



**FCC PART 15C
TEST REPORT
No. 2013WLN0851**

for

TCT Mobile Limited

**HSDPA/HSUPA/UMTS Tri bands / GSM quad bands/LTE 5 bands
mobile phone**

Model name: Diablo HD LTE EMEA 1.2GHz

Marketing Name: ONE TOUCH 6034R

With

FCC ID: RAD468

Hardware Version: PIO

Software Version: v1B28

Issued Date: 2014-01-14



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.

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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
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Fax: +86-10-62304633-2504

1.2. Project data

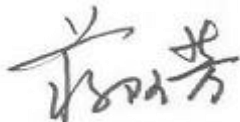
Testing Start Date: 2013-10-09
Testing End Date: 2013-10-12

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

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2.2. Manufacturer Information

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Telephone: 0086-21-61460890
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3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	HSDPA/HSUPA/UMTS Tri bands / GSM quad bands/LTE 5 bands mobile phone
Model Name	Diablo HD LTE EMEA 1.2GHz
Marketing name	ONE TOUCH 6034R
FCC ID	RAD468
WLAN Frequency Range	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Number of Channels	a/n-HT20 mode: 5 n-HT40 mode: 2
Antenna	Integral Antenna
MAX Conducted Power	21.37dBm(OFDM)
GPRS Class	Class 10
GPRS operation mode	Class B
Extreme Temperature	-20/+55°C
Normal Voltage	3.9VDC

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	PIO	v1B28
EUT2	/	PIO	v1B28

*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	Battery	CAC2000005C2	/
AE2	Charger	CBA3000AG0C1	/

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

3.4. General Description

Equipment Under Test (EUT) is a model of HSDPA/HSUPA/UMTS Tri bands / GSM quad bands/LTE 5 bands mobile phone with integrated antenna. It consists of normal options: Battery and Charger.

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

Samples undergoing test were selected by the Client.

Normal Accessory setting:

1. A microSD card was being installed in the device during the test;
2. Fully charged battery should be used during the test.

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,	2010
	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	
	Guidance for Performing Compliance Measurements on	
KDB558074	Digital Transmission Systems (DTS) Operating Under	2012
	§15.247	

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 (a)	/	P
Peak Power Spectral Density	15.247 (d)	/	P
Occupied 6dB Bandwidth	15.247 (d)	/	P
Band Edges Compliance	15.247 (b)	/	P
Transmitter Spurious Emission - Conducted	15.247	/	P
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.
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/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.

This model is a variant product which market name is ONE TOUCH 6034M; all the test result has been derived from test report of ONE TOUCH 6034M.

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	3.9V (By battery)
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2013-07-08	2014-07-07
2	Test Receiver	ESS	847151/015	Rohde & Schwarz	2013-12-29	2014-10-30
3	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2013-4-15	2014-08-12
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

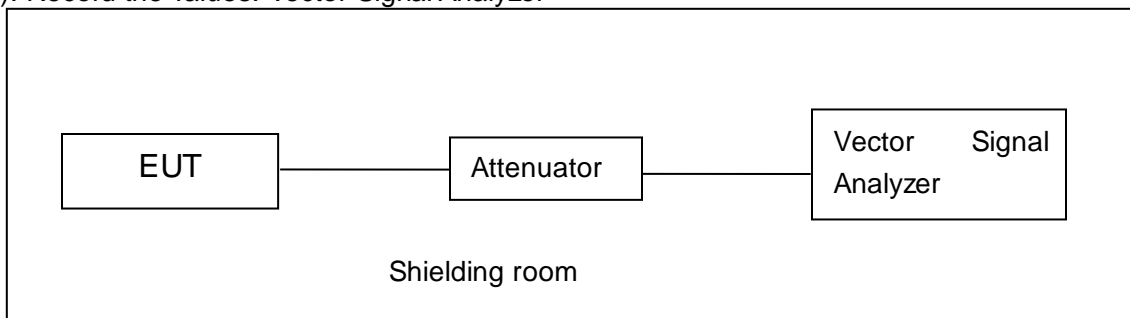
No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	2013-11-8	2014-11-7
2	BiLog Antenna	VULB9163	9163-514	Schwarzbeck	2011-11-11	2014-11-10
3	Dual-Ridge Waveguide Horn Antenna	3117	00119024	ETS-Lindgren	2011-2-2	2014-2-1
4	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2011-7-1	2014-06-30
5	Loop antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2011-12-21	2014-12-20
6	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

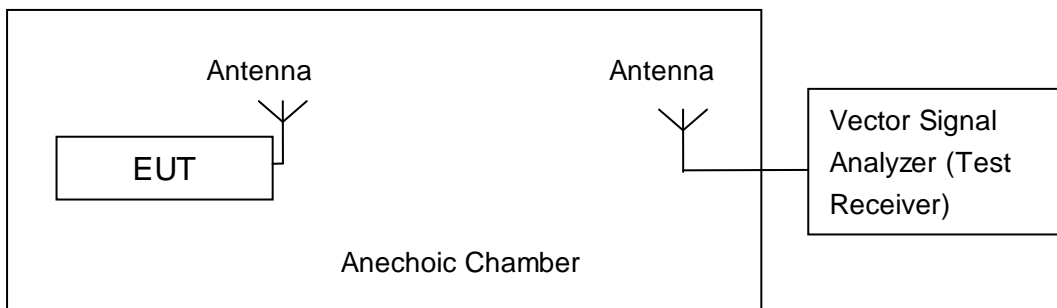


A.1.2. Radiated Emission Measurements

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, and option 1 is used for peak power measurement.

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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A.2.1. Maximum Peak Output Power-conducted

Measurement Results:

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	20.91	/	/
	9	20.90	/	/
	12	20.75	/	/
	18	20.74	/	/
	24	21.20	/	/
	36	21.22	/	/
	48	21.29	/	/
	54	21.32	21.29	21.36

The data rate 54Mbps is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n (20MHz)	MCS0	19.97	/	/
	MCS1	19.84	/	/
	MCS2	19.81	/	/
	MCS3	20.30	/	/
	MCS4	20.31	/	/
	MCS5	20.36	20.84	20.45
	MCS6	20.33	/	/
	MCS7	20.34	/	/

The data rate MCS5 is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n (40MHz)	MCS0	20.46	/
	MCS1	20.31	/
	MCS2	20.29	/
	MCS3	20.69	/
	MCS4	20.68	/
	MCS5	20.76	21.37
	MCS6	20.74	/
	MCS7	20.74	/

The data rate MCS5 is selected as worse condition, and the following cases are performed with this condition.

Conclusion: PASS

A.2.2. Maximum Average Output Power-Conducted

802.11a mode

Mode	Test Result (dBm)		
	5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	12.91	13.17	12.84

802.11n-HT20 mode

Mode	Test Result (dBm)		
	5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n (20MHz)	11.89	12.36	11.93

802.11n-HT40 mode

Mode	Test Result (dBm)	
	5755MHz (Ch151)	5795MHz (Ch159)
802.11n (40MHz)	12.25	12.89

Conclusion: PASS

A.3. Peak Power Spectral Density

Measurement Limit:

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

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

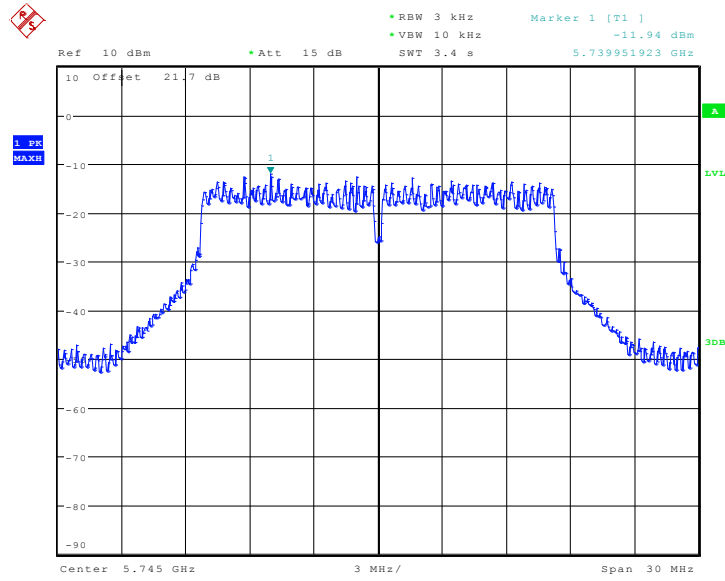
Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Measurement Results:

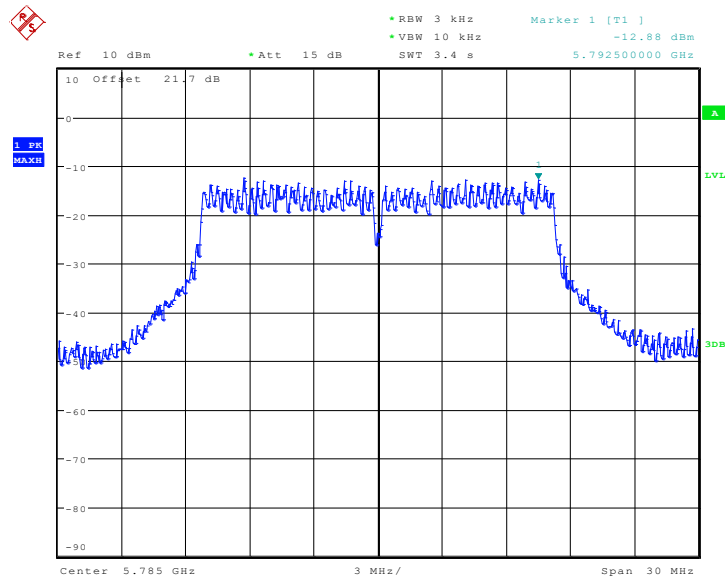
Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
		Fig.	Value	
802.11a	149	Fig.1	-11.94	P
	157	Fig.2	-12.88	P
	165	Fig.3	-12.99	P
802.11n HT20	149	Fig.4	-14.07	P
	157	Fig.5	-14.20	P
	165	Fig.6	-13.83	P
802.11n HT40	151	Fig.7	-14.77	P
	159	Fig.8	-15.14	P

Conclusion: PASS



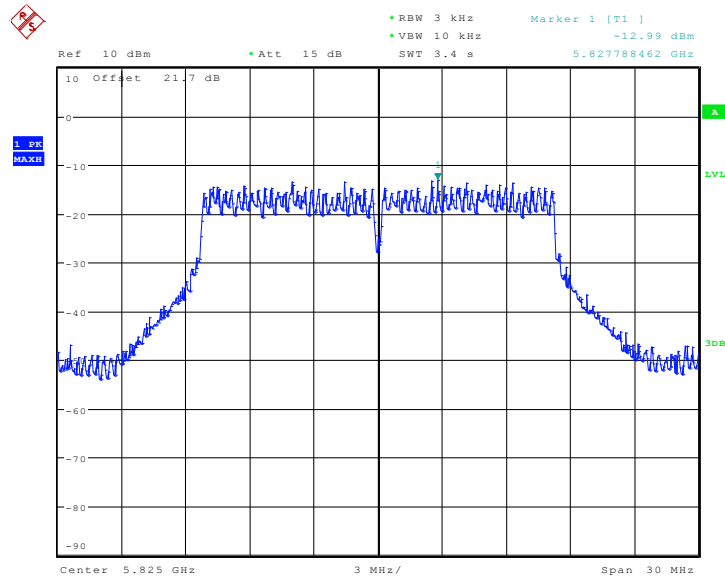
Date: 11.OCT.2013 21:38:54

Fig. 1 Power Spectral Density (802.11a, Ch 149)



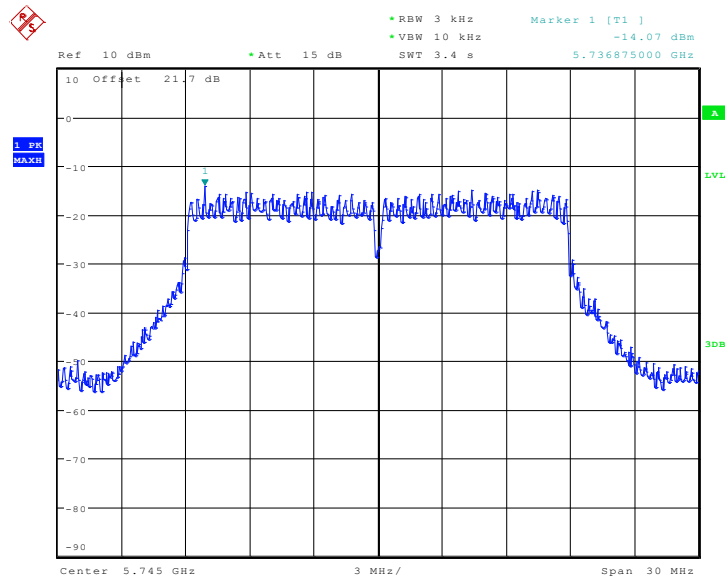
Date: 11.OCT.2013 21:40:32

Fig. 2 Power Spectral Density (802.11a, Ch 157)



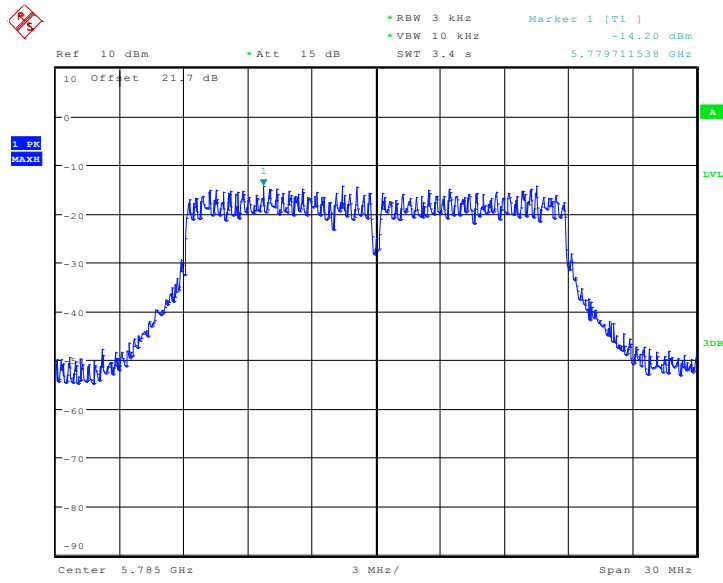
Date: 11.OCT.2013 21:41:58

Fig. 3 Power Spectral Density (802.11a, Ch 165)



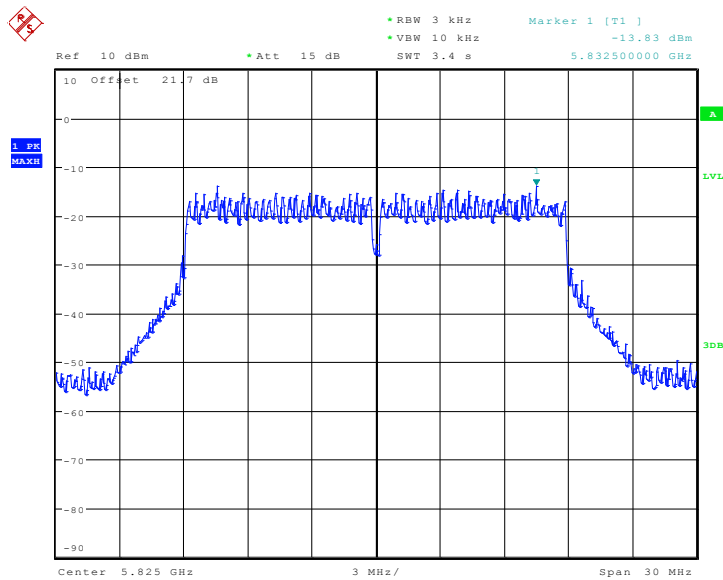
Date: 11.OCT.2013 21:42:57

Fig. 4 Power Spectral Density (802.11n-HT20, Ch 149)



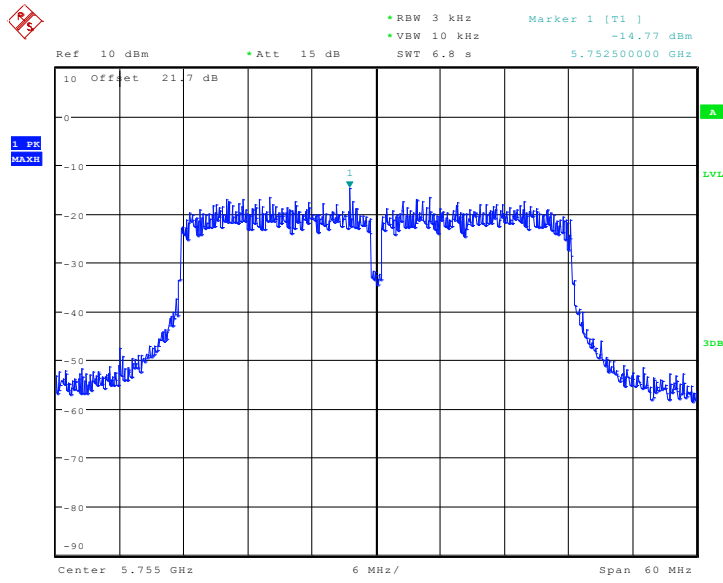
Date: 11.OCT.2013 21:43:29

Fig. 5 Power Spectral Density (802.11n-HT20, Ch 157)



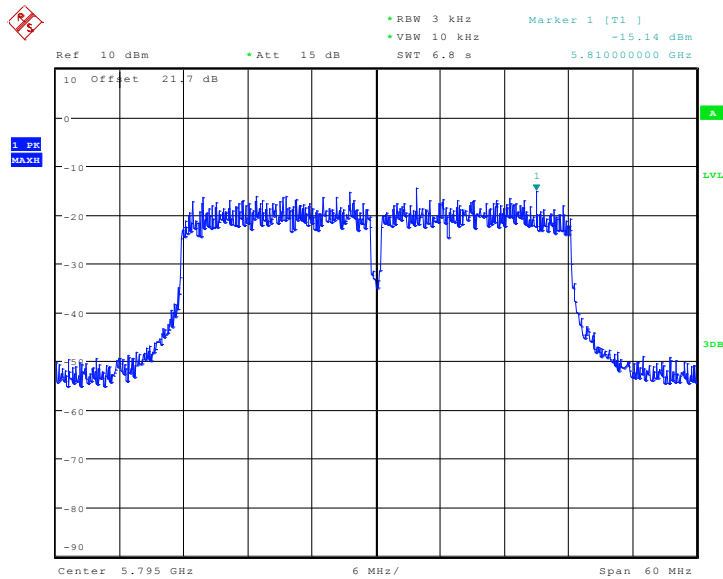
Date: 11.OCT.2013 21:44:04

Fig. 6 Power Spectral Density (802.11n-HT20, Ch 165)



Date: 11.OCT.2013 21:44:55

Fig. 7 Power Spectral Density (802.11n-HT40, Ch 151)



Date: 11.OCT.2013 21:45:30

Fig. 8 Power Spectral Density (802.11n-HT40, Ch 159)

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:

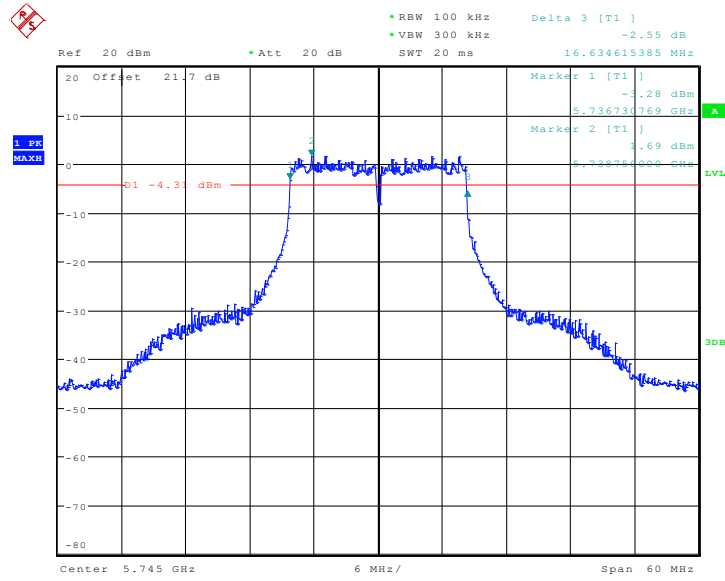
Measurement Uncertainty	60.80Hz
-------------------------	---------

Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
		Fig.	Value	
802.11a	149	Fig.9	16634.6	P
	157	Fig.10	16634.6	P
	165	Fig.11	16634.6	P
802.11n HT20	149	Fig.12	17884.6	P
	157	Fig.13	17884.6	P
	165	Fig.14	17884.6	P
802.11n HT40	151	Fig.15	36442.3	P
	159	Fig.16	36442.3	P

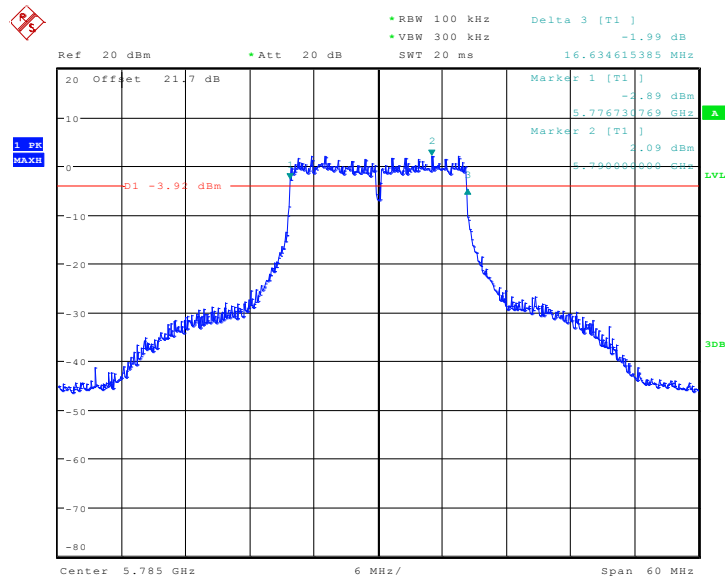
Conclusion: PASS

Test graphs as below:



