



**FCC PART 15C
TEST REPORT
No.2011WLN0267**

for

TCT MOBILE LIMITED

GSM/GPRS/EDGE 850/1900 DUAL BAND MOBILE PHONE

Type: Onyx lifestyle WIFI A

Market Name: one touch 819A

With

FCC ID: RAD188

Hardware Version: PIO

Software Version: SW460

Issued Date: 2011-06-13



DAR accreditation (DIN EN ISO/IEC 17025): No. DGA-PL-114/01-02

FCC 2.948 Listed: No.733176

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

No. DGA-PL-114/01-02

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:

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China, 100191

Tel:+86(0)10-62304633, Fax:+86(0)10-62304793 Email:welcome@emcite.com. www.emcite.com

©Copyright. All rights reserved by TMC Beijing.

CONTENTS

| | |
|---|-----------|
| CONTENTS | 2 |
| 1. TEST LABORATORY | 5 |
| 1.1. TESTING LOCATION | 5 |
| 1.2. TESTING ENVIRONMENT | 5 |
| 1.3. PROJECT DATA | 5 |
| 1.4. SIGNATURE | 5 |
| 2. CLIENT INFORMATION | 6 |
| 2.1. APPLICANT INFORMATION | 6 |
| 2.2. MANUFACTURER INFORMATION..... | 6 |
| 3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) | 7 |
| 3.1. ABOUT EUT | 7 |
| 3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST | 7 |
| 3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST..... | 7 |
| 3.4. GENERAL DESCRIPTION | 7 |
| 4. REFERENCE DOCUMENTS | 7 |
| 4.1. DOCUMENTS SUPPLIED BY APPLICANT | 7 |
| 4.2. REFERENCE DOCUMENTS FOR TESTING..... | 8 |
| 5. LABORATORY ENVIRONMENT | 9 |
| 6. SUMMARY OF TEST RESULTS | 10 |
| 6.1. SUMMARY OF TEST RESULTS..... | 10 |
| 6.2. STATEMENTS..... | 10 |
| 7. TEST EQUIPMENTS UTILIZED | 11 |
| ANNEX A: MEASUREMENT RESULTS | 12 |
| A.1. MEASUREMENT METHOD | 12 |
| A.2. MAXIMUM PEAK OUTPUT POWER | 13 |
| A.2.1. MAXIMUM PEAK OUTPUT POWER | 13 |
| A.3. PEAK POWER SPECTRAL DENSITY | 14 |
| FIG. 1 POWER SPECTRAL DENSITY (802.11B, CH 1) | 14 |
| FIG. 2 POWER SPECTRAL DENSITY (802.11B, CH 6) | 15 |
| FIG. 3 POWER SPECTRAL DENSITY (802.11B, CH 11) | 15 |
| FIG. 4 POWER SPECTRAL DENSITY (802.11G, CH 1) | 16 |
| FIG. 5 POWER SPECTRAL DENSITY (802.11G, CH 6) | 16 |
| FIG. 6 POWER SPECTRAL DENSITY (802.11G, CH 11) | 17 |
| A.4. OCCUPIED 6DB BANDWIDTH | 18 |
| FIG. 7 OCCUPIED 6DB BANDWIDTH (802.11B, CH 1) | 18 |

| | | |
|---|---|----|
| FIG. 8 | OCCUPIED 6dB BANDWIDTH (802.11B, CH 6) | 19 |
| FIG. 9 | OCCUPIED 6dB BANDWIDTH (802.11B, CH 11) | 19 |
| FIG. 10 | OCCUPIED 6dB BANDWIDTH (802.11G, CH 1) | 20 |
| FIG. 11 | OCCUPIED 6dB BANDWIDTH (802.11G, CH 6) | 20 |
| FIG. 12 | OCCUPIED 6dB BANDWIDTH (802.11G, CH 11) | 21 |
| A.5. BAND EDGES COMPLIANCE | | 22 |
| FIG. 13 | BAND EDGES (802.11B, CH 1) | 22 |
| FIG. 14 | BAND EDGES (802.11B, CH 11) | 23 |
| FIG. 15 | BAND EDGES (802.11G, CH 1) | 23 |
| FIG. 16 | BAND EDGES (802.11G, CH 11) | 24 |
| A.6. TRANSMITTER SPURIOUS EMISSION | | 25 |
| A.6.1 TRANSMITTER SPURIOUS EMISSION - CONDUCTED | | 25 |
| FIG. 17 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, CENTER FREQUENCY) | 27 |
| FIG. 18 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 30 MHz-1 GHz) | 27 |
| FIG. 19 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 1 GHz-2.5 GHz) | 28 |
| FIG. 20 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 2.5 GHz-7.5 GHz) | 28 |
| FIG. 21 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 7.5 GHz-10 GHz) | 29 |
| FIG. 22 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 10 GHz-15 GHz) | 29 |
| FIG. 23 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 15 GHz-20 GHz) | 30 |
| FIG. 24 | CONDUCTED SPURIOUS EMISSION (802.11B, CH1, 20 GHz-26 GHz) | 30 |
| FIG. 25 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, CENTER FREQUENCY) | 31 |
| FIG. 26 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 30 MHz-1 GHz) | 31 |
| FIG. 27 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 1 GHz-2.5 GHz) | 32 |
| FIG. 28 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 2.5 GHz-7.5 GHz) | 32 |
| FIG. 29 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 7.5 GHz-10 GHz) | 33 |
| FIG. 30 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 10 GHz-15 GHz) | 33 |
| FIG. 31 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 15 GHz-20 GHz) | 34 |
| FIG. 32 | CONDUCTED SPURIOUS EMISSION (802.11B, CH6, 20 GHz-26 GHz) | 34 |
| FIG. 33 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, CENTER FREQUENCY) | 35 |
| FIG. 34 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 30 MHz-1 GHz) | 35 |
| FIG. 35 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 1 GHz-2.5 GHz) | 36 |
| FIG. 36 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 2.5 GHz-7.5 GHz) | 36 |
| FIG. 37 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 7.5 GHz-10 GHz) | 37 |
| FIG. 38 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 10 GHz-15 GHz) | 37 |
| FIG. 39 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 15 GHz-20 GHz) | 38 |
| FIG. 40 | CONDUCTED SPURIOUS EMISSION (802.11B, CH11, 20 GHz-26 GHz) | 38 |
| FIG. 41 | CONDUCTED SPURIOUS EMISSION (802.11G, CH1, CENTER FREQUENCY) | 39 |
| FIG. 42 | CONDUCTED SPURIOUS EMISSION (802.11G, CH1, 30 MHz-1 GHz) | 39 |
| FIG. 43 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 1 GHz-2.5 GHz) | 40 |
| FIG. 44 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 2.5 GHz-7.5 GHz) | 40 |
| FIG. 45 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 7.5 GHz-10 GHz) | 41 |
| FIG. 46 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 10 GHz-15 GHz) | 41 |
| FIG. 47 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 15 GHz-20 GHz) | 42 |
| FIG. 48 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH1, 20 GHz-26 GHz) | 42 |

| | | |
|---------|---|----|
| FIG. 49 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, CENTER FREQUENCY)..... | 43 |
| FIG. 50 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 30 MHz-1 GHz) | 43 |
| FIG. 51 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 1 GHz-2.5 GHz)..... | 44 |
| FIG. 52 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 2.5 GHz-7.5 GHz)..... | 44 |
| FIG. 53 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 7.5 GHz-10 GHz)..... | 45 |
| FIG. 54 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 10 GHz-15 GHz)..... | 45 |
| FIG. 55 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 15 GHz-20 GHz)..... | 46 |
| FIG. 56 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH6, 20 GHz-26 GHz)..... | 46 |
| FIG. 57 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, CENTER FREQUENCY) | 47 |
| FIG. 58 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 30 MHz-1 GHz)..... | 47 |
| FIG. 59 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 1 GHz-2.5 GHz) | 48 |
| FIG. 60 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 2.5 GHz-7.5 GHz)..... | 48 |
| FIG. 61 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 7.5 GHz-10 GHz)..... | 49 |
| FIG. 62 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 10 GHz-15 GHz)..... | 49 |
| FIG. 63 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 15 GHz-20 GHz)..... | 50 |
| FIG. 64 | CONDUCTED SPURIOUS EMISSION ((802.11G, CH11, 20 GHz-26 GHz)..... | 50 |
| A.6.2 | TRANSMITTER SPURIOUS EMISSION - RADIATED | 51 |
| FIG. 65 | RADIATED SPURIOUS EMISSION (POWER): 802.11B, CH1, 2.38 GHz - 243GHz | 55 |
| FIG. 66 | RADIATED SPURIOUS EMISSION (802.11B, CH1, 30 MHz-1 GHz)..... | 55 |
| FIG. 67 | RADIATED SPURIOUS EMISSION (802.11B, CH1, 1 GHz-4 GHz) | 56 |
| FIG. 68 | RADIATED SPURIOUS EMISSION (802.11B, CH1, 4 GHz-18 GHz) | 56 |
| FIG. 69 | RADIATED SPURIOUS EMISSION (802.11B, CH6, 30 MHz-1 GHz)..... | 57 |
| FIG. 70 | RADIATED SPURIOUS EMISSION (802.11B, CH6, 1 GHz-4 GHz) | 57 |
| FIG. 71 | RADIATED SPURIOUS EMISSION (802.11B, CH6, 4 GHz-18 GHz) | 58 |
| FIG. 72 | RADIATED SPURIOUS EMISSION (POWER): 802.11B, CH11, 2.45 GHz - 2.50GHz | 58 |
| FIG. 73 | RADIATED SPURIOUS EMISSION (802.11B, CH11, 30 MHz-1 GHz) | 59 |
| FIG. 74 | RADIATED SPURIOUS EMISSION (802.11B, CH11, 1 GHz-4 GHz) | 59 |
| FIG. 75 | RADIATED SPURIOUS EMISSION (802.11B, CH11, 4 GHz-18 GHz) | 60 |
| FIG. 76 | RADIATED SPURIOUS EMISSION (POWER): 802.11G, CH1, 2.38 GHz - 2.43GHz | 60 |
| FIG. 77 | RADIATED SPURIOUS EMISSION (802.11G, CH1, 30 MHz-1 GHz)..... | 61 |
| FIG. 78 | RADIATED SPURIOUS EMISSION (802.11G, CH1, 1 GHz-4 GHz) | 61 |
| FIG. 79 | RADIATED SPURIOUS EMISSION (802.11G, CH1, 4 GHz-18 GHz) | 62 |
| FIG. 80 | RADIATED SPURIOUS EMISSION (802.11G, CH6, 30 MHz-1 GHz)..... | 62 |
| FIG. 81 | RADIATED SPURIOUS EMISSION (802.11G, CH6, 1 GHz-4 GHz) | 63 |
| FIG. 82 | RADIATED SPURIOUS EMISSION (802.11G, CH6, 4 GHz-18 GHz) | 63 |
| FIG. 83 | RADIATED SPURIOUS EMISSION (POWER): 802.11G, CH11, 2.45 GHz - 2.50GHz | 64 |
| FIG. 84 | RADIATED SPURIOUS EMISSION (802.11G, CH11, 30 MHz-1 GHz) | 64 |
| FIG. 85 | RADIATED SPURIOUS EMISSION (802.11G, CH11, 1 GHz-4 GHz) | 65 |
| FIG. 86 | RADIATED SPURIOUS EMISSION (802.11G, CH11, 4 GHz-18 GHz) | 65 |
| FIG. 87 | RADIATED EMISSION: 18 GHz - 26.5 GHz | 66 |
| A.7. | AC POWERLINE CONDUCTED EMISSION | 67 |
| FIG. 88 | AC POWERLINE CONDUCTED EMISSION-802.11B..... | 68 |
| FIG. 89 | AC POWERLINE CONDUCTED EMISSION-802.11G | 69 |

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

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

1.3. Project data

Testing End Date: 2011-06-02

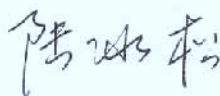
1.4. Signature



Sun Zhenyu
(Prepared this test report)



Gao Hong
(Reviewed this test report)



Lu Bingsong
Deputy Director of the laboratory
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: TCT MOBILE LIMITED
Address /Post: 5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Pudong Area Shanghai, P.R. China. 201203
City: Shanghai
Postal Code: 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, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Pudong Area Shanghai, P.R. China. 201203
City: Shanghai
Postal Code: 201203
Country: China
Contact Gong Zhizhou
Email zhizhou.gong@jrdcom.com
Telephone: 0086-21-61460890
Fax: 0086-21-61460602

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

| | |
|---------------------|---|
| Description | GSM/GPRS/EDGE 850/1900 DUAL BAND MOBILE PHONE |
| Type | Onyx lifestyle WIFI A |
| FCC ID | RAD188 |
| IC ID | / |
| With WLAN Function | Yes |
| Frequency Range | ISM 2400MHz~2483.5MHz |
| Type of Modulation | DSSS/CCK/OFDM |
| Number of Channels | 11 |
| Antenna | Integral Antenna |
| MAX Conducted Power | 23.59dBm(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 | 012727000010052 | PIO | SW460 |
| EUT2 | 012727000010060 | PIO | SW460 |

*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 | CAB31L0000C1 | / |
| AE2 | Battery | CAB31L0000C2 | / |
| AE3 | Travel Adapter | CBA3120AG0C2 | / |
| AE4 | Travel Adapter | CBA3001AG0C1 | / |

*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/GPRS/EDGE 850/1900 DUAL BAND MOBILE PHONE with integrated antenna. It consists of normal options: Battery and Charger.

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

Samples undergoing test were selected by the Client.

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

| | | |
|------------|--|-------------------------|
| FCC Part15 | FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz. | Oct, 2009 Edition |
| ANSI C63.4 | Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz | 2009 |
| KDB558074 | Measurement of Digital Transmission Systems Operating under Section 15.247 | March 23, 2005 |

5. LABORATORY ENVIRONMENT

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

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

Control room did not exceed following limits along the EMC testing:

| | |
|--------------------------|----------------------------|
| Temperature | Min. = 15 °C, Max. = 35 °C |
| Relative humidity | Min. =30 %, Max. = 60 % |
| Shielding effectiveness | > 110 dB |
| Electrical insulation | > 10 kΩ |
| Ground system resistance | < 0.5 Ω |

Semi-anechoic chamber (23 meters×17meters×10meters) did not exceed following limits along the EMC testing::

| | |
|-----------------------------------|---|
| Temperature | Min. = 15 °C, Max. = 30 °C |
| Relative humidity | Min. = 30 %, Max. = 60 % |
| Shielding effectiveness | > 110 dB |
| Electrical insulation | > 10 kΩ |
| Ground system resistance | < 0.5 Ω |
| Normalised site attenuation (NSA) | < ±3.2 dB, 10 m distance, from 30 to 1000 MHz |
| Uniformity of field strength | Between 0 and 6 dB, from 80MHz to 3000 MHz |

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

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

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

| SUMMARY OF MEASUREMENT RESULTS | Sub-clause of Part15C | Sub-clause of IC | Verdict |
|---|------------------------|------------------|---------|
| Maximum Peak Output Power | 15.247 (a) | / | P |
| Peak Power Spectral Density | 15.247 (d) | / | P |
| Occupied 6dB Bandwidth | 15.247 (d) | / | P |
| Band Edges Compliance | 15.247 (b) | / | P |
| Transmitter Spurious Emission - Conducted | 15.247 | / | P |
| Transmitter Spurious Emission - Radiated | 15.247, 15.209, 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 KDB558074 and ANSI C63.4.

Terms used in Verdict column

| | |
|----|---|
| P | Pass, The EUT complies with the essential requirements in the standard. |
| NP | Not Perform, The test was not performed by TMC |
| NA | Not Applicable, The test was not applicable |
| F | Fail, The EUT does not comply with the essential requirements in the standard |

6.2. Statements

TMC has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

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

This model is a variant product of the model Onyx wifi A, which market name is one touch 813A; only the test cases of radiated emission and AC powerline conducted emission were performed. The other test cases are not performed, and derived from test report of Onyx wifi A (market name is one one touch 813A).

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 case listed above are tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

| | | |
|-------------|-------|------|
| Temperature | T nom | 26°C |
|-------------|-------|------|

| | | |
|--------------|-------|------------------|
| Voltage | V nom | 3.6V(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 | 2011-07-19 |
| 2 | Test Receiver | ESS | 847151/015 | Rohde & Schwarz | 2011-10-30 |
| 3 | LISN | ESH2-Z5 | 829991/012 | Rohde & Schwarz | 2011-08-12 |

Radiated emission test system

| No. | Equipment | Model | Serial Number | Manufacturer | Calibration Due date |
|------------|-----------------------------------|--------------|----------------------|---------------------|-----------------------------|
| 1 | Test Receiver | ESI40 | 831564/002 | Rohde & Schwarz | 2011-08-11 |
| 2 | BiLog Antenna | 3142B | 9908-1403 | EMCO | 2012-03-15 |
| 3 | Dual-Ridge Waveguide Horn Antenna | 3115 | 9906-5827 | EMCO | 2011-12-25 |

Anechoic chamber

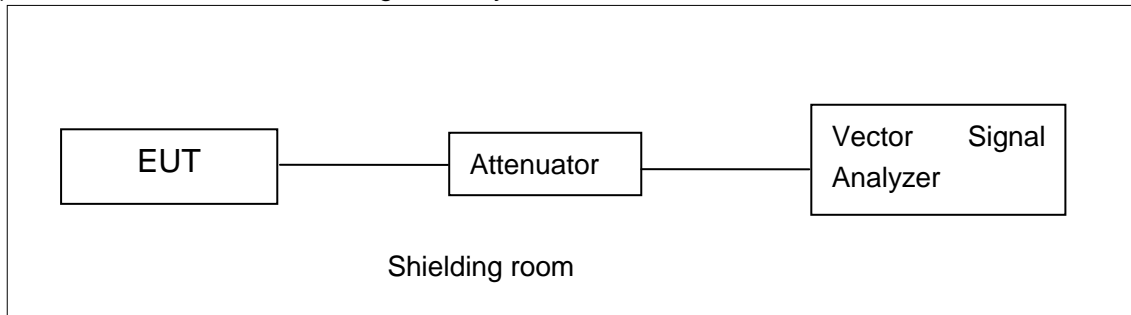
Anechoic chamber by Frankonia German.

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

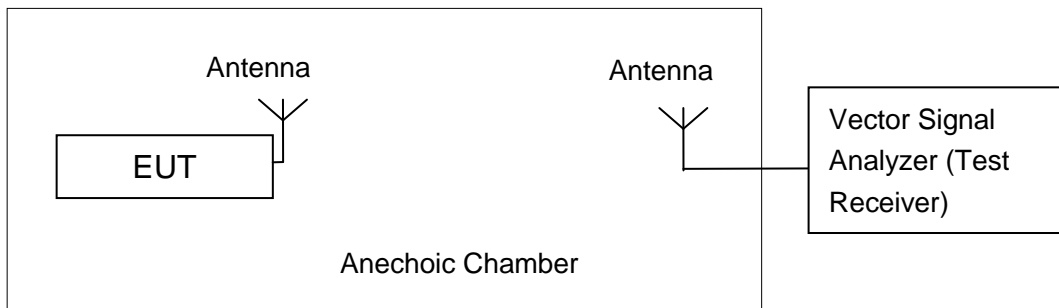


A.1.2. Radiated Emission Measurements

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 C63.4 and KDB558074

A.2. Maximum Peak Output Power

Measurement Limit and Method:

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

The measurement is made according to ANSI C63.4 and KDB558074, and power output option 1 (RBW=20MHz) in KDB558074 is used for the test. EUT is operating in continuous transmitting mode

Measurement Uncertainty:

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

A.2.1. Maximum Peak Output Power

Measurement Results:

802.11b/g mode

| Mode | Data Rate (Mbps) | Test Result (dBm) | | |
|---------|------------------|-------------------|---------------|-----------------|
| | | 2412MHz (Ch1) | 2437MHz (Ch6) | 2462 MHz (Ch11) |
| 802.11b | 1 | 20.27 | / | / |
| | 2 | 20.38 | / | / |
| | 5.5 | 21.55 | / | / |
| | 11 | 23.02 | 23.43 | 23.59 |
| 802.11g | 6 | 22.27 | / | / |
| | 9 | 22.23 | / | / |
| | 12 | 21.92 | / | / |
| | 18 | 21.88 | / | / |
| | 24 | 22.31 | / | / |
| | 36 | 22.32 | / | / |
| | 48 | 22.39 | / | / |
| | 54 | 22.40 | 22.87 | 23.06 |

The data rate 11Mbps and 54Mbps are selected as worse condition, and the following cases are performed with this condition.

