



FCC CO-LOCATION RADIO TEST REPORT

FCC ID : A4RG020D
Equipment : Smartphone
Model Name : G020D
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, CA 94043, USA
Standard : FCC Part 15 Subpart E §15.407

The product was completed on Dec. 27, 2018. We, SPORTON INTERNATIONAL INC., 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this 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.

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	6
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Carrier Frequency and Channel	7
2.2 Test Mode.....	7
2.3 Connection Diagram of Test System.....	8
2.4 EUT Operation Test Setup	8
3 Test Result	9
3.1 Unwanted Emissions Measurement.....	9
3.2 Antenna Requirements.....	13
4 List of Measuring Equipment.....	14
5 Uncertainty of Evaluation	15
Appendix A. Radiated Spurious Emission	
Appendix B. Radiated Spurious Emission Plots	
Appendix C. Duty Cycle Plots	



History of this test report

Report No.	Version	Description	Issued Date
FR891147-01G	01	Initial issue of report	Jan. 07, 2019
FR891147-01G	02	Revising the description.	Jan. 28, 2019



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(b)	Unwanted Emissions	Pass	Under limit 1.61 dB at 5350.800 MHz
3.2	15.203 15.407(a)	Antenna Requirement	Pass	-

Reviewed by: Wii Chang

Report Producer: Natasha Hsieh



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Model Name	G020D
Sample 1	The device with 1st battery
Sample 2	The device with 2nd battery
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC/GNSS WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
EUT Stage	Identical Prototype

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

1.2 Modification of EUT

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

1.3 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH12-HY

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

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 E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X Plane for WLAN 5GHz Ant.1 and WLAN 5GHz MIMO Ant.1+2, Y Plane for WLAN 2.4GHz Ant.1 + WLAN 5GHz Ant.2, and Z Plane for WLAN 2.4GHz Ant.2 and WLAN 5GHz Ant.2) were recorded in this report.

2.1 Carrier Frequency and Channel

2400-2483.5 MHz 802.11g		2400-2483.5 MHz Bluetooth – LE	
Channel	Freq. (MHz)	Channel	Freq. (MHz)
13	2472	00	2402

5250-5350 MHz Band 2 (U-NII-2A)	
Channel	Freq. (MHz)
62	5310

2.2 Test Mode

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

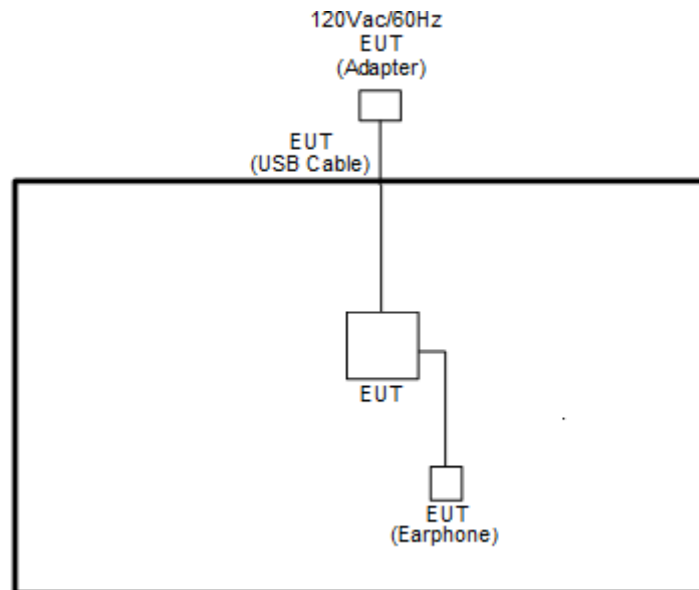
<Co-Location>

Modulation	Data Rate
802.11g for Ant. 2 + Bluetooth LE	6 Mbps + 2 Mbps
802.11g for Ant. 1 + 802.11n HT40 for Ant. 2	6 Mbps + MCS0
802.11n HT40 for MIMO Ant. 1+2 + Bluetooth LE	MCS0 + 2 Mbps
802.11n HT40 for Ant. 1 + Bluetooth LE	MCS0 + 2 Mbps

Remark: For Radiated Test Cases, the tests were performed with USB Type C Cable 1.

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



2.4 EUT Operation Test Setup

The RF test items, utility "QRCT" 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 Unwanted Emissions Measurement

3.1.1 Limit of Unwanted Emissions

- (1) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

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

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

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

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

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.³
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.⁴

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

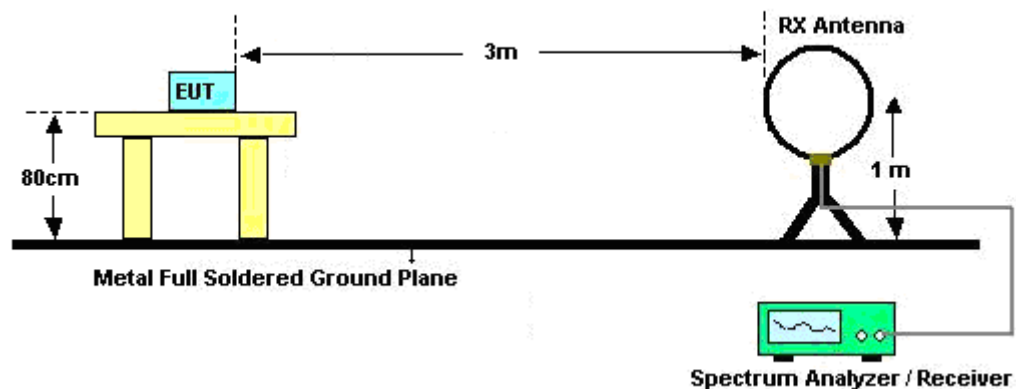
3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
(1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

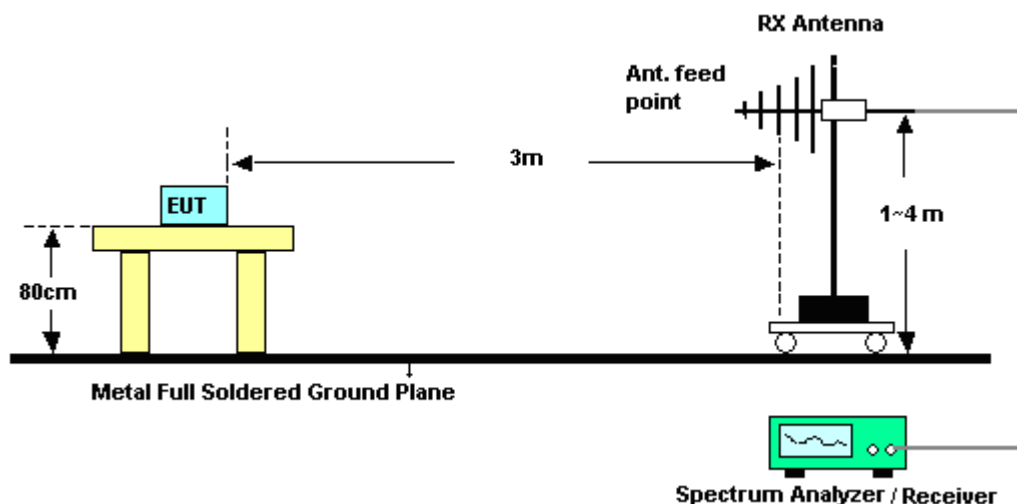
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.1.4 Test Setup

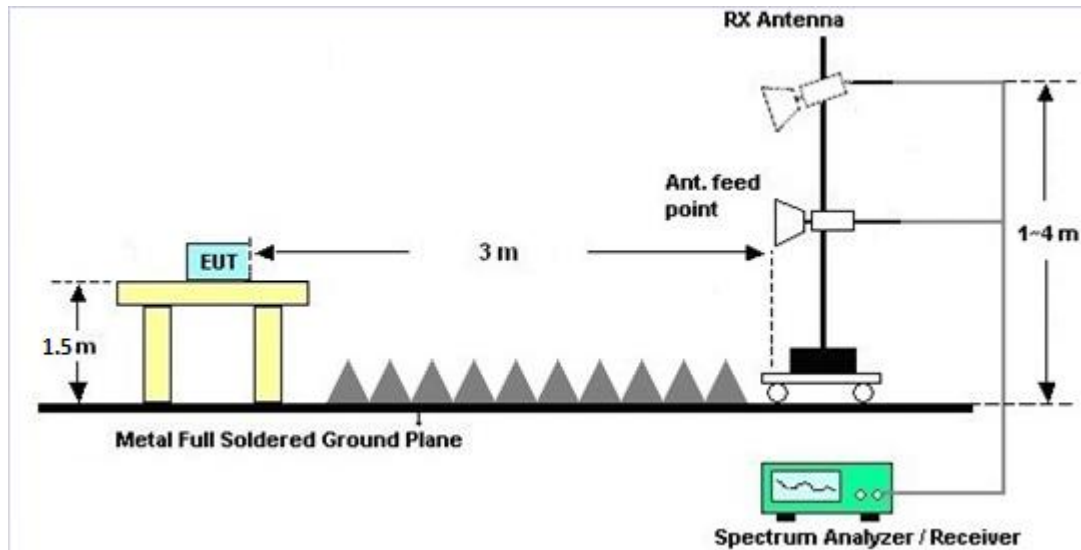
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B.

3.1.7 Duty Cycle

Please refer to Appendix C.

3.1.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B.



