

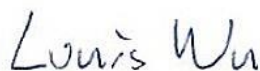


FCC RADIO TEST REPORT

FCC ID : 2A8B7TURBOXC865C
Equipment : Smart Module
Brand Name : TurboX
Model Name : C865C
Applicant : Multinarity Ltd.
112 Yigal Alon 3rd Floor, TEL AVIV,
6789150, Israel
Standard : FCC Part 15 Subpart C §15.247

The product was received on Sep. 14, 2022 and testing was performed from Sep. 26, 2022 to Jan. 10, 2023. 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 partial 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.



Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR290812C	01	Initial issue of report	Dec. 22, 2022
FR290812C	02	Revise Conducted Test Results	Jan. 11, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.247(a)(2)	6dB Bandwidth	-	See Note
-	2.1049	99% Occupied Bandwidth	-	See Note
3.1	15.247(b)	Power Output Measurement	Pass	-
-	15.247(e)	Power Spectral Density	-	See Note
-	15.247(d)	Conducted Band Edges	-	See Note
		Conducted Spurious Emission	-	See Note
3.2	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	0.78 dB under the limit at 2483.520 MHz
3.3	15.207	AC Conducted Emission	Pass	6.20 dB under the limit at 0.150 MHz
3.4	15.203	Antenna Requirement	Pass	-

Note: The module (Model: C865C) makes no difference after verifying output power, this report reuses test data from the module report.

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to report "Uncertainty of Evaluation".

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: Sheng Kuo

Report Producer: Doris Chen

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax and Wi-Fi 5GHz 802.11a/n/ac/ax

Product Feature		
Installed into Host	Equipment Name: Notebook Computer	
	Brand Name: spacetop	
	Model Name: SPEA001	
Antenna Type	WLAN	
	<Ant. 0>: PIFA Antenna	
	<Ant. 1>: PIFA Antenna	
	Bluetooth: PIFA Antenna	
Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	<Ant. 0>: 1.96
		<Ant. 1>: 1.60

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

1.1.1 Antenna Directional Gain

<For CDD Mode>

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F2)f)ii)

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

For power measurements on IEEE 802.11 devices,

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

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

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

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

As minimum $N_{SS}=1$ is supported by EUT, the formula can be simplified as:

Directional gain = $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi

Where $G_1, G_2, \dots, G_N$ denote single antenna gain.

The directional gain "DG" is calculated as following table.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant 0	Ant 1	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4GHz	1.96	1.60	1.96	4.79	0.00	0.00

Calculation example:

If a device has two antenna, $G_{ANT1} = 1.96\text{dBi}$; $G_{ANT2} = 1.60\text{dBi}$

Directional gain of power measurement = $\max(1.96, 1.60) + 0 = 1.96\text{ dBi}$

Directional gain of PSD derived from formula which is

$$10 \times \log \left\{ \left[10^{\frac{1.96\text{ dBi}}{20}} + 10^{\frac{1.60\text{ dBi}}{20}} \right]^2 \right\} / 2$$

$$= 4.79\text{ dBi}$$

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 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 (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, CO07-HY, 03CH20-HY

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

FCC designation No.: 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 C §15.247
- ♦ FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ 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.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, 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 only the worst case emissions were reported 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)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

This device support 26/52/106/242/484-tone RU.

The 242-tone RU is covered by 20MHz channel and 484-tone RU is covered by 40MHz channel.

The final test modes include the worst data rates for each modulation shown in the table below.

Single Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps

MIMO Antenna

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

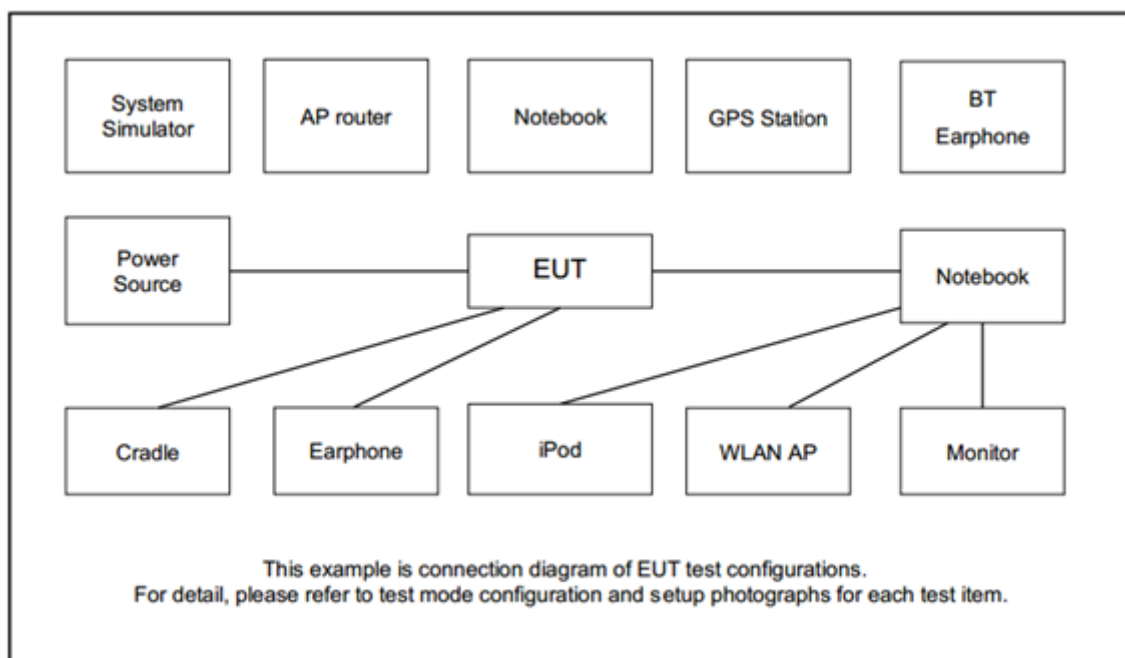
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + Bluetooth Link + Earphone + Hard Disk + AR Glasses



Ch. #	2400-2483.5 MHz	
	802.11b	802.11g
Low	01	01
Middle	06	06
High	11	11

Ch. #	2400-2483.5 MHz		
	802.11n HT20	802.11n HT40	802.11ax HE20
Low	01	03	01
Middle	06	06	-
High	11	09	11

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	Kinyo	BTE-3622	N/A	N/A	N/A
2.	WLAN AP	ASUS	RT-AC52	N/A	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	P79G	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Notebook	DELL	Latitude5310	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Earphone + Mic	Samsung	Ecouteur	N/A	Unshielded, 1.8 m	N/A
6.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
7.	Hard Disk	ADATA	HV620S-1T	N/A	Unshielded, 1.2m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT 4.0.00197.0" was installed in Notebook which was programmed in order to 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.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna with directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

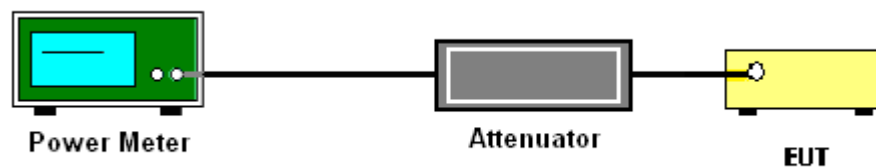
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.1.4 Test Setup



3.1.5 Test Result of Average Output Power

Please refer to Appendix A.

3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device is measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
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 “-”.

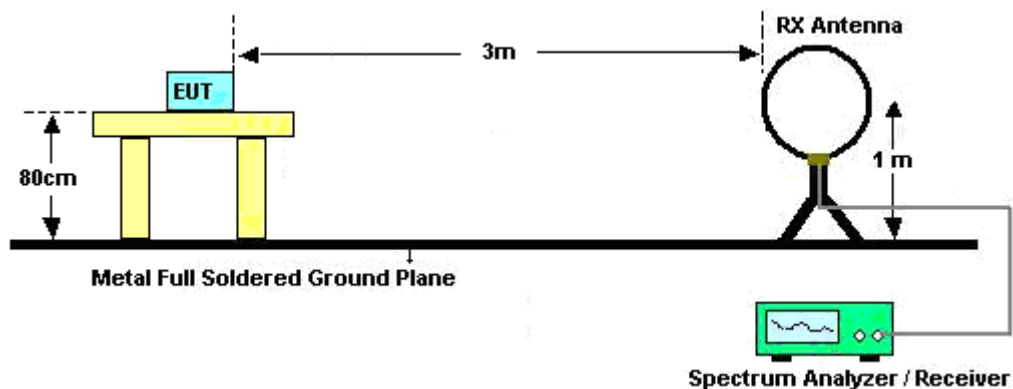
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW = 3 MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

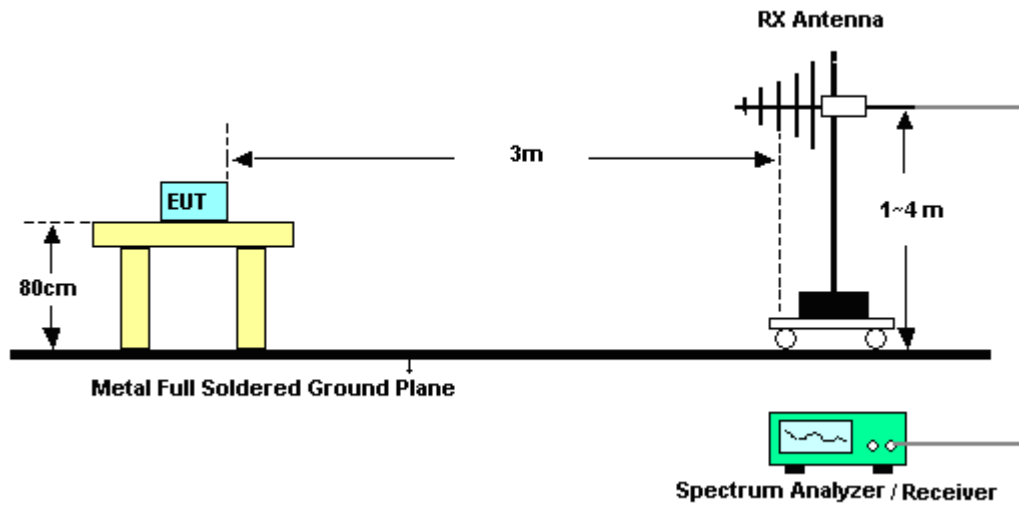
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

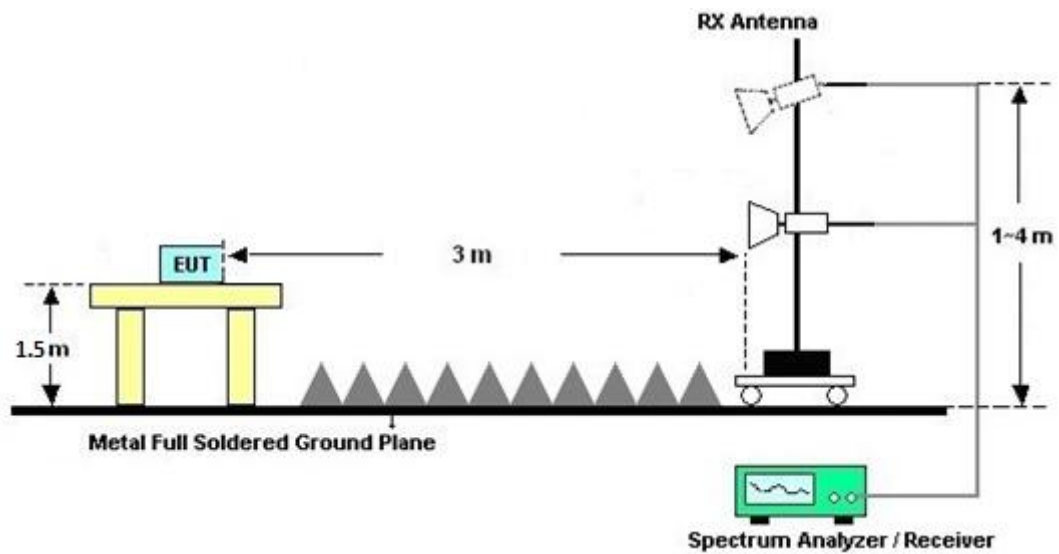
For radiated emissions below 30MHz



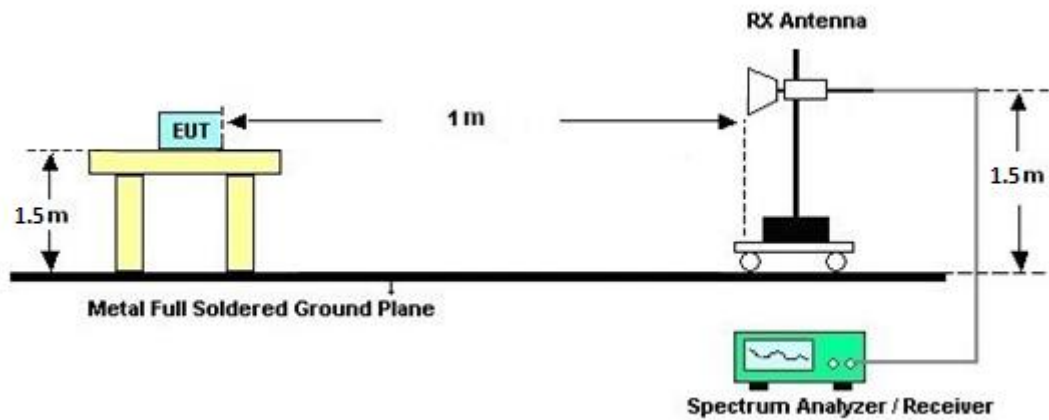
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.2.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

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 comes out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.2.7 Duty Cycle

Please refer to Appendix E.

