



FCC PART 15C TEST REPORT No. 2012WLN0407

for

ZTE Corporation

WCDMA/GSM (GPRS) Dual-Mode Digital Mobile Phone

Model: ZTE V790/Movistar Motion/V790/ZTE V790S

With

FCC ID: Q78-ZTEV790

Hardware Version: p8rA

Software Version: MOVISTAR_P752D03V1.0.0B01

Issued Date: 2012-08-31



Deutscher
Akkreditierungs
Rat

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No. DGA-PL-114/01-02

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

Note:The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

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CONTENTS

CONTENTS	2
1. TEST LABORATORY	6
1.1. TESTING LOCATION	6
1.2. TESTING ENVIRONMENT.....	6
1.3. PROJECT DATA	6
1.4. SIGNATURE	6
2. CLIENT INFORMATION.....	7
2.1. APPLICANT INFORMATION	7
2.2. MANUFACTURER INFORMATION.....	7
3. EQUIPMENT UNDER TEST(EUT) AND ANCILLARY EQUIPMENT(AE)	8
3.1. ABOUT EUT	8
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	8
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	8
3.4. GENERAL DESCRIPTION.....	8
4. REFERENCE DOCUMENTS	8
4.1. DOCUMENTS SUPPLIED BY APPLICANT	8
4.2. REFERENCE DOCUMENTS FOR TESTING	9
5. LABORATORY ENVIRONMENT.....	10
6. SUMMARY OF TEST RESULTS	11
6.1. SUMMARY OF TEST RESULTS	11
6.2. STATEMENTS.....	11
7. TEST EQUIPMENTS UTILIZED	12
ANNEX A: MEASUREMENT RESULTS.....	13
A.1. MEASUREMENT METHOD	13
A.2. MAXIMUM OUTPUT POWER.....	14
A.2.1. MAXIMUM PEAK OUTPUT POWER-CONDUCTED	14
A.2.2. MAXIMUM AVERAGE OUTPUT POWER-CONDUCTED.....	16
A.3. PEAK POWER SPECTRAL DENSITY	17
FIG. 1 POWER SPECTRAL DENSITY (802.11B, CH 1)	18
FIG. 2 POWER SPECTRAL DENSITY (802.11B, CH 6)	18
FIG. 3 POWER SPECTRAL DENSITY (802.11B, CH 11)	19
FIG. 4 POWER SPECTRAL DENSITY (802.11G, CH 1)	19
FIG. 5 POWER SPECTRAL DENSITY (802.11G, CH 6)	20
FIG. 6 POWER SPECTRAL DENSITY (802.11G, CH 11).....	20
FIG. 7 POWER SPECTRAL DENSITY (802.11N-20MHZ, CH 1)	21
FIG. 8 POWER SPECTRAL DENSITY (802.11N-20MHZ, CH 6)	21
FIG. 9 POWER SPECTRAL DENSITY (802.11N-20MHZ, CH 11)	22

A.4. OCCUPIED 6dB BANDWIDTH	23
FIG. 10 OCCUPIED 6dB BANDWIDTH (802.11B, CH 1).....	24
FIG. 11 OCCUPIED 6dB BANDWIDTH (802.11B, CH 6).....	24
FIG. 12 OCCUPIED 6dB BANDWIDTH (802.11B, CH 11).....	25
FIG. 13 OCCUPIED 6dB BANDWIDTH (802.11G, CH 1).....	25
FIG. 14 OCCUPIED 6dB BANDWIDTH (802.11G, CH 6).....	26
FIG. 15 OCCUPIED 6dB BANDWIDTH (802.11G, CH 11).....	26
FIG. 16 OCCUPIED 6dB BANDWIDTH (802.11N-20MHZ, CH 1).....	27
FIG. 17 OCCUPIED 6dB BANDWIDTH (802.11N-20MHZ, CH 6).....	27
FIG. 18 OCCUPIED 6dB BANDWIDTH (802.11N-20MHZ, CH 11).....	28
A.5. BAND EDGES COMPLIANCE	29
FIG. 19 BAND EDGES (802.11B, CH 1)	30
FIG. 20 BAND EDGES (802.11B, CH 11)	30
FIG. 21 BAND EDGES (802.11G, CH 1)	31
FIG. 22 BAND EDGES (802.11G, CH 11).....	31
FIG. 23 BAND EDGES (802.11N-20MHZ, CH 1)	32
FIG. 24 BAND EDGES (802.11N-20MHZ, CH 11)	32
A.6. TRANSMITTER SPURIOUS EMISSION	33
A.6.1 TRANSMITTER SPURIOUS EMISSION - CONDUCTED	33
FIG. 25 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, CENTER FREQUENCY)	37
FIG. 26 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 30 MHZ-1 GHZ).....	37
FIG. 27 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 1 GHZ-2.5 GHZ)	38
FIG. 28 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 2.5 GHZ-7.5 GHZ).....	38
FIG. 29 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 7.5 GHZ-10 GHZ).....	39
FIG. 30 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 10 GHZ-15 GHZ).....	39
FIG. 31 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 15 GHZ-20 GHZ).....	40
FIG. 32 CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 20 GHZ-26 GHZ).....	40
FIG. 33 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, CENTER FREQUENCY)	41
FIG. 34 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 30 MHZ-1 GHZ).....	41
FIG. 35 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 1 GHZ-2.5 GHZ)	42
FIG. 36 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 2.5 GHZ-7.5 GHZ).....	42
FIG. 37 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 7.5 GHZ-10 GHZ).....	43
FIG. 38 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 10 GHZ-15 GHZ).....	43
FIG. 39 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 15 GHZ-20 GHZ).....	44
FIG. 40 CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 20 GHZ-26 GHZ).....	44
FIG. 41 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, CENTER FREQUENCY)	45
FIG. 42 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 30 MHZ-1 GHZ)	45
FIG. 43 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 1 GHZ-2.5 GHZ).....	46
FIG. 44 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 2.5 GHZ-7.5 GHZ).....	46
FIG. 45 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 7.5 GHZ-10 GHZ).....	47
FIG. 46 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 10 GHZ-15 GHZ).....	47
FIG. 47 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 15 GHZ-20 GHZ).....	48
FIG. 48 CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 20 GHZ-26 GHZ).....	48
FIG. 49 CONDUCTED SPURIOUS EMISSION (802.11G, CH1, CENTER FREQUENCY)	49

FIG. 50	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 30 MHz-1 GHz)	49
FIG. 51	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 1 GHz-2.5 GHz).....	50
FIG. 52	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 2.5 GHz-7.5 GHz).....	50
FIG. 53	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 7.5 GHz-10 GHz).....	51
FIG. 54	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 10 GHz-15 GHz).....	51
FIG. 55	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 15 GHz-20 GHz).....	52
FIG. 56	CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 20 GHz-26 GHz).....	52
FIG. 57	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, CENTER FREQUENCY)	53
FIG. 58	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 30 MHz-1 GHz)	53
FIG. 59	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 1 GHz-2.5 GHz).....	54
FIG. 60	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 2.5 GHz-7.5 GHz).....	54
FIG. 61	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 7.5 GHz-10 GHz).....	55
FIG. 62	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 10 GHz-15 GHz).....	55
FIG. 63	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 15 GHz-20 GHz).....	56
FIG. 64	CONDUCTED SPURIOUS EMISSION (802.11G, CH6, 20 GHz-26 GHz).....	56
FIG. 65	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, CENTER FREQUENCY).....	57
FIG. 66	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 30 MHz-1 GHz)	57
FIG. 67	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 1 GHz-2.5 GHz).....	58
FIG. 68	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 2.5 GHz-7.5 GHz).....	58
FIG. 69	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 7.5 GHz-10 GHz).....	59
FIG. 70	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 10 GHz-15 GHz).....	59
FIG. 71	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 15 GHz-20 GHz).....	60
FIG. 72	CONDUCTED SPURIOUS EMISSION (802.11G, CH11, 20 GHz-26 GHz).....	60
FIG. 73	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, CENTER FREQUENCY)	61
FIG. 74	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 30 MHz-1 GHz)	61
FIG. 75	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 1 GHz-2.5 GHz).....	62
FIG. 76	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 2.5 GHz-7.5 GHz).....	62
FIG. 77	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 7.5 GHz-10 GHz).....	63
FIG. 78	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 10 GHz-15 GHz).....	63
FIG. 79	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 15 GHz-20 GHz).....	64
FIG. 80	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH1, 20 GHz-26 GHz).....	64
FIG. 81	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, CENTER FREQUENCY)	65
FIG. 82	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 30 MHz-1 GHz)	65
FIG. 83	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 1 GHz-2.5 GHz).....	66
FIG. 84	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 2.5 GHz-7.5 GHz).....	66
FIG. 85	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 7.5 GHz-10 GHz).....	67
FIG. 86	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 10 GHz-15 GHz).....	67
FIG. 87	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 15 GHz-20 GHz).....	68
FIG. 88	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH6, 20 GHz-26 GHz).....	68
FIG. 89	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, CENTER FREQUENCY).....	69
FIG. 90	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 30 MHz-1 GHz)	69
FIG. 91	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 1 GHz-2.5 GHz).....	70
FIG. 92	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 2.5 GHz-7.5 GHz).....	70
FIG. 93	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 7.5 GHz-10 GHz).....	71

FIG. 94	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 10 GHz-15 GHz).....	71
FIG. 95	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 15 GHz-20 GHz).....	72
FIG. 96	CONDUCTED SPURIOUS EMISSION (802.11N-HT20, CH11, 20 GHz-26 GHz).....	72
A.6.2 TRANSMITTER SPURIOUS EMISSION - RADIATED.....		73
FIG. 97	RADIATED SPURIOUS EMISSION (POWER): 802.11B, CH1, 2.38 GHz – 2.5GHz.....	80
FIG. 98	RADIATED SPURIOUS EMISSION (802.11B, CH1, 30 MHz-1 GHz).....	80
FIG. 99	RADIATED SPURIOUS EMISSION (802.11B, CH1, 1 GHz-3 GHz)	81
FIG. 100	RADIATED SPURIOUS EMISSION (802.11B, CH1, 3 GHz-18 GHz)	81
FIG. 101	RADIATED SPURIOUS EMISSION (802.11B, CH6, 30 MHz-1 GHz).....	82
FIG. 102	RADIATED SPURIOUS EMISSION (802.11B, CH6, 1 GHz-3 GHz)	82
FIG. 103	RADIATED SPURIOUS EMISSION (802.11B, CH6, 3 GHz-18 GHz)	83
FIG. 104	RADIATED SPURIOUS EMISSION (POWER): 802.11B, CH11, 2.38 GHz - 2.5GHz.....	83
FIG. 105	RADIATED SPURIOUS EMISSION (802.11B, CH11, 30 MHz-1 GHz).....	84
FIG. 106	RADIATED SPURIOUS EMISSION (802.11B, CH11, 1 GHz-3 GHz)	84
FIG. 107	RADIATED SPURIOUS EMISSION (802.11B, CH11, 3 GHz-18 GHz)	85
FIG. 108	RADIATED SPURIOUS EMISSION (POWER): 802.11G, CH1, 2.38 GHz - 2.5GHz.....	85
FIG. 109	RADIATED SPURIOUS EMISSION (802.11G, CH1, 30 MHz-1 GHz).....	86
FIG. 110	RADIATED SPURIOUS EMISSION (802.11G, CH1, 1 GHz-3 GHz)	86
FIG. 111	RADIATED SPURIOUS EMISSION (802.11G, CH1, 3 GHz-18 GHz)	87
FIG. 112	RADIATED SPURIOUS EMISSION (802.11G, CH6, 30 MHz-1 GHz).....	87
FIG. 113	RADIATED SPURIOUS EMISSION (802.11G, CH6, 1 GHz-3 GHz)	88
FIG. 114	RADIATED SPURIOUS EMISSION (802.11G, CH6, 3 GHz-18 GHz)	88
FIG. 115	RADIATED SPURIOUS EMISSION (POWER): 802.11G, CH11, 2.38 GHz - 2.5GHz.....	89
FIG. 116	RADIATED SPURIOUS EMISSION (802.11G, CH11, 30 MHz-1 GHz).....	89
FIG. 117	RADIATED SPURIOUS EMISSION (802.11G, CH11, 1 GHz-3 GHz).....	90
FIG. 118	RADIATED SPURIOUS EMISSION (802.11G, CH11, 3 GHz-18 GHz).....	90
FIG. 119	RADIATED SPURIOUS EMISSION (POWER): 802.11N-20MHz, CH1, 2.38 GHz - 2.5GHz.....	91
FIG. 120	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH1, 30 MHz-1 GHz).....	91
FIG. 121	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH1, 1 GHz-3 GHz)	92
FIG. 122	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH1, 3 GHz-18 GHz)	92
FIG. 123	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH6, 30 MHz-1 GHz).....	93
FIG. 124	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH6, 1 GHz-3 GHz)	93
FIG. 125	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH6, 3 GHz-18 GHz)	94
FIG. 126	RADIATED SPURIOUS EMISSION (POWER): 802.11N-20MHz, CH11, 2.38 GHz - 2.5GHz.....	94
FIG. 127	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH11, 30 MHz-1 GHz).....	95
FIG. 128	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH11, 1 GHz-3 GHz).....	95
FIG. 129	RADIATED SPURIOUS EMISSION (802.11N-20MHz, CH11, 3 GHz-18 GHz).....	96
FIG. 130	RADIATED SPURIOUS EMISSION (ALL CHANNELS): 18GHz – 26.5GHz.....	96
A.7. AC POWERLINE CONDUCTED EMISSION.....		97
FIG. 131	AC POWERLINE CONDUCTED EMISSION-802.11B	98
FIG. 132	AC POWERLINE CONDUCTED EMISSION-802.11G	99
FIG. 133	AC POWERLINE CONDUCTED EMISSION-802.11N	100

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: 2012-08-20
Testing End Date: 2012-08-31

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

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Country: China
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2.2. Manufacturer Information

Company Name: ZTE Corporation
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City: Shenzhen
Postal Code: 518057
Country: China
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Email /
Telephone: +86-21-68897541
Fax: +86-21-50801070

3. EQUIPMENT UNDER TEST(EUT) AND ANCILLARY EQUIPMENT(AE)

3.1. About EUT

Description	WCDMA/GSM (GPRS) Dual-Mode Digital Mobile Phone
Model	ZTE V790/Movistar Motion/V790/ZTE V790S
FCC ID	Q78-ZTEV790
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	21.08dBm(OFDM)
Power Supply	3.7V 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

EUT ID*	IMEI	HW Version	SW Version
EUT1	866302010001793	p8rA	MOVISTAR_P752D03V1.0.0B01
EUT2	866302010003625	p8rA	MOVISTAR_P752D03V1.0.0B01

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	Type	SN
AE1	Battery	Li3712T42P3h654246h	/
AE2	Charger	STC-A22O50I500USBA	/

*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 WCDMA/GSM (GPRS) Dual-Mode Digital 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

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	3.7V(By battery)
Humidity	H nom	44%
Air Pressure	A nom	1010hPa

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	2012-09-22
3	Test Receiver	ESS	847151/015	Rohde & Schwarz	2012-10-30
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

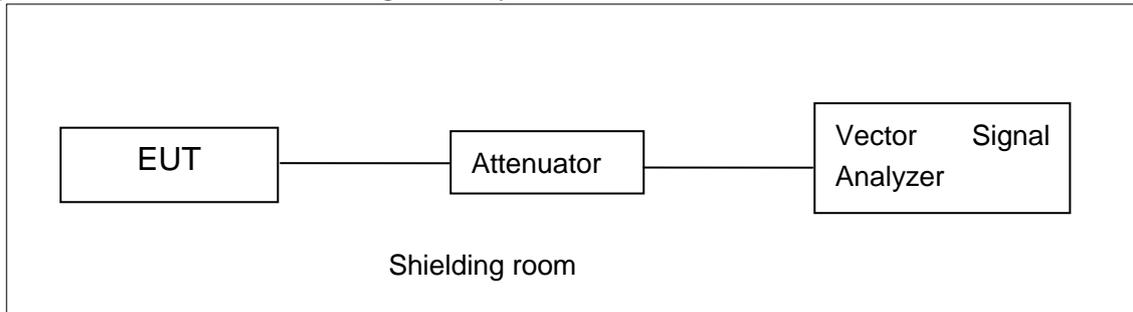
Anechoic chamber by Frankonia German.

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

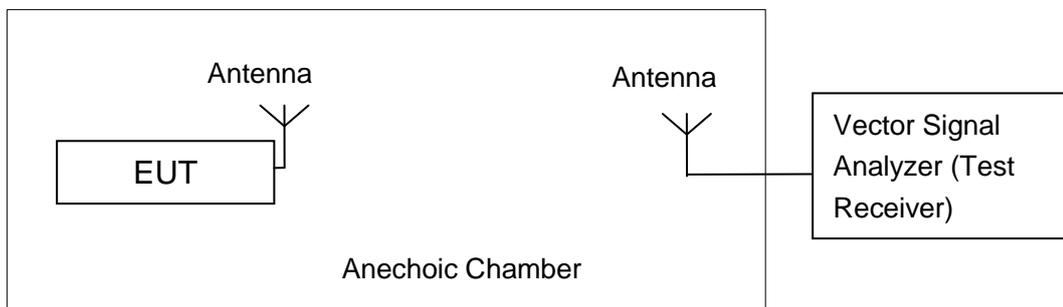


A.1.2. Radiated Emission Measurements

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
-------------------------	--------

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	15.91	/	/
	2	16.18	/	/
	5.5	18.08	/	/
	11	18.77	18.75	19.81
802.11g	6	17.52	/	/
	9	17.74	/	/
	12	17.97	/	/
	18	17.51	/	/
	24	20.02	/	/
	36	20.15	/	/
	48	19.84	/	/
	54	20.27	19.22	21.08

The data rate 11Mbps and 54Mbps 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	17.74	17.63	18.04
	MCS1	17.58	/	/
	MCS2	16.68	/	/
	MCS3	17.13	/	/
	MCS4	16.15	/	/
	MCS5	16.27	/	/
	MCS6	16.32	/	/
	MCS7	15.85	/	/

The data rate MCS0 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	/	/	/
	MCS1	/	/	/
	MCS2	/	/	/
	MCS3	/	/	/
	MCS4	/	/	/
	MCS5	/	/	/
	MCS6	/	/	/
	MCS7	/	/	/

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	12.40	12.45	13.24
802.11g	11.40	11.62	12.17

802.11n-HT20 mode

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	9.22	9.54	10.03

802.11n-HT40 mode

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

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	-11.07	P
	6	Fig.2	-11.15	P
	11	Fig.3	-10.22	P
802.11g	1	Fig.4	-13.63	P
	6	Fig.5	-13.26	P
	11	Fig.6	-12.69	P

802.11n-HT20 mode

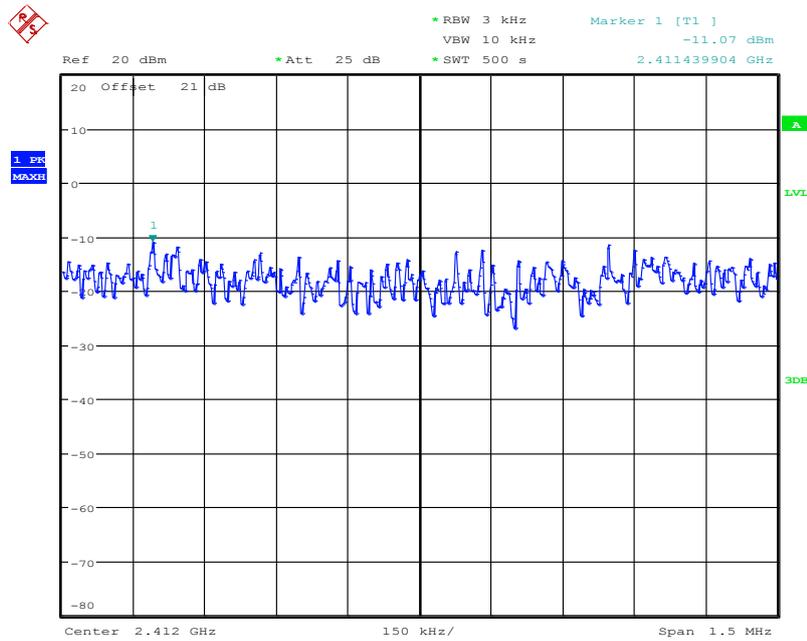
Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (20MHz)	1	Fig.7	-16.66	P
	6	Fig.8	-15.77	P
	11	Fig.9	-15.68	P

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (40MHz)	3	/	/	/
	6	/	/	/
	9	/	/	/

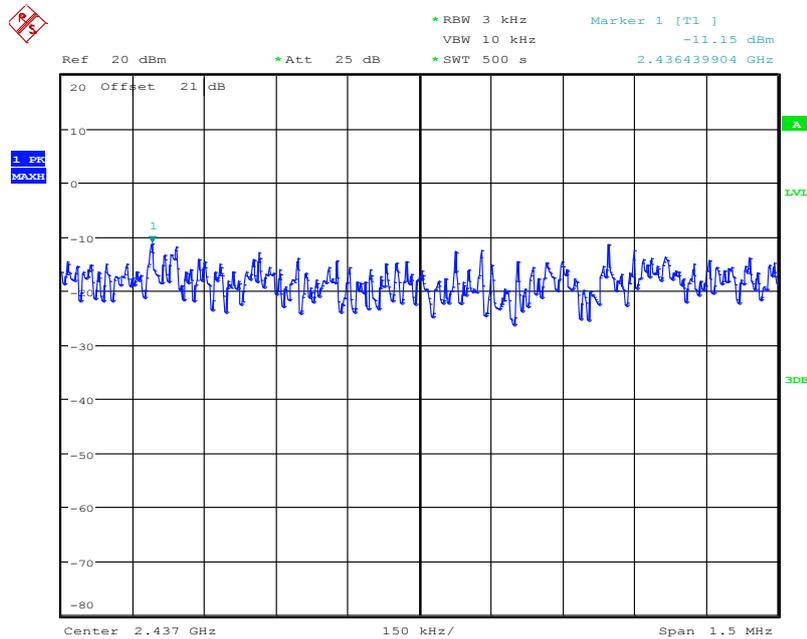
Conclusion: PASS

Test graphs as below:



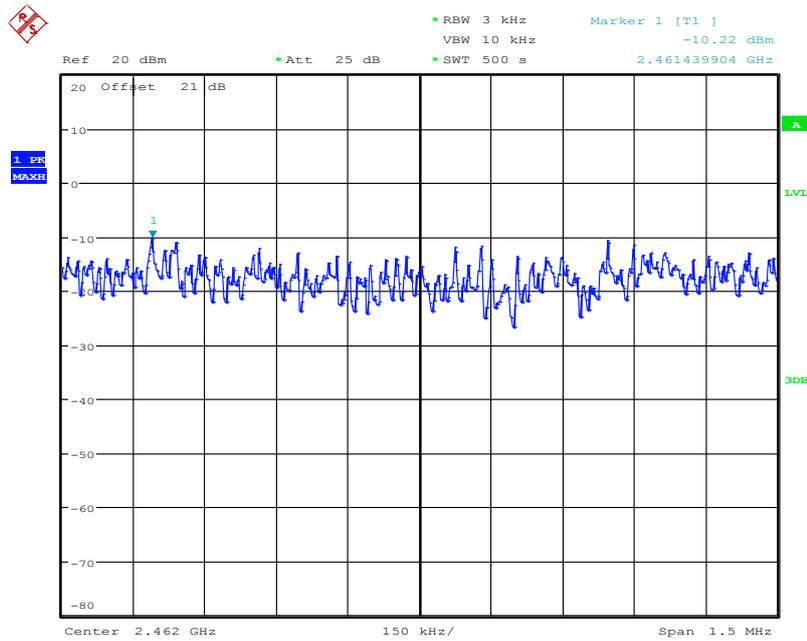
Date: 23.AUG.2012 09:01:09

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



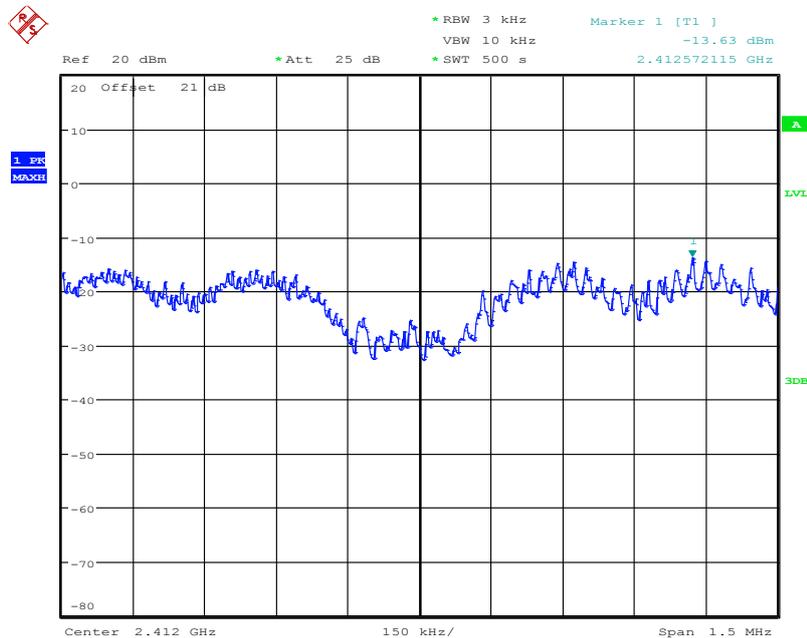
Date: 23.AUG.2012 09:16:11

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



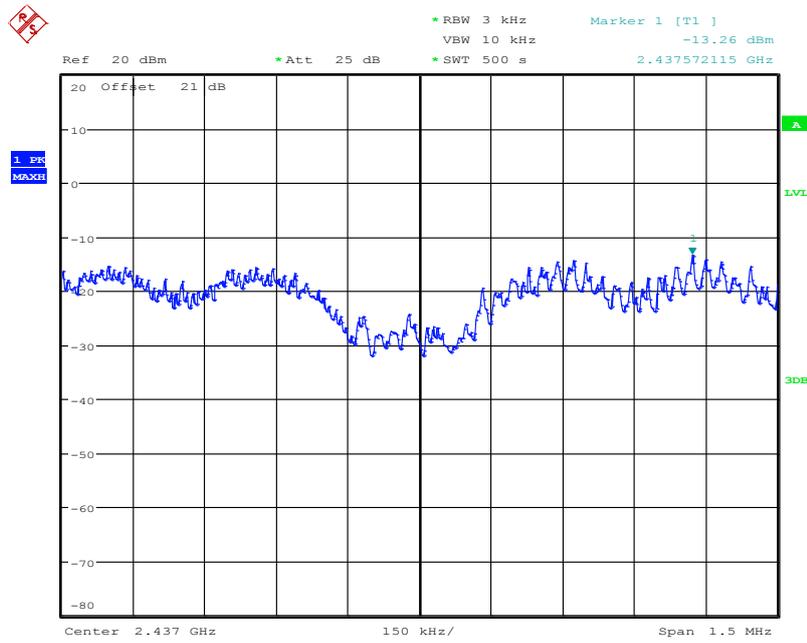
Date: 23.AUG.2012 09:26:27

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



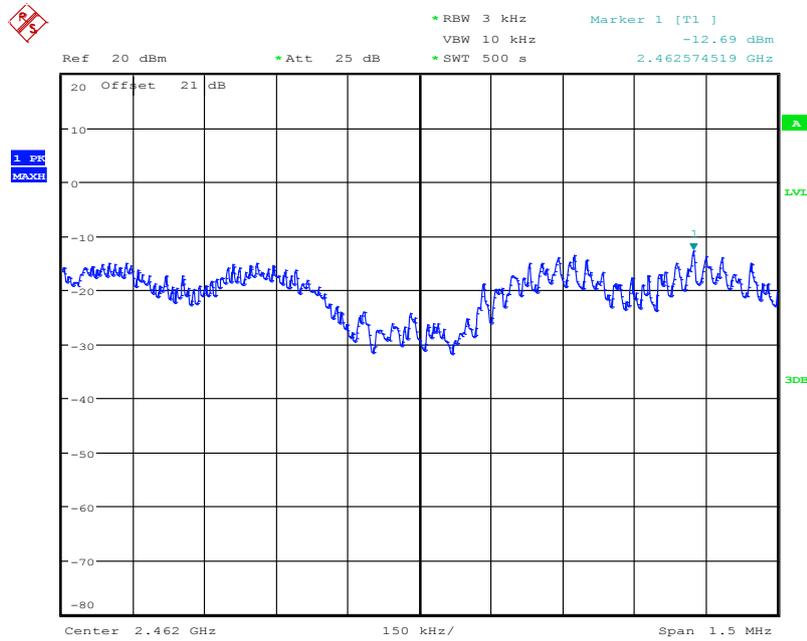
Date: 23.AUG.2012 09:36:23

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



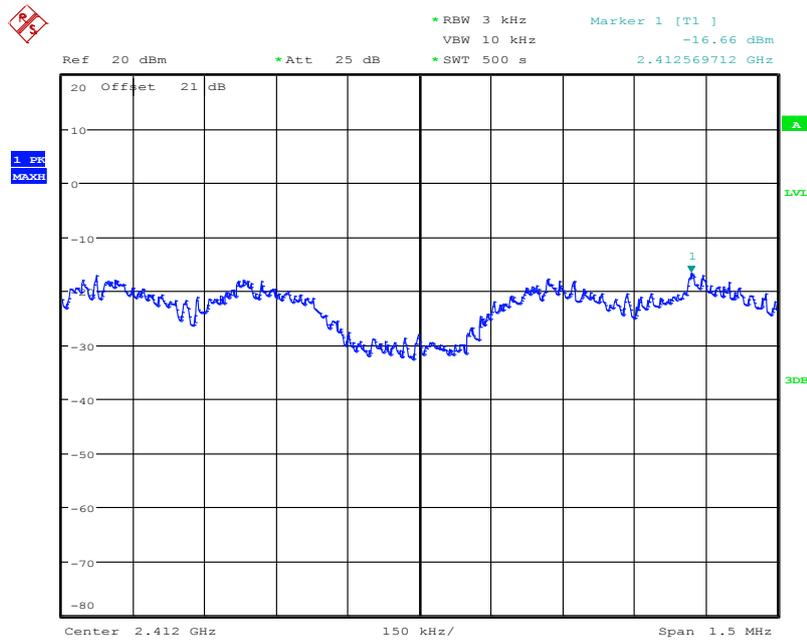
Date: 23.AUG.2012 09:59:44

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



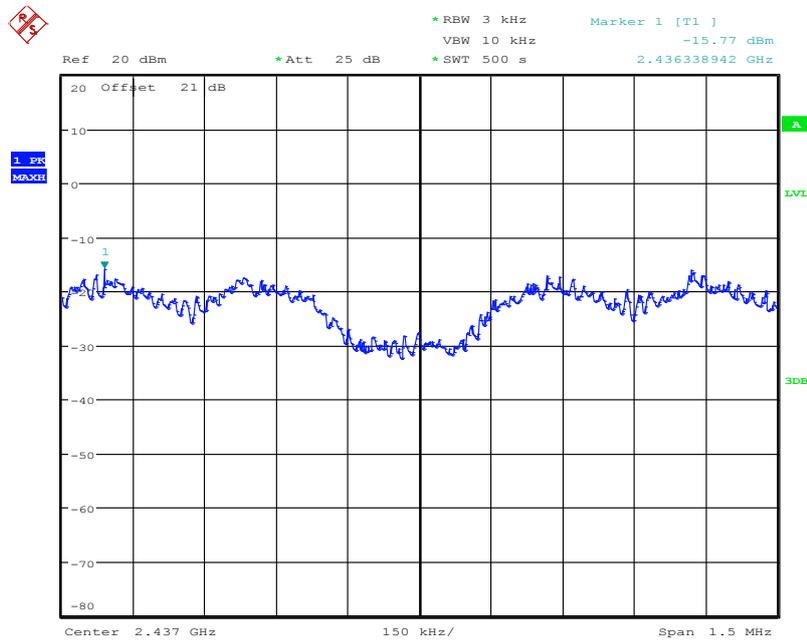
Date: 23.AUG.2012 10:44:53

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



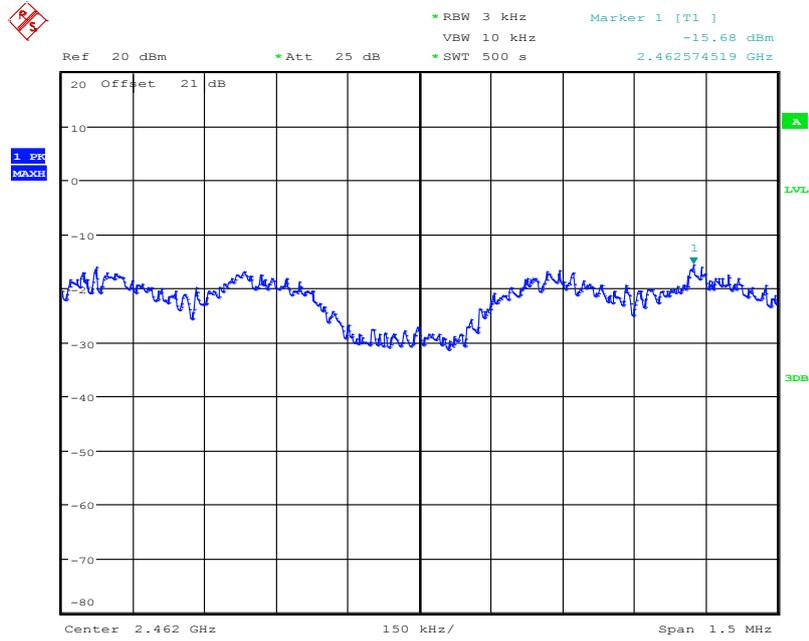
Date: 23.AUG.2012 10:55:16

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



Date: 23.AUG.2012 11:07:55

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



Date: 23.AUG.2012 11:22:41

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

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.10	10449	P
	6	Fig.11	11089	P
	11	Fig.12	11089	P
802.11g	1	Fig.13	16474	P
	6	Fig.14	16474	P
	11	Fig.15	16474	P

