

# FCC RF Test Report

APPLICANT : Honeywell International Inc.  
EQUIPMENT : 99EX Mobile computer  
BRAND NAME : Honeywell  
MODEL NAME : 99EXLF  
MARKETING NAME : Dolphin 99EX  
FCC ID : HD5-99EXLF  
STANDARD : FCC Part 15 Subpart E  
CLASSIFICATION : Unlicensed National Information Infrastructure (UNII)

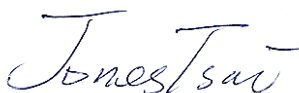
The product was received on Dec. 06, 2010 and completely tested on Oct. 31, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



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Reviewed by: Joseph Lin / Supervisor



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Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.



## TABLE OF CONTENTS

|                                                           |            |
|-----------------------------------------------------------|------------|
| <b>REVISION HISTORY .....</b>                             | <b>3</b>   |
| <b>SUMMARY OF TEST RESULT .....</b>                       | <b>4</b>   |
| <b>1 GENERAL DESCRIPTION .....</b>                        | <b>5</b>   |
| 1.1 Applicant .....                                       | 5          |
| 1.2 Manufacturer .....                                    | 5          |
| 1.3 Feature of Equipment Under Test .....                 | 5          |
| 1.4 Testing Site .....                                    | 6          |
| 1.5 Applied Standards .....                               | 6          |
| 1.6 Ancillary Equipment List .....                        | 7          |
| <b>2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....</b> | <b>8</b>   |
| 2.1 Carrier Frequency Channel .....                       | 8          |
| 2.2 RF Power .....                                        | 9          |
| 2.3 Test Mode .....                                       | 10         |
| 2.4 Connection Diagram of Test System .....               | 12         |
| 2.5 RF Utility .....                                      | 12         |
| <b>3 TEST RESULT .....</b>                                | <b>13</b>  |
| 3.1 26dB & 99% Bandwidth Measurement .....                | 13         |
| 3.2 Maximum Conducted Output Power Measurement .....      | 34         |
| 3.3 Power Spectral Density Measurement .....              | 36         |
| 3.4 Band Edges Measurement .....                          | 47         |
| 3.5 Conducted Spurious Emission .....                     | 57         |
| 3.6 AC Conducted Emission Measurement .....               | 88         |
| 3.7 Radiated Emission Measurement .....                   | 92         |
| 3.8 Peak Excursion Ratio Measurement .....                | 132        |
| 3.9 Automatically Discontinue Transmission .....          | 143        |
| 3.10 Frequency Stability Measurement .....                | 144        |
| 3.11 Antenna Requirements .....                           | 146        |
| <b>4 LIST OF MEASURING EQUIPMENT .....</b>                | <b>147</b> |
| <b>5 UNCERTAINTY OF EVALUATION .....</b>                  | <b>148</b> |
| <b>APPENDIX A. SETUP PHOTOGRAPHS</b>                      |            |



## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION             | ISSUED DATE   |
|--------------|---------|-------------------------|---------------|
| FR0D0904-35C | Rev. 01 | Initial issue of report | Nov. 24, 2015 |
|              |         |                         |               |
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|              |         |                         |               |

## SUMMARY OF TEST RESULT

| Report Section | FCC Rule              | Description                               | Limit                                             | Result | Remark                                  |
|----------------|-----------------------|-------------------------------------------|---------------------------------------------------|--------|-----------------------------------------|
| 3.1            | 15.403(i)             | 26dB & 99% Bandwidth                      | -                                                 | Pass   | -                                       |
| 3.2            | 15.407(a)             | Maximum Conducted Output Power            | $\leq 17, 24, 30$ dBm<br>(depend on band)         | Pass   | -                                       |
| 3.3            | 15.407(a)             | Power Spectral Density                    | $\leq 4, 11, 17$ dBm<br>(depend on band)          | Pass   | -                                       |
| 3.4            | 15.407(b)             | Frequency Band Edges                      | $\leq -17, -27$ dBm<br>(depend on band)&15.209(a) | Pass   | -                                       |
| 3.5            | 15.407(b)             | Spurious Emission                         | EIRP < -27<br>dBm/MHz                             | Pass   | -                                       |
| 3.6            | 15.207                | AC Conducted Emission                     | 15.207(a)                                         | Pass   | Under limit<br>18.00 dB at<br>0.502 MHz |
| 3.7            | 15.407(b)             | Transmitter Radiated Emission             | $\leq -17, -27$ dBm<br>(depend on band)&15.209(a) | Pass   | Under limit<br>7.32 dB at<br>32.70 MHz  |
| 3.8            | 15.407(b)             | Peak Excursion Ratio                      | $\leq 13$ dB                                      | Pass   | -                                       |
| 3.9            | 15.407(c)             | Automatically Discontinue<br>Transmission | Discontinue<br>Transmission                       | Pass   | -                                       |
| 3.10           | 15.407(g)             | Frequency Stability                       | Within Operation<br>Band                          | Pass   | -                                       |
| 3.11           | 15.203 &<br>15.407(a) | Antenna Requirement                       | N/A                                               | Pass   | -                                       |

**Remark:** The FR0D0904-35C report reuses conducted and radiation test data from the FR0D0904C report.



# 1 General Description

## 1.1 Applicant

Honeywell International Inc.

9680 Old Bailes Road, Fort Mill, SC 29707 USA

## 1.2 Manufacturer

Honeywell International Inc.

9680 Old Bailes Road, Fort Mill, SC 29707 USA

## 1.3 Feature of Equipment Under Test

| Product Feature & Specification |                                                                                                                                                                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | 99EX Mobile computer                                                                                                                                                                                                                                                                         |
| Brand Name                      | Honeywell                                                                                                                                                                                                                                                                                    |
| Model Name                      | 99EXLF                                                                                                                                                                                                                                                                                       |
| Marketing Name                  | Dolphin 99EX                                                                                                                                                                                                                                                                                 |
| FCC ID                          | HD5-99EXLF                                                                                                                                                                                                                                                                                   |
| Tx/Rx Frequency Range           | 5150 MHz ~ 5250 MHz<br>5250 MHz ~ 5350 MHz<br>5470 MHz ~ 5725 MHz                                                                                                                                                                                                                            |
| Maximum Output Power to Antenna | <5150 MHz ~ 5250 MHz><br>802.11a : 15.29 dBm / 0.034 W<br>802.11n HT20 : 15.10 dBm / 0.032 W<br><5250 MHz ~ 5350 MHz><br>802.11a : 15.20 dBm / 0.033 W<br>802.11n HT20 : 15.12 dBm / 0.033 W<br><5470 MHz ~ 5725 MHz><br>802.11a : 15.40 dBm / 0.035 W<br>802.11n HT20 : 15.40 dBm / 0.035 W |
| Antenna Type                    | PIFA Antenna with gain 3.50 dBi                                                                                                                                                                                                                                                              |
| HW Version                      | 8                                                                                                                                                                                                                                                                                            |
| SW Version                      | 26.07                                                                                                                                                                                                                                                                                        |
| Type of Modulation              | OFDM (BPSK / QPSK / 16QAM / 64QAM)                                                                                                                                                                                                                                                           |
| EUT Stage                       | Identical Prototype                                                                                                                                                                                                                                                                          |

### Remark:

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Unlicensed National Information Infrastructure (UNII).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Testing Site

|                    |                                                                                                                                                              |           |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                                                   |           |
| Test Site Location | No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park,<br>Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL: +886-3-3273456 / FAX: +886-3-3284978 |           |
| Test Site No.      | Sporton Site No.                                                                                                                                             |           |
|                    | CO05-HY                                                                                                                                                      | 03CH07-HY |

## 1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
- ANSI C63.4-2003

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 1.6 Ancillary Equipment List

| Item | Equipment                | Trade Name    | Model Name     | FCC ID                                       | Data Cable        | Power Cord                                                 |
|------|--------------------------|---------------|----------------|----------------------------------------------|-------------------|------------------------------------------------------------|
| 1.   | System Simulator         | R&S           | CMU 200        | N/A                                          | N/A               | Unshielded, 1.8 m                                          |
| 2.   | WLAN AP                  | D-Link        | DIR-865L       | KA2IR865LA1                                  | N/A               | Unshielded, 1.8 m                                          |
| 3.   | Bluetooth Earphone       | Sony Ericsson | MW600          | PY7DDA-2029                                  | N/A               | N/A                                                        |
| 4.   | Notebook                 | DELL          | Vostro 1510    | FCC DoC                                      | N/A               | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 5.   | Notebook                 | DELL          | Latitude E6320 | FCC DoC/<br>Contains FCC ID:<br>QDS-BRCM1054 | N/A               | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 6.   | LCD Monitor              | Lenovo        | 6135-AB1       | FCC DoC                                      | Shielded, 1.6 m   | Unshielded, 1.8 m                                          |
| 7.   | iPod                     | Apple         | A1285          | FCC DoC                                      | Unshielded, 1.2 m | N/A                                                        |
| 8.   | Charging Base            | Honeywell     | 99EX-HB        | N/A                                          | N/A               | N/A                                                        |
| 9.   | Adapter (for radiation)  | ENG           | 3A-902DB12     | N/A                                          | N/A               | N/A                                                        |
| 10.  | Adapter (for conduction) | FranMar       | FRA036-S12-4   | N/A                                          | N/A               | Unshielded, 1.8m                                           |
| 11.  | SD Card                  | SanDisk       | MicroSD HC     | FCC DoC                                      | N/A               | N/A                                                        |

## 2 Test Configuration of Equipment Under Test

### 2.1 Carrier Frequency Channel

| Frequency Band                    | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|-----------------------------------|---------|-------------|---------|-------------|
| 5150-5250 MHz<br>Band 1 (U-NII-1) | 36      | 5180        | 44      | 5220        |
|                                   | 40      | 5200        | 48      | 5240        |

| Frequency Band                     | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|------------------------------------|---------|-------------|---------|-------------|
| 5250-5350 MHz<br>Band 2 (U-NII-2A) | 52      | 5260        | 60      | 5300        |
|                                    | 56      | 5280        | 64      | 5320        |

| Frequency Band                     | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|------------------------------------|---------|-------------|---------|-------------|
| 5470-5725 MHz<br>Band 3 (U-NII-2C) | 100     | 5500        | 124     | 5620        |
|                                    | 104     | 5520        | 128     | 5640        |
|                                    | 108     | 5540        | 132     | 5660        |
|                                    | 112     | 5560        | 136     | 5680        |
|                                    | 116     | 5580        | 140     | 5700        |
|                                    | 120     | 5600        |         |             |

## 2.2 RF Power

Preliminary RF power output tests were performed in different data rate and recorded the in the following table:

| Channel | Frequency | 5GHz 802.11a RF Power (dBm) |        |         |         |         |         |         |         |
|---------|-----------|-----------------------------|--------|---------|---------|---------|---------|---------|---------|
|         |           | Data Rate                   |        |         |         |         |         |         |         |
|         |           | 6 Mbps                      | 9 Mbps | 12 Mbps | 18 Mbps | 24 Mbps | 36 Mbps | 48 Mbps | 54 Mbps |
| CH 36   | 5180 MHz  | 15.29                       | 15.27  | 14.29   | 14.22   | 13.23   | 13.15   | 11.67   | 11.69   |
| CH 44   | 5220 MHz  | 15.27                       | 15.26  | 14.30   | 14.31   | 13.33   | 13.25   | 11.66   | 11.73   |
| CH 48   | 5240 MHz  | 15.27                       | 15.22  | 14.31   | 14.24   | 13.28   | 13.15   | 11.74   | 11.60   |
| CH 52   | 5260 MHz  | 15.08                       | 15.03  | 14.21   | 14.05   | 13.12   | 13.03   | 11.90   | 11.88   |
| CH 60   | 5300 MHz  | 15.08                       | 15.07  | 14.16   | 14.09   | 13.08   | 13.11   | 11.51   | 11.53   |
| CH 64   | 5320 MHz  | 15.20                       | 15.16  | 14.25   | 14.17   | 13.14   | 13.11   | 11.54   | 11.57   |
| CH 100  | 5500 MHz  | 15.11                       | 15.07  | 14.10   | 14.08   | 13.02   | 13.45   | 11.88   | 11.82   |
| CH 116  | 5580 MHz  | 15.40                       | 15.37  | 14.53   | 14.43   | 13.37   | 13.23   | 11.70   | 11.62   |
| CH 140  | 5700 MHz  | 15.20                       | 15.18  | 14.22   | 14.07   | 13.12   | 13.01   | 11.92   | 11.87   |

| Channel | Frequency | 5GHz 802.11n HT20 RF Power (dBm) |         |           |         |         |         |           |         |
|---------|-----------|----------------------------------|---------|-----------|---------|---------|---------|-----------|---------|
|         |           | Data Rate                        |         |           |         |         |         |           |         |
|         |           | 6.5 Mbps                         | 13 Mbps | 19.5 Mbps | 26 Mbps | 39 Mbps | 52 Mbps | 58.5 Mbps | 65 Mbps |
| CH 36   | 5180 MHz  | 15.10                            | 14.06   | 14.00     | 13.05   | 13.02   | 11.85   | 11.83     | 10.54   |
| CH 44   | 5220 MHz  | 15.02                            | 14.10   | 14.04     | 13.06   | 13.34   | 11.83   | 11.82     | 10.91   |
| CH 48   | 5240 MHz  | 15.09                            | 14.04   | 14.10     | 13.06   | 13.38   | 11.89   | 11.83     | 10.97   |
| CH 52   | 5260 MHz  | 15.03                            | 14.02   | 14.00     | 13.04   | 13.40   | 11.88   | 11.81     | 10.96   |
| CH 60   | 5300 MHz  | 15.08                            | 14.11   | 14.05     | 13.11   | 13.40   | 11.88   | 11.81     | 10.93   |
| CH 64   | 5320 MHz  | 15.12                            | 14.14   | 14.07     | 13.05   | 13.05   | 11.91   | 11.84     | 10.92   |
| CH 100  | 5500 MHz  | 15.38                            | 14.46   | 14.30     | 13.28   | 13.21   | 11.57   | 11.50     | 10.77   |
| CH 116  | 5580 MHz  | 15.39                            | 14.42   | 14.34     | 13.29   | 13.19   | 11.61   | 11.56     | 10.65   |
| CH 140  | 5700 MHz  | 15.40                            | 14.50   | 14.43     | 13.33   | 13.28   | 11.70   | 11.59     | 10.77   |

### Remark:

1. The data rates of WLAN 802.11a/n were set in 6Mbps for 802.11a, and 6.5Mbps for 802.11n HT20 for all the test cases due to the highest RF output power.
2. The EUT is programmed to transmit signal continuously for all testing.

## 2.3 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

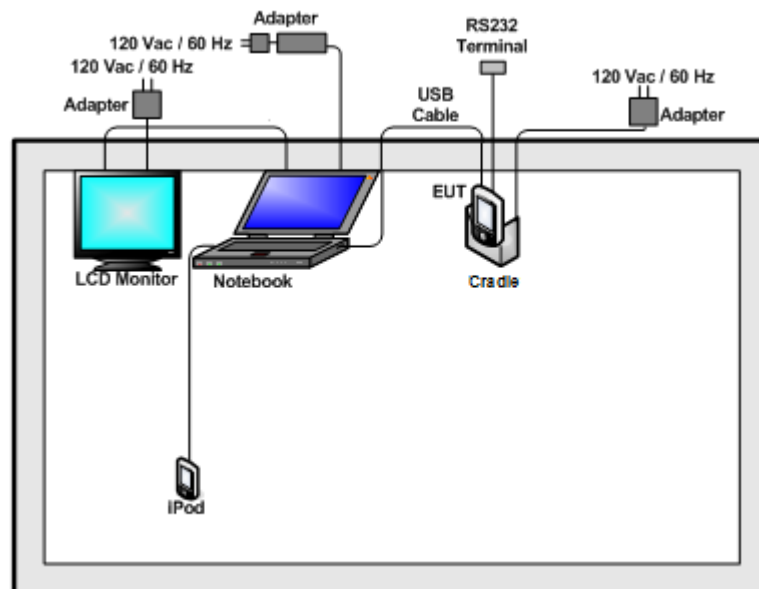
The following tables are showing the test modes as the worst cases and recorded in this report.

| Test Cases    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Item     | 802.11a/n (Modulation : OFDM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Conducted TCs | <ul style="list-style-type: none"> <li>■ Mode 1: 802.11a_CH36_5180 MHz</li> <li>■ Mode 2: 802.11a_CH44_5220 MHz</li> <li>■ Mode 3: 802.11a_CH48_5240 MHz</li> <li>■ Mode 4: 802.11a_CH52_5260 MHz</li> <li>■ Mode 5: 802.11a_CH60_5300 MHz</li> <li>■ Mode 6: 802.11a_CH64_5320 MHz</li> <li>■ Mode 7: 802.11a_CH100_5500 MHz</li> <li>■ Mode 8: 802.11a_CH116_5580 MHz</li> <li>■ Mode 9: 802.11a_CH140_5700 MHz</li> <li>■ Mode 10: 802.11n_CH36_5180 MHz (BW 20M)</li> <li>■ Mode 11: 802.11n_CH44_5220 MHz (BW 20M)</li> <li>■ Mode 12: 802.11n_CH48_5240 MHz (BW 20M)</li> <li>■ Mode 13: 802.11n_CH52_5260 MHz (BW 20M)</li> <li>■ Mode 14: 802.11n_CH60_5300 MHz (BW 20M)</li> <li>■ Mode 15: 802.11n_CH64_5320 MHz (BW 20M)</li> <li>■ Mode 16: 802.11n_CH100_5500 MHz (BW 20M)</li> <li>■ Mode 17: 802.11n_CH116_5580 MHz (BW 20M)</li> <li>■ Mode 18: 802.11n_CH140_5700 MHz (BW 20M)</li> </ul> |

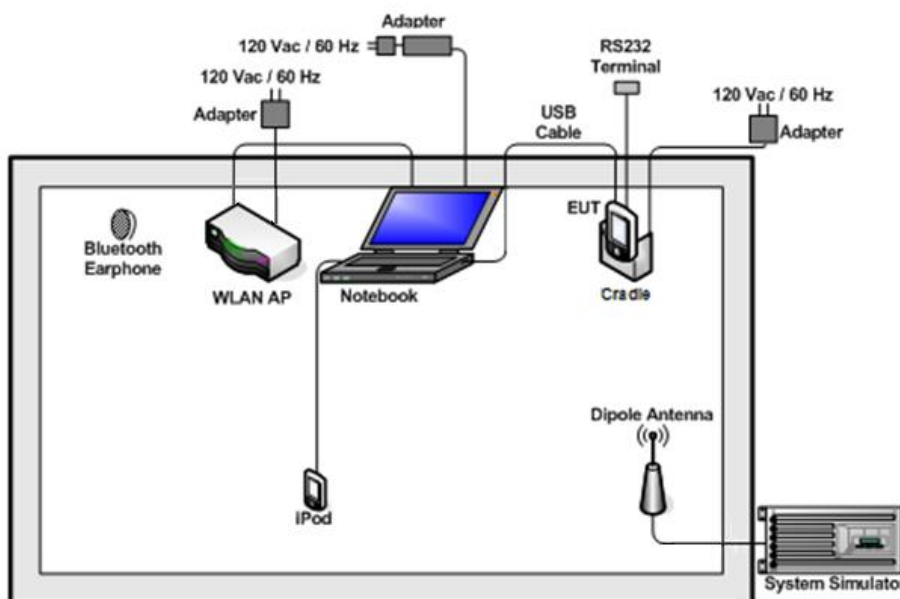
| Test Item                                                                                                                                                                                                                                                                                                                                   | 802.11a/n (Modulation : OFDM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Radiated TCs</b>                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>■ Mode 1: 802.11a_CH36_5180 MHz + TC 1</li> <li>■ Mode 2: 802.11a_CH44_5220 MHz + TC 1</li> <li>■ Mode 3: 802.11a_CH48_5240 MHz + TC 1</li> <li>■ Mode 4: 802.11a_CH52_5260 MHz + TC 1</li> <li>■ Mode 5: 802.11a_CH60_5300 MHz + TC 1</li> <li>■ Mode 6: 802.11a_CH64_5320 MHz + TC 1</li> <li>■ Mode 7: 802.11a_CH100_5500 MHz + TC 1</li> <li>■ Mode 8: 802.11a_CH116_5580 MHz + TC 1</li> <li>■ Mode 9: 802.11a_CH140_5700 MHz + TC 1</li> <li>■ Mode 10: 802.11n_CH36_5180 MHz (BW 20M) + TC 1</li> <li>■ Mode 11: 802.11n_CH44_5220 MHz (BW 20M) + TC 1</li> <li>■ Mode 12: 802.11n_CH48_5240 MHz (BW 20M) + TC 1</li> <li>■ Mode 13: 802.11n_CH52_5260 MHz (BW 20M) + TC 1</li> <li>■ Mode 14: 802.11n_CH60_5300 MHz (BW 20M) + TC 1</li> <li>■ Mode 15: 802.11n_CH64_5320 MHz (BW 20M) + TC 1</li> <li>■ Mode 16: 802.11n_CH100_5500 MHz (BW 20M) + TC 1</li> <li>■ Mode 17: 802.11n_CH116_5580 MHz (BW 20M) + TC 1</li> <li>■ Mode 18: 802.11n_CH140_5700 MHz (BW 20M) + TC 1</li> </ul> |
| <b>AC Conducted Emission</b>                                                                                                                                                                                                                                                                                                                | Mode 1 : WCDMA Band II Idle + Bluetooth Link + WLAN (5GHz) Link + Camera + TC 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Remark:</b> <ol style="list-style-type: none"> <li>TC 1 stands for Test Configuration, and consists of USB cable, RS232 terminal, cradle, and adapter.</li> <li>TC 2 stands for Test Configuration, and consists of RSS232 Terminal, Charging Base (Charging from Adapter), SD Card, and USB Cable (Data Link with Notebook).</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## 2.4 Connection Diagram of Test System

### <WLAN Tx Mode>



### <AC Conducted Emission Mode>



## 2.5 RF Utility

The programmed RF Utility "TI1273 WLAN FCC" is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

### 3 Test Result

#### 3.1 26dB & 99% Bandwidth Measurement

##### 3.1.1 Limit of 26dB & 99% Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B). For the band 5.15~5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B. For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log B.

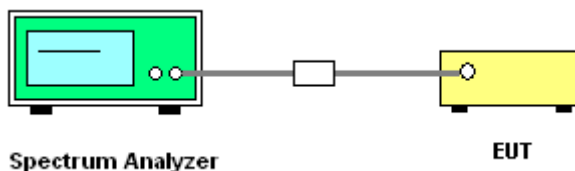
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC Public Notice DA 02-2138 (Measurement Guidelines of UNII).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Read RBW and repeat measurement as needed until the RBW/BW ratio is approximately 1%.
4. Use a RBW = approximately 1% of the emission bandwidth; Set the VBW > RBW; Use a peak detector.
5. Measure the maximum width of the emission that is 26 dB relative to the peak of the emission and 99% occupied bandwidth.

##### 3.1.4 Test Setup

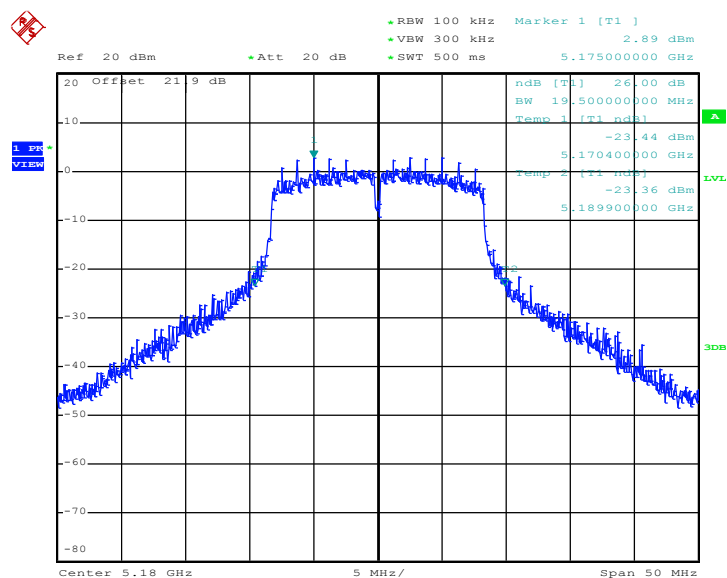


### 3.1.5 Test Result of 26dB Bandwidth

|                        |          |                            |         |
|------------------------|----------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1~9 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu  | <b>Relative Humidity :</b> | 54~57%  |

| Channel | Frequency (MHz) | 802.11a<br>26dB Bandwidth (MHz) | Pass/Fail |
|---------|-----------------|---------------------------------|-----------|
| 36      | 5180            | 19.50                           | Pass      |
| 44      | 5220            | 19.10                           | Pass      |
| 48      | 5240            | 19.30                           | Pass      |
| 52      | 5260            | 18.65                           | Pass      |
| 60      | 5300            | 19.10                           | Pass      |
| 64      | 5320            | 18.70                           | Pass      |
| 100     | 5500            | 19.05                           | Pass      |
| 116     | 5580            | 19.05                           | Pass      |
| 140     | 5700            | 19.30                           | Pass      |

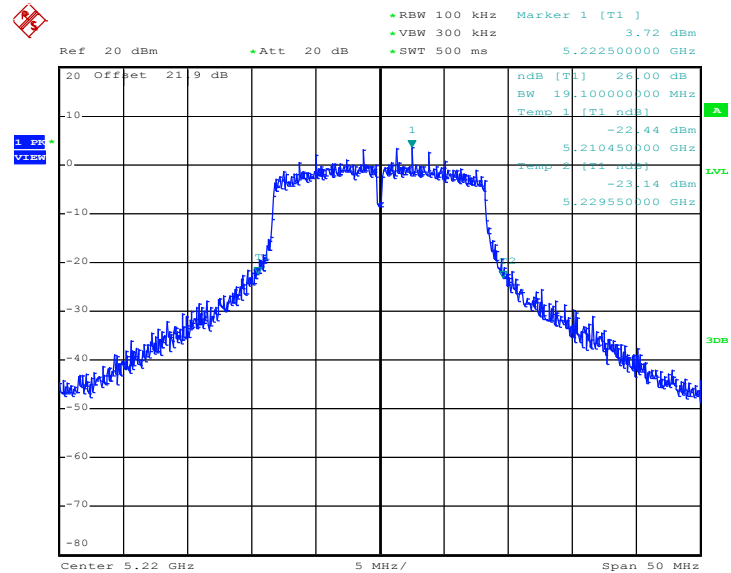
**26 dB Bandwidth Plot on 802.11a Channel 36**



Date: 10.DEC.2010 08:43:20

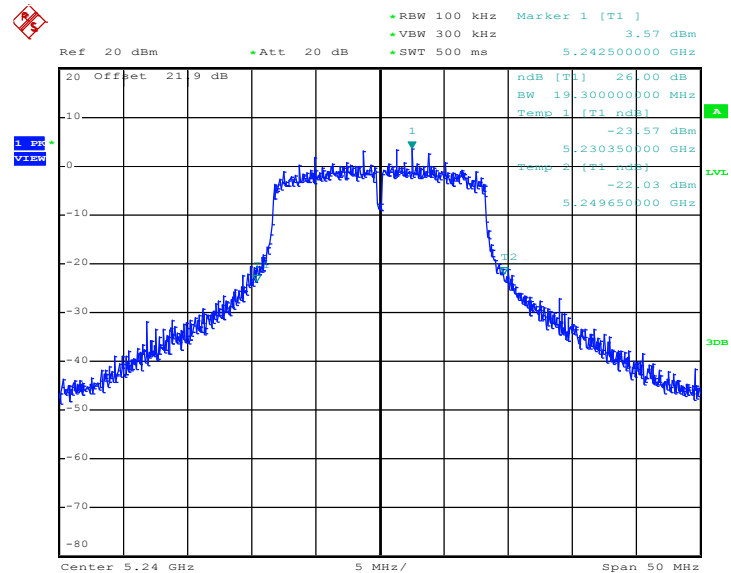


26 dB Bandwidth Plot on 802.11a Channel 44



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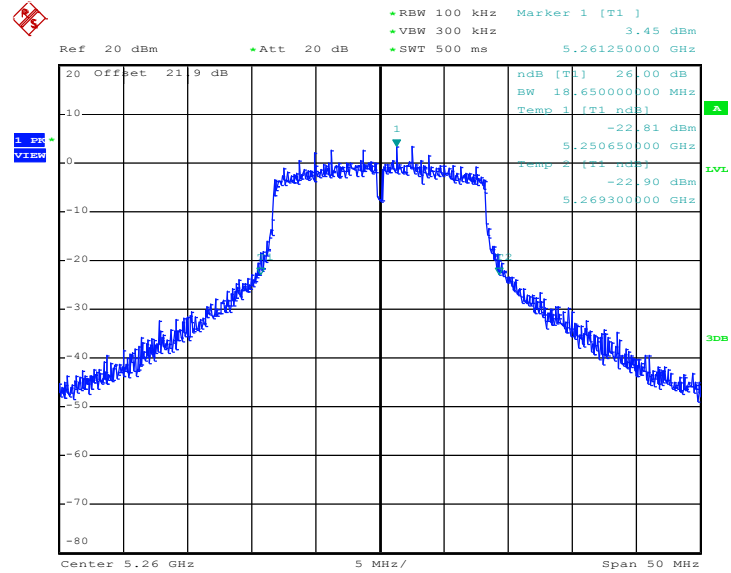
26 dB Bandwidth Plot on 802.11a Channel 48



Date: 10.DEC.2010 09:00:27

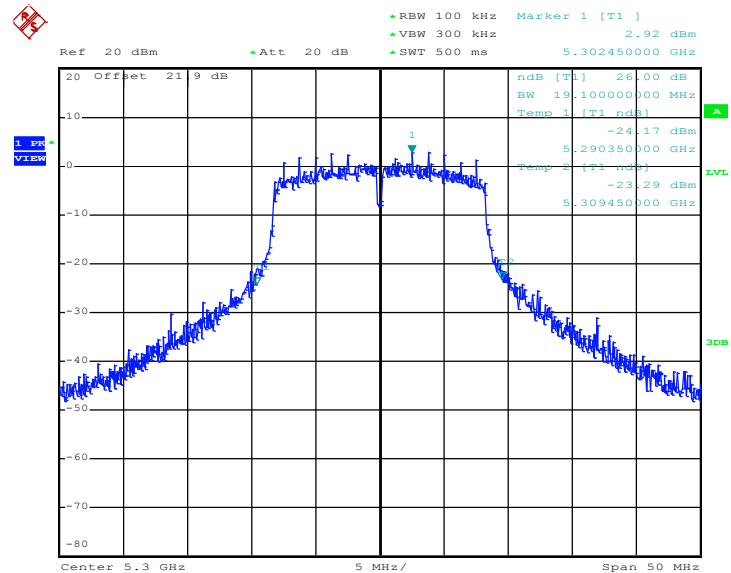


26 dB Bandwidth Plot on 802.11a Channel 52



Date: 10.DEC.2010 09:01:29

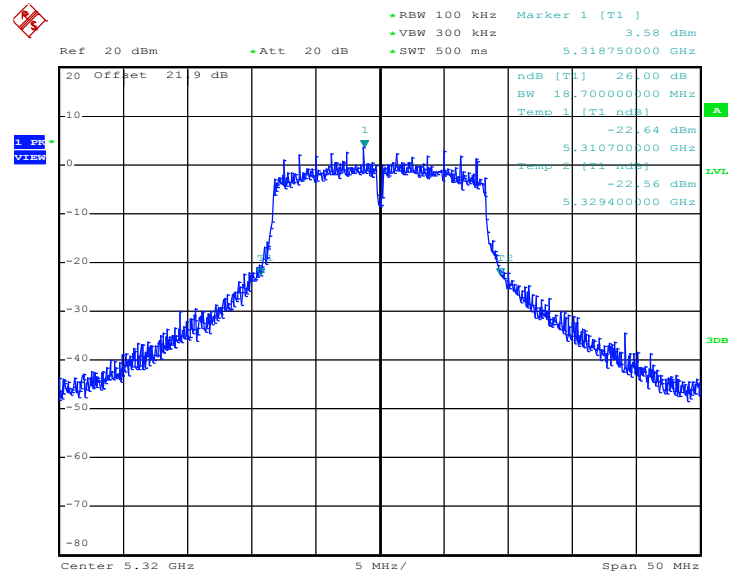
26 dB Bandwidth Plot on 802.11a Channel 60



Date: 10.DEC.2010 09:02:36

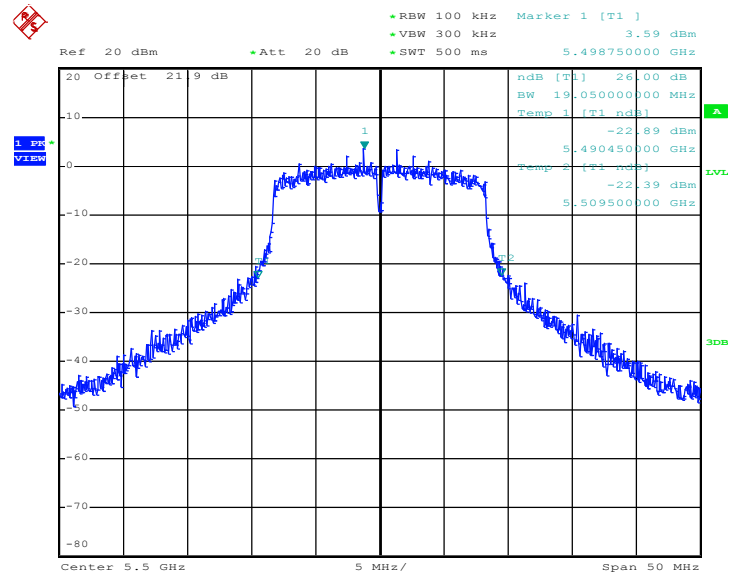


26 dB Bandwidth Plot on 802.11a Channel 64



Date: 10.DEC.2010 09:03:26

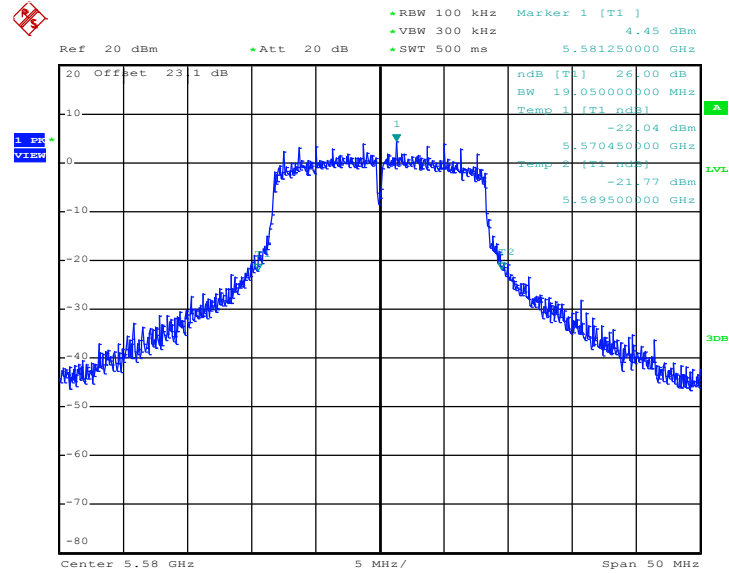
26 dB Bandwidth Plot on 802.11a Channel 100



Date: 10.DEC.2010 09:04:38

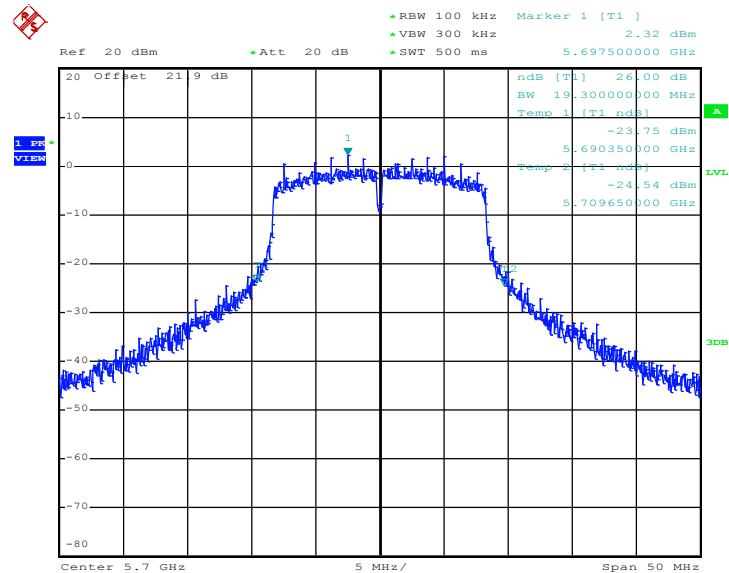


26 dB Bandwidth Plot on 802.11a Channel 116



Date: 10.FEB.2011 00:18:28

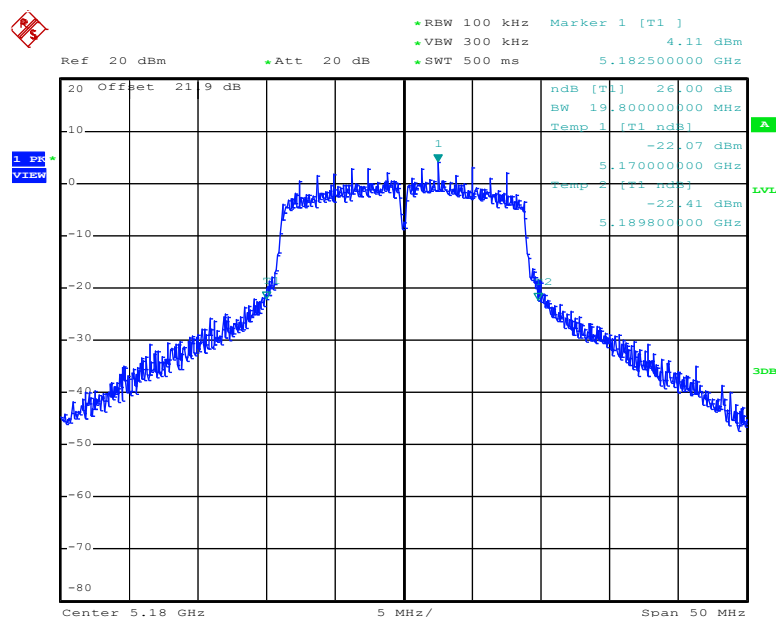
26 dB Bandwidth Plot on 802.11a Channel 140



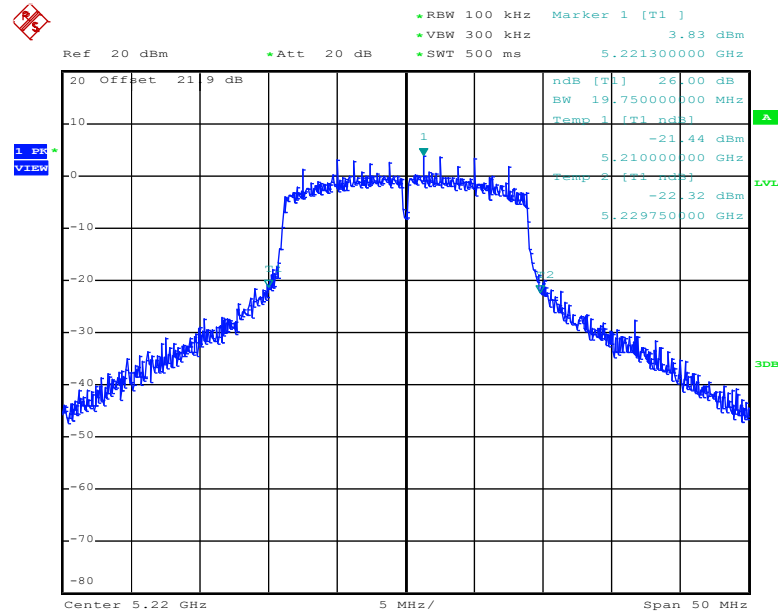
Date: 10.DEC.2010 09:10:15

|                 |            |                     |         |
|-----------------|------------|---------------------|---------|
| Test Mode :     | Mode 10~18 | Temperature :       | 25~27°C |
| Test Engineer : | Ken Hsu    | Relative Humidity : | 54~57%  |

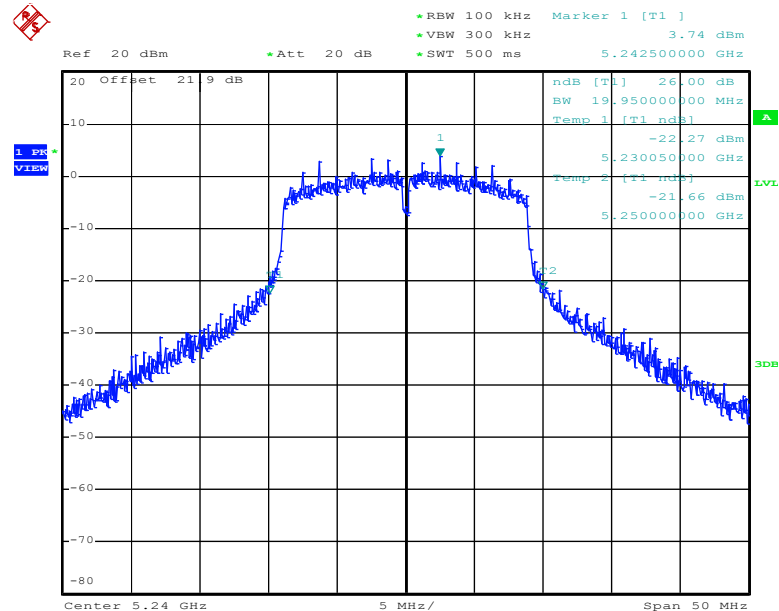
| Channel | Frequency (MHz) | 802.11n HT20<br>26dB Bandwidth (MHz) | Pass/Fail |
|---------|-----------------|--------------------------------------|-----------|
| 36      | 5180            | 19.80                                | Pass      |
| 44      | 5220            | 19.75                                | Pass      |
| 48      | 5240            | 19.95                                | Pass      |
| 52      | 5260            | 19.95                                | Pass      |
| 60      | 5300            | 19.55                                | Pass      |
| 64      | 5320            | 19.75                                | Pass      |
| 100     | 5500            | 20.00                                | Pass      |
| 116     | 5580            | 20.00                                | Pass      |
| 140     | 5700            | 20.15                                | Pass      |

