# FCC 47 CFR PART 15 SUBPART C

# TEST REPORT

*For*

| | |
|---|---|
| **Applicant :** | **China Mobile Internet Technologies Inc.** |
| **Address :** | **No.76, Shenbei Road, Shenbei New Area, Shenyang, Liaoning ProVince, China** |
| **Product Name :** | **TransPhone** |
| **Model Name :** | **TP703** |
| **Brand Name :** | **TransPhone** |
| **FCC ID :** | **PT8T703** |
| **Report No. :** | **STS120808F3** |
| **Date of Issue :** | **September 15,2012** |


| | |
|---|---|
| **Issued by :** | **Shenzhen Super Test Service Technology Co., Ltd.** |
| **Address :** | **No.5, Langshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong, China** |
| **Tel :** | **86-755-2795 8522** |
| **Fax :** | **86-755-2795 8022** |

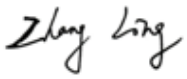
# TABLE OF CONTENTS

# 1. VERIFICATION OF CONFORMITY

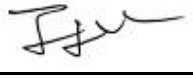
| | |
|---|---|
| **Equipment Under Test:** | TransPhone |
| **Brand Name:** | TransPhone |
| **Model Number:** | TP703 |
| **Series Model Name:** | N/A |
| **Difference description:** | N/A |
| **FCC ID:** | PT8T703 |
| **Applicant:** | China Mobile Internet Technologies Inc. |
| | 1 No.76, Shenbei Road, Shenbei New Area, Shenyang, Liaoning ProVince, China |
| **Manufacturer:** | China Mobile Internet Technologies Inc. |
| | No.76, Shenbei Road, Shenbei New Area, Shenyang, Liaoning ProVince, China |
| **Technical Standards:** | 47 CFR Part 15 Subpart C |
| **File Number:** | STS120808F3 |
| **Date of test:** | September 05,2012~ September 15,2012 |
| **Deviation:** | None |
| **Condition of Test Sample:** | Normal |
| **Test Result:** | PASS |

The above equipment was tested by *Shenzhen Super Test Service Technology Co., Ltd.* for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

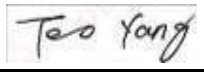
The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature): 

Zhang Ling September 15,2012

Review by (+ signature): 

July Wen September 15,2012

Approved by (+ signature): 

Terry Yang September 15,2012

# 2. GENERAL INFORMATION

## 2.1 Product Information

| **EUT- Mobile Phone** | |
|---|---|
| Description: | TransPhone |
| Model Name: | TP703 |
| Series Number: | N/A |
| Model Difference description: | N/A |
| Power Supply: | DC 5V by AC/DC adapter 100~240V 50/60Hz<br>DC 3.7V by Lithium-ion Battery |
| Frequency Range: | 2412MHz – 2472MHz, 2422-2452MHz(IEEE 802.11n-40 Band) |
| Number of Channels: | IEEE 802.11b/g/n mode: 13 Channels |
| Transmit Power | IEEE 802.11b mode: 16.0+/-1.5 dBm<br>IEEE 802.11g mode: 14.5+/-2 dBm<br>IEEE 802.11n-20 mode: 14.5+/-2 dBm<br>IEEE 802.11n-40 mode: 14.5+/-2 dBm |
| Modulation Technique: | IEEE 802.11b mode: DSSS (1, 2, 5.5 and 11 Mpbs)<br>IEEE 802.11g mode: OFDM (6, 9, 12, 18, 24, 36, 48 and 54 Mpbs)<br>802.11n Standard-20 MHz Channel mode: OFDM (6.5, 13, 19.5, 26, 39, 52, 58.5, 65.0Mbps)<br>802.11n Standard-40 MHz Channel mode: OFDM (6.5, 13, 19.5, 26, 39, 52, 58.5, 65.0Mbps) |
| Antenna Gain: | 0dBi |
| Temperature Range: | -20°C ~ +50°C |

***NOTE:***

1. For a more detailed features description about the EUT, please refer to User's Manual.

## 2.2 Objective

The objective of the report is to perform tests according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

| No. | Identity | Document Title |
|---|---|---|
| 1 | 47 CFR Part 15(10-1-05 Edition) | Radio Frequency Devices |

## 2.3 Test Standards and Results

Test items and the results are as bellow:

| No. | Section | Description | Result | Date of Test |
|---|---|---|---|---|
| 1 | 15.247(a)(2) | 6dB Bandwidth | PASS | 2012-9-12 |
| 2 | 15.247(b)(3) | Peak Output Power | PASS | 2012-9-12 |
| 3 | 15.247(d) | conducted spurious emission | PASS | 2012-9-12 |
| 4 | 15.247(d) | Band Edge | PASS | 2012-9-12 |
| 5 | 15.247(e) | Power Spectral Density | PASS | 2012-9-12 |
| 6 | 15.207 | Conducted Emission | PASS | 2012-9-12 |
| 7 | 15.247(d)<br>15.205<br>15.209 | Radiated Emission | PASS | 2012-9-12 |

*Note: 1. The test result judgment is decided by the limit of measurement standard*
*2. The information of measurement uncertainty is available upon the customer's request.*

## 2.4 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35ºC
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

# 3. TEST FACILITY

## 3.1TEST FACILITY

| | |
|---|---|
| Test Site: | Most Technology Service Co., Ltd. |
| Location: | No.5, Langshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong, China |
| Description: | There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009 and CISPR 16 requirements.<br>The FCC Registration Number is **490827.** |
| Site Filing: | The site description is on file with the Federal Communications<br>Commission, 7435 Oakland Mills Road, Columbia, MD 21046. |
| Instrument Tolerance: | All measuring equipment is in accord with ANSI C63.4:2009 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement. |
| Ground Plane: | Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. |

## 3.2 GENERAL TEST PROCEDURES

**EUT Function and Test Mode**

The EUT has been tested under normal operating（TX）and standby（RX）condition.

The field strength of radiation emission was measured in the following position: EUT stand-up position (Y axis), lie-down position (X, Z axis).

The following data show only with the worst case setup.

The worst case of Y axis was reported.

Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report.

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4:2009,Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2009.

## 3.3 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|---|---|---|---|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| [1]0.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - 156.52525 | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.7 - 156.9 | 2655 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 162.0125 - 167.17 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 167.72 - 173.2 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 240 - 285 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 322 - 335.4 | 3600 - 4400 | ([2]) |
| 13.36 - 13.41 | | | |

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

# 4. TEST EQUIPMENT LIST

**Instrumentation:** The following list contains equipment used at MOST for testing. The equipment conforms to the CISPR 16-1/ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

| No. | Equipment | Manufacturer | Model No. | S/N | Calibration date | Calibration due date |
|---|---|---|---|---|---|---|
| 1 | Test Receiver | Rohde & Schwarz | ESCI | 100492 | 2012/03/14 | 2013/03/14 |
| 2 | L.I.S.N. | Rohde & Schwarz | ENV216 | 100093 | 2012/03/14 | 2013/03/14 |
| 3 | Coaxial Switch | Anritsu Corp | MP59B | 6200283933 | 2012/03/14 | 2013/03/14 |
| 4 | Terminator | Hubersuhner | 50Ω | No.1 | 2012/03/14 | 2013/03/14 |
| 5 | RF Cable | SchwarzBeck | N/A | No.1 | 2012/03/14 | 2013/03/14 |
| 6 | Test Receiver | Rohde & Schwarz | ESPI | 101202 | 2012/03/14 | 2013/03/14 |
| 7 | Bilog Antenna | Sunol | JB3 | A121206 | 2012/03/14 | 2013/03/14 |
| 8 | Test Antenna - Horn | Schwarzbeck | BBHA 9120C | -- | 2012/03/14 | 2013/03/14 |
| 9 | Test Antenna - LOOP | Schwarzbeck | VULB 9163 | -- | 2012/03/14 | 2013/03/14 |
| 10 | Cable | Resenberger | N/A | NO.1 | 2012/03/14 | 2013/03/14 |
| 11 | Cable | SchwarzBeck | N/A | NO.2 | 2012/03/14 | 2013/03/14 |
| 12 | Cable | SchwarzBeck | N/A | NO.3 | 2012/03/14 | 2013/03/14 |
| 13 | DC Power Filter | DuoJi | DL2×30B | N/A | 2012/03/14 | 2013/03/14 |
| 14 | Single Phase Power Line Filter | DuoJi | FNF 202B30 | N/A | 2012/03/14 | 2013/03/14 |
| 15 | 3 Phase Power Line Filter | DuoJi | FNF 402B30 | N/A | 2012/03/14 | 2013/03/14 |
| 16 | Spectrum Analyzer | Agilent | 4408B | MY41440460 | 2012/03/14 | 2013/03/14 |
| 17 | Absorbing Clamp | Luthi | MDS21 | 3635 | 2012/03/14 | 2013/03/14 |
| 18 | Coaxial Switch | Anritsu Corp | MP59B | 6200283933 | 2012/03/14 | 2013/03/14 |
| 19 | AC Power Source | Kikusui | AC40MA | LM003232 | 2012/03/14 | 2013/03/14 |
| 20 | Test Analyzer | Kikusui | KHA1000 | LM003720 | 2012/03/14 | 2013/03/14 |
| 21 | Line Impendence Network | Kikusui | LIN40MA-PCR-L | LM002352 | 2012/03/14 | 2013/03/14 |
| 22 | ESD Tester | Kikusui | KES4021 | LM003537 | 2012/03/14 | 2013/03/14 |
| 23 | EMCPRO System | EM Test | UCS-500-M4 | V0648102026 | 2012/03/14 | 2013/03/14 |
| 24 | Signal Generator | IFR | 2032 | 203002/100 | 2012/03/14 | 2013/03/14 |
| 25 | Amplifier | A&R | 150W1000 | 301584 | 2012/03/14 | 2013/03/14 |
| 26 | CDN | FCC | FCC-801-M2-25 | 47 | 2012/03/14 | 2013/03/14 |
| 27 | CDN | FCC | FCC-801-M3-25 | 107 | 2012/03/14 | 2013/03/14 |
| 28 | EM Injection Clamp | FCC | F-203I-23mm | 403 | 2012/03/14 | 2013/03/14 |
| 29 | RF Cable | MIYAZAKI | N/A | No.1/No.2 | 2012/03/14 | 2013/03/14 |
| 30 | Universal Radio Communication Tester | ROHDE&SCHWARZ | CMU200 | 0304789 | 2012/03/14 | 2013/03/14 |
| 31 | Telecommunication Antenna | European Antennas | PSA 75301R/170 | 0304213 | 2012/03/14 | 2013/03/14 |
| 32 | Temperature Chamber | Guangzhou Gongwen | GDS-250 | N/A | 2012/03/14 | 2013/03/14 |

***NOTE:*** *Equipments listed above have been calibrated and are in the period of validation.*

# 5. 47 CFR Part 15 C 15.247 Requirements

## 5.1 6dB Bandwidth

### 5.1.1 Definition

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 5.1.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

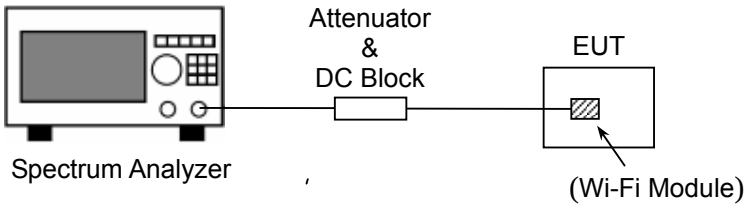



Figure 1: RF Test Setup

### 5.1.3 Test Result

The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the Module.

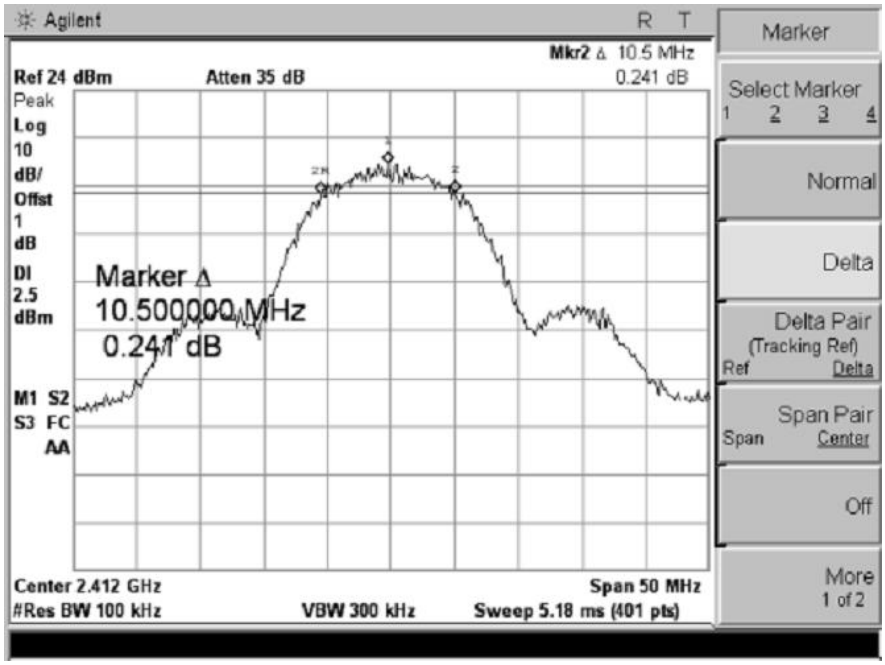
#### 5.1.3.1 802.11b Test Mode

The minimum occupied bandwidth for the fundamental frequency 2412MHz is 10.5MHz. This occupied bandwidth complies with the FCC requirement.

**A. Test Verdict:**

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---|---|---|---|---|
| 1 | 2412 | 10.5 | ≥ 500 | PASS |
| 6 | 2437 | 10.5 | ≥ 500 | PASS |
| 11 | 2462 | 11.1 | ≥ 500 | PASS |

**B. Test Plot:**

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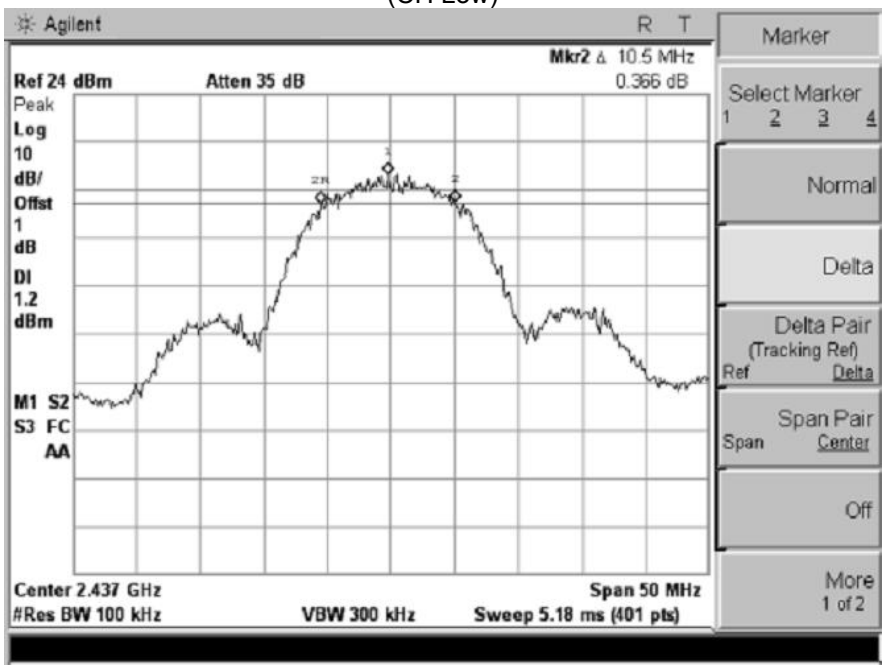
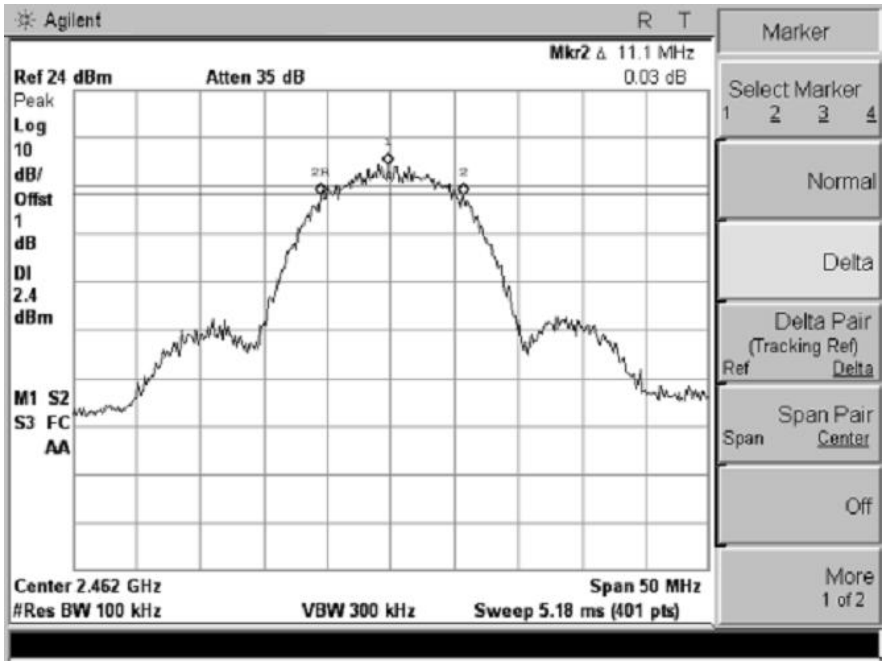



(CH Mid)




(CH High)

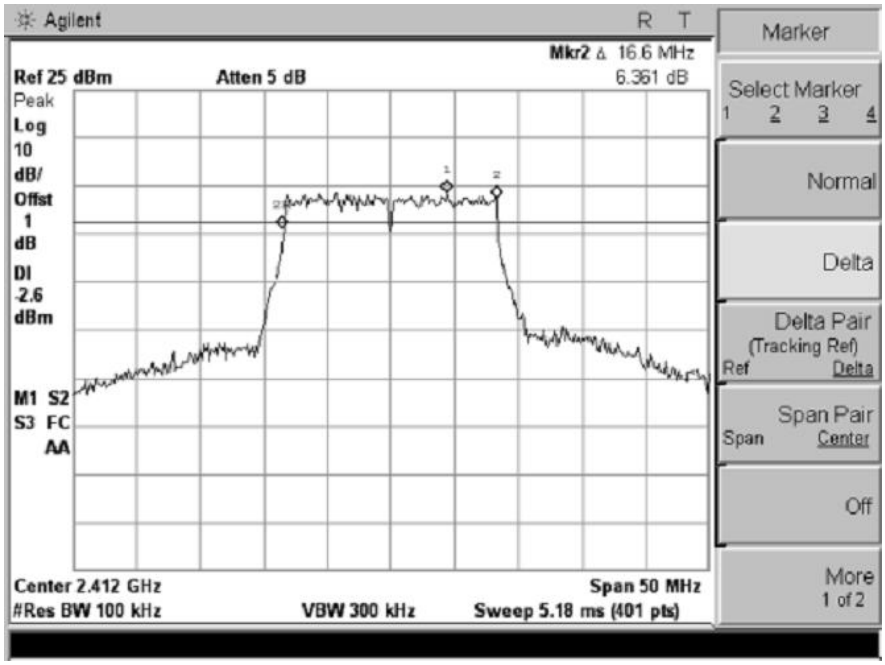
### 5.1.3.2 802.11g Test Mode

The minimum occupied bandwidth for the fundamental frequency 2412MHz is 16.6MHz. This occupied bandwidth complies with the FCC requirement.

