# FCC TEST REPORT (15.407)

**REPORT NO.:** RF980406H01A-1

**MODEL NO.:** AP-7131N

**RECEIVED:** April 06, 2009

**TESTED:** June 06 to 17, 2009

**ISSUED:** July 10, 2009

**APPLICANT:** Motorola Inc.

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**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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# 1. CERTIFICATION

| | |
|---|---|
| **PRODUCT:** | 11n Access-Point |
| **BRAND NAME:** | Motorola |
| **MODEL NO.:** | AP-7131N |
| **TEST SAMPLE:** | R&D SAMPLE |
| **TESTED:** | June 06 to 17, 2009 |
| **APPLICANT:** | Motorola Inc. |
| **STANDARDS:** | FCC Part 15, Subpart E (Section 15.407), ANSI C63.4-2003 |

The above equipment (Model: AP-7131N) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : _____ , **DATE:** July 10, 2009
( Midoli Peng, Specialist )

**TECHNICAL ACCEPTANCE** : _____ , **DATE:** July 10, 2009
Responsible for RF
( Hank Chung, Deputy Manager )

**APPROVED BY** : _____ , **DATE:** July 10, 2009
(May Chen, Deputy Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For 802.11a

| APPLIED STANDARD: FCC Part 15, Subpart E (Section 15.407) | | | |
|---|---|---|---|
| **Standard Section** | **Test Type** | **Result** | **Remark** |
| 15.407(b)(5) | AC Power Conducted Emission | PASS | Meet the requirement of limit. Minimum passing margin is –13.53dB at 3.98438MHz |
| 15.407(b/1/2/3)(b)(5) | Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz | PASS | Meet the requirement of limit. Minimum passing margin is –0.72dB at 5150.00MHz |
| 15.407(a/1/2/3) | Peak Transmit Power | PASS | Meet the requirement of limit. |
| 15.407(a)(6) | Peak Power Excursion | PASS | Meet the requirement of limit. |
| 15.407(a/1/2/3) | Peak Power Spectral Density | PASS | Meet the requirement of limit. |
| 15.407(g) | Frequency Stability | PASS | Meet the requirement of limit. |

**NOTE:**

1. The EUT was operating in 2400 ~ 2483.5MHz, 5.15~5.25GHz and 5.725~5.850GHz frequencies band. This report was recorded the RF parameters including 5.15~5.25GHz. For the 2400 ~ 2483.5MHz and 5.725~5.850GHz RF parameters was recorded in another test report.

## 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

| Measurement | Value |
|---|---|
| Conducted emissions | 2.44 dB |
| Radiated emissions (30MHz-1GHz) | 3.94 dB |
| Radiated emissions (1GHz -18GHz) | 2.49 dB |
| Radiated emissions (18GHz -40GHz) | 2.70 dB |

# 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

| | |
|---|---|
| **PRODUCT** | 11n Access-Point |
| **MODEL NO.** | AP-7131N |
| **FCC ID** | UZ7AP7131N |
| **POWER SUPPLY** | DC 48V from Power Adapter or DC 55V from POE |
| **MODULATION TYPE** | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM |
| **MODULATION TECHNOLOGY** | DSSS, OFDM |
| **TRANSFER RATE** | 802.11b: 11 / 5.5 / 2 / 1Mbps<br>802.11g: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6Mbps<br>802.11a: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6Mbps<br>Draft 802.11n (20MHz) (400ns GI): 144.4 / 130 / 115.6 / 86.7 / 72.2 / 65 / 57.8 / 43.3 / 28.9 / 21.7 / 14.4 / 7.2Mbps<br>Draft 802.11n (40MHz) (400ns GI): 300 / 270 / 240 / 180 / 150 / 135 / 120 / 90 / 60 / 45 / 30 / 15Mbps<br>Draft 802.11n (20MHz) (800ns GI): 130 / 117 / 104 / 78 / 65 / 58.5 / 52 / 39 / 26 / 19.5 / 13 / 6.5Mbps.<br>Draft 802.11n (40MHz) (400ns GI): 270 / 243 / 216 / 162 / 135 / 121.5 / 108 / 81 / 54 / 40.5 / 27 / 13.5Mbps. |
| **FREQUENCY RANGE** | For 15.407<br>802.11a: 5.18 ~ 5.24GHz |
| | For 15.247<br>802.11b & 802.11g: 2412 ~ 2462MHz<br>802.11a: 5.745 ~ 5.825GHz |
| **NUMBER OF CHANNEL** | **For 15.407**<br>4 for 802.11a, draft 802.11n (20MHz)<br>2 for draft 802.11n (40MHz) |
| | **For 15.247(2.4GHz)**<br>11 for 802.11b, 802.11g, draft 802.11n (20MHz)<br>7 for draft 802.11n (40MHz)<br>**For 15.247(5GHz)**<br>5 for 802.11a, draft 802.11n (20MHz)<br>2 for draft 802.11n (40MHz) |

| | |
|---|---|
| **MAXIMUM OUTPUT POWER** | Please see note 2 |
| **ANTENNA TYPE** | Please see note 1 |
| **DATA CABLE** | NA |
| **I/O PORTS** | RJ-45 port * 1< Ethernet (10,100,1000Mbps) ><br>RJ-45 port * 1< POE / Ethernet (10,100, 1000Mbps) ><br>RJ-45 port * 1< Console > |
| **ASSOCIATED DEVICES** | Adapter x1 ; POE x1 |

**NOTE:**

1. There are twelve antennas provided to this EUT, please refer to the following table:

| No | Brand | Model | Antenna Type | Connecter Type (External only) | Frequency range (MHz) | Indoor or Outdoor |
|---|---|---|---|---|---|---|
| 1 | Symbol | ML-2499-BYGA2-01R | YAGI | Type N-Female | 2400~2500 | Indoor |
| 2 | Symbol | ML-2499-11PNA2-01R | Panel | RP-BNC-Female | 2400~2500 | Indoor |
| 3 | Symbol | ML-2452-APA2-01 | Dipole | RP-SMA MALE | 2400-2500, 5150-5850 | Indoor |
| 4 | Motolora | ML-2452-PTA2M3X3-1 | Embedded | RP-SMA-Male | 2400-2500, 4900-5990 | Indoor |
| 5 | Symbol | ML-5299-WPNA1-01R | Panel | RP-SMA-Female | 5150-5875 | Indoor |
| 6 | Symbol | ML-2499-HPA3-01R | Dipole | RP-BNC FEMALE | 2400-2500 | Indoor |
| 7 | Symbol | ML-5299-HPA1-01R | Dipole | RP-SMA FEMALE | 5150-5875 | Indoor |
| 8 | Motolora | ML-2452-PTA3M3-036 | Patch | RP-SMA-Male | 2400-2500, 4900-5990 | Indoor |
| 9 | WHA YU | ML-2452-APA6J-01 | Dipole | SMA Plug Reverse | 2400-2500, 4900-5990 | Indoor |
| 10 | Motolora | ML-2452-PNL9M3-036 | Panel | Reverse SMA | 2400-2500, 5150-5875 | Indoor |
| 11 | Motolora | ML-5299-BYGA15-012 | YAGI | Type N Female connector | 4900-5800 | Indoor |
| 12 | WHA YU | M25.90002.S01 | Dipole | I-PEX | 2400-2500, 5150-5850 | Indoor |

| No | Brand | Model | Gain (dBi) | Cable Loss(dB) (External only, if any) | Net Gain (dB) | Cable Length (External only, if any) |
|---|---|---|---|---|---|---|
| 1 | Symbol | ML-2499-BYGA2-01R | 14.2 | 0.3 | 13.9 | 12 inch |
| 2 | Symbol | ML-2499-11PNA2-01R | 11.2 | 2.7 | 8.5 | 96 inch |
| 3 | Symbol | ML-2452-APA2-01 | 3 / 4 | N/A | 3 / 4 | N/A |
| 4 | Motolora | ML-2452-PTA2M3X3-1 | 1 / 2 | N/A | 1 / 2 | N/A |
| 5 | Symbol | ML-5299-WPNA1-01R | 14.2 | 1.2 | 13 | 36 inch |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | Symbol | ML-2499-HPA3-01R | 4.6 | 1.3 | 3.3 | 48 inch |
| 7 | Symbol | ML-5299-HPA1-01R | 5.9 | 0.84 | 5.06 | 36 inch |
| 8 | Motolora | ML-2452-PTA3M3-036 | 6/7 | 0.92 / 1.97 | 5.08 / 5.03 | 36 inch |
| 9 | WHA YU | ML-2452-APA6J-01 | -6 / -6 | N/A | 2.4GHz<br>Peak gain : -5.76dBi<br>5GHz Peak gain :<br>band 1: -3.77dBi<br>band 2: -3.38dBi<br>band 3: -2.84dBi<br>band 4: -2.94dBi | N/A |
| 10 | Motolora | ML-2452-PNL9M3-036 | 8 / 10.7 | N/A | 8 / 10.7 | 36 inch |
| 11 | Motolora | ML-5299-BYGA15-012 | 14.5 | N/A | 14.5 | 3 ft |
| 12 | WHA YU | M25.90002.S01 | 3.03 / 4.06 | N/A | 3.03 / 4.06 | 63mm |

**Note :**

1. For Radio card 1: The antennas 1~4, 6 & 8-10 will be use, therefore antenna 1, 2, 4, 6, 8, were chosen for final test.
2. For Radio card 2: The antennas 3~5 & 7-11 will be use, therefore antenna 4, 5, 7, 8, 11, were chosen for final test.
3. For Radio card 3: The antenna 12 will be use only, therefore antenna 12 was chosen for final test.

2. The maximum output power (Unit : mW) :

| No. | Model No. | Operating Frequency (MHz) | | | |
|---|---|---|---|---|---|
| | | 2412MHz ~ 2462MHz | | | |
| | | 802.11b | 802.11g | draft 802.11n (20MHz) | draft 802.11n (40MHz) |
| 1 | ML-2499-BYGA2-01R | 108.863 | 139.609 | 149.939 | 126.103 |
| 2 | ML-2499-11PNA2-01R | 308.169 | 324.163 | 289.148 | 233.642 |
| 4 | ML-2452-PTA2M3X3-1 | 538.069 | 996.802 | 986.682 | 999.385 |
| 6 | ML-2499-HPA3-01R | 956.375 | 903.749 | 943.888 | 646.982 |
| 8 | ML-2452-PTA3M3-036 | 509.155 | 801.957 | 718.918 | 519.772 |
| 12 | M25.90002.S01 | 283.792 | NA | NA | NA |

| No. | Model No. | Operating Frequency (MHz) | | |
|---|---|---|---|---|
| | | 5180 ~ 5240 MHz | | |
| | | 802.11a | draft 802.11n (20MHz) | draft 802.11n (40MHz) |
| 4 | ML-2452-PTA2M3X3-1 | 30.990 | 30.606 | 46.138 |
| 5 | ML-5299-WPNA1-01R | 6.148 | 6.993 | 9.274 |
| 7 | ML-5299-HPA1-01R | 30.990 | 30.606 | 46.138 |
| 8 | ML-2452-PTA3M3-036 | 30.990 | 30.606 | 46.138 |
| 11 | ML-5299-BYGA15-012 | 4.600 | 4.559 | 6.660 |
| 12 | M25.90002.S01 | 9.705 | NA | NA |

| No. | Model No. | Operating Frequency (MHz) | | |
|---|---|---|---|---|
| | | 5745 ~ 5825 MHz | | |
| | | 802.11a | draft 802.11n (20MHz) | draft 802.11n (40MHz) |
| 4 | ML-2452-PTA2M3X3-1 | 940.387 | 921.281 | 898.173 |
| 5 | ML-5299-WPNA1-01R | 189.619 | 183.244 | 178.048 |
| 7 | ML-5299-HPA1-01R | 940.387 | 921.281 | 898.173 |
| 8 | ML-2452-PTA3M3-036 | 940.387 | 921.281 | 898.173 |
| 11 | ML-5299-BYGA15-012 | 136.405 | 135.623 | 133.889 |
| 12 | M25.90002.S01 | 310.456 | NA | NA |

