



**FCC PART 15C  
TEST REPORT  
No. 2012WLN0435**

for

**TCT Mobile Limited**

**GSM/EGPRS Quadband mobile phone**

**Type: Conet 2SIM**

**Market Name: ONE TOUCH 815D**

With

**FCC ID: RAD309**

**Hardware Version: PIO**

**Software Version: V321**

**Issued Date: 2012-11-23**



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**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  
Address: No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China  
Postal Code: 100191  
Telephone: 00861062304633  
Fax: 00861062304793

### 1.2. Testing Environment

Normal Temperature: 15-30°C  
Extreme Temperature: -10/+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: 2012-10-10  
Testing End Date: 2012-10-23

### 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  
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. 201203  
Country: China  
Contact: Gong Zhizhou  
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Telephone: 0086-21-61460890  
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### **3. EQUIPMENT UNDER TEST(EUT) AND ANCILLARY**

#### **EQUIPMENT(AE)**

##### **3.1. About EUT**

Description	GSM/EGPRS Quadband mobile phone
Type	Conet 2SIM
Market name	ONE TOUCH 815D
FCC ID	RAD309
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	24.79dBm(CCK)
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	866664010006407	PIO	V321
EUT2	866664010005409	PIO	V321

\*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	CAB3120000C1	/
AE2	Battery	CAB3120000C3	/
AE3	Charger	CBA3120AG0C2	/

\*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/EGPRS Quadband 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 metersx3.0 metersx2.7 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 metersx6.7metersx6.15meters) 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 ( $S_{VSWR}$ )	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 metersx4.00 metersx3.80 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)	/	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.

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.

Test Conditions.

This model is a variant product which market name is ONE TOUCH 815; all the test result has been derived from test report of ONE TOUCH 815.

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
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## **7. TEST EQUIPMENTS UTILIZED**

### **Conducted test system**

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2013-07-19
2	Spectrum Analyzer	MS2687B	6200819812	Anritsu	2013-09-22
3	Test Receiver	ESS	847151/015	Rohde & Schwarz	2013-10-30
4	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2013-08-12

### **Radiated emission test system**

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Test Receiver	ESI40	831564/002	Rohde & Schwarz	2013-08-11
2	BiLog Antenna	3142B	9908-1403	EMCO	2013-03-15
3	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2012-12-25
4	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2013-06-30

### **Anechoic chamber**

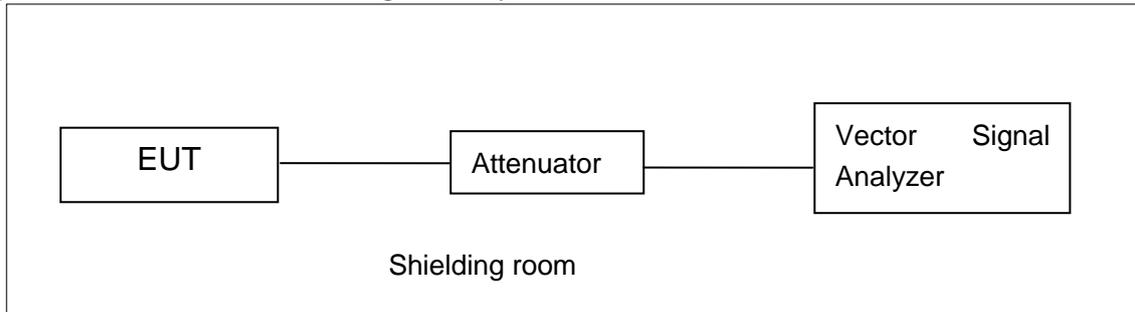
Anechoic chamber by Frankonia German.

## 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

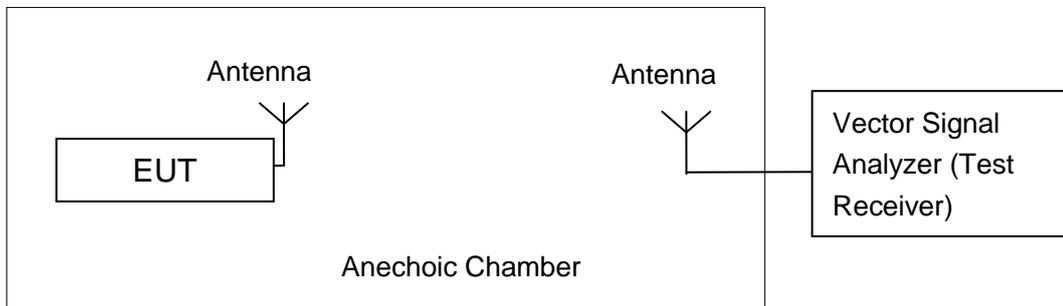


#### A.1.2. Radiated Emission Measurements

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
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### 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	21.17	/	/
	2	21.43	/	/
	5.5	22.83	/	/
	11	24.29	24.53	24.79
802.11g	6	23.54	/	/
	9	23.56	/	/
	12	23.33		
	18	23.31	/	/
	24	23.68	/	/
	36	23.66	/	/
	48	23.83	23.85	23.98
54	23.80	/	/	

The data rate 11Mbps and 48Mbps 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	21.79	/	/
	MCS1	21.55	/	/
	MCS2	21.48	/	/
	MCS3	22.02	22.09	22.36
	MCS4	21.84	/	/
	MCS5	21.91	/	/
	MCS6	21.94	/	/
	MCS7	21.97	/	/

The data rate MCS3 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	21.56	/	/
	MCS1	21.36	/	/
	MCS2	21.39	/	/
	MCS3	21.68	/	/
	MCS4	21.67	/	/
	MCS5	21.74	21.74	21.94
	MCS6	21.70	/	/
	MCS7	21.50	/	/

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	17.69	17.76	17.95
802.11g	15.02	15.06	15.24

**802.11n-HT20 mode**

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	13.26	13.18	13.48

**802.11n-HT40 mode**

Mode	Test Result (dBm)		
	2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	12.85	12.81	13.00

**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
802.11b	1	Fig.1	-3.82	P
	6	Fig.2	-4.15	P
	11	Fig.3	-3.82	P
802.11g	1	Fig.4	-8.88	P
	6	Fig.5	-8.72	P
	11	Fig.6	-8.06	P

**802.11n-HT20 mode**

Mode	Channel	Power Spectral Density ( dBm/3 kHz )		Conclusion
802.11n (20MHz)	1	Fig.7	-9.75	P
	6	Fig.8	-10.55	P
	11	Fig.9	-11.05	P

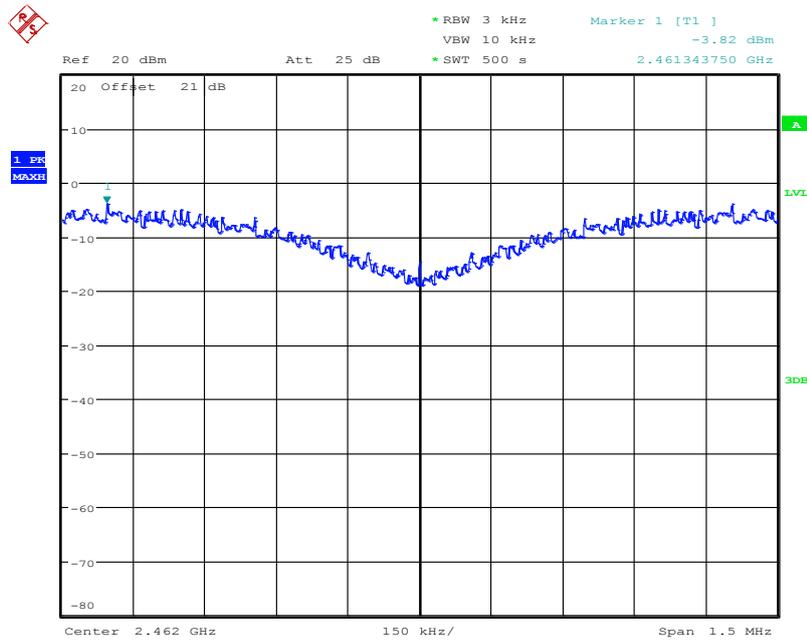
**802.11n-HT40 mode**

Mode	Channel	Power Spectral Density ( dBm/3 kHz )		Conclusion
802.11n (40MHz)	3	Fig.10	-14.43	P
	6	Fig.11	-13.97	P
	9	Fig.12	-13.83	P

**Conclusion: PASS**

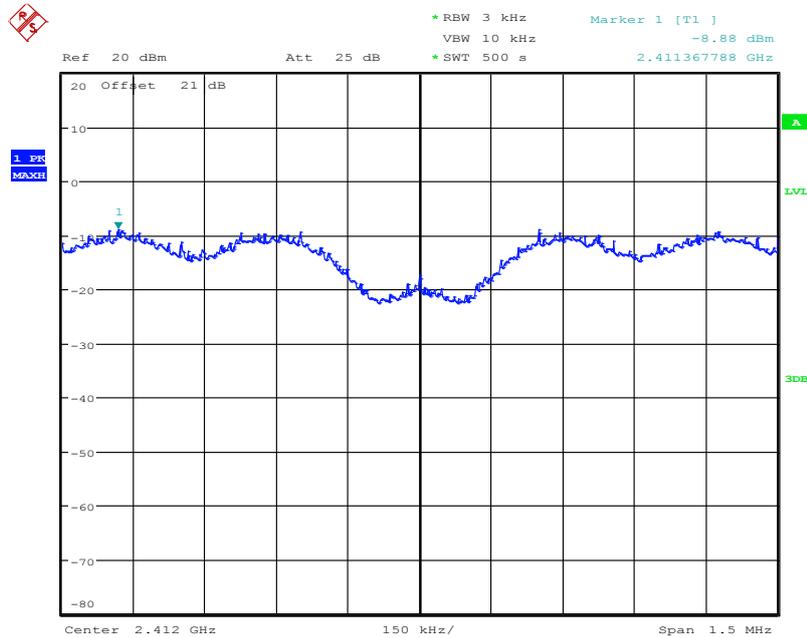
**Test graphs as below:**





Date: 10.OCT.2012 11:38:57

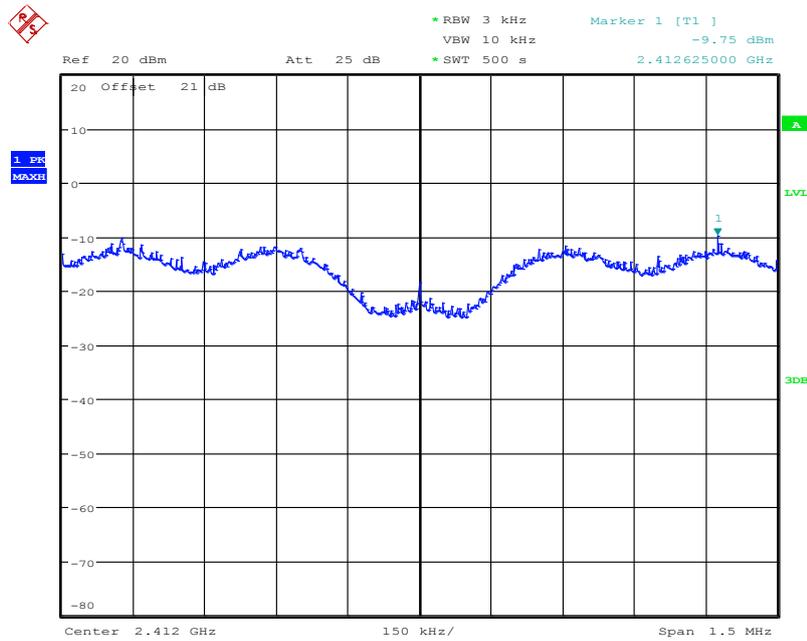
**Fig. 3 Power Spectral Density (802.11b, Ch 11)**



Date: 10.OCT.2012 12:26:33

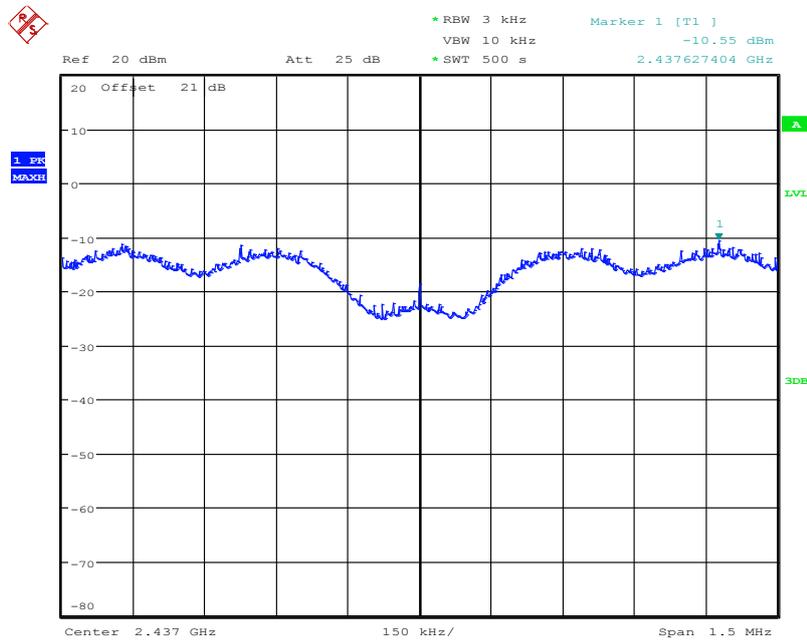
**Fig. 4 Power Spectral Density (802.11g, Ch 1)**





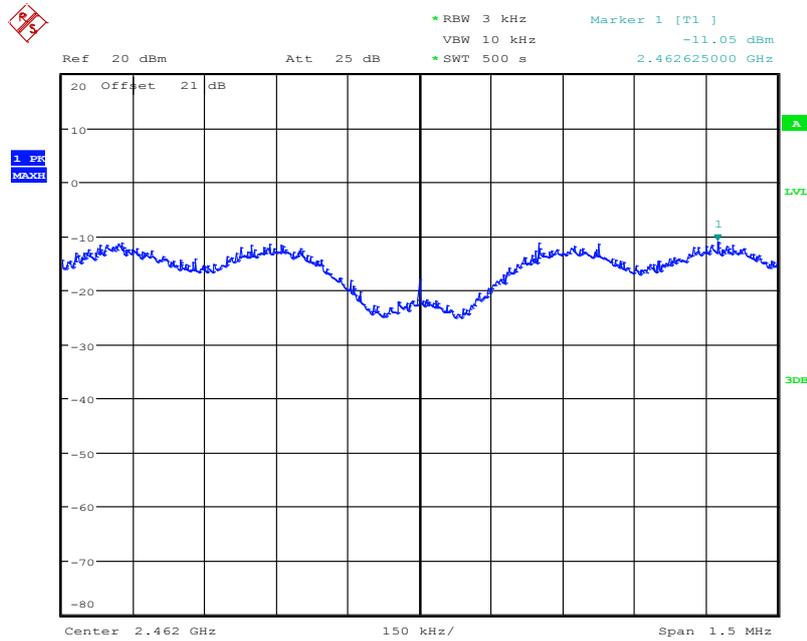
Date: 14.OCT.2012 19:47:42

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



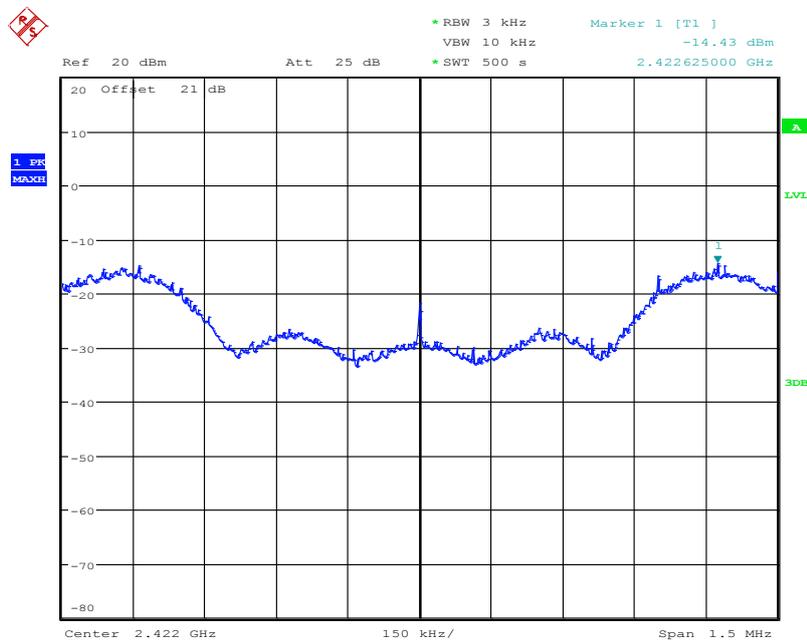
Date: 14.OCT.2012 19:58:43

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



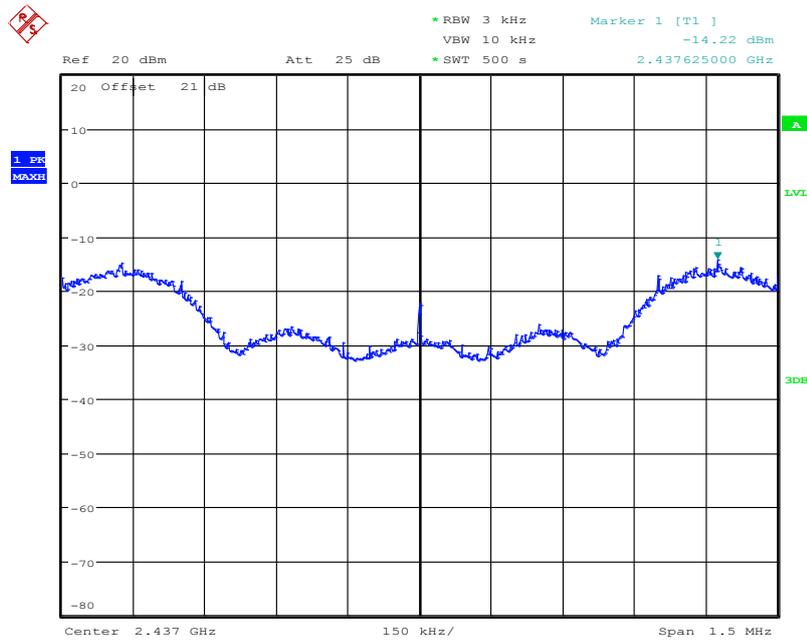
Date: 14.OCT.2012 20:23:41

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



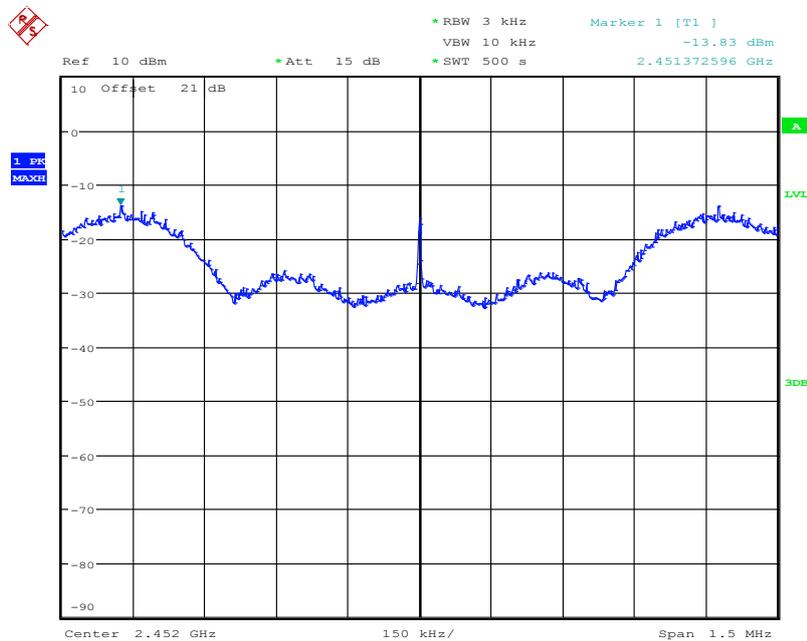
Date: 14.OCT.2012 20:34:17

**Fig. 10 Power Spectral Density (802.11n-40MHz, Ch 3)**



Date: 14.OCT.2012 21:06:39

**Fig. 11 Power Spectral Density (802.11n-40MHz, Ch 6)**



Date: 15.OCT.2012 10:25:01

**Fig. 12 Power Spectral Density (802.11n-40MHz, 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	9186	P
	6	Fig.14	9103	P
	11	Fig.15	9103	P
802.11g	1	Fig.16	16474	P
	6	Fig.17	16474	P
	11	Fig.18	16538	P

###### 802.11n-HT20 mode

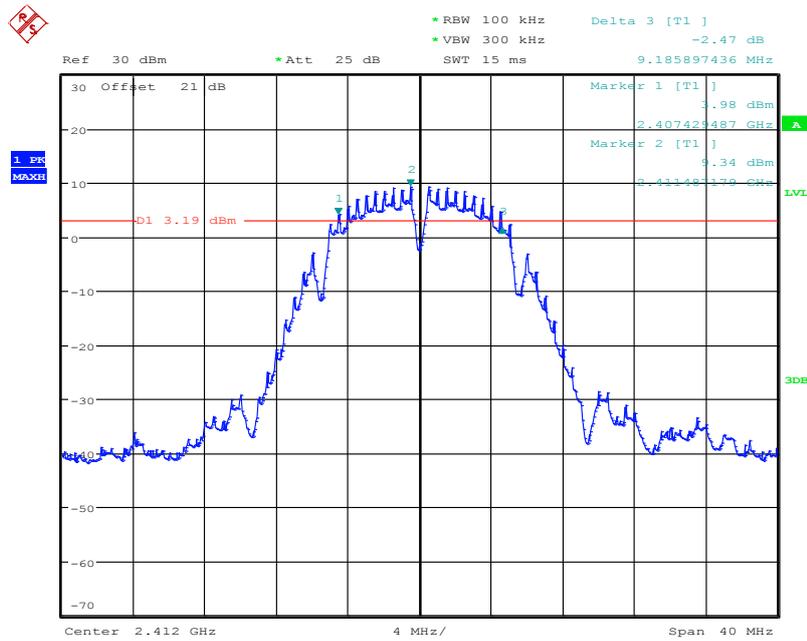
Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
802.11n (20MHz)	1	Fig.19	17692	P
	6	Fig.20	17692	P
	11	Fig.21	17692	P

###### 802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
802.11n (40MHz)	3	Fig.22	36346	P
	6	Fig.23	36346	P
	9	Fig.24	36346	P

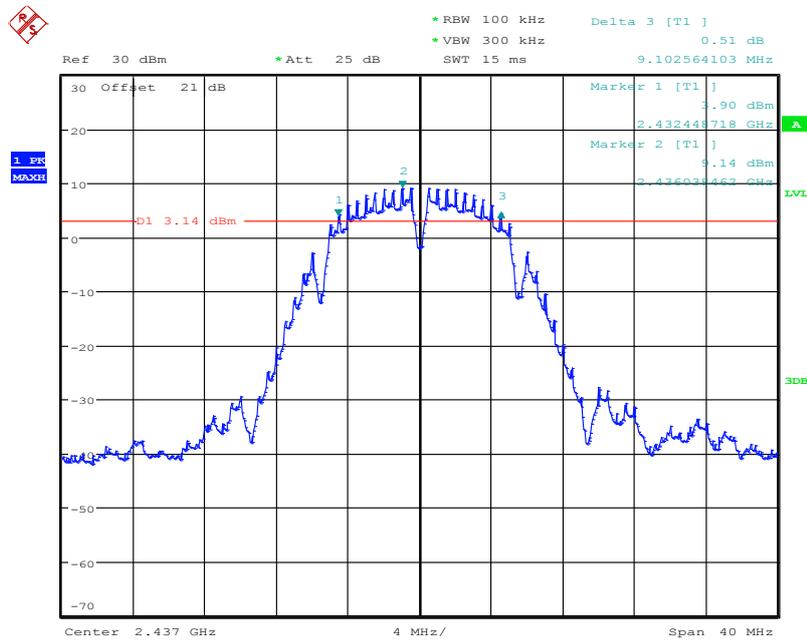
**Conclusion: PASS**

Test graphs as below:



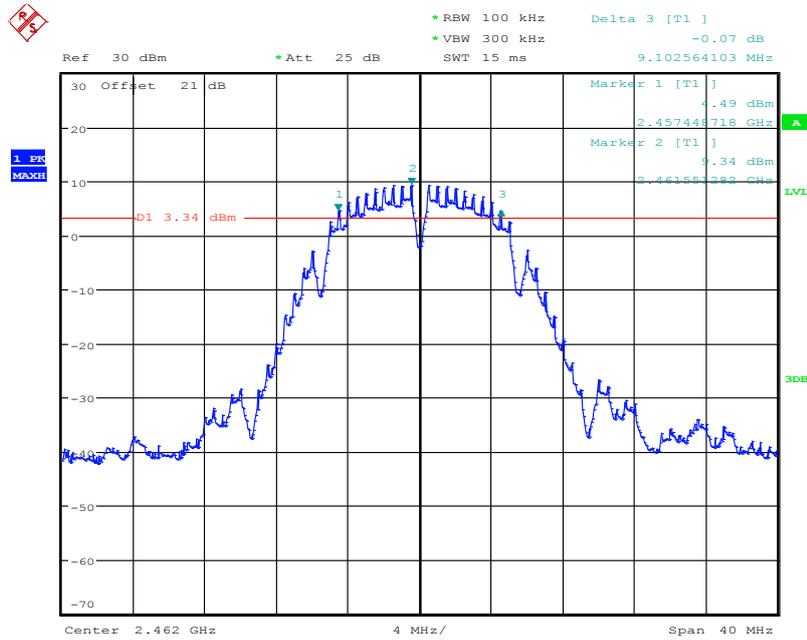
Date: 10.OCT.2012 14:07:09

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



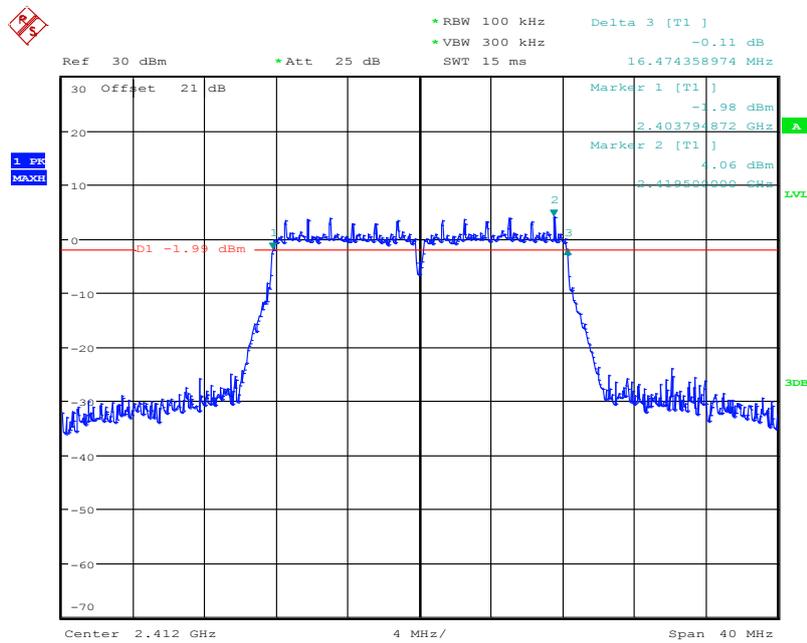
Date: 10.OCT.2012 14:10:42

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



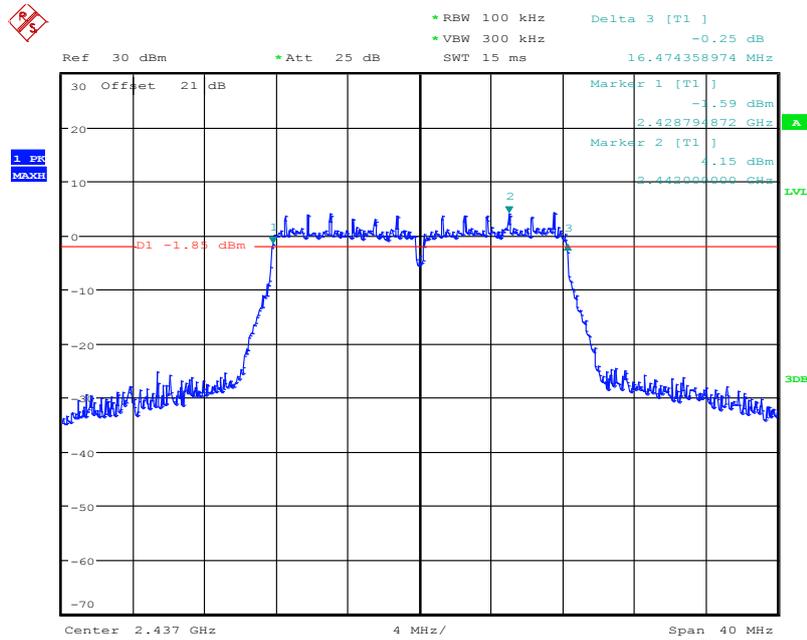
Date: 10.OCT.2012 14:12:22

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



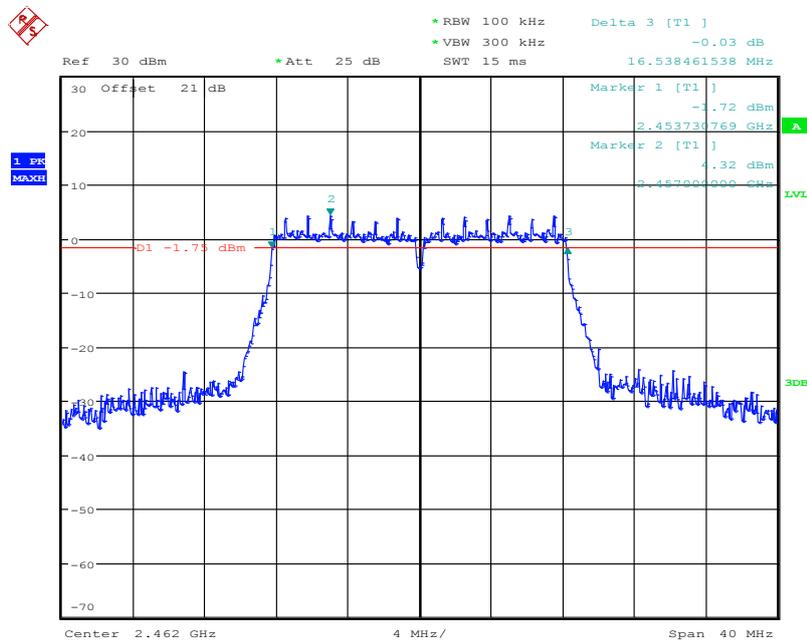
Date: 10.OCT.2012 14:14:47

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



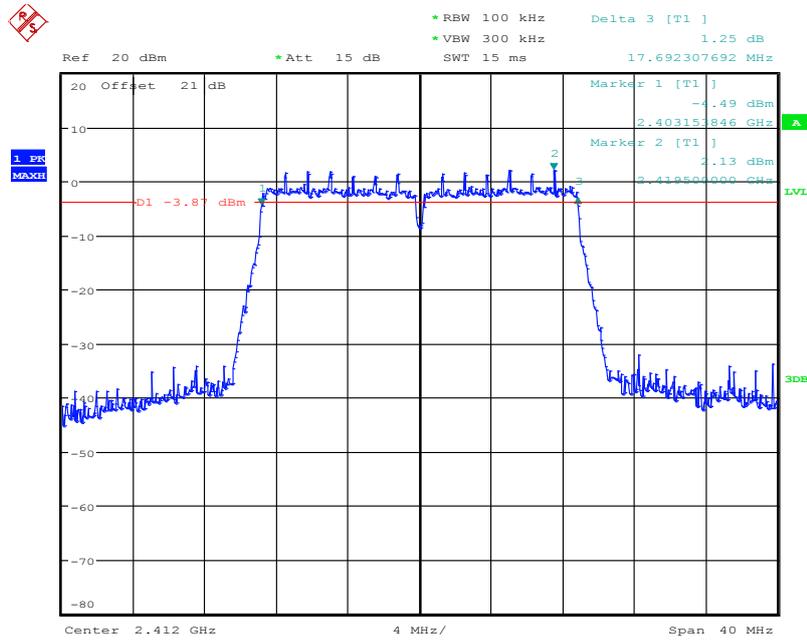
Date: 10.OCT.2012 14:19:00

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



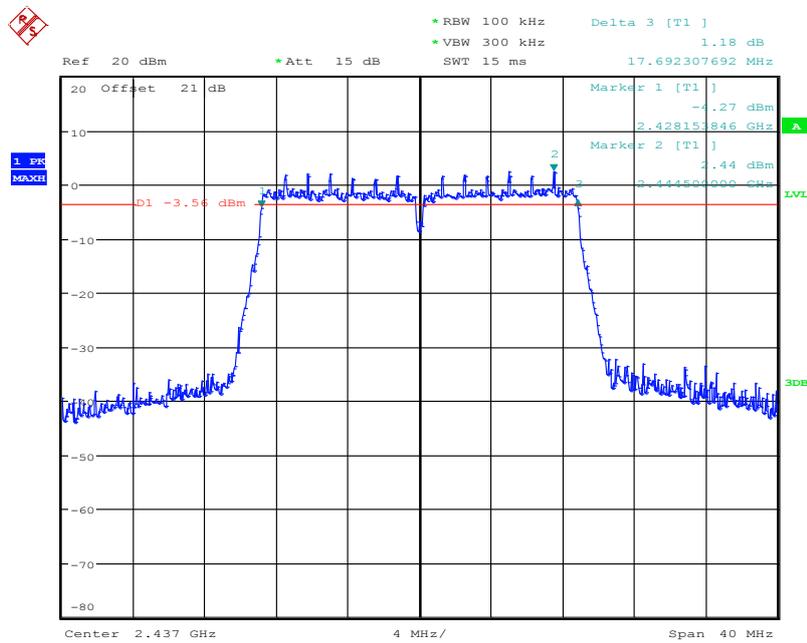
Date: 10.OCT.2012 14:20:30

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



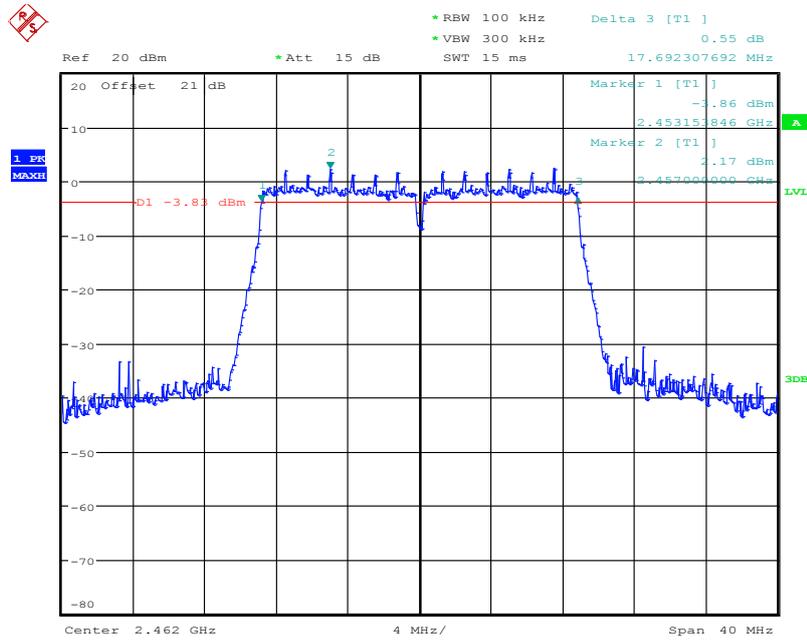
Date: 15.OCT.2012 08:58:01

**Fig. 19 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)**



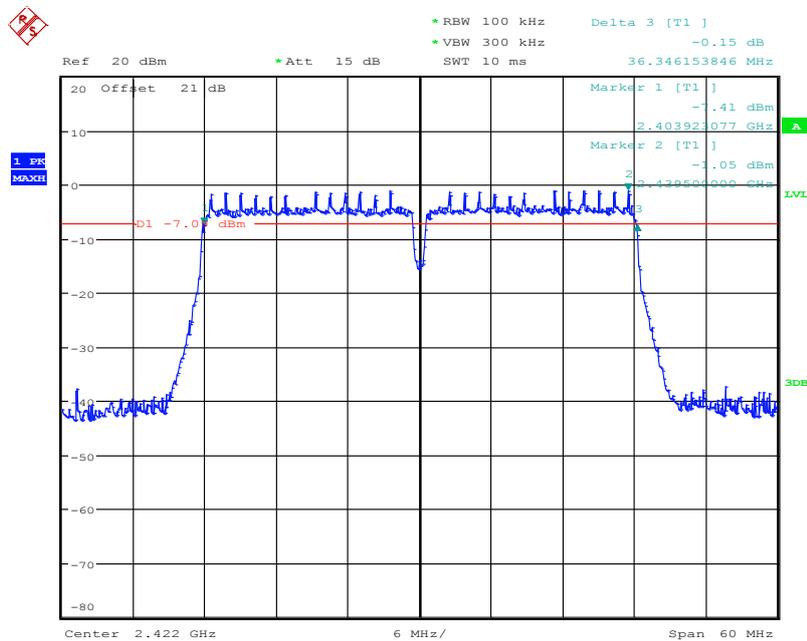
Date: 15.OCT.2012 08:59:35

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



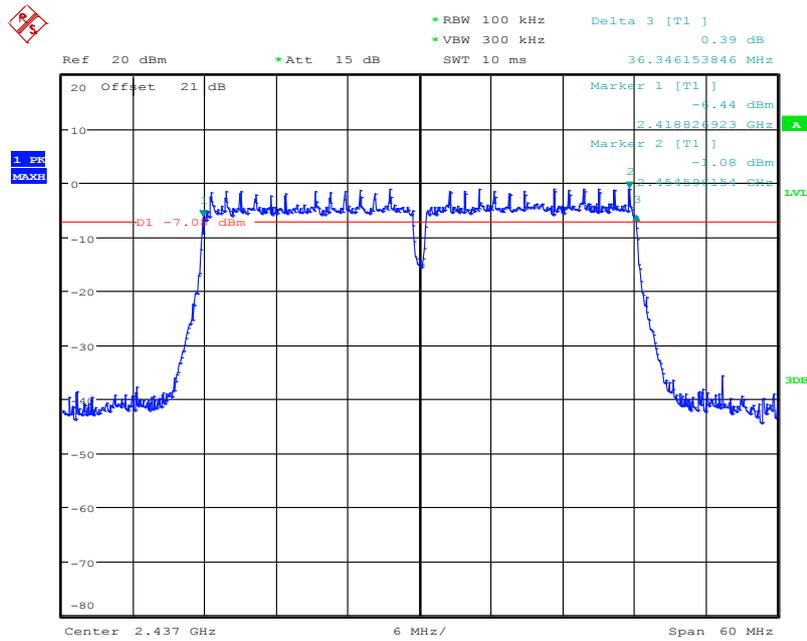
Date: 15.OCT.2012 09:00:57

**Fig. 21 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 11)**



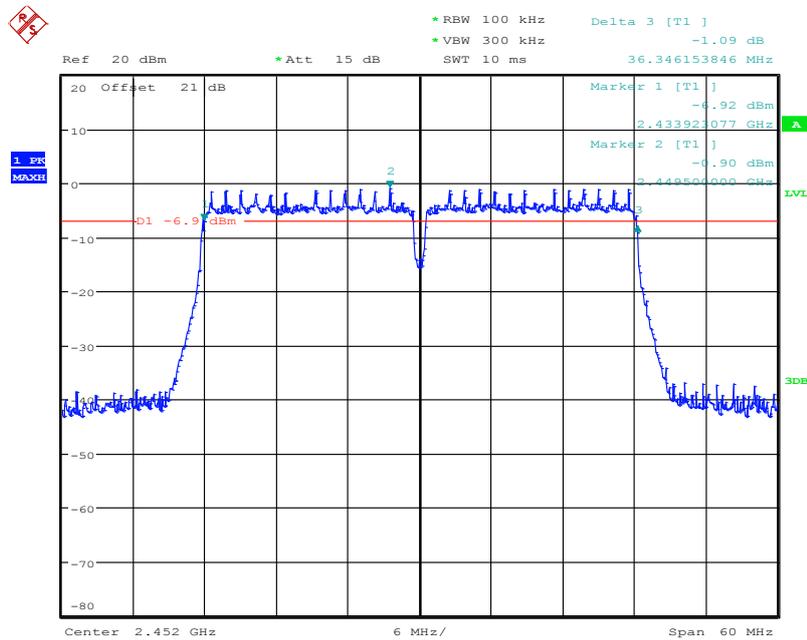
Date: 15.OCT.2012 09:03:31

**Fig. 22 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)**



Date: 15.OCT.2012 09:05:22

**Fig. 23 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 6)**



Date: 15.OCT.2012 09:07:26

**Fig. 24 Occupied 6dB Bandwidth (802.11n-40MHz, 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**

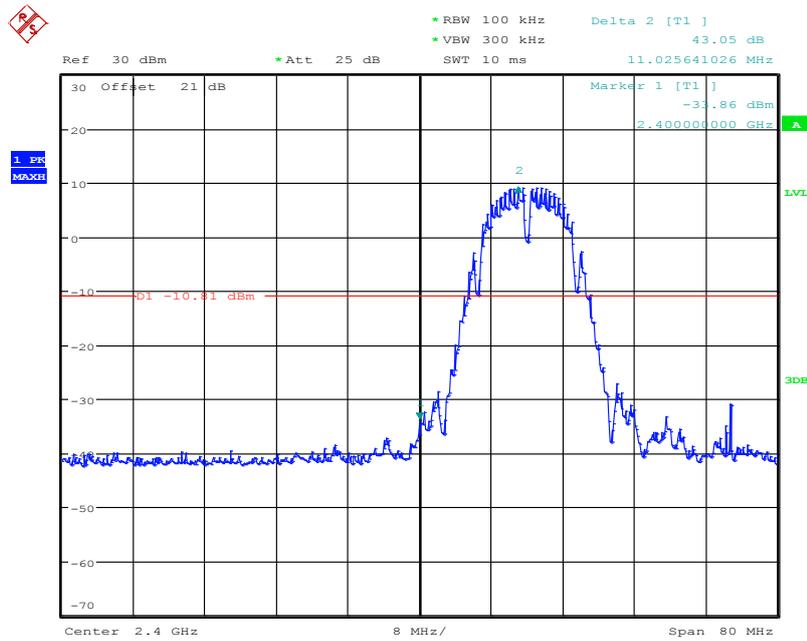
Mode	Channel	Test Results	Conclusion
802.11n (20MHz)	1	Fig.29	P
	11	Fig.30	P

