



FCC RF Test Report

APPLICANT : FUJITSU LIMITED
EQUIPMENT : STYLISTIC Q series Tablet PC
BRAND NAME : FUJITSU
MODEL NAME : Q738
FCC ID : EJE-WB0104
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

This is a partial report. The product was received on Nov. 18, 2017 and testing was completed on Nov. 29, 2017. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR7N1801E	Rev. 01	Initial issue of report	Jan. 11, 2018



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.407(a)	Maximum Conducted Output Power	≤ 30 dBm	Pass	-
3.2	15.407(b)	Unwanted Emissions	15.407(b)(4)(i) & 15.209(a)	Pass	Under limit 5.90 dB at 203.610 MHz
3.3	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

FUJITSU LIMITED

1-1, Kamikonadaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.2 Manufacturer

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.3 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, and 60GHz

Product Specification subjective to this standard	
Integrated WLAN Module	Brand Name: Intel Model Name: 8265NGW
Antenna Type	WLAN: <Ant. 1>: PIFA Antenna <Ant. 2>: PIFA Antenna Bluetooth: PIFA Antenna 60GHz: Integral Antenna

1.4 Modification of EUT

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



1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH05-HY	03CH07-HY

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

1.6 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 v01r04.
- ♦ 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: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Note:

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



2.2 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

Single Antenna

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

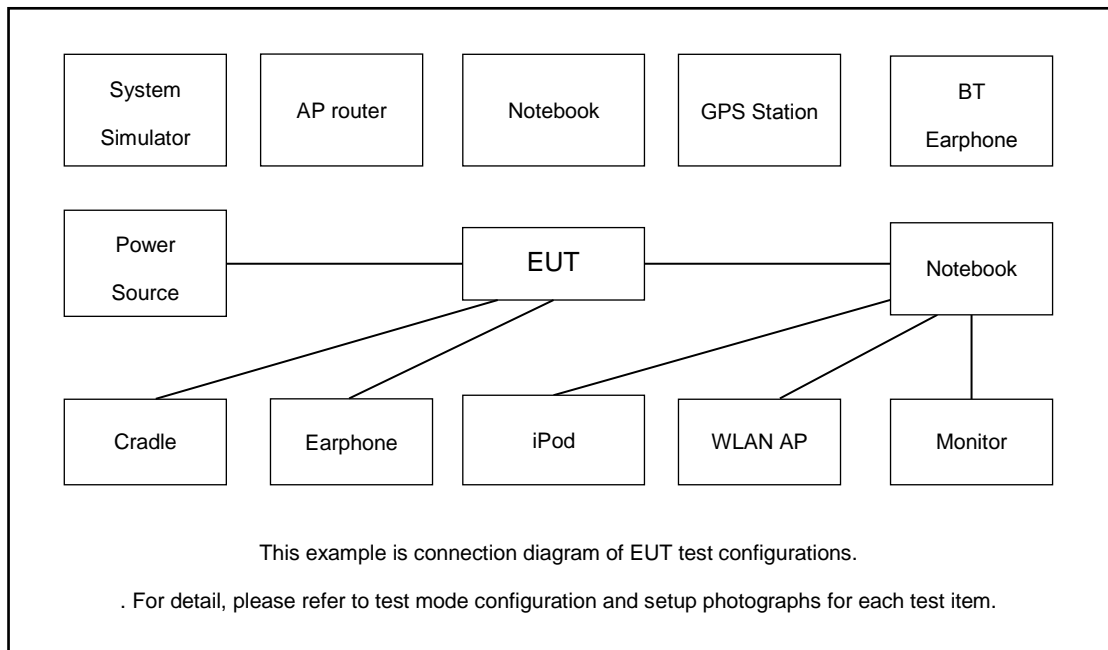
MIMO Antenna

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Ch. #		Band IV : 5725-5850 MHz	
		802.11n HT20	802.11n HT40
L	Low	-	151
M	Middle	157	-
H	High	-	-

Ch. #		Band IV : 5725-5850 MHz	
		802.11ac VHT40	802.11ac VHT80
L	Low	151	-
M	Middle	-	155
H	High	159	-

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.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

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

3 Test Result

3.1 Maximum Conducted Output Power Measurement

3.1.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

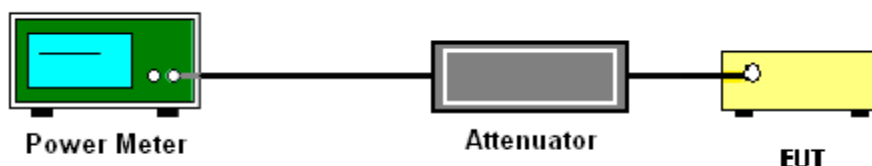
3.1.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.

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.

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 5.725-5.85 GHz band:
15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 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.

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



EIRP (dBm)	Field Strength at 3m (dBµV/m)
-17	78.3
- 27	68.3

(3) KDB789033 D02 v01r04 G)2)c)

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

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

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

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.



3.2.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

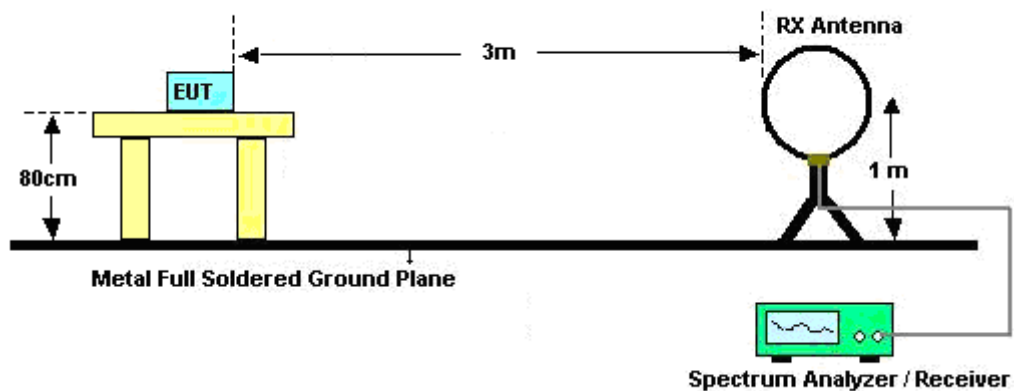
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

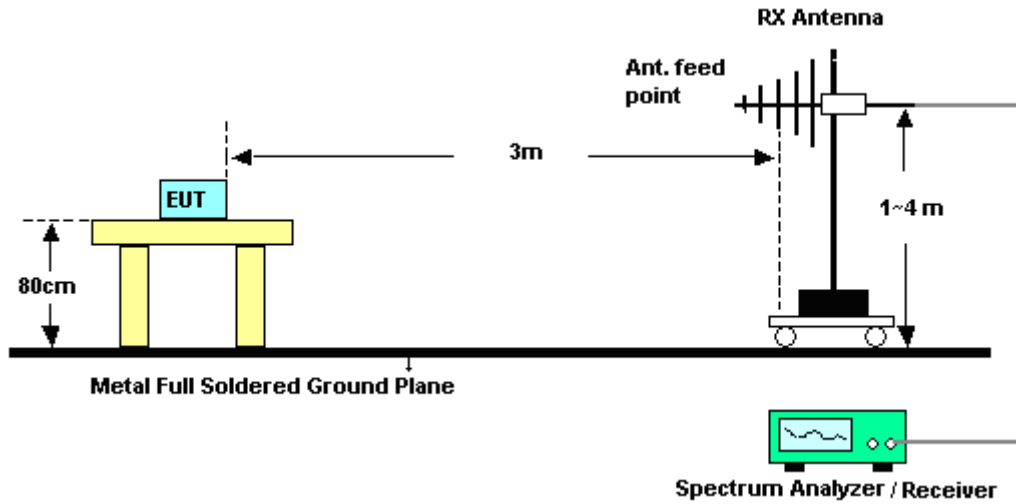
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.2.4 Test Setup

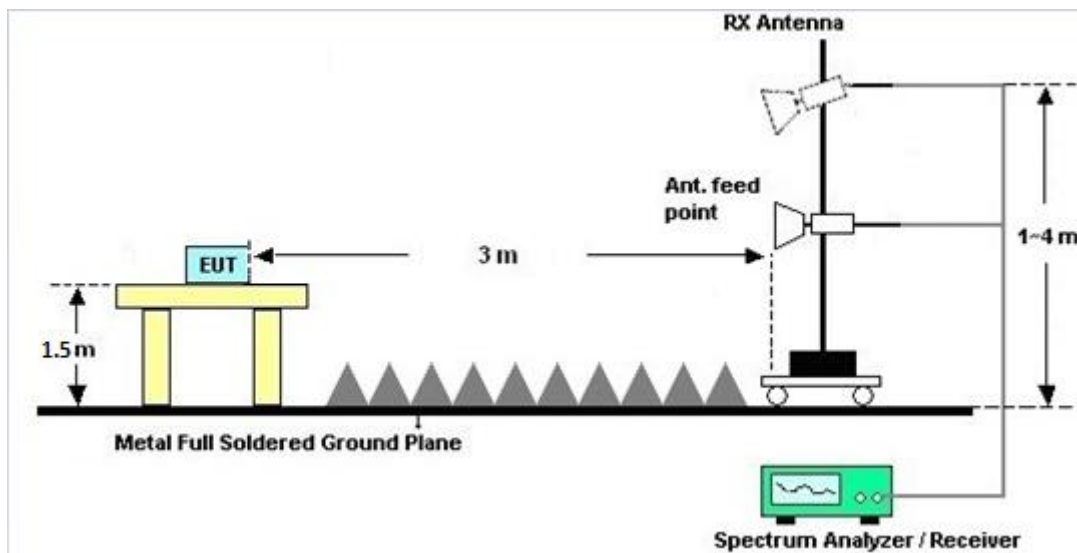
For radiated emissions below 30MHz



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.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.



