FCC RADIO TEST REPORT

FCC ID	:	**2AP6E-PROXYEDGE-13**
Equipment	:	**Communication module**
Brand Name	:	**Proxy**
Model Name	:	**Proxy 1LD**
Applicant	:	**Proxy, Inc.** **500 3rd St, San Francisco, CA 94107**
Manufacturer	:	**Wistron NeWeb Corp.** **20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C**
Standard	:	**FCC Part 15 Subpart C §15.247**

The product was received on Oct. 25, 2020 and testing was started from Apr. 01, 2020 and completed on May 09, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications 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 of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR9O2516	01	Initial issue of report	Aug. 19, 2020

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	Under limit 0.68 dB at 4824.000 MHz
-	15.207	AC Conducted Emission	Not Required	-
3.3	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. The module (Model: Proxy 1LD) makes no difference after verifying output power, this report reuses test data from the module report.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Cindy Liu

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth - LE and Wi-Fi 2.4GHz 802.11b/g/n

Product Specification subjective to this standard	
Integrated Host	Brand Name: Proxy Model Name: Mobile Reader Edge
Antenna Type	WLAN: PIFA Antenna Bluetooth – LE: PIFA Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	
	TH05-HY	03CH07-HY

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

FCC designation No.: TW1190

1.4 Applicable Standards

According to the specifications of 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 DTS Meas. Guidance v05r02
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

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: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

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

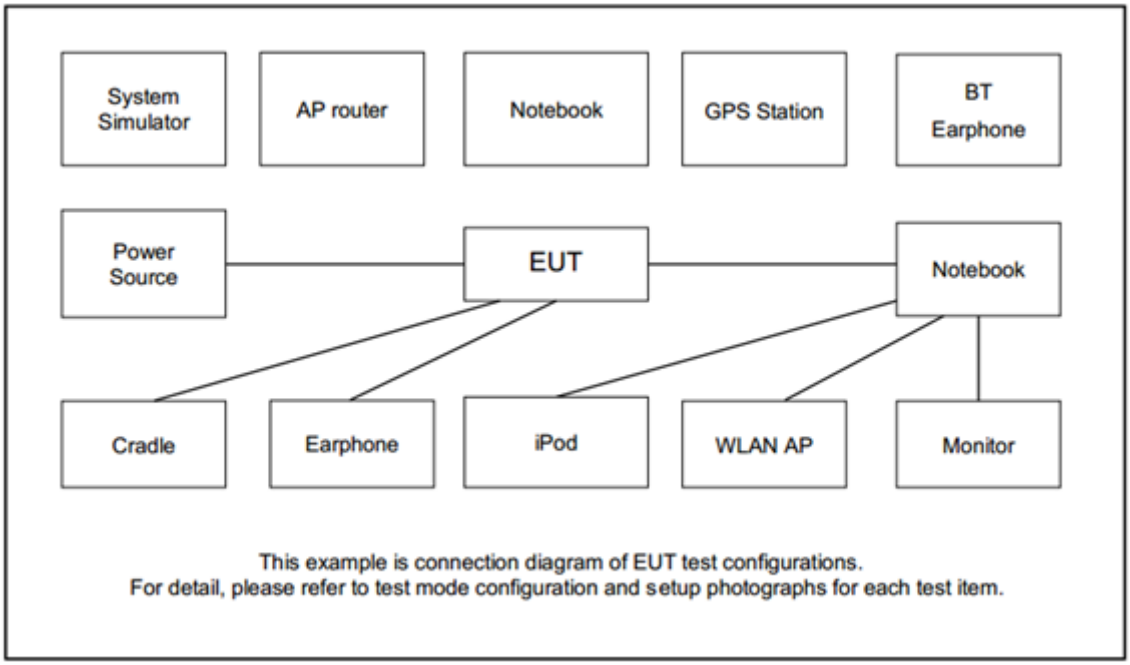
Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11b	**1 Mbps**
802.11g	**6 Mbps**
802.11n HT20	**MCS0**

Ch. #	2400-2483.5 MHz		
	802.11b	802.11g	802.11n HT20
Low	01	01	01
Middle	06	06	06
High	11	11	11

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

2.3 Connection Diagram of Test System



2.4 EUT Operation Test Setup

The RF test items, utility “CMD V6.1.7601” was installed in EUT 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 2400-2483.5MHz, the limit for output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi 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 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

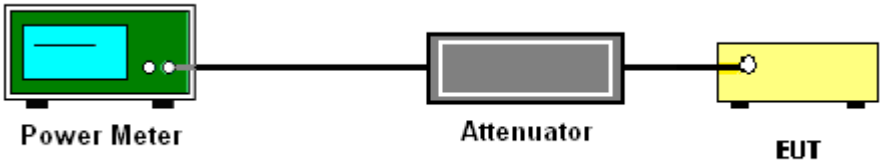
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.3 PKPM1
2. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
3. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.1.6 Test Result of Average Output Power (Reporting Only)

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 was 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

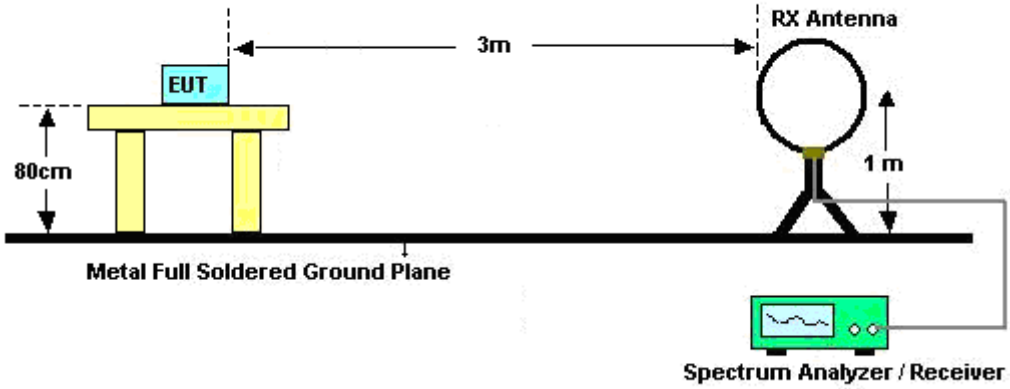
See list of measuring equipment of this test report.

