

FCC RADIO TEST REPORT

FCC ID : EJE-WB0108
Equipment : Tablet PC
Brand Name : FUJITSU
Model Name : T939
Applicant : FUJITSU CLIENT COMPUTING LIMITED
1-1, Kamikodanaka 4-chome,
Nakahara-ku, Kawasaki, 211-8588 Japan
Manufacturer : FUJITSU CLIENT COMPUTING LIMITED
1-1, Kamikodanaka 4-chome,
Nakahara-ku, Kawasaki, 211-8588 Japan
Standard : FCC Part 15 Subpart C §15.247

The product was received on Dec. 31, 2018 and testing was started from Jan. 03, 2019 and completed on Jan. 27, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The 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 partial report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



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
FR8D3109C	01	Initial issue of report	Mar. 05, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(b)	Power Output Measurement	Pass	-
3.2	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 3.65 dB at 2389.940 MHz
3.3	15.207	AC Conducted Emission	Pass	Under limit 10.51 dB at 0.188 MHz
3.4	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Natasha Hsieh



1 General Description

1.1 Product Feature of Equipment Under Test

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

Product Specification subjective to this standard	
Integrated WLAN Module	Brand Name: Intel Model Name: 9560NGW
Antenna Type	WLAN: <Ant. 1> PIFA Antenna <Ant. 2> PIFA Antenna Bluetooth: PIFA Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH05-HY	CO05-HY

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

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.	
	03CH16-HY	

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

FCC Designation No.: TW1190 and TW0007

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ 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

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Ant.1 and MIMO Ant.1+2, Z plane for Ant.2) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

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

Single Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

MIMO Antenna

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + Bluetooth Link + Adapter

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	SonyEricsson	MW600	PY700A2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “DRTU” was installed in EUT which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

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

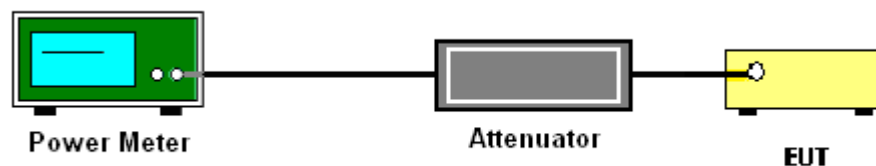
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.3 PKPM1
2. For Average Power, the testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v05 section 9.2.3.1 Method AVGPM.
3. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.
6. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.1.4 Test Setup



3.1.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.1.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.

3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

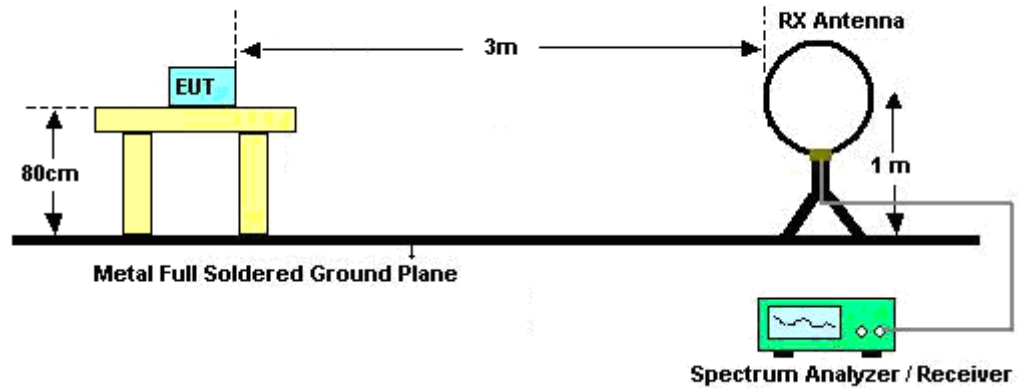
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

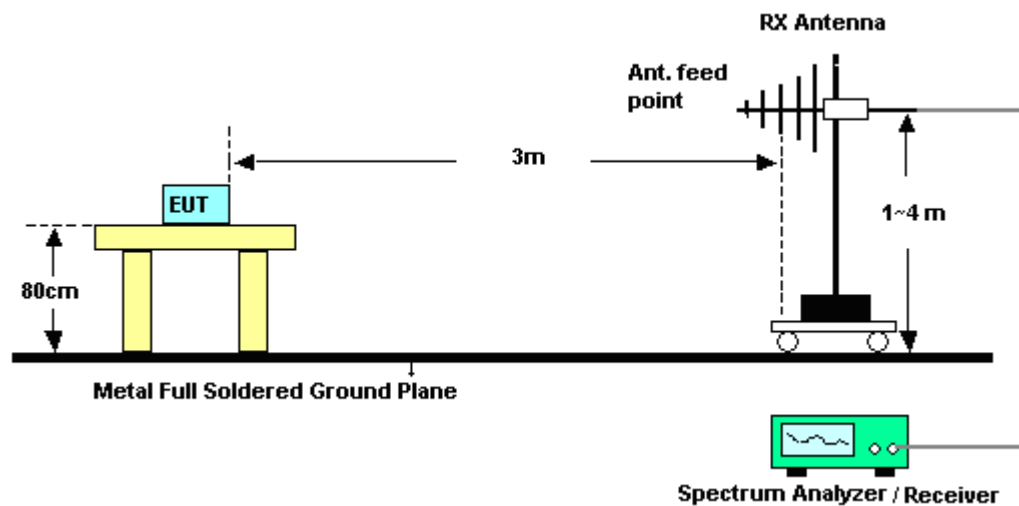
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

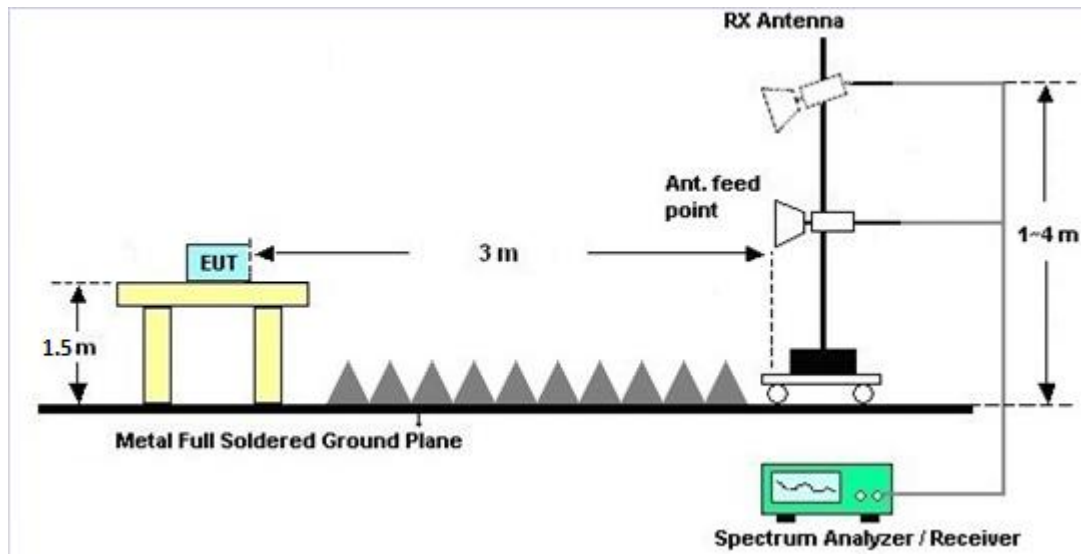
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.2.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.3 AC Conducted Emission Measurement

3.3.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

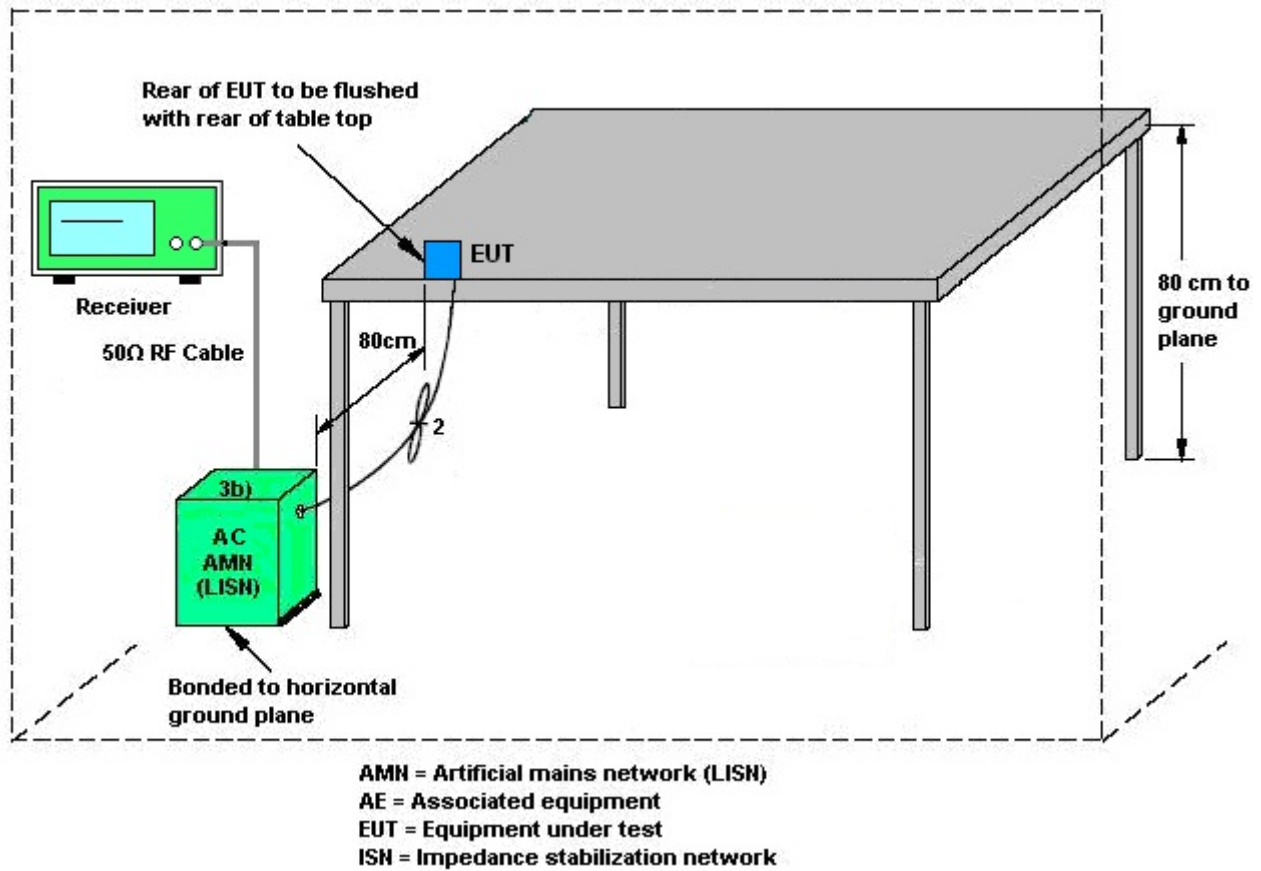
3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.3.4 Test Setup



