



FCC PART 15C TEST REPORT No. I14Z45687-SRD01

for

TCT Mobile Limited

HSUPA/HSDPA+/UMTS triband/GSM quad-band mobile phone

Model name: Yaris 4 ULC

Marketing Name: 4032A

With

FCC ID: RAD497

Hardware Version: PIO

Software Version: vD71

Issued Date: 2014-04-09



FCC 2.948 Listed: No.733176

IC O.A.T.S listed: No.6629A-1

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1. TEST LABORATORY

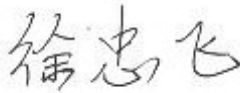
1.1. Testing Location

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: 008610623046332046
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1.2. Project Data

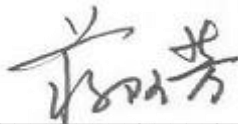
Testing Start Date: 2013-07-05
Testing End Date: 2013-07-15

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: TCT Mobile Limited
Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Pudong Area Shanghai, P.R. China. 20120
Contact: Gong Zhizhou
Email: zhizhou.gong@jrdcom.com
Telephone: 0086-21-61460890
Fax: 0086-21-61460602

2.2. Manufacturer Information

Company Name: TCT Mobile Limited
Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Pudong Area Shanghai, P.R. China. 20120
Contact: Gong Zhizhou
Email: zhizhou.gong@jrdcom.com
Telephone: 0086-21-61460890
Fax: 0086-21-61460602

3. EQUIPMENT UNDER TEST(EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	HSUPA/HSDPA+/UMTS triband/GSM quad-band mobile phone
Model name	Yaris 4 ULC
Marketing name	4032A
FCC ID	RAD497
IC ID	/
With WLAN Function	Yes
Frequency Range	ISM 2400MHz~2483.5MHz
Type of Modulation	DSSS/CCK/OFDM
Number of Channels	11
Antenna	Integral Antenna
MAX Conducted Power	26.01dBm(CCK)
Power Supply	3.8V DC by Battery

3.2. Internal Identification of EUT Used During the Test

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	PIO	vD71
EUT2	/	PIO	vD71

*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	CAB31P0000C1	/
AE2	Battery	CAB31P0000C3	/
AE3	Battery	CAB60B0000C1	/
AE4	Battery	CAB60B0000C2	/
AE5	Charger	CBA3007AG0C1	/
AE6	Charger	CBA3007AG0C2	/
AE7	Charger	CBA3002AG0C2	/
AE8	Charger	CBA3002AG0C3	/

*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 HSUPA/HSDPA+/UMTS triband/GSM quad-band 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.

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.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5 MHz, and 5725-5850 MHz.	2013
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003
KDB558074	Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247	2012

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Fully-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, 15.205, 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 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 4033A; all the test result has been derived from test report of ONE TOUCH 4033A.

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(By battery)
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	2014-10-30
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	2014-08-11
2	BiLog Antenna	3142B	9908-1403	EMCO	2015-03-15
3	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2014-12-25
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

Connect the EUT to the test system as Fig.A.1.1.1 shows.

Set the EUT to the required work mode.

Set the EUT to the required channel.

Set the Vector Signal Analyzer and start measurement.

Record the values. Vector Signal Analyzer

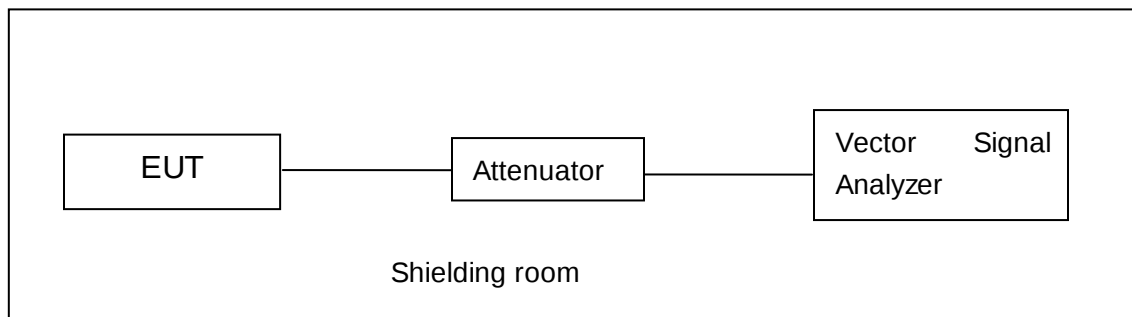


Fig.A.1.1.1: Test Setup Diagram for Conducted Measurements

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;

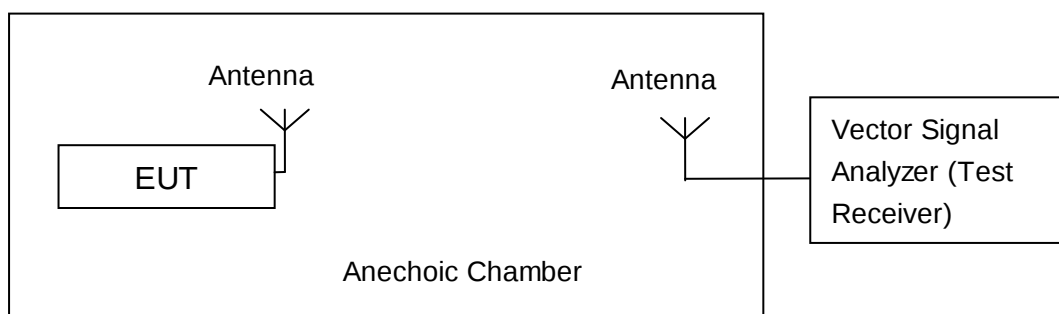


Fig.A.1.2.1: Test Setup Diagram for Radiated Measurements

A.2. Maximum Output Power

Measurement Limit and Method:

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

The measurement is made according to KDB558074.

A.2.1. Maximum Peak Output Power-conducted

Measurement Results:

802.11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	22.11	/	/
	2	22.27	/	/
	5.5	24.04	/	/
	11	25.48	25.76	26.01
802.11g	6	23.53	/	/
	9	23.39	/	/
	12	23.23	/	/
	18	23.47	/	/
	24	23.82	24.06	24.26
	36	23.72	/	/
	48	23.66	/	/
	54	23.70	/	/

The data rate 11Mbps and 24Mbps are selected as worse condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	MCS0	21.61	/	/
	MCS1	21.25	/	/
	MCS2	21.20	/	/
	MCS3	21.65	/	/
	MCS4	21.70	/	/
	MCS5	21.83	22.06	22.24
	MCS6	21.76	/	/
	MCS7	21.68	/	/

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)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	MCS0	20.43	/	/
	MCS1	20.32	/	/
	MCS2	20.23	/	/
	MCS3	20.60	/	/
	MCS4	20.61	/	/
	MCS5	20.62	20.50	20.73
	MCS6	20.54	/	/
	MCS7	18.68	/	/

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
802.11b/g mode

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	20.07	20.37	20.48
802.11g	17.27	16.98	17.06

802.11n-HT20 mode

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	14.59	14.77	15.07

802.11n-HT40 mode

Mode	Test Result (dBm)		
	2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	12.18	12.00	12.02

Conclusion: Pass

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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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 KDB558074.

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	24Mbps(OFDM)	MCS5(OFDM)	MCS5(OFDM)

Measurement Results:

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11b	1	Fig.A.3.1	-4.49	P
	6	Fig.A.3.2	-3.17	P
	11	Fig.A.3.3	-4.64	P
802.11g	1	Fig.A.3.4	-9.19	P
	6	Fig.A.3.5	-10.66	P
	11	Fig.A.3.6	-9.69	P

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (HT20)	1	Fig.A.3.7	-11.69	P
	6	Fig.A.3.8	-11.03	P
	11	Fig.A.3.9	-12.03	P

802.11n-HT40 mode

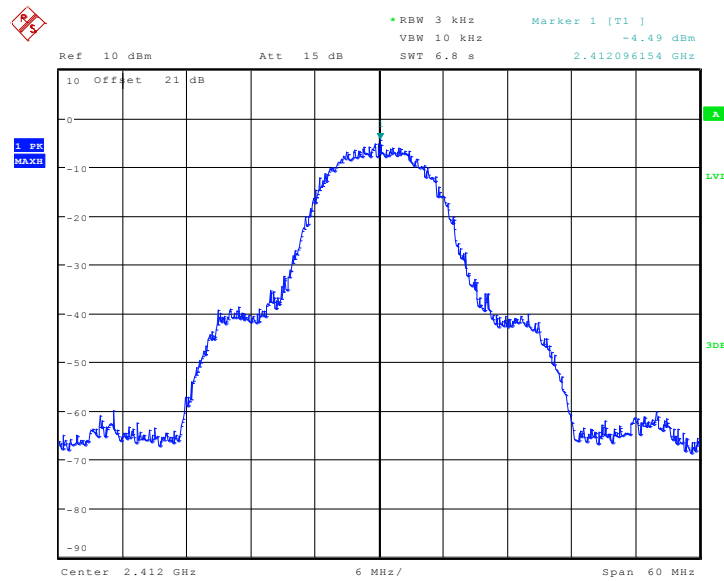
Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (HT40)	3	Fig.A.3.10	-16.94	P
	6	Fig.A.3.11	-16.24	P
	9	Fig.A.3.12	-16.94	P

Conclusion: Pass

Measurement Uncertainty:

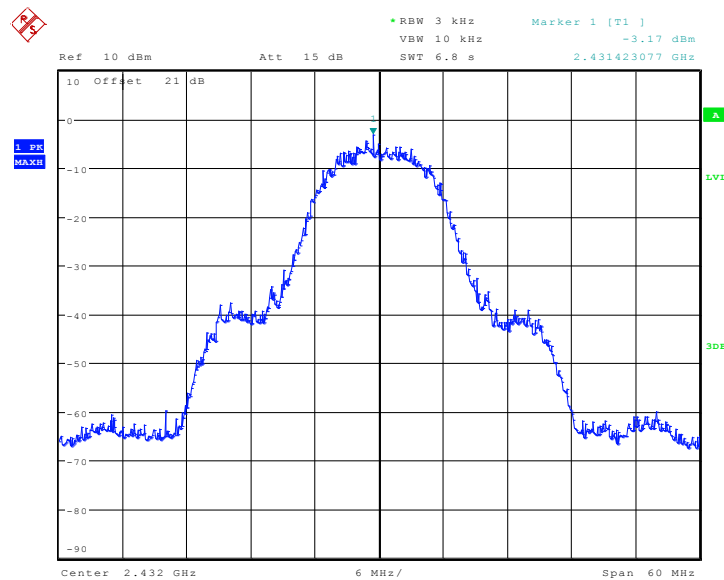
Measurement Uncertainty	0.75dB
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Test graphs as below:



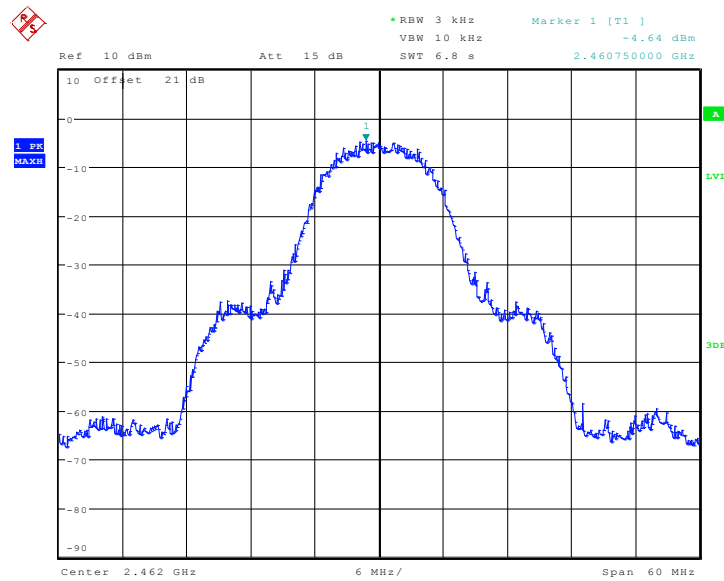
Date: 12..MIII..2013 16:22:41

Fig.A.3.1 Power Spectral Density (802.11b, Ch 1)



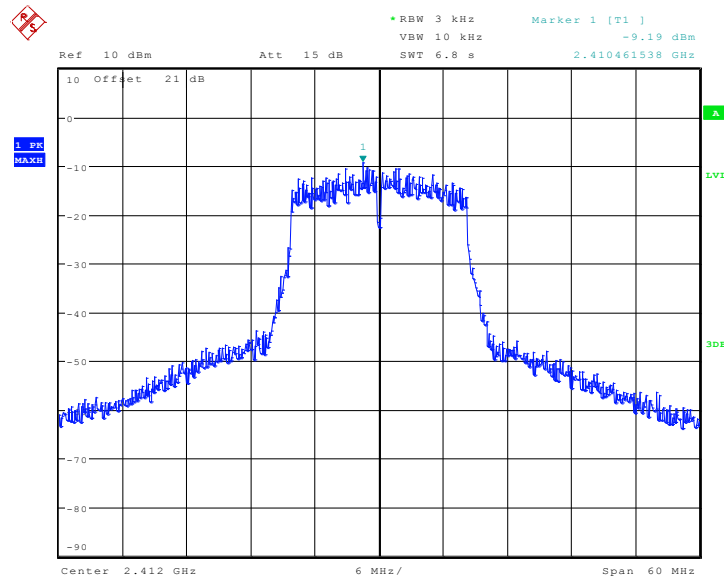
Date: 12..JUL.2013 16:24:18

Fig.A.3.2 Power Spectral Density (802.11b, Ch 6)



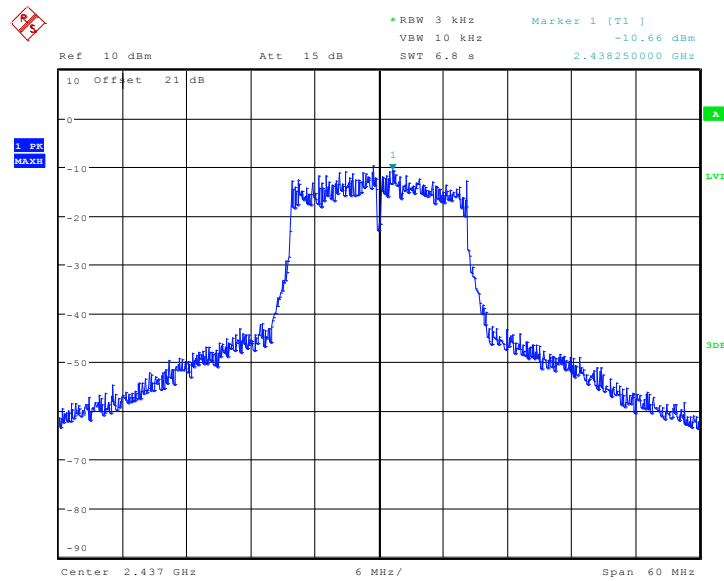
Date: 12..JUL..2013 16:26:22

Fig.A.3.3 Power Spectral Density (802.11b, Ch 11)



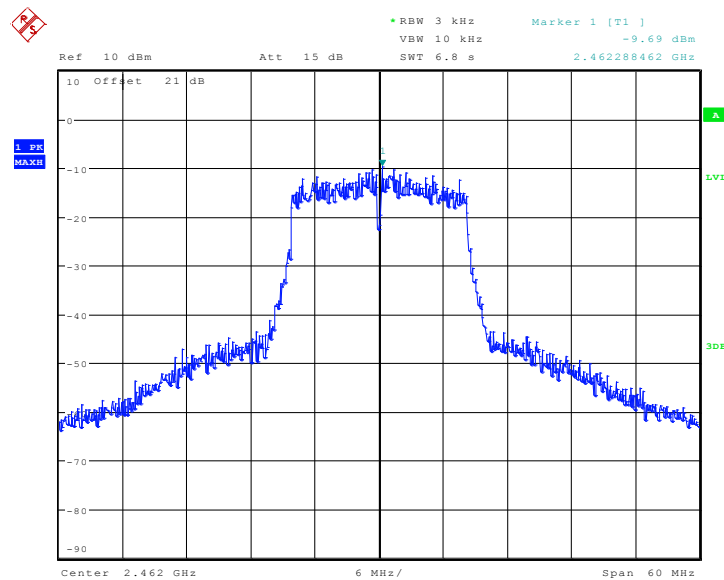
Date: 12..JUL..2013 16:28:00

Fig.A.3.4 Power Spectral Density (802.11g, Ch 1)



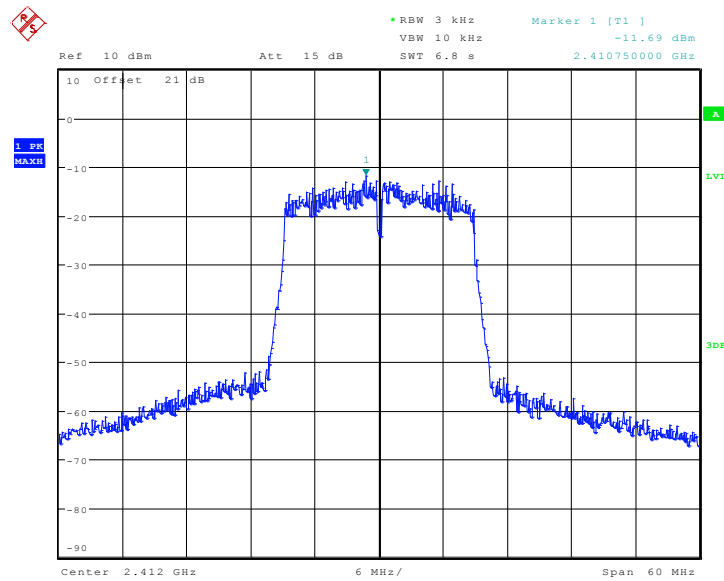
Date: 12..JUL..2013 16:29:38

Fig.A.3.5 Power Spectral Density (802.11g, Ch 6)



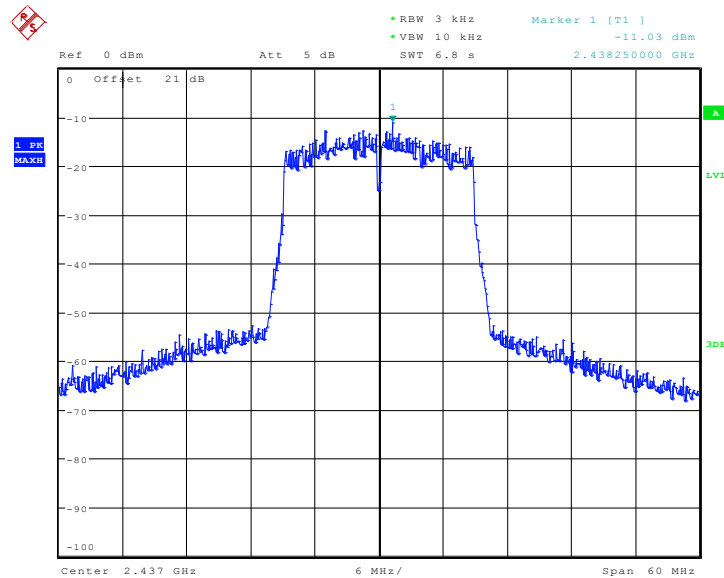
Date: 12..JUL..2013 16:31:10

Fig.A.3.6 Power Spectral Density (802.11g, Ch 11)



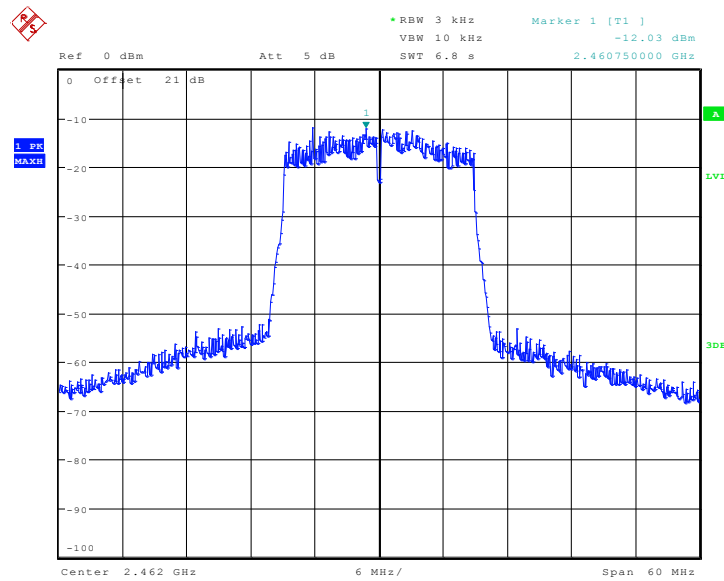
Date: 12..III..2013 16:33:13

Fig.A.3.7 Power Spectral Density (802.11n-HT20, Ch 1)



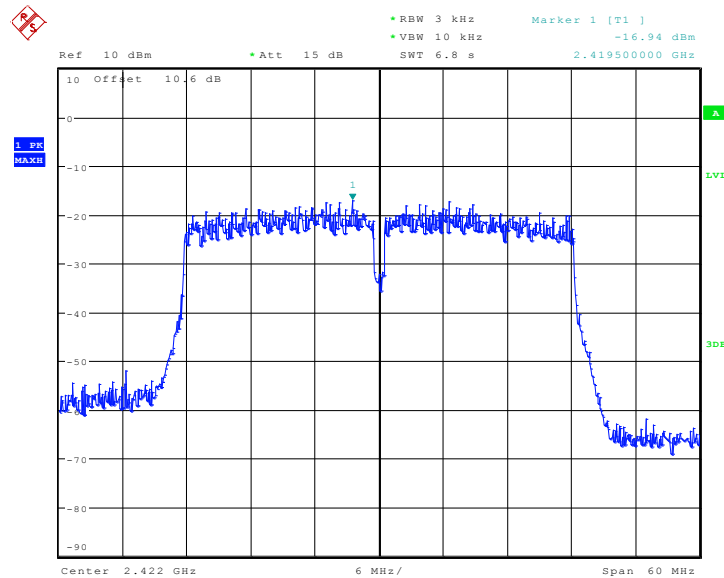
Date: 12..JUL.2013 16:35:42

Fig.A.3.8 Power Spectral Density (802.11n-HT20, Ch 6)



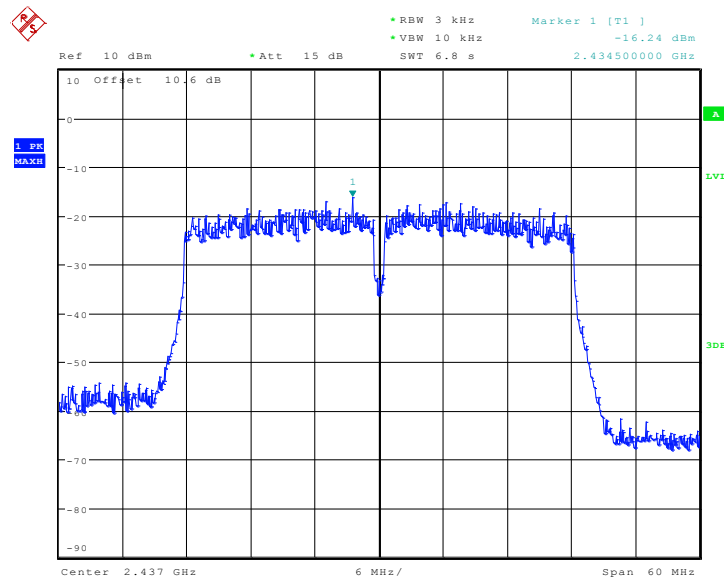
Date: 12..MIII..2013 16:18:10

Fig.A.3.9 Power Spectral Density (802.11n-HT20, Ch 11)



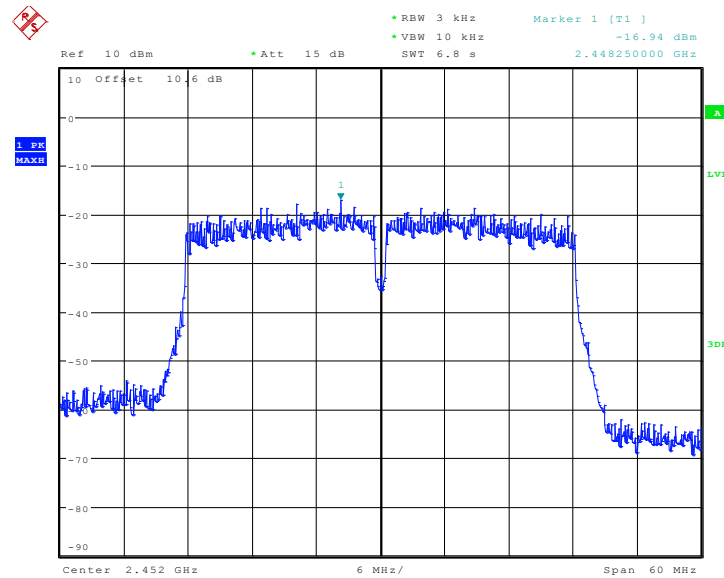
Date: 19..JUL..2013 13:32:35

Fig.A.3.10 Power Spectral Density (802.11n-HT40, Ch 3)



Date: 19..III..2013 13:35:28

Fig.A.3.11 Power Spectral Density (802.11n-HT40, Ch 6)



Date: 19..III..2013 13:37:35

Fig.A.3.12 Power Spectral Density (802.11n-HT40, Ch 9)

A.4. Occupied 6dB Bandwidth

Measurement Limit:

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

The measurement is made according to KDB558074.

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	24Mbps(OFDM)	MCS5(OFDM)	MCS5(OFDM)

Measurement Result:

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11b	1	Fig.A.4.1	9855.77	P
	6	Fig.A.4.2	9695.51	P
	11	Fig.A.4.3	9775.64	P
802.11g	1	Fig.A.4.4	16586.54	P
	6	Fig.A.4.5	16586.54	P
	11	Fig.A.4.6	16586.54	P

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT20)	1	Fig.A.4.7	17788.46	P
	6	Fig.A.4.8	17788.46	P
	11	Fig.A.4.9	17788.46	P

802.11n-HT40 mode

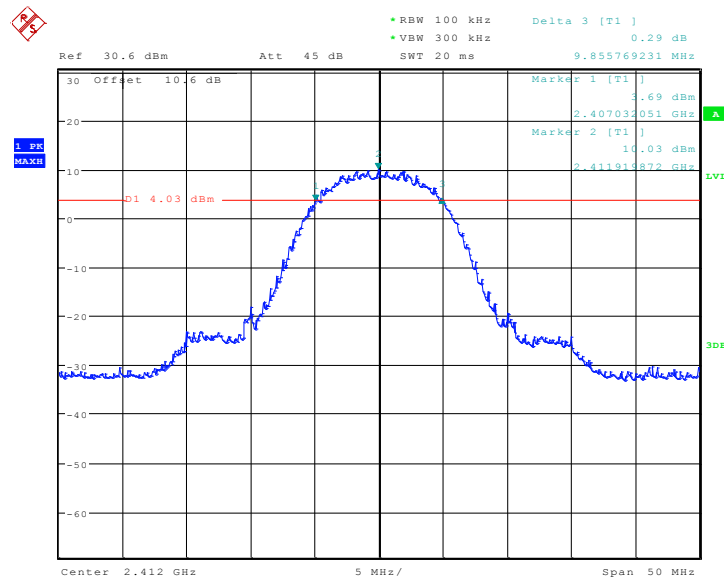
Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT40)	3	Fig.A.4.10	36538.46	P
	6	Fig.A.4.11	36057.69	P
	9	Fig.A.4.12	36378.21	P

Conclusion: Pass

Measurement Uncertainty:

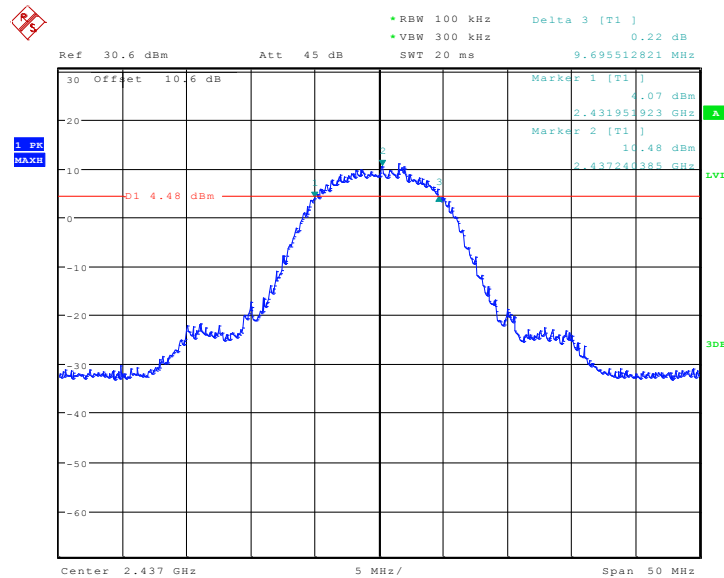
Measurement Uncertainty	60.80Hz
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Test graphs as below:



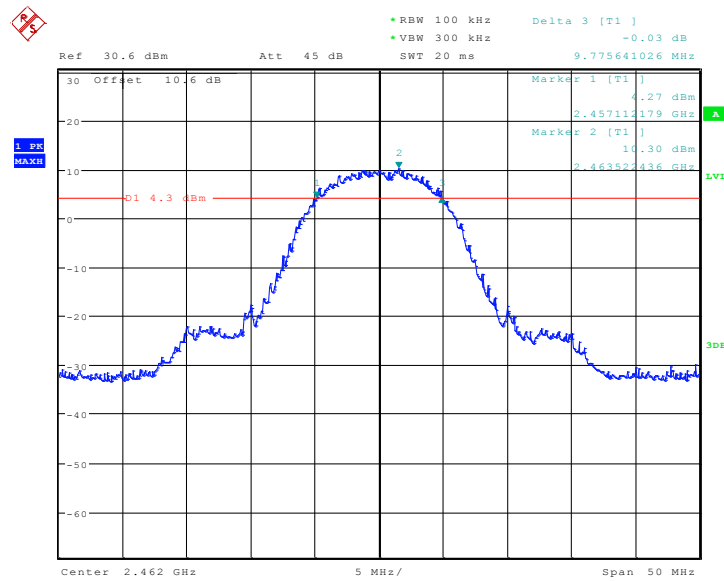
Date: 10..MIII..2013 15:01:04

Fig.A.4.1 Occupied 6dB Bandwidth (802.11b, Ch 1)



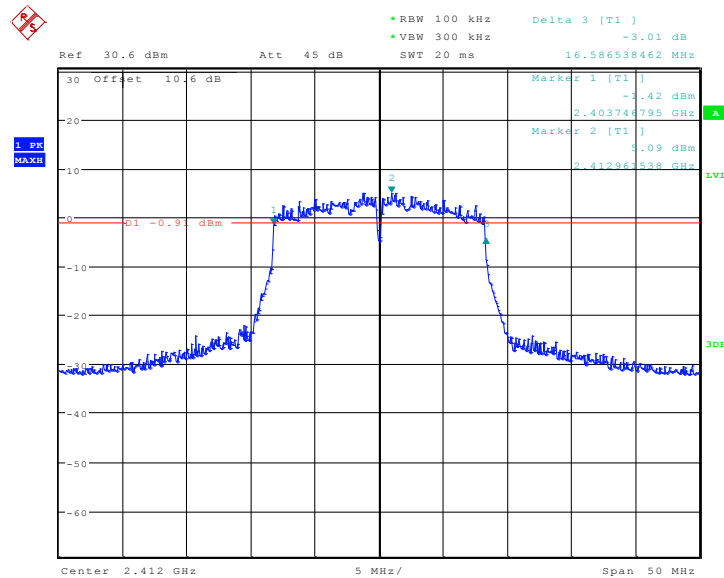
Date: 10..JUL..2013 15:07:26

Fig.A.4.2 Occupied 6dB Bandwidth (802.11b, Ch 6)



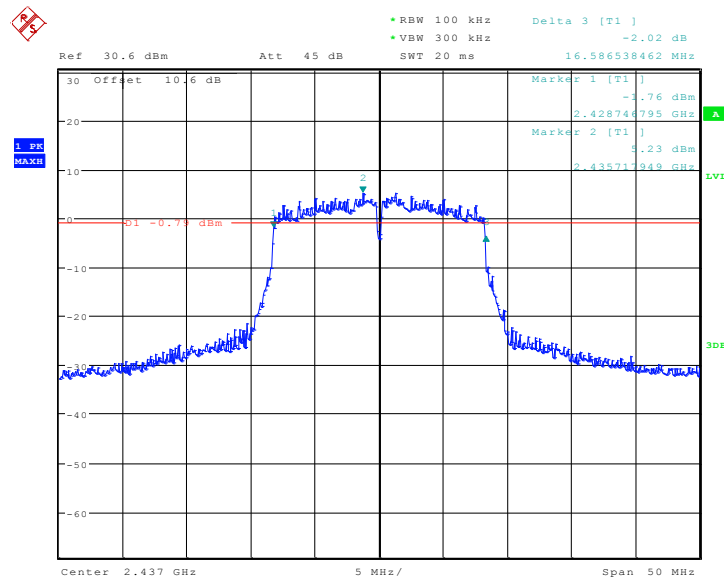
Date: 10..III..2013 15:41:24

Fig.A.4.3 Occupied 6dB Bandwidth (802.11b, Ch 11)



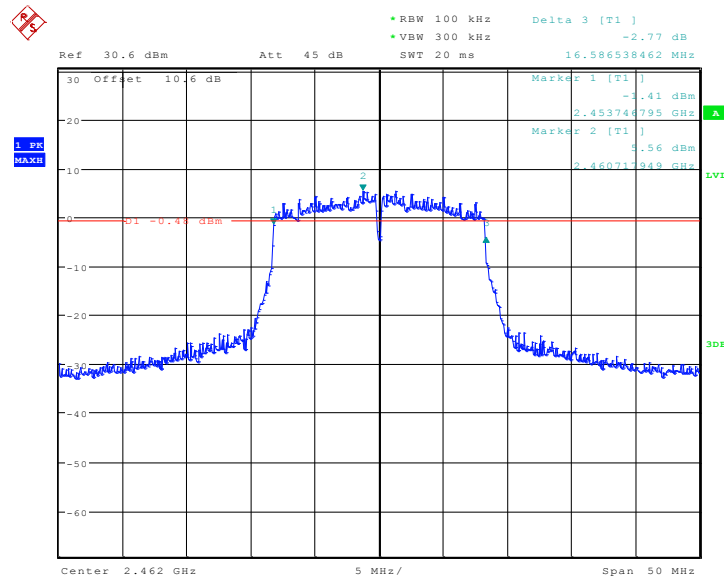
Date: 10.JUL.2013 15:19:12

Fig.A.4.4 Occupied 6dB Bandwidth (802.11g, Ch 1)