3.2.3 Test Procedures

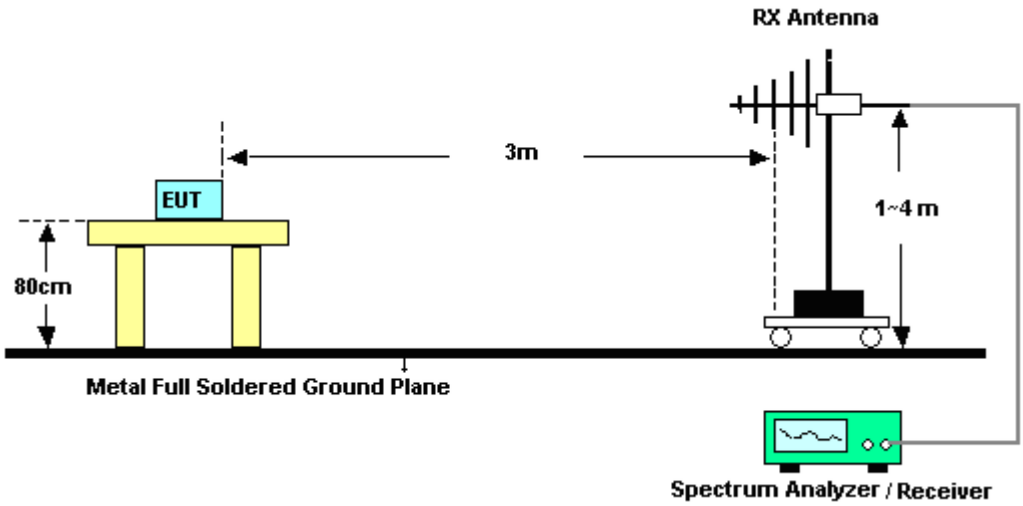
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

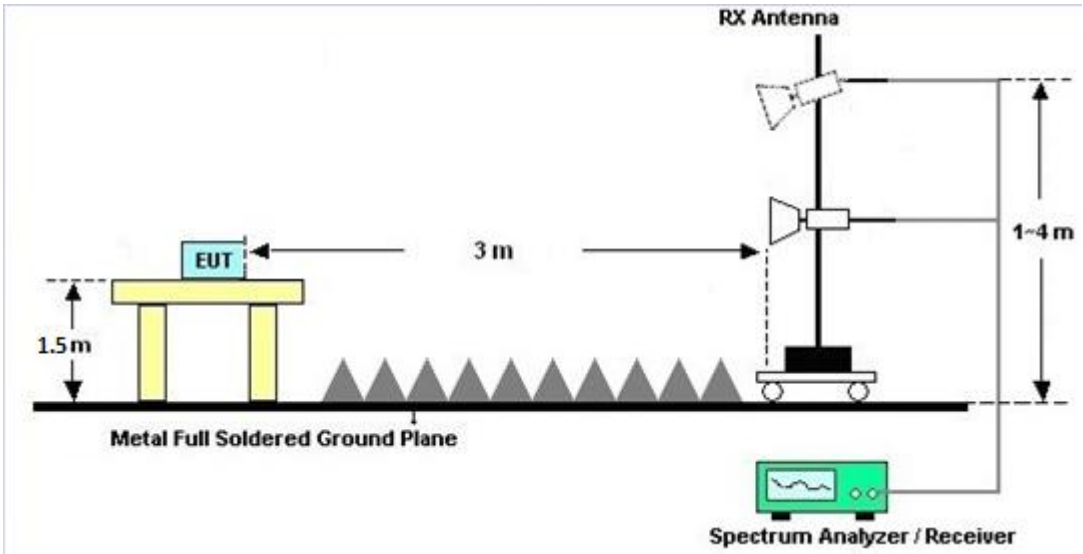
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

3.3 Antenna Requirements

3.3.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H2	41410069	N/A	Jun. 17, 2019	Apr. 13, 2020~ Apr. 21, 2020	Jun. 16, 2020	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 23, 2019	Apr. 13, 2020~ Apr. 21, 2020	Dec. 22, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Aug. 14, 2019	Apr. 13, 2020~ Apr. 21, 2020	Aug. 13, 2020	Conducted (TH05-HY)
Switch Control Manframe	Burgeon	ETF-058	EC1300484	N/A	Aug. 22, 2019	Apr. 13, 2020~ Apr. 21, 2020	Aug. 21, 2020	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 29, 2020	Apr. 29, 2020~ May 09, 2020	Apr. 28, 2021	Radiation (03CH07-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 30, 2019	Apr. 01, 2020~ Apr. 28, 2020	Apr. 29, 2020	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 06, 2019	Apr. 01, 2020~ May 09, 2020	Dec. 05, 2020	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz~26.5GHz	Jan. 18, 2020	Apr. 01, 2020~ May 09, 2020	Jan. 17, 2021	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Dec. 26, 2019	Apr. 01, 2020~ May 09, 2020	Dec. 25, 2020	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz~18GHz	Apr. 23, 2020	Apr. 01, 2020~ May 09, 2020	Apr. 22, 2021	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz~18GHz	Apr. 24, 2019	Apr. 01, 2020~ May 09, 2020	Apr. 23, 2020	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	May 20, 2019	Apr. 01, 2020~ May 09, 2020	May 19, 2020	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Nov. 01, 2019	Apr. 01, 2020~ May 09, 2020	Oct. 31, 2020	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,801606/2	18GHz~40GHz	Feb. 25, 2020	Apr. 01, 2020~ May 09, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9kHz~30MHz	Feb. 25, 2020	Apr. 01, 2020~ May 09, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 25, 2020	Apr. 01, 2020~ May 09, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 25, 2020	Apr. 01, 2020~ May 09, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF780208368	Control Ant Mast	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 28, 2019	Apr. 01, 2020~ May 09, 2020	Oct. 27, 2020	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 26, 2019	Apr. 01, 2020~ May 09, 2020	Nov. 25, 2020	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	N/A	N/A	N/A	Apr. 01, 2020~ May 09, 2020	N/A	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 13, 2019	Apr. 01, 2020~ May 09, 2020	Dec. 12, 2020	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.6

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.2

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

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

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Kai Liao	Temperature:	21~25	°C
Test Date:	2020/4/13 ~2020/4/21	Relative Humidity:	51~54	%

Report Number : FR9O2516

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2
11b	1Mbps	1	1	2412	11.10	-		0.15	-	11.25	-
11b	1Mbps	1	6	2437	11.70	-		0.15	-	11.85	-
11b	1Mbps	1	11	2462	12.20	-		0.15	-	12.35	-
11g	6Mbps	1	1	2412	14.40	-		0.15	-	14.55	-
11g	6Mbps	1	6	2437	16.20	-		0.15	-	16.35	-
11g	6Mbps	1	11	2462	16.90	-		0.15	-	17.05	-
HT20	MCS0	1	1	2412	14.30	-		0.15	-	14.45	-
HT20	MCS0	1	6	2437	16.80	-		0.15	-	16.95	-
HT20	MCS0	1	11	2462	16.70	-		0.15	-	16.85	-

Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh and Ken Wu	Temperature :	21 ~ 22°C
		Relative Humidity :	50 ~ 51%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2332.47	53.97	-20.03	74	39.43	31.87	17.87	35.2	100	239	P	H
		2387.07	43.03	-10.97	54	28.48	31.8	17.98	35.23	100	239	A	H
	*	2412	93.35	-	-	78.71	31.87	18.02	35.25	100	239	P	H
	*	2412	90.18	-	-	75.54	31.87	18.02	35.25	100	239	A	H
													H
		2336.46	54.23	-19.77	74	39.65	31.9	17.88	35.2	154	312	P	V
		2387.175	43.07	-10.93	54	28.52	31.8	17.98	35.23	154	312	A	V
	*	2412	95.88	-	-	81.24	31.87	18.02	35.25	154	312	P	V
	*	2412	92.66	-	-	78.02	31.87	18.02	35.25	154	312	A	V
													V
802.11b CH 11 2462MHz	*	2462	94.43	-	-	79.59	32.03	18.09	35.28	168	136	P	H
	*	2462	91.25	-	-	76.41	32.03	18.09	35.28	168	136	A	H
		2487.4	53.66	-20.34	74	38.75	32.07	18.13	35.29	168	136	P	H
		2488	43.49	-10.51	54	28.55	32.1	18.13	35.29	168	136	A	H
													H
	*	2462	95.82	-	-	80.98	32.03	18.09	35.28	138	36	P	V
	*	2462	92.69	-	-	77.85	32.03	18.09	35.28	138	36	A	V
		2499.8	53.72	-20.28	74	38.78	32.1	18.14	35.3	138	36	P	V
		2487.84	43.59	-10.41	54	28.65	32.1	18.13	35.29	138	36	A	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	53.02	-20.98	74	65.98	34.05	12.02	59.03	260	122	P	H
		4824	51.07	-2.93	54	64.03	34.05	12.02	59.03	260	122	A	H
													H
													H
		4824	54.55	-19.45	74	67.51	34.05	12.02	59.03	395	162	P	V
		4824	52.76	-1.24	54	65.72	34.05	12.02	59.03	395	162	A	V
													V
													V
802.11b CH 06 2437MHz		4874	54.03	-19.97	74	66.7	34.1	12.15	58.92	237	229	P	H
		4874	52.83	-1.17	54	65.5	34.1	12.15	58.92	237	229	A	H
		7311	41.62	-32.38	74	49.74	35.6	14.58	58.3	100	0	P	H
													H
		4874	54.53	-19.47	74	67.2	34.1	12.15	58.92	387	158	P	V
		4874	53.23	-0.77	54	65.9	34.1	12.15	58.92	387	158	A	V
		7311	41.94	-32.06	74	50.06	35.6	14.58	58.3	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	54.24	-19.76	74	66.55	34.23	12.27	58.81	236	224	P	H
		4924	53	-1	54	65.31	34.23	12.27	58.81	236	224	A	H
		7386	43.73	-30.27	74	51.03	35.6	14.64	57.54	100	0	P	H
													H
		4924	54.41	-19.59	74	66.72	34.23	12.27	58.81	381	159	P	V
		4924	53.09	-0.91	54	65.4	34.23	12.27	58.81	381	159	A	V
		7386	39.55	-34.45	74	46.85	35.6	14.64	57.54	100	0	P	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 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2390	55.34	-18.66	74	40.79	31.8	17.98	35.23	100	239	P	H
		2390	44.47	-9.53	54	29.92	31.8	17.98	35.23	100	239	A	H
	*	2412	97.82	-	-	83.18	31.87	18.02	35.25	100	239	P	H
	*	2412	90.24	-	-	75.6	31.87	18.02	35.25	100	239	A	H
													H
													H
		2386.86	54.45	-19.55	74	39.9	31.8	17.98	35.23	155	312	P	V
		2389.905	44.49	-9.51	54	29.94	31.8	17.98	35.23	155	312	A	V
	*	2412	100.66	-	-	86.02	31.87	18.02	35.25	155	312	P	V
	*	2412	92.74	-	-	78.1	31.87	18.02	35.25	155	312	A	V
													V
													V
802.11g CH 11 2462MHz	*	2462	101.91	-	-	87.07	32.03	18.09	35.28	100	317	P	H
	*	2462	93.06	-	-	78.22	32.03	18.09	35.28	100	317	A	H
		2483.6	60.14	-13.86	74	45.24	32.07	18.12	35.29	100	317	P	H
		2483.52	48.64	-5.36	54	33.74	32.07	18.12	35.29	100	317	A	H
													H
													H
	*	2462	103.49	-	-	88.65	32.03	18.09	35.28	139	323	P	V
	*	2462	95.85	-	-	81.01	32.03	18.09	35.28	139	323	A	V
		2484.44	60.94	-13.06	74	46.04	32.07	18.12	35.29	139	323	P	V
		2483.56	48.08	-5.92	54	33.18	32.07	18.12	35.29	139	323	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)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	64.86	-9.14	74	77.82	34.05	12.02	59.03	265	204	P	H
		4824	51.81	-2.19	54	64.77	34.05	12.02	59.03	265	204	A	H
													H
													H
		4824	65.05	-8.95	74	78.01	34.05	12.02	59.03	100	199	P	V
		4824	52.35	-1.65	54	65.31	34.05	12.02	59.03	100	199	A	V
													V
													V
802.11g CH 06 2437MHz		4874	65.03	-8.97	74	77.7	34.1	12.15	58.92	291	205	P	H
		4874	52.93	-1.07	54	65.6	34.1	12.15	58.92	291	205	A	H
		7311	49.81	-24.19	74	57.93	35.6	14.58	58.3	100	0	P	H
													H
		4874	63.08	-10.92	74	75.75	34.1	12.15	58.92	100	200	P	V
		4874	53.23	-0.77	54	65.9	34.1	12.15	58.92	100	200	A	V
		7311	54.84	-19.16	74	62.96	35.6	14.58	58.3	100	108	P	V
													V
802.11g CH 11 2462MHz		4924	62.8	-11.2	74	75.11	34.23	12.27	58.81	357	106	P	H
		4924	51.2	-2.8	54	63.51	34.23	12.27	58.81	357	106	A	H
		7386	49.54	-24.46	74	57.66	35.6	14.63	58.35	100	0	P	H
													H
		4924	63.95	-10.05	74	76.26	34.23	12.27	58.81	100	163	P	V
		4924	53.32	-0.68	54	65.63	34.23	12.27	58.81	100	163	A	V
		7386	51.28	-22.72	74	59.4	35.6	14.63	58.35	100	124	P	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 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.8	55.07	-18.93	74	40.52	31.8	17.98	35.23	100	240	P	H
		2390	45.41	-8.59	54	30.86	31.8	17.98	35.23	100	240	A	H
	*	2412	98	-	-	83.36	31.87	18.02	35.25	100	240	P	H
	*	2412	90.48	-	-	75.84	31.87	18.02	35.25	100	240	A	H
													H
													H
		2388.75	54.63	-19.37	74	40.08	31.8	17.98	35.23	154	310	P	V
		2389.905	44.95	-9.05	54	30.4	31.8	17.98	35.23	154	310	A	V
	*	2412	100.37	-	-	85.73	31.87	18.02	35.25	154	310	P	V
	*	2412	92.8	-	-	78.16	31.87	18.02	35.25	154	310	A	V
													V
													V
802.11n HT20 CH 11 2462MHz	*	2462	100.94	-	-	86.1	32.03	18.09	35.28	100	317	P	H
	*	2462	93.06	-	-	78.22	32.03	18.09	35.28	100	317	A	H
		2483.92	63.45	-10.55	74	48.55	32.07	18.12	35.29	100	317	P	H
		2483.52	49.36	-4.64	54	34.46	32.07	18.12	35.29	100	317	A	H
													H
													H
	*	2462	103.29	-	-	88.45	32.03	18.09	35.28	138	323	P	V
	*	2462	95.89	-	-	81.05	32.03	18.09	35.28	138	323	A	V
		2484.08	61.4	-12.6	74	46.5	32.07	18.12	35.29	138	323	P	V
		2483.52	48.91	-5.09	54	34.01	32.07	18.12	35.29	138	323	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. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	67.37	-6.63	74	80.33	34.05	12.02	59.03	100	190	P	H
		4824	52.58	-1.42	54	65.54	34.05	12.02	59.03	100	190	A	H
													H
													H
		4824	67.99	-6.01	74	80.95	34.05	12.02	59.03	100	199	P	V
		4824	53.32	-0.68	54	66.28	34.05	12.02	59.03	100	199	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	66.29	-7.71	74	78.89	34.1	12.06	58.76	304	201	P	H
		4874	51.96	-2.04	54	64.56	34.1	12.06	58.76	304	201	A	H
		7311	55.19	-18.81	74	62.48	35.6	14.58	57.47	346	158	P	H
		7311	41.49	-12.51	54	48.78	35.6	14.58	57.47	346	158	A	H
		4874	63.59	-10.41	74	76.19	34.1	12.06	58.76	100	210	P	V
		4874	52.67	-1.33	54	65.27	34.1	12.06	58.76	100	210	A	V
		7311	58.71	-15.29	74	66	35.6	14.58	57.47	100	182	P	V
		7311	43.53	-10.47	54	50.82	35.6	14.58	57.47	100	182	A	V
802.11n HT20 CH 11 2462MHz		4924	60.29	-13.71	74	72.57	34.23	12.13	58.64	335	109	P	H
		4924	50.17	-3.83	54	62.45	34.23	12.13	58.64	335	109	A	H
		7386	47.13	-26.87	74	54.43	35.6	14.64	57.54	100	0	P	H
													H
		4924	62.27	-11.73	74	74.55	34.23	12.13	58.64	242	153	P	V
		4924	51.78	-2.22	54	64.06	34.23	12.13	58.64	242	153	A	V
		7386	49.27	-24.73	74	56.57	35.6	14.64	57.54	100	0	P	V
													V

