



**FCC PART 15C  
TEST REPORT  
No. 2013WLN0667**

**for**

**TCT Mobile Limited**

**GSM quad band mobile phone**

**Type: Tahiti 1Sim Wifi+DTV**

**Market Name: ALCATEL 3042G**

**With**

**FCC ID: RAD339**

**Hardware Version: PIO**

**Software Version: v523**

**Issued Date: 2013-03-28**



**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 LABORATORY

### 1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT  
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Postal Code: 100191  
Telephone: 008610623046332561  
Fax: 008610623046332504

### 1.2. Testing Environment

Normal Temperature: 15-30°C  
Extreme Temperature: -20/+55°C  
Relative Humidity: 30-60%  
Air Pressure 990hPa-1040hPa

Note: The climatic requirements above are general exclude the special requirements for dedicated test environments listed in section 5 and some specific test cases in other parts of this report.

### 1.3. Project data

Testing Start Date: 2013-02-08  
Testing End Date: 2013-03-18

### 1.4. Signature



---

**Xu Zhongfei**  
**(Prepared this test report)**



---

**Gao Hong**  
**(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. 201203  
Country: China  
Contact Gong Zhizhou  
Email zhizhou.gong @jrdcom.com  
Telephone: 0086-21-61460890  
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### **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. 201203  
Country: China  
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	GSM quad band mobile phone
Type	Tahiti 1Sim Wifi+DTV
Market name	ALCATEL 3042G
FCC ID	RAD339
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	23.40dBm(OFDM)
Power Supply	3.8V DC by Battery

Note: Photographs of EUT are shown in ANNEX C of this test report.

#### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT1	013504000001590	PIO	v523
EUT2	013504000001822	PIO	v523

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

#### **3.3. Internal Identification of AE used during the test**

<b>AE ID*</b>	<b>Description</b>	<b>Type</b>	<b>SN</b>
AE1	Battery	CAB31L0000C2	/
AE2	Battery	CAB31L0000C1	/
AE3	Charger	CBA3002AG0C1	/
AE3	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 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.

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.	Oct, 2009 Edition
ANSI C63.10	Procedures for testing compliance of a wide variety of unlicensed wireless devices	2009

## 5. LABORATORY ENVIRONMENT

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

**Semi-anechoic chamber** (10 meters×6.7meters×6.15meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 M ohm
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.5 dB, 3 m distance
Site voltage standing-wave ratio (S <sub>VSWR</sub> )	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

**Shielding Room2** (7.30 meters×4.00 meters×3.80 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

## 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)	/	<b>P</b>
Peak Power Spectral Density	15.247 (d)	/	<b>P</b>
Occupied 6dB Bandwidth	15.247 (d)	/	<b>P</b>
Band Edges Compliance	15.247 (b)	/	<b>P</b>
Transmitter Spurious Emission - Conducted	15.247	/	<b>P</b>
Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	/	<b>P</b>
AC Powerline Conducted Emission	15.107, 15.207	/	<b>P</b>

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

The measurement is made according to Public notice ANSI C63.10.

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/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

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

This model is a variant product which market name is ONE TOUCH 3041G; all the test result has been derived from test report ONE TOUCH 3041G.

Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage
V min	Low Voltage
V max	High Voltage
H nom	Norm Humidity
A nom	Norm Air Pressure

For this report, all the test cases listed above are tested under Normal Temperature and Normal Voltage which is using a new battery, and also under norm humidity, the specific conditions as following:

Temperature	T nom	26°C
Voltage	V nom	3.8V(By battery)

Humidity	H nom	44%
Air Pressure	A nom	1010hPa

## **7. TEST EQUIPMENTS UTILIZED**

### **Conducted test system**

<b>No.</b>	<b>Equipment</b>	<b>Model</b>	<b>Serial Number</b>	<b>Manufacturer</b>	<b>Calibration Due date</b>
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2013-07-19
2	Test Receiver	ESS	847151/015	Rohde & Schwarz	2013-10-30
3	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2013-08-12

### **Radiated emission test system**

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

### **Anechoic chamber**

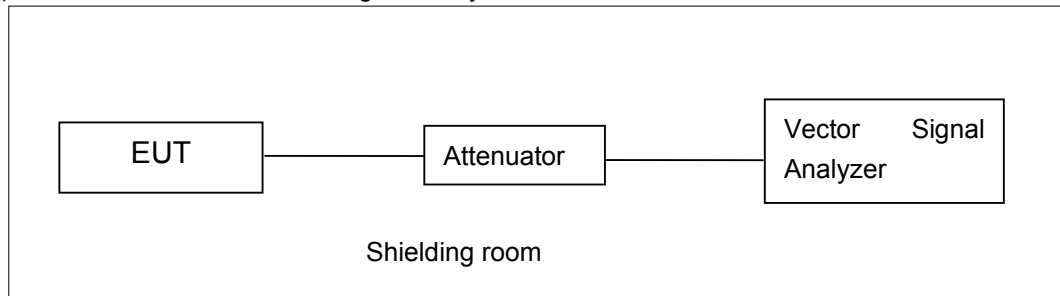
Anechoic chamber by Frankonia German.

## 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

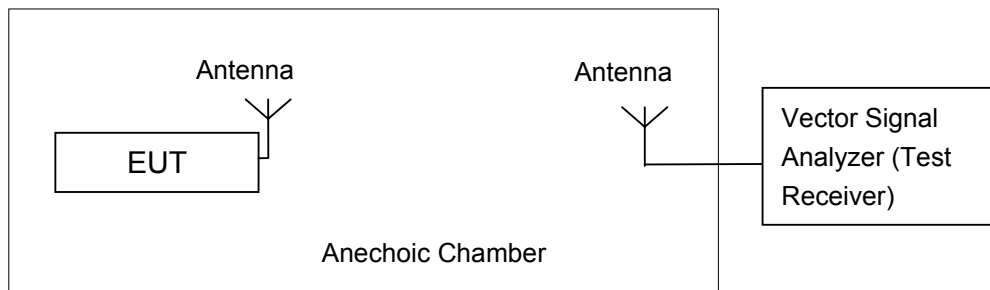


#### A.1.2. Radiated Emission Measurements

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 C63.10

## 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 ANSI C63.10, and EUT is operating in continuous transmitting mode.

### Measurement Uncertainty:

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

### 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	19.64	/	/
	2	19.70	/	/
	5.5	21.09	/	/
	11	22.55	22.51	23.03
802.11g	6	22.65	/	/
	9	22.71	/	/
	12	22.54		
	18	22.49	/	/
	24	23.05	23.04	23.40
	36	22.81	/	/
	48	22.90	/	/
	54	22.94	/	/

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	20.54	/	/
	MCS1	20.35	/	/
	MCS2	20.37	/	/
	MCS3	20.84	/	/
	MCS4	20.89	/	/
	MCS5	21.01	21.03	21.40
	MCS6	20.96	/	/



	MCS7	20.97	/	/
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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	20.38	/	/
	MCS1	20.29	/	/
	MCS2	20.21	/	/
	MCS3	20.70	20.76	21.05
	MCS4	20.53	/	/
	MCS5	20.59	/	/
	MCS6	20.57	/	/
	MCS7	20.58	/	/

The data rate MCS3 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	15.89	15.98	16.37
802.11g	14.06	14.25	14.67

**802.11n-HT20 mode**

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	12.18	12.13	12.47

**802.11n-HT40 mode**

Mode	Test Result (dBm)		
	2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	11.63	11.65	11.97

**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 C63.10

**Measurement Uncertainty:**

Measurement Uncertainty	0.75dB
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**Measurement Results:**

**802.11b/g mode**

Mode	Channel	Power Spectral Density ( dBm/3 kHz )		Conclusion
		Fig.	Value	
802.11b	1	Fig.1	-4.58	P
	6	Fig.2	-6.31	P
	11	Fig.3	-4.70	P
802.11g	1	Fig.4	-9.41	P
	6	Fig.5	-8.30	P
	11	Fig.6	-7.13	P

**802.11n-HT20 mode**

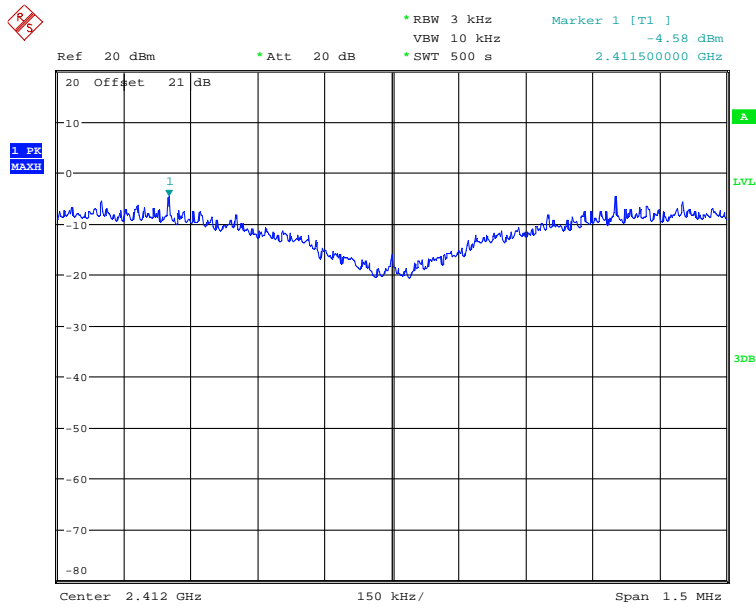
Mode	Channel	Power Spectral Density ( dBm/3 kHz )		Conclusion
		Fig.	Value	
802.11n (20MHz)	1	Fig.7	-12.43	P
	6	Fig.8	-12.42	P
	11	Fig.9	-12.02	P

**802.11n-HT40 mode**

Mode	Channel	Power Spectral Density ( dBm/3 kHz )		Conclusion
		Fig.	Value	
802.11n (40MHz)	3	Fig.10	-15.69	P
	6	Fig.11	-15.87	P
	9	Fig.12	-16.14	P

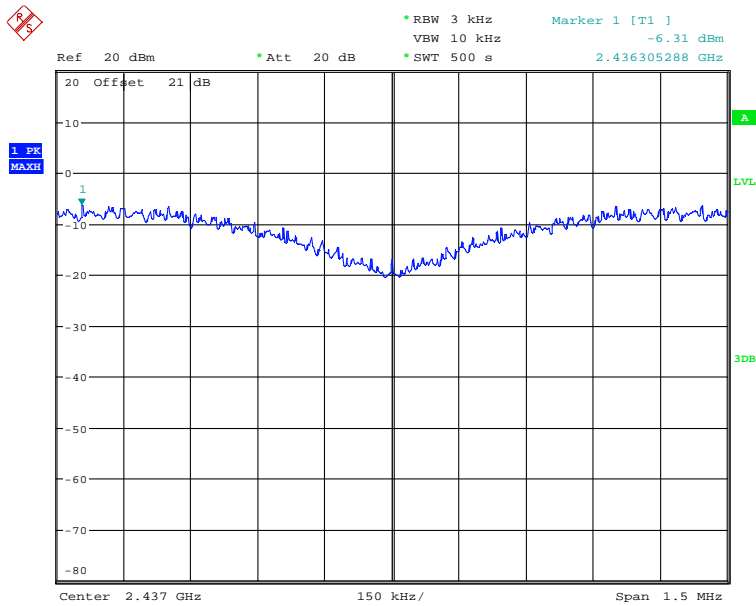
**Conclusion: PASS**

**Test graphs as below:**



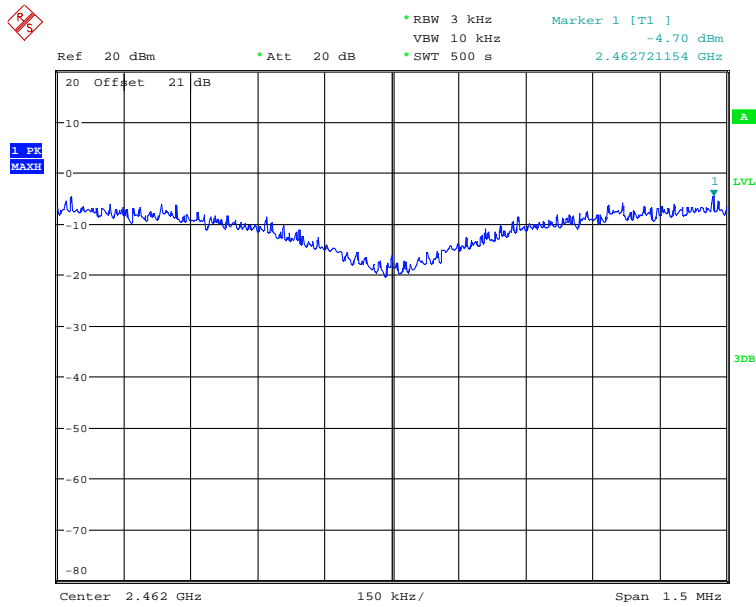
Date: 2.MAR.2013 15:46:11

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



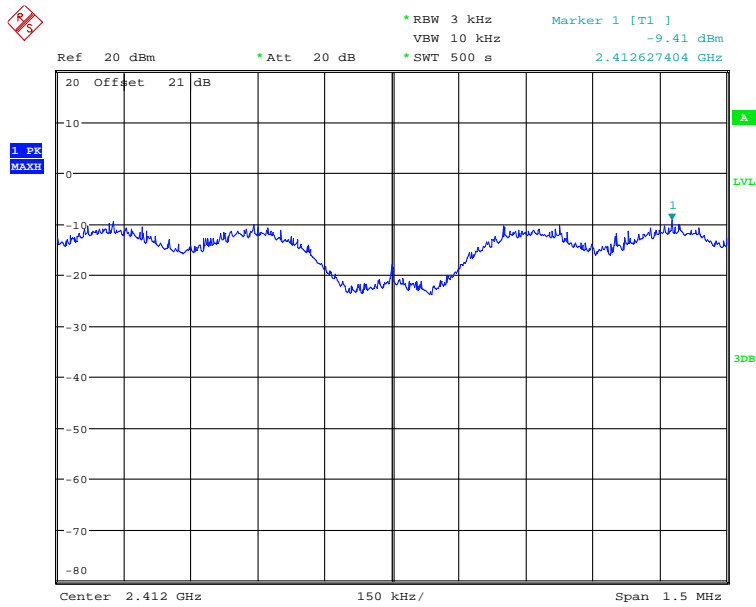
Date: 2.MAR.2013 15:57:44

**Fig. 2 Power Spectral Density (802.11b, Ch 6)**



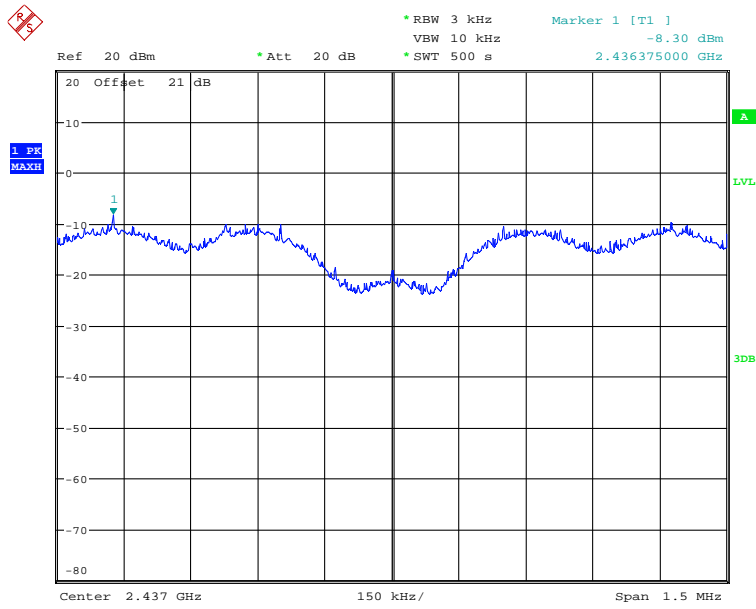
Date: 2.MAR.2013 16:07:53

Fig. 3 Power Spectral Density (802.11b, Ch 11)



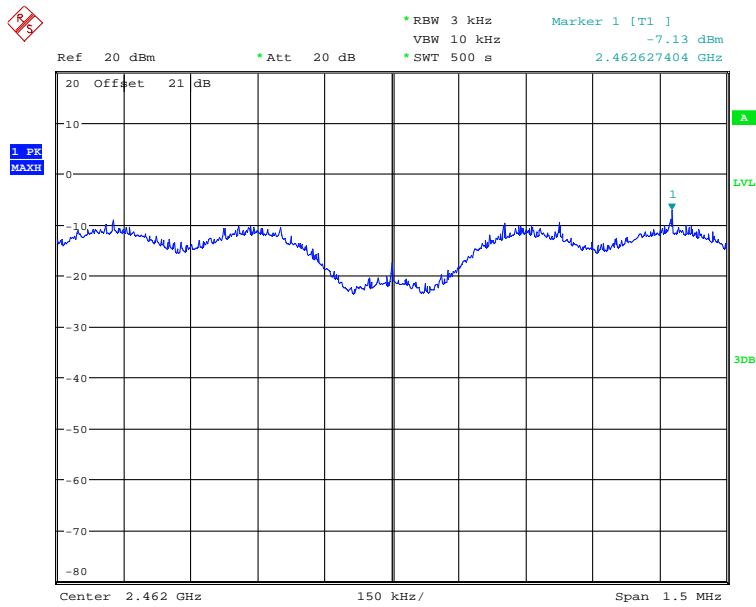
Date: 2.MAR.2013 16:17:16

Fig. 4 Power Spectral Density (802.11g, Ch 1)



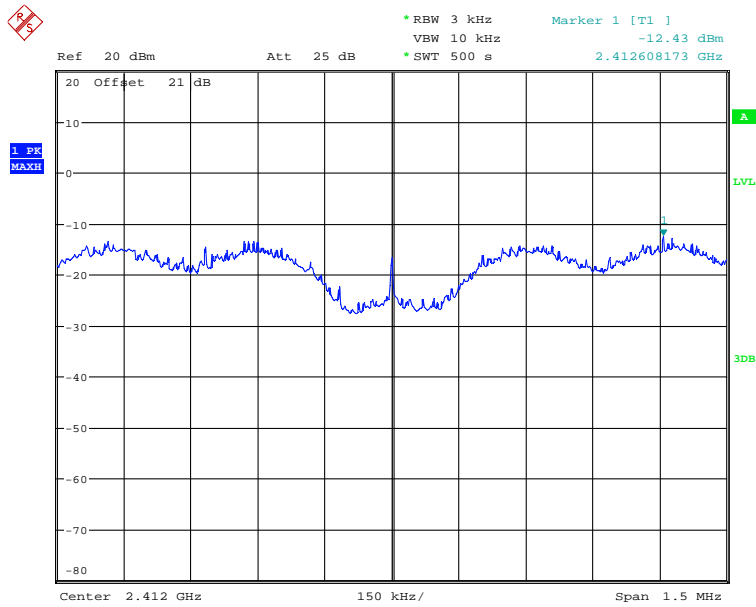
Date: 2.MAR.2013 16:28:35

Fig. 5 Power Spectral Density (802.11g, Ch 6)



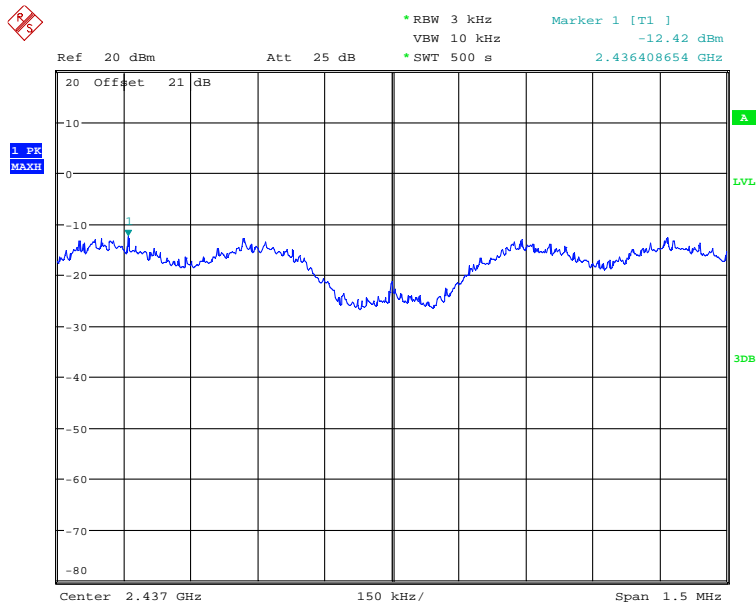
Date: 2.MAR.2013 16:37:32

Fig. 6 Power Spectral Density (802.11g, Ch 11)



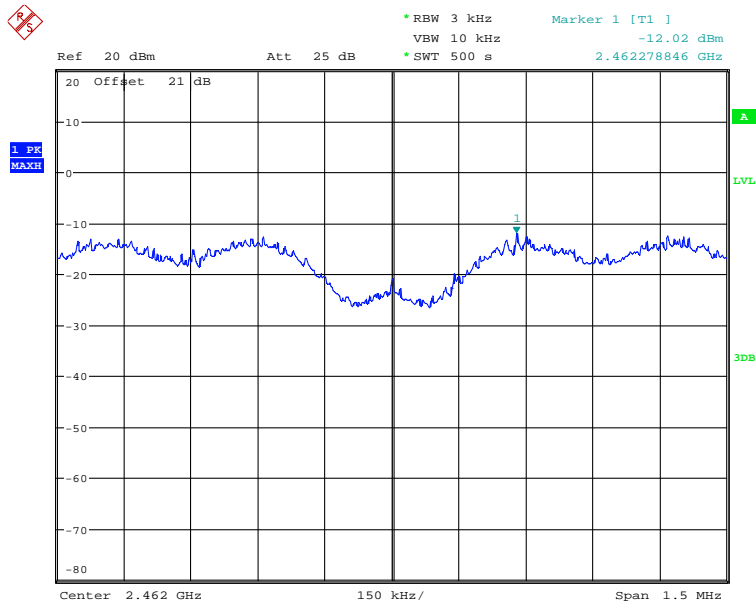
Date: 15.MAR.2013 12:23:38

Fig. 7 Power Spectral Density (802.11n-20MHz, Ch 1)



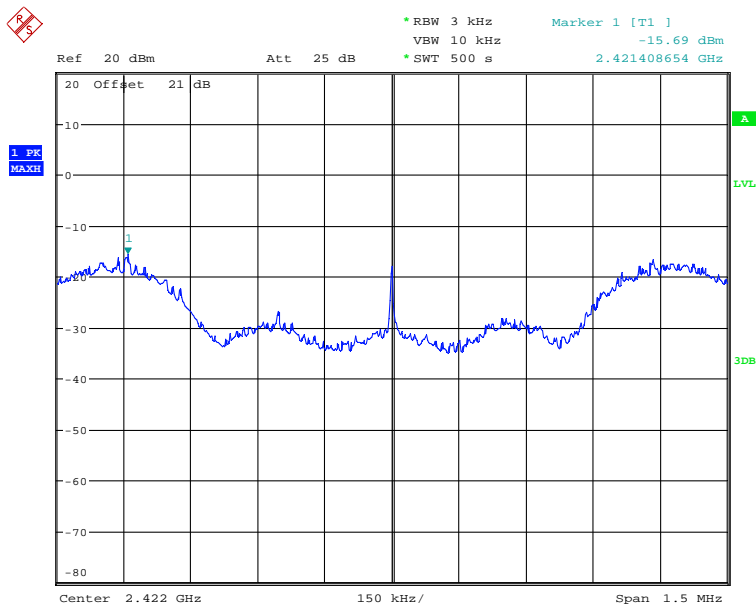
Date: 15.MAR.2013 12:50:54

Fig. 8 Power Spectral Density (802.11n-20MHz, Ch 6)



Date: 15.MAR.2013 13:16:09

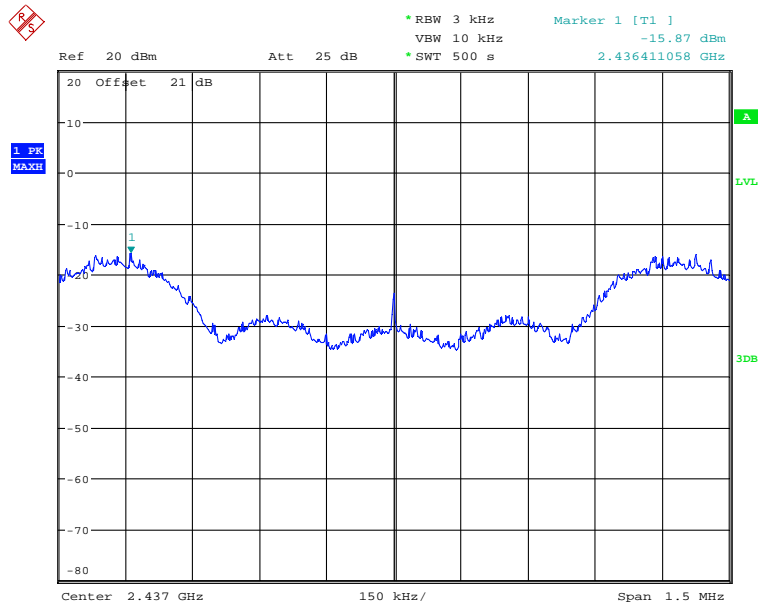
**Fig. 9 Power Spectral Density (802.11n-20MHz, Ch 11)**



Date: 15.MAR.2013 13:26:40

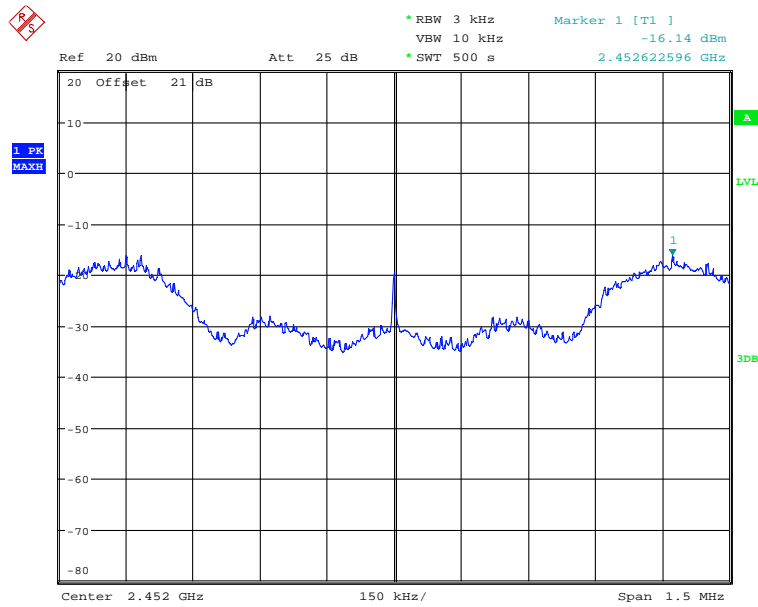
**Fig. 10 Power Spectral Density (802.11n-HT40, Ch 3)**





Date: 15.MAR.2013 13:54:36

Fig. 11 Power Spectral Density (802.11n-HT40, Ch 6)



Date: 15.MAR.2013 14:12:19

Fig. 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 ANSI C63.10

##### Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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##### Measurement Result:

##### 802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
802.11b	1	Fig.13	10705.13	P
	6	Fig.14	98717.95	P
	11	Fig.15	96153.85	P
802.11g	1	Fig.16	16602.56	P
	6	Fig.17	16602.56	P
	11	Fig.18	16538.46	P

##### 802.11n-HT20 mode

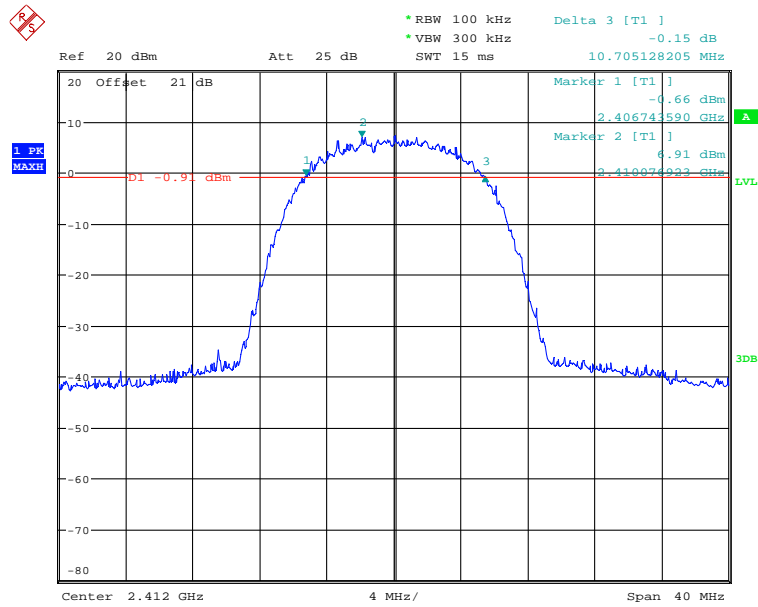
Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
802.11n (20MHz)	1	Fig.19	17820.51	P
	6	Fig.20	17820.51	P
	11	Fig.21	17820.51	P

##### 802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
802.11n (40MHz)	3	Fig.22	36666.67	P
	6	Fig.23	36666.67	P
	9	Fig.24	36538.46	P

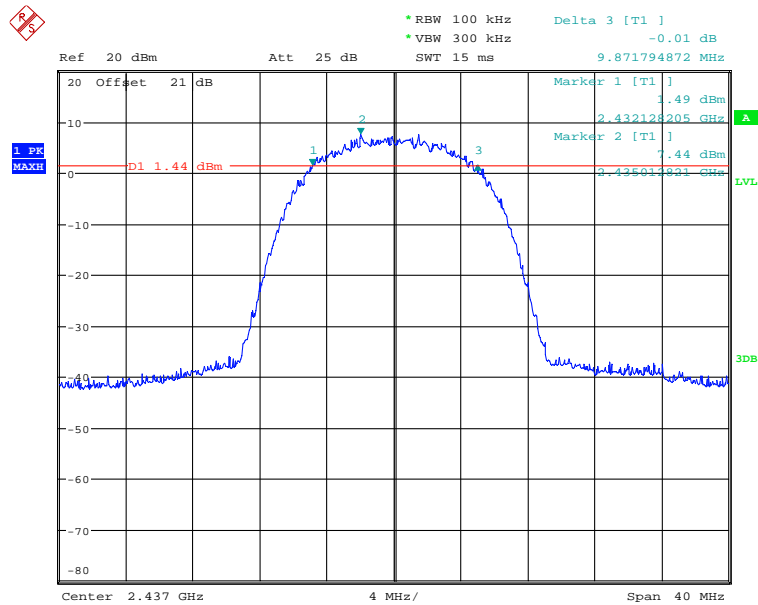
**Conclusion: PASS**

**Test graphs as below:**



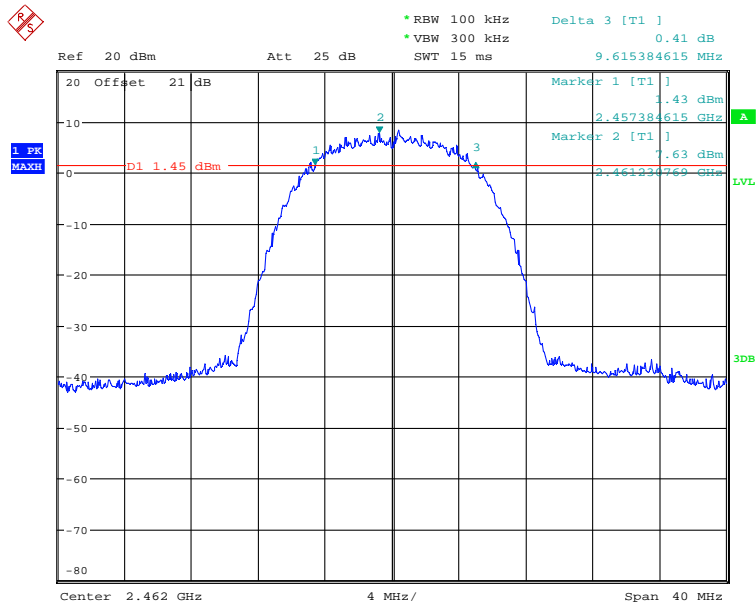
Date: 16.MAR.2013 13:59:45

Fig. 13 Occupied 6dB Bandwidth (802.11b, Ch 1)



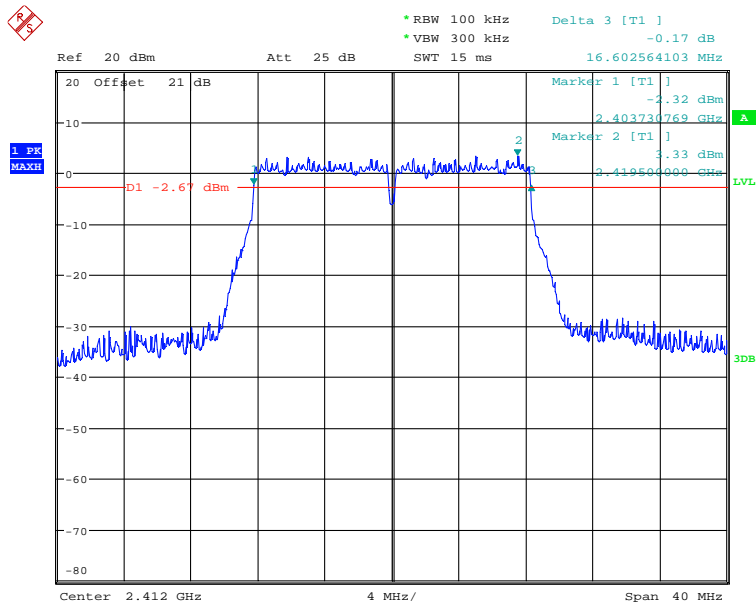
Date: 16.MAR.2013 14:01:00

Fig. 14 Occupied 6dB Bandwidth (802.11b, Ch 6)



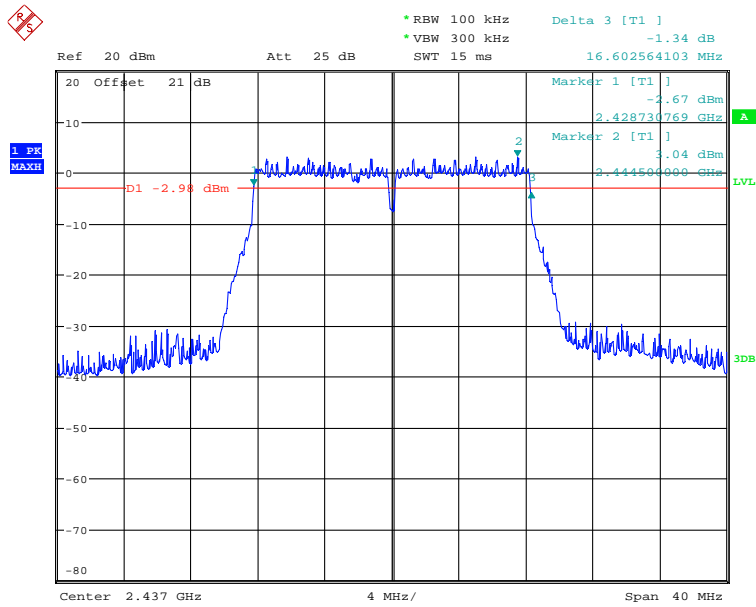
Date: 16.MAR.2013 14:02:04

Fig. 15 Occupied 6dB Bandwidth (802.11b, Ch 11)



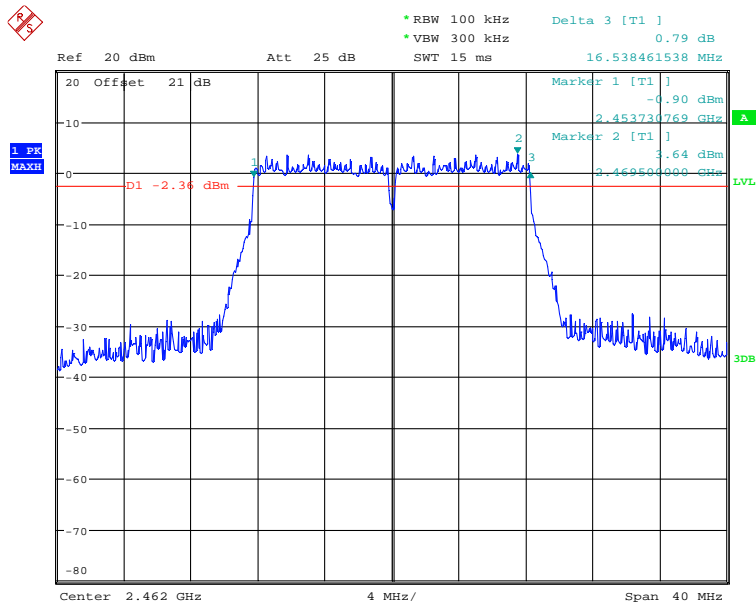
Date: 16.MAR.2013 14:39:51

Fig. 16 Occupied 6dB Bandwidth (802.11g, Ch 1)



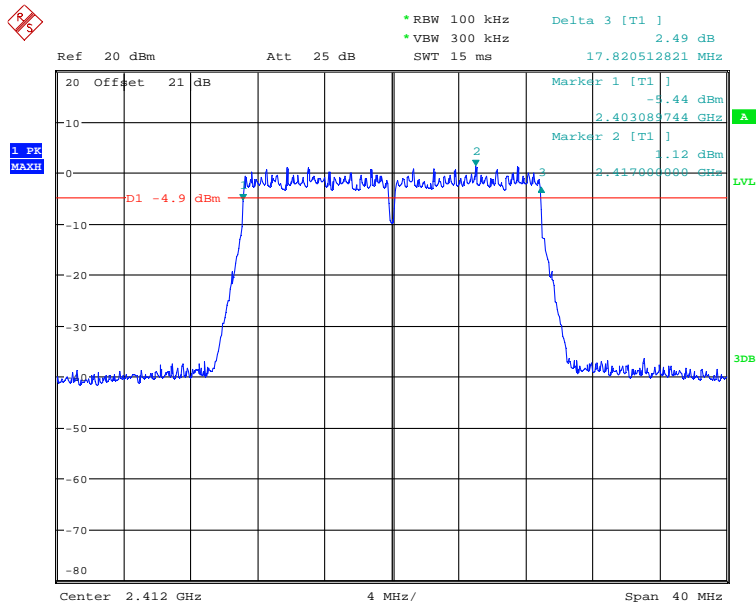
Date: 16.MAR.2013 14:40:47

Fig. 17 Occupied 6dB Bandwidth (802.11g, Ch 6)



