



**FCC PART 15C/IC RSS-210
TEST REPORT
No. 2013WLN0776**

for

Sony Mobile Communications AB

Wi-Fi Display Adapter

Type: RW-0100

With

FCC ID: PY7-RW0100

IC: 4170B- RW0100

Hardware Version: AP

Software Version: 0.1.1.1

Issued Date: 2013-09-30

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 TMC Beijing.

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China, 100191

Tel: +86(0)10-62304633-2561, Fax: +86(0)10-62304633-2504 Email:welcome@emcite.com. www.emcite.com

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1. TEST LATORATORY

1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT
Address: No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China
Postal Code: 100191
Telephone: +86-10-62304633-2561
Fax: +86-10-62304633-2504

1.2. Project data

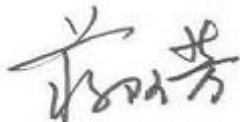
Testing Start Date: 2013-09-09
Testing End Date: 2013-09-30

1.3. Signature



Xu Zhongfei

(Prepared this test report)



Jiang Afang

(Reviewed this test report)



Xiao Li

Deputy Director of the laboratory

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: Sony Mobile Communications (China) Co. Ltd
Address /Post: Sony Mobile R&D Center, No. 16, Guangshun South Street,
Chaoyang District
City: Beijing
Postal Code: 100102
Country: China
Contact Person: Ma, Gang
Telephone: +86-10-58656312
Fax: +86-10-58659049

2.2. Manufacturer Information

Company Name: Sony Mobile Communications AB
Address /Post: Nya Vattentornet, 22188 Lund, Sweden
City: Lund
Postal Code: 22188
Country: Sweden
Contact Person: Nordlof, Anders
Telephone: +46-10-802 3919
Fax: +46-10-800 2441

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	Wi-Fi Display Adapter
Type	RW-0100
FCC ID	PY7-RW0100
IC	4170B- RW0100
WLAN Frequency Range	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
MAX Radiated Power	20.22dBm(OFDM)
MAX Conducted Power	14.02dBm(OFDM)
Extreme Temperature	-20/+55°C
Voltage	USB cable power

Note: Photographs of EUT are shown in ANNEX C of this test report. Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

3.2. Internal Identification of EUT used during the test

EUT ID*	S/N	HW Version	SW Version
EUT1	13341D1DCE0251A	AP	0.1.1.1
EUT2	13341D1DCE02B22	AP	0.1.1.1

*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	AC/DC Adapter	AC-0400-EU	8512W19 100304
AE2	USB Cable	AI-0700	124412D41165448

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

3.4. General Description

The Equipment Under Test (EUT) is a model of Wi-Fi Display Adapter with integrated antenna. It has a USB port and a HDMI port.

It support WLAN (802.11 a/b/g/n) and NFC functions. For 2.4GHz 802.11n, it also supports MIMO. It includes normal options: AC/DC adapter, USB cable and HDMI cable.

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 C63.4	Low-Voltage Electrical and Electronic Equipment in the	2009
	Range of 9 kHz to 40 GHz	
	Measurement of Digital Transmission Systems	
KDB558074	Operating under Section 15.247	2012
	Spectrum Management and Telecommunications - Radio	
	Standards Specification	
RSS-GEN	General Requirements and Information for the Certification	Issue 3
	of Radiocommunication Equipment	
	Spectrum Management and Telecommunications - Radio	
	Standards Specification	
RSS-210	Low-power Licence-exempt Radiocommunication Devices	Issue 8
	(All Frequency Bands): Category I Equipment	

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
Maximum Peak Output Power	15.247 (b)	A8,A9	P
Peak Power Spectral Density	15.247 (e)	A8,A9	P
Occupied 6dB Bandwidth	15.247 (a)	A8	P
99% Occupied Bandwidth	/	RSS-Gen 4.6.1	P
Transmitter Spurious Emission - Conducted	15.247	A8	P
Transmitter Spurious Emission - Radiated	15.247, 15.209	A8	P
Transmitter Spurious Emission - Radiated < 30MHz	15.247, 15.209	A8	P
AC Powerline Conducted Emission	15.107, 15.207	7.2.2	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 TMC
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

TMC has evaluated the test cases requested by the client/manufacturer 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	USB cable power
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2014-07-08
2	Test Receiver	ESS	847151/015	Rohde & Schwarz	2013-10-30
3	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2014-08-12
4	Shielding Room	S81	/	ETS-Lindgren	/

Radiated emission test system

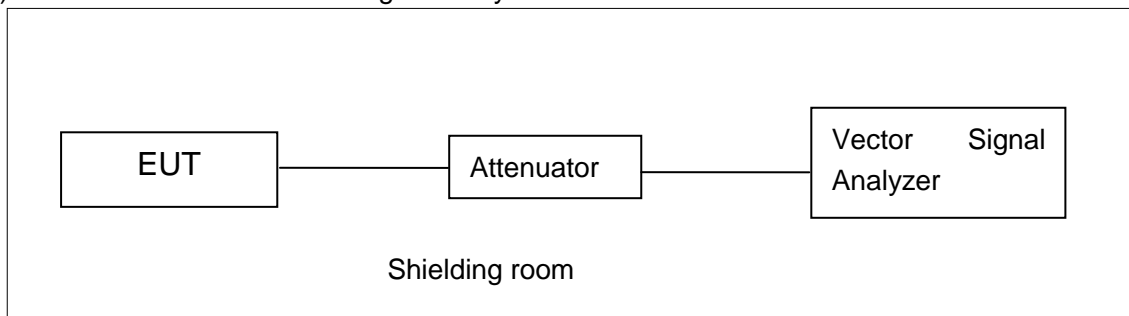
No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Test Receiver	ESI40	831564/002	Rohde & Schwarz	2014-02-12
2	BiLog Antenna	3142B	9908-1403	EMCO	2014-03-15
3	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2013-12-25
4	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2014-06-30
5	Semi-anechoic chamber	/	CT000332-1074	Frankonia German	/

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer

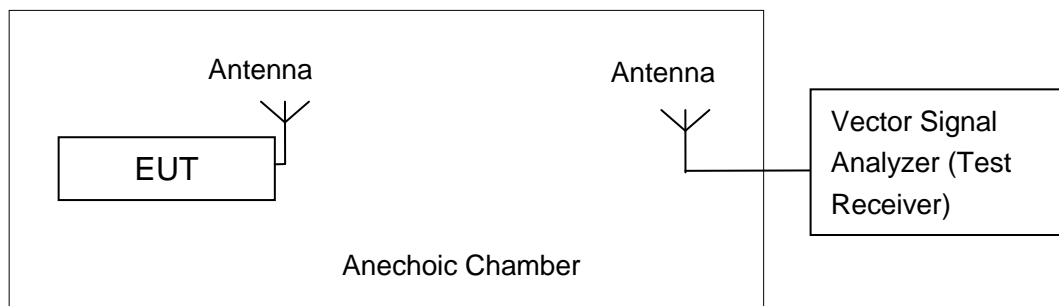


A.1.2. Radiated Emission Measurements

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 C63.4 and KDB558074

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. Maximum Peak Output Power

Measurement Limit and Method:

Standard	Limit (dBm)
FCC CRF Part 15.247(b)	< 30

The measurement is made according to ANSI C63.4 and KDB558074

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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A.2.1. Output Power Verification

This test is only for mode verification, and the selected mode will be used for the future measurement.

Measurement Results:

OFDM/a mode	Maximum Conducted Power (dBm)							
data rate (Mbps)	6	9	12	18	24	36	48	54
149 (5745 MHz)	12.29	13.52	13.21	13.30	13.41	13.80	13.76	13.72

OFDM/n-HT20 mode	Maximum Conducted Power (dBm)							
data rate (Mbps)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
149 (5745 MHz)	13.50	13.50	13.45	14.02	13.76	13.72	13.69	13.25

Selected data rate for all measurement:

OFDM /a-mode: 36Mbps

OFDM /n-HT20 mode: MCS3

A.2.2. Antenna Gain

The antenna gain of the complete system is calculated by the difference of radiated power and the conducted power of the EUT.

Test	Channel		
	149	157	161
Tnom,Vnom	149	157	161
Conducted Power(dBm)	8.16	7.41	7.78
Radiated Power(dBm)	14.06	13.85	14.11
Gain(dBi)	5.90	6.44	6.33

Antenna Gain = Radiated value (with radiated sample) - Conducted values (with conducted samples)

A.2.3. Maximum Peak Output Power

Measurement Results:

802.11a

Mode	Test Result (dBm)					
	5745 MHz (Ch149)		5785 MHz (Ch157)		5805 MHz (Ch161)	
	Conducted	Radiated	Conducted	Radiated	Conducted	Radiated
802.11a	13.80	19.70	13.62	20.06	13.46	19.79

802.11n-HT20

Mode	Test Result (dBm)					
	5745 MHz (Ch149)		5785 MHz (Ch157)		5805 MHz (Ch161)	
	Conducted	Radiated	Conducted	Radiated	Conducted	Radiated
802.11n-HT20	14.02	19.92	13.78	20.22	13.68	20.01

Conclusion: PASS

A.3. Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(e)	< 8 dBm/3 kHz

The measurement is made according to ANSI C63.4 and KDB558074

Measurement Uncertainty:

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

Measurement Results:

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11a	149	-20.82	P
	157	-22.24	P
	161	-22.48	P
802.11n HT20	149	-20.49	P
	157	-21.75	P
	161	-20.44	P

Conclusion: PASS

A.4. Occupied 6dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

The measurement is made according to ANSI C63.4 and KDB558074

Measurement Uncertainty:

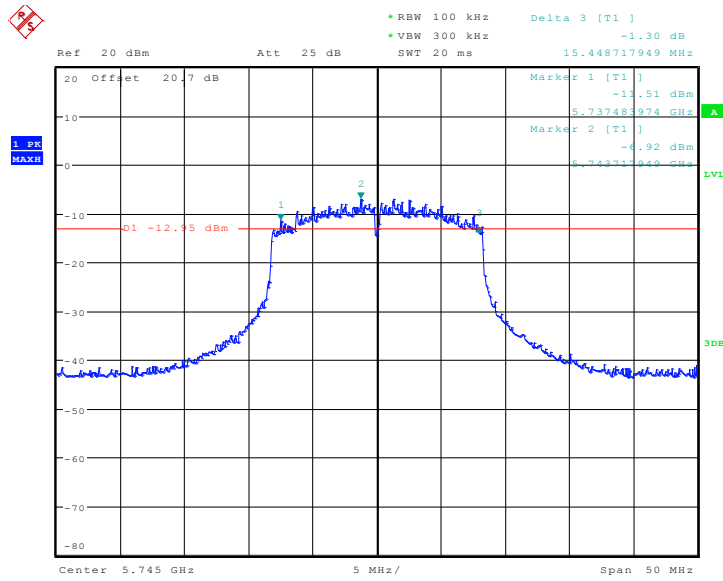
Measurement Uncertainty	60.80Hz
-------------------------	---------

Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11a	149	Fig.1	15449	P
	157	Fig.2	15465	P
	161	Fig.3	15176	P
802.11n HT20	149	Fig.4	15064	P
	157	Fig.5	15064	P
	161	Fig.6	15064	P

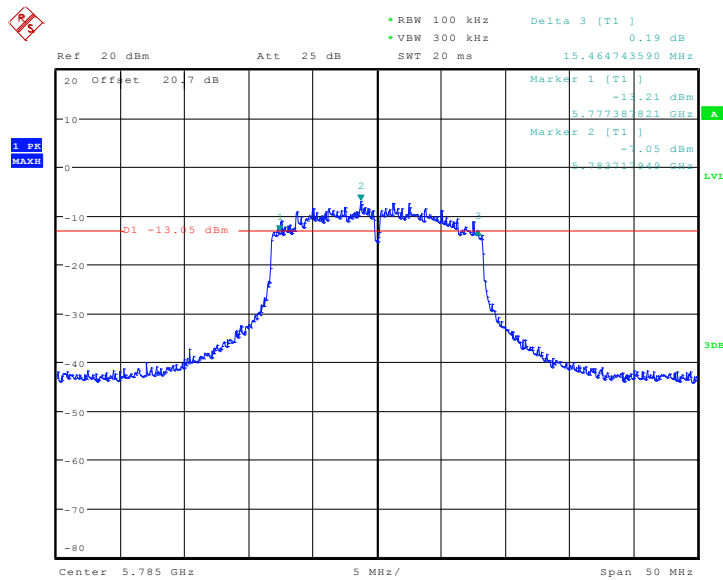
Conclusion: PASS

Test graphs as below:



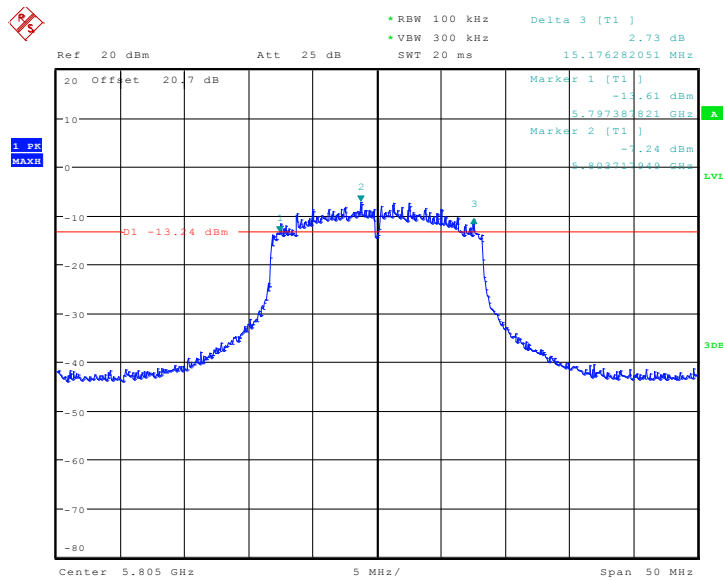
Date: 22.SEP.2013 14:35:15

Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)



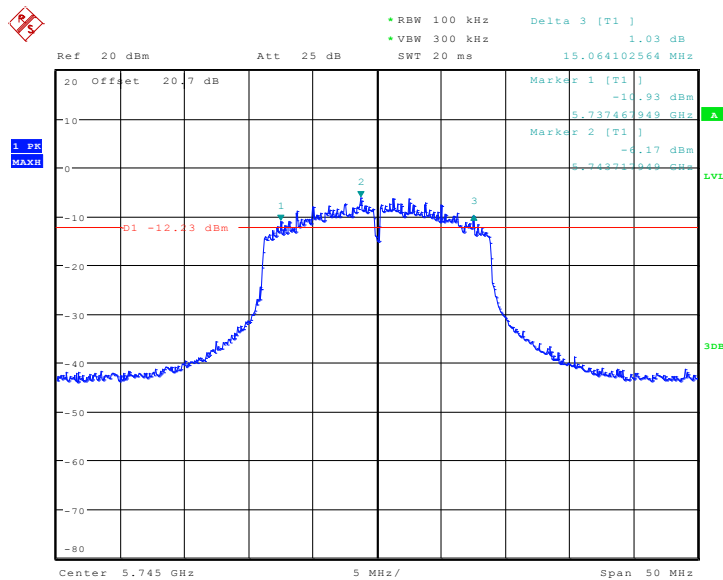
Date: 22.SEP.2013 14:36:44

Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)



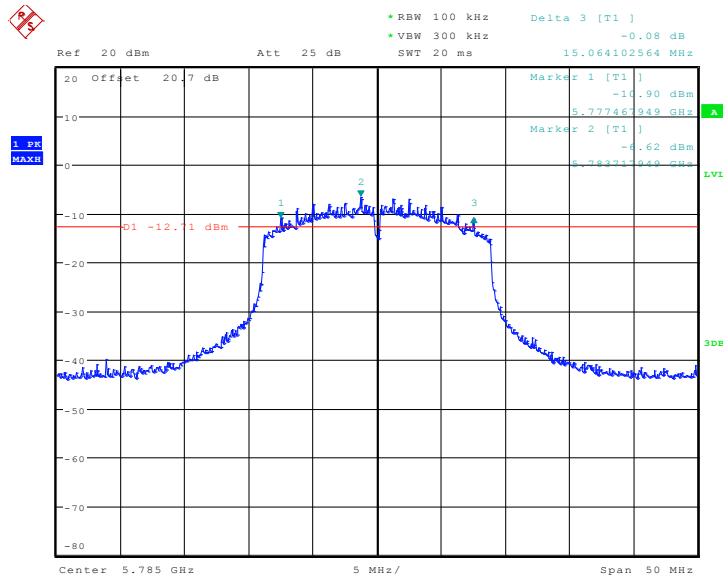
Date: 22.SEP.2013 14:38:10

Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 161)



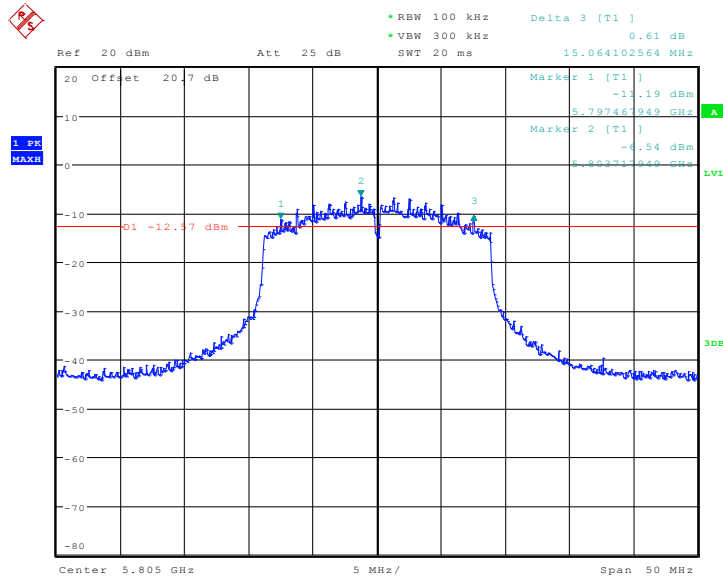
Date: 22.SEP.2013 14:40:09

Fig. 4 Occupied 6dB Bandwidth (802.11n-HT20, Ch 149)