3. The EUT must be supplied with a power adapter or POE as below :

| Adapter | | |
|---|---|---|
| Brand | Model No. | Spec. |
| MOTOROLA | 50-14000-247R | AC Input : 100-240V, 1A, 50-60Hz<br>DC Output : 48V, 0.75A<br>DC output cable : 1.9m, unshielded with one core |
| POE | | |
| Brand | Model No. | Spec. |
| MOTOROLA | AP-PSBIAS-1P3-AFR | AC Input : 100-240V, 0.8A, 50 / 60Hz<br>DC Output : 55V, 0.57A |

4. The EUT has three radio cards inside the device.
   Radio 1 operates all the time, with 3Tx MIMO, at 2.4 GHz.
   Radio 2 operates all the time, with 3Tx MIMO at 5 GHz.
   Radio 3 does not operate in 11n mode. In the 2.4GHz band, the radio 3 only transmits at 1Mbps which is 802.11b DSSS rate. In the 5GHz band, the radio 3 only transmits in 6Mbps which is 802.11a OFDM rate.
5. During normal operation, only radio 1 and 2 will transmit data, radio 3 will work as a sensor radio. Radio 3 is mostly Rx-only, though it does also transmit a low duty cycle signal at 2.4 GHz and 5 GHz. The radio 1 or radio 2 will transmit simultaneously with radio 3 when radio 3 detects signals.
6. Radio 1 and radio 2 will reduce 1dB automatically from maximum power when radio 3 detect signals and transmit signals.
7. The EUT incorporates CDD function with 802.11a, 802.11b, 802.11g and MIMO function with draft 802.11n.
8. The radio 1 and radio 2 are 3 * 3 spatial MIMO (3Tx & 3Rx) without beam forming function. The antenna configurations are three transmitter antennas and three receiver antennas. Spatial multiplexing modes for simultaneous transmission using 3 antennas, and for simultaneous receiver using 3 antennas.
9. The EUT have MIMO power save mode, one transmitter may be active (chain 0) while others is inactive (chain 1 and chain 2) or two transmitters may be active (chain 0 and 1) while others is inactive (chain 2). Output power is no different compared to operation when all of transmitter chains are active. Transmitter power is not increased or decreased for chain 0 or chain 0 and chain 1 when is single chain or dual chain mode, compared to three chain active mode.
10. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

## 3.2 DESCRIPTION OF TEST MODES

**Operated in 5150MHz ~ 5250MHz bands:**

Four channels are provided for 802.11a and draft 802.11n (20MHz):

| CHANNEL | FREQUENCY |
|---|---|
| 1 | 5180 MHz |
| 2 | 5200 MHz |
| 3 | 5220 MHz |
| 4 | 5240 MHz |

Two channels are provided for draft 802.11n (40MHz):

| CHANNEL | FREQUENCY |
|---|---|
| 1 | 5190 MHz |
| 2 | 5230 MHz |

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

| EUT CONFIGURE MODE | APPLICABLE TO | | | | DESCRIPTION |
|---|---|---|---|---|---|
| | PLC | RE < 1G | RE ³ 1G | APCM | |
| - | √ | √ | √ | √ | - |

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz

**RE ³ 1G:** Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

## ANTENNA COMBINATION MODE:

| COMBINATION MODE | OPERATION MODE | TX CHAIN(0) | TX CHAIN(1) | TX CHAIN(2) |
|---|---|---|---|---|
| A | 802.11 a | √ | | |
| B | 802.11 a | √ | | √ |
| C | 802.11 a | √ | √ | √ |
| D | DRAFT 802.11n(20MHz) for MCS0~7 | √ | | |
| E | DRAFT 802.11n(20MHz) for MCS0~7 | √ | | √ |
| F | DRAFT 802.11n(20MHz) for MCS0~7 | √ | √ | √ |
| G | DRAFT 802.11n(20MHz) for MCS8~15 | √ | | |
| H | DRAFT 802.11n(20MHz) for MCS8~15 | √ | | √ |
| I | DRAFT 802.11n(20MHz) for MCS8~15 | √ | √ | √ |
| J | DRAFT 802.11n(40MHz) for MCS0~7 | √ | | |
| K | DRAFT 802.11n(40MHz) for MCS0~7 | √ | | √ |
| L | DRAFT 802.11n(40MHz) for MCS0~7 | √ | √ | √ |
| M | DRAFT 802.11n(40MHz) for MCS8~15 | √ | | |
| N | DRAFT 802.11n(40MHz) for MCS8~15 | √ | | √ |
| O | DRAFT 802.11n(40MHz) for MCS8~15 | √ | √ | √ |

Note:
1. The above information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
2. Mode A (Radio card 3) the worst mode, was selected as representative mode for the report.
3. Mode C, F, L (Radio card 2) the worst modes, were selected as representative mode for the report.

**POWER LINE CONDUCTED EMISSION TEST:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) | TX COMBINATION |
|---|---|---|---|---|---|---|
| 802.11a | 1 to 4 | 1 | OFDM | BPSK | 6 | A |
| 802.11a | 1 to 4 | 1 | OFDM | BPSK | 6 | C |

☒ The EUT was Pre-tested as the following test modes:

| Test Mode | Description |
|---|---|
| Mode 1 | With Adapter |
| Mode 2 | With POE |

Mode 2, the worse case one, was chosen for final test.

**RADIATED EMISSION TEST (BELOW 1 GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) | TX COMBINATION |
|---|---|---|---|---|---|---|
| 802.11a | 1 to 4 | 1 | OFDM | BPSK | 6 | A |
| 802.11a | 1 to 4 | 1 | OFDM | BPSK | 6 | C |

☒ The EUT was Pre-tested as the following test modes:

| Test Mode | Description |
|---|---|
| Mode 1 | With Adapter |
| Mode 2 | With POE |

Mode 2, the worse case one, was chosen for final test.

## RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATIO N TYPE | DATA RATE (Mbps) | TX COMBINATION |
|---|---|---|---|---|---|---|
| 802.11a | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6 | A |
| 802.11a | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6 | C |
| For 5 GHz Draft 802.11n (20MHz) | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6.5 | F |
| For 5 GHz Draft 802.11n (40MHz) | 1 to 2 | 1, 2 | OFDM | BPSK | 13.5 | L |

## BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) | TX COMBINATION |
|---|---|---|---|---|---|---|
| 802.11a | 1 to 4 | 1, 4 | OFDM | BPSK | 6 | A |
| 802.11a | 1 to 4 | 1, 4 | OFDM | BPSK | 6 | C |
| For 5 GHz Draft 802.11n (20MHz) | 1 to 4 | 1, 4 | OFDM | BPSK | 6.5 | F |
| For 5 GHz Draft 802.11n (40MHz) | 1 to 2 | 1, 2 | OFDM | BPSK | 13.5 | L |

## ANTENNA PORT CONDUCTED MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) | TX COMBINATION |
|---|---|---|---|---|---|---|
| 802.11a | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6 | A |
| 802.11a | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6 | C |
| For 5 GHz Draft 802.11n (20MHz) | 1 to 4 | 1, 2, 4 | OFDM | BPSK | 6.5 | F |
| For 5 GHz Draft 802.11n (40MHz) | 1 to 2 | 1, 2 | OFDM | BPSK | 13.5 | L |

## 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an 11n Access-Point. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart E (15.407)**

**ANSI C63.4-2003**

All test items have been performed and recorded as per the above standards.

**NOTE**: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

## 3.4 DESCRIPTION OF SUPPORT UNITS

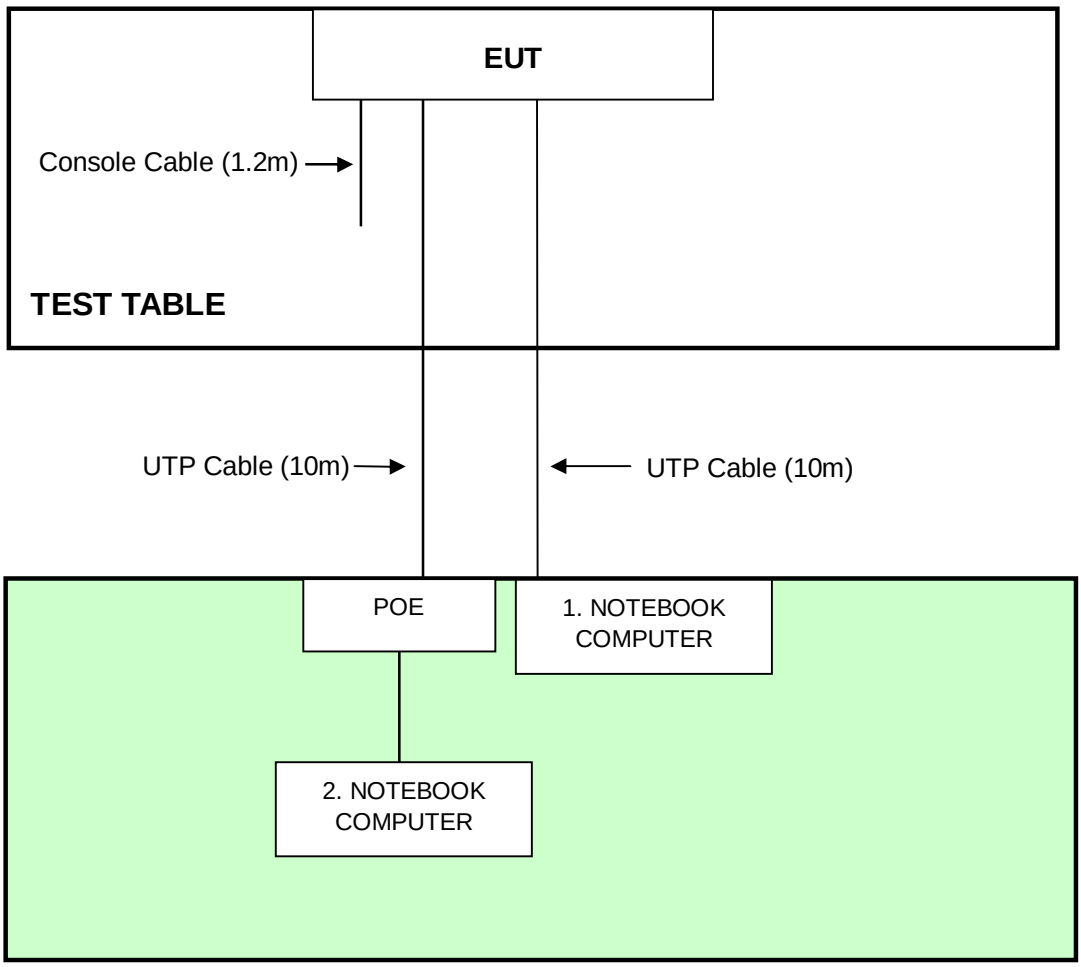
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT | BRAND | MODEL NO. | SERIAL NO. | FCC ID |
|---|---|---|---|---|---|
| 1 | NOTEBOOK COMPUTER | DELL | D531 | CN-0XM006-48643-86L-4472 | QDS-BRCM1019 |
| 2 | NOTEBOOK COMPUTER | DELL | PP18L | 6976685584 | FCC DoC |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|---|---|
| 1 | UTP Cable (10m) |
| 2 | UTP Cable (10m) |

**NOTE:** All power cords of the above support units are non shielded (1.8m).

## 3.5 CONFIGURATION OF SYSTEM UNDER TEST



# 4. TEST TYPES AND RESULTS

## 4.1 CONDUCTED EMISSION MEASUREMENT

### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| FREQUENCY OF EMISSION (MHz) | CONDUCTED LIMIT (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15-0.5<br>0.5-5<br>5-30 | 66 to 56<br>56<br>60 | 56 to 46<br>46<br>50 |

**NOTE**: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 4.1.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| Test Receiver | ESCS 30 | 100375 | Mar. 23, 2009 | Mar. 22, 2010 |
| Line-Impedance Stabilization Network(for Peripheral) | ENV-216 | 100071 | Nov. 26, 2008 | Nov. 25, 2009 |
| Line-Impedance Stabilization Network (for EUT) | ESH3-Z5 | 848773/004 | Nov. 05, 2008 | Nov. 04, 2009 |
| RF Cable (JYEBAO) | 5DFB | COBCAB-001 | Aug. 15, 2008 | Aug. 14, 2009 |
| 50 ohms Terminator | 50 | 3 | Nov. 05, 2008 | Nov. 04, 2009 |
| Software | BV ADT_Cond_V7.3.7 | NA | NA | NA |

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. B.
3 The VCCI Con B Registration No. is C-2193.