**802.11n-HT40 mode**

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

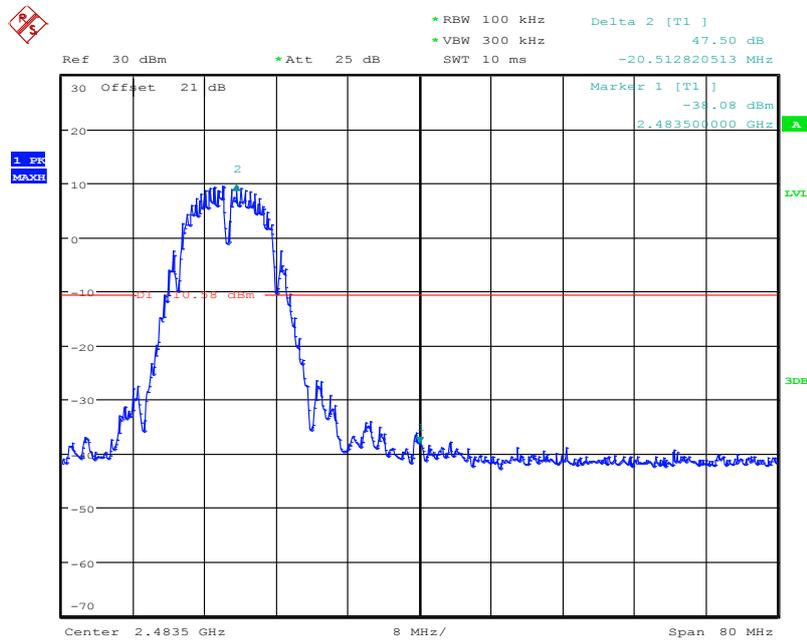
**Conclusion: PASS**

**Test graphs as below:**



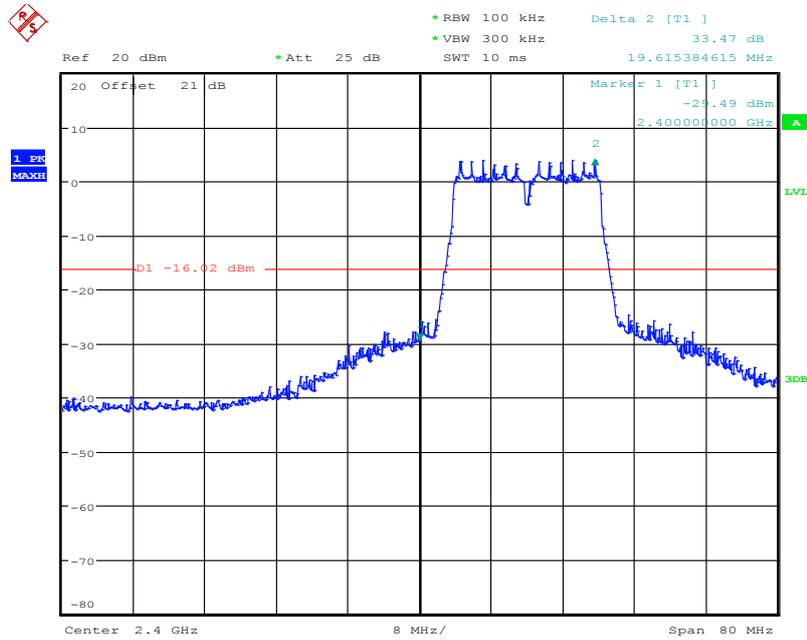
Date: 10.OCT.2012 14:36:11

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



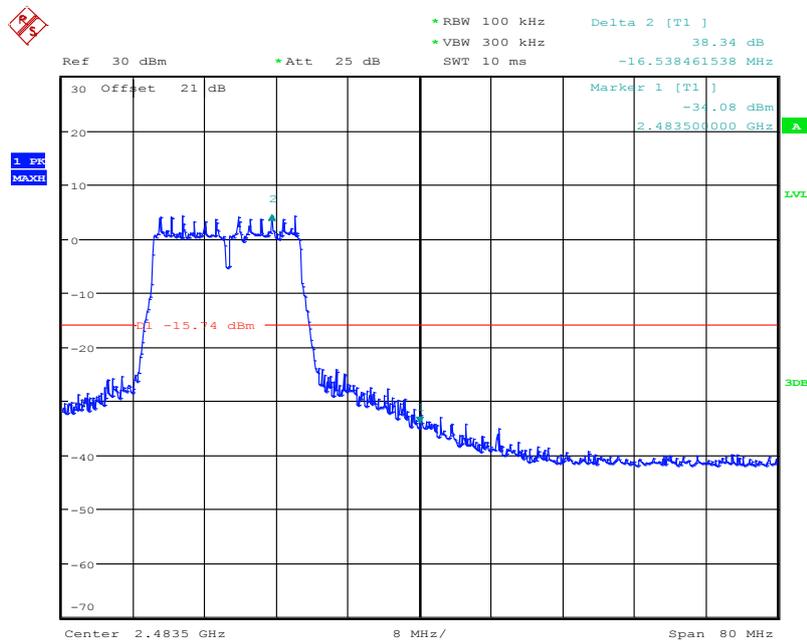
Date: 10.OCT.2012 14:37:31

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



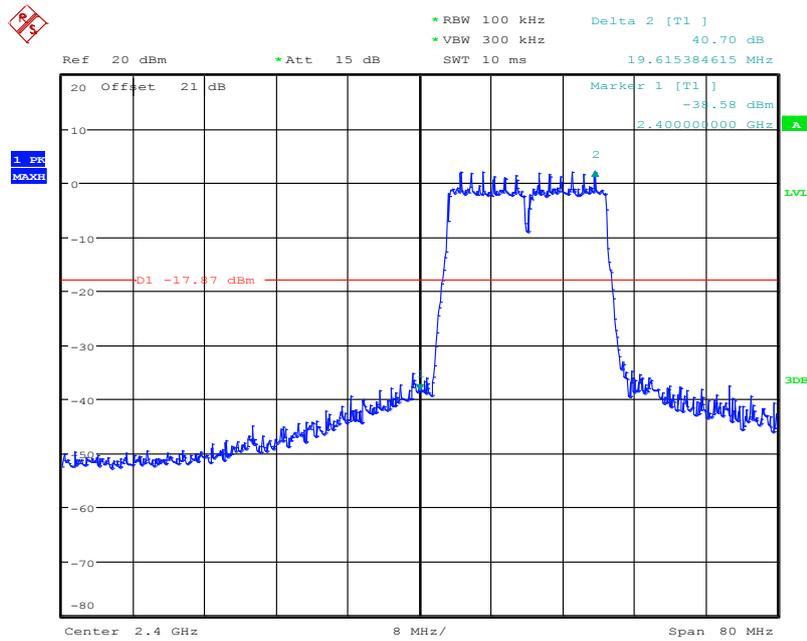
Date: 10.OCT.2012 14:31:28

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



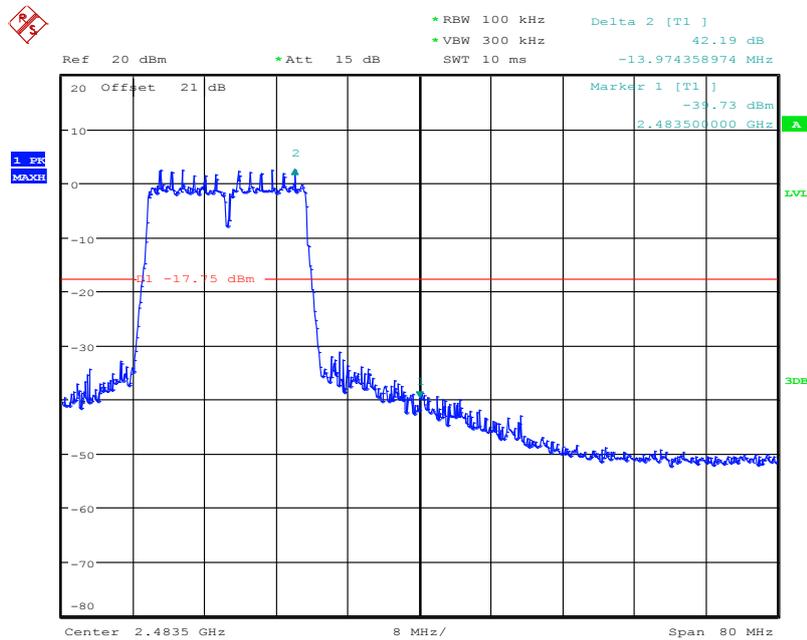
Date: 10.OCT.2012 14:33:21

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



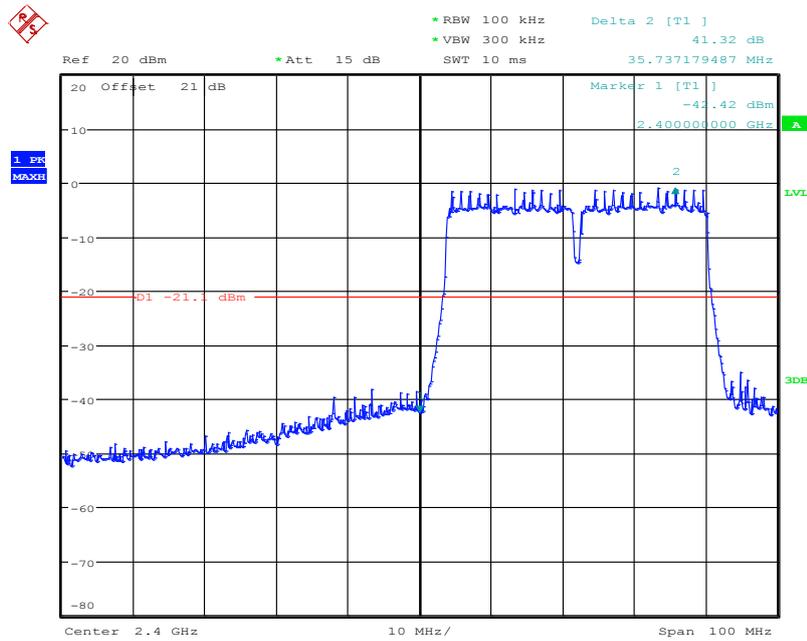
Date: 15.OCT.2012 09:26:11

**Fig. 29 Band Edges (802.11n-20MHz, Ch 1)**



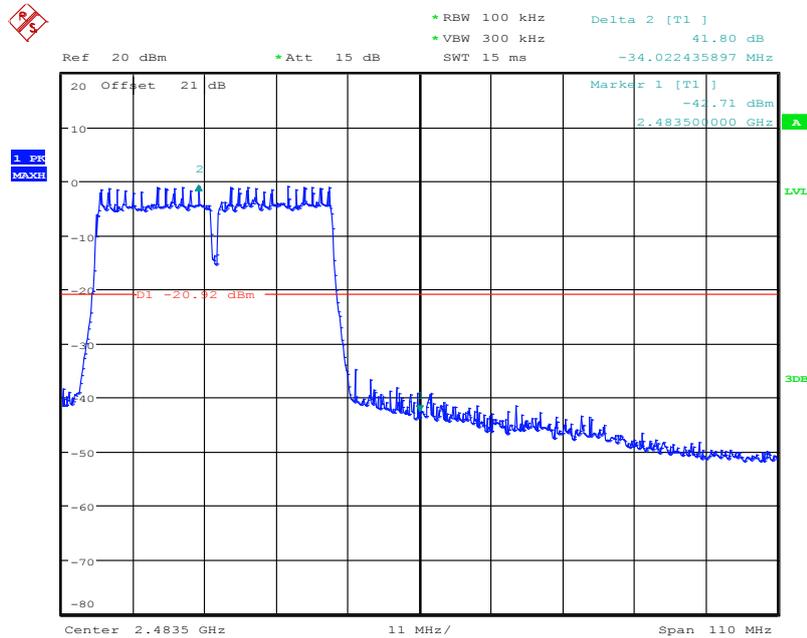
Date: 15.OCT.2012 09:27:37

**Fig. 30 Band Edges (802.11n-20MHz, Ch 11)**



Date: 15.OCT.2012 09:29:15

**Fig. 31 Band Edges (802.11n-40MHz, Ch 3)**



Date: 15.OCT.2012 09:30:42

**Fig. 32 Band Edges (802.11n-40MHz, 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

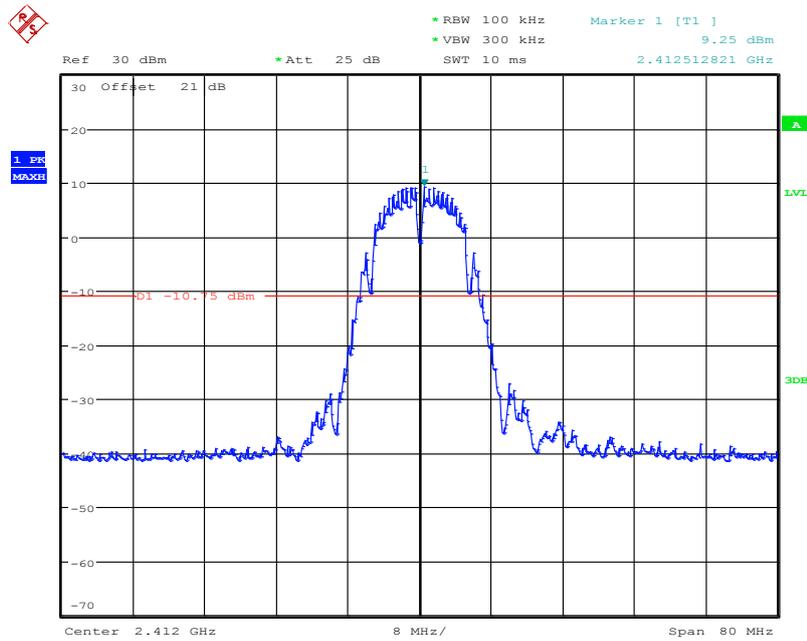
**802.11n-HT40 mode**

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

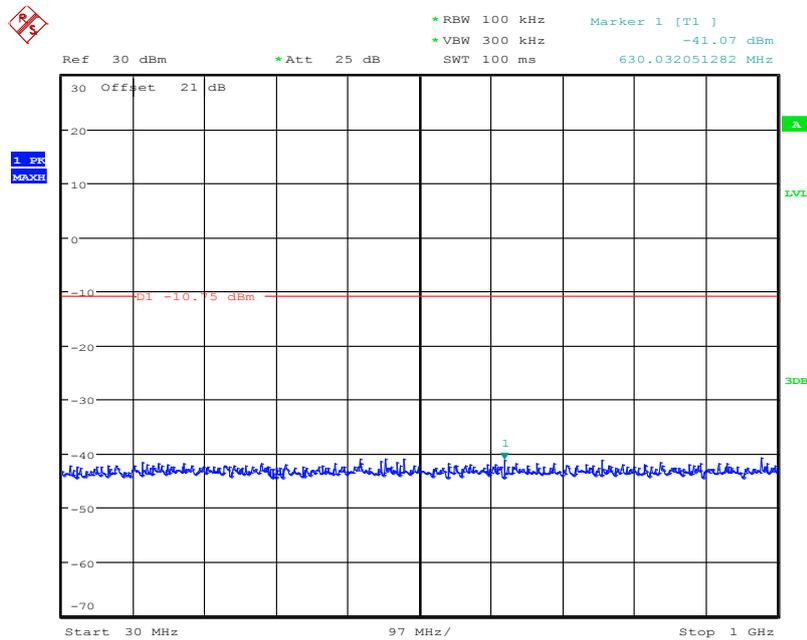
**Conclusion: PASS**

**Test graphs as below:**



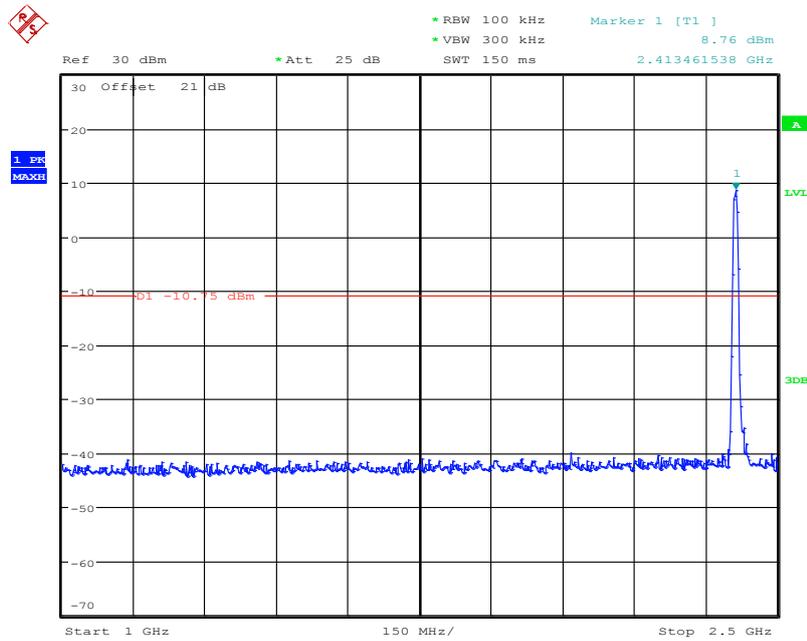
Date: 10.OCT.2012 14:46:02

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



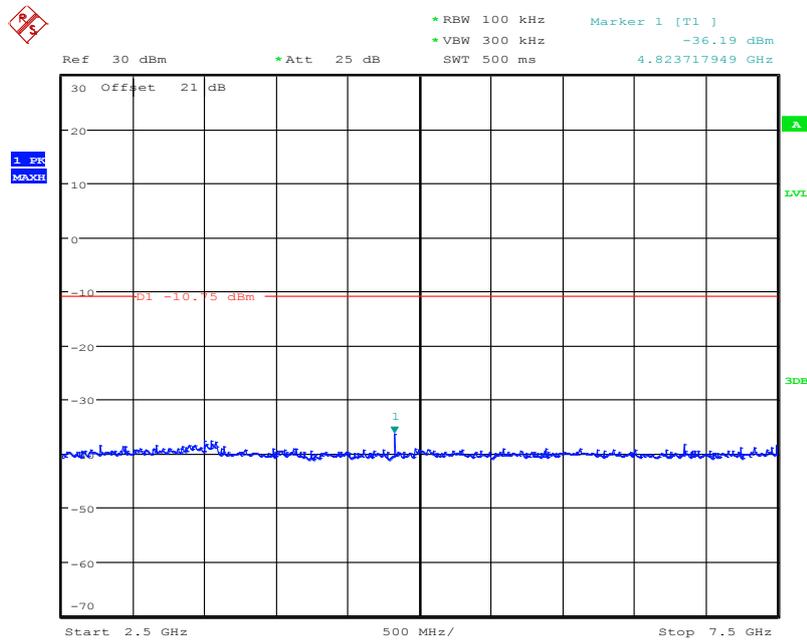
Date: 10.OCT.2012 14:46:31

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



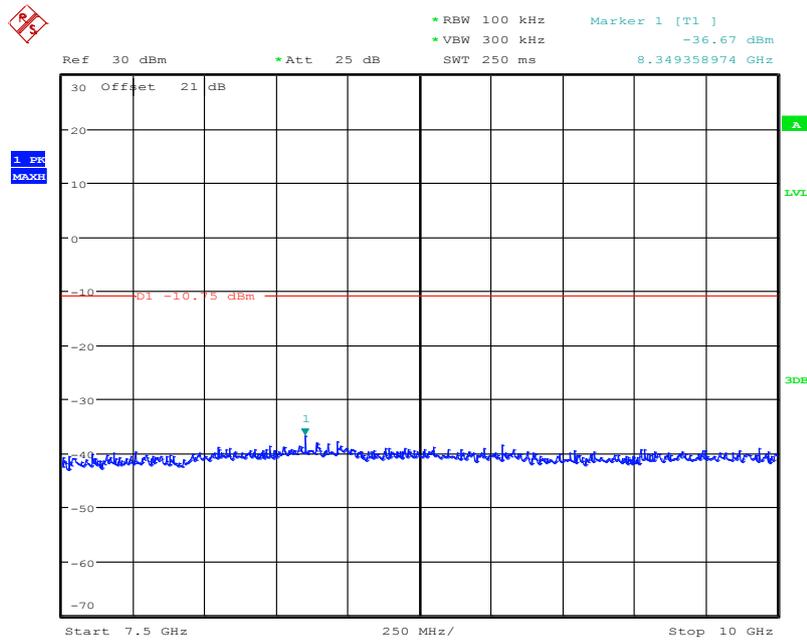
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**Fig. 35 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)**



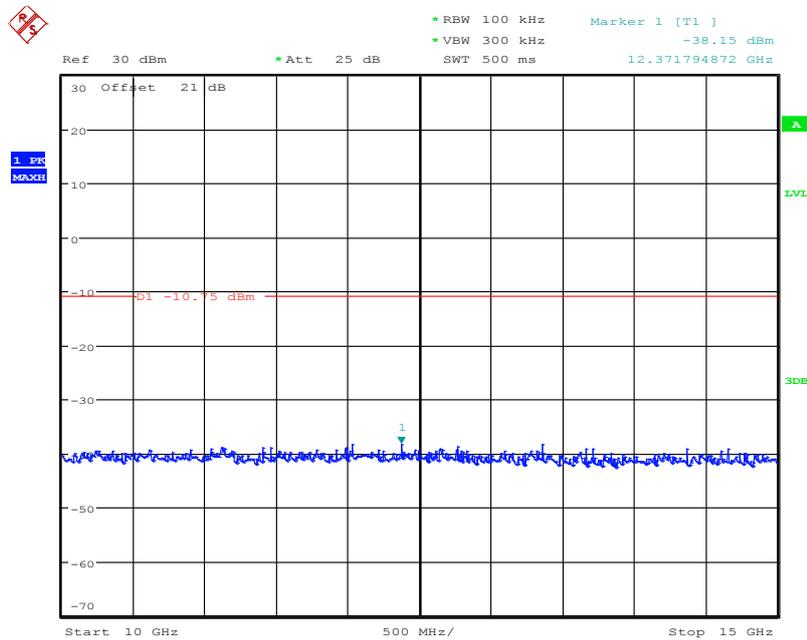
Date: 10.OCT.2012 15:00:45

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



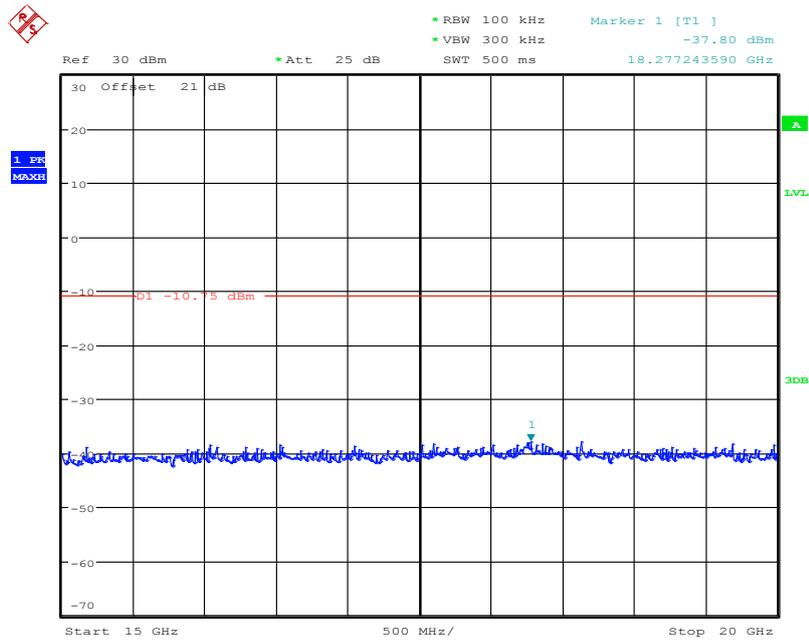
Date: 10.OCT.2012 15:01:12

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



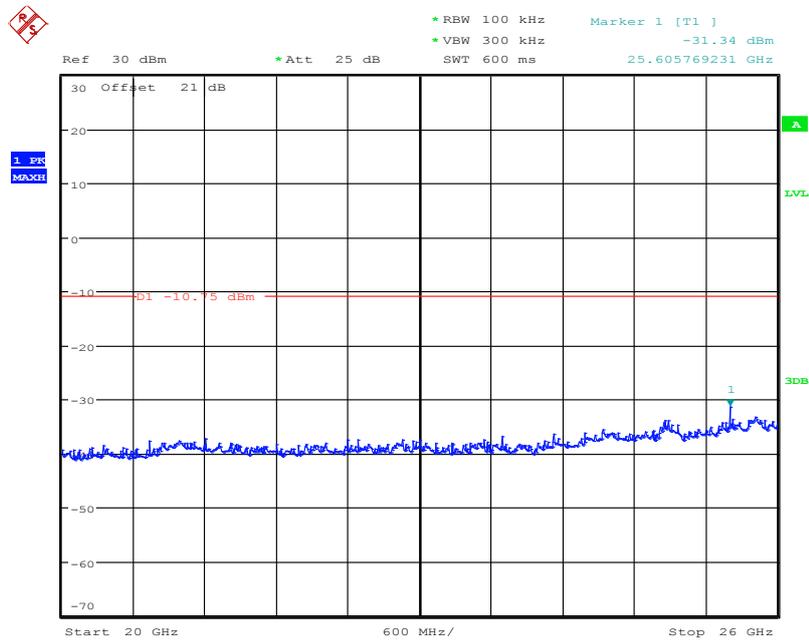
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**Fig. 38 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)**



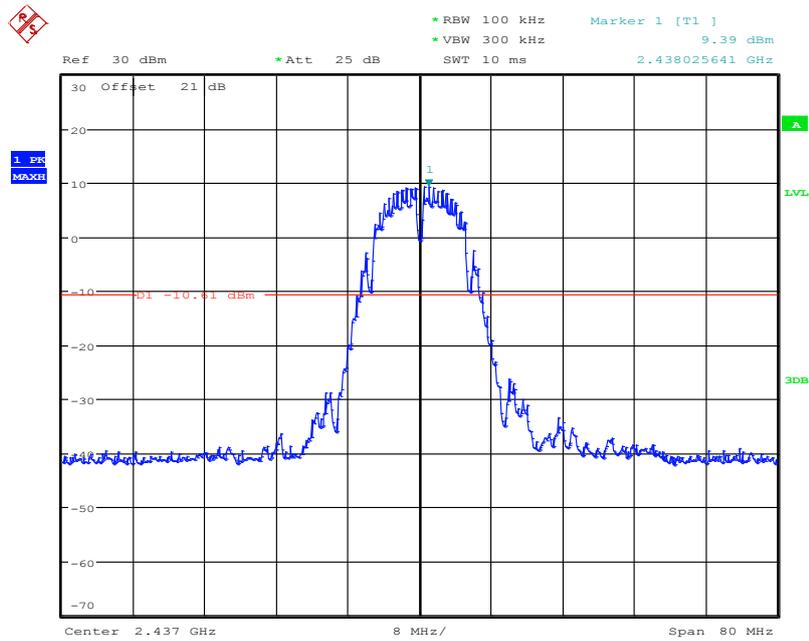
Date: 10.OCT.2012 15:02:06

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



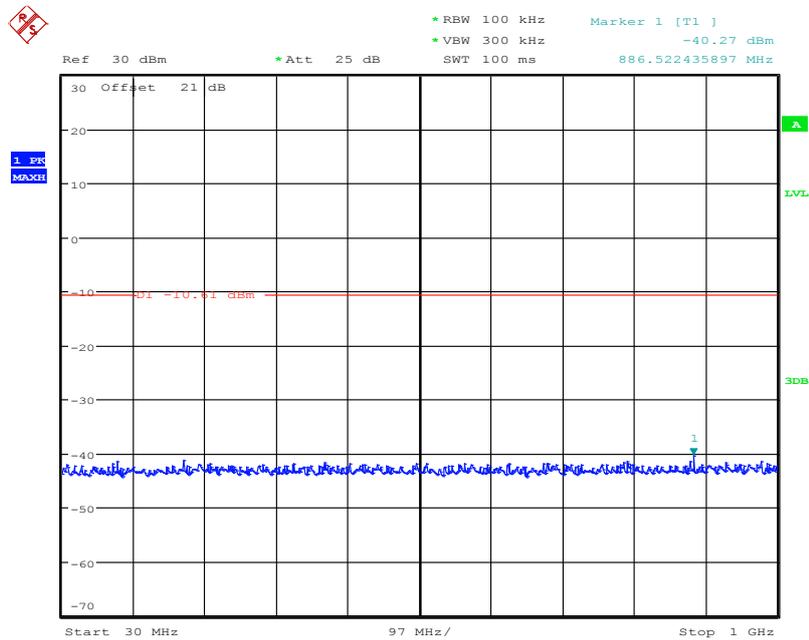
Date: 10.OCT.2012 15:02:36

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



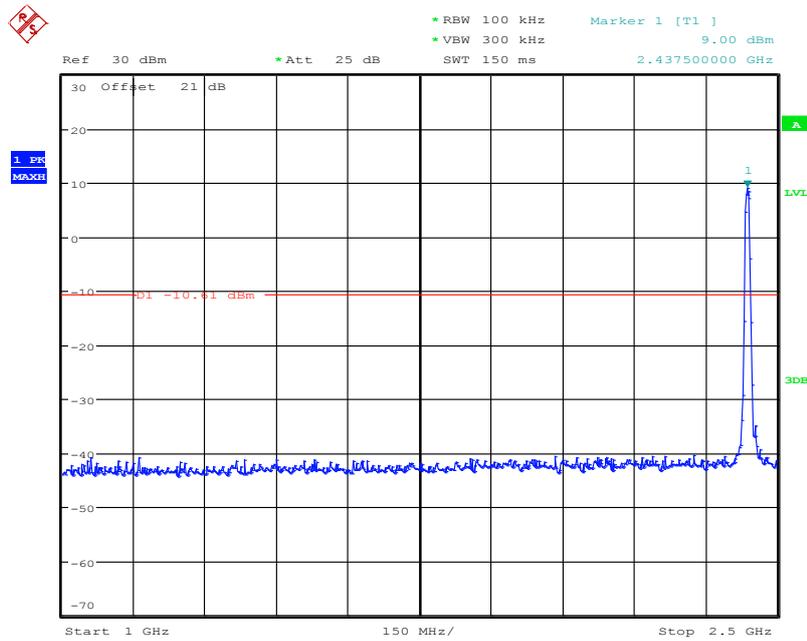
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**Fig. 41 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)**



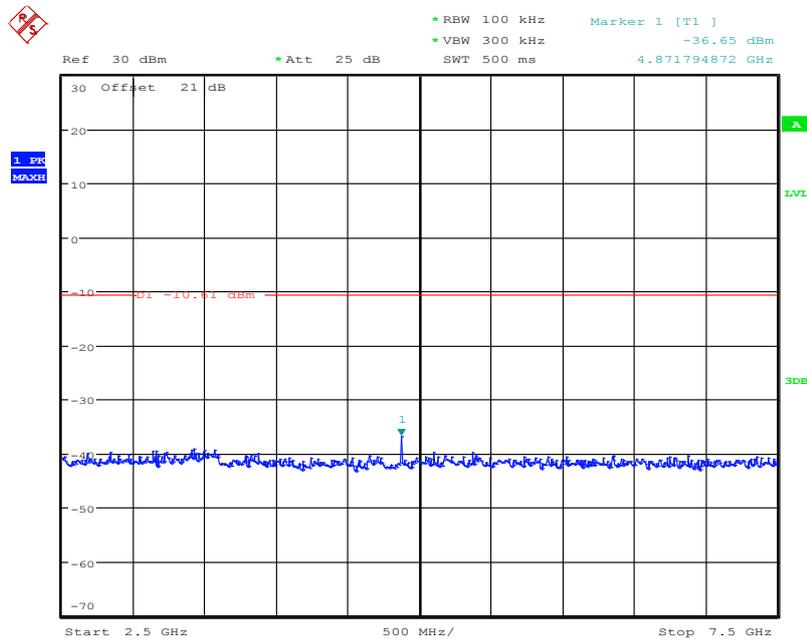
Date: 10.OCT.2012 15:05:28

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



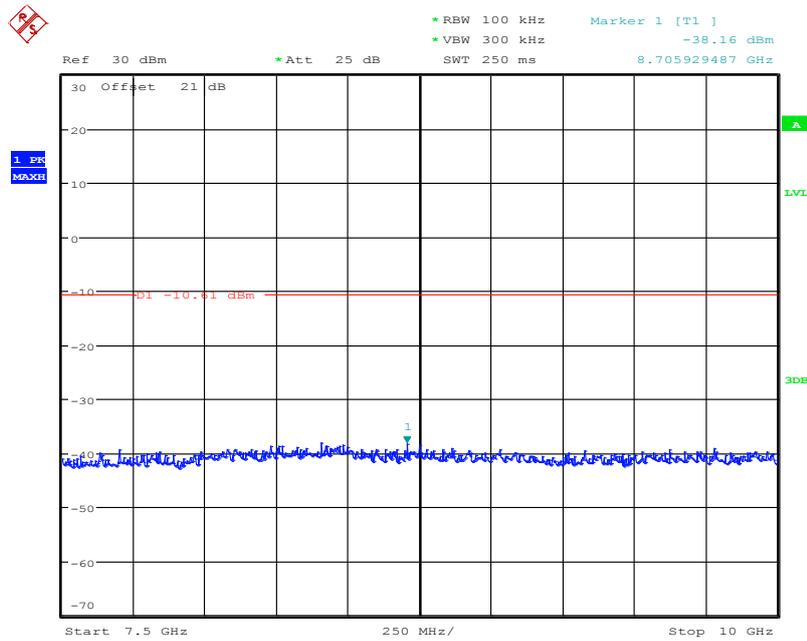
Date: 10.OCT.2012 15:05:47

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



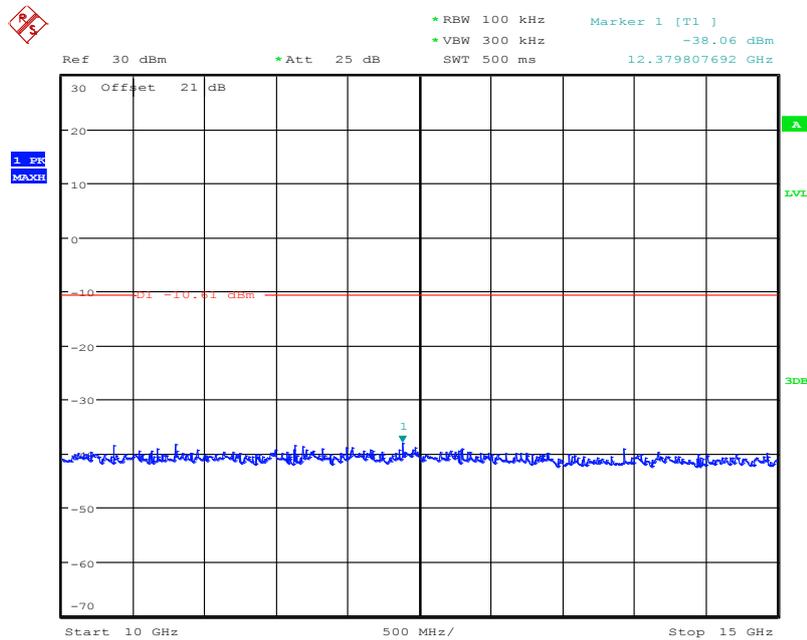
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**Fig. 44 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)**