Conclusion: PASS

A.3. Peak Power Spectral Density

Measurement Limit:

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

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

Measurement Uncertainty:

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

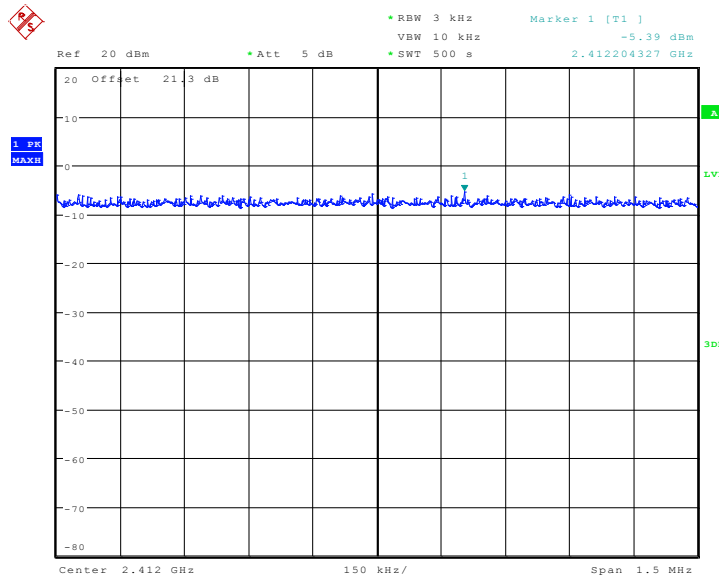
Measurement Results:

802.11b/g mode

| Mode | Channel | Power Spectral Density (dBm/3 kHz) | | Conclusion |
|---------|---------|---|-------|------------|
| 802.11b | 1 | Fig.1 | -5.39 | P |
| | 6 | Fig.2 | -3.87 | P |
| | 11 | Fig.3 | -4.25 | P |
| 802.11g | 1 | Fig.4 | -7.67 | P |
| | 6 | Fig.5 | -7.86 | P |
| | 11 | Fig.6 | -7.79 | P |

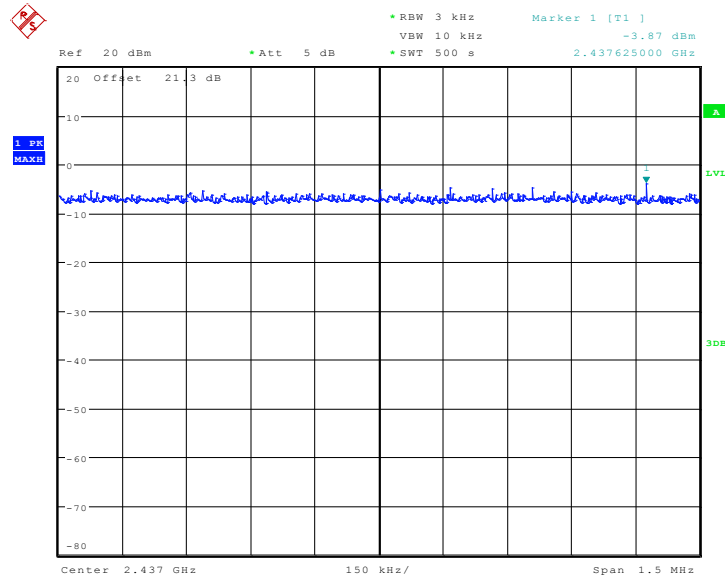
Conclusion: PASS

Test graphs as below:



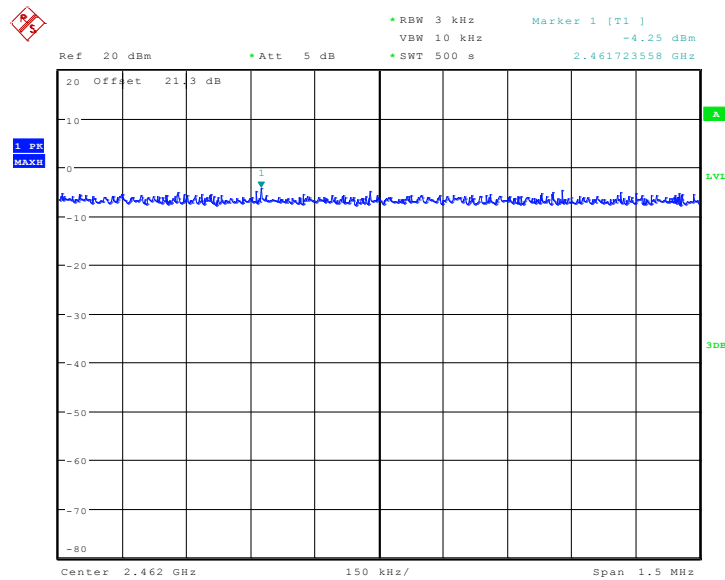
Date: 1.APR.2011 11:15:02

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



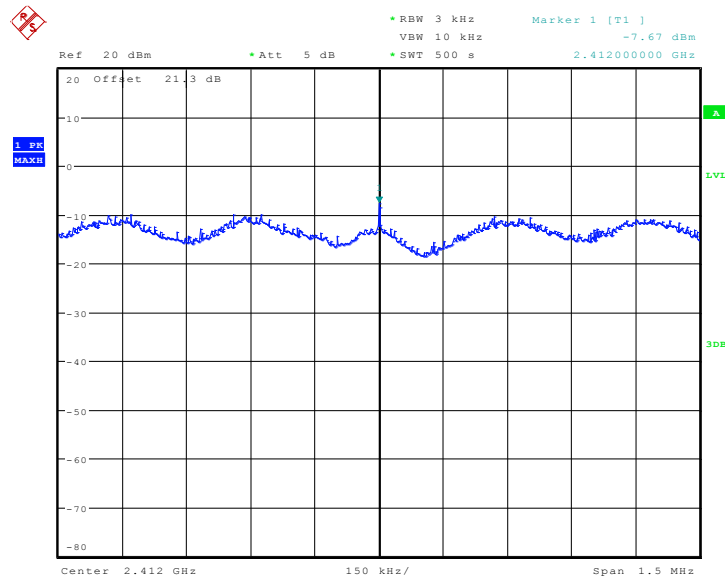
Date: 1.APR.2011 11:06:33

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



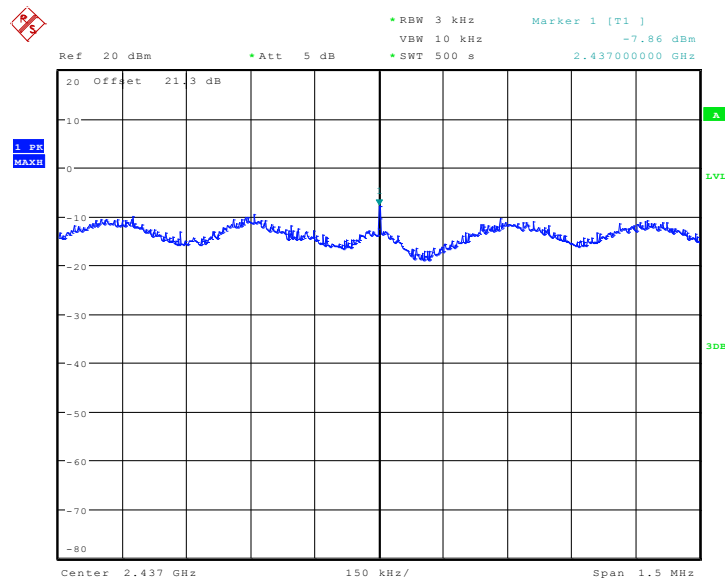
Date: 1.APR.2011 11:32:41

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



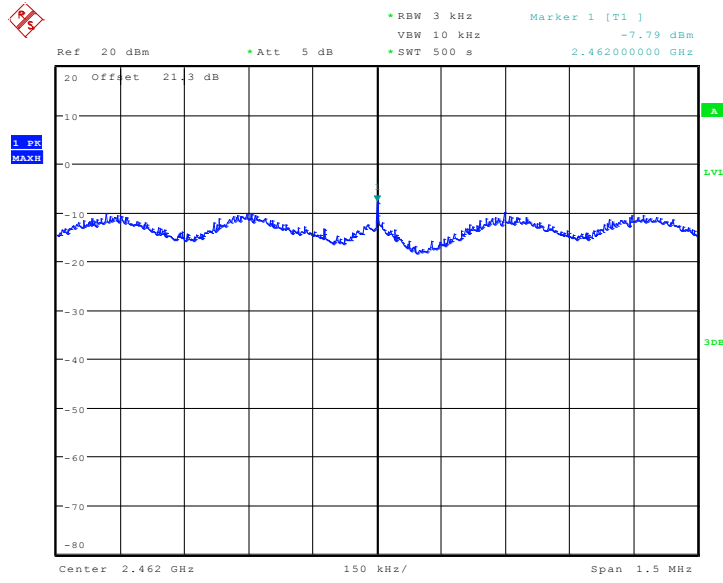
Date: 1.APR.2011 14:18:25

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



Date: 1.APR.2011 14:29:04

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



Date: 1.APR.2011 14:50:01

Fig. 6 Power Spectral Density (802.11g, 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 C63.4 and KDB558074

Measurement Uncertainty:

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

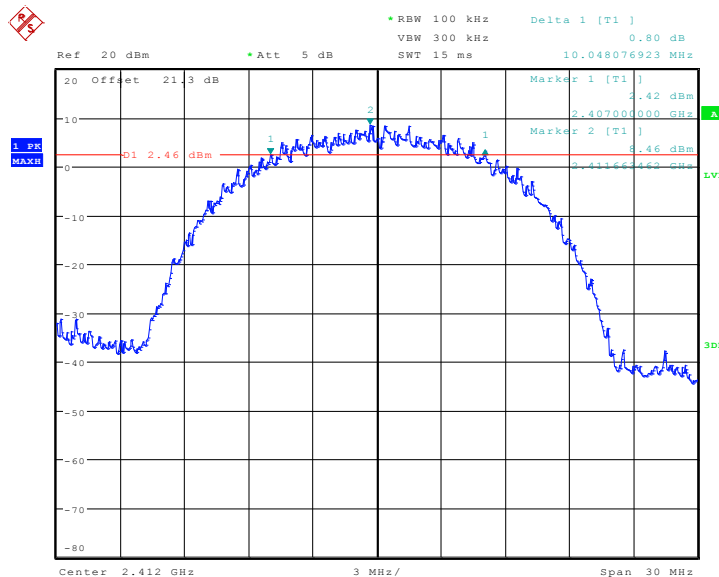
Measurement Result:

802.11b/g mode

| Mode | Channel | Occupied 6dB Bandwidth (kHz) | | conclusion |
|---------|---------|-------------------------------|-------|------------|
| 802.11b | 1 | Fig.7 | 10048 | P |
| | 6 | Fig.8 | 10577 | P |
| | 11 | Fig.9 | 10096 | P |
| 802.11g | 1 | Fig.10 | 16538 | P |
| | 6 | Fig.11 | 16538 | P |
| | 11 | Fig.12 | 16538 | P |

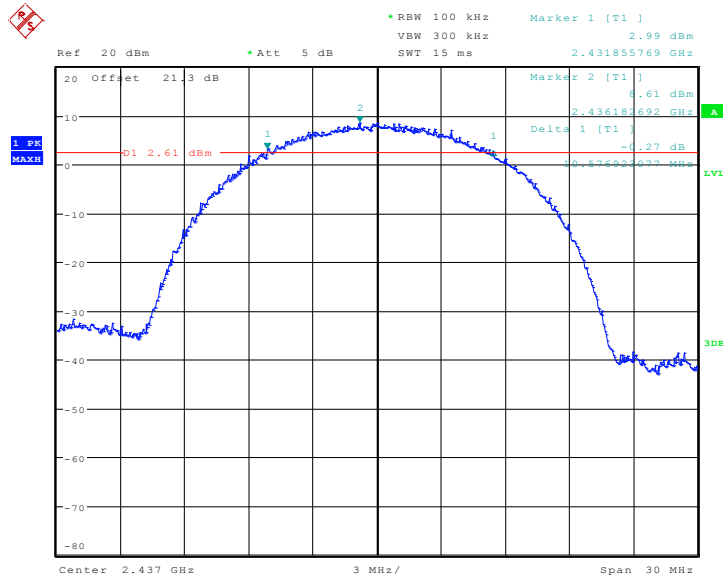
Conclusion: PASS

Test graphs as below:



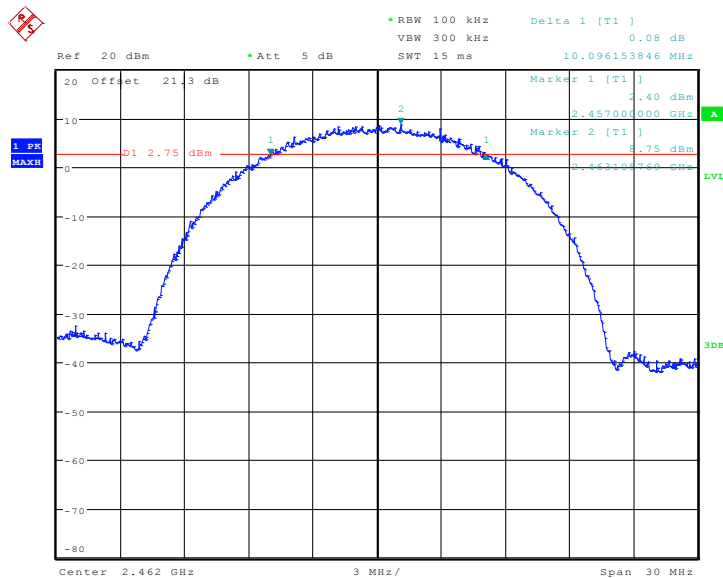
Date: 1.APR.2011 09:18:54

Fig. 7 Occupied 6dB Bandwidth (802.11b, Ch 1)



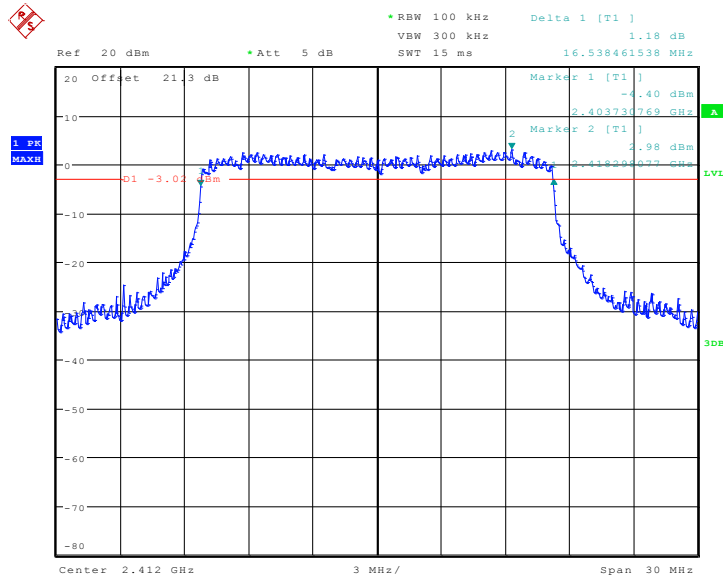
Date: 1.APR.2011 09:32:15

Fig. 8 Occupied 6dB Bandwidth (802.11b, Ch 6)



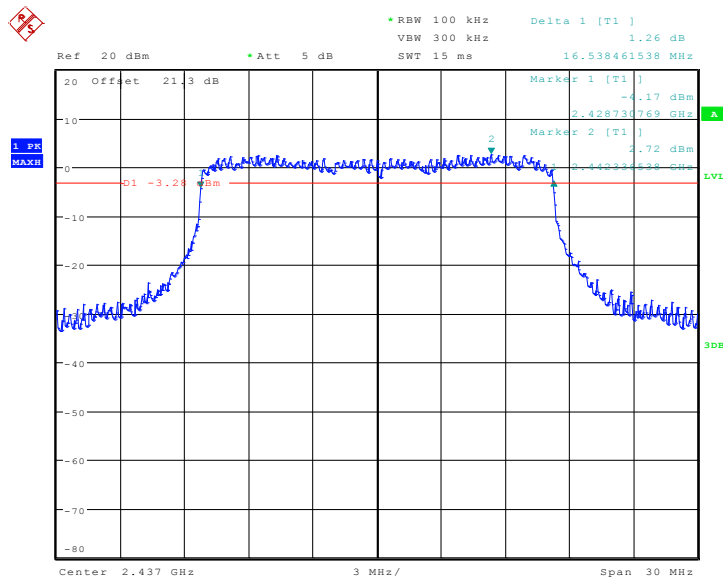
Date: 1.APR.2011 09:29:44

Fig. 9 Occupied 6dB Bandwidth (802.11b, Ch 11)



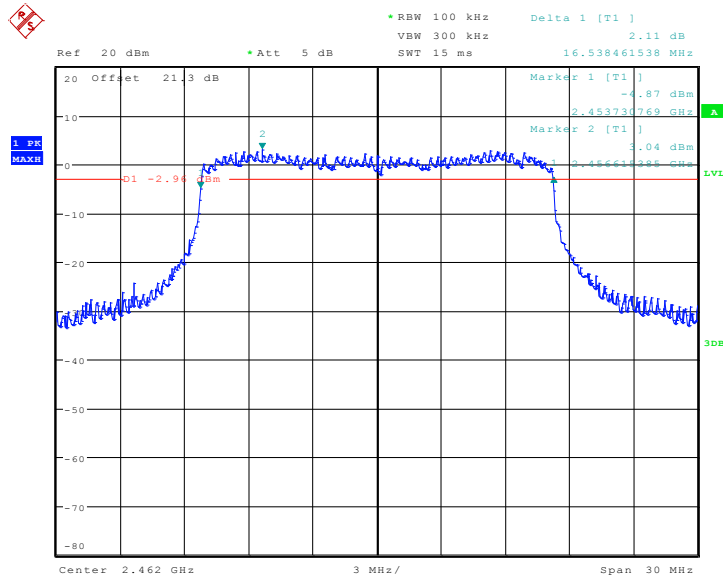
Date: 1.APR.2011 09:24:14

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



Date: 1.APR.2011 09:26:12

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



Date: 1.APR.2011 09:27:57

Fig. 12 Occupied 6dB Bandwidth (802.11g, 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 C63.4 and KDB558074

Measurement Uncertainty:

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

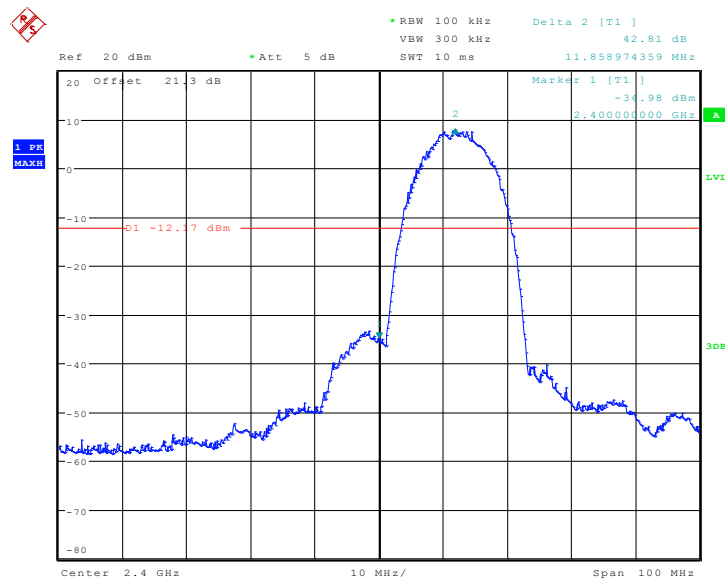
Measurement Result:

802.11b/g mode

| Mode | Channel | Test Results | Conclusion |
|---------|---------|--------------|------------|
| 802.11b | 1 | Fig.13 | P |
| | 11 | Fig.14 | P |
| 802.11g | 1 | Fig.15 | P |
| | 11 | Fig.16 | P |

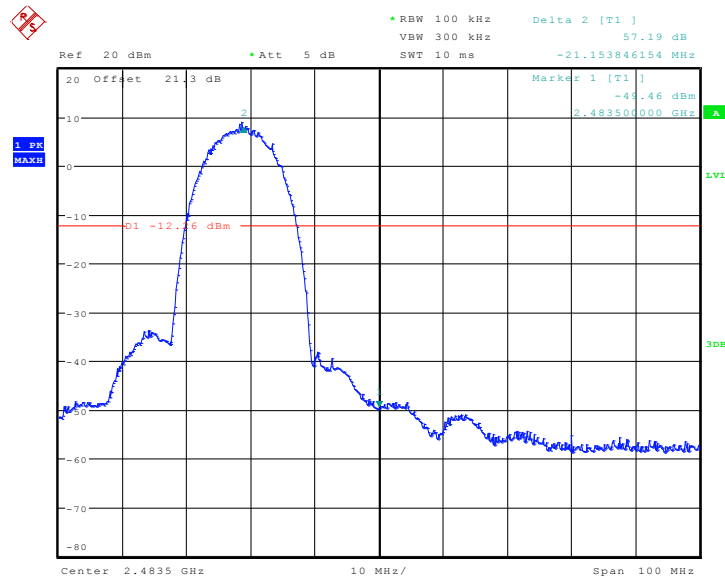
Conclusion: PASS

Test graphs as below:



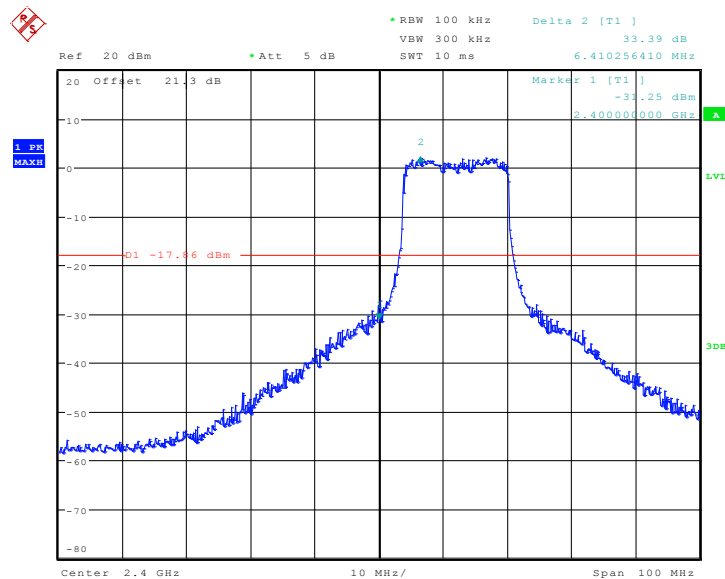
Date: 1.APR.2011 09:36:35

Fig. 13 Band Edges (802.11b, Ch 1)



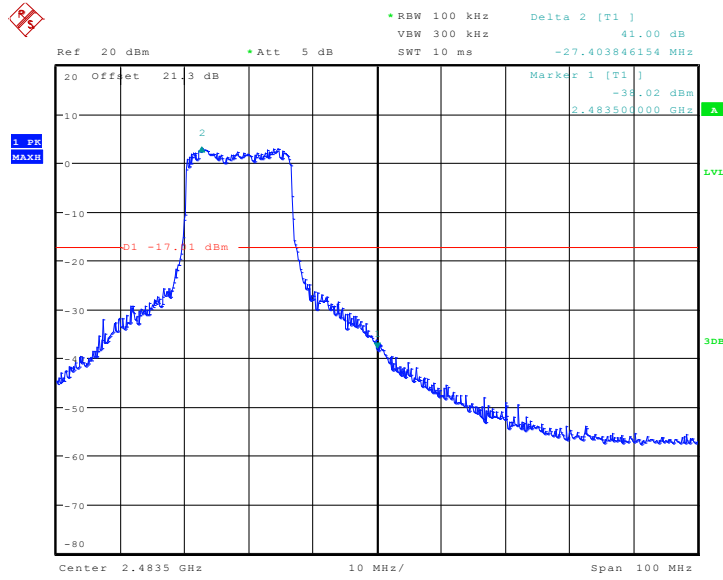
Date: 1.APR.2011 09:34:27

Fig. 14 Band Edges (802.11b, Ch 11)



Date: 1.APR.2011 09:38:40

Fig. 15 Band Edges (802.11g, Ch 1)



Date: 1.APR.2011 09:42:19

Fig. 16 Band Edges (802.11g, 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 C63.4 and KDB558074

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:

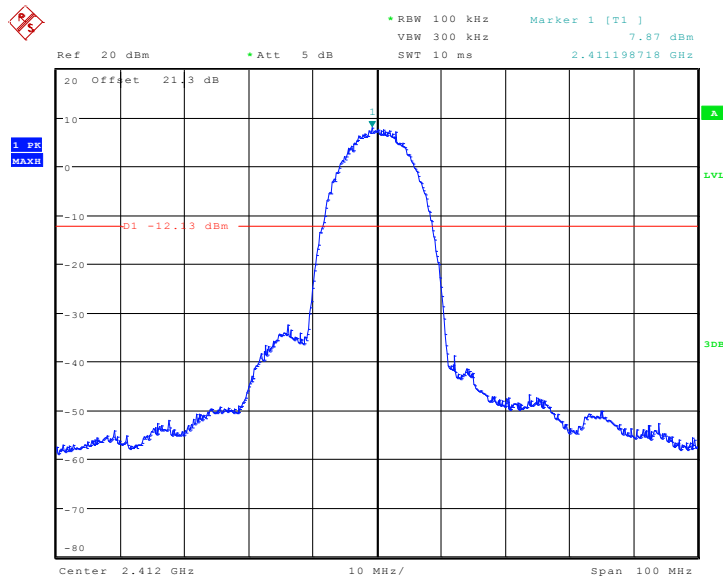
802.11b/g mode

| MODE | Channel | Frequency Range | Test Results | Conclusion |
|---------|---------|-----------------|--------------|------------|
| 802.11b | 1 | 2.412 GHz | Fig.17 | P |
| | | 30 MHz ~ 1 GHz | Fig.18 | P |
| | | 1GHz-2.5GHz | Fig.19 | P |
| | | 2.5GHz-7.5GHz | Fig.20 | P |
| | | 7.5GHz-10GHz | Fig.21 | P |
| | | 10GHz-15GHz | Fig.22 | P |
| | | 15GHz-20GHz | Fig.23 | P |
| | | 20GHz-26GHz | Fig.24 | P |
| | 6 | 2.437 GHz | Fig.25 | P |
| | | 30 MHz ~ 1 GHz | Fig.26 | P |
| | | 1GHz-2.5GHz | Fig.27 | P |
| | | 2.5GHz-7.5GHz | Fig.28 | P |
| | | 7.5GHz-10GHz | Fig.29 | P |
| | | 10GHz-15GHz | Fig.30 | P |
| | | 15GHz-20GHz | Fig.31 | P |
| | | 20GHz-26GHz | Fig.32 | P |
| | 11 | 2.462 GHz | Fig.33 | P |
| | | 30 MHz ~ 1 GHz | Fig.34 | P |
| | | 1GHz-2.5GHz | Fig.35 | P |
| | | 2.5GHz-7.5GHz | Fig.36 | P |

| | | | | |
|---------|----|----------------|--------|---|
| | | 7.5GHz-10GHz | Fig.37 | P |
| | | 10GHz-15GHz | Fig.38 | P |
| | | 15GHz-20GHz | Fig.39 | P |
| | | 20GHz-26GHz | Fig.40 | P |
| 802.11g | 1 | 2.412 GHz | Fig.41 | P |
| | | 30 MHz ~ 1 GHz | Fig.42 | P |
| | | 1GHz-2.5GHz | Fig.43 | P |
| | | 2.5GHz-7.5GHz | Fig.44 | P |
| | | 7.5GHz-10GHz | Fig.45 | P |
| | | 10GHz-15GHz | Fig.46 | P |
| | | 15GHz-20GHz | Fig.47 | P |
| | | 20GHz-26GHz | Fig.48 | P |
| | 6 | 2.437 GHz | Fig.49 | P |
| | | 30 MHz ~ 1 GHz | Fig.50 | P |
| | | 1GHz-2.5GHz | Fig.51 | P |
| | | 2.5GHz-7.5GHz | Fig.52 | P |
| | | 7.5GHz-10GHz | Fig.53 | P |
| | | 10GHz-15GHz | Fig.54 | P |
| | | 15GHz-20GHz | Fig.55 | P |
| | | 20GHz-26GHz | Fig.56 | P |
| | 11 | 2.462 GHz | Fig.57 | P |
| | | 30 MHz ~ 1 GHz | Fig.58 | P |
| | | 1GHz-2.5GHz | Fig.59 | P |
| | | 2.5GHz-7.5GHz | Fig.60 | P |
| | | 7.5GHz-10GHz | Fig.61 | P |
| | | 10GHz-15GHz | Fig.62 | P |
| | | 15GHz-20GHz | Fig.63 | P |
| | | 20GHz-26GHz | Fig.64 | P |