### 4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs

b. provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

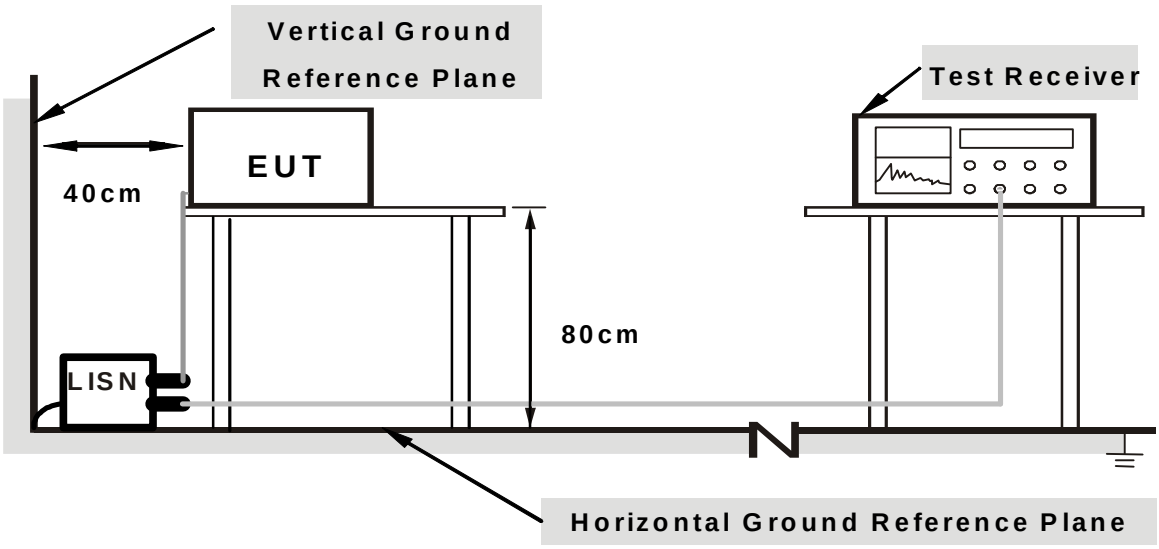
c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

d. The frequency range from 150kHz to 30MHz was searched. Emission level under (Limit – 20dB) was not recorded.

### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP




**Note: 1.Support units were connected to second LISN.**
**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

1. Placed the EUT on the testing table.
2. Prepared other computer systems to act as a communication partner and placed them outside of testing area.
3. The communication partner run test program “AR5088nx MB82” to enable EUT under transmission/receiving condition continuously at specific channel frequency via UTP cables.

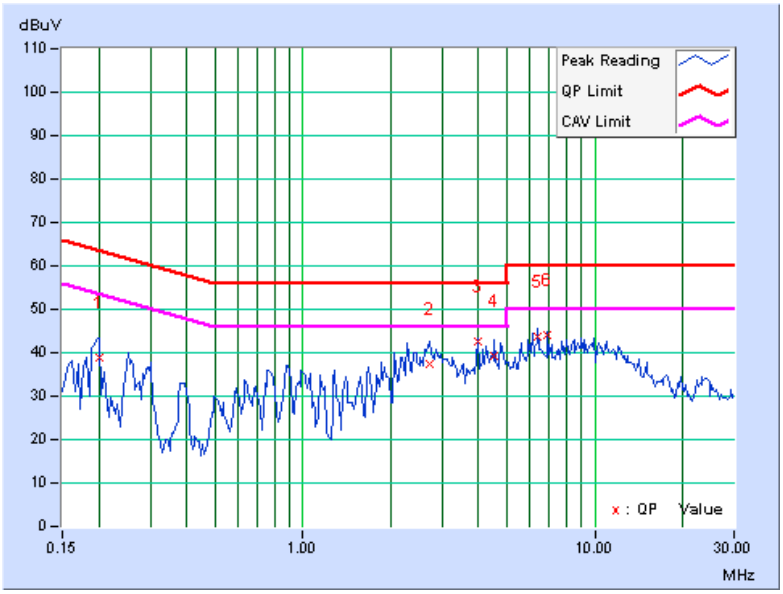
## 4.1.7 TEST RESULTS

**802.11a OFDM MODULATION < Radio Card 3>:**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **PHASE** | Line (L) |
| **MODULATION TYPE** | BPSK | **6dB BANDWIDTH** | 9 kHz |
| **TRANSFER RATE** | 6Mbps | **INPUT POWER** | 120Vac, 60 Hz |
| **ENVIRONMENTAL CONDITIONS** | 25deg. C, 60%RH, 965hPa | **TESTED BY** | Eagle Chen |
| **TEST MODE** | Radio Card 3 | | |

| | Freq. | Corr. | Reading Value | | Emission Level | | Limit | | Margin | |
|---|---|---|---|---|---|---|---|---|---|---|
| **No** | | **Factor** | **[dB (uV)]** | | **[dB (uV)]** | | **[dB (uV)]** | | **(dB)** | |
| | **[MHz]** | **(dB)** | **Q.P.** | **AV.** | **Q.P.** | **AV.** | **Q.P.** | **AV.** | **Q.P.** | **AV.** |
| 1 | 0.201 | 0.22 | 38.66 | - | 38.88 | - | 63.58 | 53.58 | -24.70 | - |
| 2 | 2.727 | 0.47 | 37.01 | - | 37.48 | - | 56.00 | 46.00 | -18.52 | - |
| **+3** | **3.984** | **0.58** | **41.89** | **-** | **42.47** | **-** | **56.00** | **46.00** | **-13.53** | **-** |
| 4 | 4.516 | 0.59 | 38.77 | - | 39.36 | - | 56.00 | 46.00 | -16.64 | - |
| 5 | 6.375 | 0.63 | 43.04 | - | 43.67 | - | 60.00 | 50.00 | -16.33 | - |
| 6 | 6.902 | 0.64 | 43.45 | - | 44.09 | - | 60.00 | 50.00 | -15.91 | - |

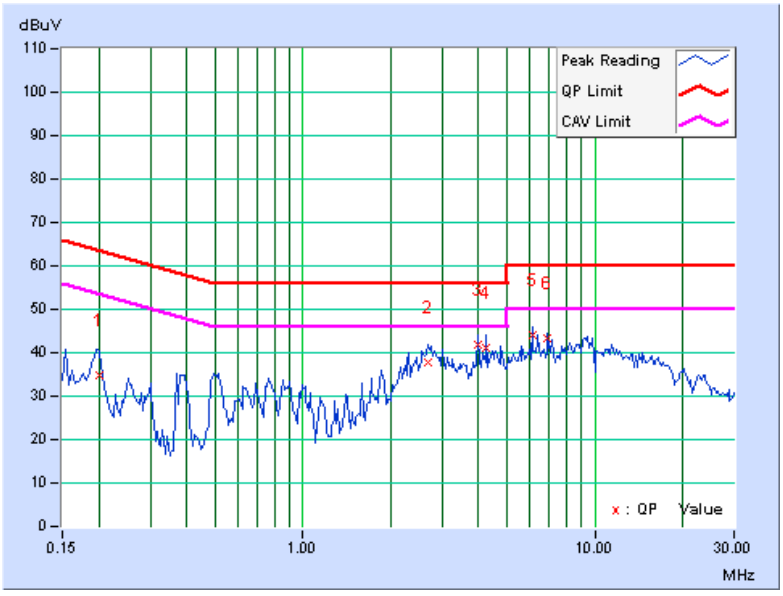
**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | PHASE | Neutral (N) |
| MODULATION TYPE | BPSK | 6dB BANDWIDTH | 9 kHz |
| TRANSFER RATE | 6Mbps | INPUT POWER | 120Vac, 60 Hz |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 60%RH, 965hPa | TESTED BY | Eagle Chen |
| TEST MODE | Radio Card 3 | | |

| | Freq. | Corr. | Reading Value | | Emission Level | | Limit | | Margin | |
|---|---|---|---|---|---|---|---|---|---|---|
| No | | Factor | [dB (uV)] | | [dB (uV)] | | [dB (uV)] | | (dB) | |
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.201 | 0.15 | 34.78 | - | 34.93 | - | 63.58 | 53.58 | -28.65 | - |
| 2 | 2.668 | 0.39 | 37.32 | - | 37.71 | - | 56.00 | 46.00 | -18.29 | - |
| +3 | 3.984 | 0.51 | 41.41 | - | 41.92 | - | 56.00 | 46.00 | -14.08 | - |
| 4 | 4.250 | 0.51 | 40.65 | - | 41.16 | - | 56.00 | 46.00 | -14.84 | - |
| 5 | 6.105 | 0.53 | 43.50 | - | 44.03 | - | 60.00 | 50.00 | -15.97 | - |
| 6 | 6.902 | 0.54 | 42.67 | - | 43.21 | - | 60.00 | 50.00 | -16.79 | - |

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

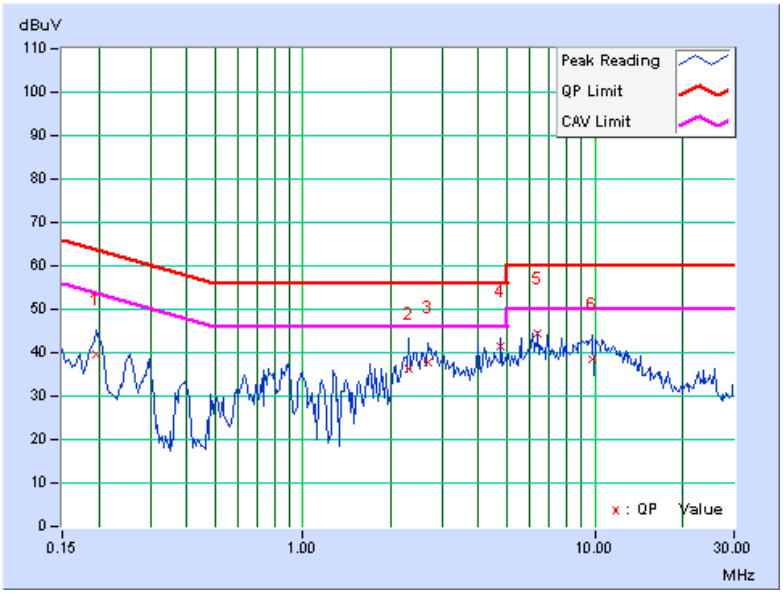


## 802.11a OFDM MODULATION < Radio Card 2>:

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | PHASE | Line (L) |
| MODULATION TYPE | BPSK | 6dB BANDWIDTH | 9 kHz |
| TRANSFER RATE | 6Mbps | INPUT POWER | 120Vac, 60 Hz |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 60%RH, 965hPa | TESTED BY | Eagle Chen |
| TEST MODE | Radio Card 2 | | |

| | Freq. | Corr. | Reading Value | | Emission Level | | Limit | | Margin | |
|---|---|---|---|---|---|---|---|---|---|---|
| No | | Factor | [dB (uV)] | | [dB (uV)] | | [dB (uV)] | | (dB) | |
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.197 | 0.22 | 39.55 | - | 39.77 | - | 63.74 | 53.74 | -23.97 | - |
| 2 | 2.301 | 0.44 | 35.70 | - | 36.14 | - | 56.00 | 46.00 | -19.86 | - |
| 3 | 2.680 | 0.47 | 37.42 | - | 37.89 | - | 56.00 | 46.00 | -18.11 | - |
| +4 | 4.777 | 0.60 | 41.03 | - | 41.63 | - | 56.00 | 46.00 | -14.37 | - |
| 5 | 6.371 | 0.63 | 43.76 | - | 44.39 | - | 60.00 | 50.00 | -15.61 | - |
| 6 | 9.863 | 0.71 | 37.67 | - | 38.38 | - | 60.00 | 50.00 | -21.62 | - |