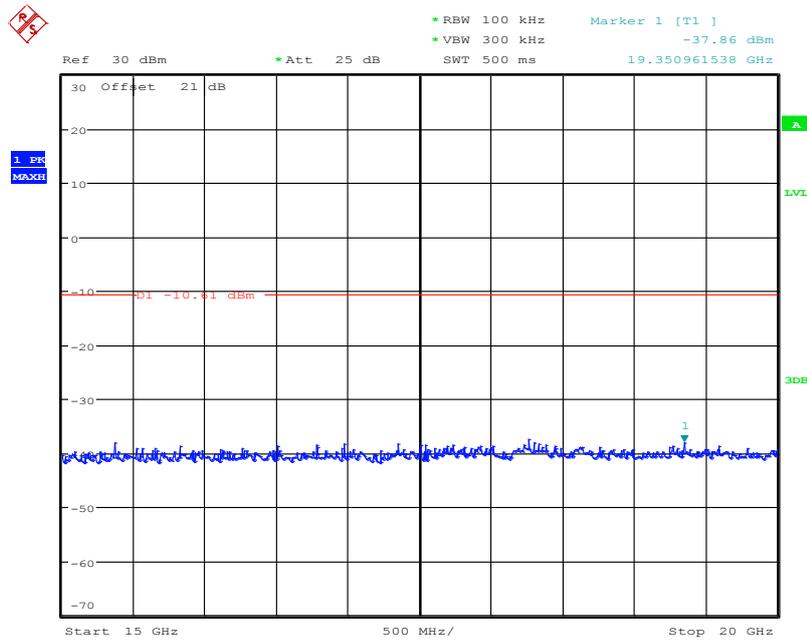
Date: 10.OCT.2012 15:06:39

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



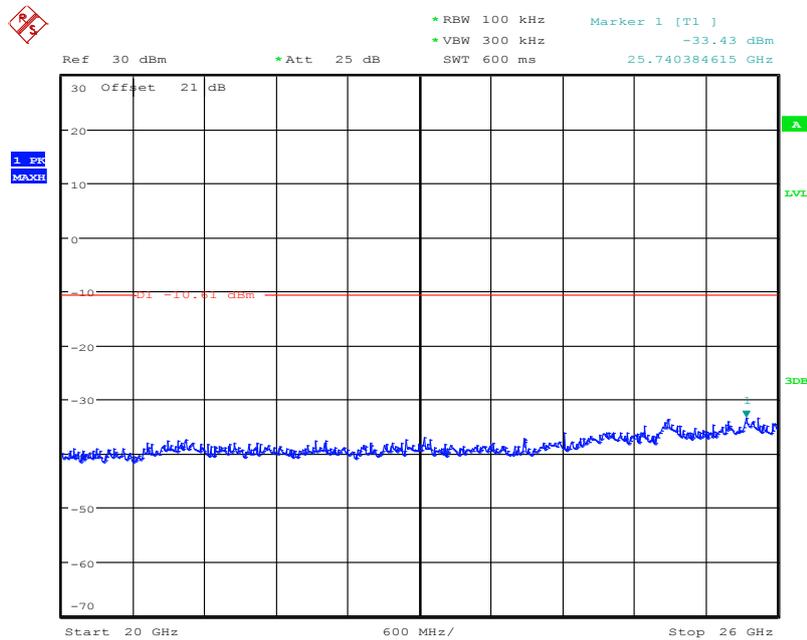
Date: 10.OCT.2012 15:07:13

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



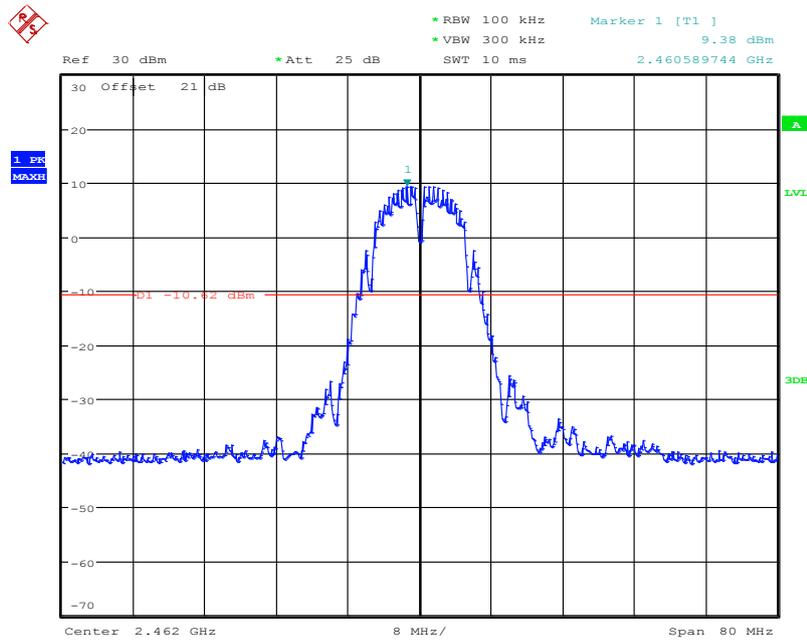
Date: 10.OCT.2012 15:07:38

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



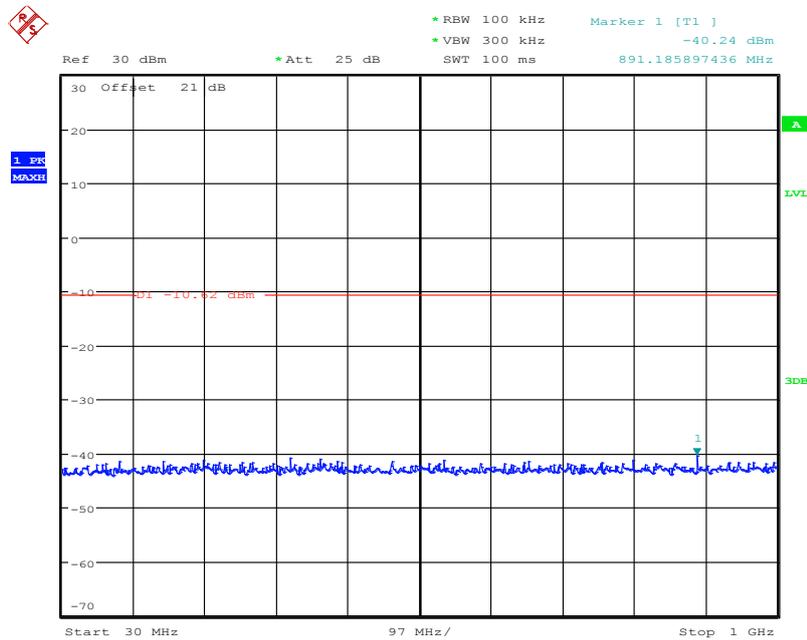
Date: 10.OCT.2012 15:08:05

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



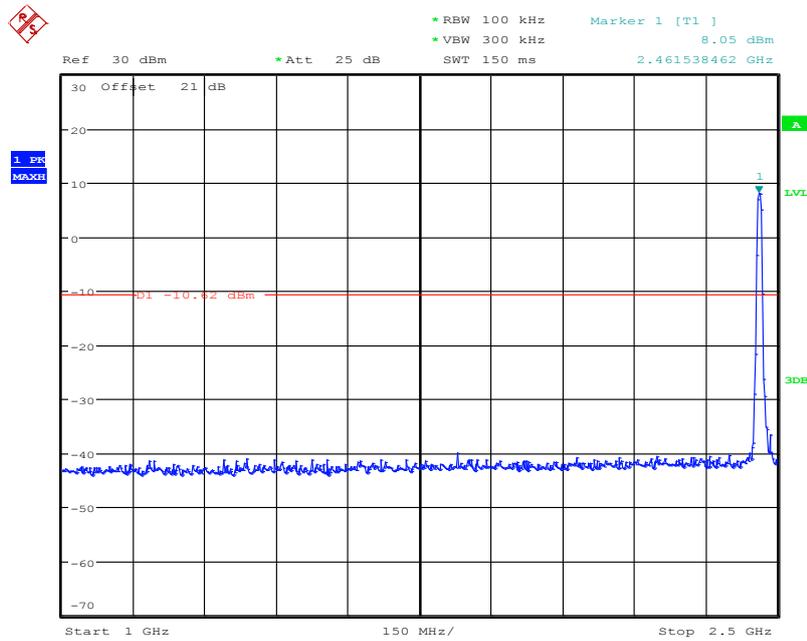
Date: 10.OCT.2012 15:10:23

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



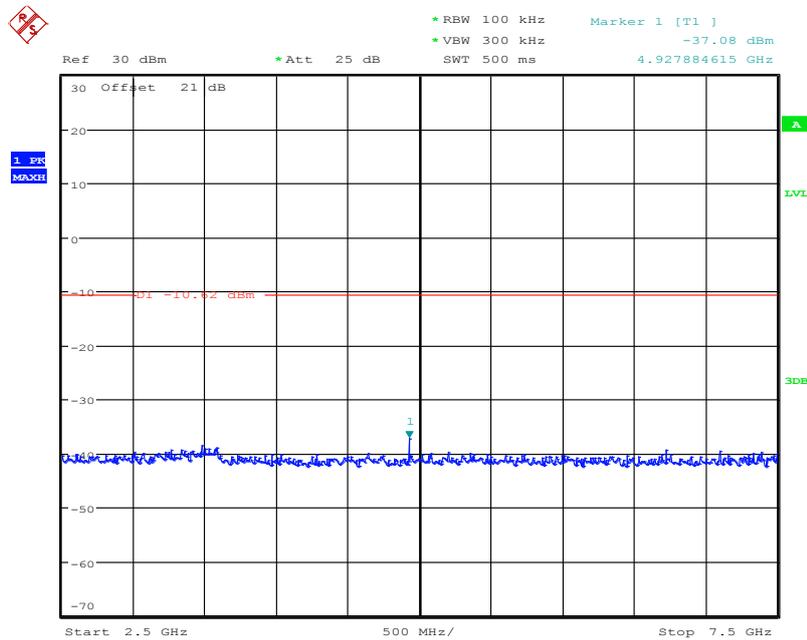
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**Fig. 50 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)**



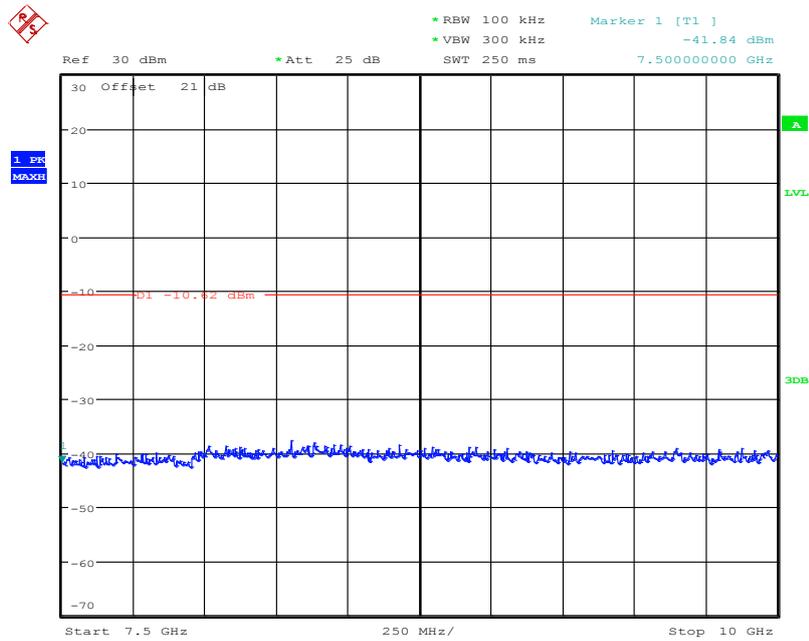
Date: 10.OCT.2012 15:11:27

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



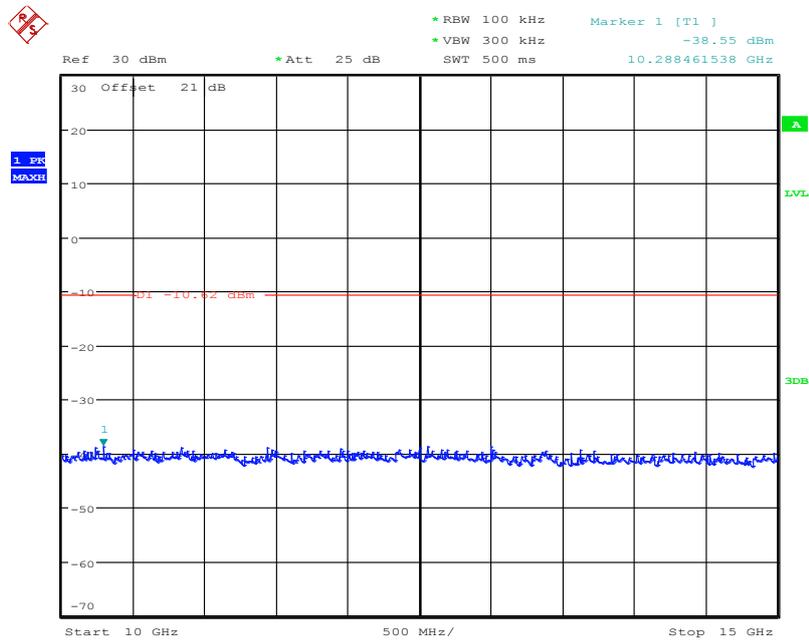
Date: 10.OCT.2012 15:12:17

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



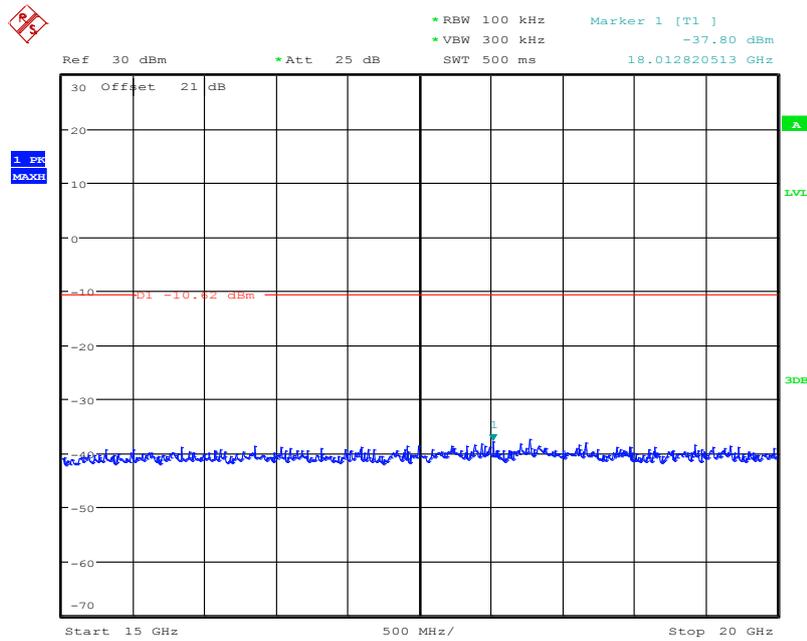
Date: 10.OCT.2012 15:12:46

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



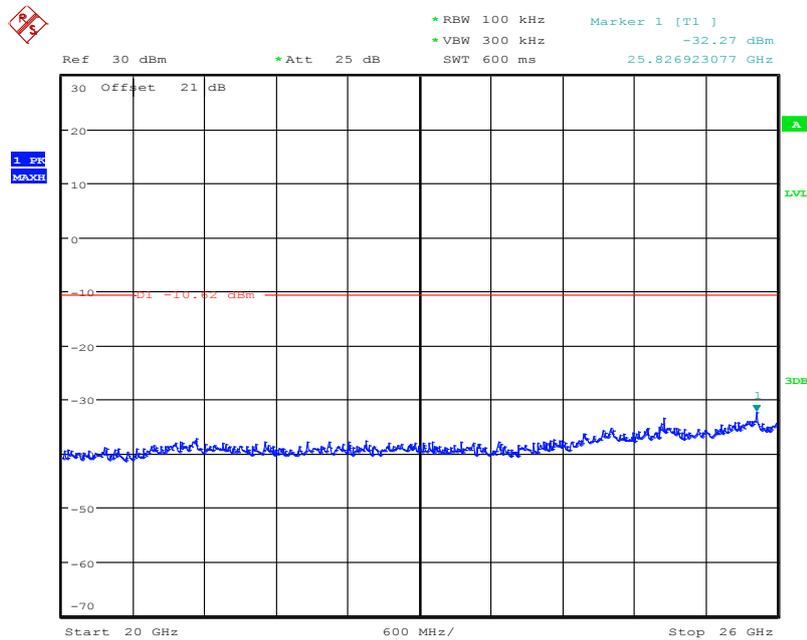
Date: 10.OCT.2012 15:13:14

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



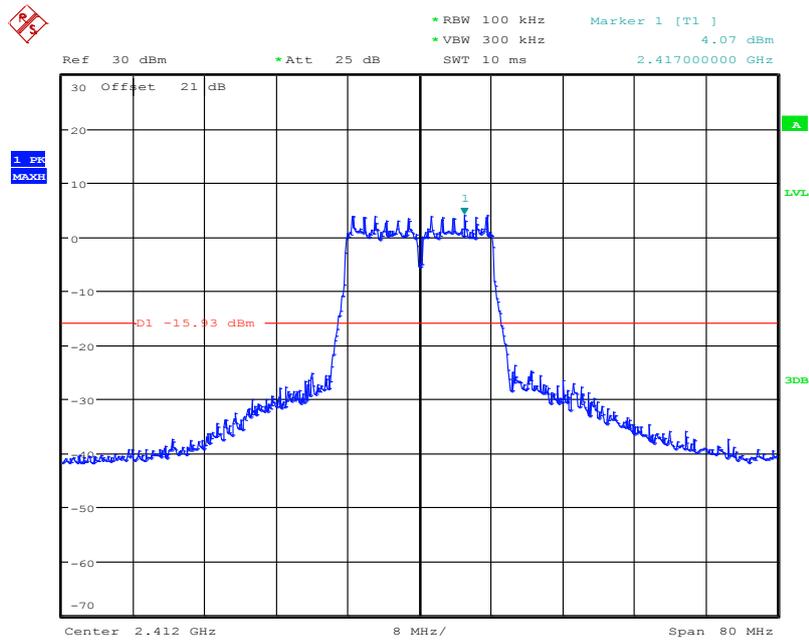
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**Fig. 55 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)**