3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.4 Antenna Requirements

3.4.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.4.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

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

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

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

<CDD Modes>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	0.11	-0.56	0.11	2.79	0.00	0.00

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	N/A	Aug. 16, 2018	Jan. 03, 2019~ Jan. 10, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz z	Aug. 16, 2018	Jan. 03, 2019~ Jan. 10, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2018	Jan. 03, 2019~ Jan. 10, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC130048 4	N/A	Mar. 01, 2018	Jan. 03, 2019~ Jan. 10, 2019	Feb. 28, 2019	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Nov. 23, 2017	Jan. 20, 2019~ Jan. 23, 2019	Nov. 22, 2019	Radiation (03CH16-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Jan. 20, 2019~ Jan. 23, 2019	Jul. 15, 2019	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 576	18GHz ~ 40GHz	May 08, 2018	Jan. 20, 2019~ Jan. 23, 2019	May 07, 2019	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Jan. 20, 2019~ Jan. 23, 2019	N/A	Radiation (03CH16-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03	171000180 0054001	1GHz~18GHz	Apr. 16, 2018	Jan. 20, 2019~ Jan. 23, 2019	Apr. 15, 2019	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY572901 11	3Hz~26.5GHz	Nov. 29, 2018	Jan. 20, 2019~ Jan. 23, 2019	Nov. 28, 2019	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-152 2	1G~18GHz	Sep. 07, 2018	Jan. 20, 2019~ Jan. 23, 2019	Sep. 06, 2019	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY532701 47	1GHz~26.5GHz	Feb. 02, 2018	Jan. 20, 2019~ Jan. 23, 2019	Feb. 01, 2019	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30M-18G	Mar. 14, 2018	Jan. 20, 2019~ Jan. 23, 2019	Mar. 13, 2019	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15539/ 4	30M-18G	Mar. 14, 2018	Jan. 20, 2019~ Jan. 23, 2019	Mar. 13, 2019	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36979/ 4	30M~18GHz	Mar. 14, 2018	Jan. 20, 2019~ Jan. 23, 2019	Mar. 13, 2019	Radiation (03CH16-HY)
Spectrum Analyzer	Agilent	N9010A	MY534701 18	10Hz~44GHz	Apr. 17, 2018	Jan. 20, 2019~ Jan. 23, 2019	Apr. 16, 2019	Radiation (03CH16-HY)
Biconical Antenna	SCHWARZBECK	BBA 9106 & VHBB 9124	301	30MHz-300MHz	Feb. 06, 2018	Jan. 20, 2019~ Jan. 23, 2019	Feb. 05, 2019	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1000MHz	Oct. 02, 2018	Jan. 20, 2019~ Jan. 23, 2019	Oct. 01, 2019	Radiation (03CH16-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 27, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	Jan. 27, 2019	Nov. 11, 2019	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 06, 2018	Jan. 27, 2019	Mar. 05, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Jan. 27, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	Jan. 27, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jan. 27, 2019	N/A	Conduction (CO05-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Sep. 14, 2018	Jan. 27, 2019	Sep. 13, 2019	Conduction (CO05-HY)
Software	Audix	E3 6.2009-8-24c	RK-001179	N/A	N/A	Jan. 27, 2019	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Nov. 08, 2018	Jan. 27, 2019	Nov. 07, 2019	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.9
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Derek Hsu/AnAn Wu	Temperature:	21~25	°C
Test Date:	2019/1/3~2019/01/10	Relative Humidity:	51~54	%

TEST RESULTS DATA
Peak Output Power

2.4GHz Band																
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	16.51	16.31	-	30.00	30.00	0.11	-0.56	16.62	15.75	36.00	36.00	Pass
11b	1Mbps	1	6	2437	16.48	16.59	-	30.00	30.00	0.11	-0.56	16.59	16.03	36.00	36.00	Pass
11b	1Mbps	1	11	2462	16.65	16.60	-	30.00	30.00	0.11	-0.56	16.76	16.04	36.00	36.00	Pass
11b	1Mbps	1	12	2467	16.62	16.56	-	30.00	30.00	0.11	-0.56	16.73	16.00	36.00	36.00	Pass
11b	1Mbps	1	13	2472	16.61	16.55	-	30.00	30.00	0.11	-0.56	16.72	15.99	36.00	36.00	Pass
11g	6Mbps	1	1	2412	19.91	19.73	-	30.00	30.00	0.11	-0.56	20.02	19.17	36.00	36.00	Pass
11g	6Mbps	1	6	2437	19.89	19.99	-	30.00	30.00	0.11	-0.56	20.00	19.43	36.00	36.00	Pass
11g	6Mbps	1	11	2462	20.02	19.92	-	30.00	30.00	0.11	-0.56	20.13	19.36	36.00	36.00	Pass
HT20	MCS0	1	1	2412	20.01	19.84	-	30.00	30.00	0.11	-0.56	20.12	19.28	36.00	36.00	Pass
HT20	MCS0	1	6	2437	19.98	20.08	-	30.00	30.00	0.11	-0.56	20.09	19.52	36.00	36.00	Pass
HT20	MCS0	1	11	2462	20.28	19.98	-	30.00	30.00	0.11	-0.56	20.39	19.42	36.00	36.00	Pass
HT20	MCS0	1	12	2467	18.56	18.15	-	30.00	30.00	0.11	-0.56	18.67	17.59	36.00	36.00	Pass
HT20	MCS0	1	13	2472	-1.18	-1.62	-	30.00	30.00	0.11	-0.56	-1.07	-2.18	36.00	36.00	Pass
HT40	MCS0	1	3	2422	19.85	19.70	-	30.00	30.00	0.11	-0.56	19.96	19.14	36.00	36.00	Pass
HT40	MCS0	1	6	2437	20.22	20.11	-	30.00	30.00	0.11	-0.56	20.33	19.55	36.00	36.00	Pass
HT40	MCS0	1	9	2452	19.61	19.14	-	30.00	30.00	0.11	-0.56	19.72	18.58	36.00	36.00	Pass
HT40	MCS0	1	10	2457	17.44	17.12	-	30.00	30.00	0.11	-0.56	17.55	16.56	36.00	36.00	Pass
HT40	MCS0	1	11	2462	9.41	10.54	-	30.00	30.00	0.11	-0.56	9.52	9.98	36.00	36.00	Pass
HT20	MCS0	2	1	2412	19.51	19.45	22.49	30.00		0.11		22.60		36.00		Pass
HT20	MCS0	2	6	2437	20.12	20.31	23.23	30.00		0.11		23.34		36.00		Pass
HT20	MCS0	2	11	2462	19.94	19.84	22.90	30.00		0.11		23.01		36.00		Pass
HT20	MCS0	2	12	2467	15.85	15.80	18.84	30.00		0.11		18.95		36.00		Pass
HT20	MCS0	2	13	2472	-3.07	-2.67	0.14	30.00		0.11		0.25		36.00		Pass
HT40	MCS0	2	3	2422	18.33	18.46	21.41	30.00		0.11		21.52		36.00		Pass
HT40	MCS0	2	6	2437	19.25	19.31	22.29	30.00		0.11		22.40		36.00		Pass
HT40	MCS0	2	9	2452	17.62	17.45	20.55	30.00		0.11		20.66		36.00		Pass
HT40	MCS0	2	10	2457	17.10	17.07	20.10	30.00		0.11		20.21		36.00		Pass
HT40	MCS0	2	11	2462	9.46	9.45	12.47	30.00		0.11		12.58		36.00		Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
11b	1Mbps	1	1	2412	0.05	0.06	14.80	14.62	-
11b	1Mbps	1	6	2437	0.05	0.06	14.75	14.84	
11b	1Mbps	1	11	2462	0.05	0.06	14.98	14.86	
11b	1Mbps	1	12	2467	0.05	0.06	14.96	14.79	
11b	1Mbps	1	13	2472	0.05	0.06	14.95	14.71	
11g	6Mbps	1	1	2412	0.09	0.10	14.77	14.67	
11g	6Mbps	1	6	2437	0.09	0.10	14.65	14.83	
11g	6Mbps	1	11	2462	0.09	0.10	14.80	14.76	
11g	6Mbps	1	12	2467	0.09	0.10	13.36	12.90	
11g	6Mbps	1	13	2472	0.09	0.10	-6.17	-6.61	
HT20	MCS0	1	1	2412	0.09	0.11	14.67	14.62	
HT20	MCS0	1	6	2437	0.09	0.11	14.57	14.79	
HT20	MCS0	1	11	2462	0.09	0.11	14.79	14.74	
HT20	MCS0	1	12	2467	0.09	0.11	13.34	12.86	
HT20	MCS0	1	13	2472	0.09	0.11	-6.24	-6.72	
HT40	MCS0	1	3	2422	0.28	0.27	14.61	14.37	
HT40	MCS0	1	6	2437	0.28	0.27	14.70	14.60	
HT40	MCS0	1	9	2452	0.28	0.27	14.20	13.60	
HT40	MCS0	1	10	2457	0.28	0.27	10.89	10.41	
HT40	MCS0	1	11	2462	0.28	0.27	2.78	3.39	
HT20	MCS0	2	1	2412	0.11	0.11	14.11	14.23	17.18
HT20	MCS0	2	6	2437	0.11	0.11	14.79	14.99	17.90
HT20	MCS0	2	11	2462	0.11	0.11	14.39	14.37	17.39
HT20	MCS0	2	12	2467	0.11	0.11	10.71	10.76	13.75
HT20	MCS0	2	13	2472	0.11	0.11	-8.26	-8.04	-5.14
HT40	MCS0	2	3	2422	0.32	0.34	12.77	12.98	15.89
HT40	MCS0	2	6	2437	0.32	0.34	13.71	13.80	16.77
HT40	MCS0	2	9	2452	0.32	0.34	12.84	12.62	15.74
HT40	MCS0	2	10	2457	0.32	0.34	10.49	10.32	13.42
HT40	MCS0	2	11	2462	0.32	0.34	2.17	2.18	5.19