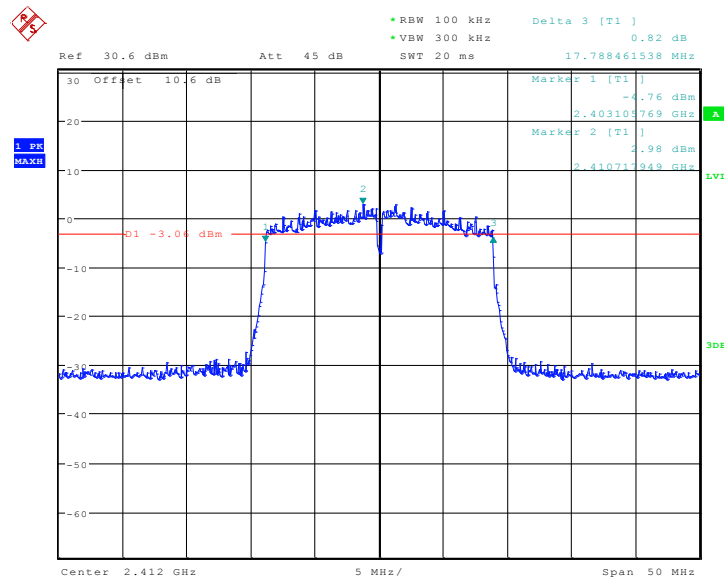
Date: 10..III..2013 15:22:20

Fig.A.4.5 Occupied 6dB Bandwidth (802.11g, Ch 6)



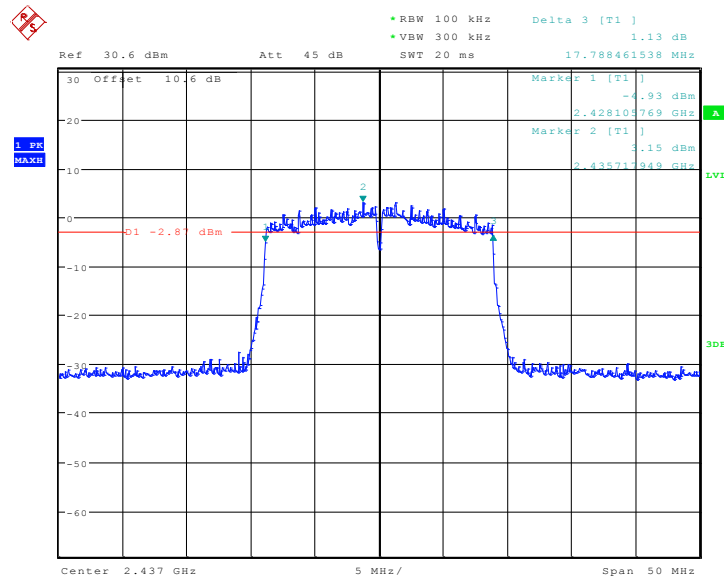
Date: 10..JUL..2013 15:27:19

Fig.A.4.6 Occupied 6dB Bandwidth (802.11g, Ch 11)



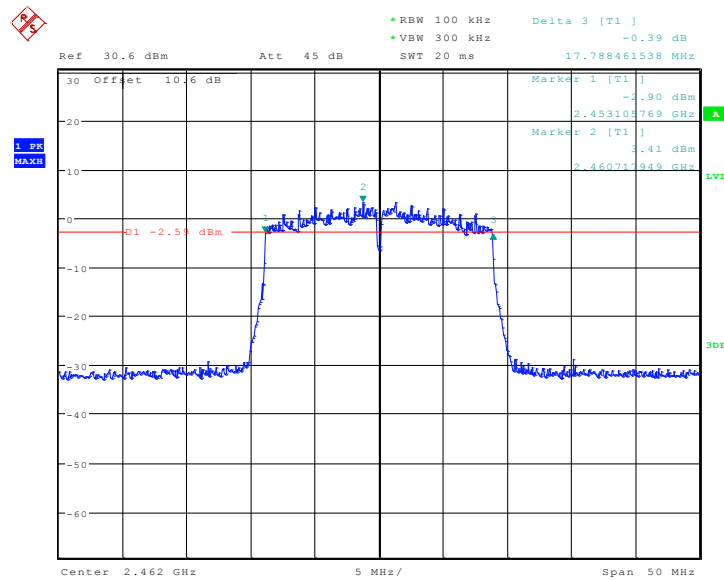
Date: 10..III..2013 15:31:37

Fig.A.4.7 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)



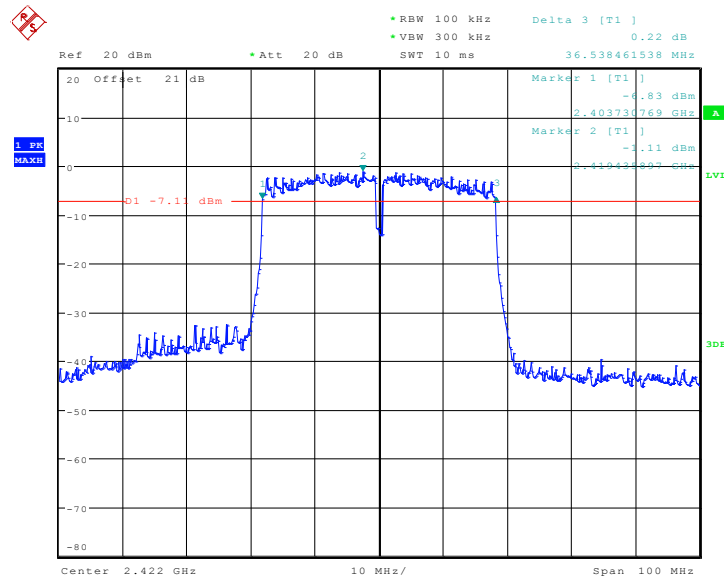
Date: 10..JUL..2013 15:34:18

Fig.A.4.8 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)



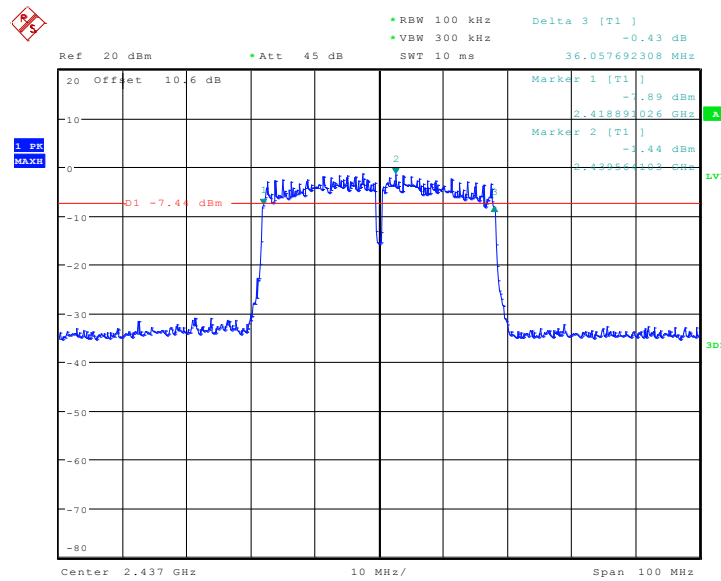
Date: 10..III..2013 15:38:04

Fig.A.4.9 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)



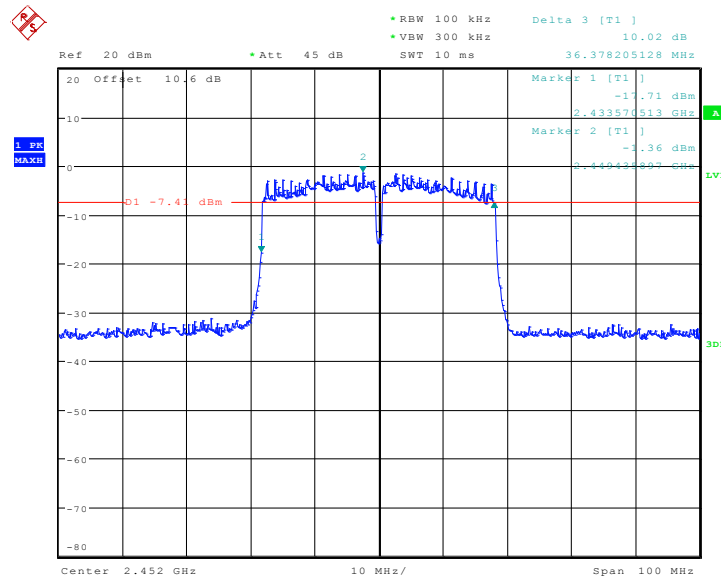
Date: 12.AUG.2013 19:30:47

Fig.A.4.10 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)



Date: 19.JUL.2013 13:47:05

Fig.A.4.11 Occupied 6dB Bandwidth (802.11n-HT40, Ch 6)



Date: 19.JUL.2013 13:49:22

Fig.A.4.12 Occupied 6dB Bandwidth (802.11n-HT40, Ch 9)

A.5. Band Edges Compliance

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

The measurement is made according to KDB558074.

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	24Mbps(OFDM)	MCS5(OFDM)	MCS5(OFDM)

Measurement Result:

802.11b/g mode

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.A.5.1	P
	11	Fig.A.5.2	P
802.11g	1	Fig.A.5.3	P
	11	Fig.A.5.4	P

802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT20)	1	Fig.A.5.5	P
	11	Fig.A.5.6	P

802.11n-HT40 mode

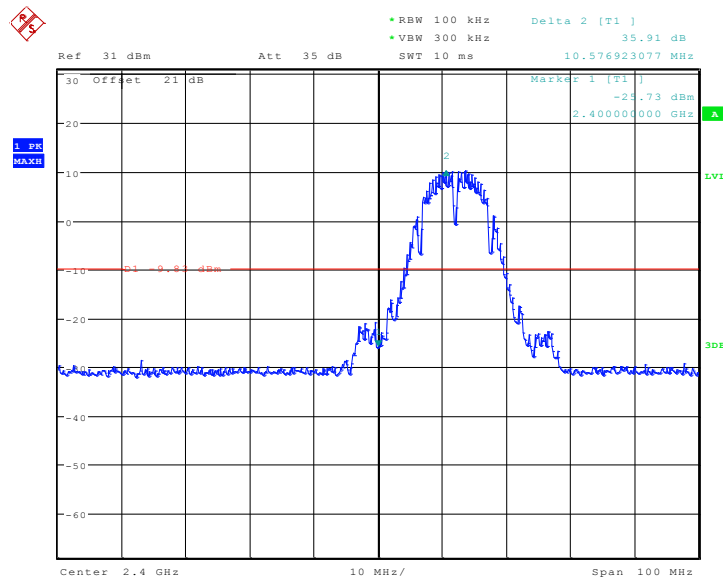
Mode	Channel	Test Results	Conclusion
802.11n (HT40)	3	Fig.A.5.7	P
	9	Fig.A.5.8	P

Conclusion: Pass

Measurement Uncertainty:

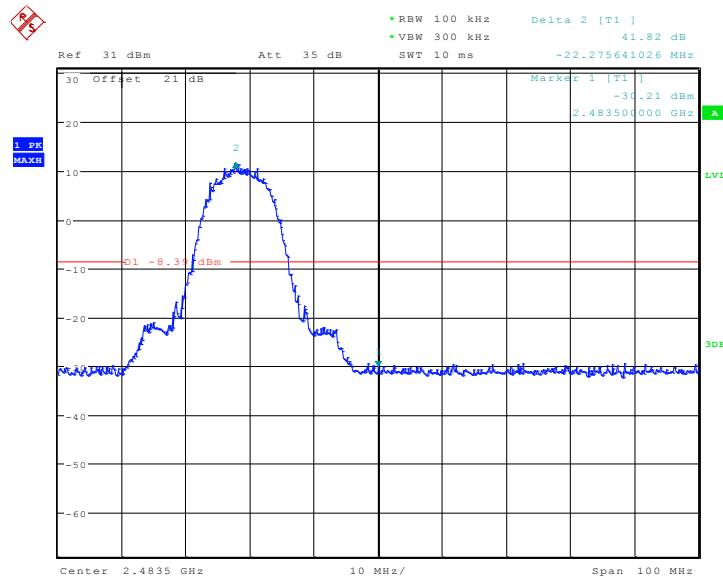
Measurement Uncertainty	0.75dB
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Test graphs as below:



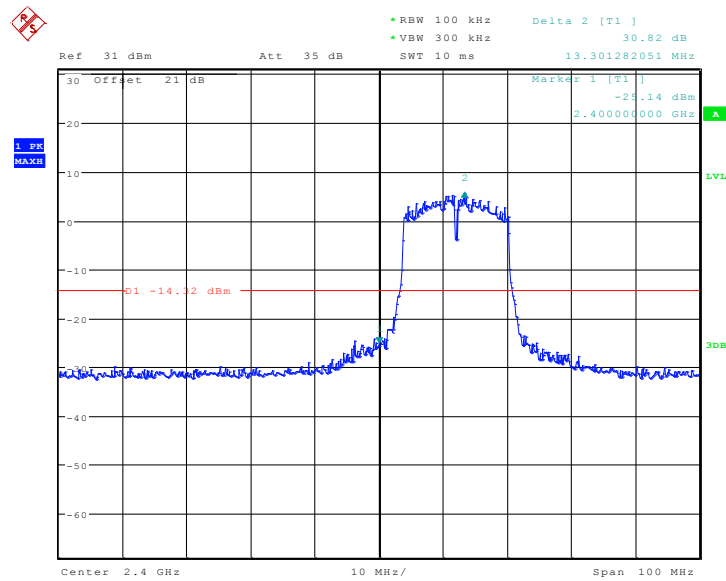
Date: 12..JUL..2013 15:51:03

Fig.A.5.1 Band Edges (802.11b, Ch 1)



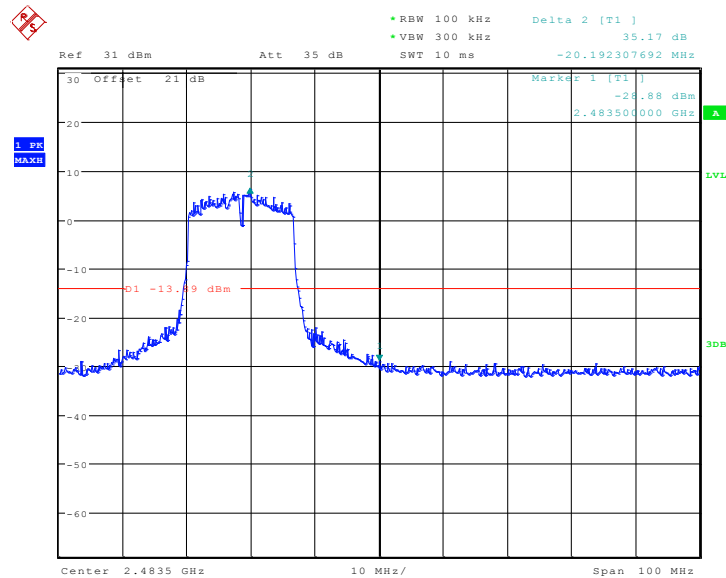
Date: 12..JUL..2013 15:56:27

Fig.A.5.2 Band Edges (802.11b, Ch 11)



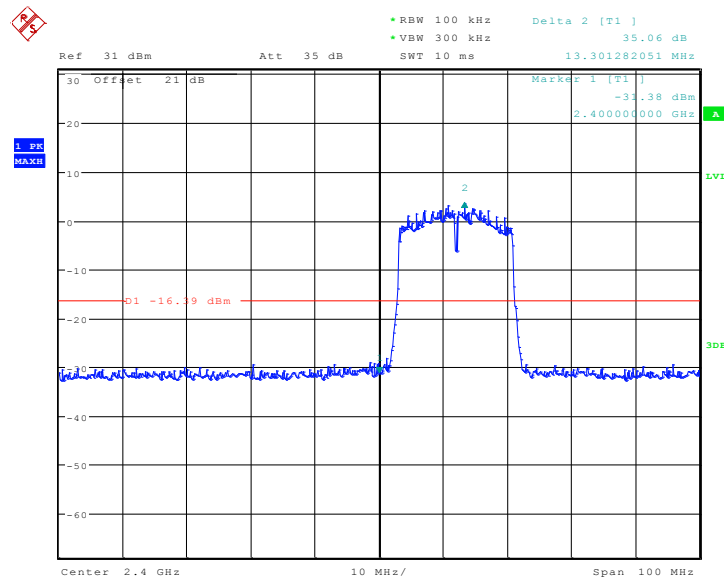
Date: 12..JUL..2013 16:02:37

Fig.A.5.3 Band Edges (802.11g, Ch 1)



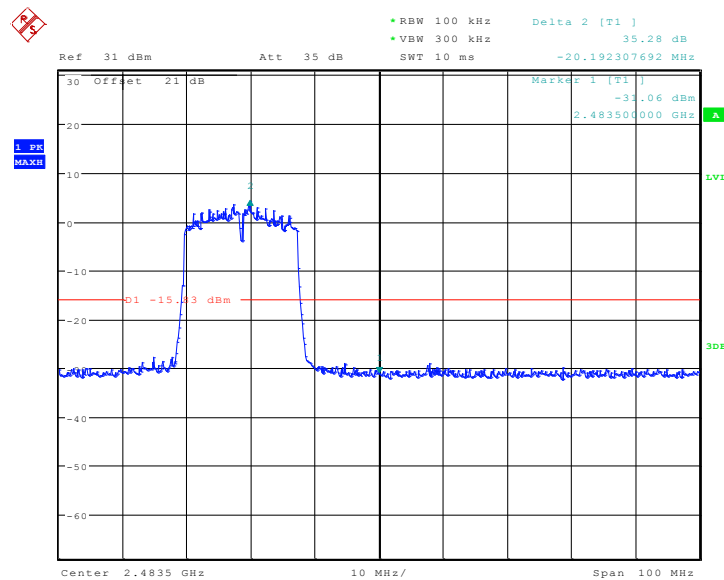
Date: 12..JUL..2013 16:04:24

Fig.A.5.4 Band Edges (802.11g, Ch 11)



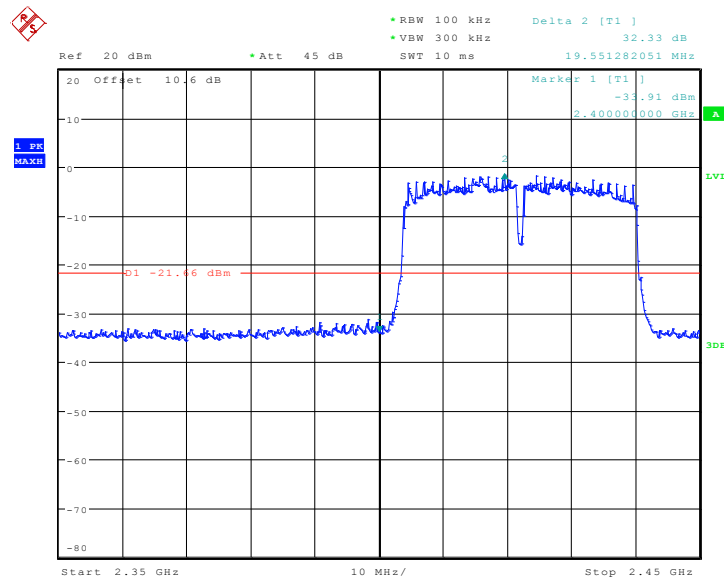
Date: 12..JUL..2013 16:06:10

Fig.A.5.5 Band Edges (802.11n-HT20, Ch 1)



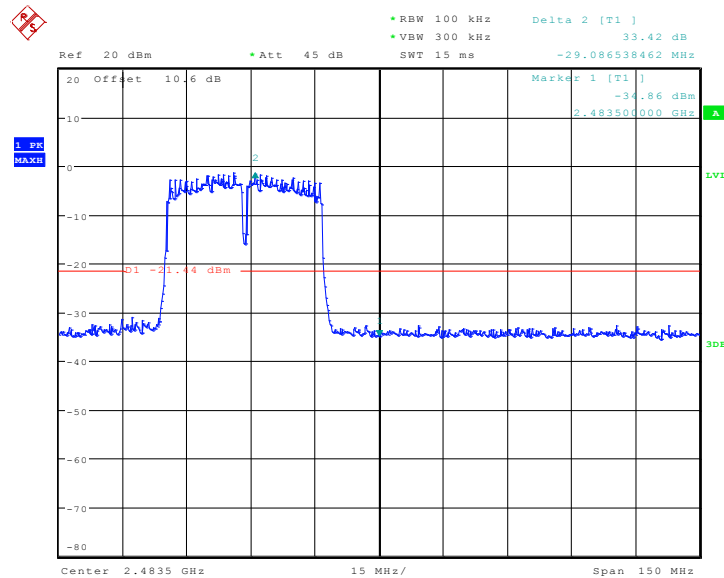
Date: 12..JUL..2013 16:07:54

Fig.A.5.6 Band Edges (802.11n-HT20, Ch 11)



Date: 19..JUL..2013 13:52:50

Fig.A.5.7 Band Edges (802.11n-HT40, Ch 3)



Date: 19..JUL..2013 13:55:18

Fig.A.5.8 Band Edges (802.11n-HT40, Ch 9)

A.6. Transmitter Spurious Emission

A.6.1 Transmitter Spurious Emission - Conducted

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 KDB558074.

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	24Mbps(OFDM)	MCS5(OFDM)	MCS5(OFDM)

Measurement Results:

802.11b mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.A.6.1.1	P
		30 MHz ~ 1 GHz	Fig.A.6.1.2	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.5	P
		10 GHz ~ 15 GHz	Fig.A.6.1.6	P
		15 GHz ~ 20 GHz	Fig.A.6.1.7	P
		20 GHz ~ 26 GHz	Fig.A.6.1.8	P
	6	2.437 GHz	Fig.A.6.1.9	P
		30 MHz ~ 1 GHz	Fig.A.6.1.10	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.11	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	P
		10 GHz ~ 15 GHz	Fig.A.6.1.14	P
		15 GHz ~ 20 GHz	Fig.A.6.1.15	P
		20 GHz ~ 26 GHz	Fig.A.6.1.16	P
	11	2.462 GHz	Fig.A.6.1.17	P
		30 MHz ~ 1 GHz	Fig.A.6.1.18	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.21	P
		10 GHz ~ 15 GHz	Fig.A.6.1.22	P
		15 GHz ~ 20 GHz	Fig.A.6.1.23	P
		20 GHz ~ 26 GHz	Fig.A.6.1.24	P

802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.412 GHz	Fig.A.6.1.25	P
		30 MHz ~ 1 GHz	Fig.A.6.1.26	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.27	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.28	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.29	P
		10 GHz ~ 15 GHz	Fig.A.6.1.30	P
		15 GHz ~ 20 GHz	Fig.A.6.1.31	P
		20 GHz ~ 26 GHz	Fig.A.6.1.32	P
	6	2.437 GHz	Fig.A.6.1.33	P
		30 MHz ~ 1 GHz	Fig.A.6.1.34	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.35	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.36	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.37	P
		10 GHz ~ 15 GHz	Fig.A.6.1.38	P
		15 GHz ~ 20 GHz	Fig.A.6.1.39	P
		20 GHz ~ 26 GHz	Fig.A.6.1.40	P
	11	2.462 GHz	Fig.A.6.1.41	P
		30 MHz ~ 1 GHz	Fig.A.6.1.42	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.43	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.44	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.45	P
		10 GHz ~ 15 GHz	Fig.A.6.1.46	P
		15 GHz ~ 20 GHz	Fig.A.6.1.47	P
		20 GHz ~ 26 GHz	Fig.A.6.1.48	P

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.412 GHz	Fig.A.6.1.49	P
		30 MHz ~ 1 GHz	Fig.A.6.1.50	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.51	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.52	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.53	P
		10 GHz ~ 15 GHz	Fig.A.6.1.54	P
		15 GHz ~ 20 GHz	Fig.A.6.1.55	P
		20 GHz ~ 26 GHz	Fig.A.6.1.56	P
	6	2.437 GHz	Fig.A.6.1.57	P
		30 MHz ~ 1 GHz	Fig.A.6.1.58	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.59	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.60	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.61	P
		10 GHz ~ 15 GHz	Fig.A.6.1.62	P
		15 GHz ~ 20 GHz	Fig.A.6.1.63	P
		20 GHz ~ 26 GHz	Fig.A.6.1.64	P
	11	2.462 GHz	Fig.A.6.1.65	P
		30 MHz ~ 1 GHz	Fig.A.6.1.66	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.67	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.68	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.69	P
		10 GHz ~ 15 GHz	Fig.A.6.1.70	P
		15 GHz ~ 20 GHz	Fig.A.6.1.71	P
		20 GHz ~ 26 GHz	Fig.A.6.1.72	P

802.11n-HT40 mode

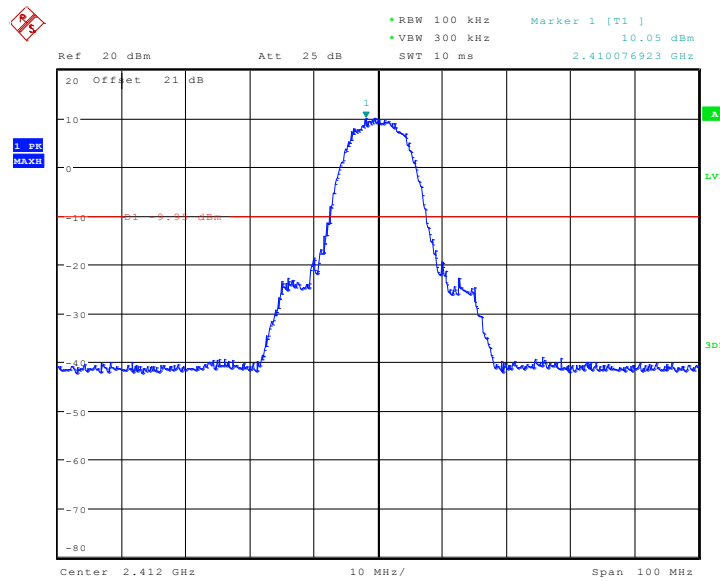
MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.422 GHz	Fig.A.6.1.73	P
		30 MHz ~ 1 GHz	Fig.A.6.1.74	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.75	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.76	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.77	P
		10 GHz ~ 15 GHz	Fig.A.6.1.78	P
		15 GHz ~ 20 GHz	Fig.A.6.1.79	P
		20 GHz ~ 26 GHz	Fig.A.6.1.80	P
	6	2.437 GHz	Fig.A.6.1.81	P
		30 MHz ~ 1 GHz	Fig.A.6.1.82	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.83	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.84	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.85	P
		10 GHz ~ 15 GHz	Fig.A.6.1.86	P
		15 GHz ~ 20 GHz	Fig.A.6.1.87	P
		20 GHz ~ 26 GHz	Fig.A.6.1.88	P
	9	2.452 GHz	Fig.A.6.1.89	P
		30 MHz ~ 1 GHz	Fig.A.6.1.90	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.91	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.92	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.93	P
		10 GHz ~ 15 GHz	Fig.A.6.1.94	P
		15 GHz ~ 20 GHz	Fig.A.6.1.95	P
		20 GHz ~ 26 GHz	Fig.A.6.1.96	P

Conclusion: Pass

Measurement Uncertainty:

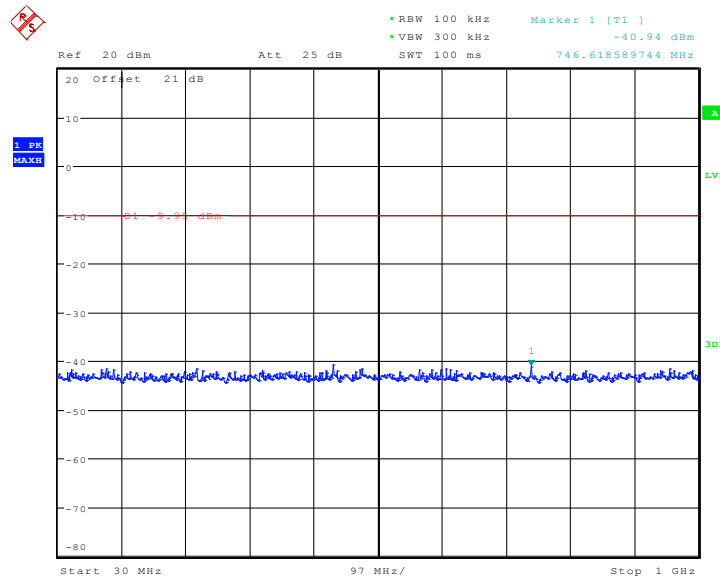
Frequency Range	Uncertainty(dB)
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

Test graphs as below:



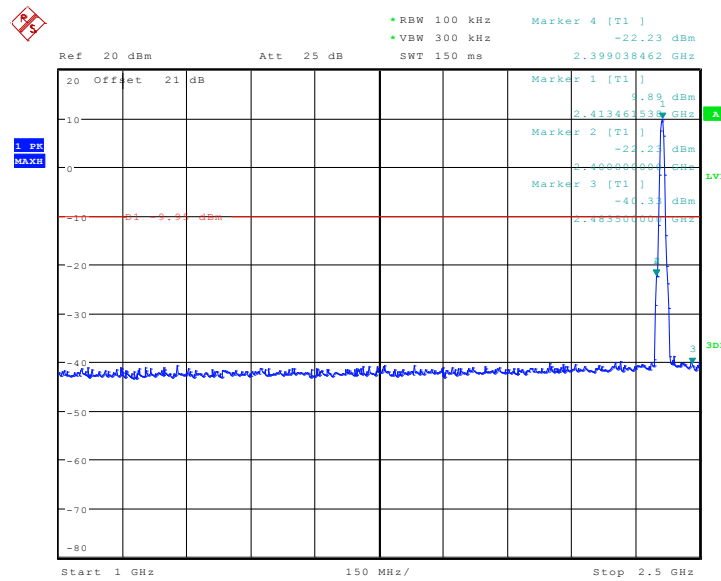
Date: 15..JUL..2013 09:01:02

Fig.A.6.1.1 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)



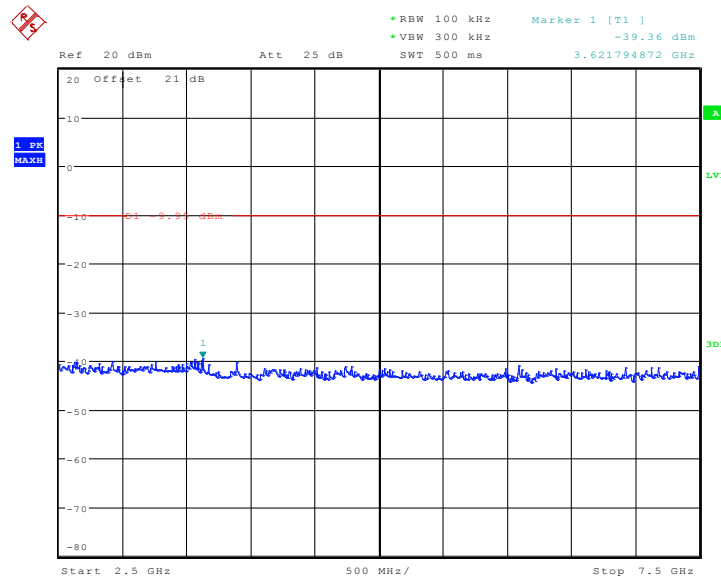
Date: 15.JUL.2013 09:02:11

Fig.A.6.1.2 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)



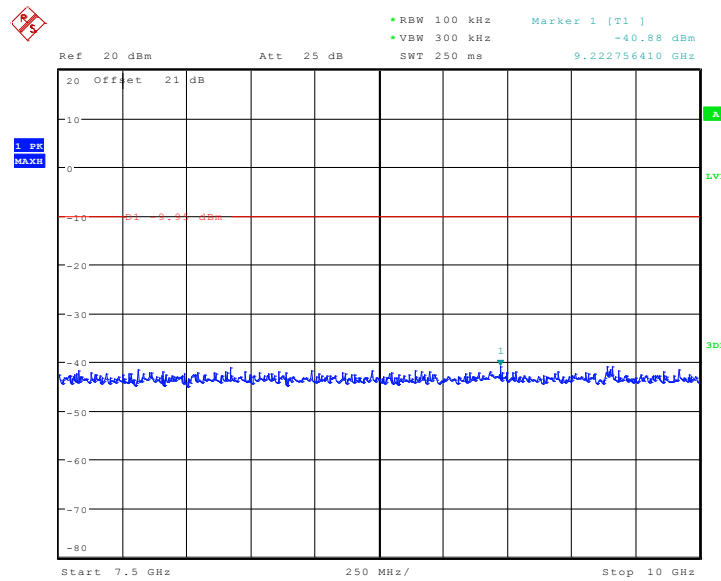
Date: 15..JUL..2013 09:03:58

Fig.A.6.1.3 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)



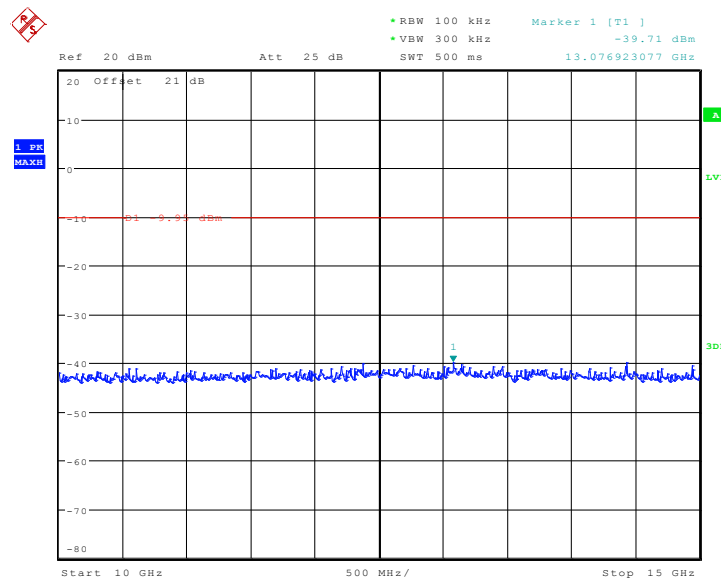
Date: 15..JUL..2013 09:04:56

Fig.A.6.1.4 Conducted Spurious Emission (802.11b, Ch1, 2.5 GHz-7.5 GHz)