Date: 22.SEP.2013 14:41:38

Fig. 5 Occupied 6dB Bandwidth (802.11n-HT20, Ch 157)



Date: 22.SEP.2013 14:43:02

Fig. 6 Occupied 6dB Bandwidth (802.11n-HT20, Ch 161)

A.5 99% Occupied Channel Bandwidth

Reference : RSS-Gen 4.6.1

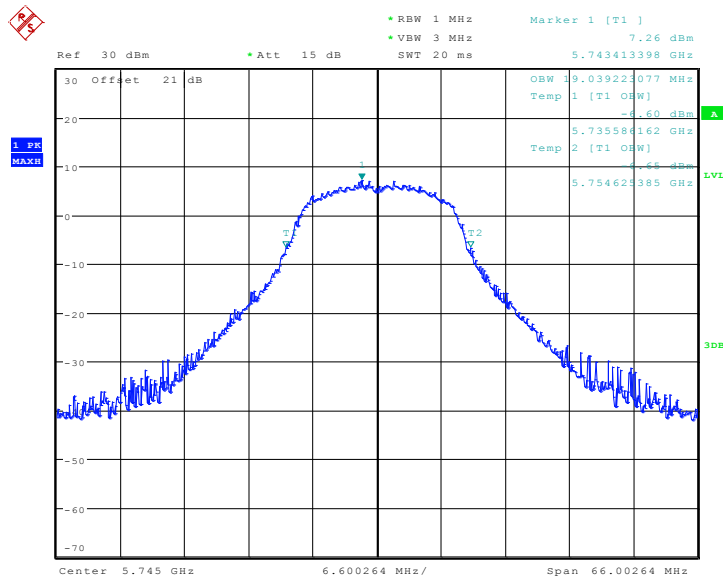
Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
-------------------------	---------

Measurement Result:

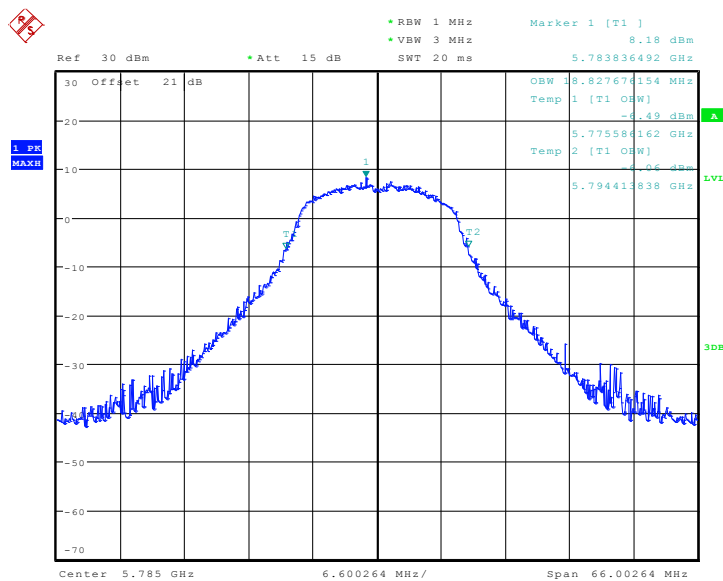
Mode	Channel	Occupied Bandwidth (kHz)		conclusion
802.11a	149	Fig.7	19039	P
	157	Fig.8	18828	P
	161	Fig.9	18933	P
802.11n HT20	149	Fig.10	19674	P
	157	Fig.11	19568	P
	161	Fig.12	19674	P

Conclusion: PASS



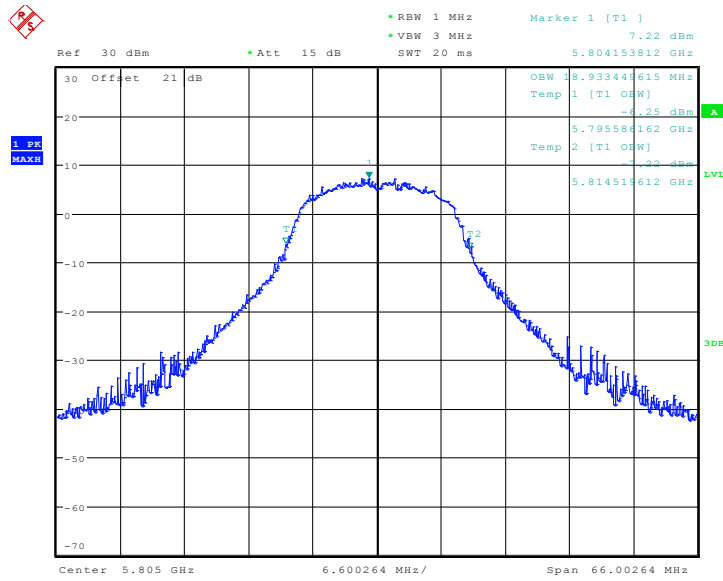
Date: 30.SEP.2013 18:06:17

Fig. 7 99% Occupied Bandwidth: Channel 149, 802.11a



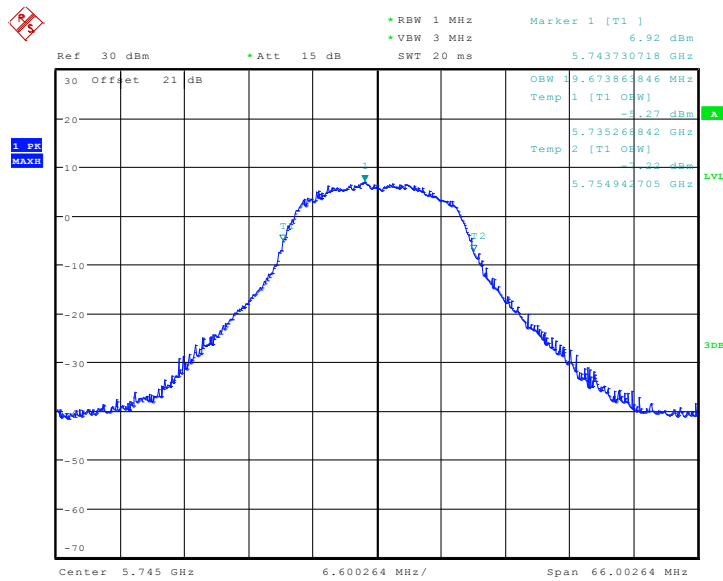
Date: 30.SEP.2013 18:07:51

Fig. 8 99% Occupied Bandwidth: Channel 157, 802.11a



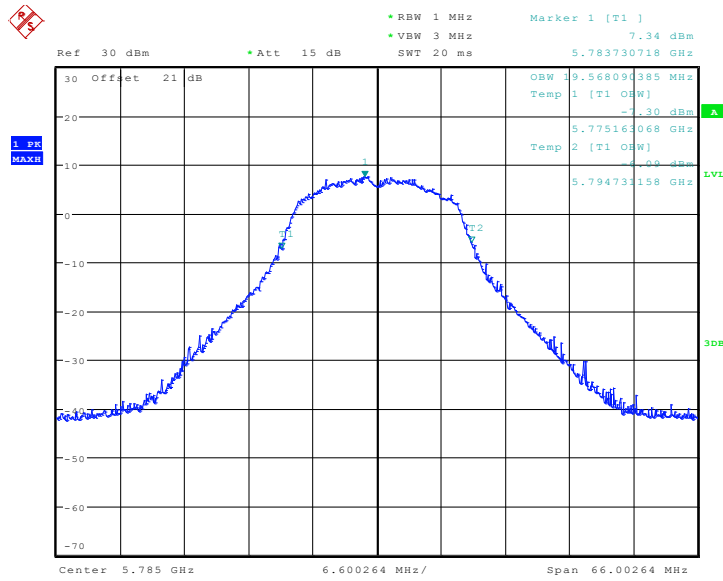
Date: 30.SEP.2013 18:09:12

Fig. 9 99% Occupied Bandwidth: Channel 161, 802.11a



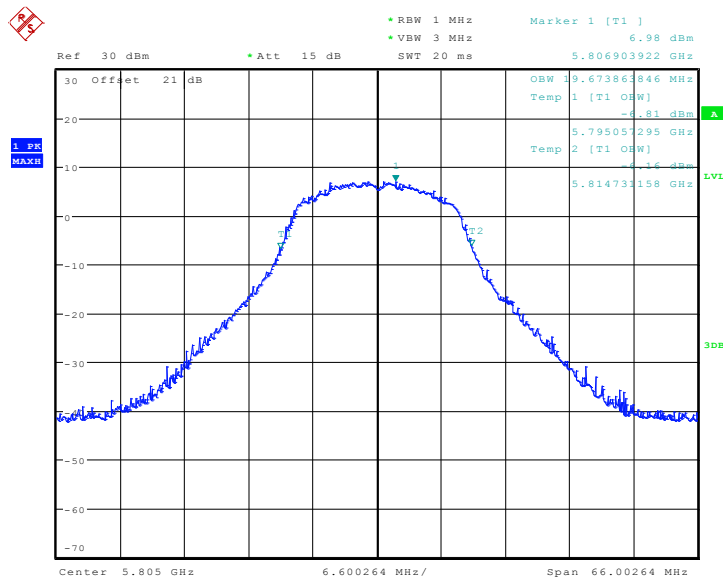
Date: 30.SEP.2013 18:07:16

Fig. 10 99% Occupied Bandwidth: Channel 149, 802.11n-HT20



Date: 30.SEP.2013 18:08:28

Fig. 11 99% Occupied Bandwidth: Channel 157, 802.11n-HT20



Date: 30.SEP.2013 18:09:49

Fig. 12 99% Occupied Bandwidth: Channel 161, 802.11n-HT20

A.6. 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 C63.4 and KDB558074

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(dB)
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

A.6.1 Transmitter Spurious Emission - Conducted

Measurement Results:

802.11a mode

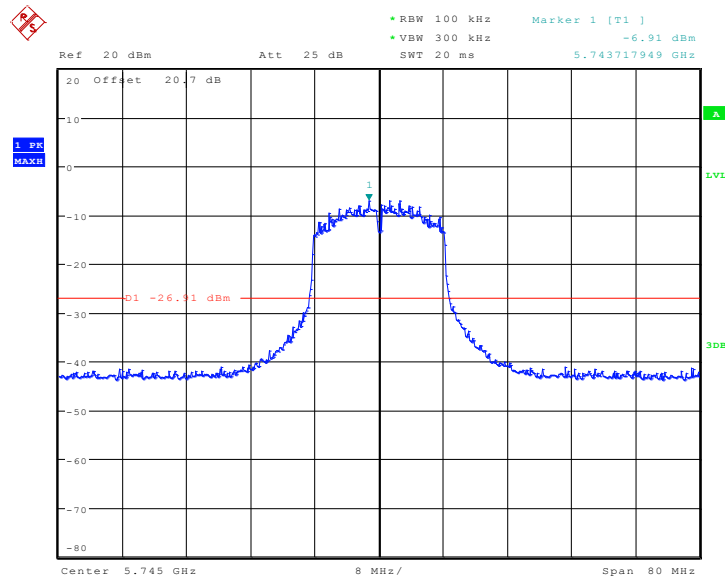
MODE	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	5.745 GHz	Fig.13	P
		30 MHz ~ 12 GHz	Fig.14	P
		12 GHz ~ 25 GHz	Fig.15	P
		25 GHz ~ 40 GHz	Fig.16	P
	157	5.785 GHz	Fig.17	P
		30 MHz ~ 12 GHz	Fig.18	P
		12 GHz ~ 25 GHz	Fig.19	P
		25 GHz ~ 40 GHz	Fig.20	P
	161	5.805 GHz	Fig.21	P
		30 MHz ~ 12 GHz	Fig.22	P
		12 GHz ~ 25 GHz	Fig.23	P
		25 GHz ~ 40 GHz	Fig.24	P

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n HT20	149	5.745 GHz	Fig.25	P
		30 MHz ~ 12 GHz	Fig.26	P
		12 GHz ~ 25 GHz	Fig.27	P
		25 GHz ~ 40 GHz	Fig.28	P
	157	5.785 GHz	Fig.29	P
		30 MHz ~ 12 GHz	Fig.30	P
		12 GHz ~ 25 GHz	Fig.31	P
		25 GHz ~ 40 GHz	Fig.32	P
	161	5.805 GHz	Fig.33	P
		30 MHz ~ 12 GHz	Fig.34	P
		12 GHz ~ 25 GHz	Fig.35	P
		25 GHz ~ 40 GHz	Fig.36	P

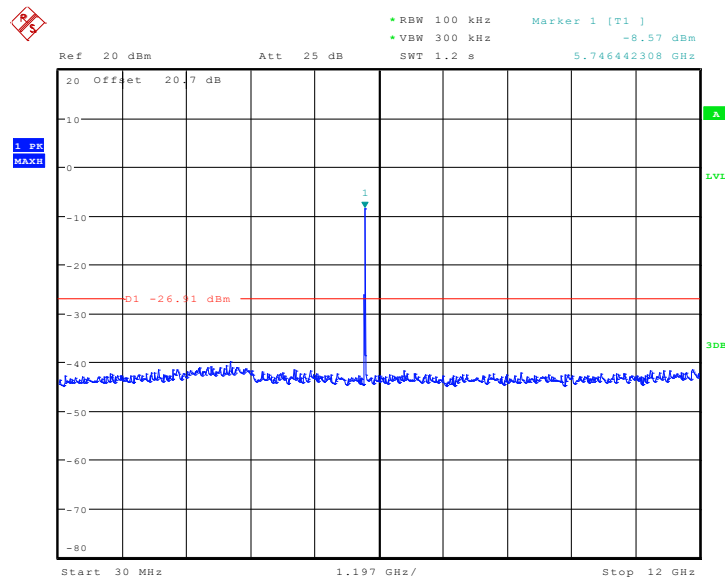
Conclusion: PASS

Test graphs as below:



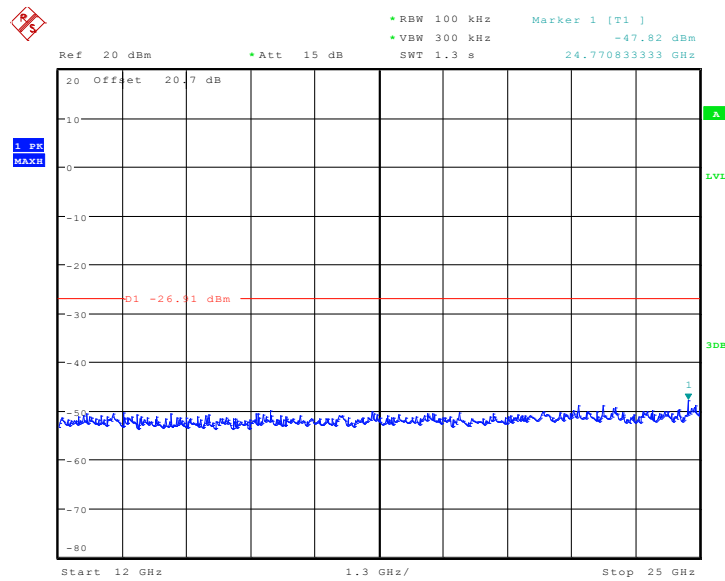
Date: 22.SEP.2013 14:57:30

Fig. 13 Conducted Spurious Emission (802.11a, Ch149, Center Frequency)



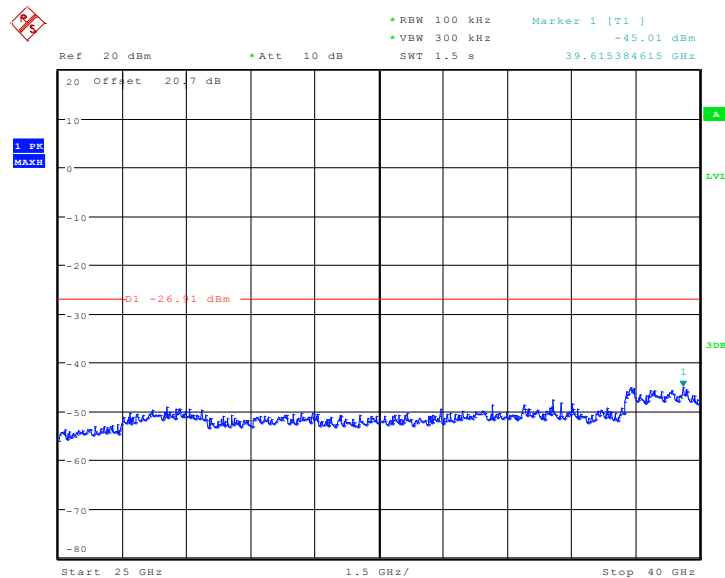
Date: 22.SEP.2013 14:57:53

Fig. 14 Conducted Spurious Emission (802.11a, Ch149, 30 MHz-12 GHz)



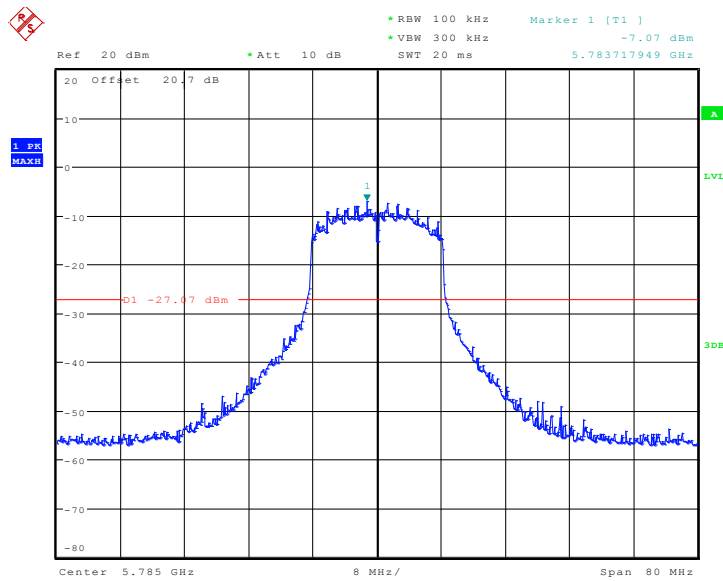
Date: 22.SEP.2013 14:58:26

Fig. 15 Conducted Spurious Emission (802.11a, Ch149, 12 GHz-25 GHz)