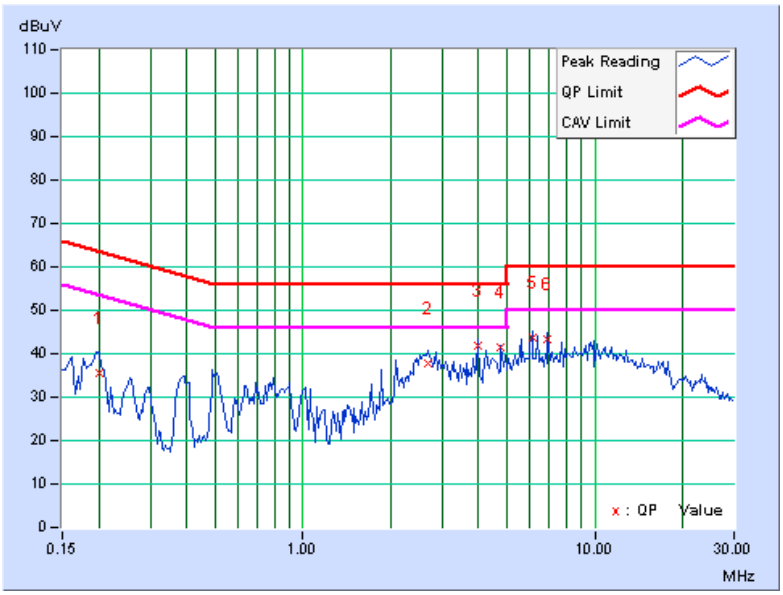
**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **PHASE** | Neutral (N) |
| **MODULATION TYPE** | BPSK | **6dB BANDWIDTH** | 9 kHz |
| **TRANSFER RATE** | 6Mbps | **INPUT POWER** | 120Vac, 60 Hz |
| **ENVIRONMENTAL CONDITIONS** | 25deg. C, 60%RH, 965hPa | **TESTED BY** | Eagle Chen |
| **TEST MODE** | Radio Card 2 | | |

| | Freq. | Corr. | Reading Value | | Emission Level | | Limit | | Margin | |
|---|---|---|---|---|---|---|---|---|---|---|
| **No** | | **Factor** | **[dB (uV)]** | | **[dB (uV)]** | | **[dB (uV)]** | | **(dB)** | |
| | **[MHz]** | **(dB)** | **Q.P.** | **AV.** | **Q.P.** | **AV.** | **Q.P.** | **AV.** | **Q.P.** | **AV.** |
| 1 | 0.201 | 0.15 | 35.54 | - | 35.69 | - | 63.58 | 53.58 | -27.89 | - |
| 2 | 2.676 | 0.39 | 37.32 | - | 37.71 | - | 56.00 | 46.00 | -18.29 | - |
| +3 | 3.980 | 0.51 | 41.30 | - | 41.81 | - | 56.00 | 46.00 | -14.19 | - |
| 4 | 4.777 | 0.52 | 41.01 | - | 41.53 | - | 56.00 | 46.00 | -14.47 | - |
| 5 | 6.105 | 0.53 | 43.17 | - | 43.70 | - | 60.00 | 50.00 | -16.30 | - |
| 6 | 6.902 | 0.54 | 42.63 | - | 43.17 | - | 60.00 | 50.00 | -16.83 | - |

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

| Frequencies (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**:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

## 4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

| **Frequencies (MHz)** | **EIRP Limit (dBm)** | **Equivalent Field Strength at 3m (dBμV/m)** *note 3 |
|---|---|---|
| 5150~5250 | -27 | 68.3 |
| 5250~5350 | -27 | 68.3 |
| 5470~5725 | -27 | 68.3 |
| 5725~5825 | -27 *note 1 | 68.3 |
| | -17 *note 2 | 78.3 |

**NOTE**:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

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

## 4.2.3 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| ROHDE & SCHWARZ Spectrum Analyzer | FSP40 | 100036 | Dec. 9, 2008 | Dec. 8, 2009 |
| HP Pre_Amplifier | 8449B | 3008A01923 | Nov. 10, 2008 | Nov. 9, 2009 |
| ROHDE & SCHWARZ Test Receiver | ESCS30 | 847124/029 | Sep. 9, 2008 | Sep. 8, 2009 |
| SCHWARZBECK TRILOG Broadband Antenna | VULB 9168 | 138 | April 29, 2009 | April 28, 2010 |
| Schwarzbeck Horn_Antenna | BBHA9120 | D124 | Dec. 09, 2008 | Dec. 08, 2009 |
| Schwarzbeck Horn_Antenna | BBHA 9170 | BBHA9170153 | Jan. 22, 2009 | Jan. 21, 2010 |
| RF Switches | EMH-011 | 08009 | Oct. 07, 2008 | Oct. 06, 2009 |
| RF CABLE (Chaintek) | Sucoflex 106 | 28077 | Aug. 15, 2008 | Aug. 14, 2009 |
| RF Cable | 8DFB | STCCAB-30M-1GHz | Oct. 07, 2008 | Oct. 06, 2009 |
| Software | ADT_Radiated_V7.6.15.9.2 | NA | NA | NA |
| CT Antenna Tower & Turn Table | NA | NA | NA | NA |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, HP preamplifier (model: 8449B) and Spectrum Analyzer (model: FSP40) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 7450G-3.

### 4.2.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

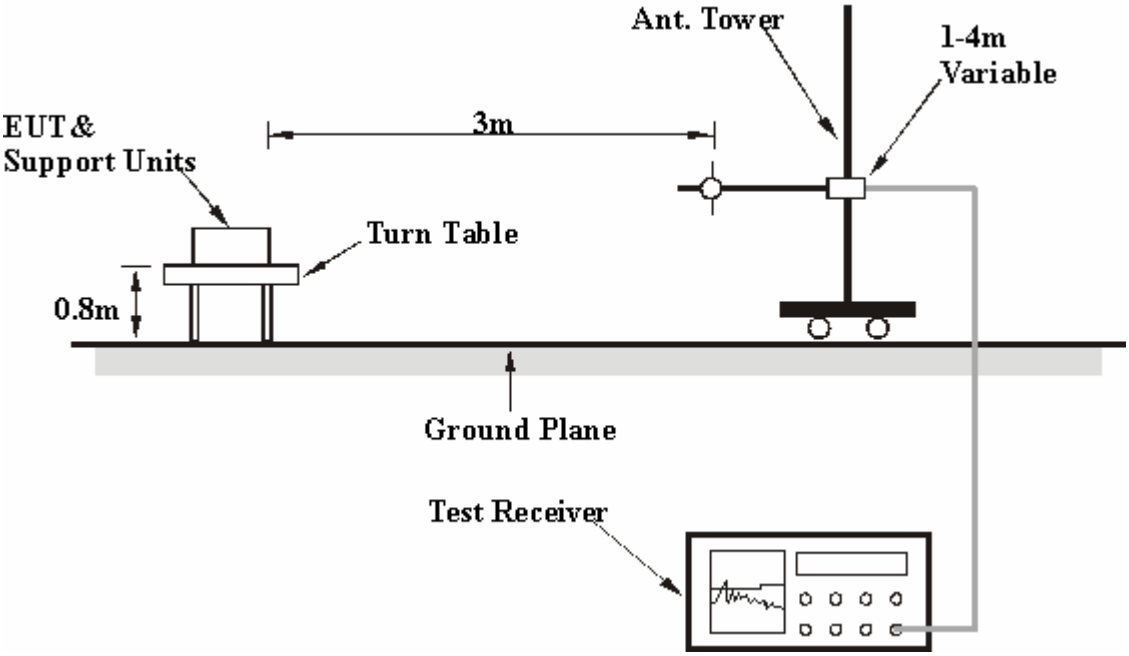
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

### 4.2.5 DEVIATION FROM TEST STANDARD

No deviation

4.2.6 TEST SETUP




For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.7 EUT OPERATING CONDITION

Same as 4.1.6

## 4.2.8 TEST RESULTS – ANTENNA 4

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | Below 1000MHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Quasi-Peak |
| ENVIRONMENTAL CONDITIONS | 30.0deg. C, 55.0%RH 965hPa | TESTED BY | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 125.00 | 27.43 QP | 43.50 | -16.07 | 1.26 H | 148 | 14.36 | 13.07 |
| 2 | 250.00 | 44.48 QP | 46.00 | -1.52 | 1.22 H | 276 | 30.23 | 14.25 |
| 3 | 375.00 | 38.54 QP | 46.00 | -7.46 | 1.21 H | 279 | 19.73 | 18.81 |
| 4 | 650.00 | 43.76 QP | 46.00 | -2.24 | 1.21 H | 256 | 18.23 | 25.53 |
| 5 | 750.00 | 35.88 QP | 46.00 | -10.12 | 1.09 H | 255 | 8.97 | 26.91 |
| 6 | 875.00 | 37.12 QP | 46.00 | -8.88 | 1.00 H | 123 | 7.83 | 29.29 |
| 7 | 1000.00 | 38.77 QP | 54.00 | -15.23 | 1.04 H | 154 | 8.03 | 30.74 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 57.21 | 32.23 QP | 40.00 | -7.77 | 1.00 V | 249 | 18.54 | 13.69 |
| 2 | 125.00 | 29.73 QP | 43.50 | -13.77 | 1.00 V | 142 | 16.66 | 13.07 |
| 3 | 250.00 | 28.59 QP | 46.00 | -17.41 | 1.00 V | 67 | 14.34 | 14.25 |
| 4 | 375.00 | 39.12 QP | 46.00 | -6.88 | 1.05 V | 252 | 20.31 | 18.81 |
| 5 | 600.00 | 37.77 QP | 46.00 | -8.23 | 1.00 V | 284 | 12.73 | 25.04 |
| 6 | 650.00 | 39.84 QP | 46.00 | -6.16 | 1.00 V | 248 | 14.31 | 25.53 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 30.0deg. C, 55.0%RH<br>965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 43.85 PK | 68.30 | -24.45 | 1.36 H | 346 | 11.58 | 32.27 |
| 2 | 5150.00 | 55.03 PK | 74.00 | -18.97 | 1.23 H | 26 | 19.03 | 36.00 |
| 3 | 5150.00 | 44.25 AV | 54.00 | -9.75 | 1.23 H | 26 | 8.25 | 36.00 |
| 4 | *5180.00 | 110.30 PK | | | 1.24 H | 27 | 74.25 | 36.05 |
| 5 | *5180.00 | 99.30 AV | | | 1.24 H | 27 | 63.25 | 36.05 |
| 6 | #6906.60 | 52.92 PK | 68.30 | -15.38 | 1.69 H | 52 | 11.84 | 41.08 |
| 7 | #10360.00 | 54.96 PK | 68.30 | -13.34 | 1.58 H | 283 | 9.04 | 45.92 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 43.60 PK | 68.30 | -24.70 | 1.00 V | 35 | 11.33 | 32.27 |
| 2 | 5150.00 | 56.80 PK | 74.00 | -17.20 | 1.25 V | 257 | 20.80 | 36.00 |
| 3 | 5150.00 | 43.87 AV | 54.00 | -10.13 | 1.25 V | 257 | 7.87 | 36.00 |
| 4 | *5180.00 | 115.69 PK | | | 1.26 V | 357 | 79.64 | 36.05 |
| 5 | *5180.00 | 104.96 AV | | | 1.26 V | 357 | 68.91 | 36.05 |
| 6 | #6906.60 | 52.30 PK | 68.30 | -16.00 | 1.00 V | 29 | 11.22 | 41.08 |
| 7 | #10360.00 | 54.40 PK | 68.30 | -13.90 | 1.00 V | 33 | 8.48 | 45.92 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 30.0deg. C, 55.0%RH 965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 43.85 PK | 68.30 | -24.45 | 1.35 H | 351 | 11.57 | 32.28 |
| 2 | *5200.00 | 110.40 PK | | | 1.04 H | 52 | 74.32 | 36.08 |
| 3 | *5200.00 | 100.10 AV | | | 1.04 H | 52 | 64.02 | 36.08 |
| 4 | #6933.30 | 52.83 PK | 68.30 | -15.47 | 1.60 H | 57 | 11.70 | 41.13 |
| 5 | #10400.00 | 54.86 PK | 68.30 | -13.44 | 1.31 H | 258 | 8.87 | 45.99 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 43.20 PK | 68.30 | -25.10 | 1.00 V | 26 | 10.92 | 32.28 |
| 2 | *5200.00 | 115.28 PK | | | 1.26 V | 341 | 79.20 | 36.08 |
| 3 | *5200.00 | 105.22 AV | | | 1.26 V | 341 | 69.14 | 36.08 |
| 4 | #6933.30 | 52.60 PK | 68.30 | -15.70 | 1.01 V | 34 | 11.47 | 41.13 |
| 5 | #10400.00 | 54.10 PK | 68.30 | -14.20 | 1.00 V | 32 | 8.11 | 45.99 |