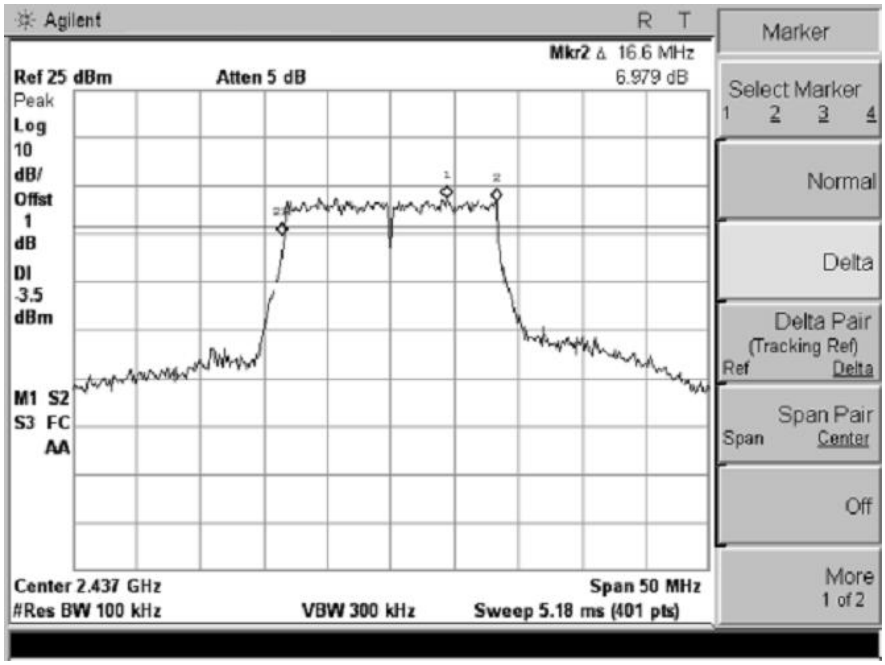
**A. Test Verdict:**

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---|---|---|---|---|
| 1 | 2412 | 16.6 | ≥ 500 | PASS |
| 6 | 2437 | 16.6 | ≥ 500 | PASS |
| 11 | 2462 | 16.6 | ≥ 500 | PASS |

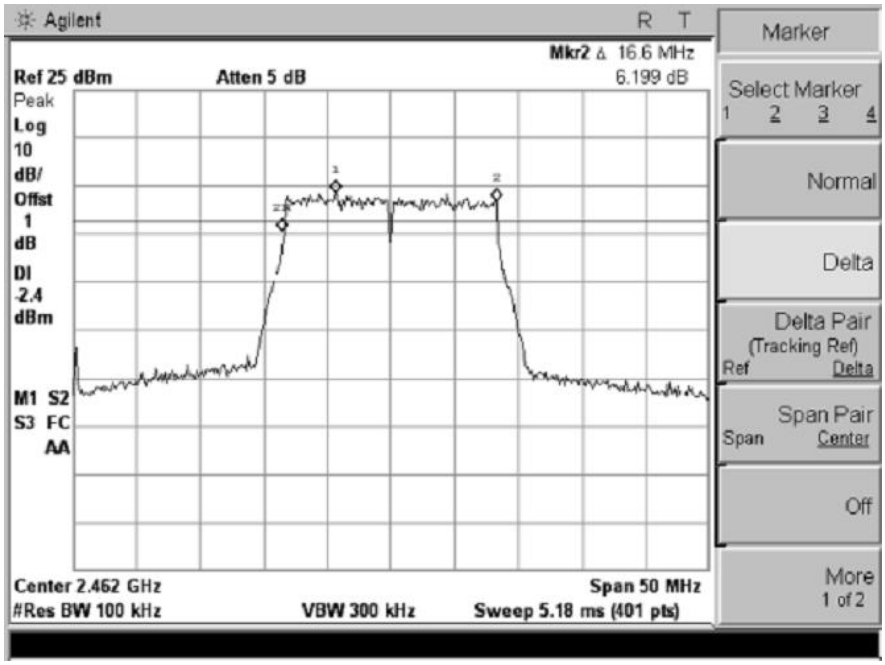
**B. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

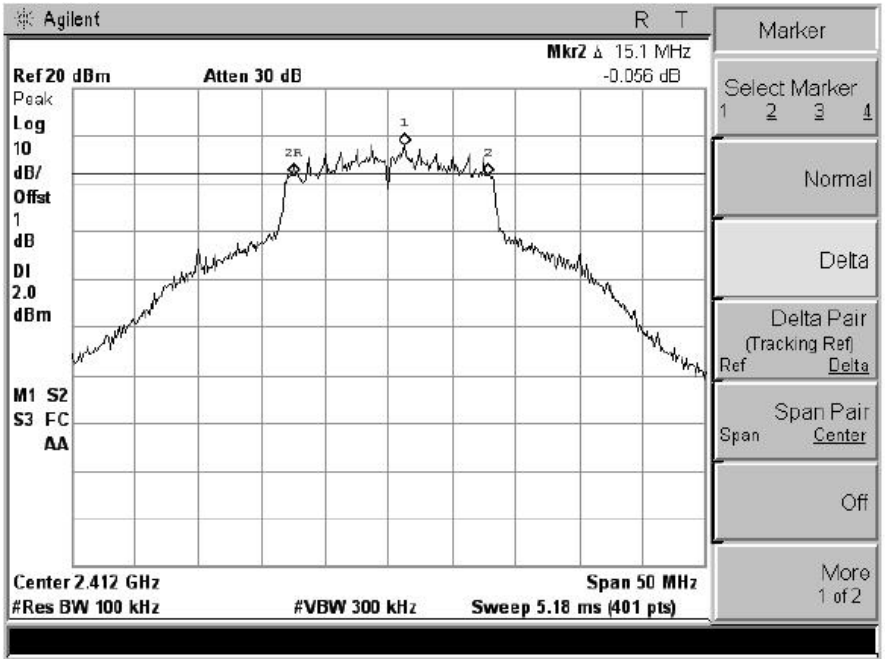
### 5.1.3.3 802.11n-20 Test Mode

The minimum occupied bandwidth for the fundamental frequency 2412MHz is 15.1MHz. This occupied bandwidth complies with the FCC requirement.

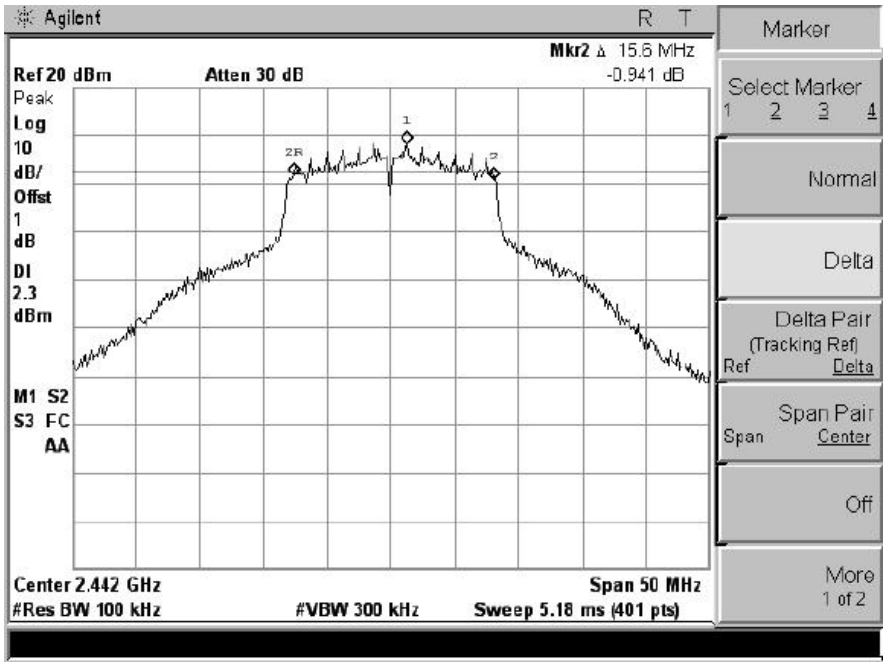
**A. Test Verdict:**

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---|---|---|---|---|
| 1 | 2412 | 15.1 | ≥ 500 | PASS |
| 6 | 2442 | 15.6 | ≥ 500 | PASS |
| 11 | 2462 | 15.4 | ≥ 500 | PASS |

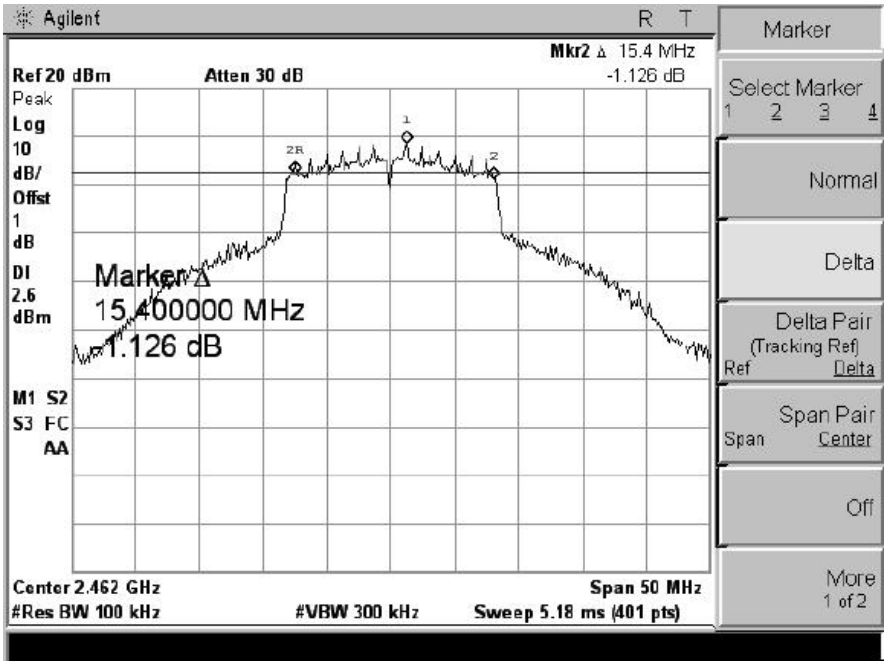
**B. Test Plot:**


Agilent
R T
Marker
Mkr2 Δ 15.1 MHz
Ref 20 dBm
Atten 30 dB
-0.056 dB
Peak
Log
10
dB/
Offst
1
dB
Dl
2.0
dBm
M1 S2
S3 FC
AA
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2
Center 2.412 GHz
Span 50 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.18 ms (401 pts)

(CH Low)


Agilent
R T
Marker
Mkr2 Δ 15.6 MHz
Ref 20 dBm
Atten 30 dB
-0.941 dB
Peak
Log
10
dB/
Offst
1
dB
Dl
2.3
dBm
M1 S2
S3 FC
AA
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2
Center 2.442 GHz
Span 50 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.18 ms (401 pts)

(CH Mid)




(CH High)

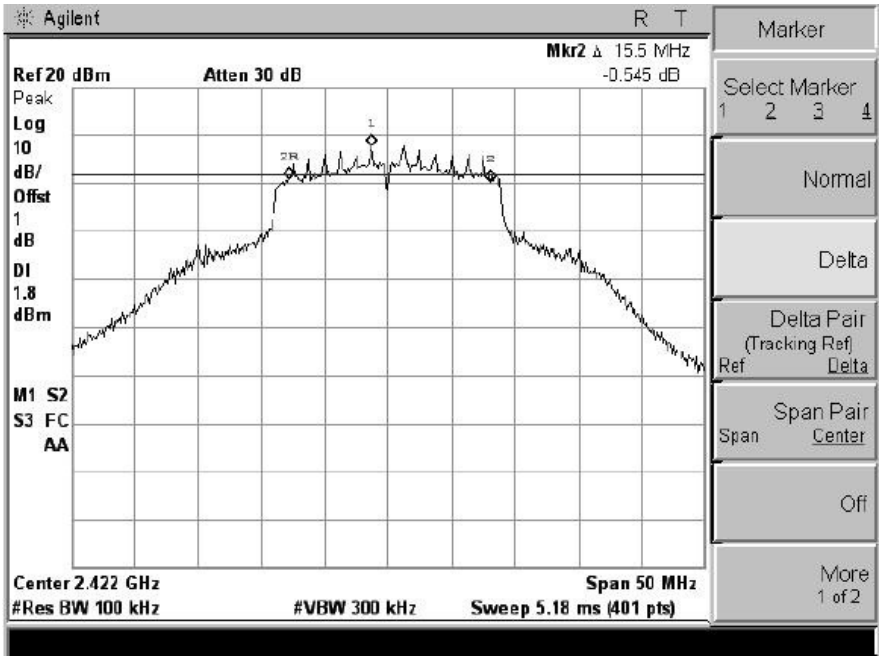
### 5.1.3.4 802.11n-40 Test Mode

The minimum occupied bandwidth for the fundamental frequency 2437MHz is 15.4MHz. This occupied bandwidth complies with the FCC requirement.

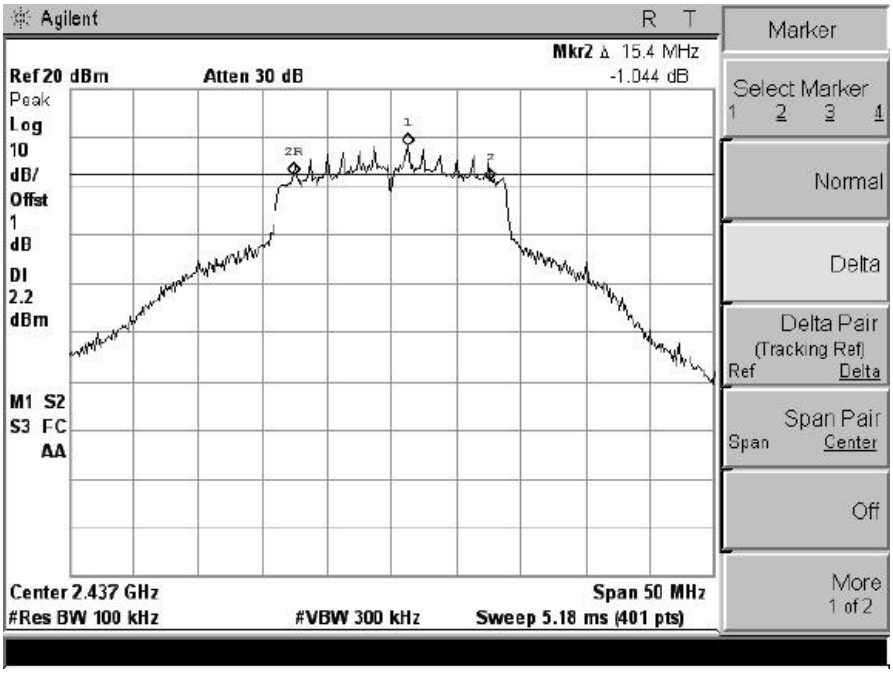
**C. Test Verdict:**

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---|---|---|---|---|
| 1 | 2422 | 15.5 | ≥ 500 | PASS |
| 6 | 2437 | 15.4 | ≥ 500 | PASS |
| 11 | 2452 | 15.6 | ≥ 500 | PASS |

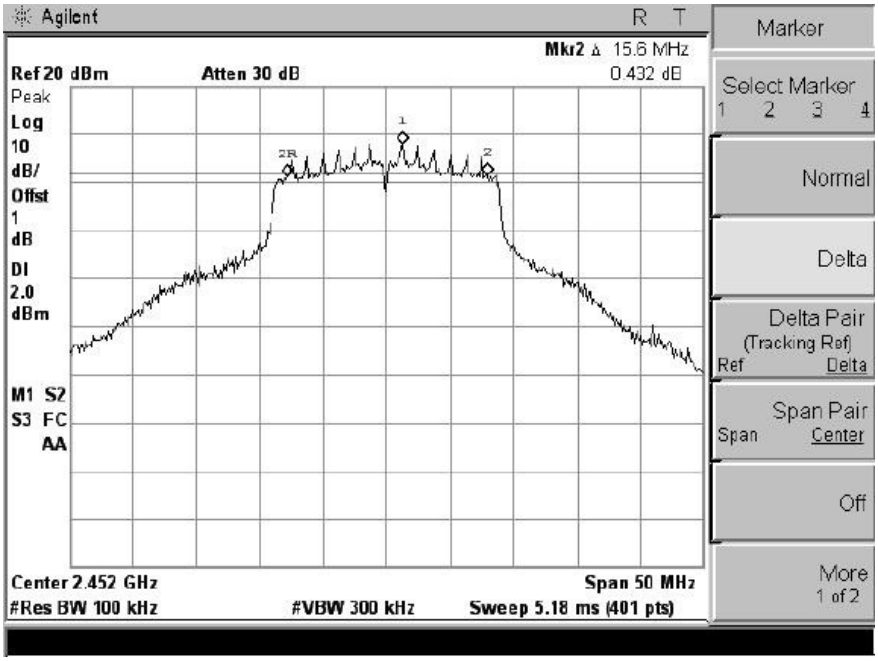
**D. Test Plot:**


Agilent
R T
Mkr2 Δ 15.5 MHz
Ref 20 dBm
Atten 30 dB
-0.545 dB
Peak
Log
10
dB/
Offst
1
dB
Dl
1.8
dBm
M1 S2
S3 FC
AA
Center 2.422 GHz
Span 50 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.18 ms (401 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

(CH Low)


Agilent
R T
Mkr2 Δ 15.4 MHz
Ref 20 dBm
Atten 30 dB
-1.044 dB
Peak
Log
10
dB/
Offst
1
dB
Dl
2.2
dBm
M1 S2
S3 FC
AA
Center 2.437 GHz
Span 50 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.18 ms (401 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

(CH Mid)


Agilent
R T
Mkr2 Δ 15.6 MHz
Ref 20 dBm
Atten 30 dB
0.432 dB
Peak
Log
10
dB/
Offst
1
dB
Dl
2.0
dBm
M1 S2
S3 FC
AA
Center 2.452 GHz
Span 50 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.18 ms (401 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

(CH High)

## 5.2 Peak Output Power

### 5.2.1 Definition

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

### 5.2.2 Test Description

See section 5.1.2 of this report.

### 5.2.3 Test Result

The EUT operates at maximum output power mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

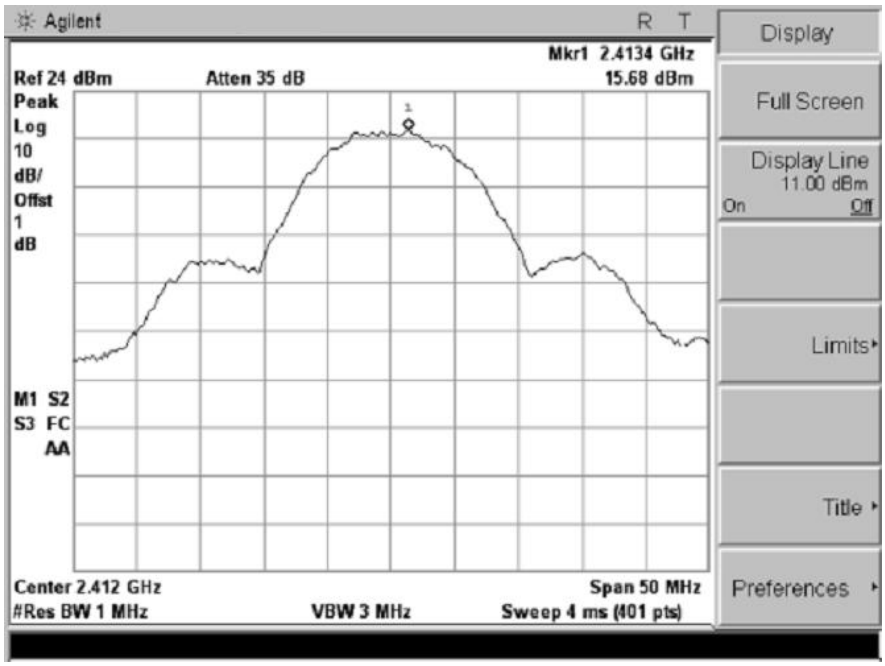
#### 5.2.3.1 802.11b Test Mode

The maximum output power for the fundamental frequency 2462MHz is 15.69dBm. This power complies with the FCC requirement.

