

# FCC WIFI TEST REPORT

No. 150701-WIFI

For

Bullitt Group

Product Name: Smartphone

Model Name: SP4

Trade Name: Kodak

Issued Date: 2015-08-04

**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 GCCT.

To verify test report authenticity, send full test report to Email: dr\_xywen@126.com

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## CONTENTS

<b>1. Test Laboratory.....</b>	<b>4</b>
1.1 Testing Location.....	4
1.2 Testing Environment.....	4
1.3 Project Data.....	4
<b>2. Client Information.....</b>	<b>5</b>
2.1 Applicant Information.....	5
2.2 Manufacturer Information.....	5
<b>3. Equipment Under Test (EUT) and Ancillary Equipment (AE).....</b>	<b>6</b>
3.1 About EUT.....	6
3.2 Internal Identification of EUT.....	7
3.3 Internal Identification of AE .....	7
4. Test Results .....	8
4.1 Summary of Test Results .....	8
4.2 Statements .....	8
<b>5. Test Equipment Utilized .....</b>	<b>9</b>
<b>ANNEX A: EUT Photograph.....</b>	<b>10</b>
<b>ANNEX B: Detailed Test Results.....</b>	<b>20</b>
B.1 Maximum Transmit Power.....	20
B.2 Maximum Power Spectral Density.....	21
B.3 6dB Occupied Bandwidth .....	29
B.4 Band Edge Compliance .....	38
B.5 Conducted Transmission Spurious Emission .....	45
B.6 AC Conducted Emission .....	90
B.7 Radiated Emission.....	96
B.8 Antenna Requirements .....	101
<b>ANNEX C: Report Revision History.....</b>	<b>103</b>

**GENERAL SUMMARY**

<b>Product Name</b>	Smartphone
<b>Model Name</b>	SP4
<b>Trade Name</b>	Kodak
<b>Applicant</b>	Bullitt Group
<b>Manufacturer</b>	CK Telecom Limited
<b>Test Laboratory</b>	GCCT, Guangdong Telecommunications Terminal Products Quality Supervision and Testing Center
<b>Reference Standards</b>	FCC CFR 47 Part 15C:“Radio Frequency Devices Sub-Part C: intentional Radiators” ANSI C63.10-2013, “American National Standard for Testing Unlicensed Wireless Devices”
<b>Test Conclusion</b>	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in annex B of this test report are below limits specified in the relevant standards.  General Judgment: Pass
	Date of issue: 2015.08.04
<b>Comment</b>	The test results in this report apply only to the tested sample of the stated device/equipment.

*Approved by:*Luo Jian  
Manager*Reviewed by:*Wen Xiaoyong  
Deputy Manager*Tested by:*Gao Xiaoqing  
Test Engineer

## 1. Test Laboratory

### 1.1 Testing Location

<b>Company Name</b>	GCCT, Guangdong Telecommunications Terminal Products Quality Supervision and Testing Center
<b>Address</b>	Technology Road, High-tech Zone, Heyuan, Guangdong Province, PR.China
<b>CNAS Registration No.</b>	L4992
<b>FCC Registration No.</b>	303878
<b>Postal Code</b>	517001
<b>Telephone</b>	+86-762-3607221
<b>Fax</b>	+86-762-3603336

### 1.2 Testing Environment

Environment Data	Temperature(°C)	Humidity(%)
<b>Maximum Ambient</b>	26.2	55
<b>Minimum Ambient</b>	19.6	50

EUT is under testing environment.

### 1.3 Project Data

<b>Project Leader</b>	Wen Xiaoyong
<b>Testing Start Date</b>	2015-07-06
<b>Testing End Date</b>	2015-08-04

## 2. Client Information

### 2.1 Applicant Information

Company Name	Bullitt Group
Address	4 The Aquarium, 1-7 King Street, Reading, RG1 2AN, UK
City	/
Postal Code	/
Country	UK

### 2.2 Manufacturer Information

Company Name	CK Telecom Limited
Address	Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China.
City	Heyuan
Postal Code	/
Country	China

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

#### 3.1 About EUT

<b>Model Name</b>	SP4
<b>FCC ID</b>	ZL5SP4
<b>Tx Frequency</b>	GSM850:824~848 MHz UMTS Band V : 826~846MHz PCS1900 : 1850~1909MHz UMTS Band II : 1852~1907MHz Bluetooth/BLE: 2402 ~ 2480 MHz WIFI(802.11b/g/n-20): 2412 ~ 2462 MHz WIFI(n-40): 2422 ~ 2452 MHz
<b>Rx Frequency</b>	GSM850: 869~893 MHz UMTS Band V : 871~891 MHz PCS1900 : 1930~1989 MHz UMTS Band II : 1932~1987 MHz Bluetooth/BLE: 2402 ~ 2480 MHz WIFI(802.11b/g/n-20): 2412 ~ 2462 MHz WIFI(n-40): 2422 ~ 2452 MHz
<b>Number of Channels</b>	GSM850&WCDMA Band V:25 PCS1900&WCDMA Band II: 60 Bluetooth:79 WIFI(802.11b/g/n-20):11 WIFI(n-40):7 BLE:40
<b>Modulation</b>	GSM&DCS:GMSK WCDMA:BPSK/QPSK Bluetooth: GFSK& $\pi$ /4-DQPSK&8DPSK WIFI:CCK/OFDM BLE:GFSK
<b>Antenna Type</b>	PIFA(GSM/DCS/WCDMA); MONOPOLE (Bluetooth/WIFI)
<b>Antenna Gain</b>	GSM850:-0.5dBi DCS1900: -0.5dBi WCDMA850: -1dBi WCDMA1900: -1dBi Bluetooth/BLE/WIFI: -1dBi
<b>Normal Voltage</b>	3.8V
<b>Extreme Low Voltage</b>	3.6V
<b>Extreme High Voltage</b>	4.2V
<b>Extreme Low Temperature</b>	0°C
<b>Extreme High Temperature</b>	40°C

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

Extreme Voltage and Temperature is provided by Applicant.

### 3.2 Internal Identification of EUT

EUT ID *	IMEI	HW Version	SW Version
150701-M01	356092022307067 356092022307075	SLFQPLUS-V1.0	SLFQPLUS14A-S00A_CKT_L2EN_101_150130
150701-M03	356092022307083 356092022307091	SLFQPLUS-V1.0	SLFQPLUS14A-S00A_CKT_L2EN_101_150130

\*EUT ID: is used to identify the test sample in the lab internally. 150701-M01 and 150701-M03 are the same mobile phone.

### 3.3 Internal Identification of AE

AE ID *	Description	Type	SN
150701-B01	Battery	HD395759AR	/
150701-C01	Adapter	A8-501000	/
150701-B03	Battery	HD395759AR	/
150701-C03	Adapter	A8-501000	/

\*AE ID: is used to identify the test sample in the lab internally. 150701-B01 and 150701-B03 are the same accessory , 150701-C01 and 150701-C03 are the same accessory.

## 4. Test Results

### 4.1 Summary of Test Results

No	Test cases	Sample	Verdict
1	Maximum transmit power	M01	Pass
2	Maximum Power Spectral Density	M01	Pass
3	6dB Occupied Bandwidth	M01	Pass
4	Band Edge Compliance	M01	Pass
5	Conducted Transmission Spurious Emission	M01	Pass
6	AC Conducted Emission	M03	Pass
7	Radiated Emissions	M03	Pass
8	Antenna Requirements	M01	Pass

**Note:** please refer to Annex B in this test report for the detailed test results.

All measurement uncertainty is not taken into consideration for all presented test result.

### 4.2 Statements

GCCT has evaluated the test cases requested by the applicant/manufacturer as listed in section 4.1 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in general summary.

## 5. Test Equipment Utilized

**Table 1. Measurement Equipment**

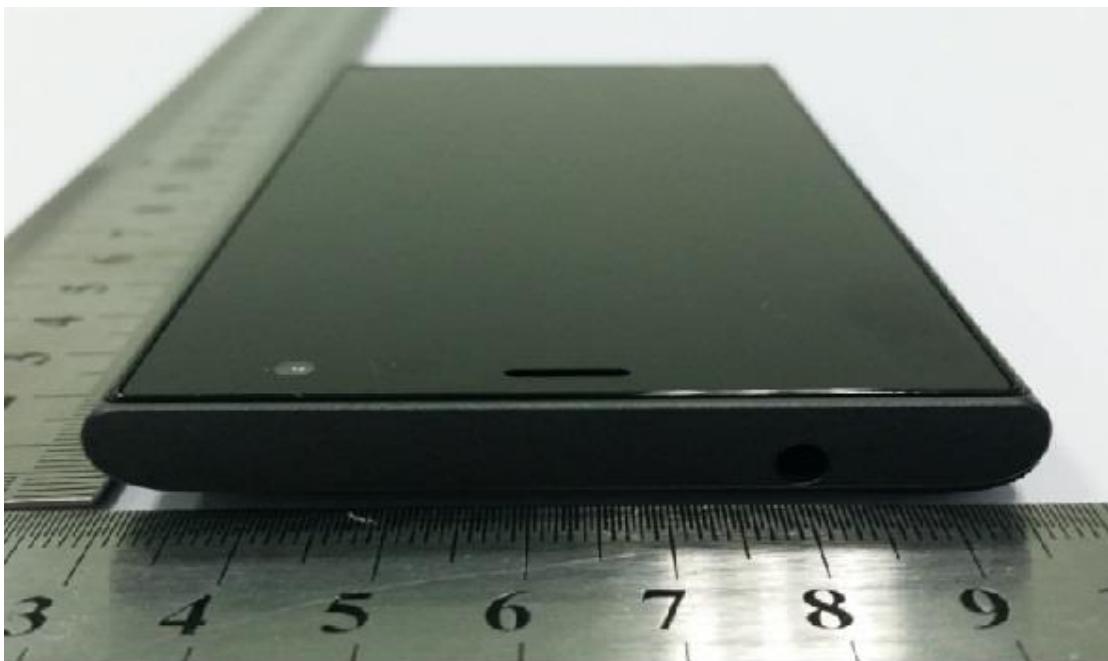
<b>Hardware</b>						
No.	Name	Model	SN	Manufacturer	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	N9020A	MY52091261	Agilent	2014.08.15	2015.08.15
2	Switch Unit	/	E0112	/		/
<b>Software</b>						
Tech WIFI		v1.0.3				

**Table 2. Radiated emission test system**

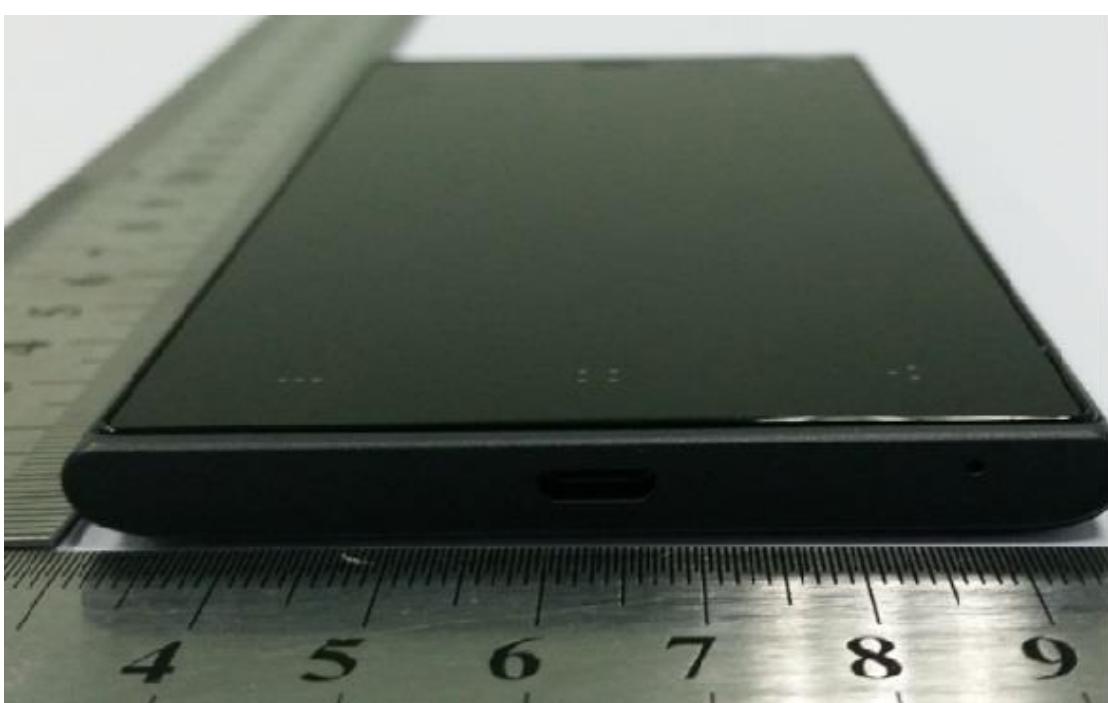
No.	Name	Model	SN	Manufacturer	Cal. date	Cal. Due Date
1	Spectrum Analyzer	E4440A	MY48250641	Agilent	2014.08.15	2015.08.15
2	BiCoNilog Antenna	3142E	00142015	ETS-Lindgren	2013-10-25	2015-10-25
3	Horn Antenna	3117	129169	ETS-Lindgren	2013-10-25	2015-10-25
4	Signal Generator	N5183A-5 32	MY49060563	Agilent	2014.08.15	2015.08.15
5	Universal Radio Communication Tester	E5515C	MY48367105	Agilent	2014.08.15	2015.08.15
6	RF Preselector	N9039A	MY48260024	Agilent	/	/
7	Loop Antenna	HFH2	860015/00	R&S	2014.08.15	2015.08.15