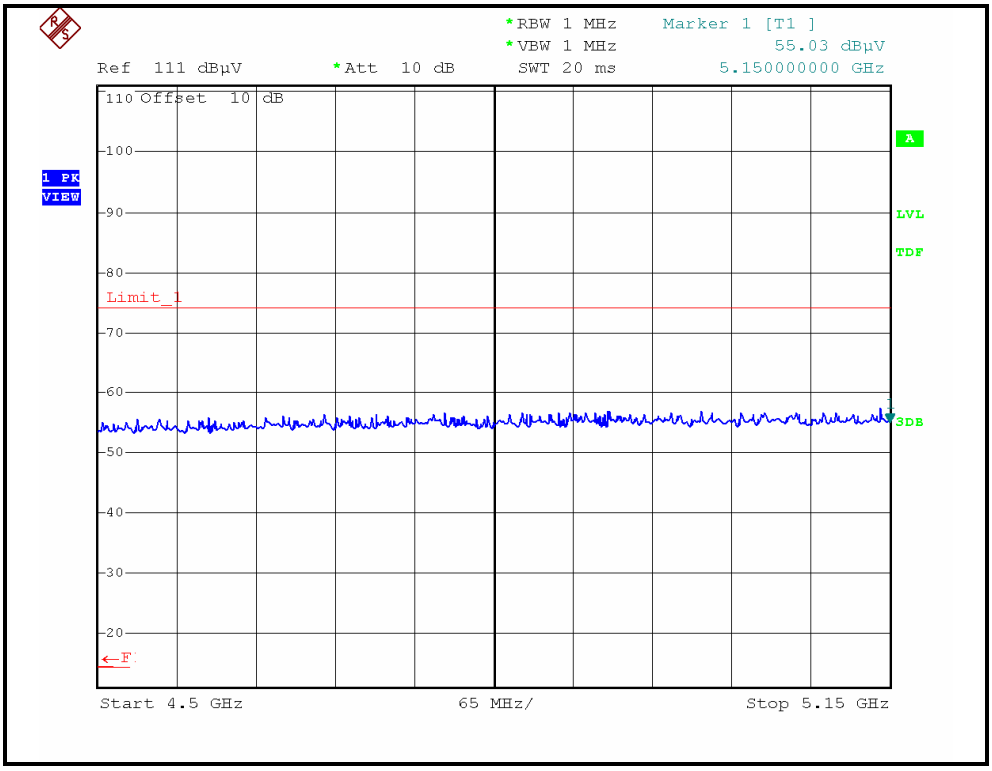
**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

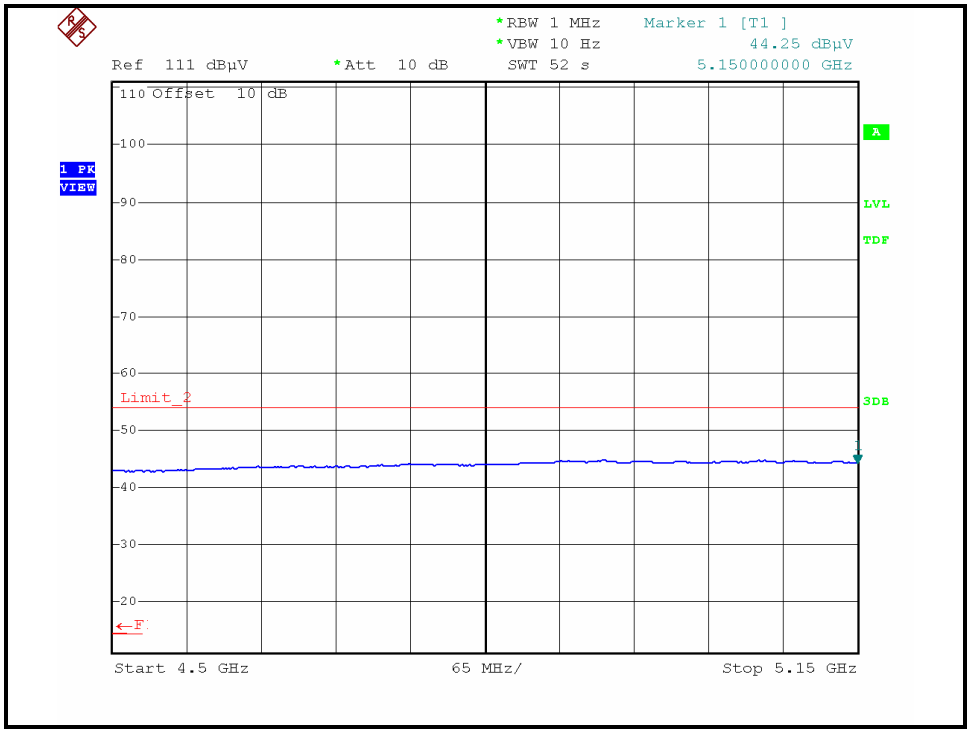
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 30.0deg. C, 55.0%RH 965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 43.79 PK | 68.30 | -24.51 | 1.30 H | 349 | 11.49 | 32.30 |
| 2 | *5240.00 | 110.60 PK | | | 1.23 H | 29 | 74.46 | 36.14 |
| 3 | *5240.00 | 100.30 AV | | | 1.23 H | 29 | 64.16 | 36.14 |
| 4 | 5350.00 | 57.89 PK | 74.00 | -16.11 | 1.00 H | 244 | 21.57 | 36.32 |
| 5 | 5350.00 | 46.08 AV | 54.00 | -7.92 | 1.00 H | 244 | 9.76 | 36.32 |
| 6 | 6986.60 | 52.77 PK | 68.30 | -15.53 | 1.58 H | 63 | 11.54 | 41.23 |
| 7 | #10480.00 | 54.77 PK | 68.30 | -13.53 | 1.47 H | 24 | 8.65 | 46.12 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 43.40 PK | 68.30 | -24.90 | 1.01 V | 26 | 11.10 | 32.30 |
| 2 | *5240.00 | 115.68 PK | | | 1.27 V | 359 | 79.54 | 36.14 |
| 3 | *5240.00 | 105.30 AV | | | 1.27 V | 359 | 69.16 | 36.14 |
| 4 | 5350.00 | 60.81 PK | 74.00 | -13.19 | 1.18 V | 330 | 24.49 | 36.32 |
| 5 | 5350.00 | 48.41 AV | 54.00 | -5.59 | 1.18 V | 330 | 12.09 | 36.32 |
| 6 | 6986.60 | 52.10 PK | 68.30 | -16.20 | 1.04 V | 31 | 10.87 | 41.23 |
| 7 | #10480.00 | 54.20 PK | 68.30 | -14.10 | 1.00 V | 24 | 8.08 | 46.12 |

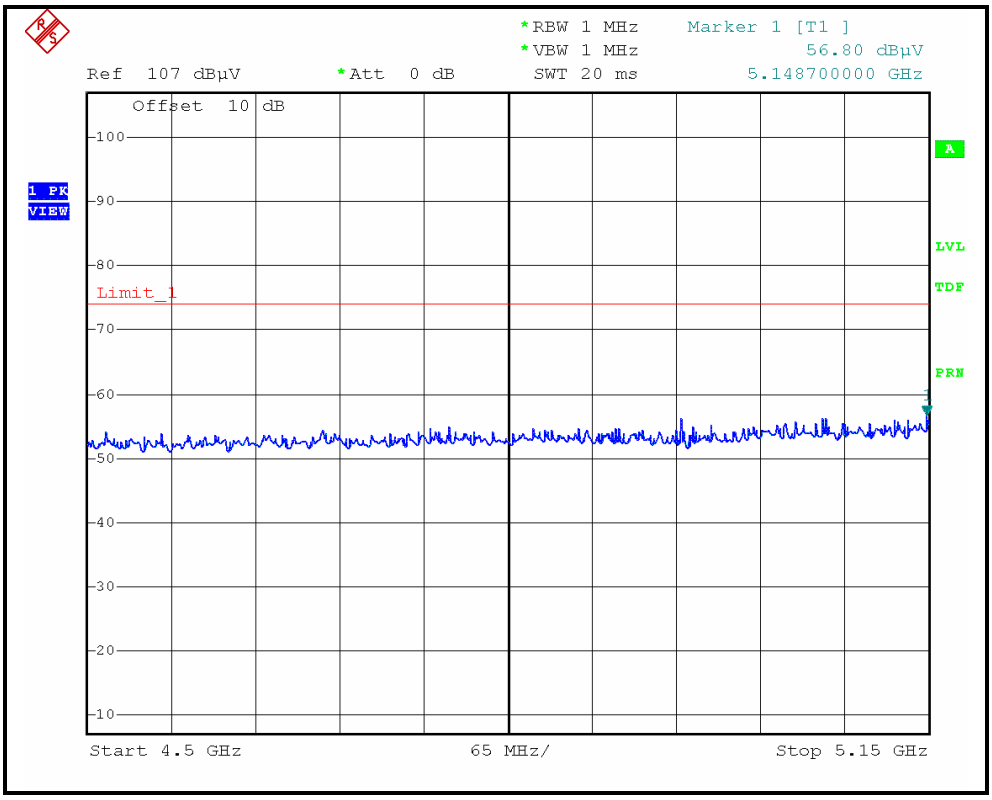
**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

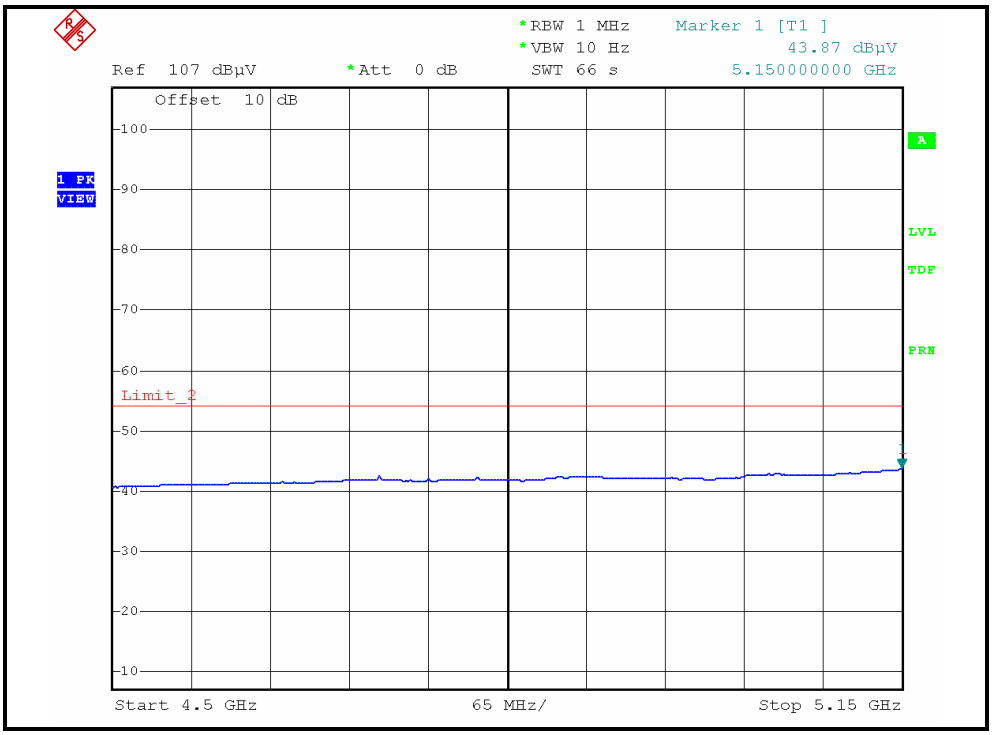
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