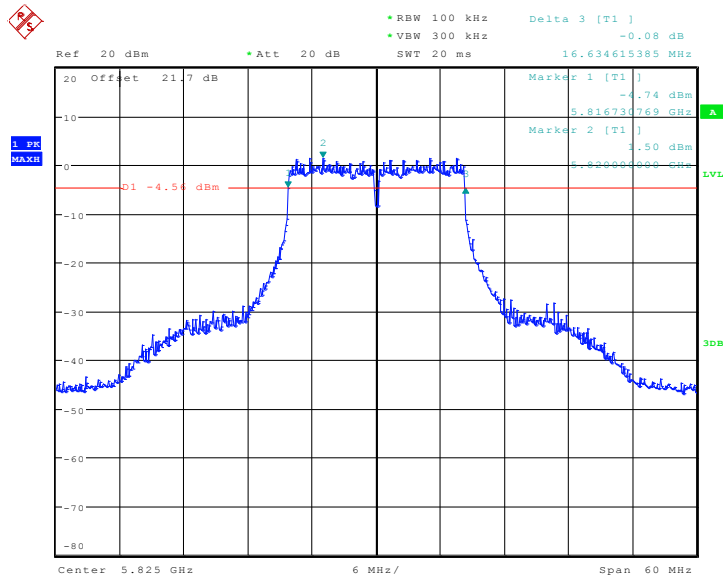
Date: 12.OCT.2013 08:54:08

Fig. 9 Occupied 6dB Bandwidth (802.11a, Ch 149)



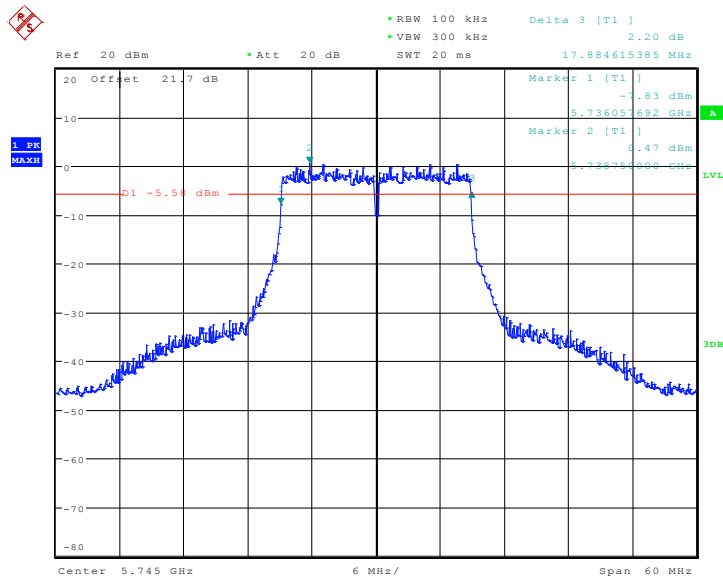
Date: 12.OCT.2013 08:55:16

Fig. 10 Occupied 6dB Bandwidth (802.11a, Ch 157)



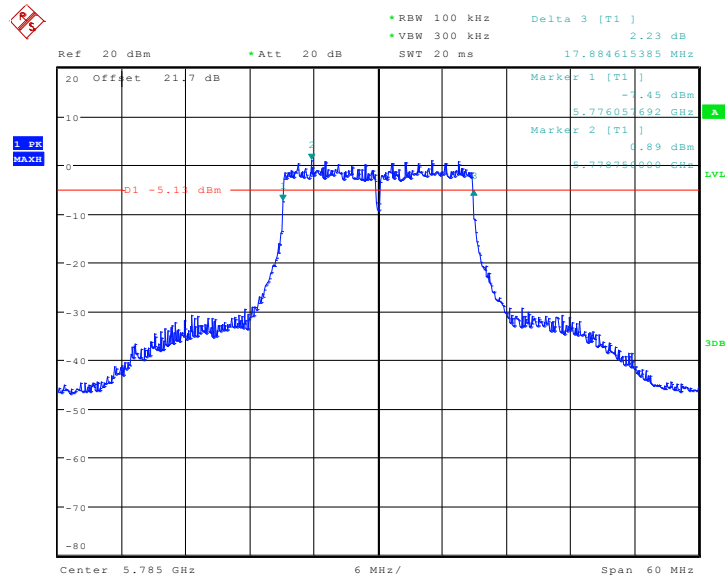
Date: 12.OCT.2013 08:56:09

Fig. 11 Occupied 6dB Bandwidth (802.11a, Ch 165)



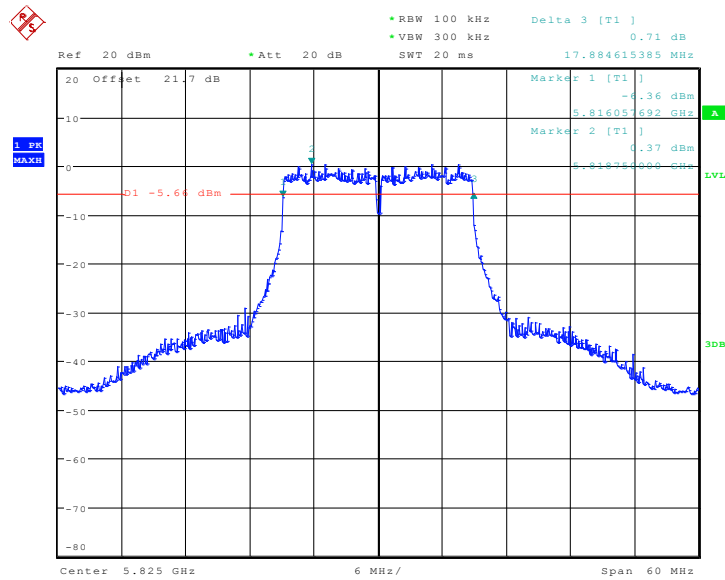
Date: 12.OCT.2013 09:15:34

Fig. 12 Occupied 6dB Bandwidth (802.11n-HT20, Ch 149)



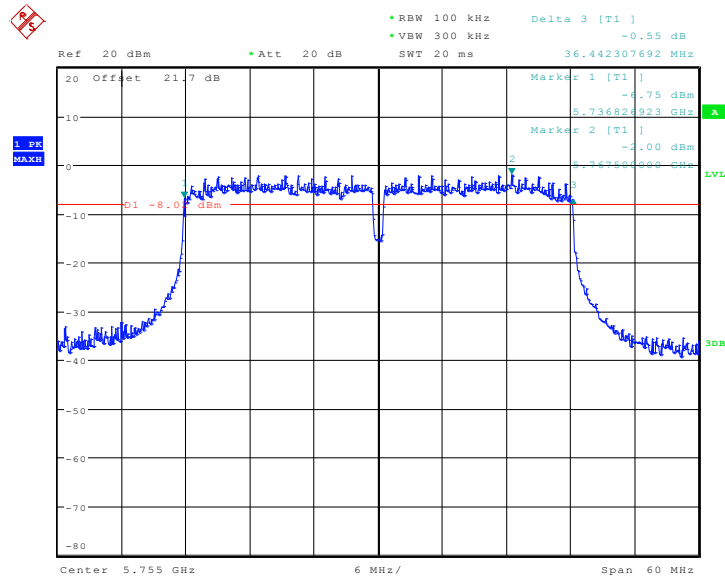
Date: 12.OCT.2013 09:16:46

Fig. 13 Occupied 6dB Bandwidth (802.11n-HT20, Ch 157)



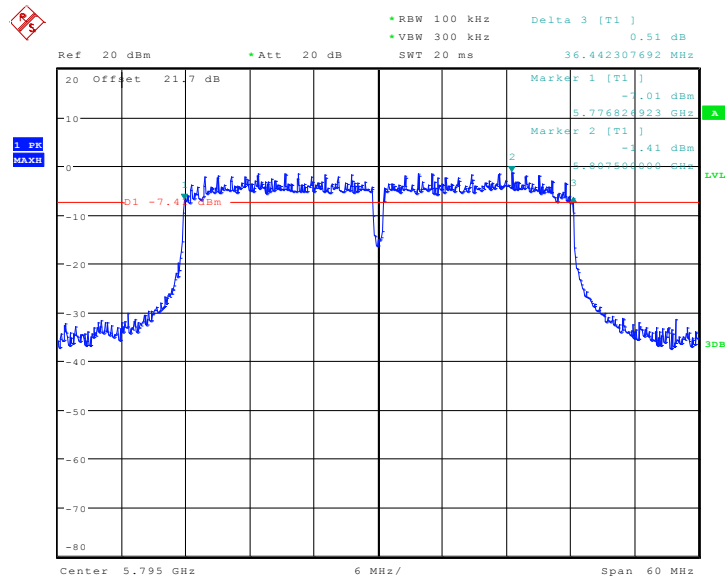
Date: 12.OCT.2013 09:18:20

Fig. 14 Occupied 6dB Bandwidth (802.11n-HT20, Ch 165)



Date: 12.OCT.2013 09:20:21

Fig. 15 Occupied 6dB Bandwidth (802.11n-HT40, Ch 151)



Date: 12.OCT.2013 09:21:53

Fig. 16 Occupied 6dB Bandwidth (802.11n-HT40, Ch 157)

A.5. 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

A.6.1 Transmitter Spurious Emission - Conducted

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

Measurement Results:

802.11a mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	5.745 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
	157	5.785 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
	165	5.825 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

802.11n-HT20 mode

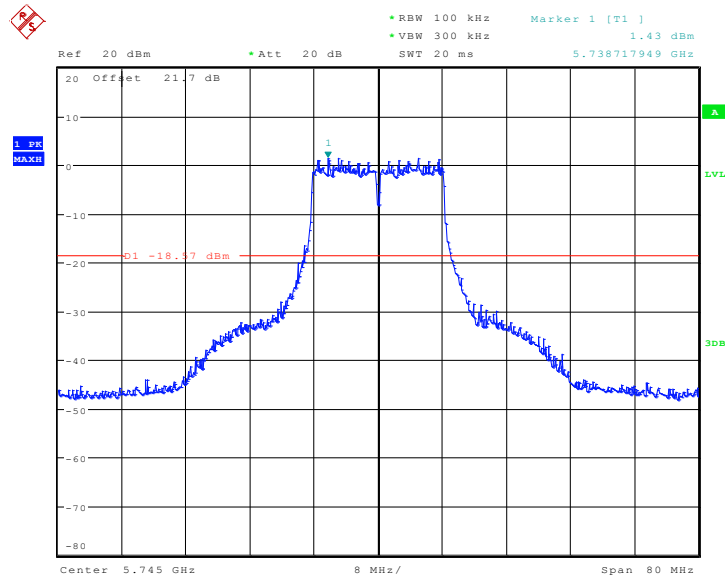
MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n HT20	149	5.745 GHz	Fig.29	P
		30 MHz ~ 12 GHz	Fig.30	P
		12 GHz ~ 25 GHz	Fig.31	P
		25 GHz ~ 40 GHz	Fig.32	P
	157	5.785 GHz	Fig.33	P
		30 MHz ~ 12 GHz	Fig.34	P
		12 GHz ~ 25 GHz	Fig.35	P
		25 GHz ~ 40 GHz	Fig.36	P
	165	5.825 GHz	Fig.37	P
		30 MHz ~ 12 GHz	Fig.38	P
		12 GHz ~ 25 GHz	Fig.39	P
		25 GHz ~ 40 GHz	Fig.40	P

802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (40MHz)	151	5.755 GHz	Fig.41	P
		30 MHz ~ 12 GHz	Fig.42	P
		12 GHz ~ 25 GHz	Fig.43	P
		25 GHz ~ 40 GHz	Fig.44	P
	159	5.795 GHz	Fig.45	P
		30 MHz ~ 12 GHz	Fig.46	P
		12 GHz ~ 25 GHz	Fig.47	P
		25 GHz ~ 40 GHz	Fig.48	P

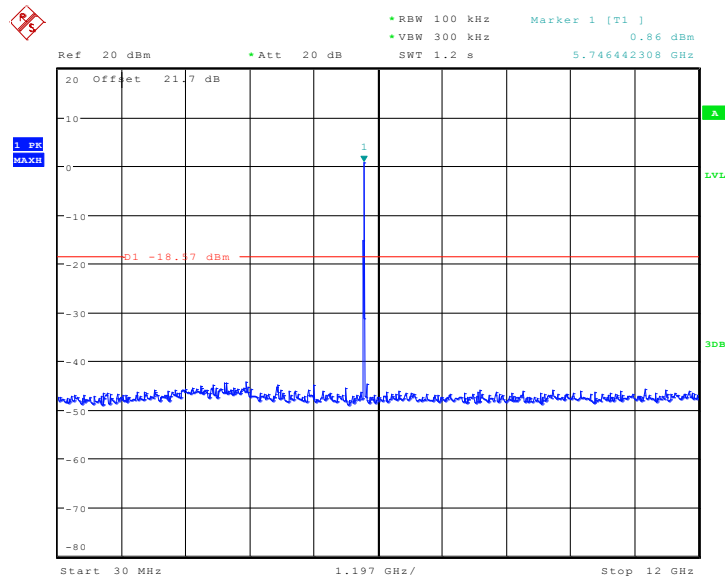
Conclusion: PASS

Test graphs as below:



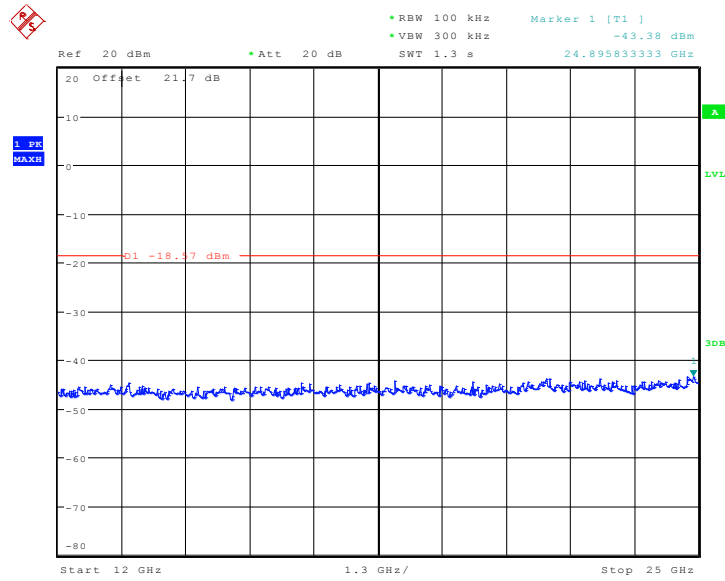
Date: 12.OCT.2013 09:56:43

Fig. 17 Conducted Spurious Emission (802.11a, Ch149, Center Frequency)



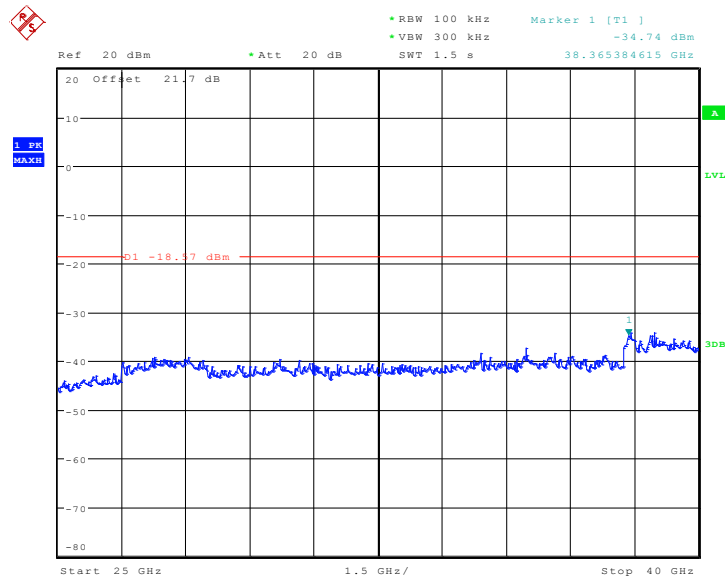
Date: 12.OCT.2013 09:57:14

Fig. 18 Conducted Spurious Emission (802.11a, Ch149, 30 MHz-12 GHz)



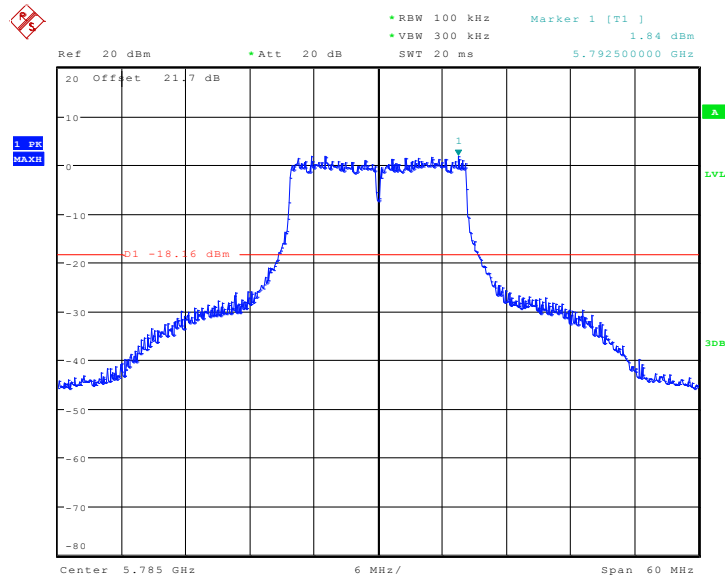
Date: 12.OCT.2013 09:57:39

Fig. 19 Conducted Spurious Emission (802.11a, Ch149, 12 GHz-25 GHz)



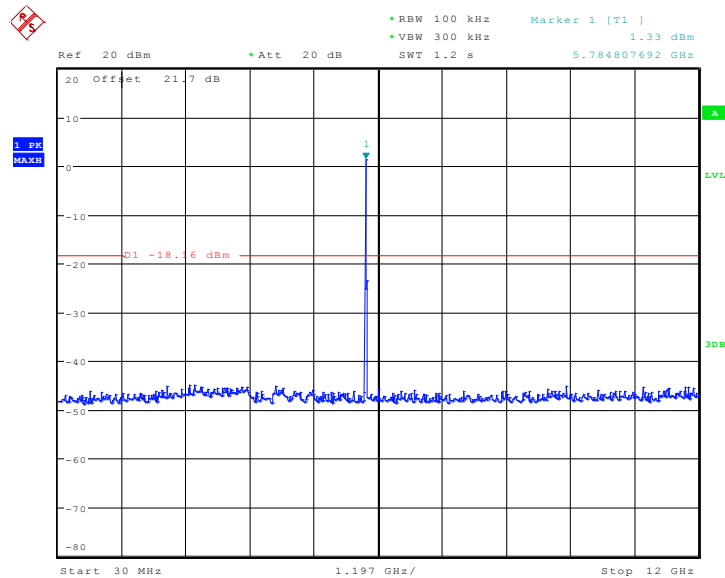
Date: 12.OCT.2013 09:57:58

Fig. 20 Conducted Spurious Emission (802.11a, Ch149, 25 GHz-40 GHz)



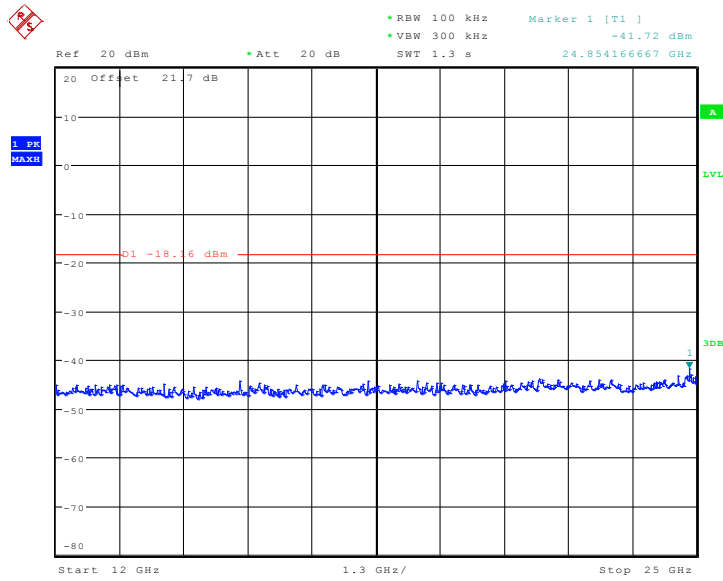
Date: 12.OCT.2013 10:02:03

Fig. 21 Conducted Spurious Emission (802.11a, Ch157, Center Frequency)



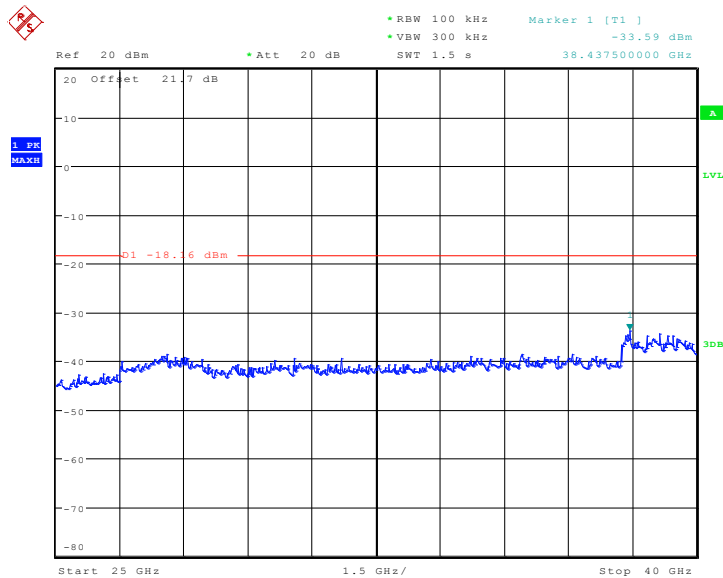
Date: 12.OCT.2013 10:02:27

Fig. 22 Conducted Spurious Emission (802.11a, Ch157, 30 MHz-12 GHz)



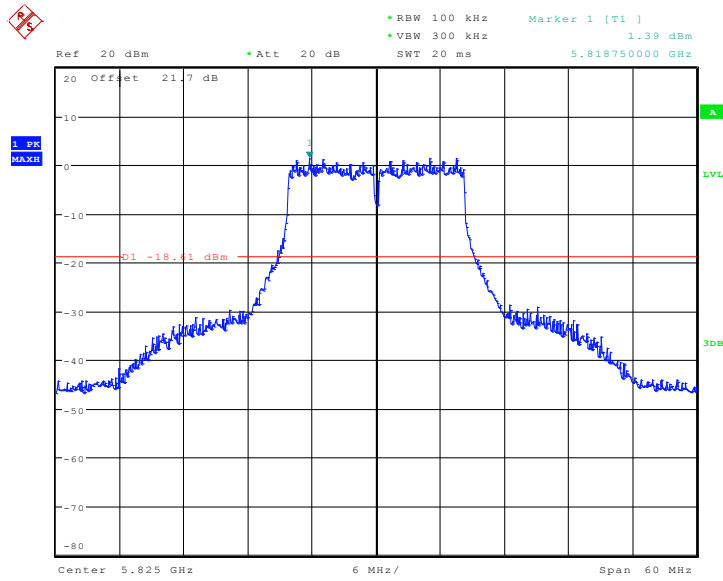
Date: 12.OCT.2013 10:02:51

Fig. 23 Conducted Spurious Emission (802.11a, Ch157, 12 GHz-25 GHz)