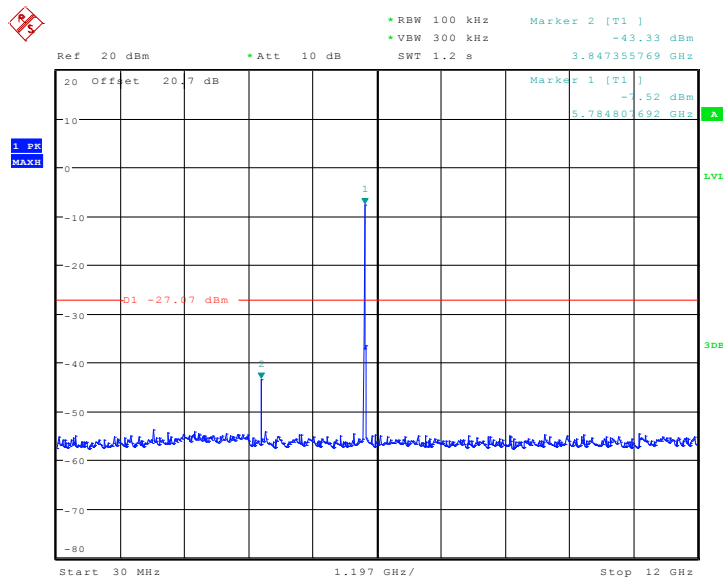
Date: 22.SEP.2013 14:59:07

Fig. 16 Conducted Spurious Emission (802.11a, Ch149, 25 GHz-40 GHz)



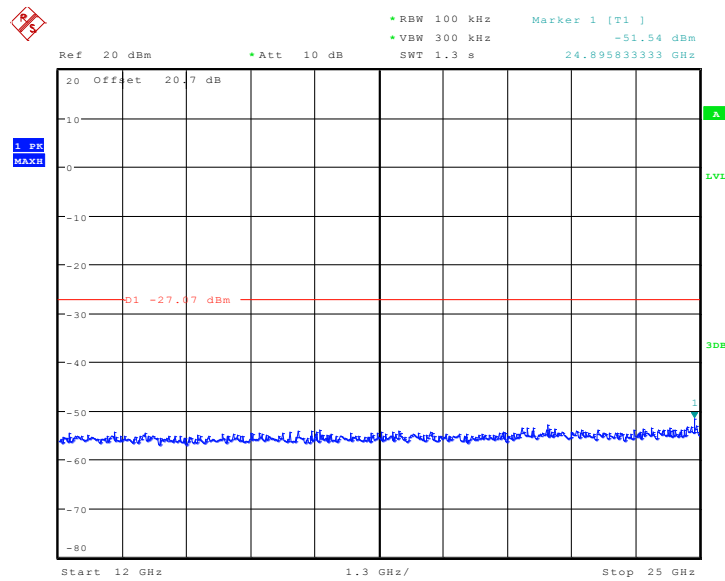
Date: 22.SEP.2013 15:00:24

Fig. 17 Conducted Spurious Emission (802.11a, Ch157, Center Frequency)



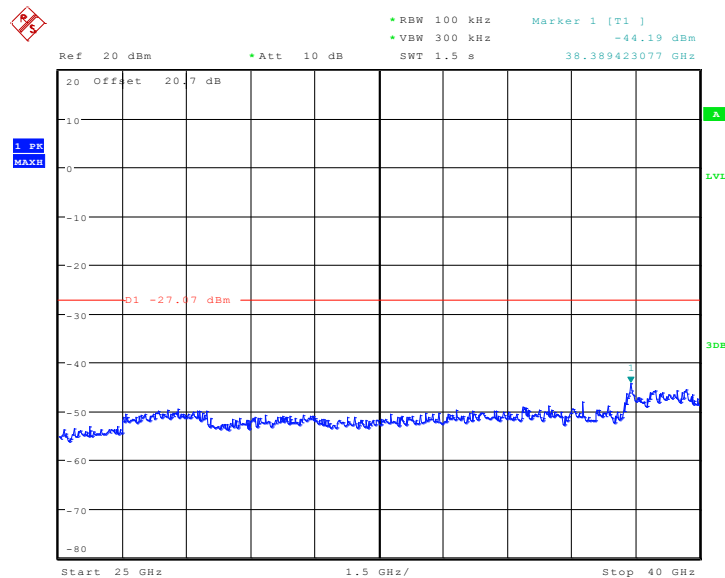
Date: 22.SEP.2013 15:00:52

Fig. 18 Conducted Spurious Emission (802.11a, Ch157, 30 MHz-12 GHz)



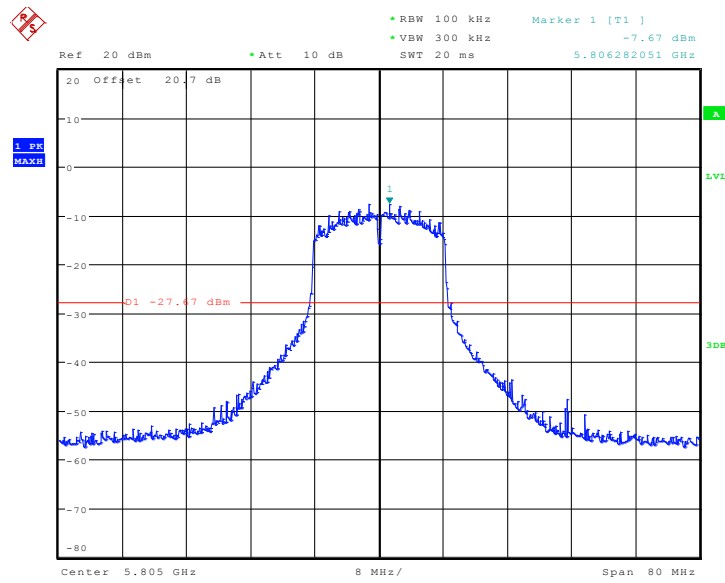
Date: 22.SEP.2013 15:01:22

Fig. 19 Conducted Spurious Emission (802.11a, Ch157, 12 GHz-25 GHz)



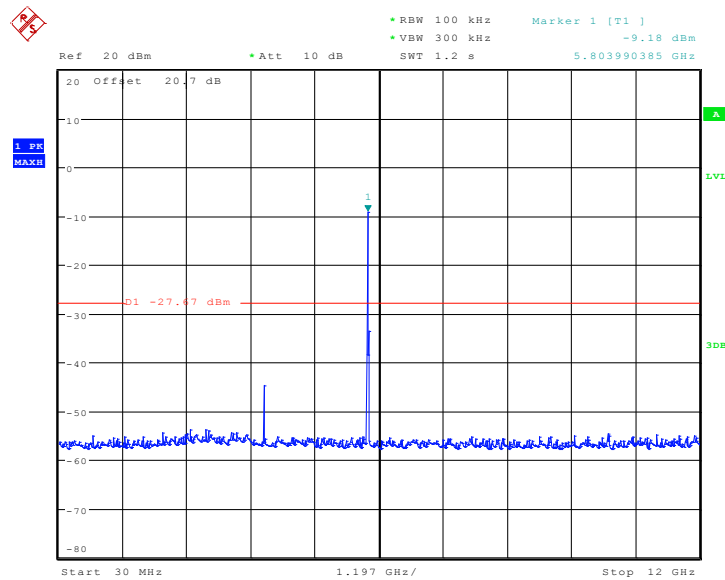
Date: 22.SEP.2013 15:01:40

Fig. 20 Conducted Spurious Emission (802.11a, Ch157, 25 GHz-40 GHz)



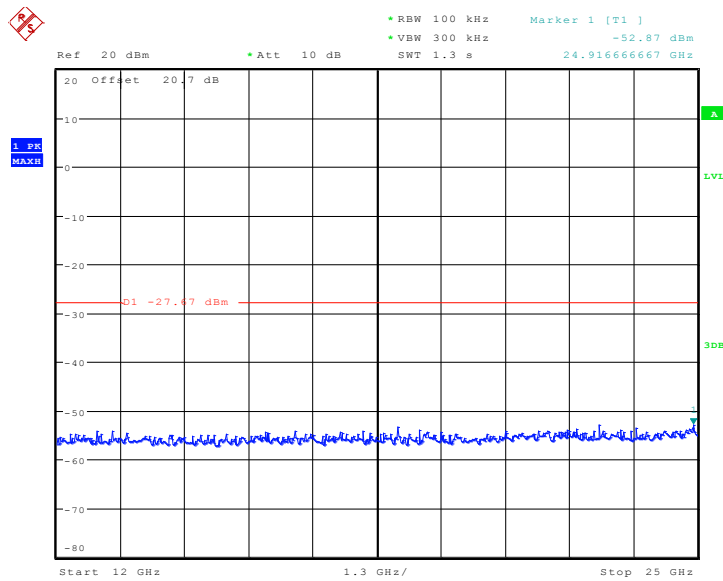
Date: 22.SEP.2013 15:04:14

Fig. 21 Conducted Spurious Emission (802.11a, Ch165, Center Frequency)



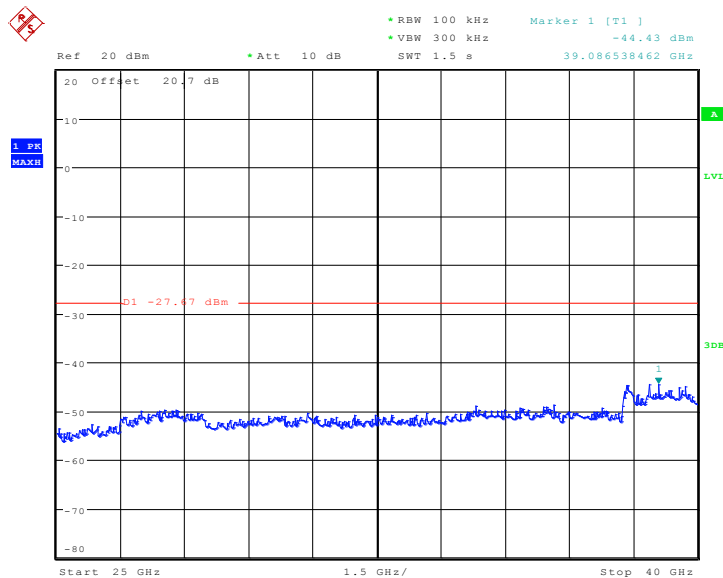
Date: 22.SEP.2013 15:04:38

Fig. 22 Conducted Spurious Emission (802.11a, Ch165, 30 MHz-12 GHz)



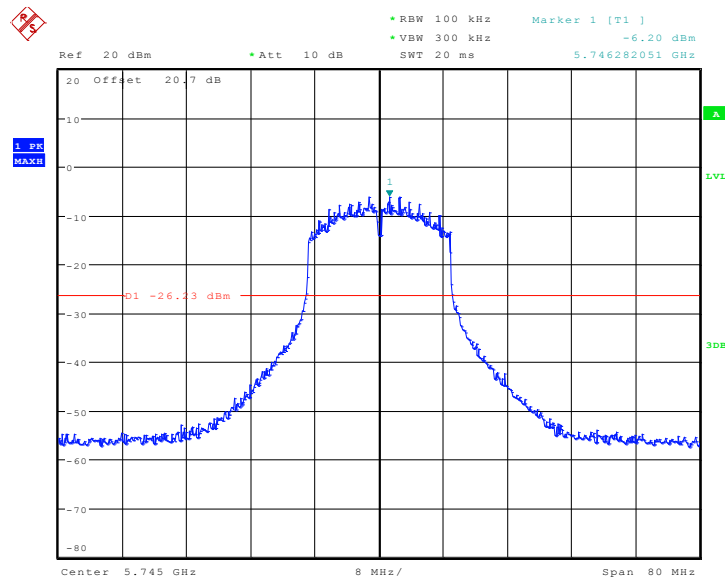
Date: 22.SEP.2013 15:04:58

Fig. 23 Conducted Spurious Emission (802.11a, Ch165, 12 GHz-25 GHz)



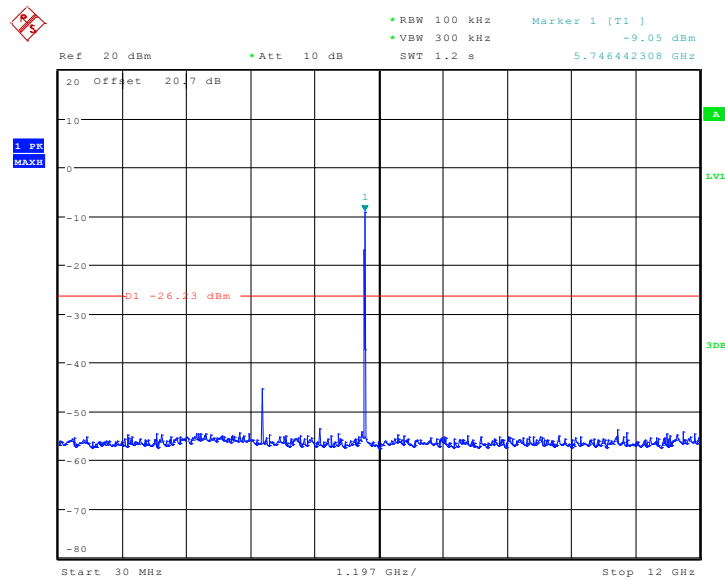
Date: 22.SEP.2013 15:05:18

Fig. 24 Conducted Spurious Emission (802.11a, Ch165, 25 GHz-40 GHz)



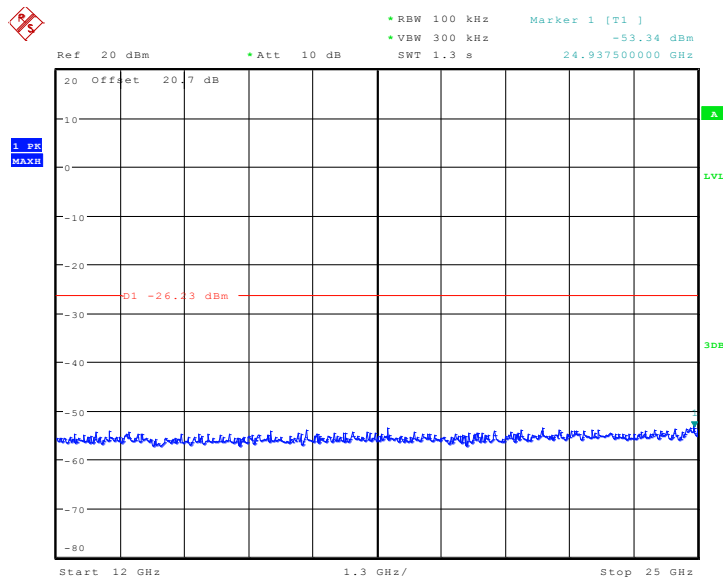
Date: 22.SEP.2013 15:06:13

Fig. 25 Conducted Spurious Emission (802.11n-HT20, Ch149, Center Frequency)



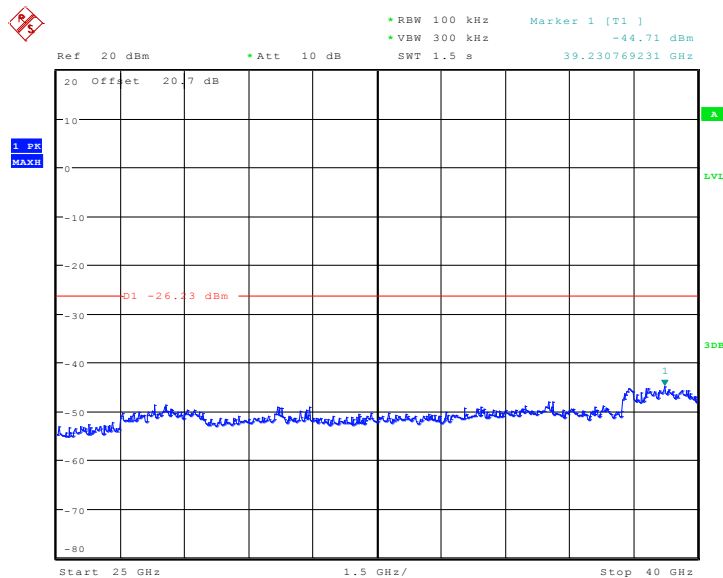
Date: 22.SEP.2013 15:06:36

Fig. 26 Conducted Spurious Emission (802.11n-HT20, Ch149, 30 MHz-12 GHz)



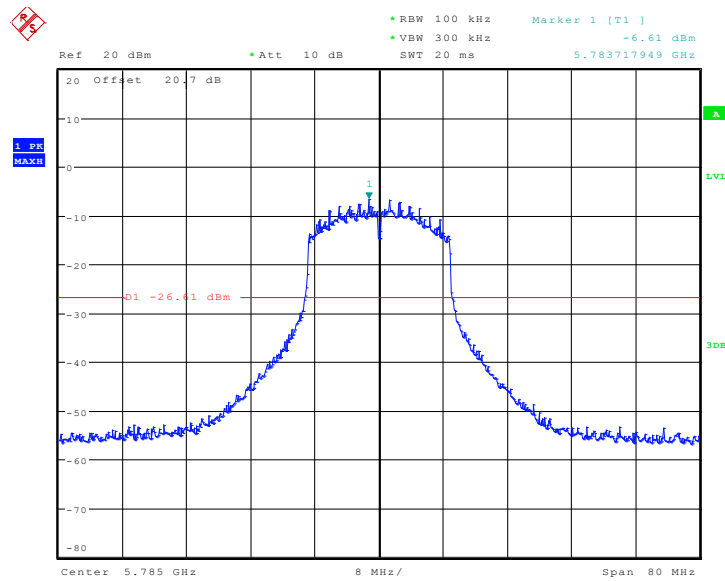
Date: 22.SEP.2013 15:06:59

Fig. 27 Conducted Spurious Emission (802.11n-HT20, Ch149, 12 GHz-25 GHz)



