



FCC PART 15 TEST REPORT No. I15Z43176-EMC01

for

Huawei Technologies Co., Ltd.

Smart Phone

Model name: EVA-L19

With

FCC ID: QISEVA-L19

Hardware Version: HL1UEVAM

Software Version: A168-L09C900B072

Issued Date: 2016-02-17



Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

FCC 2.948 Listed: No. 525429

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1. TEST LATORATORY

1.1. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

Location 4: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology
Development Area, Beijing, P. R. China 100176

1.2. Testing Environment

Normal Temperature: 15-35℃

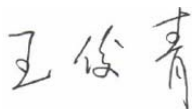
Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2016-01-12

Testing End Date: 2016-02-03

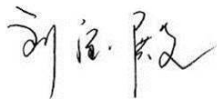
1.4. Signature



Wang Junqing
(Prepared this test report)



Qu Pengfei
(Reviewed this test report)



Liu Baodian
Deputy Director of the laboratory
(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

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Ltd., Bantian, Longgang District Shenzhen China
City: Shenzhen
Postal Code: 518129
Country: China
Contact Person: zhangheng
Contact Email: ivy.zhangheng@huawei.com
Telephone: 18121057839/021-61752571
Fax: /

2.2. Manufacturer Information

Company Name: Huawei Technologies Co.,Ltd
Address /Post: Administration Building, Headquarters of Huawei Technologies Co.,
Ltd., Bantian, Longgang District Shenzhen China
City: Shenzhen
Postal Code: 518129
Country: China
Contact Person: zhangheng
Contact Email: ivy.zhangheng@huawei.com
Telephone: 18121057839/021-61752571
Fax: /

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Smart Phone
Model name	EVA-L19
FCC ID	QISEVA-L19
WLAN Frequency Range	ISM Bands: 5150MHz~5250MHz, 5250MHz~5350MHz, 5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, Academy of telecommunication Research, MIIT.

3.2. Internal Identification of EUT used during the test

EUT ID*	S/N	HW Version	SW Version
EUT1	869827020008203	HL1UEVAM	A168-L09C900B072

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Type	Note
AE1	battery	/	Inbuilt
AE2	Travel Charger	HW-050200C01	1543176CH003
AE3	USB Cable	/	1543176DC003

AE1

Model	HB366481ECW
Manufacturer	Huawei
Capacitance	2900mAh
Nominal voltage	3.82V

AE2

Model	HW-050200C01
Manufacturer	Hangjia
Length of cable	/

AE3

Model	/
Manufacturer	/
Length of cable	100cm

*AE ID: is used to identify the test sample in the lab internally.



3.4. General Description

Equipment Under Test (EUT) is model of Smart Phone with integrated antenna and inbuilt battery.

Manual and specifications of the EUT were provided to fulfill the test.

Samples undergoing test were selected by the Client.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1+ AE1+ AE2 +AE3	Charger



4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

	FCC CFR 47, Part 15, Subpart C:	
	15.205 Restricted bands of operation;	
FCC Part15	15.209 Radiated emission limits, general requirements;	2014
	15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz.	
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
KDB 789033 D02	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E	June 2014

5. LABORATORY ENVIRONMENT

Semi/full-anechoic chamber SAC-1 (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m/10m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Semi-anechoic chamber SAC-2 (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Band edge compliance	15.209	/	P
Transmitter spurious emissions radiated	15.407	/	P
Spurious emissions radiated < 30 MHz	15.407	/	P

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacture as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	15℃~35℃
Voltage	3.82V
Humidity	15%~75%



7. TEST EQUIPMENTS UTILIZED

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	R&S	2016-10-29	1 Year
2	Test Receiver	FSV40	101047	R&S	2016-07-02	1 Year
3	Loop Antenna	HFH2-Z2	829324/007	R&S	2017-12-16	3 Years
4	EMI Antenna	VULB9163	9163-514	Schwarzbeck	2017-11-24	3 Years
5	EMI Antenna	3117	00139065	ETS-Lindgren	2017-07-01	3 Years
6	EMI Antenna	3116	2661	ETS-Lindgren	2017-06-17	3 Years

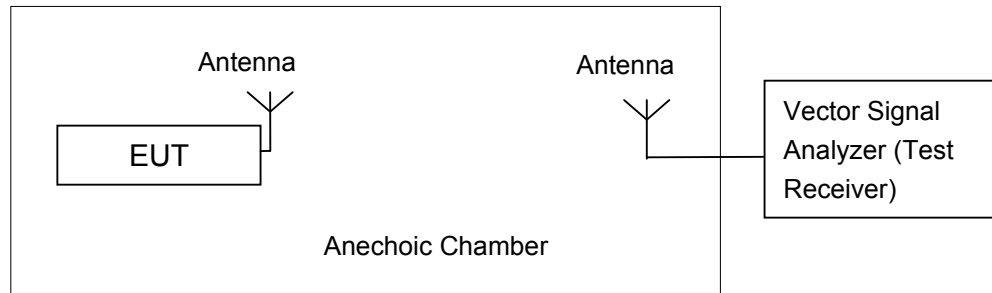
ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 40GHz, RBW = 1MHz, VBW = 3MHz;



The measurement is made according to KDB 789033

For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m.

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m or 10m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

A.2. Band Edges Compliance**Measurement Limit:**

Standard	Limit (dB μ V/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to KDB 789033

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
-------------------------	--------

Measurement Result:**5GHz U-NII 1**

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.1	P
802.11n-HT20	5180 MHz	Fig.2	P
802.11n-HT40	5190 MHz	Fig.3	P
802.11ac-HT20	5180 MHz	Fig.4	P
802.11ac-HT40	5190 MHz	Fig.5	P

5GHz U-NII 2A

Mode	Channel	Test Results	Conclusion
802.11a	5230 MHz	Fig.6	P
802.11n-HT20	5230 MHz	Fig.7	P
802.11n-HT40	5310 MHz	Fig.8	P
802.11ac-HT20	5230 MHz	Fig.9	P
802.11ac-HT40	5310 MHz	Fig.10	P

5GHz U-NII 2C

Mode	Channel	Test Results	Conclusion
802.11a	5500 MHz	Fig.11	P
802.11a	5700 MHz	Fig.12	P
802.11n-HT20	5500 MHz	Fig.13	P
802.11n-HT20	5700 MHz	Fig.14	P
802.11n-HT40	5510 MHz	Fig.15	P
802.11n-HT40	5670 MHz	Fig.16	P
802.11ac-HT20	5500 MHz	Fig.17	P
802.11ac-HT20	5700 MHz	Fig.18	P
802.11ac-HT40	5510 MHz	Fig.19	P
802.11ac-HT40	5670 MHz	Fig.20	P

5GHz 802.11ac 80MHz

Mode	Channel	Test Results	Conclusion
802.11ac-HT80	5210 MHz	Fig.21	P
802.11ac-HT80	5290 MHz	Fig.22	P
802.11ac-HT80	5530 MHz	Fig.23	P

Conclusion: PASS

Test graphs as below:

RE - Power-5.125GHz-5.175GHz

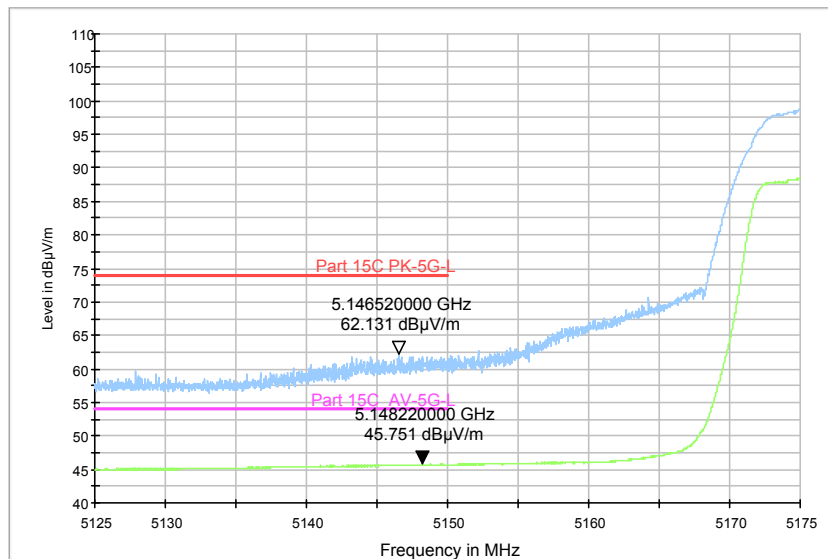


Fig. 1 Band Edges (802.11a, 5180MHz)

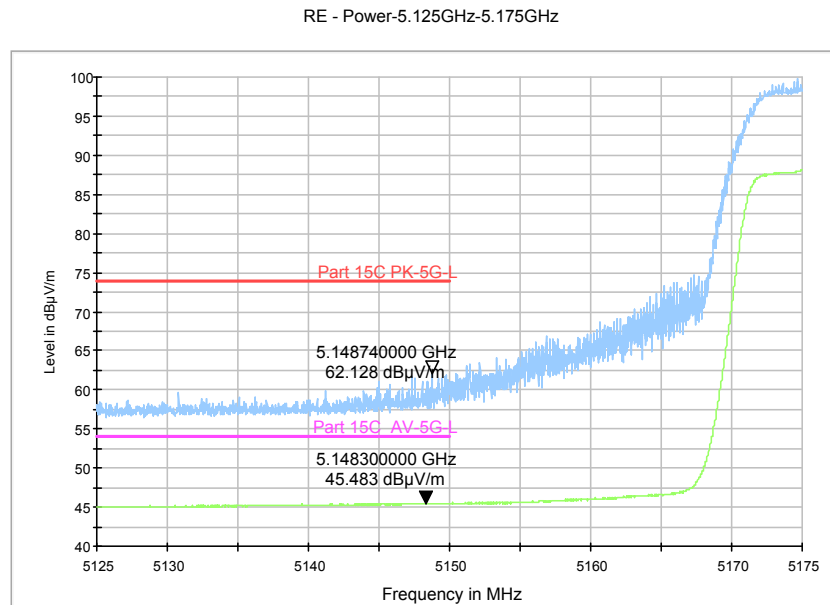


Fig. 2 Band Edges (802.11n-HT20, 5180MHz)

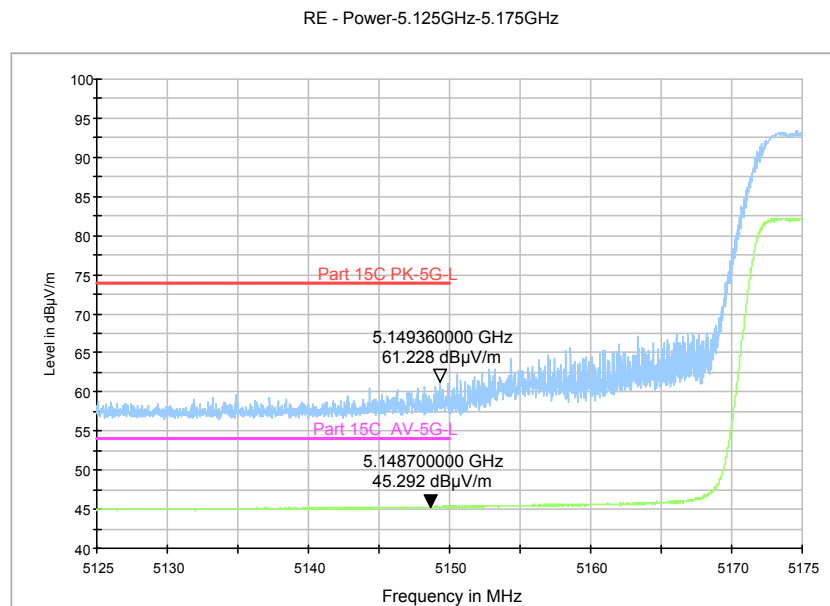


Fig. 3 Band Edges (802.11n-HT40, 5190MHz)

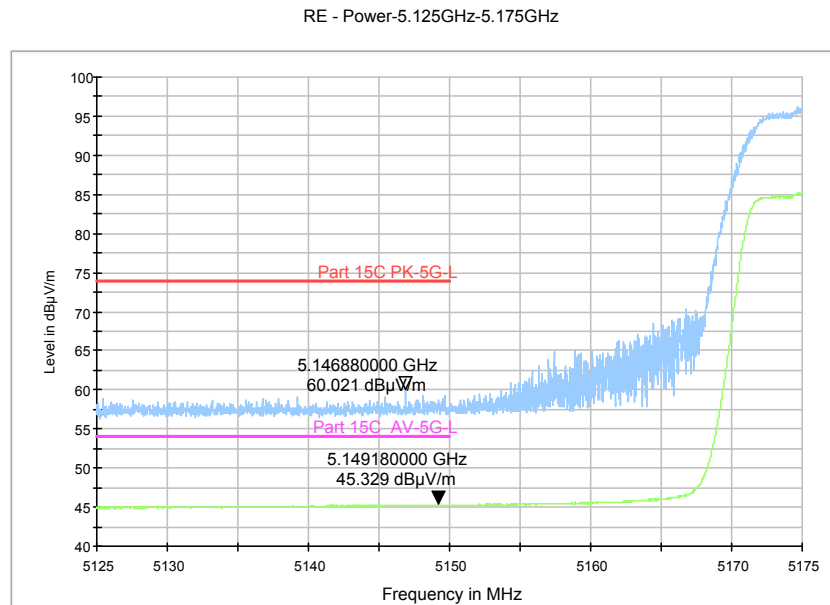


Fig. 4 Band Edges (802.11ac-HT20, 5180MHz)

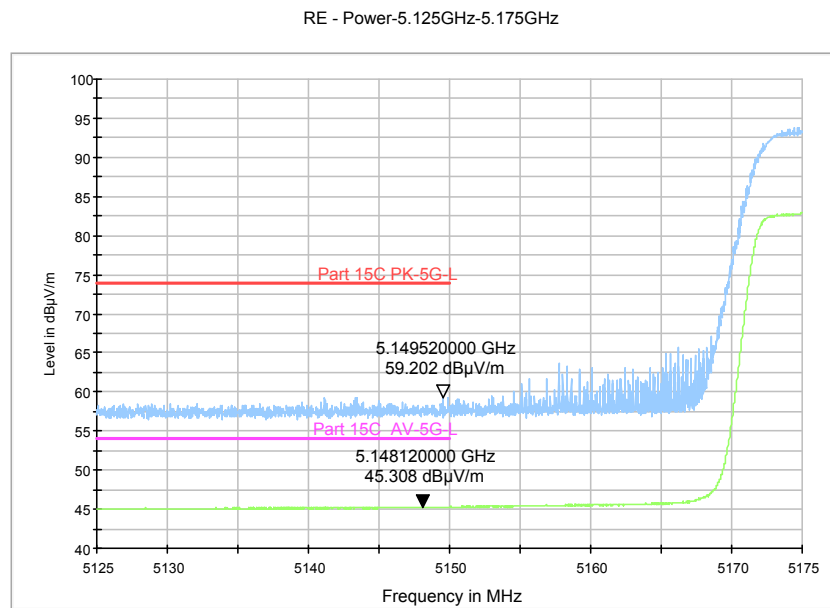


Fig. 5 Band Edges (802.11ac-HT40, 5190MHz)

RE - Power-5.325GHz-5.375GHz

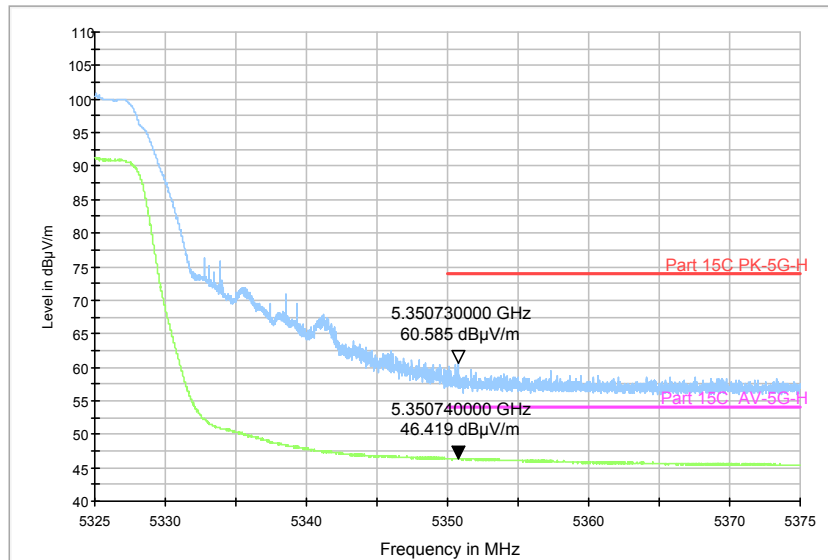


Fig. 6 Band Edges (802.11a, 5320MHz)

RE - Power-5.325GHz-5.375GHz

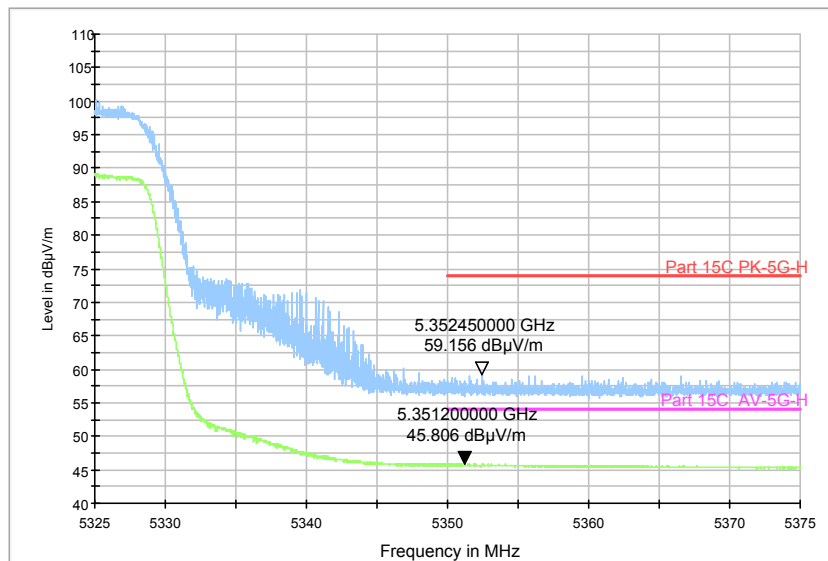


Fig. 7 Band Edges (802.11n-HT20, 5320MHz)

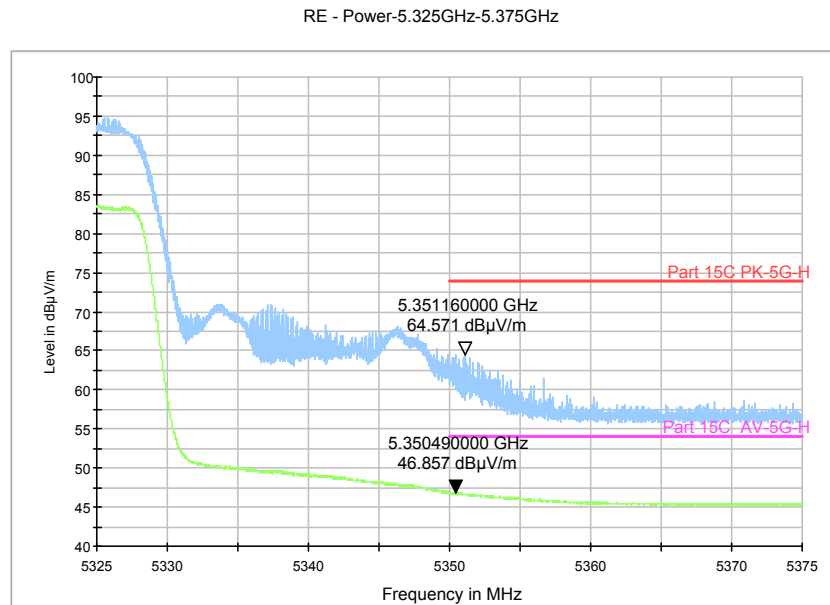


Fig. 8 Band Edges (802.11n-HT40, 5310MHz)

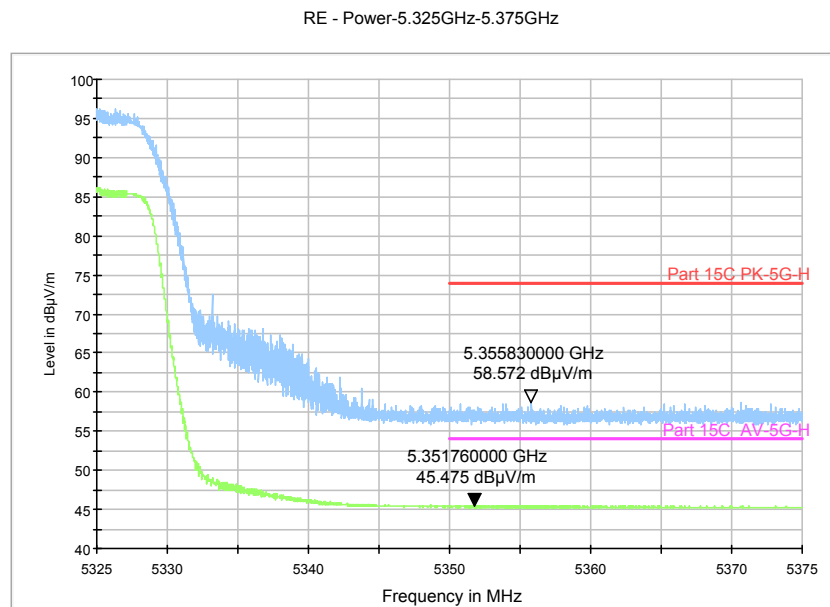


Fig. 9 Band Edges (802.11ac-HT20, 5320MHz)

RE - Power-5.325GHz-5.375GHz

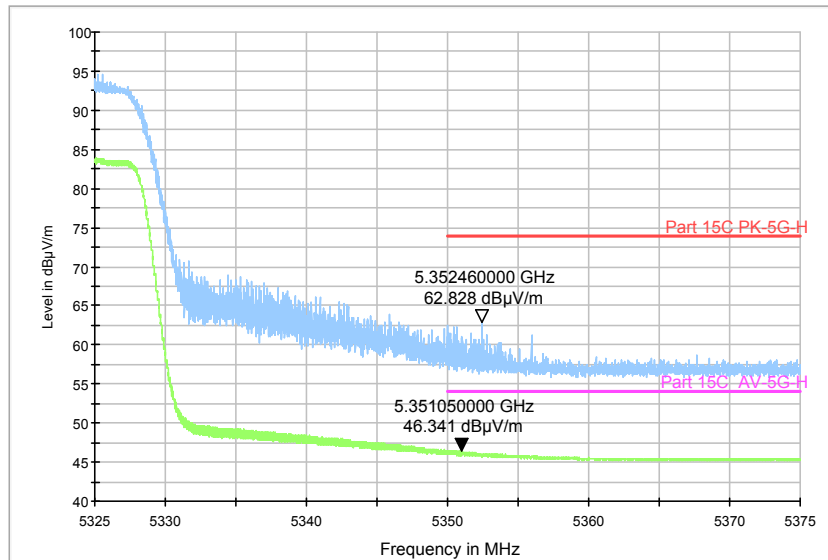


Fig. 10 Band Edges (802.11ac-HT40, 5310MHz)

RE - Power-5.45GHz-5.50GHz

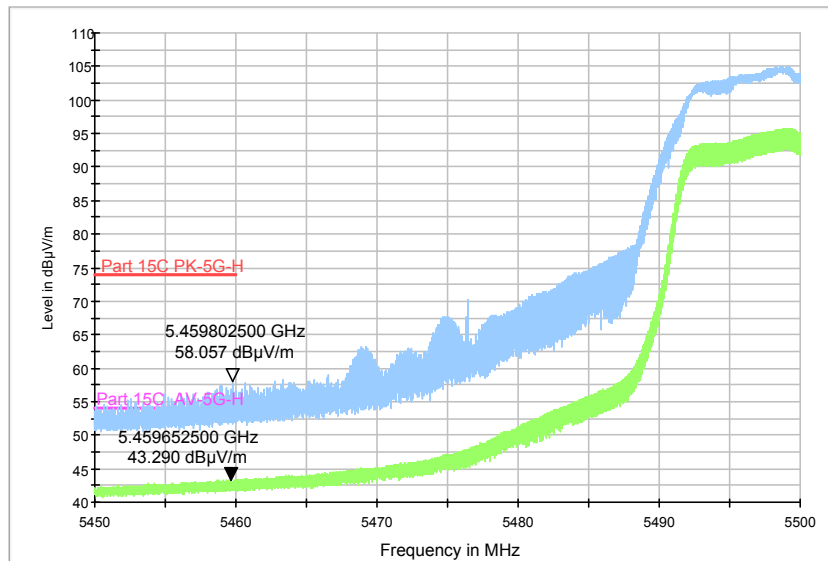


Fig. 11 Band Edges (802.11a, 5500MHz)

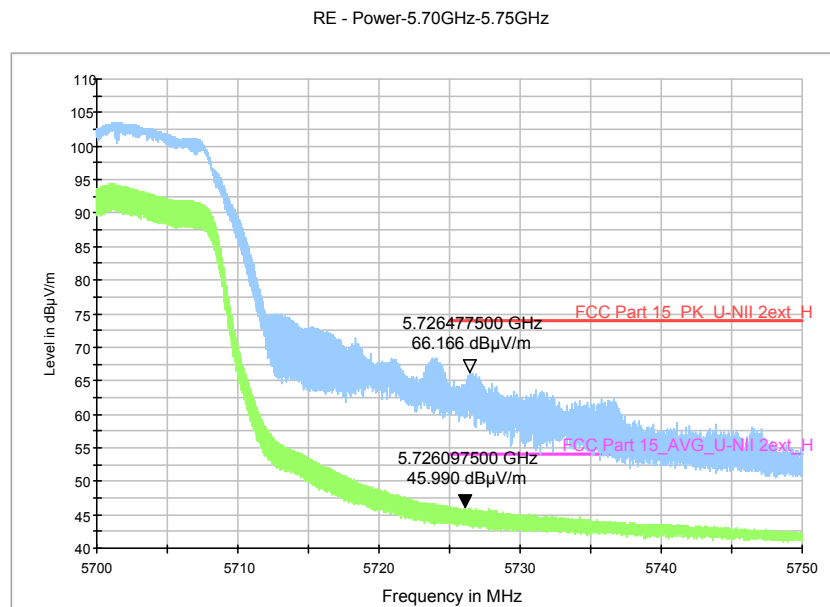


Fig. 12 Band Edges (802.11a, 5700MHz)

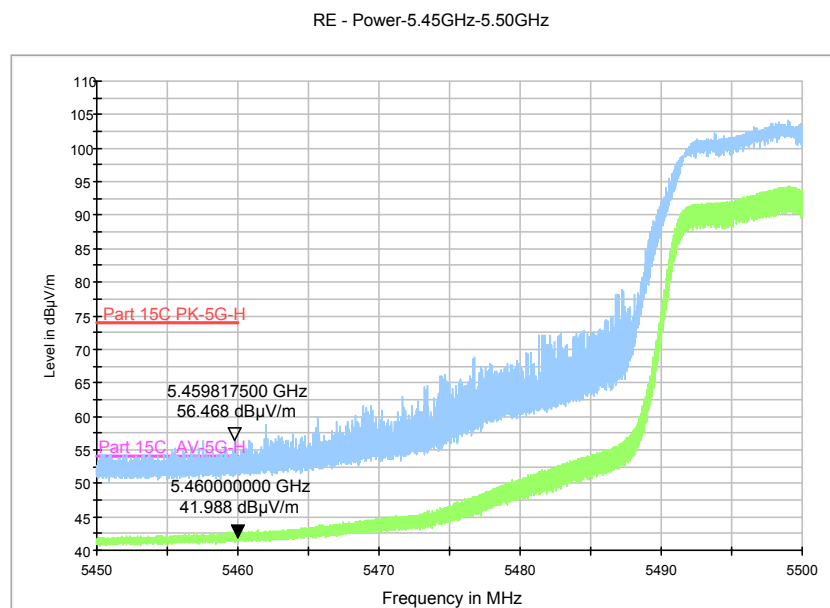


Fig. 13 Band Edges (802.11n-HT20, 5500MHz)

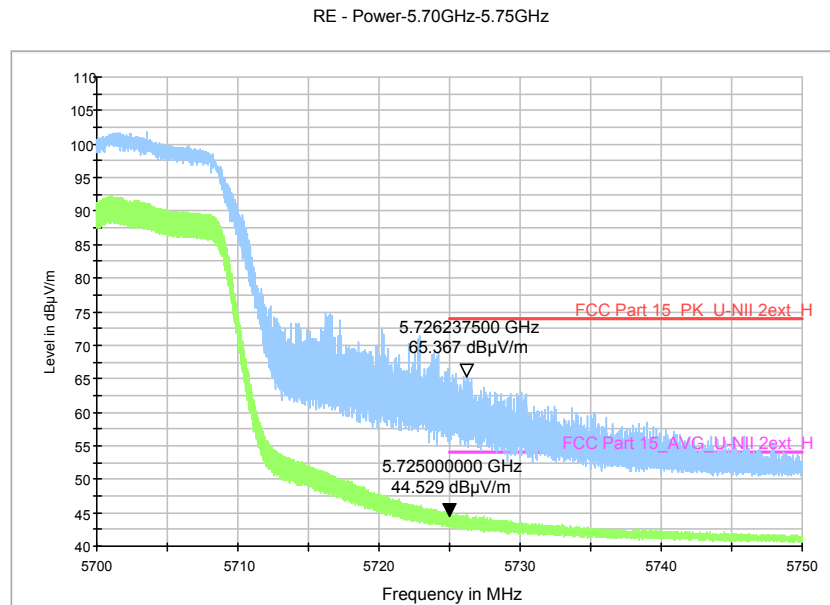


Fig. 14 Band Edges (802.11n-HT20, 5700MHz)

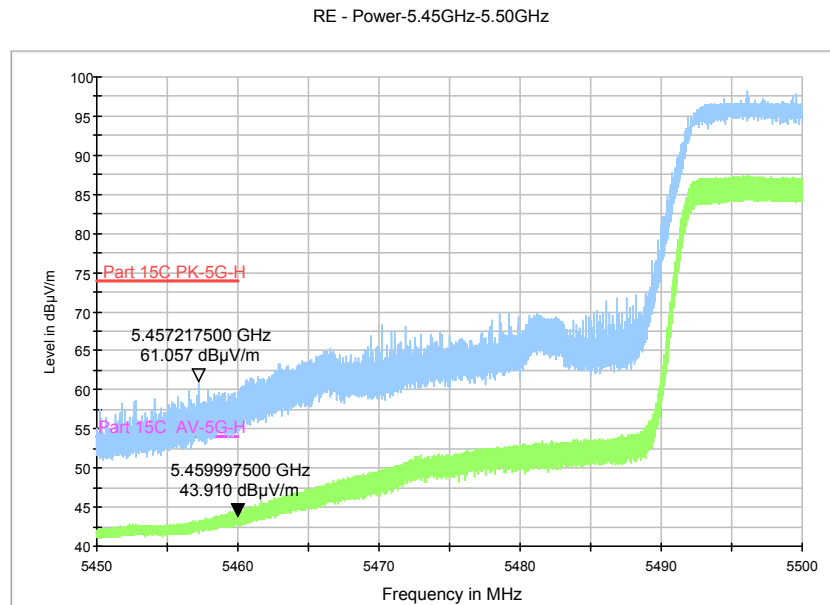


Fig. 15 Band Edges (802.11n-HT40, 5510MHz)