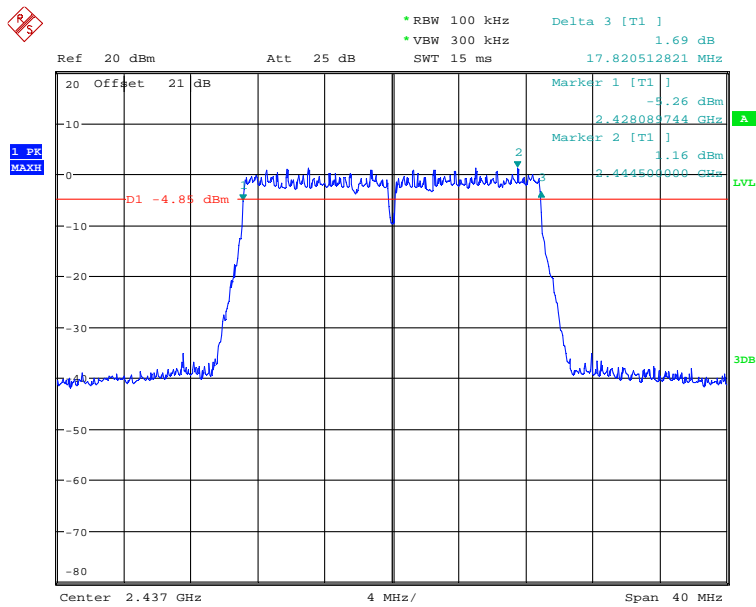
Date: 16.MAR.2013 14:42:10

Fig. 18 Occupied 6dB Bandwidth (802.11g, Ch 11)



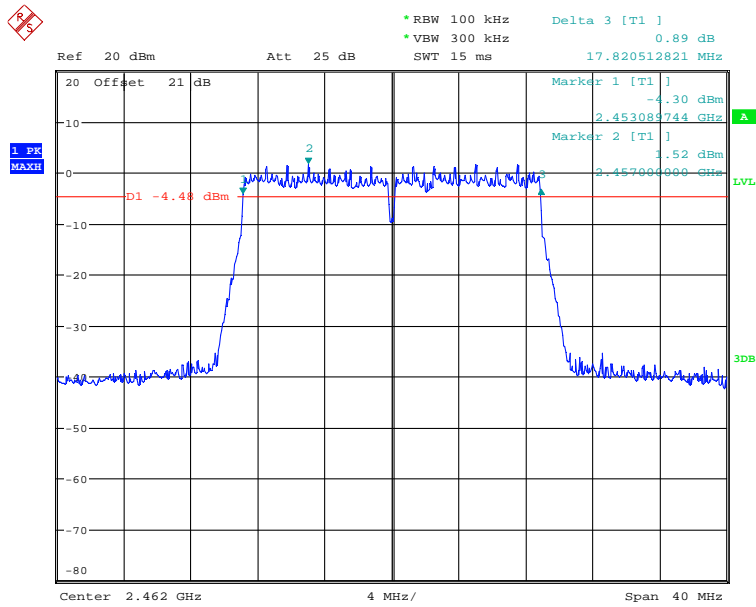
Date: 16.MAR.2013 14:43:41

**Fig. 19 Occupied 6dB Bandwidth (802.11n-HT20, Ch 1)**



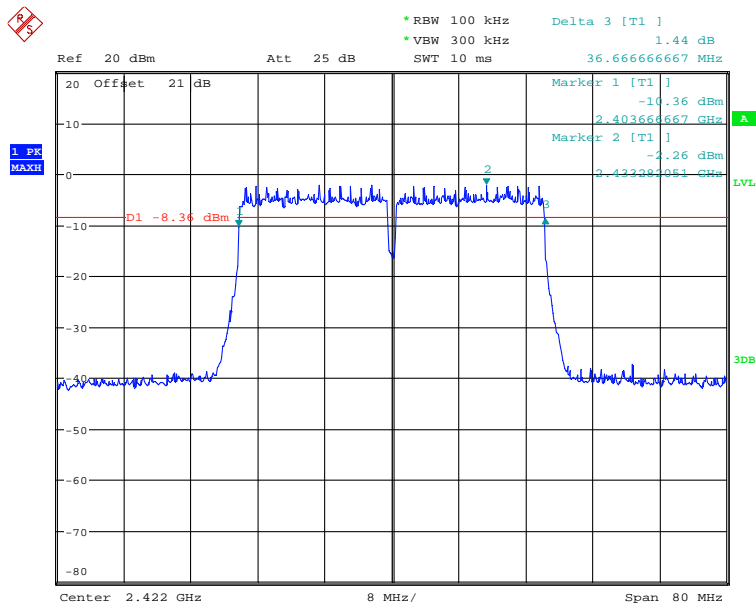
Date: 16.MAR.2013 14:44:52

**Fig. 20 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)**



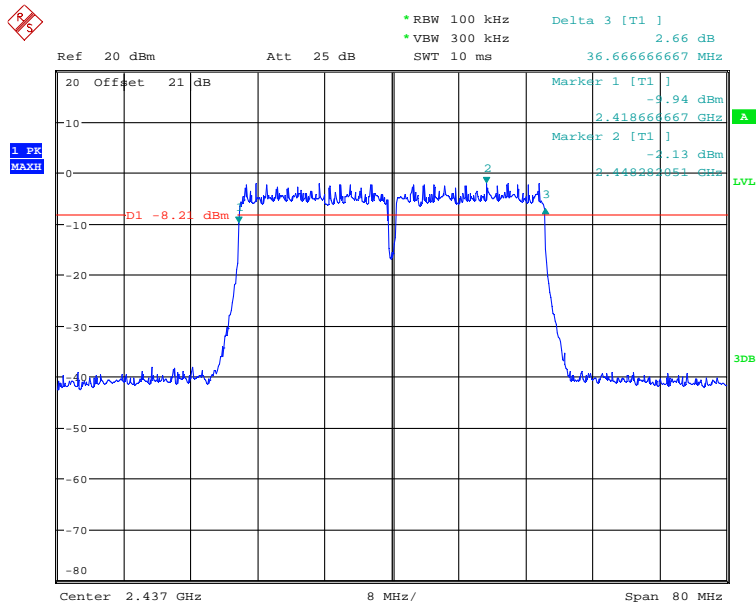
Date: 16.MAR.2013 14:45:43

**Fig. 21 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)**



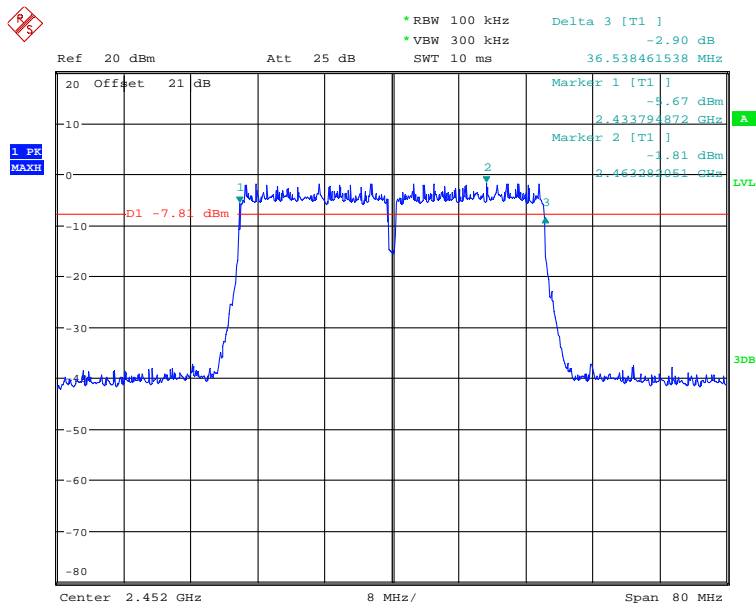
Date: 16.MAR.2013 14:47:20

**Fig. 22 Occupied 6dB Bandwidth (802.11n-HT40, Ch 3)**



Date: 16.MAR.2013 14:48:36

**Fig. 23 Occupied 6dB Bandwidth (802.11n-HT40, Ch 6)**



Date: 16.MAR.2013 14:49:46

**Fig. 24 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 ANSI C63.10

**Measurement Uncertainty:**

Measurement Uncertainty	0.75dB
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**Measurement Result:**

**802.11b/g mode**

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.25	P
	11	Fig.26	P
802.11g	1	Fig.27	P
	11	Fig.28	P

**802.11n-HT20 mode**

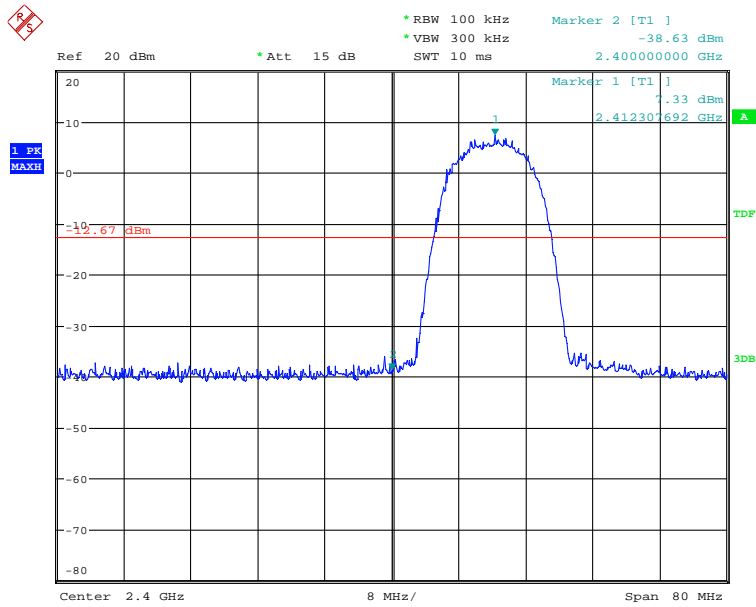
Mode	Channel	Test Results	Conclusion
802.11n (20MHz)	1	Fig.29	P
	11	Fig.30	P

**802.11n-HT40 mode**

Mode	Channel	Test Results	Conclusion
802.11n (40MHz)	3	Fig.31	P
	9	Fig.32	P

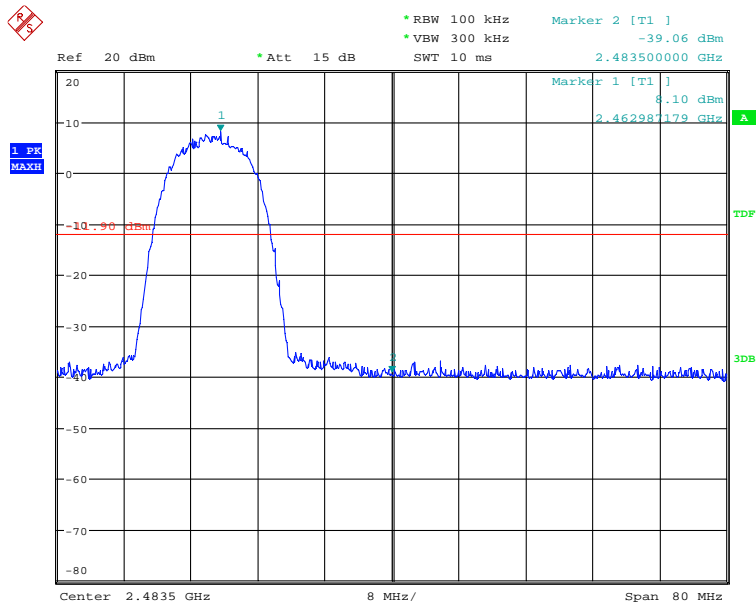
**Conclusion: PASS**

**Test graphs as below:**



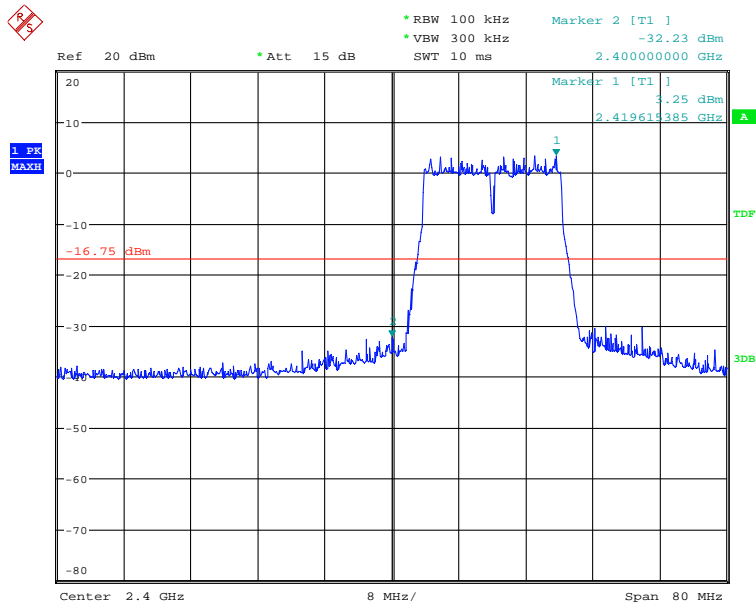
Date: 16.MAR.2013 14:52:37

Fig. 25 Band Edges (802.11b, Ch 1)



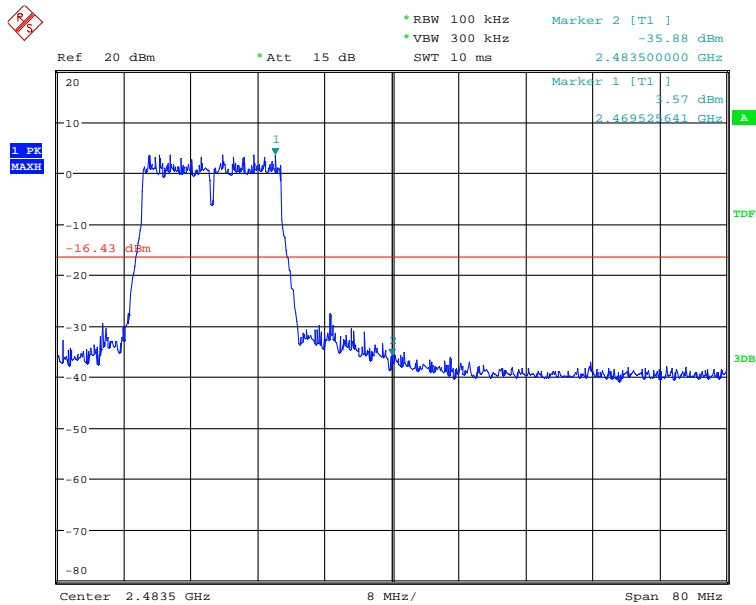
Date: 16.MAR.2013 14:53:01

Fig. 26 Band Edges (802.11b, Ch 11)



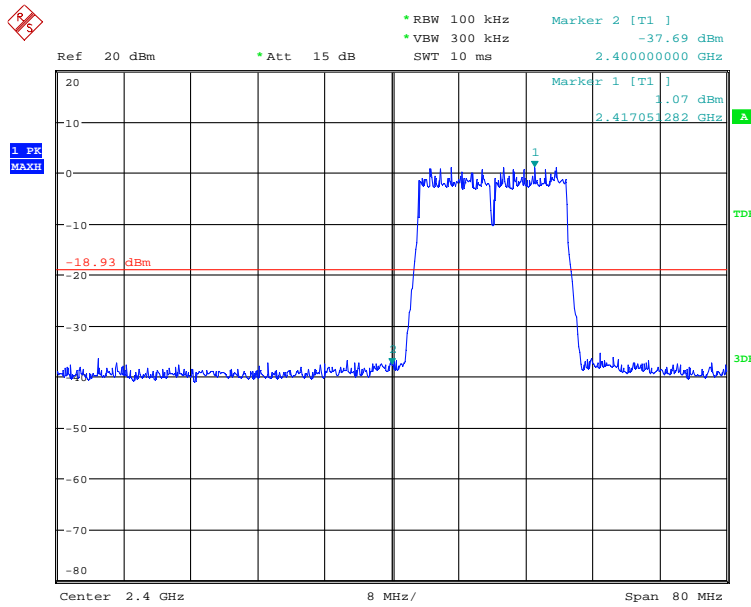
Date: 16.MAR.2013 14:53:43

**Fig. 27 Band Edges (802.11g, Ch 1)**



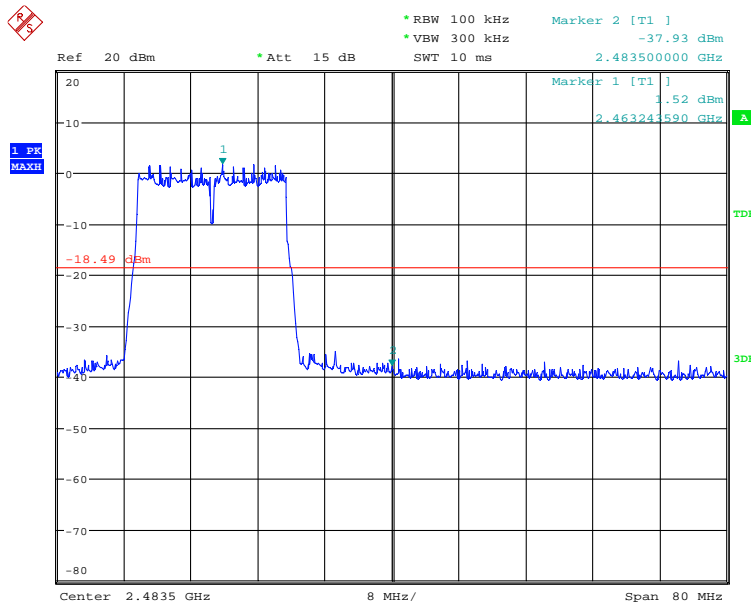
Date: 16.MAR.2013 14:54:15

**Fig. 28 Band Edges (802.11g, Ch 11)**



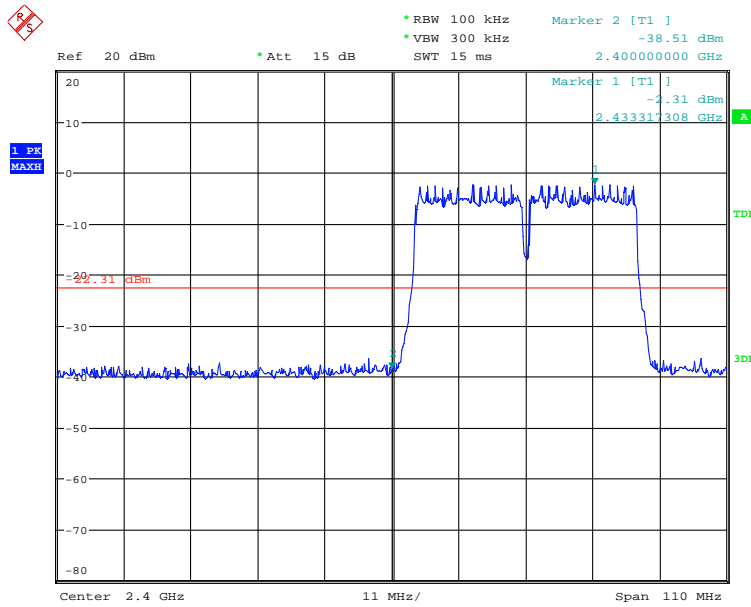
Date: 16.MAR.2013 14:54:56

**Fig. 29 Band Edges (802.11n-HT20, Ch 1)**



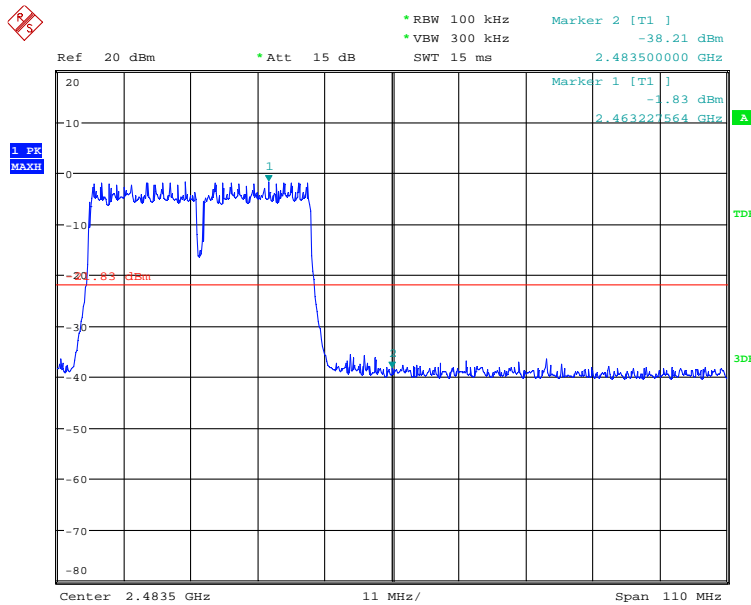
Date: 16.MAR.2013 14:55:15

**Fig. 30 Band Edges (802.11n-HT20, Ch 11)**



Date: 16.MAR.2013 14:56:05

Fig. 31 Band Edges (802.11n-HT40, Ch 3)



Date: 16.MAR.2013 14:56:31

Fig. 32 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 ANSI C63.10

#### Measurement Uncertainty:

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

#### Measurement Results:

##### 802.11b/g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.33	P
		30 MHz ~ 1 GHz	Fig.34	P
		1 GHz ~ 2.5 GHz	Fig.35	P
		2.5 GHz ~ 7.5 GHz	Fig.36	P
		7.5 GHz ~ 10 GHz	Fig.37	P
		10 GHz ~ 15 GHz	Fig.38	P
		15 GHz ~ 20 GHz	Fig.39	P
		20 GHz ~ 26 GHz	Fig.40	P
	6	2.437 GHz	Fig.41	P
		30 MHz ~ 1 GHz	Fig.42	P
		1 GHz ~ 2.5 GHz	Fig.43	P
		2.5 GHz ~ 7.5 GHz	Fig.44	P
		7.5 GHz ~ 10 GHz	Fig.45	P
		10 GHz ~ 15 GHz	Fig.46	P
		15 GHz ~ 20 GHz	Fig.47	P
		20 GHz ~ 26 GHz	Fig.48	P
	11	2.462 GHz	Fig.49	P
		30 MHz ~ 1 GHz	Fig.50	P
		1 GHz ~ 2.5 GHz	Fig.51	P
		2.5 GHz ~ 7.5 GHz	Fig.52	P

		7.5 GHz ~ 10 GHz	Fig.53	P
		10 GHz ~ 15 GHz	Fig.54	P
		15 GHz ~ 20 GHz	Fig.55	P
		20 GHz ~ 26 GHz	Fig.56	P
802.11g	1	2.412 GHz	Fig.57	P
		30 MHz ~ 1 GHz	Fig.58	P
		1 GHz ~ 2.5 GHz	Fig.59	P
		2.5 GHz ~ 7.5 GHz	Fig.60	P
		7.5 GHz ~ 10 GHz	Fig.61	P
		10 GHz ~ 15 GHz	Fig.62	P
		15 GHz ~ 20 GHz	Fig.63	P
		20 GHz ~ 26 GHz	Fig.64	P
	6	2.437 GHz	Fig.65	P
		30 MHz ~ 1 GHz	Fig.66	P
		1 GHz ~ 2.5 GHz	Fig.67	P
		2.5 GHz ~ 7.5 GHz	Fig.68	P
		7.5 GHz ~ 10 GHz	Fig.69	P
		10 GHz ~ 15 GHz	Fig.70	P
		15 GHz ~ 20 GHz	Fig.71	P
		20 GHz ~ 26 GHz	Fig.72	P
	11	2.462 GHz	Fig.73	P
		30 MHz ~ 1 GHz	Fig.74	P
		1 GHz ~ 2.5 GHz	Fig.75	P
		2.5 GHz ~ 7.5 GHz	Fig.76	P
		7.5 GHz ~ 10 GHz	Fig.77	P
		10 GHz ~ 15 GHz	Fig.78	P
		15 GHz ~ 20 GHz	Fig.79	P
		20 GHz ~ 26 GHz	Fig.80	P

**802.11n-HT20 mode**

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (20MHz)	1	2.412 GHz	Fig.81	P
		30 MHz ~ 1 GHz	Fig.82	P
		1 GHz ~ 2.5 GHz	Fig.83	P
		2.5 GHz ~ 7.5 GHz	Fig.84	P
		7.5 GHz ~ 10 GHz	Fig.85	P
		10 GHz ~ 15 GHz	Fig.86	P
		15 GHz ~ 20 GHz	Fig.87	P
		20 GHz ~ 26 GHz	Fig.88	P
	6	2.437 GHz	Fig.89	P
		30 MHz ~ 1 GHz	Fig.90	P
		1 GHz ~ 2.5 GHz	Fig.91	P
		2.5 GHz ~ 7.5 GHz	Fig.92	P
		7.5 GHz ~ 10 GHz	Fig.93	P
		10 GHz ~ 15 GHz	Fig.94	P
		15 GHz ~ 20 GHz	Fig.95	P
		20 GHz ~ 26 GHz	Fig.96	P
	11	2.462 GHz	Fig.97	P
		30 MHz ~ 1 GHz	Fig.98	P
		1 GHz ~ 2.5 GHz	Fig.99	P
		2.5 GHz ~ 7.5 GHz	Fig.100	P
		7.5 GHz ~ 10 GHz	Fig.101	P
		10 GHz ~ 15 GHz	Fig.102	P
		15 GHz ~ 20 GHz	Fig.103	P
		20 GHz ~ 26 GHz	Fig.104	P

**802.11n-HT40 mode**

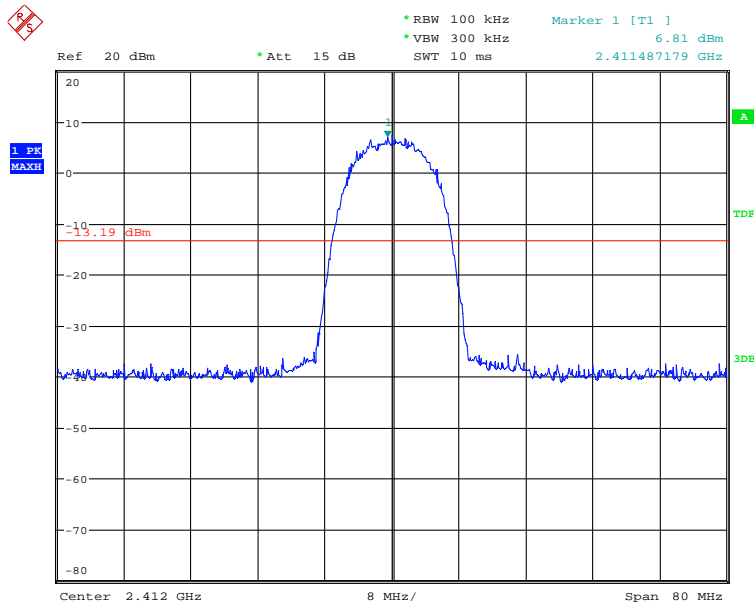
MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (40MHz)	3	2.422 GHz	Fig.105	P
		30 MHz ~ 1 GHz	Fig.106	P
		1 GHz ~ 2.5 GHz	Fig.107	P
		2.5 GHz ~ 7.5 GHz	Fig.108	P
		7.5 GHz ~ 10 GHz	Fig.109	P
		10 GHz ~ 15 GHz	Fig.110	P
		15 GHz ~ 20 GHz	Fig.111	P
		20 GHz ~ 26 GHz	Fig.112	P
	6	2.437 GHz	Fig.113	P
		30 MHz ~ 1 GHz	Fig.114	P
		1 GHz ~ 2.5 GHz	Fig.115	P
		2.5 GHz ~ 7.5 GHz	Fig.116	P
		7.5 GHz ~ 10 GHz	Fig.117	P
		10 GHz ~ 15 GHz	Fig.118	P



		15 GHz ~ 20 GHz	Fig.119	P
		20 GHz ~ 26 GHz	Fig.120	P
	9	2.452 GHz	Fig.121	P
		30 MHz ~ 1 GHz	Fig.122	P
		1 GHz ~ 2.5 GHz	Fig.123	P
		2.5 GHz ~ 7.5 GHz	Fig.124	P
		7.5 GHz ~ 10 GHz	Fig.125	P
		10 GHz ~ 15 GHz	Fig.126	P
		15 GHz ~ 20 GHz	Fig.127	P
		20 GHz ~ 26 GHz	Fig.128	P

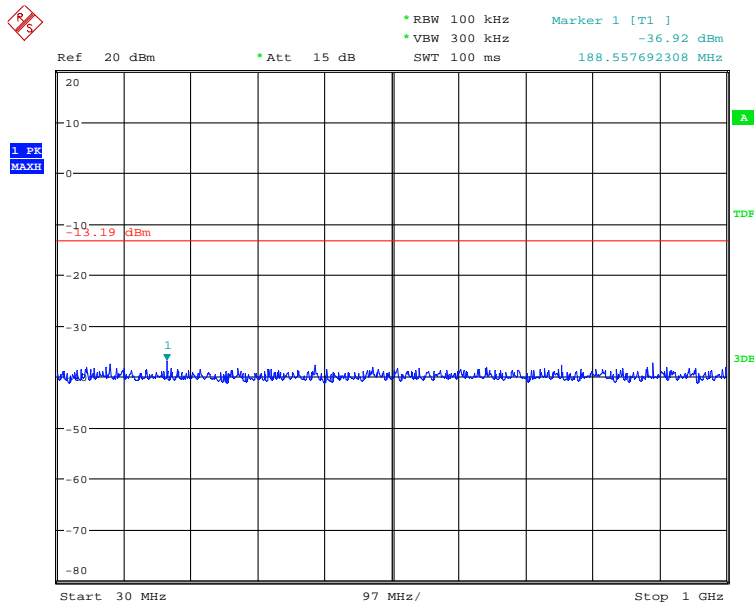
**Conclusion: PASS**

**Test graphs as below:**



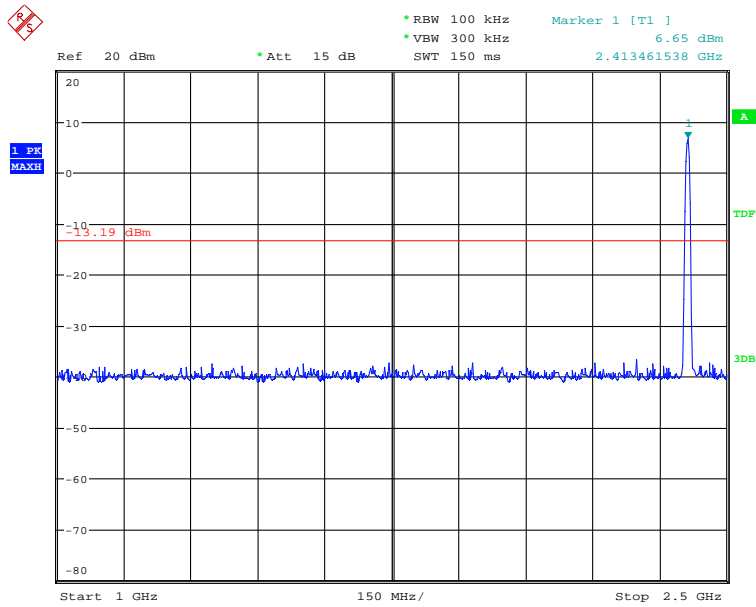
Date: 16.MAR.2013 15:05:05

**Fig. 33 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)**



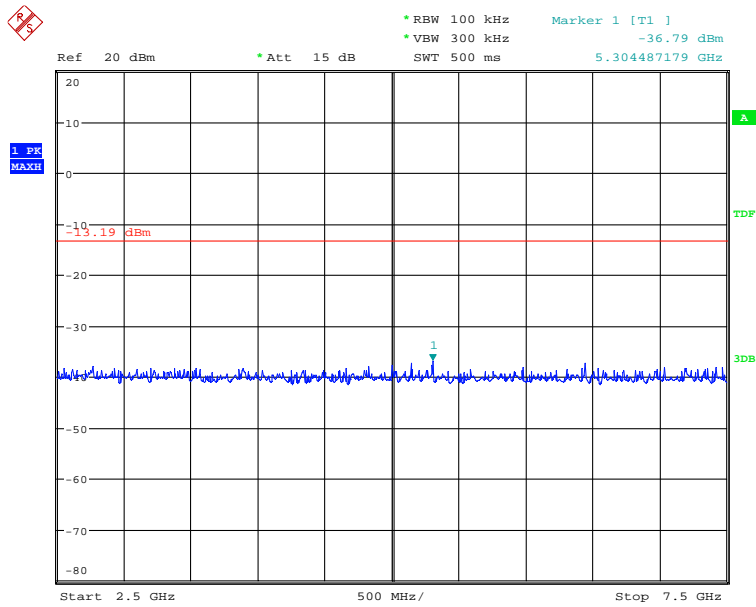
Date: 16.MAR.2013 15:05:11

**Fig. 34 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)**



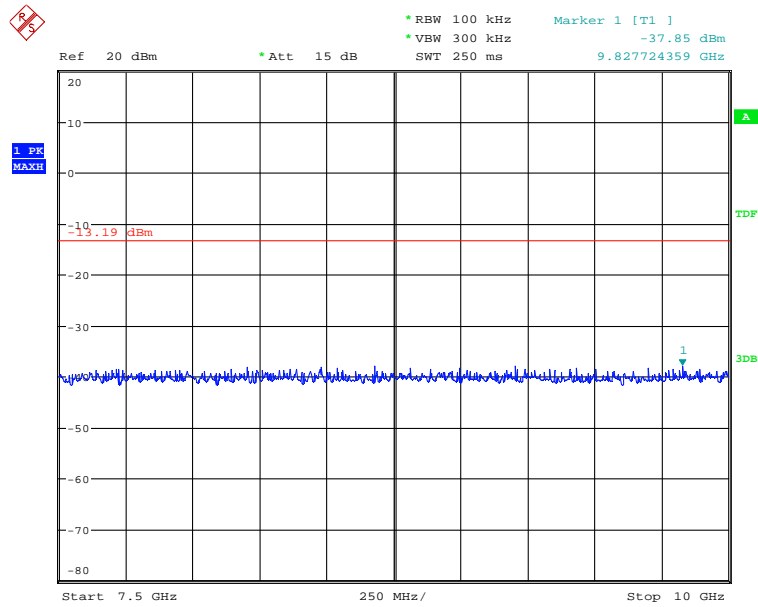
Date: 16.MAR.2013 15:05:18

Fig. 35 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)



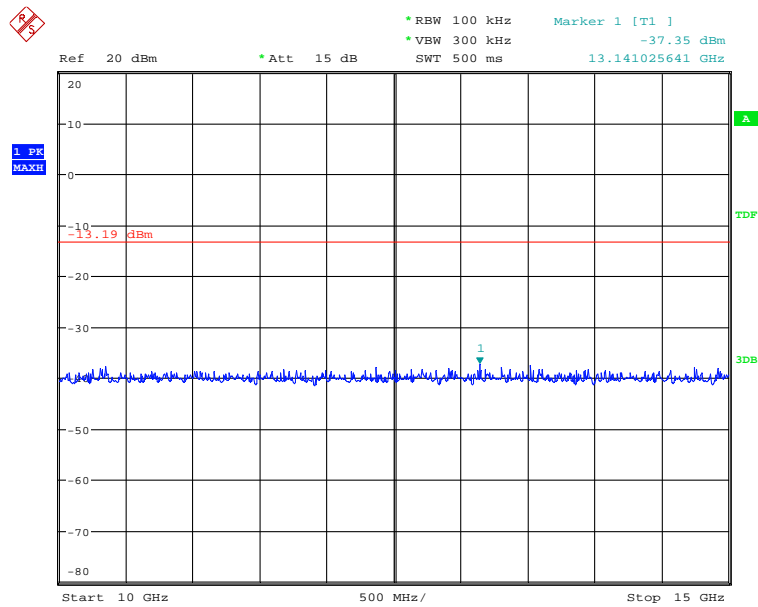
Date: 16.MAR.2013 15:05:25

Fig. 36 Conducted Spurious Emission (802.11b, Ch1, 2.5 GHz-7.5 GHz)