3.3 Antenna Requirements

3.3.1 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.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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

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

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

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

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant 1 (dBi)	Ant 2 (dBi)				
Band IV	-1.26	2.18	2.18	3.64	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	0932001	N/A	Sep. 26, 2017	Nov. 21, 2017~ Nov. 22, 2017	Sep. 25, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	0846202	300MHz~40GHz	Sep. 26, 2017	Nov. 21, 2017~ Nov. 22, 2017	Sep. 25, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 25, 2016	Nov. 21, 2017~ Nov. 22, 2017	Nov. 24, 2017	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Jan. 07, 2017	Nov. 22, 2017~ Nov. 29, 2017	Jan. 06, 2018	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	Nov. 22, 2017~ Nov. 29, 2017	Aug. 22, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2017	Nov. 22, 2017~ Nov. 29, 2017	Apr. 24, 2018	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	Mar. 14, 2017	Nov. 22, 2017~ Nov. 29, 2017	Mar. 13, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2017	Nov. 22, 2017~ Nov. 29, 2017	Apr. 16, 2018	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Nov. 22, 2017~ Nov. 29, 2017	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Nov. 22, 2017~ Nov. 29, 2017	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35-H G	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Nov. 22, 2017~ Nov. 29, 2017	Jul. 17, 2018	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Oct. 20, 2016	Nov. 22, 2017~ Nov. 29, 2017	Oct. 19, 2018	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	18GHz- 40GHz	Nov. 10, 2017	Nov. 22, 2017~ Nov. 29, 2017	Nov. 09, 2018	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz to 26.5GHz	Jan. 12, 2017	Nov. 22, 2017~ Nov. 29, 2017	Jan. 11, 2018	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 30, 2017	Nov. 22, 2017~ Nov. 29, 2017	Oct. 29, 2018	Radiation (03CH07-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.70
-------------------------------------------------------------------------	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.50
-------------------------------------------------------------------------	------

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

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

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiming Liu	Temperature:	21~25	°C
Test Date:	2017/11/21~2017/11/22	Relative Humidity:	51~54	%

TEST RESULTS DATA
Average Power Table

Band IV														
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	149	5745	0.06	0.06	13.26	13.24		30.00	30.00	-1.26	2.18	Pass
11a	6Mbps	1	157	5785	0.06	0.06	13.23	13.21		30.00	30.00	-1.26	2.18	Pass
11a	6Mbps	1	165	5825	0.06	0.06	13.22	13.16		30.00	30.00	-1.26	2.18	Pass
HT20	MCS0	1	149	5745	0.09	0.00	13.49	13.32		30.00	30.00	-1.26	2.18	Pass
HT20	MCS0	1	157	5785	0.09	0.00	13.21	13.17		30.00	30.00	-1.26	2.18	Pass
HT20	MCS0	1	165	5825	0.09	0.00	13.15	13.13		30.00	30.00	-1.26	2.18	Pass
HT40	MCS0	1	151	5755	0.14	0.14	13.29	13.14		30.00	30.00	-1.26	2.18	Pass
HT40	MCS0	1	159	5795	0.14	0.14	13.27	13.11		30.00	30.00	-1.26	2.18	Pass
VHT20	MCS0	1	149	5745	0.07	0.07	13.47	13.31		30.00	30.00	-1.26	2.18	Pass
VHT20	MCS0	1	157	5785	0.07	0.07	13.19	13.15		30.00	30.00	-1.26	2.18	Pass
VHT20	MCS0	1	165	5825	0.07	0.07	13.14	13.07		30.00	30.00	-1.26	2.18	Pass
VHT40	MCS0	1	151	5755	0.16	0.14	13.26	13.12		30.00	30.00	-1.26	2.18	Pass
VHT40	MCS0	1	159	5795	0.16	0.14	13.25	13.09		30.00	30.00	-1.26	2.18	Pass
VHT80	MCS0	1	155	5775	0.29	0.29	13.49	13.14		30.00	30.00	-1.26	2.18	Pass
HT20	MCS 8	2	149	5745	0.17	0.16	13.47	13.16	16.33	30.00		2.18		Pass
HT20	MCS 8	2	157	5785	0.17	0.16	13.17	13.14	16.16	30.00		2.18		Pass
HT20	MCS 8	2	165	5825	0.17	0.16	13.12	13.08	16.11	30.00		2.18		Pass
HT40	MCS 8	2	151	5755	0.34	0.31	13.49	13.13	16.32	30.00		2.18		Pass
HT40	MCS 8	2	159	5795	0.34	0.31	13.14	13.11	16.13	30.00		2.18		Pass
VHT20	MCS0	2	149	5745	0.18	0.18	13.38	13.13	16.27	30.00		2.18		Pass
VHT20	MCS0	2	157	5785	0.18	0.18	13.15	13.10	16.14	30.00		2.18		Pass
VHT20	MCS0	2	165	5825	0.18	0.18	13.11	13.05	16.09	30.00		2.18		Pass
VHT40	MCS0	2	151	5755	0.34	0.31	13.44	13.11	16.29	30.00		2.18		Pass
VHT40	MCS0	2	159	5795	0.34	0.31	13.12	13.06	16.10	30.00		2.18		Pass
VHT80	MCS0	2	155	5775	0.64	0.61	13.49	13.26	16.38	30.00		2.18		Pass



Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh and James Chiu	Temperature :	21~23°C
		Relative Humidity :	51~53%

Band 4 - 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
802.11n HT20 CH 157 5785MHz		5623.4	53.54	-14.66	68.2	40.98	35.07	12.61	35.12	102	294	P	H
		5659.6	53.04	-22.29	75.33	40.44	35.12	12.61	35.13	102	294	P	H
		5719.6	52.6	-58.09	110.69	39.8	35.21	12.73	35.14	102	294	P	H
		5722.6	52.32	-64.41	116.73	39.52	35.21	12.73	35.14	102	294	P	H
	*	5785	104.43	-	-	91.45	35.29	12.85	35.16	102	294	P	H
	*	5785	96.93	-	-	83.95	35.29	12.85	35.16	102	294	A	H
		5850.2	52.84	-68.9	121.74	39.69	35.38	12.94	35.17	102	294	P	H
		5869.6	53.04	-53.67	106.71	39.79	35.41	13.02	35.18	102	294	P	H
		5917	52.08	-22.02	74.1	38.68	35.48	13.11	35.19	102	294	P	H
		5949.6	50.64	-17.56	68.2	37.11	35.53	13.2	35.2	102	294	P	H
		5628.6	52.24	-15.96	68.2	39.69	35.07	12.61	35.13	265	247	P	V
		5680	51.71	-38.73	90.44	39.04	35.14	12.67	35.14	265	247	P	V
		5703	52.58	-53.46	106.04	39.8	35.19	12.73	35.14	265	247	P	V
		5724.4	51.49	-69.34	120.83	38.69	35.21	12.73	35.14	265	247	P	V
	*	5785	100.17	-	-	87.19	35.29	12.85	35.16	265	247	P	V
	*	5785	92.35	-	-	79.37	35.29	12.85	35.16	265	247	A	V
		5852.8	50.72	-65.1	115.82	37.57	35.38	12.94	35.17	265	247	P	V
		5864.8	51.11	-56.94	108.05	37.86	35.41	13.02	35.18	265	247	P	V
	5888.4	51.75	-43.5	95.25	38.46	35.46	13.02	35.19	265	247	P	V	
	5933.2	50.62	-17.58	68.2	37.2	35.5	13.11	35.19	265	247	P	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Cable Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for 802.11n HT20 CH 157 5785MHz and a Remark section.