**26 dB Bandwidth Plot on 802.11n HT20 Channel 36**


Date: 10.DEC.2010 09:14:05

**26 dB Bandwidth Plot on 802.11n HT20 Channel 44**


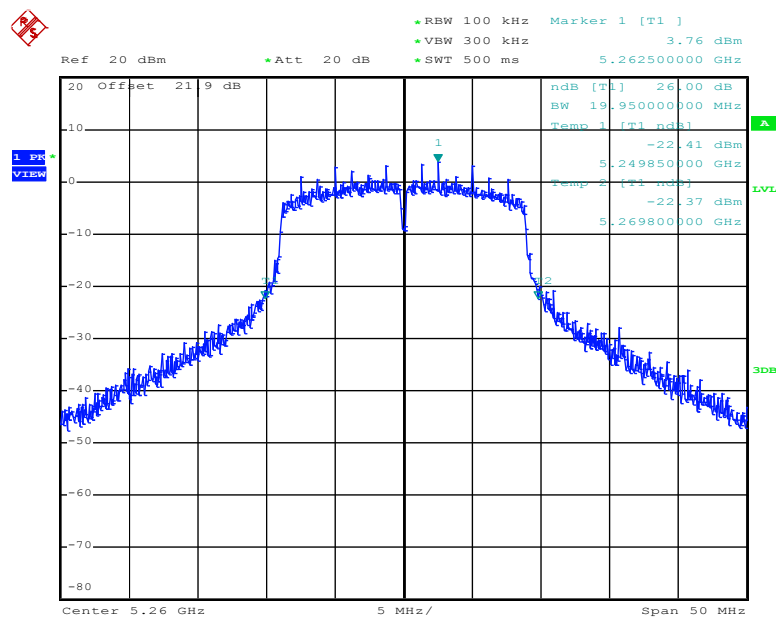
Date: 10.DEC.2010 09:16:51

**26 dB Bandwidth Plot on 802.11n HT20 Channel 48**


Date: 10.DEC.2010 09:19:06

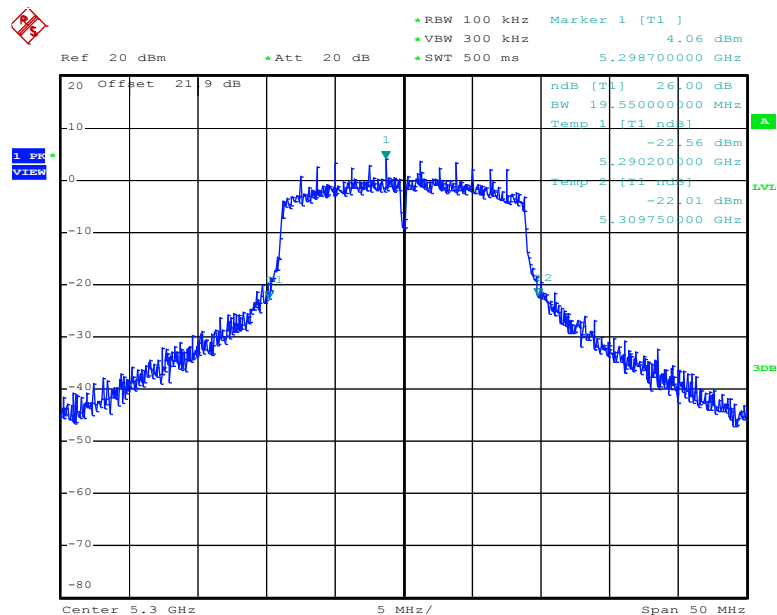


### 26 dB Bandwidth Plot on 802.11n HT20 Channel 52

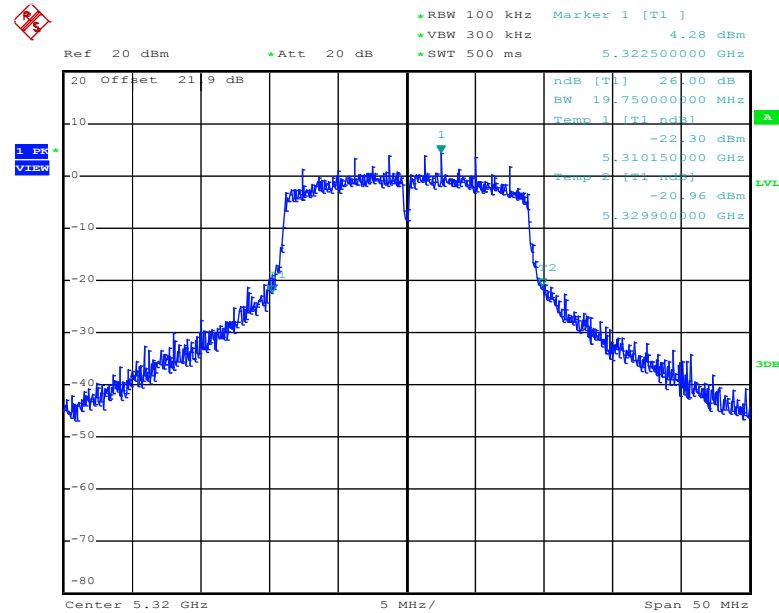


Date: 10.DEC.2010 09:21:23

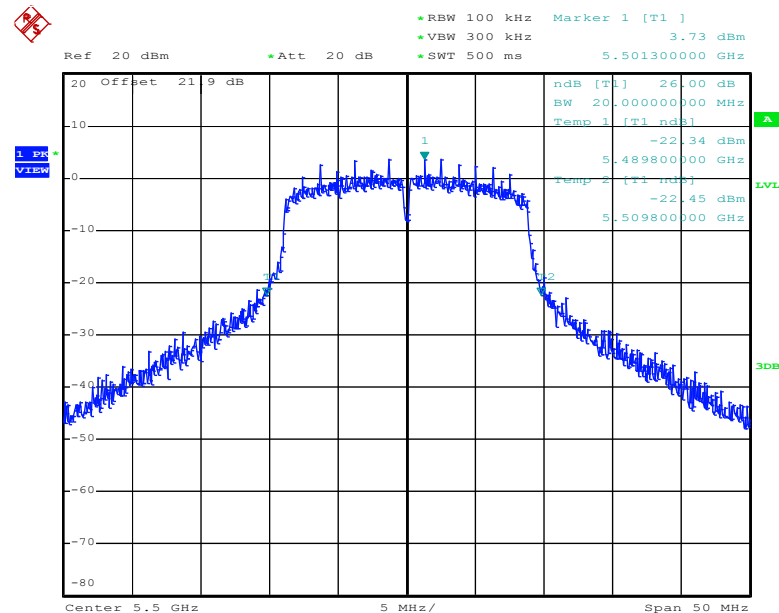
### 26 dB Bandwidth Plot on 802.11n HT20 Channel 60



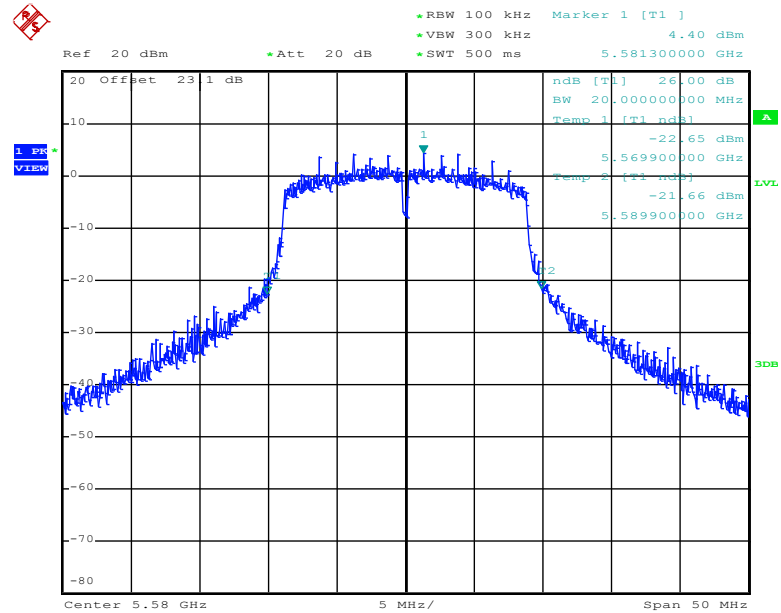
Date: 10.DEC.2010 09:22:12

**26 dB Bandwidth Plot on 802.11n HT20 Channel 64**


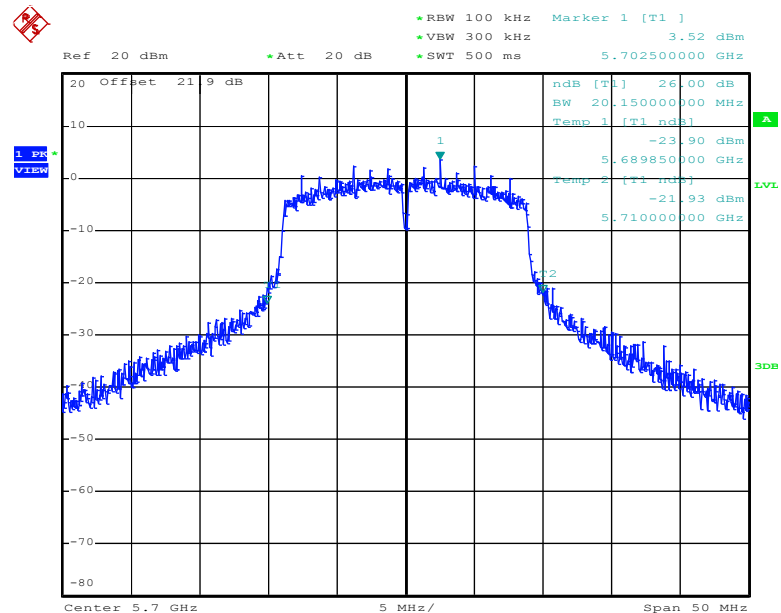
Date: 10.DEC.2010 09:24:02

**26 dB Bandwidth Plot on 802.11n HT20 Channel 100**


Date: 10.DEC.2010 09:25:09

**26 dB Bandwidth Plot on 802.11n HT20 Channel 116**


Date: 10.FEB.2011 01:13:12

**26 dB Bandwidth Plot on 802.11n HT20 Channel 140**


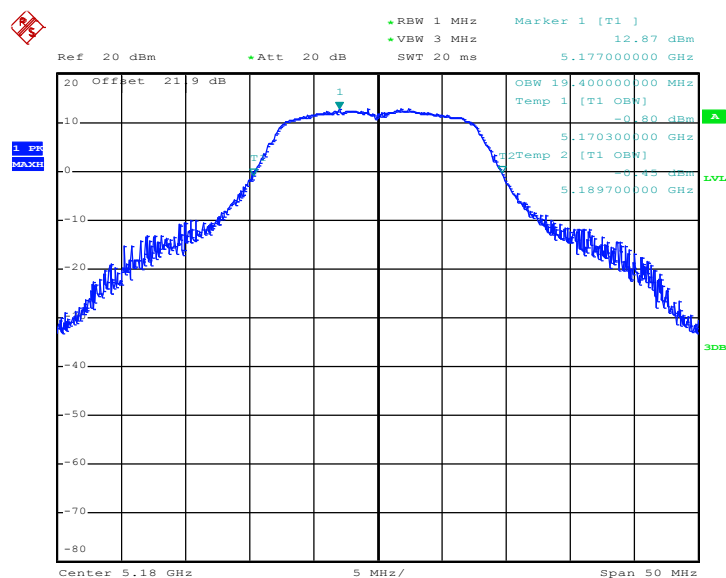
Date: 10.DEC.2010 09:26:53

### 3.1.6 Test Result of 99% Occupied Bandwidth

|                        |          |                            |         |
|------------------------|----------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1~9 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu  | <b>Relative Humidity :</b> | 54~57%  |

| Channel | Frequency (MHz) | 802.11a<br>99% Occupied Bandwidth (MHz) | Pass/Fail |
|---------|-----------------|-----------------------------------------|-----------|
| 36      | 5180            | 19.40                                   | Pass      |
| 44      | 5220            | 19.30                                   | Pass      |
| 48      | 5240            | 19.25                                   | Pass      |
| 52      | 5260            | 19.30                                   | Pass      |
| 60      | 5300            | 19.25                                   | Pass      |
| 64      | 5320            | 19.20                                   | Pass      |
| 100     | 5500            | 19.20                                   | Pass      |
| 116     | 5580            | 19.15                                   | Pass      |
| 140     | 5700            | 19.30                                   | Pass      |

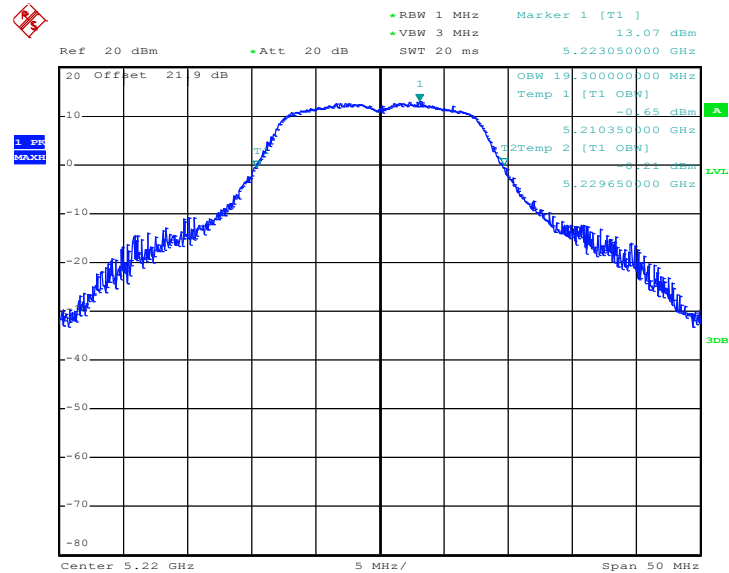
**99% Occupied Bandwidth Plot on 802.11a Channel 36**



Date: 10.DEC.2010 09:59:53

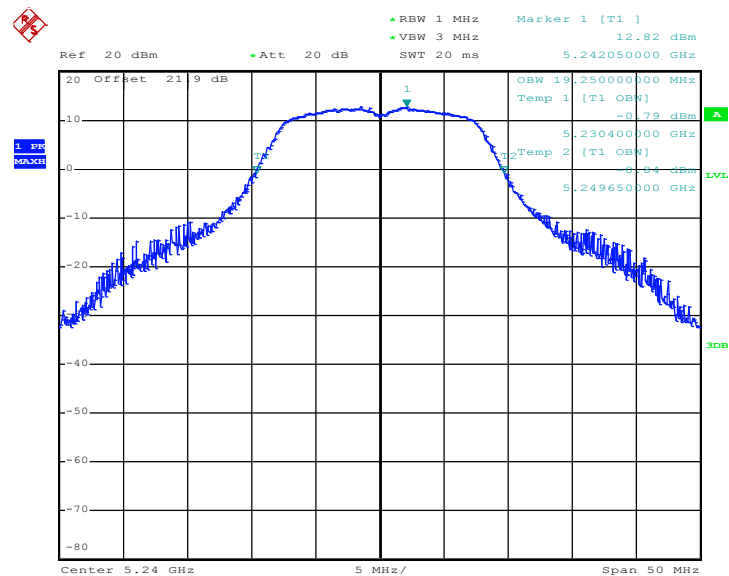


99% Occupied Bandwidth Plot on 802.11a Channel 44



Date: 10.DEC.2010 10:00:51

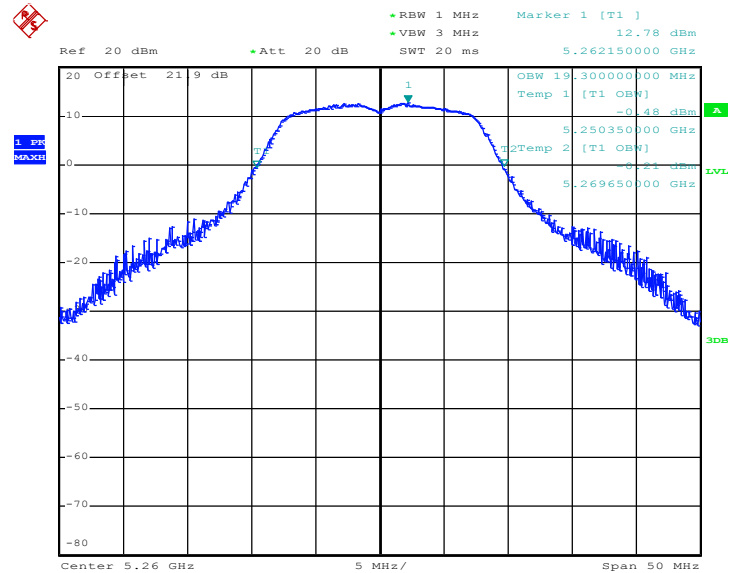
99% Occupied Bandwidth Plot on 802.11a Channel 48



Date: 10.DEC.2010 10:01:39

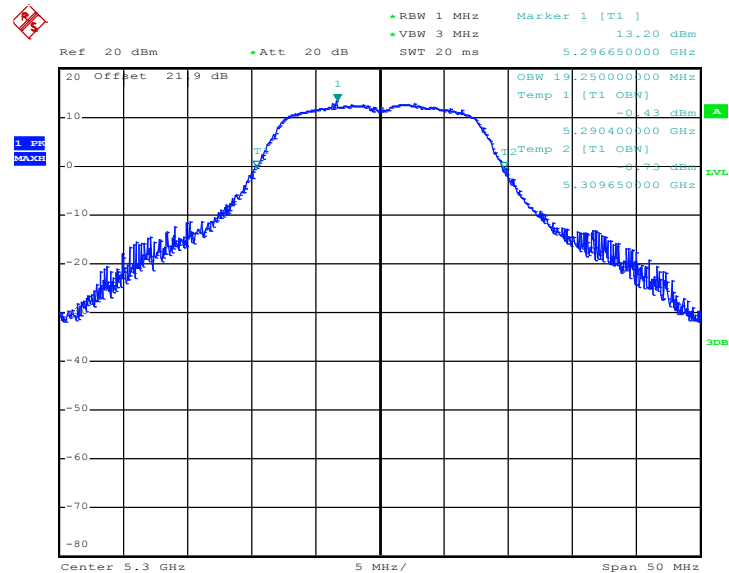


99% Occupied Bandwidth Plot on 802.11a Channel 52

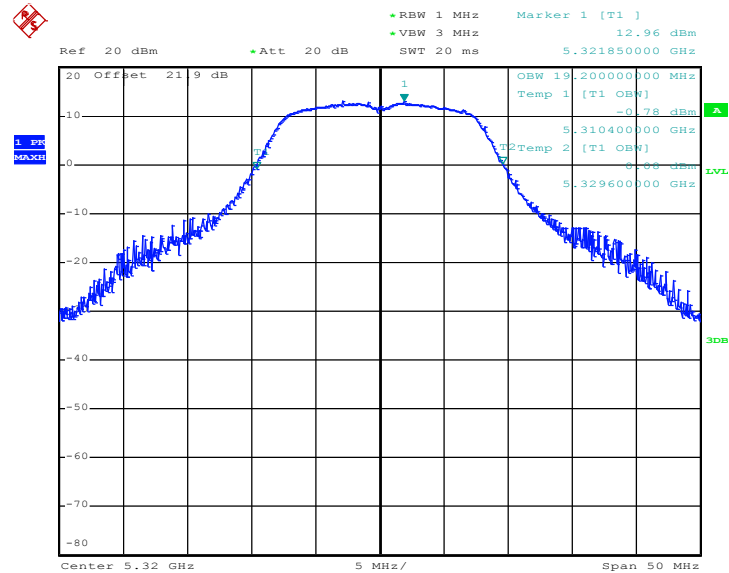


Date: 10.DEC.2010 10:02:20

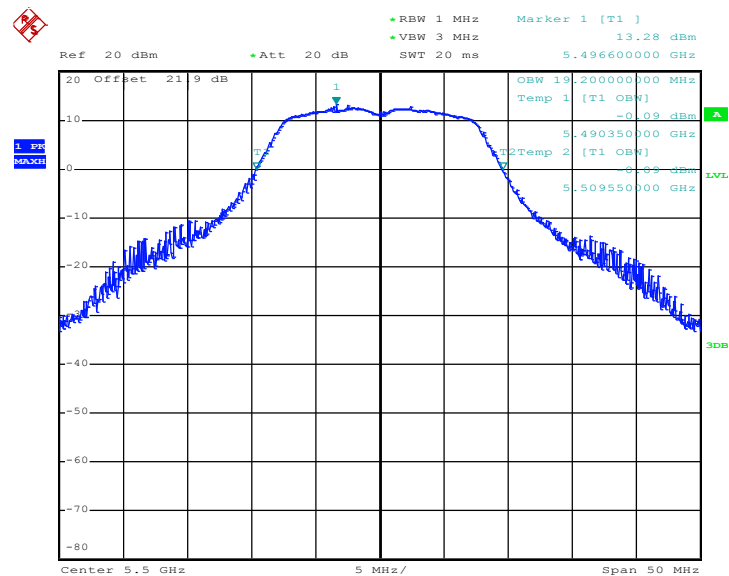
99% Occupied Bandwidth Plot on 802.11a Channel 60



Date: 10.DEC.2010 10:03:06

**99% Occupied Bandwidth Plot on 802.11a Channel 64**


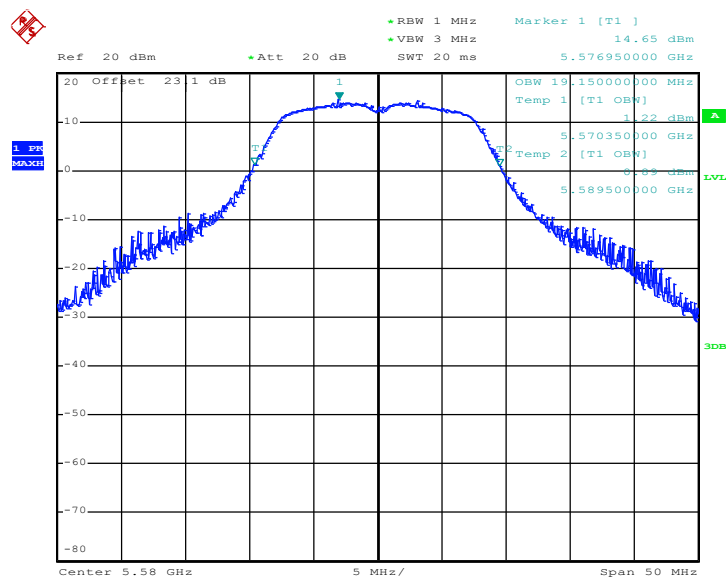
Date: 10.DEC.2010 10:03:56

**99% Occupied Bandwidth Plot on 802.11a Channel 100**


Date: 10.DEC.2010 10:05:51

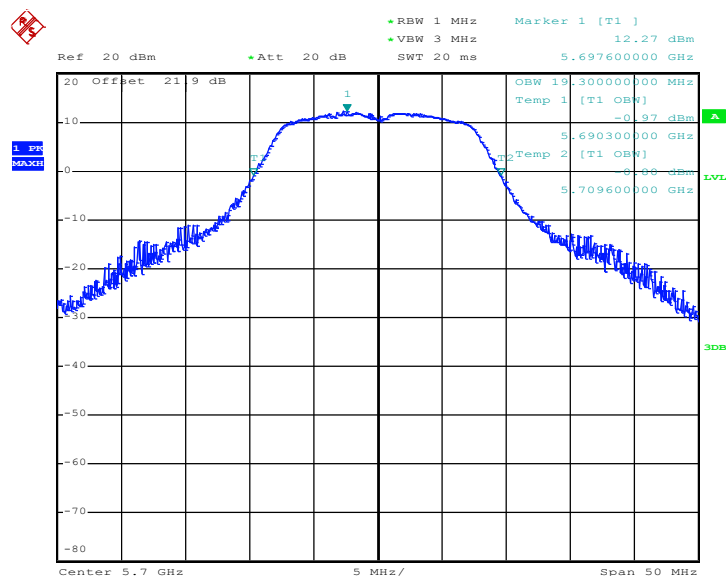


99% Occupied Bandwidth Plot on 802.11a Channel 116



Date: 10.FEB.2011 00:20:18

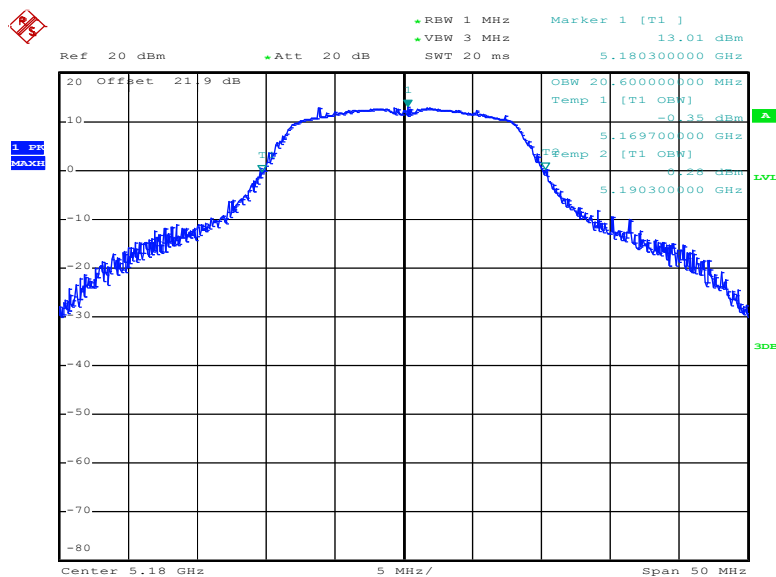
99% Occupied Bandwidth Plot on 802.11a Channel 140



Date: 10.DEC.2010 10:07:15

|                        |            |                            |         |
|------------------------|------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 10~18 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu    | <b>Relative Humidity :</b> | 54~57%  |

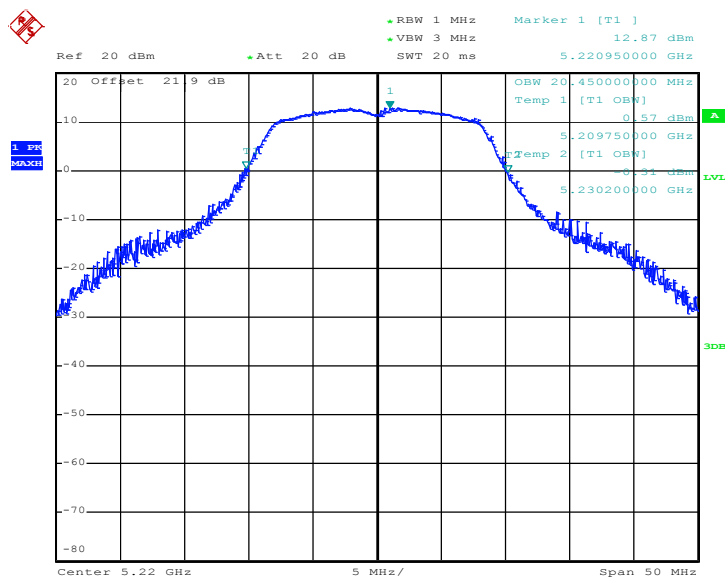
| Channel | Frequency (MHz) | 802.11n HT20<br>99% Occupied Bandwidth (MHz) | Pass/Fail |
|---------|-----------------|----------------------------------------------|-----------|
| 36      | 5180            | 20.60                                        | Pass      |
| 44      | 5220            | 20.45                                        | Pass      |
| 48      | 5240            | 20.45                                        | Pass      |
| 52      | 5260            | 20.35                                        | Pass      |
| 60      | 5300            | 20.30                                        | Pass      |
| 64      | 5320            | 20.35                                        | Pass      |
| 100     | 5500            | 20.30                                        | Pass      |
| 116     | 5580            | 20.15                                        | Pass      |
| 140     | 5700            | 20.45                                        | Pass      |

**99% Occupied Bandwidth Plot on 802.11n HT20 Channel 36**


Date: 10.DEC.2010 10:17:02

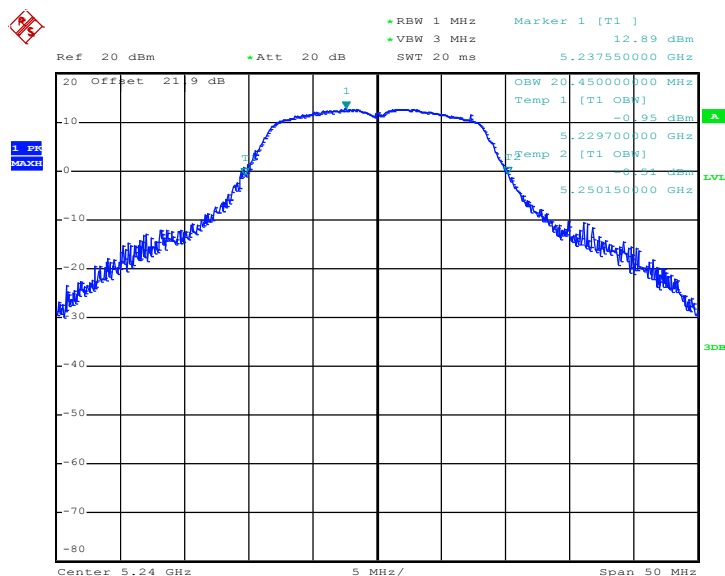


99% Occupied Bandwidth Plot on 802.11n HT20 Channel 44



Date: 10.DEC.2010 10:18:23

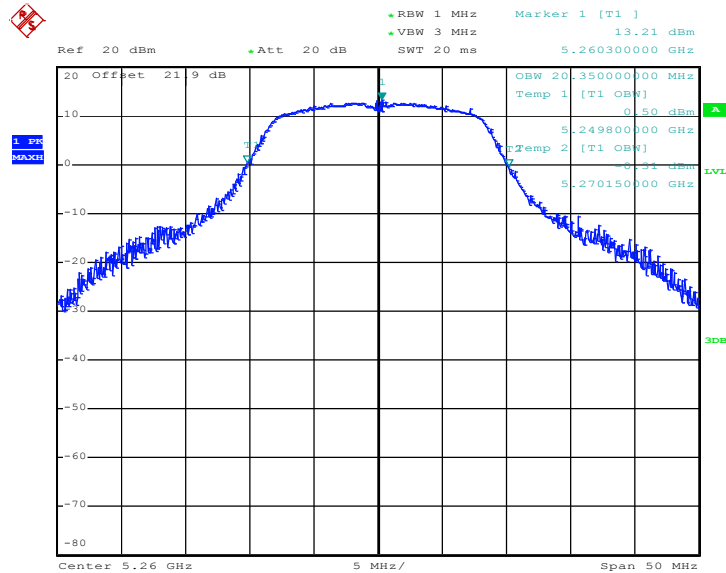
99% Occupied Bandwidth Plot on 802.11n HT20 Channel 48



Date: 10.DEC.2010 10:19:03

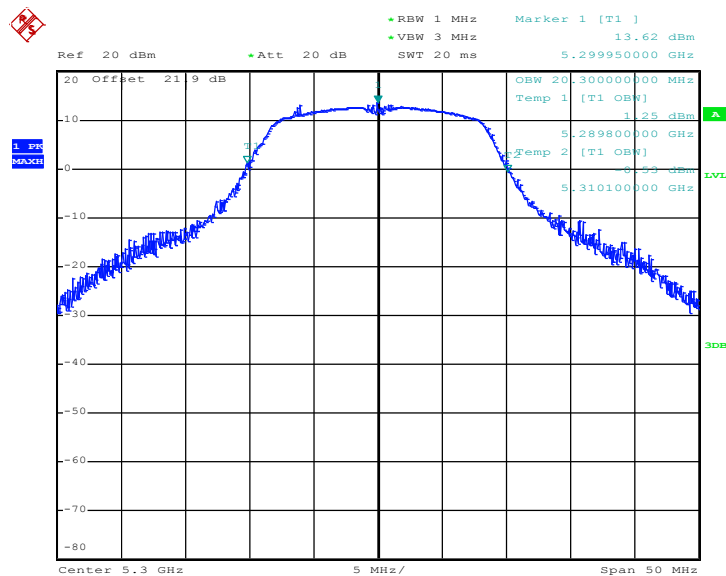


99% Occupied Bandwidth Plot on 802.11n HT20 Channel 52



Date: 10.DEC.2010 10:19:46

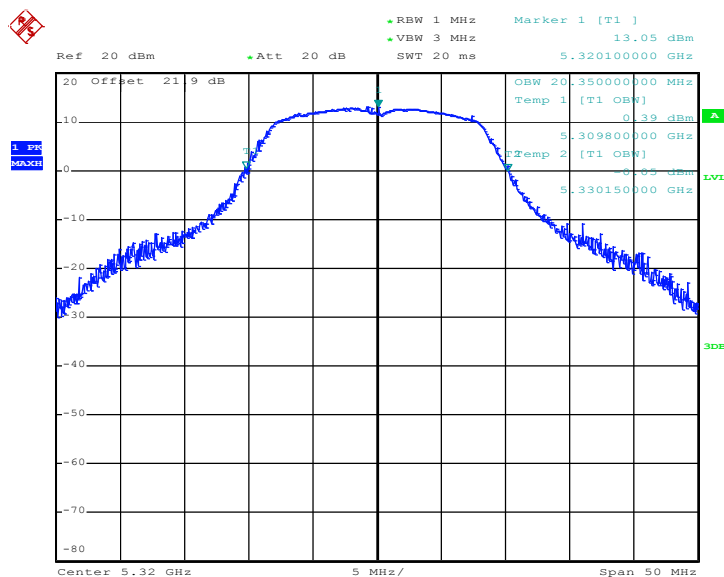
99% Occupied Bandwidth Plot on 802.11n HT20 Channel 60



Date: 10.DEC.2010 10:20:47

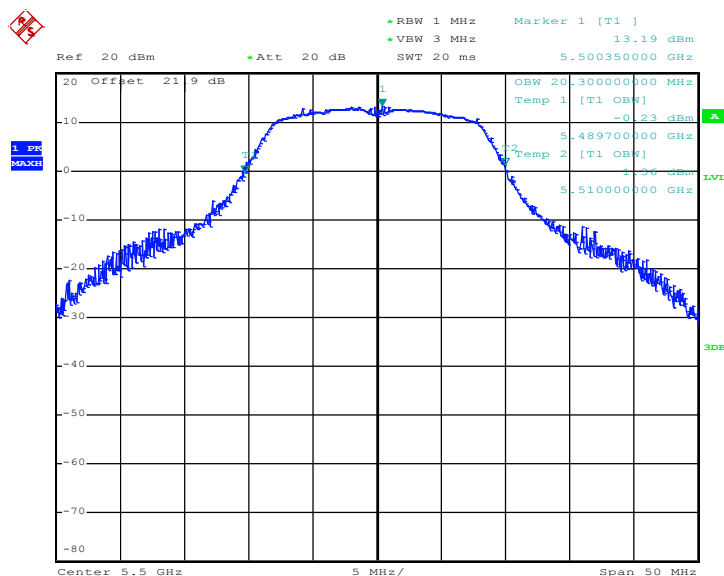


99% Occupied Bandwidth Plot on 802.11n HT20 Channel 64



Date: 10.DEC.2010 10:21:36

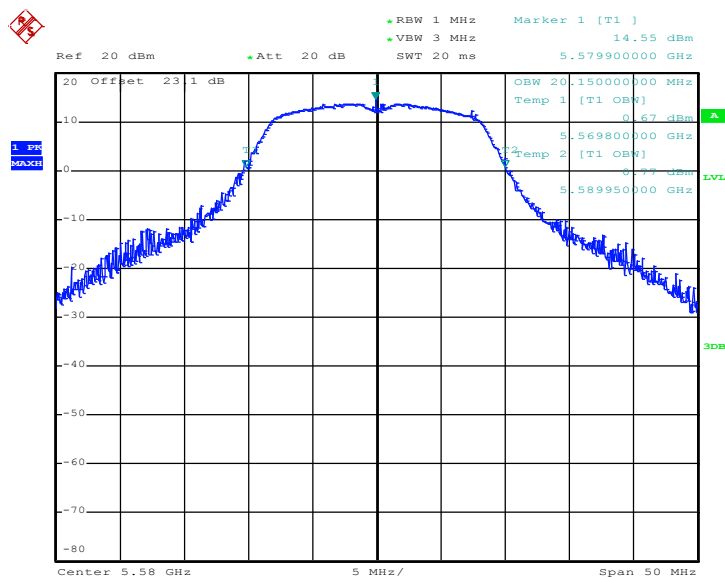
99% Occupied Bandwidth Plot on 802.11n HT20 Channel 100



Date: 10.DEC.2010 10:22:27

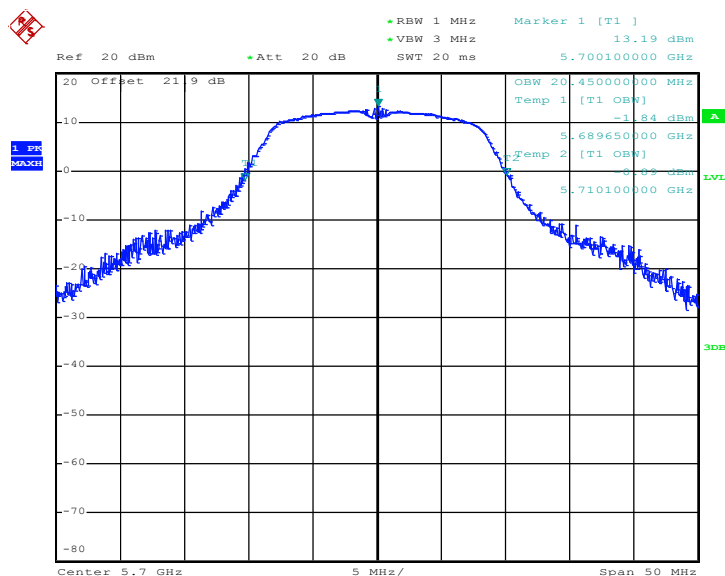


99% Occupied Bandwidth Plot on 802.11n HT20 Channel 116



Date: 10.FEB.2011 01:13:41

99% Occupied Bandwidth Plot on 802.11n HT20 Channel 140



Date: 10.DEC.2010 10:24:02

## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or  $4 \text{ dBm} + 10\log B$ , where B is the 26 dB emissions bandwidth in MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or  $11 \text{ dBm} + 10\log B$ . If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

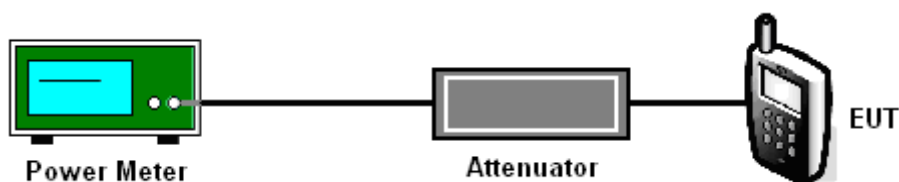
### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Measure the power and record it.

### 3.2.4 Test Setup



**3.2.5 Test Result of Maximum Conducted Output Power**

|                        |          |                            |         |
|------------------------|----------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1~9 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu  | <b>Relative Humidity :</b> | 54~57%  |

| Channel | Frequency (MHz) | 802.11a<br>Measured Output Power (dBm) | Max. Limits (dBm) | Pass/Fail |
|---------|-----------------|----------------------------------------|-------------------|-----------|
| 36      | 5180            | 15.29                                  | 16.90             | Pass      |
| 44      | 5220            | 15.27                                  | 16.81             | Pass      |
| 48      | 5240            | 15.27                                  | 16.86             | Pass      |
| 52      | 5260            | 15.08                                  | 23.71             | Pass      |
| 60      | 5300            | 15.08                                  | 23.81             | Pass      |
| 64      | 5320            | 15.20                                  | 23.72             | Pass      |
| 100     | 5500            | 15.11                                  | 23.80             | Pass      |
| 116     | 5580            | 15.40                                  | 23.80             | Pass      |
| 140     | 5700            | 15.20                                  | 23.86             | Pass      |

|                        |            |                            |         |
|------------------------|------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 10~18 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu    | <b>Relative Humidity :</b> | 54~57%  |

| Channel | Frequency (MHz) | 802.11n HT20<br>Measured Output Power (dBm) | Max. Limits (dBm) | Pass/Fail |
|---------|-----------------|---------------------------------------------|-------------------|-----------|
| 36      | 5180            | 15.10                                       | 16.97             | Pass      |
| 44      | 5220            | 15.02                                       | 16.96             | Pass      |
| 48      | 5240            | 15.09                                       | 17.00             | Pass      |
| 52      | 5260            | 15.03                                       | 24.00             | Pass      |
| 60      | 5300            | 15.08                                       | 23.91             | Pass      |
| 64      | 5320            | 15.12                                       | 23.96             | Pass      |
| 100     | 5500            | 15.38                                       | 24.00             | Pass      |
| 116     | 5580            | 15.39                                       | 24.00             | Pass      |
| 140     | 5700            | 15.40                                       | 24.00             | Pass      |

### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

For the band 5.15–5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1MHz band. For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1MHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

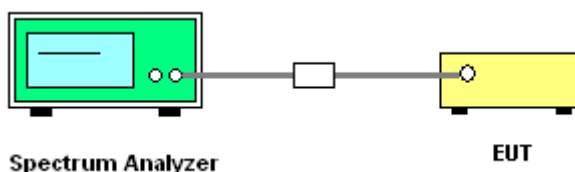
#### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.3.3 Test Procedures

The transmitter output is connected to the spectrum analyzer. According to the method 3 of DA-02-2138, the resolution bandwidth is set to 1 MHz, video bandwidth is 3MHz, trace average 100 traces in power averaging mode, and sample detection is used, and the analyzer is set for video averaging.

