# FCC RF Test Report

| | | |
|---|---|---|
| **APPLICANT** | **:** | **HTC Corporation** |
| **EQUIPMENT** | **:** | **Smartphone** |
| **MODEL NAME** | **:** | **PL80100** |
| **FCC ID** | **:** | **NM8PL80100** |
| **STANDARD** | **:** | **FCC Part 15 Subpart E** |
| **CLASSIFICATION** | **:** | **(NII) Unlicensed National Information Infrastructure** |

**The product was received on Sep. 24, 2012 and completely tested on Nov. 09, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the 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.**

**Reviewed by:**

Jones Tsai

**Jones Tsai / Manager**

Testing Laboratory 1190

***SPORTON INTERNATIONAL INC.***
***No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.***

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# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FR281611-02E | Rev. 01 | Initial issue of report | Nov. 13, 2012 |
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# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | IC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|---|
| 3.1 | 15.403(i) | A9.2 | 26dB Bandwidth | - | Pass | - |
| 3.2 | 15.407(a) | A9.2 | Maximum Conducted Output Power | ≤ 17, 24, 30 dBm (depend on band) | Pass | - |
| 3.3 | 15.407(a) | A9.2 | Power Spectral Density | ≤ 4, 11, 17 dBm (depend on band) | Pass | - |
| 3.4 | 15.407(a)(6) | A9.3 | Peak Excursion Ratio | ≤ 13dB | Pass | - |
| 3.5 | 15.407(b) | A9.3 | Unwanted Emissions | ≤ -17, -27 dBm (depend on band)&15.209(a) | Pass | Under limit 3.47 dB at 5149.450 MHz |
| 3.6 | 15.207 | Gen 7.2.4 | AC Conducted Emission | 15.207(a) | Pass | Under limit 7.70 dB at 13.558 MHz |
| 3.7 | 15.407(g) | A9.5 | Frequency Stability | Within Operation Band | Pass | - |
| 3.7 | 15.407(c) | A9.5 | Automatically Discontinue Transmission | Discontinue Transmission | Pass | - |
| 3.9 | 15.203 & 15.407(a) | A9.2 | Antenna Requirement | N/A | Pass | - |

# 1 General Description

## 1.1 Applicant

**HTC Corporation**
No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan

## 1.2 Manufacturer

**HTC Corporation**
No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan

## 1.3 Feature of Equipment Under Test

| Product Feature & Specification | |
|---|---|
| **Equipment** | Smartphone |
| **Model Name** | PL80100 |
| **FCC ID** | NM8PL80100 |
| **Sample 1** | EUT with LCD Panel 1, Main Camera 1, and Front Camera 1 |
| **Sample 2** | EUT with LCD Panel 2, Main Camera 2, and Front Camera 2 |
| **EUT supports Radios application** | GSM/EGPRS/WCDMA/HSPA/<br>WLAN 11abgn / Bluetooth / NFC |
| **EUT Stage** | Identical Prototype |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

| Product Specification subjective to this standard | |
|---|---|
| **Tx/Rx Frequency Range** | 5180 MHz ~ 5240 MHz<br>5260 MHz ~ 5320 MHz<br>5500 MHz ~ 5700 MHz |
| **Maximum Output Power to Antenna** | **<5180 MHz ~ 5240 MHz>**<br>802.11a : 12.44 dBm / 0.0175 W<br>802.11n HT20 : 12.46 dBm / 0.0176 W<br>802.11n HT40 : 11.87 dBm / 0.0154 W<br>**<5260 MHz ~ 5320 MHz>**<br>802.11a : 12.18 dBm / 0.0165 W<br>802.11n HT20 : 12.31 dBm / 0.0170 W<br>802.11n HT40 : 11.75 dBm / 0.0150 W<br>**<5500 MHz ~ 5700 MHz>**<br>802.11a : 12.29 dBm / 0.0169 W<br>802.11n HT20 : 12.30 dBm / 0.0170 W<br>802.11n HT40 : 12.05 dBm / 0.0160 W |
| **Antenna Type** | PIFA Antenna<br>**<5180 MHz ~ 5240 MHz>**<br>with gain -0.70 dBi<br>**<5260 MHz ~ 5320 MHz>**<br>with gain -0.70 dBi<br>**<5500 MHz ~ 5700 MHz>**<br>with gain -0.50 dBi |
| **Type of Modulation** | **OFDM (BPSK / QPSK / 16QAM / 64QAM)** |

## 1.4 Testing Site

| Test Site | SPORTON INTERNATIONAL INC. | | | |
|---|---|---|---|---|
| Test Site Location | No. 52, Hwa Ya 1st 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. | | | FCC/IC Registration No. |
| | TH02-HY | CO05-HY | 03CH06-HY | 722060/4086B-1 |

## 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 KDB 789033 D01 General UNII Test Procedures v01r02
- ANSI C63.4-2003 and ANSI C63.10-2009
- IC RSS-210 Issued 8
- IC RSS-Gen Issue 3

**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-628 | KA2DIR628A2 | N/A | Unshielded, 1.8 m |
| 3. | Bluetooth Earphone | Sony Ericsson | MW600 | PY7DDA-2029 | N/A | N/A |
| 4. | Notebook | DELL | Latitude E6320 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |

# 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

## 2.1 Carrier Frequency Channel

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5150-5250 MHz Band 1 | 36 | 5180 | 44 | 5220 |
| | **38** | **5190** | **46** | **5230** |
| | 40 | 5200 | 48 | 5240 |

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5250-5350 MHz Band 2 | 52 | 5260 | 60 | 5300 |
| | **54** | **5270** | **62** | **5310** |
| | 56 | 5280 | 64 | 5320 |

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5470-5725 MHz Band 3 | 100 | 5500 | 116 | 5580 |
| | **102** | **5510** | 132 | 5660 |
| | 104 | 5520 | **134** | **5670** |
| | 108 | 5540 | 136 | 5680 |
| | **110** | **5550** | 140 | 5700 |
| | 112 | 5560 | | |

**Note:** The above Frequency and Channel in boldface were 802.11n HT40.

## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

| 5GHz 802.11a mode | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Data Rate (MHz) | 6M bps | 9M bps | 12M bps | 18M bps | 24M bps | 36M bps | 48M bps | 54M bps |
| Peak Power (dBm) | 12.44 | 12.42 | 12.43 | 12.43 | 12.11 | 12.42 | 12.42 | 12.43 |

| 5GHz 802.11n HT20 mode | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Data Rate (MHz) | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
| Peak Power (dBm) | 12.46 | 12.43 | 12.44 | 12.44 | 12.42 | 12.45 | 12.44 | 12.42 |

| 5GHz 802.11n HT40 mode | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Data Rate (MHz) | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
| Peak Power (dBm) | 12.05 | 12.03 | 12.03 | 12.04 | 12.03 | 12.02 | 12.02 | 12.04 |

## 2.3 Test Mode

**Final results of test modes, data rates and test channels are shown as following table.**

| Test Cases | | | | |
|---|---|---|---|---|
| | **Test Items** | **Mode** | **Data rate** | **Test Channel** |
| **Conducted TCs** | **26dB and 99% BW Power Spectral Density** | **802.11a** | **6 Mbps** | **L/M/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/M/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/M/H** |
| | **Output Power** | **802.11a** | **6 Mbps** | **L/M/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/M/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/M/H** |
| | **Peak Excursion** | **802.11a** | **6 Mbps** | **L/M/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/M/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/M/H** |
| | **Frequency Stability** | **802.11a** | **6 Mbps** | **L/M/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/M/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/M/H** |
| **Radiated TCs** | **Radiated Band Edge** | **802.11a** | **6 Mbps** | **L/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/H** |
| | **Radiated Spurious Emission** | **802.11a** | **6 Mbps** | **L/M/H** |
| | | **802.11n HT20** | **6.5 Mbps** | **L/M/H** |
| | | **802.11n HT40** | **13.5 Mbps** | **L/M/H** |
| **AC Conducted Emission** | Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC + Earphone + Battery 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1<br>Mode 2 **:** GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC + Earphone + Battery 1 + USB Cable 1 (Charging from Adapter 1) for Sample 2 | | | |

**Remark:**

**1.** The worst case of conducted emission is mode 1; only the test data of it was reported.

**2.** For Radiated TCs, the test was performed with Earphone, Battery 2, USB Cable 2, Adapter 2, and Sample 1.

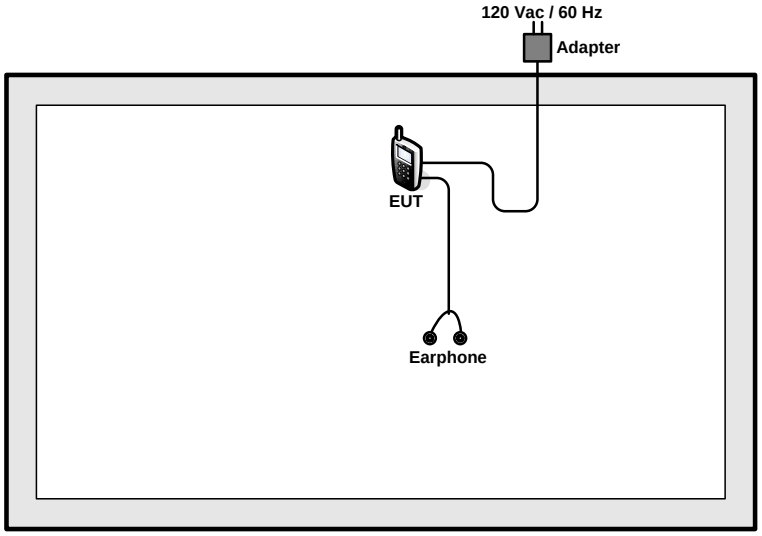
| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5725 MHz |
|---|---|---|---|---|
| | | 802.11a | 802.11a | 802.11a |
| L | Low | 36 | 52 | 100 |
| M | Middle | 44 | 60 | 116 |
| H | High | 48 | 64 | 140 |

| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5725 MHz |
|---|---|---|---|---|
| | | 802.11n HT20 | 802.11n HT20 | 802.11n HT20 |
| L | Low | 36 | 52 | 100 |
| M | Middle | 44 | 60 | 116 |
| H | High | 48 | 64 | 140 |

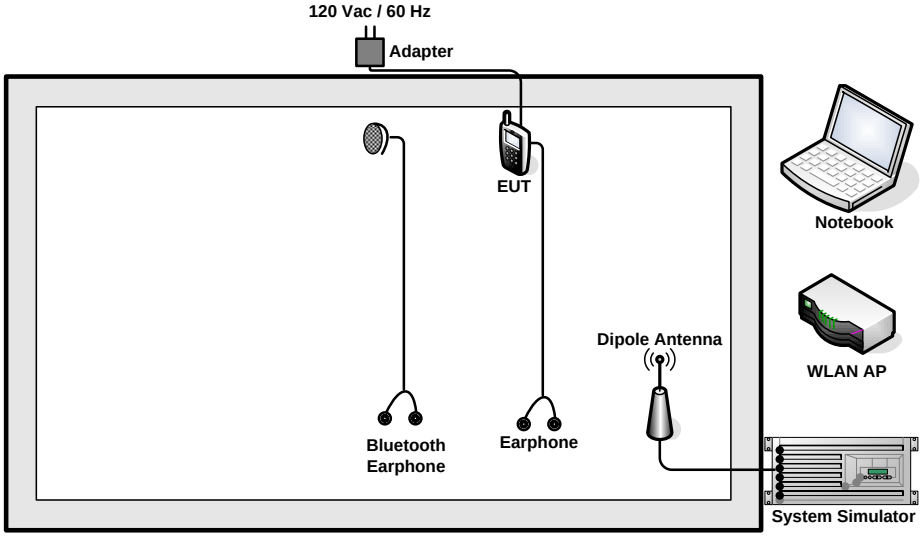
| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5725 MHz |
|---|---|---|---|---|
| | | 802.11n HT40 | 802.11n HT40 | 802.11n HT40 |
| L | Low | 38 | 54 | 102 |
| M | Middle | - | - | 110 |
| H | High | 46 | 62 | 134 |

## 2.4 Connection Diagram of Test System

**<WLAN Tx Mode>**




**<AC Conducted Emission Mode>**




## 2.5 RF Utility

For WLAN (802.11a and 802.11n HT20) function, execute “Remote 432X controller (P2.01)” to make the EUT contact with WLAN AP for continuous transmitting and receiving signals.

For WLAN (802.11n HT40) function, execute “Command” to make the EUT contact with WLAN AP for continuous transmitting and receiving signals.

# 3 Test Result

## 3.1 26dB & Bandwidth Measurement

### 3.1.1 Description of Bandwidth Measurement

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.

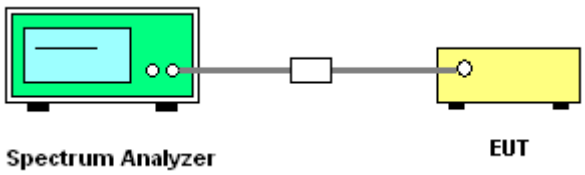
### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02. Section D) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. Measure and record the results in the test report.

### 3.1.4 Test Setup

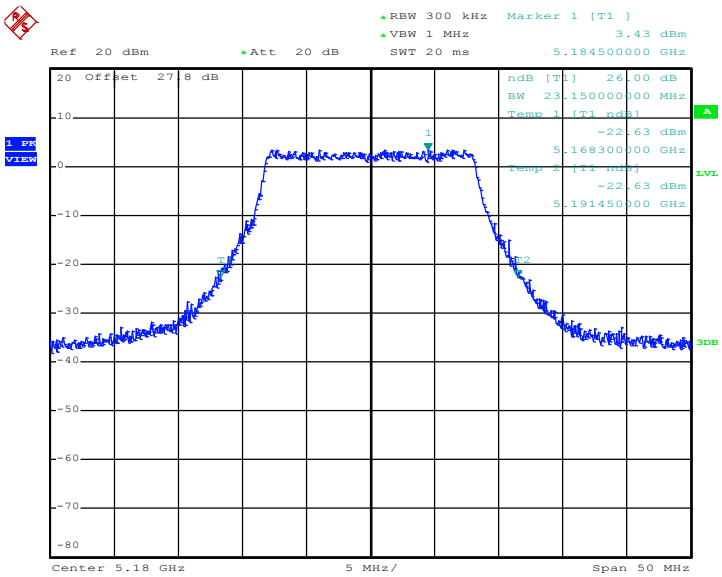


## 3.1.5 Test Result of 26dB Bandwidth Plots

| Test Mode : | 802.11a | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

| Channel | Frequency (MHz) | 802.11a 26dB Bandwidth (MHz) | Pass/Fail |
|---|---|---|---|
| 36 | 5180 | 23.150 | N/A |
| 44 | 5220 | 22.750 | N/A |
| 48 | 5240 | 23.000 | N/A |
| 52 | 5260 | 23.050 | N/A |
| 60 | 5300 | 23.050 | N/A |
| 64 | 5320 | 23.050 | N/A |
| 100 | 5500 | 23.050 | N/A |
| 116 | 5580 | 23.100 | N/A |
| 140 | 5700 | 22.850 | N/A |

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

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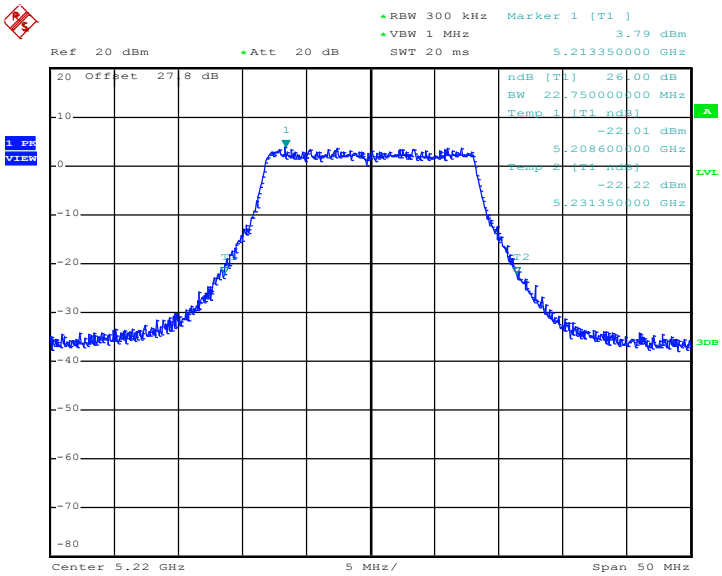
## 26 dB Bandwidth Plot on 802.11a Channel 44

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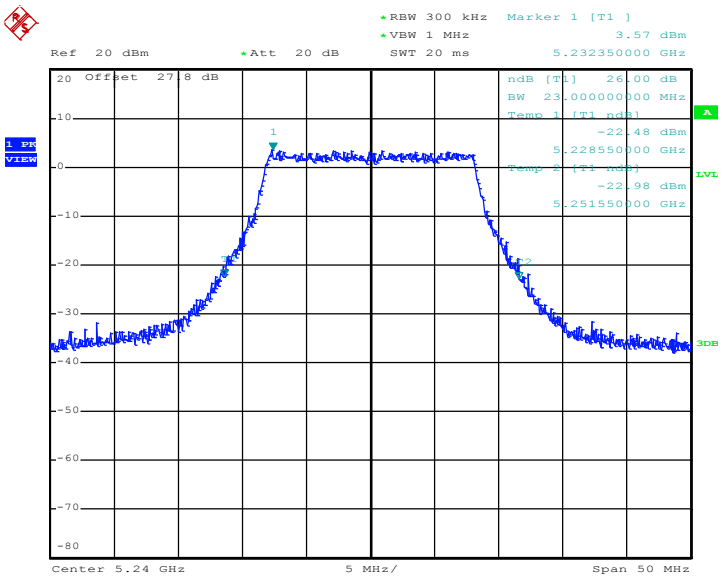
## 26 dB Bandwidth Plot on 802.11a Channel 48

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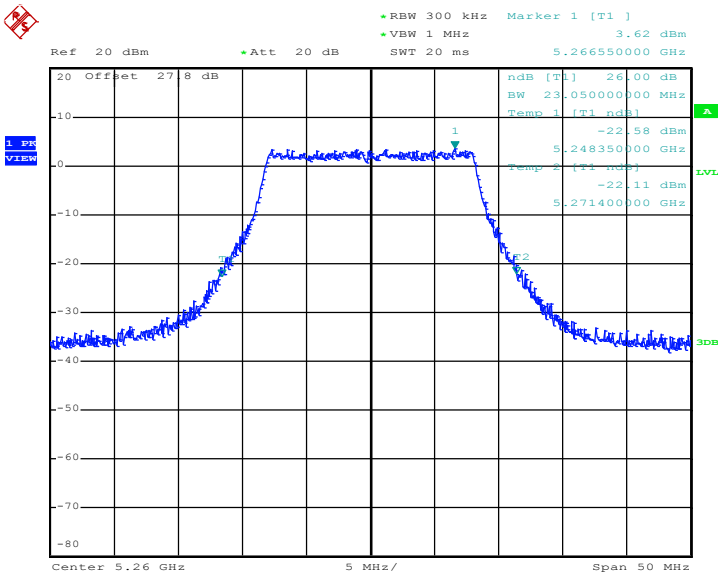


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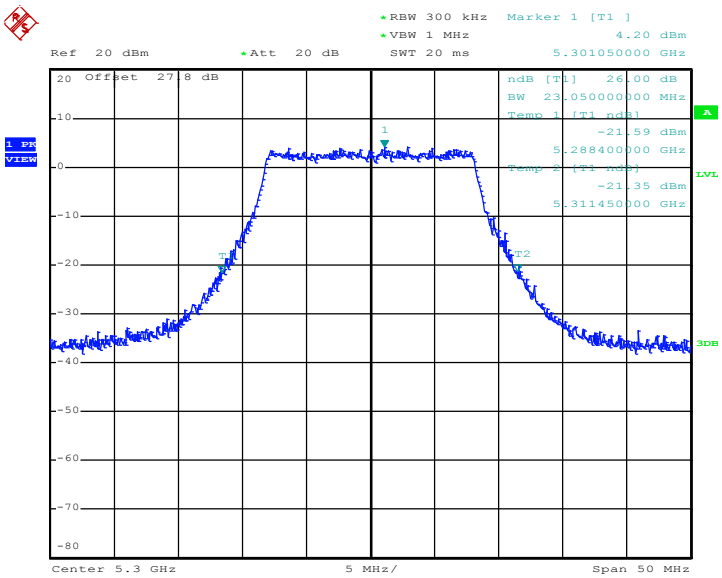
## 26 dB Bandwidth Plot on 802.11a Channel 60

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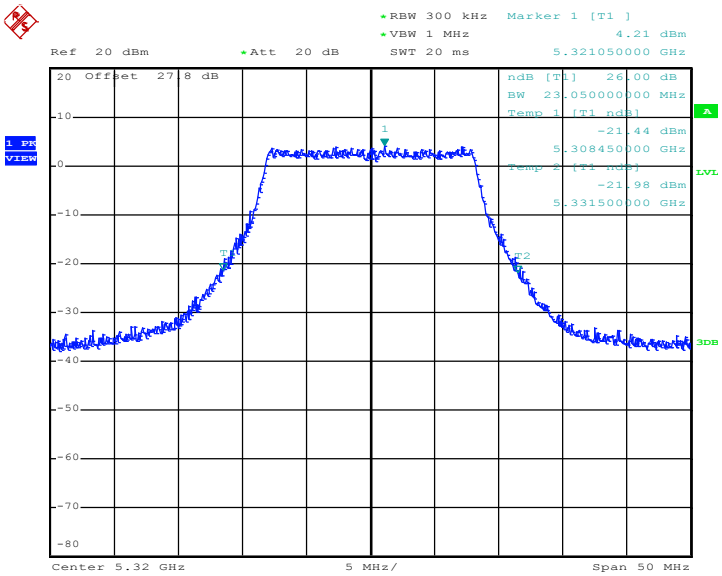
## 26 dB Bandwidth Plot on 802.11a Channel 64

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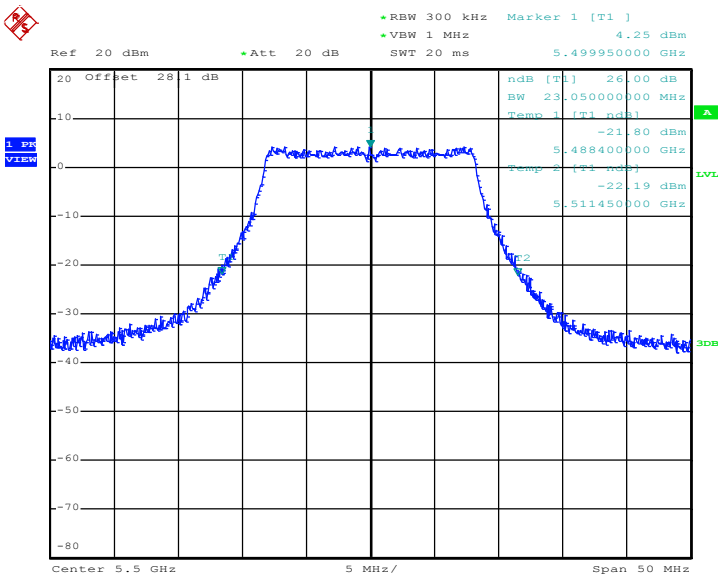
## 26 dB Bandwidth Plot on 802.11a Channel 100