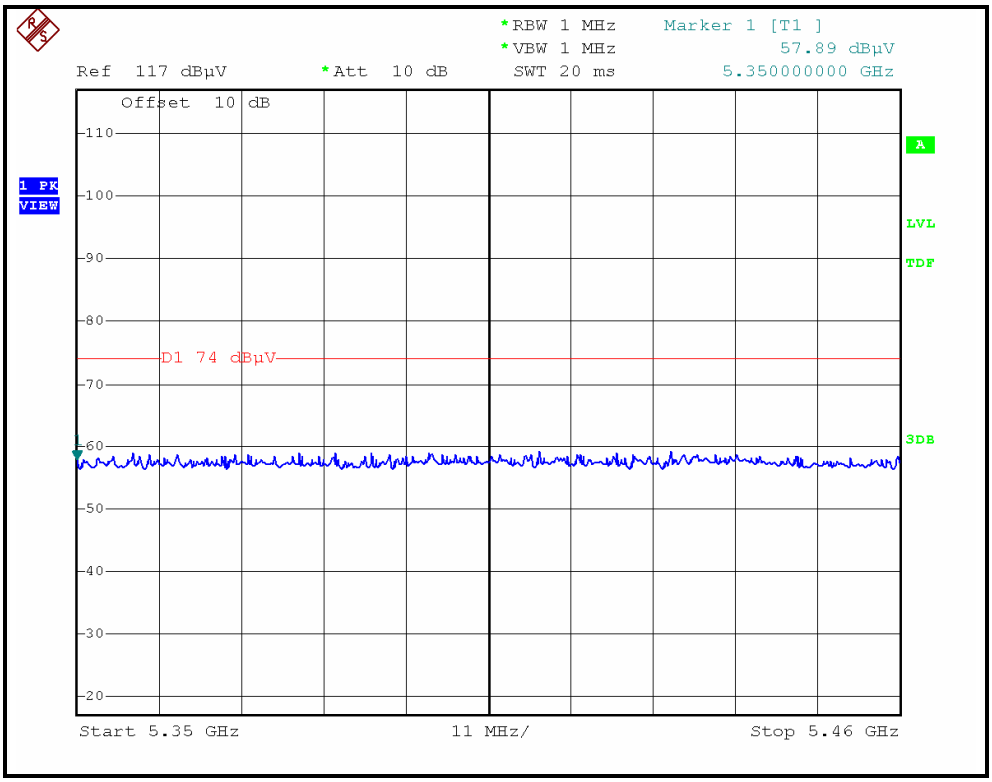



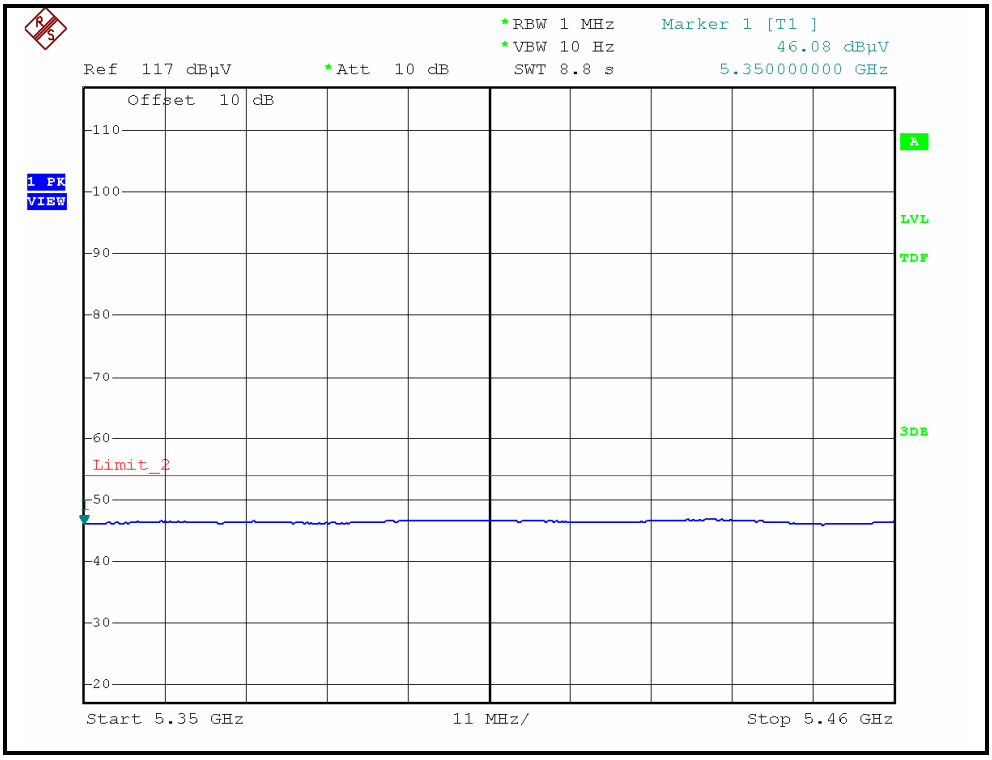
RESTRICTED BANDEDGE (802.11a MODE, CH1, VERTICAL )



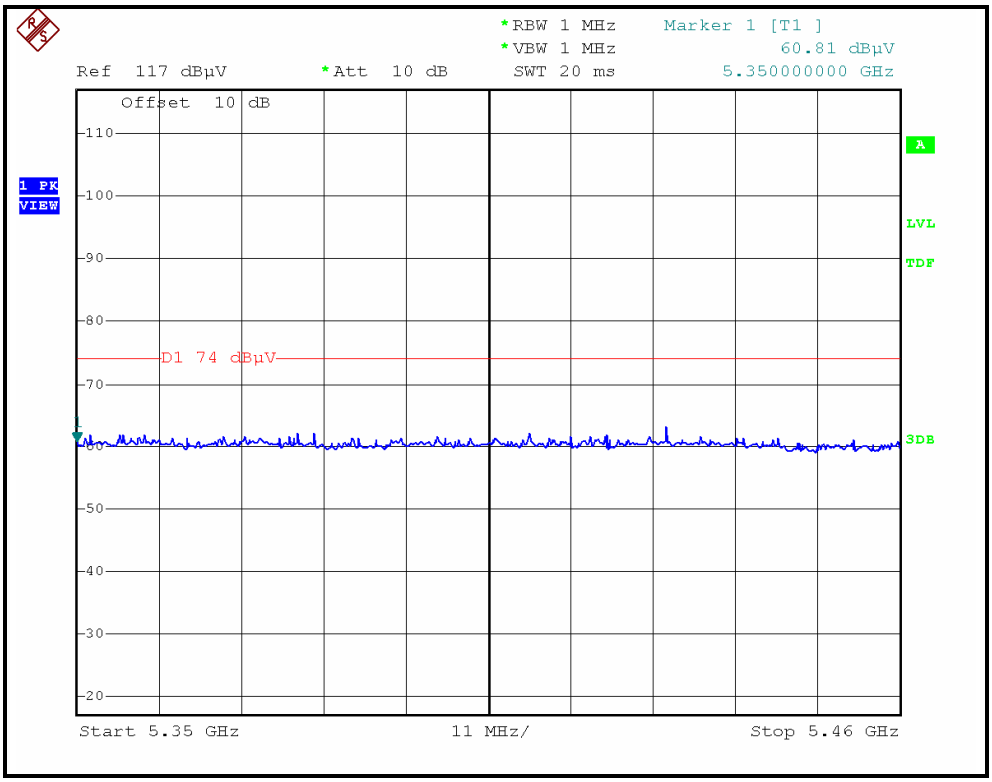



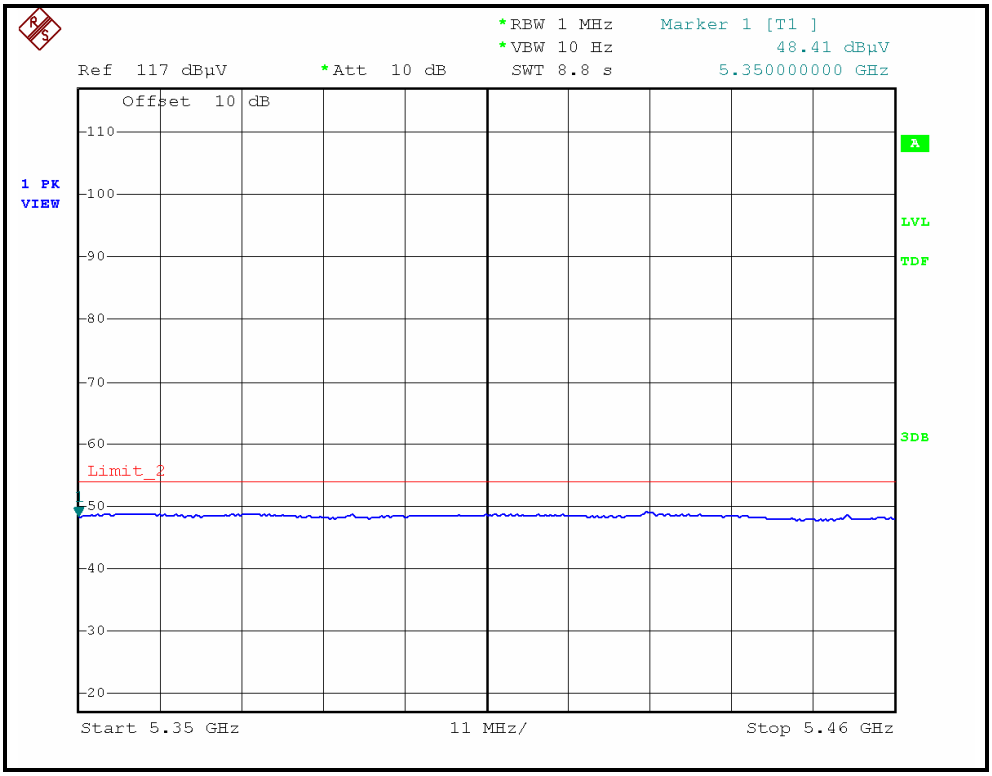
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE, CH4, VERTICAL )