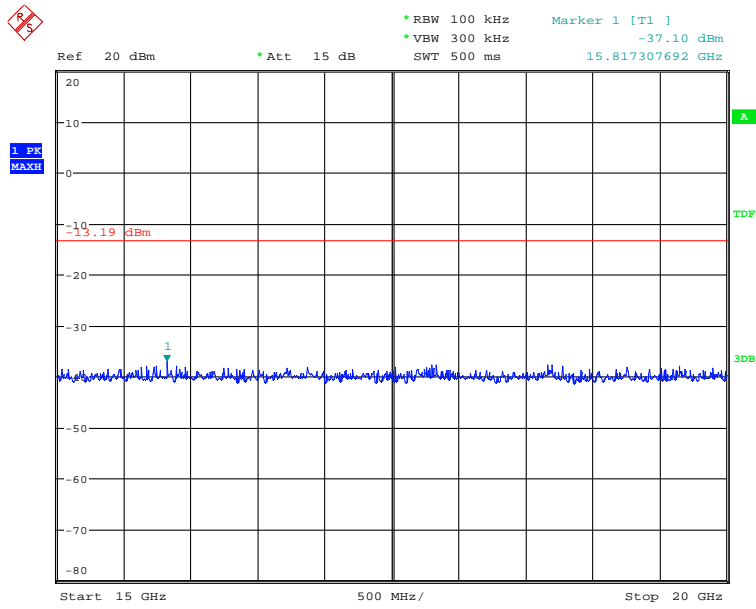
Date: 16.MAR.2013 15:05:32

**Fig. 37 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)**



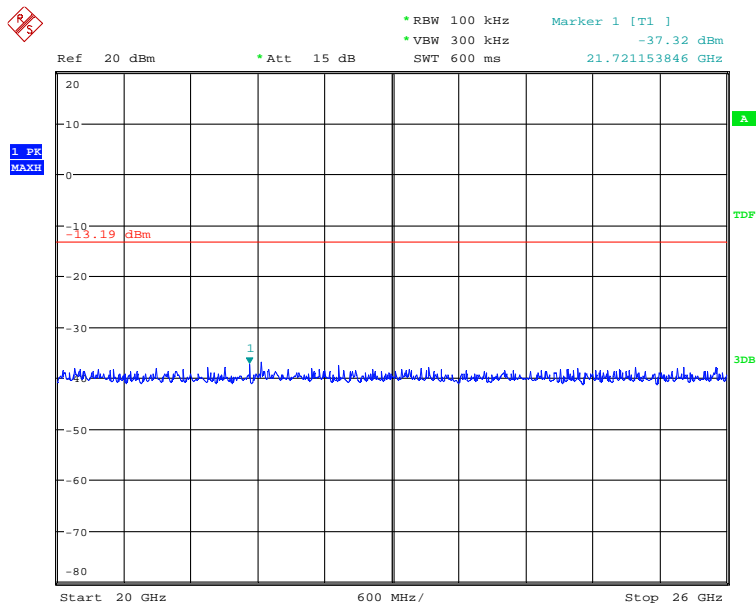
Date: 16.MAR.2013 15:05:39

**Fig. 38 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)**



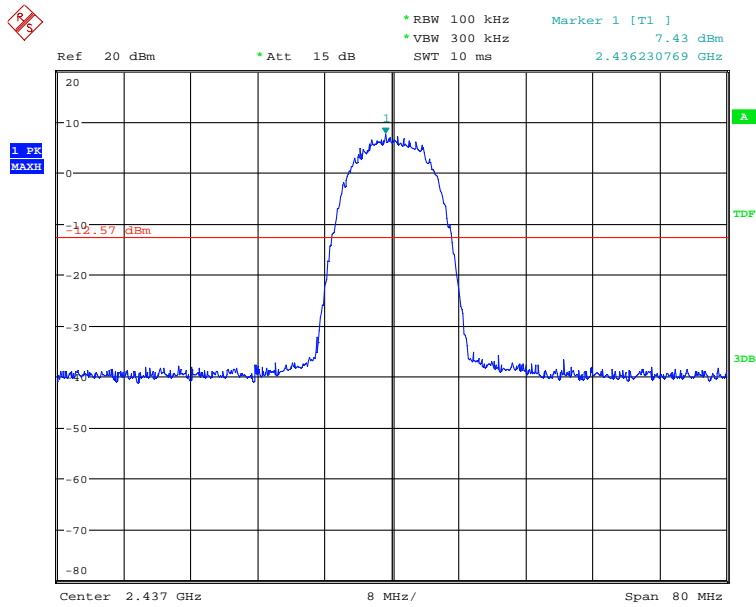
Date: 16.MAR.2013 15:05:46

**Fig. 39 Conducted Spurious Emission (802.11b, Ch1, 15 GHz-20 GHz)**



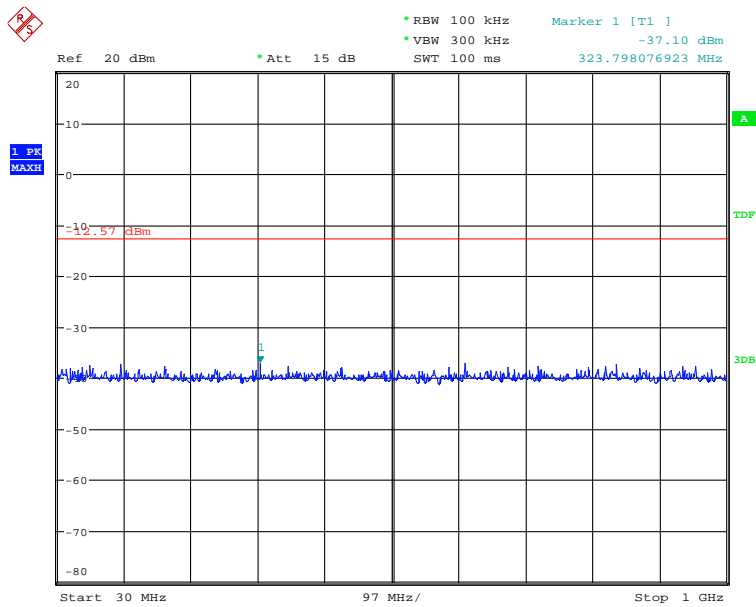
Date: 16.MAR.2013 15:05:53

**Fig. 40 Conducted Spurious Emission (802.11b, Ch1, 20 GHz-26 GHz)**



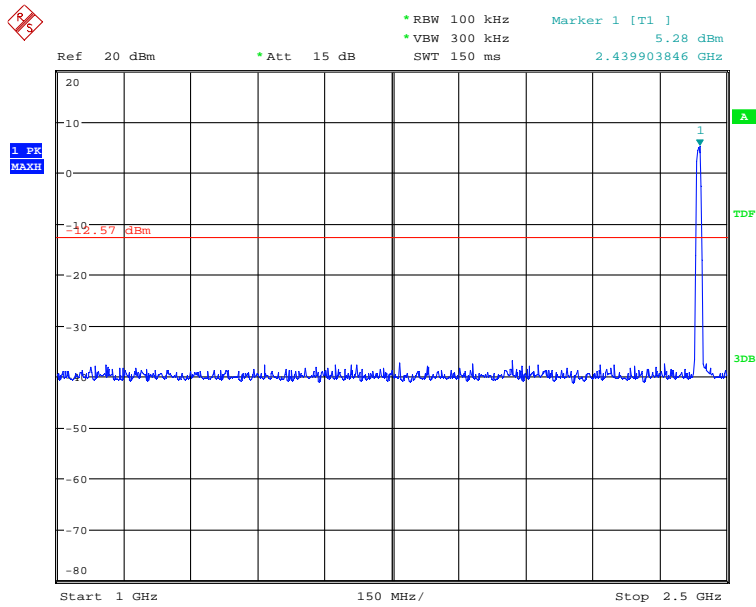
Date: 16.MAR.2013 15:06:16

**Fig. 41 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)**



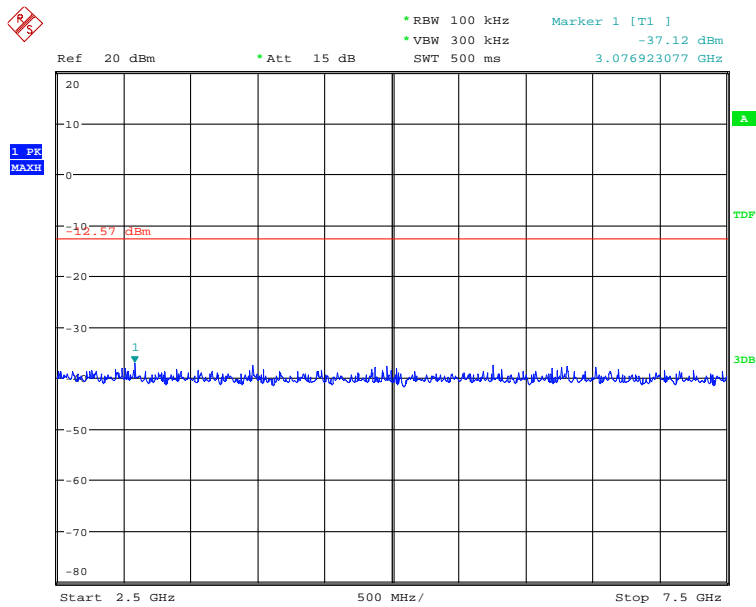
Date: 16.MAR.2013 15:06:23

**Fig. 42 Conducted Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)**



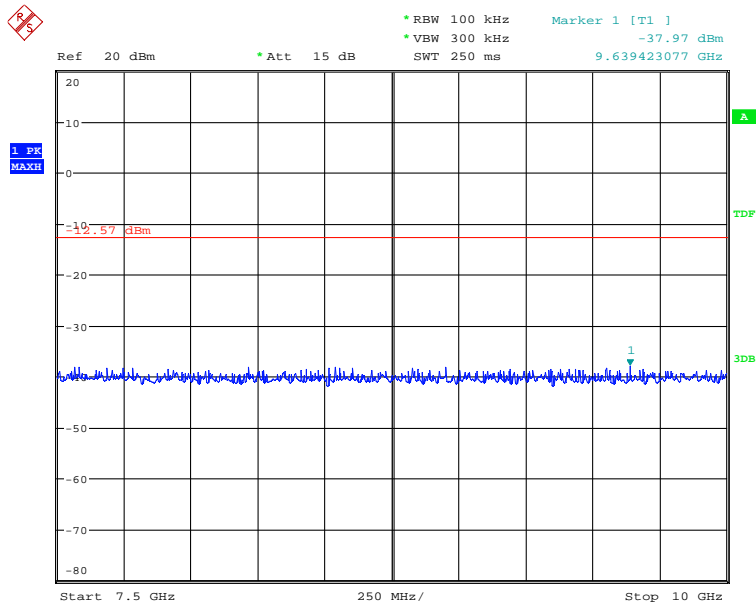
Date: 16.MAR.2013 15:06:30

Fig. 43 Conducted Spurious Emission (802.11b, Ch6, 1 GHz-2.5 GHz)



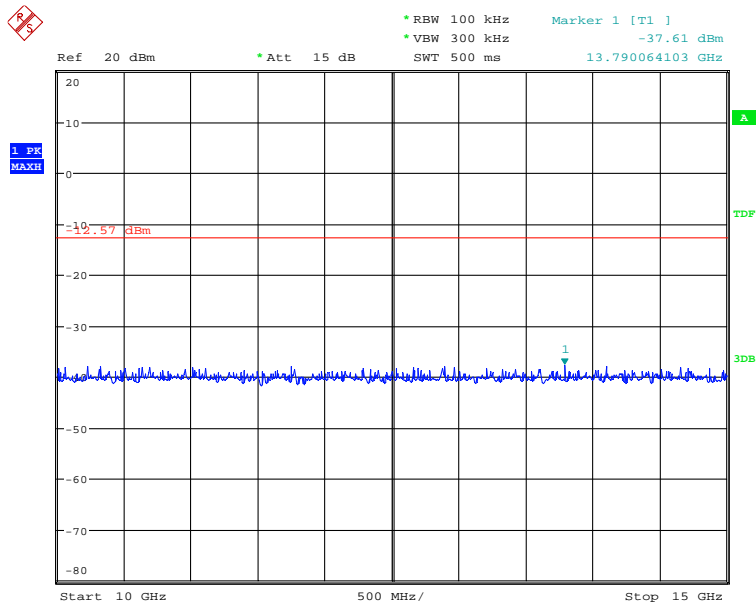
Date: 16.MAR.2013 15:06:37

Fig. 44 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)



Date: 16.MAR.2013 15:06:44

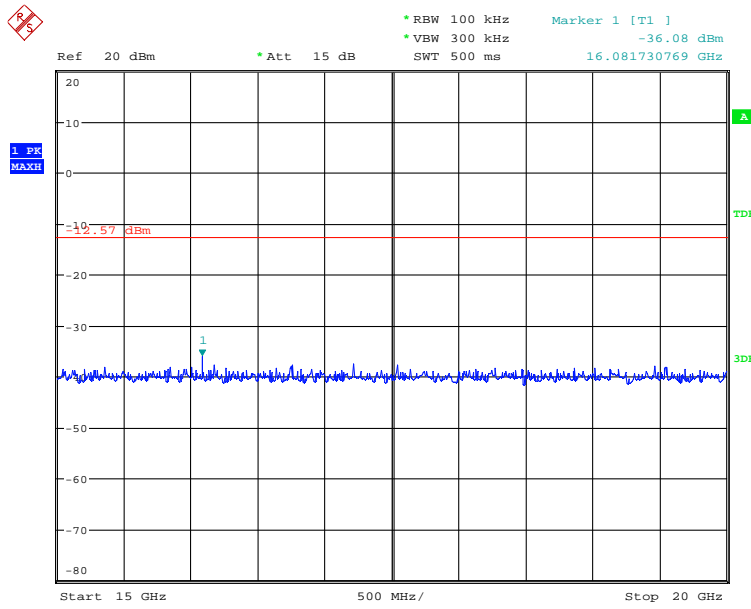
Fig. 45 Conducted Spurious Emission (802.11b, Ch6, 7.5 GHz-10 GHz)



Date: 16.MAR.2013 15:06:50

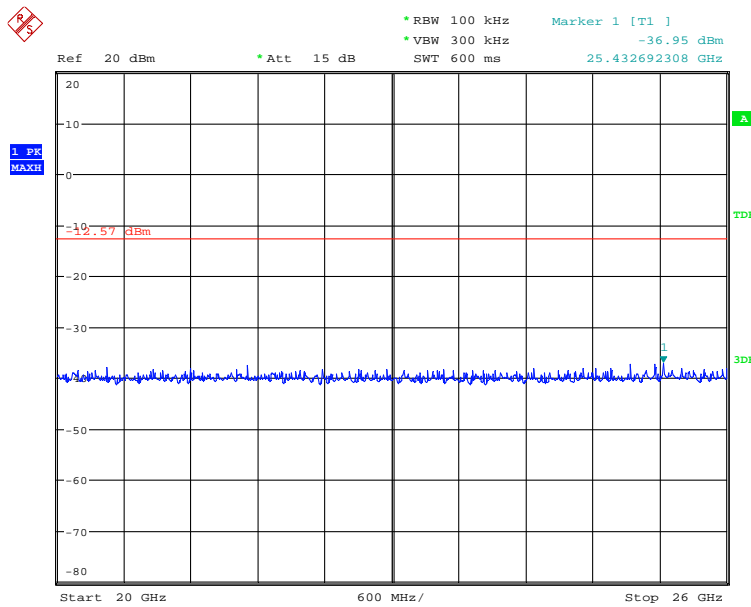
Fig. 46 Conducted Spurious Emission (802.11b, Ch6, 10 GHz-15 GHz)





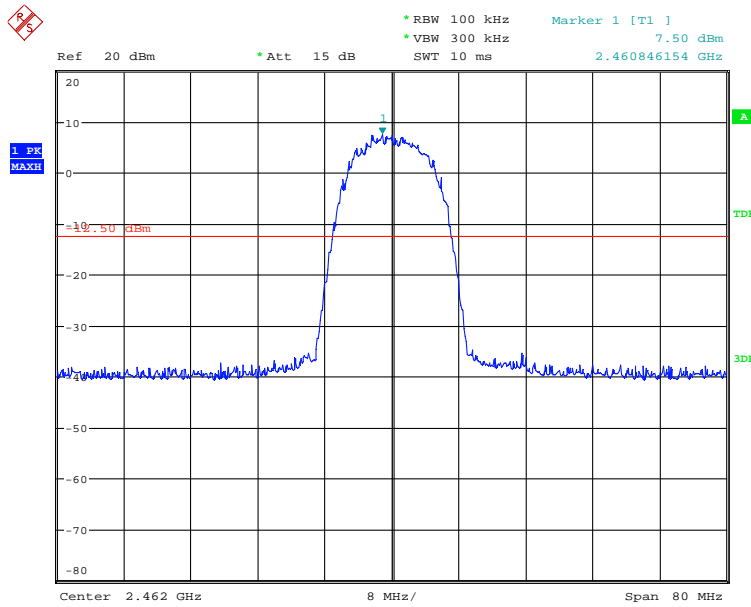
Date: 16.MAR.2013 15:06:57

**Fig. 47 Conducted Spurious Emission (802.11b, Ch6, 15 GHz-20 GHz)**



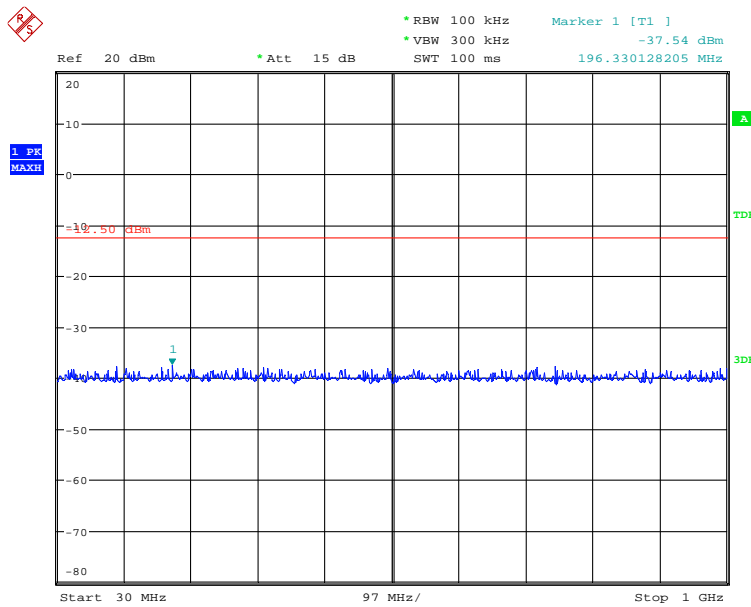
Date: 16.MAR.2013 15:07:04

**Fig. 48 Conducted Spurious Emission (802.11b, Ch6, 20 GHz-26 GHz)**



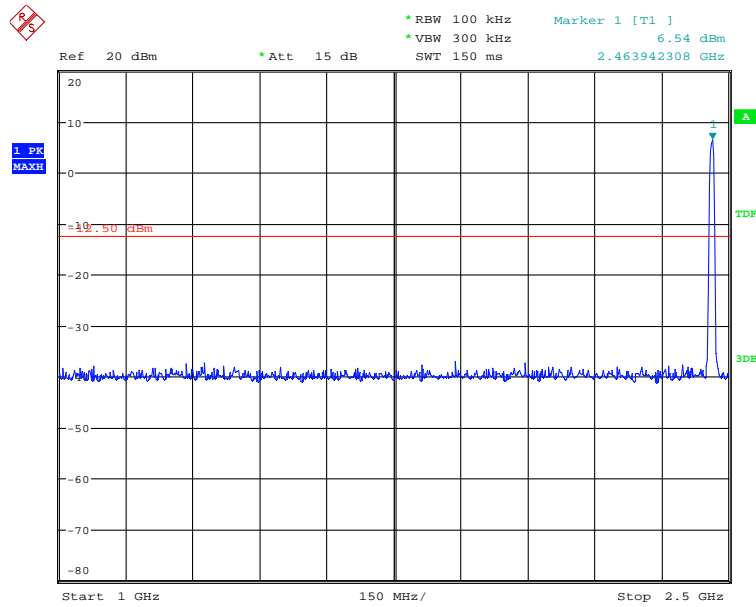
Date: 16.MAR.2013 15:07:25

Fig. 49 Conducted Spurious Emission (802.11b, Ch11, Center Frequency)



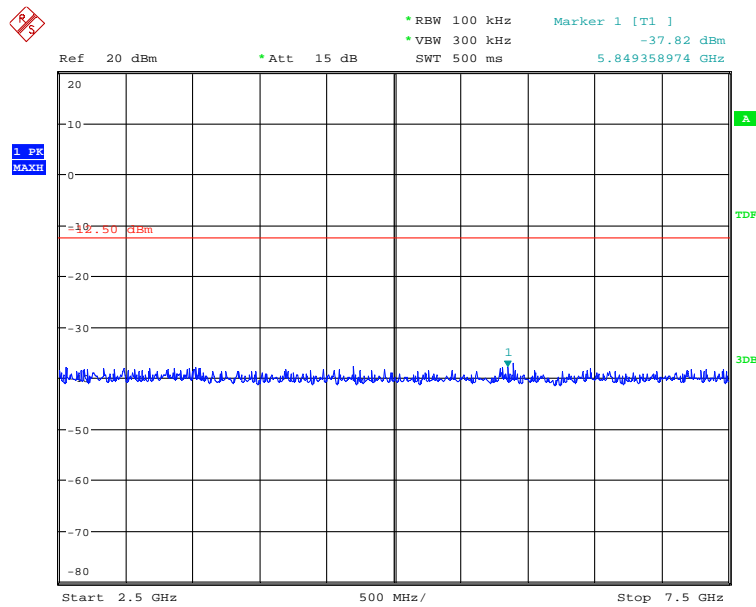
Date: 16.MAR.2013 15:07:32

Fig. 50 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)



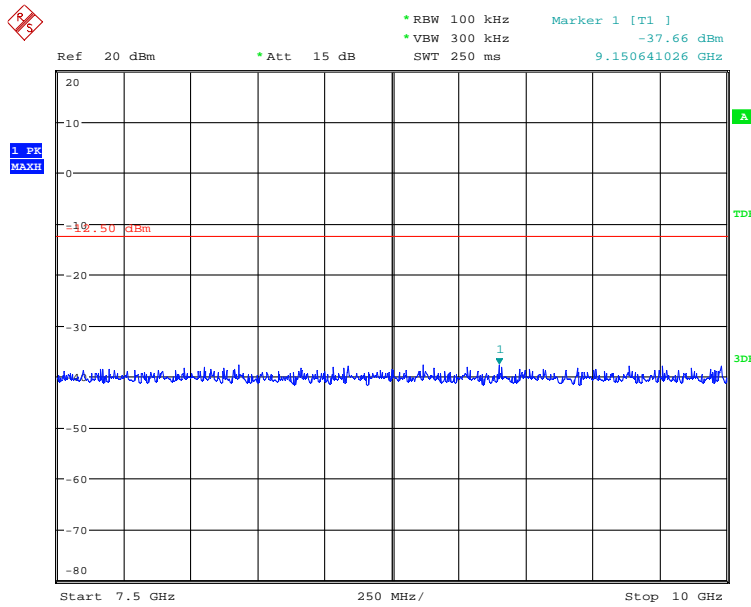
Date: 16.MAR.2013 15:07:38

**Fig. 51 Conducted Spurious Emission (802.11b, Ch11, 1 GHz-2.5 GHz)**



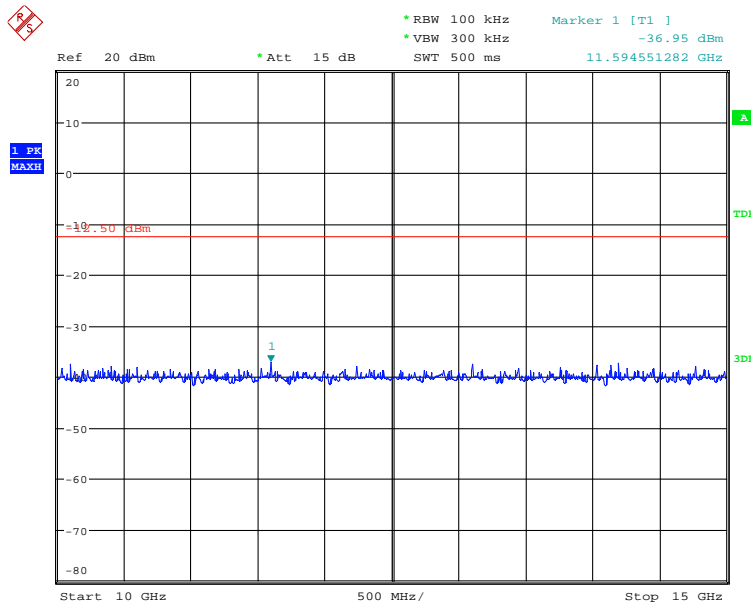
Date: 16.MAR.2013 15:07:45

**Fig. 52 Conducted Spurious Emission (802.11b, Ch11, 2.5 GHz-7.5 GHz)**



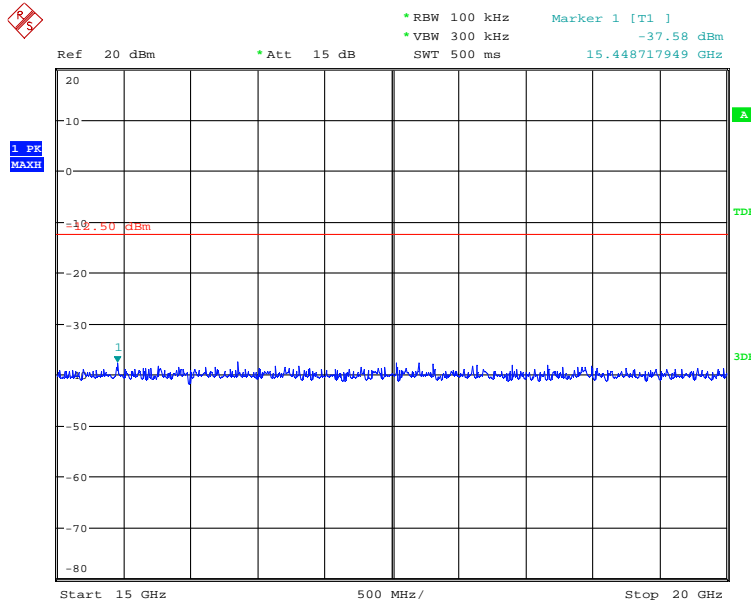
Date: 16.MAR.2013 15:07:52

**Fig. 53 Conducted Spurious Emission (802.11b, Ch11, 7.5 GHz-10 GHz)**



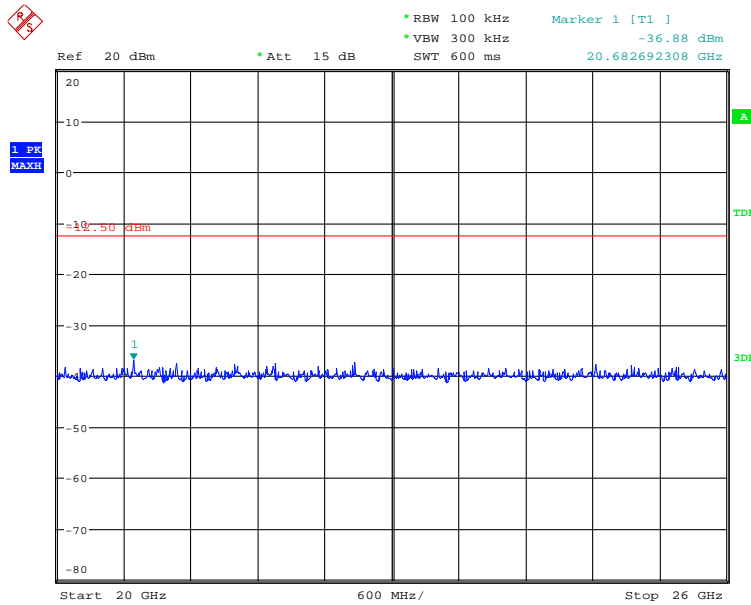
Date: 16.MAR.2013 15:07:59

**Fig. 54 Conducted Spurious Emission (802.11b, Ch11, 10 GHz-15 GHz)**



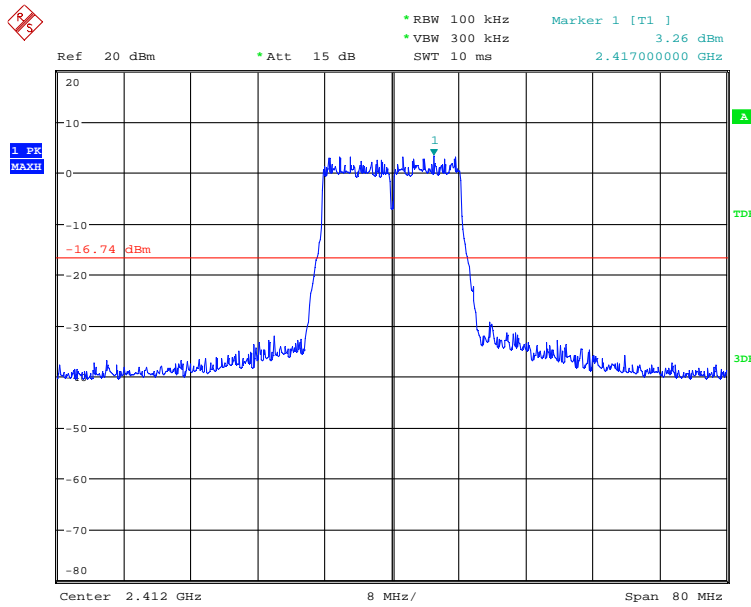
Date: 16.MAR.2013 15:08:06

Fig. 55 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)



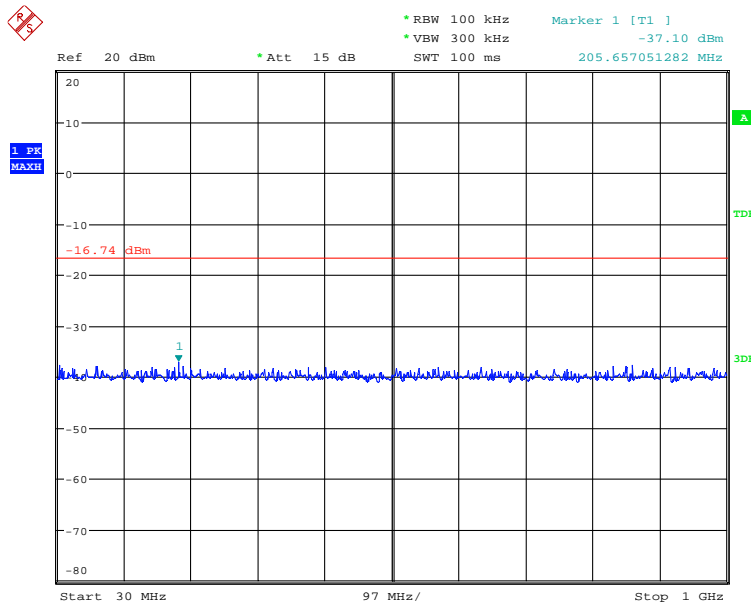
Date: 16.MAR.2013 15:08:12

Fig. 56 Conducted Spurious Emission (802.11b, Ch11, 20 GHz-26 GHz)



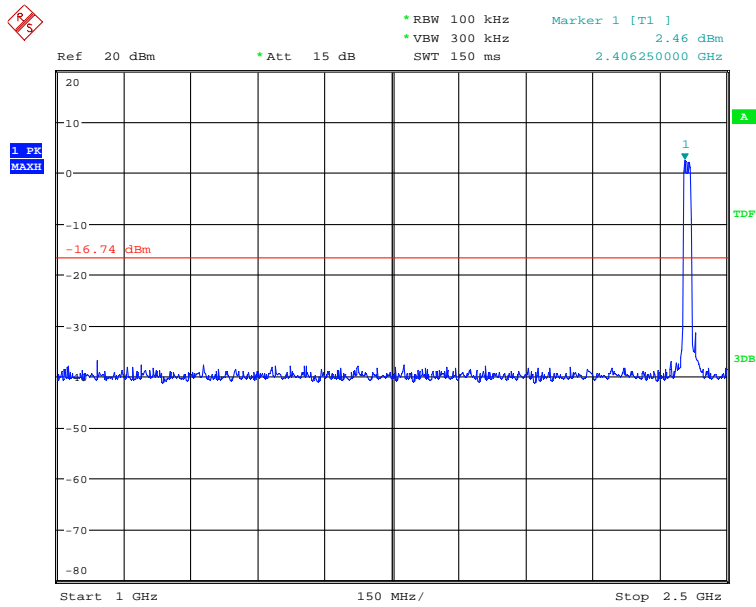
Date: 16.MAR.2013 15:09:11

Fig. 57 Conducted Spurious Emission (802.11g, Ch1, Center Frequency)



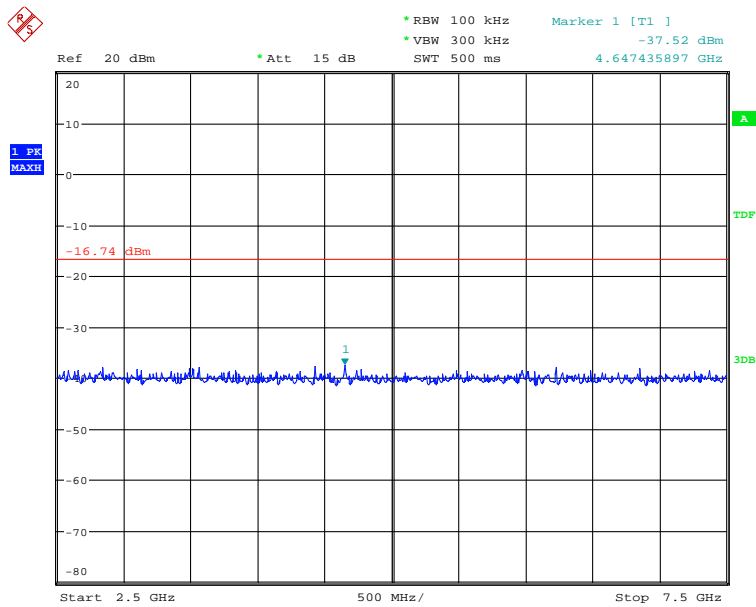
Date: 16.MAR.2013 15:09:18

Fig. 58 Conducted Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)



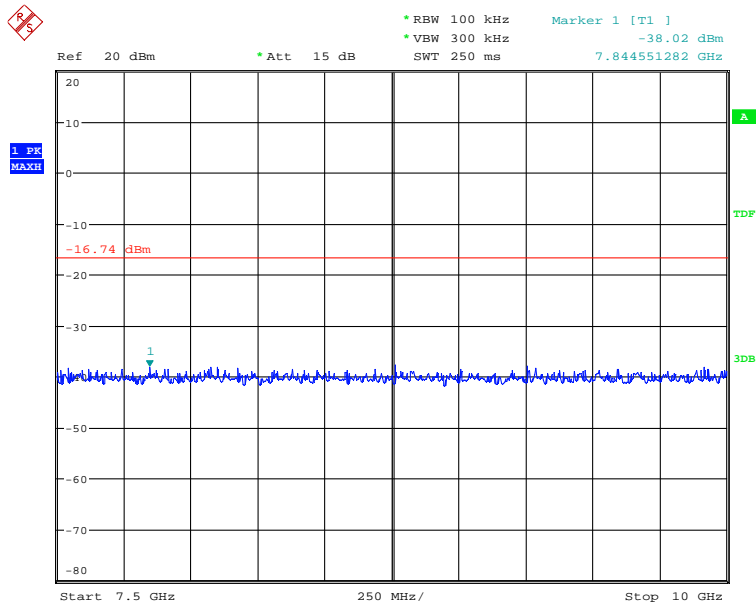
Date: 16.MAR.2013 15:09:25

**Fig. 59 Conducted Spurious Emission (802.11g, Ch1, 1 GHz-2.5 GHz)**



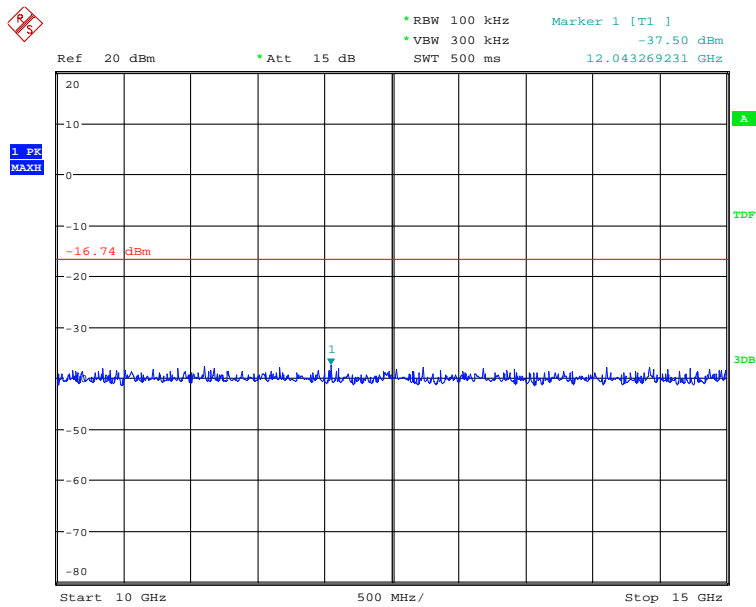
Date: 16.MAR.2013 15:09:32

**Fig. 60 Conducted Spurious Emission (802.11g, Ch1, 2.5 GHz-7.5 GHz)**



Date: 16.MAR.2013 15:09:39

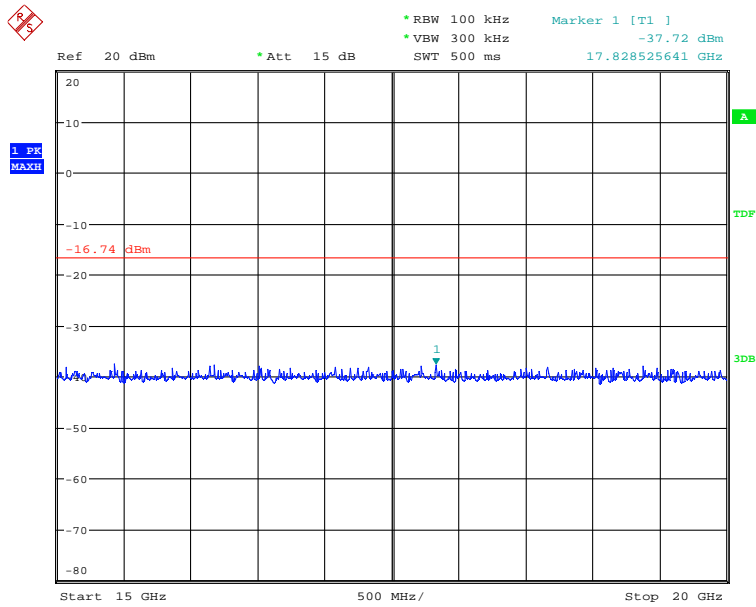
**Fig. 61 Conducted Spurious Emission (802.11g, Ch1, 7.5 GHz-10 GHz)**



Date: 16.MAR.2013 15:09:45

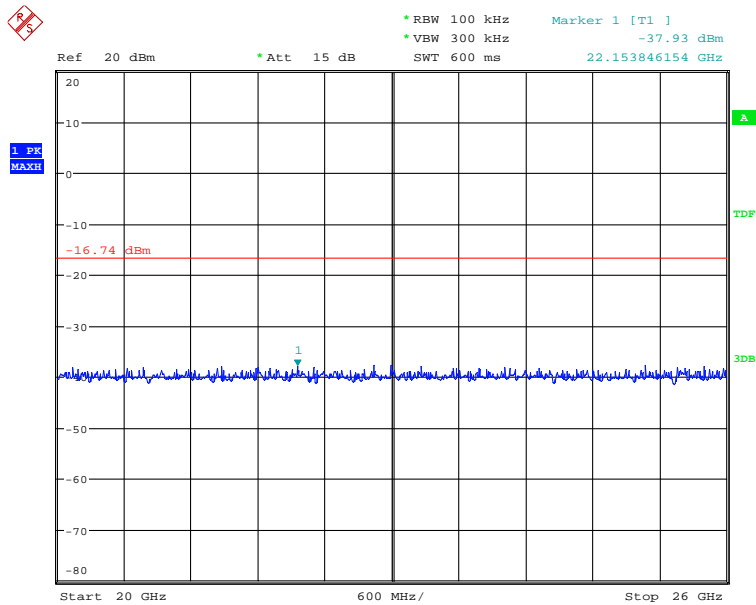
**Fig. 62 Conducted Spurious Emission (802.11g, Ch1, 10 GHz-15 GHz)**





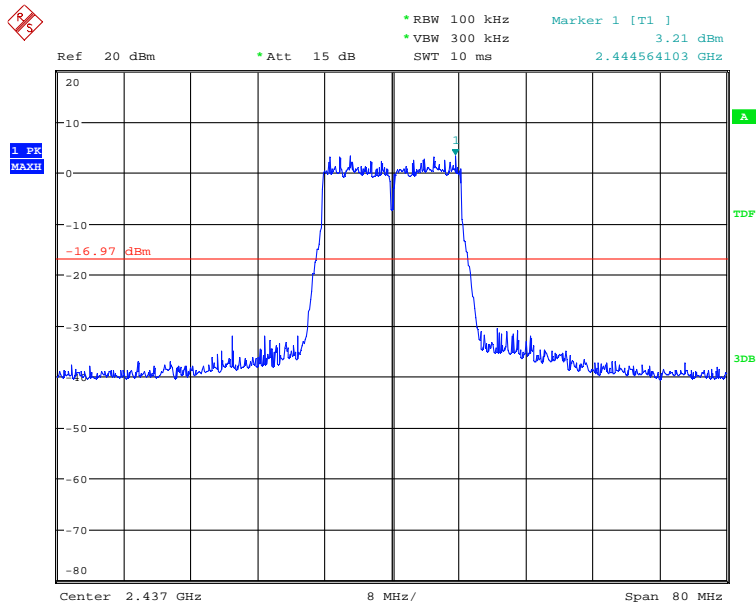
Date: 16.MAR.2013 15:09:52

Fig. 63 Conducted Spurious Emission (802.11g, Ch1, 15 GHz-20 GHz)