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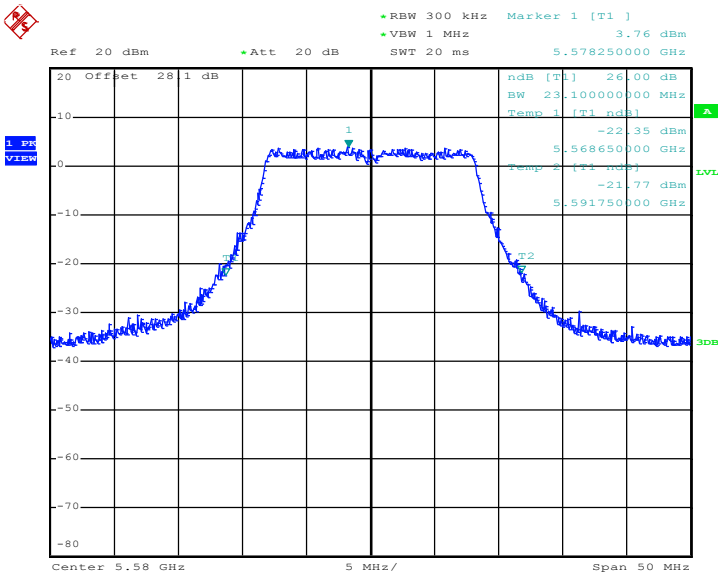
## 26 dB Bandwidth Plot on 802.11a Channel 116

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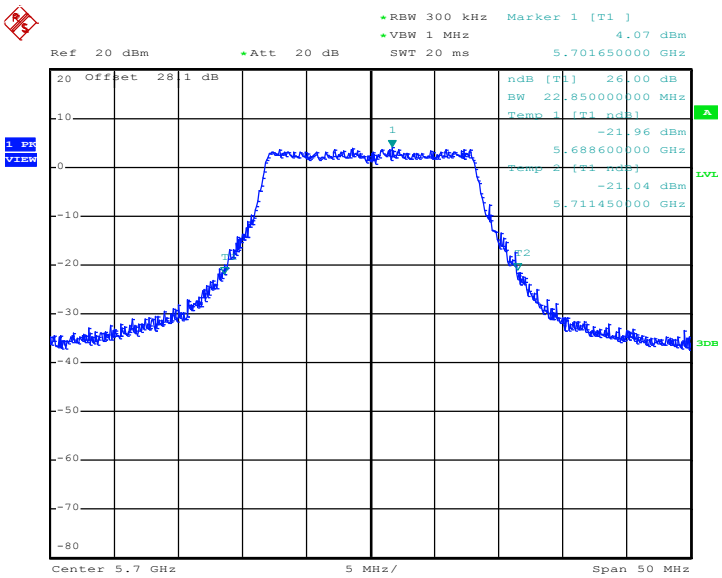
## 26 dB Bandwidth Plot on 802.11a Channel 140

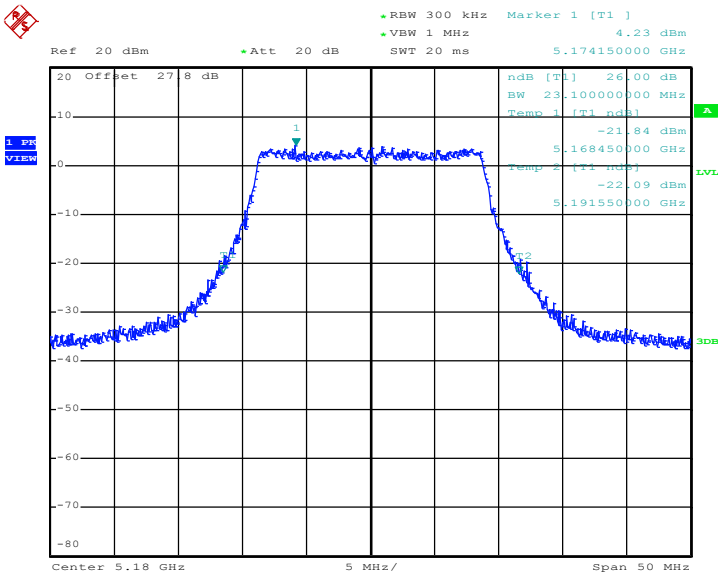



Date: 7.OCT.2012 16:07:31

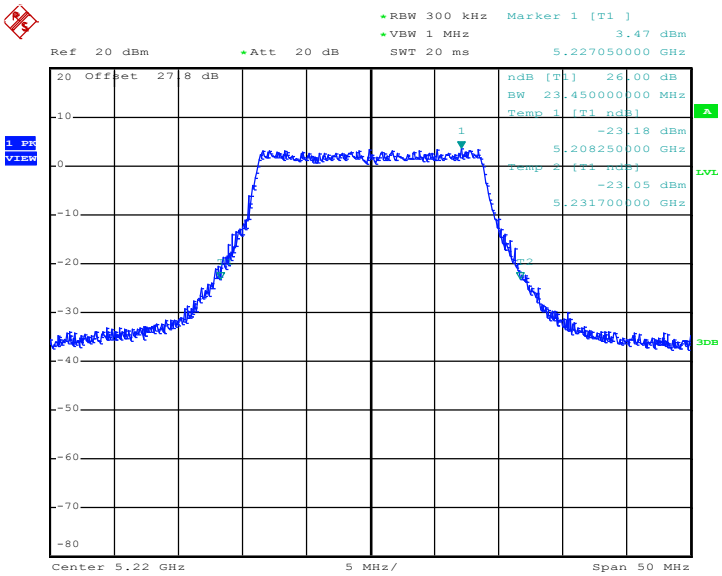
| Test Mode : | 802.11n HT20 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

| Channel | Frequency (MHz) | 802.11n HT20 26dB Bandwidth (MHz) | Pass/Fail |
|---|---|---|---|
| 36 | 5180 | 23.100 | N/A |
| 44 | 5220 | 23.450 | N/A |
| 48 | 5240 | 23.500 | N/A |
| 52 | 5260 | 23.400 | N/A |
| 60 | 5300 | 23.350 | N/A |
| 64 | 5320 | 23.500 | N/A |
| 100 | 5500 | 23.350 | N/A |
| 116 | 5580 | 23.700 | N/A |
| 140 | 5700 | 23.650 | N/A |

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



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

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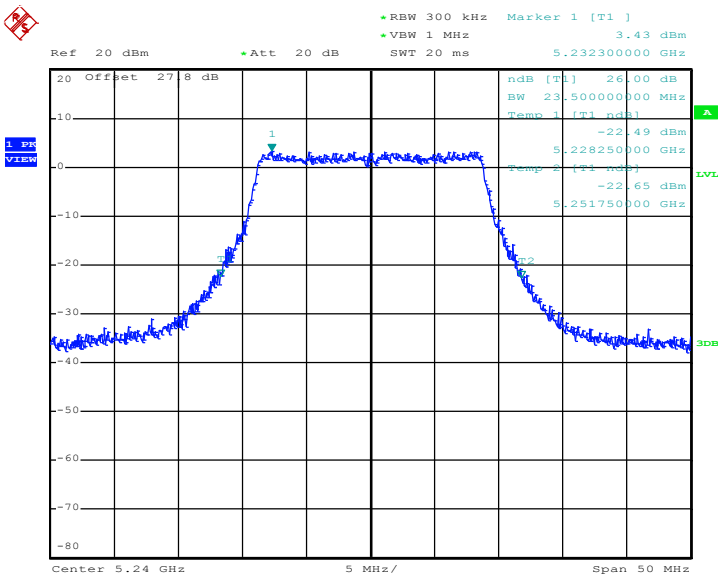
## 26 dB Bandwidth Plot on 802.11n HT20 Channel 48

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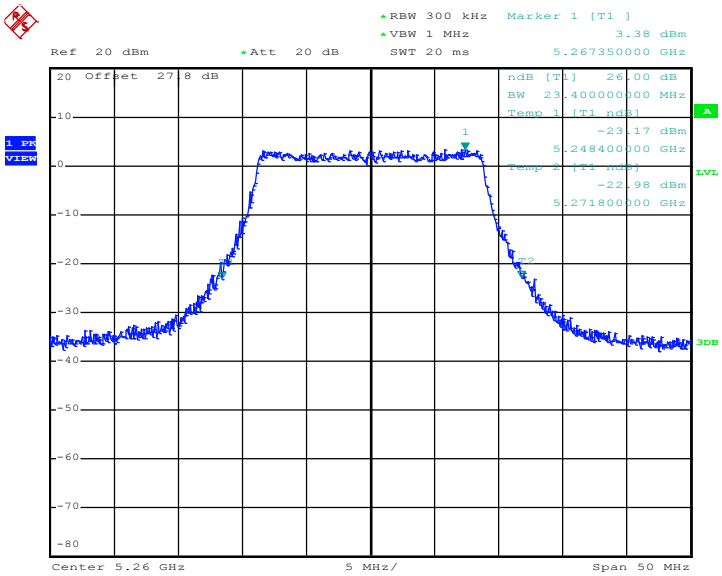


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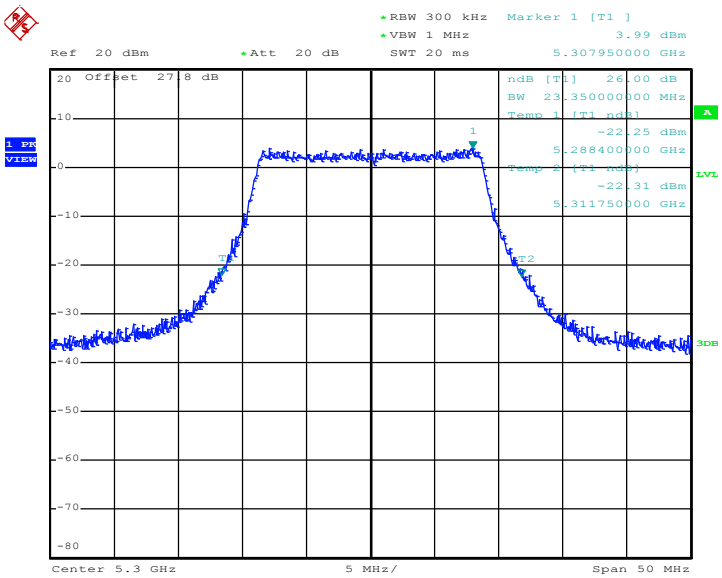
## 26 dB Bandwidth Plot on 802.11n HT20 Channel 60

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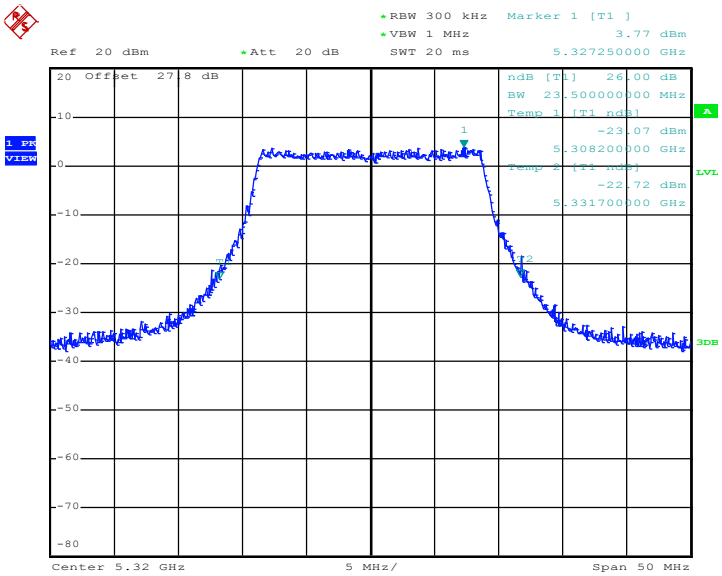


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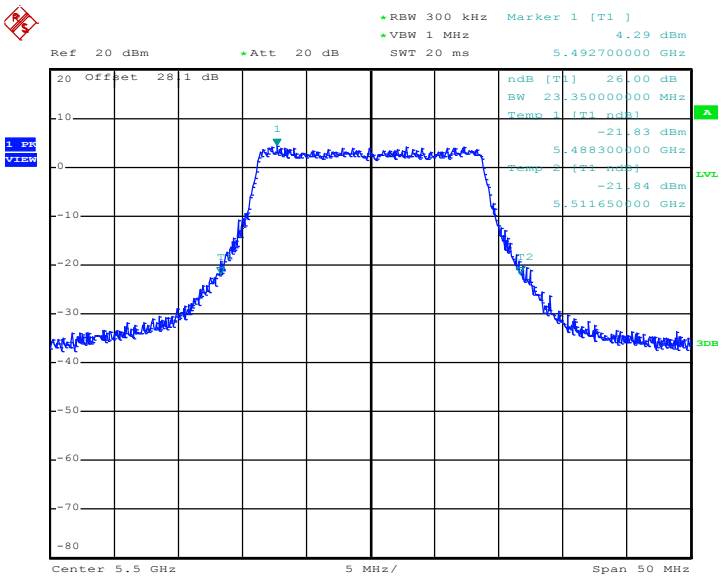
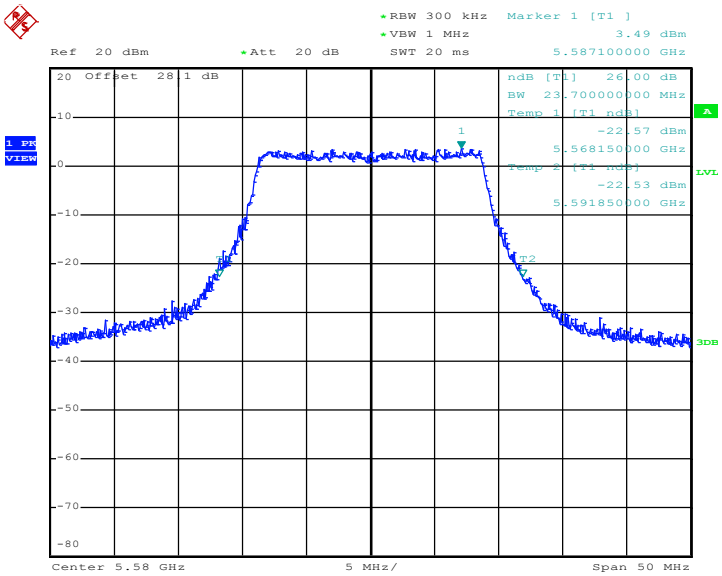


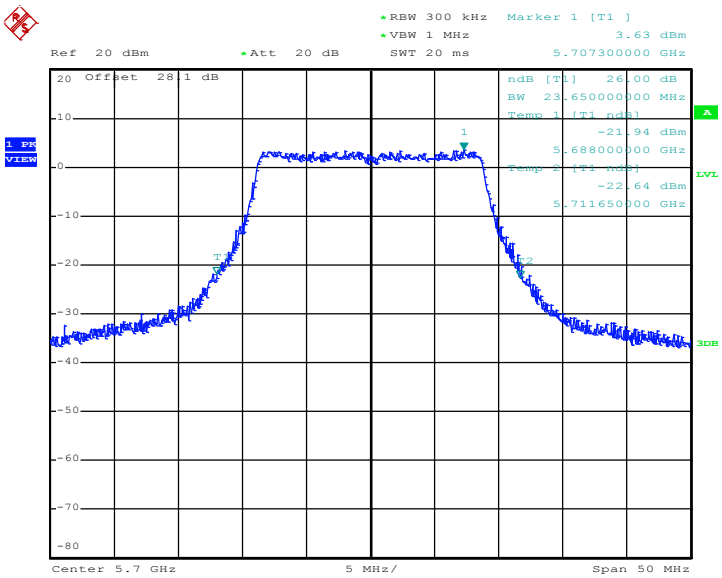

Date: 7.OCT.2012 16:13:24

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




Date: 7.OCT.2012 16:11:27

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

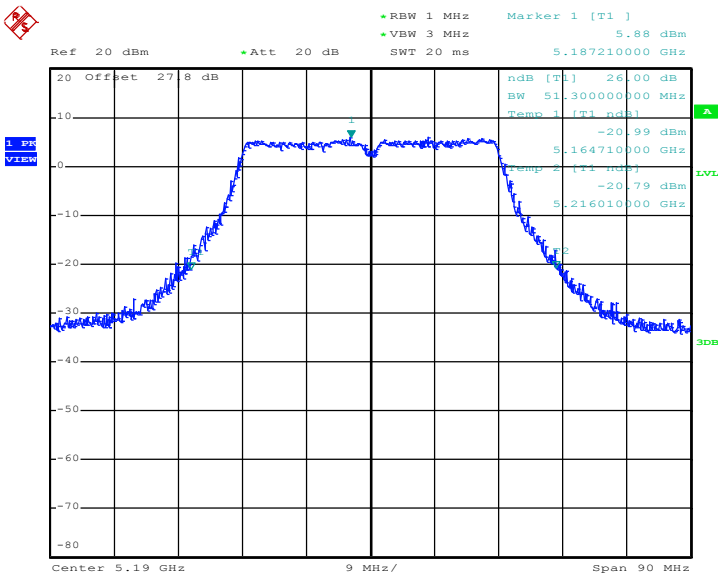



Date: 7.OCT.2012 16:09:29

| Test Mode : | 802.11n HT40 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

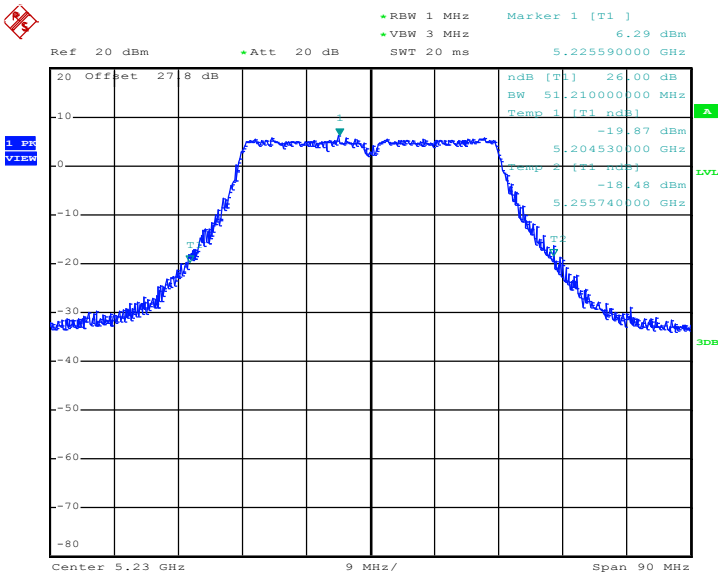
| Channel | Frequency (MHz) | 802.11n HT40 26dB Bandwidth (MHz) | Pass/Fail |
|---|---|---|---|
| 38 | 5190 | 51.300 | N/A |
| 46 | 5230 | 51.210 | N/A |
| 54 | 5270 | 49.860 | N/A |
| 62 | 5310 | 50.760 | N/A |
| 102 | 5510 | 50.670 | N/A |
| 110 | 5550 | 51.750 | N/A |
| 134 | 5670 | 51.030 | N/A |

**26 dB Bandwidth Plot on 802.11n HT40 Channel 38**



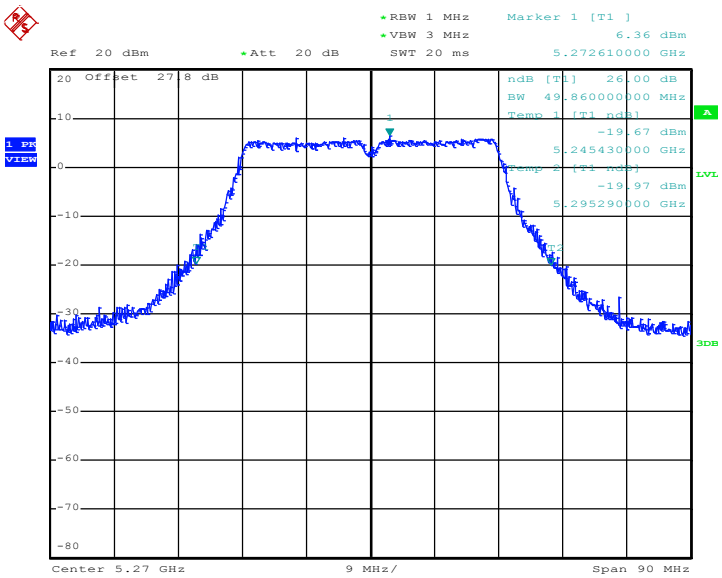

Date: 8.OCT.2012 13:57:44

## 26 dB Bandwidth Plot on 802.11n HT40 Channel 46



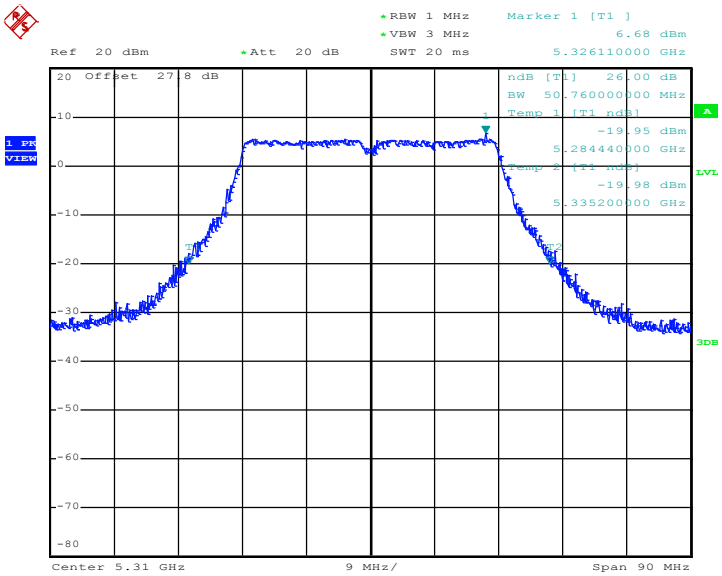

Date: 8.OCT.2012 14:01:29

## 26 dB Bandwidth Plot on 802.11n HT40 Channel 54




Date: 8.OCT.2012 14:06:43

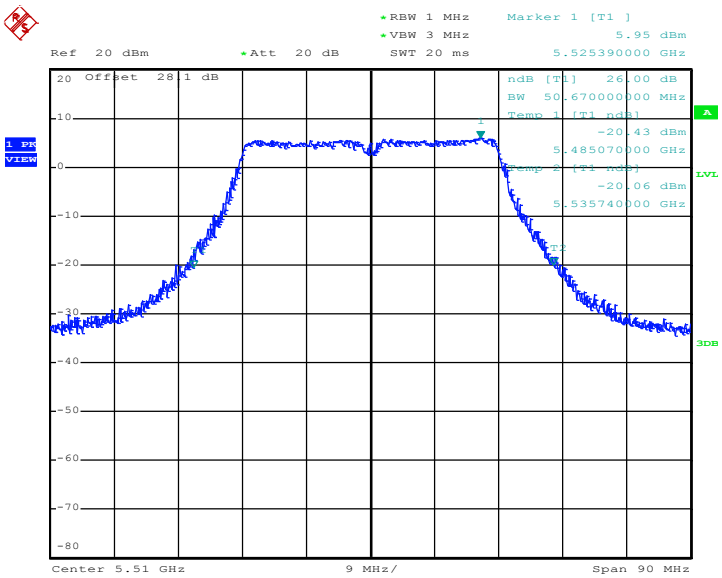
## 26 dB Bandwidth Plot on 802.11n HT40 Channel 62




281611 15E 26dB 802.11a_N40 5310 (ch62)

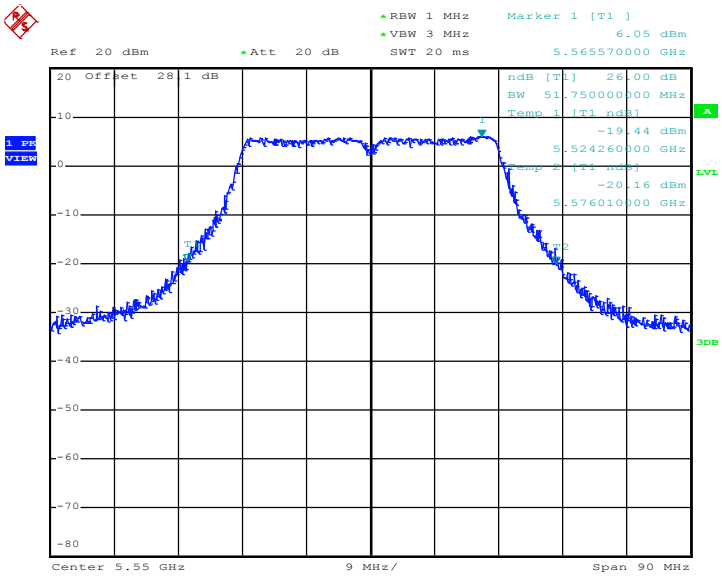
Date: 8.OCT.2012 14:10:04

## 26 dB Bandwidth Plot on 802.11n HT40 Channel 102



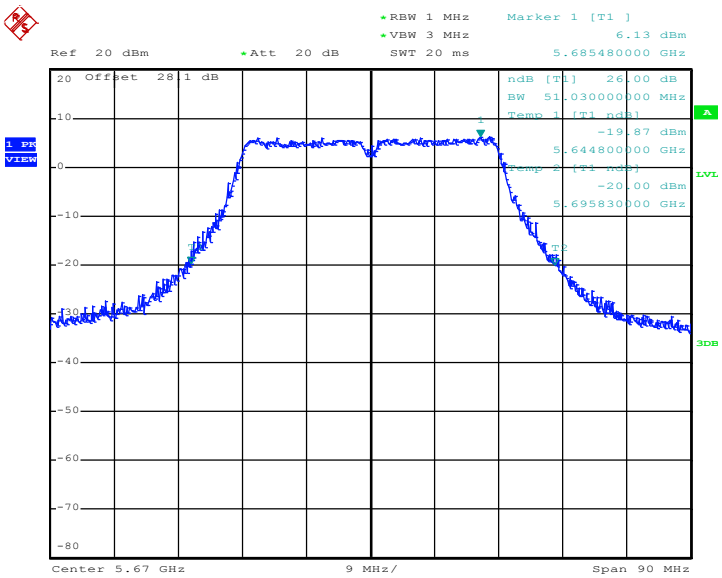

Date: 8.OCT.2012 14:34:16

## 26 dB Bandwidth Plot on 802.11n HT40 Channel 110




Date: 8.OCT.2012 14:31:14

## 26 dB Bandwidth Plot on 802.11n HT40 Channel 134




Date: 8.OCT.2012 14:28:32

## 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 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power 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 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power 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.