#### 3.3.4 Test Setup

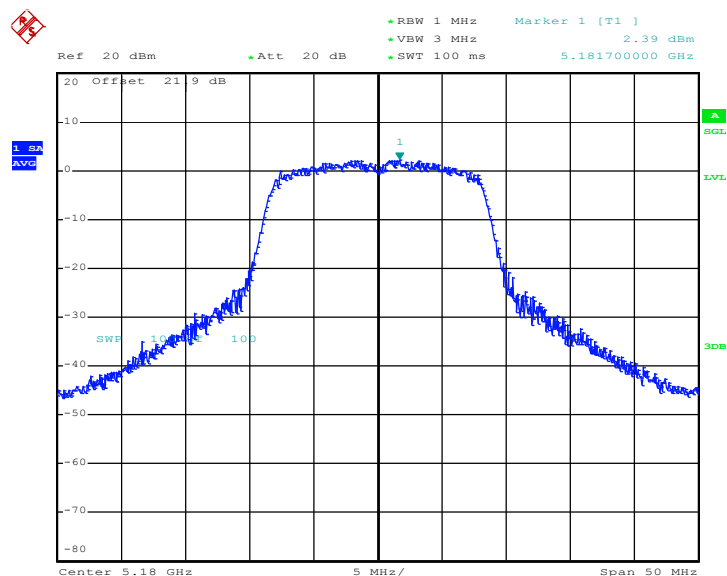


### 3.3.5 Test Result of Power Spectral Density

|                 |          |                     |         |
|-----------------|----------|---------------------|---------|
| Test Mode :     | Mode 1~9 | Temperature :       | 25~27°C |
| Test Engineer : | Ken Hsu  | Relative Humidity : | 54~57%  |

| Channel | Frequency (MHz) | 802.11a Measured PSD (dBm) | Max. Limits (dBm) | Pass/Fail |
|---------|-----------------|----------------------------|-------------------|-----------|
| 36      | 5180            | 2.39                       | 4                 | Pass      |
| 44      | 5220            | 2.74                       | 4                 | Pass      |
| 48      | 5240            | 2.21                       | 4                 | Pass      |
| 52      | 5260            | 2.98                       | 11                | Pass      |
| 60      | 5300            | 3.34                       | 11                | Pass      |
| 64      | 5320            | 2.58                       | 11                | Pass      |
| 100     | 5500            | 2.61                       | 11                | Pass      |
| 116     | 5580            | 5.44                       | 11                | Pass      |
| 140     | 5700            | 1.62                       | 11                | Pass      |

**PSD Plot on 802.11a Channel 36**



Date: 8.DEC.2010 16:49:43



Date: 8.DEC.2010 16:50:33

The screenshot shows a VectorStar spectrum analyzer interface. The main display is a grid with a blue trace representing the signal. The trace shows a peak at 5.24 GHz, which is marked with a green triangle and labeled '1'. The peak is at 0 dB. The signal has a bandwidth of 100 MHz, indicated by the 'SWB' label. The center frequency is 5.24 GHz, and the span is 50 MHz. The resolution bandwidth (RBW) is 1 MHz, and the video bandwidth (VBW) is 3 MHz. The sweep time (SWT) is 100 ms. The reference level is 20 dBm, and the attenuation is 20 dB. The marker 1 is at 5.23820000 GHz and 2.21 dBm. The display also shows the '1.8A' and 'AVG' settings on the left side.

Ref 20 dBm      • Att 20 dB      • RBW 1 MHz      Marker 1 [T1]      2.21 dBm  
 • VBW 3 MHz      • SWT 100 ms      5.23820000 GHz

20 Offset 21 9 dB

1.8A  
 AVG

SWB 100 100

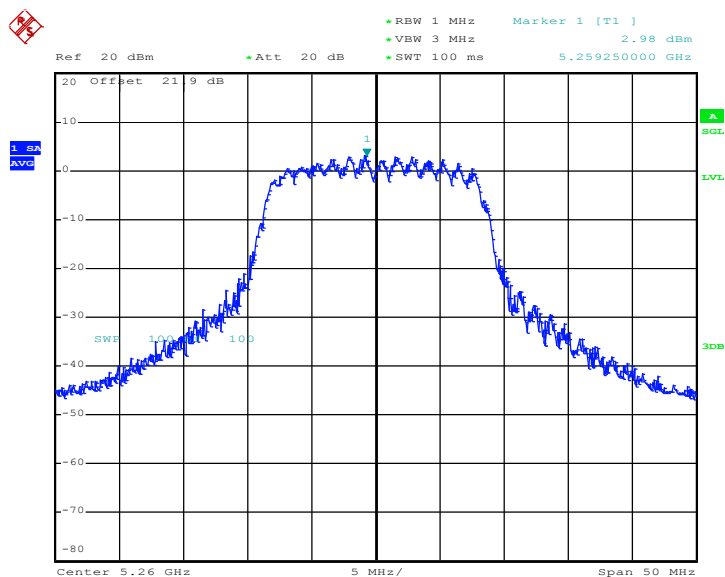
1

Center 5.24 GHz      5 MHz/      Span 50 MHz

Date: 8.DEC.2010 16:51:50

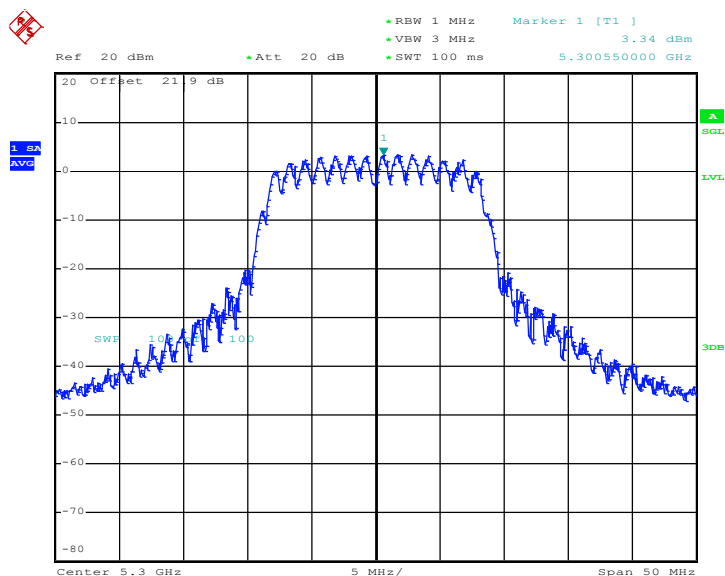


### PSD Plot on 802.11a Channel 52



Date: 8.DEC.2010 16:53:06

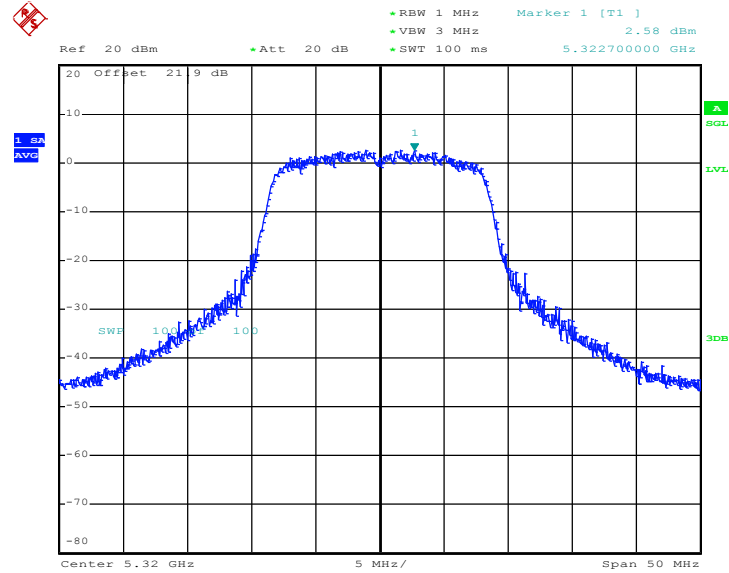
### PSD Plot on 802.11a Channel 60



Date: 8.DEC.2010 16:54:01

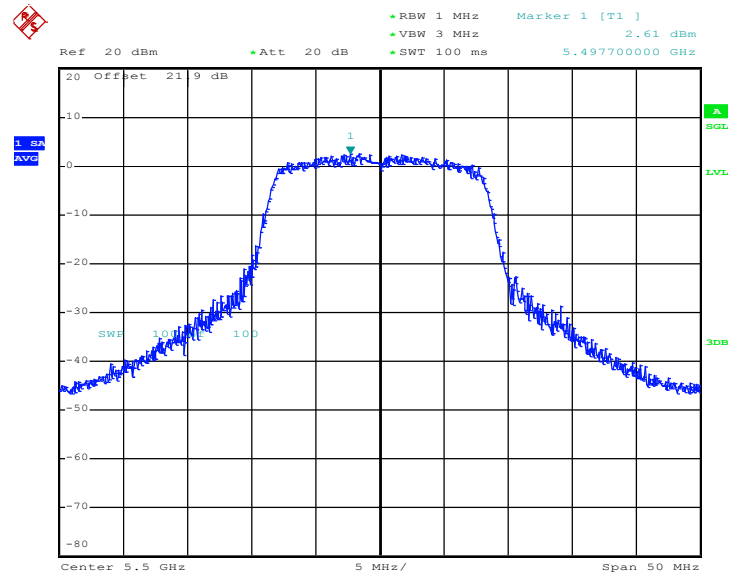


PSD Plot on 802.11a Channel 64

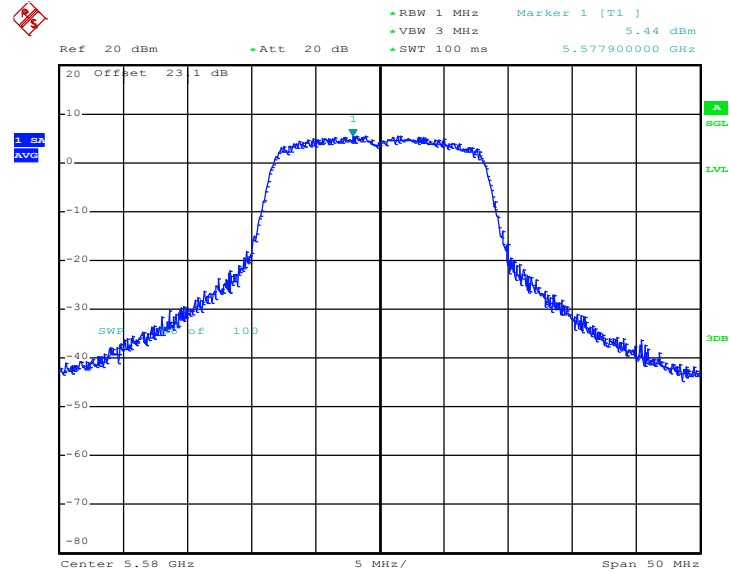


Date: 8.DEC.2010 16:55:11

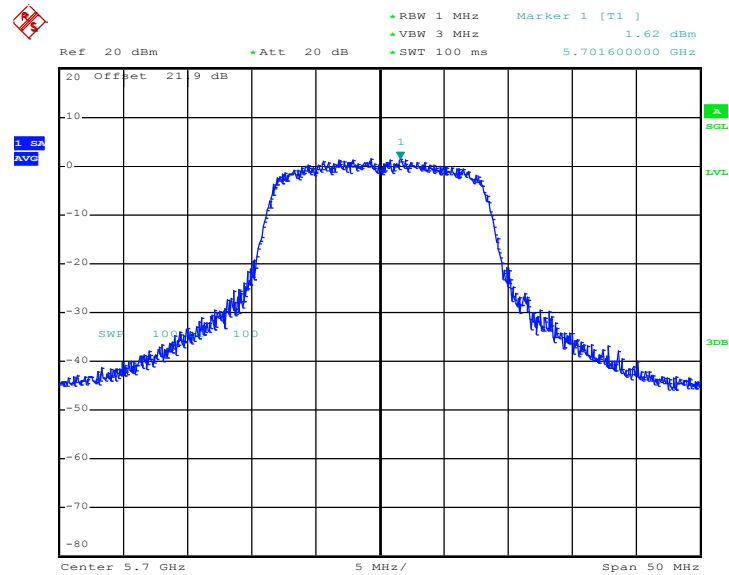
PSD Plot on 802.11a Channel 100



Date: 8.DEC.2010 16:56:31

**PSD Plot on 802.11a Channel 116**


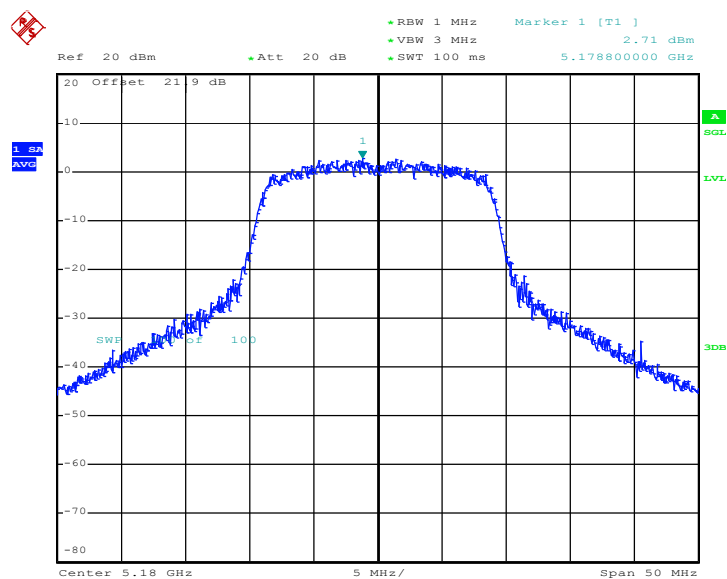
Date: 10.FEB.2011 00:25:04

**PSD Plot on 802.11a Channel 140**


Date: 8.DEC.2010 16:58:00

|                        |            |                            |         |
|------------------------|------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 10~18 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu    | <b>Relative Humidity :</b> | 54~57%  |

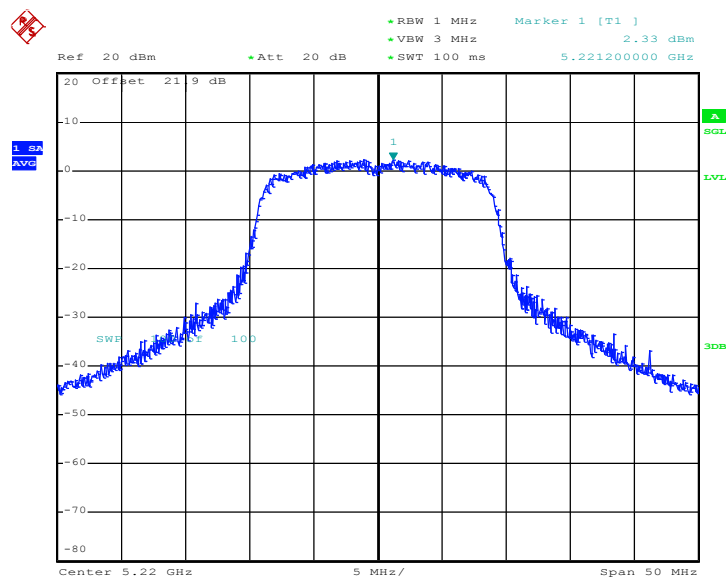
| Channel | Frequency (MHz) | 802.11n HT20 Measured PSD (dBm) | Max. Limits (dBm ) | Pass/Fail |
|---------|-----------------|---------------------------------|--------------------|-----------|
| 36      | 5180            | 2.71                            | 4                  | Pass      |
| 44      | 5220            | 2.33                            | 4                  | Pass      |
| 48      | 5240            | 2.98                            | 4                  | Pass      |
| 52      | 5260            | 2.46                            | 11                 | Pass      |
| 60      | 5300            | 2.25                            | 11                 | Pass      |
| 64      | 5320            | 2.84                            | 11                 | Pass      |
| 100     | 5500            | 2.69                            | 11                 | Pass      |
| 116     | 5580            | 5.66                            | 11                 | Pass      |
| 140     | 5700            | 1.41                            | 11                 | Pass      |

**PSD Plot on 802.11n HT20 Channel 36**


Date: 8.DEC.2010 17:21:27

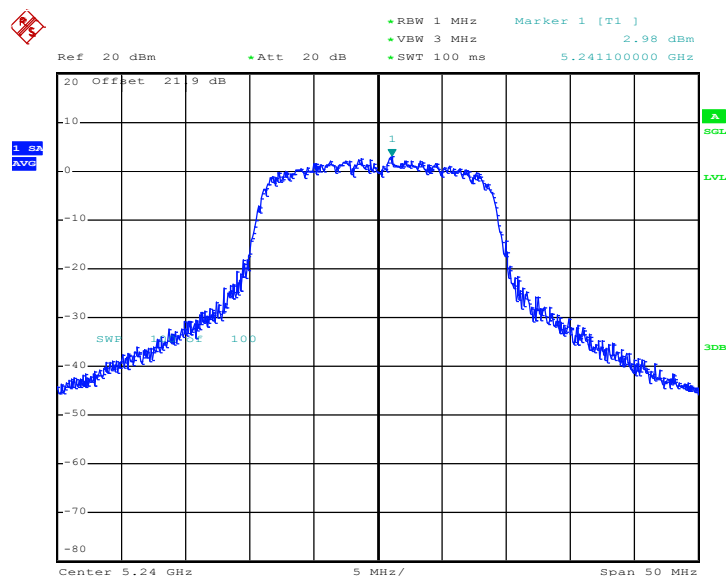


PSD Plot on 802.11n HT20 Channel 44



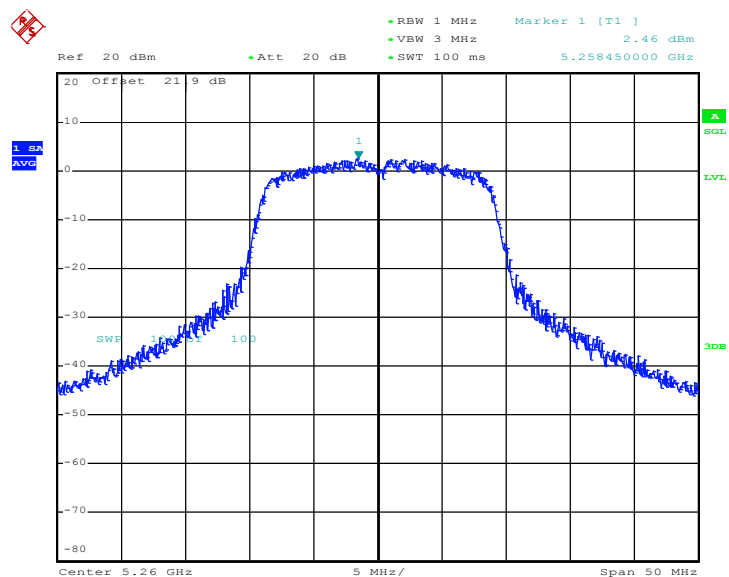
Date: 8.DEC.2010 17:22:22

PSD Plot on 802.11n HT20 Channel 48



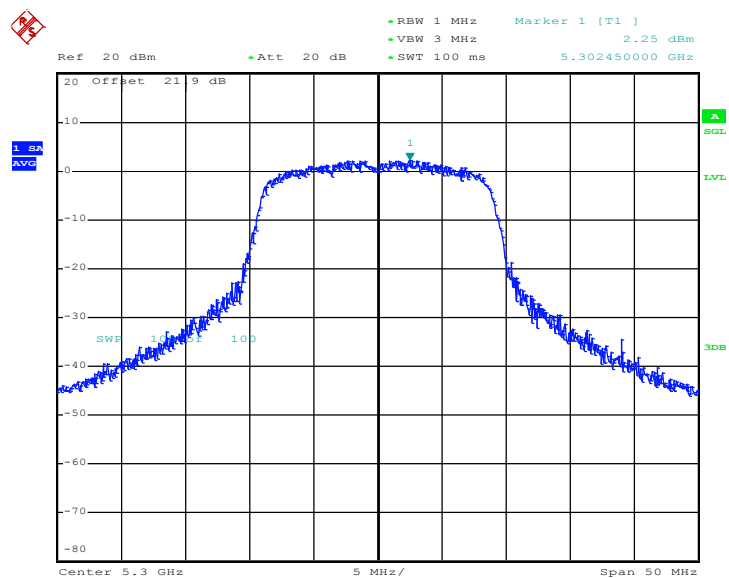
Date: 8.DEC.2010 17:23:27

### PSD Plot on 802.11n HT20 Channel 52



Date: 8.DEC.2010 17:24:31

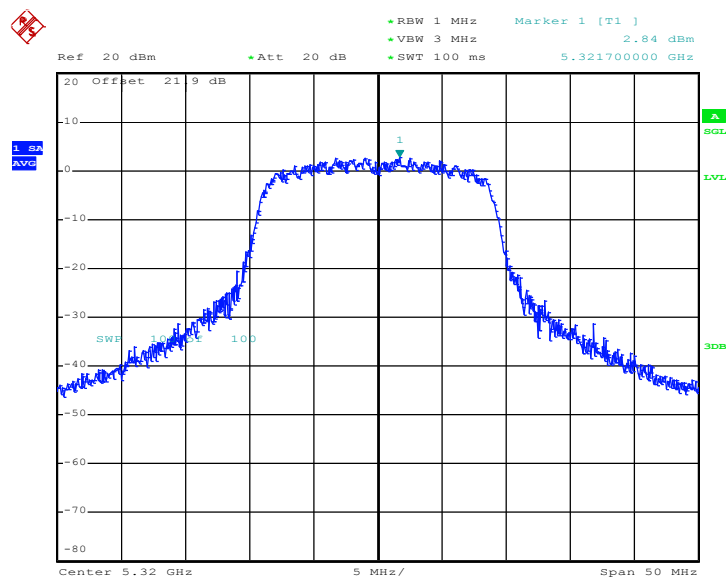
### PSD Plot on 802.11n HT20 Channel 60



Date: 8.DEC.2010 17:27:46

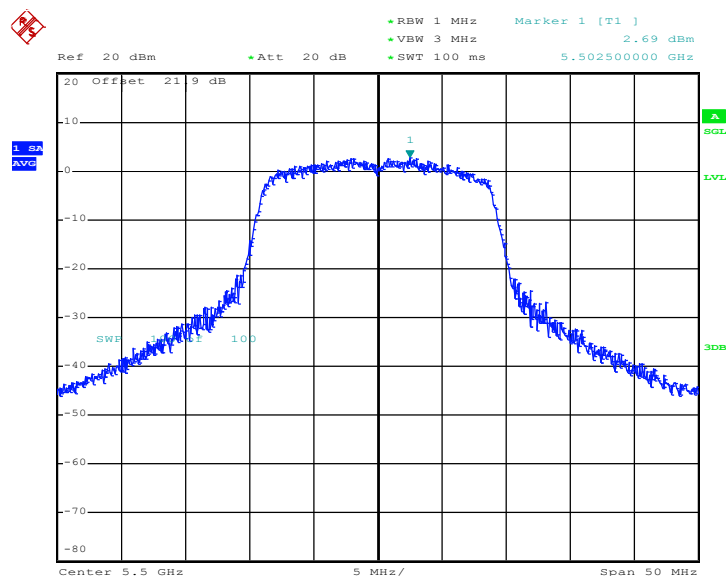


PSD Plot on 802.11n HT20 Channel 64

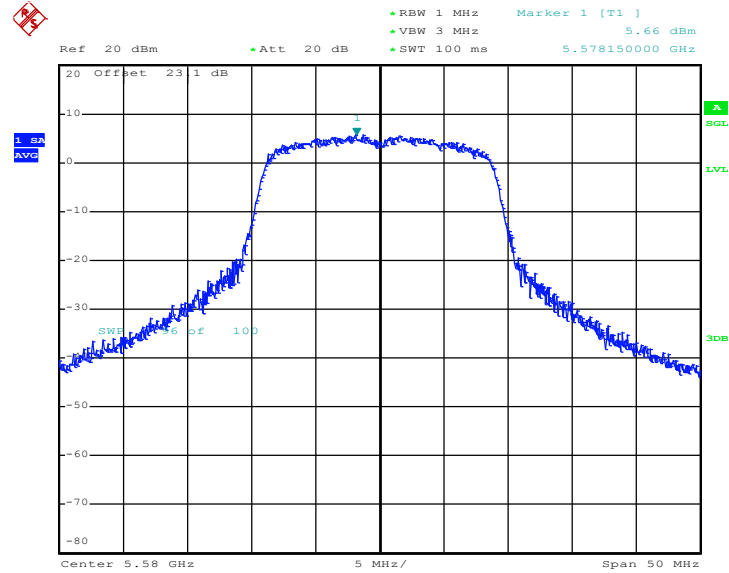


Date: 8.DEC.2010 17:26:51

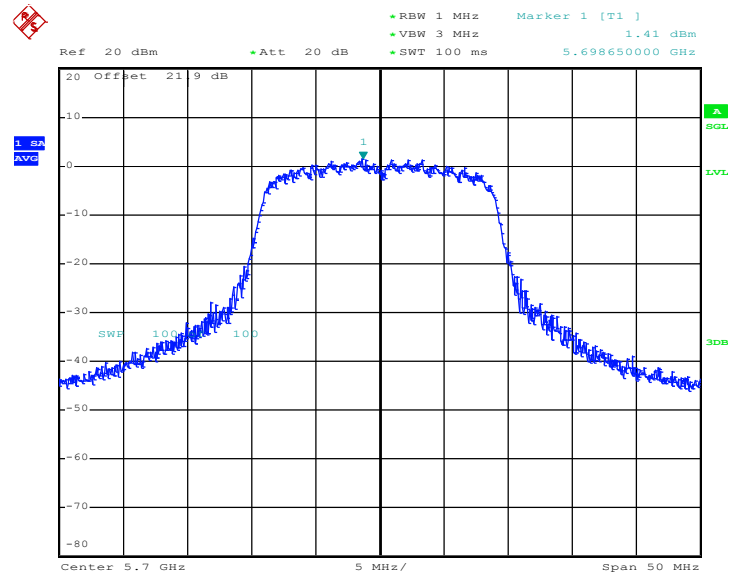
PSD Plot on 802.11n HT20 Channel 100



Date: 8.DEC.2010 17:28:40

**PSD Plot on 802.11n HT20 Channel 116**


Date: 10.FEB.2011 01:14:02

**PSD Plot on 802.11n HT20 Channel 140**


Date: 8.DEC.2010 17:29:46

## 3.4 Band Edges Measurement

### 3.4.1 Limit of Band Edges

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band. For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (2) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

### 3.4.2 Measuring Instruments

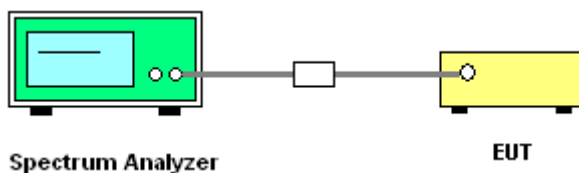
See list of measuring instruments of this test report.

### 3.4.3 Test Procedures

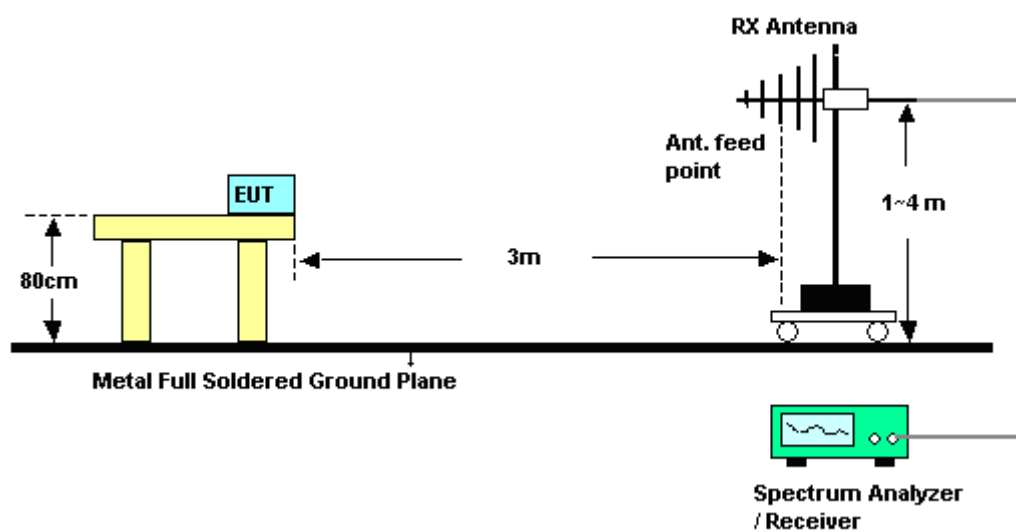
1. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

### 3.4.4 Test Setup

<Conducted>



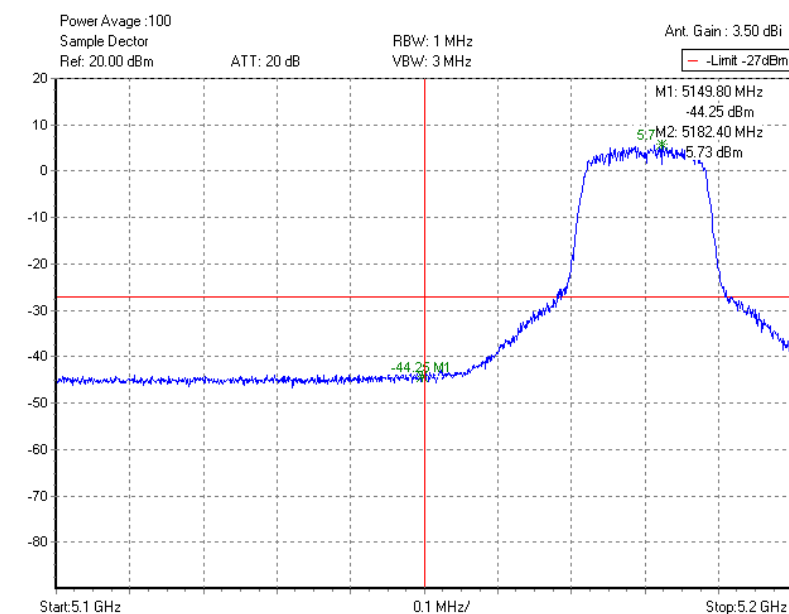
<Radiated>



### 3.4.5 Test Result of Conducted Band Edges

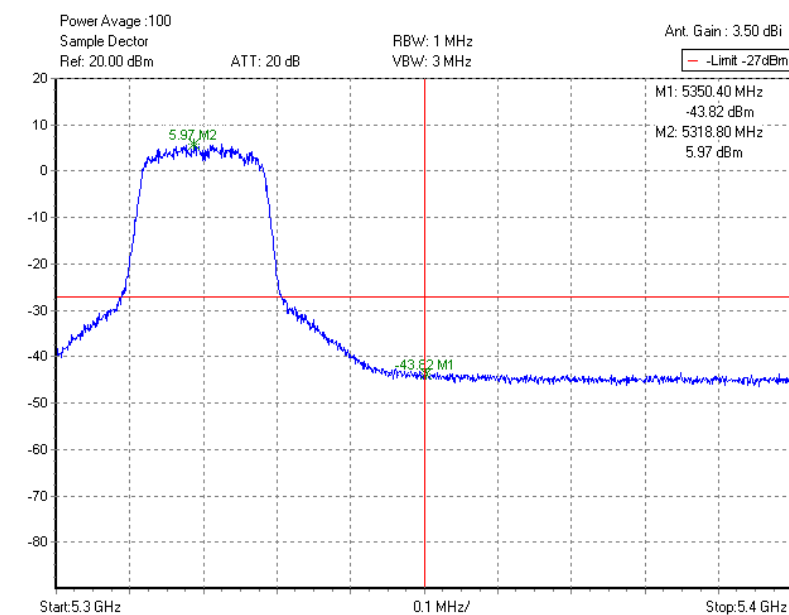
|                        |              |                            |         |
|------------------------|--------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1 and 6 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu      | <b>Relative Humidity :</b> | 54~57%  |

**Low Band Edge Plot on Channel 36**



Test result was offsetted with path loss, and antenna gain.

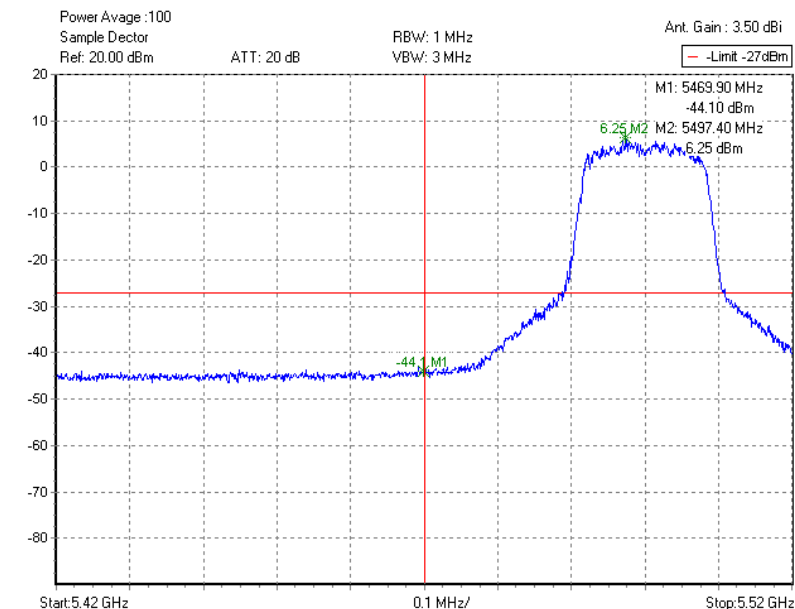
**High Band Edge Plot on Channel 64**



Test result was offsetted with path loss, and antenna gain.

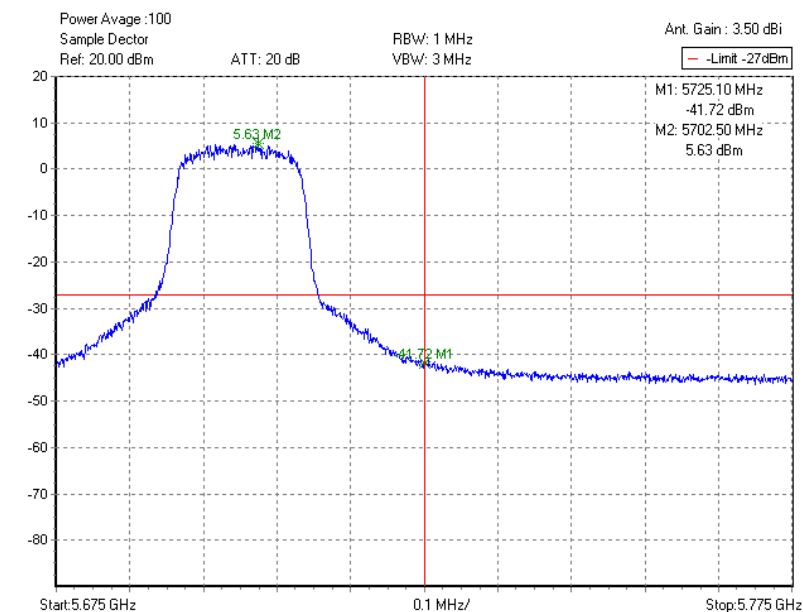
|                        |              |                            |         |
|------------------------|--------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 7 and 9 | <b>Temperature :</b>       | 25~27°C |
| <b>Test Engineer :</b> | Ken Hsu      | <b>Relative Humidity :</b> | 54~57%  |

### Low Band Edge Plot on Channel 100



Test result was offsetted with path loss, and antenna gain.

### High Band Edge Plot on Channel 140

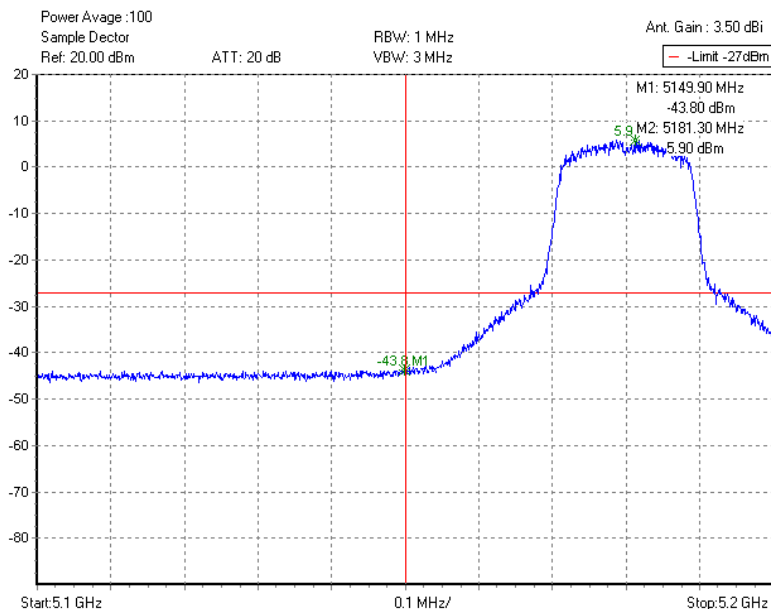


Test result was offsetted with path loss, and antenna gain.



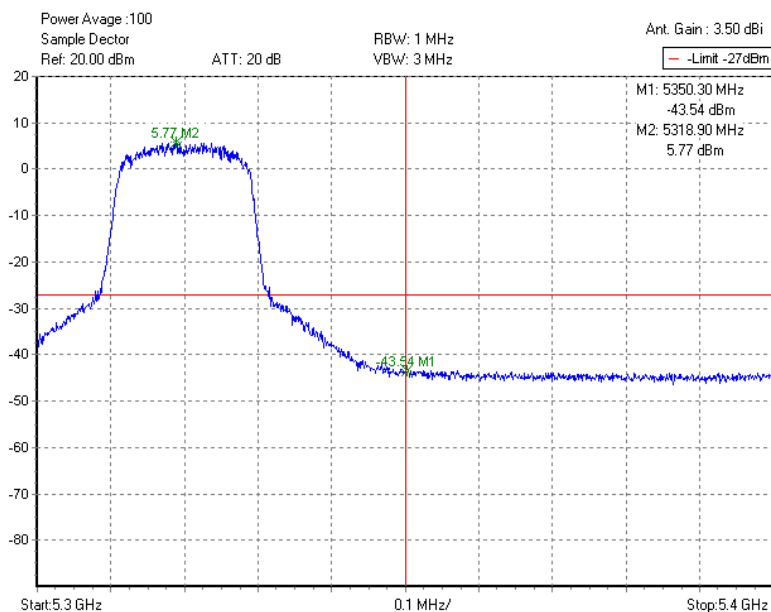
|                 |                |                     |         |
|-----------------|----------------|---------------------|---------|
| Test Mode :     | Mode 10 and 15 | Temperature :       | 25~27°C |
| Test Engineer : | Ken Hsu        | Relative Humidity : | 54~57%  |

### Low Band Edge Plot on Channel 36



Test result was offsetted with path loss, and antenna gain.

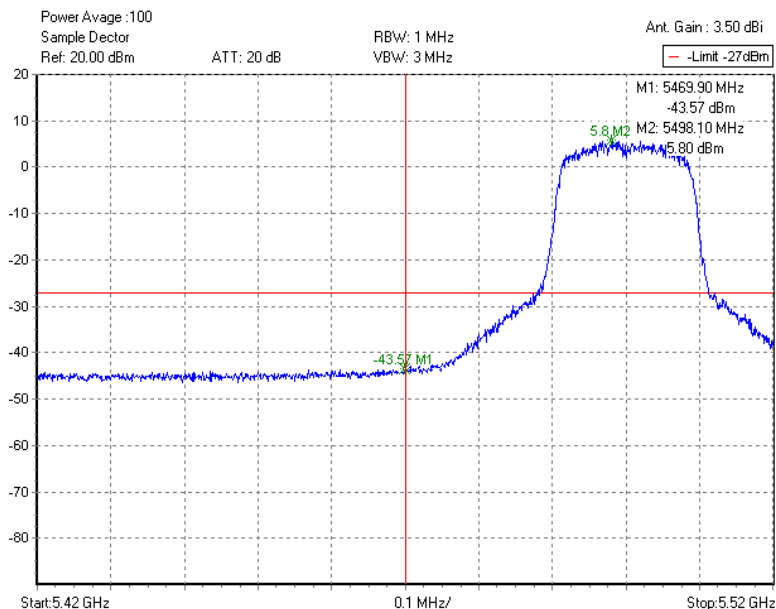
### High Band Edge Plot on Channel 64



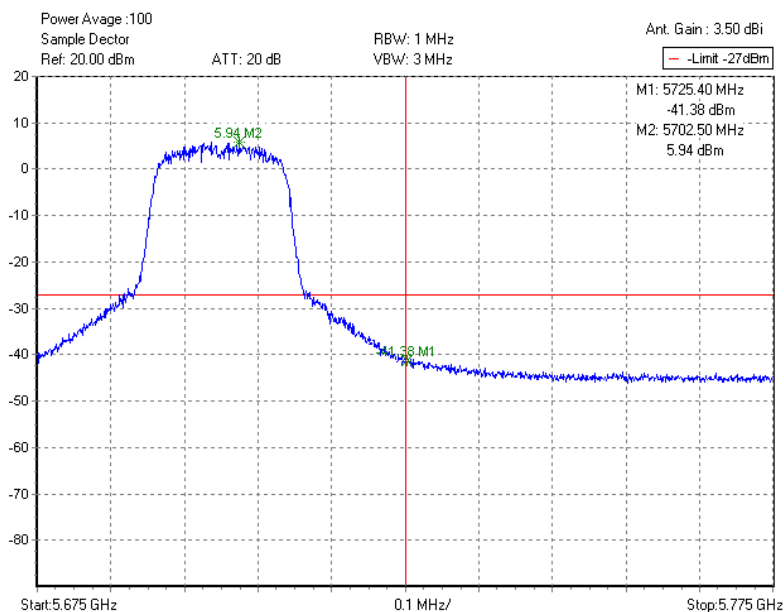
Test result was offsetted with path loss, and antenna gain.



|                 |                |                     |         |
|-----------------|----------------|---------------------|---------|
| Test Mode :     | Mode 16 and 18 | Temperature :       | 25~27°C |
| Test Engineer : | Ken Hsu        | Relative Humidity : | 54~57%  |

**Low Band Edge Plot on Channel 100**

Test result was offsetted with path loss, and antenna gain.