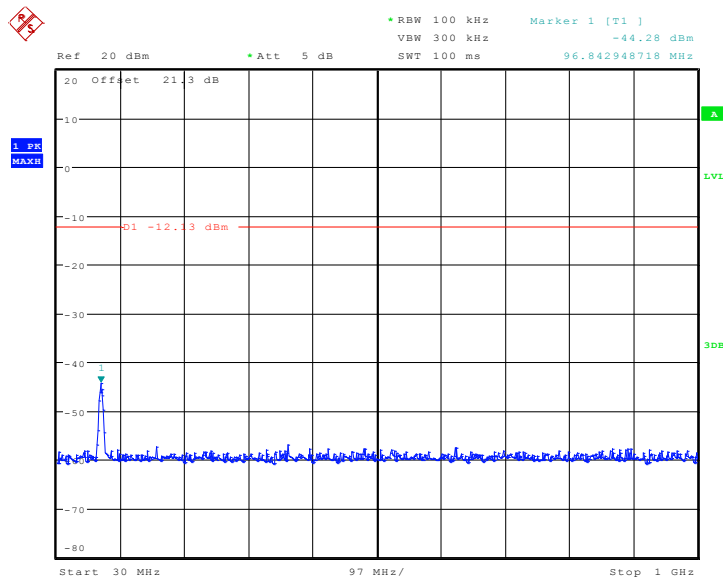
Conclusion: PASS

Test graphs as below:



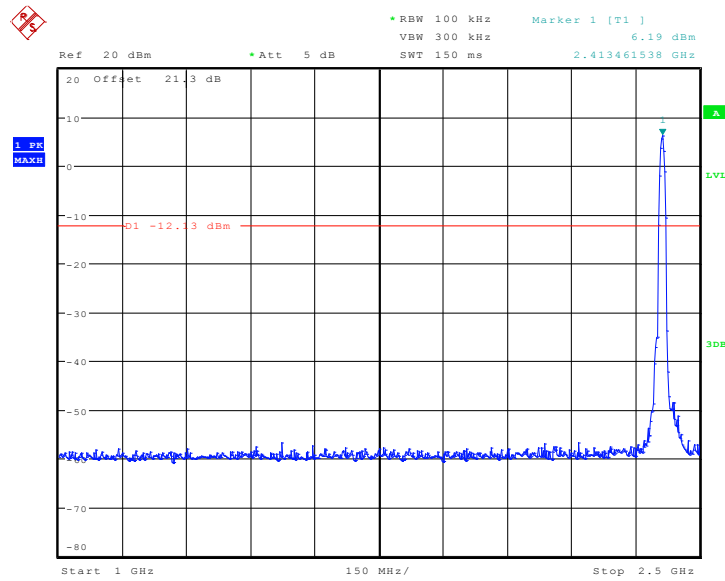
Date: 1.APR.2011 10:43:52

Fig. 17 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)



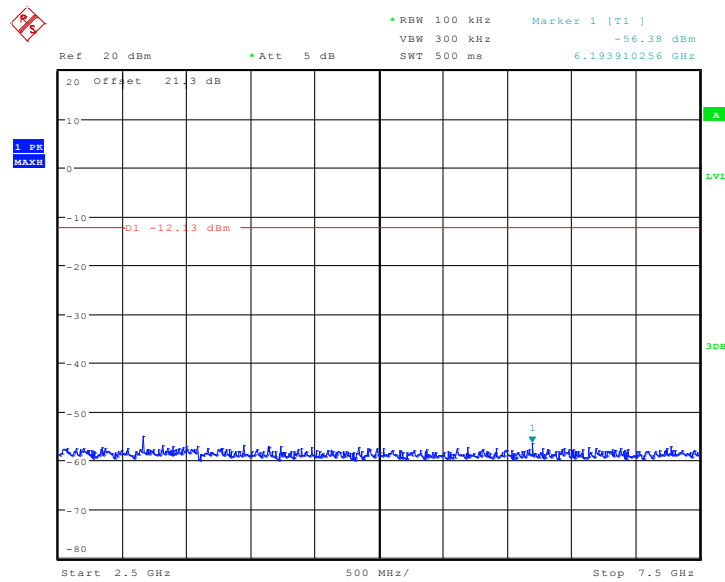
Date: 1.APR.2011 10:44:06

Fig. 18 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)



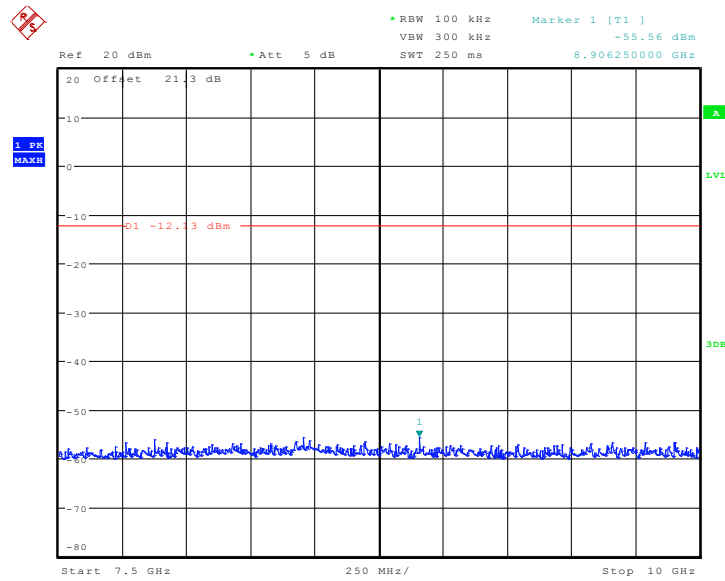
Date: 1.APR.2011 10:44:23

Fig. 19 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)



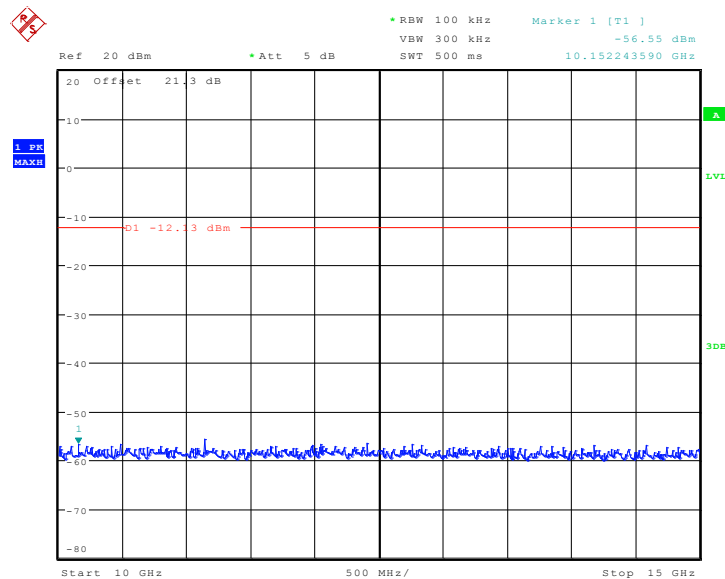
Date: 1.APR.2011 10:44:43

Fig. 20 Conducted Spurious Emission (802.11b, Ch1, 2.5 GHz-7.5 GHz)



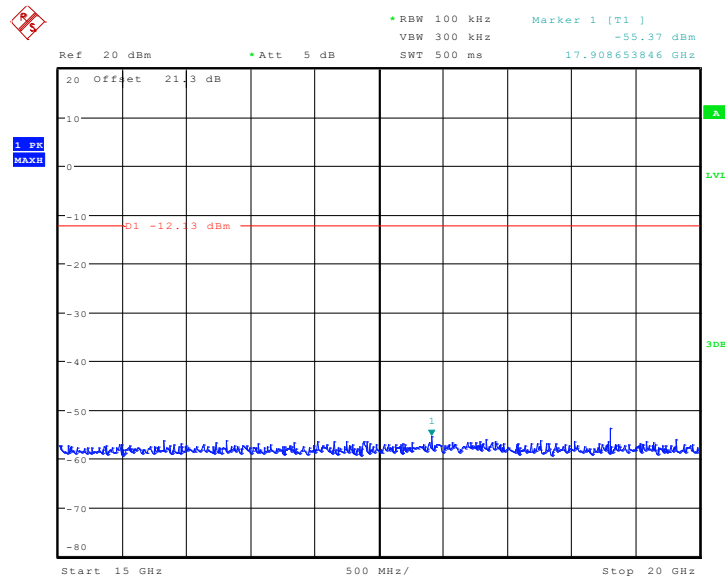
Date: 1.APR.2011 10:45:02

Fig. 21 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)



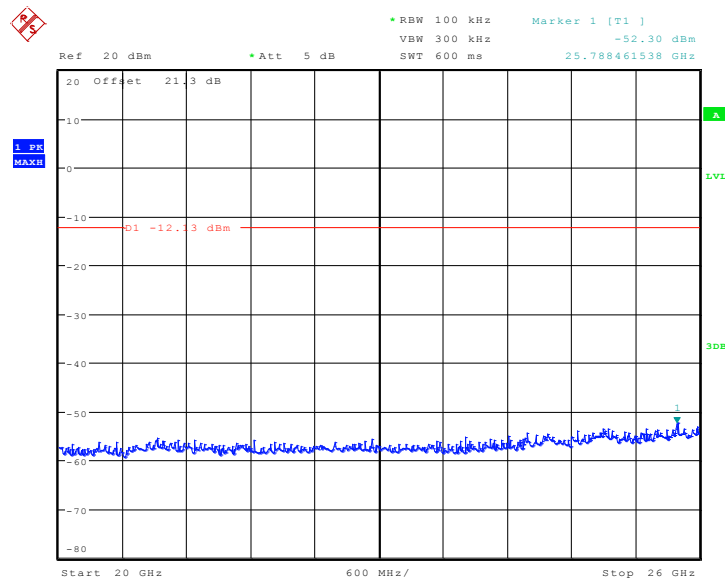
Date: 1.APR.2011 10:45:29

Fig. 22 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)



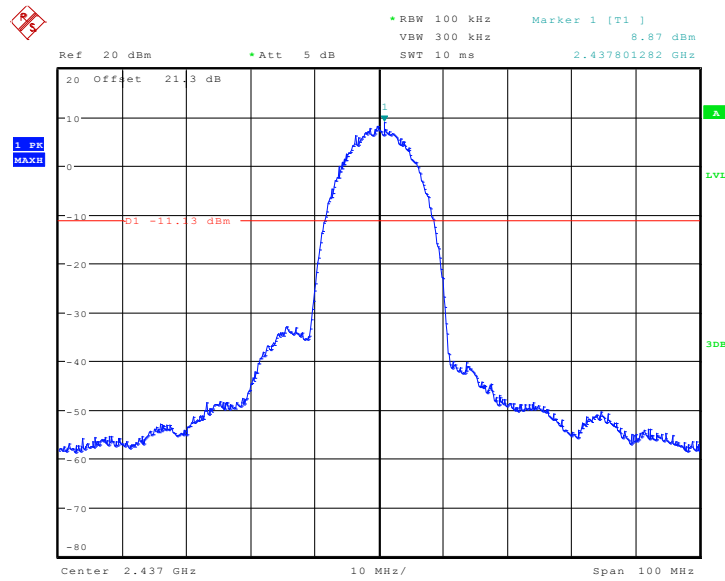
Date: 1.APR.2011 10:45:45

Fig. 23 Conducted Spurious Emission (802.11b, Ch1, 15 GHz-20 GHz)



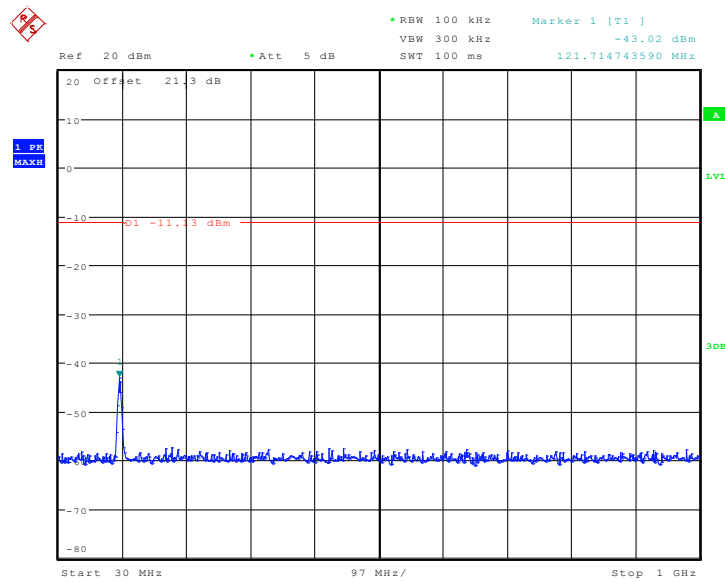
Date: 1.APR.2011 10:46:00

Fig. 24 Conducted Spurious Emission (802.11b, Ch1, 20 GHz-26 GHz)



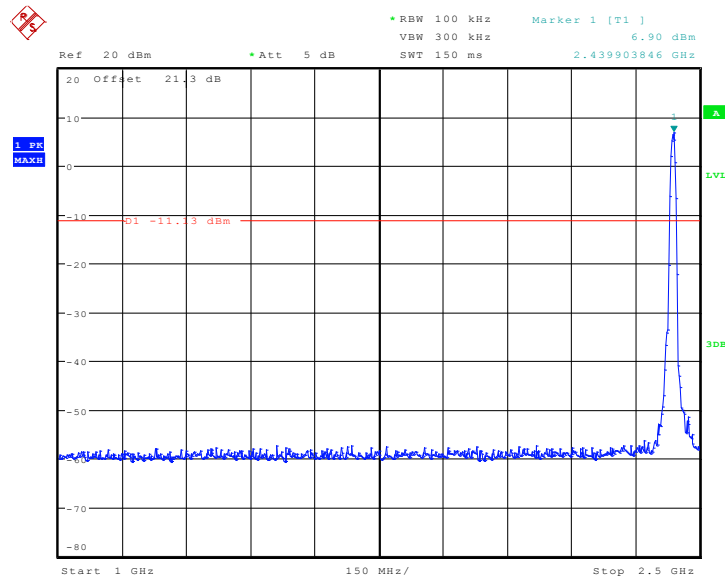
Date: 1.APR.2011 10:46:56

Fig. 25 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)



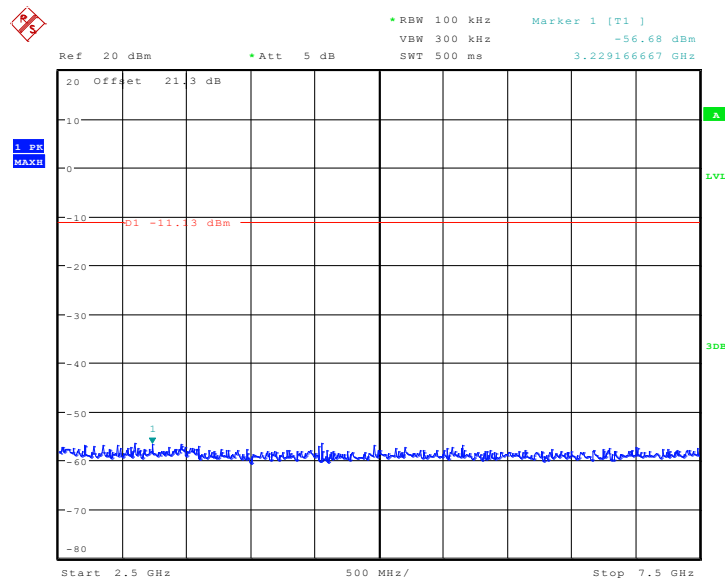
Date: 1.APR.2011 10:47:08

Fig. 26 Conducted Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)



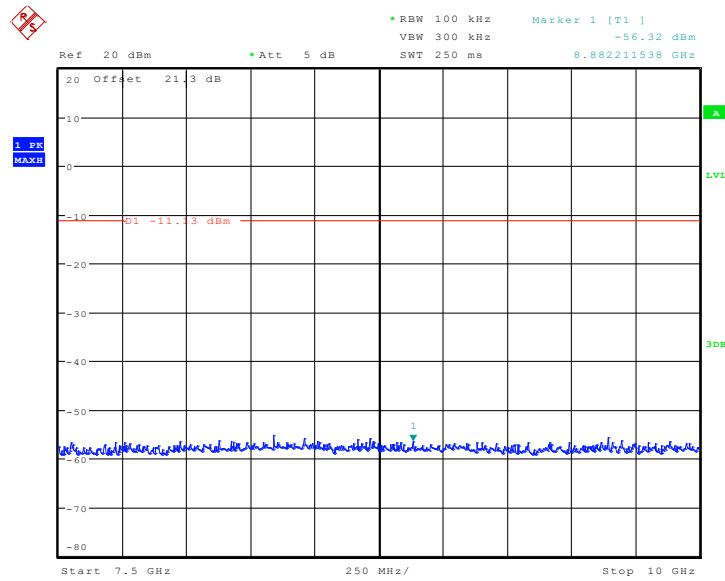
Date: 1.APR.2011 10:47:25

Fig. 27 Conducted Spurious Emission (802.11b, Ch6, 1 GHz-2.5 GHz)



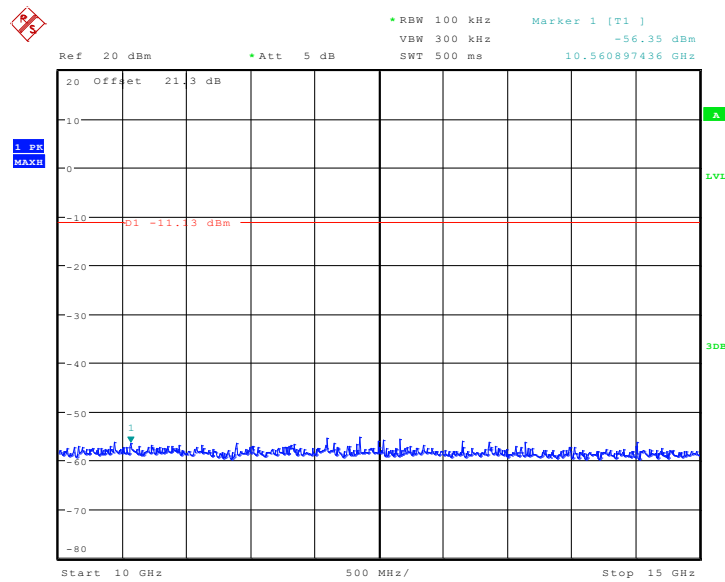
Date: 1.APR.2011 10:47:41

Fig. 28 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)



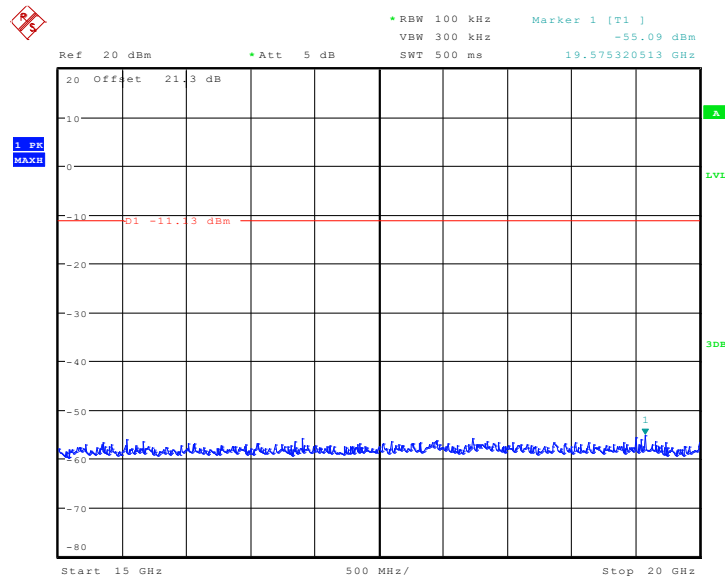
Date: 1.APR.2011 10:48:17

Fig. 29 Conducted Spurious Emission (802.11b, Ch6, 7.5 GHz-10 GHz)



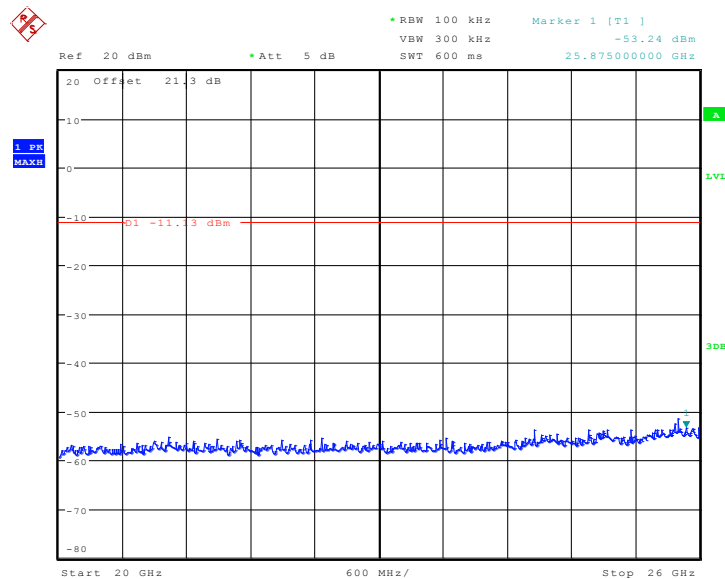
Date: 1.APR.2011 10:48:36

Fig. 30 Conducted Spurious Emission (802.11b, Ch6, 10 GHz-15 GHz)