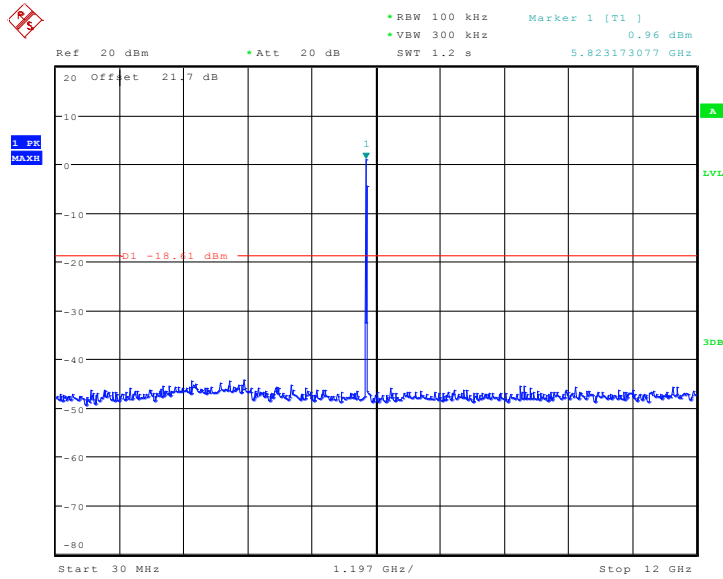
Date: 12.OCT.2013 10:03:10

Fig. 24 Conducted Spurious Emission (802.11a, Ch157, 25 GHz-40 GHz)



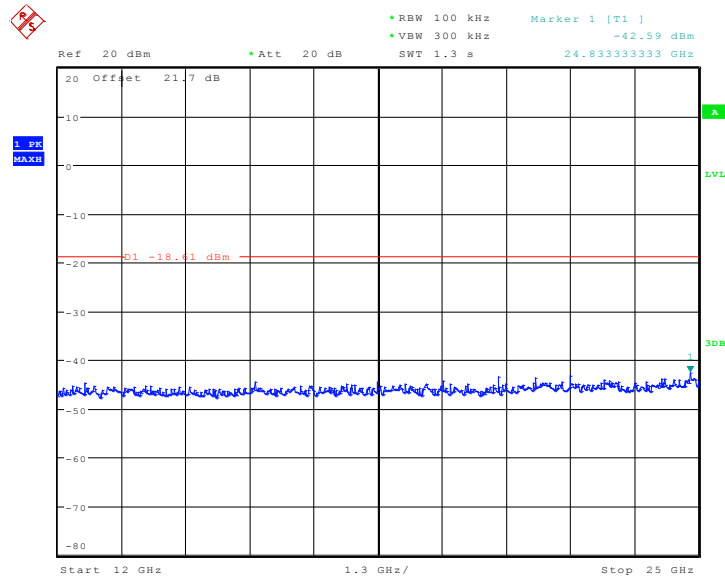
Date: 12.OCT.2013 10:04:13

Fig. 25 Conducted Spurious Emission (802.11a, Ch165, Center Frequency)



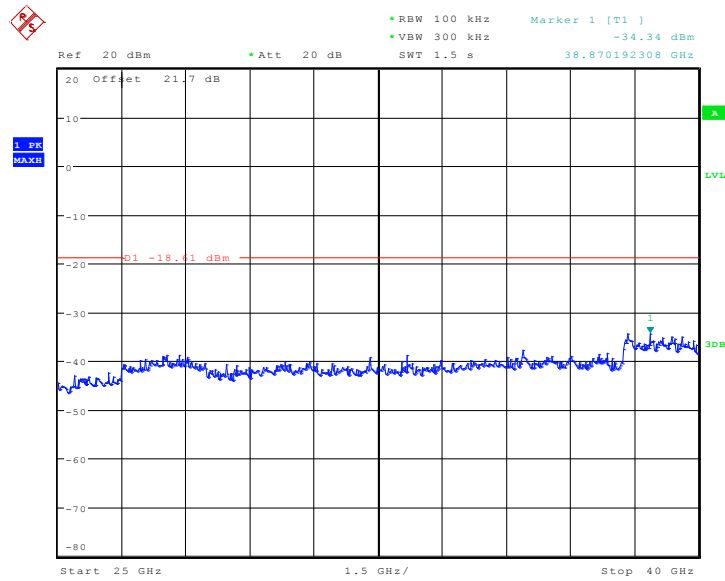
Date: 12.OCT.2013 10:04:31

Fig. 26 Conducted Spurious Emission (802.11a, Ch165, 30 MHz-12 GHz)



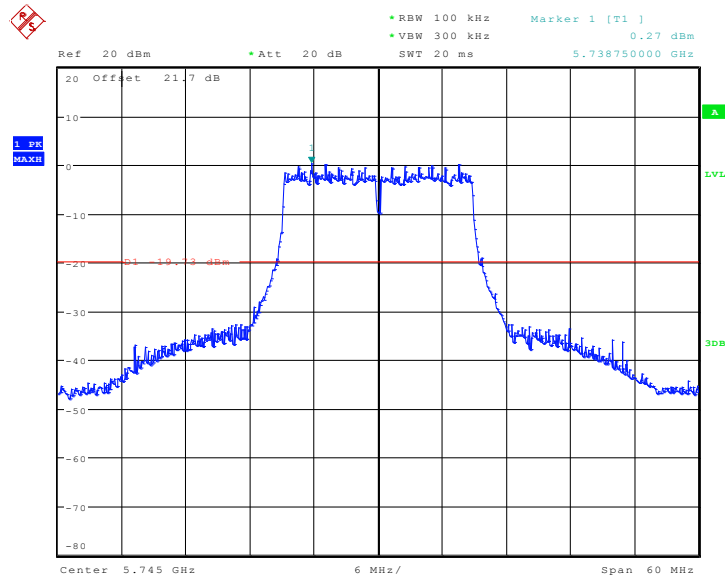
Date: 12.OCT.2013 10:04:52

Fig. 27 Conducted Spurious Emission (802.11a, Ch165, 12 GHz-25 GHz)



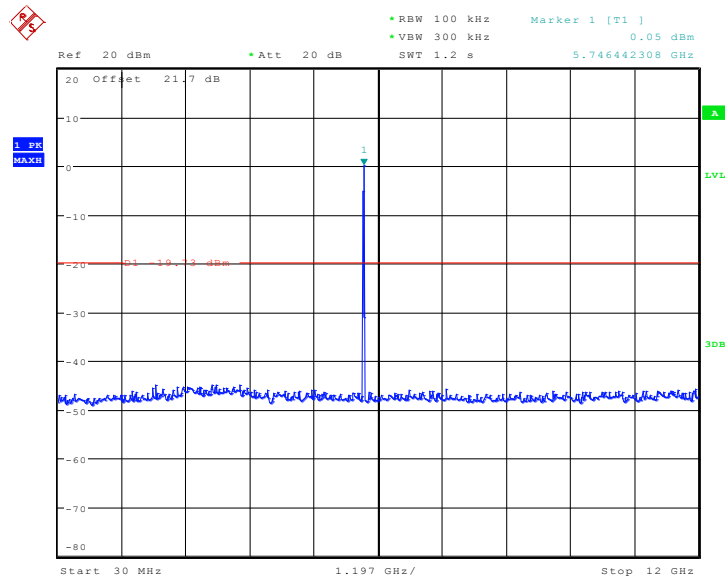
Date: 12.OCT.2013 10:05:09

Fig. 28 Conducted Spurious Emission (802.11a, Ch165, 25 GHz-40 GHz)



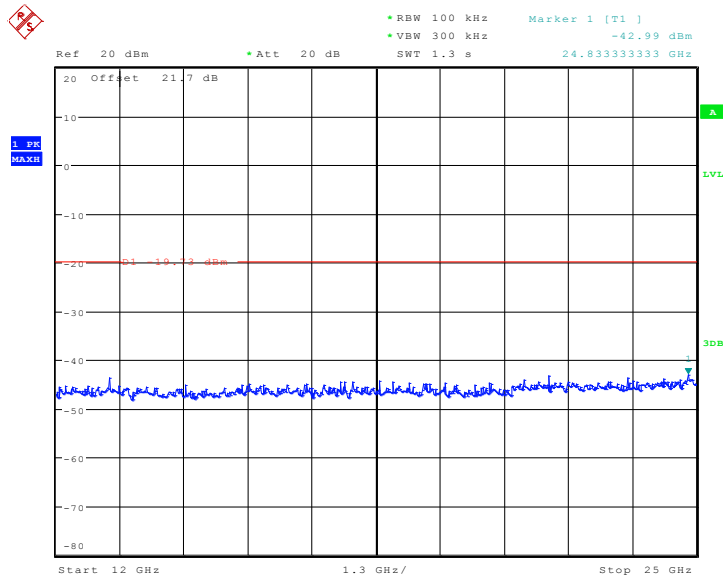
Date: 12.OCT.2013 10:06:05

Fig. 29 Conducted Spurious Emission (802.11n-HT20, Ch149, Center Frequency)



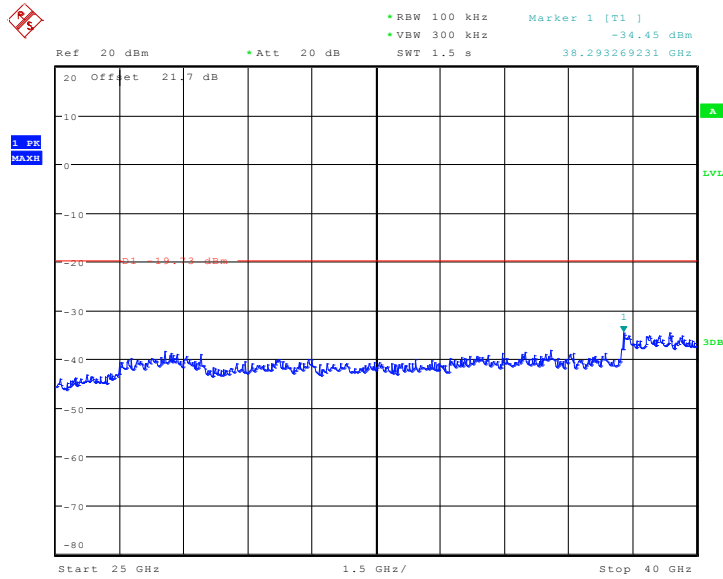
Date: 12.OCT.2013 10:06:22

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



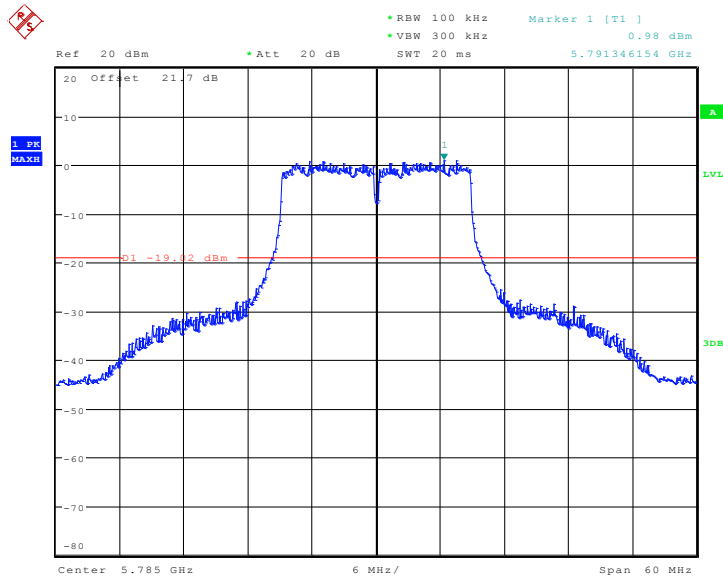
Date: 12.OCT.2013 10:06:41

Fig. 31 Conducted Spurious Emission (802.11n-HT20, Ch149, 12 GHz-25 GHz)



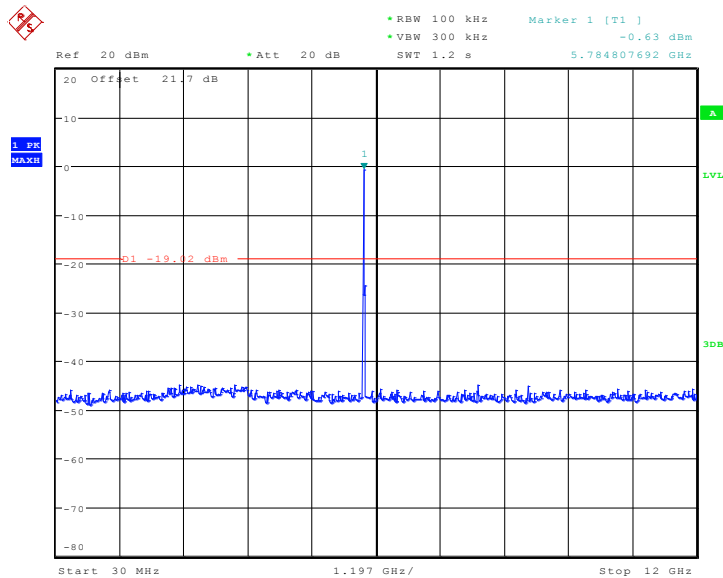
Date: 12.OCT.2013 10:06:58

Fig. 32 Conducted Spurious Emission (802.11n-HT20, Ch149, 25 GHz-40 GHz)



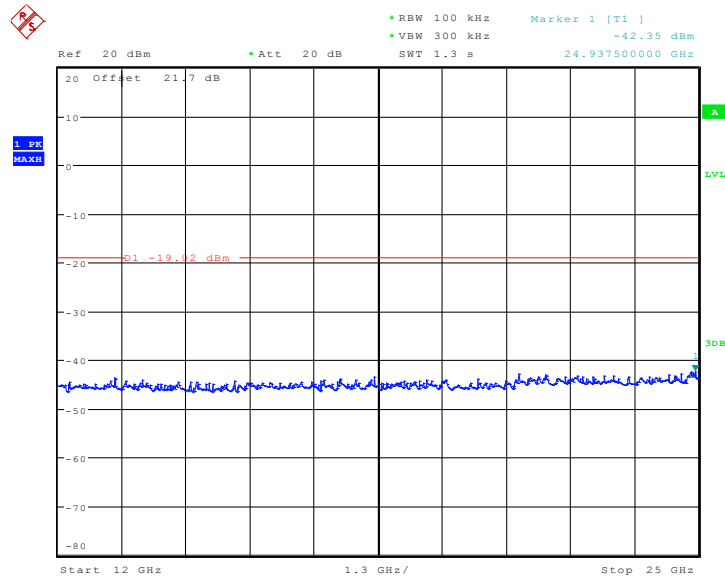
Date: 12.OCT.2013 10:42:14

Fig. 33 Conducted Spurious Emission (802.11n-HT20, Ch157, Center Frequency)



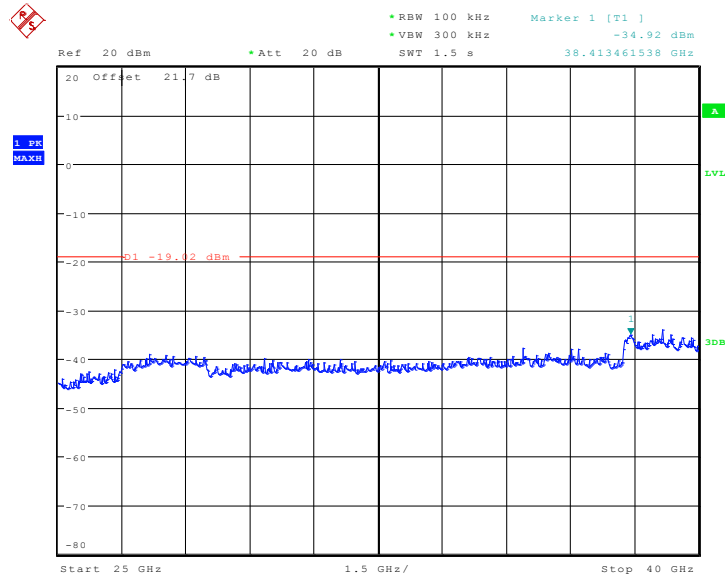
Date: 12.OCT.2013 10:42:31

Fig. 34 Conducted Spurious Emission (802.11n-HT20, Ch157, 30 MHz-12 GHz)



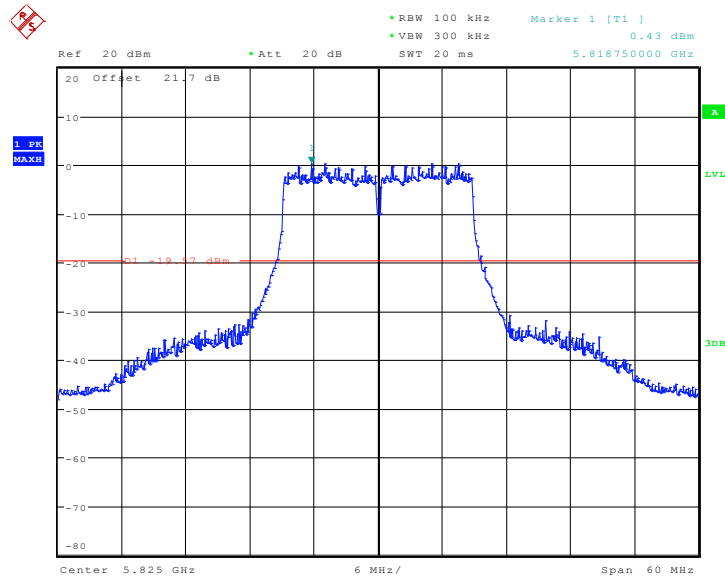
Date: 12.OCT.2013 10:45:32

Fig. 35 Conducted Spurious Emission (802.11n-HT20, Ch157, 12 GHz-25 GHz)



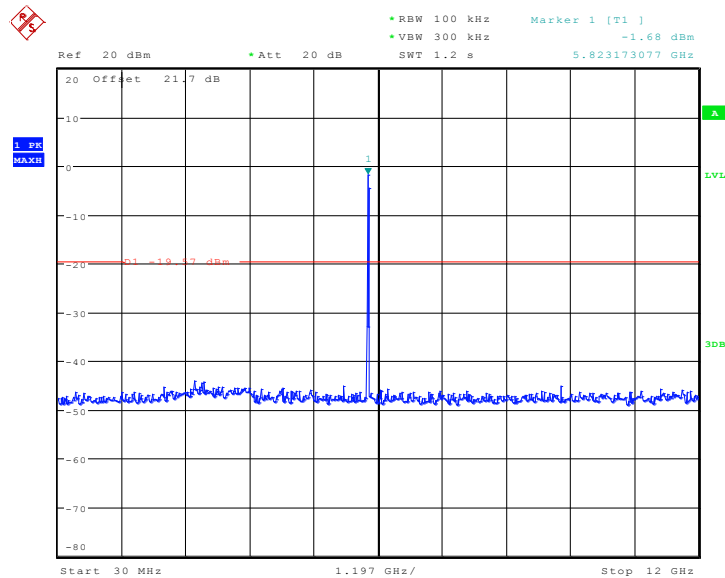
Date: 12.OCT.2013 10:45:47

Fig. 36 Conducted Spurious Emission (802.11n-HT20, Ch157, 25 GHz-40 GHz)



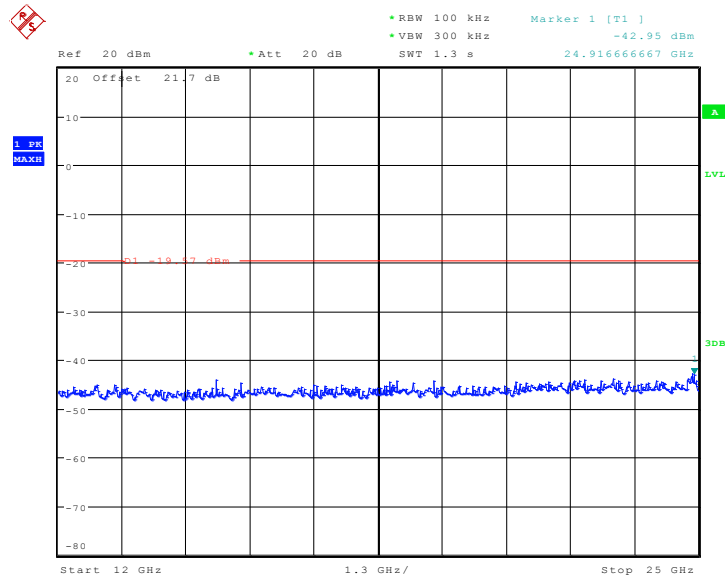
Date: 12.OCT.2013 10:46:34

Fig. 37 Conducted Spurious Emission (802.11n-HT20, Ch165, Center Frequency)



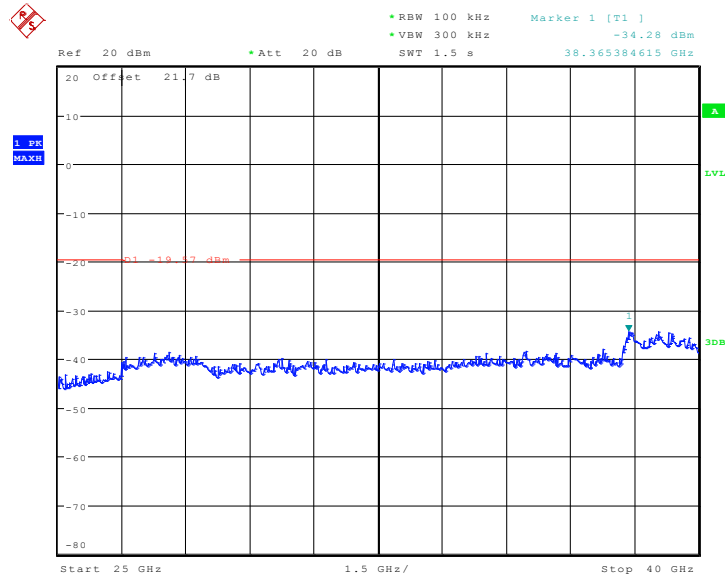
Date: 12.OCT.2013 10:46:46

Fig. 38 Conducted Spurious Emission (802.11n-HT20, Ch165, 30 MHz-12 GHz)