3.2 Antenna Requirements

3.2.1 Standard Applicable

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

3.2.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.2.3 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
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	Mar. 29, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 28, 2019	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	37059&01	30MHz~1GHz	Oct. 13, 2018	Nov. 30, 2018~ Dec. 27, 2018	Oct. 12, 2019	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Oct. 19, 2018	Nov. 30, 2018~ Dec. 27, 2018	Oct. 18, 2019	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917057 6	18GHz ~ 40GHz	May 08, 2018	Nov. 30, 2018~ Dec. 27, 2018	May 07, 2019	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 25, 2017	Nov. 30, 2018~ Dec. 17, 2018	Dec. 24, 2018	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 24, 2018	Dec. 27, 2018	Dec. 23, 2018	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 15, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 14, 2019	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 26, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 25, 2019	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY53270148	1GHz~26.5GHz	Jan. 15, 2018	Nov. 30, 2018~ Dec. 27, 2018	Jan. 14, 2019	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03K	17100018000 54002	1GHz~18GHz	Apr. 17, 2018	Nov. 30, 2018~ Dec. 27, 2018	Apr. 16, 2019	Radiation (03CH12-HY)
Preamplifier	MITEQ	TTA1840-35- HG	1864481	18GHz ~ 40GHz	Aug. 24, 2018	Nov. 30, 2018~ Dec. 27, 2018	Aug. 23, 2019	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP161243	N/A	May 12, 2018	Nov. 30, 2018~ Dec. 27, 2018	May 11, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30M-18G	Mar. 14, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 13, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Oct. 16, 2018	Nov. 30, 2018~ Dec. 27, 2018	Oct. 15, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30M~40GHz	Oct. 16, 2018	Nov. 30, 2018~ Dec. 27, 2018	Oct. 15, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-1 2SS	SN2	1.2GHz Low Pass	Mar. 21, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 20, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60ST	SN2	3GHz High Pass	Mar. 21, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 20, 2019	Radiation (03CH12-HY)
Filter	Woken	WHKX8-5272. 5-6750-18000 -40ST	SN2	6.75G Highpas s	Mar. 21, 2018	Nov. 30, 2018~ Dec. 27, 2018	Mar. 20, 2019	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 30, 2018~ Dec. 27, 2018	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1m~4m	N/A	Nov. 30, 2018~ Dec. 27, 2018	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 30, 2018~ Dec. 27, 2018	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Nov. 30, 2018~ Dec. 27, 2018	N/A	Radiation (03CH12-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.10
--	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
--	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.70
--	------



Appendix A. Radiated Spurious Emission

Test Engineer :	Jack Cheng, Lance Chiang, and Peter Liao	Temperature :	22~24°C
		Relative Humidity :	52~60%

WIFI 802.11g (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 13 2472MHz	*	2472	87.72	-	-	75.12	27.36	16.8	31.56	339	44	P	H
	*	2472	77.61	-	-	65.01	27.36	16.8	31.56	339	44	A	H
		2483.84	60.02	-13.98	74	47.43	27.33	16.82	31.56	339	44	P	H
		2483.6	48.04	-5.96	54	35.45	27.33	16.82	31.56	339	44	A	H
													H
													H
	*	2472	85.68	-	-	73.08	27.36	16.8	31.56	106	92	P	V
	*	2472	75.69	-	-	63.09	27.36	16.8	31.56	106	92	A	V
		2483.76	60.83	-13.17	74	48.24	27.33	16.82	31.56	106	92	P	V
		2483.56	48.82	-5.18	54	36.23	27.33	16.82	31.56	106	92	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



BLE 2Mbps (Band Edge @ 3m)

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2342.655	57.36	-16.64	74	44.69	27.64	16.61	31.58	312	57	P	H
		2388.855	47.41	-6.59	54	34.79	27.52	16.68	31.58	312	57	A	H
	*	2402	102.49	-	-	89.86	27.5	16.7	31.57	312	57	P	H
	*	2402	100.76	-	-	88.13	27.5	16.7	31.57	312	57	A	H
													H
													H
		2384.34	57.57	-16.43	74	44.94	27.53	16.68	31.58	111	114	P	V
		2325.12	47.56	-6.44	54	34.81	27.75	16.59	31.59	111	114	A	V
	*	2402	105.68	-	-	93.05	27.5	16.7	31.57	111	114	P	V
	*	2402	103.93	-	-	91.3	27.5	16.7	31.57	111	114	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Co-location Mode

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

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11g CH 13 2472MHz Ant. 2 + BLE CH 00 2402MHz		4804	40.31	-33.69	74	55.37	31.1	10.42	56.58	100	0	P	H
		4944	40.88	-33.12	74	55.62	31.28	10.5	56.52	100	0	P	H
		7416	45.98	-28.02	74	53.02	36.33	12.73	56.1	100	0	P	H
													H
													H
													H
													H
													H
		4804	39.5	-34.5	74	54.56	31.1	10.42	56.58	100	0	P	V
		4944	39.61	-34.39	74	54.35	31.28	10.5	56.52	100	0	P	V
		7416	45.26	-28.74	74	52.3	36.33	12.73	56.1	100	0	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz (LF @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11g CH 13 2472MHz Ant. 2 + BLE CH 00 2402MHz		65.1	28.12	-11.88	40	45.69	11.75	1.14	30.46	-	-	P	H
		109.11	26.95	-16.55	43.5	39.16	16.75	1.46	30.42	-	-	P	H
		172.29	25.71	-17.79	43.5	38.77	15.32	1.97	30.35	-	-	P	H
		755.7	31.94	-14.06	46	29.58	27.91	3.84	29.39	-	-	P	H
		892.9	36.46	-9.54	46	32.45	28.94	4.22	29.15	100	0	P	H
		897.8	35.26	-10.74	46	31.25	28.9	4.25	29.14	-	-	P	H
													H
													H
													H
													H
													H
		30	32.84	-7.16	40	37.75	24.57	0.7	30.18	100	0	P	V
		67.26	26.46	-13.54	40	43.79	11.97	1.16	30.46	-	-	P	V
		105.06	27.12	-16.38	43.5	39.69	16.4	1.45	30.42	-	-	P	V
		618.5	29.81	-16.19	46	30.24	25.7	3.48	29.61	-	-	P	V
		771.1	32.81	-13.19	46	30.31	27.97	3.89	29.36	-	-	P	V
		885.9	37.55	-8.45	46	33.53	28.97	4.21	29.16	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



WIFI 802.11g (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	Avg. (P/A)	(H/V)
802.11g CH 13 2472MHz	*	2472	89.39	-	-	76.79	27.36	16.8	31.56	223	357	P	H
	*	2472	79.13	-	-	66.53	27.36	16.8	31.56	223	357	A	H
		2483.84	60.63	-13.37	74	48.04	27.33	16.82	31.56	223	357	P	H
		2483.52	48.07	-5.93	54	35.48	27.33	16.82	31.56	223	357	A	H
													H
													H
	*	2472	86.07	-	-	73.47	27.36	16.8	31.56	219	210	P	V
	*	2472	76.19	-	-	63.59	27.36	16.8	31.56	219	210	A	V
		2483.64	59.99	-14.01	74	47.4	27.33	16.82	31.56	219	210	P	V
		2483.52	46.96	-7.04	54	34.37	27.33	16.82	31.56	219	210	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		5124.44	53.16	-20.84	74	42.4	31.95	9.95	31.14	101	65	P	H
		5116.62	41.81	-12.19	54	31.04	31.97	9.94	31.14	101	65	A	H
	*	5310	101.9	-	-	91.62	31.3	10.13	31.15	101	65	P	H
	*	5310	91.22	-	-	80.94	31.3	10.13	31.15	101	65	A	H
		5353.92	58.8	-15.2	74	48.47	31.32	10.16	31.15	101	65	P	H
		5350.8	48.79	-5.21	54	38.48	31.3	10.16	31.15	101	65	A	H
													H
													H
		5147.9	52.85	-21.15	74	42.11	31.9	9.98	31.14	101	322	P	V
		5141.44	42.09	-11.91	54	31.34	31.92	9.97	31.14	101	322	A	V
	*	5310	105.55	-	-	95.27	31.3	10.13	31.15	101	322	P	V
	*	5310	94.92	-	-	84.64	31.3	10.13	31.15	101	322	A	V
		5350.08	62.57	-11.43	74	52.26	31.3	10.16	31.15	101	322	P	V
		5350.8	52.39	-1.61	54	42.08	31.3	10.16	31.15	101	322	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Co-location Mode

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11g CH 13 2472MHz Ant. 1 + 802.11n HT40 CH 62 5310MHz Ant. 2		4944	33.5	-40.5	74	48.24	31.28	10.5	56.52	100	0	P	H
		7416	39.37	-34.63	74	46.41	36.33	12.73	56.1	100	0	P	H
		10620	43.2	-30.8	74	48.19	39.88	15.72	60.59	100	0	P	H
		15930	40.76	-33.24	74	41.47	37.33	19.46	57.5	100	0	P	H
													H
													H
													H
													H
		4944	32.95	-41.05	74	47.69	31.28	10.5	56.52	100	0	P	V
		7416	39.42	-34.58	74	46.46	36.33	12.73	56.1	100	0	P	V
		10620	41.93	-32.07	74	46.92	39.88	15.72	60.59	100	0	P	V
		15930	41.09	-32.91	74	41.8	37.33	19.46	57.5	100	0	P	V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11g CH 13 2472MHz Ant. 1 + 802.11n HT40 CH 62 5310MHz Ant. 2		109.11	26.47	-17.03	43.5	38.68	16.75	1.46	30.42	-	-	P	H
		172.83	25.23	-18.27	43.5	38.29	15.32	1.97	30.35	-	-	P	H
		230.07	24	-22	46	35.97	16.08	2.22	30.27	-	-	P	H
		807.5	32.4	-13.6	46	30.03	27.66	3.99	29.28	-	-	P	H
		904.8	36.13	-9.87	46	31.96	29.03	4.27	29.13	-	-	P	H
		948.9	36.27	-9.73	46	30.32	30.52	4.43	29	100	0	P	H
													H
													H
													H
													H
													H
		30	33.91	-6.09	40	38.82	24.57	0.7	30.18	100	0	P	V
		67.8	23.44	-16.56	40	40.64	12.09	1.17	30.46	-	-	P	V
		170.94	26.96	-16.54	43.5	39.92	15.43	1.96	30.35	-	-	P	V
		848.8	33.25	-12.75	46	29.55	28.83	4.09	29.22	-	-	P	V
		925.8	34.56	-11.44	46	29.7	29.58	4.35	29.07	-	-	P	V
		959.4	35.89	-10.11	46	29.5	30.91	4.45	28.97	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		5111.86	52.77	-21.23	74	42	31.98	9.93	31.14	119	113	P	H
		5105.4	41.33	-12.67	54	30.55	31.99	9.93	31.14	119	113	A	H
	*	2402	53.26	-	-	50.66	27.5	6.67	31.57	119	113	P	H
	*	5310	106.89	-	-	96.61	31.3	10.13	31.15	119	113	P	H
	*	5310	97.06	-	-	86.78	31.3	10.13	31.15	119	113	A	H
		5350.8	58.47	-15.53	74	48.16	31.3	10.16	31.15	119	113	P	H
		5350.56	48.21	-5.79	54	37.9	31.3	10.16	31.15	119	113	A	H
		5063.58	54.07	-19.93	74	43.48	31.85	9.88	31.14	326	79	P	V
		5095.54	41.23	-12.77	54	30.48	31.98	9.91	31.14	326	79	A	V
	*	2402	49.31	-	-	46.71	27.5	6.67	31.57	326	79	P	V
	*	5310	104.86	-	-	94.58	31.3	10.13	31.15	326	79	P	V
	*	5310	94.82	-	-	84.54	31.3	10.13	31.15	326	79	A	V
		5350.32	56.73	-17.27	74	46.42	31.3	10.16	31.15	326	79	P	V
		5350.08	45.29	-8.71	54	34.98	31.3	10.16	31.15	326	79	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



