



FCC CO-LOCATION RADIO TEST REPORT

FCC ID : 2AOAG-3668
EQUIPMENT : Digital Media Receiver
MODEL NAME : D9N29T
Applicant : Moxham L.L.C.
1320 Main Street Suite 300 Columbia, South Carolina, 29201
STANDARD : FCC Part 15 Subpart E §15.407

The product was completed on Jul. 12, 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.)



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History of this test report

Report No.	Version	Description	Issued Date
FR831509-01D	01	Initial issue of report	Jul. 18, 2018



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
3.1	15.407(b)	Unwanted Emissions	Pass
3.2	15.203 & 15.407(a)	Antenna Requirement	Pass

Reviewed by: Louis Wu

Report Producer: Natasha Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	D9N29T
FCC ID	2AOAG-3668
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
Antenna Type	WLAN Ant. 1 : Fixed Internal Antenna Ant. 2 : Fixed Internal Antenna Bluetooth LE Ant. 1 : Fixed Internal Antenna Ant. 2 : Fixed Internal Antenna

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. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
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. 03CH07-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 v04
- ♦ ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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).

2.1 Carrier Frequency and Channel

2400-2483.5 MHz 802.11b		5150-5250 MHz 802.11a	
Channel	Freq. (MHz)	Channel	Freq. (MHz)
6	2437	36	5180
11	2462	-	-

5150-5250 MHz 802.11ac VHT 80		2400-2483.5 MHz Bluetooth LE (1Mbps)	
Channel	Freq. (MHz)	Channel	Freq. (MHz)
42	5210	39	2480

2.2 Test Mode

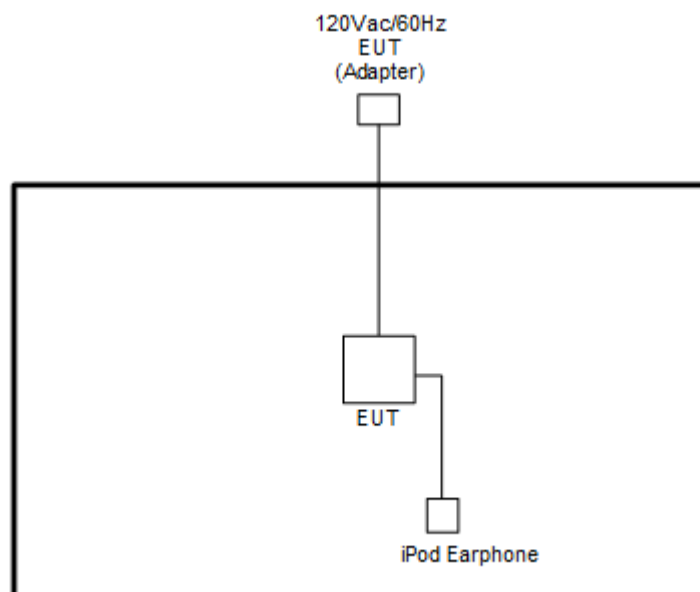
Final test modes are considering the modulation and worse data rates as below table.

<Co-Location>

Modulation	Data Rate
802.11b + Bluetooth LE	1 Mbps + 2 Mbps
802.11a + Bluetooth LE	6 Mbps + 2 Mbps
802.11ac + Bluetooth LE	MCS0 + 2 Mbps

2.3 Connection Diagram of Test System

<Co-Location Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

The RF test items, programmed RF utility, “Tool” installed in the EUT make the EUT provide functions like channel selection and power level for continuous transmitting and receiving 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) Sections 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.

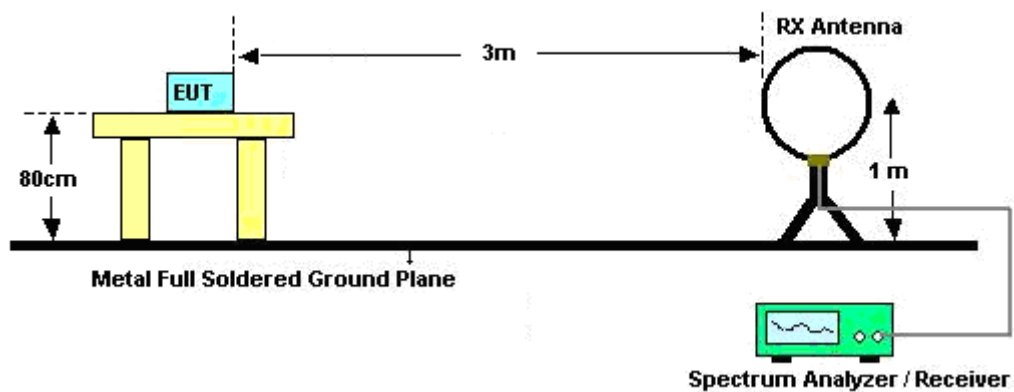
3.1.3 Test Procedures

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.

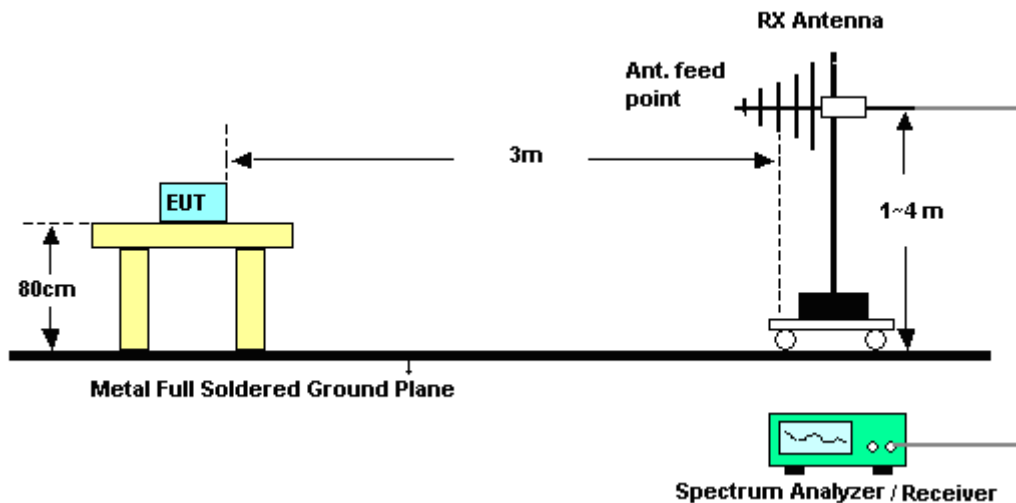
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level 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

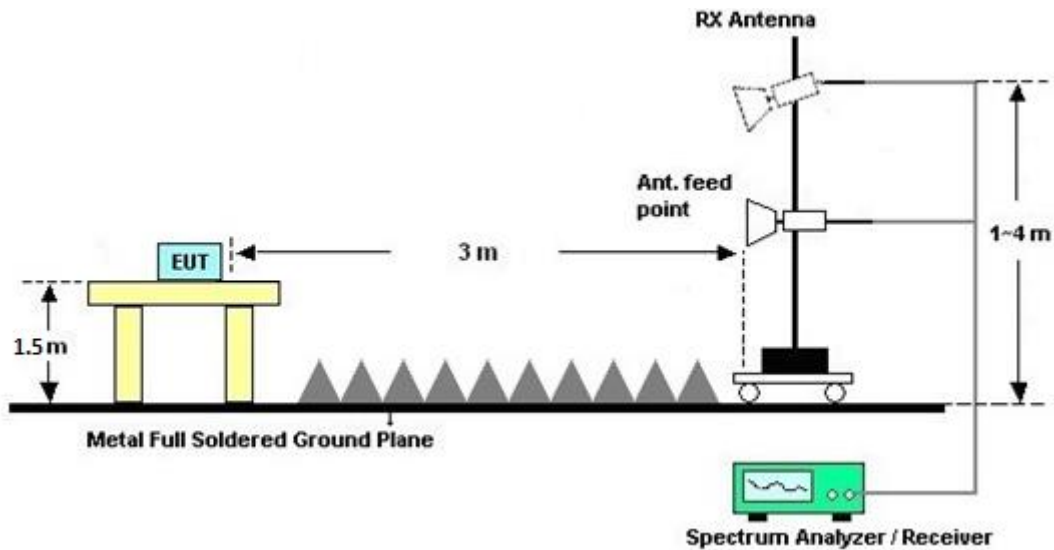
For radiated emissions below 30MHz



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
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Dec. 18, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Dec. 17, 2018	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Aug. 22, 2018	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Nov. 10, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	Apr. 24, 2019	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	May 21, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	May 20, 2019	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A023 62	1GHz~ 26.5GHz	Oct. 30, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Oct. 29, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY534701 18	10Hz~44GHz	Apr. 17, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	Apr. 16, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/ 4,MY2865 5/4	9KHz~30MHz	Jan. 02, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	Jan. 01, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/ 4, MY24971/ 4, MY15682/ 4	30MHz~1GHz	Feb. 27, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/ 4, MY24971/ 4, MY15682/ 4	1GHz~18GHz	Feb. 27, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Jun. 13, 2018 ~ Jul. 12, 2018	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Jun. 13, 2018 ~ Jul. 12, 2018	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35-H G	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Jul. 17, 2018	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	RK-00104 2	N/A	N/A	Jun. 13, 2018 ~ Jul. 12, 2018	N/A	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN477220	3.0G High Pass	Nov. 21, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Nov. 20, 2018	Radiation (03CH07-HY)
Filter	Microwave	WHKX7.0/26.5 G-6SS	SN4	7G High Pass	Nov. 21, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Nov. 20, 2018	Radiation (03CH07-HY)
Filter	Wainwright	WLKS1200-8S S	SN3	1.2G Low Pass	Nov. 21, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Nov. 20, 2018	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 251	18GHz- 40GHz	Nov. 10, 2017	Jun. 13, 2018 ~ Jul. 12, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SF102/2*11SK 252	MY4278/2	9kHz~40GHz	May 17, 2018	Jun. 13, 2018 ~ Jul. 12, 2018	May 16, 2019	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% ($U = 2Uc(y)$)	5.7
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.5
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2
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Appendix A. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh, and Nick Yu	Temperature :	24~26°C
		Relative Humidity :	53~56%