**High Band Edge Plot on Channel 140**

Test result was offsetted with path loss, and antenna gain.

### 3.4.6 Test Result of Radiated Band Edges

|                       |         |                            |            |
|-----------------------|---------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 1  | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11a | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 36      | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5150.00                       | 55.14               | -18.86                  | 74.00                       | 46.13                     | 34.25                       | 9.41                    | 34.65                      | 112                  | 271                     | Peak    |
| 5150.00                       | 40.10               | -13.90                  | 54.00                       | 31.09                     | 34.25                       | 9.41                    | 34.65                      | 112                  | 271                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5150.00                     | 62.53               | -11.47                  | 74.00                       | 53.52                     | 34.25                       | 9.41                    | 34.65                      | 135                  | 352                     | Peak    |
| 5150.00                     | 42.51               | -11.49                  | 54.00                       | 33.50                     | 34.25                       | 9.41                    | 34.65                      | 135                  | 352                     | Average |

|                       |         |                            |            |
|-----------------------|---------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 6  | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11a | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 64      | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5350.00                       | 58.23               | -15.77                  | 74.00                       | 49.44                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 264                     | Peak    |
| 5350.00                       | 41.74               | -12.26                  | 54.00                       | 32.95                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 264                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5350.00                     | 56.57               | -17.43                  | 74.00                       | 47.78                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 24                      | Peak    |
| 5350.00                     | 41.30               | -12.70                  | 54.00                       | 32.51                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 24                      | Average |



|                       |         |                            |            |
|-----------------------|---------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 7  | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11a | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 100     | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5470.00                       | 51.96               | -36.34                  | 88.30                       | 43.29                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 255                     | Peak    |
| 5470.00                       | 39.07               | -29.23                  | 68.30                       | 30.40                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 255                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5470.00                     | 54.48               | -33.82                  | 88.30                       | 45.81                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 48                      | Peak    |
| 5470.00                     | 40.63               | -27.67                  | 68.30                       | 31.96                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 48                      | Average |

|                       |         |                            |            |
|-----------------------|---------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 9  | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11a | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 140     | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5725.00                       | 60.83               | -27.47                  | 88.30                       | 51.93                     | 34.82                       | 9.92                    | 35.84                      | 100                  | 273                     | Peak    |
| 5725.00                       | 43.79               | -24.51                  | 68.30                       | 34.89                     | 34.82                       | 9.92                    | 35.84                      | 100                  | 273                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5725.00                     | 62.31               | -25.99                  | 88.30                       | 53.41                     | 34.82                       | 9.92                    | 35.84                      | 111                  | 5                       | Peak    |
| 5725.00                     | 47.37               | -20.93                  | 68.30                       | 38.47                     | 34.82                       | 9.92                    | 35.84                      | 111                  | 5                       | Average |



|                       |              |                            |            |
|-----------------------|--------------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 10      | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11n HT20 | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 36           | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5150.00                       | 55.98               | -18.02                  | 74.00                       | 46.97                     | 34.25                       | 9.41                    | 34.65                      | 100                  | 271                     | Peak    |
| 5150.00                       | 40.83               | -13.17                  | 54.00                       | 31.82                     | 34.25                       | 9.41                    | 34.65                      | 100                  | 271                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5150.00                     | 57.59               | -16.41                  | 74.00                       | 48.58                     | 34.25                       | 9.41                    | 34.65                      | 123                  | 1                       | Peak    |
| 5150.00                     | 42.08               | -11.92                  | 54.00                       | 33.07                     | 34.25                       | 9.41                    | 34.65                      | 123                  | 1                       | Average |

|                       |              |                            |            |
|-----------------------|--------------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 15      | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11n HT20 | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 64           | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5350.00                       | 59.35               | -14.65                  | 74.00                       | 50.56                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 265                     | Peak    |
| 5350.00                       | 41.78               | -12.22                  | 54.00                       | 32.99                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 265                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5350.00                     | 58.10               | -15.90                  | 74.00                       | 49.31                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 30                      | Peak    |
| 5350.00                     | 42.25               | -11.75                  | 54.00                       | 33.46                     | 34.45                       | 9.74                    | 35.40                      | 100                  | 30                      | Average |



|                       |              |                            |            |
|-----------------------|--------------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 16      | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11n HT20 | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 100          | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5470.00                       | 58.04               | -30.26                  | 88.30                       | 49.37                     | 34.57                       | 9.94                    | 35.84                      | 173                  | 120                     | Peak    |
| 5470.00                       | 40.04               | -28.26                  | 68.30                       | 31.37                     | 34.57                       | 9.94                    | 35.84                      | 173                  | 120                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5470.00                     | 55.50               | -32.80                  | 88.30                       | 46.83                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 47                      | Peak    |
| 5470.00                     | 41.17               | -27.13                  | 68.30                       | 32.50                     | 34.57                       | 9.94                    | 35.84                      | 100                  | 47                      | Average |

|                       |              |                            |            |
|-----------------------|--------------|----------------------------|------------|
| <b>Test Mode :</b>    | Mode 18      | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Band :</b>    | 802.11n HT20 | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Channel :</b> | 140          | <b>Test Engineer :</b>     | Ivan Jiang |

| ANTENNA POLARITY : HORIZONTAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-------------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )          | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5725.00                       | 62.09               | -26.21                  | 88.30                       | 53.19                     | 34.82                       | 9.92                    | 35.84                      | 100                  | 272                     | Peak    |
| 5725.00                       | 45.45               | -22.85                  | 68.30                       | 36.55                     | 34.82                       | 9.92                    | 35.84                      | 100                  | 272                     | Average |

| ANTENNA POLARITY : VERTICAL |                     |                         |                             |                           |                             |                         |                            |                      |                         |         |
|-----------------------------|---------------------|-------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| Frequency<br>( MHz )        | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>( dBuV ) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
| 5725.00                     | 66.85               | -21.45                  | 88.30                       | 57.95                     | 34.82                       | 9.92                    | 35.84                      | 122                  | 4                       | Peak    |
| 5725.00                     | 48.39               | -19.91                  | 68.30                       | 39.49                     | 34.82                       | 9.92                    | 35.84                      | 122                  | 4                       | Average |

### 3.5 Conducted Spurious Emission

#### 3.5.1 Limit of Spurious Emission Measurement

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of –27 dBm/MHz.

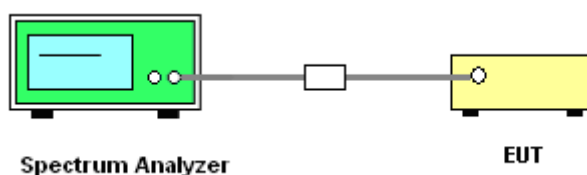
#### 3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.5.3 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = VBW = 1 MHz, Video bandwidth (VBW), scan from 30 MHz to 40 GHz.

#### 3.5.4 Test Setup



### 3.5.5 Test Result

|                       |                                       |                            |         |
|-----------------------|---------------------------------------|----------------------------|---------|
| <b>Test Mode :</b>    | Mode 1~9                              | <b>Temperature :</b>       | 25~27℃  |
| <b>Test Band :</b>    | 802.11a                               | <b>Relative Humidity :</b> | 54~57%  |
| <b>Test Channel :</b> | 36, 44, 48, 52, 60, 64, 100, 116, 140 | <b>Test Engineer :</b>     | Ken Hsu |

#### <30 MHz ~ 3 GHz>

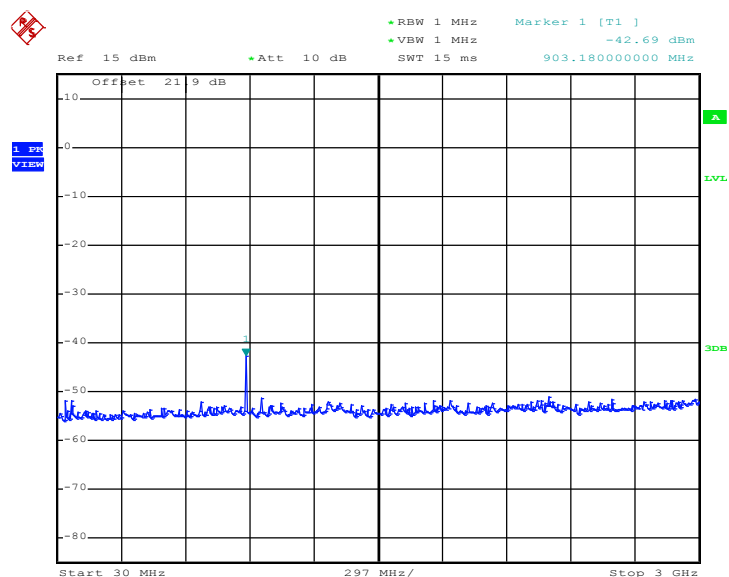
| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 903.18          | -42.69      | 3.5                | -39.19                 | -27         |
| 44      | 5220            | 903.18          | -44.85      | 3.5                | -41.35                 | -27         |
| 48      | 5240            | 65.64           | -50.02      | 3.5                | -46.52                 | -27         |
| 52      | 5260            | 2904.96         | -49.67      | 3.5                | -46.17                 | -27         |
| 60      | 5300            | 2869.32         | -49.89      | 3.5                | -46.39                 | -27         |
| 64      | 5320            | 65.64           | -49.47      | 3.5                | -45.97                 | -27         |
| 100     | 5500            | 65.64           | -49.90      | 3.5                | -46.40                 | -27         |
| 116     | 5580            | 2584.20         | -48.65      | 3.5                | -45.15                 | -27         |
| 140     | 5700            | 2922.78         | -49.85      | 3.5                | -46.35                 | -27         |

#### <3 GHz ~ 13.6 GHz>

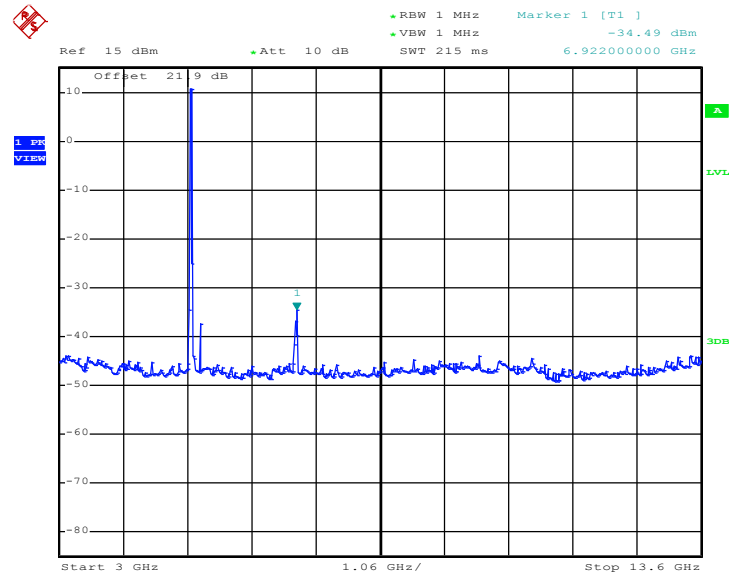
| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 6922.0          | -34.49      | 3.5                | -30.99                 | -27         |
| 44      | 5220            | 6922.0          | -35.07      | 3.5                | -31.57                 | -27         |
| 48      | 5240            | 6922.0          | -36.36      | 3.5                | -32.86                 | -27         |
| 52      | 5260            | 6922.0          | -35.43      | 3.5                | -31.93                 | -27         |
| 60      | 5300            | 6922.0          | -35.50      | 3.5                | -32.00                 | -27         |
| 64      | 5320            | 6922.0          | -36.83      | 3.5                | -33.33                 | -27         |
| 100     | 5500            | 6900.8          | -33.72      | 3.5                | -30.22                 | -27         |
| 116     | 5580            | 6922.0          | -35.40      | 3.5                | -31.90                 | -27         |
| 140     | 5700            | 6943.2          | -42.21      | 3.5                | -38.71                 | -27         |

**<13.6 GHz ~ 40 GHz>**

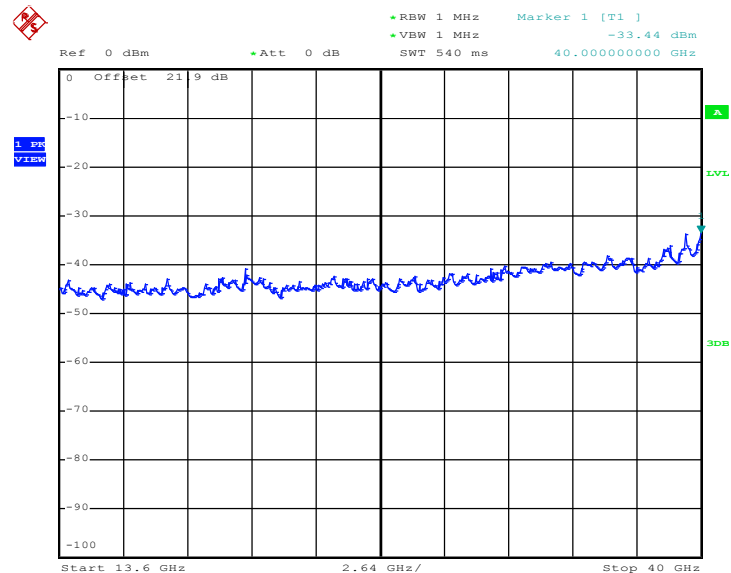
| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 40000.0         | -33.44      | 3.5                | -29.94                 | -27         |
| 44      | 5220            | 39947.2         | -33.73      | 3.5                | -30.23                 | -27         |
| 48      | 5240            | 40000.0         | -34.11      | 3.5                | -30.61                 | -27         |
| 52      | 5260            | 40000.0         | -33.77      | 3.5                | -30.27                 | -27         |
| 60      | 5300            | 40000.0         | -33.96      | 3.5                | -30.46                 | -27         |
| 64      | 5320            | 40000.0         | -33.75      | 3.5                | -30.25                 | -27         |
| 100     | 5500            | 40000.0         | -33.91      | 3.5                | -30.41                 | -27         |
| 116     | 5580            | 40000.0         | -31.17      | 3.5                | -27.67                 | -27         |
| 140     | 5700            | 40000.0         | -33.50      | 3.5                | -30.00                 | -27         |

**Mode 1 : Conducted Spurious Emission Plot between  
802.11a 30 MHz ~ 3 GHz**


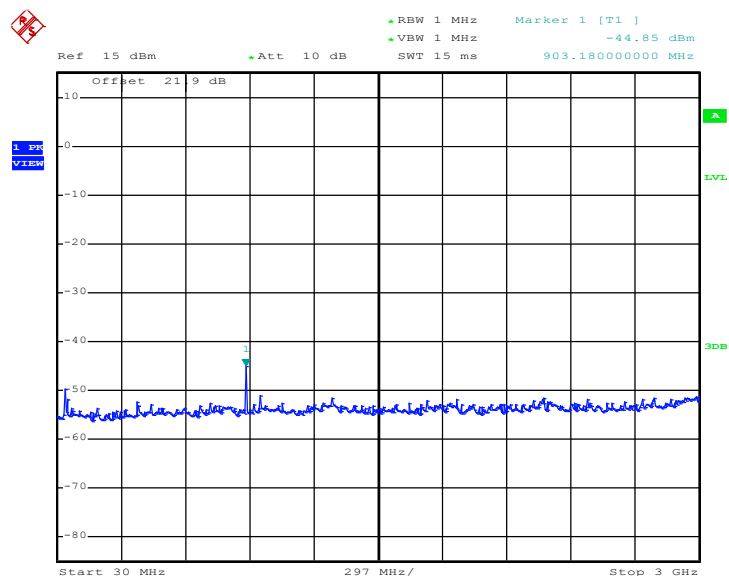
Date: 10.DEC.2010 17:11:40

**Mode 1 : Conducted Spurious Emission Plot between  
802.11a 3 GHz ~ 13.6 GHz**


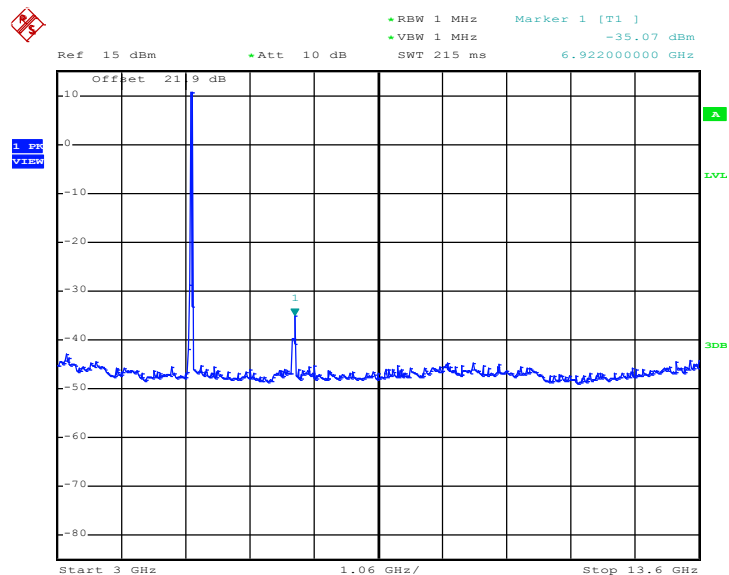
Date: 10.DEC.2010 17:11:52

**Mode 1 : Conducted Spurious Emission Plot between  
802.11a 13.6 GHz ~ 40 GHz**


Date: 10.DEC.2010 17:12:07

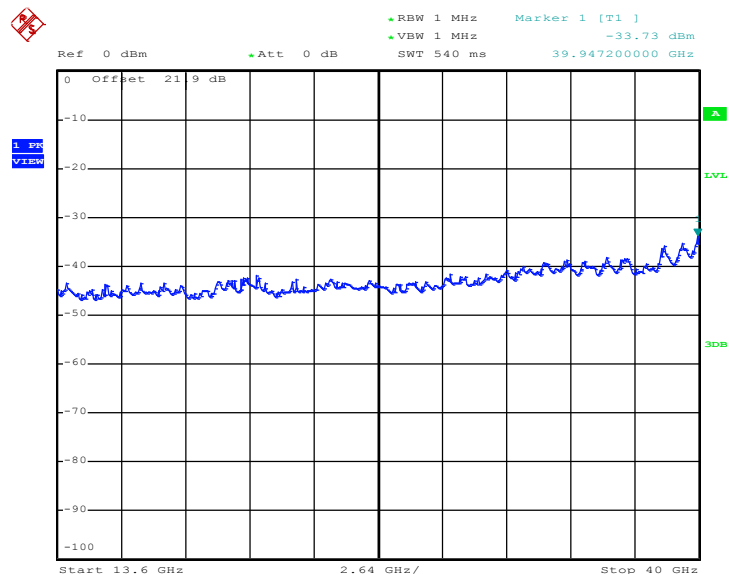
**Mode 2 : Conducted Spurious Emission Plot between  
802.11a 30 MHz ~ 3 GHz**


Date: 10.DEC.2010 17:12:39

**Mode 2 : Conducted Spurious Emission Plot between  
802.11a 3 GHz ~ 13.6 GHz**


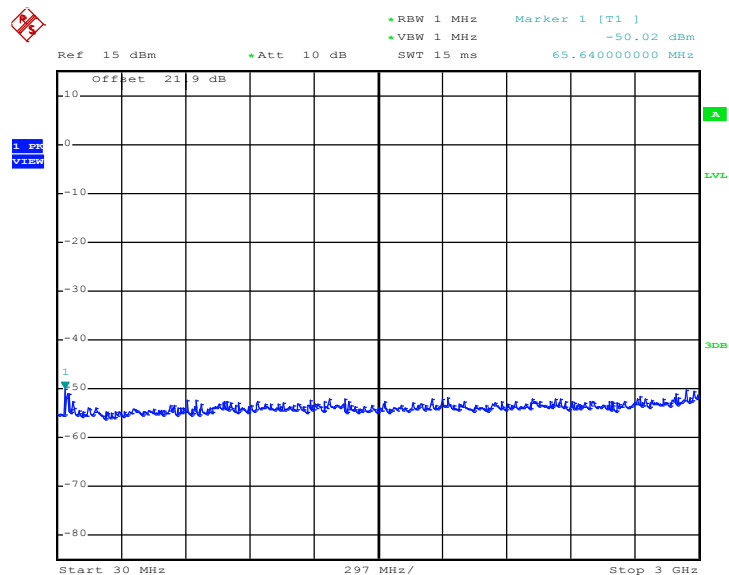
Date: 10.DEC.2010 17:12:51

### Mode 2 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



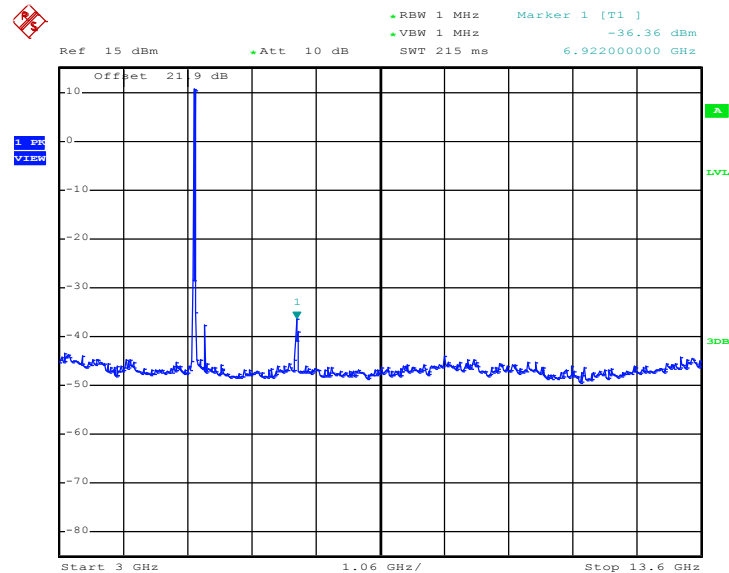
Date: 10.DEC.2010 17:13:03

### Mode 3 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



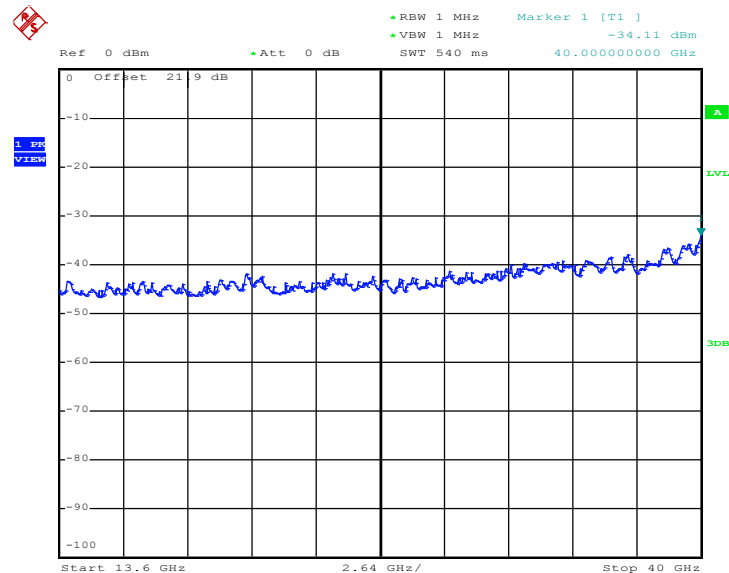
Date: 10.DEC.2010 17:13:24

### Mode 3 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



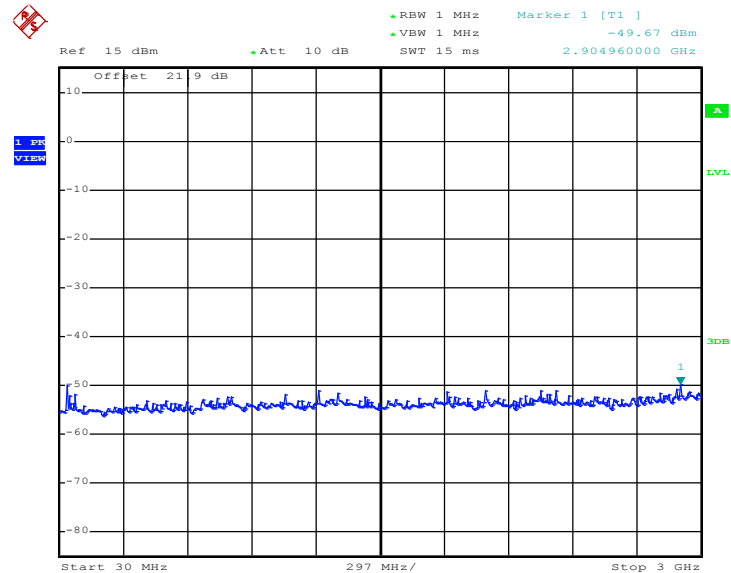
Date: 10.DEC.2010 17:13:36

### Mode 3 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



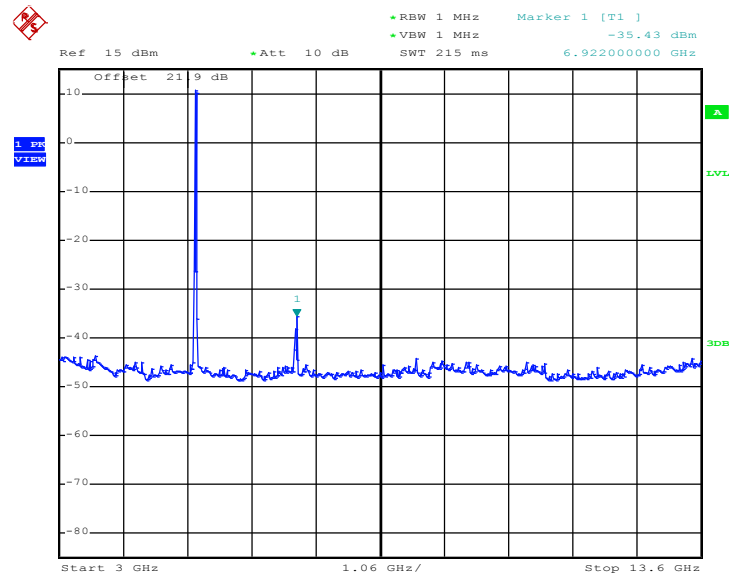
Date: 10.DEC.2010 17:13:48

### Mode 4 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



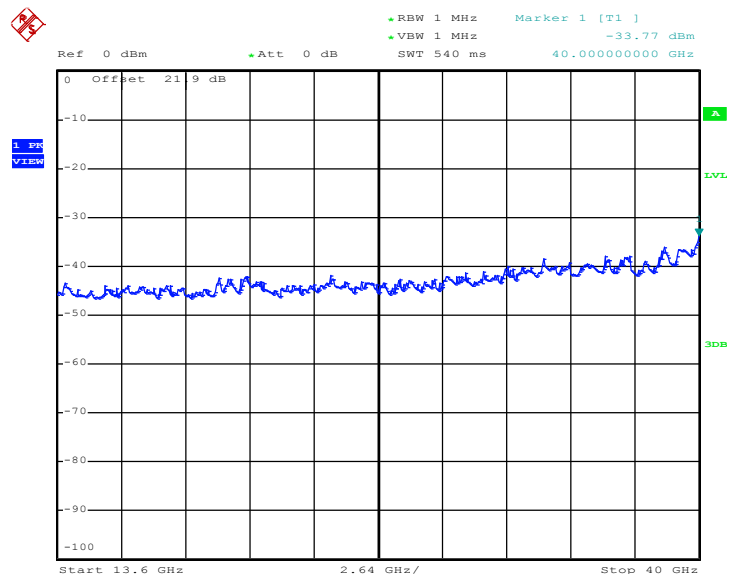
Date: 10.DEC.2010 17:14:10

### Mode 4 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



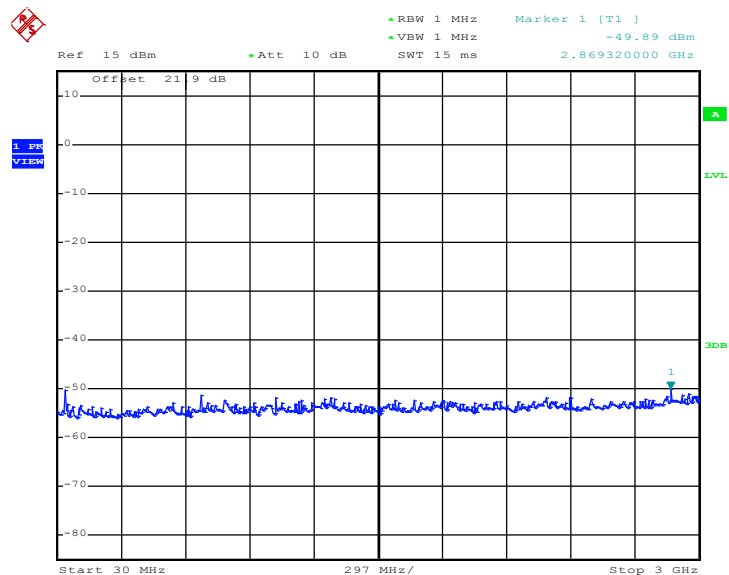
Date: 10.DEC.2010 17:14:22

**Mode 4 : Conducted Spurious Emission Plot between  
802.11a 13.6 GHz ~ 40 GHz**

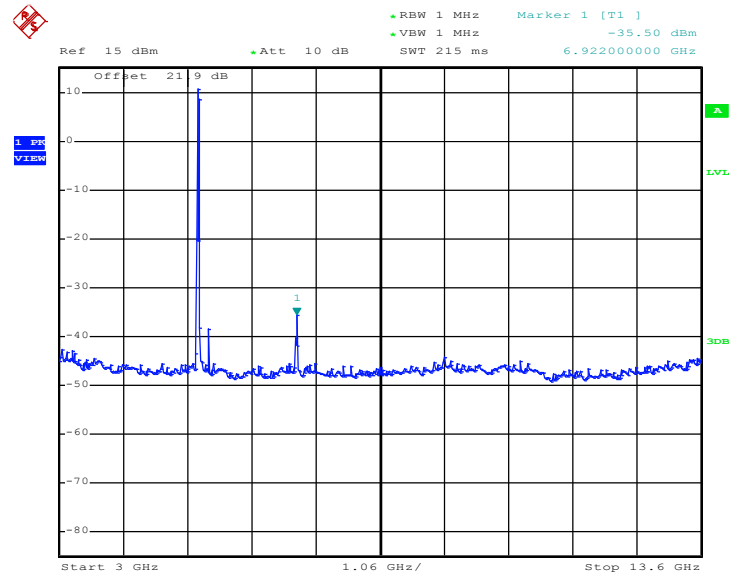


Date: 10.DEC.2010 17:14:34

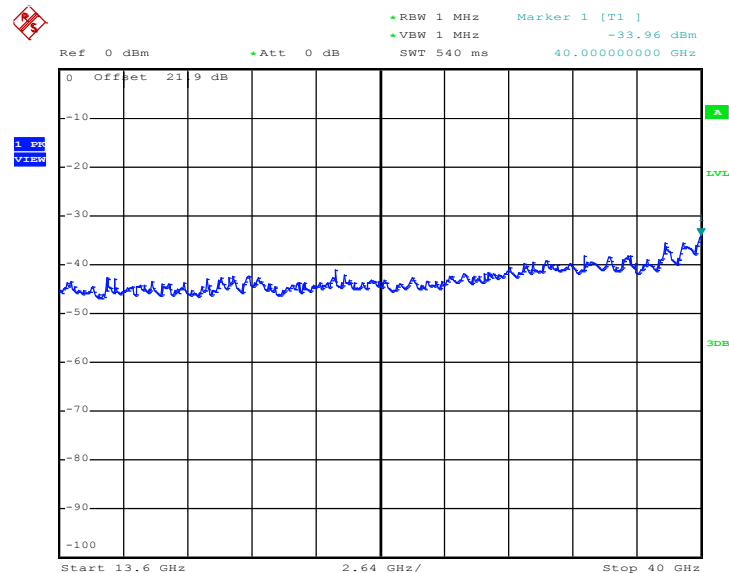
**Mode 5 : Conducted Spurious Emission Plot between  
802.11a 30 MHz ~ 3 GHz**



Date: 10.DEC.2010 17:14:58

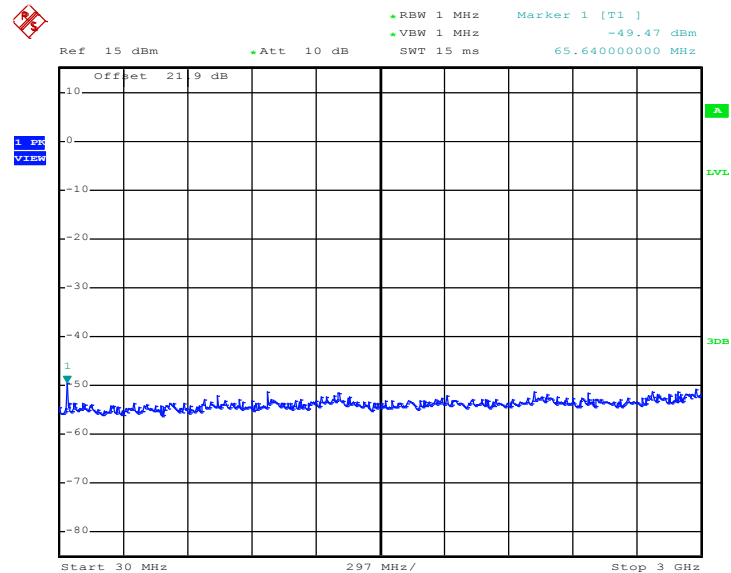
**Mode 5 : Conducted Spurious Emission Plot between  
802.11a 3 GHz ~ 13.6 GHz**


Date: 10.DEC.2010 17:15:09

**Mode 5 : Conducted Spurious Emission Plot between  
802.11a 13.6 GHz ~ 40 GHz**


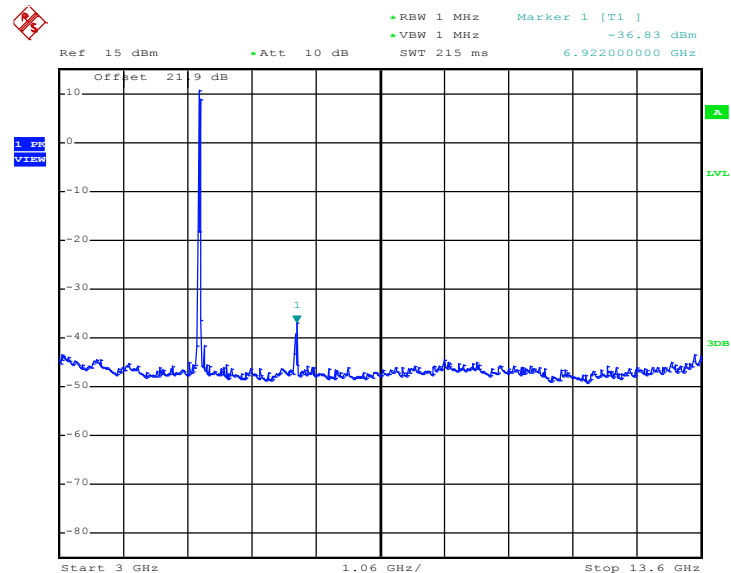
Date: 10.DEC.2010 17:15:21

### Mode 6 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



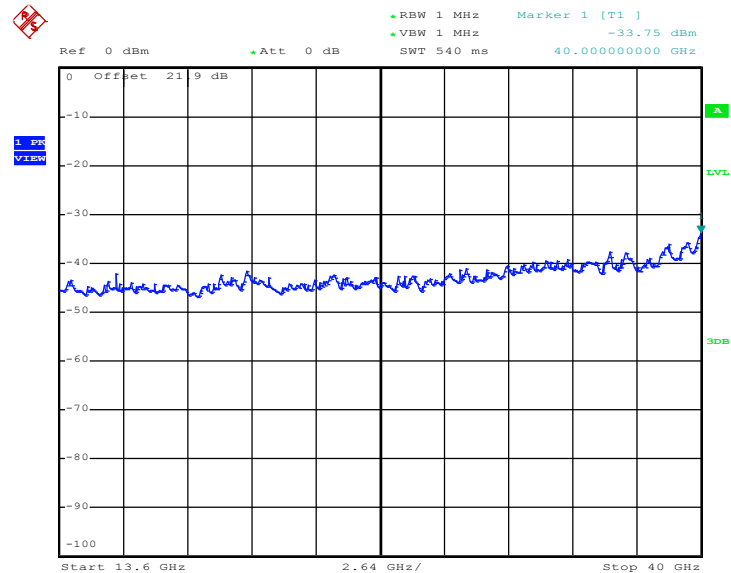
Date: 10.DEC.2010 17:16:03

### Mode 6 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



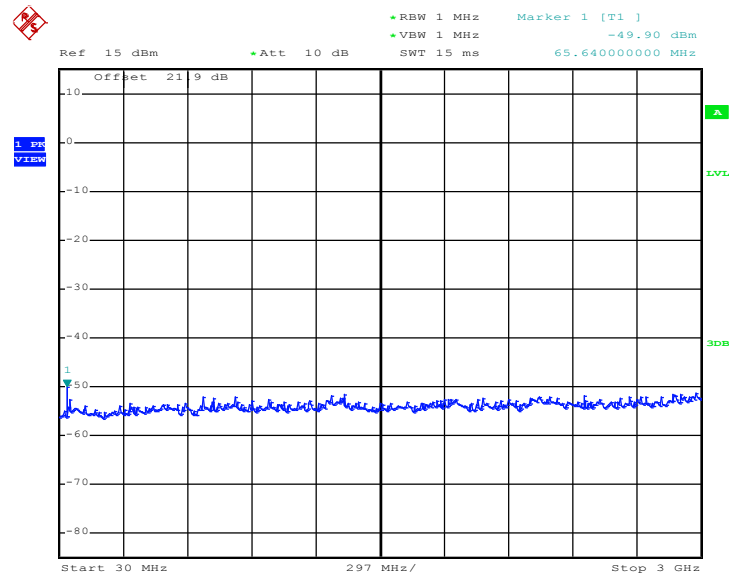
Date: 10.DEC.2010 17:16:14

### Mode 6 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz

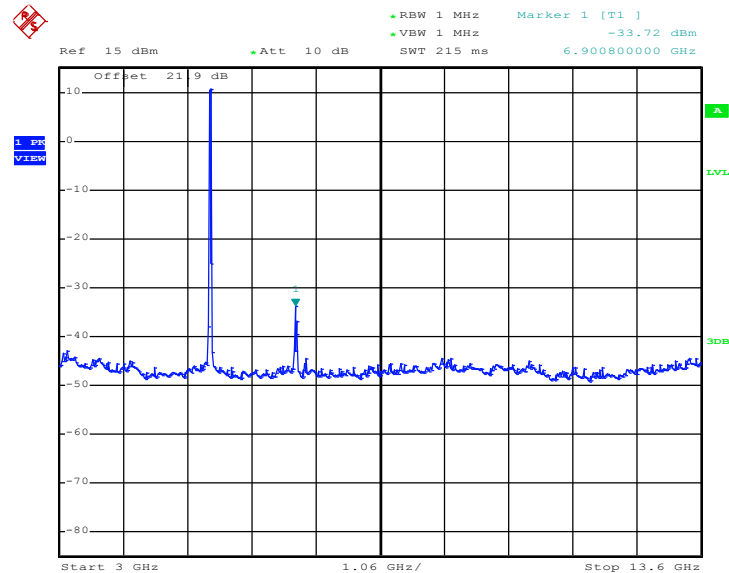


Date: 10.DEC.2010 17:16:26

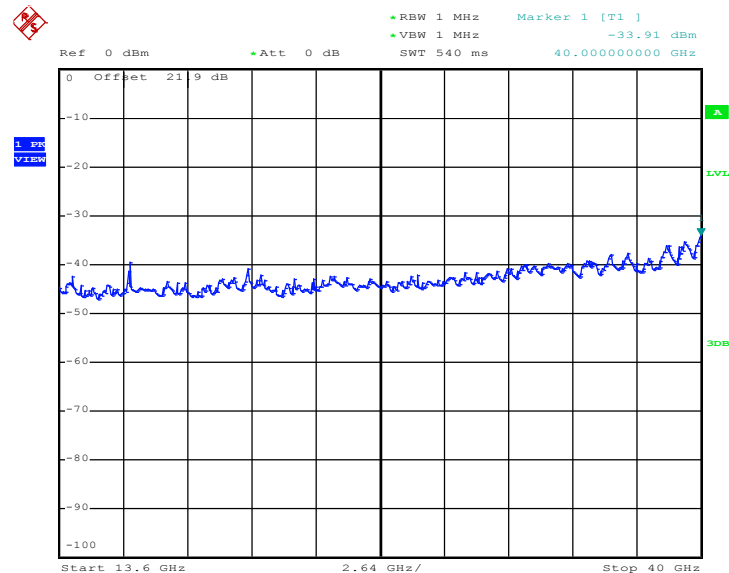
### Mode 7 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.DEC.2010 17:17:02

