



**FCC PART 15C
TEST REPORT
(RADIATED PART)
No. I15Z40514-SRD07**

for

Sony Mobile Communications Inc.

GSM/WCDMA/LTE Device

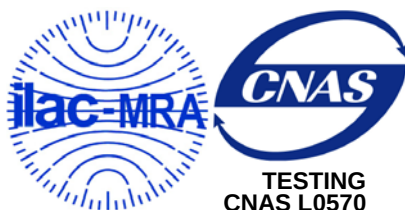
FCC ID: PY7-PM0796

With

Hardware Version: A

Software Version: 1292-7201,s_atp_1_41_5_2

Issued Date: 2015-05-19



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.

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1. TEST LATORATORY

1.1. Testing Location

Company Name: CTTL Beijing, Telecommunication Metrology Center of MIIT
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Postal Code: 100191
Telephone: +86-10-62304633-2561
Fax: +86-10-62304633-2504

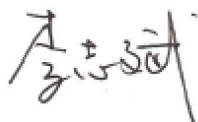
1.2. Project data

Testing Start Date: 2015-03-20
Testing End Date: 2015-04-30

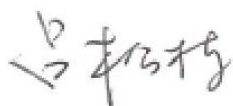
1.3. Signature



Xu Zhongfei
(Prepared this test report)



Li Zhibin
(Reviewed this test report)



Lv Songdong
(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

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City:	Beijing
Postal Code:	100102
Country:	China
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Telephone:	+86-10-58656312
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2.2. Manufacturer Information

Company Name:	Sony Mobile Communications Inc.
Address /Post:	1-8-15 Konan, Minato-ku, Tokyo, 108-0075, Japan
City:	Tokyo
Postal Code:	108-0075
Country:	Japan

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT

(AE)

3.1. About EUT

Description	GSM/WCDMA/LTE Device
FCC ID	PY7-PM0796
WLAN Frequency Range	ISM Band: 2400MHz~2483.5MHz
Type of modulation	DSSS/CCK/OFDM
Number of Channels	11
Antenna	Internal

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	004402148061504	A	1292-7201,s_atp_1_41_5_2

*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	SN
AE1	Travel Charger	/	/
AE3	USB Cable	1447A7PC000350C	/

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

3.4. General Description

The Equipment below Test (EUT) is a model of GSM/WCDMA/LTE Device with integrated antenna and embedded battery.

It has MP3, camera, USB memory, FM radio, GPS receiver, NFC, Bluetooth (EDR, BLE), ANT+, WLAN (802.11 a/ac/b/g/n) and Wi-Fi hotspot functions.

It consists of normal options: USB cable and travel charger.

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

Samples undergoing test were selected by the client.



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;	Oct,
	15.247 Operation within the bands 902–928MHz,	2012
	2400–2483.5 MHz, and 5725–5850 MHz.	
	Methods of Measurement of Radio-Noise Emissions from	
ANSI C63.10	Low-Voltage Electrical and Electronic Equipment in the	2009
	Range of 9 kHz to 40 GHz	

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Transmitter Spurious Emission - Radiated	15.247, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	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.
NP	Not Perform, The test was not performed 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	26°C
Voltage	3.8V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Test Receiver	ESCI	100344	Rohde & Schwarz	2013-11-8	2015-11-7
2	Test Receiver	ESCI 7	100948	Rohde & Schwarz	2014-07-19	2015-07-18
3	BiLog Antenna	VULB9163	9163-514	Schwarzbeck	2011-11-11	2015-11-10
4	Dual-Ridge Waveguide Horn Antenna	3117	00119024	ETS-Lindgren	2014-2-2	2017-2-1
5	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2014-7-1	2017-06-30
6	Loop antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2012-12-21	2015-12-20
7	Semi-anechoic chamber	/	CT000332-1074	Frankonia German	/	/

ANNEX A: MEASUREMENT RESULTS

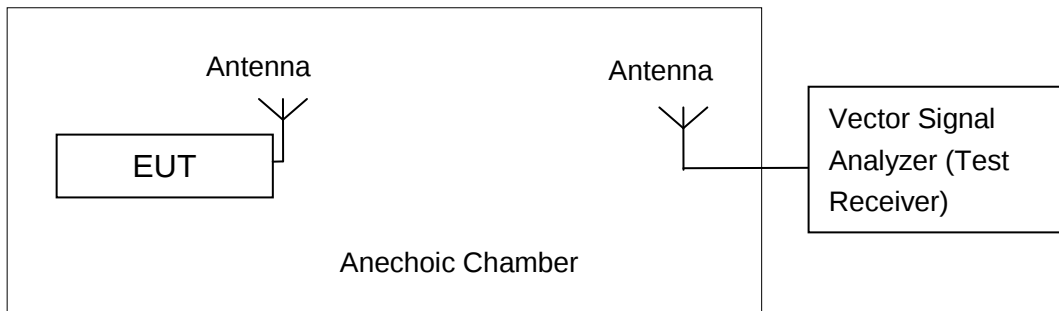
A.1. Measurement Method

A.1.1. Radiated Emission Measurements

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 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to ANSI C63.10

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. 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. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

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)).

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Measurement Uncertainty:

Frequency Range	Uncertainty
$30\text{MHz} \leq f \leq 2\text{GHz}$	0.63 dB
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	0.82 dB
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.55 dB
$8\text{GHz} \leq f \leq 20\text{GHz}$	1.86 dB
$20\text{GHz} \leq f \leq 22\text{GHz}$	1.90 dB
$22\text{GHz} \leq f \leq 26\text{GHz}$	2.20 dB

Note: Configuration information to be tested as follows:

Modulation type and data rate:

802.11b	802.11g	802.11n-HT20
1Mbps(CCK)	6Mbps(OFDM)	MCS0(OFDM)

A.2.1 Transmitter Spurious Emission - Radiated

Limit in restricted band:

Measurement Results:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.A.2.1	P
	1	1 GHz ~ 3 GHz	Fig.A.2.2	P
		3 GHz ~ 18 GHz	Fig.A.2.3	P
	6	30 MHz ~1 GHz	Fig.A.2.4	P
		1 GHz ~ 3 GHz	Fig.A.2.5	P
		3 GHz ~ 18 GHz	Fig.A.2.6	P
		18 GHz~ 26.5 GHz	Fig.A.2.7	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.8	P
	11	1 GHz ~ 3 GHz	Fig.A.2.9	P
		3 GHz ~ 18 GHz	Fig.A.2.10	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.11	P
	12	1 GHz ~ 3 GHz	Fig.A.2.12	P
		3 GHz ~ 18 GHz	Fig.A.2.13	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.14	P
	13	1 GHz ~ 3 GHz	Fig.A.2.15	P
		3 GHz ~ 18 GHz	Fig.A.2.16	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.2.17	P
	1	1 GHz ~ 3 GHz	Fig.A.2.18	P
		3 GHz ~ 18 GHz	Fig.A.2.19	P
	6	30 MHz ~1 GHz	Fig.A.2.20	P
		1 GHz ~ 3 GHz	Fig.A.2.21	P
		3 GHz ~ 18 GHz	Fig.A.2.22	P
		18 GHz~ 26.5 GHz	Fig.A.2.23	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.24	P
	11	1 GHz ~ 3 GHz	Fig.A.2.25	P
		3 GHz ~ 18 GHz	Fig.A.2.26	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.27	P
	12	1 GHz ~ 3 GHz	Fig.A.2.28	P
		3 GHz ~ 18 GHz	Fig.A.2.29	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.30	P
	13	1 GHz ~ 3 GHz	Fig.A.2.31	P
		3 GHz ~ 18 GHz	Fig.A.2.32	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.A.2.33	P
	1	1 GHz ~ 3 GHz	Fig.A.2.34	P
		3 GHz ~ 18 GHz	Fig.A.2.35	P
	6	30 MHz ~1 GHz	Fig.A.2.36	P
		1 GHz ~ 3 GHz	Fig.A.2.37	P
		3 GHz ~ 18 GHz	Fig.A.2.38	P
		18 GHz~ 26.5 GHz	Fig.A.2.39	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.40	P
	11	1 GHz ~ 3 GHz	Fig.A.2.41	P
		3 GHz ~ 18 GHz	Fig.A.2.42	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.43	P
	12	1 GHz ~ 3 GHz	Fig.A.2.44	P
		3 GHz ~ 18 GHz	Fig.A.2.45	P
	Power	2.45GHz ~2.5GHz	Fig.A.2.46	P
	13	1 GHz ~ 3 GHz	Fig.A.2.47	P
		3 GHz ~ 18 GHz	Fig.A.2.48	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= $P_{Mea}+A_{Rpl}= P_{Mea}+Cable\ Loss+Antenna\ Factor$

These recorded emissions around 21GHz are highest noise floor levels since no higher spurious emission is detected.

802.11b

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
2389.831	48.1	-38.8	27.7	59.200	H
17902.969	58.2	-18.5	45.6	31.100	V
17915.156	57.7	-17.7	45.6	29.800	V
17908.125	57.6	-18.5	45.6	30.500	V
17864.531	57.6	-18.5	45.6	30.500	H
17971.406	57.4	-17.7	45.6	29.500	V

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17889.375	57.1	-18.5	45.6	30.000	V
17883.281	57.1	-18.5	45.6	30.000	H
17854.688	57.1	-18.5	45.6	30.000	V
17986.406	57.0	-17.7	45.6	29.100	H
17892.188	56.9	-18.5	45.6	29.800	V
17999.063	56.9	-17.7	45.6	29.000	V

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2493.825	46.8	-38.9	27.7	58.000	V
17907.188	57.9	-18.5	45.6	30.800	H
17870.625	57.8	-18.5	45.6	30.700	H
17865.469	57.6	-18.5	45.6	30.500	V
17903.438	57.6	-18.5	45.6	30.500	H
17880.938	57.5	-18.5	45.6	30.400	V

Ch12

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2484.145	36.3	-38.9	27.7	47.500	V
17901.563	46.3	-18.5	45.6	19.200	V
17895.469	46.2	-18.5	45.6	19.100	V
17875.781	46.2	-18.5	45.6	19.100	V
17885.156	46.2	-18.5	45.6	19.100	H
17881.406	46.1	-18.5	45.6	19.000	V

Ch13

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2485.810	36.4	-38.9	27.7	47.600	H
17869.688	46.1	-18.5	45.6	19.000	V
17871.094	46.1	-18.5	45.6	19.000	V
17895.000	46.1	-18.5	45.6	19.000	H
17907.656	46.0	-18.5	45.6	18.900	V
17925.469	46.0	-17.7	45.6	18.100	V

802.11g

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2389.894	49.5	-38.8	27.7	60.600	H
17973.750	57.6	-17.7	45.6	29.700	V
17849.063	57.6	-18.5	45.6	30.500	V
17974.688	57.5	-17.7	45.6	29.600	V
17960.156	57.3	-17.7	45.6	29.400	H
17970.938	57.2	-17.7	45.6	29.300	V

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17891.250	58.1	-18.5	45.6	31.000	V
17965.313	57.9	-17.7	45.6	30.000	V
17856.094	57.5	-18.5	45.6	30.400	V
17899.219	57.1	-18.5	45.6	30.000	H
17995.781	57.0	-17.7	45.6	29.100	V
17967.656	57.0	-17.7	45.6	29.100	V

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2487.531	45.1	-38.9	27.7	56.300	H
17873.906	57.6	-18.5	45.6	30.500	V
17938.594	57.5	-17.7	45.6	29.600	V
17888.438	57.2	-18.5	45.6	30.100	H
17879.063	57.2	-18.5	45.6	30.100	V
17903.906	57.1	-18.5	45.6	30.000	H

Ch12

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2483.500	32.4	-38.9	27.7	43.600	V
17874.375	46.2	-18.5	45.6	19.100	V
17898.281	46.2	-18.5	45.6	19.100	H
17881.875	46.0	-18.5	45.6	18.900	V
17877.656	46.0	-18.5	45.6	18.900	H
17867.813	46.0	-18.5	45.6	18.900	V

Ch13

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2485.595	32.6	-38.9	27.7	43.800	H
17884.688	46.4	-18.5	45.6	19.300	V
17888.906	46.2	-18.5	45.6	19.100	V
17871.563	46.1	-18.5	45.6	19.000	V
17895.000	46.1	-18.5	45.6	19.000	V
17892.188	46.1	-18.5	45.6	19.000	V

802.11n-HT20

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2389.950	47.2	-38.8	27.7	58.300	V
17917.500	57.6	-17.7	45.6	29.700	V
17865.938	57.5	-18.5	45.6	30.400	H
17989.688	57.3	-17.7	45.6	29.400	H
17878.125	57.3	-18.5	45.6	30.200	V
17881.875	57.2	-18.5	45.6	30.100	V

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17889.375	57.3	-18.5	45.6	30.200	V
17880.938	57.3	-18.5	45.6	30.200	H
17901.563	57.3	-18.5	45.6	30.200	V
17906.719	57.1	-18.5	45.6	30.000	V
17845.781	57.1	-18.5	45.6	30.000	V
17982.656	57.0	-17.7	45.6	29.100	V

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2492.985	46.4	-38.9	27.7	57.600	V
17970.000	58.8	-17.7	45.6	30.900	H
17898.750	58.2	-18.5	45.6	31.100	V
17885.156	57.7	-18.5	45.6	30.600	V
17868.281	57.6	-18.5	45.6	30.500	V
17885.625	57.6	-18.5	45.6	30.500	H

Ch12

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2484.400	32.9	-38.9	27.7	44.100	V
17896.875	46.1	-18.5	45.6	19.000	H
17879.063	46.1	-18.5	45.6	19.000	V
17886.094	46.0	-18.5	45.6	18.900	V
17877.656	46.0	-18.5	45.6	18.900	V
17901.563	46.0	-18.5	45.6	18.900	V