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Simultaneously													
BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)		5150	64.93	-9.07	74	54.63	34.41	11.03	35.14	106	244	P	H
		5150	53.02	-0.98	54	42.72	34.41	11.03	35.14	106	244	A	H
	*	5180	112.35	38.35	74	102	34.46	11.03	35.14	106	244	P	H
	*	5180	104.19	50.19	54	93.84	34.46	11.03	35.14	106	244	A	H
		5148.46	61.05	-12.95	74	50.75	34.41	11.03	35.14	317	52	P	V
		5150	51.74	-2.26	54	41.44	34.41	11.03	35.14	317	52	A	V
	*	5180	111.83	37.83	74	101.48	34.46	11.03	35.14	317	52	P	V
	*	5180	103.4	49.4	54	93.05	34.46	11.03	35.14	317	52	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band edge @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		5146.38	66.91	-7.09	74	56.61	34.41	11.03	35.14	244	107	P	H
		5149.76	53.13	-0.87	54	42.83	34.41	11.03	35.14	244	107	A	H
	*	5210	103.04	29.04	74	92.58	34.5	11.1	35.14	244	107	P	H
	*	5210	94.62	40.62	54	84.16	34.5	11.1	35.14	244	107	A	H
		5380.48	50.87	-23.13	74	40.13	34.74	11.15	35.15	244	107	P	H
		5351.08	41.11	-12.89	54	30.43	34.69	11.14	35.15	244	107	A	H
		5149.5	65.22	-8.78	74	54.92	34.41	11.03	35.14	231	320	P	V
		5150	52.64	-1.36	54	42.34	34.41	11.03	35.14	231	320	A	V
	*	5210	101.9	27.9	74	91.44	34.5	11.1	35.14	231	320	P	V
	*	5210	93.3	39.3	54	82.84	34.5	11.1	35.14	231	320	A	V
		5366.76	49.2	-24.8	74	38.5	34.71	11.14	35.15	231	320	P	V
		5350.8	39.81	-14.19	54	29.13	34.69	11.14	35.15	231	320	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band edge @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		5150	65.76	-8.24	74	55.46	34.41	11.03	35.14	245	106	P	H
		5150	53.17	-0.83	54	42.87	34.41	11.03	35.14	245	106	A	H
	*	5210	102.83	28.83	74	92.37	34.5	11.1	35.14	245	106	P	H
	*	5210	94.8	40.8	54	84.34	34.5	11.1	35.14	245	106	A	H
		5424.72	51.22	-22.78	74	40.4	34.78	11.2	35.16	245	106	P	H
		5350.24	41.3	-12.7	54	30.62	34.69	11.14	35.15	245	106	A	H
		5147.68	64.14	-9.86	74	53.84	34.41	11.03	35.14	232	328	P	V
		5150	52.25	-1.75	54	41.95	34.41	11.03	35.14	232	328	A	V
	*	5210	101.65	27.65	74	91.19	34.5	11.1	35.14	232	328	P	V
	*	5210	93.15	39.15	54	82.69	34.5	11.1	35.14	232	328	A	V
		5362	48.98	-25.02	74	38.28	34.71	11.14	35.15	232	328	P	V
		5351.36	39.53	-14.47	54	28.85	34.69	11.14	35.15	232	328	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band edge @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11a_Tx_Ch36 5180MHz(Ant1)		5147.94	62.09	-11.91	74	51.79	34.41	11.03	35.14	106	244	P	H
		5150	52.58	-1.42	54	42.28	34.41	11.03	35.14	106	244	A	H
	*	5180	112.37	38.37	74	102.02	34.46	11.03	35.14	106	244	P	H
	*	5180	104.07	50.07	54	93.72	34.46	11.03	35.14	106	244	A	H
		5149.76	63.51	-10.49	74	53.21	34.41	11.03	35.14	318	51	P	V
		5150	52.19	-1.81	54	41.89	34.41	11.03	35.14	318	51	A	V
	*	5180	111.06	37.06	74	100.71	34.46	11.03	35.14	318	51	P	V
	*	5180	103.29	49.29	54	92.94	34.46	11.03	35.14	318	51	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz (Band edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Simultaneously													
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)	*	2480	100.65	26.65	74	86.01	32.16	7.56	35.07	314	119	P	H
	*	2480	100.21	46.21	54	85.57	32.16	7.56	35.07	314	119	A	H
		2499.84	55.24	-18.76	74	40.57	32.2	7.56	35.08	314	119	P	H
		2484.08	47.71	-6.29	54	33.07	32.16	7.56	35.07	314	119	A	H
	*	2480	97.56	23.56	74	82.92	32.16	7.56	35.07	147	350	P	V
	*	2480	95.87	41.87	54	81.23	32.16	7.56	35.07	147	350	A	V
		2498.68	55.41	-18.59	74	40.74	32.2	7.56	35.08	147	350	P	V
		2484	46.67	-7.33	54	32.03	32.16	7.56	35.07	147	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz (Band edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Simultaneously													
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)	*	2480	102.23	28.23	74	87.59	32.16	7.56	35.07	276	285	P	H
	*	2480	101.8	47.8	54	87.16	32.16	7.56	35.07	276	285	A	H
		2483.92	56.42	-17.58	74	41.78	32.16	7.56	35.07	276	285	P	H
		2484.08	51.71	-2.29	54	37.07	32.16	7.56	35.07	276	285	A	H
	*	2480	99.41	25.41	74	84.77	32.16	7.56	35.07	400	330	P	V
	*	2480	99.17	45.17	54	84.53	32.16	7.56	35.07	400	330	A	V
		2484.04	56.75	-17.25	74	42.11	32.16	7.56	35.07	400	330	P	V
		2484.04	50.38	-3.62	54	35.74	32.16	7.56	35.07	400	330	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz (Band edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Simultaneously													
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)	*	2480	101.65	27.65	74	87.01	32.16	7.56	35.07	277	303	P	H
	*	2480	101.04	47.04	54	86.4	32.16	7.56	35.07	277	303	A	H
		2484	56.61	-17.39	74	41.97	32.16	7.56	35.07	277	303	P	H
		2483.96	51.16	-2.84	54	36.52	32.16	7.56	35.07	277	303	A	H
	*	2480	98.93	24.93	74	84.29	32.16	7.56	35.07	258	330	P	V
	*	2480	98.22	44.22	54	83.58	32.16	7.56	35.07	258	330	A	V
		2483.96	56.76	-17.24	74	42.12	32.16	7.56	35.07	258	330	P	V
		2483.96	50.99	-3.01	54	36.35	32.16	7.56	35.07	258	330	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz (Band edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Simultaneously													
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz(Ant1)	*	2480	99.4	25.4	74	84.76	32.16	7.56	35.07	318	205	P	H
	*	2480	98.79	44.79	54	84.15	32.16	7.56	35.07	318	205	A	H
		2483.92	55.78	-18.22	74	41.14	32.16	7.56	35.07	318	205	P	H
		2483.96	49.21	-4.79	54	34.57	32.16	7.56	35.07	318	205	A	H
	*	2480	96.23	22.23	74	81.59	32.16	7.56	35.07	142	1	P	V
	*	2480	95.7	41.7	54	81.06	32.16	7.56	35.07	142	1	A	V
		2495.32	54.42	-19.58	74	39.75	32.2	7.56	35.08	142	1	P	V
		2483.92	46.28	-7.72	54	31.64	32.16	7.56	35.07	142	1	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)		4960	43.42	-30.58	74	57.14	34.21	11.14	59.07	100	0	P	H
		7440	41.71	-32.29	74	50.37	35.63	14.04	58.33	100	0	P	H
		10360	47.33	-20.87	68.2	52.47	37.19	17	59.33	100	0	P	H
		15540	48.63	-25.37	74	44.27	40.43	20.52	56.59	100	0	P	H
		4960	42.43	-31.57	74	56.15	34.21	11.14	59.07	100	0	P	V
		7440	41.85	-32.15	74	50.51	35.63	14.04	58.33	100	0	P	V
		10360	49.96	-18.24	68.2	55.1	37.19	17	59.33	100	0	P	V
		15540	48.15	-25.85	74	43.79	40.43	20.52	56.59	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		4960	43.74	-30.26	74	57.46	34.21	11.14	59.07	100	0	P	H
		7440	41.49	-32.51	74	50.15	35.63	14.04	58.33	100	0	P	H
		10420	44.94	-23.26	68.2	49.94	37.23	17.05	59.28	100	0	P	H
		15630	46.56	-27.44	74	42.05	40.51	20.57	56.57	100	0	P	H
		4960	40.9	-33.1	74	54.62	34.21	11.14	59.07	100	0	P	V
		7440	41.92	-32.08	74	50.58	35.63	14.04	58.33	100	0	P	V
		10420	45.27	-22.93	68.2	50.27	37.23	17.05	59.28	100	0	P	V
		15630	46.73	-27.27	74	42.22	40.51	20.57	56.57	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 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.
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		4960	41.83	-32.17	74	55.55	34.21	11.14	59.07	100	0	P	H
		7440	42.37	-31.63	74	51.03	35.63	14.04	58.33	100	0	P	H
		10420	44.56	-23.64	68.2	49.56	37.23	17.05	59.28	100	0	P	H
		15630	46.97	-27.03	74	42.46	40.51	20.57	56.57	100	0	P	H
		4960	42.32	-31.68	74	56.04	34.21	11.14	59.07	100	0	P	V
		7440	41.93	-32.07	74	50.59	35.63	14.04	58.33	100	0	P	V
		10420	44.86	-23.34	68.2	49.86	37.23	17.05	59.28	100	0	P	V
		15630	46.6	-27.4	74	42.09	40.51	20.57	56.57	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 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.
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE(2M) CH39 2480MHz(Ant2) + 11a_Tx_Ch36 5180MHz(Ant1)		4960	42.73	-31.27	74	56.45	34.21	11.14	59.07	100	0	P	H
		7440	41.6	-32.4	74	50.26	35.63	14.04	58.33	100	0	P	H
		10360	46.78	-21.42	68.2	51.92	37.19	17	59.33	100	0	P	H
		15540	48.63	-25.37	74	44.27	40.43	20.52	56.59	100	0	P	H
		4960	43.46	-30.54	74	57.18	34.21	11.14	59.07	100	0	P	V
		7440	41.62	-32.38	74	50.28	35.63	14.04	58.33	100	0	P	V
		10360	49.84	-18.36	68.2	54.98	37.19	17	59.33	100	0	P	V
		15540	48.13	-25.87	74	43.77	40.43	20.52	56.59	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												