3.2.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.3 AC Conducted Emission Measurement

3.3.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

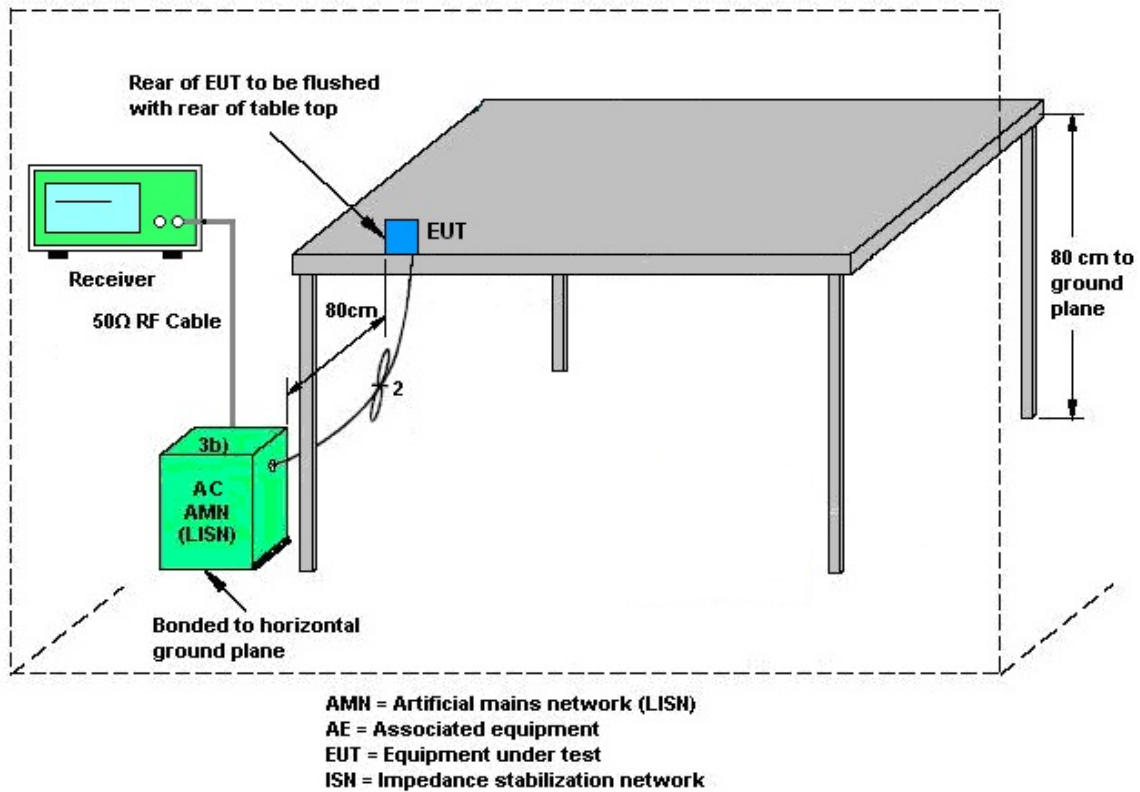
3.3.2 Measuring Instruments

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

3.3.3 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 (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.3.4 Test Setup



3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.4 Antenna Requirements

3.4.1 Standard Applicable

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY59053012	10Hz~44GHz	Nov. 18, 2021	Oct. 09, 2022~ Nov. 04, 2022	Nov. 17, 2022	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz~1000MHz	Jan. 03, 2022	Oct. 09, 2022~ Nov. 04, 2022	Jan. 02, 2023	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 15, 2021	Oct. 09, 2022~ Nov. 04, 2022	Nov. 14, 2022	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 28, 2022	Oct. 09, 2022~ Nov. 04, 2022	Jun. 27, 2023	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 07, 2022	Oct. 09, 2022~ Nov. 04, 2022	Jan. 06, 2023	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802N 1D01N-06	54682 & AT-N0603	30MHz~1GHz	Sep. 18, 2022	Oct. 09, 2022~ Nov. 04, 2022	Sep. 17, 2023	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	02360	1GHz~18GHz	Nov. 02, 2021	Oct. 09, 2022~ Oct. 31, 2022	Nov. 01, 2022	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02038	1GHz~18GHz	Aug. 09, 2022	Nov. 01, 2022~ Nov. 04, 2022	Aug. 08, 2023	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00994	18GHz~40GHz	Nov. 04, 2021	Oct. 09, 2022~ Nov. 02, 2022	Nov. 03, 2022	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 30, 2021	Nov. 02, 2022~ Nov. 04, 2022	Nov. 29, 2022	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303B	TP200879	N/A	Mar. 22, 2022	Oct. 09, 2022~ Nov. 04, 2022	Mar. 21, 2023	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,80401 5/2,804027/2	N/A	Jan. 19, 2022	Oct. 09, 2022~ Nov. 04, 2022	Jan. 18, 2023	Radiation (03CH20-HY)
Software	Audix	E3 6.2009-8-24	RK-002156	N/A	N/A	Oct. 09, 2022~ Nov. 04, 2022	N/A	Radiation (03CH20-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 09, 2022~ Nov. 04, 2022	N/A	Radiation (03CH20-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 09, 2022~ Nov. 04, 2022	N/A	Radiation (03CH20-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 09, 2022~ Nov. 04, 2022	N/A	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Sep. 28, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 17, 2022	Jan. 10, 2023	Nov. 16, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO36	10MHz~6GHz	Sep. 09, 2022	Sep. 28, 2022~ Jan. 10, 2023	Sep. 08, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101905	10Hz - 40GHz	Aug. 03, 2022	Sep. 28, 2022~ Jan. 10, 2023	Aug. 02, 2023	Conducted (TH05-HY)

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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	Sep. 26, 2022	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Sep. 26, 2022	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz~200MHz	Oct. 29, 2021	Sep. 26, 2022	Oct. 28, 2022	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 16, 2022	Sep. 26, 2022	Mar. 15, 2023	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Feb. 16, 2022	Sep. 26, 2022	Feb. 15, 2023	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Oct. 21, 2021	Sep. 26, 2022	Oct. 20, 2022	Conduction (CO07-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.5 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% ($U = 2Uc(y)$)	5.7 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Willy Chang	Temperature:	21~25	°C
Test Date:	2022/9/28 ~ 2023/1/10	Relative Humidity:	51~54	%

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	1	1	2412	12.40	15.40		30.00	30.00	1.96	1.60	14.36	17.00	36.00	36.00	Pass
11b	1Mbps	1	6	2437	12.30	15.10		30.00	30.00	1.96	1.60	14.26	16.70	36.00	36.00	Pass
11b	1Mbps	1	11	2462	12.00	15.00		30.00	30.00	1.96	1.60	13.96	16.60	36.00	36.00	Pass
11g	6Mbps	1	1	2412	12.30	15.40		30.00	30.00	1.96	1.60	14.26	17.00	36.00	36.00	Pass
11g	6Mbps	1	6	2437	12.40	15.00		30.00	30.00	1.96	1.60	14.36	16.60	36.00	36.00	Pass
11g	6Mbps	1	11	2462	12.00	15.10		30.00	30.00	1.96	1.60	13.96	16.70	36.00	36.00	Pass

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HT20	MCS0	2	1	2412	12.20	12.00	15.11	30.00		1.96		17.07		36.00		Pass
HT20	MCS0	2	6	2437	12.30	11.00	14.71	30.00		1.96		16.67		36.00		Pass
HT20	MCS0	2	11	2462	12.10	11.20	14.68	30.00		1.96		16.64		36.00		Pass
HT40	MCS0	2	3	2422	12.10	11.50	14.82	30.00		1.96		16.78		36.00		Pass
HT40	MCS0	2	6	2437	12.40	11.60	15.03	30.00		1.96		16.99		36.00		Pass
HT40	MCS0	2	9	2452	12.30	10.90	14.67	30.00		1.96		16.63		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	12.40	12.00	15.21	30.00		1.96		17.17		36.00		Pass
HE20	MCS0	2	1	2412	26/0	12.70	12.10	15.42	30.00		1.96		17.38		36.00		Pass
HE20	MCS0	2	6	2437	Full	12.40	11.20	14.85	30.00		1.96		16.81		36.00		Pass
HE20	MCS0	2	6	2437	26/4	12.80	12.10	15.47	30.00		1.96		17.43		36.00		Pass
HE20	MCS0	2	11	2462	Full	12.20	11.40	14.83	30.00		1.96		16.79		36.00		Pass
HE20	MCS0	2	11	2462	26/8	12.60	12.10	15.37	30.00		1.96		17.33		36.00		Pass
HE40	MCS0	2	3	2422	Full	12.40	11.80	15.12	30.00		1.96		17.08		36.00		Pass
HE40	MCS0	2	6	2437	Full	12.30	11.50	14.93	30.00		1.96		16.89		36.00		Pass
HE40	MCS0	2	9	2452	Full	12.10	10.80	14.51	30.00		1.96		16.47		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.