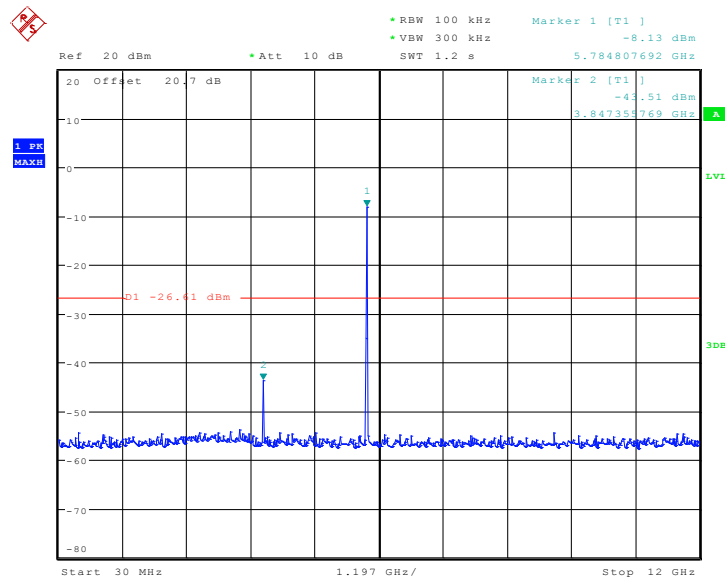
Date: 22.SEP.2013 15:07:36

Fig. 28 Conducted Spurious Emission (802.11n-HT20, Ch149, 25 GHz-40 GHz)



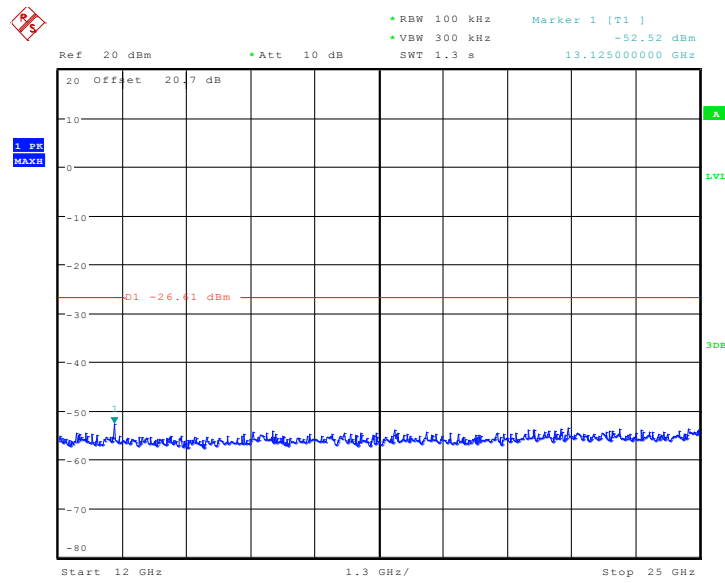
Date: 22.SEP.2013 15:08:22

Fig. 29 Conducted Spurious Emission (802.11n-HT20, Ch157, Center Frequency)



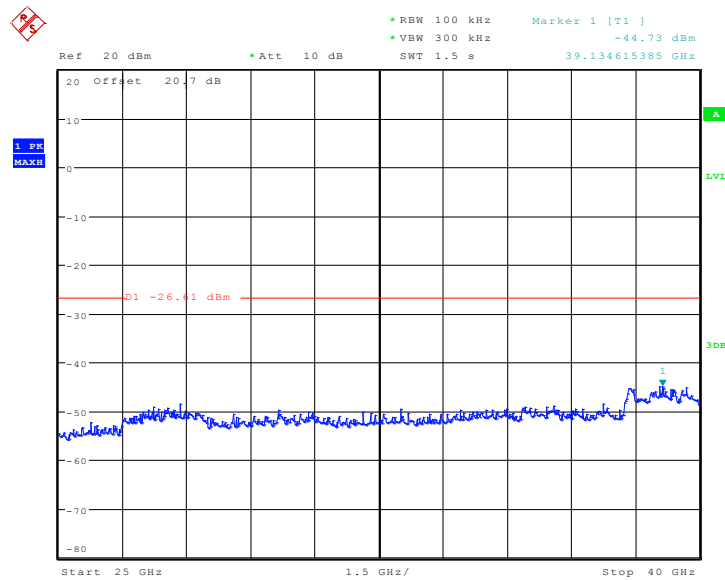
Date: 22.SEP.2013 15:08:45

Fig. 30 Conducted Spurious Emission (802.11n-HT20, Ch157, 30 MHz-12 GHz)



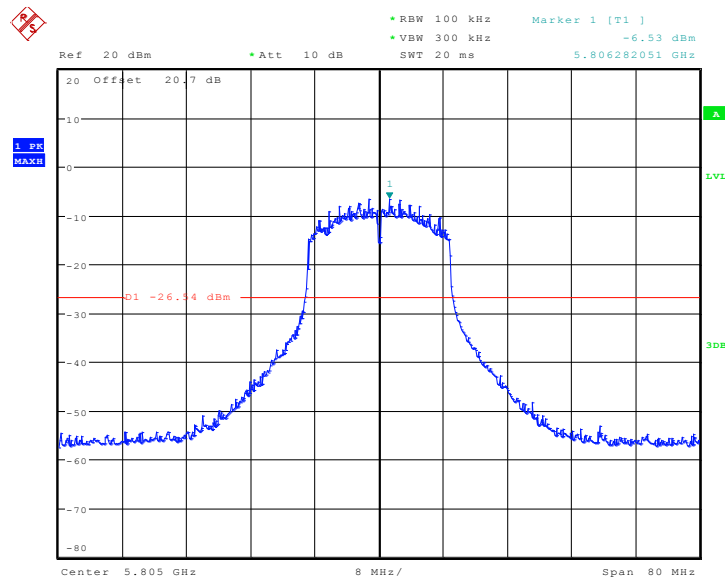
Date: 22.SEP.2013 15:09:01

Fig. 31 Conducted Spurious Emission (802.11n-HT20, Ch157, 12 GHz-25 GHz)



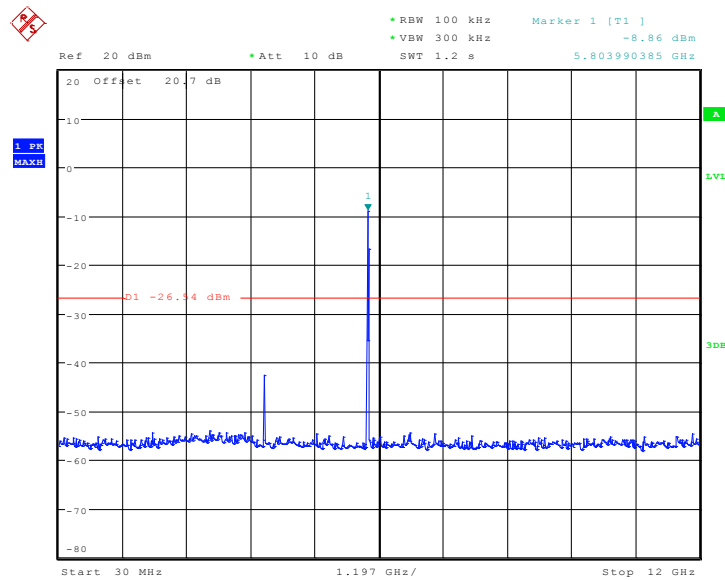
Date: 22.SEP.2013 15:09:22

Fig. 32 Conducted Spurious Emission (802.11n-HT20, Ch157, 25 GHz-40 GHz)



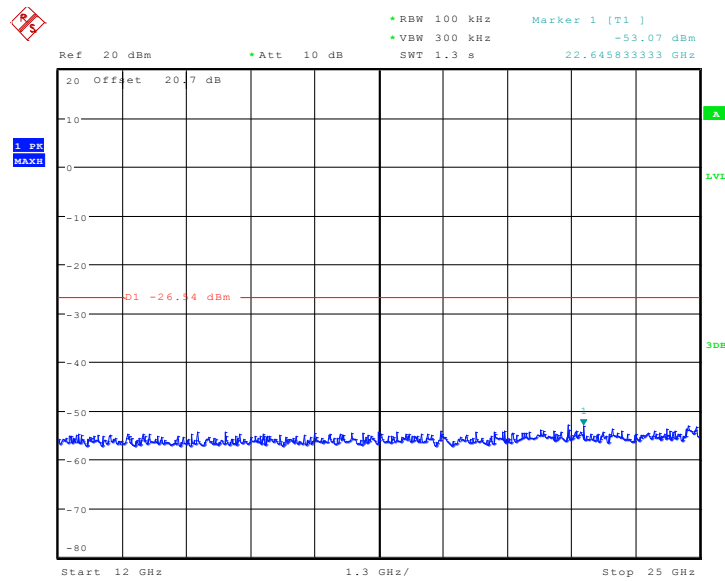
Date: 22.SEP.2013 15:10:04

Fig. 33 Conducted Spurious Emission (802.11n-HT20, Ch161, Center Frequency)



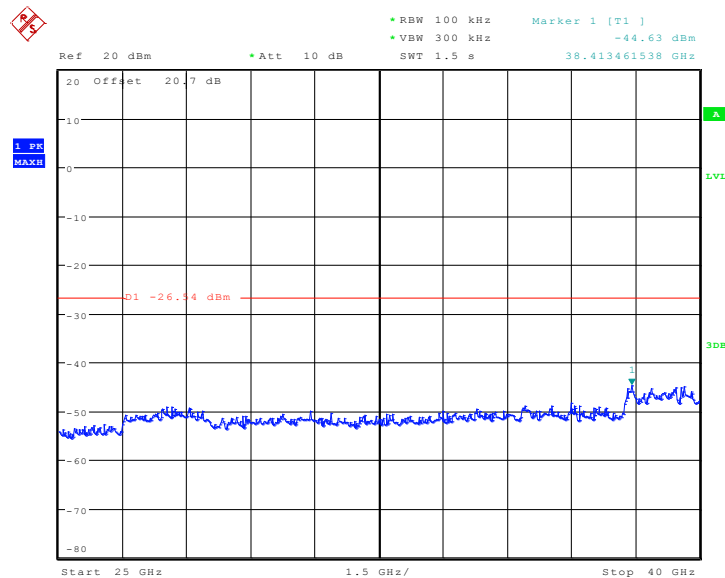
Date: 22.SEP.2013 15:10:22

Fig. 34 Conducted Spurious Emission (802.11n-HT20, Ch161, 30 MHz-12 GHz)



Date: 22.SEP.2013 15:10:38

Fig. 35 Conducted Spurious Emission (802.11n-HT20, Ch161, 12 GHz-25 GHz)



Date: 22.SEP.2013 15:11:01

Fig. 36 Conducted Spurious Emission (802.11n-HT20, Ch161, 25 GHz-40 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Limit in restricted band:

Measurement Results:

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	30 MHz ~1 GHz	Fig.37	P
		1 GHz ~ 3 GHz	Fig.38	P
		3 GHz ~ 6 GHz	Fig.39	P
		6 GHz ~ 18 GHz	Fig.40	P
		18 GHz ~ 26.5 GHz	Fig.41	P
	157	30 MHz ~1 GHz	Fig.42	P
		1 GHz ~ 3 GHz	Fig.43	P
		3 GHz ~ 6 GHz	Fig.44	P
		6 GHz ~ 18 GHz	Fig.45	P
		18 GHz ~ 26.5 GHz	Fig.46	P
	161	30 MHz ~1 GHz	Fig.47	P
		1 GHz ~ 3 GHz	Fig.48	P
		3 GHz ~ 6 GHz	Fig.49	P
		6 GHz ~ 18 GHz	Fig.50	P
		18 GHz ~ 26.5 GHz	Fig.51	P
/	All channels	26.5 GHz~ 40 GHz	Fig.52	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	30 MHz ~1 GHz	Fig.53	P
		1 GHz ~ 3 GHz	Fig.54	P
		3 GHz ~ 6 GHz	Fig.55	P
		6 GHz ~ 18 GHz	Fig.56	P
		18 GHz ~ 26.5 GHz	Fig.57	P
	157	30 MHz ~1 GHz	Fig.58	P
		1 GHz ~ 3 GHz	Fig.59	P
		3 GHz ~ 6 GHz	Fig.60	P
		6 GHz ~ 18 GHz	Fig.61	P
		18 GHz ~ 26.5 GHz	Fig.62	P
	161	30 MHz ~1 GHz	Fig.63	P
		1 GHz ~ 3 GHz	Fig.64	P
		3 GHz ~ 6 GHz	Fig.65	P
		6 GHz ~ 18 GHz	Fig.66	P
		18 GHz ~ 26.5 GHz	Fig.67	P
/	All channels	26.5 GHz~ 40 GHz	Fig.68	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rp} 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.

Test graphs as below:

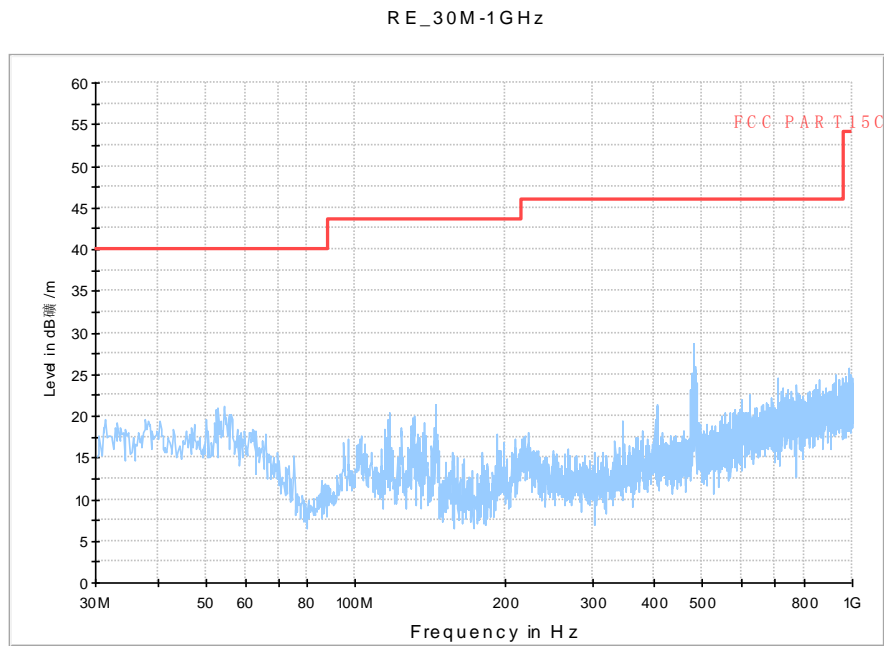


Fig. 37 Radiated Spurious Emission (802.11a, Ch149, 30 MHz-1 GHz)

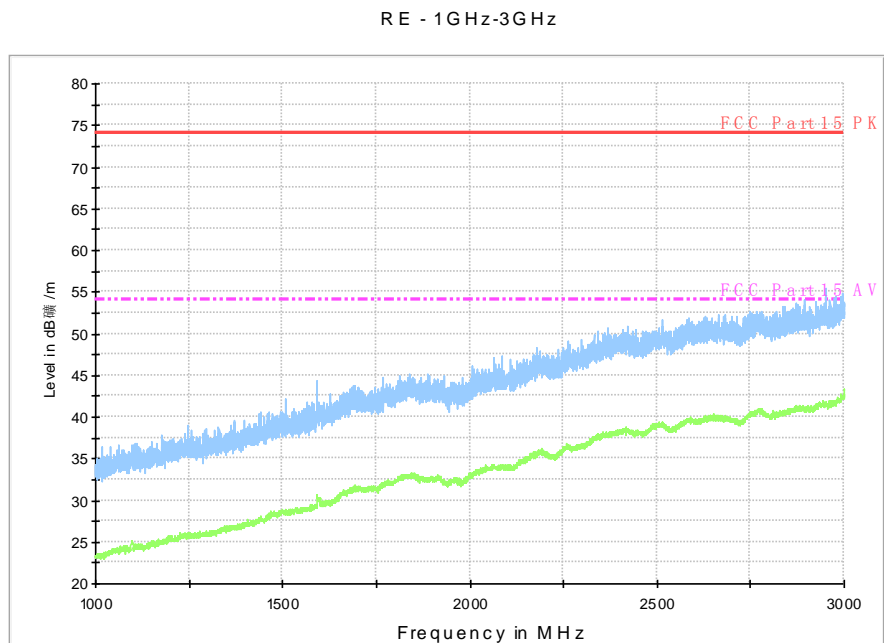


Fig. 38 Radiated Spurious Emission (802.11a, Ch149, 1 GHz-3 GHz)

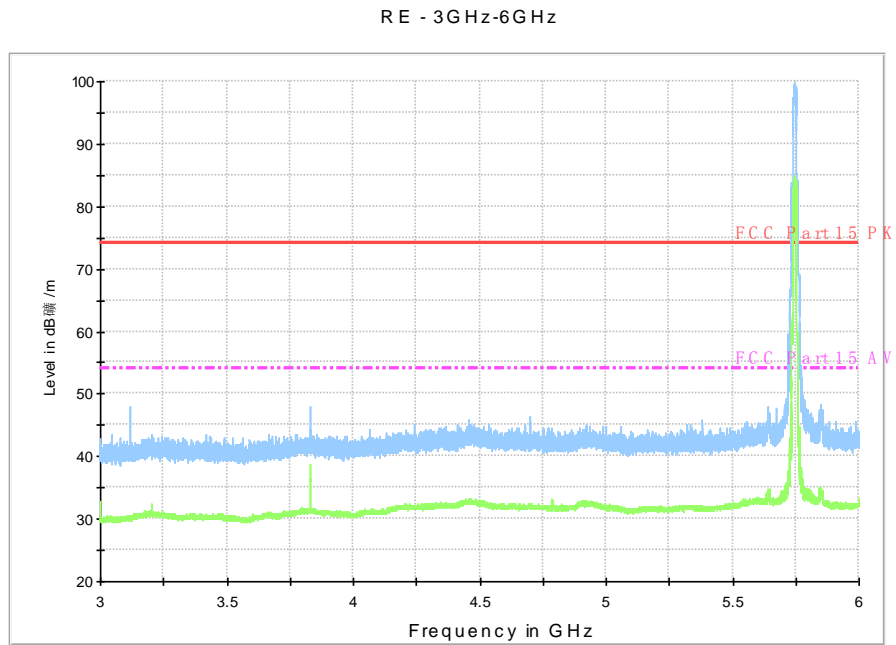


Fig. 39 Radiated Spurious Emission (802.11a, Ch149, 3 GHz-6 GHz)