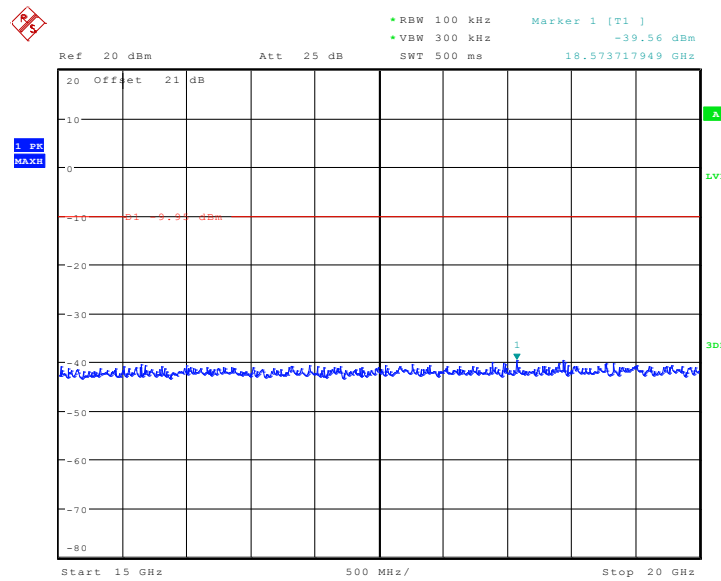
Date: 15..III..2013 09:05:26

Fig.A.6.1.5 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)



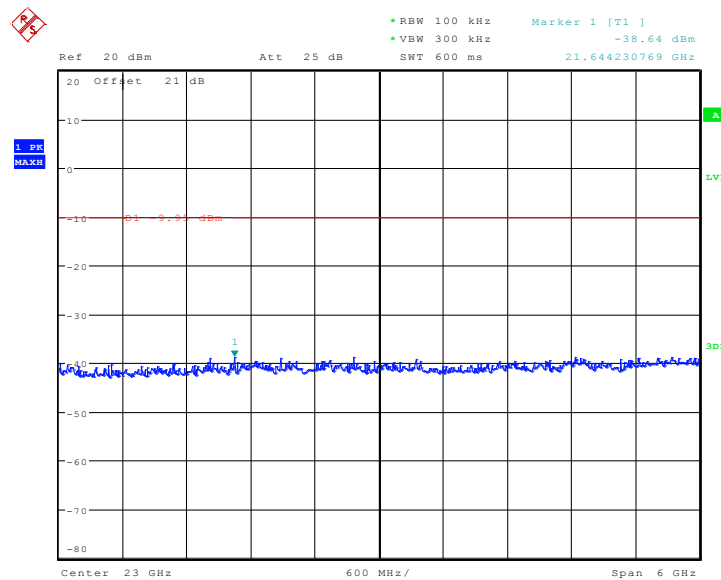
Date: 15.JUL.2013 09:06:46

Fig.A.6.1.6 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)



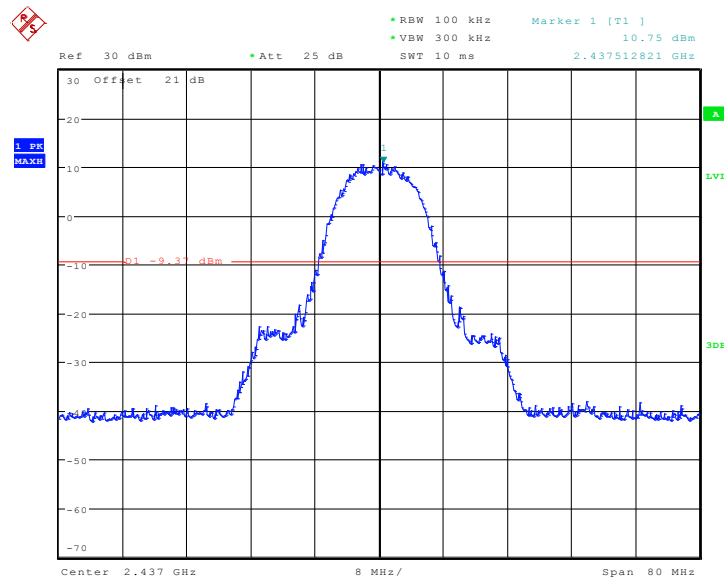
Date: 15..JUL..2013 09:07:28

Fig.A.6.1.7 Conducted Spurious Emission (802.11b, Ch1, 15 GHz-20 GHz)



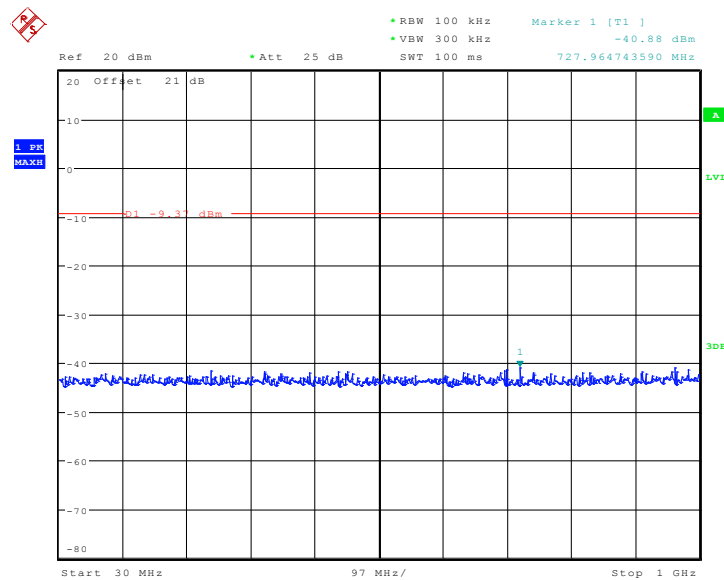
Date: 15..JUL..2013 09:08:13

Fig.A.6.1.8 Conducted Spurious Emission (802.11b, Ch1, 20 GHz-26 GHz)



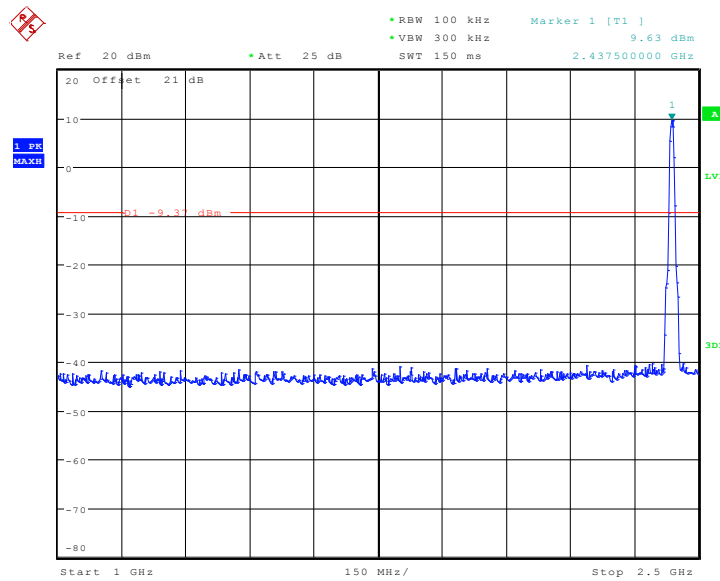
Date: 31..JUL..2013 08:37:19

Fig.A.6.1.9 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)



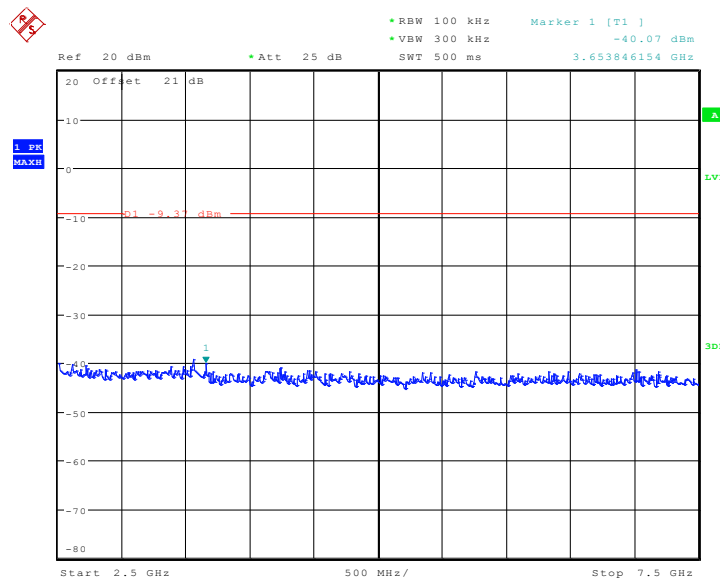
Date: 31..JUL..2013 08:37:40

Fig.A.6.1.10 Conducted Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)



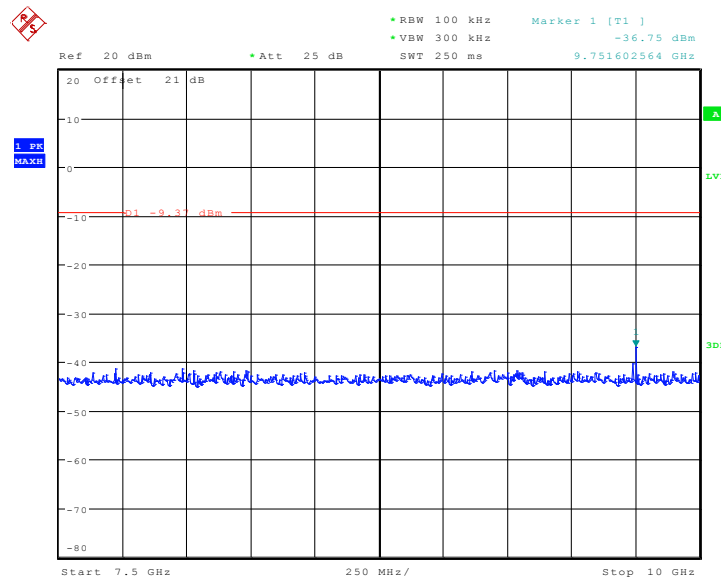
Date: 31..JUL..2013 08:37:52

Fig.A.6.1.11 Conducted Spurious Emission (802.11b, Ch6, 1 GHz-2.5 GHz)



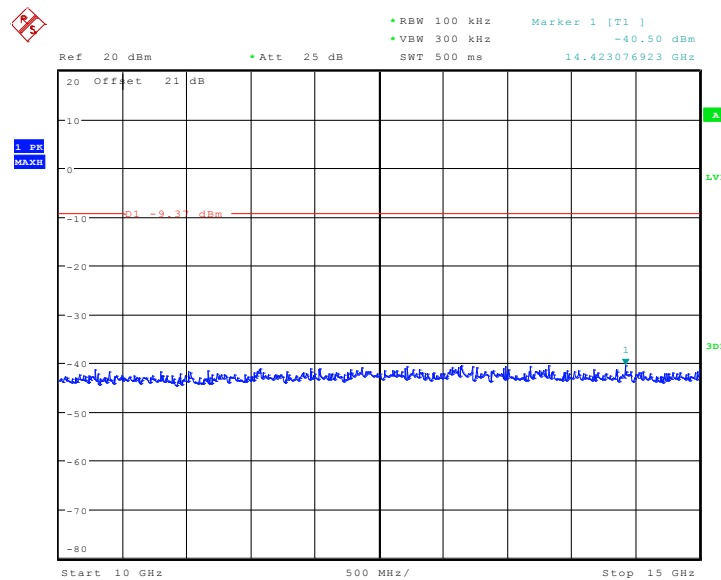
Date: 31.JUL.2013 08:38:07

Fig.A.6.1.12 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)



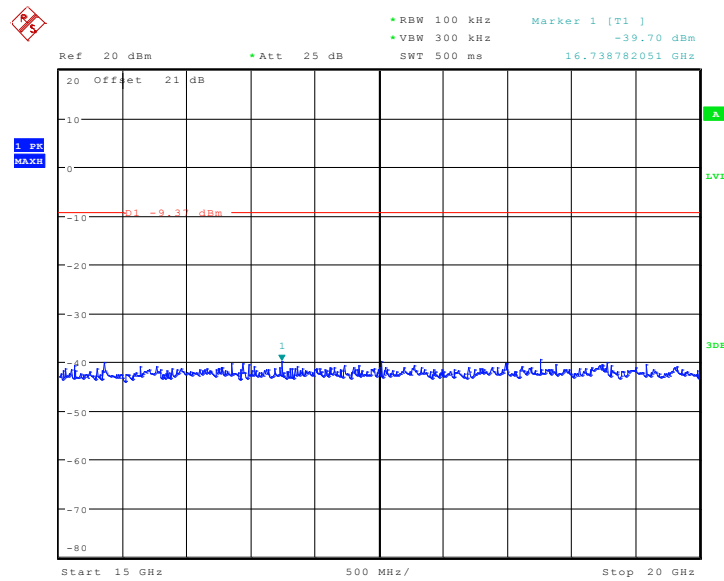
Date: 31..JUL..2013 08:38:23

Fig.A.6.1.13 Conducted Spurious Emission (802.11b, Ch6, 7.5 GHz-10 GHz)



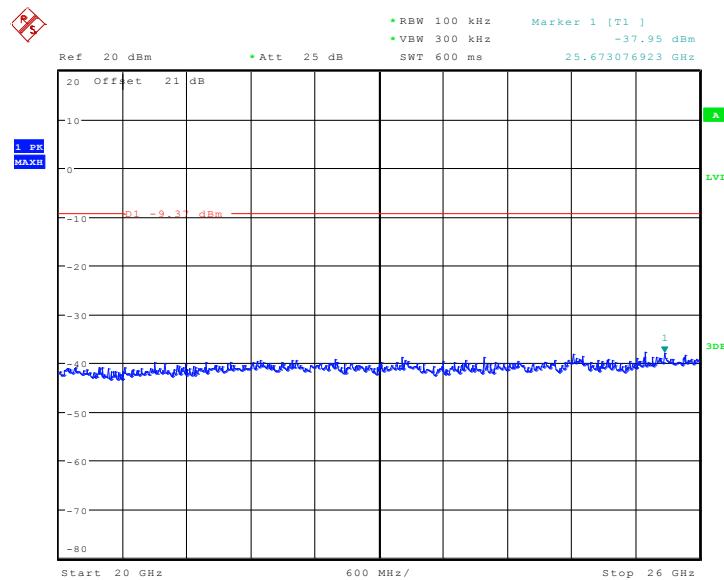
Date: 31.JUL.2013 08:38:41

Fig.A.6.1.14 Conducted Spurious Emission (802.11b, Ch6, 10 GHz-15 GHz)



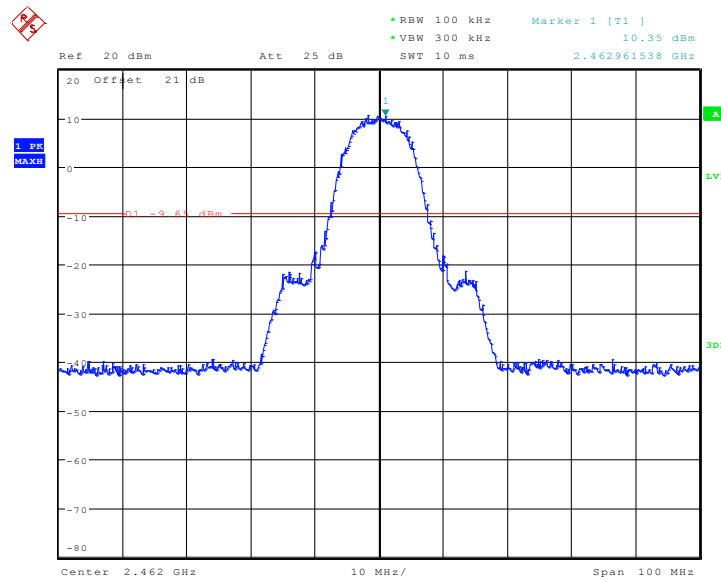
Date: 31..JUL..2013 08:39:03

Fig.A.6.1.15 Conducted Spurious Emission (802.11b, Ch6, 15 GHz-20 GHz)



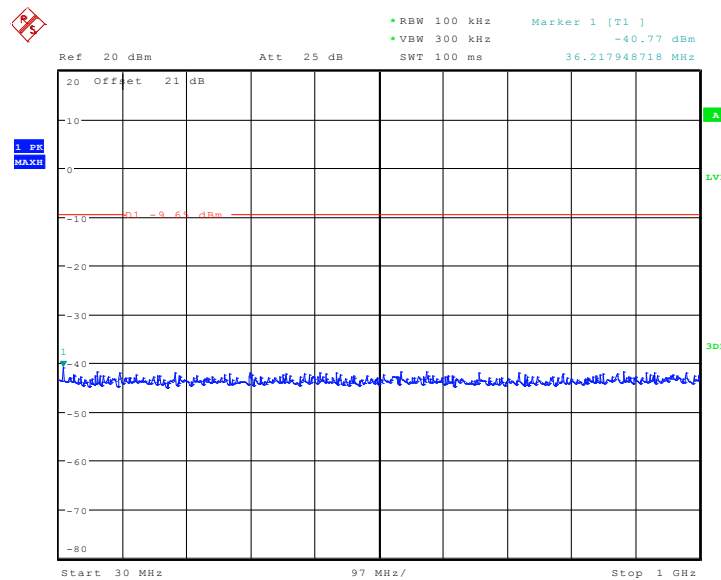
Date: 31.JUL.2013 08:39:29

Fig.A.6.1.16 Conducted Spurious Emission (802.11b, Ch6, 20 GHz-26 GHz)



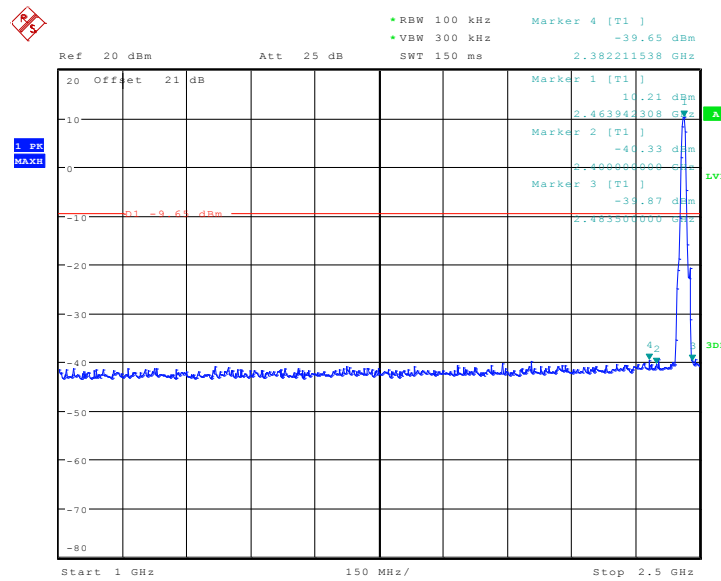
Date: 15..JUL..2013 09:55:13

Fig.A.6.1.17 Conducted Spurious Emission (802.11b, Ch11, Center Frequency)



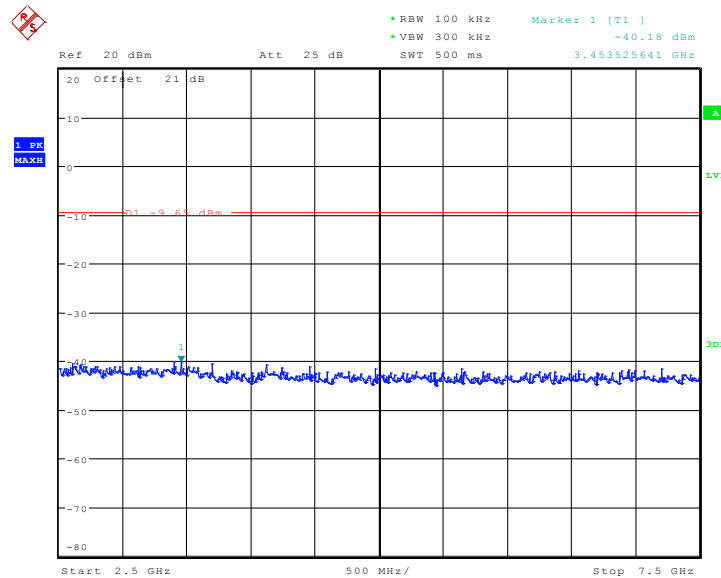
Date: 15.JUL.2013 09:55:48

Fig.A.6.1.18 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)



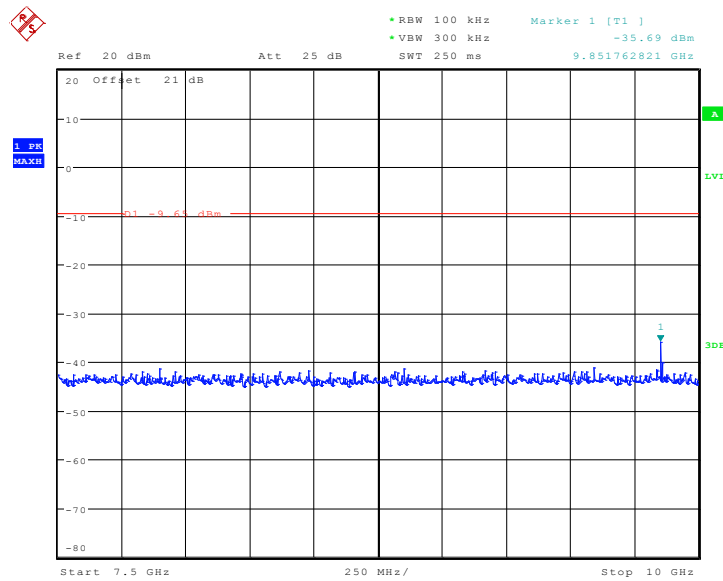
Date: 15..III..2013 09:57:06

Fig.A.6.1.19 Conducted Spurious Emission (802.11b, Ch11, 1 GHz-2.5 GHz)



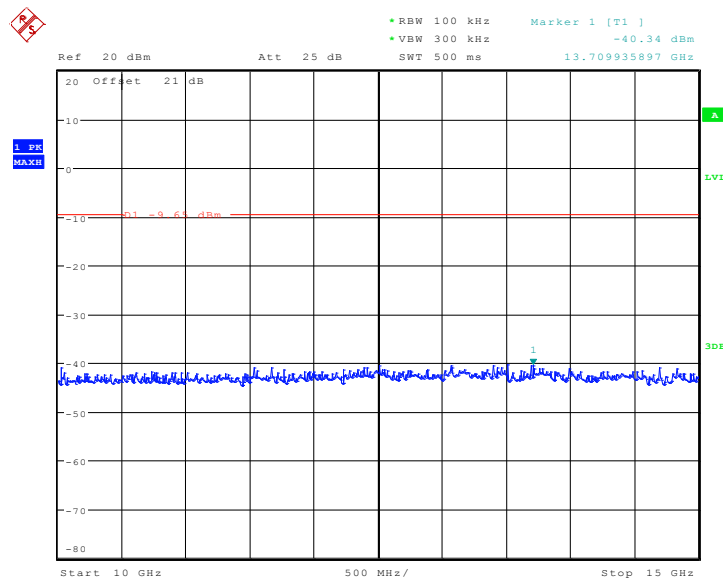
Date: 15.JUL.2013 09:57:28

Fig.A.6.1.20 Conducted Spurious Emission (802.11b, Ch11, 2.5 GHz-7.5 GHz)



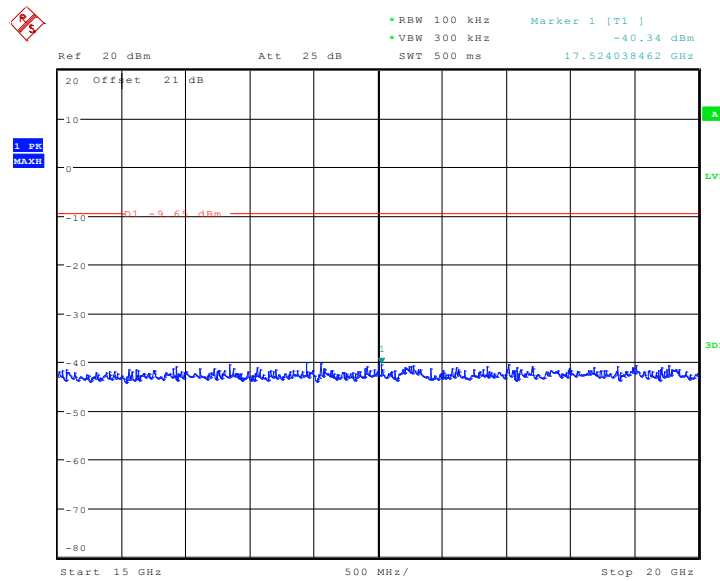
Date: 15..III..2013 09:57:46

Fig.A.6.1.21 Conducted Spurious Emission (802.11b, Ch11, 7.5 GHz-10 GHz)



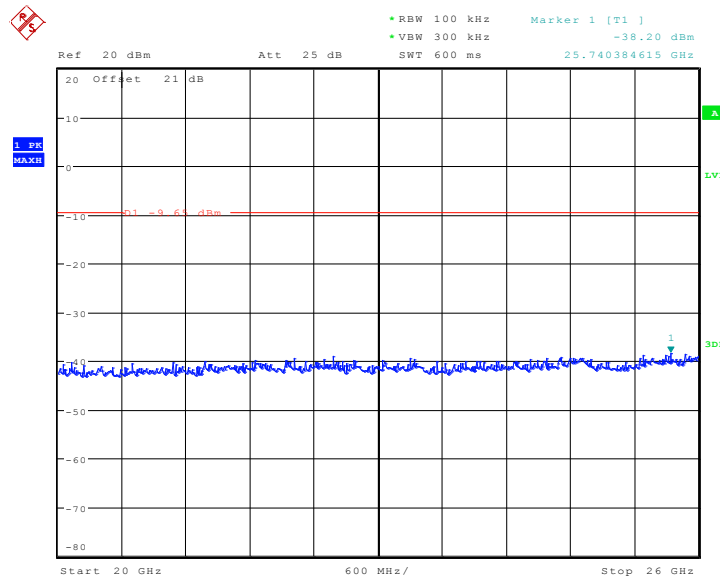
Date: 15.JUL.2013 09:58:10

Fig.A.6.1.22 Conducted Spurious Emission (802.11b, Ch11, 10 GHz-15 GHz)



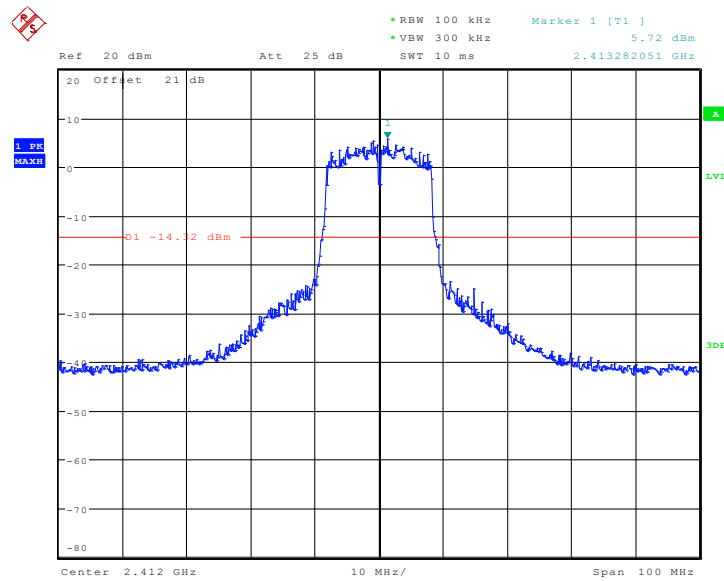
Date: 15..JUL..2013 09:58:23

Fig.A.6.1.23 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)



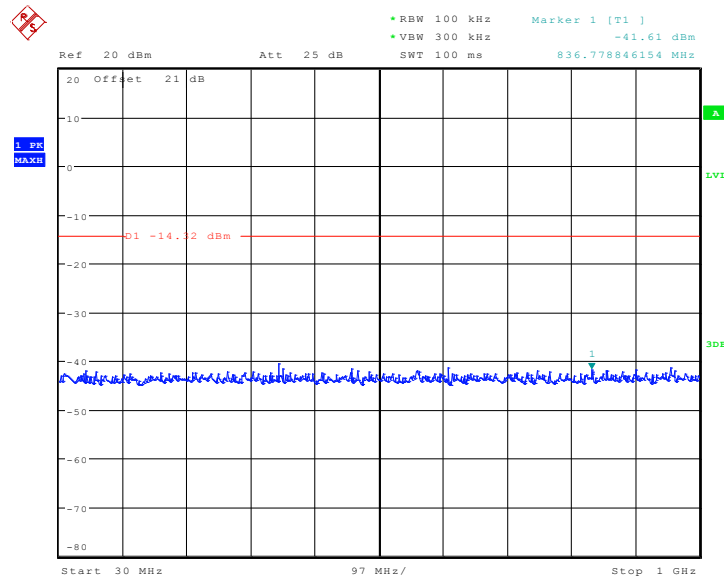
Date: 15.JUL.2013 09:58:50

Fig.A.6.1.24 Conducted Spurious Emission (802.11b, Ch11, 20 GHz-26 GHz)



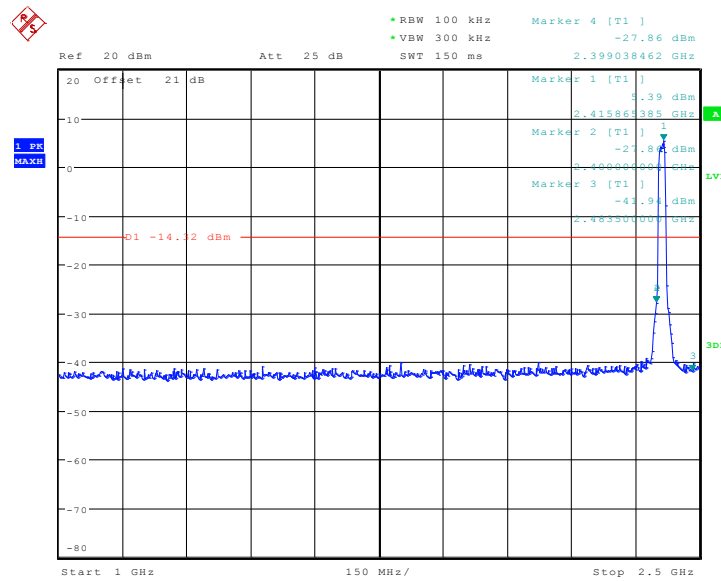
Date: 15..JUL..2013 10:00:12

Fig.A.6.1.25 Conducted Spurious Emission (802.11g, Ch1, Center Frequency)



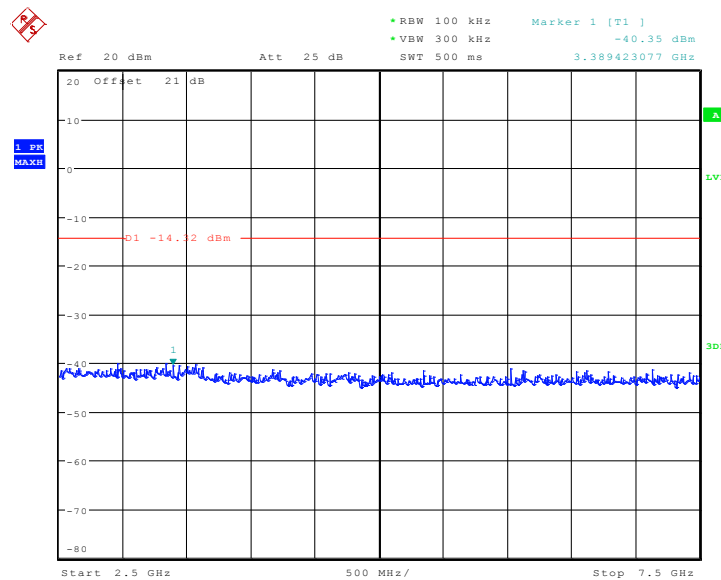
Date: 15.JUL.2013 10:00:40

Fig.A.6.1.26 Conducted Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)



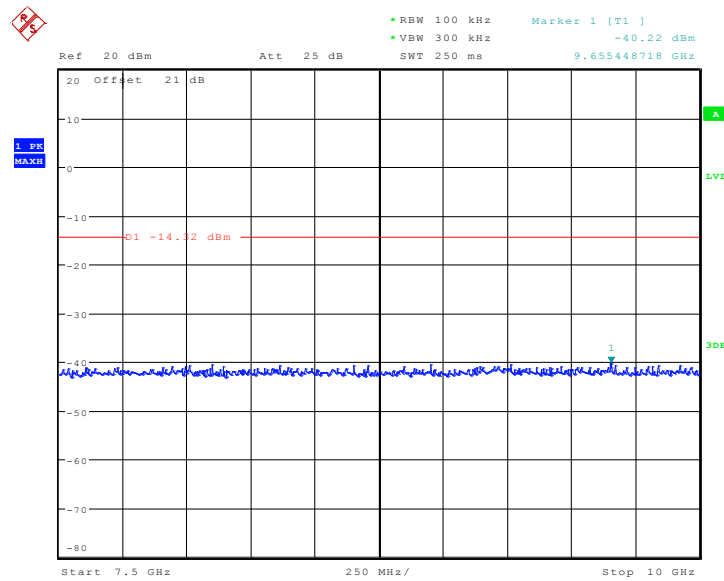
Date: 15..MIII..2013 10:01:23

Fig.A.6.1.27 Conducted Spurious Emission (802.11g, Ch1, 1 GHz-2.5 GHz)



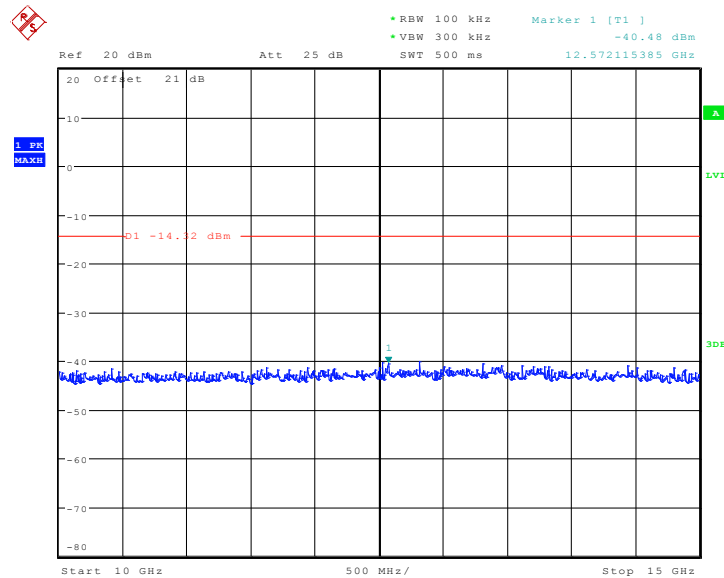
Date: 15..JUL.2013 10:01:50

Fig.A.6.1.28 Conducted Spurious Emission (802.11g, Ch1, 2.5 GHz-7.5 GHz)