Remark

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

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11n HT20 LF		30	31	-9	40	35.72	24.32	0.94	29.98	-	-	P	H
		93.45	33.56	-9.94	43.5	46.75	15.08	1.72	29.99	-	-	P	H
		120.99	35.53	-7.97	43.5	46.07	17.43	1.99	29.96	100	0	P	H
		785.1	30.84	-15.16	46	27.37	27.81	4.99	29.33	-	-	P	H
		860.7	32.49	-13.51	46	27.43	28.9	5.23	29.07	-	-	P	H
		950.3	34.01	-11.99	46	26.73	30.26	5.58	28.56	-	-	P	H
													H
													H
													H
													H
													H
													H
		30.54	30.19	-9.81	40	35.1	24.12	0.95	29.98	-	-	P	V
		41.34	32.42	-7.58	40	42.87	18.44	1.1	29.99	-	-	P	V
		121.53	35.95	-7.55	43.5	46.49	17.43	1.99	29.96	100	0	P	V
		783.7	32.39	-13.61	46	28.93	27.81	4.98	29.33	-	-	P	V
		855.8	32.1	-13.9	46	27.12	28.85	5.22	29.09	-	-	P	V
		952.4	33.98	-12.02	46	26.57	30.37	5.59	28.55	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix C. Radiated Spurious Emission Plots

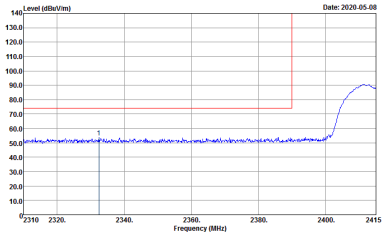
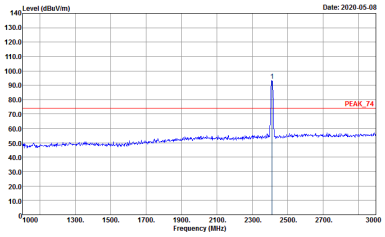
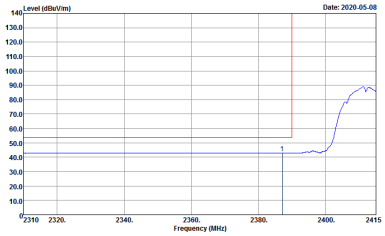
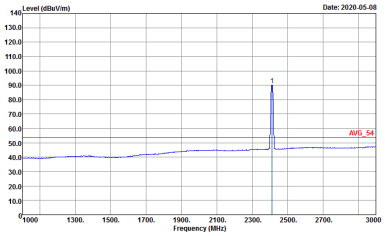
Test Engineer :	Jesse Wang, Stan Hsieh and Ken Wu	**Temperature :**	21 ~ 22°C
		Relative Humidity :	50 ~ 51%