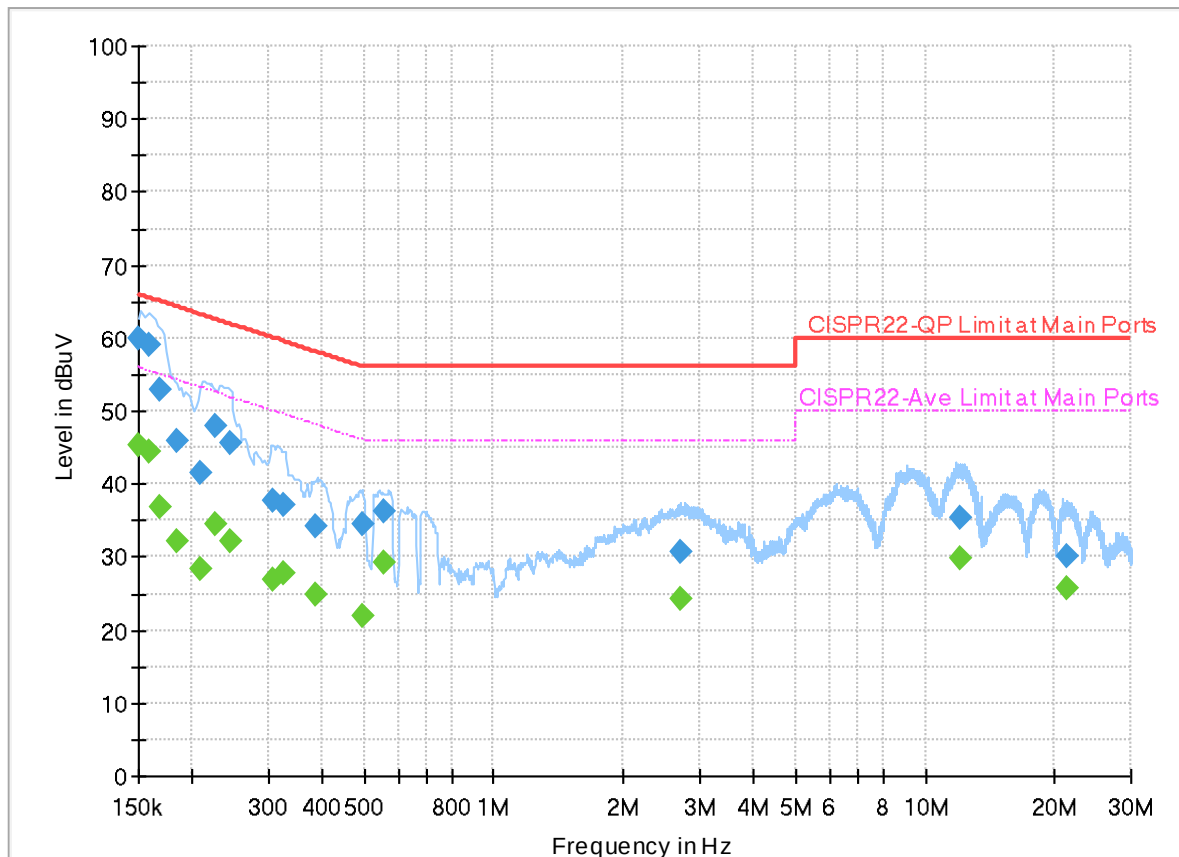
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	Temperature :	23.2~25.7℃
		Relative Humidity :	53.1~66.2%

EUT Information

Report NO : 290812
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



Final_Result

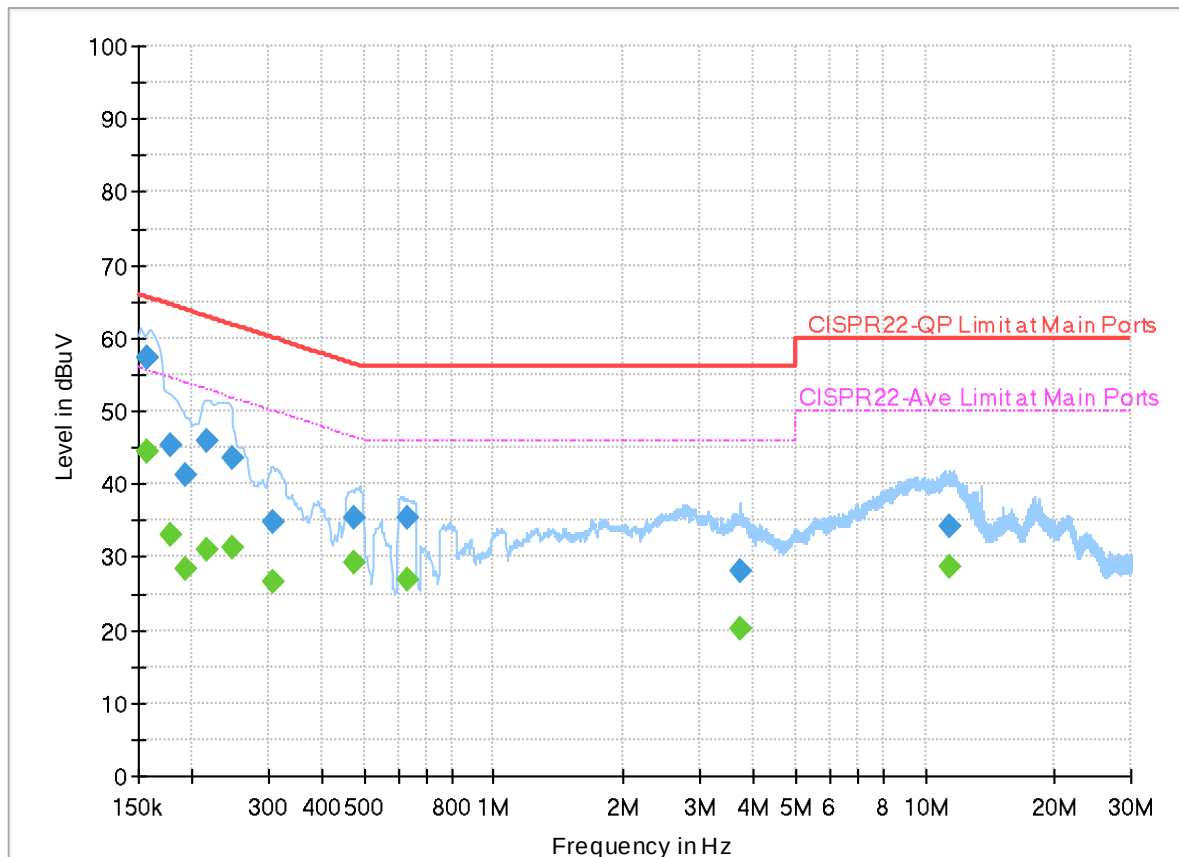
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	45.43	56.00	10.57	L1	OFF	20.0
0.150000	59.80	---	66.00	6.20	L1	OFF	20.0
0.159090	---	44.38	55.51	11.13	L1	OFF	20.0
0.159090	59.14	---	65.51	6.37	L1	OFF	20.0
0.168540	---	36.95	55.03	18.08	L1	OFF	20.0
0.168540	52.99	---	65.03	12.04	L1	OFF	20.0
0.183750	---	32.27	54.31	22.04	L1	OFF	20.0
0.183750	45.81	---	64.31	18.50	L1	OFF	20.0
0.208680	---	28.34	53.26	24.92	L1	OFF	20.0
0.208680	41.52	---	63.26	21.74	L1	OFF	20.0
0.227040	---	34.42	52.56	18.14	L1	OFF	20.0
0.227040	47.95	---	62.56	14.61	L1	OFF	20.0
0.244860	---	32.18	51.93	19.75	L1	OFF	20.0
0.244860	45.69	---	61.93	16.24	L1	OFF	20.0
0.308400	---	26.93	50.01	23.08	L1	OFF	20.0
0.308400	37.60	---	60.01	22.41	L1	OFF	20.0
0.324870	---	27.89	49.58	21.69	L1	OFF	20.0
0.324870	37.06	---	59.58	22.52	L1	OFF	20.0
0.387420	---	24.92	48.12	23.20	L1	OFF	20.0

0.387420	34.25	---	58.12	23.87	L1	OFF	20.0
0.494250	---	21.87	46.10	24.23	L1	OFF	20.0
0.494250	34.47	---	56.10	21.63	L1	OFF	20.0
0.555000	---	29.21	46.00	16.79	L1	OFF	20.0
0.555000	36.23	---	56.00	19.77	L1	OFF	20.0
2.703840	---	24.33	46.00	21.67	L1	OFF	20.0
2.703840	30.62	---	56.00	25.38	L1	OFF	20.0
12.107580	---	29.93	50.00	20.07	L1	OFF	20.2
12.107580	35.25	---	60.00	24.75	L1	OFF	20.2
21.302250	---	25.68	50.00	24.32	L1	OFF	20.2
21.302250	30.21	---	60.00	29.79	L1	OFF	20.2

EUT Information

Report NO : 290812
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	44.38	55.63	11.25	N	OFF	20.0
0.156750	57.45	---	65.63	8.18	N	OFF	20.0
0.157290	---	44.30	55.61	11.31	N	OFF	20.0
0.157290	57.37	---	65.61	8.24	N	OFF	20.0
0.177180	---	32.95	54.62	21.67	N	OFF	20.0
0.177180	45.29	---	64.62	19.33	N	OFF	20.0
0.192570	---	28.43	53.93	25.50	N	OFF	20.0
0.192570	41.29	---	63.93	22.64	N	OFF	20.0
0.216330	---	30.91	52.96	22.05	N	OFF	20.0
0.216330	45.82	---	62.96	17.14	N	OFF	20.0
0.246750	---	31.24	51.87	20.63	N	OFF	20.0
0.246750	43.59	---	61.87	18.28	N	OFF	20.0
0.306780	---	26.60	50.06	23.46	N	OFF	20.0
0.306780	34.89	---	60.06	25.17	N	OFF	20.0
0.476250	---	29.16	46.40	17.24	N	OFF	20.0
0.476250	35.37	---	56.40	21.03	N	OFF	20.0
0.629880	---	26.95	46.00	19.05	N	OFF	20.0
0.629880	35.33	---	56.00	20.67	N	OFF	20.0
3.734340	---	20.23	46.00	25.77	N	OFF	20.1

3.734340	28.00	---	56.00	28.00	N	OFF	20.1
11.332500	---	28.71	50.00	21.29	N	OFF	20.2
11.332500	34.28	---	60.00	25.72	N	OFF	20.2



Appendix C. Radiated Spurious Emission

Test Engineer :	Leo Li 、 JC Liang and John Chuang	Temperature :	19~22°C
		Relative Humidity :	65~70%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	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)
802.11b CH 01 2412MHz		2346.33	49.47	-24.53	74	39.92	27.2	18.6	36.25	105	66	P	H
		2390	39.62	-14.38	54	29.77	27.44	18.68	36.27	105	66	A	H
	*	2412	108.77	-	-	98.76	27.57	18.72	36.28	105	66	P	H
	*	2412	105.68	-	-	95.67	27.57	18.72	36.28	105	66	A	H
													H
													H
		2390	50.06	-23.94	74	40.21	27.44	18.68	36.27	341	253	P	V
		2390	39.58	-14.42	54	29.73	27.44	18.68	36.27	341	253	A	V
	*	2412	108.79	-	-	98.78	27.57	18.72	36.28	341	253	P	V
	*	2412	105.63	-	-	95.62	27.57	18.72	36.28	341	253	A	V
													V
													V
802.11b CH 06 2437MHz		2338.96	49.17	-24.83	74	39.63	27.2	18.59	36.25	118	66	P	H
		2390	39.48	-14.52	54	29.63	27.44	18.68	36.27	118	66	A	H
	*	2437	106.05	-	-	95.85	27.72	18.77	36.29	118	66	P	H
	*	2437	102.85	-	-	92.65	27.72	18.77	36.29	118	66	A	H
		2493.28	49.53	-24.47	74	39	27.97	18.88	36.32	118	66	P	H
		2483.84	39.08	-14.92	54	28.59	27.94	18.86	36.31	118	66	A	H
		2386.16	49.68	-24.32	74	39.85	27.42	18.68	36.27	400	252	P	V
		2390	39.14	-14.86	54	29.29	27.44	18.68	36.27	400	252	A	V
	*	2437	105.61	-	-	95.41	27.72	18.77	36.29	400	252	P	V
	*	2437	102.42	-	-	92.22	27.72	18.77	36.29	400	252	A	V
		2487.68	49.9	-24.1	74	39.39	27.95	18.87	36.31	400	252	P	V
		2484.08	39.14	-14.86	54	28.65	27.94	18.86	36.31	400	252	A	V



802.11b CH 11 2462MHz	*	2462	105.55	-	-	95.18	27.85	18.82	36.3	103	69	P	H
	*	2462	102.42	-	-	92.05	27.85	18.82	36.3	103	69	A	H
		2499.08	50.28	-23.72	74	39.71	28	18.89	36.32	103	69	P	H
		2483.52	39.39	-14.61	54	28.91	27.93	18.86	36.31	103	69	A	H
													H
													H
	*	2462	105.48	-	-	95.11	27.85	18.82	36.3	392	252	P	V
	*	2462	102.33	-	-	91.96	27.85	18.82	36.3	392	252	A	V
		2495.52	49.57	-24.43	74	39.03	27.98	18.88	36.32	392	252	P	V
		2483.52	39.49	-14.51	54	29.01	27.93	18.86	36.31	392	252	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

[illegible]