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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)		4924	47.32	-26.68	74	61.03	34.21	10.66	59.14	100	0	P	H
		4960	42.71	-31.29	74	56.31	34.21	10.71	59.07	100	0	P	H
		7386	48.77	-25.23	74	57.68	35.66	13.29	58.26	100	0	P	H
		7440	44.17	-29.83	74	53.16	35.63	13.32	58.33	100	0	P	H
		4924	52.71	-21.29	74	66.42	34.21	10.66	59.14	267	15	P	V
		4924	49.53	-4.47	54	63.24	34.21	10.66	59.14	267	15	V	V
		4960	42.58	-31.42	74	56.18	34.21	10.71	59.07	100	0	P	V
		7386	48.88	-25.12	74	57.79	35.66	13.29	58.26	100	0	P	V
		7440	44.01	-29.99	74	53	35.63	13.32	58.33	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)		4874	54.99	-19.01	74	68.85	34.22	10.6	59.24	240	71	P	H
		4874	52.32	-1.68	54	66.18	34.22	10.6	59.24	240	71	V	H
		4960	43.21	-30.79	74	56.81	34.21	10.71	59.07	100	0	P	H
		7311	56.73	-17.27	74	65.54	35.71	13.19	58.13	238	95	P	H
		7311	52.36	-1.64	54	61.17	35.71	13.19	58.13	238	95	V	H
		7440	44.28	-29.72	74	53.27	35.63	13.32	58.33	100	0	P	H
		4874	53.9	-20.1	74	67.76	34.22	10.6	59.24	367	236	P	V
		4874	51.57	-2.43	54	65.43	34.22	10.6	59.24	367	236	V	V
		4960	42.52	-31.48	74	56.12	34.21	10.71	59.07	100	0	P	V
		7311	55.66	-18.34	74	64.47	35.71	13.19	58.13	268	311	P	V
		7311	51.35	-2.65	54	60.16	35.71	13.19	58.13	268	311	V	V
		7440	44.18	-29.82	74	53.17	35.63	13.32	58.33	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)		4874	54.64	-19.36	74	68.5	34.22	10.6	59.24	240	70	P	H
		4874	52.09	-1.91	54	65.95	34.22	10.6	59.24	240	70	V	H
		4960	43.2	-30.8	74	56.8	34.21	10.71	59.07	100	0	P	H
		7311	56.74	-17.26	74	65.55	35.71	13.19	58.13	237	95	P	H
		7311	52.53	-1.47	54	61.34	35.71	13.19	58.13	237	95	V	H
		7440	44.64	-29.36	74	53.63	35.63	13.32	58.33	100	0	P	H
		4874	53.73	-20.27	74	67.59	34.22	10.6	59.24	367	232	P	V
		4874	51.4	-2.6	54	65.26	34.22	10.6	59.24	367	232	V	V
		4960	42.49	-31.51	74	56.09	34.21	10.71	59.07	100	0	P	V
		7311	55.96	-18.04	74	64.77	35.71	13.19	58.13	269	320	P	V
		7311	51.79	-2.21	54	60.6	35.71	13.19	58.13	269	320	V	V
		7440	44.38	-29.62	74	53.37	35.63	13.32	58.33	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz(Ant1)		4924	46.53	-27.47	74	60.24	34.21	10.66	59.14	100	0	P	H
		4960	41.27	-32.73	74	54.87	34.21	10.71	59.07	100	0	P	H
		7386	49.46	-24.54	74	58.37	35.66	13.29	58.26	100	0	P	H
		7440	42.72	-31.28	74	51.71	35.63	13.32	58.33	100	0	P	H
		4924	48.25	-25.75	74	61.96	34.21	10.66	59.14	100	0	P	V
		4960	42.03	-31.97	74	55.63	34.21	10.71	59.07	100	0	P	V
		7386	52.06	-21.94	74	60.97	35.66	13.29	58.26	219	177	P	V
		7386	46.5	-7.5	54	55.41	35.66	13.29	58.26	219	177	V	V
		7440	42.25	-31.75	74	51.24	35.63	13.32	58.33	100	0	P	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 1 5150~5250MHz (LF @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)		30	29.72	-10.28	40	35.14	24.6	1.33	31.35	100	0	P	H
		44.58	23.36	-16.64	40	36.86	16.71	1.34	31.55	-	-	P	H
		57.81	18.44	-21.56	40	36.64	12.05	1.35	31.6	-	-	P	H
		783	30.15	-15.85	46	28.18	27.98	4.6	30.61	-	-	P	H
		867	30.74	-15.26	46	27.42	28.98	4.88	30.54	-	-	P	H
		947.5	32.17	-13.83	46	27.41	30.23	5.05	30.52	-	-	P	H
		30	30.29	-9.71	40	35.71	24.6	1.33	31.35	100	0	P	V
		38.91	19.04	-20.96	40	29.29	19.88	1.34	31.47	-	-	P	V
		71.31	24.19	-15.81	40	41.58	12.5	1.7	31.59	-	-	P	V
		777.4	30.07	-15.93	46	28.25	27.97	4.46	30.61	-	-	P	V
		862.8	30.68	-15.32	46	27.34	29.01	4.88	30.55	-	-	P	V
		948.9	31.55	-14.45	46	26.74	30.28	5.05	30.52	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF @ 3m)

WIFI Ant. Simultaneously	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)
BT CH39 2480MHz(Ant2) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		32.16	32.02	-7.98	40	38.49	23.58	1.33	31.38	100	0	P	H
		73.2	25.18	-14.82	40	42.39	12.67	1.71	31.59	-	-	P	H
		134.49	24.6	-18.9	43.5	36.71	17.4	2.01	31.52	-	-	P	H
		624.1	34.01	-11.99	46	35.02	25.64	4.14	30.79	-	-	P	H
		746.6	31.98	-14.02	46	30.43	27.73	4.46	30.64	-	-	P	H
		967.1	33.31	-20.69	54	27.89	30.87	5.06	30.51	-	-	P	H
		30	30.08	-9.92	40	35.5	24.6	1.33	31.35	100	0	P	V
		71.58	22.2	-17.8	40	39.58	12.5	1.71	31.59	-	-	P	V
		207.93	21.48	-22.02	43.5	35.47	15.07	2.38	31.44	-	-	P	V
		514.9	28.93	-17.07	46	32.25	23.92	3.72	30.96	-	-	P	V
		624.1	33.68	-12.32	46	34.69	25.64	4.14	30.79	-	-	P	V
		993.7	32.21	-21.79	54	27.17	30.43	5.12	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80 _Tx_Ch42 5210MHz(Ant2)		30	29.42	-10.58	40	34.84	24.6	1.33	31.35	100	0	P	H
		134.49	24.82	-18.68	43.5	36.93	17.4	2.01	31.52	-	-	P	H
		260.85	30.79	-15.21	46	39.78	19.5	2.87	31.36	-	-	P	H
		624.1	33.22	-12.78	46	34.23	25.64	4.14	30.79	-	-	P	H
		769	32.78	-13.22	46	31.04	27.9	4.46	30.62	-	-	P	H
		964.3	32.6	-21.4	54	27.17	30.88	5.06	30.51	-	-	P	H
		30	29.43	-10.57	40	34.85	24.6	1.33	31.35	100	0	P	V
		70.5	23.38	-16.62	40	40.85	12.42	1.7	31.59	-	-	P	V
		277.32	24.92	-21.08	46	34.54	18.85	2.86	31.33	-	-	P	V
		514.9	33.02	-12.98	46	36.34	23.92	3.72	30.96	-	-	P	V
		728.4	32.3	-13.7	46	31.44	27.14	4.37	30.65	-	-	P	V
		992.3	33.17	-20.83	54	28.08	30.48	5.12	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF @ 3m)