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



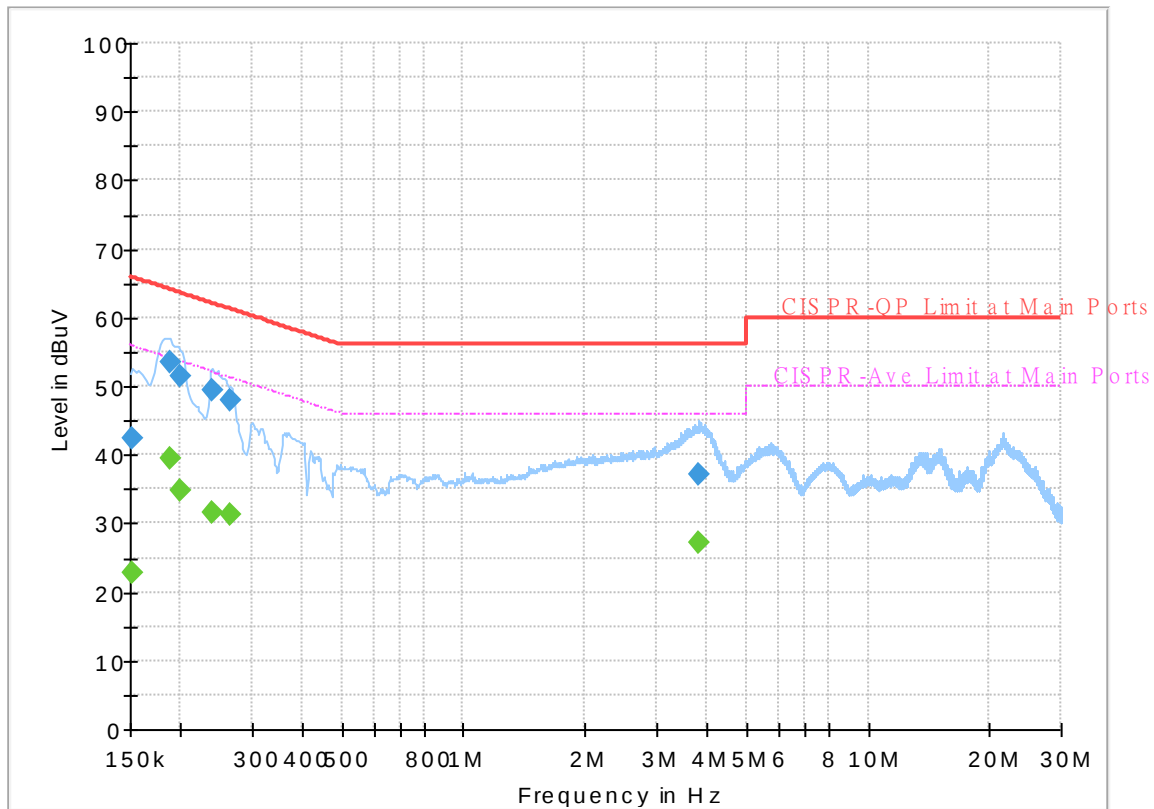
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Eric Jeng	Temperature :	22~25°C
		Relative Humidity :	52~55%

EUT Information

Report NO : 8D3109
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



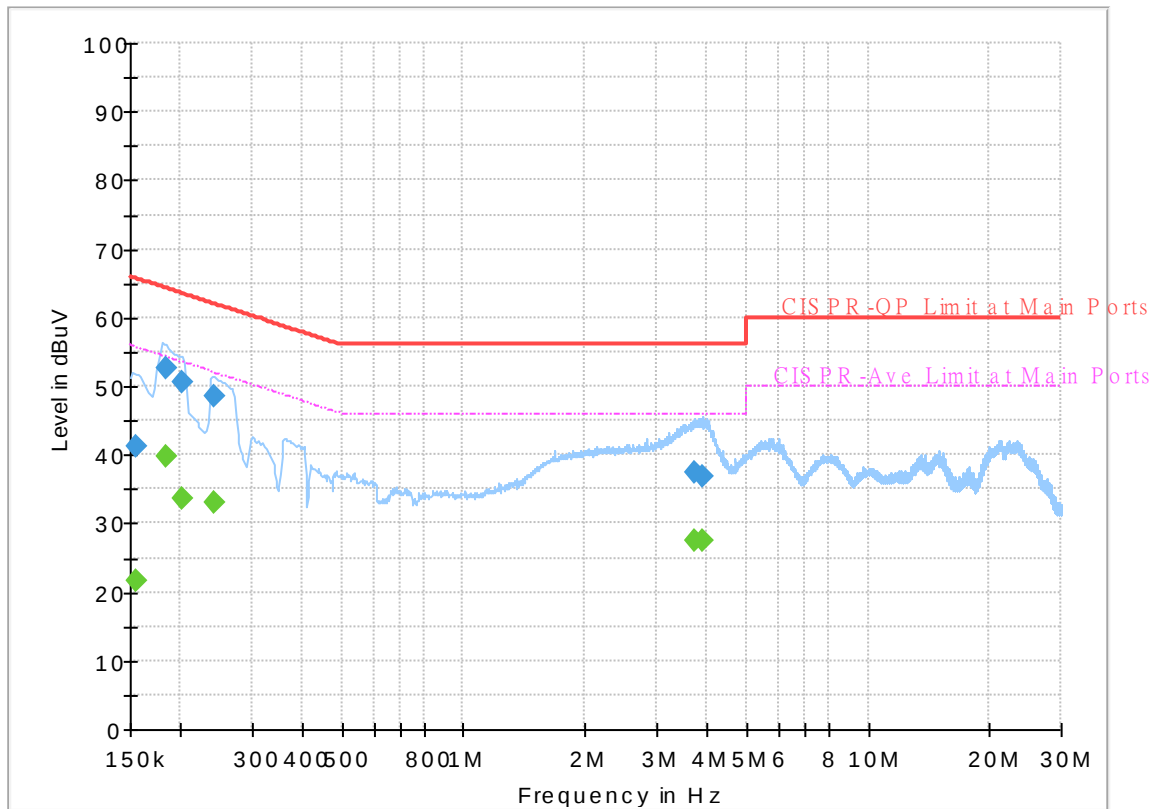
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	22.66	55.88	33.22	L1	OFF	19.5
0.152250	42.38	---	65.88	23.50	L1	OFF	19.5
0.188250	---	39.62	54.11	14.49	L1	OFF	19.5
0.188250	53.60	---	64.11	10.51	L1	OFF	19.5
0.199500	---	34.94	53.63	18.69	L1	OFF	19.5
0.199500	51.40	---	63.63	12.23	L1	OFF	19.5
0.240000	---	31.66	52.10	20.44	L1	OFF	19.5
0.240000	49.50	---	62.10	12.60	L1	OFF	19.5
0.264750	---	31.22	51.28	20.06	L1	OFF	19.5
0.264750	47.87	---	61.28	13.41	L1	OFF	19.5
3.808500	---	27.22	46.00	18.78	L1	OFF	19.6
3.808500	37.08	---	56.00	18.92	L1	OFF	19.6

EUT Information

Report NO : 8D3109
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	21.68	55.75	34.07	N	OFF	19.5
0.154500	41.10	---	65.75	24.65	N	OFF	19.5
0.183750	---	39.75	54.31	14.56	N	OFF	19.5
0.183750	52.68	---	64.31	11.63	N	OFF	19.5
0.201750	---	33.61	53.54	19.93	N	OFF	19.5
0.201750	50.71	---	63.54	12.83	N	OFF	19.5
0.242250	---	33.11	52.02	18.91	N	OFF	19.5
0.242250	48.50	---	62.02	13.52	N	OFF	19.5
3.738750	---	27.52	46.00	18.48	N	OFF	19.6
3.738750	37.41	---	56.00	18.59	N	OFF	19.6
3.891750	---	27.34	46.00	18.66	N	OFF	19.6
3.891750	36.99	---	56.00	19.01	N	OFF	19.6



Appendix C. Radiated Spurious Emission

Test Engineer :	Andy Yang, CR Liao, Jacky Hung	Temperature :	23~25°C
		Relative Humidity :	55~57%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 06 2437MHz		2356.76	56.76	-17.24	74	41.33	27.16	18.27	30	100	63	P	H
		2359.84	43.6	-10.4	54	28.17	27.16	18.27	30	100	63	A	H
	*	2437	106.15	-	-	90.43	27.35	18.35	29.98	100	63	P	H
	*	2437	103.12	-	-	87.4	27.35	18.35	29.98	100	63	A	H
		2497.13	58.03	-15.97	74	42.11	27.49	18.39	29.96	100	63	P	H
		2485.16	44.56	-9.44	54	28.69	27.46	18.38	29.97	100	63	A	H
		2323.72	57	-17	74	41.71	27.08	18.22	30.01	362	253	P	V
		2360.12	43.43	-10.57	54	28	27.16	18.27	30	362	253	A	V
	*	2437	103.92	-	-	88.2	27.35	18.35	29.98	362	253	P	V
	*	2437	100.78	-	-	85.06	27.35	18.35	29.98	362	253	A	V
		2493.42	57.55	-16.45	74	41.64	27.48	18.39	29.96	362	253	P	V
		2485.3	44.05	-9.95	54	28.18	27.46	18.38	29.97	362	253	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(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)
802.11b CH 06 2437MHz		4874	41.45	-32.55	74	54.79	31.35	13.84	58.53	100	0	P	H
		7311	42.89	-31.11	74	50.57	36.07	15.22	58.97	100	0	P	H
													H
													H
		4874	39.92	-34.08	74	53.26	31.35	13.84	58.53	100	0	P	V
		7311	42.63	-31.37	74	50.31	36.07	15.22	58.97	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2389.94	60.54	-13.46	74	44.97	27.24	18.32	29.99	100	62	P	H
		2389.94	50.35	-3.65	54	34.78	27.24	18.32	29.99	100	62	A	H
	*	2422	104.4	-	-	88.73	27.31	18.34	29.98	100	62	P	H
	*	2422	96.38	-	-	80.71	27.31	18.34	29.98	100	62	A	H
		2494.89	56.71	-17.29	74	40.79	27.49	18.39	29.96	100	62	P	H
		2486.98	46.88	-7.12	54	31	27.47	18.38	29.97	100	62	A	H
		2382.1	59.04	-14.96	74	43.51	27.22	18.3	29.99	370	250	P	V
		2389.52	49.15	-4.85	54	33.6	27.23	18.31	29.99	370	250	A	V
	*	2422	101.86	-	-	86.19	27.31	18.34	29.98	370	250	P	V
	*	2422	93.95	-	-	78.28	27.31	18.34	29.98	370	250	A	V
		2484.95	56.57	-17.43	74	40.7	27.46	18.38	29.97	370	250	P	V
		2491.25	46.31	-7.69	54	30.42	27.48	18.38	29.97	370	250	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(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 03 2422MHz		4844	39.42	-34.58	74	52.87	31.29	13.79	58.53	100	0	P	H
		7266	43.25	-30.75	74	51.06	35.94	15.26	59.01	100	0	P	H
													H
													H
		4844	39.09	-34.91	74	52.54	31.29	13.79	58.53	100	0	P	V
		7266	43.39	-30.61	74	51.2	35.94	15.26	59.01	100	0	P	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 WIFI 802.11n HT40 (LF)