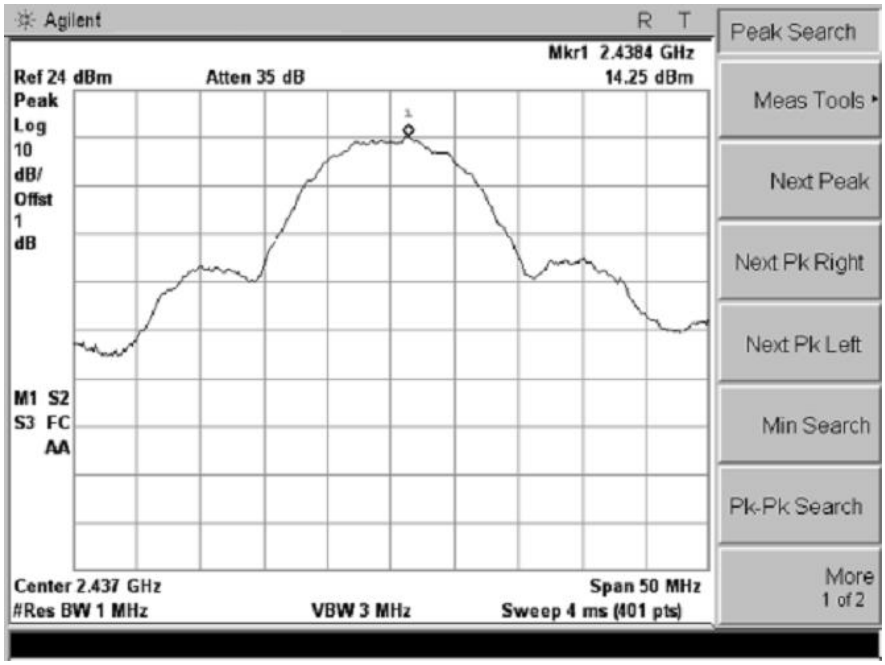
**A. Test Verdict:**

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 15.68 | 0.037 | 30 | 1 | PASS |
| 6 | 2437 | 14.25 | 0.027 | | | PASS |
| 11 | 2462 | 15.69 | 0.037 | | | PASS |

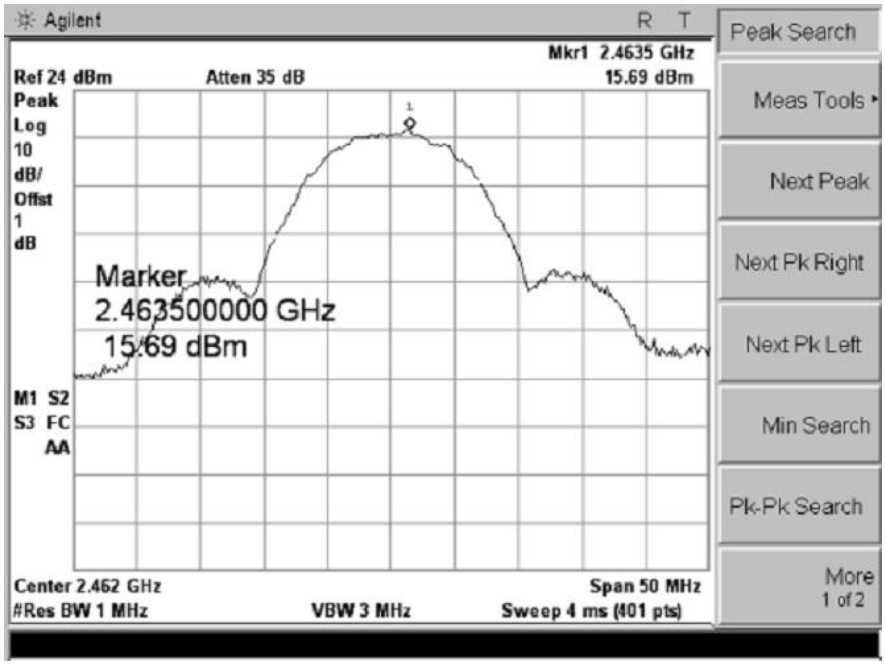
**B. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

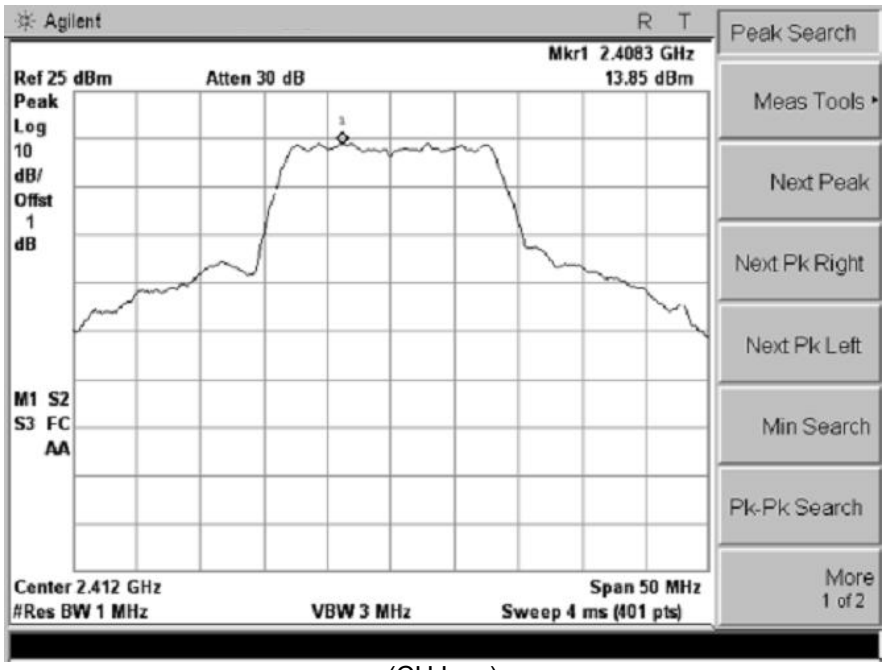
### 5.2.3.2 802.11g Test Mode

The maximum output power for the fundamental frequency 2462 MHz is 14.42dBm. This power complies with the FCC requirement.

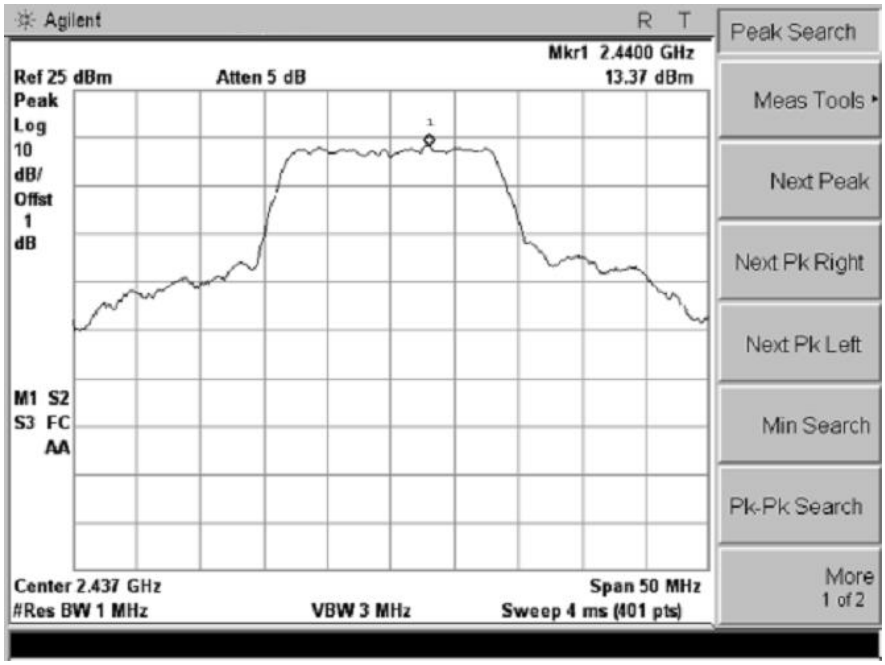
**A. Test Verdict:**

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 13.85 | 0.024 | 30 | 1 | PASS |
| 6 | 2437 | 13.37 | 0.022 | | | PASS |
| 11 | 2462 | 14.42 | 0.028 | | | PASS |

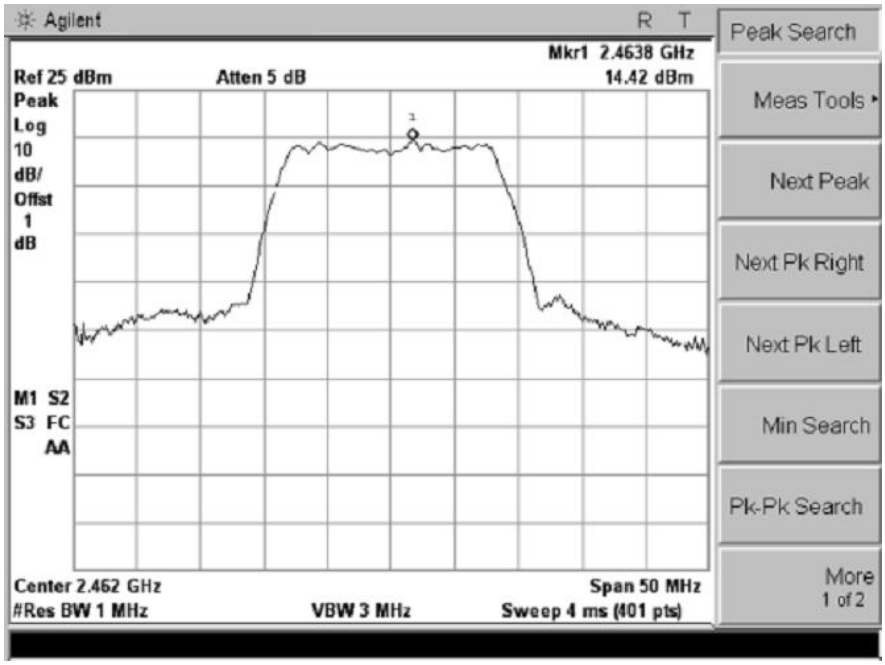
**B. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

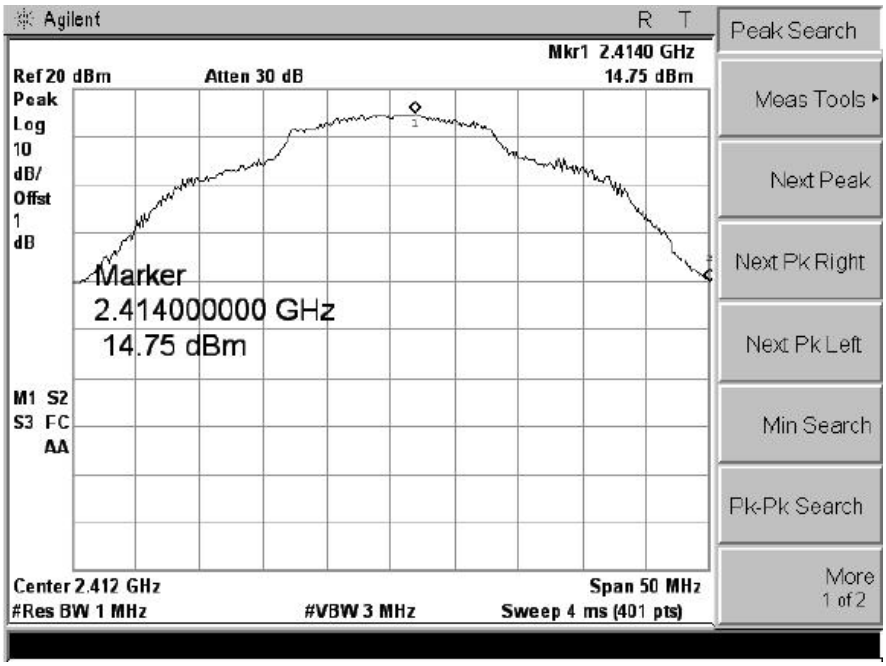
### 5.2.3.3 802.11n-20 Test Mode

The maximum output power for the fundamental frequency 2442 MHz is 14.78dBm. This power complies with the FCC requirement.

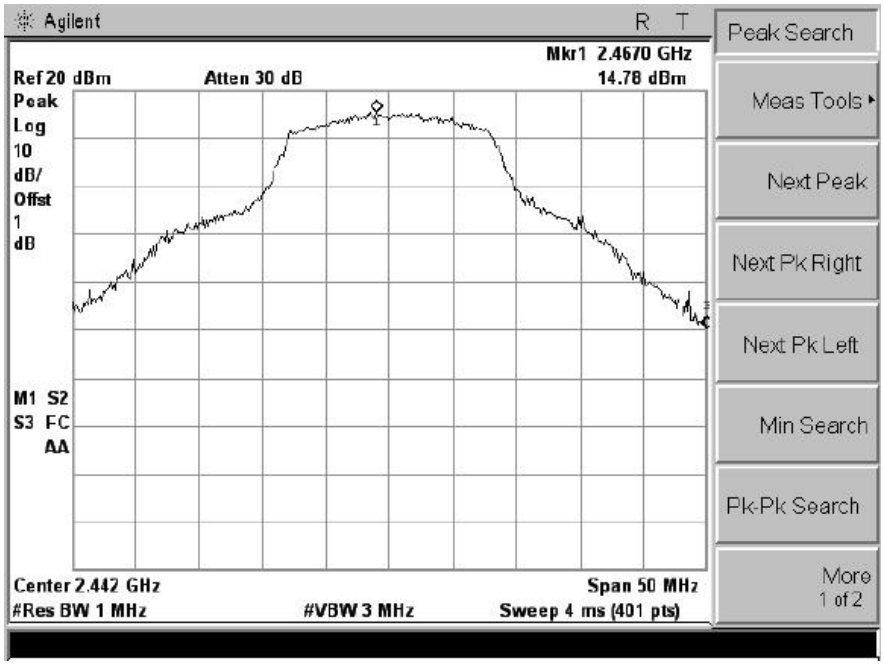
**A. Test Verdict:**

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 14.75 | 0.030 | 30 | 1 | PASS |
| 6 | 2442 | 14.78 | 0.030 | | | PASS |
| 11 | 2462 | 14.62 | 0.029 | | | PASS |

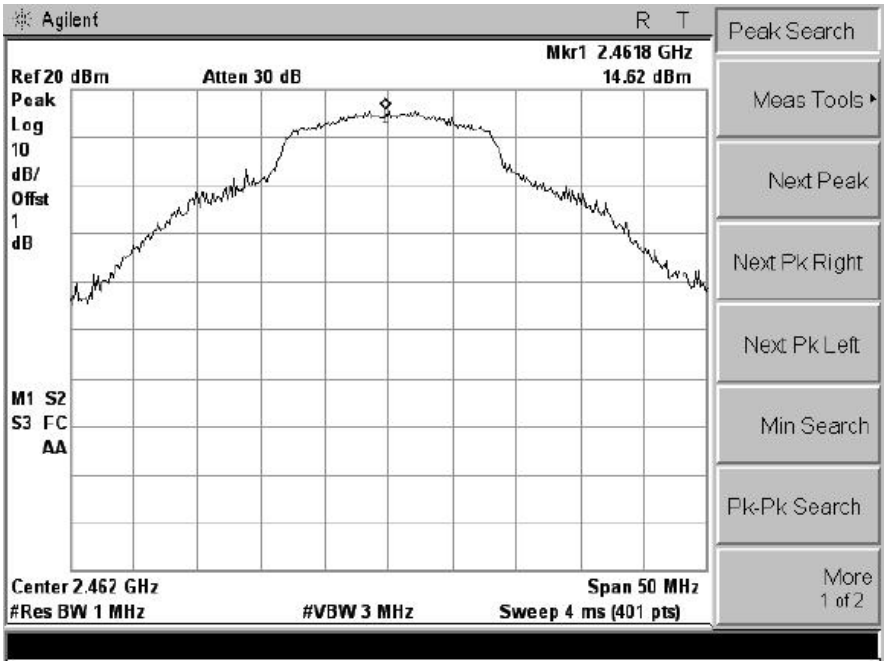
**B. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

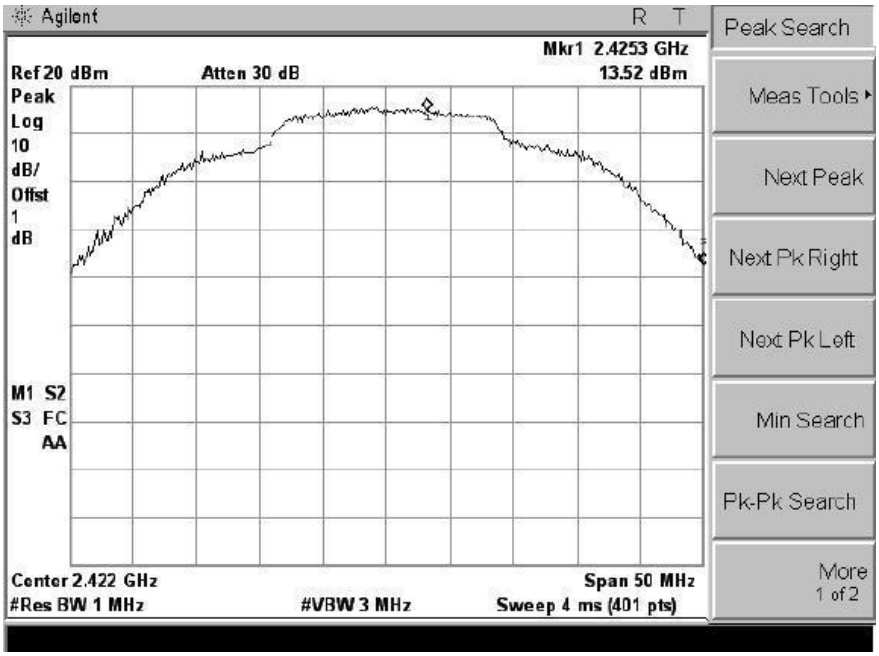
### 5.2.3.4 802.11n-40 Test Mode

The maximum output power for the fundamental frequency 2472 MHz is 13.67dBm. This power complies with the FCC requirement.

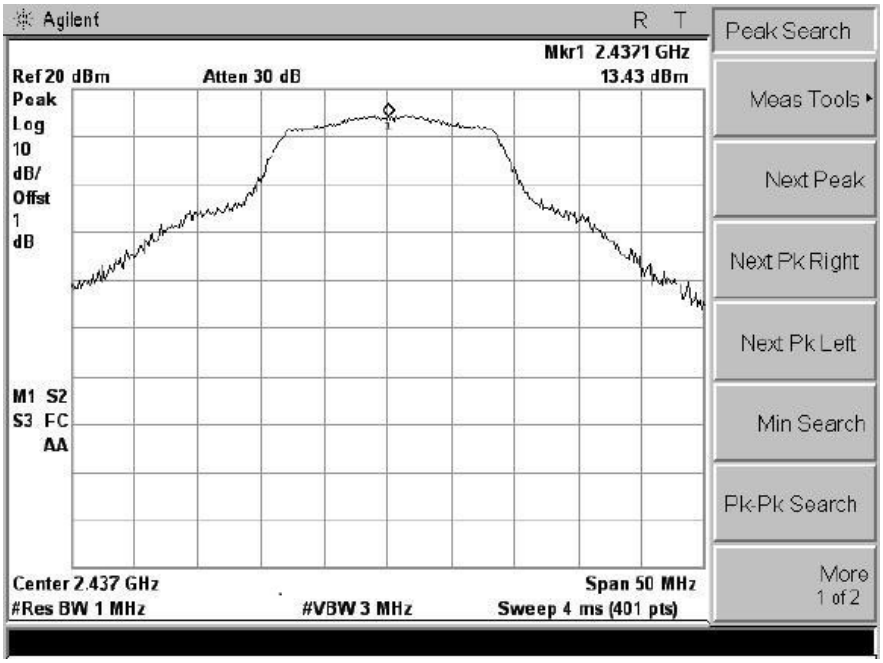
**A. Test Verdict:**

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | W | dBm | W | |
| 1 | 2422 | 13.52 | 0.022 | 30 | 1 | PASS |
| 6 | 2437 | 13.43 | 0.022 | | | PASS |
| 11 | 2452 | 13.65 | 0.023 | | | PASS |

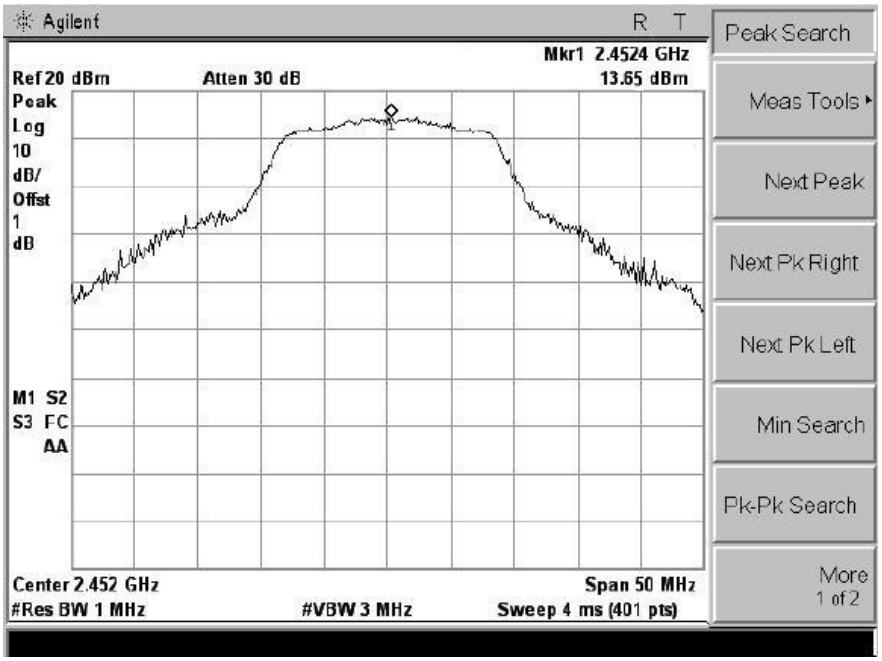
**B. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

## 5.3 Conducted Spurious Emission

### 5.3.1 Definition

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

### 5.3.2 Test Description

See section 5.1.2 of this report.