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11b CH 06 2437MHz		4874	43.29	-30.71	74	35	32.85	13.04	37.6	-	-	P	H
		7311	47.94	-26.06	74	33.53	37.06	15.88	38.53	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4874	43.45	-30.55	74	35.16	32.85	13.04	37.6	-	-	P	V
		7311	47.85	-26.15	74	33.44	37.06	15.88	38.53	-	-	P	V
													V
													V
													V
													V
													V
													V

[illegible]



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11g CH 01 2412MHz		2389.905	56.04	-17.96	74	46.19	27.44	18.68	36.27	107	67	P	H
		2390	46.22	-7.78	54	36.37	27.44	18.68	36.27	107	67	A	H
	*	2412	109.92	-	-	99.91	27.57	18.72	36.28	107	67	P	H
	*	2412	102.04	-	-	92.03	27.57	18.72	36.28	107	67	A	H
													H
													H
		2389.905	56.39	-17.61	74	46.54	27.44	18.68	36.27	342	255	P	V
		2390	46.03	-7.97	54	36.18	27.44	18.68	36.27	342	255	A	V
	*	2412	110.22	-	-	100.21	27.57	18.72	36.28	342	255	P	V
	*	2412	101.81	-	-	91.8	27.57	18.72	36.28	342	255	A	V
													V
													V
802.11g CH 06 2437MHz		2389.84	49.39	-24.61	74	39.54	27.44	18.68	36.27	100	67	P	H
		2390	39.17	-14.83	54	29.32	27.44	18.68	36.27	100	67	A	H
	*	2437	107.88	-	-	97.68	27.72	18.77	36.29	100	67	P	H
	*	2437	99.28	-	-	89.08	27.72	18.77	36.29	100	67	A	H
		2493.68	49.35	-24.65	74	38.82	27.97	18.88	36.32	100	67	P	H
		2484.08	39.09	-14.91	54	28.6	27.94	18.86	36.31	100	67	A	H
		2388.24	49.49	-24.51	74	39.65	27.43	18.68	36.27	400	253	P	V
		2390	38.93	-15.07	54	29.08	27.44	18.68	36.27	400	253	A	V
	*	2437	107.68	-	-	97.48	27.72	18.77	36.29	400	253	P	V
	*	2437	99.03	-	-	88.83	27.72	18.77	36.29	400	253	A	V
		2492.64	49.95	-24.05	74	39.42	27.97	18.88	36.32	400	253	P	V
		2484	39.12	-14.88	54	28.63	27.94	18.86	36.31	400	253	A	V



802.11g CH 11 2462MHz	*	2462	107.53	-	-	97.16	27.85	18.82	36.3	102	68	P	H
	*	2462	99.67	-	-	89.3	27.85	18.82	36.3	102	68	A	H
		2485.88	51.08	-22.92	74	40.59	27.94	18.86	36.31	102	68	P	H
		2483.52	41.36	-12.64	54	30.88	27.93	18.86	36.31	102	68	A	H
													H
													H
	*	2462	107.17	-	-	96.8	27.85	18.82	36.3	397	251	P	V
	*	2462	99.2	-	-	88.83	27.85	18.82	36.3	397	251	A	V
		2485.28	51.72	-22.28	74	41.23	27.94	18.86	36.31	397	251	P	V
		2483.52	41.71	-12.29	54	31.23	27.93	18.86	36.31	397	251	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz****WIFI 802.11g (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11g CH 01 2412MHz		4824	43.25	-30.75	74	35.12	32.64	13.05	37.56	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4824	44.19	-29.81	74	36.06	32.64	13.05	37.56	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11g CH 06 2437MHz		4874	42.9	-31.1	74	34.61	32.85	13.04	37.6	-	-	P	H
		7311	47.93	-26.07	74	33.52	37.06	15.88	38.53	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4874	42.82	-31.18	74	34.53	32.85	13.04	37.6	-	-	P	V
		7311	47.47	-26.53	74	33.06	37.06	15.88	38.53	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

[illegible]



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 01 2412MHz		2389.695	60.06	-13.94	74	50.39	27.26	18.68	36.27	210	311	P	H
		2390	51.04	-2.96	54	41.37	27.26	18.68	36.27	210	311	A	H
	*	2412	114.14	-	-	104.35	27.35	18.72	36.28	210	311	P	H
	*	2412	105.99	-	-	96.2	27.35	18.72	36.28	210	311	A	H
													H
													H
		2389.59	62.26	-11.74	74	52.59	27.26	18.68	36.27	331	330	P	V
		2390	52.74	-1.26	54	43.07	27.26	18.68	36.27	331	330	A	V
	*	2412	113.91	-	-	104.12	27.35	18.72	36.28	331	330	P	V
	*	2412	105.9	-	-	96.11	27.35	18.72	36.28	331	330	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.04	50.2	-23.8	74	40.53	27.26	18.68	36.27	204	305	P	H
		2390	39.93	-14.07	54	30.26	27.26	18.68	36.27	204	305	A	H
	*	2437	115.45	-	-	105.52	27.45	18.77	36.29	204	305	P	H
	*	2437	107.77	-	-	97.84	27.45	18.77	36.29	204	305	A	H
		2494.64	49.63	-24.37	74	39.39	27.68	18.88	36.32	204	305	P	H
		2483.68	39.33	-14.67	54	29.15	27.63	18.86	36.31	204	305	A	H
		2386.96	50.09	-23.91	74	40.43	27.25	18.68	36.27	310	330	P	V
		2387.44	39.2	-14.8	54	29.54	27.25	18.68	36.27	310	330	A	V
	*	2437	115.43	-	-	105.5	27.45	18.77	36.29	310	330	P	V
	*	2437	107.27	-	-	97.34	27.45	18.77	36.29	310	330	A	V
		2494.48	49.81	-24.19	74	39.57	27.68	18.88	36.32	310	330	P	V
		2483.52	39.29	-14.71	54	29.11	27.63	18.86	36.31	310	330	A	V



802.11n HT20 CH 11 2462MHz	*	2462	113.44	-	-	103.37	27.55	18.82	36.3	195	302	P	H
	*	2462	105.91	-	-	95.84	27.55	18.82	36.3	195	302	A	H
		2483.8	58.64	-15.36	74	48.45	27.64	18.86	36.31	195	302	P	H
		2483.52	48.44	-5.56	54	38.26	27.63	18.86	36.31	195	302	A	H
													H
													H
	*	2462	112.89	-	-	102.82	27.55	18.82	36.3	301	352	P	V
	*	2462	105.07	-	-	95	27.55	18.82	36.3	301	352	A	V
		2483.88	60.27	-13.73	74	50.08	27.64	18.86	36.31	301	352	P	V
		2483.52	49.31	-4.69	54	39.13	27.63	18.86	36.31	301	352	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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 01 2412MHz		4824	43.94	-30.06	74	36.05	32.4	13.05	37.56	-	-	P	H
													H
													H
													H
													H
													H
		4824	43.97	-30.03	74	36.08	32.4	13.05	37.56	-	-	P	V
													V
													V
													V
													V
													V



WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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 06 2437MHz		4874	43.52	-30.48	74	35.58	32.5	13.04	37.6	-	-	P	H
		7311	47.9	-26.1	74	33.65	36.9	15.88	38.53	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4874	42.86	-31.14	74	34.92	32.5	13.04	37.6	-	-	P	V
		7311	47.96	-26.04	74	33.71	36.9	15.88	38.53	-	-	P	V
													V
													V
													V
													V
													V
													V

[illegible]



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2390	58.72	-15.28	74	49.05	27.26	18.68	36.27	185	305	P	H
		2390	49.37	-4.63	54	39.7	27.26	18.68	36.27	185	305	A	H
	*	2422	109.08	-	-	99.24	27.39	18.74	36.29	185	305	P	H
	*	2422	101.46	-	-	91.62	27.39	18.74	36.29	185	305	A	H
		2483.52	50.25	-23.75	74	40.07	27.63	18.86	36.31	185	305	P	H
		2483.52	40.69	-13.31	54	30.51	27.63	18.86	36.31	185	305	A	H
		2389.04	63.46	-10.54	74	53.79	27.26	18.68	36.27	325	338	P	V
		2390	52.03	-1.97	54	42.36	27.26	18.68	36.27	325	338	A	V
	*	2422	109.01	-	-	99.17	27.39	18.74	36.29	325	338	P	V
	*	2422	101.07	-	-	91.23	27.39	18.74	36.29	325	338	A	V
		2483.76	51.13	-22.87	74	40.94	27.64	18.86	36.31	325	338	P	V
		2483.84	40.06	-13.94	54	29.87	27.64	18.86	36.31	325	338	A	V
802.11n HT40 CH 06 2437MHz		2389.04	57.15	-16.85	74	47.48	27.26	18.68	36.27	204	308	P	H
		2387.92	45.14	-8.86	54	35.48	27.25	18.68	36.27	204	308	A	H
	*	2437	111.4	-	-	101.47	27.45	18.77	36.29	204	308	P	H
	*	2437	103.85	-	-	93.92	27.45	18.77	36.29	204	308	A	H
		2484.56	57.05	-16.95	74	46.86	27.64	18.86	36.31	204	308	P	H
		2483.68	45.83	-8.17	54	35.65	27.63	18.86	36.31	204	308	A	H
		2389.84	55.59	-18.41	74	45.92	27.26	18.68	36.27	286	334	P	V
		2386.96	42.99	-11.01	54	33.33	27.25	18.68	36.27	286	334	A	V
	*	2437	110.55	-	-	100.62	27.45	18.77	36.29	286	334	P	V
	*	2437	102.2	-	-	92.27	27.45	18.77	36.29	286	334	A	V
		2483.52	58.69	-15.31	74	48.51	27.63	18.86	36.31	286	334	P	V
		2483.52	48.21	-5.79	54	38.03	27.63	18.86	36.31	286	334	A	V



802.11n HT40 CH 09 2452MHz		2389.52	54.17	-19.83	74	44.5	27.26	18.68	36.27	192	305	P	H
		2390	42.18	-11.82	54	32.51	27.26	18.68	36.27	192	305	A	H
	*	2452	109.74	-	-	99.73	27.51	18.8	36.3	192	305	P	H
	*	2452	102.51	-	-	92.5	27.51	18.8	36.3	192	305	A	H
		2483.68	62.95	-11.05	74	52.77	27.63	18.86	36.31	192	305	P	H
		2483.52	52.72	-1.28	54	42.54	27.63	18.86	36.31	192	305	A	H
		2388.4	52.66	-21.34	74	43	27.25	18.68	36.27	299	355	P	V
		2387.92	41.45	-12.55	54	31.79	27.25	18.68	36.27	299	355	A	V
	*	2452	109.26	-	-	99.25	27.51	18.8	36.3	299	355	P	V
	*	2452	101.04	-	-	91.03	27.51	18.8	36.3	299	355	A	V
		2484.08	63.5	-10.5	74	53.31	27.64	18.86	36.31	299	355	P	V
		2483.52	53.22	-0.78	54	43.04	27.63	18.86	36.31	299	355	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	44.17	-29.83	74	36.3	32.4	13.04	37.57	-	-	P	H
		7266	47.7	-26.3	74	33.31	37.04	15.84	38.49	-	-	P	H
													H
													H
													H
													H
		4844	43.41	-30.59	74	35.54	32.4	13.04	37.57	-	-	P	V
		7266	47.91	-26.09	74	33.52	37.04	15.84	38.49	-	-	P	V
													V
													V
													V
													V



WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 06 2437MHz		4874	42.87	-31.13	74	34.93	32.5	13.04	37.6	-	-	P	H
		7311	48.61	-25.39	74	34.36	36.9	15.88	38.53	-	-	P	H
		7311	39.39	-14.61	54	25.14	36.9	15.88	38.53	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4874	43.66	-30.34	74	35.72	32.5	13.04	37.6	-	-	P	V
		7311	48.05	-25.95	74	33.8	36.9	15.88	38.53	-	-	P	V
		7311	38.83	-15.17	54	24.58	36.9	15.88	38.53	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		4904	43.3	-30.7	74	35.26	32.62	13.04	37.62	-	-	P	H
		7356	47.32	-26.68	74	33.11	36.86	15.91	38.56	-	-	P	H
													H
													H
													H
													H
													H
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													H
													H
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													H
													H
													H
													H
		4904	43.06	-30.94	74	35.02	32.62	13.04	37.62	-	-	P	V
		7356	47.73	-26.27	74	33.52	36.86	15.91	38.56	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												