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)
2.4GHz 802.11n HT40 LF		133.95	19.6	-23.9	43.5	32.57	18.04	1.35	32.36	-	-	P	H
		152.04	34.35	-9.15	43.5	47.55	17.66	1.5	32.36	100	0	P	H
		213.33	23.74	-19.76	43.5	37.9	16.3	1.9	32.36	-	-	P	H
		407.8	26.37	-19.63	46	33.04	22.62	3.22	32.51	-	-	P	H
		652.8	28.45	-17.55	46	30.84	26.13	4.08	32.6	-	-	P	H
		828.5	31.9	-14.1	46	31.14	28.44	4.52	32.2	-	-	P	H
													H
													H
													H
													H
													H
													H
		48.09	24.47	-15.53	40	40.21	15.9	0.79	32.43	-	-	P	V
		150.69	26.94	-16.56	43.5	40.01	17.8	1.49	32.36	-	-	P	V
		237.09	24.09	-21.91	46	36.7	17.63	2.14	32.38	-	-	P	V
		503.7	25.53	-20.47	46	30.38	24.42	3.31	32.58	-	-	P	V
		684.3	28.78	-17.22	46	30.8	26.45	4.08	32.55	-	-	P	V
		811	30.48	-15.52	46	30.14	28.23	4.41	32.3	100	0	P	V
													V
													V
												V	
												V	
												V	
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

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 01 2412MHz		2389.38	57.64	-16.36	74	42.09	27.23	18.31	29.99	100	124	P	H
		2389.905	47.41	-6.59	54	31.84	27.24	18.32	29.99	100	124	A	H
	*	2412	104.88	-	-	89.24	27.29	18.34	29.99	100	124	P	H
	*	2412	97.22	-	-	81.58	27.29	18.34	29.99	100	124	A	H
													H
													H
		2389.59	56.35	-17.65	74	40.79	27.24	18.31	29.99	303	94	P	V
		2389.905	45.82	-8.18	54	30.25	27.24	18.32	29.99	303	94	A	V
	*	2412	101.45	-	-	85.81	27.29	18.34	29.99	303	94	P	V
	*	2412	93.21	-	-	77.57	27.29	18.34	29.99	303	94	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 2		(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 01 2412MHz		4824	39.54	-34.46	74	53.07	31.25	13.76	58.54	100	0	P	H
													H
													H
													H
		4824	40.02	-33.98	74	53.55	31.25	13.76	58.54	100	0	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2316.02	56.29	-17.71	74	41.03	27.06	18.21	30.01	100	119	P	H
		2367.4	44.92	-9.08	54	29.45	27.18	18.28	29.99	100	119	A	H
	*	2437	105.01	-	-	89.29	27.35	18.35	29.98	100	119	P	H
	*	2437	96.75	-	-	81.03	27.35	18.35	29.98	100	119	A	H
		2495.87	55.83	-18.17	74	39.91	27.49	18.39	29.96	100	119	P	H
		2489.15	45.41	-8.59	54	29.53	27.47	18.38	29.97	100	119	A	H
		2371.74	55.99	-18.01	74	40.5	27.19	18.29	29.99	313	74	P	V
		2375.52	44.93	-9.07	54	29.43	27.2	18.29	29.99	313	74	A	V
	*	2437	101.95	-	-	86.23	27.35	18.35	29.98	313	74	P	V
	*	2437	93.84	-	-	78.12	27.35	18.35	29.98	313	74	A	V
		2485.16	55.8	-18.2	74	39.93	27.46	18.38	29.97	313	74	P	V
		2488.73	45.33	-8.67	54	29.45	27.47	18.38	29.97	313	74	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 2		(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 HT20 CH 06 2437MHz		4874	38.96	-35.04	74	52.3	31.35	13.84	58.53	100	0	P	H
		7311	43.1	-30.9	74	50.78	36.07	15.22	58.97	100	0	P	H
													H
													H
		4874	39.74	-34.26	74	53.08	31.35	13.84	58.53	100	0	P	V
		7311	43.02	-30.98	74	50.7	36.07	15.22	58.97	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (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.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 06 2437MHz		2362.08	55.97	-18.03	74	40.52	27.17	18.28	30	100	55	P	H
		2376.08	44.81	-9.19	54	29.3	27.2	18.3	29.99	100	55	A	H
	*	2437	105.6	-	-	89.88	27.35	18.35	29.98	100	55	P	H
	*	2437	97.71	-	-	81.99	27.35	18.35	29.98	100	55	A	H
		2484.11	57.19	-16.81	74	41.32	27.46	18.38	29.97	100	55	P	H
		2496.08	45.6	-8.4	54	29.68	27.49	18.39	29.96	100	55	A	H
		2381.68	56.03	-17.97	74	40.5	27.22	18.3	29.99	312	178	P	V
		2389.24	44.78	-9.22	54	29.23	27.23	18.31	29.99	312	178	A	V
	*	2437	102.85	-	-	87.13	27.35	18.35	29.98	312	178	P	V
	*	2437	95.17	-	-	79.45	27.35	18.35	29.98	312	178	A	V
		2487.89	56.45	-17.55	74	40.57	27.47	18.38	29.97	312	178	P	V
		2499.58	45.32	-8.68	54	29.39	27.5	18.39	29.96	312	178	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(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 HT20 CH 06 2437MHz		4874	39.12	-34.88	74	52.46	31.35	13.84	58.53	100	0	P	H
		7311	42.43	-31.57	74	50.11	36.07	15.22	58.97	100	0	P	H
													H
													H
		4874	38.66	-35.34	74	52	31.35	13.84	58.53	100	0	P	V
		7311	42.99	-31.01	74	50.67	36.07	15.22	58.97	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2379.16	55.89	-18.11	74	40.37	27.21	18.3	29.99	100	57	P	H
		2388.26	46.88	-7.12	54	31.33	27.23	18.31	29.99	100	57	A	H
	*	2422	103.91	-	-	88.24	27.31	18.34	29.98	100	57	P	H
	*	2422	95.9	-	-	80.23	27.31	18.34	29.98	100	57	A	H
		2495.31	56.73	-17.27	74	40.81	27.49	18.39	29.96	100	57	P	H
		2485.37	46.43	-7.57	54	30.56	27.46	18.38	29.97	100	57	A	H
		2380.56	55.72	-18.28	74	40.2	27.21	18.3	29.99	357	177	P	V
		2389.38	47.72	-6.28	54	32.17	27.23	18.31	29.99	357	177	A	V
	*	2422	103.15	-	-	87.48	27.31	18.34	29.98	357	177	P	V
	*	2422	95.15	-	-	79.48	27.31	18.34	29.98	357	177	A	V
		2498.67	55.6	-18.4	74	39.67	27.5	18.39	29.96	357	177	P	V
		2499.44	46.38	-7.62	54	30.45	27.5	18.39	29.96	357	177	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(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 03 2422MHz		4844	39.26	-34.74	74	52.71	31.29	13.79	58.53	100	0	P	H
		7266	43.22	-30.78	74	51.03	35.94	15.26	59.01	100	0	P	H
													H
													H
		4844	39.77	-34.23	74	53.22	31.29	13.79	58.53	100	0	P	V
		7266	42.67	-31.33	74	50.48	35.94	15.26	59.01	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average 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

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



Appendix D. Radiated Spurious Emission Plots

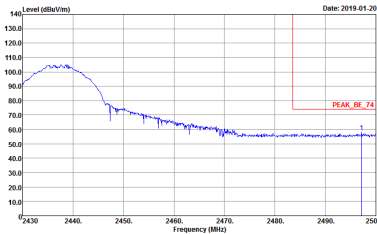
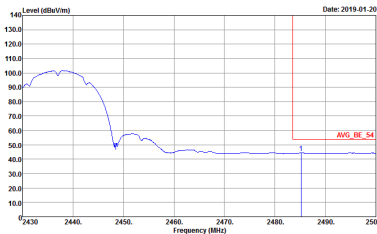
Test Engineer :	Andy Yang, CR Liao, Jacky Hung	Temperature :	23~25°C
		Relative Humidity :	55~57%

Note symbol

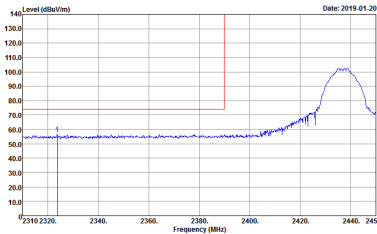
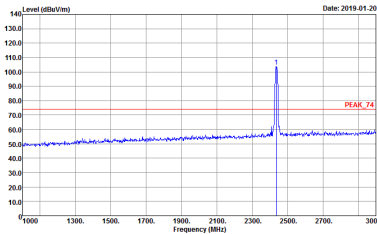
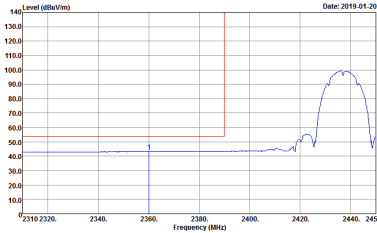
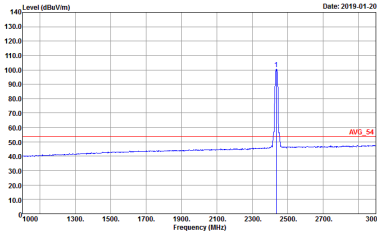
-L	Low channel location
-R	High channel location

