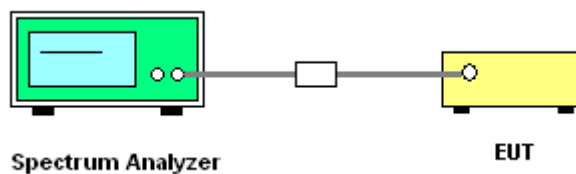
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in 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 $\geq 3 \times$ 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

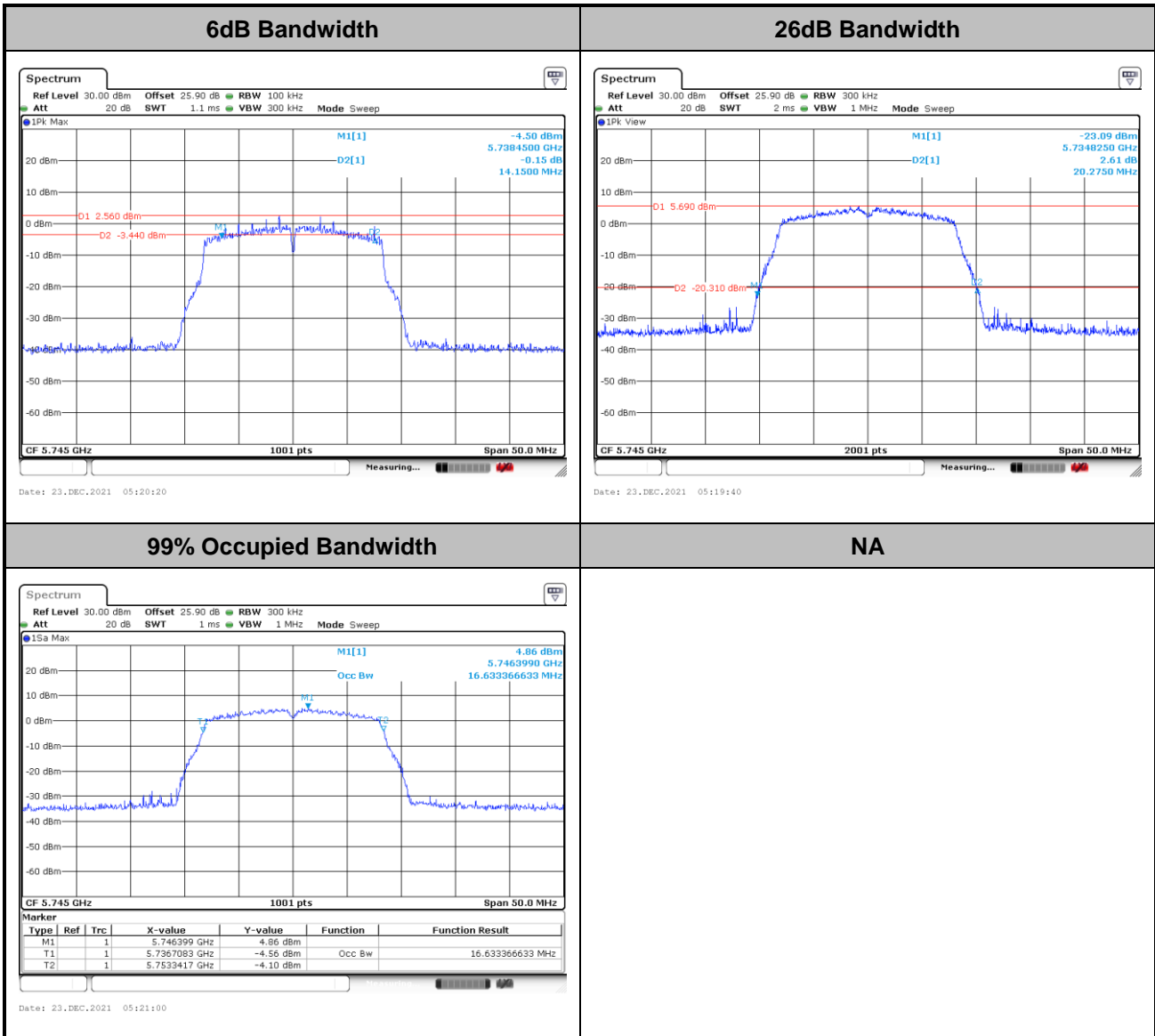


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.