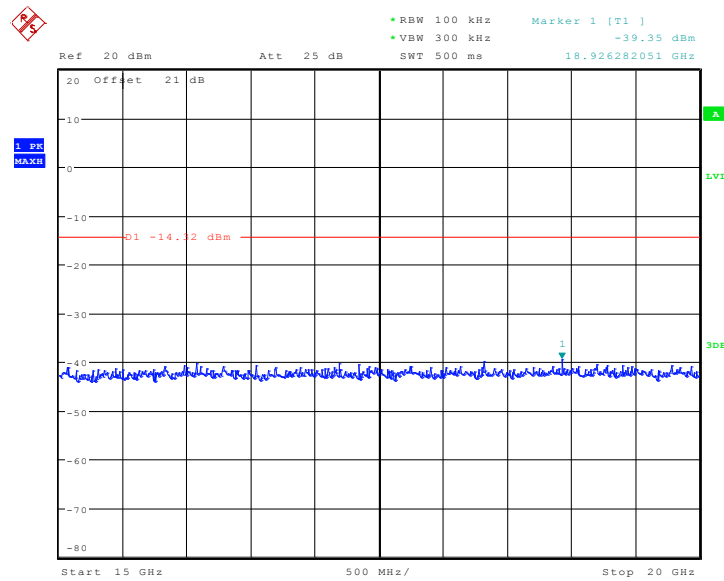
Date: 15..JUL..2013 10:06:10

Fig.A.6.1.29 Conducted Spurious Emission (802.11g, Ch1, 7.5 GHz-10 GHz)



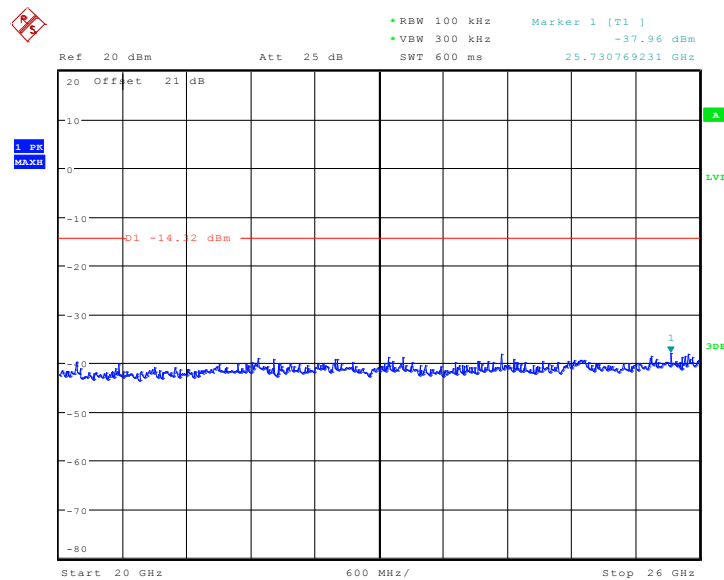
Date: 15.JUL.2013 10:06:28

Fig.A.6.1.30 Conducted Spurious Emission (802.11g, Ch1, 10 GHz-15 GHz)



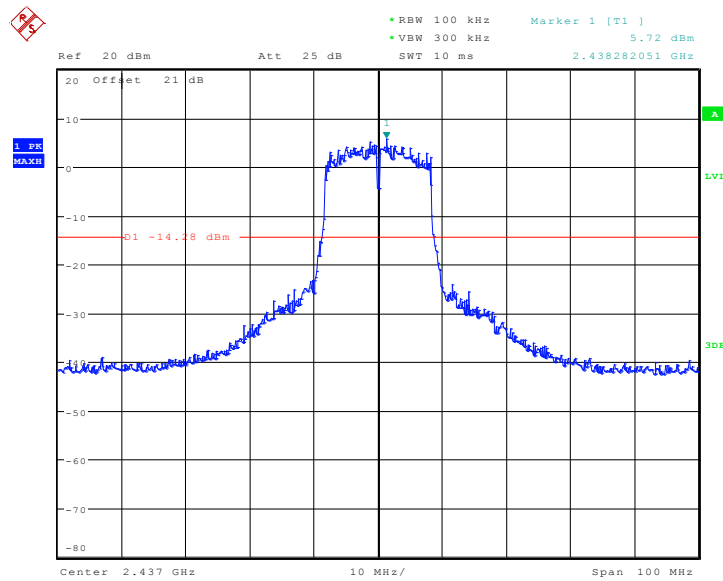
Date: 15..JUL..2013 10:06:49

Fig.A.6.1.31 Conducted Spurious Emission (802.11g, Ch1, 15 GHz-20 GHz)



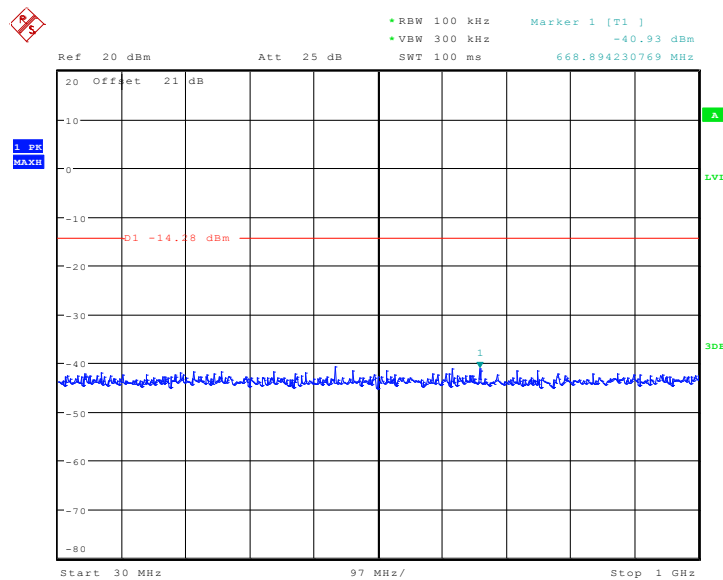
Date: 15.JUL.2013 10:07:11

Fig.A.6.1.32 Conducted Spurious Emission (802.11g, Ch1, 20 GHz-26 GHz)



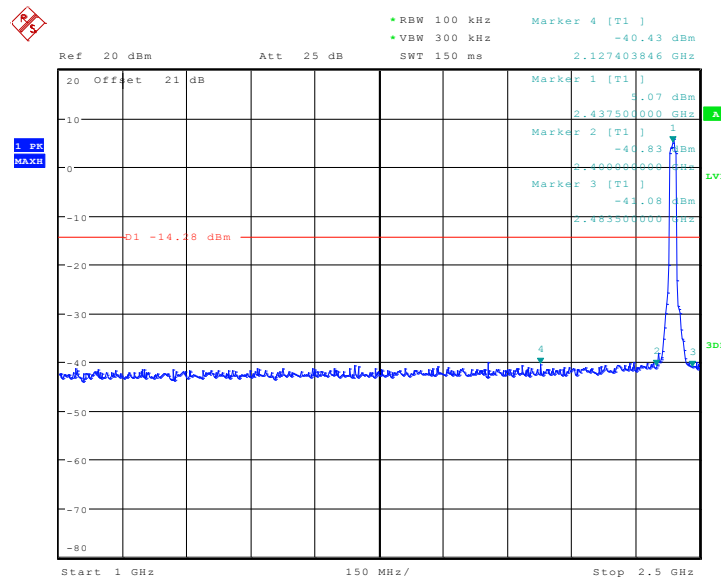
Date: 15..JUL..2013 10:08:13

Fig.A.6.1.33 Conducted Spurious Emission (802.11g, Ch6, Center Frequency)



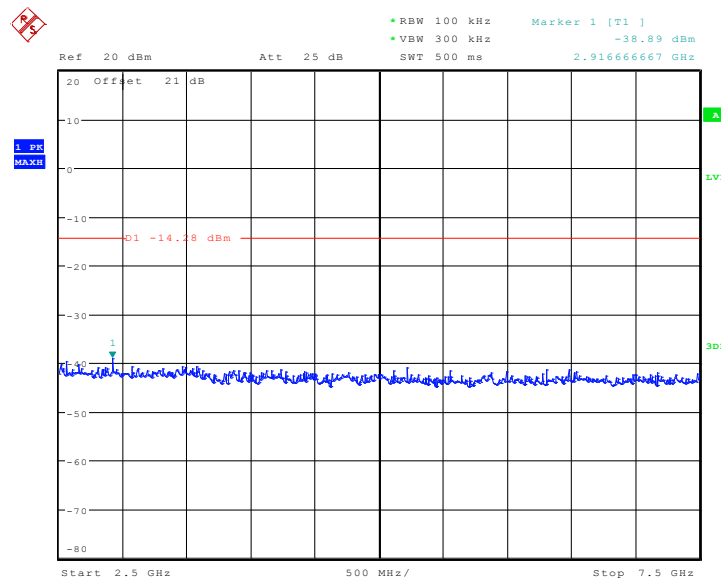
Date: 15.JUL.2013 10:08:28

Fig.A.6.1.34 Conducted Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)



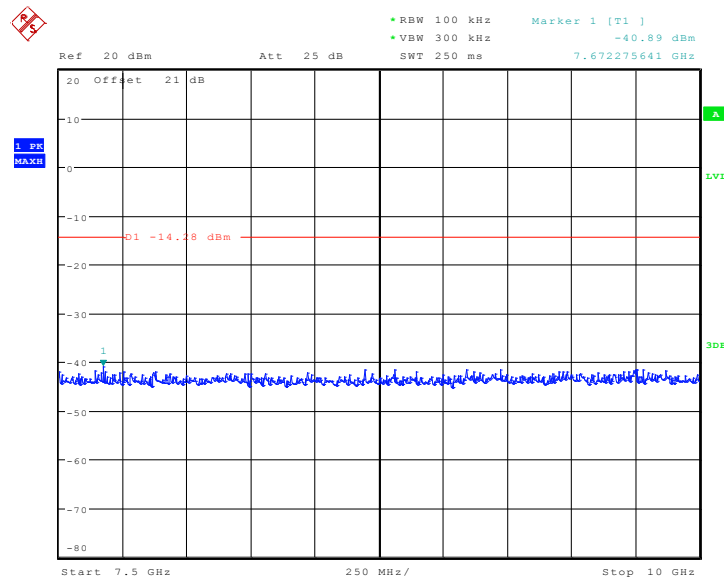
Date: 15..III..2013 10:09:26

Fig.A.6.1.35 Conducted Spurious Emission (802.11g, Ch6, 1 GHz-2.5 GHz)



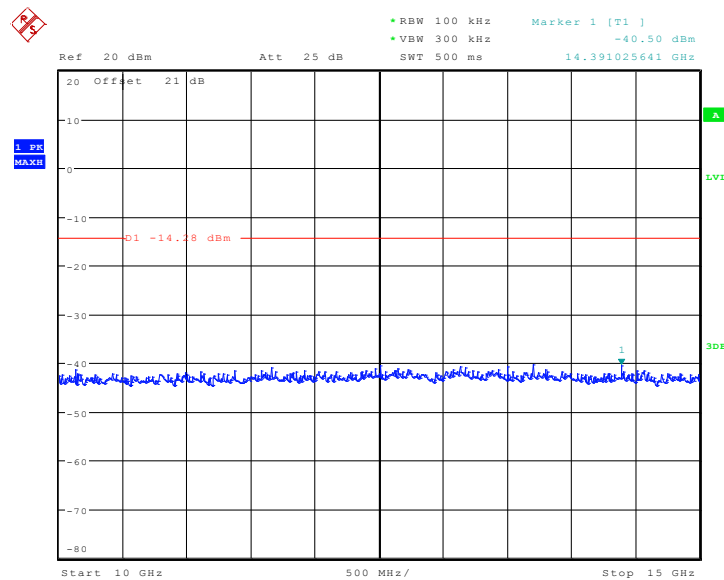
Date: 15.JUL.2013 10:09:58

Fig.A.6.1.36 Conducted Spurious Emission (802.11g, Ch6, 2.5 GHz-7.5 GHz)



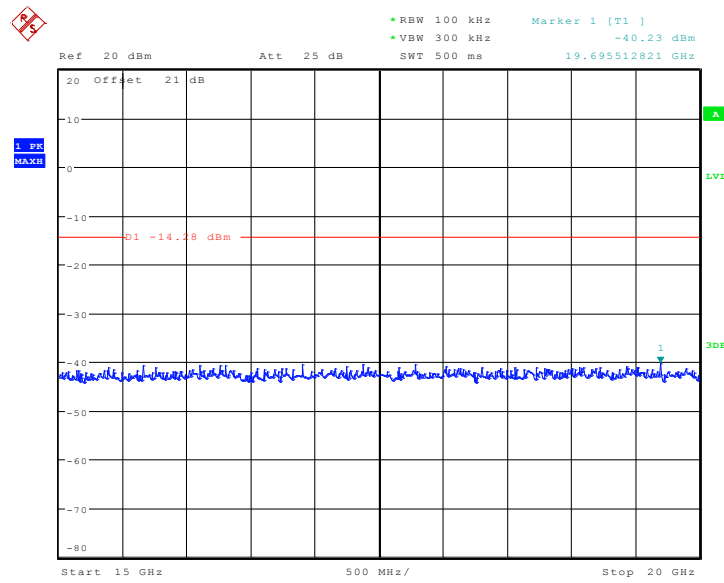
Date: 15..JUL..2013 10:10:19

Fig.A.6.1.37 Conducted Spurious Emission (802.11g, Ch6, 7.5 GHz-10 GHz)



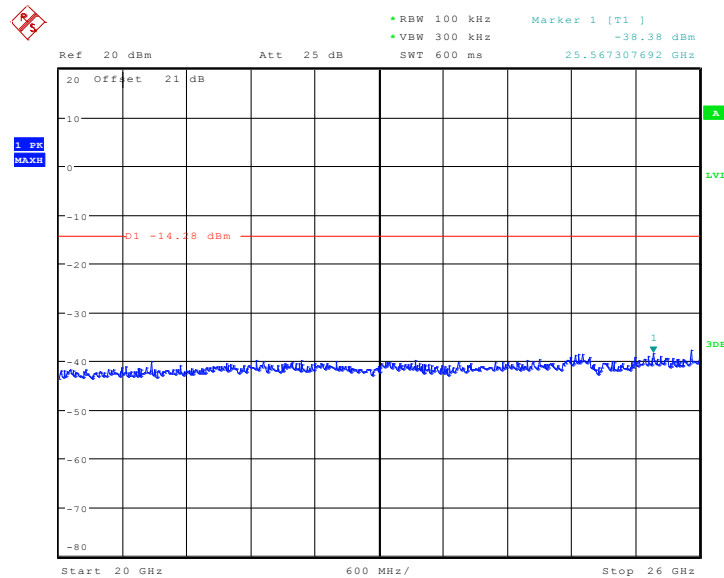
Date: 15.JUL.2013 10:10:36

Fig.A.6.1.38 Conducted Spurious Emission (802.11g, Ch6, 10 GHz-15 GHz)



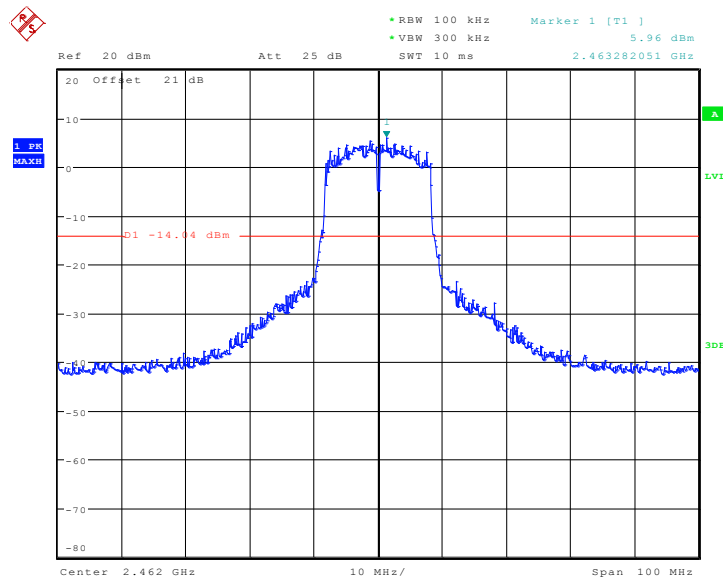
Date: 15..JUL..2013 10:10:52

Fig.A.6.1.39 Conducted Spurious Emission (802.11g, Ch6, 15 GHz-20 GHz)



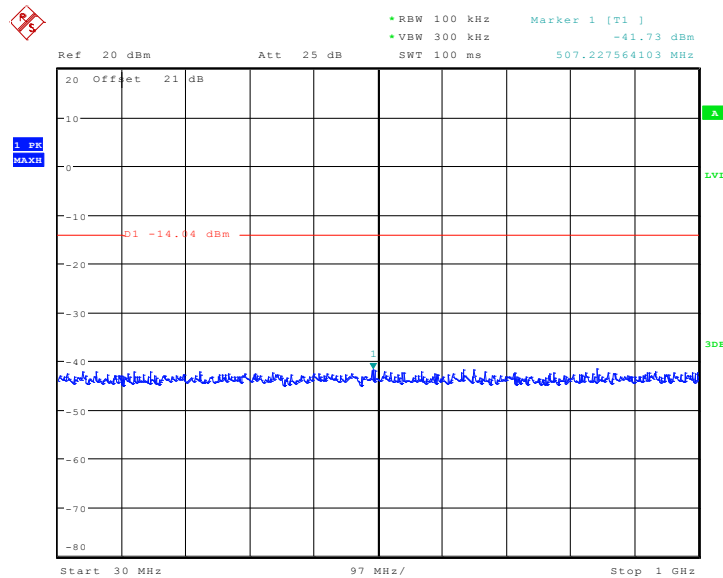
Date: 15.JUL.2013 10:11:12

Fig.A.6.1.40 Conducted Spurious Emission (802.11g, Ch6, 20 GHz-26 GHz)



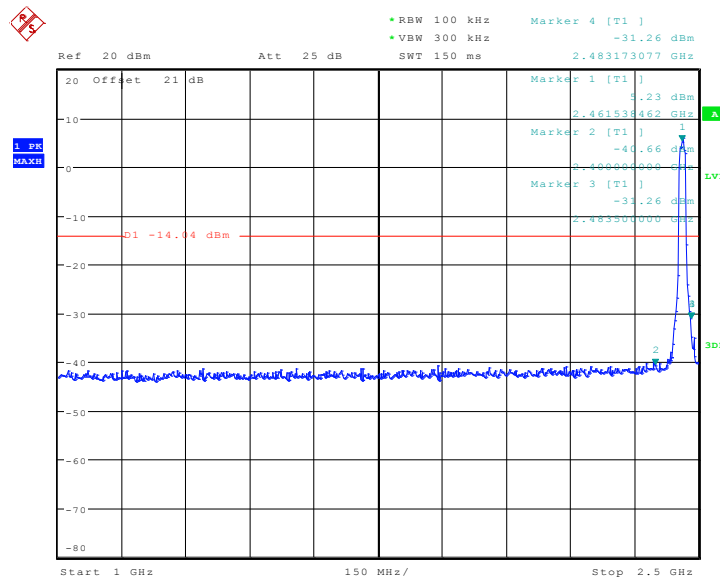
Date: 15..JUL..2013 10:12:19

Fig.A.6.1.41 Conducted Spurious Emission (802.11g, Ch11, Center Frequency)



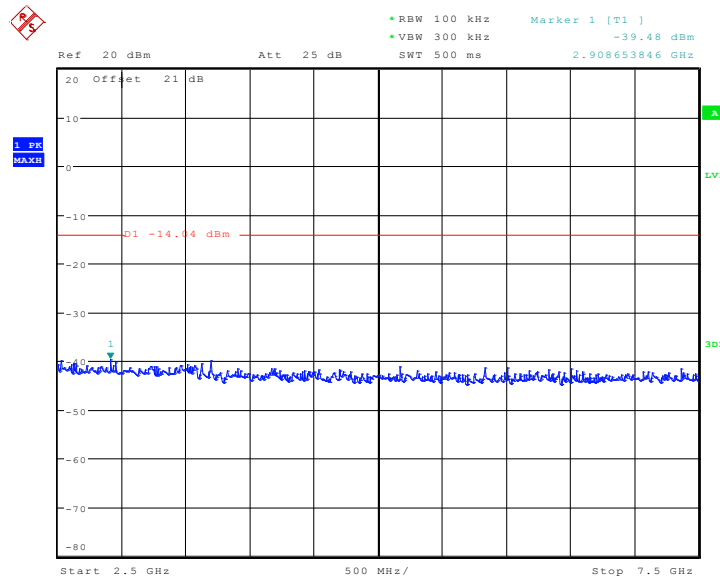
Date: 15..JUL..2013 10:12:34

Fig.A.6.1.42 Conducted Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)



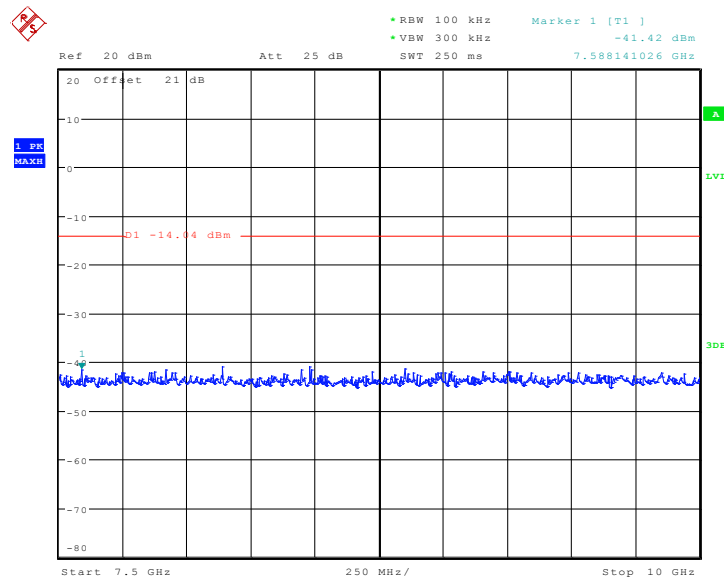
Date: 15..JUL..2013 10:13:11

Fig.A.6.1.43 Conducted Spurious Emission (802.11g, Ch11, 1 GHz-2.5 GHz)



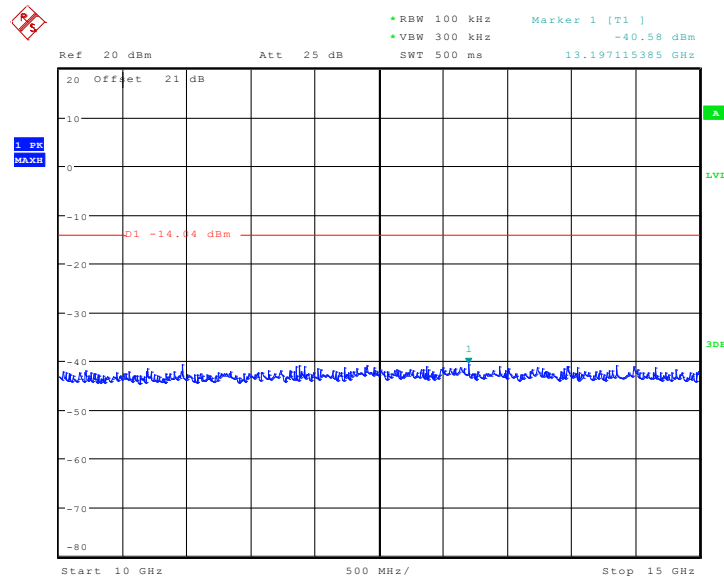
Date: 15.JUL.2013 10:13:32

Fig.A.6.1.44 Conducted Spurious Emission (802.11g, Ch11, 2.5 GHz-7.5 GHz)



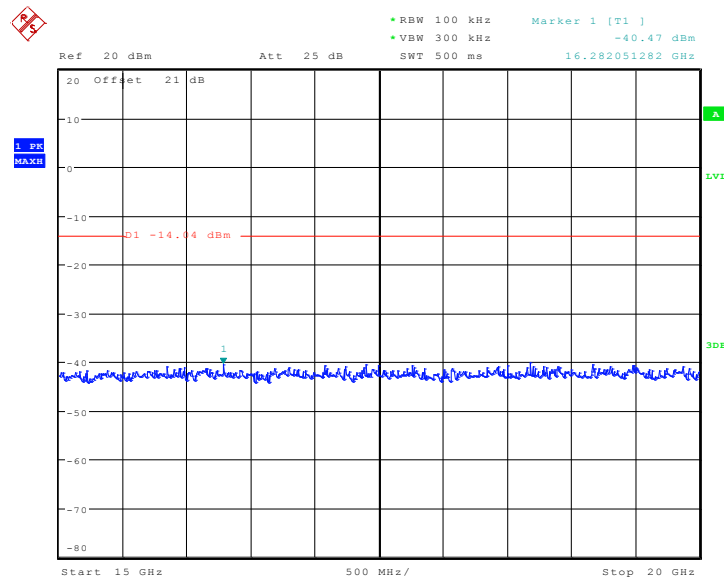
Date: 15..JUL..2013 10:13:52

Fig.A.6.1.45 Conducted Spurious Emission (802.11g, Ch11, 7.5 GHz-10 GHz)



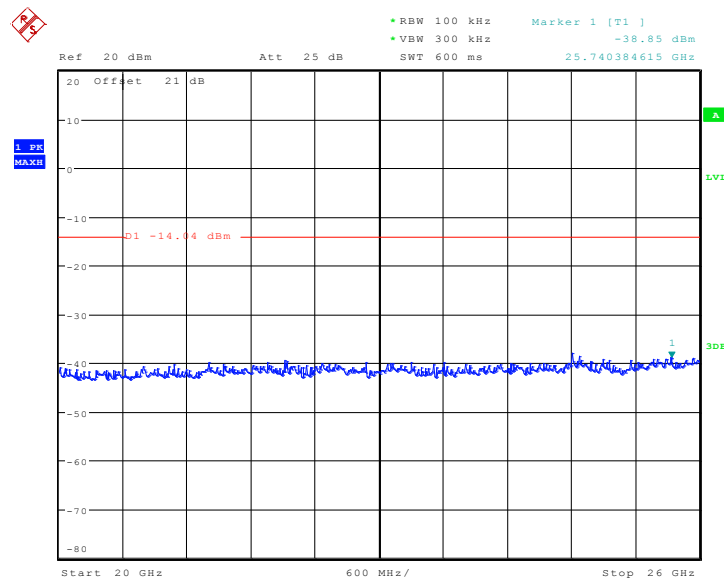
Date: 15.JUL.2013 10:14:08

Fig.A.6.1.46 Conducted Spurious Emission (802.11g, Ch11, 10 GHz-15 GHz)



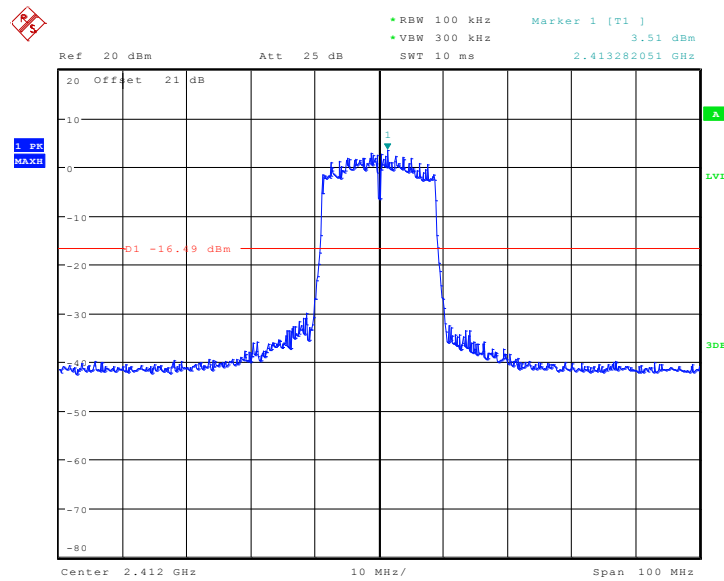
Date: 15..JUL..2013 10:14:36

Fig.A.6.1.47 Conducted Spurious Emission (802.11g, Ch11, 15 GHz-20 GHz)



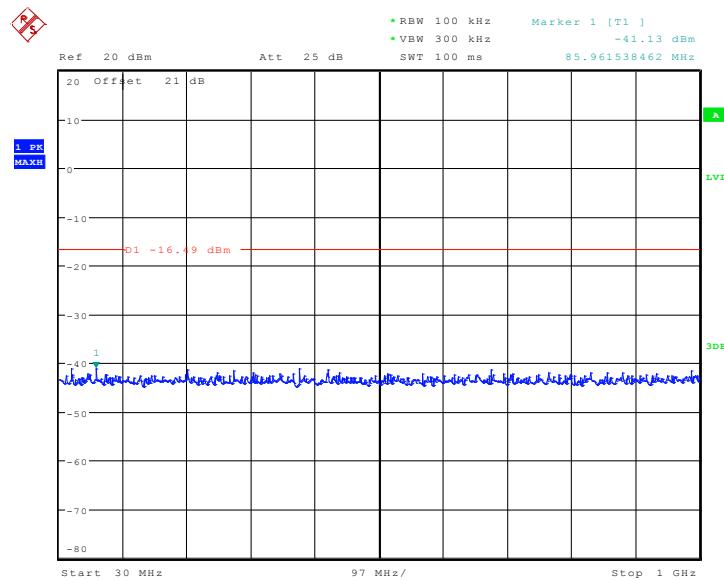
Date: 15.JUL.2013 10:14:54

Fig.A.6.1.48 Conducted Spurious Emission (802.11g, Ch11, 20 GHz-26 GHz)



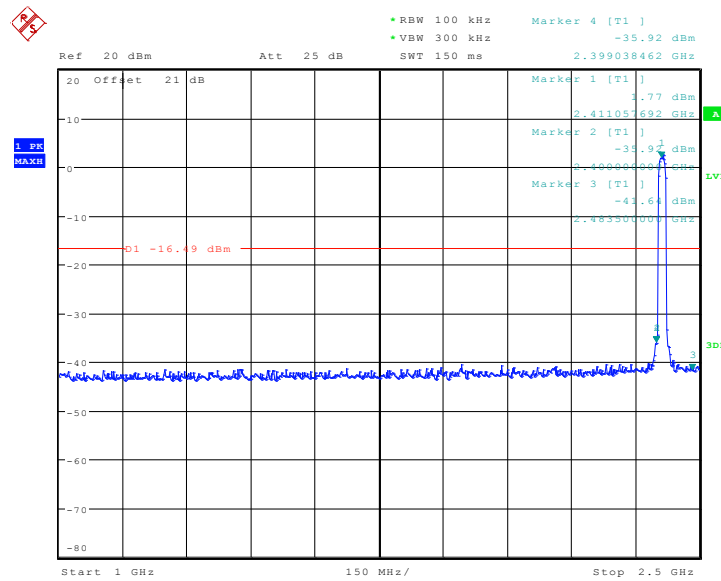
Date: 15..JUL..2013 10:16:52

Fig.A.6.1.49 Conducted Spurious Emission (802.11n-HT20, Ch1, Center Frequency)



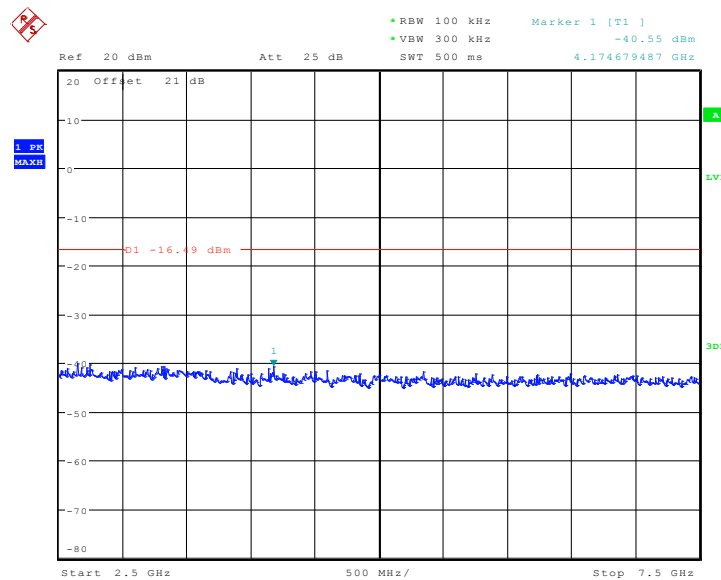
Date: 15.JUL.2013 10:17:19

Fig.A.6.1.50 Conducted Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)



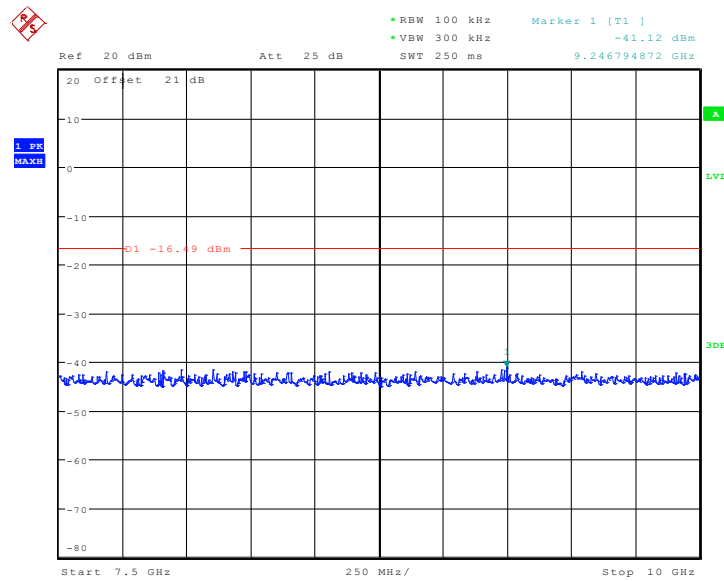
Date: 15..III..2013 10:17:54

Fig.A.6.1.51 Conducted Spurious Emission (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)



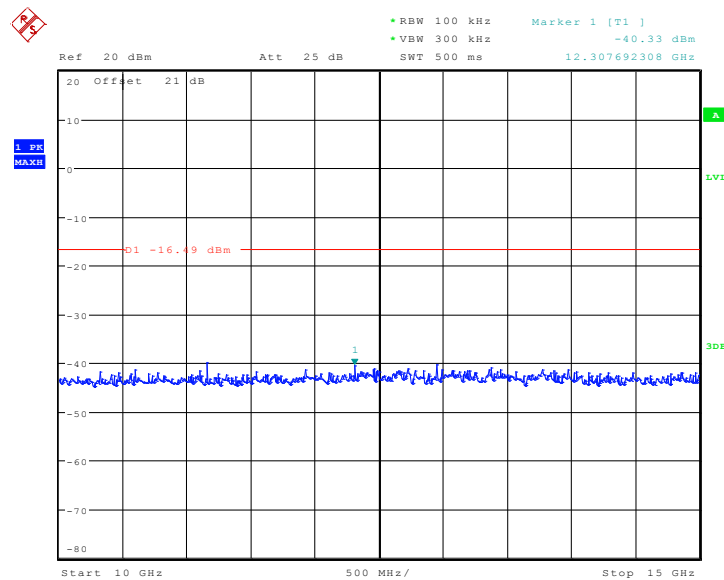
Date: 15..JUL.2013 10:18:20

Fig.A.6.1.52 Conducted Spurious Emission (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)