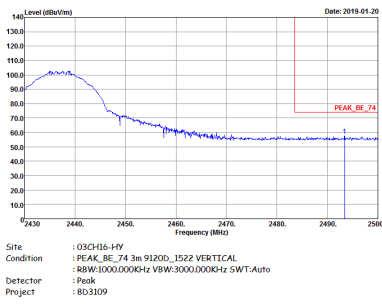
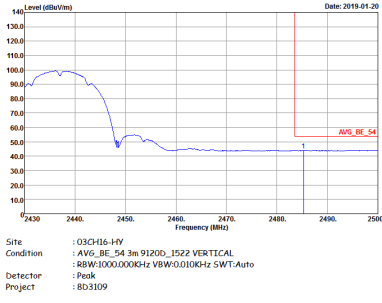
**2.4GHz 2400~2483.5MHz****WIFI 802.11b (Band Edge @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 8D3109	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 8D3109

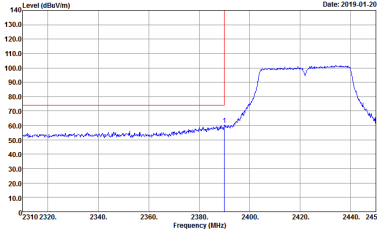
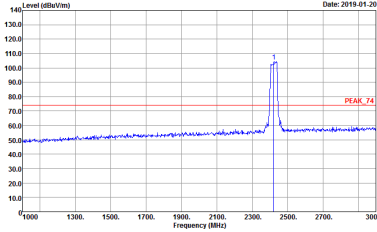
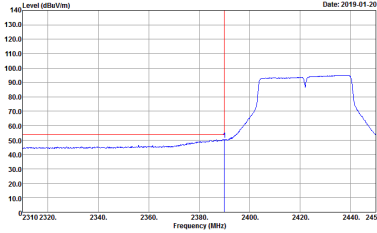
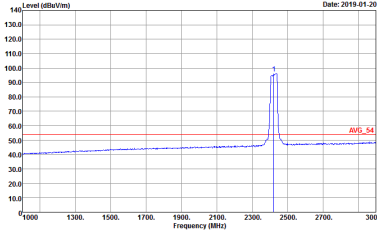
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.010KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank

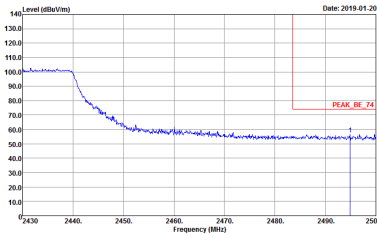
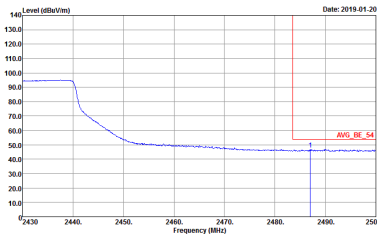


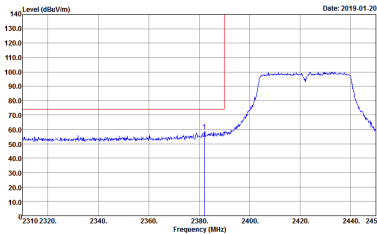
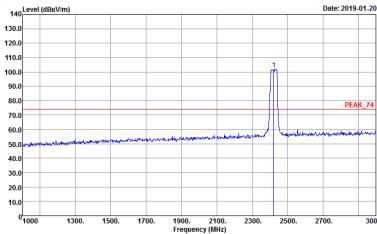
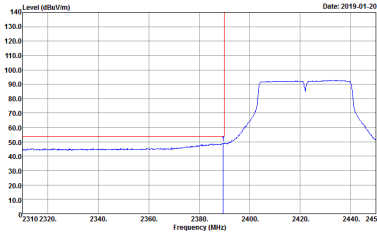
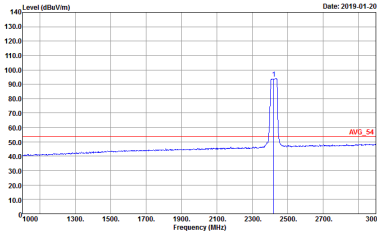
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 8D3109

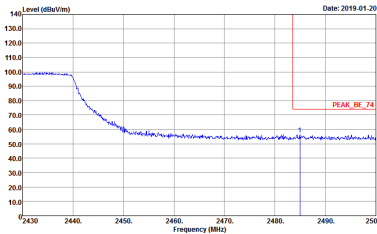
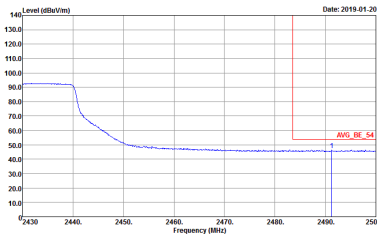
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank

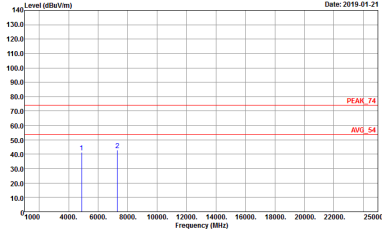
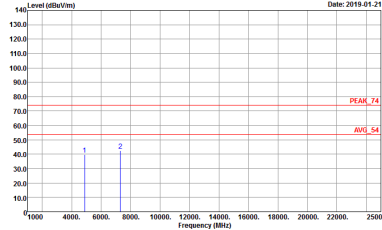
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank



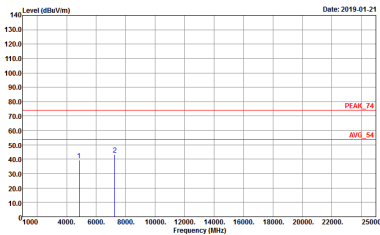
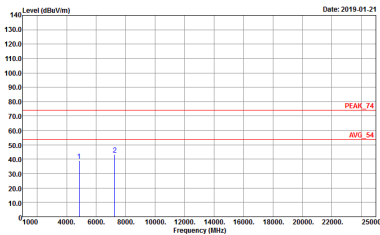
2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

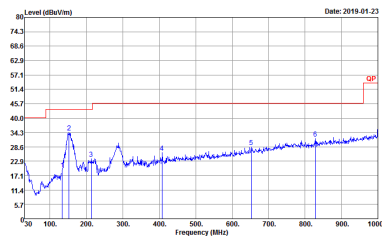
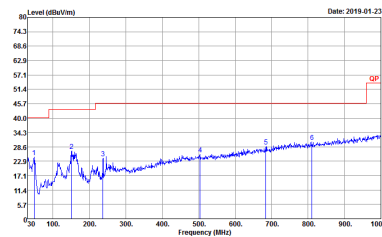
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109



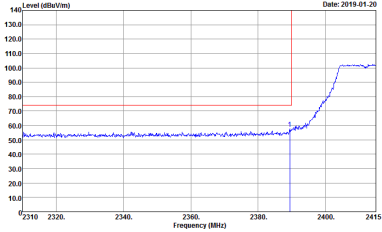
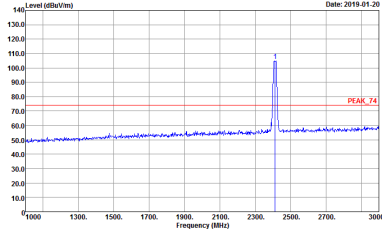
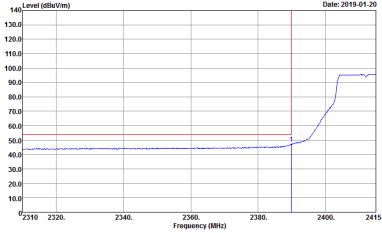
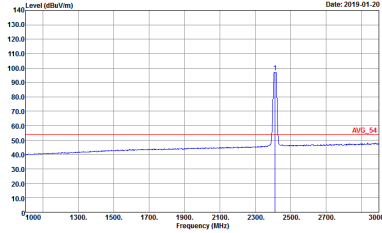
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

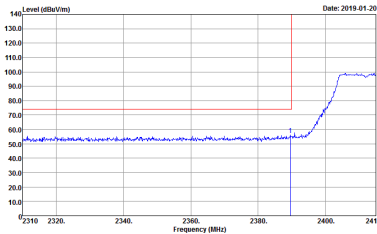
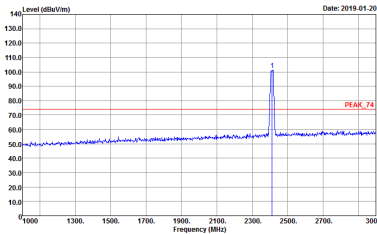
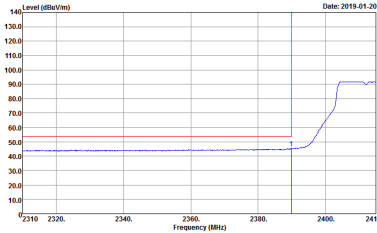
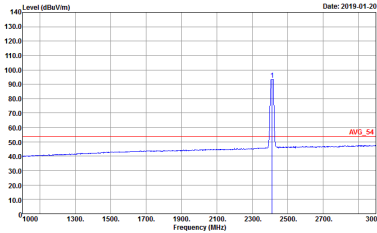
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109

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

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : QP 3m B1LO6_47020606 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : QP 3m B1LO6_47020606 VERTICAL Detector : Peak Project : 8D3109