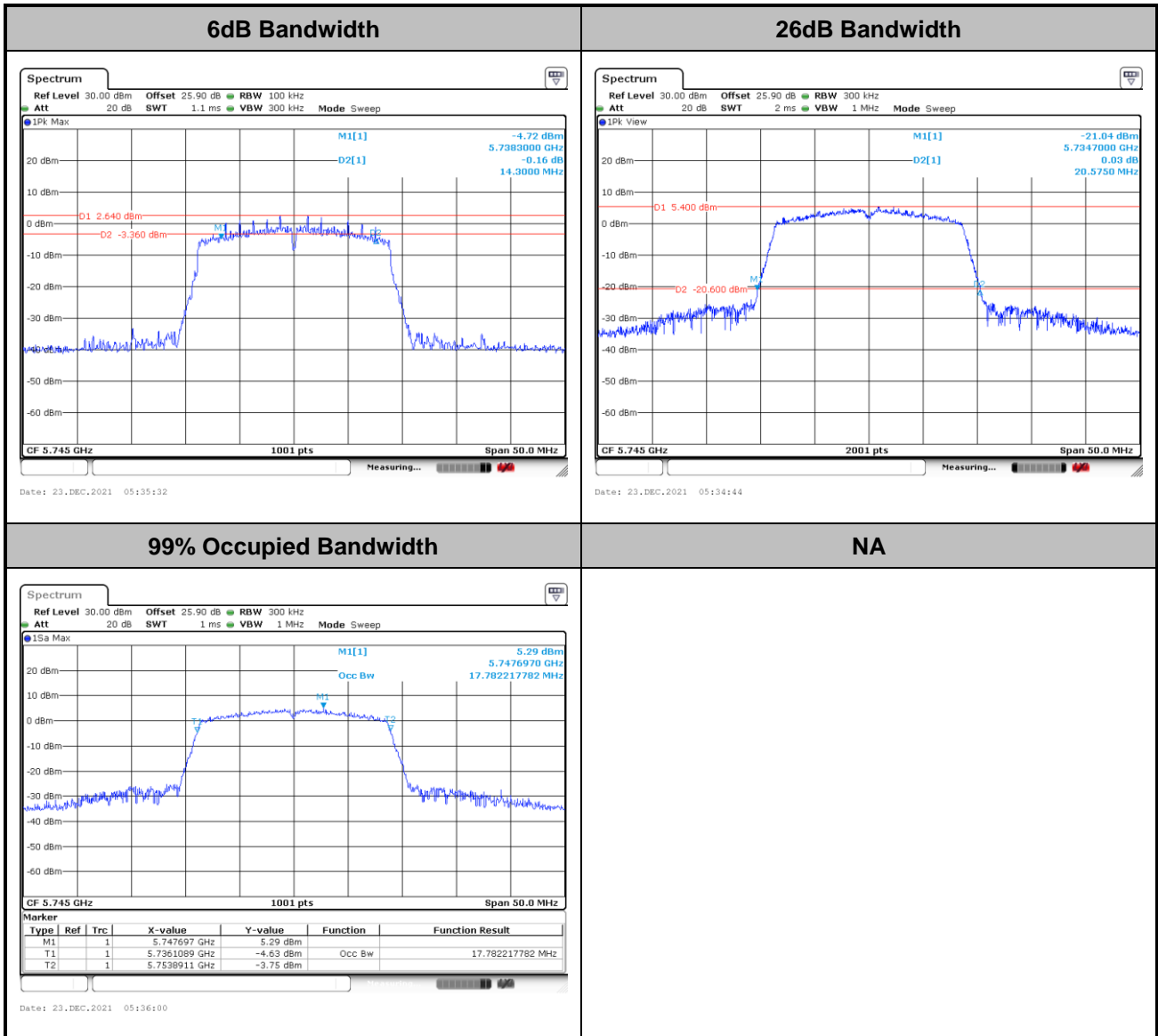
<802.11a Mode>



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



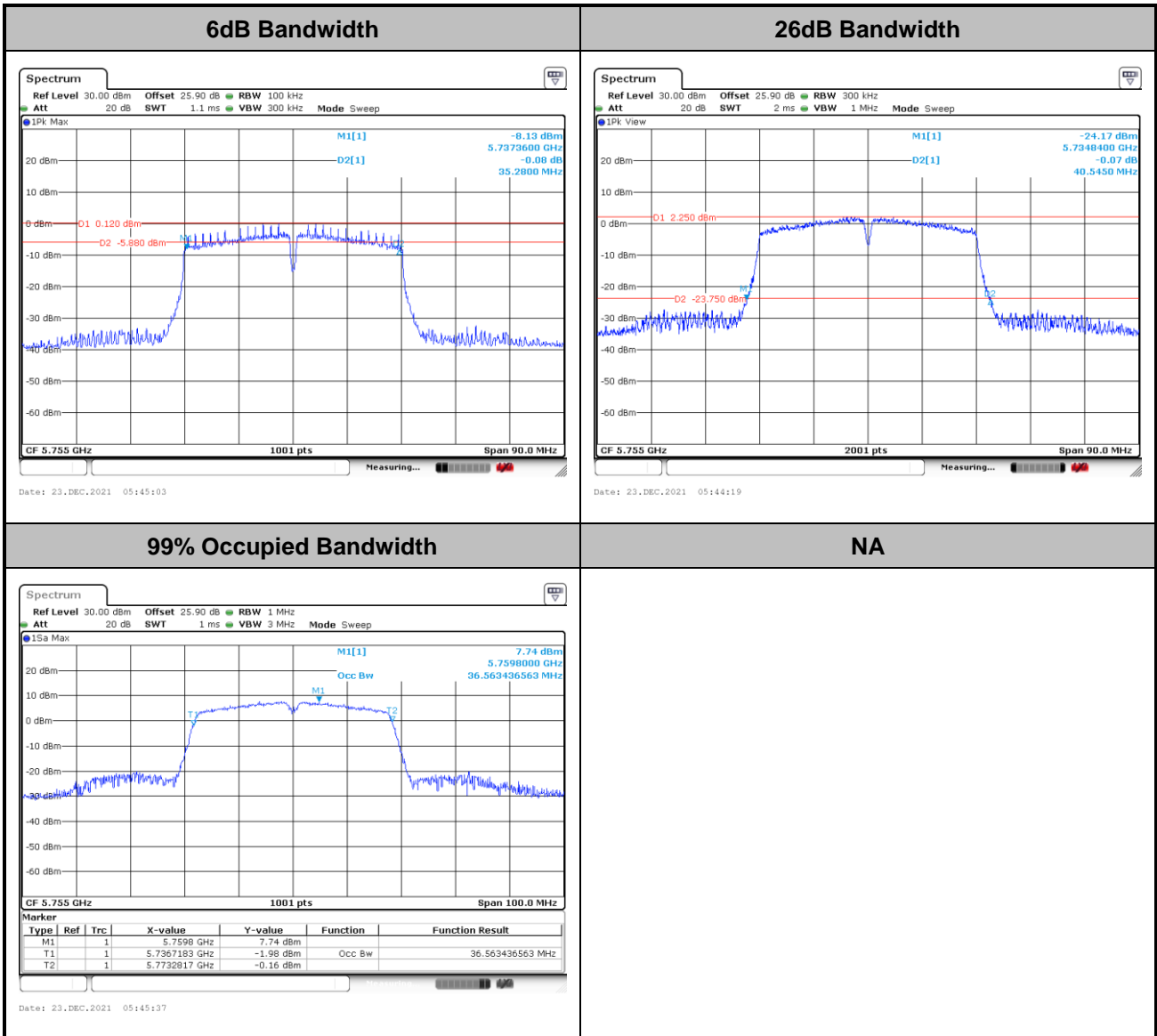
<802.11n HT20 Mode>



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



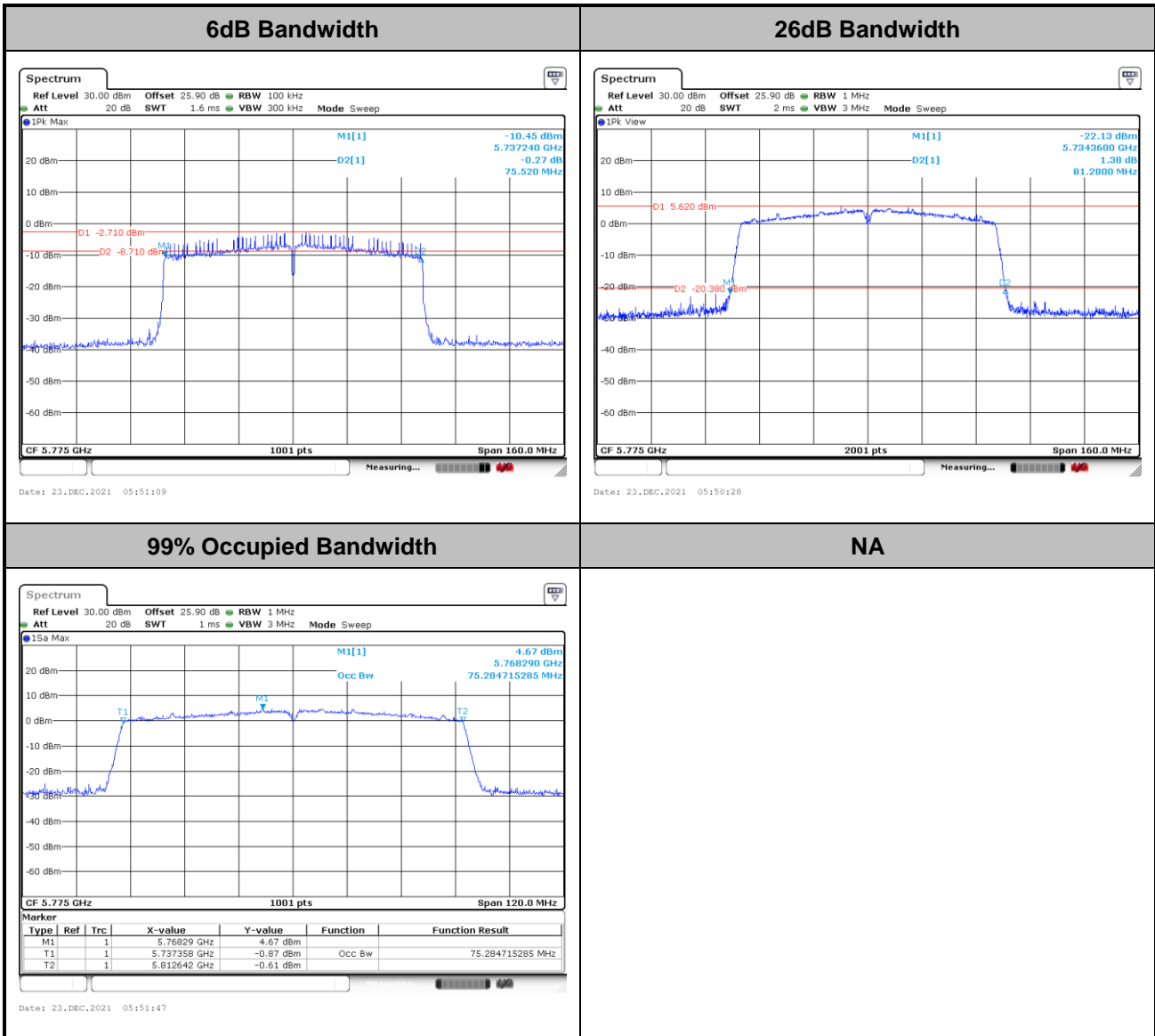
<802.11n HT40 Mode>



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



<802.11ac VHT80 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.

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

Please refer to the measuring equipment list in this test report.

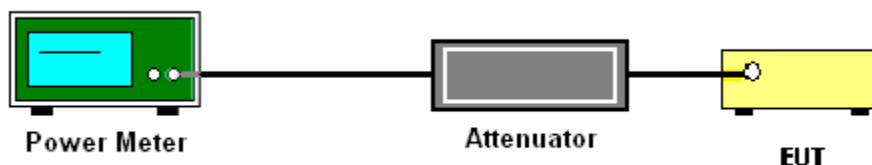
3.2.3 Test Procedures

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

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

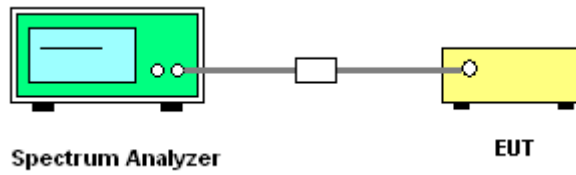
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

Method SA-3

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

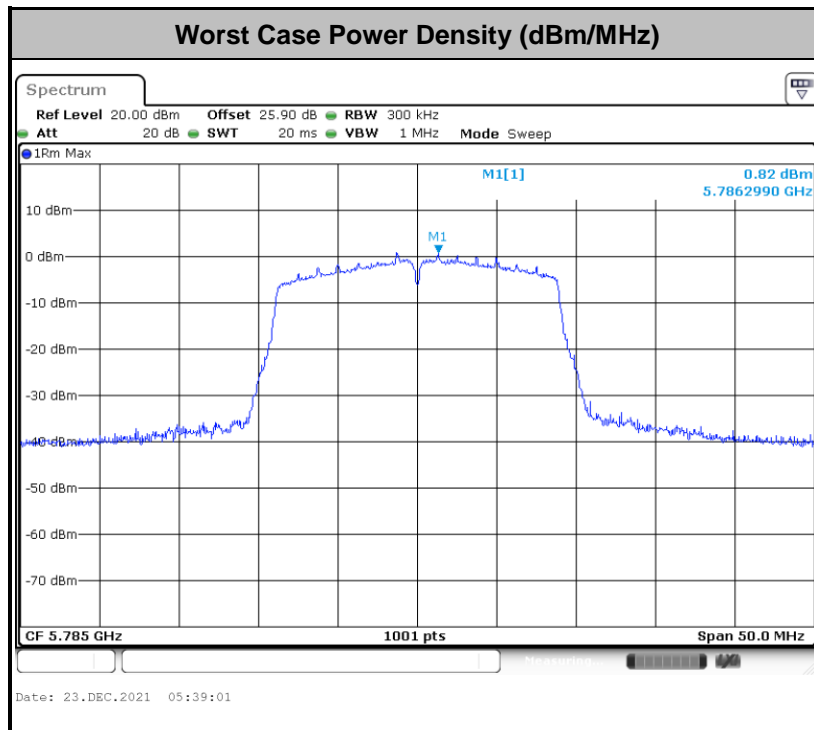
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300 kHz.
 - Set VBW \geq 1 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Add $10 \log(500 \text{ kHz/RBW})$ to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
 - Sweep time \leq (number of points in sweep) \times 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 is 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.