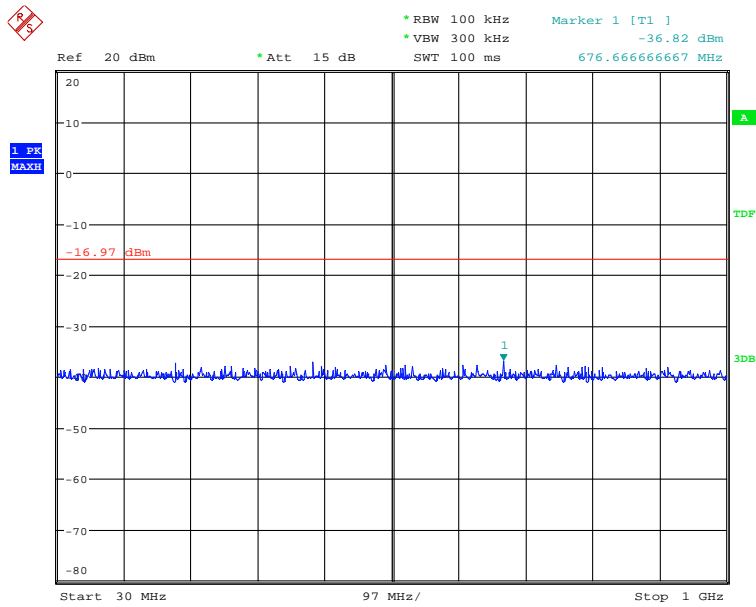
Date: 16.MAR.2013 15:09:59

Fig. 64 Conducted Spurious Emission (802.11g, Ch1, 20 GHz-26 GHz)



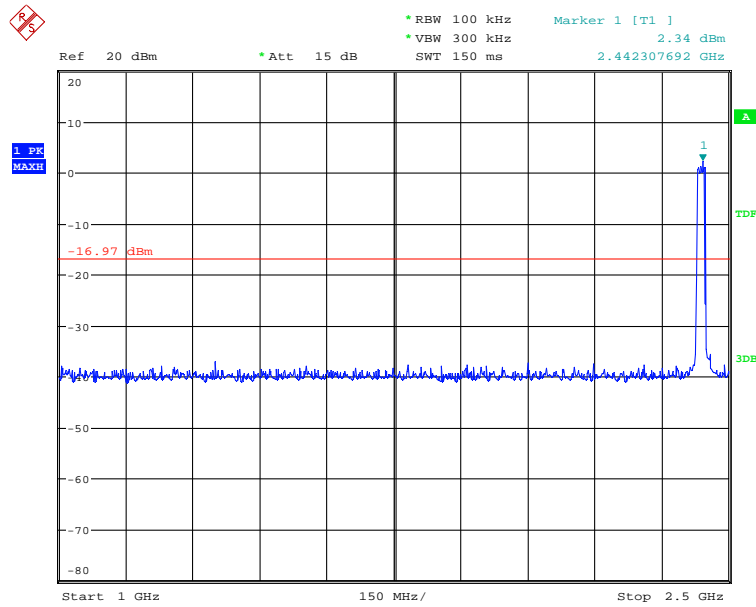
Date: 16.MAR.2013 15:10:38

Fig. 65 Conducted Spurious Emission (802.11g, Ch6, Center Frequency)



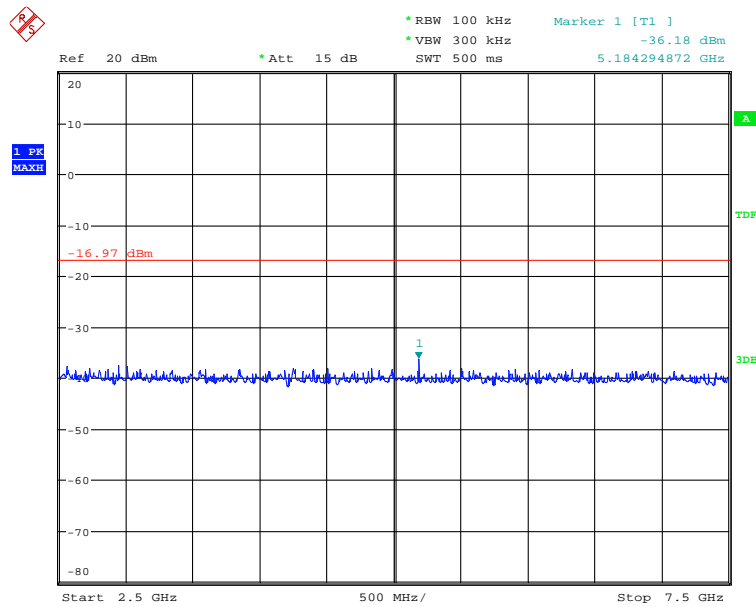
Date: 16.MAR.2013 15:10:45

Fig. 66 Conducted Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)



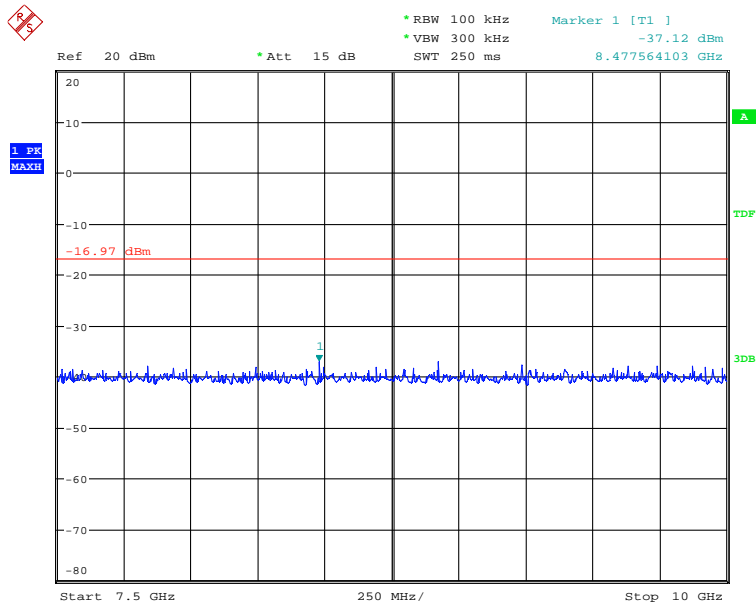
Date: 16.MAR.2013 15:10:52

**Fig. 67 Conducted Spurious Emission (802.11g, Ch6, 1 GHz-2.5 GHz)**



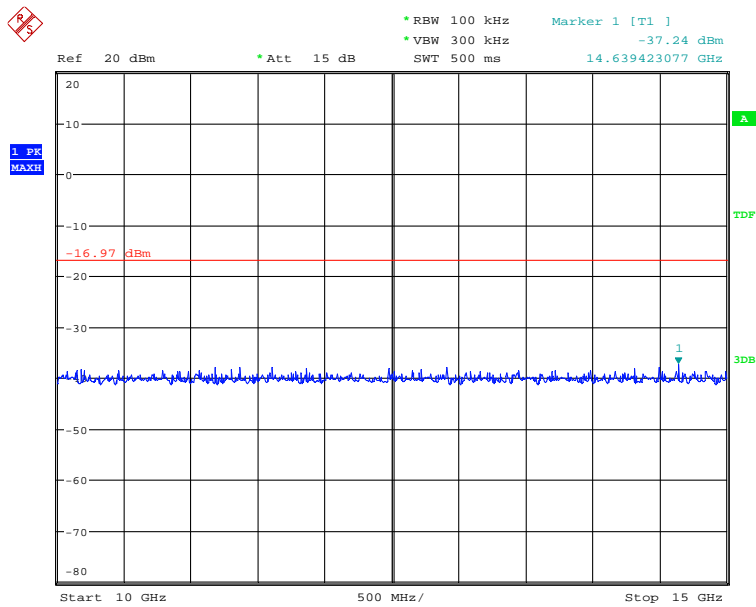
Date: 16.MAR.2013 15:10:59

**Fig. 68 Conducted Spurious Emission (802.11g, Ch6, 2.5 GHz-7.5 GHz)**



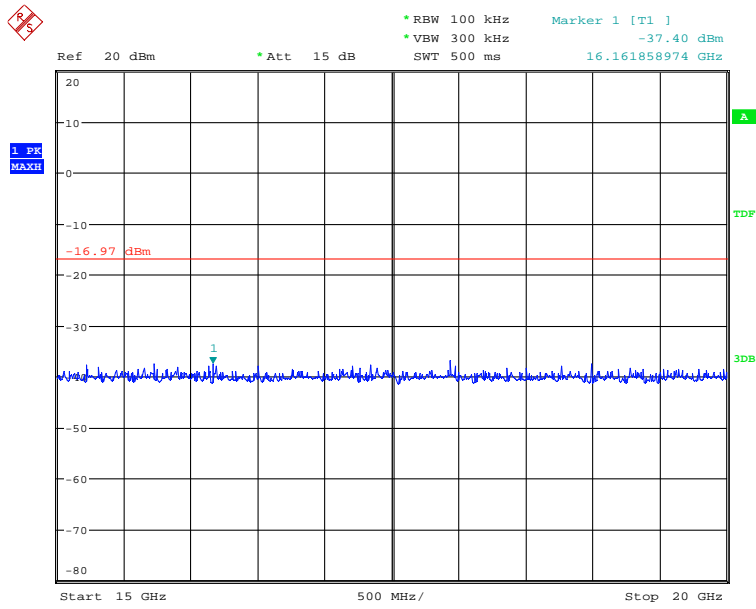
Date: 16.MAR.2013 15:11:06

**Fig. 69 Conducted Spurious Emission (802.11g, Ch6, 7.5 GHz-10 GHz)**



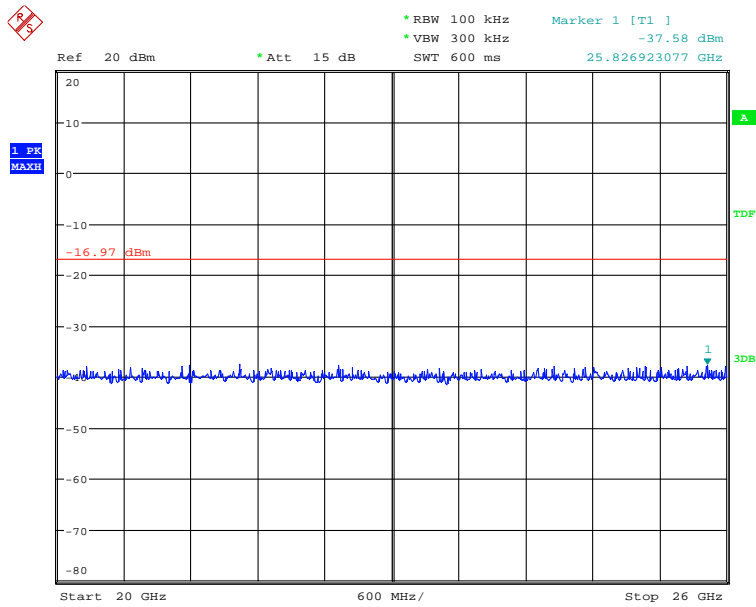
Date: 16.MAR.2013 15:11:13

**Fig. 70 Conducted Spurious Emission (802.11g, Ch6, 10 GHz-15 GHz)**



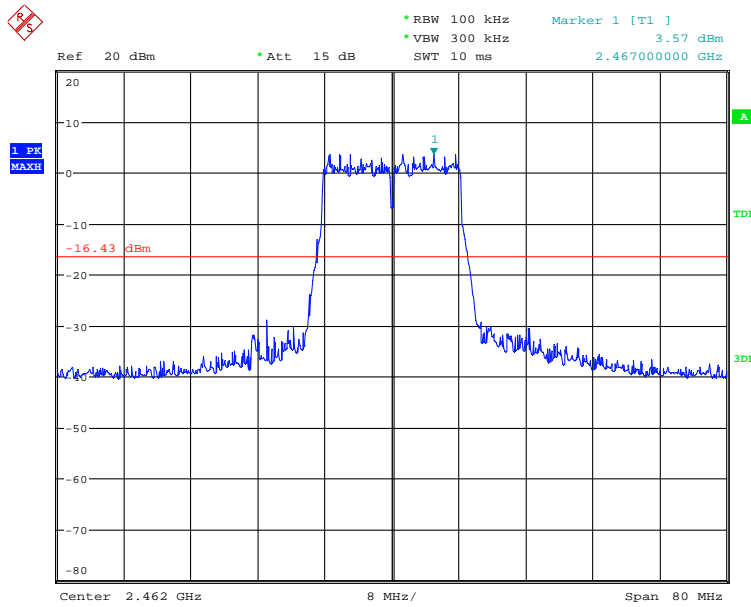
Date: 16.MAR.2013 15:11:20

**Fig. 71 Conducted Spurious Emission (802.11g, Ch6, 15 GHz-20 GHz)**



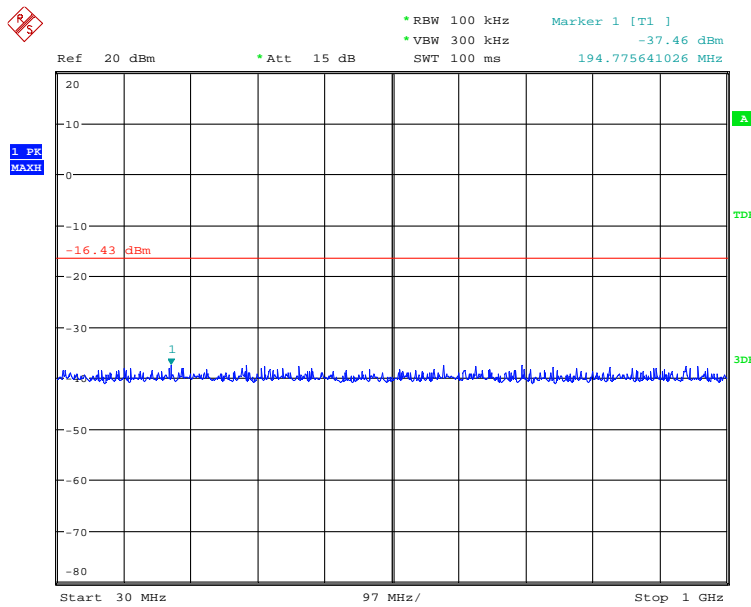
Date: 16.MAR.2013 15:11:26

**Fig. 72 Conducted Spurious Emission (802.11g, Ch6, 20 GHz-26 GHz)**



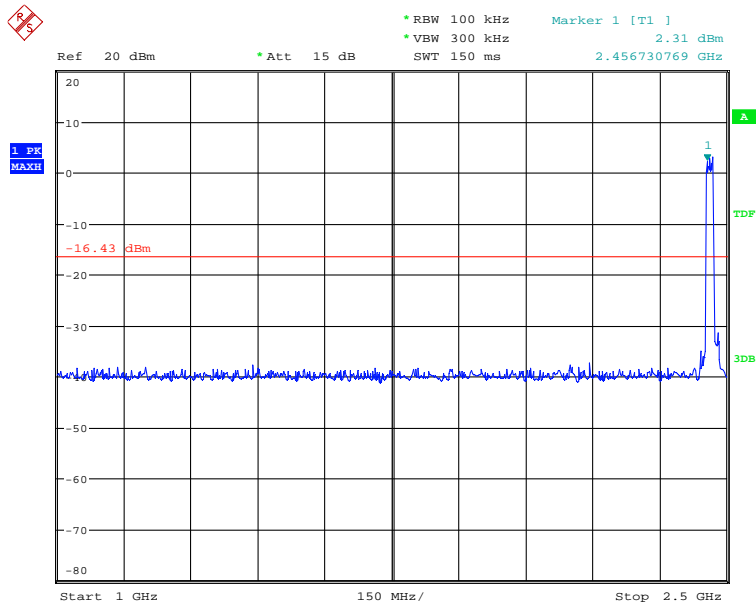
Date: 16.MAR.2013 15:11:53

Fig. 73 Conducted Spurious Emission (802.11g, Ch11, Center Frequency)



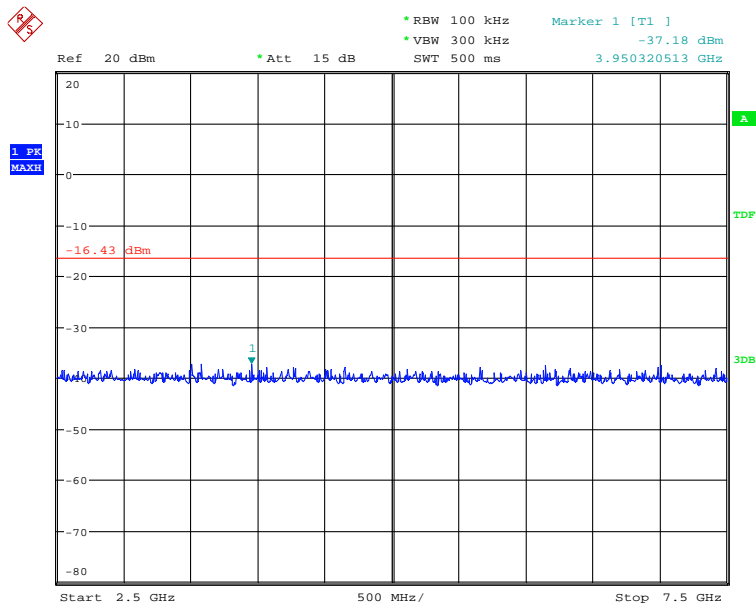
Date: 16.MAR.2013 15:12:00

Fig. 74 Conducted Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)



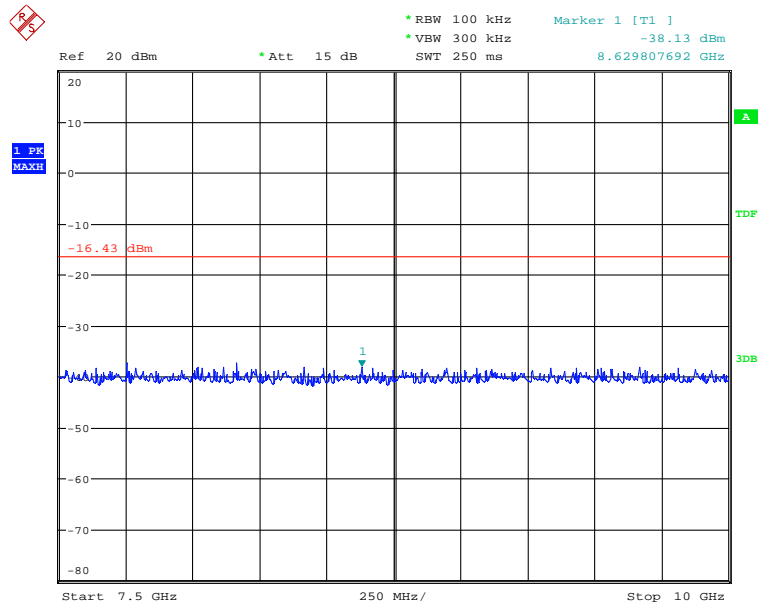
Date: 16.MAR.2013 15:12:06

**Fig. 75 Conducted Spurious Emission (802.11g, Ch11, 1 GHz-2.5 GHz)**



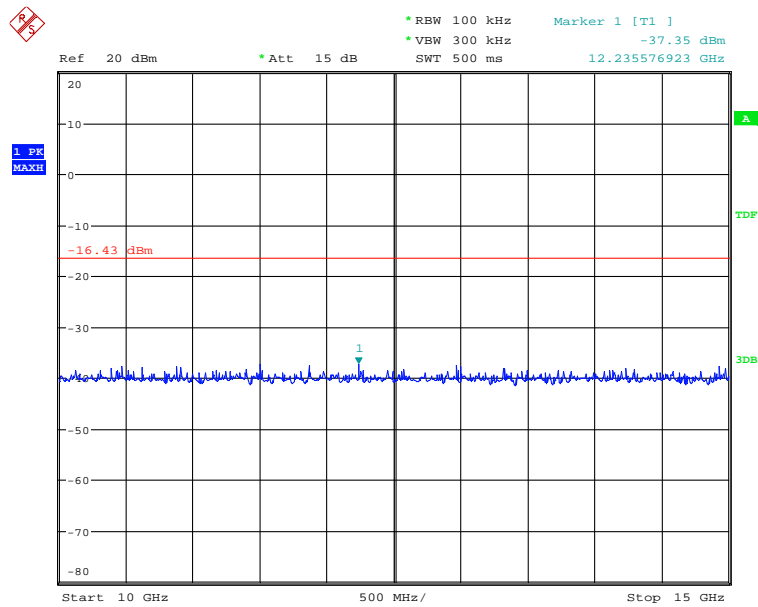
Date: 16.MAR.2013 15:12:13

**Fig. 76 Conducted Spurious Emission (802.11g, Ch11, 2.5 GHz-7.5 GHz)**



Date: 16.MAR.2013 15:12:20

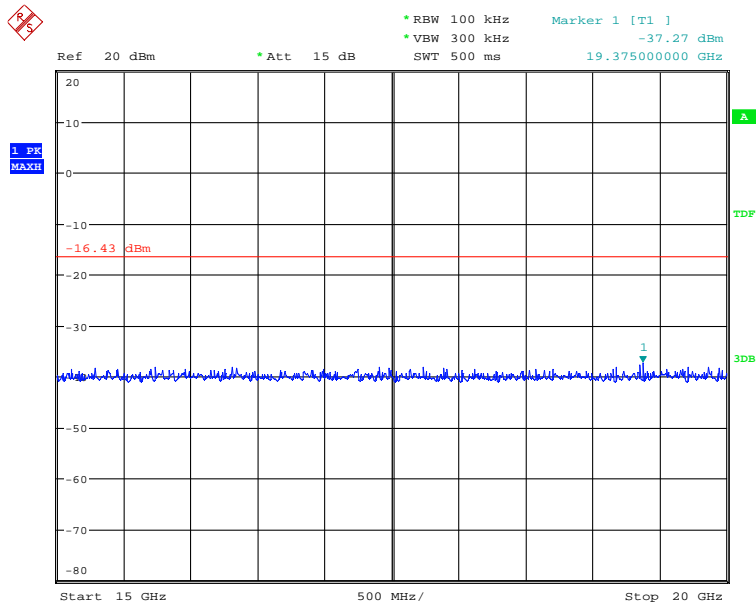
**Fig. 77 Conducted Spurious Emission (802.11g, Ch11, 7.5 GHz-10 GHz)**



Date: 16.MAR.2013 15:12:27

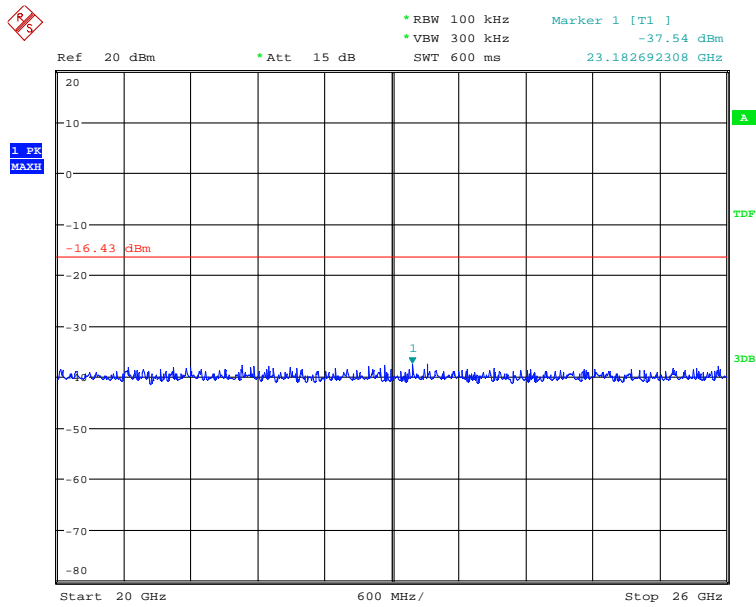
**Fig. 78 Conducted Spurious Emission (802.11g, Ch11, 10 GHz-15 GHz)**





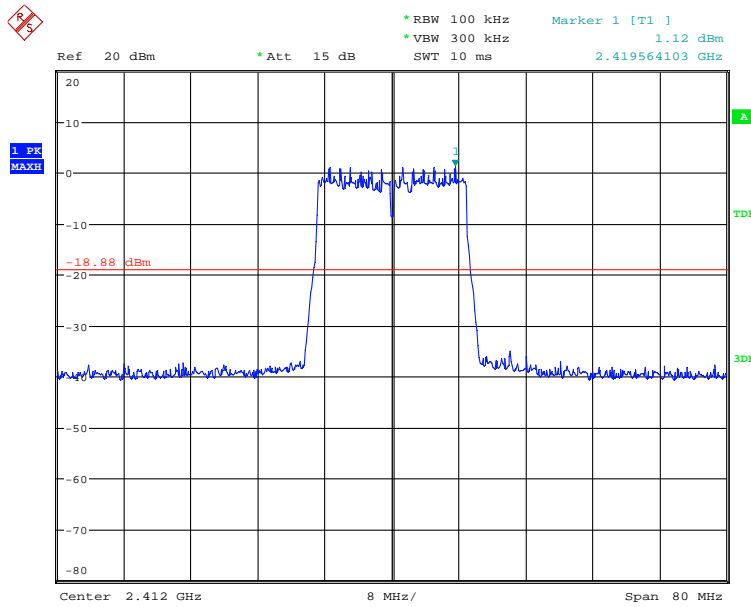
Date: 16.MAR.2013 15:12:33

Fig. 79 Conducted Spurious Emission (802.11g, Ch11, 15 GHz-20 GHz)



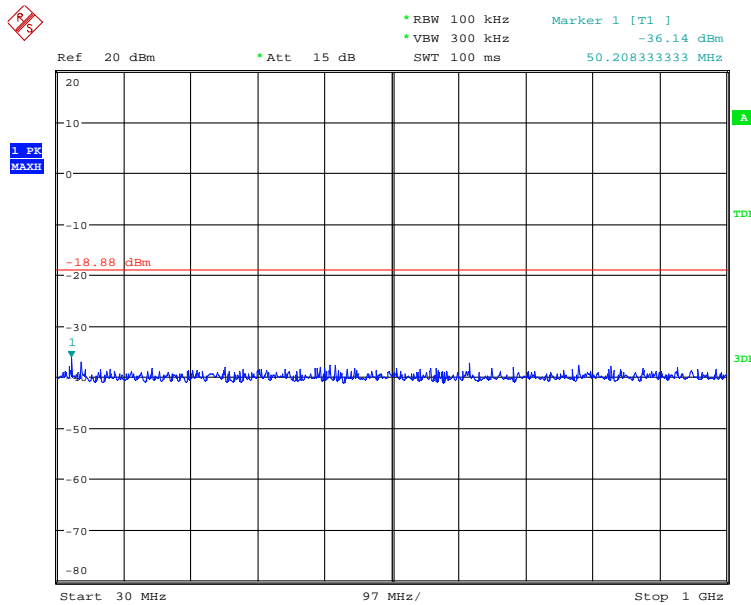
Date: 16.MAR.2013 15:12:40

Fig. 80 Conducted Spurious Emission (802.11g, Ch11, 20 GHz-26 GHz)



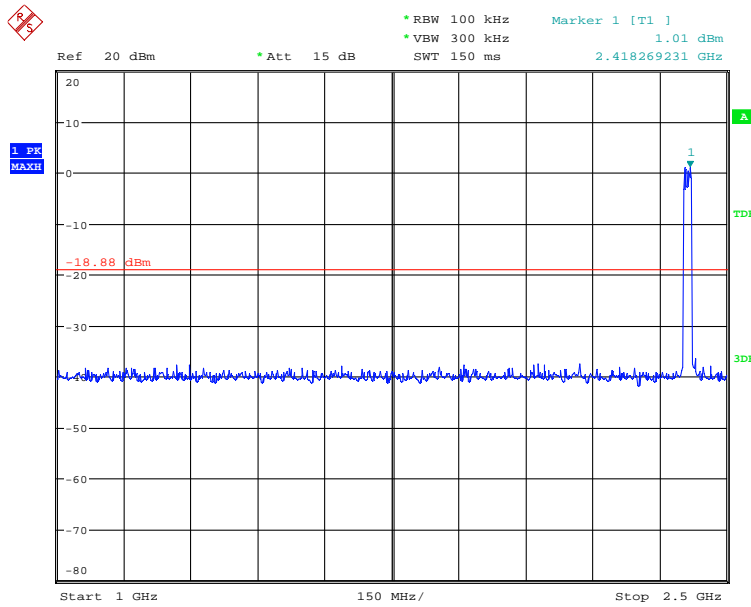
Date: 16.MAR.2013 15:13:20

Fig. 81 Conducted Spurious Emission (802.11n-HT20, Ch1, Center Frequency)



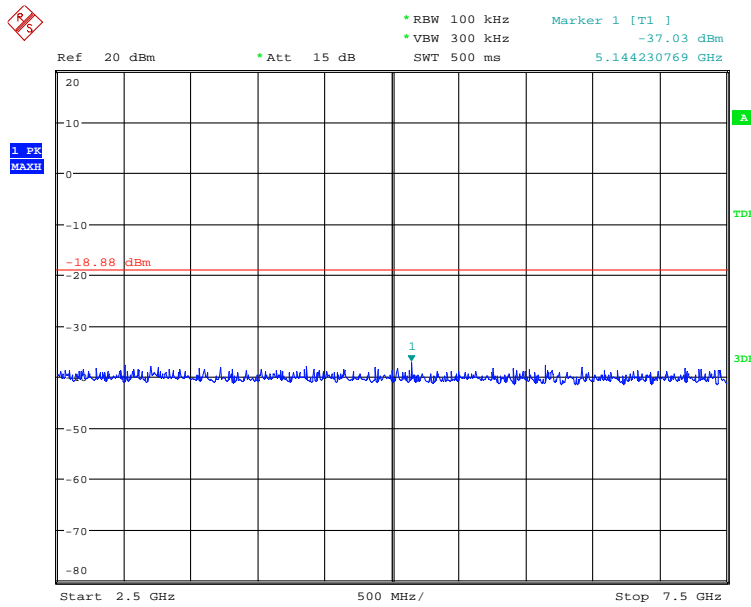
Date: 16.MAR.2013 15:13:26

Fig. 82 Conducted Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)



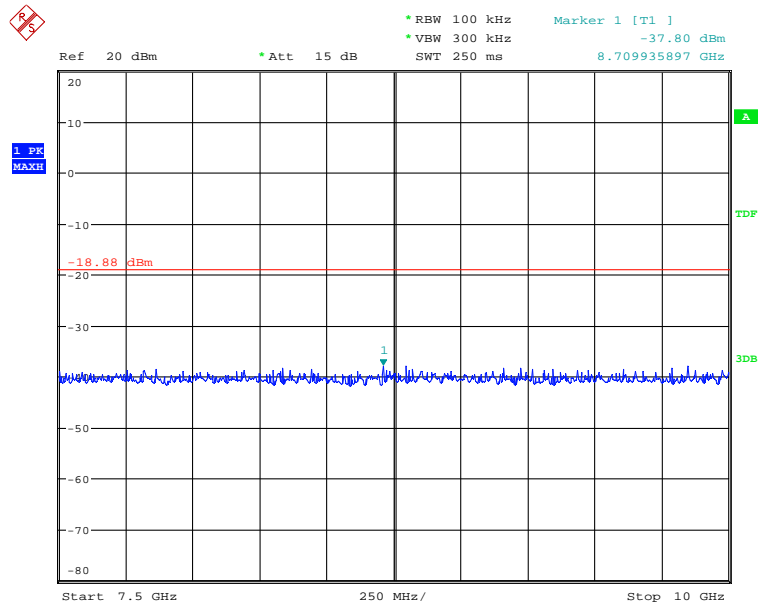
Date: 16.MAR.2013 15:13:32

Fig. 83 Conducted Spurious Emission (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)



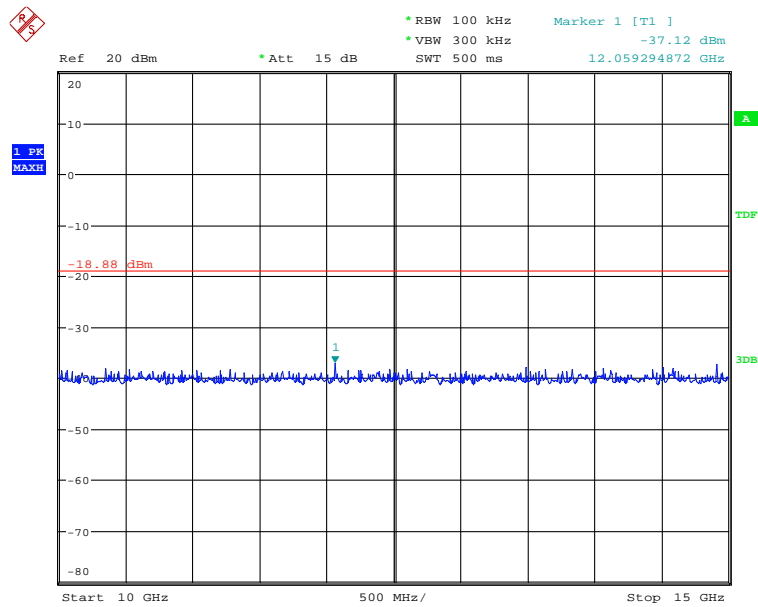
Date: 16.MAR.2013 15:13:38

Fig. 84 Conducted Spurious Emission (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)



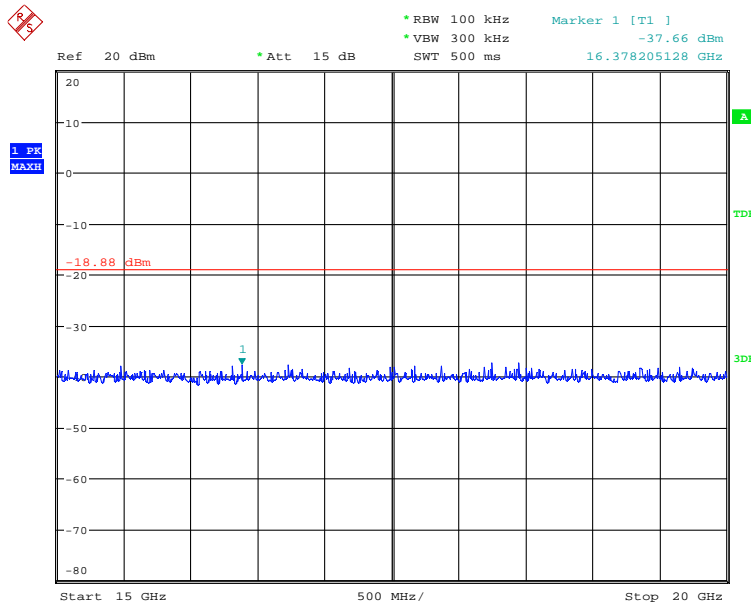
Date: 16.MAR.2013 15:13:44

**Fig. 85 Conducted Spurious Emission (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)**



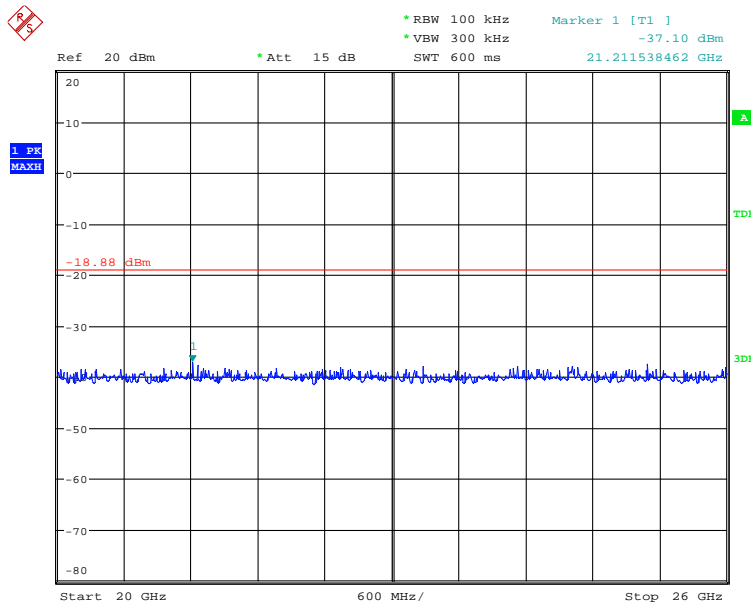
Date: 16.MAR.2013 15:13:50

**Fig. 86 Conducted Spurious Emission (802.11n-HT20, Ch1, 10 GHz-15 GHz)**



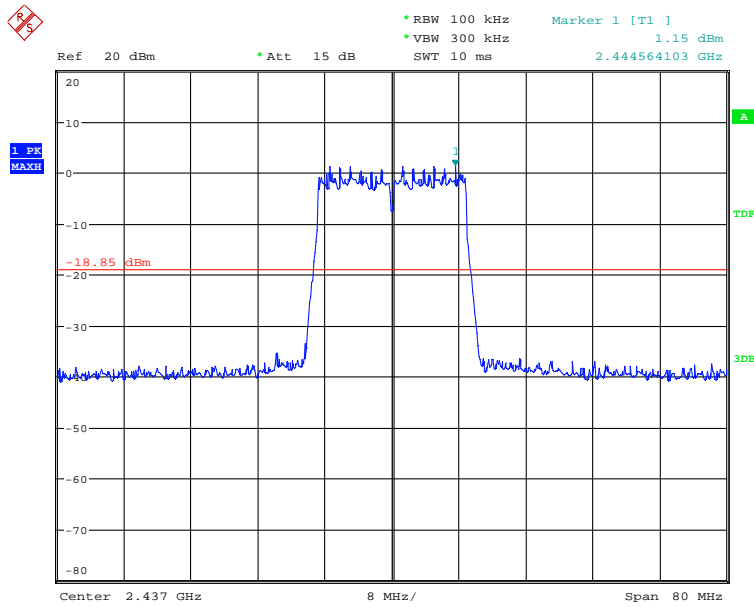
Date: 16.MAR.2013 15:13:55

Fig. 87 Conducted Spurious Emission (802.11n-HT20, Ch1, 15 GHz-20 GHz)



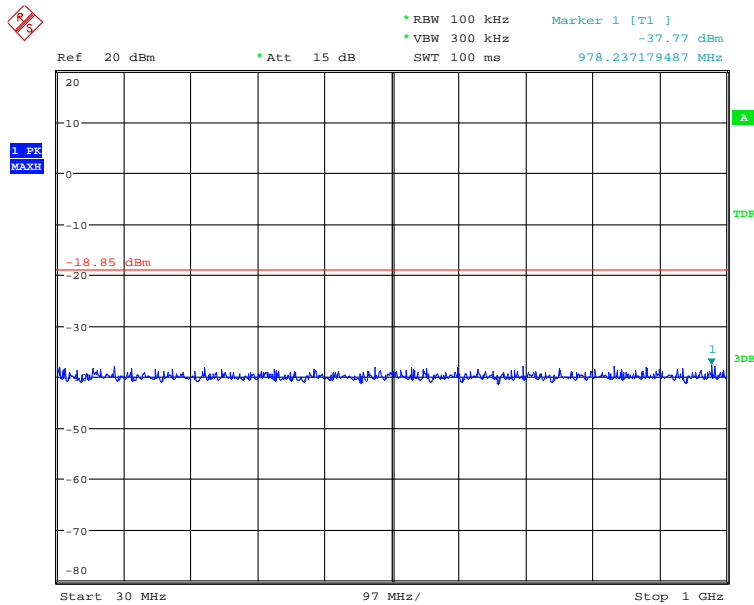
Date: 16.MAR.2013 15:14:01

Fig. 88 Conducted Spurious Emission (802.11n-HT20, Ch1, 20 GHz-26 GHz)