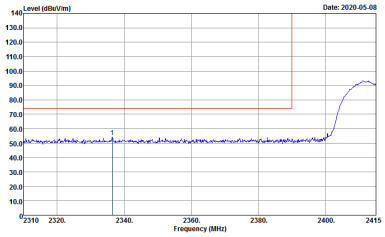
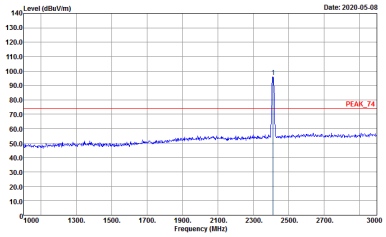
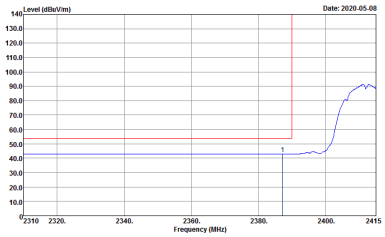
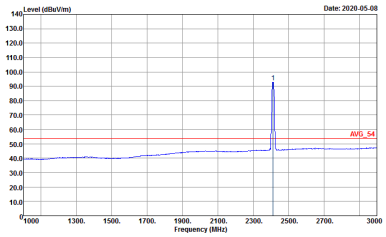
Note symbol

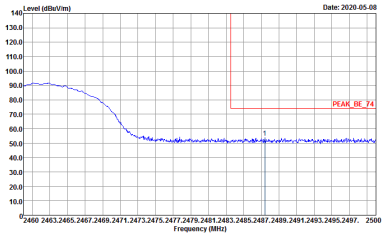
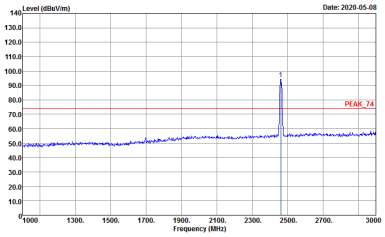
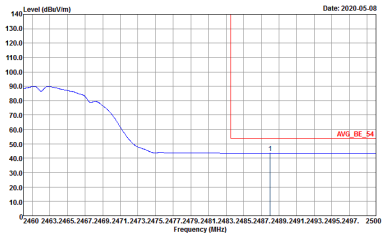
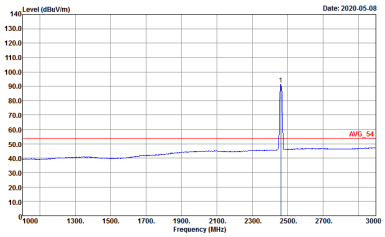
-L	**Low channel location**
-R	**High channel location**

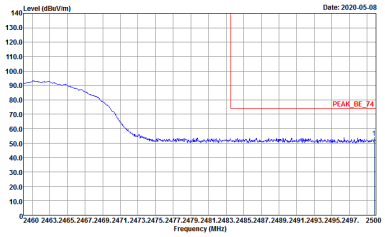
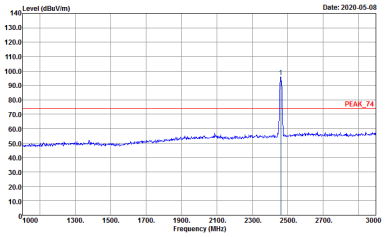
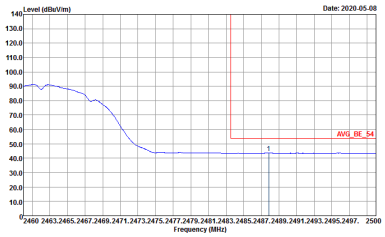
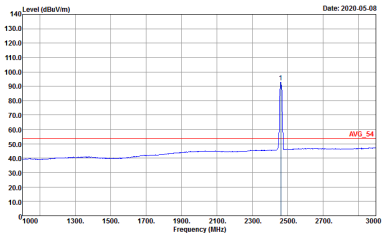
2.4GHz 2400~2483.5MHz

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 : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40

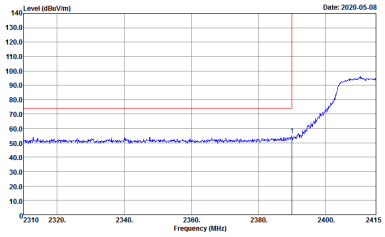
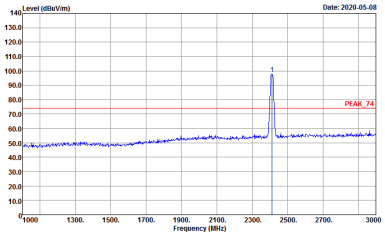
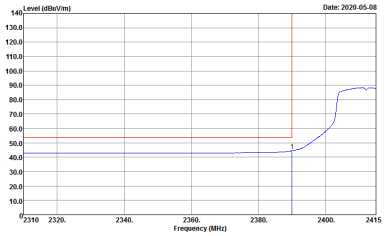
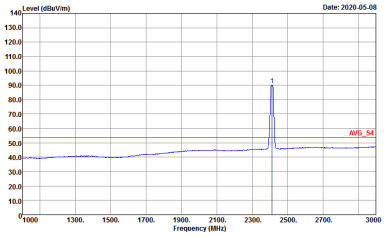
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW.:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 4 Setting : 40

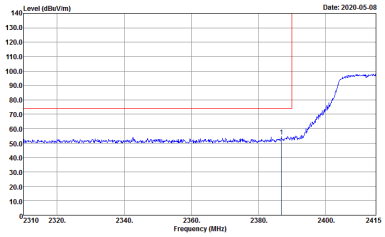
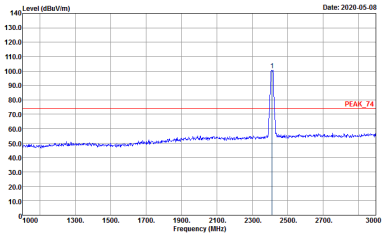
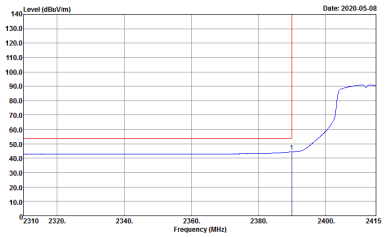
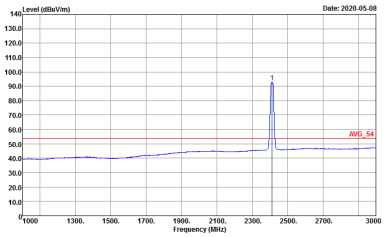
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44