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 falls 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.

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

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

Please refer to the measuring equipment list in this test report.

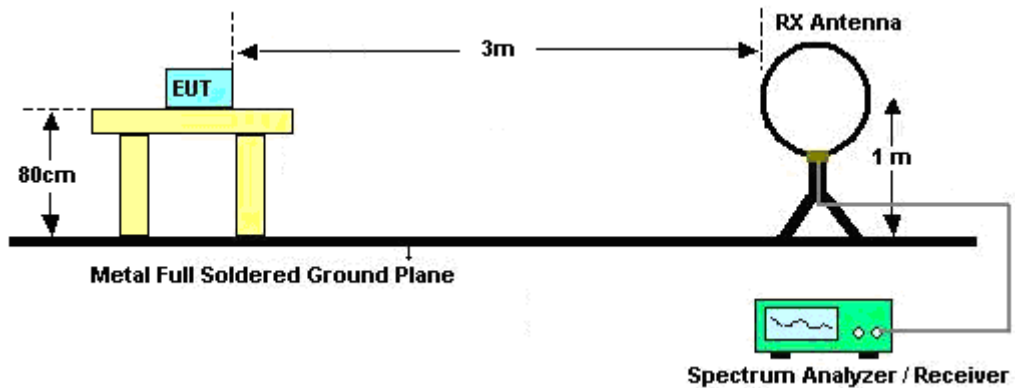
3.4.3 Test Procedures

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 \geq 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 \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 is 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 is set 3 meters away from the receiving antenna which is 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 is 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.

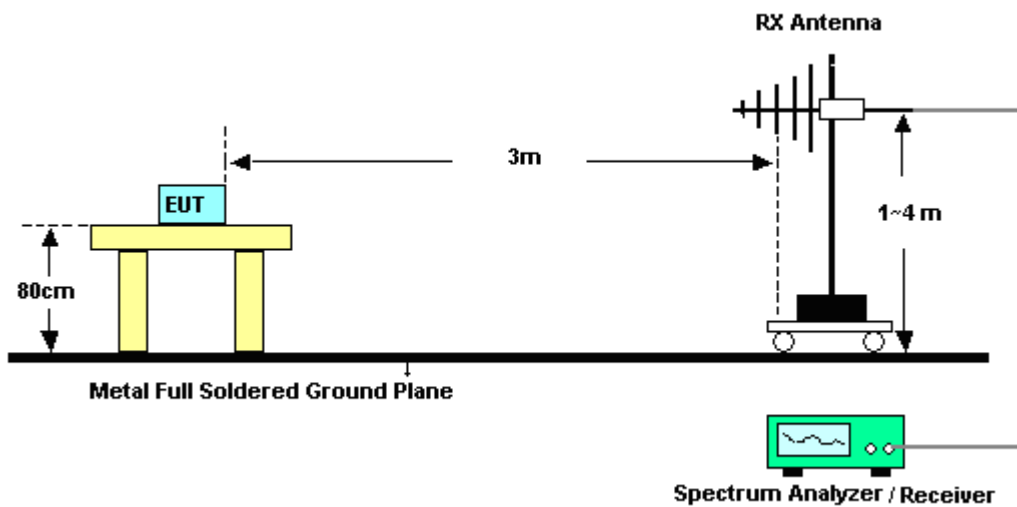
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-“.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-“.

3.4.4 Test Setup

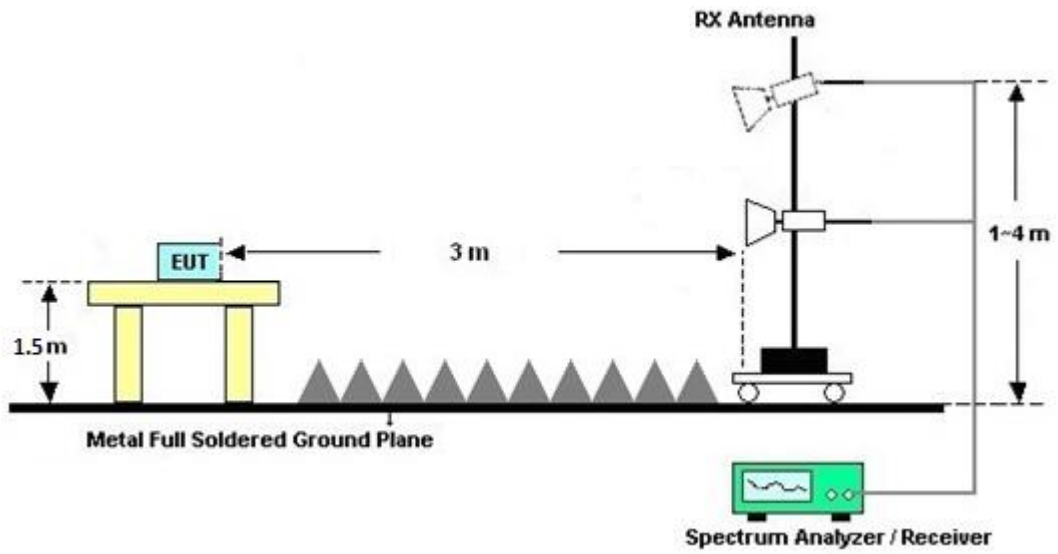
For radiated emissions below 30MHz



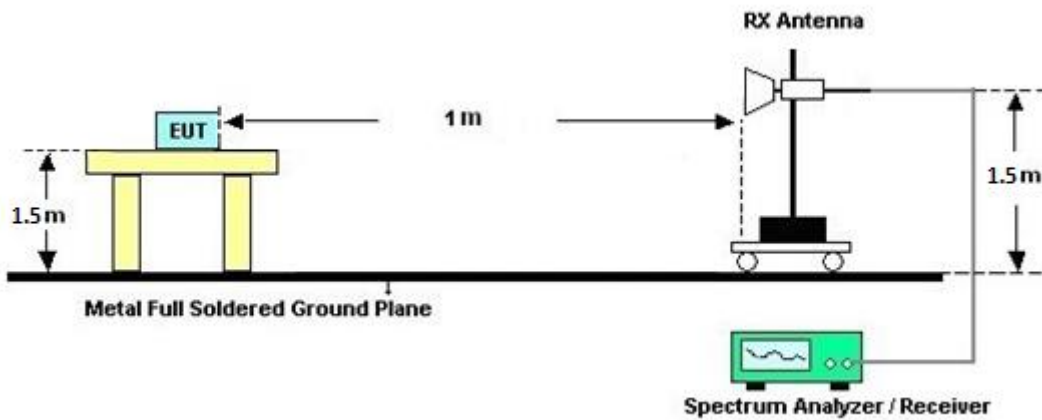
For radiated emissions from 30MHz to 1GHz



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 starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement 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.