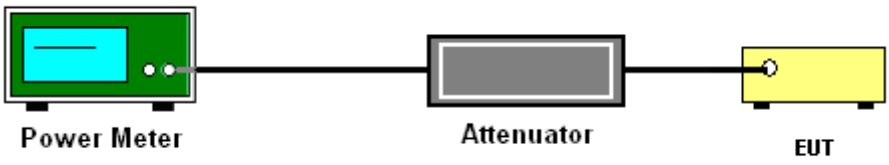
### 3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r02.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Maximum Conducted Output Power

| Test Mode : | 802.11a | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle | 95.39% | Duty Factor | 0.20dB |

| Channel | Frequency (MHz) | 802.11a Output Power (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 36 | 5180 | 12.24 | 12.44 | 17 | Pass |
| 44 | 5220 | 12.06 | 12.26 | 17 | Pass |
| 48 | 5240 | 12.01 | 12.21 | 17 | Pass |
| 52 | 5260 | 11.98 | 12.18 | 24 | Pass |
| 60 | 5300 | 11.97 | 12.17 | 24 | Pass |
| 64 | 5320 | 11.92 | 12.12 | 24 | Pass |
| 100 | 5500 | 12.09 | 12.29 | 24 | Pass |
| 116 | 5580 | 11.96 | 12.16 | 24 | Pass |
| 140 | 5700 | 12.01 | 12.21 | 24 | Pass |

**Note:**

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW)
3. 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 dBm + 10log (26dB BW).

| Test Mode : | 802.11n HT20 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle | 95.07% | Duty Factor | 0.22dB |

| Channel | Frequency (MHz) | 802.11n HT20 Output Power (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 36 | 5180 | 12.24 | 12.46 | 17 | Pass |
| 44 | 5220 | 12.05 | 12.27 | 17 | Pass |
| 48 | 5240 | 11.97 | 12.19 | 17 | Pass |
| 52 | 5260 | 12.03 | 12.25 | 24 | Pass |
| 60 | 5300 | 12.09 | 12.31 | 24 | Pass |
| 64 | 5320 | 11.98 | 12.20 | 24 | Pass |
| 100 | 5500 | 12.08 | 12.30 | 24 | Pass |
| 116 | 5580 | 12.01 | 12.23 | 24 | Pass |
| 140 | 5700 | 11.97 | 12.19 | 24 | Pass |

**Note:**

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW)
3. 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 dBm + 10log (26dB BW)

| Test Mode : | 802.11n HT40 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle | 86.98% | Duty Factor | 0.61dB |

| Channel | Frequency (MHz) | 802.11n HT40 Output Power (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 38 | 5190 | 8.68 | 9.29 | 17 | Pass |
| 46 | 5230 | 11.26 | 11.87 | 17 | Pass |
| 54 | 5270 | 11.05 | 11.66 | 24 | Pass |
| 62 | 5310 | 11.14 | 11.75 | 24 | Pass |
| 102 | 5510 | 11.44 | 12.05 | 24 | Pass |
| 110 | 5550 | 11.36 | 11.97 | 24 | Pass |
| 134 | 5670 | 11.34 | 11.95 | 24 | Pass |

**Note:**

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW)
3. 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 dBm + 10log (26dB BW)

## 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 1-MHz 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 1-MHz 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 testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02.

Section E) Peak power spectral density (PPSD).

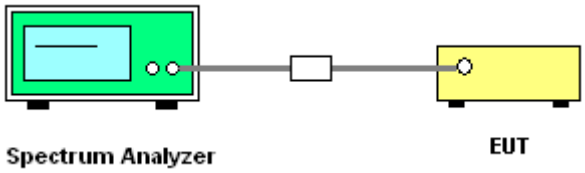
Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

**# Method SA-2 #**

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r02.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = sample
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

### 3.3.4 Test Setup



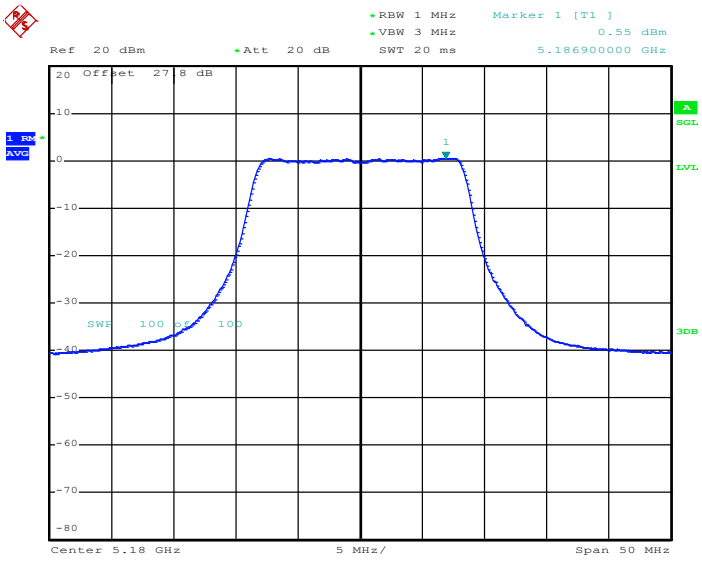
### 3.3.5 Test Result of Power Spectral Density

| Test Mode : | 802.11a | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle: | 95.39% | Duty Factor: | 0.20dB |

| Channel | Frequency (MHz) | 802.11a PSD (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 36 | 5180 | 0.550 | 0.755 | 4 | Pass |
| 44 | 5220 | 0.470 | 0.675 | 4 | Pass |
| 48 | 5240 | 0.450 | 0.655 | 4 | Pass |
| 52 | 5260 | 0.330 | 0.535 | 11 | Pass |
| 60 | 5300 | 0.700 | 0.905 | 11 | Pass |
| 64 | 5320 | 0.650 | 0.855 | 11 | Pass |
| 100 | 5500 | 1.350 | 1.555 | 11 | Pass |
| 116 | 5580 | 0.540 | 0.745 | 11 | Pass |
| 140 | 5700 | 0.790 | 0.995 | 11 | Pass |

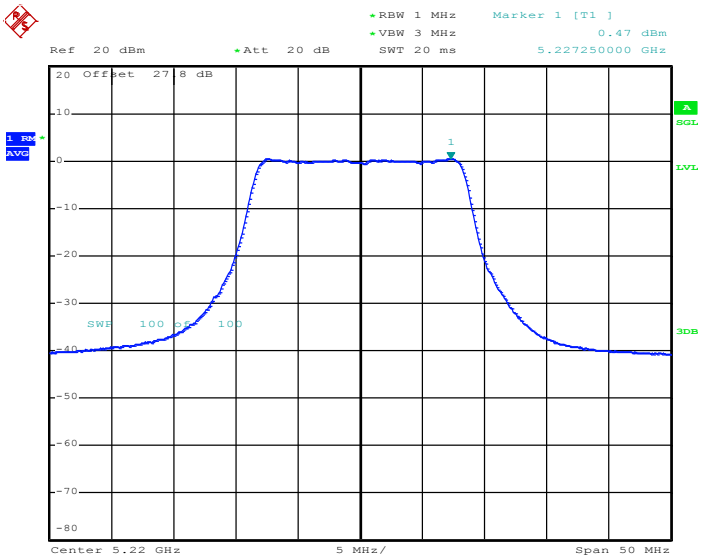
**Note:** Result of Final PSD equals to Measured PSD adds the duty factor.

**PSD Plot on 802.11a Channel 36**



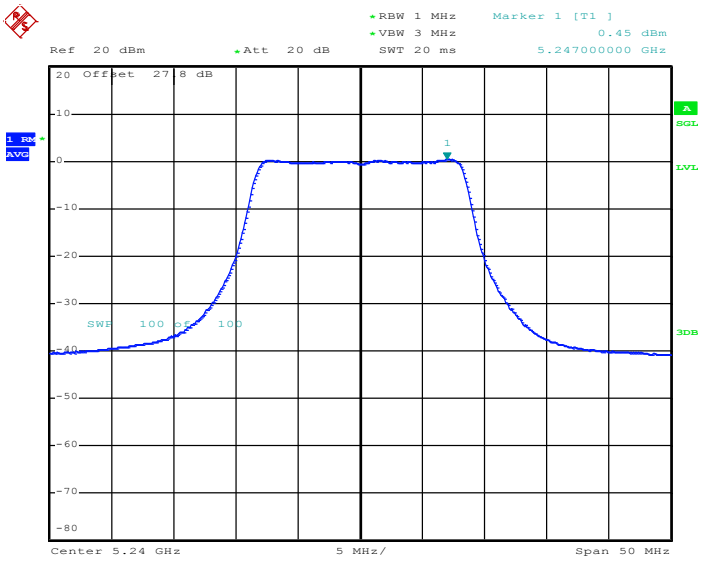

Date: 7.OCT.2012 15:51:37

## PSD Plot on 802.11a Channel 44



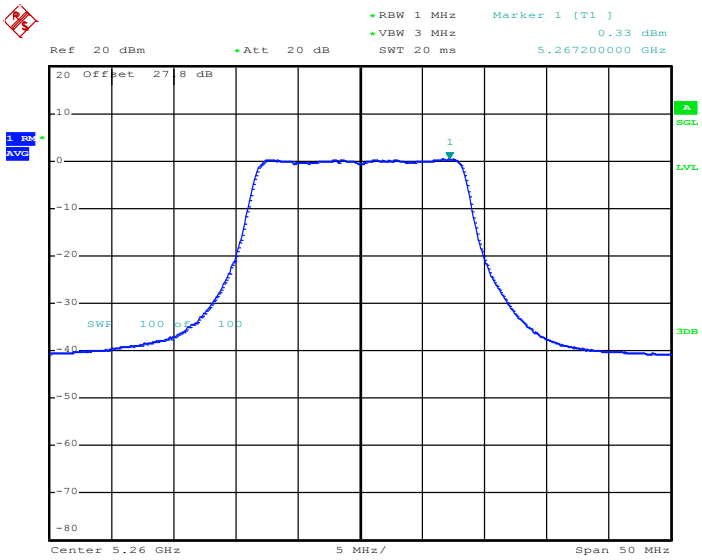

Date: 7.OCT.2012 15:53:59

## PSD Plot on 802.11a Channel 48



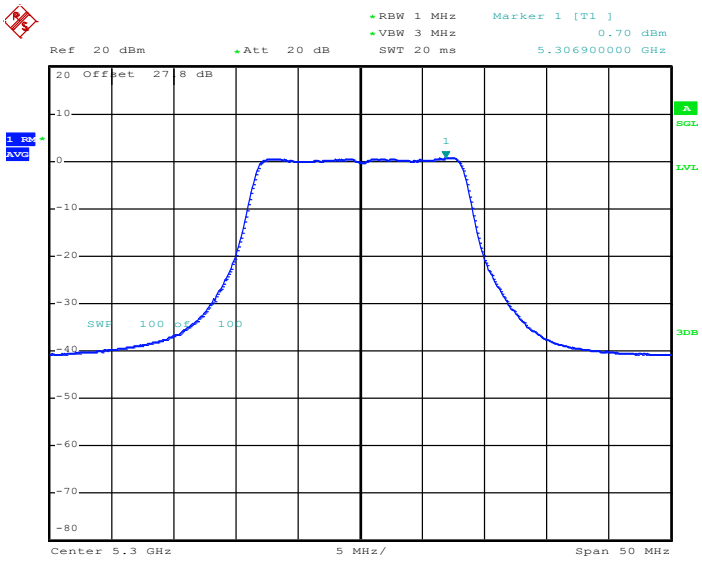

Date: 7.OCT.2012 15:56:06

## PSD Plot on 802.11a Channel 52



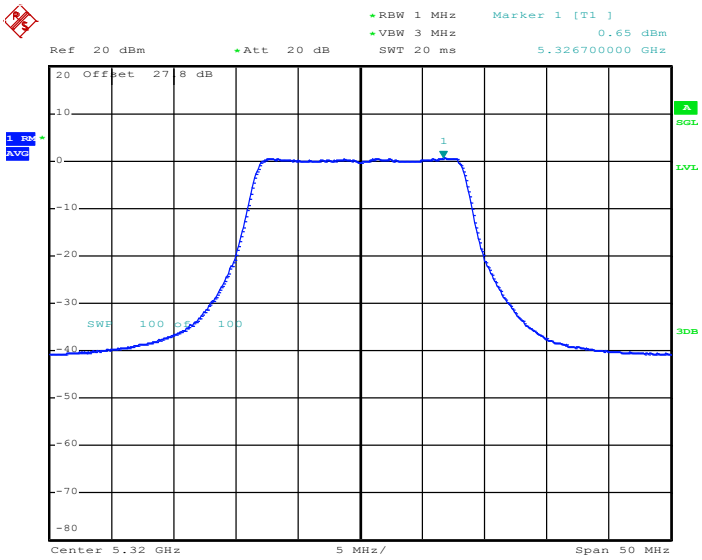

Date: 7.OCT.2012 15:58:10

## PSD Plot on 802.11a Channel 60



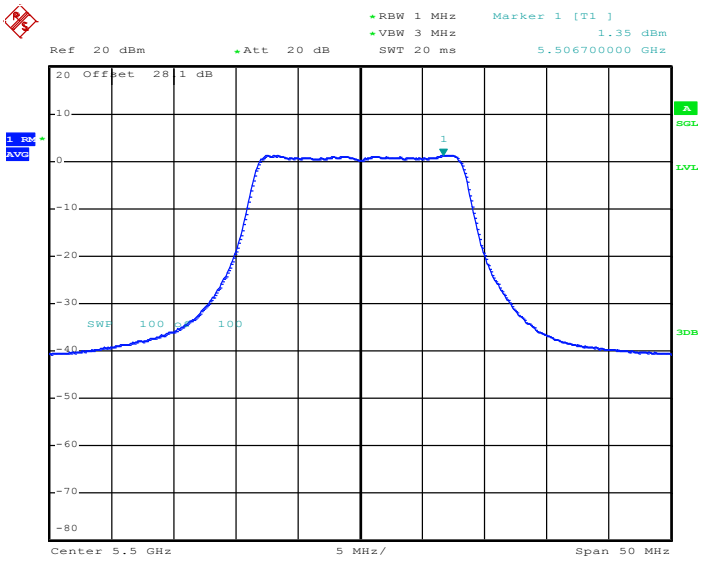

Date: 7.OCT.2012 16:00:23

## PSD Plot on 802.11a Channel 64



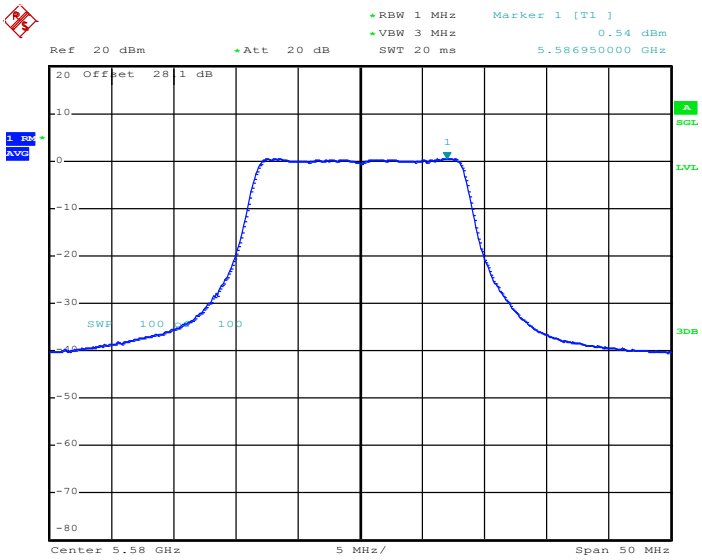

Date: 7.OCT.2012 16:02:01

## PSD Plot on 802.11a Channel 100



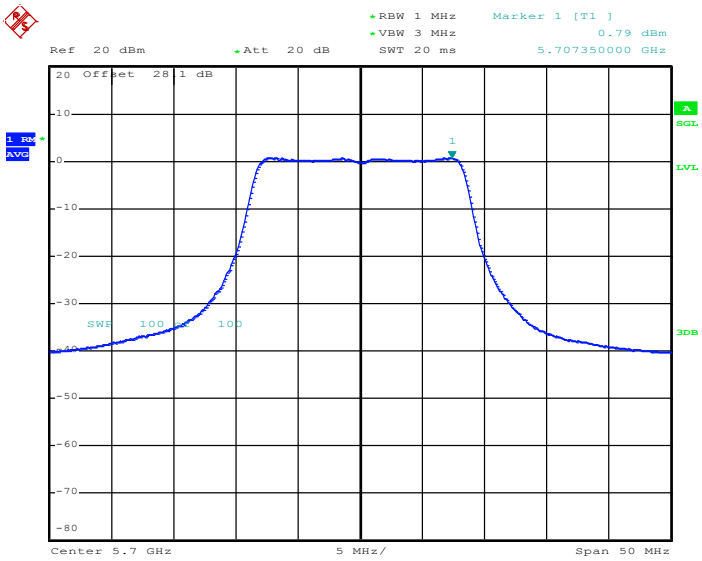

Date: 7.OCT.2012 16:03:48

## PSD Plot on 802.11a Channel 116




Date: 7.OCT.2012 16:05:42

## PSD Plot on 802.11a Channel 140



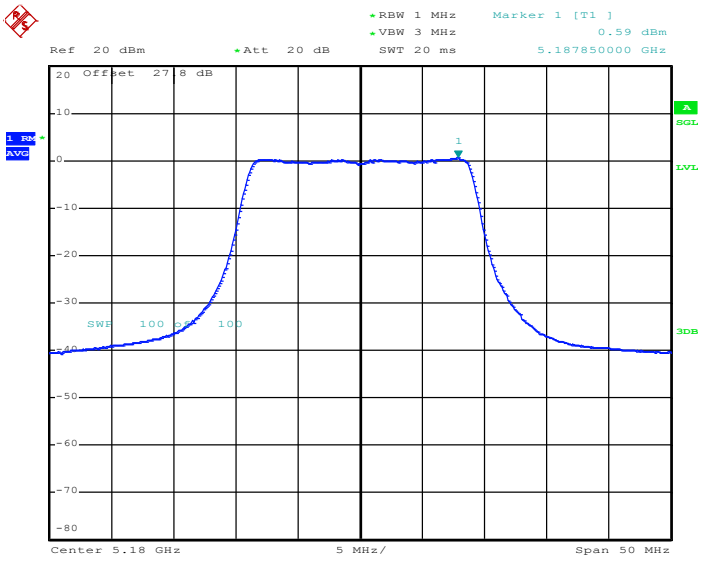

Date: 7.OCT.2012 16:07:49

| Test Mode : | 802.11n HT20 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle: | 95.07% | Duty Factor: | 0.22dB |

| Channel | Frequency (MHz) | 802.11n HT20 PSD (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 36 | 5180 | 0.590 | 0.810 | 4 | Pass |
| 44 | 5220 | 0.310 | 0.530 | 4 | Pass |
| 48 | 5240 | 0.270 | 0.490 | 4 | Pass |
| 52 | 5260 | 0.430 | 0.650 | 11 | Pass |
| 60 | 5300 | 0.580 | 0.800 | 11 | Pass |
| 64 | 5320 | 0.630 | 0.850 | 11 | Pass |
| 100 | 5500 | 1.050 | 1.270 | 11 | Pass |
| 116 | 5580 | 0.310 | 0.530 | 11 | Pass |
| 140 | 5700 | 0.600 | 0.820 | 11 | Pass |

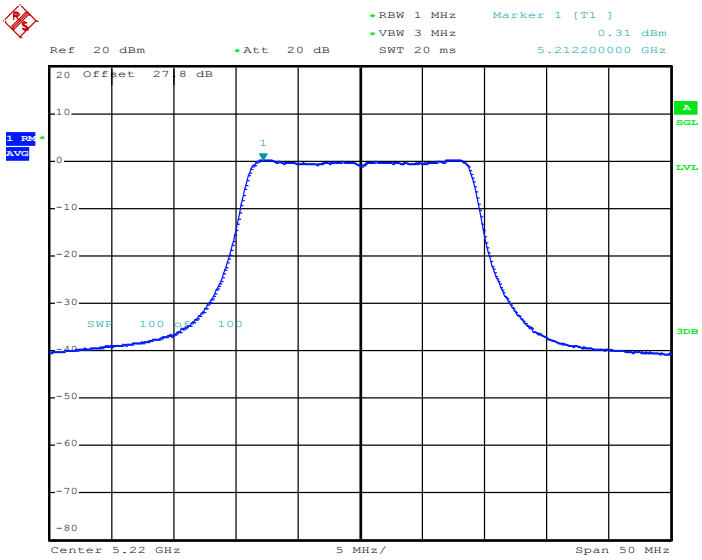
**Note:** Result of Final PSD equals to Measured PSD adds the duty factor.