Ch13

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2484.445	32.6	-38.9	27.7	43.800	V
17890.313	46.1	-18.5	45.6	19.000	H
17898.281	46.1	-18.5	45.6	19.000	V
17864.063	46.0	-18.5	45.6	18.900	H
17890.781	46.0	-18.5	45.6	18.900	V
17884.219	46.0	-18.5	45.6	18.900	V

Test graphs as below:

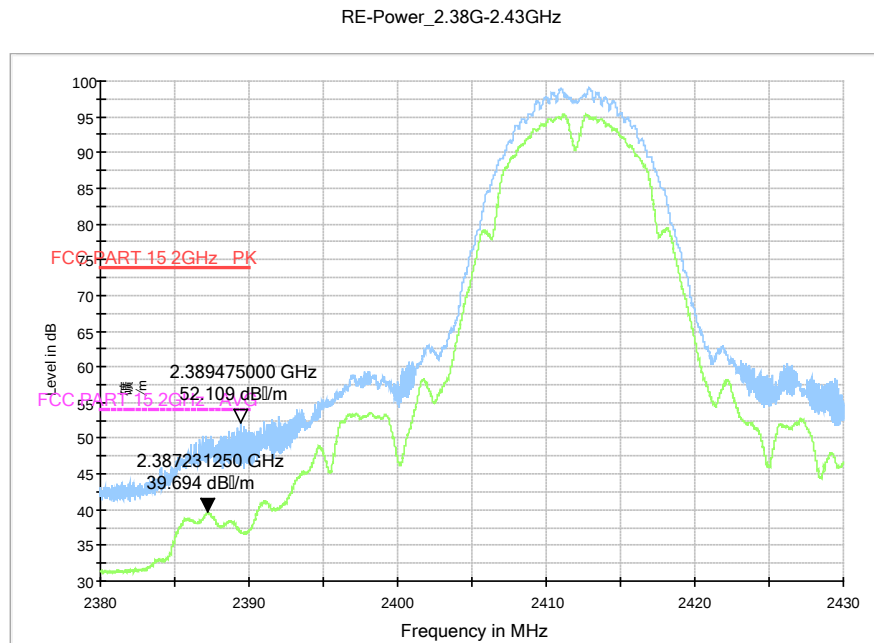


Fig.A.2.1 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz – 2.45GHz

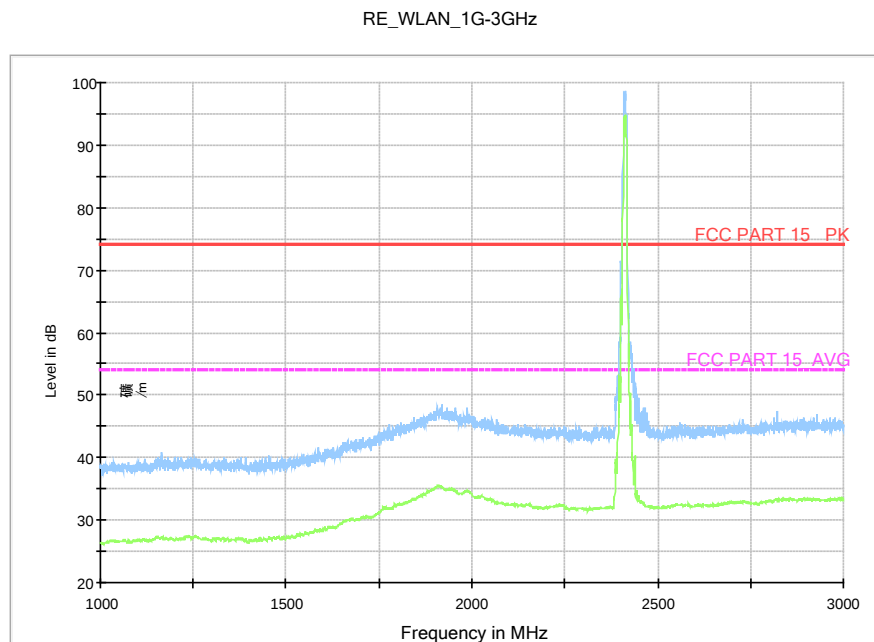


Fig.A.2.2 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)

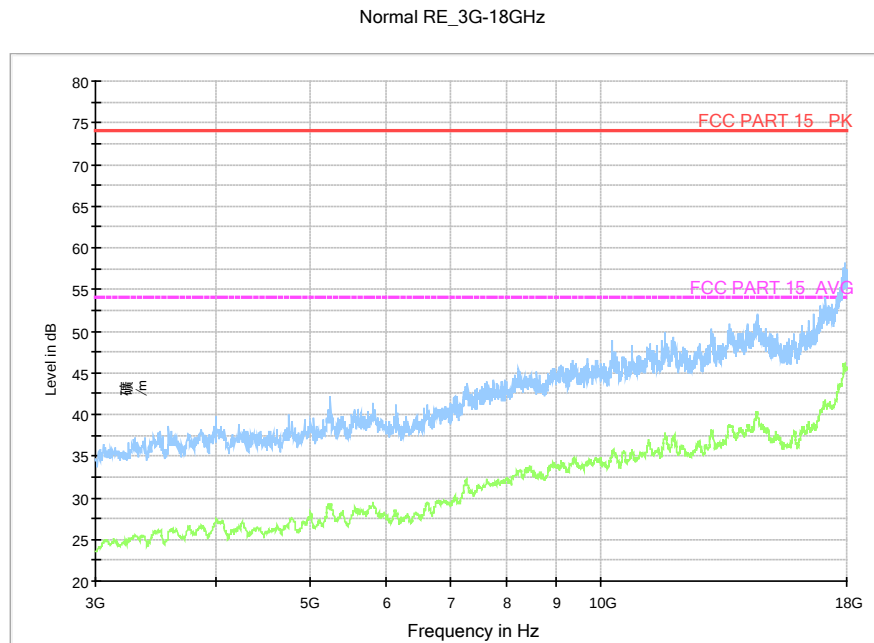


Fig.A.2.3 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)

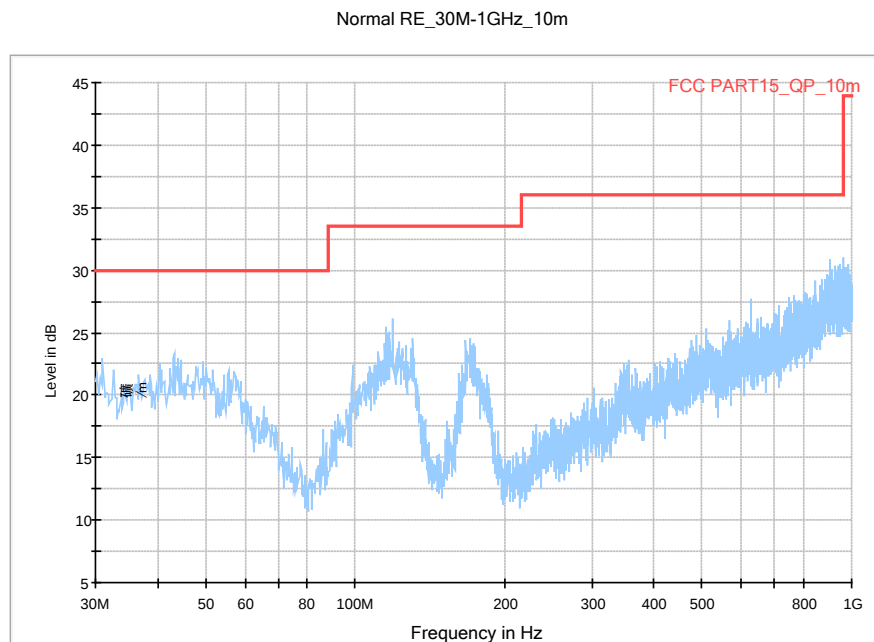


Fig.A.2.4 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)

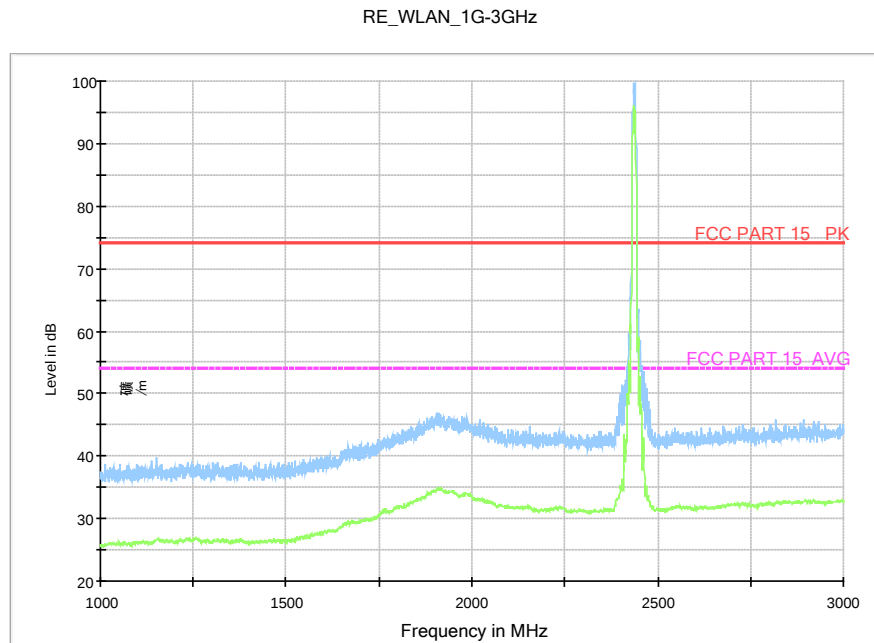


Fig.A.2.5 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)

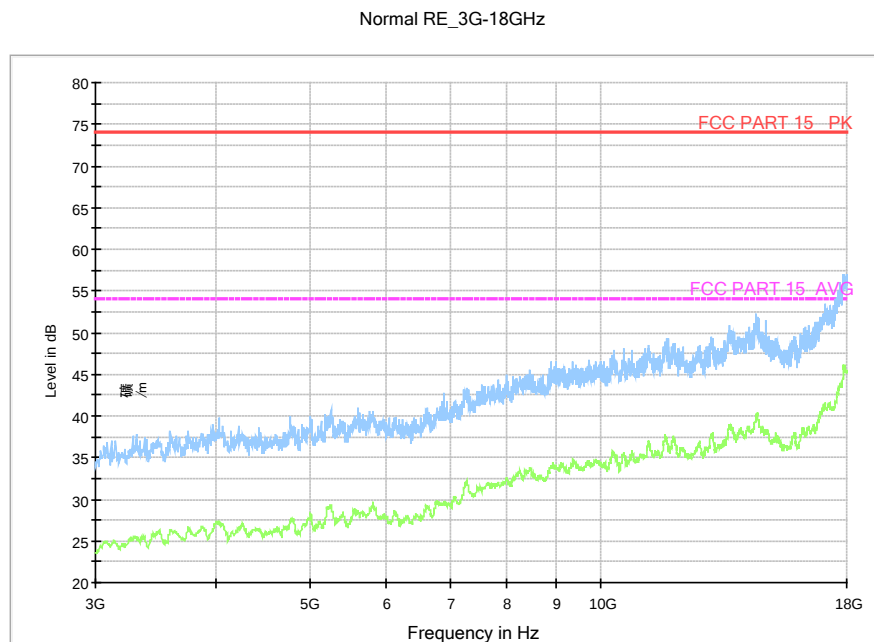


Fig.A.2.6 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)

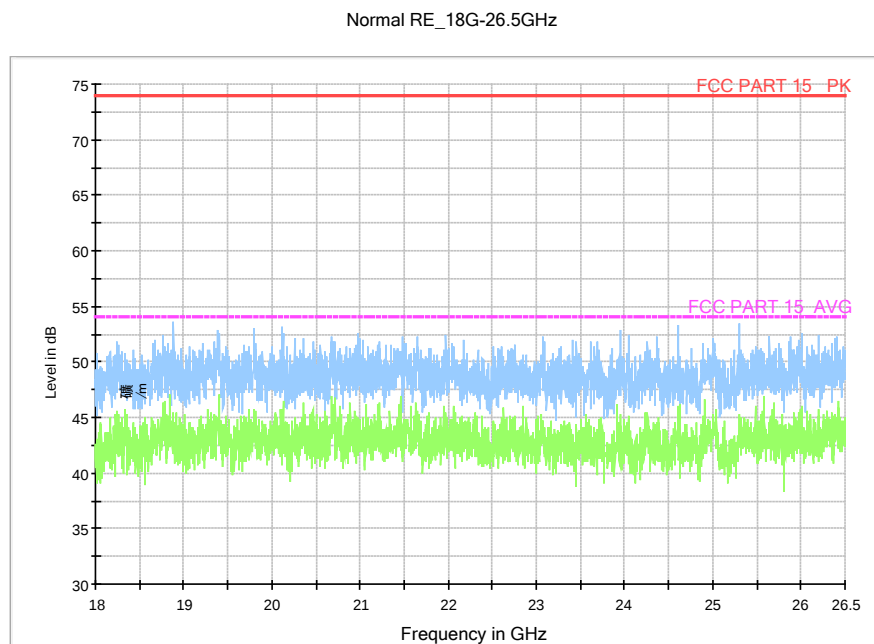


Fig.A.2.7 Radiated Spurious Emission (802.11b, Ch6, 18GHz – 26.5GHz)