2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		2389.695	63.82	-10.18	74	54.15	27.26	18.68	36.27	206	306	P	H
		2390	44.99	-9.01	54	35.32	27.26	18.68	36.27	206	306	A	H
	*	2412	122.87	-	-	113.08	27.35	18.72	36.28	206	306	P	H
	*	2412	114.46	-	-	104.67	27.35	18.72	36.28	206	306	A	H
													H
													H
		2389.8	65.24	-8.76	74	55.57	27.26	18.68	36.27	326	340	P	V
		2390	42.66	-11.34	54	32.99	27.26	18.68	36.27	326	340	A	V
	*	2412	114.1	-	-	104.31	27.35	18.72	36.28	326	340	P	V
	*	2412	106.58	-	-	96.79	27.35	18.72	36.28	326	340	A	V
													V
													V
802.11ax HE20 Partial 26/8 CH 11 2462MHz	*	2462	121.16	-	-	111.09	27.55	18.82	36.3	222	308	P	H
	*	2462	114.39	-	-	104.32	27.55	18.82	36.3	222	308	A	H
		2483.8	64.8	-9.2	74	54.61	27.64	18.86	36.31	222	308	P	H
		2483.52	42.97	-11.03	54	32.79	27.63	18.86	36.31	222	308	A	H
													H
													H
	*	2462	122.37	-	-	112.3	27.55	18.82	36.3	306	3	P	V
	*	2462	114.36	-	-	104.29	27.55	18.82	36.3	306	3	A	V
		2483.64	65.12	-8.88	74	54.94	27.63	18.86	36.31	306	3	P	V
		2483.52	42.75	-11.25	54	32.57	27.63	18.86	36.31	306	3	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

[illegible]

[illegible]

Emission above 18GHz

2.4GHz WIFI 802.11n HT40 (SHF)

[illegible]

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT40 LF		57.16	28.95	-11.05	40	50.74	12.2	1.63	35.62	-	-	P	H
		111.48	34.9	-8.6	43.5	51.08	17.19	2.15	35.52	-	-	P	H
		249.22	39.05	-6.95	46	52.88	18.36	3.1	35.29	-	-	P	H
		359.8	38.02	-7.98	46	48.67	20.66	3.66	34.97	-	-	P	H
		746.83	38.46	-7.54	46	39.39	27.67	5.15	33.75	-	-	P	H
		885.54	38.86	-7.14	46	37.68	28.7	5.66	33.18	-	-	P	H
													H
													H
													H
													H
													H
													H
		36.79	31.99	-8.01	40	45.28	20.95	1.4	35.64	-	-	P	V
		109.54	31.68	-11.82	43.5	48.08	16.99	2.13	35.52	-	-	P	V
		241.46	31.01	-14.99	46	45.87	17.4	3.05	35.31	-	-	P	V
		359.8	33.84	-12.16	46	44.49	20.66	3.66	34.97	-	-	P	V
		386.96	31.34	-14.66	46	40.99	21.43	3.8	34.88	-	-	P	V
		746.83	38.58	-7.42	46	39.51	27.67	5.15	33.75	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against limit line.												
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is 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	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	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+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													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 2390MHz:

- 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)
- Margin
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- 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)
- Margin
= 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”.



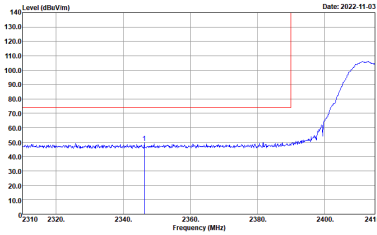
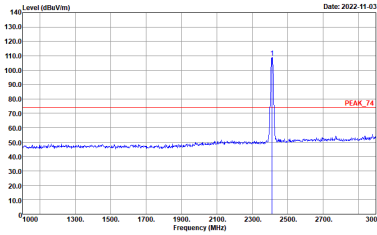
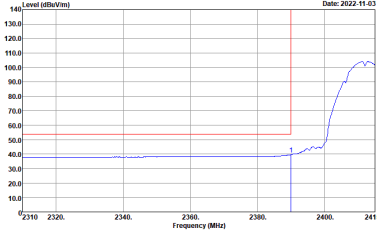
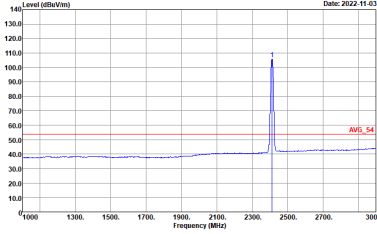
Appendix D. Radiated Spurious Emission Plots

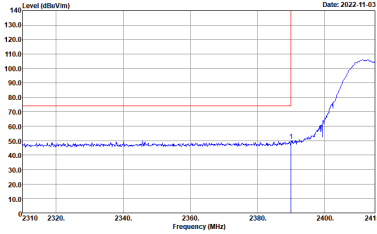
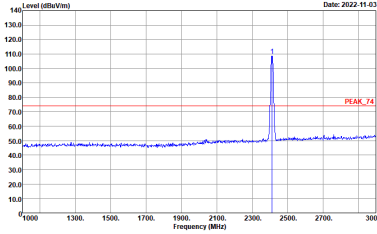
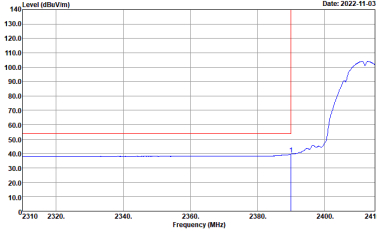
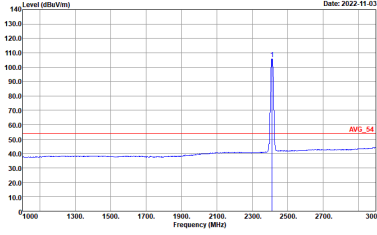
Test Engineer :	Leo Li 、 JC Liang and John Chuang	Temperature :	19~22°C
		Relative Humidity :	65~70%

Note symbol

-L	Low channel location
-R	High channel location

2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

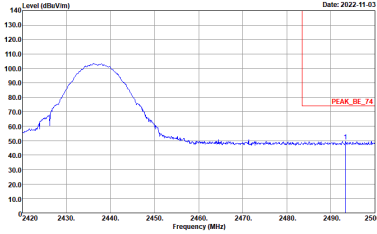
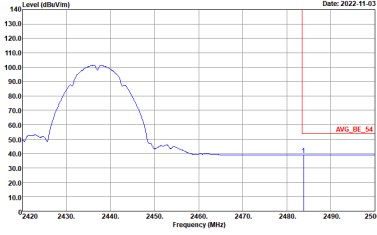
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

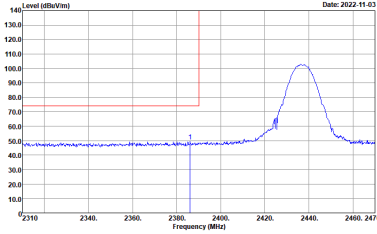
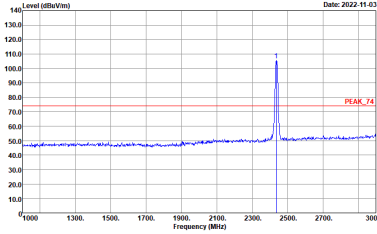
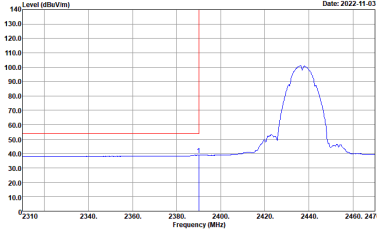
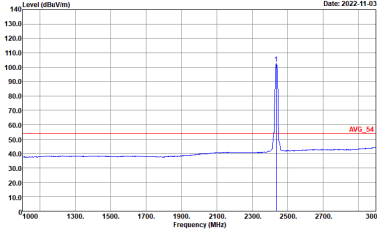
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



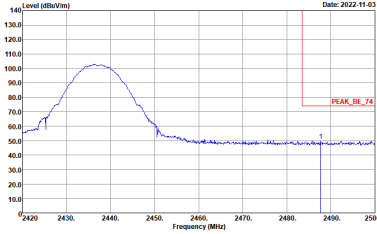
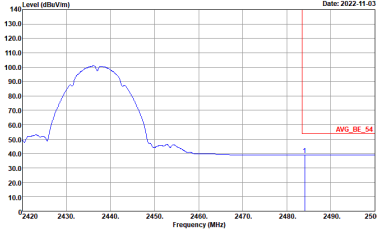
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

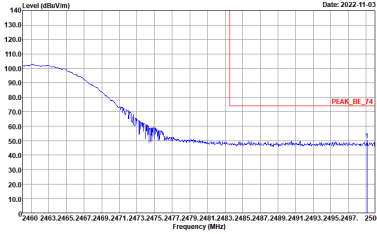
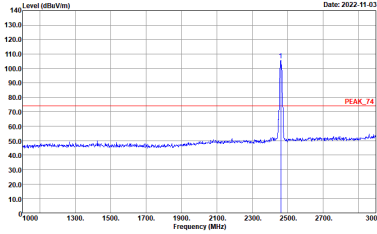
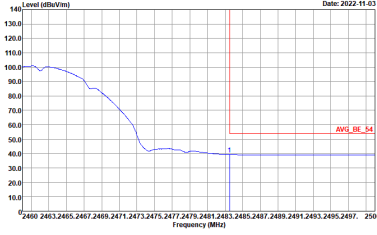
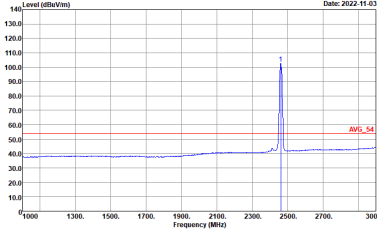


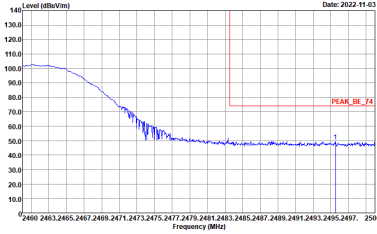
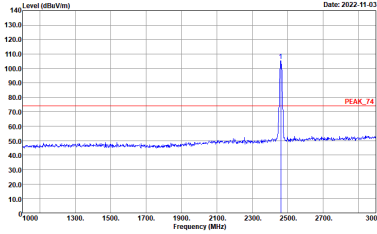
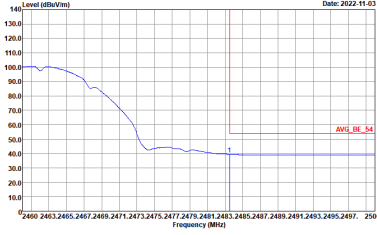
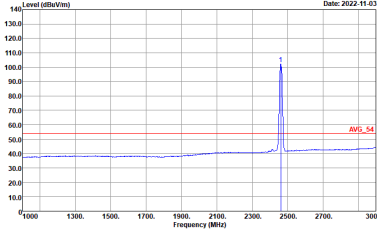
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



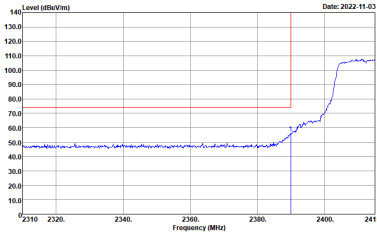
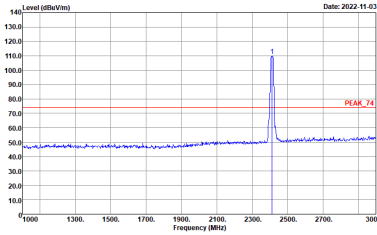
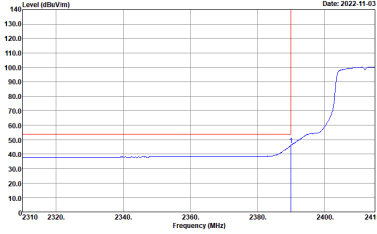
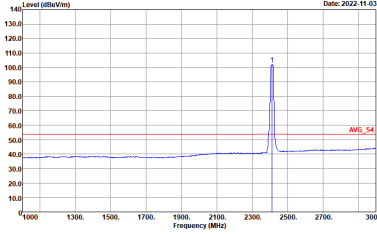
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