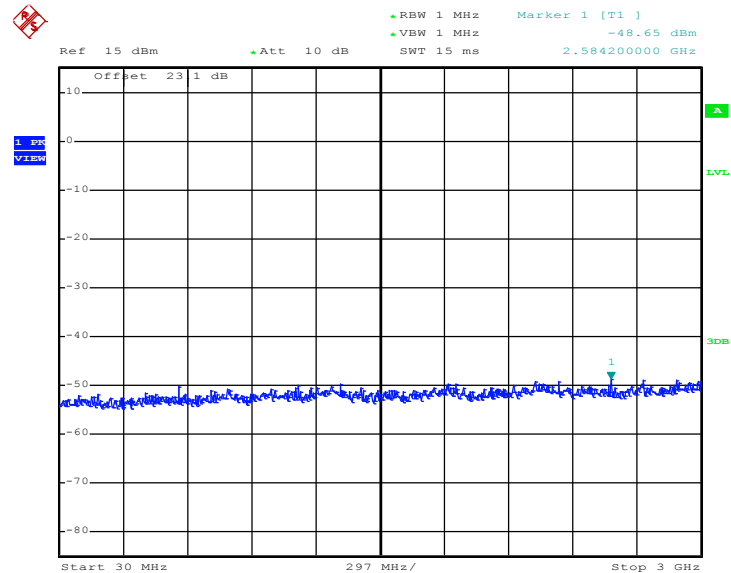
**Mode 7 : Conducted Spurious Emission Plot between  
802.11a 3 GHz ~ 13.6 GHz**


Date: 10.DEC.2010 17:17:14

**Mode 7 : Conducted Spurious Emission Plot between  
802.11a 13.6 GHz ~ 40 GHz**


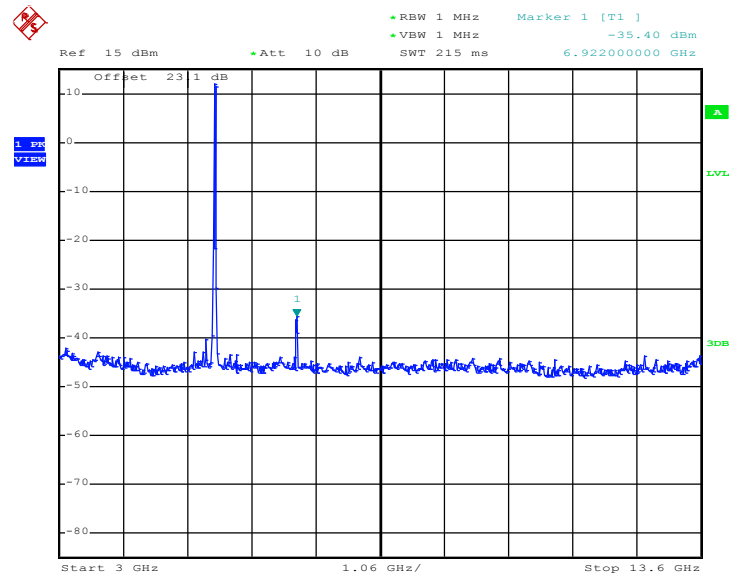
Date: 10.DEC.2010 17:17:26

### Mode 8 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



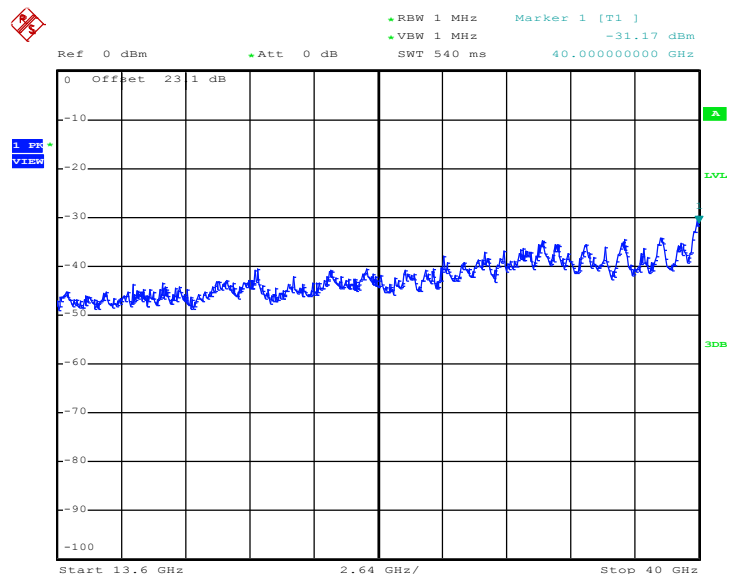
Date: 10.FEB.2011 00:45:27

### Mode 8 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



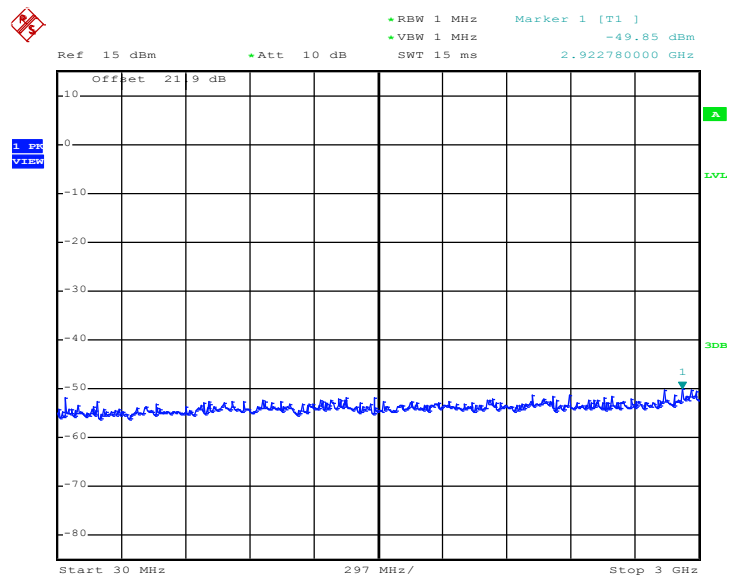
Date: 10.FEB.2011 00:50:01

### Mode 8 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



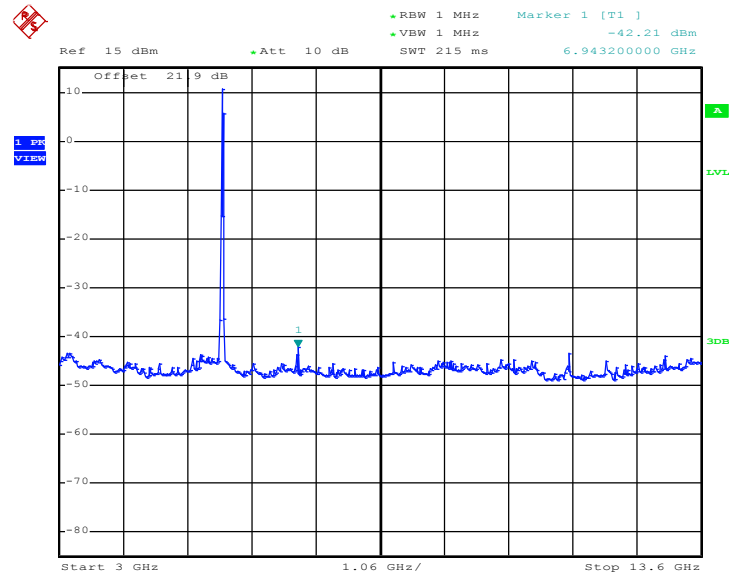
Date: 10.FEB.2011 00:53:52

### Mode 9 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



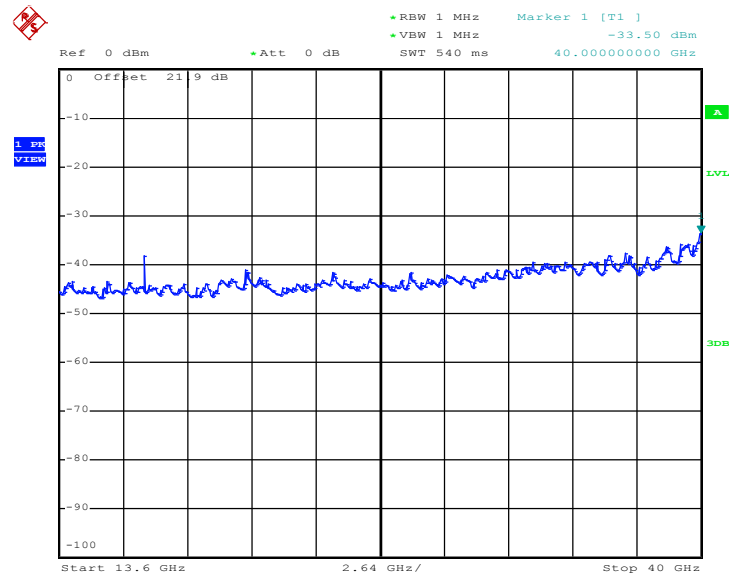
Date: 10.DEC.2010 17:22:04

### Mode 9 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



Date: 10.DEC.2010 17:22:15

### Mode 9 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



Date: 10.DEC.2010 17:22:27

|                       |                                       |                            |         |
|-----------------------|---------------------------------------|----------------------------|---------|
| <b>Test Mode :</b>    | Mode 10~18                            | <b>Temperature :</b>       | 25~27°C |
| <b>Test Band :</b>    | 802.11n HT20                          | <b>Relative Humidity :</b> | 54~57%  |
| <b>Test Channel :</b> | 36, 44, 48, 52, 60, 64, 100, 116, 140 | <b>Test Engineer :</b>     | Ken Hsu |

**<30 MHz ~ 3 GHz>**

| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 2893.08         | -50.26      | 3.5                | -46.76                 | -27         |
| 44      | 5220            | 77.52           | -33.08      | 3.5                | -29.58                 | -27         |
| 48      | 5240            | 65.64           | -49.93      | 3.5                | -46.43                 | -27         |
| 52      | 5260            | 903.18          | -46.01      | 3.5                | -42.51                 | -27         |
| 60      | 5300            | 903.18          | -40.75      | 3.5                | -37.25                 | -27         |
| 64      | 5320            | 903.18          | -42.49      | 3.5                | -38.99                 | -27         |
| 100     | 5500            | 35.94           | -46.45      | 3.5                | -42.95                 | -27         |
| 116     | 5580            | 2221.86         | -48.47      | 3.5                | -44.97                 | -27         |
| 140     | 5700            | 903.18          | -42.73      | 3.5                | -39.23                 | -27         |

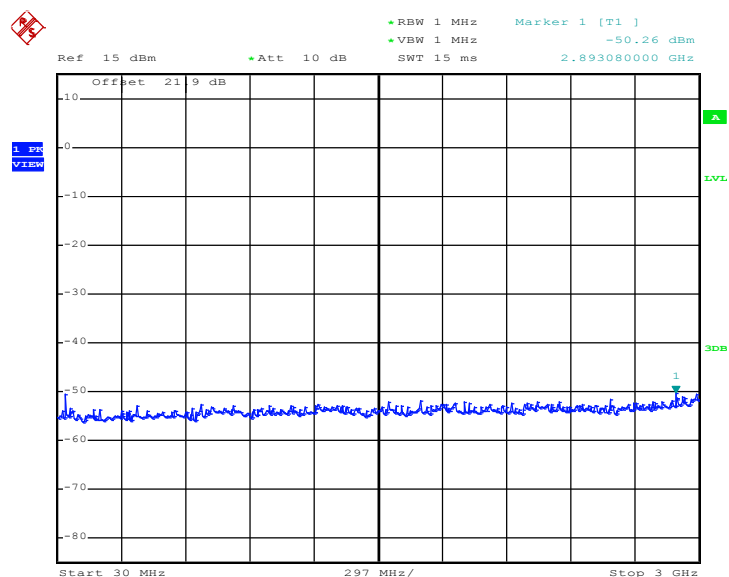
**<3 GHz ~ 13.6 GHz>**

| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 6922.0          | -36.99      | 3.5                | -33.49                 | -27         |
| 44      | 5220            | 6900.8          | -37.35      | 3.5                | -33.85                 | -27         |
| 48      | 5240            | 6922.0          | -33.94      | 3.5                | -30.44                 | -27         |
| 52      | 5260            | 6922.0          | -35.34      | 3.5                | -31.84                 | -27         |
| 60      | 5300            | 6922.0          | -36.26      | 3.5                | -32.76                 | -27         |
| 64      | 5320            | 6922.0          | -39.15      | 3.5                | -35.65                 | -27         |
| 100     | 5500            | 6922.0          | -35.55      | 3.5                | -32.05                 | -27         |
| 116     | 5580            | 6922.0          | -34.93      | 3.5                | -31.43                 | -27         |
| 140     | 5700            | 5544.0          | -39.98      | 3.5                | -36.48                 | -27         |

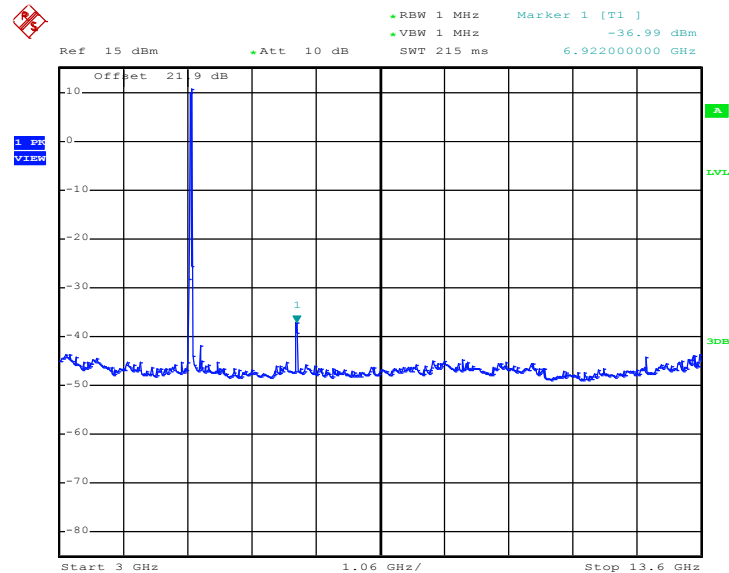
**<13.6 GHz ~ 40 GHz>**

| Channel | Frequency (MHz) | Frequency (MHz) | Level (dBm) | Antenna Gain (dBi) | EIRP Test Result (dBm) | Limit (dBm) |
|---------|-----------------|-----------------|-------------|--------------------|------------------------|-------------|
| 36      | 5180            | 40000.0         | -33.40      | 3.5                | -29.90                 | -27         |
| 44      | 5220            | 39894.4         | -33.57      | 3.5                | -30.07                 | -27         |
| 48      | 5240            | 40000.0         | -33.11      | 3.5                | -29.61                 | -27         |
| 52      | 5260            | 40000.0         | -33.33      | 3.5                | -29.83                 | -27         |
| 60      | 5300            | 40000.0         | -33.11      | 3.5                | -29.61                 | -27         |
| 64      | 5320            | 40000.0         | -33.78      | 3.5                | -30.28                 | -27         |
| 100     | 5500            | 40000.0         | -33.51      | 3.5                | -30.01                 | -27         |
| 116     | 5580            | 40000.0         | -30.90      | 3.5                | -27.40                 | -27         |
| 140     | 5700            | 40000.0         | -33.98      | 3.5                | -30.48                 | -27         |

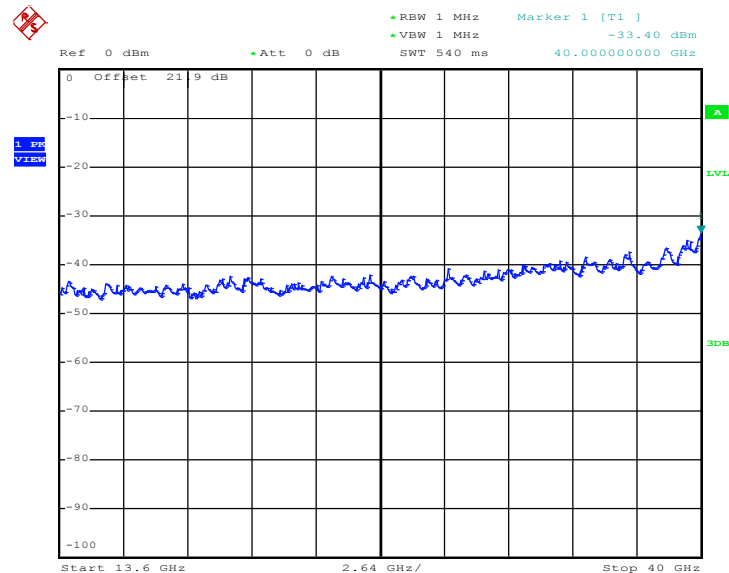
**Mode 10 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**



Date: 10.DEC.2010 17:28:36

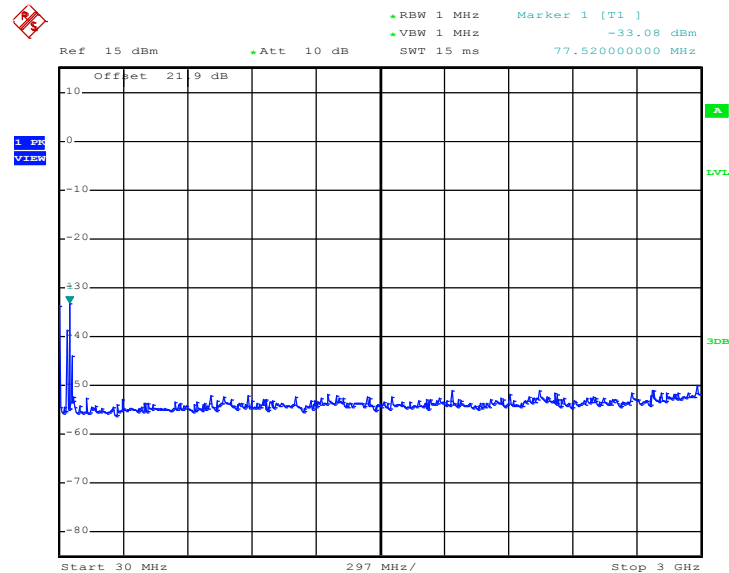
**Mode 10 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


Date: 10.DEC.2010 17:28:48

**Mode 10 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**


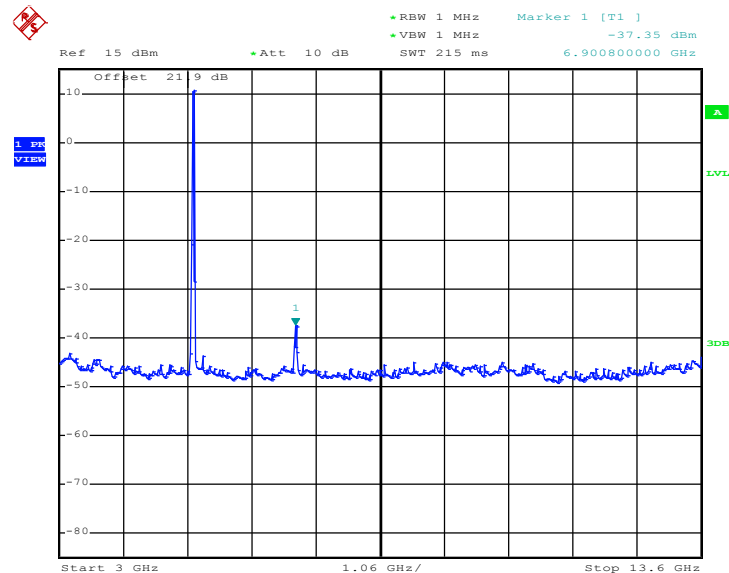
Date: 10.DEC.2010 17:29:00

### Mode 11 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



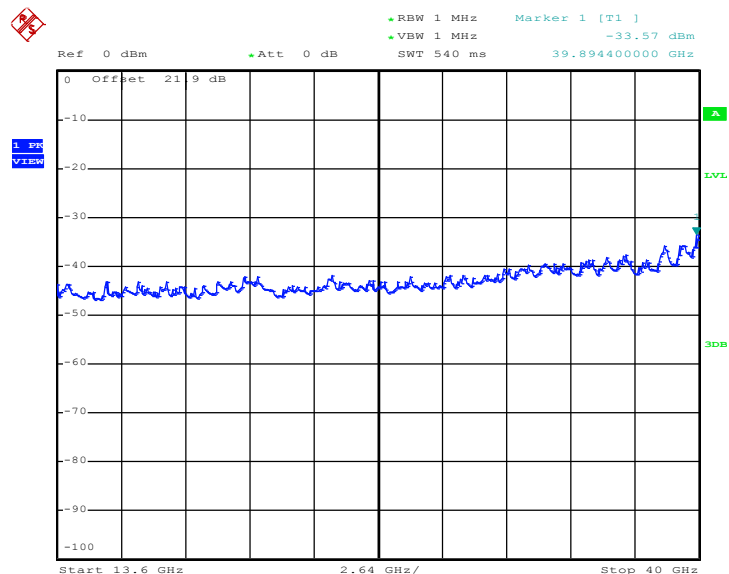
Date: 10.DEC.2010 17:29:48

### Mode 11 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



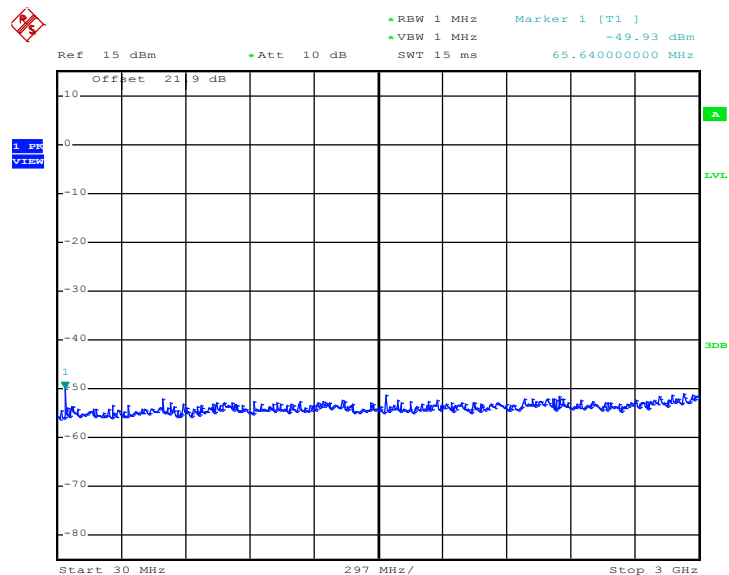
Date: 10.DEC.2010 17:30:00

**Mode 11 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**



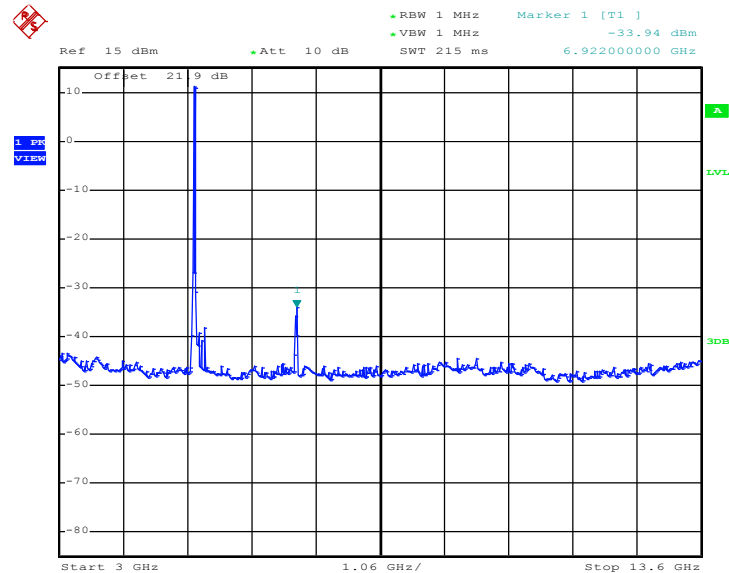
Date: 10.DEC.2010 17:30:12

**Mode 12 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**



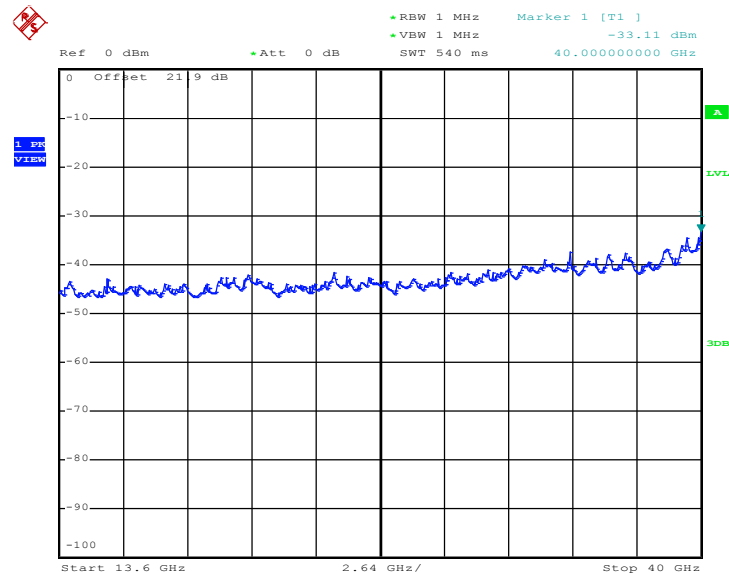
Date: 10.DEC.2010 17:30:41

### Mode 12 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz

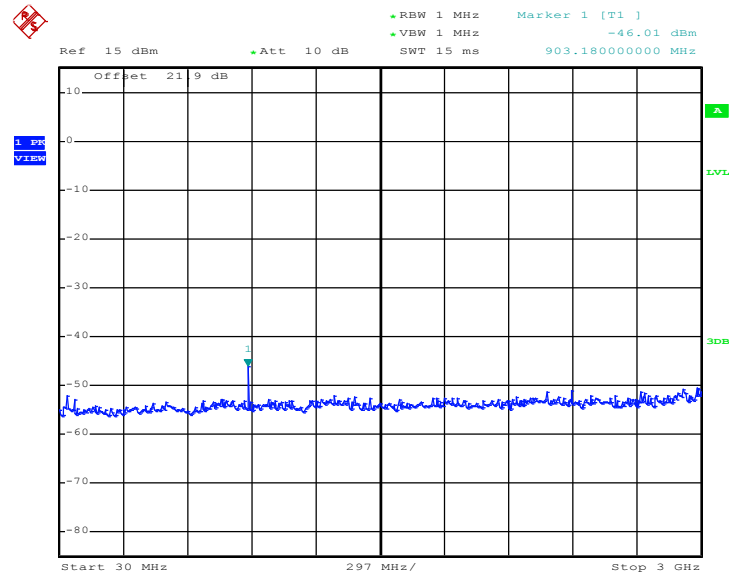


Date: 10.DEC.2010 17:30:53

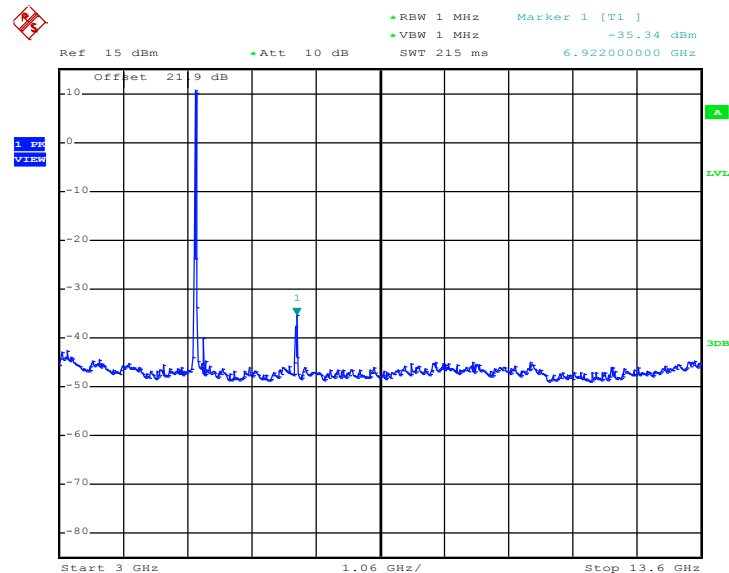
### Mode 12 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.DEC.2010 17:31:05

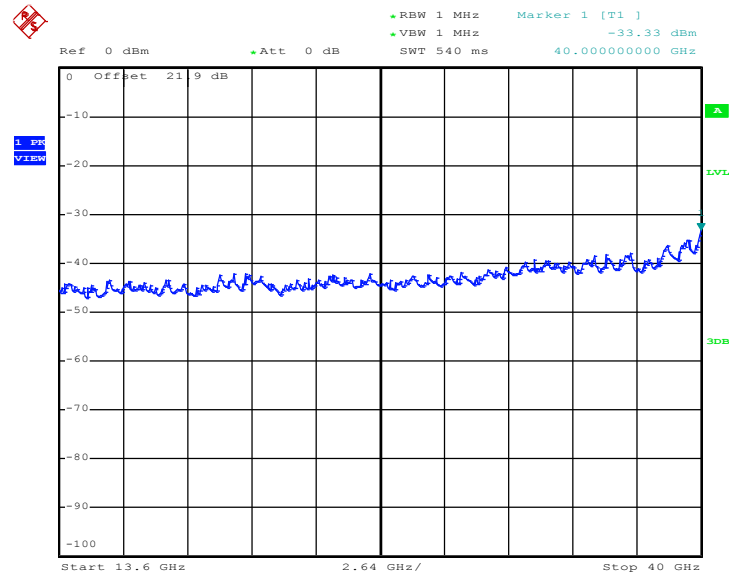
**Mode 13 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**


Date: 10.DEC.2010 17:38:47

**Mode 13 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


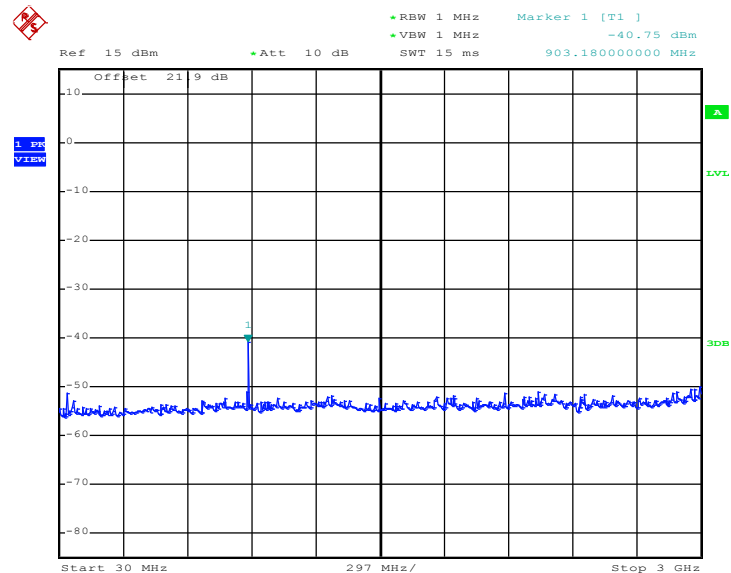
Date: 10.DEC.2010 17:38:59

### Mode 13 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz

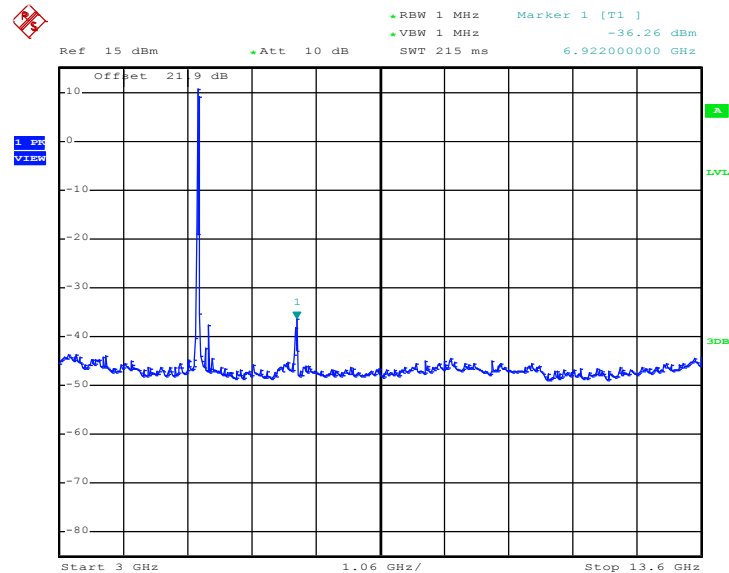


Date: 10.DEC.2010 17:39:11

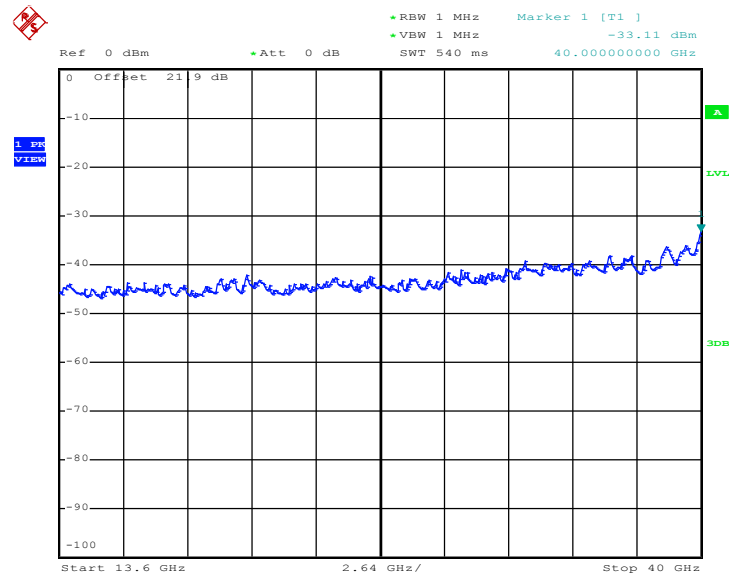
### Mode 14 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



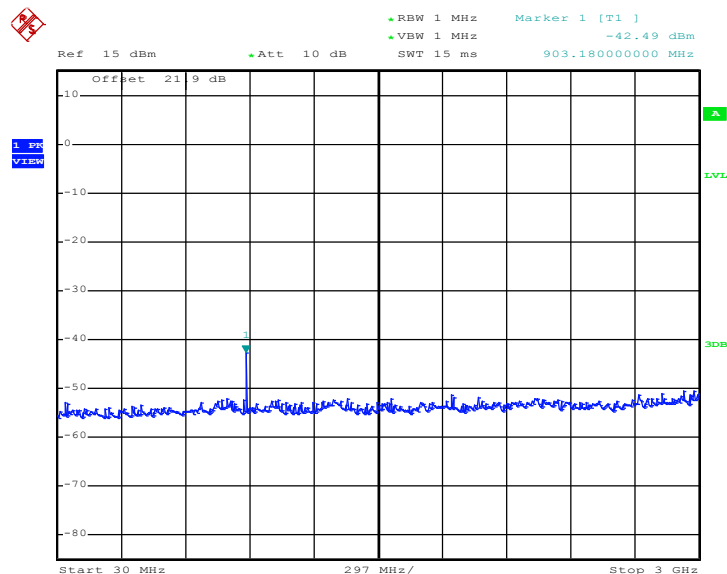
Date: 10.DEC.2010 17:40:16

**Mode 14 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


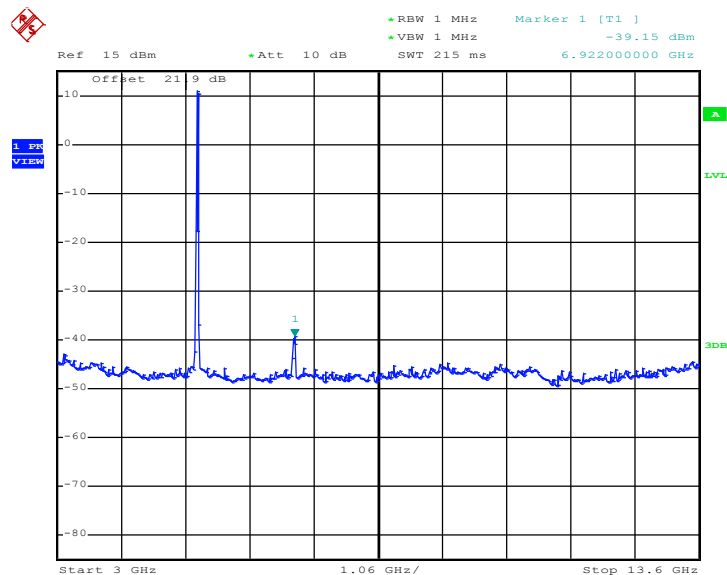
Date: 10.DEC.2010 17:40:28

**Mode 14 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**


Date: 10.DEC.2010 17:40:40

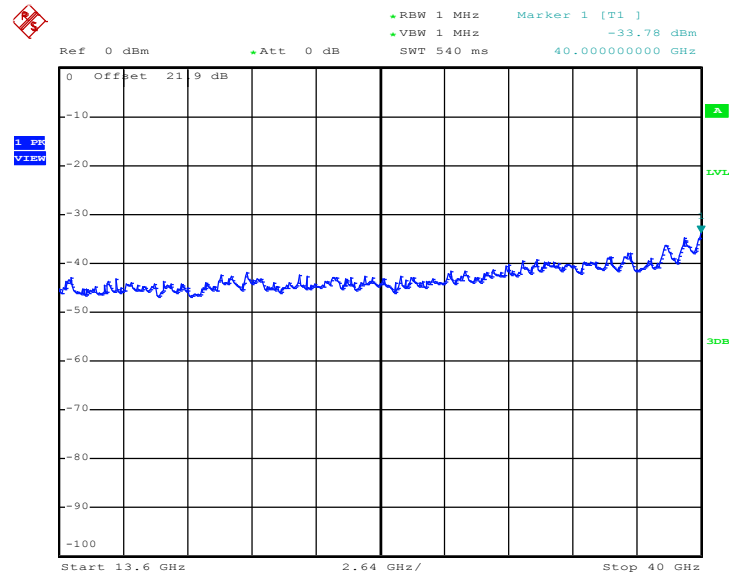
**Mode 15 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**


Date: 10.DEC.2010 17:41:03

**Mode 15 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


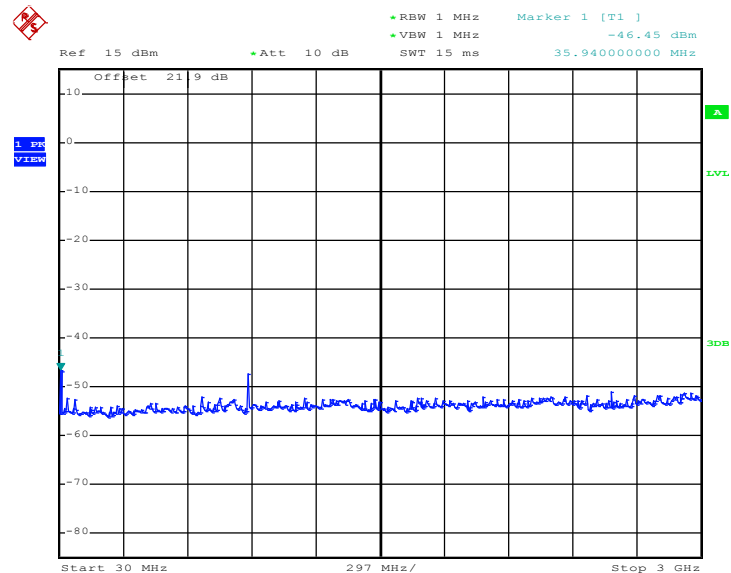
Date: 10.DEC.2010 17:41:15

**Mode 15 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**

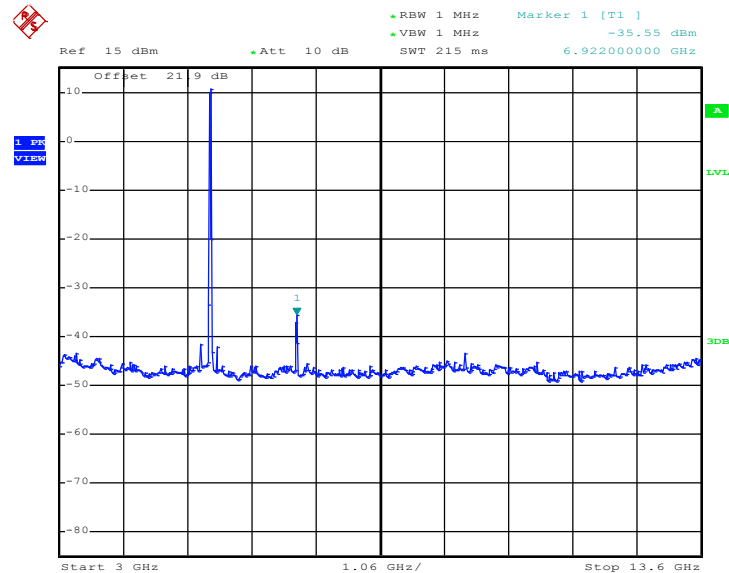


Date: 10.DEC.2010 17:41:27

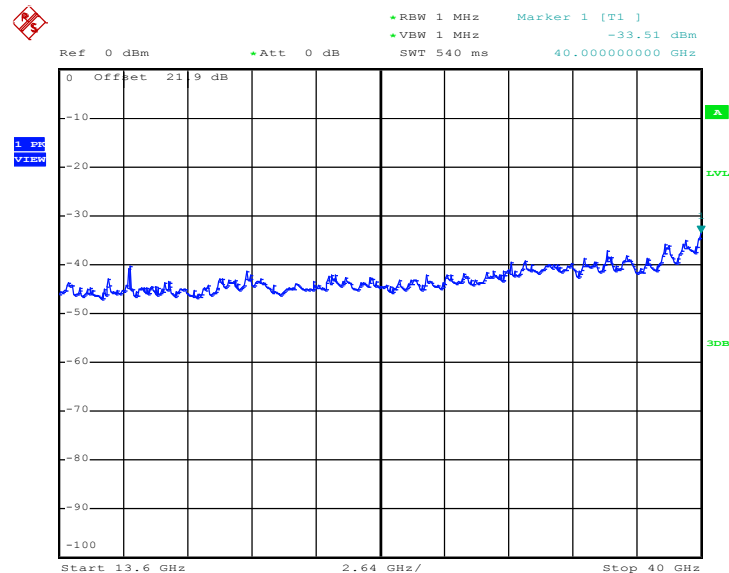
**Mode 16 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**