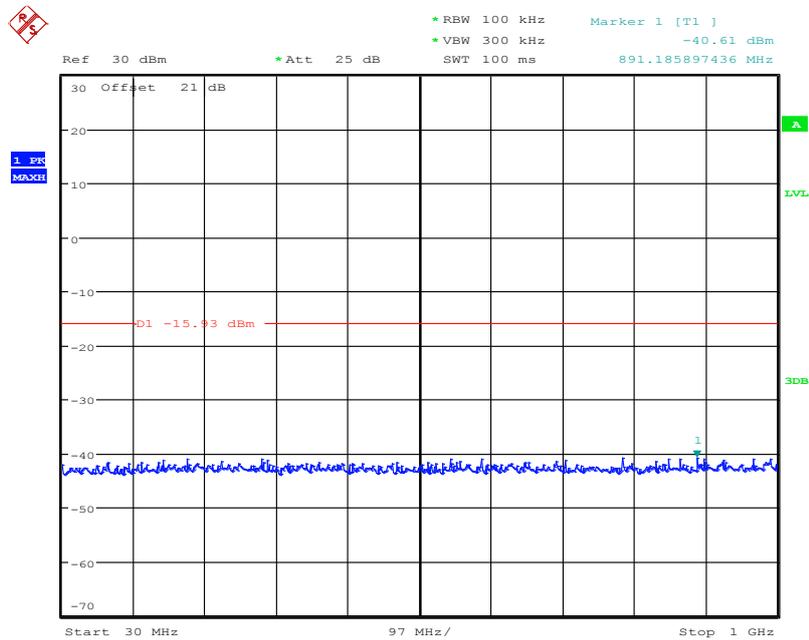
Date: 10.OCT.2012 15:13:59

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



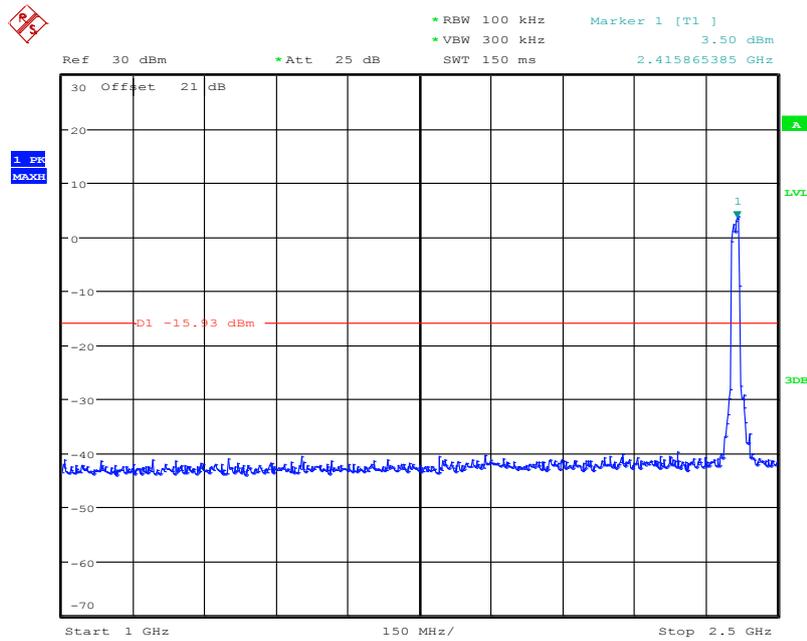
Date: 10.OCT.2012 15:18:50

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



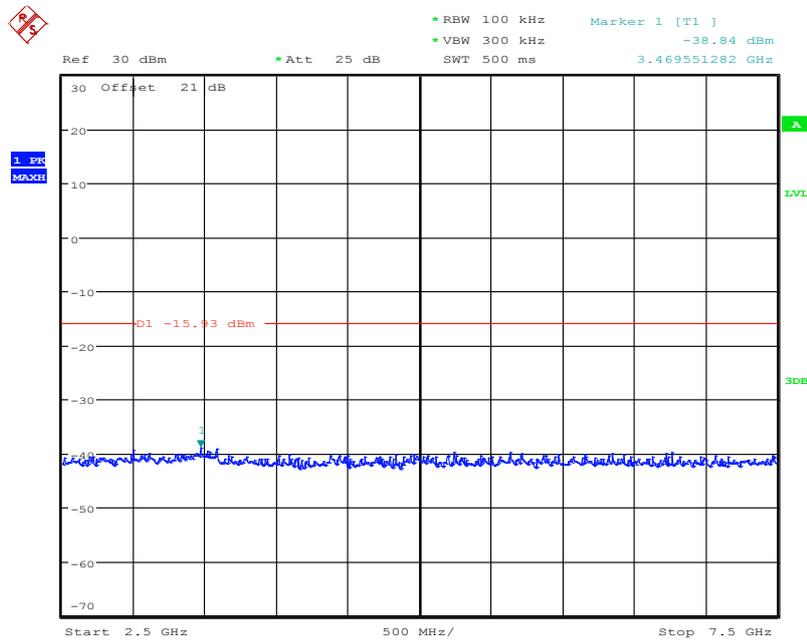
Date: 10.OCT.2012 15:19:38

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



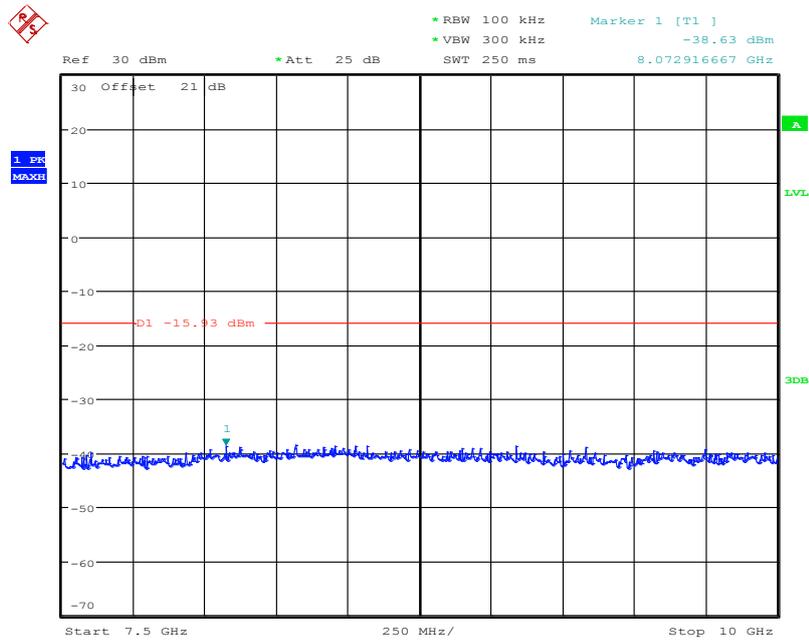
Date: 10.OCT.2012 15:20:51

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



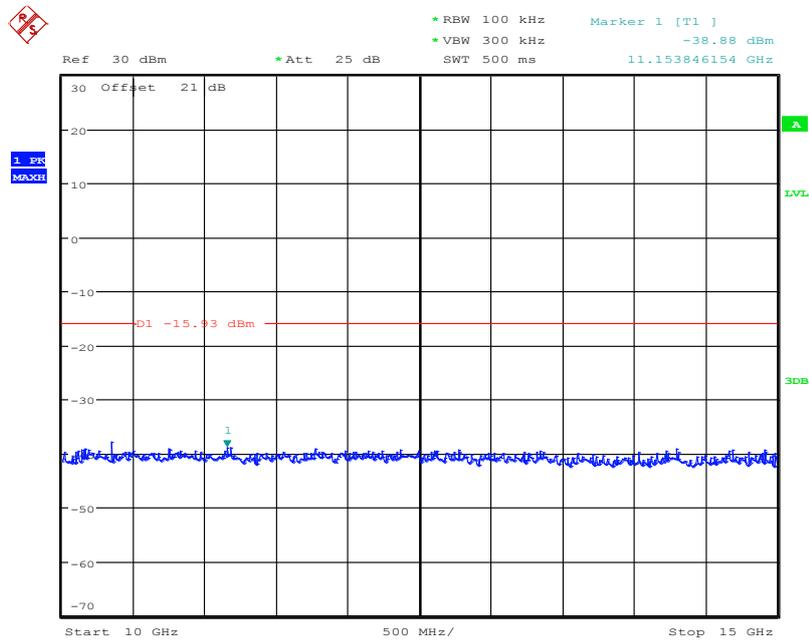
Date: 10.OCT.2012 15:21:31

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



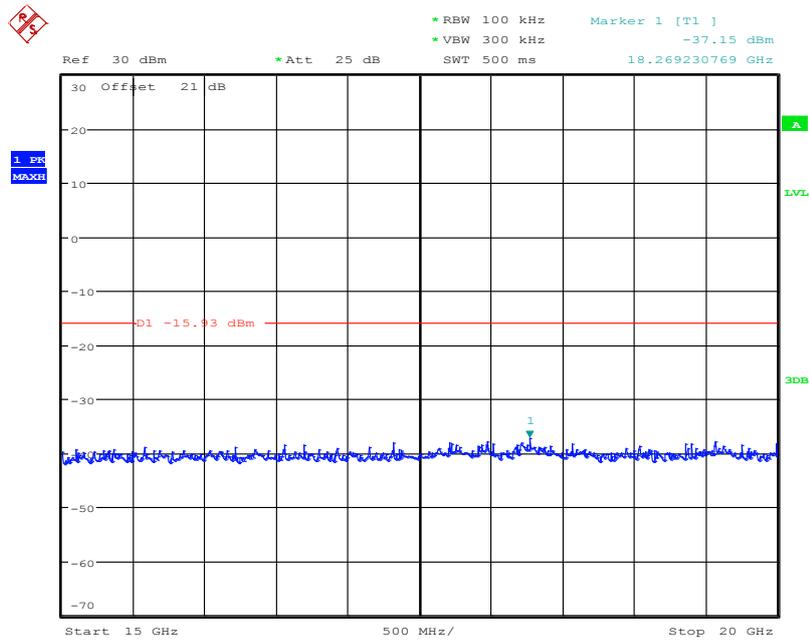
Date: 10.OCT.2012 15:21:50

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



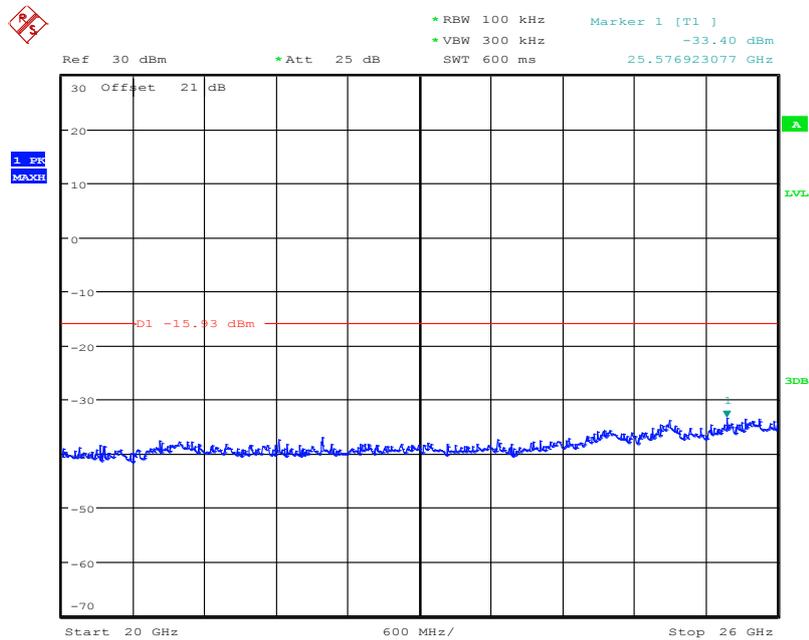
Date: 10.OCT.2012 15:22:12

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



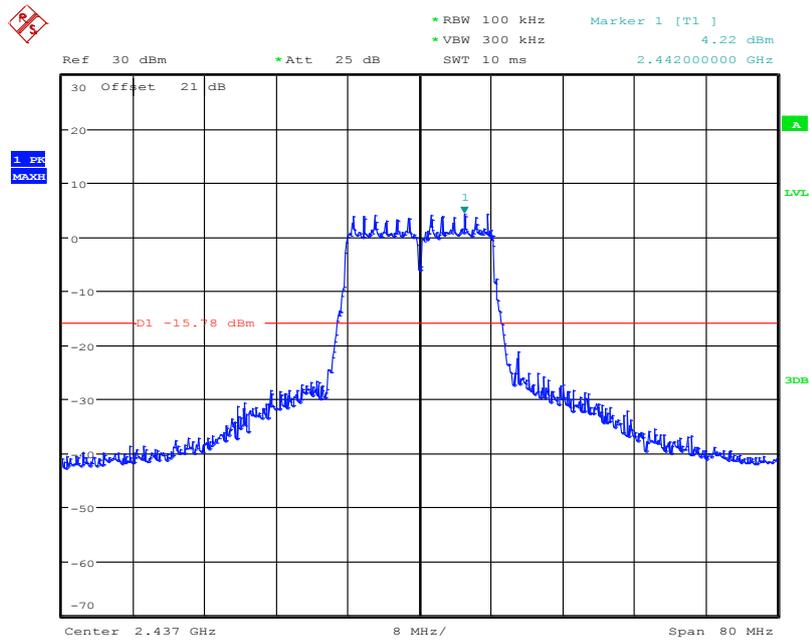
Date: 10.OCT.2012 15:22:38

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



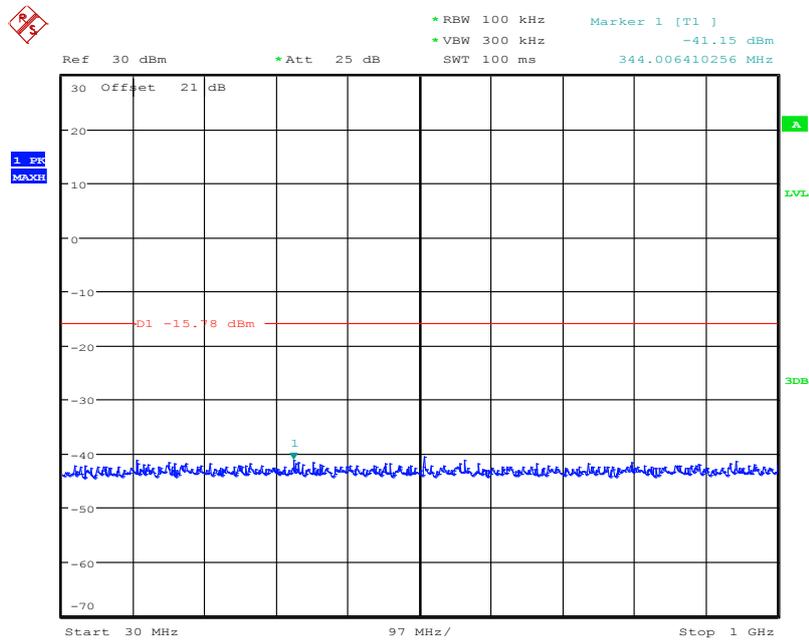
Date: 10.OCT.2012 15:23:04

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



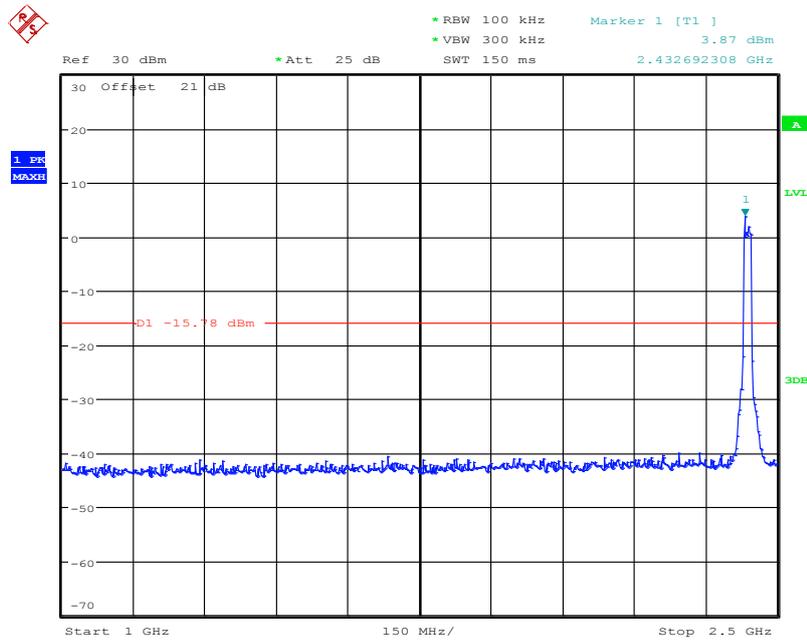
Date: 10.OCT.2012 15:24:42

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



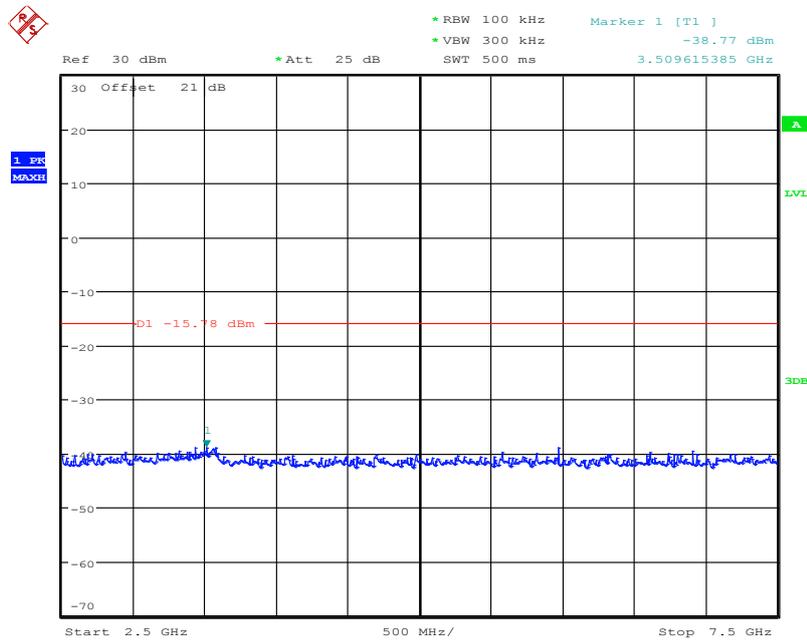
Date: 10.OCT.2012 15:25:09

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



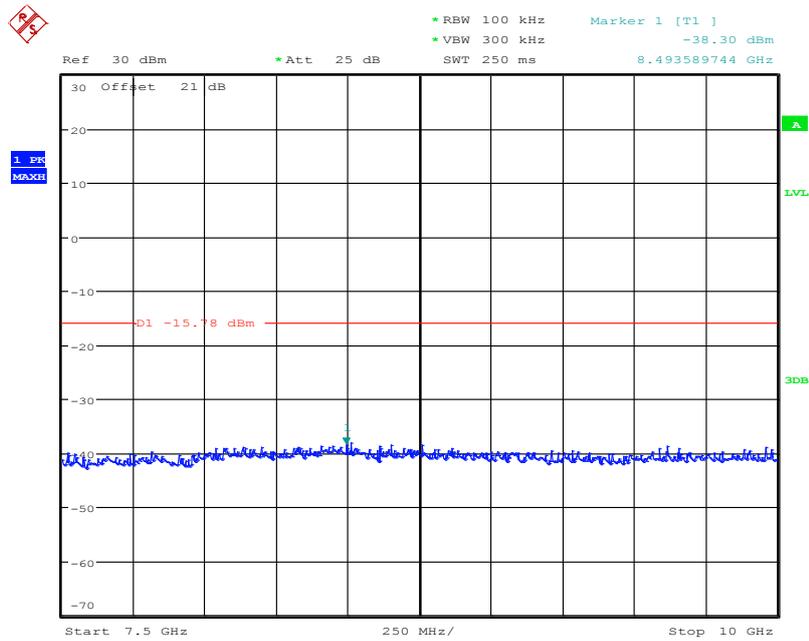
Date: 10.OCT.2012 15:25:33

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



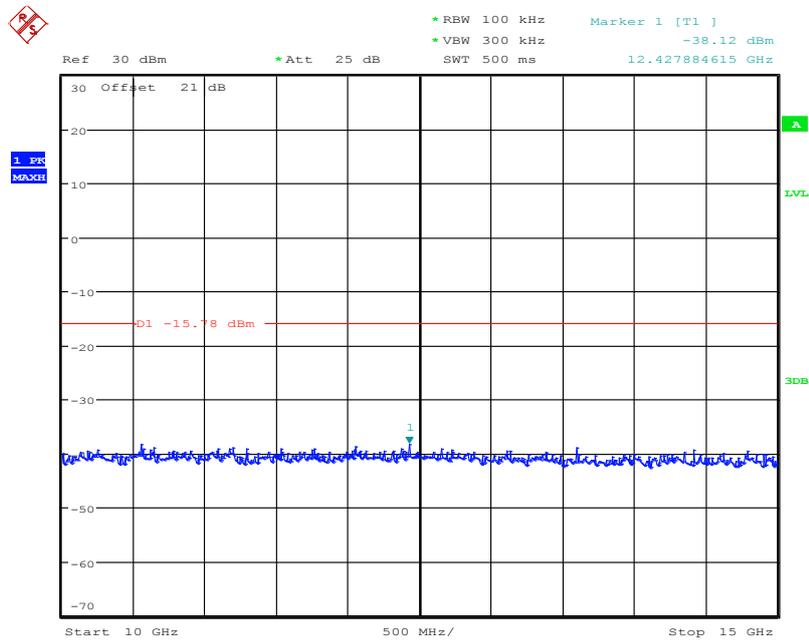
Date: 10.OCT.2012 15:26:07

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



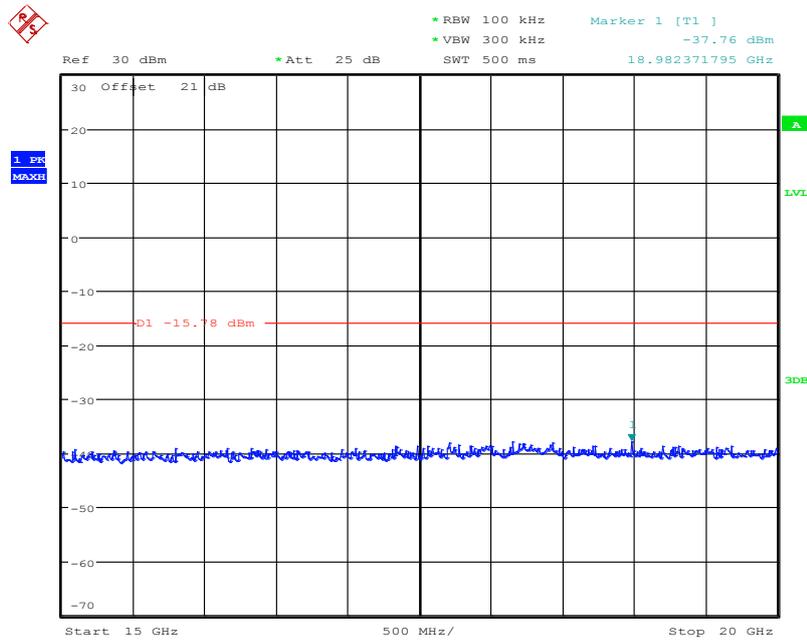
Date: 10.OCT.2012 15:26:40

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



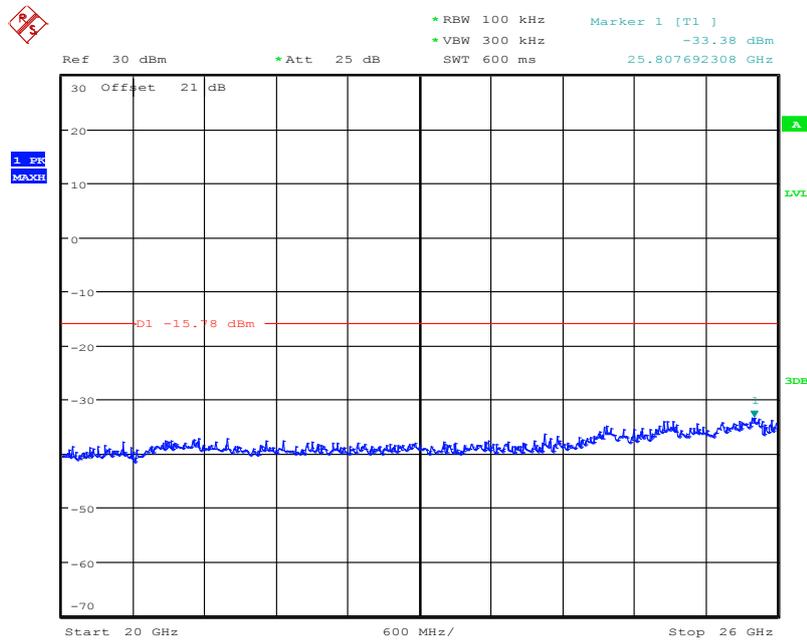
Date: 10.OCT.2012 15:27:11

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



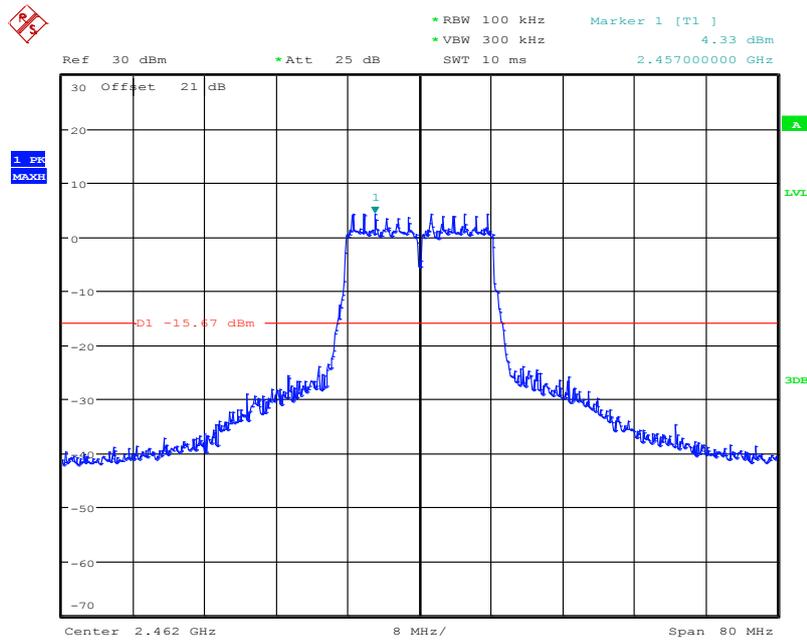
Date: 10.OCT.2012 15:27:45

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



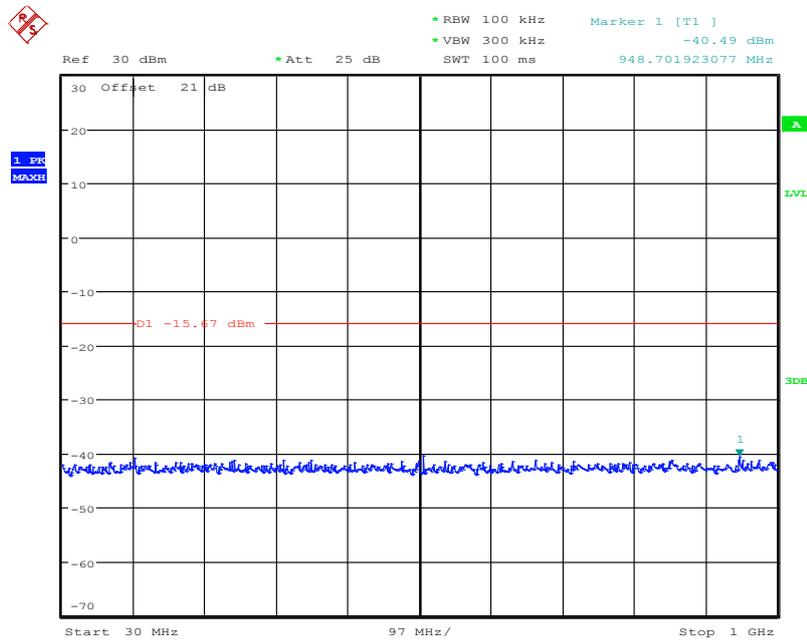
Date: 10.OCT.2012 15:28:18

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



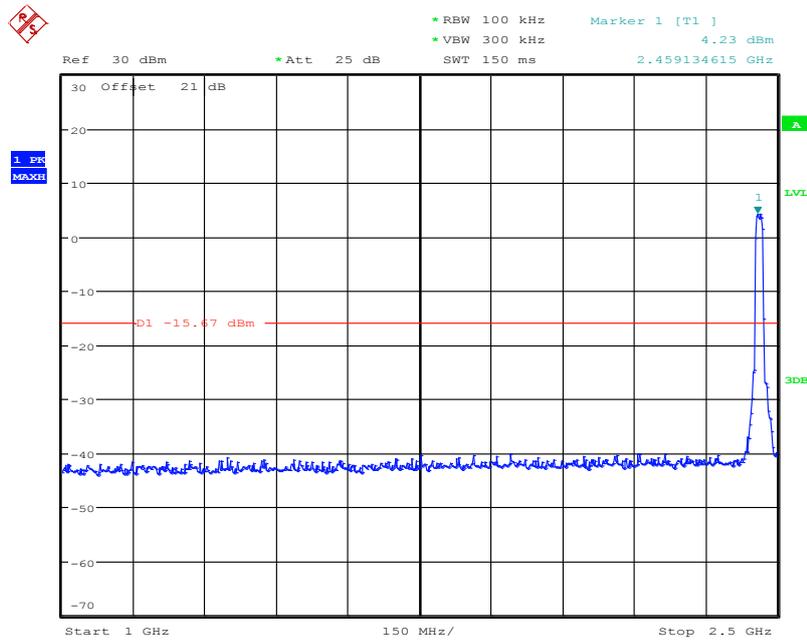
Date: 10.OCT.2012 15:30:25

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



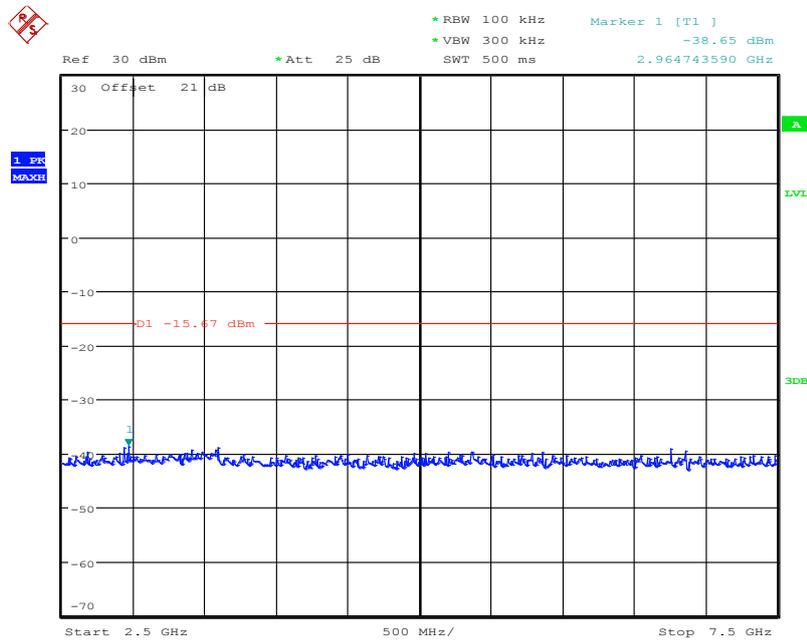
Date: 10.OCT.2012 15:31:32

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



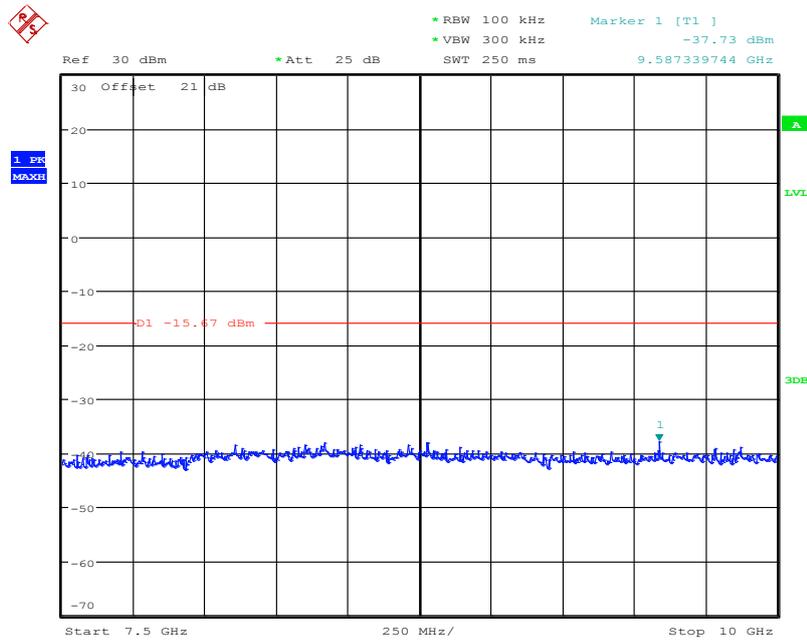
Date: 10.OCT.2012 15:32:08

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



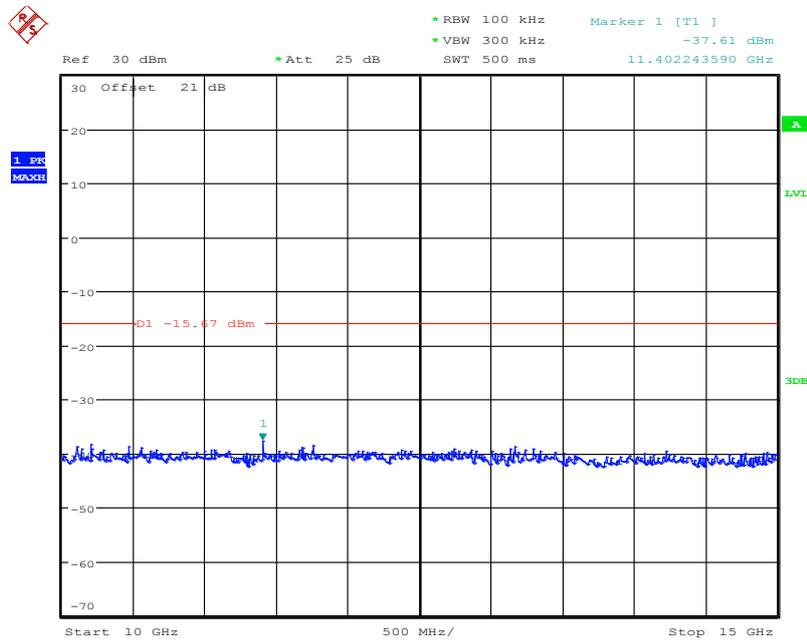
Date: 10.OCT.2012 15:32:38

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



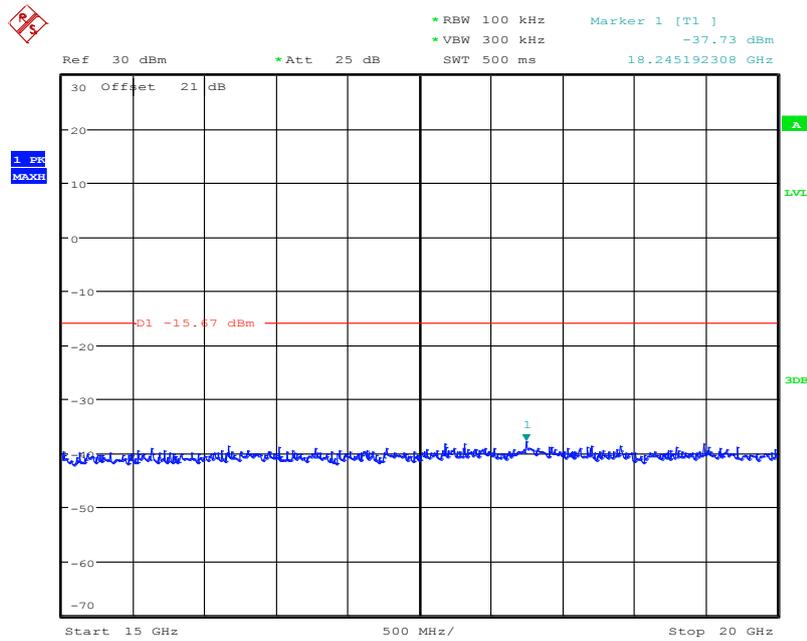
Date: 10.OCT.2012 15:33:05

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



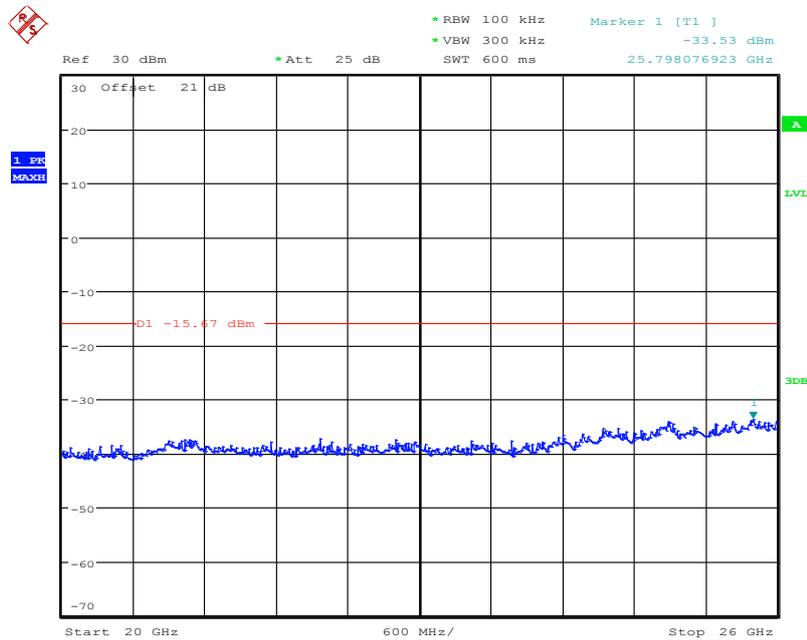
Date: 10.OCT.2012 15:33:28

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



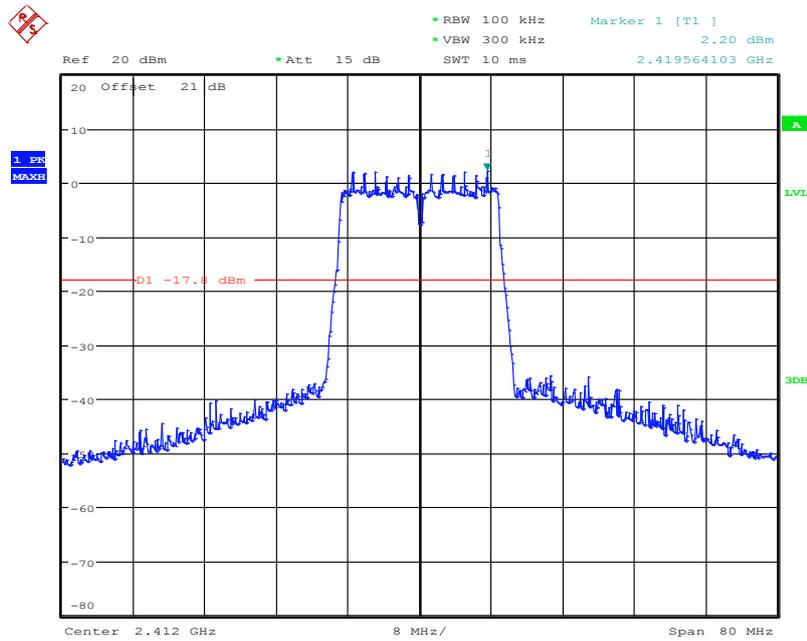
Date: 10.OCT.2012 15:33:49

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



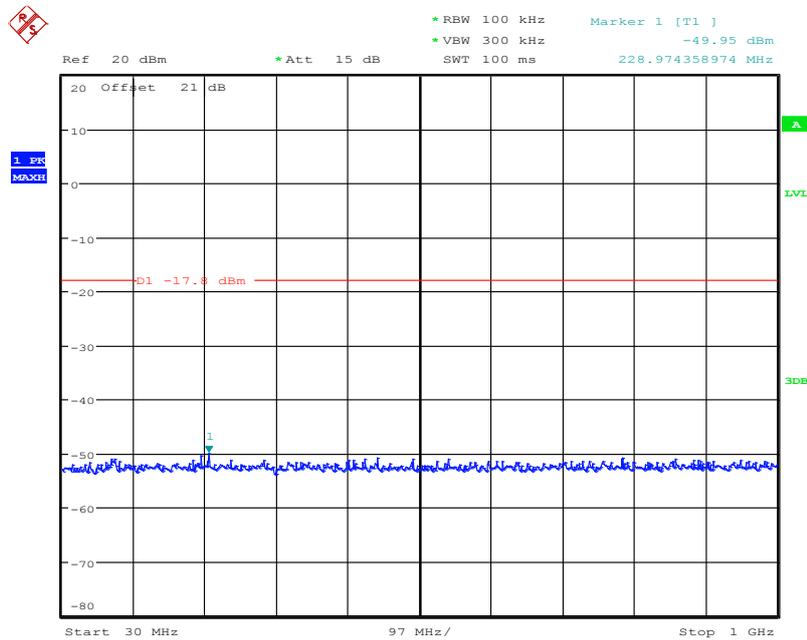
Date: 10.OCT.2012 15:34:15

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



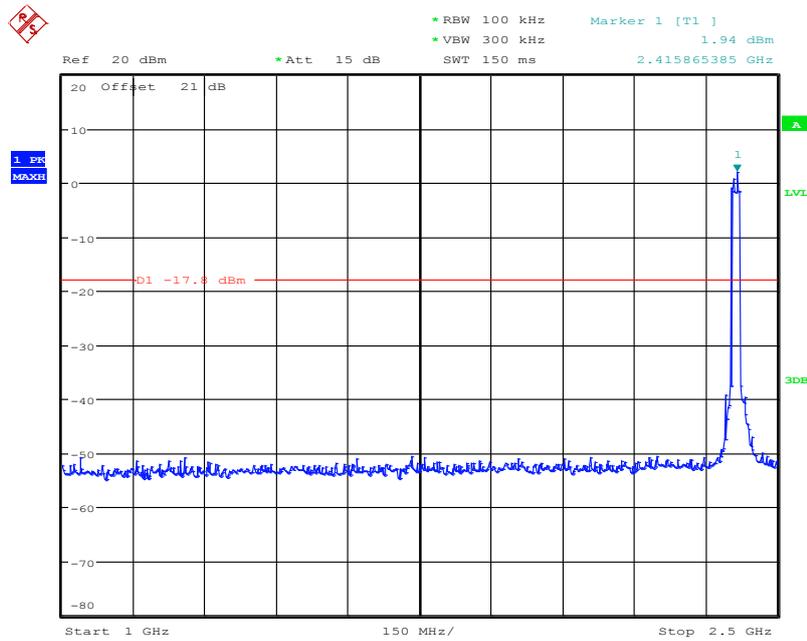
Date: 15.OCT.2012 09:36:40

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



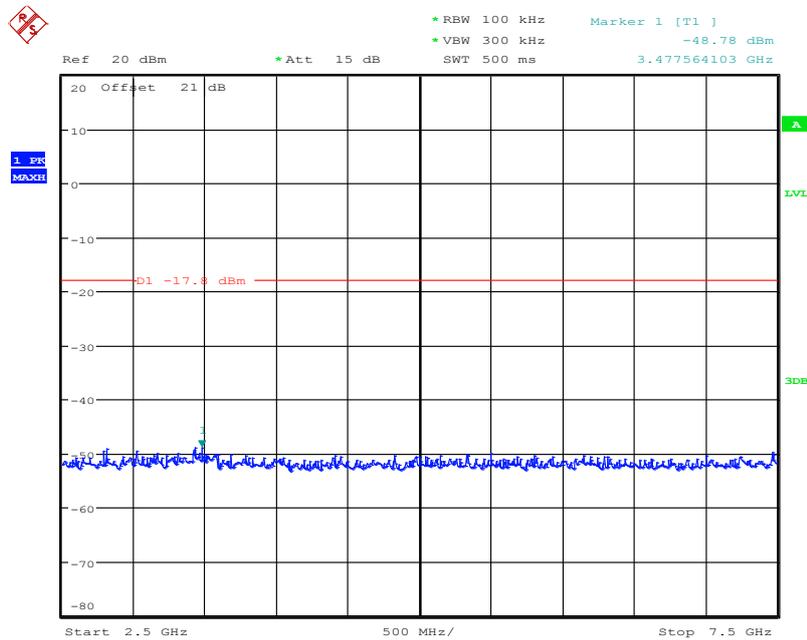
Date: 15.OCT.2012 09:37:59

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



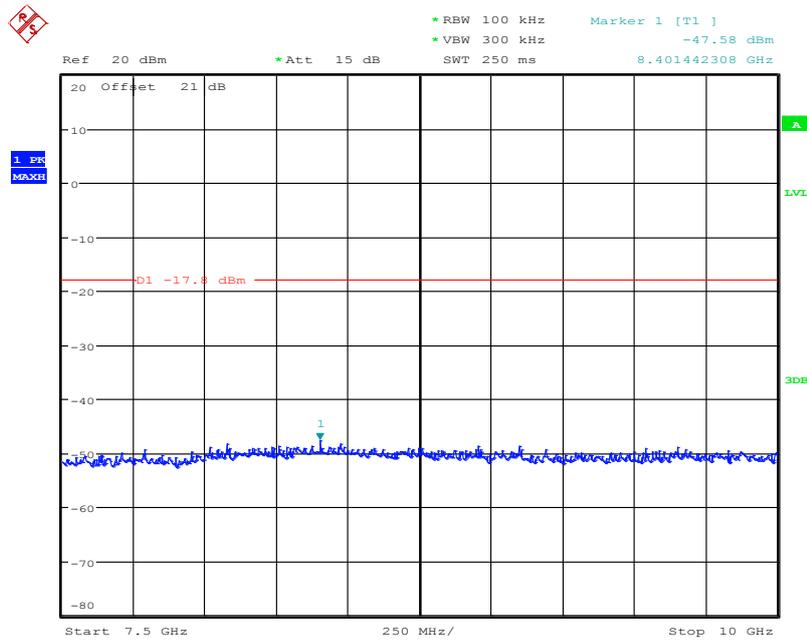
Date: 15.OCT.2012 09:38:19

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



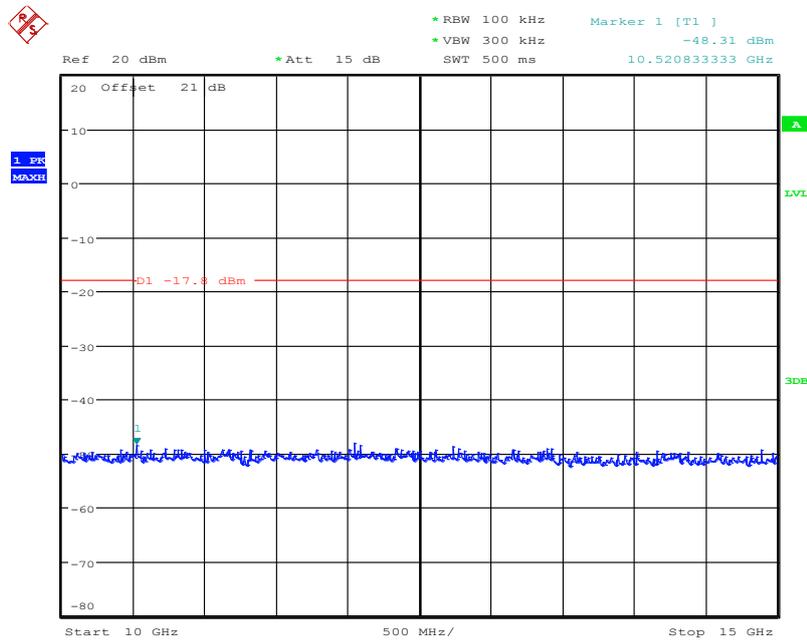
Date: 15.OCT.2012 09:38:38

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



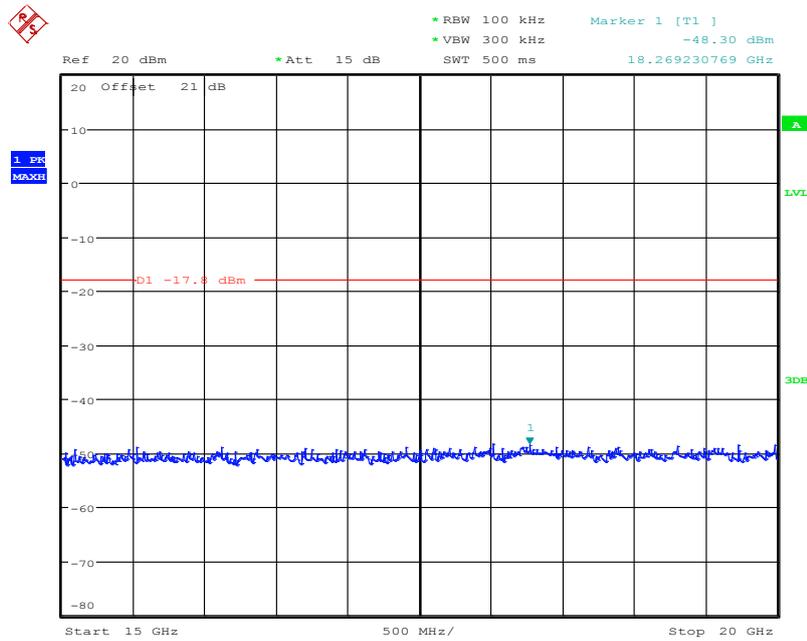
Date: 15.OCT.2012 09:39:08

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



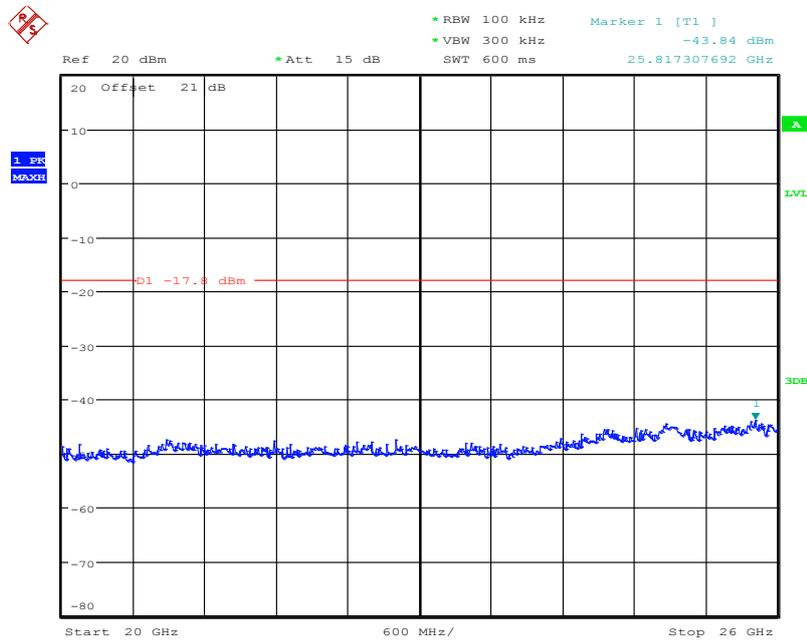
Date: 15.OCT.2012 09:39:34

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



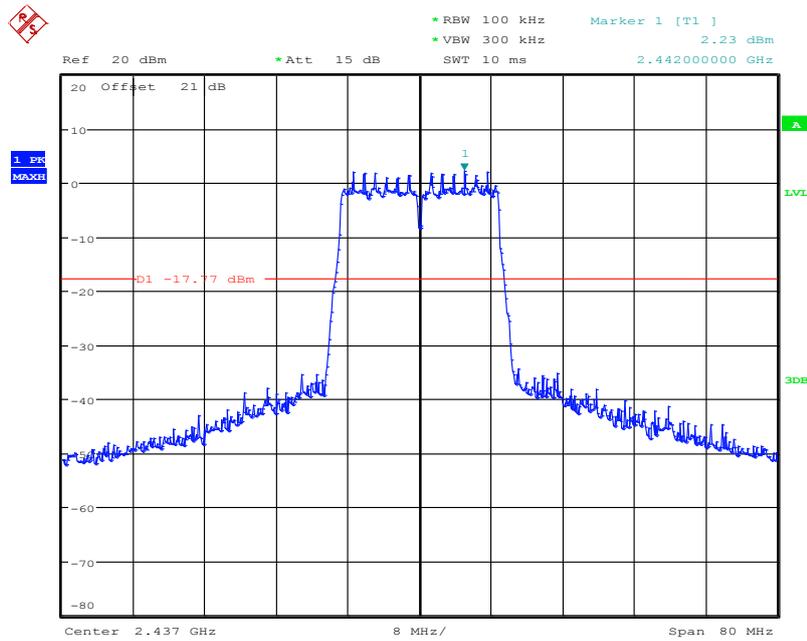
Date: 15.OCT.2012 09:39:51

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



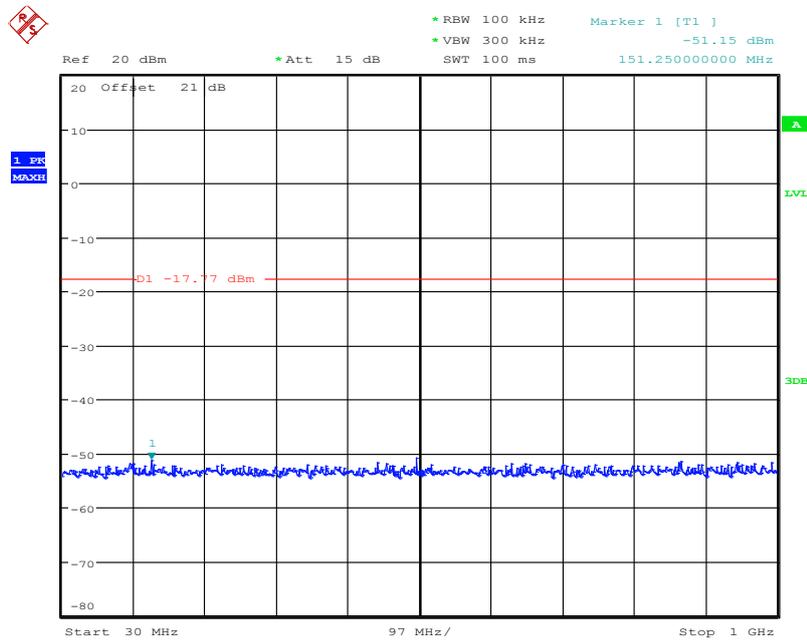
Date: 15.OCT.2012 09:40:13

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



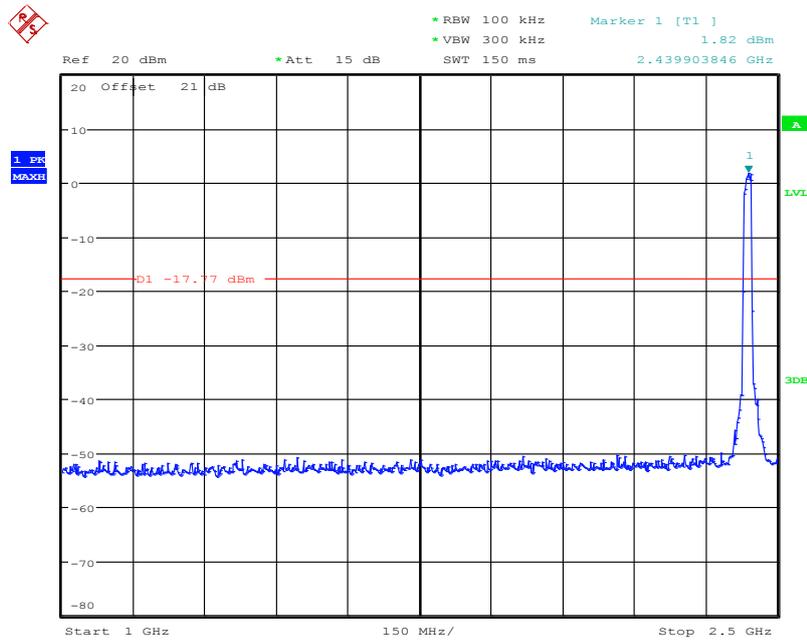
Date: 15.OCT.2012 09:41:37

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



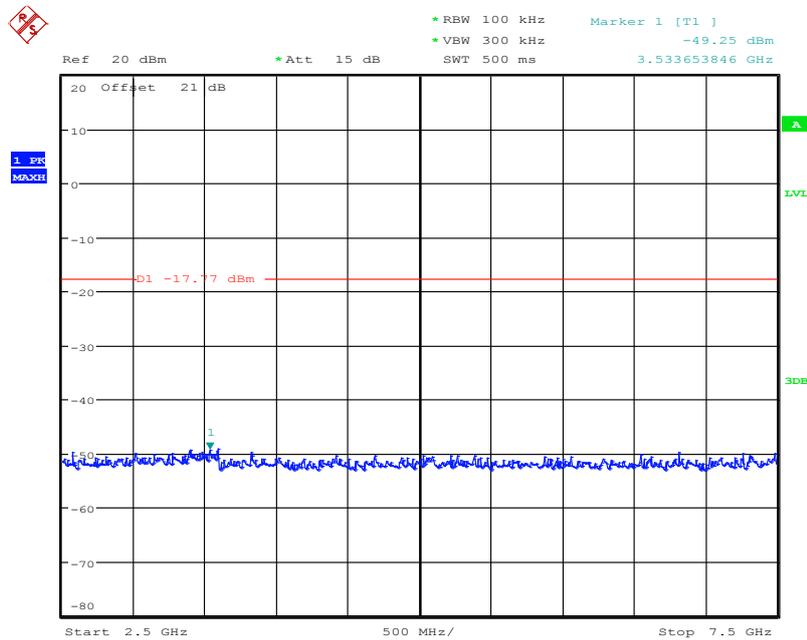
Date: 15.OCT.2012 09:41:56

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



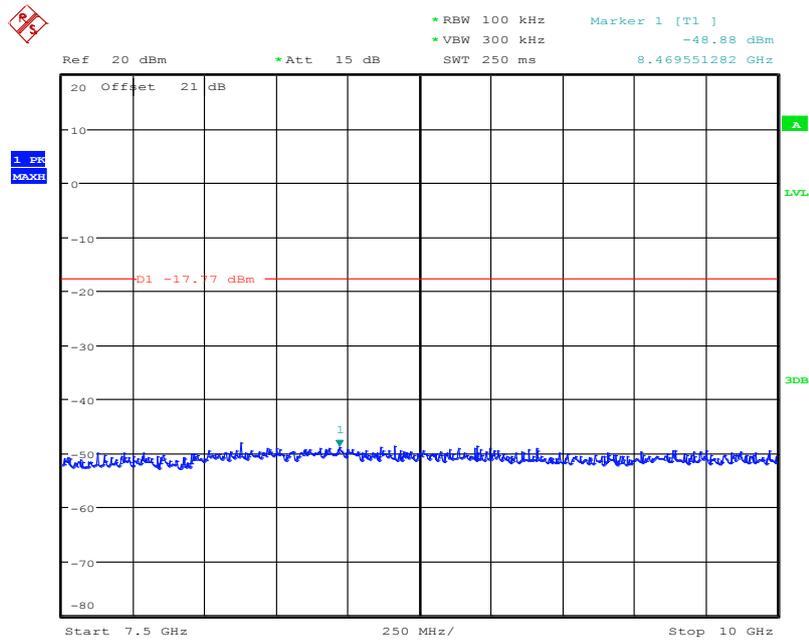
Date: 15.OCT.2012 09:42:17

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



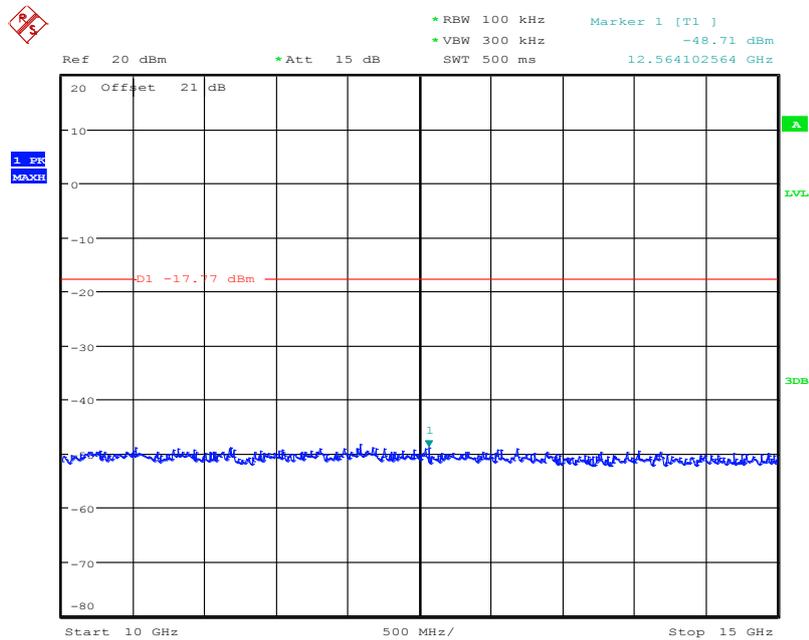
Date: 15.OCT.2012 09:42:37

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



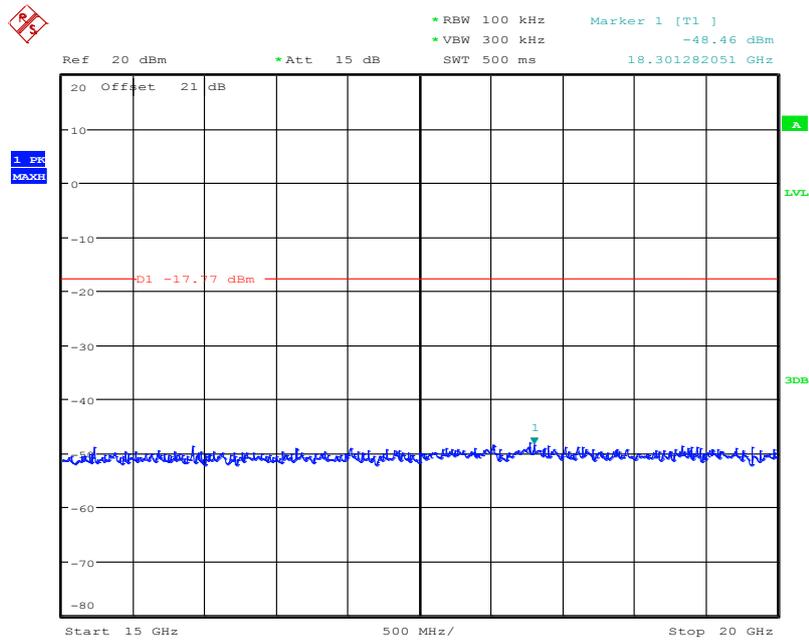