### 5.3.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

#### 5.3.3.1 802.11b Test Mode

1. Table for the Harmonics:
NOTE: "---" in the table following means that the emission power was too small to be measured and was at least 20dB below the limit.

| No. | Frequency (MHz) | Emission Power (dBm) | Limit (dBm) |
|---|---|---|---|
| Low Channel | | | |
| 1 | 4824.20 | --- | >20 |
| 2 | 7236.10 | --- | >20 |
| 3 | 9648.30 | --- | >20 |
| 4 | 12060.00 | --- | >20 |
| 5 | other | --- | >20 |
| Middle Channel | | | |
| 1 | 4874.20 | --- | >20 |
| 2 | 7311.10 | --- | >20 |
| 3 | 9748.30 | --- | >20 |
| 4 | 12185.00 | --- | >20 |
| 5 | other | --- | >20 |
| High Channel | | | |
| 1 | 4924.10 | --- | >20 |
| 2 | 7386.20 | --- | >20 |
| 3 | 9848.20 | --- | >20 |
| 4 | 12310.00 | --- | >20 |
| 5 | other | --- | >20 |

#### 5.3.3.2 802.11g Test Mode

1. Table for the Harmonics:
NOTE: "---" in the table following means that the emission power was too small to be measured and was at least 20dB below the limit.

| No. | Frequency (MHz) | Emission Power (dBm) | Limit (dBm) |
|---|---|---|---|
| Low Channel | | | |
| 1 | 4824.20 | --- | >20 |
| 2 | 7236.10 | --- | >20 |
| 3 | 9648.30 | --- | >20 |
| 4 | 12060.00 | --- | >20 |
| 5 | other | --- | >20 |
| Middle Channel | | | |
| 1 | 4874.20 | --- | >20 |
| 2 | 7311.10 | --- | >20 |
| 3 | 9748.30 | --- | >20 |
| 4 | 12185.00 | --- | >20 |
| 5 | other | --- | >20 |
| High Channel | | | |
| 1 | 4924.10 | --- | >20 |
| 2 | 7386.20 | --- | >20 |
| 3 | 9848.20 | --- | >20 |
| 4 | 12310.00 | --- | >20 |
| 5 | other | --- | >20 |

### 5.3.3.3 802.11n-20 Test Mode

1. Table for the Harmonics:
NOTE: "---" in the table following means that the emission power was too small to be measured and was at least 20dB below the limit.

| No. | Frequency (MHz) | Emission Power (dBm) | Limit (dBm) |
|---|---|---|---|
| Low Channel | | | |
| 1 | 4824.20 | --- | >20 |
| 2 | 7236.10 | --- | >20 |
| 3 | 9648.30 | --- | >20 |
| 4 | 12060.00 | --- | >20 |
| 5 | other | --- | >20 |
| Middle Channel | | | |
| 1 | 4874.20 | --- | >20 |
| 2 | 7311.10 | --- | >20 |
| 3 | 9748.30 | --- | >20 |
| 4 | 12185.00 | --- | >20 |
| 5 | other | --- | >20 |
| High Channel | | | |
| 1 | 4924.10 | --- | >20 |
| 2 | 7386.20 | --- | >20 |
| 3 | 9848.20 | --- | >20 |
| 4 | 12310.00 | --- | >20 |
| 5 | other | --- | >20 |

### 5.3.3.4 802.11n-40 Test Mode

1. Table for the Harmonics:
NOTE: "---" in the table following means that the emission power was too small to be measured and was at least 20dB below the limit.

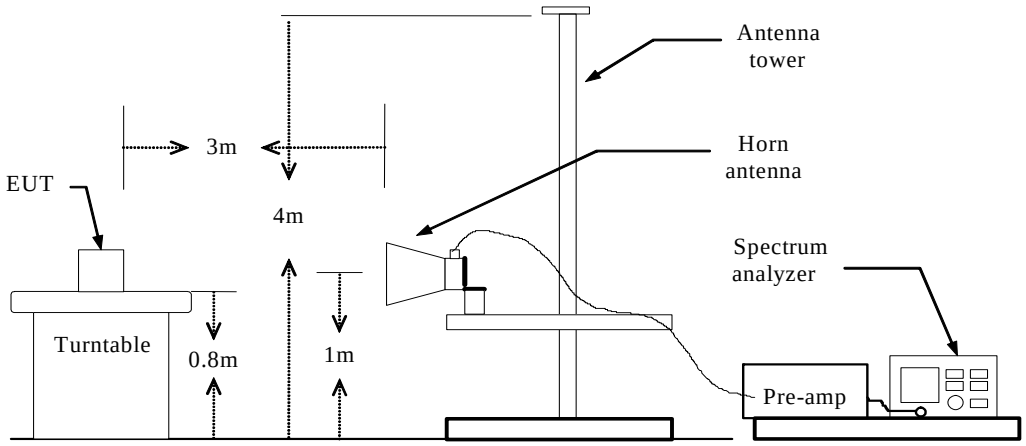
| No. | Frequency (MHz) | Emission Power (dBm) | Limit (dBm) |
|---|---|---|---|
| Low Channel | | | |
| 1 | 4844.20 | --- | >20 |
| 2 | 7266.10 | --- | >20 |
| 3 | 9688.30 | --- | >20 |
| 4 | 12060.00 | --- | >20 |
| 5 | other | --- | >20 |
| Middle Channel | | | |
| 1 | 4874.20 | --- | >20 |
| 2 | 7311.10 | --- | >20 |
| 3 | 9748.30 | --- | >20 |
| 4 | 12185.00 | --- | >20 |
| 5 | other | --- | >20 |
| High Channel | | | |
| 1 | 4904.10 | --- | >20 |
| 2 | 7356.20 | --- | >20 |
| 3 | 9808.20 | --- | >20 |
| 4 | 12310.00 | --- | >20 |
| 5 | other | --- | >20 |

## 5.4 Band Edge

### 5.4.1 Definition

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

### 5.4.2 Test Description



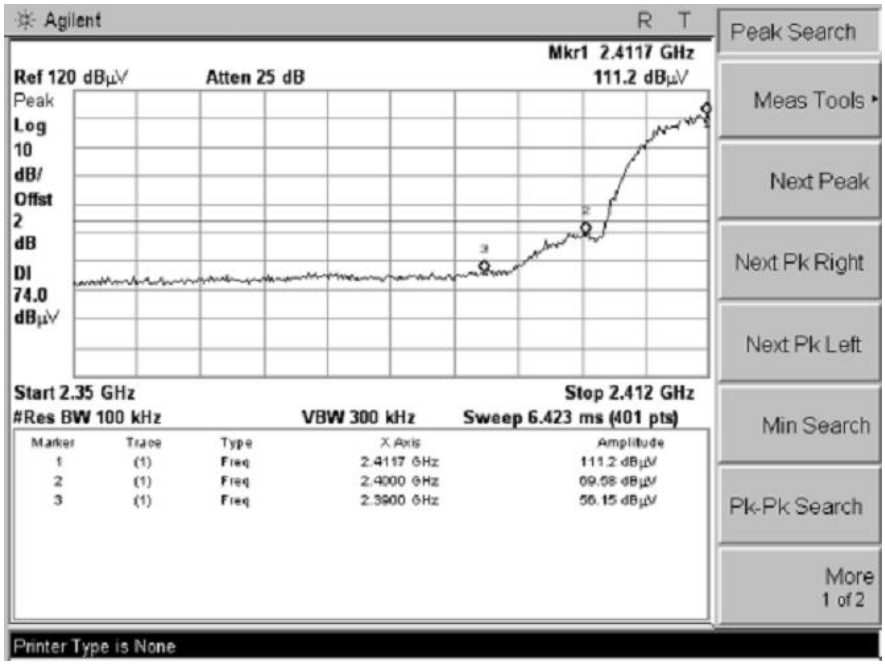

### 5.4.3 Test Result

The EUT operates at continuous transmit test mode. The lowest and highest channels are tested to verify the band edge emissions.

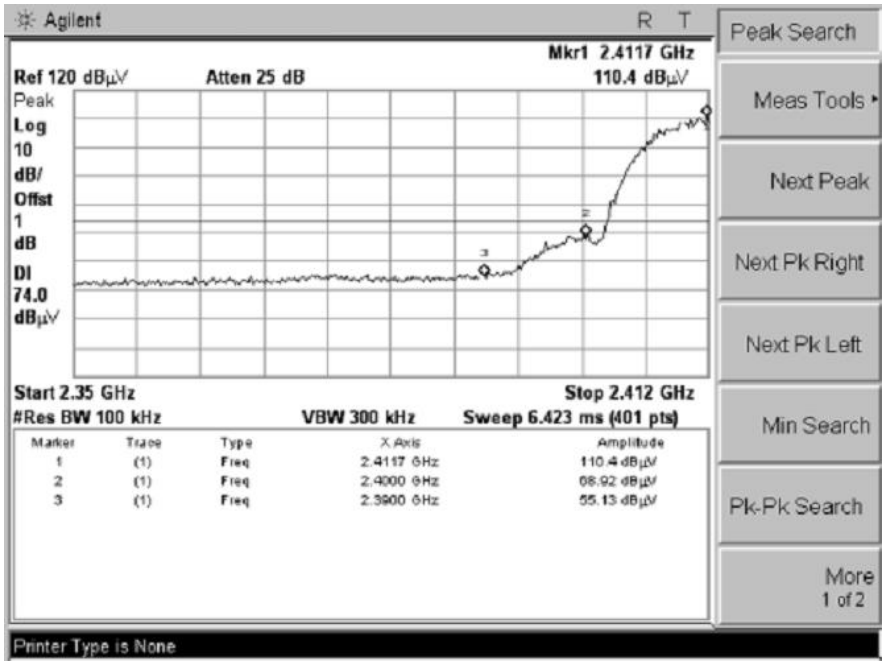
#### 5.4.3.1 802.11b Test Mode

| Test Mode | | Channel Marked Frequency | Limit (dBuv/m) | Test Result Highest Emission (dBuv/m) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Vertical | | Horizontal | |
| | | | | Peak | Average | Peak | Average |
| WIFI | Low Channel | 2390MHz | 74(Peak) 54(Average) | 56.15 | 36.78. | 55.13 | 36.13 |
| | | 2400MHz | | 69.58 | 45.59 | 68.92 | 45.07 |
| | High Channel | 2483.5MHz | | 54.03 | 35. 37 | 56.49 | 37.14 |
| | | 2500MHz | | 53.74 | 33.61 | 54.73 | 33.97 |

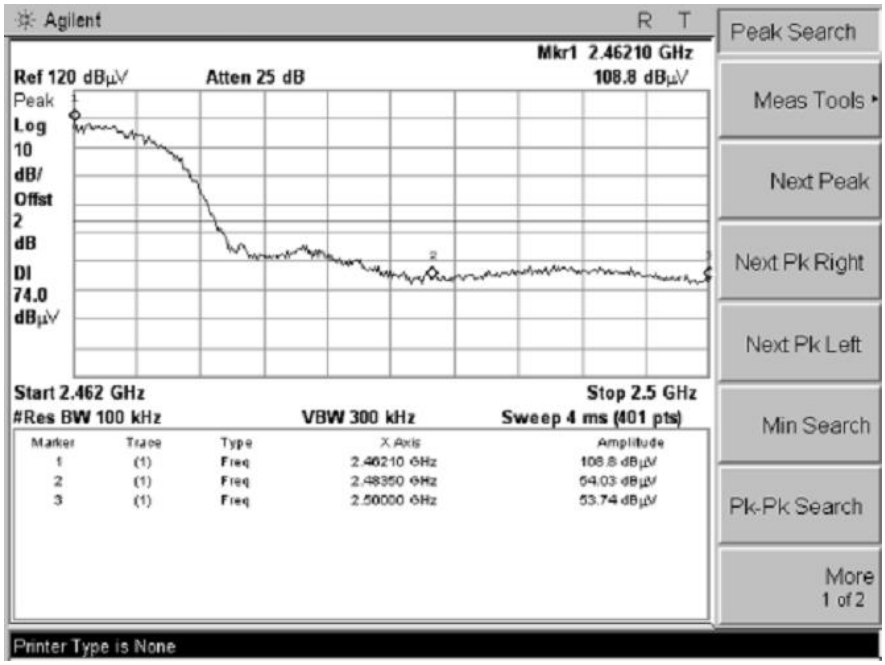
**Test Plot:**



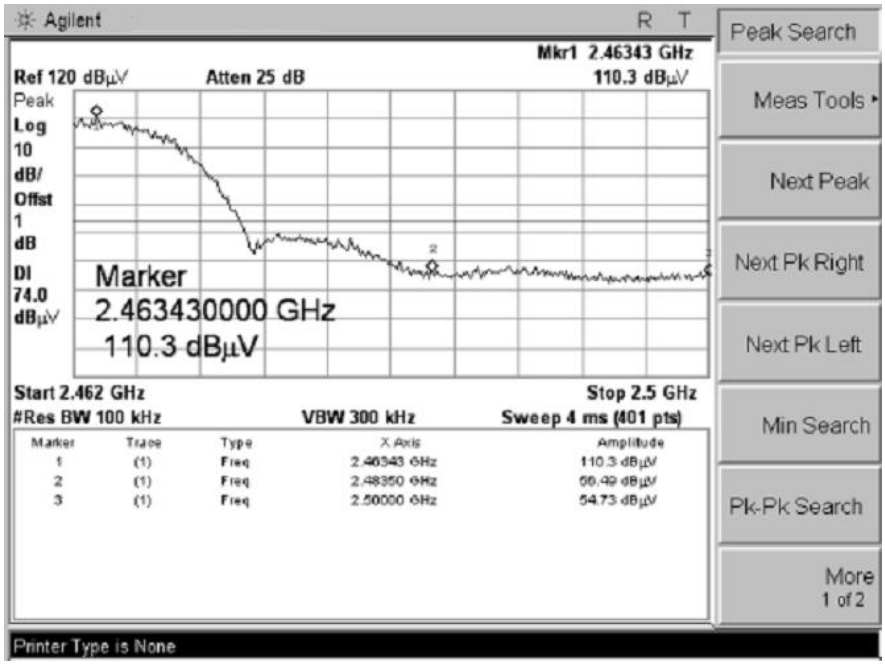

(CH Low, Vertical, Peak)




(CH Low, Horizontal, Peak)




(CH High, Vertical, Peak)

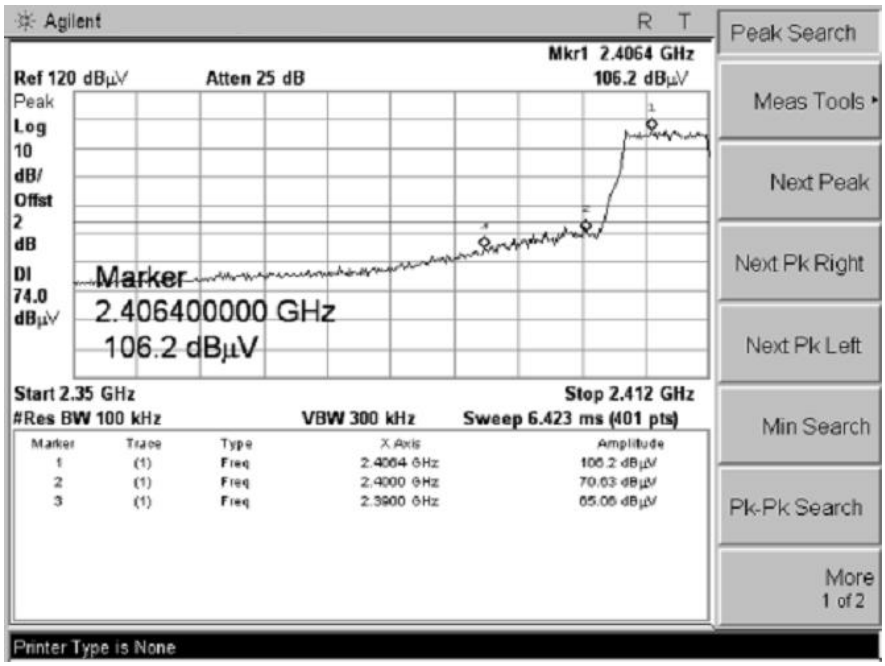



(CH High, Horizontal, Peak)

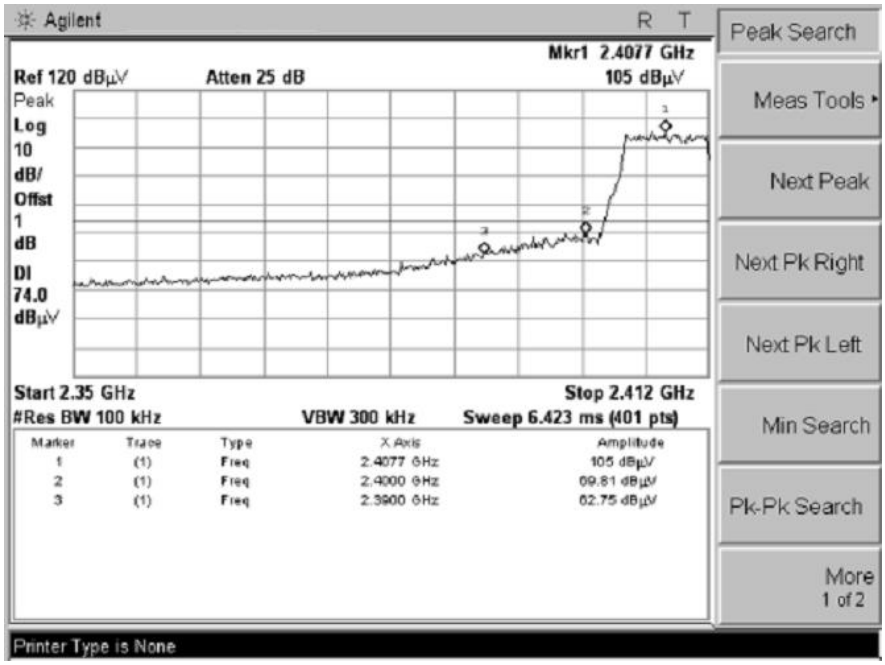
### 5.4.3.2 802.11g Test Mode

| Test Mode | | Channel Marked Frequency | Limit (dBuv/m) | Test Result Highest Emission (dBuv/m) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Vertical | | Horizontal | |
| | | | | Peak | Average | Peak | Average |
| WIFI | Low Channel | 2390MHz | 74(Peak) 54(Average) | 65.06 | 43.92 | 62.75 | 40.86 |
| | | 2400MHz | | 70.63 | 51.84 | 69.81 | 49.63 |
| | High Channel | 2483.5MHz | | 61.29 | 42.87 | 60.98 | 41.54 |
| | | 2500MHz | | 54.65 | 38.77 | 54.05 | 39.02 |