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11a_Tx_Ch36 5180MHz(Ant1)		30	29.6	-10.4	40	35.02	24.6	1.33	31.35	100	0	P	H
		149.34	29.19	-14.31	43.5	41.4	17.06	2.24	31.51	-	-	P	H
		264.63	18.98	-27.02	46	28.11	19.35	2.87	31.35	-	-	P	H
		333.6	27.55	-18.45	46	35.99	19.84	2.96	31.24	-	-	P	H
		444.9	32.95	-13.05	46	37.61	22.91	3.49	31.06	-	-	P	H
		948.2	32.93	-13.07	46	28.12	30.28	5.05	30.52	-	-	P	H
		30	29.6	-10.4	40	35.02	24.6	1.33	31.35	100	0	P	V
		71.31	21.57	-18.43	40	38.96	12.5	1.7	31.59	-	-	P	V
		207.93	17.56	-25.94	43.5	31.55	15.07	2.38	31.44	-	-	P	V
		517	29.37	-16.63	46	32.67	23.93	3.72	30.95	-	-	P	V
		624.1	33.57	-12.43	46	34.58	25.64	4.14	30.79	-	-	P	V
		960.8	33.65	-20.35	54	28.21	30.9	5.05	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

**Emission below 1GHz****2.4GHz 2400~2483.5MHz (LF @ 3m)**

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)		30	28.33	-11.67	40	33.88	24.6	1.2	31.35	-	-	P	H
		141.24	25.08	-18.42	43.5	37.01	17.36	2.06	31.51	-	-	P	H
		207.93	32.68	-10.82	43.5	46.8	15.07	2.18	31.44	100	0	P	H
		416.2	30.93	-15.07	46	36.35	22.4	3.05	31.11	-	-	P	H
		624.1	29.11	-16.89	46	30.21	25.64	3.89	30.79	-	-	P	H
		955.9	32.16	-13.84	46	26.95	30.69	4.71	30.51	-	-	P	H
		30	29.4	-10.6	40	34.95	24.6	1.2	31.35	100	0	P	V
		72.93	18.08	-21.92	40	35.4	12.59	1.55	31.59	-	-	P	V
		207.93	27.88	-15.62	43.5	42	15.07	2.18	31.44	-	-	P	V
		517	29.2	-16.8	46	32.57	23.93	3.49	30.95	-	-	P	V
		624.1	33.65	-12.35	46	34.75	25.64	3.89	30.79	-	-	P	V
		980.4	32.75	-21.25	54	27.38	30.79	4.76	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)		30	28.14	-11.86	40	33.69	24.6	1.2	31.35	-	-	P	H
		127.47	24.86	-18.64	43.5	36.85	17.59	1.83	31.53	-	-	P	H
		207.93	32.37	-11.13	43.5	46.49	15.07	2.18	31.44	100	0	P	H
		416.2	28.44	-17.56	46	33.86	22.4	3.05	31.11	-	-	P	H
		764.1	30.52	-15.48	46	28.9	27.87	4.18	30.62	-	-	P	H
		974.1	32.11	-21.89	54	26.74	30.84	4.71	30.51	-	-	P	H
		30.27	29.29	-10.71	40	34.84	24.6	1.2	31.35	100	0	P	V
		146.1	19	-24.5	43.5	31.09	17.19	2.06	31.51	-	-	P	V
		207.93	27.03	-16.47	43.5	41.15	15.07	2.18	31.44	-	-	P	V
		511.4	30.02	-15.98	46	33.42	23.9	3.49	30.96	-	-	P	V
		624.1	34.14	-11.86	46	35.24	25.64	3.89	30.79	-	-	P	V
		974.1	32.39	-21.61	54	27.02	30.84	4.71	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)		30.27	28.07	-11.93	40	33.62	24.6	1.2	31.35	100	0	P	H
		132.6	25.02	-18.48	43.5	37.17	17.41	1.83	31.52	-	-	P	H
		207.93	30.48	-13.02	43.5	44.6	15.07	2.18	31.44	-	-	P	H
		624.1	28.99	-17.01	46	30.09	25.64	3.89	30.79	-	-	P	H
		806.1	29.4	-16.6	46	27.54	27.91	4.32	30.59	-	-	P	H
		969.9	31.75	-22.25	54	26.36	30.86	4.71	30.51	-	-	P	H
		30	28.56	-11.44	40	34.11	24.6	1.2	31.35	100	0	P	V
		143.94	19.3	-24.2	43.5	31.29	17.3	2.06	31.51	-	-	P	V
		207.93	26.2	-17.3	43.5	40.32	15.07	2.18	31.44	-	-	P	V
		510	28.74	-17.26	46	32.15	23.9	3.49	30.97	-	-	P	V
		624.1	29.31	-16.69	46	30.41	25.64	3.89	30.79	-	-	P	V
		960.1	31.17	-22.83	54	25.74	30.9	4.71	30.51	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

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

WIFI Ant. Simultaneously	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)
BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz(Ant1)		30.27	27.95	-12.05	40	33.5	24.6	1.2	31.35	-	-	P	H
		127.2	25.16	-18.34	43.5	37.15	17.59	1.83	31.53	-	-	P	H
		207.93	32.14	-11.36	43.5	46.26	15.07	2.18	31.44	100	0	P	H
		624.1	29.9	-16.1	46	31	25.64	3.89	30.79	-	-	P	H
		868.4	31.58	-14.42	46	28.31	28.98	4.58	30.54	-	-	P	H
		955.9	32.11	-13.89	46	26.9	30.69	4.71	30.51	-	-	P	H
		30.27	28.9	-11.1	40	34.45	24.6	1.2	31.35	100	0	P	V
		139.35	18.72	-24.78	43.5	30.83	17.43	1.83	31.52	-	-	P	V
		207.93	26.14	-17.36	43.5	40.26	15.07	2.18	31.44	-	-	P	V
		624.1	33.38	-12.62	46	34.48	25.64	3.89	30.79	-	-	P	V
		888.7	30.6	-15.4	46	27.46	28.82	4.58	30.53	-	-	P	V
		954.5	32.38	-13.62	46	27.27	30.59	4.71	30.51	-	-	P	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.
-	The signal is Unintentional Radiators .
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+2		(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

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)

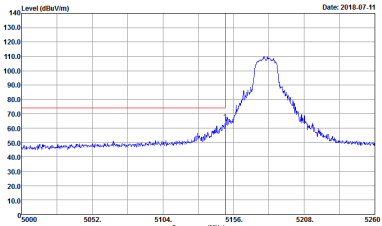
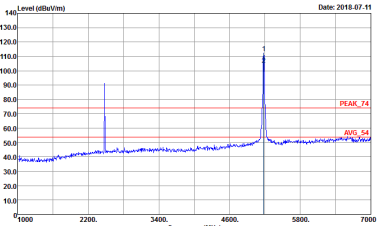
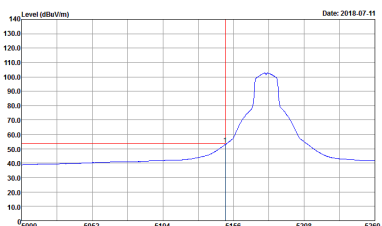
Both peak and average measured complies with the limit line, so test result is “PASS”.