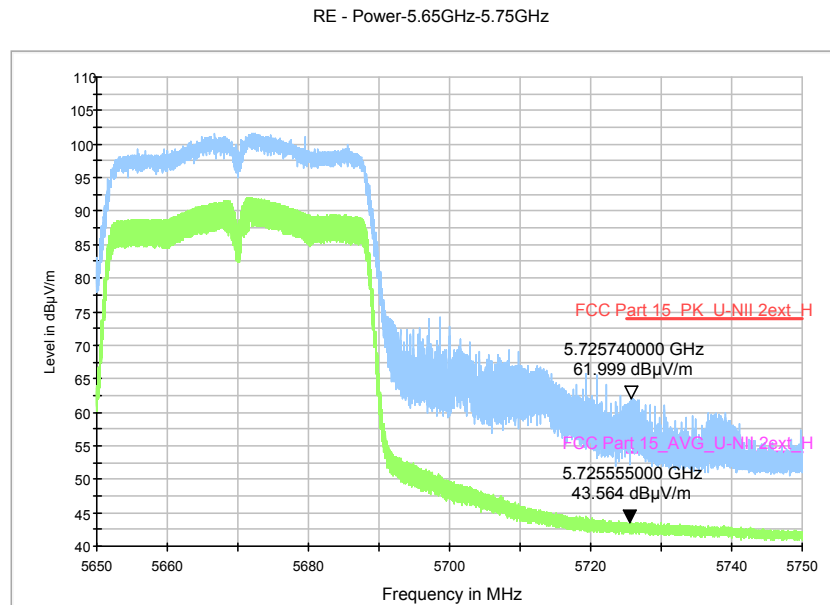


Fig. 16 Band Edges (802.11n-HT40, 5670MHz)

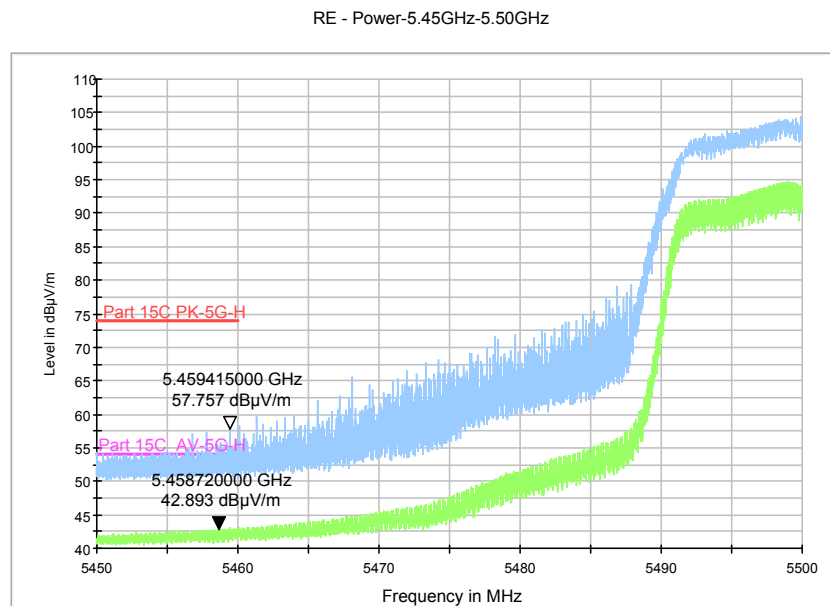


Fig. 17 Band Edges (802.11ac-HT20, 5500MHz)

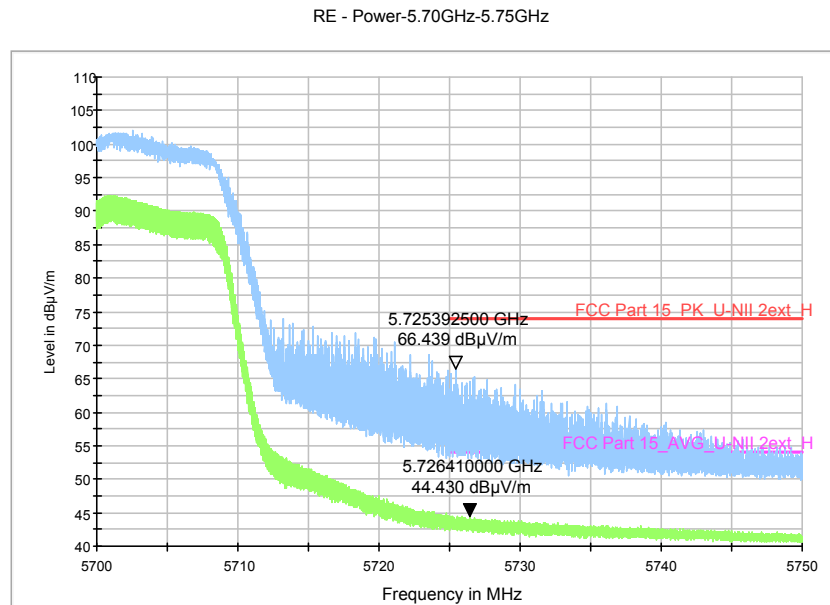


Fig. 18 Band Edges (802.11ac-HT20, 5700MHz)

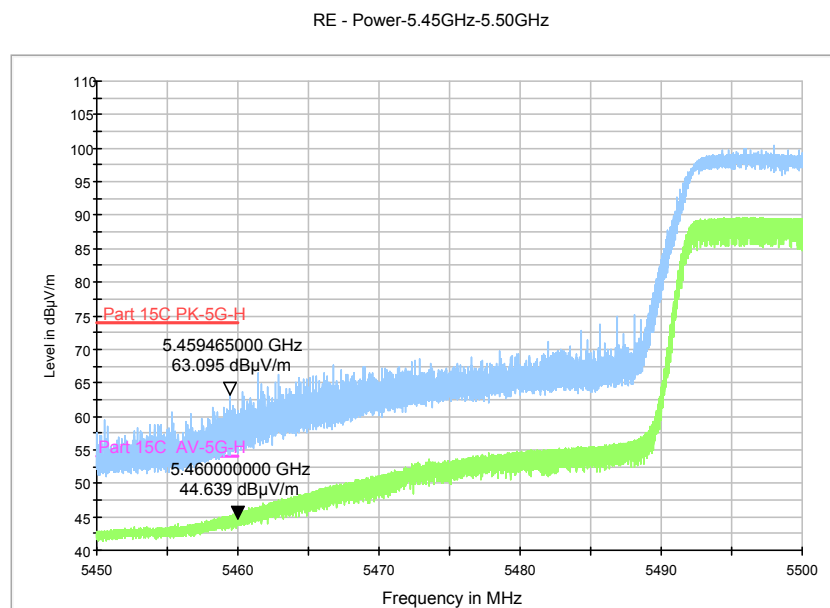


Fig. 19 Band Edges (802.11ac-HT40, 5510MHz)

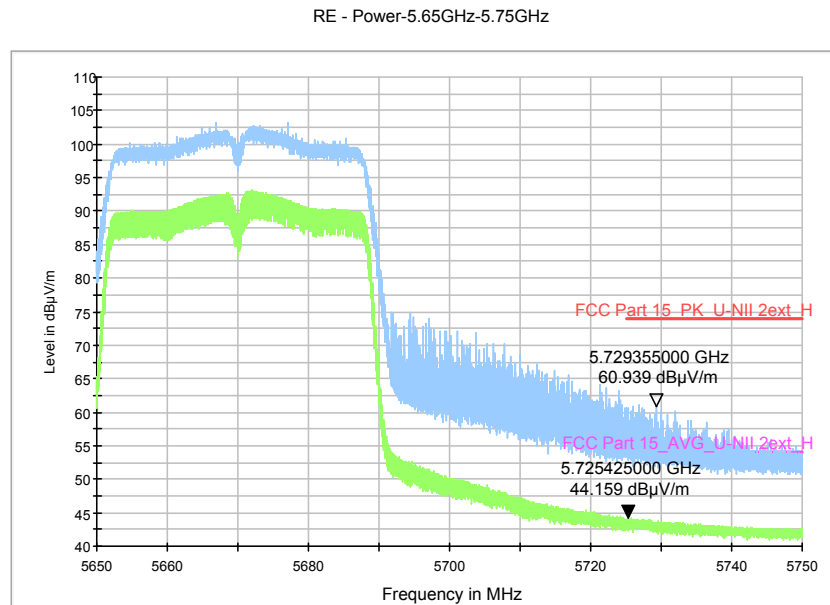


Fig. 20 Band Edges (802.11ac-HT40, 5670MHz)

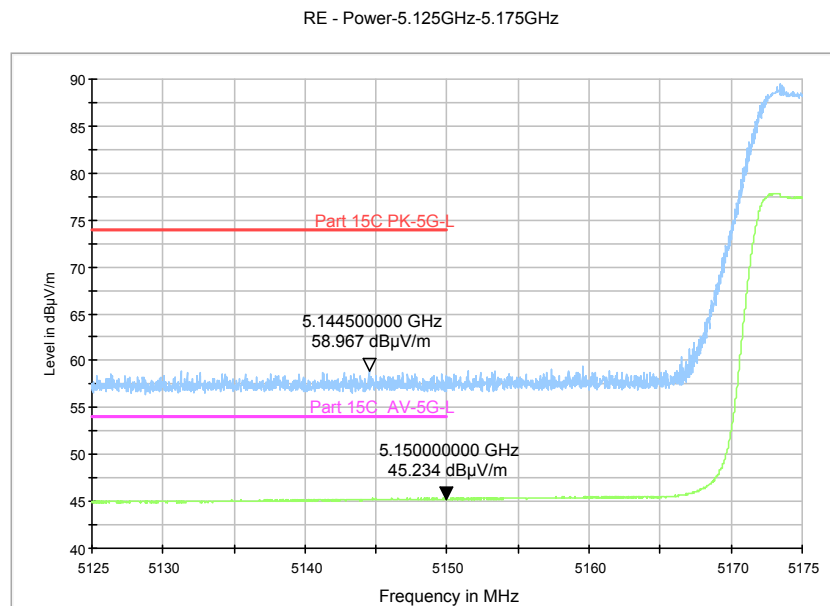


Fig. 21 Band Edges (802.11ac-HT80, 5210MHz)

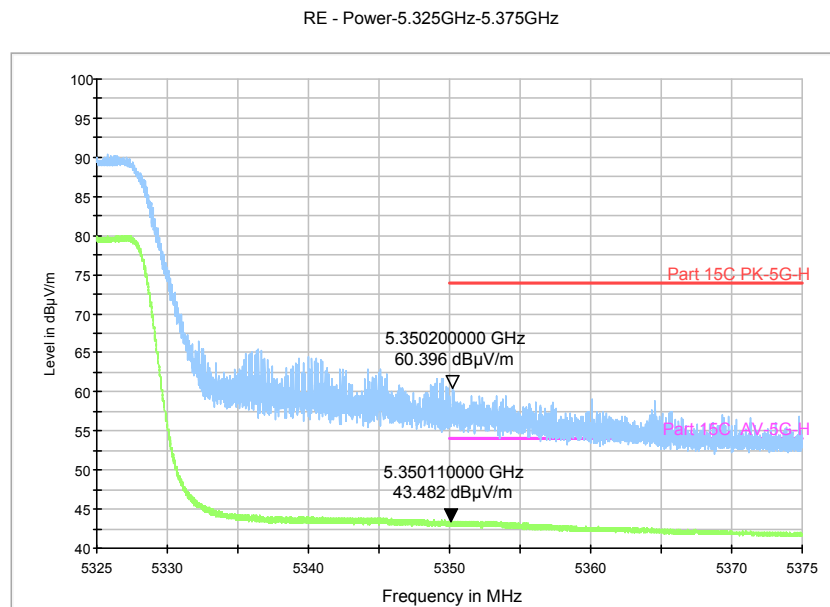


Fig. 22 Band Edges (802.11ac-HT80, 5290MHz)

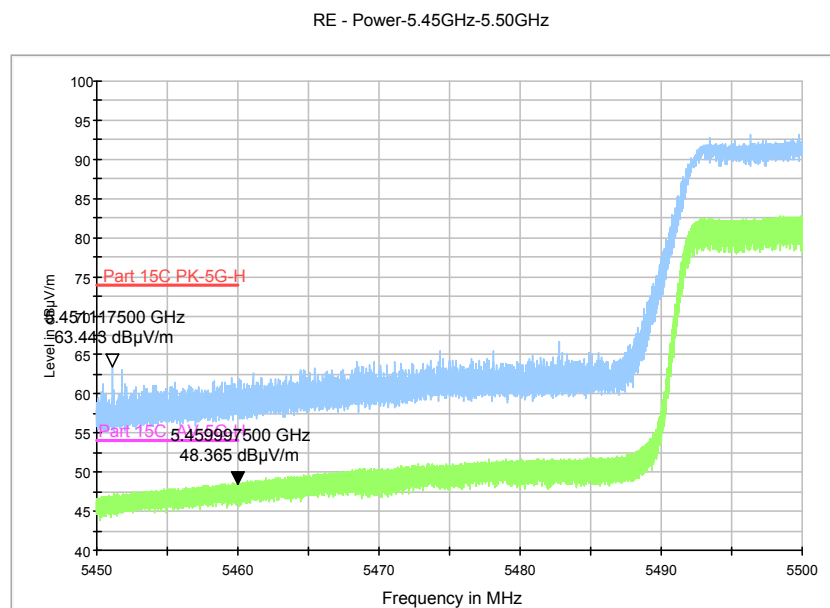


Fig. 23 Band Edges (802.11ac-HT80, 5530MHz)

A.3. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

The measurement is made according to ANSI C63.10.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBμV/m)	Measurement distance(m)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Measurement uncertainty:

Frequency Range	Uncertainty(dB)	Note
$f \leq 1\text{GHz}$	3.9	k=2
$f > 1\text{GHz}$	4.3	

Measurement Results:

5GHz U-NII 1

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	36(5180MHz)	1 GHz ~3 GHz	Fig.24	P
		3 GHz ~6 GHz	Fig.25	P
		6 GHz ~ 18 GHz	Fig.26	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.27	P
		1 GHz ~ 3 GHz	Fig.28	P
		3 GHz ~ 6 GHz	Fig.29	P
		6 GHz ~ 18 GHz	Fig.30	P
		18 GHz ~ 26.5 GHz	Fig.31	P
		26.5 GHz ~ 40 GHz	Fig.32	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.33	P
		3 GHz ~6 GHz	Fig.34	P
		6 GHz ~ 18 GHz	Fig.35	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	36(5180MHz)	1 GHz ~3 GHz	Fig.36	P
		3 GHz ~6 GHz	Fig.37	P
		6 GHz ~ 18 GHz	Fig.38	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.39	P
		1 GHz ~ 3 GHz	Fig.40	P
		3 GHz ~ 6 GHz	Fig.41	P
		6 GHz ~ 18 GHz	Fig.42	P
		18 GHz ~ 26.5 GHz	Fig.43	P
		26.5 GHz ~ 40 GHz	Fig.44	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.45	P
		3 GHz ~ 6 GHz	Fig.46	P
		6 GHz ~ 18 GHz	Fig.47	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	36(5190MHz)	30 MHz ~1 GHz	Fig.48	P
		1 GHz ~3 GHz	Fig.49	P
		3 GHz ~6 GHz	Fig.50	P
		6 GHz ~ 18 GHz	Fig.51	P
		18 GHz ~ 26.5 GHz	Fig.52	P
		26.5 GHz ~ 40 GHz	Fig.53	P
	44(5230MHz)	1 GHz ~ 3 GHz	Fig.54	P
		3 GHz ~6 GHz	Fig.55	P
		6 GHz ~ 18 GHz	Fig.56	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	36(5180MHz)	1 GHz ~3 GHz	Fig.57	P
		3 GHz ~6 GHz	Fig.58	P
		6 GHz ~ 18 GHz	Fig.59	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.60	P
		1 GHz ~ 3 GHz	Fig.61	P
		3 GHz ~ 6 GHz	Fig.62	P
		6 GHz ~ 18 GHz	Fig.63	P
		18 GHz ~ 26.5 GHz	Fig.64	P
		26.5 GHz ~ 40 GHz	Fig.65	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.66	P
		3 GHz ~ 6 GHz	Fig.67	P
		6 GHz ~ 18 GHz	Fig.68	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	36(5190MHz)	30 MHz ~1 GHz	Fig.69	P
		1 GHz ~3 GHz	Fig.70	P
		3 GHz ~6 GHz	Fig.71	P
		6 GHz ~ 18 GHz	Fig.72	P
		18 GHz ~ 26.5 GHz	Fig.73	P
		26.5 GHz ~ 40 GHz	Fig.74	P
	44(5230MHz)	1 GHz ~ 3 GHz	Fig.75	P
		3 GHz ~6 GHz	Fig.76	P
		6 GHz ~ 18 GHz	Fig.77	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result= $P_{Mea}+A_{Rpl}= P_{Mea}+Cable\ Loss+Antenna\ Factor$

5GHz U-NII 1
802.11a

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5724.944	45.8	-34.3	34.5	45.566	V
17507.400	43.9	-23.9	41.2	26.553	H
17927.400	43.9	-23.3	41.0	26.233	H
17488.200	43.8	-23.9	41.2	26.453	H
17965.200	43.8	-23.3	41.0	26.133	V
17532.600	43.8	-23.9	41.2	26.453	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5724.944	62.1	-34.3	34.5	61.866	V
17952.000	56.4	-23.3	41.0	38.733	H
17940.000	56.2	-23.3	41.0	38.533	V
17510.400	56.1	-23.9	41.2	38.753	H
17063.400	56.1	-24.6	41.4	39.315	V
17102.400	56.0	-24.6	41.4	39.215	H

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17488.800	43.9	-23.9	41.2	26.553	H
17649.600	43.9	-23.4	41.2	26.072	H
17990.400	43.9	-23.0	41.0	25.947	H
17977.200	43.9	-23.3	41.0	26.233	V
17976.600	43.9	-23.3	41.0	26.233	H
17986.200	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18000.000	54.6	-23.1	40.8	36.934	V
17999.400	53.5	-23.0	41.0	35.547	H
17998.800	53.0	-23.0	41.0	35.047	V
17998.200	53.4	-23.0	41.0	35.447	V
17997.600	54.5	-23.0	41.0	36.547	V
17997.000	53.2	-23.0	41.0	35.247	H

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18000.000	43.5	-23.1	40.8	25.834	H
17999.400	43.6	-23.0	41.0	25.647	V
17998.800	43.2	-23.0	41.0	25.247	V
17998.200	43.3	-23.0	41.0	25.347	V
17997.600	43.3	-23.0	41.0	25.347	V
17997.000	43.5	-23.0	41.0	25.547	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17971.200	56.6	-23.3	41.0	38.933	V
17948.400	56.4	-23.3	41.0	38.733	V
17883.000	56.1	-23.3	41.0	38.433	H
17521.800	55.9	-23.9	41.2	38.553	V
17927.400	55.7	-23.3	41.0	38.033	H
17087.400	55.7	-24.6	41.4	38.915	H

802.11n-HT20

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.300	45.5	-34.3	34.5	45.266	H
17979.000	54.9	-23.3	41.0	37.233	H
17507.400	53.1	-23.9	41.2	35.753	V
17992.200	53.6	-23.0	41.0	35.647	H
17959.200	54.5	-23.3	41.0	36.833	H
17940.600	54.3	-23.3	41.0	36.633	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.740	62.1	-34.3	34.5	61.866	H
17478.600	56.6	-23.9	41.2	39.253	V
17986.200	56.3	-23.3	41.0	38.633	H
17217.000	56.2	-24.2	41.4	38.985	H
17494.800	56.1	-23.9	41.2	38.753	H
17921.400	56.0	-23.3	41.0	38.333	H

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17982.000	43.9	-23.3	41.0	26.233	H
17474.400	43.9	-23.9	41.2	26.553	H
17478.000	43.9	-23.9	41.2	26.553	H
17511.000	43.9	-23.9	41.2	26.553	H
17547.600	43.9	-23.9	41.2	26.553	H
17987.400	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17542.200	56.8	-23.9	41.2	39.453	H
17640.600	56.2	-23.4	41.2	38.372	V
17436.600	56.1	-24.3	41.2	39.169	V
17775.600	55.9	-23.4	41.0	38.272	H
17128.800	55.8	-24.2	41.4	38.585	V
17529.600	55.7	-23.9	41.2	38.353	H

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17488.200	44.1	-23.9	41.2	26.753	V
17988.000	44.0	-23.0	41.0	26.047	H
17492.400	43.9	-23.9	41.2	26.553	V
17509.800	43.9	-23.9	41.2	26.553	V
17532.600	43.9	-23.9	41.2	26.553	V
17927.400	43.9	-23.3	41.0	26.233	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17955.000	56.6	-23.3	41.0	38.933	V
17503.800	56.3	-23.9	41.2	38.953	V
17639.400	56.2	-23.4	41.2	38.372	V
17790.000	56.1	-23.4	41.0	38.472	H
17637.600	56.1	-23.4	41.2	38.272	V
17821.800	55.8	-23.3	41.0	38.133	H

802.11n-HT40

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.700	45.3	-34.3	34.5	45.066	V
17973.000	44.0	-23.3	41.0	26.333	H
17972.400	44.0	-23.3	41.0	26.333	V
17922.600	44.0	-23.3	41.0	26.333	H
17985.600	44.0	-23.3	41.0	26.333	V
17975.400	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.360	61.2	-34.3	34.5	60.966	V
18000.000	53.2	-23.1	40.8	35.534	V
17999.400	53.1	-23.0	41.0	35.147	V
17998.800	52.7	-23.0	41.0	34.747	V
17998.200	54.2	-23.0	41.0	36.247	V
17997.600	54.0	-23.0	41.0	36.047	V

Channel 44

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17497.800	44.0	-23.9	41.2	26.653	V
17971.800	44.0	-23.3	41.0	26.333	H
17900.400	43.9	-23.3	41.0	26.233	V
17953.800	43.9	-23.3	41.0	26.233	V
17969.400	43.8	-23.3	41.0	26.133	H
17976.600	43.8	-23.3	41.0	26.133	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18000.000	54.8	-23.1	40.8	37.134	H
17999.400	54.2	-23.0	41.0	36.247	H
17998.800	53.0	-23.0	41.0	35.047	V
17998.200	54.3	-23.0	41.0	36.347	V
17997.600	54.2	-23.0	41.0	36.247	V
17997.000	54.1	-23.0	41.0	36.147	H

802.11ac-HT20

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.180	45.3	-34.3	34.5	45.066	H
17531.400	44.1	-23.9	41.2	26.753	V
17959.800	44.1	-23.3	41.0	26.433	H
17957.400	43.9	-23.3	41.0	26.233	V
17556.600	43.9	-23.9	41.2	26.553	H
17497.800	43.9	-23.9	41.2	26.553	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5146.88	60	-34.2665	34.5	59.766	H
17999.4	56.2	-23.0473	41	38.247	V
17975.4	56	-23.3329	41	38.333	V
17386.8	55.9	-24.2692	41.2	38.969	H
17788.2	55.9	-23.3716	41	38.272	V
17489.4	55.7	-23.8534	41.2	38.353	H

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17977.800	43.9	-23.3	41.0	26.233	V
17940.000	43.9	-23.3	41.0	26.233	H
17967.600	43.9	-23.3	41.0	26.233	V
17961.000	43.9	-23.3	41.0	26.233	H
17478.600	43.9	-23.9	41.2	26.553	V
17507.400	43.8	-23.9	41.2	26.453	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17514.600	56.8	-23.9	41.2	39.453	V
17570.400	56.2	-23.9	41.2	38.853	V
17302.800	55.9	-24.3	41.2	38.969	H
17211.600	55.9	-24.2	41.4	38.685	H
17574.000	55.8	-23.9	41.2	38.453	V
17472.000	55.8	-23.9	41.2	38.453	H

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17964.600	44.0	-23.3	41.0	26.333	V
17987.400	44.0	-23.3	41.0	26.333	V
17950.800	43.9	-23.3	41.0	26.233	H
17983.800	43.9	-23.3	41.0	26.233	V
17958.000	43.9	-23.3	41.0	26.233	H
17491.800	43.9	-23.9	41.2	26.553	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17678.400	56.1	-23.4	41.2	38.272	V
17689.800	56.0	-23.4	41.2	38.172	H
17497.800	55.9	-23.9	41.2	38.553	H
17372.400	55.8	-24.3	41.2	38.869	V
17021.400	55.8	-24.6	41.4	39.015	V
17865.000	55.7	-23.3	41.0	38.033	V



802.11ac-HT40

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.120	45.3	-34.3	34.5	45.066	V
17961.600	44.0	-23.3	41.0	26.333	V
17511.600	44.0	-23.9	41.2	26.653	V
17479.800	43.9	-23.9	41.2	26.553	V
17954.400	43.9	-23.3	41.0	26.233	V
17512.800	43.9	-23.9	41.2	26.553	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.520	59.2	-34.3	34.5	58.966	V
17935.800	56.7	-23.3	41.0	39.033	V
17523.000	56.2	-23.9	41.2	38.853	H
17707.800	56.2	-23.4	41.2	38.372	V
17976.600	56.1	-23.3	41.0	38.433	V
17871.000	56.0	-23.3	41.0	38.333	H

Channel 44

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17567.400	44.0	-23.9	41.2	26.653	H
17499.600	43.9	-23.9	41.2	26.553	H
17946.600	43.9	-23.3	41.0	26.233	H
17941.800	43.9	-23.3	41.0	26.233	V
17942.400	43.9	-23.3	41.0	26.233	V
17953.800	43.9	-23.3	41.0	26.233	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17547.000	56.6	-23.9	41.2	39.253	H
17552.400	56.2	-23.9	41.2	38.853	H
16758.000	55.9	-24.4	41.5	38.830	H
17709.600	55.7	-23.4	41.2	37.872	H
17693.400	55.7	-23.4	41.2	37.872	H
17964.000	55.7	-23.3	41.0	38.033	H

Test graphs as below:

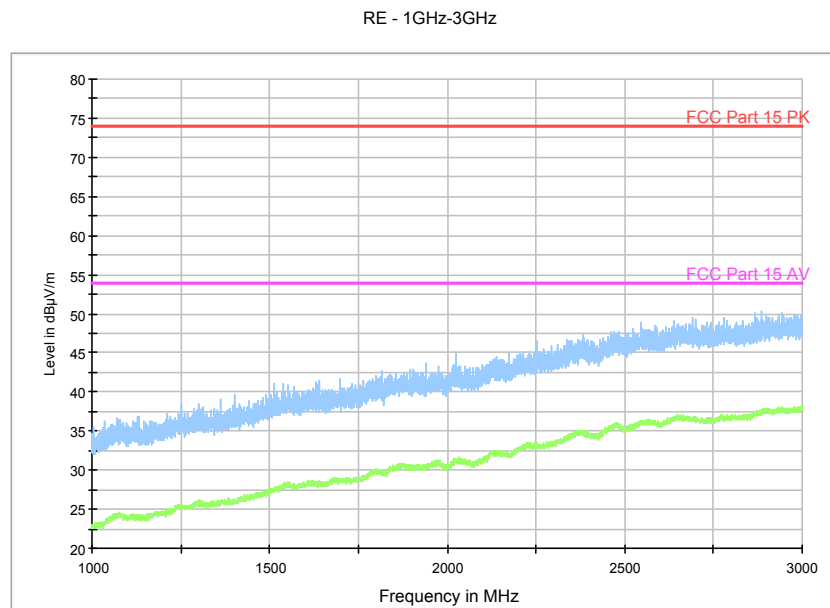


Fig. 24 Radiated Spurious Emission (802.11a, ch36, 1 GHz-3 GHz)

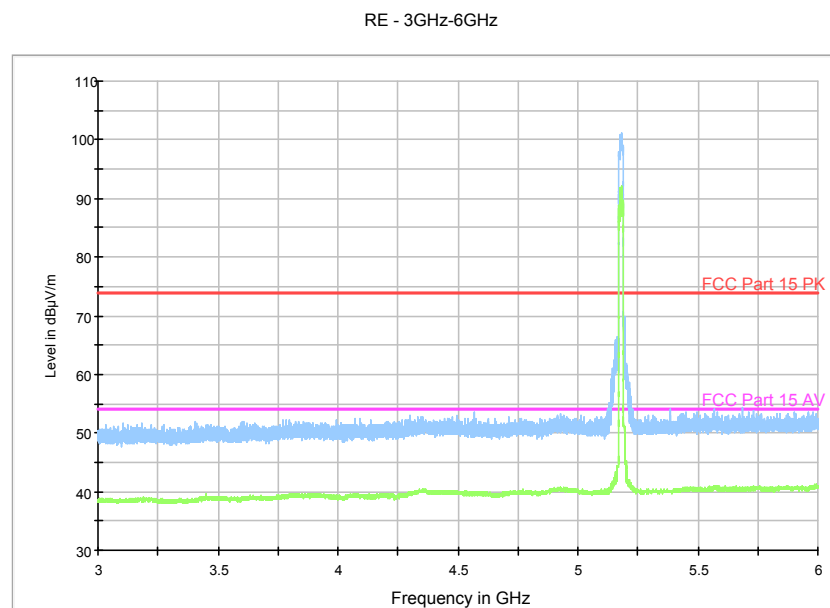


Fig. 25 Radiated Spurious Emission (802.11a, ch36, 3 GHz-6 GHz)

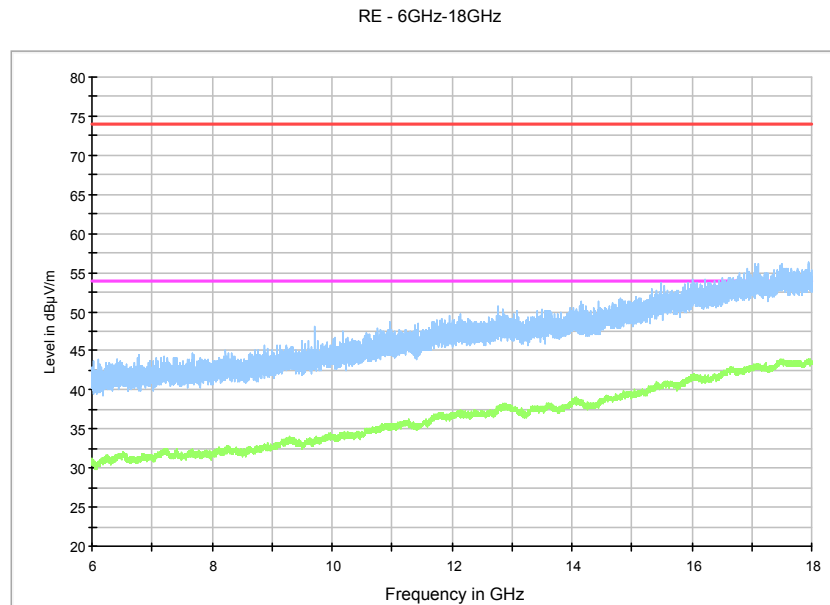


Fig. 26 Radiated Spurious Emission (802.11a, ch36, 6 GHz-18 GHz)