Date: 10.DEC.2010 17:48:14

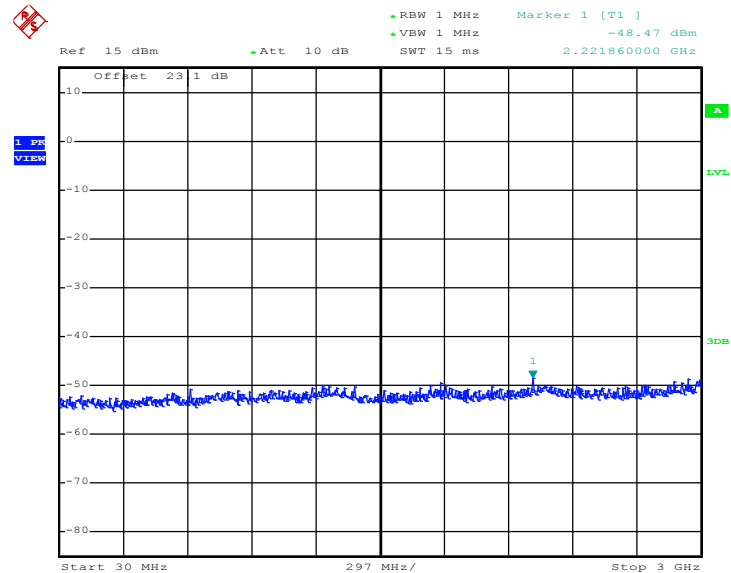
**Mode 16 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


Date: 10.DEC.2010 17:48:26

**Mode 16 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**


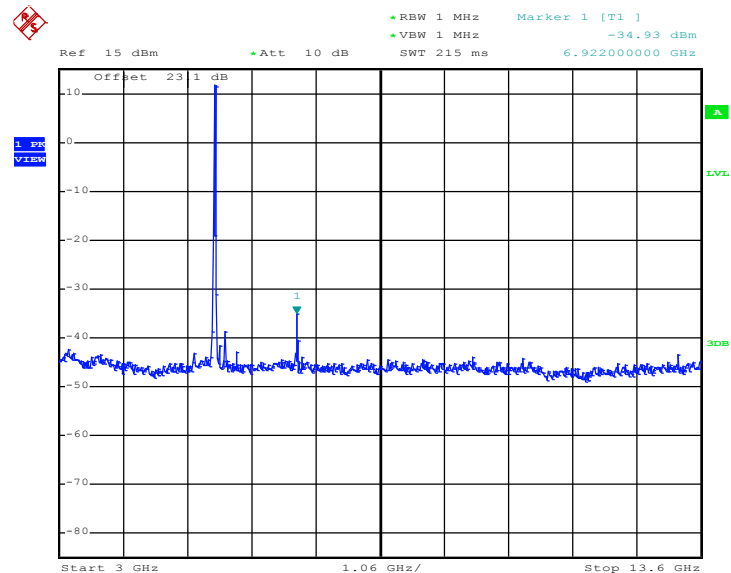
Date: 10.DEC.2010 17:48:38

### Mode 17 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz

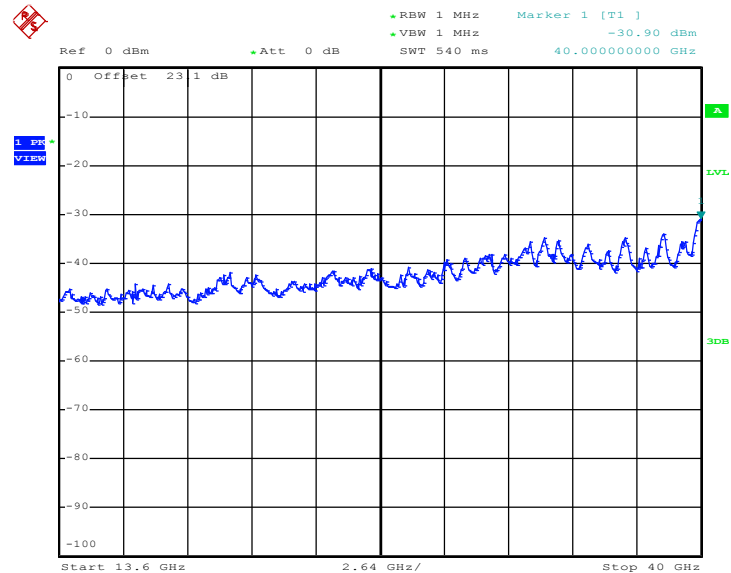


Date: 10.FEB.2011 01:04:45

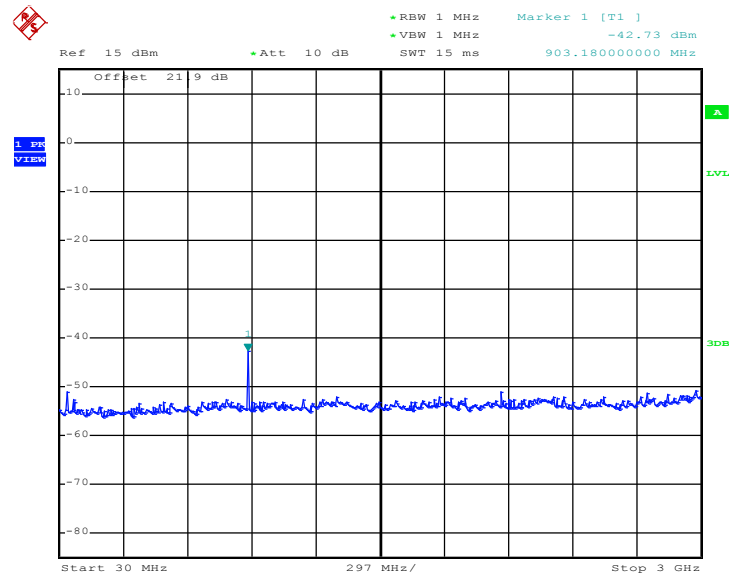
### Mode 17 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



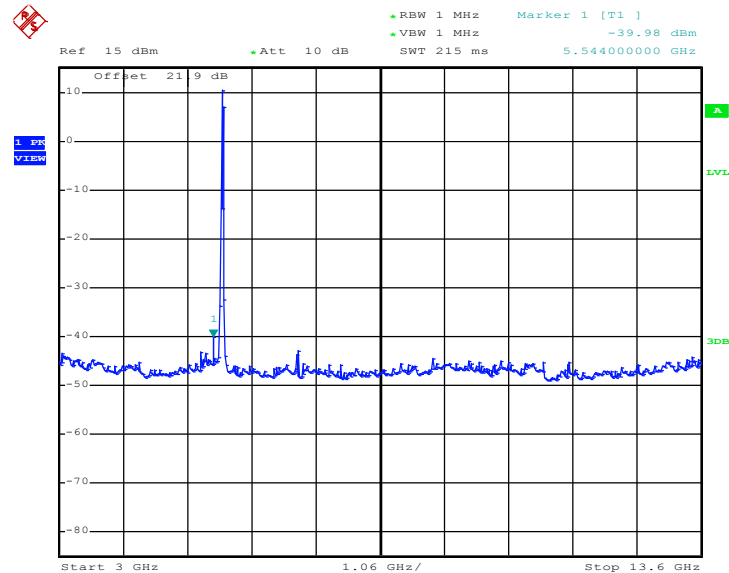
Date: 10.FEB.2011 01:03:34

**Mode 17 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**


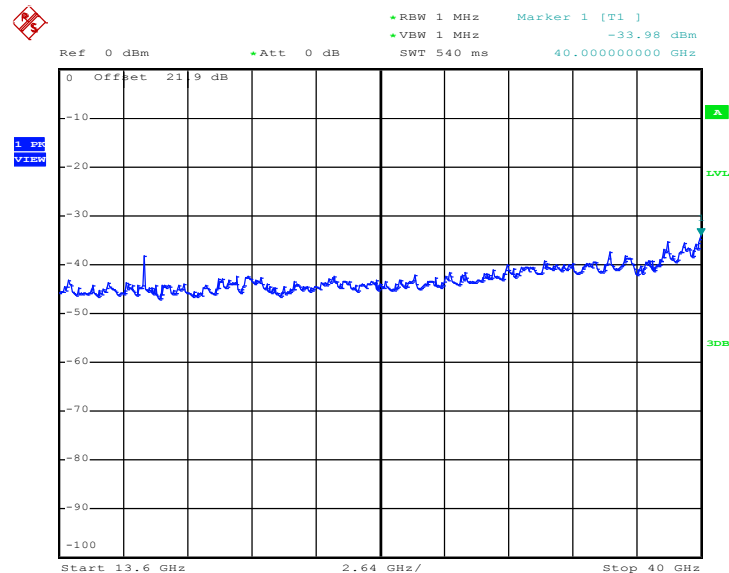
Date: 10.FEB.2011 01:02:04

**Mode 18 : Conducted Spurious Emission Plot between  
802.11n 30 MHz ~ 3 GHz**


Date: 10.DEC.2010 17:43:21

**Mode 18 : Conducted Spurious Emission Plot between  
802.11n 3 GHz ~ 13.6 GHz**


Date: 10.DEC.2010 17:43:33

**Mode 18 : Conducted Spurious Emission Plot between  
802.11n 13.6 GHz ~ 40 GHz**


Date: 10.DEC.2010 17:43:45

## 3.6 AC Conducted Emission Measurement

### 3.6.1 Limit of AC Conducted Emission

For equipment 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.

| Frequency of emission (MHz) | Conducted limit (dBuV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-peak             | Average   |
| 0.15-0.5                    | 66 to 56*              | 56 to 46* |
| 0.5-5                       | 56                     | 46        |
| 5-30                        | 60                     | 50        |

\*Decreases with the logarithm of the frequency.

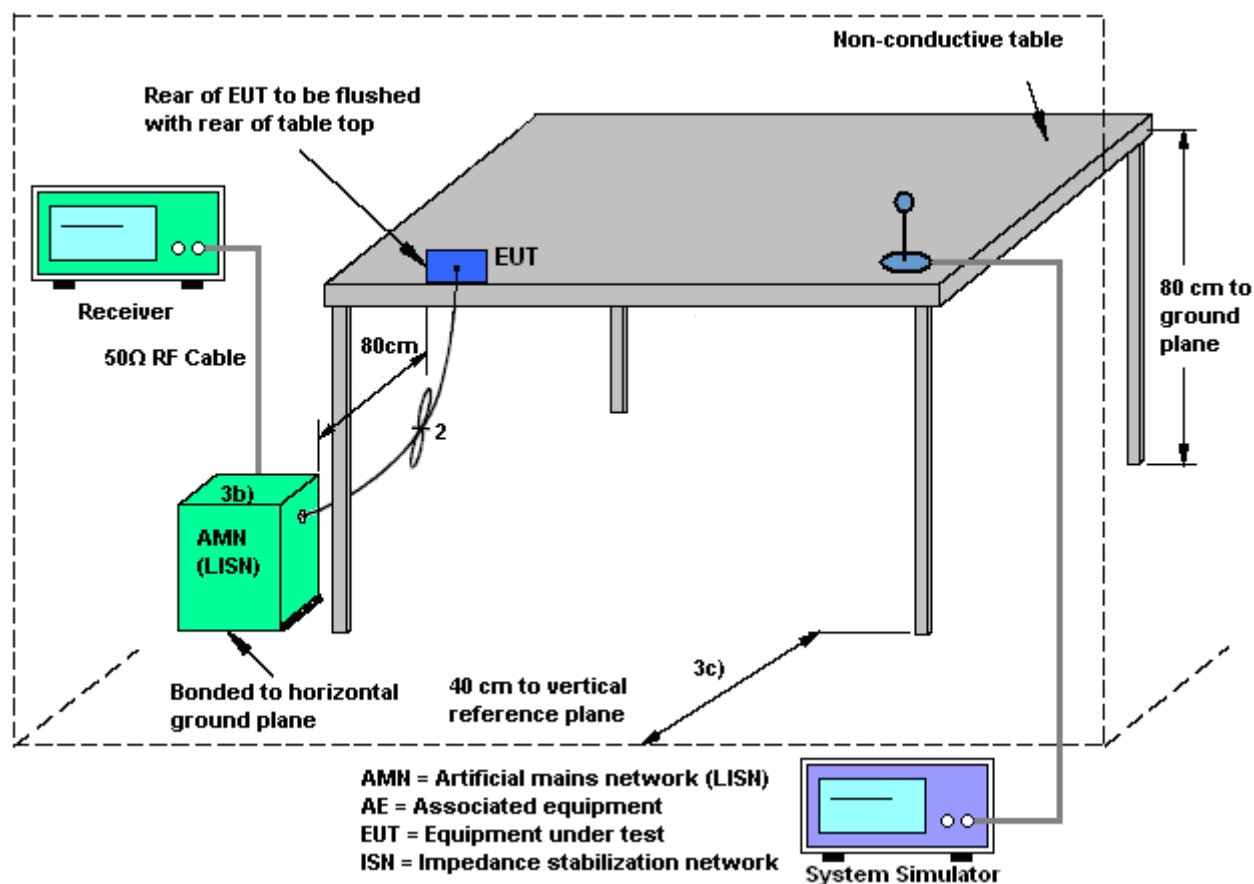
### 3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.6.3 Test Procedures

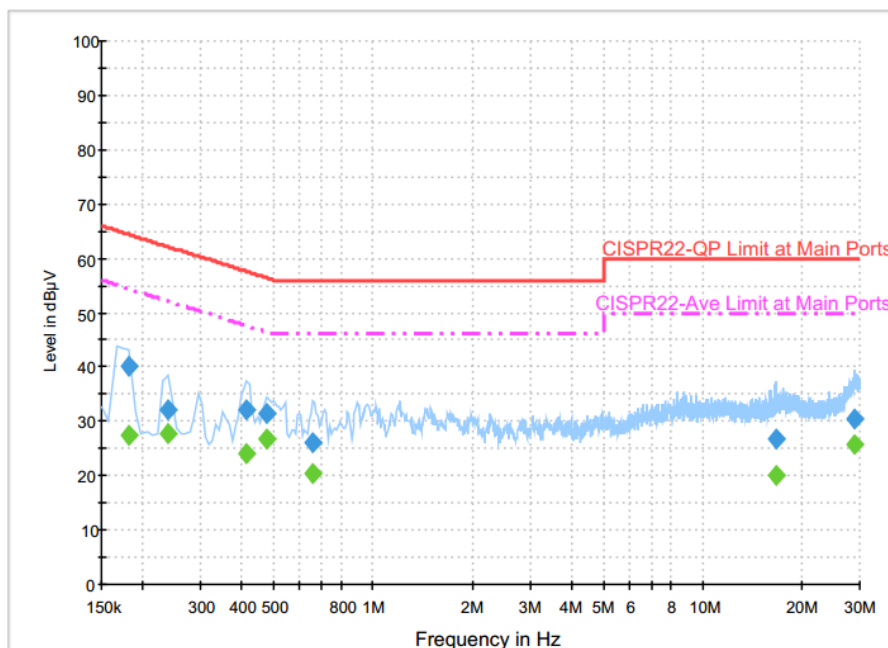
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

### 3.6.4 Test Setup



### 3.6.5 Test Result of AC Conducted Emission

|                        |                                                                        |                            |        |
|------------------------|------------------------------------------------------------------------|----------------------------|--------|
| <b>Test Mode :</b>     | Mode 1                                                                 | <b>Temperature :</b>       | 25~26℃ |
| <b>Test Engineer :</b> | Kai-Chun Chu                                                           | <b>Relative Humidity :</b> | 57~58% |
| <b>Test Voltage :</b>  | 120Vac / 60Hz                                                          | <b>Phase :</b>             | Line   |
| <b>Function Type :</b> | WCDMA Band II Idle + Bluetooth Link + WLAN (5GHz) Link + Camera + TC 2 |                            |        |



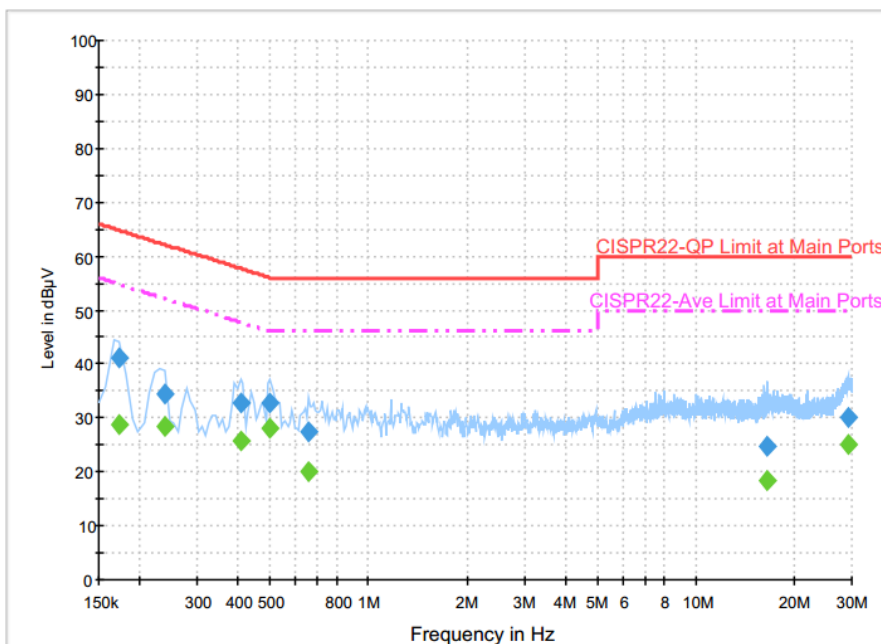
#### Final Result : QuasiPeak

| Frequency (MHz) | QuasiPeak (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|--------|------|------------|-------------|--------------|
| 0.182000        | 40.2             | Off    | L1   | 19.5       | 24.2        | 64.4         |
| 0.238000        | 32.0             | Off    | L1   | 19.5       | 30.2        | 62.2         |
| 0.414000        | 32.0             | Off    | L1   | 19.5       | 25.6        | 57.6         |
| 0.478000        | 31.4             | Off    | L1   | 19.5       | 25.0        | 56.4         |
| 0.654000        | 26.2             | Off    | L1   | 19.6       | 29.8        | 56.0         |
| 16.774000       | 26.8             | Off    | L1   | 19.8       | 33.2        | 60.0         |
| 28.870000       | 30.6             | Off    | L1   | 20.0       | 29.4        | 60.0         |

#### Final Result : Average

| Frequency (MHz) | Average (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.182000        | 27.5           | Off    | L1   | 19.5       | 26.9        | 54.4         |
| 0.238000        | 27.8           | Off    | L1   | 19.5       | 24.4        | 52.2         |
| 0.414000        | 24.1           | Off    | L1   | 19.5       | 23.5        | 47.6         |
| 0.478000        | 26.8           | Off    | L1   | 19.5       | 19.6        | 46.4         |
| 0.654000        | 20.4           | Off    | L1   | 19.6       | 25.6        | 46.0         |
| 16.774000       | 20.0           | Off    | L1   | 19.8       | 30.0        | 50.0         |
| 28.870000       | 25.7           | Off    | L1   | 20.0       | 24.3        | 50.0         |

|                        |                                                                        |                            |         |
|------------------------|------------------------------------------------------------------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1                                                                 | <b>Temperature :</b>       | 25~26°C |
| <b>Test Engineer :</b> | Kai-Chun Chu                                                           | <b>Relative Humidity :</b> | 57~58%  |
| <b>Test Voltage :</b>  | 120Vac / 60Hz                                                          | <b>Phase :</b>             | Neutral |
| <b>Function Type :</b> | WCDMA Band II Idle + Bluetooth Link + WLAN (5GHz) Link + Camera + TC 2 |                            |         |


**Final Result : QuasiPeak**

| Frequency (MHz) | QuasiPeak (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|--------|------|------------|-------------|--------------|
| 0.174000        | 41.1             | Off    | N    | 19.5       | 23.7        | 64.8         |
| 0.238000        | 34.5             | Off    | N    | 19.5       | 27.7        | 62.2         |
| 0.406000        | 32.6             | Off    | N    | 19.5       | 25.1        | 57.7         |
| 0.502000        | 32.6             | Off    | N    | 19.5       | 23.4        | 56.0         |
| 0.654000        | 27.4             | Off    | N    | 19.6       | 28.6        | 56.0         |
| 16.534000       | 24.7             | Off    | N    | 19.9       | 35.3        | 60.0         |
| 29.126000       | 30.1             | Off    | N    | 20.1       | 29.9        | 60.0         |

**Final Result : Average**

| Frequency (MHz) | Average (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.174000        | 28.8           | Off    | N    | 19.5       | 26.0        | 54.8         |
| 0.238000        | 28.4           | Off    | N    | 19.5       | 23.8        | 52.2         |
| 0.406000        | 25.8           | Off    | N    | 19.5       | 21.9        | 47.7         |
| 0.502000        | 28.0           | Off    | N    | 19.5       | 18.0        | 46.0         |
| 0.654000        | 20.1           | Off    | N    | 19.6       | 25.9        | 46.0         |
| 16.534000       | 18.4           | Off    | N    | 19.9       | 31.6        | 50.0         |
| 29.126000       | 25.2           | Off    | N    | 20.1       | 24.8        | 50.0         |

### 3.7 Radiated Emission Measurement

#### 3.7.1 Limit of Radiated Emission

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 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                                |

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (4) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

#### 3.7.2 Measuring Instruments

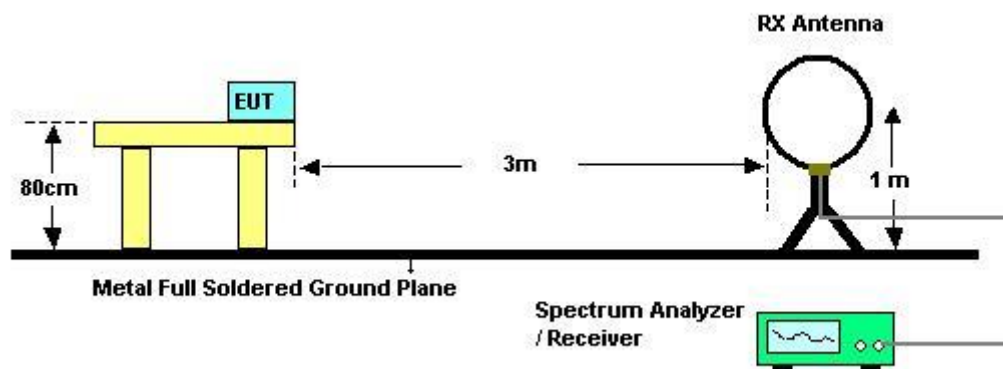
See list of measuring instruments of this test report.

### 3.7.3 Test Procedures

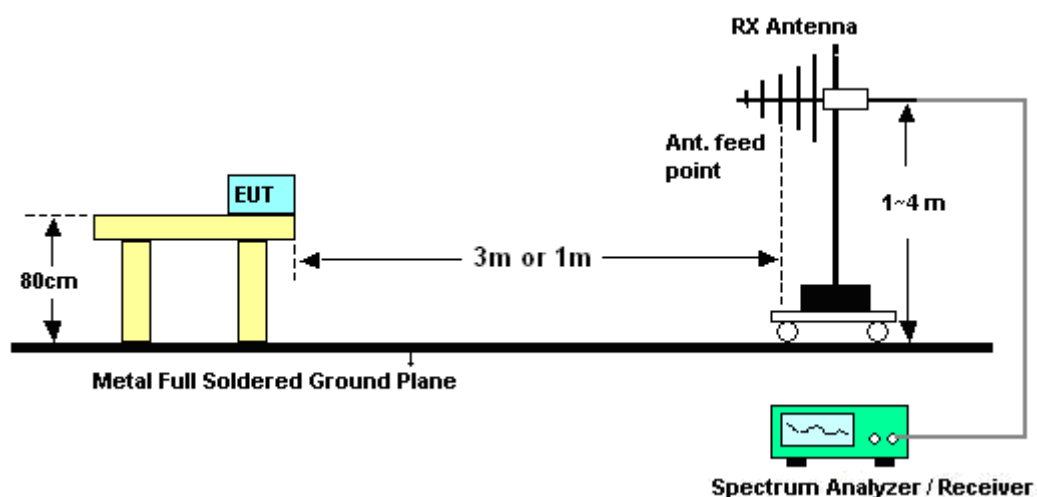
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
6. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
8. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
9. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.7.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



**3.7.5 Test Results of Radiated Emissions (9kHz ~ 30MHz)**

|                      |            |                 |        |
|----------------------|------------|-----------------|--------|
| <b>Temperature</b>   | 23~24°C    | <b>Humidity</b> | 49~50% |
| <b>Test Engineer</b> | Ivan Jiang |                 |        |

| <b>Freq.<br/>(MHz)</b> | <b>Level<br/>(dBuV)</b> | <b>Over Limit<br/>(dB)</b> | <b>Limit Line<br/>(dBuV)</b> | <b>Remark</b> |
|------------------------|-------------------------|----------------------------|------------------------------|---------------|
| -                      | -                       | -                          | -                            | See Note      |

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

**3.7.6 Test Result of Radiated Emission (30MHz ~ 10<sup>th</sup> harmonic)**

|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 1                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 36                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5180 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.05               | 24.35               | -19.15                  | 43.50                       | 43.71                   | 11.12                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 241.41               | 31.09               | -14.91                  | 46.00                       | 48.93                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 296.49               | 31.88               | -14.12                  | 46.00                       | 48.05                   | 13.41                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 354.60               | 32.08               | -13.92                  | 46.00                       | 46.16                   | 15.18                       | 2.02                    | 31.28                      | 102                  | 87                      | Peak    |
| 399.40               | 30.76               | -15.24                  | 46.00                       | 43.24                   | 16.56                       | 2.14                    | 31.18                      | -                    | -                       | Peak    |
| 841.80               | 29.59               | -16.41                  | 46.00                       | 34.11                   | 22.95                       | 3.25                    | 30.72                      | -                    | -                       | Peak    |
| 5150.00              | 40.10               | -13.90                  | 54.00                       | 31.09                   | 34.25                       | 9.41                    | 34.65                      | 112                  | 271                     | Average |
| 5150.00              | 55.14               | -18.86                  | 74.00                       | 46.13                   | 34.25                       | 9.41                    | 34.65                      | 112                  | 271                     | Peak    |
| 5180.00              | 104.72              | -                       | -                           | 95.76                   | 34.28                       | 9.45                    | 34.77                      | 112                  | 271                     | Peak    |
| 5180.00              | 94.58               | -                       | -                           | 85.62                   | 34.28                       | 9.45                    | 34.77                      | 112                  | 271                     | Average |
| 5350.00              | 37.69               | -16.31                  | 54.00                       | 28.90                   | 34.45                       | 9.74                    | 35.40                      | 112                  | 271                     | Average |
| 5350.00              | 49.21               | -24.79                  | 74.00                       | 40.42                   | 34.45                       | 9.74                    | 35.40                      | 112                  | 271                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 1                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 36                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5180 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 31.96               | -8.04                   | 40.00                       | 47.07                   | 15.80                       | 0.56                    | 31.47                      | 110                  | 166                     | Peak    |
| 137.73               | 28.48               | -15.02                  | 43.50                       | 47.25                   | 11.59                       | 1.19                    | 31.55                      | -                    | -                       | Peak    |
| 241.41               | 27.89               | -18.11                  | 46.00                       | 45.73                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 330.10               | 27.92               | -18.08                  | 46.00                       | 42.99                   | 14.39                       | 1.85                    | 31.31                      | -                    | -                       | Peak    |
| 635.30               | 26.47               | -19.53                  | 46.00                       | 34.39                   | 20.16                       | 2.80                    | 30.88                      | -                    | -                       | Peak    |
| 912.50               | 29.08               | -16.92                  | 46.00                       | 32.59                   | 23.79                       | 3.37                    | 30.67                      | -                    | -                       | Peak    |
| 5150.00              | 42.51               | -11.49                  | 54.00                       | 33.50                   | 34.25                       | 9.41                    | 34.65                      | 135                  | 352                     | Average |
| 5150.00              | 62.53               | -11.47                  | 74.00                       | 53.52                   | 34.25                       | 9.41                    | 34.65                      | 135                  | 352                     | Peak    |
| 5180.00              | 108.29              | -                       | -                           | 99.33                   | 34.28                       | 9.45                    | 34.77                      | 135                  | 352                     | Peak    |
| 5180.00              | 97.28               | -                       | -                           | 88.32                   | 34.28                       | 9.45                    | 34.77                      | 135                  | 352                     | Average |
| 5350.00              | 37.37               | -16.63                  | 54.00                       | 28.58                   | 34.45                       | 9.74                    | 35.40                      | 135                  | 352                     | Average |
| 5350.00              | 50.40               | -23.60                  | 74.00                       | 41.61                   | 34.45                       | 9.74                    | 35.40                      | 135                  | 352                     | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 2                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 44                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5220 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.86               | 25.16               | -18.34                  | 43.50                       | 44.44                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 240.06               | 31.16               | -14.84                  | 46.00                       | 49.07                   | 11.98                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 292.98               | 31.03               | -14.97                  | 46.00                       | 47.29                   | 13.35                       | 1.71                    | 31.32                      | -                    | -                       | Peak    |
| 330.10               | 34.87               | -11.13                  | 46.00                       | 49.94                   | 14.39                       | 1.85                    | 31.31                      | 100                  | 114                     | Peak    |
| 380.50               | 29.67               | -16.33                  | 46.00                       | 42.85                   | 15.96                       | 2.10                    | 31.24                      | -                    | -                       | Peak    |
| 920.20               | 29.81               | -16.19                  | 46.00                       | 33.18                   | 23.89                       | 3.39                    | 30.65                      | -                    | -                       | Peak    |
| 5150.00              | 49.50               | -24.50                  | 74.00                       | 40.49                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 268                     | Peak    |
| 5150.00              | 37.80               | -16.20                  | 54.00                       | 28.79                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 268                     | Average |
| 5220.00              | 105.50              | -                       | -                           | 96.55                   | 34.32                       | 9.53                    | 34.90                      | 100                  | 268                     | Peak    |
| 5220.00              | 94.92               | -                       | -                           | 85.97                   | 34.32                       | 9.53                    | 34.90                      | 100                  | 268                     | Average |
| 5350.00              | 50.32               | -23.68                  | 74.00                       | 41.53                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 268                     | Peak    |
| 5350.00              | 37.98               | -16.02                  | 54.00                       | 29.19                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 268                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 2                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 44                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5220 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.28               | -7.72                   | 40.00                       | 47.39                   | 15.80                       | 0.56                    | 31.47                      | 109                  | 216                     | Peak    |
| 72.93                | 26.59               | -13.41                  | 40.00                       | 50.75                   | 6.54                        | 0.85                    | 31.55                      | -                    | -                       | Peak    |
| 138.54               | 28.38               | -15.12                  | 43.50                       | 47.13                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 332.20               | 27.89               | -18.11                  | 46.00                       | 42.86                   | 14.48                       | 1.86                    | 31.31                      | -                    | -                       | Peak    |
| 438.60               | 27.05               | -18.95                  | 46.00                       | 38.70                   | 17.20                       | 2.27                    | 31.12                      | -                    | -                       | Peak    |
| 995.80               | 29.21               | -24.79                  | 54.00                       | 31.44                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 50.11               | -23.89                  | 74.00                       | 41.10                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 347                     | Peak    |
| 5150.00              | 38.34               | -15.66                  | 54.00                       | 29.33                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 347                     | Average |
| 5220.00              | 109.66              | -                       | -                           | 100.71                  | 34.32                       | 9.53                    | 34.90                      | 101                  | 347                     | Peak    |
| 5220.00              | 99.05               | -                       | -                           | 90.10                   | 34.32                       | 9.53                    | 34.90                      | 101                  | 347                     | Average |
| 5350.00              | 49.92               | -24.08                  | 74.00                       | 41.13                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 347                     | Peak    |
| 5350.00              | 37.62               | -16.38                  | 54.00                       | 28.83                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 347                     | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 3                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 48                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5240 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 217.38               | 28.46               | -17.54                  | 46.00                       | 48.18                   | 10.34                       | 1.40                    | 31.46                      | -                    | -                       | Peak    |
| 242.22               | 29.91               | -16.09                  | 46.00                       | 47.68                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 289.74               | 31.12               | -14.88                  | 46.00                       | 47.44                   | 13.31                       | 1.69                    | 31.32                      | -                    | -                       | Peak    |
| 330.10               | 34.93               | -11.07                  | 46.00                       | 50.00                   | 14.39                       | 1.85                    | 31.31                      | 100                  | 102                     | Peak    |
| 380.50               | 29.65               | -16.35                  | 46.00                       | 42.83                   | 15.96                       | 2.10                    | 31.24                      | -                    | -                       | Peak    |
| 998.60               | 31.04               | -22.96                  | 54.00                       | 33.23                   | 24.88                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 49.49               | -24.51                  | 74.00                       | 40.48                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 269                     | Peak    |
| 5150.00              | 37.78               | -16.22                  | 54.00                       | 28.77                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 269                     | Average |
| 5240.00              | 104.97              | -                       | -                           | 96.03                   | 34.33                       | 9.57                    | 34.96                      | 100                  | 269                     | Peak    |
| 5240.00              | 94.88               | -                       | -                           | 85.94                   | 34.33                       | 9.57                    | 34.96                      | 100                  | 269                     | Average |
| 5350.00              | 50.61               | -23.39                  | 74.00                       | 41.82                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 269                     | Peak    |
| 5350.00              | 38.07               | -15.93                  | 54.00                       | 29.28                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 269                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 3                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 48                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5240 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.35               | -7.65                   | 40.00                       | 47.46                   | 15.80                       | 0.56                    | 31.47                      | 116                  | 251                     | Peak    |
| 137.73               | 28.53               | -14.97                  | 43.50                       | 47.30                   | 11.59                       | 1.19                    | 31.55                      | -                    | -                       | Peak    |
| 242.22               | 28.73               | -17.27                  | 46.00                       | 46.50                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 399.40               | 28.83               | -17.17                  | 46.00                       | 41.31                   | 16.56                       | 2.14                    | 31.18                      | -                    | -                       | Peak    |
| 802.60               | 28.67               | -17.33                  | 46.00                       | 33.71                   | 22.49                       | 3.15                    | 30.68                      | -                    | -                       | Peak    |
| 934.20               | 29.12               | -16.88                  | 46.00                       | 32.25                   | 24.06                       | 3.42                    | 30.61                      | -                    | -                       | Peak    |
| 5150.00              | 49.86               | -24.14                  | 74.00                       | 40.85                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 23                      | Peak    |
| 5150.00              | 38.04               | -15.96                  | 54.00                       | 29.03                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 23                      | Average |
| 5240.00              | 107.85              | -                       | -                           | 98.91                   | 34.33                       | 9.57                    | 34.96                      | 101                  | 23                      | Peak    |
| 5240.00              | 97.78               | -                       | -                           | 88.84                   | 34.33                       | 9.57                    | 34.96                      | 101                  | 23                      | Average |
| 5350.00              | 51.96               | -22.04                  | 74.00                       | 43.17                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 23                      | Peak    |
| 5350.00              | 37.83               | -16.17                  | 54.00                       | 29.04                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 23                      | Average |