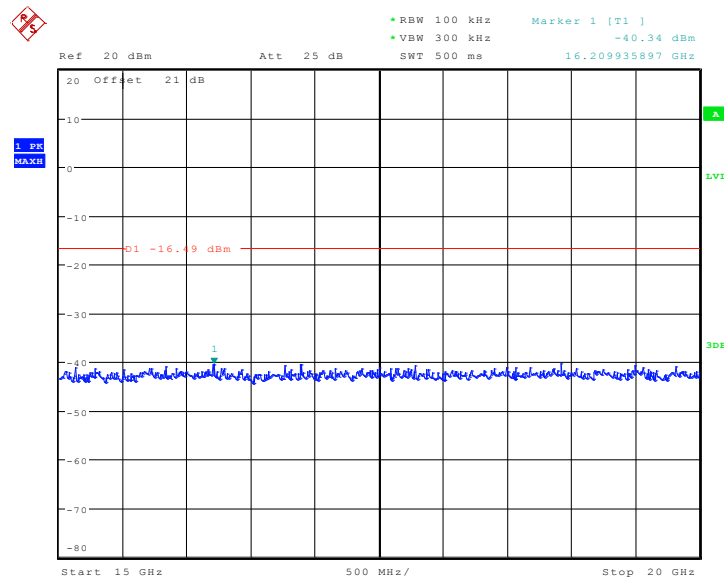
Date: 15..JUL..2013 10:18:42

Fig.A.6.1.53 Conducted Spurious Emission (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)



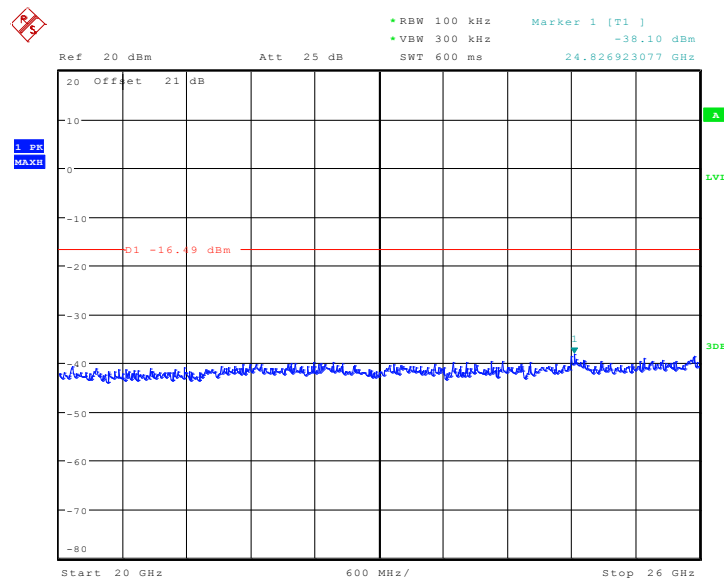
Date: 15.JUL.2013 10:18:56

Fig.A.6.1.54 Conducted Spurious Emission (802.11n-HT20, Ch1, 10 GHz-15 GHz)



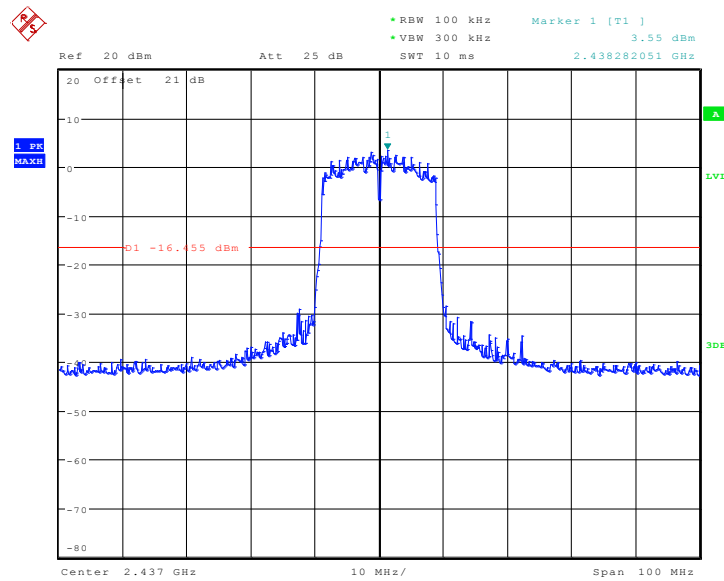
Date: 15..JUL..2013 10:19:13

Fig.A.6.1.55 Conducted Spurious Emission (802.11n-HT20, Ch1, 15 GHz-20 GHz)



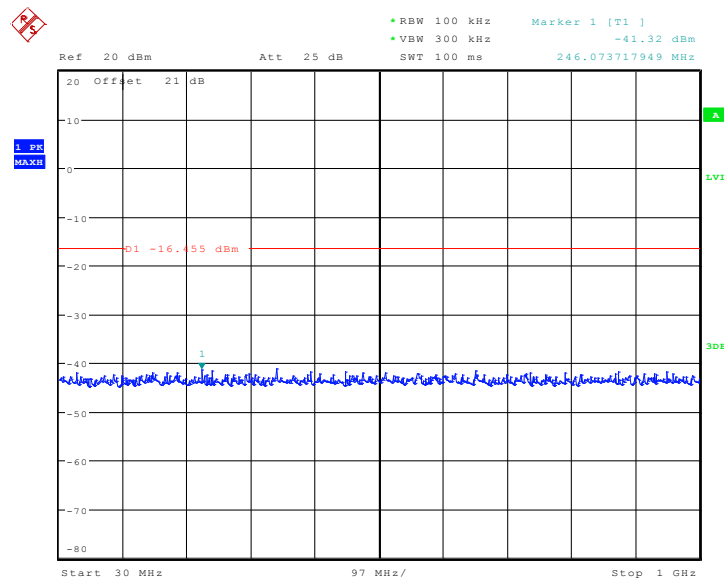
Date: 15.JUL.2013 10:19:28

Fig.A.6.1.56 Conducted Spurious Emission (802.11n-HT20, Ch1, 20 GHz-26 GHz)



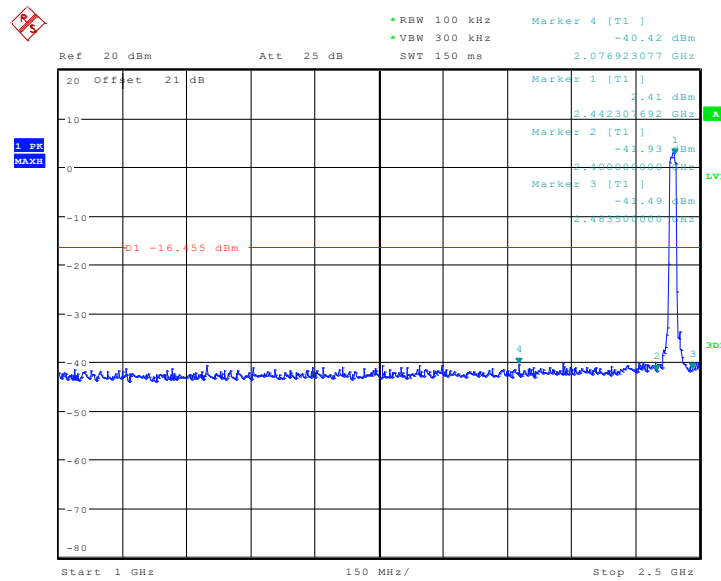
Date: 15..JUL..2013 10:21:19

Fig.A.6.1.57 Conducted Spurious Emission (802.11n-HT20, Ch6, Center Frequency)



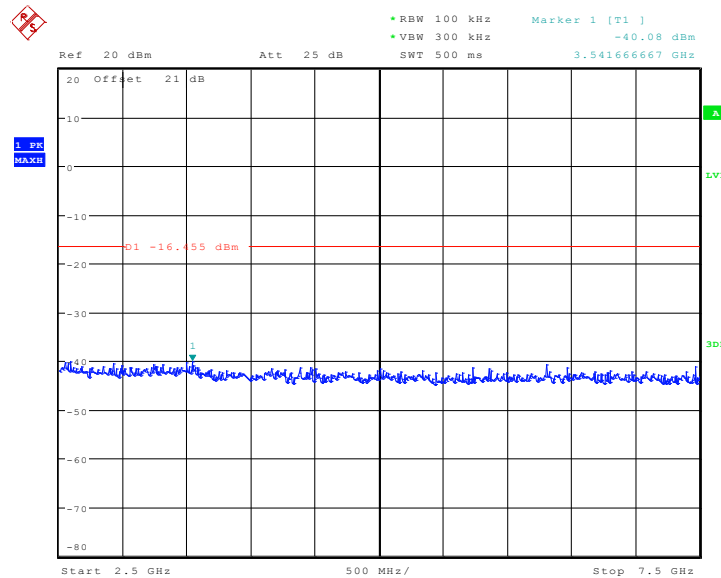
Date: 15.JUL.2013 10:21:34

Fig.A.6.1.58 Conducted Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)



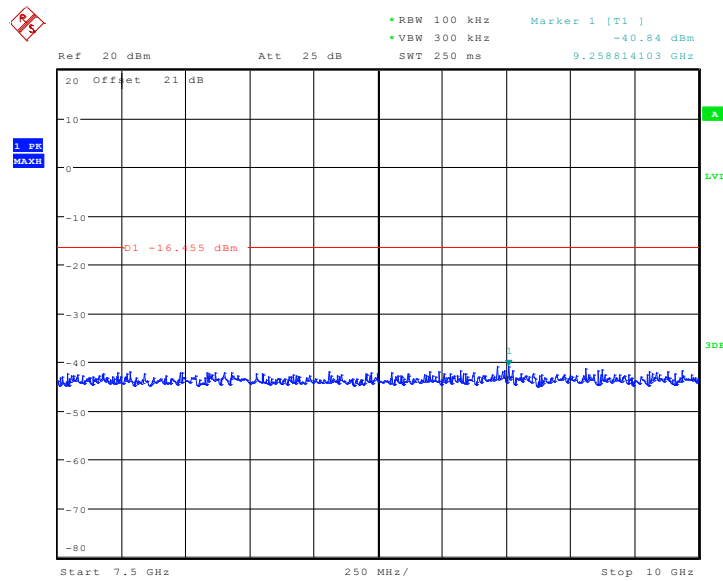
Date: 15..III..2013 10:22:26

Fig.A.6.1.59 Conducted Spurious Emission (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)



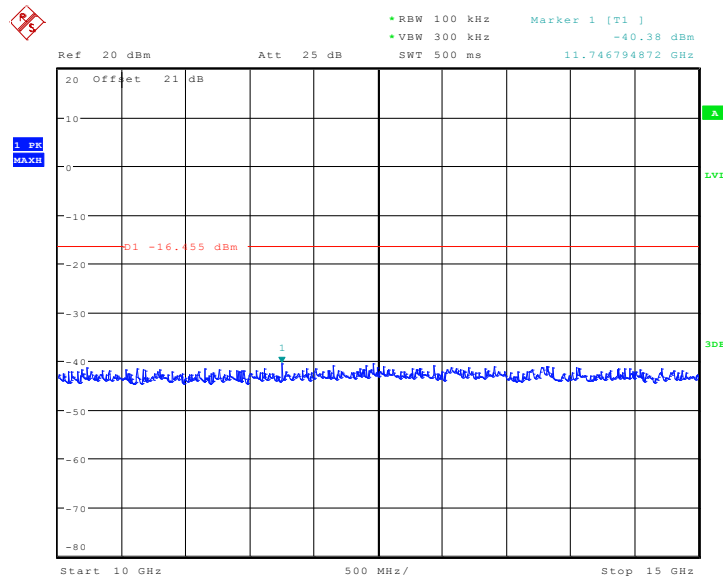
Date: 15..JUL.2013 10:22:47

Fig.A.6.1.60 Conducted Spurious Emission (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)



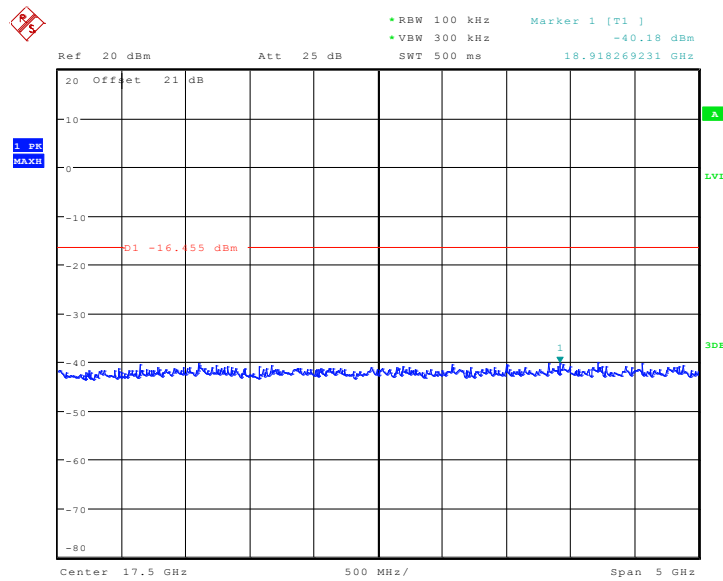
Date: 15..JUL..2013 10:23:06

Fig.A.6.1.61 Conducted Spurious Emission (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)



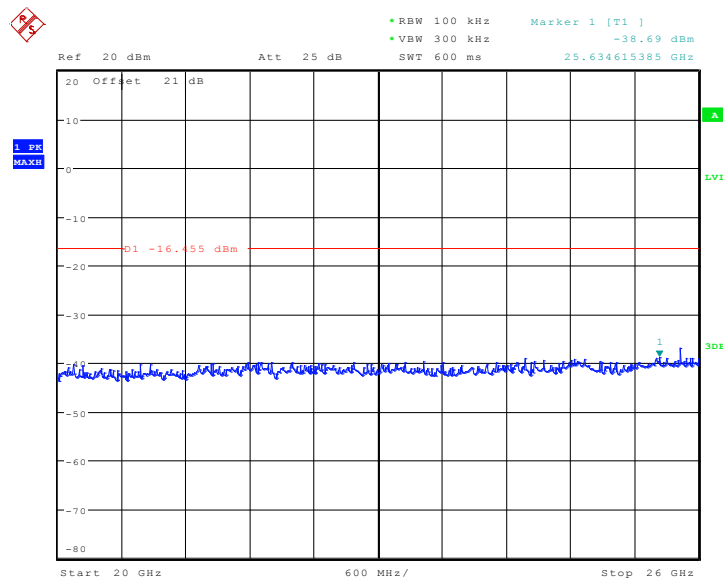
Date: 15.JUL.2013 10:23:27

Fig.A.6.1.62 Conducted Spurious Emission (802.11n-HT20, Ch6, 10 GHz-15 GHz)



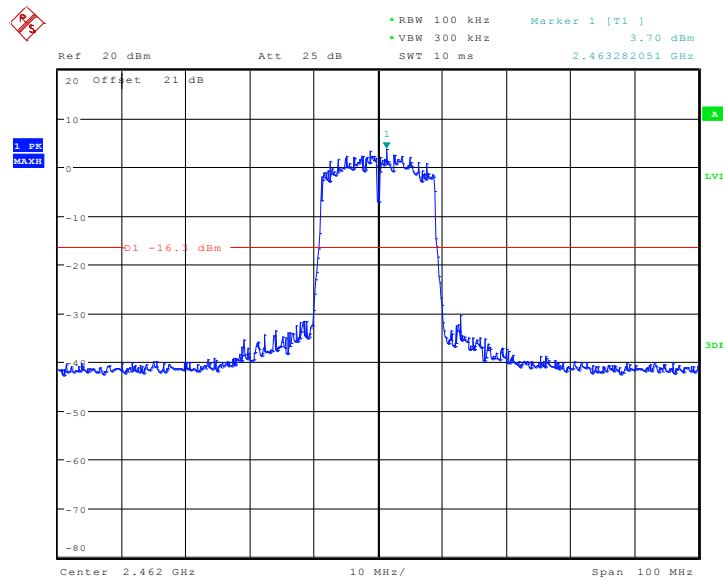
Date: 15..JUL..2013 10:23:56

Fig.A.6.1.63 Conducted Spurious Emission (802.11n-HT20, Ch6, 15 GHz-20 GHz)



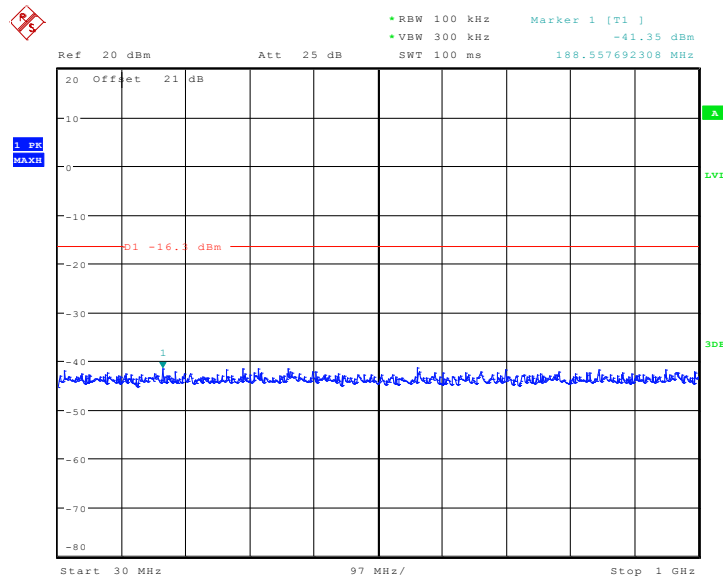
Date: 15.JUL.2013 10:24:15

Fig.A.6.1.64 Conducted Spurious Emission (802.11n-HT20, Ch6, 20 GHz-26 GHz)



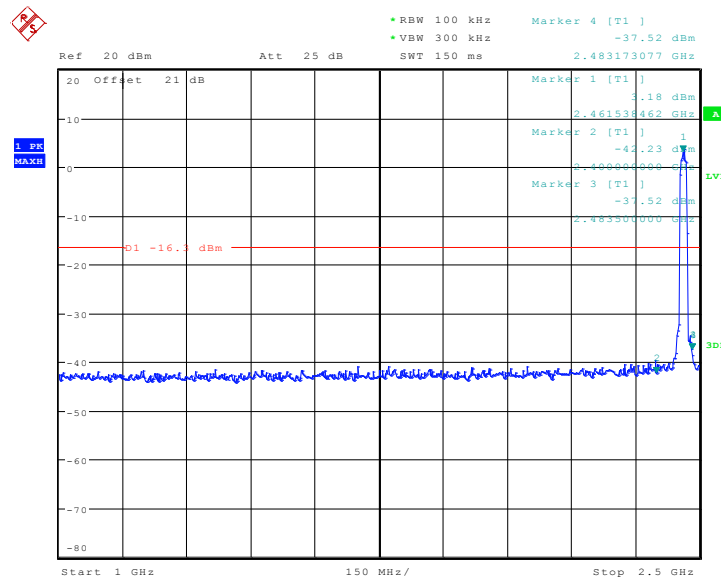
Date: 15..JUL..2013 10:25:40

Fig.A.6.1.65 Conducted Spurious Emission (802.11n-HT20, Ch11, Center Frequency)



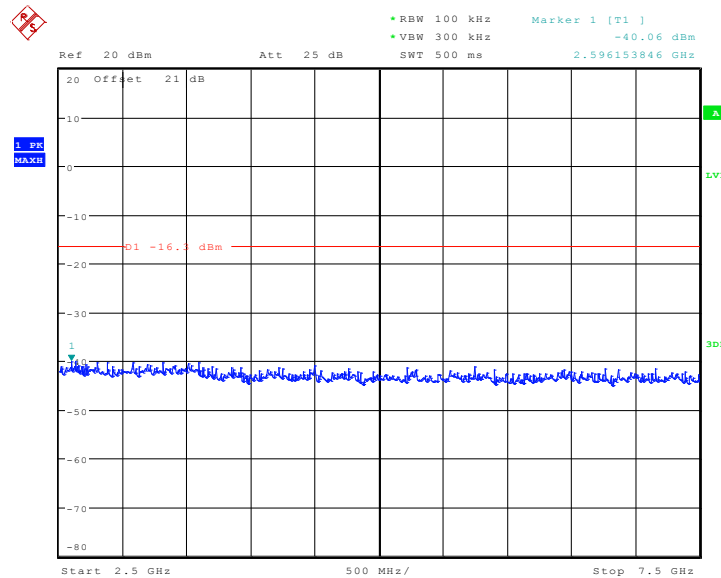
Date: 15.JUL.2013 10:25:55

Fig.A.6.1.66 Conducted Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)



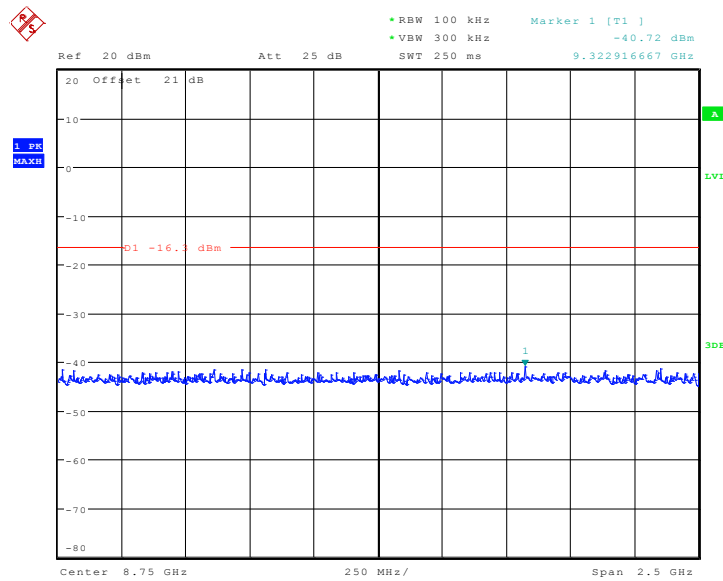
Date: 15..III..2013 10:26:25

Fig.A.6.1.67 Conducted Spurious Emission (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)



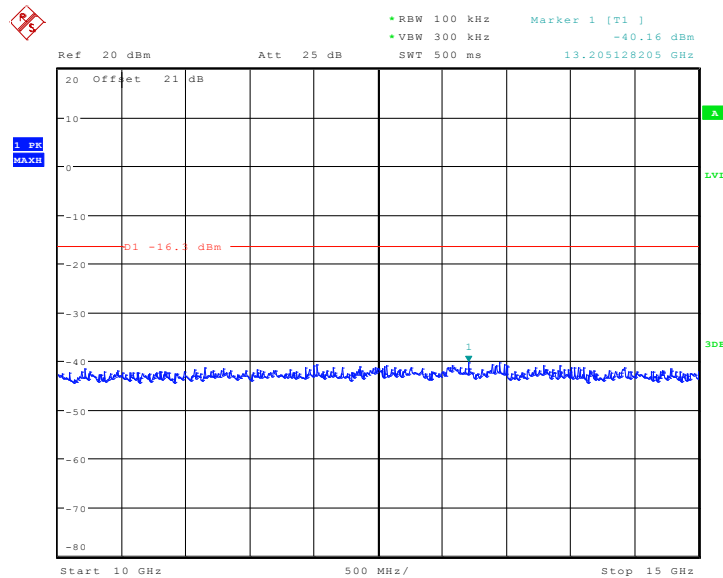
Date: 15.JUL.2013 10:26:48

Fig.A.6.1.68 Conducted Spurious Emission (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)



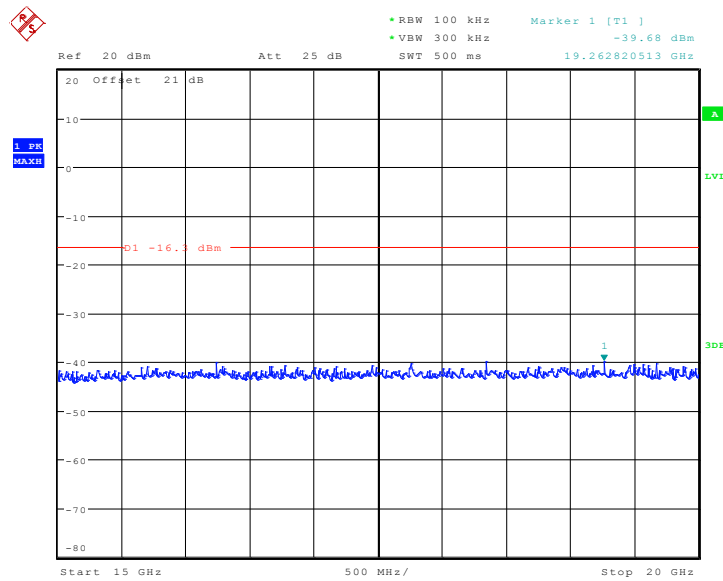
Date: 15..JUL..2013 10:27:14

Fig.A.6.1.69 Conducted Spurious Emission (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)



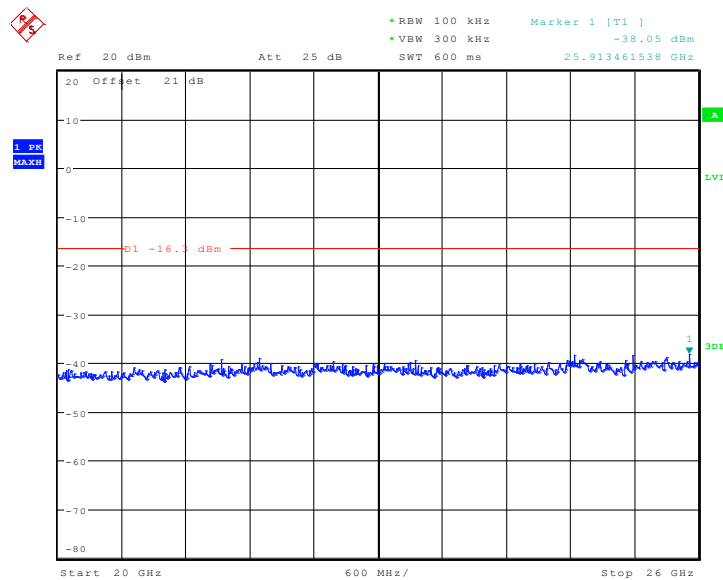
Date: 15.JUL.2013 10:27:34

Fig.A.6.1.70 Conducted Spurious Emission (802.11n-HT20, Ch11, 10 GHz-15 GHz)



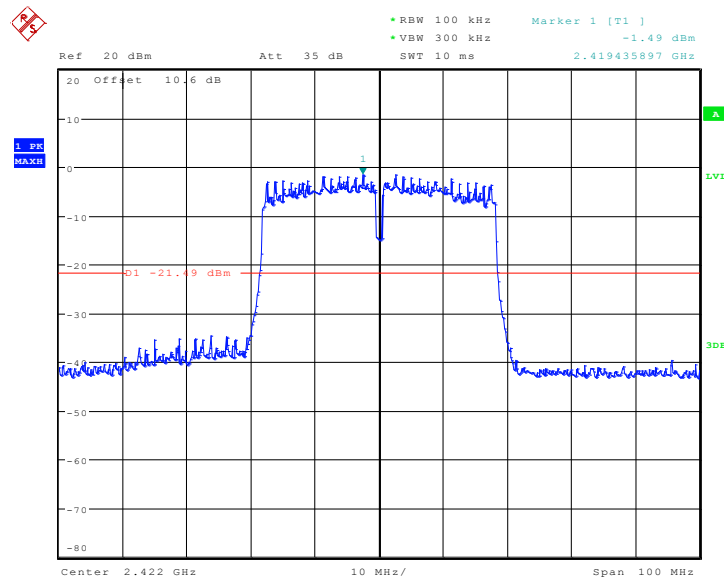
Date: 15..JUL..2013 10:27:54

Fig.A.6.1.71 Conducted Spurious Emission (802.11n-HT20, Ch11, 15 GHz-20 GHz)



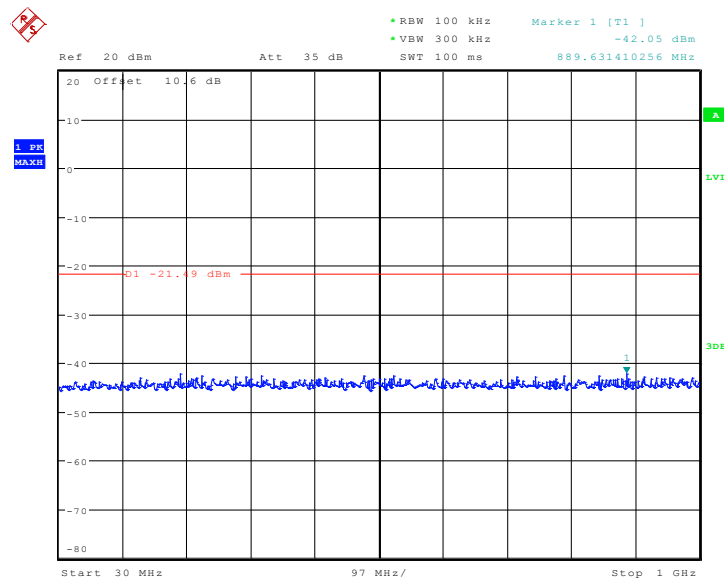
Date: 15.JUL.2013 10:28:13

Fig.A.6.1.72 Conducted Spurious Emission (802.11n-HT20, Ch11, 20 GHz-26 GHz)



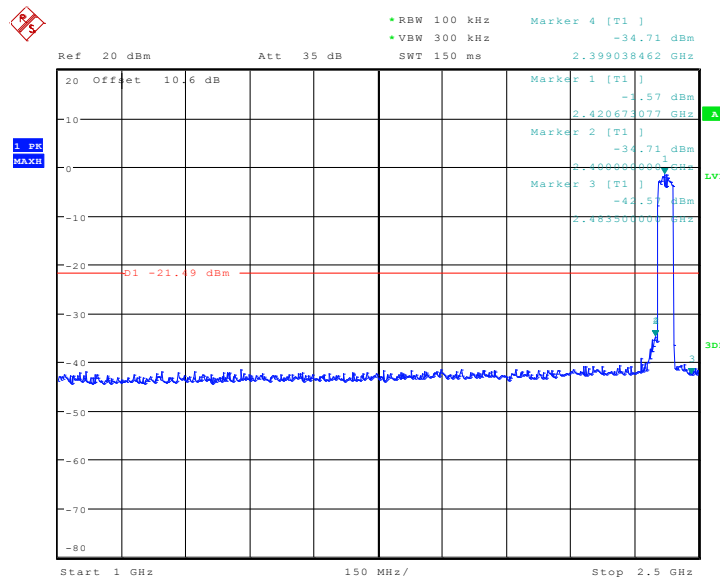
Date: 19.JUL.2013 13:59:45

Fig.A.6.1.73 Conducted Spurious Emission (802.11n-HT40, Ch3, Center Frequency)



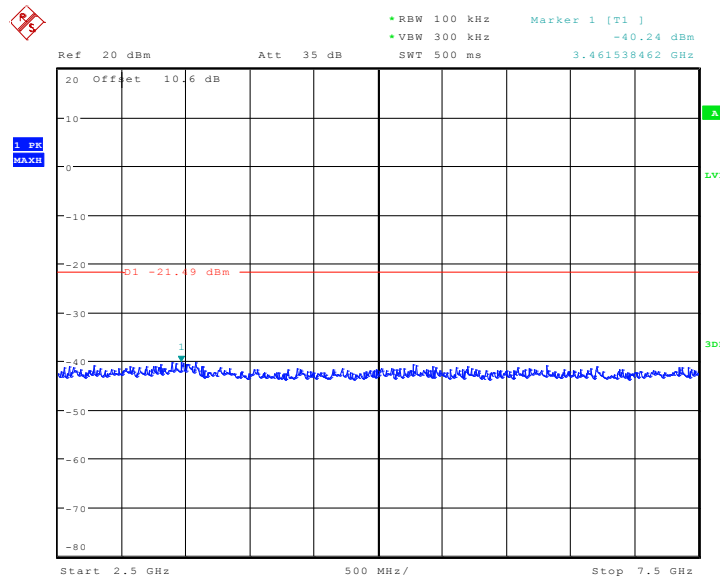
Date: 19.JUL.2013 14:00:08

Fig.A.6.1.74 Conducted Spurious Emission (802.11n-HT40, Ch3, 30 MHz-1 GHz)



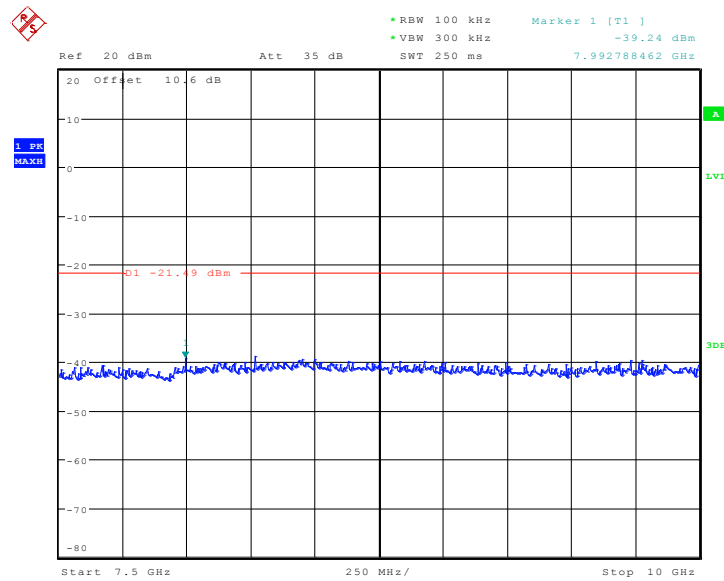
Date: 19..JUL..2013 14:02:36

Fig.A.6.1.75 Conducted Spurious Emission (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)



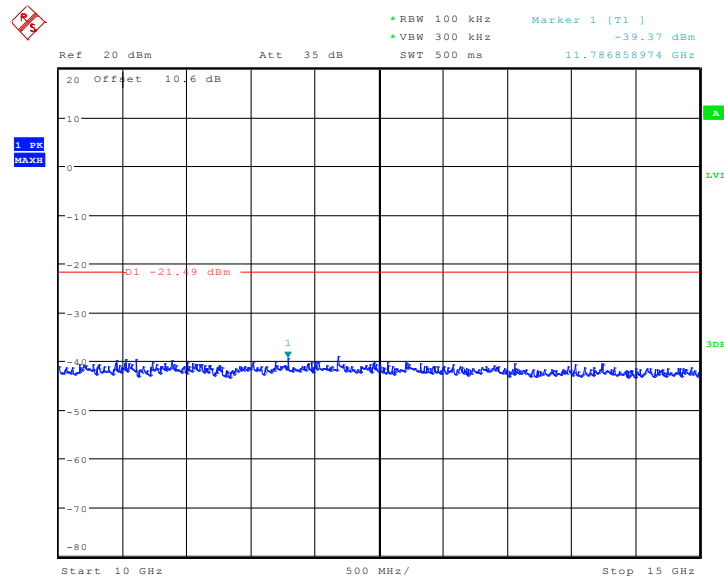
Date: 19.JUL.2013 14:03:11

Fig.A.6.1.76 Conducted Spurious Emission (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)