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



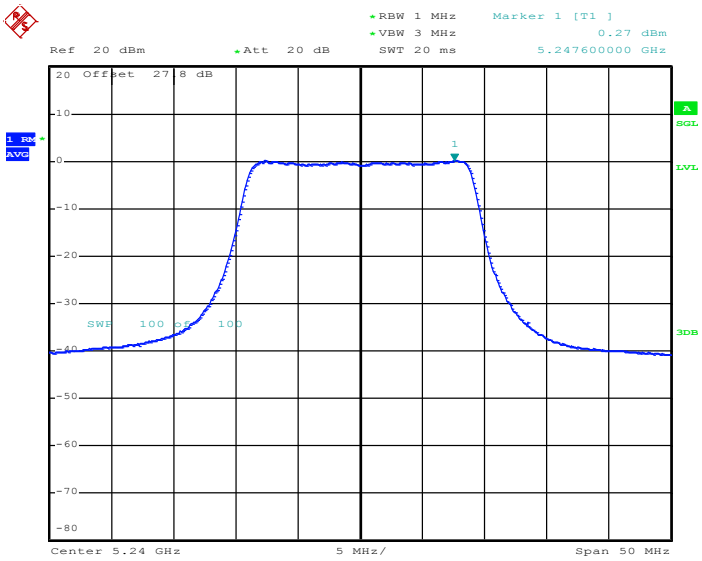

Date: 7.OCT.2012 16:15:33

## PSD Plot on 802.11n HT20 Channel 44



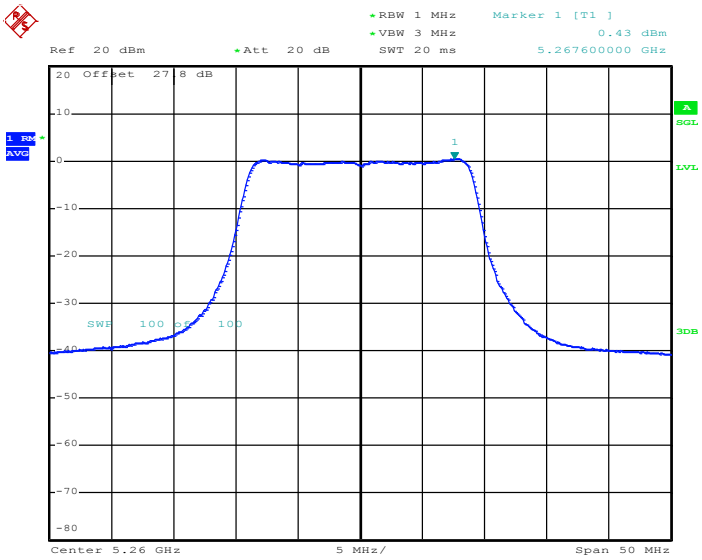

Date: 7.OCT.2012 16:17:19

## PSD Plot on 802.11n HT20 Channel 48



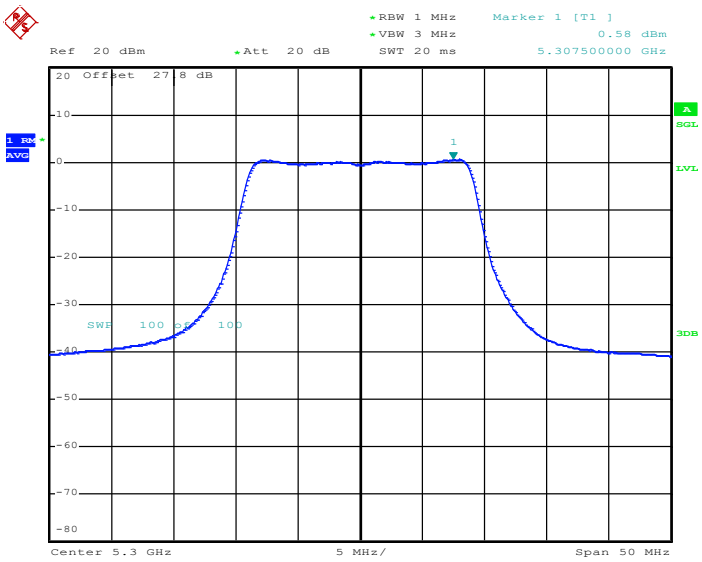

Date: 7.OCT.2012 16:19:10

## PSD Plot on 802.11n HT20 Channel 52



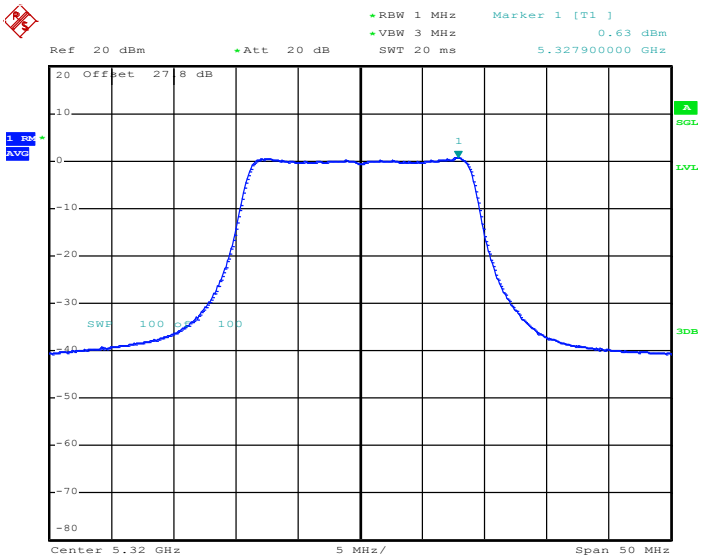

Date: 7.OCT.2012 16:21:07

## PSD Plot on 802.11n HT20 Channel 60



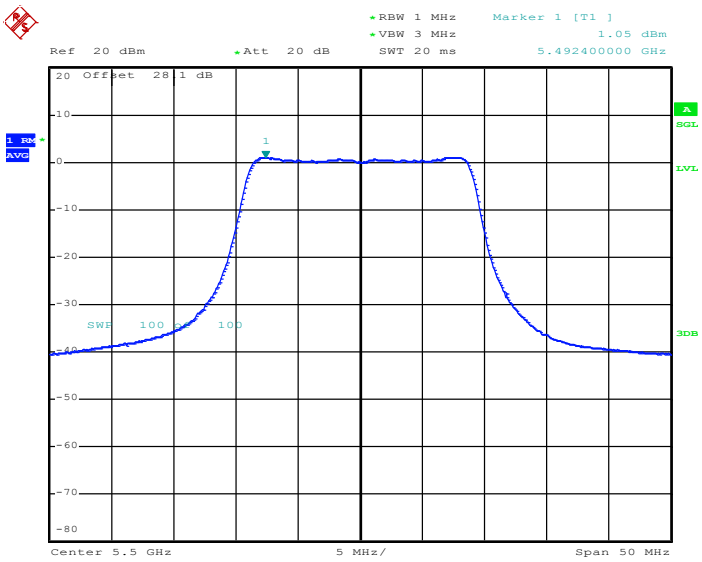

Date: 7.OCT.2012 16:22:58

## PSD Plot on 802.11n HT20 Channel 64



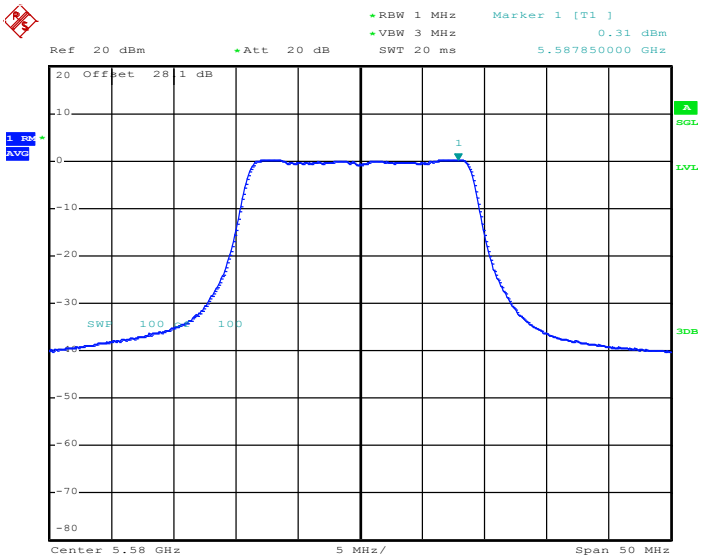

Date: 7.OCT.2012 16:25:02

## PSD Plot on 802.11n HT20 Channel 100



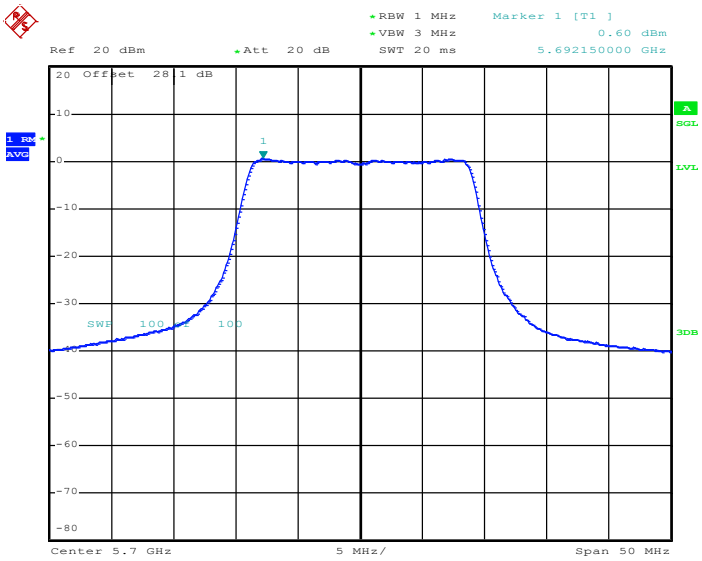

Date: 7.OCT.2012 16:13:44

## PSD Plot on 802.11n HT20 Channel 116




Date: 7.OCT.2012 16:11:45

## PSD Plot on 802.11n HT20 Channel 140




:

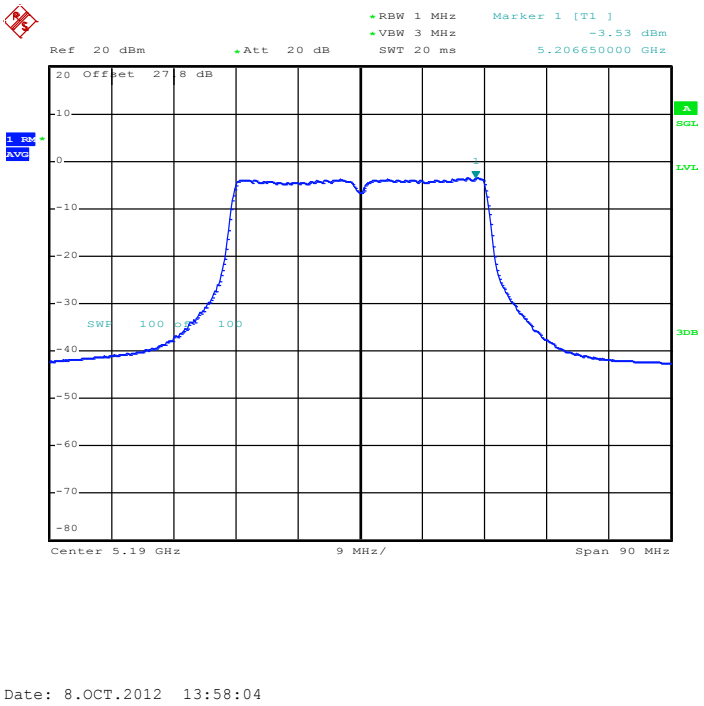
Date: 7.OCT.2012 16:09:45

| Test Mode : | 802.11n HT40 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |
| Duty Cycle: | 86.98% | Duty Factor: | 0.61dB |

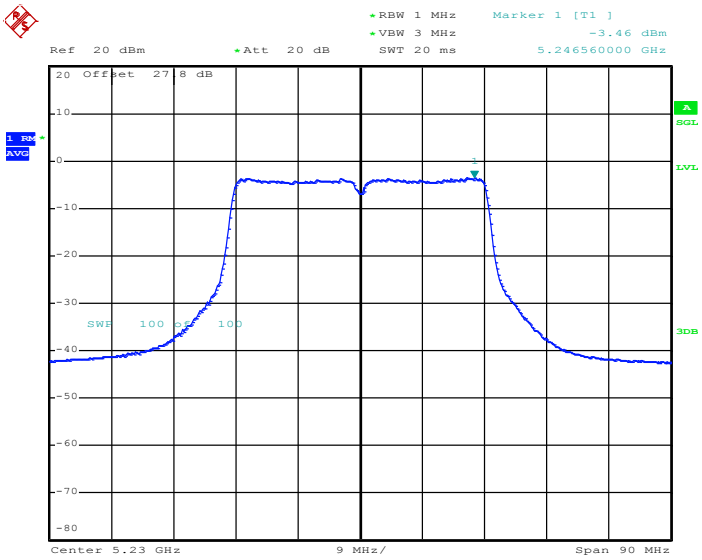
| Channel | Frequency (MHz) | 802.11n HT40 PSD (dBm) | | Max. Limits (dBm ) | Pass/Fail |
|---|---|---|---|---|---|
| | | Measured | Final | | |
| 38 | 5190 | -3.530 | -2.924 | 4 | Pass |
| 46 | 5230 | -3.460 | -2.854 | 4 | Pass |
| 54 | 5270 | -3.410 | -2.804 | 11 | Pass |
| 62 | 5310 | -3.610 | -3.004 | 11 | Pass |
| 102 | 5510 | -3.020 | -2.414 | 11 | Pass |
| 110 | 5550 | -2.900 | -2.294 | 11 | Pass |
| 134 | 5670 | -3.020 | -2.414 | 11 | Pass |

**Note:** Result of Final PSD equals to Measured PSD adds the duty factor.

**PSD Plot on 802.11n HT40 Channel 38**

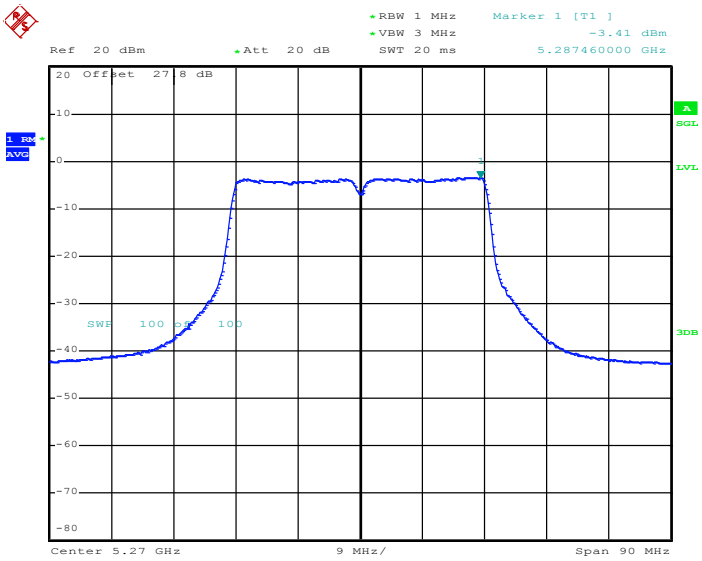


## PSD Plot on 802.11n HT40 Channel 46



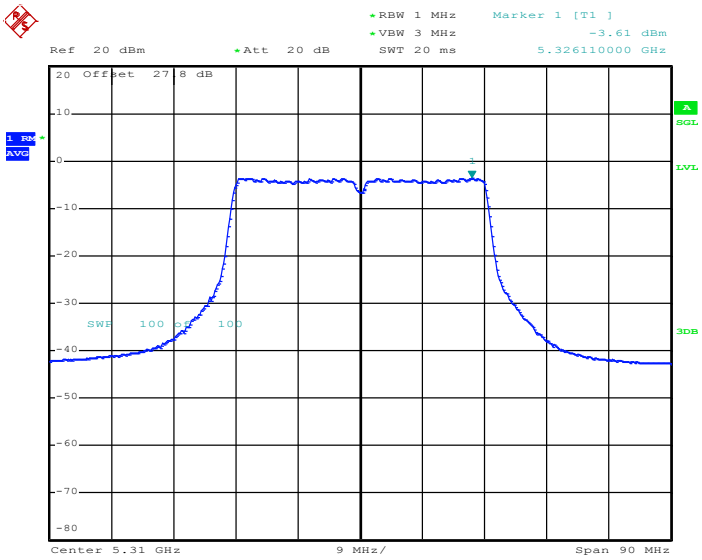

Date: 8.OCT.2012 14:02:01

## PSD Plot on 802.11n HT40 Channel 54



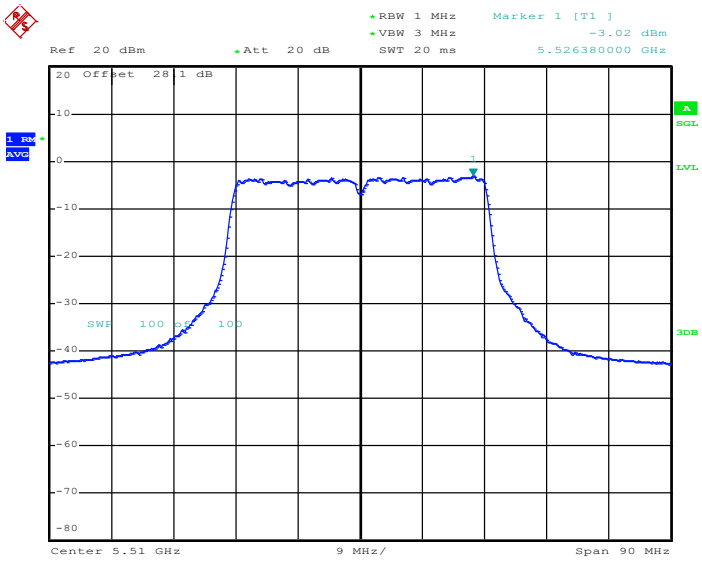

Date: 8.OCT.2012 14:07:13

## PSD Plot on 802.11n HT40 Channel 62



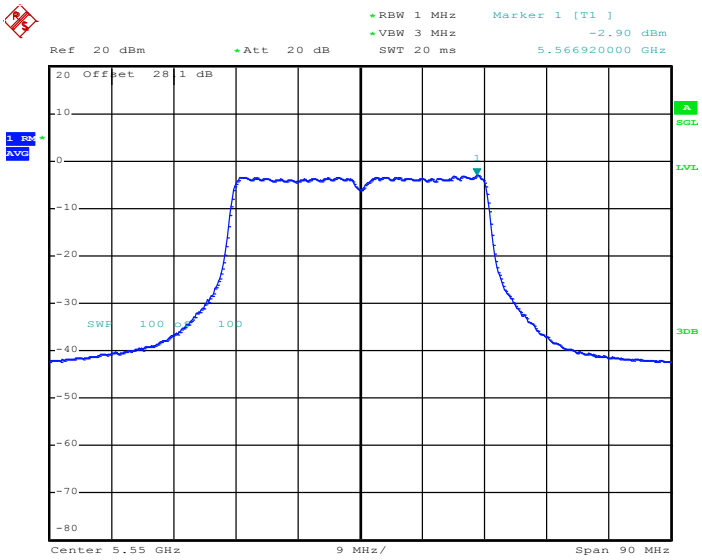

Date: 8.OCT.2012 14:10:24

## PSD Plot on 802.11n HT40 Channel 102



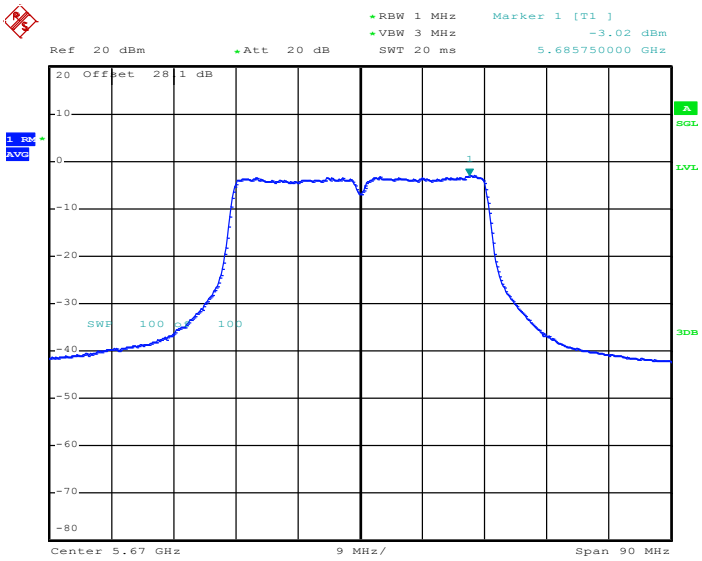

Date: 8.OCT.2012 14:34:51

## PSD Plot on 802.11n HT40 Channel 110




Date: 8.OCT.2012 14:31:36

## PSD Plot on 802.11n HT40 Channel 134




Date: 8.OCT.2012 14:29:26

## 3.4 Peak Excursion Ratio Measurement

### 3.4.1 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.

### 3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.4.3 Test Procedures

T The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02.

Section F) Peak excursion measurement

1. The transmitter output is connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emission bandwidth.
3. Find the maximum of the peak-max-hold spectrum.

   *Set RBW = 1MHz.

   *Set VBW ≥ 3MHz.

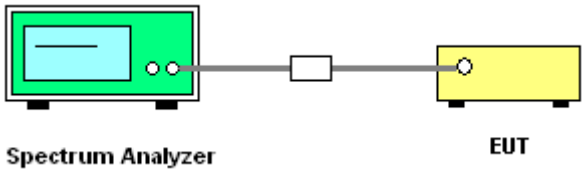
   *Detector = peak.

   *Trace mode = max-hold.

   *Allow the sweeps to continue until the trace stabilizes.