## DRAFT 802.11n (20MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 26.0deg. C, 60.0%RH 965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 43.96 PK | 68.30 | -24.34 | 1.20 H | 356 | 11.10 | 32.86 |
| 2 | 5150.00 | 56.26 PK | 74.00 | -17.74 | 1.20 H | 24 | 19.00 | 37.26 |
| 3 | 5150.00 | 44.17 AV | 54.00 | -9.83 | 1.20 H | 24 | 6.91 | 37.26 |
| 4 | *5180.00 | 110.30 PK | | | 1.21 H | 44 | 73.04 | 37.26 |
| 5 | *5180.00 | 99.40 AV | | | 1.21 H | 44 | 62.14 | 37.26 |
| 6 | #6906.60 | 53.15 PK | 68.30 | -15.15 | 1.60 H | 63 | 10.23 | 42.92 |
| 7 | #10360.00 | 55.23 PK | 68.30 | -13.07 | 1.57 H | 269 | 8.59 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 43.60 PK | 68.30 | -24.70 | 1.03 V | 43 | 10.74 | 32.86 |
| 2 | 5150.00 | 58.13 PK | 74.00 | -15.87 | 1.50 V | 0 | 20.87 | 37.26 |
| 3 | 5150.00 | 44.30 AV | 54.00 | -9.70 | 1.50 V | 0 | 7.04 | 37.26 |
| 4 | *5180.00 | 115.17 PK | | | 1.50 V | 359 | 77.91 | 37.26 |
| 5 | *5180.00 | 104.23 AV | | | 1.50 V | 359 | 66.97 | 37.26 |
| 6 | #6906.60 | 52.10 PK | 68.30 | -16.20 | 1.01 V | 21 | 9.18 | 42.92 |
| 7 | #10360.00 | 54.70 PK | 68.30 | -13.60 | 1.04 V | 24 | 8.06 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 26.0deg. C, 60.0%RH 965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 44.26 PK | 68.30 | -24.04 | 1.23 H | 351 | 11.38 | 32.88 |
| 2 | *5200.00 | 111.20 PK | | | 1.21 H | 24 | 73.94 | 37.26 |
| 3 | *5200.00 | 100.40 AV | | | 1.21 H | 24 | 63.14 | 37.26 |
| 4 | #6933.30 | 53.28 PK | 68.30 | -15.02 | 1.62 H | 48 | 10.29 | 42.99 |
| 5 | #10400.00 | 55.36 PK | 68.30 | -12.94 | 1.52 H | 258 | 8.69 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 44.10 PK | 68.30 | -24.20 | 1.04 V | 29 | 11.22 | 32.88 |
| 2 | *5200.00 | 116.37 PK | | | 1.32 V | 358 | 79.11 | 37.26 |
| 3 | *5200.00 | 105.20 AV | | | 1.32 V | 358 | 67.94 | 37.26 |
| 4 | #6933.30 | 52.80 PK | 68.30 | -15.50 | 1.02 V | 21 | 9.81 | 42.99 |
| 5 | #10400.00 | 55.03 PK | 68.30 | -13.27 | 1.05 V | 46 | 8.36 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

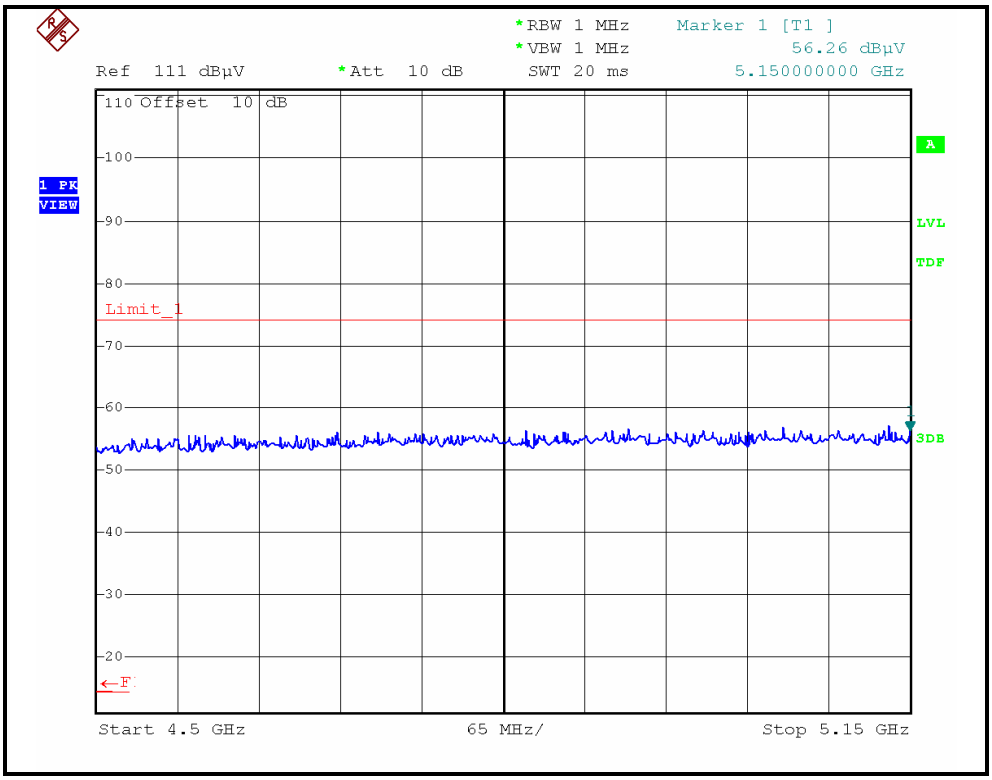
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER4 | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 26.0deg. C, 60.0%RH 965hPa | TESTED BY | Eric Lee |

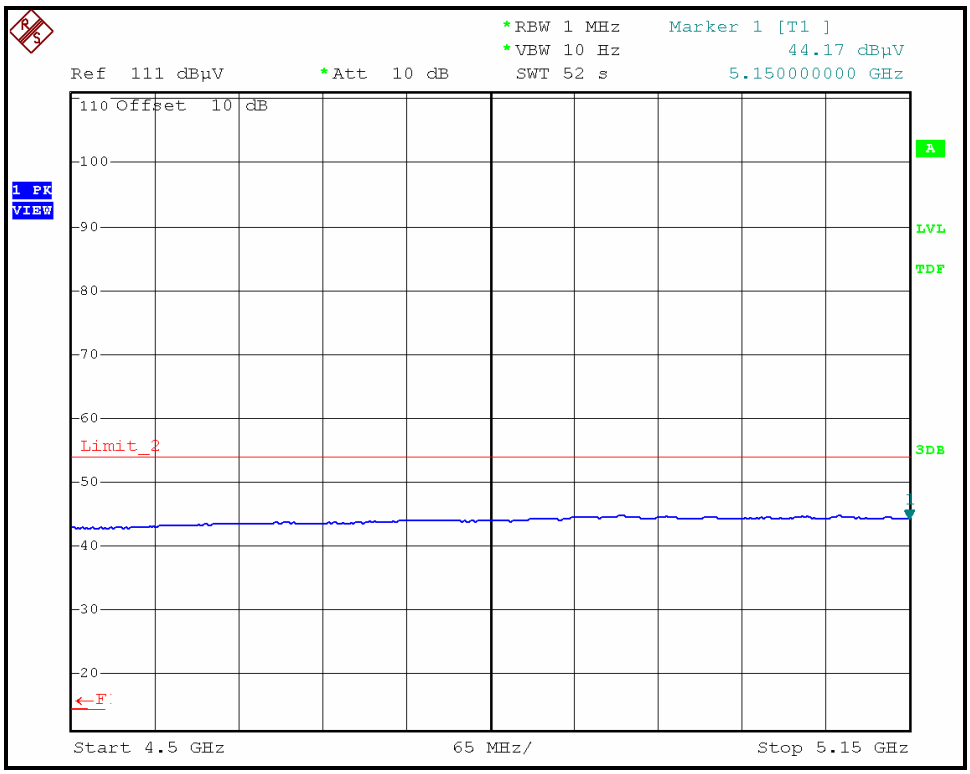
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 44.39 PK | 68.30 | -23.91 | 1.26 H | 352 | 11.49 | 32.90 |
| 2 | *5240.00 | 110.40 PK | | | 1.26 H | 31 | 73.14 | 37.26 |
| 3 | *5240.00 | 99.70 AV | | | 1.26 H | 31 | 62.44 | 37.26 |
| 4 | 5350.00 | 57.62 PK | 74.00 | -16.38 | 1.04 H | 219 | 20.36 | 37.26 |
| 5 | 5350.00 | 46.52 AV | 54.00 | -7.48 | 1.04 H | 219 | 9.26 | 37.26 |
| 6 | 6986.60 | 53.31 PK | 68.30 | -14.99 | 1.61 H | 42 | 10.18 | 43.13 |
| 7 | #10480.00 | 55.41 PK | 68.30 | -12.89 | 1.51 H | 276 | 8.68 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 44.10 PK | 68.30 | -24.20 | 1.04 V | 44 | 11.20 | 32.90 |
| 2 | *5240.00 | 115.40 PK | | | 1.33 V | 355 | 78.14 | 37.26 |
| 3 | *5240.00 | 104.56 AV | | | 1.33 V | 355 | 67.30 | 37.26 |
| 4 | 5350.00 | 60.48 PK | 74.00 | -13.52 | 1.13 V | 339 | 23.22 | 37.26 |
| 5 | 5350.00 | 48.71 AV | 54.00 | -5.29 | 1.13 V | 339 | 11.45 | 37.26 |
| 6 | 6986.60 | 53.04 PK | 68.30 | -15.26 | 1.01 V | 41 | 9.91 | 43.13 |
| 7 | #10480.00 | 55.20 PK | 68.30 | -13.10 | 1.02 V | 42 | 8.47 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

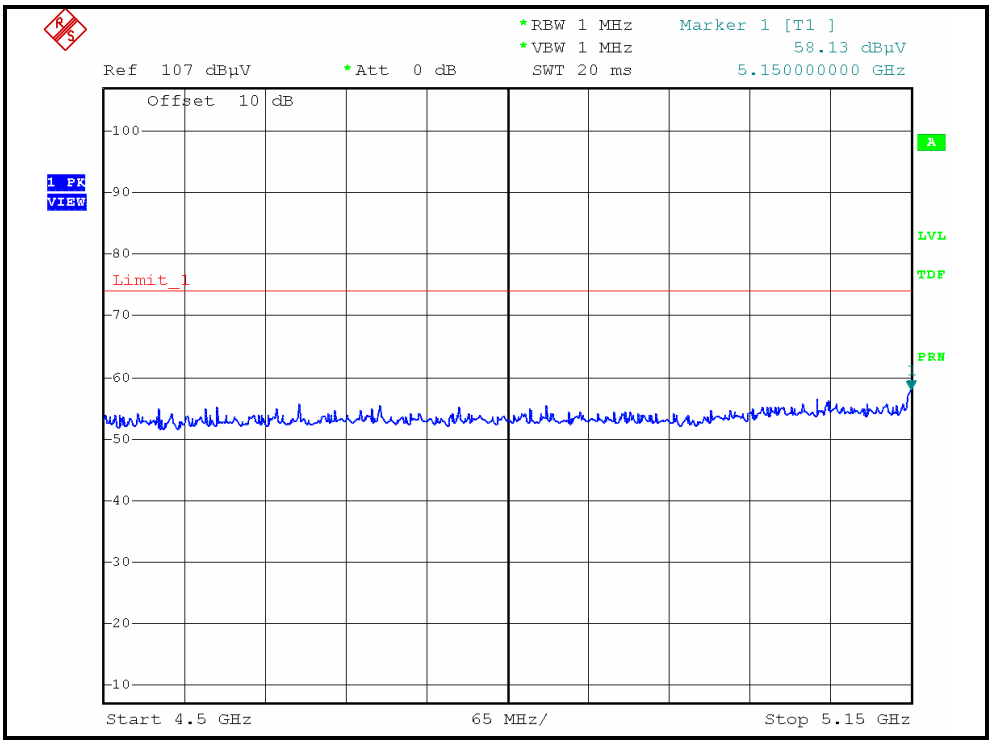
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