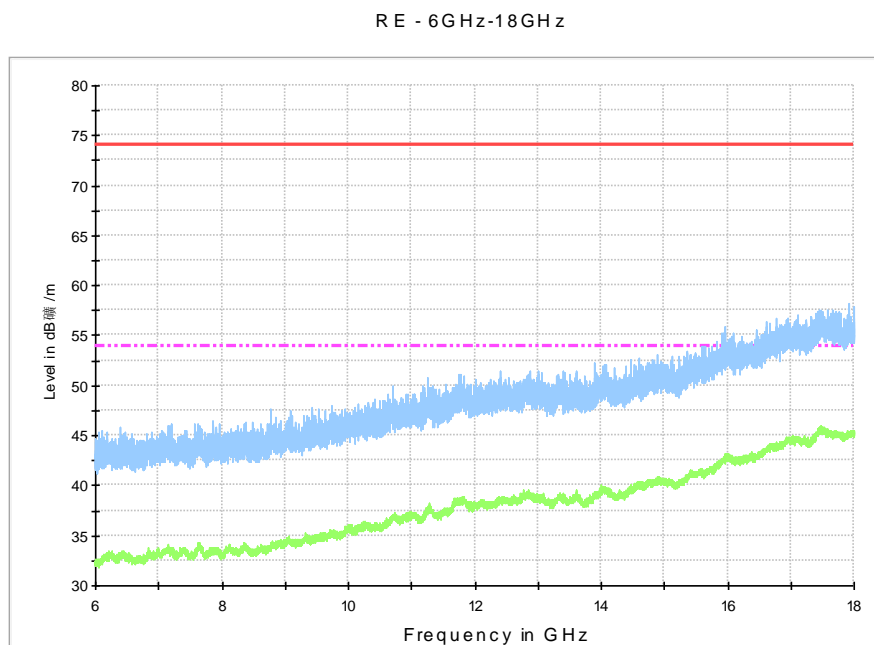


Fig. 40 Radiated Spurious Emission (802.11a, Ch149, 6 GHz-18 GHz)

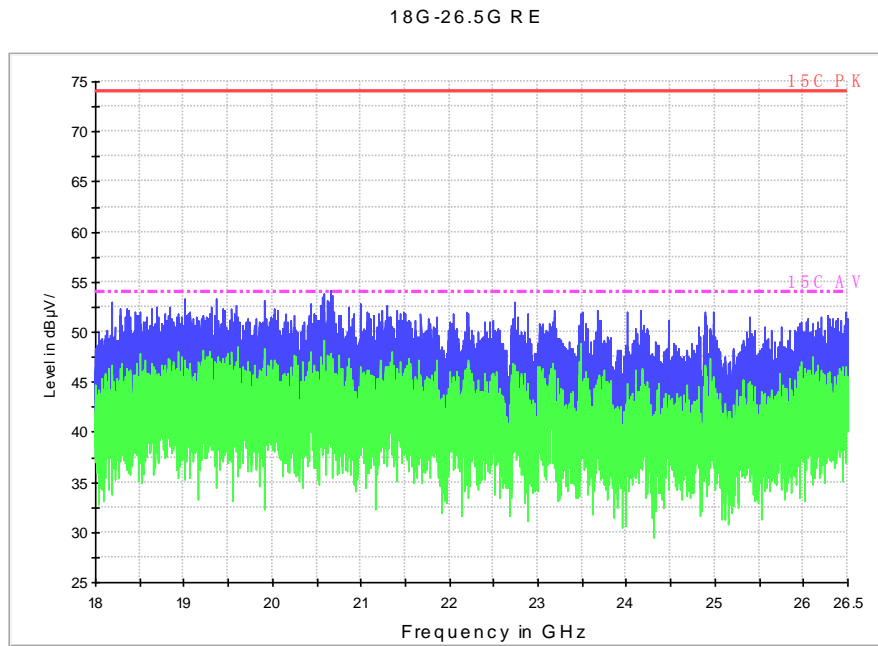


Fig. 41 Radiated Spurious Emission (802.11a, Ch149, 18 GHz-26.5 GHz)

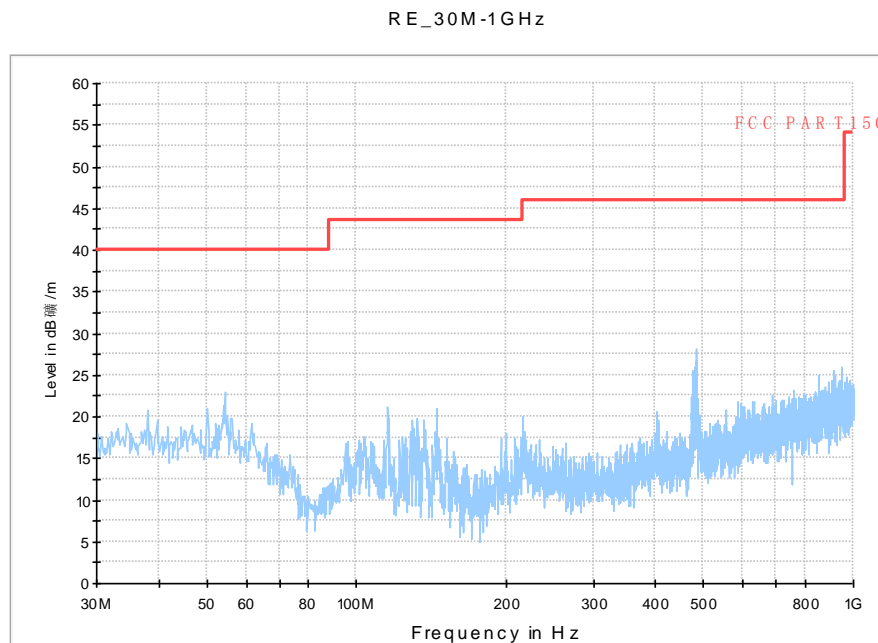


Fig. 42 Radiated Spurious Emission (802.11a, Ch157, 30 MHz-1 GHz)

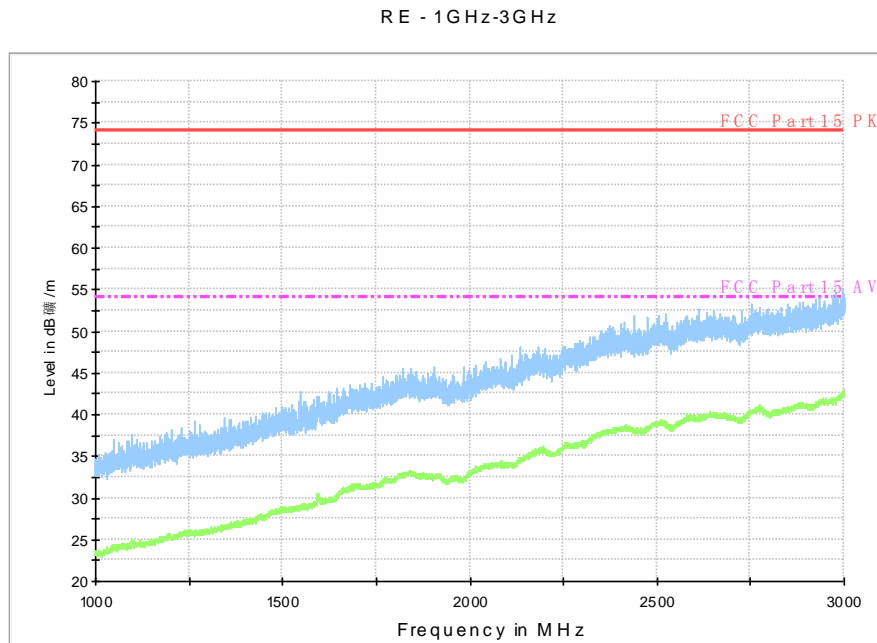


Fig. 43 Radiated Spurious Emission (802.11a, Ch157, 1 GHz-3 GHz)

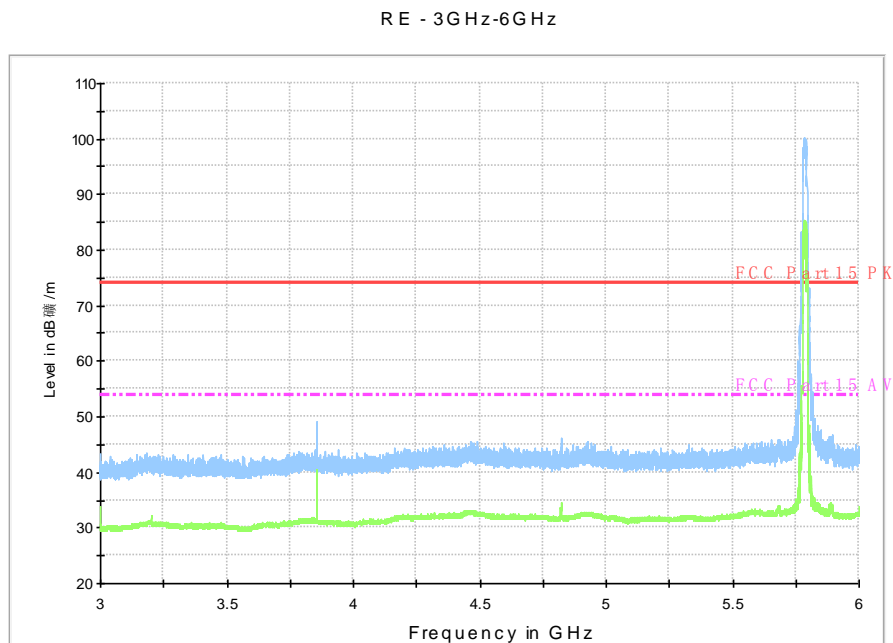


Fig. 44 Radiated Spurious Emission (802.11a, Ch157, 3 GHz-6 GHz)

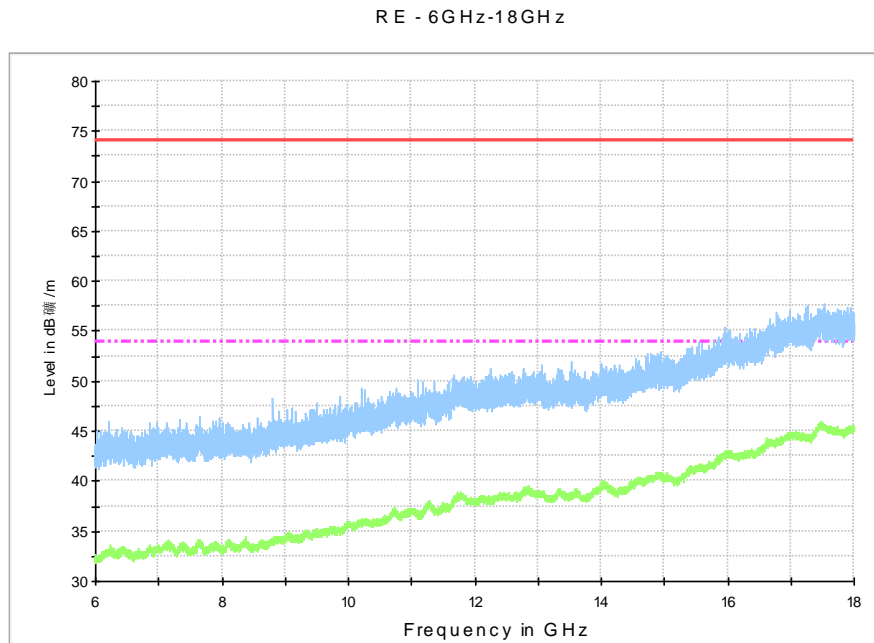


Fig. 45 Radiated Spurious Emission (802.11a, Ch157, 6 GHz-18 GHz)

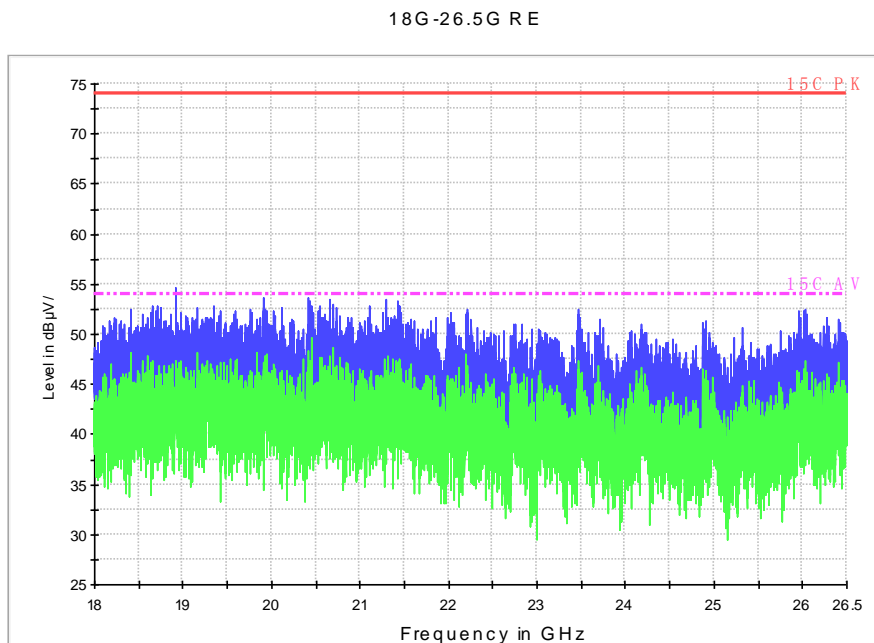


Fig. 46 Radiated Spurious Emission (802.11a, Ch157, 18 GHz-26.5 GHz)

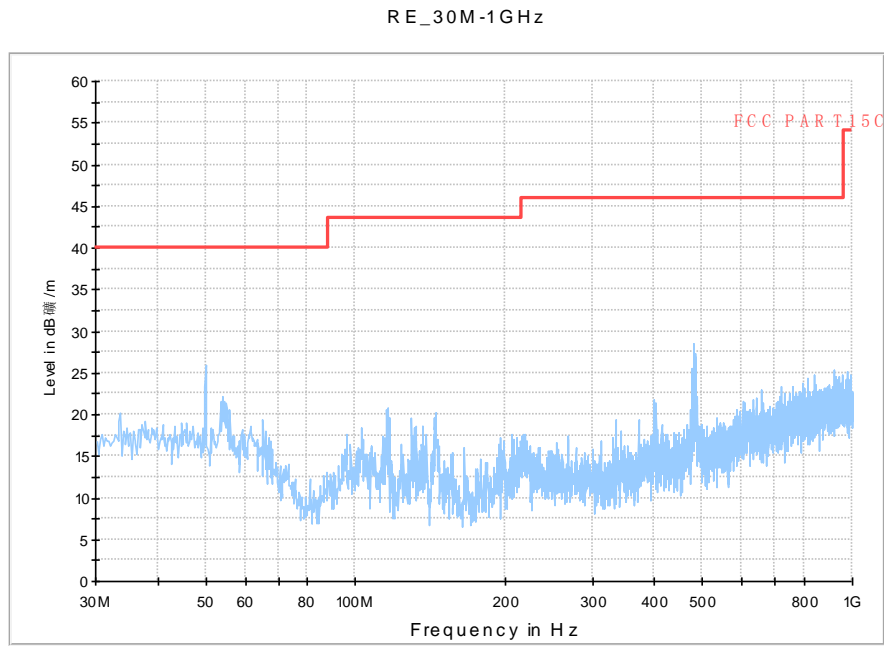


Fig. 47 Radiated Spurious Emission (802.11a, Ch161, 30 MHz-1 GHz)

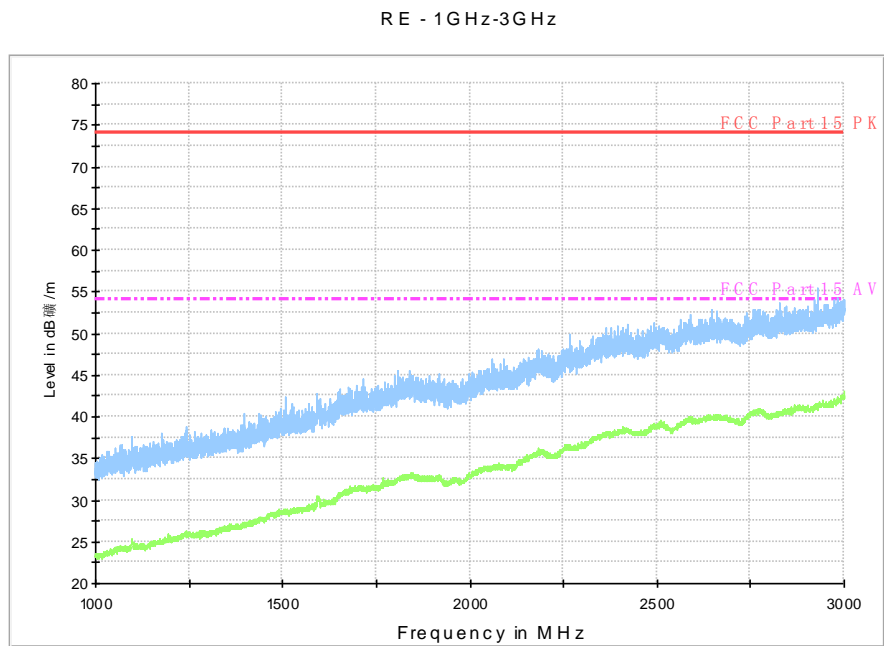


Fig. 48 Radiated Spurious Emission (802.11a, Ch161, 1 GHz-3 GHz)