Date: 15.OCT.2012 09:42:56

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



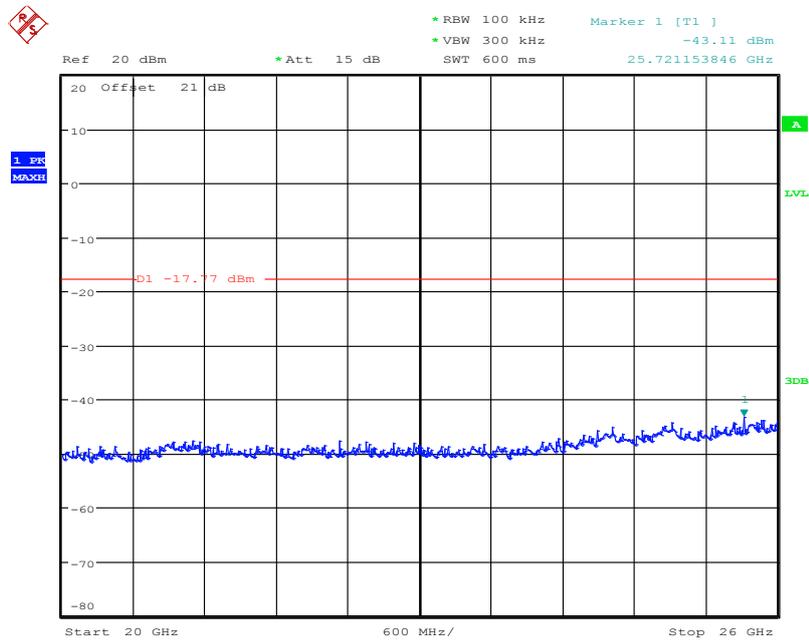
Date: 15.OCT.2012 09:43:22

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



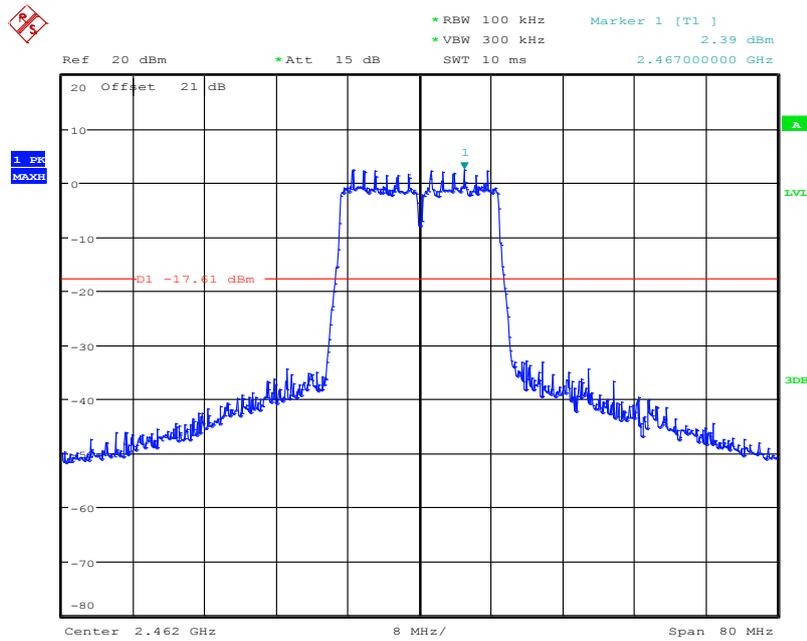
Date: 15.OCT.2012 09:43:41

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



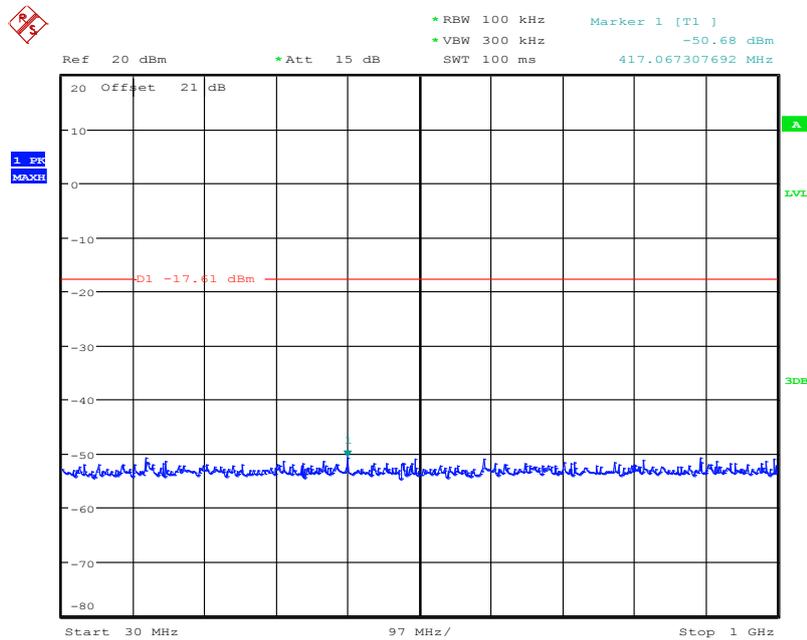
Date: 15.OCT.2012 09:43:58

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



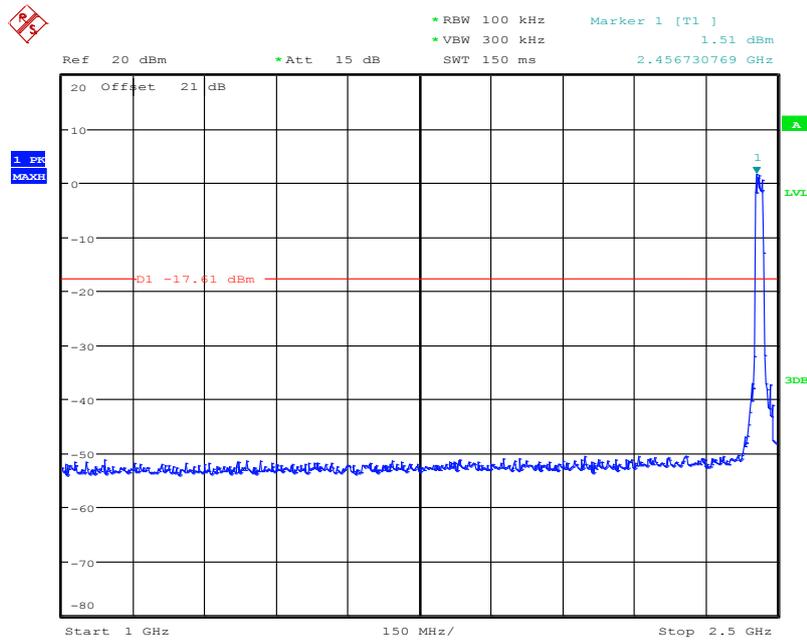
Date: 15.OCT.2012 09:45:00

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



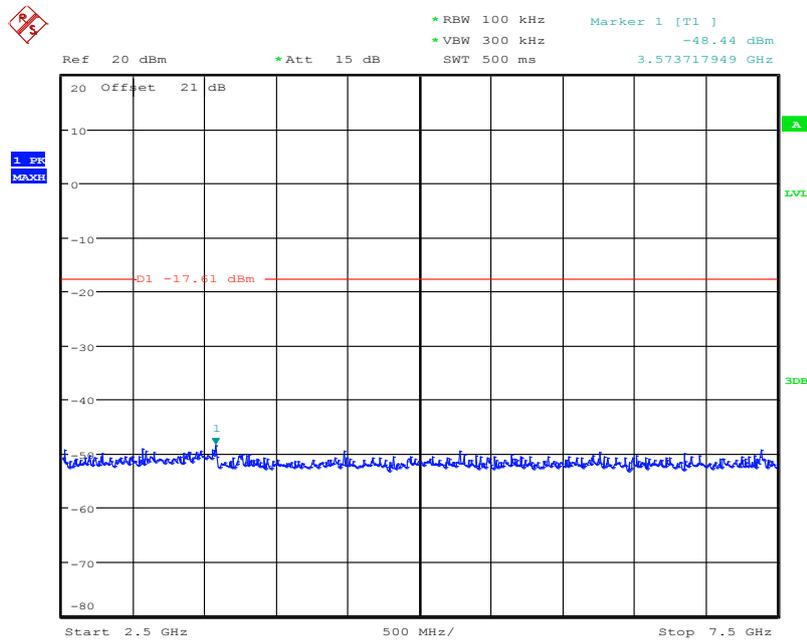
Date: 15.OCT.2012 09:45:20

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



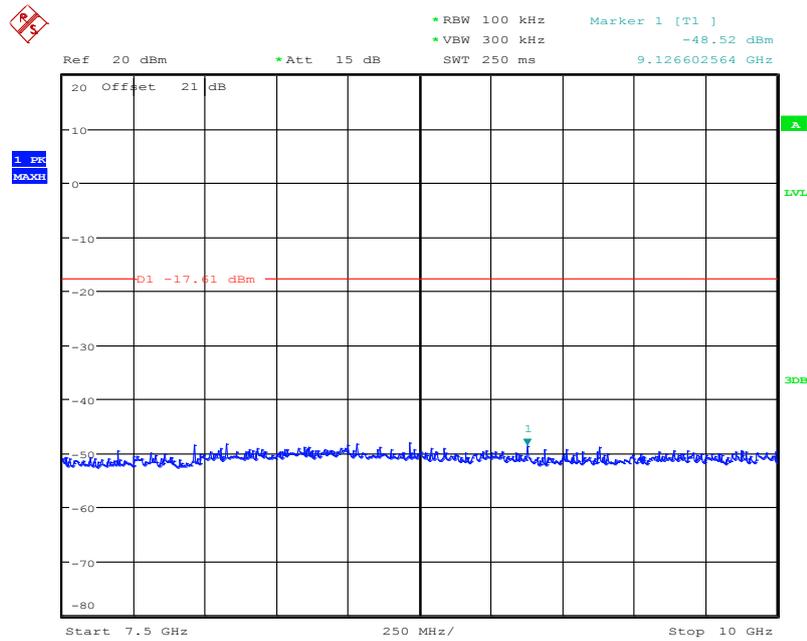
Date: 15.OCT.2012 09:45:43

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



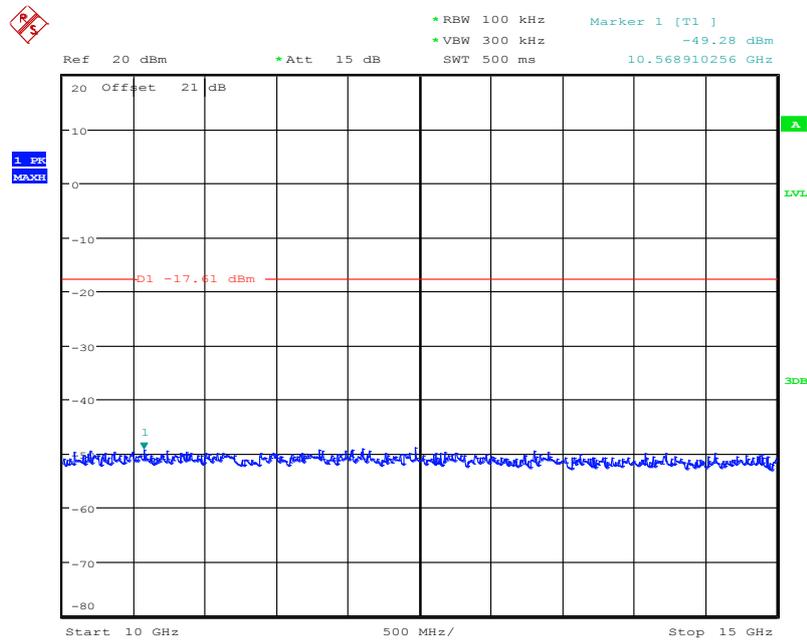
Date: 15.OCT.2012 09:46:04

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



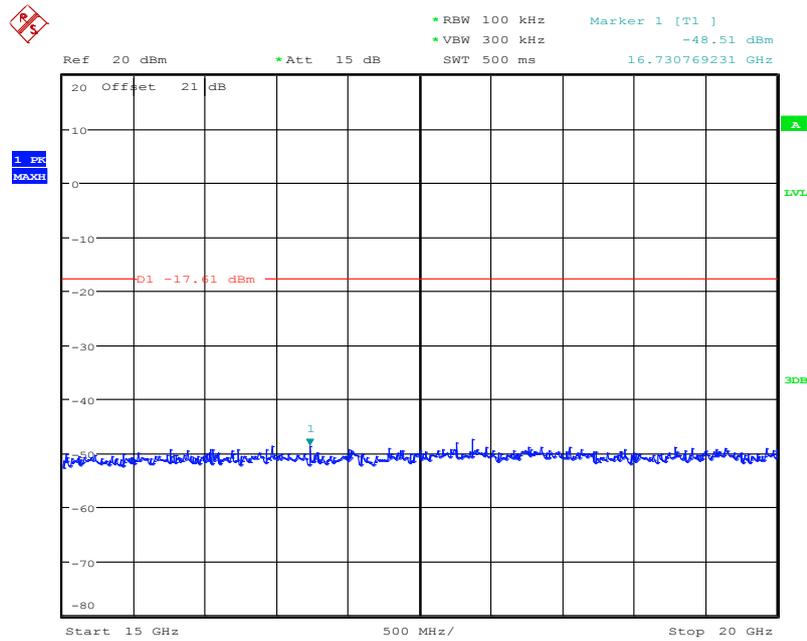
Date: 15.OCT.2012 09:46:23

**Fig. 101 Conducted Spurious Emission (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)**



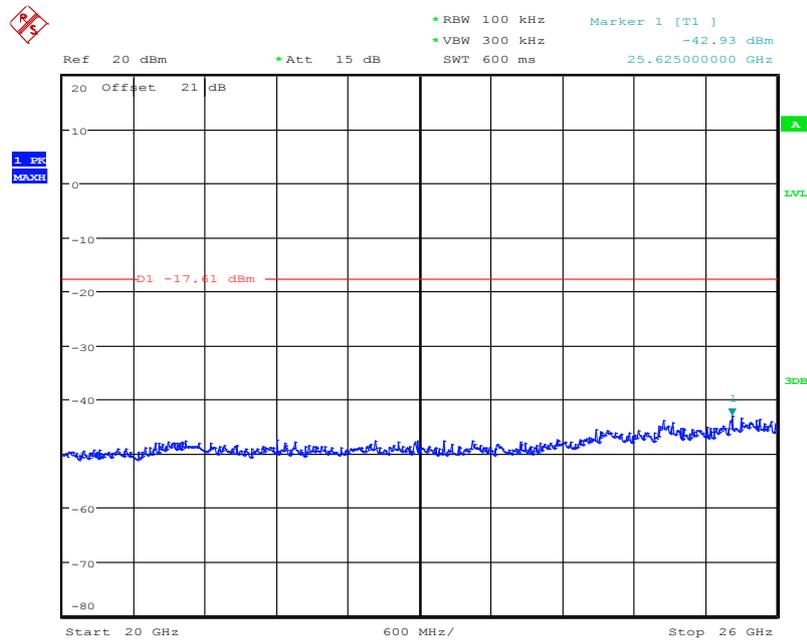
Date: 15.OCT.2012 09:46:39

**Fig. 102 Conducted Spurious Emission (802.11n-HT20, Ch11, 10 GHz-15 GHz)**



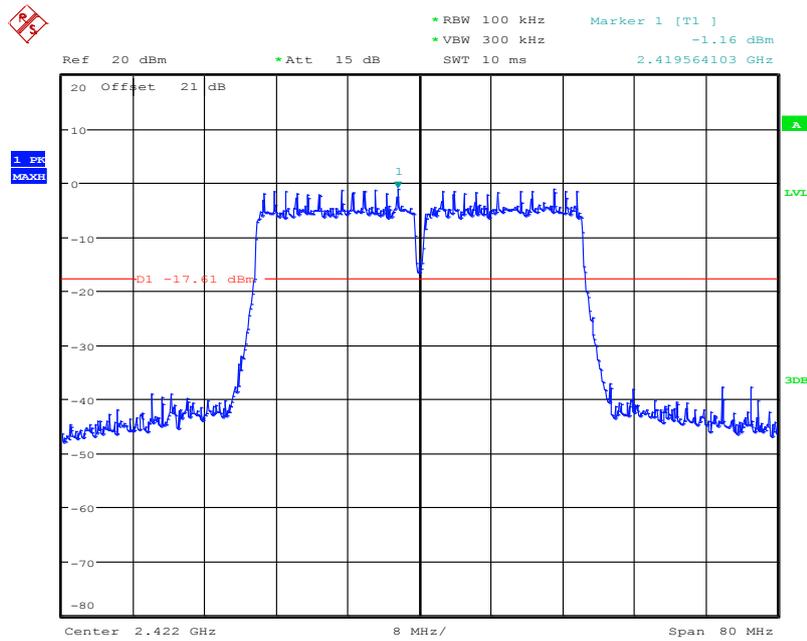
Date: 15.OCT.2012 09:46:57

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



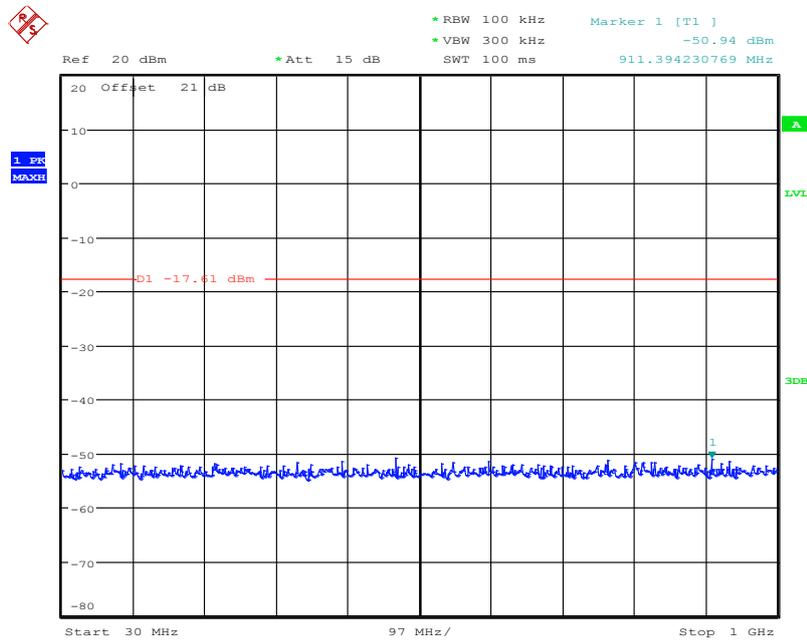
Date: 15.OCT.2012 09:47:23

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



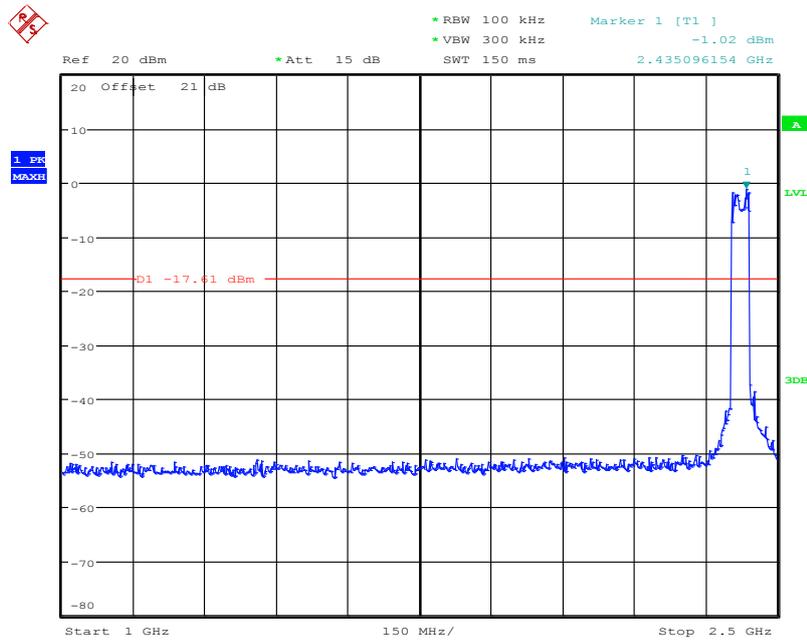
Date: 15.OCT.2012 09:49:01

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



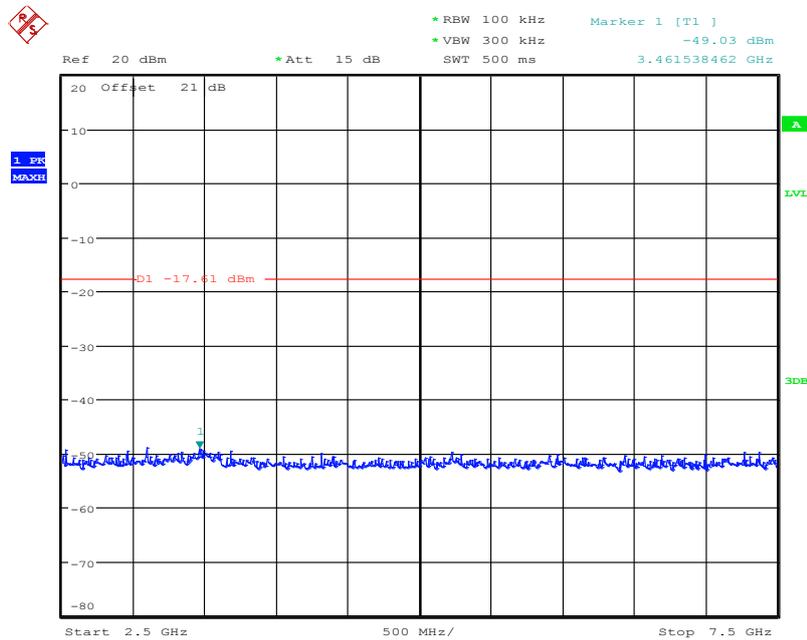
Date: 15.OCT.2012 09:49:20

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



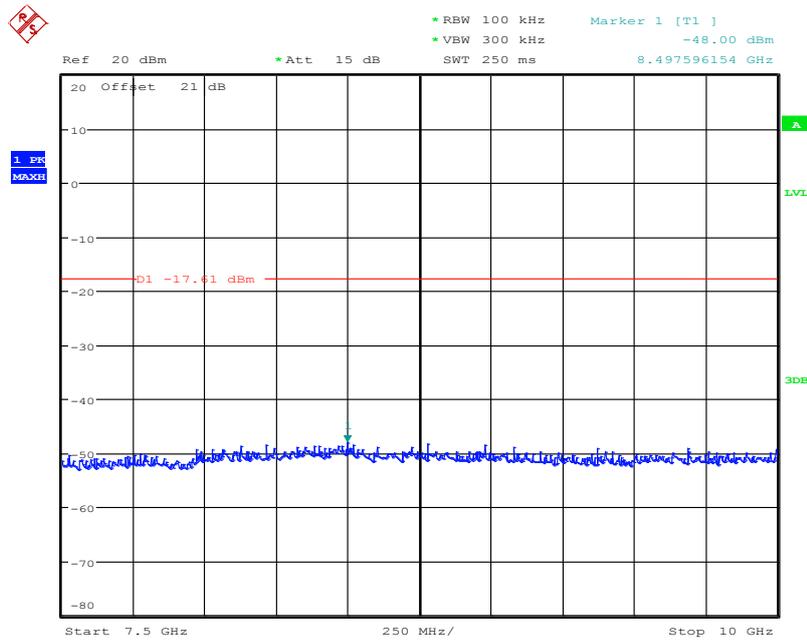
Date: 15.OCT.2012 09:49:37

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



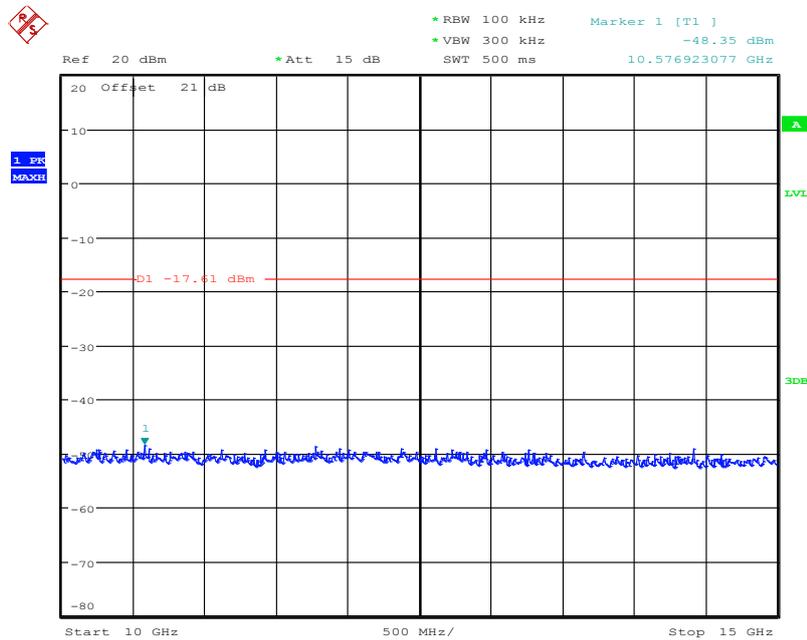
Date: 15.OCT.2012 09:49:57

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



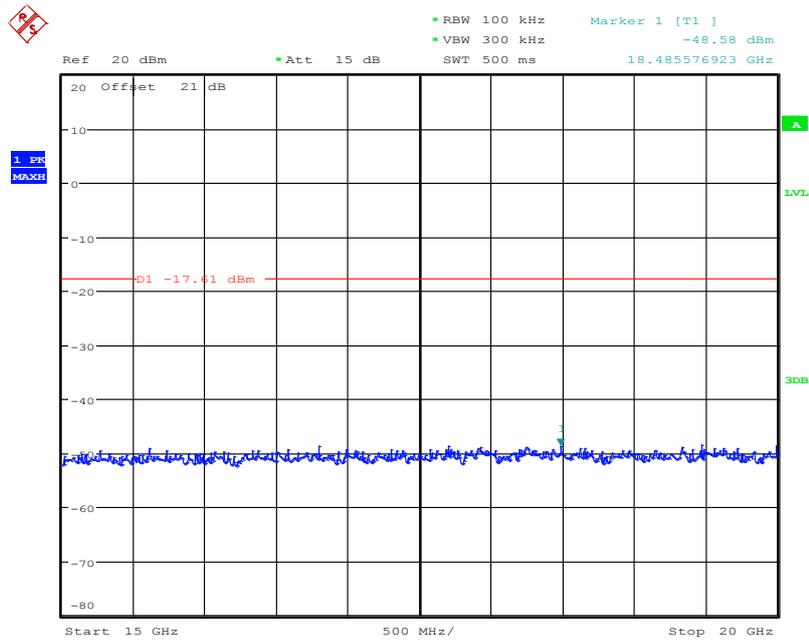
Date: 15.OCT.2012 09:50:19

**Fig. 109 Conducted Spurious Emission (802.11n- HT40, Ch3, 7.5 GHz-10 GHz)**



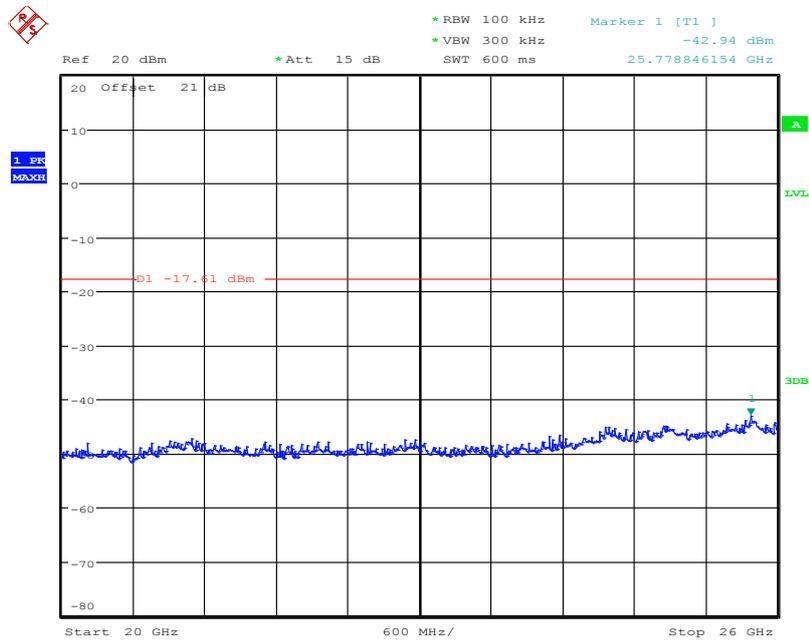
Date: 15.OCT.2012 09:50:38

**Fig. 110 Conducted Spurious Emission (802.11n- HT40, Ch3, 10 GHz-15 GHz)**



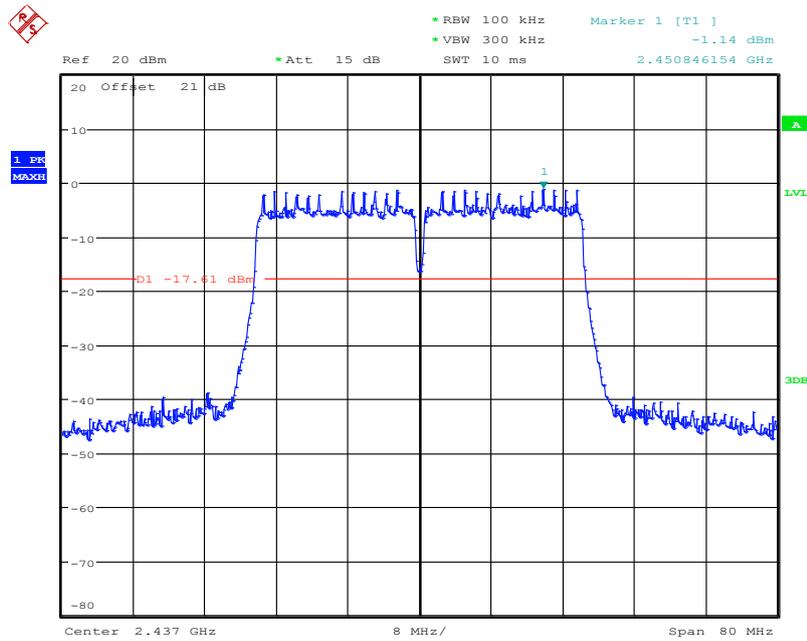
Date: 15.OCT.2012 09:50:55

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



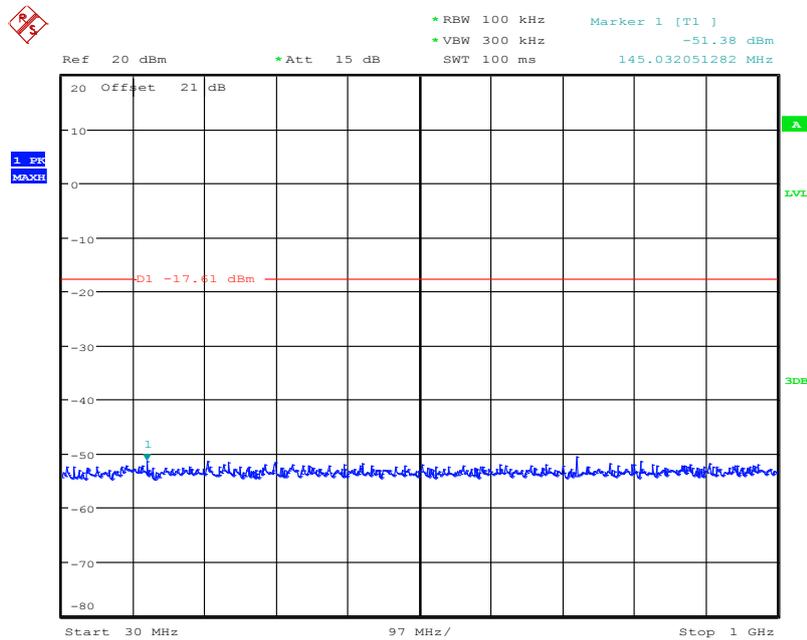
Date: 15.OCT.2012 09:51:28

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



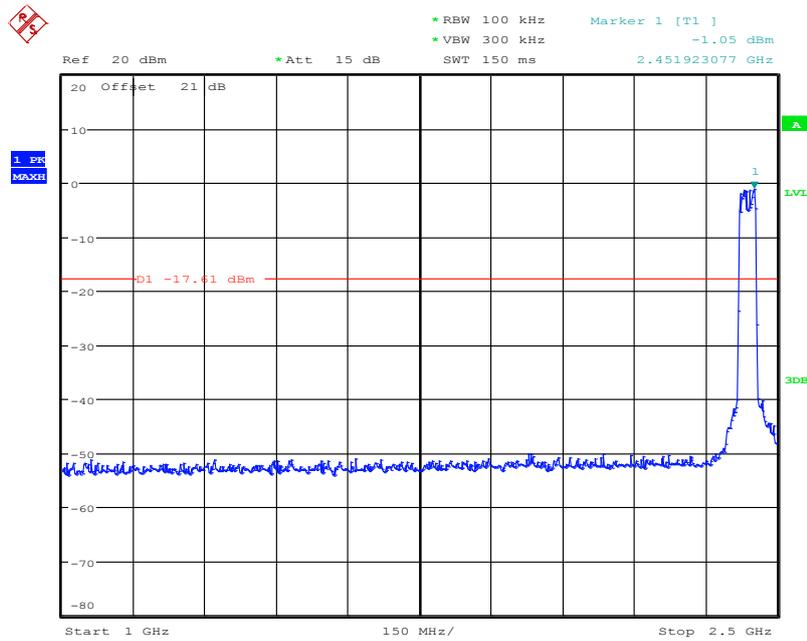
Date: 15.OCT.2012 09:52:00

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



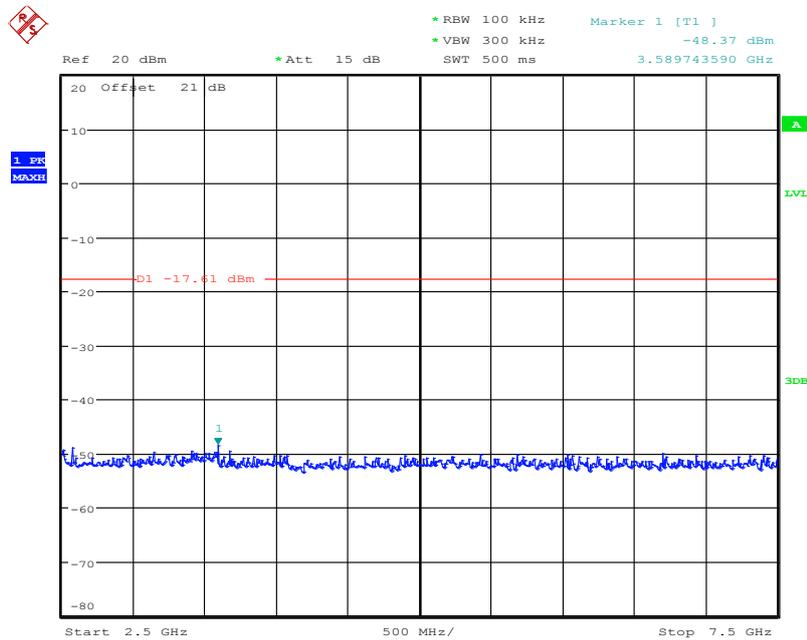
Date: 15.OCT.2012 09:52:16

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



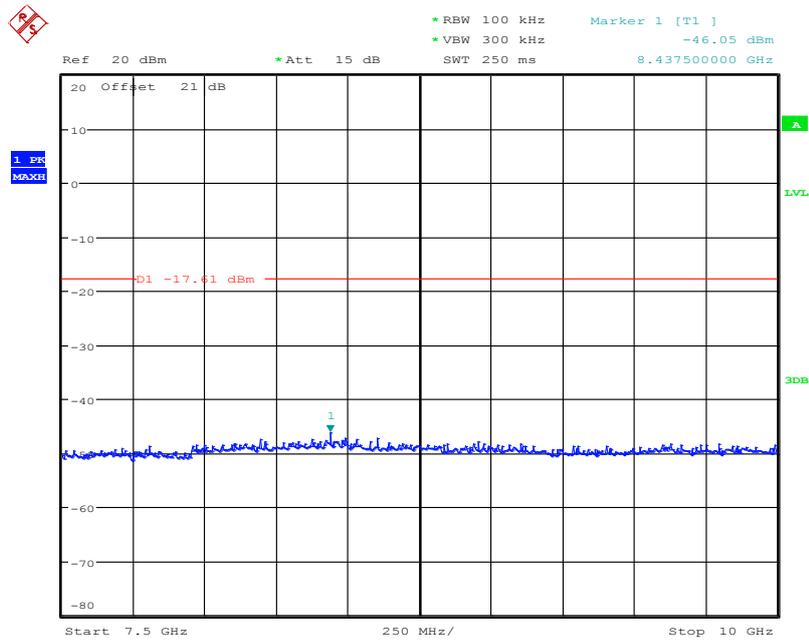
Date: 15.OCT.2012 09:52:44

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



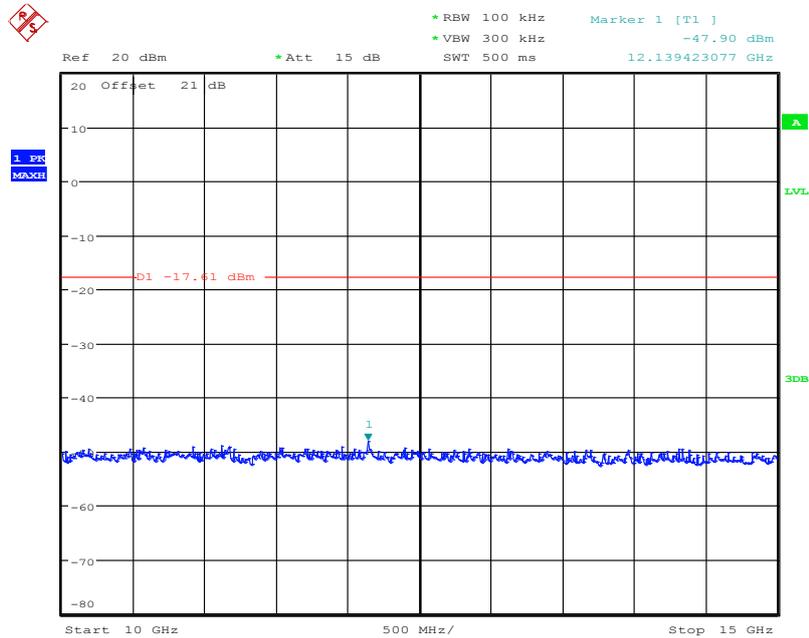
Date: 15.OCT.2012 09:53:13

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



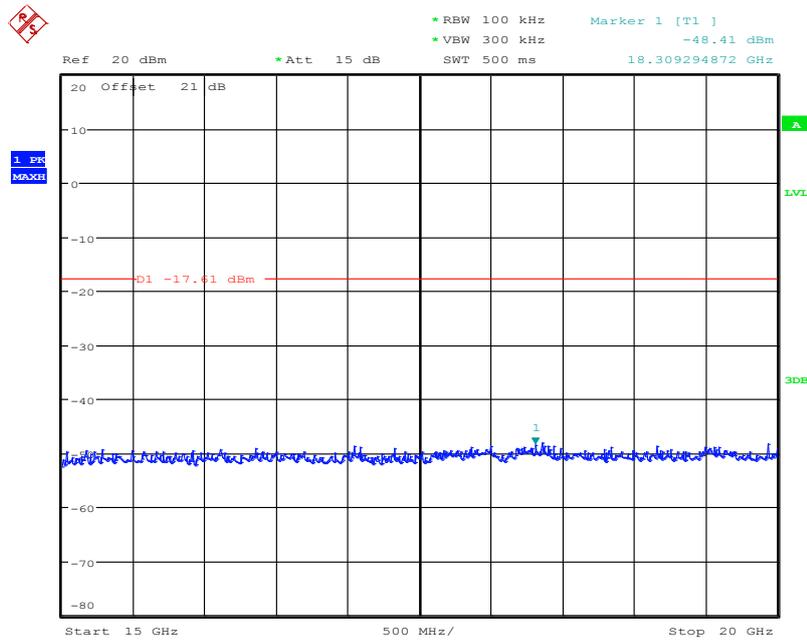
Date: 15.OCT.2012 09:59:45

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



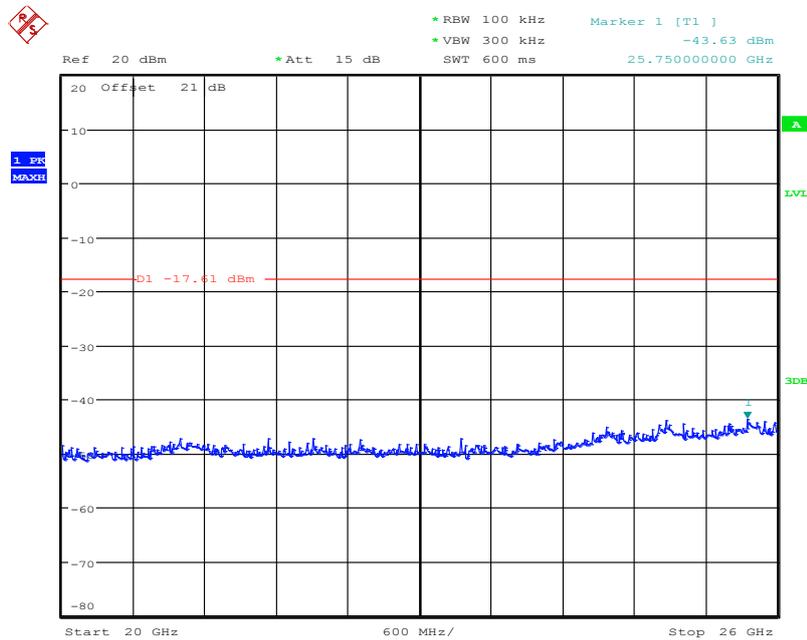
Date: 15.OCT.2012 10:00:15

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



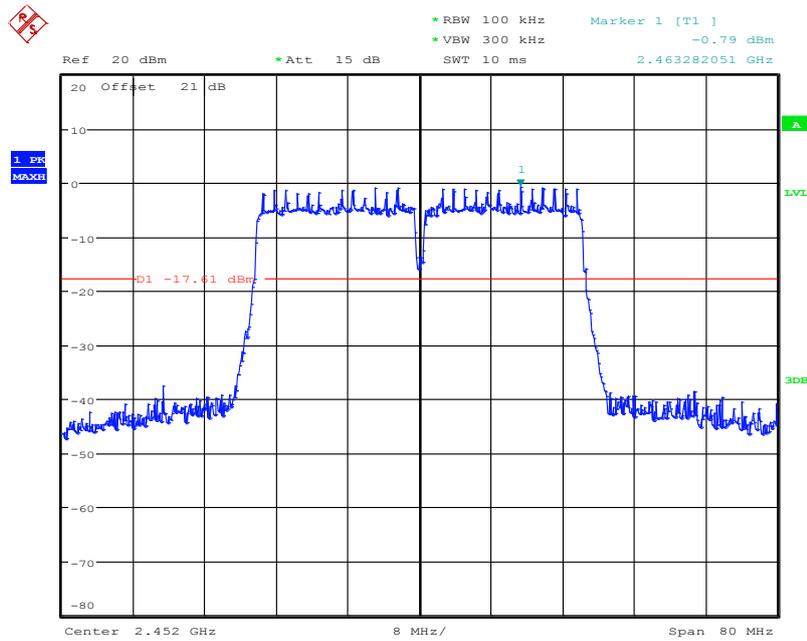
Date: 15.OCT.2012 10:00:32

**Fig. 119 Conducted Spurious Emission (802.11n-HT40, Ch6, 15 GHz-20 GHz)**



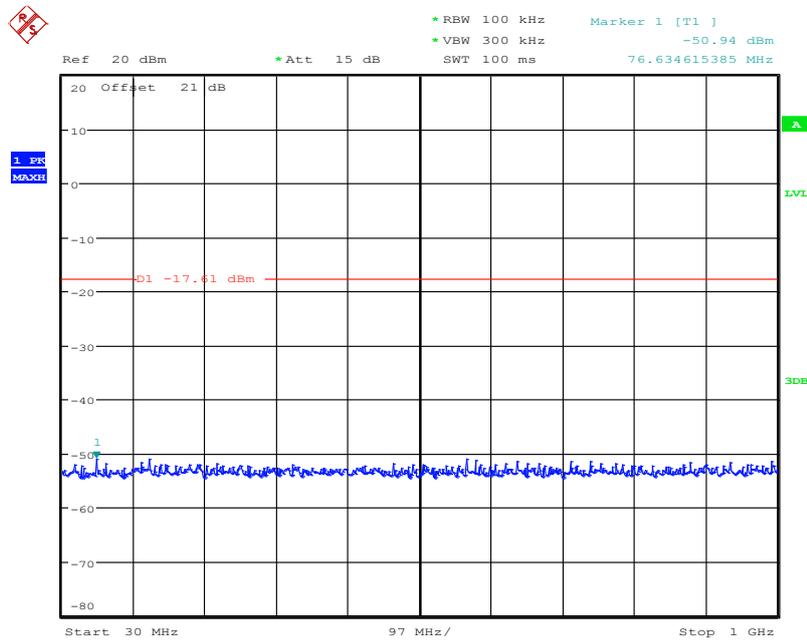
Date: 15.OCT.2012 10:00:52

**Fig. 120 Conducted Spurious Emission (802.11n-HT40, Ch6, 20 GHz-26 GHz)**



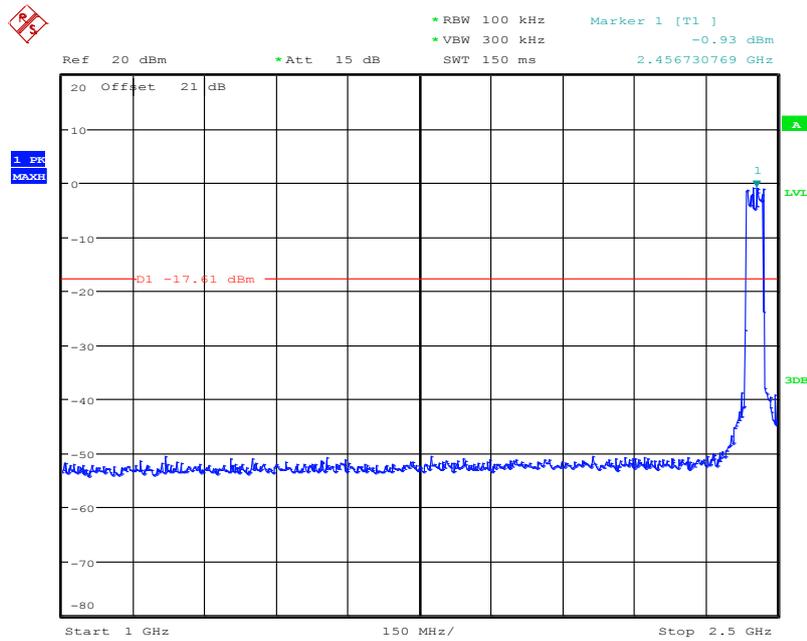
Date: 15.OCT.2012 10:01:19

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



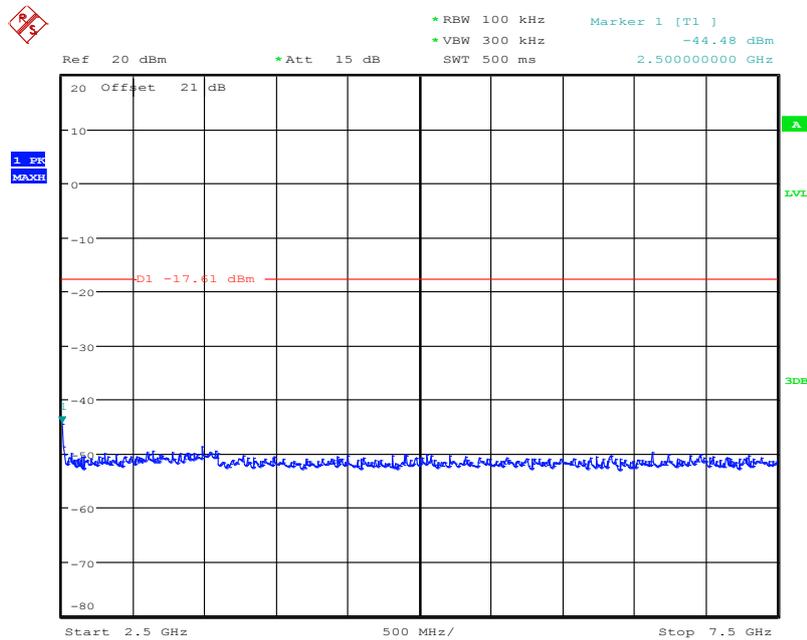
Date: 15.OCT.2012 10:01:40

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



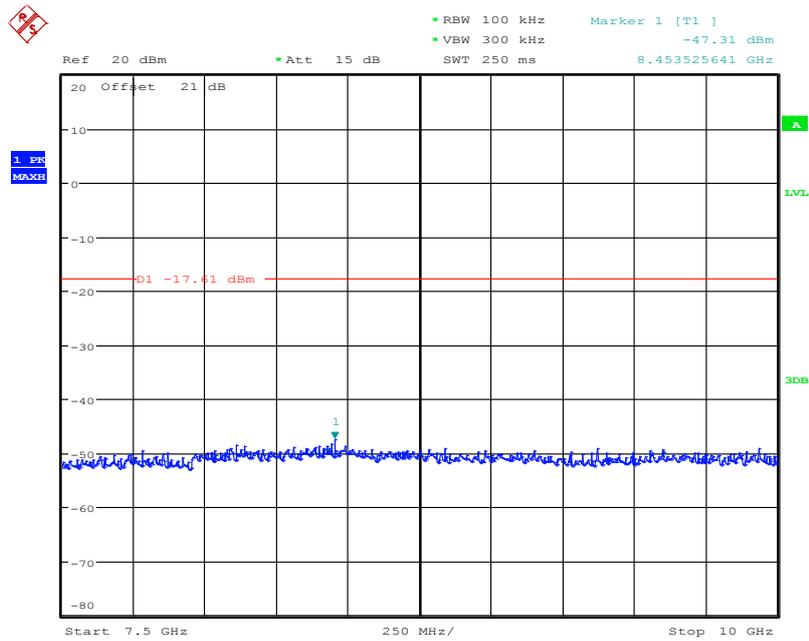
Date: 15.OCT.2012 10:02:03

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



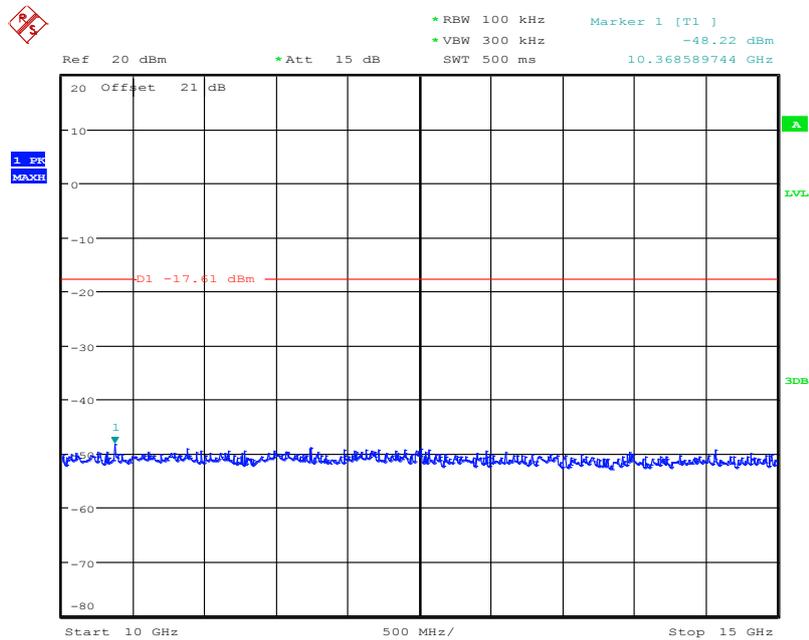
Date: 15.OCT.2012 10:02:35

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



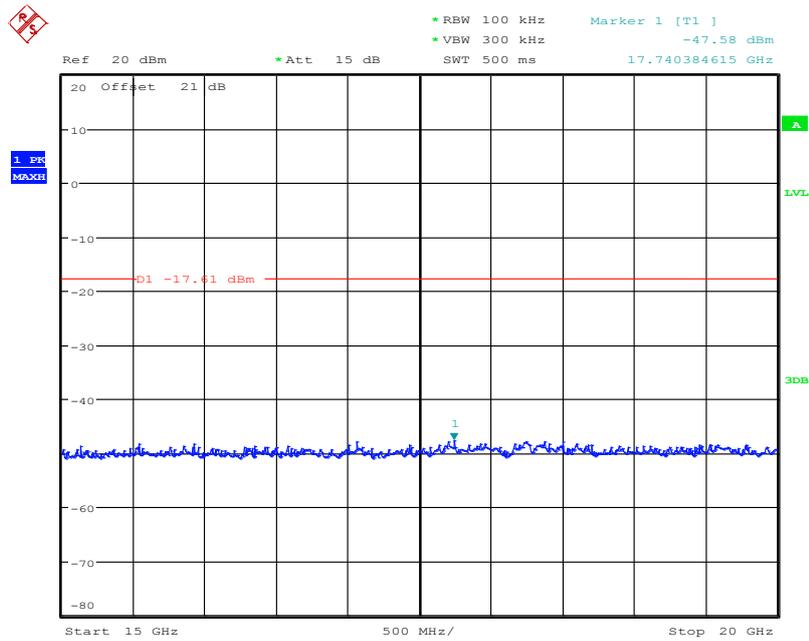
Date: 15.OCT.2012 10:02:56

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



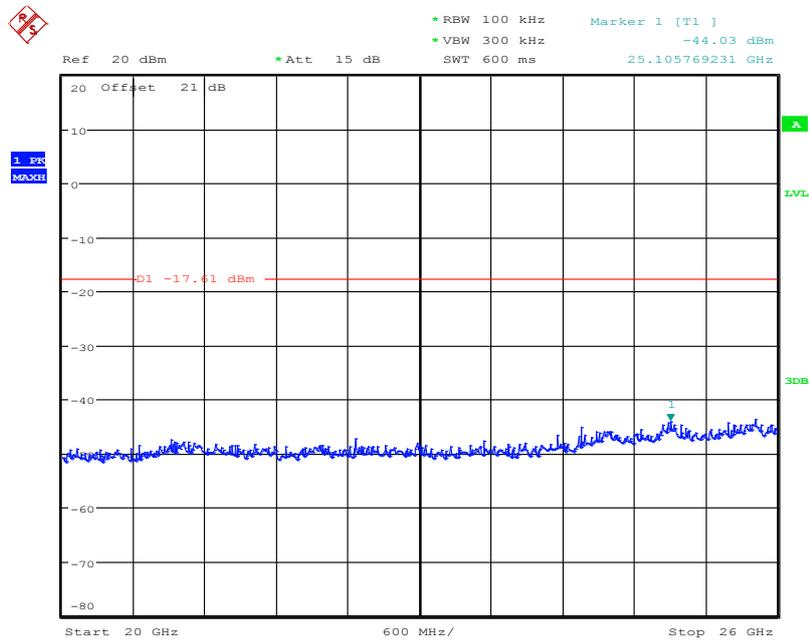
Date: 15.OCT.2012 10:03:11

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



Date: 15.OCT.2012 10:04:55

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



Date: 15.OCT.2012 10:05:12

**Fig. 128 Conducted Spurious Emission (802.11n- HT 40, 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 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
2798.400	44.6	-26.3	33.3	37.638	HORIZONTAL