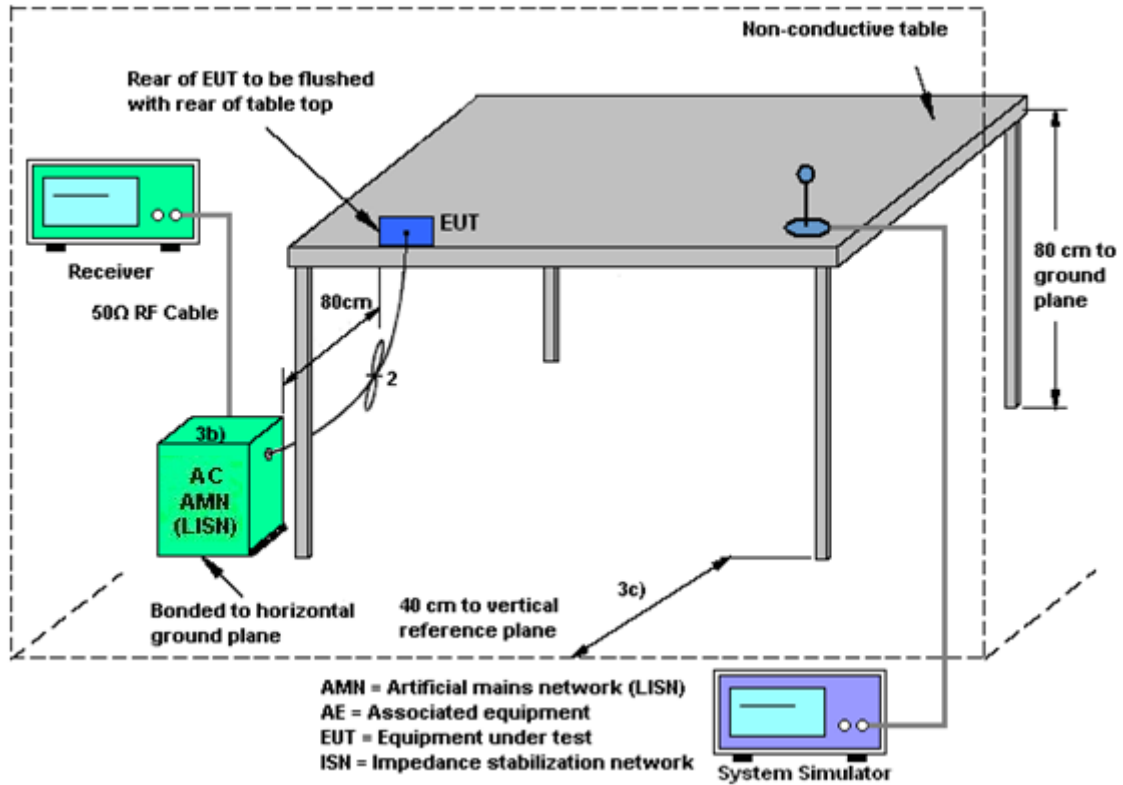
3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is 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 Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
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

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
Power Sensor	DARE	RPR3006W	13100030SNO 31(NO:182)	10MHz~6GHz	Dec. 30, 2020	Dec. 10, 2021~ Dec. 23, 2021	Dec. 29, 2021	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Dec. 10, 2021~ Dec. 23, 2021	Aug. 29, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW191204 (BOX8)	N/A	Jan. 07, 2021	Dec. 10, 2021~ Dec. 23, 2021	Jan. 06, 2022	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Dec. 10, 2021~ Dec. 20, 2021	Sep. 06, 2022	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N -06	47020 & 06	30MHz to 1GHz	Oct. 09, 2021	Dec. 10, 2021~ Dec. 20, 2021	Oct. 08, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02114	1G~18GHz	Aug. 04, 2021	Dec. 10, 2021~ Dec. 20, 2021	Aug. 03, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1522	1G~18GHz	Oct. 12, 2021	Dec. 10, 2021~ Dec. 20, 2021	Oct. 11, 2022	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00991	18GHz ~40GHz	May 12, 2021	Dec. 10, 2021~ Dec. 20, 2021	May 11, 2022	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Jul. 05, 2021	Dec. 10, 2021~ Dec. 20, 2021	Jul. 04, 2022	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845S E	980729	1-18GHz	Jul. 09, 2021	Dec. 10, 2021~ Dec. 20, 2021	Jul. 08, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Dec. 10, 2021~ Dec. 20, 2021	Jun. 21, 2022	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 09, 2021	Dec. 10, 2021~ Dec. 20, 2021	Dec. 08, 2022	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov. 18, 2021	Dec. 10, 2021~ Dec. 20, 2021	Nov. 17, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4P E	NA	Aug. 28, 2021	Dec. 10, 2021~ Dec. 20, 2021	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/4P E	NA	Aug. 28, 2021	Dec. 10, 2021~ Dec. 20, 2021	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5 757	NA	Aug. 28, 2021	Dec. 10, 2021~ Dec. 20, 2021	Aug. 27, 2022	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Dec. 10, 2021~ Dec. 20, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 10, 2021~ Dec. 20, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 10, 2021~ Dec. 20, 2021	N/A	Radiation (03CH16-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Dec. 09, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Oct. 21, 2021	Dec. 09, 2021	Oct. 20, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2021	Dec. 09, 2021	Nov. 15, 2022	Conduction (CO05-HY)
Four Line V-Network	TESEQ	NNB 52	36122	N/A	Feb. 01, 2021	Dec. 09, 2021	Jan. 31, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Dec. 09, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBE CK	VTSD 9561-F N	00691	N/A	Jul. 28, 2021	Dec. 09, 2021	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Dec. 09, 2021	Dec. 30, 2021	Conduction (CO05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Junyu Jhou	Temperature:	23.2~24.2	°C
Test Date:	2021/12/10~2021/12/23	Relative Humidity:	49.2~52.5	%

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	16.63	-	20.28	-	14.15	-	0.5	Pass
11a	6Mbps	1	157	5785	16.63	-	20.15	-	15.15	-	0.5	Pass
11a	6Mbps	1	165	5825	16.68	-	20.23	-	15.20	-	0.5	Pass
HT20	MCS0	1	149	5745	17.78	-	20.58	-	14.30	-	0.5	Pass
HT20	MCS0	1	157	5785	17.73	-	20.48	-	15.20	-	0.5	Pass
HT20	MCS0	1	165	5825	17.73	-	20.73	-	15.20	-	0.5	Pass
HT40	MCS0	1	151	5755	36.56	-	40.55	-	35.28	-	0.5	Pass
HT40	MCS0	1	159	5795	36.26	-	40.50	-	35.19	-	0.5	Pass
VHT80	MCS0	1	155	5775	75.29	-	81.28	-	75.52	-	0.5	Pass

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	13.40	-	30.00	-	-1.46	-	Pass
11a	6Mbps	1	157	5785	13.70	-	30.00	-	-1.46	-	Pass
11a	6Mbps	1	165	5825	13.70	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	149	5745	13.30	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	157	5785	13.50	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	165	5825	13.50	-	30.00	-	-1.46	-	Pass
HT40	MCS0	1	151	5755	13.30	-	30.00	-	-1.46	-	Pass
HT40	MCS0	1	159	5795	13.50	-	30.00	-	-1.46	-	Pass
VHT20	MCS0	1	149	5745	13.20	-	30.00	-	-1.46	-	Pass
VHT20	MCS0	1	157	5785	13.40	-	30.00	-	-1.46	-	Pass
VHT20	MCS0	1	165	5825	13.40	-	30.00	-	-1.46	-	Pass
VHT40	MCS0	1	151	5755	13.20	-	30.00	-	-1.46	-	Pass
VHT40	MCS0	1	159	5795	13.40	-	30.00	-	-1.46	-	Pass
VHT80	MCS0	1	155	5775	13.60	-	30.00	-	-1.46	-	Pass

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	-	2.67	-	30.00	-	-1.46	-	Pass
11a	6Mbps	1	157	5785	2.22	-	2.85	-	30.00	-	-1.46	-	Pass
11a	6Mbps	1	165	5825	2.22	-	2.71	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	149	5745	2.22	-	2.94	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	157	5785	2.22	-	3.04	-	30.00	-	-1.46	-	Pass
HT20	MCS0	1	165	5825	2.22	-	2.97	-	30.00	-	-1.46	-	Pass
HT40	MCS0	1	151	5755	2.22	-	-0.10	-	30.00	-	-1.46	-	Pass
HT40	MCS0	1	159	5795	2.22	-	0.29	-	30.00	-	-1.46	-	Pass
VHT80	MCS0	1	155	5775	2.22	-	-3.15	-	30.00	-	-1.46	-	Pass



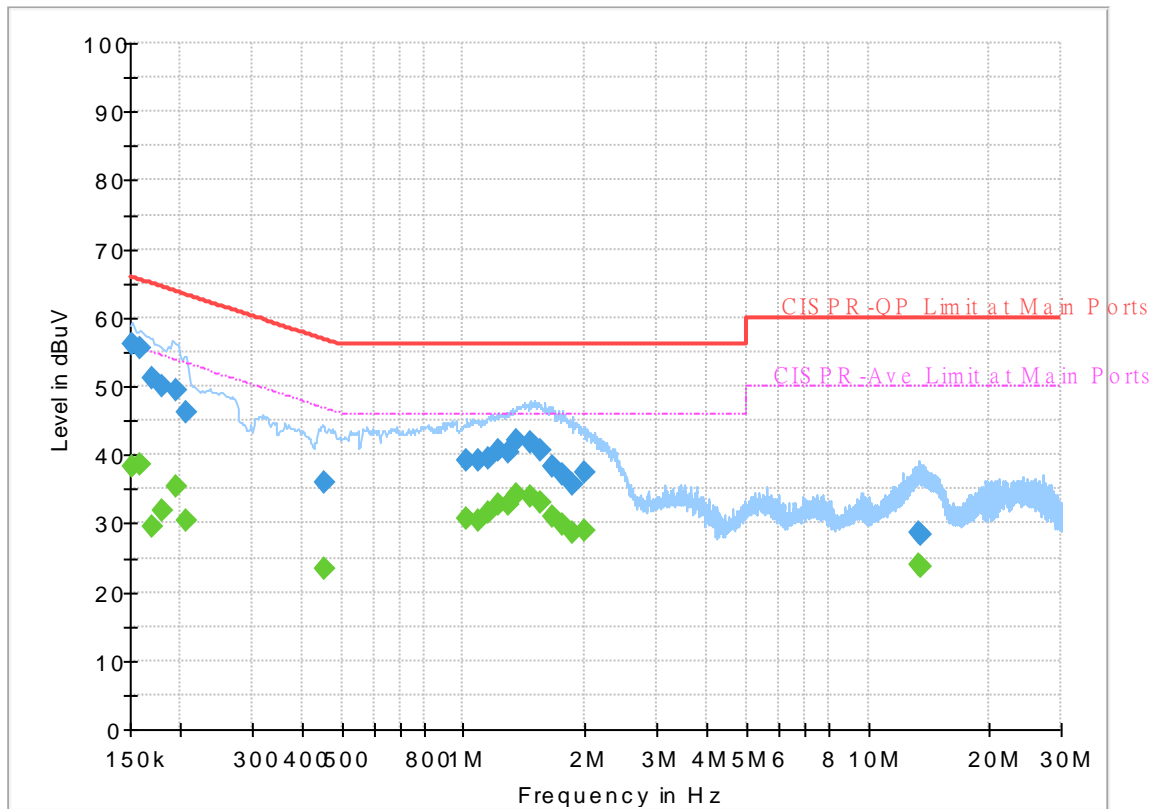
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~26°C
		Relative Humidity :	45~55%