|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 4                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 52                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5260 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.05               | 24.94               | -18.56                  | 43.50                       | 44.30                   | 11.12                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 214.14               | 28.61               | -14.89                  | 43.50                       | 48.57                   | 10.13                       | 1.38                    | 31.47                      | -                    | -                       | Peak    |
| 299.46               | 32.11               | -13.89                  | 46.00                       | 48.21                   | 13.46                       | 1.77                    | 31.33                      | -                    | -                       | Peak    |
| 330.10               | 35.80               | -10.20                  | 46.00                       | 50.87                   | 14.39                       | 1.85                    | 31.31                      | 100                  | 177                     | Peak    |
| 402.90               | 31.80               | -14.20                  | 46.00                       | 44.22                   | 16.61                       | 2.15                    | 31.18                      | -                    | -                       | Peak    |
| 895.00               | 31.35               | -14.65                  | 46.00                       | 35.15                   | 23.57                       | 3.33                    | 30.70                      | -                    | -                       | Peak    |
| 5150.00              | 50.74               | -23.26                  | 74.00                       | 41.73                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 270                     | Peak    |
| 5150.00              | 37.92               | -16.08                  | 54.00                       | 28.91                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 270                     | Average |
| 5260.00              | 106.83              | -                       | -                           | 97.93                   | 34.37                       | 9.62                    | 35.09                      | 100                  | 270                     | Peak    |
| 5260.00              | 95.62               | -                       | -                           | 86.72                   | 34.37                       | 9.62                    | 35.09                      | 100                  | 270                     | Average |
| 5350.00              | 50.48               | -23.52                  | 74.00                       | 41.69                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 270                     | Peak    |
| 5350.00              | 38.10               | -15.90                  | 54.00                       | 29.31                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 270                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 4                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 52                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5260 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.68               | -7.32                   | 40.00                       | 47.79                   | 15.80                       | 0.56                    | 31.47                      | 141                  | 100                     | Peak    |
| 65.37                | 26.60               | -13.40                  | 40.00                       | 51.36                   | 5.98                        | 0.80                    | 31.54                      | -                    | -                       | Peak    |
| 138.54               | 27.70               | -15.80                  | 43.50                       | 46.45                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 307.00               | 27.41               | -18.59                  | 46.00                       | 43.25                   | 13.70                       | 1.79                    | 31.33                      | -                    | -                       | Peak    |
| 926.50               | 30.60               | -15.40                  | 46.00                       | 33.87                   | 23.96                       | 3.40                    | 30.63                      | -                    | -                       | Peak    |
| 995.80               | 30.83               | -23.17                  | 54.00                       | 33.06                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 49.78               | -24.22                  | 74.00                       | 40.77                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 23                      | Peak    |
| 5150.00              | 37.85               | -16.15                  | 54.00                       | 28.84                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 23                      | Average |
| 5260.00              | 108.34              | -                       | -                           | 99.44                   | 34.37                       | 9.62                    | 35.09                      | 123                  | 23                      | Peak    |
| 5260.00              | 97.75               | -                       | -                           | 88.85                   | 34.37                       | 9.62                    | 35.09                      | 123                  | 23                      | Average |
| 5350.00              | 50.02               | -23.98                  | 74.00                       | 41.23                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 23                      | Peak    |
| 5350.00              | 38.16               | -15.84                  | 54.00                       | 29.37                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 23                      | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 5                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 60                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5300 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 26.16               | -13.84                  | 40.00                       | 47.93                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 115.86               | 25.06               | -18.44                  | 43.50                       | 44.34                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 220.89               | 31.34               | -14.66                  | 46.00                       | 50.76                   | 10.61                       | 1.43                    | 31.46                      | -                    | -                       | Peak    |
| 335.00               | 35.79               | -10.21                  | 46.00                       | 50.69                   | 14.54                       | 1.87                    | 31.31                      | 100                  | 55                      | Peak    |
| 383.30               | 29.62               | -16.38                  | 46.00                       | 42.69                   | 16.05                       | 2.11                    | 31.23                      | -                    | -                       | Peak    |
| 811.70               | 29.71               | -16.29                  | 46.00                       | 34.62                   | 22.61                       | 3.17                    | 30.69                      | -                    | -                       | Peak    |
| 5150.00              | 49.94               | -24.06                  | 74.00                       | 40.93                   | 34.25                       | 9.41                    | 34.65                      | 102                  | 265                     | Peak    |
| 5150.00              | 37.82               | -16.18                  | 54.00                       | 28.81                   | 34.25                       | 9.41                    | 34.65                      | 102                  | 265                     | Average |
| 5300.00              | 104.11              | -                       | -                           | 95.26                   | 34.40                       | 9.66                    | 35.21                      | 102                  | 265                     | Peak    |
| 5300.00              | 93.85               | -                       | -                           | 85.00                   | 34.40                       | 9.66                    | 35.21                      | 102                  | 265                     | Average |
| 5350.00              | 50.18               | -23.82                  | 74.00                       | 41.39                   | 34.45                       | 9.74                    | 35.40                      | 102                  | 265                     | Peak    |
| 5350.00              | 38.74               | -15.26                  | 54.00                       | 29.95                   | 34.45                       | 9.74                    | 35.40                      | 102                  | 265                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 5                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 60                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5300 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 31.89                | 31.97               | -8.03                   | 40.00                       | 46.84                   | 16.04                       | 0.55                    | 31.46                      | 115                  | 241                     | Peak    |
| 73.74                | 26.68               | -13.32                  | 40.00                       | 50.74                   | 6.63                        | 0.85                    | 31.54                      | -                    | -                       | Peak    |
| 138.81               | 28.34               | -15.16                  | 43.50                       | 47.09                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 397.30               | 26.57               | -19.43                  | 46.00                       | 39.12                   | 16.50                       | 2.14                    | 31.19                      | -                    | -                       | Peak    |
| 696.90               | 30.07               | -15.93                  | 46.00                       | 37.10                   | 20.86                       | 2.93                    | 30.82                      | -                    | -                       | Peak    |
| 898.50               | 29.05               | -16.95                  | 46.00                       | 32.80                   | 23.61                       | 3.34                    | 30.70                      | -                    | -                       | Peak    |
| 5150.00              | 49.60               | -24.40                  | 74.00                       | 40.59                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 24                      | Peak    |
| 5150.00              | 37.81               | -16.19                  | 54.00                       | 28.80                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 24                      | Average |
| 5300.00              | 108.09              | -                       | -                           | 99.24                   | 34.40                       | 9.66                    | 35.21                      | 123                  | 24                      | Peak    |
| 5300.00              | 97.76               | -                       | -                           | 88.91                   | 34.40                       | 9.66                    | 35.21                      | 123                  | 24                      | Average |
| 5350.00              | 51.11               | -22.89                  | 74.00                       | 42.32                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 24                      | Peak    |
| 5350.00              | 38.58               | -15.42                  | 54.00                       | 29.79                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 24                      | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 6                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 64                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5320 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.05               | 24.06               | -19.44                  | 43.50                       | 43.42                   | 11.12                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 242.22               | 29.38               | -16.62                  | 46.00                       | 47.15                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 299.46               | 31.58               | -14.42                  | 46.00                       | 47.68                   | 13.46                       | 1.77                    | 31.33                      | -                    | -                       | Peak    |
| 340.60               | 34.41               | -11.59                  | 46.00                       | 49.10                   | 14.72                       | 1.89                    | 31.30                      | 100                  | 291                     | Peak    |
| 397.30               | 33.50               | -12.50                  | 46.00                       | 46.05                   | 16.50                       | 2.14                    | 31.19                      | -                    | -                       | Peak    |
| 780.20               | 26.80               | -19.20                  | 46.00                       | 32.23                   | 22.15                       | 3.11                    | 30.69                      | -                    | -                       | Peak    |
| 5150.00              | 37.63               | -16.37                  | 54.00                       | 28.62                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 264                     | Average |
| 5150.00              | 49.27               | -24.73                  | 74.00                       | 40.26                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 264                     | Peak    |
| 5320.00              | 93.12               | -                       | -                           | 84.28                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 264                     | Average |
| 5320.00              | 103.58              | -                       | -                           | 94.74                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 264                     | Peak    |
| 5350.00              | 41.74               | -12.26                  | 54.00                       | 32.95                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 264                     | Average |
| 5350.00              | 58.23               | -15.77                  | 74.00                       | 49.44                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 264                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 6                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 64                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5320 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 30.81                | 32.21               | -7.79                   | 40.00                       | 46.86                   | 16.27                       | 0.54                    | 31.46                      | 104                  | 156                     | Peak    |
| 138.54               | 27.73               | -15.77                  | 43.50                       | 46.48                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 290.01               | 27.45               | -18.55                  | 46.00                       | 43.77                   | 13.31                       | 1.69                    | 31.32                      | -                    | -                       | Peak    |
| 312.60               | 26.56               | -19.44                  | 46.00                       | 42.24                   | 13.85                       | 1.79                    | 31.32                      | -                    | -                       | Peak    |
| 400.10               | 25.25               | -20.75                  | 46.00                       | 37.71                   | 16.58                       | 2.14                    | 31.18                      | -                    | -                       | Peak    |
| 948.20               | 29.22               | -16.78                  | 46.00                       | 32.09                   | 24.24                       | 3.46                    | 30.57                      | -                    | -                       | Peak    |
| 5150.00              | 37.76               | -16.24                  | 54.00                       | 28.75                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 24                      | Average |
| 5150.00              | 48.96               | -25.04                  | 74.00                       | 39.95                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 24                      | Peak    |
| 5320.00              | 96.92               | -                       | -                           | 88.08                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 24                      | Average |
| 5320.00              | 107.30              | -                       | -                           | 98.46                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 24                      | Peak    |
| 5350.00              | 41.30               | -12.70                  | 54.00                       | 32.51                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 24                      | Average |
| 5350.00              | 56.57               | -17.43                  | 74.00                       | 47.78                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 24                      | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 7                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 100                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5500 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 182.82               | 27.51               | -15.99                  | 43.50                       | 48.72                   | 9.05                        | 1.26                    | 31.52                      | -                    | -                       | Peak    |
| 240.33               | 29.62               | -16.38                  | 46.00                       | 47.53                   | 11.98                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 297.30               | 31.61               | -14.39                  | 46.00                       | 47.76                   | 13.43                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 341.30               | 36.48               | -9.52                   | 46.00                       | 51.13                   | 14.75                       | 1.90                    | 31.30                      | 100                  | 117                     | Peak    |
| 393.80               | 31.28               | -14.72                  | 46.00                       | 43.97                   | 16.38                       | 2.13                    | 31.20                      | -                    | -                       | Peak    |
| 996.50               | 29.37               | -24.63                  | 54.00                       | 31.60                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5470.00              | 39.07               | -29.23                  | 68.30                       | 30.40                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 255                     | Average |
| 5470.00              | 51.96               | -36.34                  | 88.30                       | 43.29                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 255                     | Peak    |
| 5500.00              | 100.82              | -                       | -                           | 92.17                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 255                     | Peak    |
| 5500.00              | 90.15               | -                       | -                           | 81.50                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 255                     | Average |
| 5725.00              | 49.70               | -38.60                  | 88.30                       | 40.80                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 255                     | Peak    |
| 5725.00              | 37.59               | -30.71                  | 68.30                       | 28.69                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 255                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 7                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 100                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5500 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.97                | 32.57               | -7.43                   | 40.00                       | 47.68                   | 15.80                       | 0.56                    | 31.47                      | 121                  | 106                     | Peak    |
| 137.73               | 27.61               | -15.89                  | 43.50                       | 46.38                   | 11.59                       | 1.19                    | 31.55                      | -                    | -                       | Peak    |
| 243.30               | 26.41               | -19.59                  | 46.00                       | 44.11                   | 12.19                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 397.30               | 25.15               | -20.85                  | 46.00                       | 37.70                   | 16.50                       | 2.14                    | 31.19                      | -                    | -                       | Peak    |
| 814.50               | 28.19               | -17.81                  | 46.00                       | 33.06                   | 22.64                       | 3.18                    | 30.69                      | -                    | -                       | Peak    |
| 956.60               | 28.72               | -17.28                  | 46.00                       | 31.48                   | 24.34                       | 3.47                    | 30.57                      | -                    | -                       | Peak    |
| 5470.00              | 40.63               | -27.67                  | 68.30                       | 31.96                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 48                      | Average |
| 5470.00              | 54.48               | -33.82                  | 88.30                       | 45.81                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 48                      | Peak    |
| 5500.00              | 103.23              | -                       | -                           | 94.58                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 48                      | Peak    |
| 5500.00              | 92.95               | -                       | -                           | 84.30                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 48                      | Average |
| 5725.00              | 37.50               | -30.80                  | 68.30                       | 28.60                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 48                      | Average |
| 5725.00              | 48.99               | -39.31                  | 88.30                       | 40.09                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 48                      | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 8                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 116                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5580 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 116.13               | 26.39               | -17.11                  | 43.50                       | 45.67                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 242.49               | 29.45               | -16.55                  | 46.00                       | 47.22                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 297.57               | 32.59               | -13.41                  | 46.00                       | 48.74                   | 13.43                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 332.20               | 34.68               | -11.32                  | 46.00                       | 49.65                   | 14.48                       | 1.86                    | 31.31                      | 103                  | 120                     | Peak    |
| 397.30               | 31.89               | -14.11                  | 46.00                       | 44.44                   | 16.50                       | 2.14                    | 31.19                      | -                    | -                       | Peak    |
| 937.00               | 31.72               | -14.28                  | 46.00                       | 34.80                   | 24.09                       | 3.43                    | 30.60                      | -                    | -                       | Peak    |
| 5470.00              | 51.82               | -36.48                  | 88.30                       | 40.32                   | 34.57                       | 9.94                    | 33.01                      | 183                  | 82                      | Peak    |
| 5470.00              | 39.71               | -28.59                  | 68.30                       | 28.21                   | 34.57                       | 9.94                    | 33.01                      | 183                  | 82                      | Average |
| 5580.00              | 94.93               | -                       | -                           | 83.27                   | 34.67                       | 9.99                    | 33.00                      | 183                  | 82                      | Average |
| 5580.00              | 105.31              | -                       | -                           | 93.65                   | 34.67                       | 9.99                    | 33.00                      | 183                  | 82                      | Peak    |
| 5725.00              | 51.89               | -36.41                  | 88.30                       | 40.33                   | 34.82                       | 9.92                    | 33.18                      | 183                  | 82                      | Peak    |
| 5725.00              | 40.11               | -28.19                  | 68.30                       | 28.55                   | 34.82                       | 9.92                    | 33.18                      | 183                  | 82                      | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 8                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 116                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5580 MHz is Fundamental Signals which can be ignored. |                            |          |

| <b>Frequency<br/>( MHz )</b> | <b>Level<br/>( dBuV/m )</b> | <b>Over<br/>Limit<br/>( dB )</b> | <b>Limit<br/>Line<br/>( dBuV/m )</b> | <b>Read<br/>Level<br/>(dBuV)</b> | <b>Antenna<br/>Factor<br/>( dB )</b> | <b>Cable<br/>Loss<br/>( dB )</b> | <b>Preamp<br/>Factor<br/>( dB )</b> | <b>Ant<br/>Pos<br/>( cm )</b> | <b>Table<br/>Pos<br/>( deg )</b> | <b>Remark</b> |
|------------------------------|-----------------------------|----------------------------------|--------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-------------------------------------|-------------------------------|----------------------------------|---------------|
| 30.81                        | 31.84                       | -8.16                            | 40.00                                | 46.49                            | 16.27                                | 0.54                             | 31.46                               | 100                           | 218                              | Peak          |
| 73.74                        | 27.01                       | -12.99                           | 40.00                                | 51.07                            | 6.63                                 | 0.85                             | 31.54                               | -                             | -                                | Peak          |
| 138.54                       | 29.21                       | -14.29                           | 43.50                                | 47.96                            | 11.60                                | 1.20                             | 31.55                               | -                             | -                                | Peak          |
| 397.30                       | 29.39                       | -16.61                           | 46.00                                | 41.94                            | 16.50                                | 2.14                             | 31.19                               | -                             | -                                | Peak          |
| 757.80                       | 25.01                       | -20.99                           | 46.00                                | 30.84                            | 21.80                                | 3.07                             | 30.70                               | -                             | -                                | Peak          |
| 925.80                       | 29.15                       | -16.85                           | 46.00                                | 32.42                            | 23.96                                | 3.40                             | 30.63                               | -                             | -                                | Peak          |
| 5470.00                      | 51.19                       | -37.11                           | 88.30                                | 39.69                            | 34.57                                | 9.94                             | 33.01                               | 101                           | 353                              | Peak          |
| 5470.00                      | 39.71                       | -28.59                           | 68.30                                | 28.21                            | 34.57                                | 9.94                             | 33.01                               | 101                           | 353                              | Average       |
| 5580.00                      | 106.80                      | -                                | -                                    | 95.14                            | 34.67                                | 9.99                             | 33.00                               | 101                           | 353                              | Peak          |
| 5580.00                      | 96.09                       | -                                | -                                    | 84.43                            | 34.67                                | 9.99                             | 33.00                               | 101                           | 353                              | Average       |
| 5725.00                      | 52.25                       | -36.05                           | 88.30                                | 40.69                            | 34.82                                | 9.92                             | 33.18                               | 101                           | 353                              | Peak          |
| 5725.00                      | 40.17                       | -28.13                           | 68.30                                | 28.61                            | 34.82                                | 9.92                             | 33.18                               | 101                           | 353                              | Average       |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 9                                                | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 140                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5700 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.86               | 23.78               | -19.72                  | 43.50                       | 43.06                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 241.14               | 30.21               | -15.79                  | 46.00                       | 48.05                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 294.33               | 31.81               | -14.19                  | 46.00                       | 48.03                   | 13.38                       | 1.73                    | 31.33                      | -                    | -                       | Peak    |
| 332.20               | 34.85               | -11.15                  | 46.00                       | 49.82                   | 14.48                       | 1.86                    | 31.31                      | 100                  | 46                      | Peak    |
| 383.30               | 32.61               | -13.39                  | 46.00                       | 45.68                   | 16.05                       | 2.11                    | 31.23                      | -                    | -                       | Peak    |
| 995.80               | 31.53               | -22.47                  | 54.00                       | 33.76                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5470.00              | 37.39               | -30.91                  | 68.30                       | 28.72                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 273                     | Average |
| 5470.00              | 48.87               | -39.43                  | 88.30                       | 40.20                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 273                     | Peak    |
| 5700.00              | 93.74               | -                       | -                           | 84.88                   | 34.79                       | 9.93                    | 35.86                      | 100                  | 273                     | Average |
| 5700.00              | 104.88              | -                       | -                           | 96.02                   | 34.79                       | 9.93                    | 35.86                      | 100                  | 273                     | Peak    |
| 5725.00              | 43.79               | -24.51                  | 68.30                       | 34.89                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 273                     | Average |
| 5725.00              | 60.83               | -27.47                  | 88.30                       | 51.93                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 273                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 9                                                | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 140                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5700 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 31.89                | 32.09               | -7.91                   | 40.00                       | 46.96                   | 16.04                       | 0.55                    | 31.46                      | 108                  | 187                     | Peak    |
| 138.54               | 27.60               | -15.90                  | 43.50                       | 46.35                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 228.45               | 27.66               | -18.34                  | 46.00                       | 46.47                   | 11.16                       | 1.47                    | 31.44                      | -                    | -                       | Peak    |
| 332.90               | 26.72               | -19.28                  | 46.00                       | 41.69                   | 14.48                       | 1.86                    | 31.31                      | -                    | -                       | Peak    |
| 436.50               | 29.10               | -16.90                  | 46.00                       | 40.79                   | 17.17                       | 2.27                    | 31.13                      | -                    | -                       | Peak    |
| 699.00               | 26.11               | -19.89                  | 46.00                       | 33.11                   | 20.88                       | 2.94                    | 30.82                      | -                    | -                       | Peak    |
| 5470.00              | 37.52               | -30.78                  | 68.30                       | 28.85                   | 34.57                       | 9.94                    | 35.84                      | 111                  | 5                       | Average |
| 5470.00              | 48.51               | -39.79                  | 88.30                       | 39.84                   | 34.57                       | 9.94                    | 35.84                      | 111                  | 5                       | Peak    |
| 5700.00              | 97.77               | -                       | -                           | 88.91                   | 34.79                       | 9.93                    | 35.86                      | 111                  | 5                       | Average |
| 5700.00              | 108.21              | -                       | -                           | 99.35                   | 34.79                       | 9.93                    | 35.86                      | 111                  | 5                       | Peak    |
| 5725.00              | 47.37               | -20.93                  | 68.30                       | 38.47                   | 34.82                       | 9.92                    | 35.84                      | 111                  | 5                       | Average |
| 5725.00              | 62.31               | -25.99                  | 88.30                       | 53.41                   | 34.82                       | 9.92                    | 35.84                      | 111                  | 5                       | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 10                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 36                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5180 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 28.18               | -11.82                  | 40.00                       | 49.95                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 242.22               | 29.60               | -16.40                  | 46.00                       | 47.37                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 295.41               | 33.05               | -12.95                  | 46.00                       | 49.24                   | 13.40                       | 1.74                    | 31.33                      | -                    | -                       | Peak    |
| 332.20               | 34.22               | -11.78                  | 46.00                       | 49.19                   | 14.48                       | 1.86                    | 31.31                      | 100                  | 201                     | Peak    |
| 393.80               | 28.39               | -17.61                  | 46.00                       | 41.08                   | 16.38                       | 2.13                    | 31.20                      | -                    | -                       | Peak    |
| 934.20               | 29.30               | -16.70                  | 46.00                       | 32.43                   | 24.06                       | 3.42                    | 30.61                      | -                    | -                       | Peak    |
| 5150.00              | 40.83               | -13.17                  | 54.00                       | 31.82                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 271                     | Average |
| 5150.00              | 55.98               | -18.02                  | 74.00                       | 46.97                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 271                     | Peak    |
| 5180.00              | 105.48              | -                       | -                           | 96.52                   | 34.28                       | 9.45                    | 34.77                      | 100                  | 271                     | Peak    |
| 5180.00              | 94.99               | -                       | -                           | 86.03                   | 34.28                       | 9.45                    | 34.77                      | 100                  | 271                     | Average |
| 5350.00              | 37.86               | -16.14                  | 54.00                       | 29.07                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 271                     | Average |
| 5350.00              | 49.50               | -24.50                  | 74.00                       | 40.71                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 271                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 10                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 36                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5180 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.48               | -7.52                   | 40.00                       | 47.59                   | 15.80                       | 0.56                    | 31.47                      | 116                  | 280                     | Peak    |
| 140.70               | 28.60               | -14.90                  | 43.50                       | 47.40                   | 11.55                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 287.85               | 28.77               | -17.23                  | 46.00                       | 45.15                   | 13.27                       | 1.68                    | 31.33                      | -                    | -                       | Peak    |
| 330.10               | 26.23               | -19.77                  | 46.00                       | 41.30                   | 14.39                       | 1.85                    | 31.31                      | -                    | -                       | Peak    |
| 405.70               | 25.96               | -20.04                  | 46.00                       | 38.31                   | 16.66                       | 2.16                    | 31.17                      | -                    | -                       | Peak    |
| 995.80               | 32.28               | -21.72                  | 54.00                       | 34.51                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 42.08               | -11.92                  | 54.00                       | 33.07                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 1                       | Average |
| 5150.00              | 57.59               | -16.41                  | 74.00                       | 48.58                   | 34.25                       | 9.41                    | 34.65                      | 123                  | 1                       | Peak    |
| 5180.00              | 108.96              | -                       | -                           | 100.00                  | 34.28                       | 9.45                    | 34.77                      | 123                  | 1                       | Peak    |
| 5180.00              | 98.11               | -                       | -                           | 89.15                   | 34.28                       | 9.45                    | 34.77                      | 123                  | 1                       | Average |
| 5350.00              | 37.51               | -16.49                  | 54.00                       | 28.72                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 1                       | Average |
| 5350.00              | 49.96               | -24.04                  | 74.00                       | 41.17                   | 34.45                       | 9.74                    | 35.40                      | 123                  | 1                       | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 11                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 44                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5220 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.05               | 24.59               | -18.91                  | 43.50                       | 43.95                   | 11.12                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 235.74               | 29.42               | -16.58                  | 46.00                       | 47.70                   | 11.64                       | 1.51                    | 31.43                      | -                    | -                       | Peak    |
| 295.14               | 31.80               | -14.20                  | 46.00                       | 48.02                   | 13.38                       | 1.73                    | 31.33                      | -                    | -                       | Peak    |
| 341.30               | 35.23               | -10.77                  | 46.00                       | 49.88                   | 14.75                       | 1.90                    | 31.30                      | 100                  | 192                     | Peak    |
| 383.30               | 32.92               | -13.08                  | 46.00                       | 45.99                   | 16.05                       | 2.11                    | 31.23                      | -                    | -                       | Peak    |
| 996.50               | 30.33               | -23.67                  | 54.00                       | 32.56                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 49.73               | -24.27                  | 74.00                       | 40.72                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 268                     | Peak    |
| 5150.00              | 37.91               | -16.09                  | 54.00                       | 28.90                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 268                     | Average |
| 5220.00              | 105.47              | -                       | -                           | 96.52                   | 34.32                       | 9.53                    | 34.90                      | 100                  | 268                     | Peak    |
| 5220.00              | 95.19               | -                       | -                           | 86.24                   | 34.32                       | 9.53                    | 34.90                      | 100                  | 268                     | Average |
| 5350.00              | 50.79               | -23.21                  | 74.00                       | 42.00                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 268                     | Peak    |
| 5350.00              | 38.08               | -15.92                  | 54.00                       | 29.29                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 268                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 11                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 44                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5220 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 31.62                | 32.40               | -7.60                   | 40.00                       | 47.27                   | 16.04                       | 0.55                    | 31.46                      | 144                  | 273                     | Peak    |
| 139.89               | 27.99               | -15.51                  | 43.50                       | 46.74                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 291.90               | 27.69               | -18.31                  | 46.00                       | 43.96                   | 13.34                       | 1.71                    | 31.32                      | -                    | -                       | Peak    |
| 400.10               | 25.95               | -20.05                  | 46.00                       | 38.41                   | 16.58                       | 2.14                    | 31.18                      | -                    | -                       | Peak    |
| 598.20               | 28.29               | -17.71                  | 46.00                       | 36.79                   | 19.74                       | 2.68                    | 30.92                      | -                    | -                       | Peak    |
| 911.80               | 30.26               | -15.74                  | 46.00                       | 33.78                   | 23.78                       | 3.37                    | 30.67                      | -                    | -                       | Peak    |
| 5150.00              | 50.29               | -23.71                  | 74.00                       | 41.28                   | 34.25                       | 9.41                    | 34.65                      | 102                  | 30                      | Peak    |
| 5150.00              | 38.72               | -15.28                  | 54.00                       | 29.71                   | 34.25                       | 9.41                    | 34.65                      | 102                  | 30                      | Average |
| 5220.00              | 110.18              | -                       | -                           | 101.23                  | 34.32                       | 9.53                    | 34.90                      | 102                  | 30                      | Peak    |
| 5220.00              | 98.58               | -                       | -                           | 89.63                   | 34.32                       | 9.53                    | 34.90                      | 102                  | 30                      | Average |
| 5350.00              | 49.46               | -24.54                  | 74.00                       | 40.67                   | 34.45                       | 9.74                    | 35.40                      | 102                  | 30                      | Peak    |
| 5350.00              | 37.81               | -16.19                  | 54.00                       | 29.02                   | 34.45                       | 9.74                    | 35.40                      | 102                  | 30                      | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 12                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 48                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5240 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 26.36               | -13.64                  | 40.00                       | 48.13                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 241.41               | 29.60               | -16.40                  | 46.00                       | 47.44                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 297.30               | 31.10               | -14.90                  | 46.00                       | 47.25                   | 13.43                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 337.80               | 35.71               | -10.29                  | 46.00                       | 50.50                   | 14.63                       | 1.88                    | 31.30                      | 100                  | 133                     | Peak    |
| 864.90               | 31.02               | -14.98                  | 46.00                       | 35.23                   | 23.22                       | 3.29                    | 30.72                      | -                    | -                       | Peak    |
| 920.90               | 29.55               | -16.45                  | 46.00                       | 32.92                   | 23.89                       | 3.39                    | 30.65                      | -                    | -                       | Peak    |
| 5150.00              | 49.48               | -24.52                  | 74.00                       | 40.47                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 269                     | Peak    |
| 5150.00              | 37.93               | -16.07                  | 54.00                       | 28.92                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 269                     | Average |
| 5240.00              | 105.70              | -                       | -                           | 96.76                   | 34.33                       | 9.57                    | 34.96                      | 100                  | 269                     | Peak    |
| 5240.00              | 95.26               | -                       | -                           | 86.32                   | 34.33                       | 9.57                    | 34.96                      | 100                  | 269                     | Average |
| 5350.00              | 50.30               | -23.70                  | 74.00                       | 41.51                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 269                     | Peak    |
| 5350.00              | 38.30               | -15.70                  | 54.00                       | 29.51                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 269                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 12                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 48                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5240 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.20               | -7.80                   | 40.00                       | 47.31                   | 15.80                       | 0.56                    | 31.47                      | 123                  | 257                     | Peak    |
| 138.81               | 27.79               | -15.71                  | 43.50                       | 46.54                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 242.49               | 27.59               | -18.41                  | 46.00                       | 45.36                   | 12.12                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 332.90               | 28.41               | -17.59                  | 46.00                       | 43.38                   | 14.48                       | 1.86                    | 31.31                      | -                    | -                       | Peak    |
| 699.00               | 26.18               | -19.82                  | 46.00                       | 33.18                   | 20.88                       | 2.94                    | 30.82                      | -                    | -                       | Peak    |
| 909.70               | 31.67               | -14.33                  | 46.00                       | 35.23                   | 23.75                       | 3.36                    | 30.67                      | -                    | -                       | Peak    |
| 5150.00              | 51.60               | -22.40                  | 74.00                       | 42.59                   | 34.25                       | 9.41                    | 34.65                      | 135                  | 4                       | Peak    |
| 5150.00              | 38.49               | -15.51                  | 54.00                       | 29.48                   | 34.25                       | 9.41                    | 34.65                      | 135                  | 4                       | Average |
| 5240.00              | 108.69              | -                       | -                           | 99.75                   | 34.33                       | 9.57                    | 34.96                      | 135                  | 4                       | Peak    |
| 5240.00              | 98.39               | -                       | -                           | 89.45                   | 34.33                       | 9.57                    | 34.96                      | 135                  | 4                       | Average |
| 5350.00              | 49.08               | -24.92                  | 74.00                       | 40.29                   | 34.45                       | 9.74                    | 35.40                      | 135                  | 4                       | Peak    |
| 5350.00              | 37.65               | -16.35                  | 54.00                       | 28.86                   | 34.45                       | 9.74                    | 35.40                      | 135                  | 4                       | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 13                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 52                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5260 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 114.78               | 26.17               | -17.33                  | 43.50                       | 45.62                   | 11.03                       | 1.07                    | 31.55                      | -                    | -                       | Peak    |
| 241.41               | 29.65               | -16.35                  | 46.00                       | 47.49                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 296.22               | 30.86               | -15.14                  | 46.00                       | 47.05                   | 13.40                       | 1.74                    | 31.33                      | -                    | -                       | Peak    |
| 330.10               | 34.45               | -11.55                  | 46.00                       | 49.52                   | 14.39                       | 1.85                    | 31.31                      | 100                  | 146                     | Peak    |
| 371.40               | 30.27               | -15.73                  | 46.00                       | 43.75                   | 15.69                       | 2.08                    | 31.25                      | -                    | -                       | Peak    |
| 892.20               | 30.79               | -15.21                  | 46.00                       | 34.62                   | 23.54                       | 3.33                    | 30.70                      | -                    | -                       | Peak    |
| 5150.00              | 49.40               | -24.60                  | 74.00                       | 40.39                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 272                     | Peak    |
| 5150.00              | 38.01               | -15.99                  | 54.00                       | 29.00                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 272                     | Average |
| 5260.00              | 104.31              | -                       | -                           | 95.41                   | 34.37                       | 9.62                    | 35.09                      | 100                  | 272                     | Peak    |
| 5260.00              | 93.69               | -                       | -                           | 84.79                   | 34.37                       | 9.62                    | 35.09                      | 100                  | 272                     | Average |
| 5350.00              | 49.30               | -24.70                  | 74.00                       | 40.51                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 272                     | Peak    |
| 5350.00              | 38.06               | -15.94                  | 54.00                       | 29.27                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 272                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 13                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 52                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5260 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.97                | 32.22               | -7.78                   | 40.00                       | 47.33                   | 15.80                       | 0.56                    | 31.47                      | 112                  | 261                     | Peak    |
| 43.77                | 27.40               | -12.60                  | 40.00                       | 47.13                   | 11.13                       | 0.64                    | 31.50                      | -                    | -                       | Peak    |
| 139.62               | 28.23               | -15.27                  | 43.50                       | 46.98                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 332.20               | 26.76               | -19.24                  | 46.00                       | 41.73                   | 14.48                       | 1.86                    | 31.31                      | -                    | -                       | Peak    |
| 699.70               | 26.76               | -19.24                  | 46.00                       | 33.76                   | 20.88                       | 2.94                    | 30.82                      | -                    | -                       | Peak    |
| 995.80               | 28.76               | -25.24                  | 54.00                       | 30.99                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 49.74               | -24.26                  | 74.00                       | 40.73                   | 34.25                       | 9.41                    | 34.65                      | 111                  | 29                      | Peak    |
| 5150.00              | 37.95               | -16.05                  | 54.00                       | 28.94                   | 34.25                       | 9.41                    | 34.65                      | 111                  | 29                      | Average |
| 5260.00              | 107.79              | -                       | -                           | 98.89                   | 34.37                       | 9.62                    | 35.09                      | 111                  | 29                      | Peak    |
| 5260.00              | 97.41               | -                       | -                           | 88.51                   | 34.37                       | 9.62                    | 35.09                      | 111                  | 29                      | Average |
| 5350.00              | 50.06               | -23.94                  | 74.00                       | 41.27                   | 34.45                       | 9.74                    | 35.40                      | 111                  | 29                      | Peak    |
| 5350.00              | 38.32               | -15.68                  | 54.00                       | 29.53                   | 34.45                       | 9.74                    | 35.40                      | 111                  | 29                      | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 14                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 60                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5300 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 28.08               | -11.92                  | 40.00                       | 49.85                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 222.78               | 28.60               | -17.40                  | 46.00                       | 47.86                   | 10.75                       | 1.44                    | 31.45                      | -                    | -                       | Peak    |
| 297.57               | 32.57               | -13.43                  | 46.00                       | 48.72                   | 13.43                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 340.60               | 34.32               | -11.68                  | 46.00                       | 49.01                   | 14.72                       | 1.89                    | 31.30                      | 130                  | 100                     | Peak    |
| 371.40               | 31.67               | -14.33                  | 46.00                       | 45.15                   | 15.69                       | 2.08                    | 31.25                      | -                    | -                       | Peak    |
| 892.90               | 29.93               | -16.07                  | 46.00                       | 33.75                   | 23.55                       | 3.33                    | 30.70                      | -                    | -                       | Peak    |
| 5150.00              | 49.66               | -24.34                  | 74.00                       | 40.65                   | 34.25                       | 9.41                    | 34.65                      | 175                  | 270                     | Peak    |
| 5150.00              | 37.84               | -16.16                  | 54.00                       | 28.83                   | 34.25                       | 9.41                    | 34.65                      | 175                  | 270                     | Average |
| 5300.00              | 104.03              | -                       | -                           | 95.18                   | 34.40                       | 9.66                    | 35.21                      | 175                  | 270                     | Peak    |
| 5300.00              | 93.74               | -                       | -                           | 84.89                   | 34.40                       | 9.66                    | 35.21                      | 175                  | 270                     | Average |
| 5350.00              | 50.98               | -23.02                  | 74.00                       | 42.19                   | 34.45                       | 9.74                    | 35.40                      | 175                  | 270                     | Peak    |
| 5350.00              | 39.31               | -14.69                  | 54.00                       | 30.52                   | 34.45                       | 9.74                    | 35.40                      | 175                  | 270                     | Average |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 14                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 60                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5300 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.59               | -7.41                   | 40.00                       | 47.70                   | 15.80                       | 0.56                    | 31.47                      | 100                  | 309                     | Peak    |
| 73.74                | 27.29               | -12.71                  | 40.00                       | 51.35                   | 6.63                        | 0.85                    | 31.54                      | -                    | -                       | Peak    |
| 138.54               | 28.55               | -14.95                  | 43.50                       | 47.30                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 391.70               | 25.84               | -20.16                  | 46.00                       | 38.60                   | 16.32                       | 2.12                    | 31.20                      | -                    | -                       | Peak    |
| 799.80               | 27.48               | -18.52                  | 46.00                       | 32.55                   | 22.47                       | 3.14                    | 30.68                      | -                    | -                       | Peak    |
| 1000.00              | 32.10               | -21.90                  | 54.00                       | 34.28                   | 24.89                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 49.74               | -24.26                  | 74.00                       | 40.73                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 31                      | Peak    |
| 5150.00              | 38.18               | -15.82                  | 54.00                       | 29.17                   | 34.25                       | 9.41                    | 34.65                      | 101                  | 31                      | Average |
| 5300.00              | 107.30              | -                       | -                           | 98.45                   | 34.40                       | 9.66                    | 35.21                      | 101                  | 31                      | Peak    |
| 5300.00              | 96.85               | -                       | -                           | 88.00                   | 34.40                       | 9.66                    | 35.21                      | 101                  | 31                      | Average |
| 5350.00              | 50.31               | -23.69                  | 74.00                       | 41.52                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 31                      | Peak    |
| 5350.00              | 38.86               | -15.14                  | 54.00                       | 30.07                   | 34.45                       | 9.74                    | 35.40                      | 101                  | 31                      | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 15                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 64                                                    | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5320 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 27.88               | -12.12                  | 40.00                       | 49.65                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 216.57               | 28.48               | -17.52                  | 46.00                       | 48.27                   | 10.27                       | 1.40                    | 31.46                      | -                    | -                       | Peak    |
| 290.82               | 31.41               | -14.59                  | 46.00                       | 47.71                   | 13.32                       | 1.70                    | 31.32                      | -                    | -                       | Peak    |
| 327.30               | 34.85               | -11.15                  | 46.00                       | 50.02                   | 14.30                       | 1.84                    | 31.31                      | 107                  | 152                     | Peak    |
| 817.30               | 28.57               | -17.43                  | 46.00                       | 33.41                   | 22.67                       | 3.19                    | 30.70                      | -                    | -                       | Peak    |
| 923.70               | 29.85               | -16.15                  | 46.00                       | 33.17                   | 23.92                       | 3.40                    | 30.64                      | -                    | -                       | Peak    |
| 5150.00              | 37.74               | -16.26                  | 54.00                       | 28.73                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 265                     | Average |
| 5150.00              | 49.02               | -24.98                  | 74.00                       | 40.01                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 265                     | Peak    |
| 5320.00              | 94.35               | -                       | -                           | 85.51                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 265                     | Average |
| 5320.00              | 104.96              | -                       | -                           | 96.12                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 265                     | Peak    |
| 5350.00              | 41.78               | -12.22                  | 54.00                       | 32.99                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 265                     | Average |
| 5350.00              | 59.35               | -14.65                  | 74.00                       | 50.56                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 265                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 15                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 64                                                    | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5320 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.27               | -7.73                   | 40.00                       | 47.38                   | 15.80                       | 0.56                    | 31.47                      | 100                  | 218                     | Peak    |
| 137.73               | 28.46               | -15.04                  | 43.50                       | 47.23                   | 11.59                       | 1.19                    | 31.55                      | -                    | -                       | Peak    |
| 287.58               | 27.95               | -18.05                  | 46.00                       | 44.33                   | 13.27                       | 1.68                    | 31.33                      | -                    | -                       | Peak    |
| 335.00               | 26.85               | -19.15                  | 46.00                       | 41.75                   | 14.54                       | 1.87                    | 31.31                      | -                    | -                       | Peak    |
| 696.90               | 28.19               | -17.81                  | 46.00                       | 35.22                   | 20.86                       | 2.93                    | 30.82                      | -                    | -                       | Peak    |
| 995.80               | 30.52               | -23.48                  | 54.00                       | 32.75                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5150.00              | 38.05               | -15.95                  | 54.00                       | 29.04                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 30                      | Average |
| 5150.00              | 51.55               | -22.45                  | 74.00                       | 42.54                   | 34.25                       | 9.41                    | 34.65                      | 100                  | 30                      | Peak    |
| 5320.00              | 96.78               | -                       | -                           | 87.94                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 30                      | Average |
| 5320.00              | 107.03              | -                       | -                           | 98.19                   | 34.42                       | 9.70                    | 35.28                      | 100                  | 30                      | Peak    |
| 5350.00              | 42.25               | -11.75                  | 54.00                       | 33.46                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 30                      | Average |
| 5350.00              | 58.10               | -15.90                  | 74.00                       | 49.31                   | 34.45                       | 9.74                    | 35.40                      | 100                  | 30                      | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 16                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 100                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5500 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.86               | 24.29               | -19.21                  | 43.50                       | 43.57                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 241.14               | 29.94               | -16.06                  | 46.00                       | 47.78                   | 12.05                       | 1.53                    | 31.42                      | -                    | -                       | Peak    |
| 294.06               | 31.20               | -14.80                  | 46.00                       | 47.43                   | 13.37                       | 1.72                    | 31.32                      | -                    | -                       | Peak    |
| 332.20               | 36.31               | -9.69                   | 46.00                       | 51.28                   | 14.48                       | 1.86                    | 31.31                      | 105                  | 158                     | Peak    |
| 391.70               | 30.08               | -15.92                  | 46.00                       | 42.84                   | 16.32                       | 2.12                    | 31.20                      | -                    | -                       | Peak    |
| 911.80               | 29.67               | -16.33                  | 46.00                       | 33.19                   | 23.78                       | 3.37                    | 30.67                      | -                    | -                       | Peak    |
| 5470.00              | 40.04               | -28.26                  | 68.30                       | 31.37                   | 34.57                       | 9.94                    | 35.84                      | 173                  | 120                     | Average |
| 5470.00              | 58.04               | -30.26                  | 88.30                       | 49.37                   | 34.57                       | 9.94                    | 35.84                      | 173                  | 120                     | Peak    |
| 5500.00              | 100.82              | -                       | -                           | 92.17                   | 34.60                       | 10.02                   | 35.97                      | 173                  | 120                     | Peak    |
| 5500.00              | 90.64               | -                       | -                           | 81.99                   | 34.60                       | 10.02                   | 35.97                      | 173                  | 120                     | Average |
| 5725.00              | 37.59               | -30.71                  | 68.30                       | 28.69                   | 34.82                       | 9.92                    | 35.84                      | 173                  | 120                     | Average |
| 5725.00              | 49.39               | -38.91                  | 88.30                       | 40.49                   | 34.82                       | 9.92                    | 35.84                      | 173                  | 120                     | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 16                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 100                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5500 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.68               | -7.32                   | 40.00                       | 47.79                   | 15.80                       | 0.56                    | 31.47                      | 137                  | 106                     | Peak    |
| 137.73               | 28.44               | -15.06                  | 43.50                       | 47.21                   | 11.59                       | 1.19                    | 31.55                      | -                    | -                       | Peak    |
| 287.85               | 28.13               | -17.87                  | 46.00                       | 44.51                   | 13.27                       | 1.68                    | 31.33                      | -                    | -                       | Peak    |
| 444.20               | 25.22               | -20.78                  | 46.00                       | 36.74                   | 17.30                       | 2.29                    | 31.11                      | -                    | -                       | Peak    |
| 803.30               | 27.75               | -18.25                  | 46.00                       | 32.78                   | 22.50                       | 3.15                    | 30.68                      | -                    | -                       | Peak    |
| 998.60               | 32.24               | -21.76                  | 54.00                       | 34.43                   | 24.88                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5470.00              | 41.17               | -27.13                  | 68.30                       | 32.50                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 47                      | Average |
| 5470.00              | 55.50               | -32.80                  | 88.30                       | 46.83                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 47                      | Peak    |
| 5500.00              | 93.15               | -                       | -                           | 84.50                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 47                      | Average |
| 5500.00              | 103.75              | -                       | -                           | 95.10                   | 34.60                       | 10.02                   | 35.97                      | 100                  | 47                      | Peak    |
| 5725.00              | 37.63               | -30.67                  | 68.30                       | 28.73                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 47                      | Average |
| 5725.00              | 49.21               | -39.09                  | 88.30                       | 40.31                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 47                      | Peak    |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 17                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 116                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5580 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 115.86               | 24.16               | -19.34                  | 43.50                       | 43.44                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 224.94               | 29.66               | -16.34                  | 46.00                       | 48.77                   | 10.89                       | 1.45                    | 31.45                      | -                    | -                       | Peak    |
| 297.57               | 31.47               | -14.53                  | 46.00                       | 47.62                   | 13.43                       | 1.75                    | 31.33                      | -                    | -                       | Peak    |
| 332.90               | 34.62               | -11.38                  | 46.00                       | 49.59                   | 14.48                       | 1.86                    | 31.31                      | 133                  | 158                     | Peak    |
| 368.60               | 32.09               | -13.91                  | 46.00                       | 45.67                   | 15.60                       | 2.08                    | 31.26                      | -                    | -                       | Peak    |
| 912.50               | 29.35               | -16.65                  | 46.00                       | 32.86                   | 23.79                       | 3.37                    | 30.67                      | -                    | -                       | Peak    |
| 5470.00              | 50.82               | -37.48                  | 88.30                       | 39.32                   | 34.57                       | 9.94                    | 33.01                      | 182                  | 92                      | 5470.00 |
| 5470.00              | 39.82               | -28.48                  | 68.30                       | 28.32                   | 34.57                       | 9.94                    | 33.01                      | 182                  | 92                      | 5470.00 |
| 5580.00              | 105.56              | -                       | -                           | 93.90                   | 34.67                       | 9.99                    | 33.00                      | 182                  | 92                      | 5580.00 |
| 5580.00              | 95.29               | -                       | -                           | 83.63                   | 34.67                       | 9.99                    | 33.00                      | 182                  | 92                      | 5580.00 |
| 5725.00              | 51.41               | -36.89                  | 88.30                       | 39.85                   | 34.82                       | 9.92                    | 33.18                      | 182                  | 92                      | 5725.00 |
| 5725.00              | 40.15               | -28.15                  | 68.30                       | 28.59                   | 34.82                       | 9.92                    | 33.18                      | 182                  | 92                      | 5725.00 |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 17                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 116                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5580 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.17               | -7.83                   | 40.00                       | 47.28                   | 15.80                       | 0.56                    | 31.47                      | 100                  | 322                     | Peak    |
| 138.54               | 28.59               | -14.91                  | 43.50                       | 47.34                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 288.93               | 27.14               | -18.86                  | 46.00                       | 43.48                   | 13.29                       | 1.69                    | 31.32                      | -                    | -                       | Peak    |
| 307.00               | 26.82               | -19.18                  | 46.00                       | 42.66                   | 13.70                       | 1.79                    | 31.33                      | -                    | -                       | Peak    |
| 772.50               | 26.29               | -19.71                  | 46.00                       | 31.85                   | 22.03                       | 3.10                    | 30.69                      | -                    | -                       | Peak    |
| 996.50               | 30.92               | -23.08                  | 54.00                       | 33.15                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5470.00              | 51.52               | -36.78                  | 88.30                       | 40.02                   | 34.57                       | 9.94                    | 33.01                      | 101                  | 354                     | Peak    |
| 5470.00              | 39.74               | -28.56                  | 68.30                       | 28.24                   | 34.57                       | 9.94                    | 33.01                      | 101                  | 354                     | Average |
| 5580.00              | 106.67              | -                       | -                           | 95.01                   | 34.67                       | 9.99                    | 33.00                      | 101                  | 354                     | Peak    |
| 5580.00              | 95.47               | -                       | -                           | 83.81                   | 34.67                       | 9.99                    | 33.00                      | 101                  | 354                     | Average |
| 5725.00              | 51.44               | -36.86                  | 88.30                       | 39.88                   | 34.82                       | 9.92                    | 33.18                      | 101                  | 354                     | Peak    |
| 5725.00              | 40.19               | -28.11                  | 68.30                       | 28.63                   | 34.82                       | 9.92                    | 33.18                      | 101                  | 354                     | Average |



|                        |                                                       |                            |            |
|------------------------|-------------------------------------------------------|----------------------------|------------|
| <b>Test Mode :</b>     | Mode 18                                               | <b>Temperature :</b>       | 23~24°C    |
| <b>Test Channel :</b>  | 140                                                   | <b>Relative Humidity :</b> | 49~50%     |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Horizontal |
| <b>Remark :</b>        | 5700 MHz is Fundamental Signals which can be ignored. |                            |            |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 48.90                | 26.39               | -13.61                  | 40.00                       | 48.16                   | 9.08                        | 0.68                    | 31.53                      | -                    | -                       | Peak    |
| 115.86               | 23.02               | -20.48                  | 43.50                       | 42.30                   | 11.20                       | 1.08                    | 31.56                      | -                    | -                       | Peak    |
| 295.41               | 31.84               | -14.16                  | 46.00                       | 48.03                   | 13.40                       | 1.74                    | 31.33                      | -                    | -                       | Peak    |
| 335.00               | 35.33               | -10.67                  | 46.00                       | 50.23                   | 14.54                       | 1.87                    | 31.31                      | 114                  | 352                     | Peak    |
| 377.70               | 31.06               | -14.94                  | 46.00                       | 44.34                   | 15.87                       | 2.09                    | 31.24                      | -                    | -                       | Peak    |
| 897.80               | 29.79               | -16.21                  | 46.00                       | 33.54                   | 23.61                       | 3.34                    | 30.70                      | -                    | -                       | Peak    |
| 5470.00              | 37.45               | -30.85                  | 68.30                       | 28.78                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 272                     | Average |
| 5470.00              | 48.44               | -39.86                  | 88.30                       | 39.77                   | 34.57                       | 9.94                    | 35.84                      | 100                  | 272                     | Peak    |
| 5700.00              | 94.05               | -                       | -                           | 85.19                   | 34.79                       | 9.93                    | 35.86                      | 100                  | 272                     | Average |
| 5700.00              | 104.43              | -                       | -                           | 95.57                   | 34.79                       | 9.93                    | 35.86                      | 100                  | 272                     | Peak    |
| 5725.00              | 45.45               | -22.85                  | 68.30                       | 36.55                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 272                     | Average |
| 5725.00              | 62.09               | -26.21                  | 88.30                       | 53.19                   | 34.82                       | 9.92                    | 35.84                      | 100                  | 272                     | Peak    |
| 17100.00             | 59.81               | -28.49                  | 88.30                       | 56.98                   | 42.00                       | 14.33                   | 53.50                      | 100                  | 0                       | Peak    |



|                        |                                                       |                            |          |
|------------------------|-------------------------------------------------------|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 18                                               | <b>Temperature :</b>       | 23~24°C  |
| <b>Test Channel :</b>  | 140                                                   | <b>Relative Humidity :</b> | 49~50%   |
| <b>Test Engineer :</b> | Ivan Jiang                                            | <b>Polarization :</b>      | Vertical |
| <b>Remark :</b>        | 5700 MHz is Fundamental Signals which can be ignored. |                            |          |

| Frequency<br>( MHz ) | Level<br>( dBuV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBuV/m ) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>( dB ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Remark  |
|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|----------------------------|----------------------|-------------------------|---------|
| 32.70                | 32.41               | -7.59                   | 40.00                       | 47.52                   | 15.80                       | 0.56                    | 31.47                      | 141                  | 251                     | Peak    |
| 73.74                | 26.28               | -13.72                  | 40.00                       | 50.34                   | 6.63                        | 0.85                    | 31.54                      | -                    | -                       | Peak    |
| 138.54               | 27.85               | -15.65                  | 43.50                       | 46.60                   | 11.60                       | 1.20                    | 31.55                      | -                    | -                       | Peak    |
| 307.70               | 26.52               | -19.48                  | 46.00                       | 42.36                   | 13.70                       | 1.79                    | 31.33                      | -                    | -                       | Peak    |
| 719.30               | 25.65               | -20.35                  | 46.00                       | 32.23                   | 21.20                       | 2.99                    | 30.77                      | -                    | -                       | Peak    |
| 995.80               | 30.56               | -23.44                  | 54.00                       | 32.79                   | 24.84                       | 3.51                    | 30.58                      | -                    | -                       | Peak    |
| 5470.00              | 37.56               | -30.74                  | 68.30                       | 28.89                   | 34.57                       | 9.94                    | 35.84                      | 122                  | 4                       | Average |
| 5470.00              | 49.41               | -38.89                  | 88.30                       | 40.74                   | 34.57                       | 9.94                    | 35.84                      | 122                  | 4                       | Peak    |
| 5700.00              | 98.40               | -                       | -                           | 89.54                   | 34.79                       | 9.93                    | 35.86                      | 122                  | 4                       | Average |
| 5700.00              | 108.66              | -                       | -                           | 99.80                   | 34.79                       | 9.93                    | 35.86                      | 122                  | 4                       | Peak    |
| 5725.00              | 48.39               | -19.91                  | 68.30                       | 39.49                   | 34.82                       | 9.92                    | 35.84                      | 122                  | 4                       | Average |
| 5725.00              | 66.85               | -21.45                  | 88.30                       | 57.95                   | 34.82                       | 9.92                    | 35.84                      | 122                  | 4                       | Peak    |