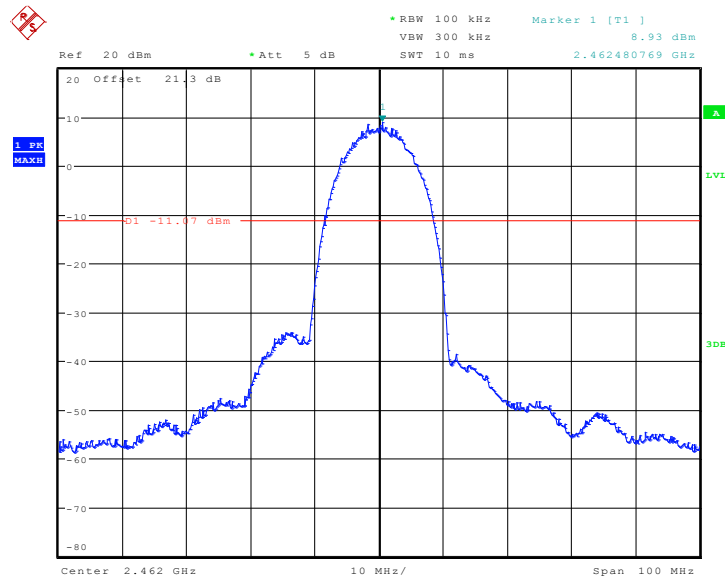
Date: 1.APR.2011 10:48:52

Fig. 31 Conducted Spurious Emission (802.11b, Ch6, 15 GHz-20 GHz)



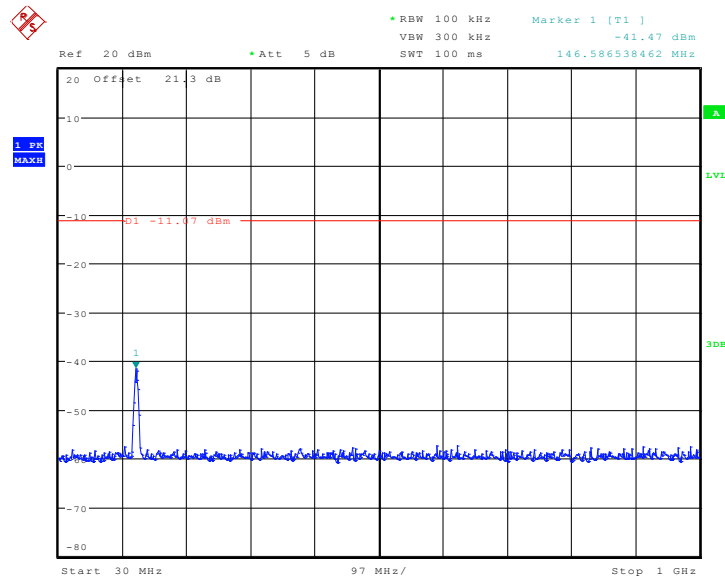
Date: 1.APR.2011 10:49:12

Fig. 32 Conducted Spurious Emission (802.11b, Ch6, 20 GHz-26 GHz)



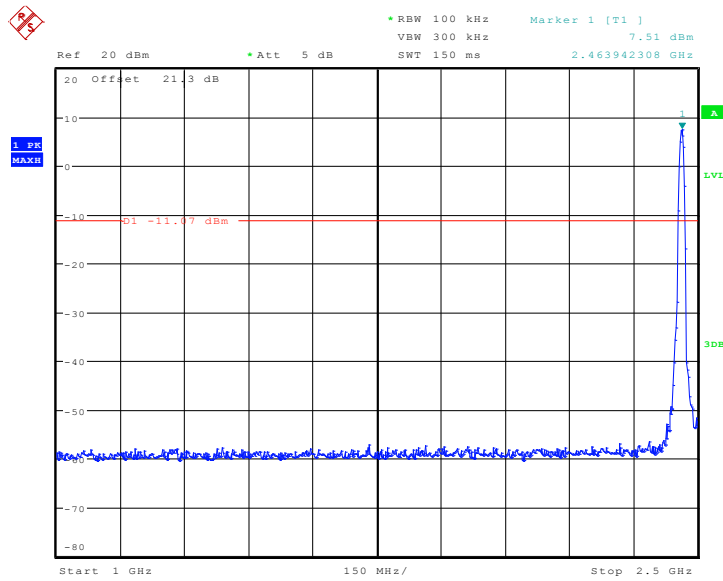
Date: 1.APR.2011 10:40:15

Fig. 33 Conducted Spurious Emission (802.11b, Ch11, Center Frequency)



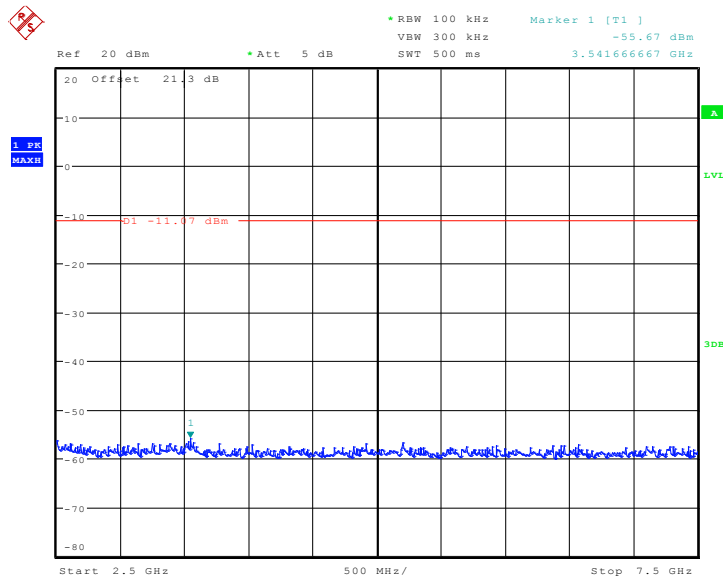
Date: 1.APR.2011 10:40:36

Fig. 34 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)



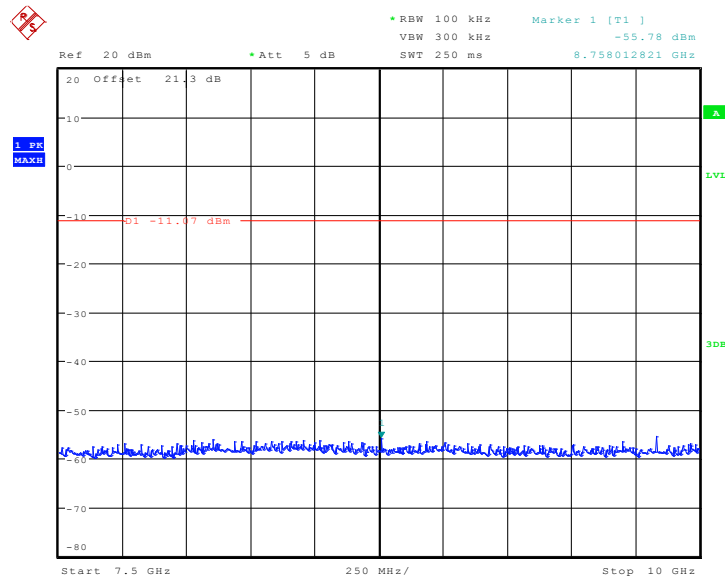
Date: 1.APR.2011 10:40:54

Fig. 35 Conducted Spurious Emission (802.11b, Ch11, 1 GHz-2.5 GHz)



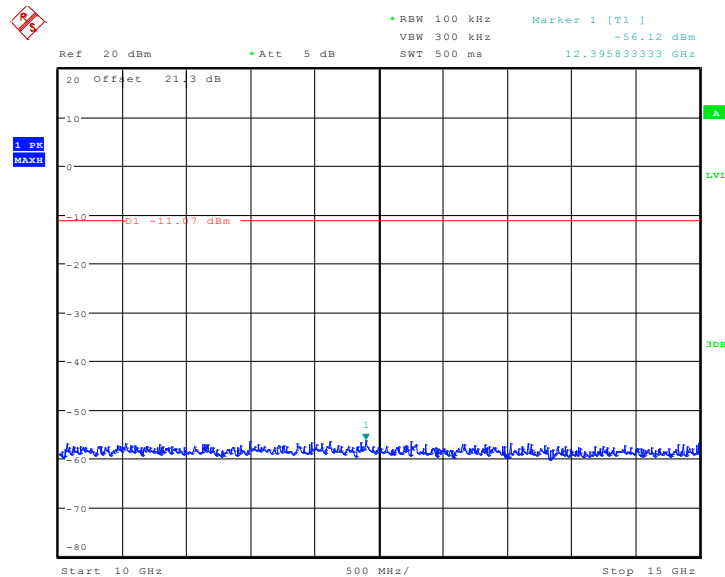
Date: 1.APR.2011 10:41:19

Fig. 36 Conducted Spurious Emission (802.11b, Ch11, 2.5 GHz-7.5 GHz)



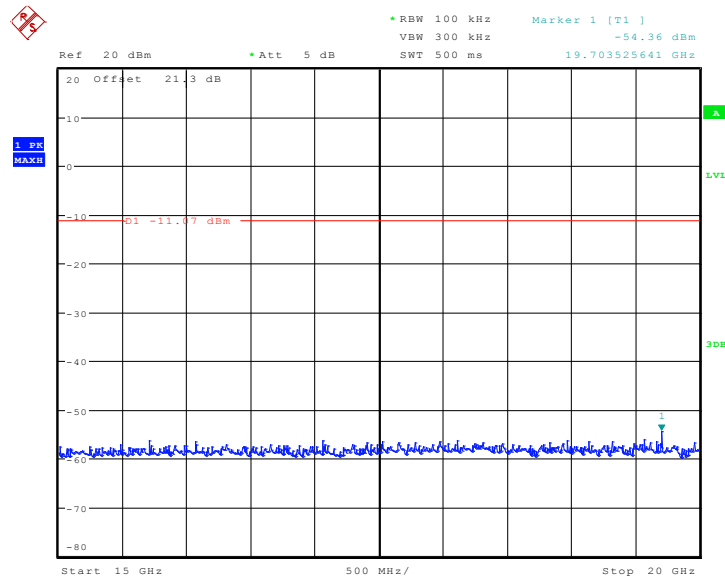
Date: 1.APR.2011 10:41:38

Fig. 37 Conducted Spurious Emission (802.11b, Ch11, 7.5 GHz-10 GHz)



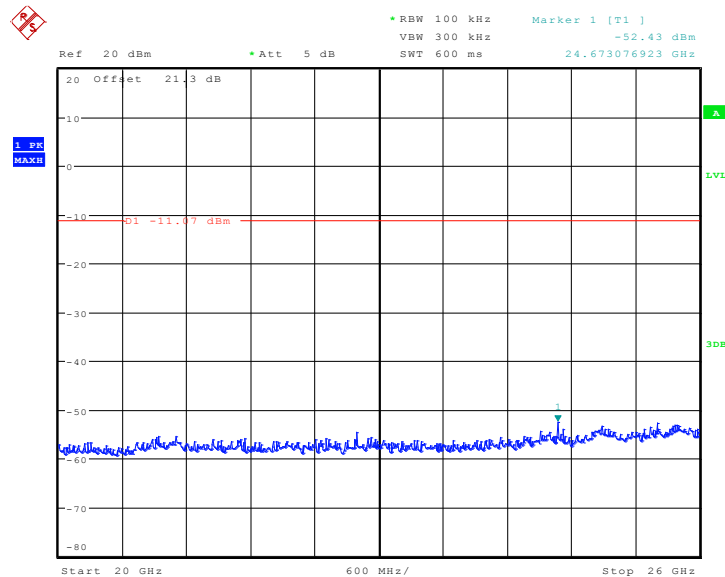
Date: 1.APR.2011 10:41:54

Fig. 38 Conducted Spurious Emission (802.11b, Ch11, 10 GHz-15 GHz)



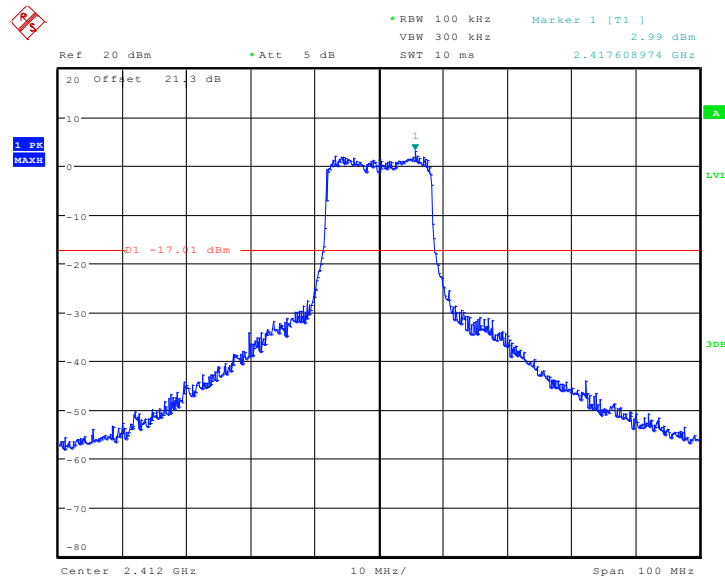
Date: 1.APR.2011 10:42:12

Fig. 39 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)



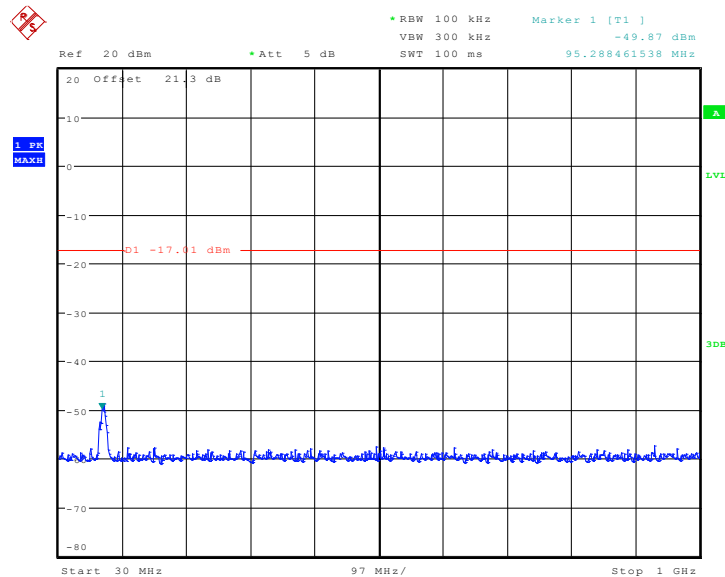
Date: 1.APR.2011 10:42:26

Fig. 40 Conducted Spurious Emission (802.11b, Ch11, 20 GHz-26 GHz)



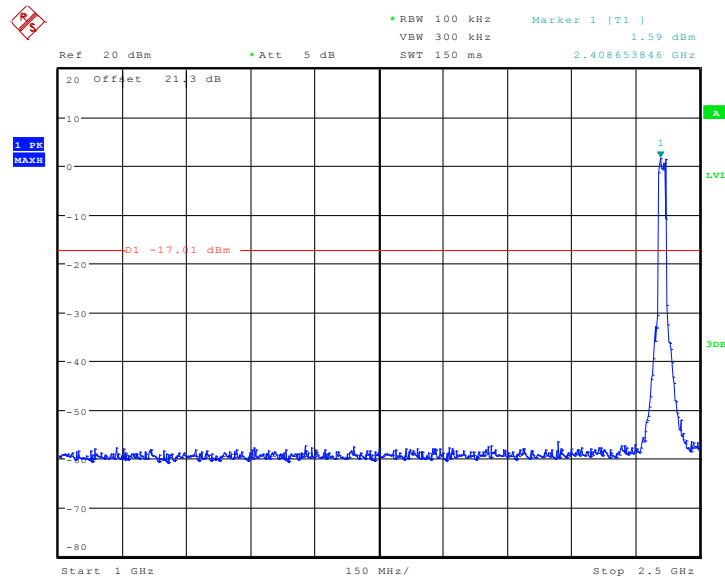
Date: 1.APR.2011 10:23:35

Fig. 41 Conducted Spurious Emission (802.11g, Ch1, Center Frequency)



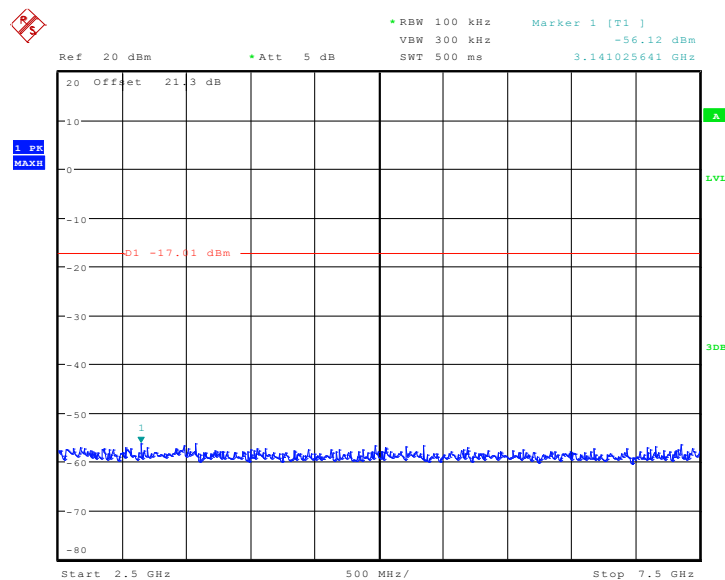
Date: 1.APR.2011 10:24:10

Fig. 42 Conducted Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)



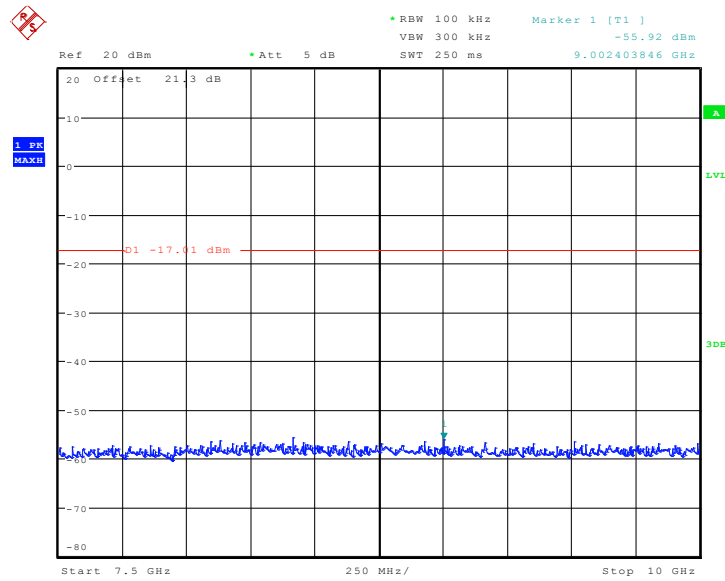
Date: 1.APR.2011 10:24:36

Fig. 43 Conducted Spurious Emission ((802.11g, Ch1, 1 GHz-2.5 GHz)



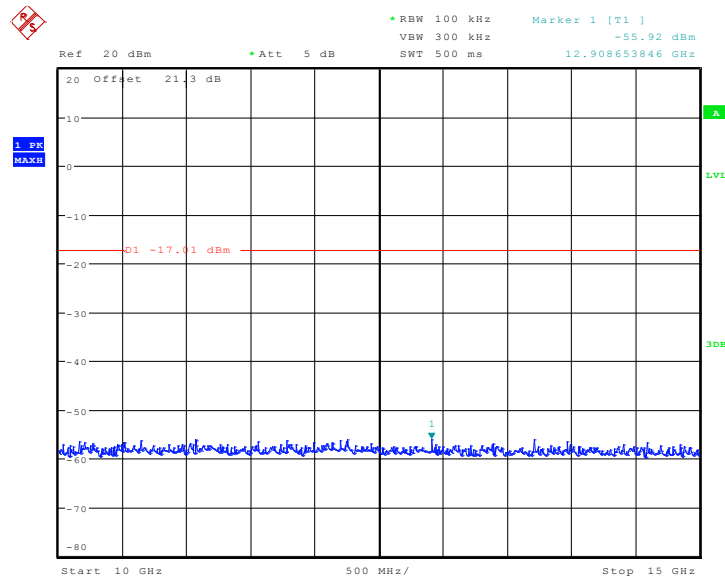
Date: 1.APR.2011 10:25:03

Fig. 44 Conducted Spurious Emission ((802.11g, Ch1, 2.5 GHz-7.5 GHz)



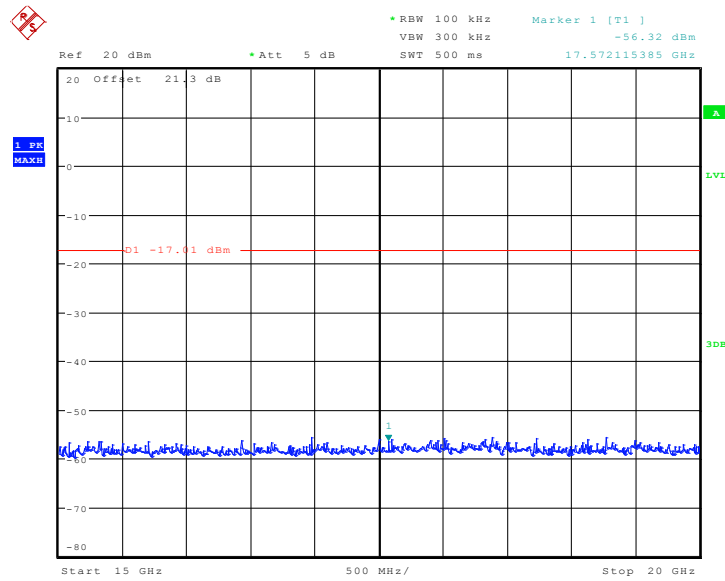
Date: 1.APR.2011 10:25:25

Fig. 45 Conducted Spurious Emission ((802.11g, Ch1, 7.5 GHz-10 GHz)



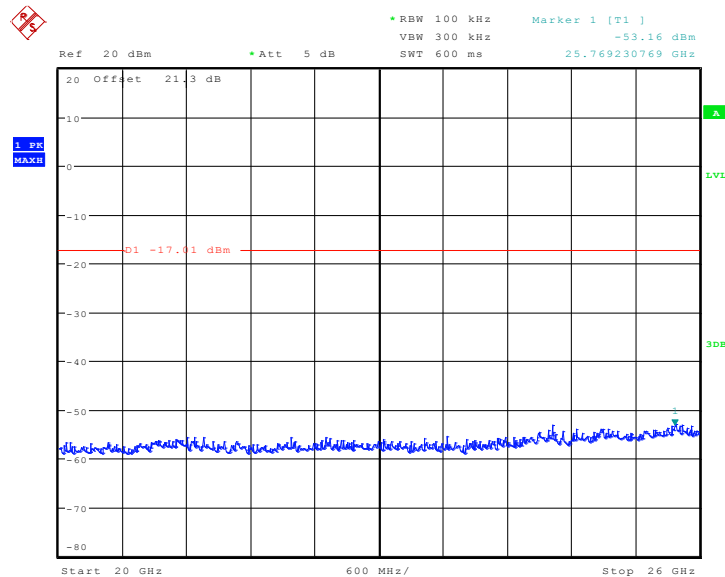
Date: 1.APR.2011 10:25:50

Fig. 46 Conducted Spurious Emission ((802.11g, Ch1, 10 GHz-15 GHz)



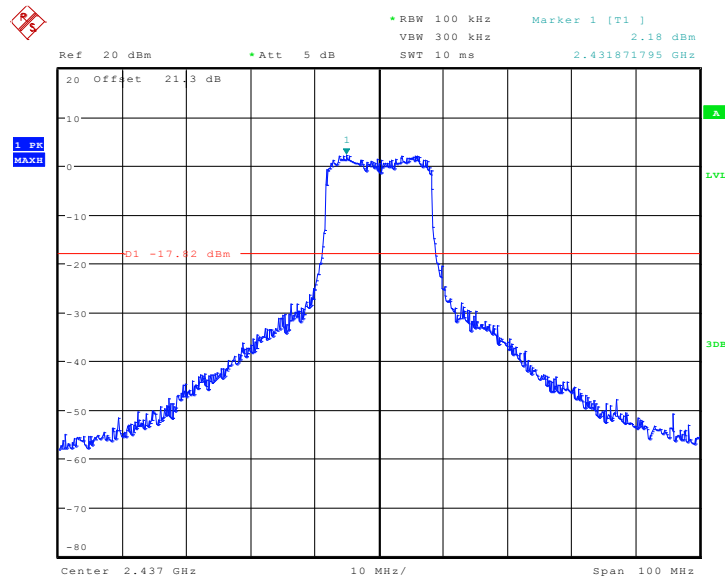
Date: 1.APR.2011 10:26:11

Fig. 47 Conducted Spurious Emission ((802.11g, Ch1, 15 GHz-20 GHz)