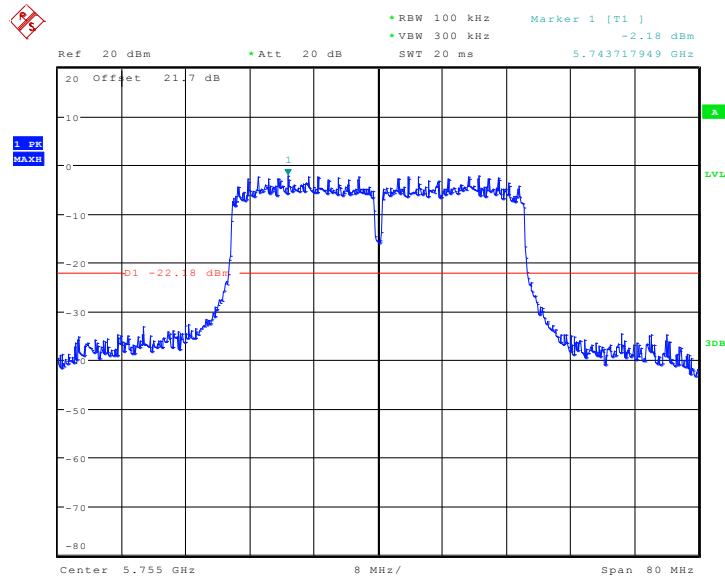
Date: 12.OCT.2013 10:46:59

Fig. 39 Conducted Spurious Emission (802.11n-HT20, Ch165, 12 GHz-25 GHz)



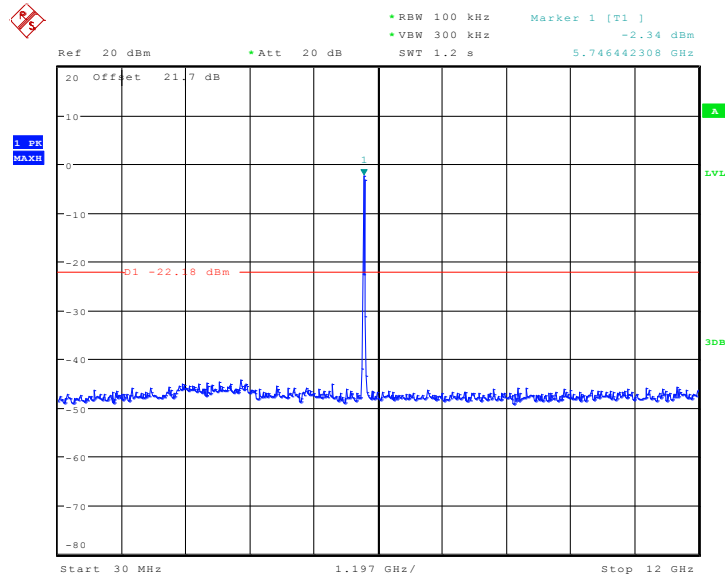
Date: 12.OCT.2013 10:47:17

Fig. 40 Conducted Spurious Emission (802.11n-HT20, Ch165, 25 GHz-40 GHz)



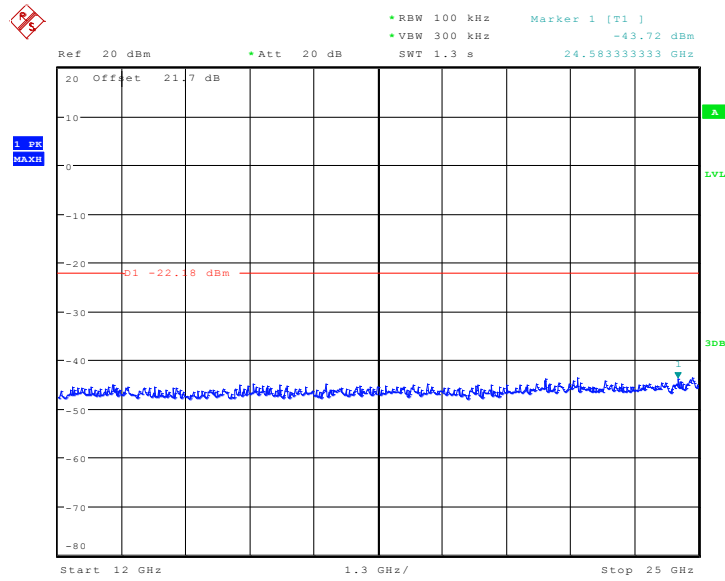
Date: 12.OCT.2013 10:52:00

Fig. 41 Conducted Spurious Emission (802.11n-HT40, Ch151, Center Frequency)



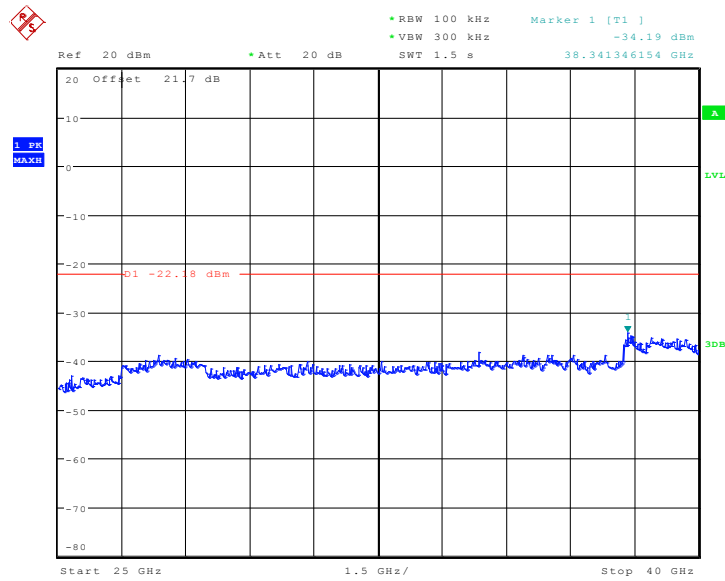
Date: 12.OCT.2013 10:52:20

Fig. 42 Conducted Spurious Emission (802.11n-HT40, Ch151, 30 MHz-12 GHz)



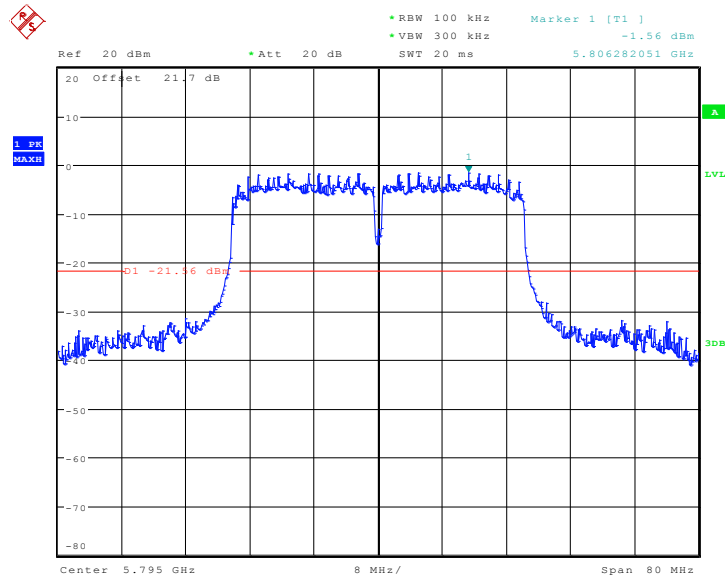
Date: 12.OCT.2013 10:52:35

Fig. 43 Conducted Spurious Emission (802.11n-HT40, Ch151, 12 GHz-25 GHz)



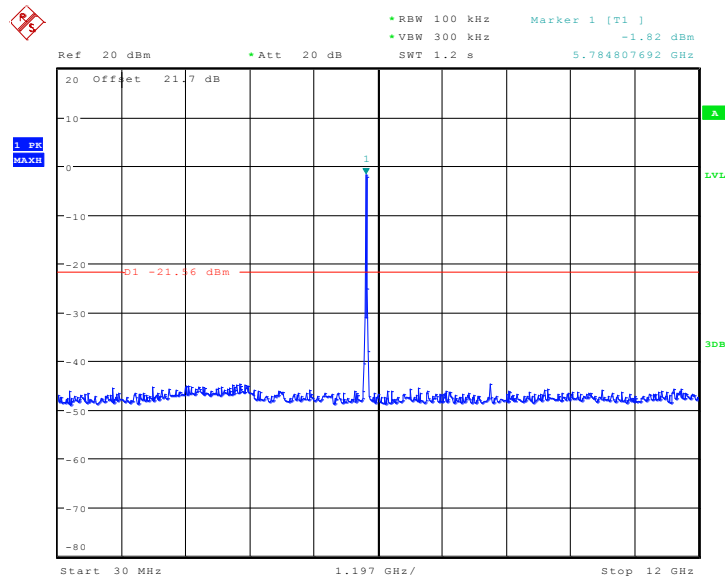
Date: 12.OCT.2013 10:52:50

Fig. 44 Conducted Spurious Emission (802.11n-HT40, Ch151, 25 GHz-40 GHz)



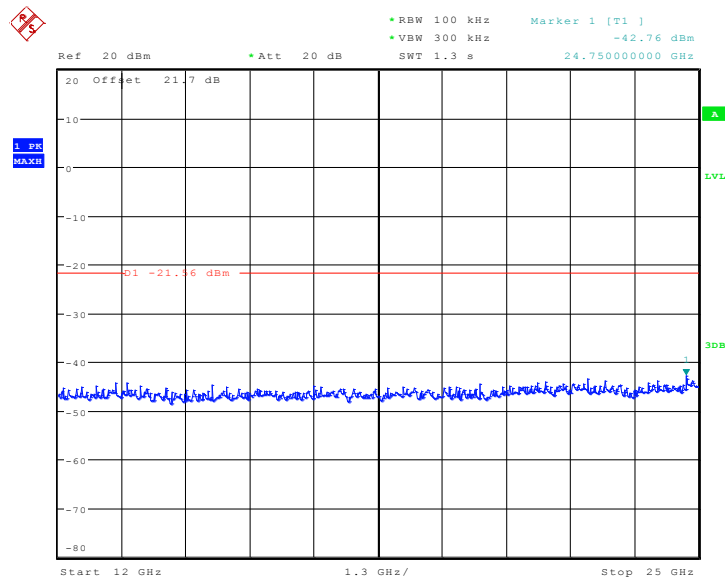
Date: 12.OCT.2013 10:53:23

Fig. 45 Conducted Spurious Emission (802.11n-HT40, Ch159, Center Frequency)



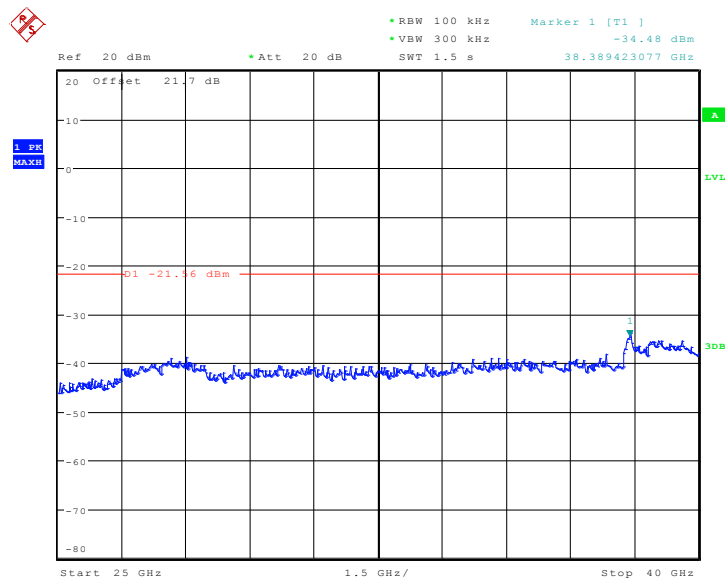
Date: 12.OCT.2013 10:53:36

Fig. 46 Conducted Spurious Emission (802.11n-HT40, Ch159, 30 MHz-12 GHz)



Date: 12.OCT.2013 10:53:49

Fig. 47 Conducted Spurious Emission (802.11n-HT40, Ch159, 12 GHz-25 GHz)



Date: 12.OCT.2013 10:54:02

Fig. 48 Conducted Spurious Emission (802.11n-HT40, Ch151, 25 GHz-40 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Measurement Uncertainty:

Frequency Range	Uncertainty(dB)
f ≤ 1GHz	3.9
f > 1GHz	4.3

Measurement Results:

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	30 MHz ~ 1 GHz	Fig.49	P
		1 GHz ~ 3 GHz	Fig.50	P
		3 GHz ~ 6 GHz	Fig.51	P
		6 GHz ~ 18 GHz	Fig.52	P
		18 GHz ~ 26.5 GHz	Fig.53	P
		26.5 GHz ~ 40 GHz	Fig.54	P
	157	30 MHz ~ 1 GHz	Fig.55	P
		1 GHz ~ 3 GHz	Fig.56	P
		3 GHz ~ 6 GHz	Fig.57	P
		6 GHz ~ 18 GHz	Fig.58	P
		18 GHz ~ 26.5 GHz	Fig.59	P
		26.5 GHz ~ 40 GHz	Fig.60	P
	165	30 MHz ~ 1 GHz	Fig.61	P
		1 GHz ~ 3 GHz	Fig.62	P
		3 GHz ~ 6 GHz	Fig.63	P
		6 GHz ~ 18 GHz	Fig.64	P
		18 GHz ~ 26.5 GHz	Fig.65	P
		26.5 GHz ~ 40 GHz	Fig.66	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	30 MHz ~1 GHz	Fig.67	P
		1 GHz ~ 3 GHz	Fig.68	P
		3 GHz ~ 6 GHz	Fig.69	P
		6 GHz ~ 18 GHz	Fig.70	P
		18 GHz ~ 26.5 GHz	Fig.71	P
		26.5 GHz ~ 40 GHz	Fig.72	P
	157	30 MHz ~1 GHz	Fig.73	P
		1 GHz ~ 3 GHz	Fig.74	P
		3 GHz ~ 6 GHz	Fig.75	P
		6 GHz ~ 18 GHz	Fig.76	P
		18 GHz ~ 26.5 GHz	Fig.77	P
		26.5 GHz ~ 40 GHz	Fig.78	P
	165	30 MHz ~1 GHz	Fig.79	P
		1 GHz ~ 3 GHz	Fig.80	P
		3 GHz ~ 6 GHz	Fig.81	P
		6 GHz ~ 18 GHz	Fig.82	P
		18 GHz ~ 26.5 GHz	Fig.83	P
		26.5 GHz ~ 40 GHz	Fig.84	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	151	30 MHz ~1 GHz	Fig.85	P
		1 GHz ~ 3 GHz	Fig.86	P
		3 GHz ~ 6 GHz	Fig.87	P
		6 GHz ~ 18 GHz	Fig.88	P
		18 GHz ~ 26.5 GHz	Fig.89	P
		26.5 GHz ~ 40 GHz	Fig.90	P
	159	30 MHz ~1 GHz	Fig.91	P
		1 GHz ~ 3 GHz	Fig.92	P
		3 GHz ~ 6 GHz	Fig.93	P
		6 GHz ~ 18 GHz	Fig.94	P
		18 GHz ~ 26.5 GHz	Fig.95	P
		26.5 GHz ~ 40 GHz	Fig.96	P

Conclusion: PASS

Test graphs as below:

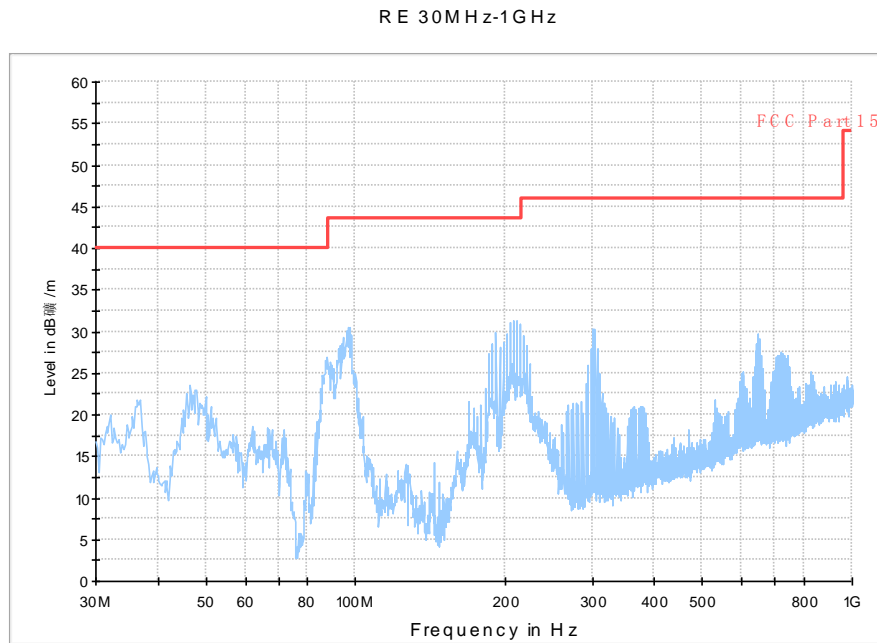


Fig. 49 Radiated Spurious Emission (802.11a, Ch149, 30 MHz-1 GHz)

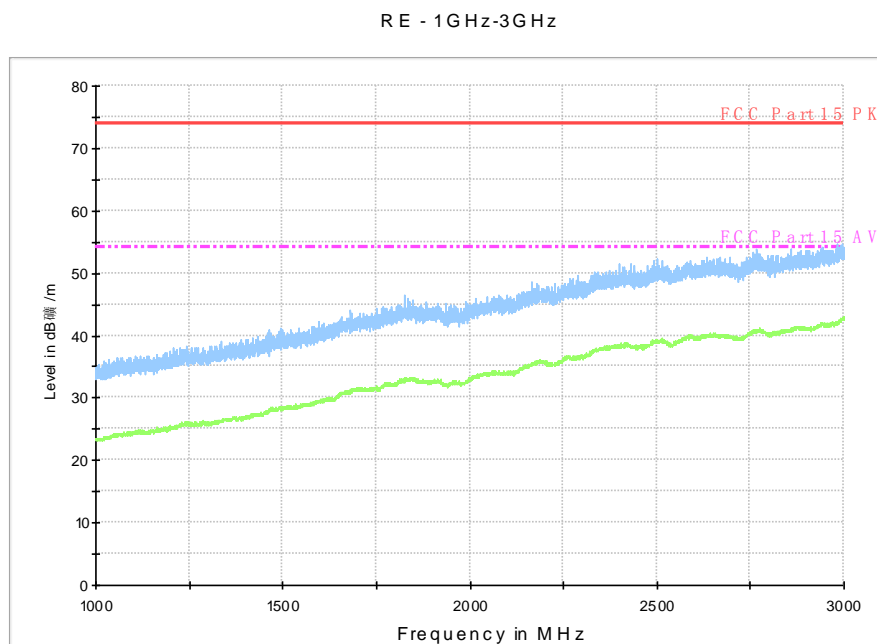


Fig. 50 Radiated Spurious Emission (802.11a, Ch149, 1 GHz-3 GHz)

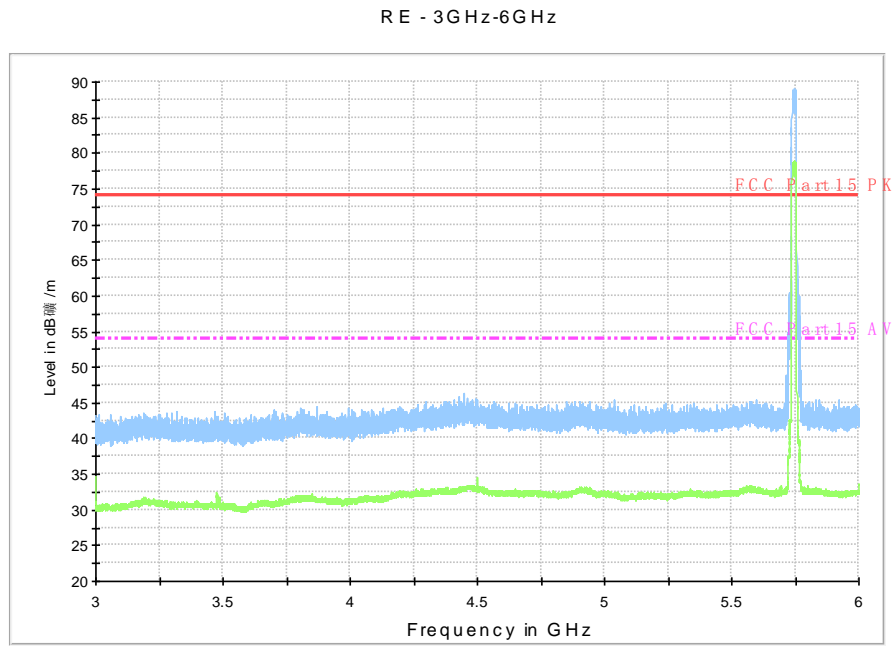


Fig. 51 Radiated Spurious Emission (802.11a, Ch149, 3 GHz-6 GHz)

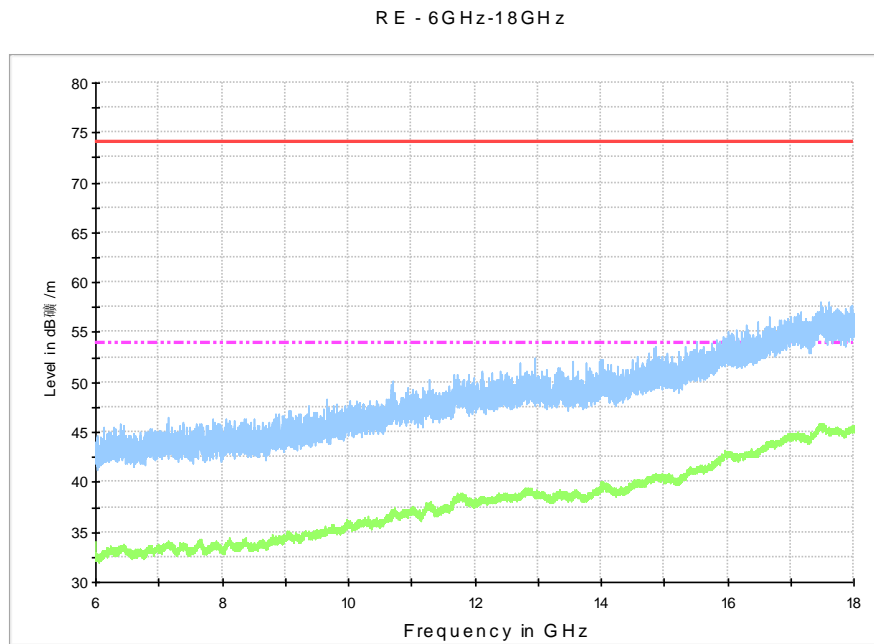


Fig. 52 Radiated Spurious Emission (802.11a, Ch149, 6 GHz-18 GHz)