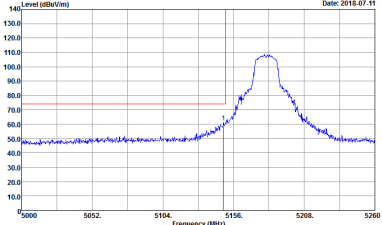
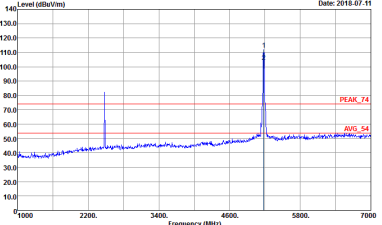
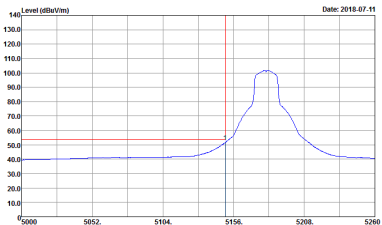
Appendix B. Radiated Spurious Emission Plots

Test Engineer :	Jesse Wang, Stan Hsieh, and Nick Yu	Temperature :	24~26°C
		Relative Humidity :	53~56%

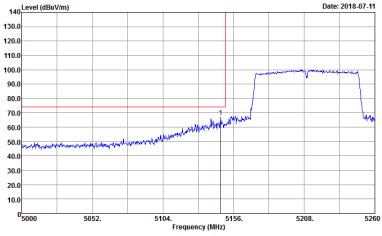
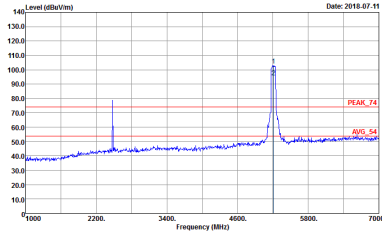
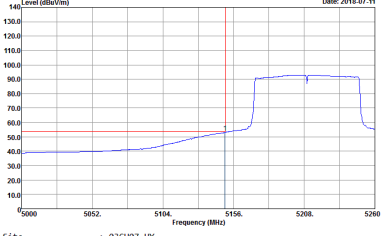
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band Edge @ 3m)

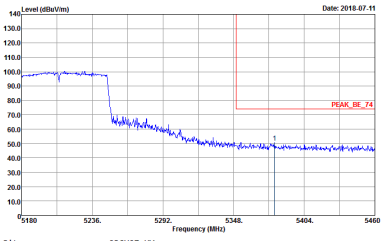
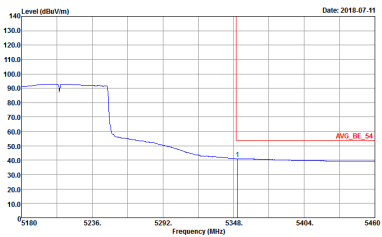
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 41	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 41
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 41	Left blank

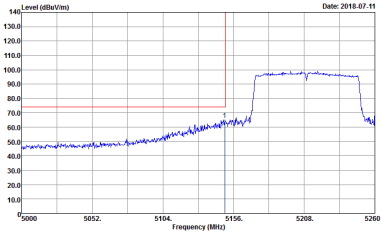
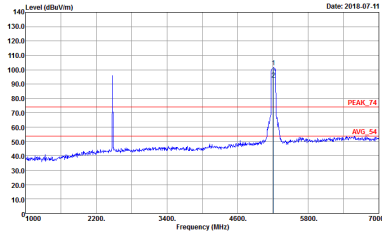
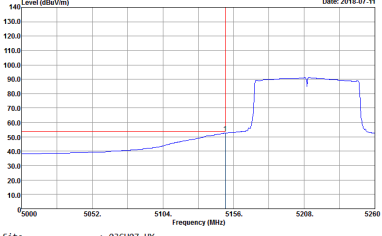


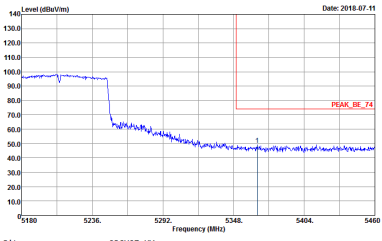
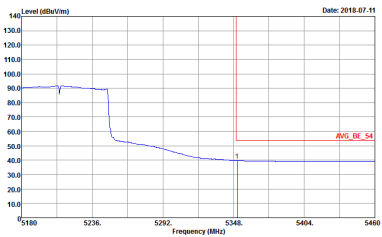
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz (Ant1)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 41	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 41
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:0.010KHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 41	Left blank

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band Edge @ 3m)

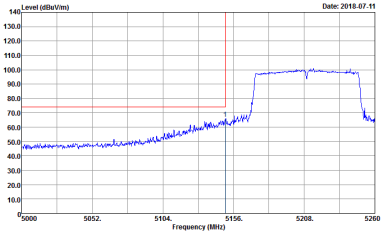
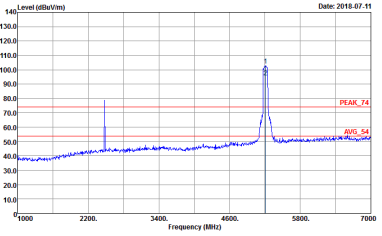
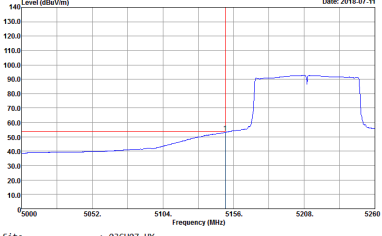
ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	Left blank

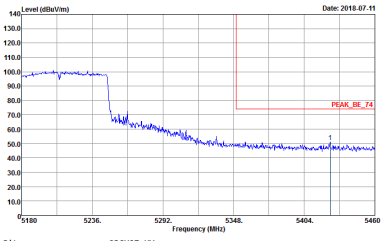
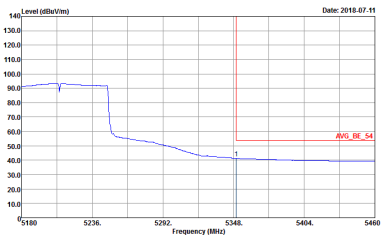
ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	Left blank

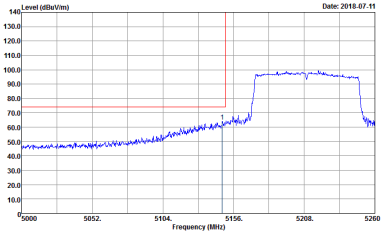
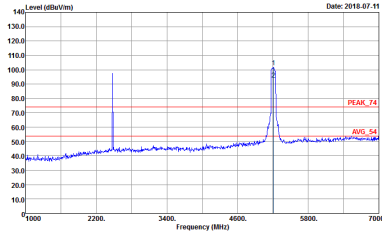
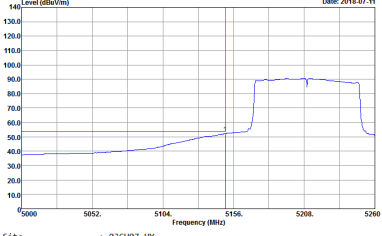
ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 42	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 42
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 42	Left blank

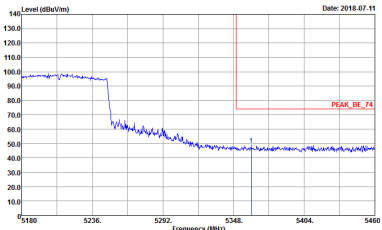
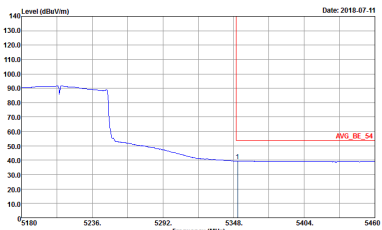
ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 42	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 42	Left blank

2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band Edge @ 3m)

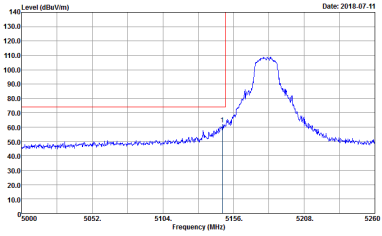
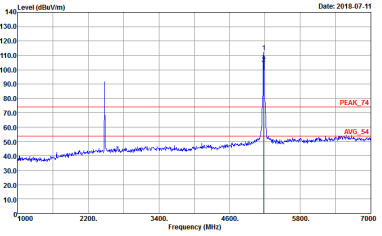
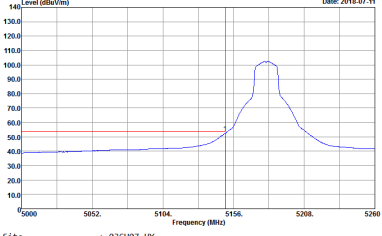
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 43	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 43
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 43	Left blank

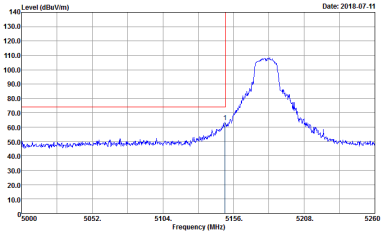
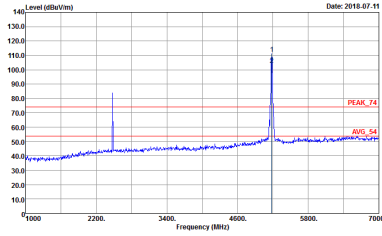
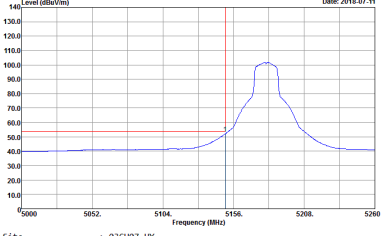
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 43	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 43	Left blank