EUT Information

Report NO : 1N3028
 Test Mode : Mode 1
 Test Voltage : Power From System
 Phase : Line

Full Spectrum



Final_Result

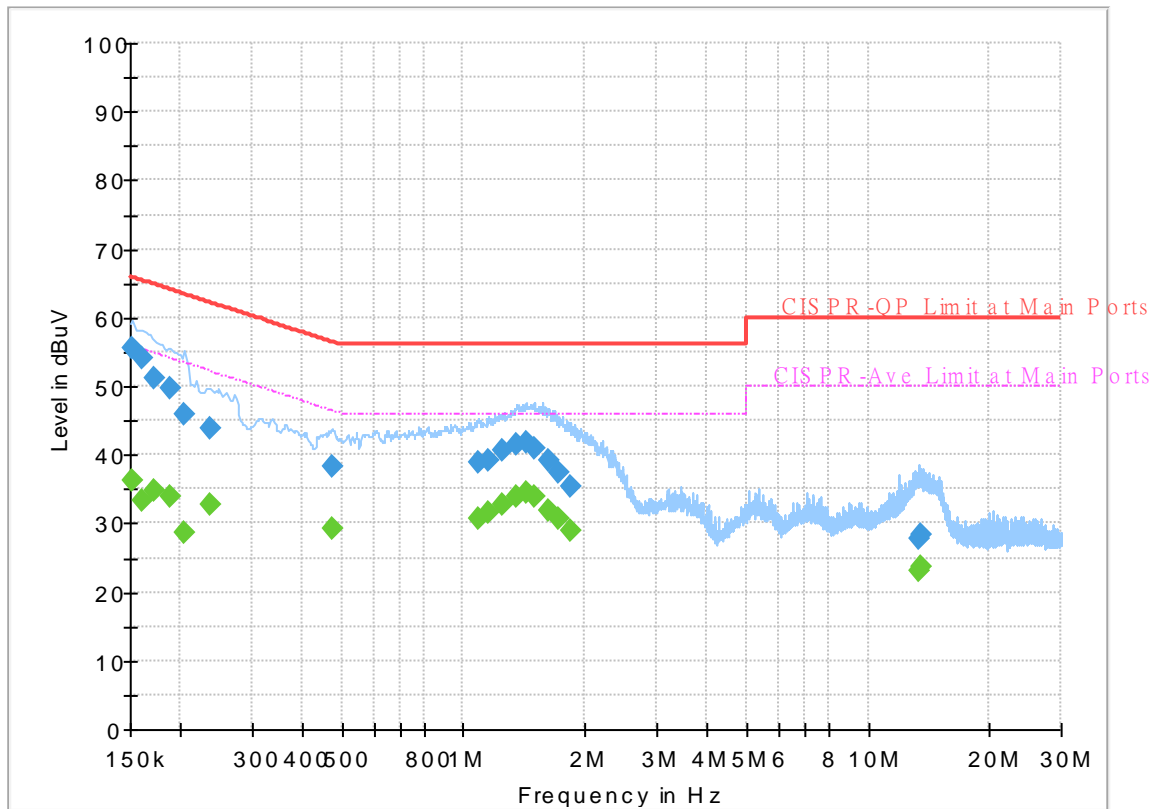
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	38.42	55.88	17.46	L1	OFF	19.6
0.152250	56.08	---	65.88	9.80	L1	OFF	19.6
0.159000	---	38.55	55.52	16.97	L1	OFF	19.6
0.159000	55.52	---	65.52	10.00	L1	OFF	19.6
0.170250	---	29.50	54.95	25.45	L1	OFF	19.6
0.170250	51.24	---	64.95	13.71	L1	OFF	19.6
0.179250	---	31.82	54.52	22.70	L1	OFF	19.6
0.179250	50.03	---	64.52	14.49	L1	OFF	19.6
0.195000	---	35.34	53.82	18.48	L1	OFF	19.6
0.195000	49.45	---	63.82	14.37	L1	OFF	19.6
0.206250	---	30.40	53.36	22.96	L1	OFF	19.6
0.206250	46.24	---	63.36	17.12	L1	OFF	19.6
0.451500	---	23.35	46.85	23.50	L1	OFF	19.7
0.451500	36.07	---	56.85	20.78	L1	OFF	19.7
1.016250	---	30.79	46.00	15.21	L1	OFF	20.1
1.016250	39.14	---	56.00	16.86	L1	OFF	20.1
1.088250	---	30.39	46.00	15.61	L1	OFF	20.1
1.088250	39.07	---	56.00	16.93	L1	OFF	20.1
1.151250	---	31.58	46.00	14.42	L1	OFF	20.1
1.151250	39.54	---	56.00	16.46	L1	OFF	20.1
1.214250	---	32.66	46.00	13.34	L1	OFF	20.1

1.214250	40.67	---	56.00	15.33	L1	OFF	20.1
1.286250	---	32.61	46.00	13.39	L1	OFF	20.1
1.286250	40.49	---	56.00	15.51	L1	OFF	20.1
1.358250	---	34.14	46.00	11.86	L1	OFF	20.1
1.358250	42.25	---	56.00	13.75	L1	OFF	20.1
1.460490	---	34.00	46.00	12.00	L1	OFF	20.1
1.460490	41.75	---	56.00	14.25	L1	OFF	20.1
1.554000	---	33.07	46.00	12.93	L1	OFF	20.1
1.554000	40.62	---	56.00	15.38	L1	OFF	20.1
1.668750	---	31.12	46.00	14.88	L1	OFF	20.0
1.668750	38.27	---	56.00	17.73	L1	OFF	20.0
1.761000	---	29.97	46.00	16.03	L1	OFF	20.0
1.761000	37.16	---	56.00	18.84	L1	OFF	20.0
1.855500	---	28.61	46.00	17.39	L1	OFF	20.0
1.855500	35.63	---	56.00	20.37	L1	OFF	20.0
1.986000	---	28.93	46.00	17.07	L1	OFF	20.0
1.986000	37.41	---	56.00	18.59	L1	OFF	20.0
13.341750	---	23.84	50.00	26.16	L1	OFF	19.8
13.341750	28.74	---	60.00	31.26	L1	OFF	19.8
13.560000	---	23.70	50.00	26.30	L1	OFF	19.9
13.560000	28.44	---	60.00	31.56	L1	OFF	19.9

EUT Information

Report NO : 1N3028
 Test Mode : Mode 1
 Test Voltage : Power From System
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	36.16	55.88	19.72	N	OFF	19.6
0.152250	55.54	---	65.88	10.34	N	OFF	19.6
0.161250	---	33.32	55.40	22.08	N	OFF	19.6
0.161250	54.08	---	65.40	11.32	N	OFF	19.6
0.172500	---	34.89	54.84	19.95	N	OFF	19.6
0.172500	51.31	---	64.84	13.53	N	OFF	19.6
0.188250	---	33.99	54.11	20.12	N	OFF	19.6
0.188250	49.70	---	64.11	14.41	N	OFF	19.6
0.204000	---	28.73	53.45	24.72	N	OFF	19.6
0.204000	45.79	---	63.45	17.66	N	OFF	19.6
0.235500	---	32.85	52.25	19.40	N	OFF	19.6
0.235500	43.89	---	62.25	18.36	N	OFF	19.6
0.471750	---	29.10	46.48	17.38	N	OFF	19.7
0.471750	38.23	---	56.48	18.25	N	OFF	19.7
1.083750	---	30.81	46.00	15.19	N	OFF	20.1
1.083750	38.78	---	56.00	17.22	N	OFF	20.1
1.155750	---	31.68	46.00	14.32	N	OFF	20.1
1.155750	39.24	---	56.00	16.76	N	OFF	20.1
1.243500	---	32.86	46.00	13.14	N	OFF	20.1
1.243500	40.59	---	56.00	15.41	N	OFF	20.1
1.353750	---	34.04	46.00	11.96	N	OFF	20.1