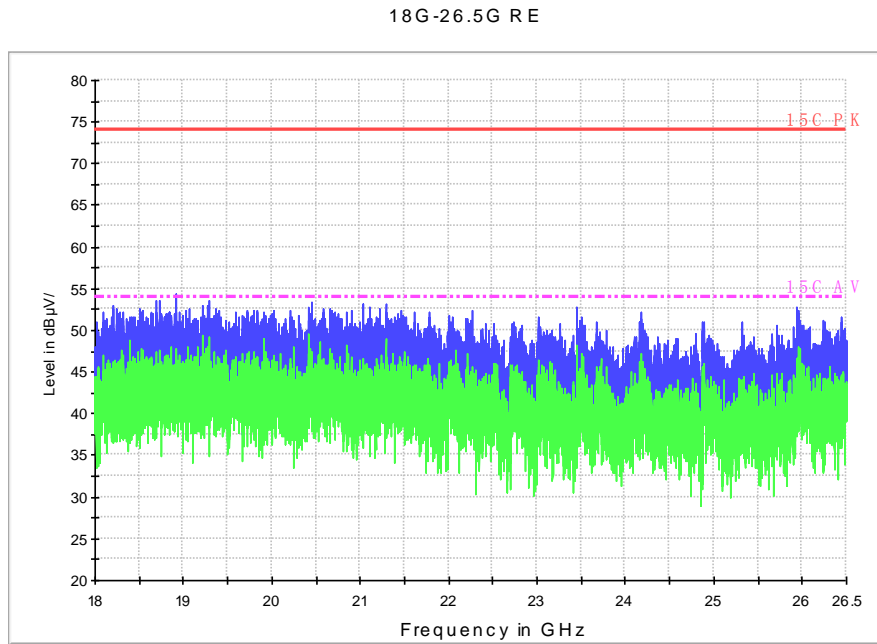


Fig. 53 Radiated Spurious Emission (802.11a, Ch149, 18 GHz-26.5 GHz)

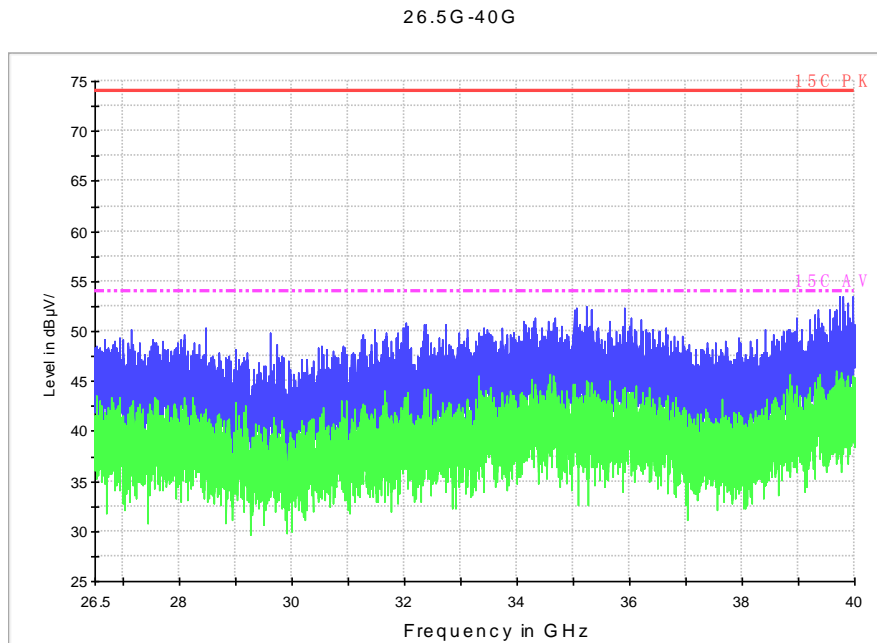


Fig. 54 Radiated Spurious Emission (802.11a, Ch149, 26.5 GHz-40 GHz)

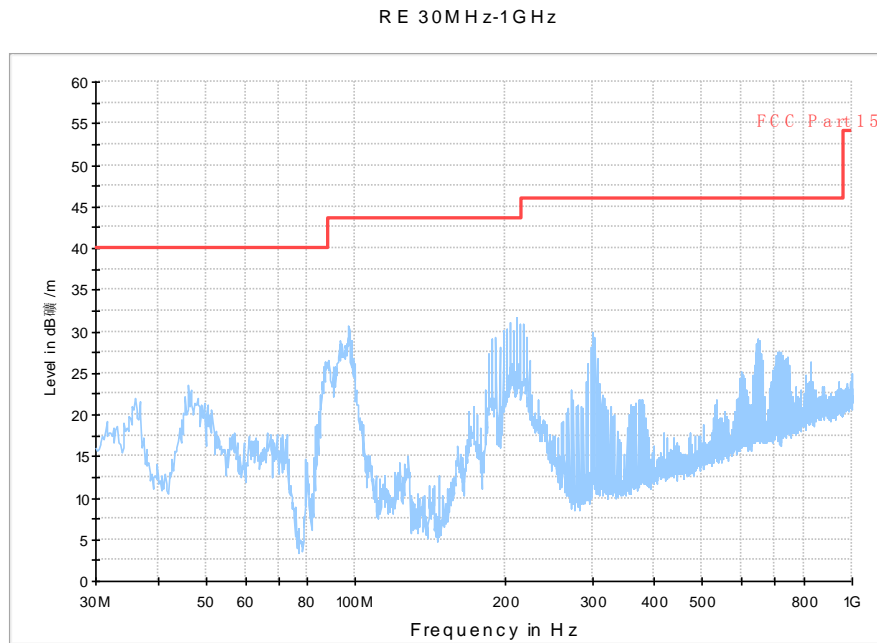


Fig. 55 Radiated Spurious Emission (802.11a, Ch157, 30 MHz-1 GHz)

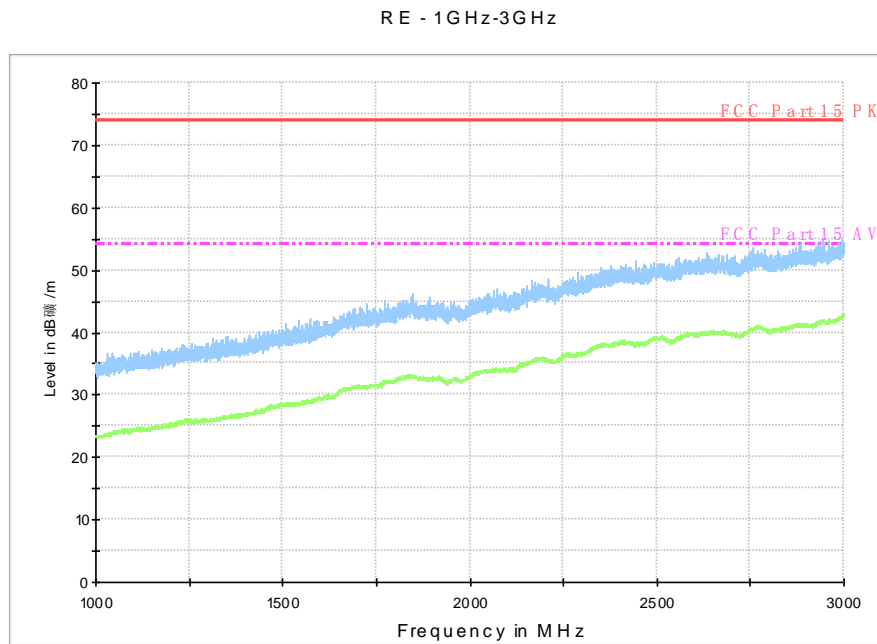


Fig. 56 Radiated Spurious Emission (802.11a, Ch157, 1 GHz-3 GHz)

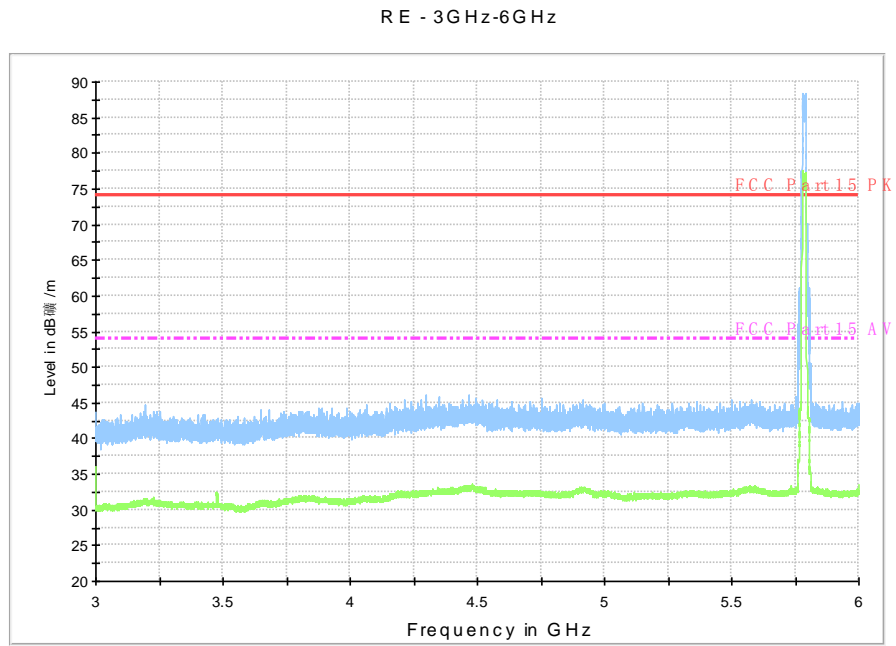


Fig. 57 Radiated Spurious Emission (802.11a, Ch157, 3 GHz-6 GHz)

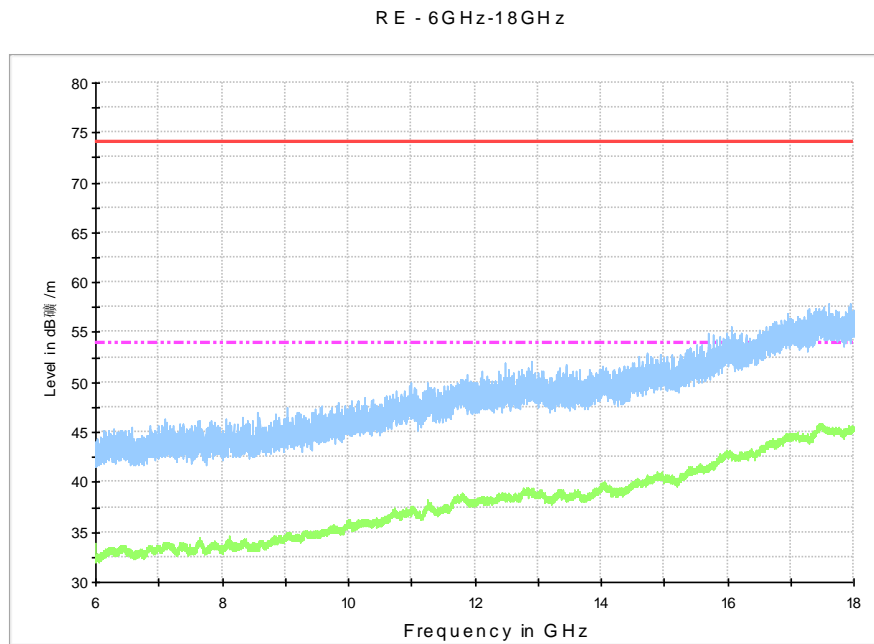


Fig. 58 Radiated Spurious Emission (802.11a, Ch157, 6 GHz-18 GHz)

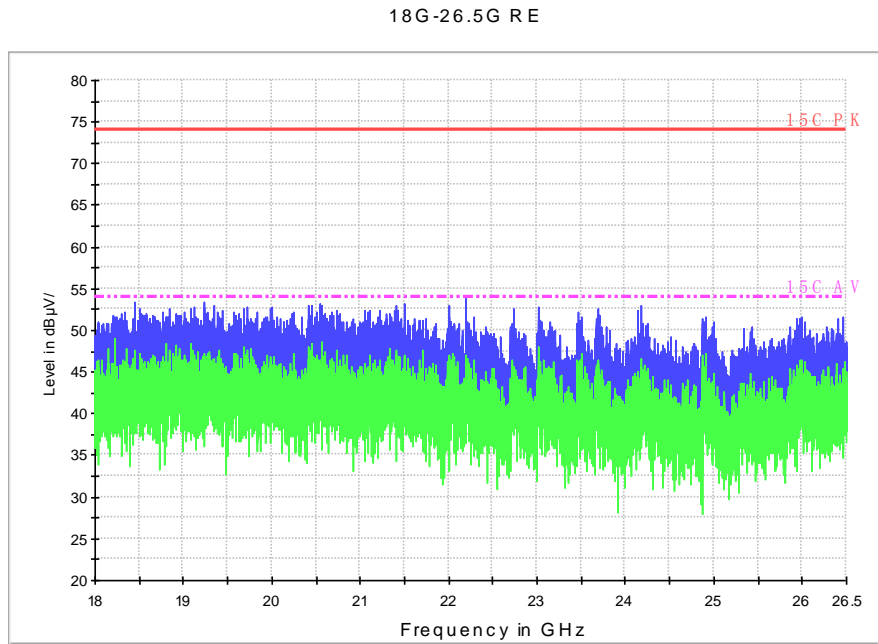


Fig. 59 Radiated Spurious Emission (802.11a, Ch157, 18 GHz-26.5 GHz)

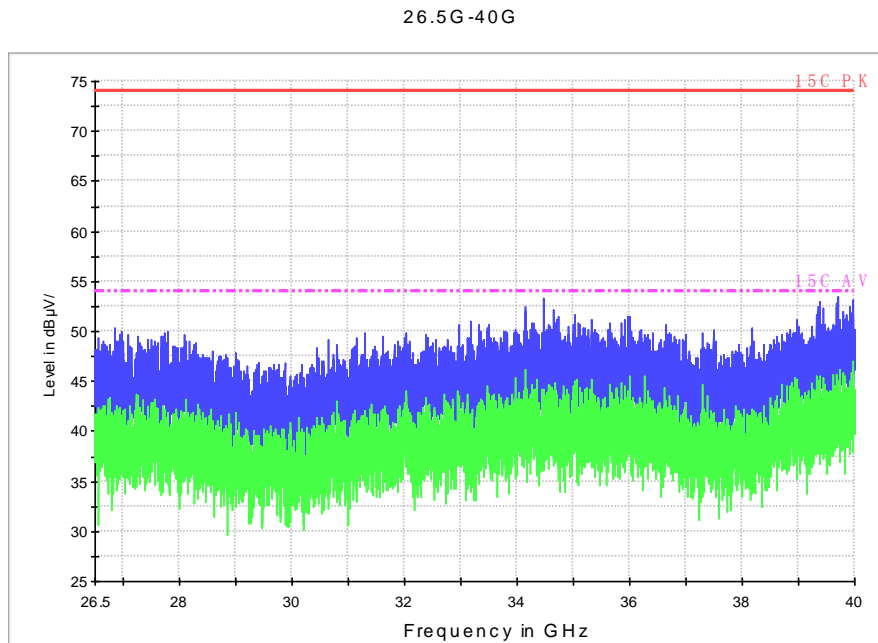


Fig. 60 Radiated Spurious Emission (802.11a, Ch157, 26.5 GHz-40 GHz)

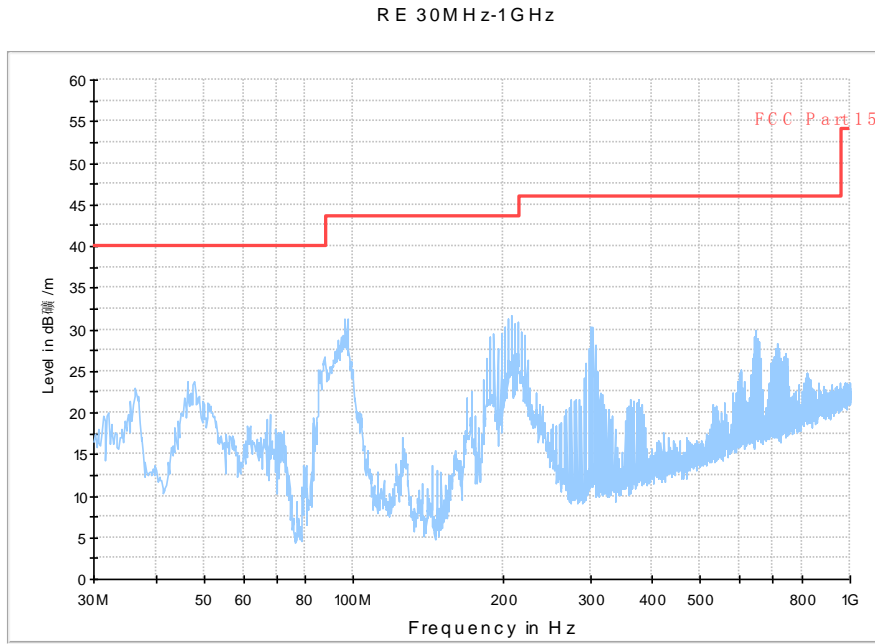


Fig. 61 Radiated Spurious Emission (802.11a, Ch165, 30 MHz-1 GHz)

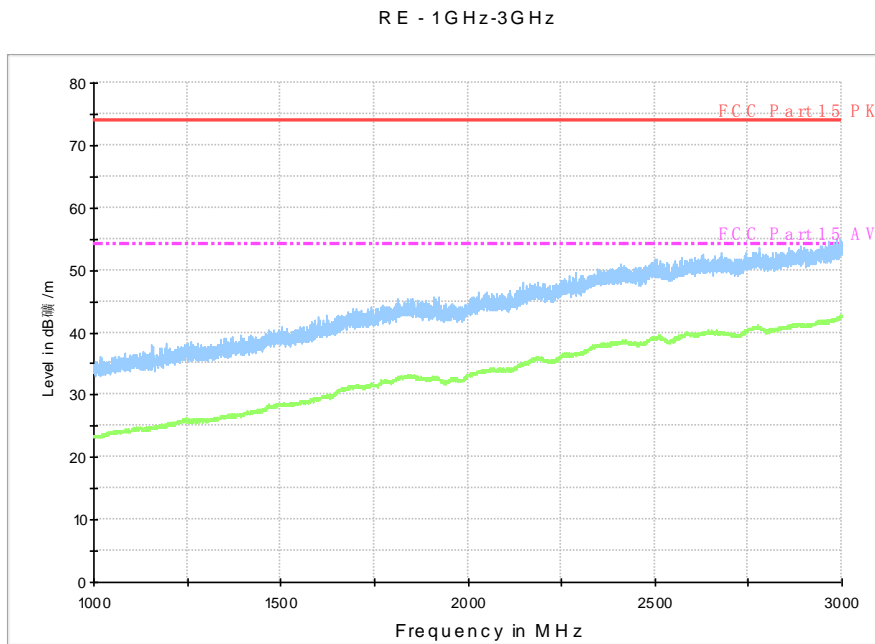


Fig. 62 Radiated Spurious Emission (802.11a, Ch165, 1 GHz-3 GHz)

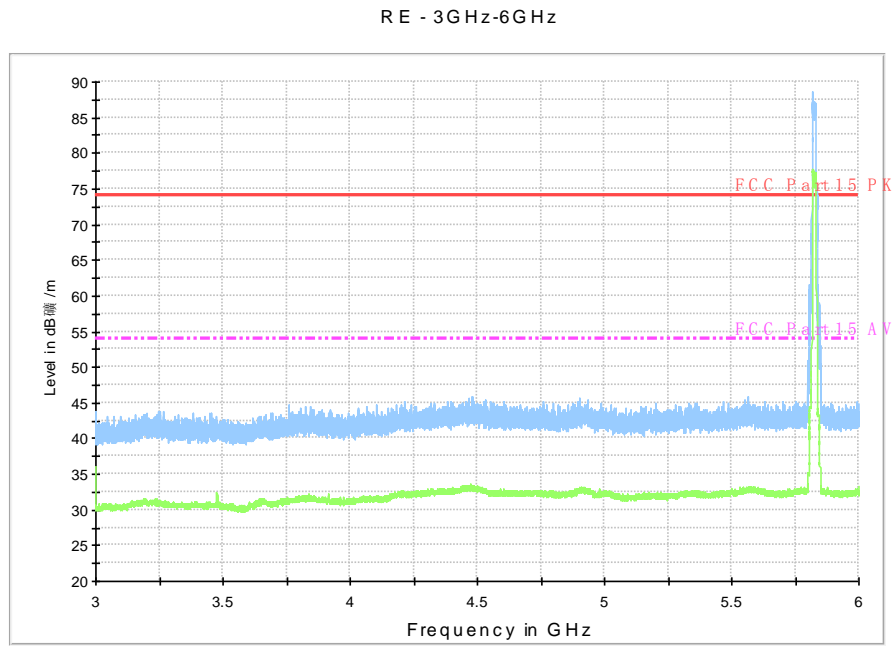


Fig. 63 Radiated Spurious Emission (802.11a, Ch165, 3 GHz-6 GHz)

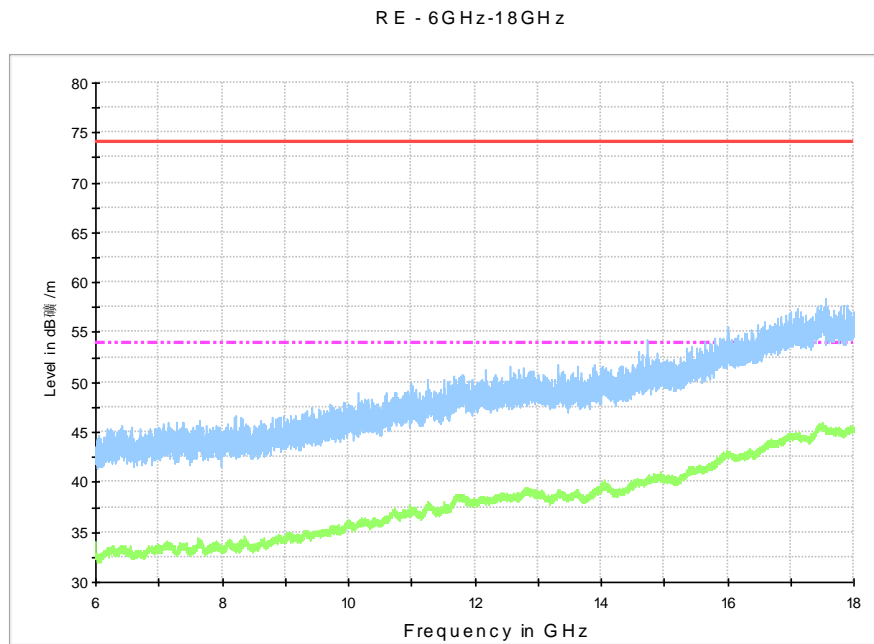


Fig. 64 Radiated Spurious Emission (802.11a, Ch165, 6 GHz-18 GHz)