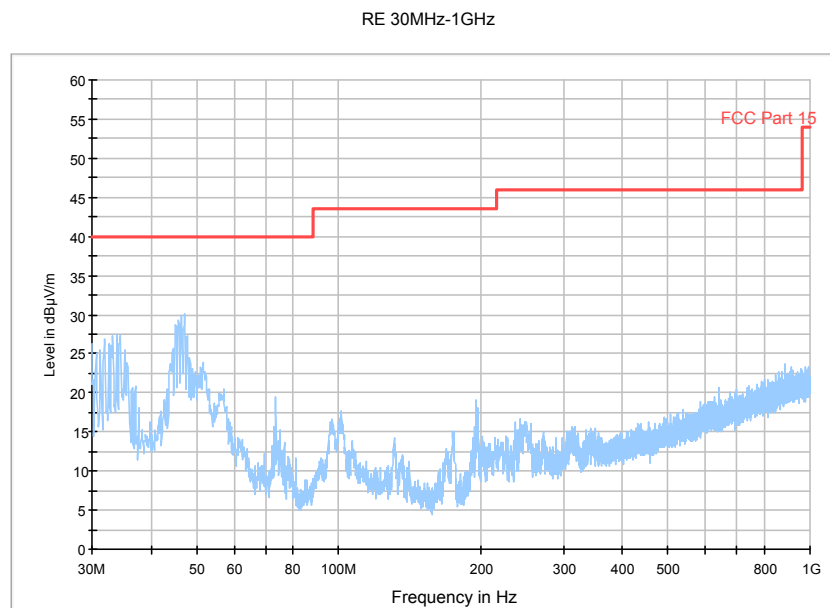


Fig. 27 Radiated Spurious Emission (802.11a, ch40, 30 MHz-1 GHz)

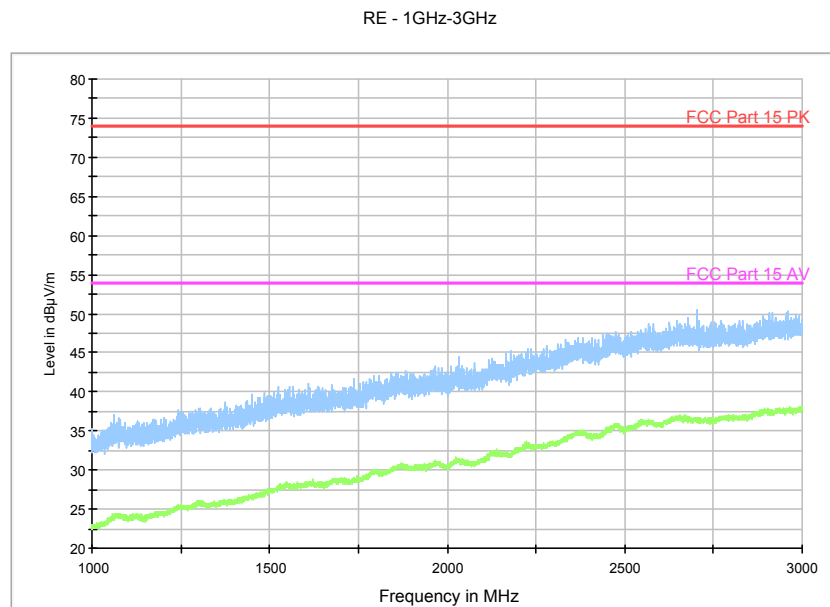
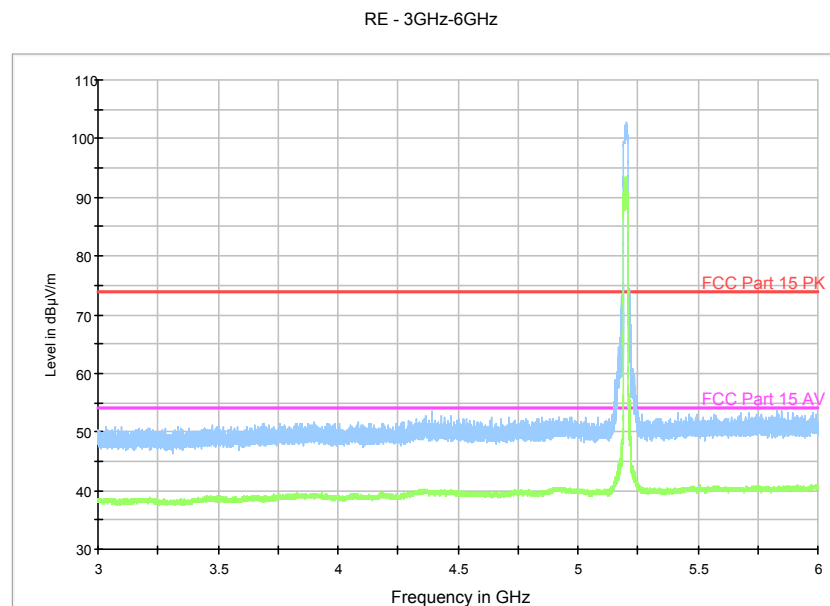


Fig. 28 Radiated Spurious Emission (802.11a, ch40, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 29 Radiated Spurious Emission (802.11a, ch40, 3GHz-6GHz)

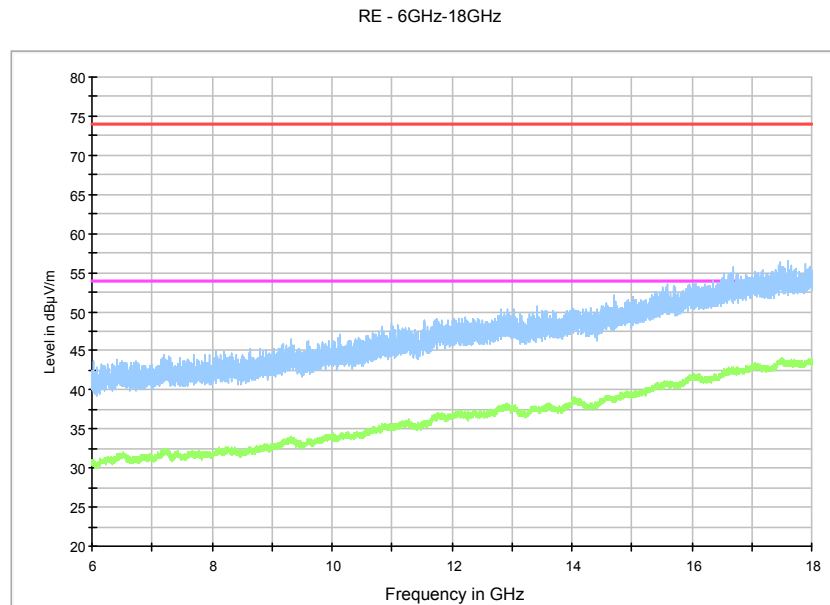


Fig. 30 Radiated Spurious Emission (802.11a, ch40, 6 GHz-18 GHz)

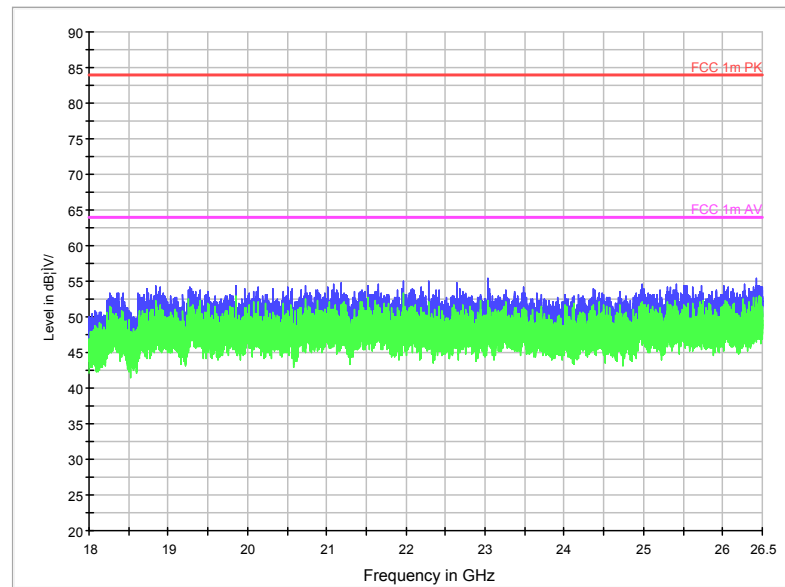


Fig. 31 Radiated Spurious Emission (802.11a, ch40, 18 GHz-26.5 GHz)

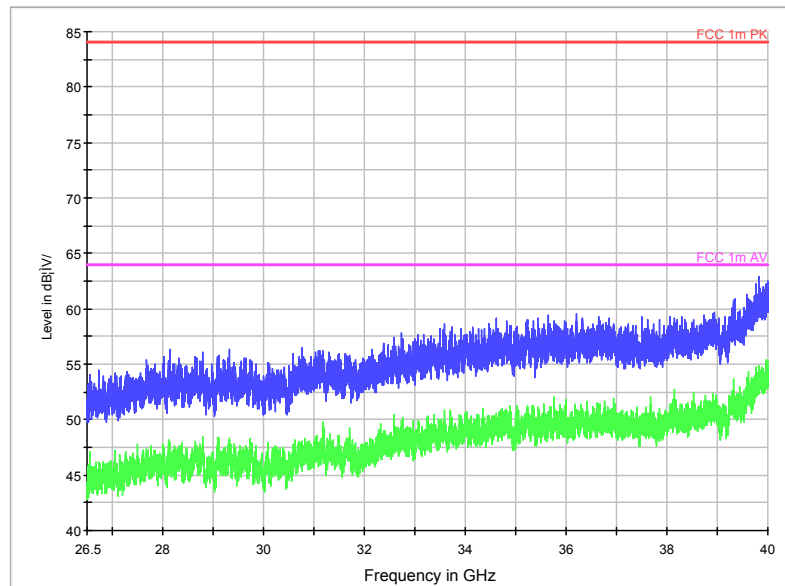


Fig. 32 Radiated Spurious Emission (802.11a, ch40, 26.5 GHz-40 GHz)

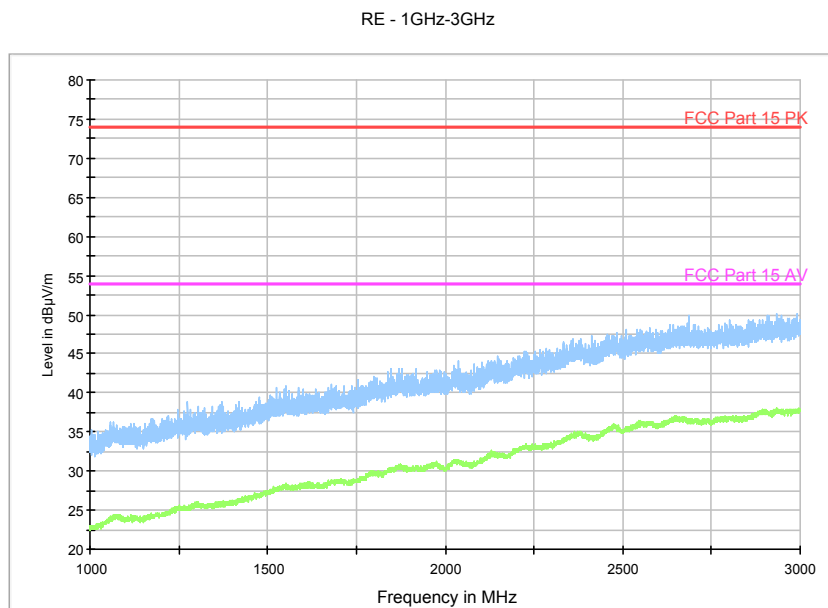
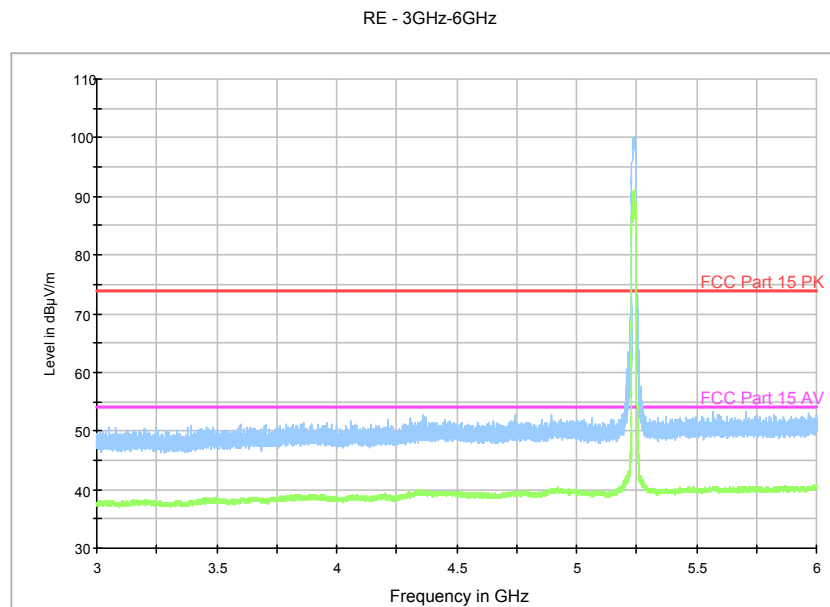


Fig. 33 Radiated Spurious Emission (802.11a, ch48, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 34 Radiated Spurious Emission (802.11a, ch48, 3GHz- 6GHz)

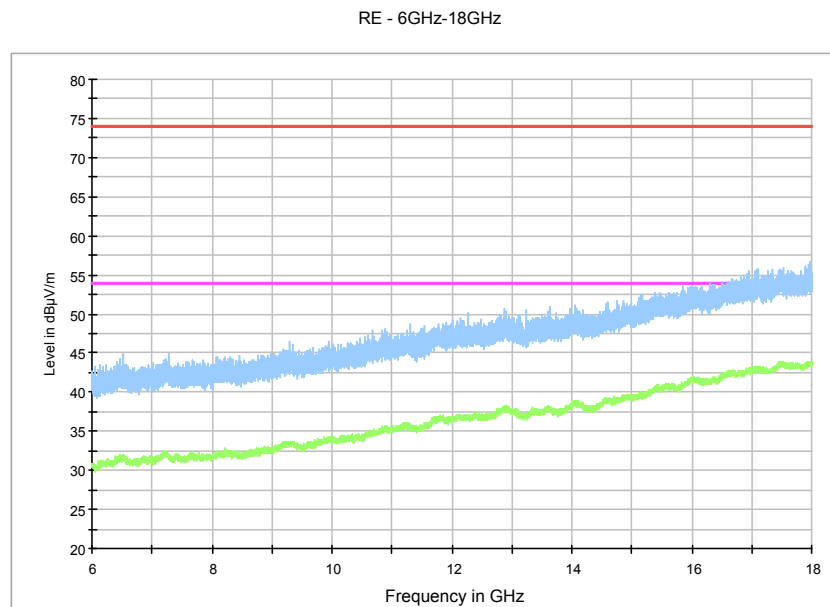


Fig. 35 Radiated Spurious Emission (802.11a, ch48, 6 GHz-18GHz)

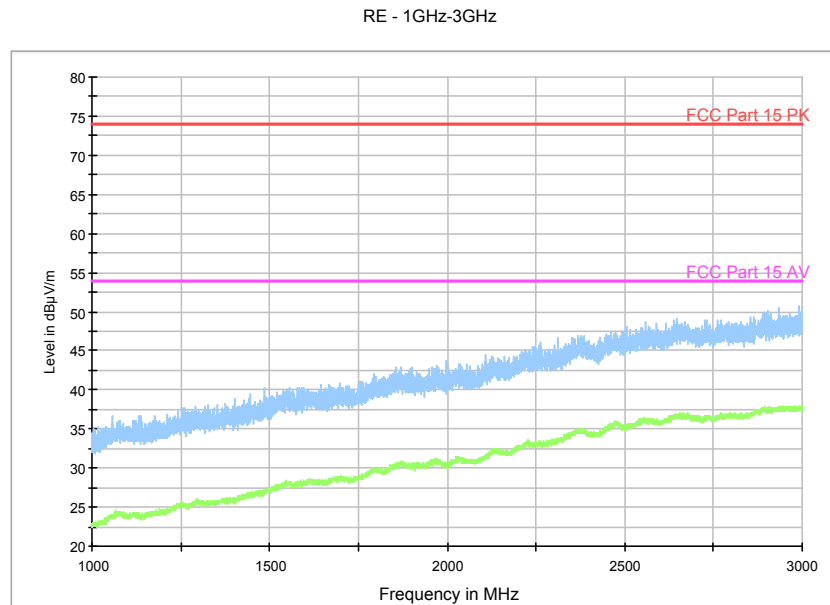
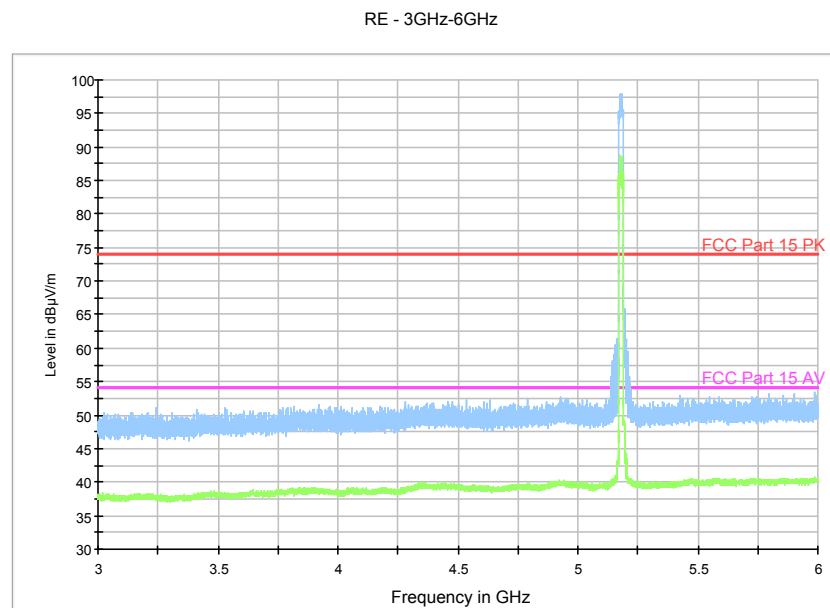


Fig. 36 Radiated Spurious Emission (802.11n-HT20, ch36, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 37 Radiated Spurious Emission (802.11n-HT20, ch36, 3GHz-6GHz)

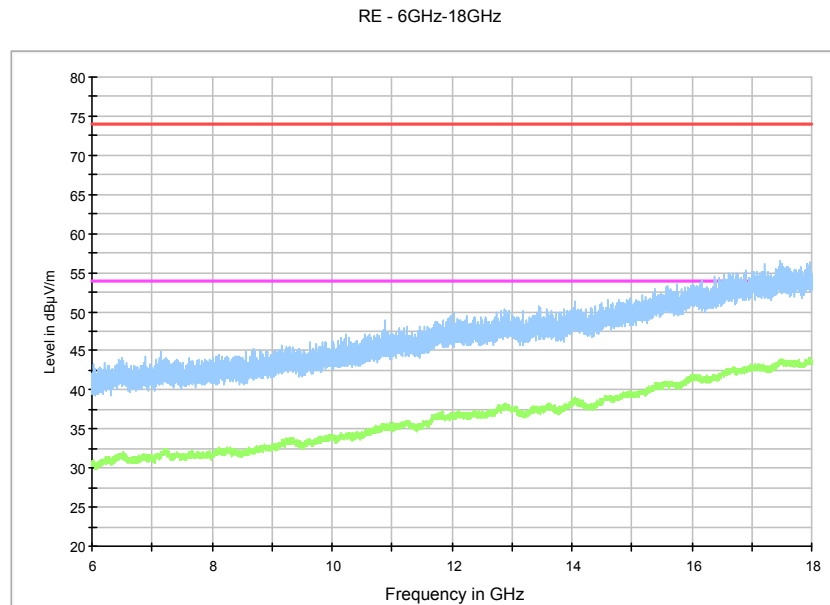


Fig. 38 Radiated Spurious Emission (802.11n-HT20, ch36, 6 GHz-18GHz)

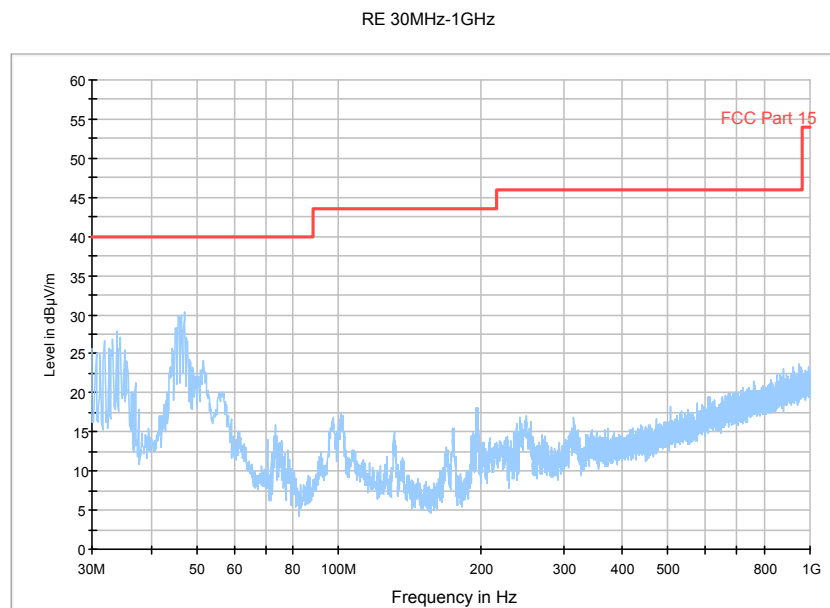


Fig. 39 Radiated Spurious Emission (802.11n-HT20, ch40, 30 MHz-1 GHz)

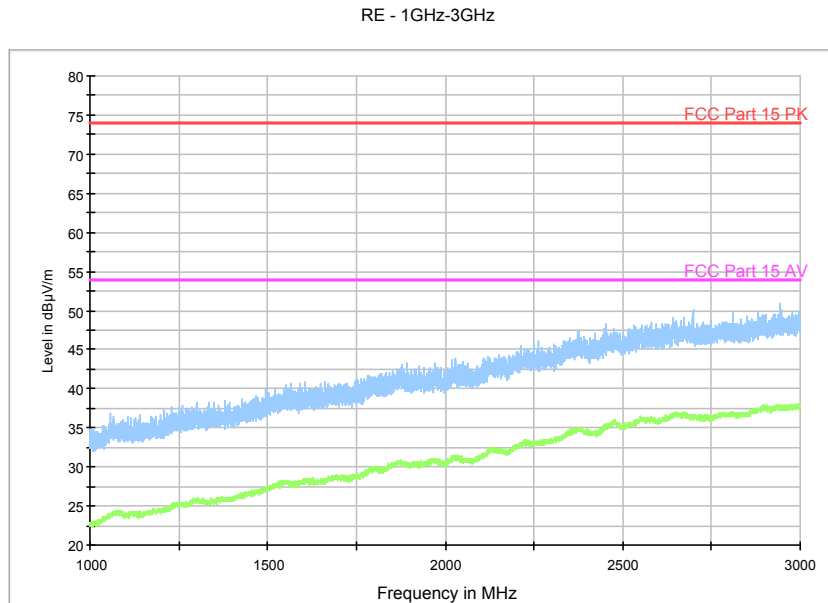
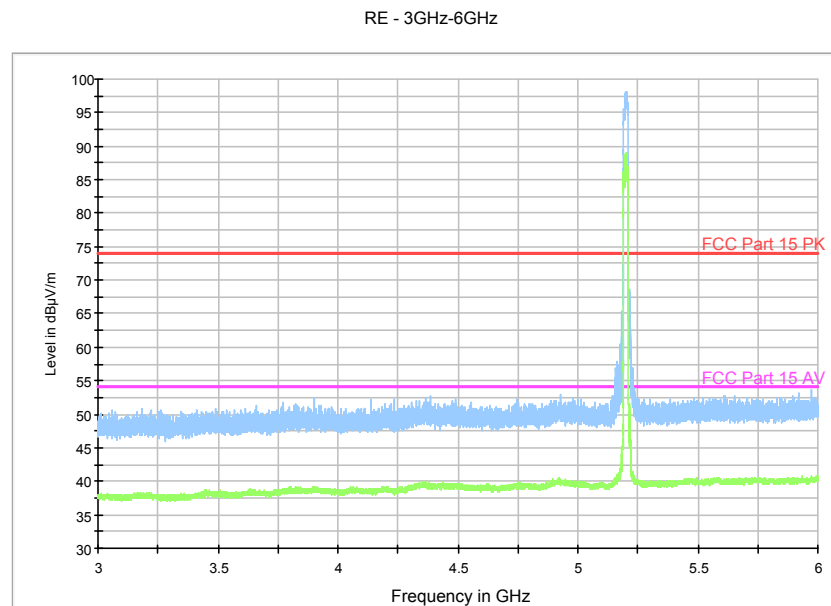


Fig. 40 Radiated Spurious Emission (802.11n-HT20, ch40, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 41 Radiated Spurious Emission (802.11n-HT20, ch40, 3 GHz-6 GHz)

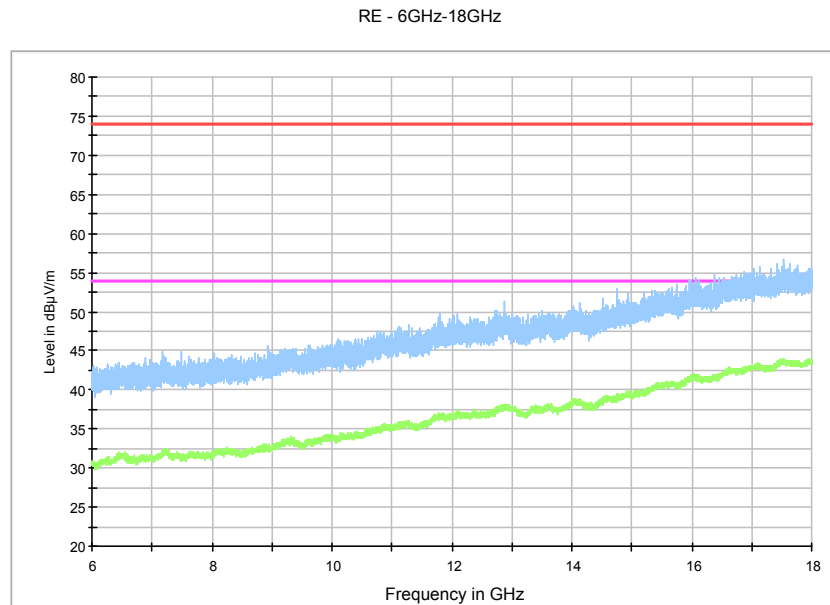


Fig. 42 Radiated Spurious Emission (802.11n-HT20, ch40, 6 GHz-18 GHz)

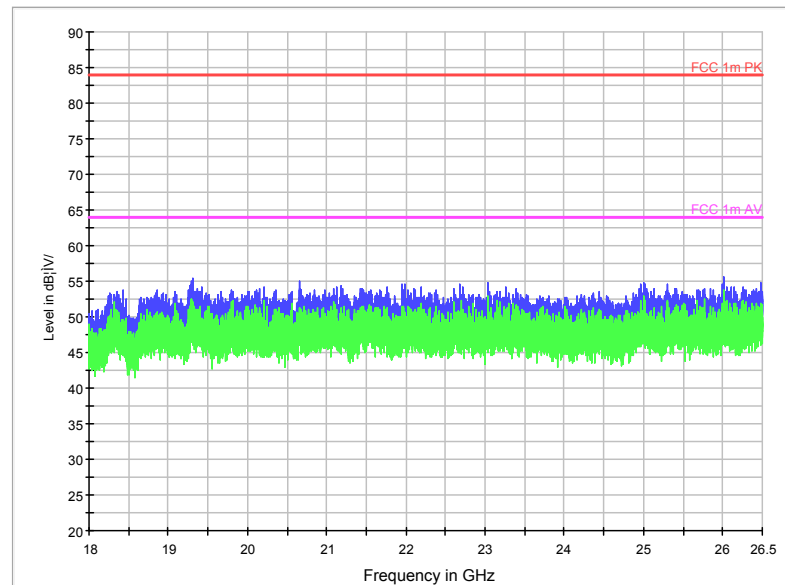


Fig. 43 Radiated Spurious Emission (802.11n-HT20, ch40, 18 GHz-26.5 GHz)

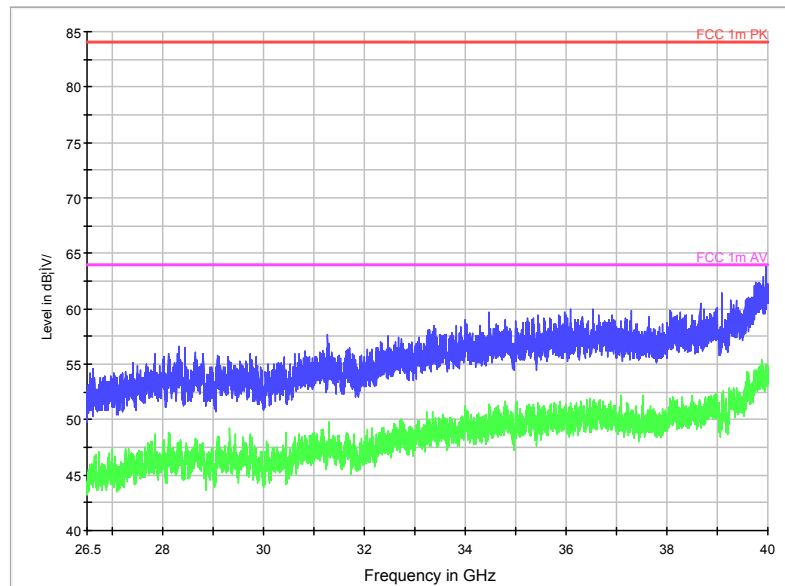


Fig. 44 Radiated Spurious Emission (802.11n-HT20, ch40, 26.5 GHz-40 GHz)