1.353750	41.45	---	56.00	14.55	N	OFF	20.1
1.425750	---	34.55	46.00	11.45	N	OFF	20.1
1.425750	41.86	---	56.00	14.14	N	OFF	20.1
1.500000	---	34.03	46.00	11.97	N	OFF	20.0
1.500000	41.08	---	56.00	14.92	N	OFF	20.0
1.626000	---	31.95	46.00	14.05	N	OFF	20.0
1.626000	39.17	---	56.00	16.83	N	OFF	20.0
1.727250	---	30.57	46.00	15.43	N	OFF	20.0
1.727250	37.55	---	56.00	18.45	N	OFF	20.0
1.837500	---	28.80	46.00	17.20	N	OFF	20.0
1.837500	35.50	---	56.00	20.50	N	OFF	20.0
13.301250	---	23.10	50.00	26.90	N	OFF	19.9
13.301250	27.87	---	60.00	32.13	N	OFF	19.9
13.560000	---	23.60	50.00	26.40	N	OFF	19.9
13.560000	28.44	---	60.00	31.56	N	OFF	19.9



Appendix C. Radiated Spurious Emission

Test Engineer :	Karl Hou and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

Band 4 - 5725~5850MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	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		5605.2	56.59	-11.61	68.2	40.09	33.21	12.88	29.59	264	67	P	H	
		5687.4	54.57	-41.34	95.91	37.94	33.3	12.93	29.6	264	67	P	H	
		5718.8	56.37	-54.09	110.46	39.62	33.41	12.95	29.61	264	67	P	H	
		5724.8	57	-64.74	121.74	40.21	33.45	12.95	29.61	264	67	P	H	
	*	5745	103.48	-	-	86.56	33.57	12.96	29.61	264	67	P	H	
	*	5745	95.58	-	-	78.66	33.57	12.96	29.61	264	67	A	H	
														H
														H
			5604.2	55.76	-12.44	68.2	39.26	33.21	12.88	29.59	100	312	P	V
			5661.4	55.17	-21.49	76.66	38.56	33.3	12.91	29.6	100	312	P	V
			5703.4	55.75	-50.4	106.15	39.1	33.32	12.94	29.61	100	312	P	V
			5724.2	57.19	-63.19	120.38	40.4	33.45	12.95	29.61	100	312	P	V
	*	5745	106.81	-	-	89.89	33.57	12.96	29.61	100	312	P	V	
	*	5745	99.39	-	-	82.47	33.57	12.96	29.61	100	312	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)
		5608.4	54.77	-13.43	68.2	38.26	33.22	12.88	29.59	258	67	P	H
		5651.2	55.77	-13.32	69.09	39.16	33.3	12.91	29.6	258	67	P	H
		5706.2	55.06	-51.88	106.94	38.39	33.34	12.94	29.61	258	67	P	H
		5723.8	55.17	-64.29	119.46	38.39	33.44	12.95	29.61	258	67	P	H
	*	5785	104.07	-	-	87.04	33.67	12.98	29.62	258	67	P	H
	*	5785	96.15	-	-	79.12	33.67	12.98	29.62	258	67	A	H
		5852.8	55.26	-60.56	115.82	38.07	34	12.82	29.63	258	67	P	H
		5859.8	55.49	-53.96	109.45	38.32	34	12.8	29.63	258	67	P	H
		5901.6	55.63	-29.85	85.48	38.61	34	12.66	29.64	258	67	P	H
		5942.6	55.13	-13.07	68.2	38.16	34.09	12.53	29.65	258	67	P	H
													H
													H
802.11a													
CH 157													
5785MHz		5644.6	55.28	-12.92	68.2	38.69	33.29	12.9	29.6	100	304	P	V
		5682.4	55.27	-36.94	92.21	38.64	33.3	12.93	29.6	100	304	P	V
		5716.2	55.15	-54.59	109.74	38.42	33.4	12.94	29.61	100	304	P	V
		5720	53.96	-56.84	110.8	37.2	33.42	12.95	29.61	100	304	P	V
	*	5785	106.43	-	-	89.4	33.67	12.98	29.62	100	304	P	V
	*	5785	99.19	-	-	82.16	33.67	12.98	29.62	100	304	A	V
		5853.8	54.77	-58.77	113.54	37.58	34	12.82	29.63	100	304	P	V
		5858.6	55.66	-54.13	109.79	38.49	34	12.8	29.63	100	304	P	V
		5893.4	55.6	-35.95	91.55	38.55	34	12.69	29.64	100	304	P	V
		5935.2	55.88	-12.32	68.2	38.91	34.07	12.55	29.65	100	304	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)	
802.11a CH 165 5825MHz	*	5825	103.32	-	-	86.19	33.85	12.91	29.63	266	73	P	H	
	*	5825	95.89	-	-	78.76	33.85	12.91	29.63	266	73	A	H	
		5854	55.57	-57.51	113.08	38.39	34	12.81	29.63	266	73	P	H	
		5856.6	55.96	-54.39	110.35	38.78	34	12.81	29.63	266	73	P	H	
		5903.2	56.66	-27.63	84.29	39.64	34.01	12.65	29.64	266	73	P	H	
		5945	54.78	-13.42	68.2	37.82	34.09	12.52	29.65	266	73	P	H	
														H
														H
	*	5825	107.81	-	-	90.68	33.85	12.91	29.63	105	309	P	V	
	*	5825	99.29	-	-	82.16	33.85	12.91	29.63	105	309	A	V	
		5851.4	59.87	-59.14	119.01	42.68	34	12.82	29.63	105	309	P	V	
		5860	55.76	-53.64	109.4	38.59	34	12.8	29.63	105	309	P	V	
		5876.2	55.43	-48.88	104.31	38.33	34	12.74	29.64	105	309	P	V	
		5931.6	55.09	-13.11	68.2	38.12	34.06	12.56	29.65	105	309	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)
		10905	48.64	-25.36	74	46.23	38.81	18.99	55.39	-	-	P	H
		10905	37.82	-16.18	54	35.41	38.81	18.99	55.39	-	-	A	H
		11490	47.6	-26.4	74	44.54	38.84	19.23	55.01	-	-	P	H
		14491	48.53	-25.47	74	40.71	40.4	21.75	54.33	-	-	P	H
		14491	39.7	-14.3	54	31.88	40.4	21.75	54.33	-	-	A	H
		17235	49.24	-18.96	68.2	42.01	37.81	25.11	55.69	-	-	P	H
		17956	54.08	-19.92	74	42.54	42.65	25.46	56.57	-	-	P	H
		17956	44.42	-9.58	54	32.88	42.65	25.46	56.57	-	-	A	H
													H
													H
													H
													H
802.11a													
CH 149													
5745MHz		10905	48.77	-25.23	74	46.36	38.81	18.99	55.39	-	-	P	V
		10905	38.09	-15.91	54	35.68	38.81	18.99	55.39	-	-	A	V
		11490	47.61	-26.39	74	44.55	38.84	19.23	55.01	-	-	P	V
		14491	48.34	-25.66	74	40.52	40.4	21.75	54.33	-	-	P	V
		14491	39.54	-14.46	54	31.72	40.4	21.75	54.33	-	-	A	V
		17235	49.05	-19.15	68.2	41.82	37.81	25.11	55.69	-	-	P	V
		17967	53.72	-20.28	74	42.1	42.74	25.46	56.58	-	-	P	V
		17967	44.63	-9.37	54	33.01	42.74	25.46	56.58	-	-	A	V
													V
													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		10883	48.15	-25.85	74	45.69	38.87	18.99	55.4	-	-	P	H	
		10883	37.91	-16.09	54	35.45	38.87	18.99	55.4	-	-	A	H	
		11570	46.86	-27.14	74	43.77	38.8	19.27	54.98	-	-	P	H	
		14491	48.7	-25.3	74	40.88	40.4	21.75	54.33	-	-	P	H	
		14491	39.84	-14.16	54	32.02	40.4	21.75	54.33	-	-	A	H	
		17355	48.73	-19.47	68.2	41.35	38.17	25.16	55.95	-	-	P	H	
		17879	54.5	-19.5	74	43.65	41.95	25.42	56.52	-	-	P	H	
		17879	44.05	-9.95	54	33.2	41.95	25.42	56.52	-	-	A	H	
														H
														H
														H
														H
			10883	48.59	-25.41	74	46.13	38.87	18.99	55.4	-	-	P	V
			10883	37.69	-16.31	54	35.23	38.87	18.99	55.4	-	-	A	V
			11570	47.25	-26.75	74	44.16	38.8	19.27	54.98	-	-	P	V
			14491	48.5	-25.5	74	40.68	40.4	21.75	54.33	-	-	P	V
			14491	39.66	-14.34	54	31.84	40.4	21.75	54.33	-	-	A	V
			17355	48.98	-19.22	68.2	41.6	38.17	25.16	55.95	-	-	P	V
			17945	54.64	-19.36	74	43.19	42.56	25.45	56.56	-	-	P	V
			17945	44.35	-9.65	54	32.9	42.56	25.45	56.56	-	-	A	V
													V	
													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 165 5825MHz		10883	48.14	-25.86	74	45.68	38.87	18.99	55.4	-	-	P	H	
		10883	37.84	-16.16	54	35.38	38.87	18.99	55.4	-	-	A	H	
		11650	46.94	-27.06	74	43.89	38.7	19.3	54.95	-	-	P	H	
		14491	48.26	-25.74	74	40.44	40.4	21.75	54.33	-	-	P	H	
		14491	39.44	-14.56	54	31.62	40.4	21.75	54.33	-	-	A	H	
		17475	48.58	-19.62	68.2	41.12	38.45	25.22	56.21	-	-	P	H	
		17868	54.21	-19.79	74	43.48	41.82	25.42	56.51	-	-	P	H	
		17868	44.23	-9.77	54	33.5	41.82	25.42	56.51	-	-	A	H	
														H
														H
														H
														H
			10883	48.29	-25.71	74	45.83	38.87	18.99	55.4	-	-	P	V
			10883	37.92	-16.08	54	35.46	38.87	18.99	55.4	-	-	A	V
			11650	47.63	-26.37	74	44.58	38.7	19.3	54.95	-	-	P	V
			14491	48.55	-25.45	74	40.73	40.4	21.75	54.33	-	-	P	V
			14491	39.81	-14.19	54	31.99	40.4	21.75	54.33	-	-	A	V
			17475	48.94	-19.26	68.2	41.48	38.45	25.22	56.21	-	-	P	V
			17945	54.52	-19.48	74	43.07	42.56	25.45	56.56	-	-	P	V
			17945	44.18	-9.82	54	32.73	42.56	25.45	56.56	-	-	A	V
													V	
													V	
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. The emission level close to 18GHz is checked that the average emission level is noise floor only. 													