BLE 2Mbps (Band Edge @ 3m)

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2319.24	54.67	-19.33	74	41.9	27.78	6.55	31.59	100	102	P	H
		2355.99	44.16	-9.84	54	31.52	27.59	6.6	31.58	100	102	A	H
	*	2402	104.35	-	-	91.72	27.5	6.67	31.57	100	102	P	H
	*	2402	102.72	-	-	90.09	27.5	6.67	31.57	100	102	A	H
													H
													H
		2315.565	54.7	-19.3	74	41.91	27.81	6.54	31.59	316	65	P	V
		2382.24	44.2	-9.8	54	31.57	27.54	6.64	31.58	316	65	A	V
	*	2402	102.13	-	-	89.5	27.5	6.67	31.57	316	65	P	V
	*	2402	100.42	-	-	87.79	27.5	6.67	31.57	316	65	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Co-location Mode

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 62 5310MHz MIMO Ant. 1+2 + BLE CH 00 2402MHz		4804	38.27	-35.73	74	53.33	31.1	9.88	56.58	100	0	P	H
		7712	51.85	-22.15	74	58.53	36.08	12.76	56.3	100	187	P	H
		7712	40.77	-13.23	54	47.45	36.08	12.76	56.3	100	187	A	H
		10620	45.94	-28.06	74	50.85	39.88	15.27	60.59	100	0	P	H
		15930	45.98	-28.02	74	46.41	37.33	19.01	57.5	100	0	P	H
													H
													H
													H
		4804	38.73	-35.27	74	53.79	31.1	9.88	56.58	100	0	P	V
		7712	52.29	-21.71	74	58.97	36.08	12.76	56.3	100	22	P	V
		7712	41.04	-12.96	54	47.72	36.08	12.76	56.3	100	22	A	V
		10620	45.71	-28.29	74	50.62	39.88	15.27	60.59	100	0	P	V
		15930	44.5	-29.5	74	44.93	37.33	19.01	57.5	100	0	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz MIMO Ant. 1+2 + BLE CH 00 2402MHz		65.1	28.27	-11.73	40	45.84	11.75	1.14	30.46	-	-	P	H
		109.38	26.85	-16.65	43.5	39.05	16.75	1.47	30.42	-	-	P	H
		173.1	25.83	-17.67	43.5	38.95	15.26	1.97	30.35	-	-	P	H
		332.2	25.64	-20.36	46	33.45	19.69	2.59	30.09	-	-	P	H
		798.4	32.63	-13.37	46	29.99	27.96	3.97	29.29	-	-	P	H
		943.3	35.04	-10.96	46	29.31	30.33	4.41	29.01	100	0	P	H
													H
													H
													H
													H
													H
		30	33.1	-6.9	40	38.01	24.57	0.7	30.18	100	0	P	V
		65.1	27.75	-12.25	40	45.32	11.75	1.14	30.46	-	-	P	V
		110.46	27.49	-16.01	43.5	39.63	16.81	1.47	30.42	-	-	P	V
		700.4	31.14	-14.86	46	30.67	26.3	3.69	29.52	-	-	P	V
		853	33.34	-12.66	46	29.54	28.91	4.1	29.21	-	-	P	V
		897.1	36.85	-9.15	46	32.85	28.9	4.24	29.14	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		5112.54	53.16	-20.84	74	42.39	31.97	9.94	31.14	120	120	P	H
		5129.88	41.72	-12.28	54	30.96	31.94	9.96	31.14	120	120	A	H
	*	2402	54.21	-	-	51.61	27.5	6.67	31.57	120	120	P	H
	*	5310	98.64	-	-	88.36	31.3	10.13	31.15	120	120	P	H
	*	5310	87.83	-	-	77.55	31.3	10.13	31.15	120	120	A	H
		5357.76	53.6	-20.4	74	43.25	31.33	10.17	31.15	120	120	P	H
		5352.72	42.15	-11.85	54	31.83	31.31	10.16	31.15	120	120	A	H
		5120.7	52.88	-21.12	74	42.12	31.96	9.94	31.14	311	78	P	V
		5111.86	41.82	-12.18	54	31.05	31.98	9.93	31.14	311	78	A	V
	*	2402	51.16	-	-	48.56	27.5	6.67	31.57	311	78	P	V
	*	5310	99.37	-	-	89.09	31.3	10.13	31.15	311	78	P	V
	*	5310	88.49	-	-	78.21	31.3	10.13	31.15	311	78	A	V
		5361.6	53.5	-20.5	74	43.13	31.35	10.17	31.15	311	78	P	V
		5358	42.01	-11.99	54	31.66	31.33	10.17	31.15	311	78	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



BLE 2Mbps (Band Edge @ 3m)

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2349.585	57	-17	74	44.36	27.6	16.62	31.58	125	103	P	H
		2328.27	47.2	-6.8	54	34.47	27.73	16.59	31.59	125	103	A	H
	*	2402	105.29	-	-	92.66	27.5	16.7	31.57	125	103	P	H
	*	2402	103.42	-	-	90.79	27.5	16.7	31.57	125	103	A	H
													H
													H
		2366.805	57.41	-16.59	74	44.77	27.57	16.65	31.58	400	78	P	V
		2372.475	47.11	-6.89	54	34.47	27.56	16.66	31.58	400	78	A	V
	*	2402	100.1	-	-	87.47	27.5	16.7	31.57	400	78	P	V
	*	2402	98.11	-	-	85.48	27.5	16.7	31.57	400	78	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Co-location Mode

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz Ant.1 + BLE CH 00 2402MHz		4804	40.26	-33.74	74	55.32	31.1	10.42	56.58	100	0	P	H
		7712	57.06	-16.94	74	63.74	36.08	13.54	56.3	111	104	P	H
		7712	45.1	-8.9	54	51.78	36.08	13.54	56.3	111	104	A	H
		10620	47.68	-26.32	74	52.59	39.88	15.8	60.59	100	0	P	H
		15930	46.78	-27.22	74	47.21	37.33	19.74	57.5	100	0	P	H
													H
													H
													H
		4804	39.95	-34.05	74	55.01	31.1	10.42	56.58	100	0	P	V
		7712	56.4	-17.6	74	63.08	36.08	13.54	56.3	399	38	P	V
		7712	44.75	-9.25	54	51.43	36.08	13.54	56.3	399	38	A	V
		10620	47.21	-26.79	74	52.12	39.88	15.8	60.59	100	0	P	V
		15930	46.85	-27.15	74	47.28	37.33	19.74	57.5	100	0	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz Ant.1 + BLE CH 00 2402MHz		64.29	27.1	-12.9	40	44.67	11.76	1.13	30.46	-	-	P	H
		68.07	27.27	-12.73	40	44.47	12.09	1.17	30.46	-	-	P	H
		109.11	26.43	-17.07	43.5	38.64	16.75	1.46	30.42	-	-	P	H
		766.2	32.49	-13.51	46	30.02	27.96	3.88	29.37	-	-	P	H
		913.9	34.11	-11.89	46	29.65	29.26	4.3	29.1	-	-	P	H
		946.1	36.19	-9.81	46	30.39	30.4	4.41	29.01	100	0	P	H
													H
													H
													H
													H
													H
		30.27	33.77	-6.23	40	38.68	24.57	0.7	30.18	100	0	P	V
		64.29	27.09	-12.91	40	44.66	11.76	1.13	30.46	-	-	P	V
		112.08	31.43	-12.07	43.5	43.45	16.92	1.48	30.42	-	-	P	V
		806.1	32.45	-13.55	46	30	27.74	3.99	29.28	-	-	P	V
		898.5	35.28	-10.72	46	31.27	28.9	4.25	29.14	-	-	P	V
		949.6	35.32	-10.68	46	29.33	30.56	4.43	29	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		5102.68	51.54	-22.46	74	40.77	31.99	9.92	31.14	100	360	P	H
		5141.1	41.53	-12.47	54	30.78	31.92	9.97	31.14	100	360	A	H
	*	2402	51.89	-	-	49.29	27.5	6.67	31.57	100	360	P	H
	*	5310	100.7	-	-	90.42	31.3	10.13	31.15	100	360	P	H
	*	5310	89.92	-	-	79.64	31.3	10.13	31.15	100	360	A	H
		5358.72	52.96	-21.04	74	42.61	31.33	10.17	31.15	100	360	P	H
		5350.8	43.8	-10.2	54	33.49	31.3	10.16	31.15	100	360	A	H
		5105.74	51.84	-22.16	74	41.06	31.99	9.93	31.14	121	93	P	V
		5148.92	41.53	-12.47	54	30.79	31.9	9.98	31.14	121	93	A	V
	*	2402	54.24	-	-	51.64	27.5	6.67	31.57	121	93	P	V
	*	5310	99.2	-	-	88.92	31.3	10.13	31.15	121	93	P	V
	*	5310	88.39	-	-	78.11	31.3	10.13	31.15	121	93	A	V
		5354.4	52.68	-21.32	74	42.35	31.32	10.16	31.15	121	93	P	V
		5350.8	43.12	-10.88	54	32.81	31.3	10.16	31.15	121	93	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



BLE 2Mbps (Band Edge @ 3m)