## ANNEX A: EUT Photograph

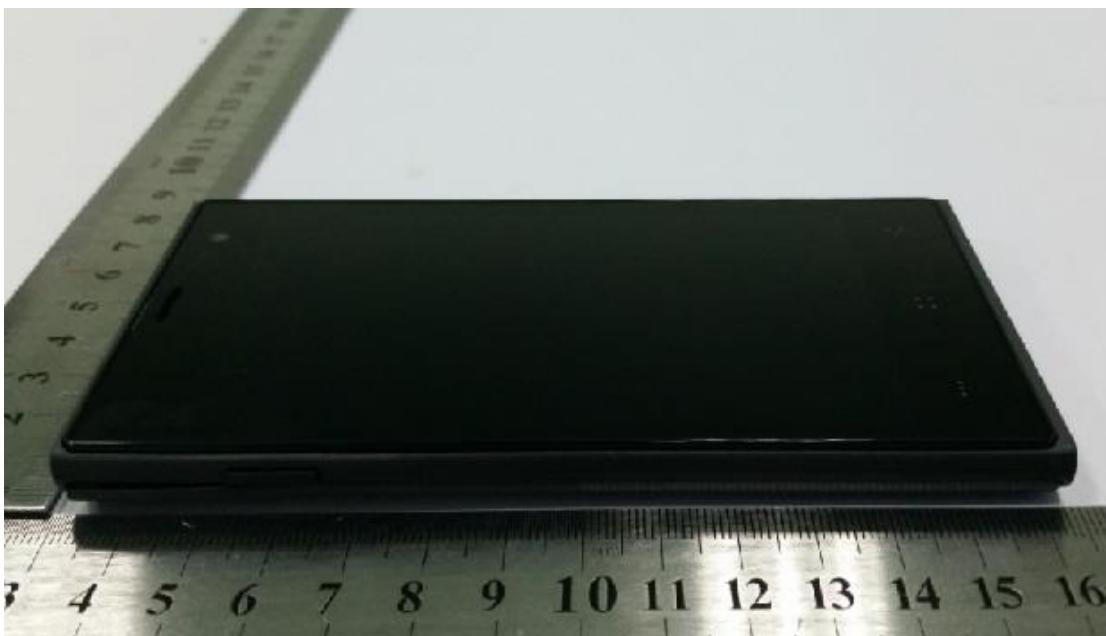
EUT -Top View



EUT- Bottom View



EUT -Left View



EUT -Right View



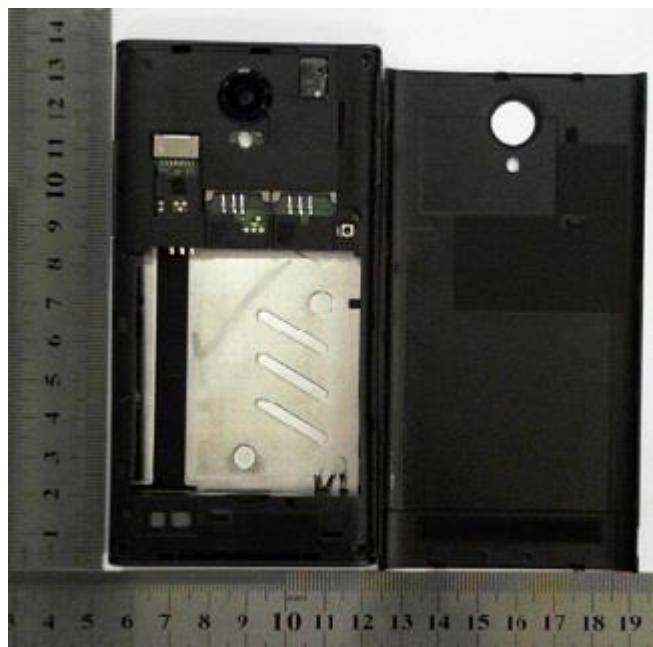
**EUT- Front View**



**EUT -Rear View**



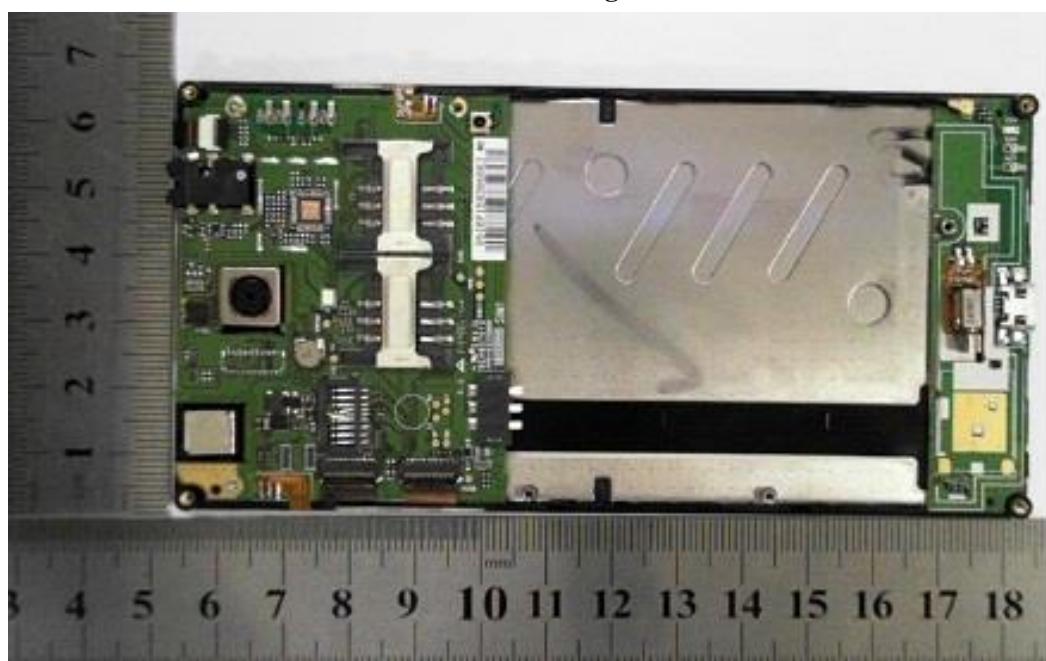
Cover off-Top view



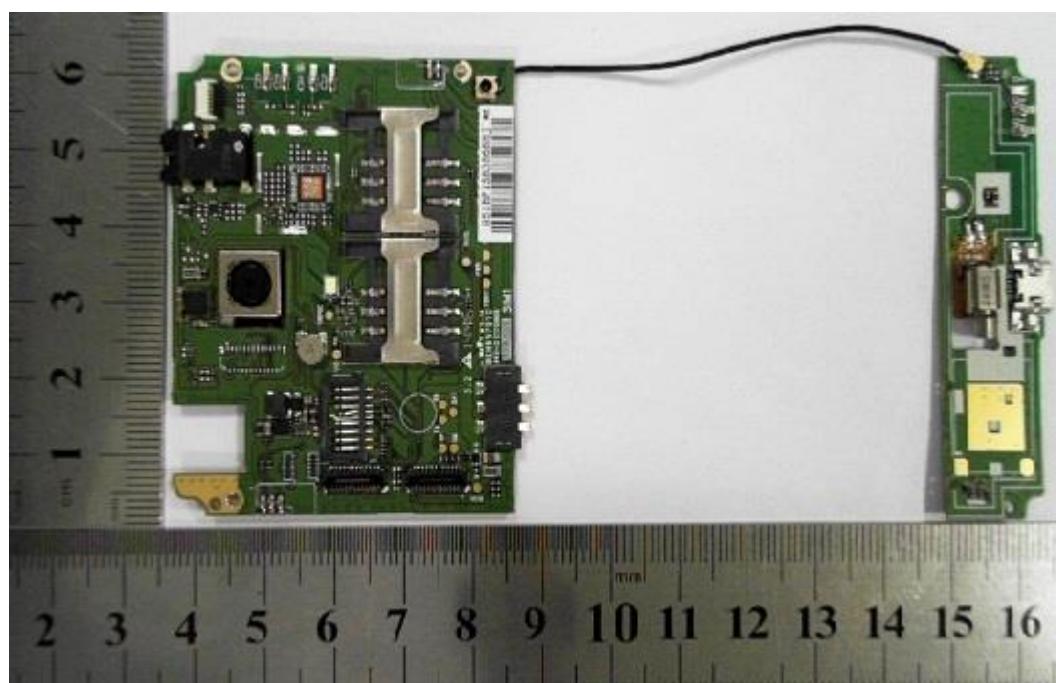
All



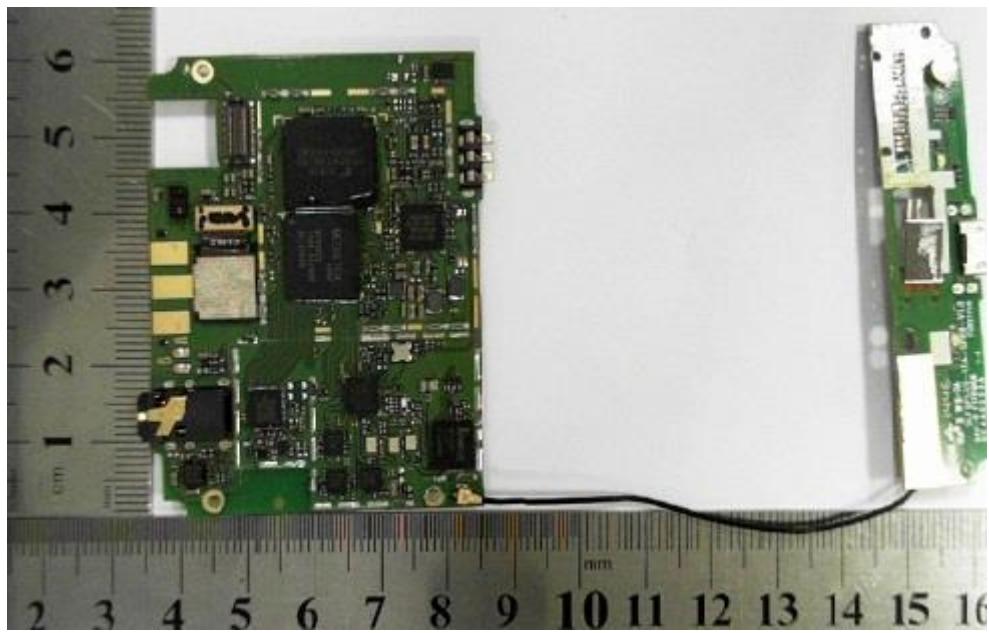
Main board With shielding -Front View



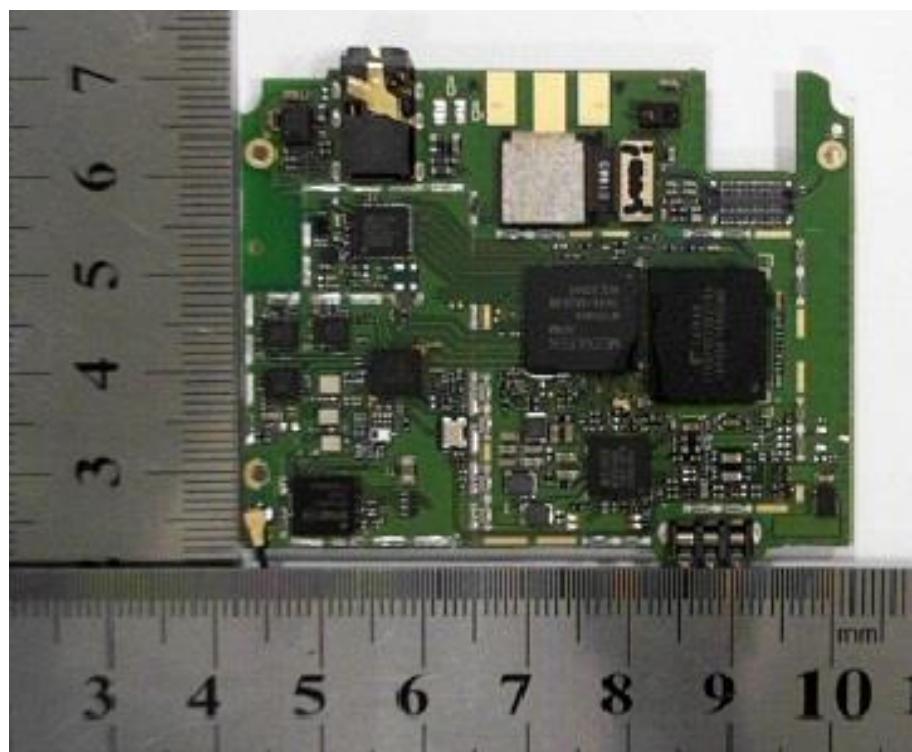
Main board Without shielding -Front View



Main board - Rear View



Main board - Rear View



**Headset**



**USB cable**



GSM/DCS Antenna View



BT Antenna View



## Battery View



## Adapter label view

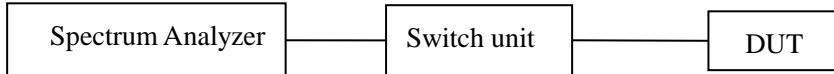


Adapter view



## ANNEX B: Detailed Test Results

The radiated test setup is shown in each radiated test case section. The conducted test setup is shown as following:



All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

### B.1 Maximum Transmit Power

#### B.1.1 Description

The maximum Peak Output power shall be equal to or less than 30dBm.

#### B.1.2 Test procedures

##### Conducted Measurement

EUT was set for low, mid, high channel with modulated mode and highest RF output power

The spectrum analyzer was connected to the antenna terminal.

##### Standard Requirement

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

##### Procedures:

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

- a) Set the RBW  $\geq$  DTS bandwidth.
- b) Set VBW  $\geq 3 \text{ RBW}$ .
- c) Set span  $\geq 3 \times \text{RBW}$
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

**B.1.2 Test Results**

<b>Mode</b>	<b>Data rate(Mbps)</b>	<b>Limit (dBm)</b>	<b>Maximum transmit power(dBm)</b>			<b>Verdict</b>
			<b>2412MHz</b>	<b>2437MHz</b>	<b>2462MHz</b>	
802.11b	1	30	15.898 (2.411GHz)	15.575 (2.436GHz)	15.488 (2.460GHz)	Pass
802.11g	6		15.342 (2.412GHz)	15.592 (2.436GHz)	15.284 (2.461GHz)	Pass
802.11n-20	6.5/7.2		12.584 (2.411GHz)	12.640 (2.437GHz)	12.711 (2.461GHz)	Pass
<b>Mode</b>	<b>Data rate(Mbps)</b>	<b>Limit (dBm)</b>	<b>Maximum transmit power(dBm)</b>			<b>Verdict</b>
			<b>2422MHz</b>	<b>2437MHz</b>	<b>2452MHz</b>	
802.11n-40	6.5/7.2	30	10.775 (2.421GHz)	10.110 (2.436GHz)	10.227 (2.452GHz)	Pass
Note	Antenna Gain is -1dBi					

**B.2 Maximum Power Spectral Density****B.2.1 Description**

The maximum Peak power spectral density shall be equal to or less than 8 dBm.

**B.2.2 Test procedures****Conducted Measurement**

EUT was set for low, mid, high channel with modulated mode and highest RF output power

The spectrum analyzer was connected to the antenna terminal.

**Procedures:**

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance, and is optional if the maximum conducted (average) output power was used to demonstrate compliance.

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth
- c) Set the RBW  $\geq 3$  kHz
- d) Set the VBW  $\geq 3$  RBW.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level.
- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

## B.2.2 Test Results

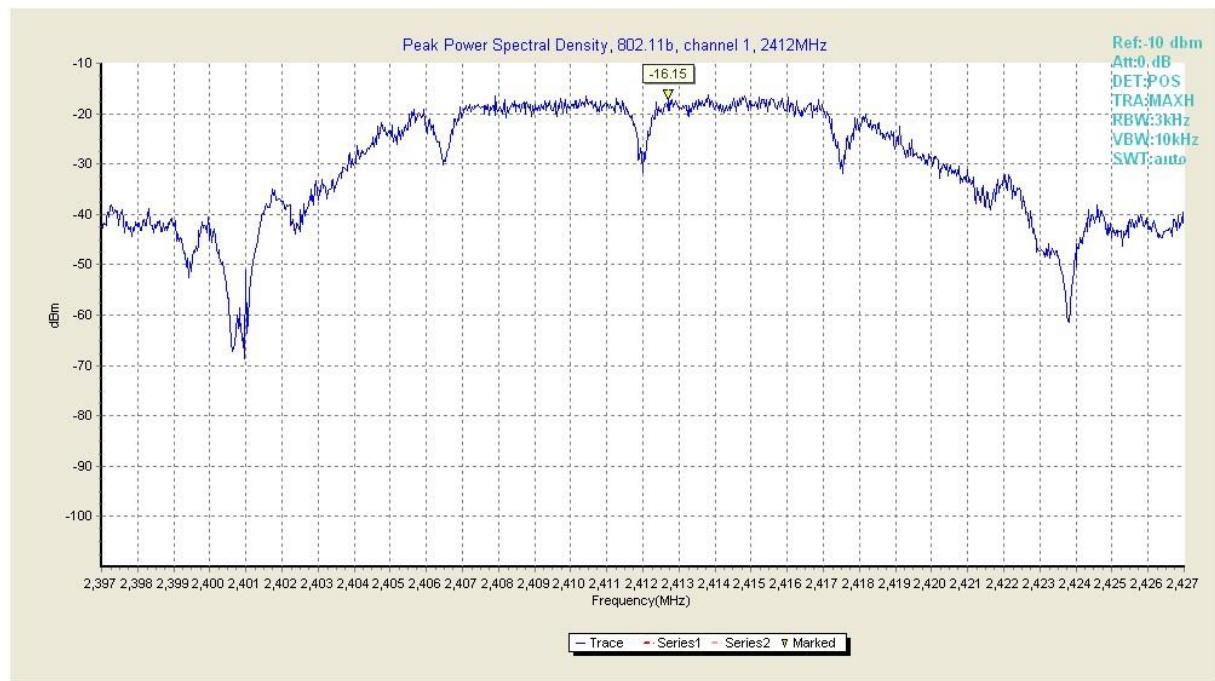
### Test equipment parameter:

TRA: Max Hold      RBW: 3kHz      VBW: 10kHz      Sweep time: AUTO

802.11b mode

Limit (dBm)	PSD(dBm)						Verdict
	Low Ch 2412MHz		Mid Ch 2437 MHz		High Ch 2462 MHz		
8	-1.15	Fig.1	-0.87	Fig.2	-1.24	Fig.3	Pass

Antenna Maximum Gain: -1dBi

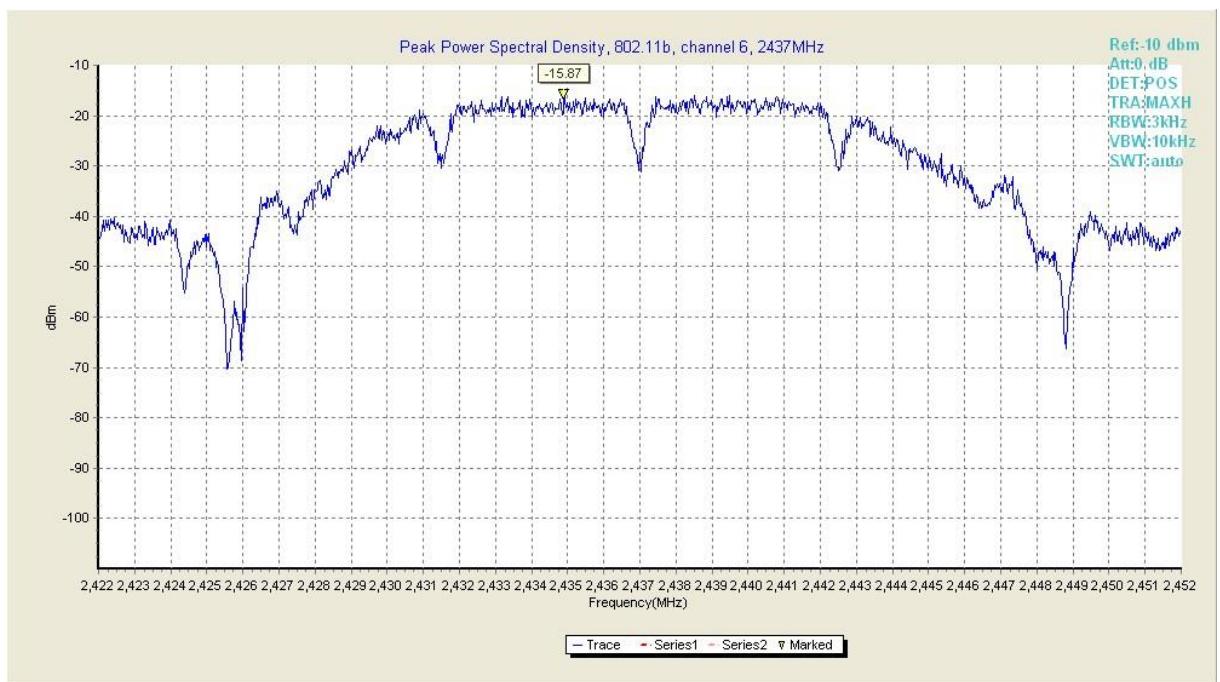


Test plot 1

2412.719971

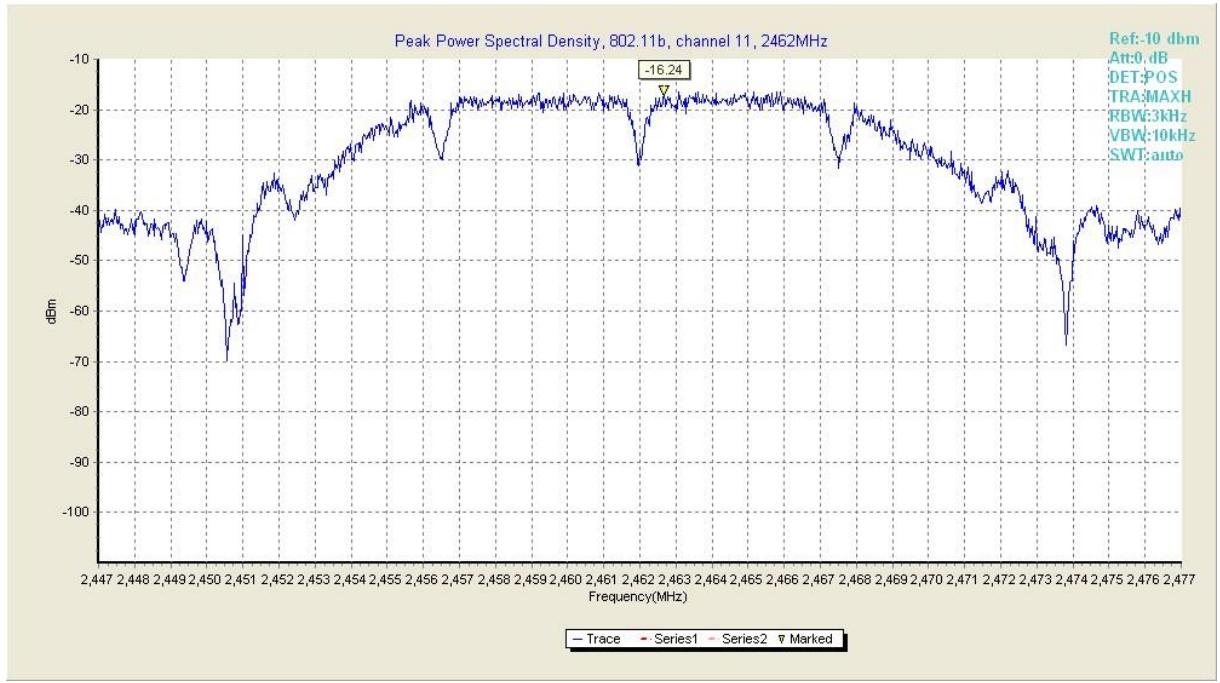
-16.150000

Fig.1 Peak power spectral density of 802.11b in channel 1,2412MHz



Test plot 1	2434.899902	-15.870000
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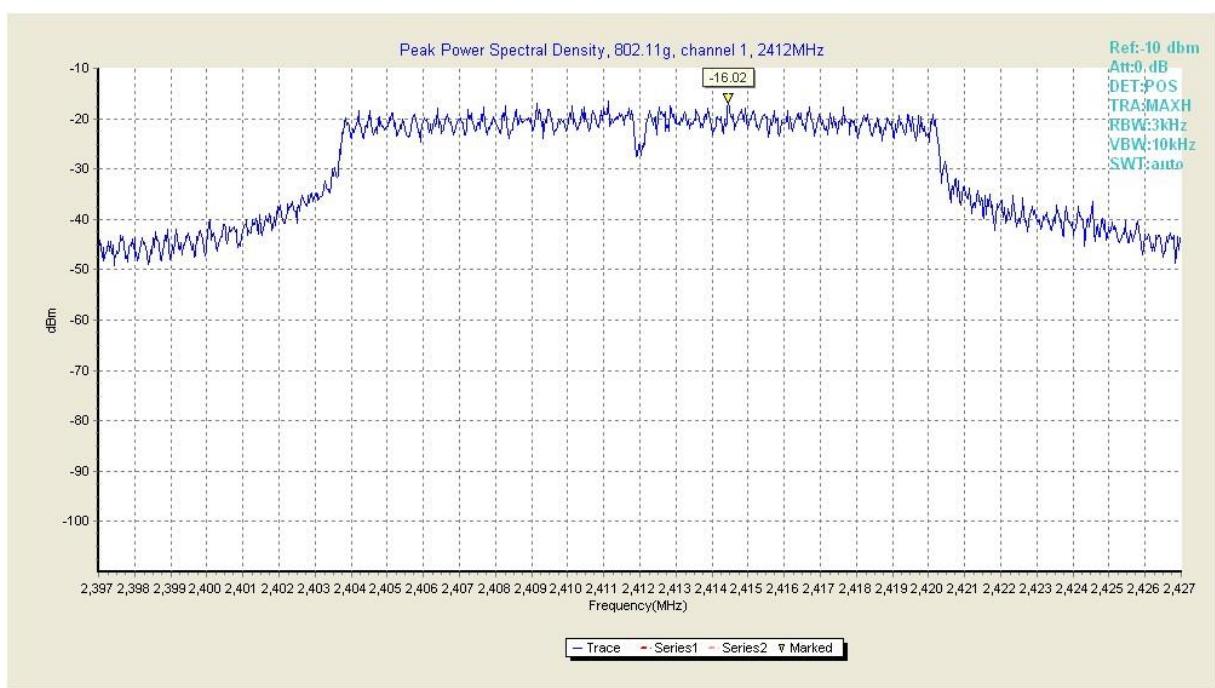
**Fig.2 Peak power spectral density of 802.11b in channel 6,2437MHz**