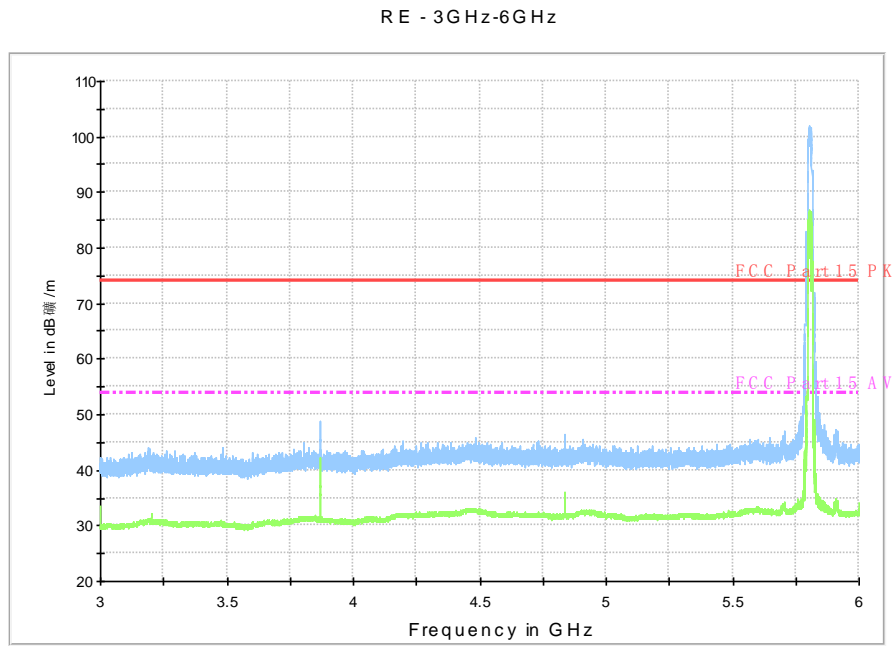


Fig. 49 Radiated Spurious Emission (802.11a, Ch161, 3 GHz-6 GHz)

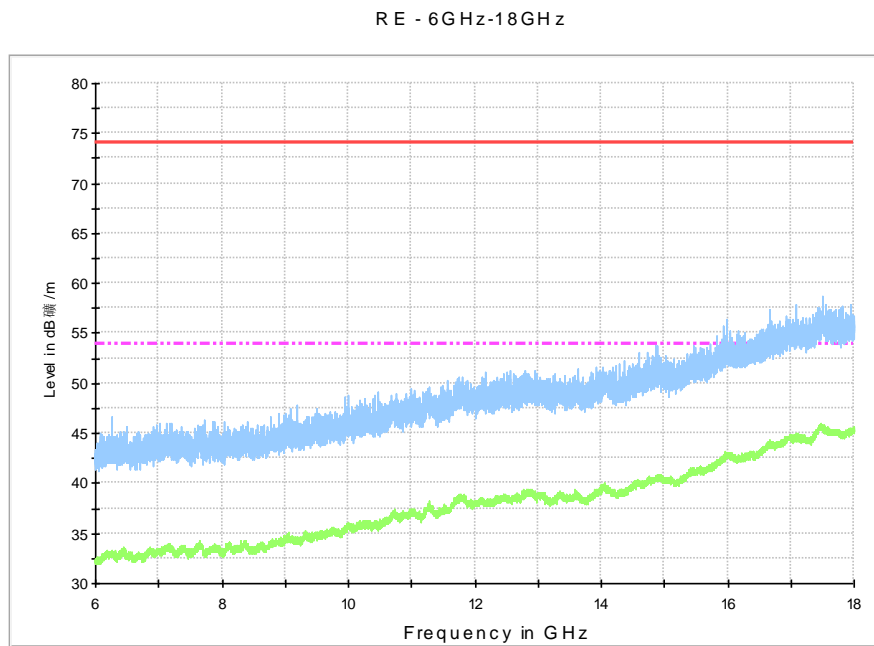


Fig. 50 Radiated Spurious Emission (802.11a, Ch161, 6 GHz-18 GHz)

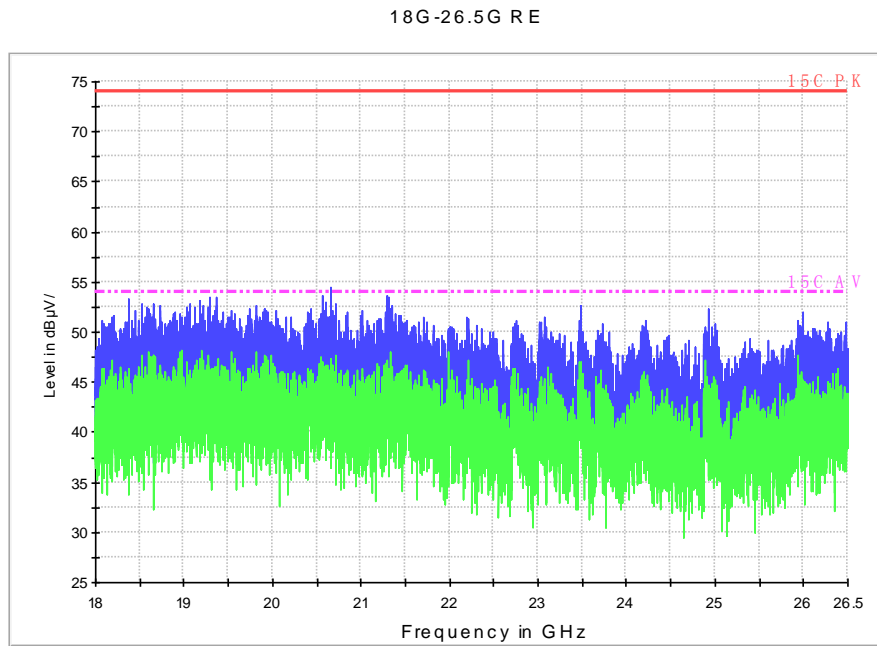


Fig. 51 Radiated Spurious Emission (802.11a, Ch161, 18 GHz-26.5 GHz)

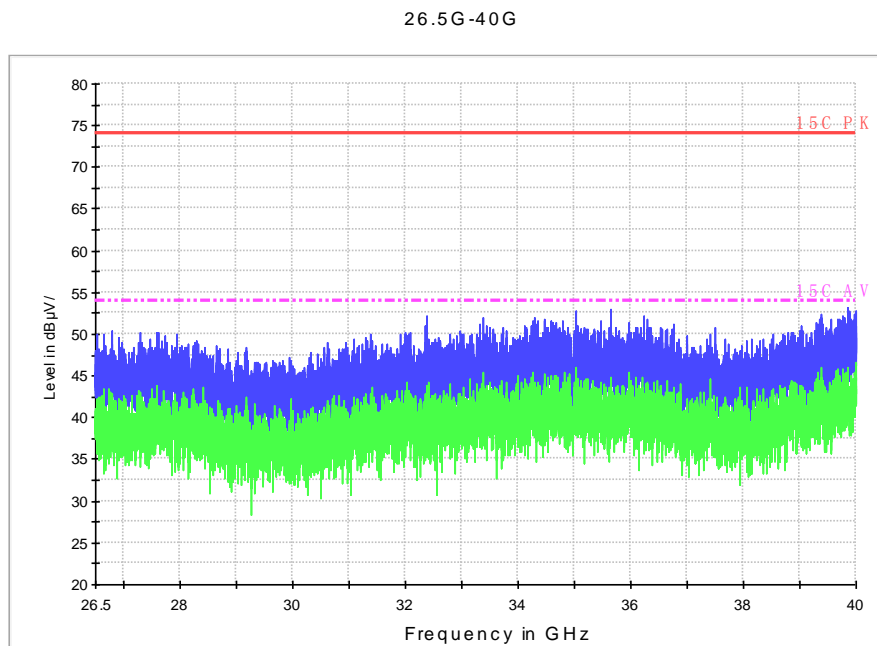


Fig. 52 Radiated emission: 802.11a, 26.5 GHz - 40 GHz

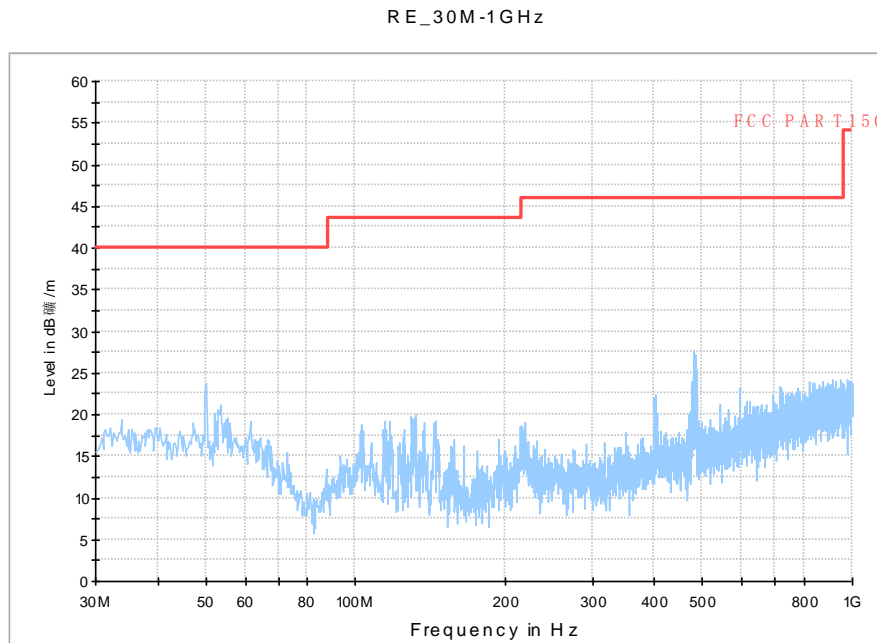


Fig. 53 Radiated Spurious Emission (802.11n-HT20, Ch149, 30 MHz-1 GHz)

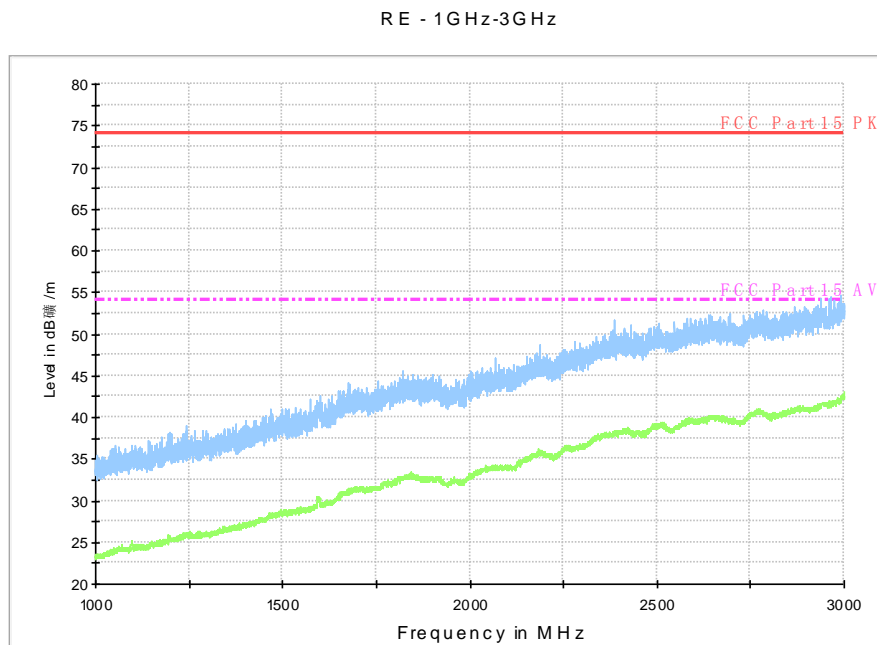


Fig. 54 Radiated Spurious Emission (802.11n-HT20, Ch149, 1 GHz-3 GHz)

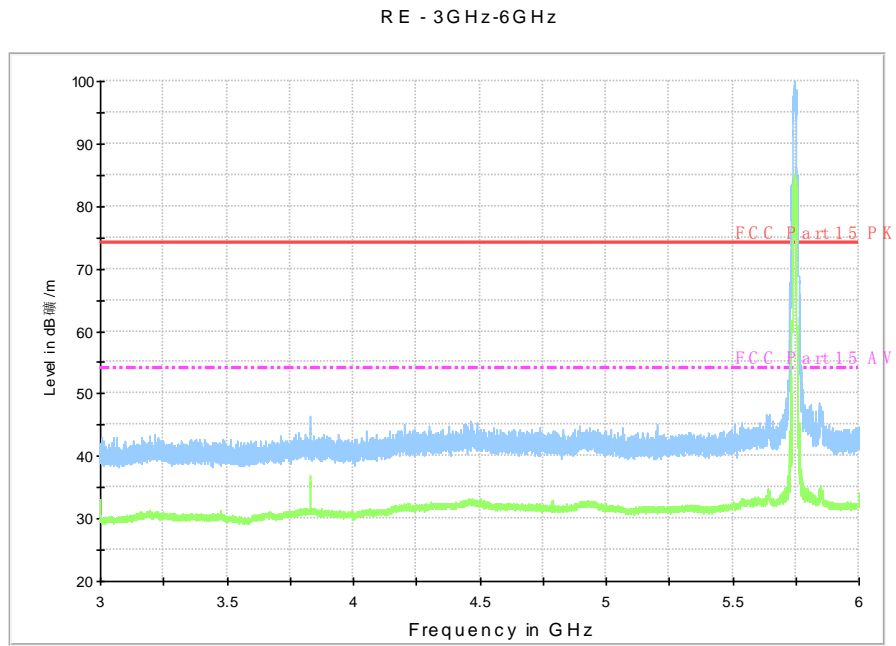


Fig. 55 Radiated Spurious Emission (802.11n-HT20, Ch149, 3 GHz-6 GHz)

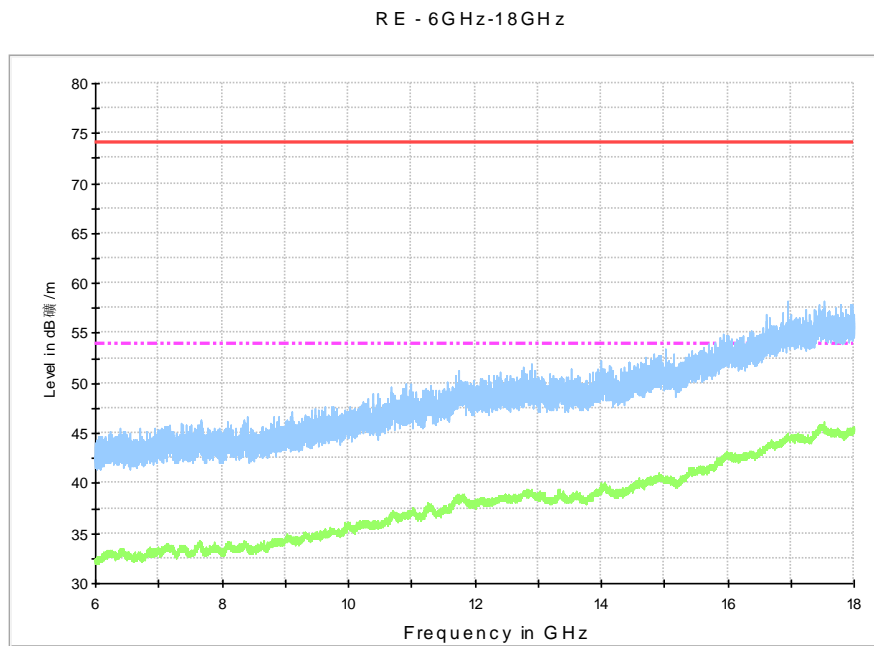


Fig. 56 Radiated Spurious Emission (802.11n-HT20, Ch149, 6 GHz-18 GHz)

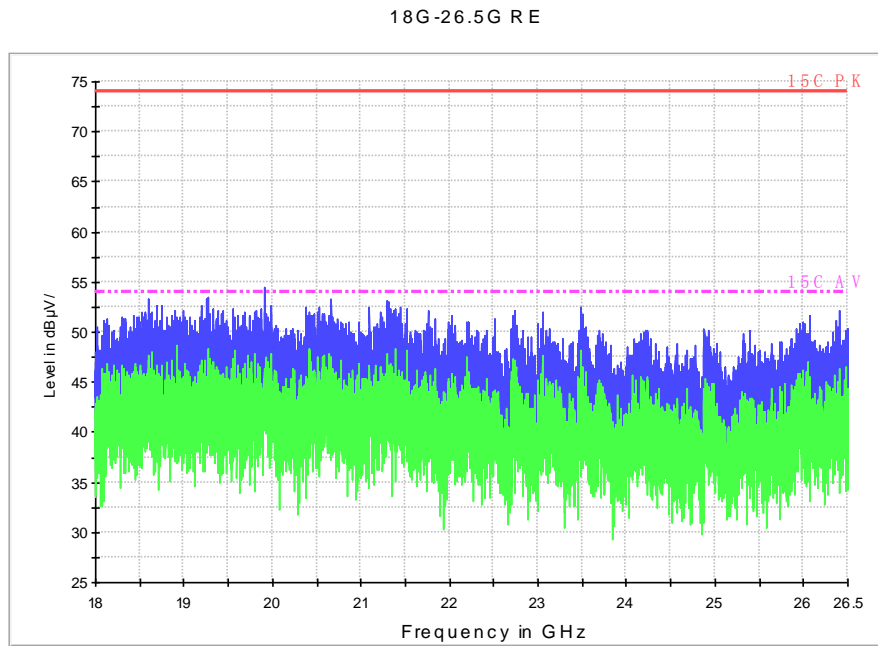


Fig. 57 Radiated Spurious Emission (802.11n-HT20, Ch149, 18 GHz-26.5 GHz)