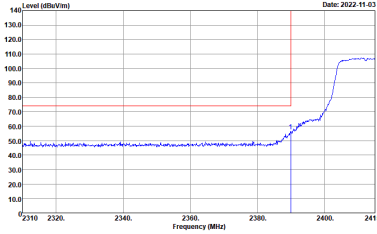
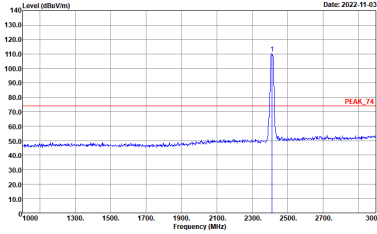
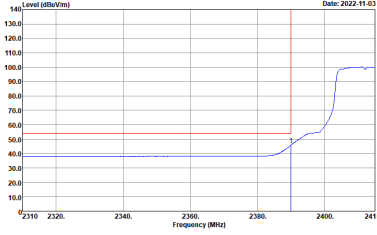
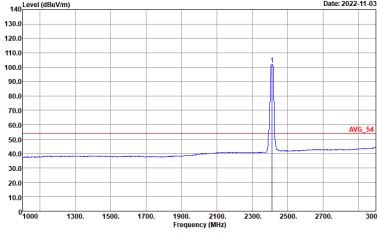
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

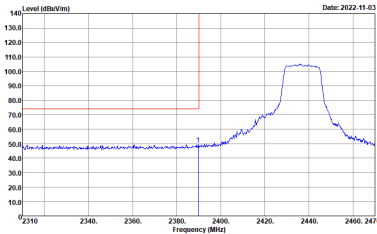
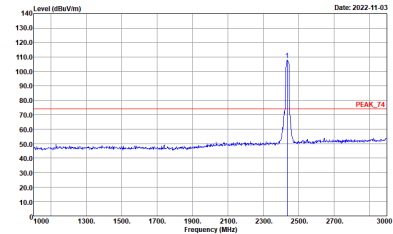
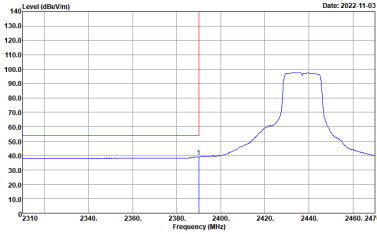
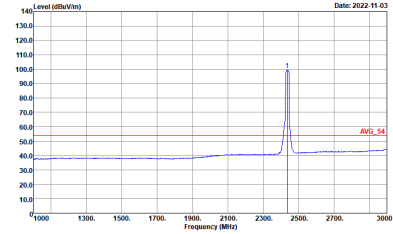


2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

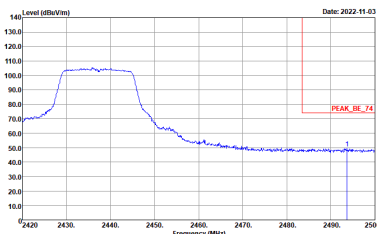
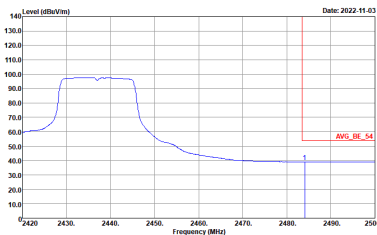
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

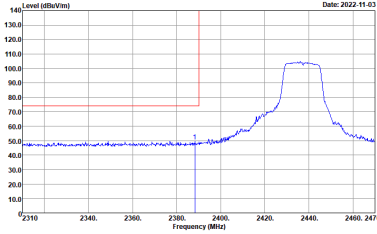
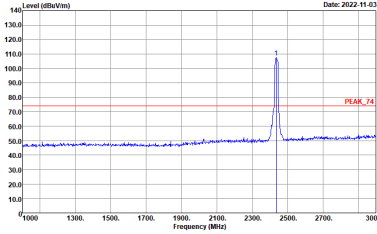
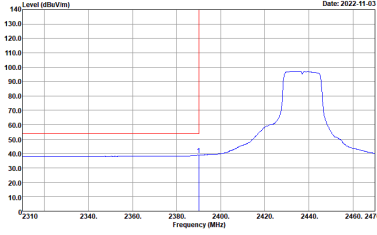
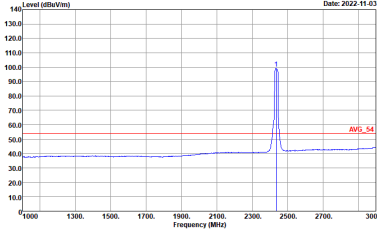
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



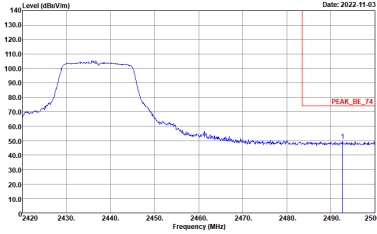
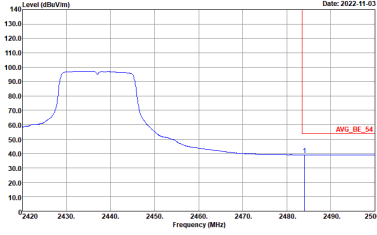
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

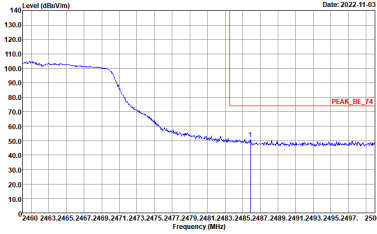
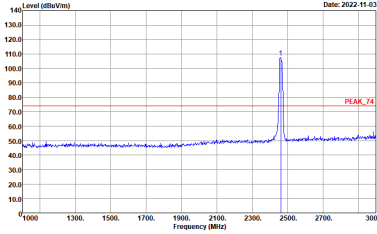
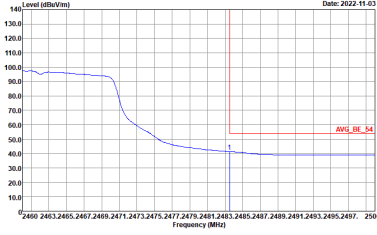
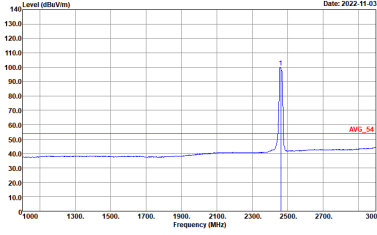


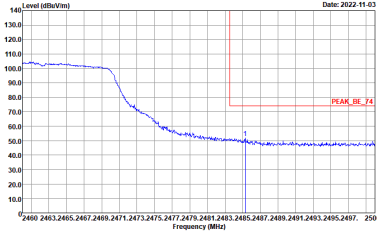
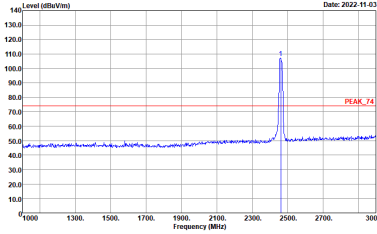
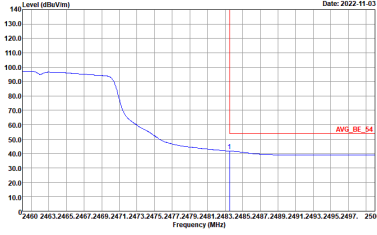
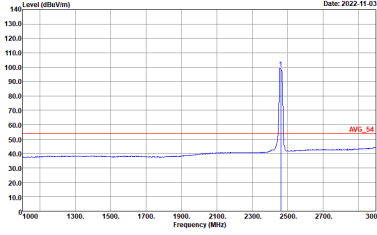
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



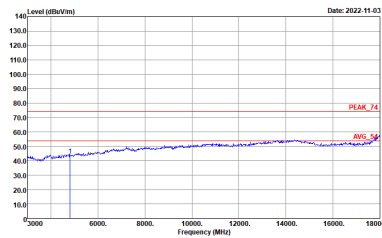
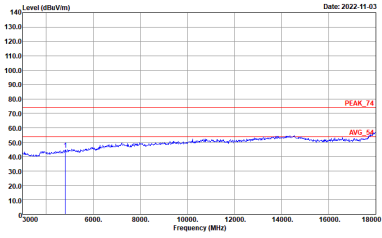
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200-02038_220809 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL

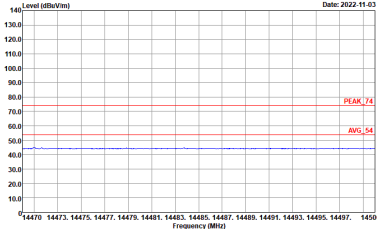
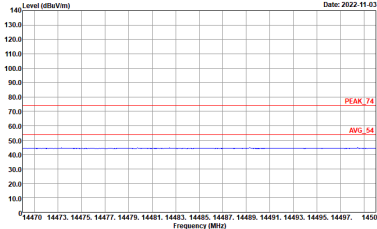
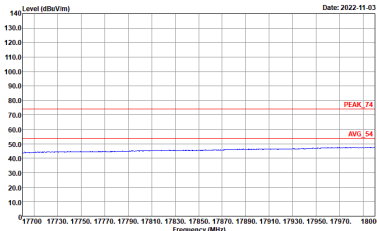
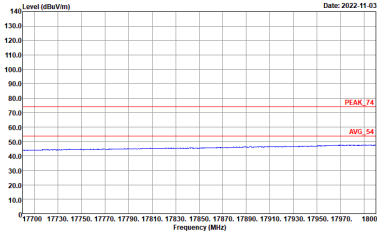


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL

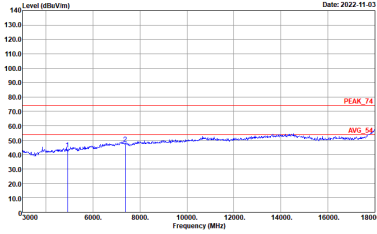
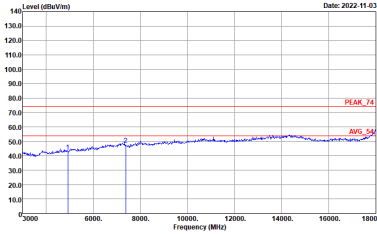


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL

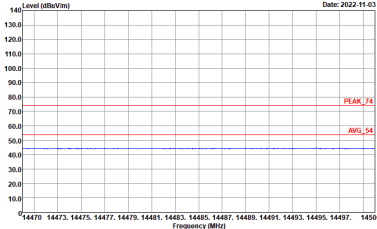
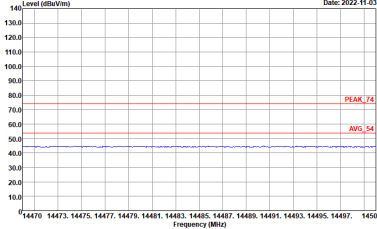
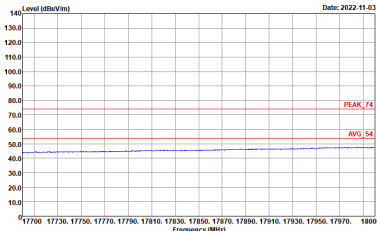
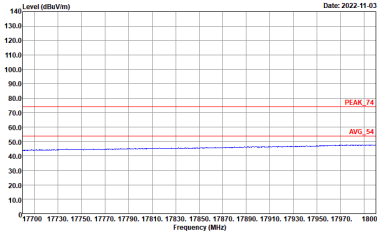


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL
	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