Band 4 5725~5850MHz
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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5606	53.38	-14.82	68.2	40.9	35.04	12.56	35.12	103	292	P	H
		5698	56.79	-46.94	103.73	44.09	35.17	12.67	35.14	103	292	P	H
		5716.8	59.84	-50.07	109.91	47.06	35.19	12.73	35.14	103	292	P	H
		5722.6	61.01	-55.72	116.73	48.21	35.21	12.73	35.14	103	292	P	H
	*	5755	102.12	-	-	89.22	35.26	12.79	35.15	103	292	P	H
	*	5755	94.42	-	-	81.52	35.26	12.79	35.15	103	292	A	H
		5851.8	51.91	-66.19	118.1	38.76	35.38	12.94	35.17	103	292	P	H
		5857.2	52.79	-57.39	110.18	39.61	35.41	12.94	35.17	103	292	P	H
		5900	51.78	-34.88	86.66	38.49	35.46	13.02	35.19	103	292	P	H
		5926.6	50.75	-17.45	68.2	37.33	35.5	13.11	35.19	103	292	P	H
802.11n													H
HT40													H
CH 151		5632	52.16	-16.04	68.2	39.61	35.07	12.61	35.13	244	252	P	V
5755MHz		5691	53.26	-45.3	98.56	40.56	35.17	12.67	35.14	244	252	P	V
		5714.4	56.33	-52.9	109.23	43.55	35.19	12.73	35.14	244	252	P	V
		5724.8	56.23	-65.51	121.74	43.43	35.21	12.73	35.14	244	252	P	V
	*	5755	97.38	-	-	84.48	35.26	12.79	35.15	244	252	P	V
	*	5755	89.51	-	-	76.61	35.26	12.79	35.15	244	252	A	V
		5855	50.13	-60.67	110.8	36.95	35.41	12.94	35.17	244	252	P	V
		5862.2	51.34	-57.44	108.78	38.09	35.41	13.02	35.18	244	252	P	V
		5911.4	50.82	-27.41	78.23	37.42	35.48	13.11	35.19	244	252	P	V
		5947.6	51.11	-17.09	68.2	37.58	35.53	13.2	35.2	244	252	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Cable Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for 802.11n HT40 CH 151 at 5755MHz and a Remark section.



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5623	55.04	-13.16	68.2	42.48	35.07	12.61	35.12	107	292	P	H
		5688.2	59.72	-36.78	96.5	47.02	35.17	12.67	35.14	107	292	P	H
		5703.2	62.07	-44.03	106.1	49.29	35.19	12.73	35.14	107	292	P	H
		5720.2	62.31	-48.95	111.26	49.51	35.21	12.73	35.14	107	292	P	H
	*	5775	99.65	-	-	86.73	35.29	12.79	35.16	107	292	P	H
	*	5775	91.41	-	-	78.49	35.29	12.79	35.16	107	292	A	H
		5850.6	63.12	-57.71	120.83	49.97	35.38	12.94	35.17	107	292	P	H
		5855	61.9	-48.9	110.8	48.72	35.41	12.94	35.17	107	292	P	H
		5875.2	55.25	-49.8	105.05	41.98	35.43	13.02	35.18	107	292	P	H
		5949.4	50.9	-17.3	68.2	37.37	35.53	13.2	35.2	107	292	P	H
802.11ac													H
VHT80													H
CH 155		5647.4	52.99	-15.21	68.2	40.42	35.09	12.61	35.13	315	258	P	V
5775MHz		5679	57.64	-32.06	89.7	44.96	35.14	12.67	35.13	315	258	P	V
		5706.4	57.78	-49.21	106.99	45	35.19	12.73	35.14	315	258	P	V
		5722.2	55.9	-59.92	115.82	43.1	35.21	12.73	35.14	315	258	P	V
	*	5775	95.13	-	-	82.21	35.29	12.79	35.16	315	258	P	V
	*	5775	87.59	-	-	74.67	35.29	12.79	35.16	315	258	A	V
		5850.4	58.95	-62.34	121.29	45.8	35.38	12.94	35.17	315	258	P	V
		5855	59.5	-51.3	110.8	46.32	35.41	12.94	35.17	315	258	P	V
		5877.2	52.8	-50.77	103.57	39.53	35.43	13.02	35.18	315	258	P	V
		5936.8	52.03	-16.17	68.2	38.62	35.5	13.11	35.2	315	258	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ac VHT80 CH 155 5775MHz		11550	45.75	-28.25	74	45.58	38.44	18.95	57.22	100	0	P	H	
		17325	50.61	-17.59	68.2	41.32	41.66	23.43	55.8	100	0	P	H	
													H	
													H	
			11550	45.46	-28.54	74	45.29	38.44	18.95	57.22	100	0	P	V
			17325	50.96	-17.24	68.2	41.67	41.66	23.43	55.8	100	0	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



Band 4 - 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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 157 5785MHz		5622.6	53.61	-14.59	68.2	41.05	35.07	12.61	35.12	100	294	P	H
		5673.8	52.47	-33.38	85.85	39.79	35.14	12.67	35.13	100	294	P	H
		5713.4	52.23	-56.72	108.95	39.45	35.19	12.73	35.14	100	294	P	H
		5723.6	53.76	-65.25	119.01	40.96	35.21	12.73	35.14	100	294	P	H
	*	5785	106.23	-	-	93.25	35.29	12.85	35.16	100	294	P	H
	*	5785	98.11	-	-	85.13	35.29	12.85	35.16	100	294	A	H
		5854.6	51.17	-60.54	111.71	37.99	35.41	12.94	35.17	100	294	P	H
		5856	52.02	-58.5	110.52	38.84	35.41	12.94	35.17	100	294	P	H
		5881.6	52.67	-47.63	100.3	39.4	35.43	13.02	35.18	100	294	P	H
		5943.4	51.3	-16.9	68.2	37.77	35.53	13.2	35.2	100	294	P	H
		5645	51.62	-16.58	68.2	39.05	35.09	12.61	35.13	100	108	P	V
		5675.6	52.44	-34.74	87.18	39.76	35.14	12.67	35.13	100	108	P	V
		5710.4	52.6	-55.51	108.11	39.82	35.19	12.73	35.14	100	108	P	V
		5720.6	50.95	-61.22	112.17	38.15	35.21	12.73	35.14	100	108	P	V
	*	5785	103.93	-	-	90.95	35.29	12.85	35.16	100	108	P	V
	*	5785	96.17	-	-	83.19	35.29	12.85	35.16	100	108	A	V
		5853.6	50.34	-63.65	113.99	37.16	35.41	12.94	35.17	100	108	P	V
		5872.8	50.86	-54.96	105.82	37.59	35.43	13.02	35.18	100	108	P	V
	5924.2	51.31	-17.48	68.79	37.89	35.5	13.11	35.19	100	108	P	V	
	5949.6	50.74	-17.46	68.2	37.21	35.53	13.2	35.2	100	108	P	V	

Remark

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



Band 4 5725~5850MHz
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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 157 5785MHz		11570	47.63	-26.37	74	47.41	38.46	18.95	57.19	100	0	P	H	
		17355	51.24	-16.96	68.2	41.98	41.61	23.45	55.8	100	0	P	H	
													H	
													H	
			11570	45.98	-28.02	74	45.76	38.46	18.95	57.19	100	0	P	V
			17355	51.73	-16.47	68.2	42.47	41.61	23.45	55.8	100	0	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz
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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5609.4	53.65	-14.55	68.2	41.17	35.04	12.56	35.12	100	292	P	H
		5696.4	57.01	-45.54	102.55	44.31	35.17	12.67	35.14	100	292	P	H
		5716.4	59.86	-49.93	109.79	47.08	35.19	12.73	35.14	100	292	P	H
		5724.4	60.49	-60.34	120.83	47.69	35.21	12.73	35.14	100	292	P	H
	*	5755	104.39	-	-	91.49	35.26	12.79	35.15	100	292	P	H
	*	5755	95.99	-	-	83.09	35.26	12.79	35.15	100	292	A	H
		5852	52.06	-65.58	117.64	38.91	35.38	12.94	35.17	100	292	P	H
		5860.2	51.55	-57.79	109.34	38.3	35.41	13.02	35.18	100	292	P	H
		5892	51.04	-41.54	92.58	37.75	35.46	13.02	35.19	100	292	P	H
		5948.2	51.3	-16.9	68.2	37.77	35.53	13.2	35.2	100	292	P	H
802.11n													H
HT40													H
CH 151		5647.2	53.1	-15.1	68.2	40.53	35.09	12.61	35.13	100	104	P	V
5755MHz		5679.4	53.12	-36.88	90	40.45	35.14	12.67	35.14	100	104	P	V
		5716.6	57.44	-52.41	109.85	44.66	35.19	12.73	35.14	100	104	P	V
		5725	57.14	-65.06	122.2	44.34	35.21	12.73	35.14	100	104	P	V
	*	5755	101.95	-	-	89.05	35.26	12.79	35.15	100	104	P	V
	*	5755	93.77	-	-	80.87	35.26	12.79	35.15	100	104	A	V
		5851	50.97	-68.95	119.92	37.82	35.38	12.94	35.17	100	104	P	V
		5874	51.2	-54.28	105.48	37.93	35.43	13.02	35.18	100	104	P	V
		5877.8	50.64	-52.48	103.12	37.37	35.43	13.02	35.18	100	104	P	V
		5942.6	50.67	-17.53	68.2	37.14	35.53	13.2	35.2	100	104	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40		11510	46.04	-27.96	74	46.02	38.4	18.92	57.3	100	0	P	H
		17268	50.66	-17.54	68.2	41.33	41.73	23.4	55.8	100	0	P	H
													H
													H
CH 151 5755MHz		11510	45.45	-28.55	74	45.43	38.4	18.92	57.3	100	0	P	V
		17268	50.64	-17.56	68.2	41.31	41.73	23.4	55.8	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
		5636.8	54.88	-13.32	68.2	42.31	35.09	12.61	35.13	100	288	P	H	
		5688.8	60.11	-36.83	96.94	47.41	35.17	12.67	35.14	100	288	P	H	
		5717.2	60.77	-49.25	110.02	47.99	35.19	12.73	35.14	100	288	P	H	
		5723.4	60.32	-58.23	118.55	47.52	35.21	12.73	35.14	100	288	P	H	
	*	5775	100.46	-	-	87.54	35.29	12.79	35.16	100	288	P	H	
	*	5775	94.64	-	-	81.72	35.29	12.79	35.16	100	288	A	H	
		5853.8	60.67	-52.87	113.54	47.49	35.41	12.94	35.17	100	288	P	H	
		5856.8	60.1	-50.2	110.3	46.92	35.41	12.94	35.17	100	288	P	H	
		5877	55.9	-47.81	103.71	42.63	35.43	13.02	35.18	100	288	P	H	
		5925.6	52.1	-16.1	68.2	38.68	35.5	13.11	35.19	100	288	P	H	
802.11ac VHT80 CH 155 5775MHz													H	
													H	
			5619.2	52.55	-15.65	68.2	40.04	35.07	12.56	35.12	100	105	P	V
			5686	56.4	-38.47	94.87	43.7	35.17	12.67	35.14	100	105	P	V
			5719.4	56.97	-53.66	110.63	44.17	35.21	12.73	35.14	100	105	P	V
			5722.2	57	-58.82	115.82	44.2	35.21	12.73	35.14	100	105	P	V
		*	5775	99.68	-	-	86.76	35.29	12.79	35.16	100	105	P	V
		*	5775	92.82	-	-	79.9	35.29	12.79	35.16	100	105	A	V
			5851	57.85	-62.07	119.92	44.7	35.38	12.94	35.17	100	105	P	V
			5866	58.19	-49.53	107.72	44.94	35.41	13.02	35.18	100	105	P	V
			5877	52.1	-51.61	103.71	38.83	35.43	13.02	35.18	100	105	P	V
			5928.6	51.67	-16.53	68.2	38.25	35.5	13.11	35.19	100	105	P	V
														V
														V
	Remark	1. No other spurious found.												
		2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ac VHT80 CH 155 5775MHz		11550	45.78	-28.22	74	45.61	38.44	18.95	57.22	100	0	P	H	
		17325	51.1	-17.1	68.2	41.81	41.66	23.43	55.8	100	0	P	H	
													H	
													H	
			11550	44.93	-29.07	74	44.76	38.44	18.95	57.22	100	0	P	V
			17325	50.73	-17.47	68.2	41.44	41.66	23.43	55.8	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