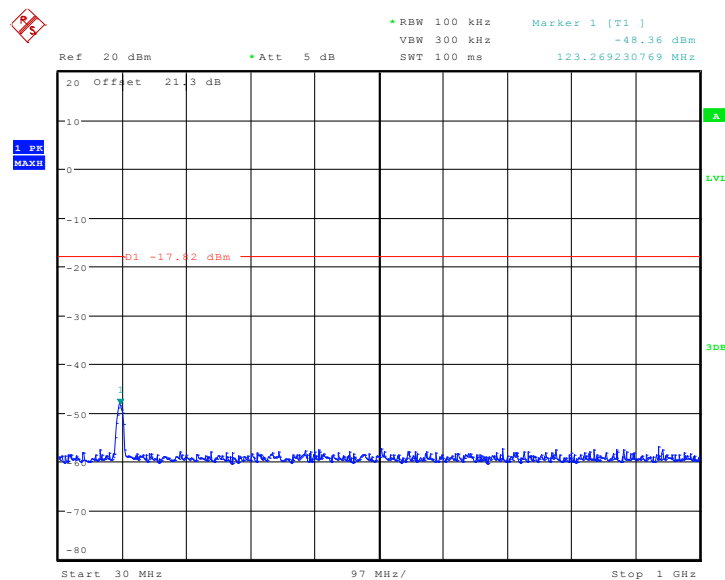
Date: 1.APR.2011 10:26:29

Fig. 48 Conducted Spurious Emission ((802.11g, Ch1, 20 GHz-26 GHz)



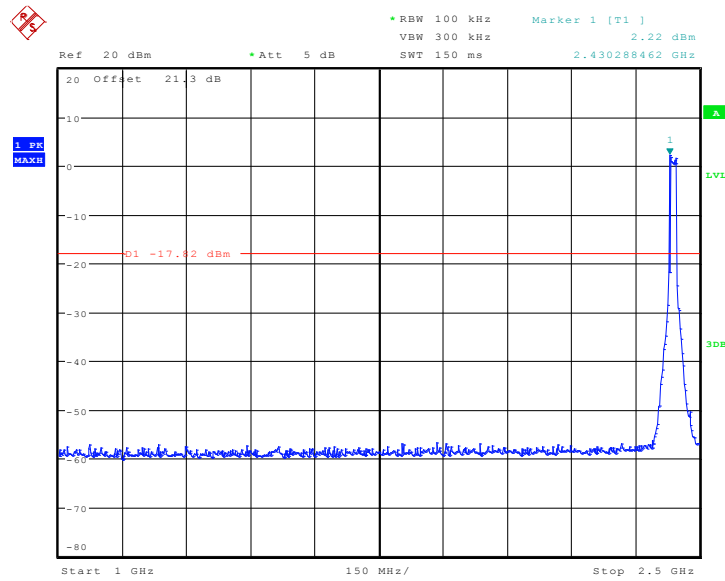
Date: 1.APR.2011 10:27:42

Fig. 49 Conducted Spurious Emission ((802.11g, Ch6, Center Frequency)



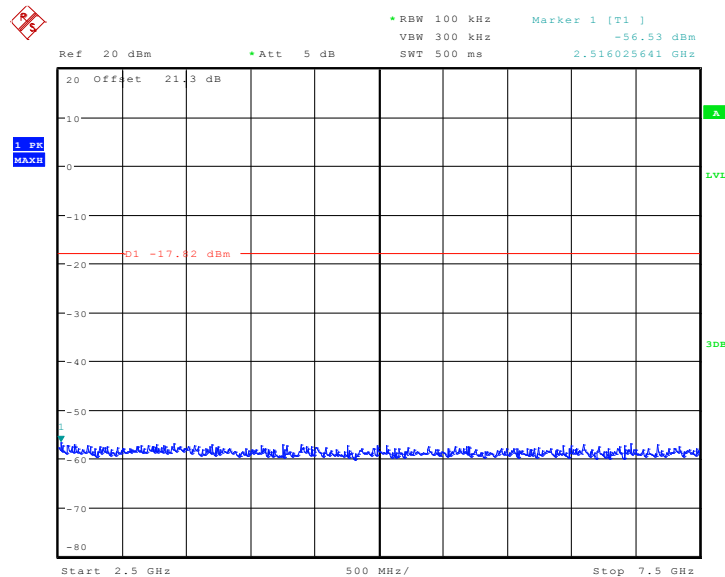
Date: 1.APR.2011 10:28:15

Fig. 50 Conducted Spurious Emission ((802.11g, Ch6, 30 MHz-1 GHz)



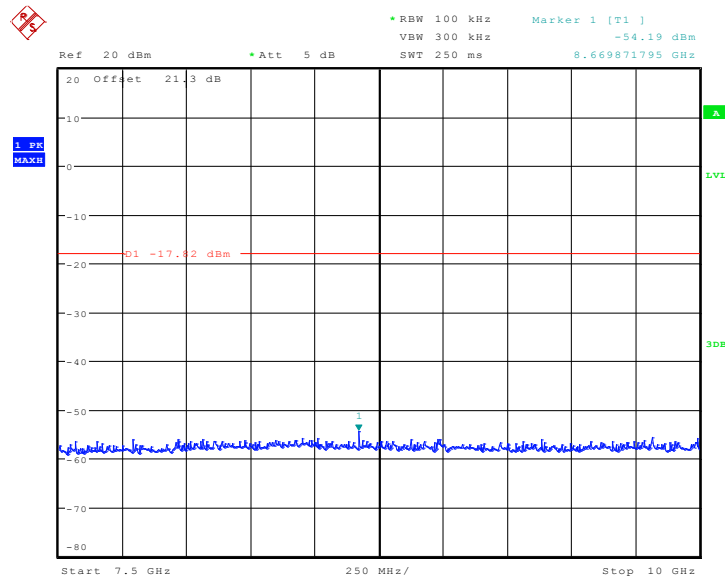
Date: 1.APR.2011 10:28:58

Fig. 51 Conducted Spurious Emission ((802.11g, Ch6, 1 GHz-2.5 GHz)



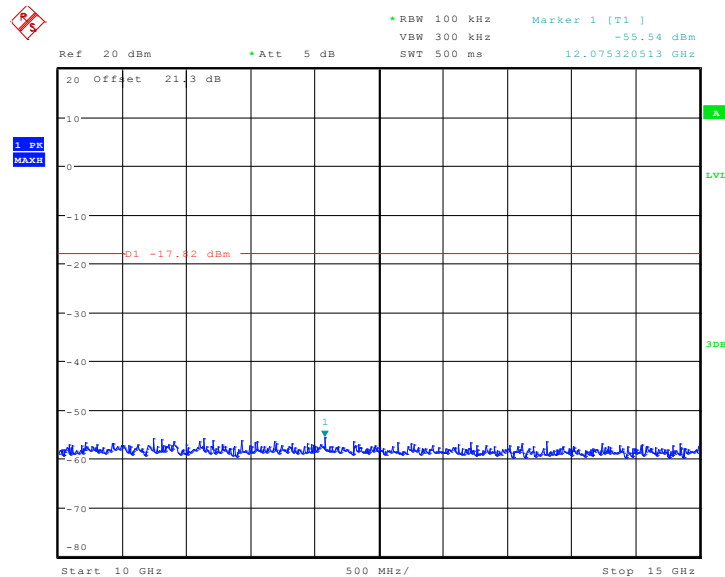
Date: 1.APR.2011 10:29:22

Fig. 52 Conducted Spurious Emission ((802.11g, Ch6, 2.5 GHz-7.5 GHz)



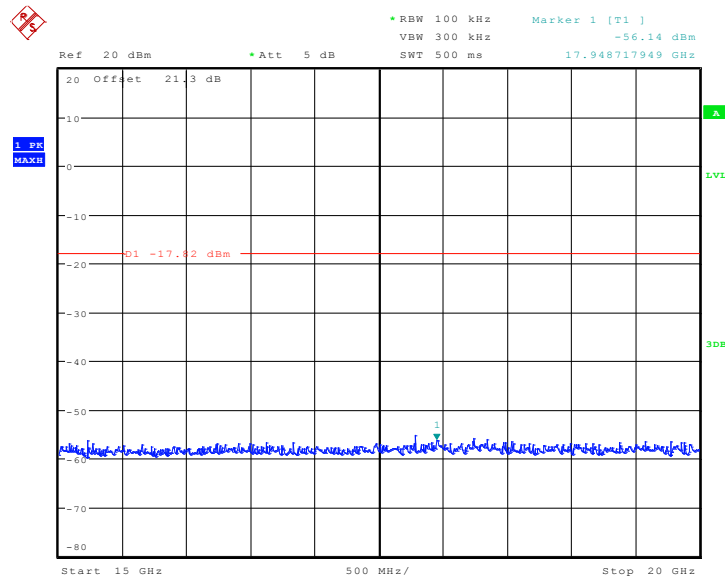
Date: 1.APR.2011 10:30:33

Fig. 53 Conducted Spurious Emission ((802.11g, Ch6, 7.5 GHz-10 GHz)



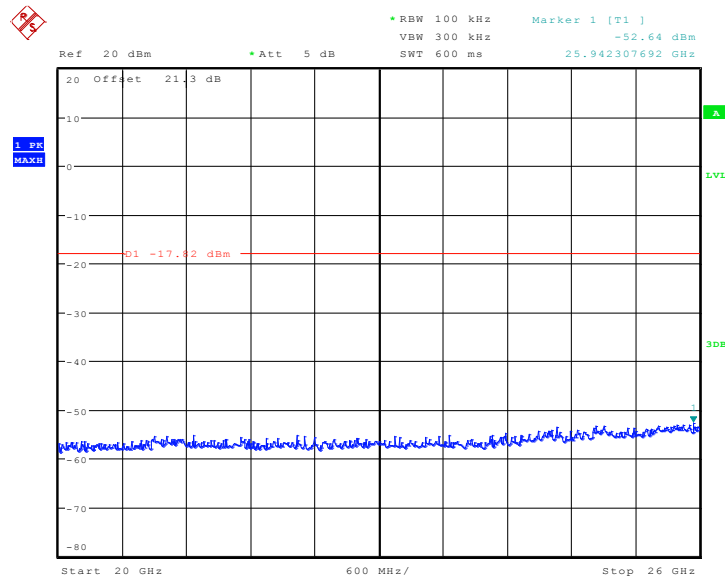
Date: 1.APR.2011 10:30:55

Fig. 54 Conducted Spurious Emission ((802.11g, Ch6, 10 GHz-15 GHz)



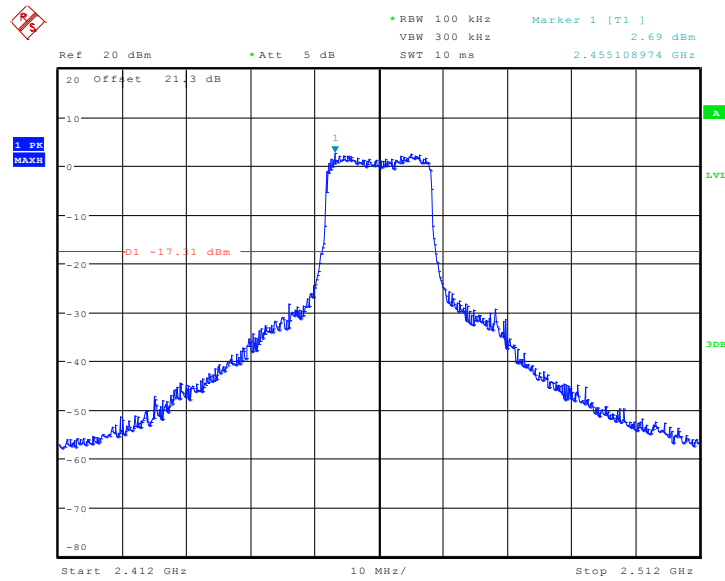
Date: 1.APR.2011 10:31:13

Fig. 55 Conducted Spurious Emission ((802.11g, Ch6, 15 GHz-20 GHz)



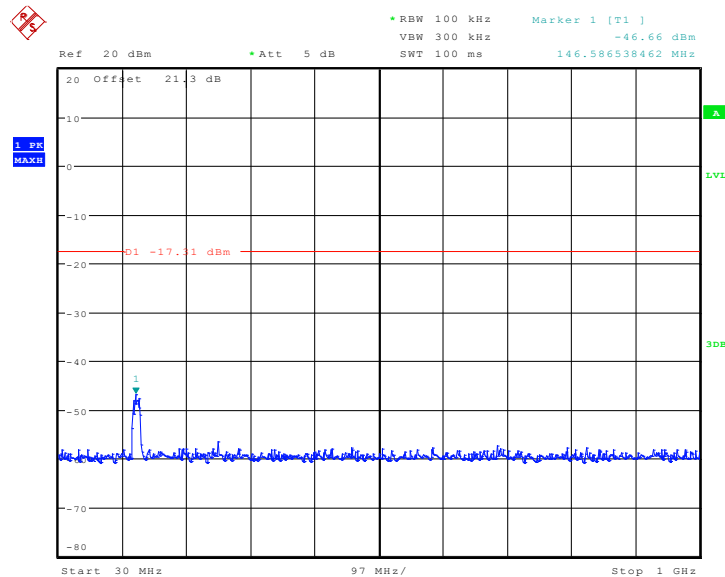
Date: 1.APR.2011 10:31:48

Fig. 56 Conducted Spurious Emission ((802.11g, Ch6, 20 GHz-26 GHz)



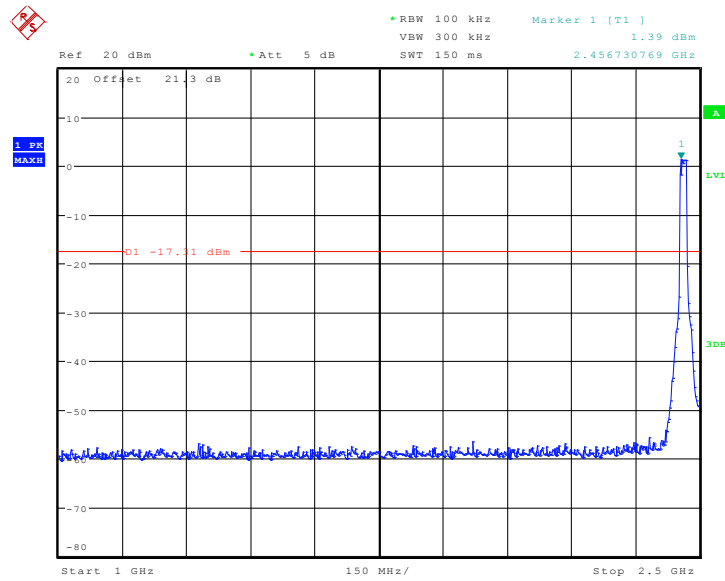
Date: 1.APR.2011 10:33:45

Fig. 57 Conducted Spurious Emission ((802.11g, Ch11, Center Frequency)



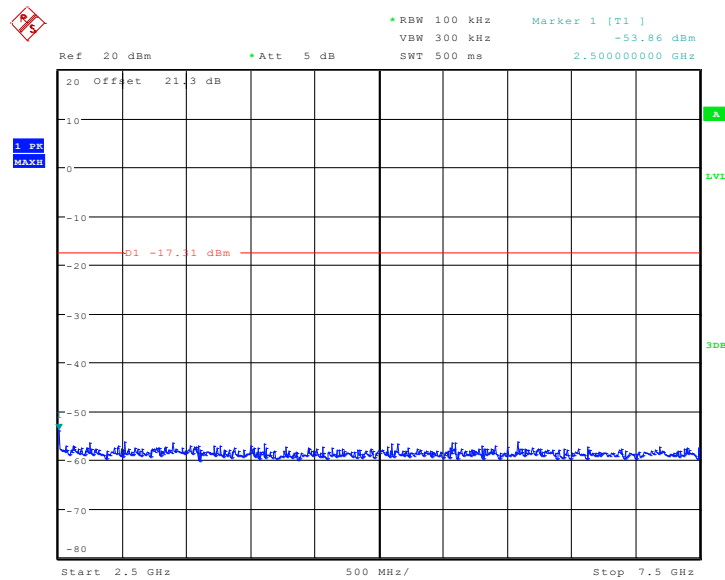
Date: 1.APR.2011 10:34:02

Fig. 58 Conducted Spurious Emission ((802.11g, Ch11, 30 MHz-1 GHz)



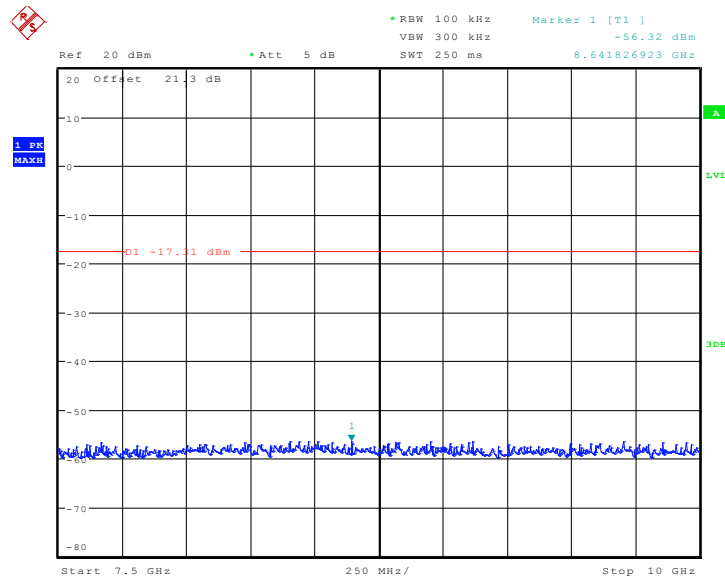
Date: 1.APR.2011 10:34:24

Fig. 59 Conducted Spurious Emission ((802.11g, Ch11, 1 GHz-2.5 GHz)



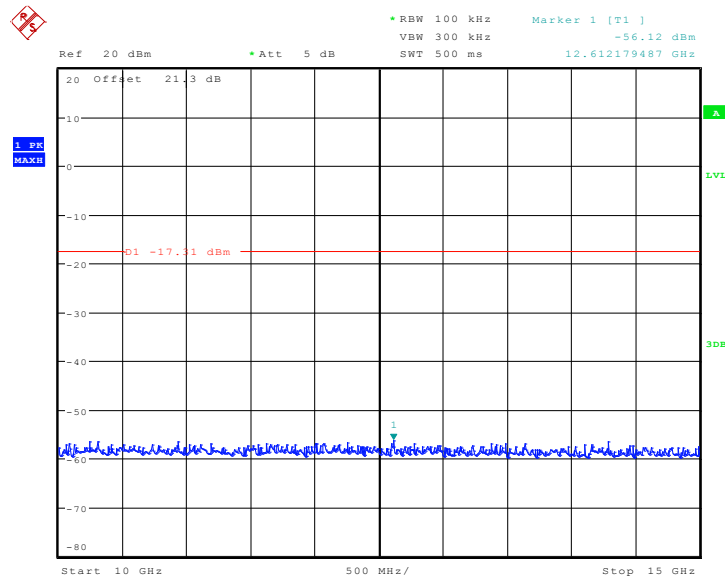
Date: 1.APR.2011 10:35:22

Fig. 60 Conducted Spurious Emission ((802.11g, Ch11, 2.5 GHz-7.5 GHz)



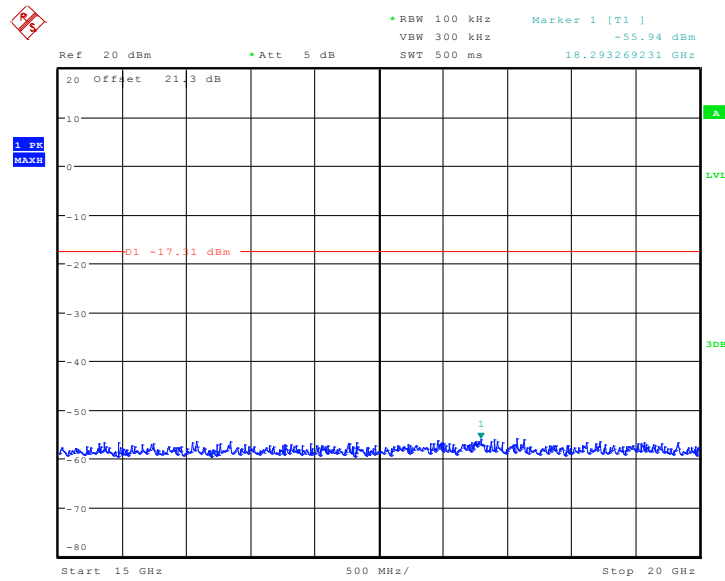
Date: 1.APR.2011 10:35:40

Fig. 61 Conducted Spurious Emission ((802.11g, Ch11, 7.5 GHz-10 GHz)



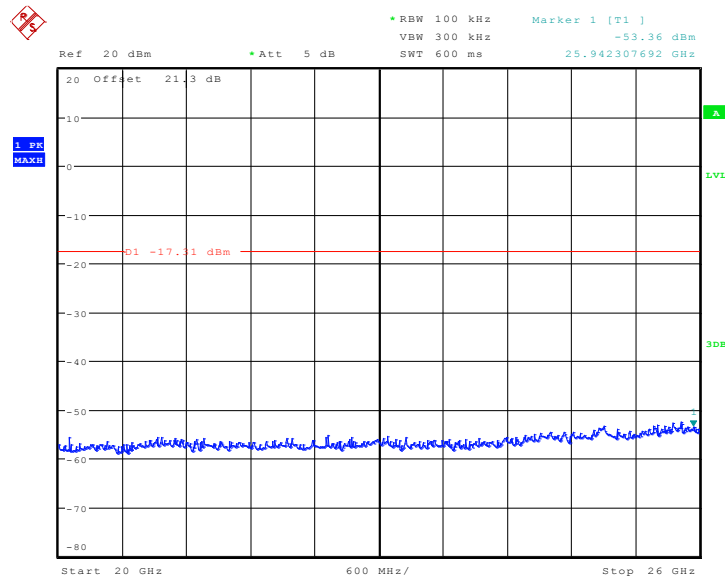
Date: 1.APR.2011 10:36:08

Fig. 62 Conducted Spurious Emission ((802.11g, Ch11, 10 GHz-15 GHz)



Date: 1.APR.2011 10:36:26

Fig. 63 Conducted Spurious Emission ((802.11g, Ch11, 15 GHz-20 GHz)



Date: 1.APR.2011 10:36:52

Fig. 64 Conducted Spurious Emission ((802.11g, 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 C63.4 and KDB558074.