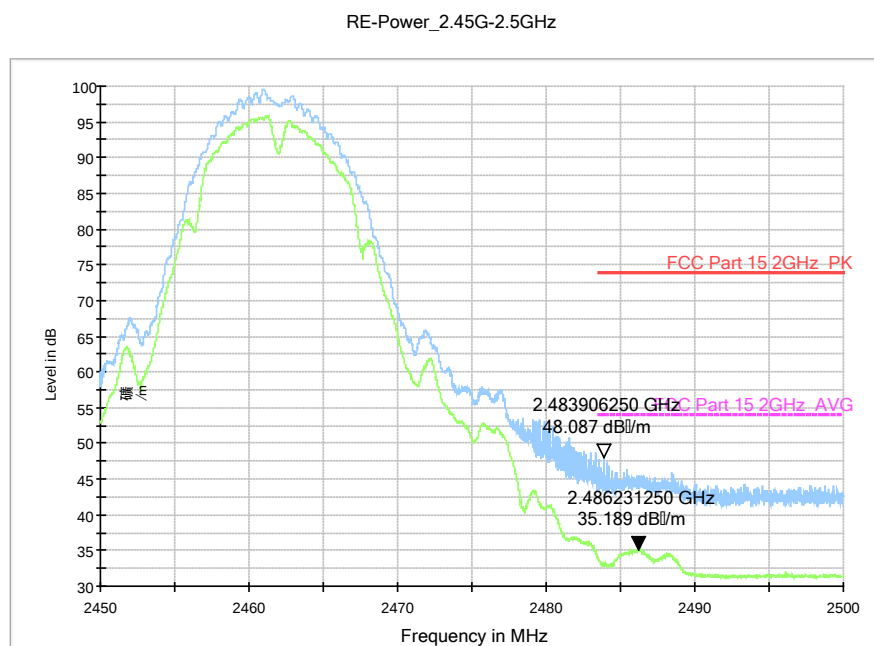


Fig.A.2.8 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

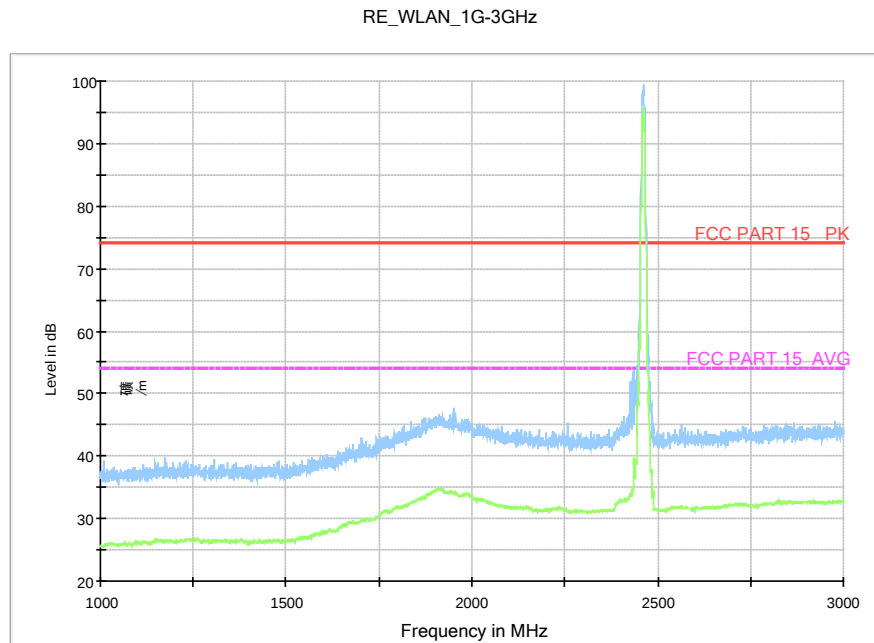


Fig.A.2.9 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)

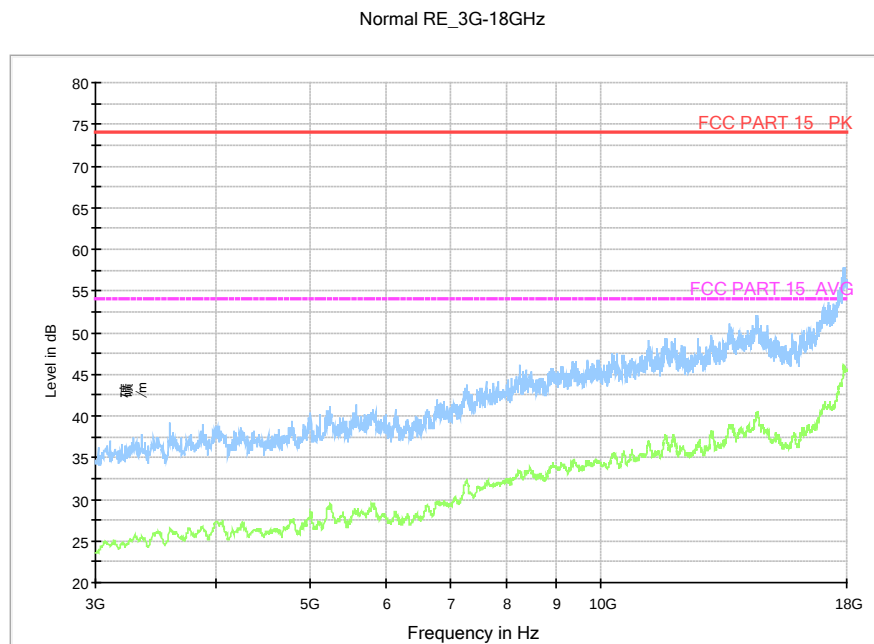


Fig.A.2.10 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)

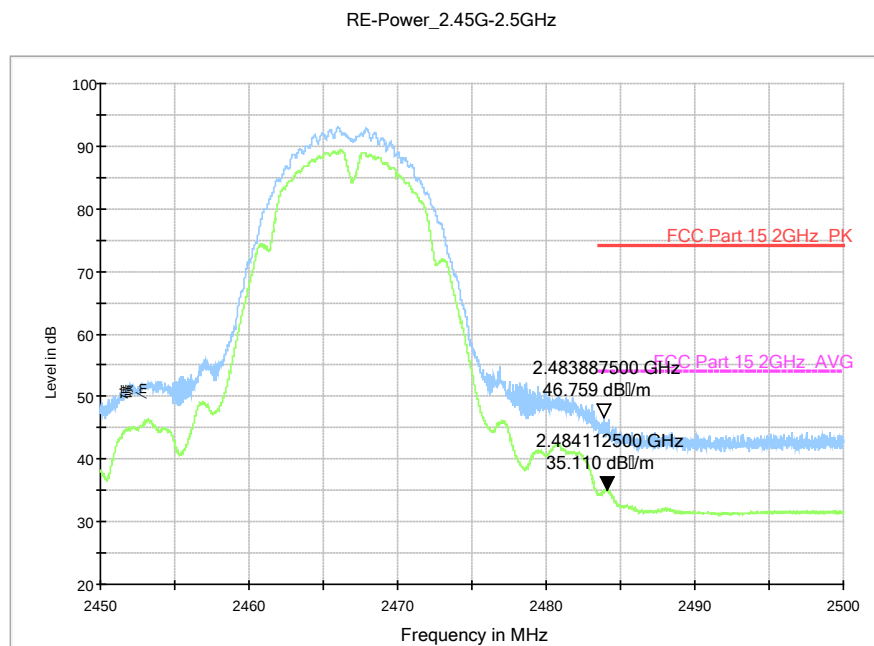


Fig.A.2.11 Radiated Spurious Emission (Power): 802.11b, ch12, 2.45 GHz - 2.50GHz

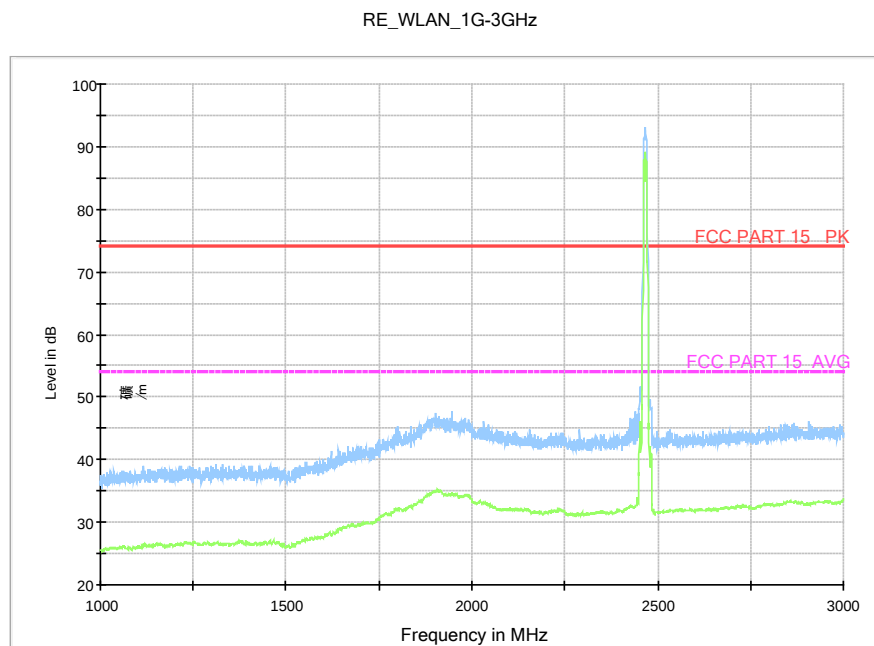


Fig.A.2.12 Radiated Spurious Emission (802.11b, Ch12, 1 GHz-3 GHz)

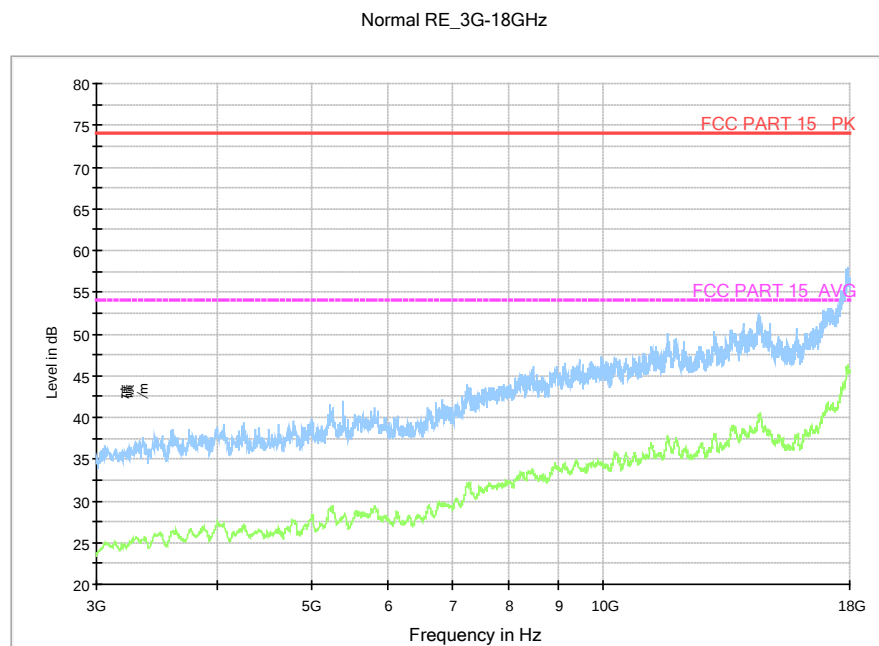


Fig.A.2.13 Radiated Spurious Emission (802.11b, Ch12, 3 GHz-18 GHz)

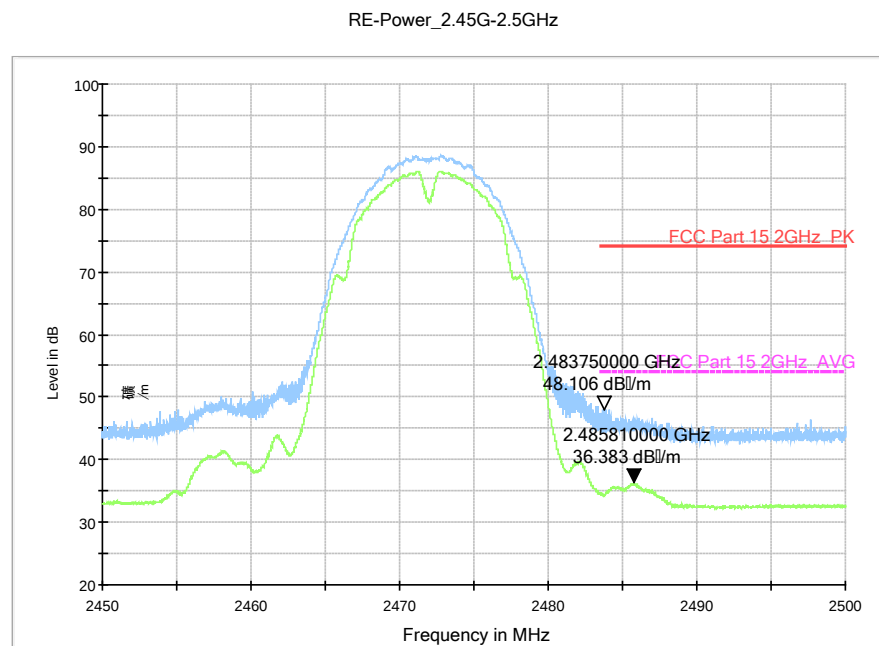


Fig.A.2.14 Radiated Spurious Emission (Power): 802.11b, ch13, 2.45 GHz - 2.50GHz

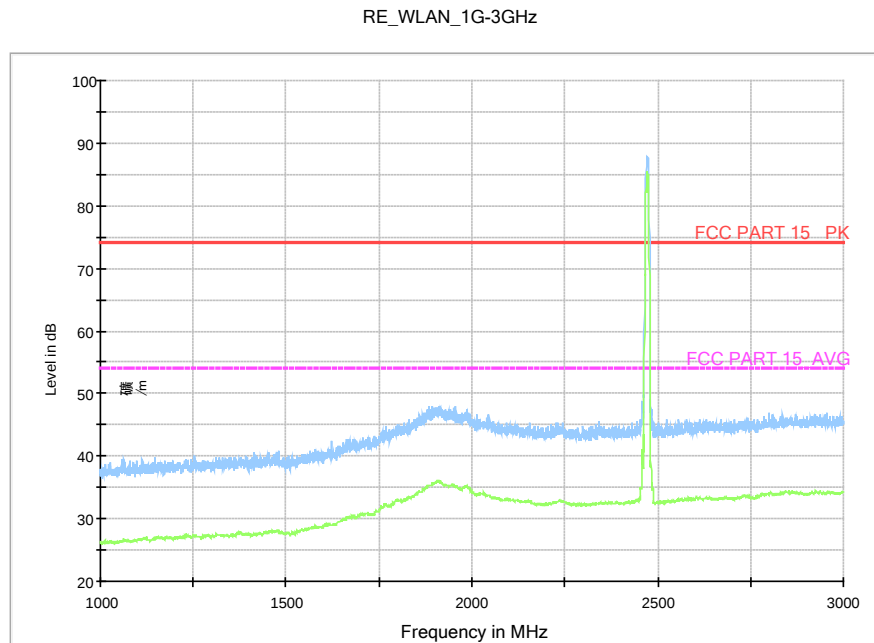


Fig.A.2.15 Radiated Spurious Emission (802.11b, Ch13, 1 GHz-3 GHz)