802.11n-HT20 mode

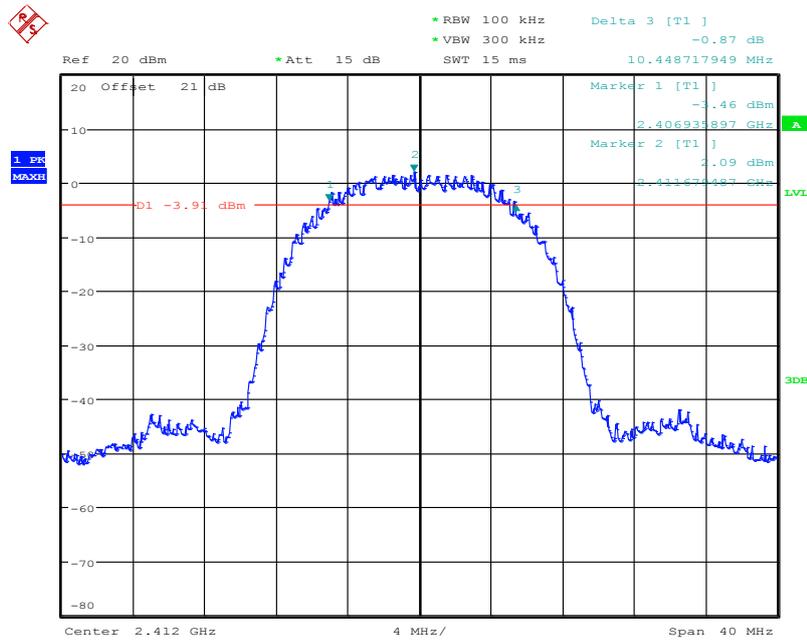
Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (20MHz)	1	Fig.16	17564	P
	6	Fig.17	17371	P
	11	Fig.18	17564	P

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (40MHz)	3	/	/	/
	6	/	/	/
	9	/	/	/

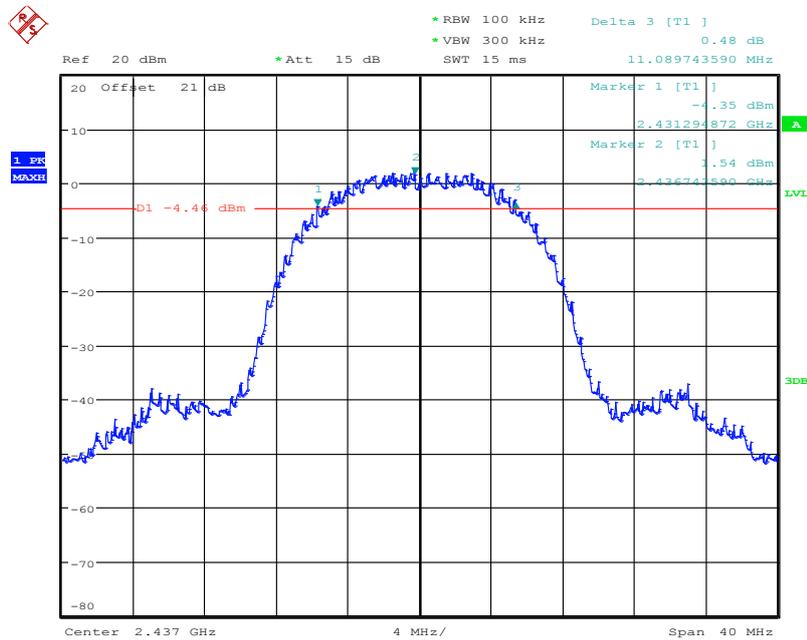
Conclusion: PASS

Test graphs as below:



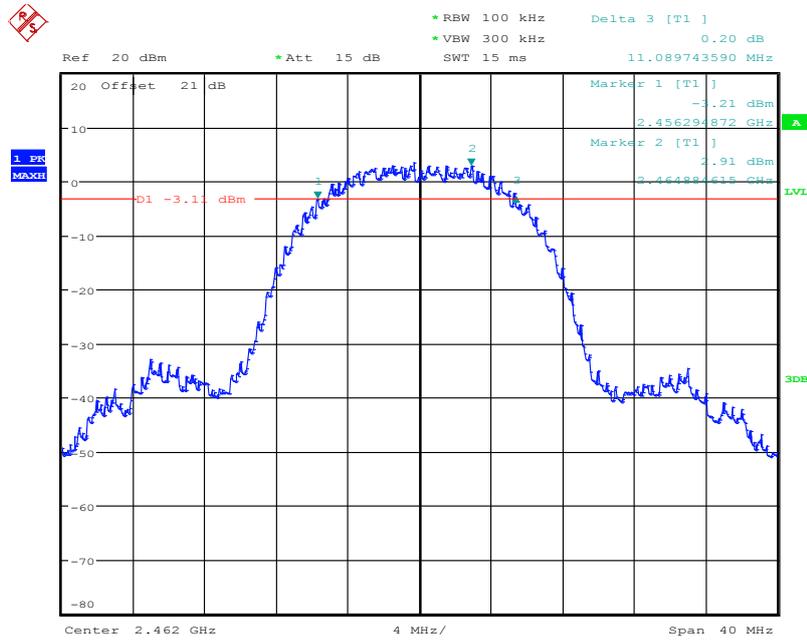
Date: 22.AUG.2012 16:13:13

Fig. 10 Occupied 6dB Bandwidth (802.11b, Ch 1)



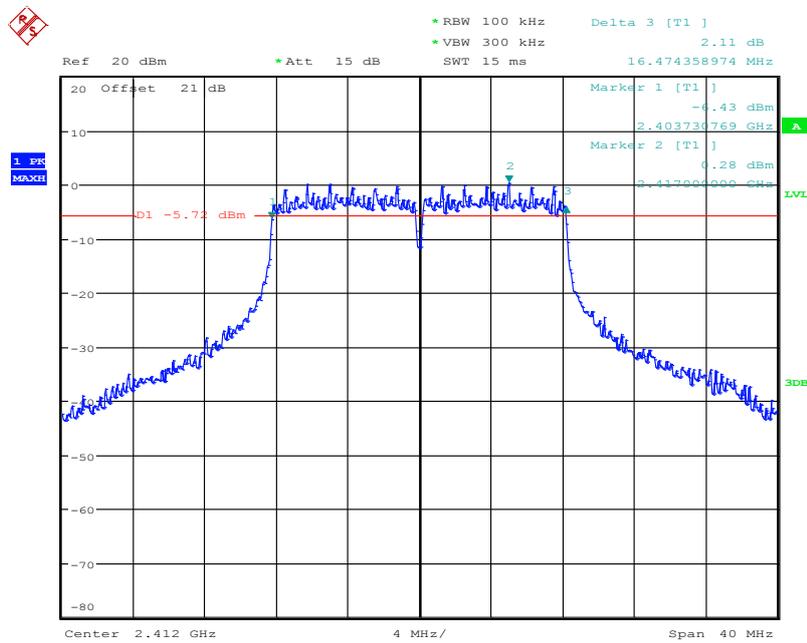
Date: 22.AUG.2012 16:15:38

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



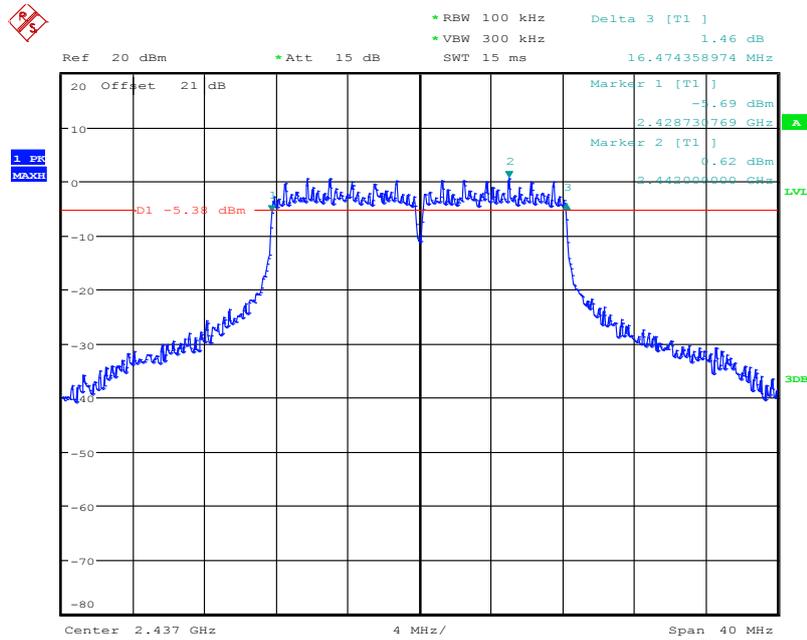
Date: 22.AUG.2012 16:17:34

Fig. 12 Occupied 6dB Bandwidth (802.11b, Ch 11)



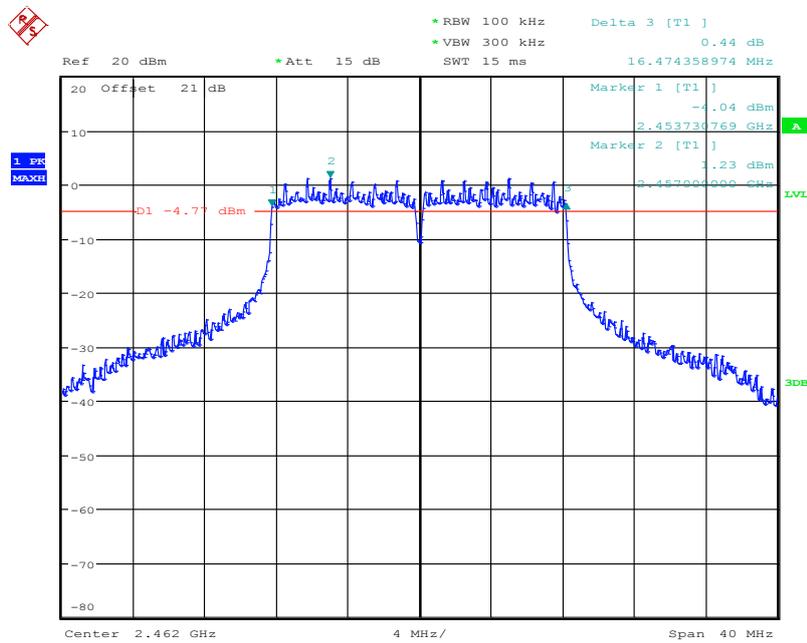
Date: 22.AUG.2012 16:21:10

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



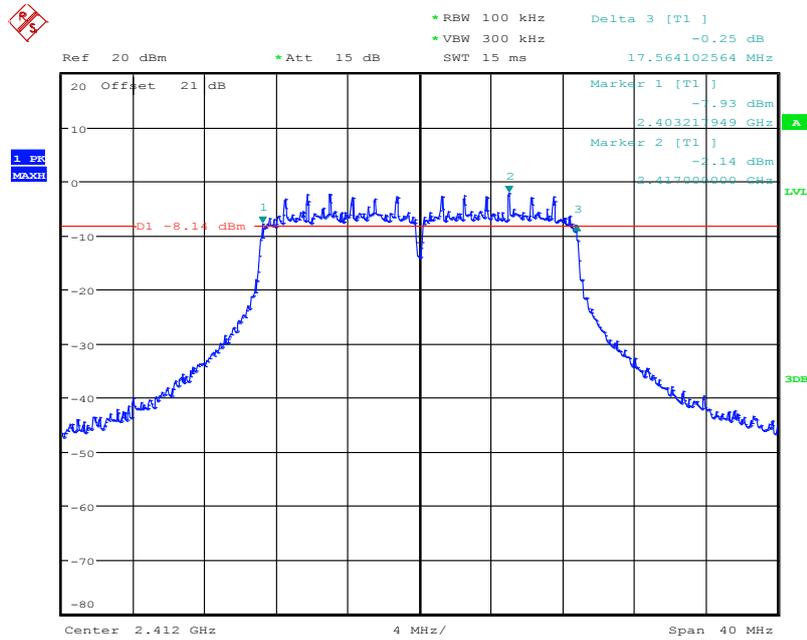
Date: 22.AUG.2012 16:23:16

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



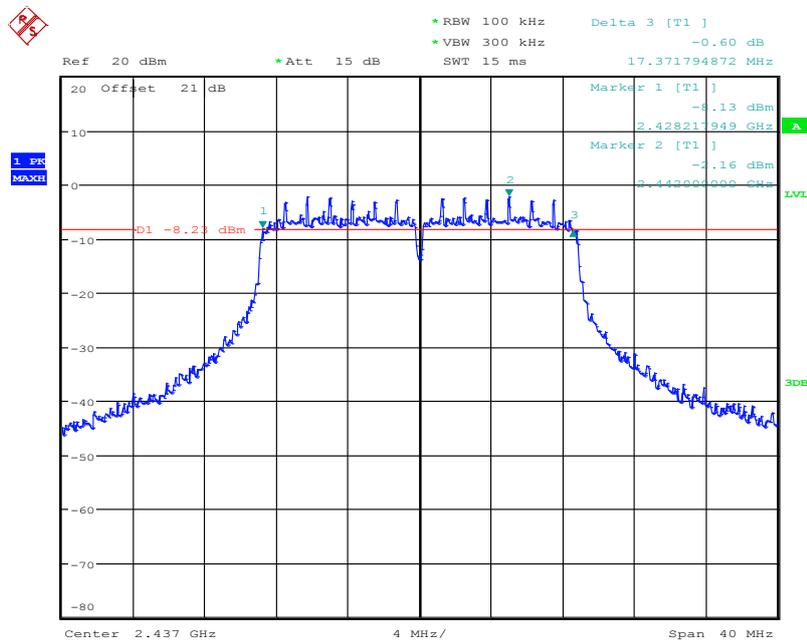
Date: 22.AUG.2012 16:24:59

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



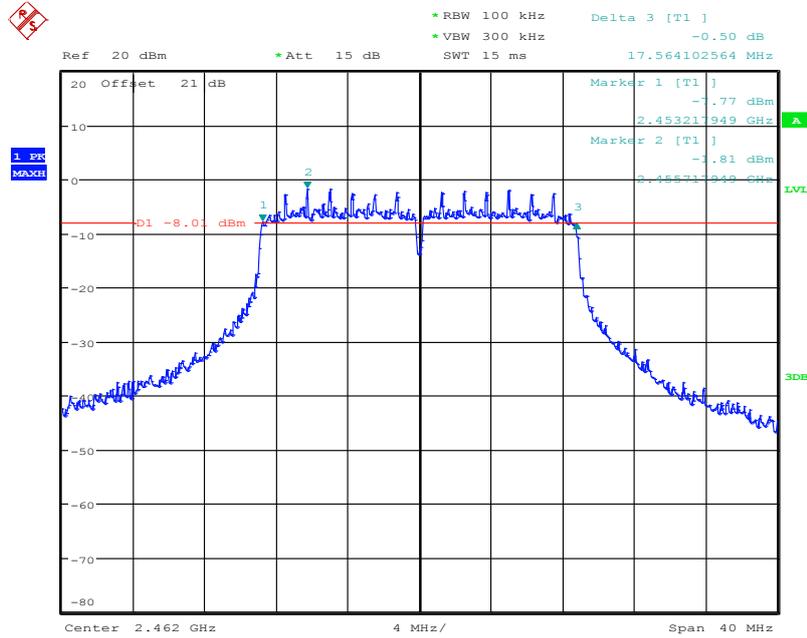
Date: 22.AUG.2012 16:32:48

Fig. 16 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)



Date: 22.AUG.2012 16:35:46

Fig. 17 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 6)



Date: 22.AUG.2012 16:37:50

Fig. 18 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 11)

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.19	P
	11	Fig.20	P
802.11g	1	Fig.21	P
	11	Fig.22	P

802.11n-HT20 mode

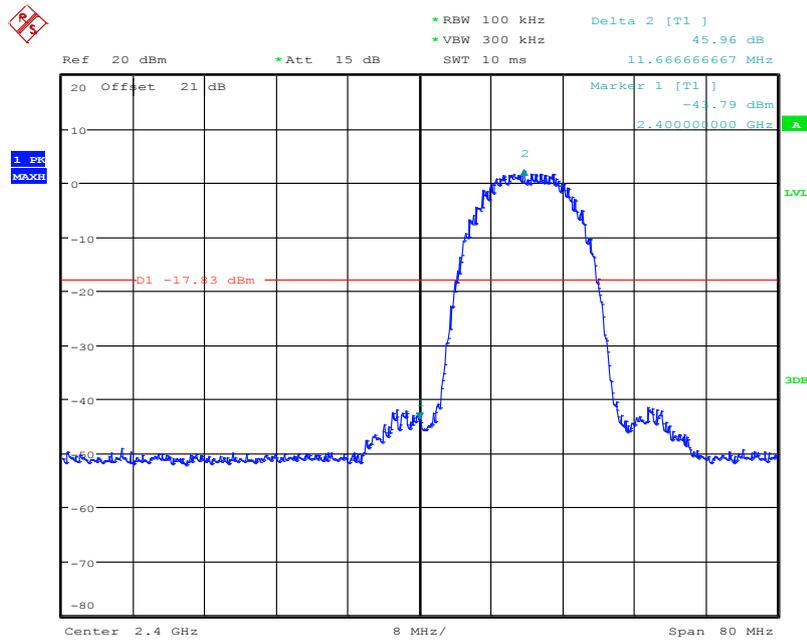
Mode	Channel	Test Results	Conclusion
802.11n (20MHz)	1	Fig.23	P
	11	Fig.24	P

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n (40MHz)	3	/	/
	9	/	/

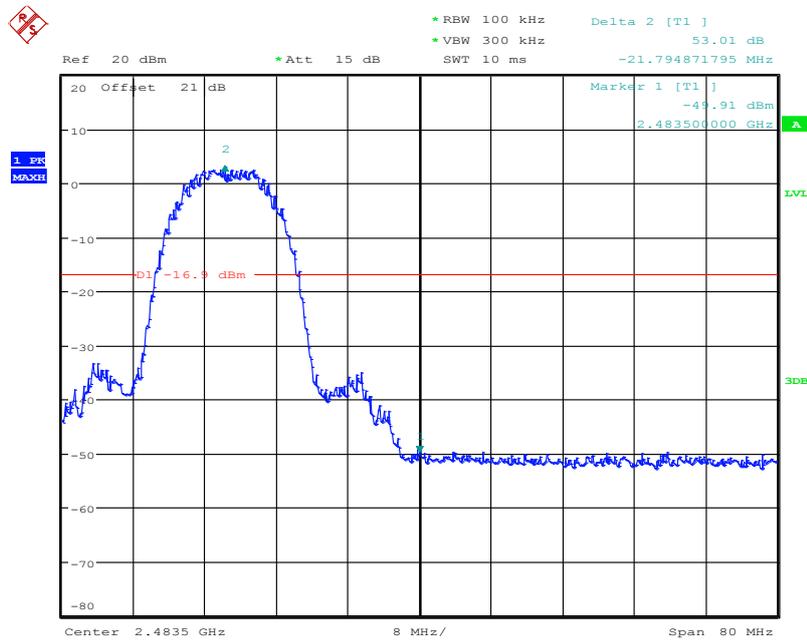
Conclusion: PASS

Test graphs as below:



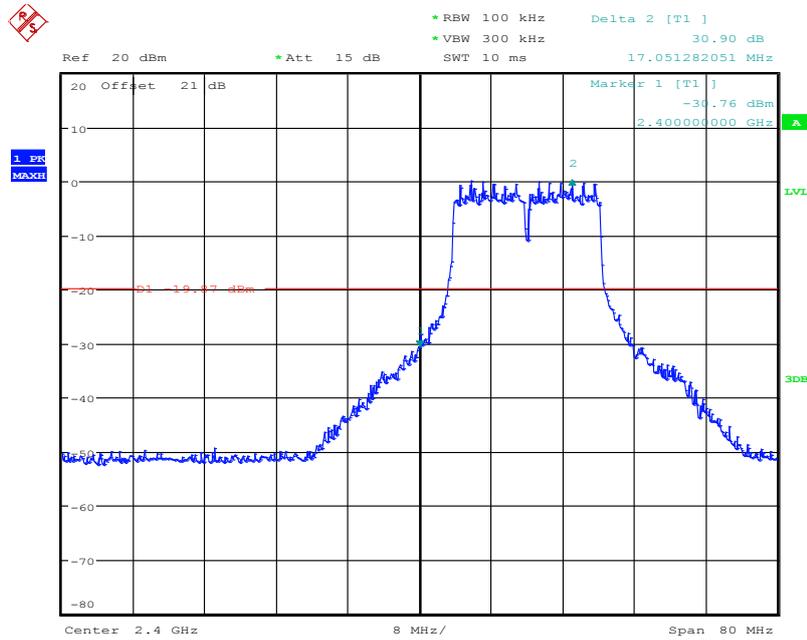
Date: 22.AUG.2012 16:42:10

Fig. 19 Band Edges (802.11b, Ch 1)



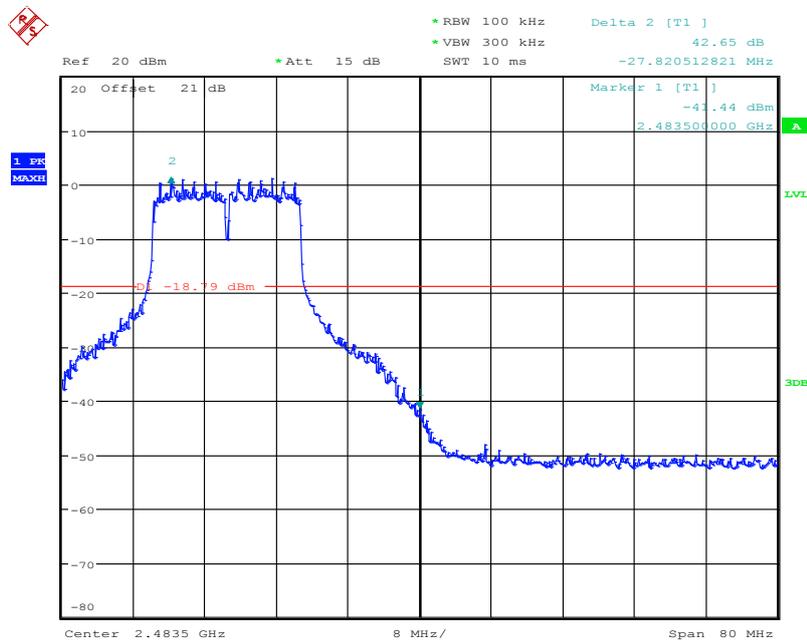
Date: 22.AUG.2012 16:43:33

Fig. 20 Band Edges (802.11b, Ch 11)



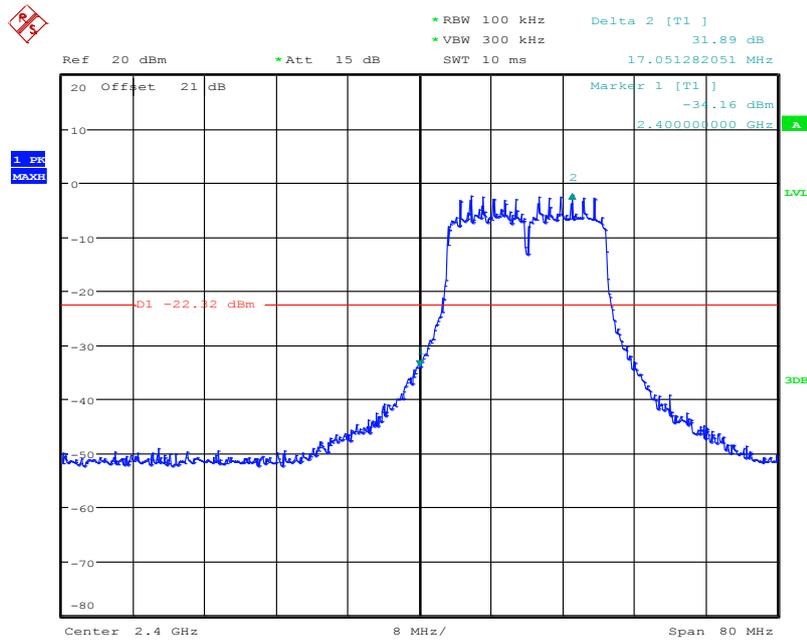
Date: 22.AUG.2012 16:45:56

Fig. 21 Band Edges (802.11g, Ch 1)



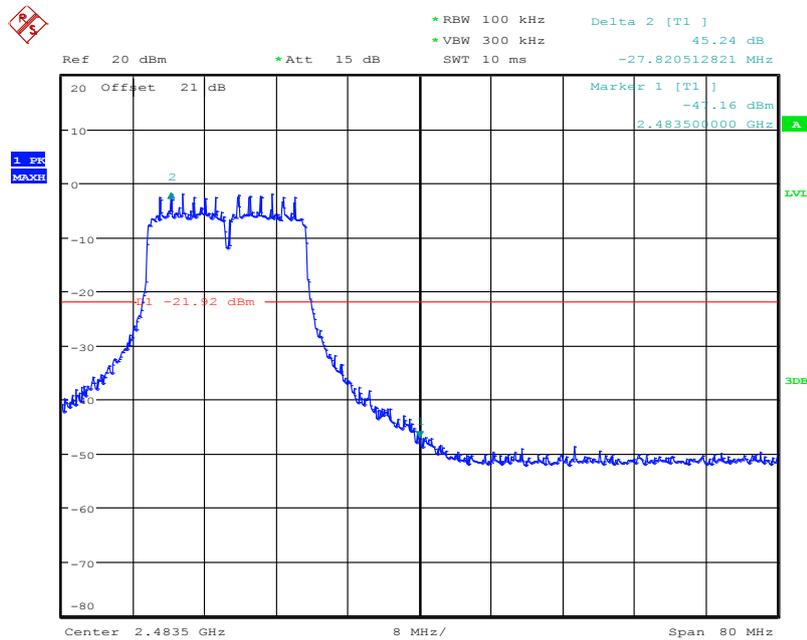
Date: 22.AUG.2012 16:47:03

Fig. 22 Band Edges (802.11g, Ch 11)



Date: 22.AUG.2012 16:49:06

Fig. 23 Band Edges (802.11n-20MHz, Ch 1)



Date: 22.AUG.2012 16:50:57

Fig. 24 Band Edges (802.11n-20MHz, Ch 11)

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.25	P
		30 MHz ~ 1 GHz	Fig.26	P
		1 GHz ~ 2.5 GHz	Fig.27	P
		2.5 GHz ~ 7.5 GHz	Fig.28	P
		7.5 GHz ~ 10 GHz	Fig.29	P
		10 GHz ~ 15 GHz	Fig.30	P
		15 GHz ~ 20 GHz	Fig.31	P
		20 GHz ~ 26 GHz	Fig.32	P
	6	2.437 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
	11	2.462 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
802.11g	1	2.412 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
	6	2.437 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
	11	2.462 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

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (20MHz)	1	2.412 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
	6	2.437 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
	11	2.462 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

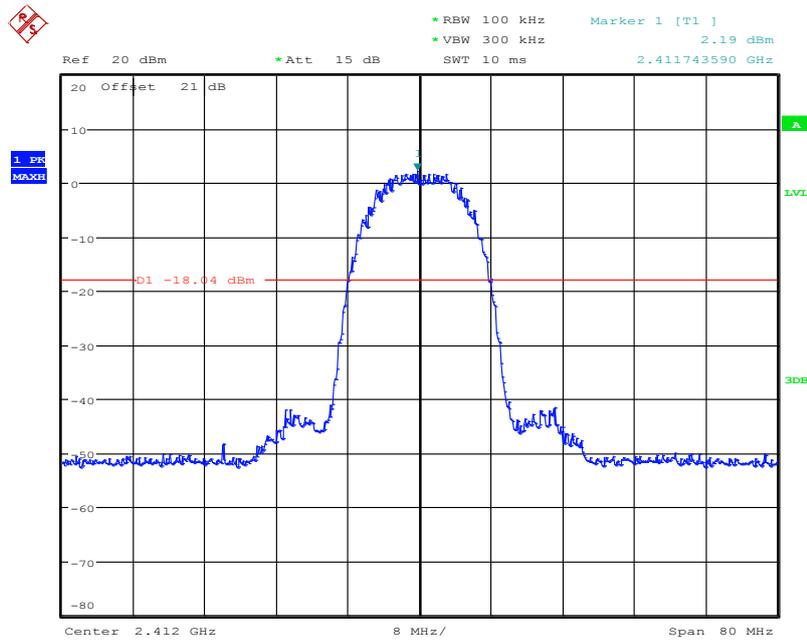
802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (40MHz)	3	2.422 GHz	/	/
		30 MHz ~ 1 GHz	/	/
		1 GHz ~ 2.5 GHz	/	/
		2.5 GHz ~ 7.5 GHz	/	/
		7.5 GHz ~ 10 GHz	/	/
		10 GHz ~ 15 GHz	/	/
		15 GHz ~ 20 GHz	/	/
		20 GHz ~ 26 GHz	/	/
	6	2.437 GHz	/	/
		30 MHz ~ 1 GHz	/	/
		1 GHz ~ 2.5 GHz	/	/
		2.5 GHz ~ 7.5 GHz	/	/
		7.5 GHz ~ 10 GHz	/	/
		10 GHz ~ 15 GHz	/	/
		15 GHz ~ 20 GHz	/	/

		15 GHz ~ 20 GHz	/	/
		20 GHz ~ 26 GHz	/	/
	9	2.452 GHz	/	/
		30 MHz ~ 1 GHz	/	/
		1 GHz ~ 2.5 GHz	/	/
		2.5 GHz ~ 7.5 GHz	/	/
		7.5 GHz ~ 10 GHz	/	/
		10 GHz ~ 15 GHz	/	/
		15 GHz ~ 20 GHz	/	/
		20 GHz ~ 26 GHz	/	/

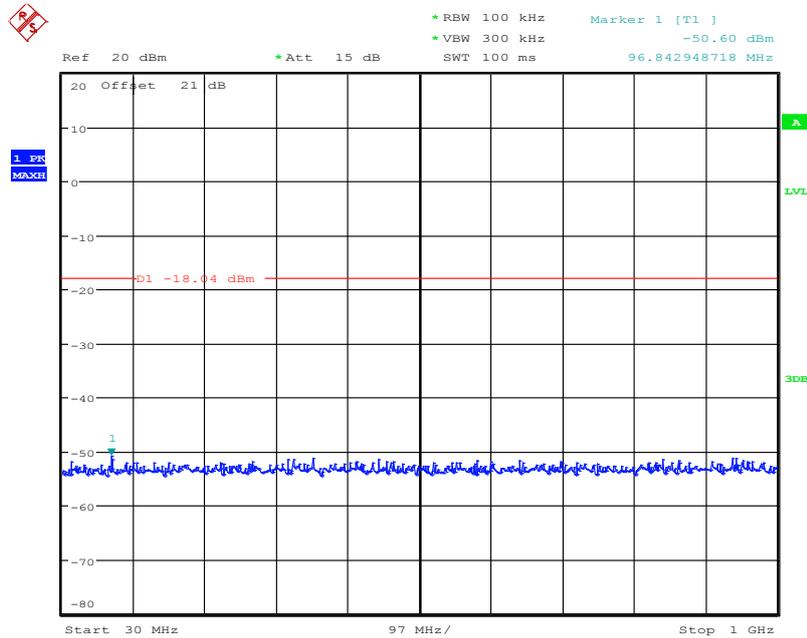
Conclusion: PASS

Test graphs as below:



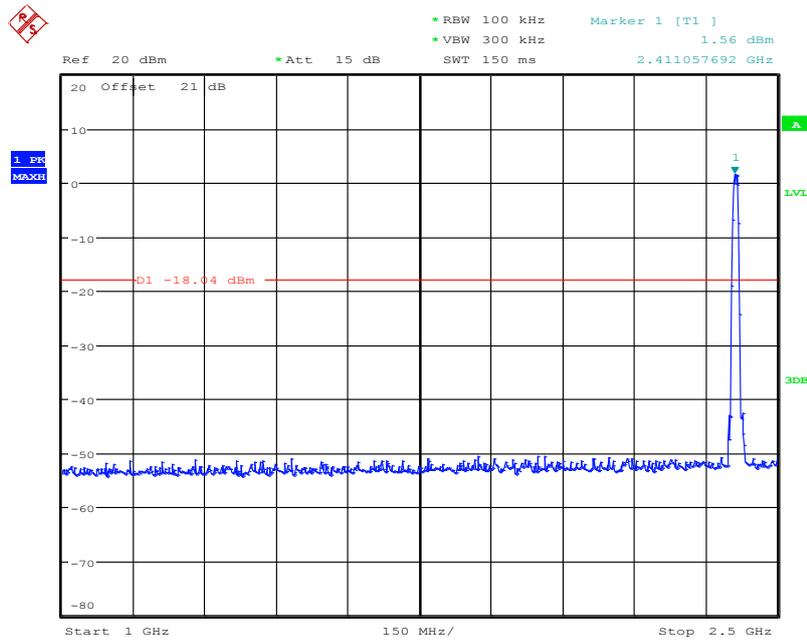
Date: 22.AUG.2012 16:52:37

Fig. 25 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)



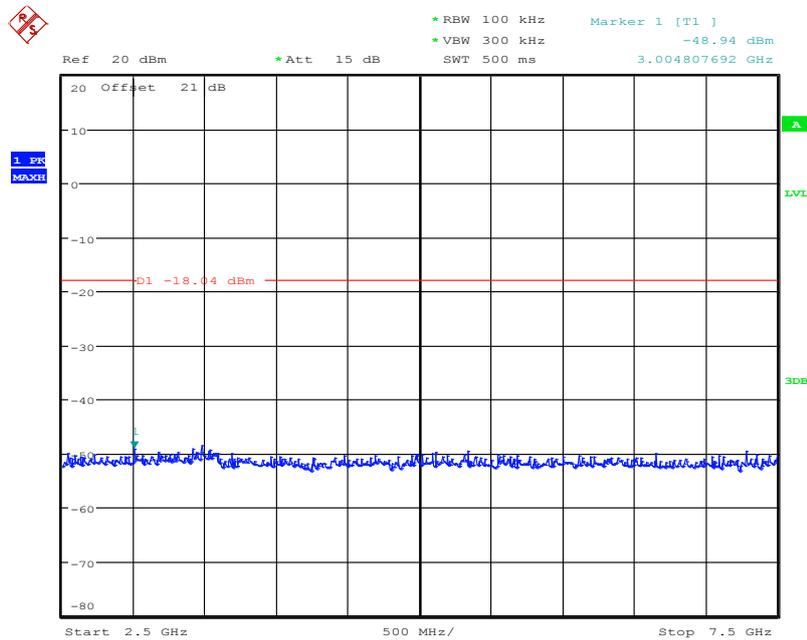
Date: 22.AUG.2012 16:52:56

Fig. 26 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)



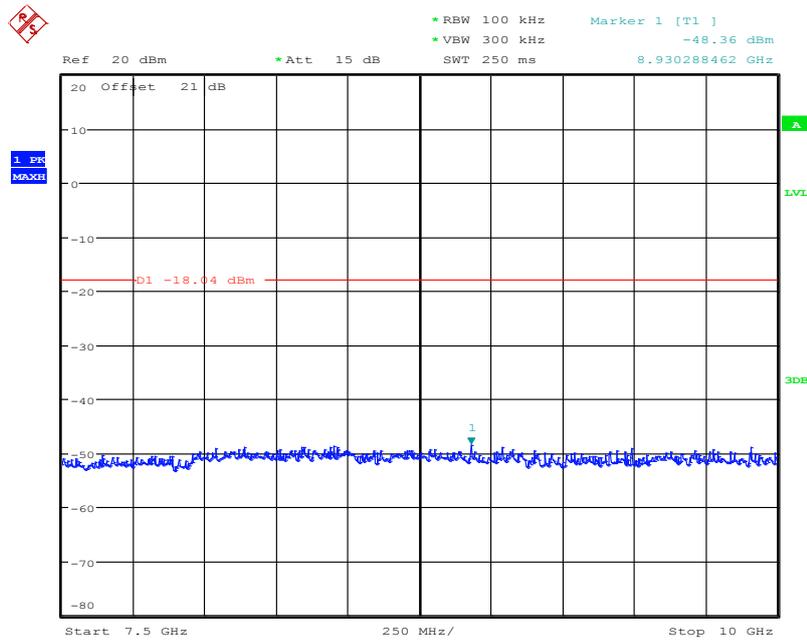
Date: 22.AUG.2012 16:53:11

Fig. 27 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)