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 43	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 43
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 43	Left blank

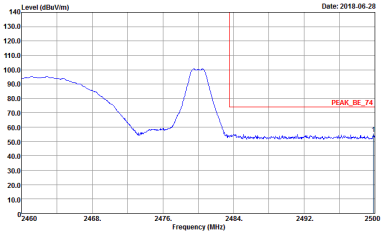
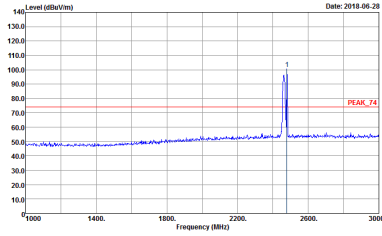
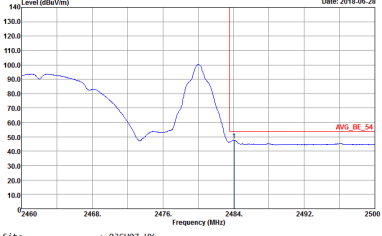
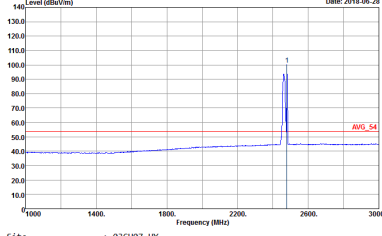
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 43	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:0.010KHz SMT:Auto Detector : Peak Project : 831509-01 Mode : 43	Left blank

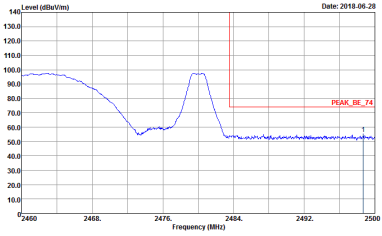
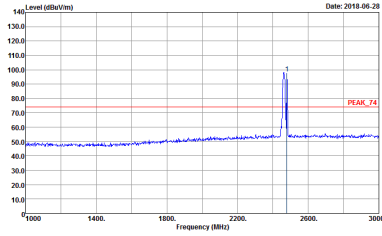
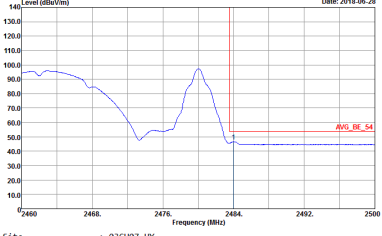
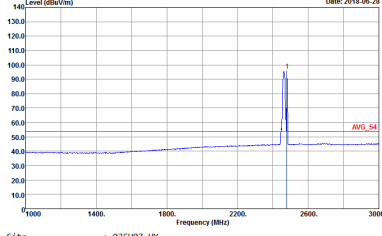
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Band Edge @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 44	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 44
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 44	Left blank

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 44	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 44
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 44	Left blank

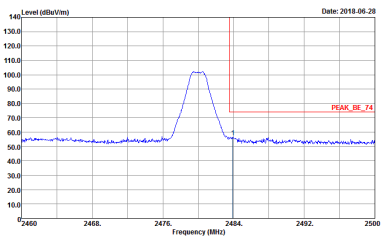
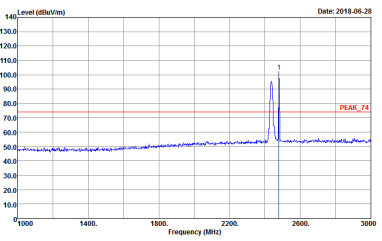
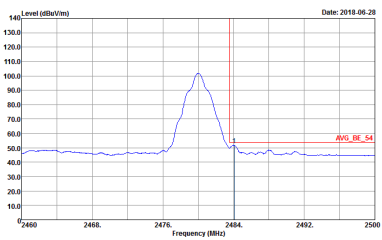
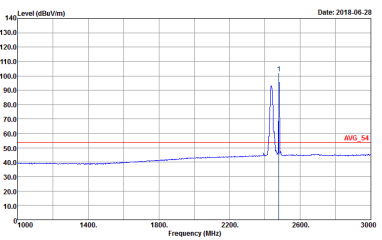
2.4GHz 2400~2483.5MHz (Band Edge @ 3m)

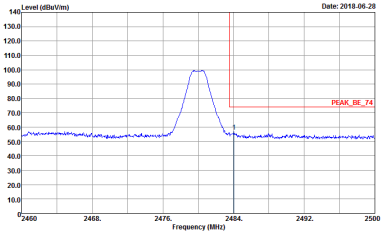
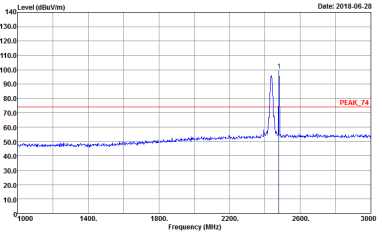
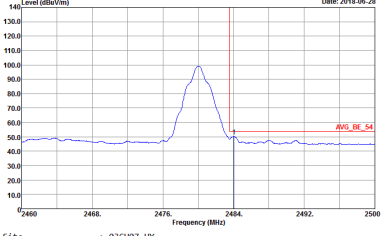
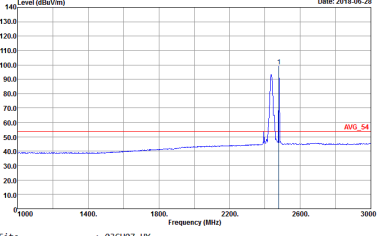
ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 55	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 55
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 55	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 55
Avg.		

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 55	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 55
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 55	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 55
Avg.		

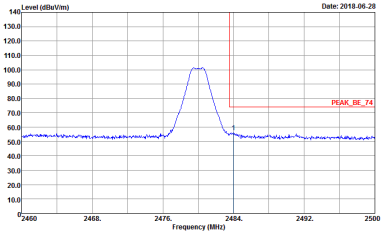
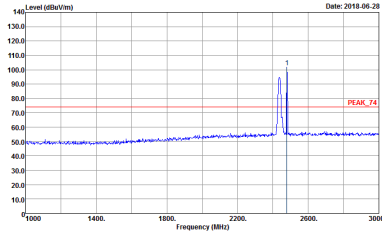
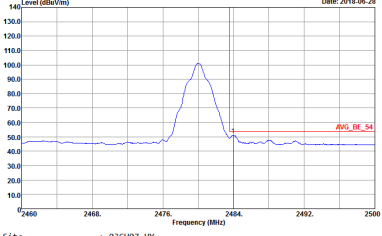
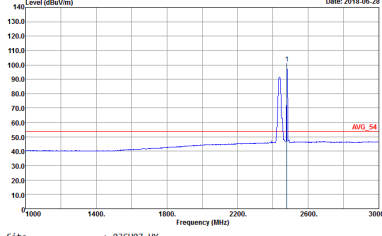


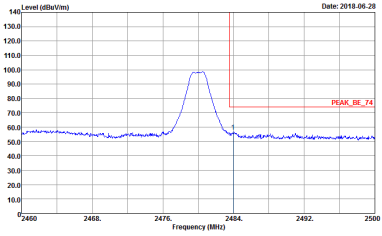
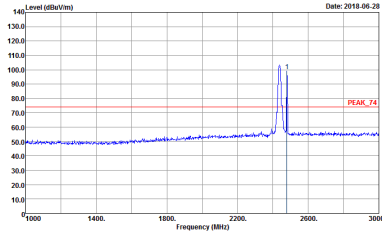
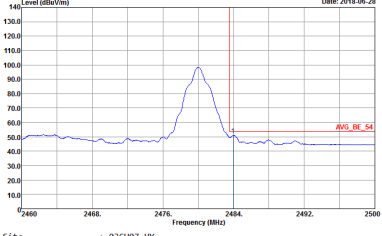
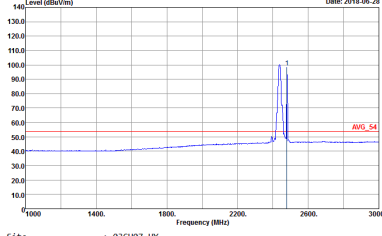
2.4GHz 2400~2483.5MHz (Band Edge @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 56	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 56
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 56	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 56

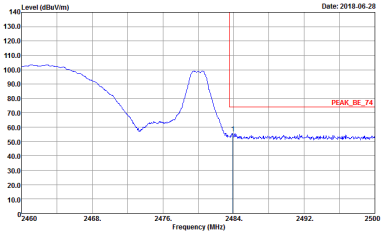
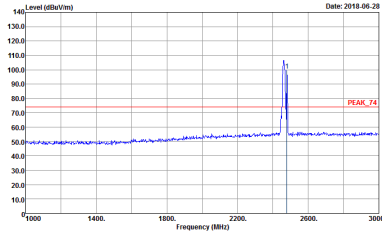
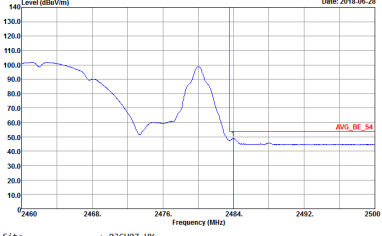
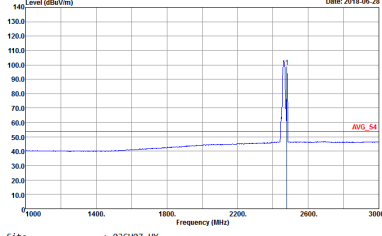
ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 56	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 56
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 56	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 56
Avg.		