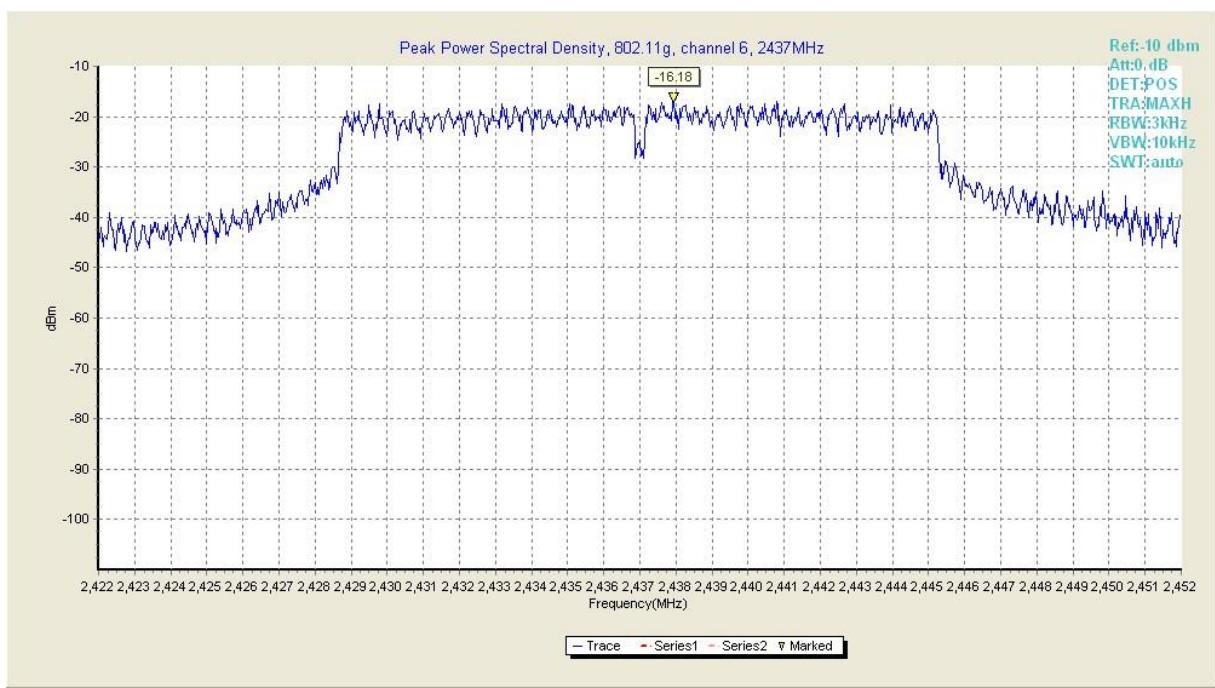
Test plot 1 2462.659912 -16.240000

**Fig.3** Peak power spectral density of 802.11b in channel 11,2462MHz

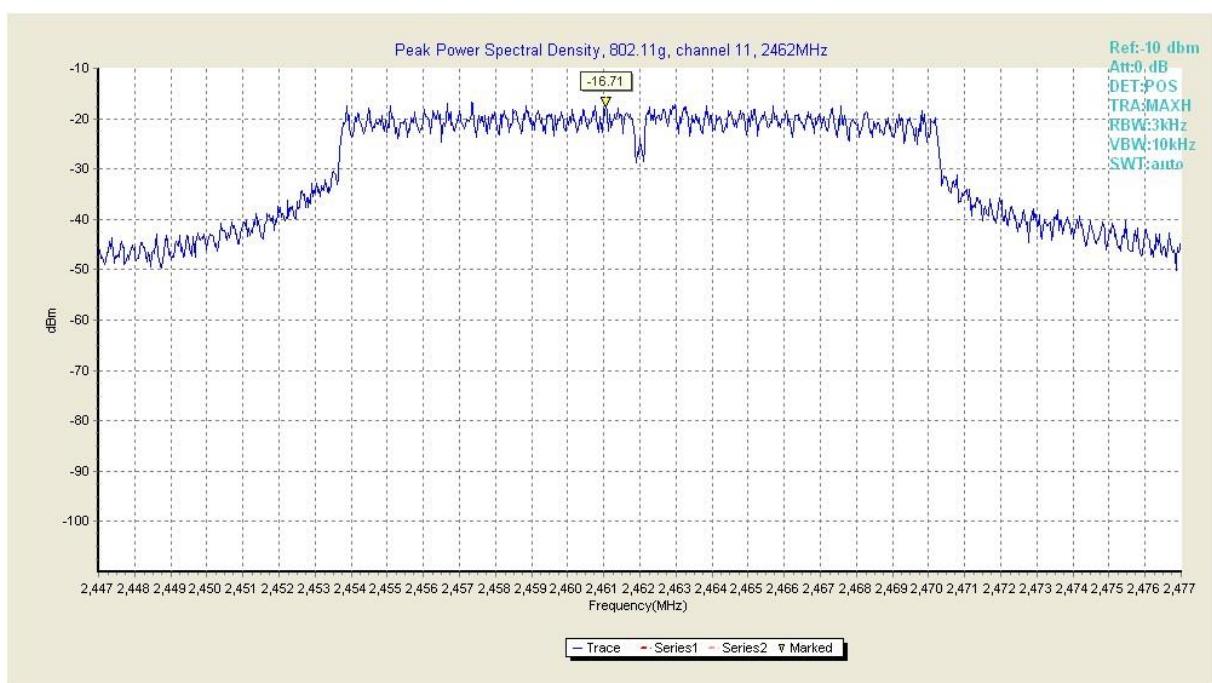
## 802.11g mode



**Fig.4 Peak power spectral density of 802.11g in channel 1,2412MHz**



**Fig.5 Peak power spectral density of 802.11g in channel 6,2437MHz**



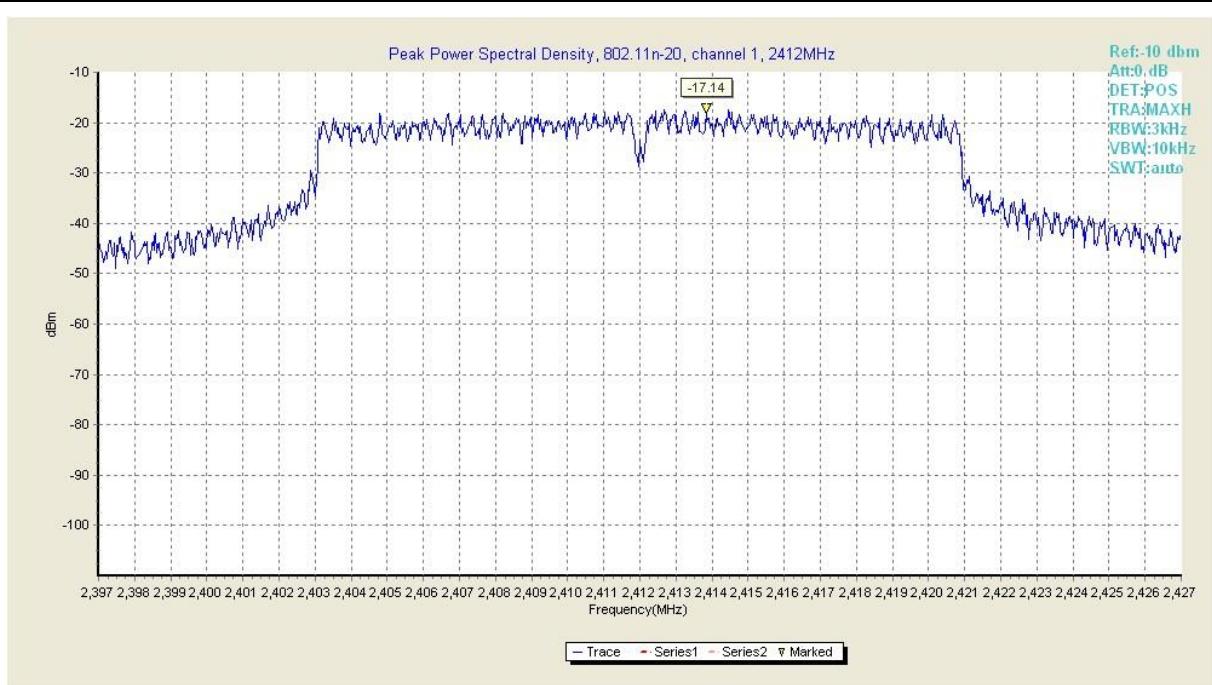
Test plot 1	2461.070068	-16.709999
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**Fig.6 Peak power spectral density of 802.11g in channel 11,2462MHz**

#### 802.11n-20 mode

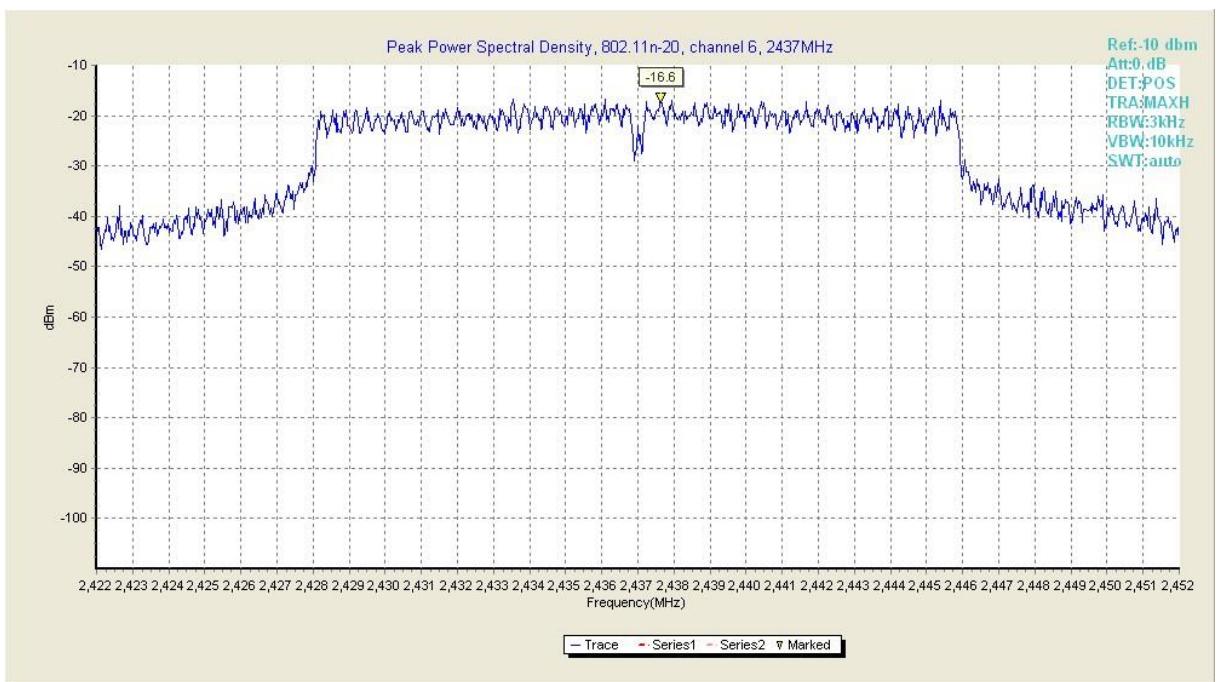
Limit (PSD dBm)	PSD(dBm)			Verdict			
	2412MHz	2437 MHz	2462 MHz				
8	-2.14	Fig.7	-2.60	Fig.8	-1.85	Fig.9	Pass

Antenna Maximum Gain: -1dBi



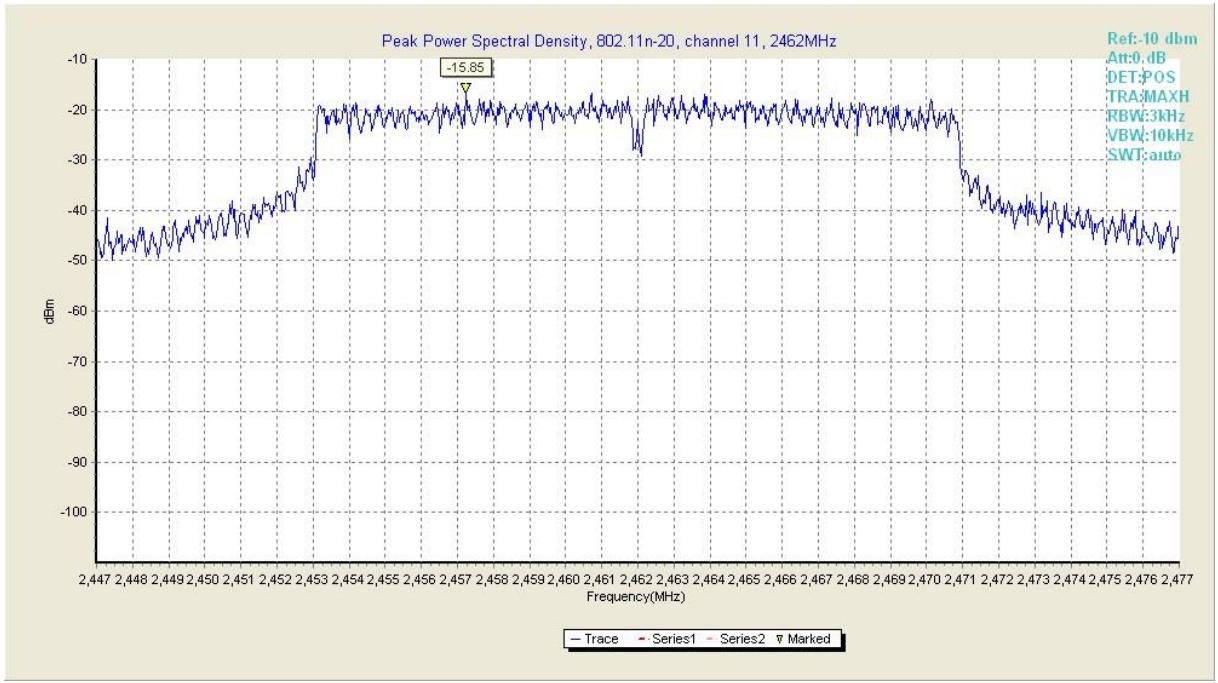
Test plot 1	2413.830078	-17.139999
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**Fig.7 Peak power spectral density of 802.11n-20 in channel 1,2412MHz**



Test plot 1 2437.629883 -16.600000

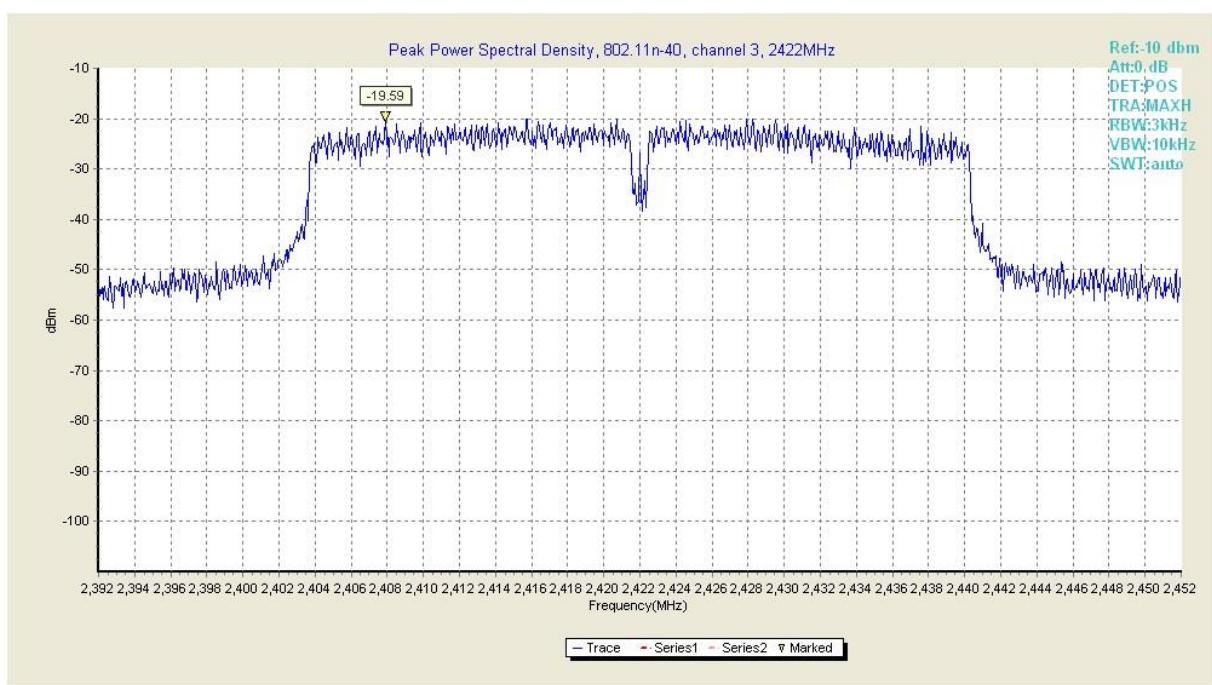
**Fig.8 Peak power spectral density of 802.11n-20 in channel 6,2437MHz**