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

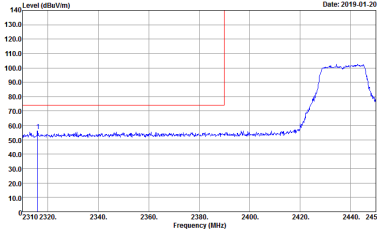
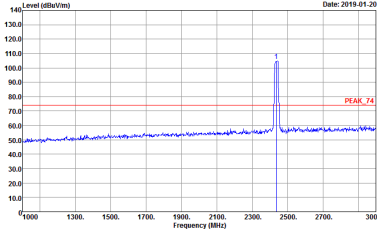
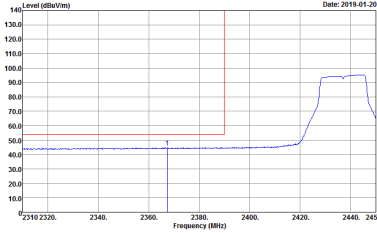
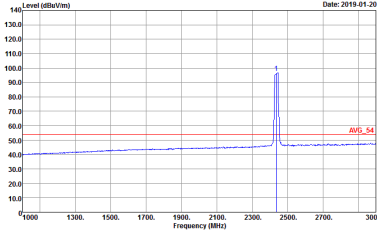
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109

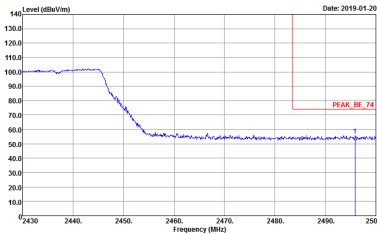
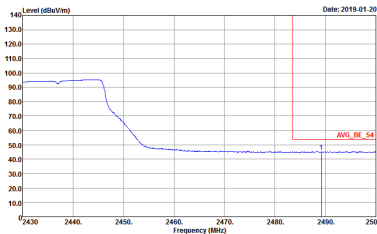
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ANT	802.11g CH01 2412MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak 803109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak 803109
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:1000KHz SWT:Auto Project : Peak 803109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:1000KHz SWT:Auto Project : Peak 803109



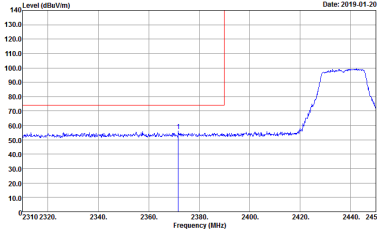
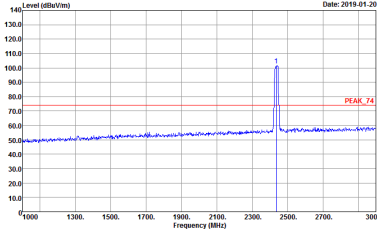
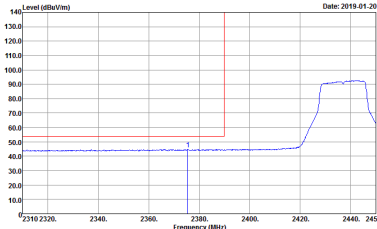
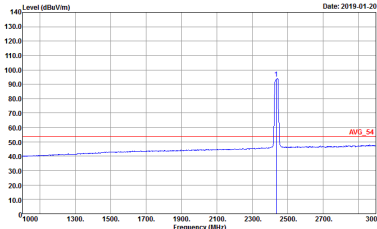
2.4GHz 2400~2483.5MHz

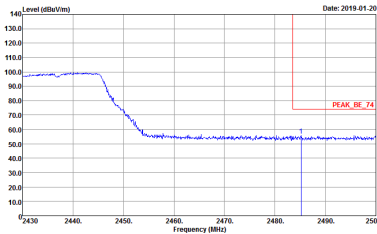
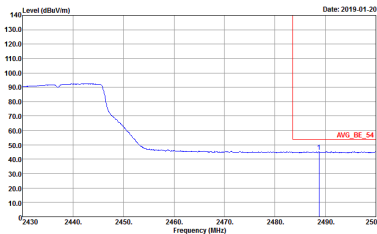
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank



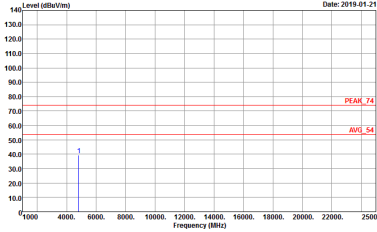
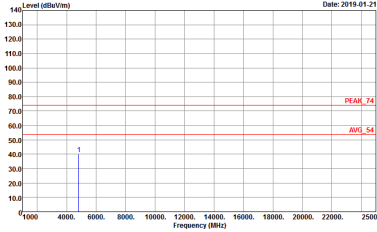
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank



2.4GHz 2400~2483.5MHz

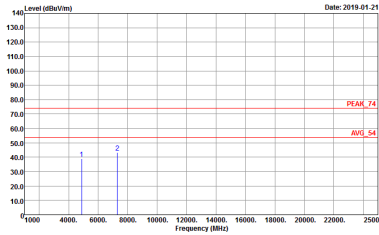
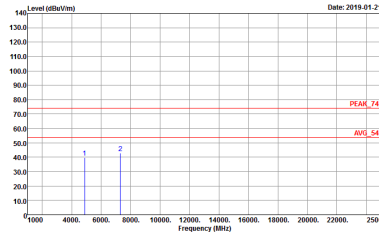
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109



2.4GHz 2400~2483.5MHz

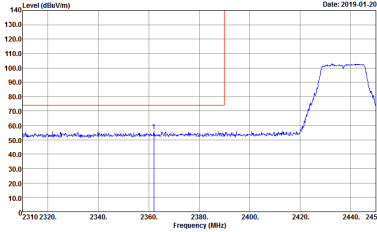
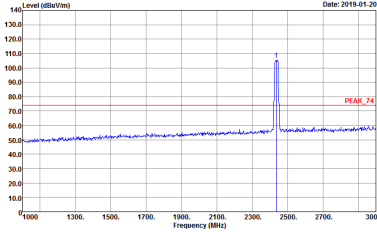
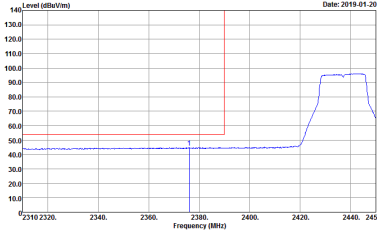
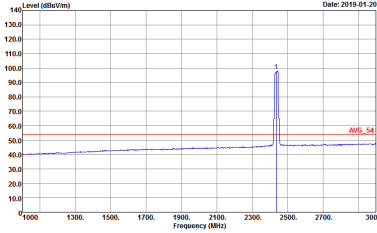
WIFI 802.11n HT20 (Harmonic @ 3m)

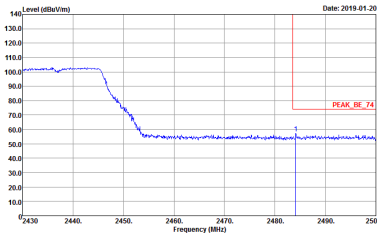
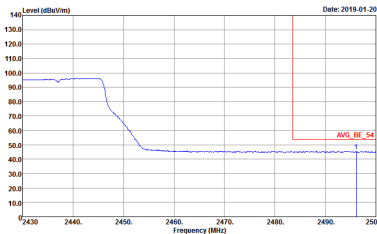
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

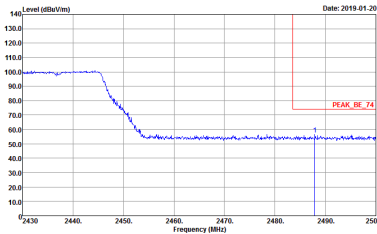
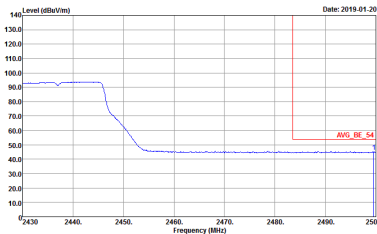
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 8D3109

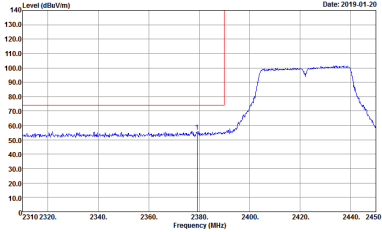
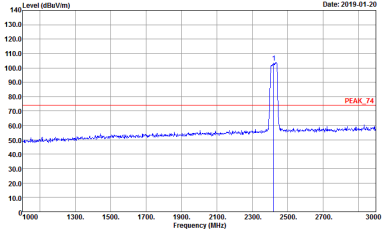
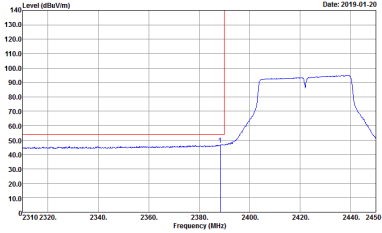
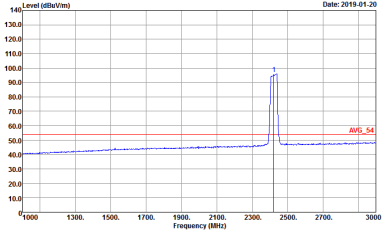


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank

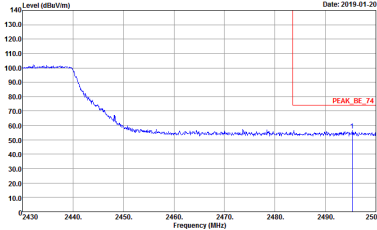
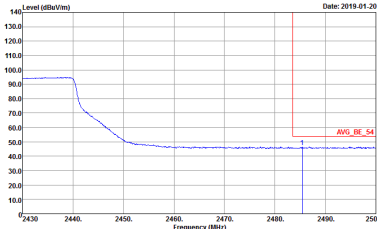


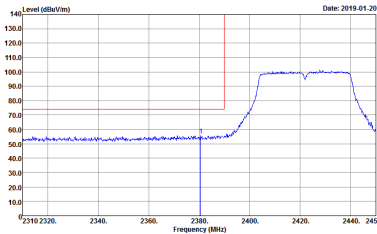
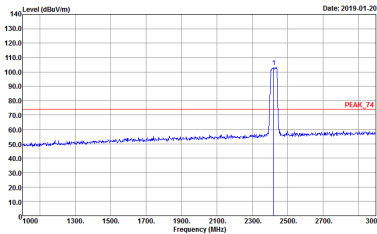
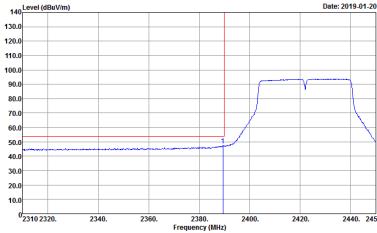
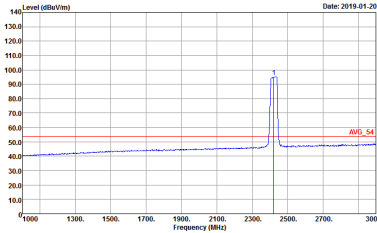
2.4GHz 2400~2483.5MHz