Limit in restricted band:

| Frequency of emission (MHz) | Field strength(uV/m) | Field strength(dBuV/m) |
|-----------------------------|----------------------|------------------------|
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

Test Condition

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

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

Measurement Results:

802.11b/g mode

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|---------|----------------|------------------|------------------|------------|
| 802.11b | Power | 2.38GHz ~2.43GHz | Fig.65 | P |
| | 1 | 30 MHz ~1 GHz | Fig.66 | P |
| | | 1 GHz ~ 4 GHz | Fig.67 | P |
| | | 4 GHz ~ 18 GHz | Fig.68 | P |
| | 6 | 30 MHz ~1 GHz | Fig.69 | P |
| | | 1 GHz ~ 4 GHz | Fig.70 | P |
| | | 4 GHz ~ 18 GHz | Fig.71 | P |
| | Power | 2.45GHz ~2.5GHz | Fig.72 | P |
| | 11 | 30 MHz ~1 GHz | Fig.73 | P |
| | | 1 GHz ~ 4 GHz | Fig.74 | P |
| | | 4 GHz ~ 18 GHz | Fig.75 | P |
| | 802.11g | Power | 2.38GHz ~2.43GHz | Fig.76 |
| 1 | | 30 MHz ~1 GHz | Fig.77 | P |
| | | 1 GHz ~ 4 GHz | Fig.78 | P |
| | | 4 GHz ~ 18 GHz | Fig.79 | P |
| 6 | | 30 MHz ~1 GHz | Fig.80 | P |
| | | 1 GHz ~ 4 GHz | Fig.81 | P |
| | | 4 GHz ~ 18 GHz | Fig.82 | P |
| Power | | 2.45GHz ~2.5GHz | Fig.83 | P |
| 11 | | 30 MHz ~1 GHz | Fig.84 | P |
| | | 1 GHz ~ 4 GHz | Fig.85 | P |
| | 4 GHz ~ 18 GHz | Fig.86 | P | |
| / | All channels | 18 GHz~ 26.5 GHz | Fig.87 | 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 |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3713.427 | 48.88 | -18.9 | 33.4 | 34.38 | HORIZONTAL |
| 3707.415 | 48.85 | -19.1 | 33.4 | 34.55 | VERTICAL |
| 3709.419 | 48.83 | -19.1 | 33.4 | 34.53 | HORIZONTAL |
| 3701.403 | 48.82 | -19.1 | 33.4 | 34.52 | VERTICAL |
| 3711.423 | 48.8 | -18.9 | 33.4 | 34.3 | VERTICAL |
| 3703.407 | 48.79 | -19.1 | 33.4 | 34.49 | VERTICAL |

Ch6

| Frequency(MHz) | Result (dBuV/m) | Cable Loss | Antenna Factor | P _{Mea} (dBuV/m) | Polarization |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3699.399 | 41.35 | -19.2 | 33.4 | 27.15 | HORIZONTAL |
| 3713.427 | 41.35 | -18.9 | 33.4 | 26.85 | HORIZONTAL |
| 3701.403 | 41.34 | -19.1 | 33.4 | 27.04 | HORIZONTAL |
| 3703.407 | 41.32 | -19.1 | 33.4 | 27.02 | HORIZONTAL |
| 3705.411 | 41.3 | -19.1 | 33.4 | 27 | HORIZONTAL |
| 3711.423 | 41.3 | -18.9 | 33.4 | 26.8 | VERTICAL |

Ch11

| Frequency(MHz) | Result (dBuV/m) | Cable Loss | Antenna Factor | P _{Mea} (dBuV/m) | Polarization |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3699.399 | 41.35 | -19.2 | 33.4 | 27.15 | VERTICAL |
| 3701.403 | 41.34 | -19.1 | 33.4 | 27.04 | VERTICAL |
| 3703.407 | 41.32 | -19.1 | 33.4 | 27.02 | HORIZONTAL |
| 3705.411 | 41.3 | -19.1 | 33.4 | 27 | VERTICAL |
| 3711.423 | 41.3 | -18.9 | 33.4 | 26.8 | VERTICAL |
| 3713.427 | 41.28 | -18.9 | 33.4 | 26.78 | VERTICAL |

802.11g

Ch1

| Frequency(MHz) | Result (dBuV/m) | Cable Loss | Antenna Factor | P _{Mea} (dBuV/m) | Polarization |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3713.427 | 48.88 | -18.9 | 33.4 | 34.38 | VERTICAL |
| 3705.411 | 48.87 | -19.1 | 33.4 | 34.57 | VERTICAL |
| 3715.431 | 48.86 | -18.9 | 33.4 | 34.36 | VERTICAL |
| 3707.415 | 48.85 | -19.1 | 33.4 | 34.55 | VERTICAL |
| 3699.399 | 48.83 | -19.2 | 33.4 | 34.63 | HORIZONTAL |
| 3709.419 | 48.83 | -19.1 | 33.4 | 34.53 | HORIZONTAL |

Ch6

| Frequency(MHz) | Result (dBuV/m) | Cable Loss | Antenna Factor | P _{Mea} (dBuV/m) | Polarization |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3713.427 | 41.35 | -18.9 | 33.4 | 26.85 | HORIZONTAL |
| 3701.403 | 41.34 | -19.1 | 33.4 | 27.04 | HORIZONTAL |
| 3697.395 | 41.33 | -19.2 | 33.4 | 27.13 | HORIZONTAL |
| 3695.391 | 41.32 | -19.2 | 33.4 | 27.12 | VERTICAL |
| 3703.407 | 41.32 | -19.1 | 33.4 | 27.02 | VERTICAL |
| 3705.411 | 41.3 | -19.1 | 33.4 | 27 | HORIZONTAL |

Ch11

| Frequency(MHz) | Result (dBuV/m) | Cable Loss | Antenna Factor | P _{Mea} (dBuV/m) | Polarization |
|----------------|-----------------|------------|----------------|---------------------------|--------------|
| 3701.403 | 41.34 | -19.1 | 33.4 | 27.04 | VERTICAL |
| 3703.407 | 41.32 | -19.1 | 33.4 | 27.02 | VERTICAL |
| 3705.411 | 41.3 | -19.1 | 33.4 | 27 | VERTICAL |
| 3711.423 | 41.3 | -18.9 | 33.4 | 26.8 | VERTICAL |
| 3713.427 | 41.28 | -18.9 | 33.4 | 26.78 | HORIZONTAL |
| 3707.415 | 41.27 | -19.1 | 33.4 | 26.97 | HORIZONTAL |

Test graphs as below:

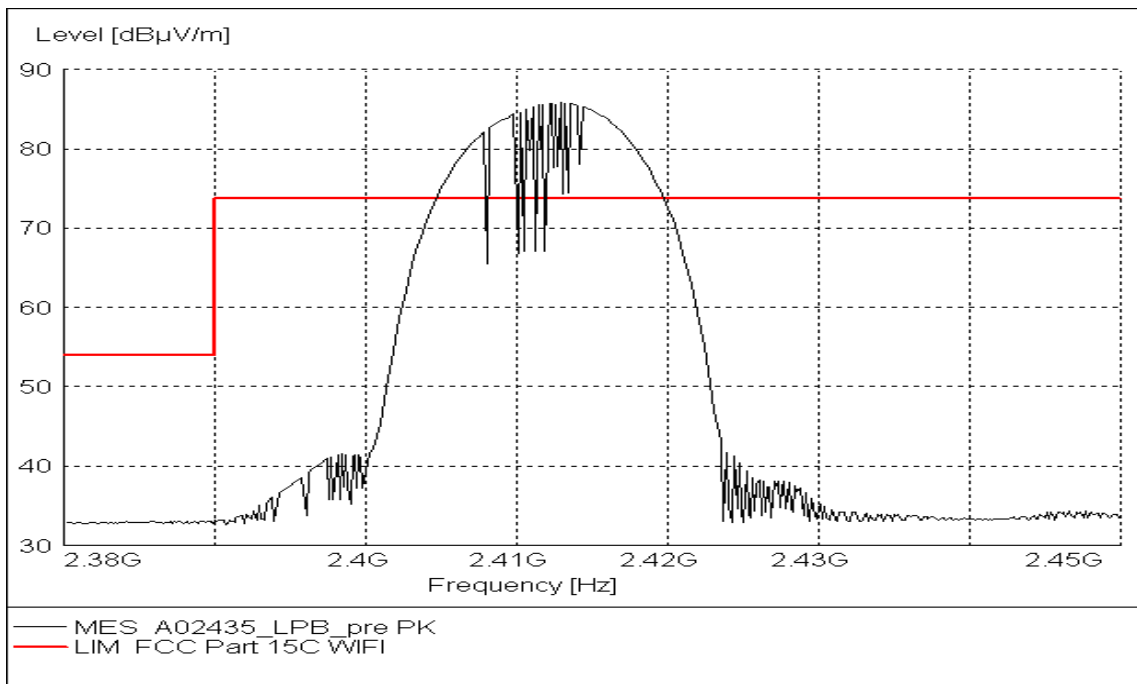


Fig. 65 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz - 243GHz

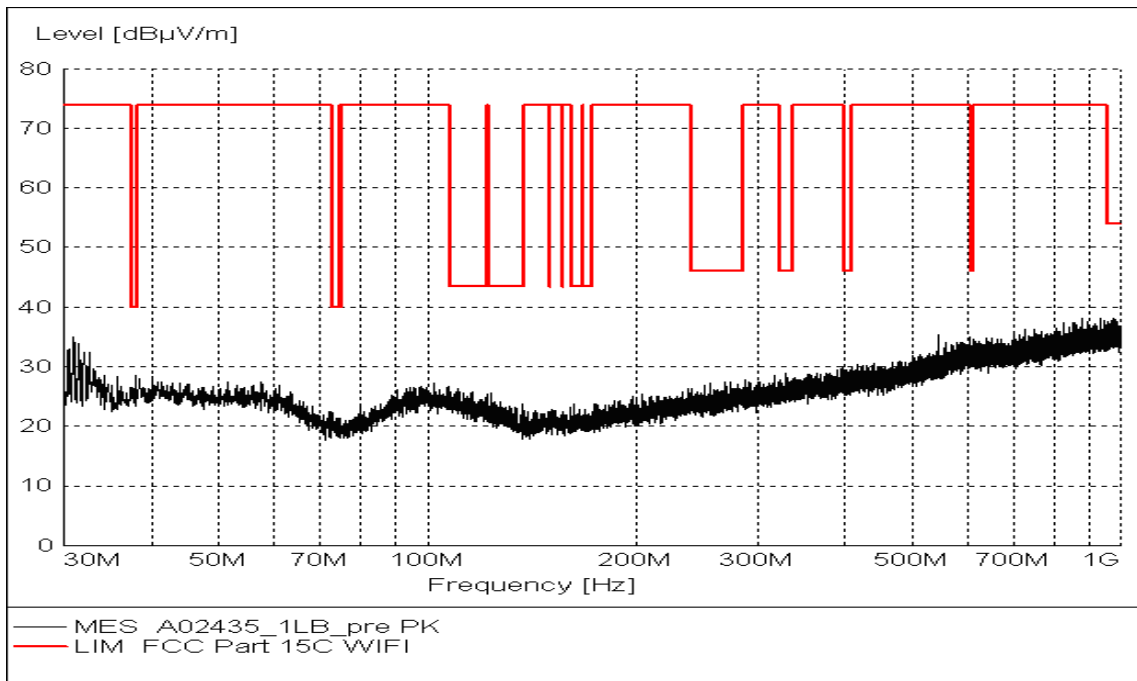


Fig. 66 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)

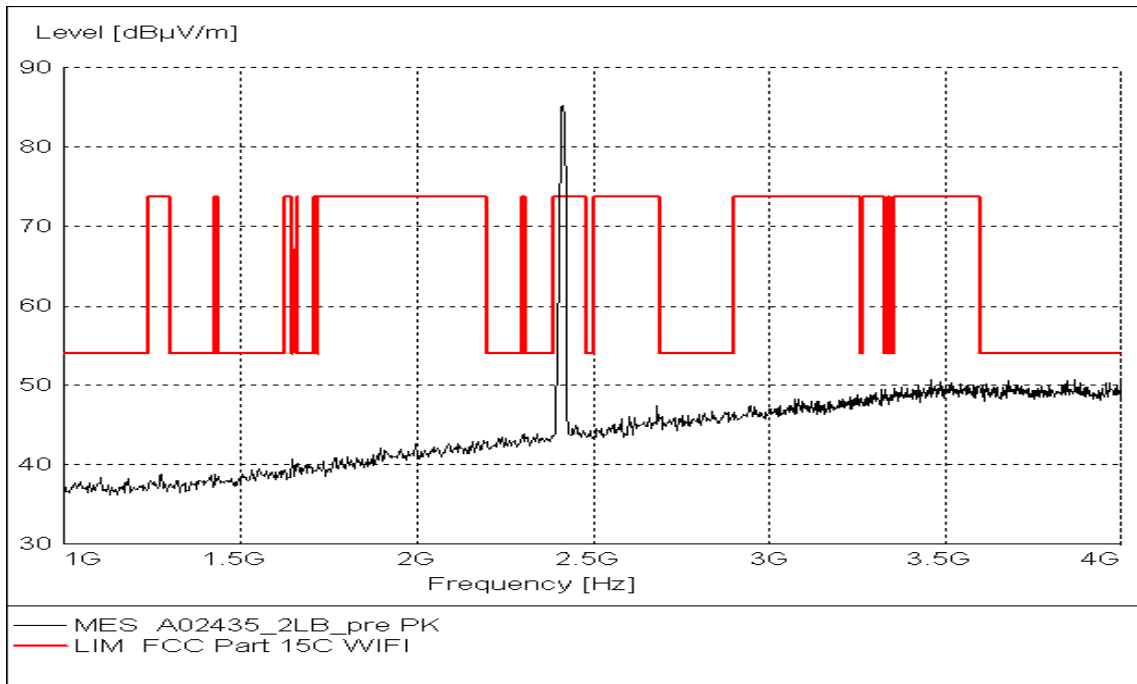


Fig. 67 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-4 GHz)

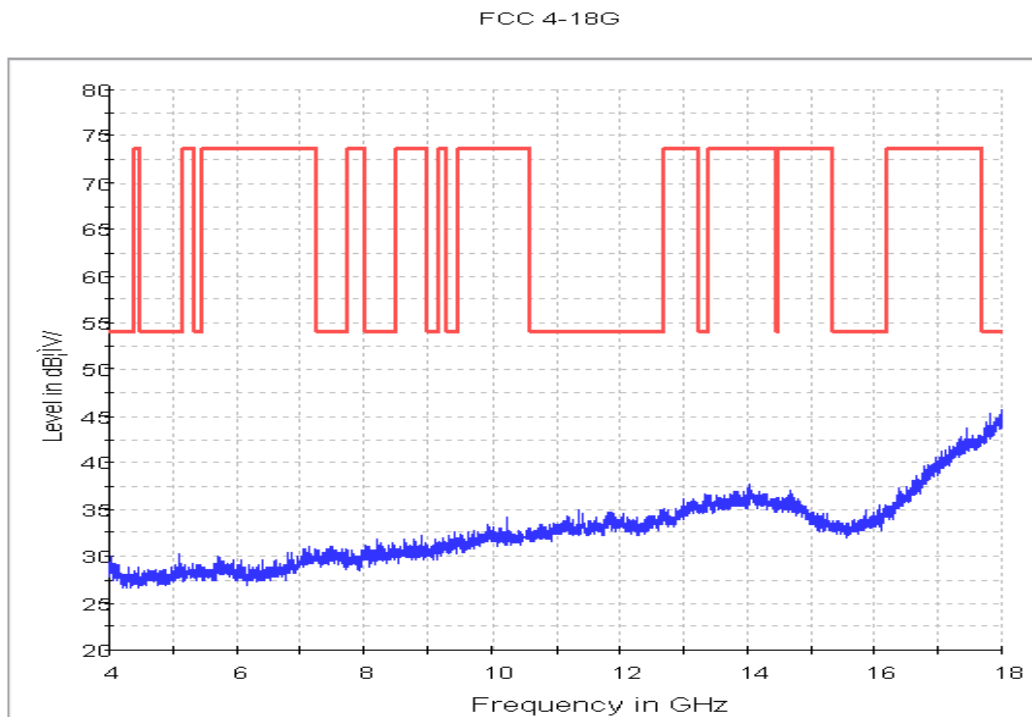


Fig. 68 Radiated Spurious Emission (802.11b, Ch1, 4 GHz-18 GHz)

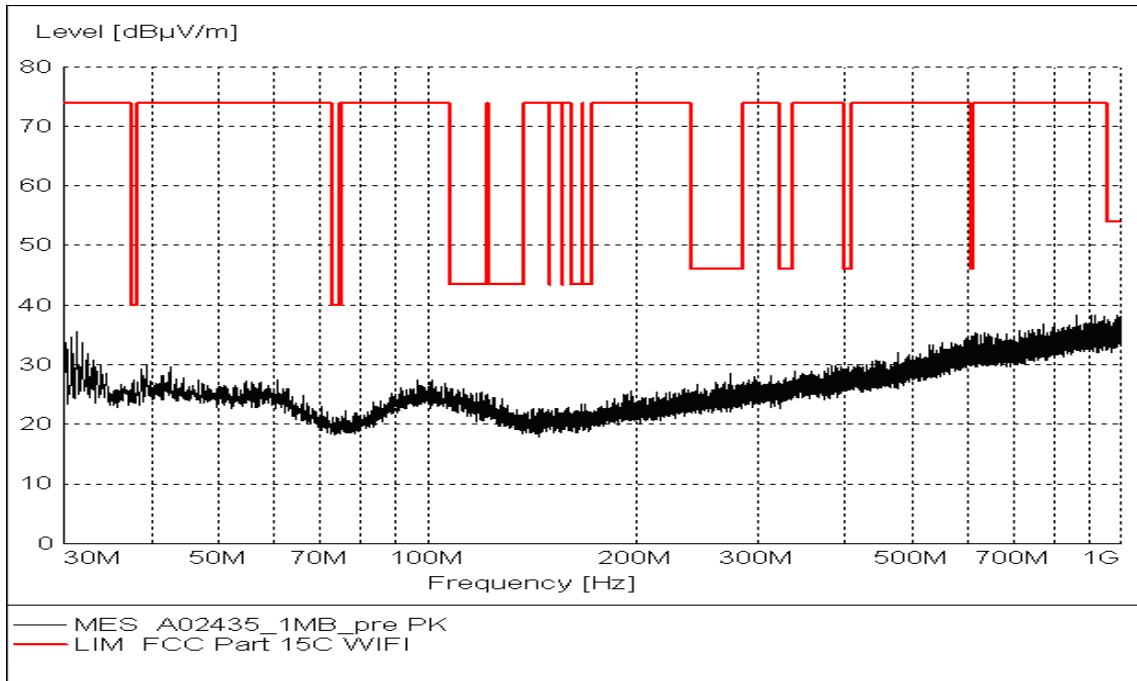


Fig. 69 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)

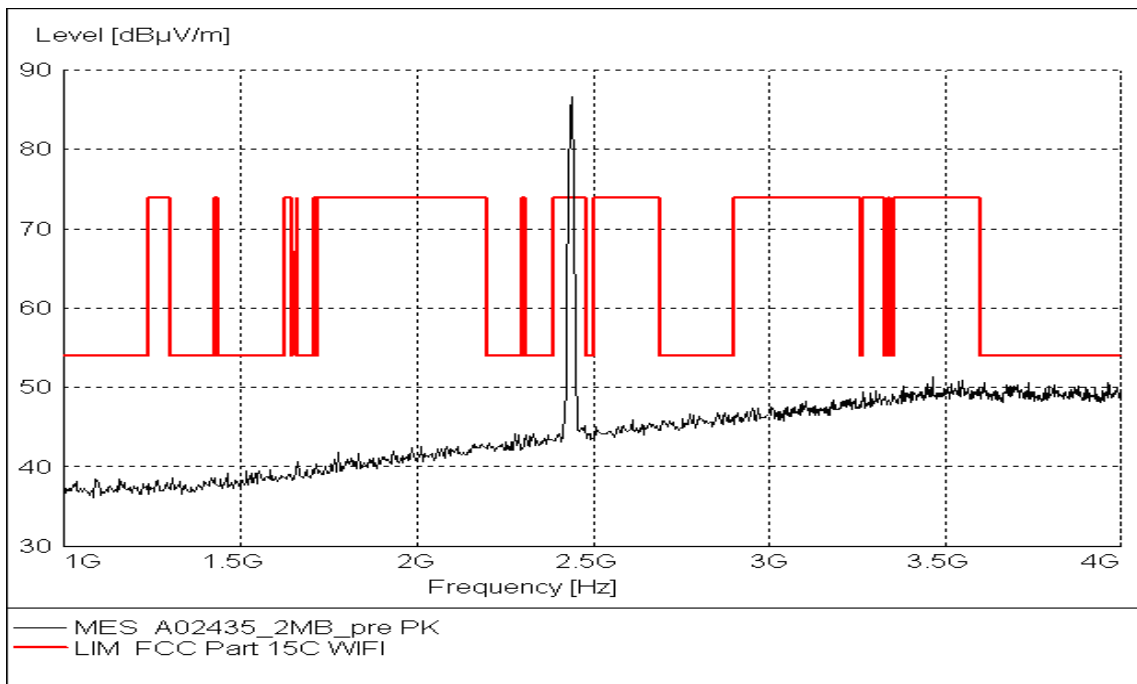


Fig. 70 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-4 GHz)

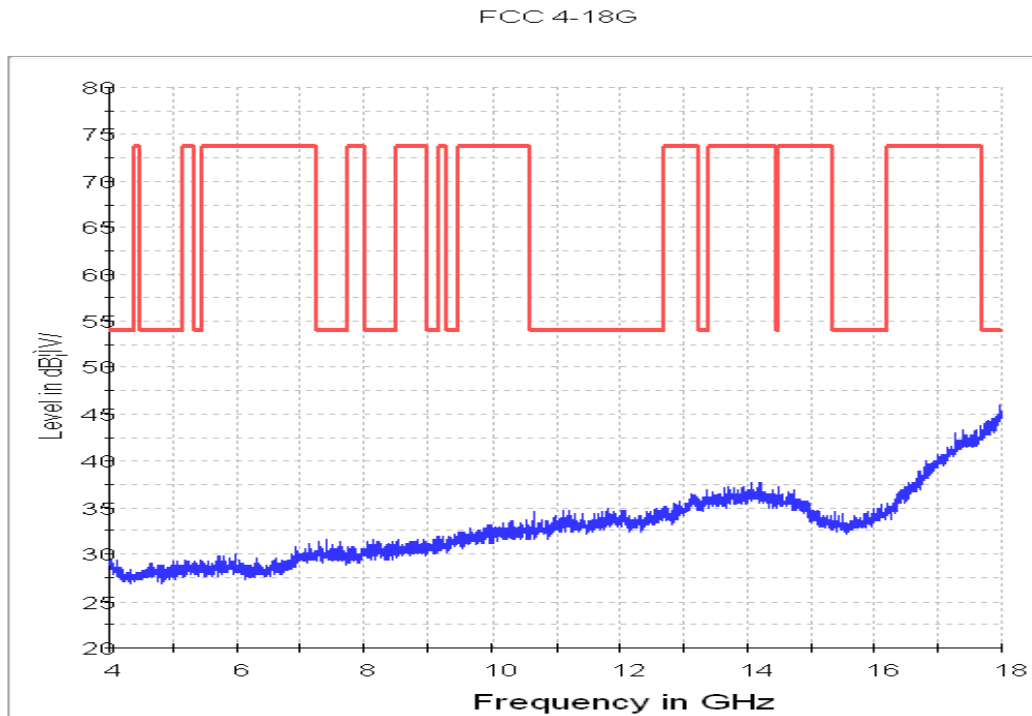


Fig. 71 Radiated Spurious Emission (802.11b, Ch6, 4 GHz-18 GHz)

