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 E §15.407**

The product was received on Dec. 31, 2018 and testing was started from Jan. 07, 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.

Jones Tsai

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
FR8D3109D	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	15.407(a)	Maximum Conducted Output Power	Pass	-
3.2	15.407(b)	Unwanted Emissions	Pass	Under limit 0.35 dB at 5458.480 MHz
3.3	15.207	AC Conducted Emission	Pass	Under limit 13.03 dB at 0.179 MHz
3.4	15.203 15.407(a)	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: Polly Tsai

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 E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- 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 Notebook type and three orthogonal panels, X, Y, Z. The worst cases (X plane) 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)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
802.11ac VHT160	50	5250	114	5570

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

2.2 Test Mode

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

Single Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0
802.11ac VHT160	MCS0

MIMO Mode

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0
802.11ac VHT160	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (5GHz) Link + Adapter

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	-	-	100
M	Middle	-	-	-
H	High	-	64	-
Straddle		-	-	-

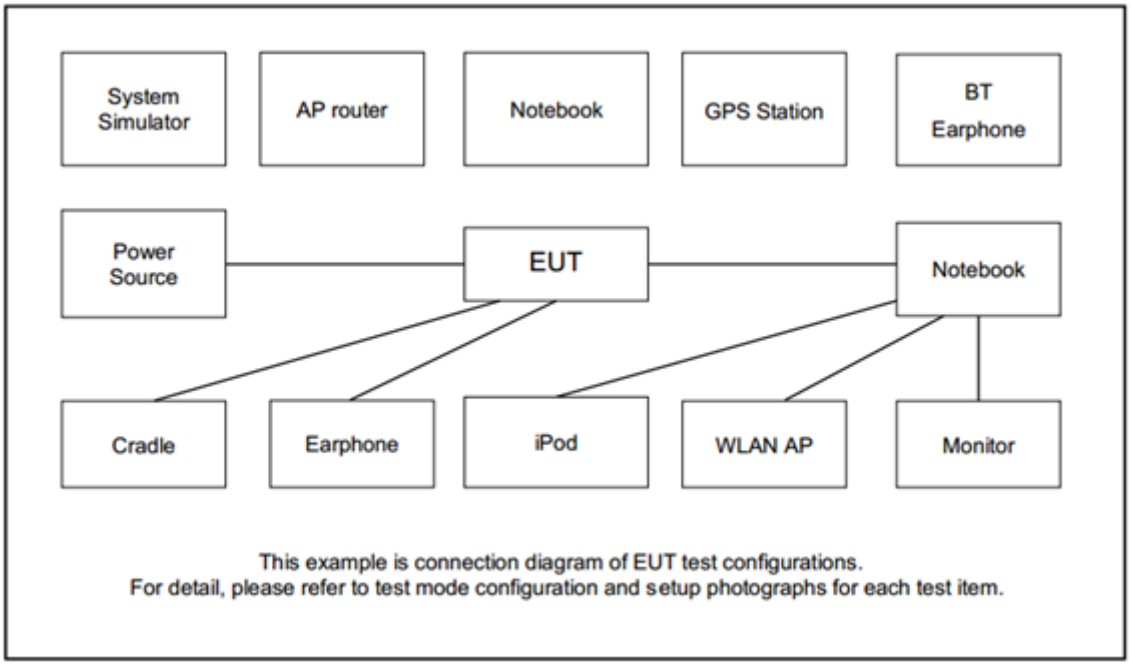
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	-	52	-
M	Middle	44	-	116
H	High	-	-	-
Straddle		-	-	-

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	-	102
M	Middle	-	-	-
H	High	46	62	-
Straddle		-	-	-

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	-
H	High	-	-	-
Straddle		-	-	138

Ch. #		Band I + II：5150-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT160	802.11ac VHT160
L	Low	-	-
M	Middle	50	114
H	High	-	-
Straddle		-	-

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.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
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 Maximum Conducted Output Power Measurement

3.1.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

■ For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For the 5.25–5.725 GHz bands:

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

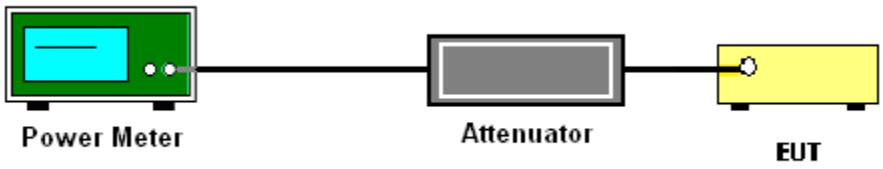
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.4 Test Setup



3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.2 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.2.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) 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.

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

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

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

(i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.[3]

(ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.[4]

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

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 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 ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

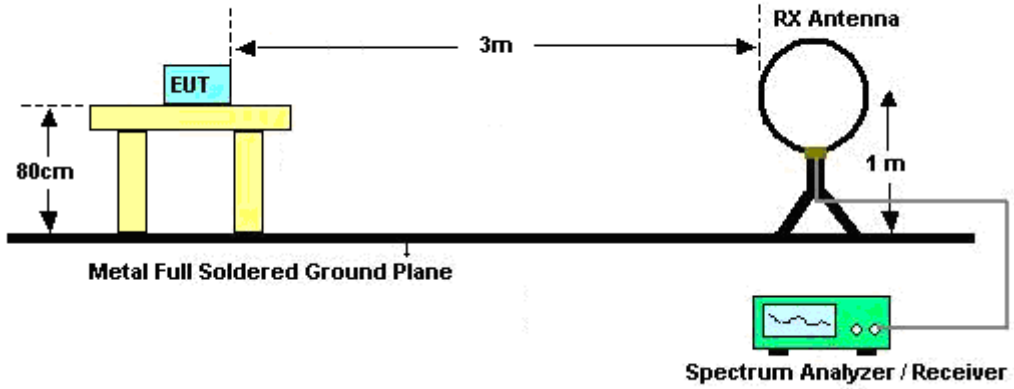
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 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.

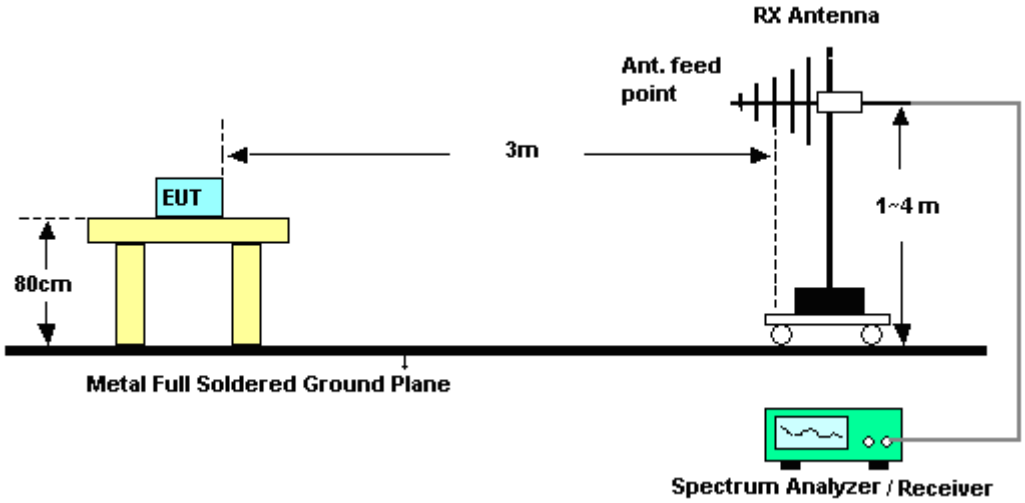
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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.

3.2.4 Test Setup

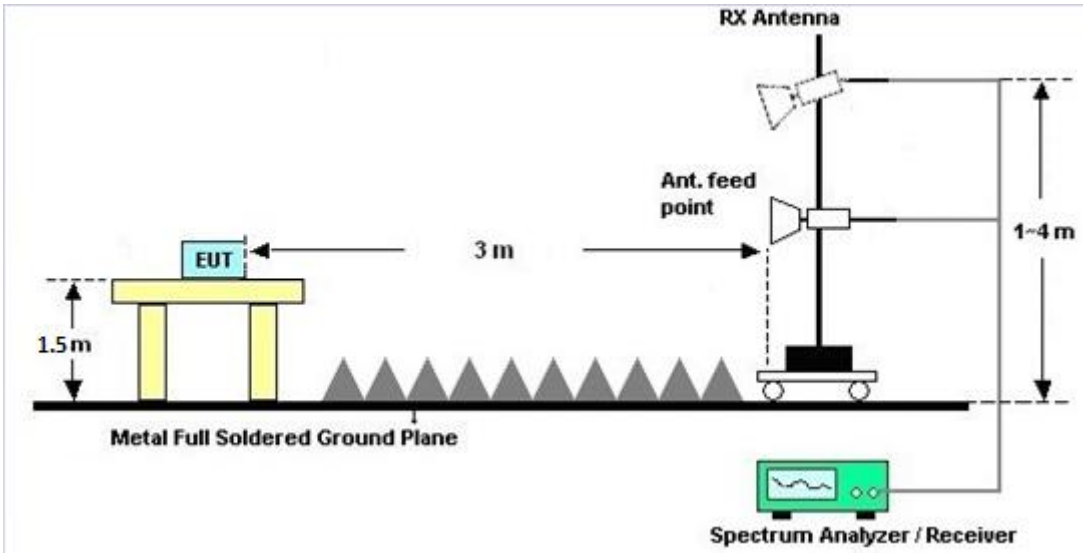
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.2.5 Test Results of Radiated Spurious Emissions (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 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 Emissions (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 (dBμV)	
	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.

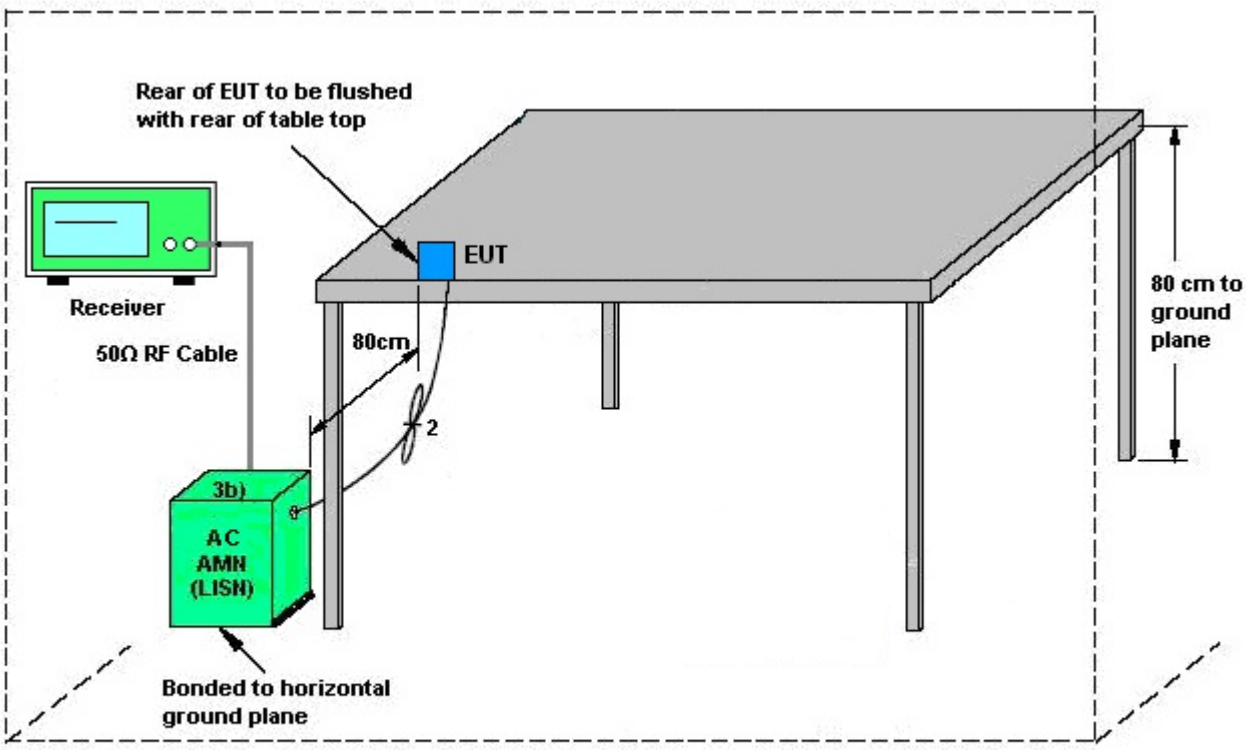
3.3.2 Measuring Instruments

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 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 with Maximum Hold Mode.

3.3.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.4 Antenna Requirements

3.4.1 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.

3.4.2 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 = GANT + Array Gain, where Array Gain is as follows.

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

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

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

The EUT supports CDD mode.

For power, the directional gain GANT 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>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	2.31	-0.92	2.31	3.85	0.00	0.00
Band II	2.99	-0.68	2.99	4.36	0.00	0.00
Band III	1.61	-0.85	1.61	3.48	0.00	0.00

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

PSD limit reduction = Composite gain + PSD Array gain – 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. 07, 2019~ Jan. 24, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 16, 2018	Jan. 07, 2019~ Jan. 24, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2018	Jan. 07, 2019~ Jan. 24, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Jan. 07, 2019~ Jan. 24, 2019	Feb. 28, 2019	Conducted (TH05-HY)
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)
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)
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)
Bilog Antenna	TESEQ	CBL6111D&00802N1D01N-06	47020&06	30MHz to 1GHz	Oct. 13, 2018	Jan. 20, 2019~ Jan. 23, 2019	Oct. 12, 2019	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Sep. 07, 2018	Jan. 20, 2019~ Jan. 23, 2019	Sep. 06, 2019	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	May 08, 2018	Jan. 20, 2019~ Jan. 23, 2019	May 07, 2019	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY57290111	3Hz~26.5GHz	Nov. 29, 2018	Jan. 20, 2019~ Jan. 23, 2019	Nov. 28, 2019	Radiation (03CH16-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	Jan. 20, 2019~ Jan. 23, 2019	Apr. 16, 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)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800054001	1GHz~18GHz	Apr. 16, 2018	Jan. 20, 2019~ Jan. 23, 2019	Apr. 15, 2019	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Feb. 02, 2018	Jan. 20, 2019~ Jan. 23, 2019	Feb. 01, 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)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
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)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Jan. 20, 2019~ Jan. 23, 2019	N/A	Radiation (03CH16-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.2**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.9**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.8**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.9**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Richard Qiu/Derek Hsu/Kai Laio	Temperature:	21~25	°C
Test Date:	2019/01/07~2019/01/24	Relative Humidity:	51~54	%

Report Number : FR8D3109D

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	0.08	0.08	13.39	13.34		24.00	24.00	2.31	-0.92		Pass
11a	6Mbps	1	44	5220	0.08	0.08	13.29	13.48		24.00	24.00	2.31	-0.92		Pass
11a	6Mbps	1	48	5240	0.08	0.08	13.32	13.38		24.00	24.00	2.31	-0.92		Pass
HT20	MCS0	1	36	5180	0.09	0.11	13.45	13.45		24.00	24.00	2.31	-0.92		Pass
HT20	MCS0	1	44	5220	0.09	0.11	13.38	13.31		24.00	24.00	2.31	-0.92		Pass
HT20	MCS0	1	48	5240	0.09	0.11	13.29	13.40		24.00	24.00	2.31	-0.92		Pass
HT40	MCS0	1	38	5190	0.22	0.22	13.49	13.33		24.00	24.00	2.31	-0.92		Pass
HT40	MCS0	1	46	5230	0.22	0.22	13.36	13.42		24.00	24.00	2.31	-0.92		Pass
VHT20	MCS0	1	36	5180	0.11	0.11	13.29	13.34		24.00	24.00	2.31	-0.92		Pass
VHT20	MCS0	1	44	5220	0.11	0.11	13.26	13.21		24.00	24.00	2.31	-0.92		Pass
VHT20	MCS0	1	48	5240	0.11	0.11	13.11	13.27		24.00	24.00	2.31	-0.92		Pass
VHT40	MCS0	1	38	5190	0.19	0.22	13.40	13.23		24.00	24.00	2.31	-0.92		Pass
VHT40	MCS0	1	46	5230	0.19	0.22	13.25	13.32		24.00	24.00	2.31	-0.92		Pass
VHT80	MCS0	1	42	5210	0.26	0.26	13.37	13.48		24.00	24.00	2.31	-0.92		Pass
VHT160	MCS0	1	50	5250	0.32	0.32	12.88	13.41		24.00	24.00	2.31	-0.92		Pass
HT20	MCS0	2	36	5180	0.13	0.13	13.40	13.49	16.46	24.00		2.31			Pass
HT20	MCS0	2	44	5220	0.13	0.13	13.39	13.42	16.42	24.00		2.31			Pass
HT20	MCS0	2	48	5240	0.13	0.13	13.27	13.26	16.28	24.00		2.31			Pass
HT40	MCS0	2	38	5190	0.24	0.22	13.47	13.42	16.46	24.00		2.31			Pass
HT40	MCS0	2	46	5230	0.24	0.22	13.30	13.27	16.30	24.00		2.31			Pass
VHT20	MCS0	2	36	5180	0.26	0.21	13.36	13.46	16.42	24.00		2.31			Pass
VHT20	MCS0	2	44	5220	0.26	0.21	13.41	13.37	16.40	24.00		2.31			Pass
VHT20	MCS0	2	48	5240	0.26	0.21	13.26	13.22	16.25	24.00		2.31			Pass
VHT40	MCS0	2	38	5190	0.45	0.45	13.38	13.35	16.38	24.00		2.31			Pass
VHT40	MCS0	2	46	5230	0.45	0.45	13.17	13.25	16.22	24.00		2.31			Pass
VHT80	MCS0	2	42	5210	0.57	0.55	13.37	13.35	16.37	24.00		2.31			Pass
VHT160	MCS0	2	50	5250	0.68	0.69	11.23	11.47	14.36	24.00		2.31			Pass

Report Number : FR8D3109D

TEST RESULTS DATA
Average Power Table

FCC Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	0.08	0.08	13.42	13.43		23.98	23.98	2.99	-0.68	26.99	Pass
11a	6Mbps	1	60	5300	0.08	0.08	13.30	13.42		23.98	23.98	2.99	-0.68	26.99	Pass
11a	6Mbps	1	64	5320	0.08	0.08	13.37	13.32		23.98	23.98	2.99	-0.68	26.99	Pass
HT20	MCS0	1	52	5260	0.09	0.11	13.31	13.39		23.98	23.98	2.99	-0.68	26.99	Pass
HT20	MCS0	1	60	5300	0.09	0.11	13.39	13.37		23.98	23.98	2.99	-0.68	26.99	Pass
HT20	MCS0	1	64	5320	0.09	0.11	13.49	13.45		23.98	23.98	2.99	-0.68	26.99	Pass
HT40	MCS0	1	54	5270	0.22	0.22	13.48	13.35		23.98	23.98	2.99	-0.68	26.99	Pass
HT40	MCS0	1	62	5310	0.22	0.22	13.32	13.36		23.98	23.98	2.99	-0.68	26.99	Pass
VHT20	MCS0	1	52	5260	0.11	0.11	13.26	13.31		23.98	23.98	2.99	-0.68	26.99	Pass
VHT20	MCS0	1	60	5300	0.11	0.11	13.23	13.29		23.98	23.98	2.99	-0.68	26.99	Pass
VHT20	MCS0	1	64	5320	0.11	0.11	13.39	13.38		23.98	23.98	2.99	-0.68	26.99	Pass
VHT40	MCS0	1	54	5270	0.19	0.22	13.34	13.27		23.98	23.98	2.99	-0.68	26.99	Pass
VHT40	MCS0	1	62	5310	0.19	0.22	13.14	13.28		23.98	23.98	2.99	-0.68	26.99	Pass
VHT80	MCS0	1	58	5290	0.26	0.26	13.34	13.43		23.98	23.98	2.99	-0.68	26.99	Pass
HT20	MCS0	2	52	5260	0.13	0.13	13.21	13.48	16.36	23.98		2.99		26.99	Pass
HT20	MCS0	2	60	5300	0.13	0.13	13.29	13.48	16.40	23.98		2.99		26.99	Pass
HT20	MCS0	2	64	5320	0.13	0.13	13.36	13.43	16.41	23.98		2.99		26.99	Pass
HT40	MCS0	2	54	5270	0.24	0.22	13.43	13.43	16.44	23.98		2.99		26.99	Pass
HT40	MCS0	2	62	5310	0.24	0.22	13.39	13.48	16.45	23.98		2.99		26.99	Pass
VHT20	MCS0	2	52	5260	0.26	0.21	13.17	13.31	16.25	23.98		2.99		26.99	Pass
VHT20	MCS0	2	60	5300	0.26	0.21	13.24	13.34	16.30	23.98		2.99		26.99	Pass
VHT20	MCS0	2	64	5320	0.26	0.21	13.29	13.29	16.30	23.98		2.99		26.99	Pass
VHT40	MCS0	2	54	5270	0.45	0.45	13.36	13.41	16.40	23.98		2.99		26.99	Pass
VHT40	MCS0	2	62	5310	0.45	0.45	13.31	13.44	16.39	23.98		2.99		26.99	Pass
VHT80	MCS0	2	58	5290	0.57	0.55	12.36	12.33	15.35	23.98		2.99		26.99	Pass

Report Number : FR8D3109D

TEST RESULTS DATA
Average Power Table

FCC Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.08	0.08	13.24	13.31		23.98	23.98	1.61	-0.85	26.99	Pass
11a	6Mbps	1	116	5580	0.08	0.08	13.30	13.33		23.98	23.98	1.61	-0.85	26.99	Pass
11a	6Mbps	1	140	5700	0.08	0.08	13.35	13.38		23.98	23.98	1.61	-0.85	26.99	Pass
11a	6Mbps	1	144	5720	0.08	0.08	13.44	13.43		23.98	23.98	1.61	-0.85	26.99	Pass
HT20	MCS0	1	100	5500	0.09	0.11	13.29	13.25		23.98	23.98	1.61	-0.85	26.99	Pass
HT20	MCS0	1	116	5580	0.09	0.11	13.32	13.41		23.98	23.98	1.61	-0.85	26.99	Pass
HT20	MCS0	1	140	5700	0.09	0.11	13.29	13.36		23.98	23.98	1.61	-0.85	26.99	Pass
HT20	MCS0	1	144	5720	0.09	0.11	13.29	13.27		23.98	23.98	1.61	-0.85	26.99	Pass
HT40	MCS0	1	102	5510	0.22	0.22	13.44	13.35		23.98	23.98	1.61	-0.85	26.99	Pass
HT40	MCS0	1	110	5550	0.22	0.22	13.39	13.37		23.98	23.98	1.61	-0.85	26.99	Pass
HT40	MCS0	1	134	5670	0.22	0.22	13.49	13.47		23.98	23.98	1.61	-0.85	26.99	Pass
HT40	MCS0	1	142	5710	0.22	0.22	13.30	13.48		23.98	23.98	1.61	-0.85	26.99	Pass
VHT20	MCS0	1	100	5500	0.11	0.11	13.22	13.22		23.98	23.98	1.61	-0.85	26.99	Pass
VHT20	MCS0	1	116	5580	0.11	0.11	13.21	13.29		23.98	23.98	1.61	-0.85	26.99	Pass
VHT20	MCS0	1	140	5700	0.11	0.11	13.27	13.26		23.98	23.98	1.61	-0.85	26.99	Pass
VHT20	MCS0	1	144	5720	0.11	0.11	13.26	13.22		23.98	23.98	1.61	-0.85	26.99	Pass
VHT40	MCS0	1	102	5510	0.19	0.22	13.35	13.21		23.98	23.98	1.61	-0.85	26.99	Pass
VHT40	MCS0	1	110	5550	0.19	0.22	13.19	13.26		23.98	23.98	1.61	-0.85	26.99	Pass
VHT40	MCS0	1	134	5670	0.19	0.22	13.32	13.43		23.98	23.98	1.61	-0.85	26.99	Pass
VHT40	MCS0	1	142	5710	0.19	0.22	13.15	13.45		23.98	23.98	1.61	-0.85	26.99	Pass
VHT80	MCS0	1	106	5530	0.26	0.26	13.49	13.47		23.98	23.98	1.61	-0.85	26.99	Pass
VHT80	MCS0	1	122	5610	0.26	0.26	13.46	13.34		23.98	23.98	1.61	-0.85	26.99	Pass
VHT80	MCS0	1	138	5690	0.26	0.26	13.31	13.46		23.98	23.98	1.61	-0.85	26.99	Pass
VHT160	MCS0	1	114	5570	0.32	0.32	13.34	13.27		23.98	23.98	1.61	-0.85	26.99	Pass
HT20	MCS0	2	100	5500	0.13	0.13	13.26	13.28	16.28	23.98		1.61		26.99	Pass
HT20	MCS0	2	116	5580	0.13	0.13	13.15	13.46	16.32	23.98		1.61		26.99	Pass
HT20	MCS0	2	140	5700	0.13	0.13	13.24	13.40	16.34	23.98		1.61		26.99	Pass
HT20	MCS0	2	144	5720	0.13	0.13	13.37	13.17	16.29	23.98		1.61		26.99	Pass
HT40	MCS0	2	102	5510	0.24	0.22	13.39	13.38	16.40	23.98		1.61		26.99	Pass
HT40	MCS0	2	110	5550	0.24	0.22	13.30	13.28	16.30	23.98		1.61		26.99	Pass
HT40	MCS0	2	134	5670	0.24	0.22	13.24	13.48	16.37	23.98		1.61		26.99	Pass
HT40	MCS0	2	142	5710	0.24	0.22	13.30	13.42	16.37	23.98		1.61		26.99	Pass
VHT20	MCS0	2	100	5500	0.26	0.21	13.22	13.30	16.27	23.98		1.61		26.99	Pass
VHT20	MCS0	2	116	5580	0.26	0.21	13.18	13.41	16.31	23.98		1.61		26.99	Pass
VHT20	MCS0	2	140	5700	0.26	0.21	13.25	13.38	16.33	23.98		1.61		26.99	Pass
VHT20	MCS0	2	144	5720	0.26	0.21	13.26	13.14	16.21	23.98		1.61		26.99	Pass
VHT40	MCS0	2	102	5510	0.45	0.45	13.38	13.38	16.39	23.98		1.61		26.99	Pass
VHT40	MCS0	2	110	5550	0.45	0.45	13.25	13.25	16.26	23.98		1.61		26.99	Pass
VHT40	MCS0	2	134	5670	0.45	0.45	13.24	13.45	16.36	23.98		1.61		26.99	Pass
VHT40	MCS0	2	142	5710	0.45	0.45	13.25	13.40	16.34	23.98		1.61		26.99	Pass
VHT80	MCS0	2	106	5530	0.57	0.55	13.41	13.29	16.36	23.98		1.61		26.99	Pass
VHT80	MCS0	2	122	5610	0.57	0.55	13.38	13.41	16.40	23.98		1.61		26.99	Pass
VHT80	MCS0	2	138	5690	0.57	0.55	13.23	13.29	16.27	23.98		1.61		26.99	Pass
VHT160	MSC0	2	114	5570	0.68	0.69	13.44	13.27	16.36	23.98		1.61		26.99	Pass