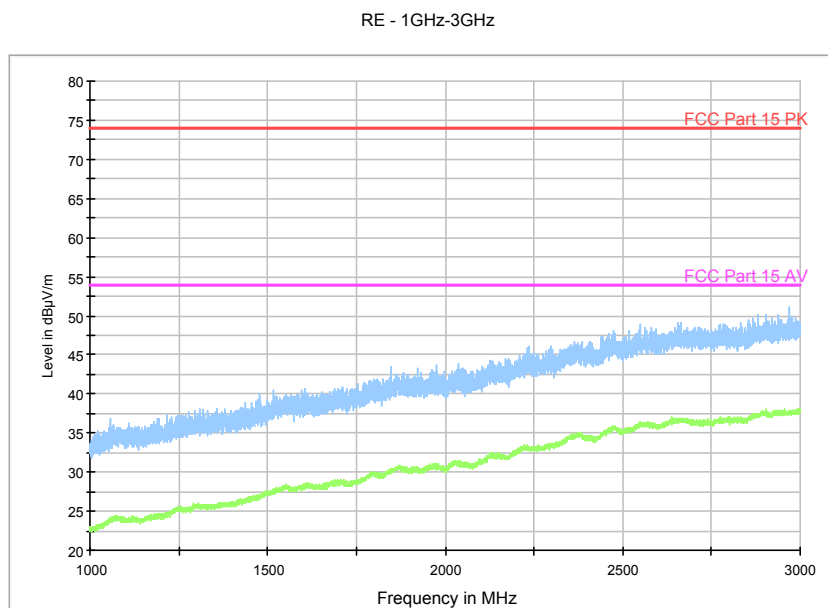
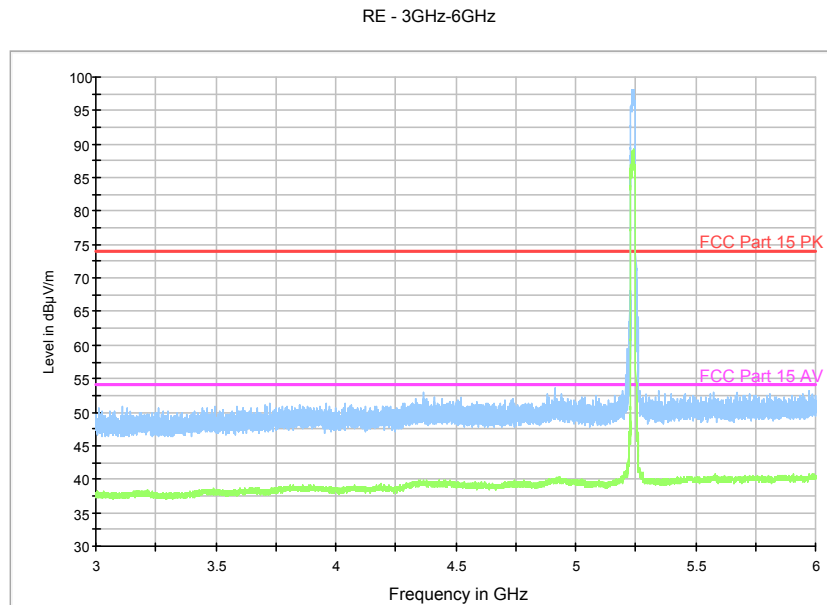


Fig. 45 Radiated Spurious Emission (802.11n-HT20, ch48, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 46 Radiated Spurious Emission (802.11n-HT20, ch48, 3 GHz-6GHz)

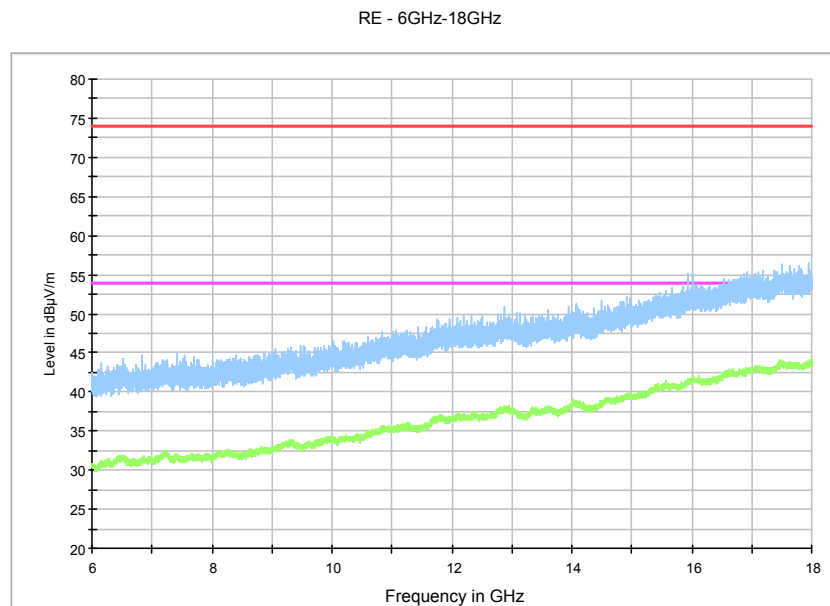


Fig. 47 Radiated Spurious Emission (802.11n-HT20, ch48, 6 GHz-18 GHz)

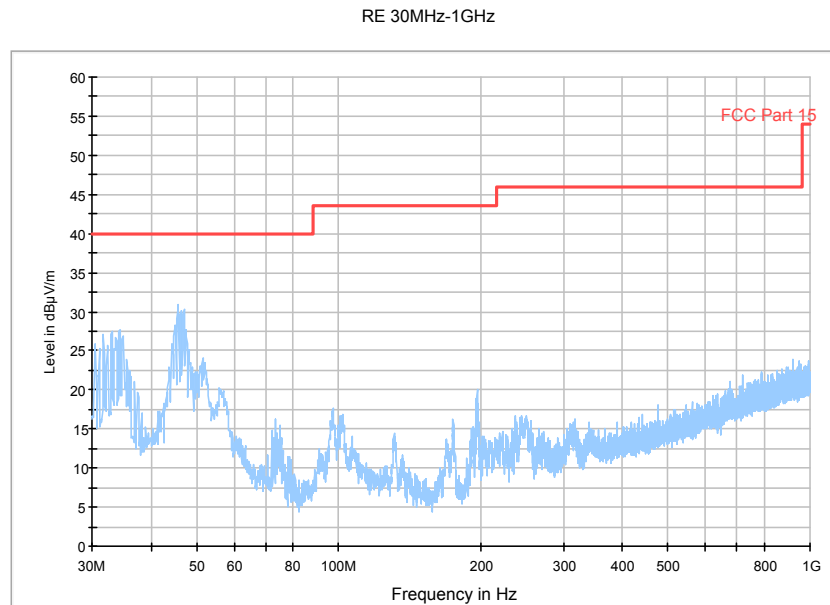


Fig. 48 Radiated Spurious Emission (802.11n-HT40, ch36, 30 MHz-1 GHz)

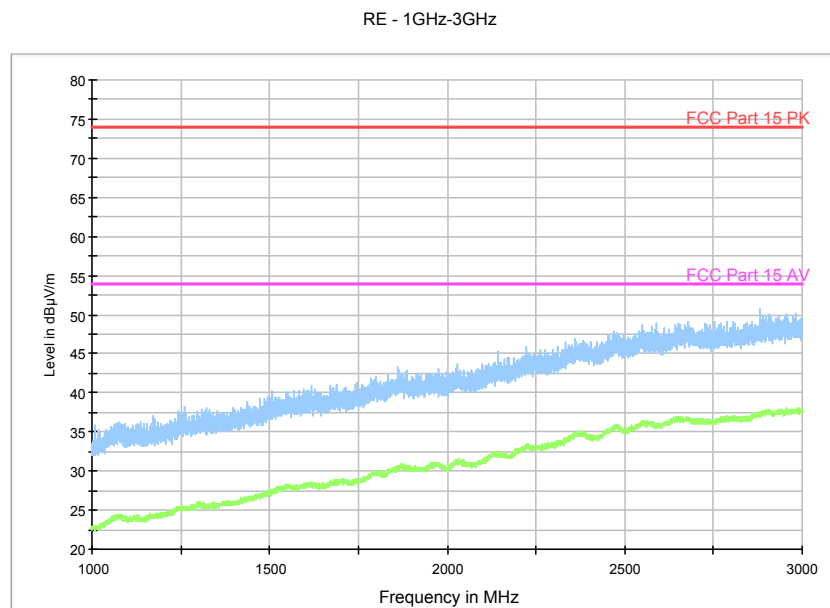
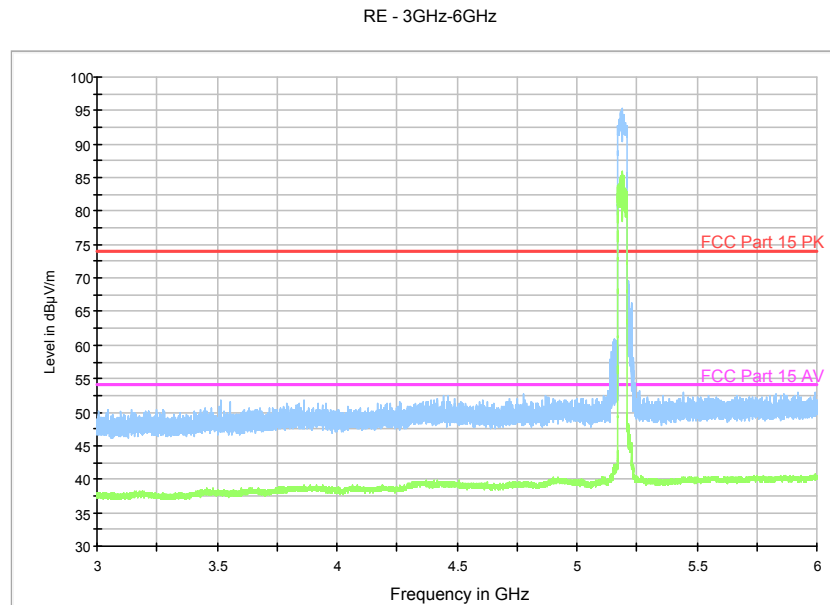


Fig. 49 Radiated Spurious Emission (802.11n-HT40, ch36, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 50 Radiated Spurious Emission (802.11n-HT40, ch36, 3 GHz-6GHz)

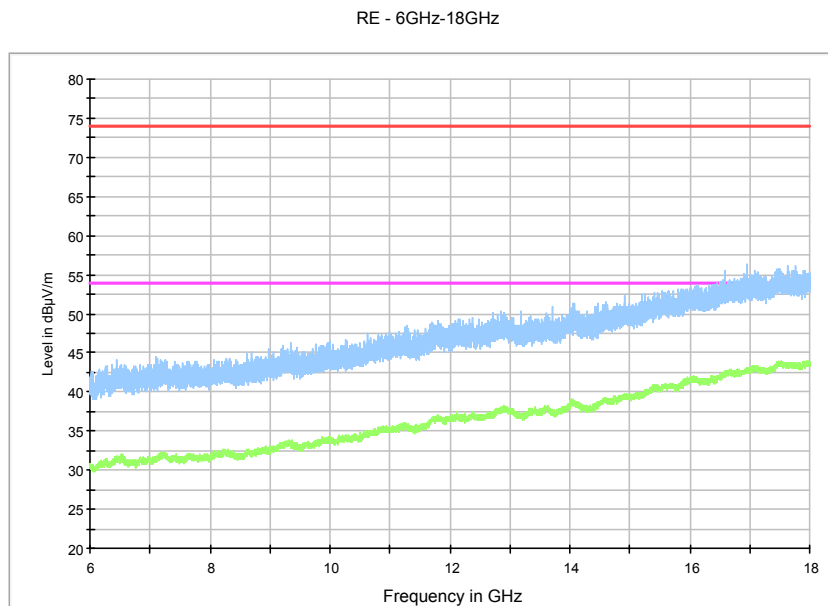


Fig. 51 Radiated Spurious Emission (802.11n-HT40, ch36, 6 GHz-18 GHz)

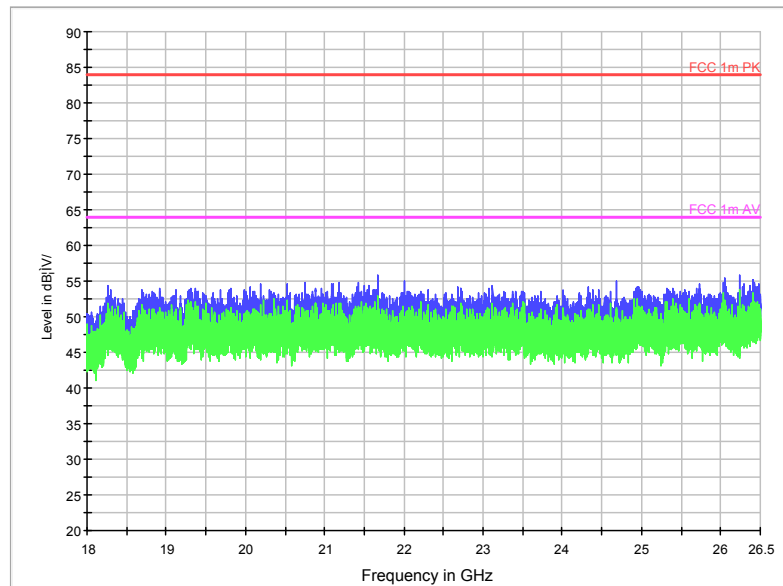


Fig. 52 Radiated Spurious Emission (802.11n-HT40, ch36, 18 GHz-26.5 GHz)

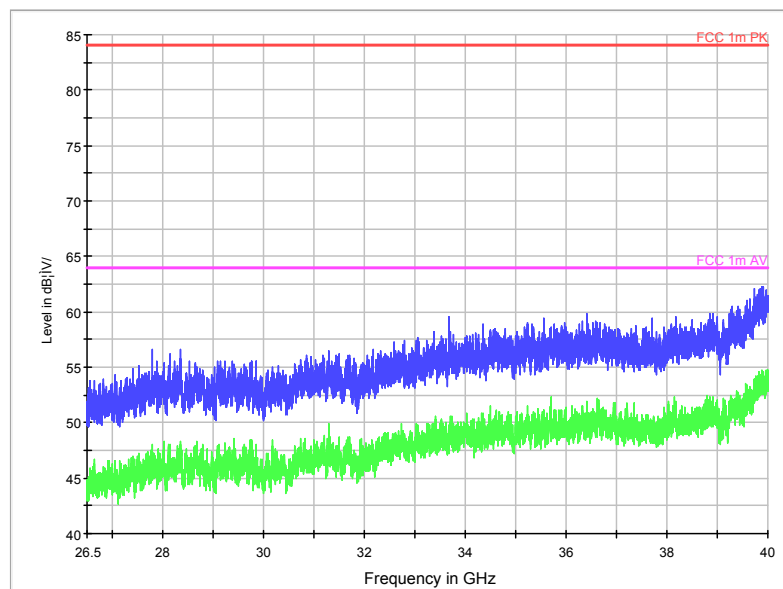


Fig. 53 Radiated Spurious Emission (802.11n-HT40, ch36, 26.5 GHz-40 GHz)

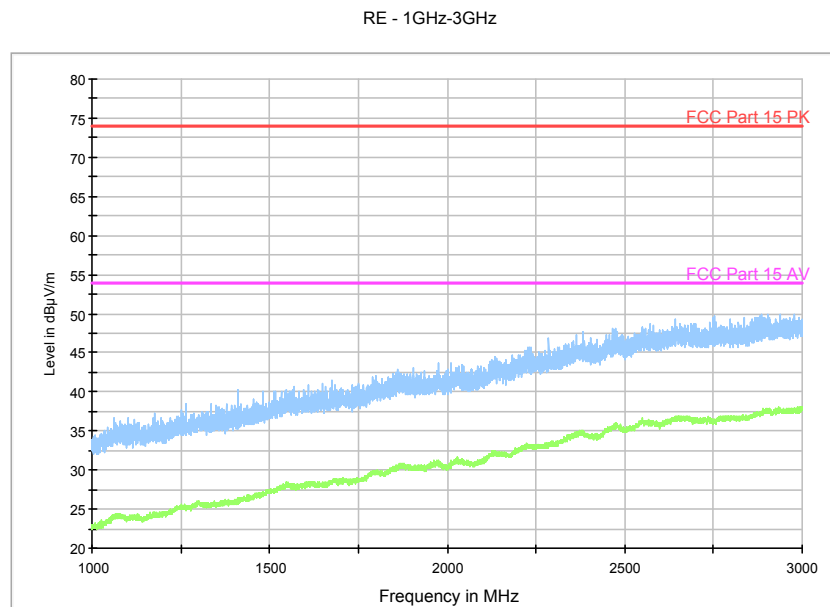
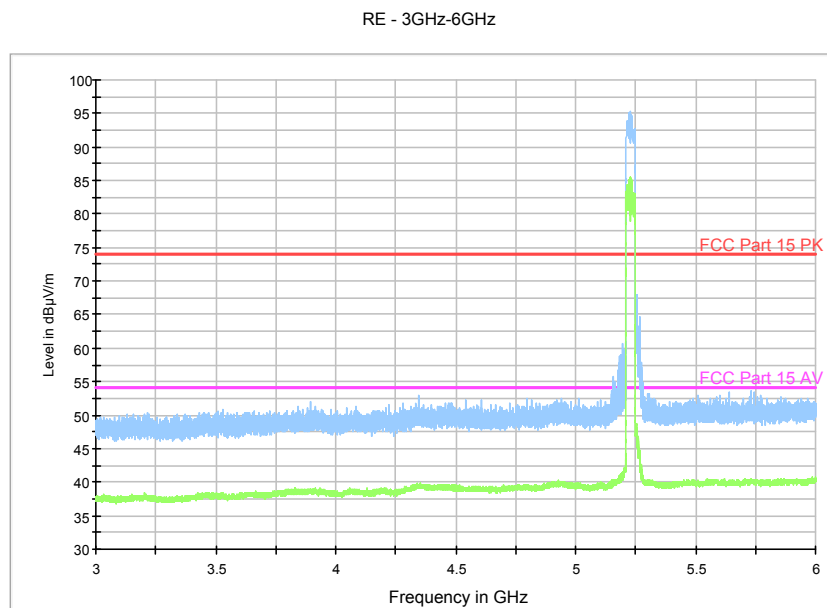


Fig. 54 Radiated Spurious Emission (802.11n-HT40, ch44, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 55 Radiated Spurious Emission (802.11n-HT40, ch44, 3GHz-6GHz)

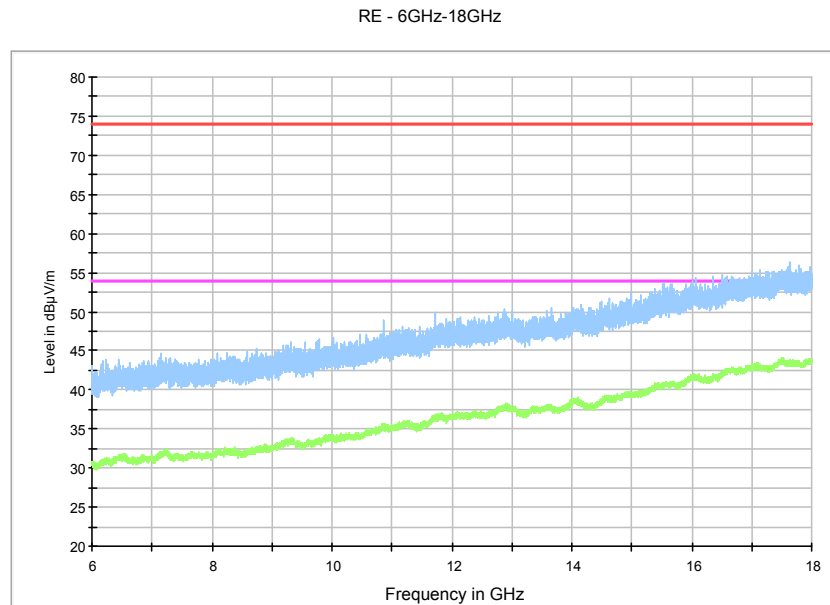


Fig. 56 Radiated Spurious Emission (802.11n-HT40, ch44, 6 GHz-18 GHz)

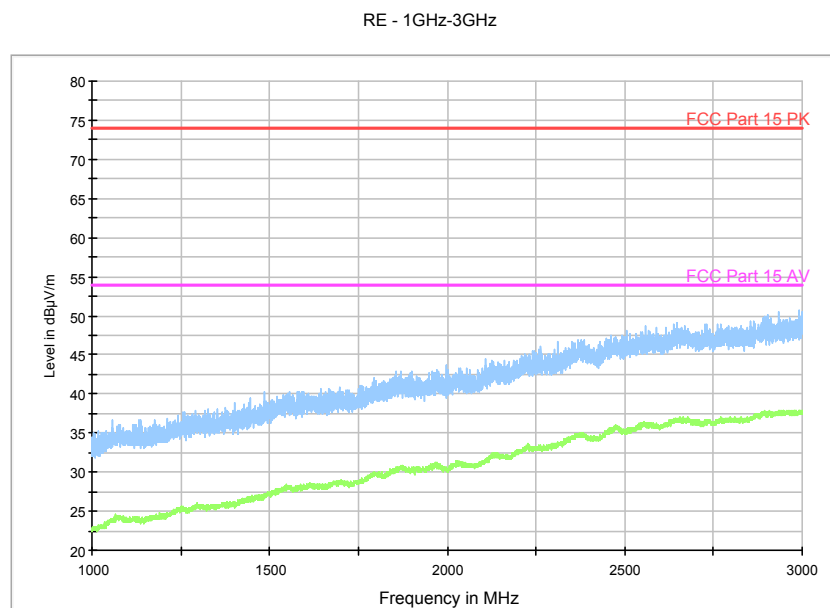
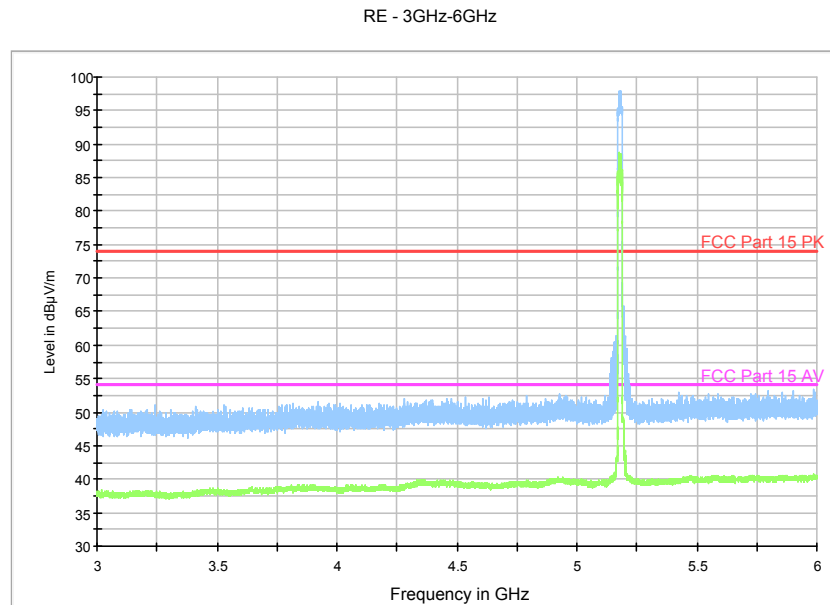


Fig. 57 Radiated Spurious Emission (802.11ac-HT20, ch36, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 58 Radiated Spurious Emission (802.11ac-HT20, ch36, 3 GHz-6 GHz)

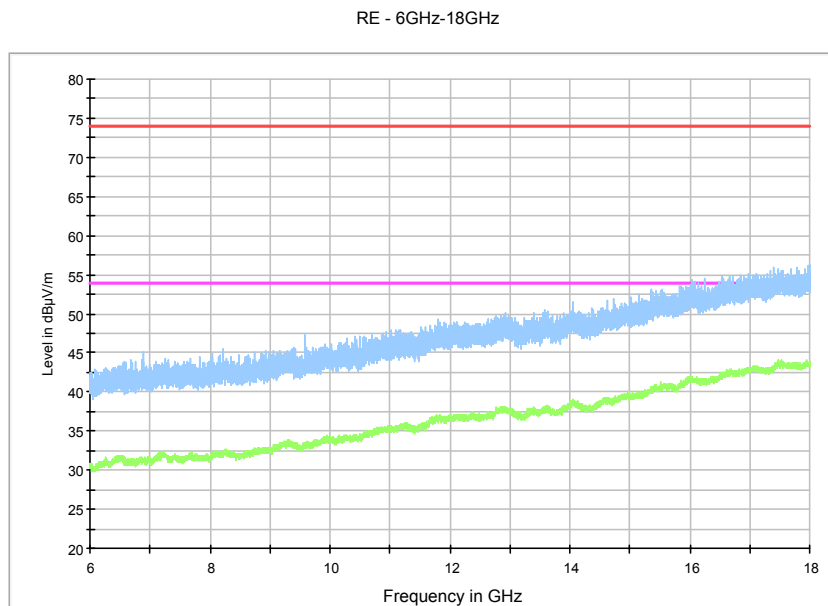


Fig. 59 Radiated Spurious Emission (802.11ac-HT20, ch36, 6 GHz-18GHz)

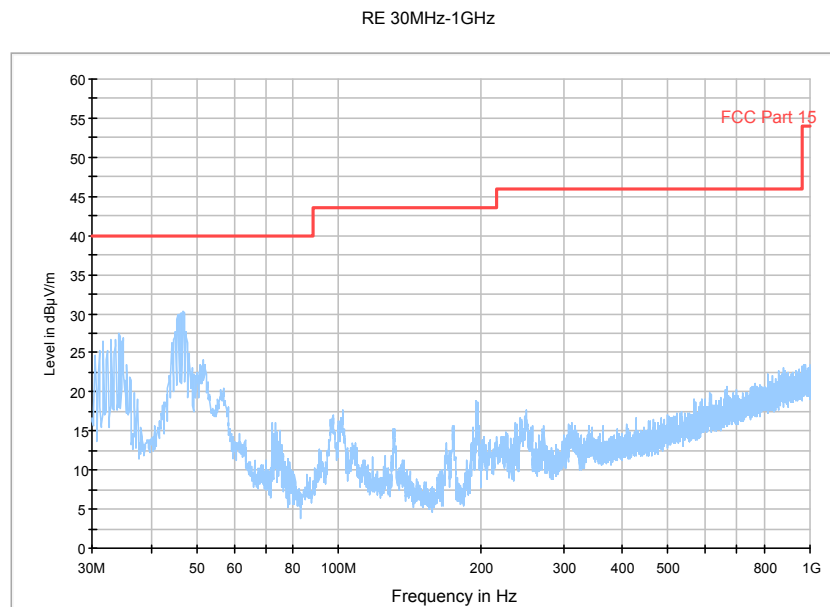


Fig. 60 Radiated Spurious Emission (802.11ac-HT20, ch40, 30 MHz-1 GHz)

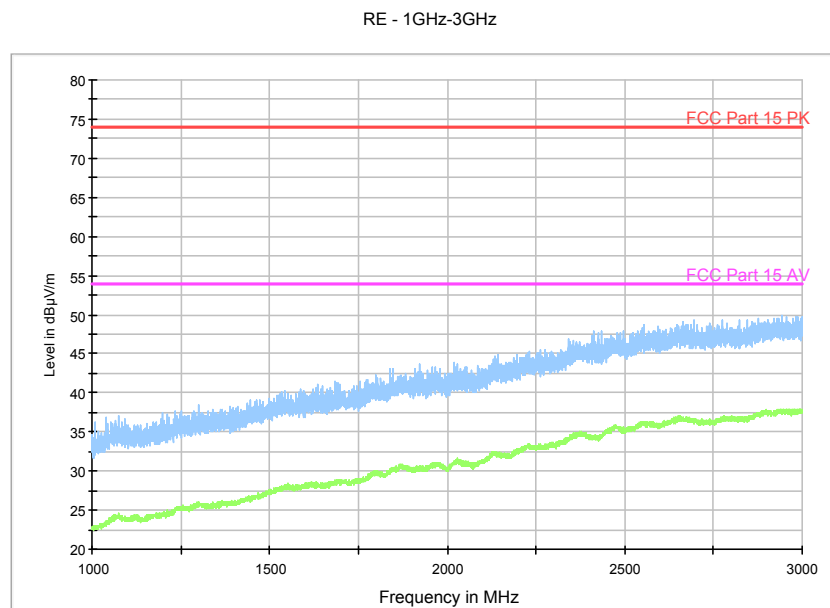
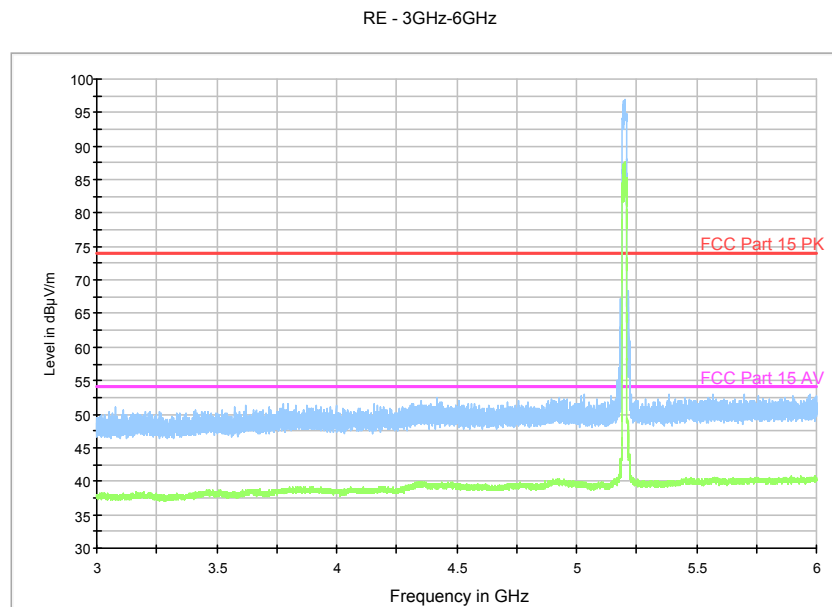


Fig. 61 Radiated Spurious Emission (802.11ac-HT20, ch40, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 62 Radiated Spurious Emission (802.11ac-HT20, ch40, 3 GHz-6 GHz)