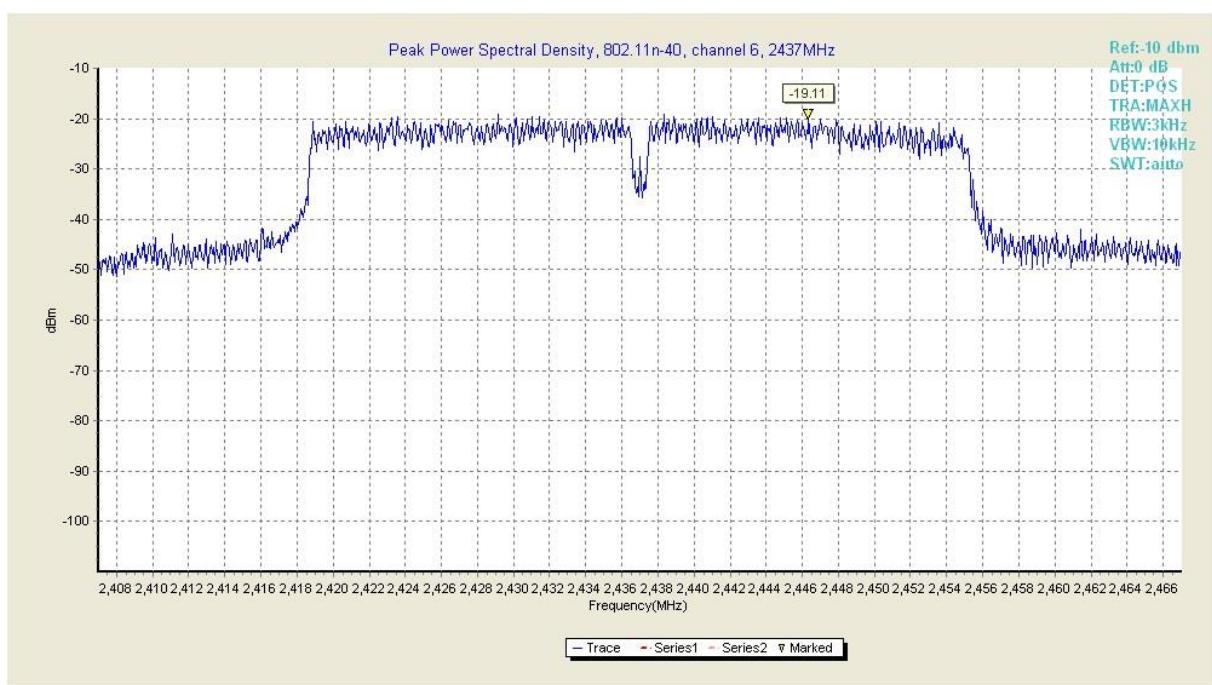
Test plot 1 2457.229980 -15.850000

**Fig.9 Peak power spectral density of 802.11n-20 in channel 11,2472MHz**

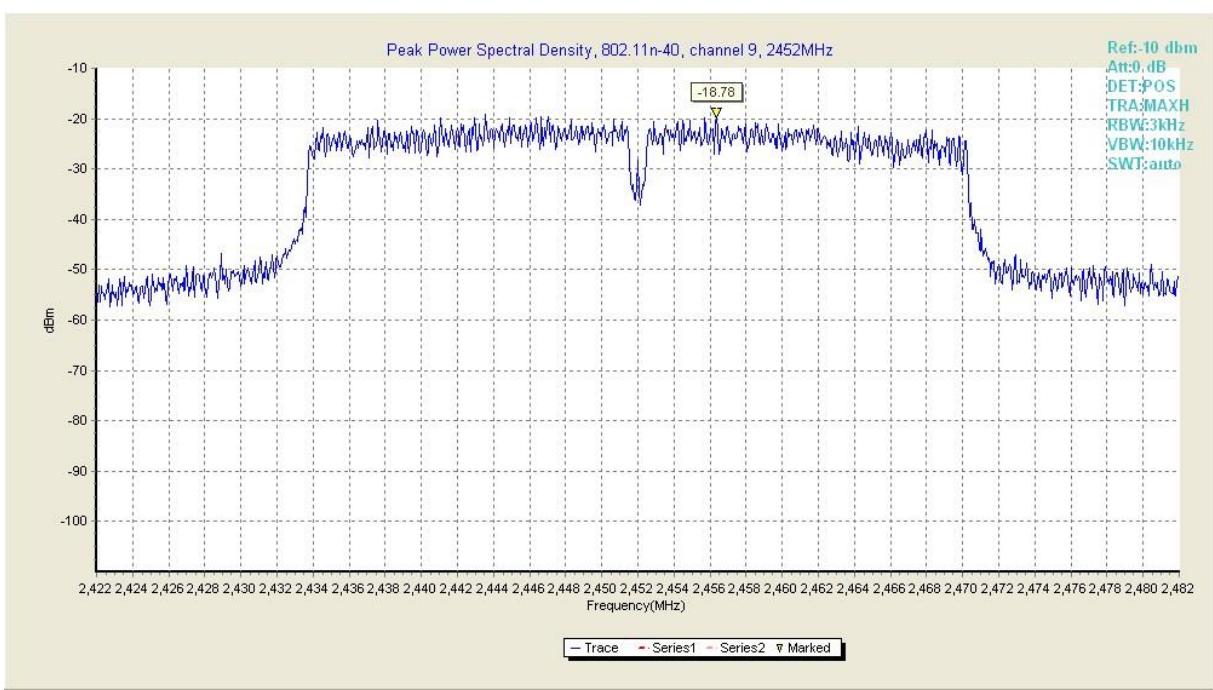
## **802.11n-40 mode**



**Fig.10 Peak power spectral density of 802.11n-40 in channel 3,2422MHz**



**Fig.11 Peak power spectral density of 802.11n-40 in channel 6,2437MHz**



Test plot 1	2456.379883	-18.780001
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**Fig.12 Peak power spectral density of 802.11n-40 in channel 9,2452MHz**

**B.3 DTS(6Db&20dB) Channel Bandwidth****B.3.1 Description**

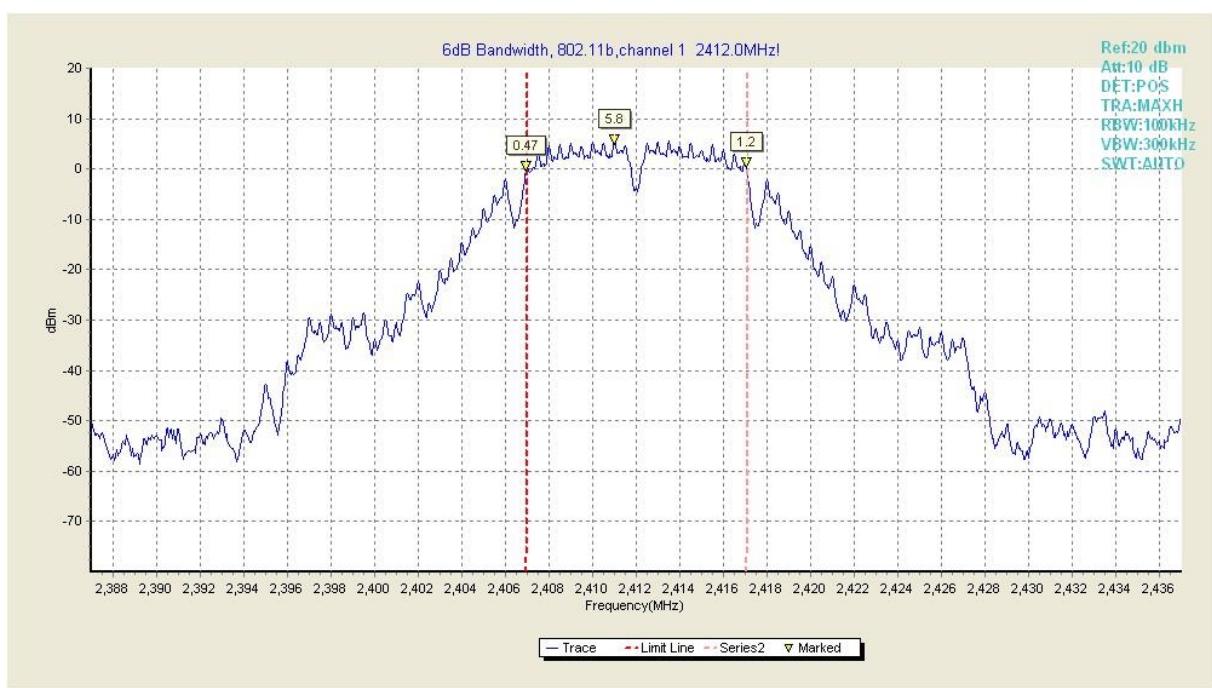
The Occupied 6dB Bandwidth shall be equal to or more than 500 kHz.

**B.3.2 Test Procedures**

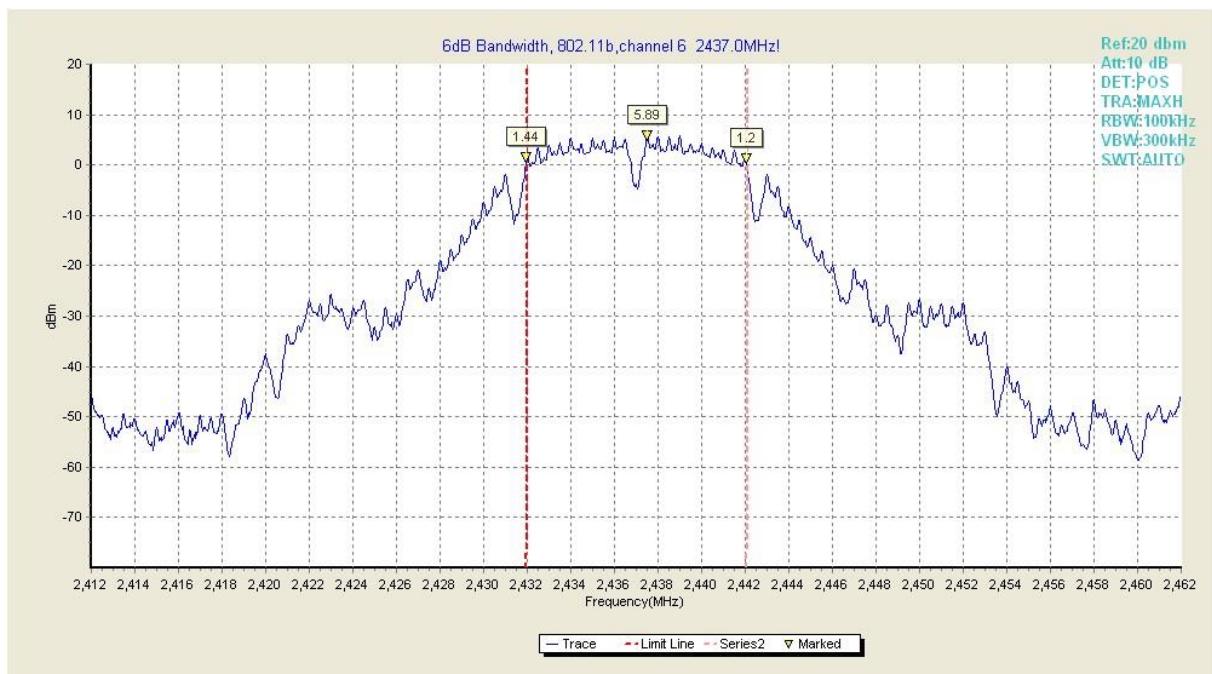
- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

**B.3.3 Test Results****802.11 b mode**

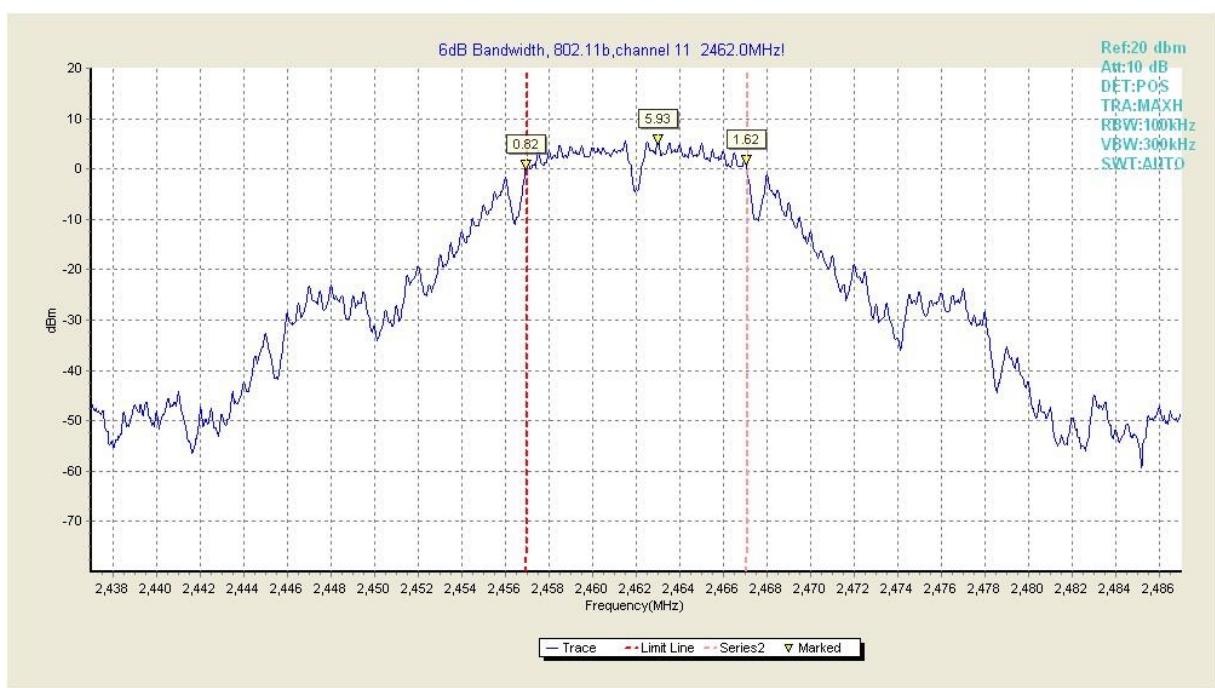
Channel	Frequency (MHz)	Limit (MHz)	Occupied Bandwidth (MHz)	Test Results	Verdict
1	2412	0.5	10.10	Fig.13	Pass
6	2437		10.10	Fig.14	Pass
11	2462		10.10	Fig.15	Pass



**Fig.13 6dB Bandwidth of 802.11b in channel 1,2412MHz**



**Fig.14 6dB Bandwidth of 802.11b in channel 6,2437MHz**

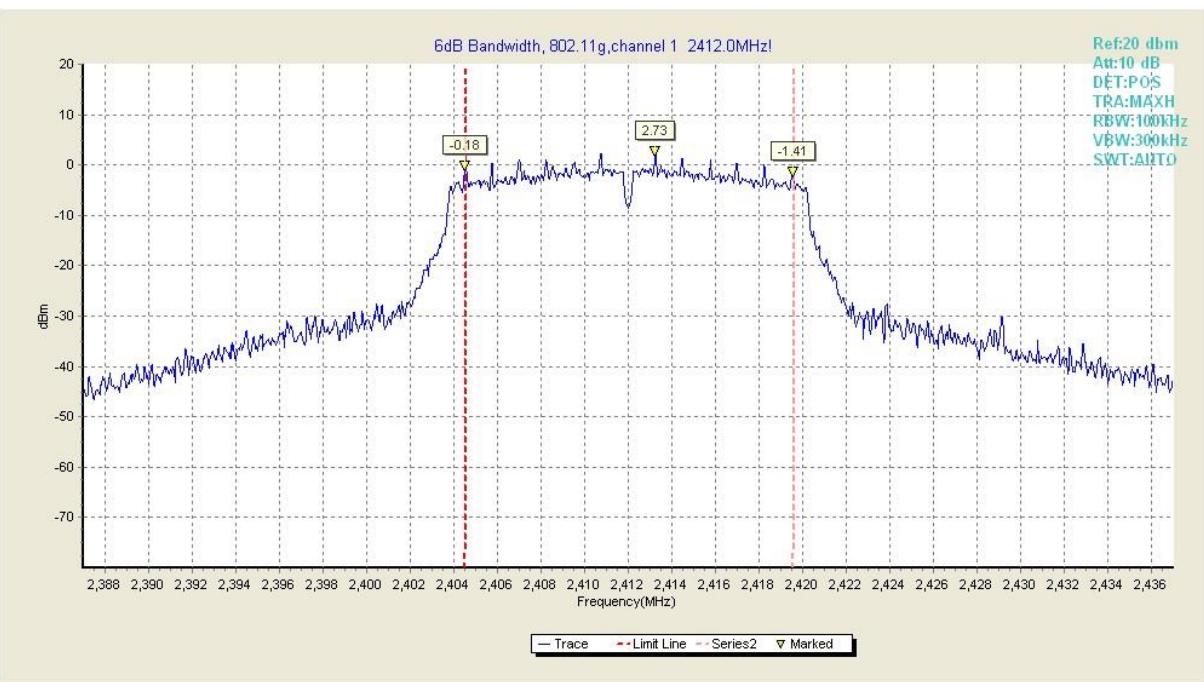


Test plot 1	2456.949951	0.820000
Test plot 2	2463.000000	5.930000
Test plot 3	2467.050049	1.620000

Fig.15 6dB Bandwidth of 802.11b in channel 11,2462MHz

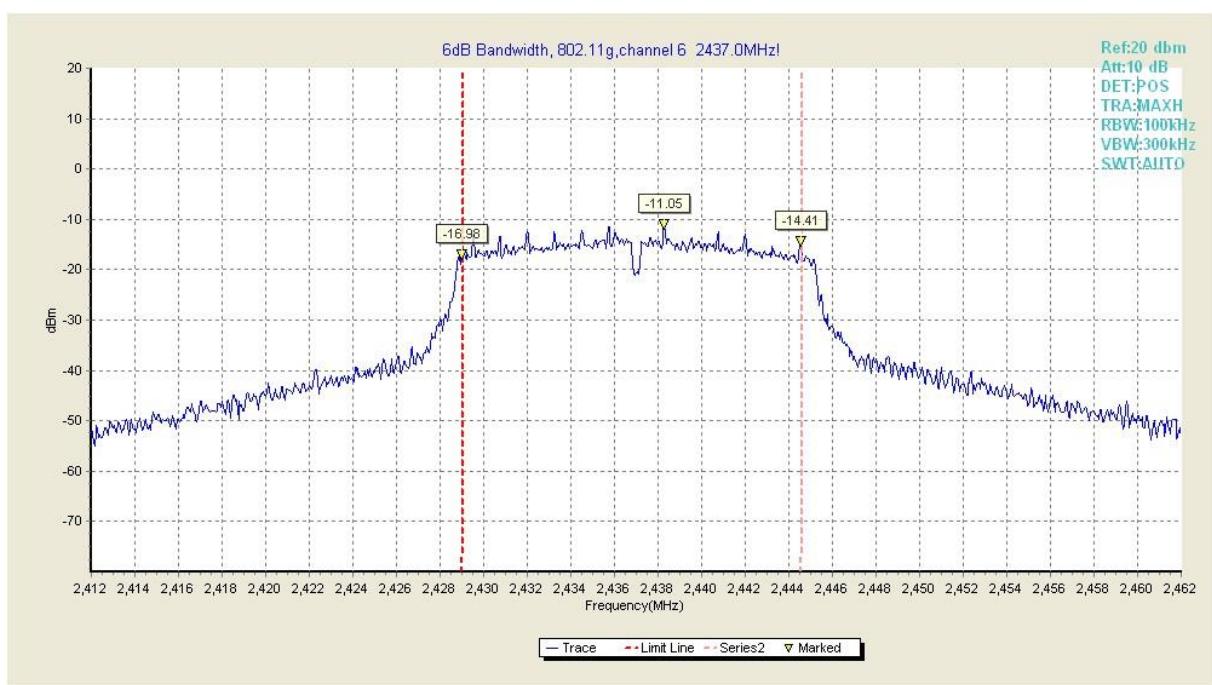
### 802.11 g mode

Channel	Frequency (MHz)	Limit (MHz)	Occupied Bandwidth (MHz)	Test Results	Verdict
1	2412	0.5	15.05	Fig.16	Pass
6	2437		15.55	Fig.17	Pass
11	2462		15.65	Fig.18	Pass



Test plot 1	2404.500000	-0.180000
Test plot 2	2413.250000	2.730000
Test plot 3	2419.550049	-1.410000

Fig.16 6dB Bandwidth of 802.11g in channel 1,2412MHz



Test plot 1	2429.000000	-16.980000
Test plot 2	2438.300049	-11.050000
Test plot 3	2444.550049	-14.410000