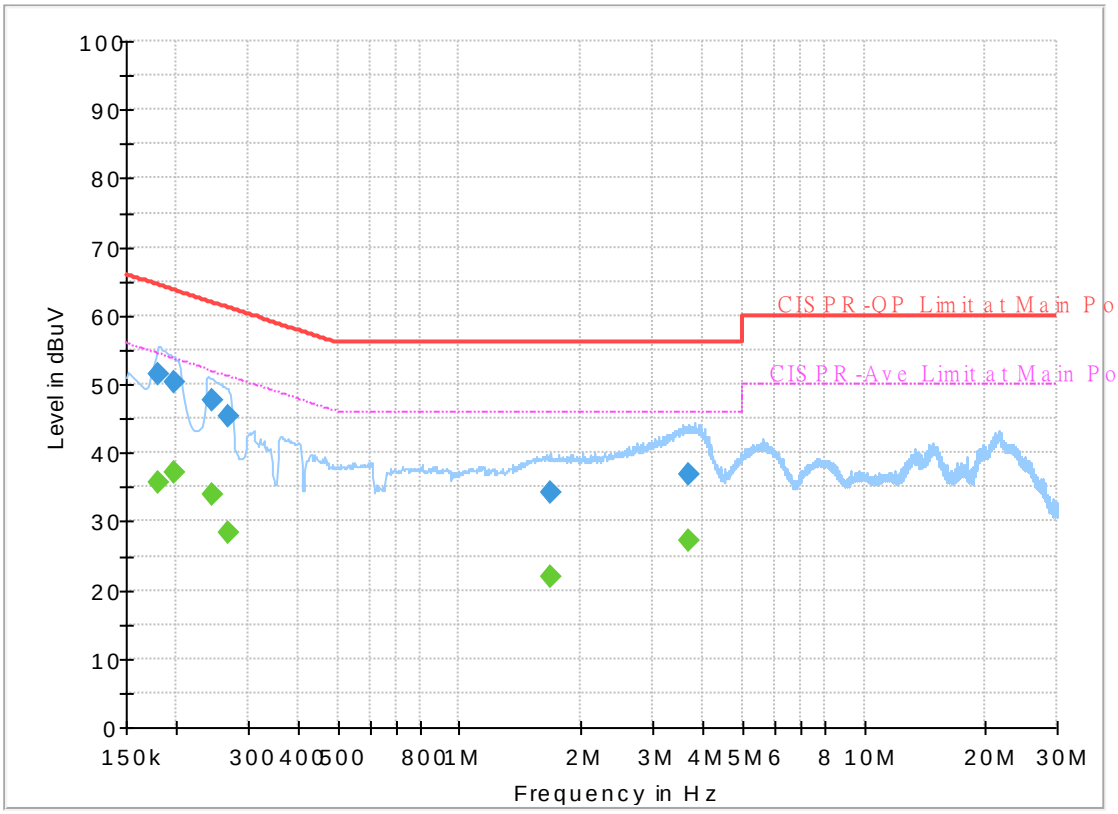
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Eric Jeng	**Temperature :**	22~25℃
		Relative Humidity :	52~55%

EUT Information

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

Full Spectrum



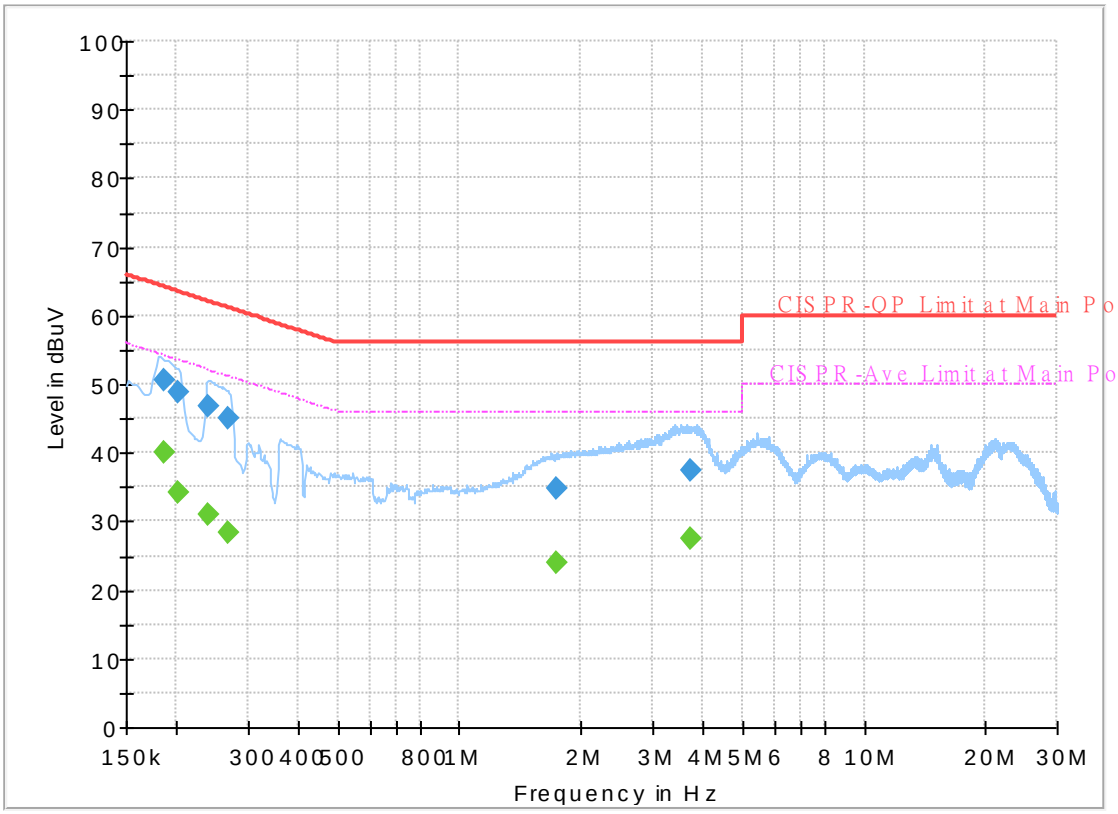
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.179250	---	35.57	54.52	18.95	L1	OFF	19.5
0.179250	51.49	---	64.52	13.03	L1	OFF	19.5
0.197250	---	37.27	53.73	16.46	L1	OFF	19.5
0.197250	50.38	---	63.73	13.35	L1	OFF	19.5
0.244500	---	33.95	51.94	17.99	L1	OFF	19.5
0.244500	47.62	---	61.94	14.32	L1	OFF	19.5
0.269250	---	28.23	51.14	22.91	L1	OFF	19.5
0.269250	45.25	---	61.14	15.89	L1	OFF	19.5
1.671000	---	21.92	46.00	24.08	L1	OFF	19.6
1.671000	34.12	---	56.00	21.88	L1	OFF	19.6
3.693750	---	27.09	46.00	18.91	L1	OFF	19.6
3.693750	36.82	---	56.00	19.18	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)
0.186000	---	40.11	54.21	14.10	N	OFF	19.5
0.186000	50.72	---	64.21	13.49	N	OFF	19.5
0.201750	---	34.20	53.54	19.34	N	OFF	19.5
0.201750	48.85	---	63.54	14.69	N	OFF	19.5
0.240000	---	31.03	52.10	21.07	N	OFF	19.5
0.240000	46.77	---	62.10	15.33	N	OFF	19.5
0.269250	---	28.31	51.14	22.83	N	OFF	19.5
0.269250	44.93	---	61.14	16.21	N	OFF	19.5
1.745250	---	23.91	46.00	22.09	N	OFF	19.6
1.745250	34.94	---	56.00	21.06	N	OFF	19.6
3.714000	---	27.61	46.00	18.39	N	OFF	19.6
3.714000	37.36	---	56.00	18.64	N	OFF	19.6

Appendix C. Radiated Spurious Emission

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

Band 3 - 5470~5725MHz

WIFI 802.11a (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)
802.11a CH 100 5500MHz		5409.2	54.99	-19.01	74	39.75	31.68	12.98	29.42	100	58	P	H
		5466.8	54.49	-13.71	68.2	39.04	31.69	13.19	29.43	100	58	P	H
		5453.2	42.57	-11.43	54	27.17	31.69	13.14	29.43	100	58	A	H
	*	5500	106.91	-	-	91.33	31.7	13.31	29.43	100	58	P	H
	*	5500	98.35	-	-	82.77	31.7	13.31	29.43	100	58	A	H
													H
		5361.2	54.34	-19.66	74	39.1	31.67	12.98	29.41	304	74	P	V
		5463.76	53.56	-14.64	68.2	38.12	31.69	13.18	29.43	304	74	P	V
		5459.92	42.02	-11.98	54	26.6	31.69	13.16	29.43	304	74	A	V
	*	5500	102.57	-	-	86.99	31.7	13.31	29.43	304	74	P	V
	*	5500	94.47	-	-	78.89	31.7	13.31	29.43	304	74	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	46.8	-27.2	74	50.11	40.2	17.99	61.5	100	0	P	H
		16500	46.6	-21.6	68.2	45.12	38.9	22.28	59.7	100	0	P	H
													H
													H
		11000	47.16	-26.84	74	50.47	40.2	17.99	61.5	100	0	P	V
		16500	45.26	-22.94	68.2	43.78	38.9	22.28	59.7	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

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 102 5510MHz		5455.6	55.21	-18.79	74	39.8	31.69	13.15	29.43	100	60	P	H
		5469.52	54.92	-13.28	68.2	39.46	31.69	13.2	29.43	100	60	P	H
		5443.36	44.98	-9.02	54	29.61	31.69	13.1	29.42	100	60	A	H
	*	5510	103.76	-	-	88.14	31.72	13.34	29.44	100	60	P	H
	*	5510	95.82	-	-	80.2	31.72	13.34	29.44	100	60	A	H
		5764.685	55.59	-12.61	68.2	38.94	32.12	14.1	29.57	100	60	P	H
		5445.28	54.56	-19.44	74	39.18	31.69	13.11	29.42	309	99	P	V
		5468.8	55.56	-12.64	68.2	40.11	31.69	13.19	29.43	309	99	P	V
		5383.12	44.35	-9.65	54	29.13	31.68	12.96	29.42	309	99	A	V
	*	5510	100.7	-	-	85.08	31.72	13.34	29.44	309	99	P	V
	*	5510	92.57	-	-	76.95	31.72	13.34	29.44	309	99	A	V
		5726.255	55.3	-12.9	68.2	38.78	32.06	14	29.54	309	99	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11020	48.22	-25.78	74	51.53	40.19	18	61.5	100	0	P	H
		16530	45.58	-22.62	68.2	43.87	39.01	22.32	59.62	100	0	P	H
802.11n													H
HT40													H
CH 102		11020	47.15	-26.85	74	50.46	40.19	18	61.5	100	0	P	V
5510MHz		16530	45.58	-22.62	68.2	43.87	39.01	22.32	59.62	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

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.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5020.8	54.25	-19.75	74	38.5	31.6	13.51	29.36	103	0	P	H
		5086.32	43.48	-10.52	54	27.88	31.62	13.35	29.37	103	0	A	H
	*	5220	102.68	-	-	87.36	31.64	13.07	29.39	103	0	P	H
	*	5220	94.72	-	-	79.4	31.64	13.07	29.39	103	0	A	H
802.11n		5445.44	53.63	-20.37	74	38.25	31.69	13.11	29.42	103	0	P	H
HT20		5444.32	43.16	-10.84	54	27.78	31.69	13.11	29.42	103	0	A	H
CH 44		5076.96	54.63	-19.37	74	39	31.62	13.38	29.37	267	182	P	V
5220MHz		5092.04	43.54	-10.46	54	27.95	31.62	13.34	29.37	267	182	A	V
	*	5220	102.18	-	-	86.86	31.64	13.07	29.39	267	182	P	V
	*	5220	94.15	-	-	78.83	31.64	13.07	29.39	267	182	A	V
		5440.4	53.73	-20.27	74	38.37	31.69	13.09	29.42	267	182	P	V
		5454.96	43.03	-10.97	54	27.62	31.69	13.15	29.43	267	182	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 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)
		10440	46.42	-21.78	68.2	50.19	39.6	17.55	60.92	100	0	P	H
		15660	44.74	-29.26	74	46.33	37.55	21.53	60.67	100	0	P	H
802.11n													H
HT20													H
CH 44		10440	46.9	-21.3	68.2	50.67	39.6	17.55	60.92	100	0	P	V
5220MHz		15660	44.7	-29.3	74	46.29	37.55	21.53	60.67	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (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 HT40 CH 46 5230MHz		5002.6	55.71	-18.29	74	39.92	31.6	13.55	29.36	100	0	P	H
		5006.24	45.54	-8.46	54	29.75	31.6	13.55	29.36	100	0	A	H
	*	5230	100.18	-	-	84.86	31.65	13.06	29.39	100	0	P	H
	*	5230	92.16	-	-	76.84	31.65	13.06	29.39	100	0	A	H
		5459.44	53.95	-20.05	74	38.53	31.69	13.16	29.43	100	0	P	H
		5439.56	44.47	-9.53	54	29.11	31.69	13.09	29.42	100	0	A	H
		5115.18	55.18	-18.82	74	39.65	31.62	13.28	29.37	257	181	P	V
		5070.46	45.39	-8.61	54	29.76	31.61	13.39	29.37	257	181	A	V
	*	5230	99.9	-	-	84.58	31.65	13.06	29.39	257	181	P	V
	*	5230	91.59	-	-	76.27	31.65	13.06	29.39	257	181	A	V
		5400.92	54.58	-19.42	74	39.37	31.68	12.95	29.42	257	181	P	V
		5416.32	44.55	-9.45	54	29.28	31.68	13.01	29.42	257	181	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 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)
		10460	46.43	-21.77	68.2	50.17	39.64	17.56	60.94	100	0	P	H
		15690	45.09	-28.91	74	46.73	37.47	21.54	60.65	100	0	P	H
802.11n													H
HT40													H
CH 46		10460	46.8	-21.4	68.2	50.54	39.64	17.56	60.94	100	0	P	V
5230MHz		15690	44.59	-29.41	74	46.23	37.47	21.54	60.65	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (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)
802.11ac VHT80 CH 42 5210MHz		5093.86	55.87	-18.13	74	40.29	31.62	13.33	29.37	100	0	P	H
		5144.3	45.95	-8.05	54	30.49	31.63	13.21	29.38	100	0	A	H
	*	5210	99.07	-	-	83.75	31.64	13.07	29.39	100	0	P	H
	*	5210	90.85	-	-	75.53	31.64	13.07	29.39	100	0	A	H
		5376.28	53.59	-20.41	74	38.36	31.68	12.97	29.42	100	0	P	H
		5450.76	45.19	-8.81	54	29.8	31.69	13.13	29.43	100	0	A	H
		5112.32	55.82	-18.18	74	40.28	31.62	13.29	29.37	255	181	P	V
		5137.28	45.85	-8.15	54	30.37	31.63	13.23	29.38	255	181	A	V
	*	5210	98.2	-	-	82.88	31.64	13.07	29.39	255	181	P	V
	*	5210	90.22	-	-	74.9	31.64	13.07	29.39	255	181	A	V
		5398.96	55.27	-18.73	74	40.06	31.68	12.95	29.42	255	181	P	V
		5354.72	44.52	-9.48	54	29.28	31.67	12.98	29.41	255	181	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 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)
		10420	46.18	-22.02	68.2	49.97	39.57	17.53	60.89	100	0	P	H
		15630	44.14	-29.86	74	45.67	37.64	21.53	60.7	100	0	P	H
802.11ac													H
VHT80													H
CH 42		10420	46.32	-21.88	68.2	50.11	39.57	17.53	60.89	100	0	P	V
5210MHz		15630	44.64	-29.36	74	46.17	37.64	21.53	60.7	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT160 (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)
		5093.34	57.48	-16.52	74	41.89	31.62	13.34	29.37	100	0	P	H
		5142.48	48.84	-5.16	54	33.37	31.63	13.22	29.38	100	0	A	H
	*	5250	95.42	-	-	80.12	31.65	13.05	29.4	100	0	P	H
	*	5250	87.7	-	-	72.4	31.65	13.05	29.4	100	0	A	H
802.11ac		5412.4	62.2	-11.8	74	46.95	31.68	12.99	29.42	100	0	P	H
VHT160		5402.6	52.74	-1.26	54	37.52	31.68	12.96	29.42	100	0	A	H
CH 50		5079.04	58.79	-15.21	74	43.17	31.62	13.37	29.37	257	182	P	V
5250MHz		5083.46	47.79	-6.21	54	32.18	31.62	13.36	29.37	257	182	A	V
	*	5250	94.58	-	-	79.28	31.65	13.05	29.4	257	182	P	V
	*	5250	86.92	-	-	71.62	31.65	13.05	29.4	257	182	A	V
		5428.64	60.61	-13.39	74	45.29	31.69	13.05	29.42	257	182	P	V
		5378.52	52.31	-1.69	54	37.09	31.68	12.96	29.42	257	182	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT160 (Harmonic @ 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)
		10500	46.74	-21.46	68.2	50.44	39.7	17.6	61	100	0	P	H
		15750	44.17	-29.83	74	45.92	37.3	21.55	60.6	100	0	P	H
802.11ac													H
VHT160													H
CH 50		10500	47.29	-20.91	68.2	50.99	39.7	17.6	61	100	0	P	V
5250MHz		15750	43.85	-30.15	74	45.6	37.3	21.55	60.6	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11a (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)
802.11a CH 64 5320MHz	*	5320	103.61	-	-	88.35	31.66	13	29.4	100	0	P	H
	*	5320	94.8	-	-	79.54	31.66	13	29.4	100	0	A	H
		5362.72	54.63	-19.37	74	39.4	31.67	12.97	29.41	100	0	P	H
		5350.08	43.24	-10.76	54	28	31.67	12.98	29.41	100	0	A	H
													H
													H
	*	5320	103.1	-	-	87.84	31.66	13	29.4	279	181	P	V
	*	5320	94.74	-	-	79.48	31.66	13	29.4	279	181	A	V
		5431.52	54.85	-19.15	74	39.52	31.69	13.06	29.42	279	181	P	V
		5350.08	42.88	-11.12	54	27.64	31.67	12.98	29.41	279	181	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 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)
802.11a CH 64 5320MHz		10640	47.01	-26.99	74	50.61	39.84	17.7	61.14	100	0	P	H
		15960	43.25	-30.75	74	45.38	36.71	21.59	60.43	100	0	P	H
													H
													H
		10640	46.54	-27.46	74	50.14	39.84	17.7	61.14	100	0	P	V
		15960	43.15	-30.85	74	45.28	36.71	21.59	60.43	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (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 HT40 CH 62 5310MHz		5136.68	54.58	-19.42	74	39.1	31.63	13.23	29.38	100	0	P	H
		5024.48	45.3	-8.7	54	29.56	31.6	13.5	29.36	100	0	A	H
	*	5310	99.84	-	-	84.57	31.66	13.01	29.4	100	0	P	H
	*	5310	92.24	-	-	76.97	31.66	13.01	29.4	100	0	A	H
		5352.72	54.64	-19.36	74	39.4	31.67	12.98	29.41	100	0	P	H
		5350.56	46.3	-7.7	54	31.06	31.67	12.98	29.41	100	0	A	H
		5083.64	54.55	-19.45	74	38.94	31.62	13.36	29.37	264	181	P	V
		5068	44.89	-9.11	54	29.25	31.61	13.4	29.37	264	181	A	V
	*	5310	99.63	-	-	84.36	31.66	13.01	29.4	264	181	P	V
	*	5310	92.12	-	-	76.85	31.66	13.01	29.4	264	181	A	V
		5383.2	54.32	-19.68	74	39.1	31.68	12.96	29.42	264	181	P	V
		5350.8	45.98	-8.02	54	30.74	31.67	12.98	29.41	264	181	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 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)
		10620	47.04	-26.96	74	50.65	39.82	17.69	61.12	100	0	P	H
		15930	43.58	-30.42	74	45.65	36.8	21.59	60.46	100	0	P	H
802.11n													H
HT40													H
CH 62		10620	47.1	-26.9	74	50.71	39.82	17.69	61.12	100	0	P	V
5310MHz		15930	43.94	-30.06	74	46.01	36.8	21.59	60.46	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (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)
802.11ac VHT80 CH 58 5290MHz		5119.34	55.58	-18.42	74	40.07	31.62	13.27	29.38	100	0	P	H
		5098.94	44.77	-9.23	54	29.2	31.62	13.32	29.37	100	0	A	H
	*	5290	98.45	-	-	83.17	31.66	13.02	29.4	100	0	P	H
	*	5290	90.05	-	-	74.77	31.66	13.02	29.4	100	0	A	H
		5361.12	56.79	-17.21	74	41.55	31.67	12.98	29.41	100	0	P	H
		5353.92	48.18	-5.82	54	32.94	31.67	12.98	29.41	100	0	A	H
		5029.58	56.19	-17.81	74	40.45	31.61	13.49	29.36	266	184	P	V
		5060.52	45.03	-8.97	54	29.38	31.61	13.41	29.37	266	184	A	V
	*	5290	97.6	-	-	82.32	31.66	13.02	29.4	266	184	P	V
	*	5290	89.62	-	-	74.34	31.66	13.02	29.4	266	184	A	V
		5355.84	57.03	-16.97	74	41.79	31.67	12.98	29.41	266	184	P	V
		5350.56	47.54	-6.46	54	32.3	31.67	12.98	29.41	266	184	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 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)
		10580	46.23	-21.97	68.2	49.87	39.78	17.66	61.08	100	0	P	H
		15870	43.81	-30.19	74	45.77	36.96	21.58	60.5	100	0	P	H
802.11ac													H
VHT80													H
CH 58		10580	47.14	-21.06	68.2	50.78	39.78	17.66	61.08	100	0	P	V
5290MHz		15870	44.33	-29.67	74	46.29	36.96	21.58	60.5	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT160 (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)
		5458.72	56.35	-17.65	74	40.93	31.69	13.16	29.43	314	360	P	H
		5469.52	56.42	-11.78	68.2	40.96	31.69	13.2	29.43	314	360	P	H
		5456.08	47.07	-6.93	54	31.66	31.69	13.15	29.43	314	360	A	H
	*	5570	93.98	-	-	78.09	31.81	13.55	29.47	314	360	P	H
802.11ac	*	5570	86.15	-	-	70.26	31.81	13.55	29.47	314	360	A	H
VHT160		5734.76	58.55	-9.65	68.2	42.01	32.08	14.02	29.56	314	360	P	H
CH 114		5456.8	57.67	-16.33	74	42.26	31.69	13.15	29.43	256	185	P	V
5570MHz		5465.68	56.5	-11.7	68.2	41.06	31.69	13.18	29.43	256	185	P	V
		5455.84	47.7	-6.3	54	32.29	31.69	13.15	29.43	256	185	A	V
	*	5570	94.94	-	-	79.05	31.81	13.55	29.47	256	185	P	V
	*	5570	87.56	-	-	71.67	31.81	13.55	29.47	256	185	A	V
		5733.185	59.27	-8.93	68.2	42.74	32.07	14.02	29.56	256	185	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT160 (Harmonic @ 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)
		11140	46.47	-27.53	74	49.72	40.12	18.1	61.47	100	0	P	H
		16710	47.69	-20.51	68.2	44.63	39.66	22.55	59.15	100	0	P	H
802.11ac													H
VHT160													H
CH 114		11140	46.47	-27.53	74	49.72	40.12	18.1	61.47	100	0	P	V
5570MHz		16710	47.89	-20.31	68.2	44.83	39.66	22.55	59.15	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (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)
		5355.07	54.22	-19.78	74	38.98	31.67	12.98	29.41	301	0	P	H
		5469.73	53.26	-14.94	68.2	37.8	31.69	13.2	29.43	301	0	P	H
		5440.09	44.13	-9.87	54	28.77	31.69	13.09	29.42	301	0	A	H
	*	5690	97.17	-	-	80.8	32	13.9	29.53	301	0	P	H
802.11ac	*	5690	88.73	-	-	72.36	32	13.9	29.53	301	0	A	H
VHT80		5854.25	56.05	-12.15	68.2	39.36	32.27	14.02	29.6	301	0	P	H
CH 138		5452.18	54.11	-19.89	74	38.71	31.69	13.14	29.43	247	187	P	V
5690MHz		5467	53.67	-14.53	68.2	38.22	31.69	13.19	29.43	247	187	P	V
		5408.11	44.02	-9.98	54	28.78	31.68	12.98	29.42	247	187	A	V
	*	5690	97.89	-	-	81.52	32	13.9	29.53	247	187	P	V
	*	5690	90.26	-	-	73.89	32	13.9	29.53	247	187	A	V
		5890.25	55.65	-12.55	68.2	39.06	32.32	13.9	29.63	247	187	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Harmonic @ 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)
		11380	46.2	-27.8	74	49.36	39.97	18.29	61.42	100	0	P	H
		17070	49.01	-19.19	68.2	43.21	40.97	23.05	58.22	100	0	P	H
802.11ac													H
VHT80													H
CH 138		11380	47.33	-26.67	74	50.49	39.97	18.29	61.42	100	0	P	V
5690MHz		17070	48.87	-19.33	68.2	43.07	40.97	23.05	58.22	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