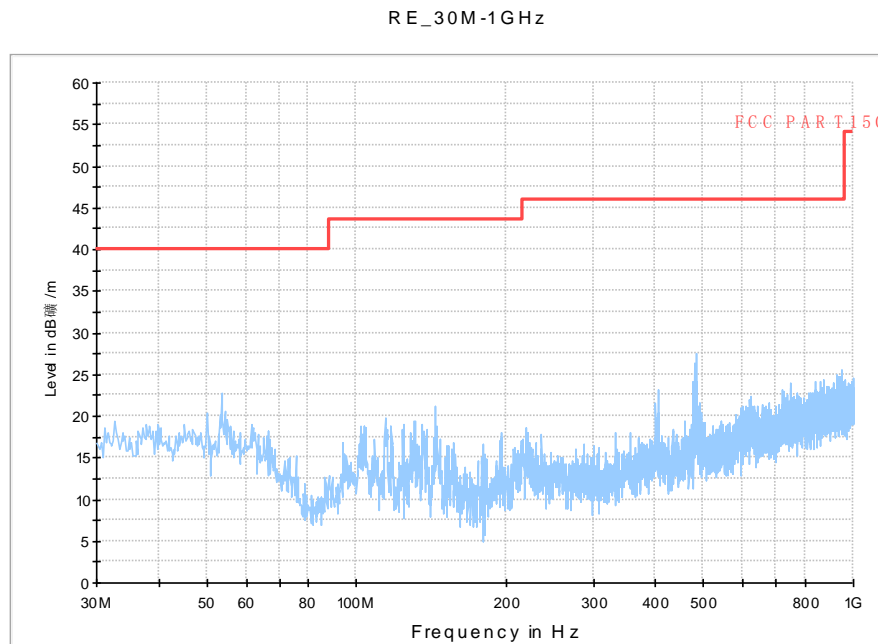


Fig. 58 Radiated Spurious Emission (802.11n-HT20, Ch157, 30 MHz-1 GHz)

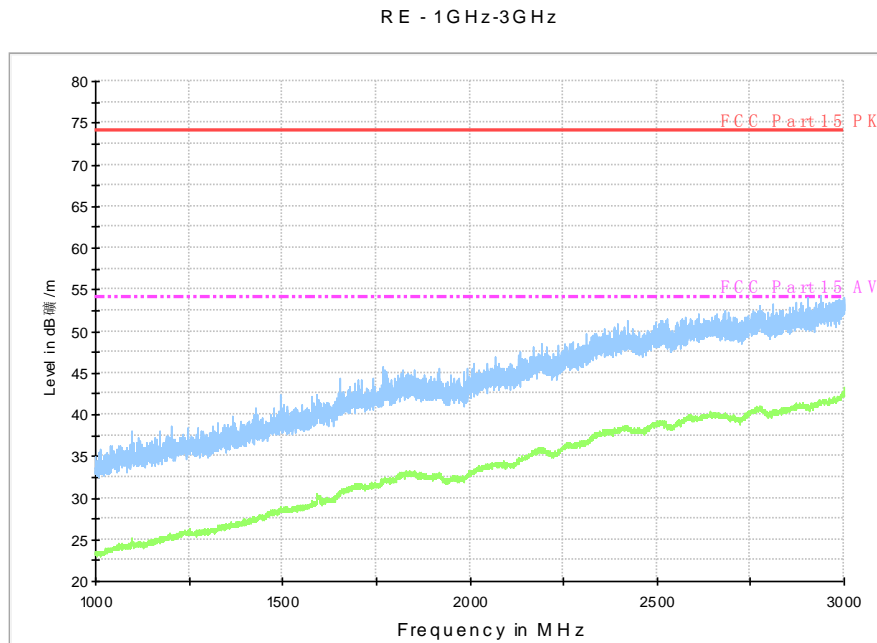


Fig. 59 Radiated Spurious Emission (802.11n-HT20, Ch157, 1 GHz-3 GHz)

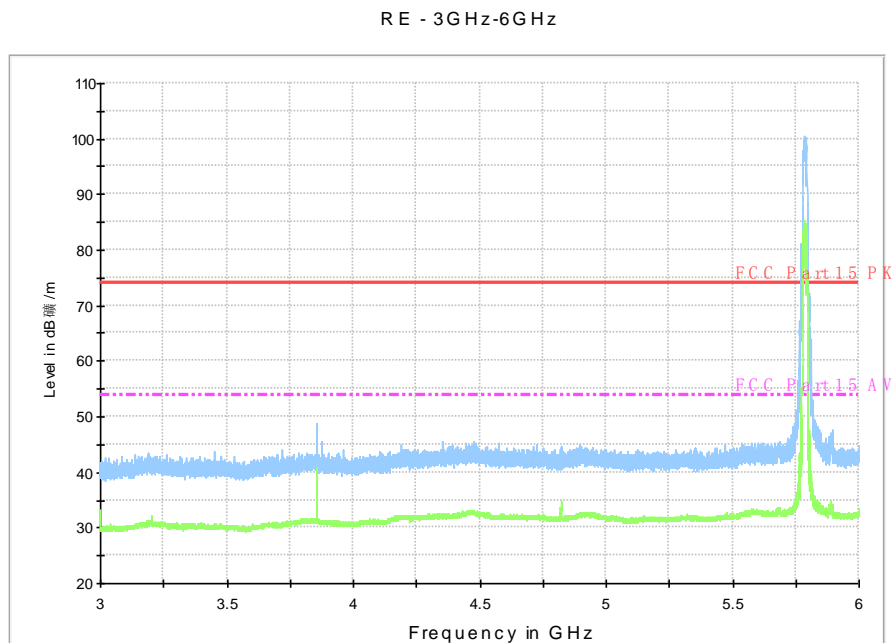


Fig. 60 Radiated Spurious Emission (802.11n-HT20, Ch157, 3 GHz-6 GHz)

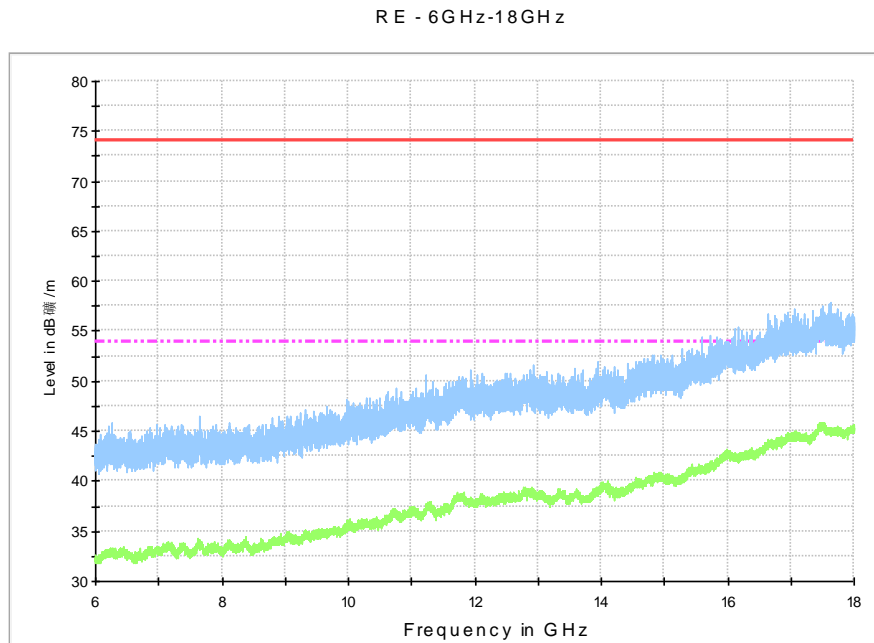


Fig. 61 Radiated Spurious Emission (802.11n-HT20, Ch157, 6 GHz-18 GHz)

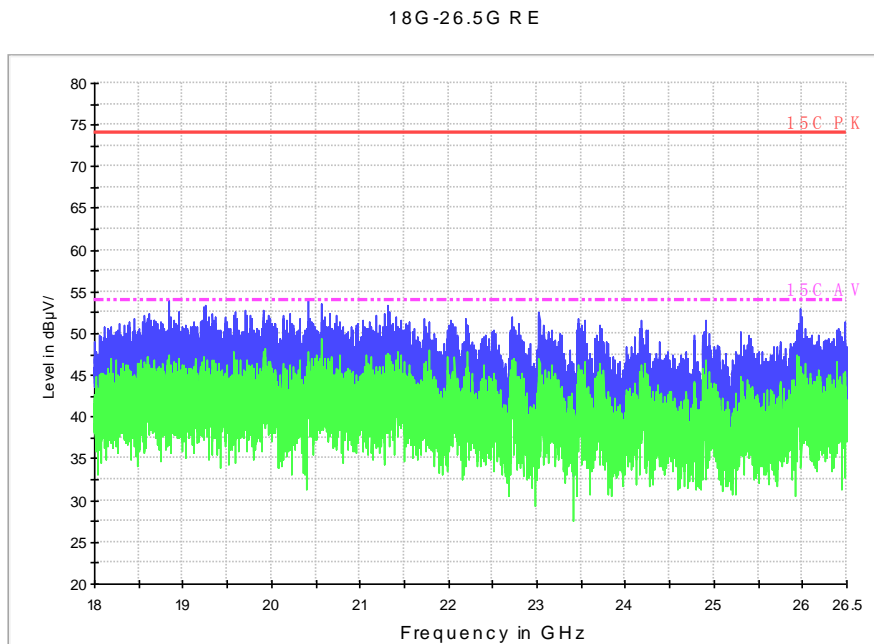


Fig. 62 Radiated Spurious Emission (802.11n-HT20, Ch157, 18 GHz-26.5 GHz)

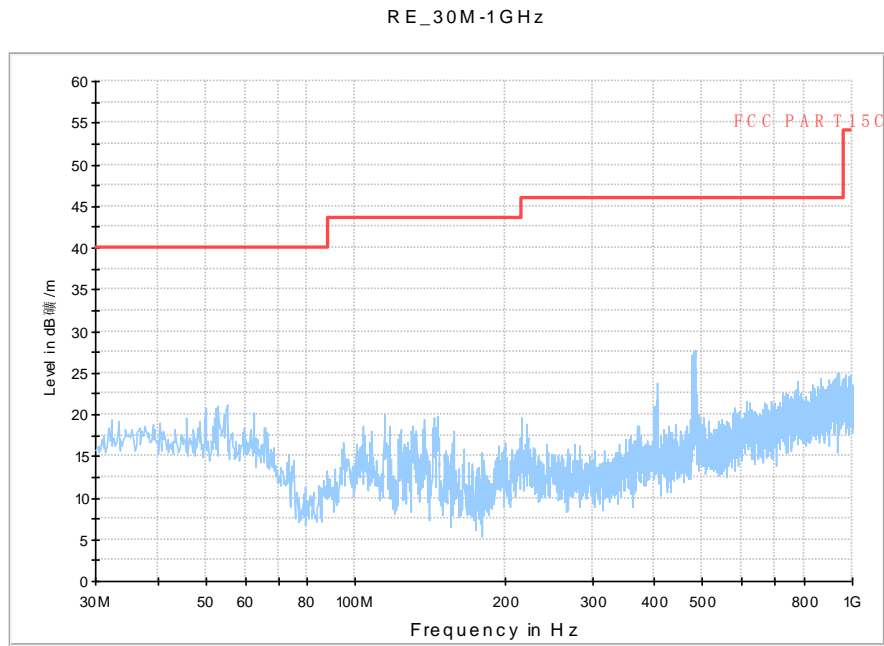


Fig. 63 Radiated Spurious Emission (802.11n-HT20, Ch161, 30 MHz-1 GHz)

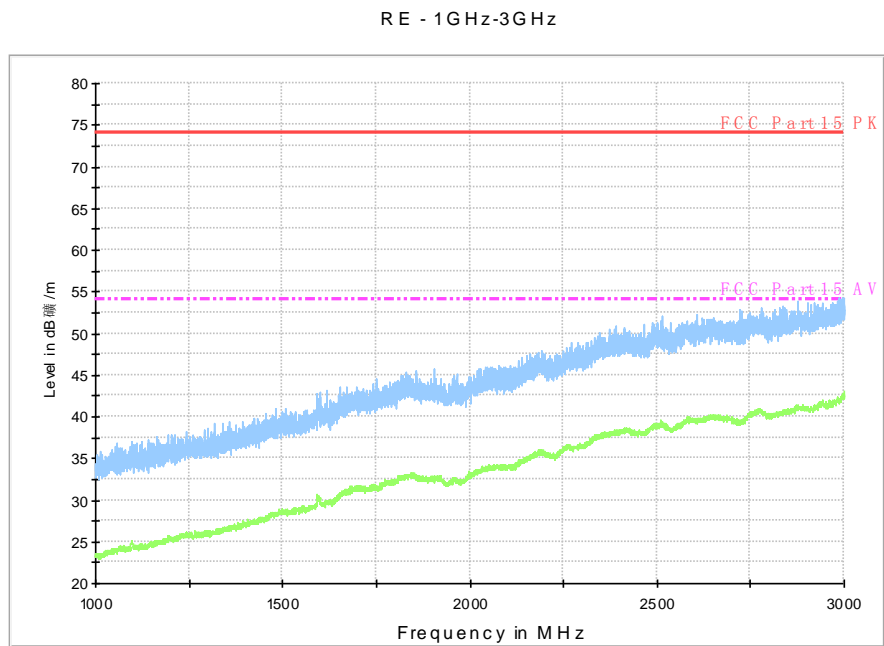


Fig. 64 Radiated Spurious Emission (802.11n-HT20, Ch161, 1 GHz-3 GHz)

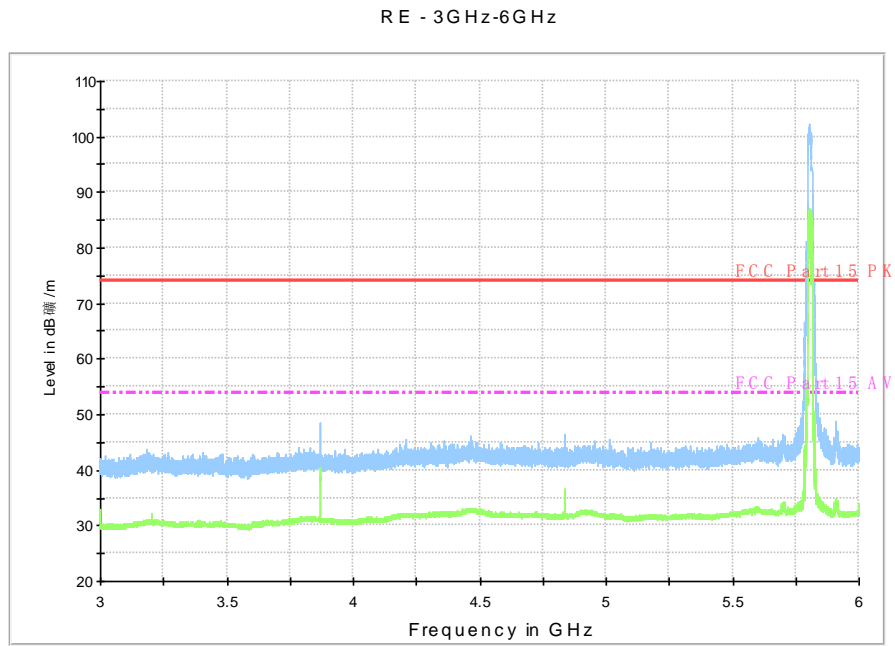


Fig. 65 Radiated Spurious Emission (802.11n-HT20, Ch161, 3 GHz-6 GHz)

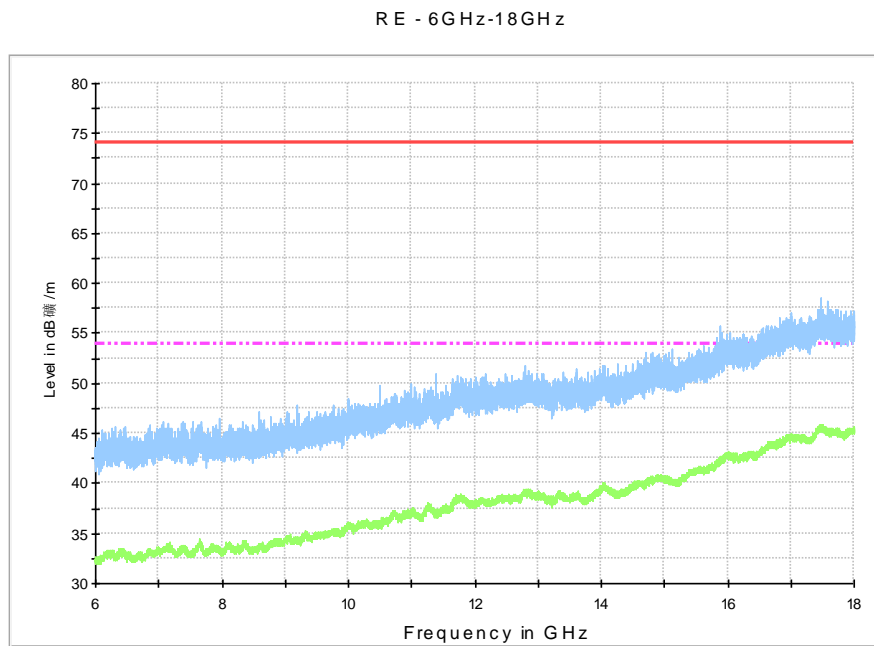


Fig. 66 Radiated Spurious Emission (802.11n-HT20, Ch161, 6 GHz-18 GHz)