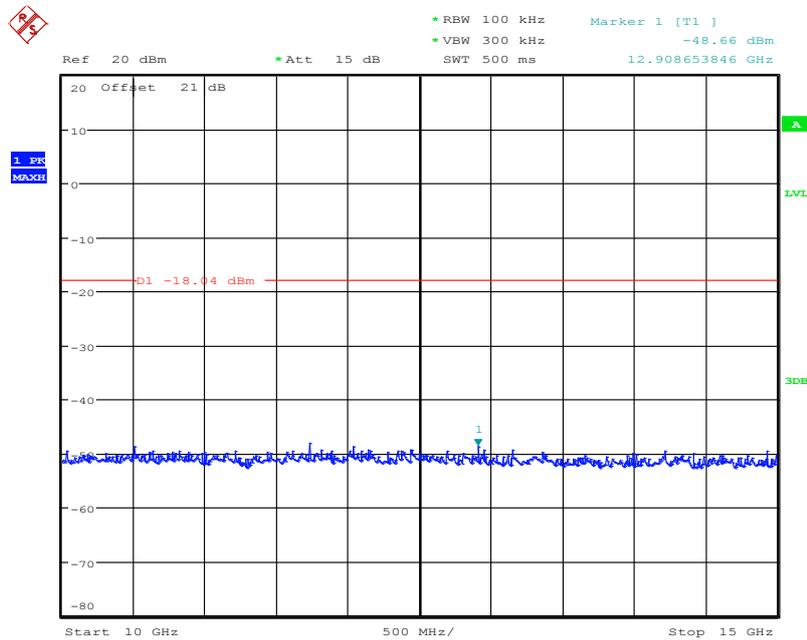
Date: 22.AUG.2012 16:53:32

Fig. 28 Conducted Spurious Emission (802.11b, Ch1, 2.5 GHz-7.5 GHz)



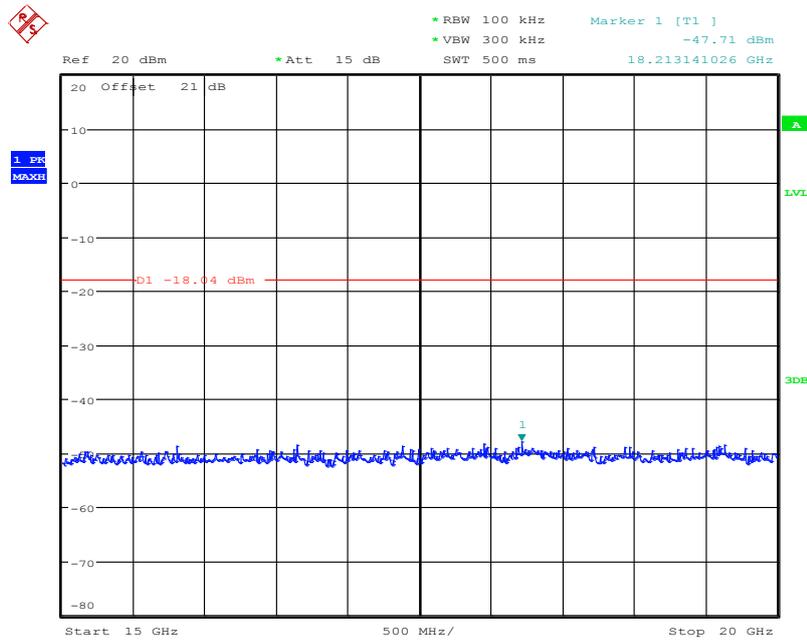
Date: 22.AUG.2012 16:53:47

Fig. 29 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)



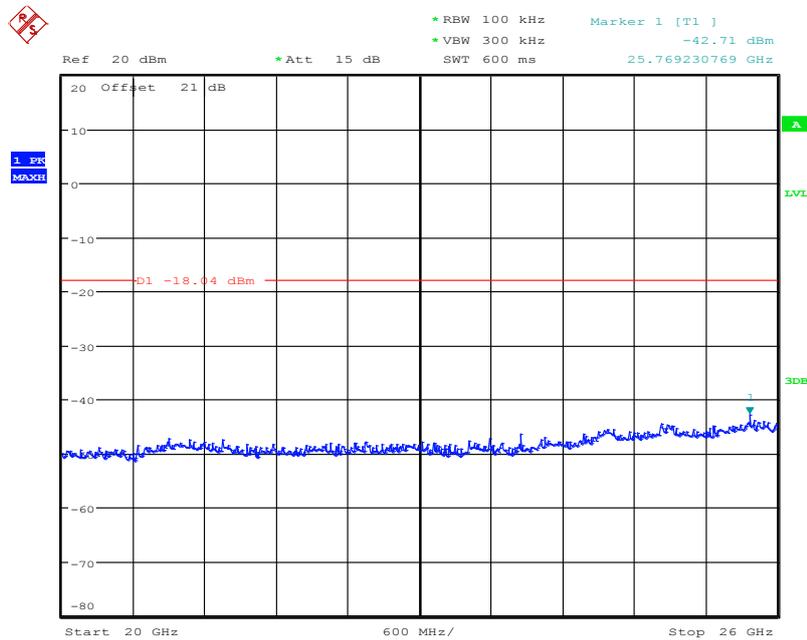
Date: 22.AUG.2012 16:54:03

Fig. 30 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)



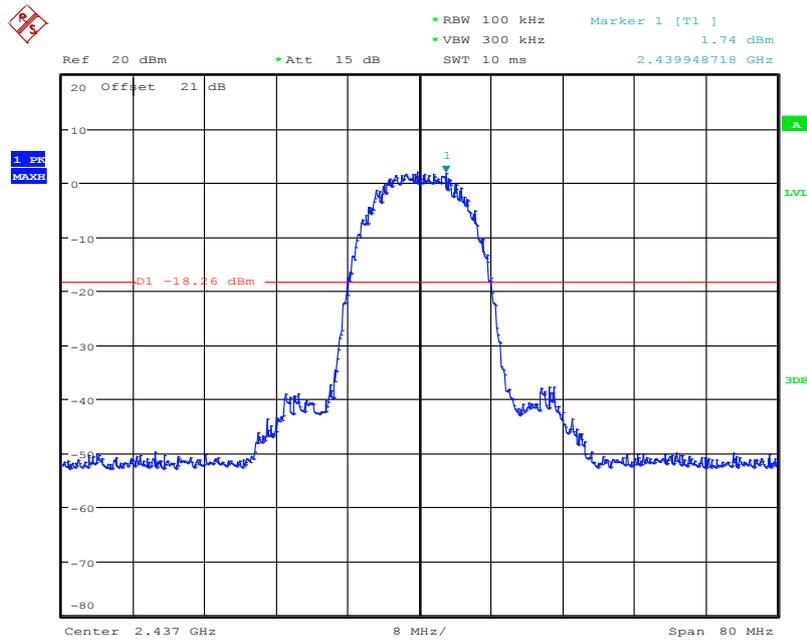
Date: 22.AUG.2012 16:54:21

Fig. 31 Conducted Spurious Emission (802.11b, Ch1, 15 GHz-20 GHz)



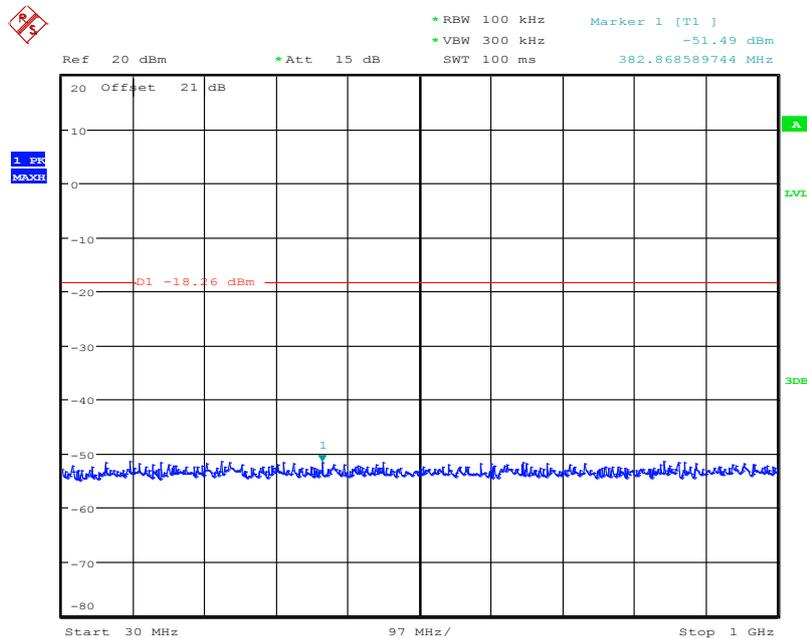
Date: 22.AUG.2012 16:54:55

Fig. 32 Conducted Spurious Emission (802.11b, Ch1, 20 GHz-26 GHz)



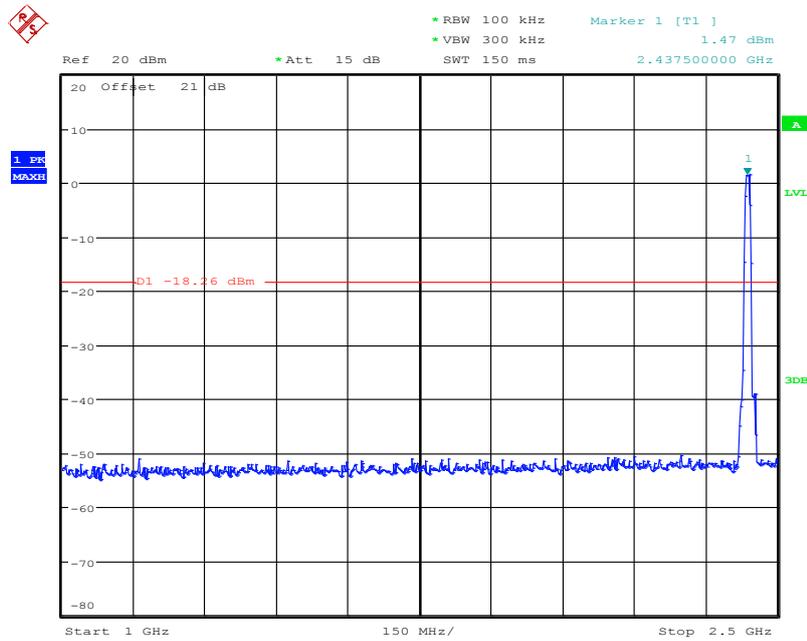
Date: 22.AUG.2012 16:55:40

Fig. 33 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)



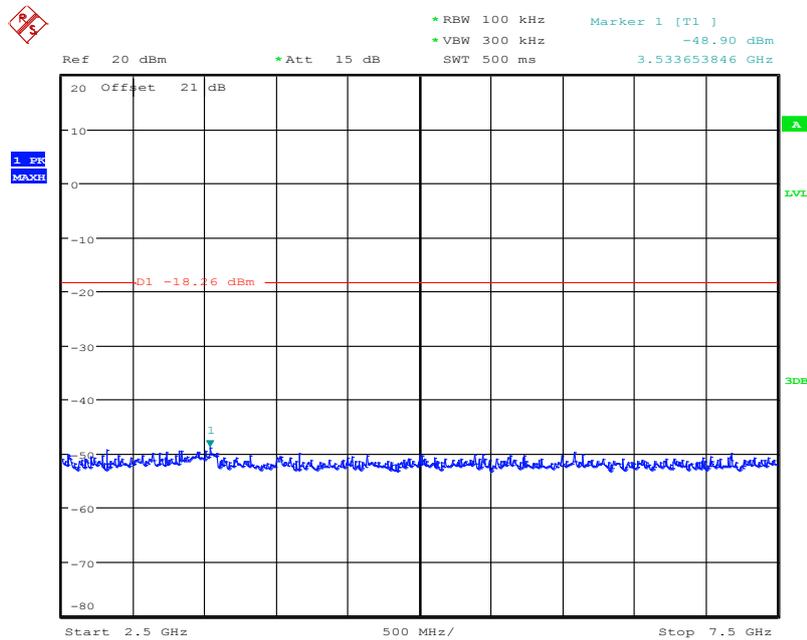
Date: 22.AUG.2012 16:55:54

Fig. 34 Conducted Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)



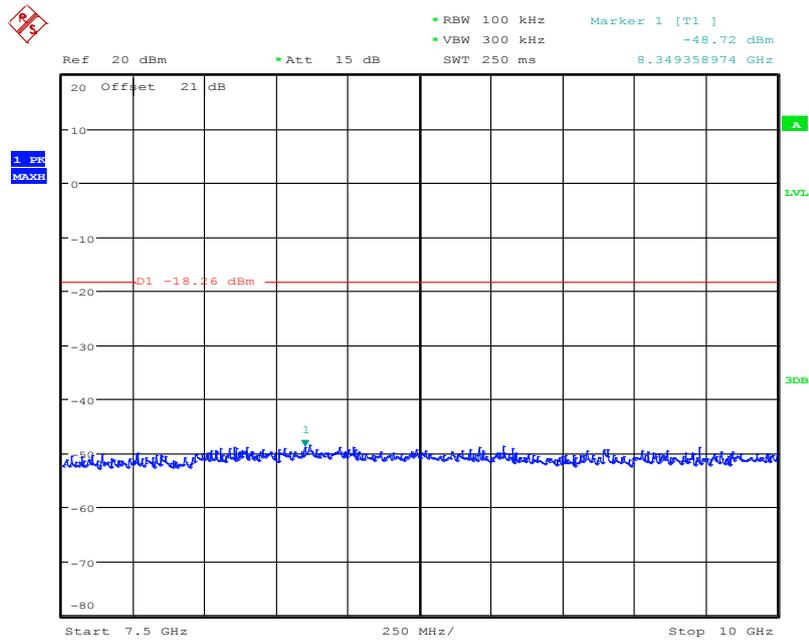
Date: 22.AUG.2012 16:56:09

Fig. 35 Conducted Spurious Emission (802.11b, Ch6, 1 GHz-2.5 GHz)



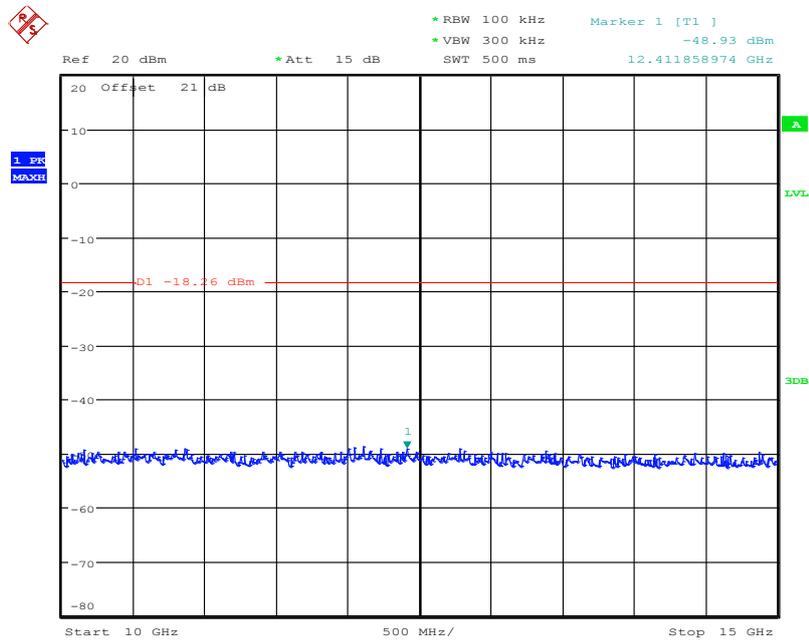
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Fig. 36 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)



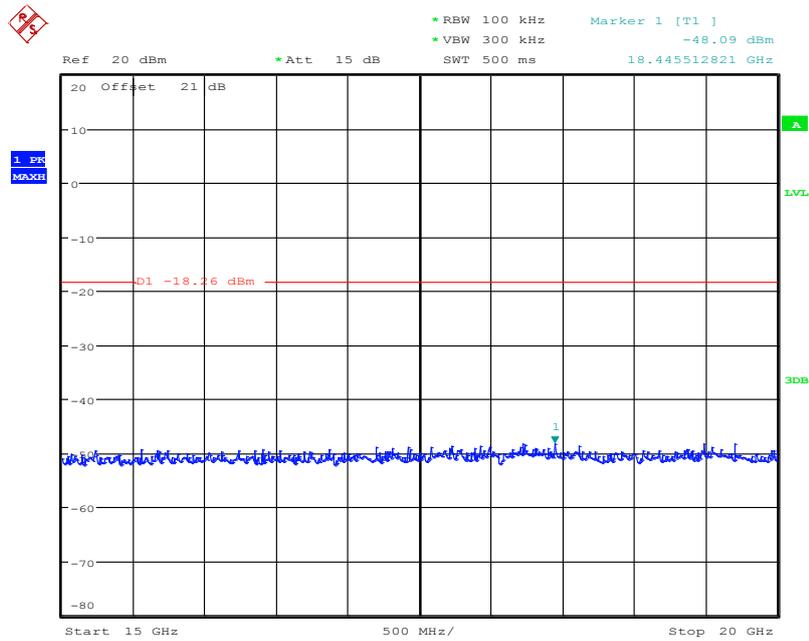
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Fig. 37 Conducted Spurious Emission (802.11b, Ch6, 7.5 GHz-10 GHz)



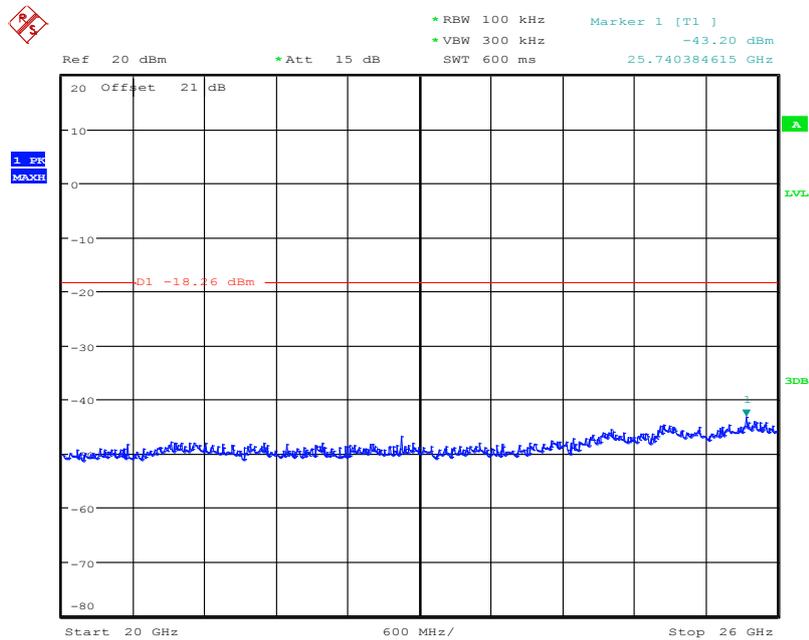
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Fig. 38 Conducted Spurious Emission (802.11b, Ch6, 10 GHz-15 GHz)



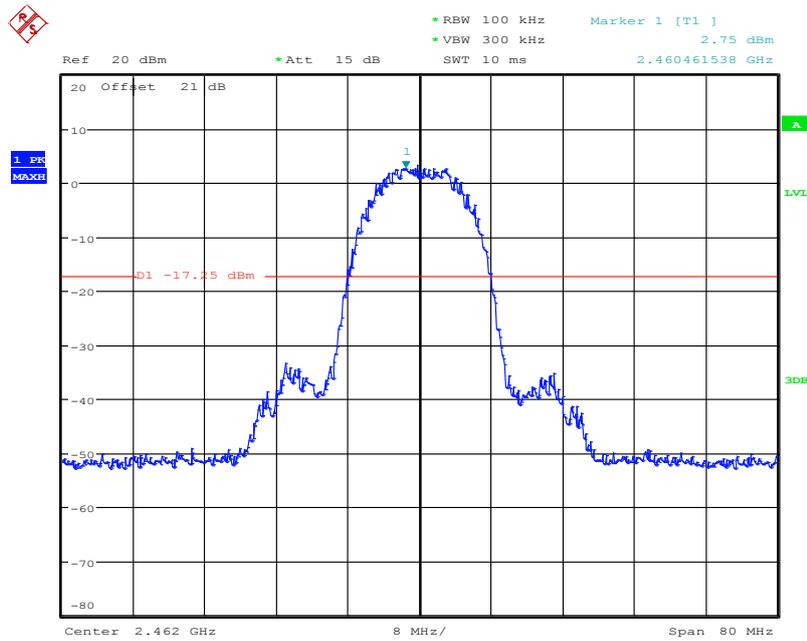
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Fig. 39 Conducted Spurious Emission (802.11b, Ch6, 15 GHz-20 GHz)



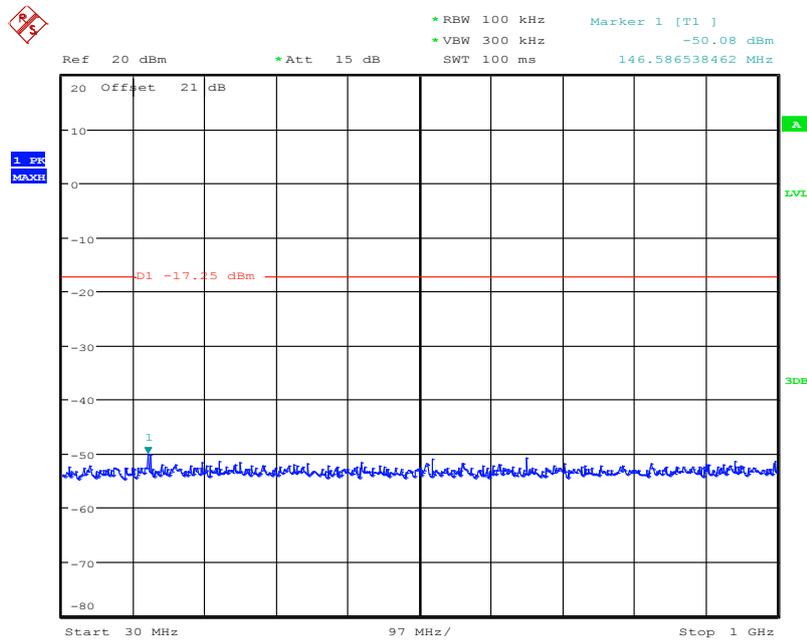
Date: 22.AUG.2012 16:57:40

Fig. 40 Conducted Spurious Emission (802.11b, Ch6, 20 GHz-26 GHz)



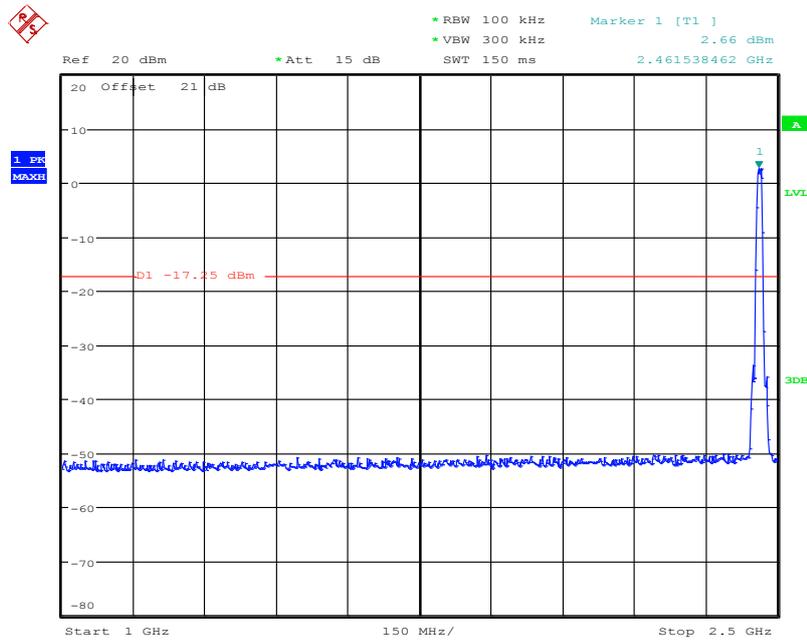
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Fig. 41 Conducted Spurious Emission (802.11b, Ch11, Center Frequency)



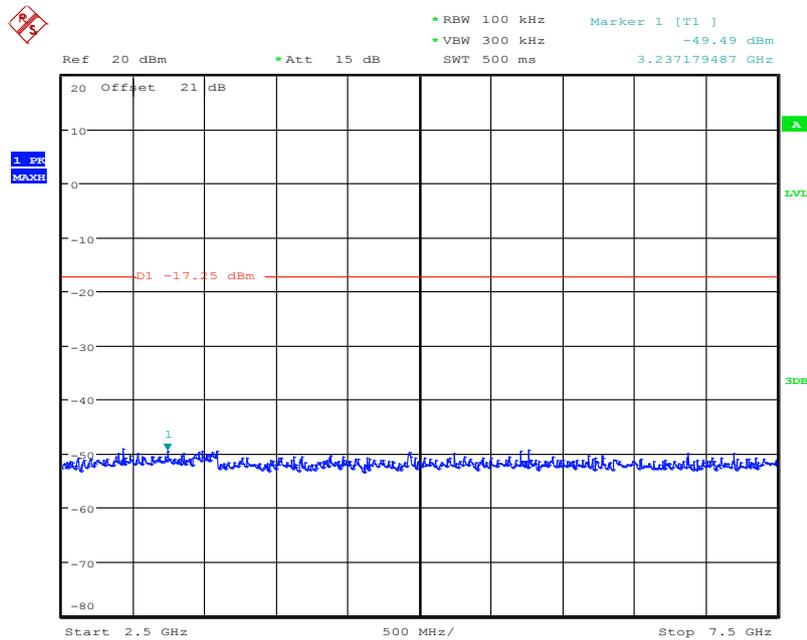
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Fig. 42 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)



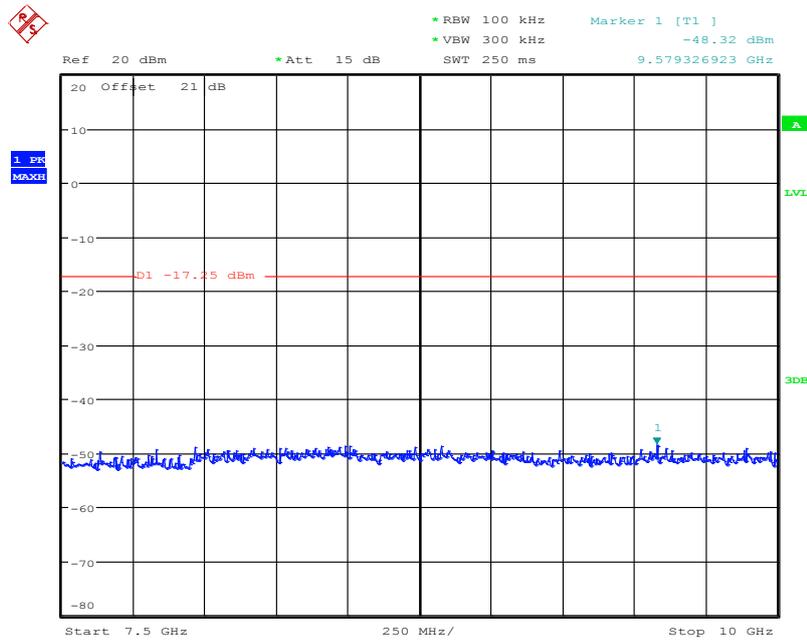
Date: 22.AUG.2012 16:59:52

Fig. 43 Conducted Spurious Emission (802.11b, Ch11, 1 GHz-2.5 GHz)



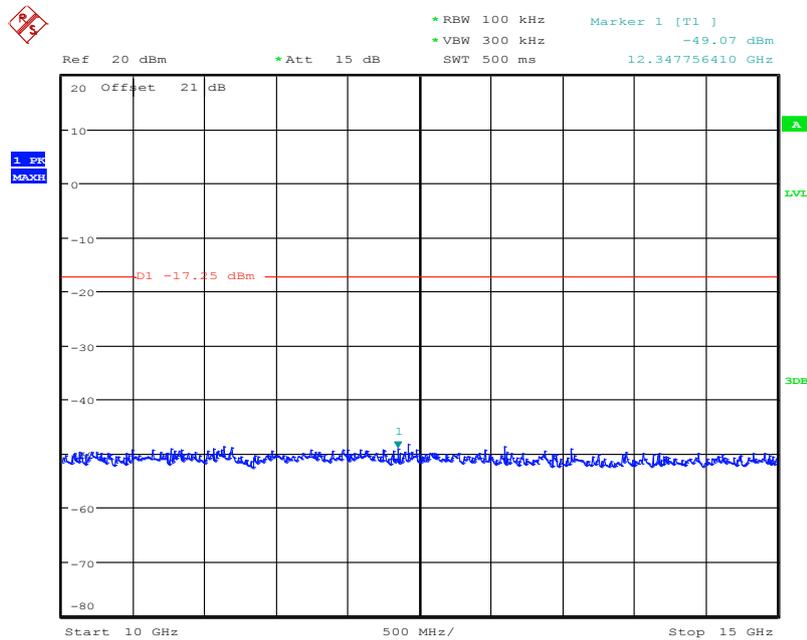
Date: 22.AUG.2012 17:00:13

Fig. 44 Conducted Spurious Emission (802.11b, Ch11, 2.5 GHz-7.5 GHz)



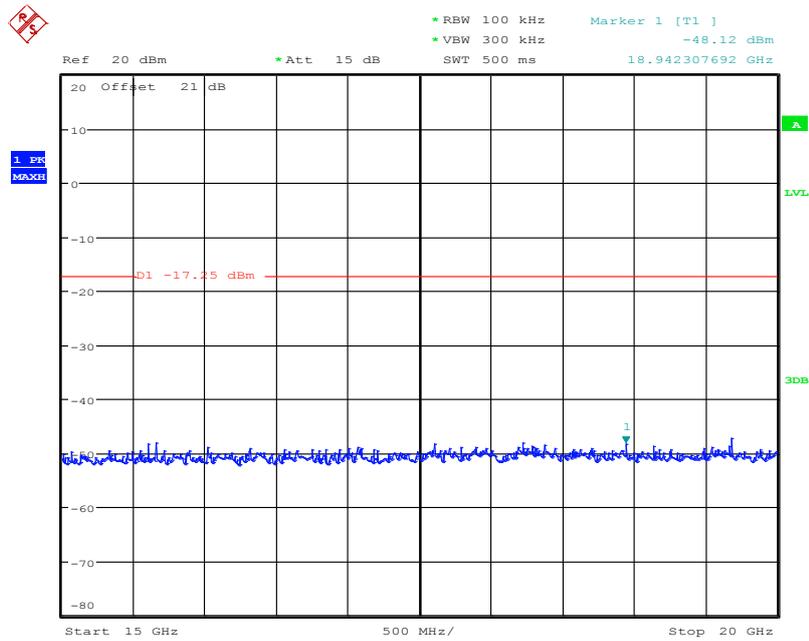
Date: 22.AUG.2012 17:00:30

Fig. 45 Conducted Spurious Emission (802.11b, Ch11, 7.5 GHz-10 GHz)



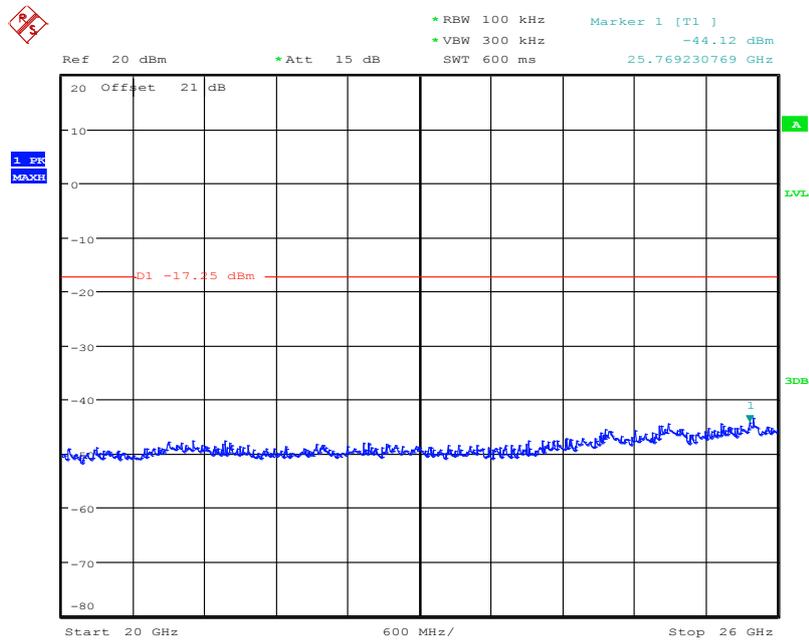
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Fig. 46 Conducted Spurious Emission (802.11b, Ch11, 10 GHz-15 GHz)



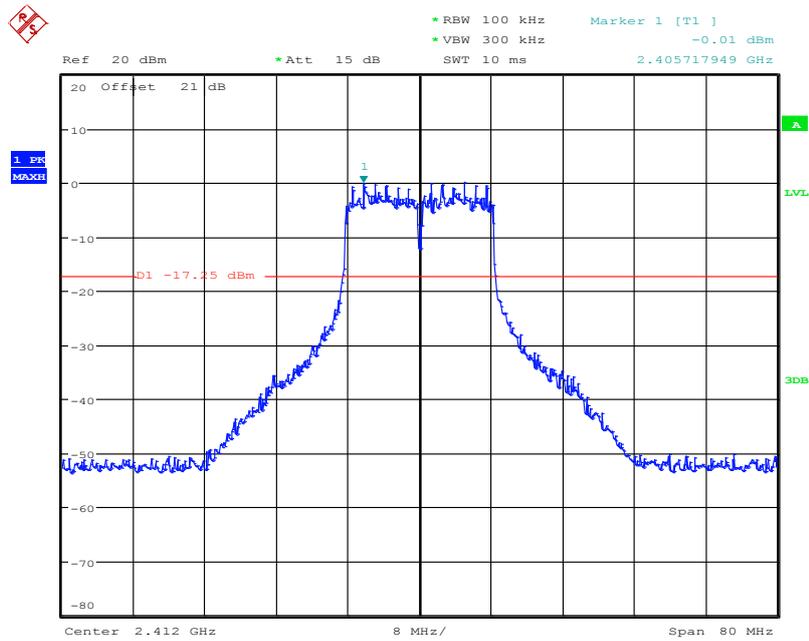
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Fig. 47 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)