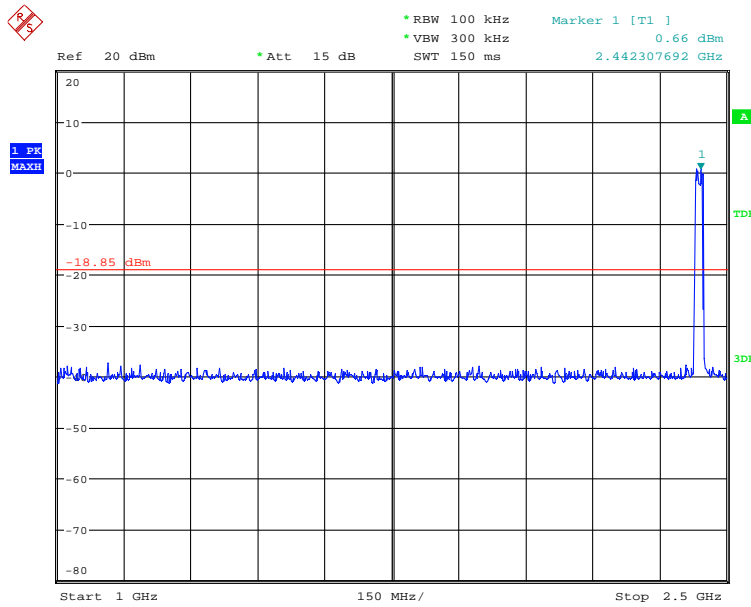
Date: 16.MAR.2013 15:14:31

**Fig. 89 Conducted Spurious Emission (802.11n-HT20, Ch6, Center Frequency)**



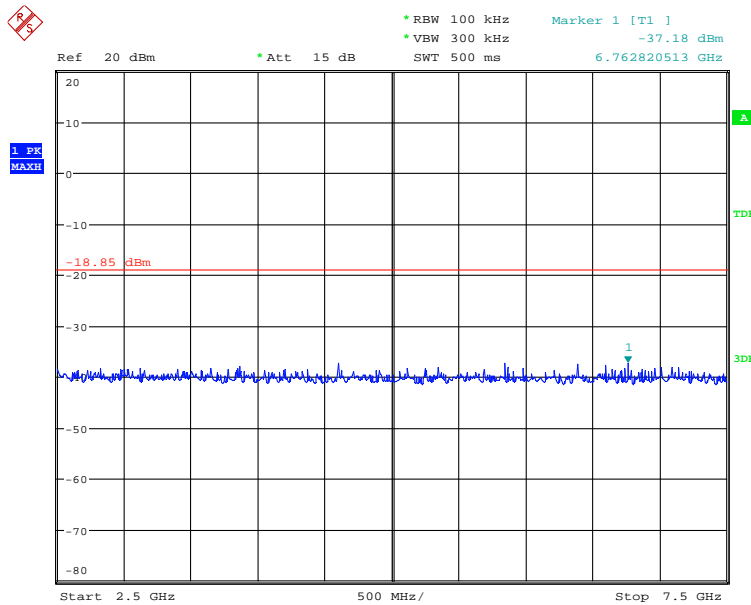
Date: 16.MAR.2013 15:14:37

**Fig. 90 Conducted Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)**



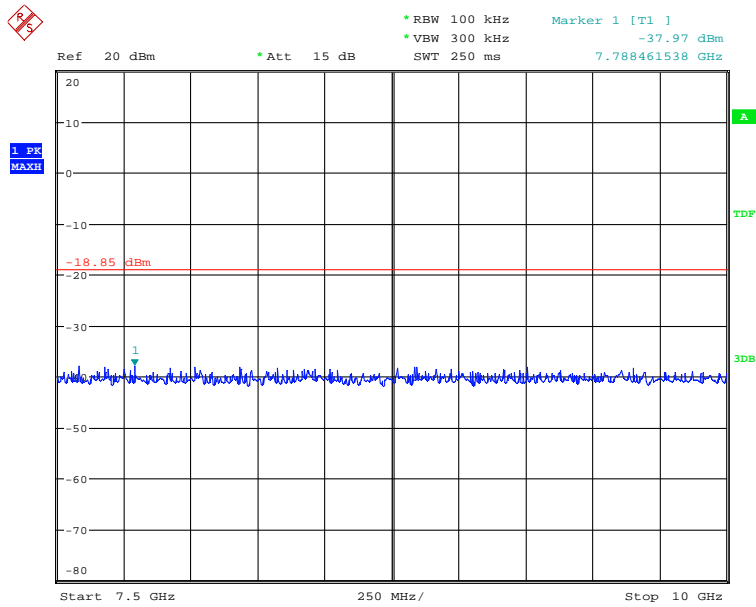
Date: 16.MAR.2013 15:14:43

Fig. 91 Conducted Spurious Emission (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)



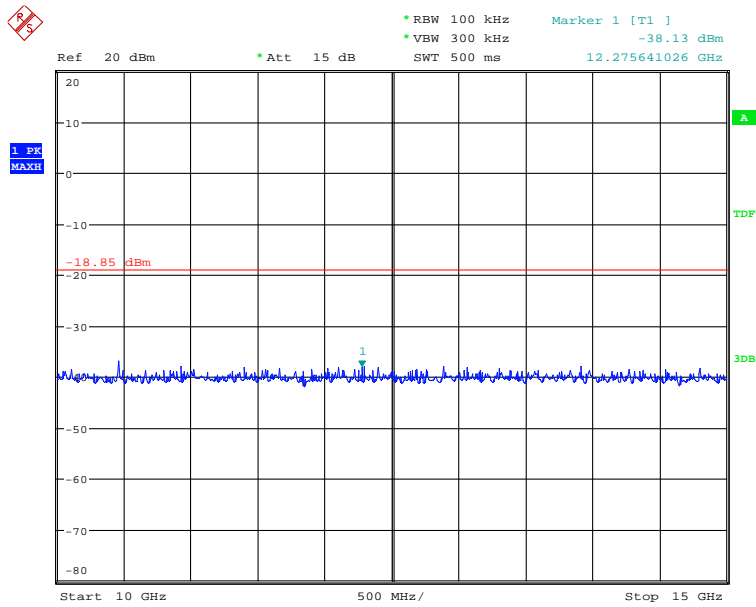
Date: 16.MAR.2013 15:14:49

Fig. 92 Conducted Spurious Emission (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)



Date: 16.MAR.2013 15:14:54

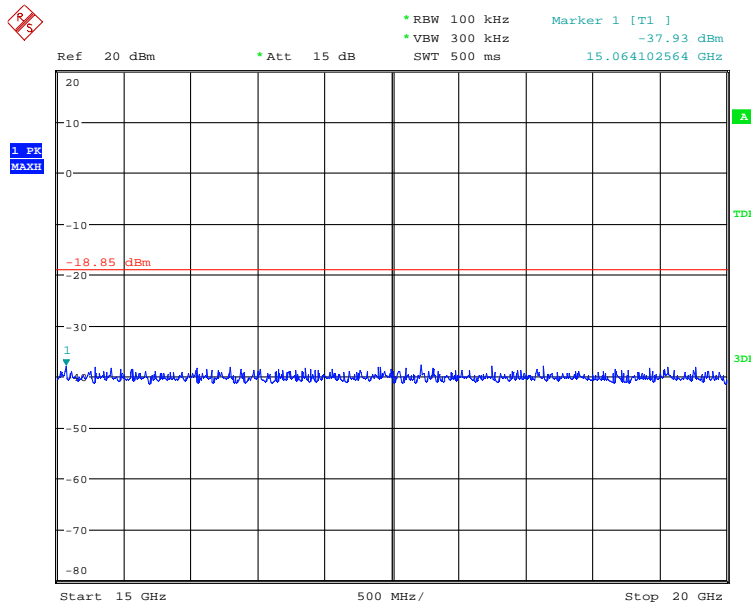
**Fig. 93 Conducted Spurious Emission (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)**



Date: 16.MAR.2013 15:15:00

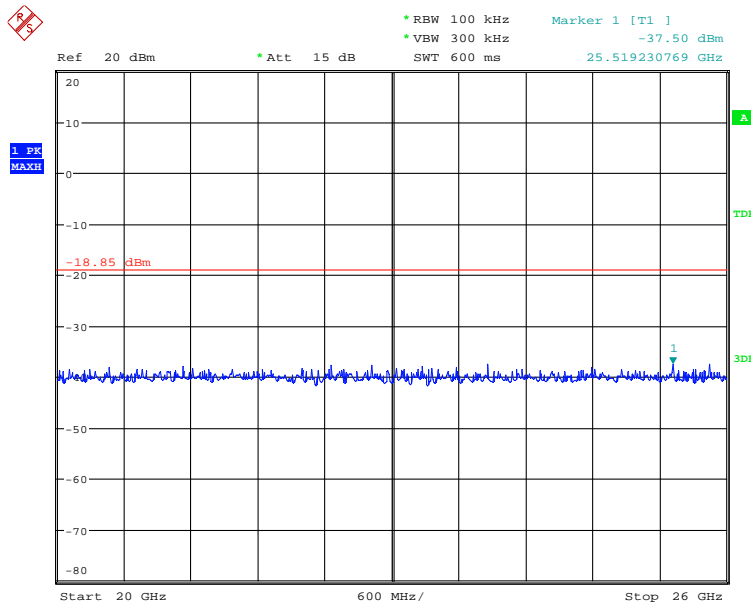
**Fig. 94 Conducted Spurious Emission (802.11n-HT20, Ch6, 10 GHz-15 GHz)**





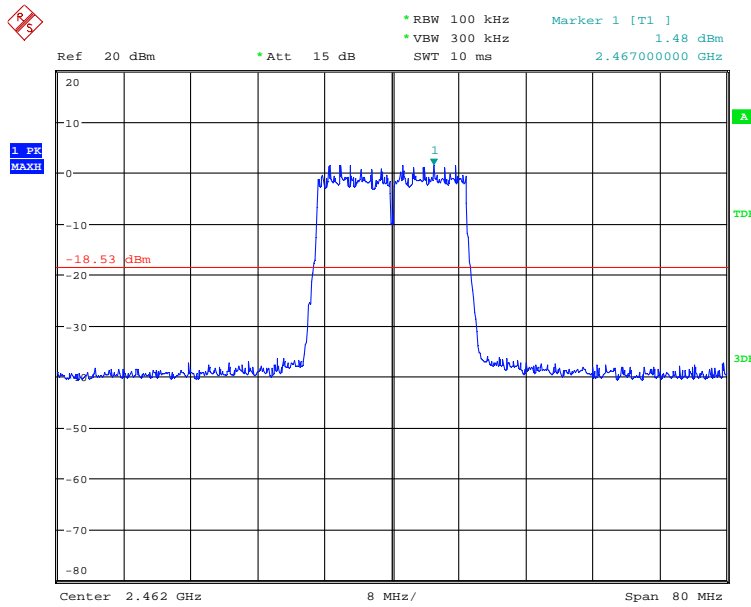
Date: 16.MAR.2013 15:15:06

Fig. 95 Conducted Spurious Emission (802.11n-HT20, Ch6, 15 GHz-20 GHz)



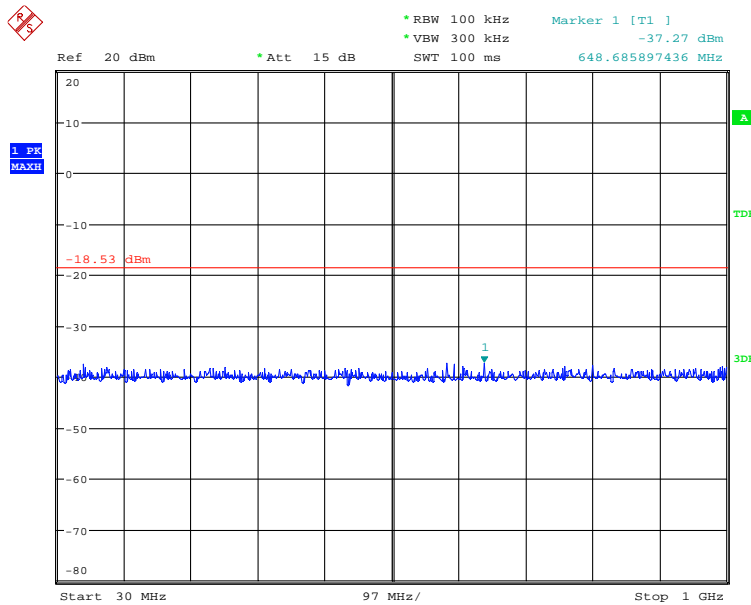
Date: 16.MAR.2013 15:15:12

Fig. 96 Conducted Spurious Emission (802.11n-HT20, Ch6, 20 GHz-26 GHz)



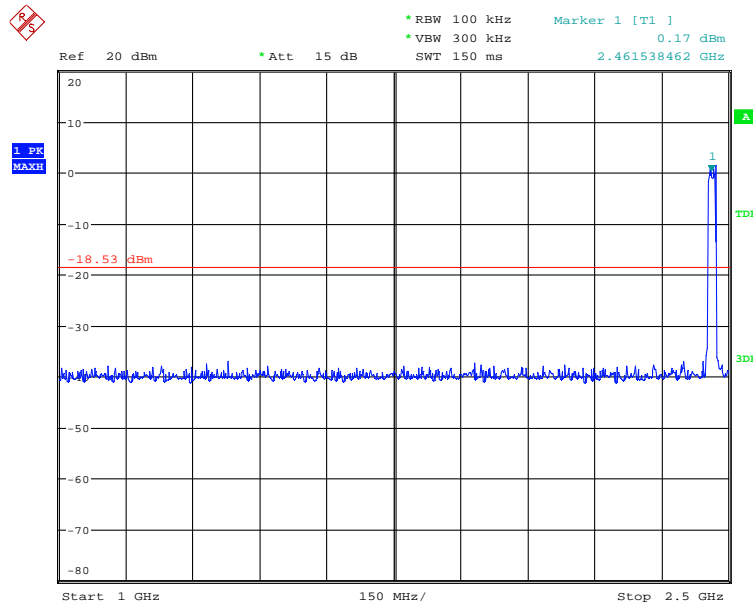
Date: 16.MAR.2013 15:15:55

Fig. 97 Conducted Spurious Emission (802.11n-HT20, Ch11, Center Frequency)



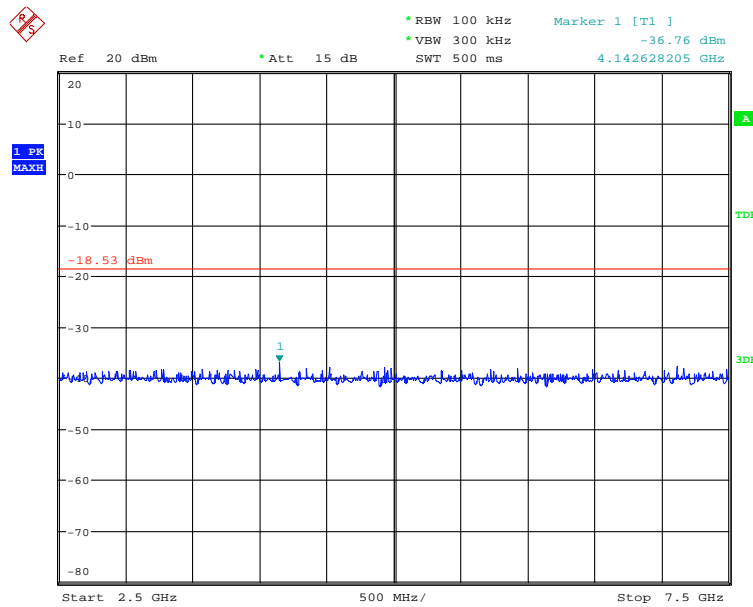
Date: 16.MAR.2013 15:16:02

Fig. 98 Conducted Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)



Date: 16.MAR.2013 15:16:08

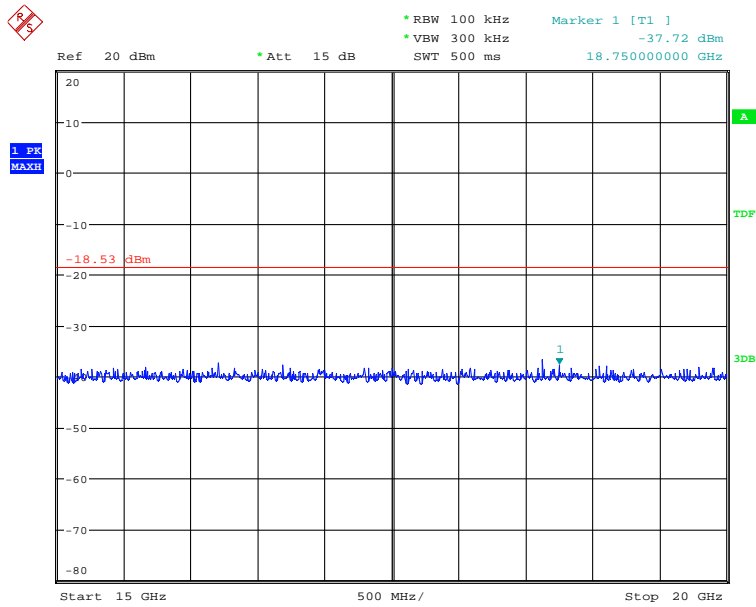
**Fig. 99 Conducted Spurious Emission (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)**



Date: 16.MAR.2013 15:16:15

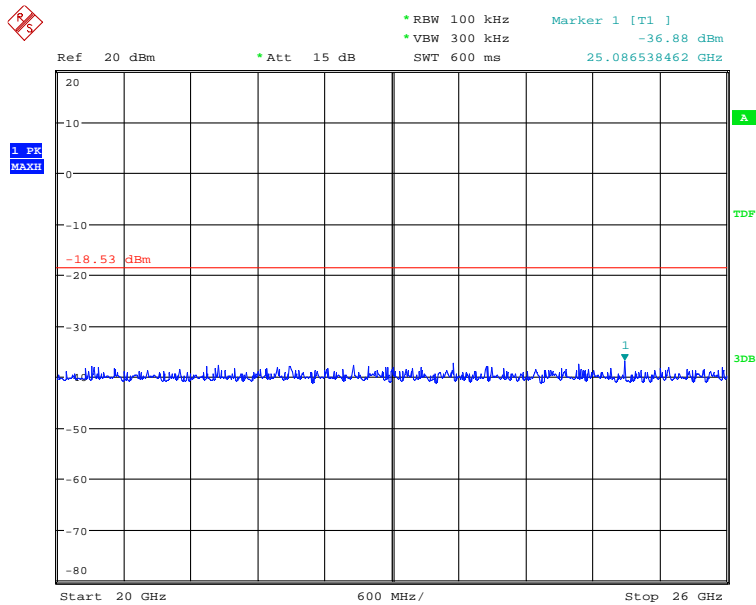
**Fig. 100 Conducted Spurious Emission (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)**





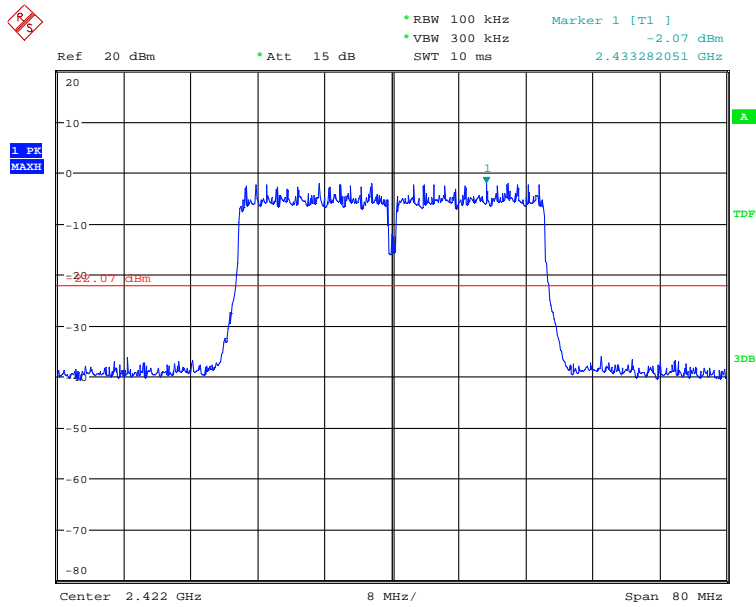
Date: 16.MAR.2013 15:16:35

Fig. 103 Conducted Spurious Emission (802.11n-HT20, Ch11, 15 GHz-20 GHz)



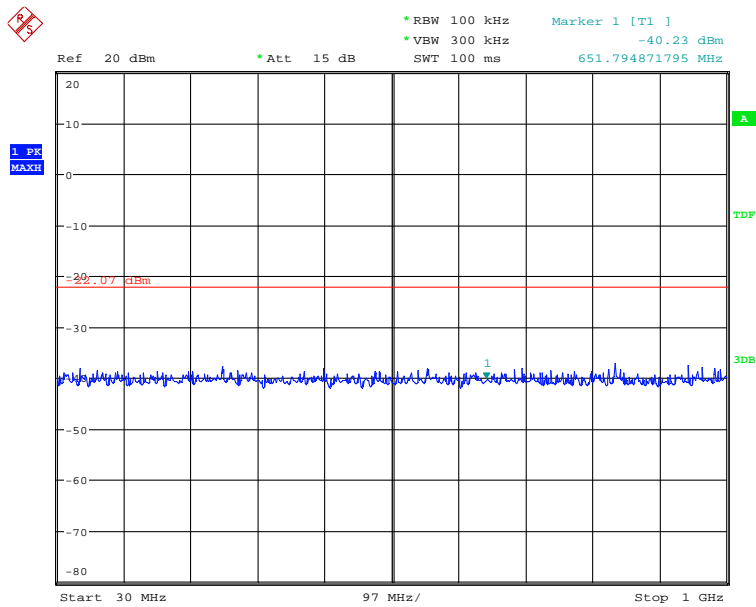
Date: 16.MAR.2013 15:16:42

Fig. 104 Conducted Spurious Emission (802.11n-HT20, Ch11, 20 GHz-26 GHz)



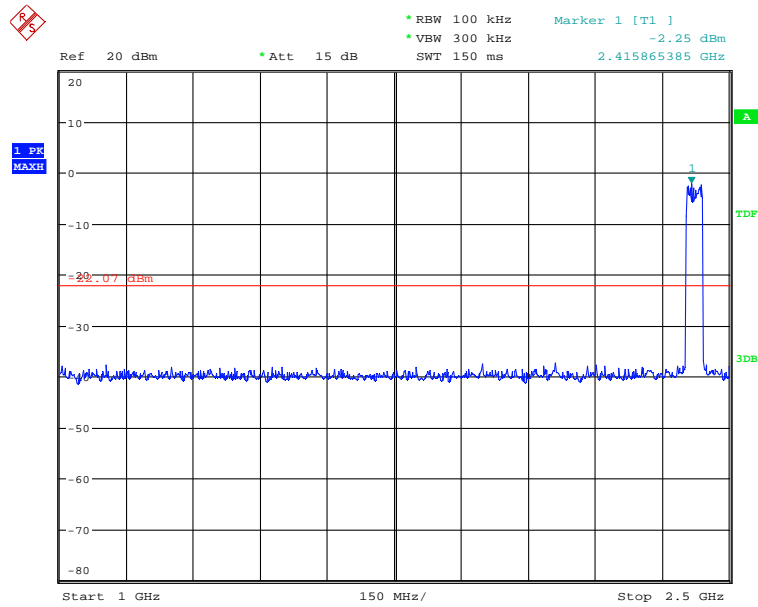
Date: 16.MAR.2013 15:17:33

Fig. 105 Conducted Spurious Emission (802.11n-HT40, Ch3, Center Frequency)



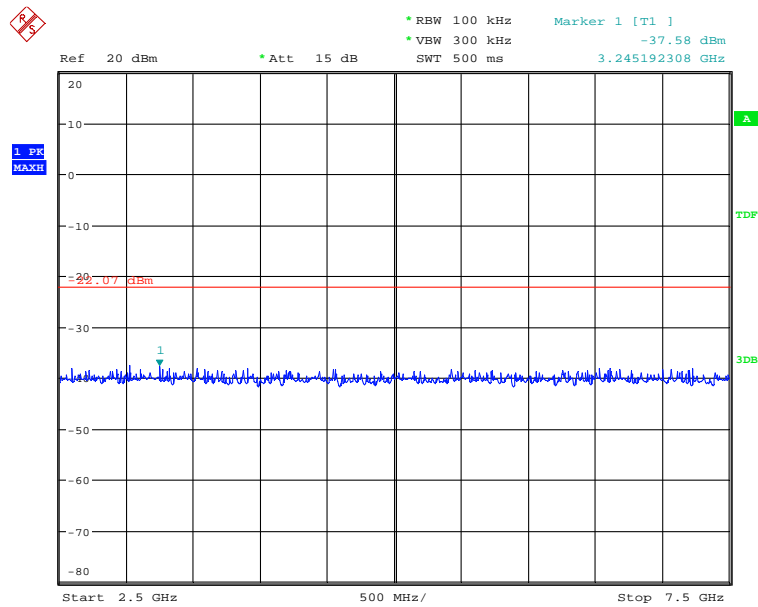
Date: 16.MAR.2013 15:17:36

Fig. 106 Conducted Spurious Emission (802.11n-HT40, Ch3, 30 MHz-1 GHz)



Date: 16.MAR.2013 15:17:43

Fig. 107 Conducted Spurious Emission (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

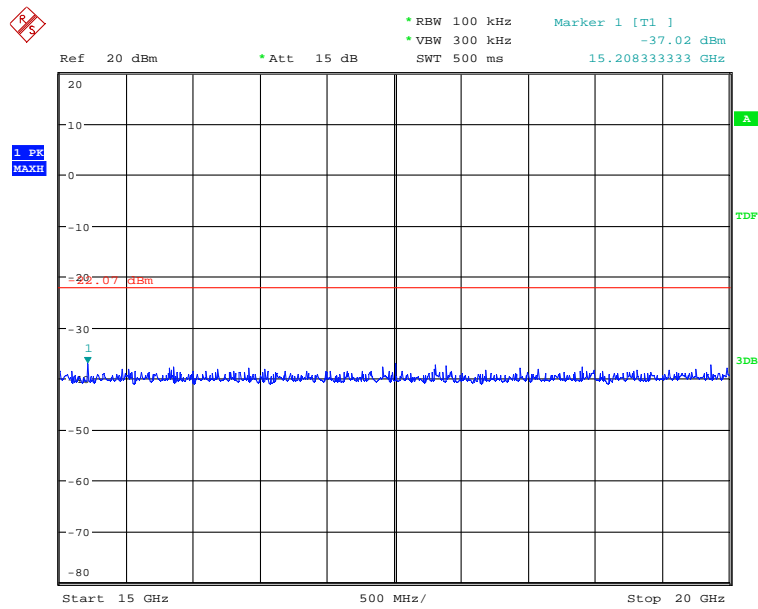


Date: 16.MAR.2013 15:17:49

Fig. 108 Conducted Spurious Emission (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

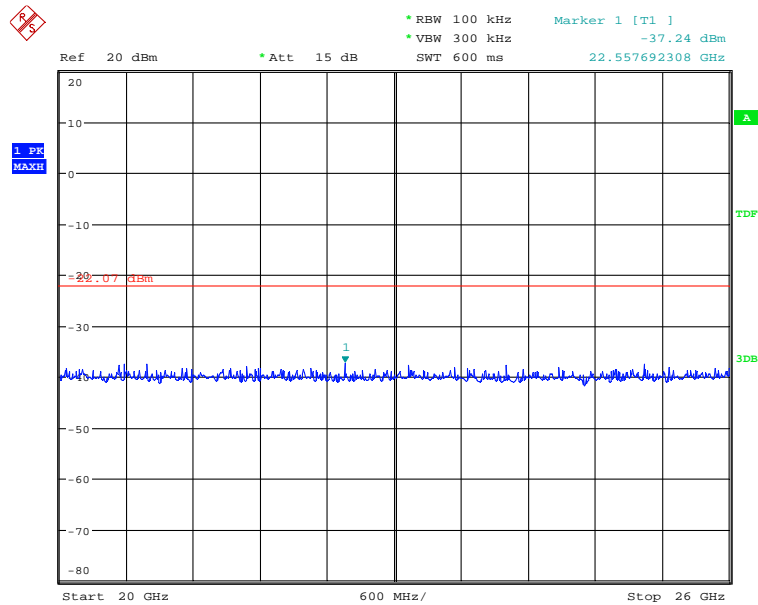






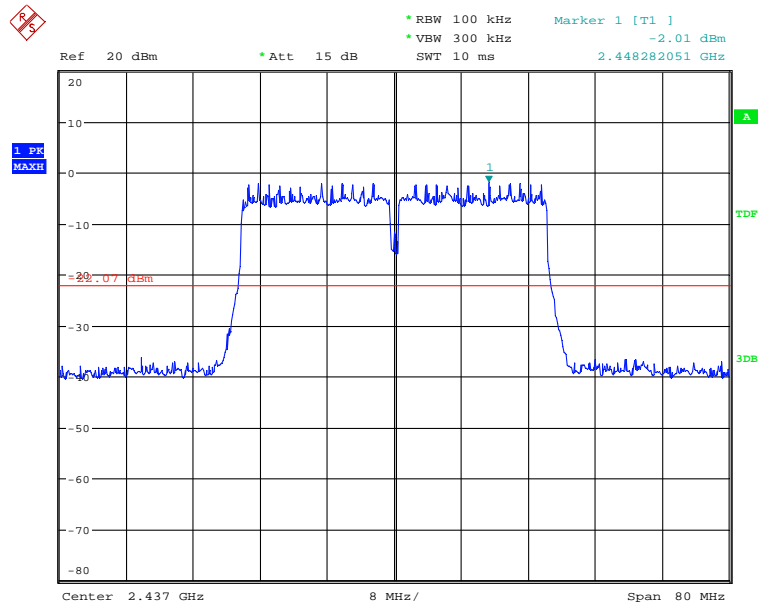
Date: 16.MAR.2013 15:18:12

Fig. 111 Conducted Spurious Emission (802.11n-HT40, Ch3, 15 GHz-20 GHz)



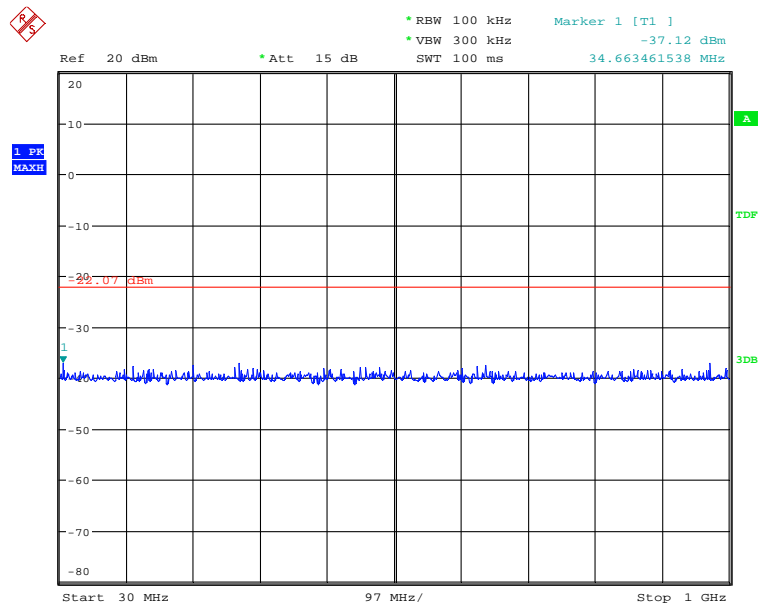
Date: 16.MAR.2013 15:18:18

Fig. 112 Conducted Spurious Emission (802.11n-HT40, Ch3, 20 GHz-26 GHz)



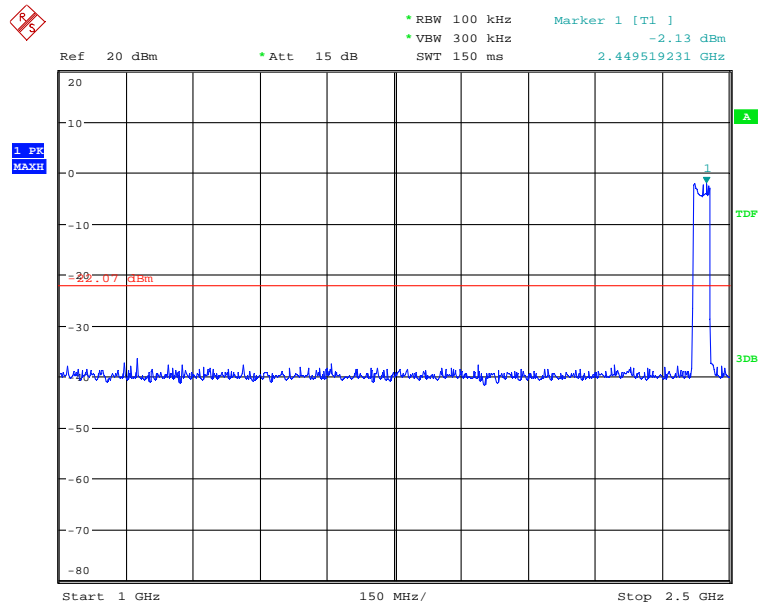
Date: 16.MAR.2013 15:18:42

Fig. 113 Conducted Spurious Emission (802.11n-HT40, Ch6, Center Frequency)



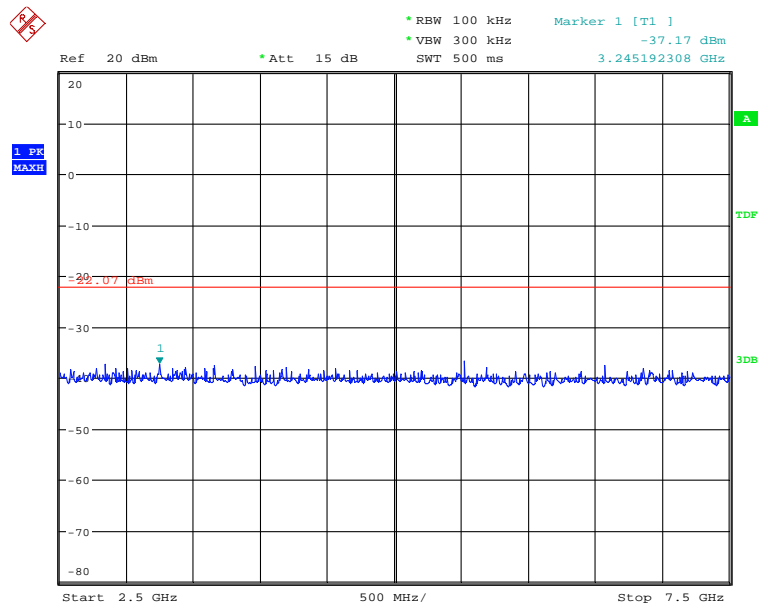
Date: 16.MAR.2013 15:18:49

Fig. 114 Conducted Spurious Emission (802.11n-HT40, Ch6, 30 MHz-1 GHz)



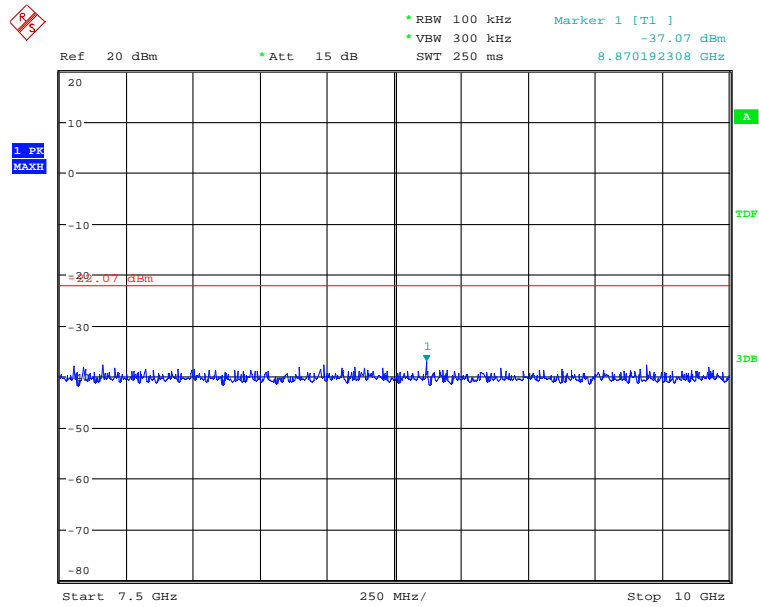
Date: 16.MAR.2013 15:18:55

Fig. 115 Conducted Spurious Emission (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)



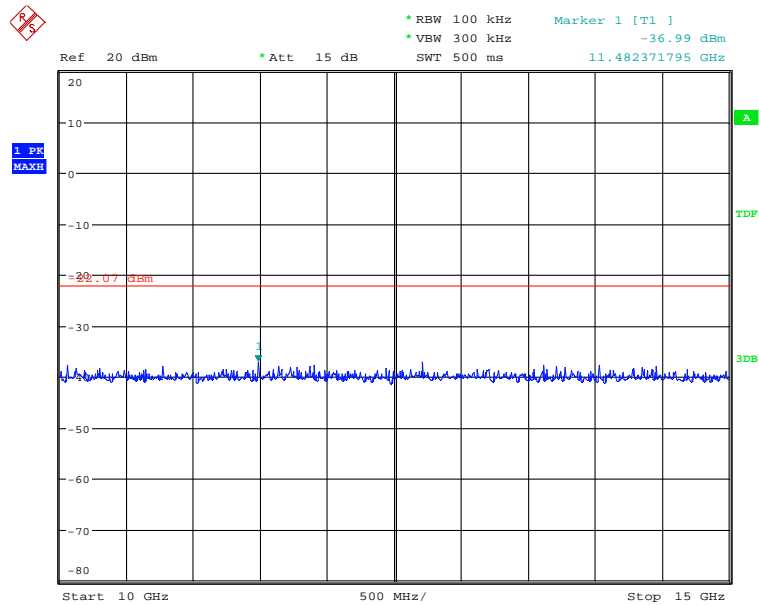
Date: 16.MAR.2013 15:19:01

Fig. 116 Conducted Spurious Emission (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)



Date: 16.MAR.2013 15:19:08

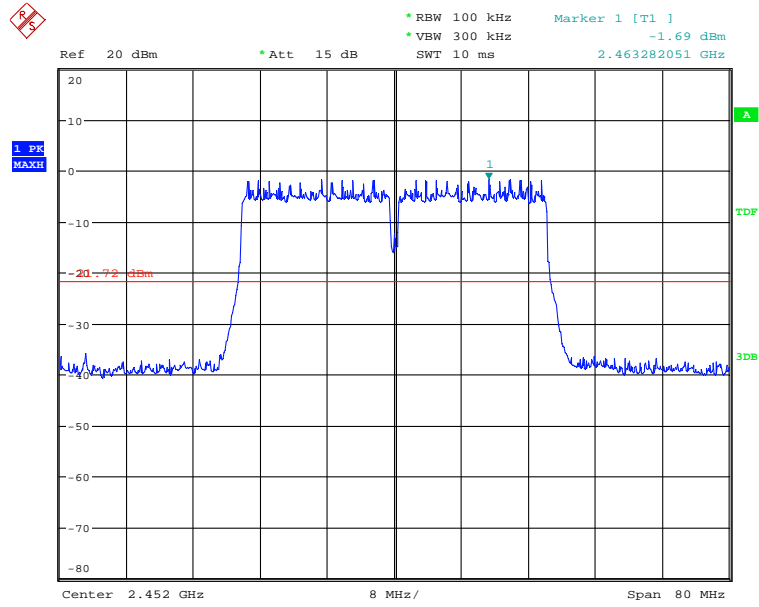
Fig. 117 Conducted Spurious Emission (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)