Fig.17 6dB Bandwidth of 802.11g in channel 1,2437MHz

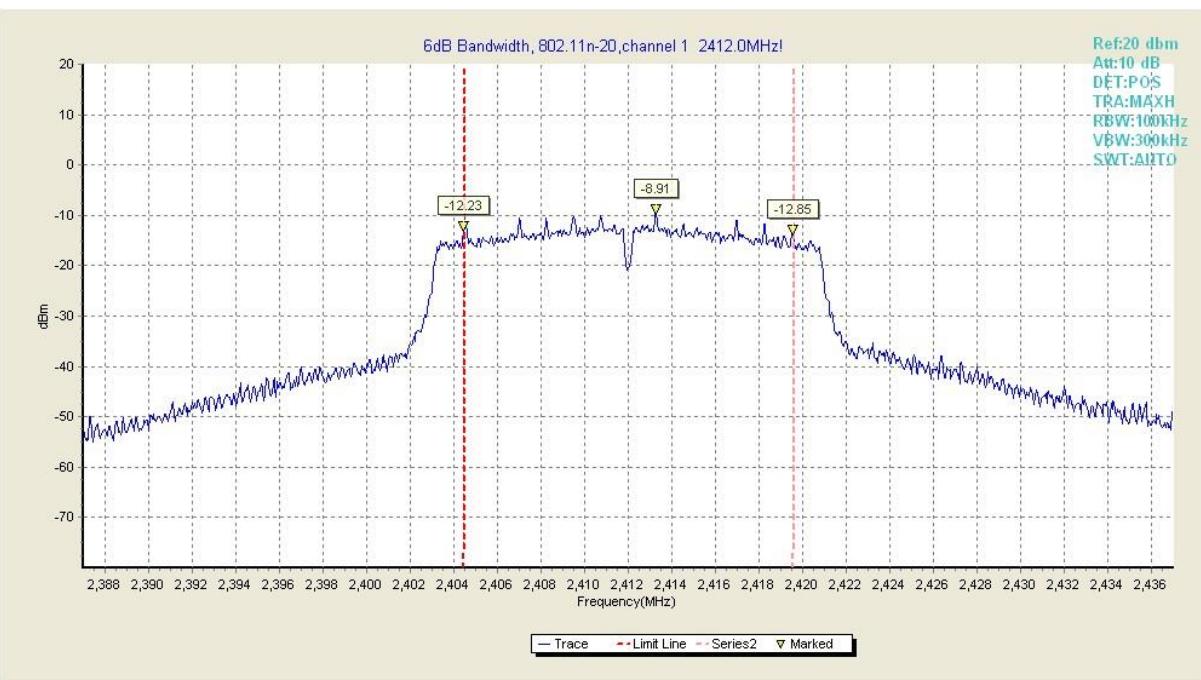


Test plot 1	2454.100098	-17.049999
Test plot 2	2463.300049	-11.370000
Test plot 3	2469.750000	-17.250000

Fig.18 6dB Bandwidth of 802.11g in channel 1,2462MHz

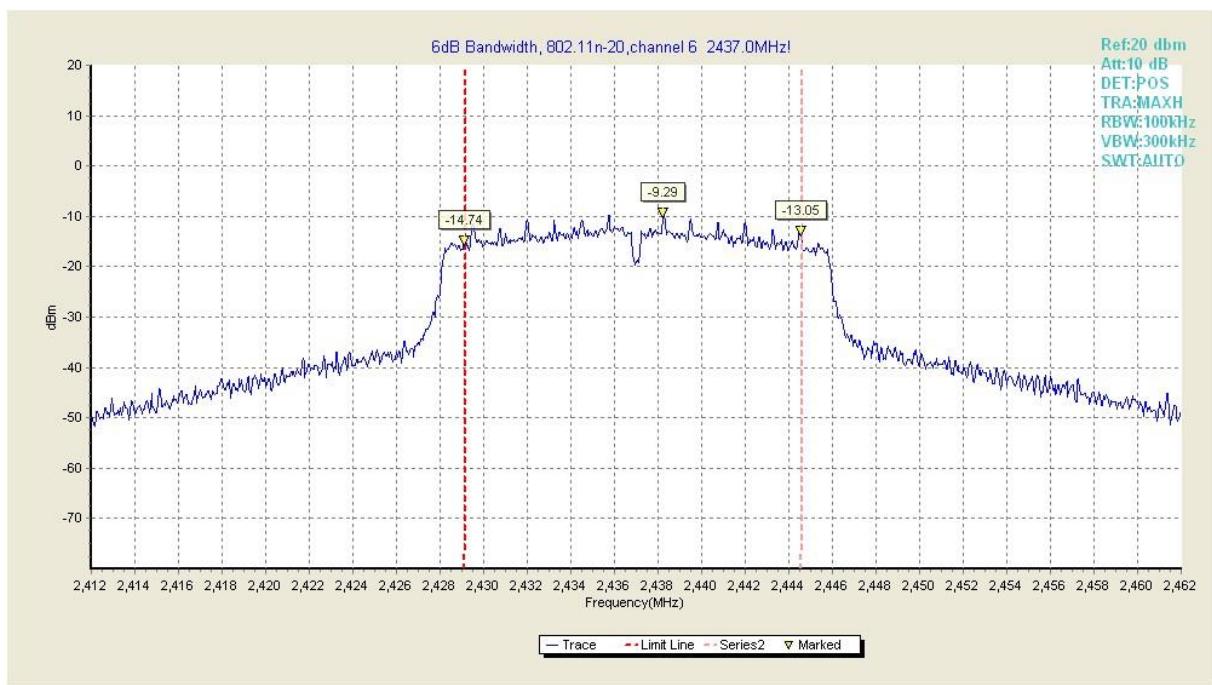
**802.11 n-20 mode**

Channel	Frequency (MHz)	Limit (MHz)	Occupied Bandwidth (MHz)	Test Results	Verdict
1	2412	0.5	15.10	Fig.19	Pass
6	2437		15.45	Fig.20	Pass
11	2462		15.10	Fig.21	Pass



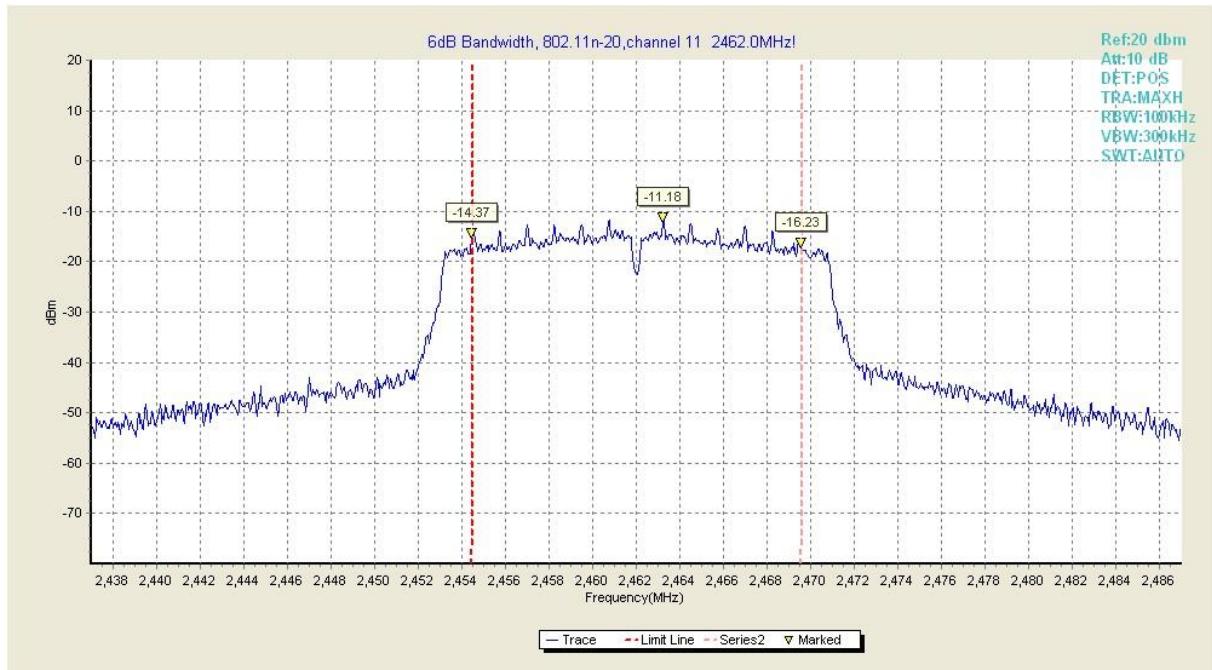
Test plot 1	2454.449951	-14.370000
Test plot 2	2463.250000	-11.180000
Test plot 3	2469.550049	-16.230000

Fig.19 6dB Bandwidth of 802.11n-20 in channel 1,2412MHz



Test plot 1	2429.100098	-14.740000
Test plot 2	2438.250000	-9.290000
Test plot 3	2444.550049	-13.050000

Fig.20 6dB Bandwidth of 802.11 n-20 in channel 6,2437MHz

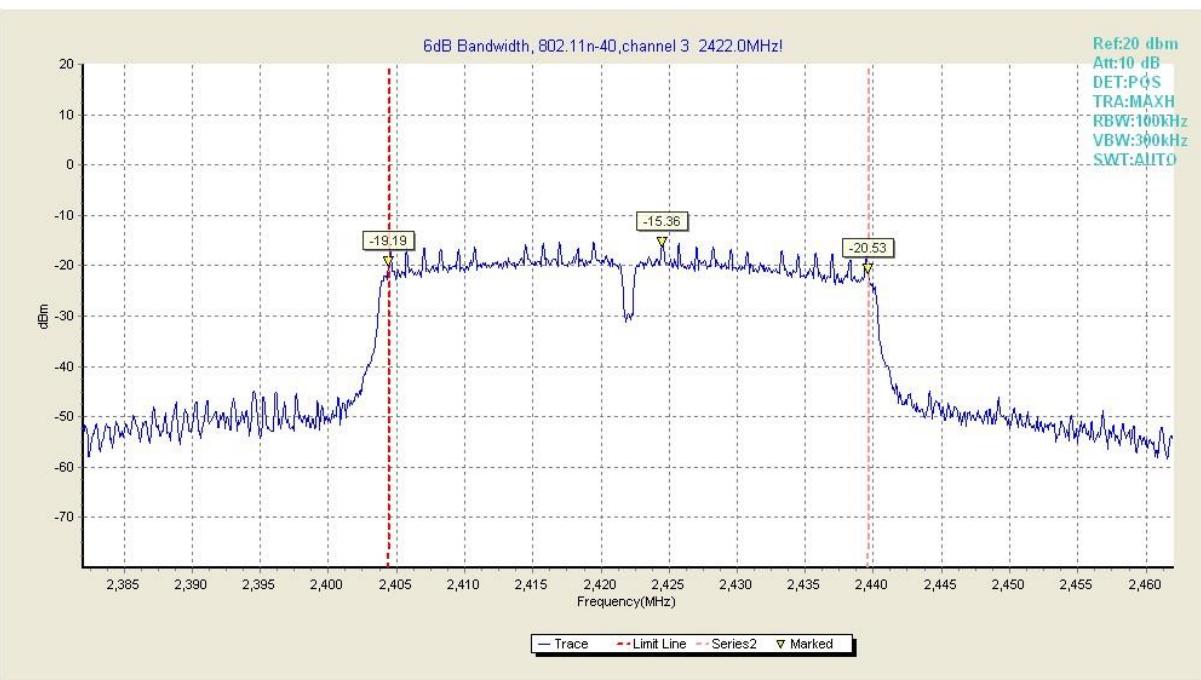


Test plot 1	2454.449951	-14.370000
Test plot 2	2463.250000	-11.180000
Test plot 3	2469.550049	-16.230000

Fig.21 6dB Bandwidth of 802.11 n-20 in channel 11,2462MHz

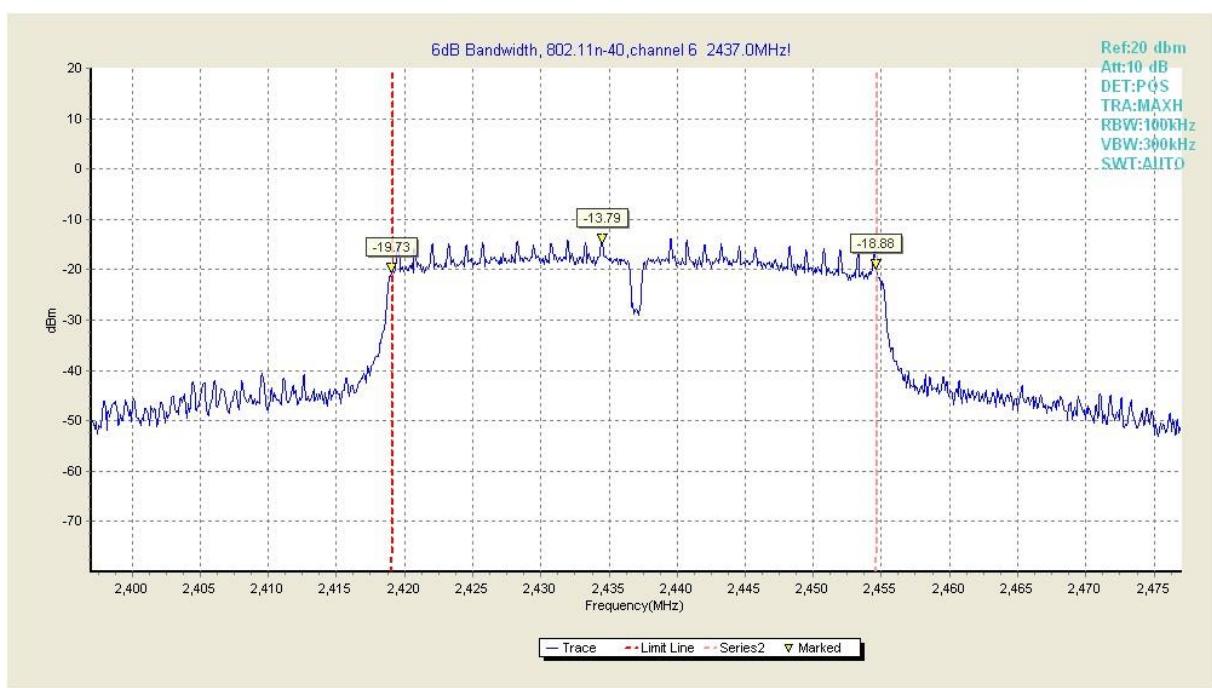
**802.11 n-40 mode**

Channel	Frequency (MHz)	Limit (MHz)	Occupied Bandwidth (MHz)	Test Results	Verdict
3	2422	0.5	35.20	Fig.22	Pass
6	2437		35.52	Fig.23	Pass
9	2452		35.20	Fig.24	Pass



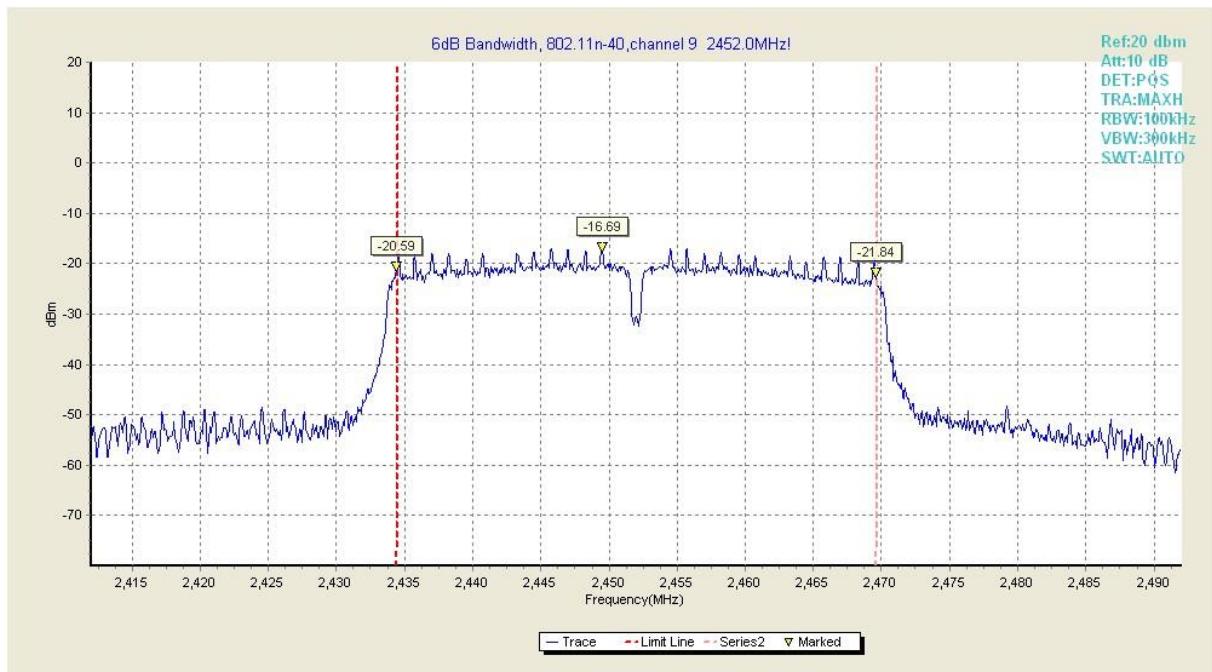
Test plot 1	2404.399902	-19.190001
Test plot 2	2424.479980	-15.360000
Test plot 3	2439.600098	-20.530001

Fig.22 6dB Bandwidth of 802.11 n-40 in channel 3,2422MHz



Test plot 1	2419.080078	-19.730000
Test plot 2	2434.520020	-13.790000
Test plot 3	2454.600098	-18.879999

Fig.23 6dB Bandwidth of 802.11 n-40 in channel 6,2437MHz



Test plot 1	2434.399902	-20.590000
Test plot 2	2449.520020	-16.690001
Test plot 3	2469.600098	-21.840000

Fig.24 6dB Bandwidth of 802.11 n-40 in channel 9,2452MHz

## B.4 Band Edge Compliance

### B.4.1 Conducted Measurement

#### B.4.1.1 Description

The Band Edges Compliance shall be equal to or less than -20 dB.

#### B.4.1.2 Test procedures

##### Conducted Measurement

EUT was set for low, mid, high channel with modulated mode and highest RF output power

The spectrum analyzer was connected to the antenna terminal.

##### Standard Requirement

Emissions within 2 MHz of an authorized band edge may be measured using either the marker-delta method (for peak or average emissions) or the integration method (for average emissions only), described below, provided that the OBW edge falls within 2 MHz of the band edge. Otherwise, all unwanted emissions measurements shall be performed using the standard methods.

##### Procedures

###### Peak Detection

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

- a) Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).
- b) Set span to 2 MHz
- c) RBW = 100 kHz.
- d) VBW  $\geq 3 \times$  RBW.
- e) Detector = peak.
- f) Sweep time = auto.
- g) Trace mode = max hold.
- h) Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)
- i) Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency ( $f_{\text{emission}}$ )  $\pm 0.5$  MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by  $f_{\text{emission}} \pm 0.5$  MHz.