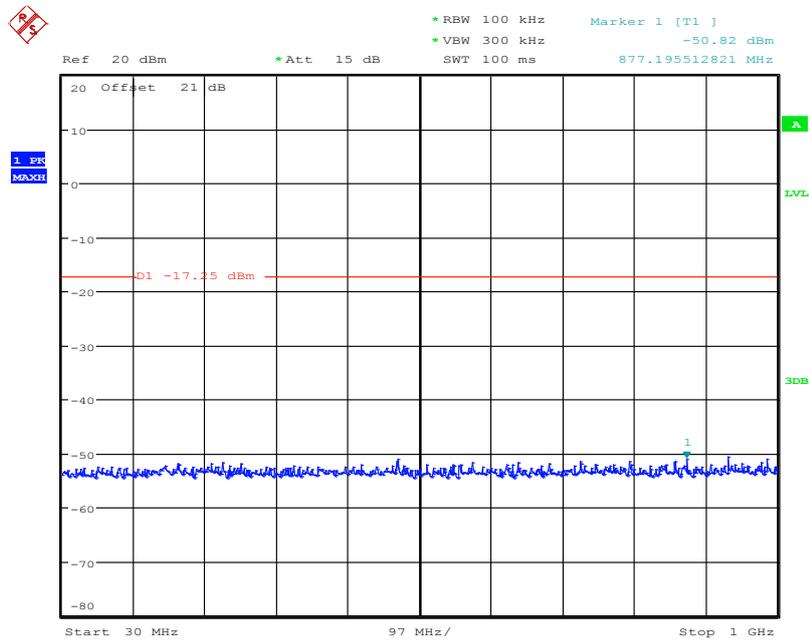
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Fig. 48 Conducted Spurious Emission (802.11b, Ch11, 20 GHz-26 GHz)



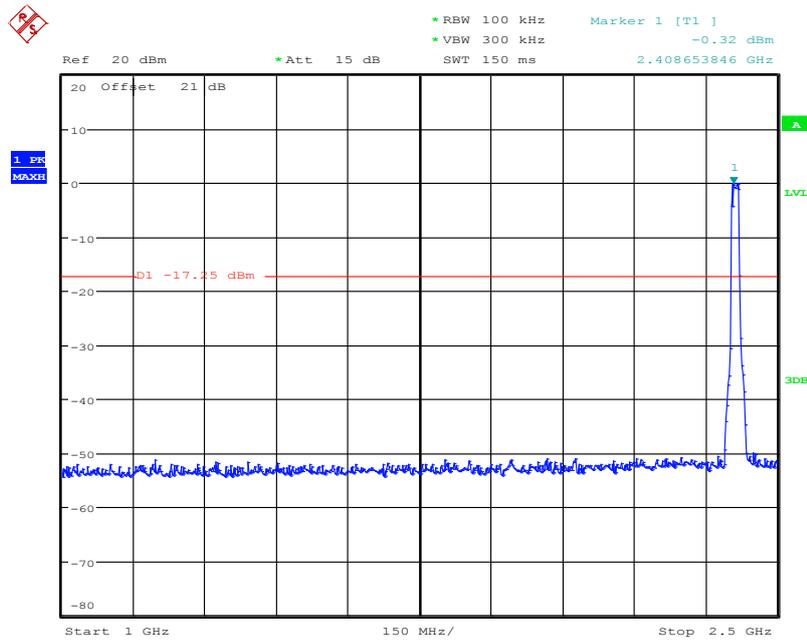
Date: 22.AUG.2012 17:01:51

Fig. 49 Conducted Spurious Emission (802.11g, Ch1, Center Frequency)



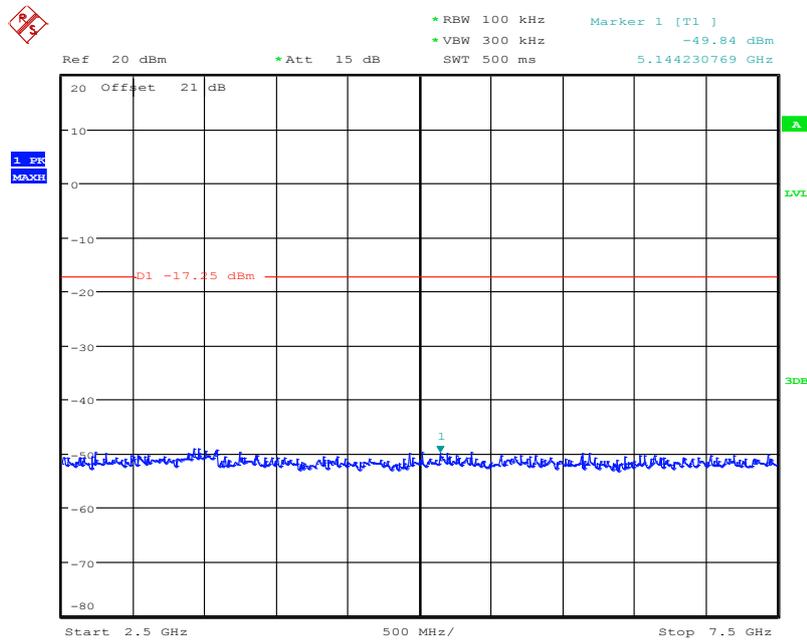
Date: 22.AUG.2012 17:02:08

Fig. 50 Conducted Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)



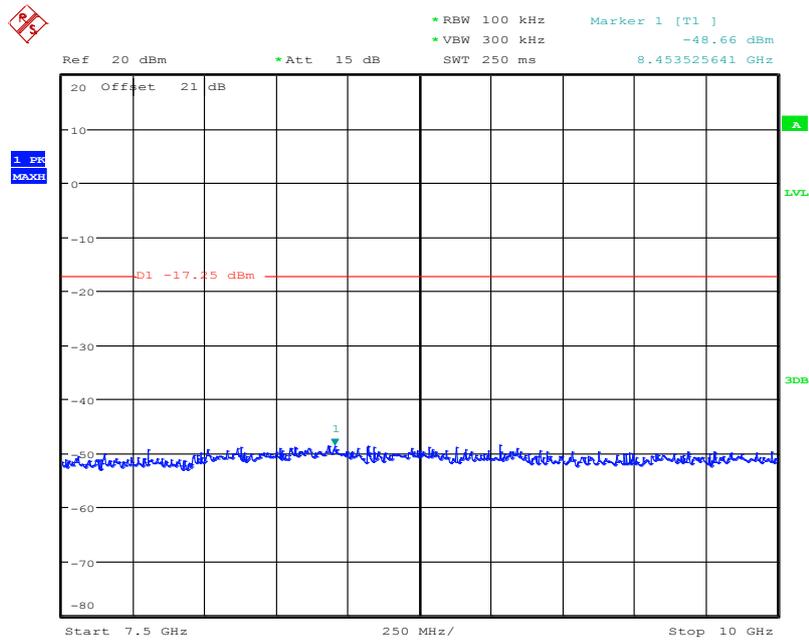
Date: 22.AUG.2012 17:02:22

Fig. 51 Conducted Spurious Emission (802.11g, Ch1, 1 GHz-2.5 GHz)



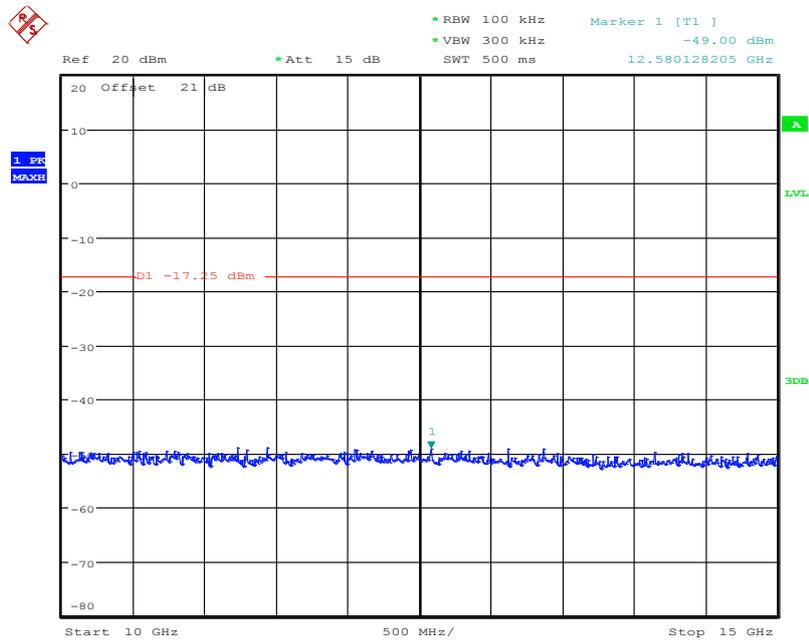
Date: 22.AUG.2012 17:02:45

Fig. 52 Conducted Spurious Emission (802.11g, Ch1, 2.5 GHz-7.5 GHz)



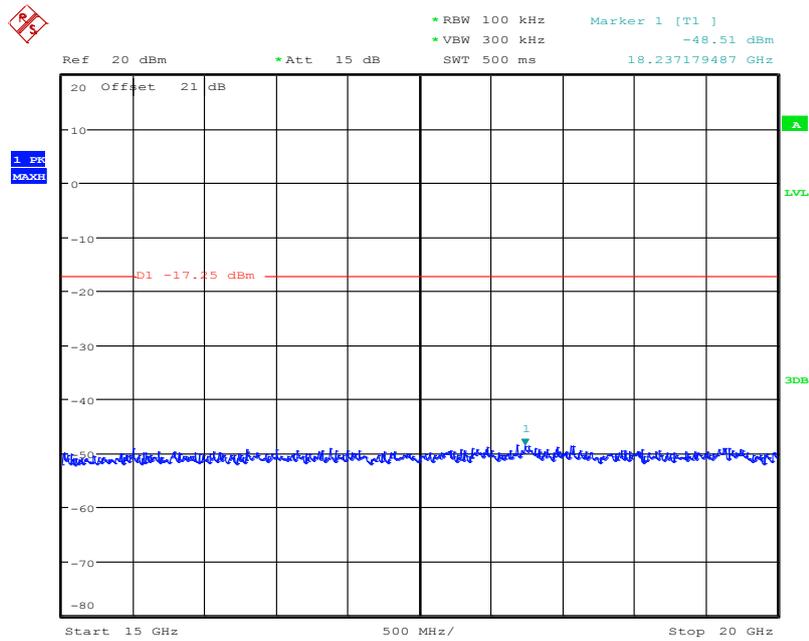
Date: 22.AUG.2012 17:03:03

Fig. 53 Conducted Spurious Emission (802.11g, Ch1, 7.5 GHz-10 GHz)



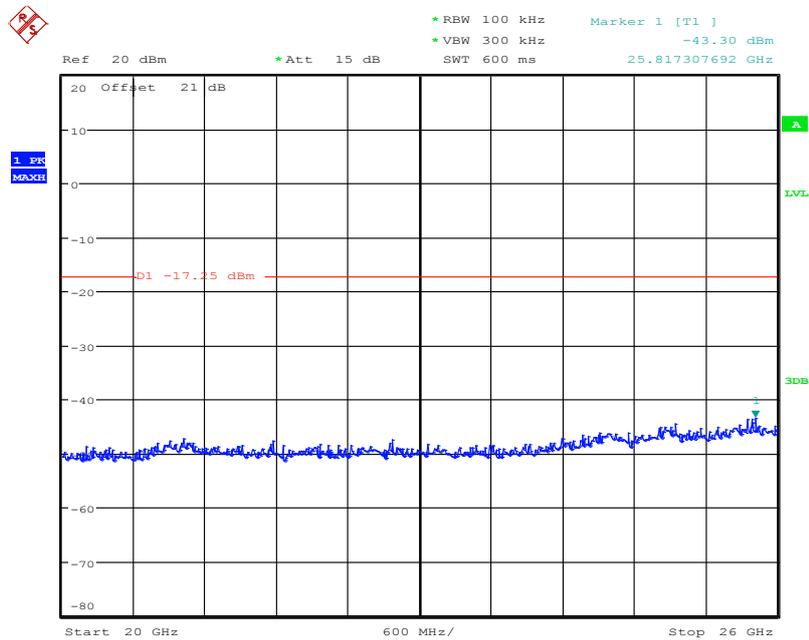
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Fig. 54 Conducted Spurious Emission (802.11g, Ch1, 10 GHz-15 GHz)



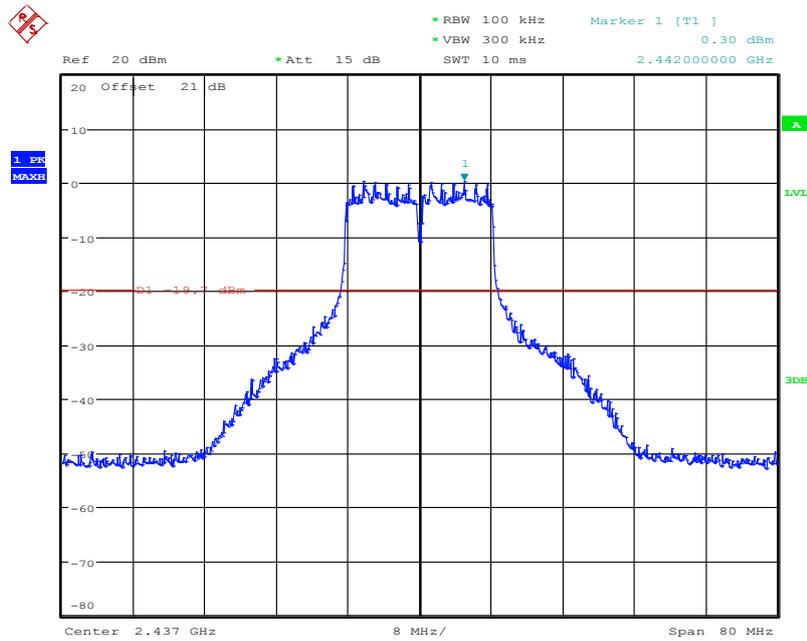
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Fig. 55 Conducted Spurious Emission (802.11g, Ch1, 15 GHz-20 GHz)



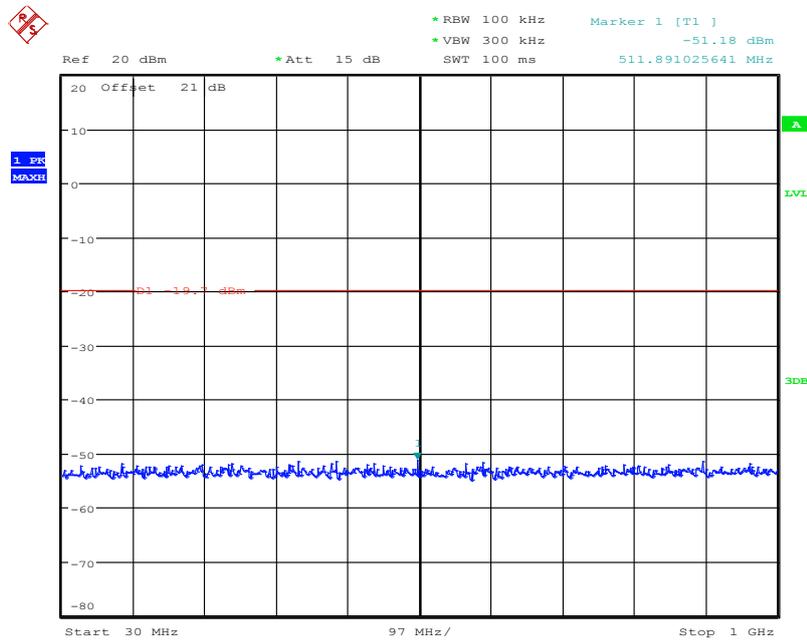
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Fig. 56 Conducted Spurious Emission (802.11g, Ch1, 20 GHz-26 GHz)



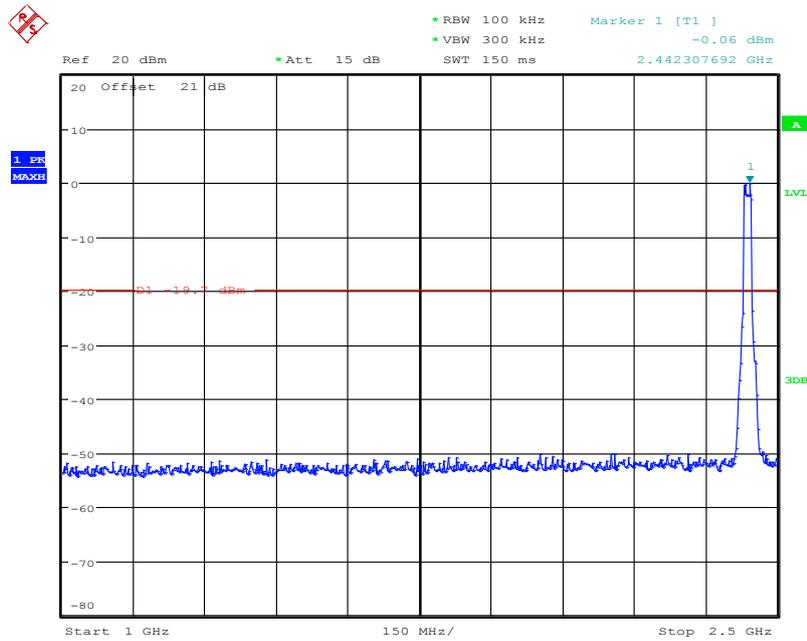
Date: 22.AUG.2012 18:12:08

Fig. 57 Conducted Spurious Emission (802.11g, Ch6, Center Frequency)



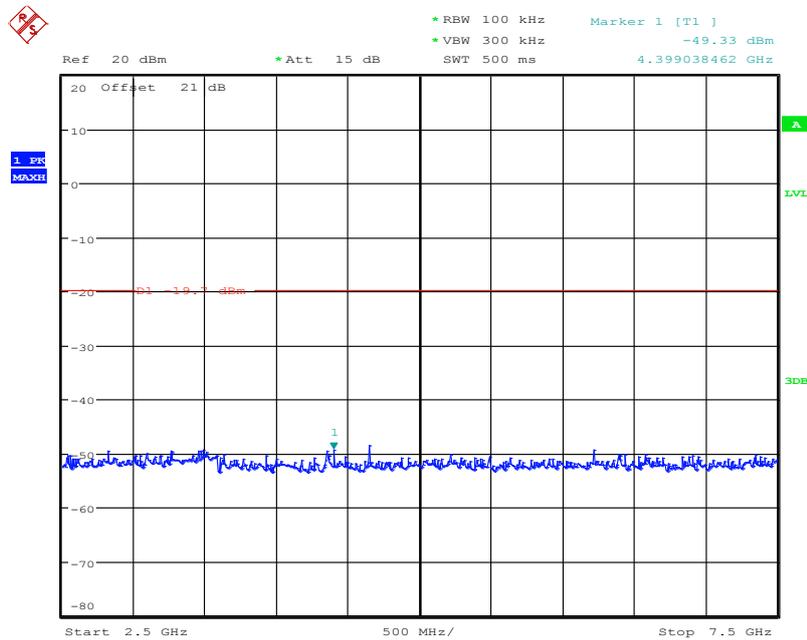
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Fig. 58 Conducted Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)



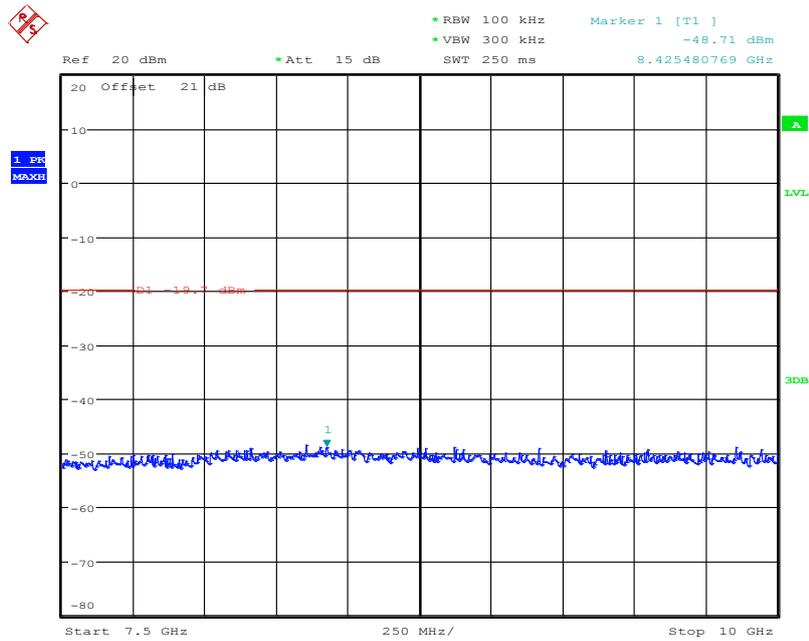
Date: 22.AUG.2012 18:12:45

Fig. 59 Conducted Spurious Emission (802.11g, Ch6, 1 GHz-2.5 GHz)



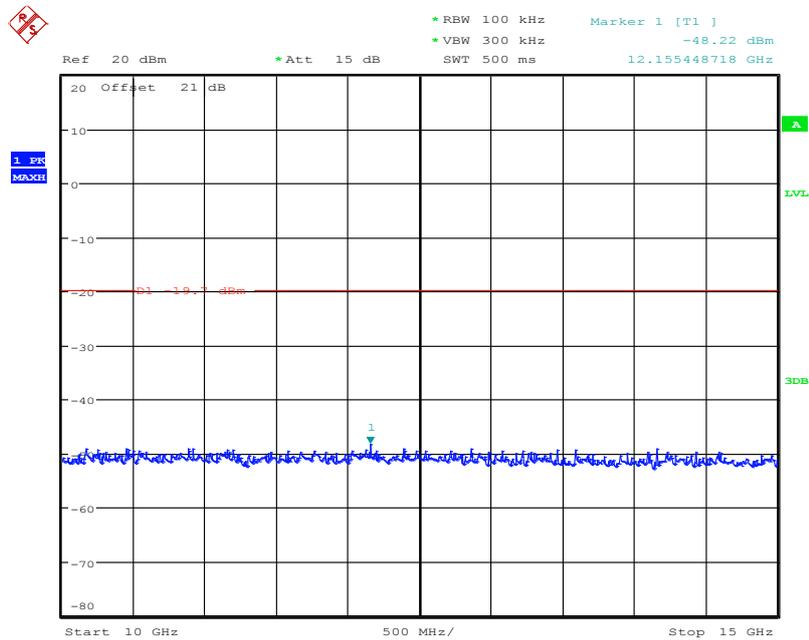
Date: 22.AUG.2012 18:13:02

Fig. 60 Conducted Spurious Emission (802.11g, Ch6, 2.5 GHz-7.5 GHz)



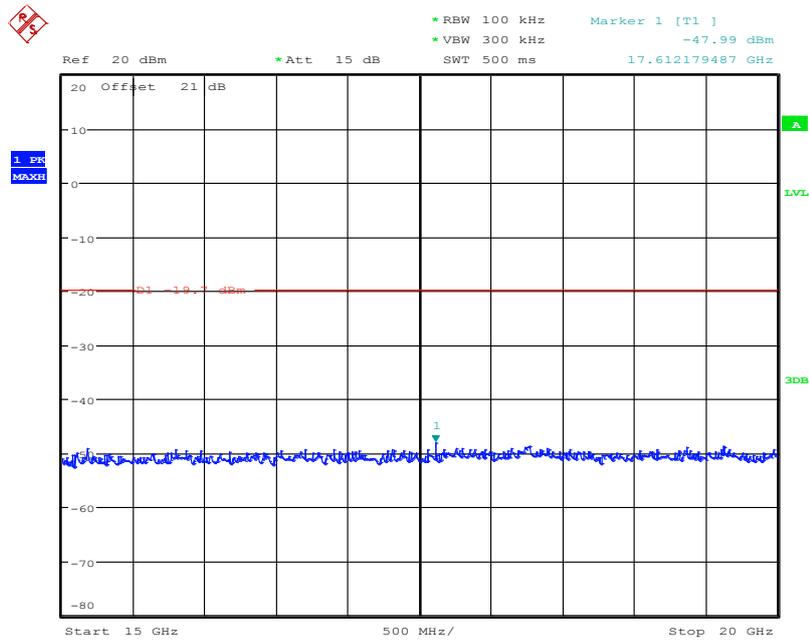
Date: 22.AUG.2012 18:13:20

Fig. 61 Conducted Spurious Emission (802.11g, Ch6, 7.5 GHz-10 GHz)



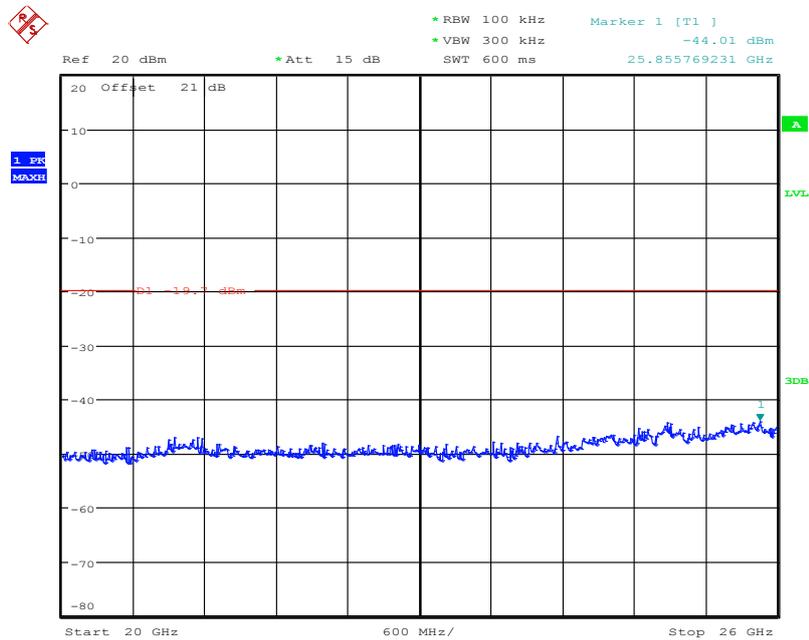
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Fig. 62 Conducted Spurious Emission (802.11g, Ch6, 10 GHz-15 GHz)



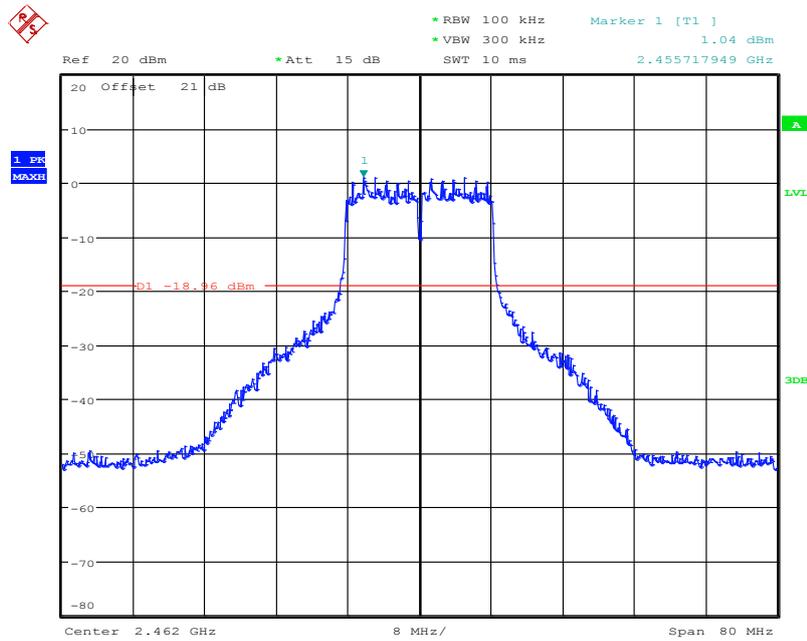
Date: 22.AUG.2012 18:13:54

Fig. 63 Conducted Spurious Emission (802.11g, Ch6, 15 GHz-20 GHz)



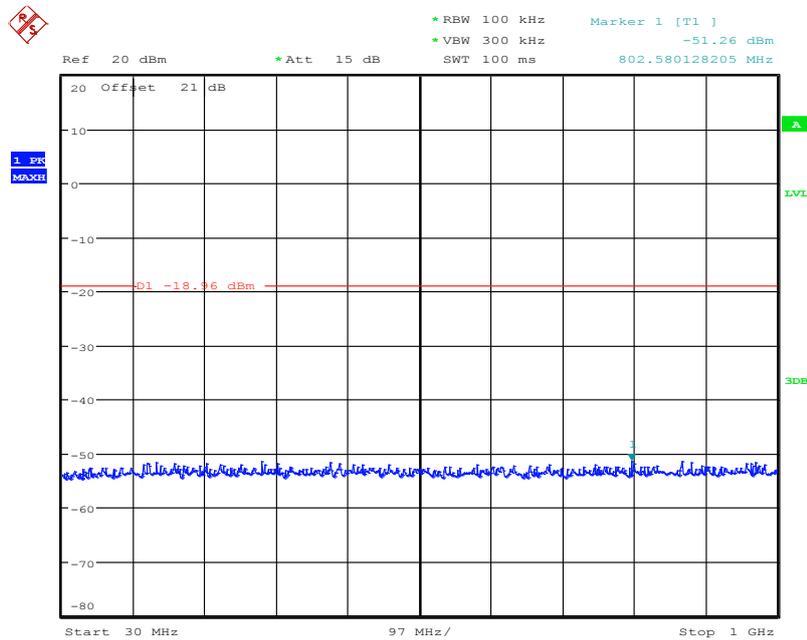
Date: 22.AUG.2012 18:14:09

Fig. 64 Conducted Spurious Emission (802.11g, Ch6, 20 GHz-26 GHz)



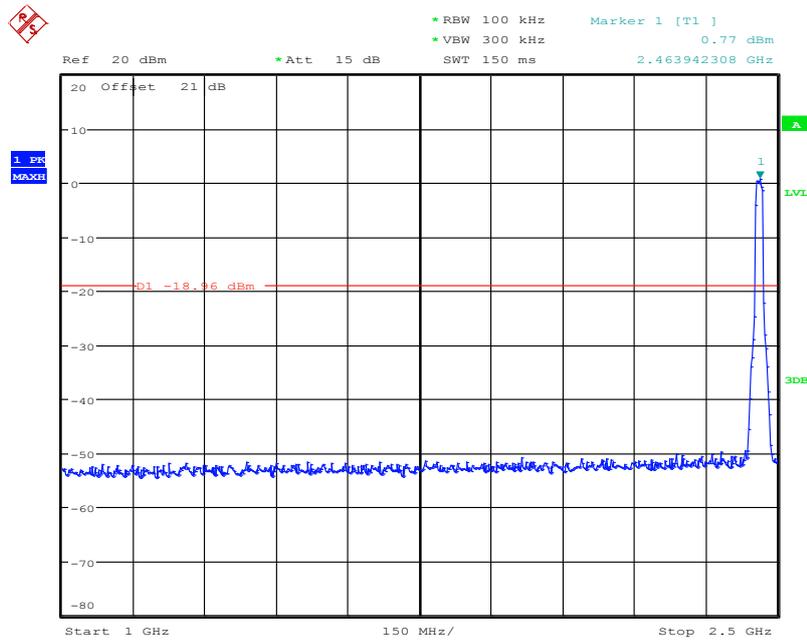
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Fig. 65 Conducted Spurious Emission (802.11g, Ch11, Center Frequency)



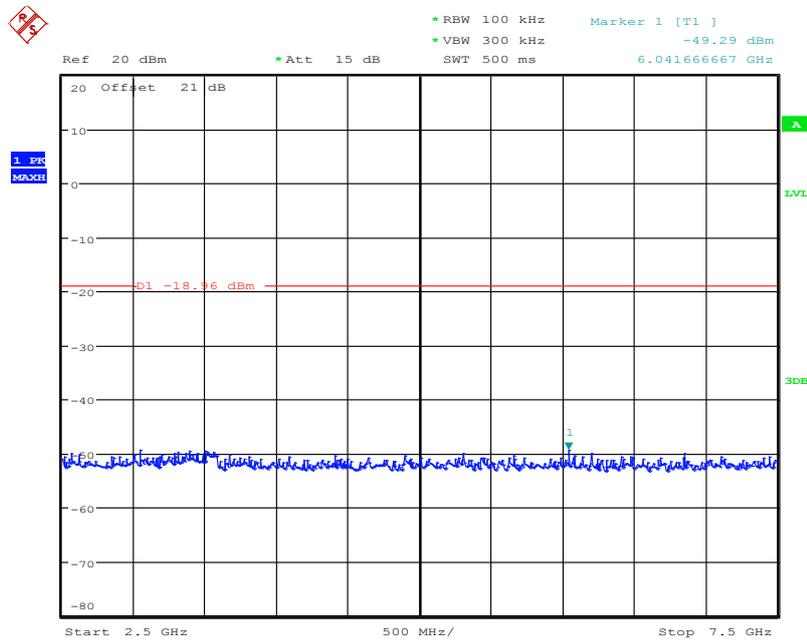
Date: 22.AUG.2012 18:15:10

Fig. 66 Conducted Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)



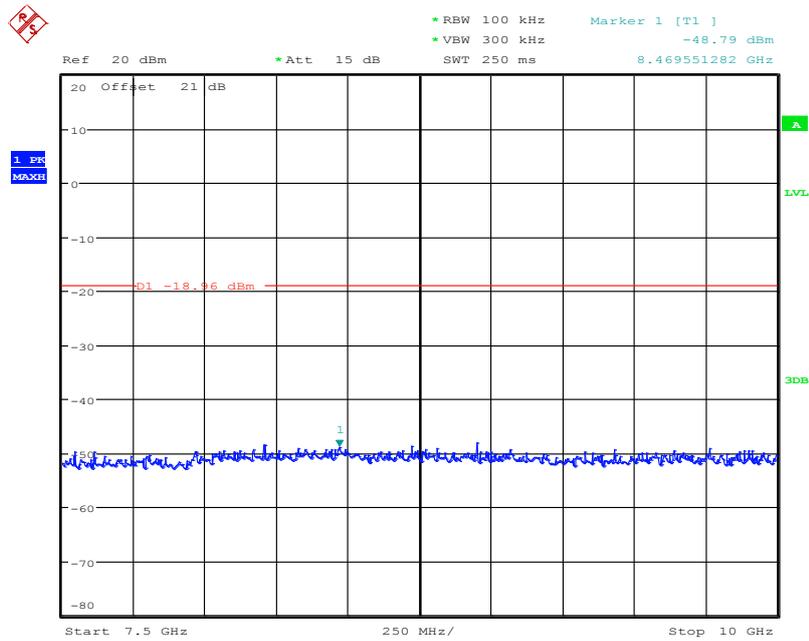
Date: 22.AUG.2012 18:15:27

Fig. 67 Conducted Spurious Emission (802.11g, Ch11, 1 GHz-2.5 GHz)