5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)	
5GHz 802.11ac VHT80 LF		30	24.63	-15.37	40	29.55	24.72	1.71	31.35	-	-	P	H	
		203.61	37.6	-5.9	43.5	51.35	14.97	2.72	31.44	100	77	P	H	
		240.06	35.47	-10.53	46	46.64	17.19	3.03	31.39	-	-	P	H	
		616.4	28.18	-17.82	46	28.87	25.72	4.39	30.8	-	-	P	H	
		771.1	30.85	-15.15	46	28.55	28.04	4.88	30.62	-	-	P	H	
		889.4	32.14	-13.86	46	28.42	28.98	5.27	30.53	-	-	P	H	
														H
														H
														H
														H
														H
														H
														H
														H
			148.53	31.24	-12.26	43.5	43	17.13	2.62	31.51	100	81	P	V
			226.02	28.85	-17.15	46	41.44	15.79	3.03	31.41	-	-	P	V
			249.24	26.09	-19.91	46	36.17	18.27	3.03	31.38	-	-	P	V
			721.4	29.18	-16.82	46	28	27.03	4.81	30.66	-	-	P	V
			913.9	31.94	-14.06	46	27.99	29.14	5.33	30.52	-	-	P	V
			963.6	33.63	-20.37	54	27.77	30.97	5.4	30.51	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

- Level(dBμV/m) =
Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

- Level(dBμV/m)
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- Level(dBμV/m)
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

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



Appendix C. Radiated Spurious Emission Plots

Test Engineer :	Jesse Wang, Stan Hsieh and James Chiu	Temperature :	21~23°C
		Relative Humidity :	51~53%



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>	<p>Site : 03CH07-HY Condition : PEAK(UNIT) 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 4</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>	<p>Site : 03CH07-HY Condition : PEAK(UNIT) 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(84)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>	<p>Site : 03CH07-HY Condition : PEAK(U) 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(84)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 8</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>	<p>Site : 03CH07-HY Condition : PEAK(UMBI) 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(84)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>	<p>Site : 03CH07-HY Condition : PEAK(UB) 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(84)_16-24 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 12</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

Table with 2 columns: WIFI (Band 4 5725~5850MHz Harmonic @ 3m), ANT (802.11n HT20 CH157 5785MHz). Row 1: 1, Horizontal, Vertical. Each plot shows Level (dBu/m) vs Frequency (MHz) with Peak and Avg. markers.



**Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 7N1801 Mode : 8</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 7N1801 Mode : 8</p>



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

Table with 2 columns: WIFI (Band 4 5725~5850MHz Harmonic @ 3m), ANT (802.11ac VHT80 CH155 5775MHz). Row 1: 1, Horizontal, Vertical. Each plot shows Level (dBu/m) vs Frequency (MHz) with Peak and Avg. markers.



Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF)

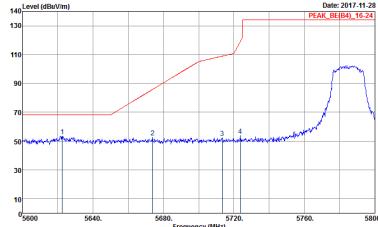
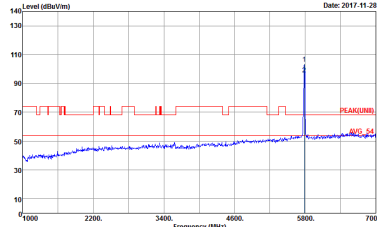
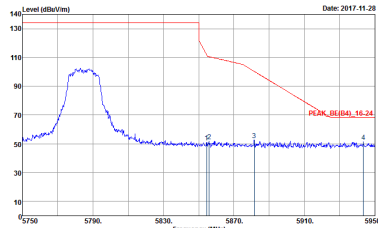
WIFI	5GHz 5725~5850MHz	
ANT	802.11ac VHT80 LF	
1	Horizontal	Vertical
QP / Peak	<p>Site : 03CH07-4FY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 7N1801 Mode : 26</p>	<p>Site : 03CH07-4FY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 7N1801 Mode : 26</p>



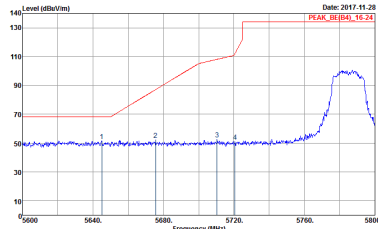
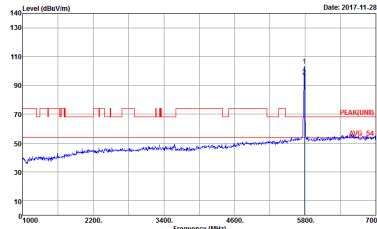
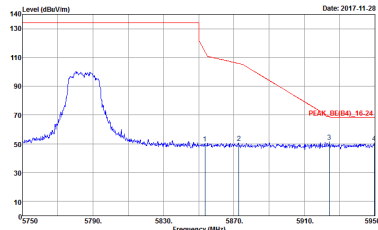
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 16</p>	<p>Site : 03CH07-HY Condition : PEAK(UNIT) 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 16</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 16</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 7N1801 Mode : 16</p>	 <p>Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 16</p>
Avg.	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 7N1801 Mode : 16</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 16</p>	 <p>Site : 03CH07-HY Condition : PEAK(LINII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 16</p>
Avg.	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 16</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 7N1801 Mode : Z0</p>	<p>Site : 03CH07-HY Condition : PEAK(UNIT) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 7N1801 Mode : Z0</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 7N1801 Mode : Z0</p>	Left blank



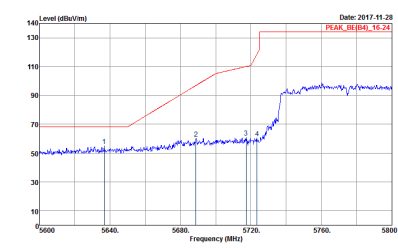
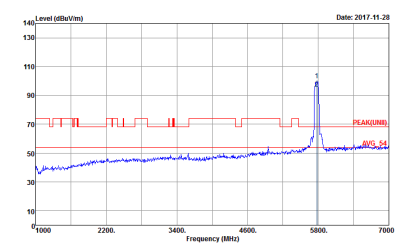
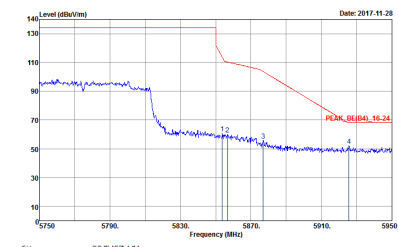
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 20</p>	<p>Site : 03CH07-HY Condition : PEAK(LINII) 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 20</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 20</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 20</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 20</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 20</p>	Left blank