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2313.36	56.22	-17.78	74	43.42	27.82	16.57	31.59	100	119	P	H
		2344.02	47.01	-6.99	54	34.33	27.64	16.62	31.58	100	119	A	H
	*	2402	100.12	-	-	87.49	27.5	16.7	31.57	100	119	P	H
	*	2402	98.24	-	-	85.61	27.5	16.7	31.57	100	119	A	H
													H
													H
		2361.24	56.81	-17.19	74	44.17	27.58	16.64	31.58	133	121	P	V
		2359.14	47.65	-6.35	54	35.01	27.58	16.64	31.58	133	121	A	V
	*	2402	104.14	-	-	91.51	27.5	16.7	31.57	133	121	P	V
	*	2402	102.39	-	-	89.76	27.5	16.7	31.57	133	121	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Co-location Mode

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 62 5310MHz Ant. 2 + BLE CH 00 2402MHz		4804	38.1	-35.9	74	53.16	31.1	10.42	56.58	100	0	P	H
		7712	43.65	-30.35	74	50.33	36.08	13.54	56.3	100	0	P	H
		10620	47.13	-26.87	74	52.04	39.88	15.8	60.59	100	0	P	H
		15930	45.17	-28.83	74	45.6	37.33	19.74	57.5	100	0	P	H
													H
													H
													H
													H
		4804	38.32	-35.68	74	53.38	31.1	10.42	56.58	100	0	P	V
		7712	45.87	-28.13	74	52.55	36.08	13.54	56.3	100	0	P	V
		10620	47.43	-26.57	74	52.34	39.88	15.8	60.59	100	0	P	V
		15930	45.58	-28.42	74	46.01	37.33	19.74	57.5	100	0	P	V
													V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF @ 3m)

Ant.	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Simultaneously		(MHz)	(dBμV/m)	Limit (dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11n HT40 CH 62 5310MHz Ant. 2 + BLE CH 00 2402MHz		64.29	27.3	-12.7	40	44.87	11.76	1.13	30.46	-	-	P	H
		68.07	27.43	-12.57	40	44.63	12.09	1.17	30.46	100	0	P	H
		173.1	26.22	-17.28	43.5	39.34	15.26	1.97	30.35	-	-	P	H
		748.7	31.34	-14.66	46	29.04	27.88	3.83	29.41	-	-	P	H
		848.8	33.42	-12.58	46	29.72	28.83	4.09	29.22	-	-	P	H
		963.6	36.22	-17.78	54	29.81	30.92	4.45	28.96	-	-	P	H
													H
													H
													H
													H
													H
		32.43	31.98	-8.02	40	38.46	23.01	0.74	30.23	100	0	P	V
		64.29	26.64	-13.36	40	44.21	11.76	1.13	30.46	-	-	P	V
		68.07	26.54	-13.46	40	43.74	12.09	1.17	30.46	-	-	P	V
		795.6	31.95	-14.05	46	29.33	27.96	3.96	29.3	-	-	P	V
		864.2	33.78	-12.22	46	29.81	29.03	4.13	29.19	-	-	P	V
		933.5	35.25	-10.75	46	30.07	29.85	4.37	29.04	-	-	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	Peak or Average
H/V	Horizontal or Vertical

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

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



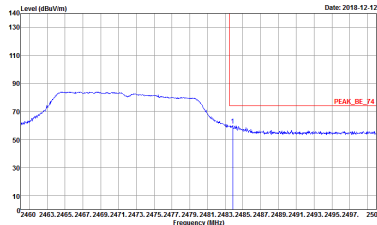
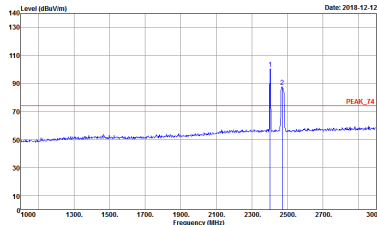
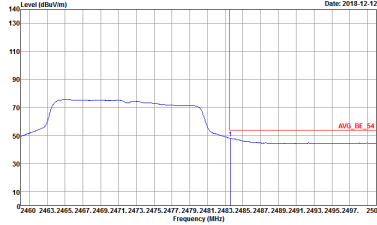
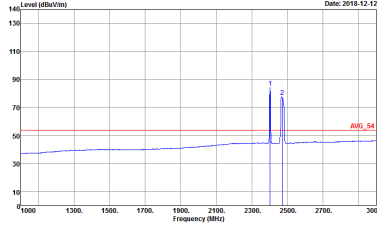
Appendix B. Radiated Spurious Emission Plots

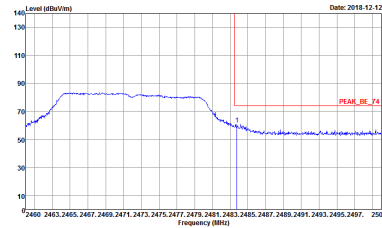
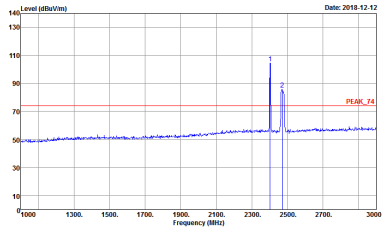
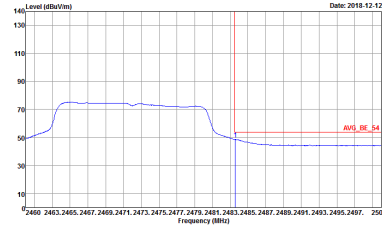
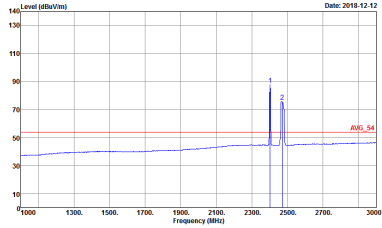
Test Engineer :	Jack Cheng, Lance Chiang, and Peter Liao	Temperature :	22~24°C
		Relative Humidity :	52~60%

Note symbol

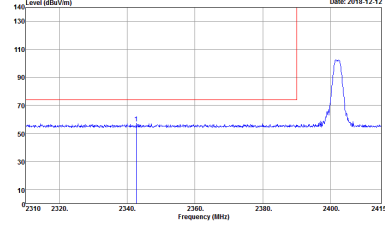
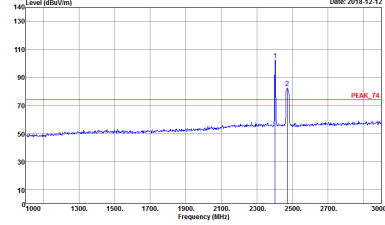
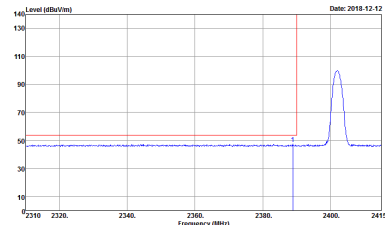
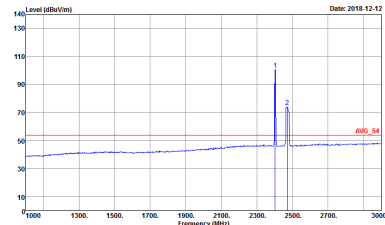
-L	Low channel location
-R	High channel location

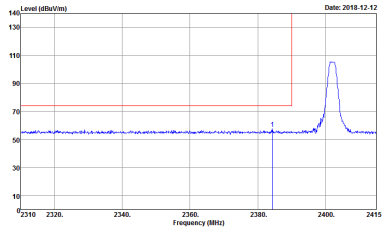
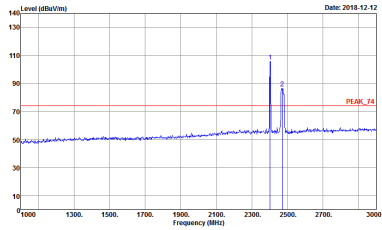
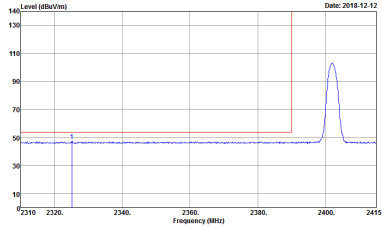
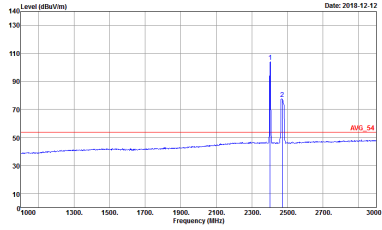
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 VERTICAL
Avg.		

BLE 2Mbps (Band Edge @ 3m)

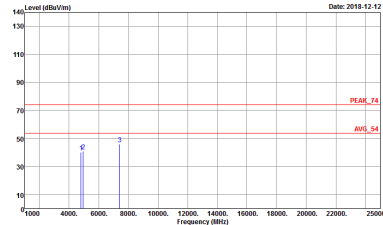
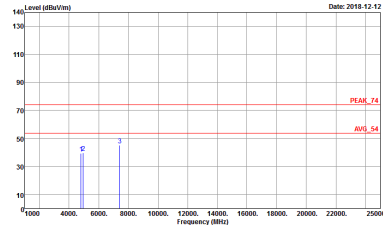
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 VERTICAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 VERTICAL



Co-location Mode

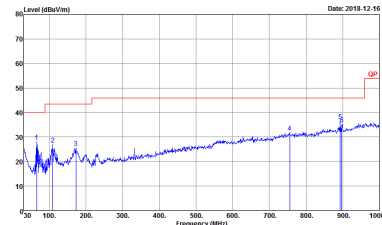
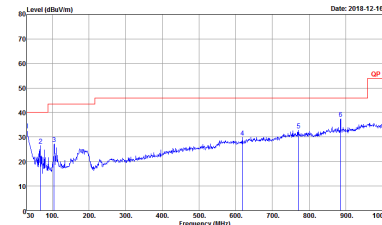
2.4GHz 2400~2483.5MHz (Harmonic @ 3m)

ANT	802.11g CH 13 2472MHz Ant. 2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 VERTICAL