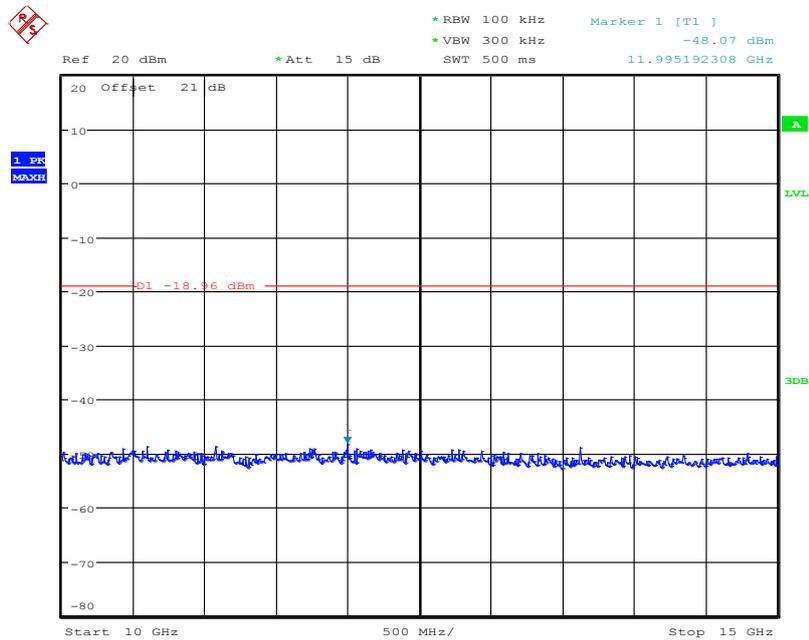
Date: 22.AUG.2012 18:15:42

Fig. 68 Conducted Spurious Emission (802.11g, Ch11, 2.5 GHz-7.5 GHz)



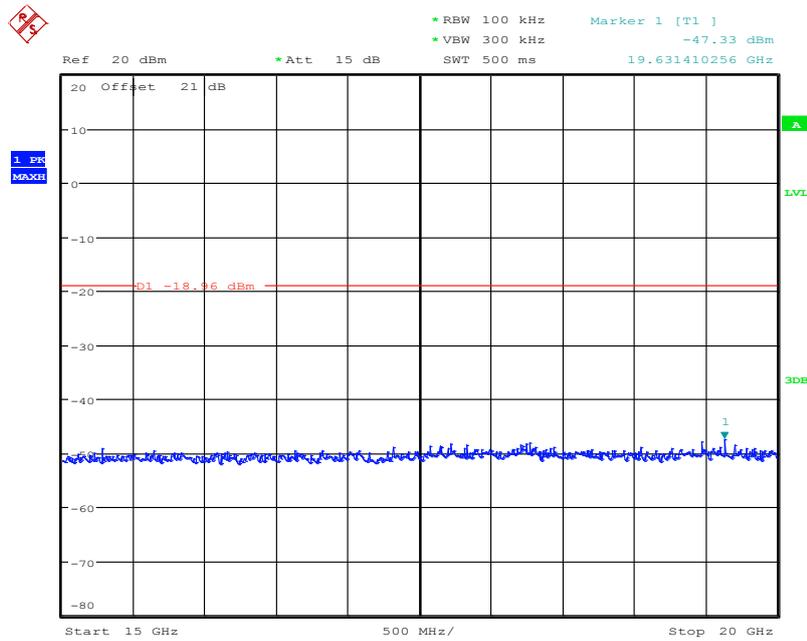
Date: 22.AUG.2012 18:15:58

Fig. 69 Conducted Spurious Emission (802.11g, Ch11, 7.5 GHz-10 GHz)



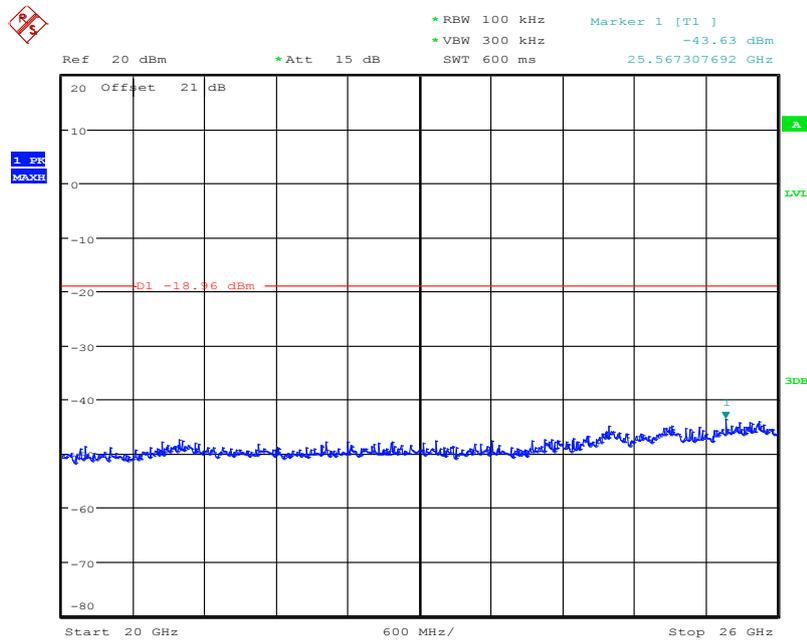
Date: 22.AUG.2012 18:16:15

Fig. 70 Conducted Spurious Emission (802.11g, Ch11, 10 GHz-15 GHz)



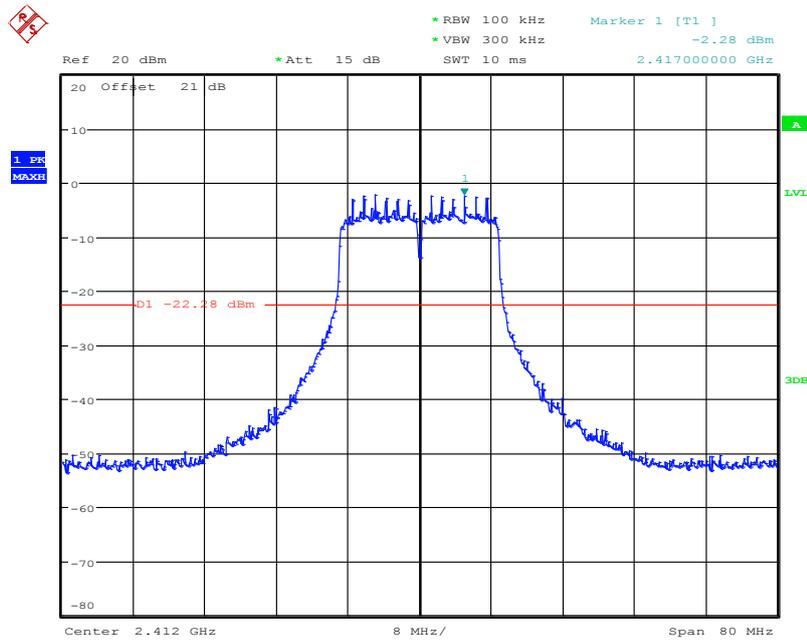
Date: 22.AUG.2012 18:16:36

Fig. 71 Conducted Spurious Emission (802.11g, Ch11, 15 GHz-20 GHz)



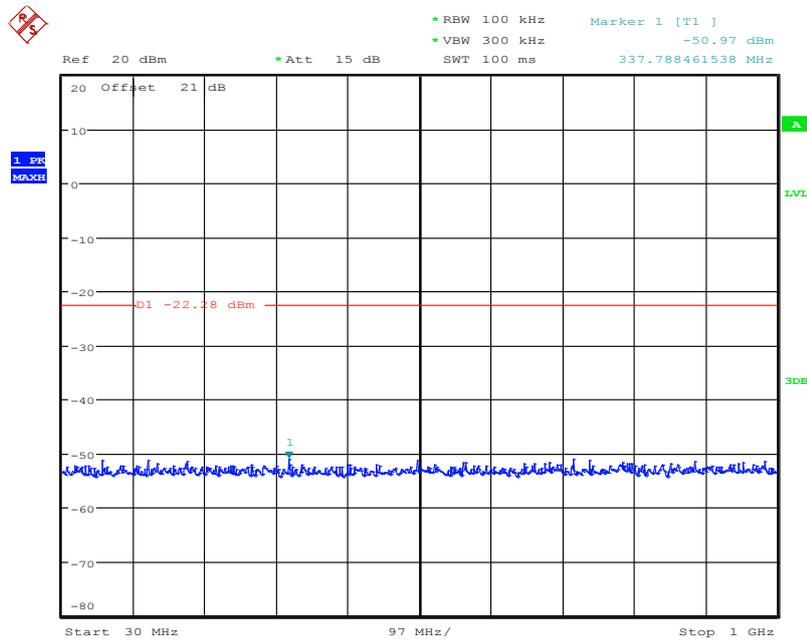
Date: 22.AUG.2012 18:16:53

Fig. 72 Conducted Spurious Emission (802.11g, Ch11, 20 GHz-26 GHz)



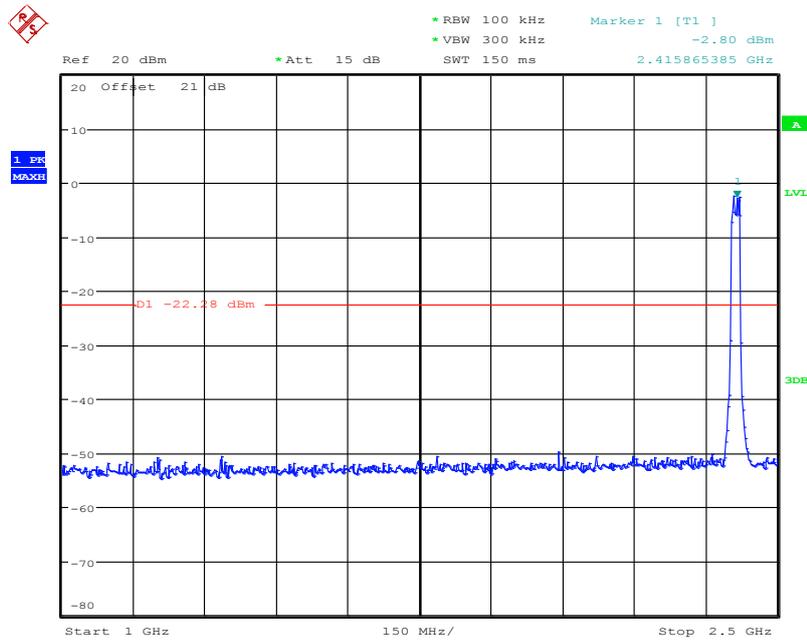
Date: 22.AUG.2012 18:17:38

Fig. 73 Conducted Spurious Emission (802.11n-HT20, Ch1, Center Frequency)



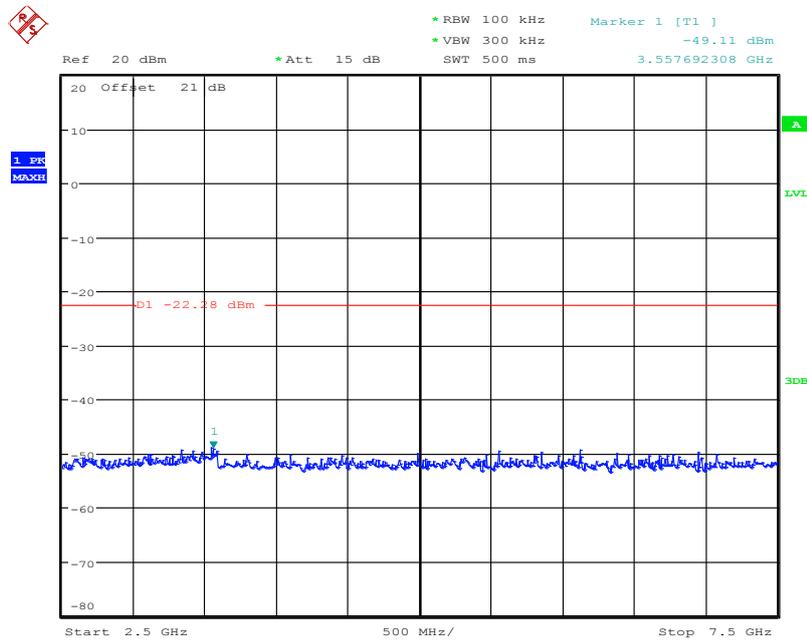
Date: 22.AUG.2012 18:18:00

Fig. 74 Conducted Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)



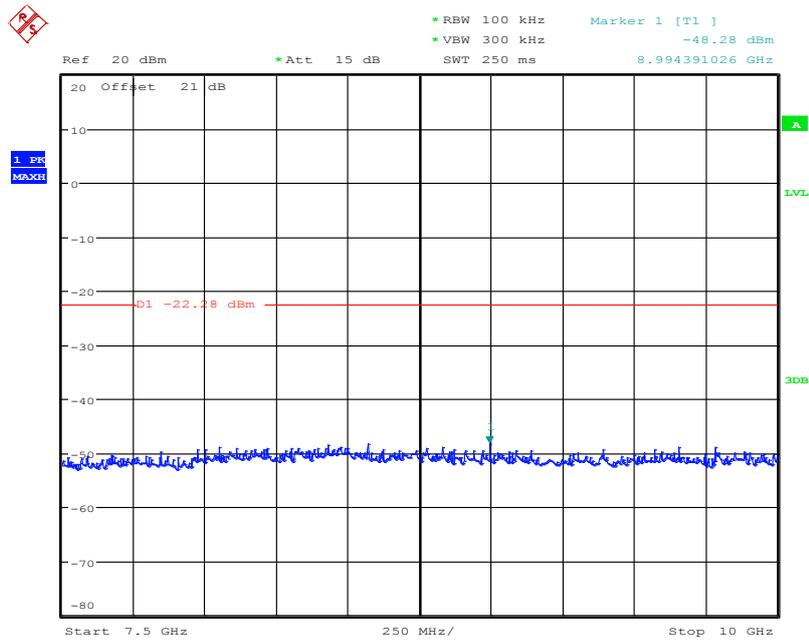
Date: 22.AUG.2012 18:18:18

Fig. 75 Conducted Spurious Emission (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)



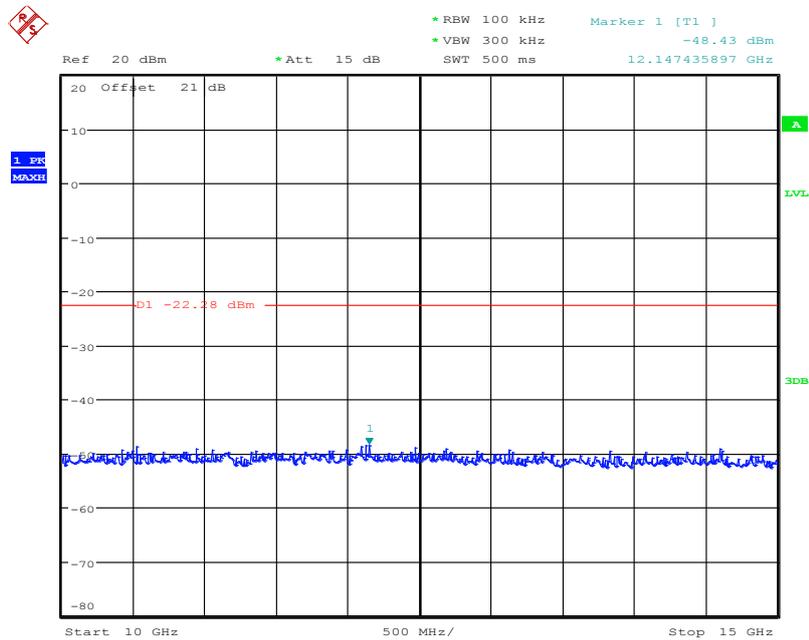
Date: 22.AUG.2012 18:18:34

Fig. 76 Conducted Spurious Emission (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)



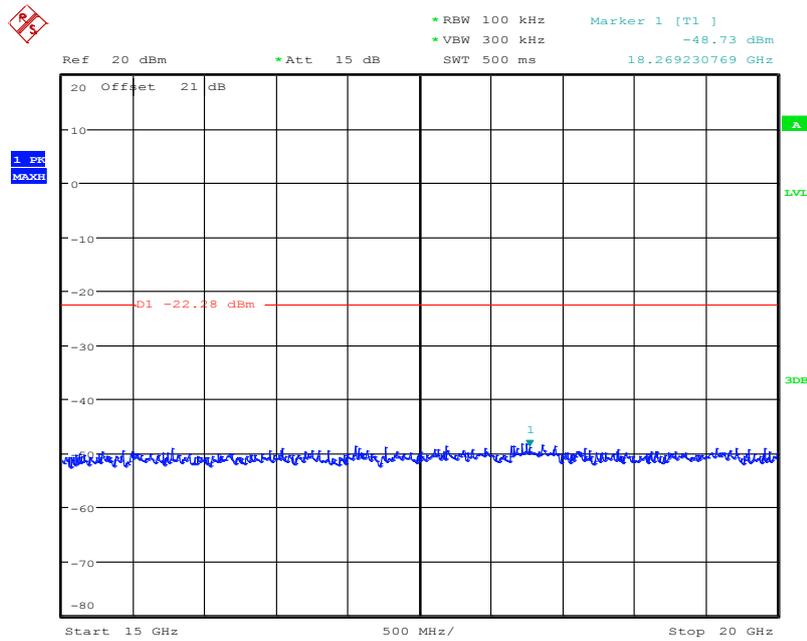
Date: 22.AUG.2012 18:18:50

Fig. 77 Conducted Spurious Emission (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)



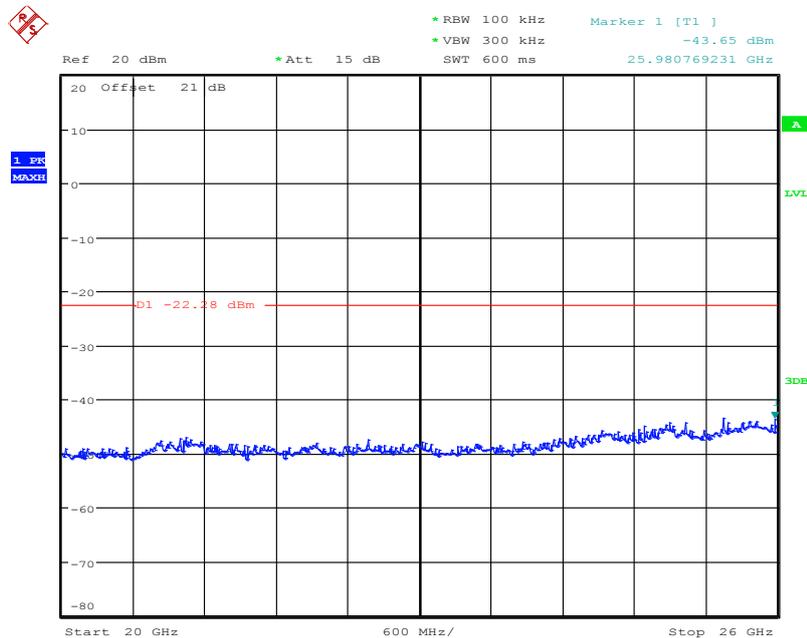
Date: 22.AUG.2012 18:19:06

Fig. 78 Conducted Spurious Emission (802.11n-HT20, Ch1, 10 GHz-15 GHz)



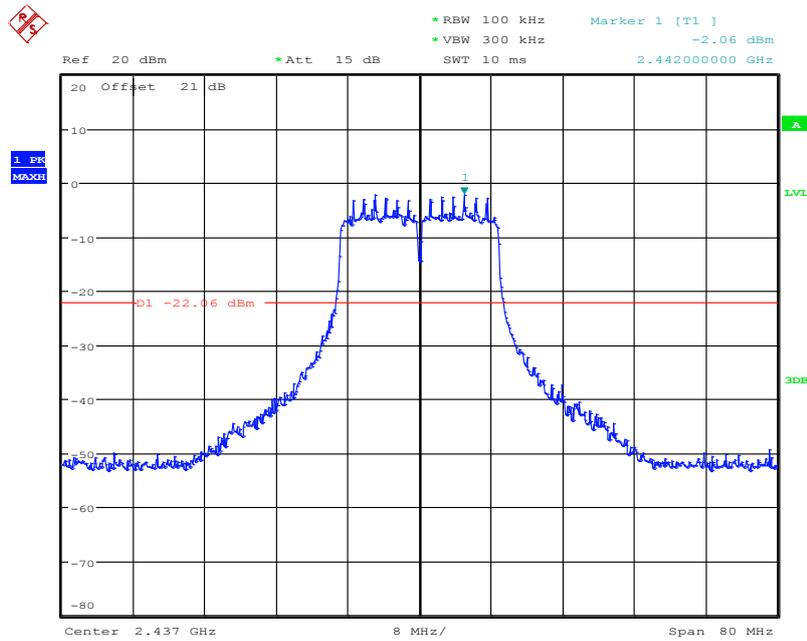
Date: 22.AUG.2012 18:19:21

Fig. 79 Conducted Spurious Emission (802.11n-HT20, Ch1, 15 GHz-20 GHz)



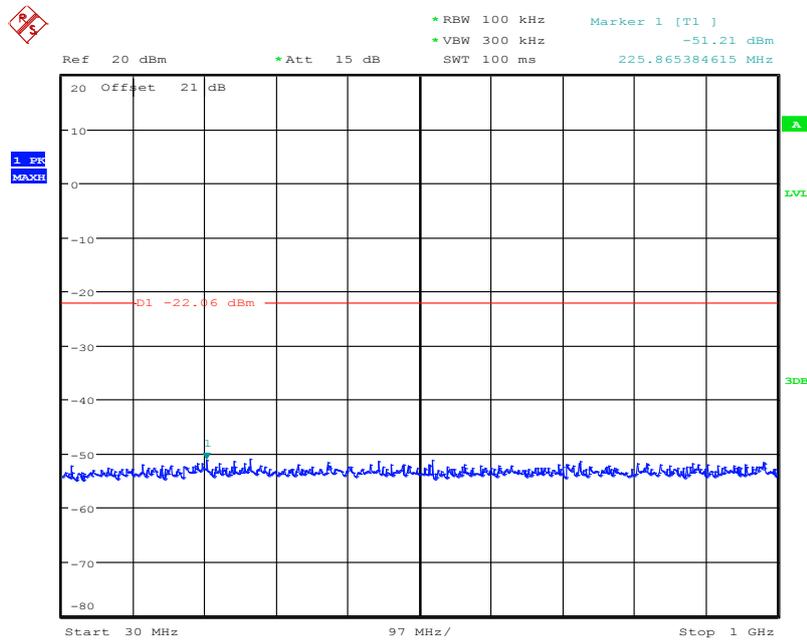
Date: 22.AUG.2012 18:19:49

Fig. 80 Conducted Spurious Emission (802.11n-HT20, Ch1, 20 GHz-26 GHz)



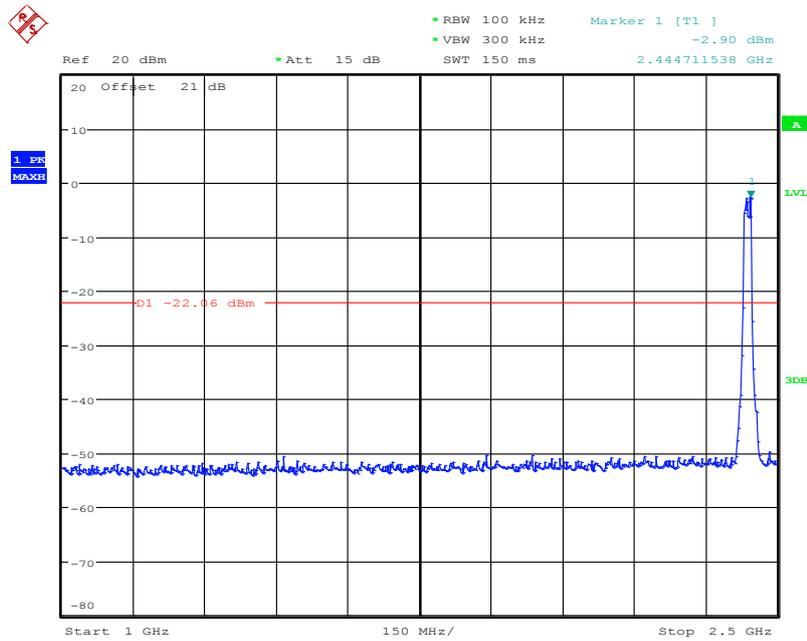
Date: 22.AUG.2012 18:22:37

Fig. 81 Conducted Spurious Emission (802.11n-HT20, Ch6, Center Frequency)



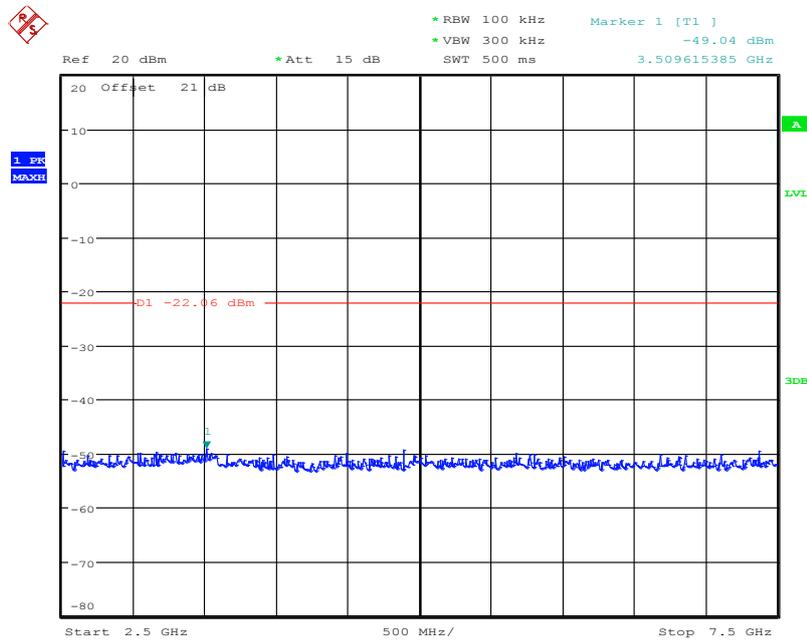
Date: 22.AUG.2012 18:22:52

Fig. 82 Conducted Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)



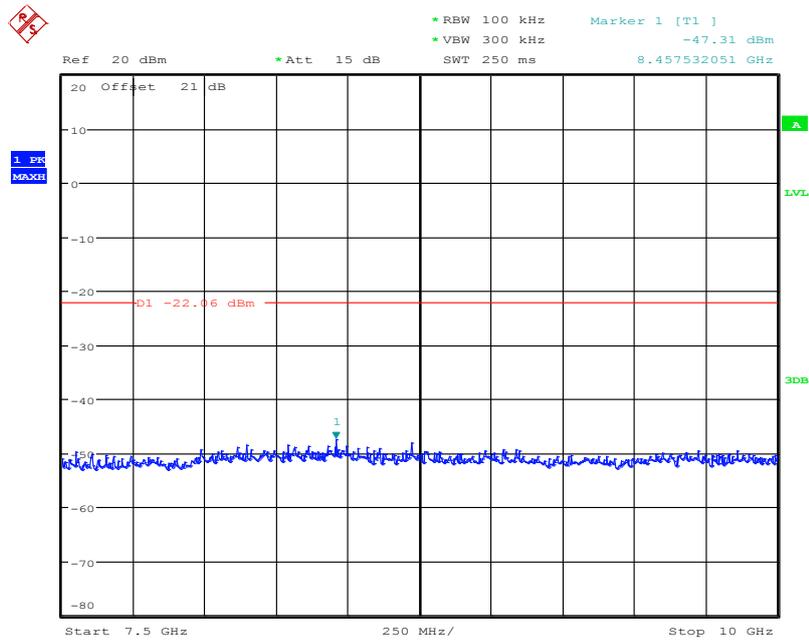
Date: 22.AUG.2012 18:23:12

Fig. 83 Conducted Spurious Emission (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)



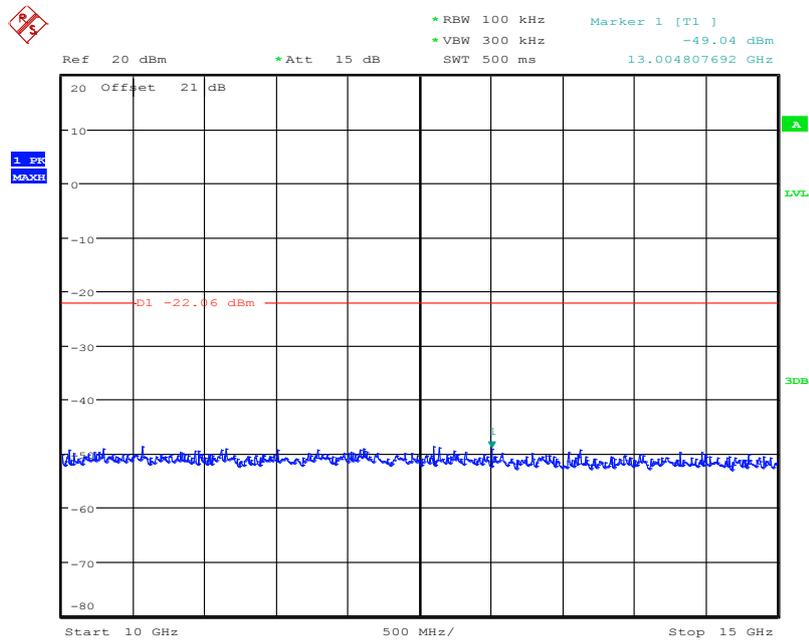
Date: 22.AUG.2012 18:23:33

Fig. 84 Conducted Spurious Emission (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)



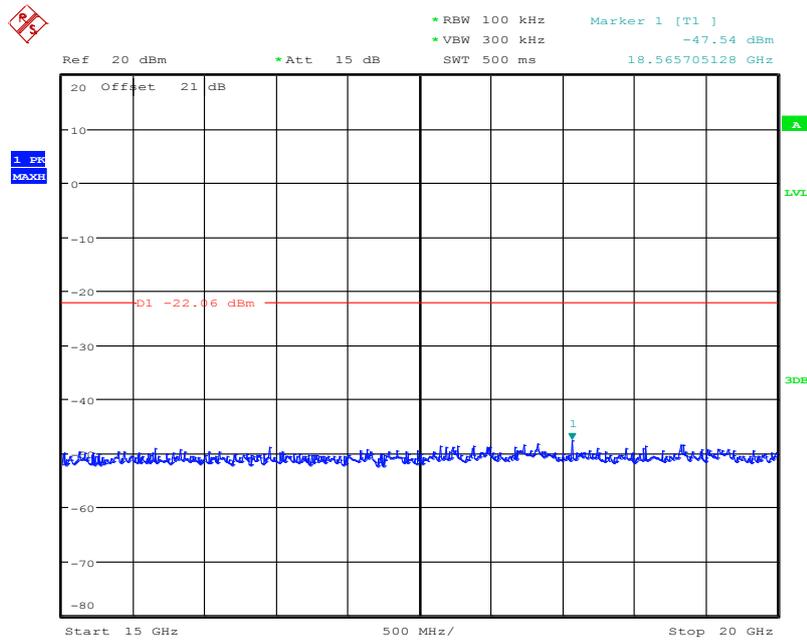
Date: 22.AUG.2012 18:23:49

Fig. 85 Conducted Spurious Emission (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)



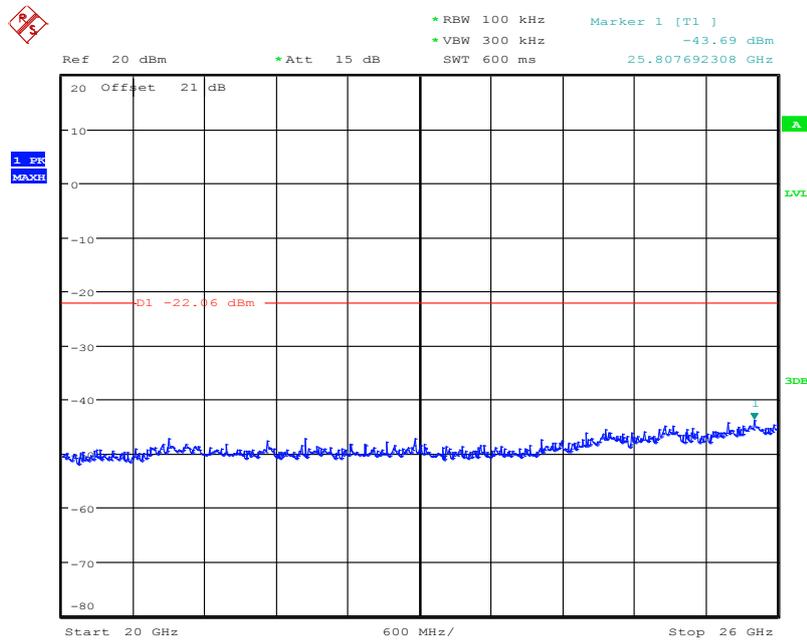
Date: 22.AUG.2012 18:24:02

Fig. 86 Conducted Spurious Emission (802.11n-HT20, Ch6, 10 GHz-15 GHz)



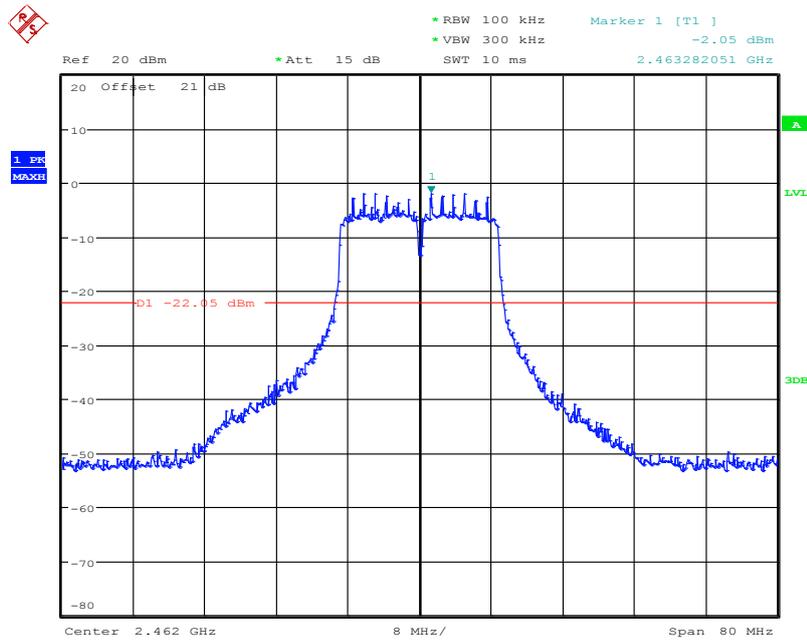
Date: 22.AUG.2012 18:24:17

Fig. 87 Conducted Spurious Emission (802.11n-HT20, Ch6, 15 GHz-20 GHz)