2791.800	44.6	-26.3	33.3	37.638	VERTICAL
2792.200	44.6	-26.3	33.3	37.638	HORIZONTAL
2802.600	44.6	-26.3	33.8	37.138	HORIZONTAL
2788.400	44.5	-26.3	33.3	37.538	HORIZONTAL
2787.800	44.5	-26.3	33.3	37.538	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2804.000	44.5	-27.6	33.8	38.341	HORIZONTAL
2792.600	44.5	-26.3	33.3	37.538	VERTICAL
2795.200	44.5	-26.3	33.3	37.538	HORIZONTAL
2794.400	44.5	-26.3	33.3	37.538	HORIZONTAL
2797.600	44.5	-26.3	33.3	37.538	HORIZONTAL
2764.400	44.5	-27.1	33.3	38.285	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2794.600	44.5	-26.3	33.3	37.538	HORIZONTAL
2794.400	44.5	-26.3	33.3	37.538	VERTICAL
2791.800	44.5	-26.3	33.3	37.538	HORIZONTAL
2772.000	44.5	-27.1	33.3	38.285	HORIZONTAL
2763.600	44.5	-27.1	33.3	38.285	HORIZONTAL
2798.400	44.5	-26.3	33.3	37.538	VERTICAL

**802.11g**

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2794.000	44.6	-26.3	33.3	37.638	HORIZONTAL
2792.200	44.6	-26.3	33.3	37.638	VERTICAL
2798.000	44.6	-26.3	33.3	37.638	HORIZONTAL
2778.000	44.6	-26.3	33.3	37.638	HORIZONTAL
2766.800	44.5	-27.1	33.3	38.285	HORIZONTAL
2799.400	44.5	-26.3	33.3	37.538	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2798.000	44.8	-26.3	33.3	37.838	HORIZONTAL
2797.400	44.7	-26.3	33.3	37.738	VERTICAL
2805.600	44.6	-27.6	33.8	38.441	HORIZONTAL
2799.200	44.5	-26.3	33.3	37.538	HORIZONTAL
2779.800	44.5	-26.3	33.3	37.538	HORIZONTAL
2792.800	44.5	-26.3	33.3	37.538	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2798.000	44.5	-26.3	33.3	37.538	HORIZONTAL
2794.200	44.5	-26.3	33.3	37.538	VERTICAL
2768.800	44.5	-27.1	33.3	38.285	HORIZONTAL
2777.200	44.5	-26.3	33.3	37.538	HORIZONTAL
2744.800	44.5	-27.6	33.3	38.754	HORIZONTAL
2771.400	44.5	-27.1	33.3	38.285	VERTICAL

**802.11n-HT20**

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2782.000	44.5	-26.3	33.3	37.538	HORIZONTAL
2782.800	44.5	-26.3	33.3	37.538	VERTICAL
2791.400	44.5	-26.3	33.3	37.538	HORIZONTAL
2799.400	44.4	-26.3	33.3	37.438	HORIZONTAL
2787.400	44.4	-26.3	33.3	37.438	HORIZONTAL
2767.800	44.4	-27.1	33.3	38.185	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2772.600	44.5	-27.1	33.3	38.285	HORIZONTAL
2794.600	44.5	-26.3	33.3	37.538	VERTICAL
2792.800	44.5	-26.3	33.3	37.538	HORIZONTAL
2794.200	44.5	-26.3	33.3	37.538	HORIZONTAL
2797.200	44.5	-26.3	33.3	37.538	HORIZONTAL
2770.400	44.5	-27.1	33.3	38.285	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2766.800	44.6	-27.1	33.3	38.385	HORIZONTAL
2793.000	44.6	-26.3	33.3	37.638	VERTICAL
2472.000	44.5	-30.3	32.6	42.173	HORIZONTAL
2735.200	44.5	-27.6	33.3	38.754	HORIZONTAL
2784.000	44.5	-26.3	33.3	37.538	HORIZONTAL
2765.400	44.5	-27.1	33.3	38.285	VERTICAL

**802.11n-HT40**

Ch3

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2782.000	44.6	-26.3	33.3	37.638	HORIZONTAL
2760.800	44.6	-27.1	33.3	38.385	VERTICAL
2766.000	44.6	-27.1	33.3	38.385	HORIZONTAL
2789.000	44.6	-26.3	33.3	37.638	HORIZONTAL
2783.000	44.5	-26.3	33.3	37.538	HORIZONTAL
2793.600	44.5	-26.3	33.3	37.538	VERTICAL

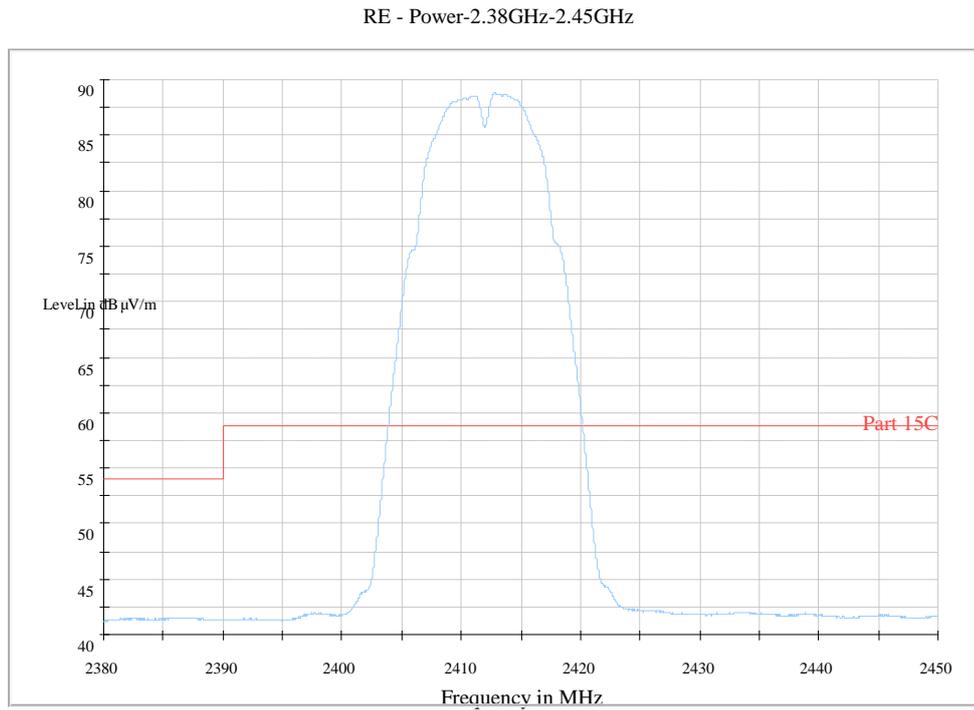
Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2781.600	44.6	-26.3	33.3	37.638	HORIZONTAL
2784.600	44.5	-26.3	33.3	37.538	VERTICAL
2788.600	44.5	-26.3	33.3	37.538	HORIZONTAL
2751.400	44.5	-27.1	33.3	38.285	HORIZONTAL
2778.000	44.5	-26.3	33.3	37.538	HORIZONTAL
2782.000	44.5	-26.3	33.3	37.538	VERTICAL

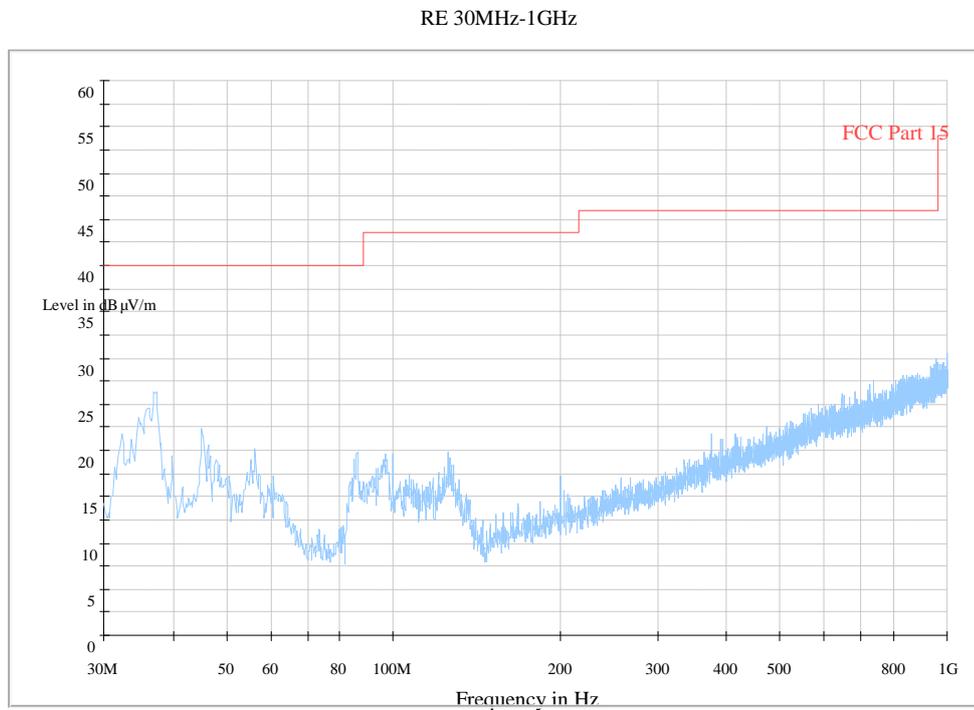
Ch9

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization
2793.200	44.7	-26.3	33.3	37.738	HORIZONTAL
2766.400	44.5	-27.1	33.3	38.285	VERTICAL
2804.200	44.5	-27.6	33.8	38.341	HORIZONTAL
2789.400	44.5	-26.3	33.3	37.538	HORIZONTAL
2793.600	44.4	-26.3	33.3	37.438	HORIZONTAL
2799.000	44.4	-26.3	33.3	37.438	VERTICAL

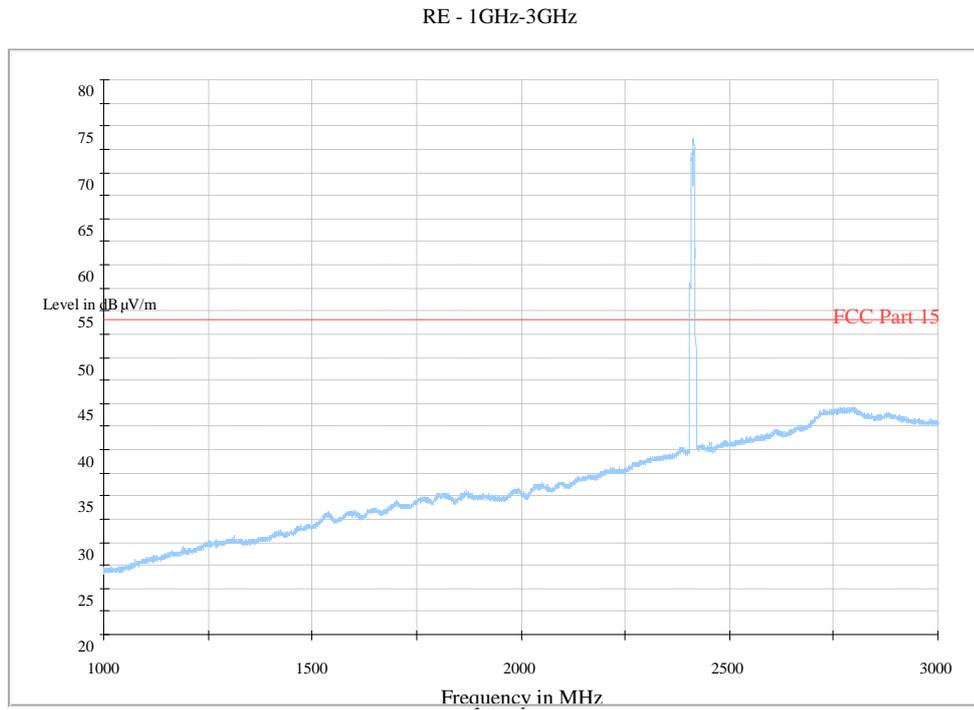
**Test graphs as below:**



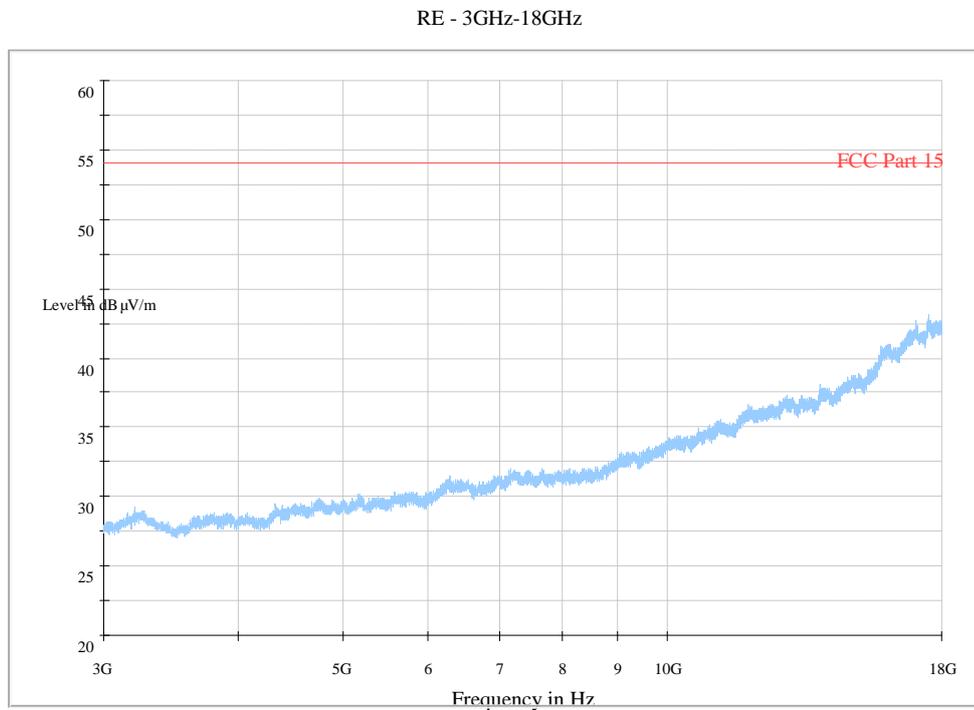
**Fig. 129 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz - 245GHz**



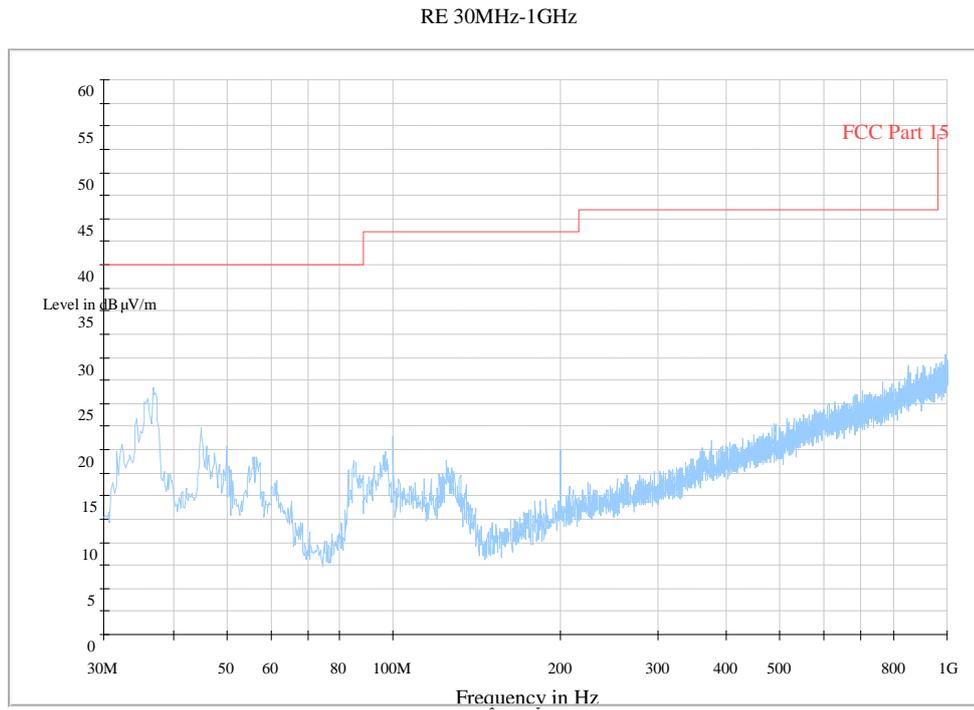
**Fig. 130 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)**



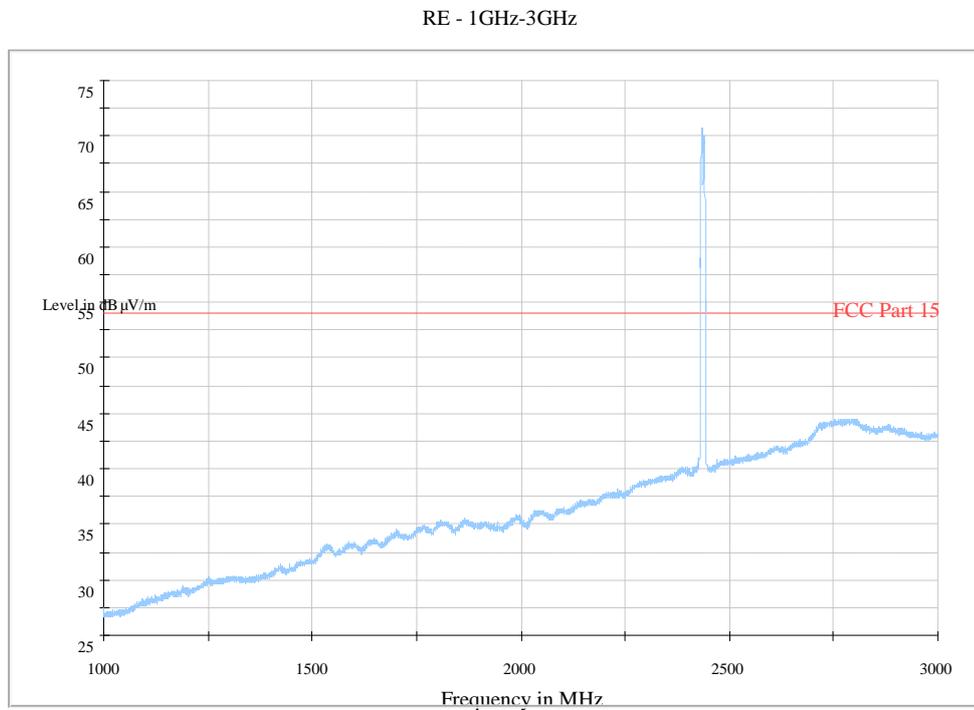
**Fig. 131 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)**



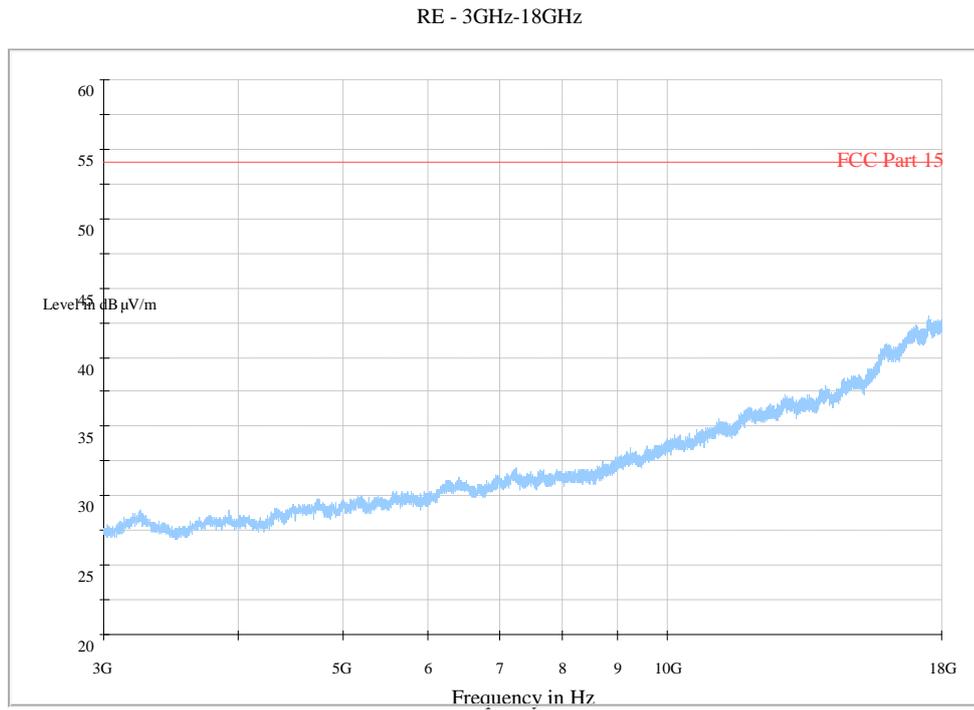
**Fig. 132 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)**



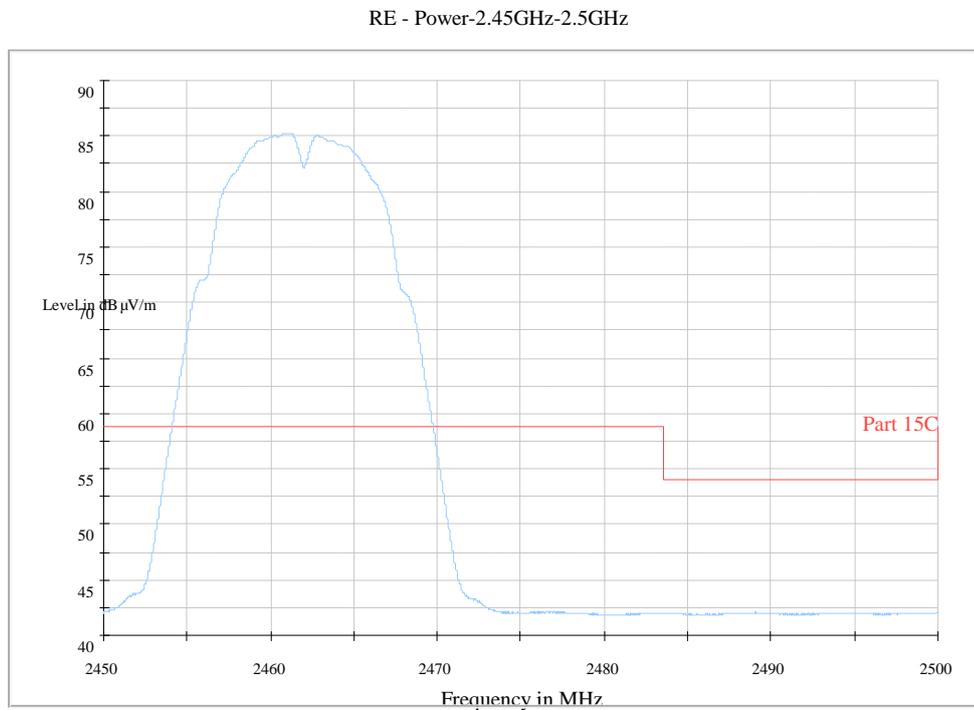
**Fig. 133 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)**



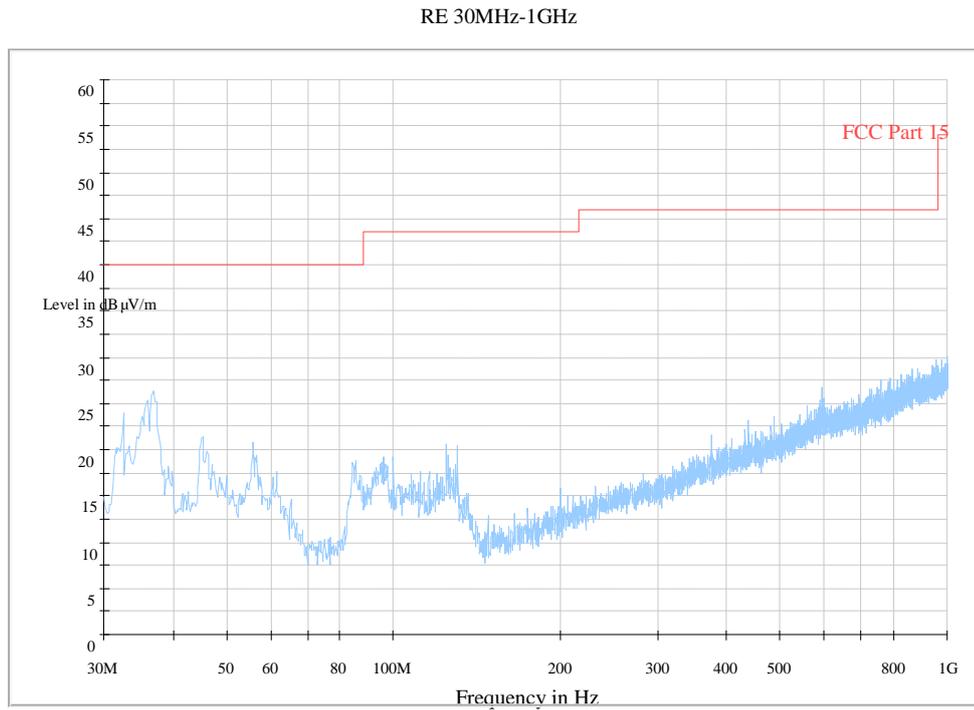
**Fig. 134 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)**



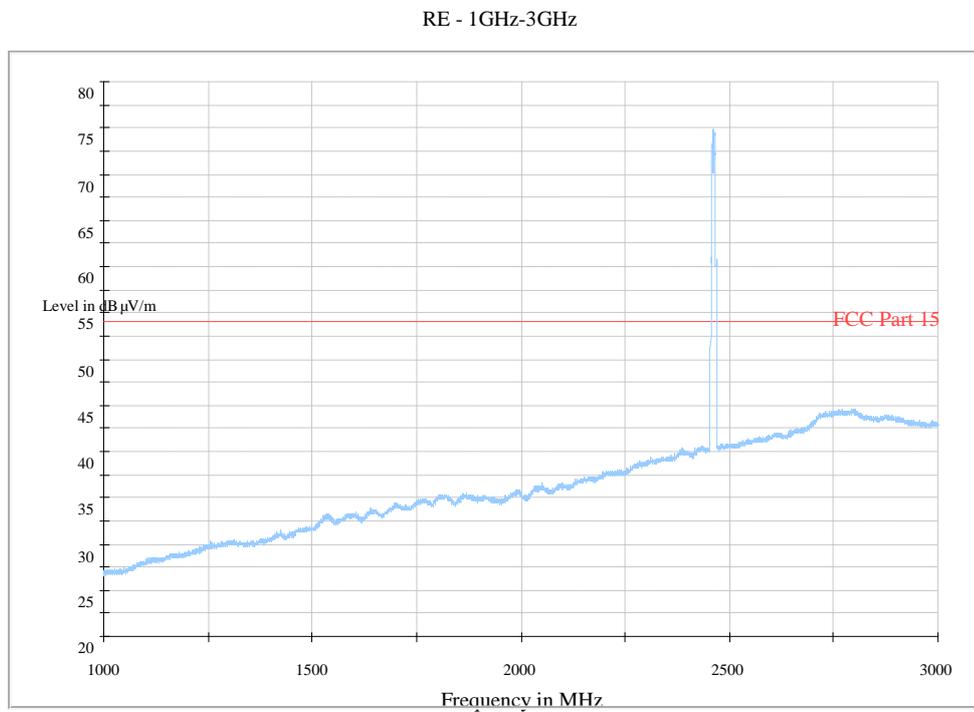
**Fig. 135 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)**



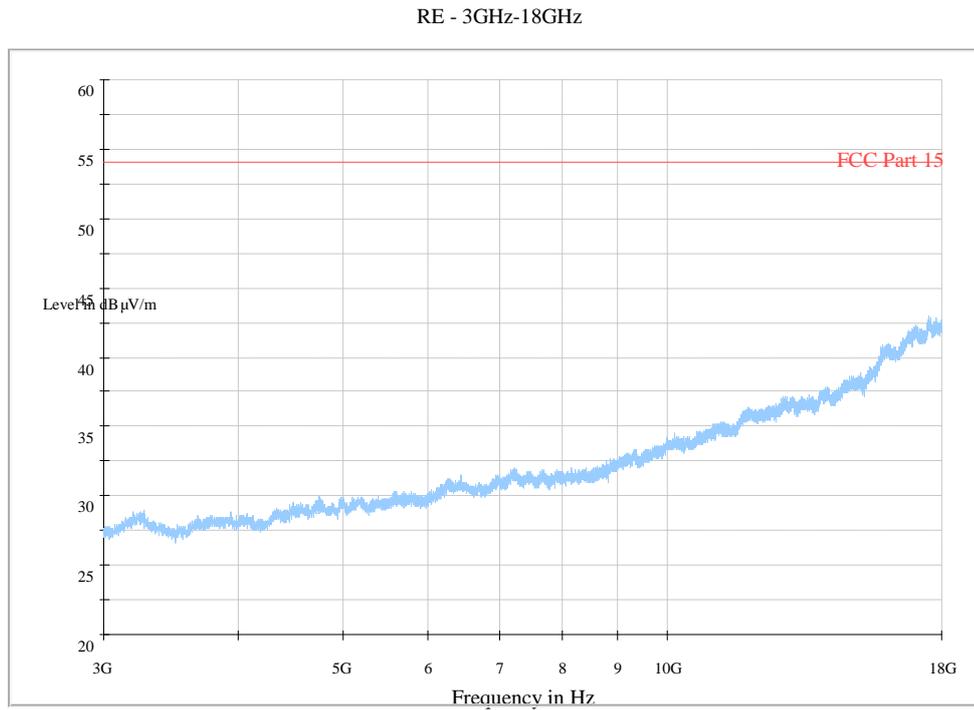
**Fig. 136 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