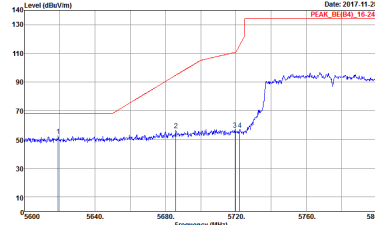
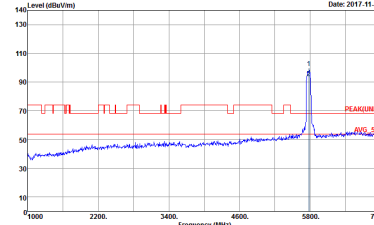
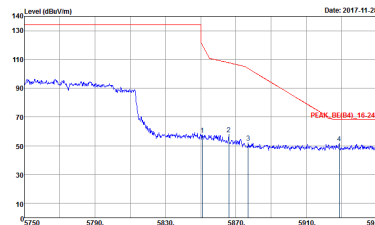
Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>	 <p>Site : 03CH07-HY Condition : PEAK(UNIT) 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>
Avg.	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 7N1801 Mode : 24</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 24</p>	 <p>Site : 03CH07-HY Condition : PEAK(LINII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 24</p>
<p>Peak.</p>	 <p>Site : 03CH07-HY Condition : PEAK_BE(B4)_16-24 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 7N1801 Mode : 24</p>	<p>Left blank</p>



**Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 7N1801 Mode : 16</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 7N1801 Mode : 16</p>



**Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 7N1801 Mode : 20</p>	<p>Site : 03CH07-HY Condition : PEAK(UNII) 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 7N1801 Mode : 20</p>

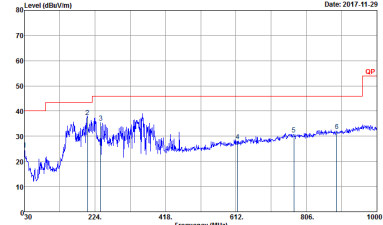
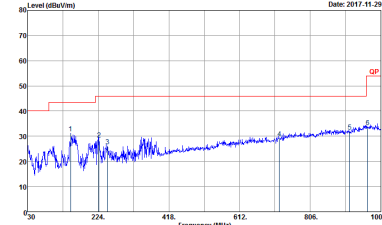


Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

Table with 3 rows: WIFI (Band 4 5725~5850MHz Harmonic @ 3m), ANT (802.11ac VHT80 CH155 5775MHz), and 1+2 (Horizontal and Vertical plots). The plots show Level (dBu/m) vs Frequency (MHz) with Peak and Avg. markers.



Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF)

WIFI	5GHz 5725-5850MHz	
ANT	802.11ac VHT80 LF	
1+2	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH07-4FY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL Detector : Peak Project : 7N1801 Mode : 2B</p>	 <p>Site : 03CH07-4FY Condition : QP 3m LF-ANT-35419(6) VERTICAL Detector : Peak Project : 7N1801 Mode : 2B</p>

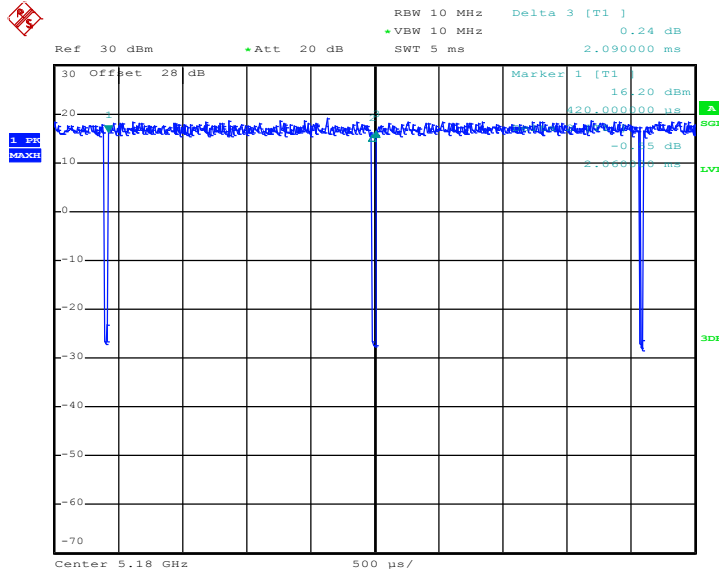
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11a	98.57	-	-	10Hz
2	802.11a	98.57	-	-	10Hz
1	5GHz 802.11n HT20	97.95	1910	0.52	1kHz
2	5GHz 802.11n HT20	98.45	-	-	10Hz
1+2	5GHz 802.11n HT20 for Ant. 1	96.15	975	1.03	3kHz
1+2	5GHz 802.11n HT20 for Ant. 2	96.45	978	1.02	3kHz
1	5GHz 802.11n HT40	96.89	936	1.07	3kHz
2	5GHz 802.11n HT40	96.89	936	1.07	3kHz
1+2	5GHz 802.11n HT40 for Ant. 1	92.42	488	2.05	3kHz
1+2	5GHz 802.11n HT40 for Ant. 2	93.18	492	2.03	3kHz
1	5GHz 802.11ac VHT20	98.46	-	-	10Hz
2	5GHz 802.11ac VHT20	98.46	-	-	10Hz
1+2	5GHz 802.11ac VHT20 for Ant. 1	95.91	984	1.02	3kHz
1+2	5GHz 802.11ac VHT20 for Ant. 2	95.88	978	1.02	3kHz
1	5GHz 802.11ac VHT40	96.32	942	1.06	3kHz
2	5GHz 802.11ac VHT40	96.91	942	1.06	3kHz
1+2	5GHz 802.11ac VHT40 for Ant. 1	92.48	492	2.03	3kHz
1+2	5GHz 802.11ac VHT40 for Ant. 2	93.21	494	2.02	3kHz
1	5GHz 802.11ac VHT80	93.50	460	2.17	3kHz
2	5GHz 802.11ac VHT80	93.44	456	2.19	3kHz
1+2	5GHz 802.11ac VHT80 for Ant. 1	86.30	252	3.97	10kHz
1+2	5GHz 802.11ac VHT80 for Ant. 2	86.99	254	3.94	10kHz