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 44 5220MHz		5123.76	54.03	-19.97	74	38.53	31.62	13.26	29.38	100	359	P	H
		5091	43.99	-10.01	54	28.4	31.62	13.34	29.37	100	359	A	H
	*	5220	110.45	-	-	95.13	31.64	13.07	29.39	100	359	P	H
	*	5220	101.58	-	-	86.26	31.64	13.07	29.39	100	359	A	H
		5437.88	54.17	-19.83	74	38.82	31.69	13.08	29.42	100	359	P	H
		5449.64	43.79	-10.21	54	28.39	31.69	13.13	29.42	100	359	A	H
		5111.54	54.06	-19.94	74	38.52	31.62	13.29	29.37	314	94	P	V
		5087.1	44.09	-9.91	54	28.49	31.62	13.35	29.37	314	94	A	V
	*	5220	106.02	-	-	90.7	31.64	13.07	29.39	314	94	P	V
	*	5220	96.96	-	-	81.64	31.64	13.07	29.39	314	94	A	V
		5404.56	53.9	-20.1	74	38.67	31.68	12.97	29.42	314	94	P	V
		5449.92	43.36	-10.64	54	27.97	31.69	13.13	29.43	314	94	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 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)
		10440	46.2	-22	68.2	49.97	39.6	17.55	60.92	100	0	P	H
		15660	44.17	-29.83	74	45.76	37.55	21.53	60.67	100	0	P	H
802.11n													H
HT20													H
CH 44		10440	45.74	-22.46	68.2	49.51	39.6	17.55	60.92	100	0	P	V
5220MHz		15660	44.22	-29.78	74	45.81	37.55	21.53	60.67	100	0	P	V
													V
													V

Remark

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

Band 1 5150~5250MHz

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 38 5190MHz		5082.16	55.57	-18.43	74	39.96	31.62	13.36	29.37	100	358	P	H
		5145.08	45.79	-8.21	54	30.33	31.63	13.21	29.38	100	358	A	H
	*	5190	105.49	-	-	90.14	31.64	13.1	29.39	100	358	P	H
	*	5190	96.87	-	-	81.52	31.64	13.1	29.39	100	358	A	H
		5421.64	54.21	-19.79	74	38.92	31.68	13.03	29.42	100	358	P	H
		5351.92	44.8	-9.2	54	29.56	31.67	12.98	29.41	100	358	A	H
		5036.92	54.78	-19.22	74	39.06	31.61	13.47	29.36	265	258	P	V
		5149.24	45.18	-8.82	54	29.73	31.63	13.2	29.38	265	258	A	V
	*	5190	101.87	-	-	86.52	31.64	13.1	29.39	265	258	P	V
	*	5190	93.11	-	-	77.76	31.64	13.1	29.39	265	258	A	V
		5432.28	53.82	-20.18	74	38.49	31.69	13.06	29.42	265	258	P	V
		5432.28	44.15	-9.85	54	28.82	31.69	13.06	29.42	265	258	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 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)
		10380	46.37	-21.83	68.2	50.19	39.51	17.5	60.83	100	0	P	H
		15570	44.92	-29.08	74	46.34	37.8	21.52	60.74	100	0	P	H
802.11n													H
HT40													H
CH 38		10380	46.32	-21.88	68.2	50.14	39.51	17.5	60.83	100	0	P	V
5190MHz		15570	44.85	-29.15	74	46.27	37.8	21.52	60.74	100	0	P	V
													V
													V

Remark

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

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (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)
		5141.96	55.91	-18.09	74	40.44	31.63	13.22	29.38	102	61	P	H
		5147.16	47.03	-6.97	54	31.57	31.63	13.21	29.38	102	61	A	H
	*	5210	101.18	-	-	85.86	31.64	13.07	29.39	102	61	P	H
	*	5210	92.34	-	-	77.02	31.64	13.07	29.39	102	61	A	H
802.11ac		5413.52	54.41	-19.59	74	39.15	31.68	13	29.42	102	61	P	H
VHT80		5426.68	44.76	-9.24	54	29.45	31.69	13.04	29.42	102	61	A	H
CH 42		5053.82	56.47	-17.53	74	40.8	31.61	13.43	29.37	330	94	P	V
5210MHz		5145.6	45.58	-8.42	54	30.12	31.63	13.21	29.38	330	94	A	V
	*	5210	97.59	-	-	82.27	31.64	13.07	29.39	330	94	P	V
	*	5210	88.89	-	-	73.57	31.64	13.07	29.39	330	94	A	V
		5384.68	53.41	-20.59	74	38.19	31.68	12.96	29.42	330	94	P	V
		5422.2	44.12	-9.88	54	28.83	31.68	13.03	29.42	330	94	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 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)
		10420	46.1	-22.1	68.2	49.89	39.57	17.53	60.89	100	0	P	H
		15630	44.54	-29.46	74	46.07	37.64	21.53	60.7	100	0	P	H
802.11ac													H
VHT80													H
CH 42		10420	46.02	-22.18	68.2	49.81	39.57	17.53	60.89	100	0	P	V
5210MHz		15630	44.94	-29.06	74	46.47	37.64	21.53	60.7	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT160 (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)
802.11ac VHT160 CH 50 5250MHz		5143	55.27	-18.73	74	39.8	31.63	13.22	29.38	100	357	P	H
		5143.78	50.45	-3.55	54	34.99	31.63	13.21	29.38	100	357	A	H
	*	5250	98.65	-	-	83.35	31.65	13.05	29.4	100	357	P	H
	*	5250	91.72	-	-	76.42	31.65	13.05	29.4	100	357	A	H
		5398.12	58.39	-15.61	74	43.18	31.68	12.95	29.42	100	357	P	H
		5402.6	52.44	-1.56	54	37.22	31.68	12.96	29.42	100	357	A	H
		5059.28	54.6	-19.4	74	38.94	31.61	13.42	29.37	300	95	P	V
		5142.22	47.89	-6.11	54	32.42	31.63	13.22	29.38	300	95	A	V
	*	5250	94.04	-	-	78.74	31.65	13.05	29.4	300	95	P	V
	*	5250	86.6	-	-	71.3	31.65	13.05	29.4	300	95	A	V
		5414.64	54.89	-19.11	74	39.63	31.68	13	29.42	300	95	P	V
		5404	46.57	-7.43	54	31.35	31.68	12.96	29.42	300	95	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT160 (Harmonic @ 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)
		10500	46.76	-21.44	68.2	50.46	39.7	17.6	61	100	0	P	H
		15750	43.86	-30.14	74	45.61	37.3	21.55	60.6	100	0	P	H
802.11ac													H
VHT160													H
CH 50		10500	46.33	-21.87	68.2	50.03	39.7	17.6	61	100	0	P	V
5250MHz		15750	43.73	-30.27	74	45.48	37.3	21.55	60.6	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

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)
		5080.24	53.88	-20.12	74	38.26	31.62	13.37	29.37	108	357	P	H
		5067.32	43.77	-10.23	54	28.13	31.61	13.4	29.37	108	357	A	H
	*	5260	107.15	-	-	91.86	31.65	13.04	29.4	108	357	P	H
	*	5260	98.79	-	-	83.5	31.65	13.04	29.4	108	357	A	H
802.11n		5359.92	53.76	-20.24	74	38.52	31.67	12.98	29.41	108	357	P	H
HT20		5446.08	43.49	-10.51	54	28.11	31.69	13.11	29.42	108	357	A	H
CH 52		5130.9	55.05	-18.95	74	39.55	31.63	13.25	29.38	267	259	P	V
5260MHz		5090.1	43.58	-10.42	54	27.99	31.62	13.34	29.37	267	259	A	V
	*	5260	103.72	-	-	88.43	31.65	13.04	29.4	267	259	P	V
	*	5260	94.61	-	-	79.32	31.65	13.04	29.4	267	259	A	V
		5401.92	53.52	-20.48	74	38.3	31.68	12.96	29.42	267	259	P	V
		5432.4	43.25	-10.75	54	27.91	31.69	13.07	29.42	267	259	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 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)
		10520	46.1	-22.1	68.2	49.79	39.72	17.61	61.02	100	0	P	H
		15780	43.37	-30.63	74	45.17	37.22	21.56	60.58	100	0	P	H
802.11n													H
HT20													H
CH 52		10520	46.21	-21.99	68.2	49.9	39.72	17.61	61.02	100	0	P	V
5260MHz		15780	44.12	-29.88	74	45.92	37.22	21.56	60.58	100	0	P	V
													V
													V

Remark

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

Band 2 5250~5350MHz

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 62 5310MHz		5060.52	53.79	-20.21	74	38.14	31.61	13.41	29.37	100	358	P	H
		5084.32	44.68	-9.32	54	29.07	31.62	13.36	29.37	100	358	A	H
	*	5310	107.54	-	-	92.27	31.66	13.01	29.4	100	358	P	H
	*	5310	98.82	-	-	83.55	31.66	13.01	29.4	100	358	A	H
		5350.32	57.82	-16.18	74	42.58	31.67	12.98	29.41	100	358	P	H
		5350.32	50.78	-3.22	54	35.54	31.67	12.98	29.41	100	358	A	H
		5058.48	54.56	-19.44	74	38.9	31.61	13.42	29.37	324	97	P	V
		5086.7	44.59	-9.41	54	28.99	31.62	13.35	29.37	324	97	A	V
	*	5310	102.23	-	-	86.96	31.66	13.01	29.4	324	97	P	V
	*	5310	93.41	-	-	78.14	31.66	13.01	29.4	324	97	A	V
		5350.32	54.51	-19.49	74	39.27	31.67	12.98	29.41	324	97	P	V
		5350.08	45.91	-8.09	54	30.67	31.67	12.98	29.41	324	97	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 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)
		10620	46.88	-27.12	74	50.49	39.82	17.69	61.12	100	0	P	H
		15930	43.72	-30.28	74	45.79	36.8	21.59	60.46	100	0	P	H
802.11n													H
HT40													H
CH 62		10620	46.66	-27.34	74	50.27	39.82	17.69	61.12	100	0	P	V
5310MHz		15930	43.71	-30.29	74	45.78	36.8	21.59	60.46	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (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)
802.11ac VHT80 CH 58 5290MHz		5089.08	54.4	-19.6	74	38.8	31.62	13.35	29.37	100	57	P	H
		5100.3	44.49	-9.51	54	28.92	31.62	13.32	29.37	100	57	A	H
	*	5290	102.19	-	-	86.91	31.66	13.02	29.4	100	57	P	H
	*	5290	93.13	-	-	77.85	31.66	13.02	29.4	100	57	A	H
		5352.24	56.83	-17.17	74	41.59	31.67	12.98	29.41	100	57	P	H
		5351.04	46.85	-7.15	54	31.61	31.67	12.98	29.41	100	57	A	H
		5128.52	53.78	-20.22	74	38.28	31.63	13.25	29.38	264	259	P	V
		5115.6	44.51	-9.49	54	28.98	31.62	13.28	29.37	264	259	A	V
	*	5290	98.73	-	-	83.45	31.66	13.02	29.4	264	259	P	V
	*	5290	89.48	-	-	74.2	31.66	13.02	29.4	264	259	A	V
		5385.6	53.47	-20.53	74	38.25	31.68	12.96	29.42	264	259	P	V
		5351.04	45.17	-8.83	54	29.93	31.67	12.98	29.41	264	259	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 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)
		10580	46.55	-21.65	68.2	50.19	39.78	17.66	61.08	100	0	P	H
		15870	43.69	-30.31	74	45.65	36.96	21.58	60.5	100	0	P	H
802.11ac													H
VHT80													H
CH 58		10580	45.79	-22.41	68.2	49.43	39.78	17.66	61.08	100	0	P	V
5290MHz		15870	43.02	-30.98	74	44.98	36.96	21.58	60.5	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

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)
		5426.08	53.33	-20.67	74	38.02	31.69	13.04	29.42	100	355	P	H
		5461.36	52.73	-15.47	68.2	37.3	31.69	13.17	29.43	100	355	P	H
		5452.72	43.49	-10.51	54	28.09	31.69	13.14	29.43	100	355	A	H
	*	5580	110.51	-	-	94.57	31.83	13.59	29.48	100	355	P	H
802.11n	*	5580	101.22	-	-	85.28	31.83	13.59	29.48	100	355	A	H
HT20		5744.21	55.3	-12.9	68.2	38.72	32.09	14.05	29.56	100	355	P	H
CH 116		5455.36	53.83	-20.17	74	38.42	31.69	13.15	29.43	252	244	P	V
5580MHz		5469.52	55.27	-12.93	68.2	39.81	31.69	13.2	29.43	252	244	P	V
		5412.64	43.19	-10.81	54	27.94	31.68	12.99	29.42	252	244	A	V
	*	5580	107.1	-	-	91.16	31.83	13.59	29.48	252	244	P	V
	*	5580	98.1	-	-	82.16	31.83	13.59	29.48	252	244	A	V
		5743.895	54.48	-13.72	68.2	37.9	32.09	14.05	29.56	252	244	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 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)
		11160	46.52	-27.48	74	49.77	40.1	18.12	61.47	100	0	P	H
		16740	46.7	-21.5	68.2	43.42	39.76	22.6	59.08	100	0	P	H
802.11n													H
HT20													H
CH 116		11160	45.97	-28.03	74	49.22	40.1	18.12	61.47	100	0	P	V
5580MHz		16740	47.57	-20.63	68.2	44.29	39.76	22.6	59.08	100	0	P	V
													V
													V

Remark

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

Band 3 - 5470~5725MHz

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 102 5510MHz		5435.44	54.27	-19.73	74	38.92	31.69	13.08	29.42	100	347	P	H
		5464.48	54.29	-13.91	68.2	38.85	31.69	13.18	29.43	100	347	P	H
		5446.24	45.1	-8.9	54	29.72	31.69	13.11	29.42	100	347	A	H
	*	5510	106.98	-	-	91.36	31.72	13.34	29.44	100	347	P	H
	*	5510	98.27	-	-	82.65	31.72	13.34	29.44	100	347	A	H
		5749.565	54.21	-13.99	68.2	37.61	32.1	14.06	29.56	100	347	P	H
		5438.08	54.15	-19.85	74	38.79	31.69	13.09	29.42	258	243	P	V
		5460	53.28	-14.92	68.2	37.86	31.69	13.16	29.43	258	243	P	V
		5451.52	44.25	-9.75	54	28.86	31.69	13.13	29.43	258	243	A	V
	*	5510	103.88	-	-	88.26	31.72	13.34	29.44	258	243	P	V
	*	5510	95.03	-	-	79.41	31.72	13.34	29.44	258	243	A	V
		5739.8	55.66	-12.54	68.2	39.1	32.08	14.04	29.56	258	243	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 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)
		11020	46.77	-27.23	74	50.08	40.19	18	61.5	100	0	P	H
		16530	45.86	-22.34	68.2	44.15	39.01	22.32	59.62	100	0	P	H
802.11n													H
HT40													H
CH 102		11020	46.29	-27.71	74	49.6	40.19	18	61.5	100	0	P	V
5510MHz		16530	46.99	-21.21	68.2	45.28	39.01	22.32	59.62	100	0	P	V
													V
													V

Remark

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

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT160 (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)
		5452.72	58.52	-15.48	74	43.12	31.69	13.14	29.43	100	30	P	H
		5464.72	58.29	-9.91	68.2	42.85	31.69	13.18	29.43	100	30	P	H
		5458.48	53.65	-0.35	54	38.23	31.69	13.16	29.43	100	30	A	H
	*	5570	99.71	-	-	83.82	31.81	13.55	29.47	100	30	P	H
802.11ac	*	5570	92.89	-	-	77	31.81	13.55	29.47	100	30	A	H
VHT160		5727.515	61.18	-7.02	68.2	44.66	32.06	14	29.54	100	30	P	H
CH 114		5446	54.42	-19.58	74	39.04	31.69	13.11	29.42	317	92	P	V
5570MHz		5463.76	54.8	-13.4	68.2	39.36	31.69	13.18	29.43	317	92	P	V
		5437.12	48.37	-5.63	54	33.02	31.69	13.08	29.42	317	92	A	V
	*	5570	94.52	-	-	78.63	31.81	13.55	29.47	317	92	P	V
	*	5570	87.22	-	-	71.33	31.81	13.55	29.47	317	92	A	V
		5726.255	56.26	-11.94	68.2	39.74	32.06	14	29.54	317	92	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT160 (Harmonic @ 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)
		11140	46.44	-27.56	74	49.69	40.12	18.1	61.47	100	0	P	H
		16710	48.11	-20.09	68.2	45.05	39.66	22.55	59.15	100	0	P	H
802.11ac													H
VHT160													H
CH 114		11140	46.56	-27.44	74	49.81	40.12	18.1	61.47	100	0	P	V
5570MHz		16710	47.16	-21.04	68.2	44.1	39.66	22.55	59.15	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (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)
		5453.74	53.81	-20.19	74	38.41	31.69	13.14	29.43	100	64	P	H
		5463.1	53.67	-14.53	68.2	38.24	31.69	13.17	29.43	100	64	P	H
		5362.48	44.32	-9.68	54	29.09	31.67	12.97	29.41	100	64	A	H
	*	5690	102.82	-	-	86.45	32	13.9	29.53	100	64	P	H
802.11ac	*	5690	94.25	-	-	77.88	32	13.9	29.53	100	64	A	H
VHT80		5920.5	55.49	-12.71	68.2	38.96	32.37	13.8	29.64	100	64	P	H
CH 138		5357.8	53.9	-20.1	74	38.66	31.67	12.98	29.41	312	102	P	V
5690MHz		5469.73	52.85	-15.35	68.2	37.39	31.69	13.2	29.43	312	102	P	V
		5420.98	44.25	-9.75	54	28.97	31.68	13.02	29.42	312	102	A	V
	*	5690	98.54	-	-	82.17	32	13.9	29.53	312	102	P	V
	*	5690	89.76	-	-	73.39	32	13.9	29.53	312	102	A	V
		5931.75	55.04	-13.16	68.2	38.53	32.39	13.76	29.64	312	102	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Harmonic @ 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)
		11380	45.68	-28.32	74	48.84	39.97	18.29	61.42	100	0	P	H
		17070	47.71	-20.49	68.2	41.91	40.97	23.05	58.22	100	0	P	H
802.11ac													H
VHT80													H
CH 138		11380	46.78	-27.22	74	49.94	39.97	18.29	61.42	100	0	P	V
5690MHz		17070	48.07	-20.13	68.2	42.27	40.97	23.05	58.22	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

WIFI 802.11ac VHT160 (LF @ 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)
802.11ac VHT160 LF		115.59	17.04	-26.46	43.5	30.72	17.52	1.17	32.37	-	-	P	H
		152.58	33.93	-9.57	43.5	47.13	17.66	1.5	32.36	100	0	P	H
		220.35	24.22	-21.78	46	38.32	16.3	1.97	32.37	-	-	P	H
		332.2	25.81	-20.19	46	34.88	20.68	2.7	32.45	-	-	P	H
		601.7	26.39	-19.61	46	29.63	25.61	3.83	32.68	-	-	P	H
		786.5	30.75	-15.25	46	30.75	27.99	4.39	32.38	-	-	P	H
													H
													H
													H
													H
													H
													H
		46.2	27.89	-12.11	40	42.91	16.7	0.71	32.43	100	0	P	V
		115.32	22.11	-21.39	43.5	35.8	17.52	1.16	32.37	-	-	P	V
		151.77	26.26	-17.24	43.5	39.46	17.66	1.5	32.36	-	-	P	V
		439.3	25.15	-20.85	46	31.37	23.13	3.18	32.53	-	-	P	V
		640.9	28.11	-17.89	46	30.69	26.01	4.03	32.62	-	-	P	V
		784.4	30.64	-15.36	46	30.65	27.98	4.4	32.39	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

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

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix D. Radiated Spurious Emission Plots

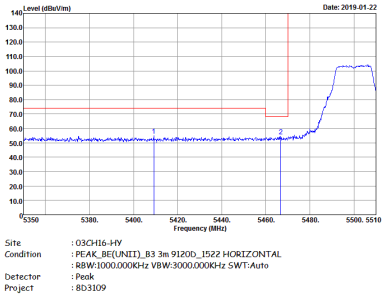
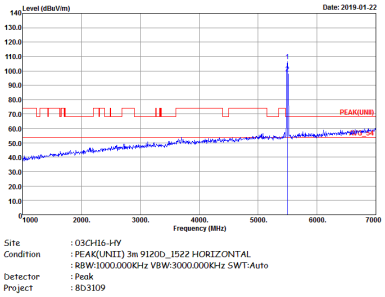
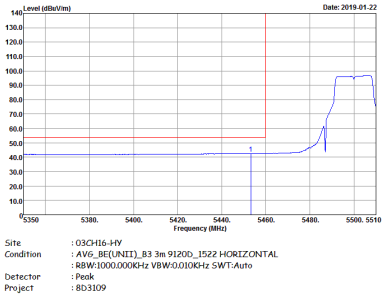
Test Engineer :	Jacky Hung, CR Liao, and Andy Yang	**Temperature :**	23~25°C
		Relative Humidity :	55~57%

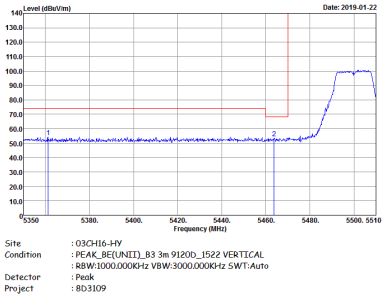
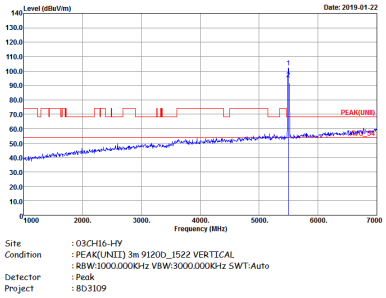
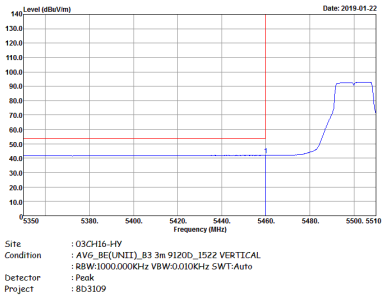
Note symbol

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

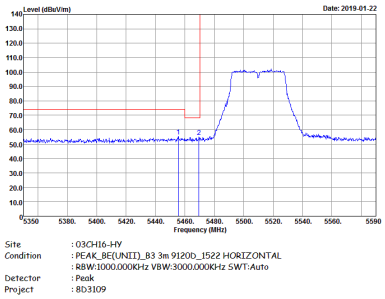
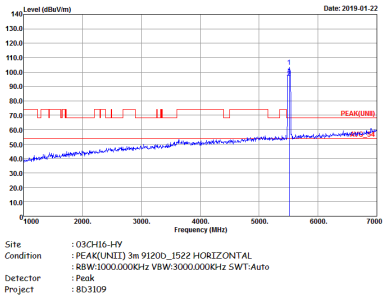
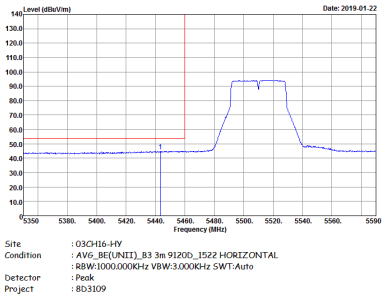
Band 3 - 5470~5725MHz

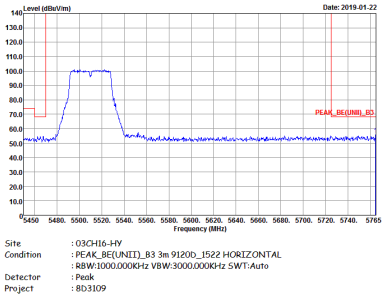
WIFI 802.11a (Band Edge @ 3m)

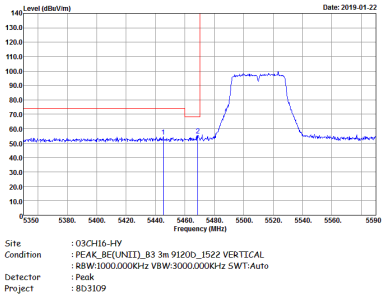
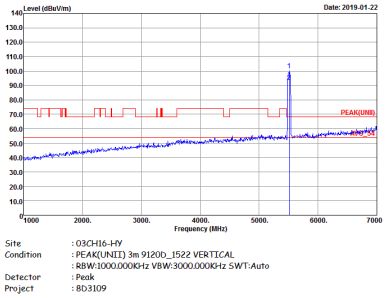
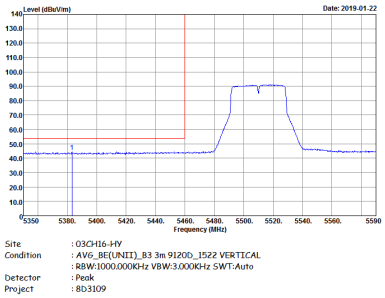
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

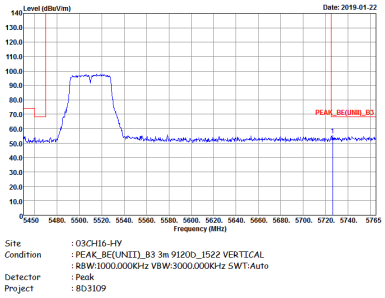
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

Band 3 5470~5725MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

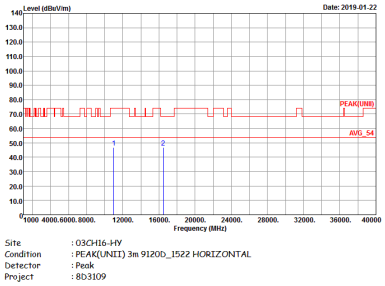
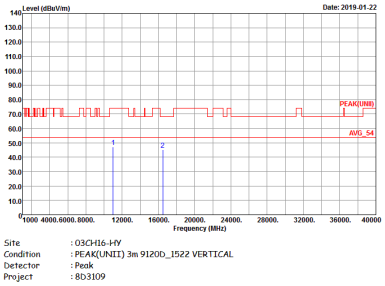
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

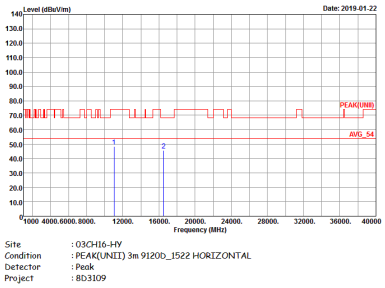
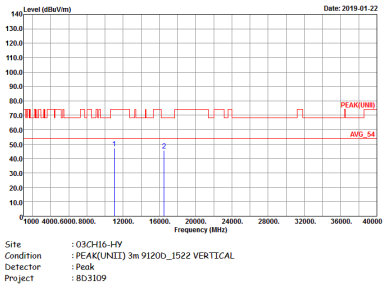
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Vertical	Fundamental
Peak		Left blank

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

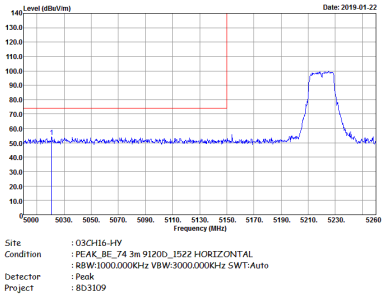
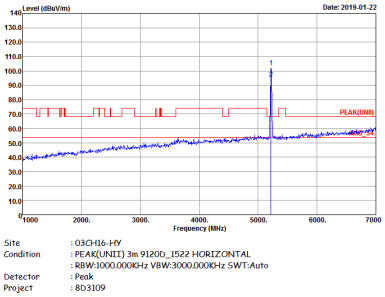
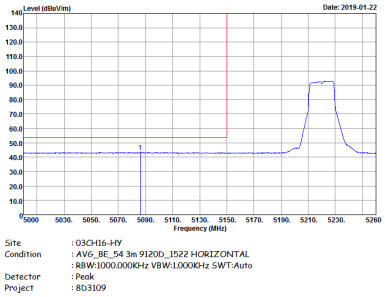
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Vertical
Peak Avg.		