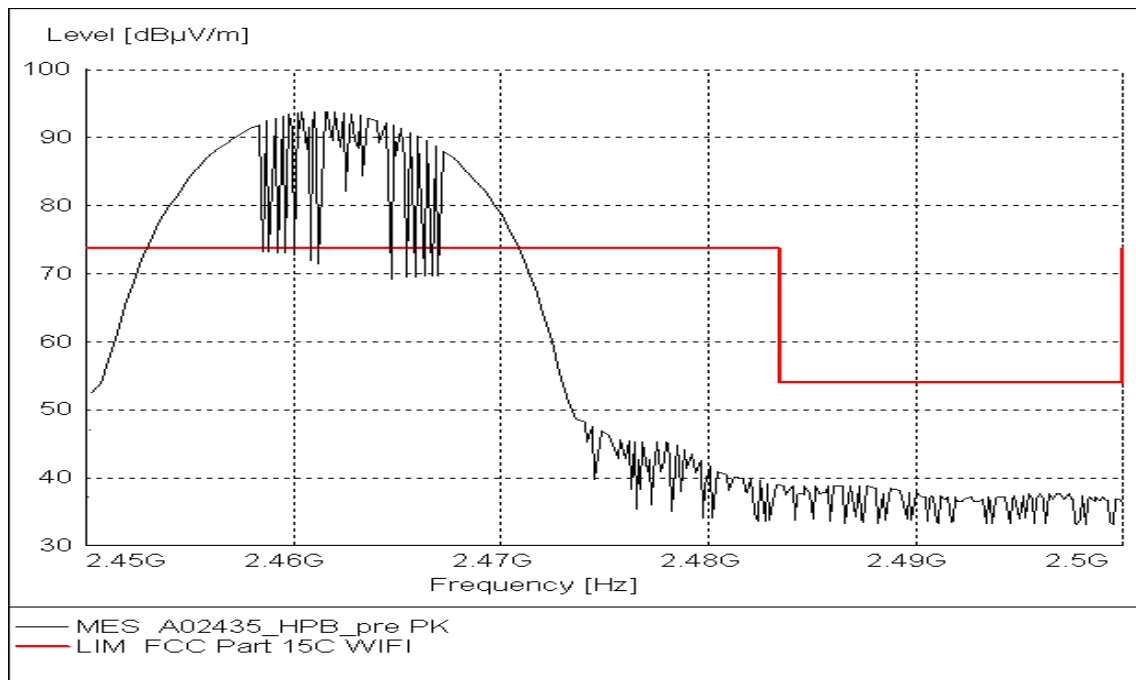


Fig. 72 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

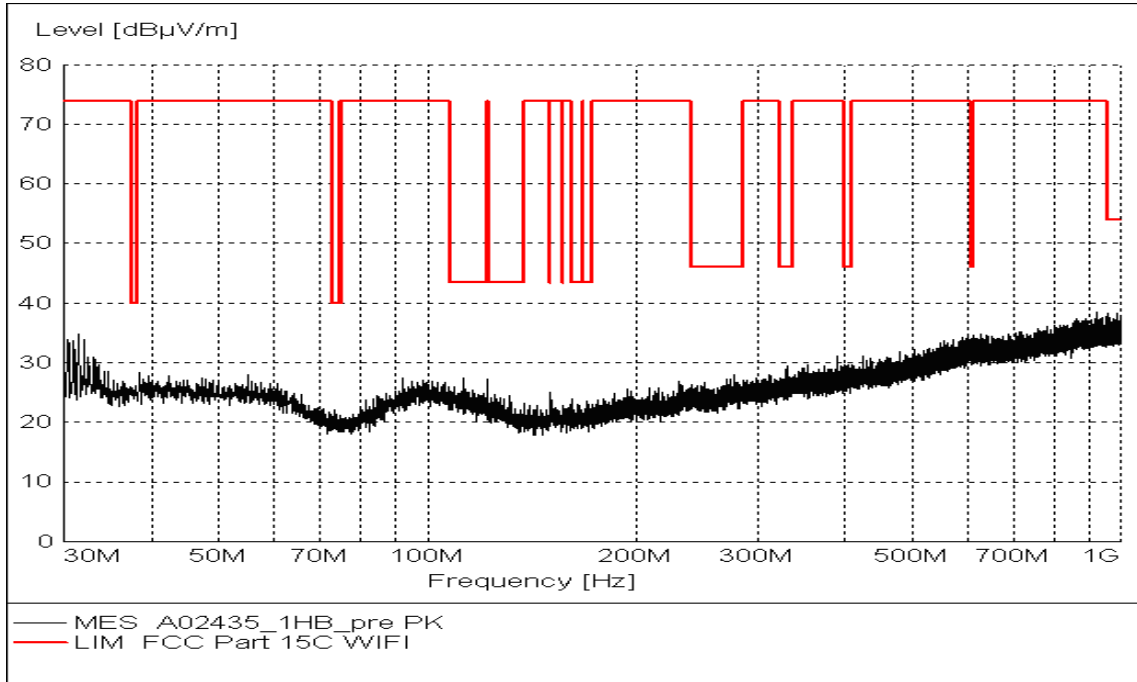


Fig. 73 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)

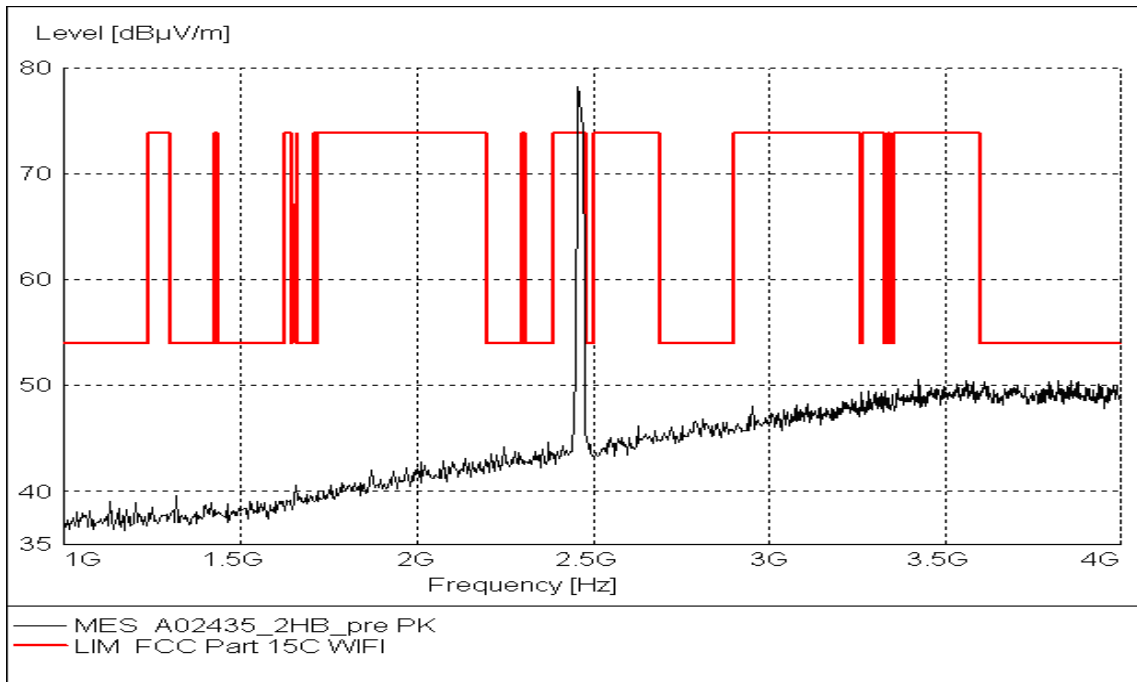


Fig. 74 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-4 GHz)

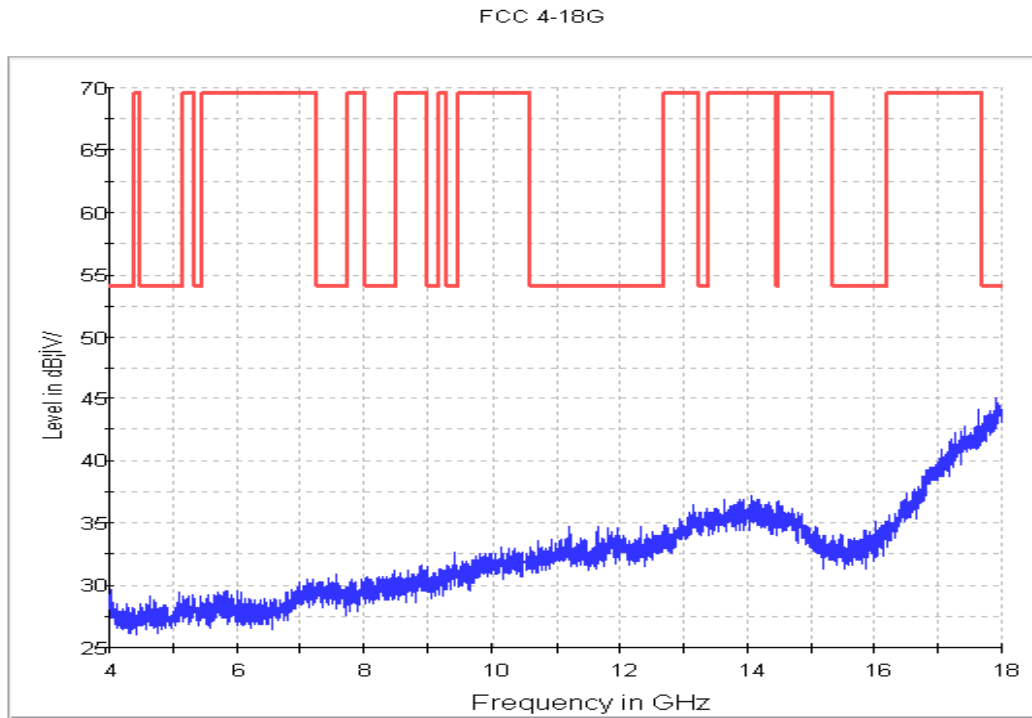


Fig. 75 Radiated Spurious Emission (802.11b, Ch11, 4 GHz-18 GHz)

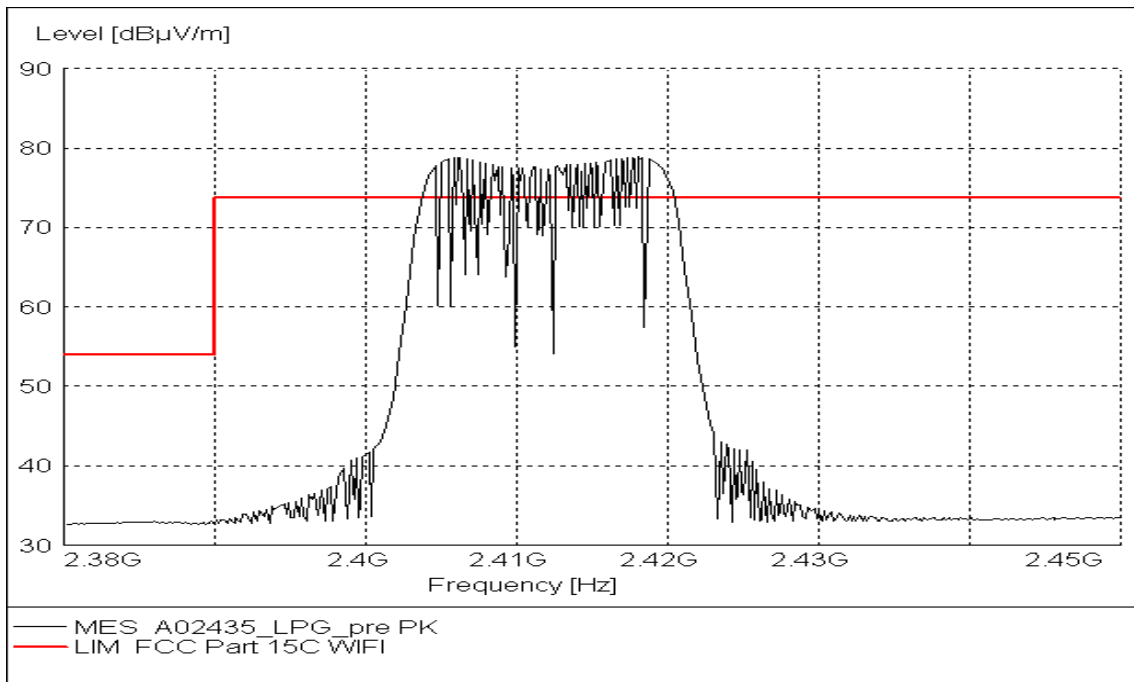


Fig. 76 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.43GHz

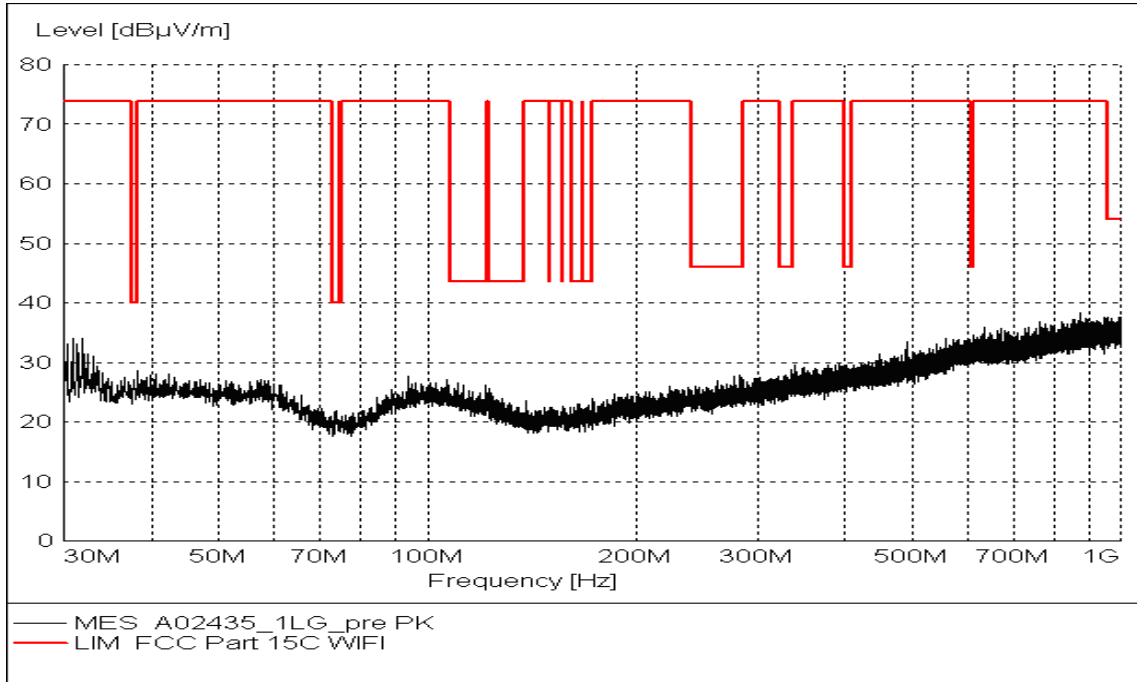


Fig. 77 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)

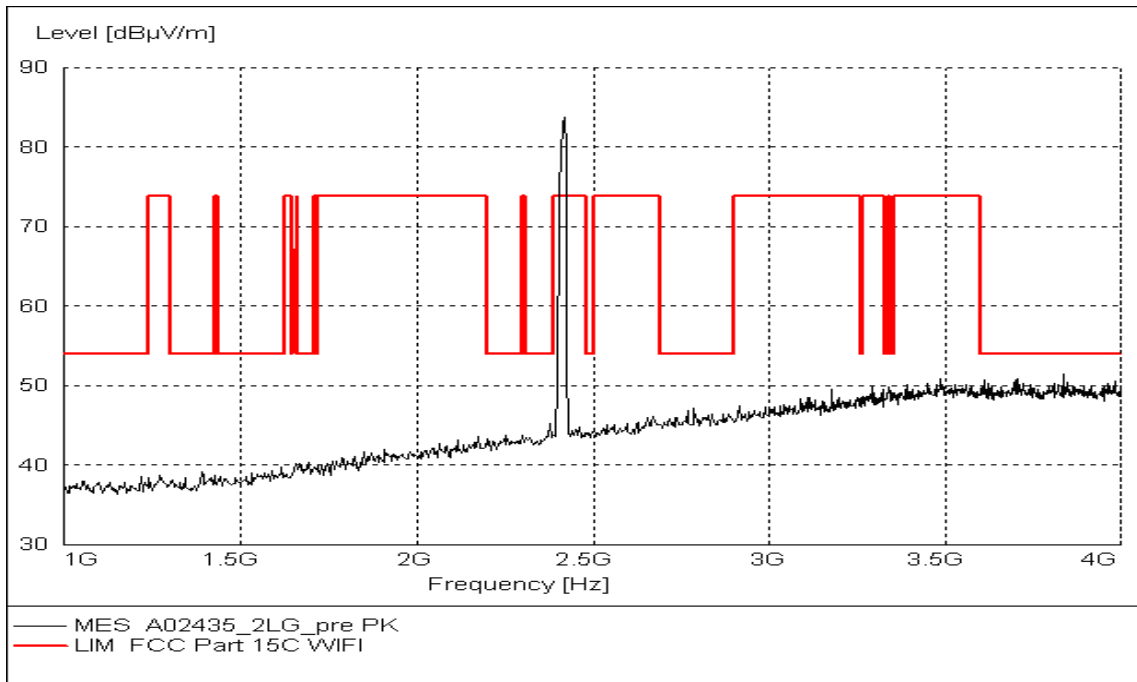


Fig. 78 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-4 GHz)

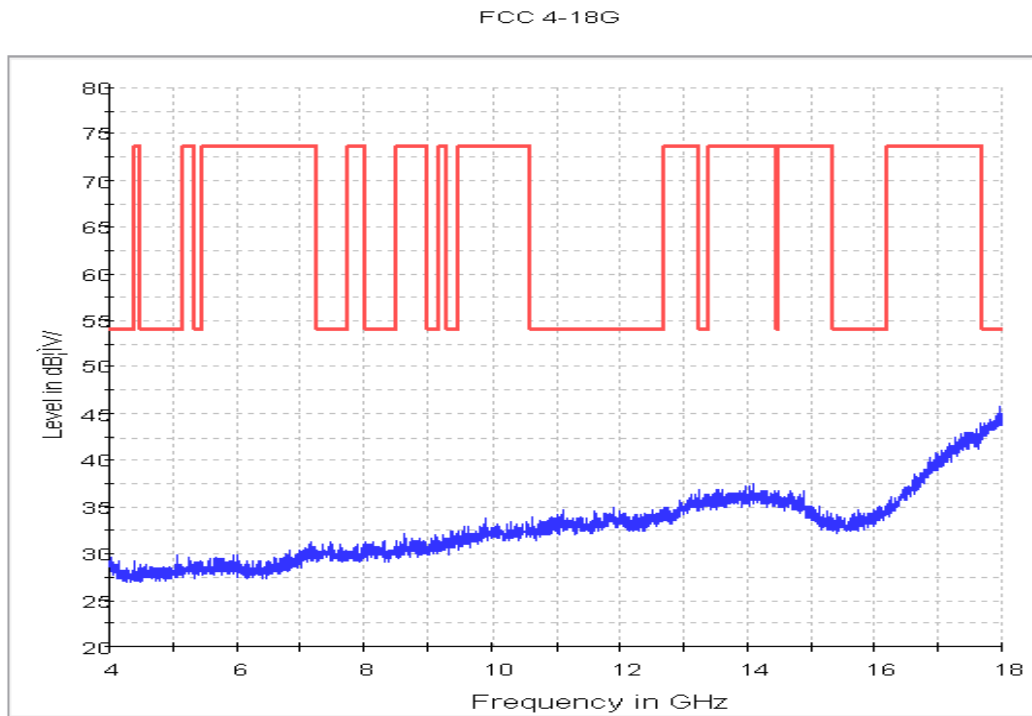


Fig. 79 Radiated Spurious Emission (802.11g, Ch1, 4 GHz-18 GHz)

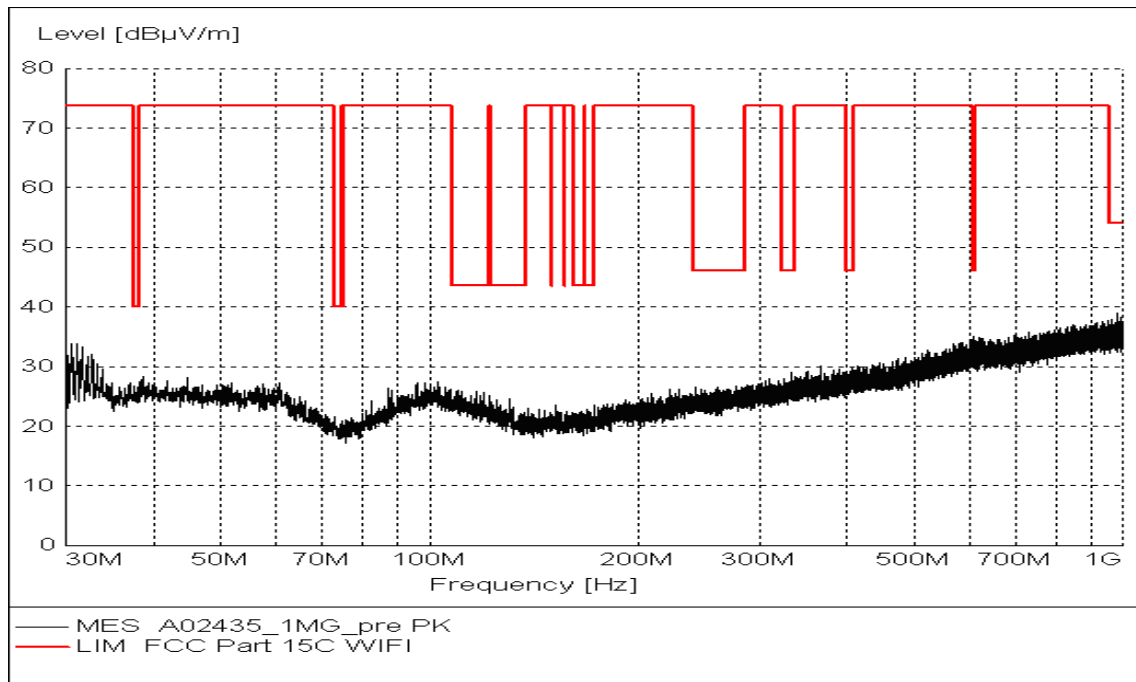


Fig. 80 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)

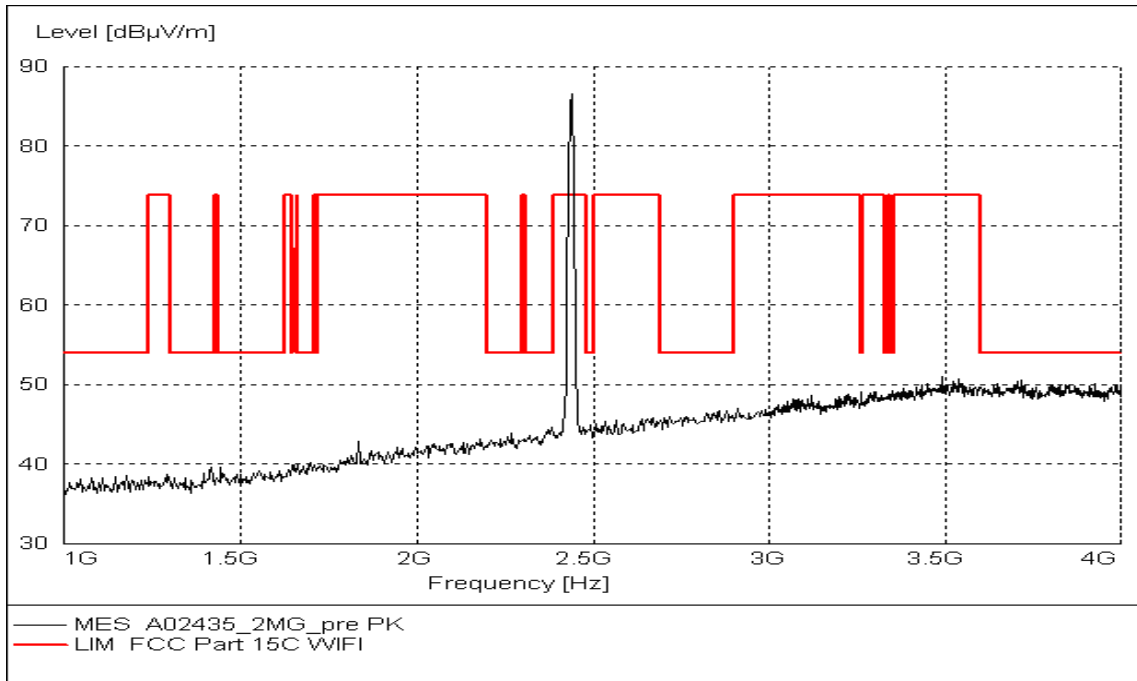


Fig. 81 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-4 GHz)