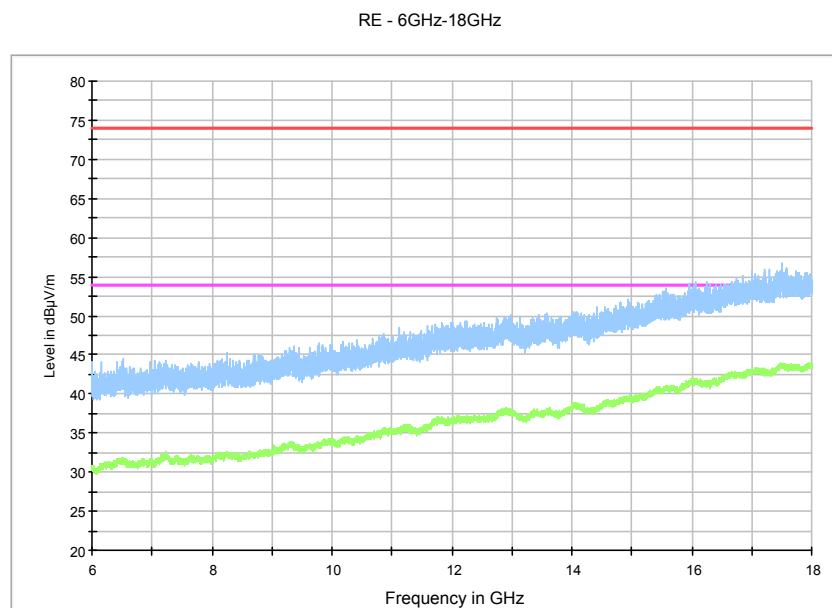


Fig. 63 Radiated Spurious Emission (802.11ac-HT20, ch40, 6 GHz-18 GHz)

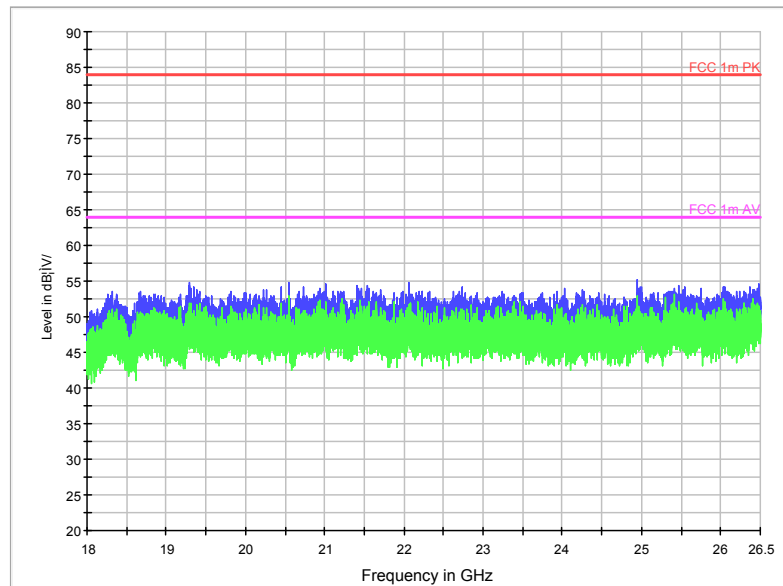


Fig. 64 Radiated Spurious Emission (802.11ac-HT20, ch40, 18 GHz-26.5 GHz)

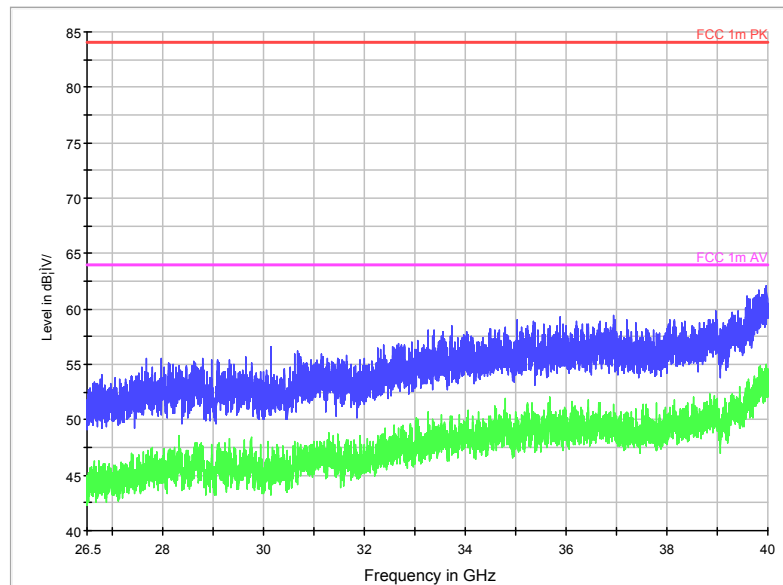


Fig. 65 Radiated Spurious Emission (802.11ac-HT20, ch40, 26.5 GHz-40 GHz)

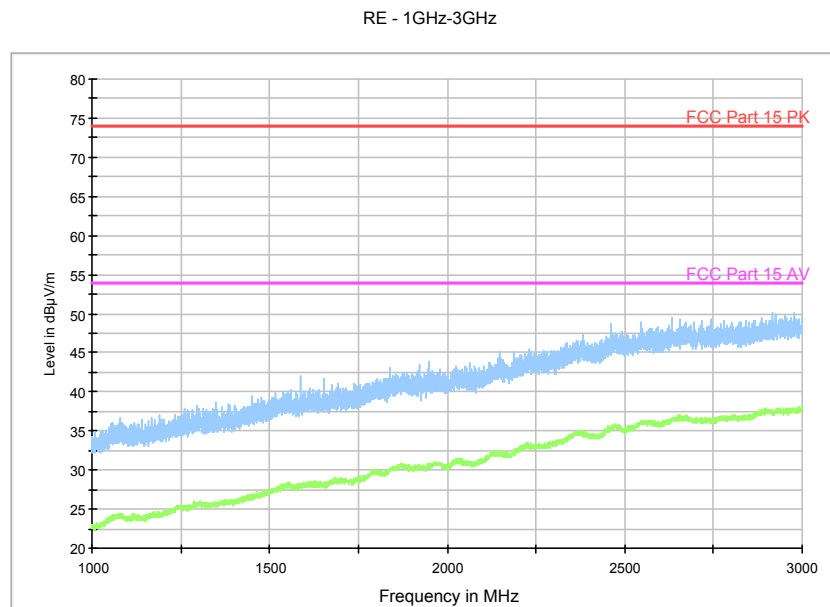
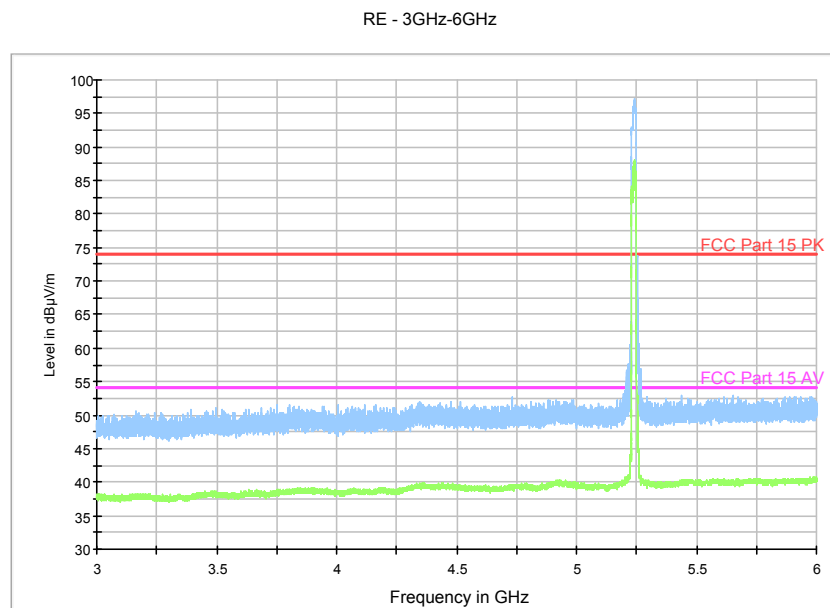


Fig. 66 Radiated Spurious Emission (802.11ac-HT20, ch48, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 67 Radiated Spurious Emission (802.11ac-HT20, ch48, 3 GHz-6GHz)

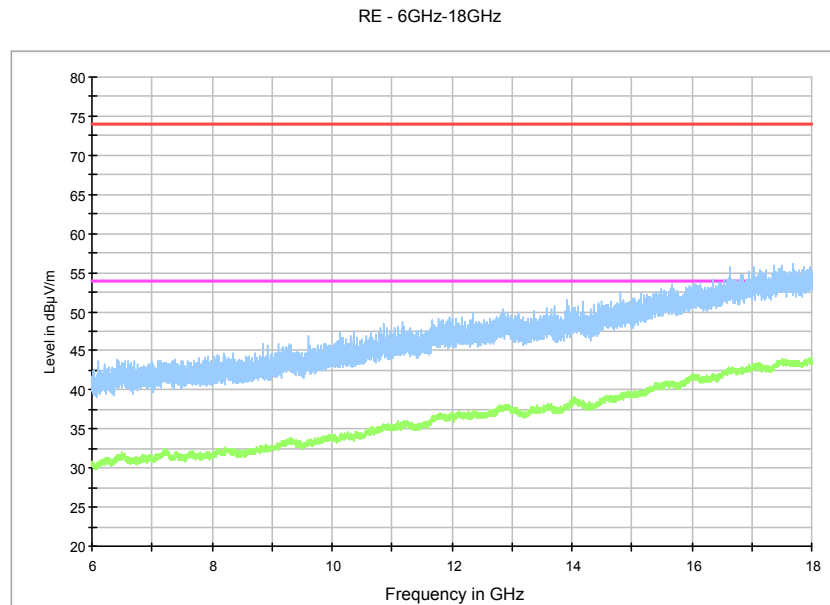


Fig. 68 Radiated Spurious Emission (802.11ac-HT20, ch48, 6 GHz-18 GHz)

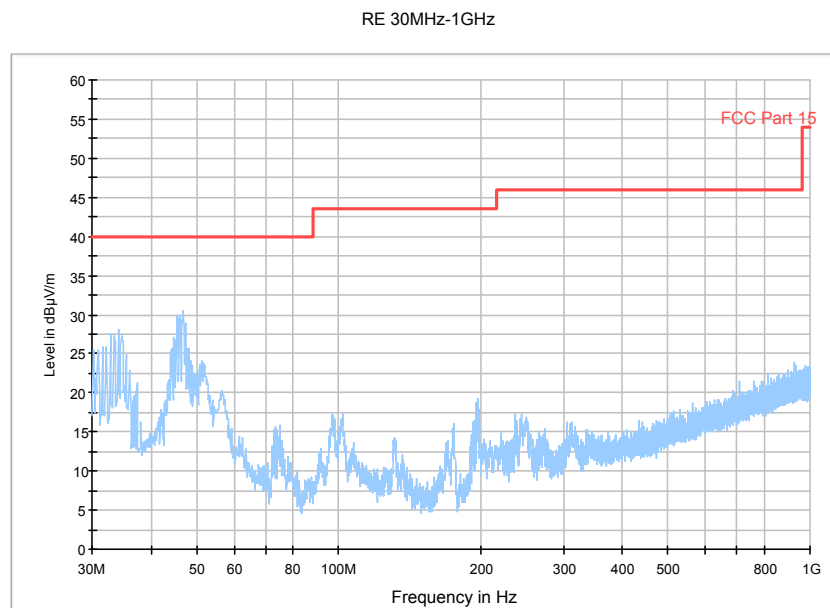


Fig. 69 Radiated Spurious Emission (802.11ac-HT40, ch36, 30 MHz-1 GHz)

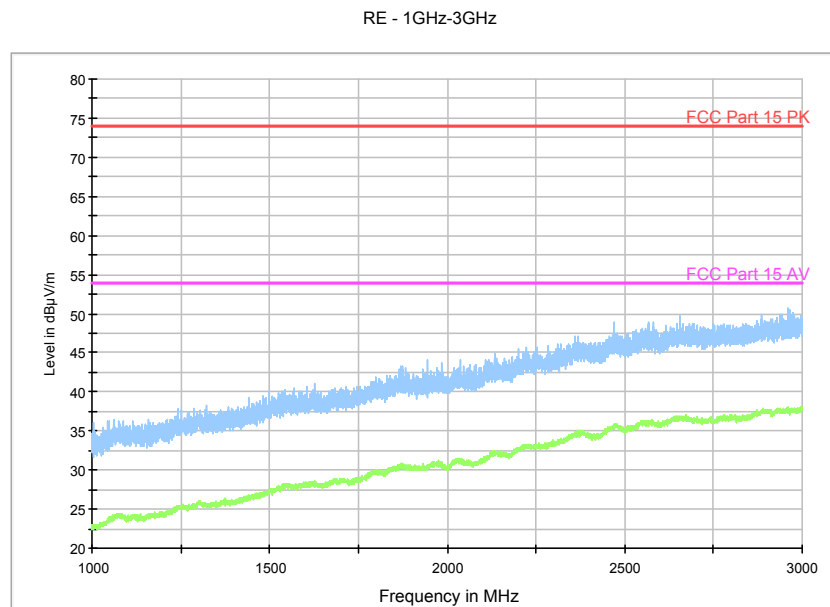
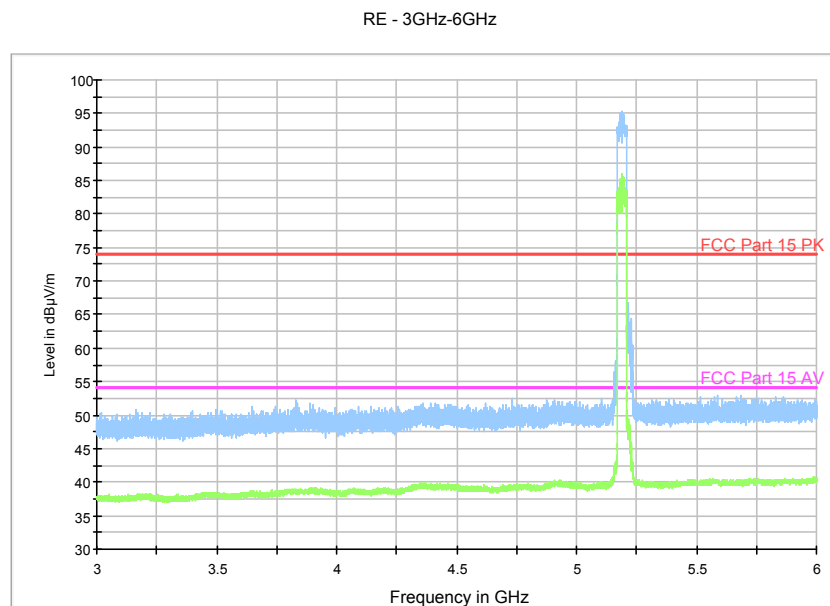


Fig. 70 Radiated Spurious Emission (802.11ac-HT40, ch38, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 71 Radiated Spurious Emission (802.11ac-HT40, ch36, 3 GHz-6 GHz)

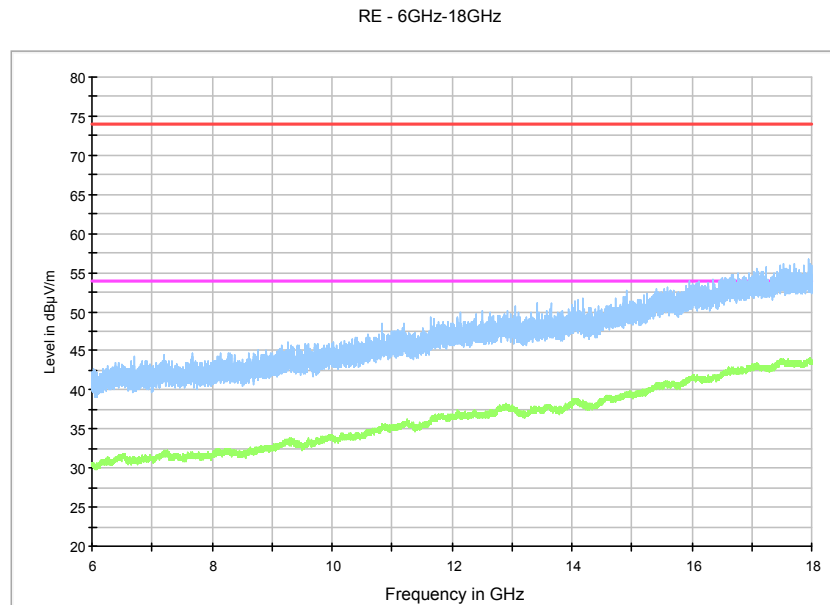


Fig. 72 Radiated Spurious Emission (802.11ac-HT40, ch38, 6 GHz-18 GHz)

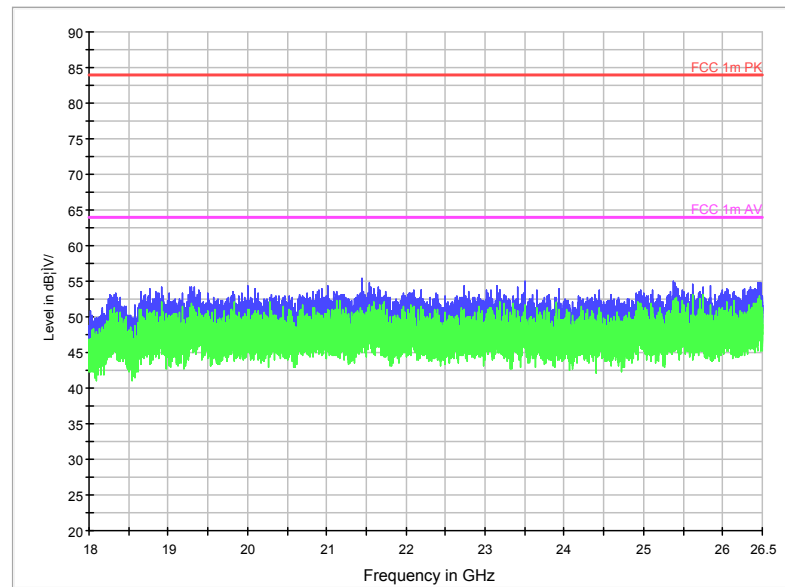


Fig. 73 Radiated Spurious Emission (802.11ac-HT40, ch36, 18 GHz-26.5 GHz)

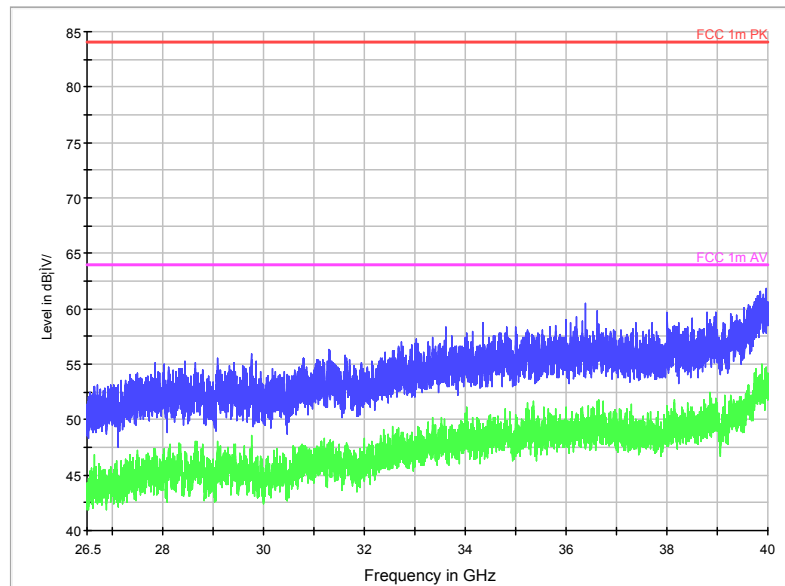


Fig. 74 Radiated Spurious Emission (802.11ac-HT40, ch36, 26.5 GHz-40 GHz)

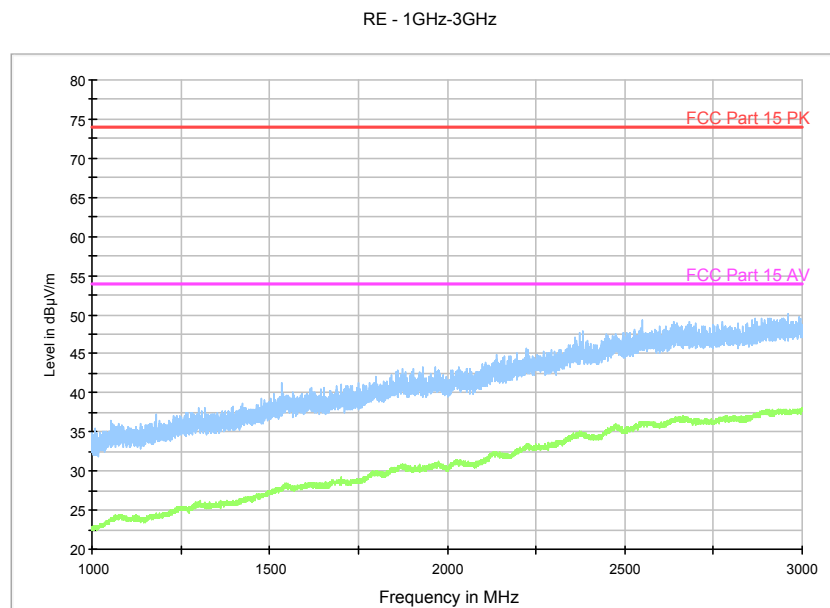
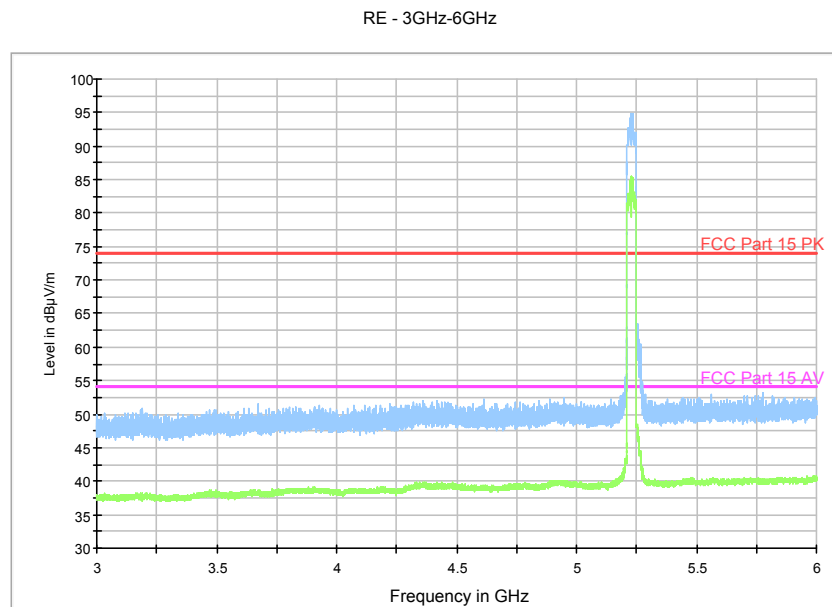


Fig. 75 Radiated Spurious Emission (802.11ac-HT40, ch44, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 76 Radiated Spurious Emission (802.11ac-HT40, ch44, 3 GHz-6 GHz)

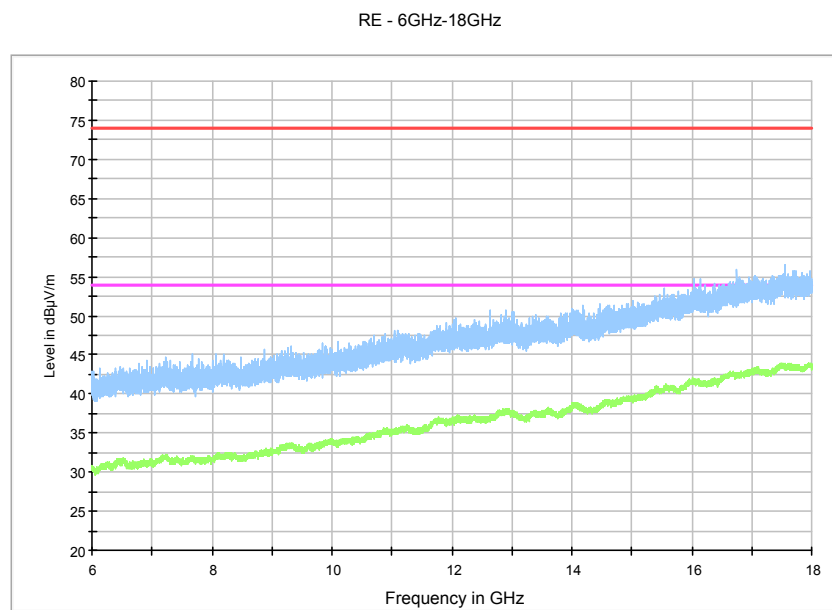


Fig. 77 Radiated Spurious Emission (802.11ac-HT40, ch46, 6 GHz-18 GHz)

5GHz U-NII 2A

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	52(5260MHz)	1 GHz ~ 3 GHz	Fig.78	P
		3 GHz ~ 6 GHz	Fig.79	P
		6 GHz ~ 18 GHz	Fig.80	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.81	P
		1 GHz ~ 3 GHz	Fig.82	P
		3 GHz ~ 6 GHz	Fig.83	P
		6 GHz ~ 18 GHz	Fig.84	P
		18 GHz ~ 26.5 GHz	Fig.85	P
		26.5 GHz ~ 40 GHz	Fig.86	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.87	P
		3 GHz ~ 6 GHz	Fig.88	P
		6 GHz ~ 18 GHz	Fig.89	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	52(5260MHz)	1 GHz ~ 3 GHz	Fig.90	P
		3 GHz ~ 6 GHz	Fig.91	P
		6 GHz ~ 18 GHz	Fig.92	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.93	P
		1 GHz ~ 3 GHz	Fig.94	P
		3 GHz ~ 6 GHz	Fig.95	P
		6 GHz ~ 18 GHz	Fig.96	P
		18 GHz ~ 26.5 GHz	Fig.97	P
		26.5 GHz ~ 40 GHz	Fig.98	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.99	P
		3 GHz ~ 6 GHz	Fig.100	P
		6 GHz ~ 18 GHz	Fig.101	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	52(5270MHz)	30 MHz ~1 GHz	Fig.102	P
		1 GHz ~ 3 GHz	Fig.103	P
		3 GHz ~ 6 GHz	Fig.104	P
		6 GHz ~ 18 GHz	Fig.105	P
		18 GHz ~ 26.5 GHz	Fig.106	P
		26.5 GHz ~ 40 GHz	Fig.107	P
	60(5310MHz)	1 GHz ~ 3 GHz	Fig.108	P
		3 GHz ~ 6 GHz	Fig.109	P
		6 GHz ~ 18 GHz	Fig.110	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	52(5260MHz)	1 GHz ~ 3 GHz	Fig.111	P
		3 GHz ~ 6 GHz	Fig.112	P
		6 GHz ~ 18 GHz	Fig.113	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.114	P
		1 GHz ~ 3 GHz	Fig.115	P
		3 GHz ~ 6 GHz	Fig.116	P
		6 GHz ~ 18 GHz	Fig.117	P
		18 GHz ~ 26.5 GHz	Fig.118	P
		26.5 GHz ~ 40 GHz	Fig.119	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.120	P
		3 GHz ~ 6 GHz	Fig.121	P
		6 GHz ~ 18 GHz	Fig.122	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	52(5270MHz)	30 MHz ~1 GHz	Fig.123	P
		1 GHz ~ 3 GHz	Fig.124	P
		3 GHz ~ 6 GHz	Fig.125	P
		6 GHz ~ 18 GHz	Fig.126	P
		18 GHz ~ 26.5 GHz	Fig.127	P
		26.5 GHz ~ 40 GHz	Fig.128	P
	60(5310MHz)	1 GHz ~ 3 GHz	Fig.129	P
		3 GHz ~ 6 GHz	Fig.130	P
		6 GHz ~ 18 GHz	Fig.131	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

5GHz U-NII 2A
802.11a

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
18000.000	44.1	-23.1	40.8	26.434	H
17999.400	44.0	-23.0	41.0	26.047	V
17998.800	43.9	-23.0	41.0	25.947	H
17998.200	43.9	-23.0	41.0	25.947	V
17997.600	43.9	-23.0	41.0	25.947	V
17997.000	43.9	-23.0	41.0	25.947	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17463.000	56.3	-23.9	41.2	38.953	H
17839.800	56.3	-23.3	41.0	38.633	H
17967.000	56.0	-23.3	41.0	38.333	H
17986.200	56.0	-23.3	41.0	38.333	H
17556.000	55.8	-23.9	41.2	38.453	H
17494.800	55.8	-23.9	41.2	38.453	H

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17970.600	44.0	-23.3	41.0	26.333	V
17511.000	44.0	-23.9	41.2	26.653	H
17994.000	44.0	-23.0	41.0	26.047	V
17469.000	44.0	-23.9	41.2	26.653	V
17486.400	43.9	-23.9	41.2	26.553	V
17956.800	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17942.400	56.5	-23.3	41.0	38.833	V
17626.800	56.2	-23.9	41.2	38.853	H
17706.000	56.2	-23.4	41.2	38.372	V
17455.800	55.9	-24.3	41.2	38.969	H
17183.400	55.6	-24.2	41.4	38.385	V
16790.400	55.6	-24.7	41.5	38.847	H

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.740	46.4	-33.9	34.4	45.872	V
17515.200	54.5	-23.9	41.2	37.153	V
17962.200	53.2	-23.3	41.0	35.533	V
17994.000	54.1	-23.0	41.0	36.147	H
17496.000	54.1	-23.9	41.2	36.753	V
17954.400	53.2	-23.3	41.0	35.533	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.730	60.6	-33.9	34.4	60.072	V
18000.000	53.3	-23.1	40.8	35.634	H
17999.400	53.7	-23.0	41.0	35.747	V
17998.800	53.3	-23.0	41.0	35.347	V
17998.200	54.3	-23.0	41.0	36.347	V
17997.600	54.5	-23.0	41.0	36.547	H

802.11n-HT20

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17637.600	44.0	-23.4	41.2	26.172	V
17660.400	43.9	-23.4	41.2	26.072	H
17977.200	43.9	-23.3	41.0	26.233	H
17502.600	43.9	-23.9	41.2	26.553	H
17986.200	43.9	-23.3	41.0	26.233	H
17557.200	43.9	-23.9	41.2	26.553	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17423.400	56.6	-24.3	41.2	39.669	H
17814.600	56.4	-23.3	41.0	38.733	V
17457.000	56.1	-24.3	41.2	39.169	H
17635.200	56.1	-23.4	41.2	38.272	H
17508.000	56.0	-23.9	41.2	38.653	V
17824.800	55.9	-23.3	41.0	38.233	H

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17935.200	44.0	-23.3	41.0	26.333	H
17505.000	44.0	-23.9	41.2	26.653	H
17977.200	43.9	-23.3	41.0	26.233	V
17505.600	43.9	-23.9	41.2	26.553	H
17639.400	43.9	-23.4	41.2	26.072	V
17925.000	43.9	-23.3	41.0	26.233	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17517.000	56.1	-23.9	41.2	38.753	H
17917.200	56.1	-23.3	41.0	38.433	H
17920.200	56.1	-23.3	41.0	38.433	H
17783.400	56.0	-23.4	41.0	38.372	H
17888.400	56.0	-23.3	41.0	38.333	V
17171.400	56.0	-24.2	41.4	38.785	V