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)
		5634	55.5	-12.7	68.2	38.92	33.27	12.9	29.59	272	73	P	H
		5691.4	55.18	-43.68	98.86	38.55	33.3	12.93	29.6	272	73	P	H
		5719.8	65.47	-45.27	110.74	48.71	33.42	12.95	29.61	272	73	P	H
		5722.6	67.54	-49.19	116.73	50.76	33.44	12.95	29.61	272	73	P	H
	*	5755	100.69	-	-	83.73	33.61	12.97	29.62	272	73	P	H
	*	5755	93.56	-	-	76.6	33.61	12.97	29.62	272	73	A	H
		5851.6	55.18	-63.37	118.55	37.99	34	12.82	29.63	272	73	P	H
		5866.2	55.33	-52.33	107.66	38.2	34	12.77	29.64	272	73	P	H
		5892.8	55.65	-36.34	91.99	38.6	34	12.69	29.64	272	73	P	H
		5931.2	55.25	-12.95	68.2	38.28	34.06	12.56	29.65	272	73	P	H
802.11n													H
HT40													H
CH 151		5618.8	55.13	-13.07	68.2	38.59	33.24	12.89	29.59	102	309	P	V
5755MHz		5699.4	55.84	-48.92	104.76	39.22	33.3	12.93	29.61	102	309	P	V
		5719	69.71	-40.81	110.52	52.96	33.41	12.95	29.61	102	309	P	V
		5724.4	69.76	-51.07	120.83	52.97	33.45	12.95	29.61	102	309	P	V
	*	5755	104.89	-	-	87.93	33.61	12.97	29.62	102	309	P	V
	*	5755	96.99	-	-	80.03	33.61	12.97	29.62	102	309	A	V
		5852.6	56.43	-59.84	116.27	39.24	34	12.82	29.63	102	309	P	V
		5855.8	55.56	-55.02	110.58	38.38	34	12.81	29.63	102	309	P	V
		5904	55.41	-28.29	83.7	38.39	34.01	12.65	29.64	102	309	P	V
		5925.2	55.1	-13.1	68.2	38.12	34.05	12.58	29.65	102	309	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)
		5602	55.12	-13.08	68.2	38.63	33.2	12.88	29.59	266	73	P	H
		5680.6	54.95	-35.93	90.88	38.33	33.3	12.92	29.6	266	73	P	H
		5700.4	54.94	-50.37	105.31	38.31	33.3	12.94	29.61	266	73	P	H
		5720.4	54.1	-57.61	111.71	37.34	33.42	12.95	29.61	266	73	P	H
	*	5795	100.3	-	-	83.24	33.69	12.99	29.62	266	73	P	H
	*	5795	93.41	-	-	76.35	33.69	12.99	29.62	266	73	A	H
		5851	57.78	-62.14	119.92	40.59	34	12.82	29.63	266	73	P	H
		5870	55.6	-51	106.6	38.48	34	12.76	29.64	266	73	P	H
		5916.6	55.36	-19.03	74.39	38.36	34.03	12.61	29.64	266	73	P	H
		5940	55.66	-12.54	68.2	38.7	34.08	12.53	29.65	266	73	P	H
802.11n													H
HT40													H
CH 159		5616.4	55.34	-12.86	68.2	38.81	33.23	12.89	29.59	102	309	P	V
5795MHz		5695.4	55.23	-46.58	101.81	38.61	33.3	12.93	29.61	102	309	P	V
		5704.6	56.3	-50.19	106.49	39.64	33.33	12.94	29.61	102	309	P	V
		5724.8	55.62	-66.12	121.74	38.83	33.45	12.95	29.61	102	309	P	V
	*	5795	104.67	-	-	87.61	33.69	12.99	29.62	102	309	P	V
	*	5795	96.85	-	-	79.79	33.69	12.99	29.62	102	309	A	V
		5851.8	57.19	-60.91	118.1	40	34	12.82	29.63	102	309	P	V
		5860.8	56.94	-52.23	109.17	39.78	34	12.79	29.63	102	309	P	V
		5912	56.45	-21.34	77.79	39.44	34.02	12.63	29.64	102	309	P	V
		5940.6	55.85	-12.35	68.2	38.89	34.08	12.53	29.65	102	309	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)
		5633.8	55.04	-13.16	68.2	38.46	33.27	12.9	29.59	260	67	P	H
		5684.4	56.36	-37.33	93.69	39.73	33.3	12.93	29.6	260	67	P	H
		5717.4	58.74	-51.33	110.07	42.01	33.4	12.94	29.61	260	67	P	H
		5724.6	58.86	-62.43	121.29	42.07	33.45	12.95	29.61	260	67	P	H
	*	5775	97.82	-	-	80.81	33.65	12.98	29.62	260	67	P	H
	*	5775	89.89	-	-	72.88	33.65	12.98	29.62	260	67	A	H
		5854.8	56.62	-54.64	111.26	39.44	34	12.81	29.63	260	67	P	H
		5870.4	57.79	-48.7	106.49	40.67	34	12.76	29.64	260	67	P	H
		5880	55.46	-46.03	101.49	38.37	34	12.73	29.64	260	67	P	H
		5929.2	55.56	-12.64	68.2	38.58	34.06	12.57	29.65	260	67	P	H
802.11ac													H
VHT80													H
CH 155		5637.8	55.68	-12.52	68.2	39.09	33.28	12.9	29.59	100	309	P	V
5775MHz		5699	59.1	-45.36	104.46	42.48	33.3	12.93	29.61	100	309	P	V
		5713.8	62.54	-46.53	109.07	45.83	33.38	12.94	29.61	100	309	P	V
		5722	62.33	-53.03	115.36	45.56	33.43	12.95	29.61	100	309	P	V
	*	5775	101.42	-	-	84.41	33.65	12.98	29.62	100	309	P	V
	*	5775	94.25	-	-	77.24	33.65	12.98	29.62	100	309	A	V
		5853.8	59.18	-54.36	113.54	41.99	34	12.82	29.63	100	309	P	V
		5863.2	61.95	-46.55	108.5	44.81	34	12.78	29.64	100	309	P	V
		5875	57.82	-47.38	105.2	40.71	34	12.75	29.64	100	309	P	V
		5925.6	56.7	-11.5	68.2	39.72	34.05	12.58	29.65	100	309	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission above 18GHz

5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

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)	
5GHz 802.11ac VHT80 SHF		22320	38.66	-35.34	74	58.14	38.37	-3.28	54.57	-	-	P	H	
		31250	43.04	-30.96	74	59.79	41.4	-2.05	56.1	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			22920	39.15	-34.85	74	57.86	38.64	-3.19	54.16	-	-	P	V
			31348	42.17	-31.83	74	59.21	41.24	-2.02	56.26	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	

Remark

- No other spurious found.
- All results are PASS against limit line.
- The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.