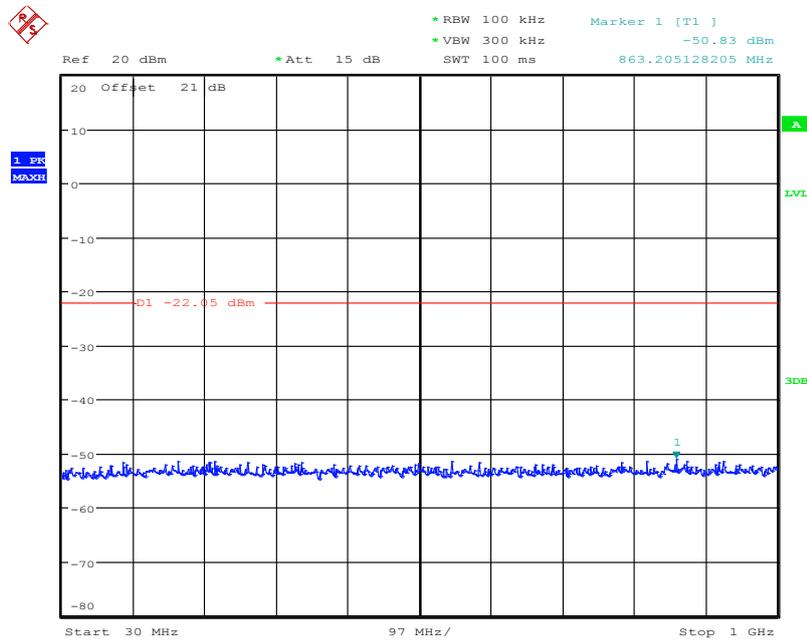
Date: 22.AUG.2012 18:24:32

Fig. 88 Conducted Spurious Emission (802.11n-HT20, Ch6, 20 GHz-26 GHz)



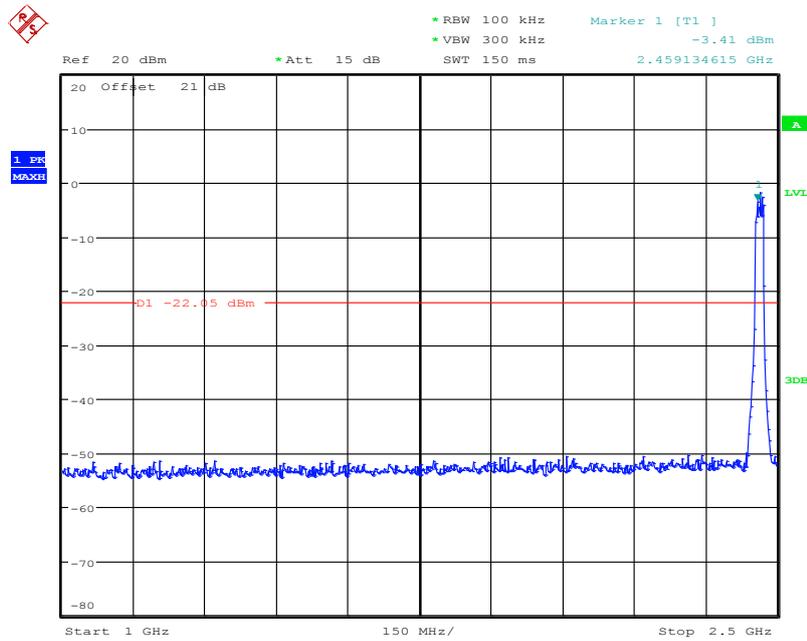
Date: 22.AUG.2012 18:25:06

Fig. 89 Conducted Spurious Emission (802.11n-HT20, Ch11, Center Frequency)



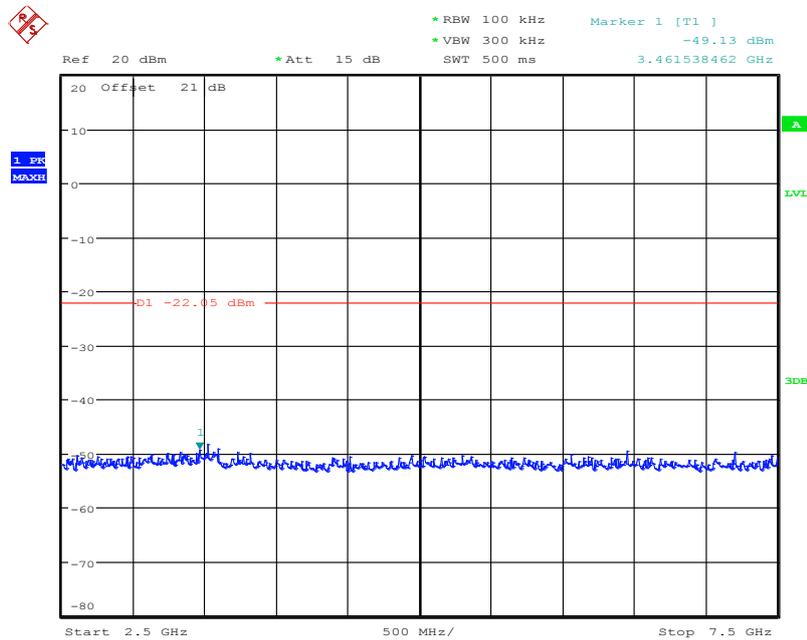
Date: 22.AUG.2012 18:25:27

Fig. 90 Conducted Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)



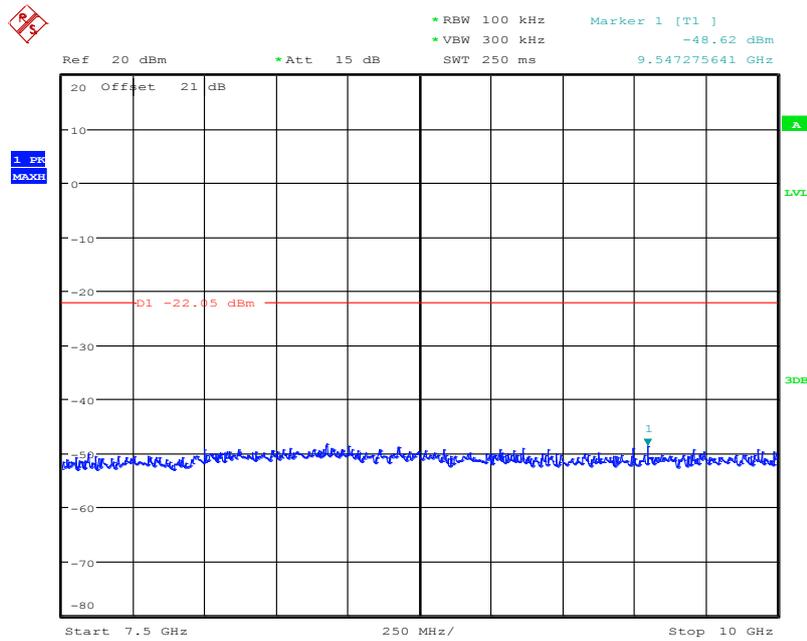
Date: 22.AUG.2012 18:25:40

Fig. 91 Conducted Spurious Emission (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)



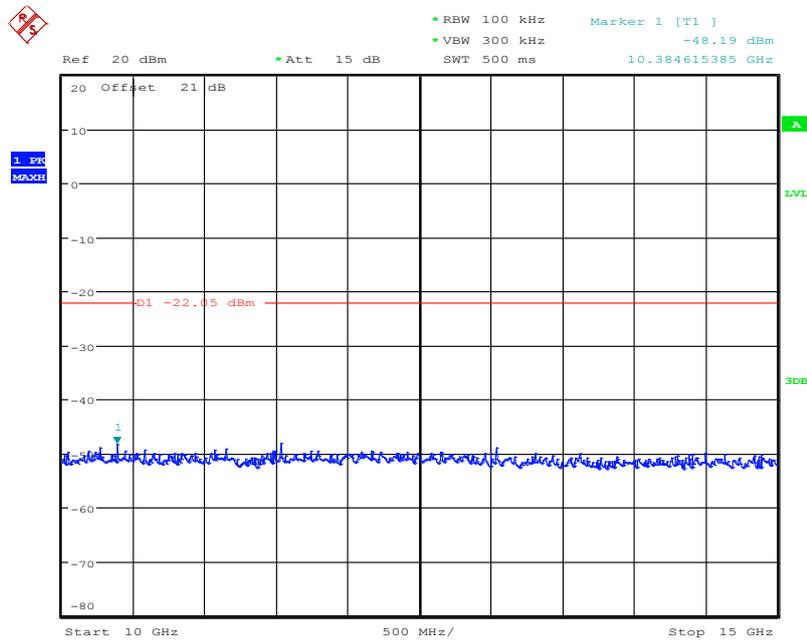
Date: 22.AUG.2012 18:25:57

Fig. 92 Conducted Spurious Emission (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)



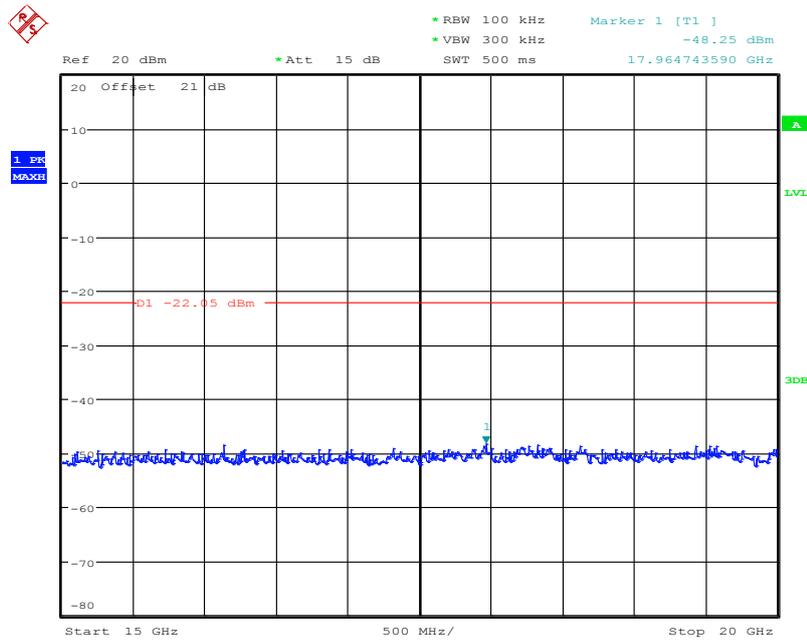
Date: 22.AUG.2012 18:26:13

Fig. 93 Conducted Spurious Emission (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)



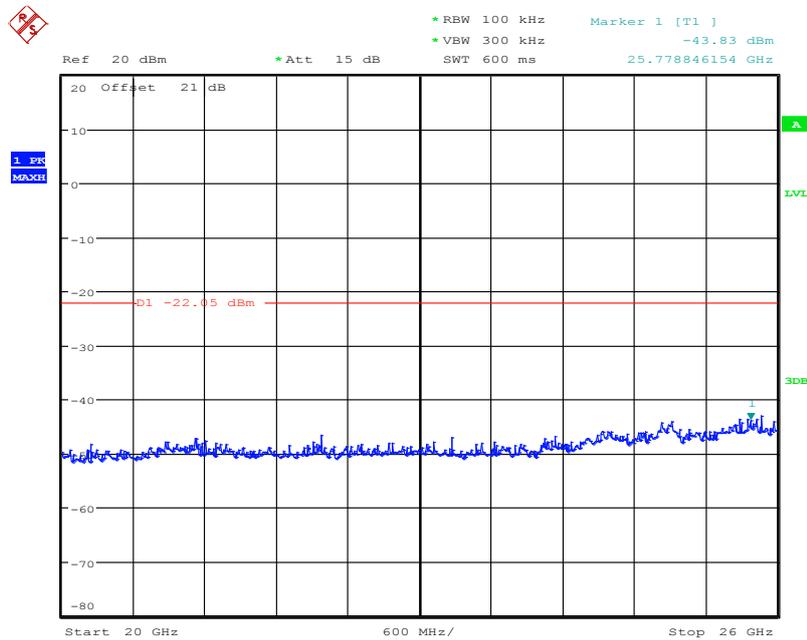
Date: 22.AUG.2012 18:26:29

Fig. 94 Conducted Spurious Emission (802.11n-HT20, Ch11, 10 GHz-15 GHz)



Date: 22.AUG.2012 18:26:45

Fig. 95 Conducted Spurious Emission (802.11n-HT20, Ch11, 15 GHz-20 GHz)



Date: 22.AUG.2012 18:27:03

Fig. 96 Conducted Spurious Emission (802.11n-HT20, Ch11, 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 ~2.5GHz	Fig.97	P
	1	30 MHz ~1 GHz	Fig.98	P
		1 GHz ~ 3 GHz	Fig.99	P
		3 GHz ~ 18 GHz	Fig.100	P
	6	30 MHz ~1 GHz	Fig.101	P
		1 GHz ~ 3 GHz	Fig.102	P
		3 GHz ~ 18 GHz	Fig.103	P
	Power	2.38GHz~2.5GHz	Fig.104	P
	11	30 MHz ~1 GHz	Fig.105	P
		1 GHz ~ 3 GHz	Fig.106	P
		3 GHz ~ 18 GHz	Fig.107	P
	802.11g	Power	2.38GHz~2.5GHz	Fig.108
1		30 MHz ~1 GHz	Fig.109	P
		1 GHz ~ 3 GHz	Fig.110	P
		3 GHz ~ 18 GHz	Fig.111	P
6		30 MHz ~1 GHz	Fig.112	P
		1 GHz ~ 3 GHz	Fig.113	P
		3 GHz ~ 18 GHz	Fig.114	P
Power		2.38GHz~2.5GHz	Fig.115	P
11		30 MHz ~1 GHz	Fig.116	P
		1 GHz ~ 3 GHz	Fig.117	P
		3 GHz ~ 18 GHz	Fig.118	P

802.11n mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (20MHz)	Power	2.38GHz ~2.5GHz	Fig.119	P
	1	30 MHz ~1 GHz	Fig.120	P
		1 GHz ~ 3 GHz	Fig.121	P
		3 GHz ~ 18 GHz	Fig.122	P
	6	30 MHz ~1 GHz	Fig.123	P
		1 GHz ~ 3 GHz	Fig.124	P
		3 GHz ~ 18 GHz	Fig.125	P
	Power	2.38GHz~2.5GHz	Fig.126	P
	11	30 MHz ~1 GHz	Fig.127	P
		1 GHz ~ 3 GHz	Fig.128	P
		3 GHz ~ 18 GHz	Fig.129	P
	802.11n (40MHz)	Power	2.38GHz ~2.5GHz	/
3		30 MHz ~1 GHz	/	/
		1 GHz ~ 3 GHz	/	/

		3 GHz ~ 18 GHz	/	/
	6	30 MHz ~1 GHz	/	/
		1 GHz ~ 3 GHz	/	/
		3 GHz ~ 18 GHz	/	/
		Power	2.38GHz~2.5GHz	/
	9	30 MHz ~1 GHz	/	/
		1 GHz ~ 3 GHz	/	/
		3 GHz ~ 18 GHz	/	/
/	All channels	18 GHz~ 26.5 GHz	Fig.130	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 _{Mea} (dBuV/m)	Polarization
2408.50	94.66	1.81	92.85	VERTICAL
2409.63	95.00	1.80	93.20	VERTICAL
2410.75	94.85	1.80	93.04	VERTICAL
2411.88	94.45	1.80	92.64	VERTICAL
2413.00	95.18	1.80	93.37	VERTICAL
2414.13	94.60	1.80	92.80	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2433.25	94.86	1.83	93.03	VERTICAL
2434.38	95.16	1.83	93.33	VERTICAL
2435.50	95.21	1.83	93.38	VERTICAL
2436.63	95.35	1.84	93.51	VERTICAL
2437.75	94.99	1.84	93.15	VERTICAL
2438.88	95.23	1.84	93.38	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2459.13	94.40	1.88	92.53	VERTICAL
2460.25	94.84	1.88	92.96	VERTICAL
2461.38	93.97	1.88	92.09	VERTICAL
2462.50	94.89	1.88	93.01	VERTICAL
2463.63	94.59	1.88	92.71	VERTICAL
2464.75	94.51	1.88	92.63	VERTICAL

802.11g

Ch1

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2405.13	94.06	1.81	92.25	HORIZONTAL
2406.25	94.41	1.81	92.61	HORIZONTAL
2407.38	93.87	1.81	92.06	HORIZONTAL
2408.50	94.01	1.81	92.21	HORIZONTAL
2409.63	94.21	1.80	92.40	HORIZONTAL
2410.75	94.20	1.80	92.40	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2429.88	92.26	1.82	90.44	HORIZONTAL
2431.00	92.33	1.82	90.51	HORIZONTAL
2432.13	92.50	1.82	90.67	HORIZONTAL
2433.25	92.09	1.83	90.26	HORIZONTAL
2434.38	92.19	1.83	90.36	HORIZONTAL
2435.50	91.84	1.83	90.00	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2462.50	90.50	1.88	88.62	VERTICAL
2463.63	90.73	1.88	88.85	VERTICAL
2464.75	91.02	1.88	89.14	VERTICAL
2465.88	90.44	1.88	88.56	VERTICAL
2467.00	90.36	1.88	88.48	VERTICAL
2468.13	90.56	1.88	88.68	VERTICAL

802.11n-HT20

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2404.00	92.38	1.81	90.57	HORIZONTAL
2405.13	92.13	1.81	90.33	HORIZONTAL
2406.25	92.82	1.81	91.02	HORIZONTAL
2407.38	92.28	1.81	90.47	HORIZONTAL
2408.50	92.53	1.81	90.72	HORIZONTAL
2409.63	92.73	1.80	90.92	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2428.75	90.53	1.81	88.72	VERTICAL
2429.88	91.07	1.82	89.25	VERTICAL
2431.00	91.00	1.82	89.18	VERTICAL
2432.13	91.42	1.82	89.60	VERTICAL
2433.25	90.97	1.83	89.14	VERTICAL
2434.38	91.25	1.83	89.42	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2463.63	89.85	1.88	87.97	HORIZONTAL
2464.75	90.45	1.88	88.57	HORIZONTAL
2465.88	90.64	1.88	88.76	HORIZONTAL
2467.00	90.18	1.88	88.30	HORIZONTAL
2468.13	90.40	1.88	88.52	HORIZONTAL
2469.25	90.02	1.88	88.14	HORIZONTAL

802.11n-HT40

Ch3

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/

Ch6

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/

Ch9

Frequency(MHz)	Result (dBuv/m)	Cable Loss + Antenna Factor	P _{Mea} (dBuV/m)	Polarization
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/

Test graphs as below:

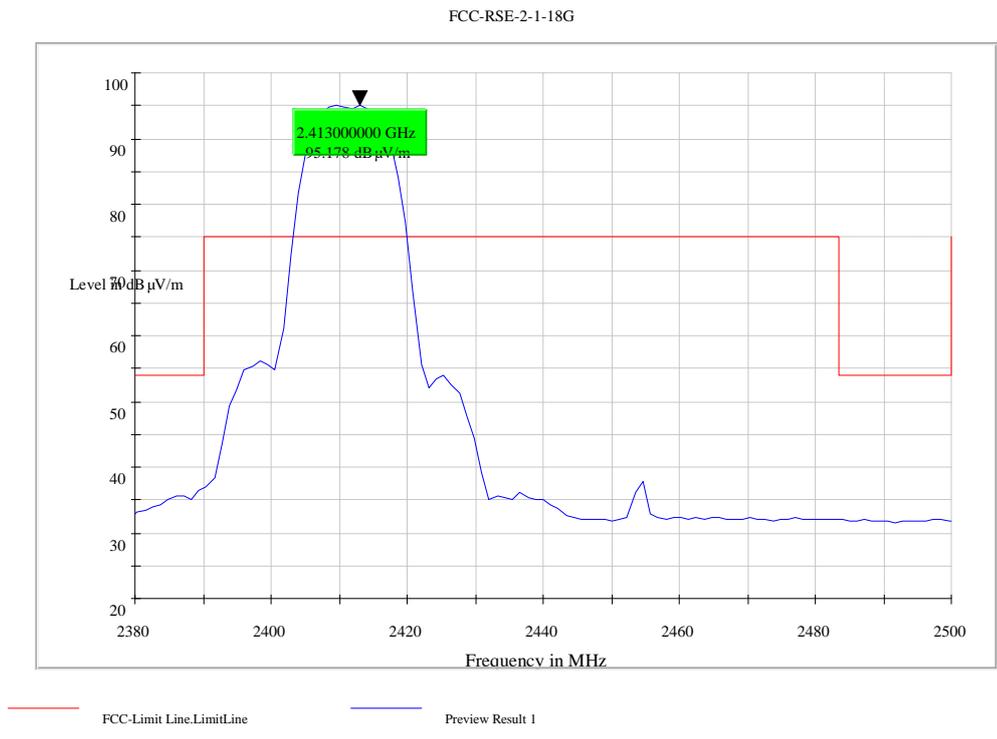


Fig. 97 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz – 2.5GHz

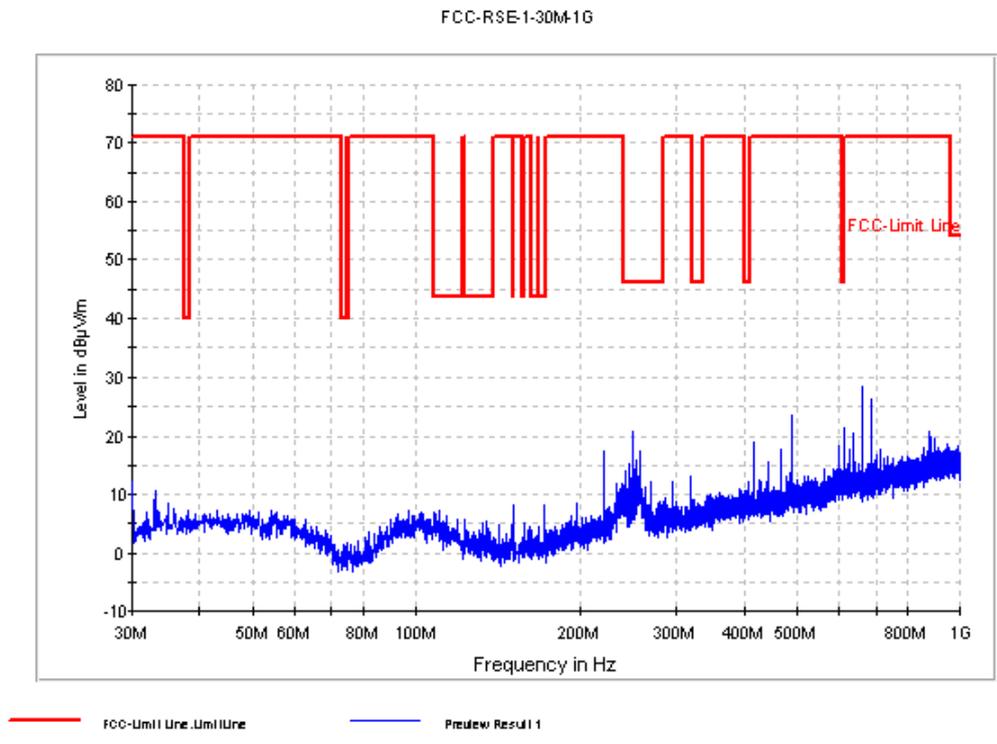


Fig. 98 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)

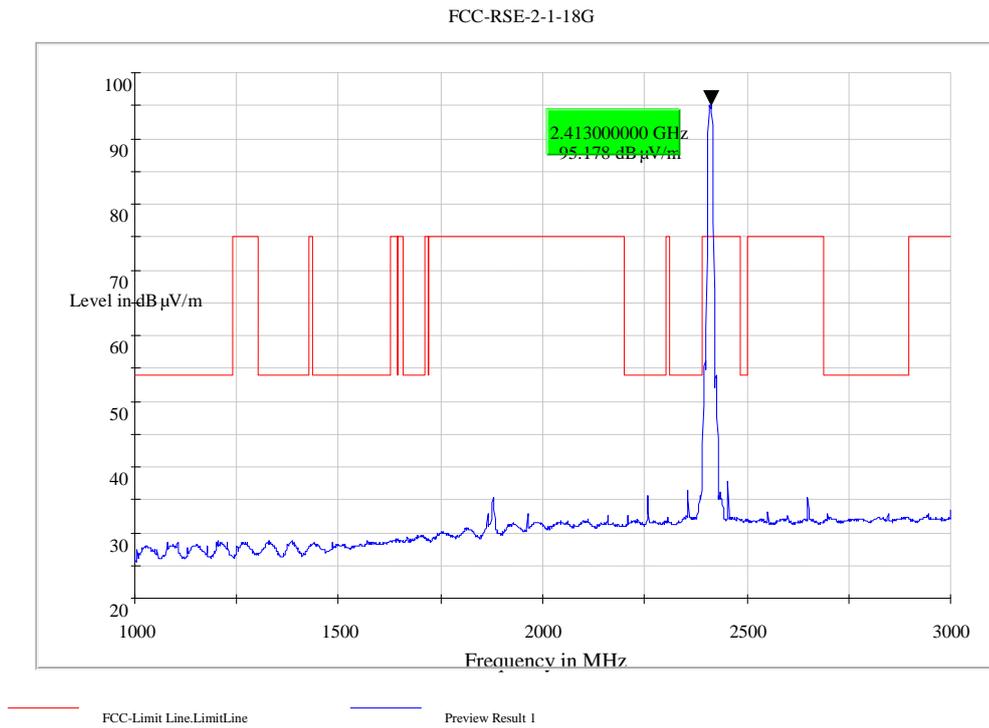


Fig. 99 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)

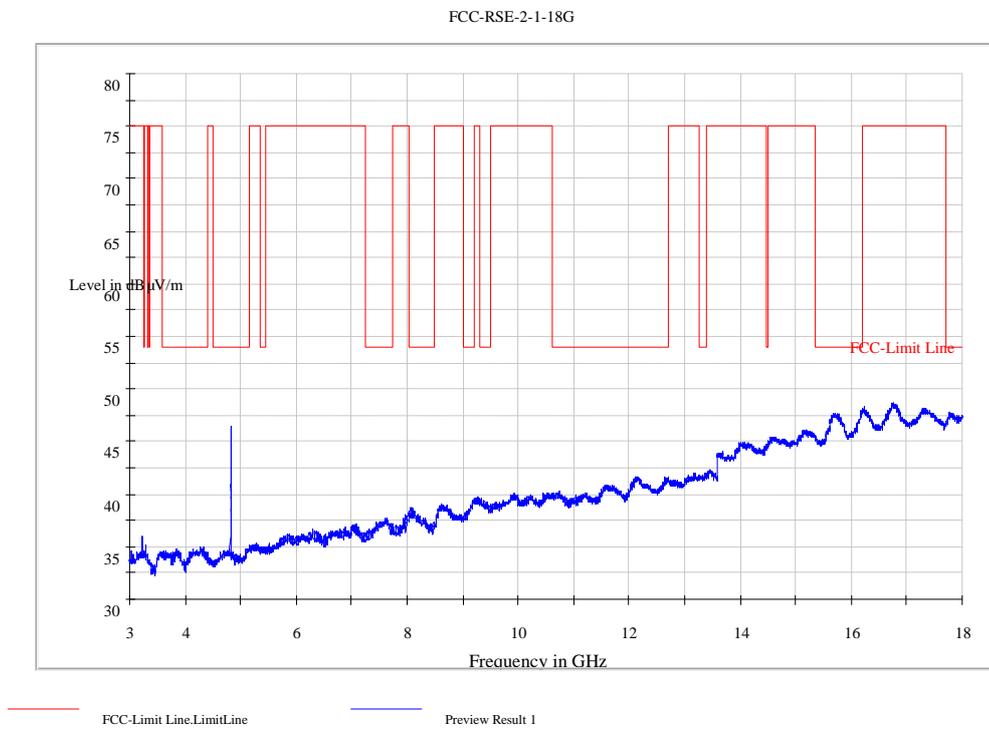


Fig. 100 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)

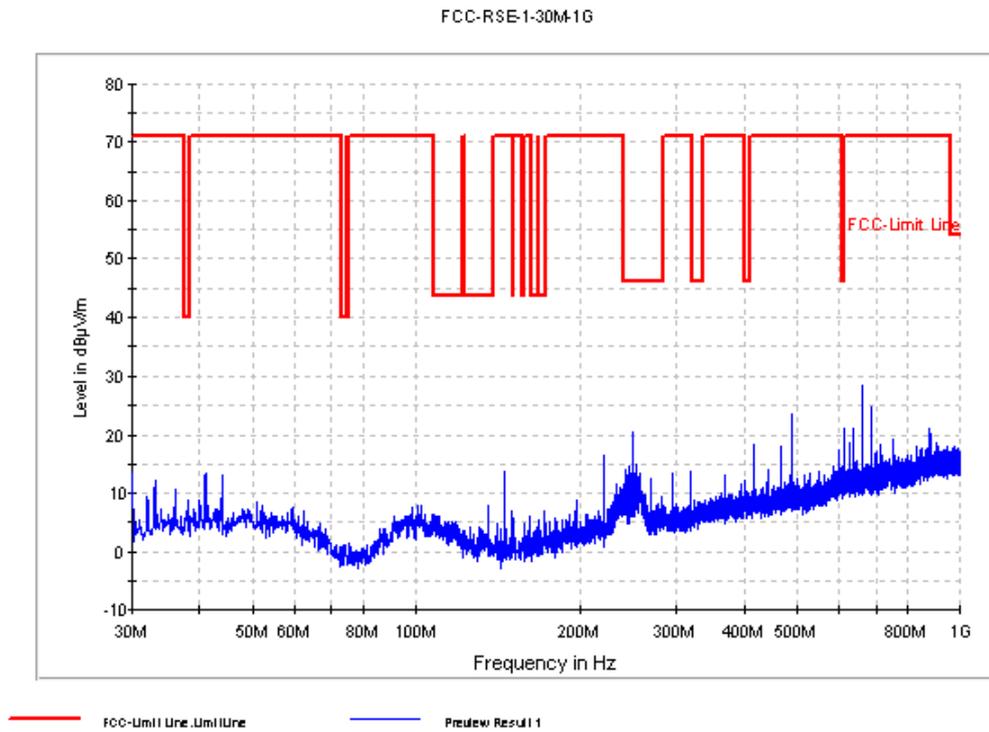


Fig. 101 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)

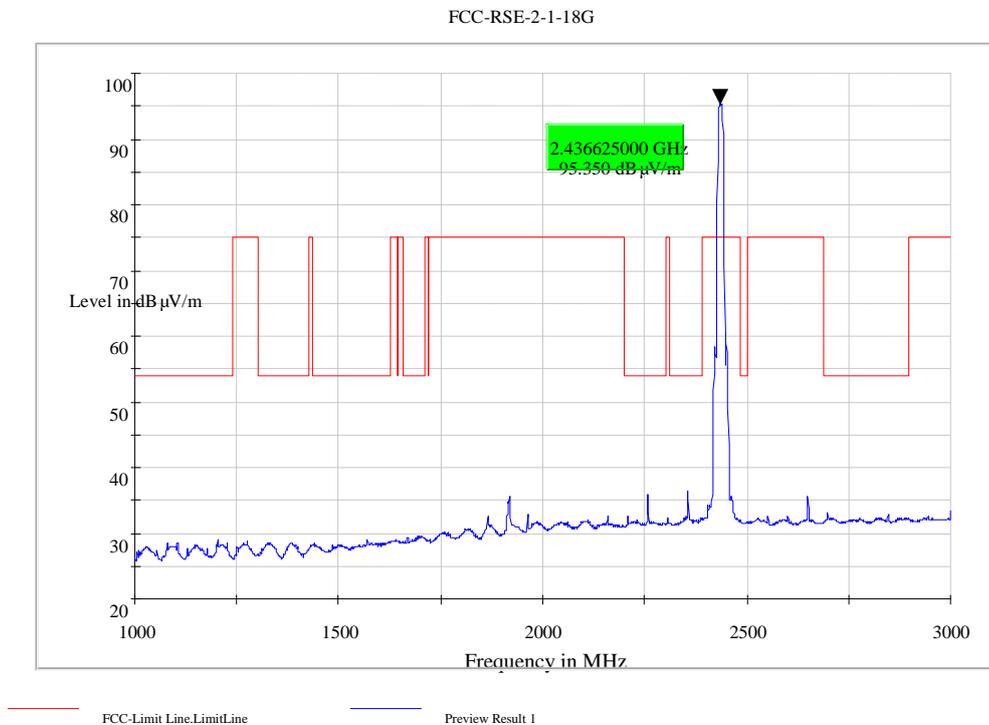


Fig. 102 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)

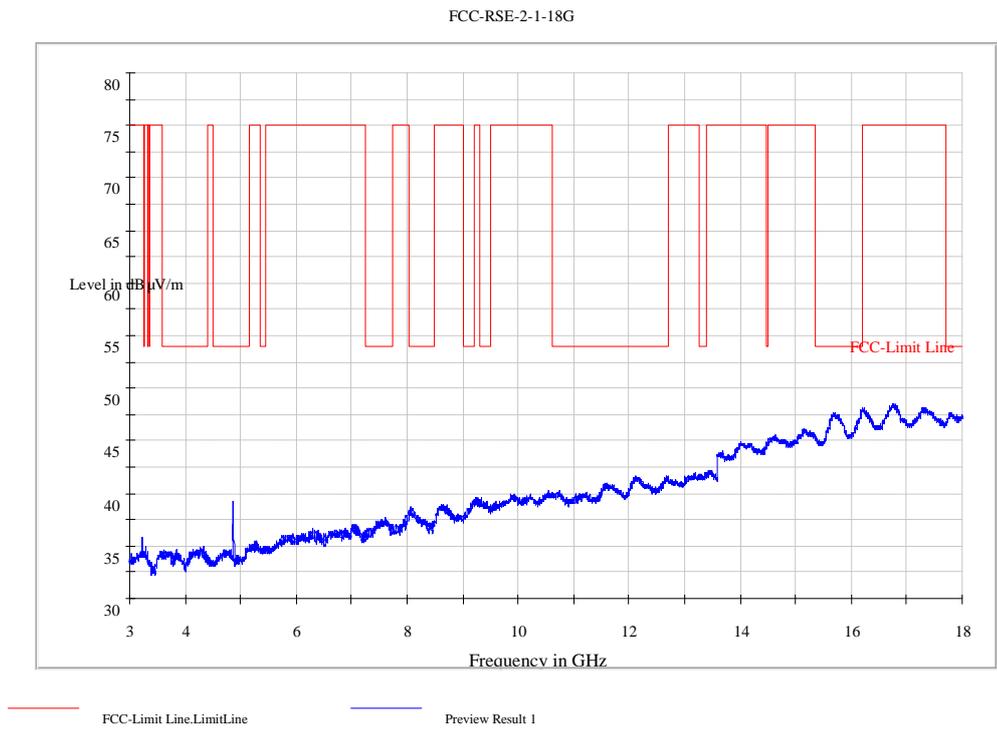


Fig. 103 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)