#### B.4.1.3 Test Results

##### 802.11b mode

Channel	Frequency(MHz)	Limit (dB)	Test Result(MHz)		Verdict
1	2400	20	22.74	Fig.25	Pass

11	2483.5		36.81	Fig.26	Pass
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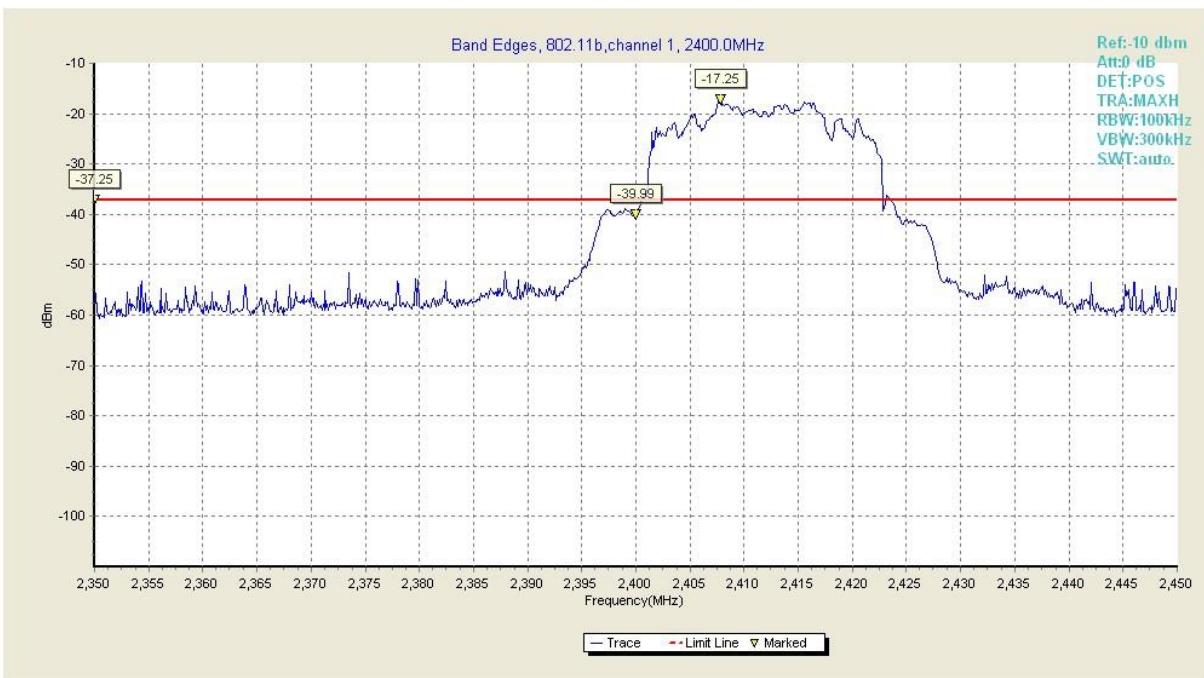


Fig25. Frequency Band Edges of 802.11b in channel 1,2400MHz



Fig26. Frequency Band Edges of 802.11b in channel 11,2483.5MHz

802.11g mode

Channel	Frequency(MHz)	Limit (dB)	Test Result(MHz)		Verdict
1	2400	20	29.33	Fig.27	Pass

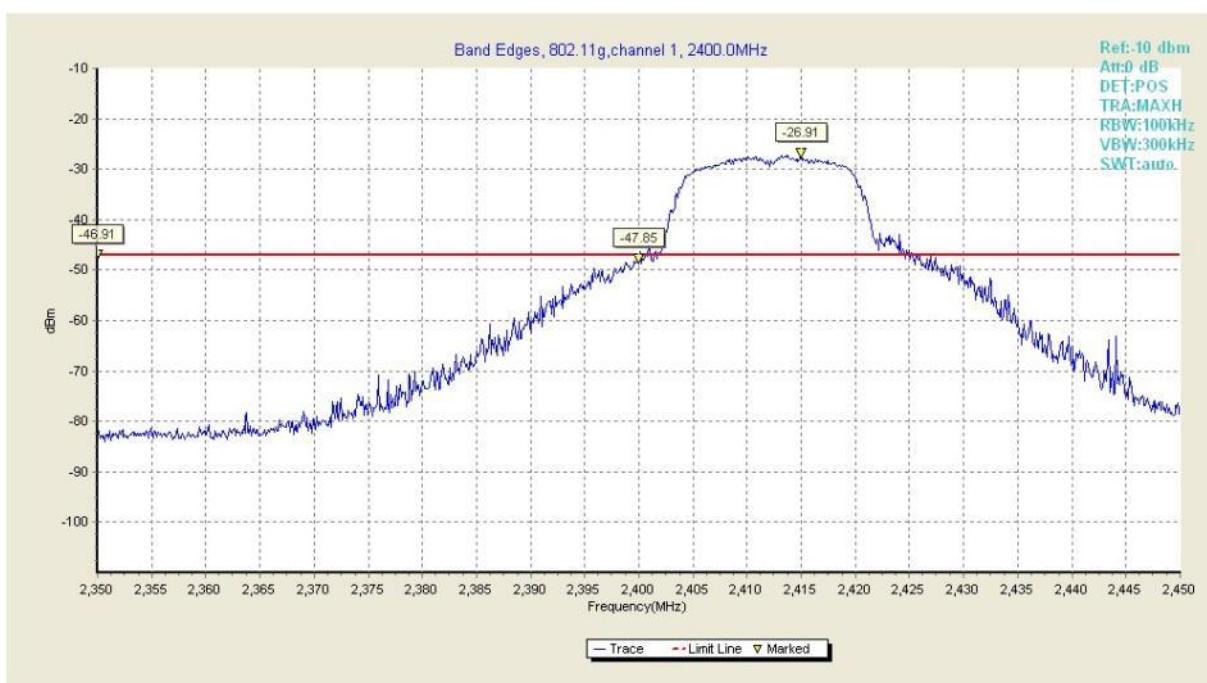
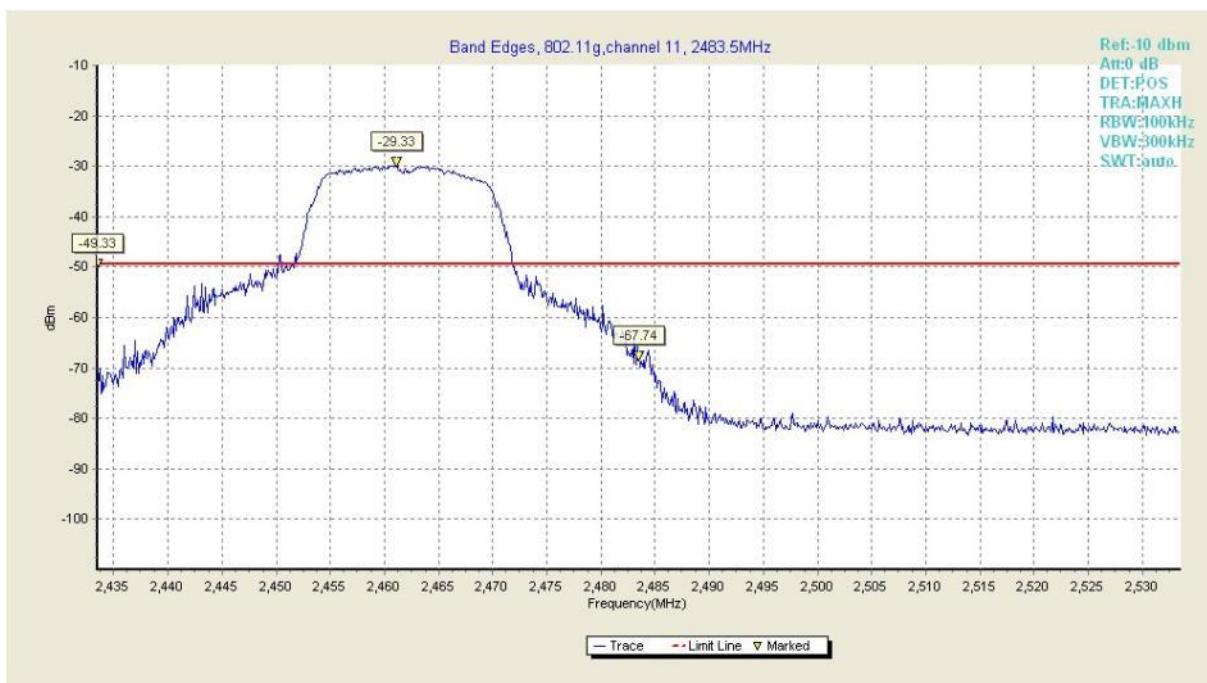
11

2483.5

49.51

Fig.28

Pass

**Fig27. Frequency Band Edges of 802.11g in channel 1,2400MHz****Fig28. Frequency Band Edges of 802.11g in channel 11,2483.5MHz****802.11n-20 mode**

Channel	Frequency(MHz)	Limit (dB)	Test Result(MHz)		Verdict
1	2400	20	21.42	Fig.29	Pass

11	2483.5		34.30	Fig.30	Pass
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Fig29. Frequency Band Edges of 802.11n-20 in channel 1,2400MHz



Fig30. Frequency Band Edges of 802.11n-20 in channel 11,2483.5MHz

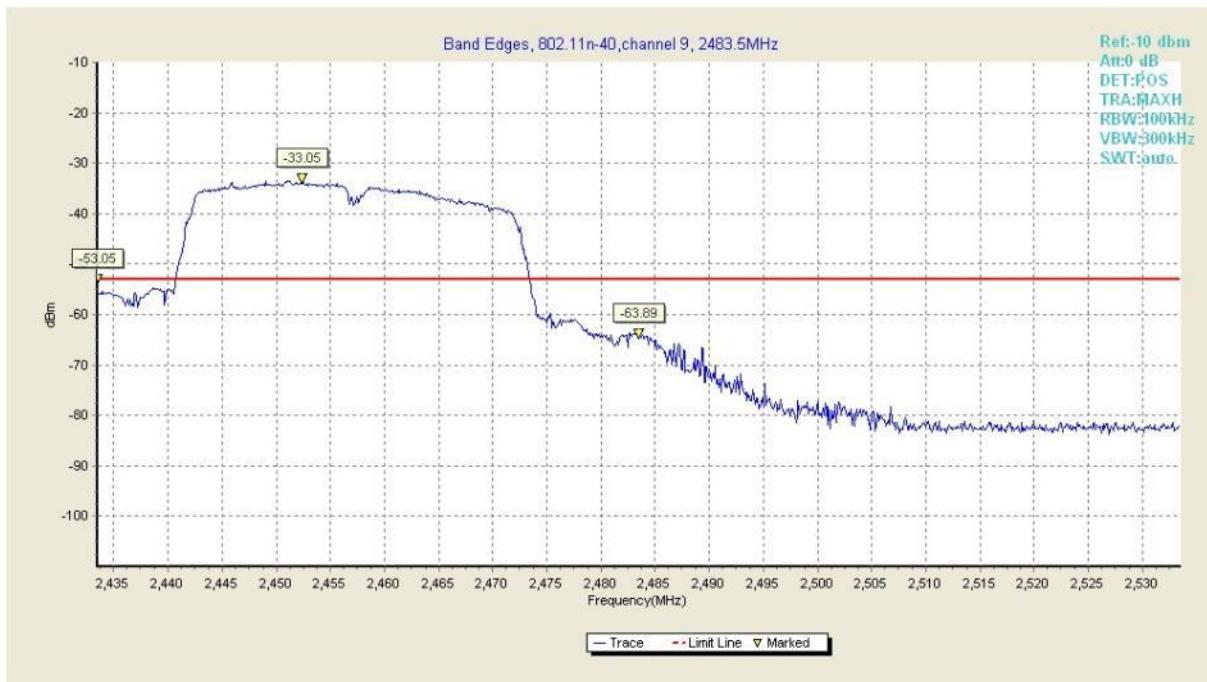
802.11n-40 mode

Channel	Frequency(MHz)	Limit (dB)	Test Result(MHz)		Verdict
3	2400	20	21.37	Fig.31	Pass

9	2483.5		30.84	Fig.32	Pass
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**Fig31. Frequency Band Edges of 802.11n-40 in channel 1,2400MHz**



**Fig32. Frequency Band Edges of 802.11n-40 in channel 11,2483.5MHz**

#### B.4.2 Radiated measurement

##### B.4.2.1 Procedures:

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal

from an external generator.

- b) Position the EUT on the rotated table inside the anechoic chamber without connection to measurement instrument. Turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range. Repeat above procedures until all measured frequencies were complete.
- c) Set band RBW=1MHz, VBW=3MHz with a convenient frequency span from band edge.
- d) Find the highest point in edge frequency, and then calculated results.
- e) Repeat above procedures until all measured frequencies were complete.

#### B.4.2.2 Test Results

Only the worst case 802.11b were reported

Frequency (MHz)	Receiver Reading (dB $\mu$ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor (dB)	Corrected Amplitude (dB $\mu$ V/m)	FCC Part 15.247/209/205	
				Height (m)	Polar (H/V)			Limit (dB $\mu$ V/m)	Margin (dB)
2400MHz									
485.79	12.88	QP	333	1.1	H	21.09	33.97	46.50	-12.53
485.79	12.25	QP	48	1.6	V	21.09	33.34	46.50	-13.16
4824.00	50.46	PK	18	1.4	V	-1.07	49.39	74.00	-24.61
4824.00	48.79	Ave	18	1.4	V	-1.07	47.72	54.00	-6.28
7236.00	46.17	PK	52	1.7	H	1.35	47.52	74.00	-26.48
7236.00	45.27	Ave	52	1.7	H	1.35	46.62	54.00	-7.38
2330.44	46.01	PK	212	1.8	V	-13.18	32.83	74.00	-41.17
2330.44	39.58	Ave	212	1.8	V	-13.18	26.40	54.00	-27.60
2364.34	44.13	PK	231	1.5	H	-13.16	30.97	74.00	-43.03
2364.34	38.98	Ave	231	1.5	H	-13.16	25.82	54.00	-28.18
<b>2400</b>	<b>43.59</b>	<b>PK</b>	<b>214</b>	<b>1.6</b>	<b>V</b>	<b>-13.18</b>	<b>30.41</b>	<b>74.00</b>	<b>-43.59</b>
<b>2400</b>	<b>40.35</b>	<b>Ave</b>	<b>214</b>	<b>1.6</b>	<b>V</b>	<b>-13.18</b>	<b>27.17</b>	<b>54.00</b>	<b>-26.83</b>
2484.53	42.30	PK	162	1.7	V	-13.19	29.11	74.00	-44.89
2484.53	37.84	Ave	162	1.7	V	-13.19	24.65	54.00	-29.35
2483.5MHz									
485.79	14.63	QP	355	1.6	H	21.09	35.72	46.50	-10.78
485.79	12.50	QP	56	1.5	V	21.09	33.59	46.50	-12.91
4924.00	50.38	PK	195	1.9	V	-0.25	50.13	74.00	-23.87

4924.00	48.76	Ave	195	1.9	V	-0.25	48.51	54.00	-5.49
7386.00	48.25	PK	150	1.0	H	2.86	51.11	74.00	-22.89
7386.00	47.39	Ave	150	1.0	H	2.86	50.25	54.00	-3.75
2316.30	46.90	PK	323	1.5	V	-13.19	33.71	74.00	-40.29
2316.30	38.19	Ave	323	1.5	V	-13.19	25.00	54.00	-29.00
2358.05	45.00	PK	19	1.9	H	-13.14	31.86	74.00	-42.14
2358.05	36.55	Ave	19	1.9	H	-13.14	23.41	54.00	-30.59
<b>2483.5</b>	<b>44.76</b>	<b>PK</b>	<b>174</b>	<b>1.7</b>	<b>V</b>	<b>-13.11</b>	<b>31.65</b>	<b>74.00</b>	<b>-42.35</b>
<b>2483.5</b>	<b>36.63</b>	<b>Ave</b>	<b>174</b>	<b>1.7</b>	<b>V</b>	<b>-13.11</b>	<b>23.52</b>	<b>54.00</b>	<b>-30.48</b>
2492.22	44.69	PK	164	1.6	V	-13.08	31.61	74.00	-42.39
2492.22	37.63	Ave	164	1.6	V	-13.08	24.55	54.00	-29.45

## B.5 Conducted Transmission Spurious Emission

### B.5.1 Description

All harmonics/spurious must be at least 20 dB down from the highest emission level within the authorized band.

### B.5.2 Test Procedures

#### Conducted Measurement

EUT was set for low, mid, high channel with modulated mode and highest RF output power

The spectrum analyzer was connected to the antenna terminal.

#### Procedures

- a) The EUT was connected to SA by a low loss cable.
- b) Set RBW=100 kHz, VBW  $\geq$  RBW, scan up to 10th harmonics. All harmonics/Spurs emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

### B.5.3 Test Result

#### 802.11b mode

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

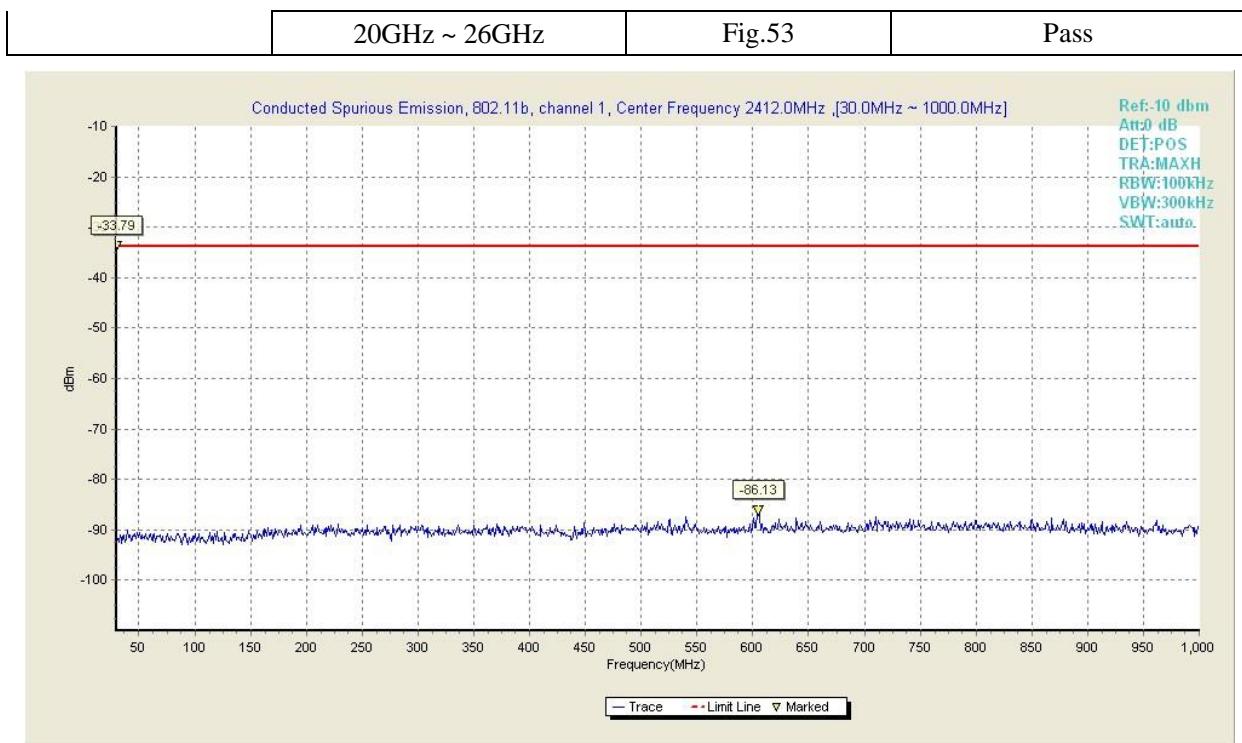


Fig33.Conducted Transmission Spurious Emission of 802.11b in channel 1,30MHz~1GHz

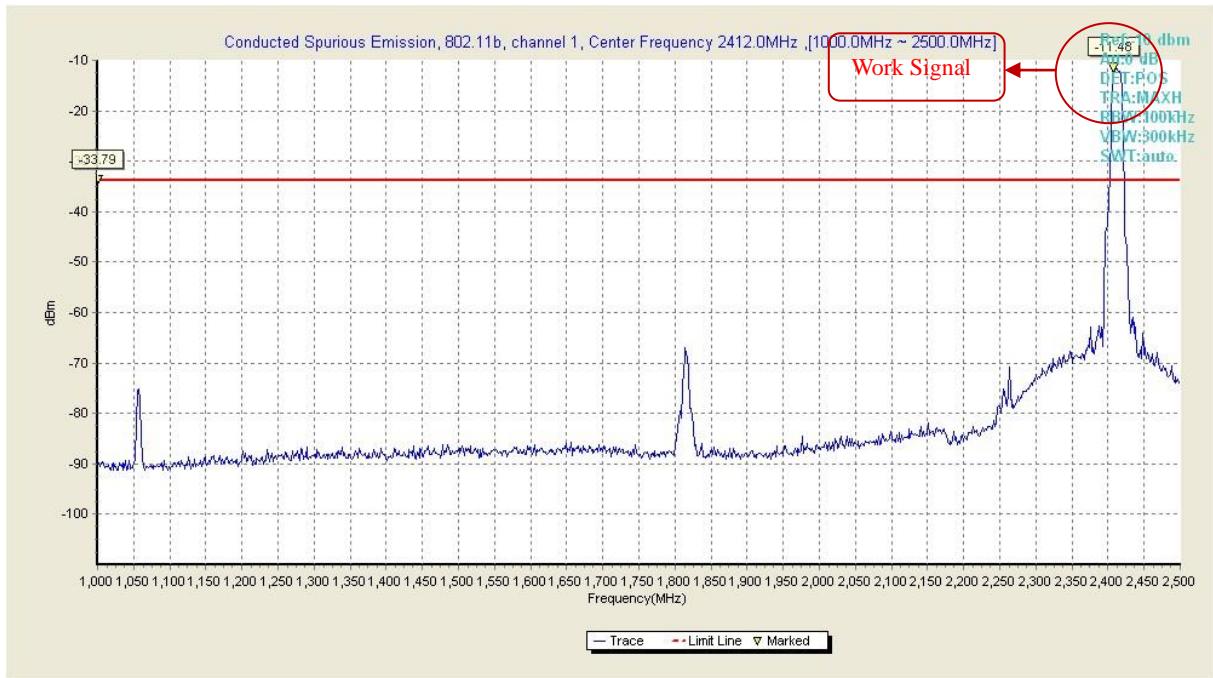


Fig34.Conducted Transmission Spurious Emission of 802.11b in channel 1,1GHz~2.5GHz