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.050	46.3	-33.9	34.4	45.772	H
17971.200	44.1	-23.3	41.0	26.433	H
17509.800	44.1	-23.9	41.2	26.753	H
17512.800	44.0	-23.9	41.2	26.653	H
17519.400	44.0	-23.9	41.2	26.653	H
17548.800	43.9	-23.9	41.2	26.553	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5352.450	59.2	-33.9	34.4	58.672	H
17982.000	56.0	-23.3	41.0	38.333	H
17941.800	55.9	-23.3	41.0	38.233	V
17529.600	55.8	-23.9	41.2	38.453	H
17611.200	55.8	-23.9	41.2	38.453	H
16789.800	55.7	-24.7	41.5	38.947	V

802.11n-HT40

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17989.200	44.1	-23.0	41.0	26.147	V
17962.800	44.1	-23.3	41.0	26.433	V
17493.600	44.1	-23.9	41.2	26.753	H
17520.600	44.0	-23.9	41.2	26.653	V
17486.400	44.0	-23.9	41.2	26.653	H
17956.800	44.0	-23.3	41.0	26.333	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17377.200	56.6	-24.3	41.2	39.669	H
17809.800	56.0	-23.3	41.0	38.333	H
17860.800	55.9	-23.3	41.0	38.233	H
17503.200	55.8	-23.9	41.2	38.453	V
17770.800	55.7	-23.4	41.0	38.072	V
17680.800	55.6	-23.4	41.2	37.772	V



Channel 60

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.490	46.9	-33.9	34.4	46.372	V
17967.600	44.0	-23.3	41.0	26.333	H
17488.800	43.9	-23.9	41.2	26.553	H
17532.600	43.9	-23.9	41.2	26.553	V
17967.000	43.9	-23.3	41.0	26.233	H
17983.200	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.160	64.6	-33.9	34.4	64.072	V
17635.200	56.8	-23.4	41.2	38.972	H
17476.800	56.0	-23.9	41.2	38.653	V
17691.600	55.8	-23.4	41.2	37.972	H
17653.800	55.8	-23.4	41.2	37.972	H
17611.800	55.7	-23.9	41.2	38.353	V

802.11ac-HT20

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17973.000	44.0	-23.3	41.0	26.333	H
17487.000	43.9	-23.9	41.2	26.553	V
17563.800	43.9	-23.9	41.2	26.553	H
17530.800	43.9	-23.9	41.2	26.553	H
17974.800	43.9	-23.3	41.0	26.233	H
17969.400	43.9	-23.3	41.0	26.233	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17917.800	56.6	-23.3	41.0	38.933	V
16874.400	56.5	-24.7	41.5	39.747	V
17962.200	56.2	-23.3	41.0	38.533	H
17662.800	56.1	-23.4	41.2	38.272	H
17748.600	55.8	-23.4	41.2	37.972	V
17510.400	55.7	-23.9	41.2	38.353	H

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17481.600	44.0	-23.9	41.2	26.653	V
17982.600	43.9	-23.3	41.0	26.233	V
17532.600	43.9	-23.9	41.2	26.553	H
17496.600	43.9	-23.9	41.2	26.553	V
17973.600	43.9	-23.3	41.0	26.233	H
17699.400	43.9	-23.4	41.2	26.072	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17486.400	56.1	-23.9	41.2	38.753	V
17512.200	56.1	-23.9	41.2	38.753	H
17674.800	56.0	-23.4	41.2	38.172	V
17443.800	56.0	-24.3	41.2	39.069	V
17057.400	55.9	-24.6	41.4	39.115	V
17684.400	55.8	-23.4	41.2	37.972	V

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.740	46.4	-33.9	34.4	45.872	V
17511.000	44.0	-23.9	41.2	26.653	H
17979.600	43.9	-23.3	41.0	26.233	H
17954.400	43.9	-23.3	41.0	26.233	V
17697.000	43.9	-23.4	41.2	26.072	H
17980.800	43.9	-23.3	41.0	26.233	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5355.830	58.6	-33.9	34.4	58.072	V
17790.600	56.2	-23.4	41.0	38.572	H
17523.000	56.1	-23.9	41.2	38.753	V
17746.200	55.9	-23.4	41.2	38.072	V
17950.800	55.9	-23.3	41.0	38.233	H
17532.000	55.8	-23.9	41.2	38.453	V



802.11ac-HT40

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17886.600	44.0	-23.3	41.0	26.333	V
17626.800	44.0	-23.9	41.2	26.653	V
17937.600	43.9	-23.3	41.0	26.233	H
17630.400	43.9	-23.9	41.2	26.553	V
17631.600	43.9	-23.9	41.2	26.553	H
17982.600	43.9	-23.3	41.0	26.233	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17886.600	56.2	-23.3	41.0	38.533	V
17626.800	56.2	-23.9	41.2	38.853	V
17937.600	56.2	-23.3	41.0	38.533	H
17630.400	56.0	-23.9	41.2	38.653	V
17631.600	55.9	-23.9	41.2	38.553	H
17982.600	55.9	-23.3	41.0	38.233	V

Channel 60

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.050	46.3	-33.9	34.4	45.772	H
17953.200	44.0	-23.3	41.0	26.333	V
17968.200	44.0	-23.3	41.0	26.333	H
17982.000	43.9	-23.3	41.0	26.233	H
17533.800	43.9	-23.9	41.2	26.553	V
17523.000	43.9	-23.9	41.2	26.553	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5352.460	62.8	-33.9	34.4	62.272	V
17808.000	56.4	-23.4	41.0	38.772	H
17601.000	56.3	-23.9	41.2	38.953	H
17971.800	55.9	-23.3	41.0	38.233	V
17962.800	55.9	-23.3	41.0	38.233	H
17998.800	55.7	-23.0	41.0	37.747	V

Test graphs as below:

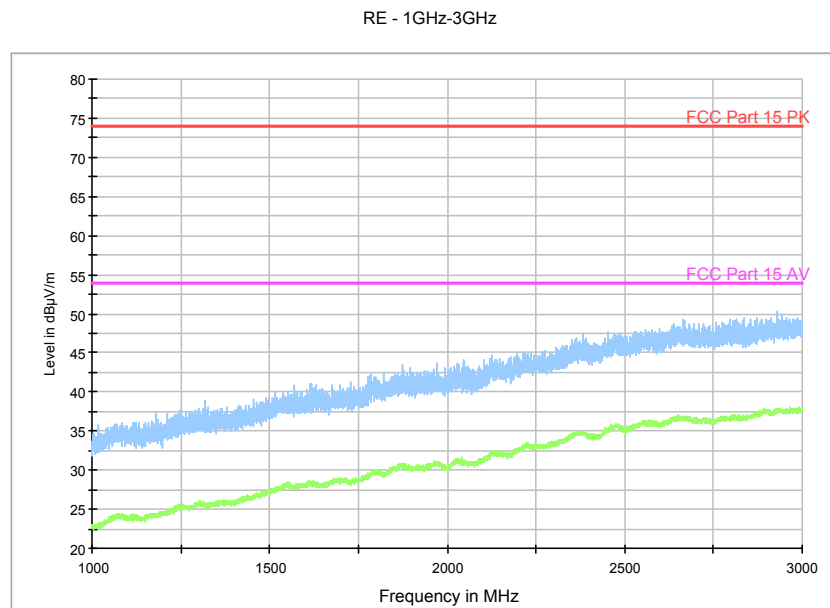
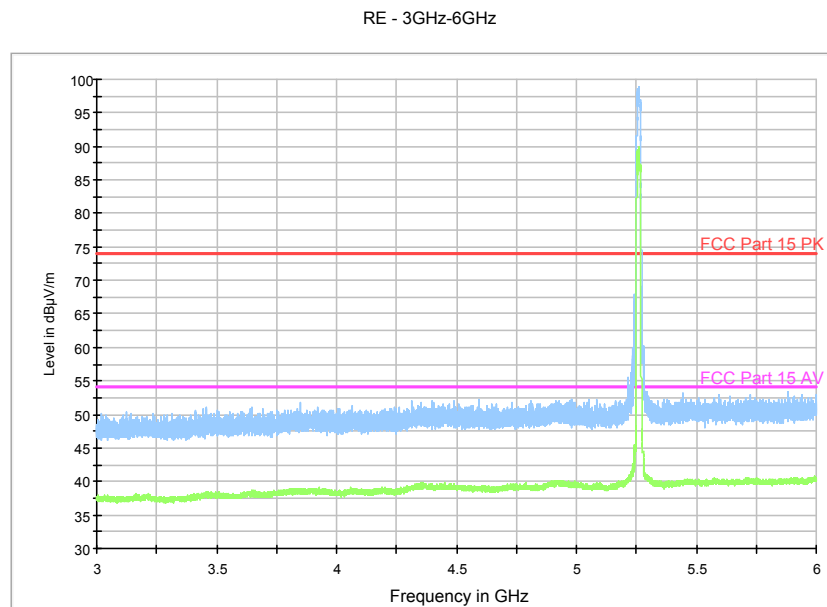


Fig. 78 Radiated Spurious Emission (802.11a, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 79 Radiated Spurious Emission (802.11a, ch52, 3 GHz-6 GHz)

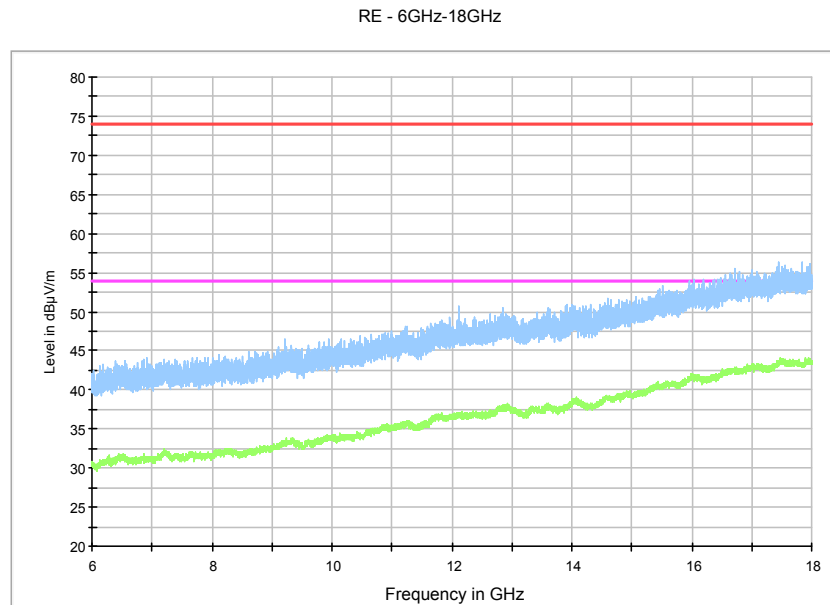


Fig. 80 Radiated Spurious Emission (802.11a, ch52, 6 GHz-18 GHz)

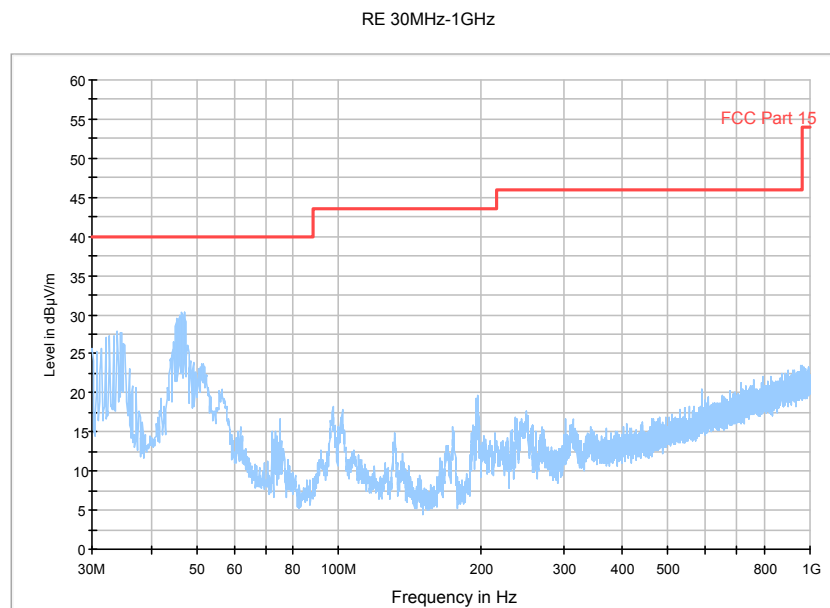


Fig. 81 Radiated Spurious Emission (802.11a, ch56, 30 MHz-1 GHz)

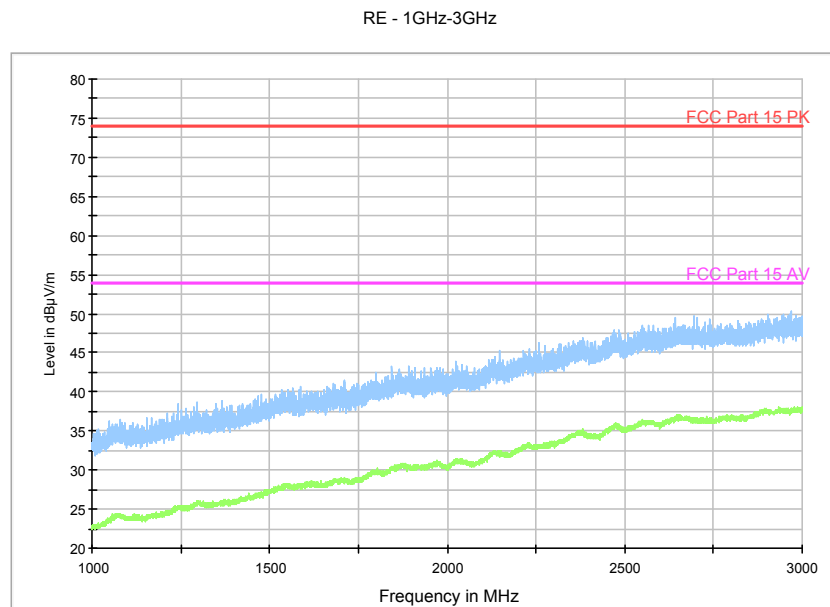
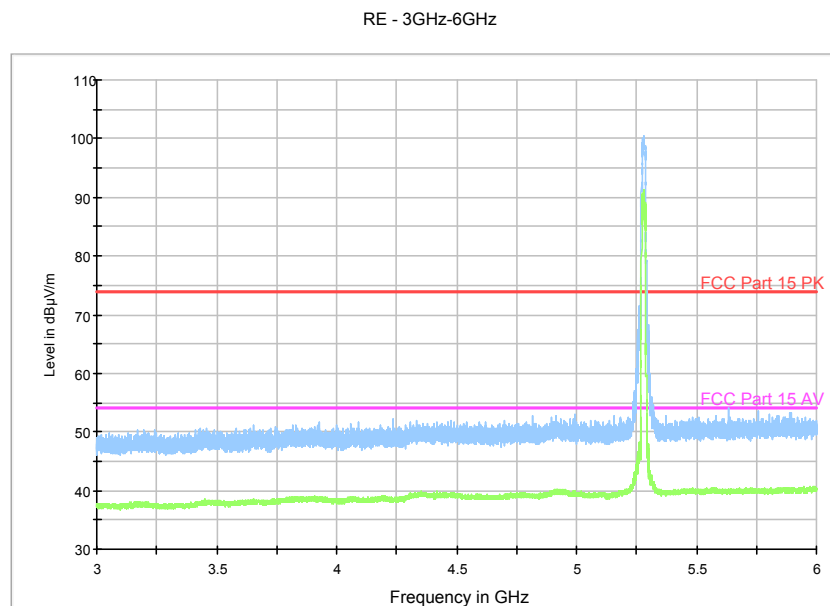


Fig. 82 Radiated Spurious Emission (802.11a, ch56, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 83 Radiated Spurious Emission (802.11a, ch56, 3 GHz-6 GHz)

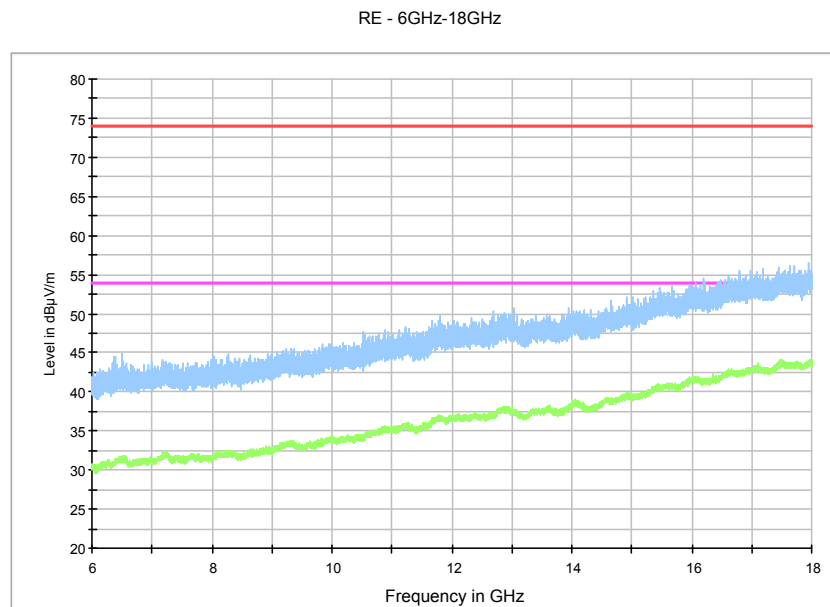


Fig. 84 Radiated Spurious Emission (802.11a, ch56, 6 GHz-18 GHz)

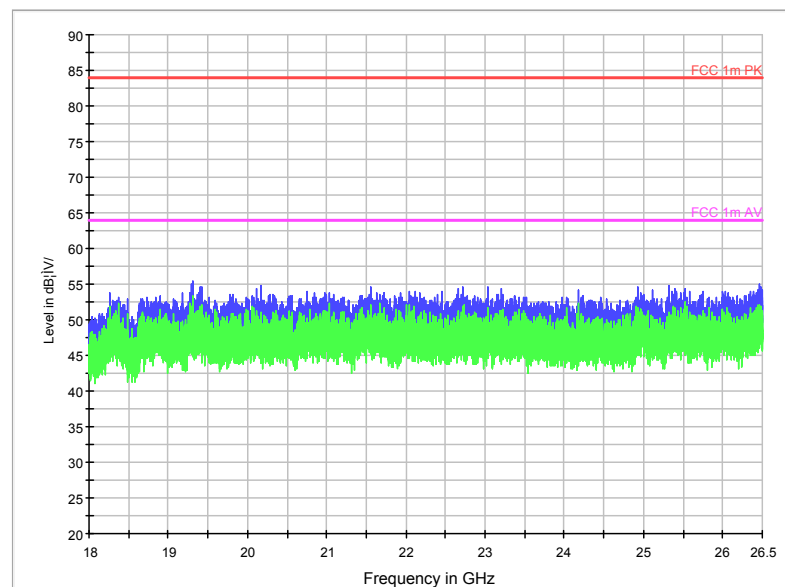


Fig. 85 Radiated Spurious Emission (802.11a, ch56, 18 GHz-26.5 GHz)

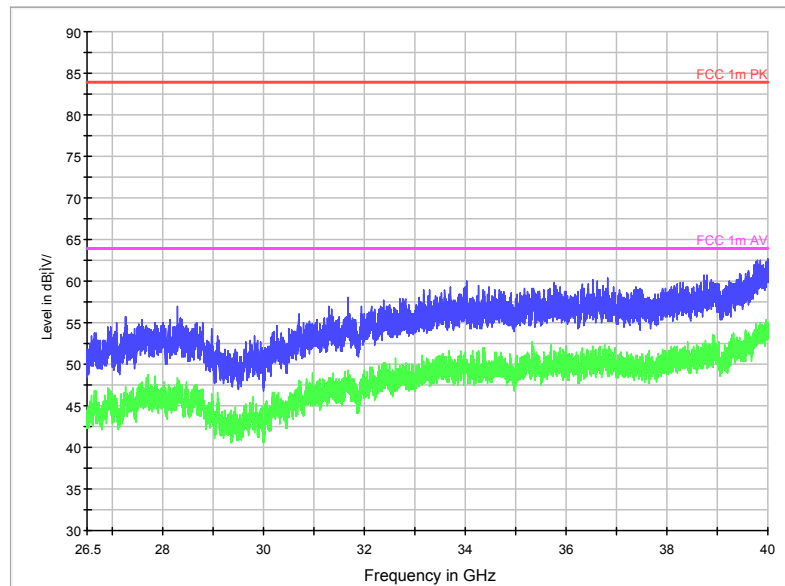


Fig. 86 Radiated Spurious Emission (802.11a, ch56, 26.5 GHz-40 GHz)

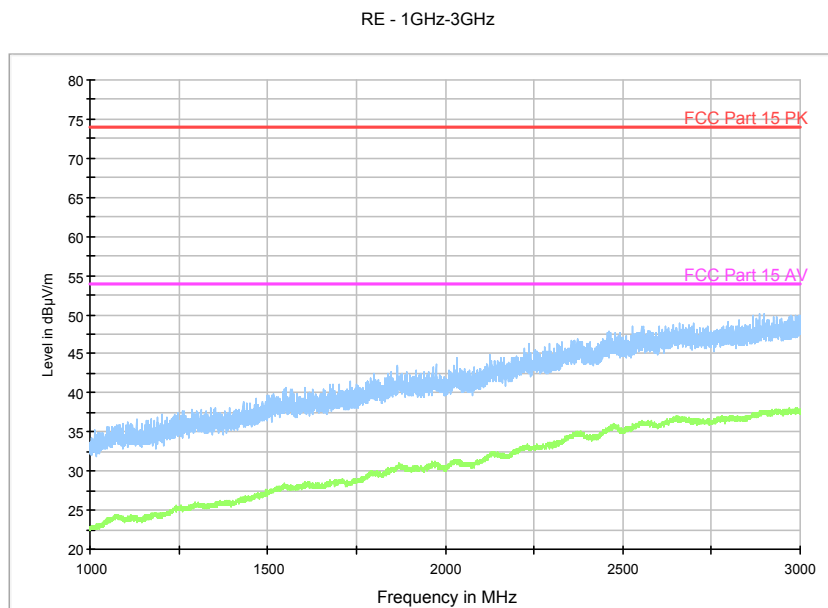
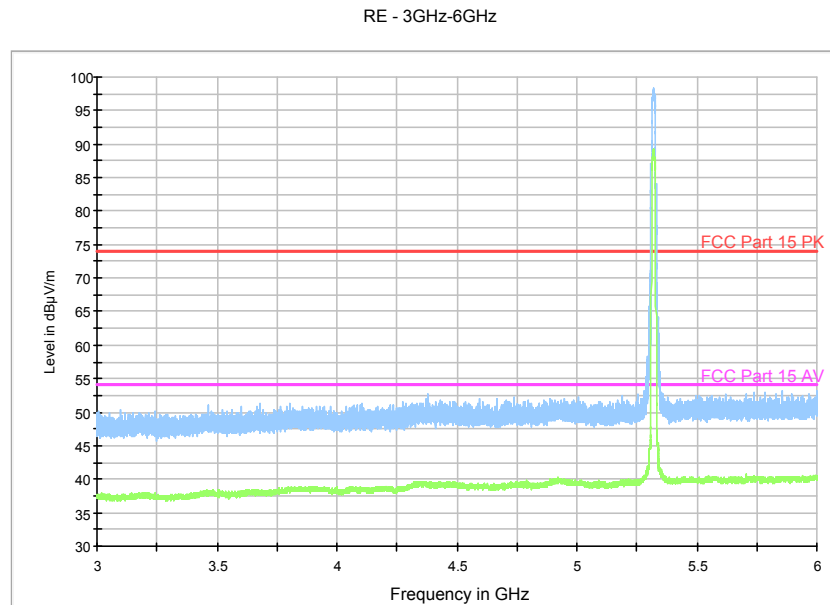


Fig. 87 Radiated Spurious Emission (802.11a, ch64, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 88 Radiated Spurious Emission (802.11a, ch64, 3GHz- 6 GHz)

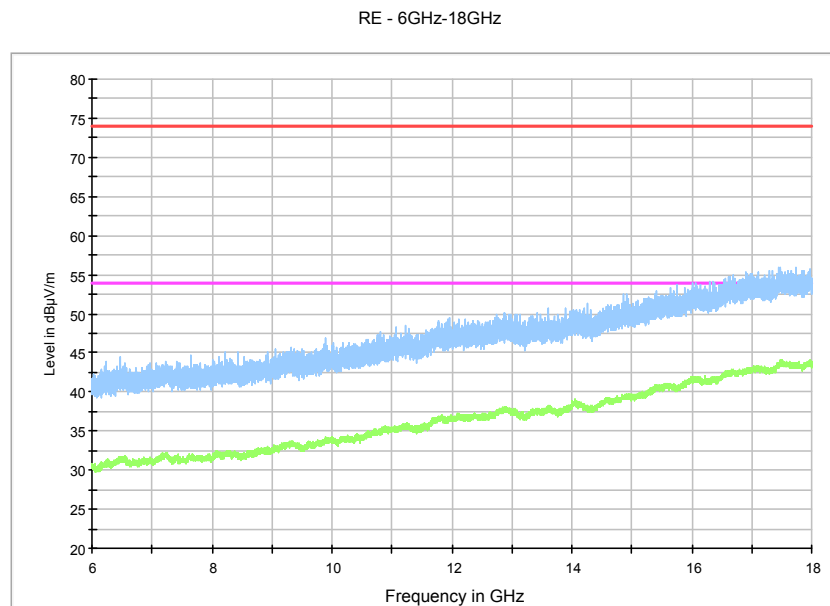


Fig. 89 Radiated Spurious Emission (802.11a, ch64, 6 GHz-18GHz)

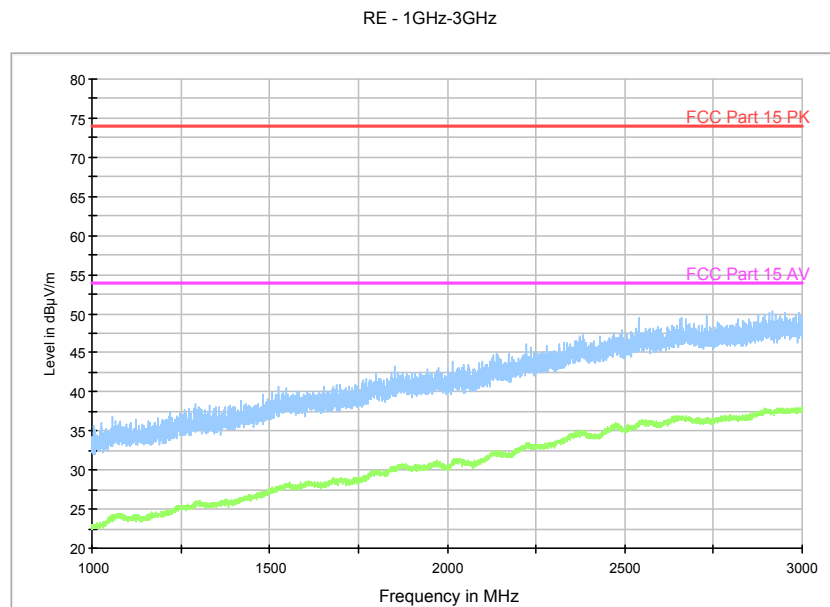
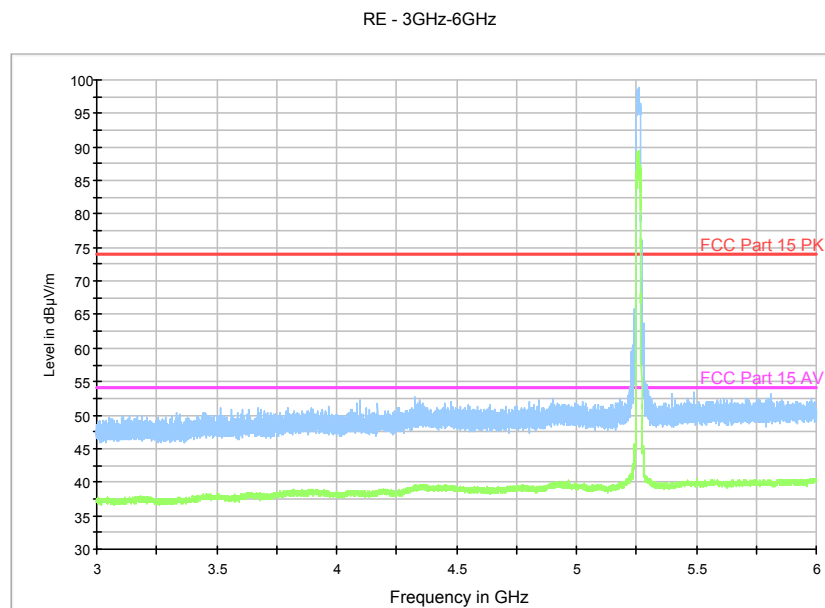


Fig. 90 Radiated Spurious Emission (802.11n-HT20, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 91 Radiated Spurious Emission (802.11n-HT20, ch52, 3 GHz-6GHz)

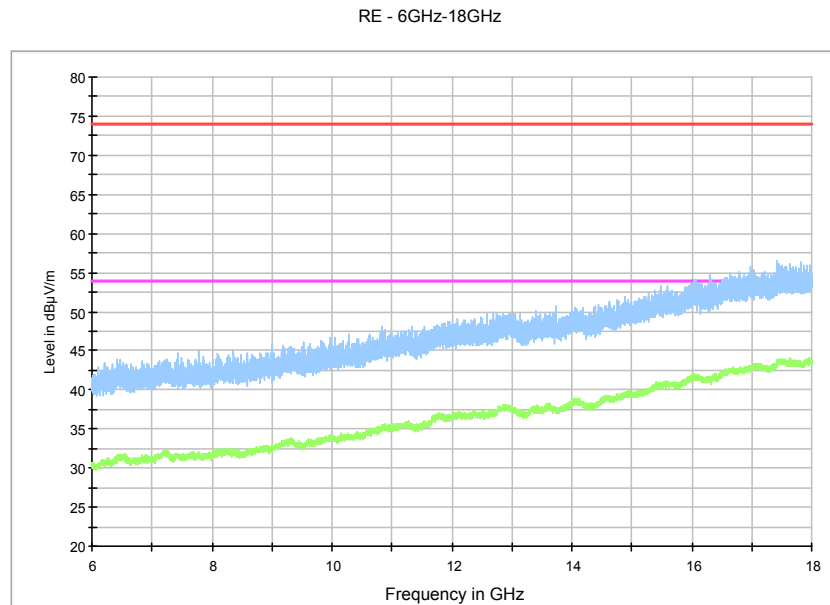


Fig. 92 Radiated Spurious Emission (802.11n-HT20, ch52, 6 GHz-18GHz)