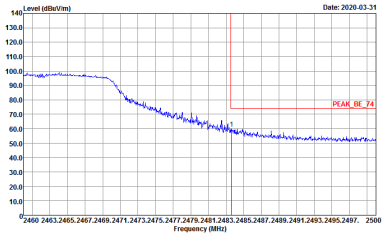
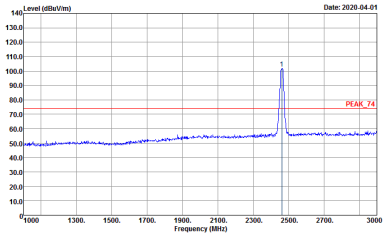
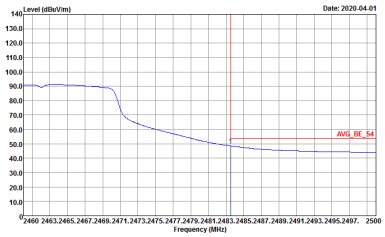
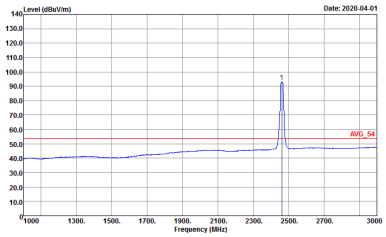
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW.:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 6 Setting : 44

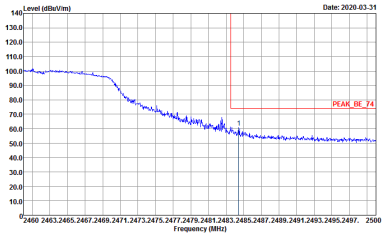
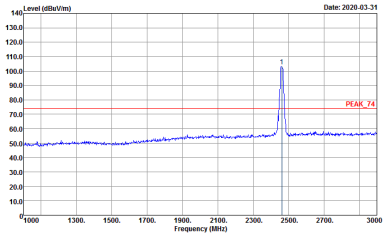
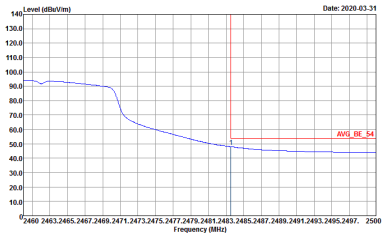
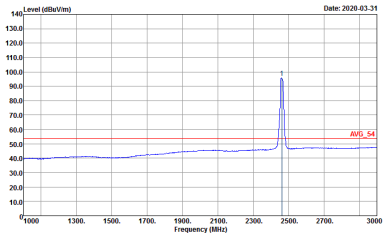
2.4GHz 2400~2483.5MHz

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 : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52

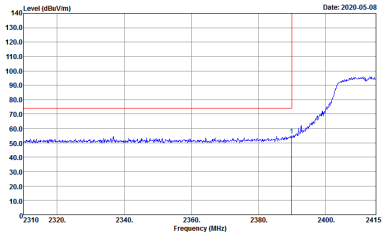
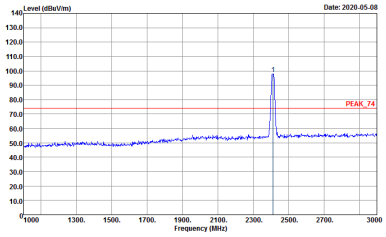
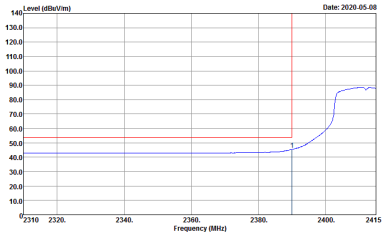
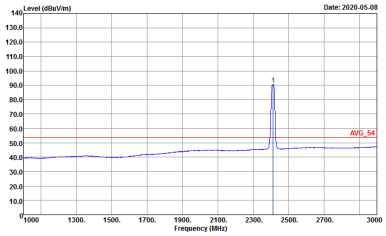
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW.:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 7 Setting : 52

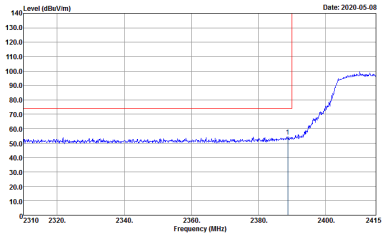
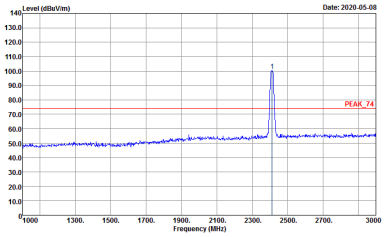
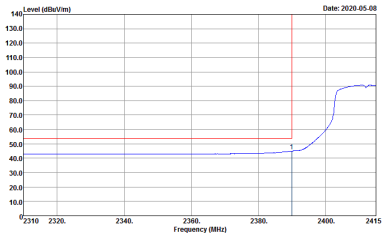
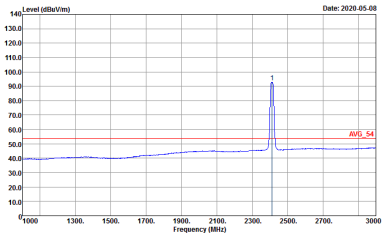
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9

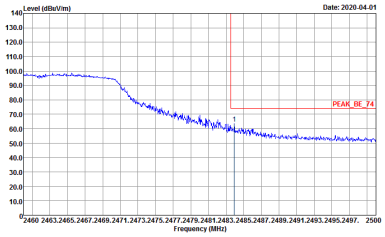
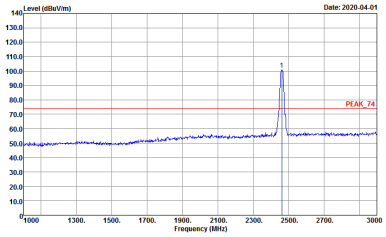
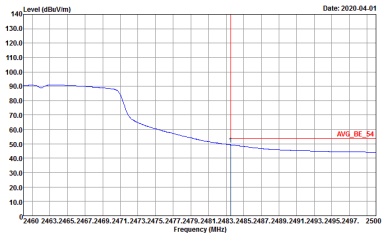
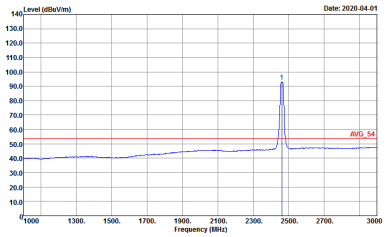
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 9