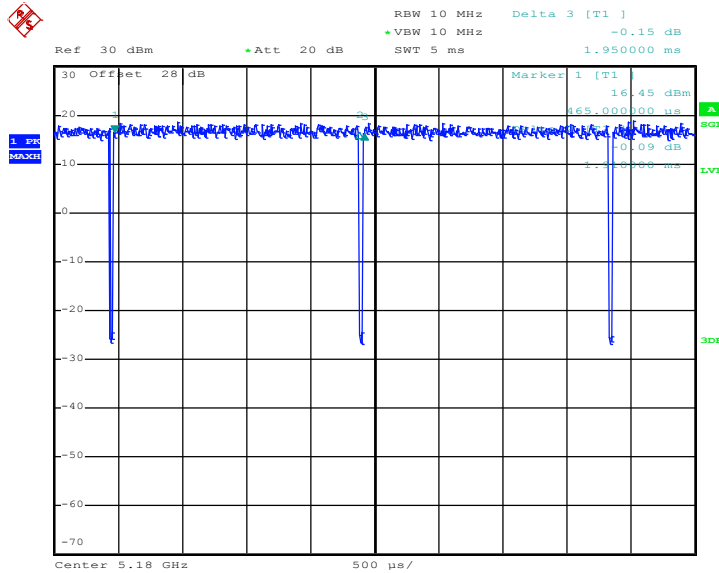
<Ant. 1>

802.11a



Date: 21.NOV.2017 15:44:51

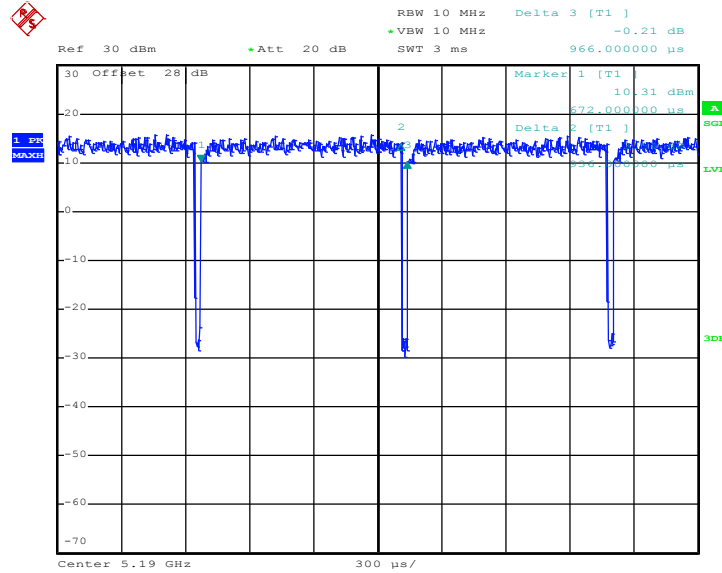
802.11n HT20



Date: 21.NOV.2017 15:46:30

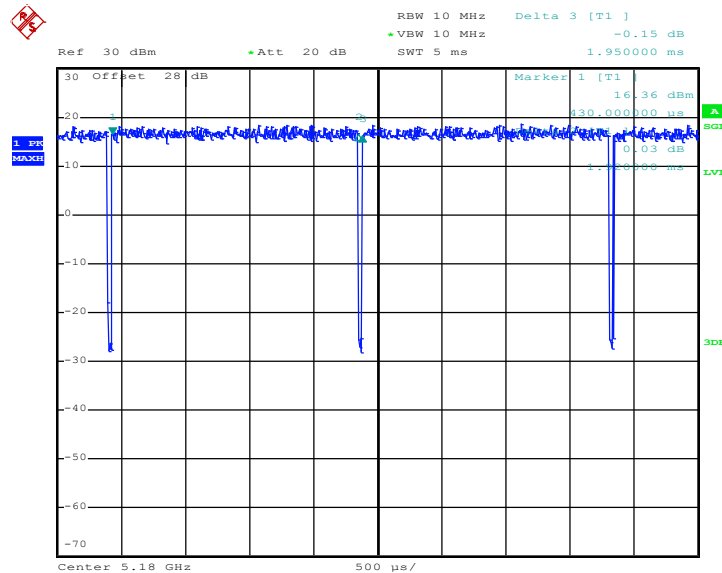


802.11n HT40



Date: 21.NOV.2017 15:49:55

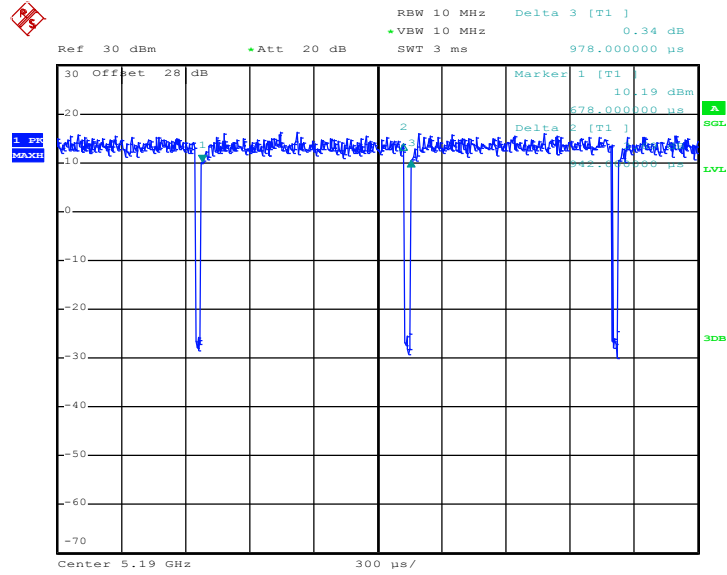
802.11ac VHT20



Date: 21.NOV.2017 15:55:52

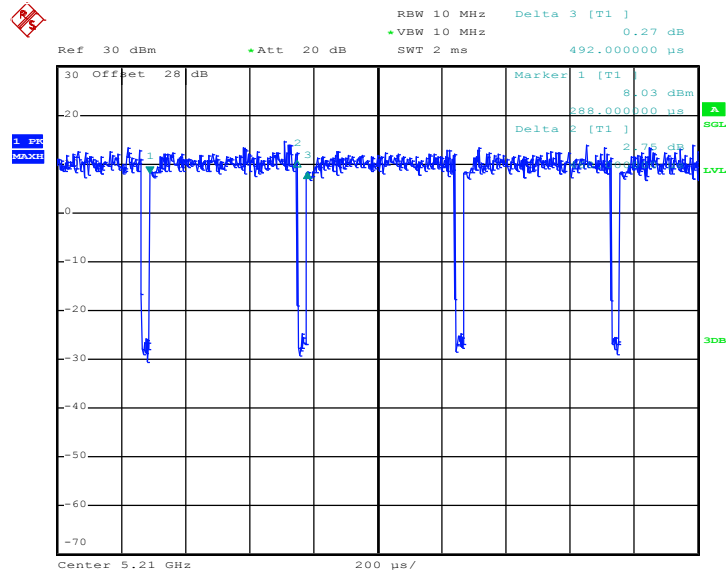


802.11ac VHT40



Date: 21.NOV.2017 15:54:15

802.11ac VHT80

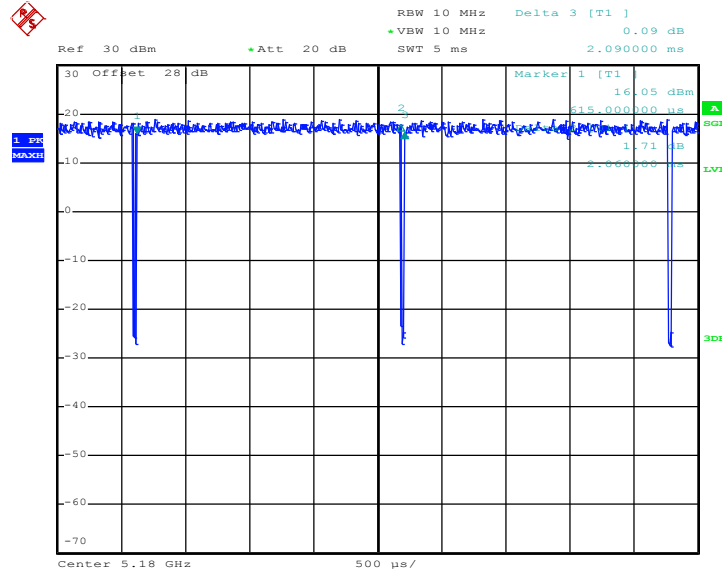


Date: 21.NOV.2017 16:00:15



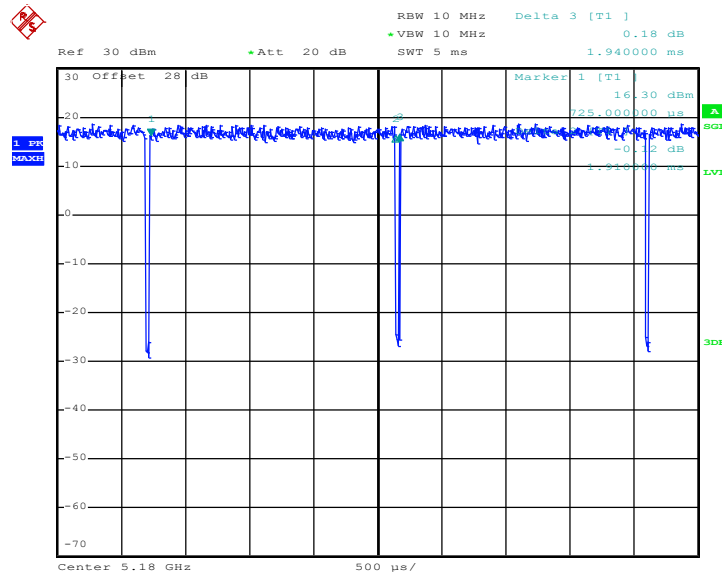
<Ant. 2>