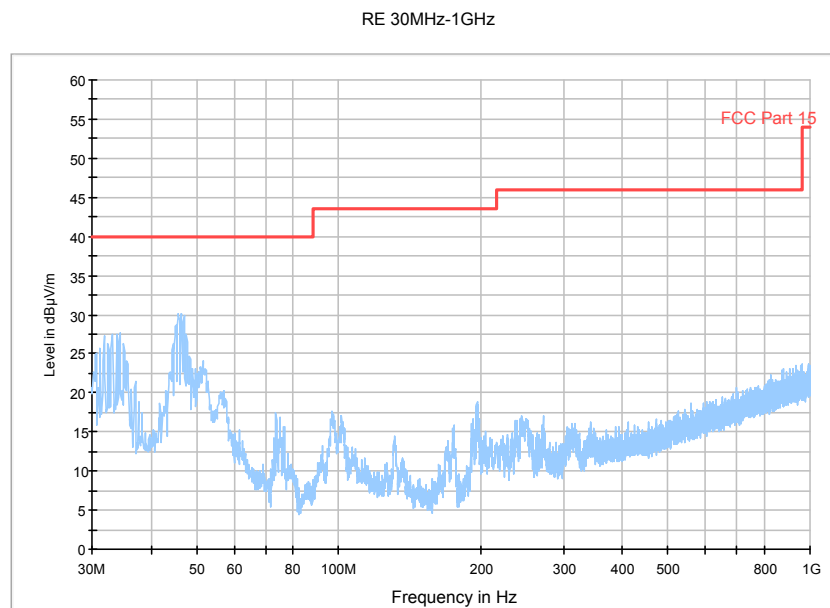


Fig. 93 Radiated Spurious Emission (802.11n-HT20, ch56, 30 MHz-1 GHz)

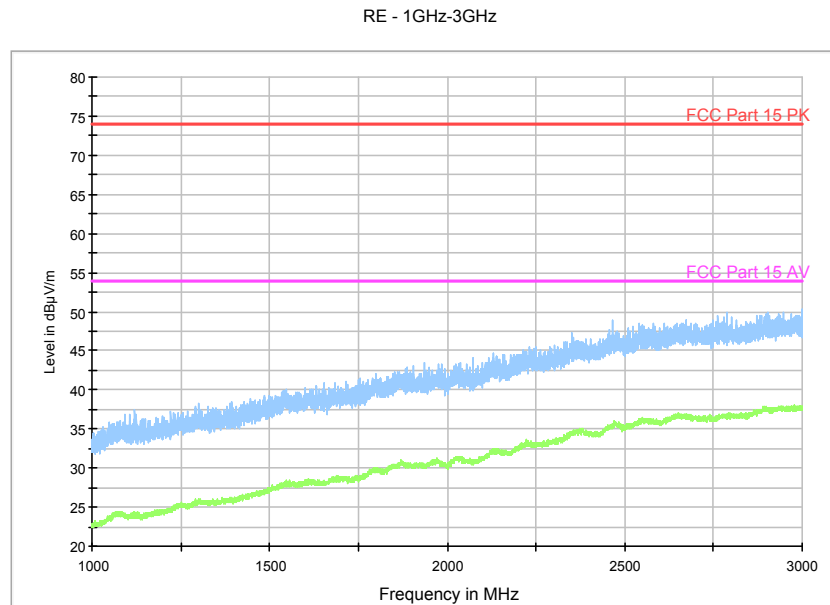
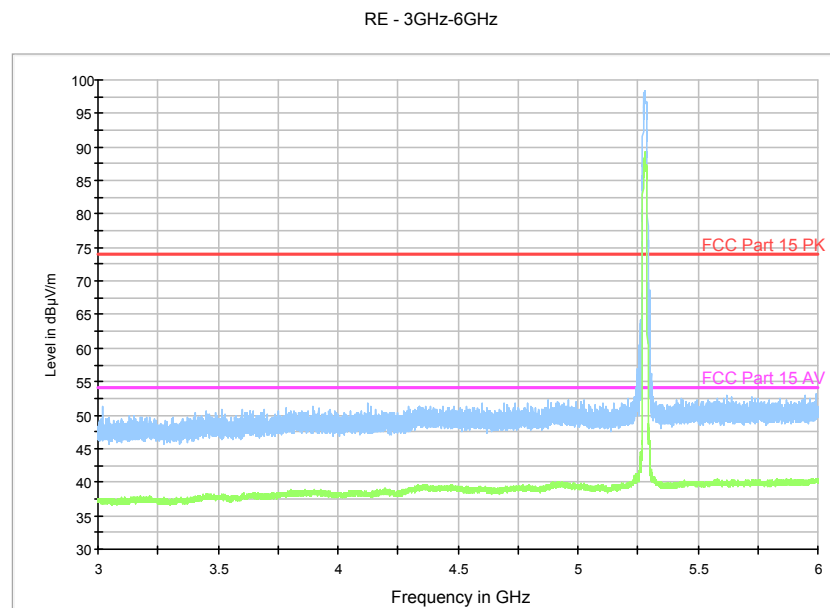


Fig. 94 Radiated Spurious Emission (802.11n-HT20, ch56, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 95 Radiated Spurious Emission (802.11n-HT20, ch56, 3GHz-6 GHz)

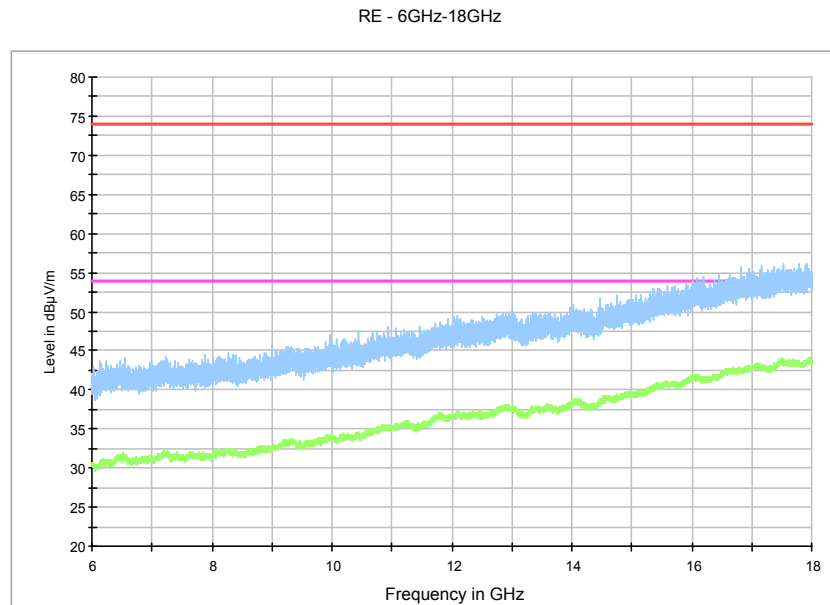


Fig. 96 Radiated Spurious Emission (802.11n-HT20, ch56, 6 GHz-18 GHz)

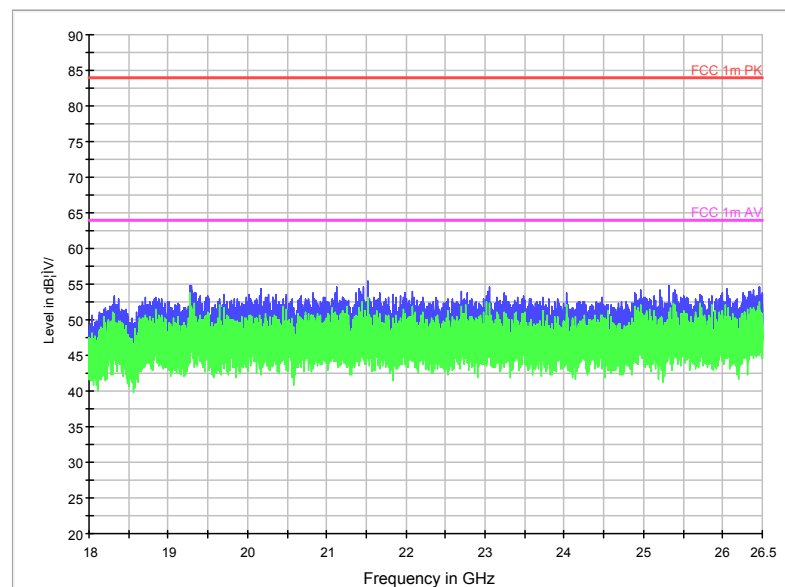


Fig. 97 Radiated Spurious Emission (802.11n-HT20, ch56, 18 GHz-26.5 GHz)

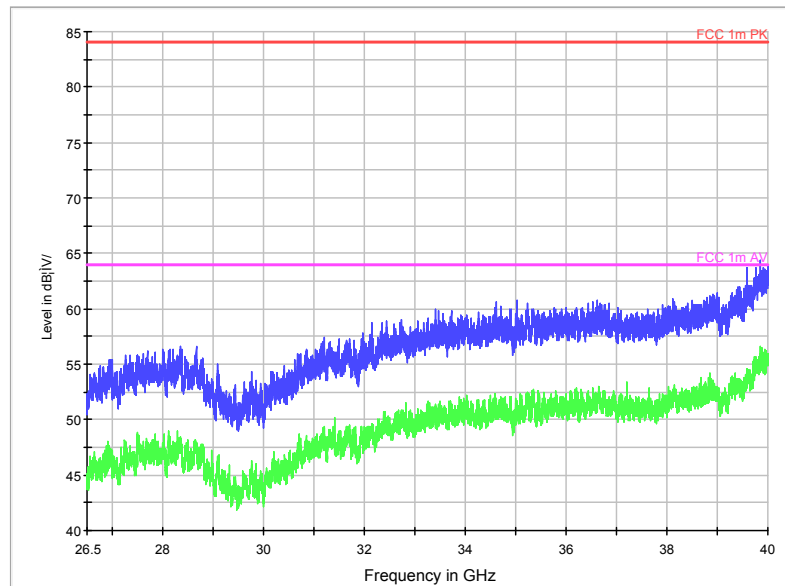


Fig. 98 Radiated Spurious Emission (802.11n-HT20, ch56, 26.5 GHz-40 GHz)

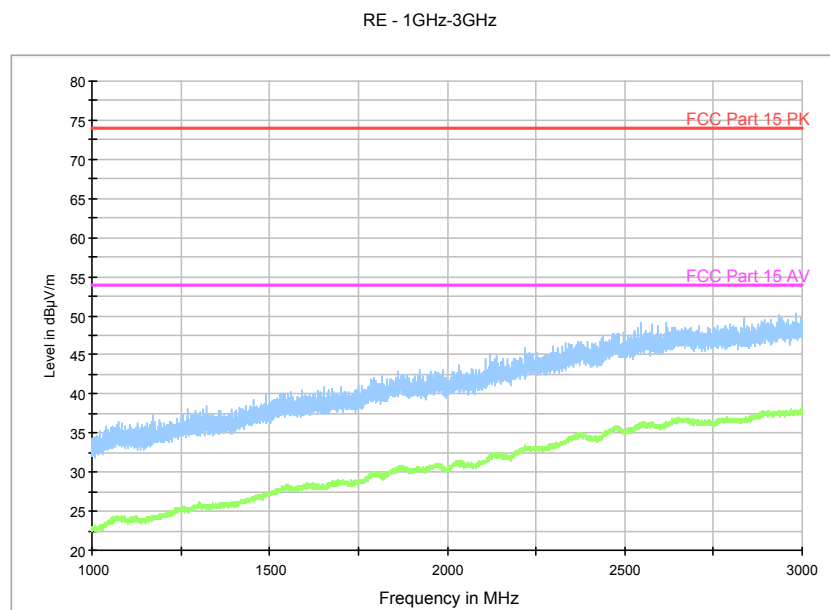
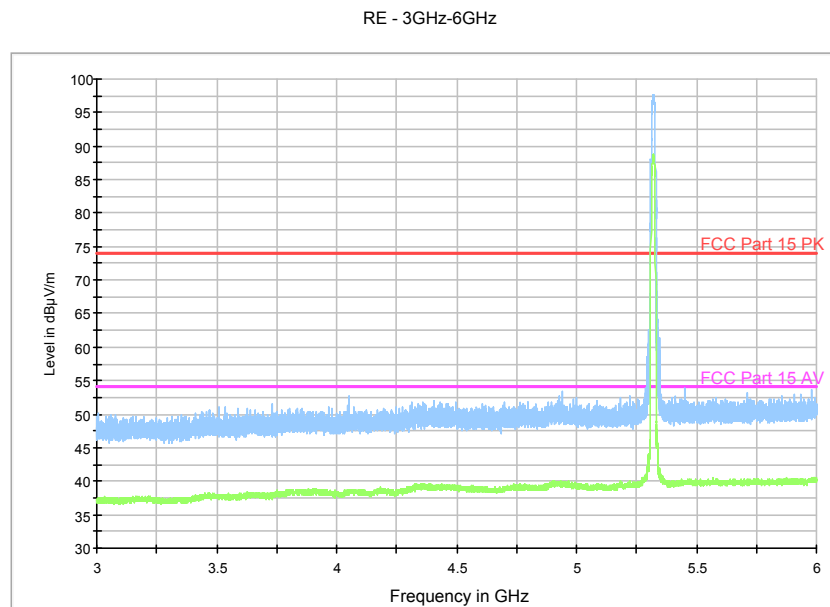


Fig. 99 Radiated Spurious Emission (802.11n-HT20, ch64, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 100 Radiated Spurious Emission (802.11n-HT20, ch64, 3 GHz-6GHz)

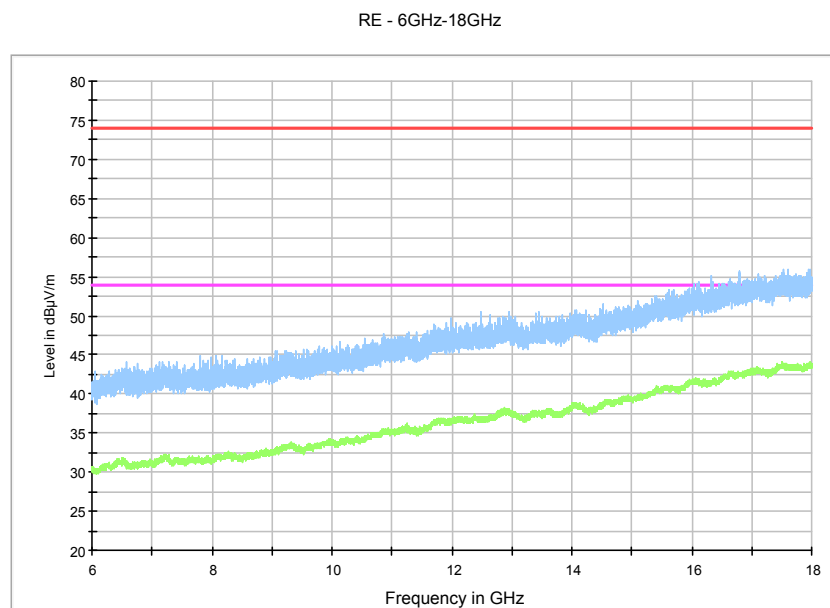


Fig. 101 Radiated Spurious Emission (802.11n-HT20, ch64, 6 GHz-18 GHz)

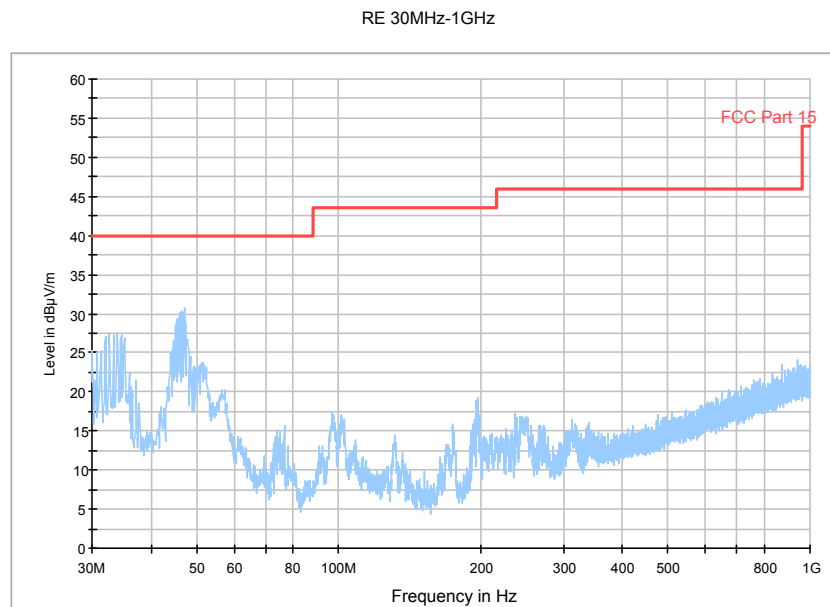


Fig. 102 Radiated Spurious Emission (802.11n-HT40, ch52, 30 MHz-1 GHz)

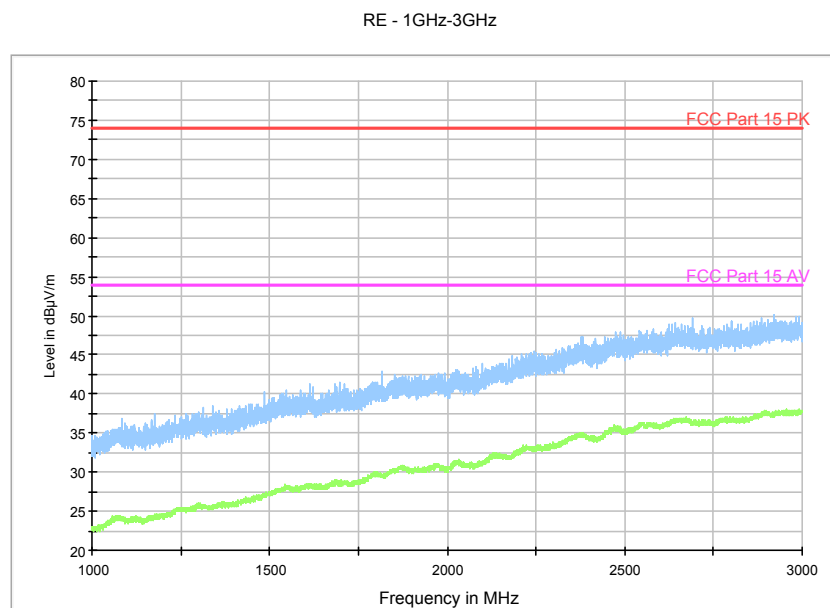
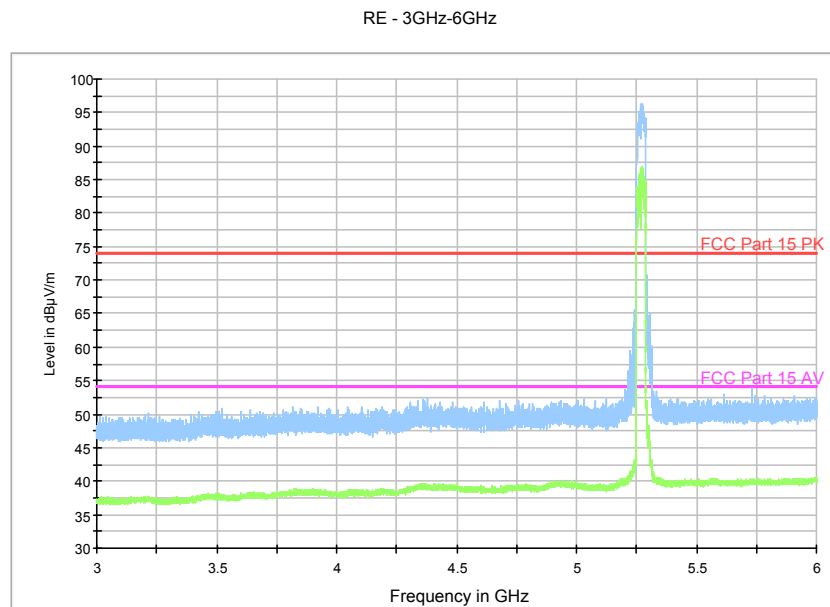


Fig. 103 Radiated Spurious Emission (802.11n-HT40, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 104 Radiated Spurious Emission (802.11n-HT40, ch52, 3 GHz-6 GHz)

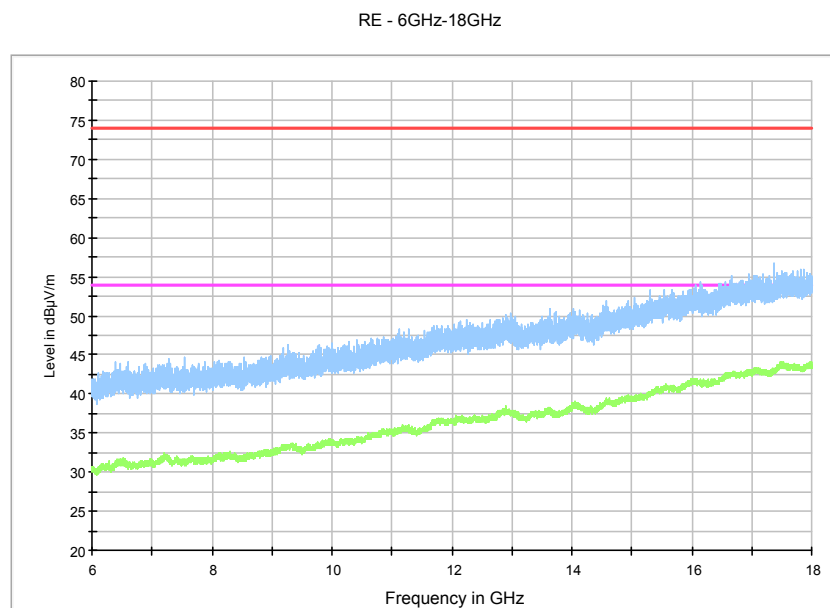


Fig. 105 Radiated Spurious Emission (802.11n-HT40, ch52, 6 GHz-18 GHz)

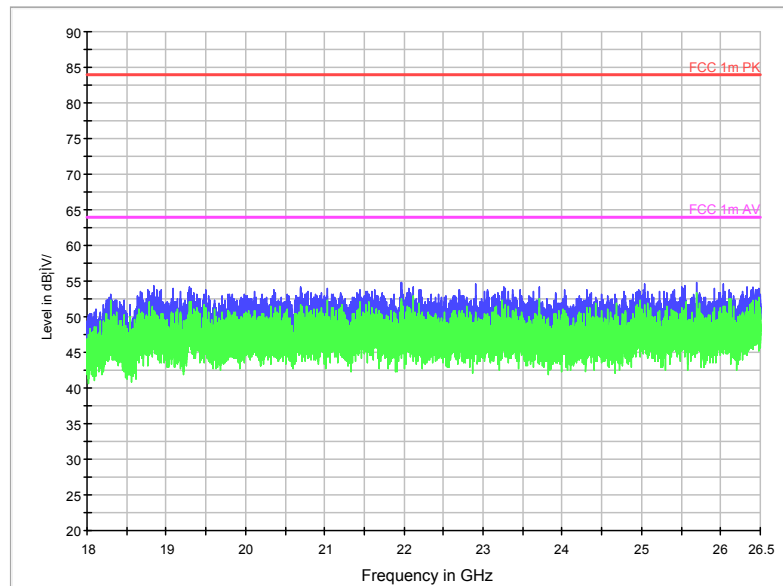


Fig. 106 Radiated Spurious Emission (802.11n-HT40, ch52, 18 GHz-26.5 GHz)

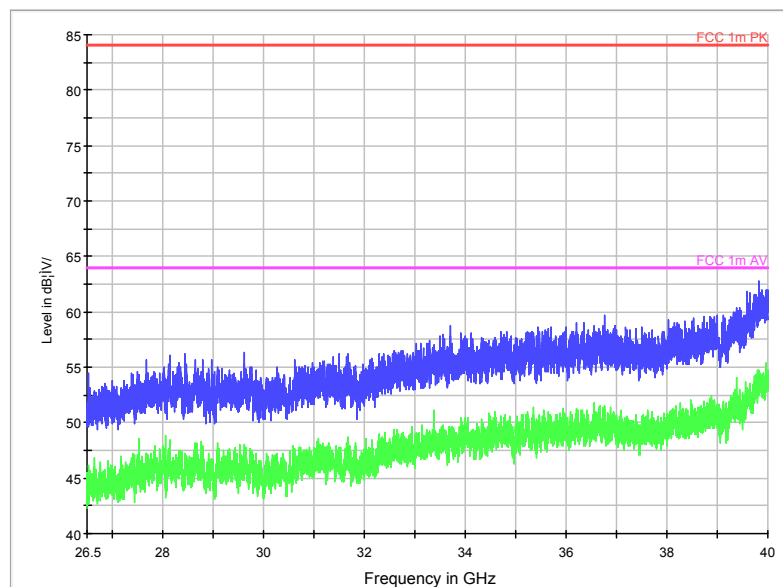


Fig. 107 Radiated Spurious Emission (802.11n-HT40, ch52, 26.5 GHz-40 GHz)

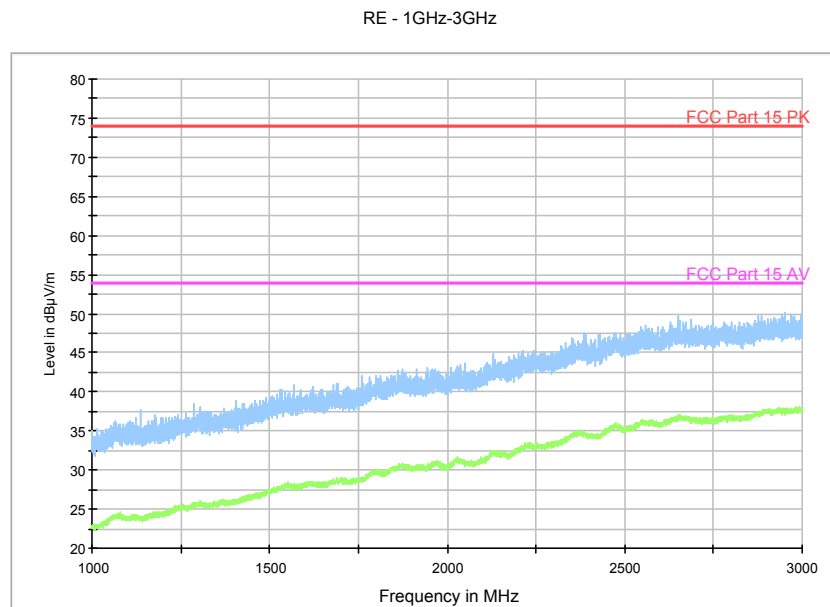
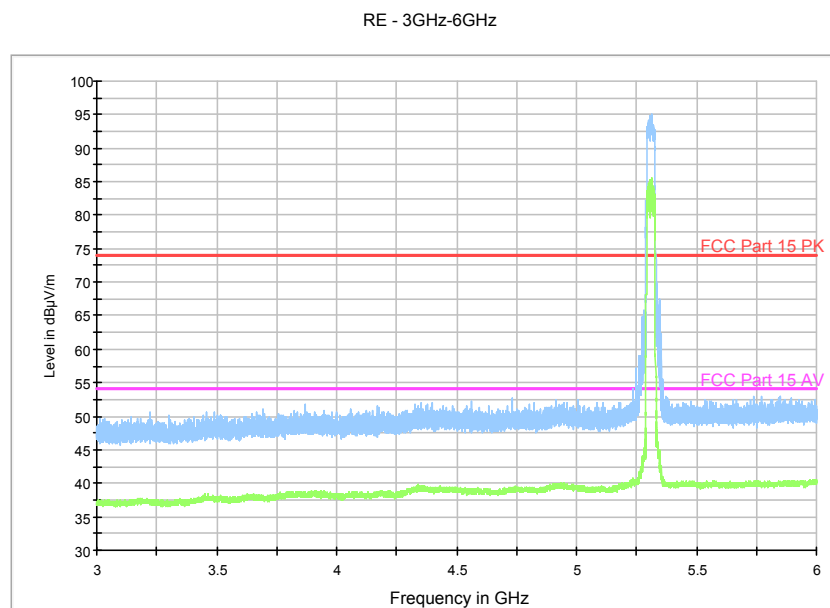


Fig. 108 Radiated Spurious Emission (802.11n-HT40, ch60, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 109 Radiated Spurious Emission (802.11n-HT40, ch60, 3 GHz-6 GHz)

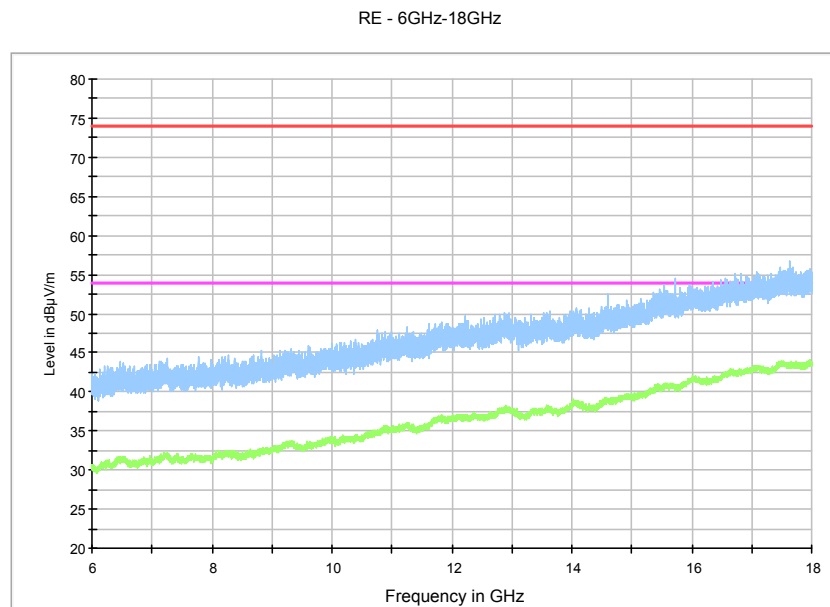


Fig. 110 Radiated Spurious Emission (802.11n-HT40, ch60, 6 GHz-18 GHz)