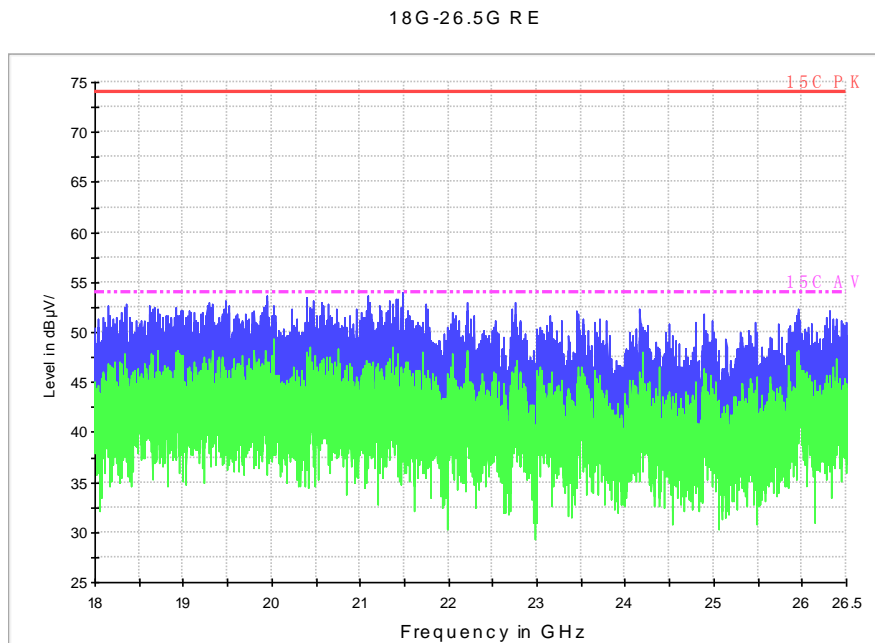


Fig. 65 Radiated Spurious Emission (802.11a, Ch165, 18 GHz-26.5 GHz)

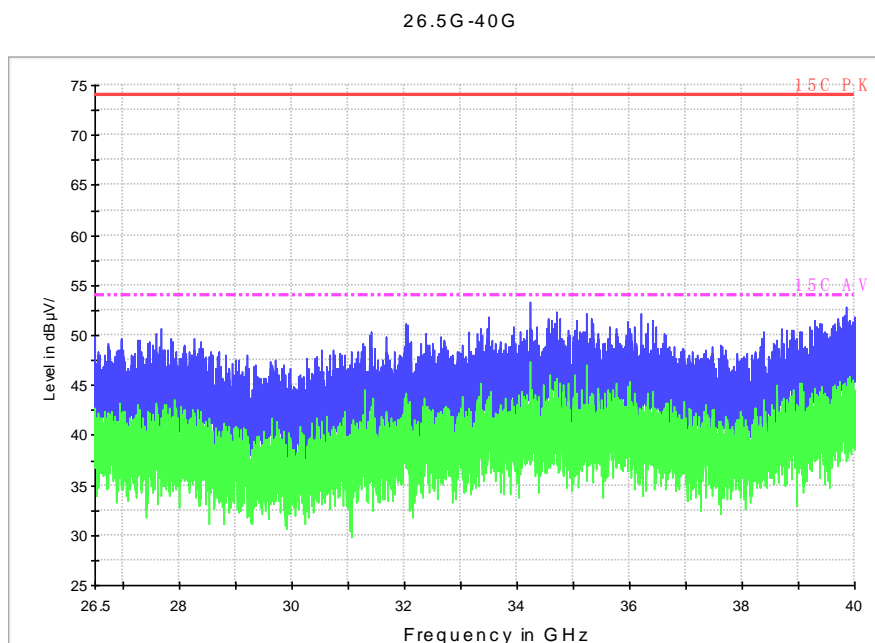


Fig. 66 Radiated Spurious Emission (802.11a, Ch165, 26.5 GHz-40 GHz)

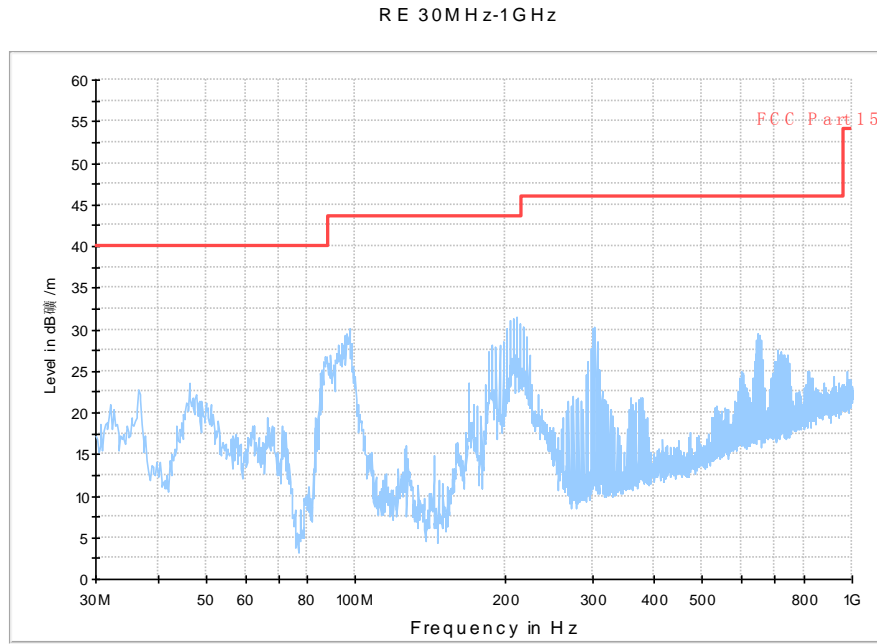


Fig. 67 Radiated Spurious Emission (802.11n-HT20, Ch149, 30 MHz-1 GHz)

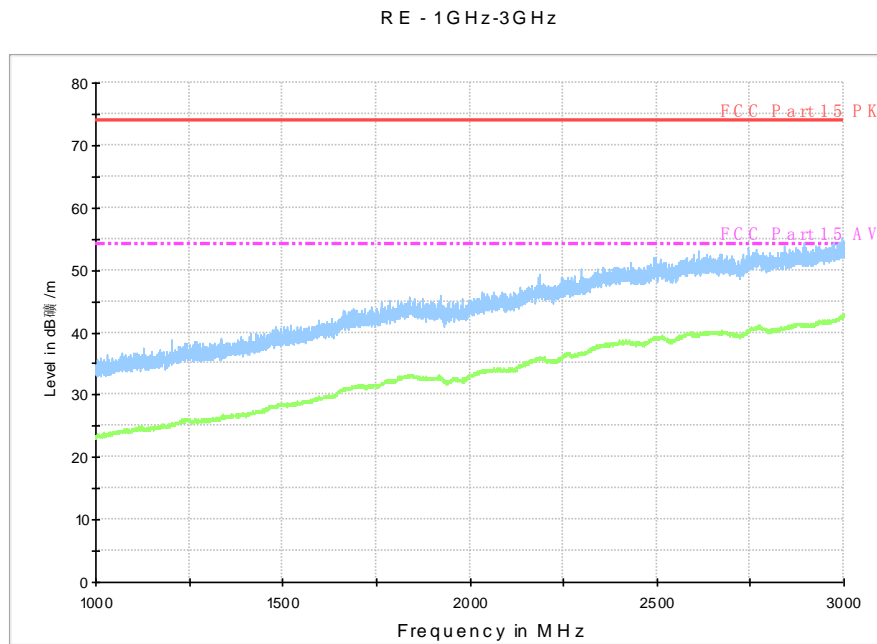


Fig. 68 Radiated Spurious Emission (802.11n-HT20, Ch149, 1 GHz-3 GHz)

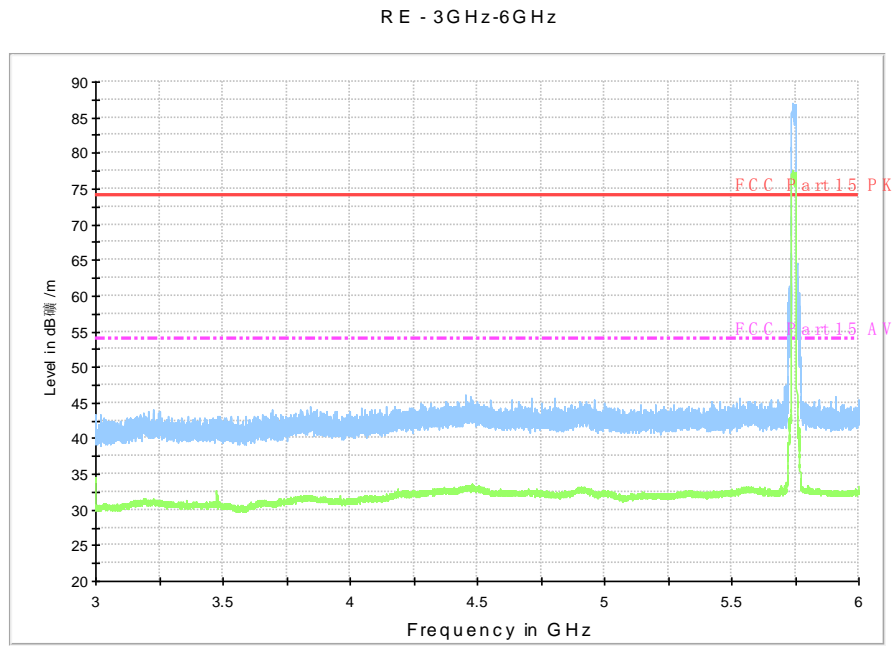


Fig. 69 Radiated Spurious Emission (802.11n-HT20, Ch149, 3 GHz-6 GHz)

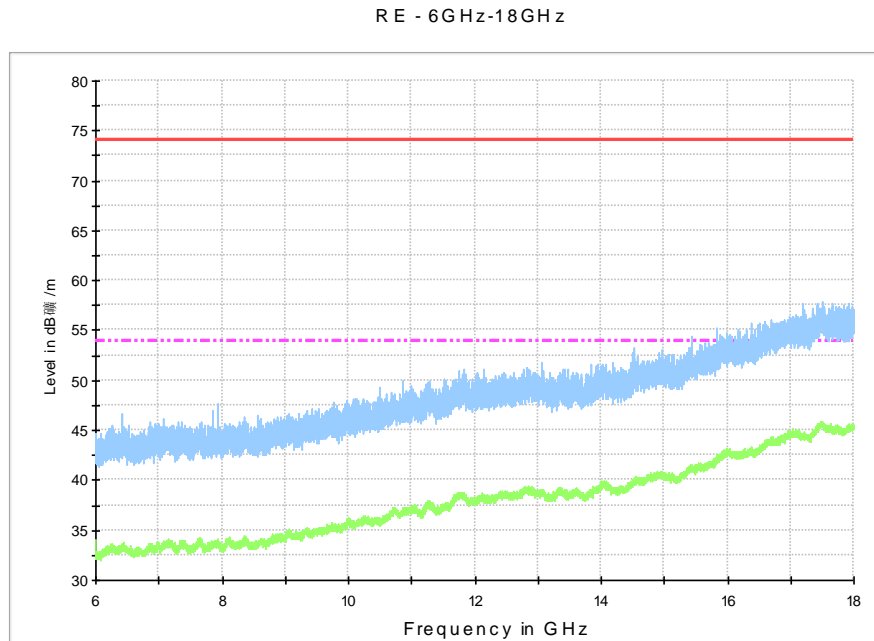


Fig. 70 Radiated Spurious Emission (802.11n-HT20, Ch149, 6 GHz-18 GHz)

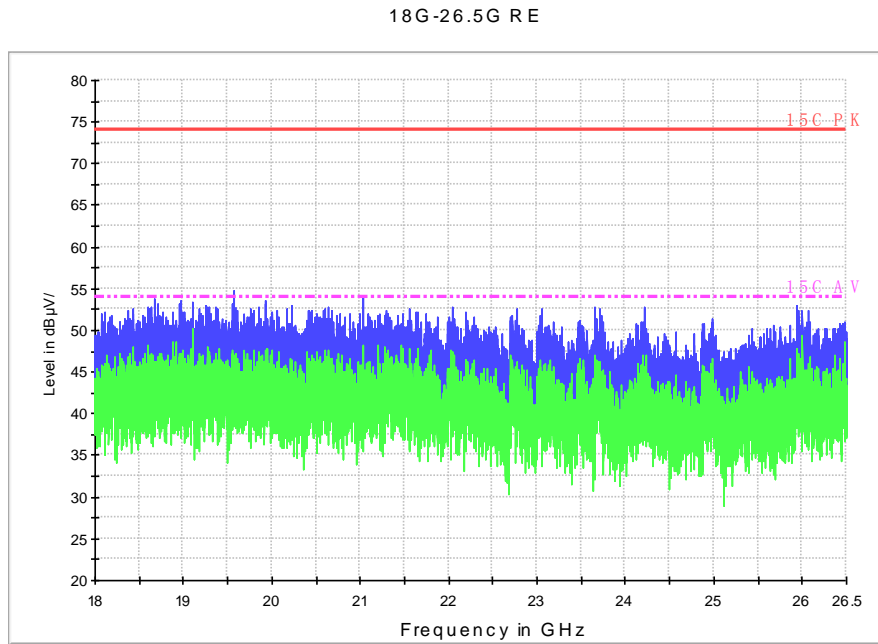


Fig. 71 Radiated Spurious Emission (802.11n-HT20, Ch149, 18 GHz-26.5 GHz)

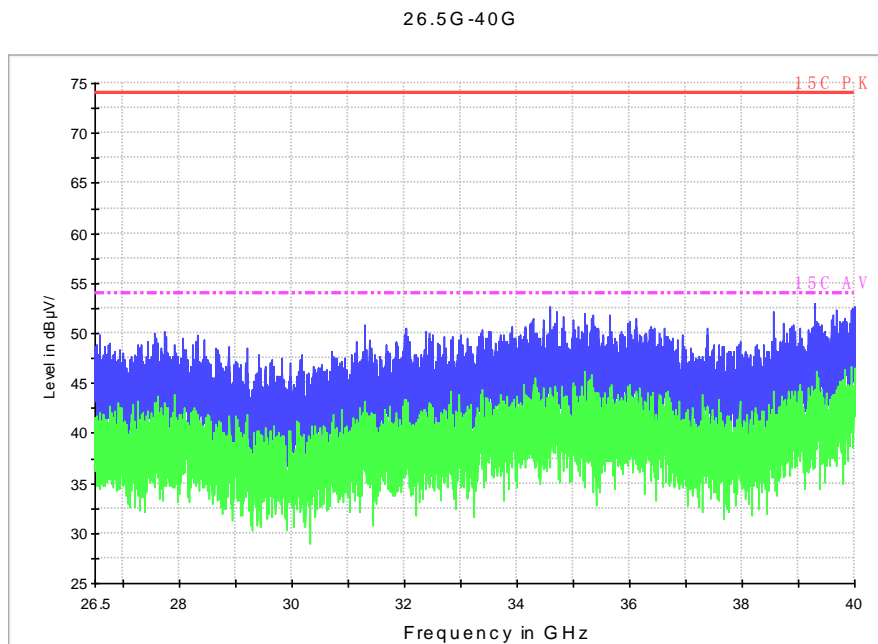


Fig. 72 Radiated Spurious Emission (802.11n-HT20, Ch149, 26.5 GHz-40 GHz)

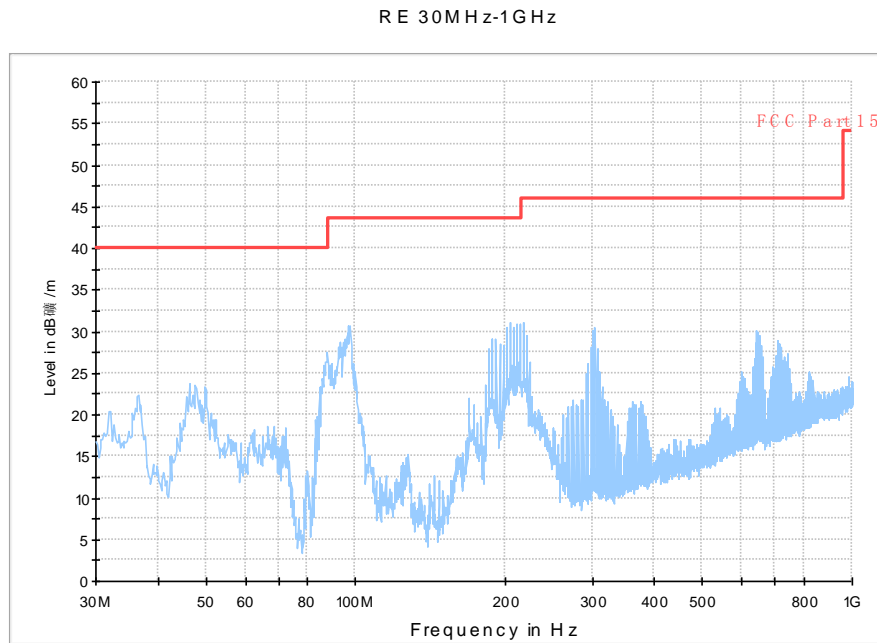


Fig. 73 Radiated Spurious Emission (802.11n-HT20, Ch157, 30 MHz-1 GHz)

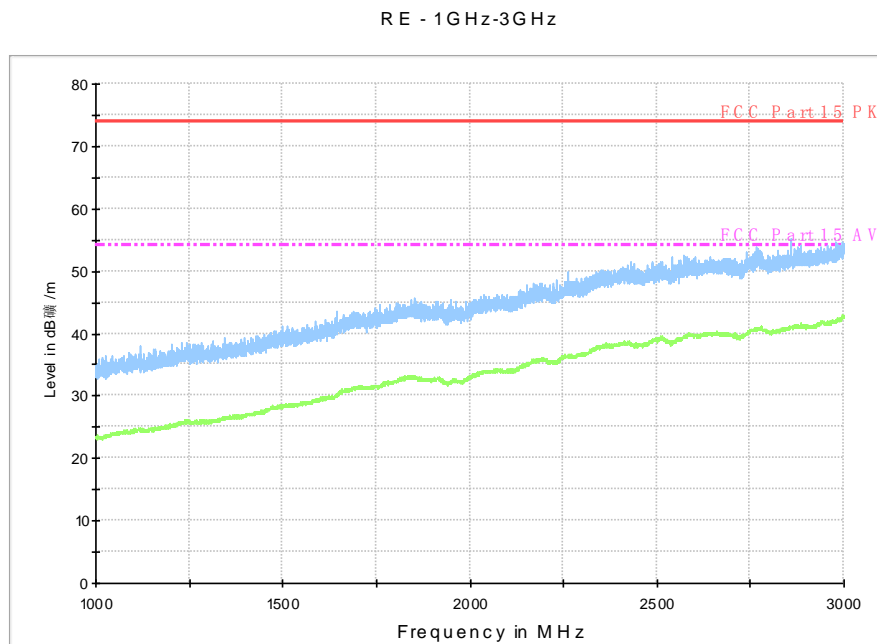


Fig. 74 Radiated Spurious Emission (802.11n-HT20, Ch157, 1 GHz-3 GHz)

RE - 3GHz-6GHz

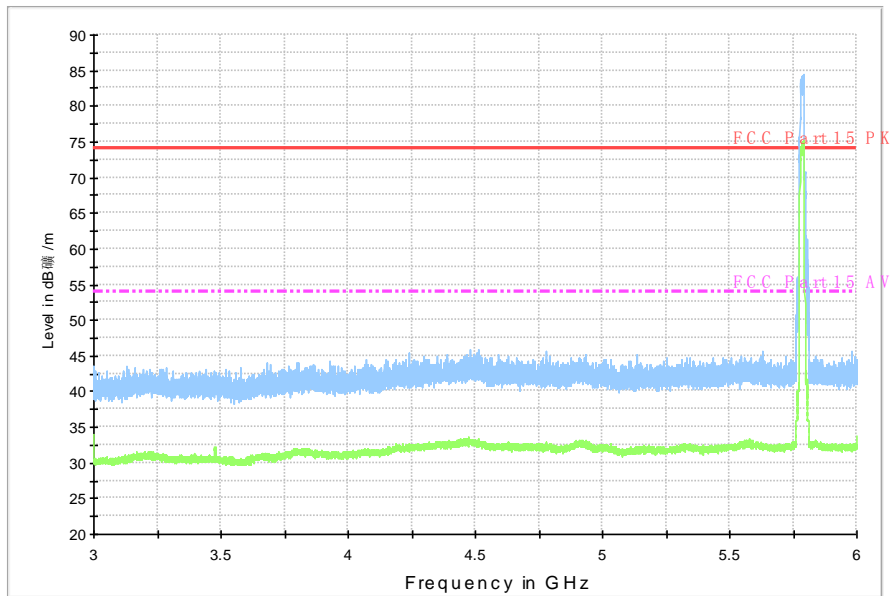


Fig. 75 Radiated Spurious Emission (802.11n-HT20, Ch157, 3 GHz-6 GHz)

RE - 6GHz-18GHz

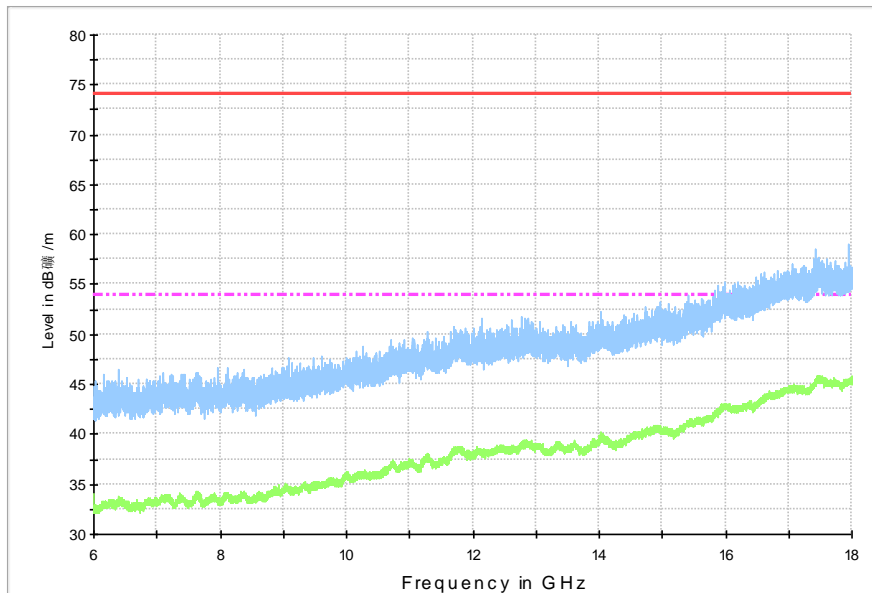


Fig. 76 Radiated Spurious Emission (802.11n-HT20, Ch157, 6 GHz-18 GHz)