   *Use the peak search function to find the peak of the spectrum.
4. Use the procedure found under section 3.3 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

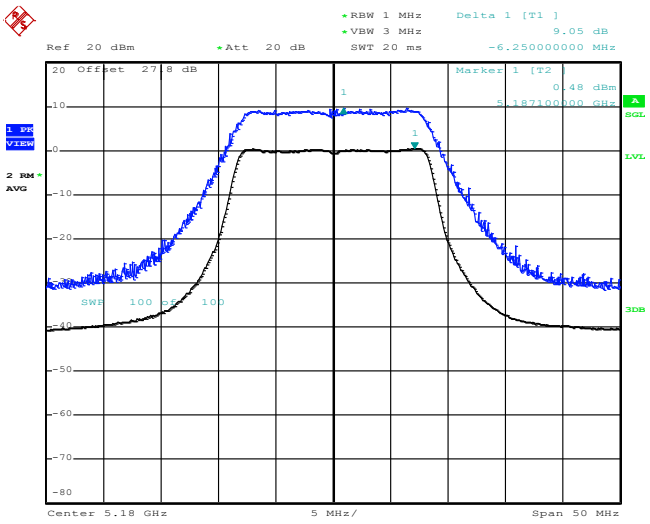
### 3.4.4 Test Setup



## 3.4.5 Test Result of Peak Excursion Ratio

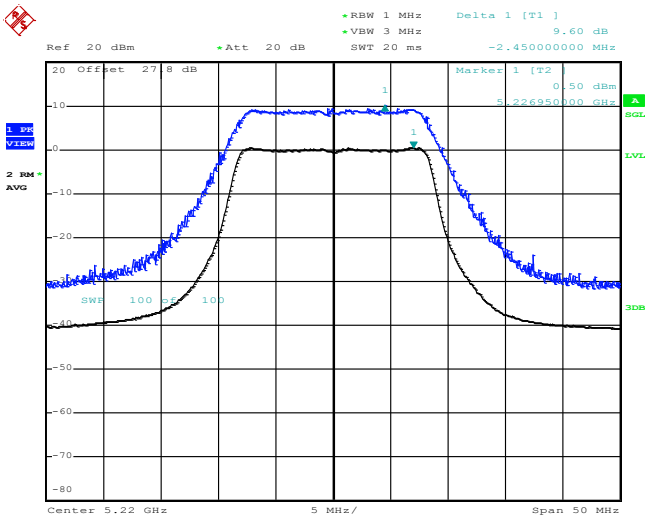
| Test Mode : | 802.11a | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

**Peak Excursion Ratio Plot on 802.11a Channel 36**



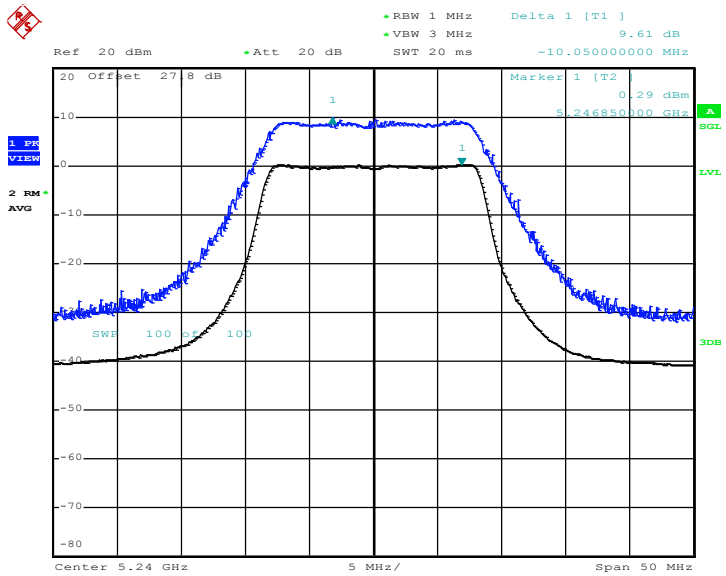

Date: 7.OCT.2012 15:51:55

**Peak Excursion Ratio Plot on 802.11a Channel 44**



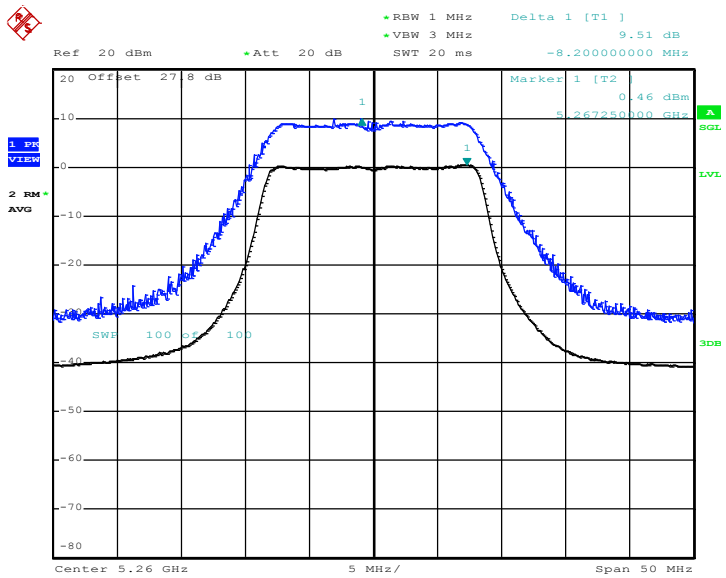

Date: 7.OCT.2012 15:54:17

## Peak Excursion Ratio Plot on 802.11a Channel 48



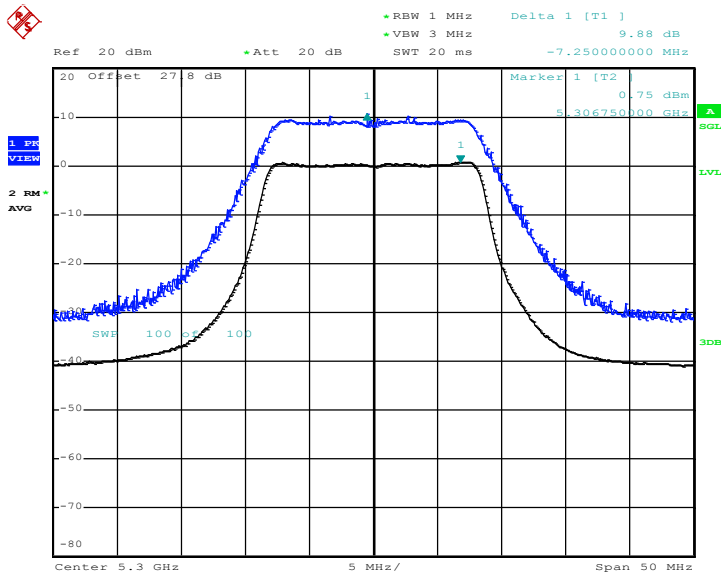

Date: 7.OCT.2012 15:56:25

## Peak Excursion Ratio Plot on 802.11a Channel 52



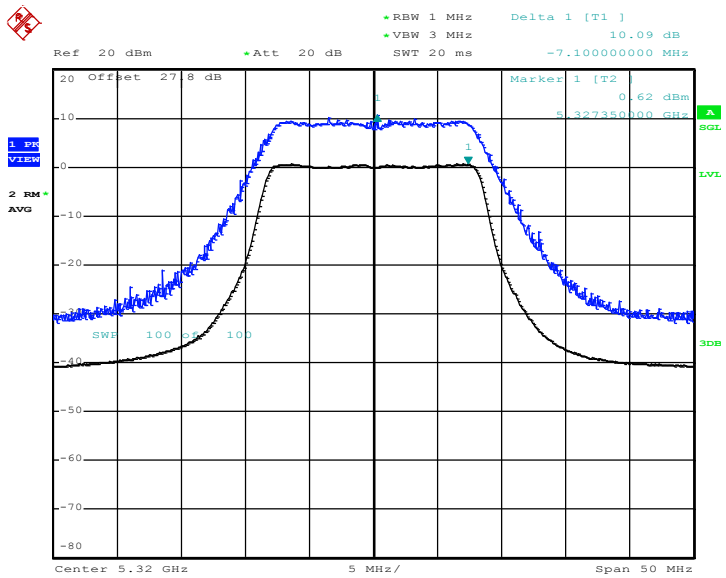

Date: 7.OCT.2012 15:58:30

## Peak Excursion Ratio Plot on 802.11a Channel 60



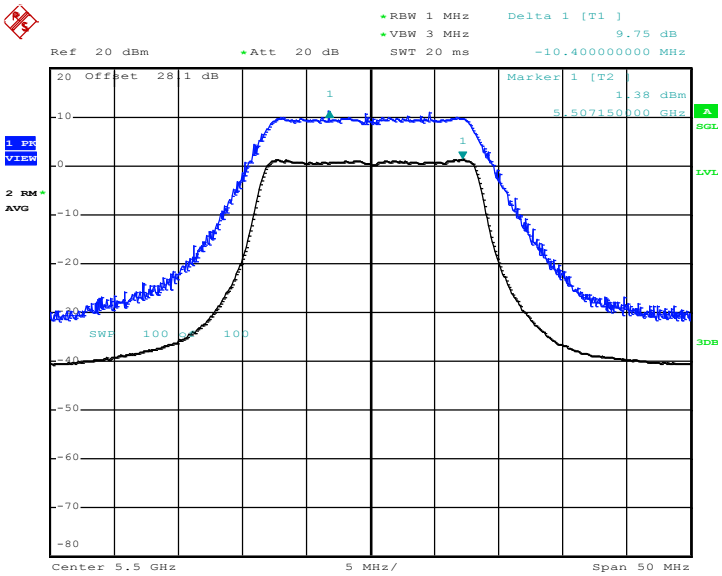

Date: 7.OCT.2012 16:00:42

## Peak Excursion Ratio Plot on 802.11a Channel 64



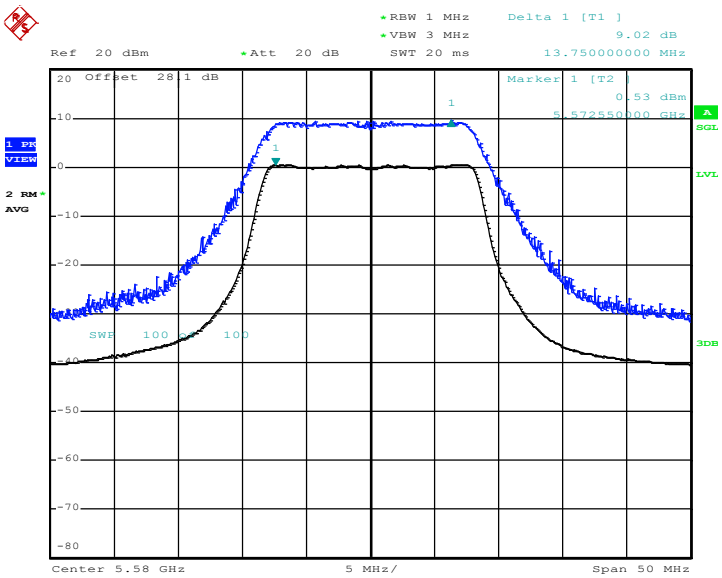

Date: 7.OCT.2012 16:02:20

## Peak Excursion Ratio Plot on 802.11a Channel 100



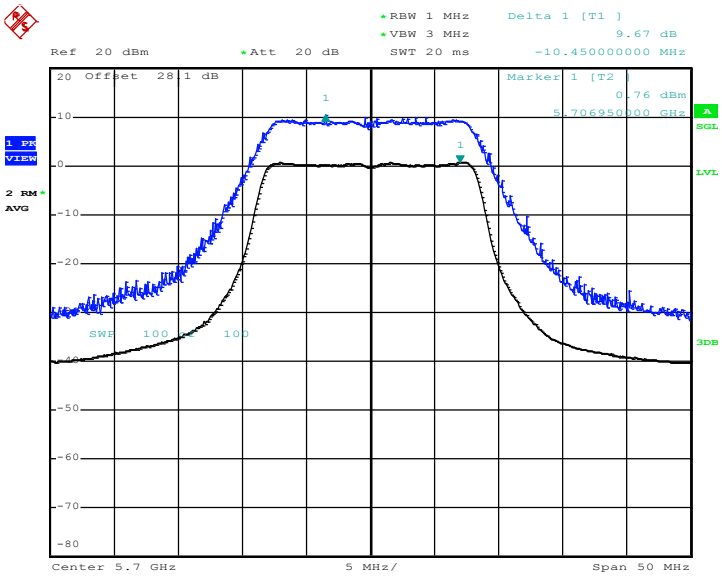

Date: 7.OCT.2012 16:04:07

## Peak Excursion Ratio Plot on 802.11a Channel 116




Date: 7.OCT.2012 16:05:59

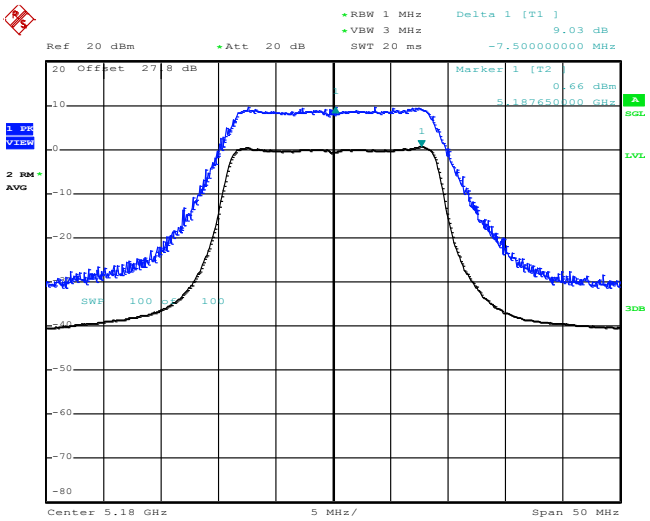
## Peak Excursion Ratio Plot on 802.11a Channel 140




Date: 7.OCT.2012 16:08:11

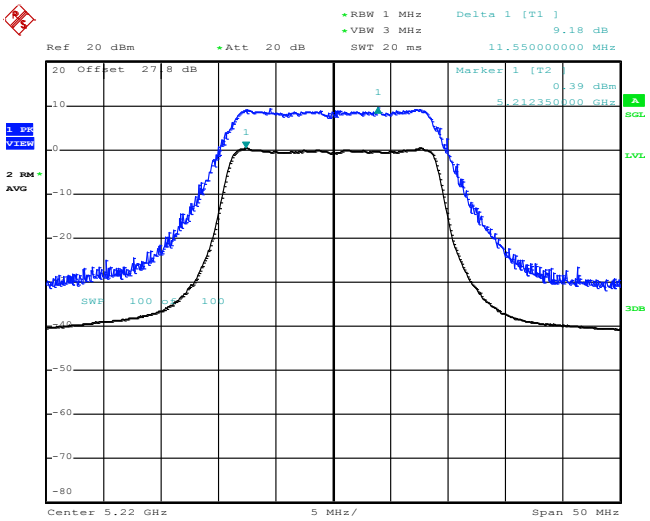
| Test Mode : | 802.11n HT20 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

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



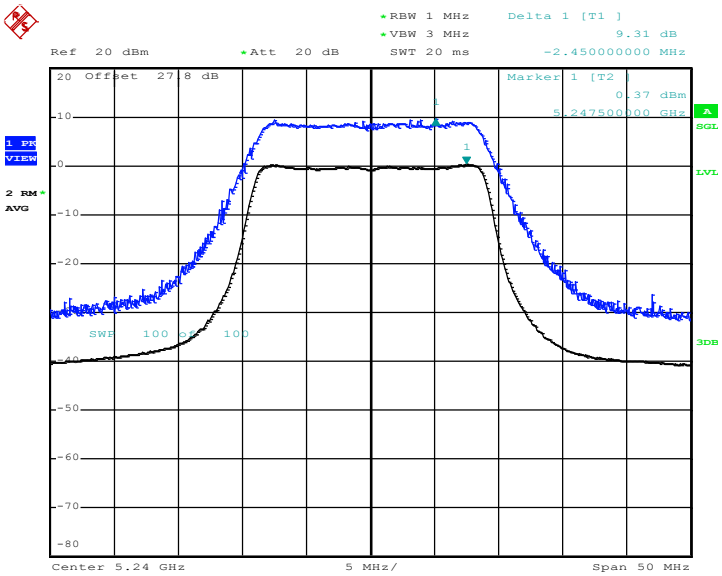

Date: 7.OCT.2012 16:15:52

**Peak Excursion Ratio Plot on 802.11n HT20 Channel 44**



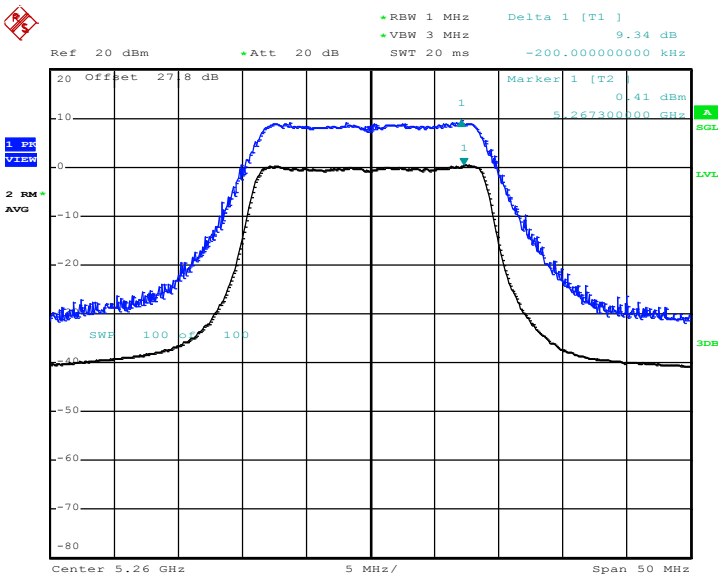

Date: 7.OCT.2012 16:17:38

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 48



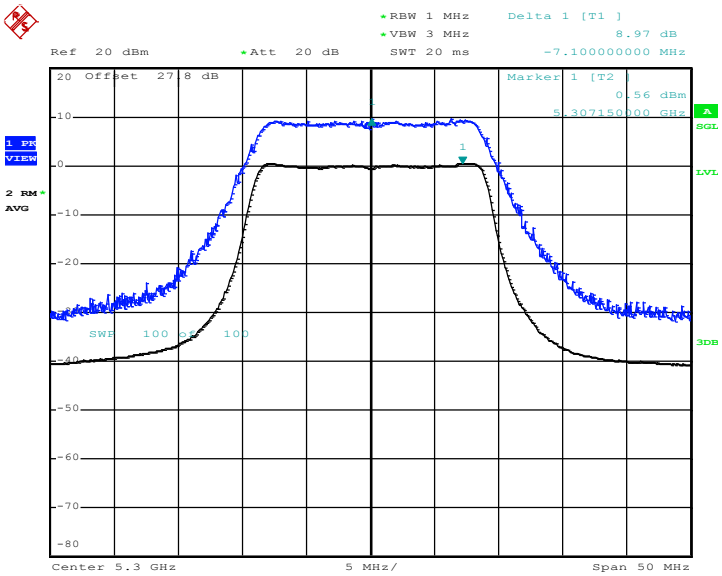

Date: 7.OCT.2012 16:19:29

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 52



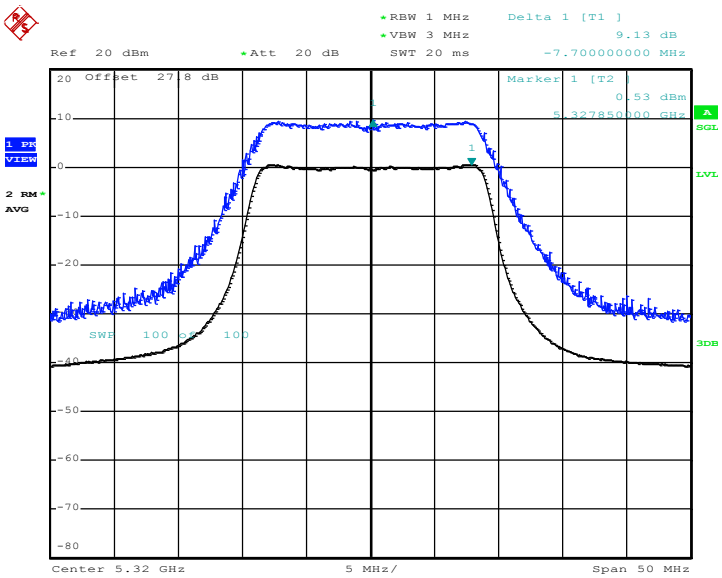

Date: 7.OCT.2012 16:21:29

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 60



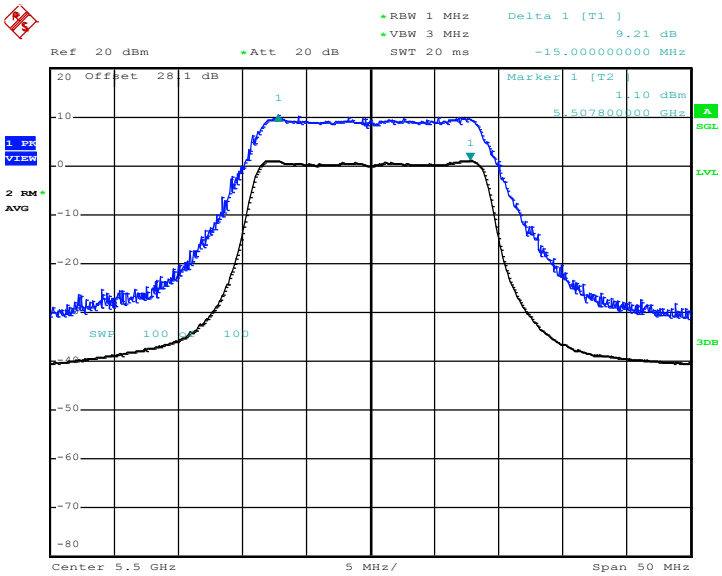

Date: 7.OCT.2012 16:23:20

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 64



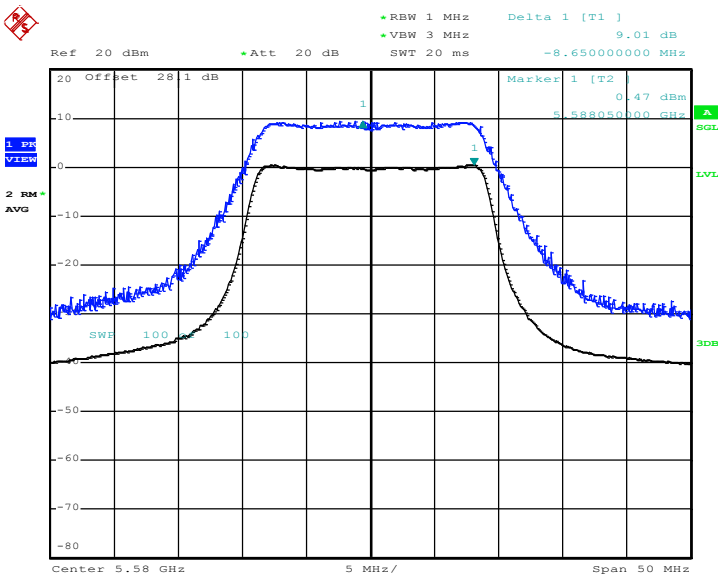

Date: 7.OCT.2012 16:25:26

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 100



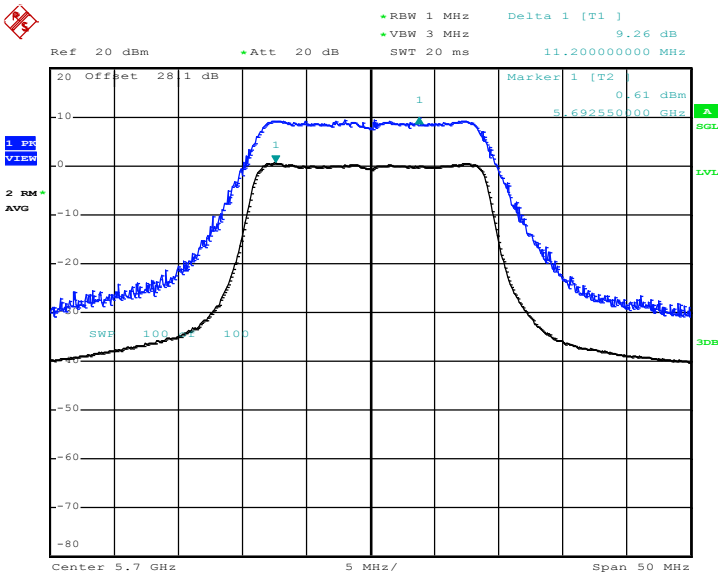

Date: 7.OCT.2012 16:14:02

## Peak Excursion Ratio Plot on 802.11n HT20 Channel 116




Date: 7.OCT.2012 16:12:05

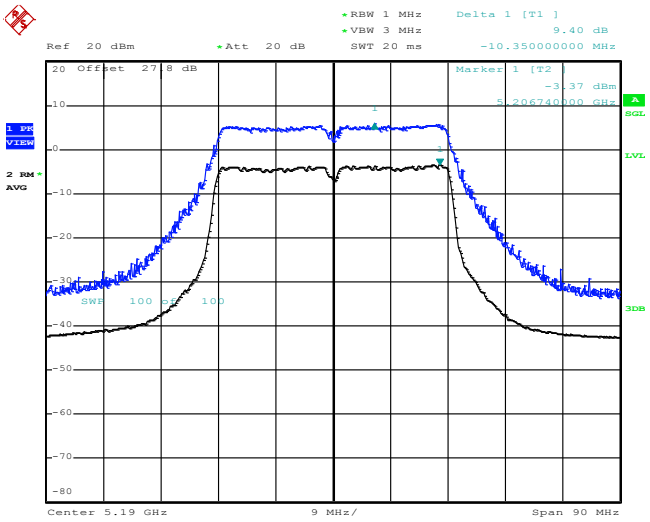
## Peak Excursion Ratio Plot on 802.11n HT20 Channel 140