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		(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		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
2412MHz													

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 :	Karl Hou and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

Note symbol

-L	Low channel location
-R	High channel location



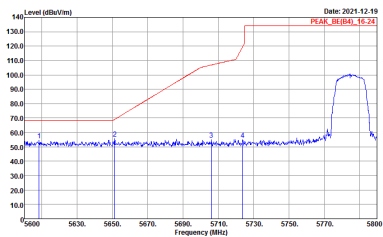
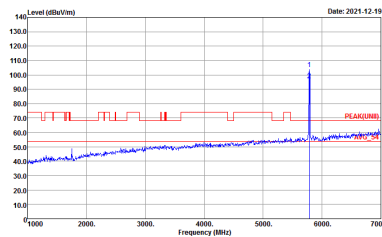
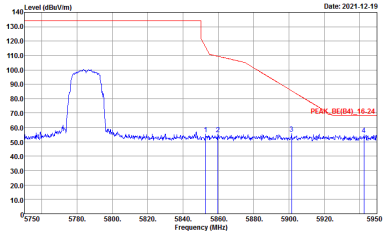
Band 4 - 5725~5850MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_8E(84)_16-24 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>

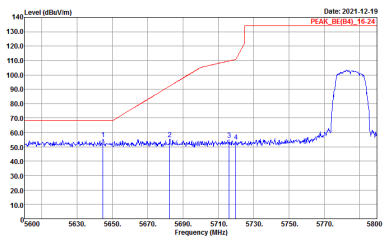
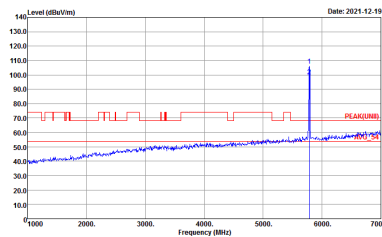
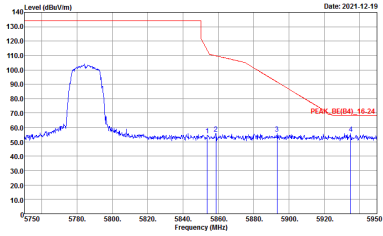


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH16-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-11Y Condition : PEAK(LINB) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>

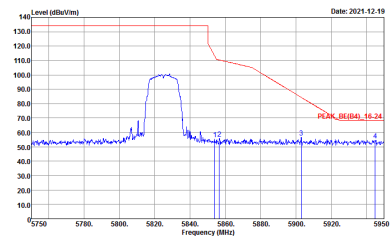
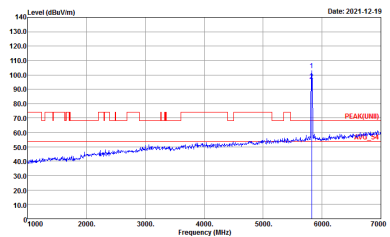


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak	 <p>Date: 2021-12-19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	 <p>Date: 2021-12-19 PEAK(B4)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>
Peak	 <p>Date: 2021-12-19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	Left blank

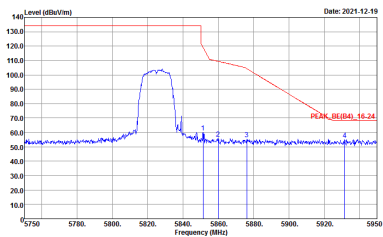
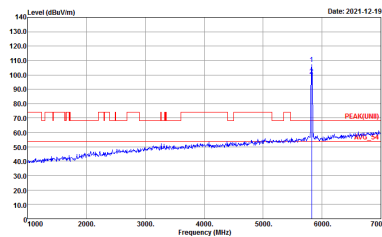


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	 <p>Date: 2021.12.19 PEAK(B4)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	 <p>Site : 03CH16-11Y Condition : PEAK(UNII) 3m 91200_02114_210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>



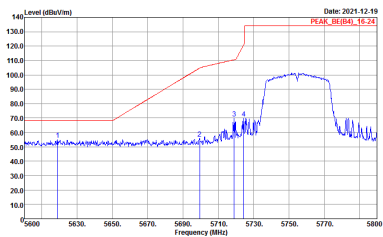
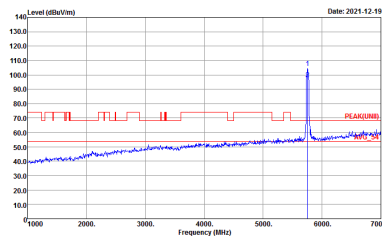
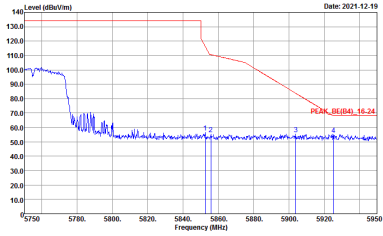
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH16-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	 <p>Site : 03CH16-11Y Condition : PEAK(UNII) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>



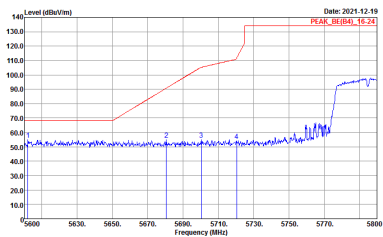
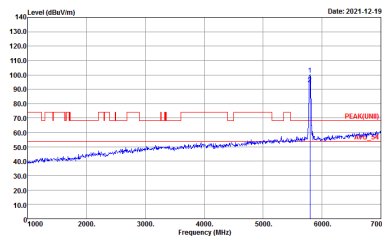
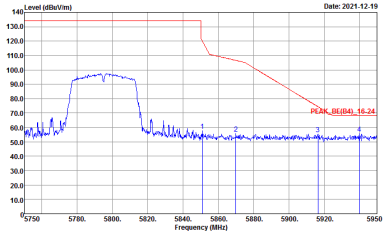
Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	Left blank

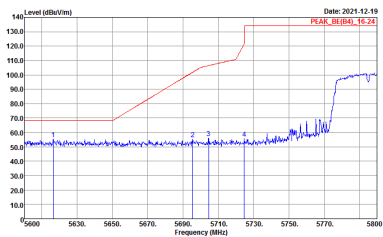
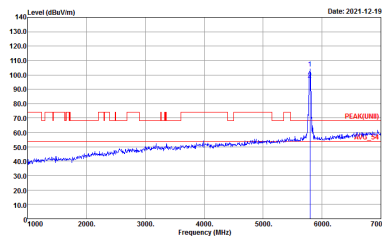
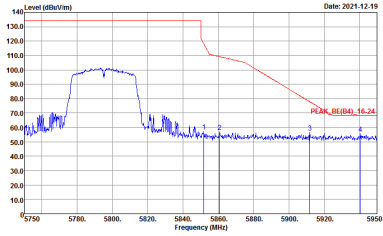


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	<p>Left blank</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	 <p>Date: 2021.12.19 PEAK(B4)</p> <p>Site : 03CH16-HY Condition : PEAK(LINII) 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	 <p>Date: 2021.12.19 PEAK(B4)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>
Peak	 <p>Date: 2021.12.19 PEAK_BE(B4)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : IN3028</p>	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	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	Left blank



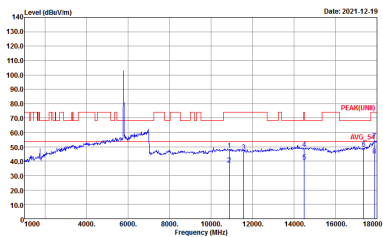
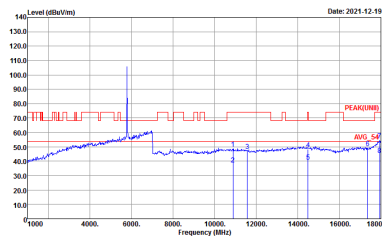
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(LINII) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>	<p>Left blank</p>



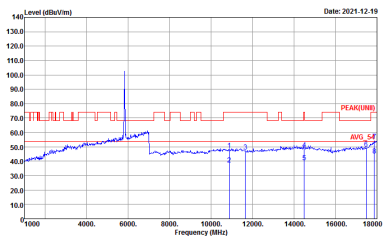
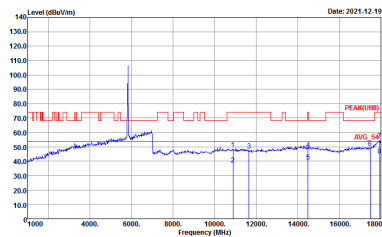
Band 4 - 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH16-11Y Condition : PEAK(LINEI) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	 <p>Site : 03CH16-11Y Condition : PEAK(LINEI) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH16-11Y Condition : PEAK(UNII) 3m 91200_02114_210804 HORIZONTAL Detector : Peak Project : IN3028</p>	 <p>Site : 03CH16-11Y Condition : PEAK(UNII) 3m 91200_02114_210804 VERTICAL Detector : Peak Project : IN3028</p>



Emission above 18GHz
5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 SHF	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(LINE1) 1m SHF ANT_9170_00991 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : PEAK(LINE1) 1m SHF ANT_9170_00991 VERTICAL Detector : Peak Project : IN3028</p>



**Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF @ 3m)**

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
1	Horizontal	Vertical
QP / Peak	<p>Site : 03CH16-HY Condition : QP 3m B1LOG_47020_211009 HORIZONTAL Detector : Peak Project : IN3028</p>	<p>Site : 03CH16-HY Condition : QP 3m B1LOG_47020_211009 VERTICAL Detector : Peak Project : IN3028</p>



Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11a	97.54	1390	0.72	1kHz
5GHz 802.11n HT40	94.18	647	1.55	3kHz
5GHz 802.11ac VHT80	90.16	323.5	3.09	10kHz