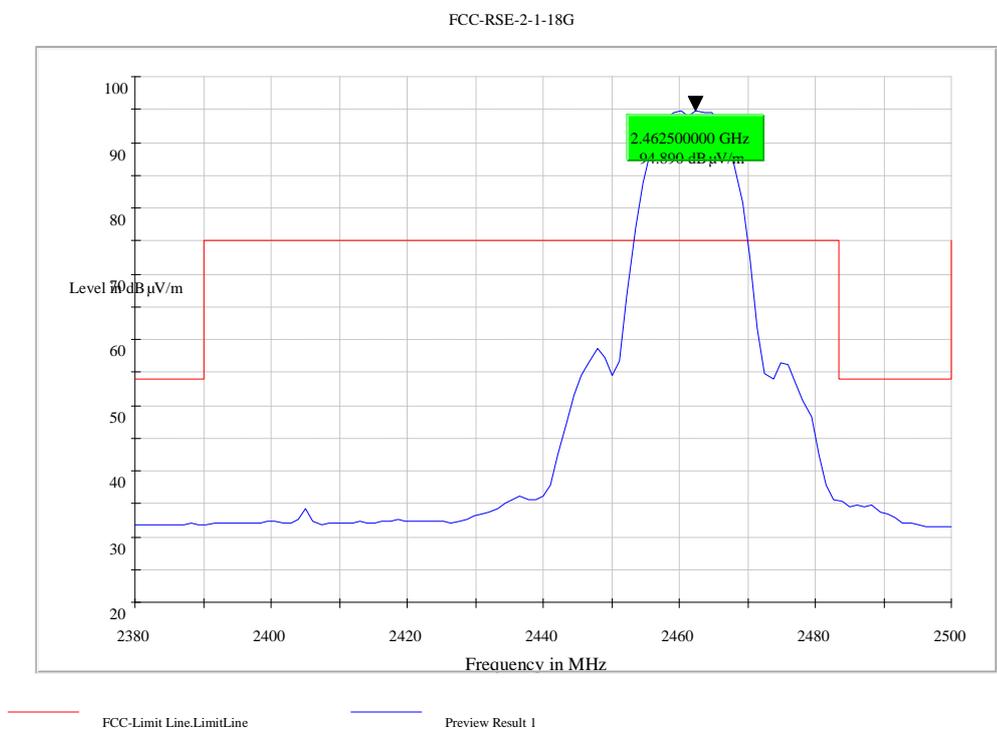


Fig. 104 Radiated Spurious Emission (Power): 802.11b, ch11, 2.38 GHz - 2.5GHz

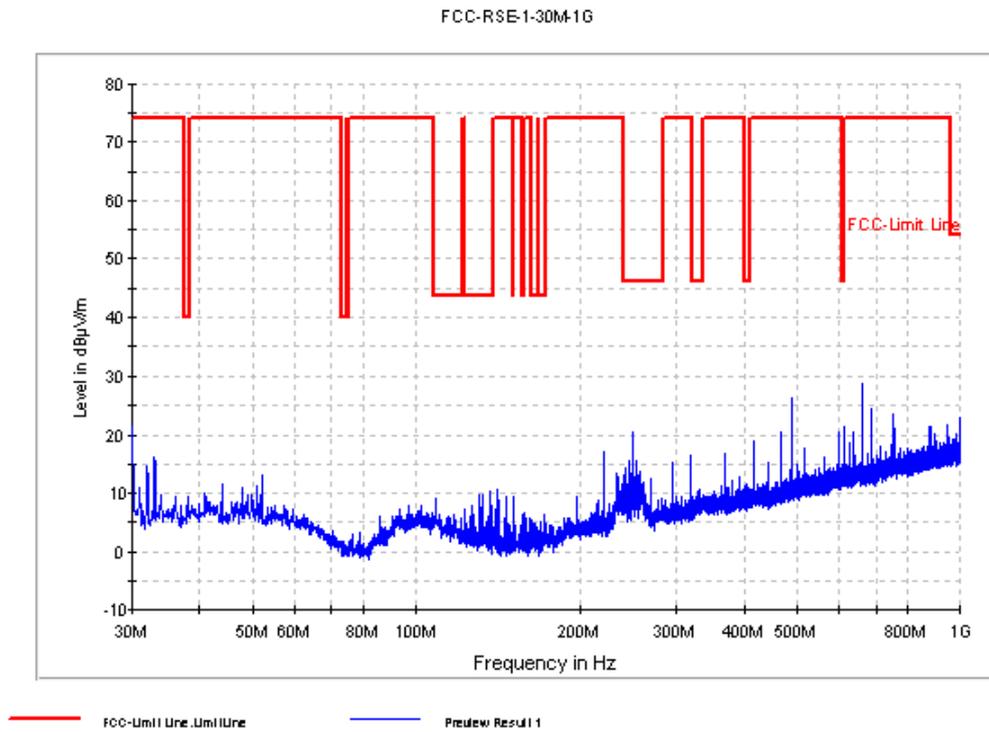


Fig. 105 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)

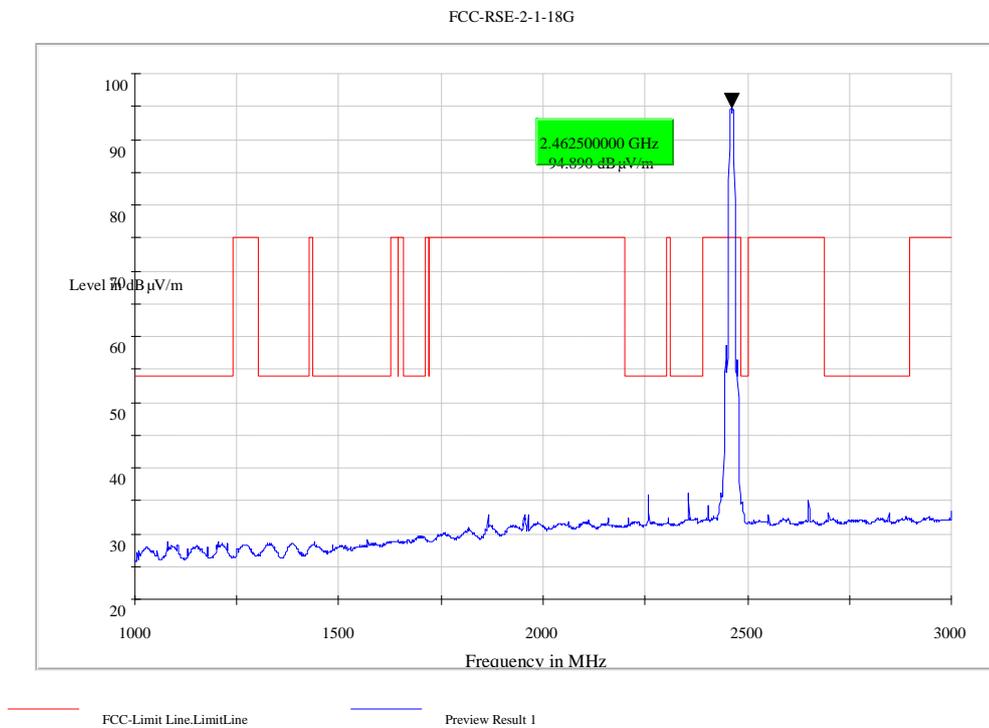


Fig. 106 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)

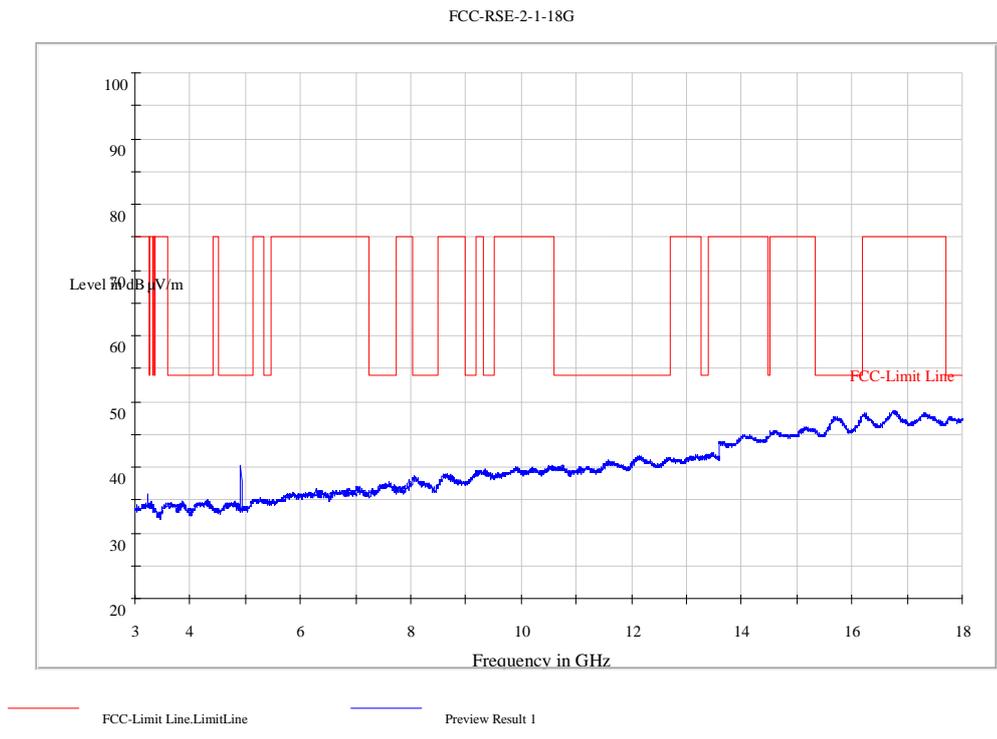


Fig. 107 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)

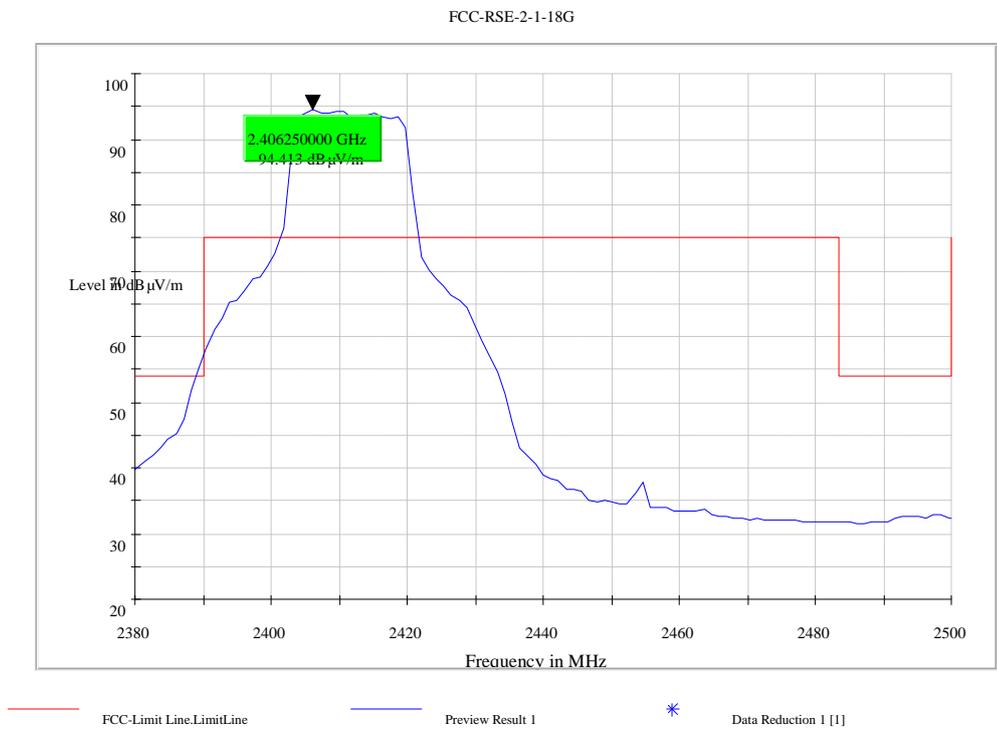


Fig. 108 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.5GHz

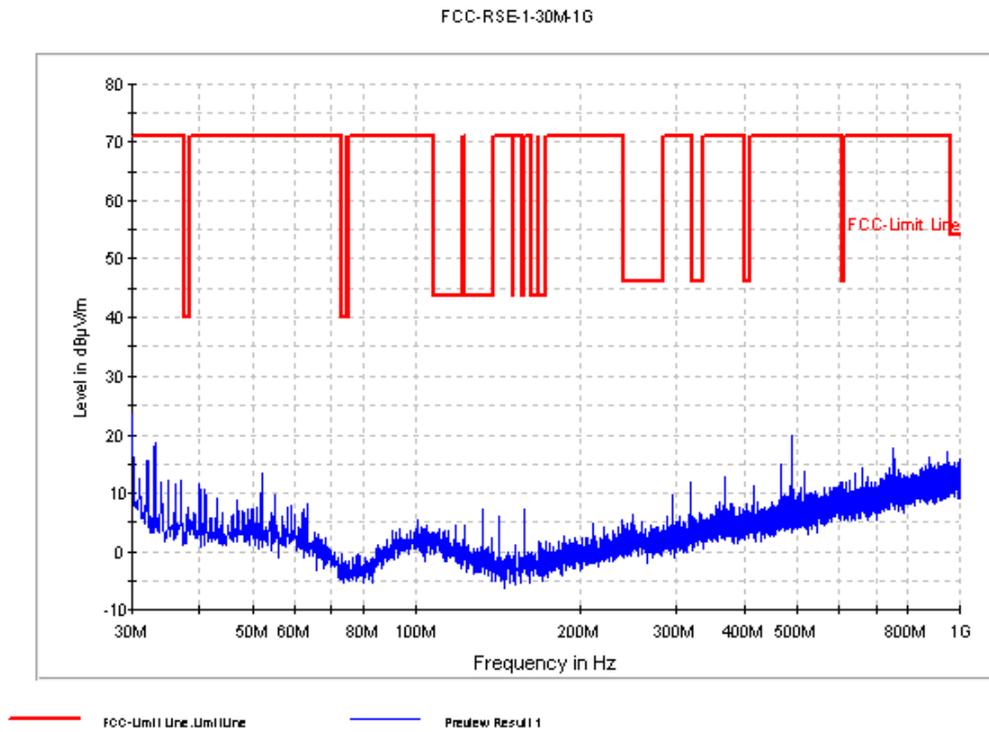


Fig. 109 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)

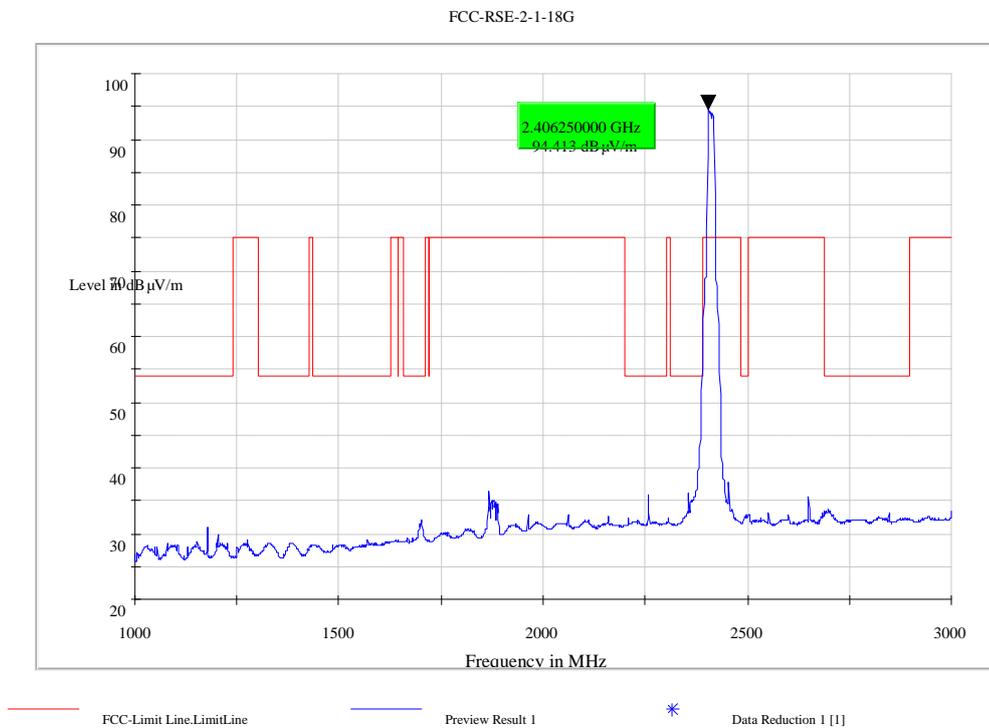


Fig. 110 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-3 GHz)

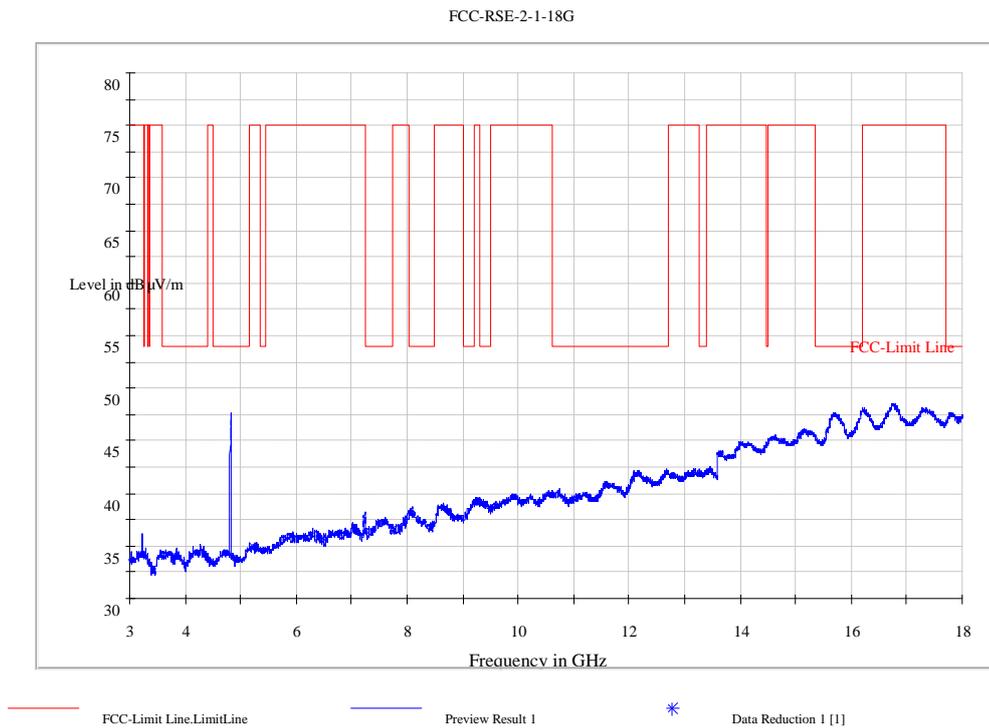


Fig. 111 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)

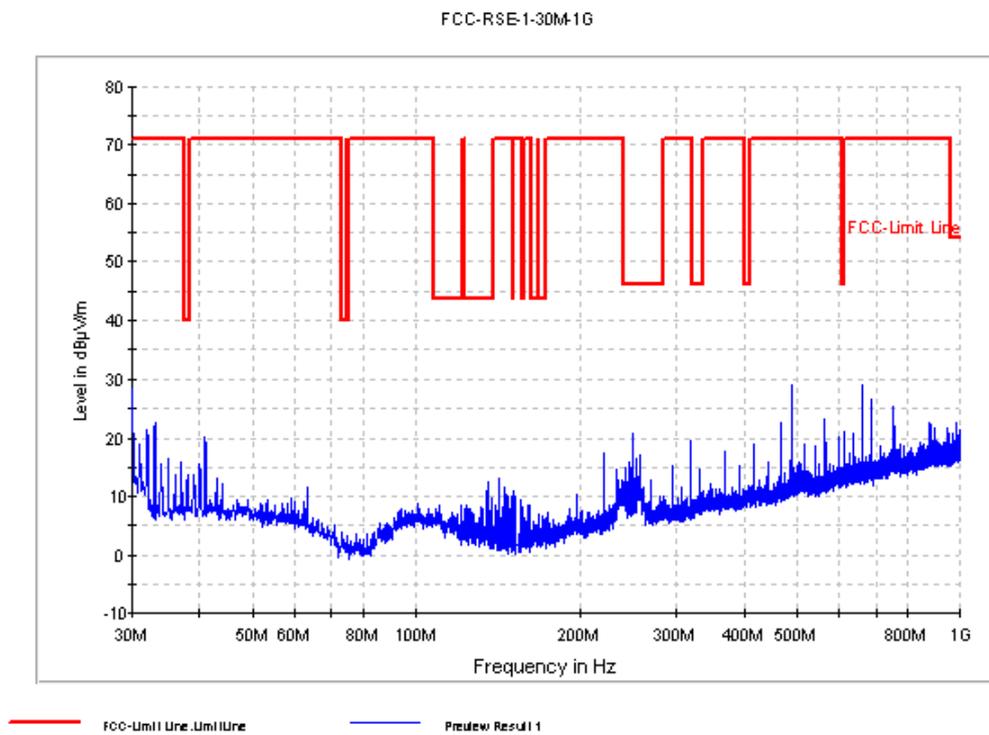


Fig. 112 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)

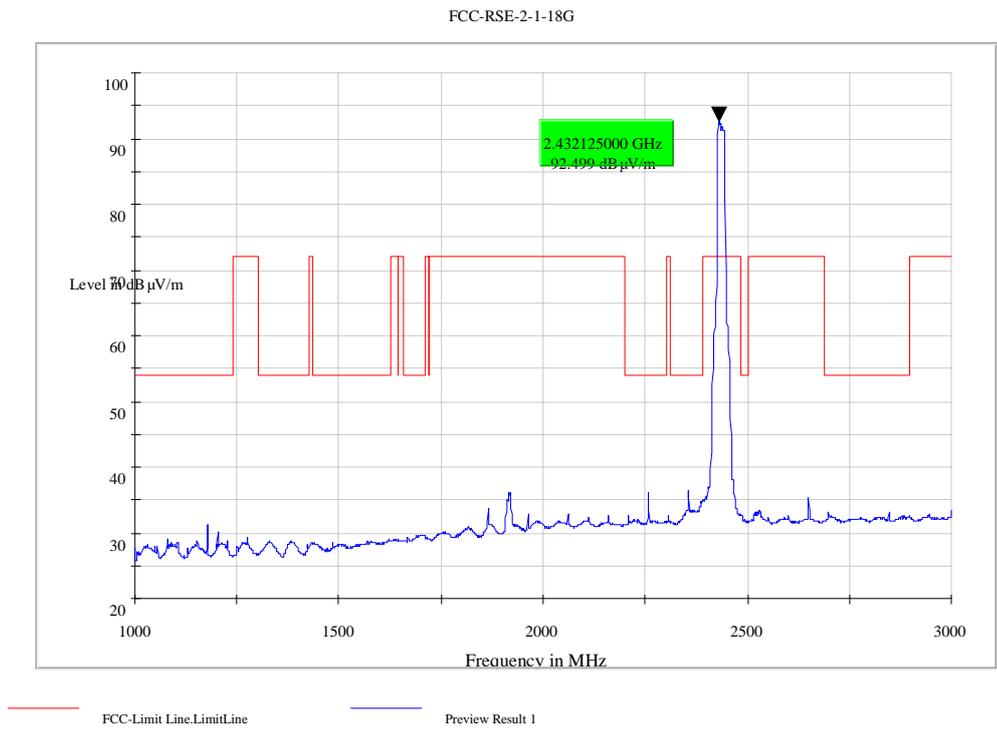


Fig. 113 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)

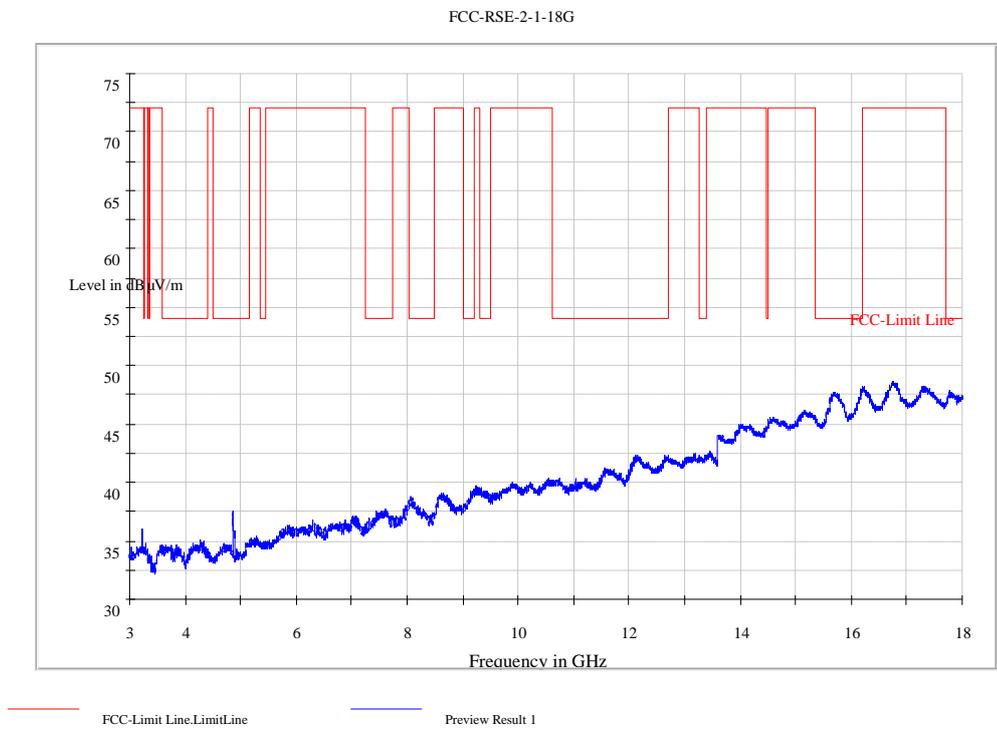


Fig. 114 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)

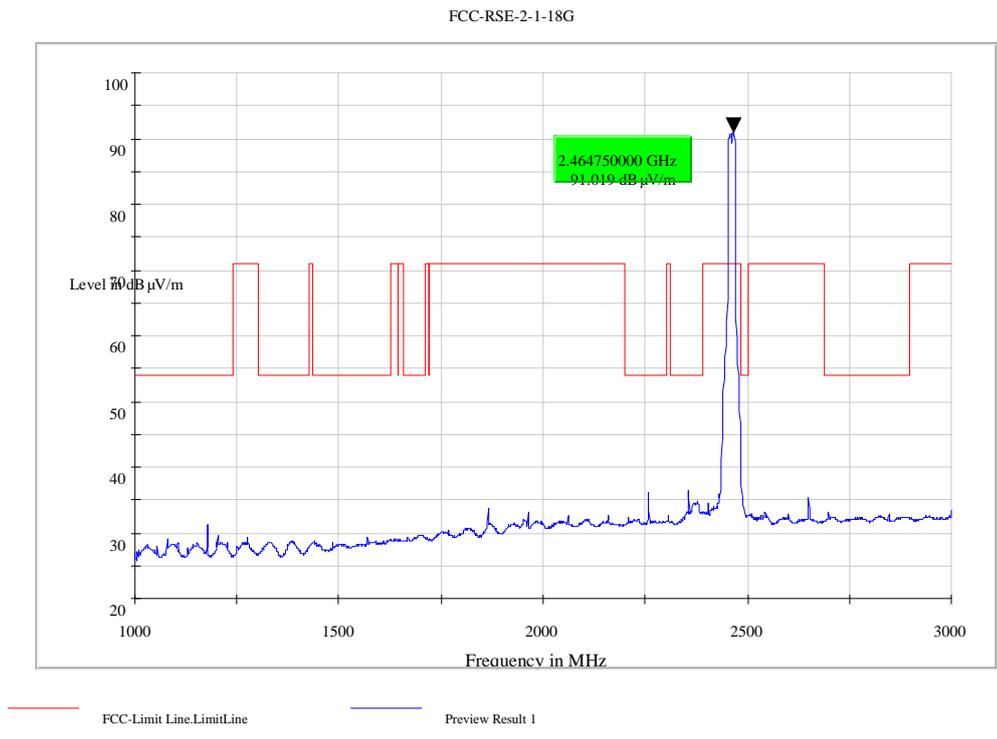


Fig. 117 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)

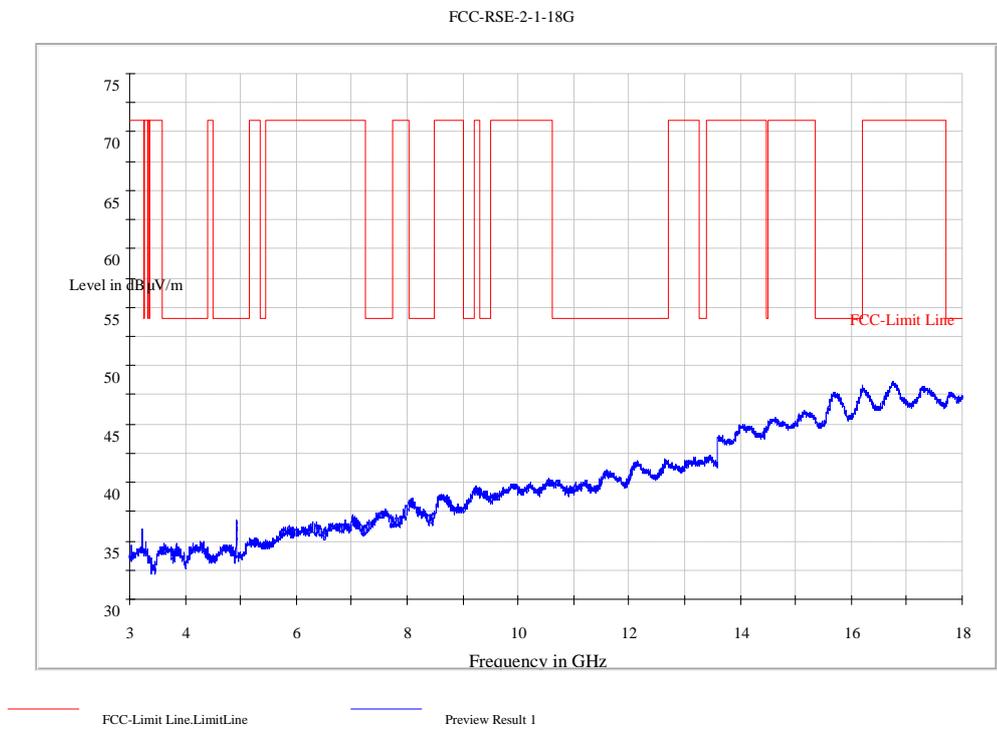


Fig. 118 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)

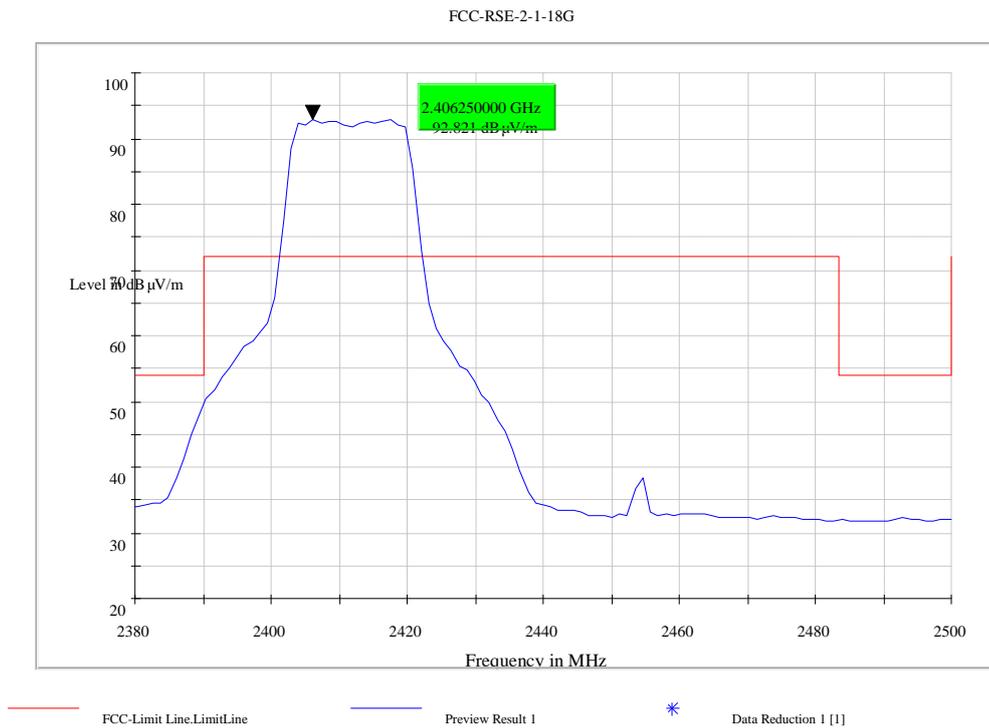


Fig. 119 Radiated Spurious Emission (Power): 802.11n-20MHz, ch1, 2.38 GHz - 2.5GHz

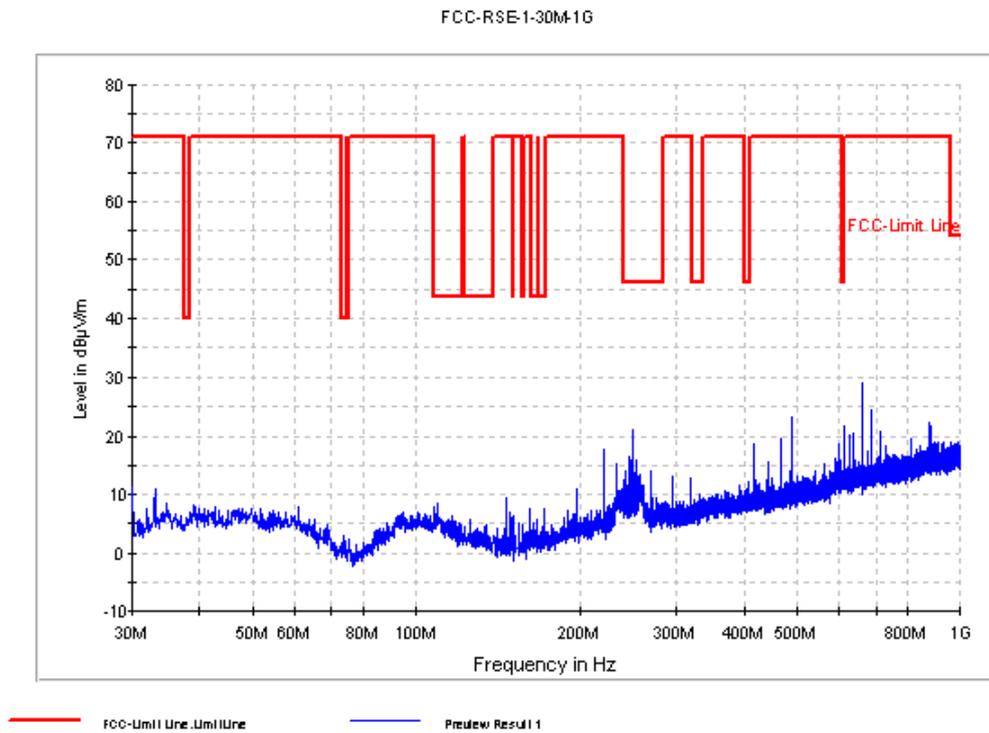


Fig. 120 Radiated Spurious Emission (802.11n-20MHz, Ch1, 30 MHz-1 GHz)