802.11a



Date: 21.NOV.2017 15:45:40

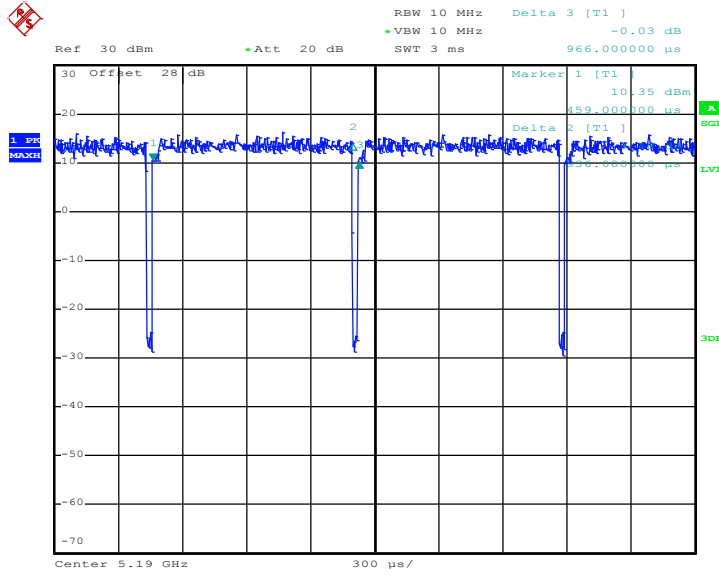
802.11n HT20



Date: 21.NOV.2017 15:47:11

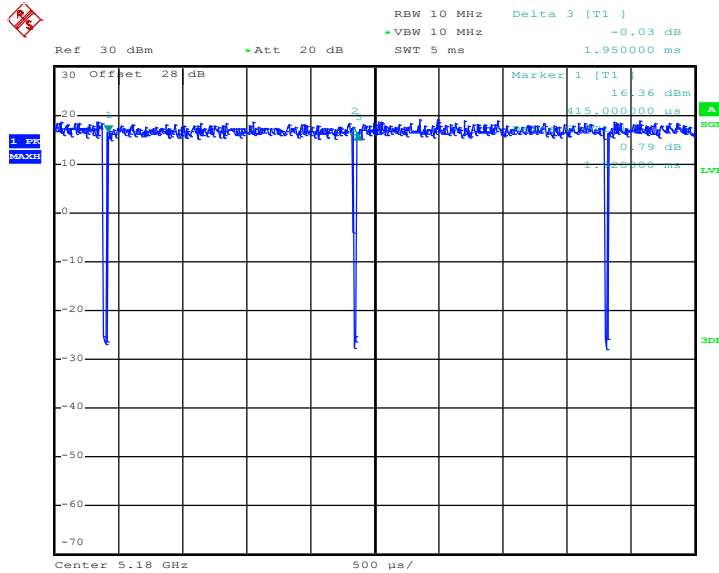


802.11n HT40



Date: 21.NOV.2017 15:50:32

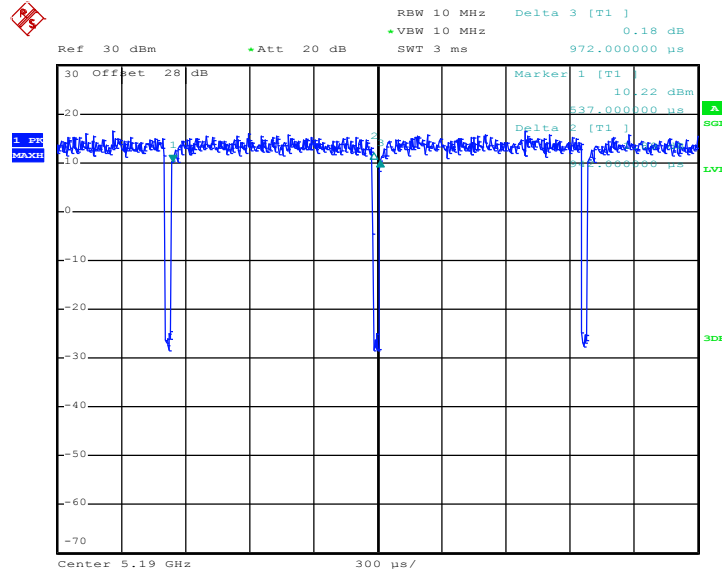
802.11ac VHT20



Date: 21.NOV.2017 15:56:24

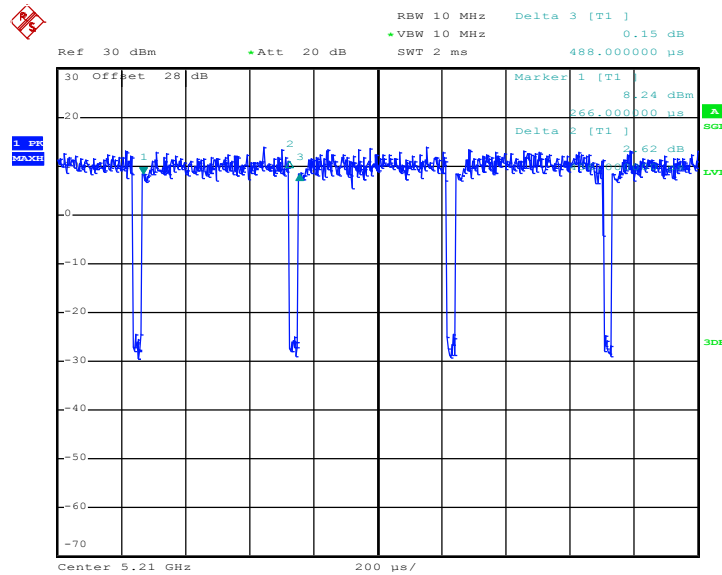


802.11ac VHT40



Date: 21.NOV.2017 15:54:59

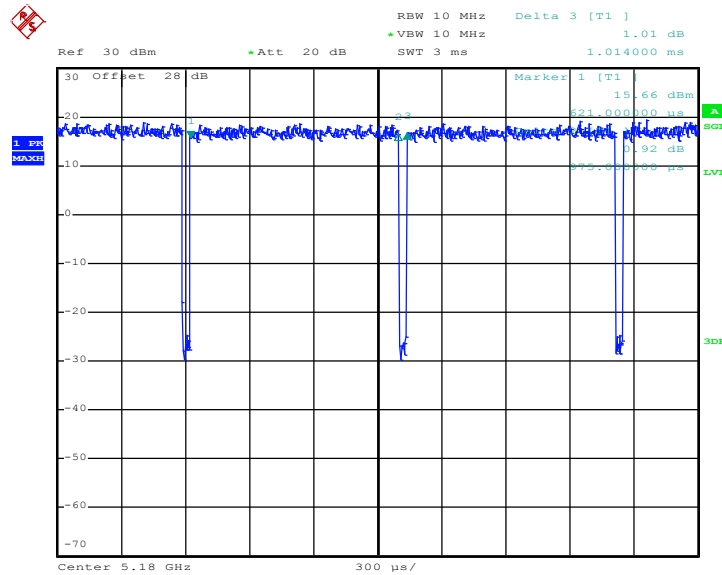
802.11ac VHT80



Date: 21.NOV.2017 16:01:00

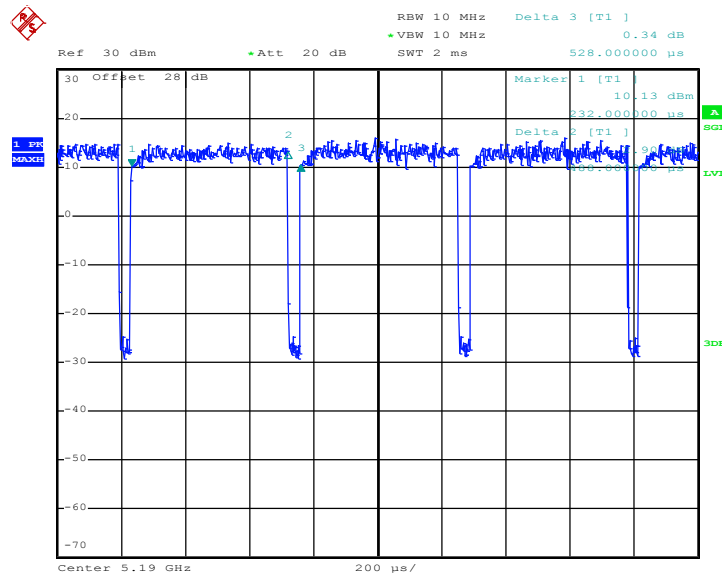
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802.11n HT20