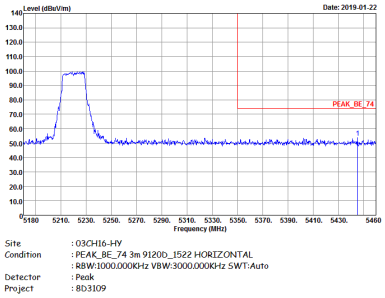
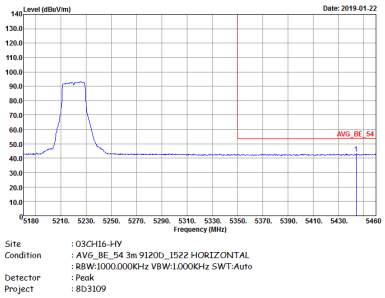
Band 3 5470~5725MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

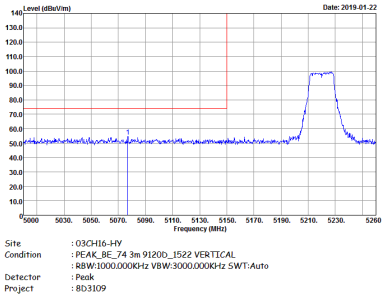
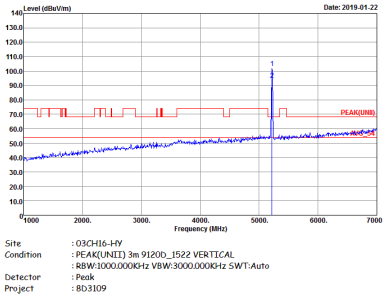
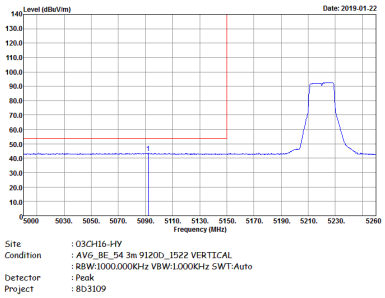
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11n HT40 CH102 5510MHz	
1	Horizontal	Vertical
Peak Avg.		

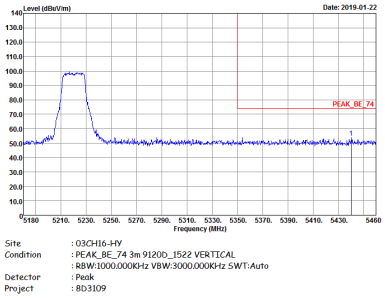
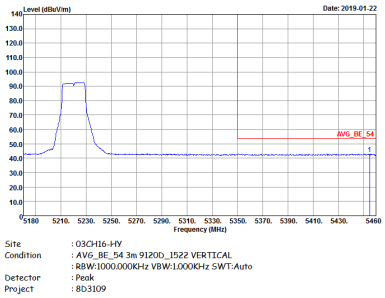
Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

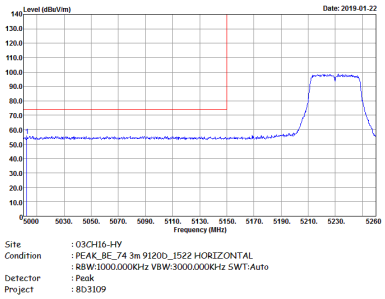
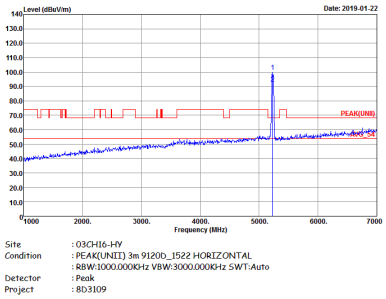
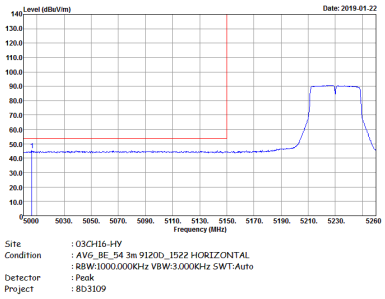
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

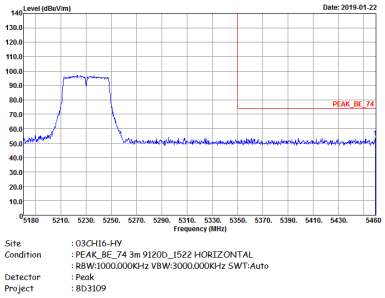
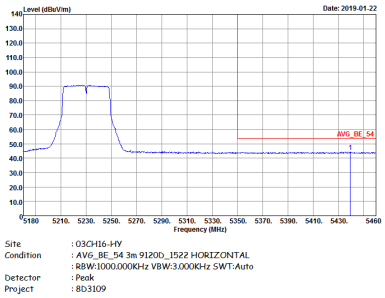
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

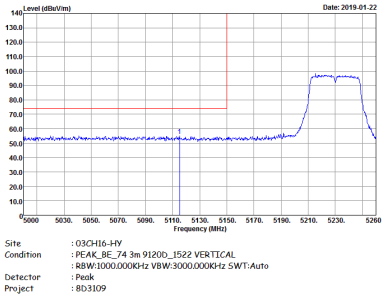
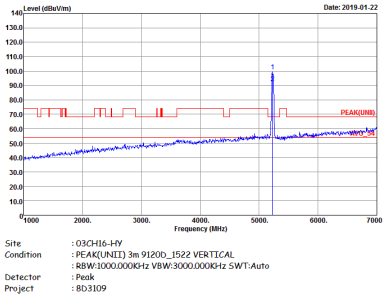
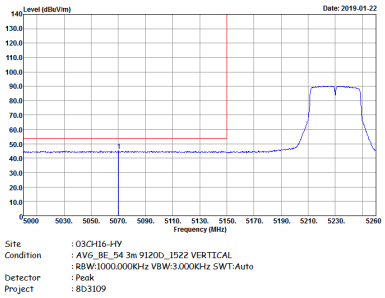
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

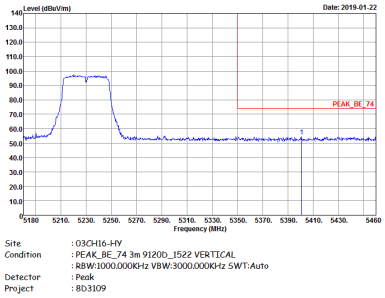
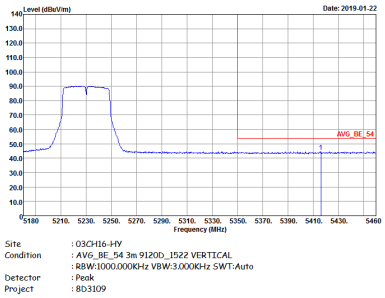
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

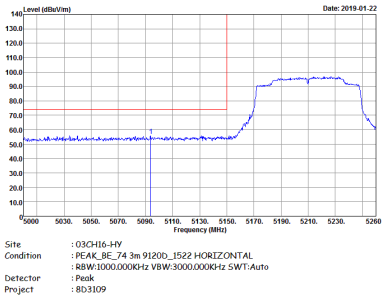
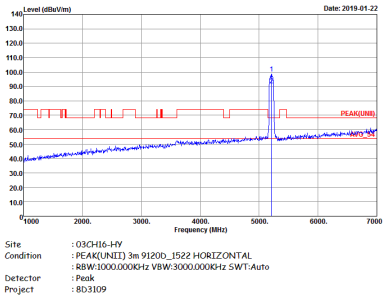
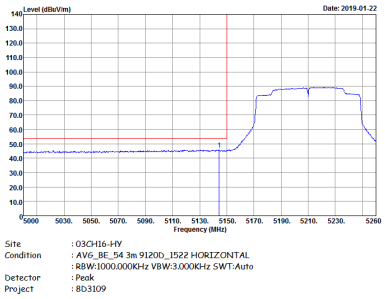
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

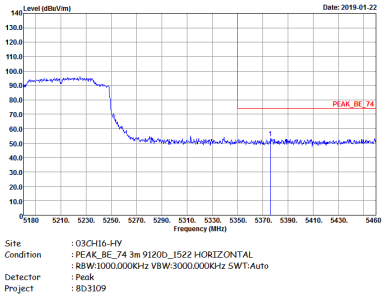
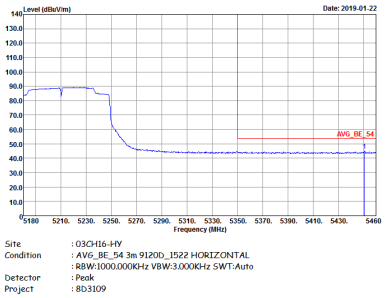
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

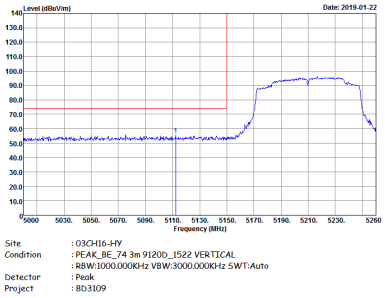
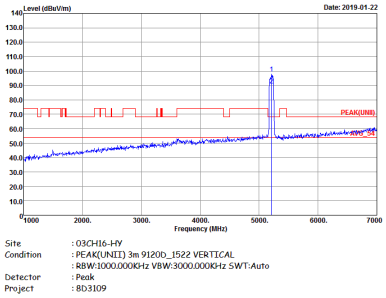
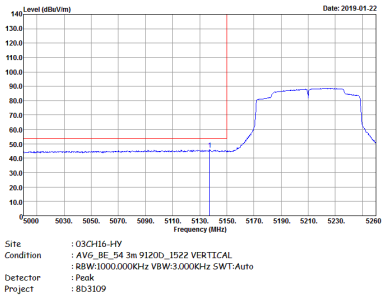
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

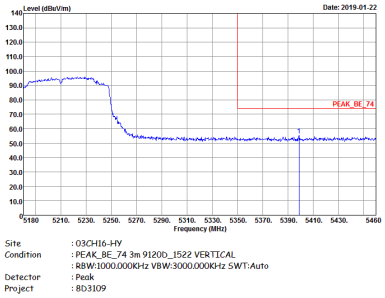
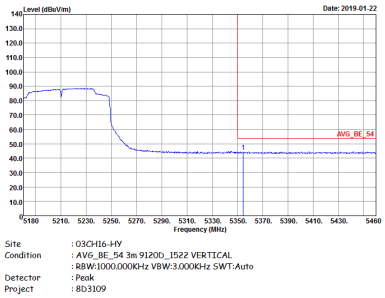
Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

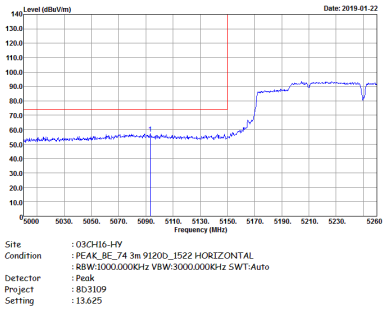
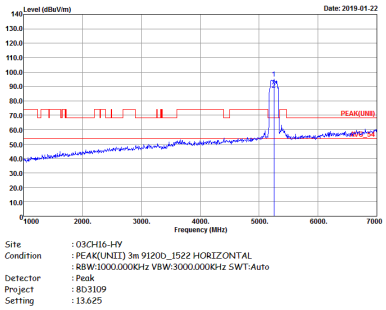
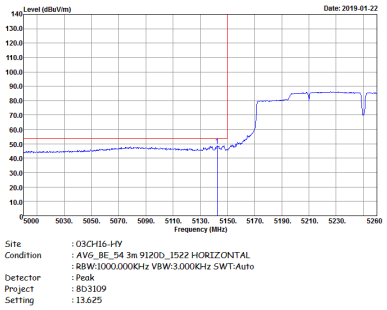
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

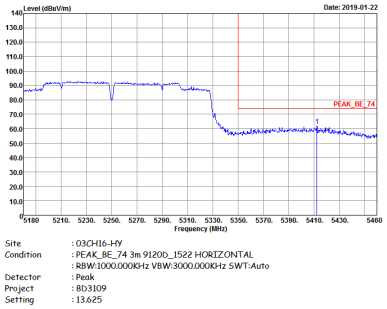
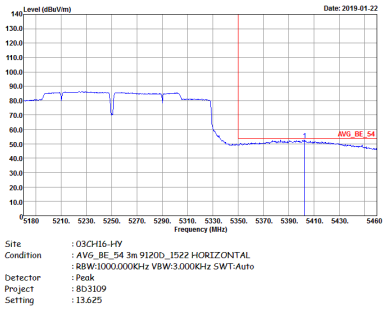
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

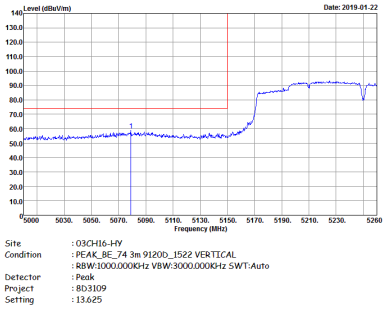
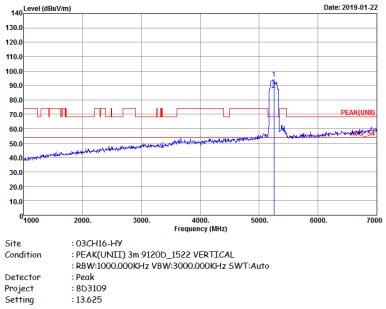
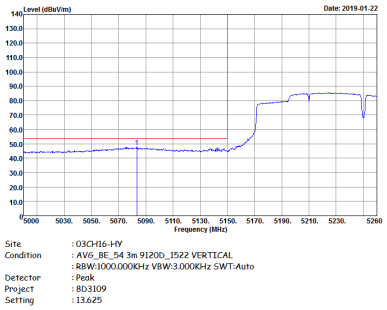
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

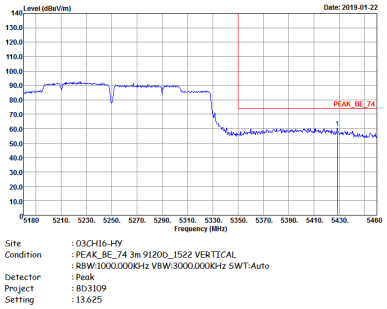
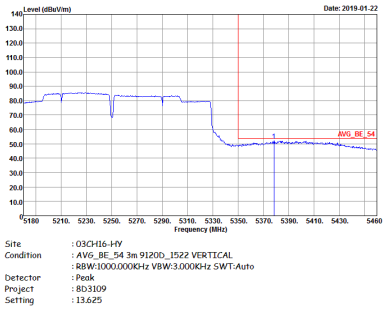
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 5150~5250MHz
WIFI 802.11ac VHT160 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

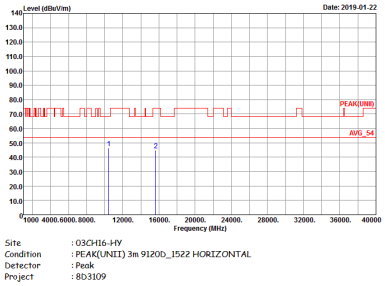
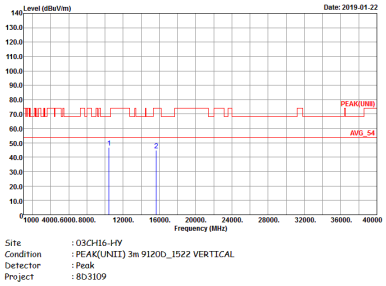
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

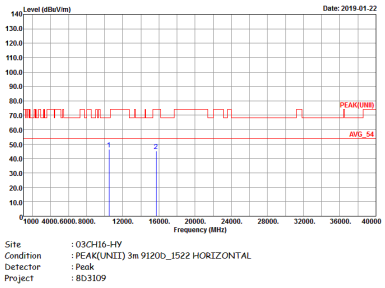
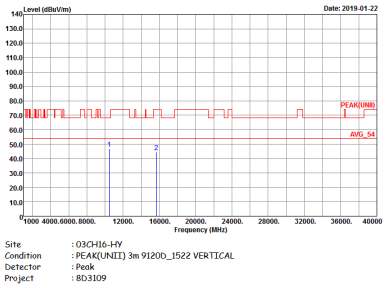
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

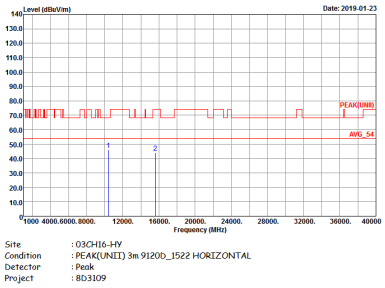
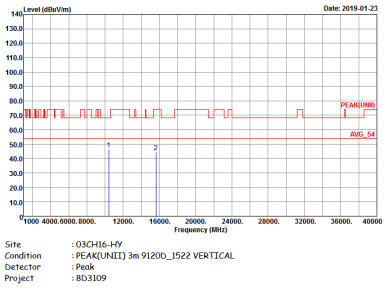
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
2	Horizontal	Vertical
Peak Avg.		

Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH46 5230MHz	
2	Horizontal	Vertical
Peak Avg.		

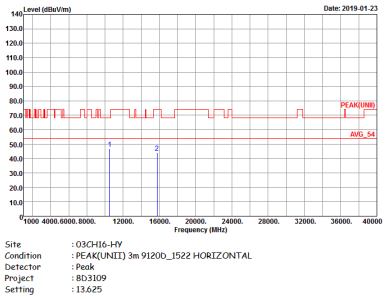
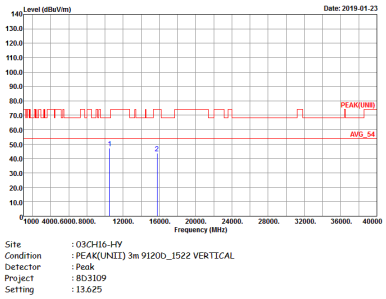
Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
2	Horizontal	Vertical
Peak Avg.		

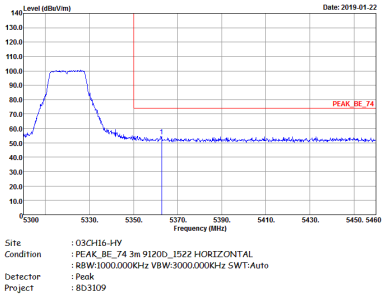
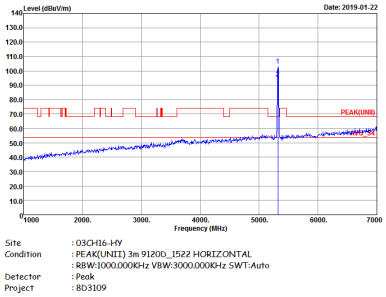
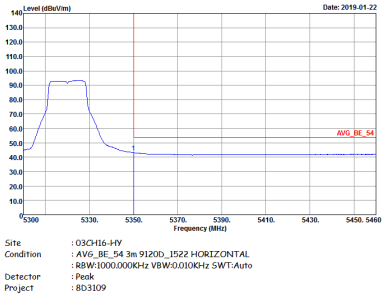
Band 1 5150~5250MHz

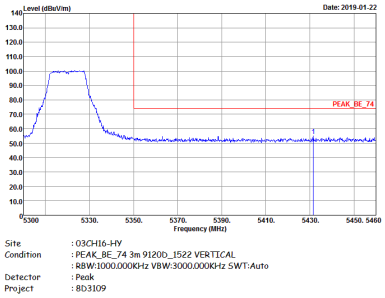
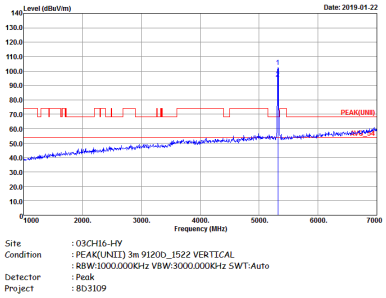
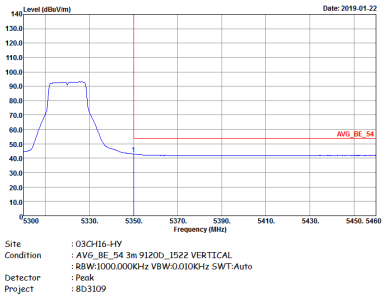
WIFI 802.11ac VHT160 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz	
2	Horizontal	Vertical
Peak Avg.		