Date: 16.MAR.2013 15:19:15

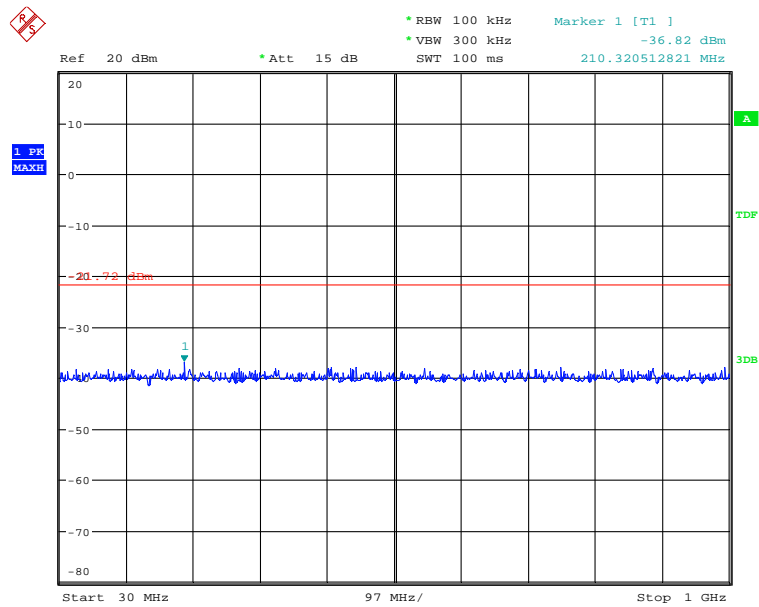
Fig. 118 Conducted Spurious Emission (802.11n-HT40, Ch6, 10 GHz-15 GHz)





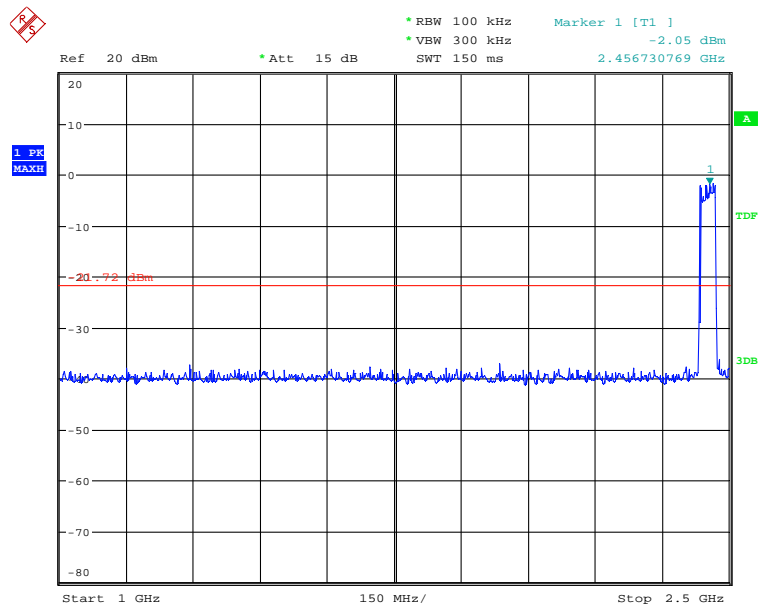
Date: 16.MAR.2013 15:19:59

Fig. 121 Conducted Spurious Emission (802.11n-HT40, Ch9, Center Frequency)



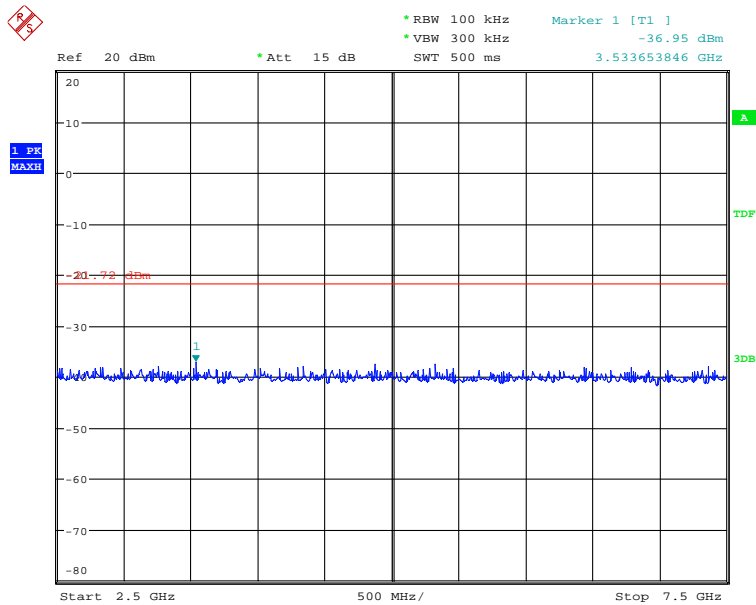
Date: 16.MAR.2013 15:20:06

Fig. 122 Conducted Spurious Emission (802.11n-HT40, Ch9, 30 MHz-1 GHz)



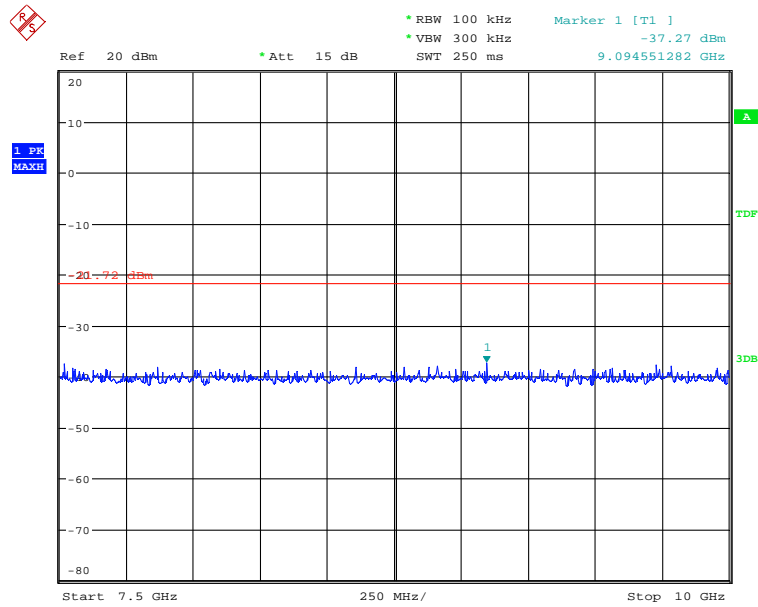
Date: 16.MAR.2013 15:20:13

**Fig. 123 Conducted Spurious Emission (802.11n-HT40, Ch9, 1GHz-2.5 GHz)**



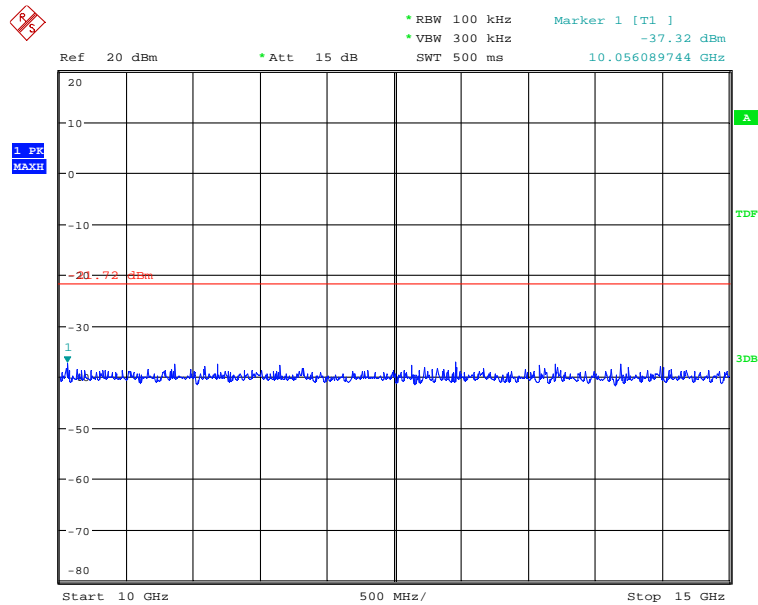
Date: 16.MAR.2013 15:20:19

**Fig. 124 Conducted Spurious Emission (802.11n-HT40, Ch9, 2.5GHz-7.5 GHz)**



Date: 16.MAR.2013 15:20:26

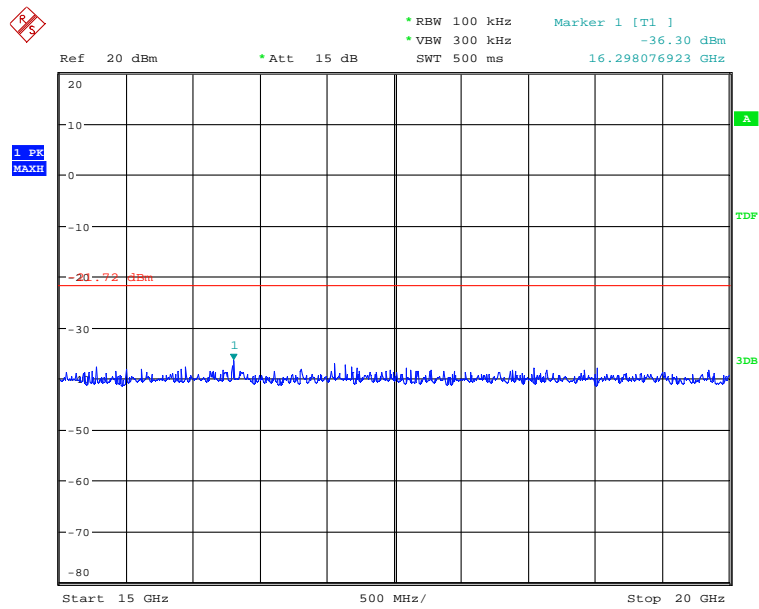
Fig. 125 Conducted Spurious Emission (802.11n-HT40, Ch9, 7.5GHz-10 GHz)



Date: 16.MAR.2013 15:20:33

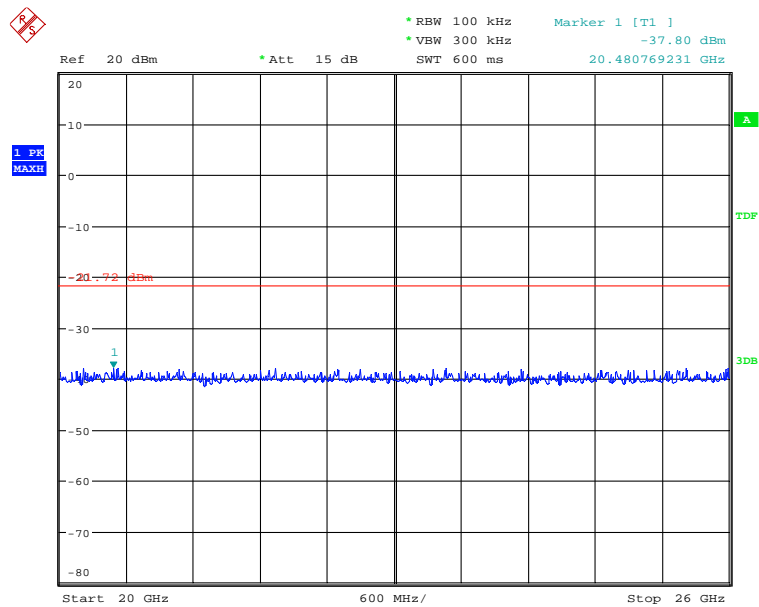
Fig. 126 Conducted Spurious Emission (802.11n-HT40, Ch9, 10GHz-15 GHz)





Date: 16.MAR.2013 15:20:40

Fig. 127 Conducted Spurious Emission (802.11n-HT40, Ch9, 15GHz-20 GHz)



Date: 16.MAR.2013 15:20:46

Fig. 128 Conducted Spurious Emission (802.11n-HT40, Ch9, 20GHz-28 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 ANSI C63.10.

#### 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

**Measurement Results:**

**802.11b/g mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.129	P
	1	30 MHz ~1 GHz	Fig.130	P
		1 GHz ~ 3 GHz	Fig.131	P
		3 GHz ~ 18 GHz	Fig.132	P
	6	30 MHz ~1 GHz	Fig.133	P
		1 GHz ~ 3 GHz	Fig.134	P
		3 GHz ~ 18 GHz	Fig.135	P
	Power	2.45GHz ~2.5GHz	Fig.136	P
	11	30 MHz ~1 GHz	Fig.137	P
		1 GHz ~ 3 GHz	Fig.138	P
		3 GHz ~ 18 GHz	Fig.139	P
	802.11g	Power	2.38GHz ~2.43GHz	Fig.140
1		30 MHz ~1 GHz	Fig.141	P
		1 GHz ~ 3 GHz	Fig.142	P
		3 GHz ~ 18 GHz	Fig.143	P
6		30 MHz ~1 GHz	Fig.144	P
		1 GHz ~ 3 GHz	Fig.145	P
		3 GHz ~ 18 GHz	Fig.146	P
Power		2.45GHz ~2.5GHz	Fig.147	P
11		30 MHz ~1 GHz	Fig.148	P
		1 GHz ~ 3 GHz	Fig.149	P
		3 GHz ~ 18 GHz	Fig.150	P

**802.11n mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (20MHz)	Power	2.38GHz ~2.45GHz	Fig.151	P
	1	30 MHz ~1 GHz	Fig.152	P
		1 GHz ~ 3 GHz	Fig.153	P
		3 GHz ~ 18 GHz	Fig.154	P
	6	30 MHz ~1 GHz	Fig.155	P
		1 GHz ~ 3 GHz	Fig.156	P
		3 GHz ~ 18 GHz	Fig.157	P
	Power	2.45GHz ~2.5GHz	Fig.158	P
	11	30 MHz ~1 GHz	Fig.159	P
		1 GHz ~ 3 GHz	Fig.160	P
		3 GHz ~ 18 GHz	Fig.161	P
	802.11n (40MHz)	Power	2.38GHz ~2.45GHz	Fig.162
3		30 MHz ~1 GHz	Fig.163	P
		1 GHz ~ 3 GHz	Fig.164	P

		3 GHz ~ 18 GHz	Fig.165	P
	6	30 MHz ~1 GHz	Fig.166	P
		1 GHz ~ 3 GHz	Fig.167	P
		3 GHz ~ 18 GHz	Fig.168	P
	Power	2.45GHz ~2.5GHz	Fig.169	P
	9	30 MHz ~1 GHz	Fig.170	P
		1 GHz ~ 3 GHz	Fig.171	P
		3 GHz ~ 18 GHz	Fig.172	P
/	All channels	18 GHz~ 26.5 GHz	Fig.173	P

**Conclusion: PASS**

**Note:**

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

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

The measurement results are obtained as described below:

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

**802.11b**

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17502.750	44.0	-25.3	42.8	26.527	VERTICAL
17509.500	43.8	-25.3	42.8	26.327	VERTICAL
17521.500	43.8	-25.3	42.8	26.327	VERTICAL
17485.500	43.8	-25.3	43.0	26.057	VERTICAL
17997.000	43.7	-24.7	42.3	26.154	HORIZONTAL
17522.250	43.7	-25.3	42.8	26.227	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17494.500	43.9	-25.3	43.0	26.157	VERTICAL
17482.500	43.9	-25.3	43.0	26.157	HORIZONTAL
17498.250	43.8	-25.3	43.0	26.057	HORIZONTAL
17503.500	43.8	-25.3	42.8	26.327	VERTICAL
17510.250	43.8	-25.3	42.8	26.327	VERTICAL
17517.000	43.8	-25.3	42.8	26.327	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17536.500	43.9	-25.3	42.9	26.267	HORIZONTAL
17994.750	43.9	-24.7	42.3	26.354	VERTICAL
17483.250	43.8	-25.3	43.0	26.057	HORIZONTAL
17500.500	43.8	-25.3	42.8	26.327	VERTICAL
17482.500	43.8	-25.3	43.0	26.057	VERTICAL
17996.250	43.8	-24.7	42.3	26.254	HORIZONTAL

**802.11g**

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17512.500	43.9	-25.3	42.8	26.427	VERTICAL
17997.750	43.8	-24.7	42.3	26.254	VERTICAL
17499.750	43.8	-25.3	43.0	26.057	HORIZONTAL
17497.500	43.8	-25.3	43.0	26.057	HORIZONTAL
17518.500	43.7	-25.3	42.8	26.227	HORIZONTAL
17992.500	43.7	-24.7	42.3	26.154	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17511.000	43.9	-25.3	42.8	26.427	VERTICAL
17952.750	43.9	-25.2	42.7	26.428	VERTICAL
17993.250	43.9	-24.7	42.3	26.354	VERTICAL
17503.500	43.9	-25.3	42.8	26.427	VERTICAL
17484.750	43.9	-25.3	43.0	26.157	VERTICAL
17533.500	43.8	-25.3	42.9	26.167	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17517.750	43.9	-25.3	42.8	26.427	HORIZONTAL
17493.750	43.9	-25.3	43.0	26.157	VERTICAL
17483.250	43.8	-25.3	43.0	26.057	HORIZONTAL
17465.250	43.8	-25.3	42.6	26.497	VERTICAL
17527.500	43.8	-25.3	42.9	26.167	VERTICAL
17988.000	43.7	-24.7	42.3	26.154	VERTICAL

**802.11n-HT20**

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17498.250	43.8	-25.3	43.0	26.057	VERTICAL
17502.000	43.8	-25.3	42.8	26.327	HORIZONTAL
17496.750	43.8	-25.3	43.0	26.057	HORIZONTAL
17473.500	43.8	-25.3	42.6	26.497	HORIZONTAL
17505.000	43.8	-25.3	42.8	26.327	HORIZONTAL
17990.250	43.8	-24.7	42.3	26.254	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17479.500	43.8	-25.3	43.0	26.057	VERTICAL
17497.500	43.8	-25.3	43.0	26.057	HORIZONTAL
17982.000	43.8	-25.2	42.3	26.768	VERTICAL
17487.750	43.8	-25.3	43.0	26.057	VERTICAL
17473.500	43.8	-25.3	42.6	26.497	VERTICAL
17529.750	43.8	-25.3	42.9	26.167	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17485.500	43.9	-25.3	43.0	26.157	HORIZONTAL
17511.750	43.8	-25.3	42.8	26.327	VERTICAL
17508.750	43.8	-25.3	42.8	26.327	HORIZONTAL
17503.500	43.7	-25.3	42.8	26.227	HORIZONTAL
17519.250	43.7	-25.3	42.8	26.227	VERTICAL
17526.750	43.7	-25.3	42.9	26.067	HORIZONTAL

**802.11n-HT40**

Ch3

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17991.750	43.9	-24.7	42.3	26.354	HORIZONTAL
17509.500	43.9	-25.3	42.8	26.427	VERTICAL
17498.250	43.9	-25.3	43.0	26.157	HORIZONTAL
17485.500	43.8	-25.3	43.0	26.057	VERTICAL
17464.500	43.7	-25.3	42.6	26.397	VERTICAL
17997.000	43.7	-24.7	42.3	26.154	HORIZONTAL

Ch6

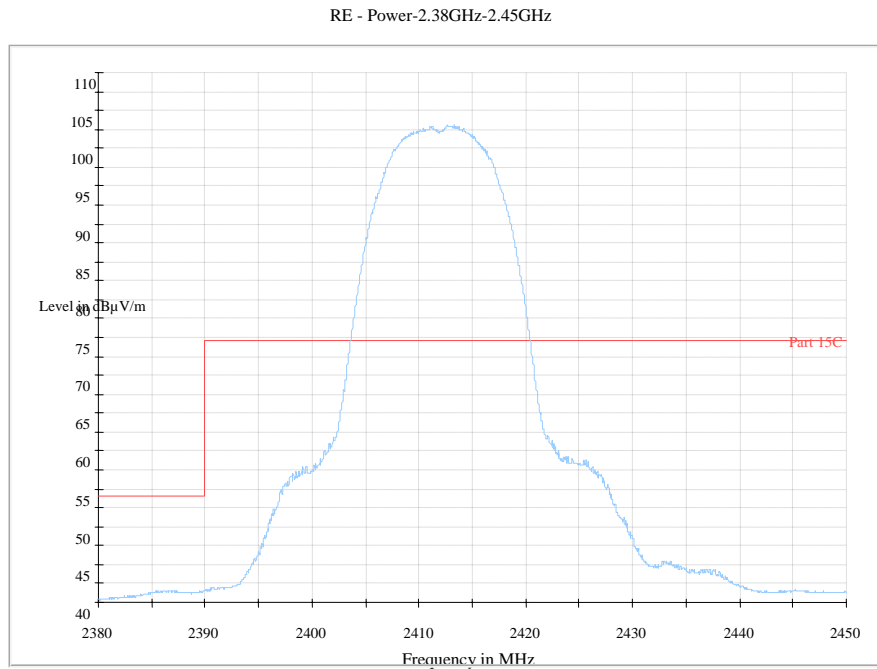
Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17499.000	43.9	-25.3	43.0	26.157	HORIZONTAL
17997.000	43.8	-24.7	42.3	26.254	VERTICAL
18000.000	43.8	-24.6	42.7	25.704	VERTICAL
17526.000	43.8	-25.3	42.9	26.167	HORIZONTAL
17508.750	43.7	-25.3	42.8	26.227	HORIZONTAL
17491.500	43.7	-25.3	43.0	25.957	VERTICAL

Ch9

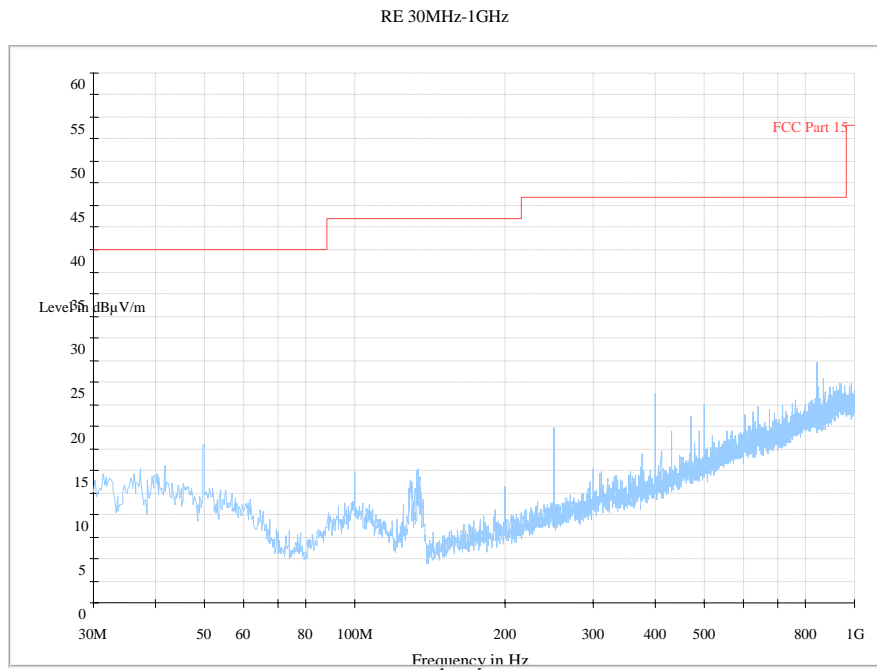
Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
17501.250	43.8	-25.3	42.8	26.327	VERTICAL
17484.000	43.8	-25.3	43.0	26.057	VERTICAL
17520.000	43.8	-25.3	42.8	26.327	VERTICAL
17522.250	43.7	-25.3	42.8	26.227	VERTICAL
17505.750	43.7	-25.3	42.8	26.227	HORIZONTAL
18000.000	43.7	-24.6	42.7	25.604	VERTICAL

**Test graphs as below:**

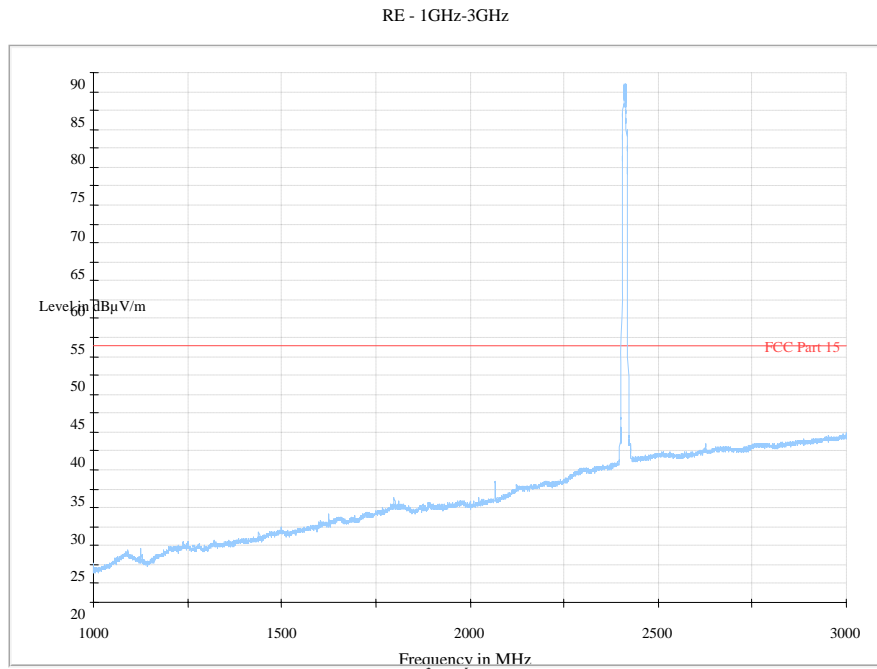




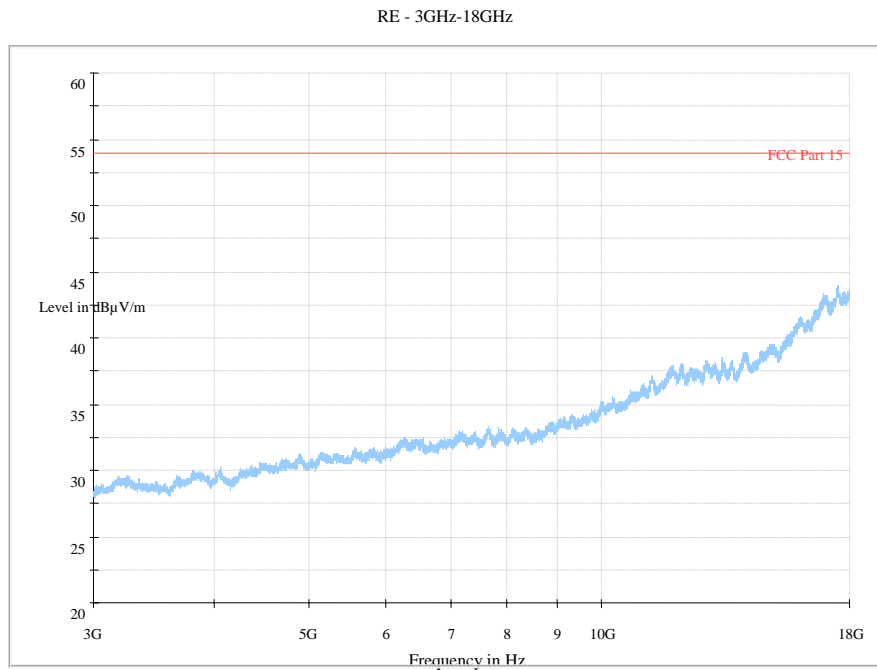
**Fig. 129 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz - 245GHz**



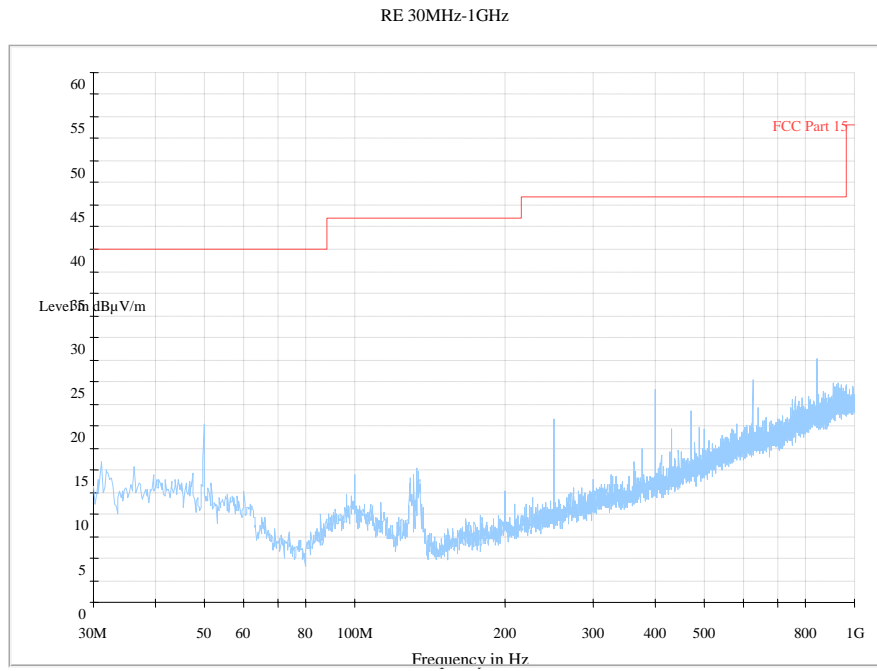
**Fig. 130 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)**



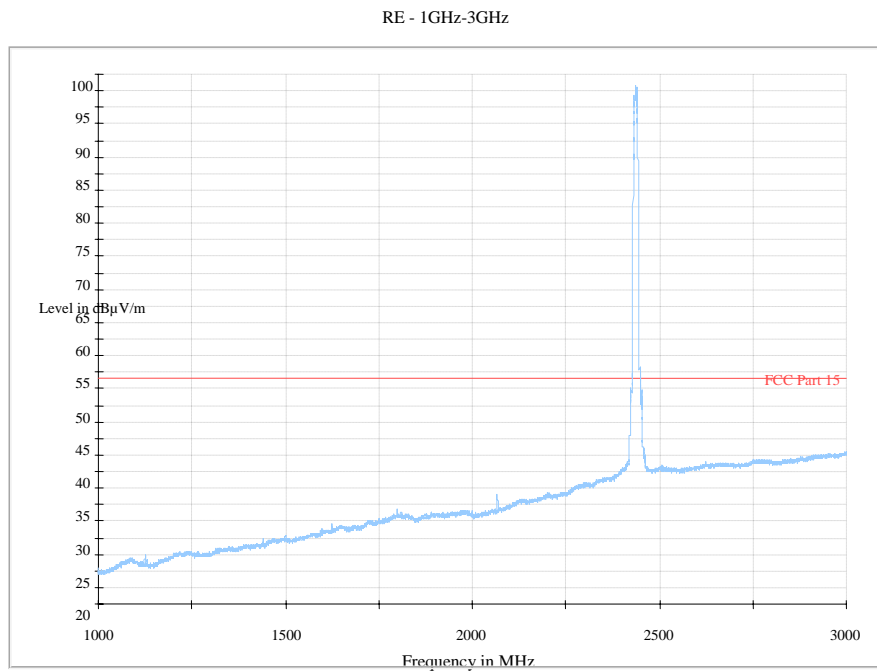
**Fig. 131 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)**



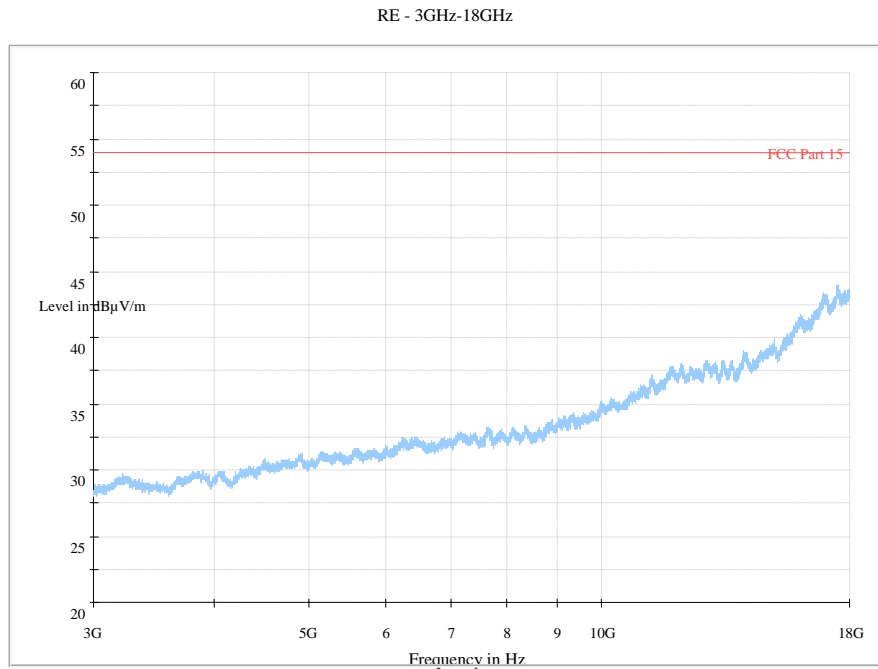
**Fig. 132 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)**



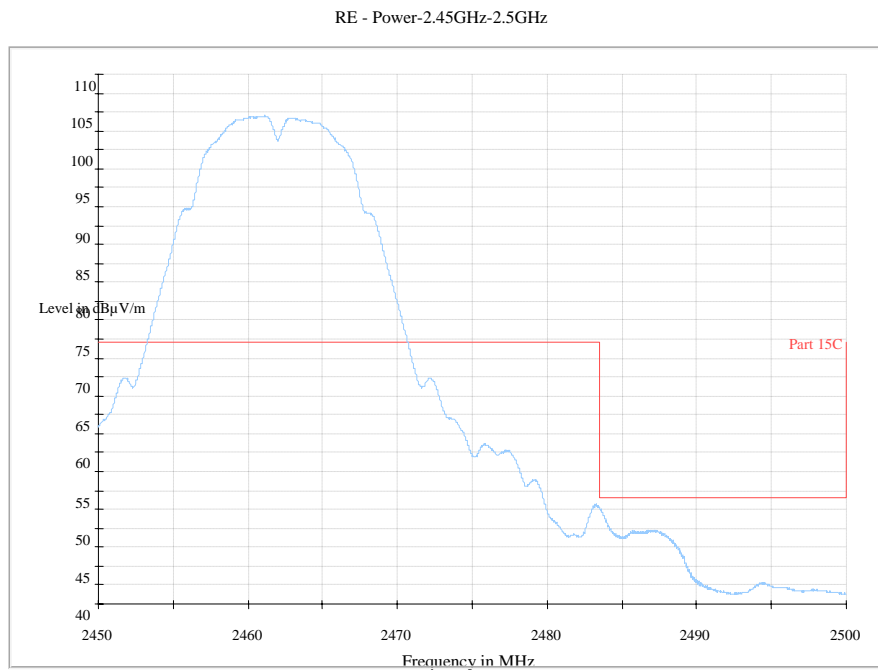
**Fig. 133 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)**



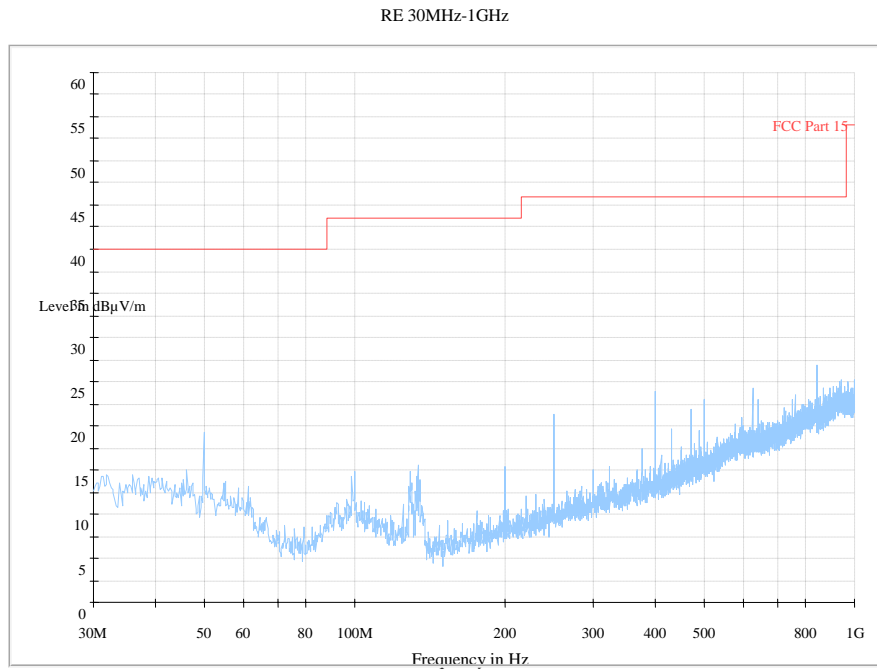
**Fig. 134 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)**



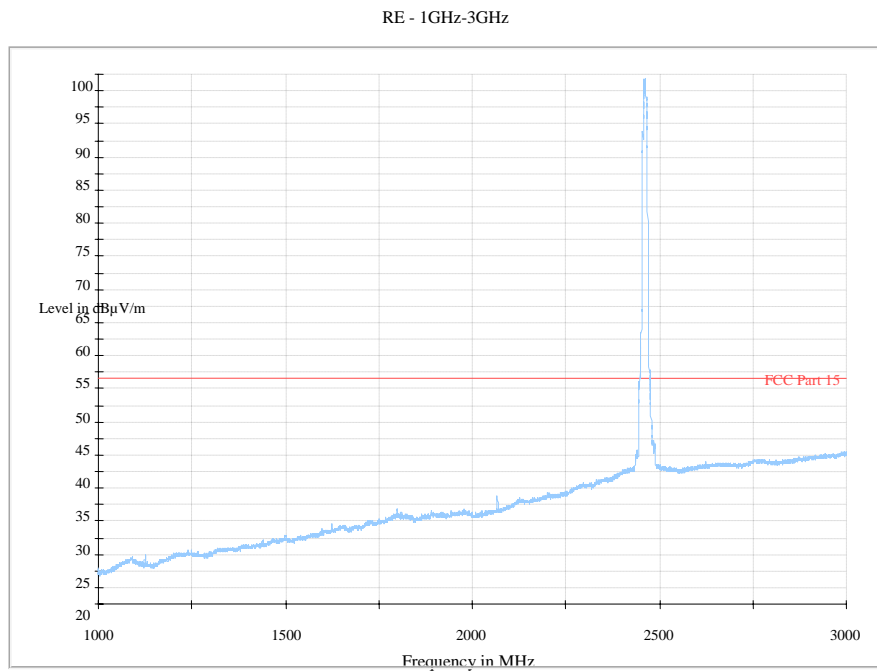
**Fig. 135 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)**