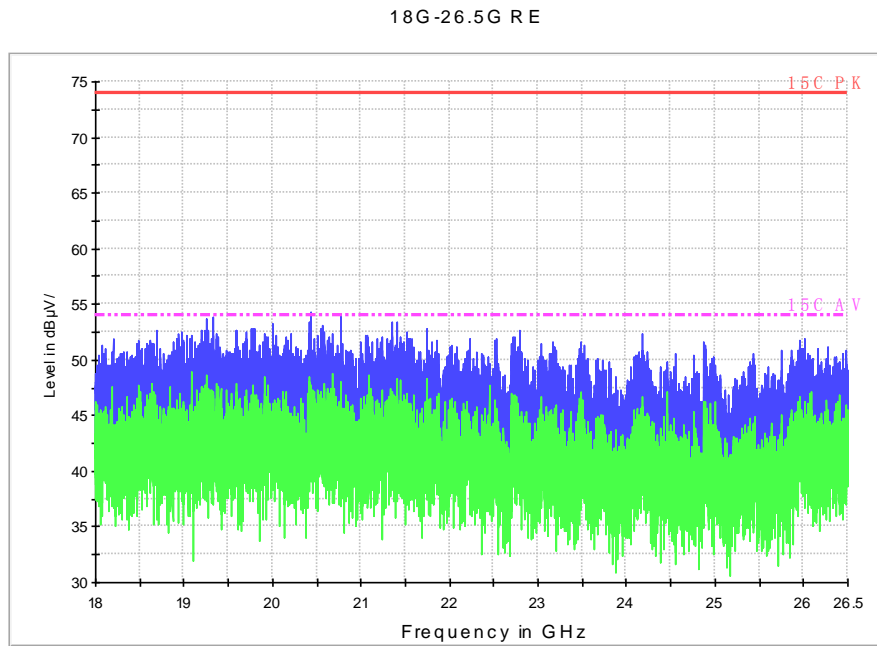


Fig. 67 Radiated Spurious Emission (802.11n-HT20, Ch161, 18 GHz-26.5 GHz)

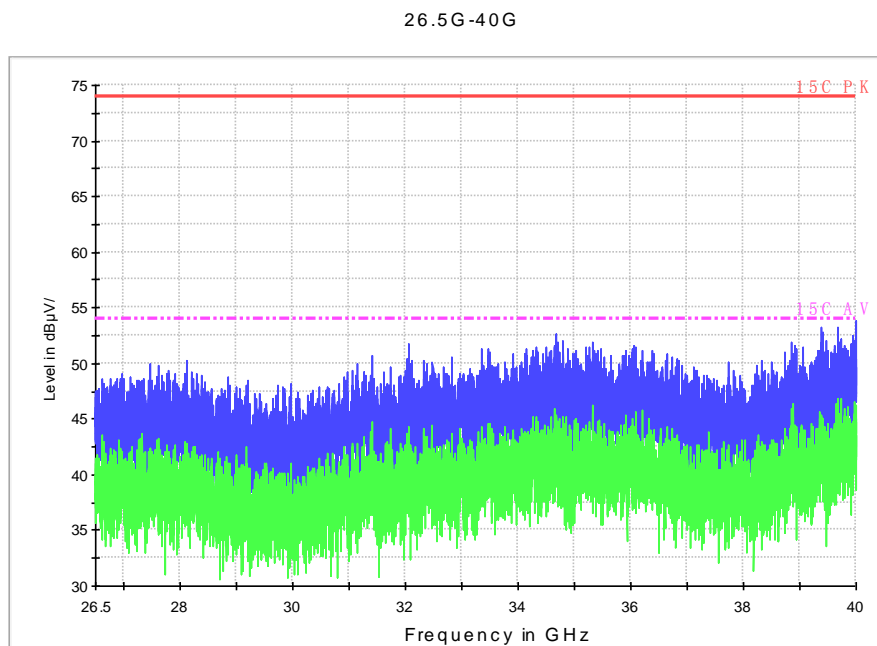


Fig. 68 Radiated emission: 802.11n, 26.5 GHz - 40 GHz

A.7. Spurious Emissions Radiated < 30MHz

Measurement Limit:

Frequency (MHz)	Field strength(dB μ V/m)	Measurement distance
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

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 Results:

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	157(5785MHz)	9 kHz ~30 MHz	Fig.69	P

Conclusion: PASS

Test graphs as below:

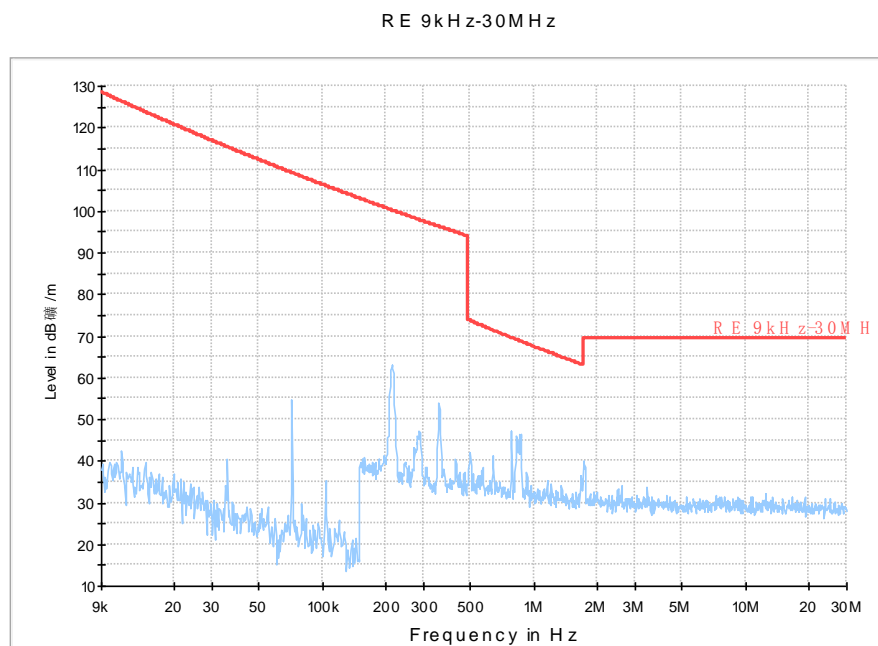


Fig. 69 Radiated Spurious Emission (802.11a, ch157, 9 kHz ~30 MHz)

A.8. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.2dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit(dB μ V)	Result (dB μ V)	Conclusion
		With charger	
0.15 to 0.5	66 to 56	Fig. 70	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 (dB μ V)	Result (dB μ V)	Conclusion
		With charger	
0.15 to 0.5	56 to 46	Fig.70	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 C63.4 and KDB558074

Conclusion: PASS

Test graphs as below:

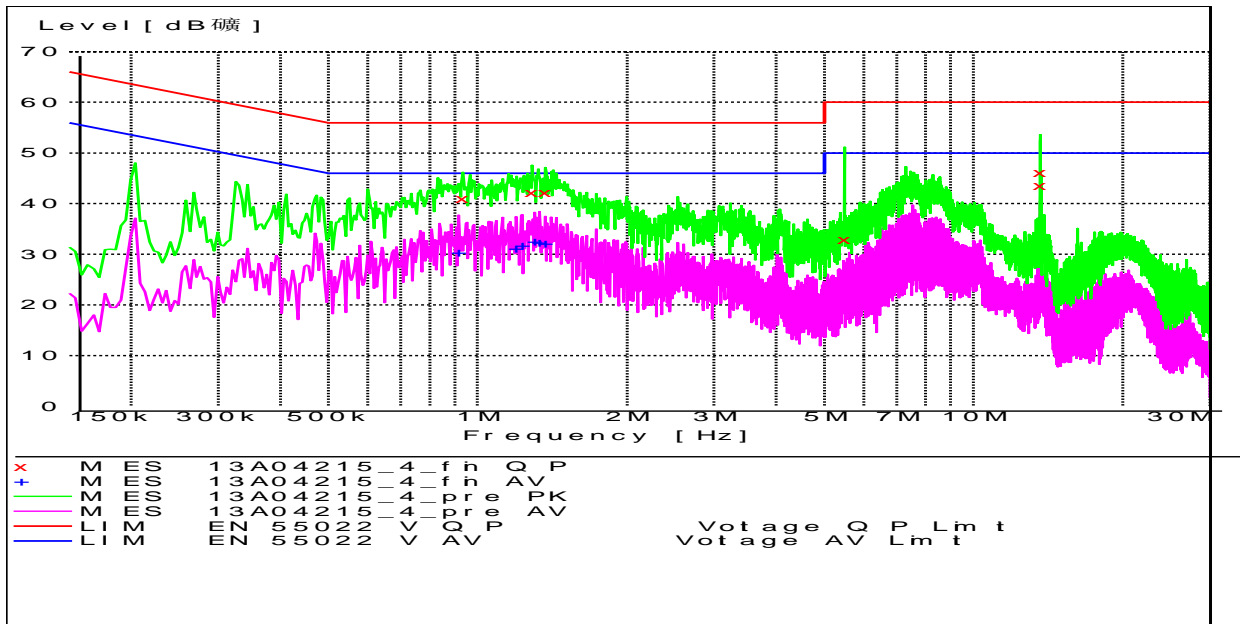


Fig. 70 AC Powerline Conducted Emission

Measurement Result: " 13A04215_4_fin QP"

Frequency (MHz)	Level (dBμV)	Transd (dB)	Limit (dBμV)	Margin (dB)	Line	PE
0.933000	41.10	9.7	56	14.9	N	GND
1.288500	42.10	9.7	56	13.9	N	GND
1.369500	42.20	9.7	56	13.8	L1	GND
5.492000	32.80	9.7	60	27.2	L1	GND
13.623500	46.10	9.5	60	13.9	L1	GND
13.632500	43.60	9.5	60	16.4	L1	GND

Measurement Result: " 13A04215_4_fin AV"

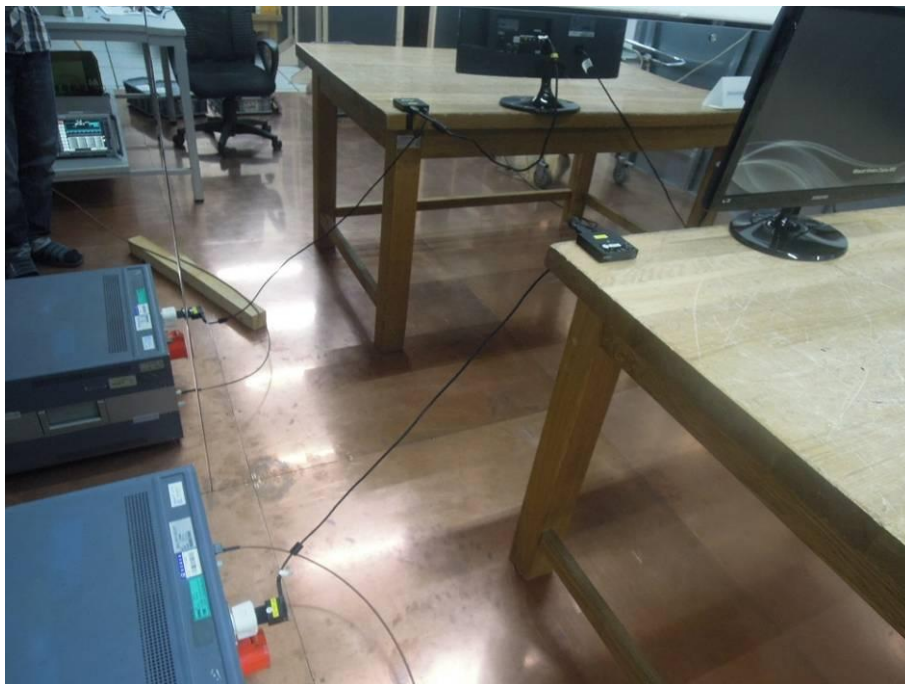
Frequency (MHz)	Level (dBμV)	Transd (dB)	Limit (dBμV)	Margin (dB)	Line	PE
0.915000	30.40	9.7	46	15.6	L1	GND
1.194000	31.10	9.7	46	14.9	L1	GND
1.230000	31.70	9.7	46	14.3	L1	GND
1.302000	32.50	9.7	46	13.5	L1	GND
1.333500	32.40	9.7	46	13.6	N	GND
1.369500	32.10	9.7	46	13.9	L1	GND

ANNEX B: PHOTOGRAPHS OF THE TEST SET-UP

Layout of Radiated Spurious Emission Test

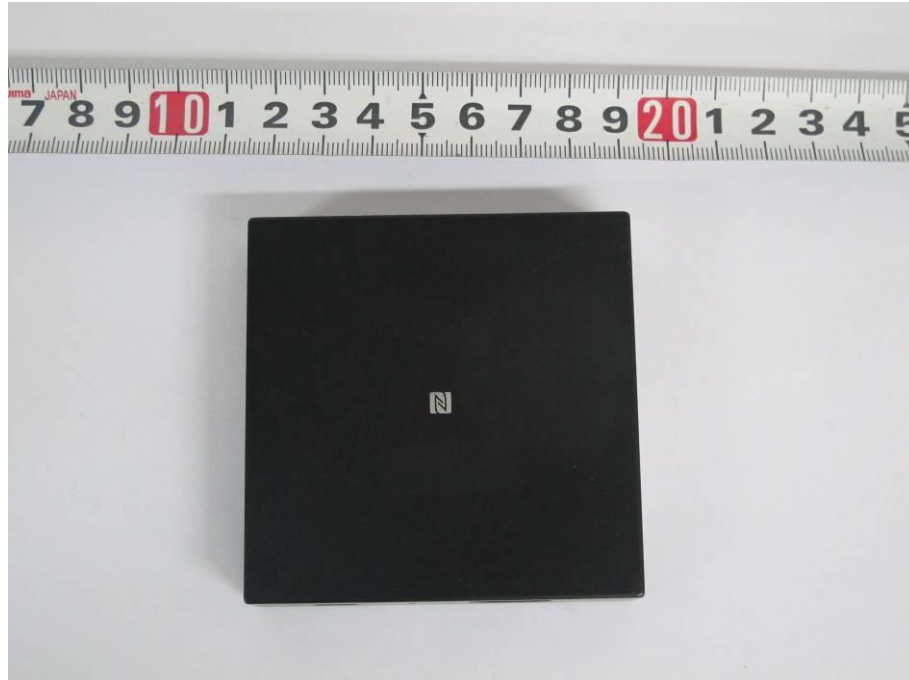


Layout of AC Powerline Conducted Emission



ANNEX C: PHOTOGRAPHS OF THE EUT

External Photo



Wi-Fi Display Adapter



Wi-Fi Display Adapter



Wi-Fi Display Adapter



AC/DC Power Adapter

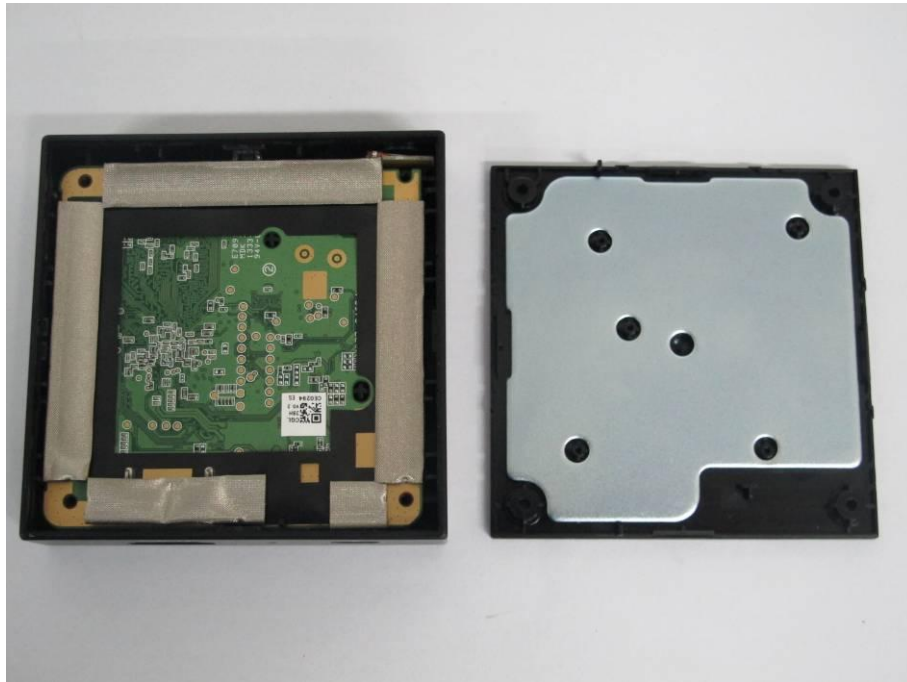


Label of AC/DC Power Adapter



USB Cable

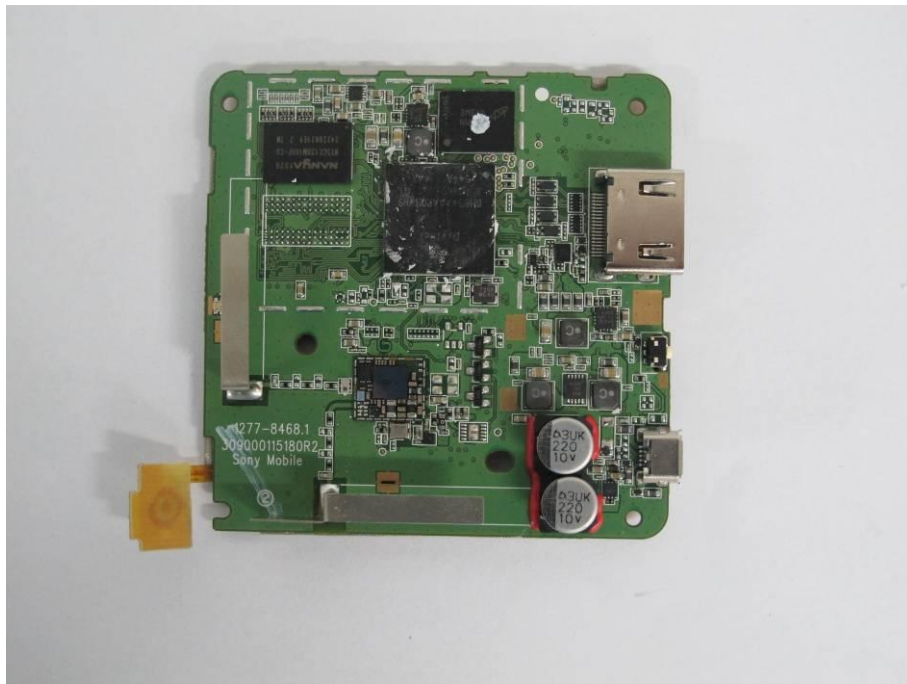
Internal Photo



Wi-Fi Display Adapter Disassembly



Wi-Fi Display Adapter Disassembly



Wi-Fi Display Adapter Disassembly

***** END OF REPORT BODY *****