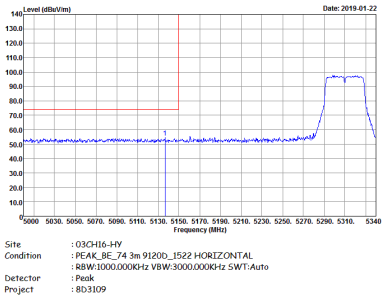
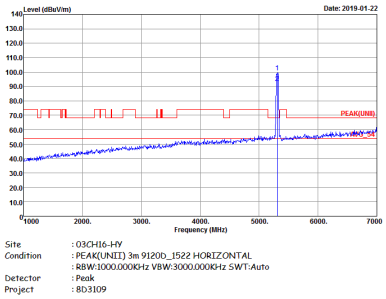
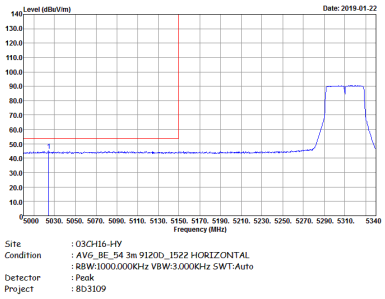
Band 2 - 5250~5350MHz

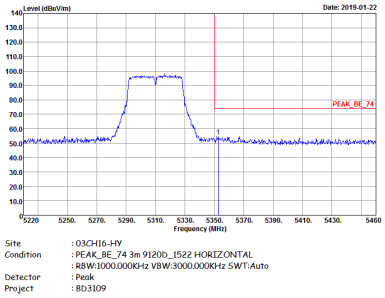
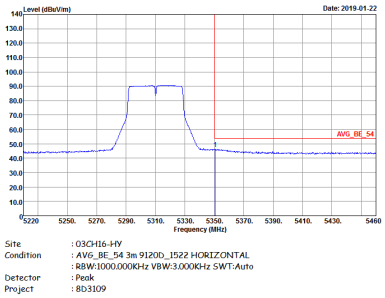
WIFI 802.11a (Band Edge @ 3m)

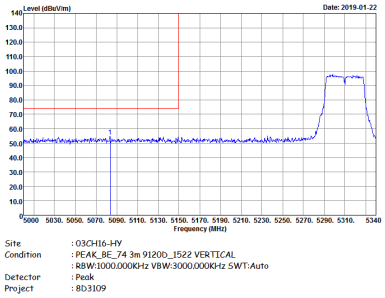
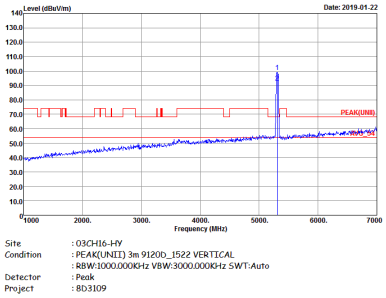
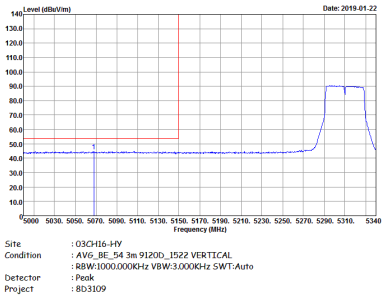
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

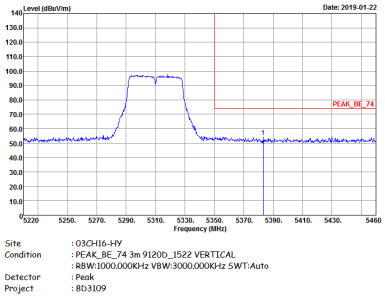
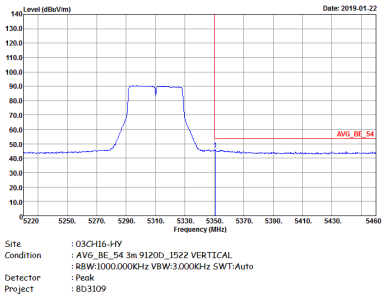
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

Band 2 5250~5350MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

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

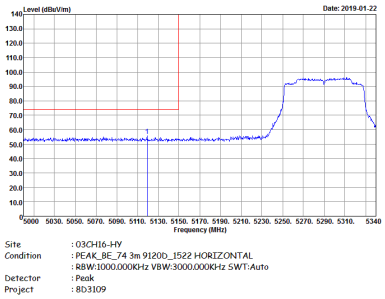
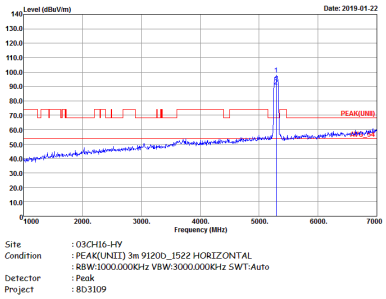
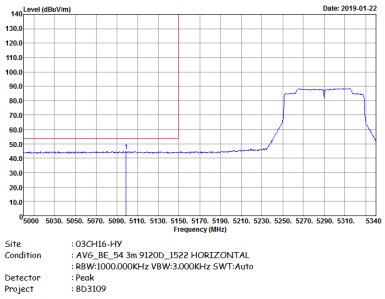
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

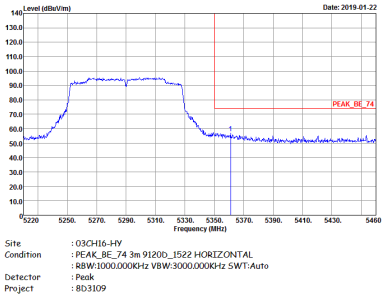
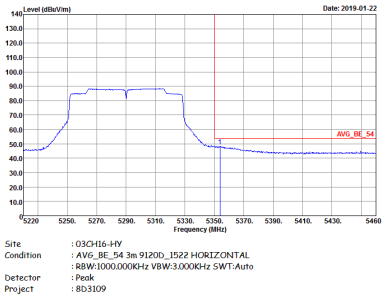
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

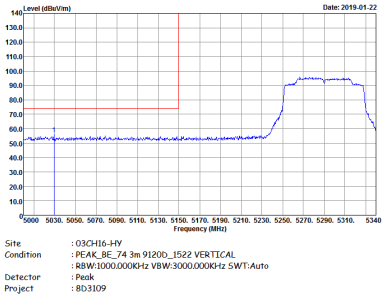
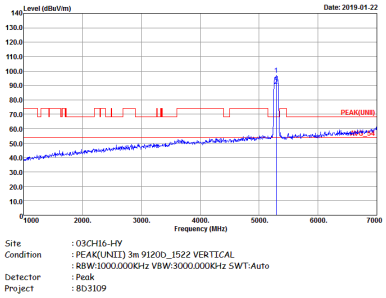
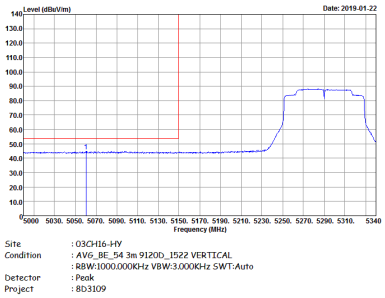
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

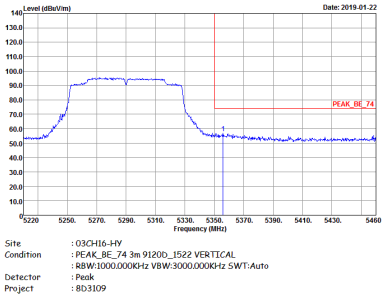
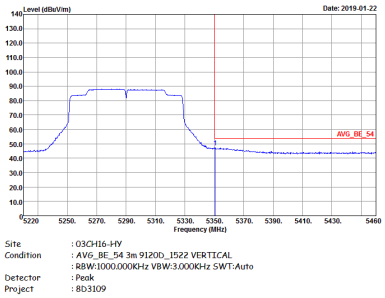
Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

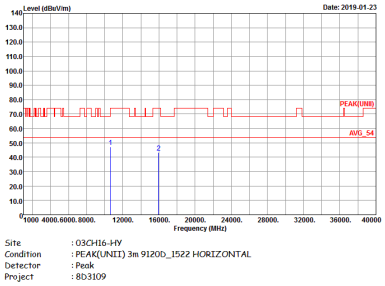
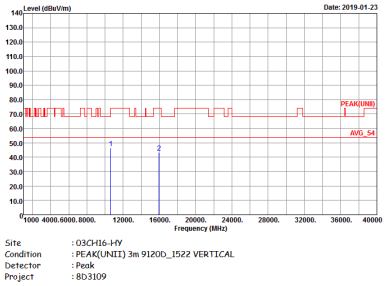
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

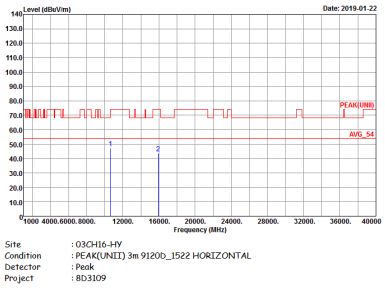
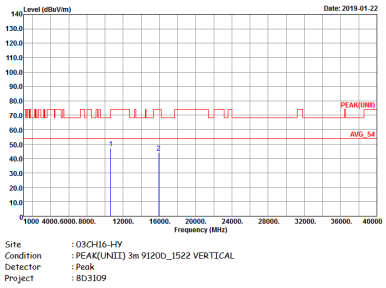
Band 2 - 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH64 5320MHz	
2	Horizontal	Vertical
Peak Avg.		

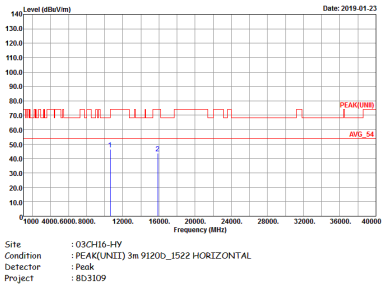
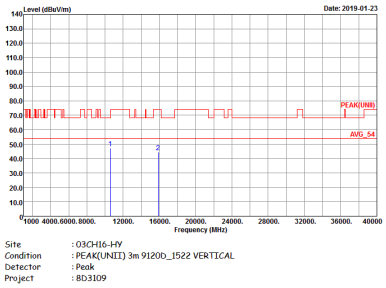
Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11n HT40 CH62 5310	
2	Horizontal	Vertical
Peak Avg.		

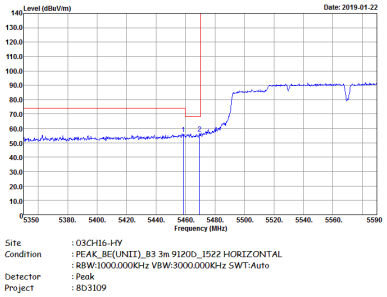
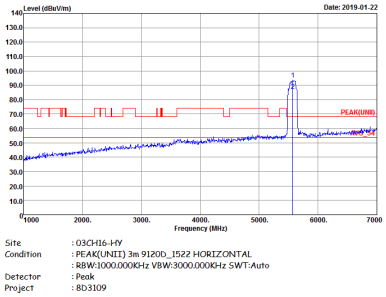
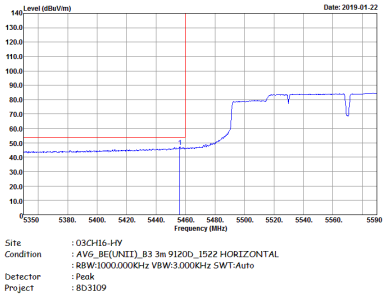
Band 2 5250~5350MHz

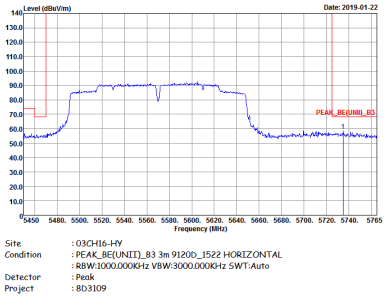
WIFI 802.11ac VHT80 (Harmonic @ 3m)

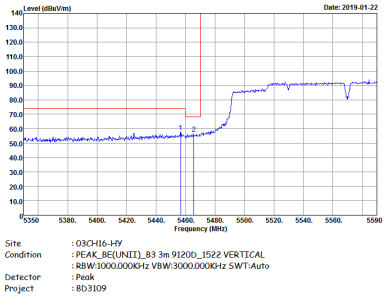
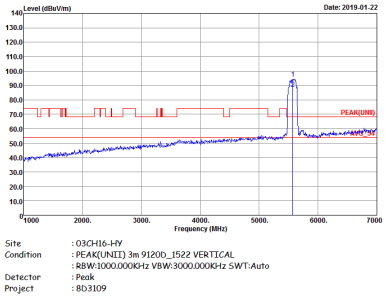
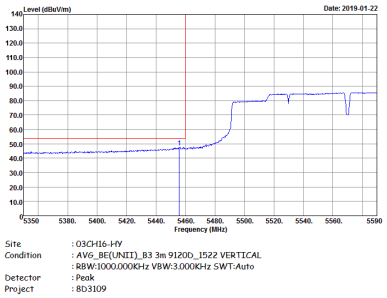
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
2	Horizontal	Vertical
Peak Avg.		

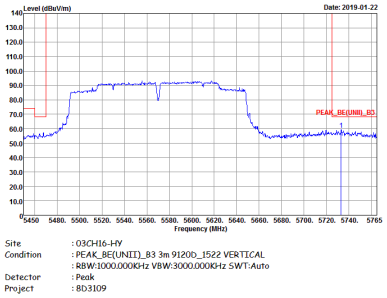
Band 3 - 5470~5725MHz

WIFI 802.11ac VHT160 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

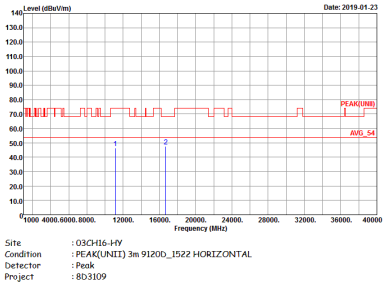
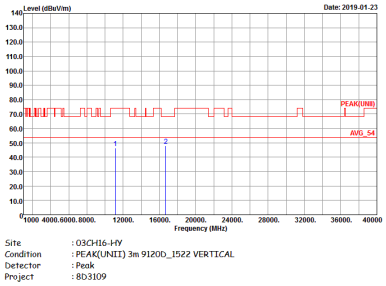
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - R	
2	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - R	
2	Vertical	Fundamental
Peak		Left blank

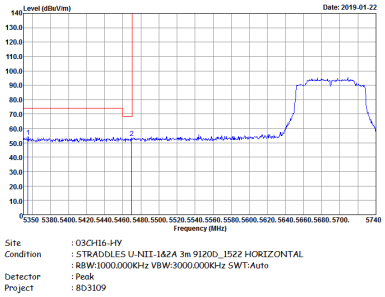
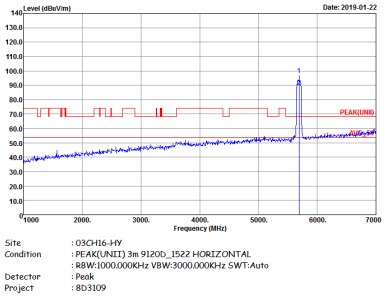
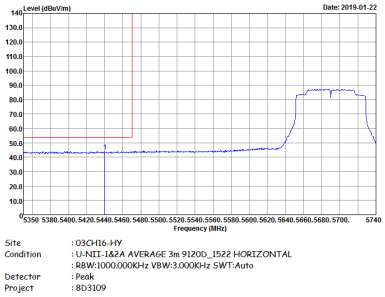
Band 3 - 5470~5725MHz

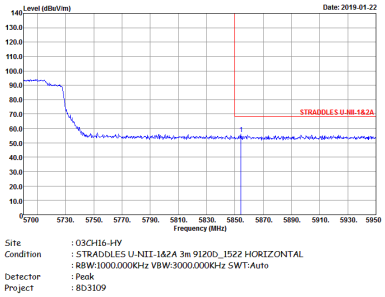
WIFI 802.11ac VHT160 (Harmonic @ 3m)

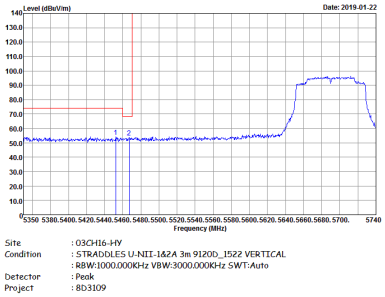
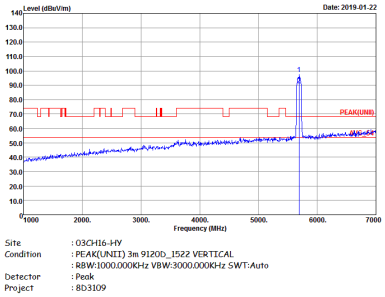
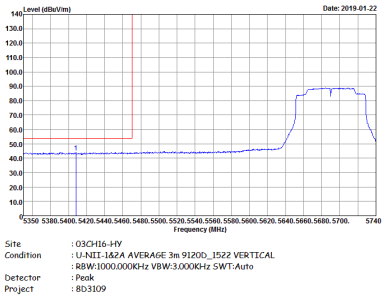
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz	
2	Horizontal	Vertical
Peak Avg.		

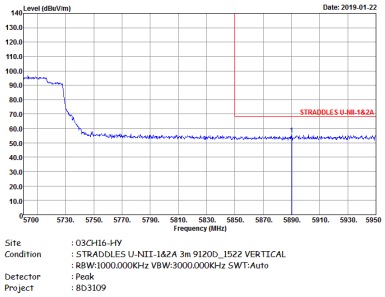
Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Fundamental @ 3m)

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
2	Horizontal	Fundamental
Peak		
Avg.		Left blank

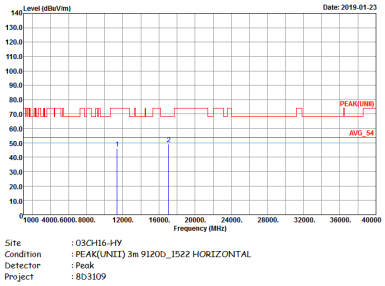
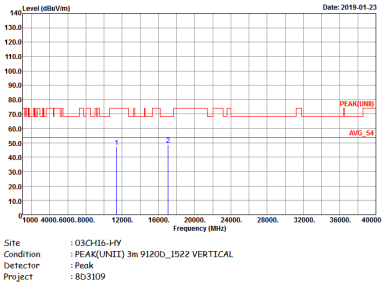
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
2	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
2	Vertical	Fundamental
Peak		Left blank

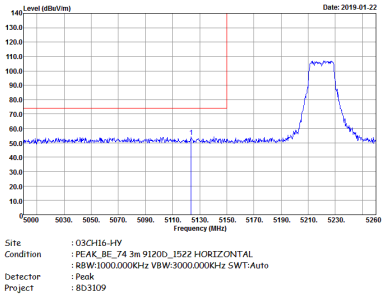
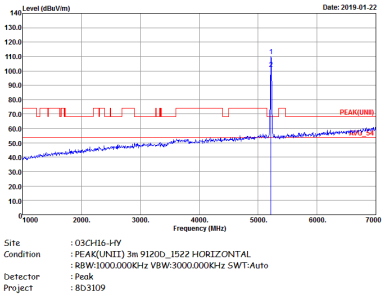
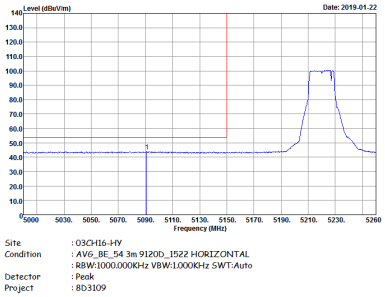
Band 3 - Straddle Channel

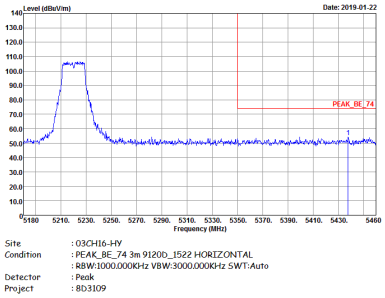
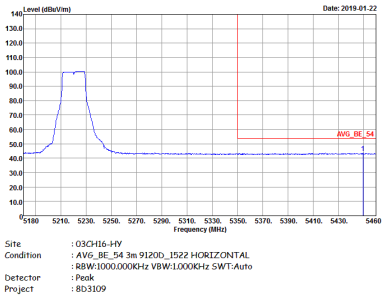
WIFI 802.11ac VHT80 (Harmonic @ 3m)

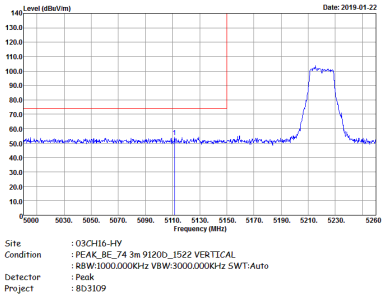
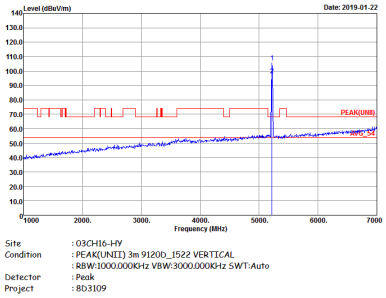
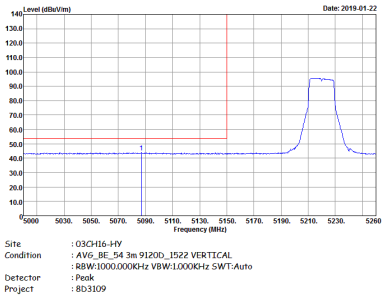
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz	
2	Horizontal	Vertical
Peak Avg.		

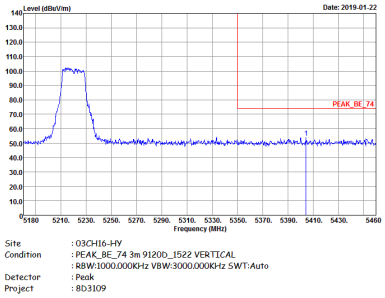
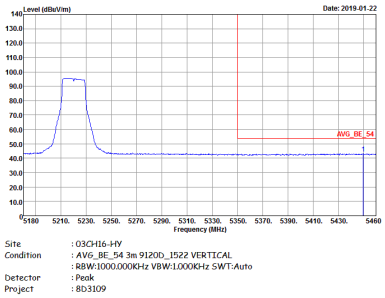
Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

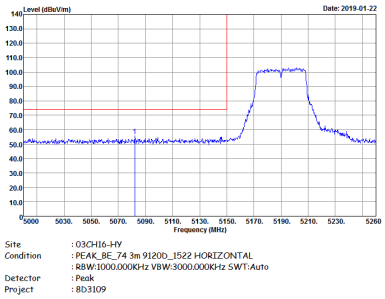
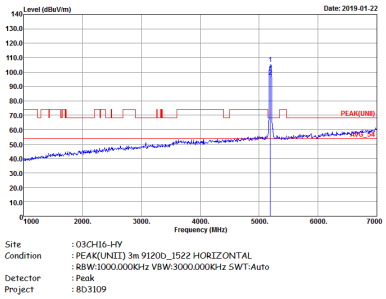
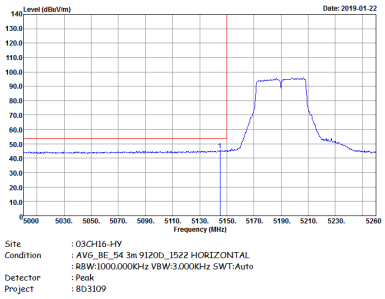
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

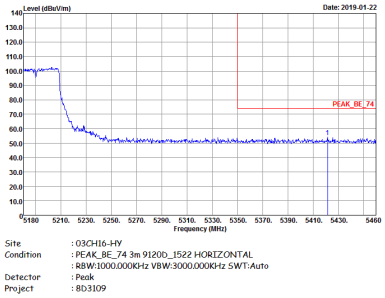
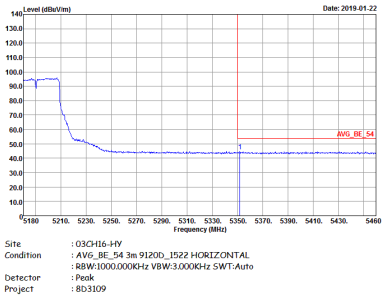
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

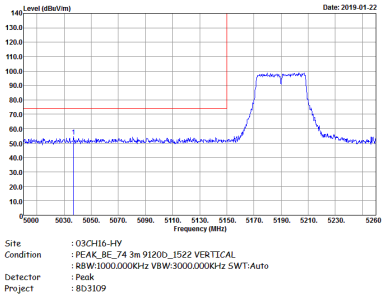
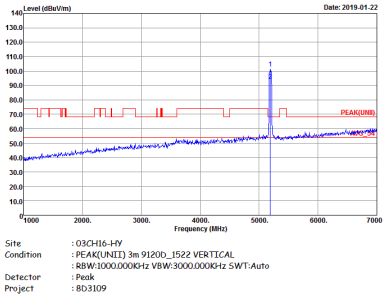
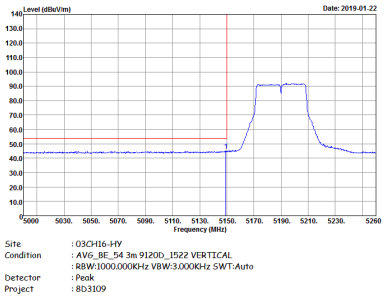
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

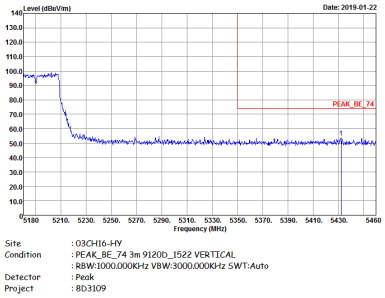
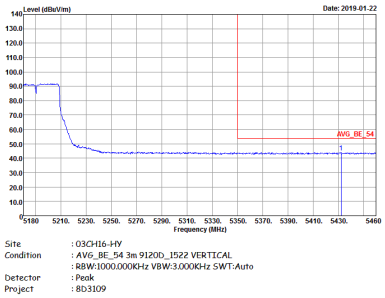
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

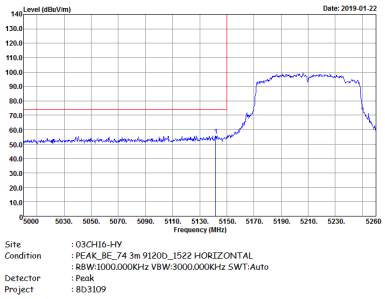
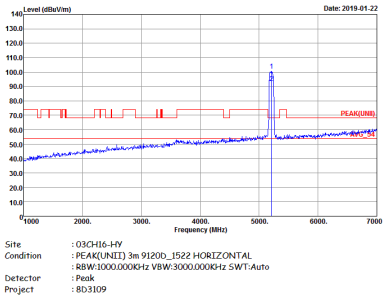
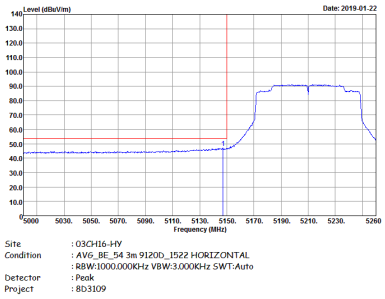
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

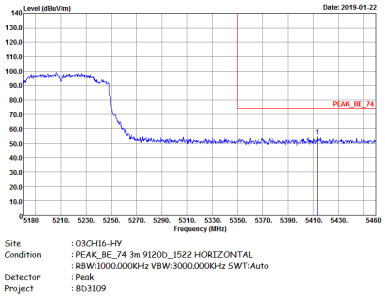
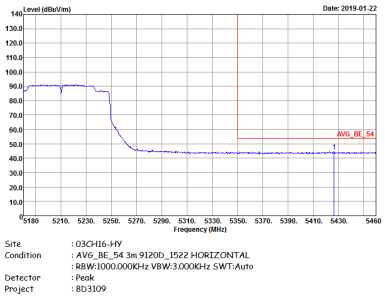
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