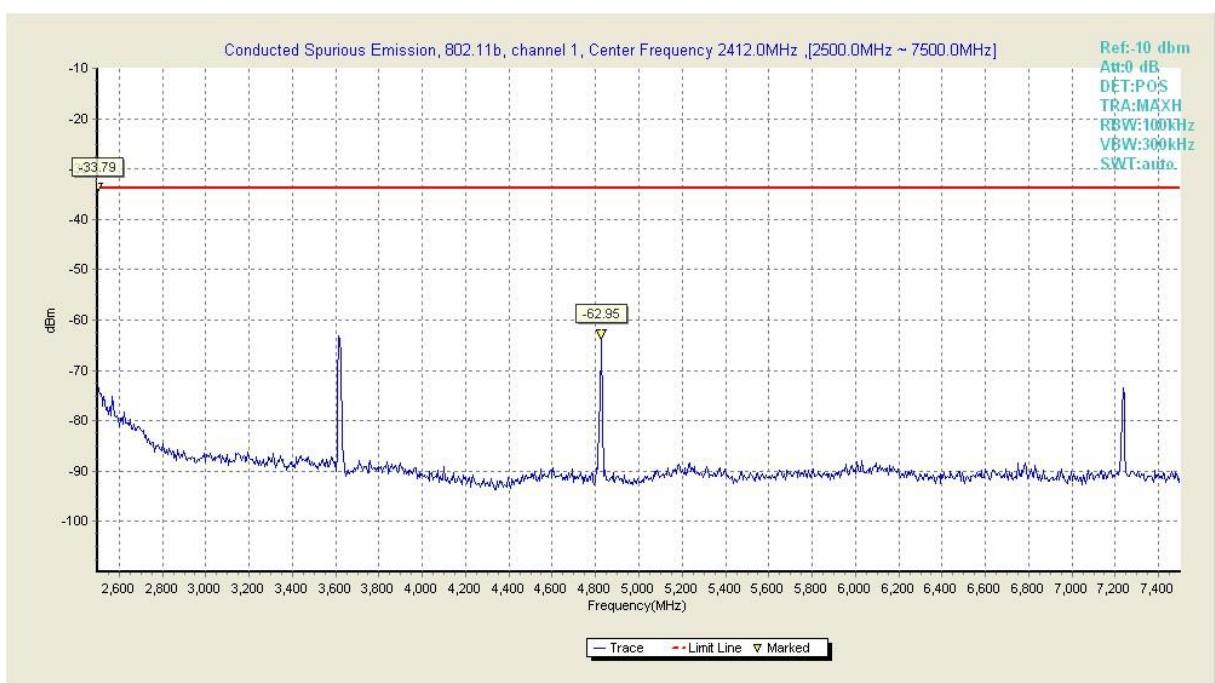


Fig35.Conducted Transmission Spurious Emission of 802.11b in channel 1, 2.5GHz~7.5GHz

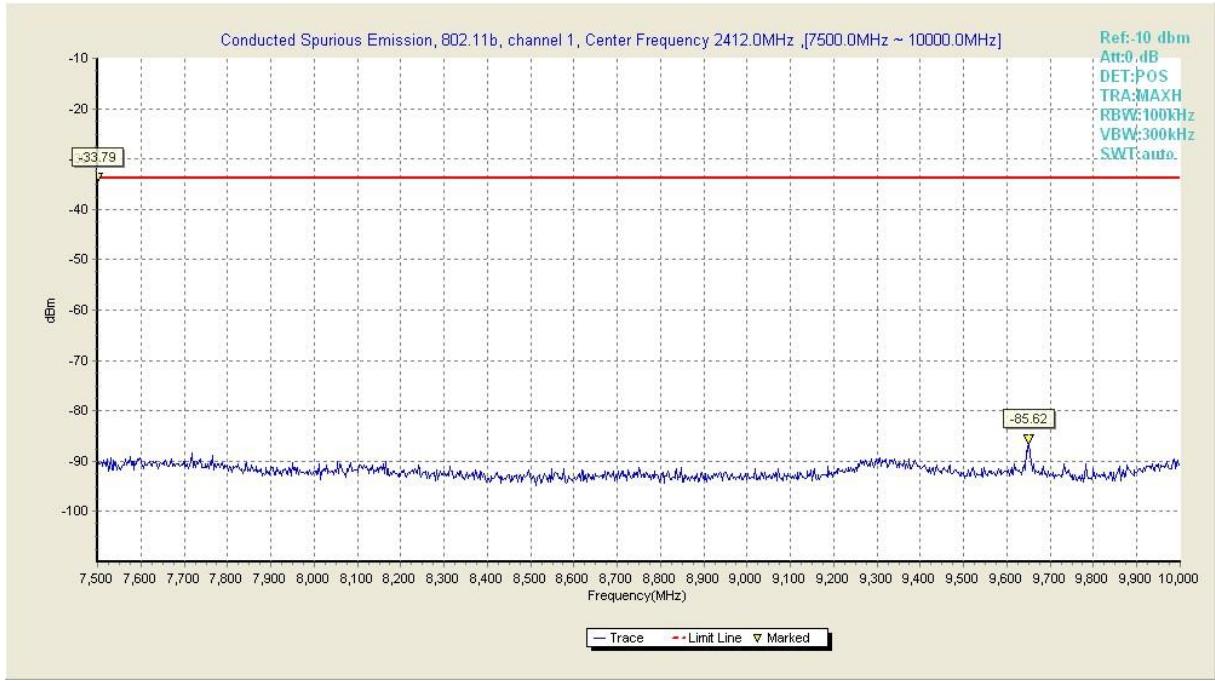


Fig36.Conducted Transmission Spurious Emission of 802.11b in channel 1, 7.5GHz~10.5GHz

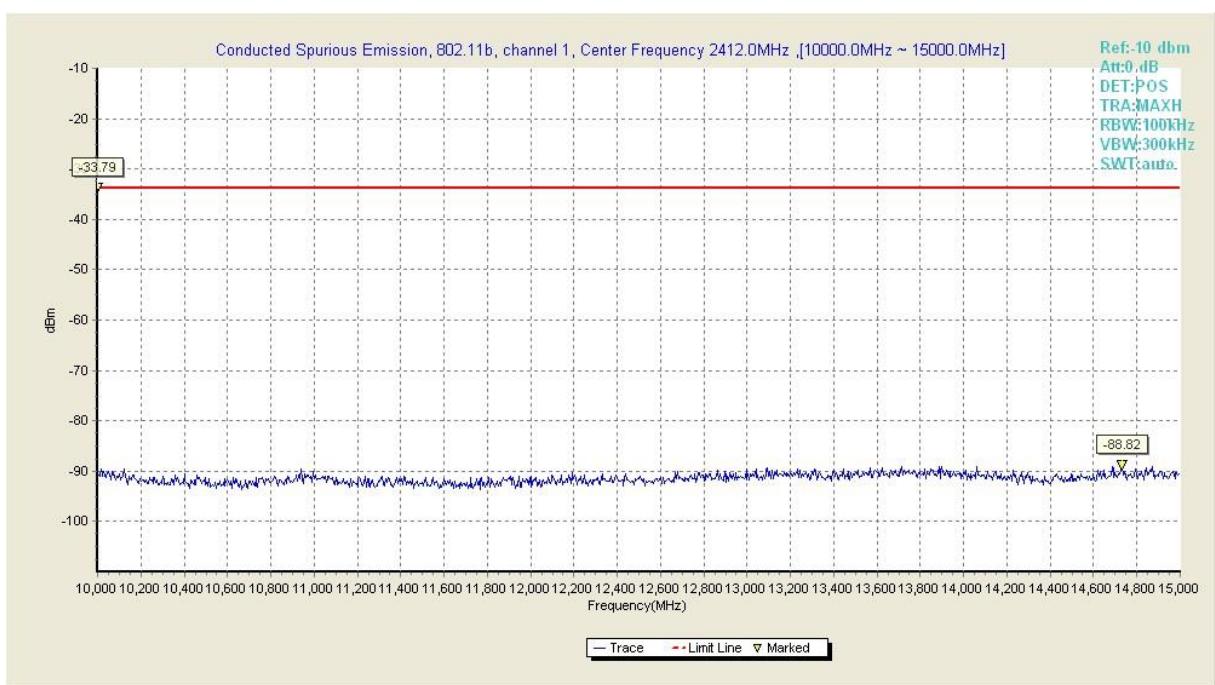


Fig37.Conducted Transmission Spurious Emission of 802.11b in channel 1, 10GHz~15GHz

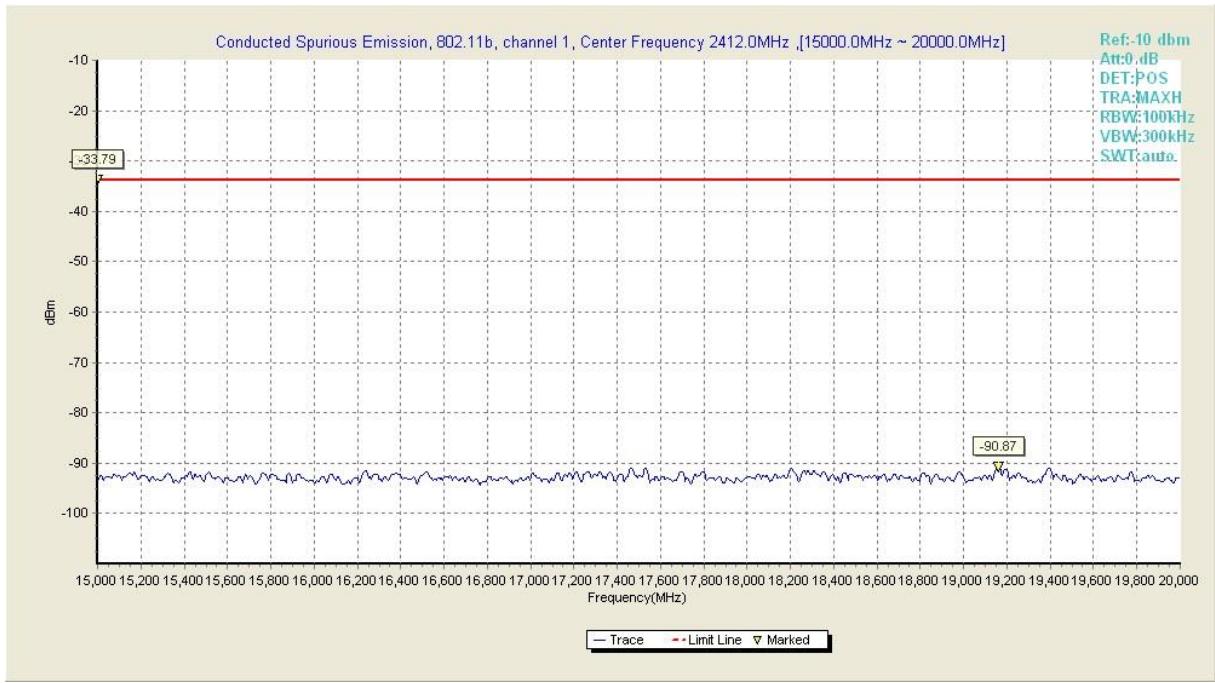


Fig38.Conducted Transmission Spurious Emission of 802.11b in channel 1, 15GHz~20GHz

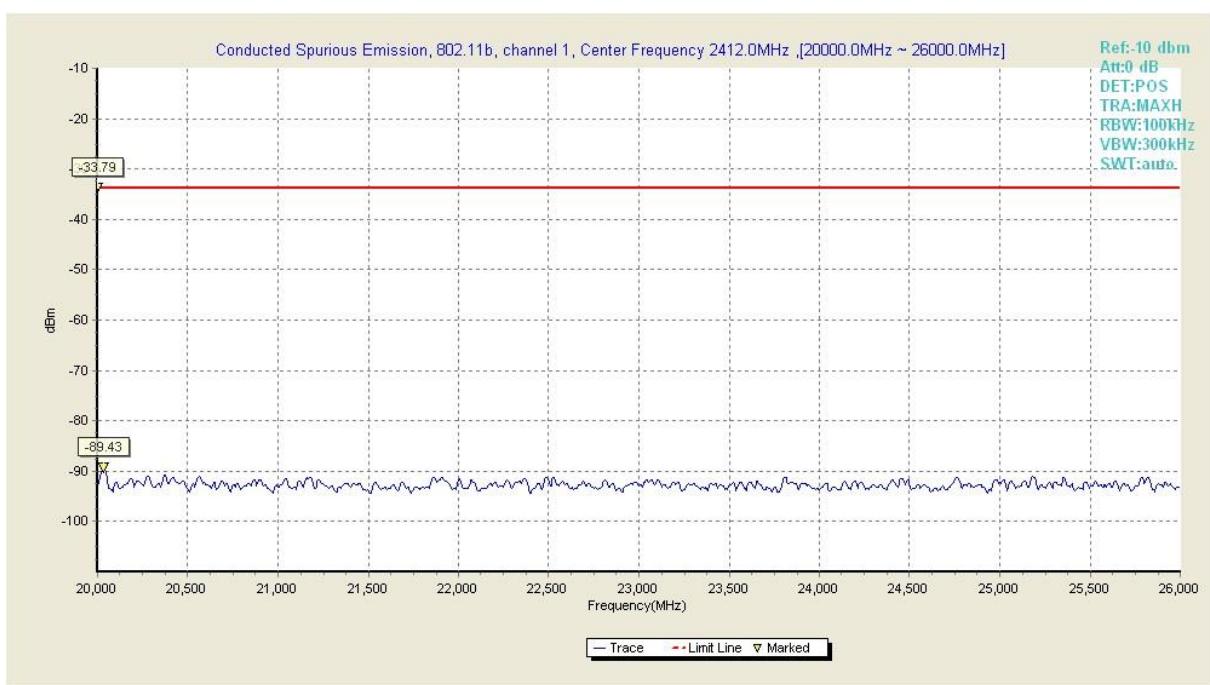


Fig39.Conducted Transmission Spurious Emission of 802.11b in channel 1, 20GHz~26GHz

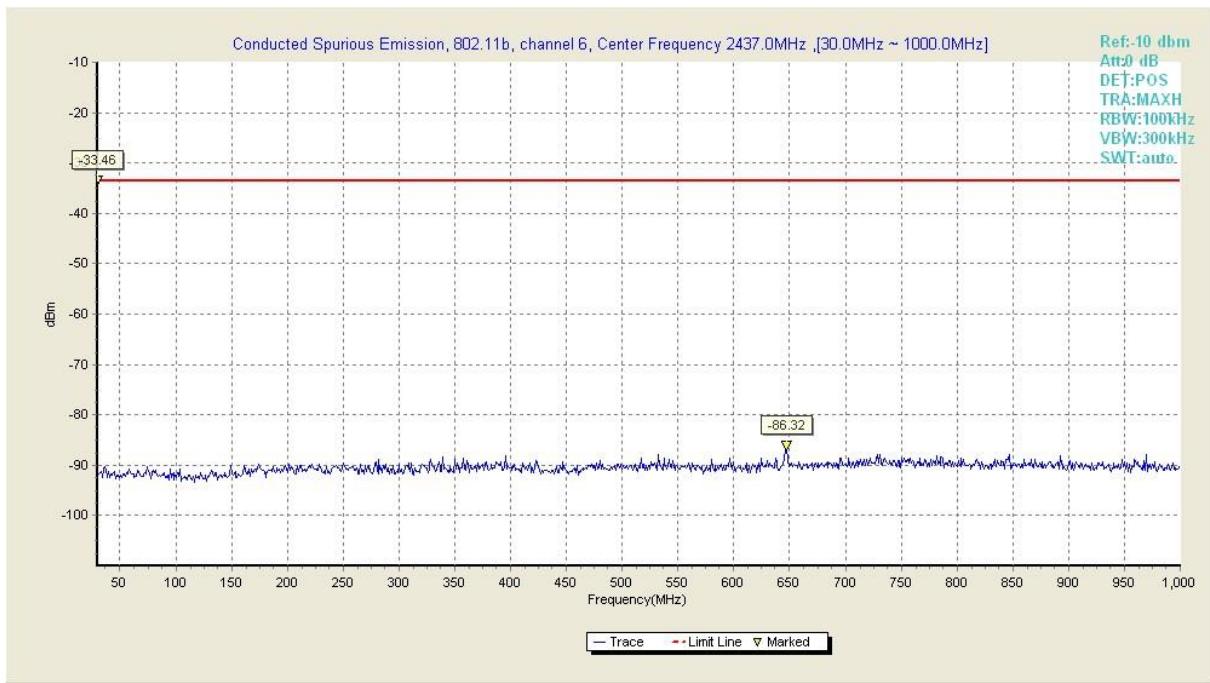


Fig40.Conducted Transmission Spurious Emission of 802.11b in channel 6, 30MHz~1GHz

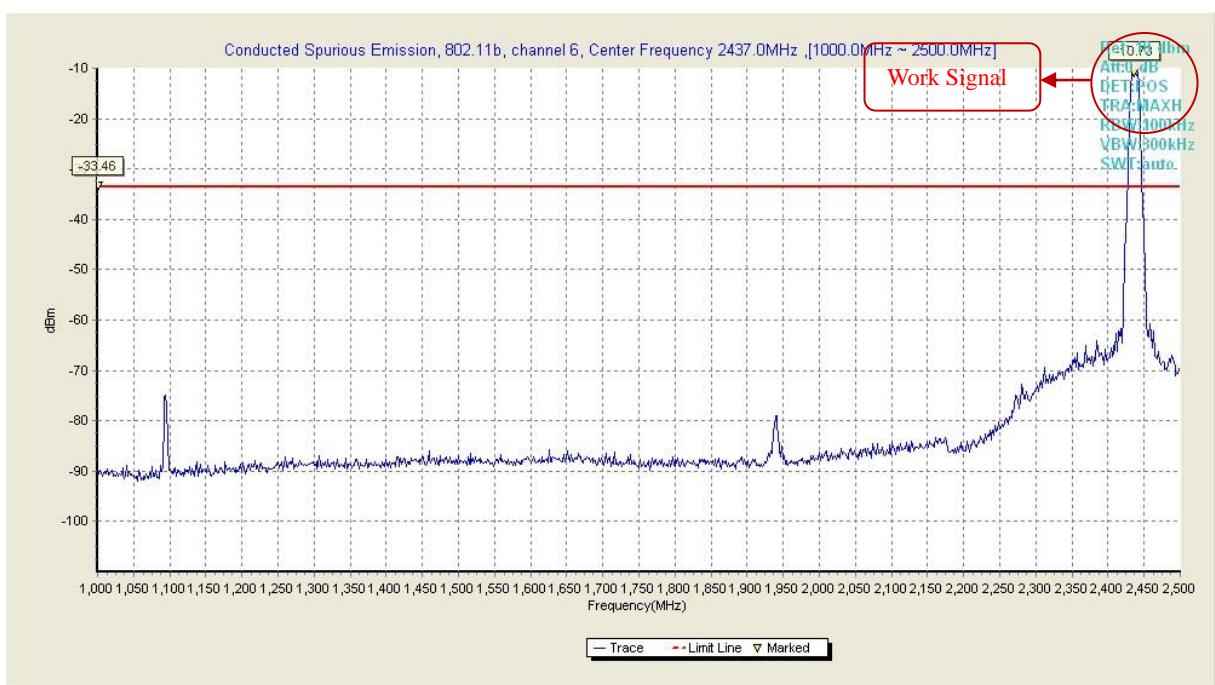


Fig41.Conducted Transmission Spurious Emission of 802.11b in channel 6, 1GHz~2.5GHz