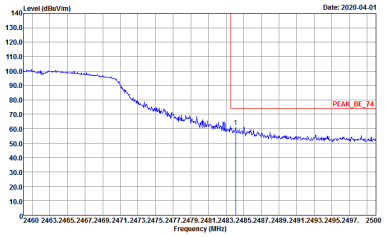
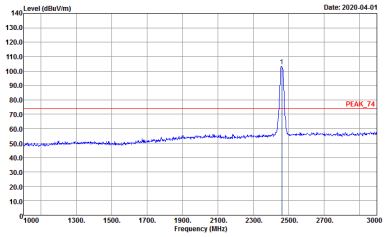
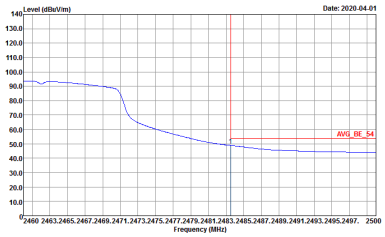
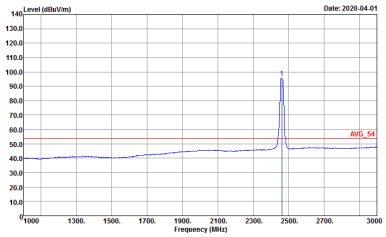
2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54

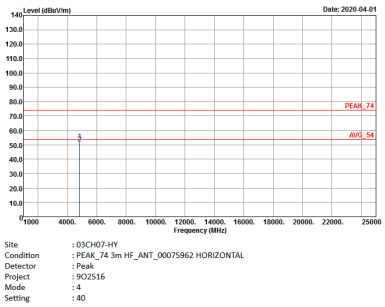
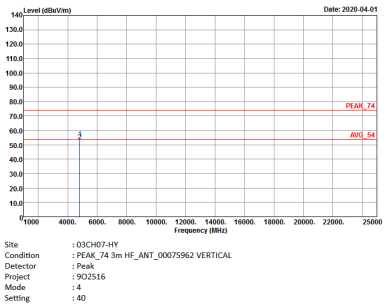
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW.:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 10 Setting : 54

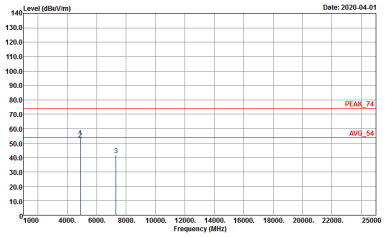
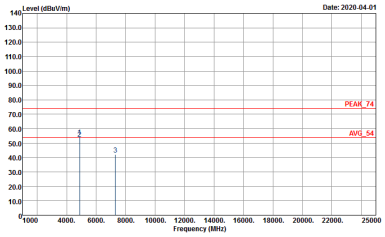
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12

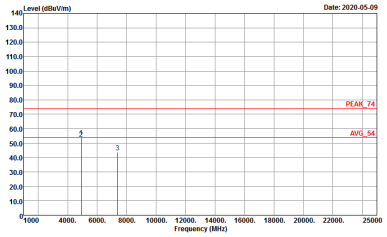
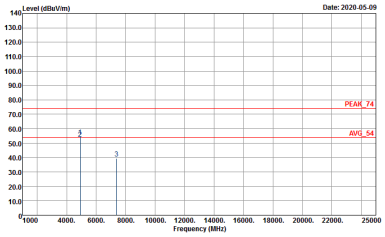
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW.:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 9O2516 Mode : 12

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

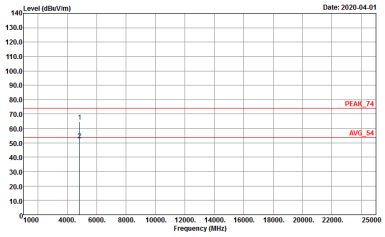
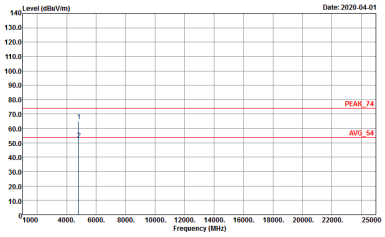
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

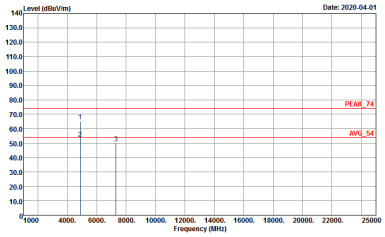
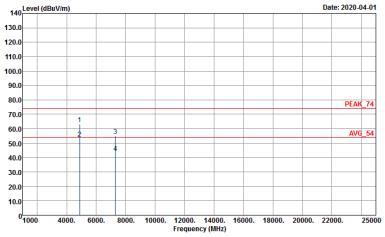
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 5 Setting : 42	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 5 Setting : 42

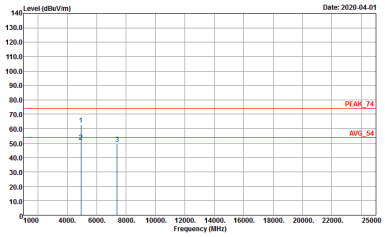
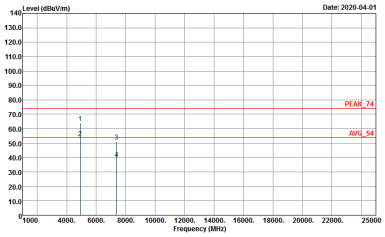
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 6 Setting : 44	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 6 Setting : 44

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

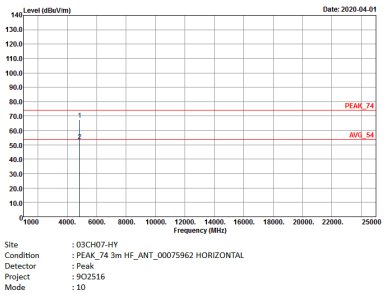
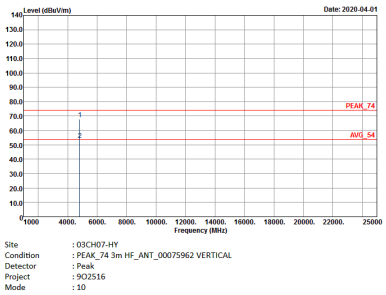
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 7 Setting : 52	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 7 Setting : 52