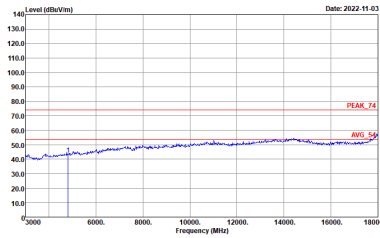
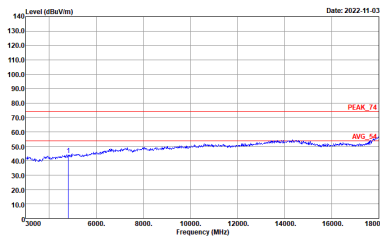
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL
	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Level (dBuV/m) Date: 2022-11-03 Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 HORIZONTAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D-02038_220809 VERTICAL

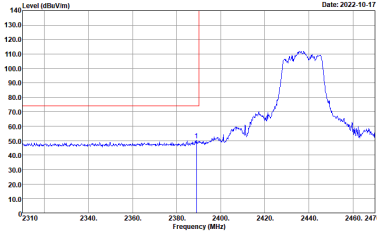
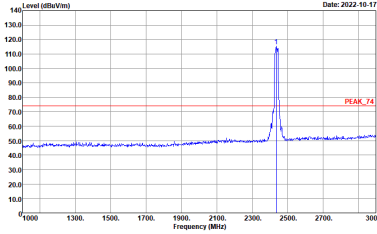
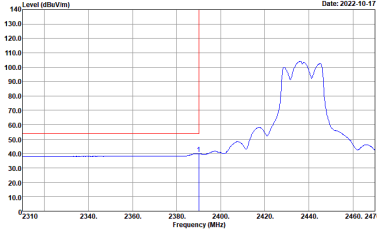
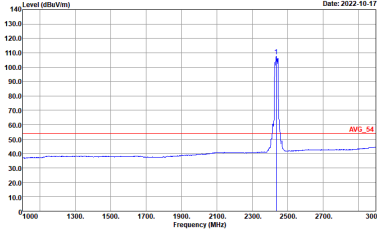


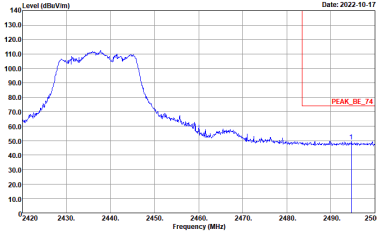
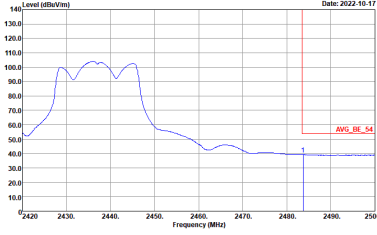
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

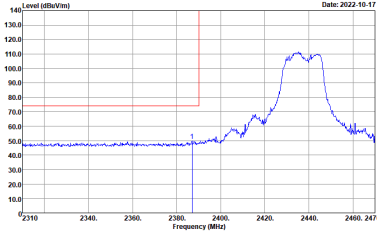
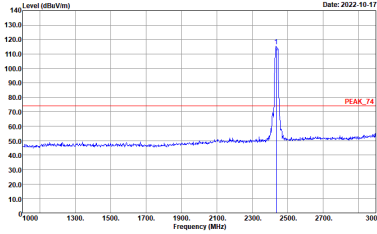
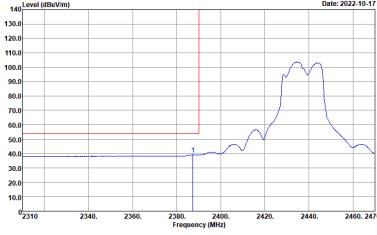
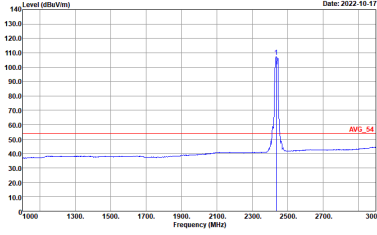
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

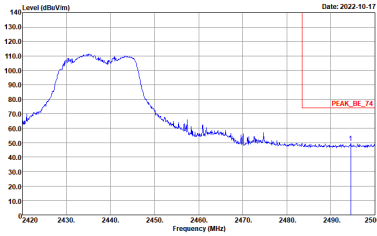
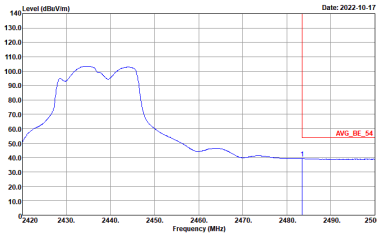


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

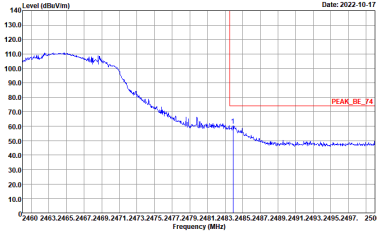
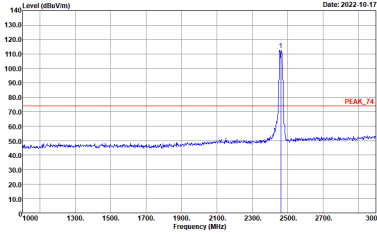
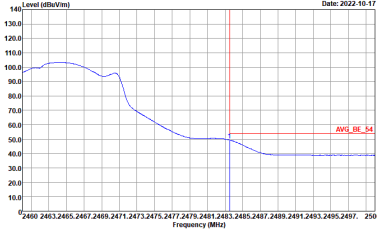
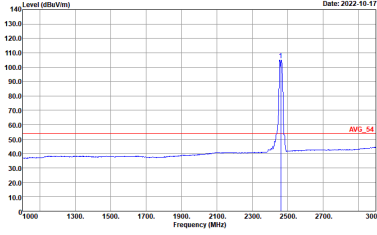
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank

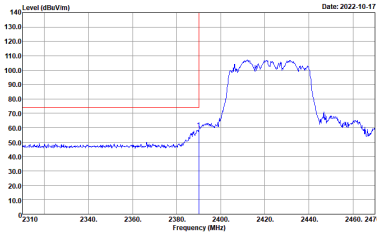
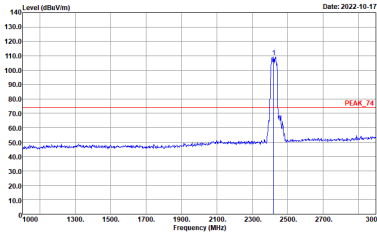
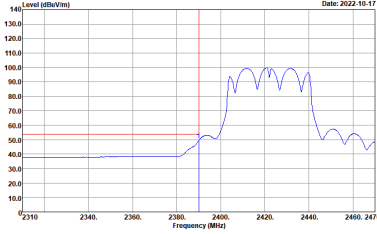
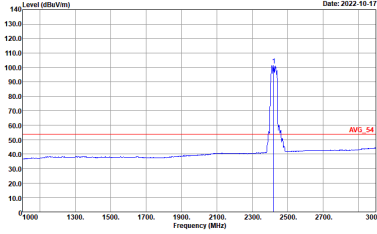


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

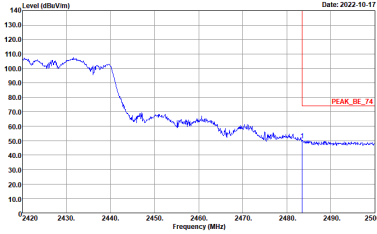
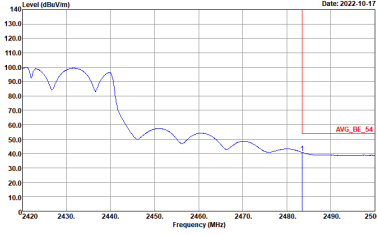
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

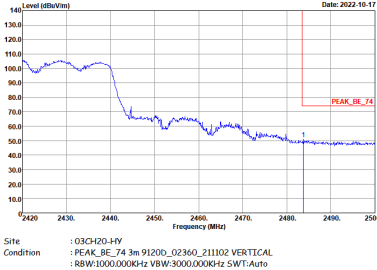
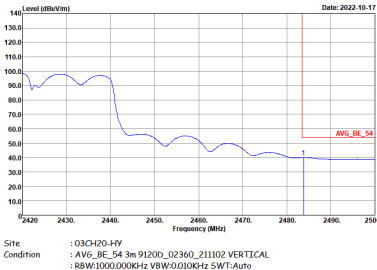


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank

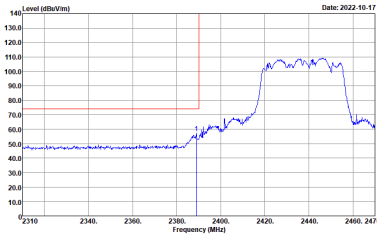
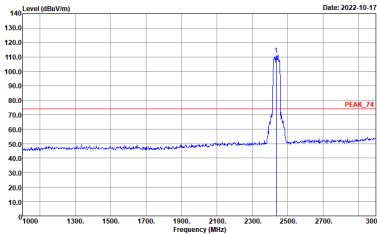
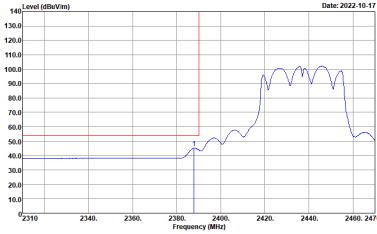
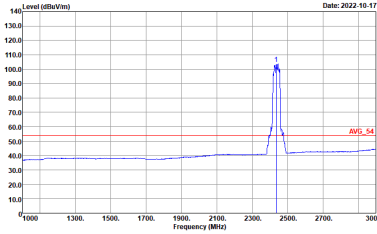


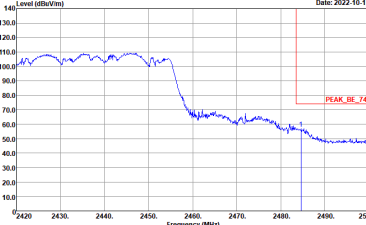
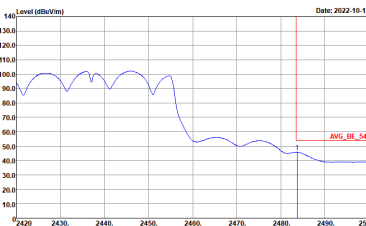
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

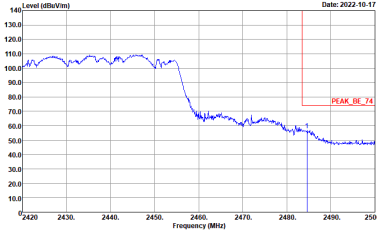
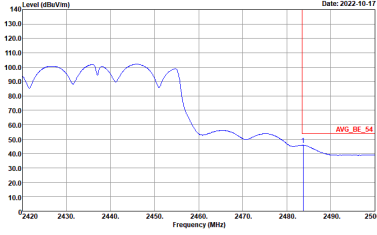


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

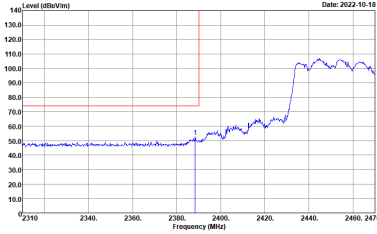
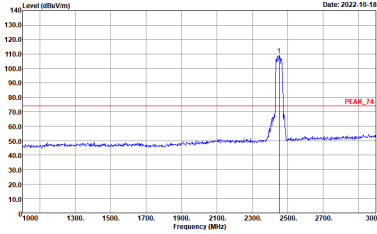
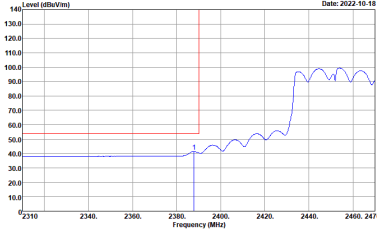
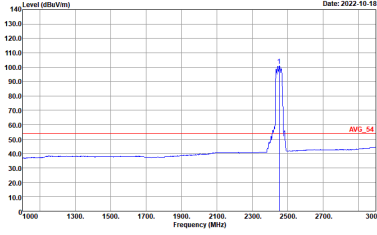