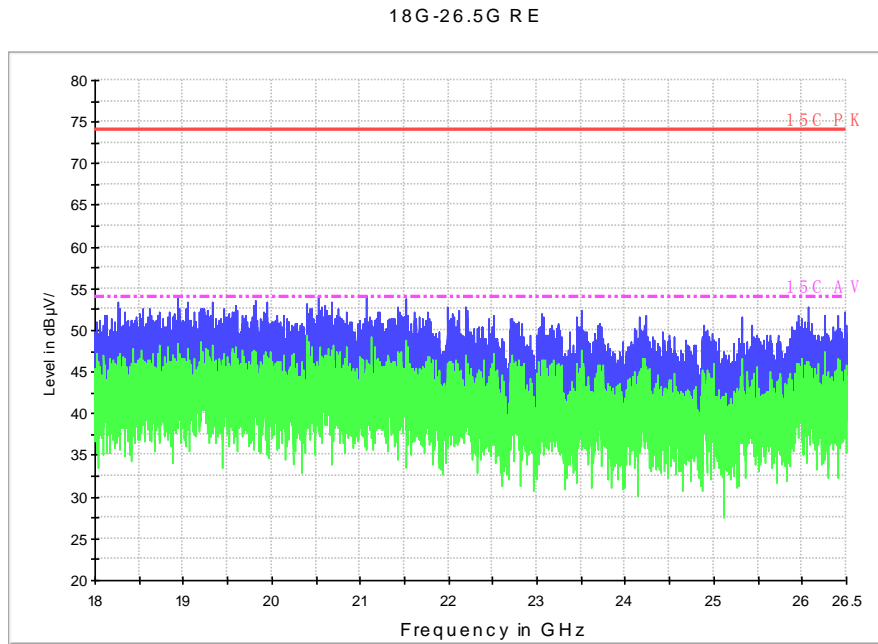


Fig. 77 Radiated Spurious Emission (802.11n-HT20, Ch157, 18 GHz-26.5 GHz)

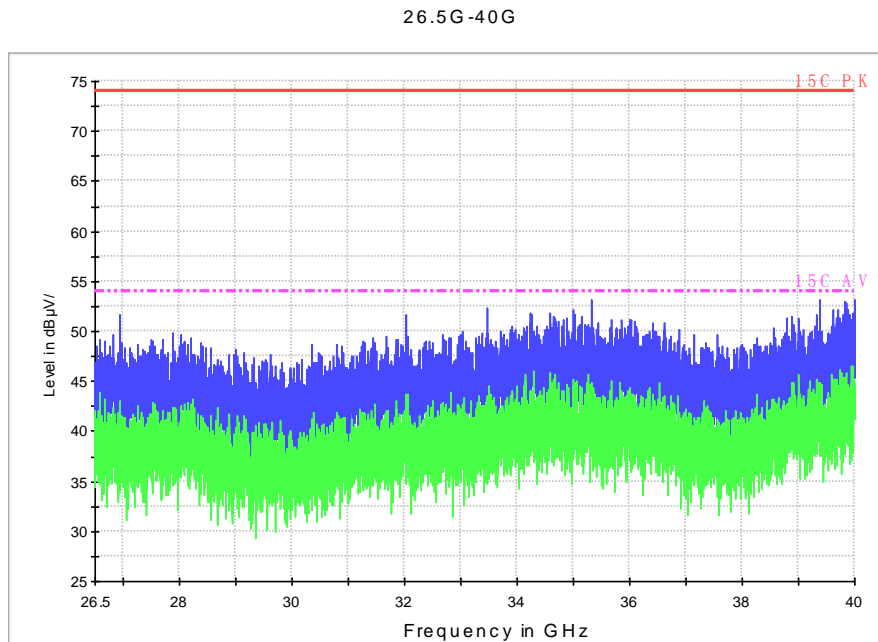


Fig. 78 Radiated Spurious Emission (802.11n-HT20, Ch157, 26.5 GHz-40 GHz)

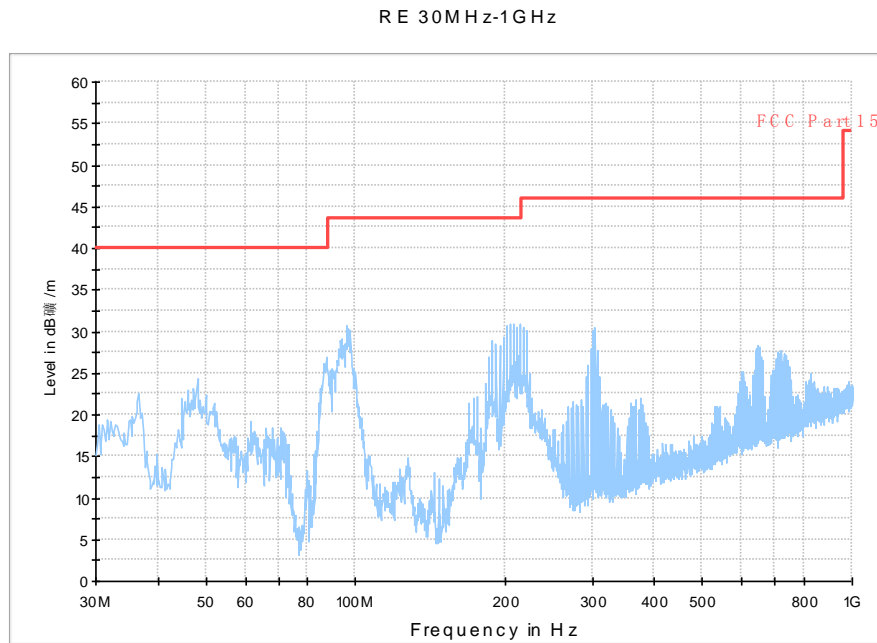


Fig. 79 Radiated Spurious Emission (802.11n-HT20, Ch165, 30 MHz-1 GHz)

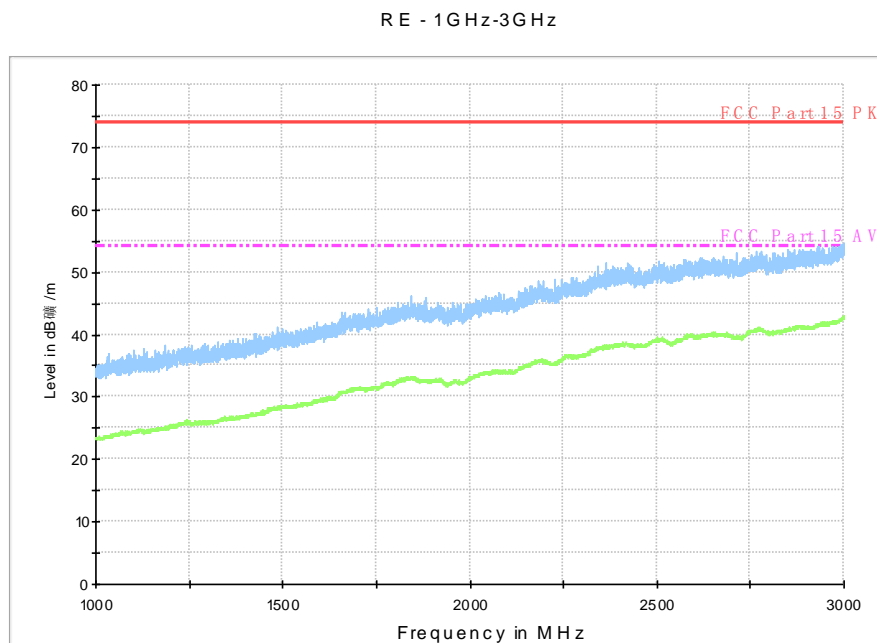


Fig. 80 Radiated Spurious Emission (802.11n-HT20, Ch165, 1 GHz-3 GHz)

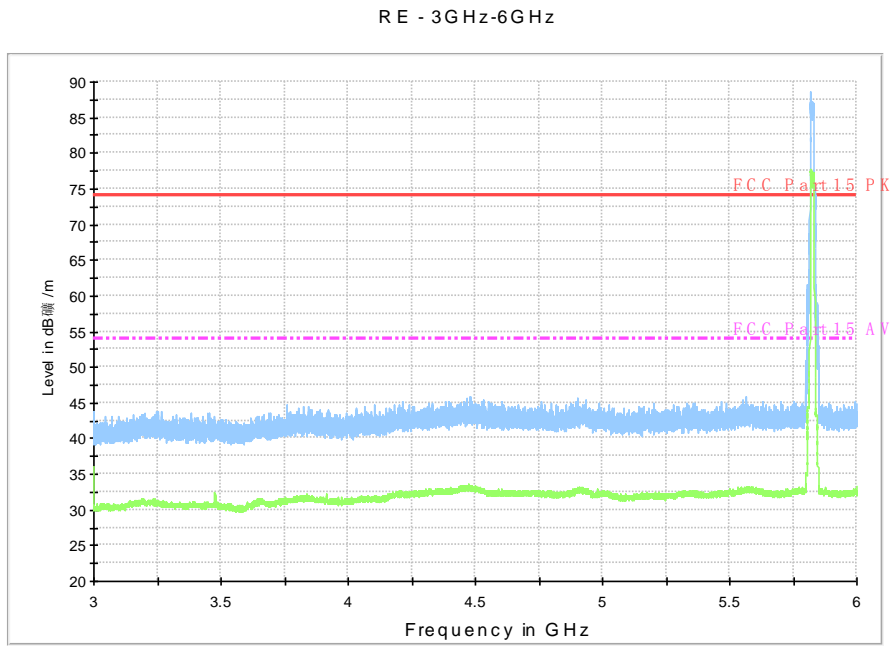


Fig. 81 Radiated Spurious Emission (802.11n-HT20, Ch165, 3 GHz-6 GHz)

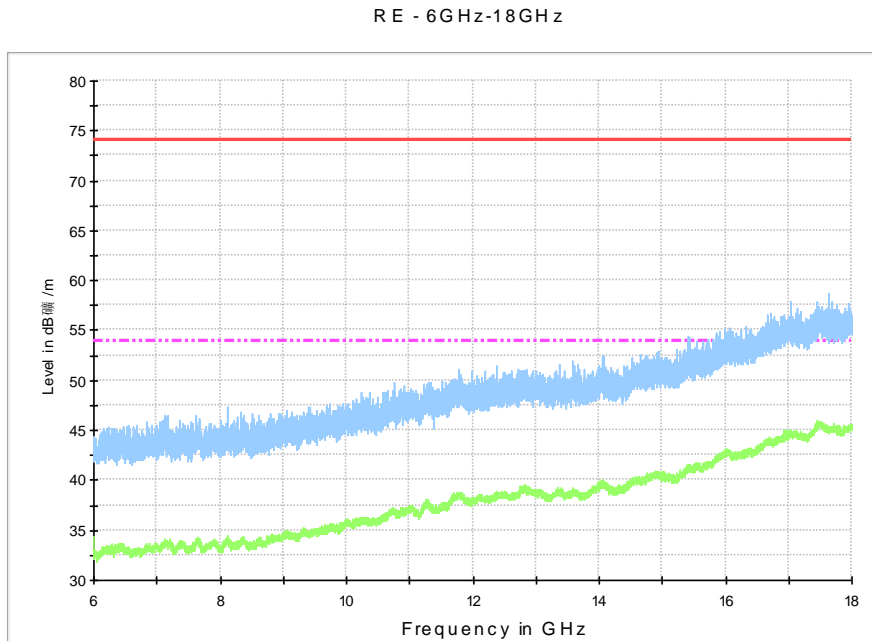


Fig. 82 Radiated Spurious Emission (802.11n-HT20, Ch165, 6 GHz-18 GHz)

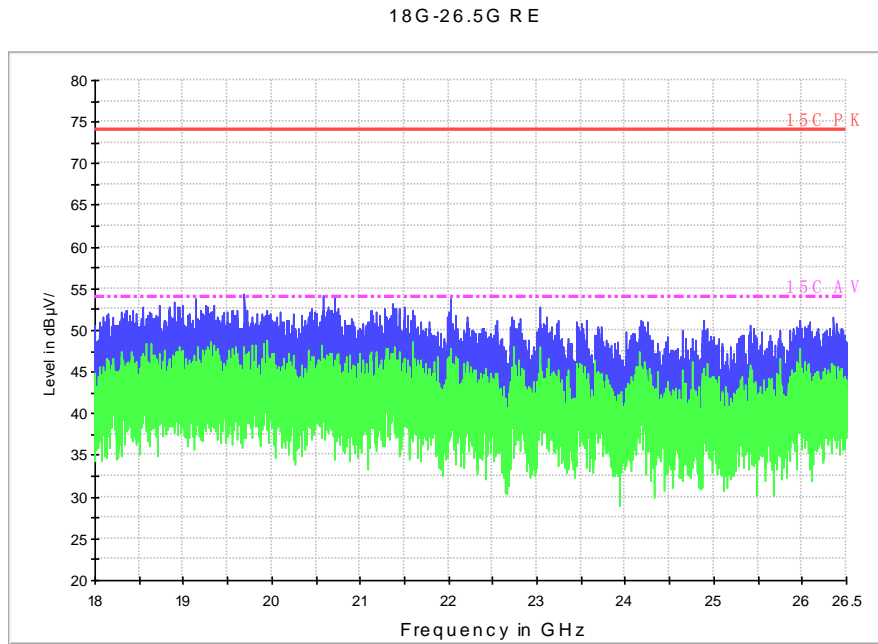


Fig. 83 Radiated Spurious Emission (802.11n-HT20, Ch165, 18 GHz-26.5 GHz)

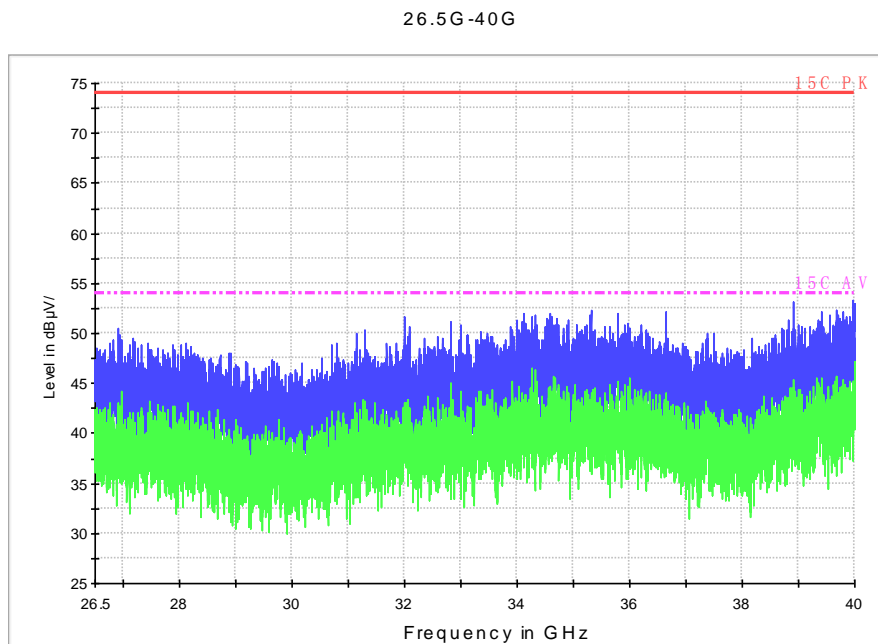


Fig. 84 Radiated Spurious Emission (802.11n-HT20, Ch165, 26.5 GHz-40 GHz)

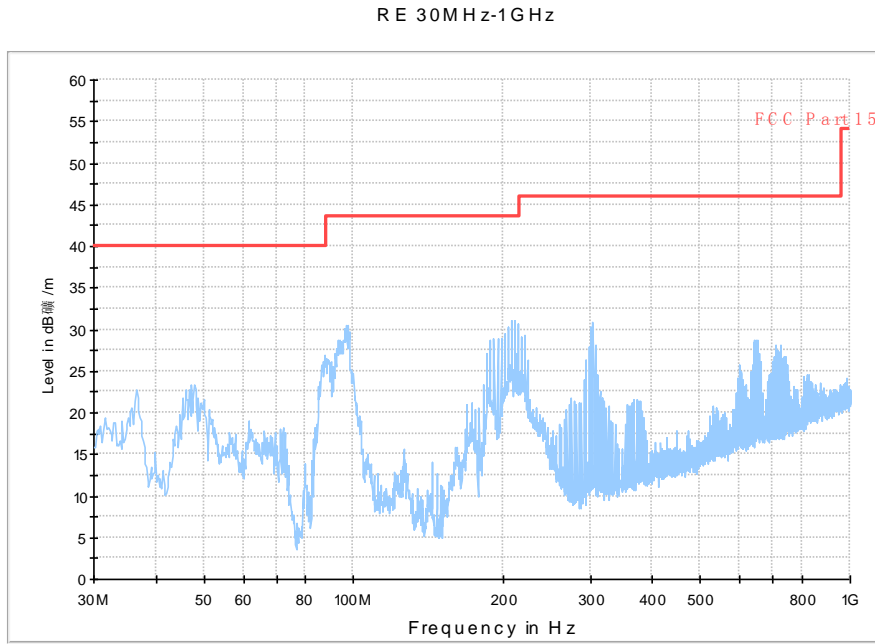


Fig. 85 Radiated Spurious Emission (802.11n-HT40, Ch151, 30 MHz-1 GHz)

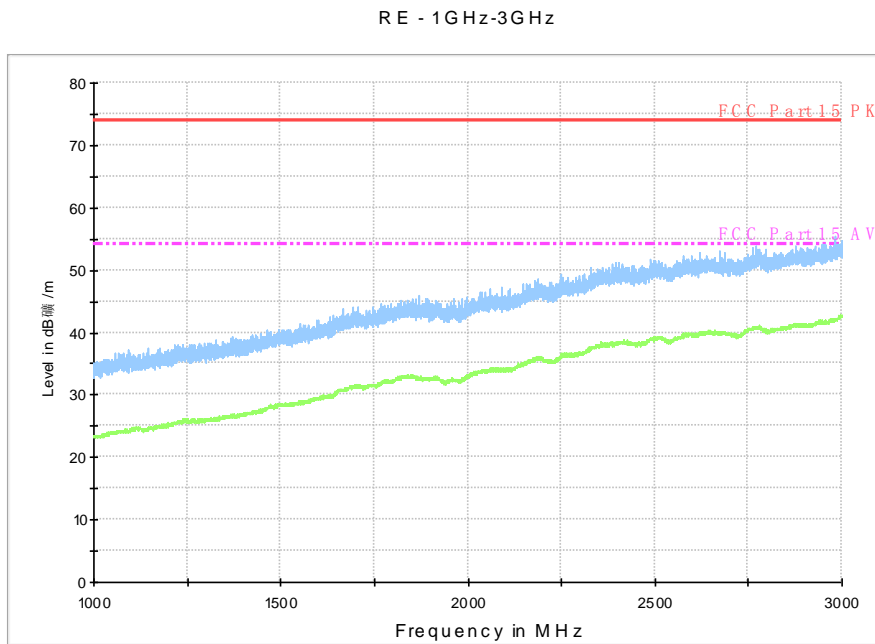


Fig. 86 Radiated Spurious Emission (802.11n-HT40, Ch151, 1 GHz-3 GHz)

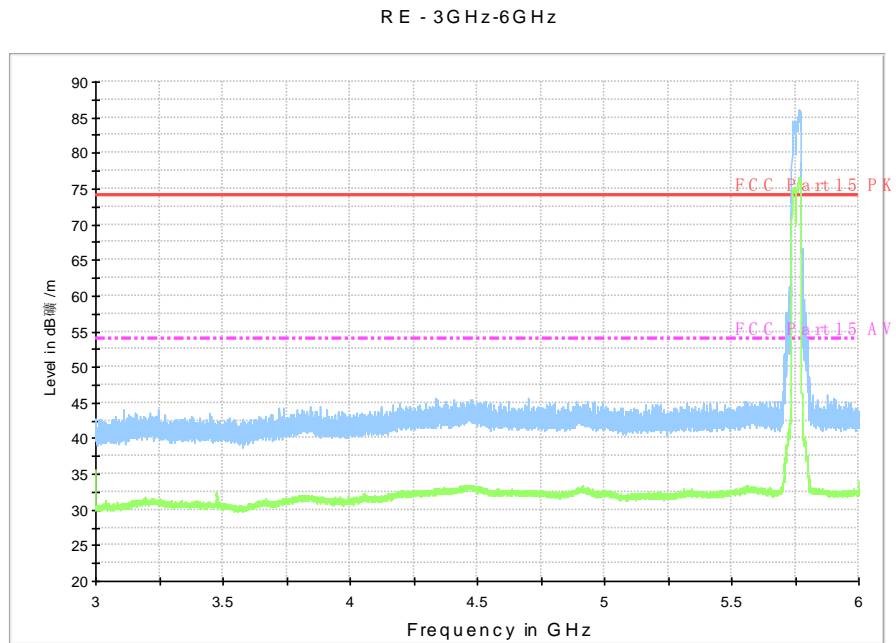


Fig. 87 Radiated Spurious Emission (802.11n-HT40, Ch151, 3 GHz-6 GHz)

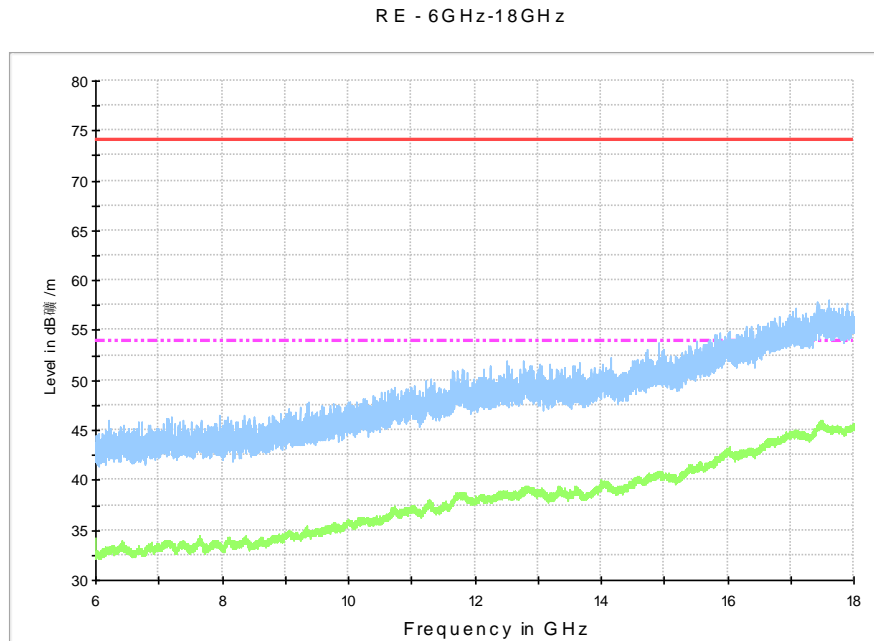


Fig. 88 Radiated Spurious Emission (802.11n-HT40, Ch151, 6 GHz-18 GHz)