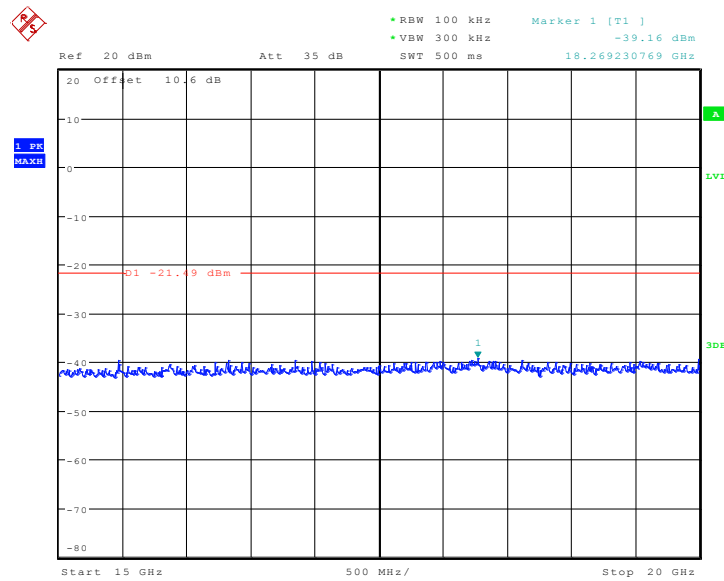
Date: 19.JUL.2013 14:03:38

Fig.A.6.1.77 Conducted Spurious Emission (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)



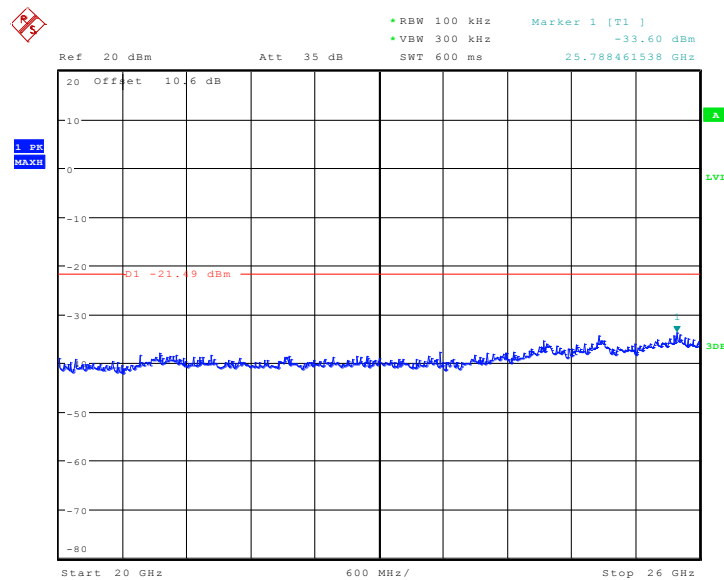
Date: 19.JUL.2013 14:04:06

Fig.A.6.1.78 Conducted Spurious Emission (802.11n-HT40, Ch3, 10 GHz-15 GHz)



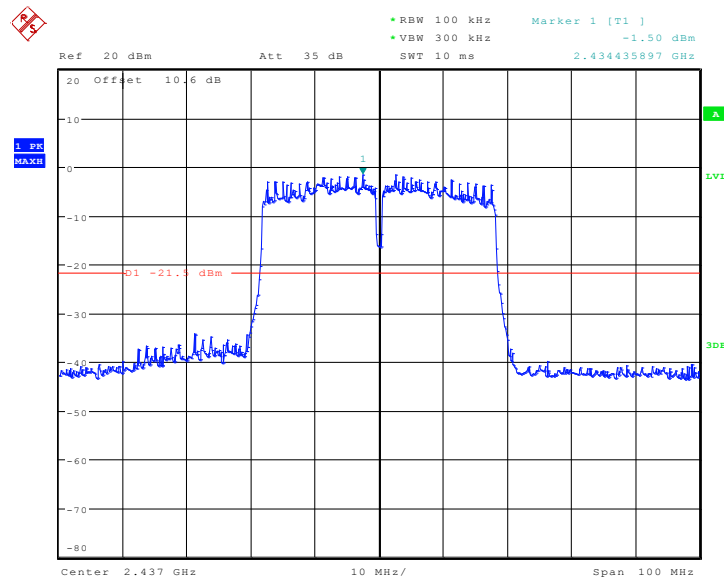
Date: 19.JUL.2013 14:04:31

Fig.A.6.1.79 Conducted Spurious Emission (802.11n-HT40, Ch3, 15 GHz-20 GHz)



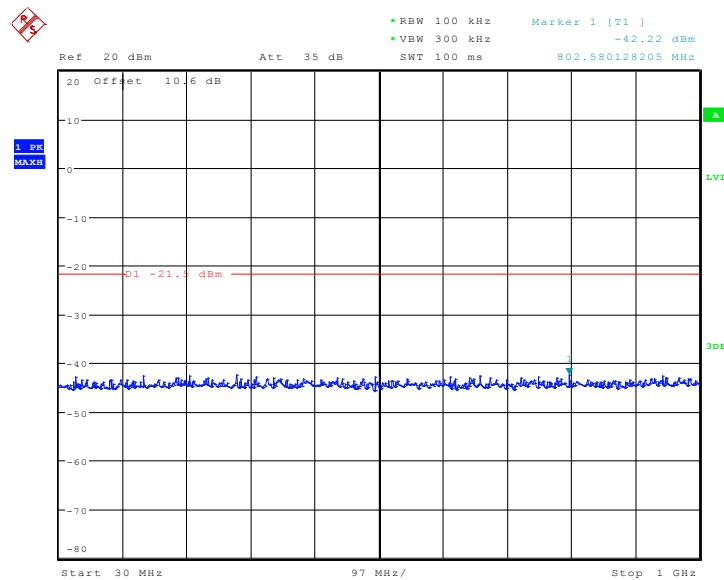
Date: 19.JUL.2013 14:05:02

Fig.A.6.1.80 Conducted Spurious Emission (802.11n-HT40, Ch3, 20 GHz-26 GHz)



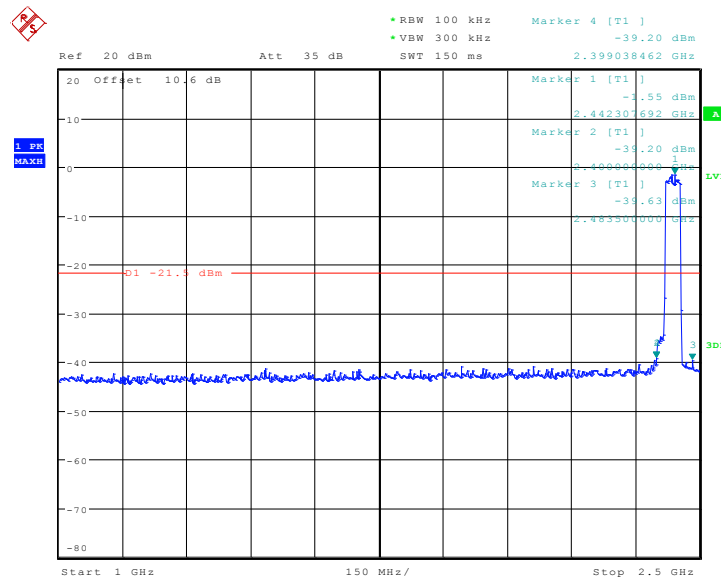
Date: 19.JUL.2013 14:06:15

Fig.A.6.1.81 Conducted Spurious Emission (802.11n-HT40, Ch6, Center Frequency)



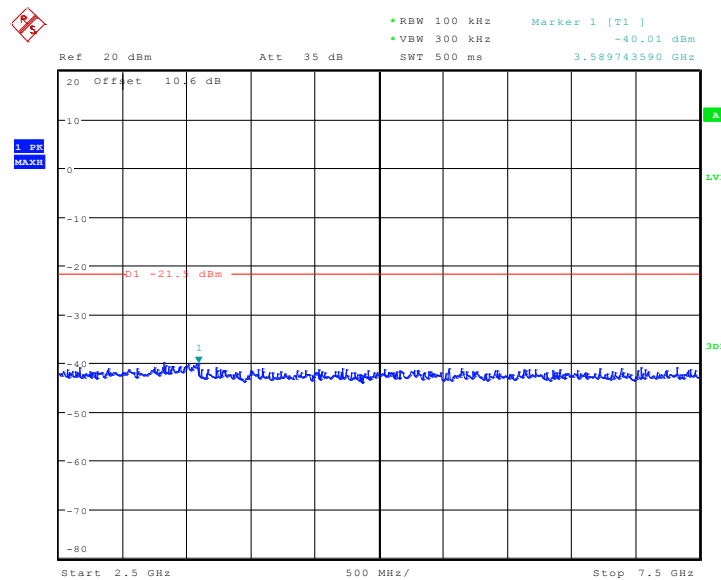
Date: 19.JUL.2013 14:06:42

Fig.A.6.1.82 Conducted Spurious Emission (802.11n-HT40, Ch6, 30 MHz-1 GHz)



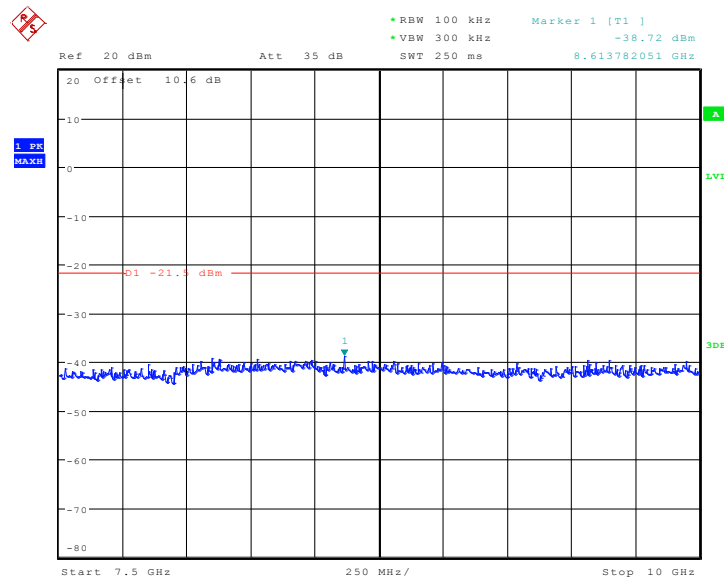
Date: 19.JUL.2013 14:08:13

Fig.A.6.1.83 Conducted Spurious Emission (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)



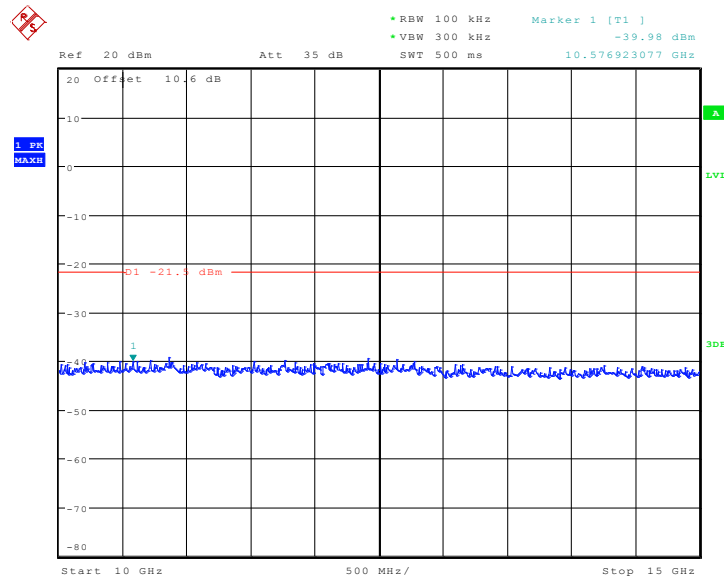
Date: 19.JUL.2013 14:08:53

Fig.A.6.1.84 Conducted Spurious Emission (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)



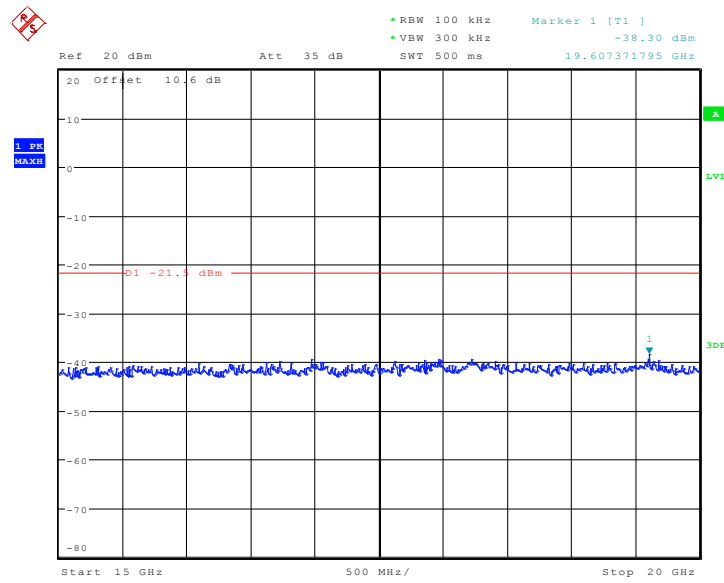
Date: 19.JUL.2013 14:09:18

Fig.A.6.1.85 Conducted Spurious Emission (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)



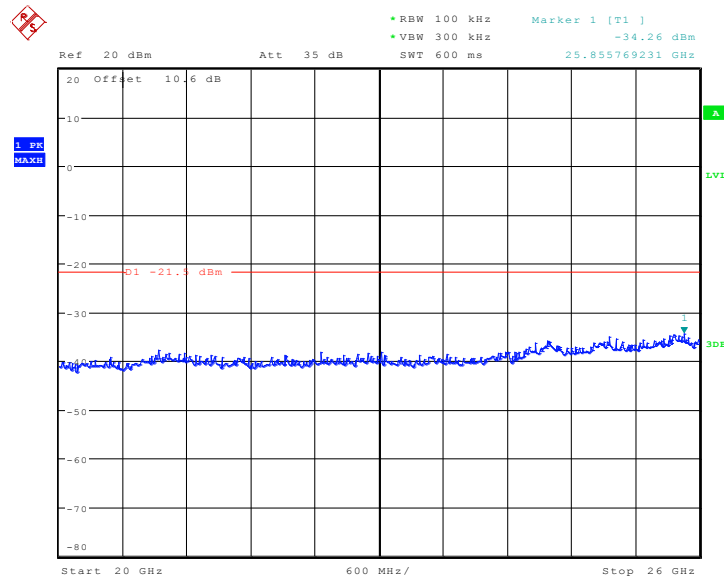
Date: 19.JUL.2013 14:09:38

Fig.A.6.1.86 Conducted Spurious Emission (802.11n-HT40, Ch6, 10 GHz-15 GHz)



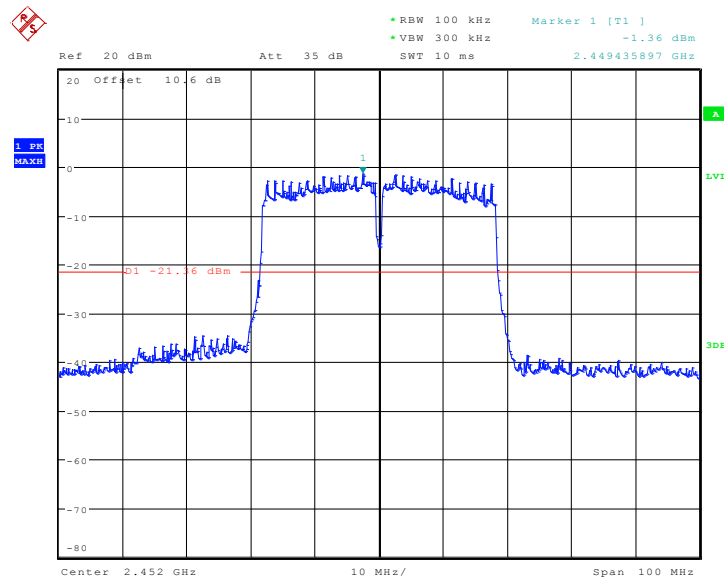
Date: 19.JUL.2013 14:10:02

Fig.A.6.1.87 Conducted Spurious Emission (802.11n-HT40, Ch6, 15 GHz-20 GHz)



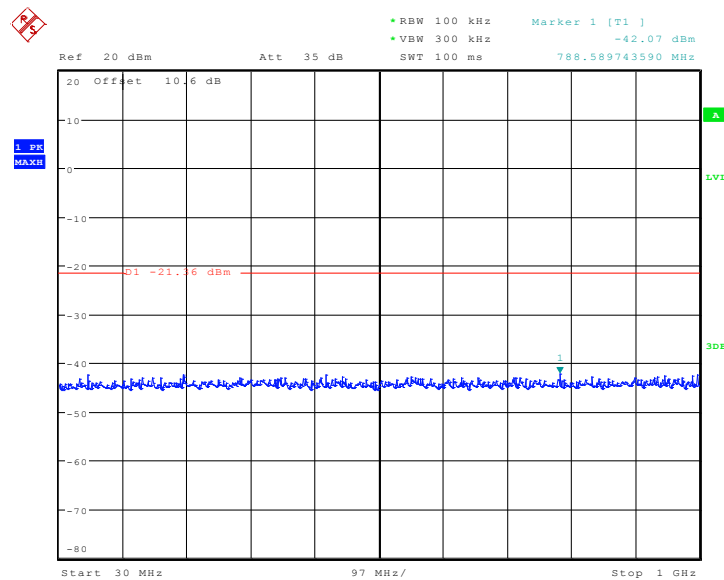
Date: 19.JUL.2013 14:10:32

Fig.A.6.1.88 Conducted Spurious Emission (802.11n-HT40, Ch6, 20 GHz-26 GHz)



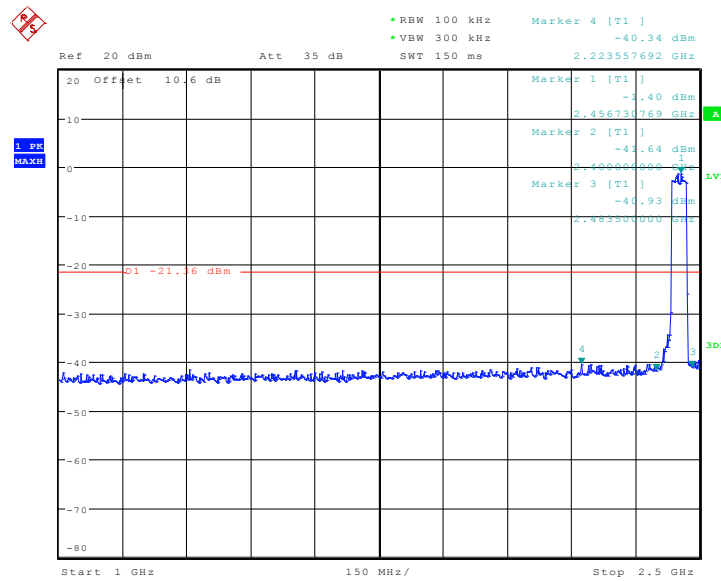
Date: 19.JUL.2013 14:12:02

Fig.A.6.1.89 Conducted Spurious Emission (802.11n-HT40, Ch9, Center Frequency)



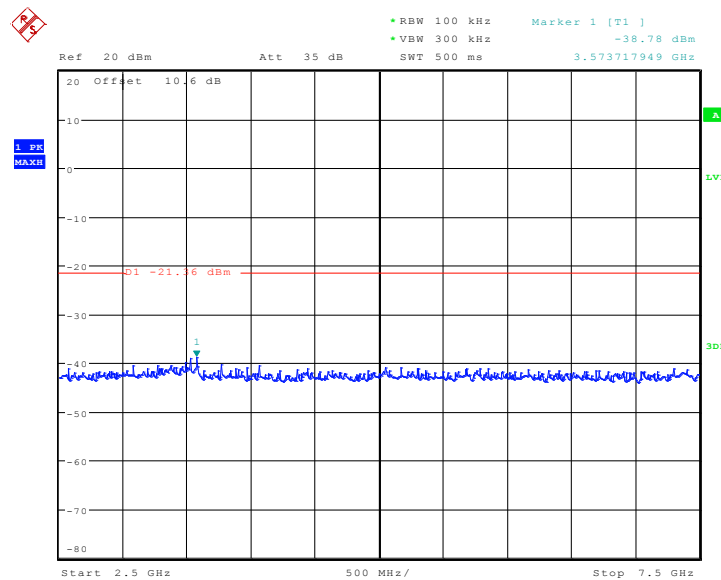
Date: 19.JUL.2013 14:12:27

Fig.A.6.1.90 Conducted Spurious Emission (802.11n-HT40, Ch9, 30 MHz-1 GHz)



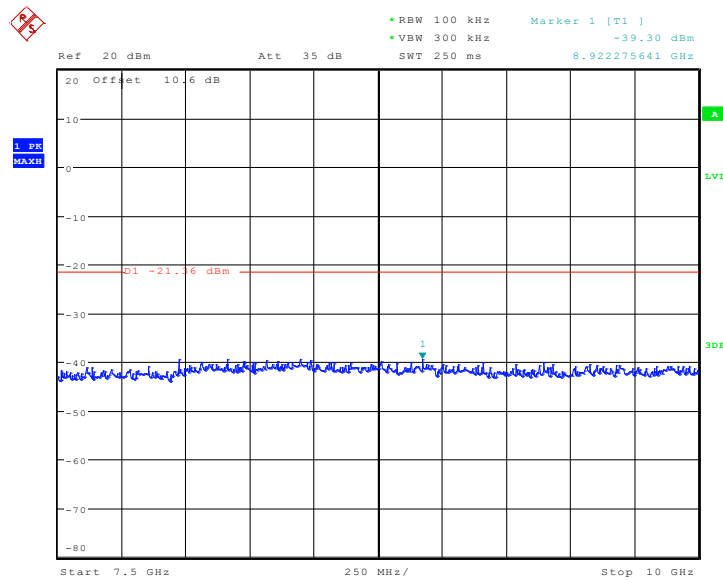
Date: 19.JUL.2013 14:14:01

Fig.A.6.1.91 Conducted Spurious Emission (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)



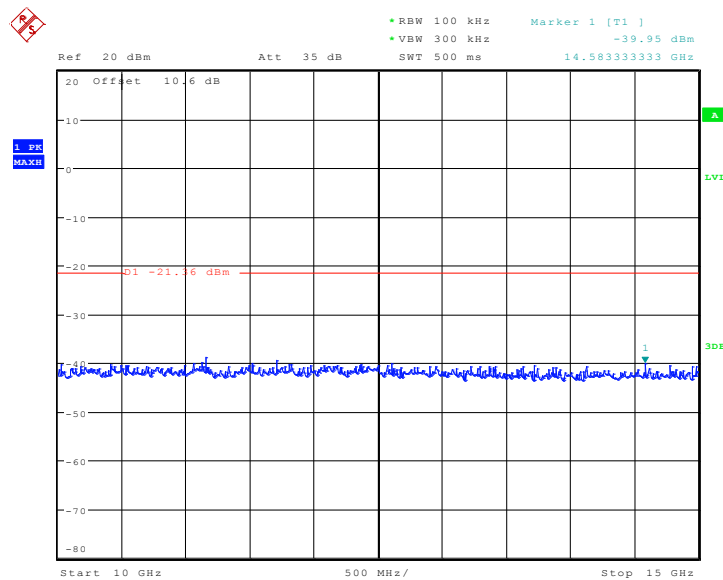
Date: 19.JUL.2013 14:14:33

Fig.A.6.1.92 Conducted Spurious Emission (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)



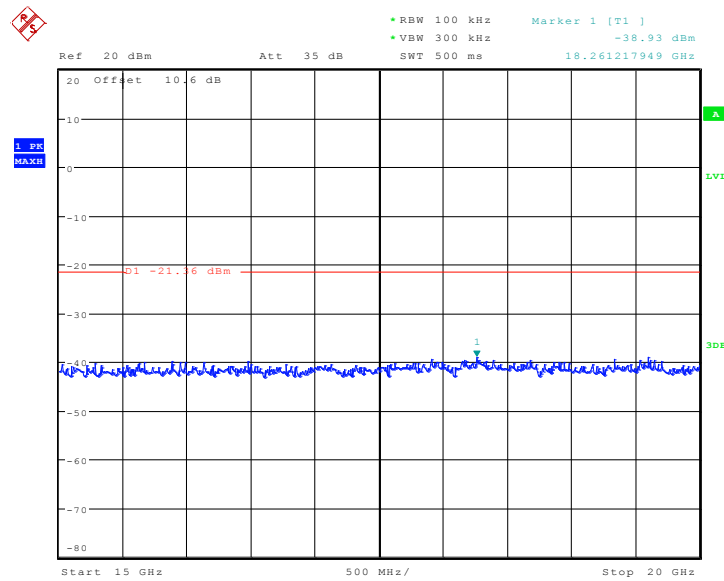
Date: 19.JUL.2013 14:15:00

Fig.A.6.1.93 Conducted Spurious Emission (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)



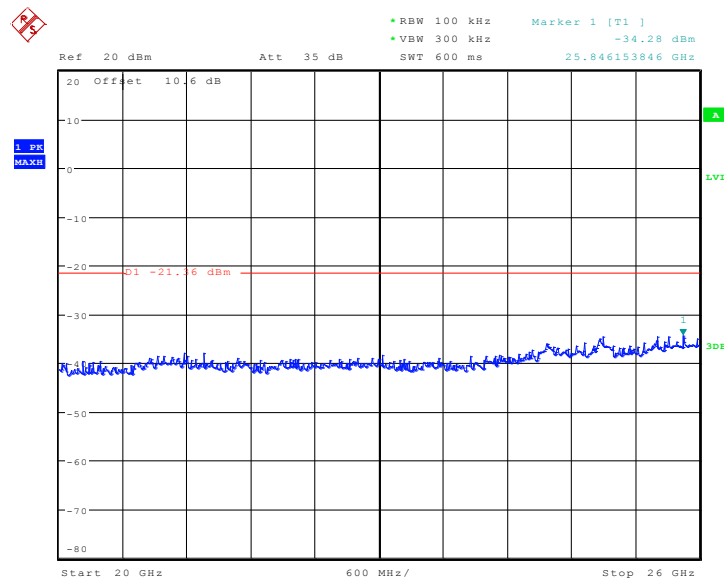
Date: 19.JUL.2013 14:15:21

Fig.A.6.1.94 Conducted Spurious Emission (802.11n-HT40, Ch9, 10 GHz-15 GHz)



Date: 19.JUL.2013 14:15:40

Fig.A.6.1.95 Conducted Spurious Emission (802.11n-HT40, Ch9, 15 GHz-20 GHz)



Date: 19.JUL.2013 14:16:01

Fig.A.6.1.96 Conducted Spurious Emission (802.11n-HT40, Ch9, 20 GHz-26 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

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)).

The measurement is made according to KDB558074.

Limit in restricted band:

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

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	24Mbps(OFDM)	MCS5(OFDM)	MCS5(OFDM)

Measurement Results:
802.11b/g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.A.6.2.1	P
	1	30 MHz ~1 GHz	Fig.A.6.2.2	P
		1 GHz ~ 3 GHz	Fig.A.6.2.3	P
		3 GHz ~ 18 GHz	Fig.A.6.2.4	P
	6	30 MHz ~1 GHz	Fig.A.6.2.5	P
		1 GHz ~ 3 GHz	Fig.A.6.2.6	P
		3 GHz ~ 18 GHz	Fig.A.6.2.7	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.8	P
	11	30 MHz ~1 GHz	Fig.A.6.2.9	P
		1 GHz ~ 3 GHz	Fig.A.6.2.10	P
		3 GHz ~ 18 GHz	Fig.A.6.2.11	P
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.6.2.12	P
	1	30 MHz ~1 GHz	Fig.A.6.2.13	P
		1 GHz ~ 3 GHz	Fig.A.6.2.14	P
		3 GHz ~ 18 GHz	Fig.A.6.2.15	P
	6	30 MHz ~1 GHz	Fig.A.6.2.16	P
		1 GHz ~ 3 GHz	Fig.A.6.2.17	P
		3 GHz ~ 18 GHz	Fig.A.6.2.18	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.19	P
	11	30 MHz ~1 GHz	Fig.A.6.2.20	P
		1 GHz ~ 3 GHz	Fig.A.6.2.21	P
		3 GHz ~ 18 GHz	Fig.A.6.2.22	P

802.11n mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.23	P
	1	30 MHz ~1 GHz	Fig.A.6.2.24	P
		1 GHz ~ 3 GHz	Fig.A.6.2.25	P
		3 GHz ~ 18 GHz	Fig.A.6.2.26	P
	6	30 MHz ~1 GHz	Fig.A.6.2.27	P
		1 GHz ~ 3 GHz	Fig.A.6.2.28	P
		3 GHz ~ 18 GHz	Fig.A.6.2.29	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.30	P
	11	30 MHz ~1 GHz	Fig.A.6.2.31	P
		1 GHz ~ 3 GHz	Fig.A.6.2.32	P
		3 GHz ~ 18 GHz	Fig.A.6.2.33	P
802.11n (HT40)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.34	P
	3	30 MHz ~1 GHz	Fig.A.6.2.35	P
		1 GHz ~ 3 GHz	Fig.A.6.2.36	P
		3 GHz ~ 18 GHz	Fig.A.6.2.37	P

	6	30 MHz ~1 GHz	Fig.A.6.2.38	P
		1 GHz ~ 3 GHz	Fig.A.6.2.39	P
		3 GHz ~ 18 GHz	Fig.A.6.2.40	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.41	P
	9	30 MHz ~1 GHz	Fig.A.6.2.42	P
		1 GHz ~ 3 GHz	Fig.A.6.2.43	P
		3 GHz ~ 18 GHz	Fig.A.6.2.44	P
/	All channels	18 GHz~ 26.5 GHz	Fig.A.6.2.45	P

Conclusion: Pass

Measurement Uncertainty:

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

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

802.11b
Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17501.250	54.9	-22.8	42.8	34.915	VERTICAL
17577.750	54.2	-22.8	42.7	34.275	VERTICAL
17547.000	54.1	-22.8	42.9	33.955	HORIZONTAL
17436.750	53.9	-23.7	42.7	34.883	VERTICAL
17729.250	53.9	-22.8	42.1	34.661	VERTICAL
17654.250	53.8	-22.8	42.7	33.971	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17697.750	54.1	-22.8	42.3	34.601	HORIZONTAL
17461.500	54.1	-22.8	42.6	34.285	HORIZONTAL
17781.750	53.9	-22.8	42.0	34.791	HORIZONTAL
17657.250	53.9	-22.8	42.7	34.071	HORIZONTAL
17442.000	53.9	-23.7	42.7	34.883	HORIZONTAL
17451.750	53.8	-23.7	42.6	34.923	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17580.750	54.2	-22.8	42.7	34.275	HORIZONTAL
17492.250	54.1	-22.8	43.0	33.845	HORIZONTAL
17712.750	54.1	-22.8	42.8	34.111	HORIZONTAL
17812.500	54.1	-22.9	42.9	34.043	HORIZONTAL
17449.500	53.9	-23.7	42.7	34.883	HORIZONTAL
17445.000	53.8	-23.7	42.7	34.783	HORIZONTAL

802.11g
Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17432.250	54.5	-23.7	42.7	35.483	HORIZONTAL
17691.000	53.8	-22.8	42.3	34.301	HORIZONTAL
16959.000	53.7	-23.9	43.5	34.050	VERTICAL
17460.000	53.7	-22.8	42.6	33.885	VERTICAL
17545.500	53.7	-22.8	42.9	33.555	VERTICAL
17910.000	53.6	-22.9	42.7	33.833	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17495.250	54.3	-22.8	43.0	34.045	HORIZONTAL
16985.250	54.1	-23.9	43.2	34.820	HORIZONTAL
17465.250	53.9	-22.8	42.6	34.085	VERTICAL
16626.000	53.9	-23.9	43.1	34.798	HORIZONTAL
17523.750	53.8	-22.8	42.8	33.815	HORIZONTAL
17481.750	53.7	-22.8	43.0	33.445	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17462.250	54.4	-22.8	42.6	34.585	HORIZONTAL
17716.500	54.4	-22.8	42.8	34.411	VERTICAL
17718.000	54.3	-22.8	42.8	34.311	VERTICAL
17493.000	54.1	-22.8	43.0	33.845	VERTICAL
17469.000	54.1	-22.8	42.6	34.285	HORIZONTAL
17748.000	54.1	-22.8	42.1	34.861	HORIZONTAL

802.11n-HT20
Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17793.000	54.8	-22.8	42.0	35.691	HORIZONTAL
17012.250	54.5	-23.9	43.2	35.200	VERTICAL
17950.500	54.2	-22.9	42.7	34.383	VERTICAL
17731.500	54.1	-22.8	42.1	34.861	HORIZONTAL
17504.250	54.1	-22.8	42.8	34.115	VERTICAL
17404.500	54.0	-23.7	42.7	35.013	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17467.500	54.5	-22.8	42.6	34.685	VERTICAL
17274.000	54.3	-23.7	43.2	34.743	VERTICAL
17805.750	53.9	-22.8	42.9	33.801	HORIZONTAL
17457.750	53.9	-23.7	42.6	35.023	VERTICAL
17493.000	53.9	-22.8	43.0	33.645	VERTICAL
17451.000	53.7	-23.7	42.6	34.823	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17504.250	54.0	-22.8	42.8	34.015	VERTICAL
17241.750	53.9	-23.7	42.8	34.763	HORIZONTAL
17459.250	53.9	-22.8	42.6	34.085	HORIZONTAL
17392.500	53.8	-23.7	42.8	34.723	HORIZONTAL
17780.250	53.8	-22.8	42.0	34.691	VERTICAL
17699.250	53.8	-22.8	42.3	34.301	VERTICAL