Date: 7.OCT.2012 16:10:05

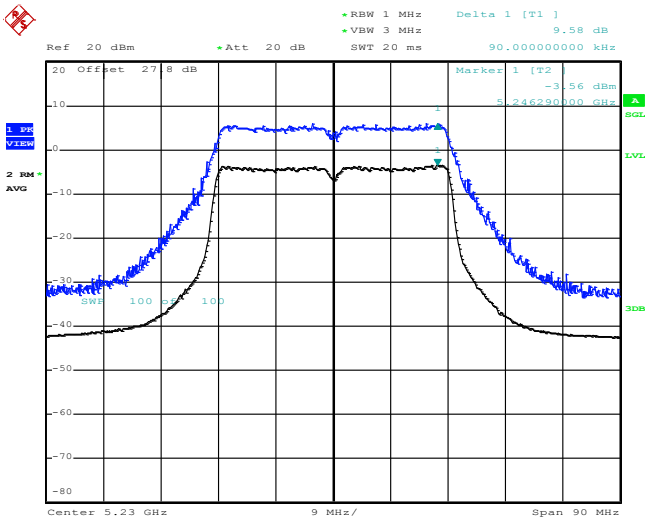
| Test Mode : | 802.11n HT40 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

**Peak Excursion Ratio Plot on 802.11n HT40 Channel 38**



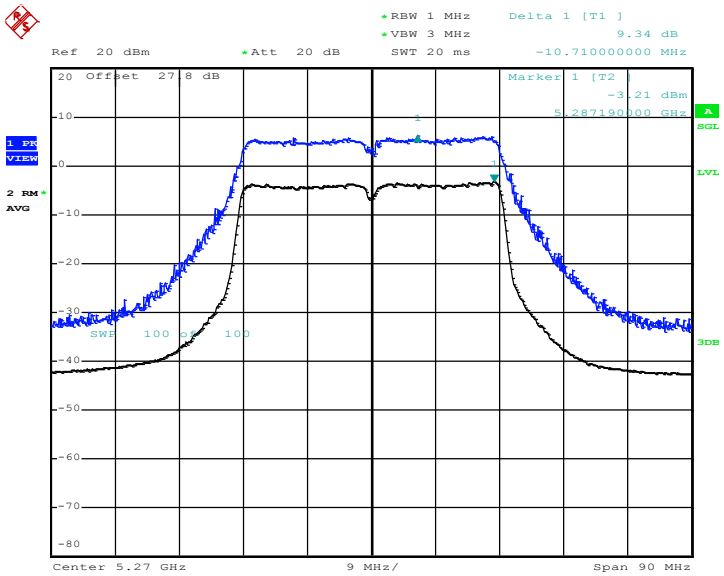

Date: 8.OCT.2012 13:58:28

**Peak Excursion Ratio Plot on 802.11n HT40 Channel 46**



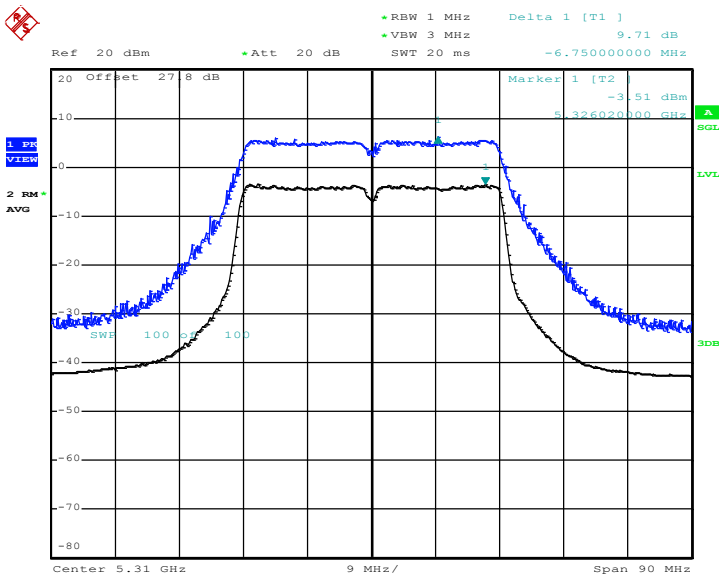

Date: 8.OCT.2012 14:03:54

## Peak Excursion Ratio Plot on 802.11n HT40 Channel 54



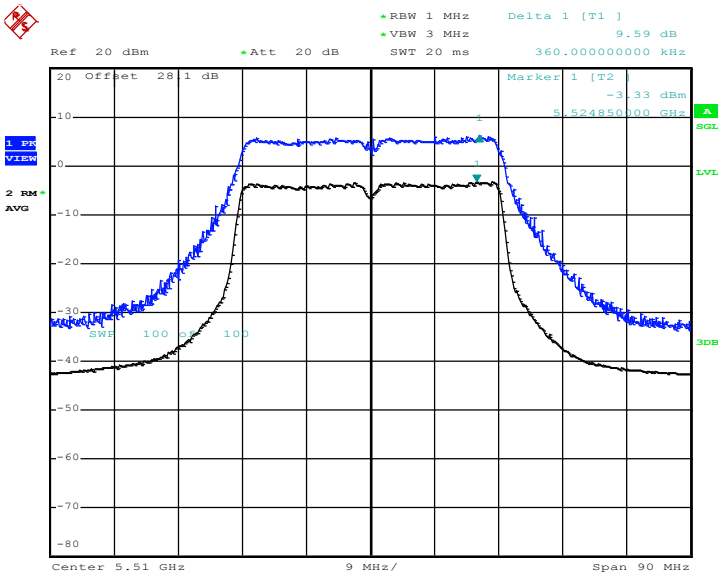

Date: 8.OCT.2012 14:08:25

## Peak Excursion Ratio Plot on 802.11n HT40 Channel 62



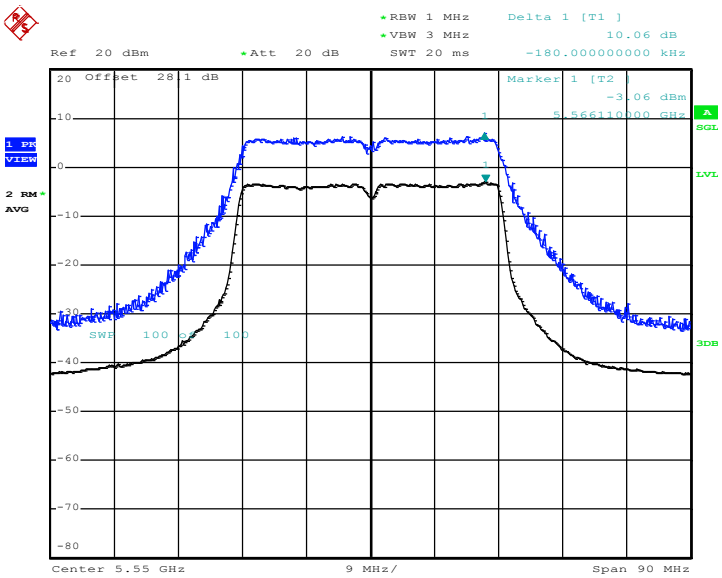

Date: 8.OCT.2012 14:10:48

## Peak Excursion Ratio Plot on 802.11n HT40 Channel 102



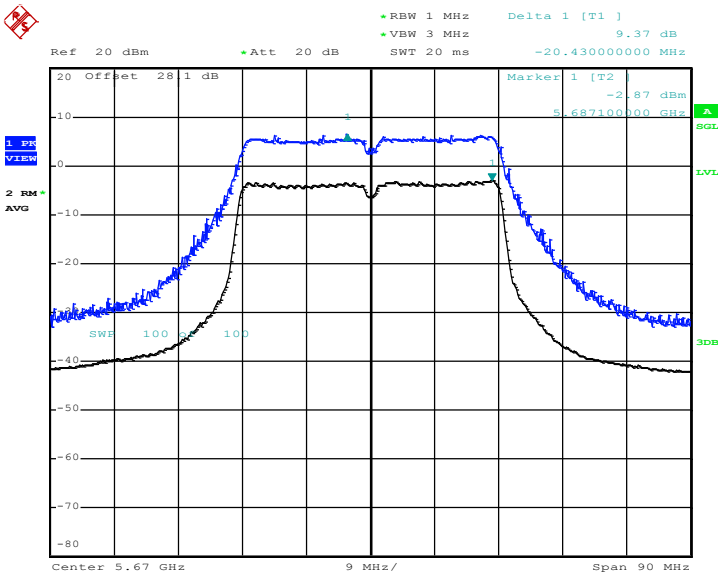

Date: 8.OCT.2012 14:35:25

## Peak Excursion Ratio Plot on 802.11n HT40 Channel 110




Date: 8.OCT.2012 14:31:57

## Peak Excursion Ratio Plot on 802.11n HT40 Channel 134




Date: 8.OCT.2012 14:29:50

## 3.5 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

### 3.5.1 Limit of Unwanted Emissions

(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 –27dBm/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) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (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 |

**Note:** The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

| EIRP (dBm) | Field Strength at 3m (dBuV/m) |
|---|---|
| -17 | 78.3 |
| - 27 | 68.3 |

### 3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.5.3 Test Procedures

1. The testing follows the guidelines in fulfills ANSI C63.4-2003 and the guidelines in ANSI C63.10-2009 test site requirement and FCC KDB 789033 D01 General UNII Test Procedures v01r02.

   Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 KHz
   - VBW = 300 KHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - The setting follows the G) 5) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

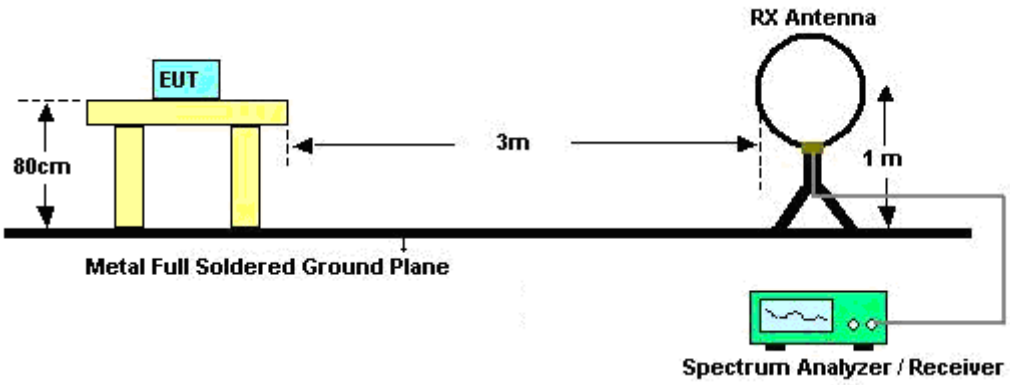
   - The setting follows G) 6) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

| Band | Duty Cycle (%) | T(us) | 1/T(KHz) | VBW Setting |
|---|---|---|---|---|
| 802.11a | 95.39 | 2070.00 | 0.483 | 1KHz |
| 802.11n HT20 | 95.07 | 1930.00 | 0.518 | 1KHz |
| 802.11n HT40 | 86.98 | 668.00 | 1.497 | 3KHz |

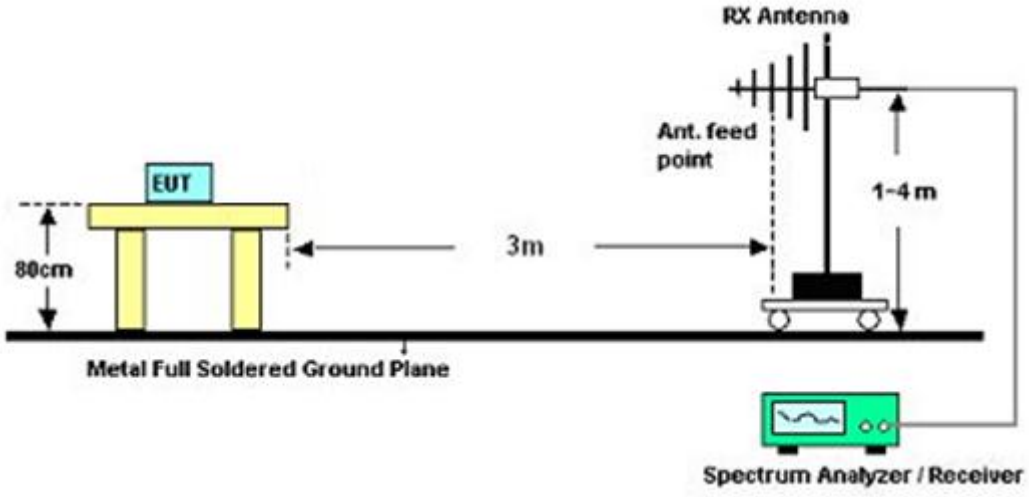
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. 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.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. 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 peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.5.4 Test Setup