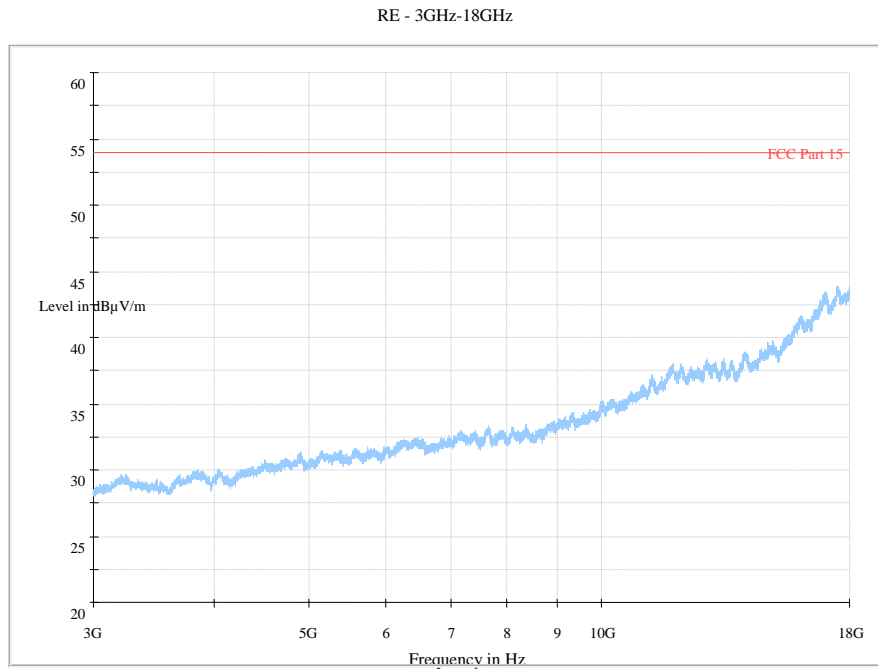
**Fig. 136 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



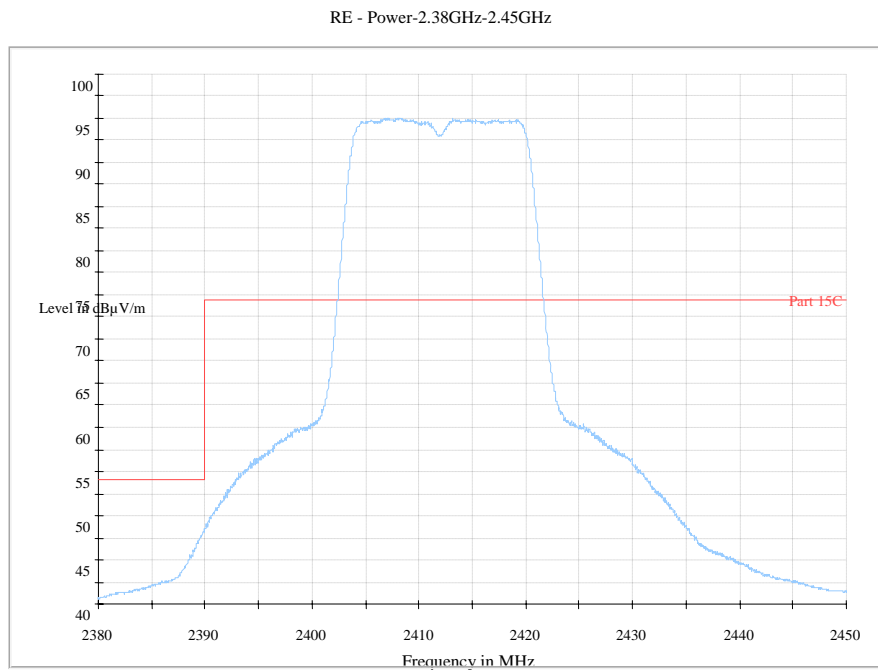
**Fig. 137 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)**



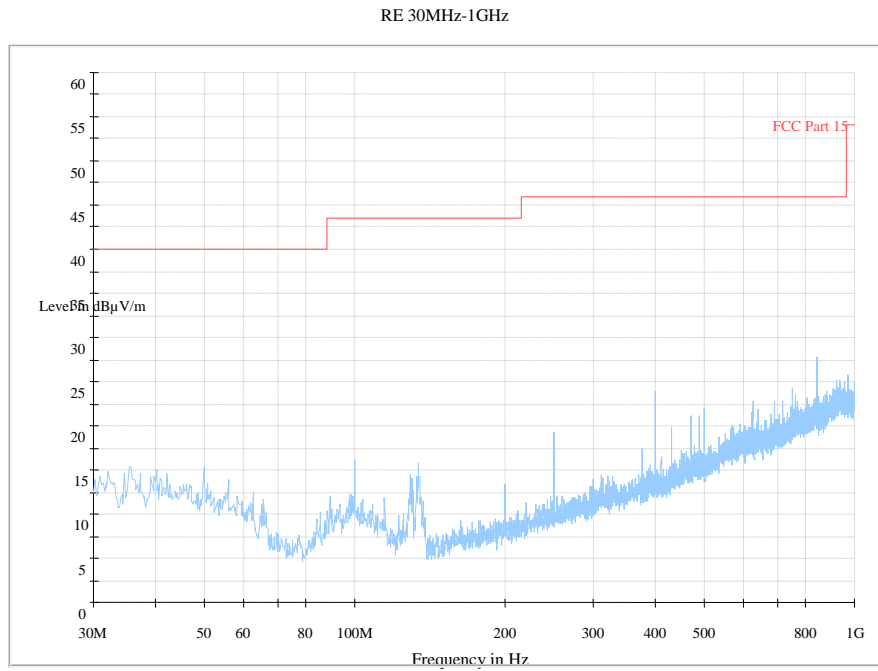
**Fig. 138 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)**



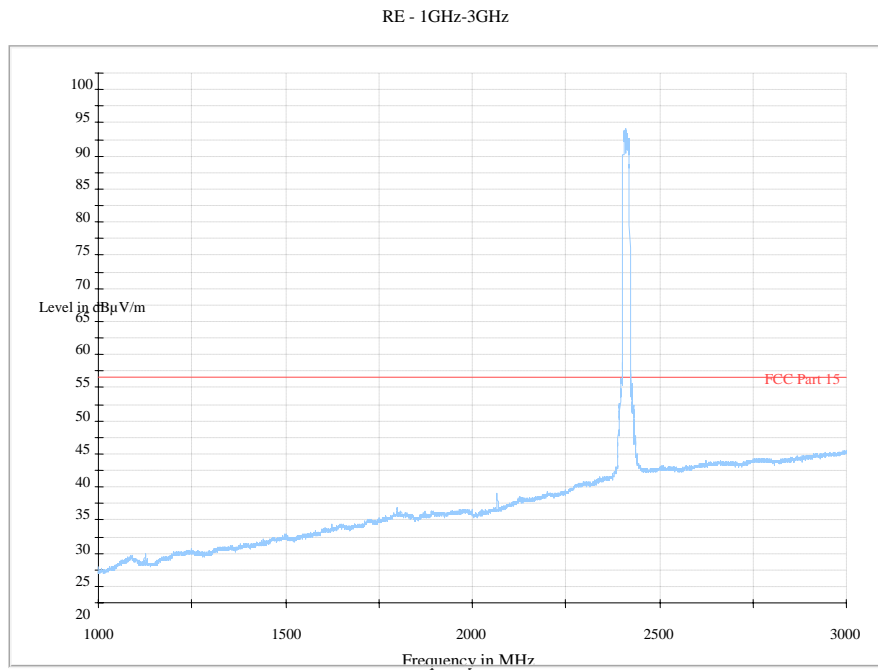
**Fig. 139 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)**



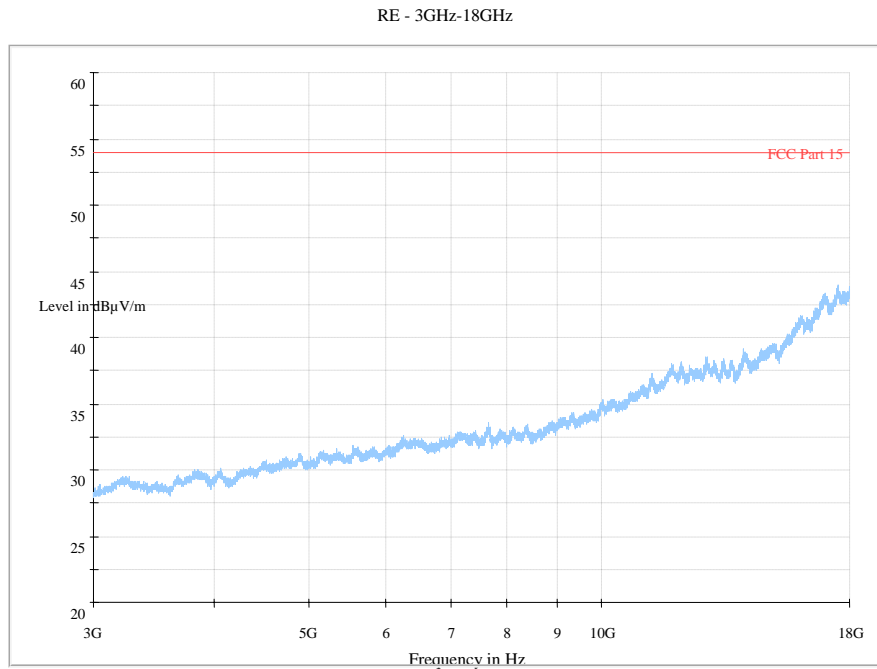
**Fig. 140 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz**



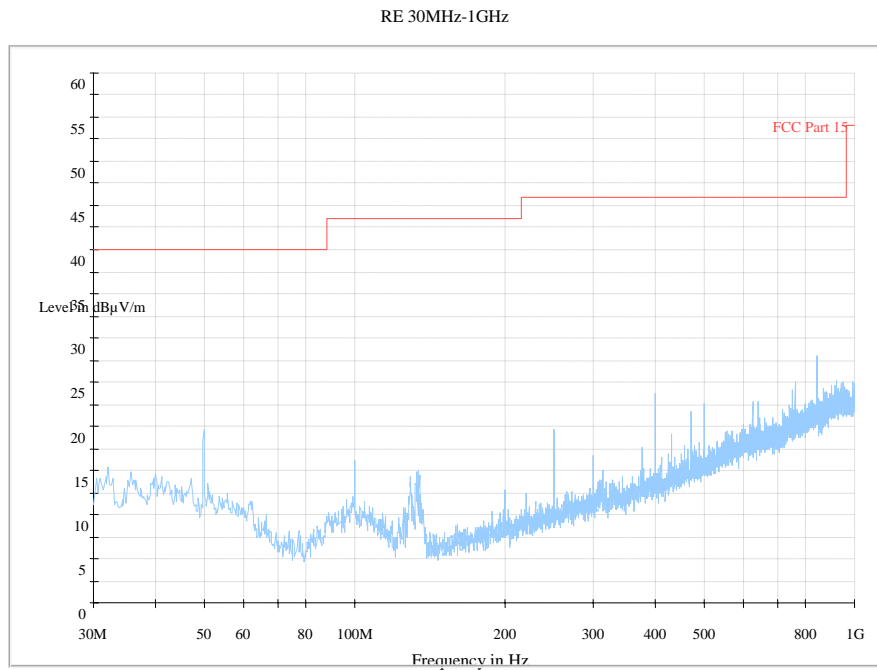
**Fig. 141 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)**



**Fig. 142 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-3 GHz)**

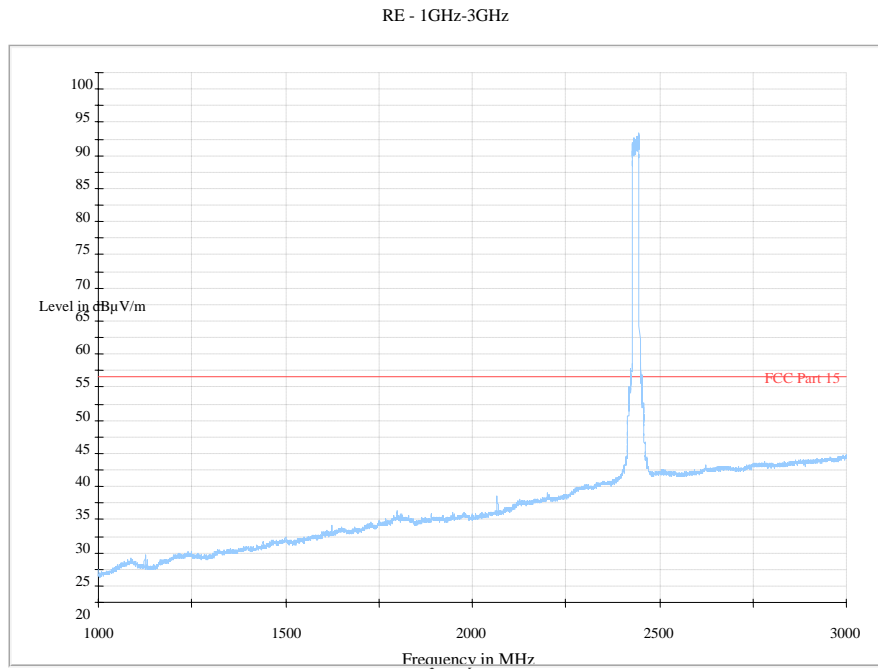


**Fig. 143 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)**

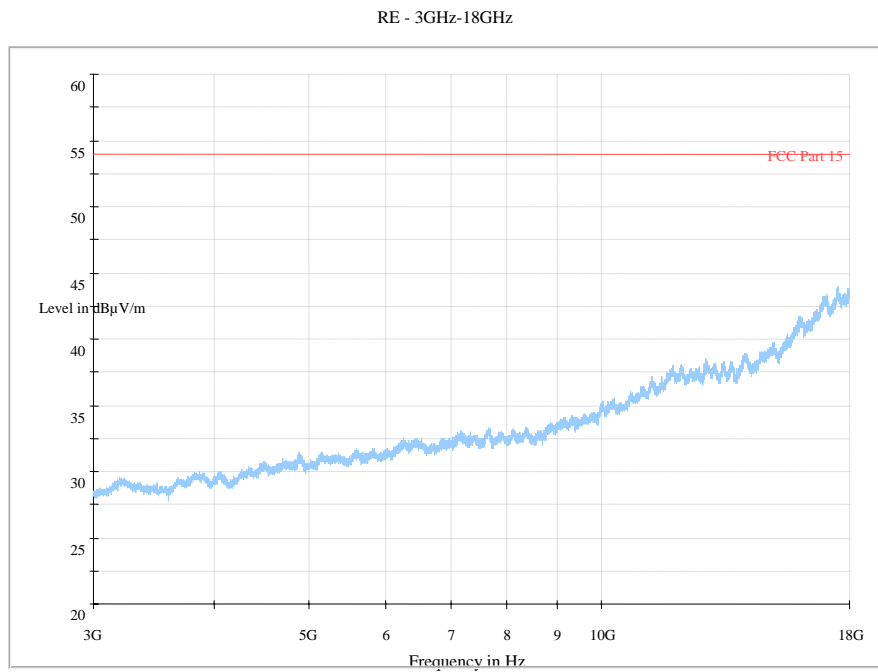


**Fig. 144 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)**

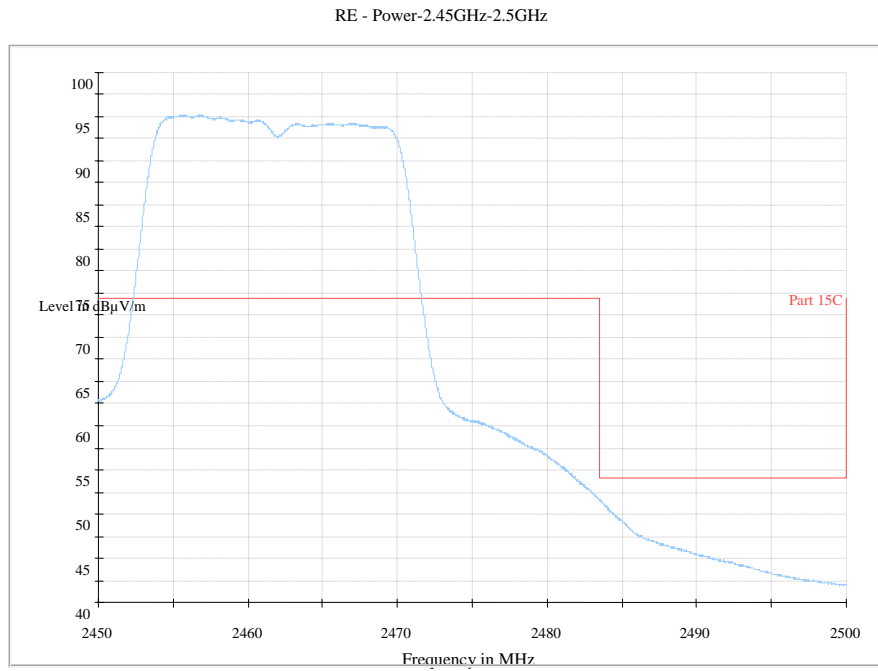




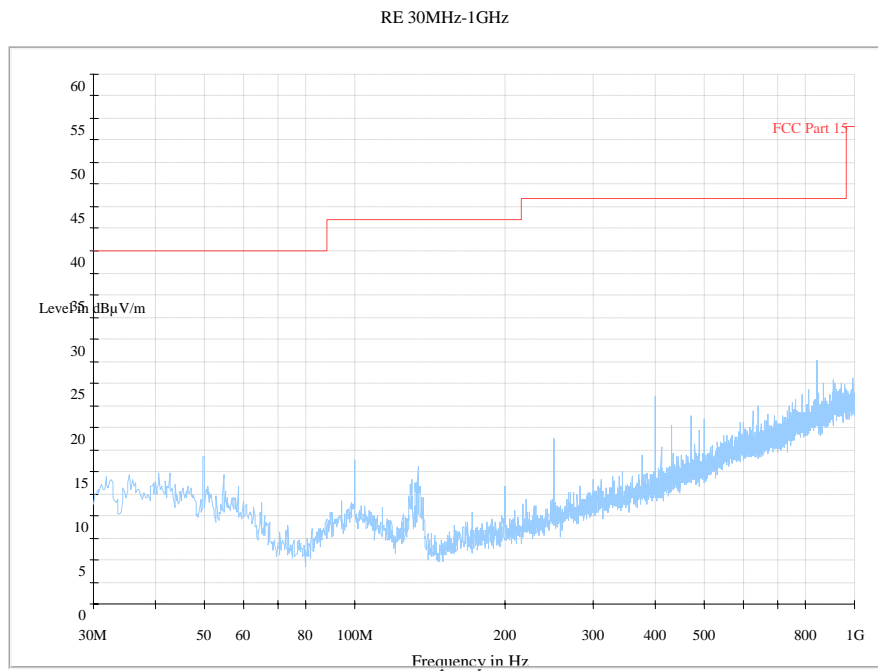
**Fig. 145 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)**



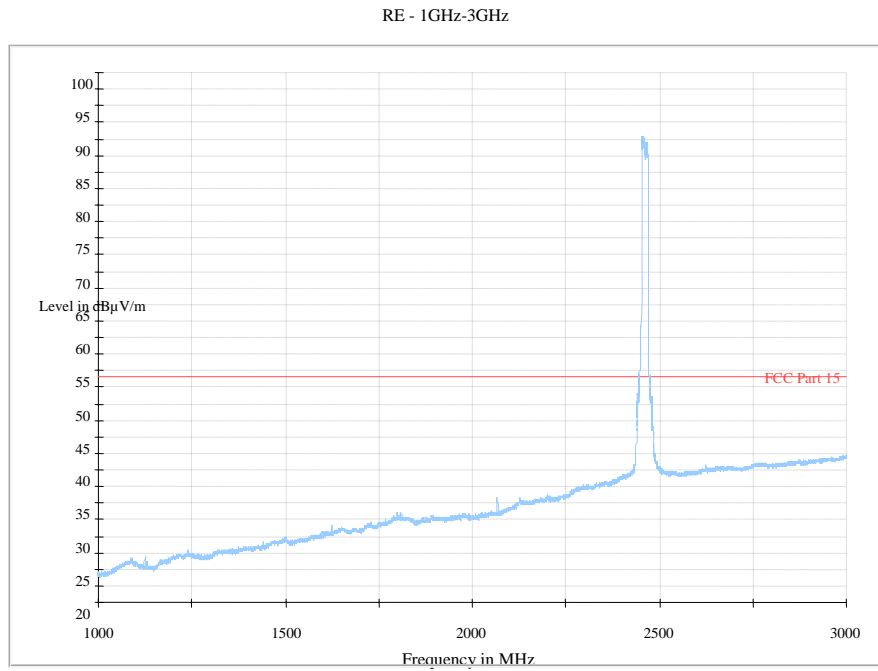
**Fig. 146 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)**



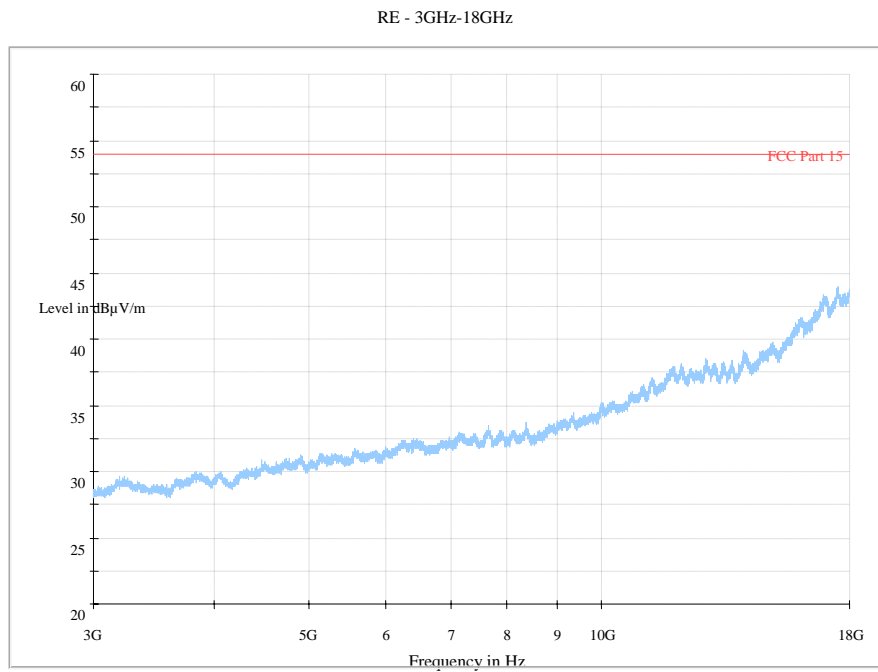
**Fig. 147 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**



**Fig. 148 Radiated Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)**



**Fig. 149 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)**



**Fig. 150 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)**

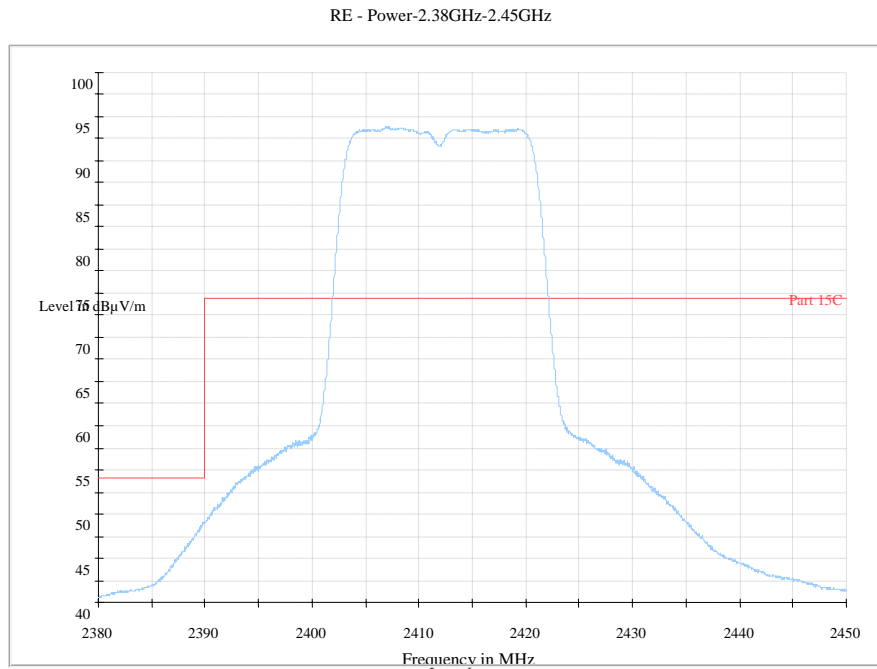


Fig. 151 Radiated Spurious Emission (Power): 802.11n-20MHz, ch1, 2.38 GHz - 2.45GHz

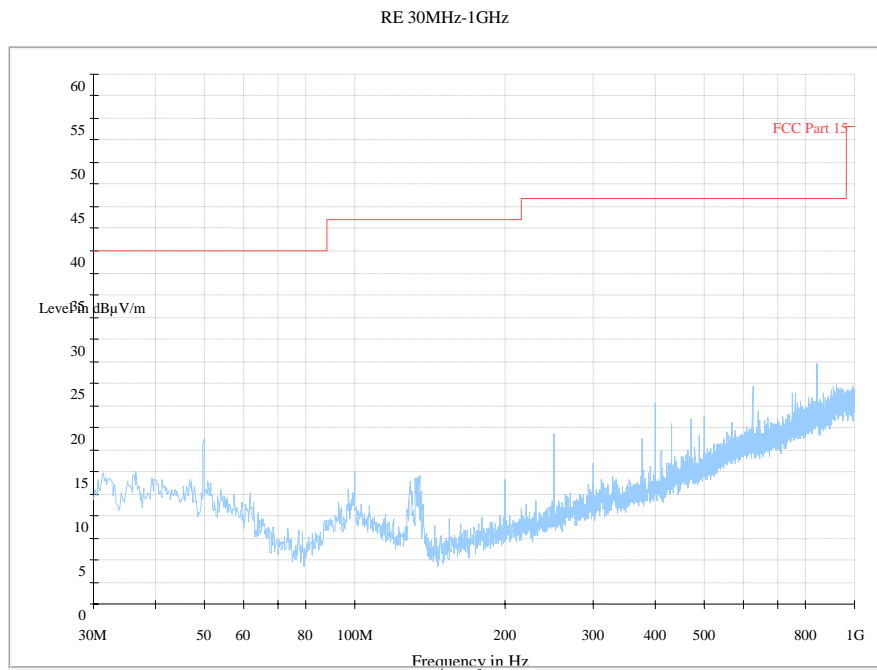
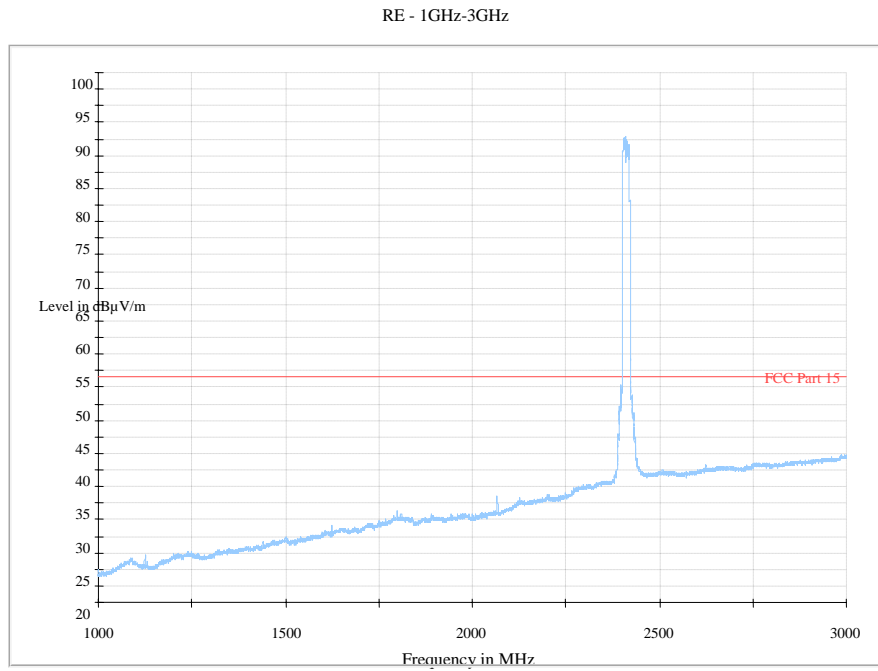
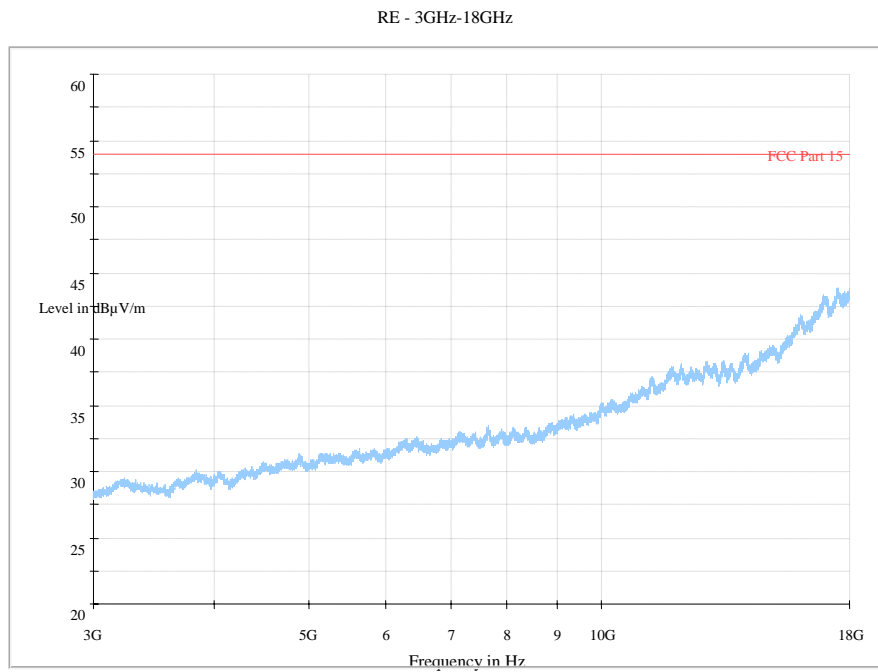


Fig. 152 Radiated Spurious Emission (802.11n-20MHz, Ch1, 30 MHz-1 GHz)



**Fig. 153 Radiated Spurious Emission (802.11n-20MHz, Ch1, 1 GHz-3 GHz)**



**Fig. 154 Radiated Spurious Emission (802.11n-20MHz, Ch1, 3 GHz-18 GHz)**

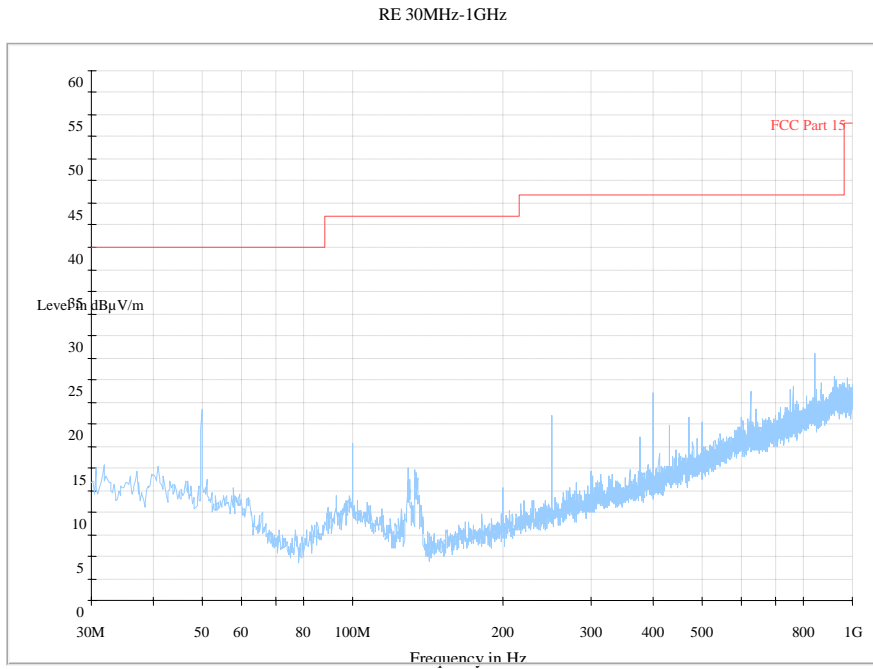


Fig. 155 Radiated Spurious Emission (802.11n-20MHz, Ch6, 30 MHz-1 GHz)

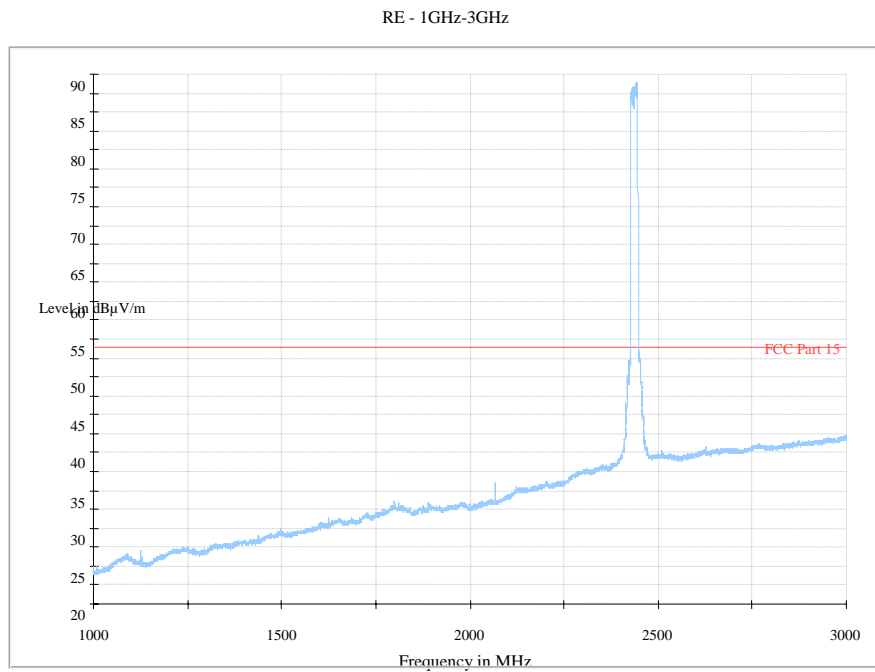
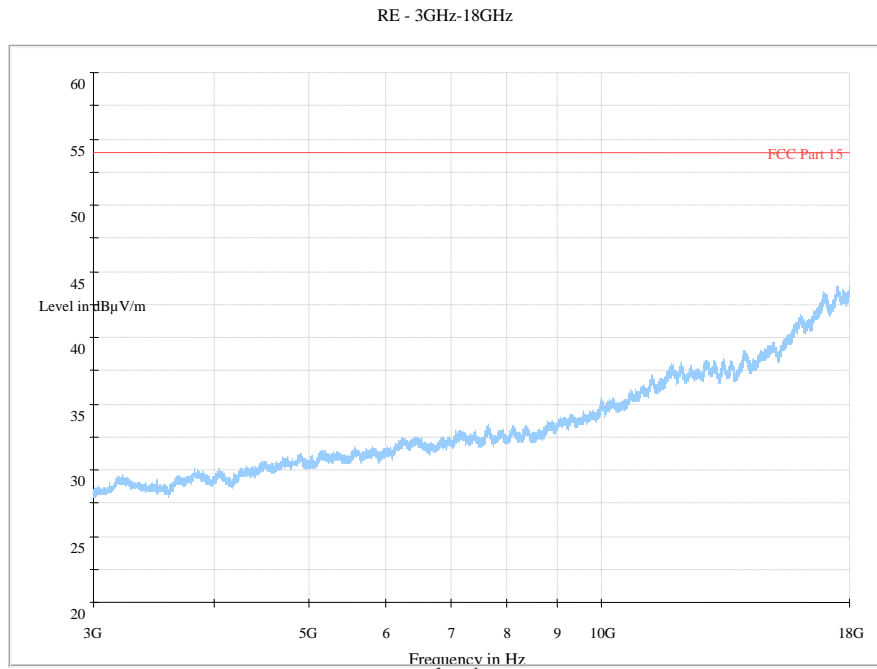
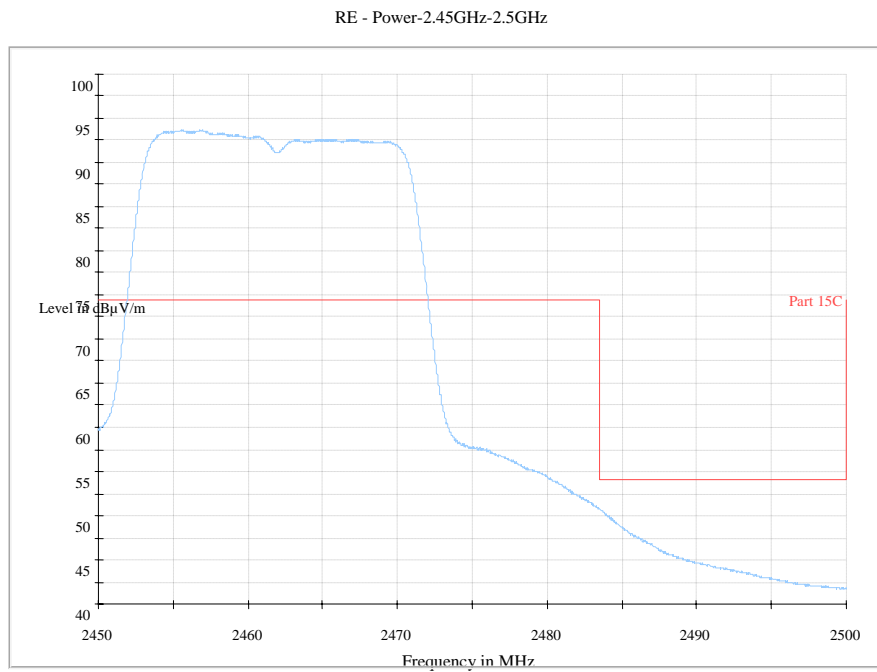