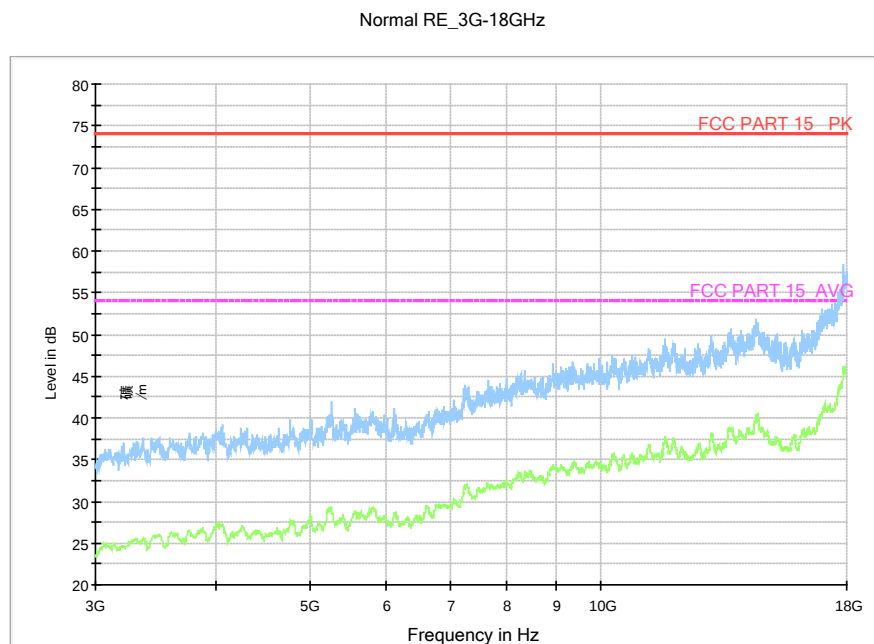


Fig.A.2.16 Radiated Spurious Emission (802.11b, Ch13, 3 GHz-18 GHz)

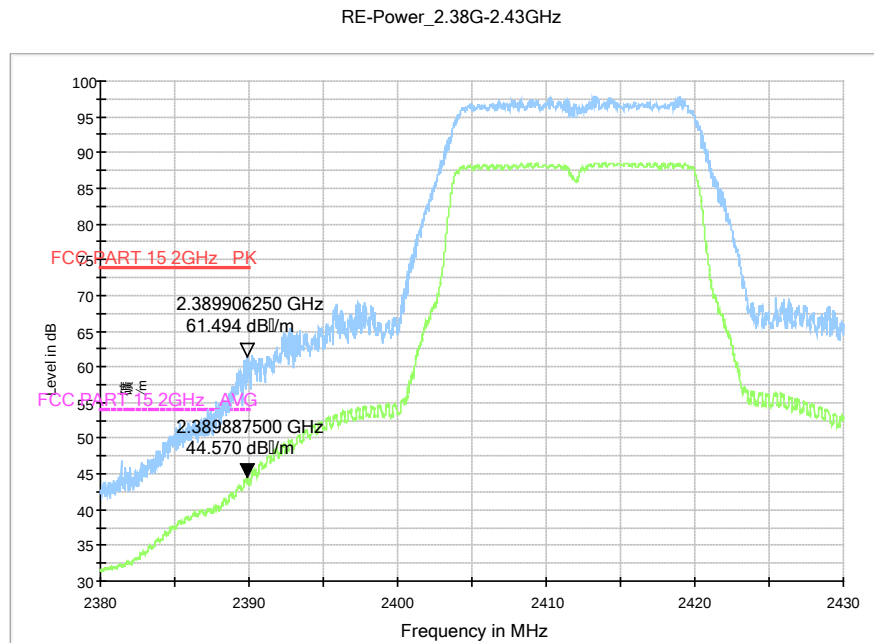


Fig.A.2.17 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz

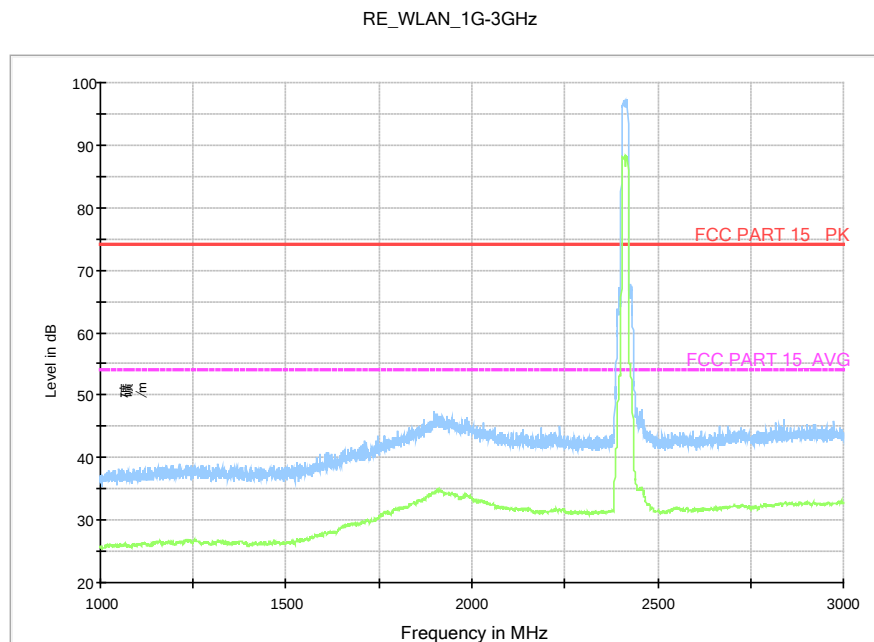


Fig.A.2.18 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-3 GHz)

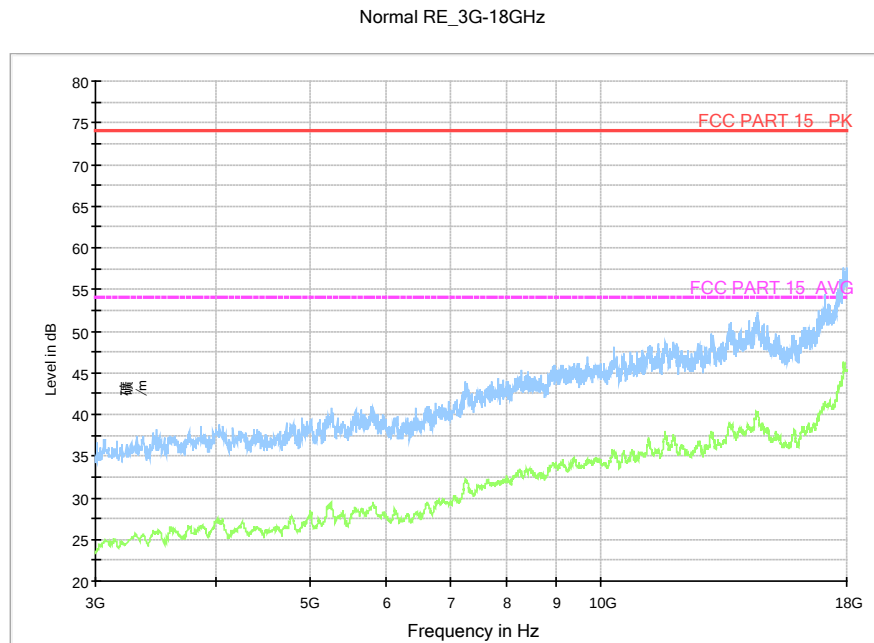


Fig.A.2.19 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)

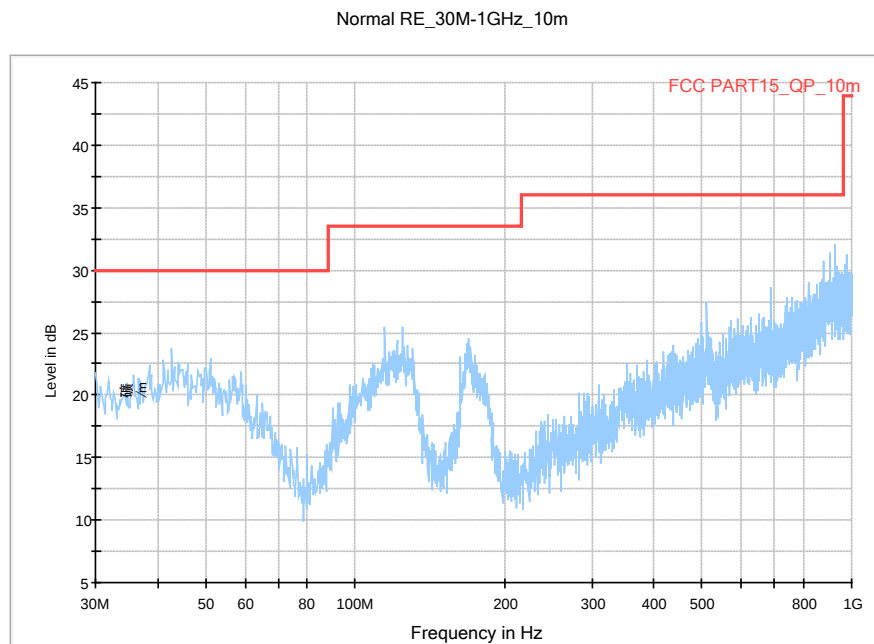


Fig.A.2.20 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)

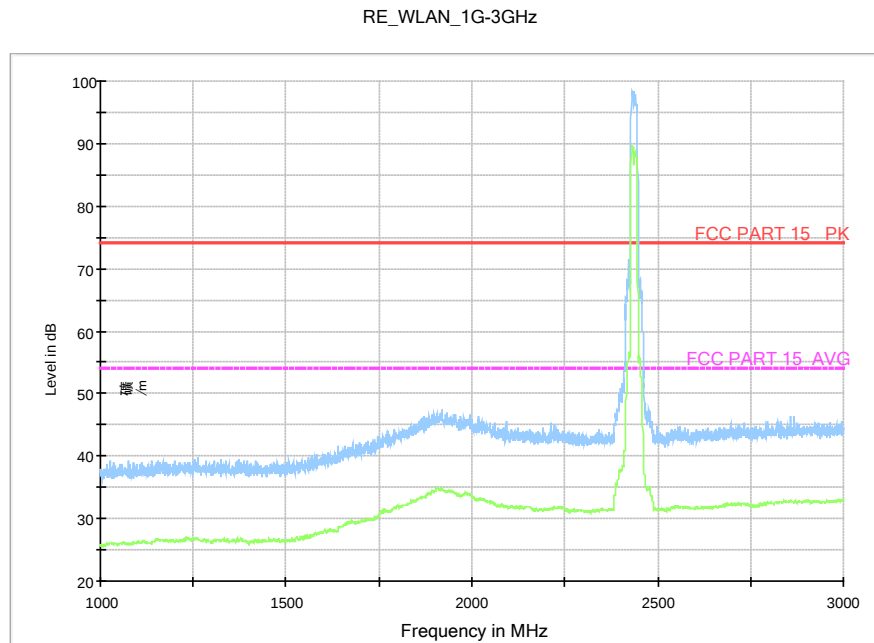


Fig.A.2.21 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)

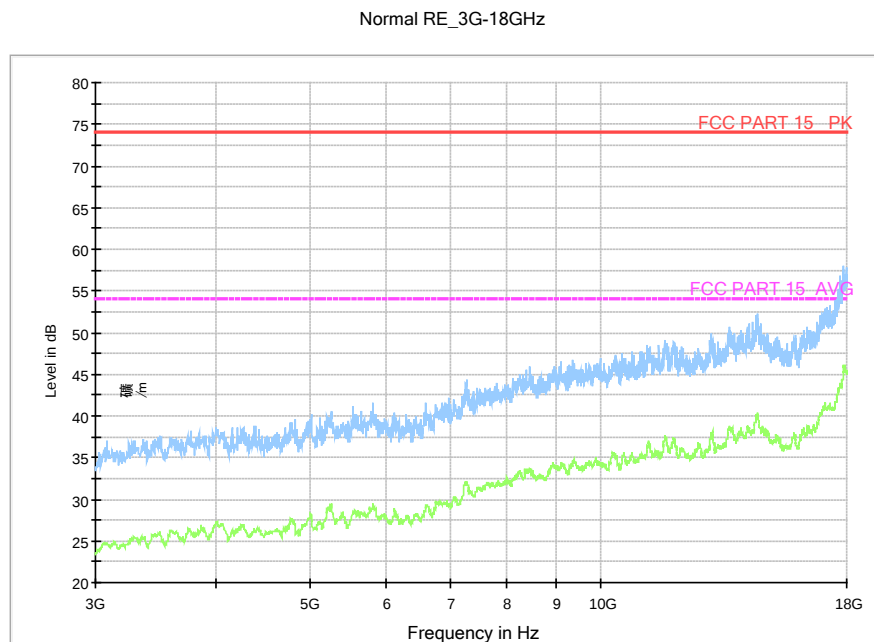


Fig.A.2.22 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)