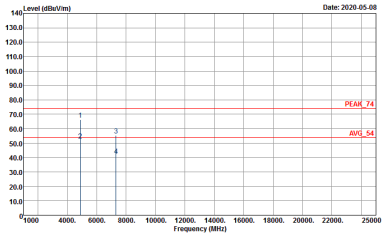
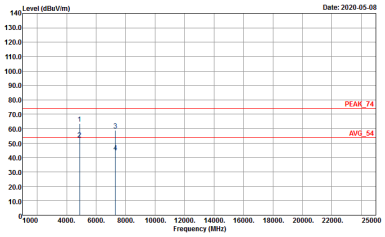
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 8 Setting : 62	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 8 Setting : 62

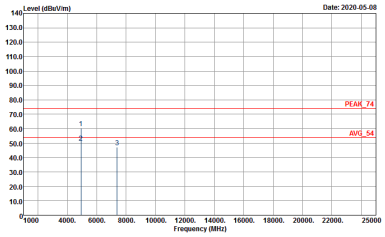
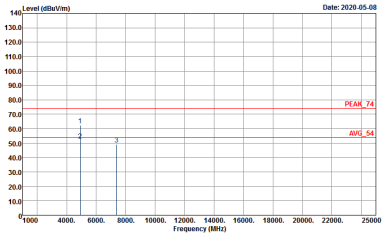
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 9 Setting : 66	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 9 Setting : 66

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

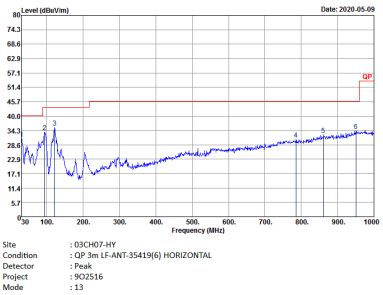
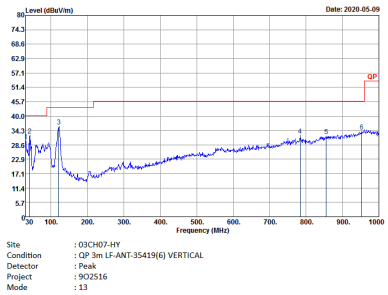
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 11 Setting : 66	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 11 Setting : 66

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 9O2516 Mode : 12 Setting : 66	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 9O2516 Mode : 12 Setting : 66

Emission below 1GHz

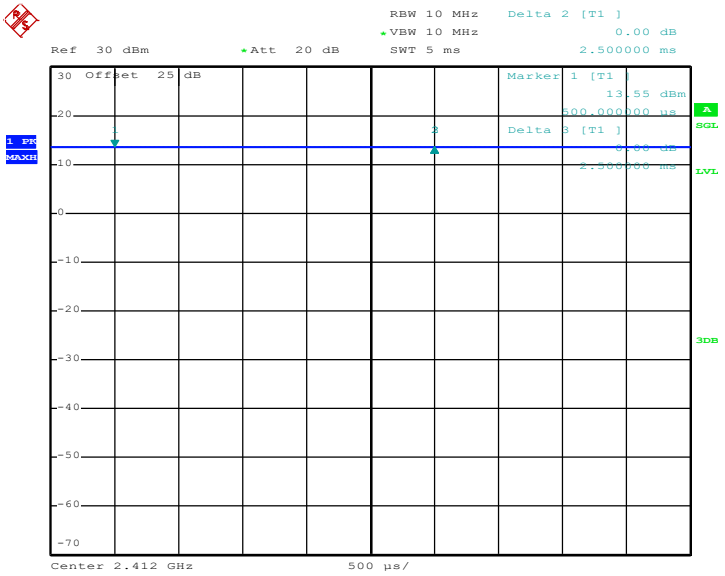
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak		

Appendix D. Duty Cycle Plots

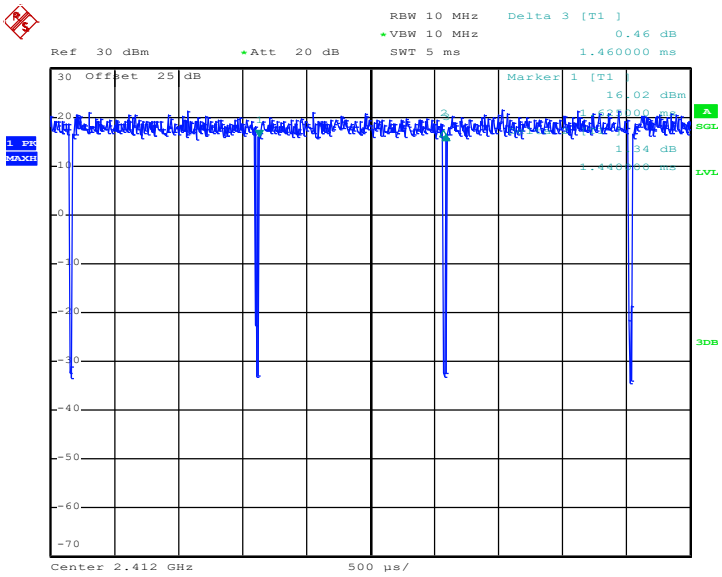
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11b	100.00	-	-	10Hz	0.00
802.11g	98.63	-	-	10Hz	0.06
2.4GHz 802.11n HT20	98.53	-	-	10Hz	0.06

802.11b



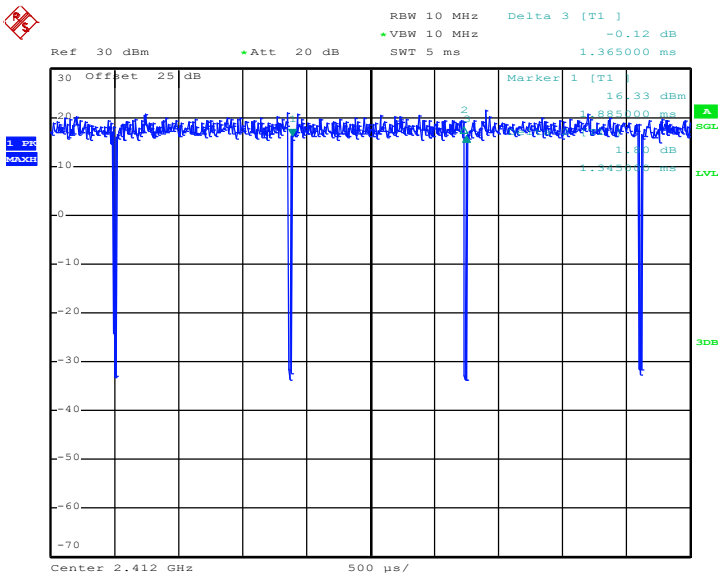
Date: 21.APR.2020 20:21:44

802.11g



Date: 21.APR.2020 20:18:09

802.11n HT20



Date: 21.APR.2020 20:14:35