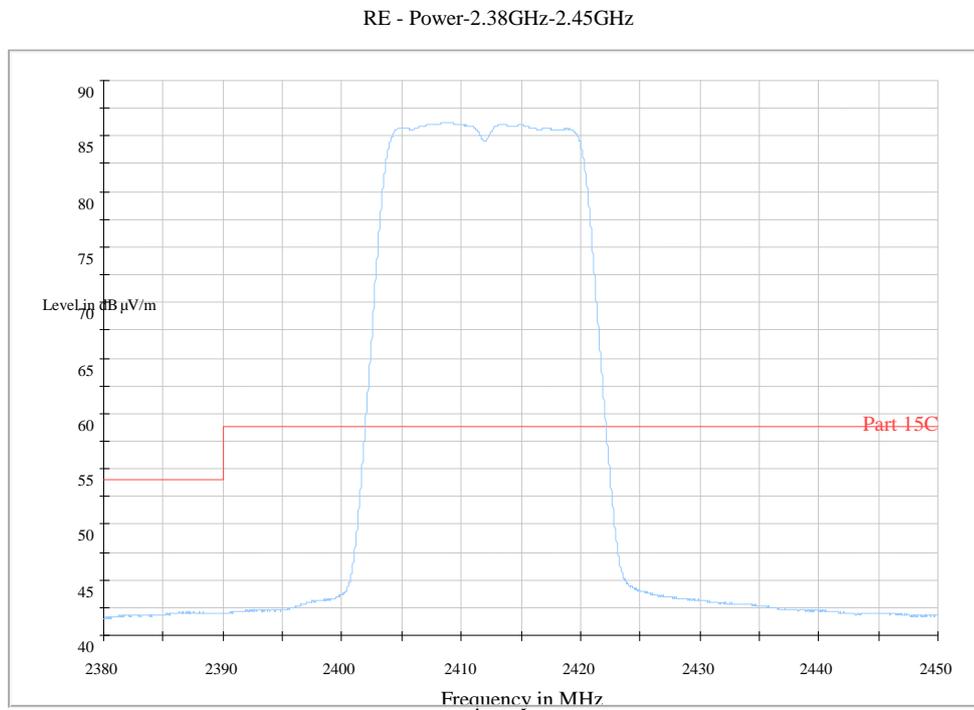
**Fig. 137 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)**



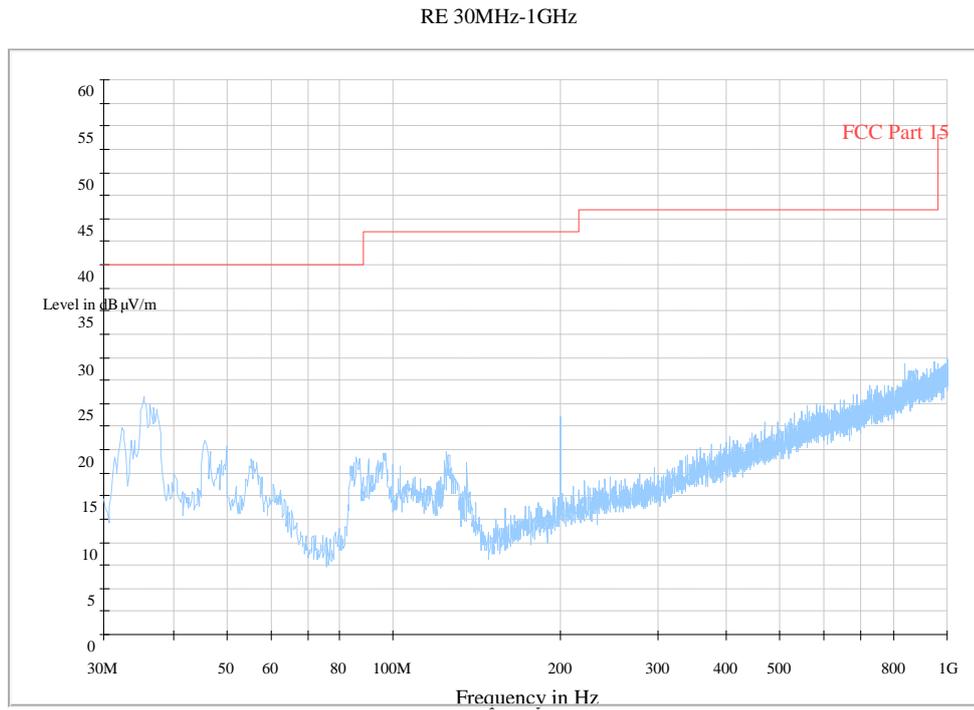
**Fig. 138 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)**



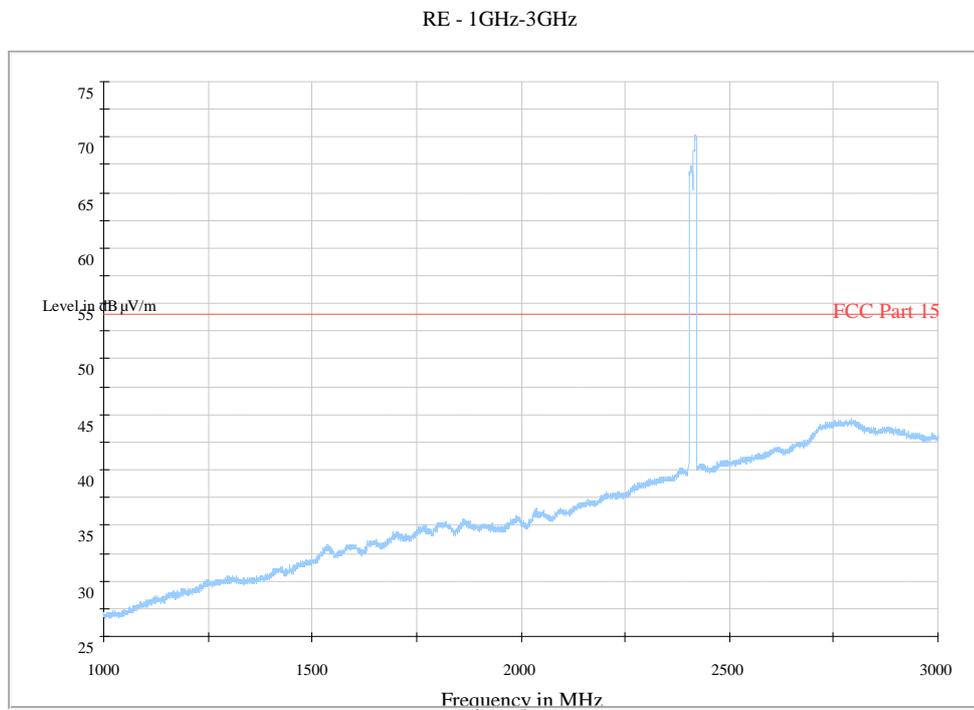
**Fig. 139 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)**



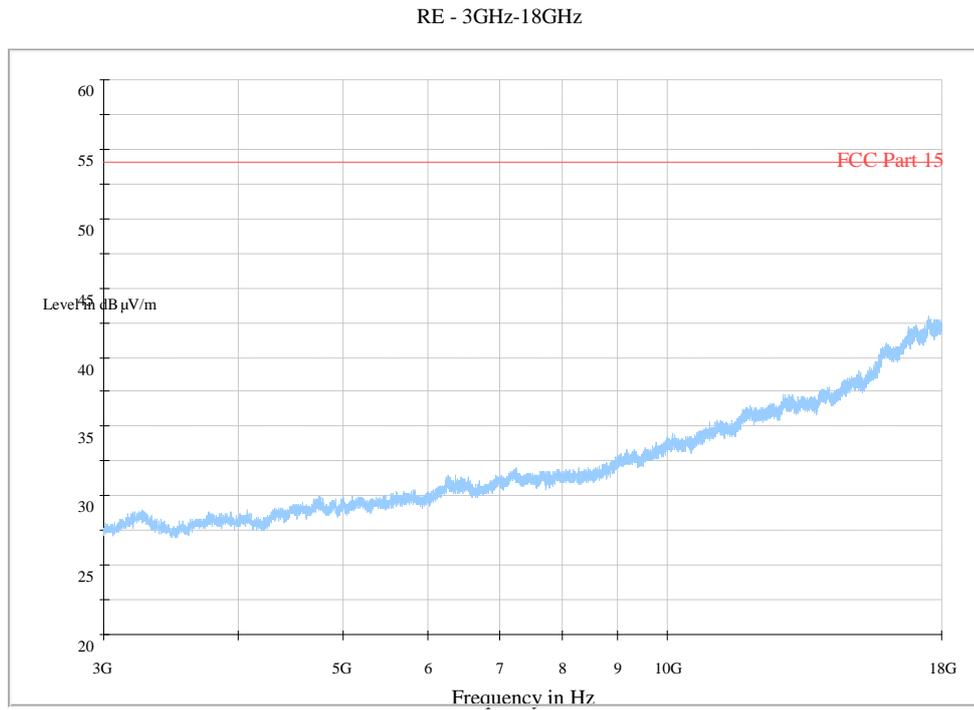
**Fig. 140 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz**



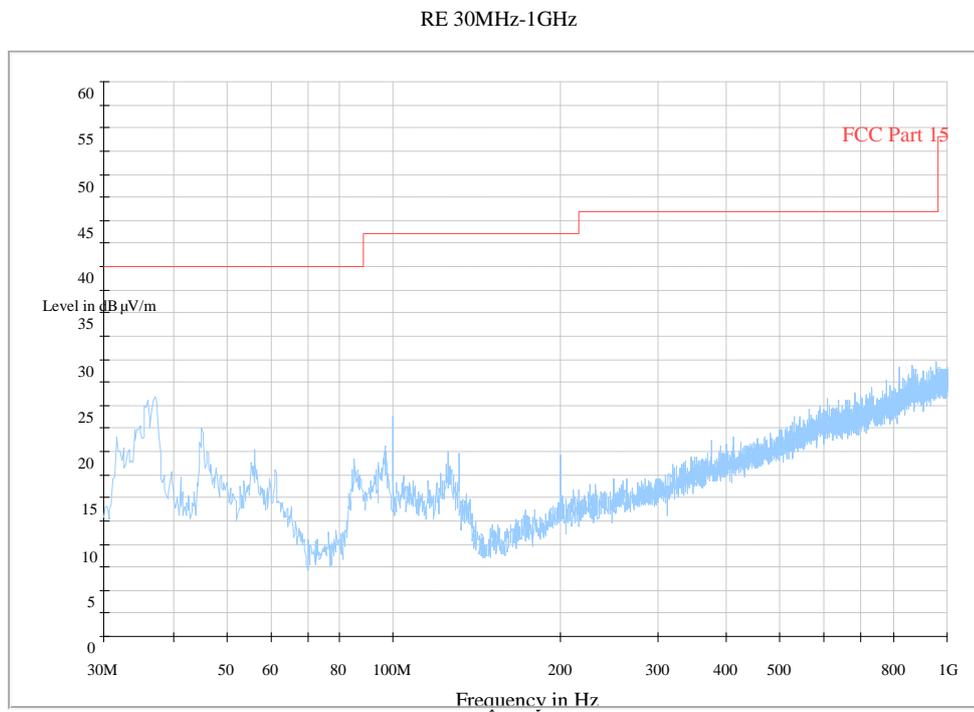
**Fig. 141 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)**



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

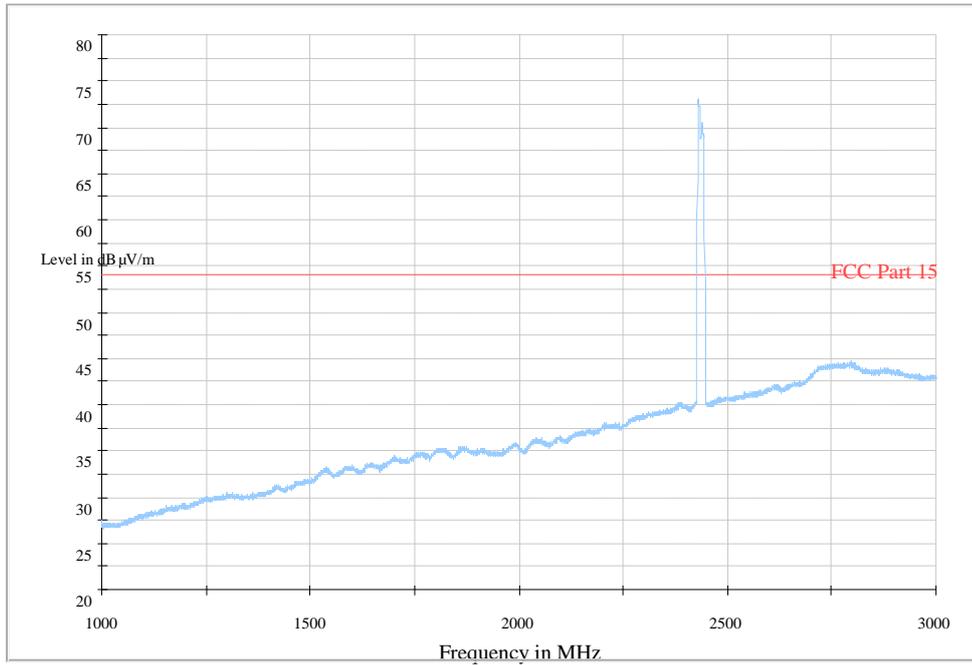


**Fig. 143 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)**



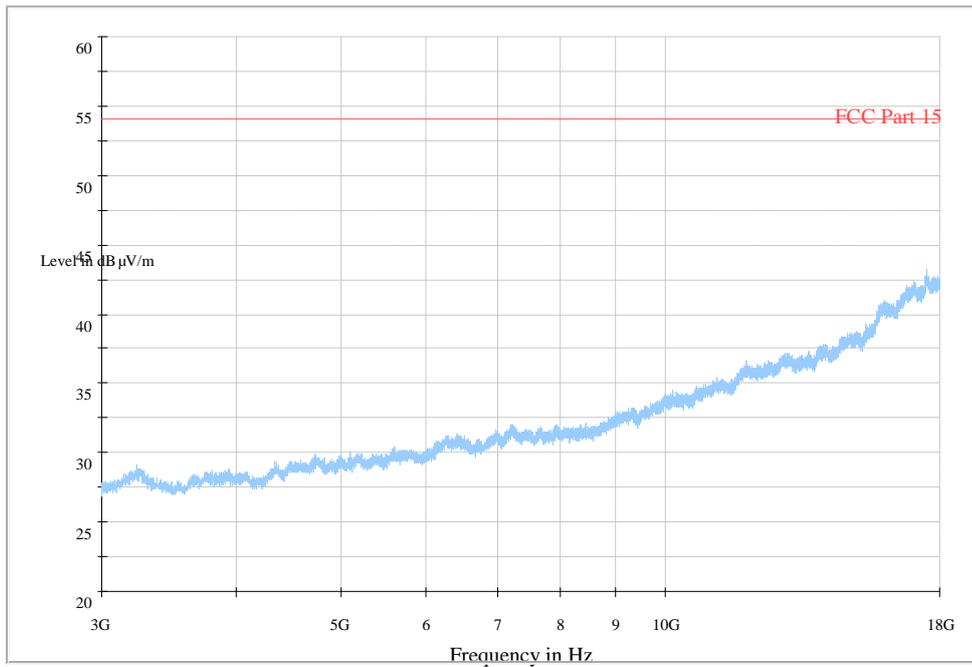
**Fig. 144 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)**

RE - 1GHz-3GHz

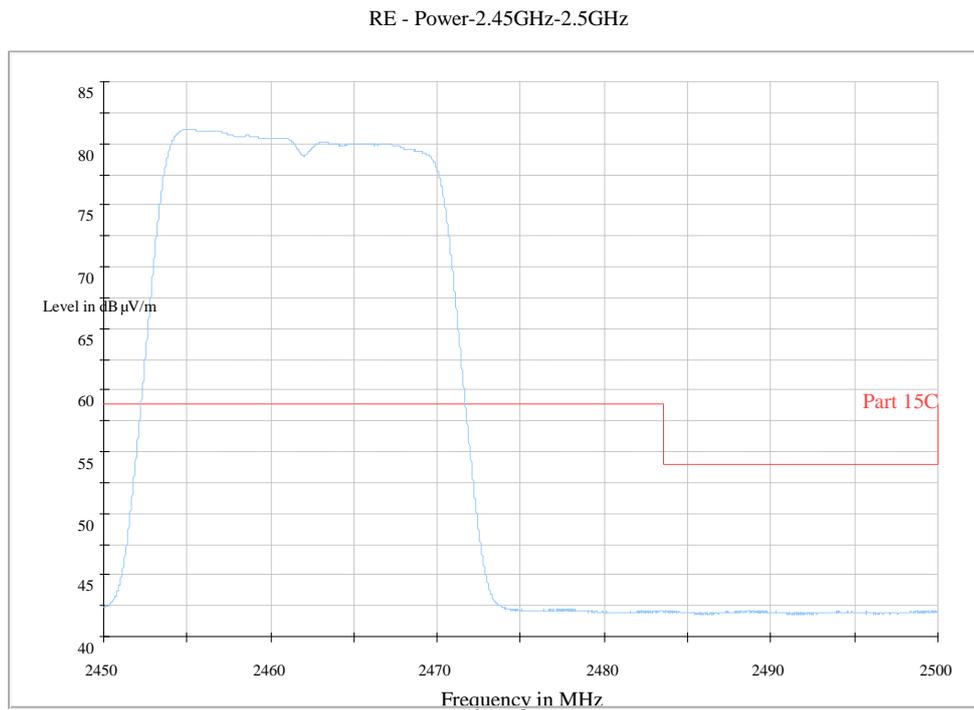


**Fig. 145 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)**

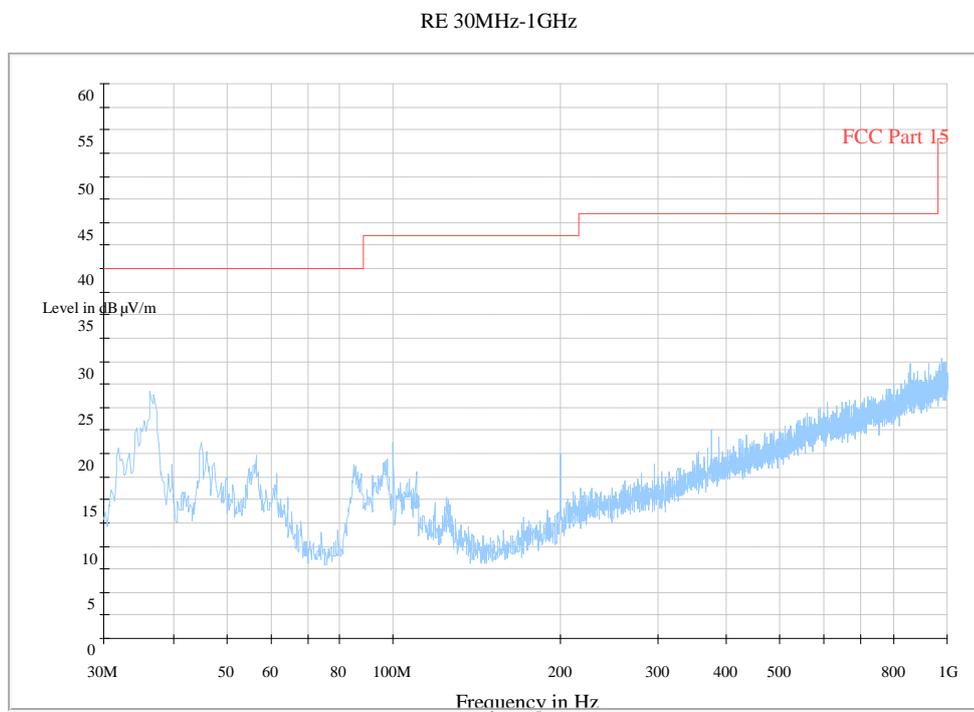
RE - 3GHz-18GHz



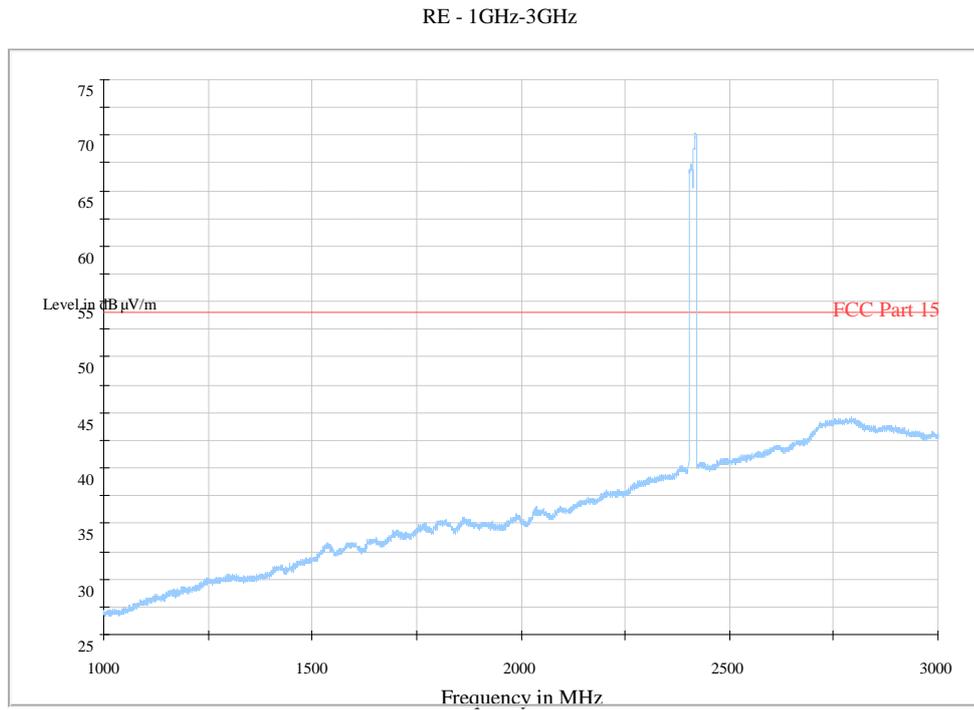
**Fig. 146 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)**



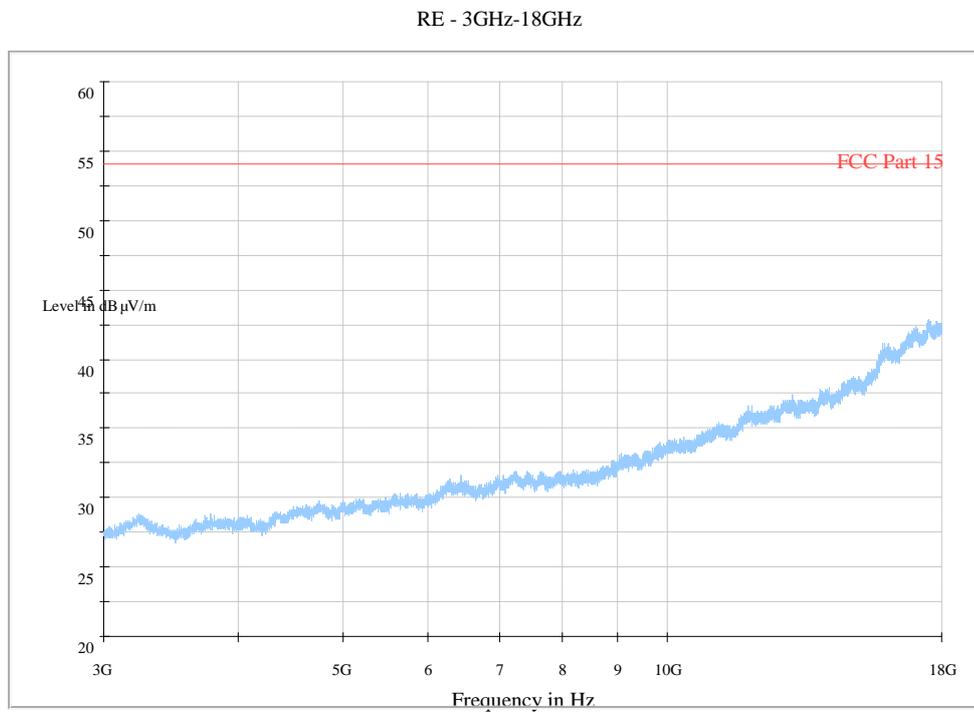
**Fig. 147 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**



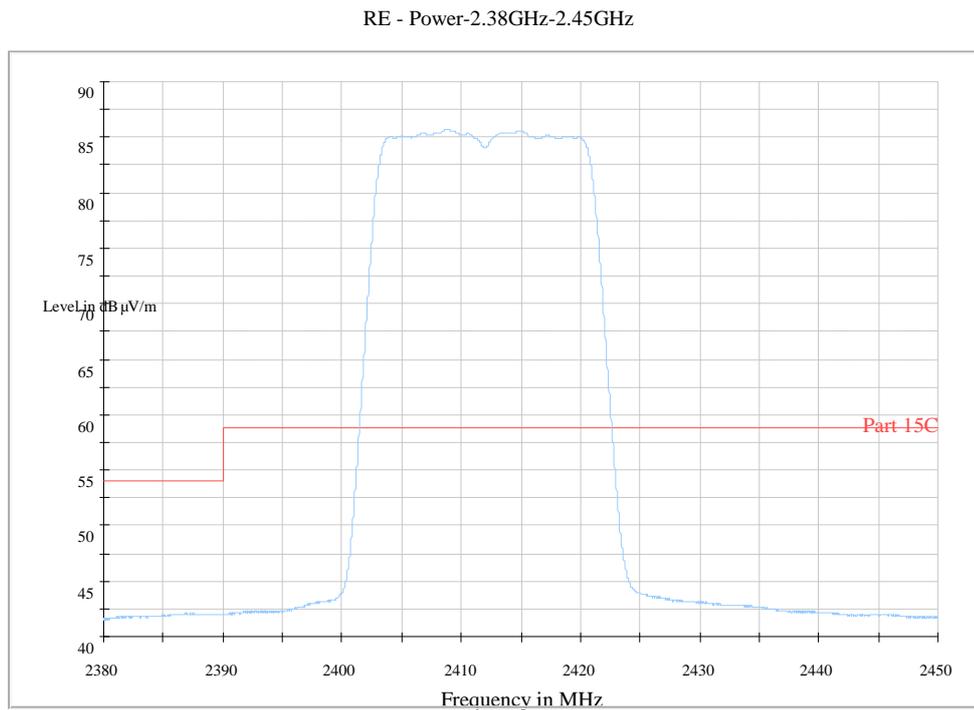
**Fig. 148 Radiated Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)**



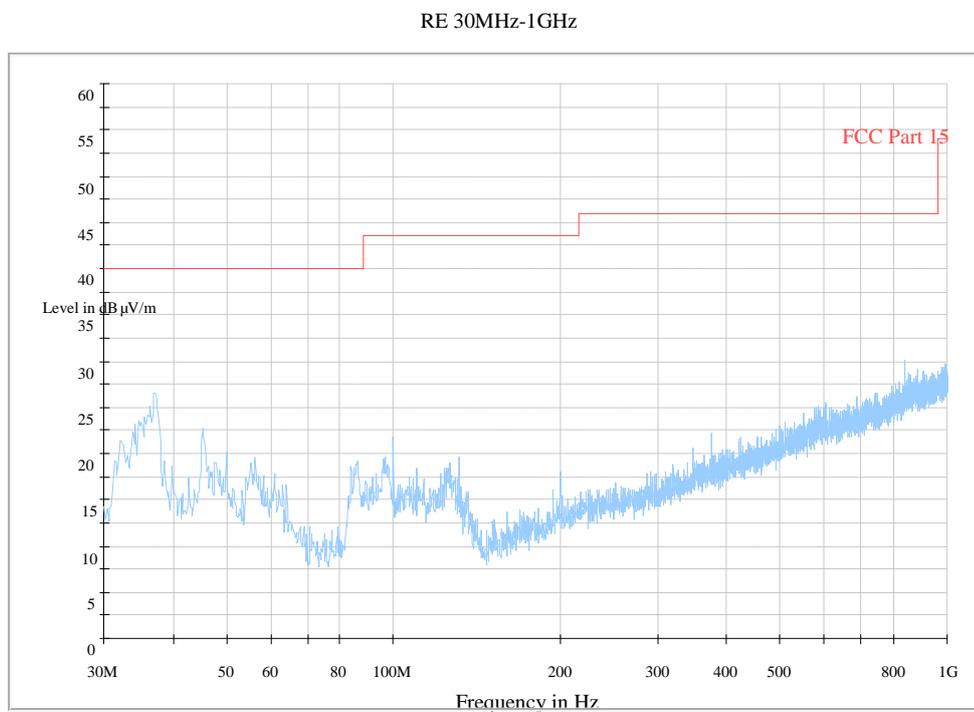
**Fig. 149 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)**



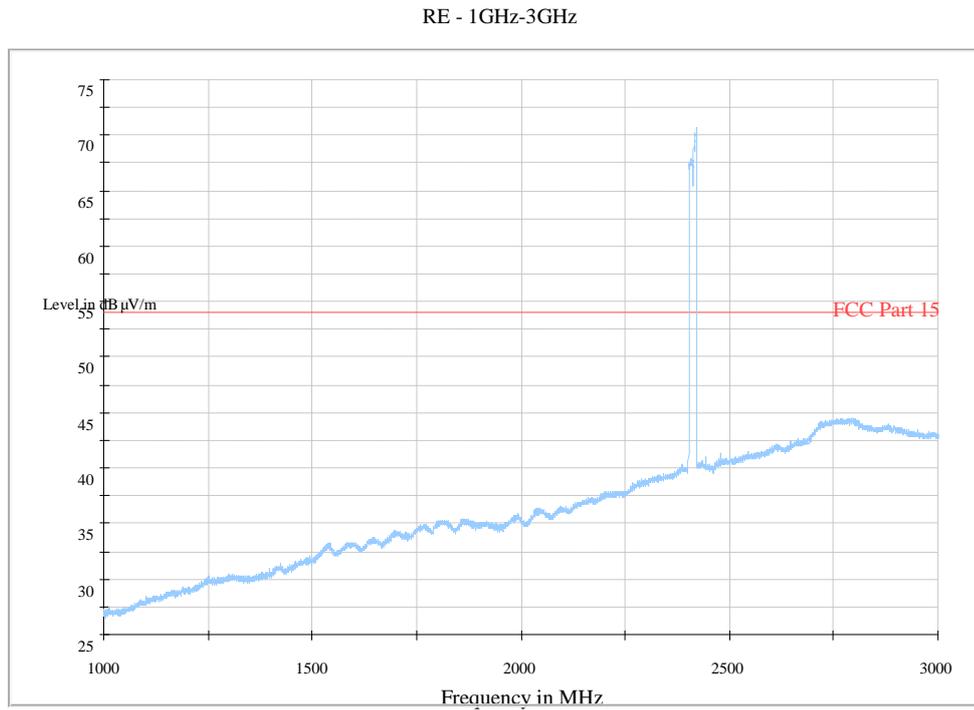
**Fig. 150 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)**



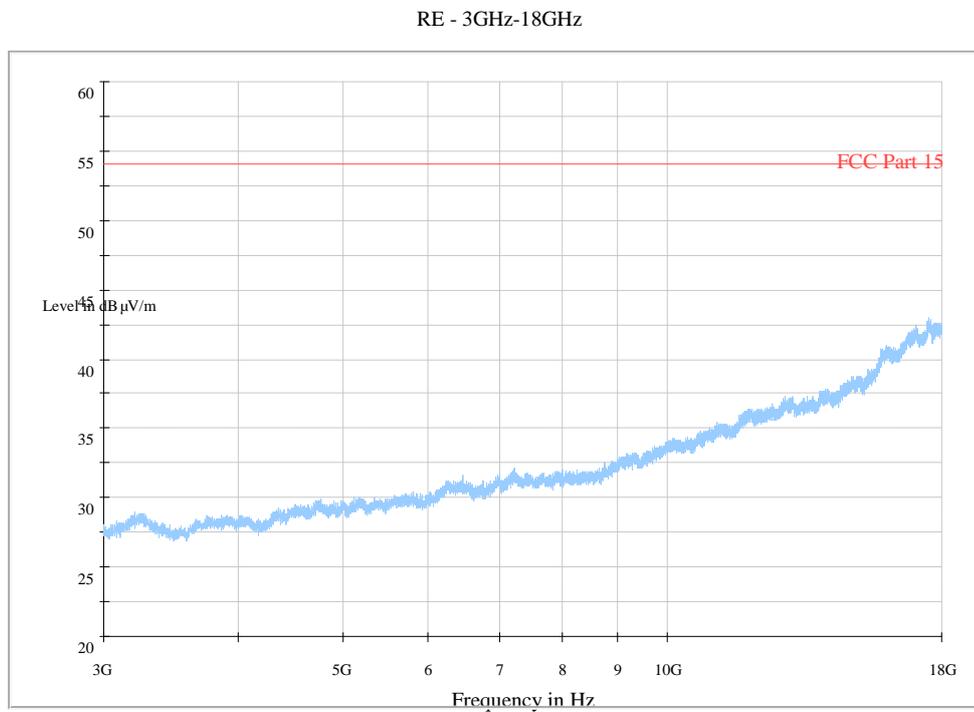
**Fig. 151 Radiated Spurious Emission (Power): 802.11n-20MHz, ch1, 2.38 GHz - 2.45GHz**



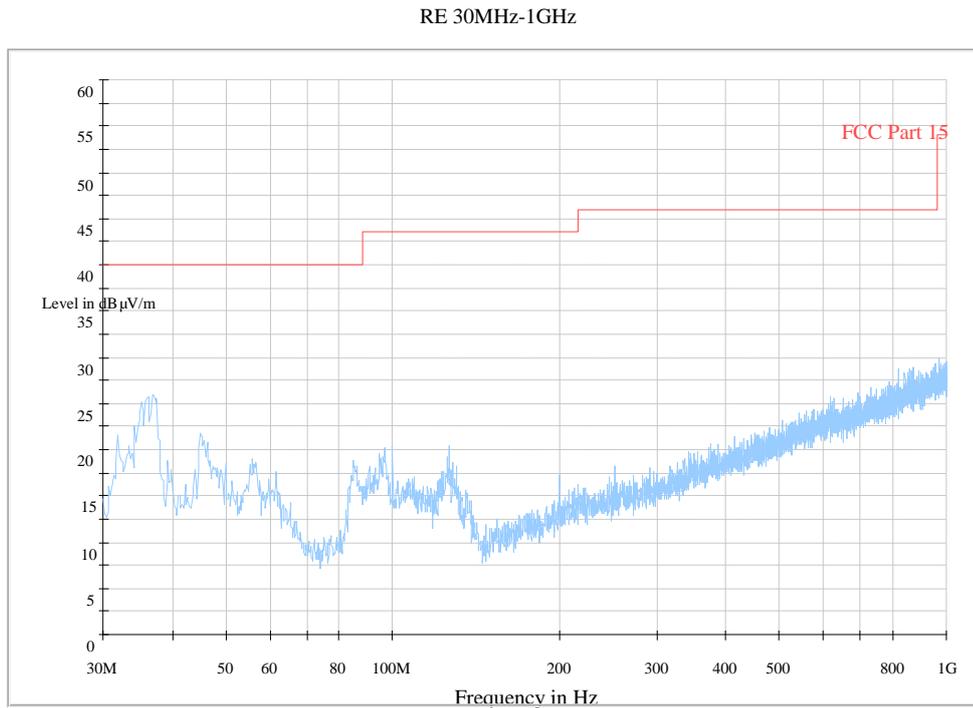
**Fig. 152 Radiated Spurious Emission (802.11n-20MHz, Ch1, 30 MHz-1 GHz)**



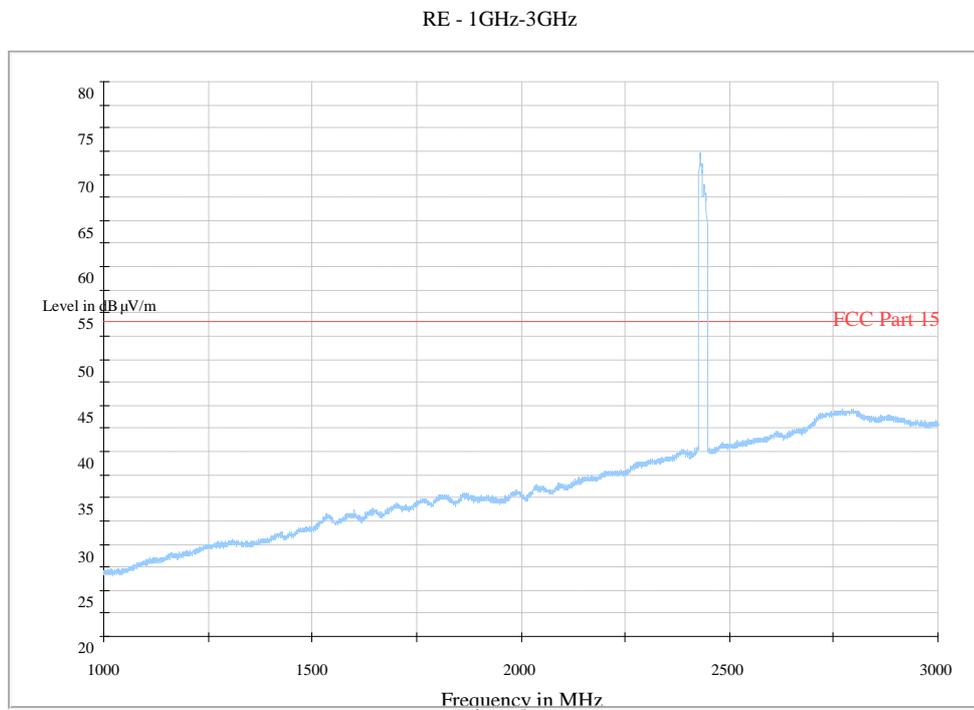
**Fig. 153 Radiated Spurious Emission (802.11n-20MHz, Ch1, 1 GHz-3 GHz)**



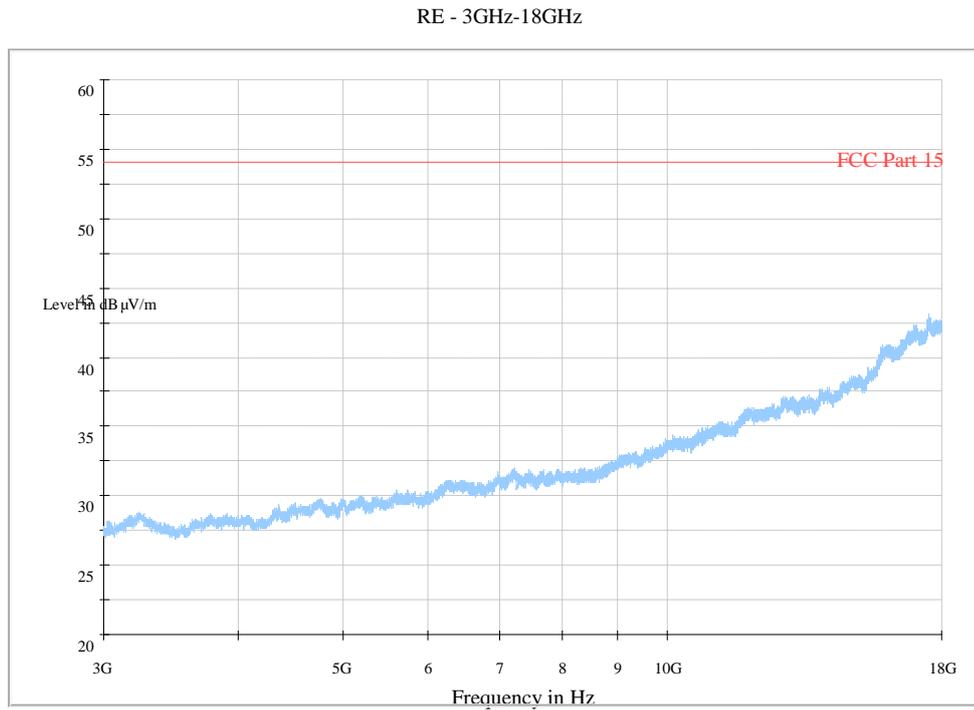
**Fig. 154 Radiated Spurious Emission (802.11n-20MHz, Ch1, 3 GHz-18 GHz)**