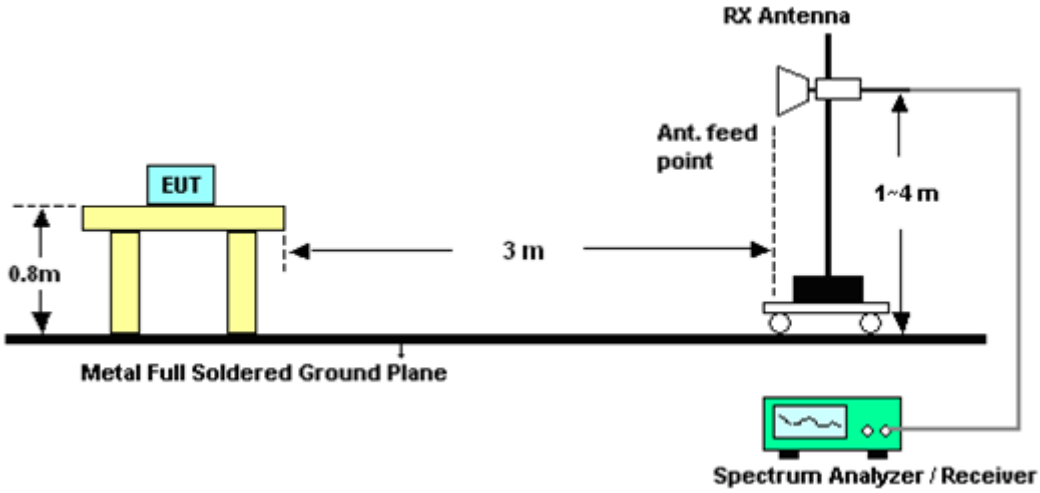
**For radiated emissions below 30MHz**



**For radiated emissions from 30MHz to 1GHz**




**For radiated emissions above 1GHz**




## 3.5.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

### 3.5.6 Test Result

### 3.5.6.1 Test Result of Radiated Band Edges

**<Sample 1>**

| | | | |
|---|---|---|---|
| **Test Mode :** | 802.11a | **Temperature :** | 30~31°C |
| **Test Channel :** | 36 | **Relative Humidity :** | 42~43% |
| **Test Engineer :** | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBµV/m )** | **Over Limit ( dB )** | **Limit Line ( dBµV/m )** | **Read Level (dBµV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 5148.55 | 58.3 | -15.7 | 74 | 46.82 | 34.89 | 10.44 | 33.85 | 100 | 38 | Peak |
| 5150 | 45.13 | -8.87 | 54 | 33.65 | 34.89 | 10.44 | 33.85 | 100 | 38 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBµV/m )** | **Over Limit ( dB )** | **Limit Line ( dBµV/m )** | **Read Level (dBµV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 5144.2 | 57.54 | -16.46 | 74 | 46.06 | 34.89 | 10.44 | 33.85 | 104 | 274 | Peak |
| 5140.75 | 42.09 | -11.91 | 54 | 30.61 | 34.89 | 10.44 | 33.85 | 104 | 274 | Average |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5124.3 | 57.16 | -16.84 | 74 | 45.73 | 34.88 | 10.4 | 33.85 | 123 | 42 | Peak |
| 5149.9 | 42.05 | -11.95 | 54 | 30.57 | 34.89 | 10.44 | 33.85 | 123 | 42 | Average |
| 5361.25 | 55.83 | -18.17 | 74 | 43.9 | 35.02 | 10.75 | 33.84 | 123 | 42 | Peak |
| 5381.4 | 40.33 | -13.67 | 54 | 28.35 | 35.03 | 10.79 | 33.84 | 123 | 42 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5135.85 | 57.15 | -16.85 | 74 | 45.72 | 34.88 | 10.4 | 33.85 | 125 | 262 | Peak |
| 5137.8 | 40.84 | -13.16 | 54 | 29.41 | 34.88 | 10.4 | 33.85 | 125 | 262 | Average |
| 5389.65 | 55.44 | -18.56 | 74 | 43.46 | 35.03 | 10.79 | 33.84 | 125 | 262 | Peak |
| 5389.15 | 39.61 | -14.39 | 54 | 27.63 | 35.03 | 10.79 | 33.84 | 125 | 262 | Average |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5134.2 | 56.35 | -17.65 | 74 | 44.92 | 34.88 | 10.4 | 33.85 | 110 | 37 | Peak |
| 5144.9 | 41.43 | -12.57 | 54 | 29.95 | 34.89 | 10.44 | 33.85 | 110 | 37 | Average |
| 5359.55 | 56.32 | -17.68 | 74 | 44.4 | 35.01 | 10.75 | 33.84 | 110 | 37 | Peak |
| 5356.95 | 41.16 | -12.84 | 54 | 29.24 | 35.01 | 10.75 | 33.84 | 110 | 37 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5121.8 | 56.31 | -17.69 | 74 | 44.89 | 34.87 | 10.4 | 33.85 | 101 | 267 | Peak |
| 5128.1 | 40.88 | -13.12 | 54 | 29.45 | 34.88 | 10.4 | 33.85 | 101 | 267 | Average |
| 5365.55 | 55.14 | -18.86 | 74 | 43.21 | 35.02 | 10.75 | 33.84 | 101 | 267 | Peak |
| 5388.8 | 39.64 | -14.36 | 54 | 27.66 | 35.03 | 10.79 | 33.84 | 101 | 267 | Average |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5358.5 | 57.55 | -16.45 | 74 | 45.63 | 35.01 | 10.75 | 33.84 | 110 | 310 | Peak |
| 5356.4 | 43.71 | -10.29 | 54 | 31.79 | 35.01 | 10.75 | 33.84 | 110 | 310 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5385.45 | 55.4 | -18.6 | 74 | 43.42 | 35.03 | 10.79 | 33.84 | 100 | 268 | Peak |
| 5357.05 | 40.46 | -13.54 | 54 | 28.54 | 35.01 | 10.75 | 33.84 | 100 | 268 | Average |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5459.92 | 56.76 | -17.24 | 74 | 44.64 | 35.07 | 10.89 | 33.84 | 127 | 56 | Peak |
| 5470 | 54.47 | -13.83 | 68.3 | 42.34 | 35.08 | 10.89 | 33.84 | 127 | 56 | Peak |
| 5459.76 | 41.76 | -12.24 | 54 | 29.64 | 35.07 | 10.89 | 33.84 | 127 | 56 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5447.92 | 55.59 | -18.41 | 74 | 43.5 | 35.07 | 10.86 | 33.84 | 193 | 265 | Peak |
| 5470 | 54.12 | -14.18 | 68.3 | 41.99 | 35.08 | 10.89 | 33.84 | 193 | 265 | Peak |
| 5460 | 39.87 | -14.13 | 54 | 27.75 | 35.07 | 10.89 | 33.84 | 193 | 265 | Average |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5725 | 58.24 | -10.06 | 68.3 | 45.33 | 35.41 | 11.34 | 33.84 | 100 | 52 | Peak |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5725 | 55.68 | -12.62 | 68.3 | 42.77 | 35.41 | 11.34 | 33.84 | 102 | 92 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 36 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5149.55 | 58.61 | -15.39 | 74 | 47.13 | 34.89 | 10.44 | 33.85 | 101 | 37 | Peak |
| 5149.9 | 45.25 | -8.75 | 54 | 33.77 | 34.89 | 10.44 | 33.85 | 101 | 37 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5142.7 | 57.7 | -16.3 | 74 | 46.22 | 34.89 | 10.44 | 33.85 | 117 | 273 | Peak |
| 5144.8 | 42.36 | -11.64 | 54 | 30.88 | 34.89 | 10.44 | 33.85 | 117 | 273 | Average |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5138.65 | 56.64 | -17.36 | 74 | 45.21 | 34.88 | 10.4 | 33.85 | 100 | 38 | Peak |
| 5148.75 | 41.86 | -12.14 | 54 | 30.38 | 34.89 | 10.44 | 33.85 | 100 | 38 | Average |
| 5360.4 | 55.62 | -18.38 | 74 | 43.7 | 35.01 | 10.75 | 33.84 | 100 | 38 | Peak |
| 5351.85 | 40.06 | -13.94 | 54 | 28.17 | 35.01 | 10.72 | 33.84 | 100 | 38 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5146.75 | 56.45 | -17.55 | 74 | 44.97 | 34.89 | 10.44 | 33.85 | 100 | 269 | Peak |
| 5129.05 | 40.85 | -13.15 | 54 | 29.42 | 34.88 | 10.4 | 33.85 | 100 | 269 | Average |
| 5375.8 | 55.12 | -18.88 | 74 | 43.19 | 35.02 | 10.75 | 33.84 | 100 | 269 | Peak |
| 5390 | 39.74 | -14.26 | 54 | 27.76 | 35.03 | 10.79 | 33.84 | 100 | 269 | Average |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5120.95 | 56.63 | -17.37 | 74 | 45.21 | 34.87 | 10.4 | 33.85 | 156 | 140 | Peak |
| 5145.05 | 41.18 | -12.82 | 54 | 29.7 | 34.89 | 10.44 | 33.85 | 156 | 140 | Average |
| 5391.9 | 55.58 | -18.42 | 74 | 43.6 | 35.03 | 10.79 | 33.84 | 156 | 140 | Peak |
| 5361.4 | 40.85 | -13.15 | 54 | 28.92 | 35.02 | 10.75 | 33.84 | 156 | 140 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5113.25 | 57.28 | -16.72 | 74 | 45.89 | 34.87 | 10.37 | 33.85 | 156 | 279 | Peak |
| 5125.65 | 40.85 | -13.15 | 54 | 29.42 | 34.88 | 10.4 | 33.85 | 156 | 279 | Average |
| 5396.2 | 55.38 | -18.62 | 74 | 43.39 | 35.04 | 10.79 | 33.84 | 156 | 279 | Peak |
| 5357.4 | 39.4 | -14.6 | 54 | 27.48 | 35.01 | 10.75 | 33.84 | 156 | 279 | Average |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5353.6 | 57.15 | -16.85 | 74 | 45.26 | 35.01 | 10.72 | 33.84 | 100 | 37 | Peak |
| 5351.25 | 43 | -11 | 54 | 31.11 | 35.01 | 10.72 | 33.84 | 100 | 37 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5399 | 55.87 | -18.13 | 74 | 43.88 | 35.04 | 10.79 | 33.84 | 100 | 268 | Peak |
| 5356.85 | 41.14 | -12.86 | 54 | 29.22 | 35.01 | 10.75 | 33.84 | 100 | 268 | Average |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5459.2 | 56.49 | -17.51 | 74 | 44.37 | 35.07 | 10.89 | 33.84 | 117 | 40 | Peak |
| 5470 | 55.99 | -12.31 | 68.3 | 43.86 | 35.08 | 10.89 | 33.84 | 117 | 40 | Peak |
| 5459.44 | 42.28 | -11.72 | 54 | 30.16 | 35.07 | 10.89 | 33.84 | 117 | 40 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5455.92 | 55.54 | -18.46 | 74 | 43.42 | 35.07 | 10.89 | 33.84 | 120 | 271 | Peak |
| 5470 | 53.78 | -14.52 | 68.3 | 41.65 | 35.08 | 10.89 | 33.84 | 120 | 271 | Peak |
| 5458.24 | 40.64 | -13.36 | 54 | 28.52 | 35.07 | 10.89 | 33.84 | 120 | 271 | Average |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5725 | 59.91 | -8.39 | 68.3 | 47 | 35.41 | 11.34 | 33.84 | 102 | 309 | Peak |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5725 | 55.78 | -12.52 | 68.3 | 42.87 | 35.41 | 11.34 | 33.84 | 103 | 92 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 38 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5149.7 | 64.45 | -9.55 | 74 | 52.97 | 34.89 | 10.44 | 33.85 | 100 | 40 | Peak |
| 5149.45 | 50.53 | -3.47 | 54 | 39.05 | 34.89 | 10.44 | 33.85 | 100 | 40 | Average |
| 5393.75 | 55.7 | -18.3 | 74 | 43.72 | 35.03 | 10.79 | 33.84 | 100 | 40 | Peak |
| 5354.25 | 40.34 | -13.66 | 54 | 28.45 | 35.01 | 10.72 | 33.84 | 100 | 40 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5130.2 | 58.14 | -15.86 | 74 | 46.71 | 34.88 | 10.4 | 33.85 | 100 | 95 | Peak |
| 5149.8 | 42.5 | -11.5 | 54 | 31.02 | 34.89 | 10.44 | 33.85 | 100 | 95 | Average |
| 5368.4 | 55.36 | -18.64 | 74 | 43.43 | 35.02 | 10.75 | 33.84 | 100 | 95 | Peak |
| 5393.95 | 39.77 | -14.23 | 54 | 27.79 | 35.03 | 10.79 | 33.84 | 100 | 95 | Average |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 46 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5142.15 | 57.19 | -16.81 | 74 | 45.71 | 34.89 | 10.44 | 33.85 | 100 | 36 | Peak |
| 5145.8 | 42.65 | -11.35 | 54 | 31.17 | 34.89 | 10.44 | 33.85 | 100 | 36 | Average |
| 5385.2 | 55.8 | -18.2 | 74 | 43.82 | 35.03 | 10.79 | 33.84 | 100 | 36 | Peak |
| 5381.9 | 40.72 | -13.28 | 54 | 28.74 | 35.03 | 10.79 | 33.84 | 100 | 36 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5144.4 | 57 | -17 | 74 | 45.52 | 34.89 | 10.44 | 33.85 | 103 | 260 | Peak |
| 5141.5 | 41.56 | -12.44 | 54 | 30.08 | 34.89 | 10.44 | 33.85 | 103 | 260 | Average |
| 5391.95 | 54.99 | -19.01 | 74 | 43.01 | 35.03 | 10.79 | 33.84 | 103 | 260 | Peak |
| 5389.2 | 39.88 | -14.12 | 54 | 27.9 | 35.03 | 10.79 | 33.84 | 103 | 260 | Average |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 54 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5120.35 | 57.28 | -16.72 | 74 | 45.86 | 34.87 | 10.4 | 33.85 | 100 | 40 | Peak |
| 5138.6 | 42.21 | -11.79 | 54 | 30.78 | 34.88 | 10.4 | 33.85 | 100 | 40 | Average |
| 5361 | 55.85 | -18.15 | 74 | 43.92 | 35.02 | 10.75 | 33.84 | 100 | 40 | Peak |
| 5350.05 | 41.17 | -12.83 | 54 | 29.28 | 35.01 | 10.72 | 33.84 | 100 | 40 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5144.15 | 56.33 | -17.67 | 74 | 44.85 | 34.89 | 10.44 | 33.85 | 100 | 277 | Peak |
| 5125.75 | 41.34 | -12.66 | 54 | 29.91 | 34.88 | 10.4 | 33.85 | 100 | 277 | Average |
| 5389.65 | 55.89 | -18.11 | 74 | 43.91 | 35.03 | 10.79 | 33.84 | 100 | 277 | Peak |
| 5358.3 | 40.4 | -13.6 | 54 | 28.48 | 35.01 | 10.75 | 33.84 | 100 | 277 | Average |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 62 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5132.1 | 56.82 | -17.18 | 74 | 45.39 | 34.88 | 10.4 | 33.85 | 100 | 35 | Peak |
| 5145.75 | 41.79 | -12.21 | 54 | 30.31 | 34.89 | 10.44 | 33.85 | 100 | 35 | Average |
| 5359.15 | 55.56 | -18.44 | 74 | 43.64 | 35.01 | 10.75 | 33.84 | 100 | 35 | Peak |
| 5350 | 46.02 | -7.98 | 54 | 34.13 | 35.01 | 10.72 | 33.84 | 100 | 35 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5131 | 56.6 | -17.4 | 74 | 45.17 | 34.88 | 10.4 | 33.85 | 100 | 266 | Peak |
| 5125.2 | 41.31 | -12.69 | 54 | 29.88 | 34.88 | 10.4 | 33.85 | 100 | 266 | Average |
| 5352 | 57.12 | -16.88 | 74 | 45.23 | 35.01 | 10.72 | 33.84 | 100 | 266 | Peak |
| 5350.05 | 43.25 | -10.75 | 54 | 31.36 | 35.01 | 10.72 | 33.84 | 100 | 266 | Average |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 102 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5456.8 | 57.02 | -16.98 | 74 | 44.9 | 35.07 | 10.89 | 33.84 | 118 | 38 | Peak |
| 5470 | 57.96 | -10.34 | 68.3 | 45.83 | 35.08 | 10.89 | 33.84 | 118 | 38 | Peak |
| 5458.64 | 42.47 | -11.53 | 54 | 30.35 | 35.07 | 10.89 | 33.84 | 118 | 38 | Average |
| 5725 | 55.45 | -12.85 | 68.3 | 42.54 | 35.41 | 11.34 | 33.84 | 118 | 38 | Peak |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5457.68 | 55.35 | -18.65 | 74 | 43.23 | 35.07 | 10.89 | 33.84 | 122 | 280 | Peak |
| 5470 | 55.11 | -13.19 | 68.3 | 42.98 | 35.08 | 10.89 | 33.84 | 122 | 280 | Peak |
| 5459.36 | 40.88 | -13.12 | 54 | 28.76 | 35.07 | 10.89 | 33.84 | 122 | 280 | Average |
| 5725 | 54.93 | -13.37 | 68.3 | 42.02 | 35.41 | 11.34 | 33.84 | 122 | 280 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 134 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5452.08 | 55.59 | -18.41 | 74 | 43.47 | 35.07 | 10.89 | 33.84 | 102 | 36 | Peak |
| 5470 | 53.25 | -15.05 | 68.3 | 41.12 | 35.08 | 10.89 | 33.84 | 102 | 36 | Peak |
| 5459.92 | 40.38 | -13.62 | 54 | 28.26 | 35.07 | 10.89 | 33.84 | 102 | 36 | Average |
| 5725 | 56.14 | -12.16 | 68.3 | 43.23 | 35.41 | 11.34 | 33.84 | 102 | 36 | Peak |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5454.48 | 55.36 | -18.64 | 74 | 43.24 | 35.07 | 10.89 | 33.84 | 137 | 100 | Peak |
| 5470 | 53.85 | -14.45 | 68.3 | 41.72 | 35.08 | 10.89 | 33.84 | 137 | 100 | Peak |
| 5459.92 | 39.93 | -14.07 | 54 | 27.81 | 35.07 | 10.89 | 33.84 | 137 | 100 | Average |
| 5725 | 54.15 | -14.15 | 68.3 | 41.24 | 35.41 | 11.34 | 33.84 | 137 | 100 | Peak |

**<Sample 2>**

| | | | |
|---|---|---|---|
| **Test Mode :** | 802.11n HT40 | **Temperature :** | 30~31°C |
| **Test Channel :** | 38 | **Relative Humidity :** | 42~43% |
| **Test Engineer :** | Kai Wang and Timberland Lin | | |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5149.75 | 58.76 | -15.24 | 74 | 47.28 | 34.89 | 10.44 | 33.85 | 101 | 32 | Peak |
| 5149.9 | 44.57 | -9.43 | 54 | 33.09 | 34.89 | 10.44 | 33.85 | 101 | 32 | Average |
| 5379.95 | 55.37 | -18.63 | 74 | 43.43 | 35.03 | 10.75 | 33.84 | 101 | 32 | Peak |
| 5379.35 | 42.49 | -11.51 | 54 | 30.55 | 35.03 | 10.75 | 33.84 | 101 | 32 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 5149.35 | 54.94 | -19.06 | 74 | 43.46 | 34.89 | 10.44 | 33.85 | 140 | 275 | Peak |
| 5150 | 42.23 | -11.77 | 54 | 30.75 | 34.89 | 10.44 | 33.85 | 140 | 275 | Average |
| 5371.8 | 55 | -19 | 74 | 43.07 | 35.02 | 10.75 | 33.84 | 140 | 275 | Peak |
| 5385.8 | 42.38 | -11.62 | 54 | 30.4 | 35.03 | 10.79 | 33.84 | 140 | 275 | Average |

### 3.5.6.2 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

**<Sample 1>**

| | | | |
|---|---|---|---|
| **Test Mode :** | 802.11a | **Temperature :** | 30~31°C |
| **Test Channel :** | 36 | **Relative Humidity :** | 42~43% |
| **Test Engineer :** | Kai Wang and Timberland Lin | **Polarization :** | Horizontal |
| **Remark :** | 1. 5180 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | 94.98 | - | - | 83.45 | 34.91 | 10.47 | 33.85 | 100 | 38 | Average |
| 5180 | 105.21 | - | - | 93.68 | 34.91 | 10.47 | 33.85 | 100 | 38 | Peak |

| | | | |
|---|---|---|---|
| **Test Mode :** | 802.11a | **Temperature :** | 30~31°C |
| **Test Channel :** | 36 | **Relative Humidity :** | 42~43% |
| **Test Engineer :** | Kai Wang and Timberland Lin | **Polarization :** | Vertical |
| **Remark :** | 1. 5180 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | 88.9 | - | - | 77.37 | 34.91 | 10.47 | 33.85 | 104 | 274 | Average |
| 5180 | 98.94 | - | - | 87.41 | 34.91 | 10.47 | 33.85 | 104 | 274 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 44 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5220 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5220 | 95.52 | - | - | 83.9 | 34.93 | 10.54 | 33.85 | 100 | 35 | Average |
| 5220 | 105.12 | - | - | 93.5 | 34.93 | 10.54 | 33.85 | 100 | 35 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 44 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5220 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5220 | 89.6 | - | - | 77.98 | 34.93 | 10.54 | 33.85 | 101 | 272 | Average |
| 5220 | 99.43 | - | - | 87.81 | 34.93 | 10.54 | 33.85 | 101 | 272 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5240 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5240 | 95.75 | - | - | 84.08 | 34.94 | 10.58 | 33.85 | 123 | 42 | Average |
| 5240 | 105.44 | - | - | 93.77 | 34.94 | 10.58 | 33.85 | 123 | 42 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5240 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5240 | 89.33 | - | - | 77.66 | 34.94 | 10.58 | 33.85 | 125 | 262 | Average |
| 5240 | 98.87 | - | - | 87.2 | 34.94 | 10.58 | 33.85 | 125 | 262 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5260 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5260 | 95.54 | - | - | 83.81 | 34.96 | 10.61 | 33.84 | 110 | 37 | Average |
| 5260 | 105.51 | - | - | 93.78 | 34.96 | 10.61 | 33.84 | 110 | 37 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5260 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5260 | 89.6 | - | - | 77.87 | 34.96 | 10.61 | 33.84 | 101 | 267 | Average |
| 5260 | 99.42 | - | - | 87.69 | 34.96 | 10.61 | 33.84 | 101 | 267 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 60 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5300 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5300 | 95.67 | - | - | 83.88 | 34.98 | 10.65 | 33.84 | 111 | 39 | Average |
| 5300 | 106.2 | - | - | 94.41 | 34.98 | 10.65 | 33.84 | 111 | 39 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 60 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5300 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5300 | 89.87 | - | - | 78.08 | 34.98 | 10.65 | 33.84 | 194 | 275 | Average |
| 5300 | 99.72 | - | - | 87.93 | 34.98 | 10.65 | 33.84 | 194 | 275 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5320 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5320 | 94.79 | - | - | 82.96 | 34.99 | 10.68 | 33.84 | 110 | 310 | Average |
| 5320 | 104.64 | - | - | 92.81 | 34.99 | 10.68 | 33.84 | 110 | 310 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5320 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5320 | 89.01 | - | - | 77.18 | 34.99 | 10.68 | 33.84 | 100 | 268 | Average |
| 5320 | 99.11 | - | - | 87.28 | 34.99 | 10.68 | 33.84 | 100 | 268 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5500 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5500 | 92.21 | - | - | 79.99 | 35.1 | 10.96 | 33.84 | 127 | 56 | Average |
| 5500 | 101.97 | - | - | 89.75 | 35.1 | 10.96 | 33.84 | 127 | 56 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5500 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5500 | 88.96 | - | - | 76.74 | 35.1 | 10.96 | 33.84 | 193 | 265 | Average |
| 5500 | 98.39 | - | - | 86.17 | 35.1 | 10.96 | 33.84 | 193 | 265 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 116 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5580 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5580 | 93.24 | - | - | 80.79 | 35.2 | 11.09 | 33.84 | 101 | 49 | Average |
| 5580 | 103.18 | - | - | 90.73 | 35.2 | 11.09 | 33.84 | 101 | 49 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 116 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5580 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5580 | 89.12 | - | - | 76.67 | 35.2 | 11.09 | 33.84 | 118 | 281 | Average |
| 5580 | 99.51 | - | - | 87.06 | 35.2 | 11.09 | 33.84 | 118 | 281 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5700 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5700 | 94.49 | - | - | 81.66 | 35.37 | 11.3 | 33.84 | 100 | 52 | Average |
| 5700 | 104.18 | - | - | 91.35 | 35.37 | 11.3 | 33.84 | 100 | 52 | Peak |

| Test Mode : | 802.11a | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5700 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5700 | 90.55 | - | - | 77.72 | 35.37 | 11.3 | 33.84 | 102 | 92 | Average |
| 5700 | 100.36 | - | - | 87.53 | 35.37 | 11.3 | 33.84 | 102 | 92 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 36 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5180 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | 94.87 | - | - | 83.34 | 34.91 | 10.47 | 33.85 | 101 | 37 | Average |
| 5180 | 104.99 | - | - | 93.46 | 34.91 | 10.47 | 33.85 | 101 | 37 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 36 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5180 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | 88.8 | - | - | 77.27 | 34.91 | 10.47 | 33.85 | 117 | 273 | Average |
| 5180 | 98.57 | - | - | 87.04 | 34.91 | 10.47 | 33.85 | 117 | 273 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 44 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5220 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5220 | 95.07 | - | - | 83.45 | 34.93 | 10.54 | 33.85 | 100 | 39 | Average |
| 5220 | 105.43 | - | - | 93.81 | 34.93 | 10.54 | 33.85 | 100 | 39 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 44 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5220 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5220 | 89.46 | - | - | 77.84 | 34.93 | 10.54 | 33.85 | 101 | 271 | Average |
| 5220 | 98.93 | - | - | 87.31 | 34.93 | 10.54 | 33.85 | 101 | 271 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5240 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5240 | 94.86 | - | - | 83.19 | 34.94 | 10.58 | 33.85 | 100 | 38 | Average |
| 5240 | 105.22 | - | - | 93.55 | 34.94 | 10.58 | 33.85 | 100 | 38 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 48 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5240 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5240 | 89.4 | - | - | 77.73 | 34.94 | 10.58 | 33.85 | 100 | 269 | Average |
| 5240 | 99.41 | - | - | 87.74 | 34.94 | 10.58 | 33.85 | 100 | 269 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5260 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5260 | 94.42 | - | - | 82.69 | 34.96 | 10.61 | 33.84 | 156 | 140 | Average |
| 5260 | 104 | - | - | 92.27 | 34.96 | 10.61 | 33.84 | 156 | 140 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 52 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5260 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5260 | 90.96 | - | - | 79.23 | 34.96 | 10.61 | 33.84 | 156 | 279 | Average |
| 5260 | 101.53 | - | - | 89.8 | 34.96 | 10.61 | 33.84 | 156 | 279 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 60 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5300 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5300 | 94.66 | - | - | 82.87 | 34.98 | 10.65 | 33.84 | 122 | 38 | Average |
| 5300 | 105.52 | - | - | 93.73 | 34.98 | 10.65 | 33.84 | 122 | 38 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 60 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5300 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5300 | 87.92 | - | - | 76.13 | 34.98 | 10.65 | 33.84 | 100 | 101 | Average |
| 5300 | 98.69 | - | - | 86.9 | 34.98 | 10.65 | 33.84 | 100 | 101 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5320 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5320 | 94.49 | - | - | 82.66 | 34.99 | 10.68 | 33.84 | 100 | 37 | Average |
| 5320 | 104.11 | - | - | 92.28 | 34.99 | 10.68 | 33.84 | 100 | 37 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 64 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5320 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5320 | 89.94 | - | - | 78.11 | 34.99 | 10.68 | 33.84 | 100 | 268 | Average |
| 5320 | 100.2 | - | - | 88.37 | 34.99 | 10.68 | 33.84 | 100 | 268 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5500 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5500 | 94.16 | - | - | 81.94 | 35.1 | 10.96 | 33.84 | 117 | 40 | Average |
| 5500 | 103.86 | - | - | 91.64 | 35.1 | 10.96 | 33.84 | 117 | 40 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 100 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5500 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5500 | 89.27 | - | - | 77.05 | 35.1 | 10.96 | 33.84 | 120 | 271 | Average |
| 5500 | 99.83 | - | - | 87.61 | 35.1 | 10.96 | 33.84 | 120 | 271 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 116 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5580 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5580 | 94.19 | - | - | 81.74 | 35.2 | 11.09 | 33.84 | 114 | 36 | Average |
| 5580 | 103.99 | - | - | 91.54 | 35.2 | 11.09 | 33.84 | 114 | 36 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 116 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5580 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5580 | 90.41 | - | - | 77.96 | 35.2 | 11.09 | 33.84 | 108 | 263 | Average |
| 5580 | 100.18 | - | - | 87.73 | 35.2 | 11.09 | 33.84 | 108 | 263 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5700 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5700 | 95.46 | - | - | 82.63 | 35.37 | 11.3 | 33.84 | 102 | 309 | Average |
| 5700 | 104.99 | - | - | 92.16 | 35.37 | 11.3 | 33.84 | 102 | 309 | Peak |

| Test Mode : | 802.11n HT20 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 140 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5700 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5700 | 90.55 | - | - | 77.72 | 35.37 | 11.3 | 33.84 | 103 | 92 | Average |
| 5700 | 100.05 | - | - | 87.22 | 35.37 | 11.3 | 33.84 | 103 | 92 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 38 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5190 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 25.18 | -14.82 | 40 | 37.29 | 18.8 | 0.64 | 31.55 | - | - | Peak |
| 138.54 | 26.46 | -17.04 | 43.5 | 45.26 | 11.18 | 1.31 | 31.29 | - | - | Peak |
| 240.06 | 24.82 | -21.18 | 46 | 42.81 | 11.4 | 1.69 | 31.08 | - | - | Peak |
| 458.9 | 40.91 | -5.09 | 46 | 52.56 | 17.07 | 2.33 | 31.05 | 100 | 269 | Peak |
| 615 | 24.21 | -21.79 | 46 | 34.17 | 19 | 2.78 | 31.74 | - | - | Peak |
| 875.4 | 26.66 | -19.34 | 46 | 33.88 | 20.56 | 3.3 | 31.08 | - | - | Peak |
| 5190 | 91.95 | - | - | 80.38 | 34.91 | 10.51 | 33.85 | 100 | 40 | Average |
| 5190 | 101.48 | - | - | 89.91 | 34.91 | 10.51 | 33.85 | 100 | 40 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 38 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5190 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 33.24 | 34.67 | -5.33 | 40 | 49.07 | 16.46 | 0.67 | 31.53 | - | - | Peak |
| 50.25 | 34.65 | -5.35 | 40 | 57.24 | 8.4 | 0.8 | 31.79 | - | - | Peak |
| 108.3 | 27.57 | -15.93 | 43.5 | 46 | 11.76 | 1.14 | 31.33 | - | - | Peak |
| 458.9 | 41.69 | -4.31 | 46 | 53.34 | 17.07 | 2.33 | 31.05 | 100 | 139 | Peak |
| 673.8 | 24.17 | -21.83 | 46 | 33.7 | 19.1 | 2.84 | 31.47 | - | - | Peak |
| 923 | 27.01 | -18.99 | 46 | 33.77 | 20.7 | 3.36 | 30.82 | - | - | Peak |
| 5190 | 82.02 | - | - | 70.45 | 34.91 | 10.51 | 33.85 | 100 | 95 | Average |
| 5190 | 91.8 | - | - | 80.23 | 34.91 | 10.51 | 33.85 | 100 | 95 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 46 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5230 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5230 | 91.47 | - | - | 79.84 | 34.94 | 10.54 | 33.85 | 100 | 36 | Average |
| 5230 | 102.03 | - | - | 90.4 | 34.94 | 10.54 | 33.85 | 100 | 36 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 46 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5230 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5230 | 85.61 | - | - | 73.98 | 34.94 | 10.54 | 33.85 | 103 | 260 | Average |
| 5230 | 95.09 | - | - | 83.46 | 34.94 | 10.54 | 33.85 | 103 | 260 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 54 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5270 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5270 | 91.16 | - | - | 79.43 | 34.96 | 10.61 | 33.84 | 100 | 40 | Average |
| 5270 | 100.51 | - | - | 88.78 | 34.96 | 10.61 | 33.84 | 100 | 40 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 54 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5270 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5270 | 85.9 | - | - | 74.17 | 34.96 | 10.61 | 33.84 | 100 | 277 | Average |
| 5270 | 96.21 | - | - | 84.48 | 34.96 | 10.61 | 33.84 | 100 | 277 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 62 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5310 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5310 | 91.18 | - | - | 79.35 | 34.99 | 10.68 | 33.84 | 100 | 35 | Average |
| 5310 | 100.49 | - | - | 88.66 | 34.99 | 10.68 | 33.84 | 100 | 35 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 62 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5310 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5310 | 86.28 | - | - | 74.45 | 34.99 | 10.68 | 33.84 | 100 | 266 | Average |
| 5310 | 95.84 | - | - | 84.01 | 34.99 | 10.68 | 33.84 | 100 | 266 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 102 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5510 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5510 | 91.29 | - | - | 79.07 | 35.1 | 10.96 | 33.84 | 118 | 38 | Average |
| 5510 | 100.69 | - | - | 88.47 | 35.1 | 10.96 | 33.84 | 118 | 38 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 102 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5510 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5510 | 86.8 | - | - | 74.58 | 35.1 | 10.96 | 33.84 | 122 | 280 | Average |
| 5510 | 96.31 | - | - | 84.09 | 35.1 | 10.96 | 33.84 | 122 | 280 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 110 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5550 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5550 | 91.63 | - | - | 79.25 | 35.17 | 11.05 | 33.84 | 104 | 39 | Average |
| 5550 | 101 | - | - | 88.62 | 35.17 | 11.05 | 33.84 | 104 | 39 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 110 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5550 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5550 | 86.55 | - | - | 74.17 | 35.17 | 11.05 | 33.84 | 136 | 273 | Average |
| 5550 | 95.54 | - | - | 83.16 | 35.17 | 11.05 | 33.84 | 136 | 273 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 134 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Horizontal |
| Remark : | 1. 5670 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5670 | 91.55 | - | - | 78.79 | 35.34 | 11.26 | 33.84 | 102 | 36 | Average |
| 5670 | 101.28 | - | - | 88.52 | 35.34 | 11.26 | 33.84 | 102 | 36 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 134 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5670 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 5670 | 87.98 | - | - | 75.22 | 35.34 | 11.26 | 33.84 | 137 | 100 | Average |
| 5670 | 97.42 | - | - | 84.66 | 35.34 | 11.26 | 33.84 | 137 | 100 | Peak |