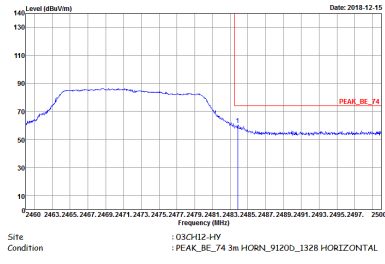
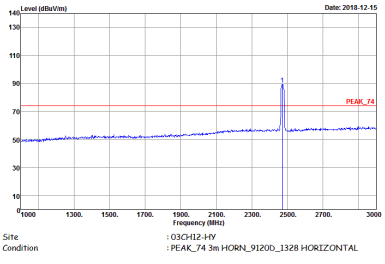
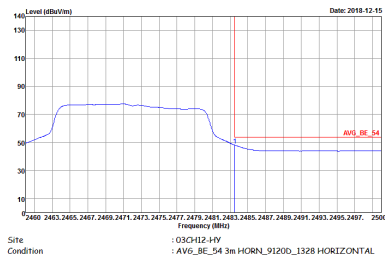
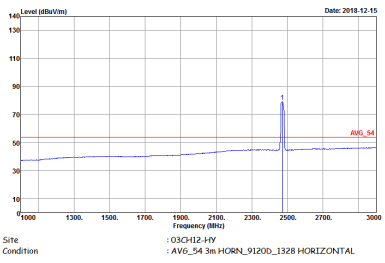


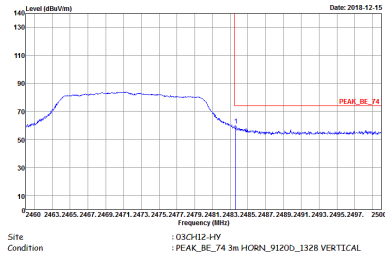
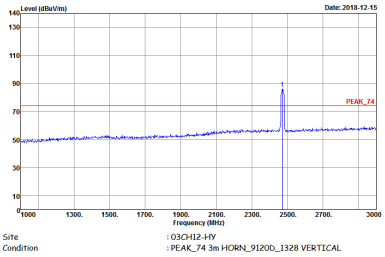
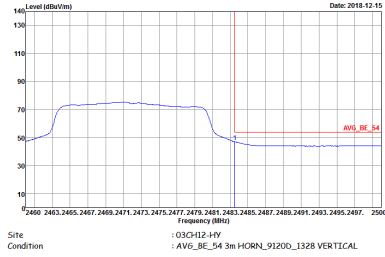
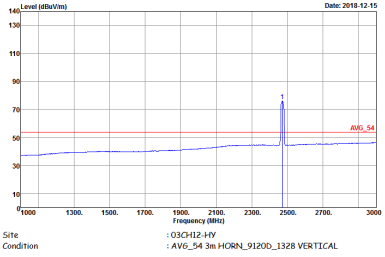
Emission below 1GHz

2.4GHz 2400~2483.5MHz (LF)

ANT	802.11g CH 13 2472MHz Ant. 2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 VERTICAL

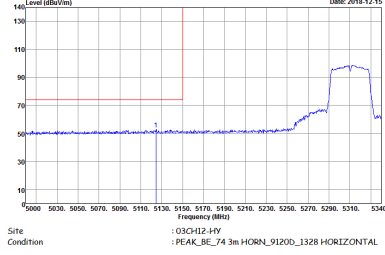
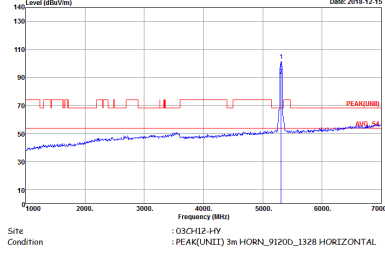
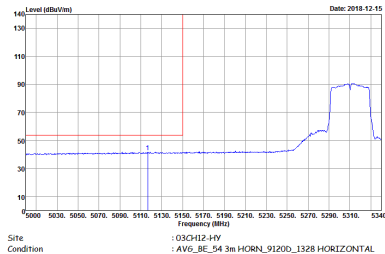
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH12-HY : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL	 Site Condition : 03CH12-HY : PEAK_74 3m HORN_9120D_1328 HORIZONTAL
Avg.	 Site Condition : 03CH12-HY : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL	 Site Condition : 03CH12-HY : AVG_54 3m HORN_9120D_1328 HORIZONTAL

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Vertical	Fundamental
Peak		
Avg.		



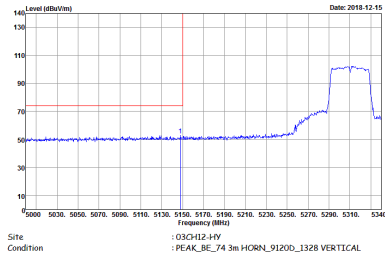
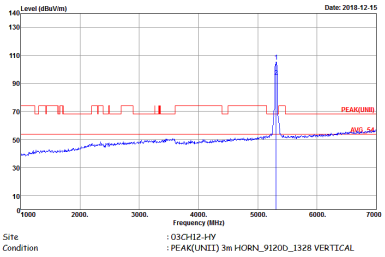
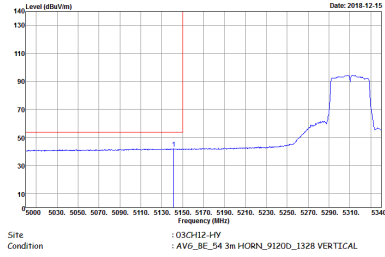
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
2	Horizontal	Fundamental
Peak	 Site: 03CH12-HY Condition: PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site: 03CH12-HY Condition: PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site: 03CH12-HY Condition: AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

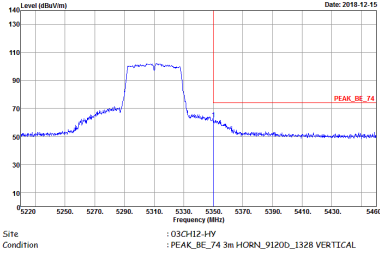
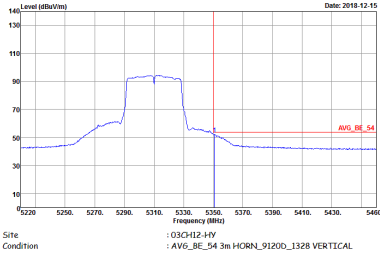


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

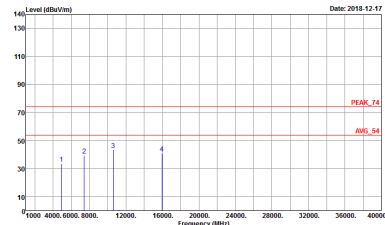
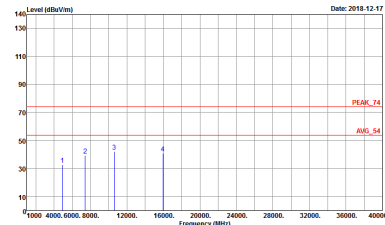


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

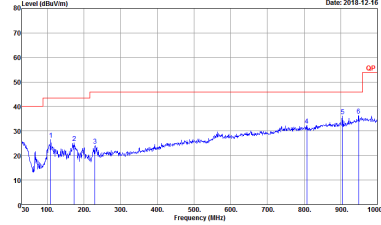
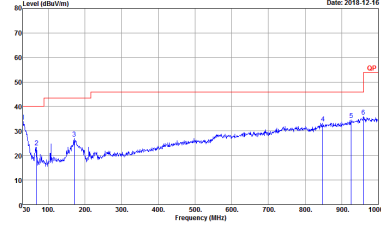


Co-location Mode

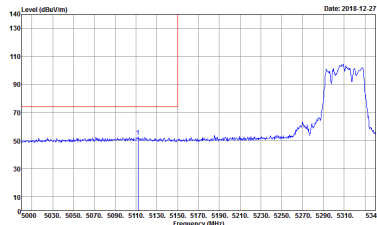
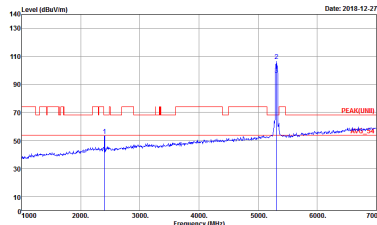
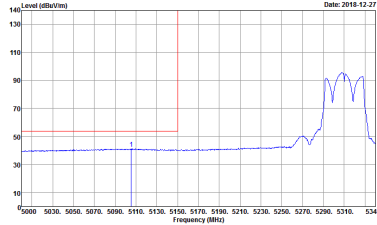
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

ANT	802.11g CH 13 2472MHz Ant. 1 + 802.11n HT40 CH 62 5310MHz Ant. 2	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 VERTICAL

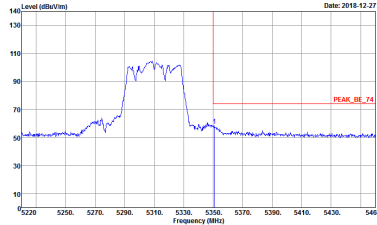
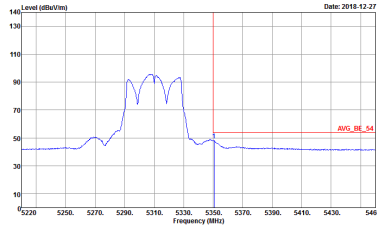
Emission below 1GHz
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF)

ANT	802.11g CH 13 2472MHz Ant. 1 + 802.11n HT40 CH 62 5310MHz Ant. 2	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH12-HY Condition : QP 3m B1L06_6111D_37059 HORIZONTAL	 Site : 03CH12-HY Condition : QP 3m B1L06_6111D_37059 VERTICAL

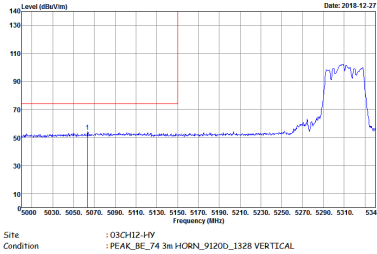
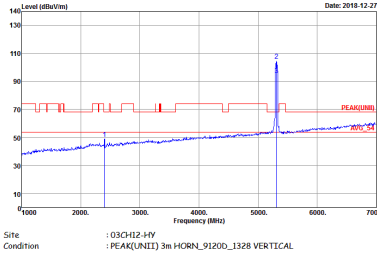
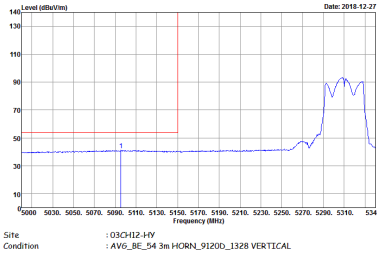
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