802.11n-HT40
Ch3

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17379.000	54.7	-23.7	42.8	35.623	VERTICAL
17447.250	54.2	-23.7	42.7	35.183	HORIZONTAL
17954.250	54.0	-22.9	42.7	34.183	HORIZONTAL
17475.750	54.0	-22.8	43.0	33.745	VERTICAL
17538.000	54.0	-22.8	42.9	33.855	VERTICAL
17992.500	53.9	-22.5	42.3	34.167	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17011.500	54.3	-23.9	43.2	35.000	HORIZONTAL
17202.750	54.0	-23.7	43.0	34.643	VERTICAL
17730.000	53.9	-22.8	42.1	34.661	HORIZONTAL
17629.500	53.9	-22.8	42.7	34.015	HORIZONTAL
17718.750	53.8	-22.8	42.8	33.811	VERTICAL
17733.000	53.7	-22.8	42.1	34.461	HORIZONTAL

Ch9

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17540.250	54.5	-22.8	42.9	34.355	VERTICAL
17937.000	54.3	-22.9	42.4	34.793	VERTICAL
16971.750	54.1	-23.9	43.5	34.450	VERTICAL
17520.750	54.1	-22.8	42.8	34.115	VERTICAL
17437.500	53.8	-23.7	42.7	34.783	VERTICAL
17558.250	53.8	-22.8	42.3	34.325	VERTICAL

Test graphs as below:

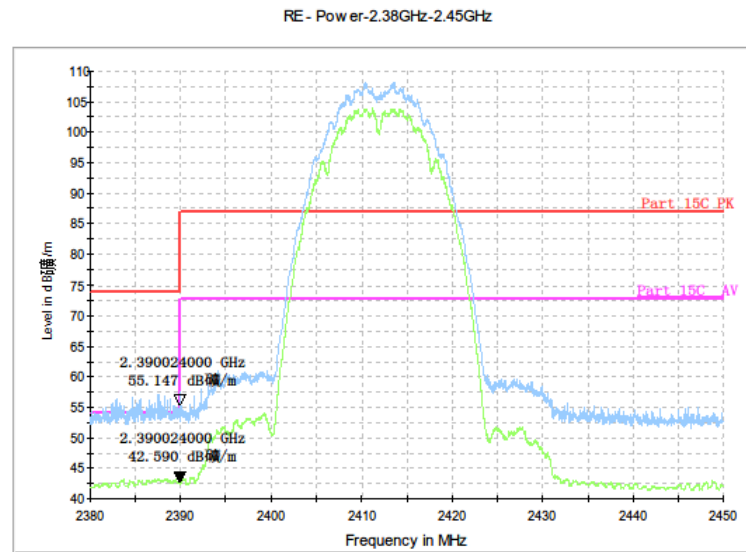


Fig.A.6.2.1 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz – 2.45GHz

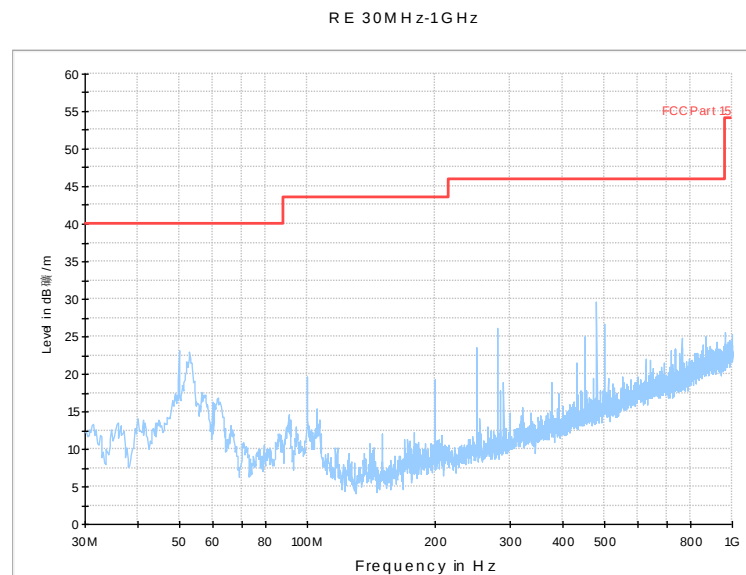


Fig.A.6.2.2 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)

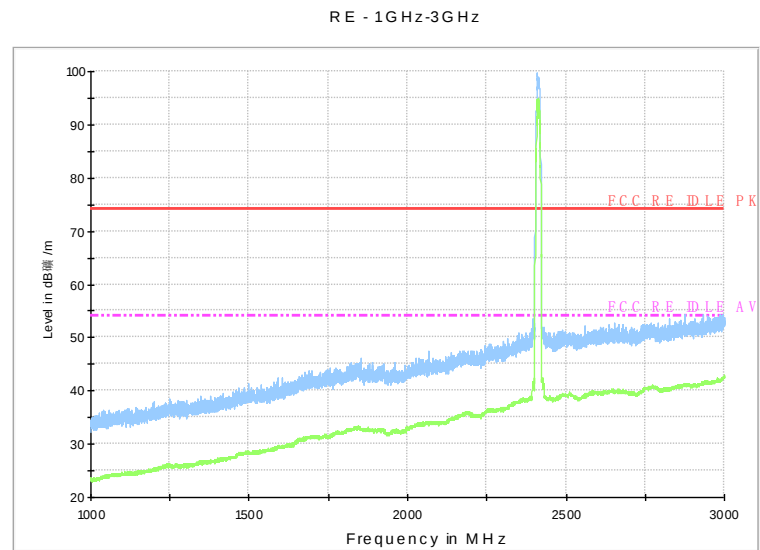


Fig.A.6.2.3 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)

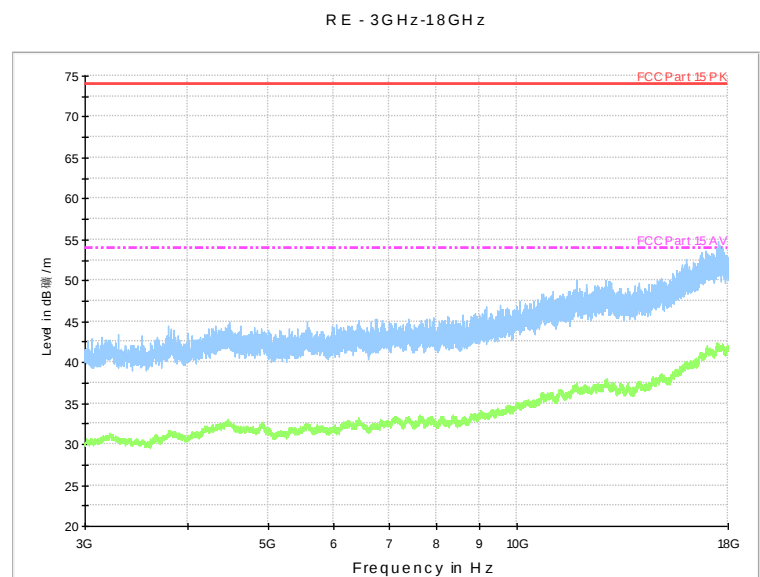


Fig.A.6.2.4 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)

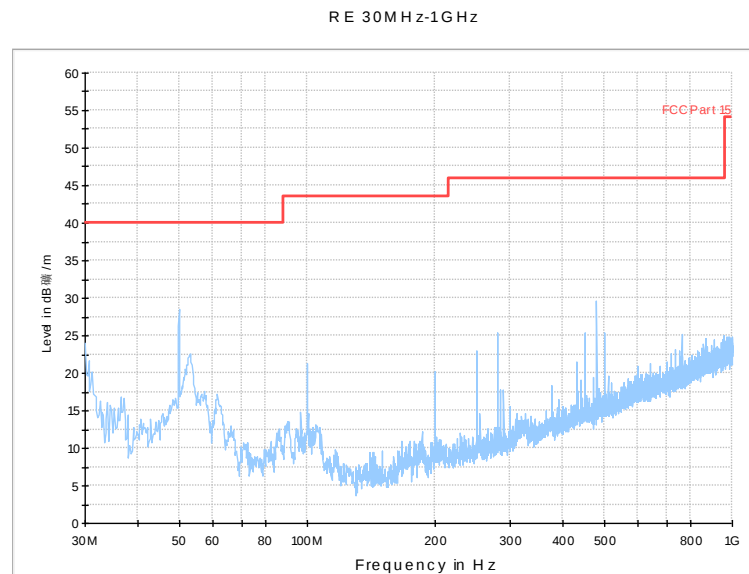


Fig.A.6.2.5 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)

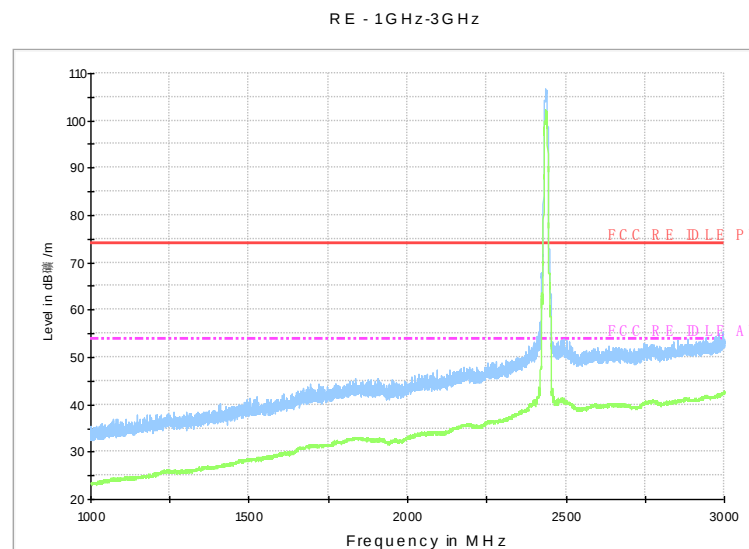


Fig.A.6.2.6 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)

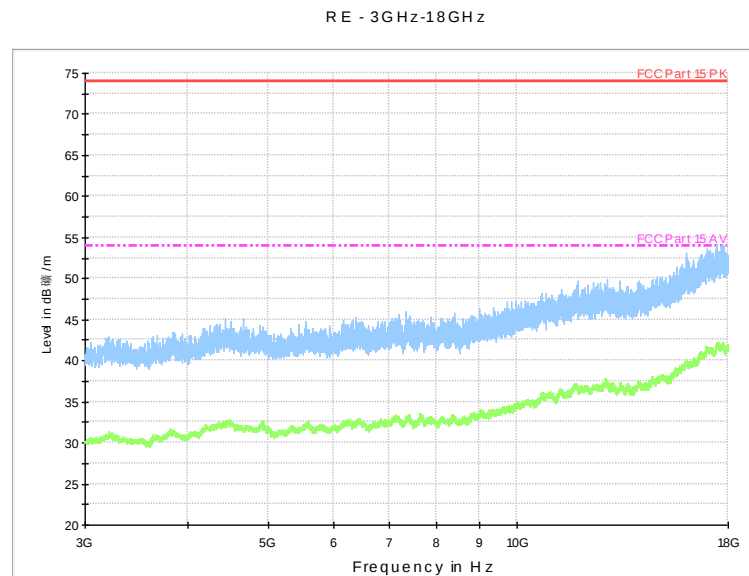


Fig.A.6.2.7 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)

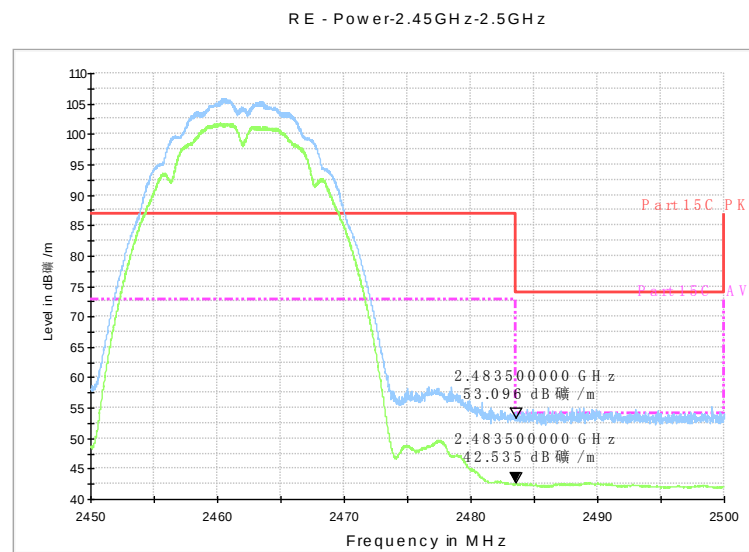


Fig.A.6.2.8 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

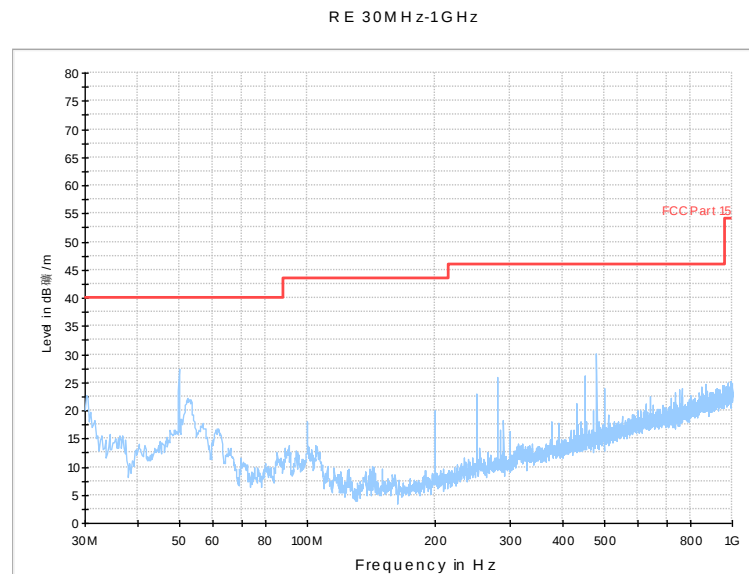


Fig.A.6.2.9 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)

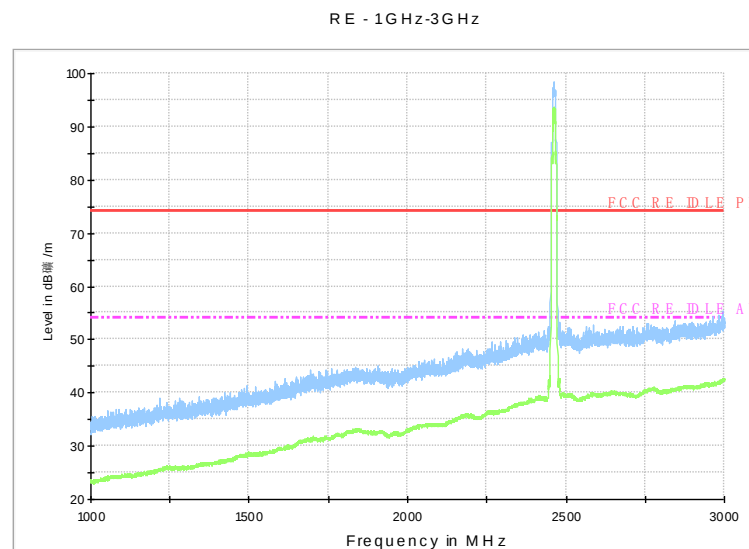


Fig.A.6.2.10 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)

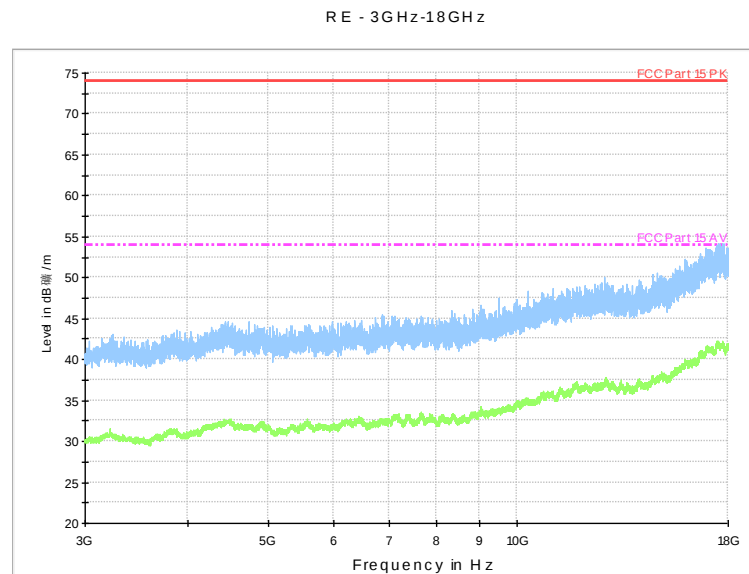


Fig.A.6.2.11 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)

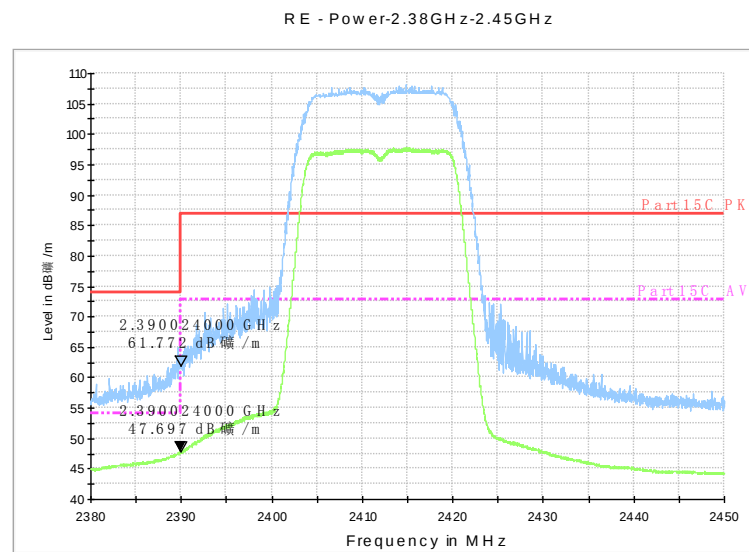


Fig.A.6.2.12 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz

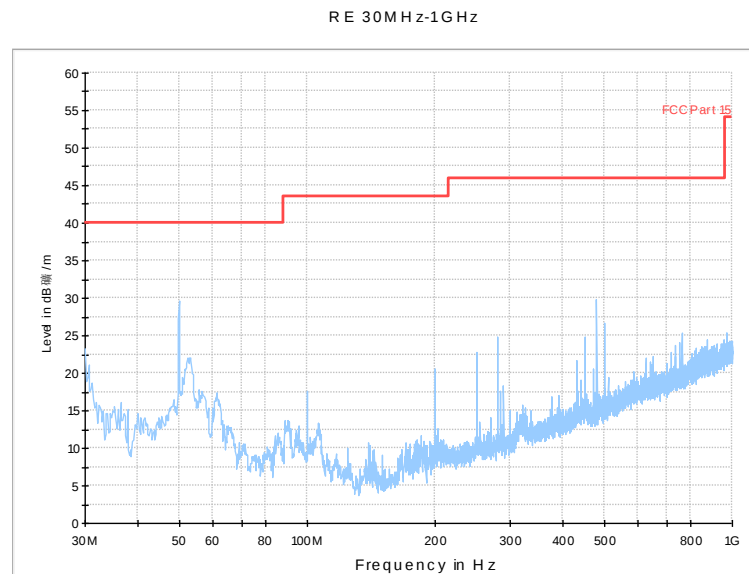


Fig.A.6.2.13 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)

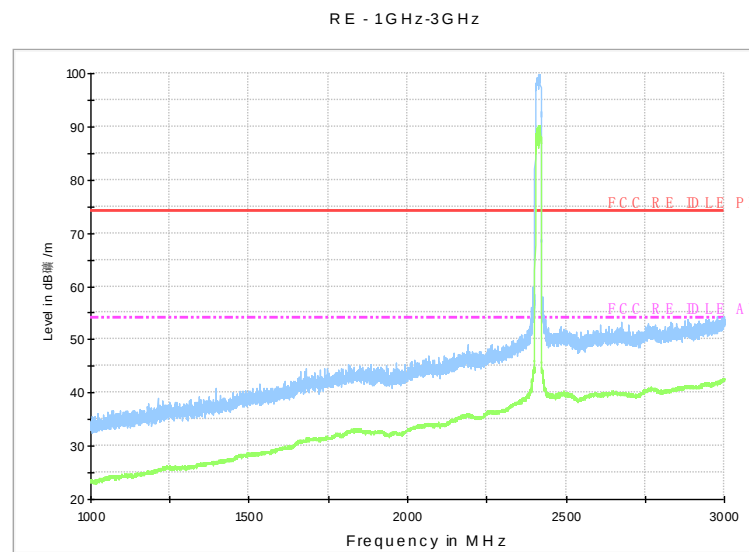


Fig.A.6.2.14 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-3 GHz)

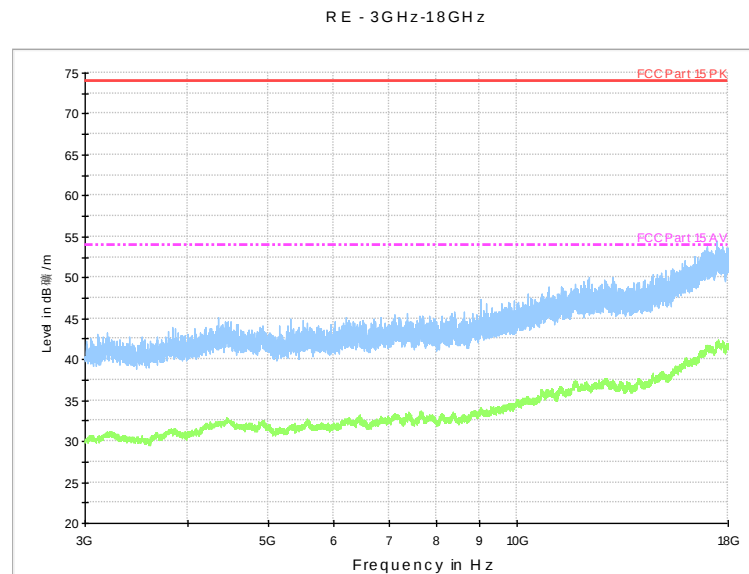


Fig.A.6.2.15 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)

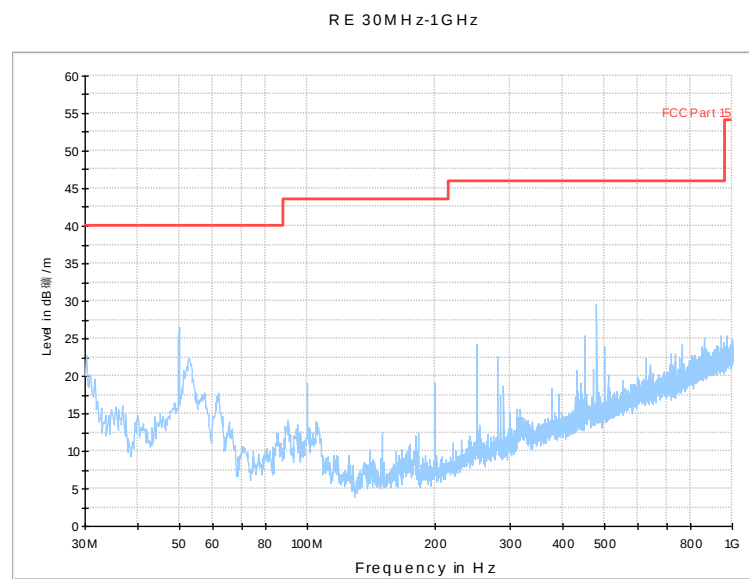


Fig.A.6.2.16 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)

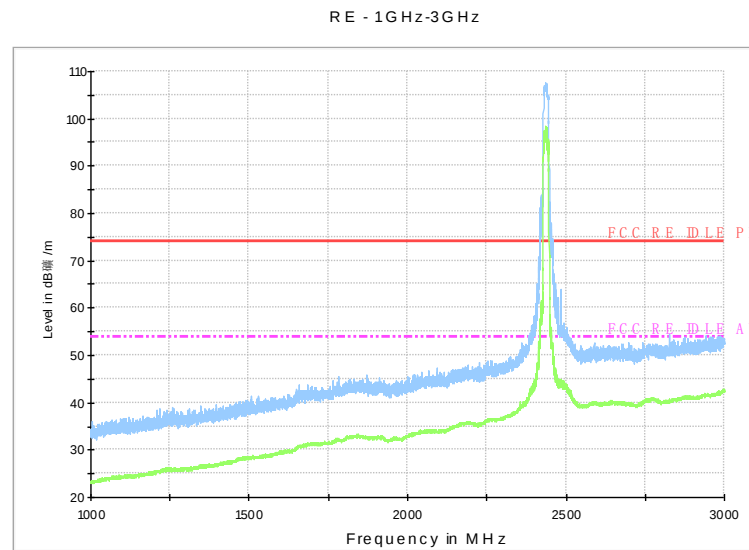


Fig.A.6.2.17 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)

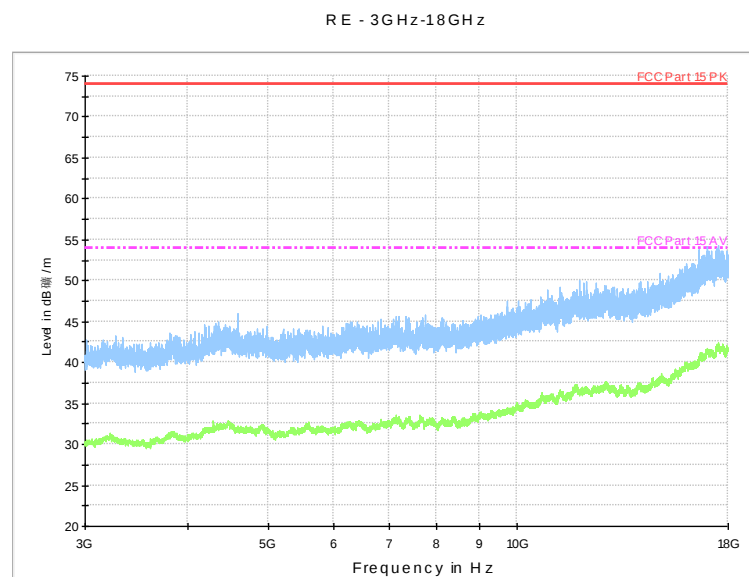


Fig.A.6.2.18 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)

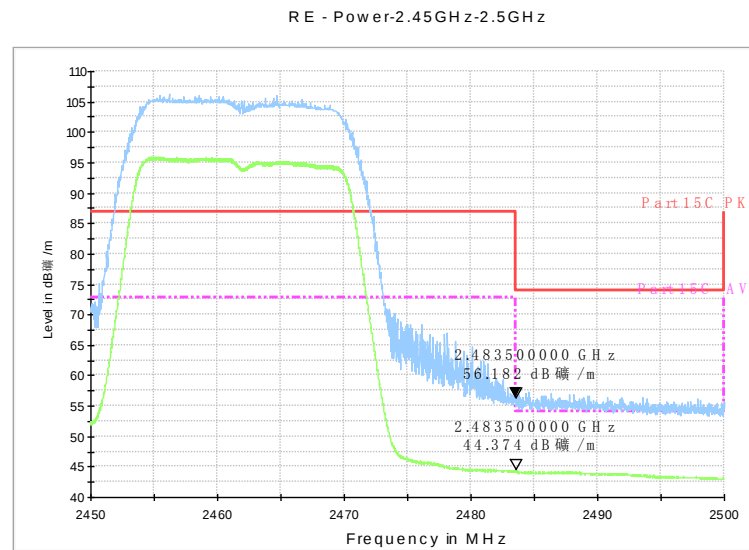


Fig.A.6.2.19 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

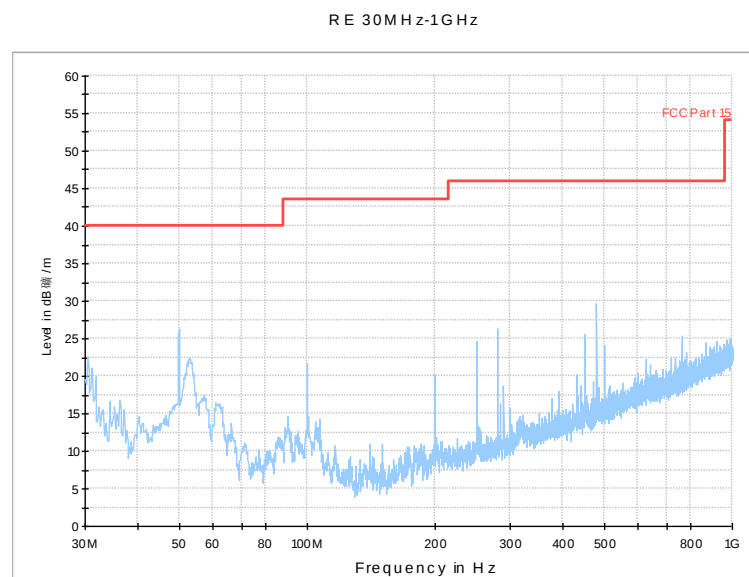


Fig.A.6.2.20 Radiated Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)

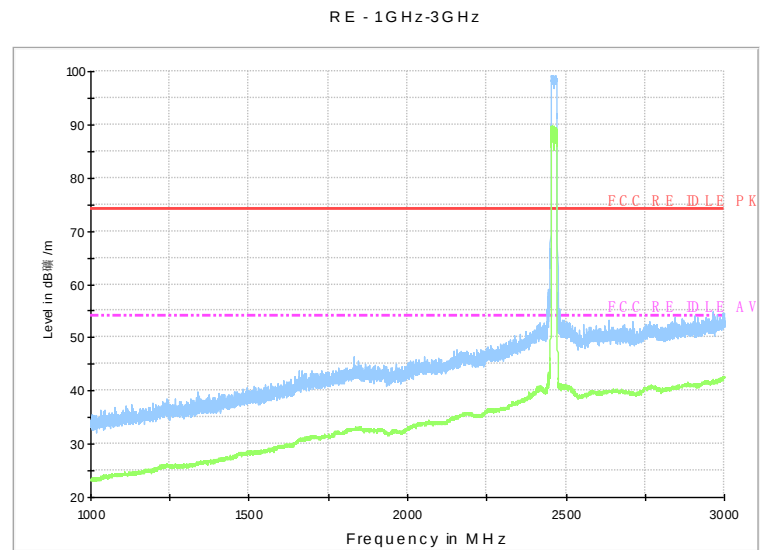


Fig.A.6.2.21 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)

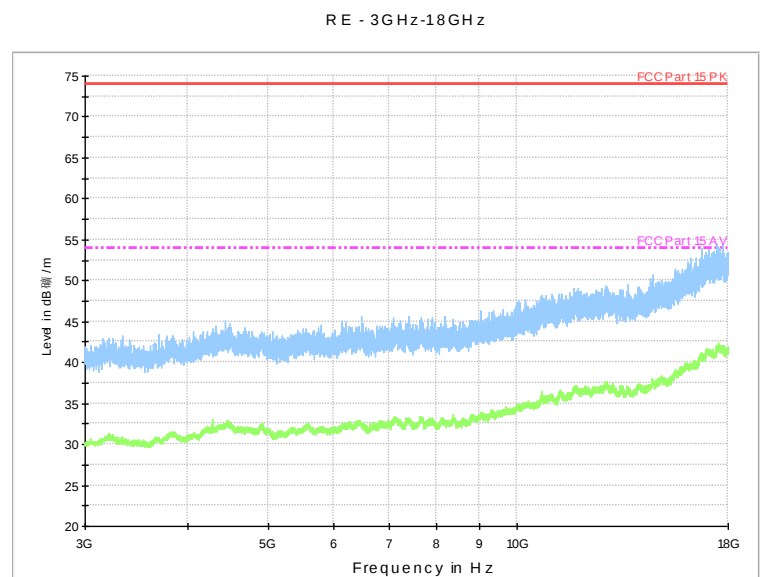


Fig.A.6.2.22 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)

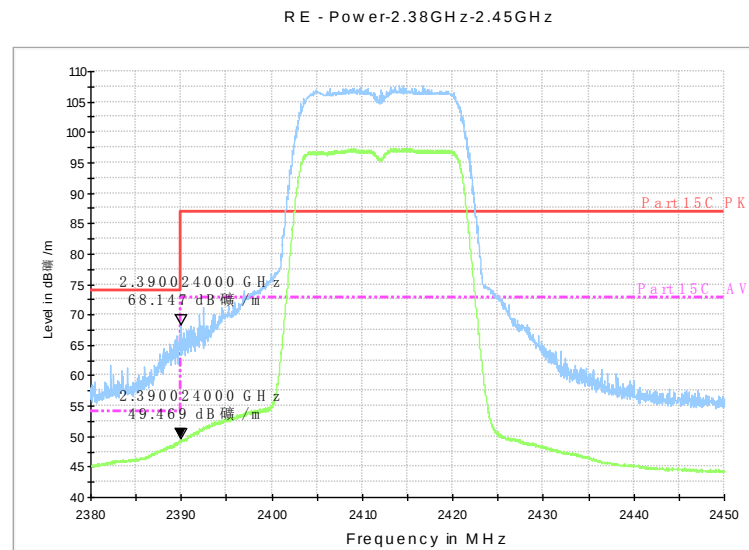


Fig.A.6.2.23 Radiated Spurious Emission (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

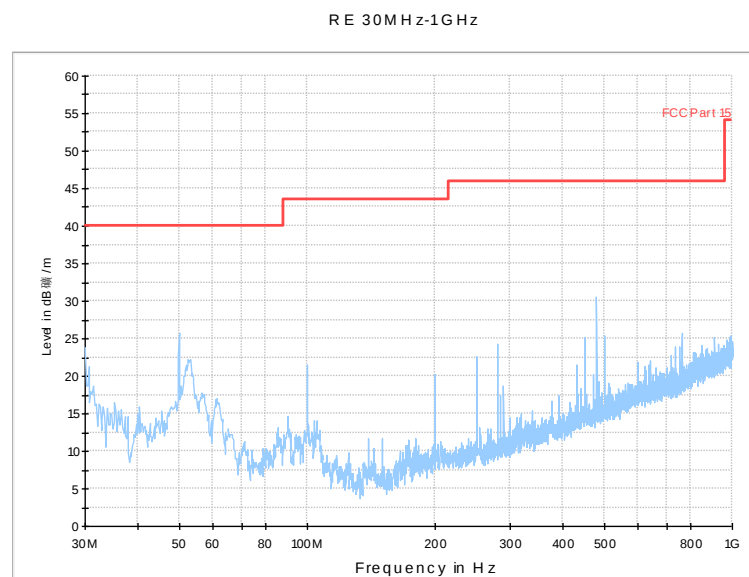


Fig.A.6.2.24 Radiated Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)