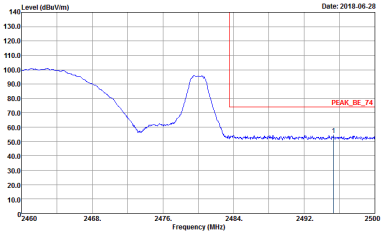
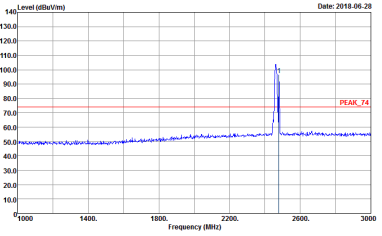
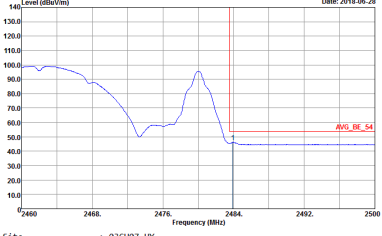
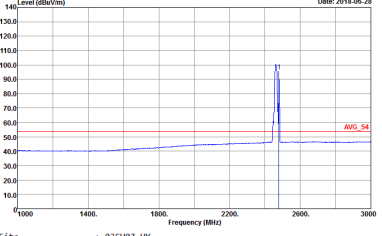
2.4GHz 2400~2483.5MHz (Band Edge @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57
Avg.		

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 57
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 57
Avg.		

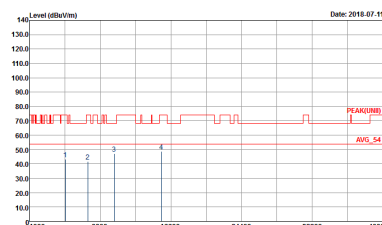
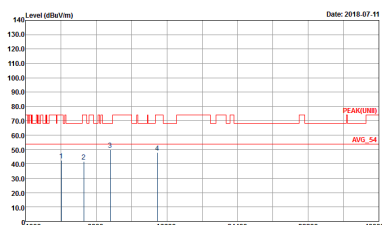
2.4GHz 2400~2483.5MHz (Band Edge @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz (Ant1)	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 58	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 58
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 58	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 58
Avg.		

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 58	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 58
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 58	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 831509-01 Mode : 58
Avg.		



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 41	 Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 41

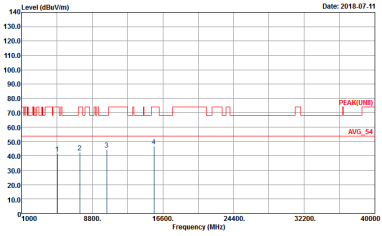
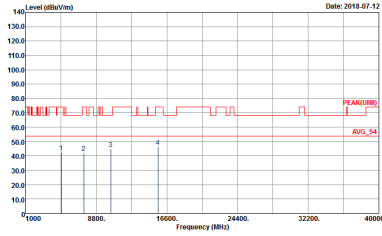


2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11a_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 42



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 43	 Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 43



2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11a_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 44	Site : 03CH07-HY Condition : PEAK(UNIT) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 44

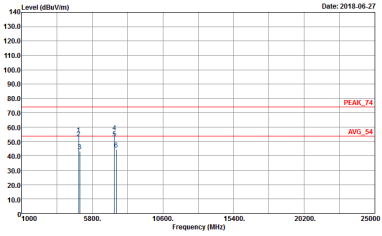
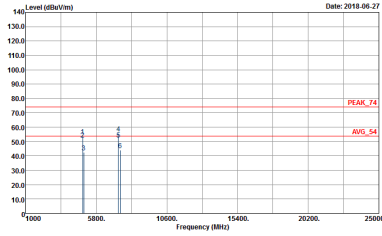


2.4GHz 2400~2483.5MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 55	Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 55

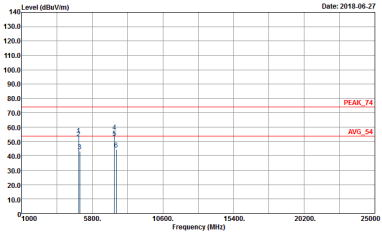
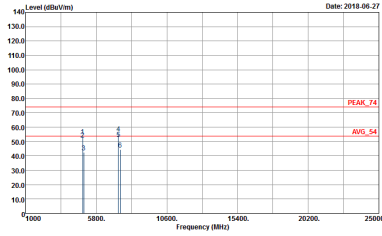


2.4GHz 2400~2483.5MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 56	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 56

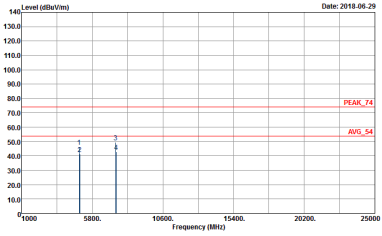
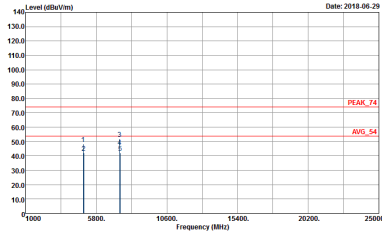


2.4GHz 2400~2483.5MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b_Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 57



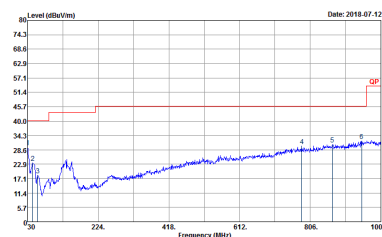
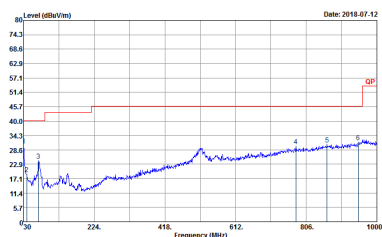
2.4GHz 2400~2483.5MHz (Harmonic @ 3m)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b_Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 831509-01 Mode : 5B	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 831509-01 Mode : 5B

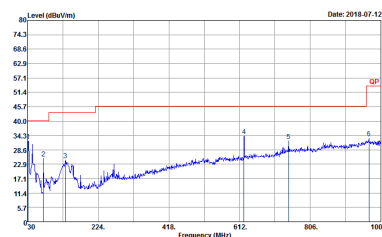
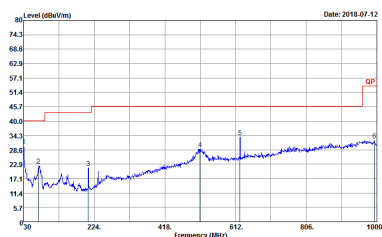


Emission below 1GHz

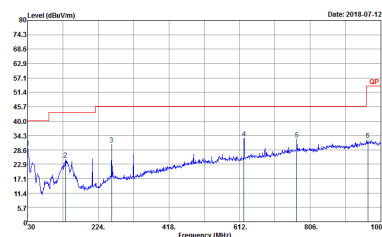
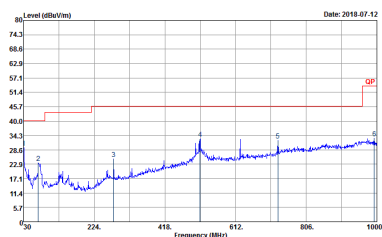
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11a_Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 41	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 41

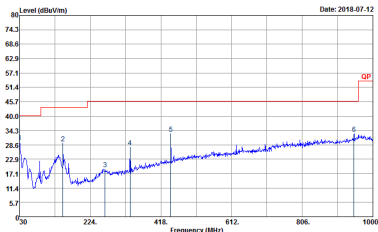
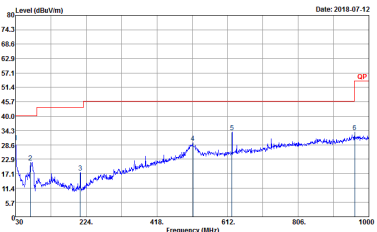
Emission below 1GHz
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 42	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 42

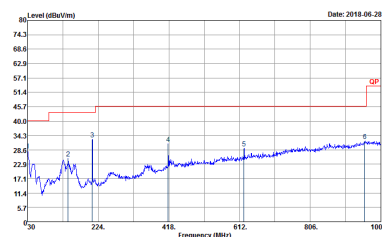
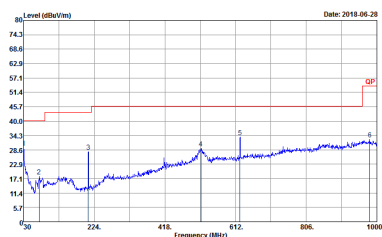
Emission below 1GHz
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11ac_VHT80_Tx_Ch42 5210MHz(Ant2)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 43	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 43

Emission below 1GHz
2.4GHz 2400~2483.5MHz and Band 1 5150~5250MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11a _Tx_Ch36 5180MHz(Ant1)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 44	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 44