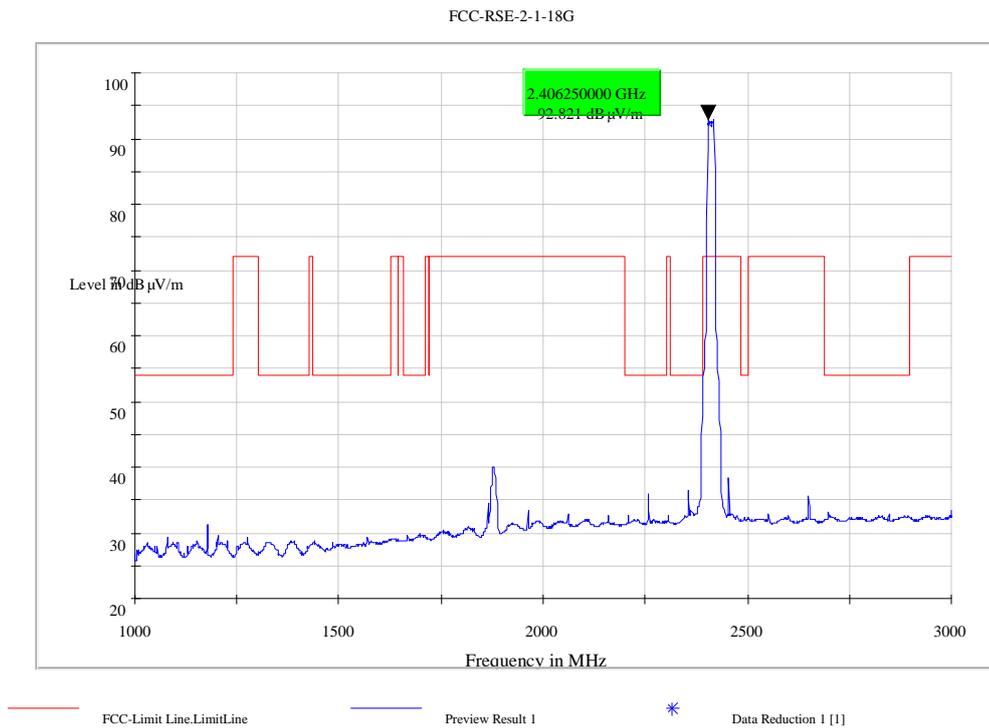


Fig. 121 Radiated Spurious Emission (802.11n-20MHz, Ch1, 1 GHz-3 GHz)

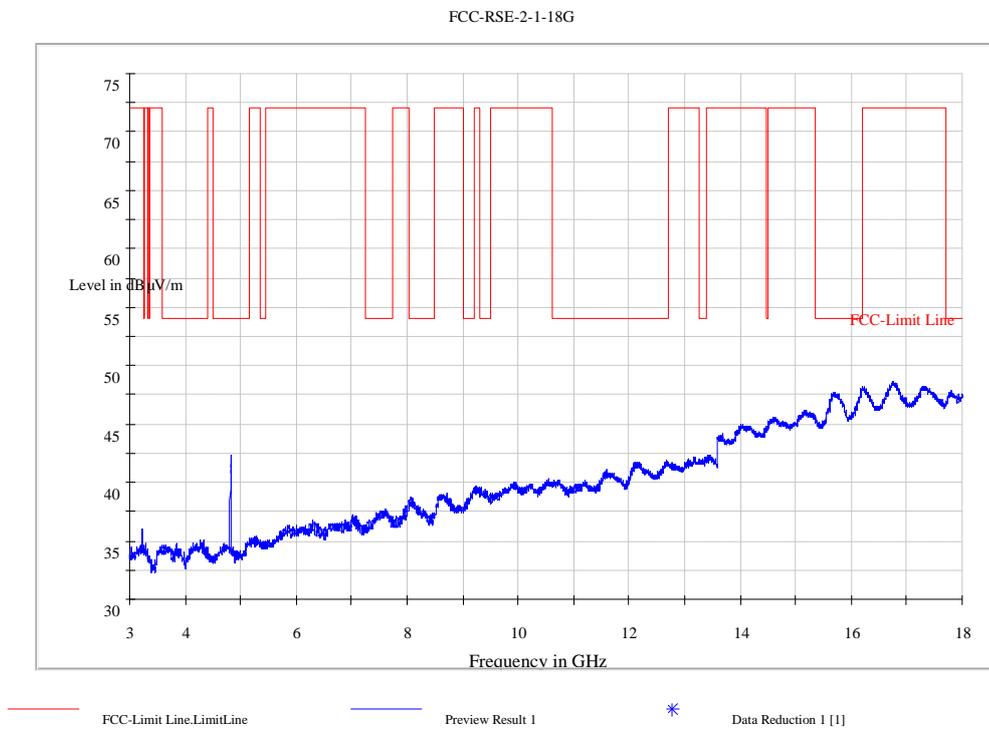


Fig. 122 Radiated Spurious Emission (802.11n-20MHz, Ch1, 3 GHz-18 GHz)

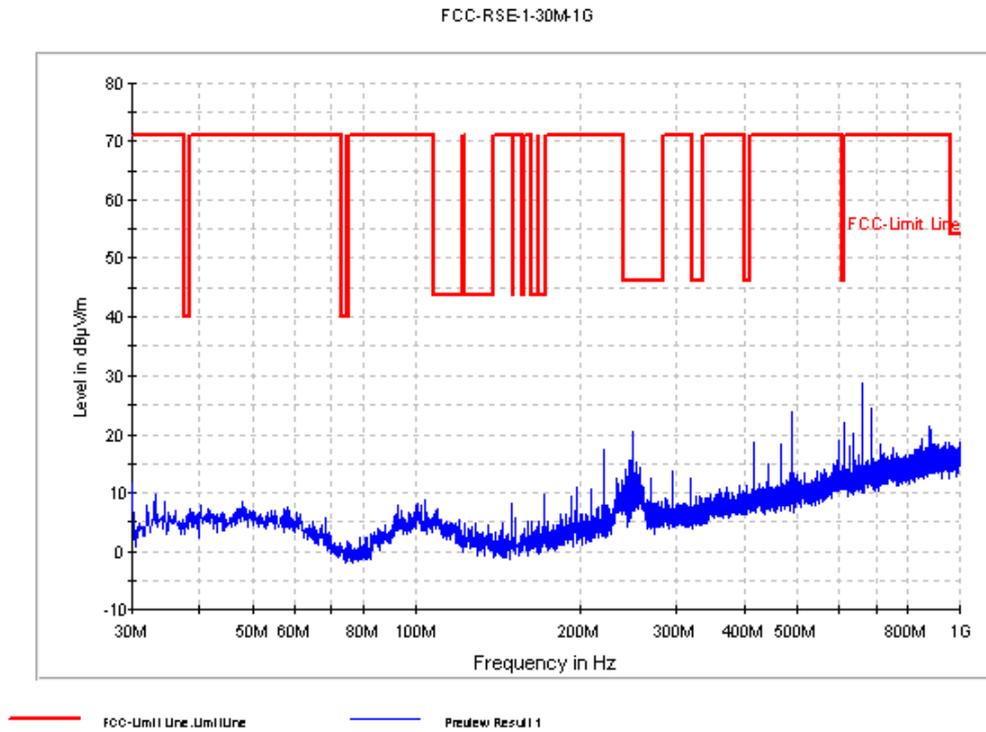


Fig. 123 Radiated Spurious Emission (802.11n-20MHz, Ch6, 30 MHz-1 GHz)

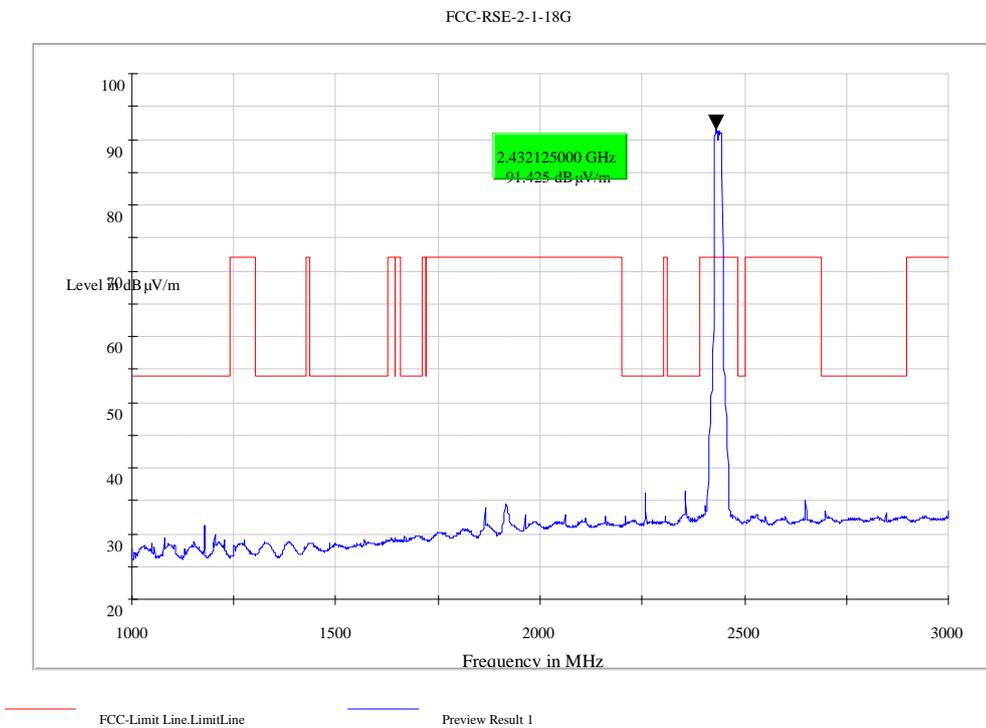


Fig. 124 Radiated Spurious Emission (802.11n-20MHz, Ch6, 1 GHz-3 GHz)

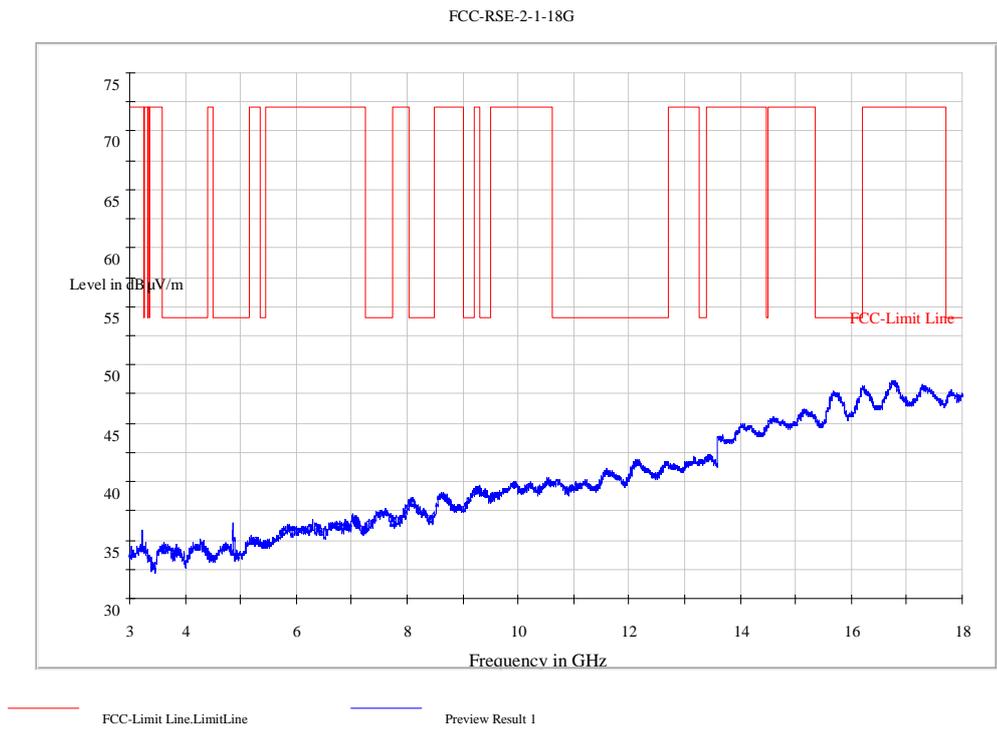


Fig. 125 Radiated Spurious Emission (802.11n-20MHz, Ch6, 3 GHz-18 GHz)

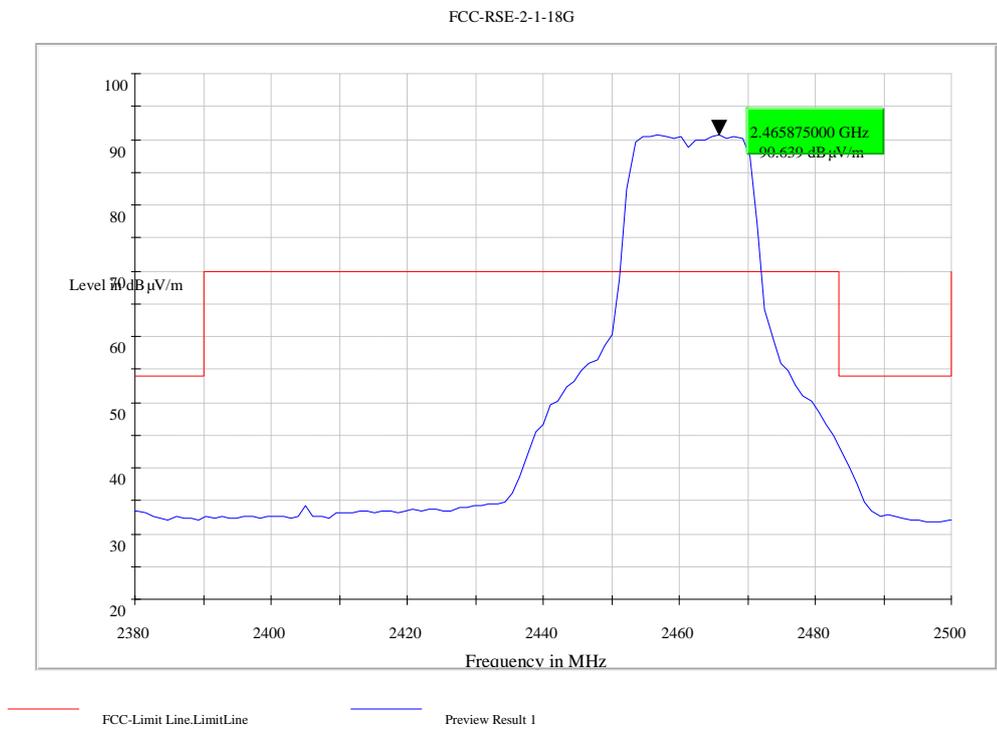


Fig. 126 Radiated Spurious Emission (Power): 802.11n-20MHz, ch11, 2.38 GHz - 2.5GHz

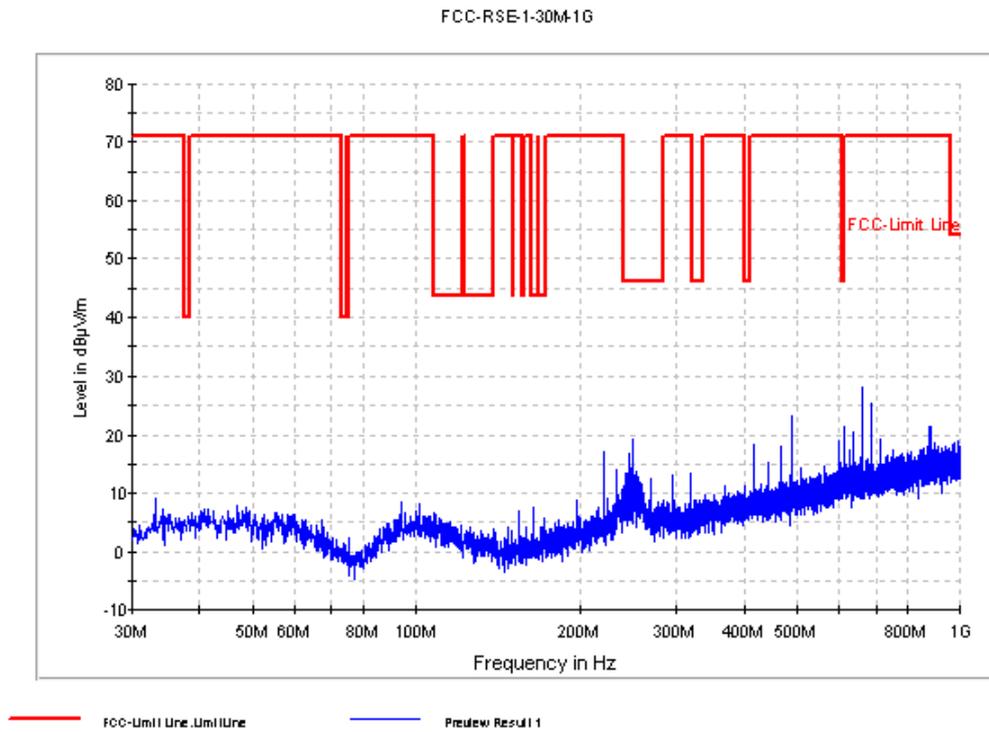


Fig. 127 Radiated Spurious Emission (802.11n-20MHz, Ch11, 30 MHz-1 GHz)

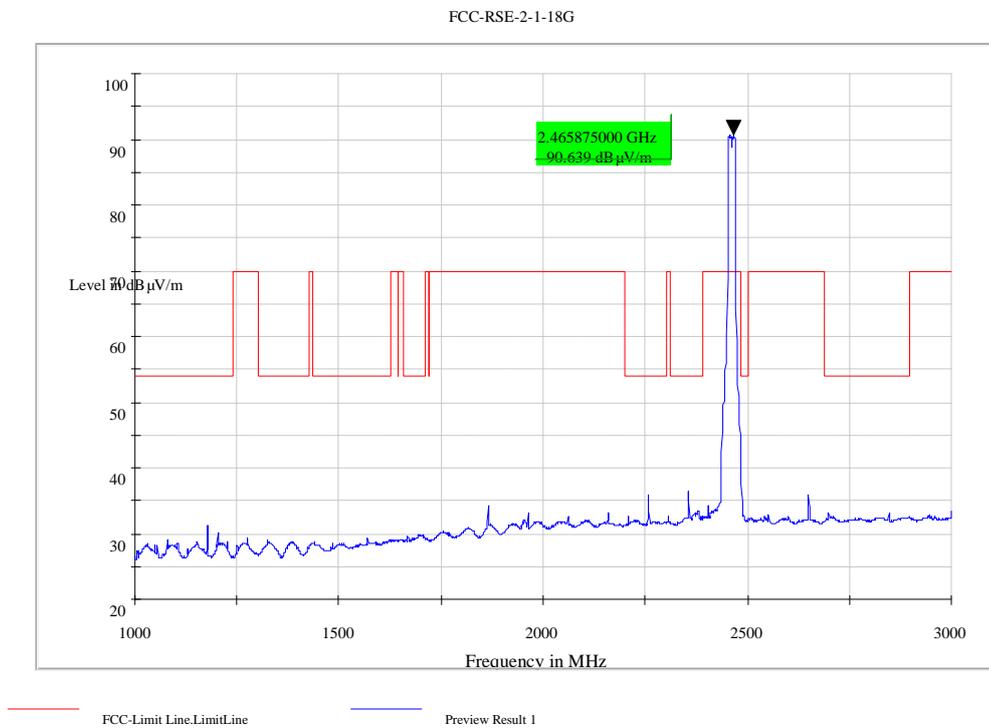


Fig. 128 Radiated Spurious Emission (802.11n-20MHz, Ch11, 1 GHz-3 GHz)

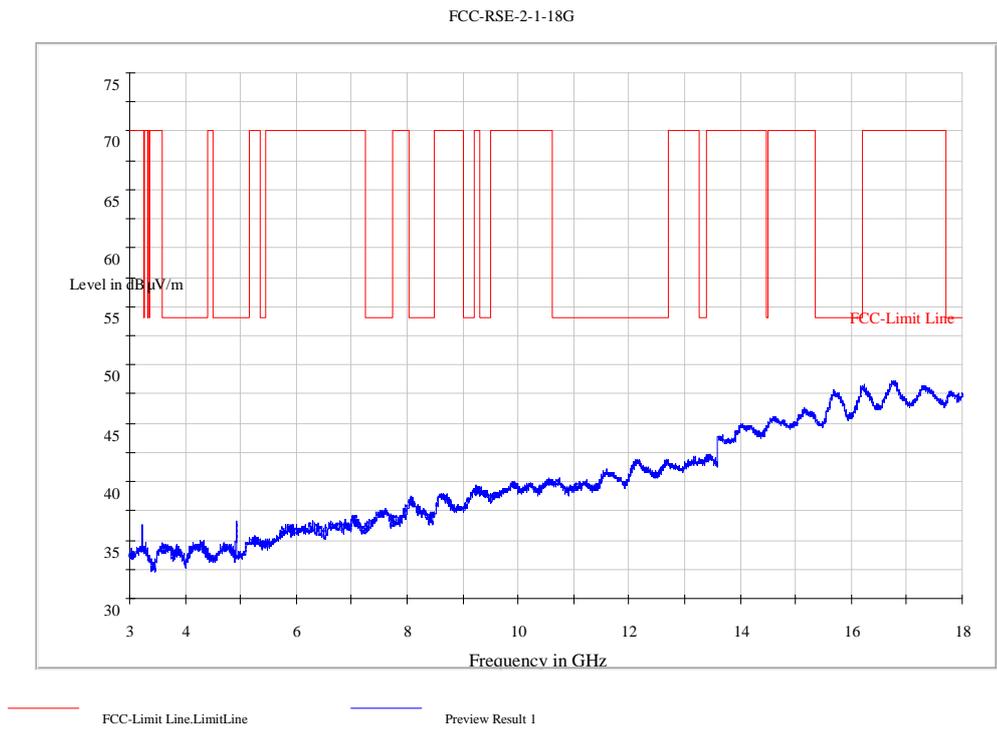


Fig. 129 Radiated Spurious Emission (802.11n-20MHz, Ch11, 3 GHz-18 GHz)

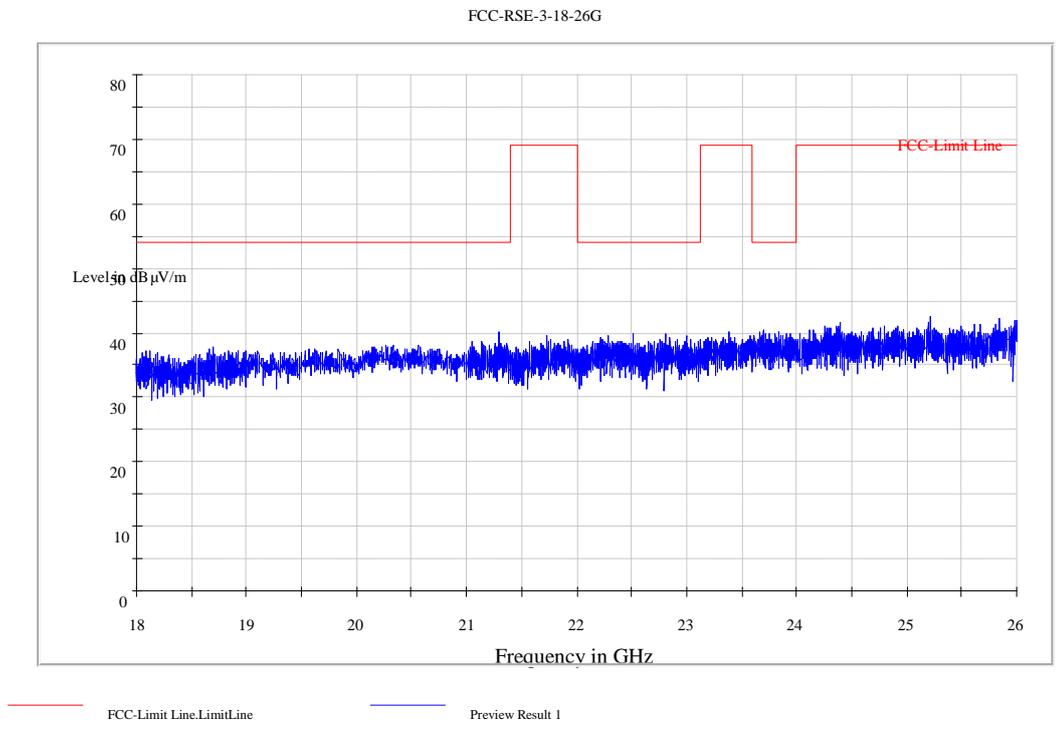


Fig. 130 Radiated Spurious Emission (All channels): 18GHz – 26.5GHz

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 μ V)	Result (dB μ V)			Conclusion
		With charger			
		802.11b	802.11g	802.11n	
0.15 to 0.5	66 to 56	Fig. 131	Fig.132	Fig.133	P
0.5 to 5	56				
5 to 30	60				

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)			Conclusion
		With charger			
		802.11b	802.11g	802.11n	
0.15 to 0.5	56 to 46	Fig.131	Fig.132	Fig.133	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:

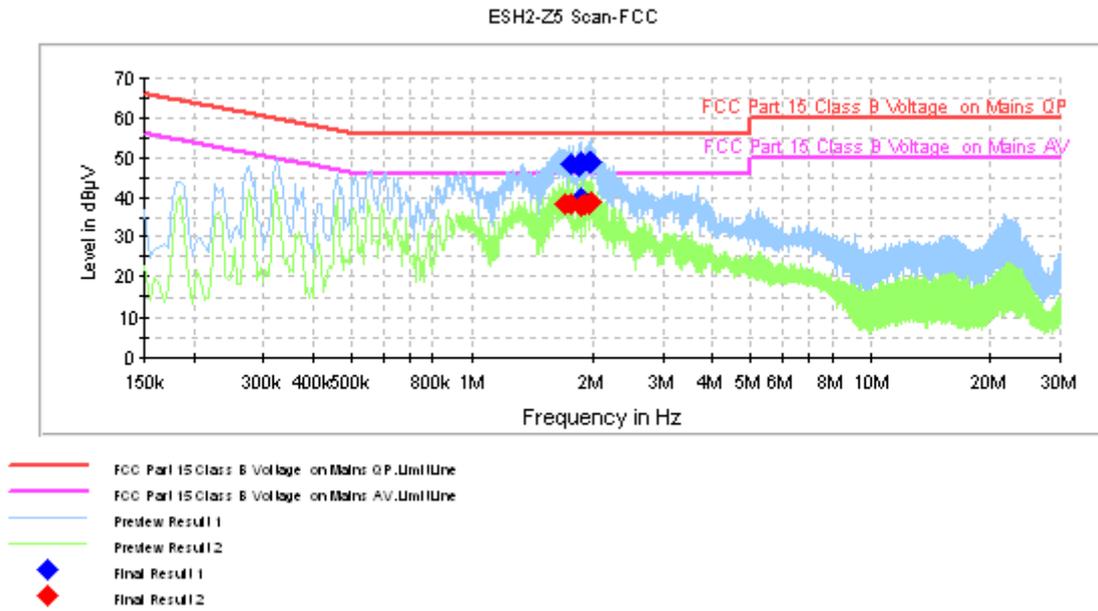


Fig. 131 AC Powerline Conducted Emission-802.11b

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.756500	48.4	FLO	L1	10.1	7.6	56.0
1.837500	47.9	FLO	L1	10.1	8.1	56.0
1.855500	39.6	FLO	N	10.1	16.4	56.0
1.869000	48.6	FLO	L1	10.1	7.4	56.0
1.954500	48.8	FLO	L1	10.1	7.2	56.0
1.986000	48.6	FLO	L1	10.1	7.4	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.707000	38.3	FLO	L1	10.1	7.7	46.0
1.756500	38.4	FLO	L1	10.1	7.6	46.0
1.855500	37.7	FLO	L1	10.1	8.3	46.0
1.905000	38.4	FLO	L1	10.1	7.6	46.0
1.954500	38.3	FLO	L1	10.1	7.7	46.0
1.986000	38.7	FLO	L1	10.1	7.3	46.0

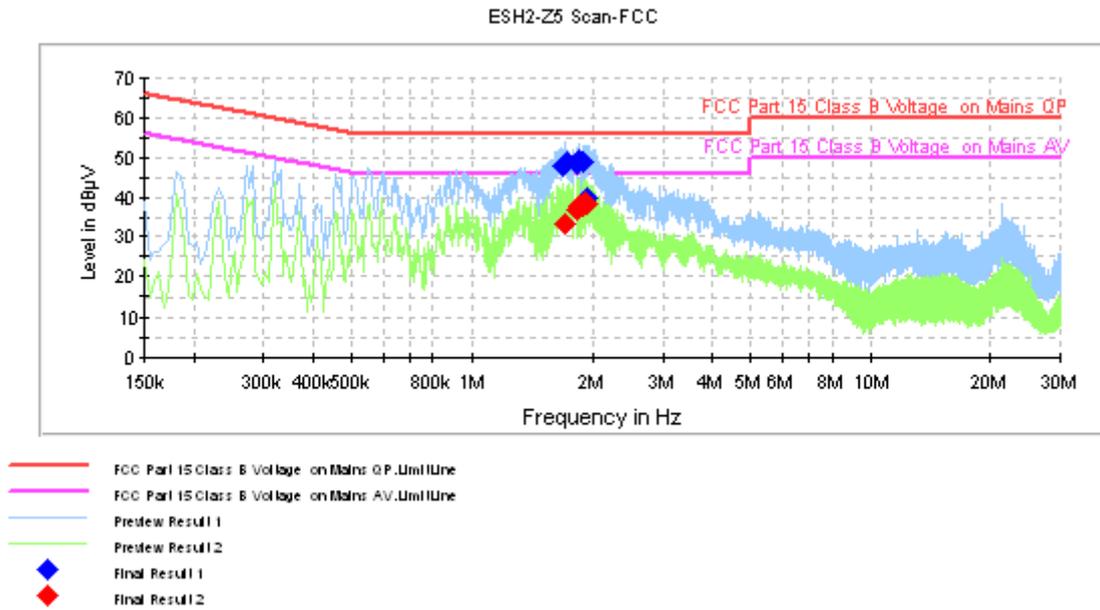


Fig. 132 AC Powerline Conducted Emission-802.11g

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.684500	47.7	FLO	L1	10.1	8.3	56.0
1.716000	48.9	FLO	L1	10.1	7.1	56.0
1.815000	48.6	FLO	L1	10.1	7.4	56.0
1.851000	49.4	FLO	L1	10.1	6.6	56.0
1.882500	48.7	FLO	L1	10.1	7.3	56.0
1.932000	40.0	FLO	N	10.1	16.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.702500	33.5	FLO	N	10.1	12.5	46.0
1.833000	37.0	FLO	L1	10.1	9.0	46.0
1.851000	37.9	FLO	L1	10.1	8.1	46.0
1.882500	37.7	FLO	L1	10.1	8.3	46.0
1.900500	38.6	FLO	L1	10.1	7.4	46.0
1.932000	38.4	FLO	L1	10.1	7.6	46.0

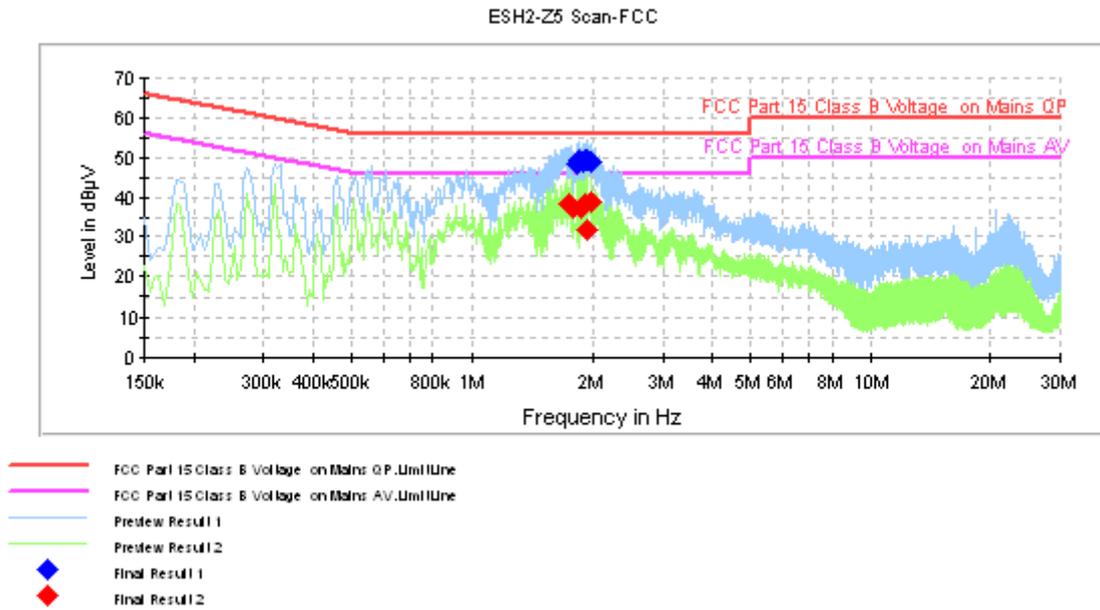


Fig. 133 AC Powerline Conducted Emission-802.11n

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.819500	48.2	FLO	L1	10.1	7.8	56.0
1.851000	49.6	FLO	L1	10.1	6.4	56.0
1.887000	48.8	FLO	L1	10.1	7.2	56.0
1.900500	49.5	FLO	L1	10.1	6.5	56.0
1.936500	49.5	FLO	L1	10.1	6.5	56.0
1.986000	48.8	FLO	L1	10.1	7.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.738500	38.4	FLO	L1	10.1	7.6	46.0
1.788000	37.5	FLO	L1	10.1	8.5	46.0
1.869000	37.2	FLO	L1	10.1	8.8	46.0
1.918500	38.4	FLO	L1	10.1	7.6	46.0
1.936500	31.6	FLO	N	10.1	14.4	46.0
1.986000	38.8	FLO	L1	10.1	7.2	46.0

*** END OF REPORT BODY ***