**<Sample 2>**

| | | | |
|---|---|---|---|
| **Test Mode :** | 802.11n HT40 | **Temperature :** | 30~31°C |
| **Test Channel :** | 38 | **Relative Humidity :** | 42~43% |
| **Test Engineer :** | Kai Wang and Timberland Lin | **Polarization :** | Horizontal |
| **Remark :** | 1. 5190 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 71.04 | 20.93 | -19.07 | 40 | 44.95 | 6.44 | 0.94 | 31.4 | - | - | Peak |
| 132.06 | 28.17 | -15.33 | 43.5 | 46.5 | 11.68 | 1.28 | 31.29 | - | - | Peak |
| 246.81 | 26.93 | -19.07 | 46 | 44.21 | 12.1 | 1.72 | 31.1 | - | - | Peak |
| 458.9 | 32.91 | -13.09 | 46 | 44.56 | 17.07 | 2.33 | 31.05 | 100 | 24 | Peak |
| 683.6 | 24.74 | -21.26 | 46 | 34.52 | 19.02 | 2.86 | 31.66 | - | - | Peak |
| 867 | 26.13 | -19.87 | 46 | 33.32 | 20.47 | 3.28 | 30.94 | - | - | Peak |
| 5190 | 87.72 | - | - | 76.15 | 34.91 | 10.51 | 33.85 | 101 | 32 | Average |
| 5190 | 97.37 | - | - | 85.79 | 34.92 | 10.51 | 33.85 | 101 | 32 | Peak |

| Test Mode : | 802.11n HT40 | Temperature : | 30~31°C |
|---|---|---|---|
| Test Channel : | 38 | Relative Humidity : | 42~43% |
| Test Engineer : | Kai Wang and Timberland Lin | Polarization : | Vertical |
| Remark : | 1. 5190 MHz is fundamental signal which can be ignored.<br>2. All other emission found more than 20dB below limit line is not reported. | | |

| Frequency ( MHz ) | Level ( dBµV/m ) | Over Limit ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 35.94 | 33.8 | -6.2 | 40 | 50.15 | 14.46 | 0.7 | 31.51 | 100 | 138 | Peak |
| 54.3 | 33.37 | -6.63 | 40 | 56.89 | 7.2 | 0.83 | 31.55 | - | - | Peak |
| 115.05 | 28.06 | -15.44 | 43.5 | 46.33 | 11.8 | 1.19 | 31.26 | - | - | Peak |
| 458.9 | 35.69 | -10.31 | 46 | 47.34 | 17.07 | 2.33 | 31.05 | - | - | Peak |
| 695.5 | 24.3 | -21.7 | 46 | 34.38 | 18.95 | 2.88 | 31.91 | - | - | Peak |
| 882.4 | 27.16 | -18.84 | 46 | 34.42 | 20.63 | 3.32 | 31.21 | - | - | Peak |
| 5190 | 83.39 | - | - | 71.82 | 34.91 | 10.51 | 33.85 | 140 | 275 | Average |
| 5190 | 94.14 | - | - | 82.56 | 34.92 | 10.51 | 33.85 | 140 | 275 | Peak |

# 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.

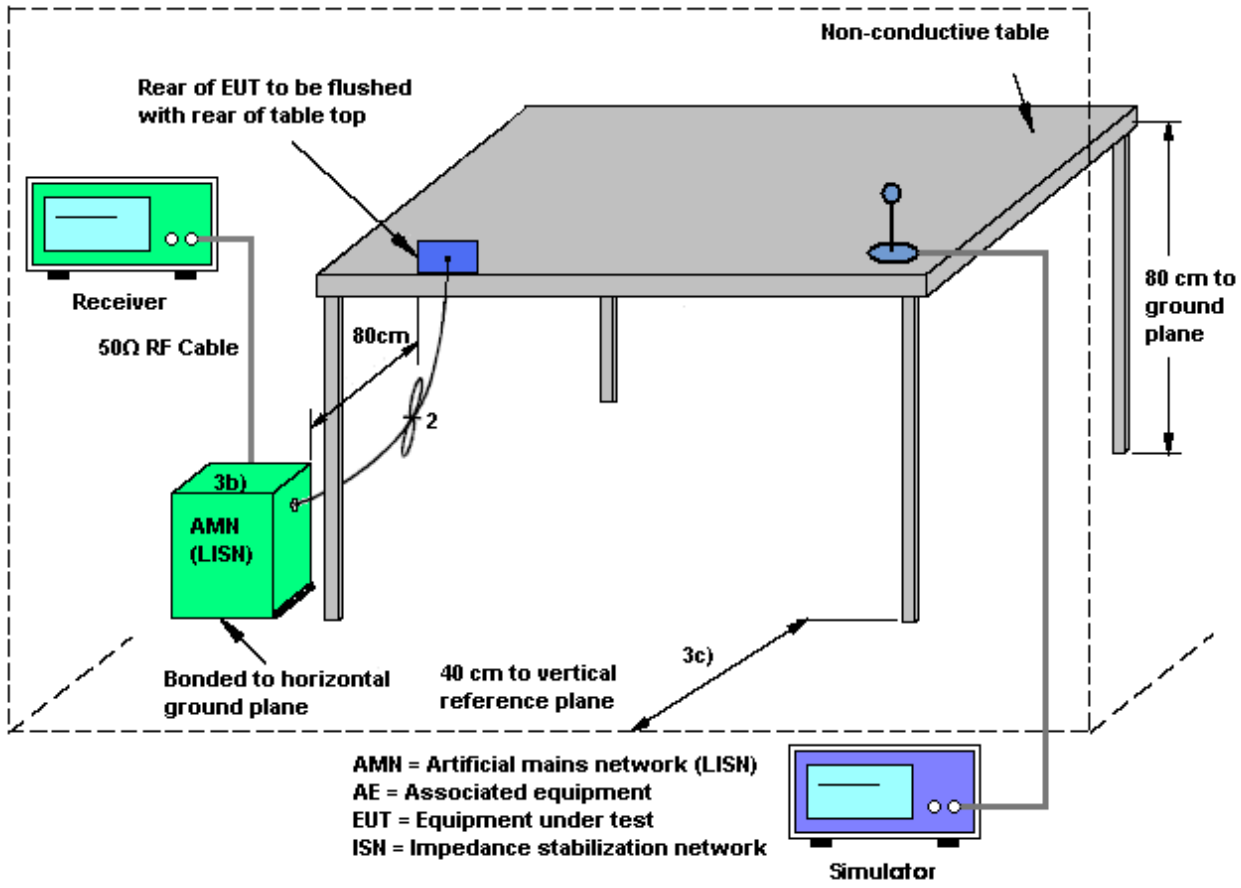
## 3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

## 3.6.3 Test Procedures

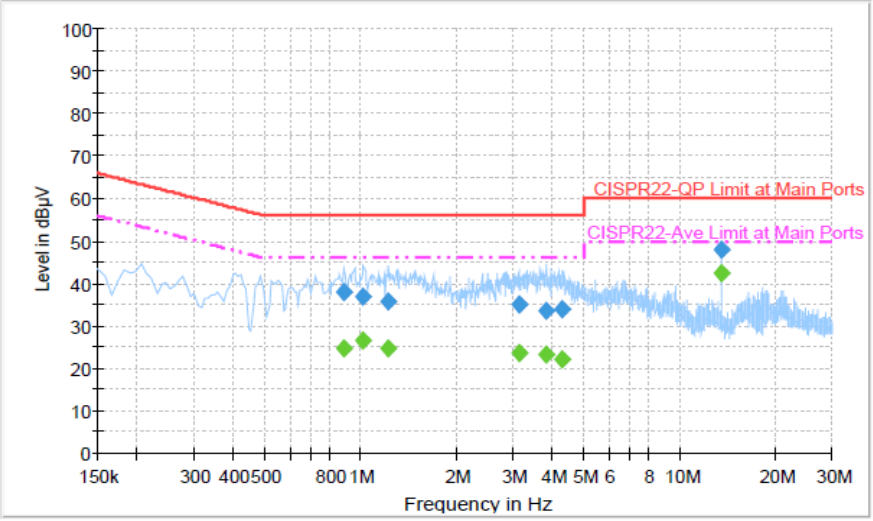
1. The testing follows the guidelines in ANSI C63.4-2003 and ANSI C63.10-2009 test site requirement.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a 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

| | | | |
|---|---|---|---|
| **Test Mode :** | Mode 1 | **Temperature :** | 20~22℃ |
| **Test Engineer :** | Kai-Chun Chu | **Relative Humidity :** | 48~50% |
| **Test Voltage :** | 120Vac / 60Hz | **Phase :** | Line |
| **Function Type :** | GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC + Earphone + Battery 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1 | | |
| **Remark :** | All emissions not reported here are more than 10 dB below the prescribed limit. | | |



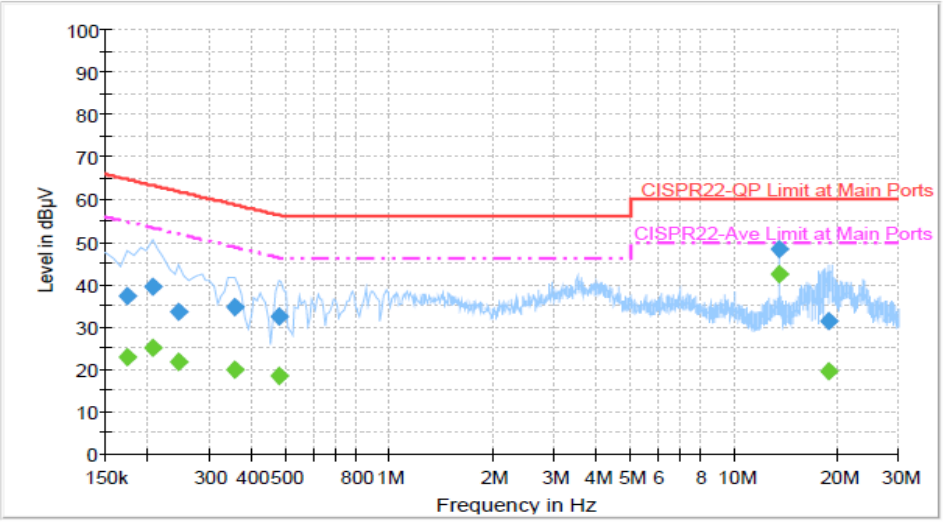

**Final Result : QuasiPeak**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.886000 | 38.1 | Off | L1 | 19.4 | 17.9 | 56.0 |
| 1.022000 | 37.0 | Off | L1 | 19.4 | 19.0 | 56.0 |
| 1.222000 | 35.9 | Off | L1 | 19.5 | 20.1 | 56.0 |
| 3.126000 | 34.9 | Off | L1 | 19.6 | 21.1 | 56.0 |
| 3.830000 | 33.6 | Off | L1 | 19.6 | 22.4 | 56.0 |
| 4.262000 | 33.9 | Off | L1 | 19.6 | 22.1 | 56.0 |
| 13.558000 | 48.1 | Off | L1 | 19.8 | 11.9 | 60.0 |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.886000 | 24.8 | Off | L1 | 19.4 | 21.2 | 46.0 |
| 1.022000 | 26.5 | Off | L1 | 19.4 | 19.5 | 46.0 |
| 1.222000 | 24.8 | Off | L1 | 19.5 | 21.2 | 46.0 |
| 3.126000 | 23.6 | Off | L1 | 19.6 | 22.4 | 46.0 |
| 3.830000 | 23.3 | Off | L1 | 19.6 | 22.7 | 46.0 |
| 4.262000 | 22.0 | Off | L1 | 19.6 | 24.0 | 46.0 |
| 13.558000 | 42.3 | Off | L1 | 19.8 | 7.7 | 50.0 |

| | | | |
|---|---|---|---|
| **Test Mode :** | Mode 1 | **Temperature :** | 20~22℃ |
| **Test Engineer :** | Kai-Chun Chu | **Relative Humidity :** | 48~50% |
| **Test Voltage :** | 120Vac / 60Hz | **Phase :** | Neutral |
| **Function Type :** | GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC + Earphone + Battery 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1 | | |
| **Remark :** | All emissions not reported here are more than 10 dB below the prescribed limit. | | |




**Final Result : QuasiPeak**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.174000 | 37.2 | Off | N | 19.4 | 27.6 | 64.8 |
| 0.206000 | 39.5 | Off | N | 19.4 | 23.9 | 63.4 |
| 0.246000 | 33.6 | Off | N | 19.4 | 28.3 | 61.9 |
| 0.358000 | 34.7 | Off | N | 19.4 | 24.1 | 58.8 |
| 0.478000 | 32.6 | Off | N | 19.4 | 23.8 | 56.4 |
| 13.558000 | 48.5 | Off | N | 19.9 | 11.5 | 60.0 |
| 18.774000 | 31.3 | Off | N | 19.9 | 28.7 | 60.0 |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.174000 | 23.0 | Off | N | 19.4 | 31.8 | 54.8 |
| 0.206000 | 25.0 | Off | N | 19.4 | 28.4 | 53.4 |
| 0.246000 | 21.8 | Off | N | 19.4 | 30.1 | 51.9 |
| 0.358000 | 19.8 | Off | N | 19.4 | 29.0 | 48.8 |
| 0.478000 | 18.5 | Off | N | 19.4 | 27.9 | 46.4 |
| 13.558000 | 42.3 | Off | N | 19.9 | 7.7 | 50.0 |
| 18.774000 | 19.5 | Off | N | 19.9 | 30.5 | 50.0 |

# 3.7 Frequency Stability Measurement

## 3.7.1 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.

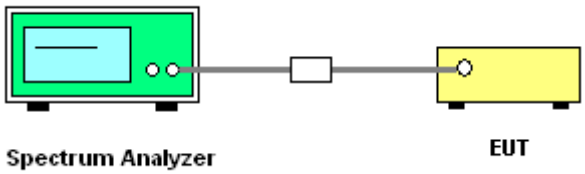
## 3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

## 3.7.3 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.

## 3.7.4 Test Setup



### 3.7.5 Test Result of Frequency Stability

| Test Mode : | 802.11a | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

| Channel | Frequency (MHz) | Low Frequency (Fl) | High Frequency (Fh) | Frequency Stability (ppm) |
|---|---|---|---|---|
| 36 | 5180 | 5171.70 | 5188.35 | 4.83 |
| 48 | 5240 | 5231.75 | 5248.35 | 9.54 |
| 52 | 5260 | 5251.70 | 5268.30 | 0.00 |
| 64 | 5320 | 5311.70 | 5328.30 | 0.00 |
| 100 | 5500 | 5491.70 | 5508.30 | 0.00 |
| 140 | 5700 | 5691.75 | 5708.25 | 0.00 |

| Test Mode : | 802.11n HT20 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

| Channel | Frequency (MHz) | Low Frequency (Fl) | High Frequency (Fh) | Frequency Stability (ppm) |
|---|---|---|---|---|
| 36 | 5180 | 5171.10 | 5188.90 | 0.00 |
| 48 | 5240 | 5231.05 | 5248.95 | 0.00 |
| 52 | 5260 | 5251.10 | 5268.90 | 0.00 |
| 64 | 5320 | 5311.10 | 5328.90 | 0.00 |
| 100 | 5500 | 5491.10 | 5508.90 | 0.00 |
| 140 | 5700 | 5691.15 | 5708.90 | 4.39 |

| Test Mode : | 802.11n HT40 | Temperature : | 24~26℃ |
|---|---|---|---|
| Test Engineer : | Bill Kuo and Kenny Chen | Relative Humidity : | 45~49% |

| Channel | Frequency (MHz) | Low Frequency (Fl) | High Frequency (Fh) | Frequency Stability (ppm) |
|---|---|---|---|---|
| 38 | 5190 | 5171.73 | 5208.27 | 0.00 |
| 46 | 5230 | 5211.73 | 5248.27 | 0.00 |
| 54 | 5270 | 5251.73 | 5288.27 | 0.00 |
| 62 | 5310 | 5291.73 | 5328.27 | 0.00 |
| 102 | 5510 | 5491.73 | 5528.27 | 0.00 |
| 134 | 5670 | 5531.73 | 5568.27 | 0.00 |

## 3.8 Automatically Discontinue Transmission

### 3.8.1 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.

### 3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.8.3 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.

## 3.9 Antenna Requirements

### 3.9.1 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.

### 3.9.2 Antenna Connected Construction

Non-standard connector used.

### 3.9.3 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 Equipments

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Spectrum Analyzer | R&S | FSP40 | 100055 | 9kHz~40GHz | Jun. 06, 2012 | Sep. 30, 2012 ~ Oct. 08, 2012 | Jun. 05, 2013 | Conducted (TH02-HY) |
| Power Meter | Anritsu | ML2495A | 1036004 | 300MHz~40GHz | Sep. 08, 2012 | Sep. 30, 2012 ~ Oct. 08, 2012 | Sep. 07, 2013 | Conducted (TH02-HY) |
| Power Sensor | Anritsu | MA2411B | 1027253 | 300MHz~40GHz | Sep. 08, 2012 | Sep. 30, 2012 ~ Oct. 08, 2012 | Sep. 07, 2013 | Conducted (TH02-HY) |
| EMI Test Receiver | R&S | ESCI 7 | 100724 | 9kHz~7GHz | Sep. 03, 2012 | Oct. 02, 2012 ~ Oct. 26, 2012 | Sep. 02, 2013 | Conduction (CO05-HY) |
| Two-LISN | R&S | ENV216 | 11-100081 | 9KHz ~ 30MHz | Dec. 09, 2011 | Oct. 02, 2012 ~ Oct. 26, 2012 | Dec. 08, 2012 | Conduction (CO05-HY) |
| Two-LISN | R&S | ENV216 | 11-100080 | 9KHz ~ 30MHz | Dec. 06, 2011 | Oct. 02, 2012 ~ Oct. 26, 2012 | Dec. 05, 2012 | Conduction (CO05-HY) |
| AC Power Source | APC | APC-1000W | N/A | N/A | N/A | Oct. 02, 2012 ~ Oct. 26, 2012 | N/A | Conduction (CO05-HY) |
| System Simulator | R&S | CMU200 | 117995 | N/A | Jul. 28, 2011 | Oct. 02, 2012 ~ Oct. 26, 2012 | Jul. 27, 2013 | Conduction (CO05-HY) |
| Spectrum Analyzer | Agilent | E4408B | MY44211030 | 9KHz ~ 26.5GHz | Nov. 23, 2011 | Oct. 06, 2012 ~ Nov. 09, 2012 | Nov. 22, 2012 | Radiation (03CH06-HY) |
| Spectrum Analyzer | R&S | FSP40 | 100055 | 9KHz~40GHz | Jun. 06, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Jun. 05, 2013 | Radiation (03CH06-HY) |
| EMI Test Receiver | R&S | ESVS10 | 834468/003 | 20MHz ~ 1000MHz | May 04, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | May. 03, 2013 | Radiation (03CH06-HY) |
| Bilog Antenna | SCHAFFNER | CBL6112B | 2885 | 30MHz ~ 2GHz | Oct. 06, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Oct. 05, 2013 | Radiation (03CH06-HY) |
| Double Ridge Horn Antenna | EMCO | 3117 | 00066583 | 1GHz ~ 18GHz | Aug. 01, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Jul. 31, 2013 | Radiation (03CH06-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 15GHz ~ 40GHz | Sep. 28, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Sep. 27, 2013 | Radiation (03CH06-HY) |
| Preamplifier | Agilent | 8449B | 3008A01917 | 1GHz ~ 26.5GHz | Apr. 13, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Apr. 12, 2013 | Radiation (03CH06-HY) |
| Amplifier | Agilent | 310N | 186713 | 9KHz ~ 1GHz | Apr. 11, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Apr. 10, 2013 | Radiation (03CH06-HY) |
| Pre Amplifier | EMCI | EMC051845 | SN980048 | 1GHz ~ 18GHz | Jul. 21, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Jul. 20, 2013 | Radiation (03CH06-HY) |
| Pre Amplifier | MITEQ | AMF-7D-00101800-30-10P | 159087 | 1GHz~18GHz | Feb. 27, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Feb. 26, 2013 | Radiation (03CH06-HY) |
| Loop Antenna | R&S | HFH2-Z2 | 860004/001 | 9KHz ~ 30MHz | Jul. 03, 2012 | Oct. 06, 2012 ~ Nov. 09, 2012 | Jul. 02, 2014 | Radiation (03CH06-HY) |

# 5 Uncertainty of Evaluation

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.26** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.54** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **4.72** |