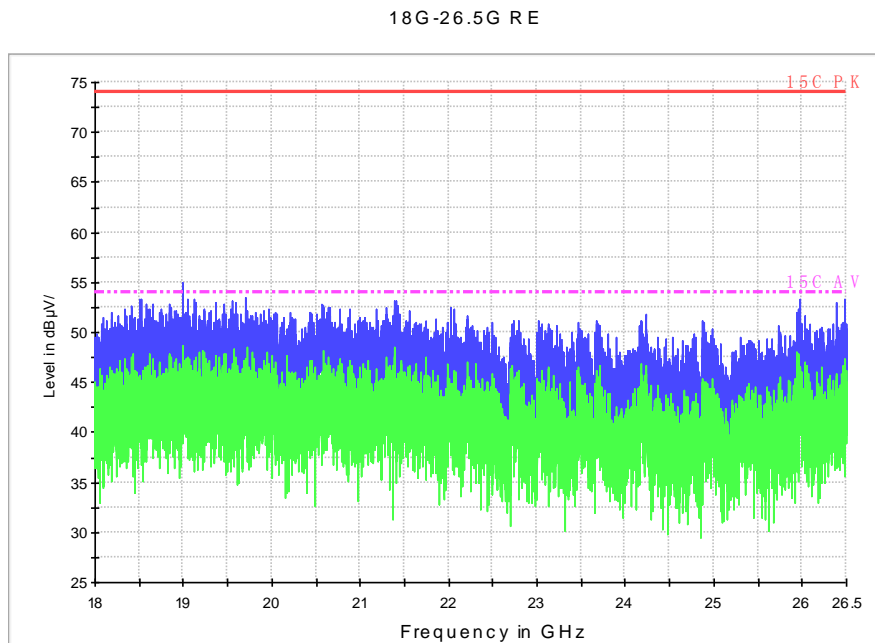


Fig. 89 Radiated Spurious Emission (802.11n-HT40, Ch151, 18 GHz-26.5 GHz)

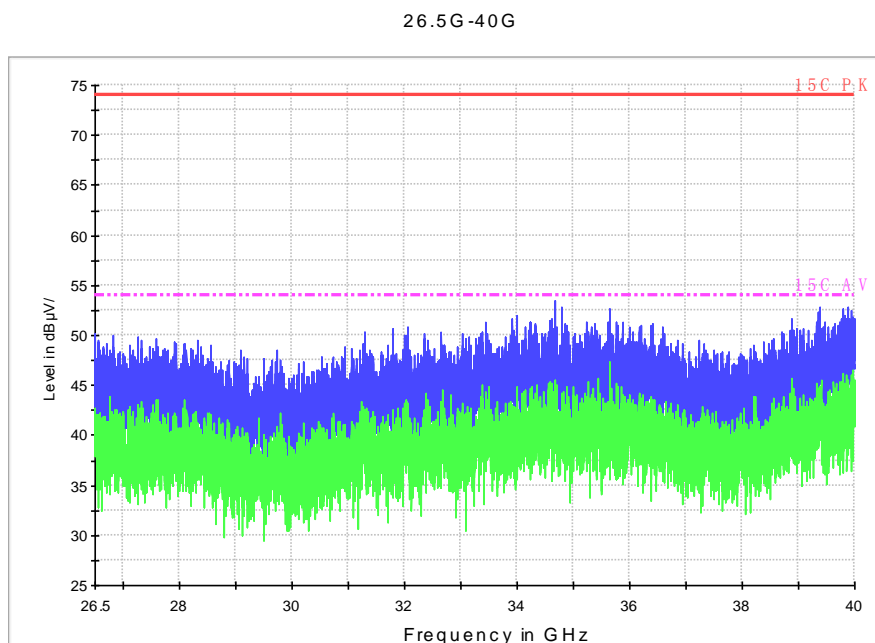


Fig. 90 Radiated Spurious Emission (802.11n-HT40, Ch151, 26.5 GHz-40 GHz)

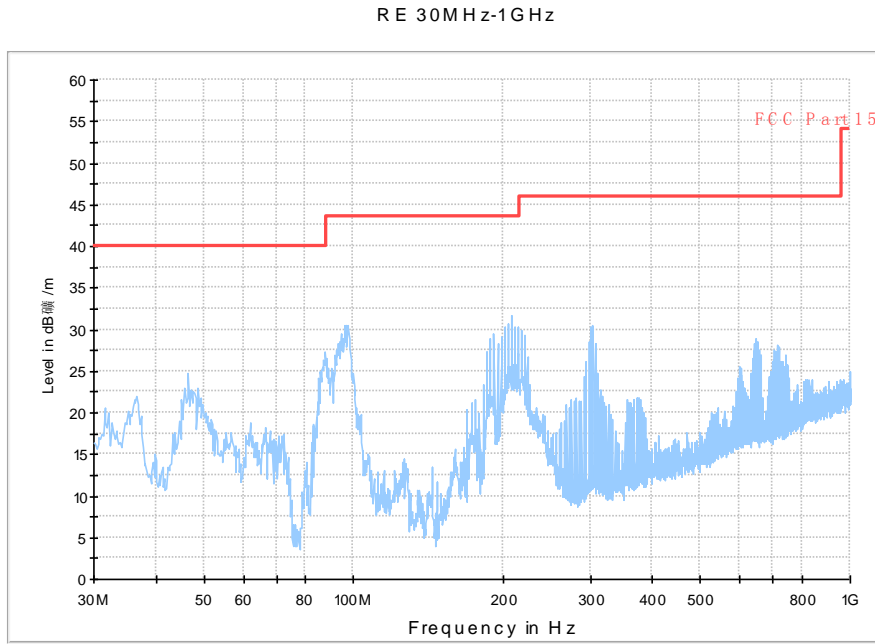


Fig. 91 Radiated Spurious Emission (802.11n-HT40, Ch159, 30 MHz-1 GHz)

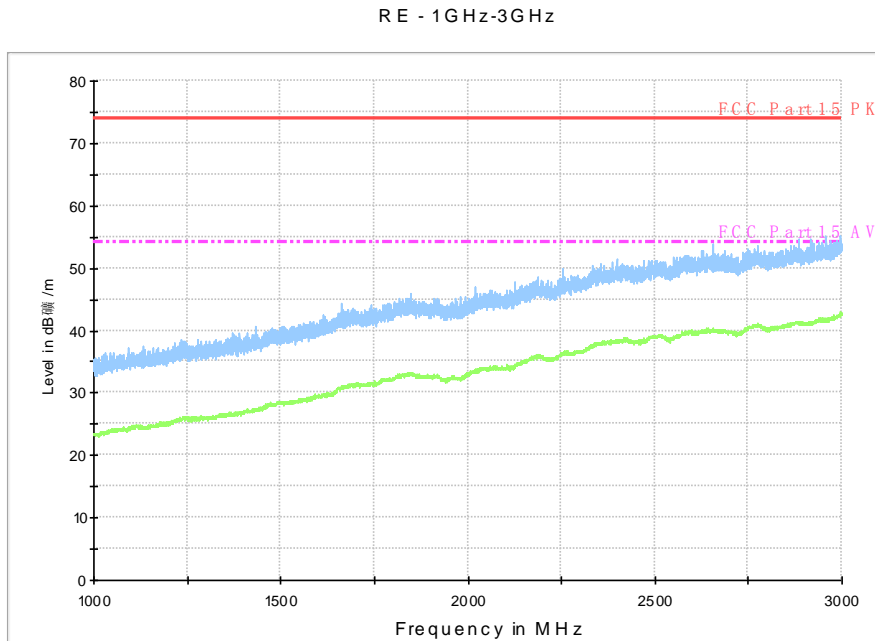


Fig. 92 Radiated Spurious Emission (802.11n-HT40, Ch159, 1 GHz-3 GHz)

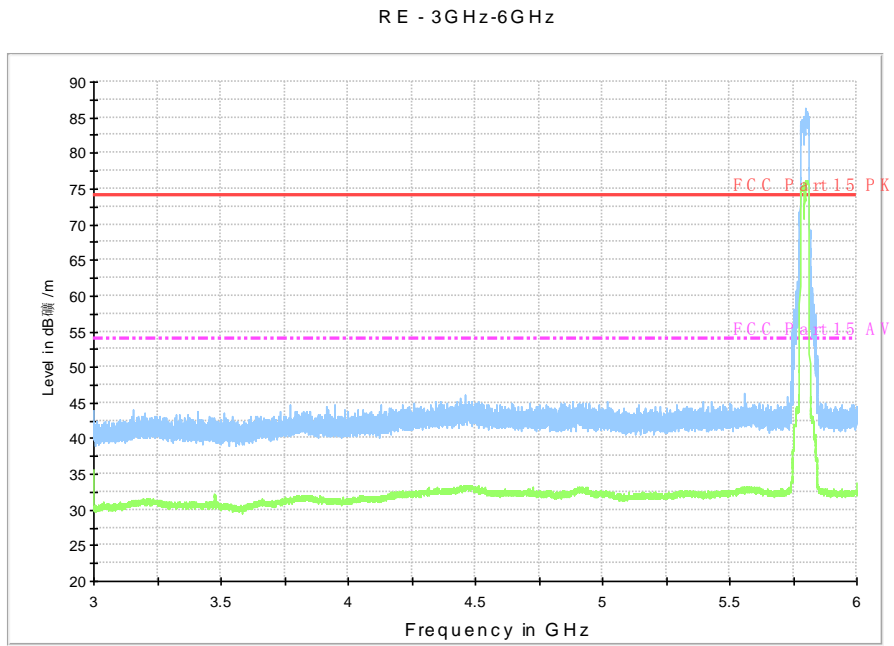


Fig. 93 Radiated Spurious Emission (802.11n-HT40, Ch159, 3 GHz-6 GHz)

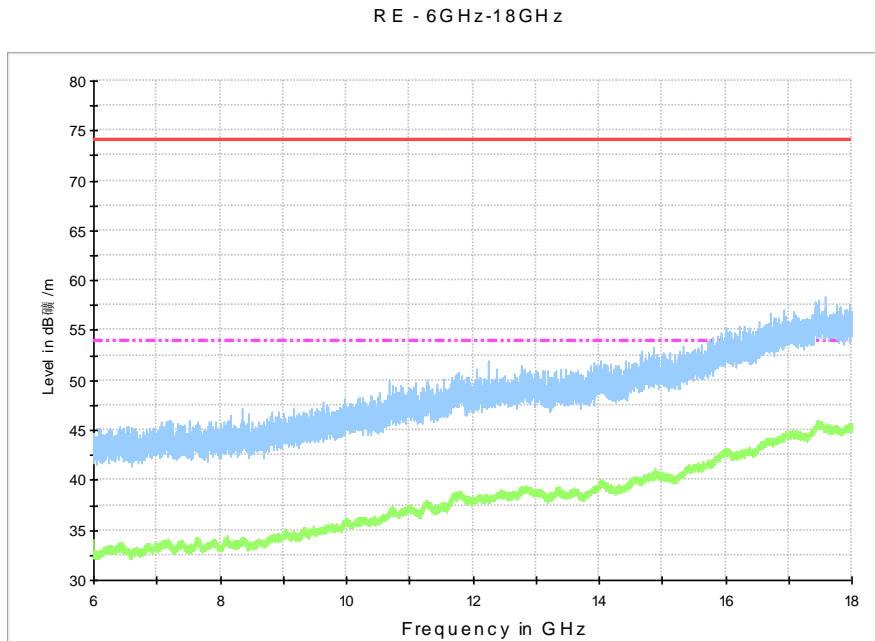


Fig. 94 Radiated Spurious Emission (802.11n-HT40, Ch159, 6 GHz-18 GHz)

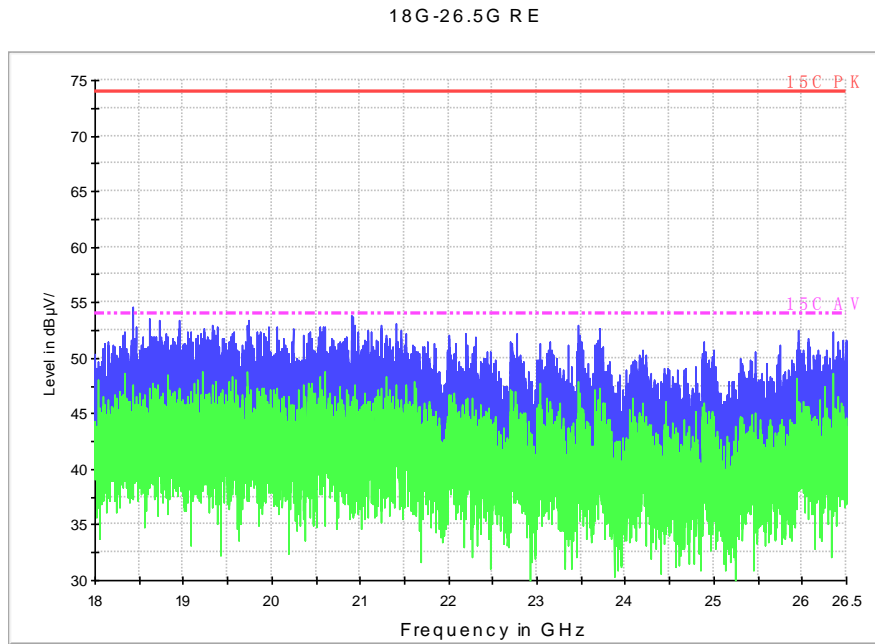


Fig. 95 Radiated Spurious Emission (802.11n-HT40, Ch159, 18 GHz-26.5 GHz)

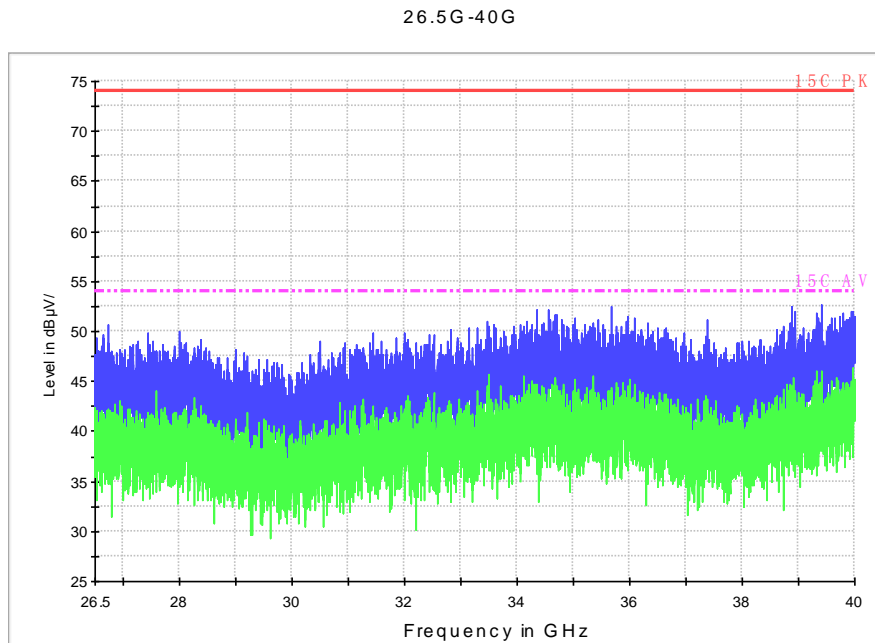


Fig. 96 Radiated Spurious Emission (802.11n-HT40, Ch159, 26.5 GHz - 40 GHz)

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig. 97	Fig. 98	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		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.97	Fig.98	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:

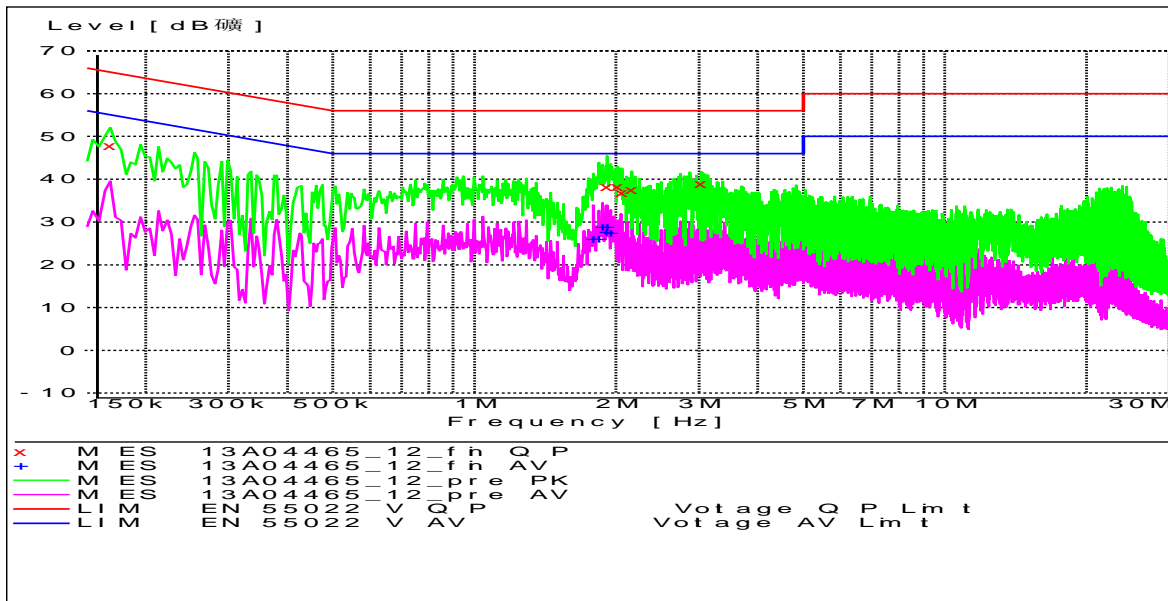


Fig. 97 AC Powerline Conducted Emission-802.11a mode

Final Result Quasi-peak

Frequency (MHz)	Level (dB μ V)	Transd (dB)	Limit (dB μ V)	Margin (dB)	Line	PE
0.168000	47.90	9.8	65	17.1	L1	GND
1.914000	38.30	9.7	56	17.7	N	GND
2.013500	38.20	9.7	56	17.8	L1	GND
2.058500	36.80	9.7	56	19.2	L1	GND
2.162000	37.50	9.7	56	18.5	L1	GND
3.035000	38.80	9.7	56	17.2	L1	GND

Final Result Average

Frequency (MHz)	Level (dB μ V)	Transd (dB)	Limit (dB μ V)	Margin (dB)	Line	PE
1.792500	26.10	9.7	46	19.9	N	GND
1.837500	26.20	9.7	46	19.8	N	GND
1.869000	28.80	9.7	46	17.2	L1	GND
1.900500	27.80	9.7	46	18.2	L1	GND
1.914000	28.90	9.7	46	17.1	L1	GND
1.945500	27.40	9.7	46	18.6	L1	GND

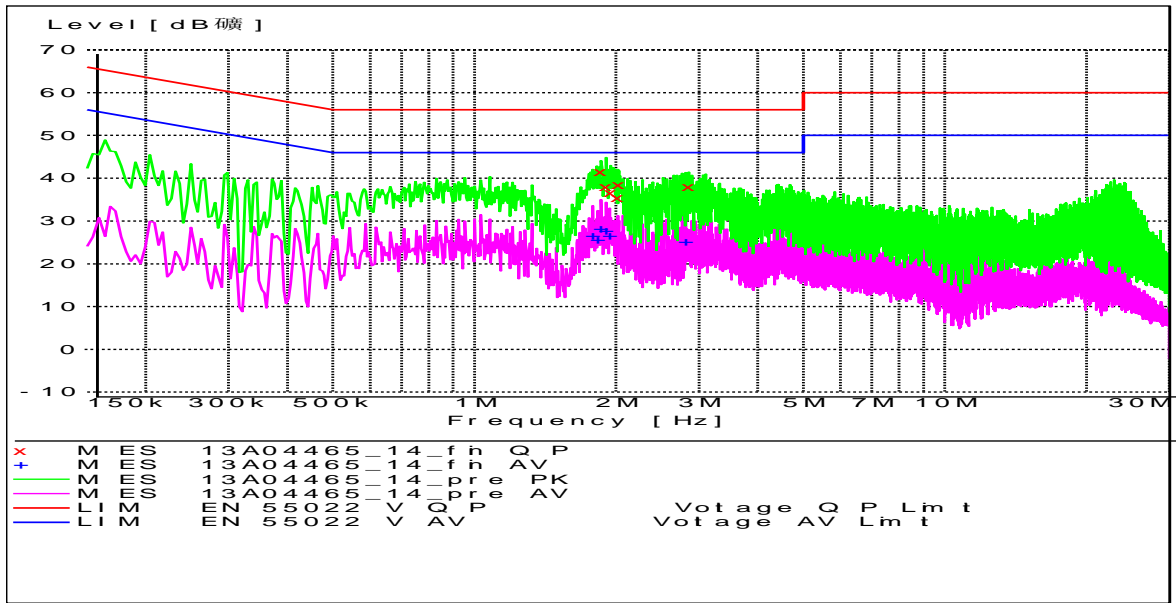


Fig. 98 AC Powerline Conducted Emission-Idle

Final Result1

Frequency (MHz)	Level (dB μ V)	Transd (dB)	Limit (dB μ V)	Margin (dB)	Line	PE
1.860000	41.50	9.7	56	14.5	L1	GND
1.905000	38.10	9.7	56	17.9	N	GND
1.950000	36.60	9.7	56	19.4	N	GND
2.013500	35.40	9.7	56	20.6	N	GND
2.027000	38.40	9.7	56	17.6	L1	GND
2.855000	38.10	9.7	56	17.9	L1	GND

Final Result2

Frequency (MHz)	Level (dB μ V)	Transd (dB)	Limit (dB μ V)	Margin (dB)	Line	PE
1.783500	26.50	9.7	46	19.5	L1	GND
1.828500	25.70	9.7	46	20.3	L1	GND
1.860000	28.10	9.7	46	17.9	L1	GND
1.905000	27.80	9.7	46	18.2	L1	GND
1.936500	26.60	9.7	46	19.4	L1	GND
2.814500	25.10	9.7	46	20.9	L1	GND

*** END OF REPORT BODY ***