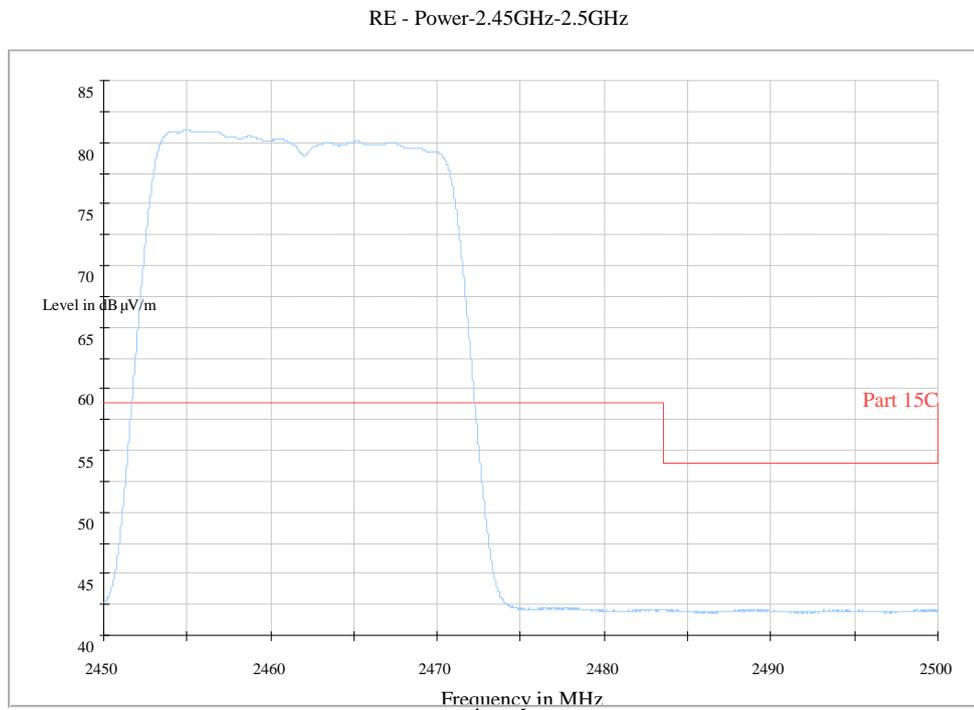
**Fig. 155 Radiated Spurious Emission (802.11n-20MHz, Ch6, 30 MHz-1 GHz)**



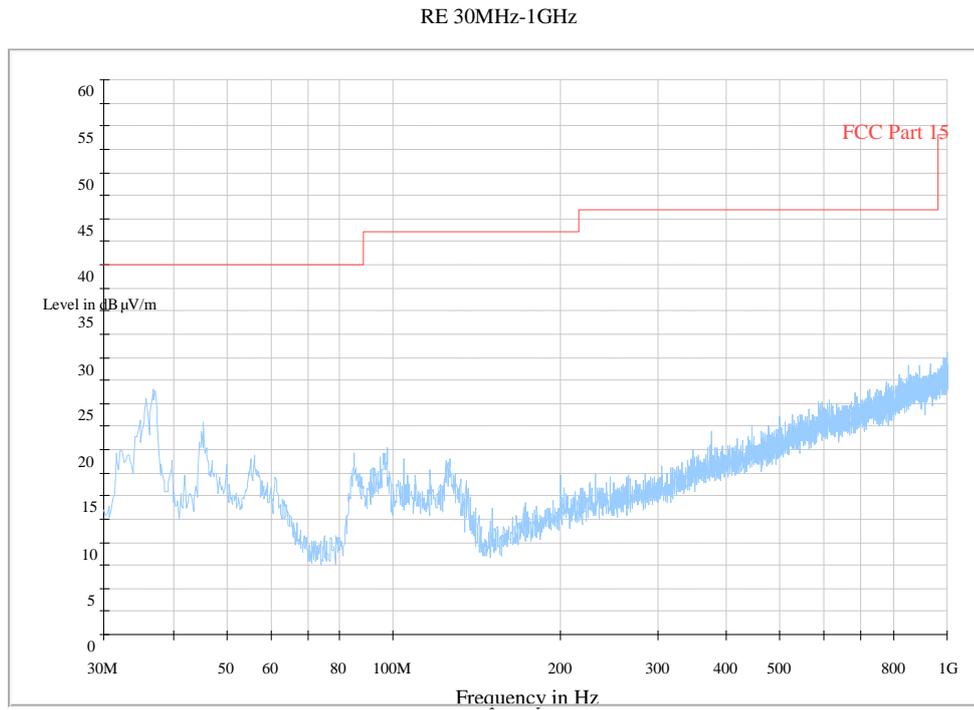
**Fig. 156 Radiated Spurious Emission (802.11n-20MHz, Ch6, 1 GHz-3 GHz)**



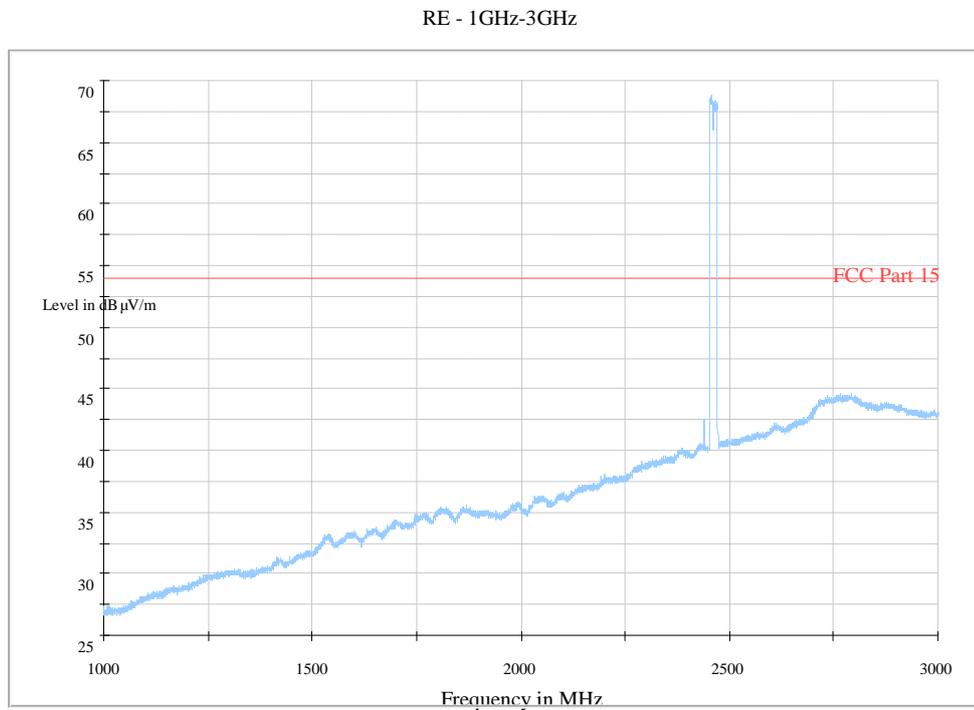
**Fig. 157 Radiated Spurious Emission (802.11n-20MHz, Ch6, 3 GHz-18 GHz)**



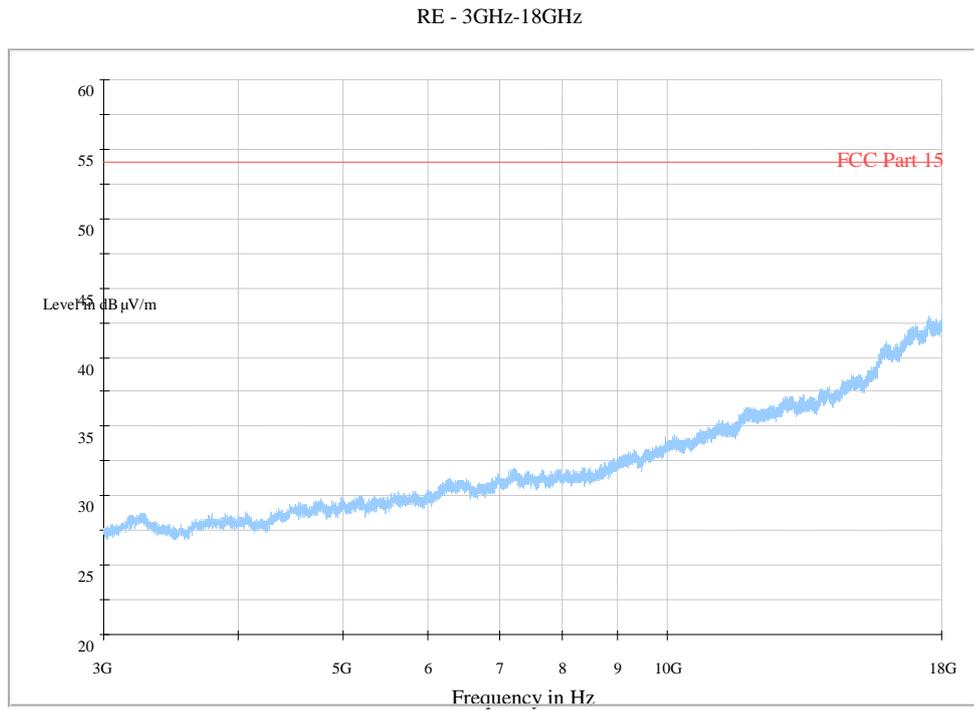
**Fig. 158 Radiated Spurious Emission (Power): 802.11n-20MHz, ch11, 2.45 GHz - 2.50GHz**



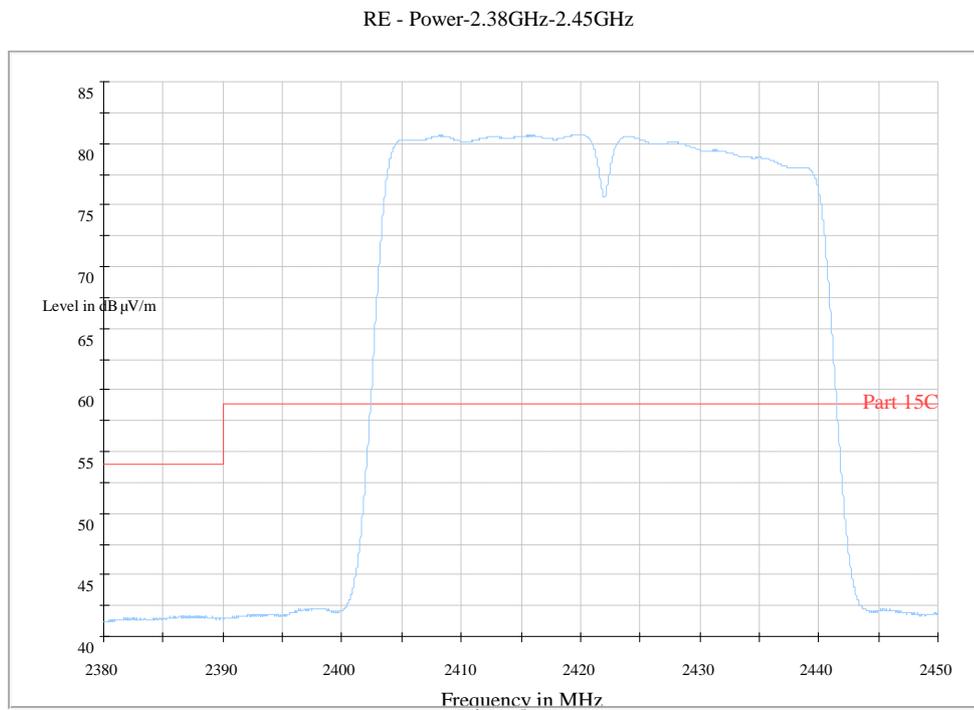
**Fig. 159 Radiated Spurious Emission (802.11n-20MHz, Ch11, 30 MHz-1 GHz)**



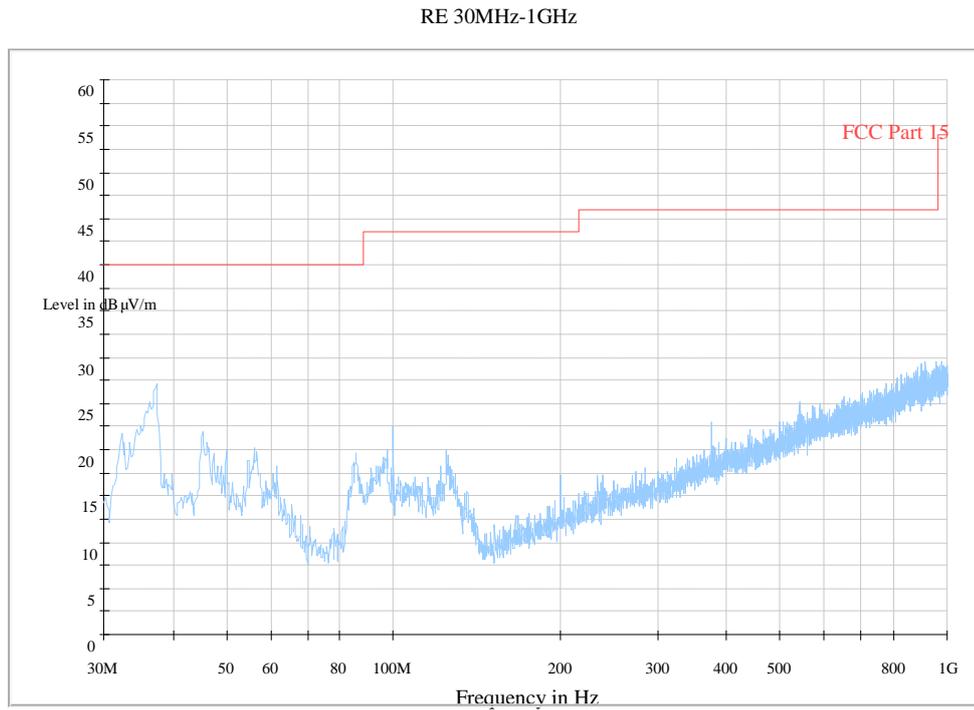
**Fig. 160 Radiated Spurious Emission (802.11n-20MHz, Ch11, 1 GHz-3 GHz)**



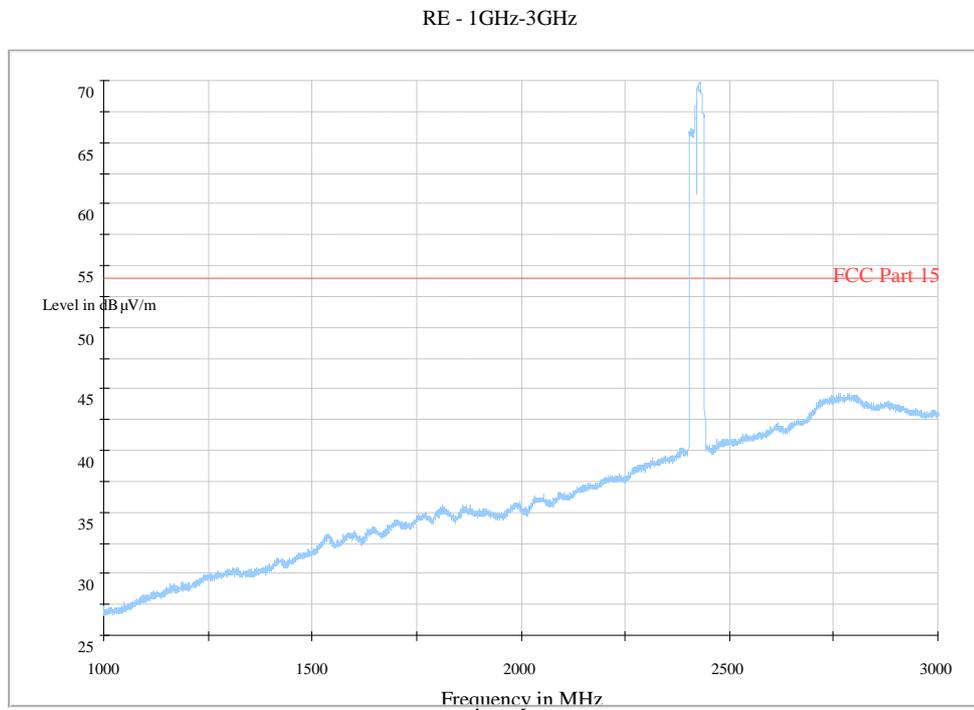
**Fig. 161 Radiated Spurious Emission (802.11n-20MHz, Ch11, 3 GHz-18 GHz)**



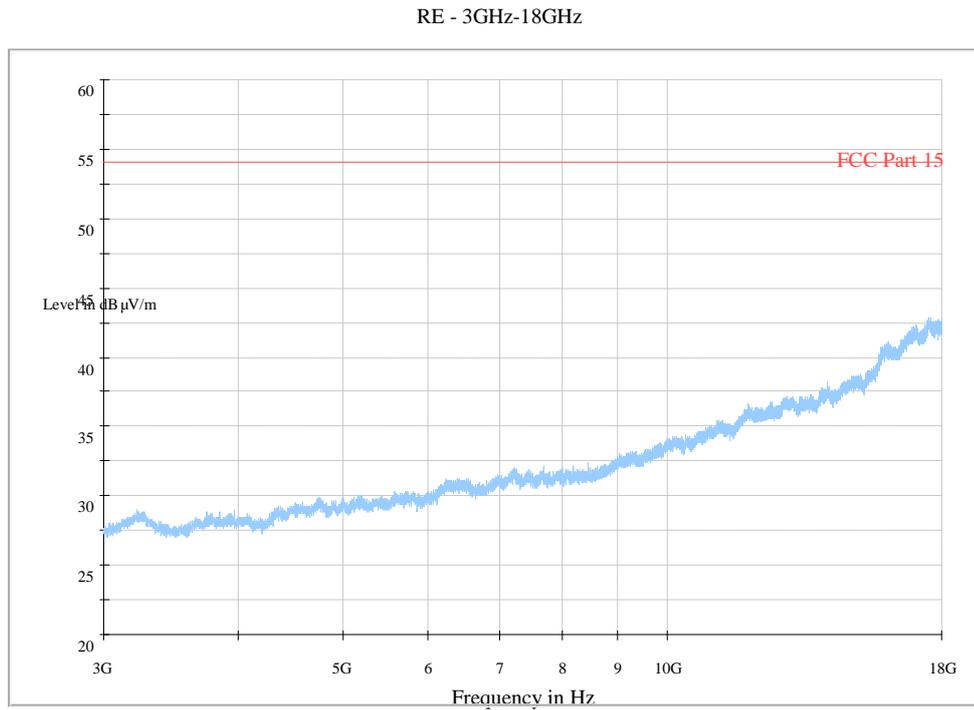
**Fig. 162 Radiated Spurious Emission (Power): 802.11n-40MHz, ch3, 2.38 GHz - 2.45GHz**



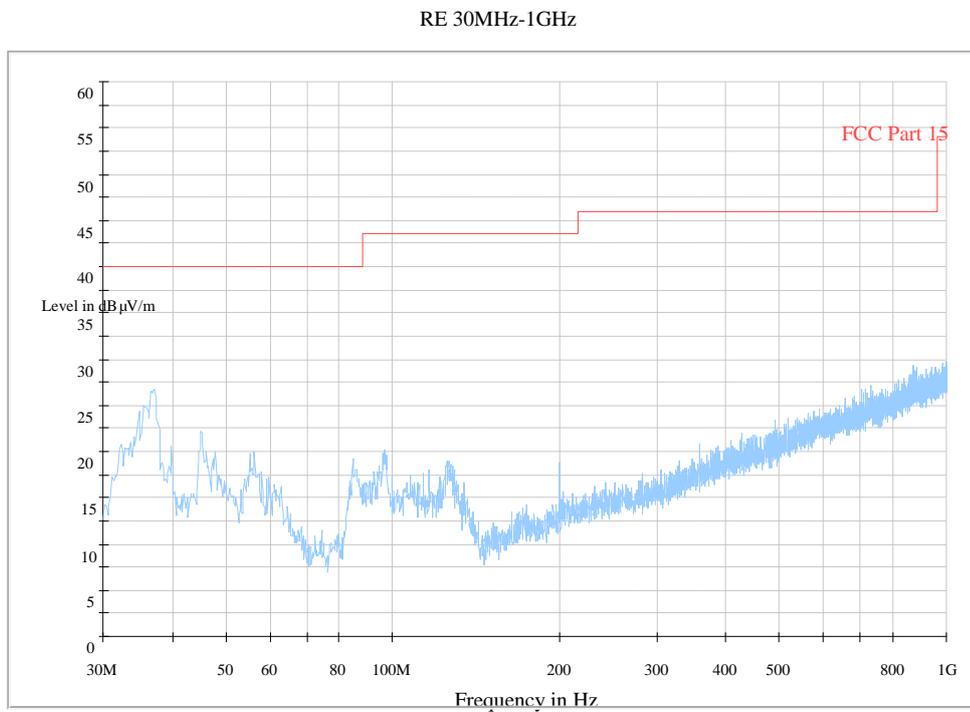
**Fig. 163 Radiated Spurious Emission (802.11n-40MHz, Ch3, 30 MHz-1 GHz)**



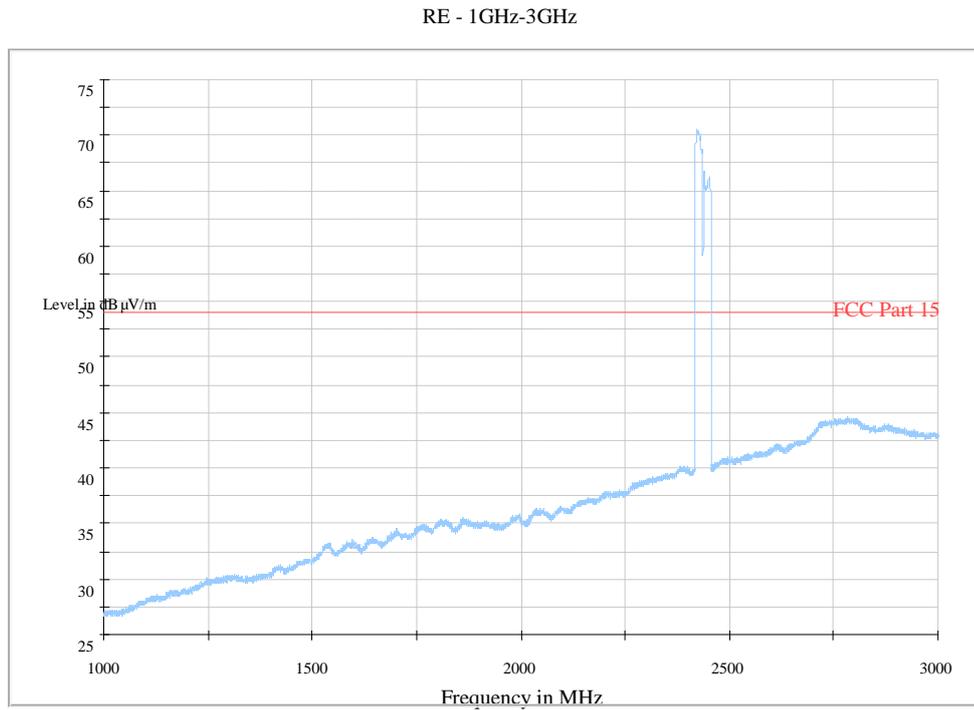
**Fig. 164 Radiated Spurious Emission (802.11n-40MHz, Ch3, 1 GHz-3 GHz)**



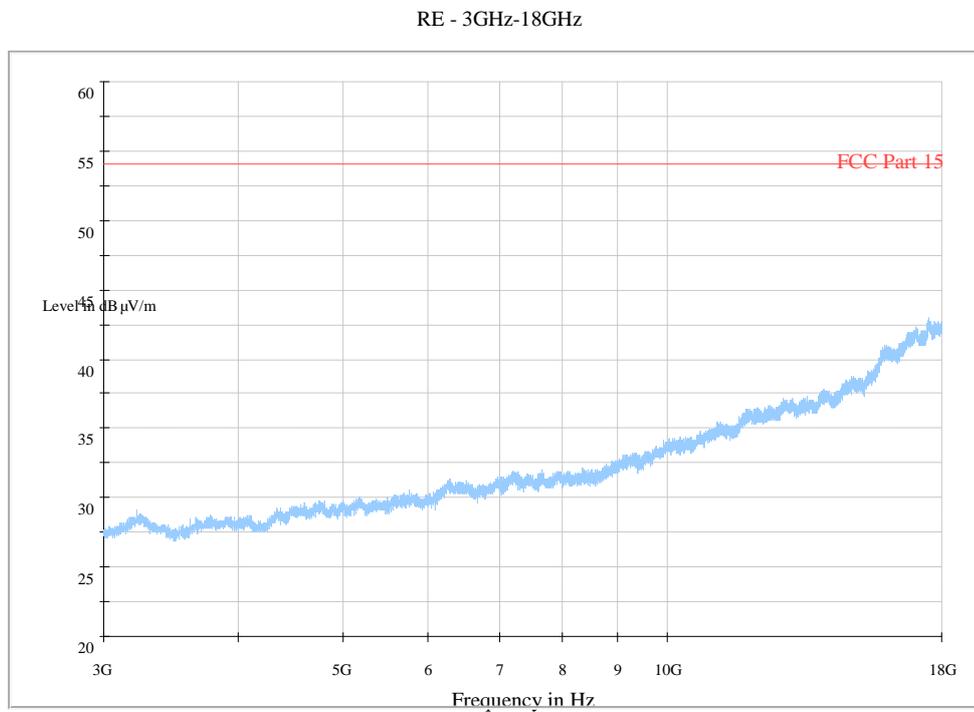
**Fig. 165 Radiated Spurious Emission (802.11n-40MHz, Ch3, 3 GHz-18 GHz)**



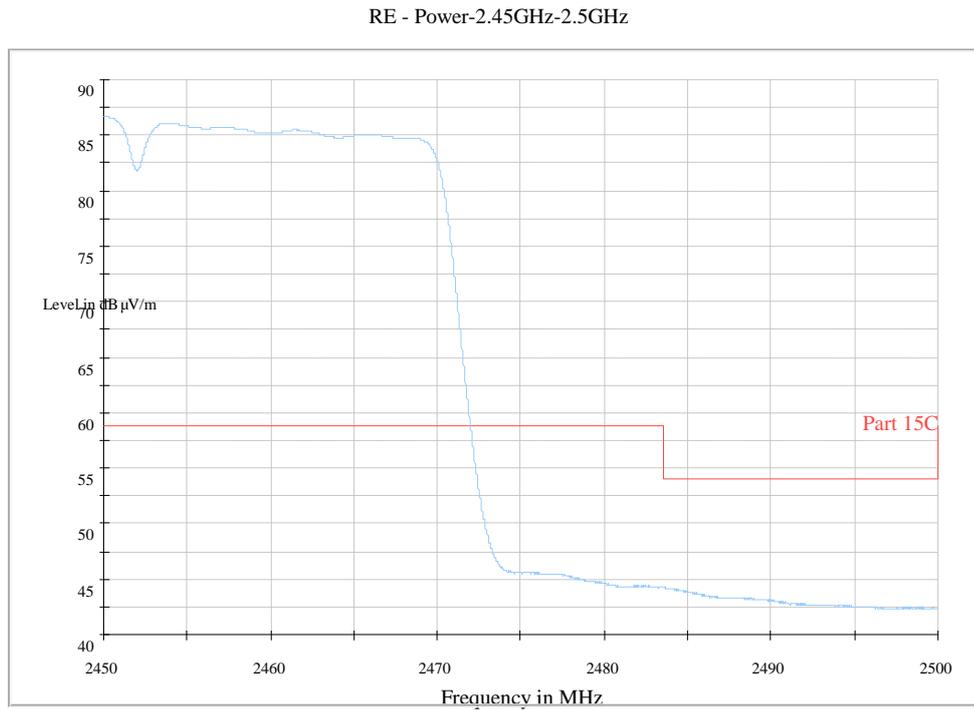
**Fig. 166 Radiated Spurious Emission (802.11n-40MHz, Ch6, 30 MHz-1 GHz)**



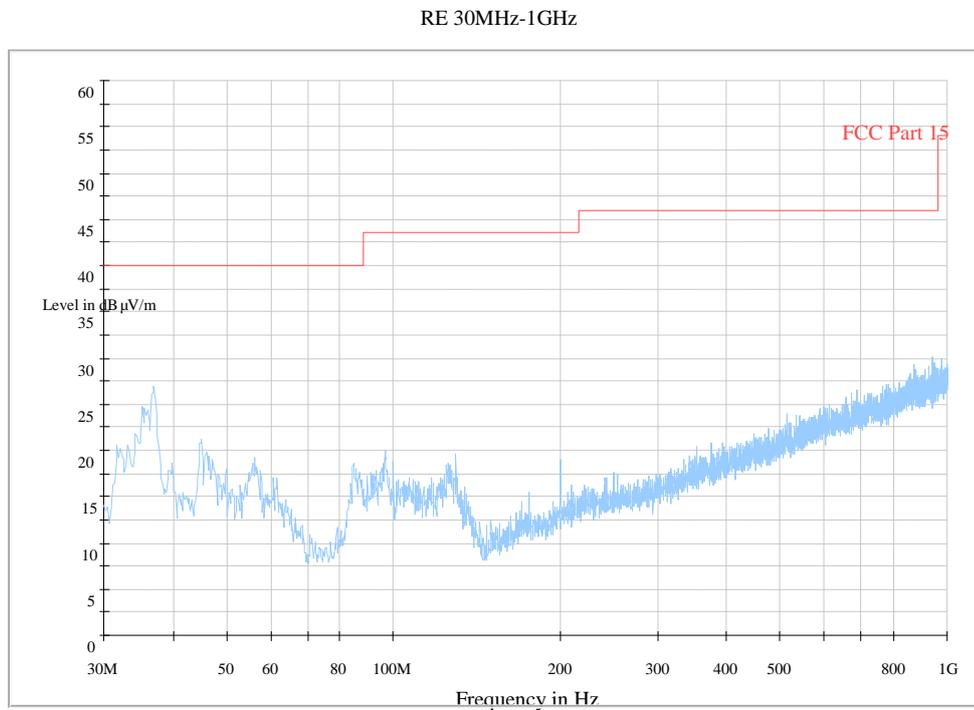
**Fig. 167 Radiated Spurious Emission (802.11n-40MHz, Ch6, 1 GHz-3 GHz)**



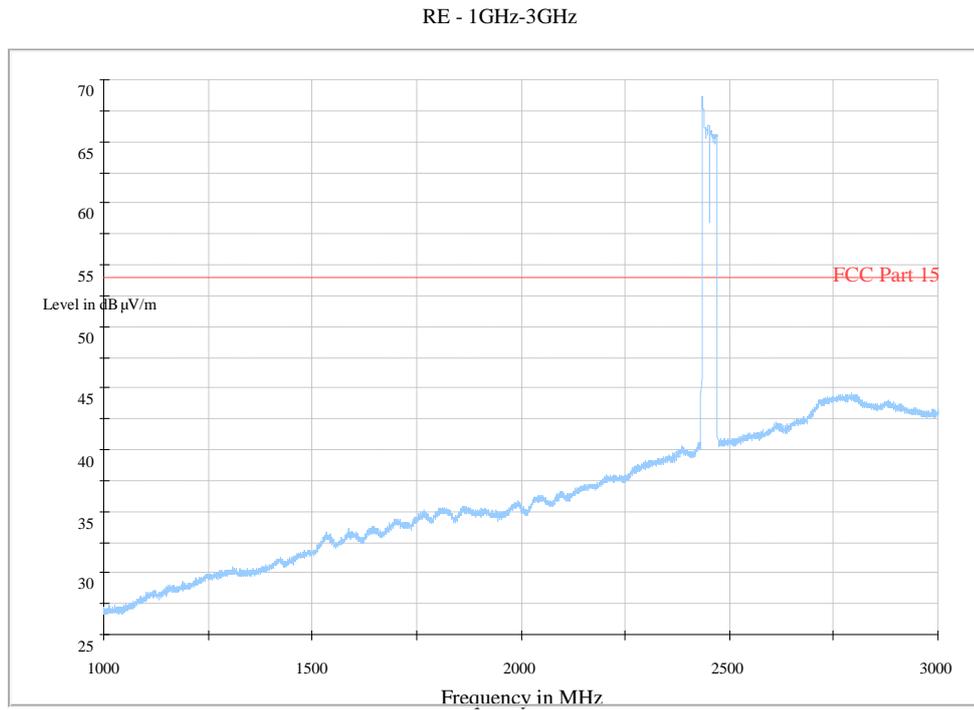
**Fig. 168 Radiated Spurious Emission (802.11n-40MHz, Ch6, 3 GHz-18 GHz)**



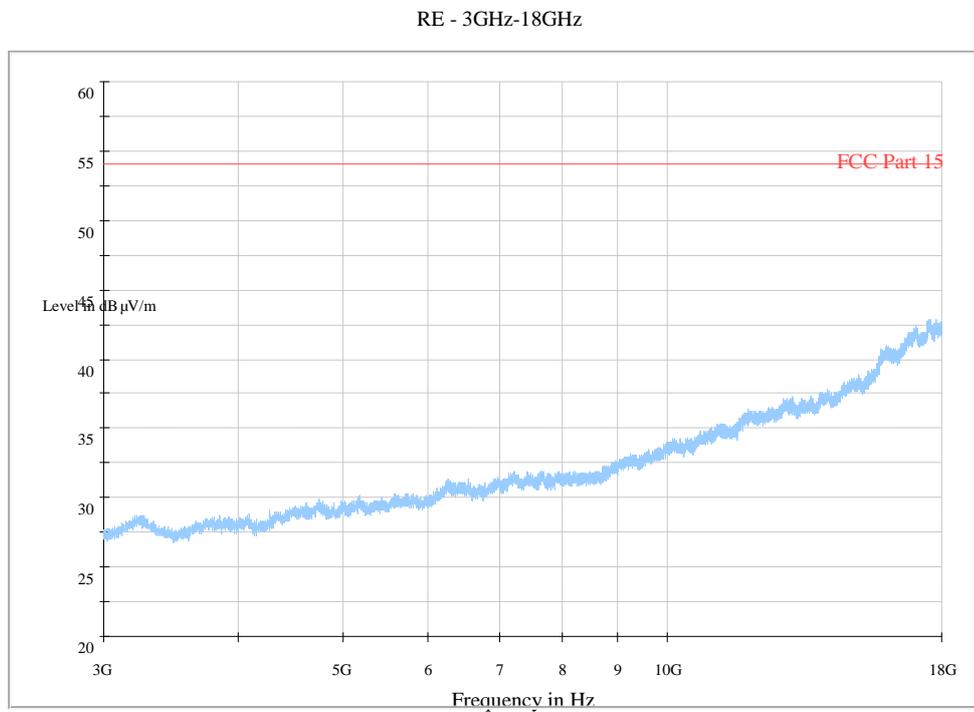
**Fig. 169 Radiated Spurious Emission (Power): 802.11n-40MHz, ch9, 2.45 GHz - 2.50GHz**



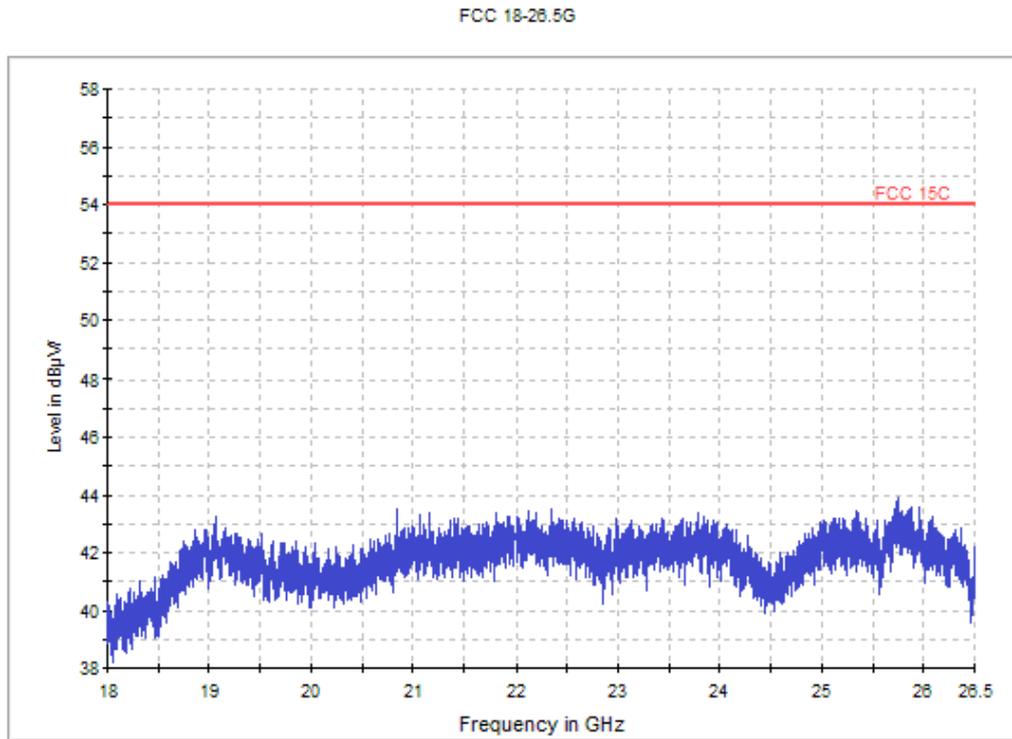
**Fig. 170 Radiated Spurious Emission (802.11n-40MHz, Ch9, 30 MHz-1 GHz)**



**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)**



**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	
0.15 to 0.5	66 to 56	Fig. 174	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)

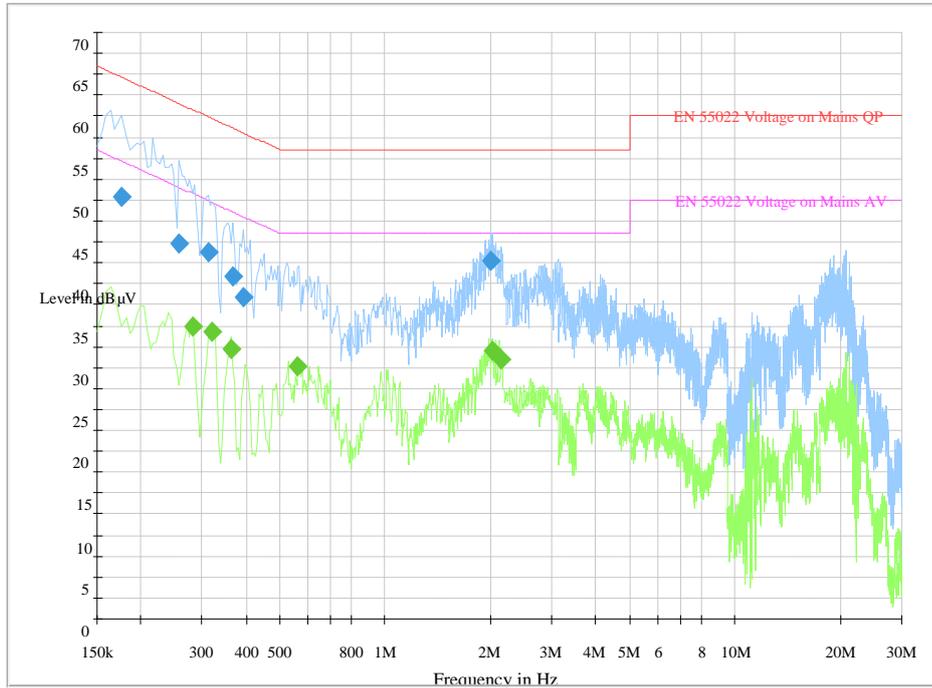
Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		With charger	
		802.11b	
0.15 to 0.5	56 to 46	Fig.174	P
0.5 to 5	46		
5 to 30	50		

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)
0.177000	50.4	GND	L1	10.0	14.2	64.6
0.258000	44.8	GND	L1	10.0	16.7	61.5
0.312000	43.7	GND	L1	10.0	16.2	59.9
0.366000	40.9	GND	L1	10.0	17.7	58.6
0.393000	38.3	GND	L1	10.0	19.7	58.0
2.013000	42.8	GND	L1	10.0	13.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.280500	34.9	GND	N	10.0	15.9	50.8
0.321000	34.3	GND	N	10.0	15.3	49.7
0.361500	32.2	GND	N	10.0	16.5	48.7
0.564000	30.1	GND	N	10.0	15.9	46.0
2.022000	32.0	GND	L1	10.0	14.0	46.0
2.143500	31.1	GND	L1	10.0	14.9	46.0

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