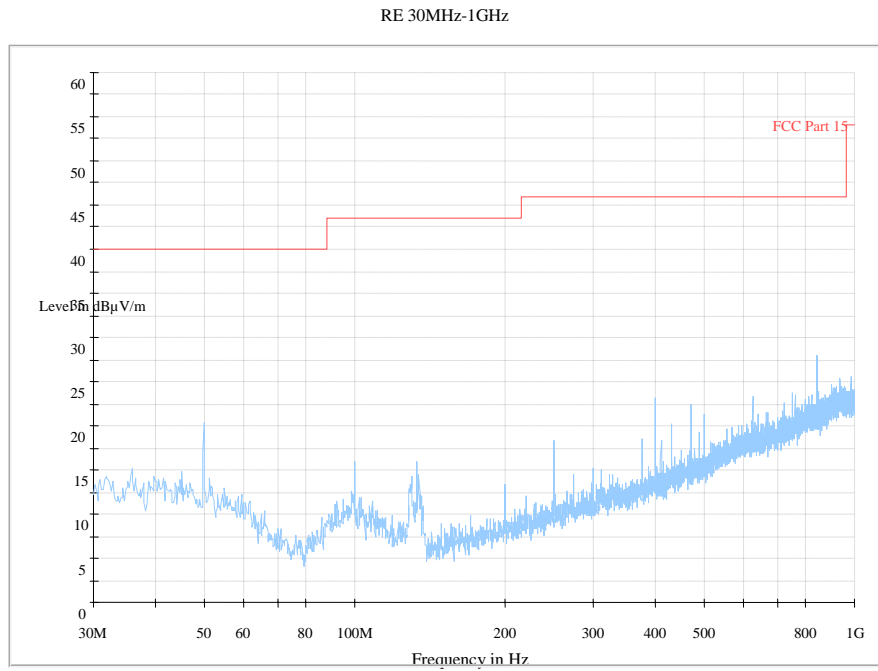
Fig. 156 Radiated Spurious Emission (802.11n-20MHz, Ch6, 1 GHz-3 GHz)



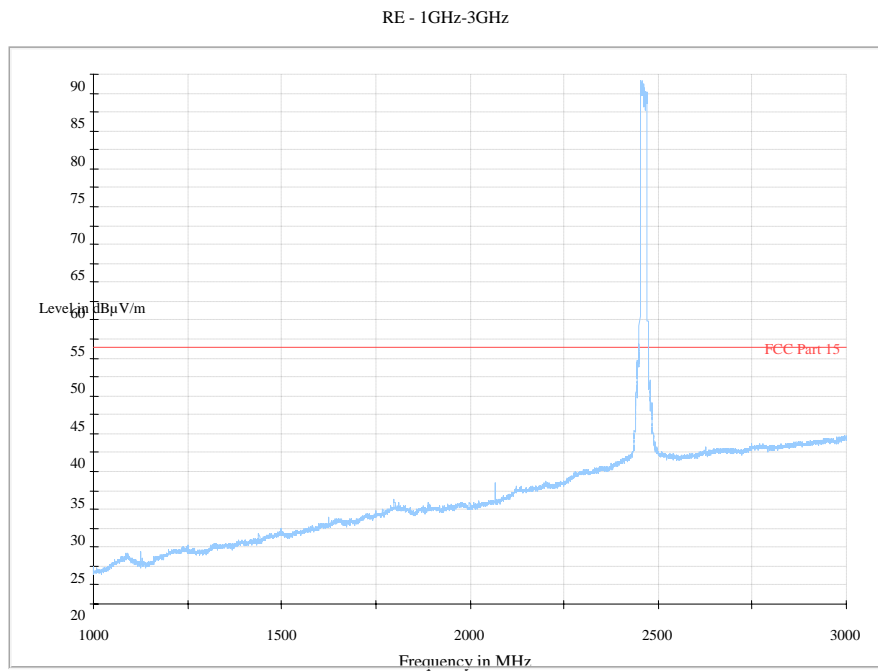
**Fig. 157 Radiated Spurious Emission (802.11n-20MHz, Ch6, 3 GHz-18 GHz)**



**Fig. 158 Radiated Spurious Emission (Power): 802.11n-20MHz, ch11, 2.45 GHz - 2.50GHz**

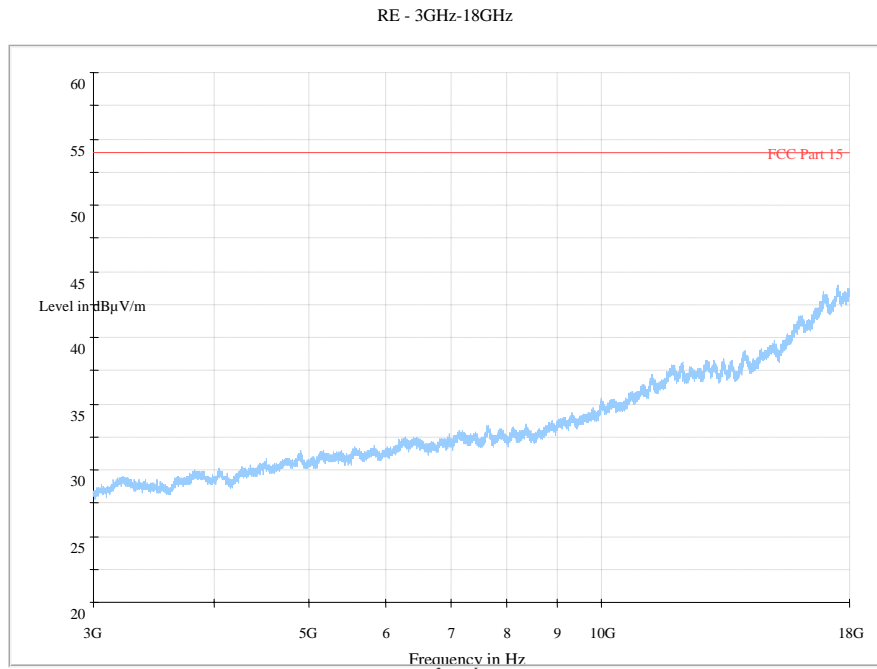


**Fig. 159 Radiated Spurious Emission (802.11n-20MHz, Ch11, 30 MHz-1 GHz)**

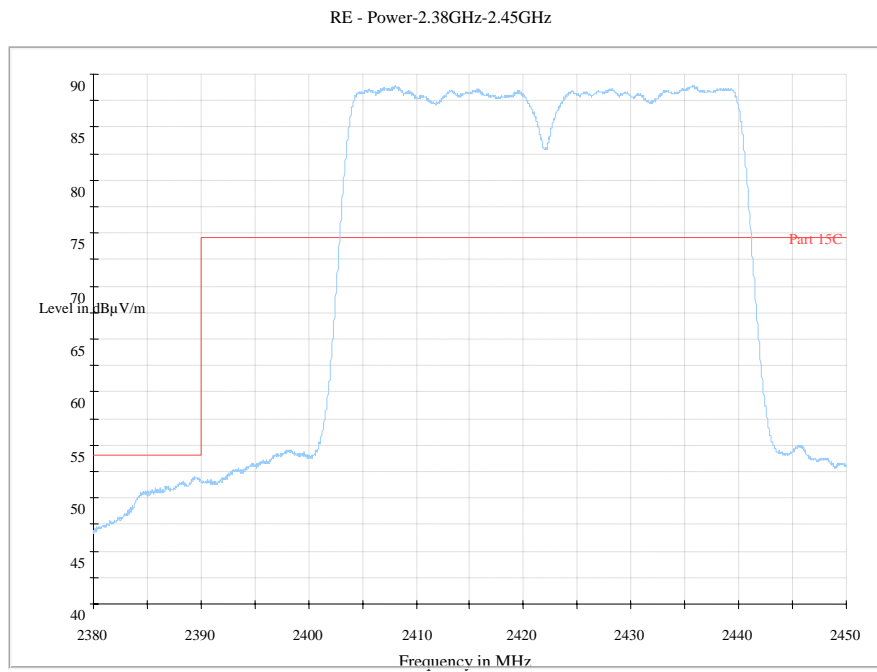


**Fig. 160 Radiated Spurious Emission (802.11n-20MHz, Ch11, 1 GHz-3 GHz)**

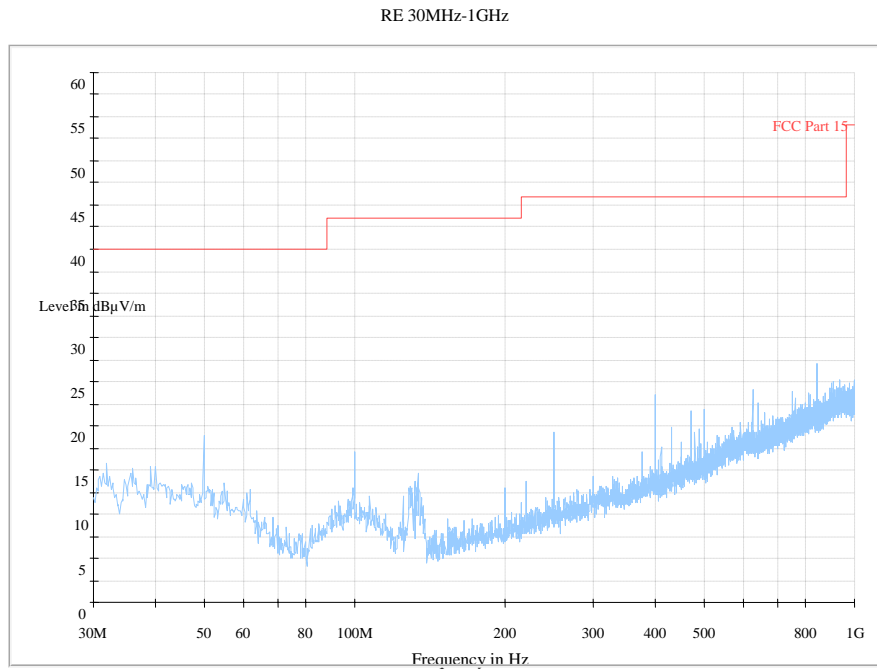




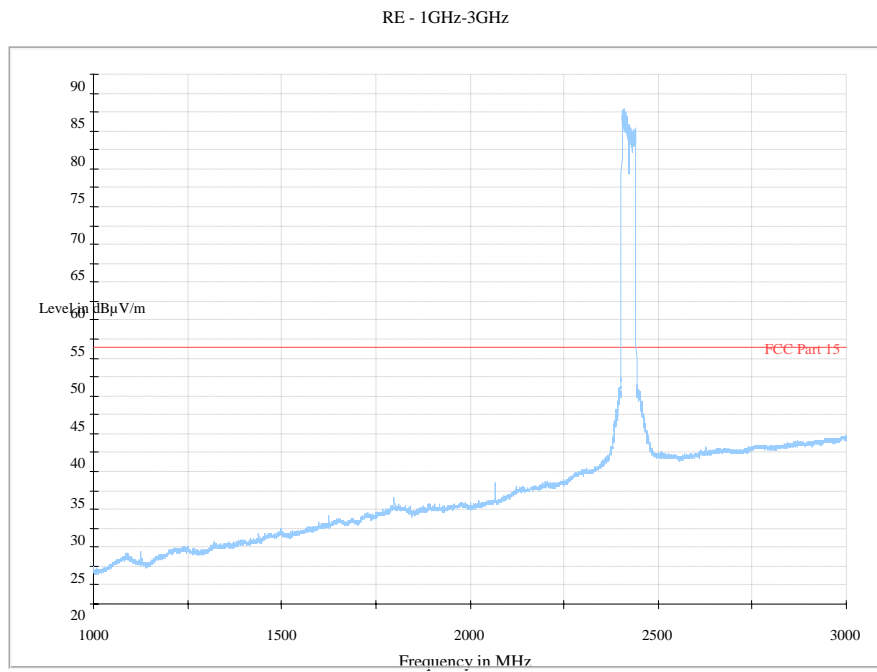
**Fig. 161 Radiated Spurious Emission (802.11n-20MHz, Ch11, 3 GHz-18 GHz)**



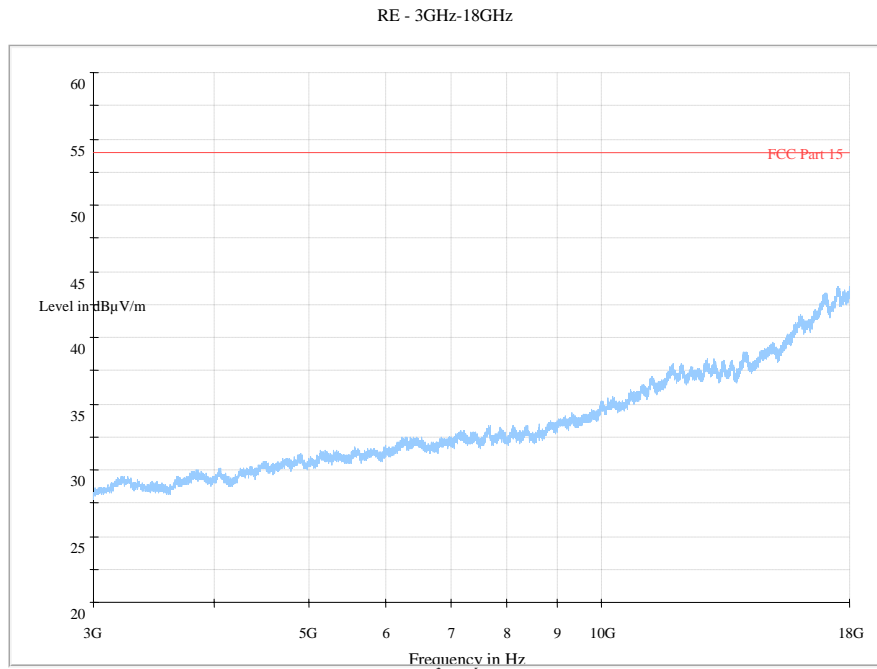
**Fig. 162 Radiated Spurious Emission (Power): 802.11n-40MHz, ch3, 2.38 GHz - 2.45GHz**



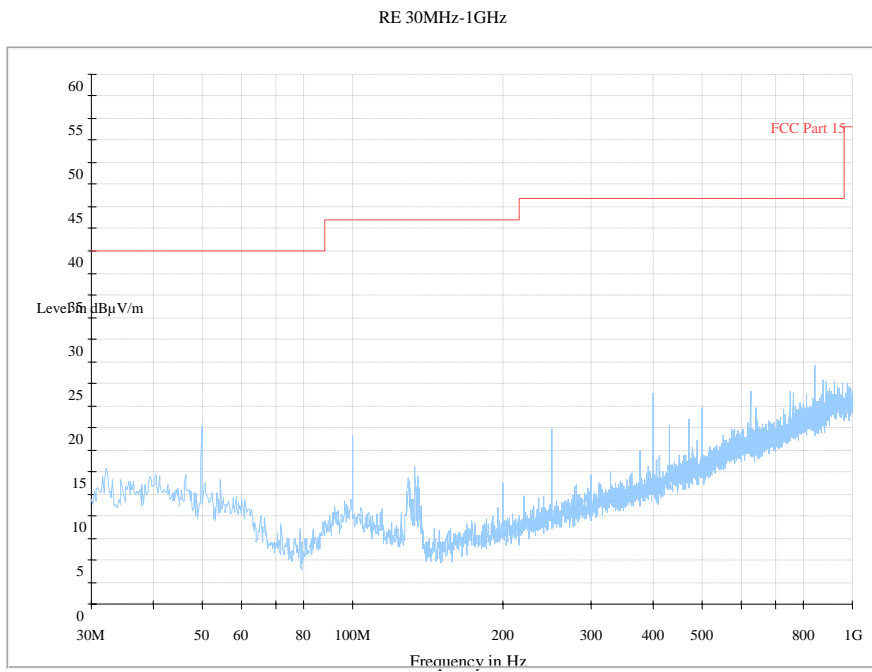
**Fig. 163 Radiated Spurious Emission (802.11n-40MHz, Ch3, 30 MHz-1 GHz)**



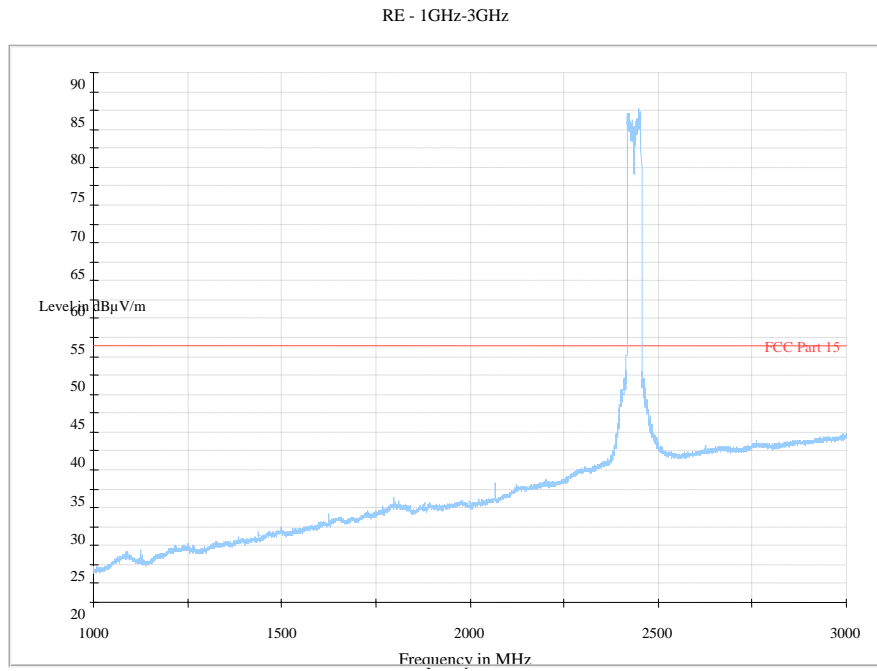
**Fig. 164 Radiated Spurious Emission (802.11n-40MHz, Ch3, 1 GHz-3 GHz)**



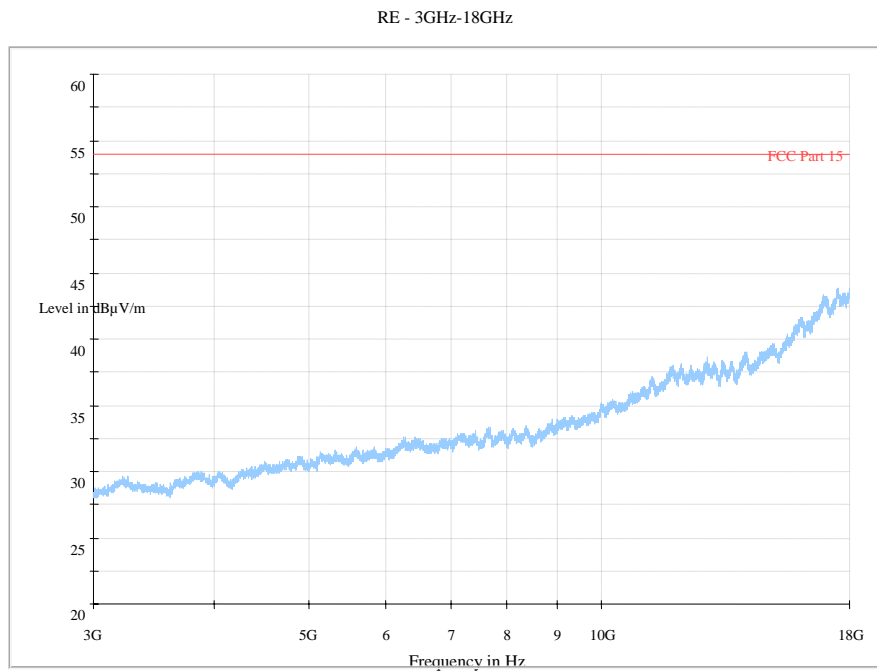
**Fig. 165 Radiated Spurious Emission (802.11n-40MHz, Ch3, 3 GHz-18 GHz)**



**Fig. 166 Radiated Spurious Emission (802.11n-40MHz, Ch6, 30 MHz-1 GHz)**



**Fig. 167 Radiated Spurious Emission (802.11n-40MHz, Ch6, 1 GHz-3 GHz)**



**Fig. 168 Radiated Spurious Emission (802.11n-40MHz, Ch6, 3 GHz-18 GHz)**



Fig. 169 Radiated Spurious Emission (Power): 802.11n-40MHz, ch9, 2.45 GHz - 2.50GHz

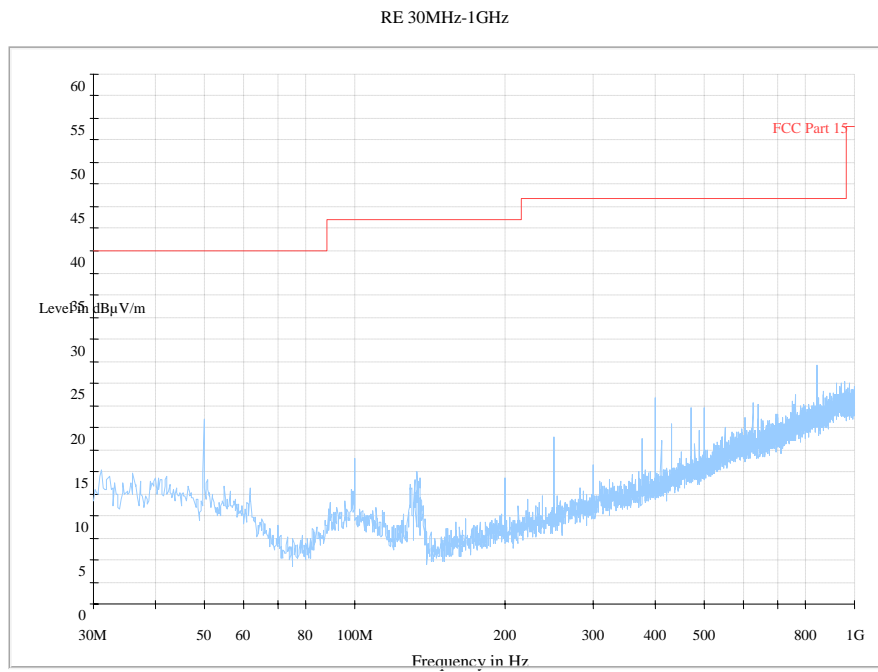
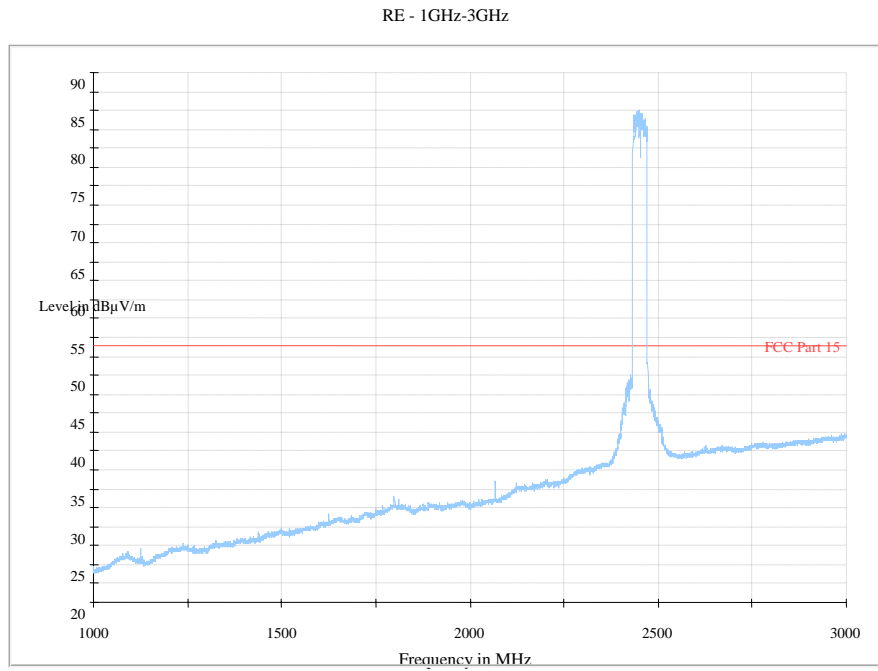
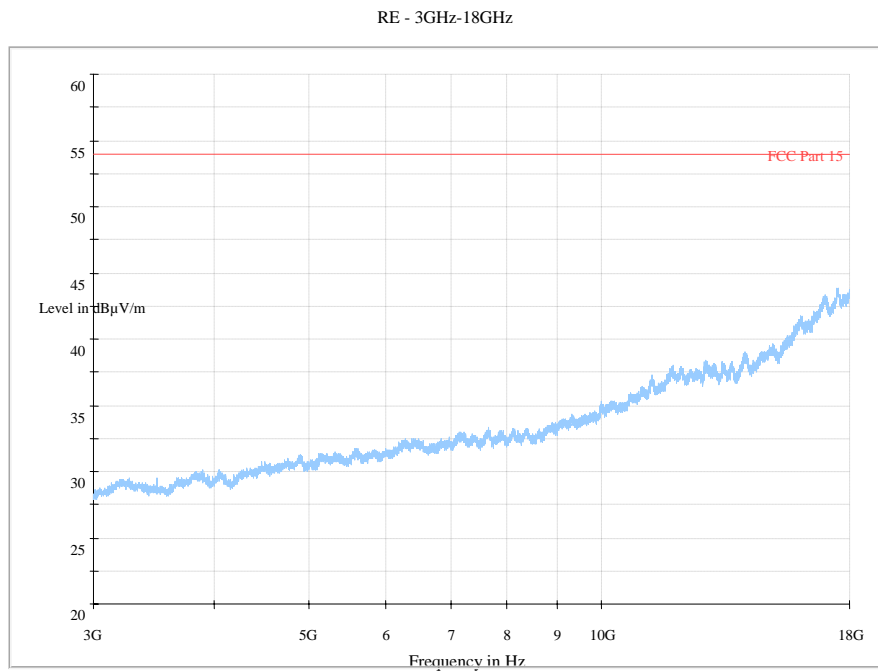


Fig. 170 Radiated Spurious Emission (802.11n-40MHz, Ch9, 30 MHz-1 GHz)



**Fig. 171 Radiated Spurious Emission (802.11n-40MHz, Ch9, 1 GHz-3 GHz)**



**Fig. 172 Radiated Spurious Emission (802.11n-40MHz, Ch9, 3 GHz-18 GHz)**

EMI 18GHz-26.5GHz

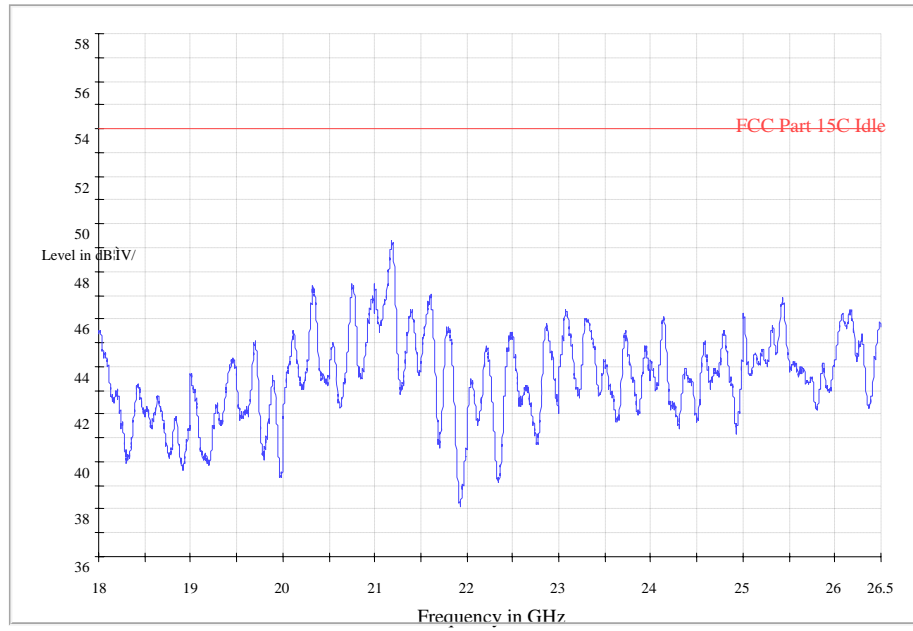


Fig. 173 Radiated Spurious Emission (All channels): 18GHz – 26.5GHz

### 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 (dB $\mu$ V)	Result (dB $\mu$ V)				Conclusion
		With charger				
		802.11b	802.11g	802.11n -20MHz	802.11n -40 MHz	
0.15 to 0.5	66 to 56	Fig. 174	Fig.175	Fig. 176	Fig.177	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)

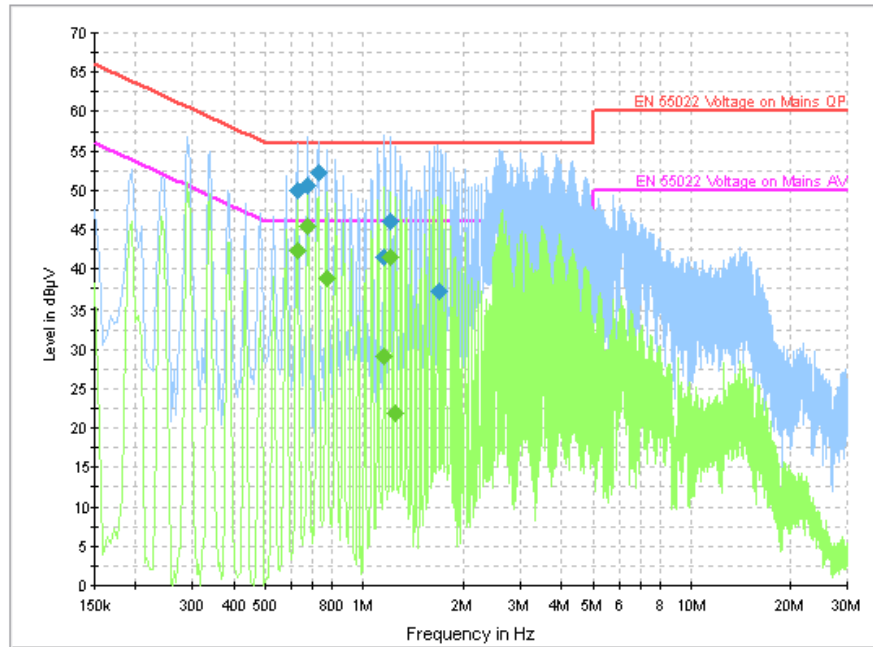
Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)				Conclusion
		With charger				
		802.11b	802.11g	802.11n -20 MHz	802.11n -40 MHz	
0.15 to 0.5	56 to 46	Fig.174	Fig.175	Fig.176	Fig.177	P
0.5 to 5	46					
5 to 30	50					
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.						

The measurement is made according to ANSI C63.10

**Conclusion: PASS**

**Test graphs as below:**





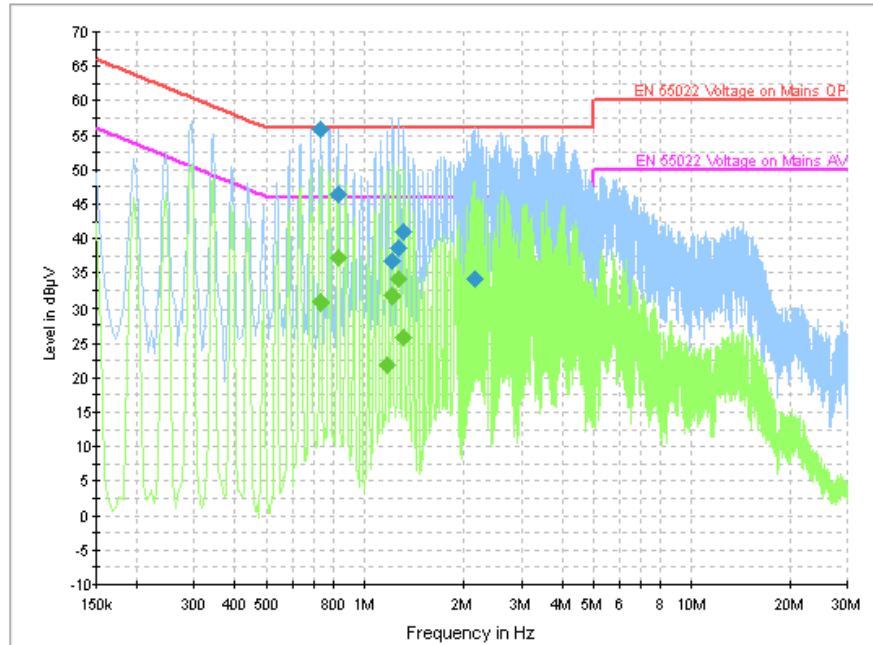
**Fig. 174 AC Powerline Conducted Emission-802.11b**

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.627000	50.0	GND	L1	10.0	6.0	56.0
0.676500	50.7	GND	L1	10.0	5.3	56.0
0.726000	52.3	GND	L1	10.0	3.7	56.0
1.158000	41.5	GND	L1	10.0	14.5	56.0
1.207500	46.1	GND	L1	10.0	9.9	56.0
1.689000	37.1	GND	L1	10.0	18.9	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.627000	42.3	GND	L1	10.0	3.7	46.0
0.676500	45.5	GND	L1	10.0	0.5	46.0
0.771000	38.8	GND	L1	10.0	7.2	46.0
1.158000	29.1	GND	L1	10.0	16.9	46.0
1.207500	41.4	GND	L1	10.0	4.6	46.0
1.252500	21.8	GND	L1	10.0	24.2	46.0



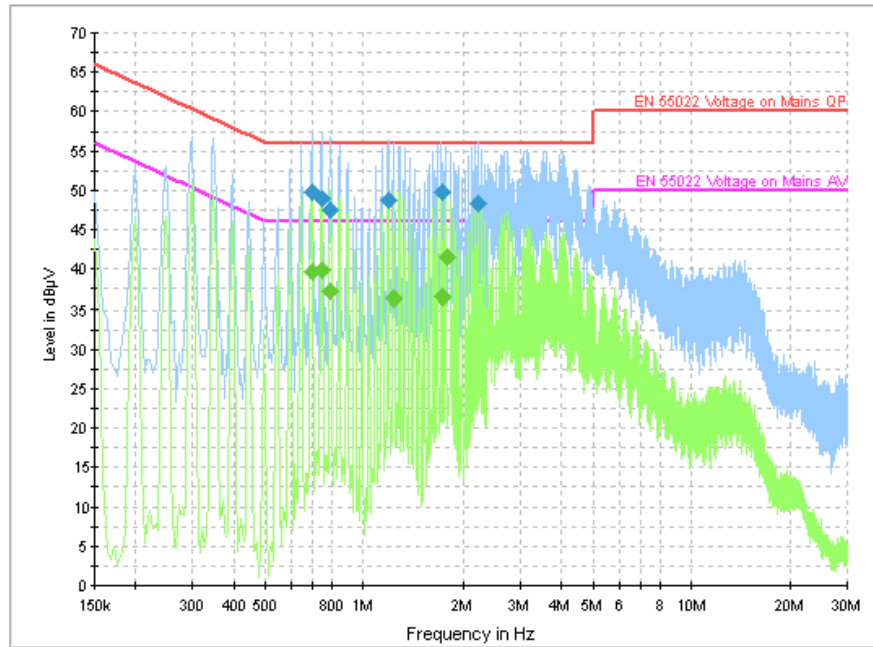
**Fig. 175 AC Powerline Conducted Emission-802.11g**

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.735000	55.8	GND	L1	10.0	0.2	56.0
0.829500	46.4	GND	L1	10.0	9.6	56.0
1.221000	36.7	GND	L1	10.0	19.3	56.0
1.270500	38.7	GND	L1	10.0	17.3	56.0
1.320000	41.1	GND	L1	10.0	14.9	56.0
2.148000	34.0	GND	L1	10.0	22.0	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.730500	30.9	GND	L1	10.0	15.1	46.0
0.829500	37.1	GND	L1	10.0	8.9	46.0
1.171500	21.8	GND	L1	10.0	24.2	46.0
1.221000	31.7	GND	L1	10.0	14.3	46.0
1.270500	34.1	GND	L1	10.0	11.9	46.0
1.320000	25.8	GND	L1	10.0	20.2	46.0



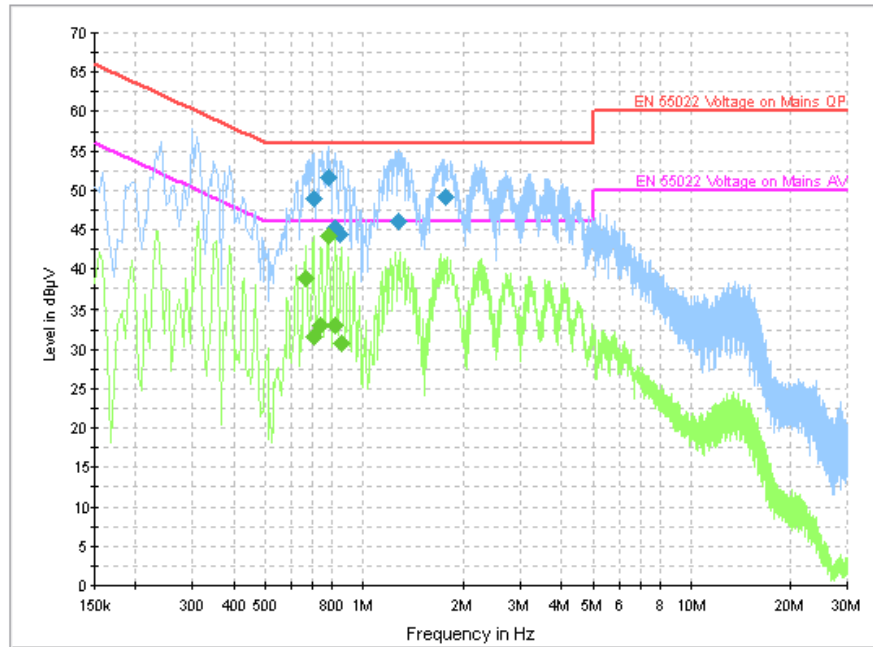
**Fig. 176 AC Powerline Conducted Emission-802.11n-20MHz**

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.694500	49.7	GND	L1	10.0	6.3	56.0
0.744000	48.9	GND	L1	10.0	7.1	56.0
0.793500	47.5	GND	L1	10.0	8.5	56.0
1.189500	48.8	GND	L1	10.0	7.2	56.0
1.729500	49.8	GND	L1	10.0	6.2	56.0
2.229000	48.3	GND	L1	10.0	7.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.694500	39.7	GND	L1	10.0	6.3	46.0
0.744000	39.8	GND	L1	10.0	6.2	46.0
0.793500	37.1	GND	L1	10.0	8.9	46.0
1.234500	36.2	GND	L1	10.0	9.8	46.0
1.729500	36.5	GND	L1	10.0	9.5	46.0
1.779000	41.5	GND	L1	10.0	4.5	46.0



**Fig. 177 AC Powerline Conducted Emission-802.11n-40MHz**

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.703500	49.0	GND	L1	10.0	7.0	56.0
0.780000	51.6	GND	L1	10.0	4.4	56.0
0.820500	45.2	GND	L1	10.0	10.8	56.0
0.852000	44.4	GND	L1	10.0	11.6	56.0
1.284000	46.0	GND	L1	10.0	10.0	56.0
1.756500	49.2	GND	L1	10.0	6.8	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.663000	38.8	GND	L1	10.0	7.2	46.0
0.703500	31.7	GND	L1	10.0	14.3	46.0
0.739500	33.1	GND	L1	10.0	12.9	46.0
0.780000	44.3	GND	L1	10.0	1.7	46.0
0.820500	33.0	GND	L1	10.0	13.0	46.0
0.856500	30.7	GND	L1	10.0	15.3	46.0

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