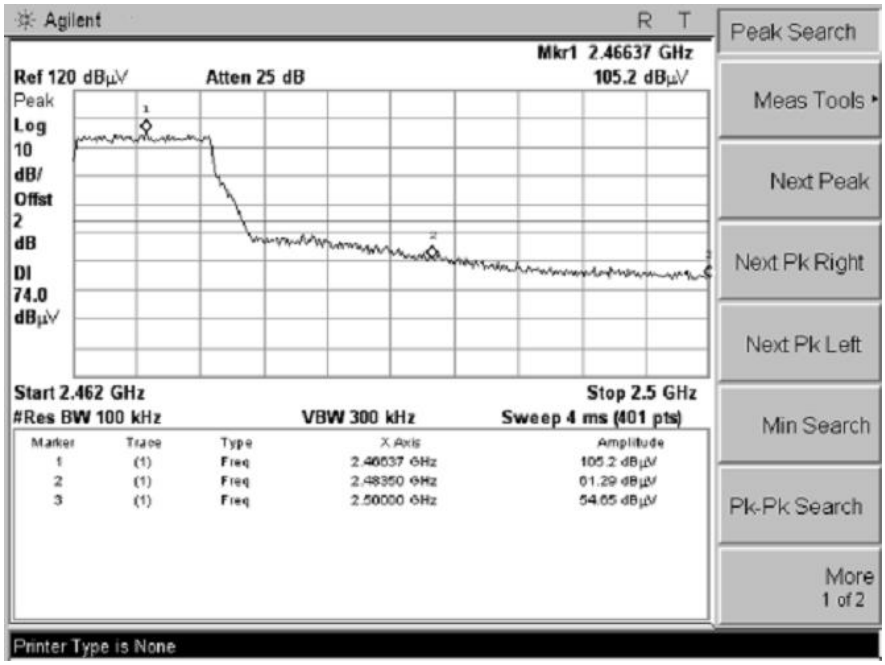
**Test Plot:**



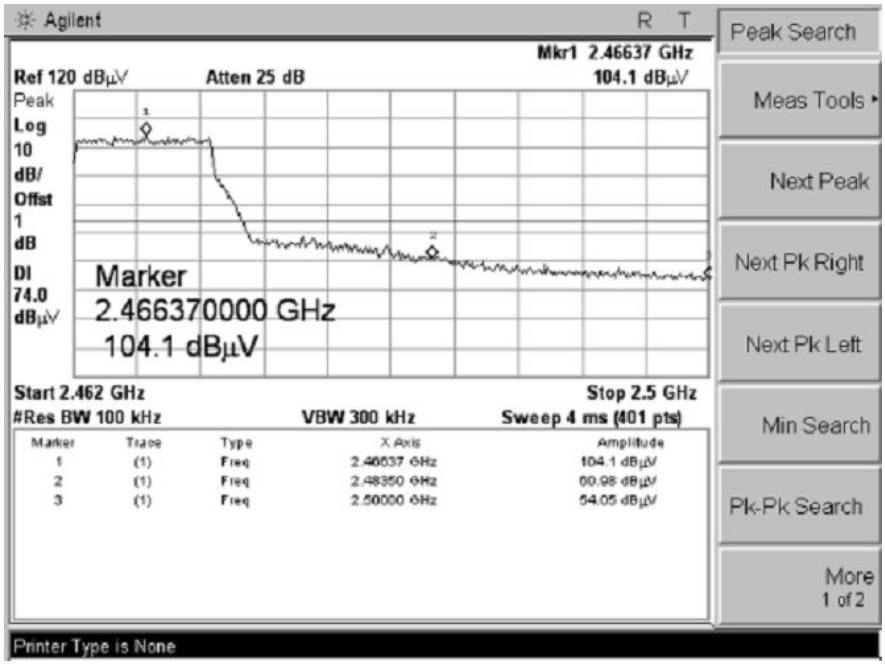

(CH Low, Vertical, Peak )




(CH Low, Horizontal, Peak)




(CH High, Vertical, Peak)

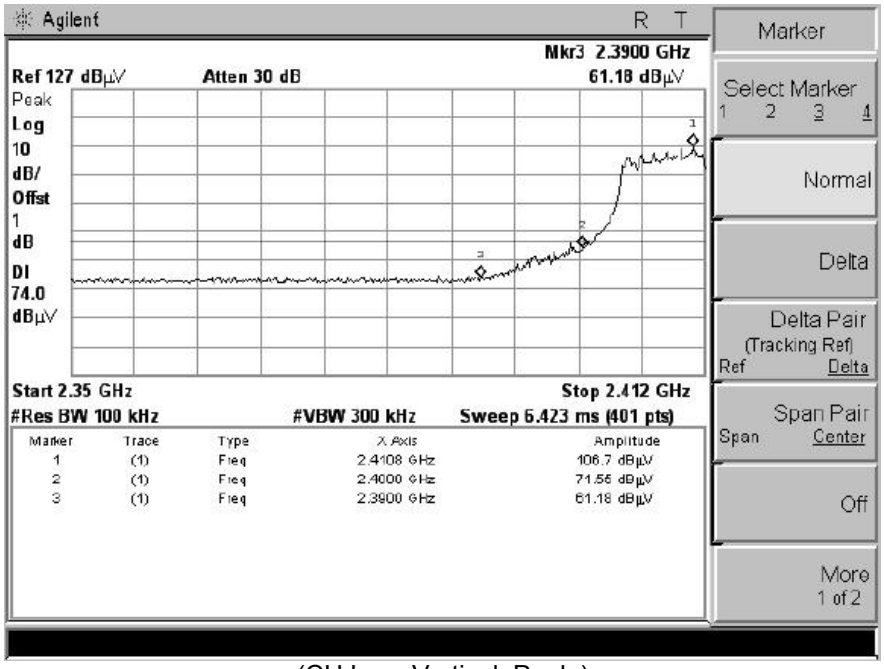



(CH High, Horizontal, Peak)

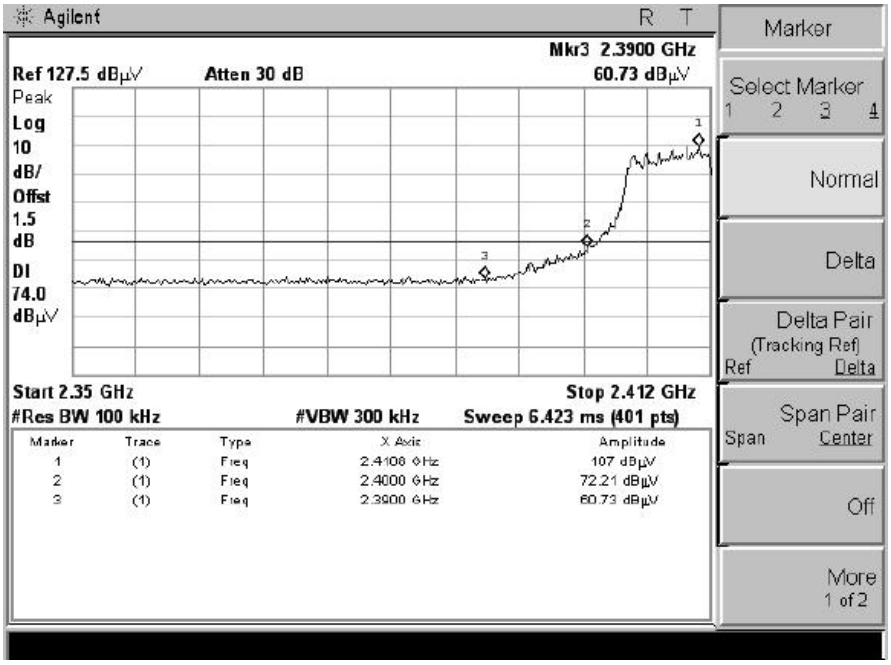
### 5.4.3.3 802.11n-20 Test Mode

| Test Mode | | Channel Marked Frequency | Limit (dBuv/m) | Test Result Highest Emission (dBuv/m) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Vertical | | Horizontal | |
| | | | | Peak | Average | Peak | Average |
| WIFI | Low Channel | 2390MHz | 74(Peak) 54(Average) | 60.73 | 36.57 | 61.18 | 37.17 |
| | | 2400MHz | | 72.21 | 50.25 | 71.55 | 50.53 |
| | High Channel | 2483.5MHz | | 72.79 | 49.08 | 71.16 | 48.38 |
| | | 2500MHz | | 60.27 | 39.73 | 59.77 | 38.14 |

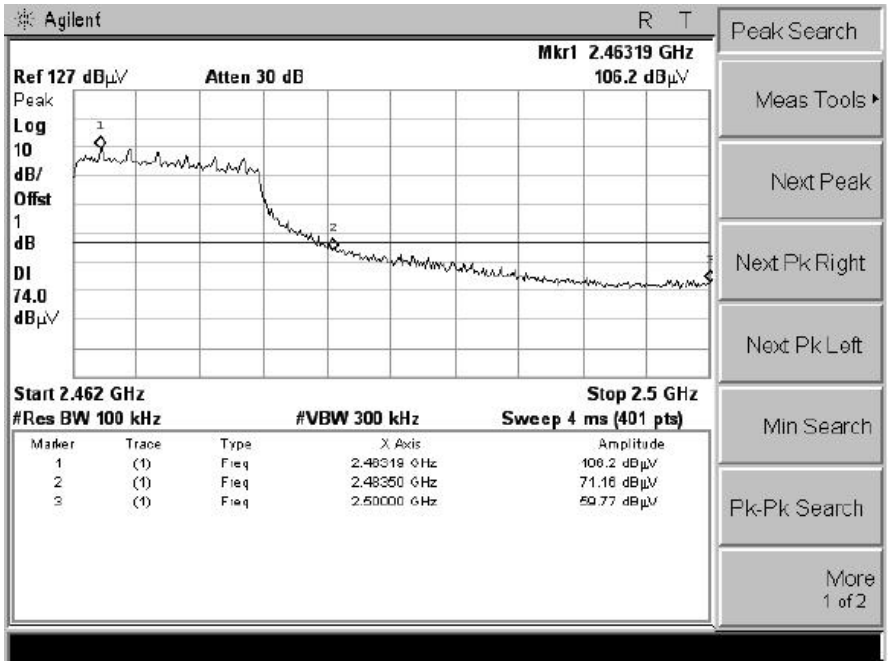
**Test Plot:**



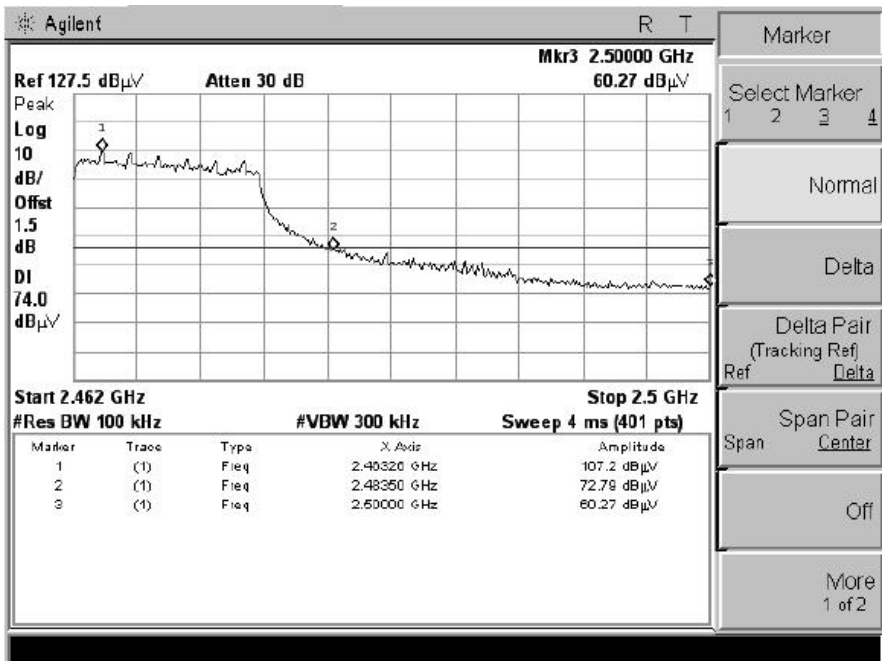

(CH Low, Vertical, Peak )




(CH Low, Horizontal, Peak)




(CH High, Vertical, Peak)

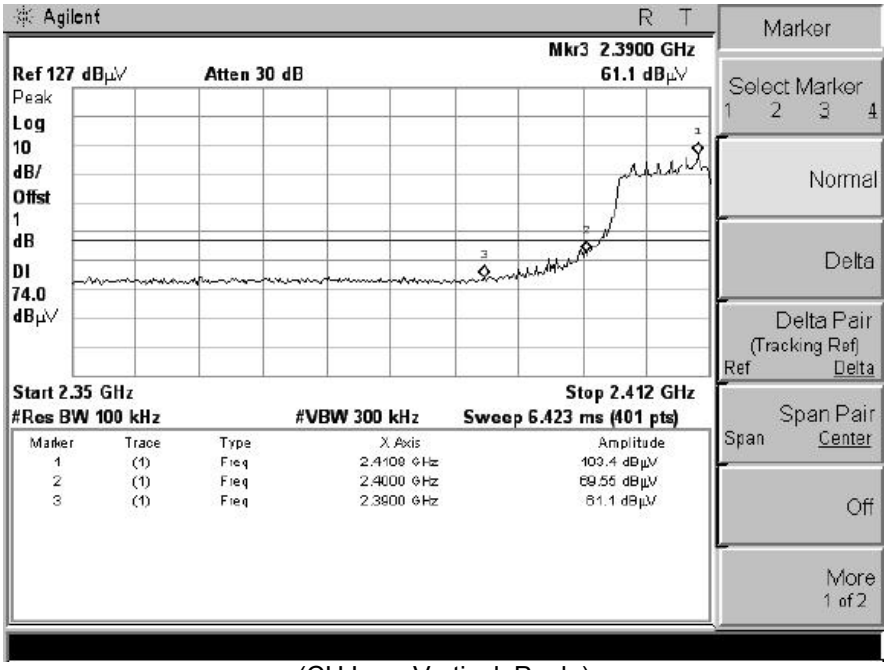



(CH High, Horizontal, Peak)

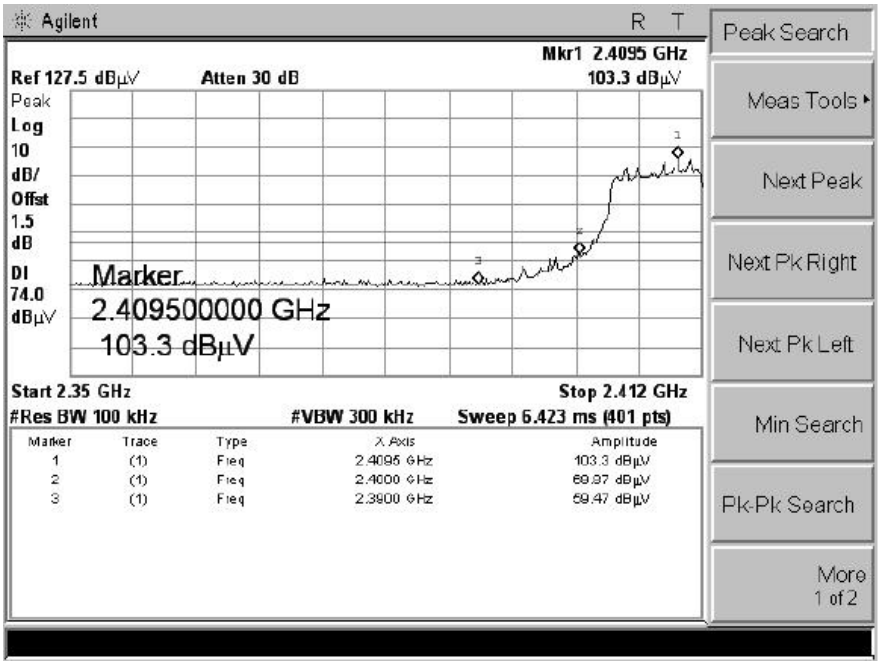
### 5.4.3.4 802.11n-40 Test Mode

| Test Mode | | Channel Marked Frequency | Limit (dBuv/m) | Test Result Highest Emission (dBuv/m) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Vertical | | Horizontal | |
| | | | | Peak | Average | Peak | Average |
| WIFI | Low Channel | 2390MHz | 74(Peak) 54(Average) | 59.47 | 36.39 | 61.10 | 37.08 |
| | | 2400MHz | | 69.87 | 50.75 | 69.55 | 50.33 |
| | High Channel | 2483.5MHz | | 68.64 | 49.12 | 69.80 | 48.92 |
| | | 2500MHz | | 59.39 | 39.66 | 59.72 | 38.68 |

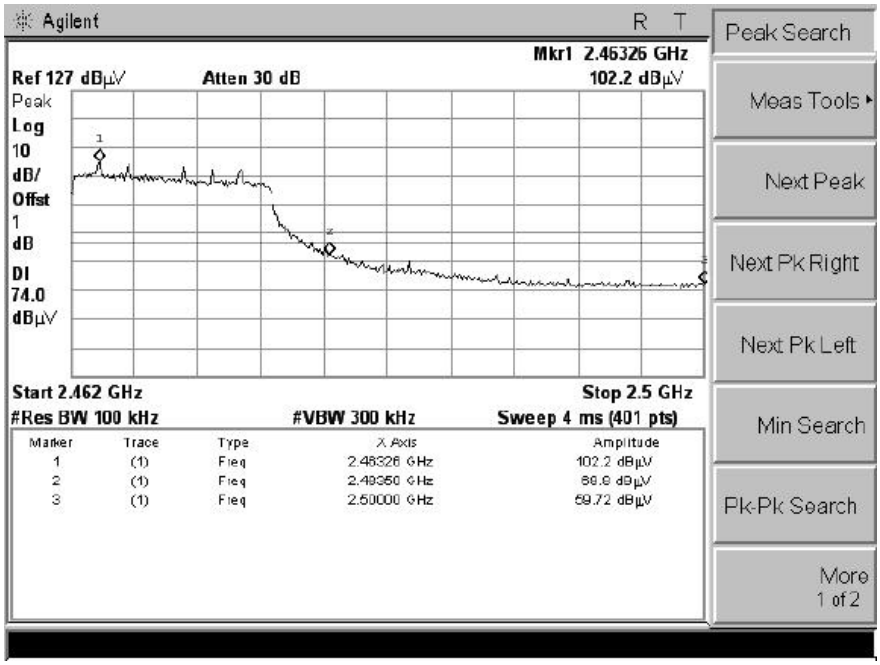
**Test Plot:**



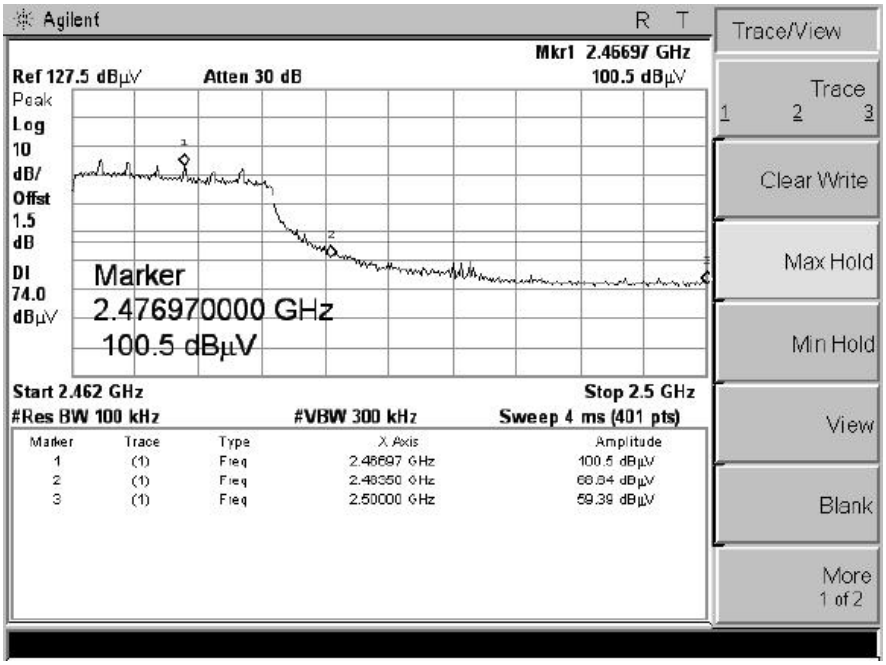

(CH Low, Vertical, Peak )




(CH Low, Horizontal, Peak)




(CH High, Vertical, Peak)




(CH High, Horizontal, Peak)

## 5.5 Power Spectral Density (PSD)

### 5.5.1 Definition

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 5.5.2 Test Description

See section 5.1.2 of this report.