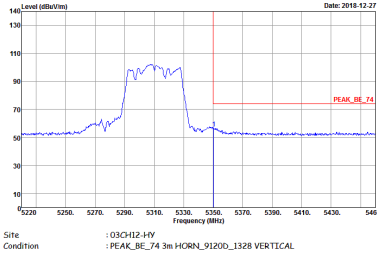
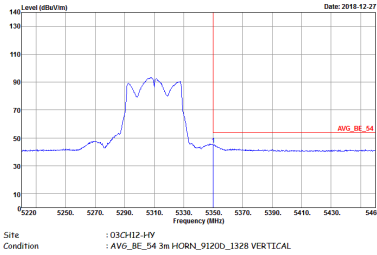


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	Left blank
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : :03CH12-HY Condition : :PEAK_BE_74 3m HORN_91200_1328 VERTICAL	 Site : :03CH12-HY Condition : :PEAK(UNIT) 3m HORN_91200_1328 VERTICAL
Avg.	 Site : :03CH12-HY Condition : :AVG_BE_54 3m HORN_91200_1328 VERTICAL	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



BLE 2Mbps (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Horizontal	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL
Avg.	Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 HORIZONTAL

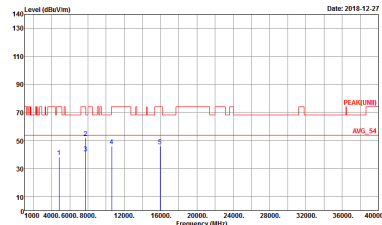
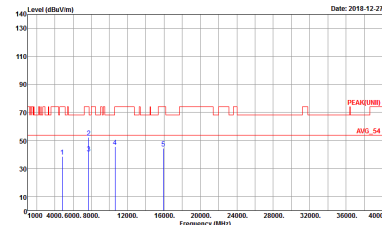


BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Vertical	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_T4 3m HORN_9120D_1328 VERTICAL	Site : 03CH12-HY Condition : PEAK_T4 3m HORN_9120D_1328 VERTICAL
Avg.	Site : 03CH12-HY Condition : AVG_BE_S4 3m HORN_9120D_1328 VERTICAL	Site : 03CH12-HY Condition : AVG_S4 3m HORN_9120D_1328 VERTICAL



Co-location Mode

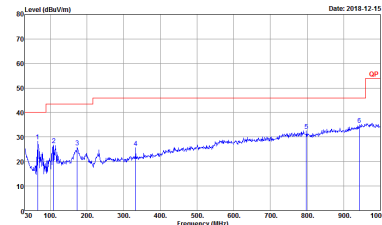
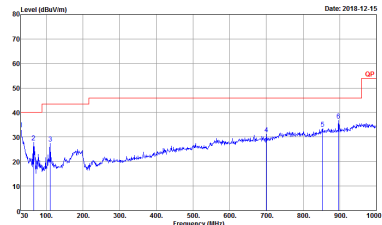
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

ANT	802.11n HT40 CH 62 5310MHz MIMO Ant. 1+2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : PEAK[UNIT] 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK[UNIT] 3m HORN_91200_1328 VERTICAL

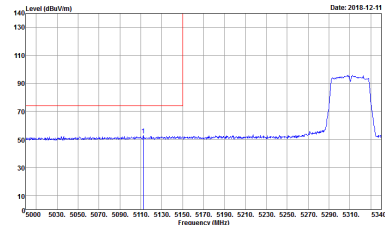
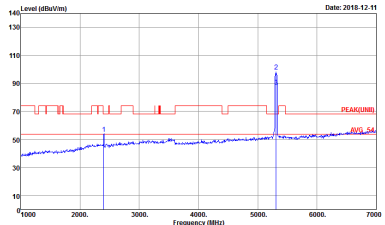
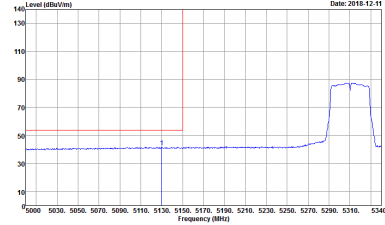


Emission below 1GHz

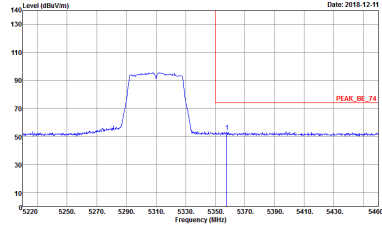
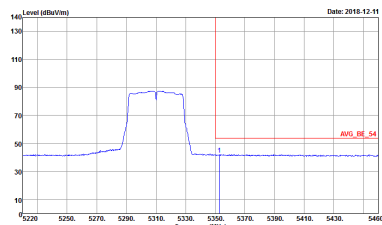
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF)

ANT	802.11n HT40 CH 62 5310MHz MIMO Ant. 1+2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 VERTICAL

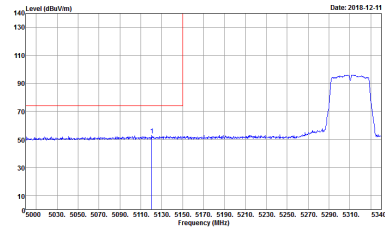
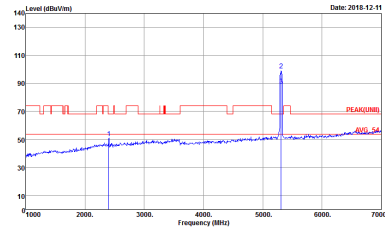
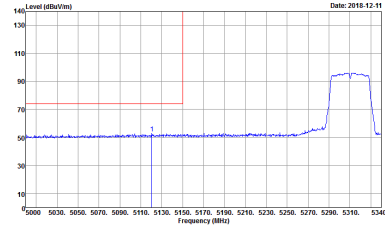
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

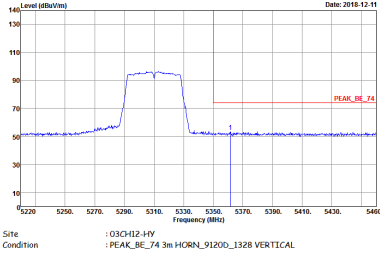
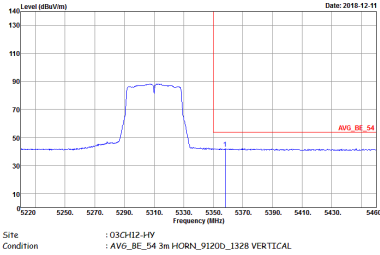


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	Left blank
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

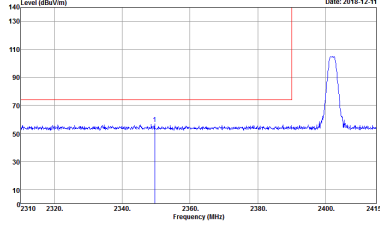
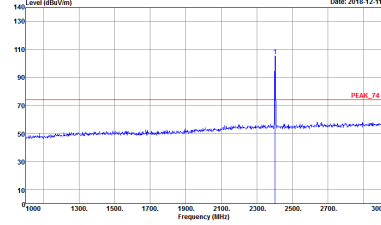
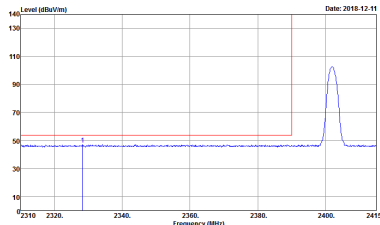
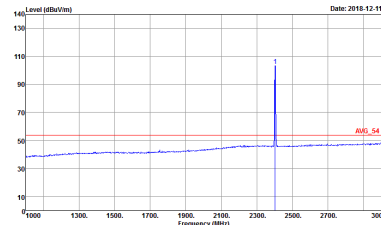


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL
Avg.	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

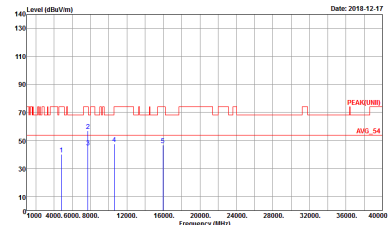
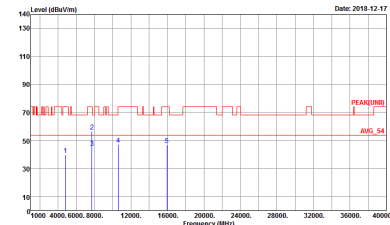
BLE 2Mbps (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 HORIZONTAL

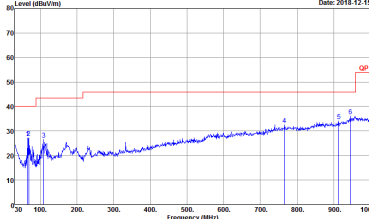
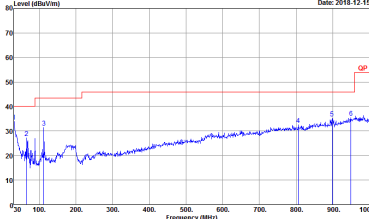


BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Vertical	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 VERTICAL
Avg.	Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL	Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 VERTICAL

Co-location Mode
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

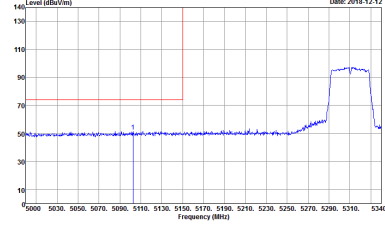
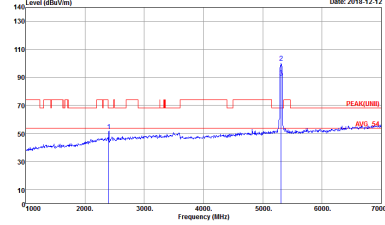
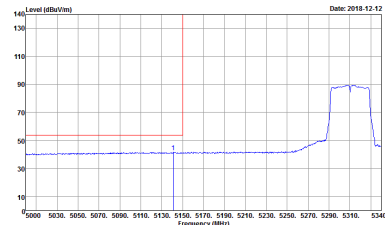
ANT	802.11n HT40 CH 62 5310MHz Ant. 1 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL