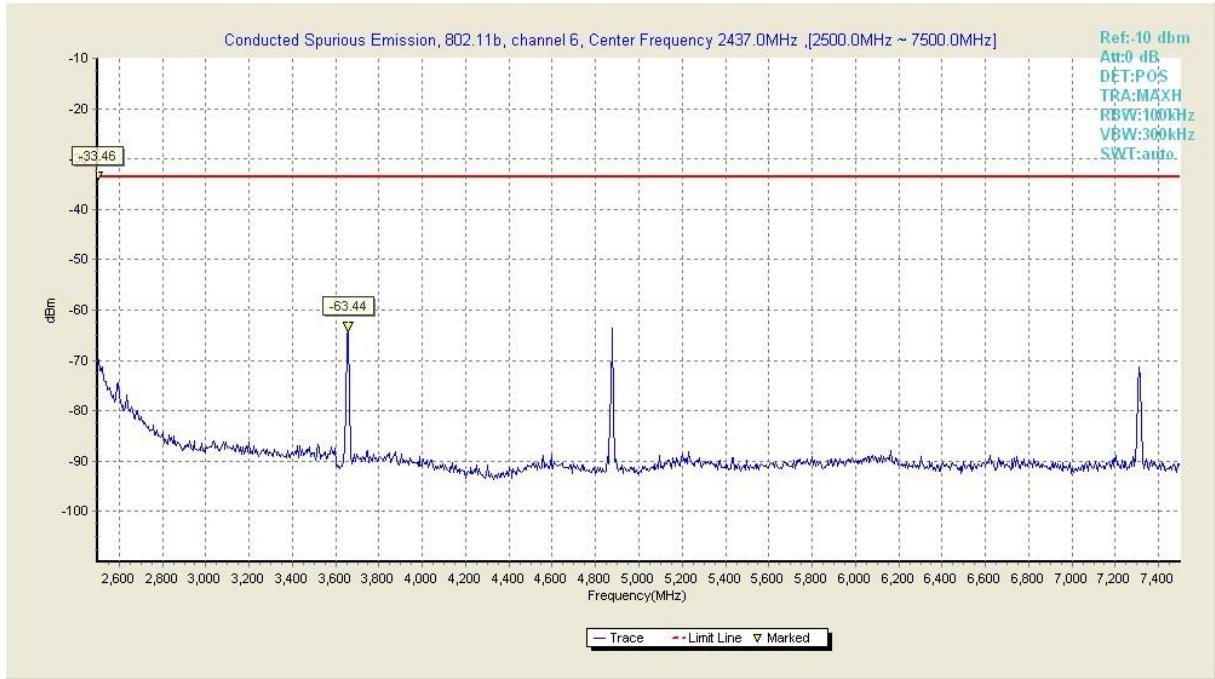


Fig42.Conducted Transmission Spurious Emission of 802.11b in channel 6, 2.5GHz~7.5GHz

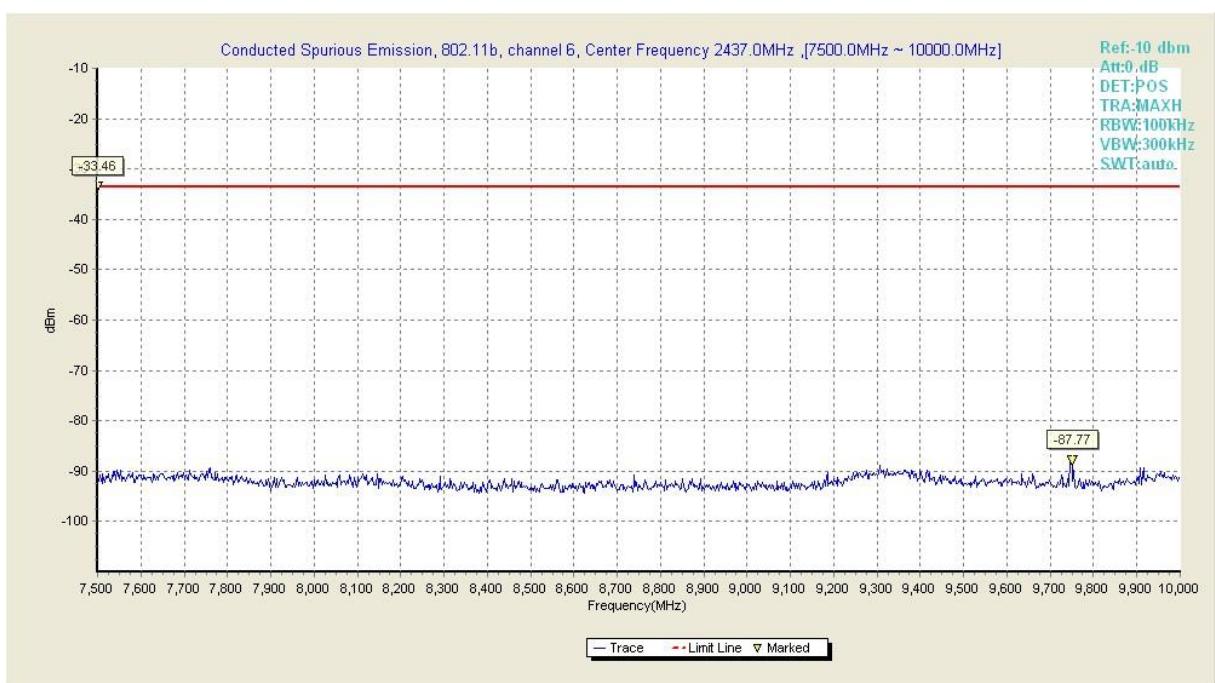


Fig43.Conducted Transmission Spurious Emission of 802.11b in channel 6, 7.5GHz~10GHz

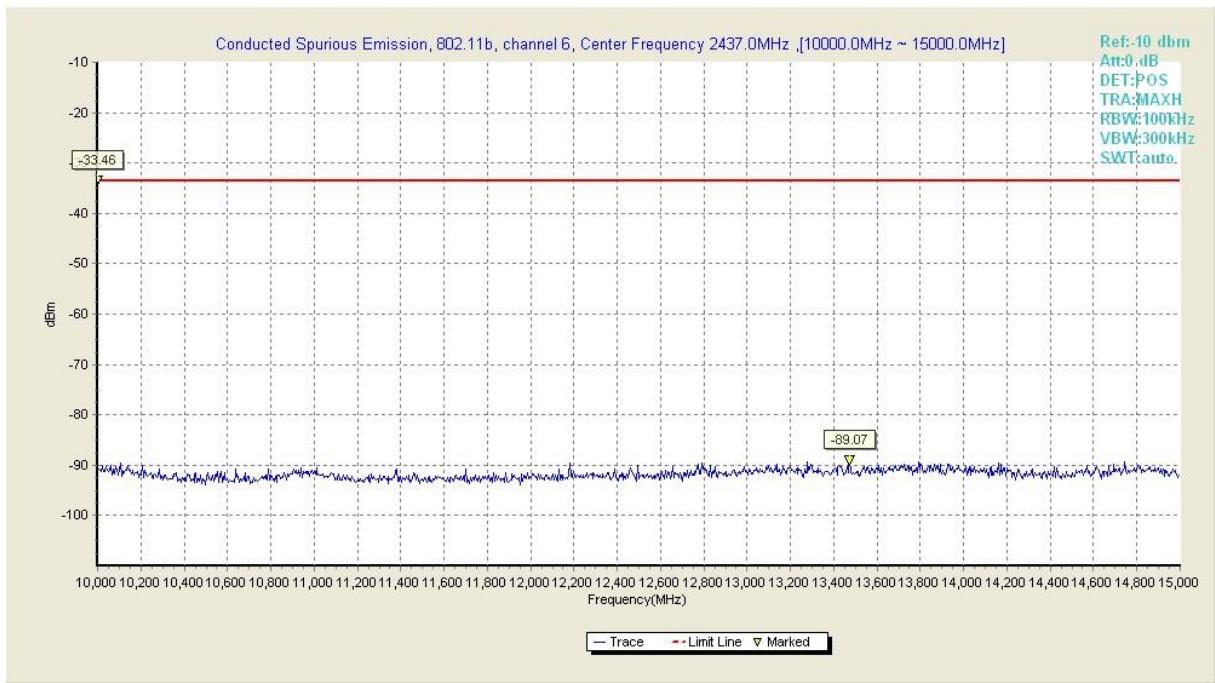


Fig44.Conducted Transmission Spurious Emission of 802.11b in channel 6, 10GHz~15GHz

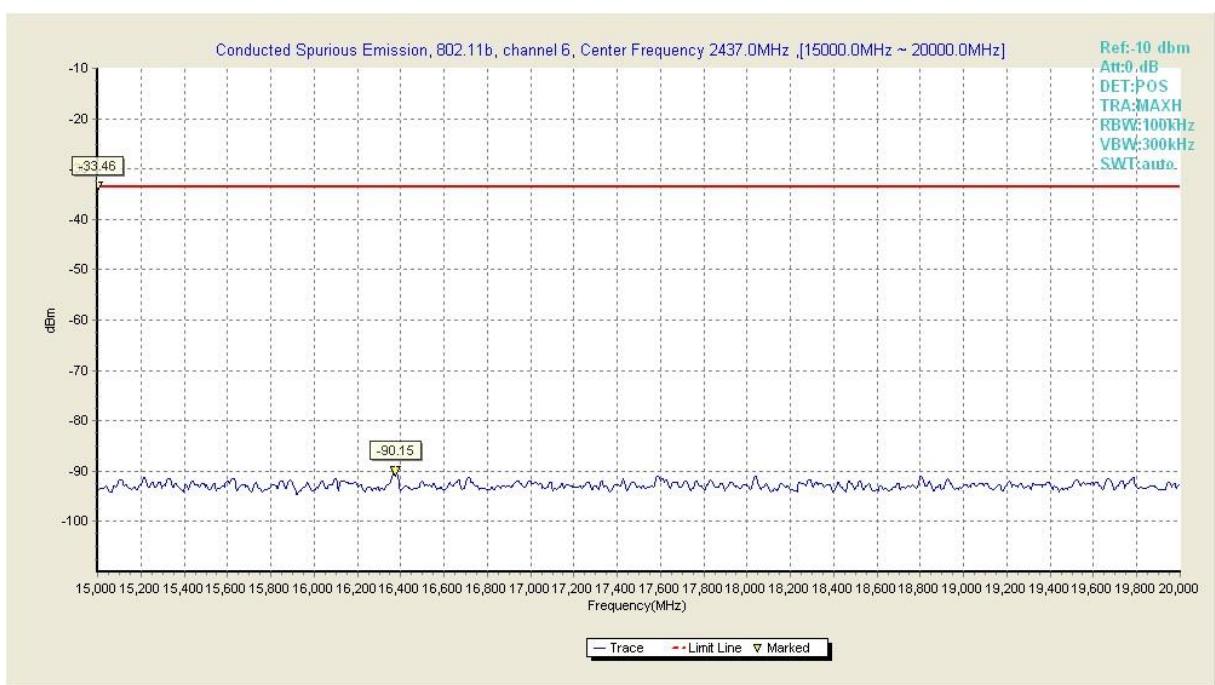


Fig45.Conducted Transmission Spurious Emission of 802.11b in channel 6, 15GHz~20GHz

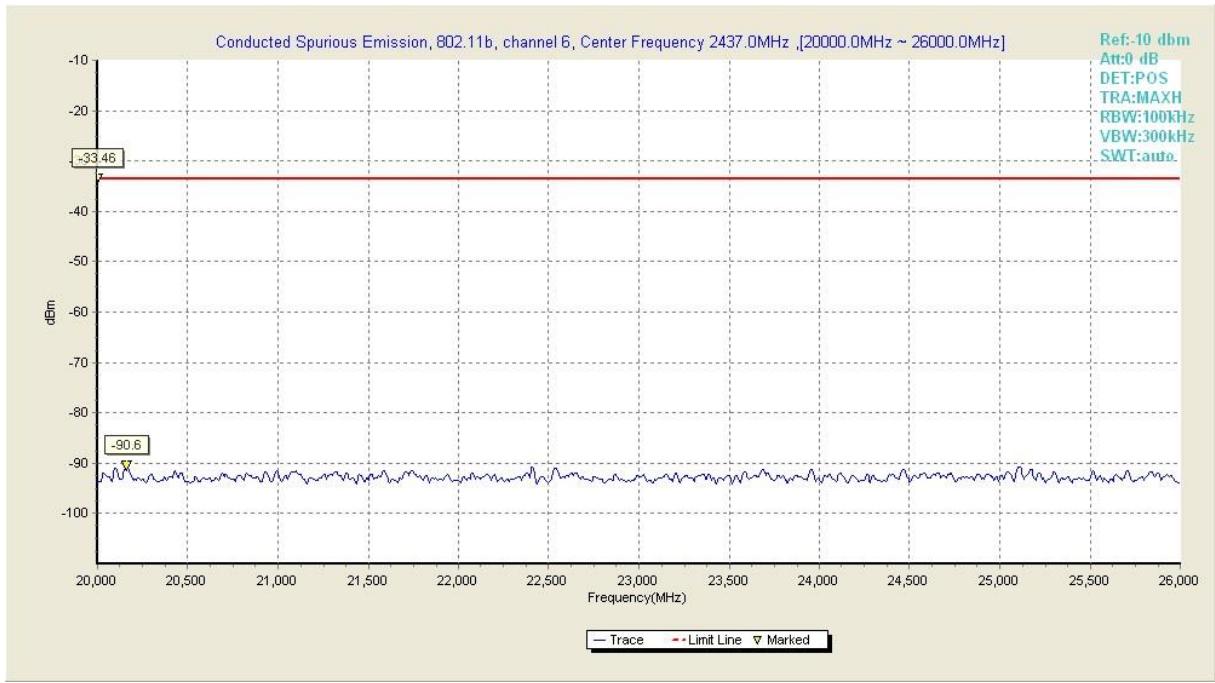


Fig46.Conducted Transmission Spurious Emission of 802.11b in channel 6, 20GHz~26GHz

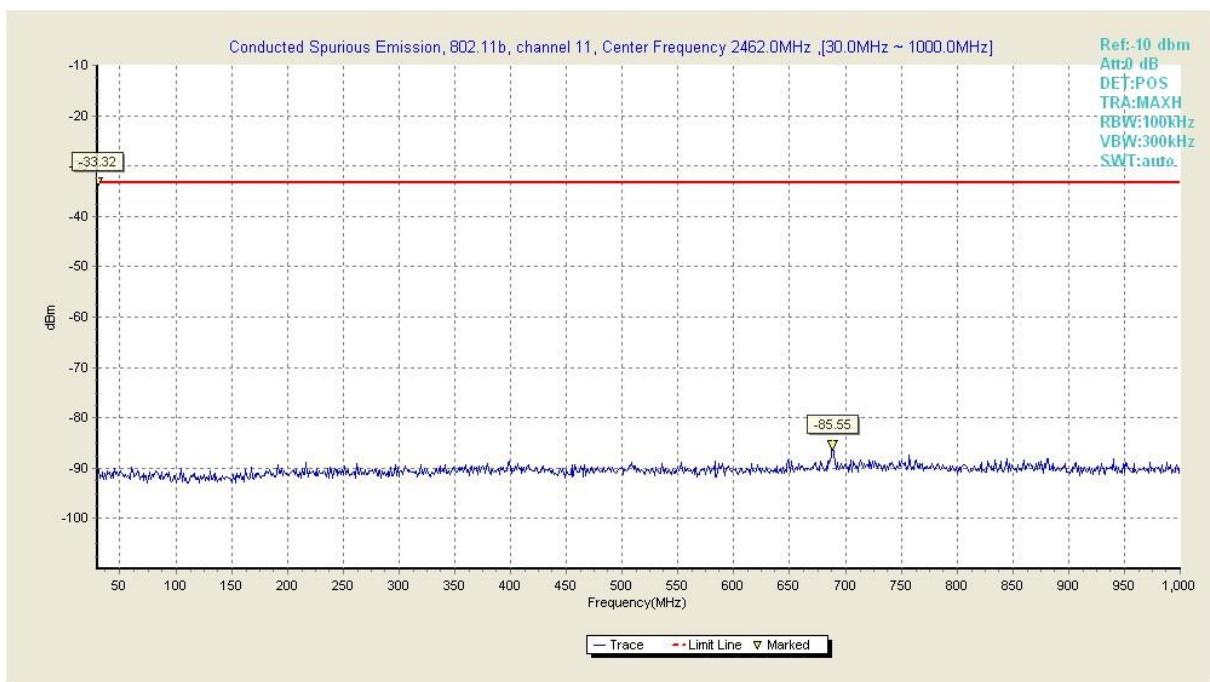


Fig47.Conducted Transmission Spurious Emission of 802.11b in channel 11, 30MHz~1GHz

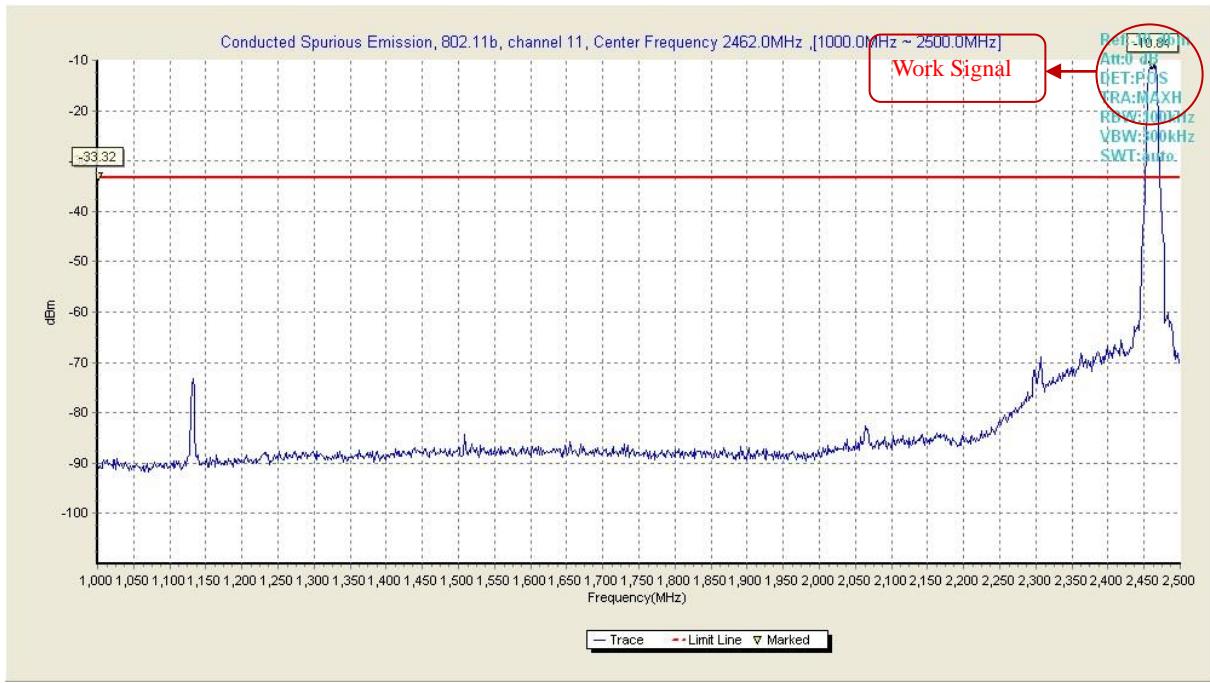


Fig48.Conducted Transmission Spurious Emission of 802.11b in channel 11, 1GHz~2.5GHz