### 5.5.3 Test Result

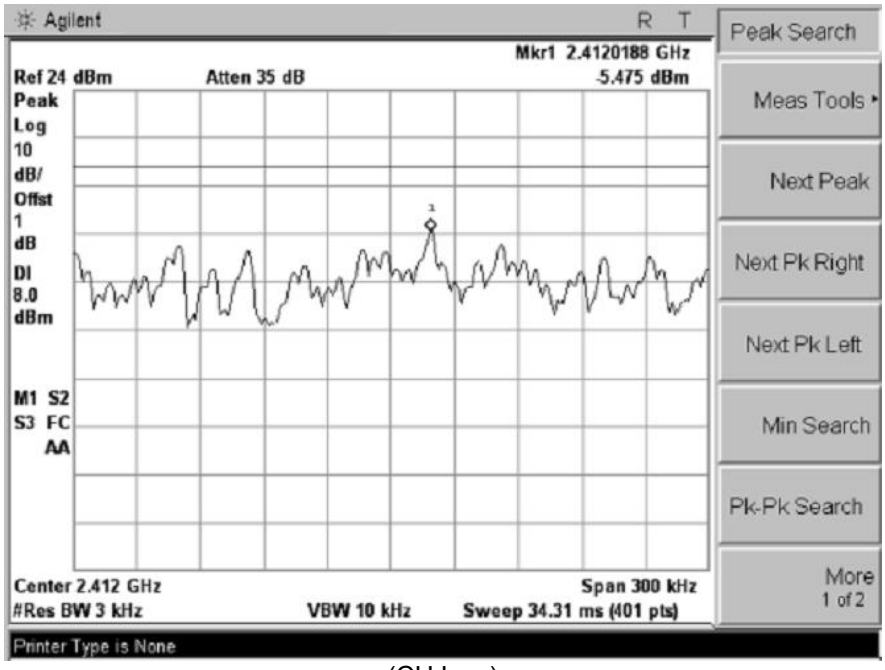
The lowest, middle and highest channels are tested to verify the power spectral density.

#### 5.5.3.1 802.11b Test Mode

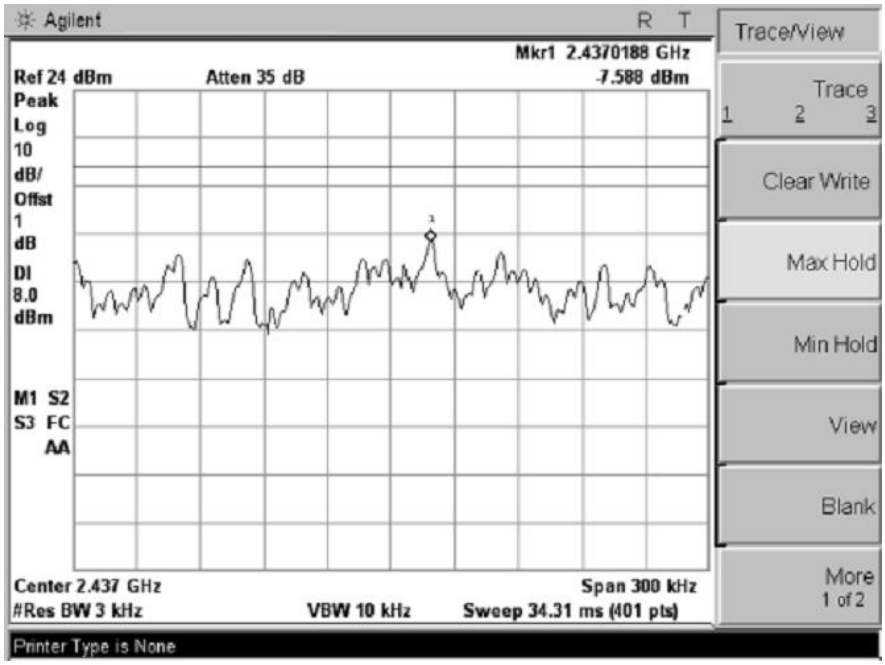
**A. Test Verdict:**

| Channel | Frequency (MHz) | PSD (dBm) | Limits(dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | -5.475 | ≤8 | PASS |
| 6 | 2437 | -7.588 | ≤8 | PASS |
| 11 | 2462 | -6.743 | ≤8 | PASS |

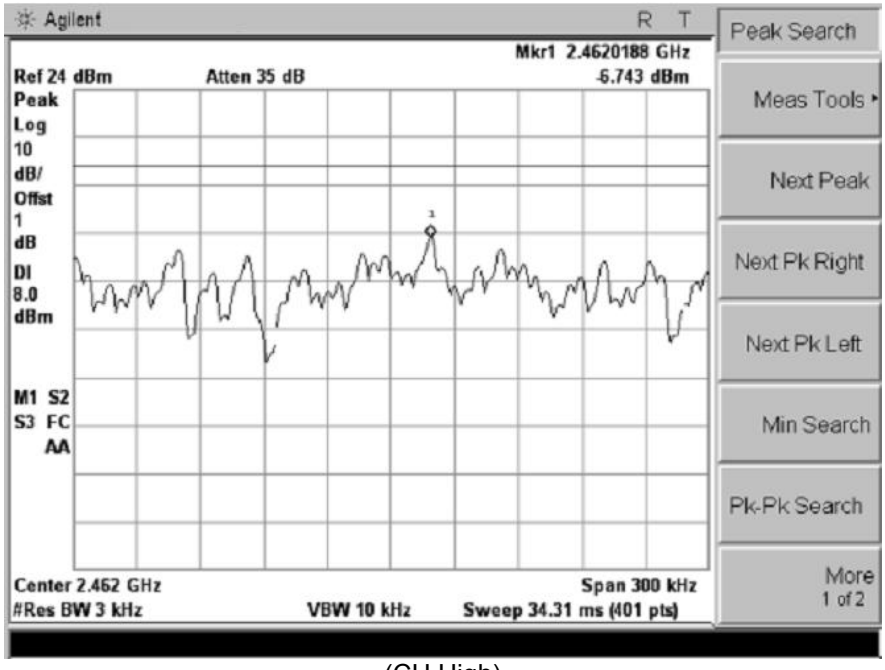
**B. Test Plot:**




(CH Low)




(CH Mid)



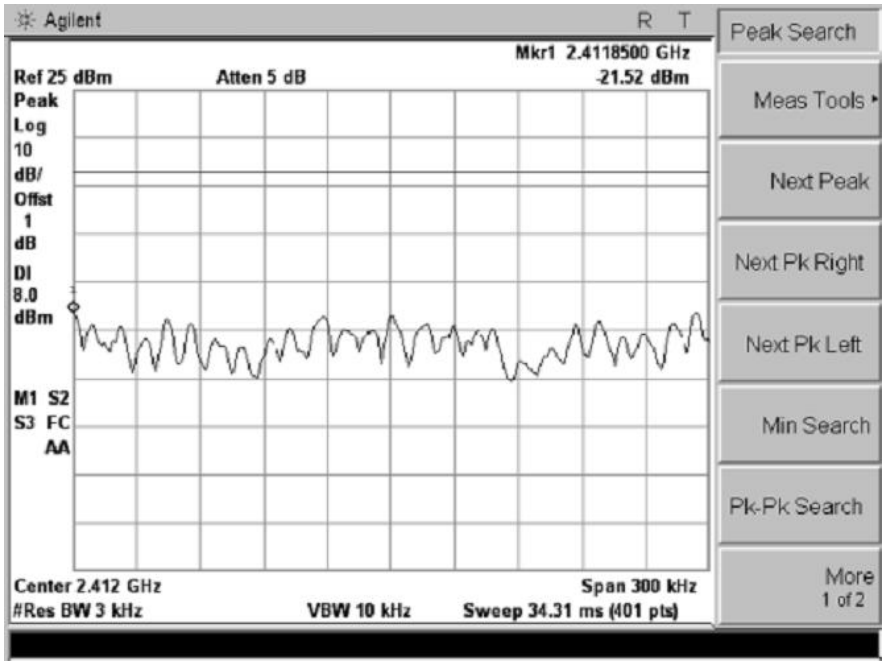

(CH High)

### 5.5.3.2 802.11g Test Mode

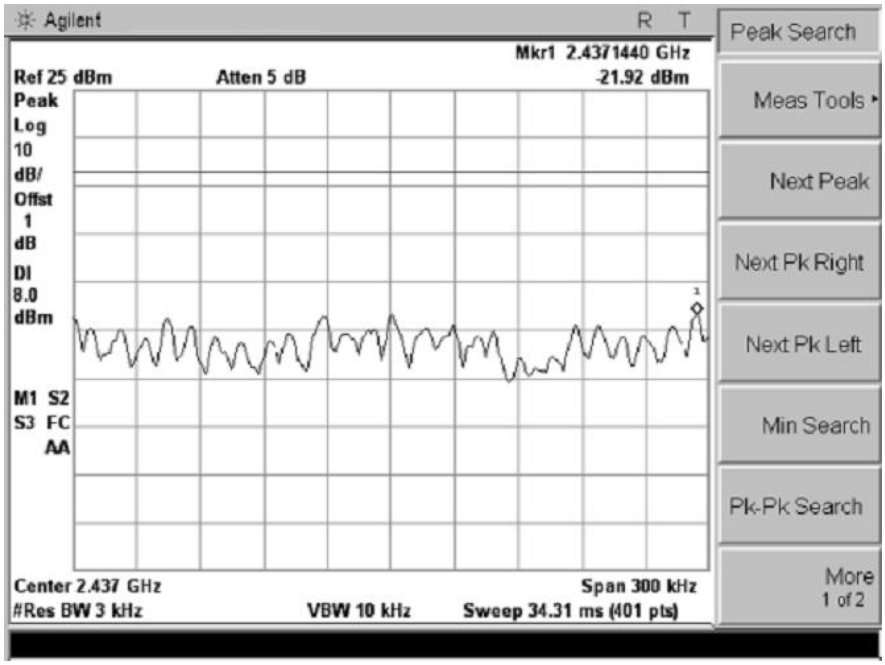
**A. Test Verdict:**

| Channel | Frequency (MHz) | PSD (dBm) | Limits(dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | -21.52 | ≤8 | PASS |
| 6 | 2437 | -21.92 | ≤8 | PASS |
| 11 | 2462 | -20.78 | ≤8 | PASS |

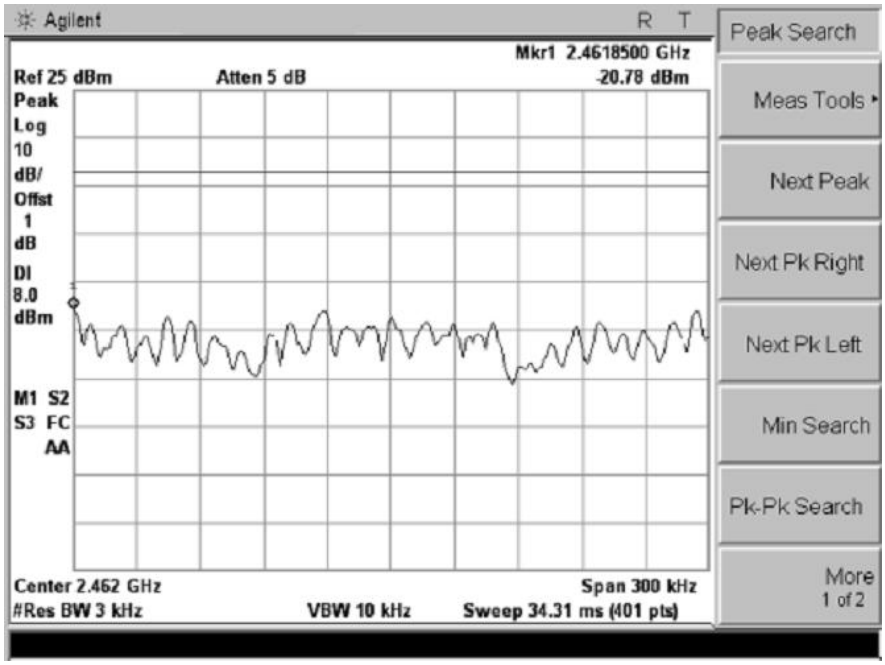
**B. Test Plot:**




(CH Low)




(CH Mid)



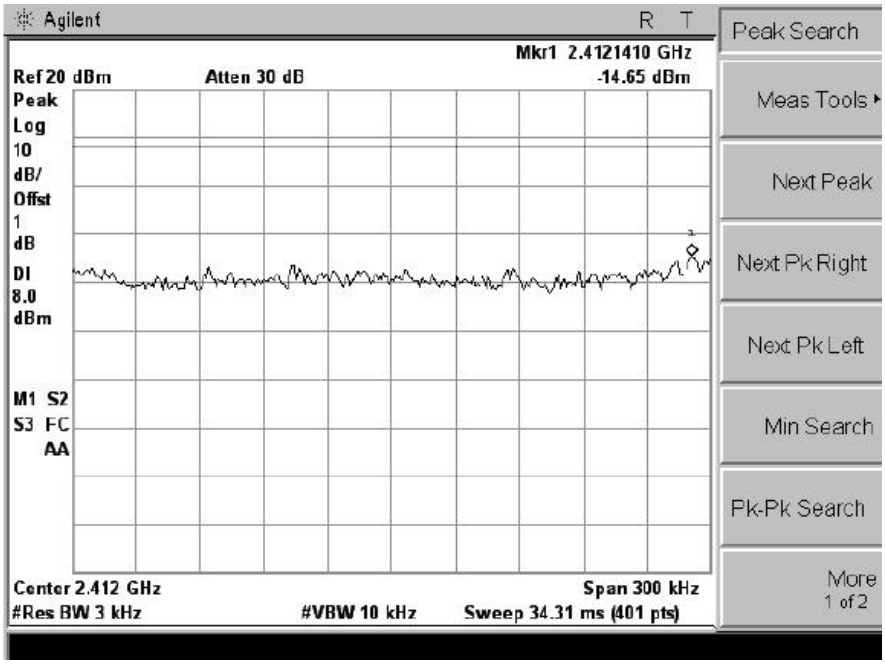

(CH High)

### 5.5.3.3 802.11n-20 Test Mode

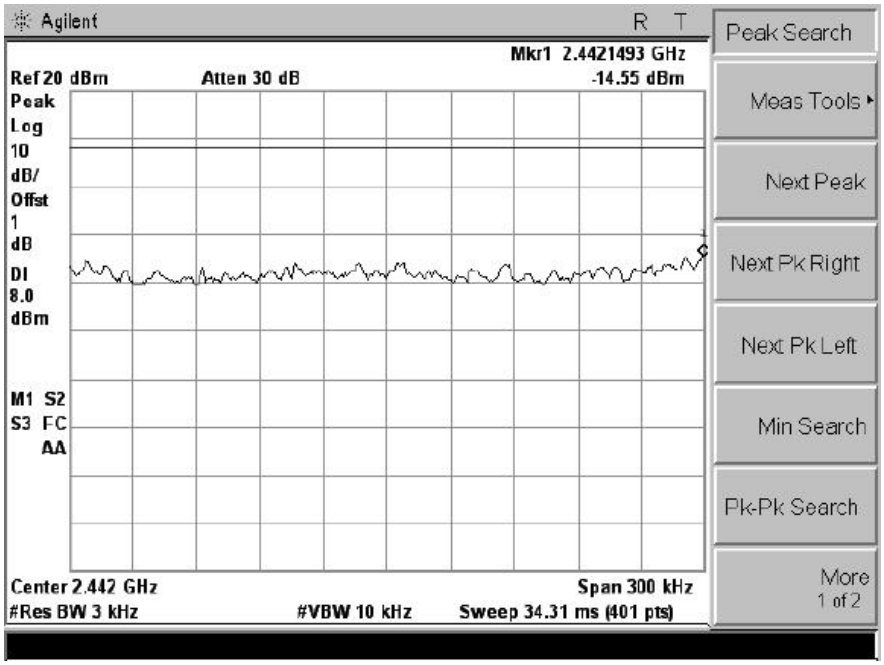
**A. Test Verdict:**

| Channel | Frequency (MHz) | PSD (dBm) | Limits(dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | -14.65 | ≤8 | PASS |
| 6 | 2437 | -14.55 | ≤8 | PASS |
| 11 | 2462 | -14.60 | ≤8 | PASS |

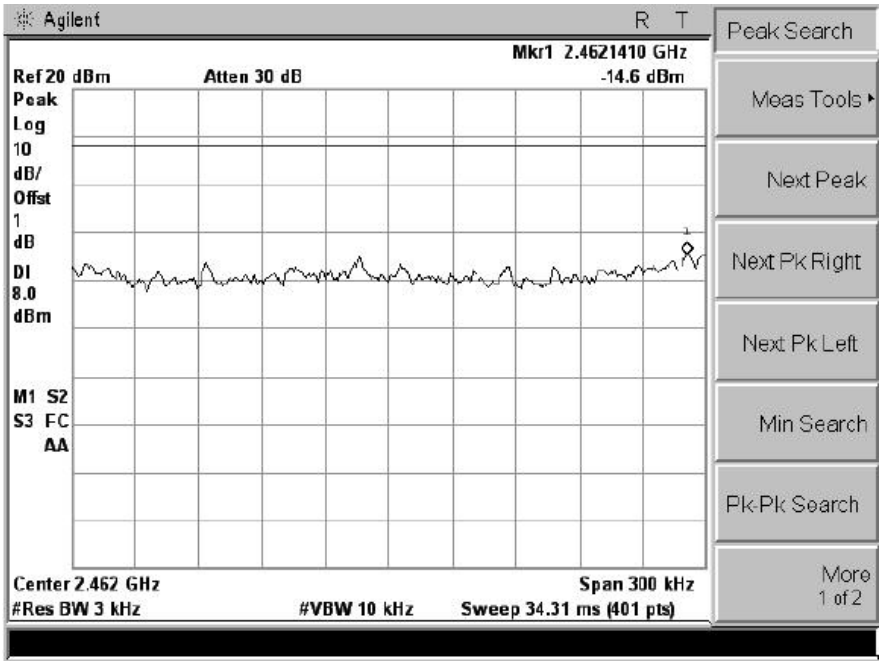
**B. Test Plot:**




(CH Low)




(CH Mid)



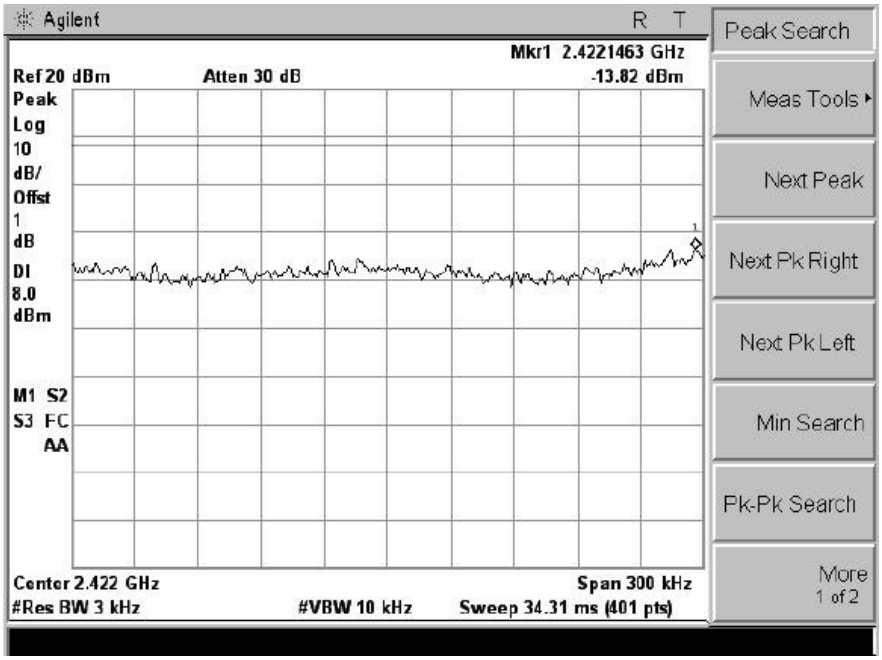

(CH High)