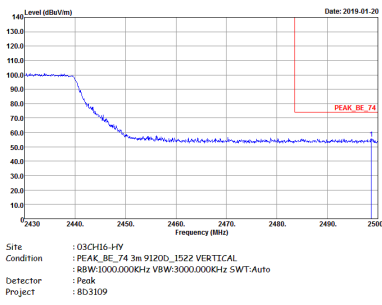
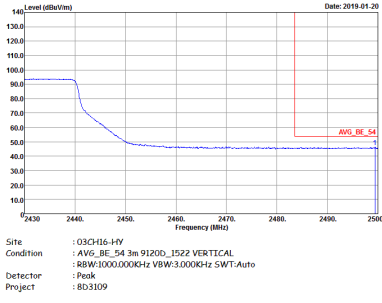
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 8D3109
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3.000kHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3.000kHz SWT:Auto Detector : Peak Project : 8D3109



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	Left Blank

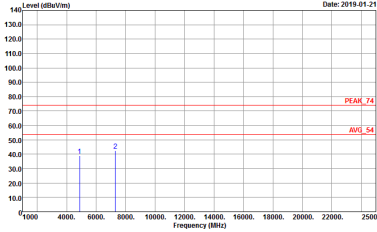
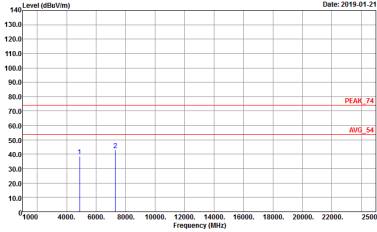
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8D3109
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 8D3109

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



2.4GHz 2400~2483.5MHz

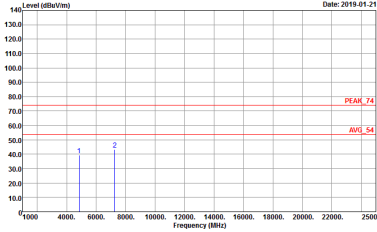
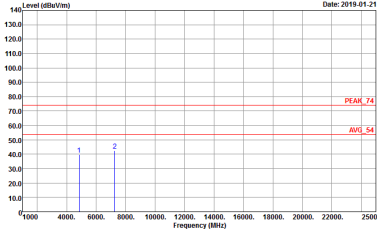
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

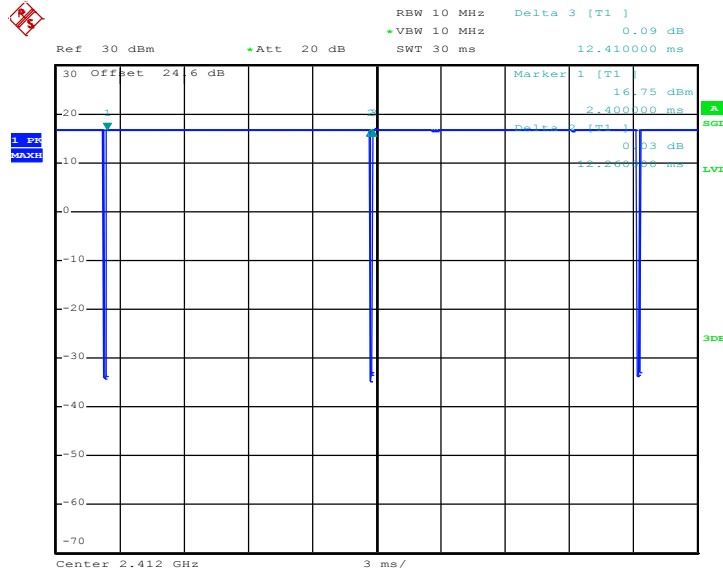
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 8D3109	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak Project : 8D3109

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11b	98.79	-	-	10Hz	0.05
2	802.11b	98.67	-	-	10Hz	0.06
1	802.11g	97.86	2060	0.49	1kHz	0.09
2	802.11g	97.62	2050	0.49	1kHz	0.10
1	2.4GHz 802.11n HT20	97.96	1920	0.52	1kHz	0.09
2	2.4GHz 802.11n HT20	97.44	1905	0.52	1kHz	0.11
1+2	2.4GHz 802.11n HT20 for Ant. 1	97.46	1920	0.52	1kHz	0.11
1+2	2.4GHz 802.11n HT20 for Ant. 2	97.46	1920	0.52	1kHz	0.11
1	2.4GHz 802.11n HT40	93.85	915	1.09	3kHz	0.28
2	2.4GHz 802.11n HT40	93.88	920	1.09	3kHz	0.27
1+2	2.4GHz 802.11n HT40 for Ant. 1	92.93	920	1.09	3kHz	0.32
1+2	2.4GHz 802.11n HT40 for Ant. 2	92.42	915	1.09	3kHz	0.34

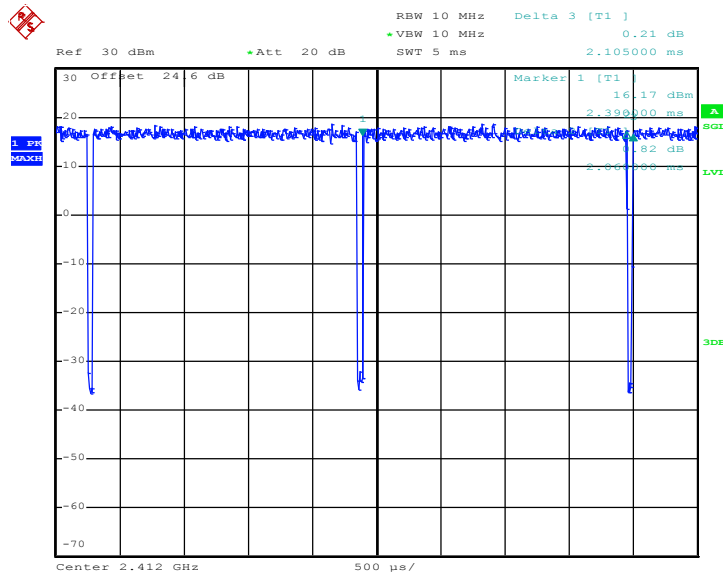
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802.11b



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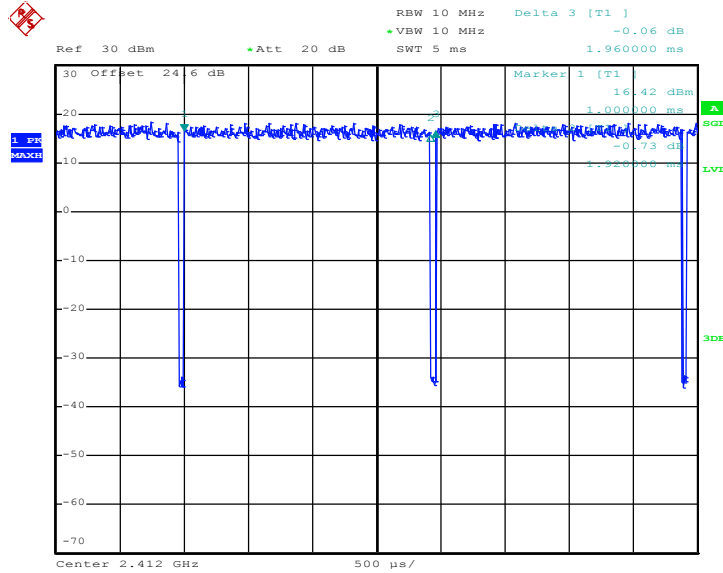
802.11g



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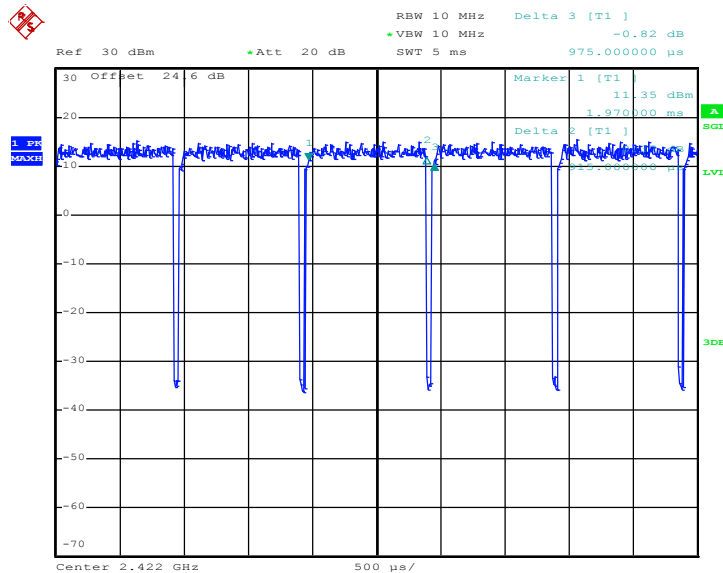