Emission below 1GHz
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF)

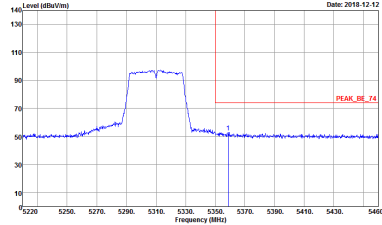
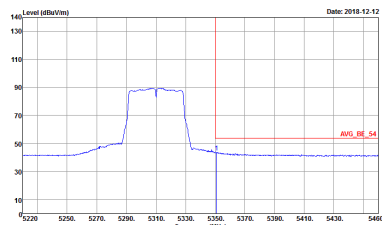
ANT	802.11n HT40 CH 62 5310MHz Ant. 1 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL	 Site : 03CH12-HY Condition : QP 3m B1LO6_6111D_37059 VERTICAL



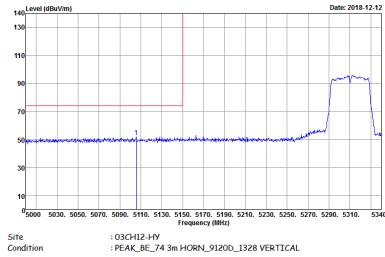
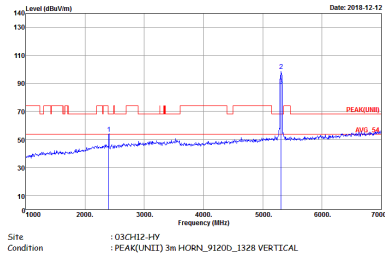
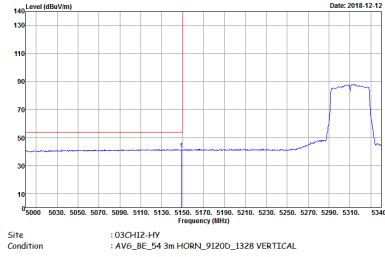
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

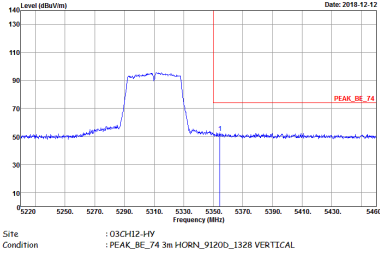
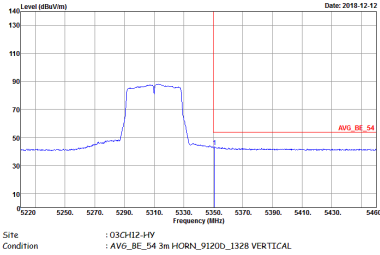


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	Left blank
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	Left blank

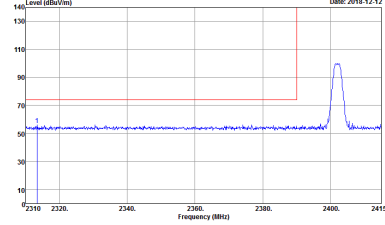
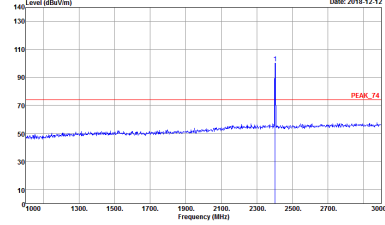
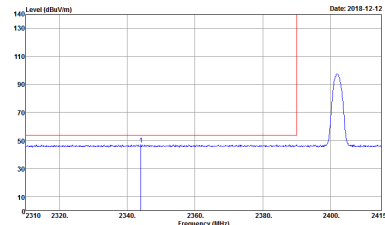
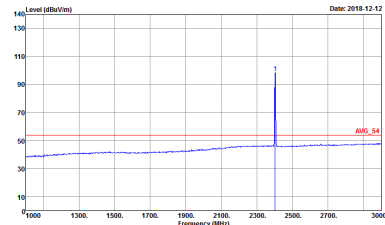


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL	Left blank

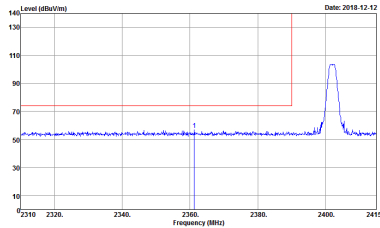
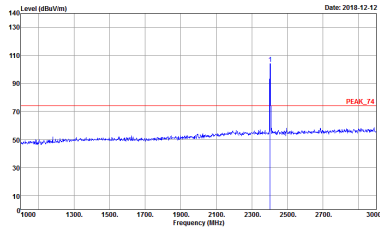
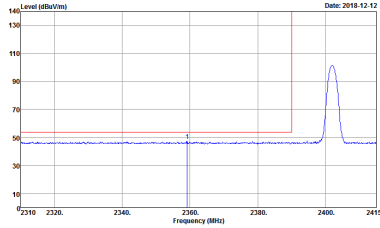
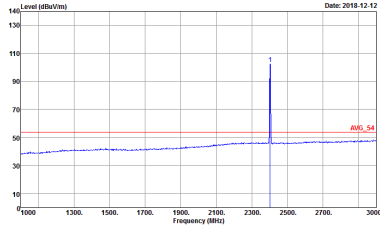


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	Left blank
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL	Left blank

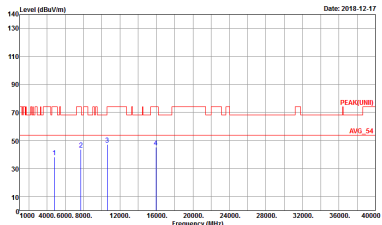
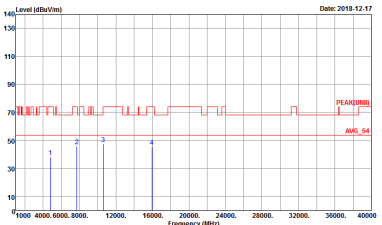
BLE 2Mbps (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 HORIZONTAL



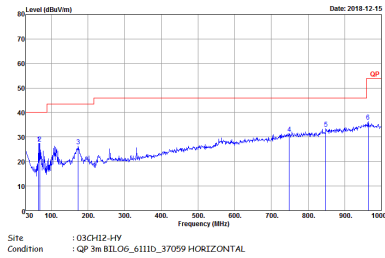
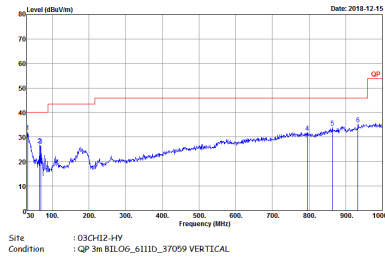
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH00 2402MHz	
	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_91200_1328 VERTICAL
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL	 Site : 03CH12-HY Condition : AVG_54 3m HORN_91200_1328 VERTICAL

Co-location Mode
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (Harmonic @ 3m)

ANT	802.11n HT40 CH 62 5310MHz Ant. 2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : PEAK[UNIT] 3m HORN_9120D_1328 HORIZONTAL	 Site : 03CH12-HY Condition : PEAK[UNIT] 3m HORN_9120D_1328 VERTICAL



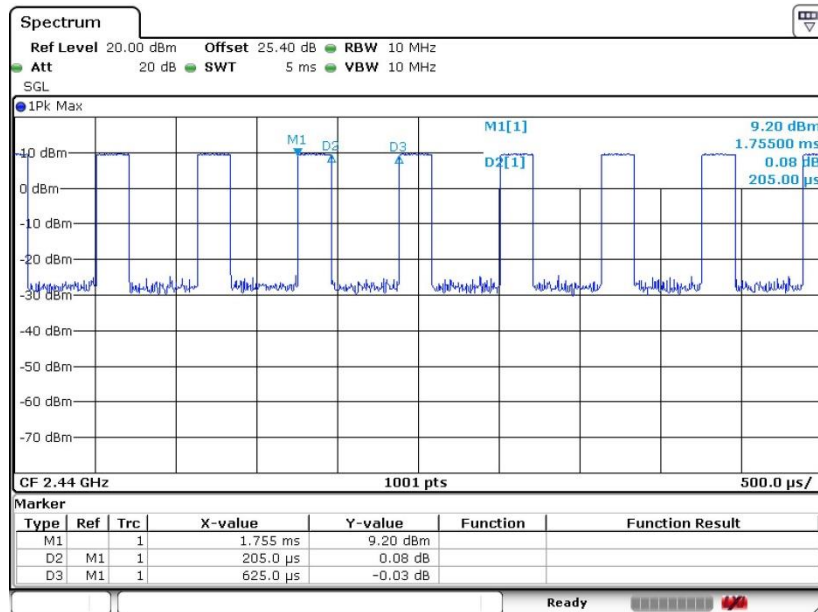
2.4GHz 2400~2483.5MHz and Band 2 5250~5350MHz (LF)

ANT	802.11n HT40 CH 62 5310MHz Ant. 2 + BLE CH 00 2402MHz	
Simultaneously	Horizontal	Vertical
QP / Peak		

Appendix C. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
-	Bluetooth - LE for 2 Mbps	32.8	205	4.88	10kHz	4.84
1	802.11g	98.31	-	-	10Hz	0.07
2	802.11g	97.83	2030	0.49	1kHz	0.10
1	5GHz 802.11n HT40	95.85	925	1.08	3kHz	0.18
2	5GHz 802.11n HT40	95.85	925	1.08	3kHz	0.18
1+2	5GHz 802.11n HT40 for ant.1	95.85	925	1.08	3kHz	0.18
1+2	5GHz 802.11n HT40 for ant.2	95.85	925	1.08	3kHz	0.18