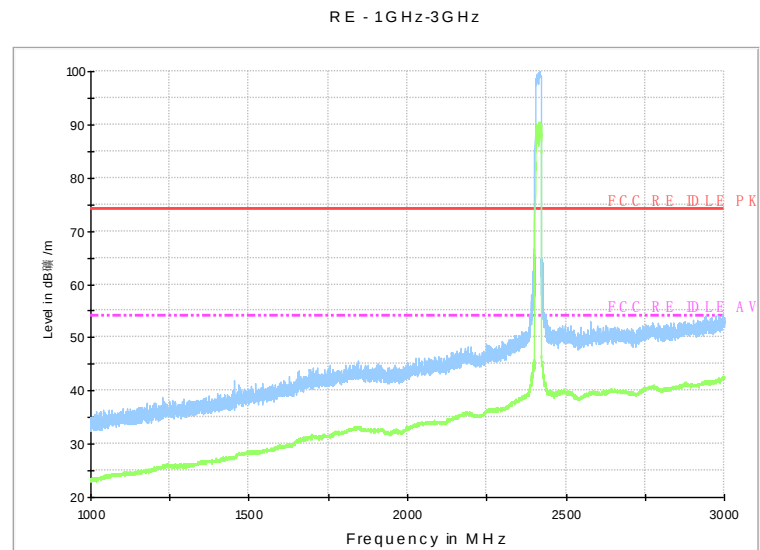


Fig.A.6.2.25 Radiated Spurious Emission (802.11n-HT20, Ch1, 1 GHz-3 GHz)

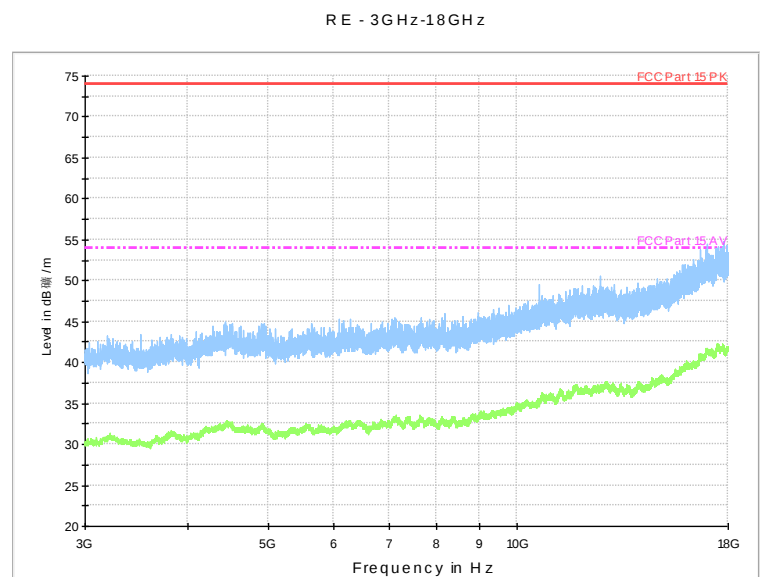


Fig.A.6.2.26 Radiated Spurious Emission (802.11n-HT20, Ch1, 3 GHz-18 GHz)

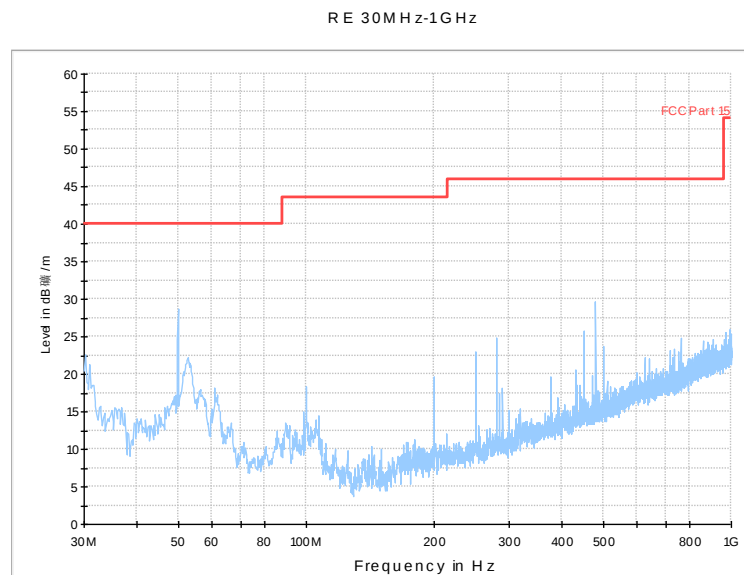


Fig.A.6.2.27 Radiated Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)

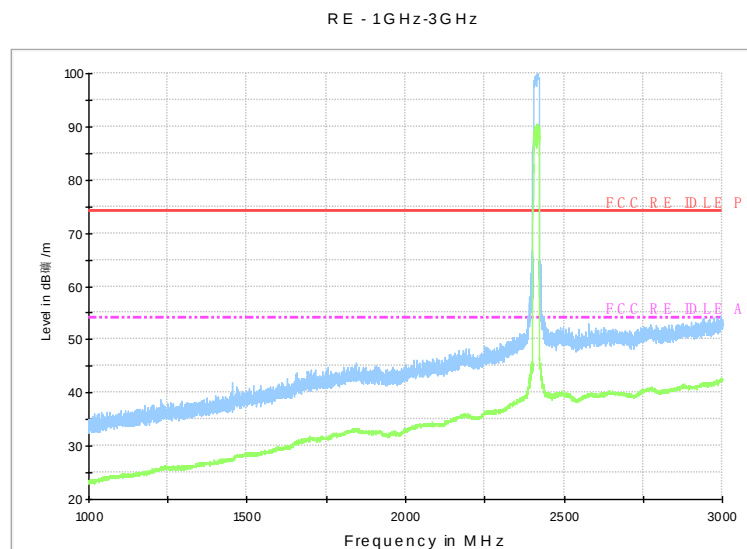


Fig.A.6.2.28 Radiated Spurious Emission (802.11n-HT20, Ch6, 1 GHz-3 GHz)

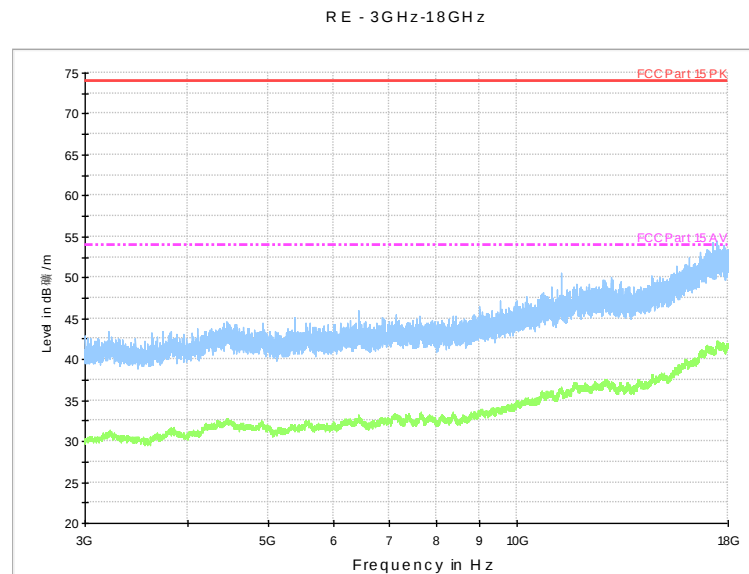


Fig.A.6.2.29 Radiated Spurious Emission (802.11n-HT20, Ch6, 3 GHz-18 GHz)

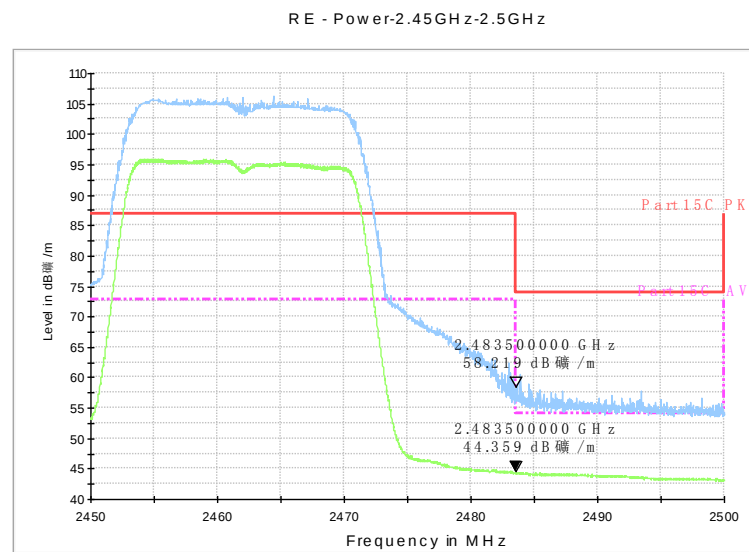


Fig.A.6.2.30 Radiated Spurious Emission (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

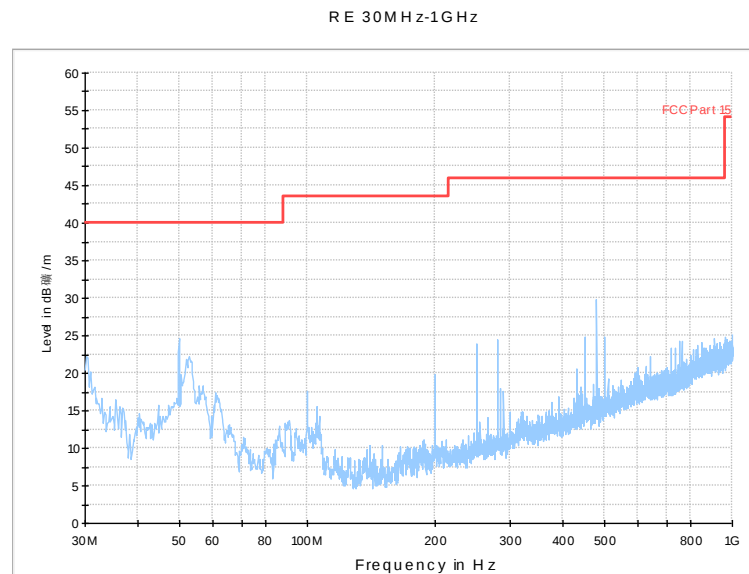


Fig.A.6.2.31 Radiated Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)

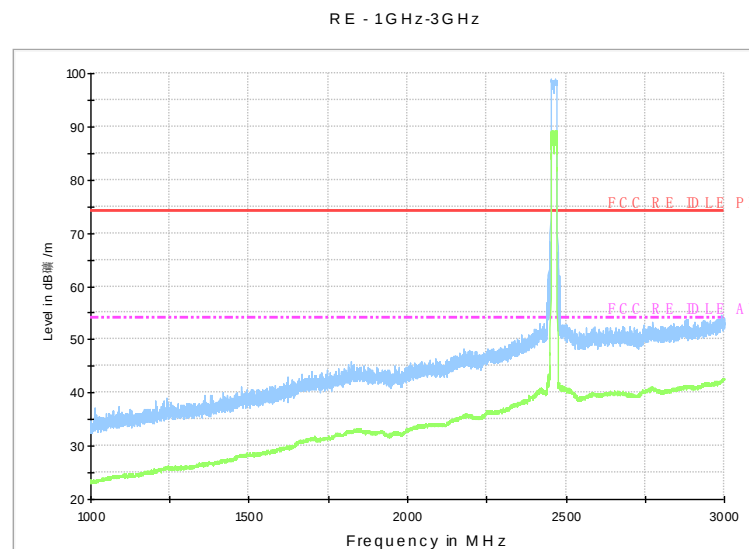


Fig.A.6.2.32 Radiated Spurious Emission (802.11n-HT20, Ch11, 1 GHz-3 GHz)

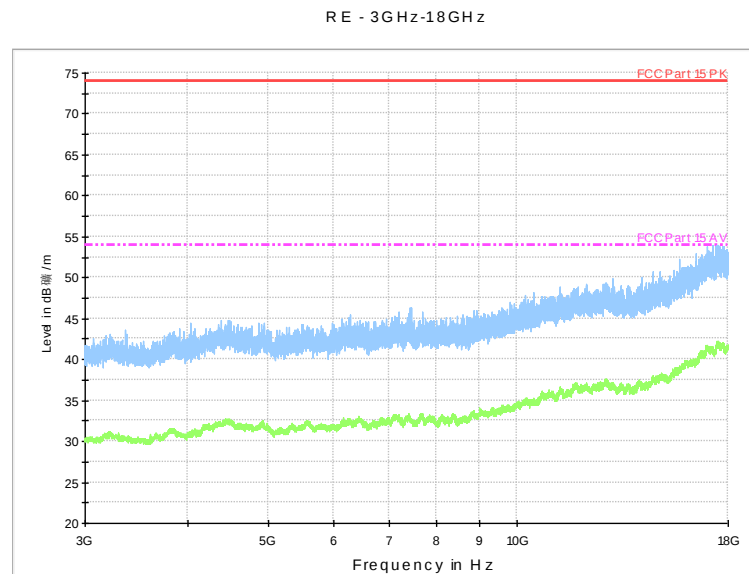


Fig.A.6.2.33 Radiated Spurious Emission (802.11n-HT20, Ch11, 3 GHz-18 GHz)

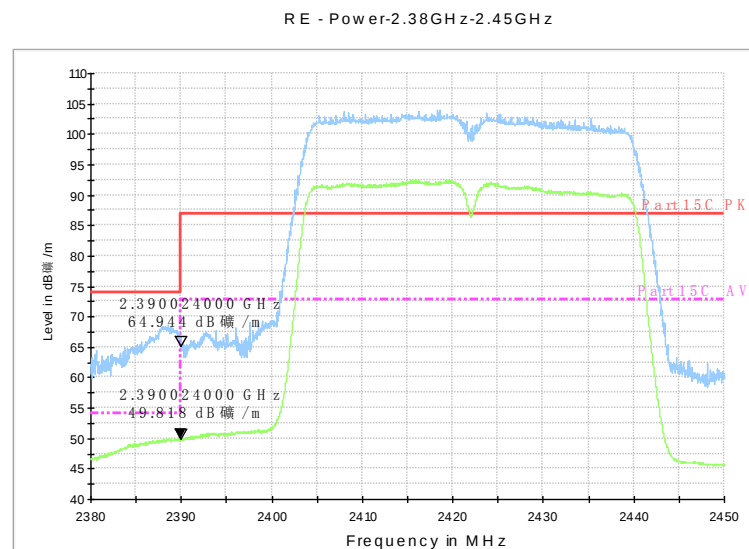


Fig.A.6.2.34 Radiated Spurious Emission (Power): 802.11n-HT40, ch3, 2.38 GHz - 2.45GHz

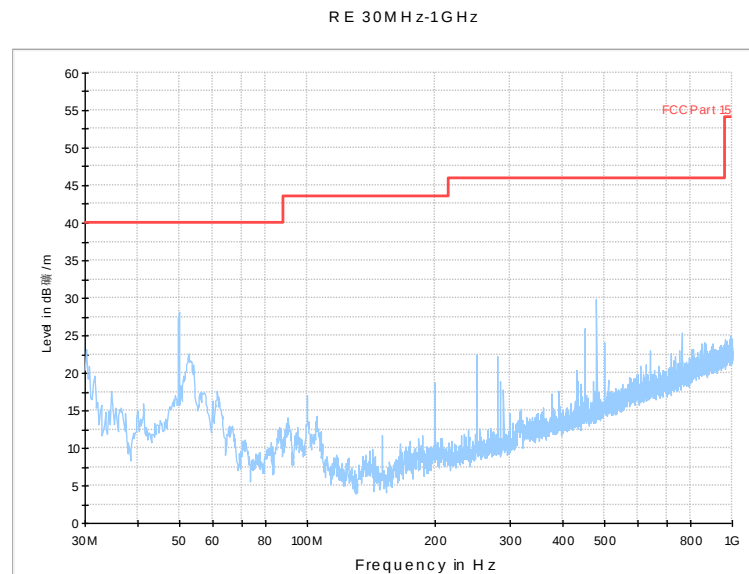


Fig.A.6.2.35 Radiated Spurious Emission (802.11n-HT40, ch3, 30 MHz-1 GHz)

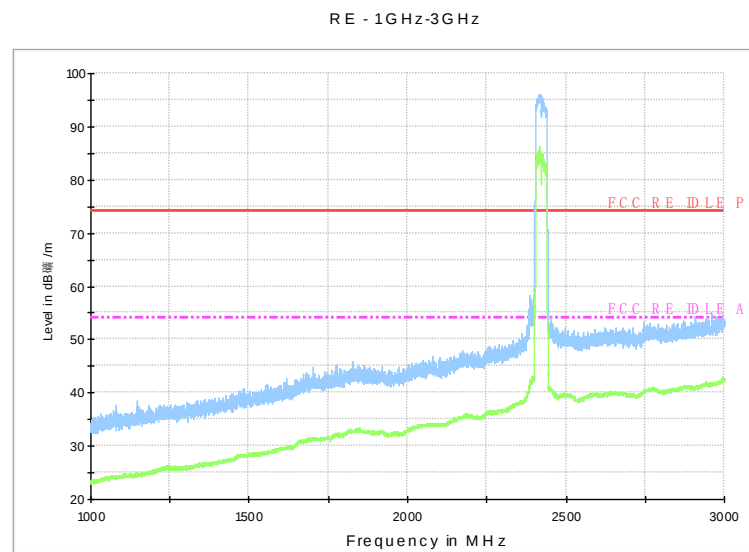


Fig.A.6.2.36 Radiated Spurious Emission (802.11n-HT40, ch3, 1 GHz-3 GHz)

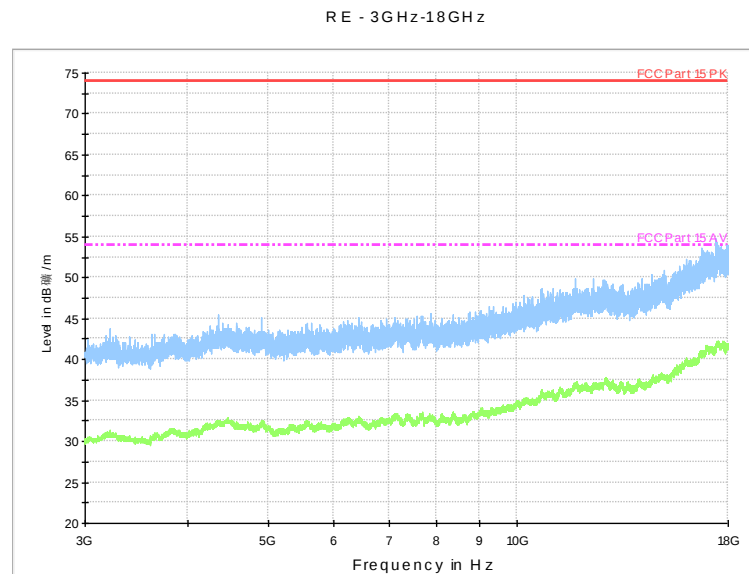


Fig.A.6.2.37 Radiated Spurious Emission (802.11n-HT40, ch3, 3 GHz-18 GHz)

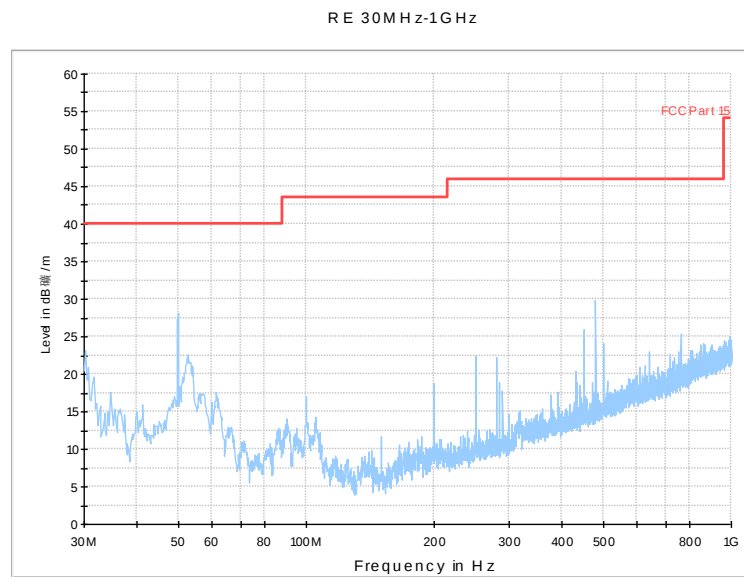


Fig.A.6.2.38 Radiated Spurious Emission (802.11n-HT40, Ch6, 30 MHz-1 GHz)

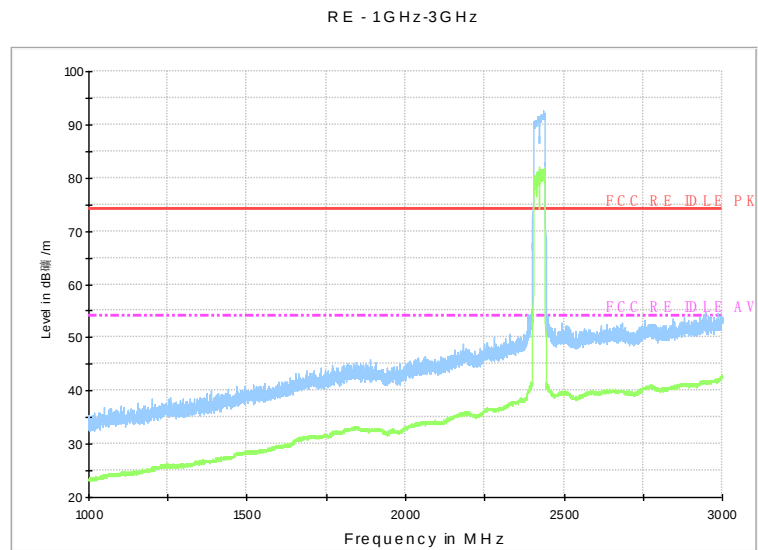


Fig.A.6.2.39 Radiated Spurious Emission (802.11n-HT40, Ch6, 1 GHz-3 GHz)

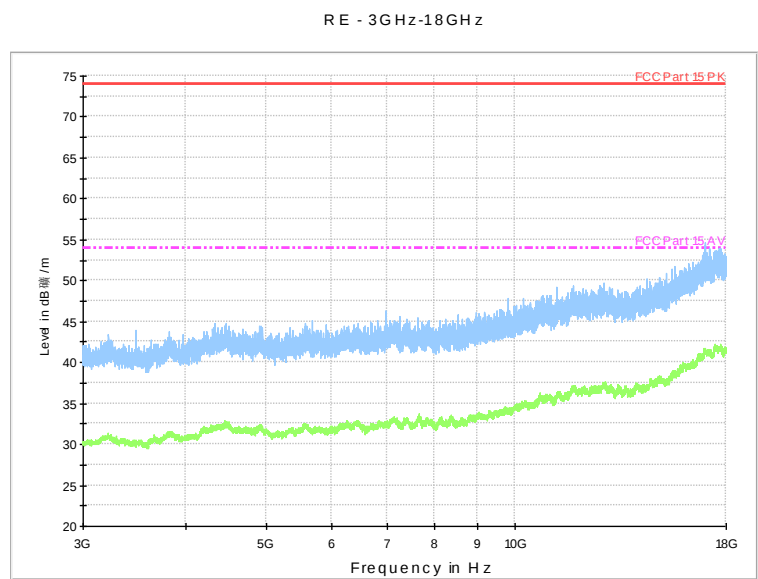


Fig.A.6.2.40 Radiated Spurious Emission (802.11n-HT40, Ch6, 3 GHz-18 GHz)

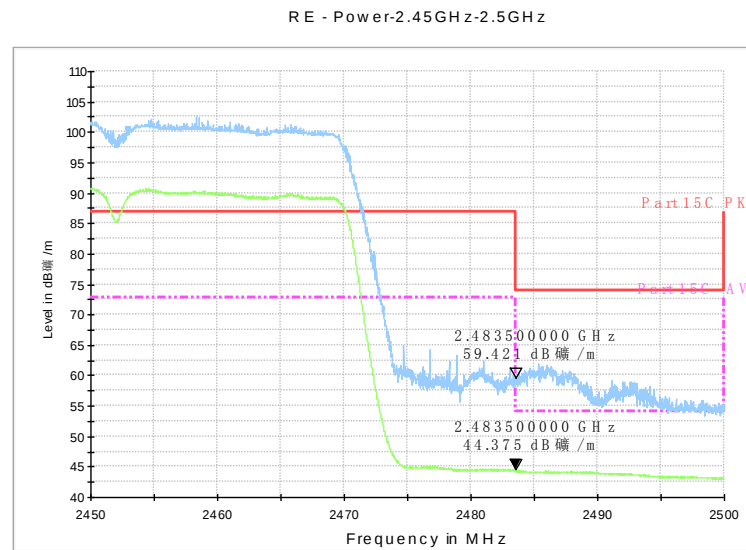


Fig.A.6.2.41 Radiated Spurious Emission (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

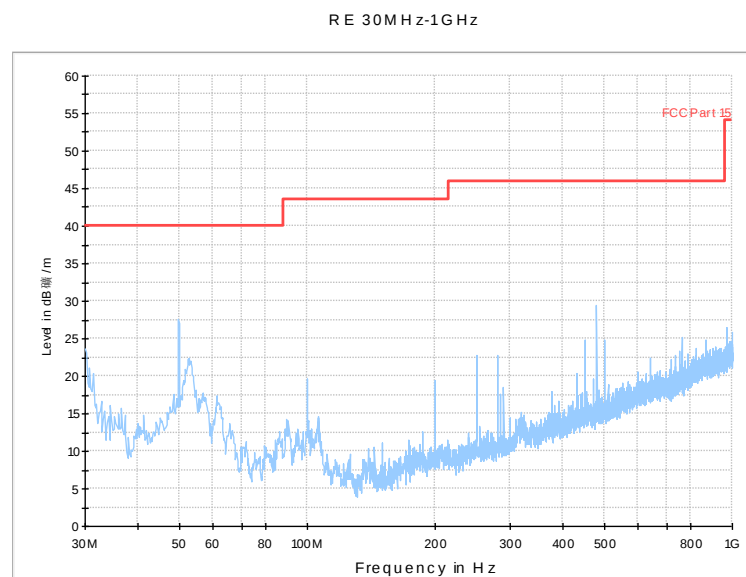


Fig.A.6.2.42 Radiated Spurious Emission (802.11n-HT40, ch9, 30 MHz-1 GHz)

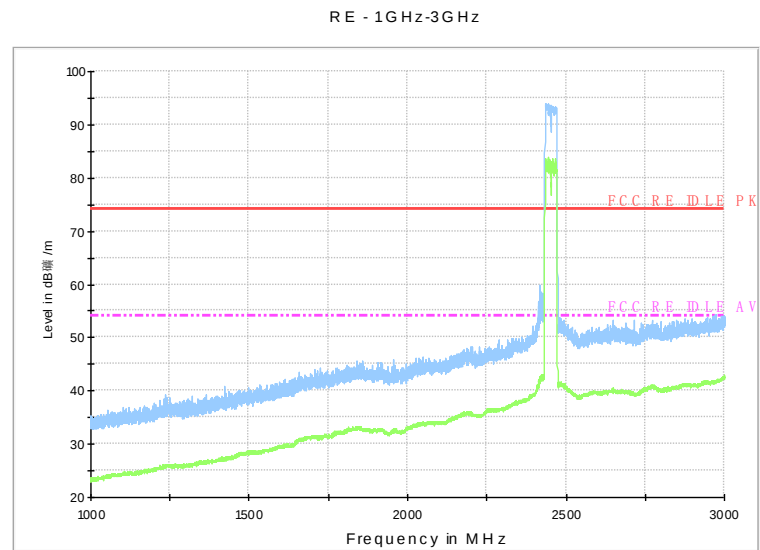


Fig.A.6.2.43 Radiated Spurious Emission (802.11n-HT40, ch9, 1 GHz-3 GHz)

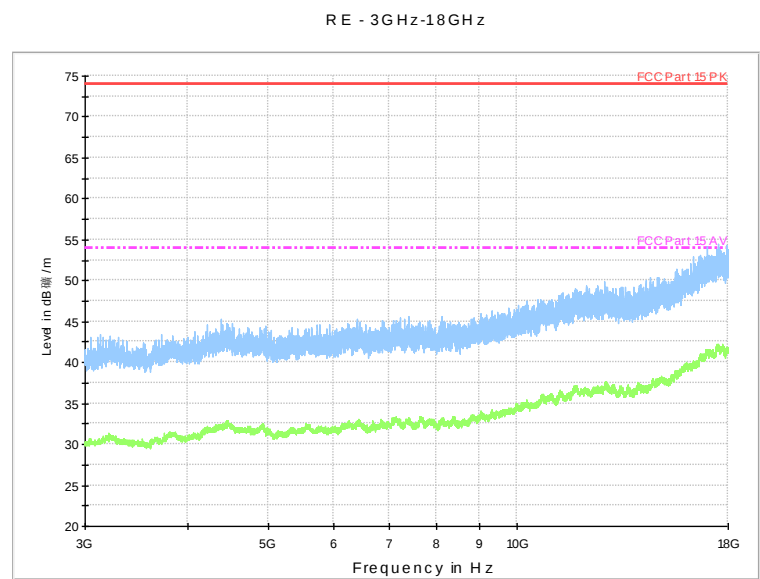


Fig.A.6.2.44 Radiated Spurious Emission (802.11n-HT40, ch9, 3 GHz-18 GHz)

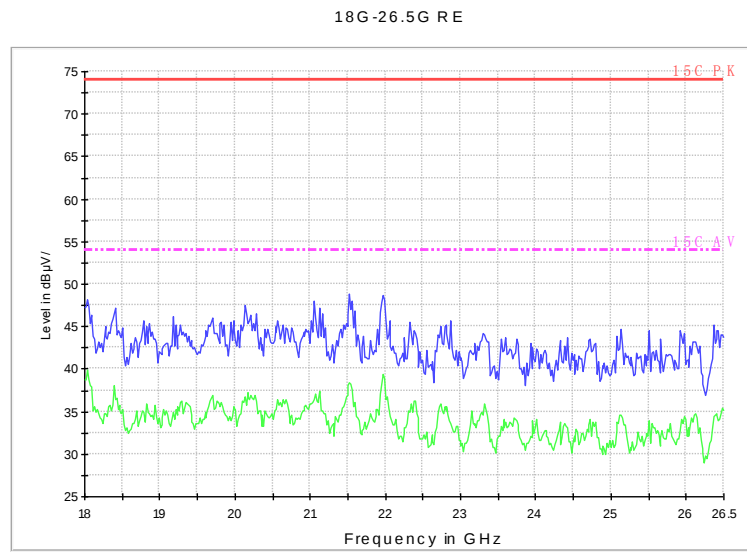


Fig.A.6.2.45 Radiated Spurious Emission (All channels): 18GHz – 26.5GHz

A.7. 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.7.1	Fig.A.7.2	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.7.1	Fig.A.7.2	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 KDB558074.

Conclusion: Pass

Measurement uncertainty:

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

Test graphs as below:

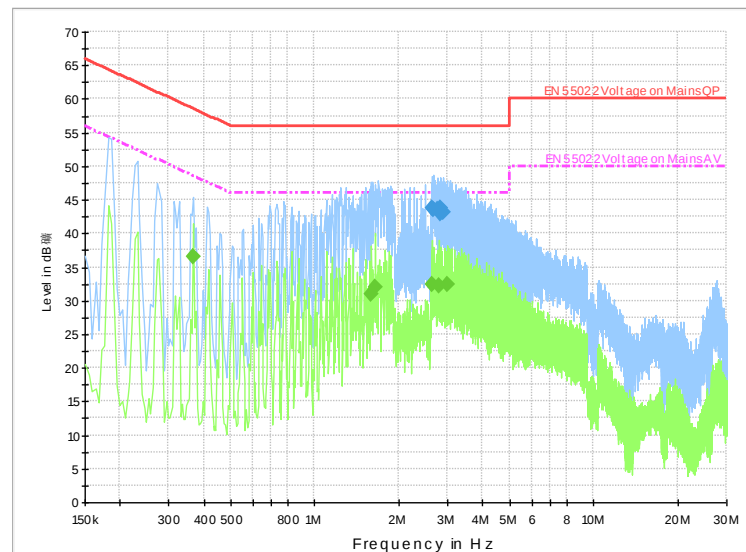


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
2.638501	43.7	GND	N	9.9	12.3	56.0
2.683501	43.6	GND	N	9.9	12.4	56.0
2.746501	43.6	GND	N	9.9	12.4	56.0
2.823001	43.7	GND	N	9.9	12.3	56.0
2.836501	42.9	GND	N	9.9	13.1	56.0
2.881501	43.2	GND	N	9.9	12.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.366001	36.6	GND	N	9.9	12.0	48.6
1.599001	31.0	GND	N	9.9	15.0	46.0
1.648501	32.0	GND	N	9.9	14.0	46.0
2.625001	32.4	GND	N	9.9	13.6	46.0
2.791501	32.1	GND	N	9.9	13.9	46.0
2.989501	32.4	GND	N	9.9	13.6	46.0

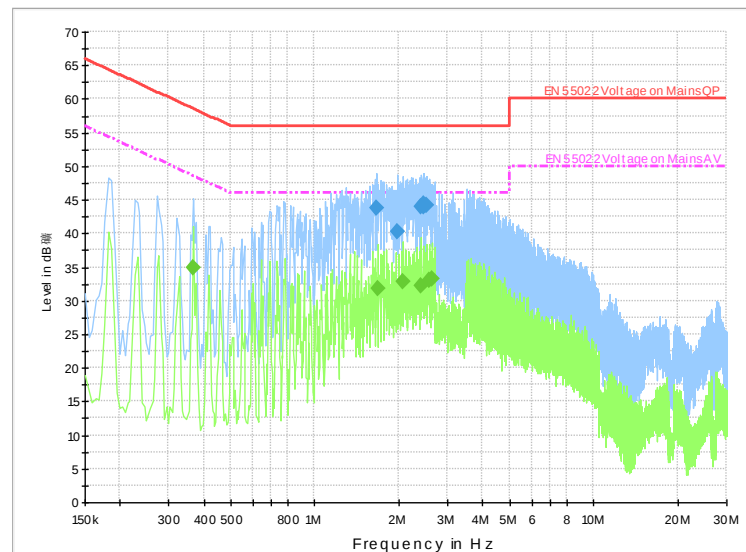


Fig.A.7.2 AC Powerline Conducted Emission-Idle

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.671001	43.8	GND	N	9.9	12.2	56.0
1.977001	40.3	GND	N	9.9	15.7	56.0
2.418001	43.9	GND	N	9.9	12.1	56.0
2.449501	44.4	GND	N	9.9	11.6	56.0
2.463001	44.1	GND	N	9.9	11.9	56.0
2.526001	44.2	GND	N	9.9	11.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.366001	34.9	GND	N	9.9	13.7	48.6
1.689001	31.8	GND	N	9.9	14.2	46.0
2.085001	32.9	GND	N	9.9	13.1	46.0
2.404501	32.3	GND	N	9.9	13.7	46.0
2.571001	32.9	GND	N	9.9	13.1	46.0
2.647501	33.3	GND	N	9.9	12.7	46.0

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