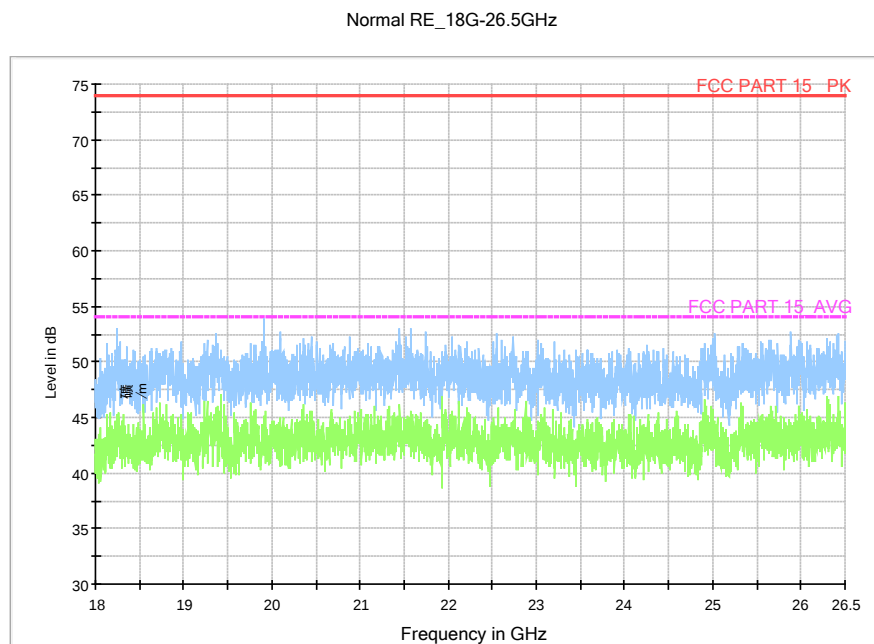


Fig.A.2.23 Radiated Spurious Emission (802.11g, Ch6, 18GHz – 26.5GHz)

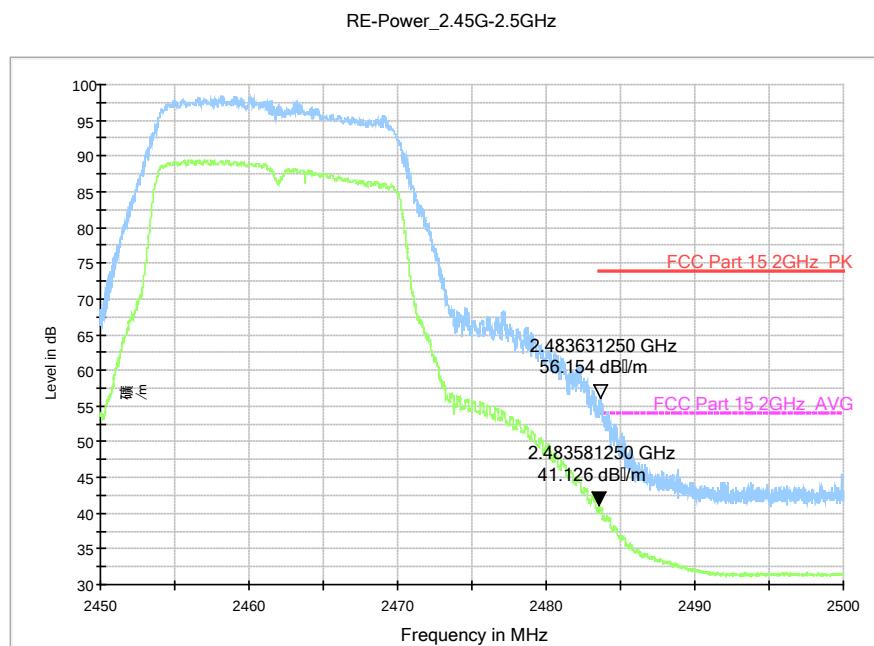


Fig.A.2.24 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

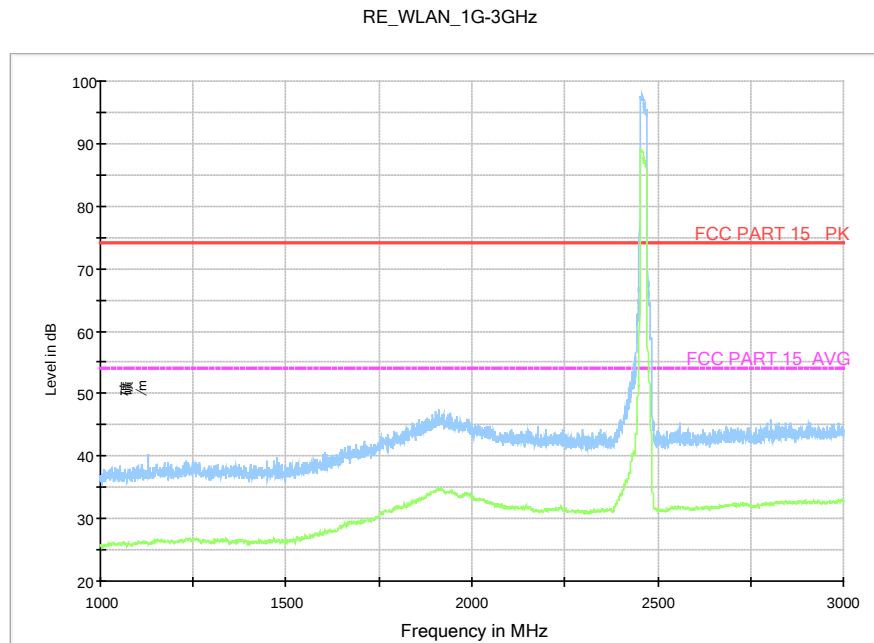


Fig.A.2.25 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)

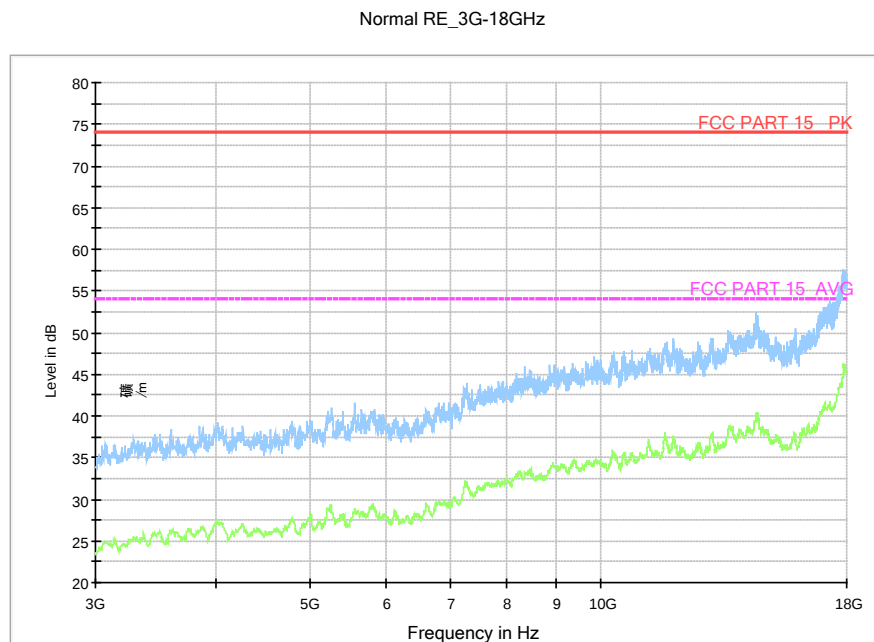


Fig.A.2.26 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)

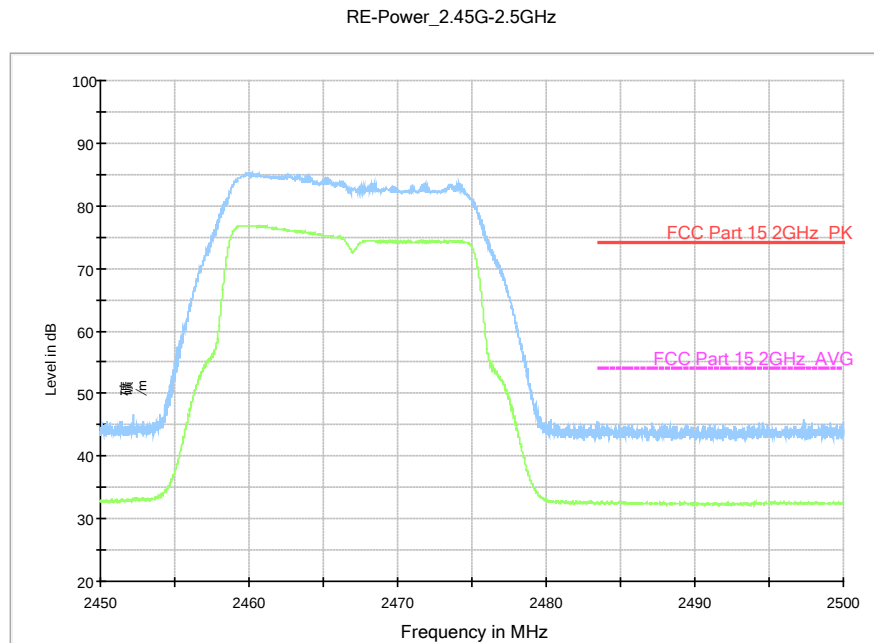


Fig.A.2.27 Radiated Spurious Emission (Power): 802.11g, ch12, 2.45 GHz - 2.50GHz

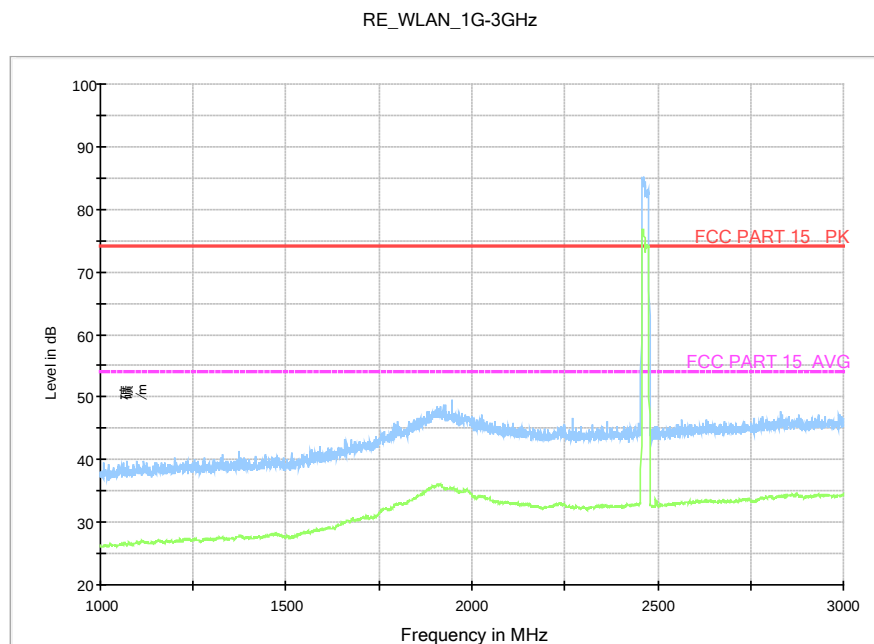


Fig.A.2.28 Radiated Spurious Emission (802.11g, Ch12, 1 GHz-3 GHz)

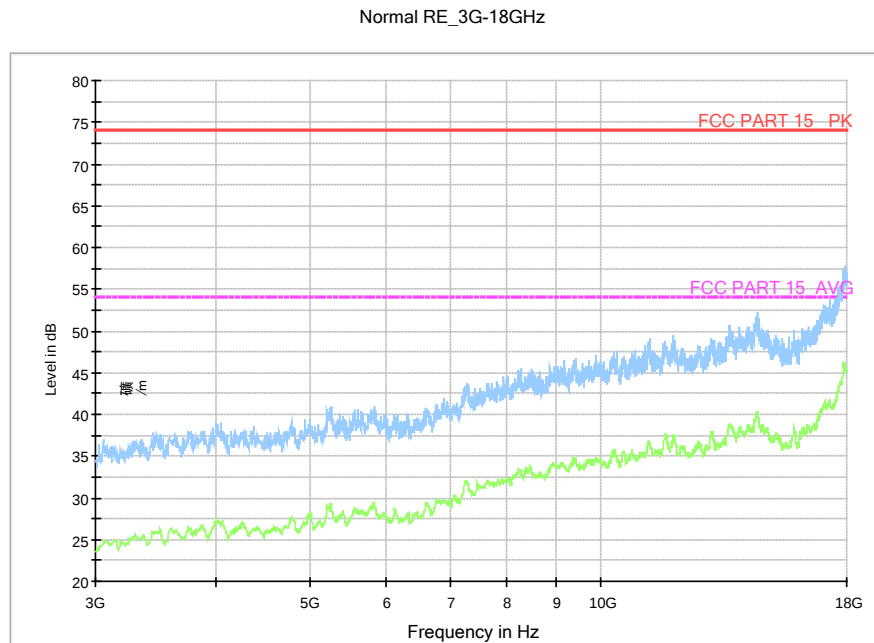


Fig.A.2.29 Radiated Spurious Emission (802.11g, Ch12, 3 GHz-18 GHz)