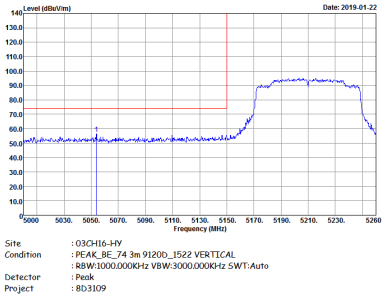
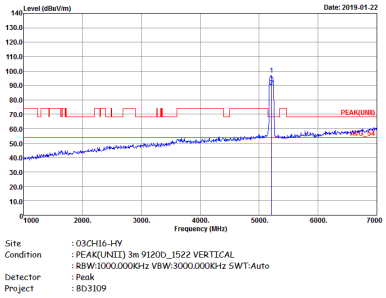
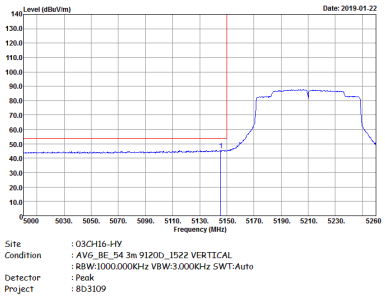
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

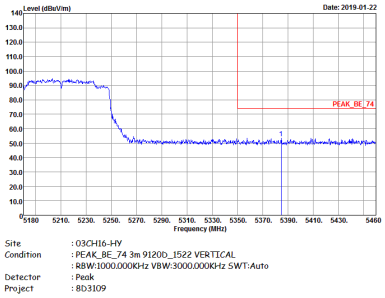
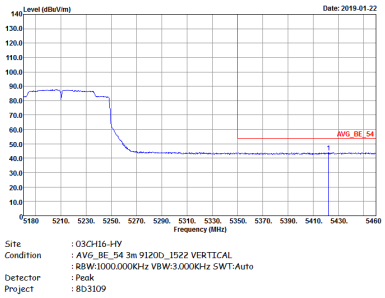
Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

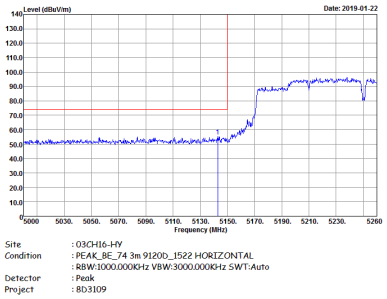
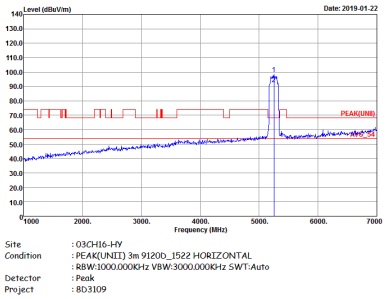
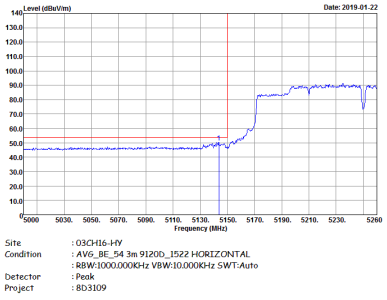
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

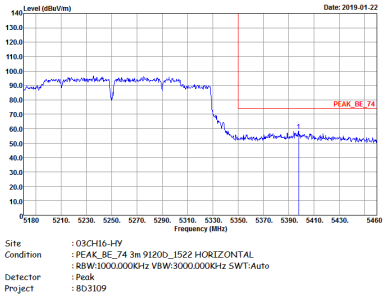
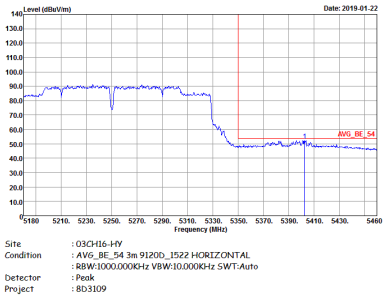
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

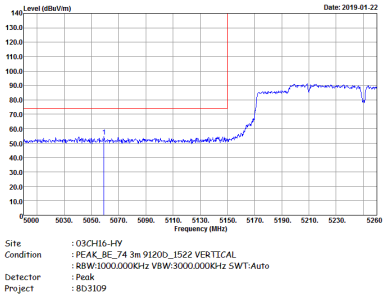
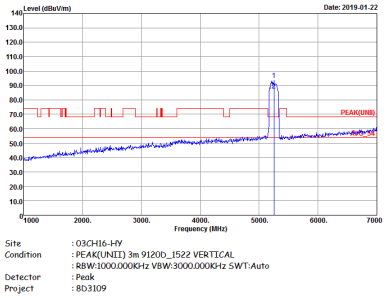
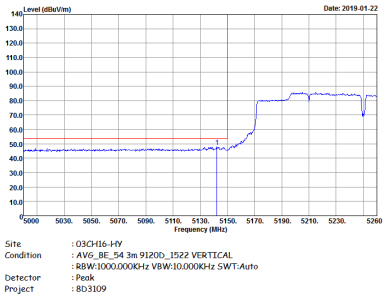
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

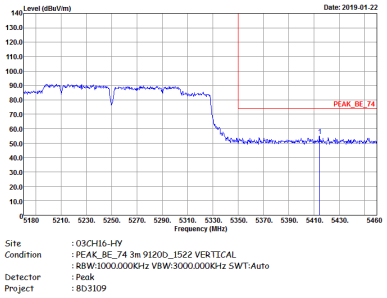
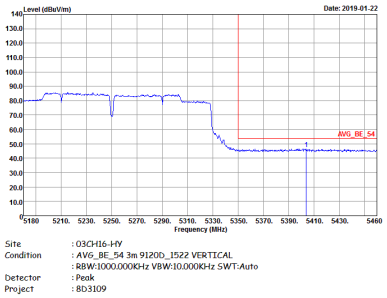
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 5150~5250MHz
WIFI 802.11ac VHT160 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

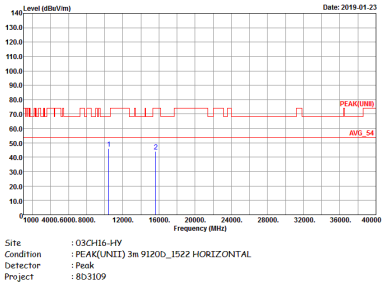
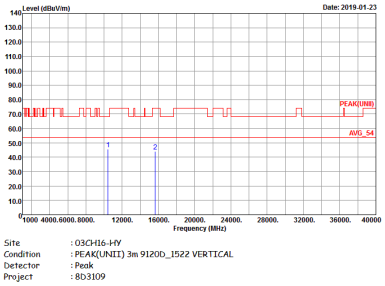
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

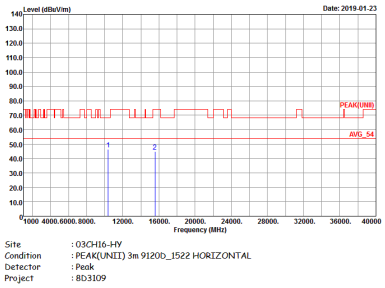
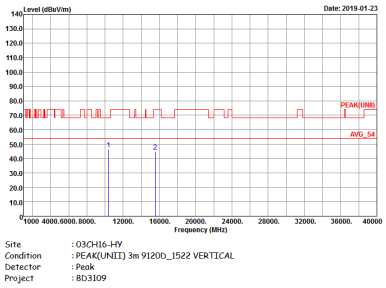
Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
1+2	Horizontal	Vertical
Peak Avg.		

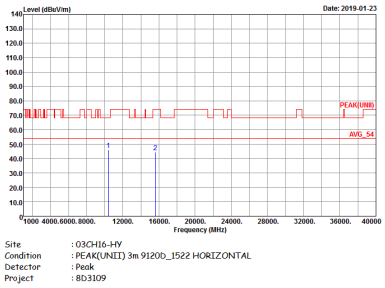
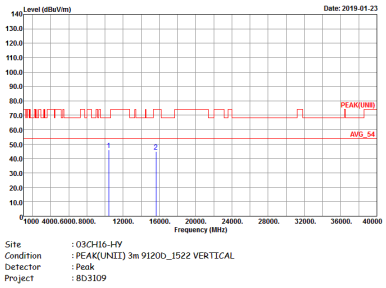
Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1+2	Horizontal	Vertical
Peak Avg.		

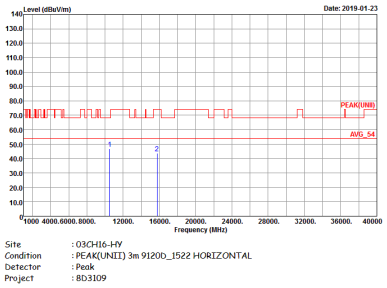
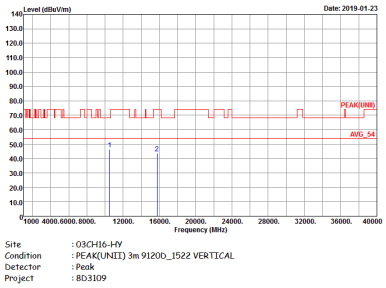
Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1+2	Horizontal	Vertical
Peak Avg.		

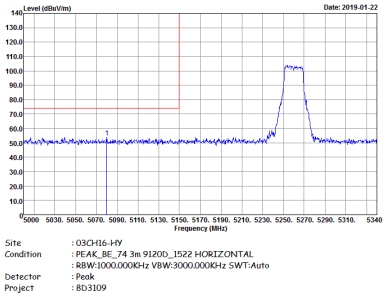
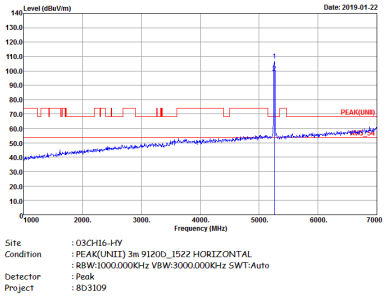
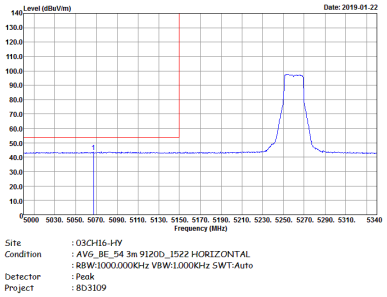
Band 1 5150~5250MHz

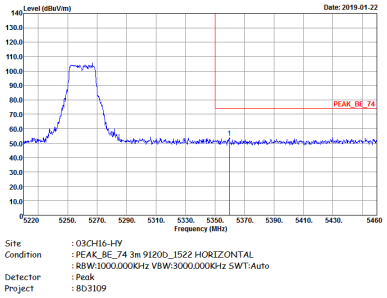
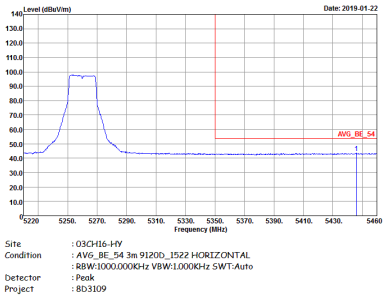
WIFI 802.11ac VHT160 (Harmonic @ 3m)

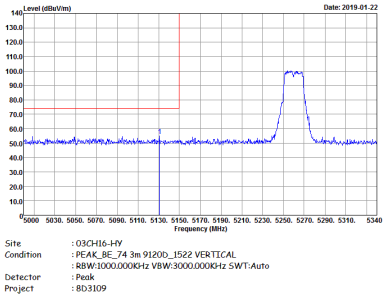
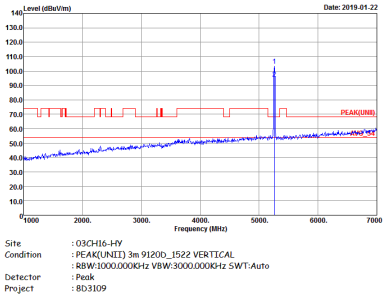
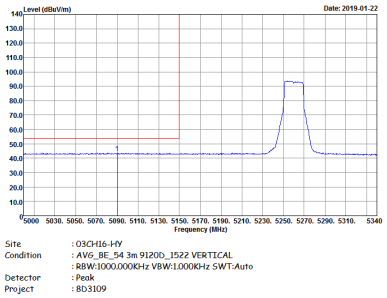
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT160 CH50 5250MHz	
1+2	Horizontal	Vertical
Peak Avg.		

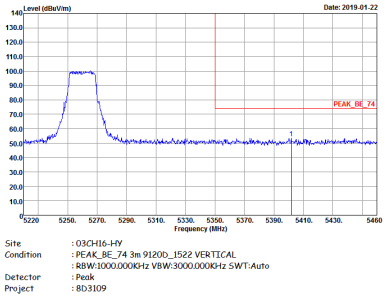
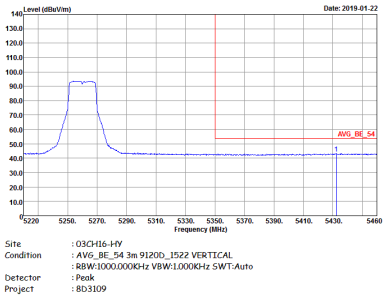
Band 2 - 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

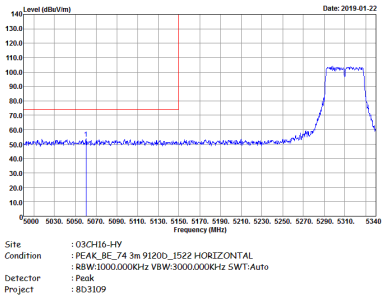
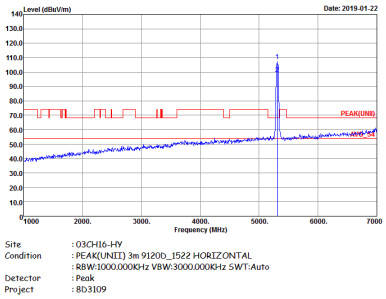
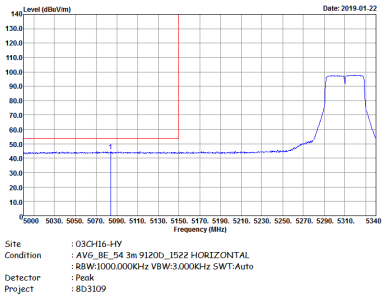
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT20 CH52 5260MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

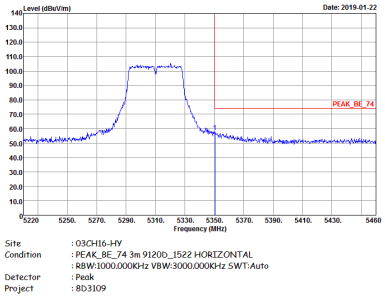
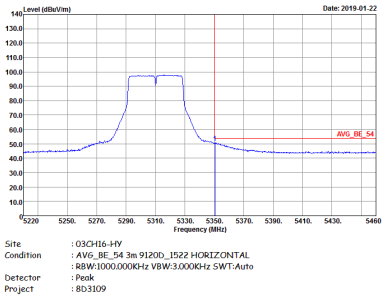
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT20 CH52 5260MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

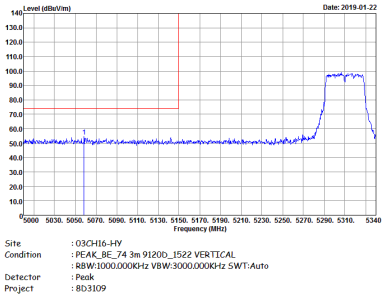
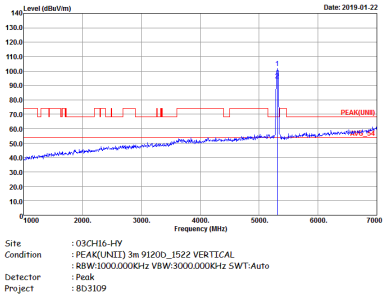
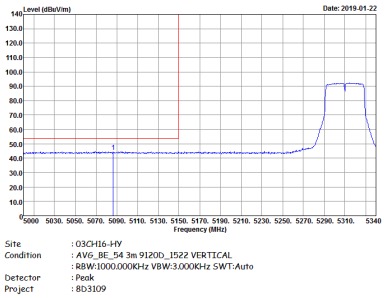
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT20 CH52 5260MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

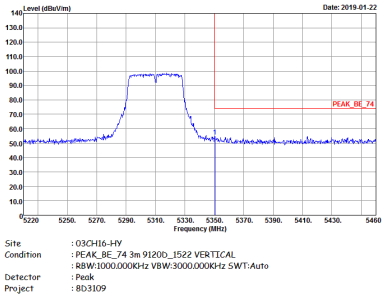
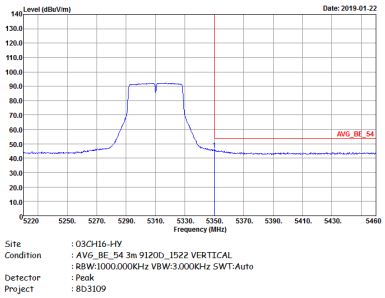
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT20 CH52 5260MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 2 5250~5350MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

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

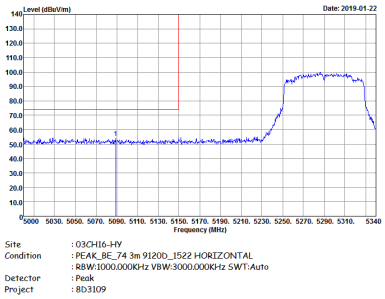
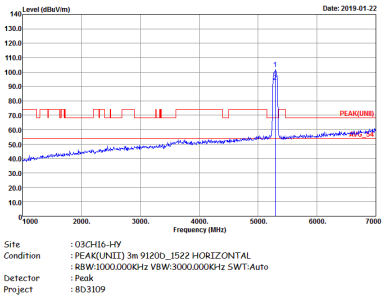
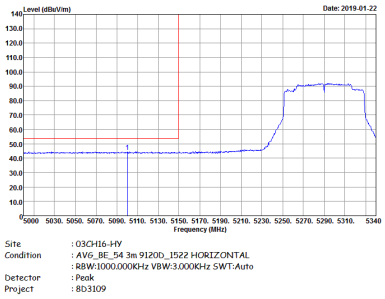
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

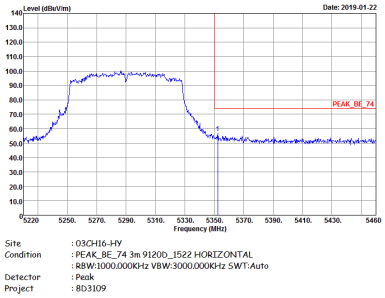
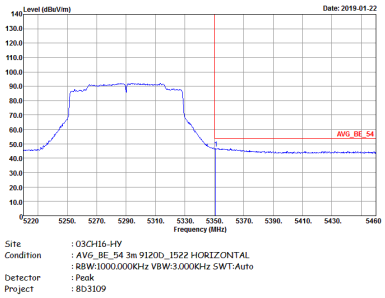
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

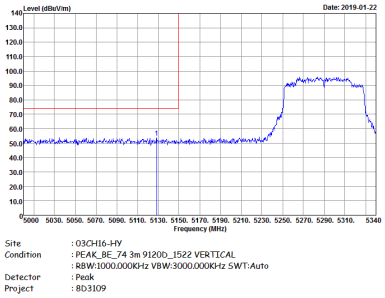
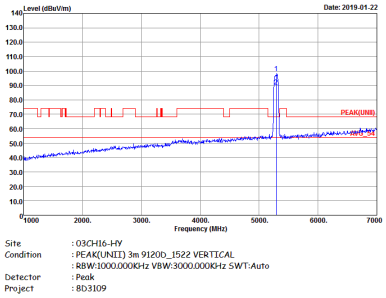
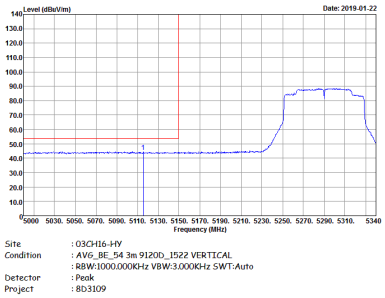
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

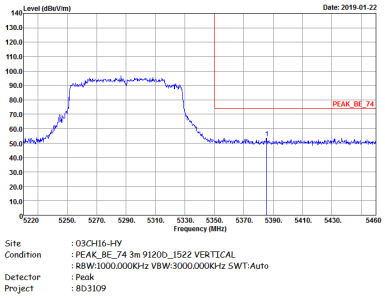
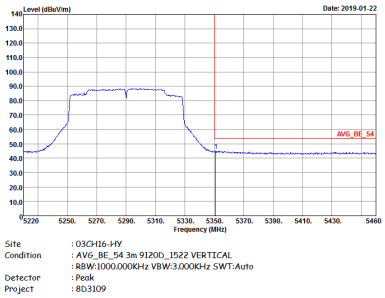
Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

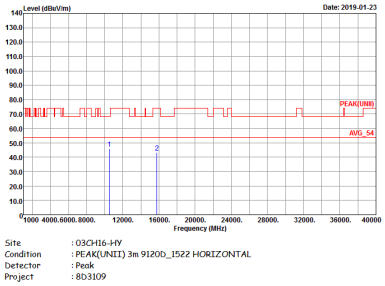
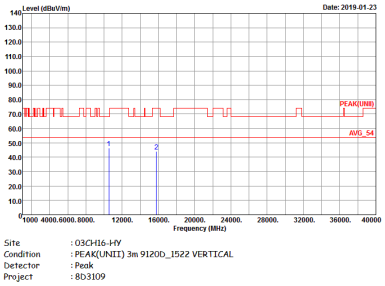
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

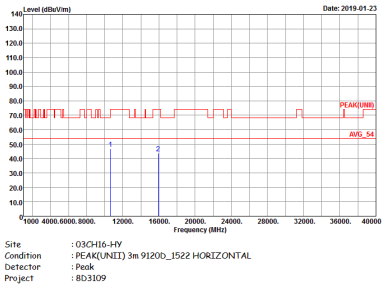
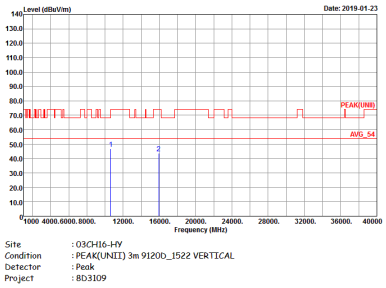
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 2 - 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

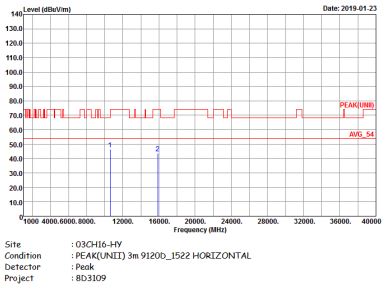
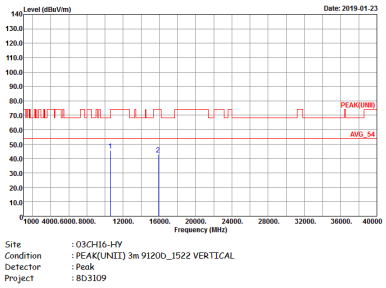
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11n HT20 CH52 5260MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 2 5250~5350MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11n HT40 CH62 5310	
1+2	Horizontal	Vertical
Peak Avg.		

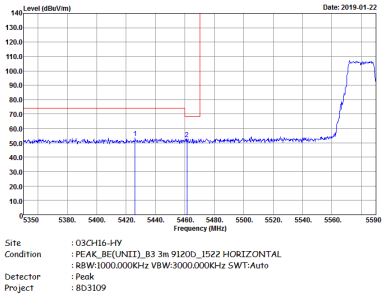
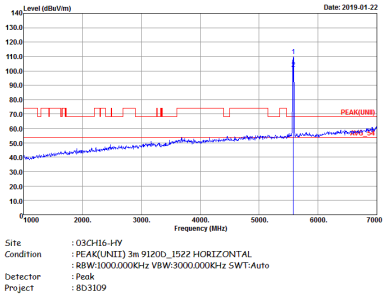
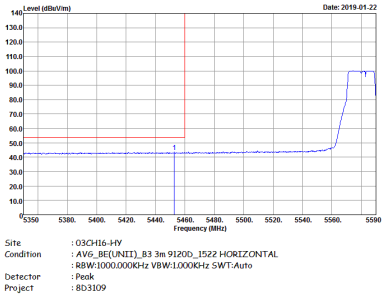
Band 2 5250~5350MHz

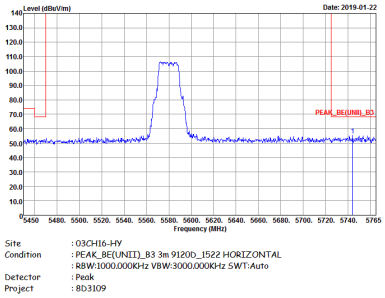
WIFI 802.11ac VHT80 (Harmonic @ 3m)

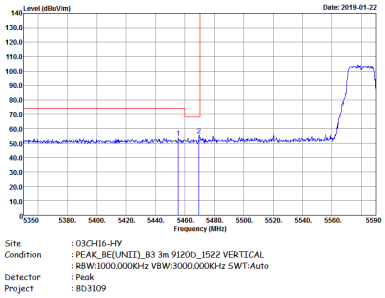
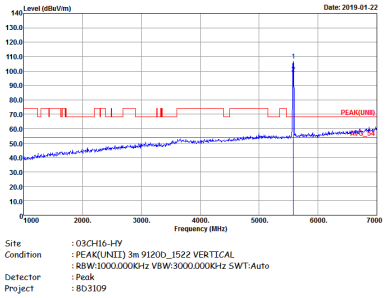
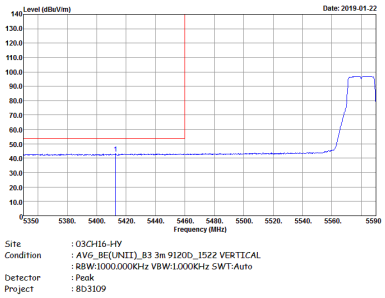
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
1+2	Horizontal	Vertical
Peak Avg.		