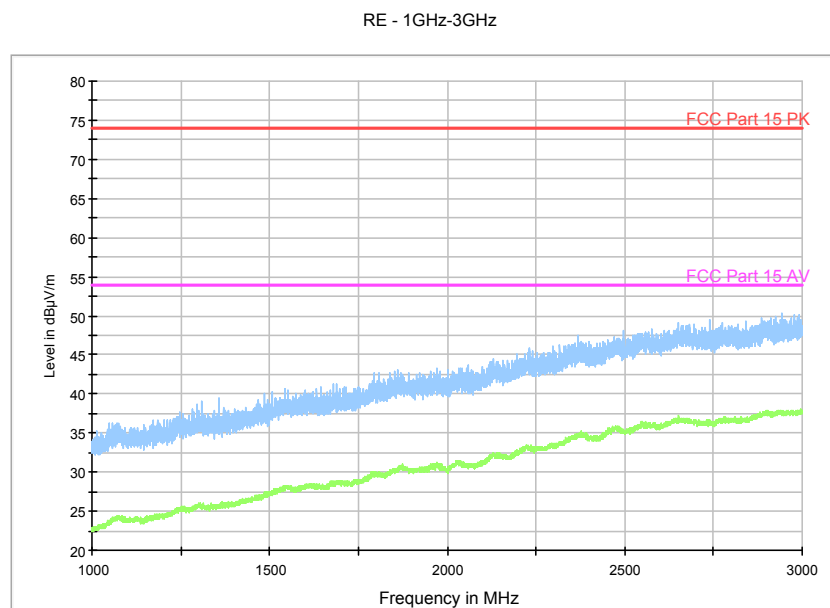
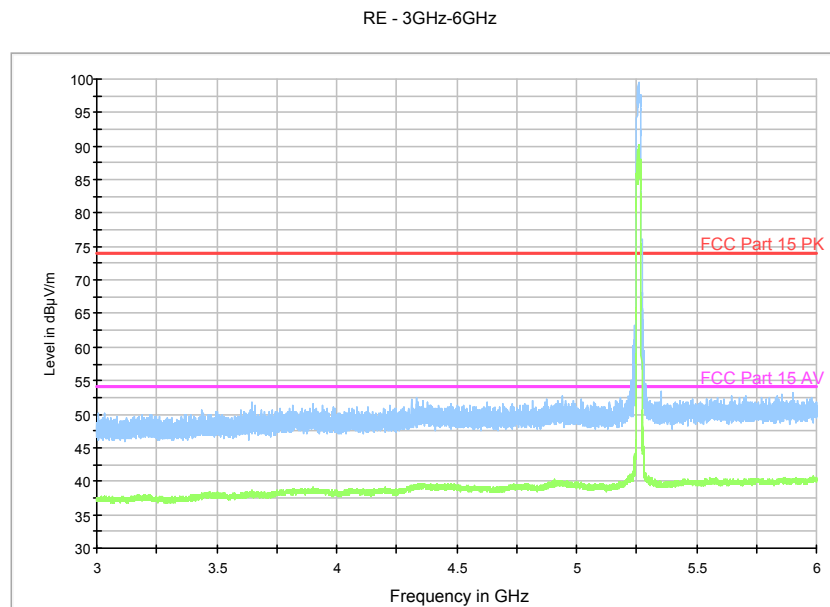


Fig. 111 Radiated Spurious Emission (802.11ac-HT20, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 112 Radiated Spurious Emission (802.11ac-HT20, ch52, 3 GHz-6 GHz)

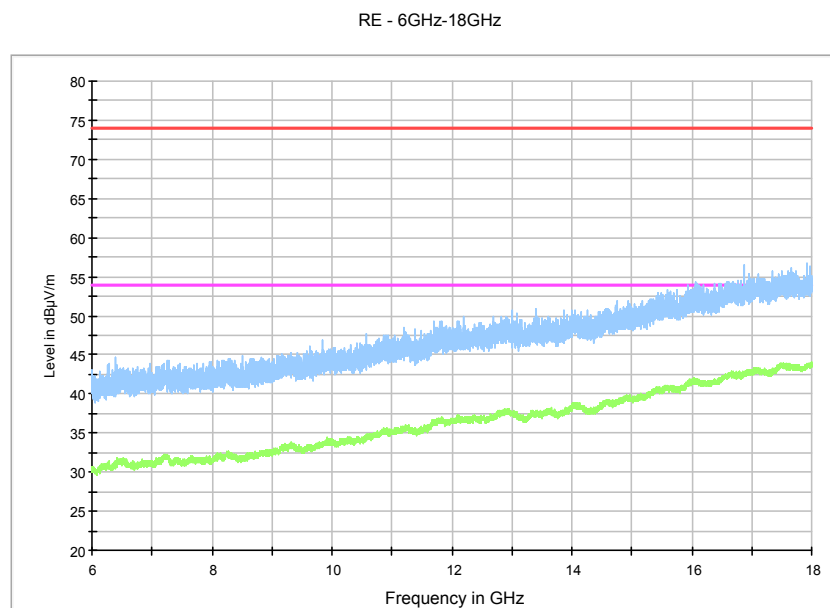


Fig. 113 Radiated Spurious Emission (802.11ac-HT20, ch52, 6 GHz-18GHz)

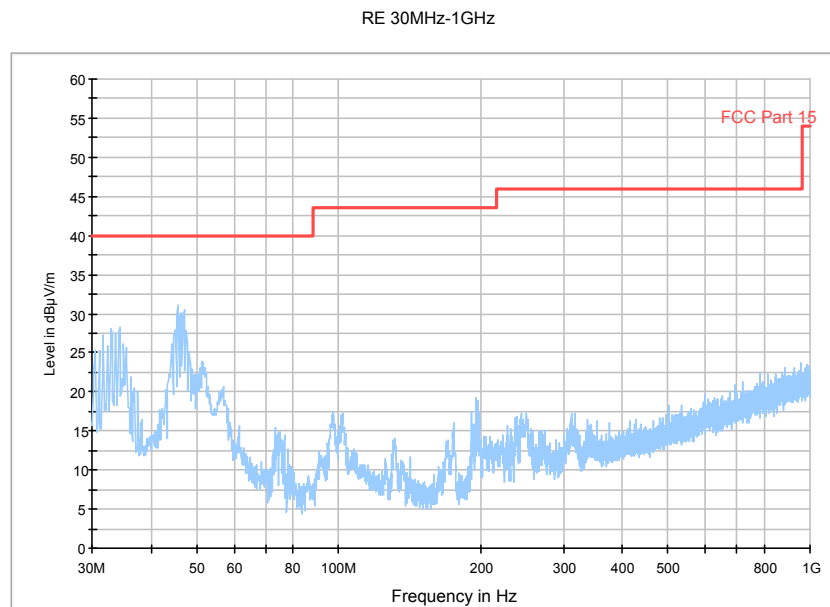


Fig. 114 Radiated Spurious Emission (802.11ac-HT20, ch56, 30 MHz-1 GHz)

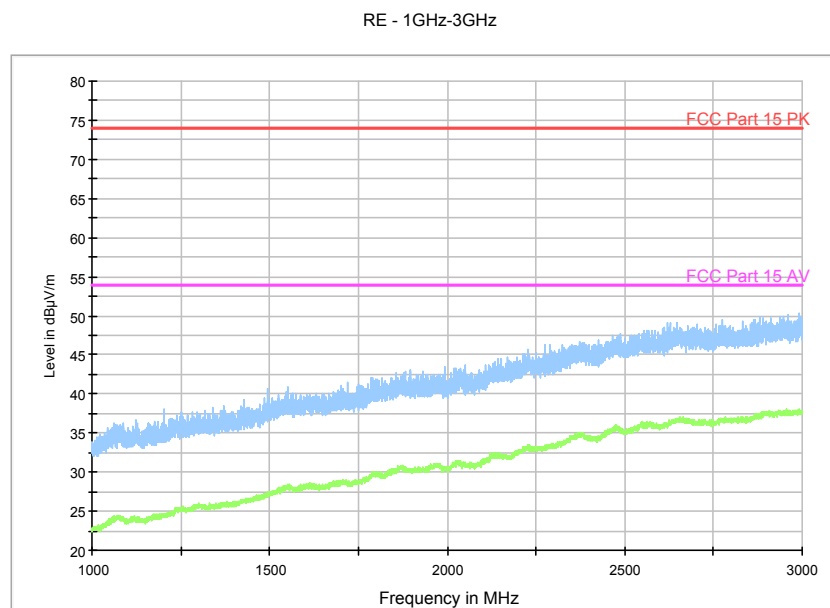
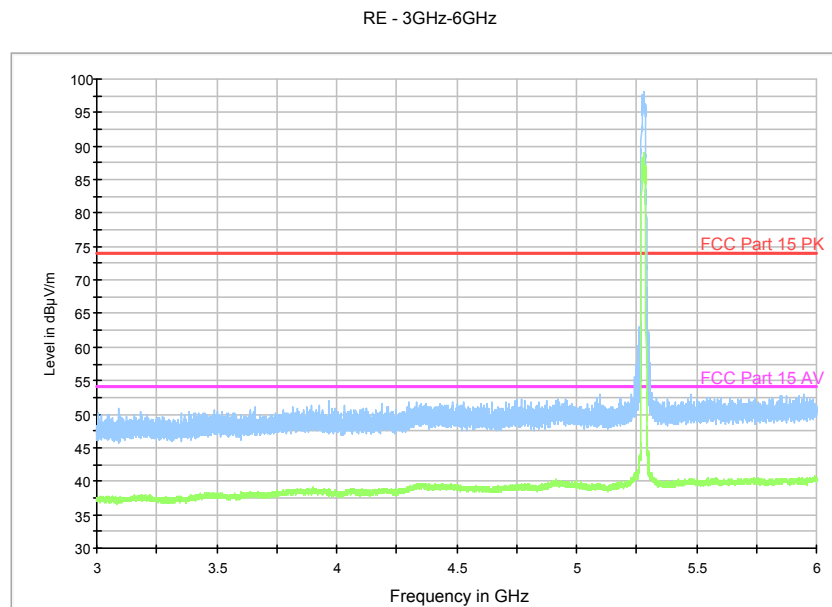


Fig. 115 Radiated Spurious Emission (802.11ac-HT20, ch56, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 116 Radiated Spurious Emission (802.11ac-HT20, ch56, 3 GHz-6 GHz)

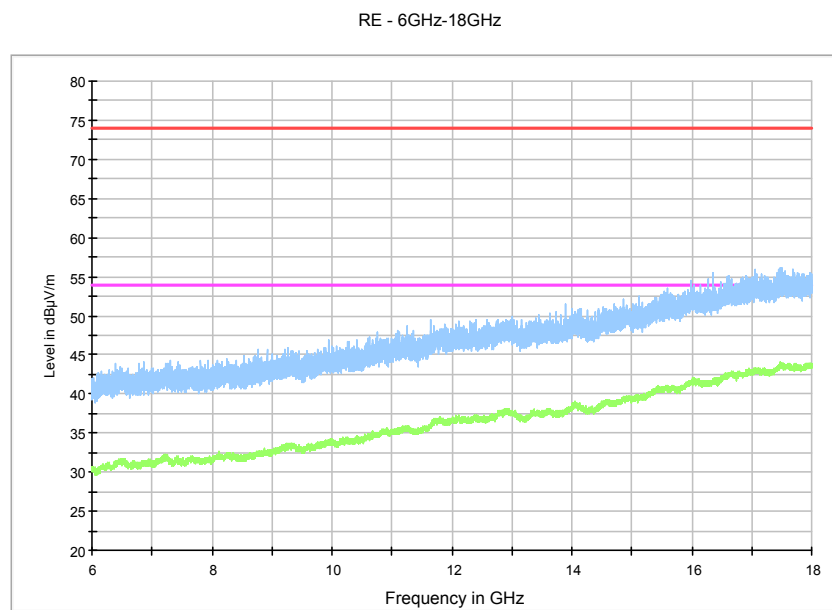


Fig. 117 Radiated Spurious Emission (802.11ac-HT20, ch56, 6 GHz-18 GHz)

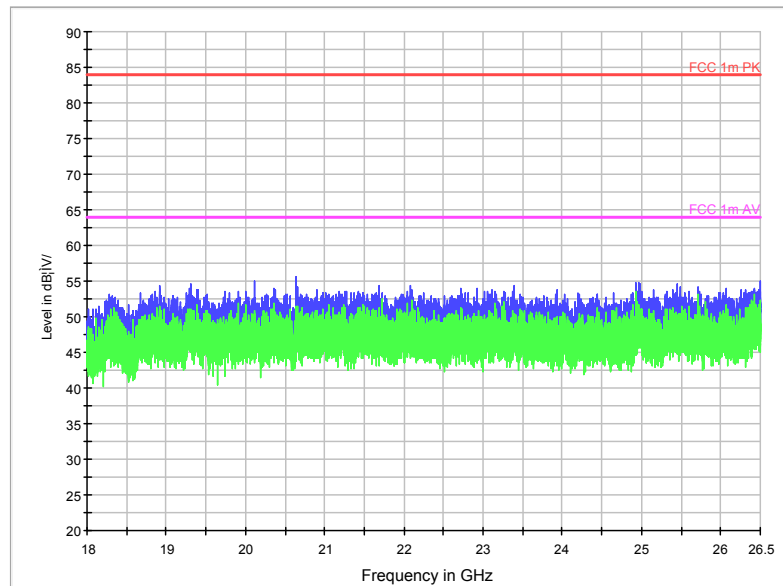


Fig. 118 Radiated Spurious Emission (802.11ac-HT20, ch56, 18 GHz-26.5 GHz)

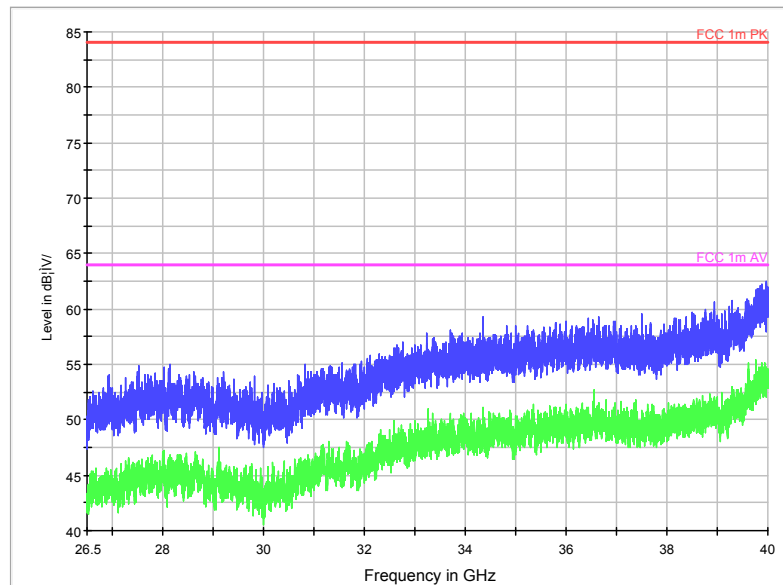


Fig. 119 Radiated Spurious Emission (802.11ac-HT20, ch56, 26.5 GHz-40 GHz)

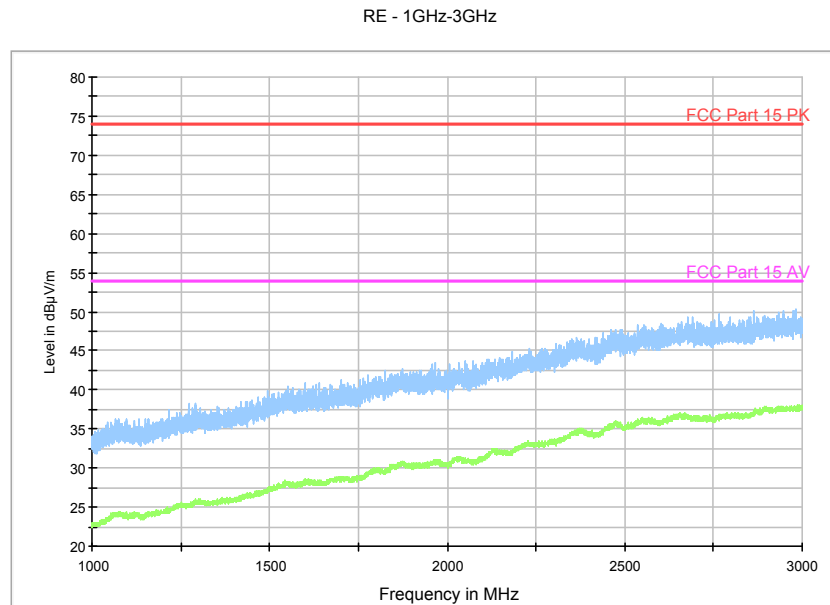
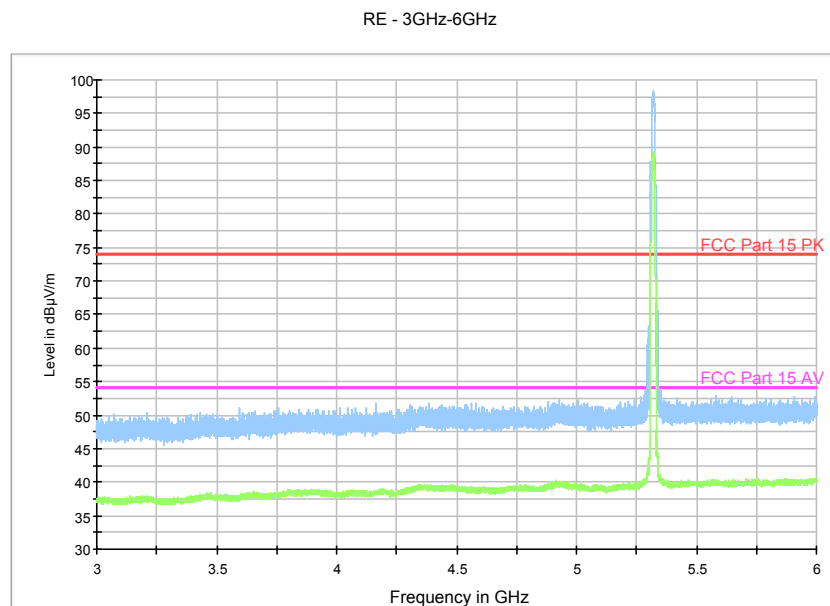


Fig. 120 Radiated Spurious Emission (802.11ac-HT20, ch64, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 121 Radiated Spurious Emission (802.11ac-HT20, ch64, 3 GHz-6GHz)

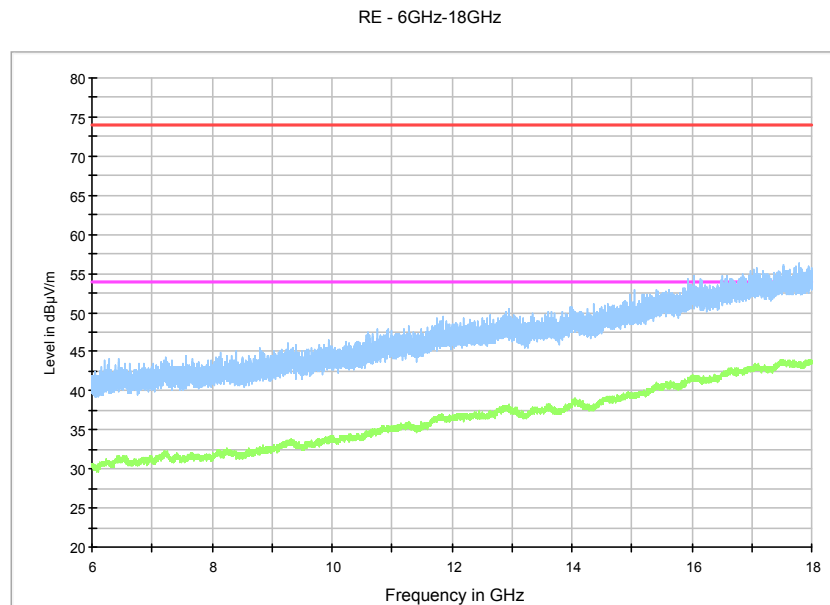


Fig. 122 Radiated Spurious Emission (802.11ac-HT20, ch64, 6 GHz-18 GHz)

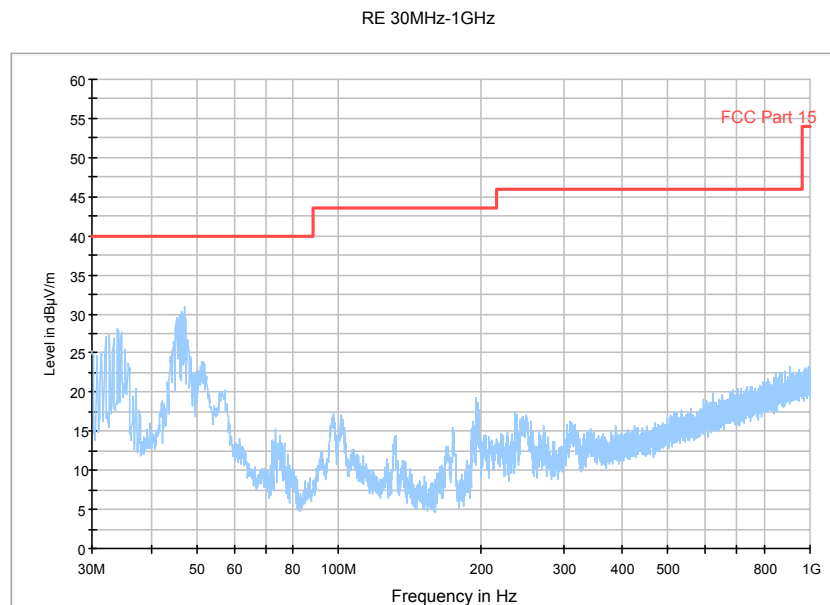


Fig. 123 Radiated Spurious Emission (802.11ac-HT40, ch52, 30 MHz-1 GHz)

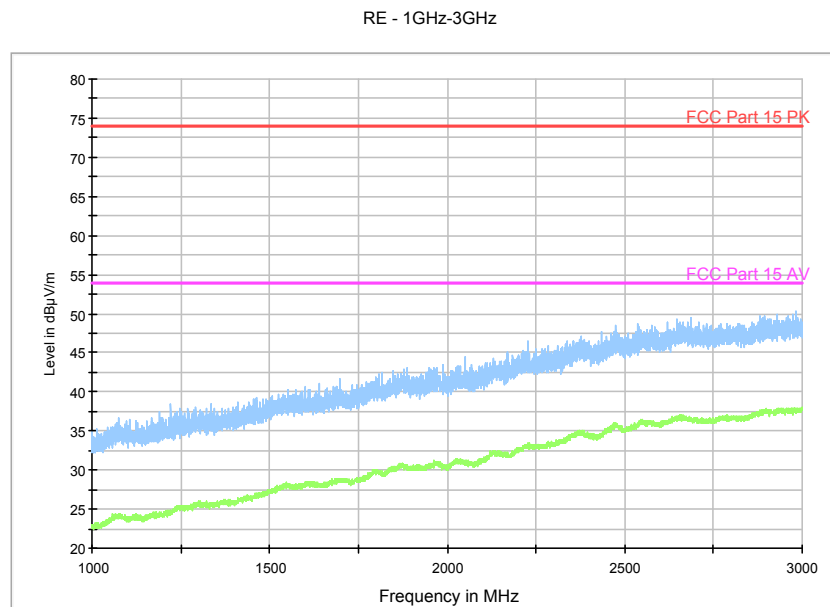
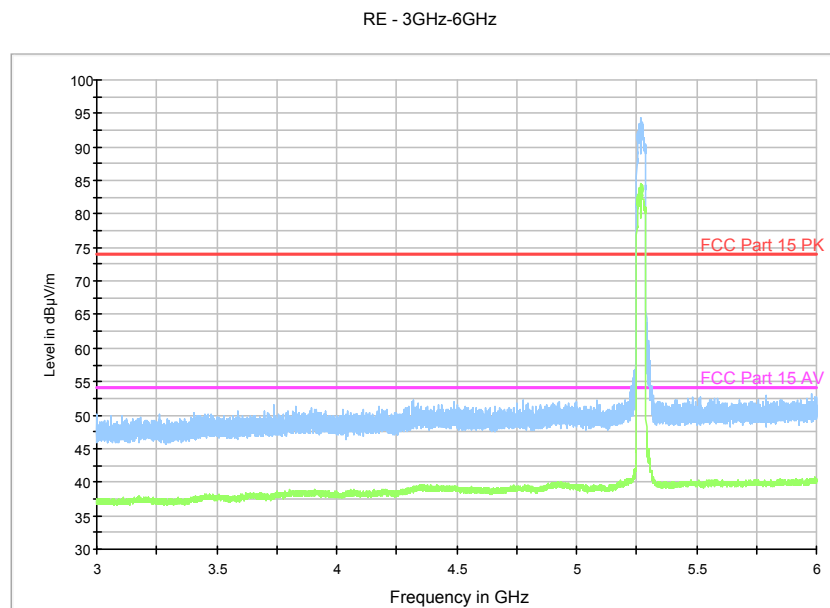


Fig. 124 Radiated Spurious Emission (802.11ac-HT40, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 125 Radiated Spurious Emission (802.11ac-HT40, ch52, 3 GHz-6 GHz)

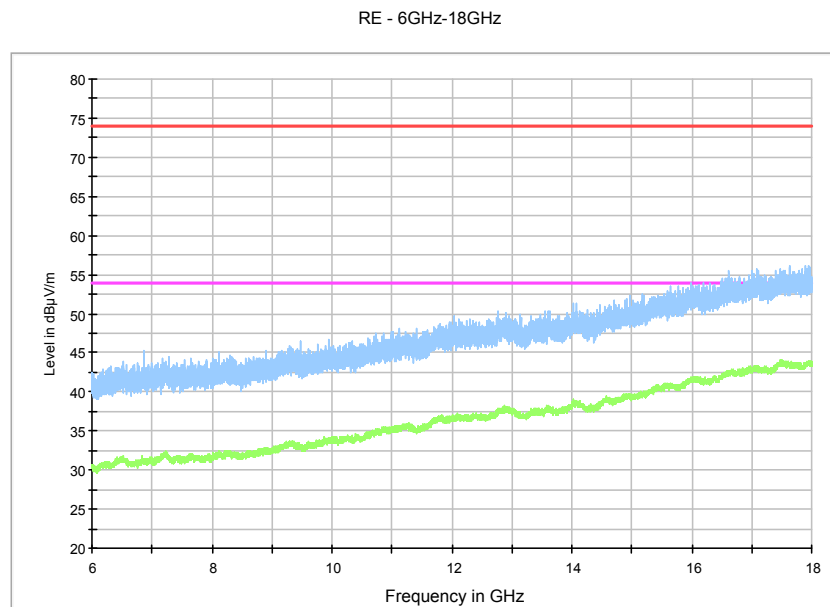


Fig. 126 Radiated Spurious Emission (802.11ac-HT40, ch52, 6 GHz-18 GHz)

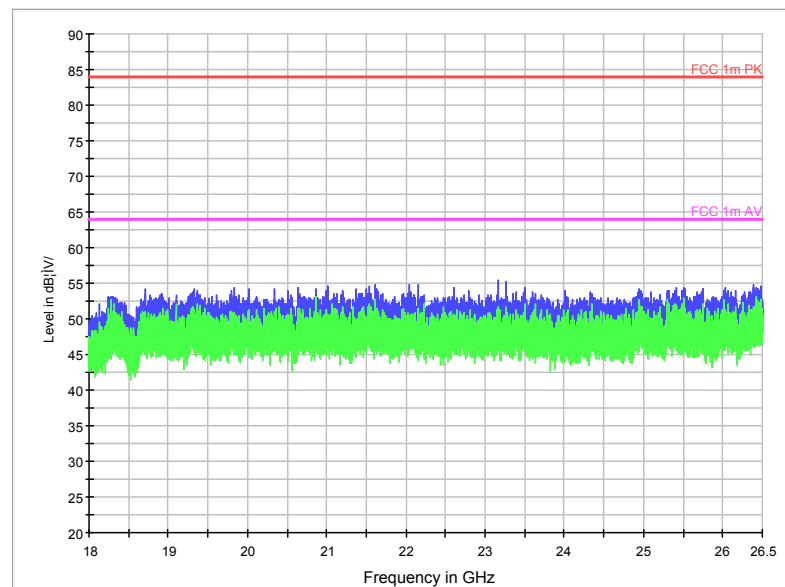


Fig. 127 Radiated Spurious Emission (802.11ac-HT40, ch52, 18 GHz-26.5 GHz)

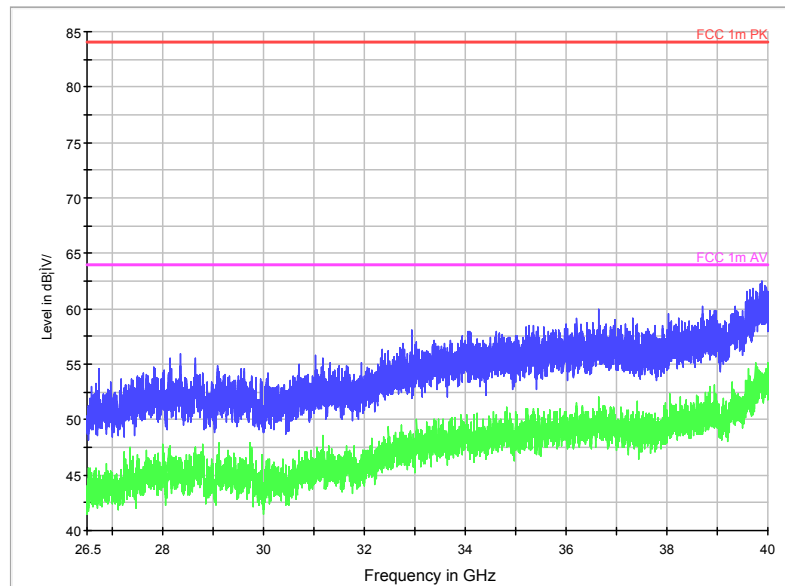


Fig. 128 Radiated Spurious Emission (802.11ac-HT40, ch52, 26.5 GHz-40 GHz)

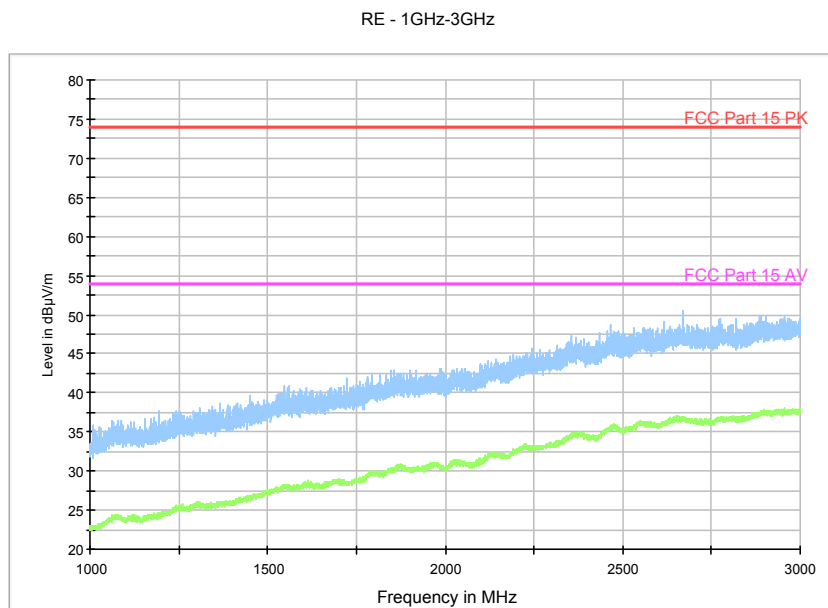


Fig. 129 Radiated Spurious Emission (802.11ac-HT40, ch60, 1 GHz-3 GHz)