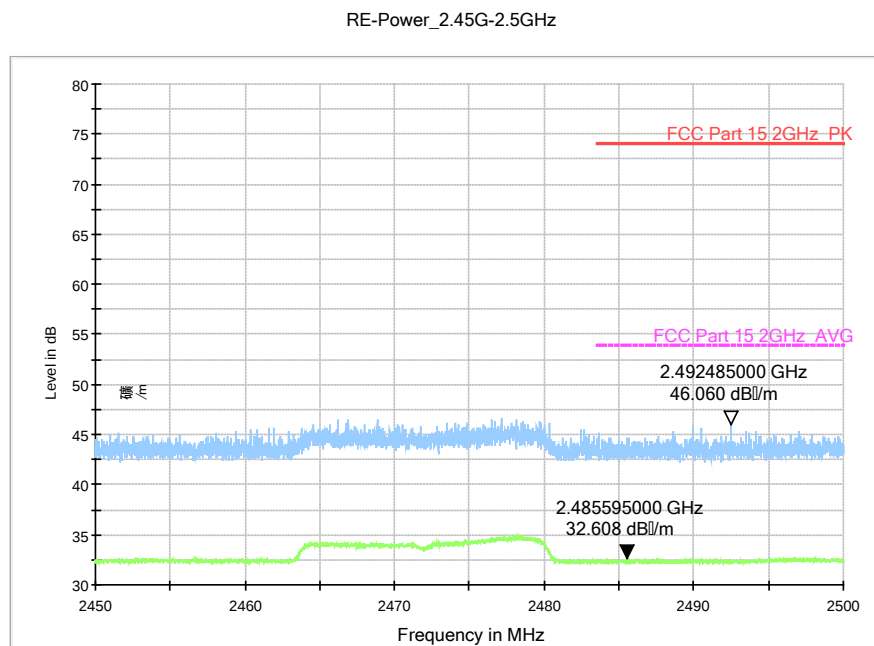


Fig.A.2.30 Radiated Spurious Emission (Power): 802.11g, ch13, 2.45 GHz - 2.50GHz

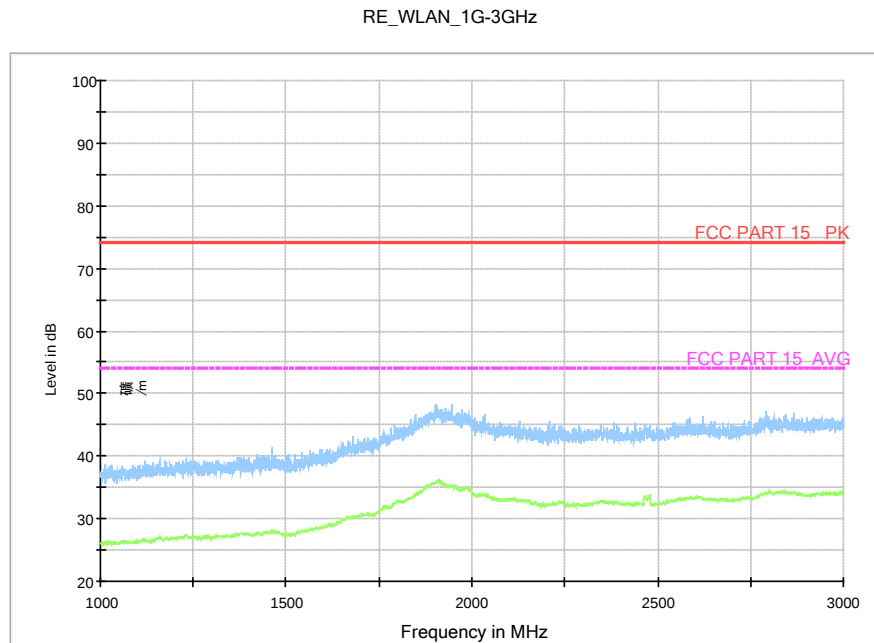


Fig.A.2.31 Radiated Spurious Emission (802.11g, Ch13, 1 GHz-3 GHz)

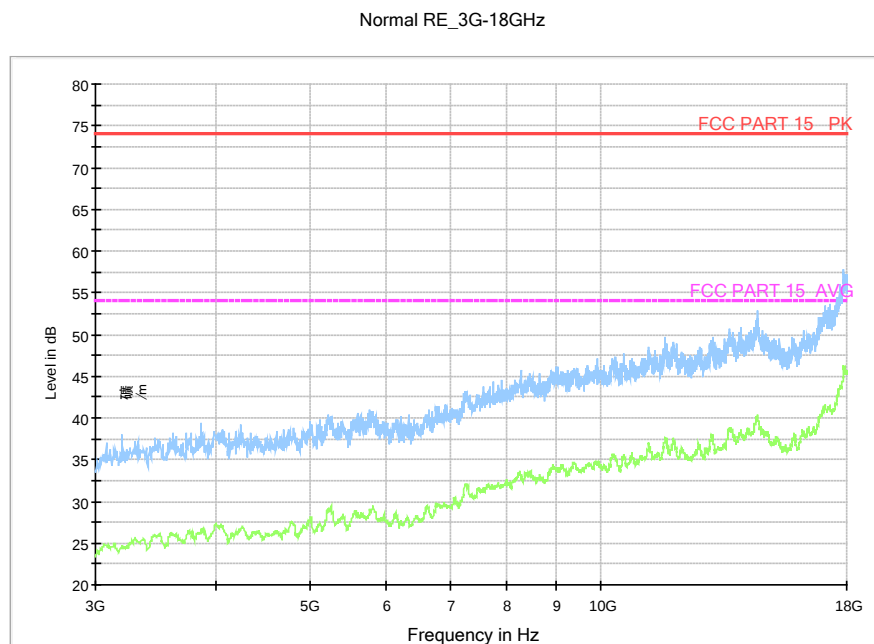


Fig.A.2.32 Radiated Spurious Emission (802.11g, Ch13, 3 GHz-18 GHz)

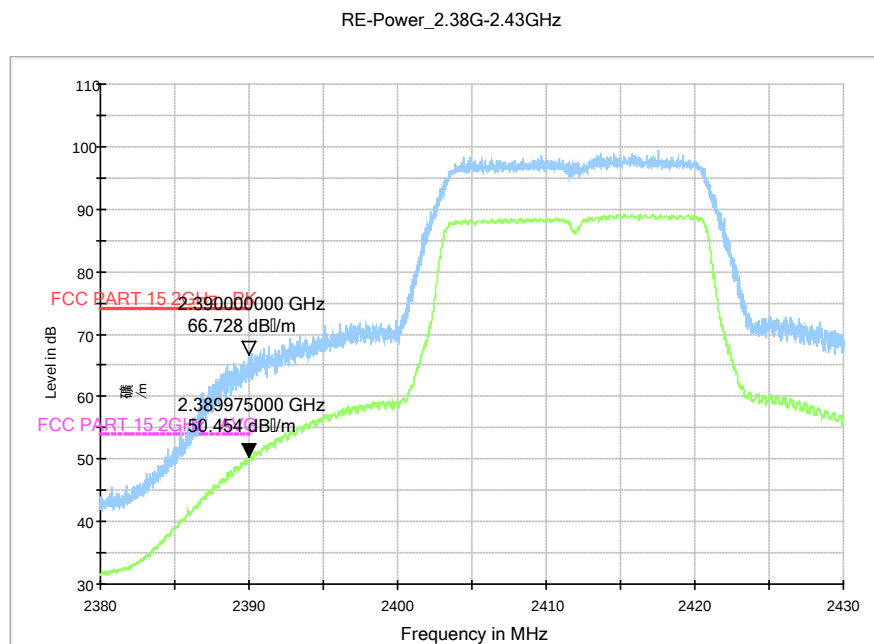


Fig.A.2.33 Radiated Spurious Emission (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

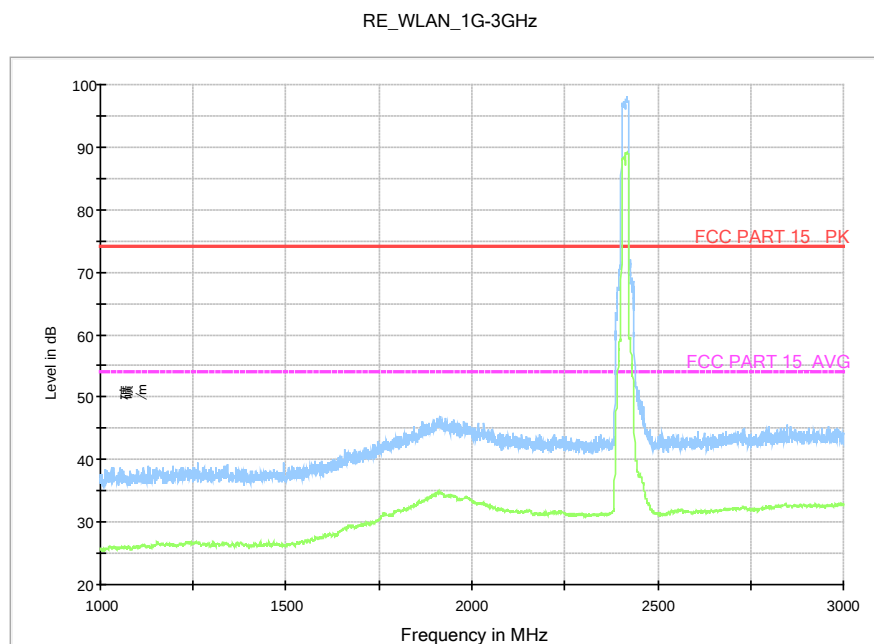


Fig.A.2.34 Radiated Spurious Emission (802.11n-HT20, Ch1, 1 GHz-3 GHz)

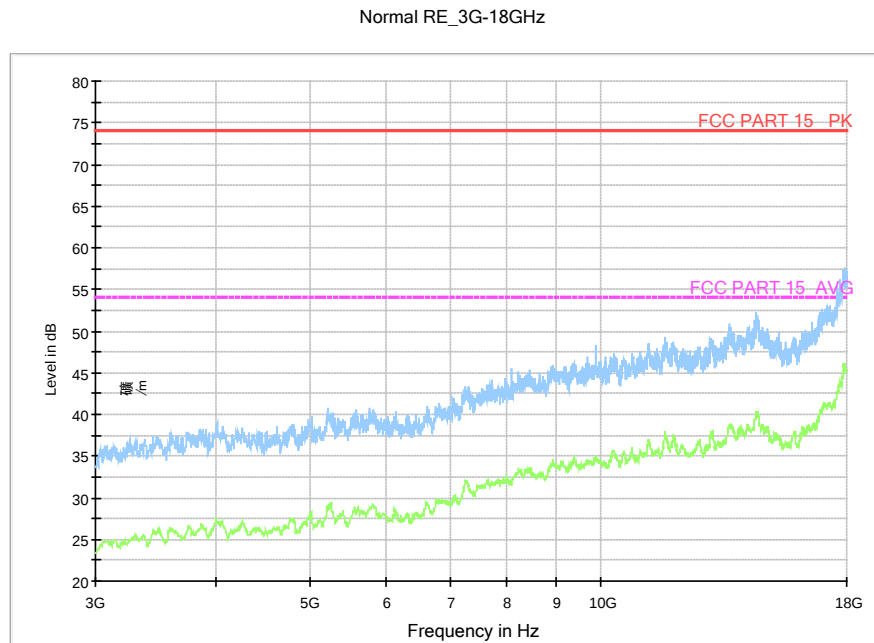


Fig.A.2.35 Radiated Spurious Emission (802.11n-HT20, Ch1, 3 GHz-18 GHz)

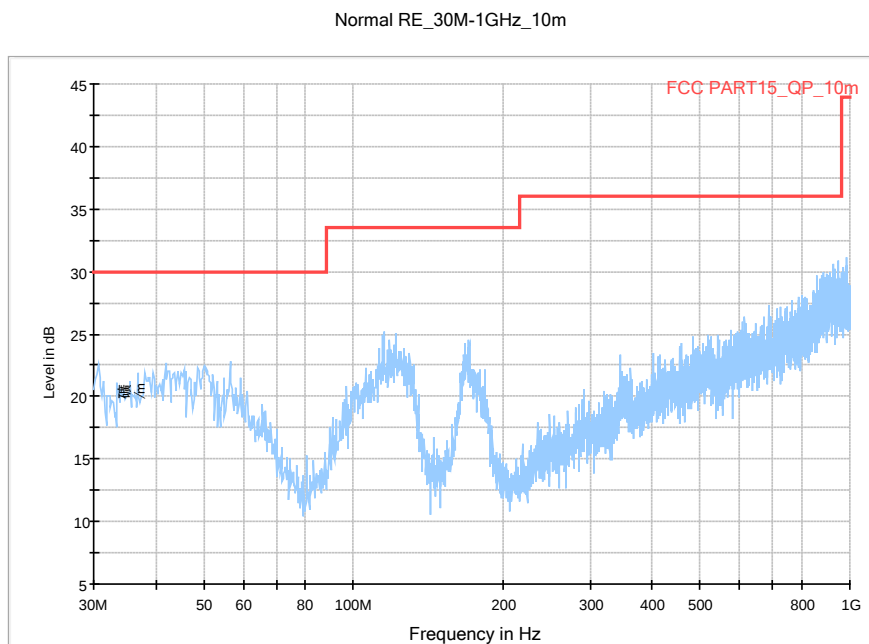


Fig.A.2.36 Radiated Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)

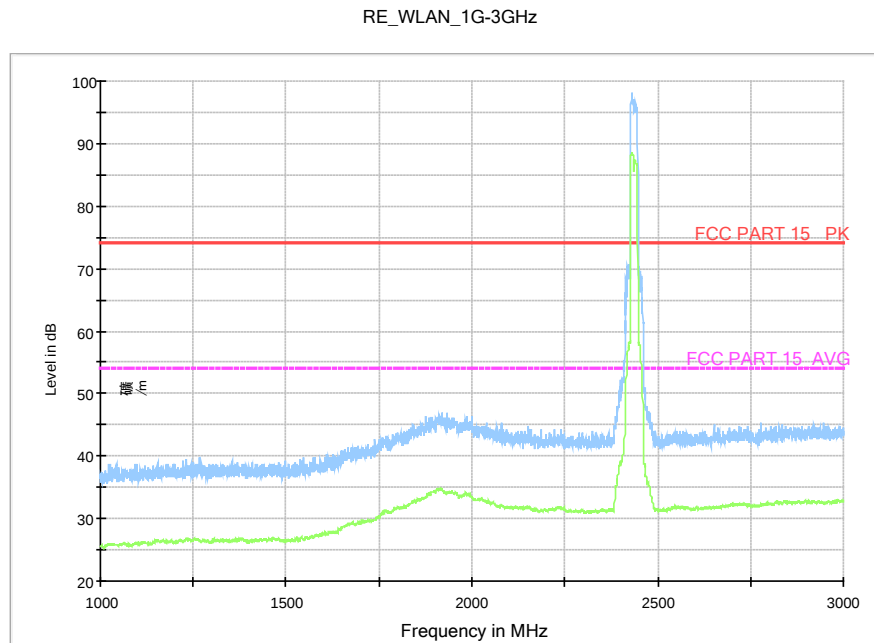


Fig.A.2.37 Radiated Spurious Emission (802.11n-HT20, Ch6, 1 GHz-3 GHz)