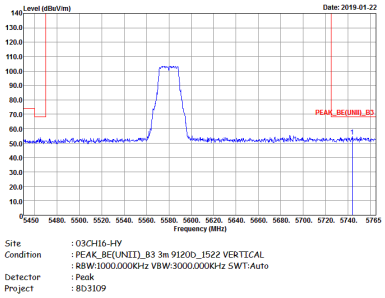
Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

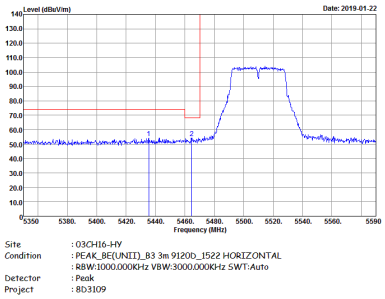
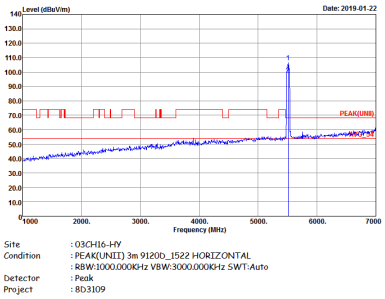
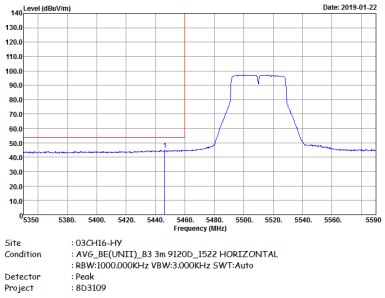
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH116 5580MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

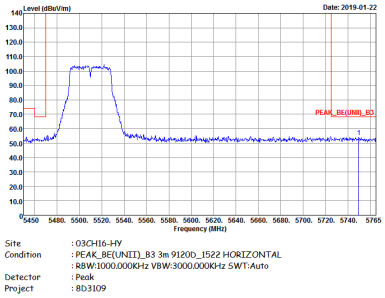
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH116 5580MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

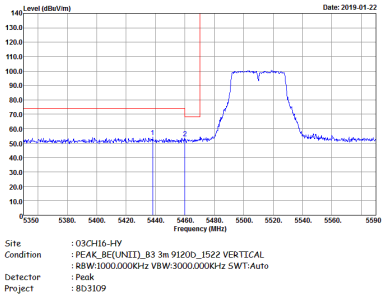
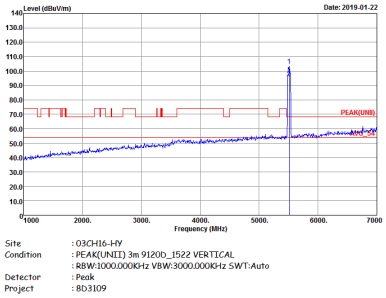
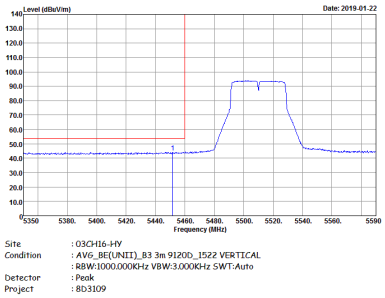
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH116 5580MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

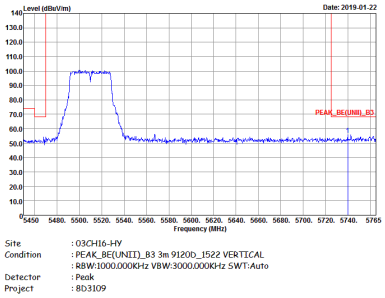
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH116 5580MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

Band 3 5470~5725MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

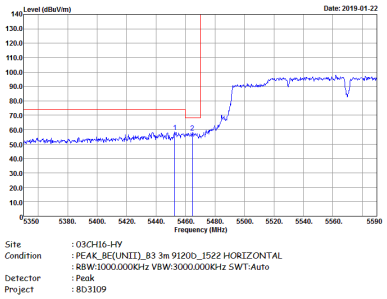
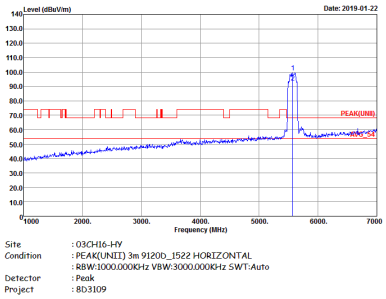
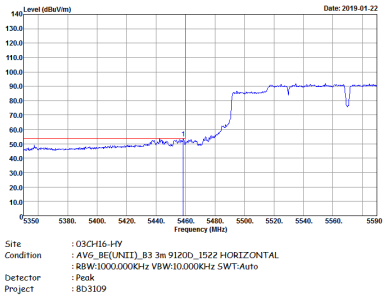
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

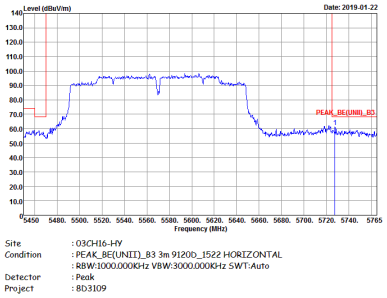
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

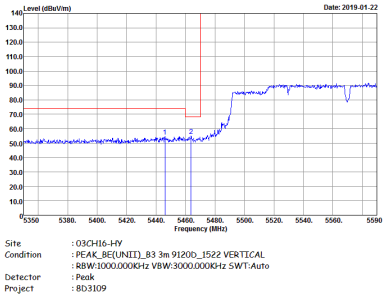
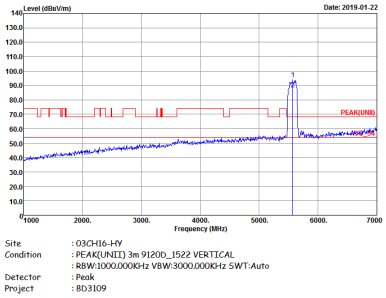
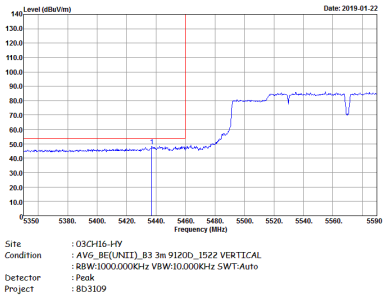
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

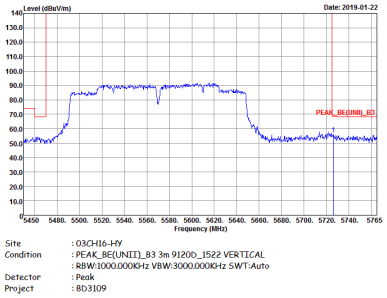
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

Band 3 5470~5725MHz
WIFI 802.11ac VHT160 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

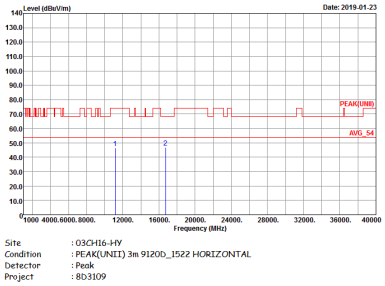
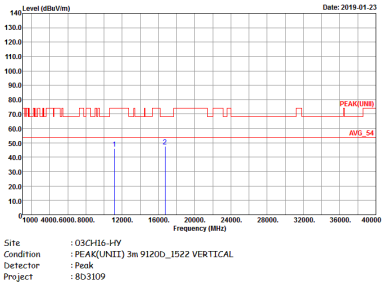
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

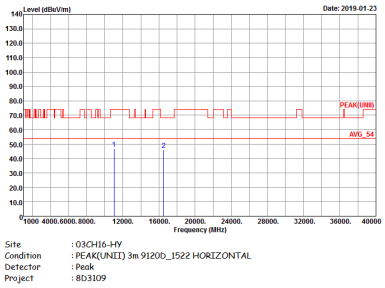
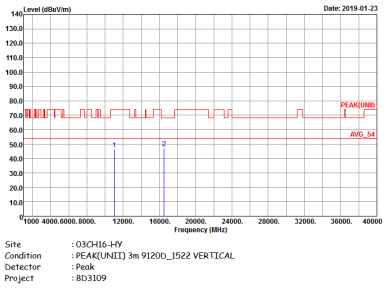
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

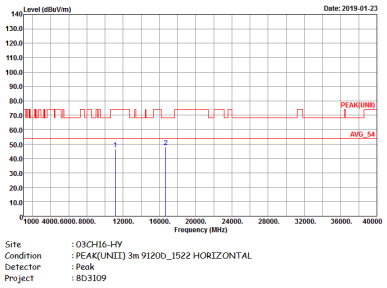
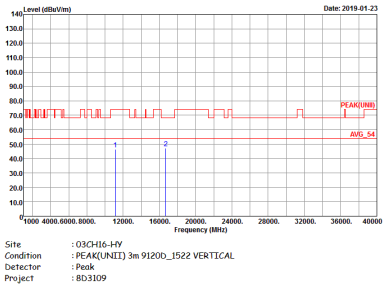
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11n HT20 CH116 5580MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 3 5470~5725MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11n HT40 CH102 5510MHz	
1+2	Horizontal	Vertical
Peak Avg.		

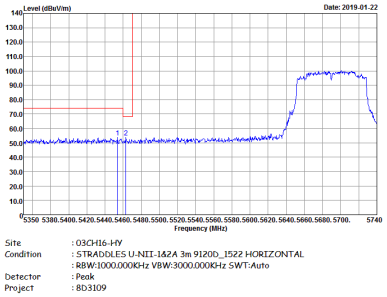
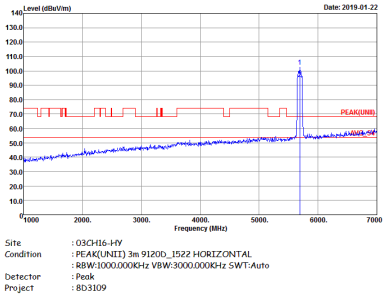
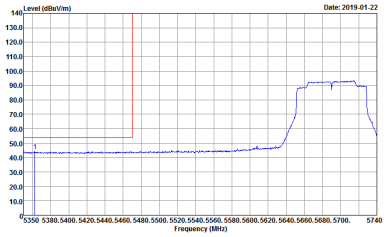
Band 3 5470~5725MHz

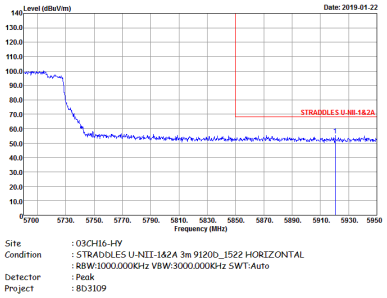
WIFI 802.11ac VHT160 (Harmonic @ 3m)

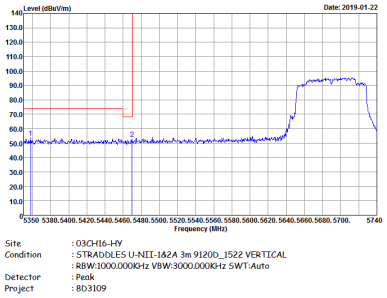
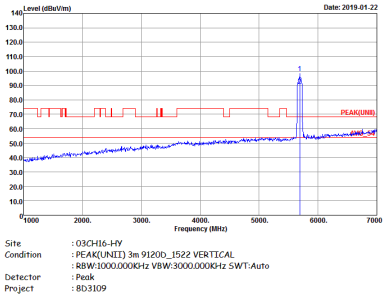
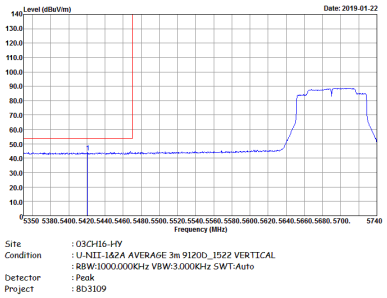
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT160 CH114 5570MHz	
1+2	Horizontal	Vertical
Peak Avg.		

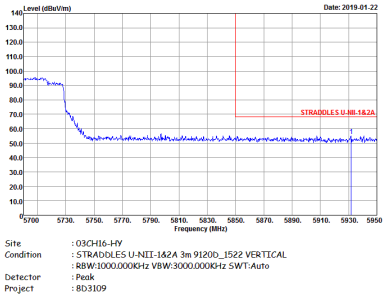
Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Fundamental @ 3m)

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

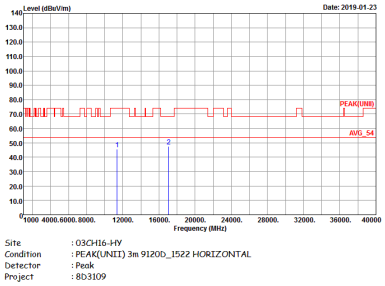
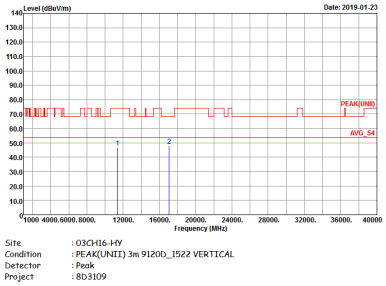
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

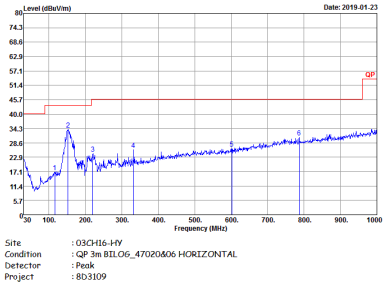
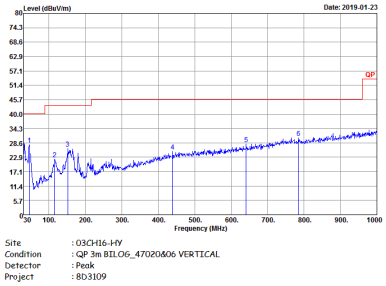
Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

5GHz WIFI 802.11ac VHT160 (LF)

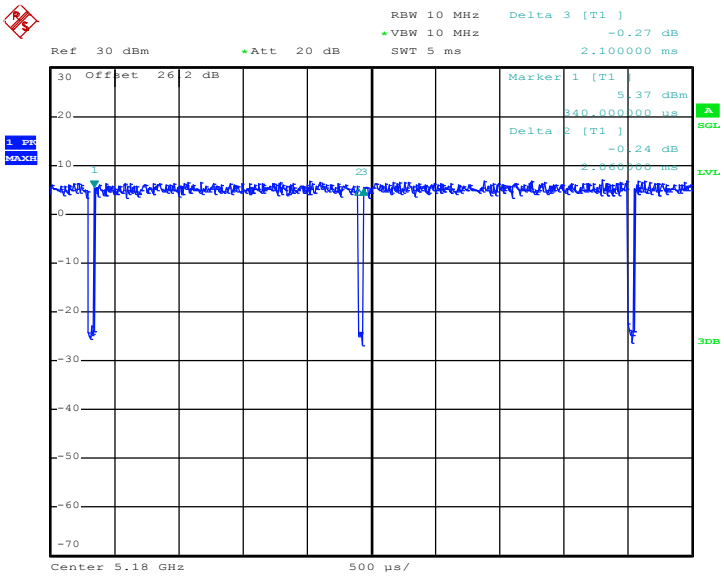
WIFI	5GHz WIFI	
ANT	802.11ac VHT160 LF	
1+2	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11a	98.10	-	-	10Hz	0.08
2	802.11a	98.10	-	-	10Hz	0.08
1	5GHz 802.11n HT20	97.96	1920	0.52	1kHz	0.09
2	5GHz 802.11n HT20	97.45	1910.00	0.52	1kHz	0.11
1+2	5GHz 802.11n HT20 for Ant. 1	96.95	1910.00	0.52	1kHz	0.13
1+2	5GHz 802.11n HT20 for Ant. 2	96.95	1910.00	0.52	1kHz	0.13
1	5GHz 802.11n HT40	95.09	930.00	1.08	3kHz	0.22
2	5GHz 802.11n HT40	95.09	930.00	1.08	3kHz	0.22
1+2	5GHz 802.11n HT40 for Ant. 1	94.55	936.00	1.07	3kHz	0.24
1+2	5GHz 802.11n HT40 for Ant. 2	95.12	936.00	1.07	3kHz	0.22
2	5GHz 802.11ac VHT80	94.27	724.00	1.38	3kHz	0.26
1+2	5GHz 802.11ac VHT80 for Ant. 1	87.78	388.00	2.58	3kHz	0.57
1+2	5GHz 802.11ac VHT80 for Ant. 2	88.18	388.00	2.58	3kHz	0.55
1	5GHz 802.11ac VHT160	92.86	520	1.92	3kHz	0.32
2	5GHz 802.11ac VHT160	92.86	520.00	1.92	3kHz	0.32
1+2	5GHz 802.11ac VHT160 for Ant. 1	85.54	284.00	3.52	10kHz	0.68
1+2	5GHz 802.11ac VHT160 for Ant. 2	85.37	280.00	3.57	10kHz	0.69

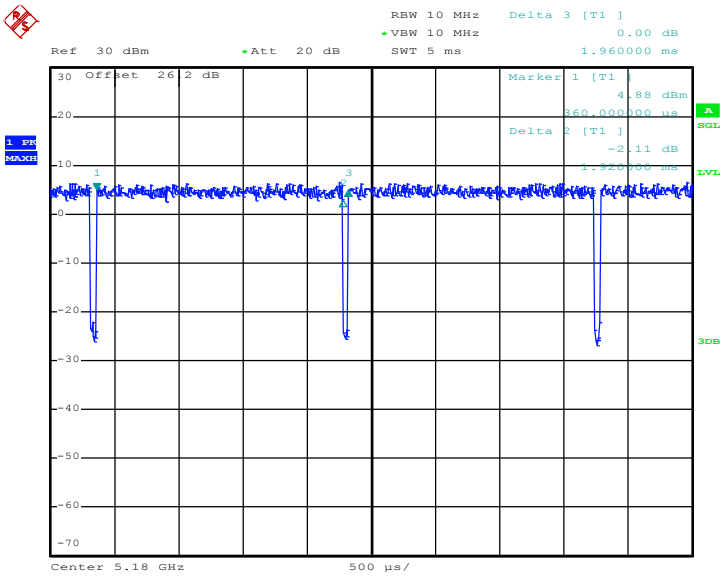
<Ant. 1>

802.11a



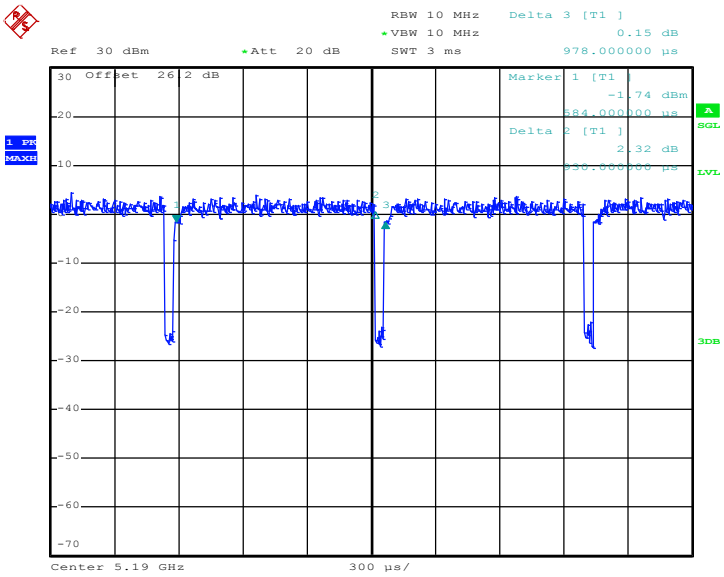
Date: 7.JAN.2019 11:56:53

802.11n HT20



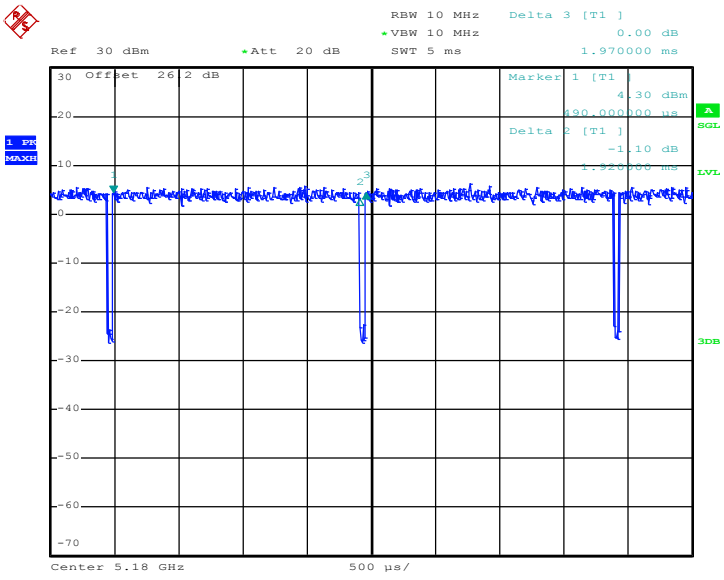
Date: 7.JAN.2019 12:00:33

802.11n HT40



Date: 7.JAN.2019 12:04:56

802.11ac VHT20



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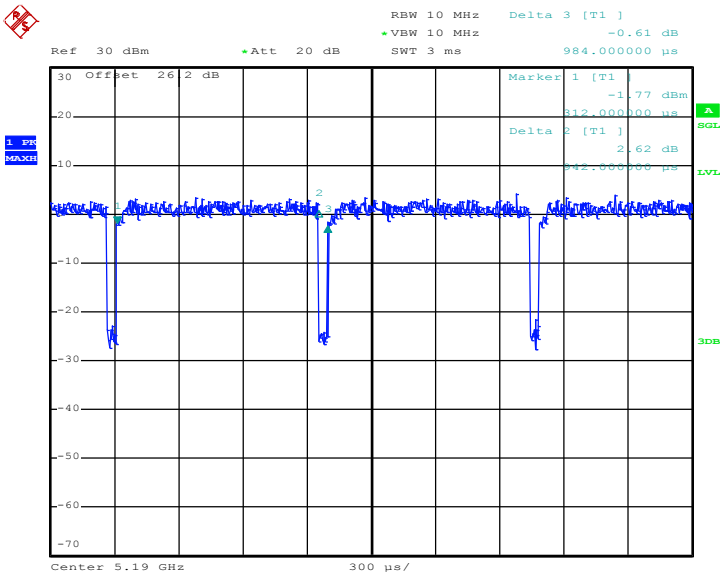
802.11ac VHT40



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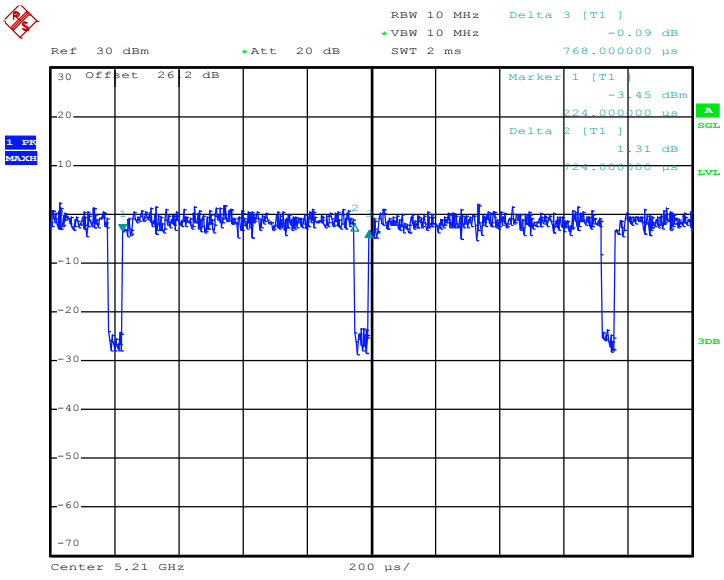
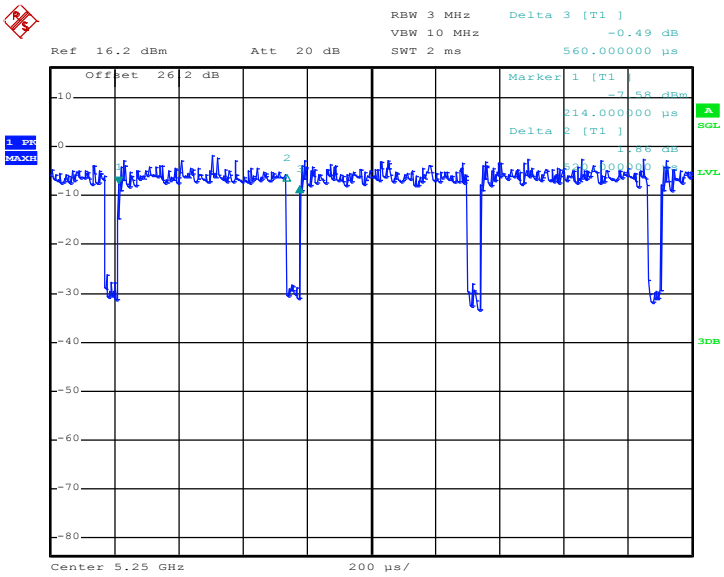
802.11ac VHT80