### 3.8 Peak Excursion Ratio Measurement

#### 3.8.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

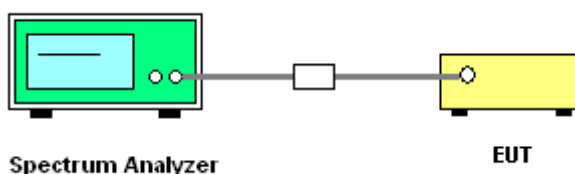
#### 3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.8.3 Test Procedures

1. The transmitter output is connected to the spectrum analyzer.
2. The resolution bandwidth and video bandwidth are set as below,  
Trace A: RBW=1 MHz, VBW=3 MHz  
Trace B: RBW=1 MHz, VBW=300 kHz
3. Trace A is set peak detector and to Max Hold, then to View. Then the detector is readjusted to sample detector, max hold to run for 60 seconds, and the signal under this measurement condition is captured in Trace B in Accordance with the method 3 of DA-02-2138.
4. The difference between the traces is investigated. The marker is placed at the frequency, which shows the largest difference. The amplitude delta between the traces at this frequency is the peak excursion.

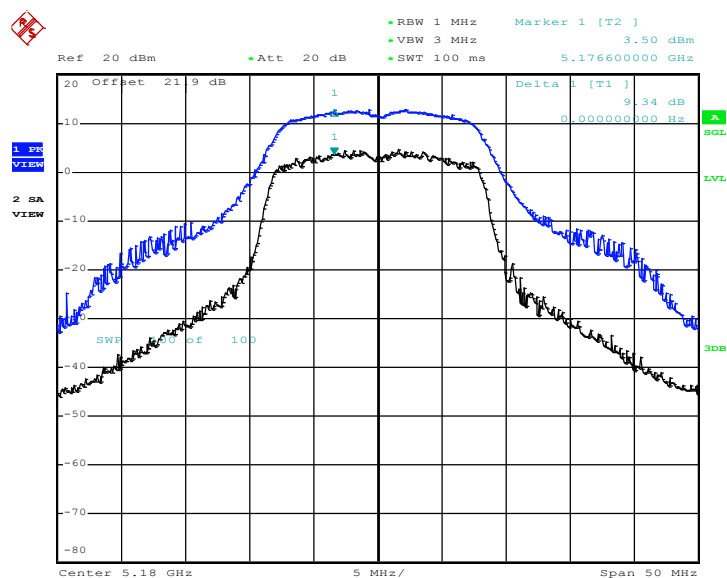
#### 3.8.4 Test Setup



### 3.8.5 Test Result of Peak Excursion Ratio

|                 |          |                     |        |
|-----------------|----------|---------------------|--------|
| Test Mode :     | Mode 1~9 | Temperature :       | 25~27℃ |
| Test Engineer : | Ken Hsu  | Relative Humidity : | 54~57% |

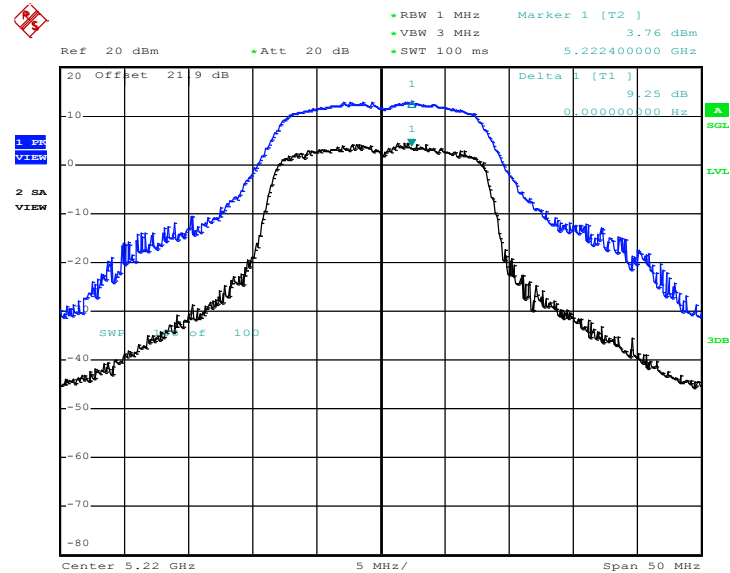
Peak Excursion Ratio Plot on 802.11a Channel 36



Date: 10.DEC.2010 08:43:44

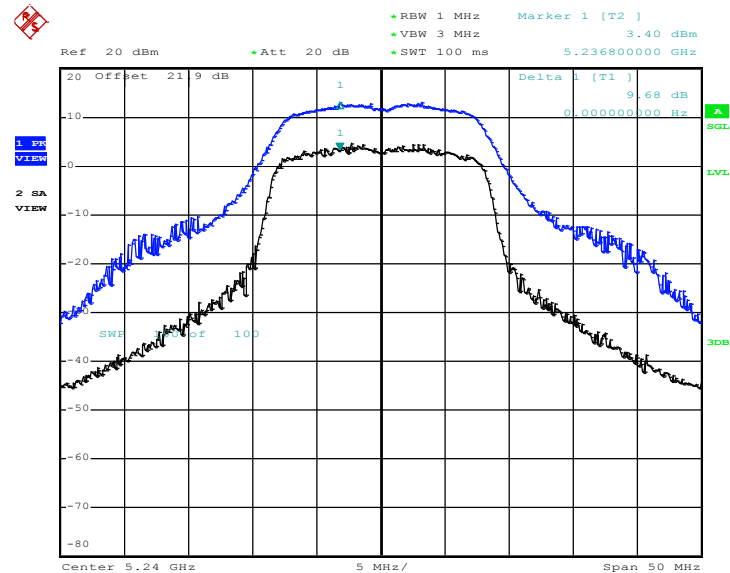


Peak Excursion Ratio Plot on 802.11a Channel 44



Date: 10.DEC.2010 08:59:55

Peak Excursion Ratio Plot on 802.11a Channel 48



Date: 10.DEC.2010 09:00:53



Ref 20 dBm

• RBW 1 MHz

• VBW 3 MHz

• SWT 100 ms

Marker 1 [T2 ]

2.99 dBm

5.256700000 GHz

Delta 1 [T1 ]

10.03 dB

0.000000000 Hz

1

1

SWR 100

Center 5.26 GHz

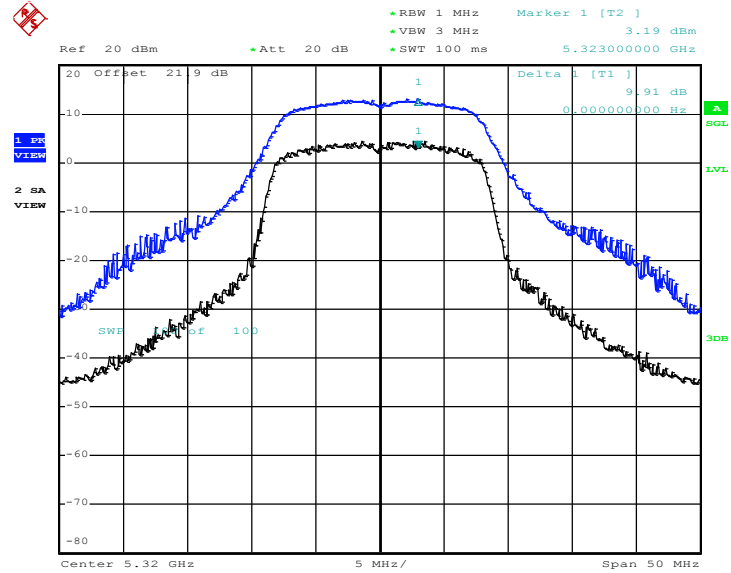
Span 50 MHz

Date: 10.DEC.2010 09:01:59

Date: 10.DEC.2010 09:02:57

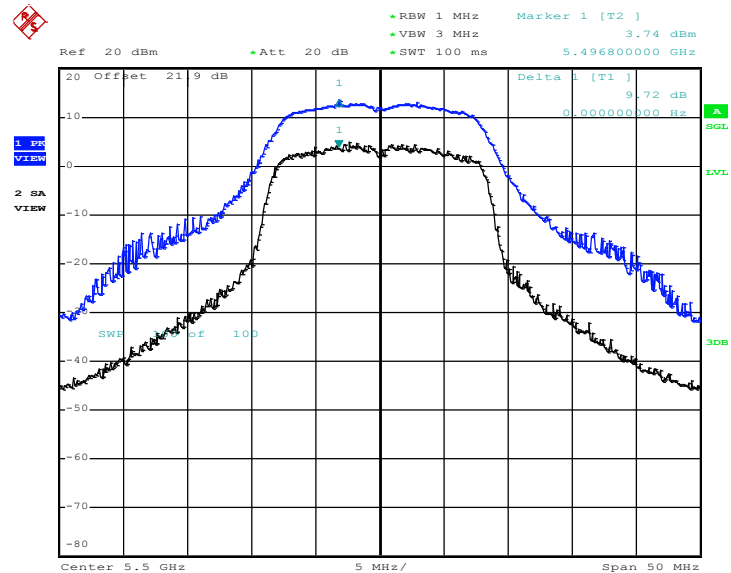


Peak Excursion Ratio Plot on 802.11a Channel 64



Date: 10.DEC.2010 09:03:53

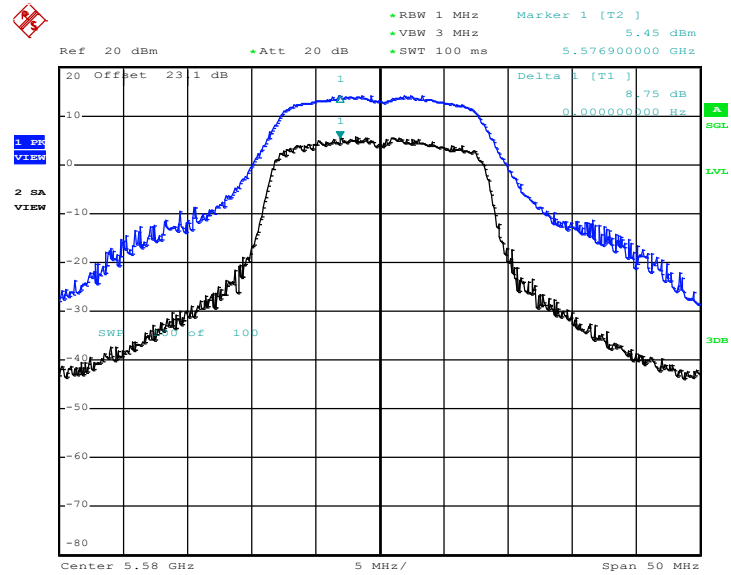
Peak Excursion Ratio Plot on 802.11a Channel 100



Date: 10.DEC.2010 09:06:51

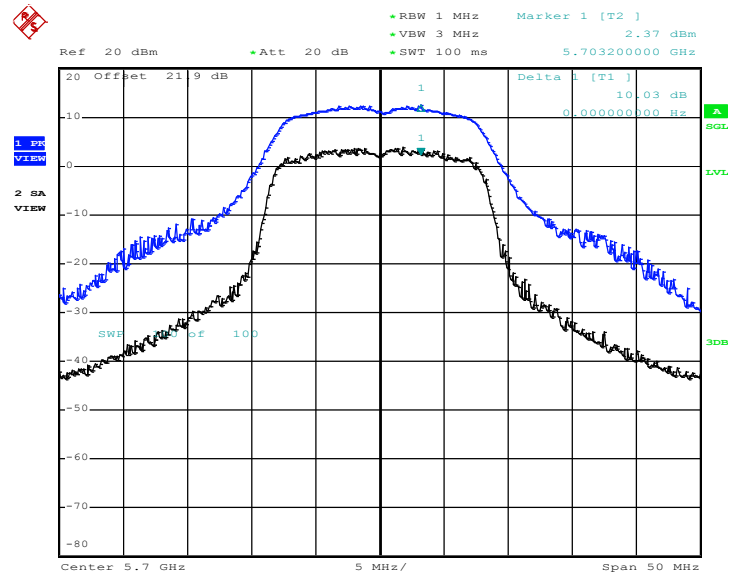


Peak Excursion Ratio Plot on 802.11a Channel 116



Date: 10.FEB.2011 00:22:05

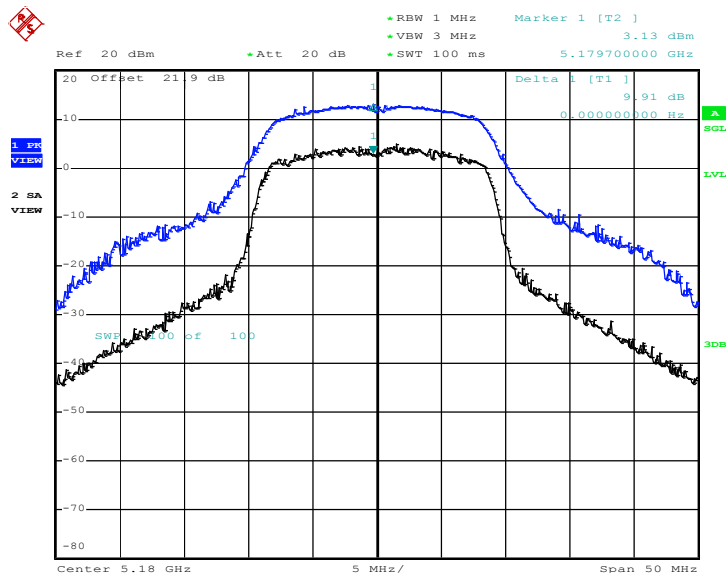
Peak Excursion Ratio Plot on 802.11a Channel 140



Date: 10.DEC.2010 09:10:49

|                 |            |                     |         |
|-----------------|------------|---------------------|---------|
| Test Mode :     | Mode 10~18 | Temperature :       | 25~27°C |
| Test Engineer : | Ken Hsu    | Relative Humidity : | 54~57%  |

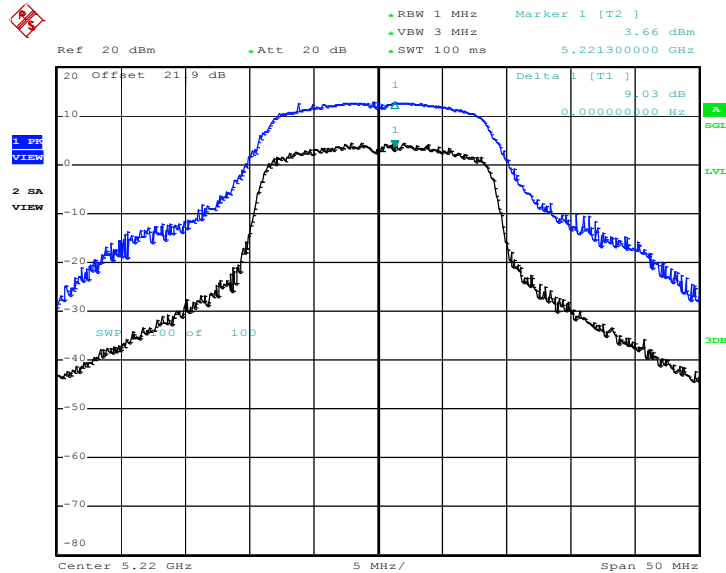
## Peak Excursion Ratio Plot on 802.11n HT20 Channel 36



Date: 10.DEC.2010 09:14:29

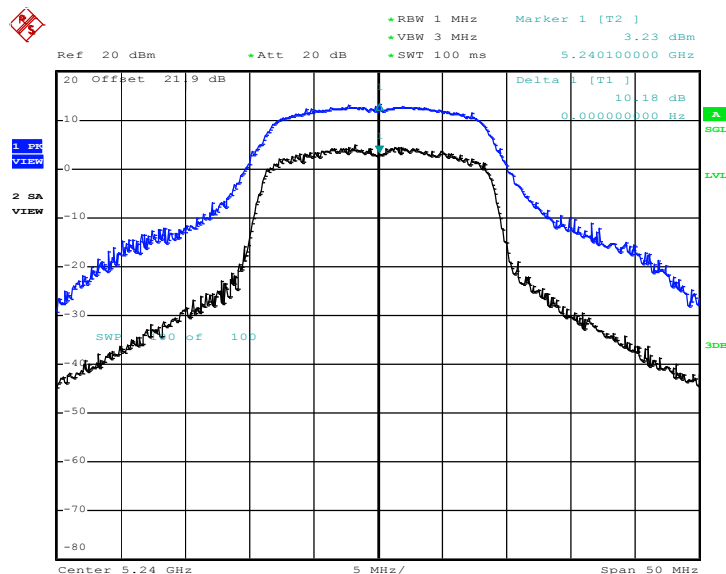


Peak Excursion Ratio Plot on 802.11n HT20 Channel 44



Date: 10.DEC.2010 09:17:12

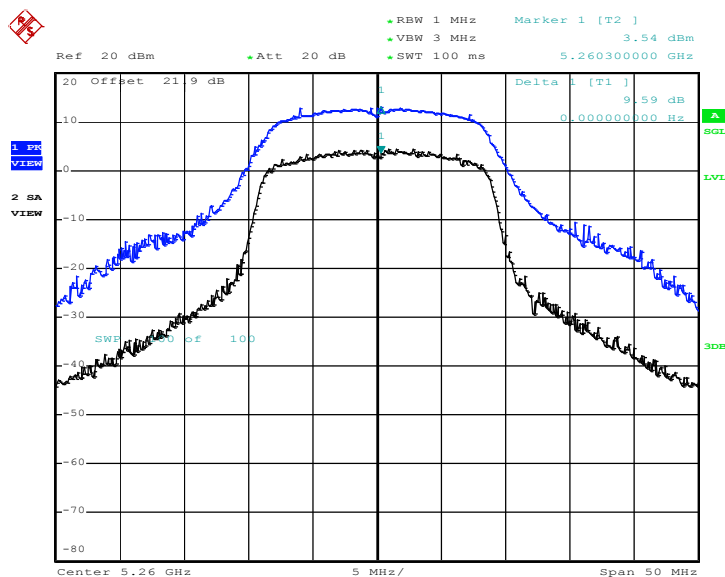
Peak Excursion Ratio Plot on 802.11n HT20 Channel 48



Date: 10.DEC.2010 09:19:46

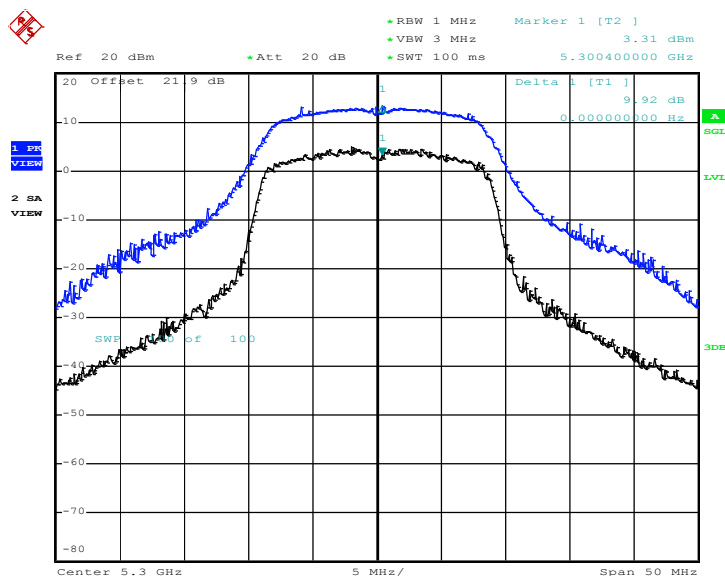


Peak Excursion Ratio Plot on 802.11n HT20 Channel 52



Date: 10.DEC.2010 09:21:46

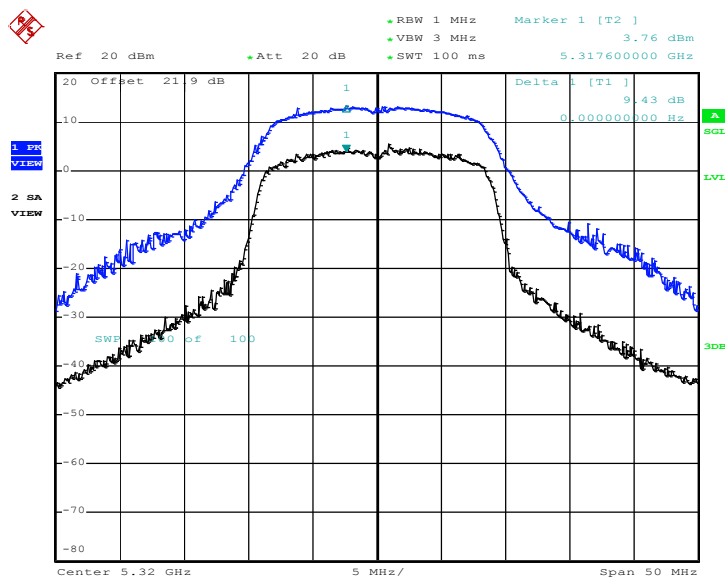
Peak Excursion Ratio Plot on 802.11n HT20 Channel 60



Date: 10.DEC.2010 09:22:31

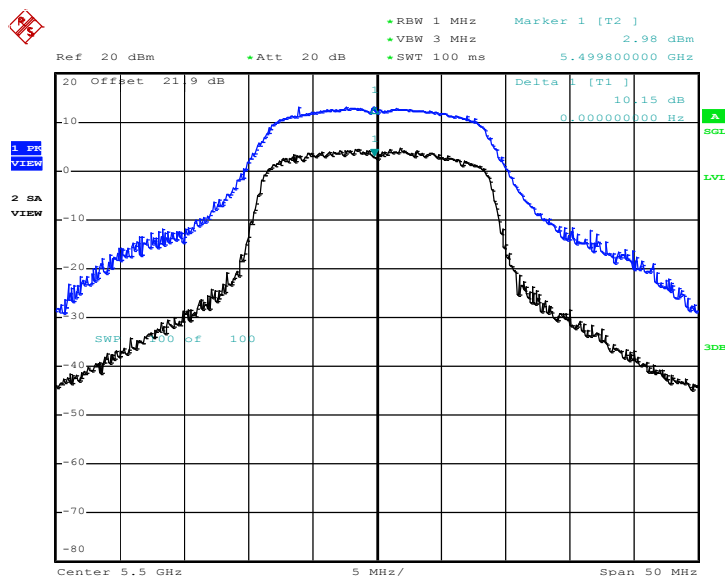


Peak Excursion Ratio Plot on 802.11n HT20 Channel 64



Date: 10.DEC.2010 09:24:23

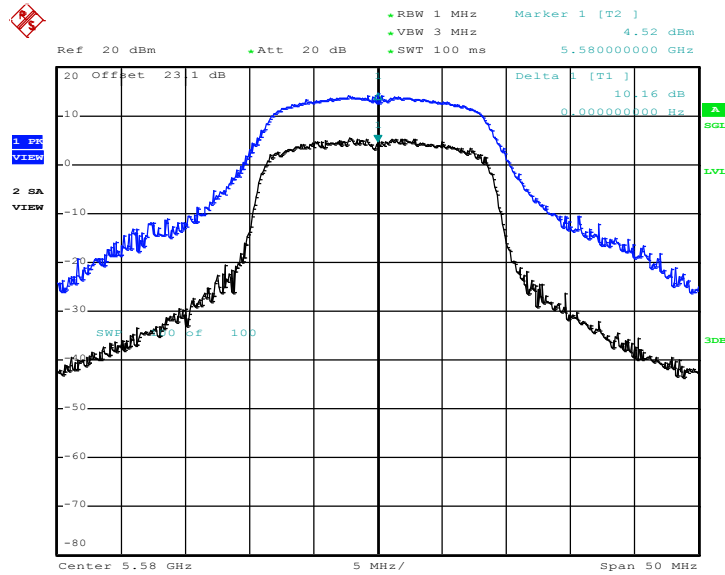
Peak Excursion Ratio Plot on 802.11n HT20 Channel 100



Date: 10.DEC.2010 09:25:29

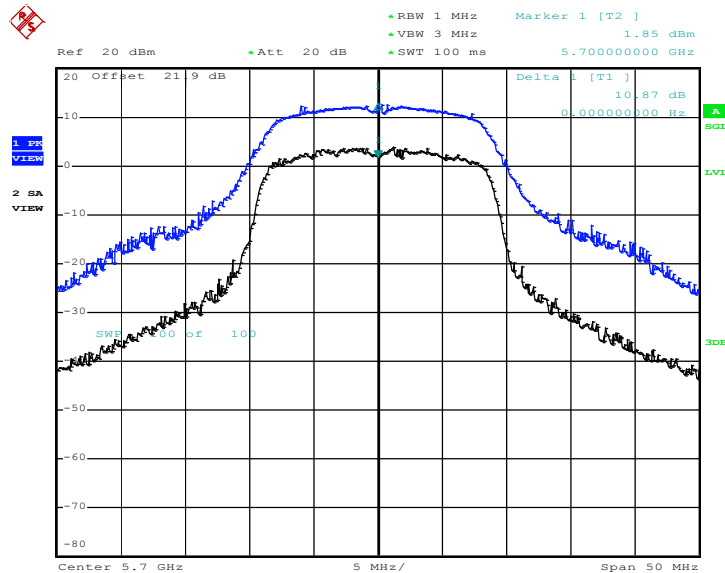


Peak Excursion Ratio Plot on 802.11n HT20 Channel 116



Date: 10.FEB.2011 01:14:21

Peak Excursion Ratio Plot on 802.11n HT20 Channel 140



Date: 10.DEC.2010 09:27:12

### **3.9 Automatically Discontinue Transmission**

#### **3.9.1 Limit of Automatically Discontinue Transmission**

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

#### **3.9.2 Measuring Instruments**

See list of measuring instruments of this test report.

#### **3.9.3 Test Result of Automatically Discontinue Transmission**

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

## 3.10 Frequency Stability Measurement

### 3.10.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

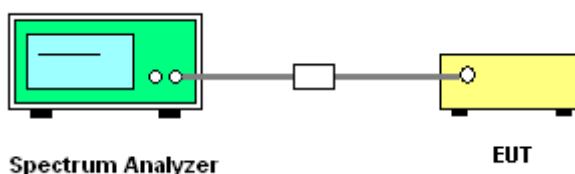
### 3.10.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.10.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 3.10.4 Test Setup



**3.10.5 Test Result of Frequency Stability**

|                        |          |                            |        |
|------------------------|----------|----------------------------|--------|
| <b>Test Mode :</b>     | Mode 1~9 | <b>Temperature :</b>       | 25~27℃ |
| <b>Test Engineer :</b> | Ken Hsu  | <b>Relative Humidity :</b> | 54~57% |

| Channel | Frequency (MHz) | Low Frequency | High Frequency | Frequency Stability (ppm) |
|---------|-----------------|---------------|----------------|---------------------------|
| 36      | 5180            | 5171.72       | 5188.28        | 0.00                      |
| 44      | 5220            | 5211.72       | 5228.28        | 0.00                      |
| 48      | 5240            | 5231.72       | 5248.28        | 0.00                      |
| 52      | 5260            | 5251.72       | 5268.28        | 0.00                      |
| 60      | 5300            | 5291.72       | 5308.28        | 0.00                      |
| 64      | 5320            | 5311.72       | 5328.28        | 0.00                      |
| 100     | 5500            | 5491.72       | 5508.28        | 0.00                      |
| 116     | 5580            | 5571.74       | 5588.26        | 0.00                      |
| 140     | 5700            | 5691.72       | 5708.28        | 0.00                      |

|                        |            |                            |        |
|------------------------|------------|----------------------------|--------|
| <b>Test Mode :</b>     | Mode 10~18 | <b>Temperature :</b>       | 25~27℃ |
| <b>Test Engineer :</b> | Ken Hsu    | <b>Relative Humidity :</b> | 54~57% |

| Channel | Frequency (MHz) | Low Frequency | High Frequency | Frequency Stability (ppm) |
|---------|-----------------|---------------|----------------|---------------------------|
| 36      | 5180            | 5171.16       | 5188.92        | 7.72                      |
| 44      | 5220            | 5211.12       | 5228.88        | 0.00                      |
| 48      | 5240            | 5231.16       | 5248.88        | 3.82                      |
| 52      | 5260            | 5251.16       | 5268.88        | 3.80                      |
| 60      | 5300            | 5291.12       | 5308.92        | 3.77                      |
| 64      | 5320            | 5311.12       | 5328.88        | 0.00                      |
| 100     | 5500            | 5491.08       | 5508.88        | -3.64                     |
| 116     | 5580            | 5571.10       | 5588.82        | -7.17                     |
| 140     | 5700            | 5691.12       | 5708.84        | -3.51                     |



## **3.11 Antenna Requirements**

### **3.11.1 Standard Applicable**

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **3.11.2 Antenna Connected Construction**

The antenna type used in this product is PIFA Antenna and it is considered to meet antenna requirement of FCC.

### **3.11.3 Antenna Gain**

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

## 4 List of Measuring Equipment

| Instrument                | Manufacturer    | Model No. | Serial No.  | Characteristics       | Calibration Date | Due Date      | Remark                |
|---------------------------|-----------------|-----------|-------------|-----------------------|------------------|---------------|-----------------------|
| Spectrum Analyzer         | R&S             | FSP30     | 101329      | 9kHz~30GHz            | Apr. 26, 2010    | Apr. 25, 2011 | Conducted (TH02-HY)   |
| Power Meter               | Anritsu         | ML2495A   | 0932001     | N/A                   | Sep. 13, 2010    | Sep. 12, 2011 | Conducted (TH02-HY)   |
| Power Sensor              | Anritsu         | MA2411B   | 0846202     | N/A                   | Sep. 14, 2010    | Sep. 13, 2011 | Conducted (TH02-HY)   |
| Bilog Antenna             | SCHAFFNER       | CBL6111C  | 2726        | 30MHz ~ 1GHz          | Oct. 31, 2010    | Oct. 30, 2011 | Radiation (03CH07-HY) |
| Spectrum Analyzer         | R&S             | FSP       | 101067      | 9KHz ~ 30GHz          | Dec. 03, 2010    | Dec. 02, 2011 | Radiation (03CH07-HY) |
| Double Ridge Horn Antenna | ESCO            | 3117      | 00075962    | 1GHz ~ 18GHz          | Aug. 19, 2010    | Aug. 18, 2011 | Radiation (03CH07-HY) |
| SHF-EHF Horn Antenna      | SCHWARZBECK     | BBHA 9170 | BBHA9170251 | 15GHz- 40GHz          | Oct. 18, 2010    | Oct. 17, 2011 | Radiation (03CH07-HY) |
| Pre Amplifier             | Agilent         | 8449B     | 3008A02362  | 1GHz~ 26.5GHz         | Dec. 06, 2010    | Dec. 05, 2011 | Radiation (03CH07-HY) |
| Pre Amplifier             | COM-POWER       | PA-103A   | 161241      | 10-1000MHz.32 dB.GAIN | Mar. 27, 2010    | Mar. 26, 2011 | Radiation (03CH07-HY) |
| Loop Antenna              | R&S             | HFH2-Z2   | 860004/001  | 9 kHz~30 MHz          | Jul. 29, 2010    | Jul. 28, 2011 | Radiation (03CH07-HY) |
| EMI Test Receiver         | Rohde & Schwarz | ESCS 30   | 100356      | 9kHz – 2.75GHz        | Dec. 01, 2014    | Nov. 30, 2015 | Conduction (CO05-HY)  |
| LISN                      | Rohde & Schwarz | ENV216    | 100080      | 9kHz~30MHz            | Dec. 02, 2014    | Dec. 01, 2015 | Conduction (CO05-HY)  |
| LISN                      | Rohde & Schwarz | ENV216    | 100081      | 9kHz~30MHz            | Dec. 08, 2014    | Dec. 07, 2015 | Conduction (CO05-HY)  |
| AC Power Source           | ChainTek        | APC-1000W | N/A         | N/A                   | N/A              | N/A           | Conduction (CO05-HY)  |

## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

| Contribution                                                                             | Uncertainty of $X_i$ |                          | $u(X_i)$ |
|------------------------------------------------------------------------------------------|----------------------|--------------------------|----------|
|                                                                                          | dB                   | Probability Distribution |          |
| Receiver Reading                                                                         | 0.10                 | Normal (k=2)             | 0.05     |
| Cable Loss                                                                               | 0.10                 | Normal (k=2)             | 0.05     |
| AMN Insertion Loss                                                                       | 2.50                 | Rectangular              | 0.63     |
| Receiver Specification                                                                   | 1.50                 | Rectangular              | 0.43     |
| Site Imperfection                                                                        | 1.39                 | Rectangular              | 0.80     |
| Mismatch                                                                                 | +0.34 / -0.35        | U-Shape                  | 0.24     |
| <b>Combined Standard Uncertainty <math>U_c(y)</math></b>                                 | <b>1.13</b>          |                          |          |
| <b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b> | <b>2.26</b>          |                          |          |

### Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

| Contribution                                                                             | Uncertainty of $X_i$ |                          | $u(X_i)$ |
|------------------------------------------------------------------------------------------|----------------------|--------------------------|----------|
|                                                                                          | dB                   | Probability Distribution |          |
| Receiver Reading                                                                         | 0.41                 | Normal (k=2)             | 0.21     |
| Antenna Factor Calibration                                                               | 0.83                 | Normal (k=2)             | 0.42     |
| Cable Loss Calibration                                                                   | 0.25                 | Normal (k=2)             | 0.13     |
| Pre-Amplifier Gain Calibration                                                           | 0.27                 | Normal (k=2)             | 0.14     |
| RCV/SPA Specification                                                                    | 2.50                 | Rectangular              | 0.72     |
| Antenna Factor Interpolation for Frequency                                               | 1.00                 | Rectangular              | 0.29     |
| Site Imperfection                                                                        | 1.43                 | Rectangular              | 0.83     |
| Mismatch                                                                                 | +0.39 / -0.41        | U-Shape                  | 0.28     |
| <b>Combined Standard Uncertainty <math>U_c(y)</math></b>                                 | <b>1.27</b>          |                          |          |
| <b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b> | <b>2.54</b>          |                          |          |

**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

| Contribution                                                                                                                         | Uncertainty of $X_i$ |                          | $u(X_i)$ | $C_i$ | $C_i * u(X_i)$ |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------|----------|-------|----------------|
|                                                                                                                                      | dB                   | Probability Distribution |          |       |                |
| Receiver Reading                                                                                                                     | $\pm 0.10$           | Normal (k=2)             | 0.10     | 1     | 0.10           |
| Antenna Factor Calibration                                                                                                           | $\pm 1.70$           | Normal (k=2)             | 0.85     | 1     | 0.85           |
| Cable Loss Calibration                                                                                                               | $\pm 0.50$           | Normal (k=2)             | 0.25     | 1     | 0.25           |
| Receiver Correction                                                                                                                  | $\pm 2.00$           | Rectangular              | 1.15     | 1     | 1.15           |
| Antenna Factor Directional                                                                                                           | $\pm 1.50$           | Rectangular              | 0.87     | 1     | 0.87           |
| Site Imperfection                                                                                                                    | $\pm 2.80$           | Triangular               | 1.14     | 1     | 1.14           |
| Mismatch<br>Receiver VSWR $\Gamma_1 = 0.197$<br>Antenna VSWR $\Gamma_2 = 0.194$<br>Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$ | +0.34 / -0.35        | U-Shape                  | 0.244    | 1     | 0.244          |
| <b>Combined Standard Uncertainty<br/><math>U_c(y)</math></b>                                                                         | <b>2.36</b>          |                          |          |       |                |
| <b>Measuring Uncertainty for a<br/>Level of Confidence of 95%<br/>(<math>U = 2U_c(y)</math>)</b>                                     | <b>4.72</b>          |                          |          |       |                |