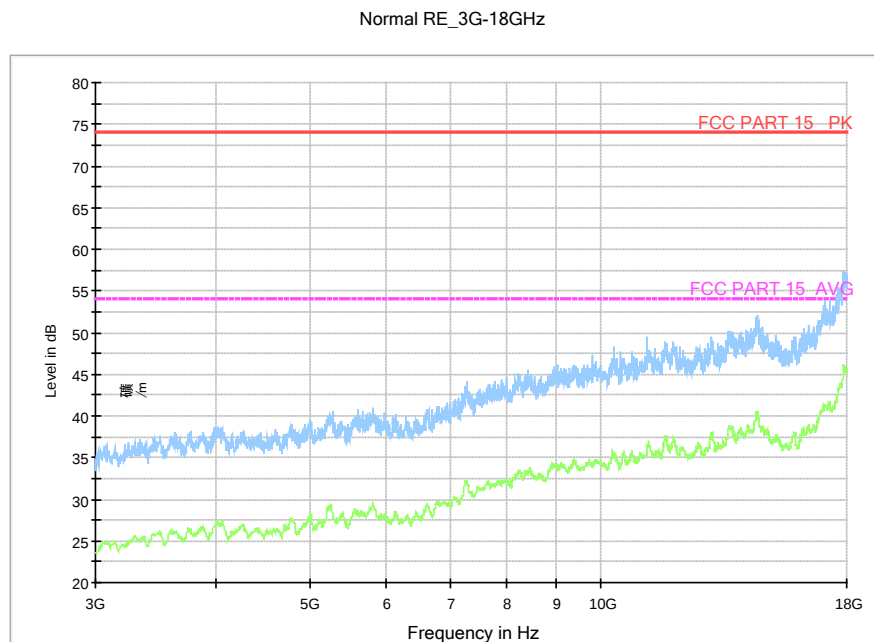


Fig.A.2.38 Radiated Spurious Emission (802.11n-HT20, Ch6, 3 GHz-18 GHz)

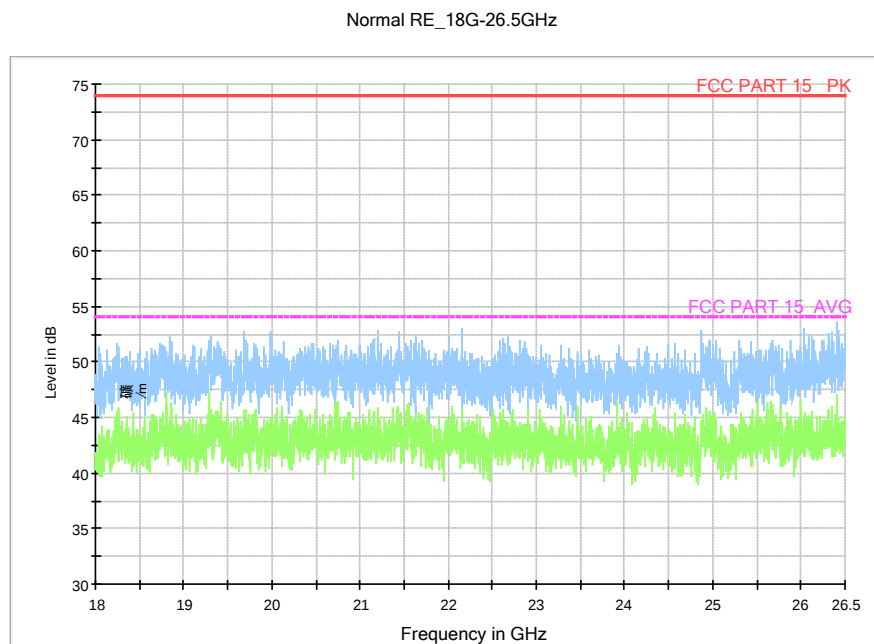


Fig.A.2.39 Radiated Spurious Emission (802.11n-HT20, Ch6, 18GHz – 26.5GHz)

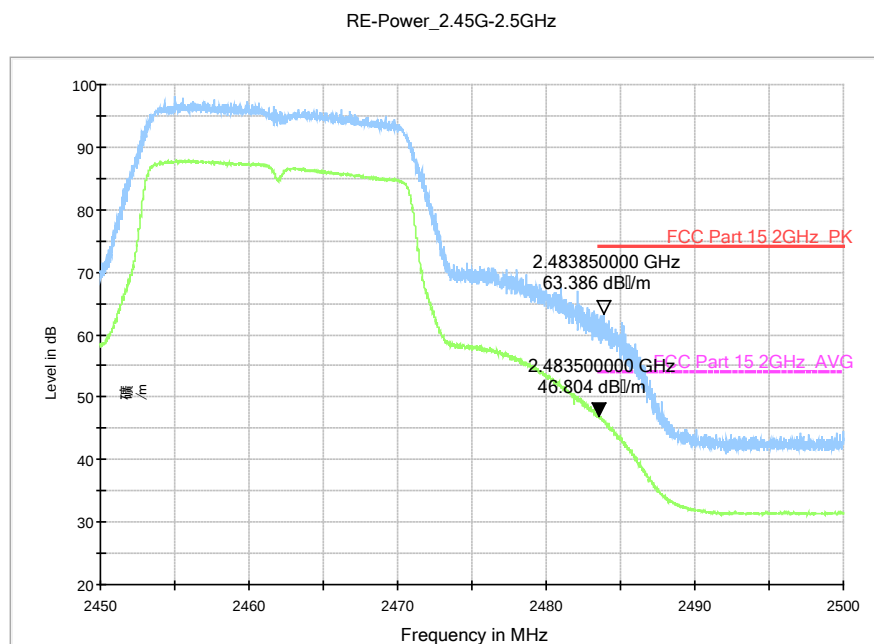


Fig.A.2.40 Radiated Spurious Emission (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

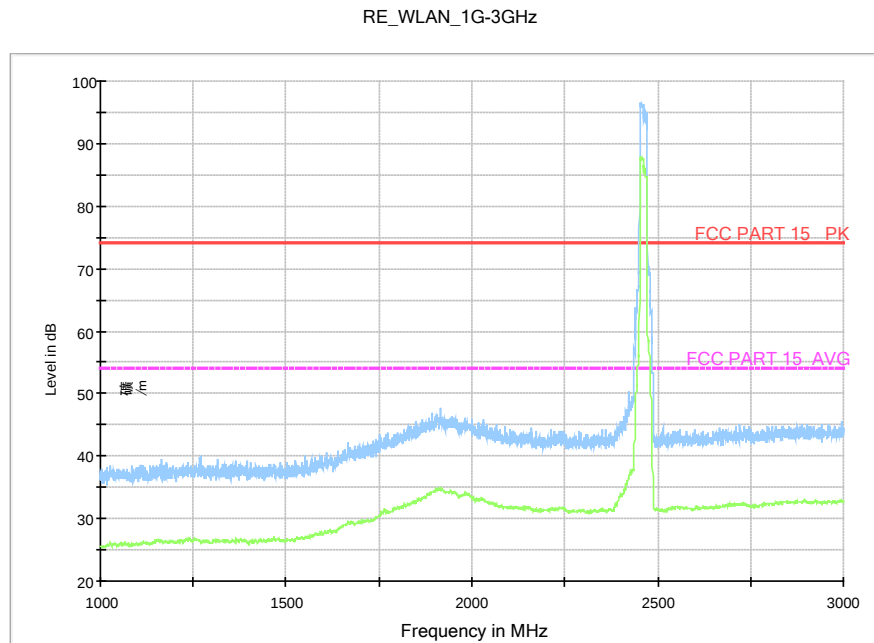


Fig.A.2.41 Radiated Spurious Emission (802.11n-HT20, Ch11, 1 GHz-3 GHz)

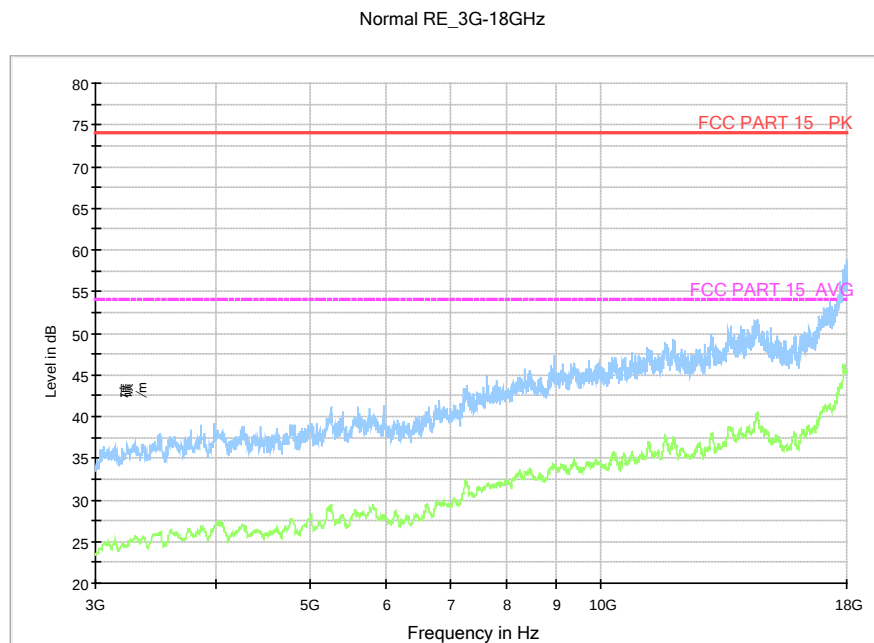


Fig.A.2.42 Radiated Spurious Emission (802.11n-HT20, Ch11, 3 GHz-18 GHz)

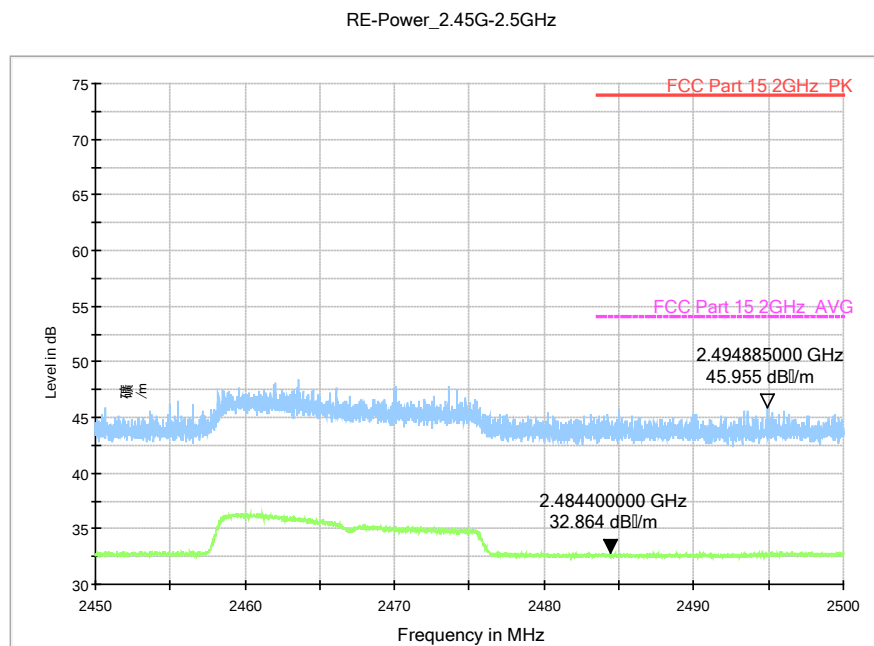


Fig.A.2.43 Radiated Spurious Emission (Power): 802.11n-HT20, ch12, 2.45 GHz - 2.50GHz

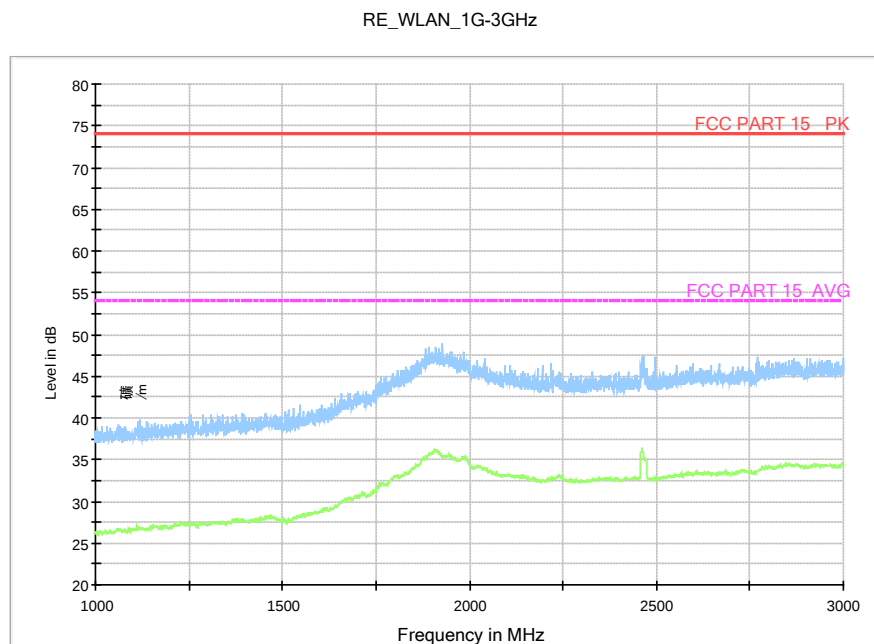


Fig.A.2.44 Radiated Spurious Emission (802.11n-HT20, Ch12, 1 GHz-3 GHz)