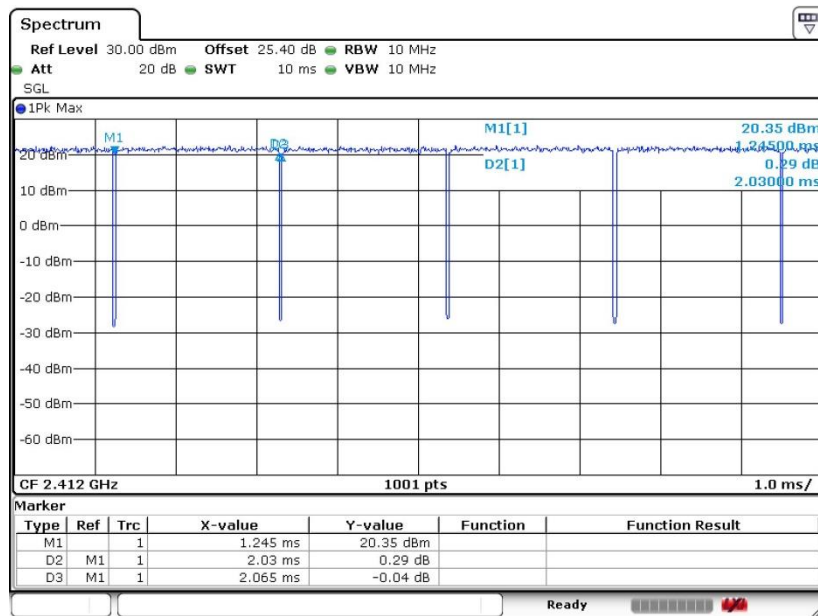
Bluetooth – LE for 2Mbps



Date: 11.OCT.2018 19:27:39

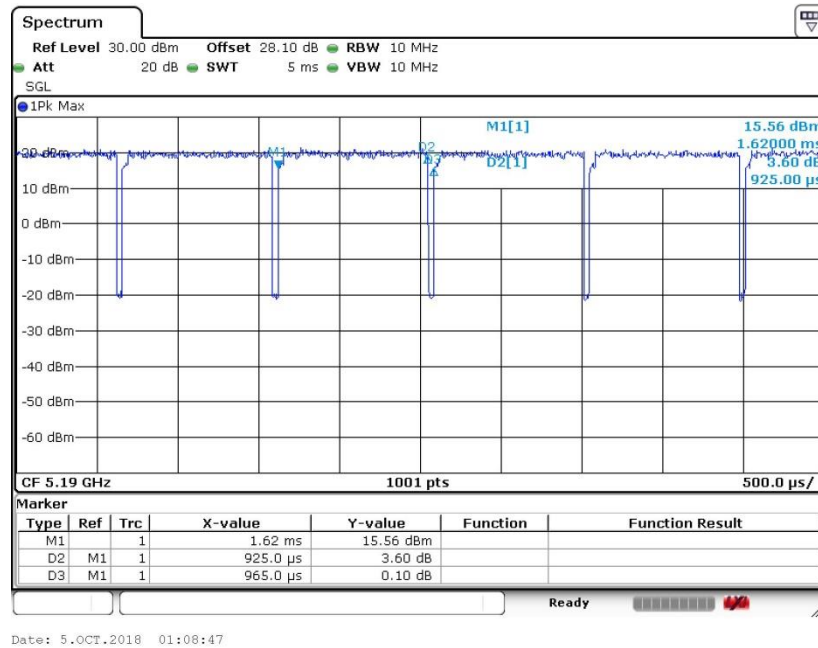
<Ant. 1>

802.11g



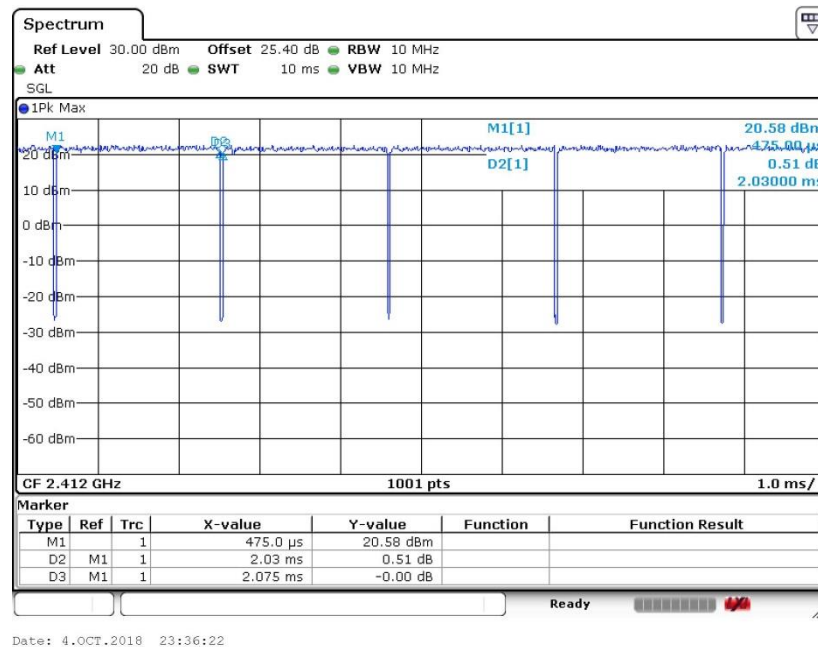
Date: 4.OCT.2018 23:35:45

802.11n HT40

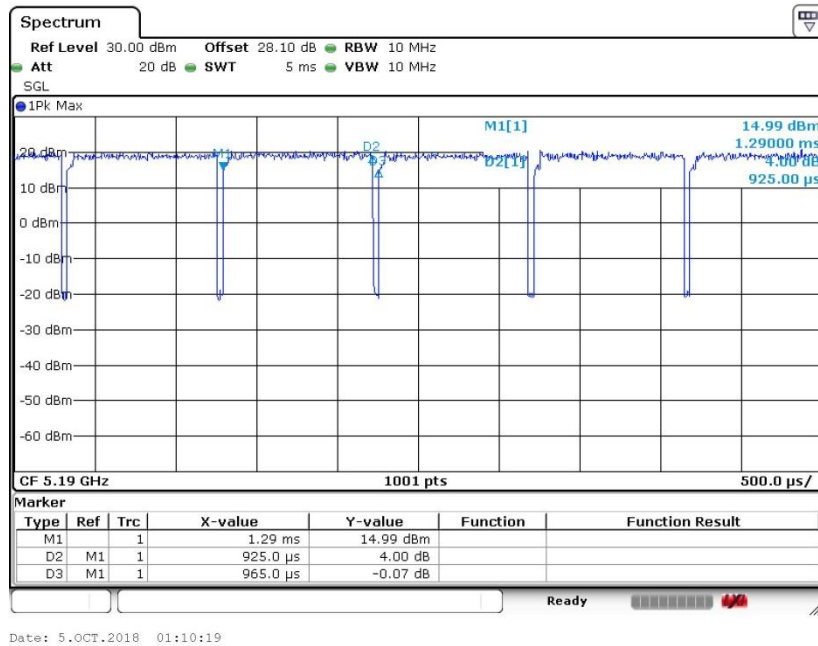


<Ant. 2>

802.11g

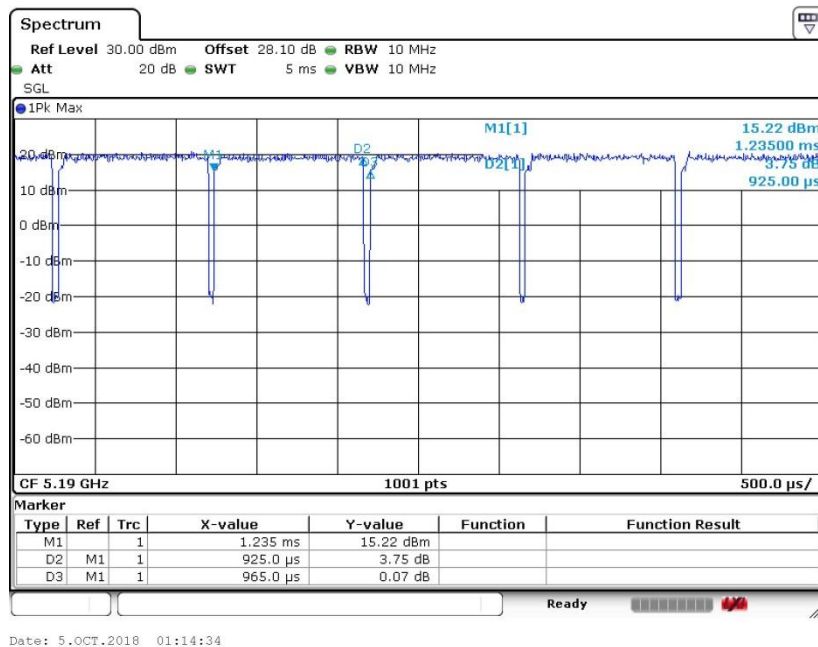


802.11n HT40



MIMO <Ant. 1>

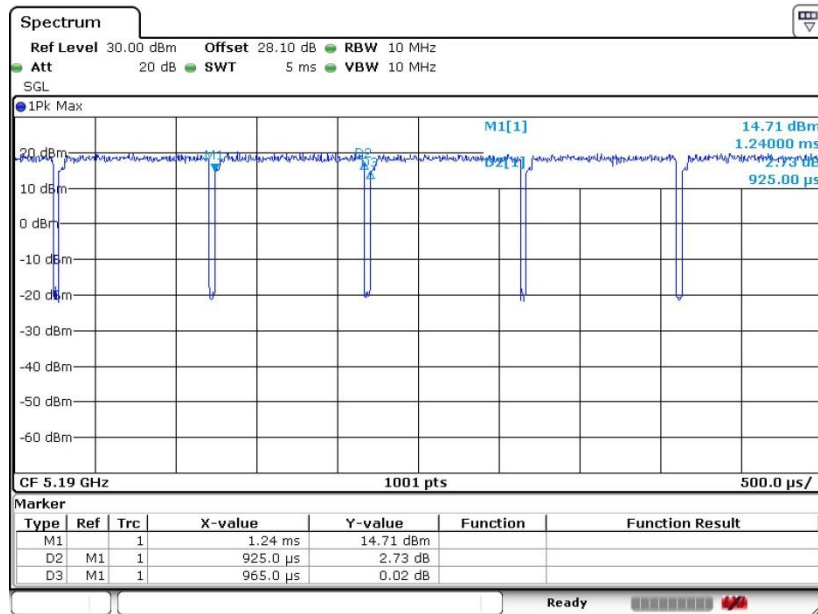
802.11n HT40





MIMO <Ant. 2>

802.11n HT40



Date: 5.OCT.2018 01:16:06

————THE END————