802.11n HT20

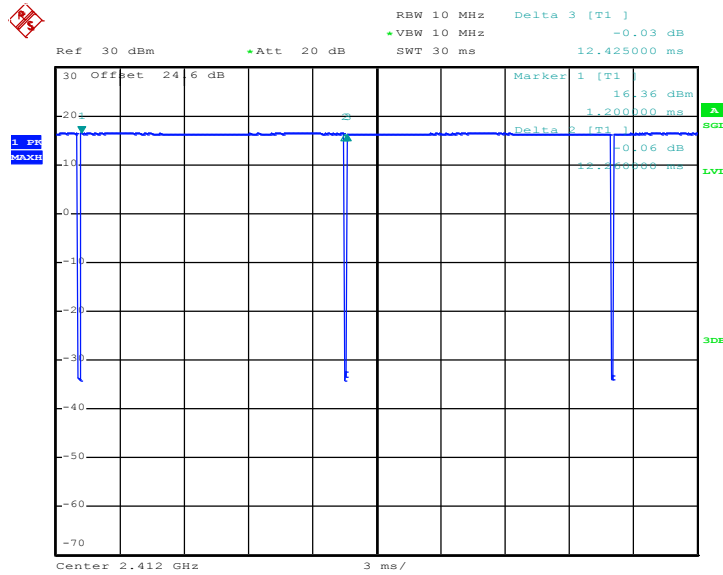


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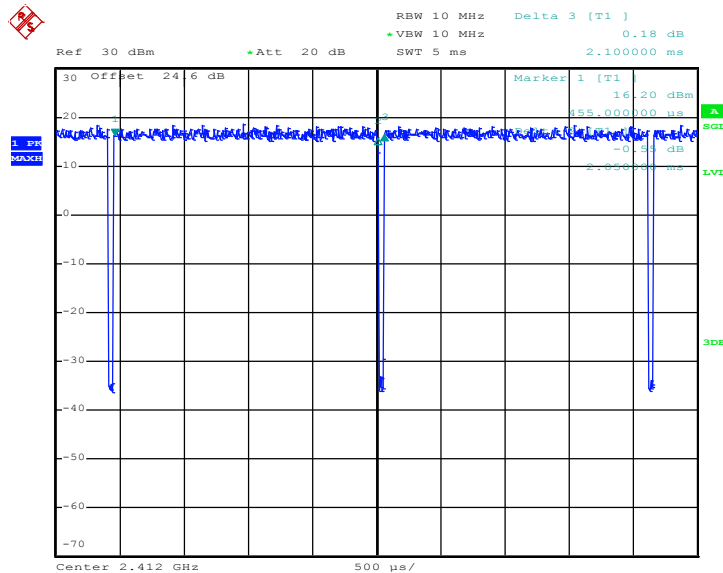
802.11n HT40



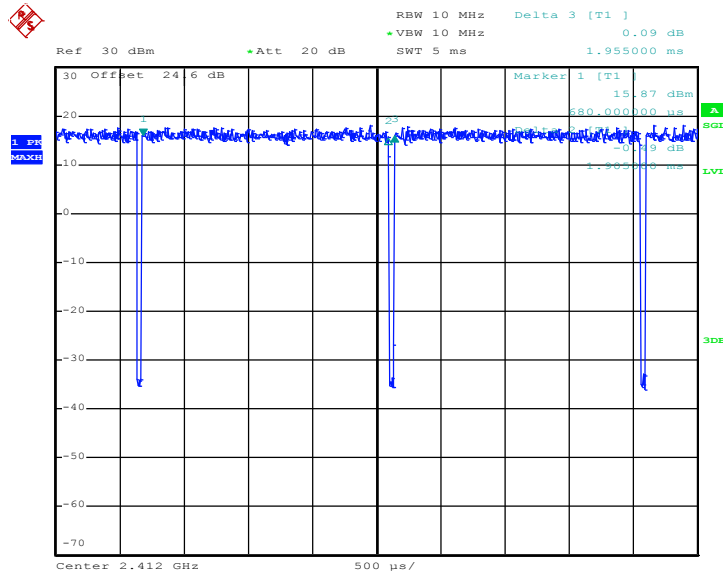
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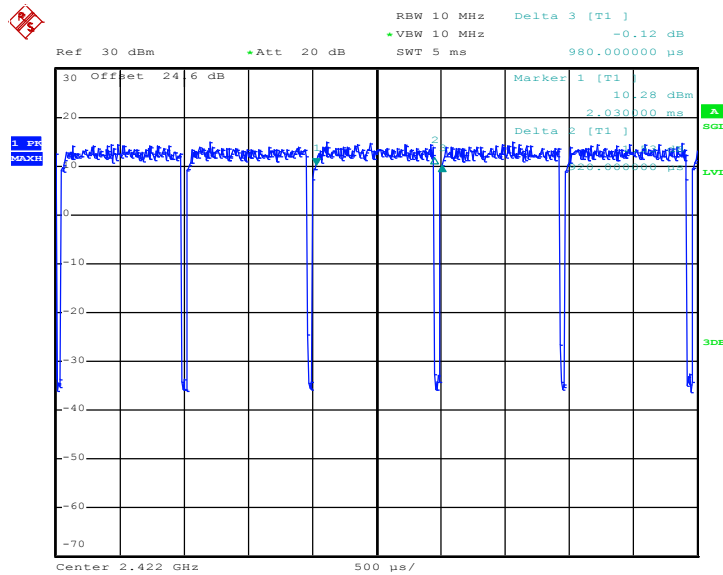
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802.11g


Date: 3.JAN.2019 23:50:59

802.11n HT20


Date: 4.JAN.2019 00:10:10

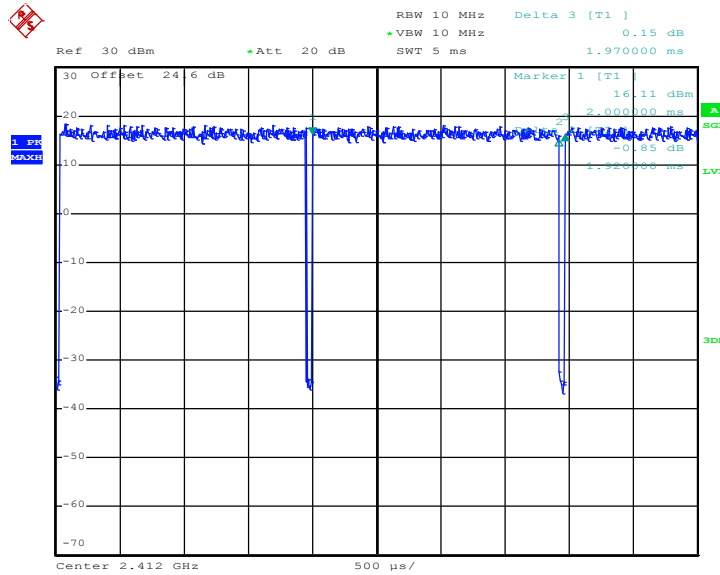
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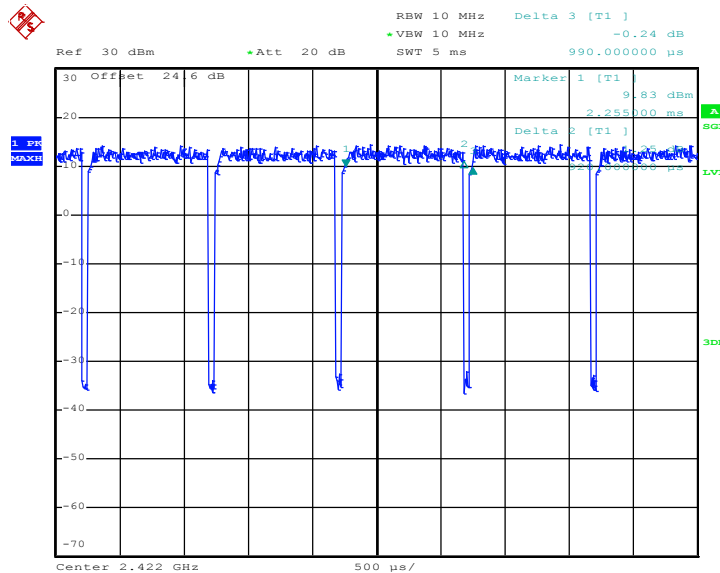
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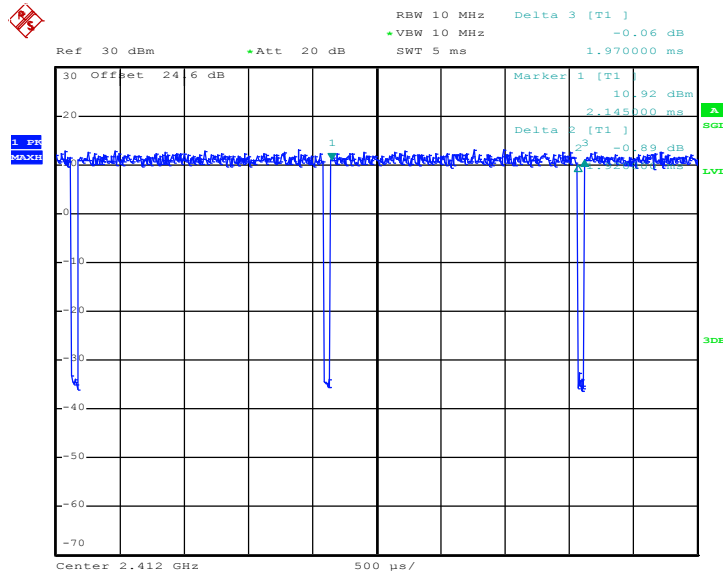


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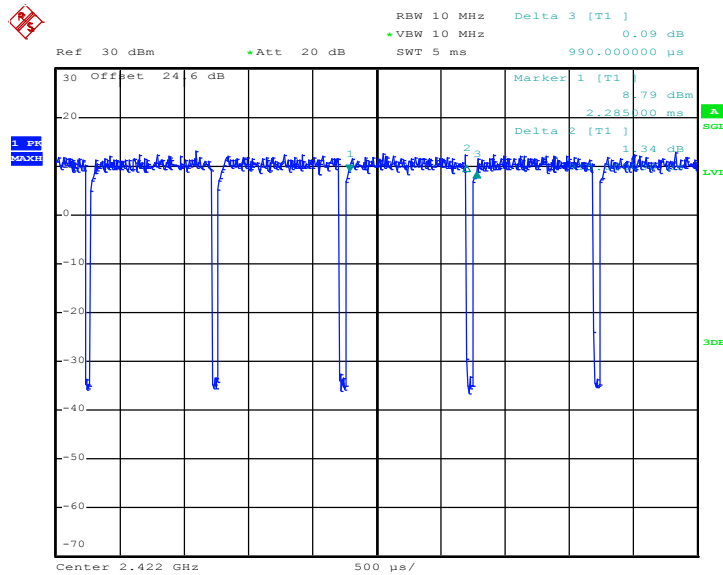
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Date: 4.JAN.2019 00:32:09

MIMO <Ant. 2>
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Date: 4.JAN.2019 00:15:26

802.11n HT40


Date: 4.JAN.2019 00:32:43