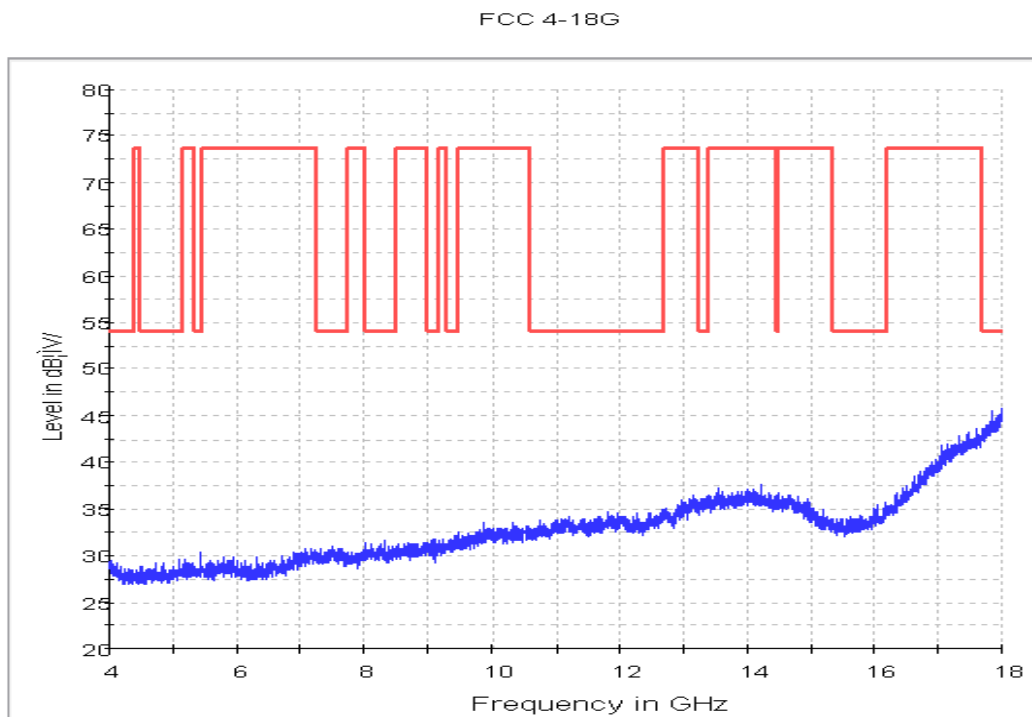


Fig. 82 Radiated Spurious Emission (802.11g, Ch6, 4 GHz-18 GHz)

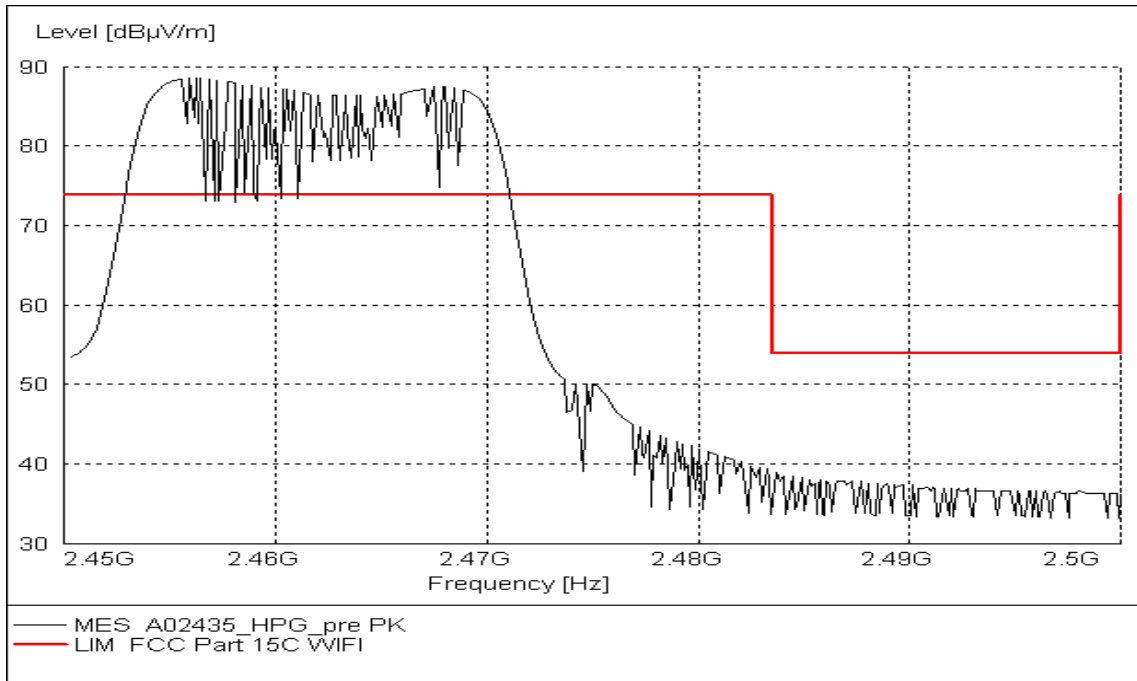


Fig. 83 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

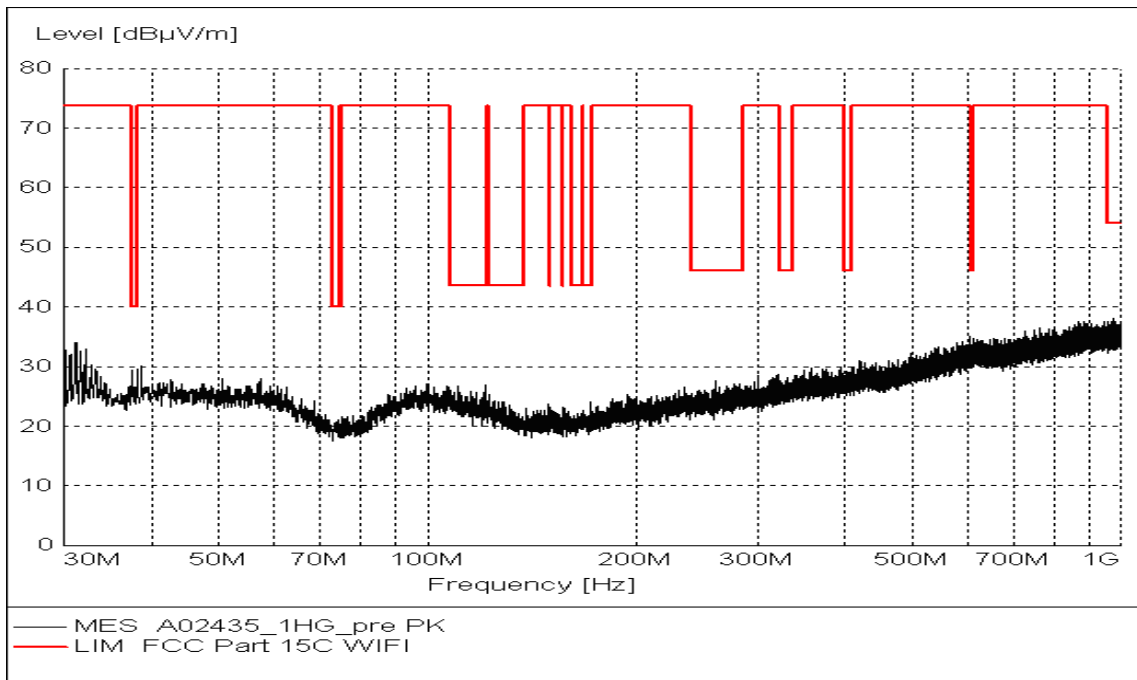


Fig. 84 Radiated Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)

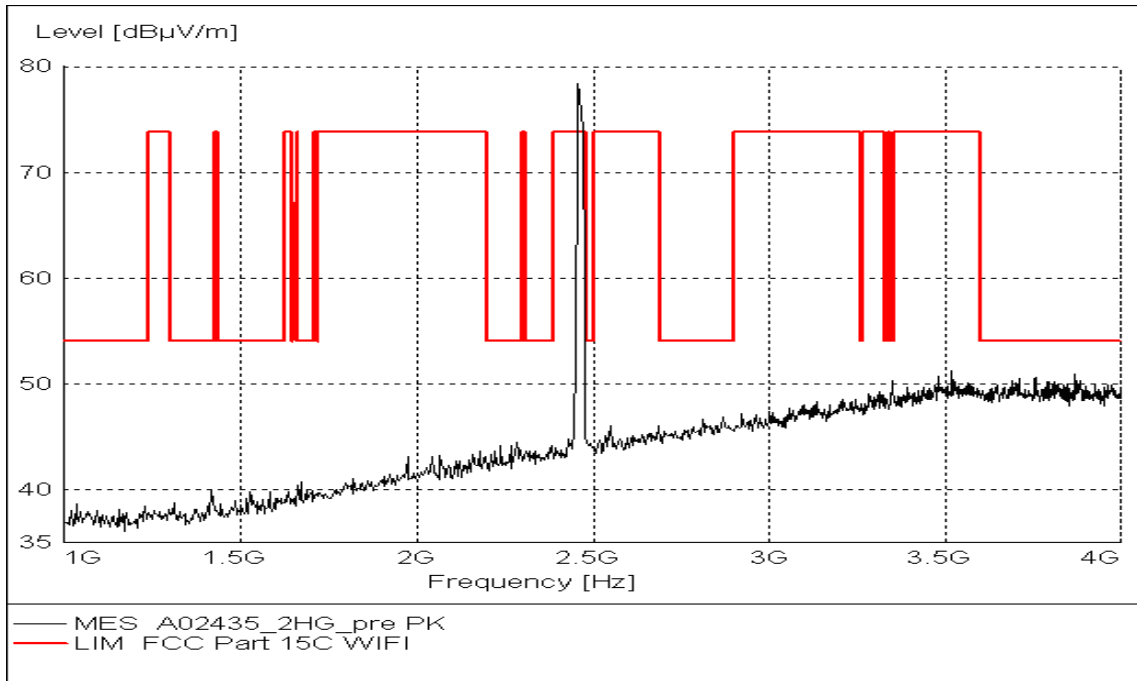


Fig. 85 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-4 GHz)

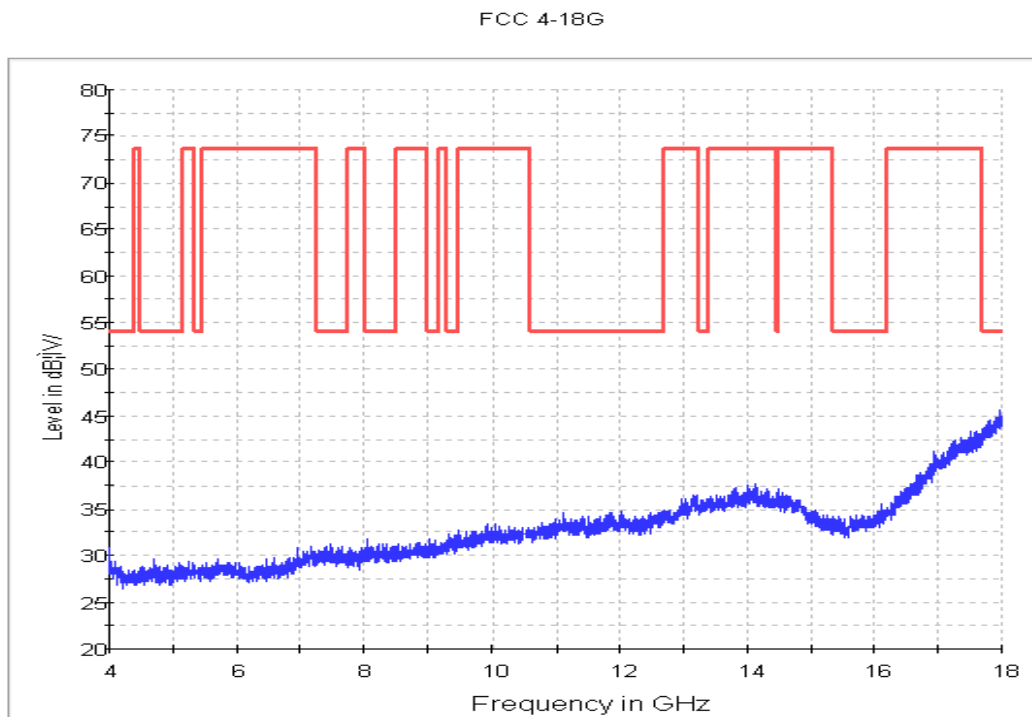


Fig. 86 Radiated Spurious Emission (802.11g, Ch11, 4 GHz-18 GHz)

Copy (3) of Copy of FCC 18-26.5G

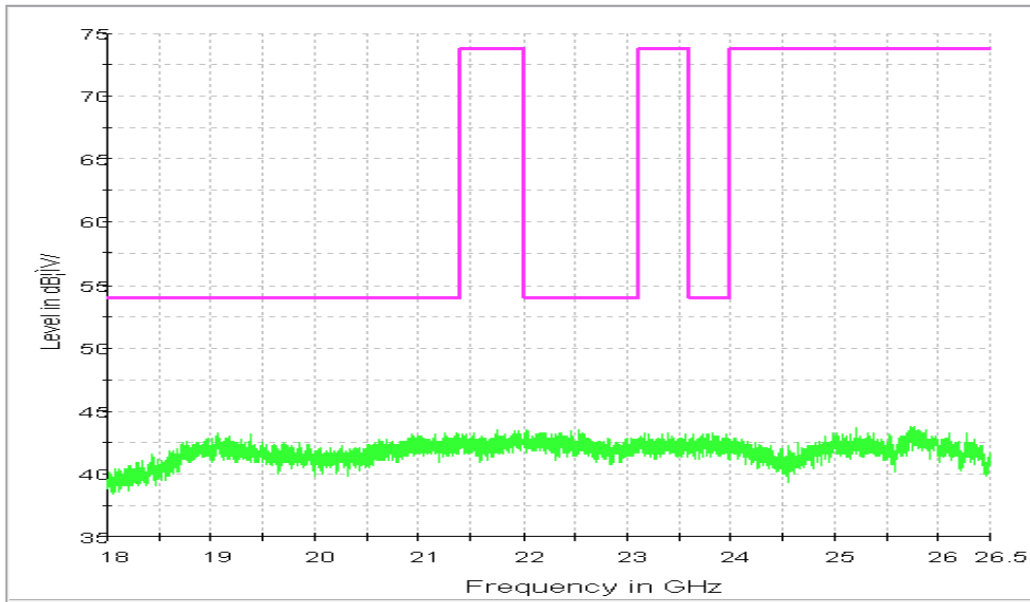


Fig. 87 Radiated emission: 18 GHz - 26.5 GHz

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 | |
| 0.15 to 0.5 | 66 to 56 | Fig. 88 | Fig.89 | 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 | |
| 0.15 to 0.5 | 56 to 46 | Fig.88 | Fig.89 | P |
| 0.5 to 5 | 46 | | | |
| 5 to 30 | 50 | | | |

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

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

Conclusion: PASS

Test graphs as below:

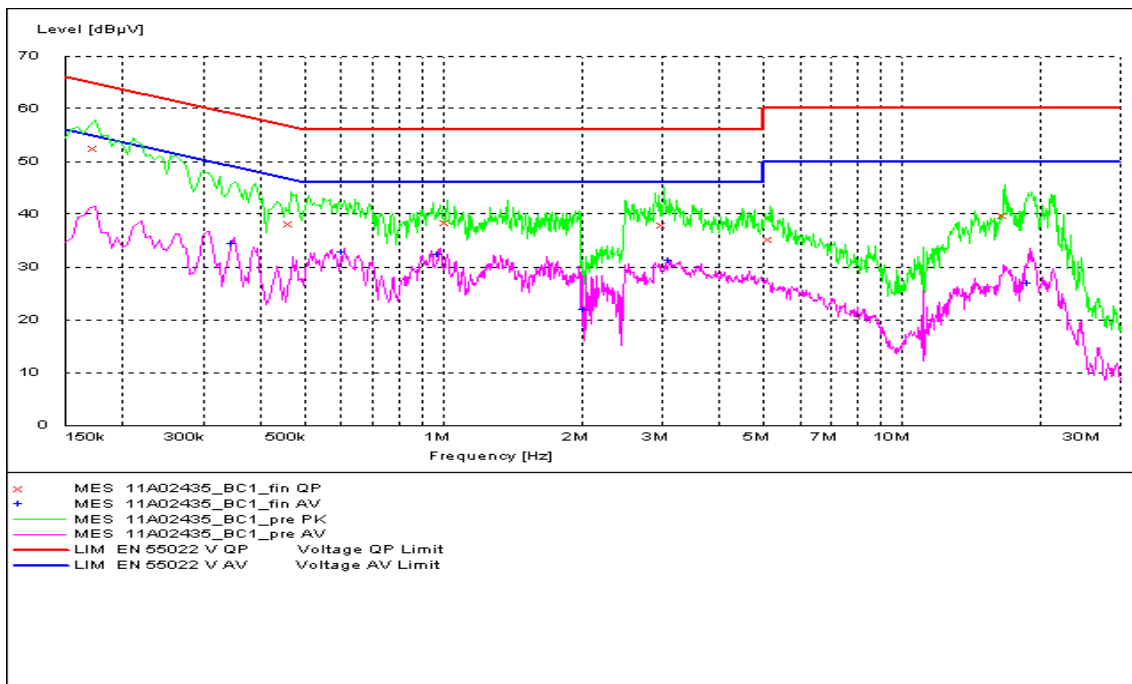


Fig. 88 AC Powerline Conducted Emission-802.11b

MEASUREMENT RESULT: "11A02435_BC1_fin QP"

| Frequency (MHz) | Level (dBµV) | Transd (dB) | Limit (dBµV) | Margin (dB) | Line | PE |
|-----------------|--------------|-------------|--------------|-------------|------|-----|
| 0.175000 | 52.50 | 10.1 | 65 | 12.2 | L1 | GND |
| 0.465000 | 38.20 | 10.1 | 57 | 18.4 | L1 | GND |
| 1.020000 | 38.40 | 10.1 | 56 | 17.6 | N | GND |
| 3.040739 | 38.00 | 10.1 | 56 | 18 | N | GND |
| 5.184988 | 35.30 | 10.2 | 60 | 24.7 | L1 | GND |
| 16.740650 | 39.70 | 10.3 | 60 | 20.3 | L1 | GND |

MEASUREMENT RESULT: "11A02435_BC1_fin AV"

| Frequency (MHz) | Level (dBµV) | Transd (dB) | Limit (dBµV) | Margin (dB) | Line | PE |
|-----------------|--------------|-------------|--------------|-------------|------|-----|
| 0.350000 | 34.40 | 10.1 | 49 | 14.6 | N | GND |
| 0.610000 | 32.70 | 10.1 | 46 | 13.3 | N | GND |
| 0.985000 | 32.20 | 10.1 | 46 | 13.8 | N | GND |
| 2.040301 | 21.90 | 10.1 | 46 | 24.1 | N | GND |
| 3.148775 | 31.10 | 10.1 | 46 | 14.9 | N | GND |
| 18.963734 | 26.90 | 10.3 | 50 | 23.1 | N | GND |

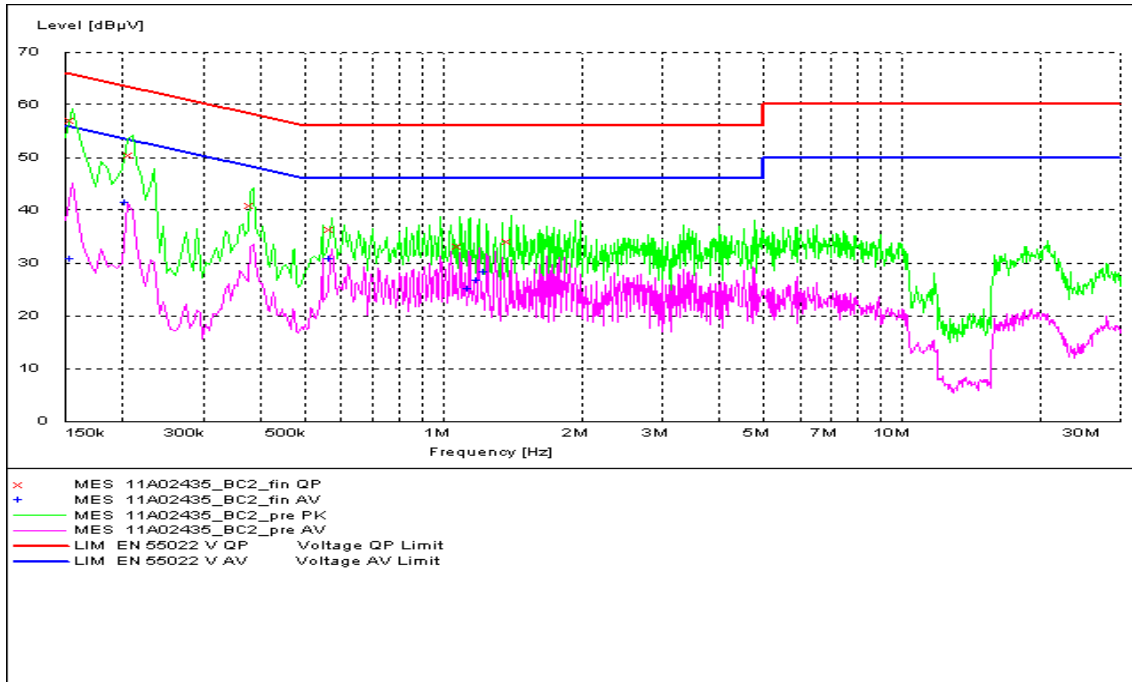


Fig. 89 AC Powerline Conducted Emission-802.11g

MEASUREMENT RESULT: "11A02435_BC2_fin QP"

| Frequency (MHz) | Level (dBµV) | Transd (dB) | Limit (dBµV) | Margin (dB) | Line | PE |
|-----------------|--------------|-------------|--------------|-------------|------|-----|
| 0.155000 | 57.10 | 10.1 | 66 | 8.6 | L1 | GND |
| 0.210000 | 50.40 | 10.1 | 63 | 12.8 | L1 | GND |
| 0.385000 | 41.00 | 10.1 | 58 | 17.2 | N | GND |
| 0.570000 | 36.30 | 10.1 | 56 | 19.7 | L1 | GND |
| 1.090000 | 33.10 | 10.1 | 56 | 22.9 | N | GND |
| 1.400000 | 34.20 | 10.1 | 56 | 21.8 | L1 | GND |

MEASUREMENT RESULT: "11A02435_BC2_fin AV"

| Frequency (MHz) | Level (dBµV) | Transd (dB) | Limit (dBµV) | Margin (dB) | Line | PE |
|-----------------|--------------|-------------|--------------|-------------|------|-----|
| 0.155000 | 30.60 | 10.1 | 56 | 25.1 | L1 | GND |
| 0.205000 | 41.50 | 10.1 | 53 | 11.9 | N | GND |
| 0.570000 | 30.80 | 10.1 | 46 | 15.2 | L1 | GND |
| 1.145000 | 25.00 | 10.1 | 46 | 21 | N | GND |
| 1.195000 | 26.60 | 10.1 | 46 | 19.4 | N | GND |
| 1.245000 | 28.30 | 10.1 | 46 | 17.7 | N | GND |

*** END OF REPORT BODY ***