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

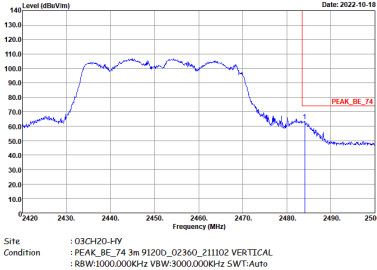
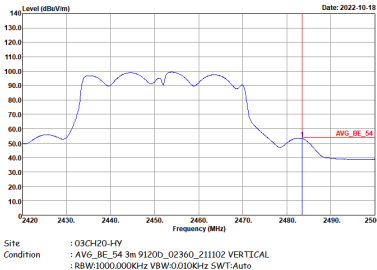


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
0+1	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

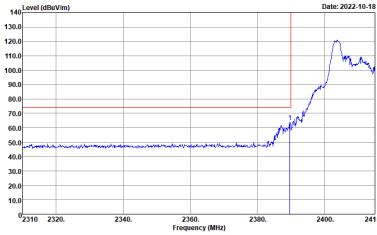
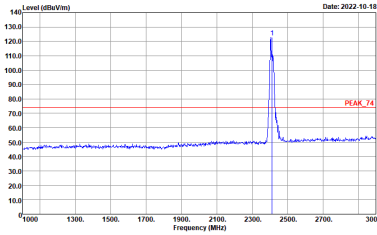
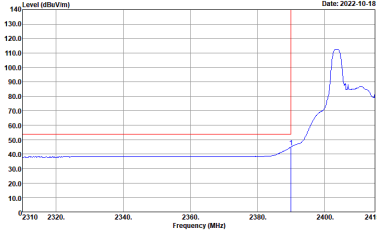
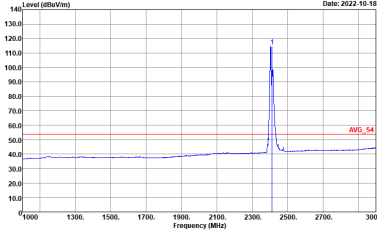


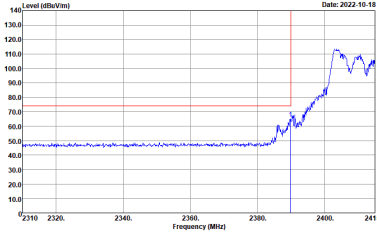
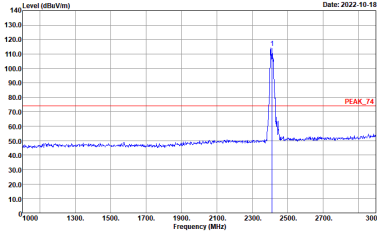
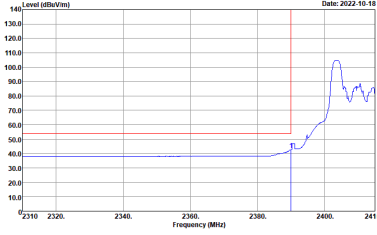
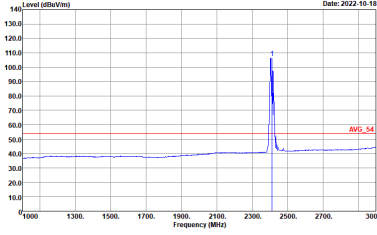
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

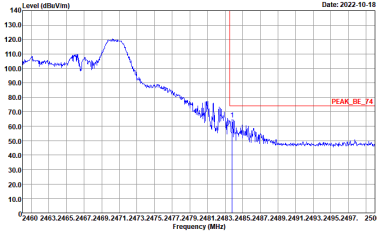
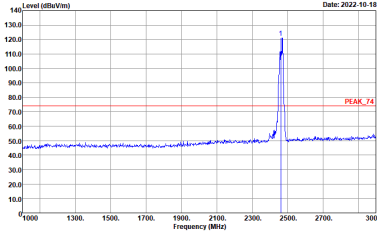
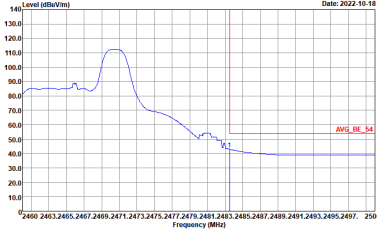
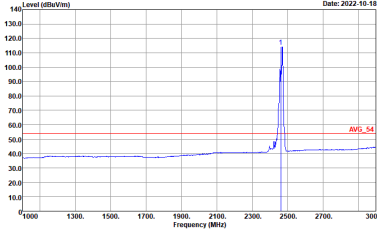


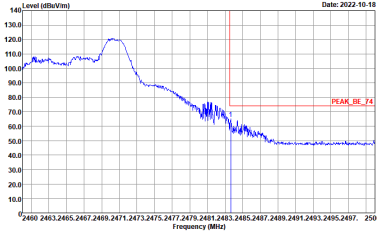
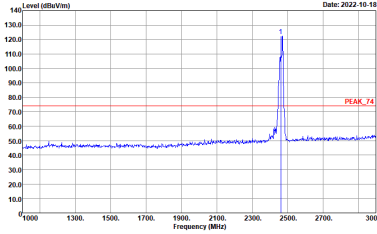
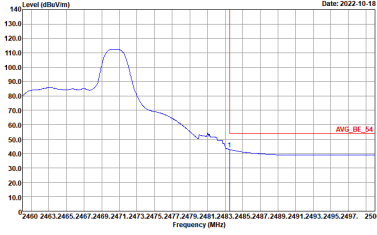
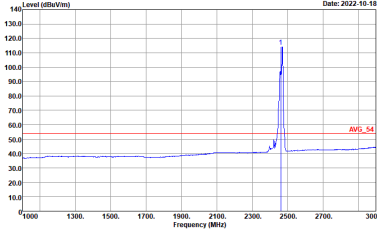
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

**2.4GHz 2400~2483.5MHz****WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

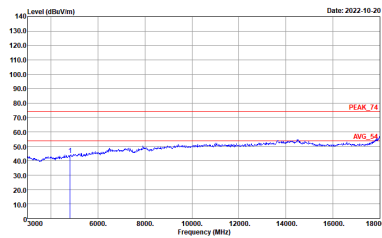
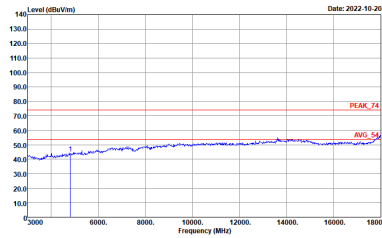
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : AVG_BE_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 91200_02360_211102 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-10-18 Site : 03CH20-HY Condition : PEAK_74 3m 9120d_02360_211102 HORIZONTAL	Level (dBuV/m) Date: 2022-10-18 Site : 03CH20-HY Condition : PEAK_74 3m 9120d_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL



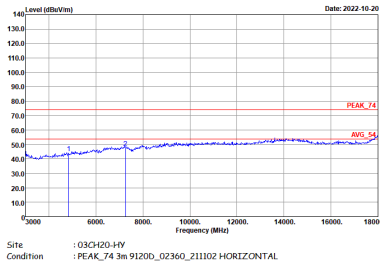
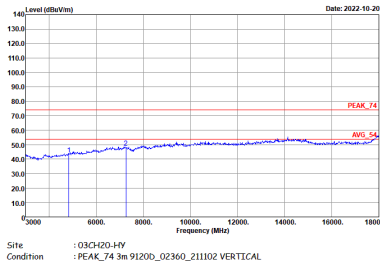
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 VERTICAL
	Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
0+1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL

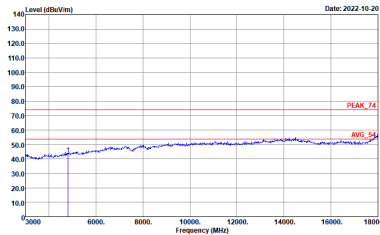
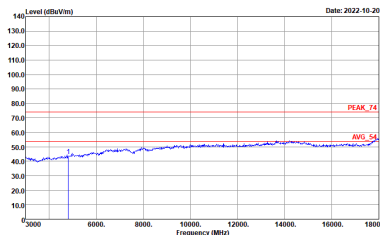


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_211102 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



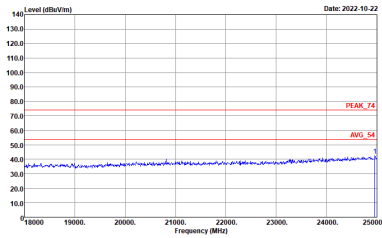
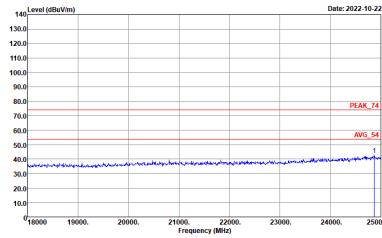
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Level (dBuV/m) Date: 2022-10-20 Site : 03CH20-HV Condition : PEAK_74 3m 91200_02360_211102 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL
	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_211102 VERTICAL

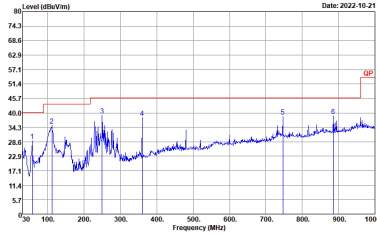
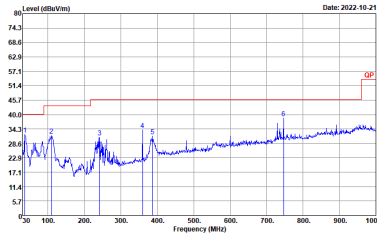


Emission above 18GHz
2.4GHz WIFI 802.11n HT40 (SHF @ 1m)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 SHF	
0+1	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 1m SHF_00994_211104 HORIZONTAL	 Site : 03CH20-HY Condition : PEAK_74 1m SHF_00994_211104 VERTICAL



Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

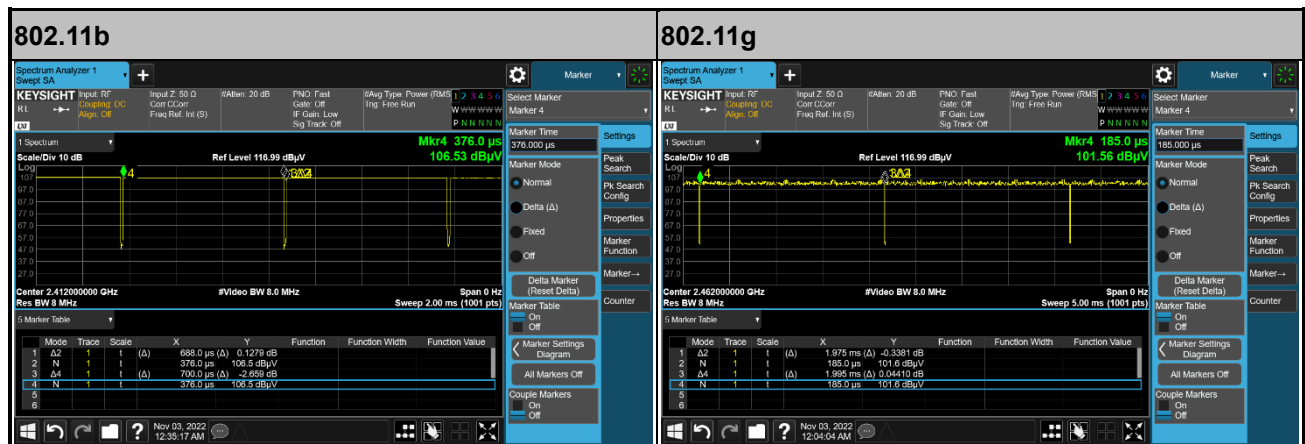
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
0+1	Horizontal	Vertical
QP / Peak	 Site : 03CH20-HY Condition : QP 3m LF_55606608_1101017 HORIZONTAL	 Site : 03CH20-HY Condition : QP 3m LF_55606608_1101017 VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11b	98.29	-	-	10Hz
1	802.11g	99.00	-	-	10Hz
0+1	2.4GHz 802.11n HT20	99.72	-	-	10Hz
0+1	2.4GHz 802.11n HT40	99.63	-	-	10Hz
0+1	2.4GHz 802.11ax HE20 Full RU	99.61	-	-	10Hz

<Ant. 1>





MIMO <Ant. 0+1>