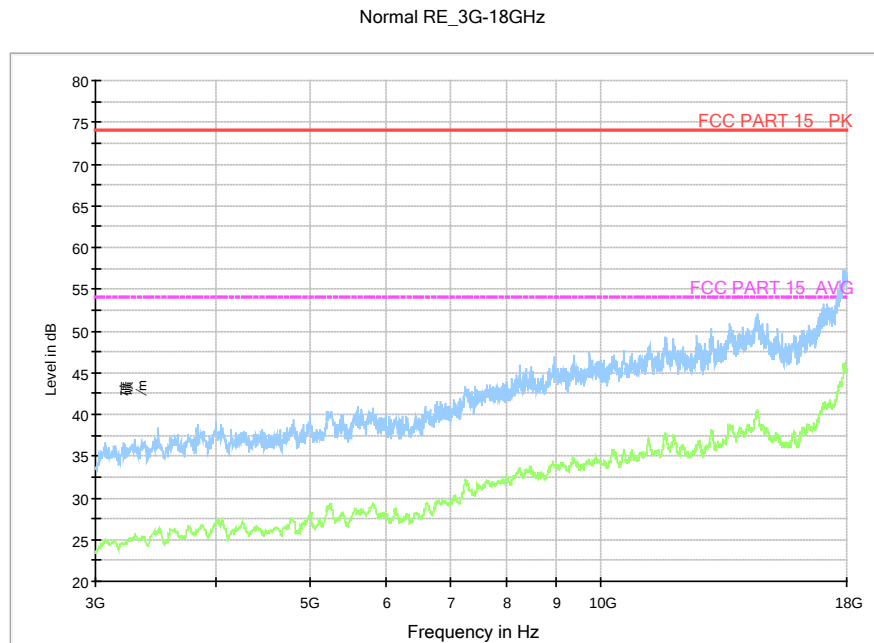


Fig.A.2.45 Radiated Spurious Emission (802.11n-HT20, Ch12, 3 GHz-18 GHz)

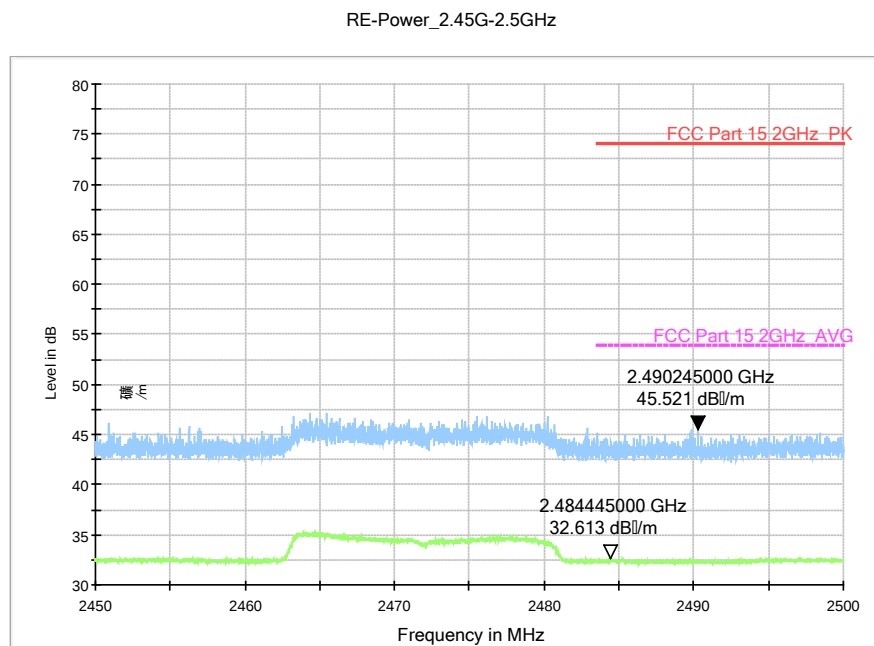


Fig.A.2.46 Radiated Spurious Emission (Power): 802.11n-HT20, ch13, 2.45 GHz - 2.50GHz

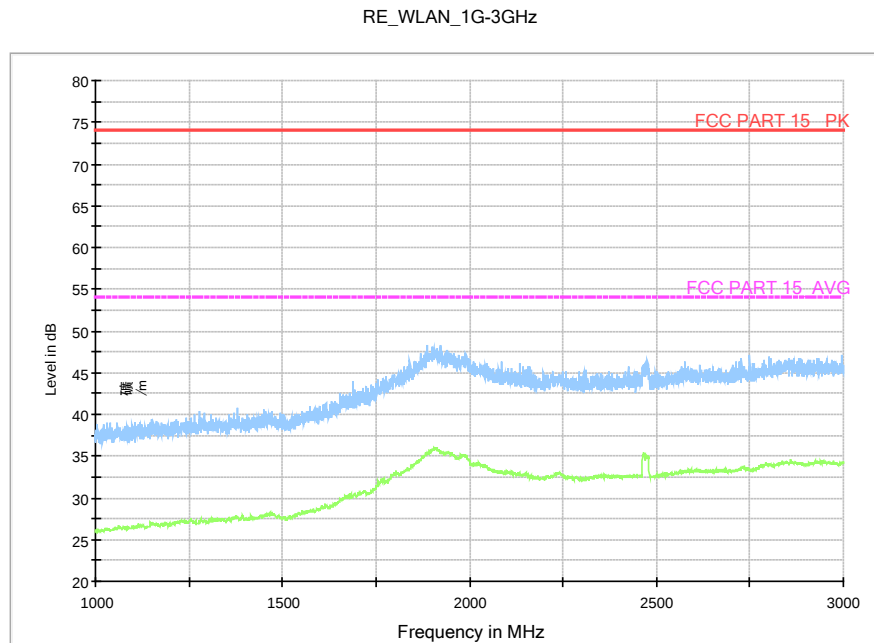


Fig.A.2.47 Radiated Spurious Emission (802.11n-HT20, Ch13, 1 GHz-3 GHz)

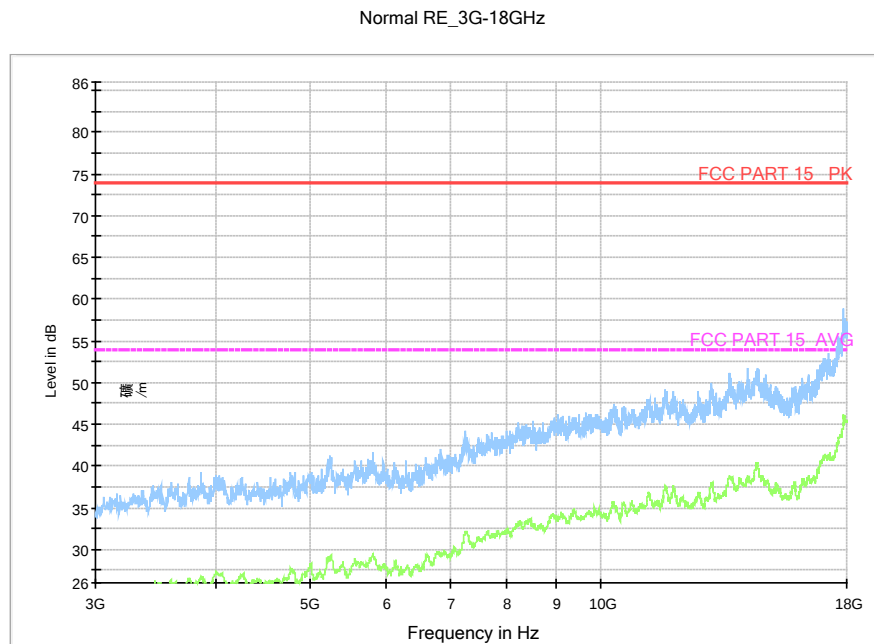


Fig.A.2.48 Radiated Spurious Emission (802.11n-HT20, Ch13, 3 GHz-18 GHz)

A.3. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.3.1	Fig.A.3.2	P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.3.1	Fig.A.3.2	P
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to ANSI C63.10

Note: Expanded measurement uncertainty for this test item is $U = 3.2\text{dB}$, $k=2$.

Conclusion: PASS

Test graphs as below:

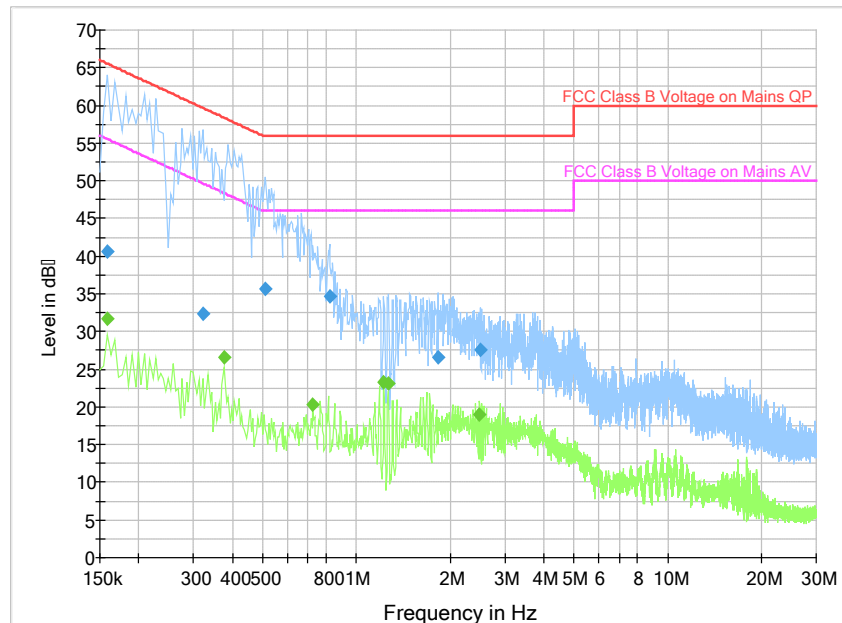


Fig.A.3.1 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Measurement Result 1:

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.159000	40.6	2000.0	9.000	On	L1	19.7	24.9	65.5
0.321000	32.3	2000.0	9.000	On	L1	19.8	27.4	59.7
0.510000	35.6	2000.0	9.000	On	L1	19.8	20.4	56.0
0.820500	34.6	2000.0	9.000	On	L1	19.8	21.4	56.0
1.833000	26.6	2000.0	9.000	On	N	19.7	29.4	56.0
2.499000	27.6	2000.0	9.000	On	N	19.6	28.4	56.0

Measurement Result 2:

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.159000	31.7	2000.0	9.000	On	L1	19.7	23.8	55.5
0.375000	26.6	2000.0	9.000	On	N	19.8	21.8	48.4
0.726000	20.3	2000.0	9.000	On	N	19.8	25.7	46.0
1.225500	23.2	2000.0	9.000	On	N	19.7	22.8	46.0
1.266000	23.1	2000.0	9.000	On	N	19.7	22.9	46.0
2.490000	19.0	2000.0	9.000	On	N	19.6	27.0	46.0

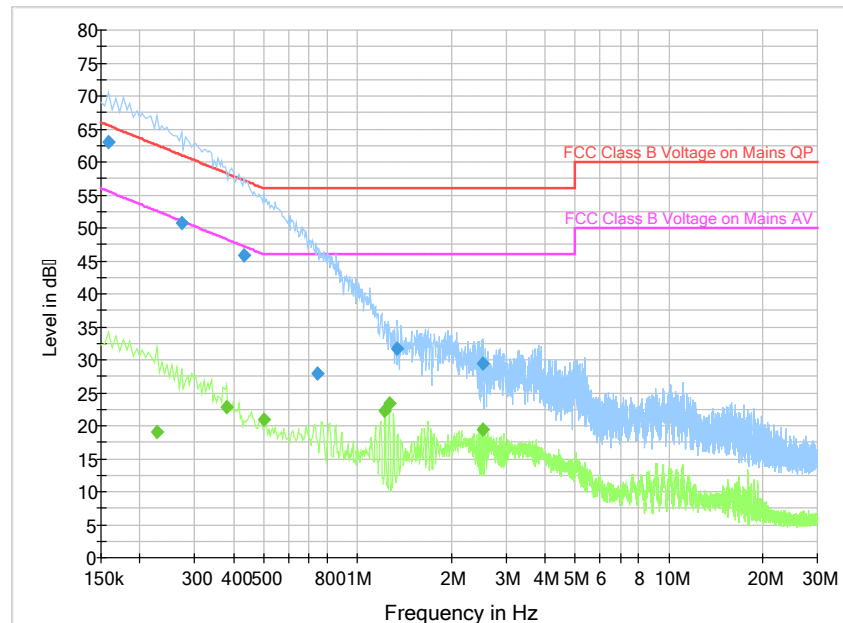


Fig.A.3.2 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Measurement Result 1:

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.159000	63.1	2000.0	9.000	On	N	19.7	2.4	65.5
0.271500	50.7	2000.0	9.000	On	N	19.8	10.4	61.1
0.433500	45.9	2000.0	9.000	On	N	19.8	11.3	57.2
0.744000	27.9	2000.0	9.000	On	L1	19.8	28.1	56.0
1.342500	31.6	2000.0	9.000	On	N	19.6	24.4	56.0
2.526000	29.5	2000.0	9.000	On	N	19.6	26.5	56.0

Measurement Result 2:

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.226500	19.1	2000.0	9.000	On	L1	19.8	33.4	52.6
0.379500	22.8	2000.0	9.000	On	N	19.8	25.5	48.3
0.501000	21.0	2000.0	9.000	On	N	19.8	25.0	46.0
1.225500	22.2	2000.0	9.000	On	N	19.7	23.8	46.0
1.266000	23.4	2000.0	9.000	On	N	19.7	22.6	46.0
2.535000	19.4	2000.0	9.000	On	N	19.6	26.6	46.0

*** END OF REPORT BODY ***