### 5.5.3.4 802.11n-40 Test Mode

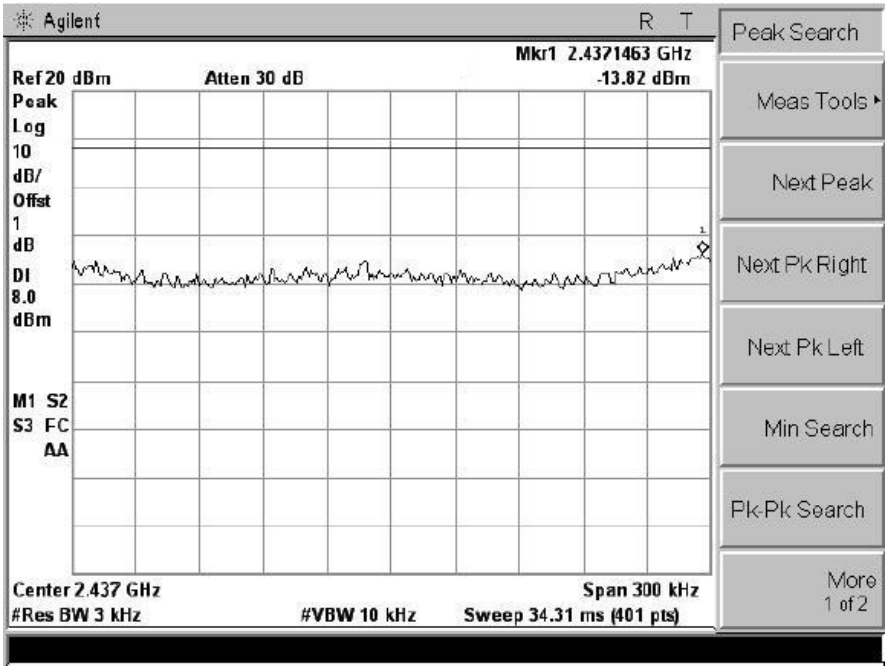
**C. Test Verdict:**

| Channel | Frequency (MHz) | PSD (dBm) | Limits(dBm) | Result |
|---|---|---|---|---|
| 1 | 2422 | -13.82 | ≤8 | PASS |
| 6 | 2437 | -13.82 | ≤8 | PASS |
| 11 | 2452 | -13.85 | ≤8 | PASS |

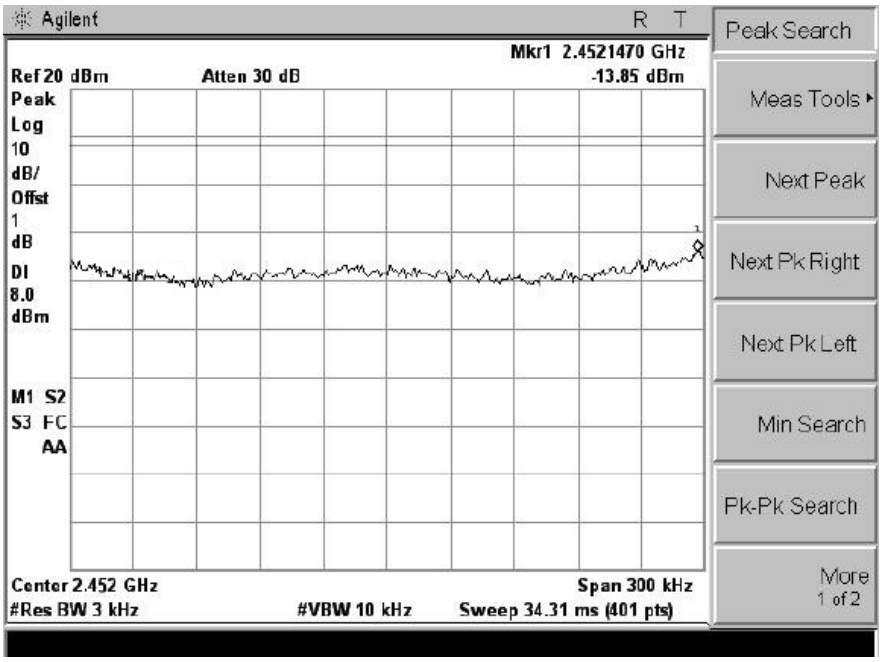
**D. Test Plot:**




(CH Low)




(CH Mid)




(CH High)

## 5.6 Conducted Emission

### 5.6.1 Definition

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).

| Frequency | Maximum RF Line Voltage | |
|---|---|---|
| | Q.P.( dBuV) | Average( dBuV) |
| 150kHz-500kHz | 66-56 | 56-46 |
| 500kHz-5MHz | 56 | 46 |
| 5MHz-30MHz | 60 | 50 |

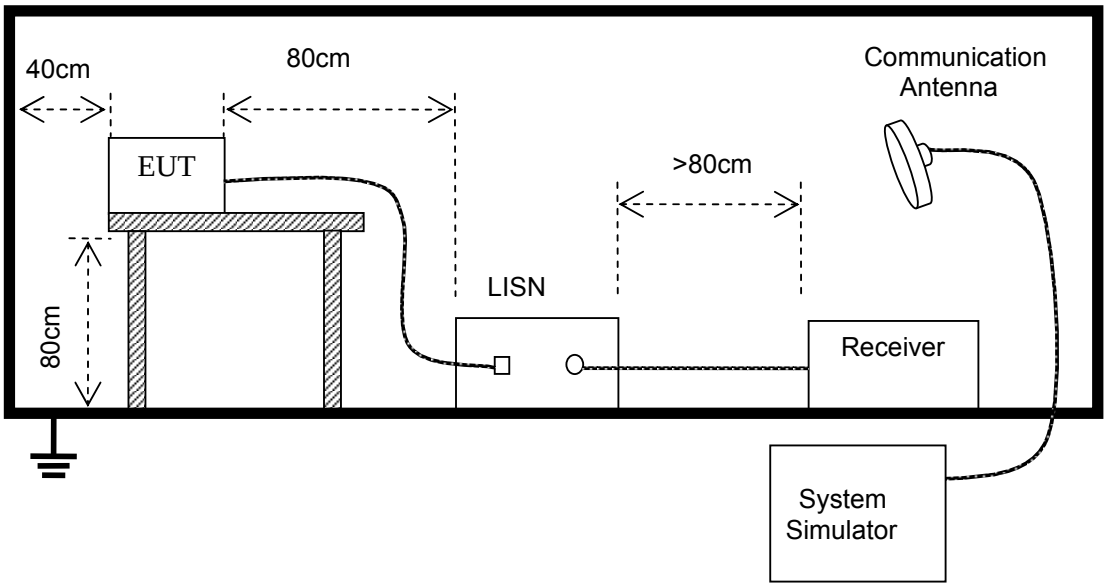
***Note:***

*1. The lower limit shall apply at the transition frequency.*

*2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz*

### 5.6.2 Test Description

The EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power.

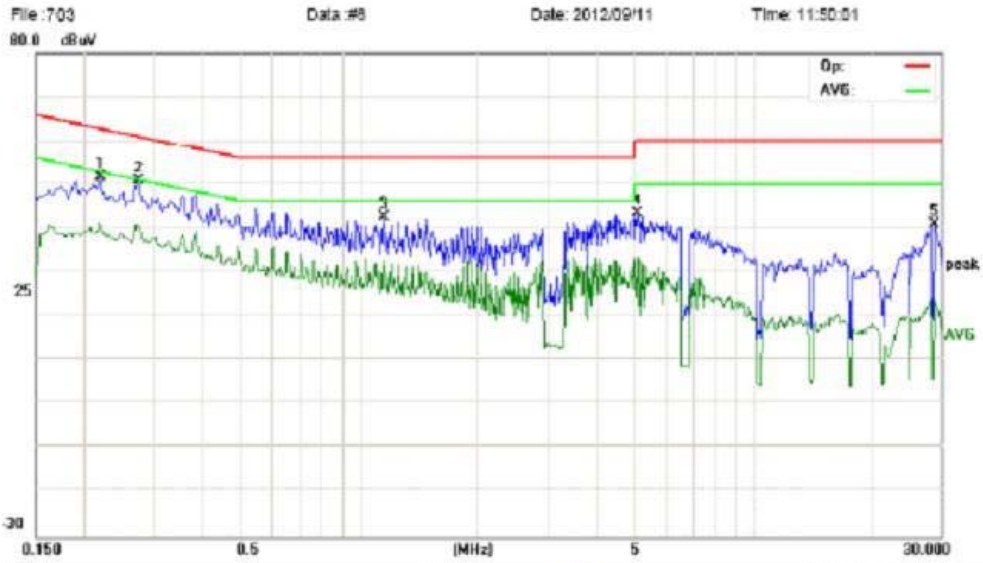



### 5.6.3 Test Result

A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

**Conducted Emission Measurement**



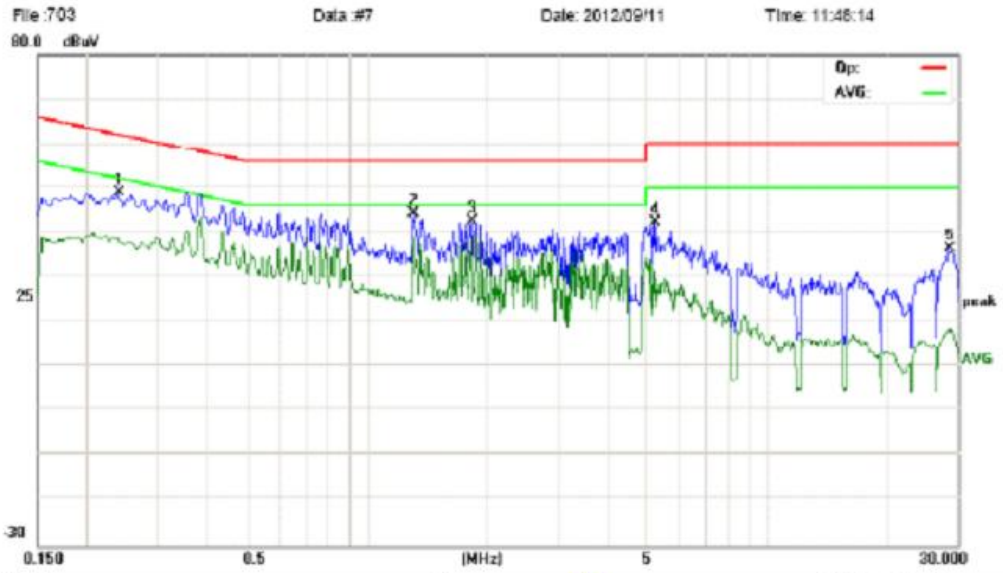

Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: AC 120V/60Hz Humidity: 60 %
EUT: 3G Mobile Phone
M/N: TP703
Mode: WIFI
Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.2180 | 39.73 | 11.88 | 51.61 | 62.89 | -11.28 | peak | |
| 2 | * | 0.2740 | 39.28 | 11.51 | 50.79 | 61.00 | -10.21 | peak | |
| 3 | | 1.1460 | 32.53 | 9.85 | 42.38 | 56.00 | -13.62 | peak | |
| 4 | | 5.0660 | 31.38 | 11.96 | 43.34 | 60.00 | -16.66 | peak | |
| 5 | | 28.8140 | 31.68 | 9.00 | 40.68 | 60.00 | -19.32 | peak | |

*:Maximum data x:Over limit !:over margin

Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

**Conducted Emission Measurement**




Site site #1
Limit: FCC Part15 B Class B QP
EUT: 3G Mobile Phone
M/N: TP703
Mode: WIFI
Note:

Phase: N
Power: AC 120V/60Hz

Temperature: 26
Humidity: 60 %

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.2380 | 37.16 | 11.75 | 48.91 | 62.17 | -13.26 | peak | |
| 2 | * | 1.3080 | 34.53 | 9.69 | 44.22 | 56.00 | -11.78 | peak | |
| 3 | | 1.8220 | 33.30 | 9.18 | 42.48 | 56.00 | -13.52 | peak | |
| 4 | | 5.2300 | 30.28 | 11.86 | 42.14 | 60.00 | -17.86 | peak | |
| 5 | | 28.5220 | 27.47 | 9.00 | 36.47 | 60.00 | -23.53 | peak | |

*:Maximum data x:Over limit !:over margin

## 5.7 Radiated Emission

### 5.7.1 Definition

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in § 15.209(a) is not required. 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)).

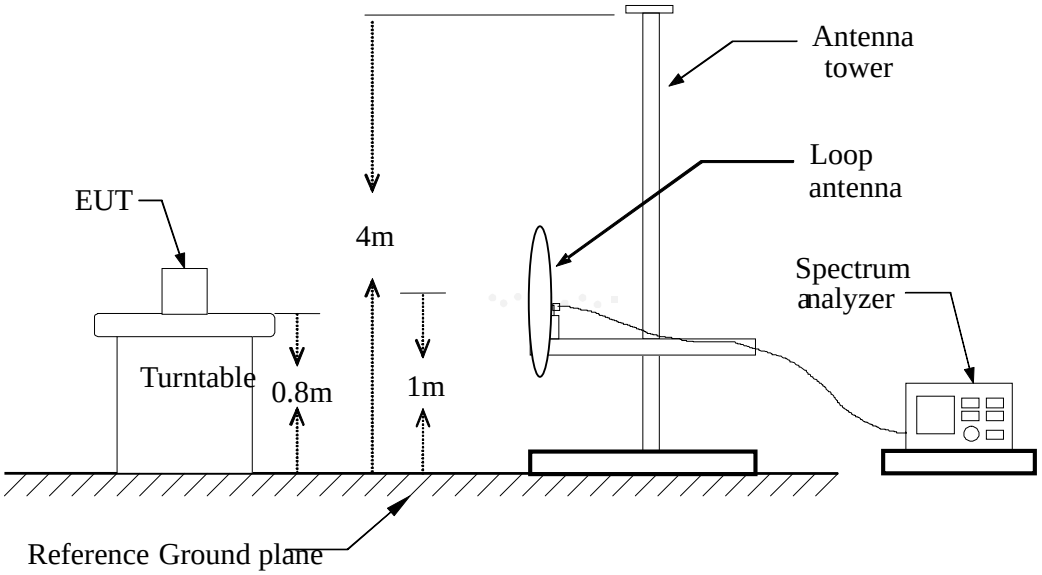
According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) |
|---|---|---|
| 0.009 - 0.490 | 2400/F(kHz) | 300 |
| 0.490 - 1.705 | 24000/F(kHz) | 30 |
| 1.705 - 30.0 | 30 | 30 |
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

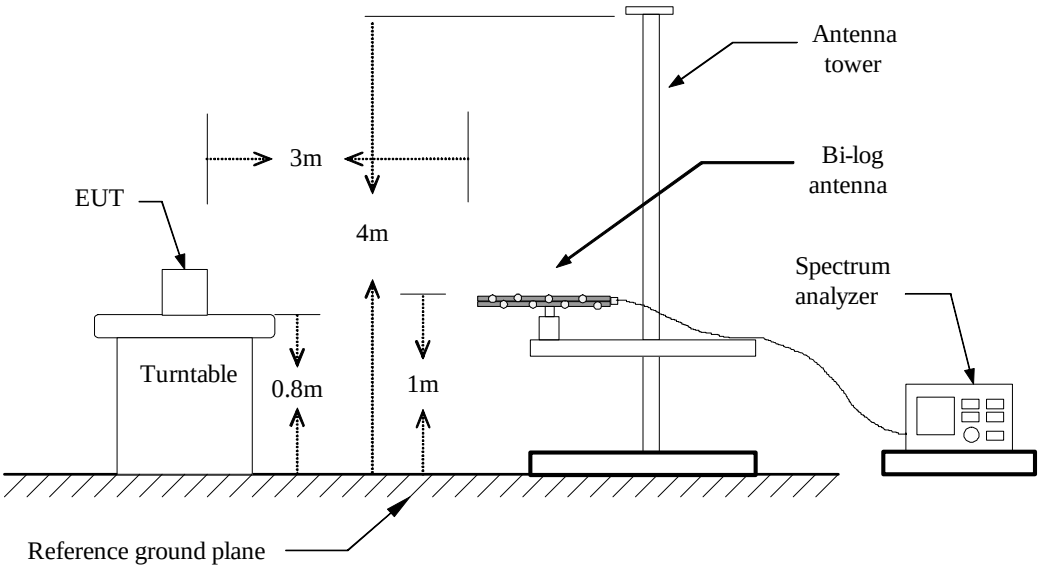
As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

### 5.7.2 Test Description

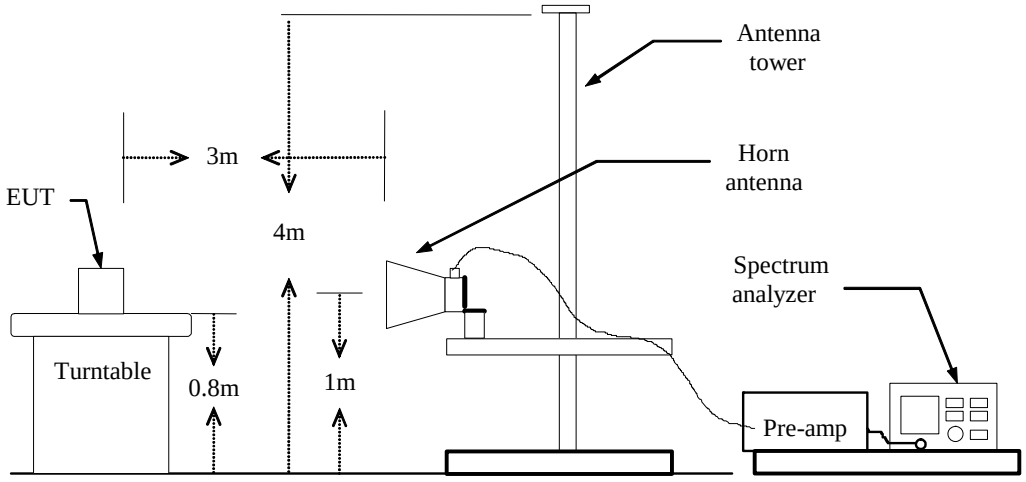
**A. Test Setup:**




**Blow 1GHz:**



**Above 1GHz:**




**B. Test procedures**

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

   Below 1GHz: RBW=100 kHz / VBW=300 kHz / Sweep=AUTO

   Above 1GHz : (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

### 5.7.3 Test Result

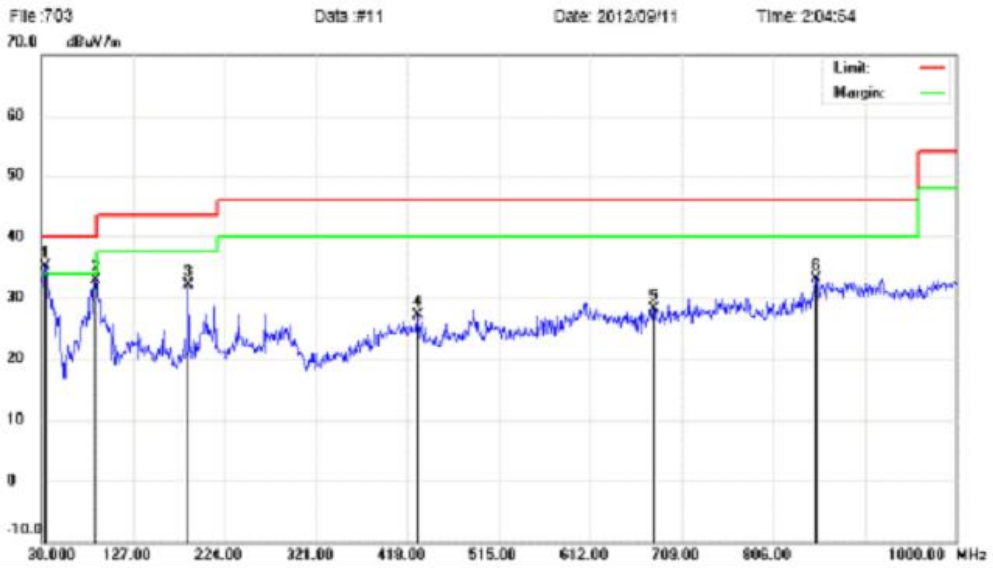
**Form 9 KHz to 30MHz:**

| (MHz) | H/V | Reading (dBuV) | Reading (dBuV) | CF (dB) | Actual FS | | Limit (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Peak (dBuV/m) | AV (dBuV/m) | | | |
| 2402.00 | H | 94.64 | 66.14 | 9.07 | 103.71 | 75.21 | 114.00 | 94.00 | -18.79 |
| | | | | | | | | | |
| 1612.50 | H | 56.05 | 30.74 | 5.78 | 61.83 | 36.52 | 74.00 | 54.00 | -17.48 |
| 4815.00 | H | 56.14 | 26.79 | 16.81 | 72.95 | 43.60 | 74.00 | 54.00 | -10.40 |
| N/A | | | | | | | | | >20 |
| | | | | | | | | | |
| 2402.00 | V | 94.51 | 72.36 | 9.07 | 103.58 | 77.18 | 114.00 | 94.00 | -16.82 |
| | | | | | | | | | |
| 1612.50 | V | 55.11 | 25.27 | 5.78 | 60.89 | 31.05 | 74.00 | 54.00 | -22.95 |
| 4815.00 | V | 55.85 | 25.71 | 16.81 | 72.66 | 42.52 | 74.00 | 54.00 | -11.48 |
| N/A | | | | | | | | | >20 |
| | | | | | | | | | |