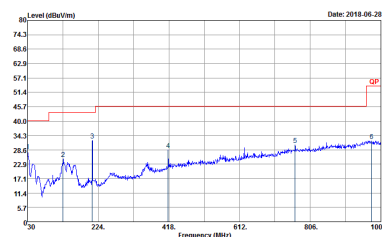
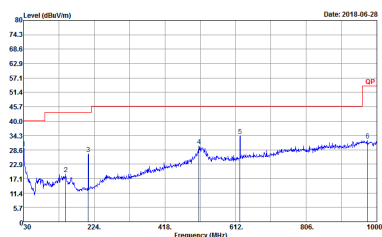
Emission below 1GHz
2.4GHz 2400~2483.5MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b _Tx_Ch11 2462MHz (Ant1)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : SS	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : SS

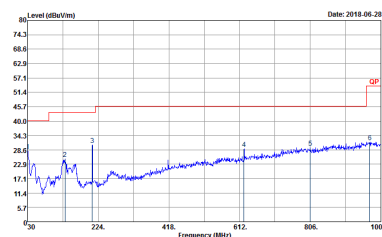
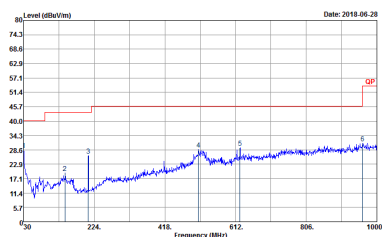


Emission below 1GHz

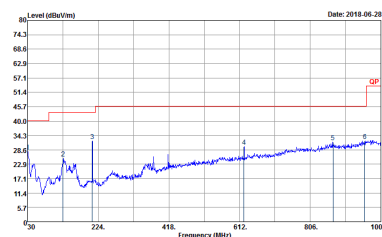
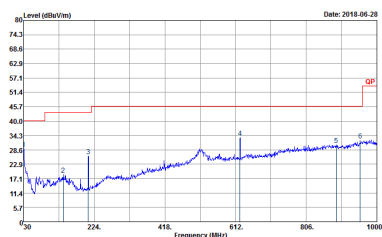
2.4GHz 2400~2483.5MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b _Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 5G	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 5G

Emission below 1GHz
2.4GHz 2400~2483.5MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant1) + 11b _Tx_Ch6 2437MHz(Ant2)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : 57	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : 57

Emission below 1GHz
2.4GHz 2400~2483.5MHz (LF)

ANT	BLE(2M) CH39 2480MHz(Ant2) + 11b _Tx_Ch11 2462MHz(Ant1)	
Simultaneously	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 831509-01 Mode : SB	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 831509-01 Mode : SB



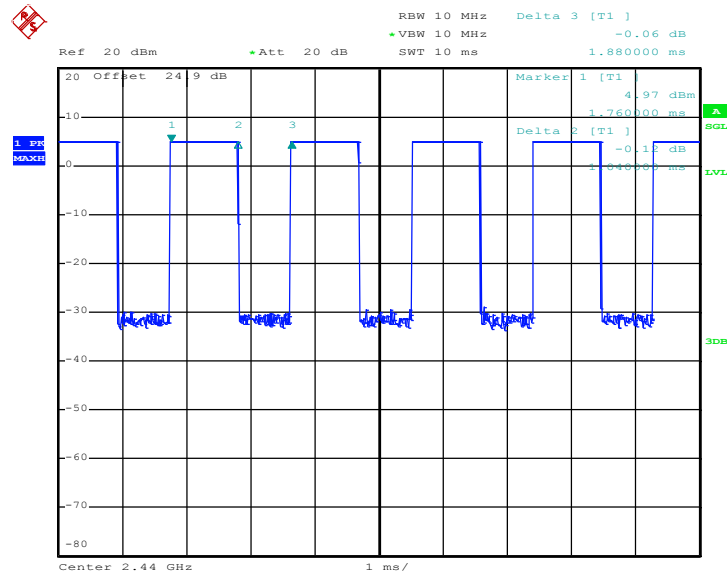
Appendix C. Duty Cycle Plots

Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor (dB)
Bluetooth - LE (2Mbps) for Ant. 1	55.32	1040.00	0.96	1kHz	2.57
Bluetooth - LE (2Mbps) for Ant. 2	55.32	1040.00	0.96	1kHz	2.57
802.11b for Ant. 1	98.59	-	-	10Hz	0.06
802.11b for Ant. 2	98.58	-	-	10Hz	0.06
802.11a for Ant. 1	100.00	-	-	10Hz	0.00
5GHz 802.11ac VHT80 for Ant. 2	100.00	-	-	10Hz	0.00



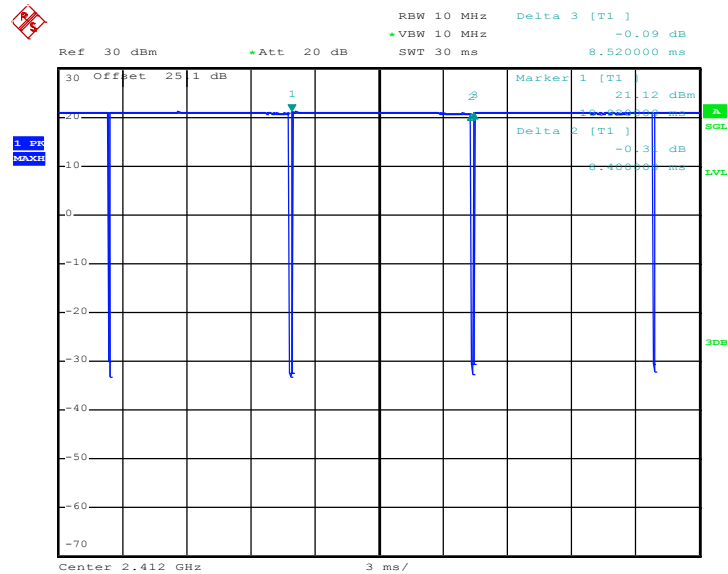
<Ant. 1>

Bluetooth - LE (2Mbps)



Date: 29.JUN.2018 02:09:41

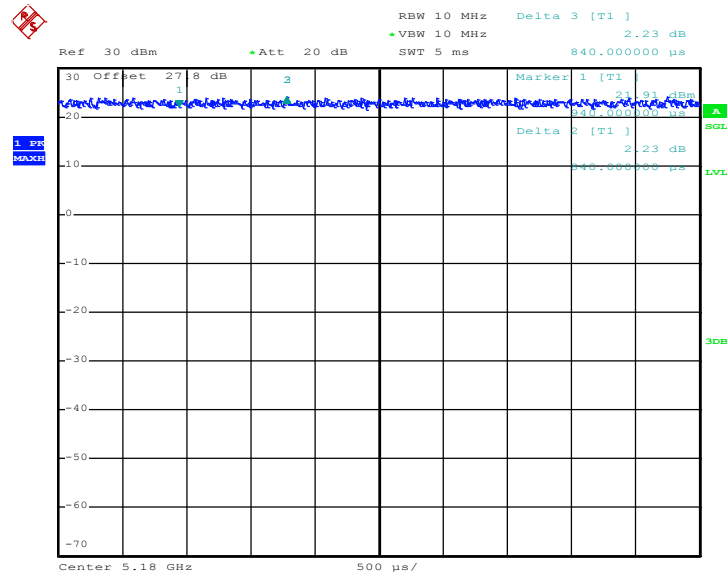
802.11b



Date: 7.JUN.2018 22:55:16



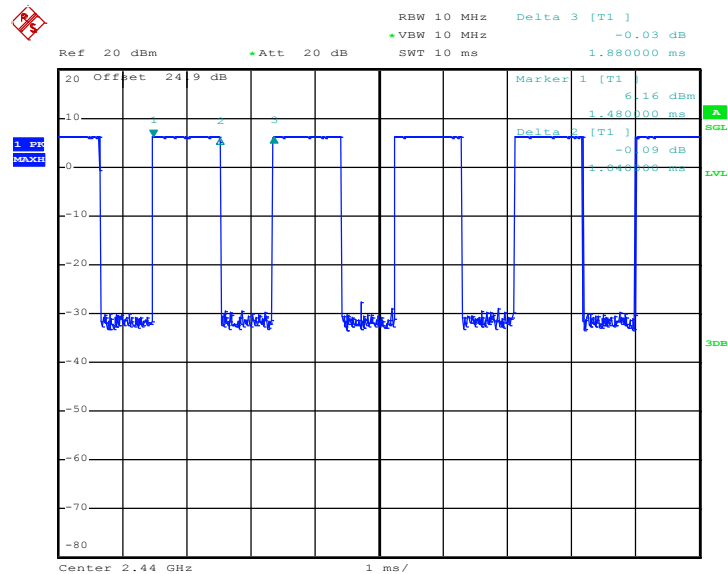
802.11a



Date: 5.JUL.2018 03:48:52

<Ant. 2>

Bluetooth - LE (2Mbps)



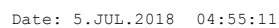
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802.11b



5GHz 802.11ac VHT80



————THE END————