Date: 21.NOV.2017 15:48:16

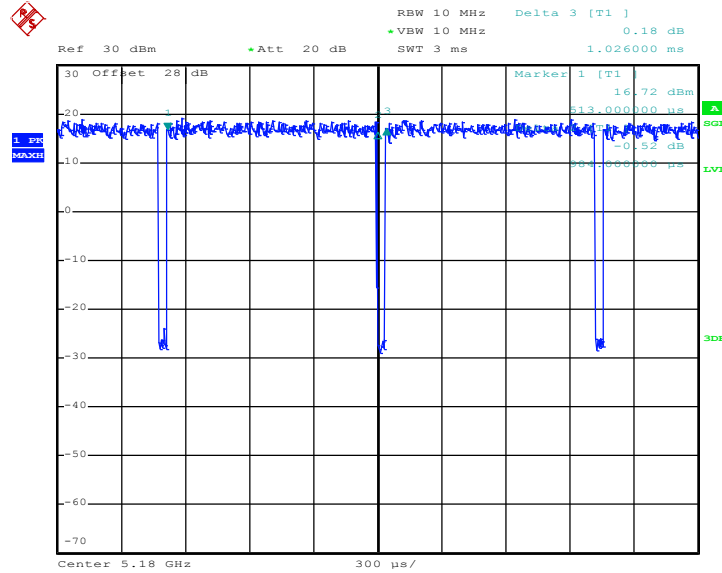
802.11n HT40



Date: 21.NOV.2017 15:51:19

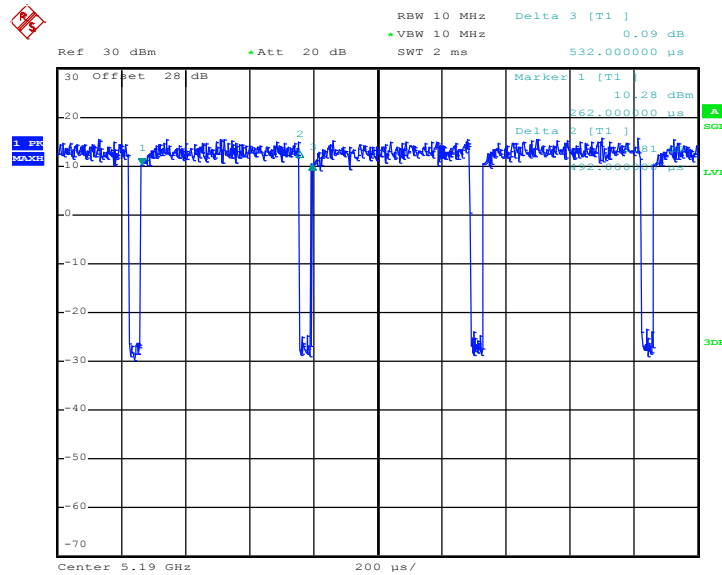


802.11ac VHT20



Date: 21.NOV.2017 15:57:03

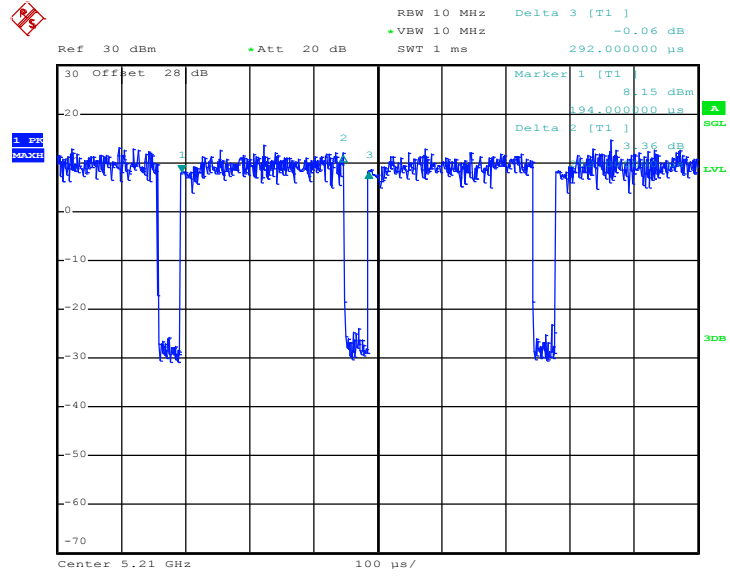
802.11ac VHT40



Date: 21.NOV.2017 15:52:48



802.11ac VHT80

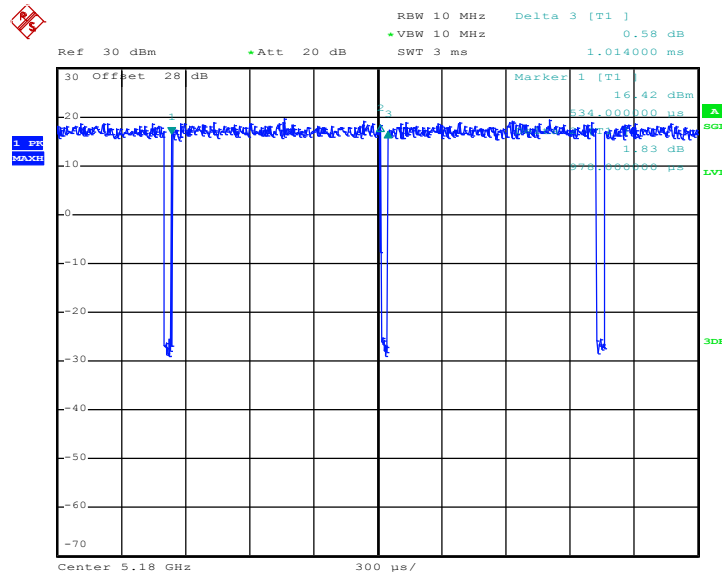


Date: 21.NOV.2017 15:58:31



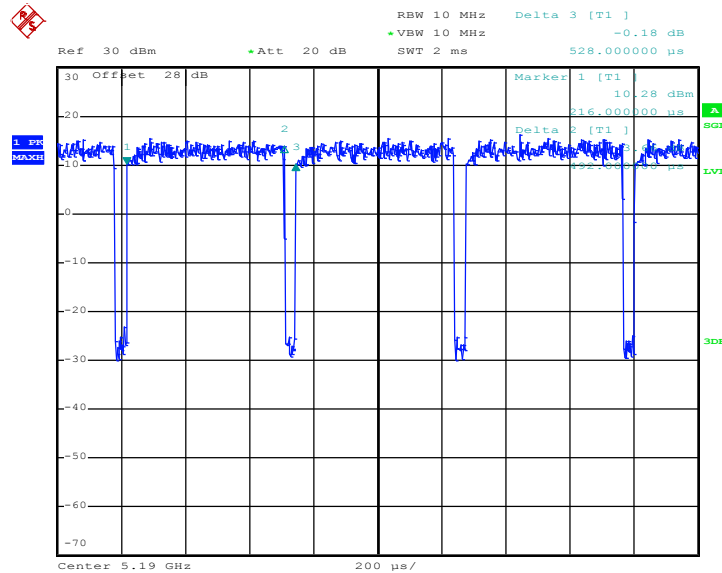
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802.11n HT20



Date: 21.NOV.2017 15:48:48

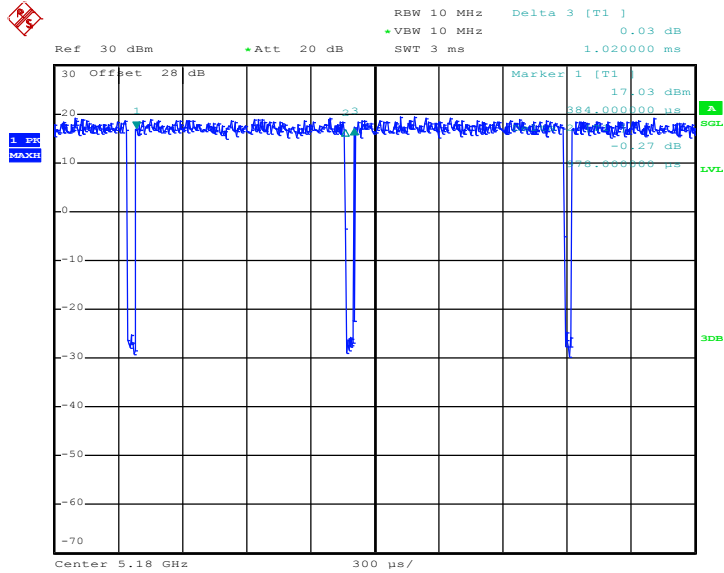
802.11n HT40



Date: 21.NOV.2017 15:51:49

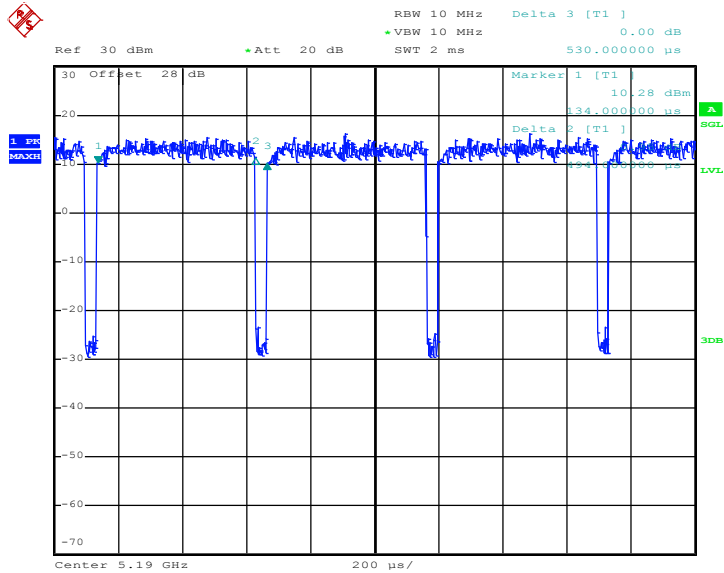


802.11ac VHT20



Date: 21.NOV.2017 15:57:38

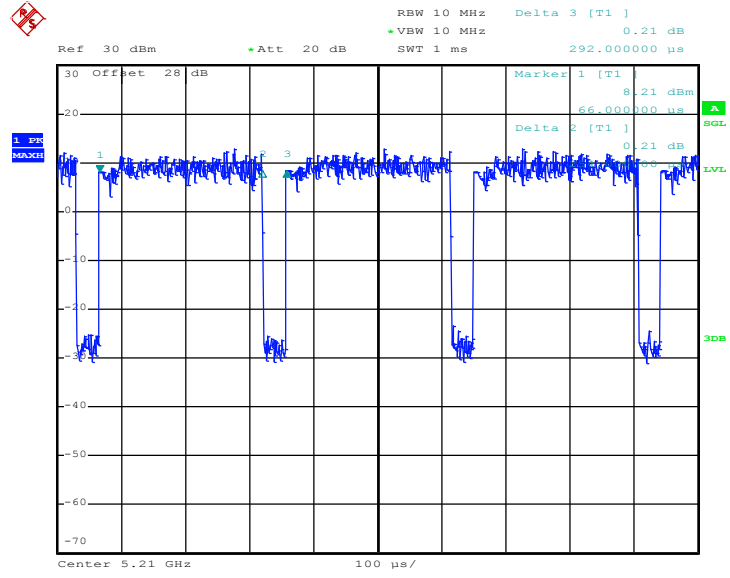
802.11ac VHT40



Date: 21.NOV.2017 15:53:27



802.11ac VHT80



Date: 21.NOV.2017 15:59:11