**Note: No test data was detected in below 30MHz.**

Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

**Radiated Emission Measurement**




Site site #1
Limit: FCC Part15 B 3M Radiation
EUT: 3G Mobile Phone
M/N: TP703
Mode: wifi
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

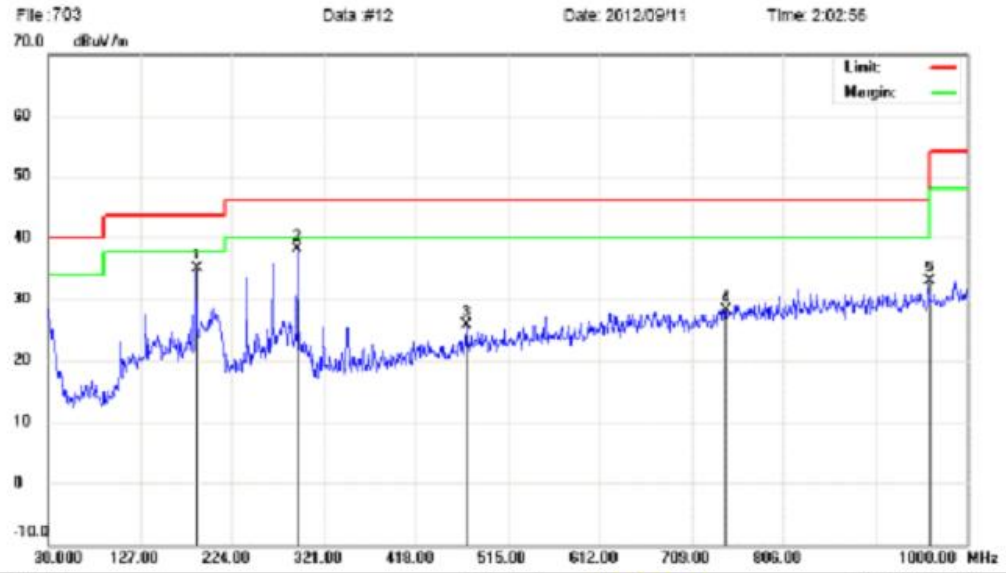
Temperature: 26
Humidity: 61 %
Distance:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | cm | degree | Comment |
| 1 | * | 34.8500 | 14.14 | 21.06 | 35.20 | 40.00 | -4.80 | peak | | | |
| 2 | | 87.2300 | 21.58 | 11.34 | 32.92 | 40.00 | -7.08 | peak | | | |
| 3 | | 186.1699 | 15.54 | 16.60 | 32.14 | 43.50 | -11.36 | peak | | | |
| 4 | | 428.6700 | 6.71 | 20.30 | 27.01 | 46.00 | -18.99 | peak | | | |
| 5 | | 679.8999 | 3.59 | 24.50 | 28.09 | 46.00 | -17.91 | peak | | | |
| 6 | | 851.5900 | 6.07 | 27.11 | 33.18 | 46.00 | -12.82 | peak | | | |

*:Maximum data x:Over limit !:over margin

Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

**Radiated Emission Measurement**




Site site #1
Limit: FCC Part15 B 3M Radiation
EUT: 3G Mobile Phone
M/N: TP703
Mode: wifi
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 26
Humidity: 61 %
Distance:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | cm | degree | Comment |
| 1 | | 186.1700 | 18.35 | 16.60 | 34.95 | 43.50 | -8.55 | peak | | | |
| 2 | * | 292.8700 | 18.68 | 19.34 | 38.02 | 46.00 | -7.98 | peak | | | |
| 3 | | 471.3500 | 4.44 | 21.25 | 25.69 | 46.00 | -20.31 | peak | | | |
| 4 | | 744.8900 | 2.28 | 25.79 | 28.07 | 46.00 | -17.93 | peak | | | |
| 5 | | 959.2600 | 4.83 | 28.00 | 32.83 | 46.00 | -13.17 | peak | | | |

*:Maximum data x:Over limit !:over margin

***Notes:***
1. Measuring frequencies from 30 MHz to the 1GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).

### 5.7.3.2 Above 1 GHz

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11b/CH Low | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4824.5 | V | 44.98 | 25.69 | 23.05 | 68.03 | 48.74 | 74.00 | 54.00 | -5.26 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4824.5 | H | 45.37 | 26.38 | 23.05 | 68.42 | 49.43 | 74.00 | 54.00 | -4.57 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11b/CH Mid | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4874.5 | V | 43.52 | 23.83 | 23.31 | 66.83 | 47.14 | 74.00 | 54.00 | -6.86 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4874.5 | H | 44.60 | 24.42 | 23.31 | 67.91 | 47.73 | 74.00 | 54.00 | -6.27 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie:
   margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11b/CH High | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4924.5 | V | 46.08 | 25.19 | 23.53 | 69.61 | 48.72 | 74.00 | 54.00 | -5.28 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4924.5 | H | 45.65 | 24.08 | 23.53 | 69.18 | 47.61 | 74.00 | 54.00 | -6.39 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie:
   margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11g/CH Low | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4824.5 | V | 43.71 | 23.61 | 23.05 | 66.76 | 46.66 | 74.00 | 54.00 | -7.34 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4824.5 | H | 44.97 | 25.08 | 23.05 | 68.02 | 48.13 | 74.00 | 54.00 | -5.87 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie:
   margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11g/CH Mid | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4874.5 | V | 45.84 | 24.23 | 23.31 | 69.15 | 47.54 | 74.00 | 54.00 | -6.46 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4874.5 | H | 44.17 | 25.79 | 23.31 | 67.48 | 49.10 | 74.00 | 54.00 | -4.90 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie:
   margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

| | | | |
|---|---|---|---|
| **Operation Mode:** | TX/ IEEE 802.11g/CH High | **Test Date:** | September12,2012 |
| **Temperature:** | 20°C | **Tested by:** | Habby Guo |
| **Humidity:** | 70 % RH | **Polarity:** | Ver. / Hor. |

| Freq. | Ant. Pol | Peak | AV | Ant. / CL | Actual Fs | | Peak | AV | AV |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | H/V | Reading | Reading | CF | | | Limit | Limit | Margin |
| | | (dBuV) | (dBuV) | (dB) | Peak | AV | (dBuV/m) | (dBuV/m) | (dB) |
| | | | | | (dBuV/m) | (dBuV/m) | | | |
| 4924.5 | V | 46.29 | 25.34 | 23.53 | 69.82 | 48.87 | 74.00 | 54.00 | -5.13 |
| N/A | V | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4924.5 | H | 44.35 | 24.20 | 23.53 | 67.88 | 47.73 | 74.00 | 54.00 | -6.27 |
| N/A | H | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

***Notes:***

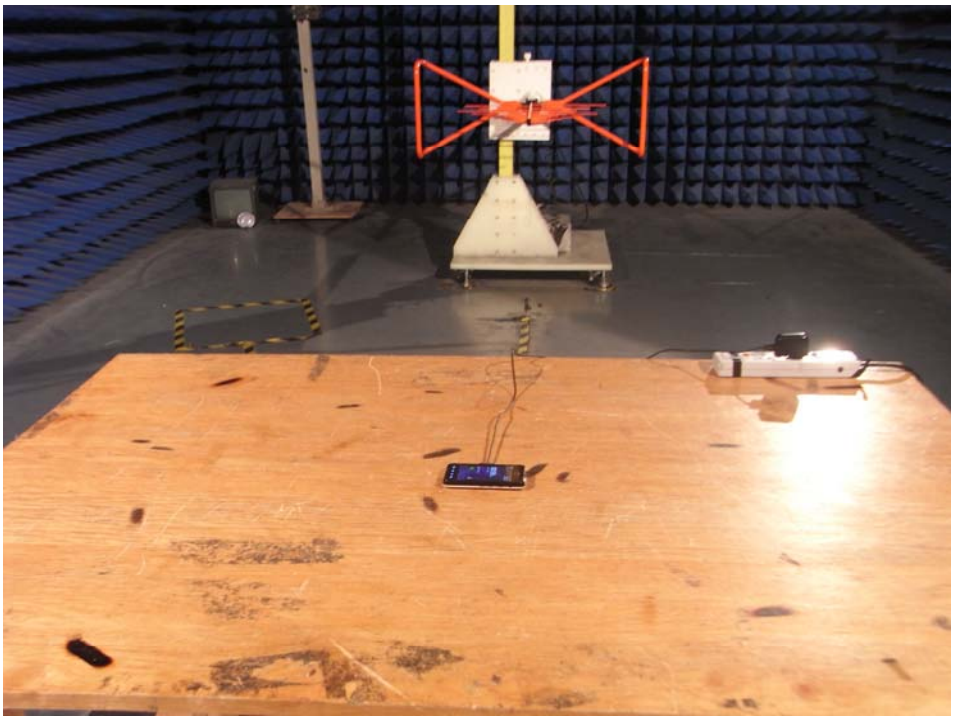
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie:
   margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

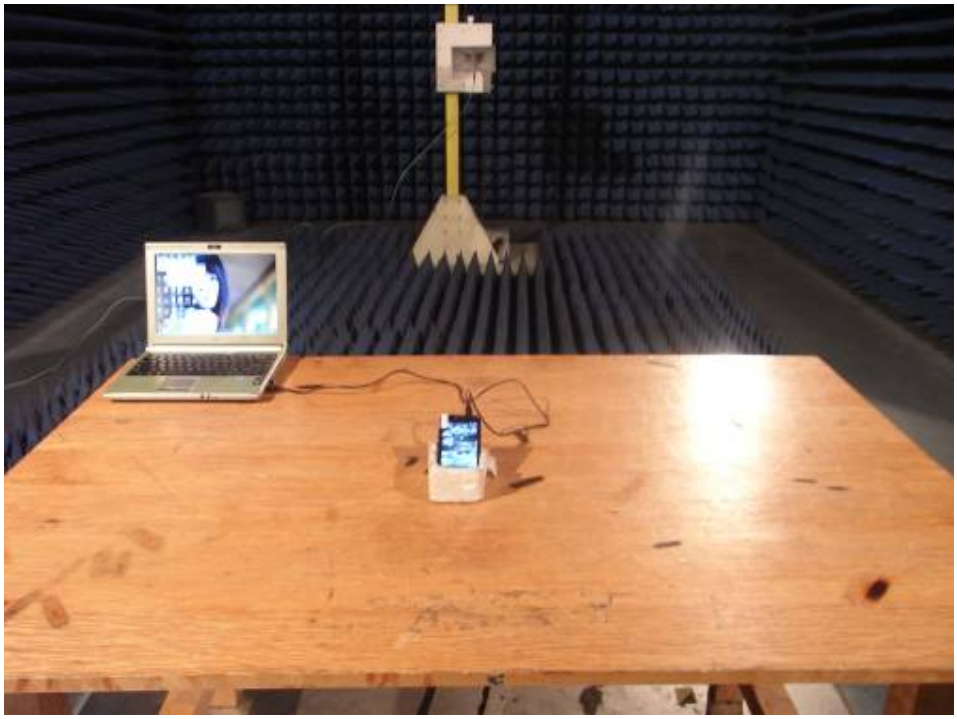
# APPENDIX 1

# PHOTOGRAPHS OF TEST SETUP

CE TEST SETUP

RE TEST SETUP





# APPENDIX 2

# PHOTOGRAPHS OF EUT

FRONT VIEW OF SAMPLE

BACK VIEW OF SAMPLE

LEFT VIEW OF SAMPLE

RIGHT VIEW OF SAMPLE

TOP VIEW OF SAMPLE

BOTTOM VIEW OF SAMPLE

PHOTO OF POWER SUPPLY


PHOTO OF HEADPHONE

PHOTO OF USB

PHOTO OF BATTERY


PHOTO OF THE ENTIRE SAMPLE

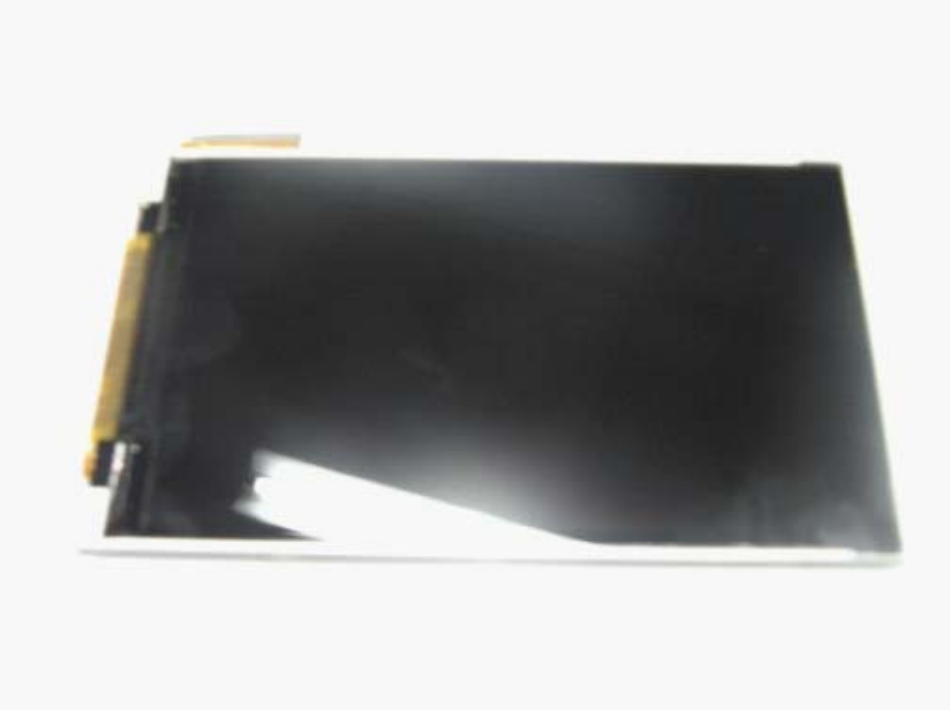
INTERNAL PHOTO OF SAMPLE – 1


INTERNAL PHOTO OF SAMPLE -2

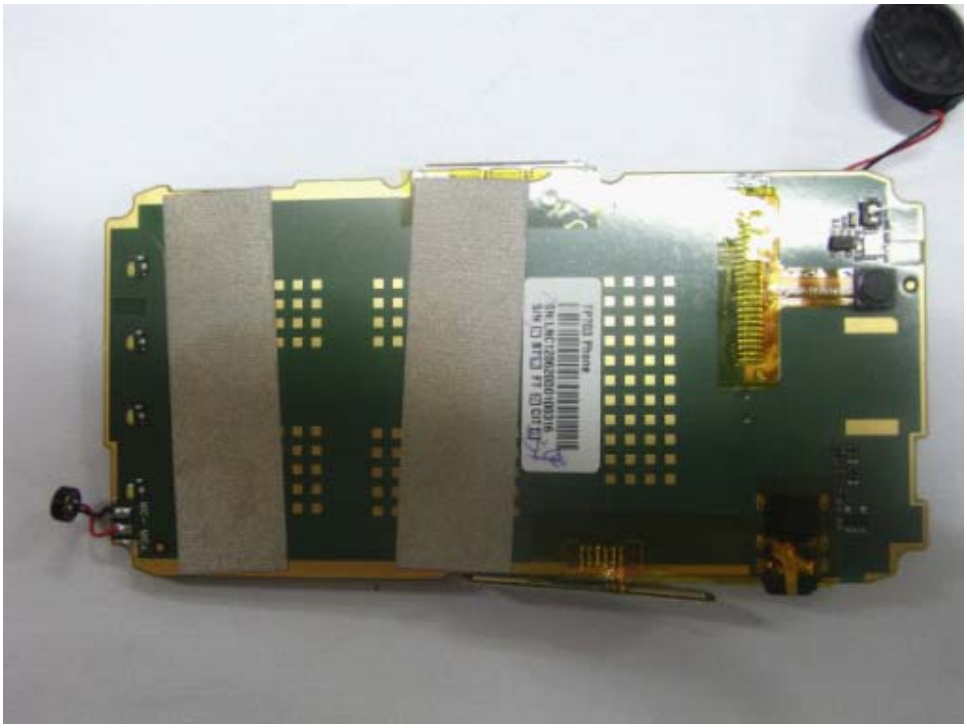
INTERNAL PHOTO OF SAMPLE – 3

INTERNAL PHOTO OF SAMPLE – 4

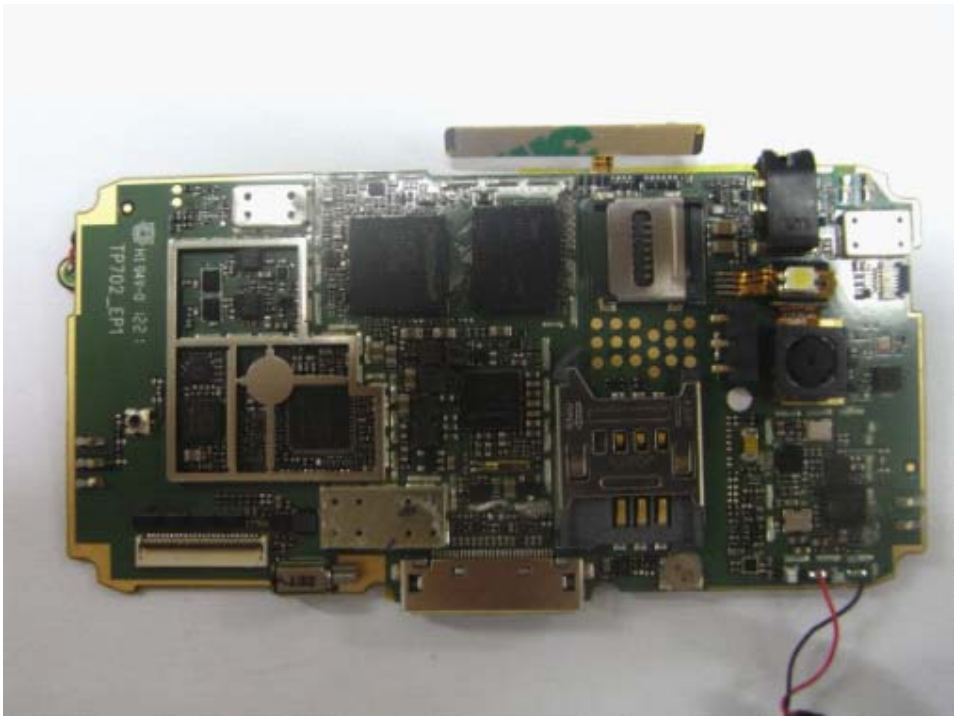
INTERNAL PHOTO OF SAMPLE –5



INTERNAL PHOTO OF SAMPLE –6



INTERNAL PHOTO OF SAMPLE –7




------END OF REPORT------