Date: 7.JAN.2019 13:58:49

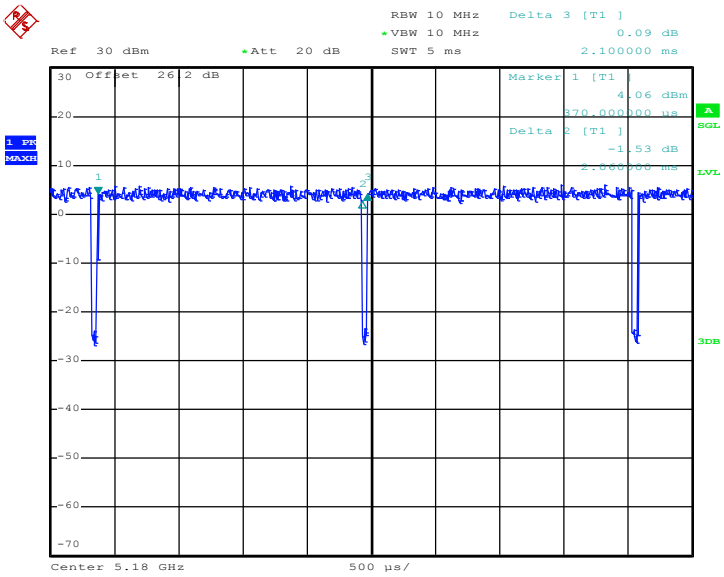
802.11ac VHT160



Date: 7.JAN.2019 17:28:14

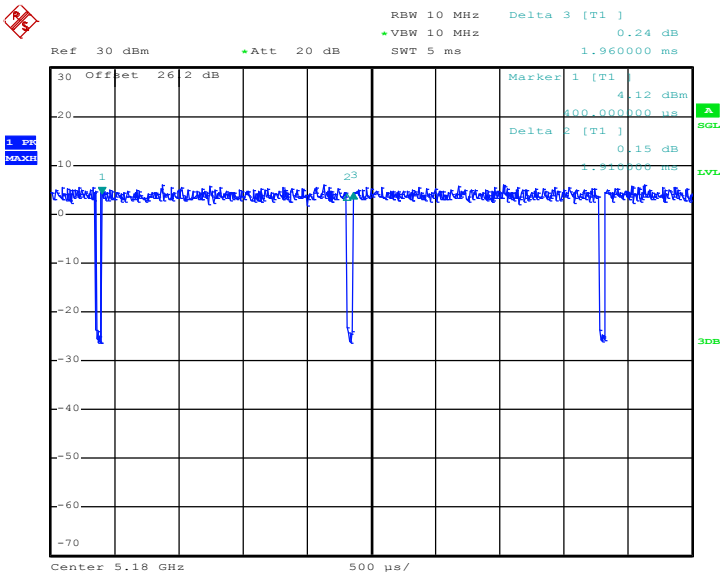
<Ant. 2>

802.11a



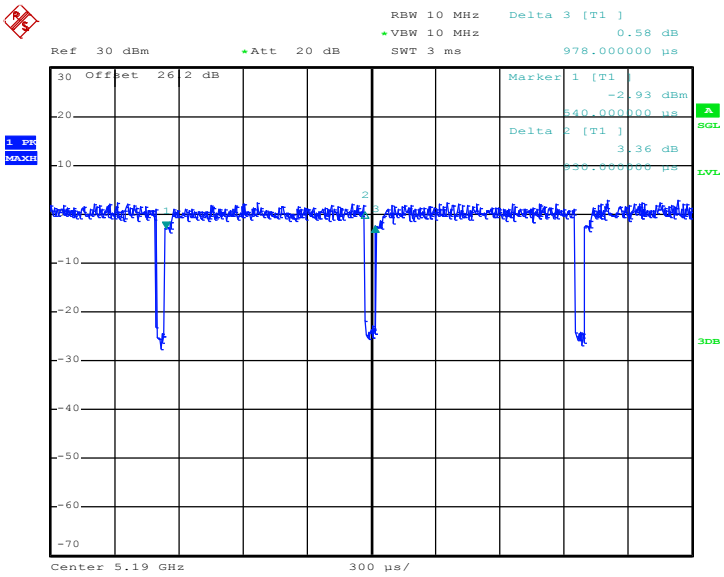
Date: 7.JAN.2019 11:58:15

802.11n HT20



Date: 7.JAN.2019 12:01:39

802.11n HT40



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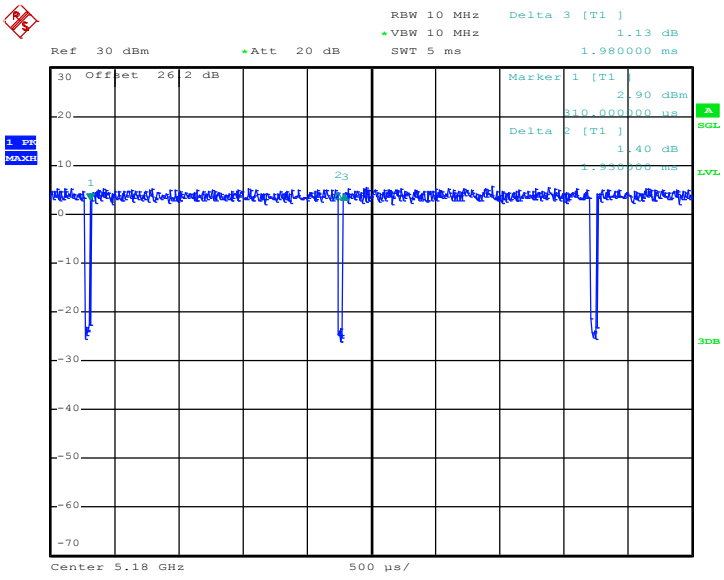
802.11ac VHT20



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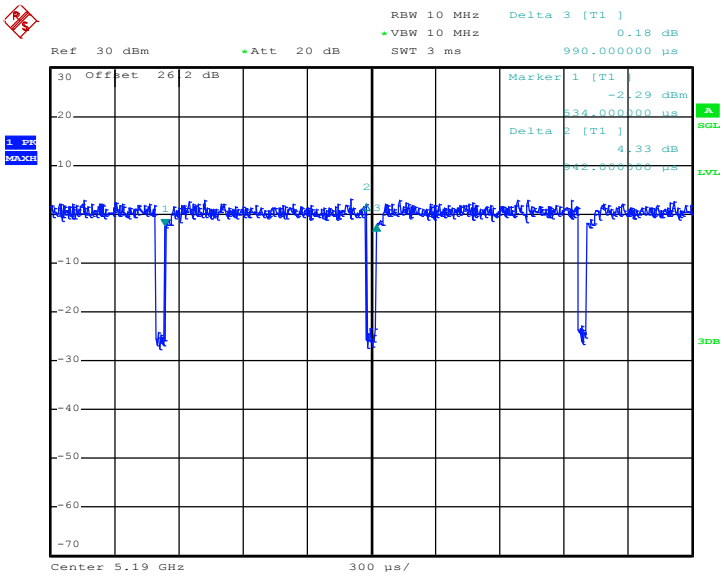
802.11ac VHT40



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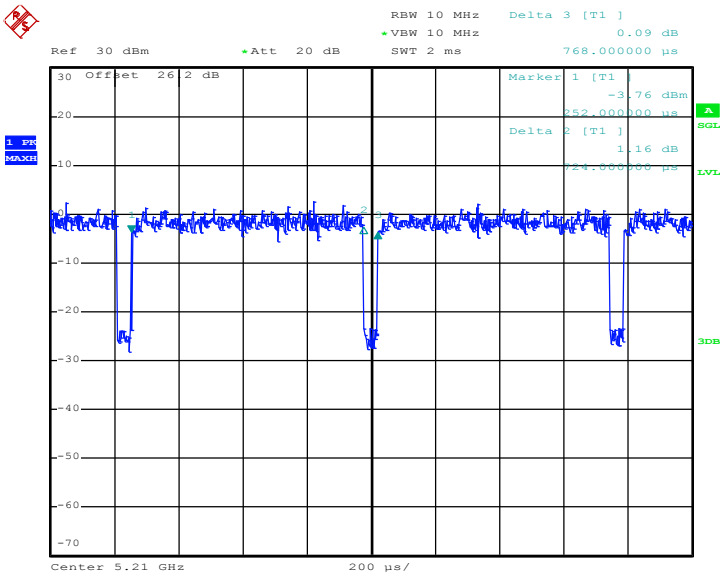
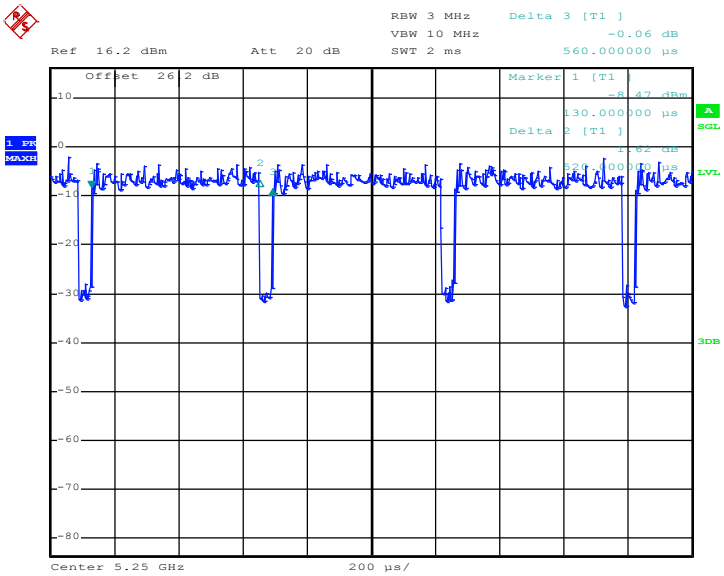
802.11ac VHT80



Date: 7.JAN.2019 13:59:56

802.11ac VHT160



Date: 7.JAN.2019 17:29:40

MIMO <Ant. 1>

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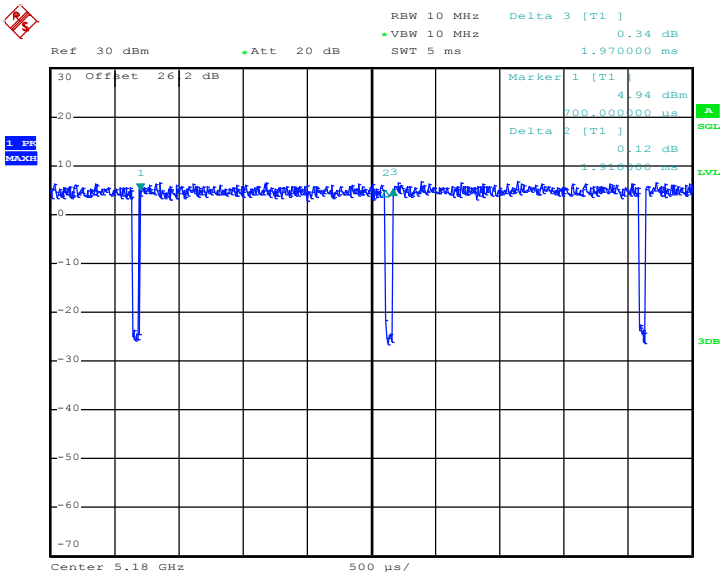

Date: 7.JAN.2019 12:02:47

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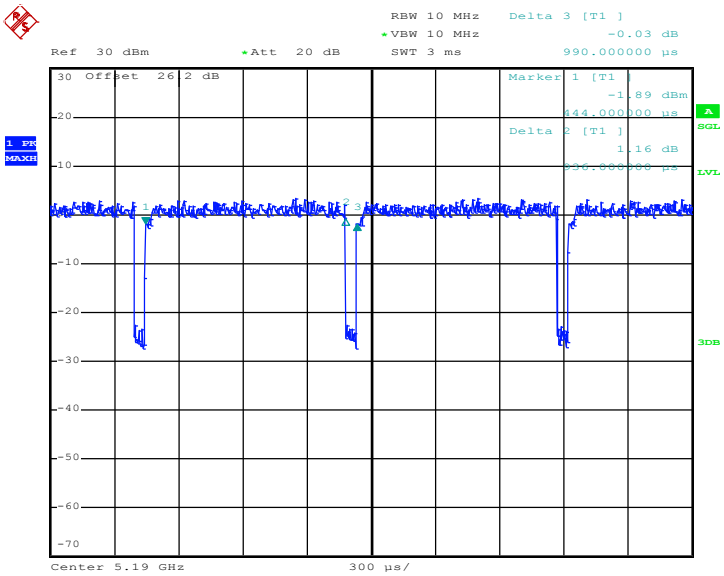

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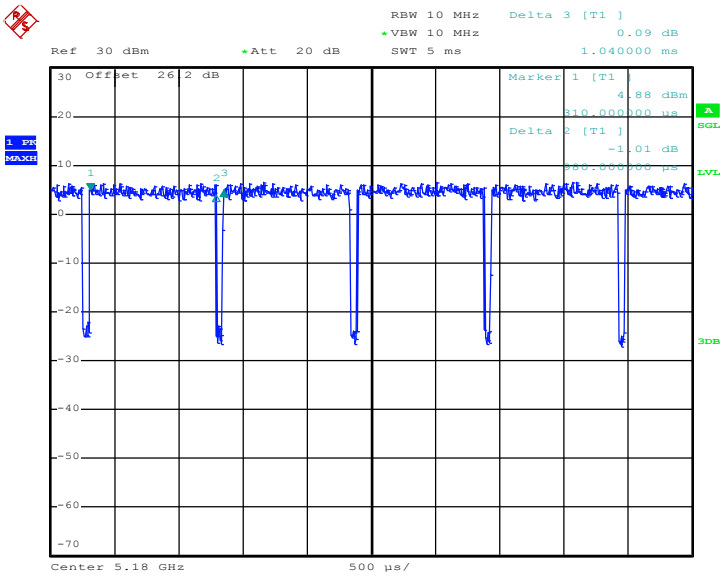

Date: 7.JAN.2019 13:45:54

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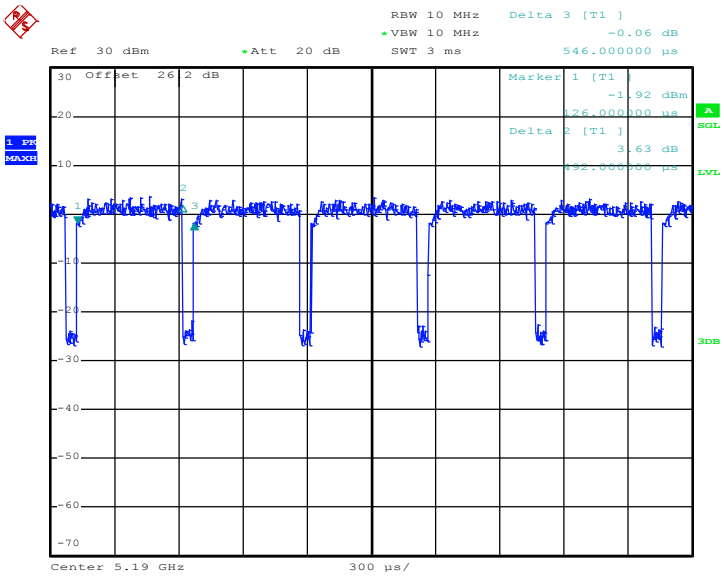

Date: 7.JAN.2019 13:51:50

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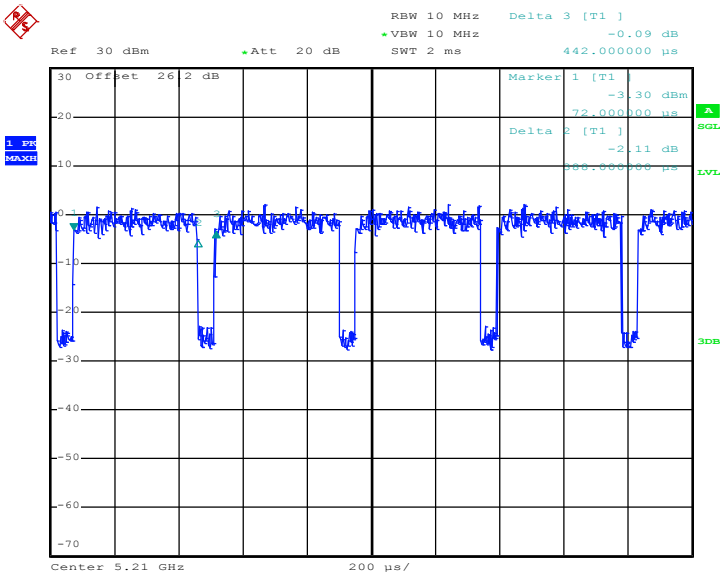

Date: 7.JAN.2019 13:57:28

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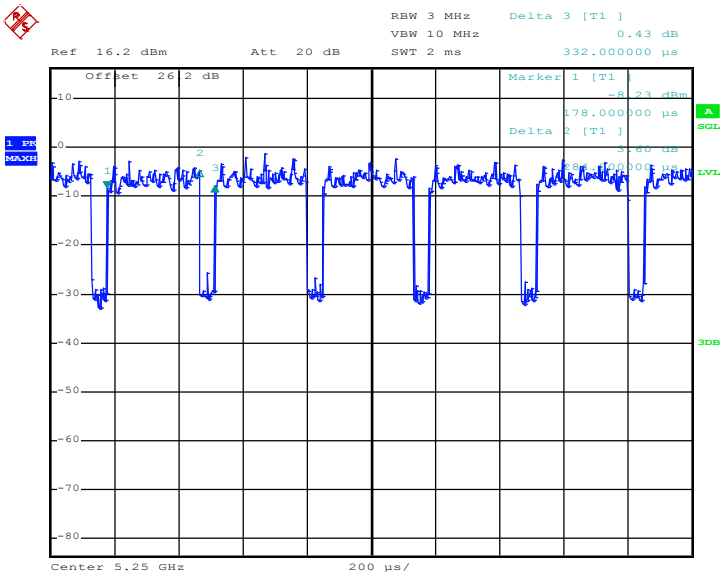

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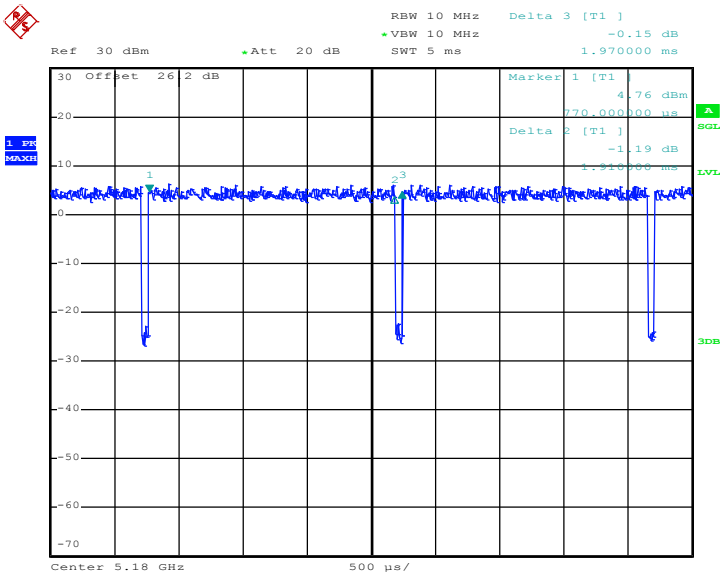

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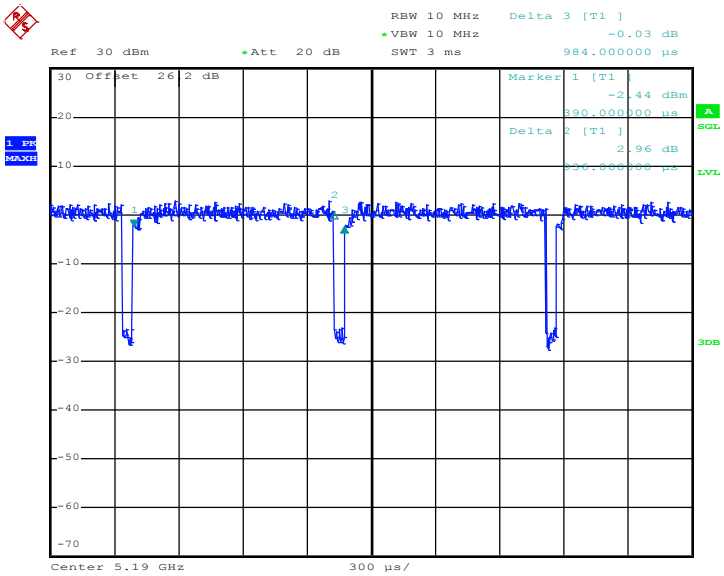

Date: 7.JAN.2019 13:42:09

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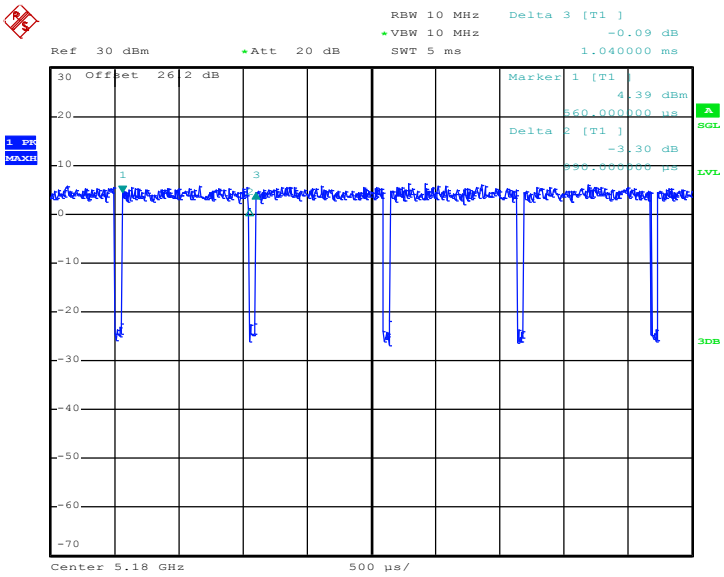

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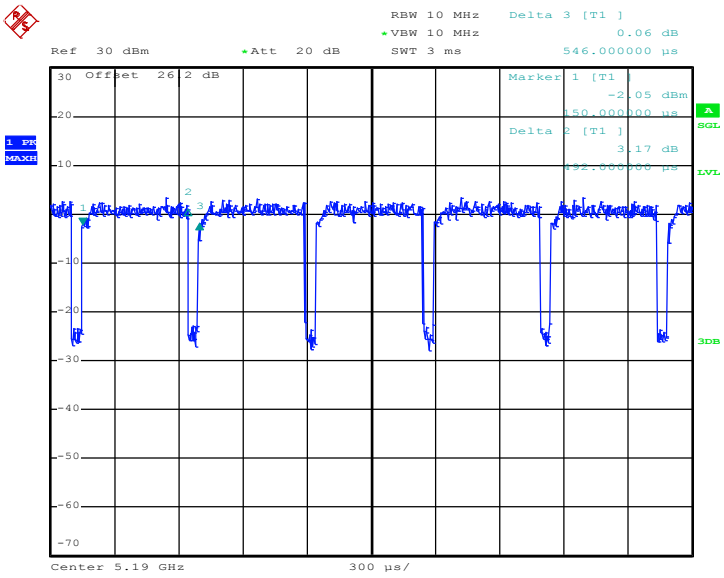

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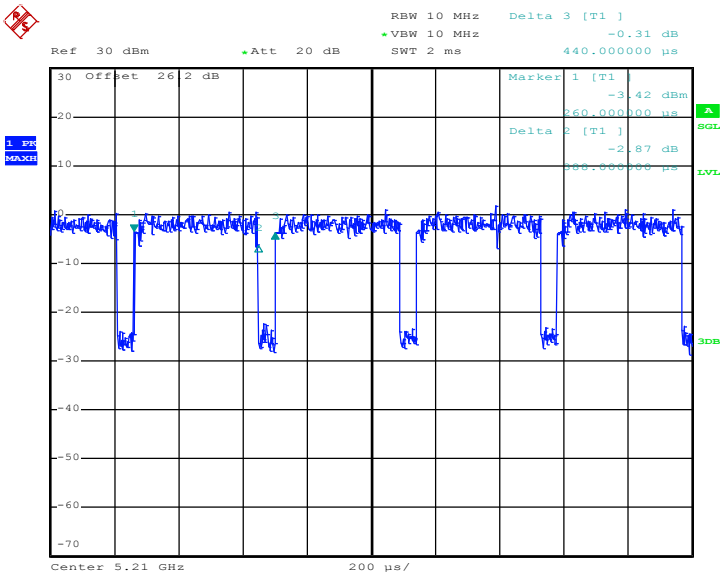

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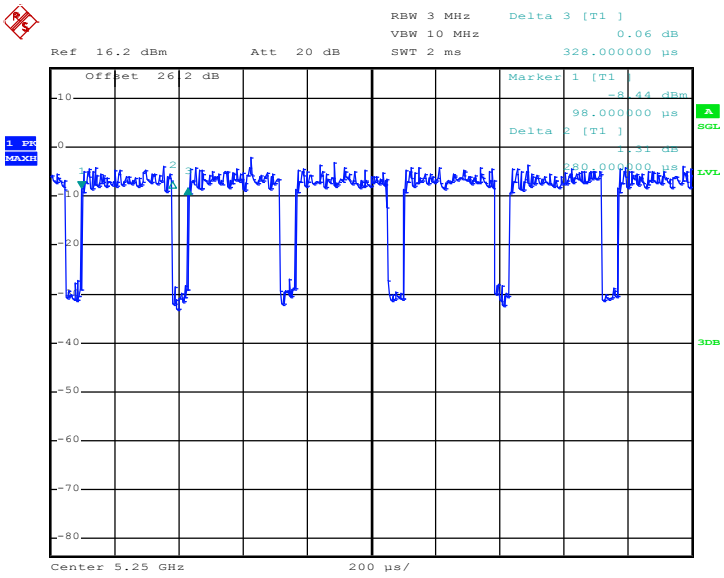

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