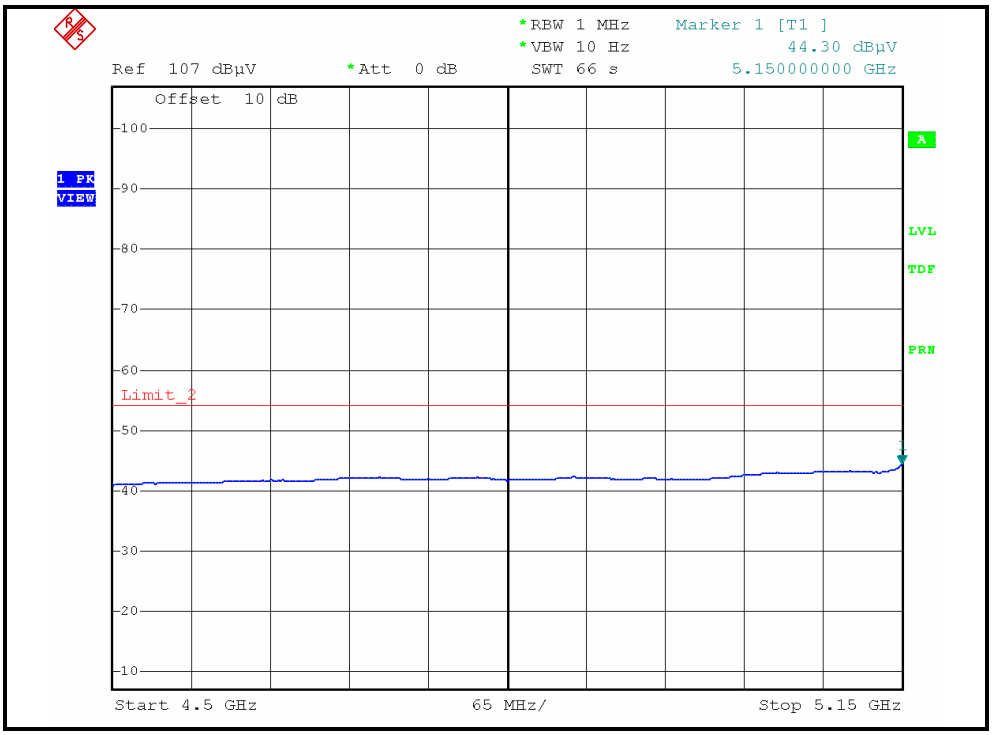
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, HORIZONTAL )



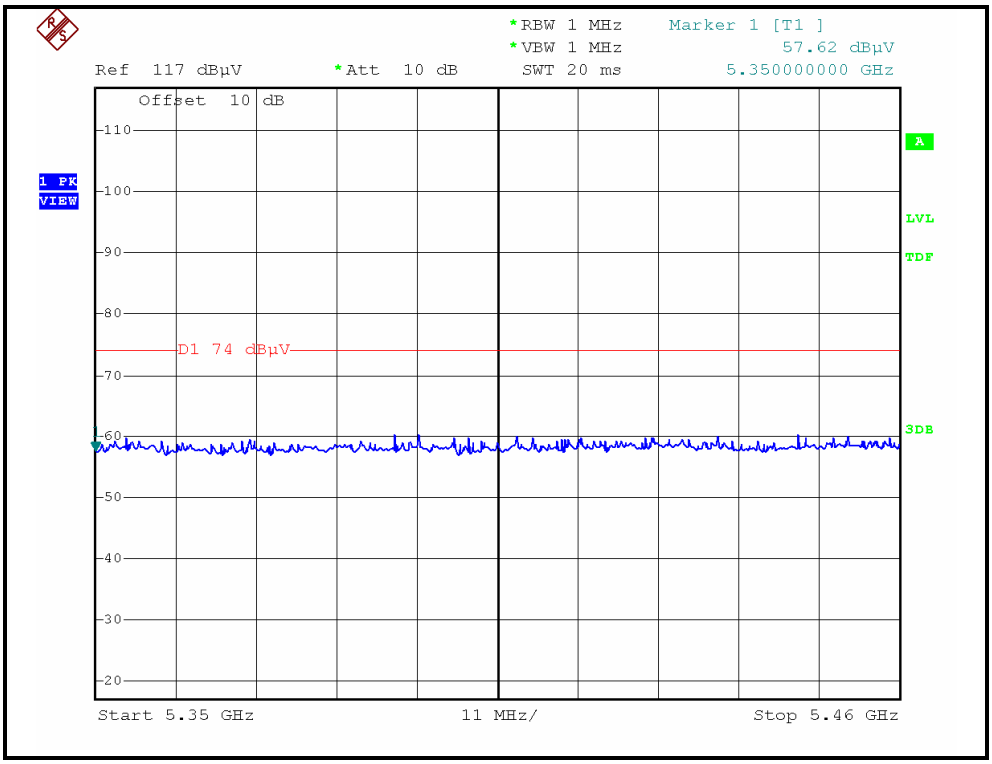



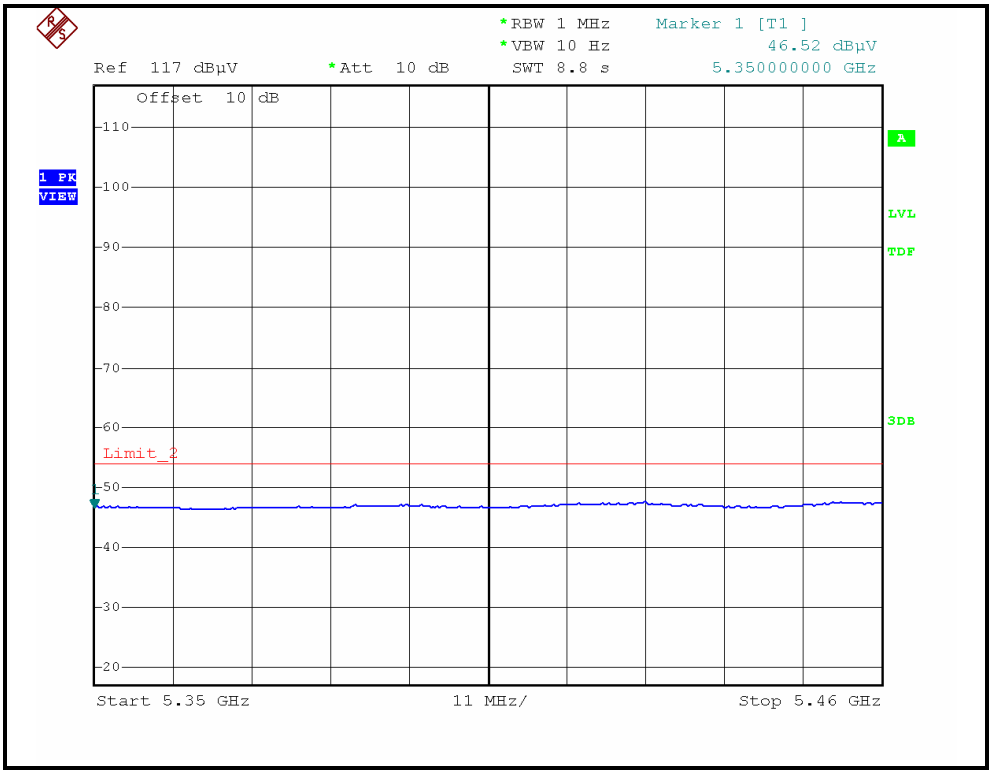
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL )



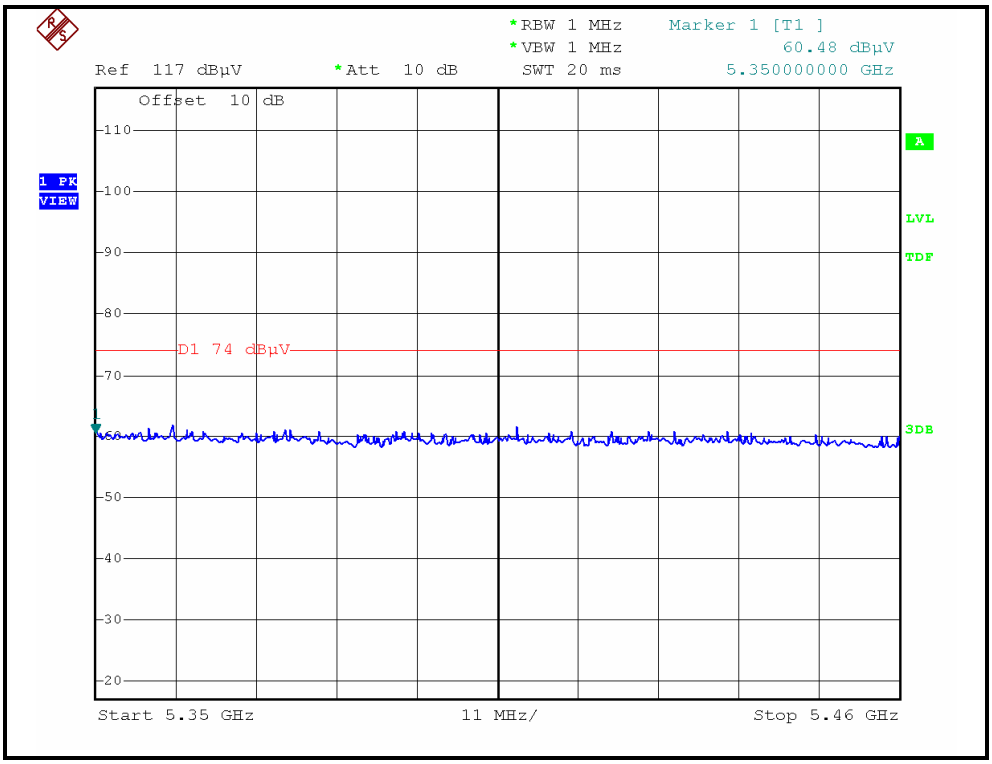



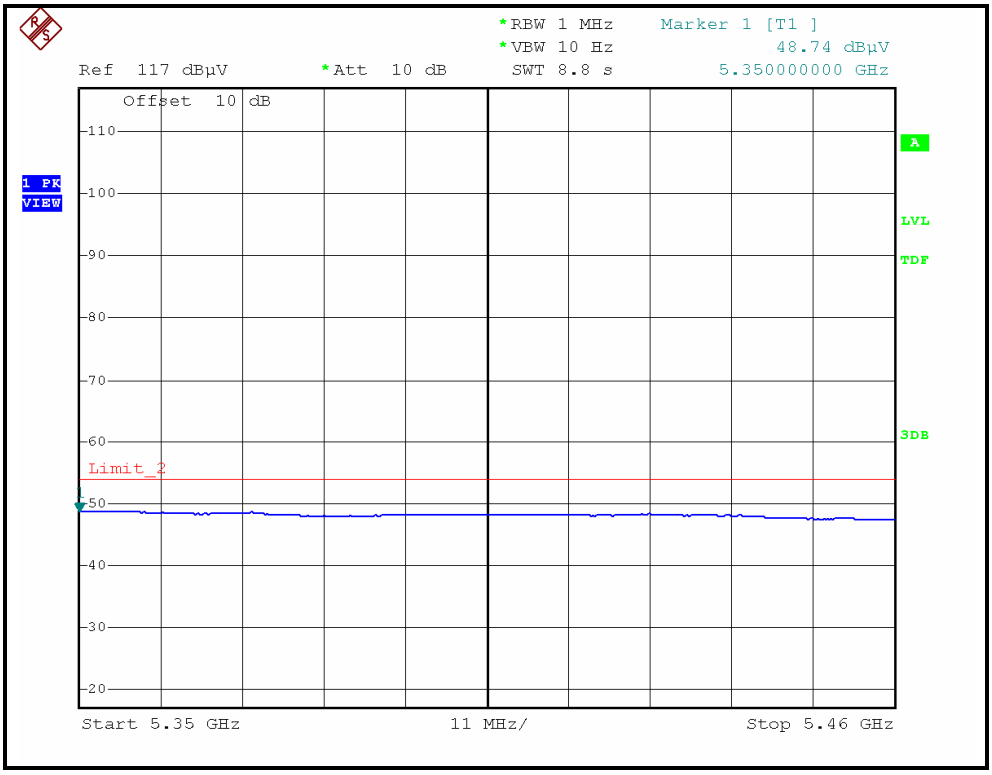
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, HORIZONTAL )



RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, VERTICAL )



## DRAFT 802.11n (40MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 26.0deg. C, 60.0%RH 965hPa | TESTED BY | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 43.74 PK | 68.30 | -24.56 | 1.32 H | 356 | 10.87 | 32.87 |
| 2 | 5150.00 | 63.81 PK | 74.00 | -10.19 | 1.26 H | 39 | 26.55 | 37.26 |
| 3 | 5150.00 | 49.65 AV | 54.00 | -4.35 | 1.26 H | 39 | 12.39 | 37.26 |
| 4 | *5190.00 | 105.30 PK | | | 1.24 H | 38 | 68.04 | 37.26 |
| 5 | *5190.00 | 95.40 AV | | | 1.24 H | 38 | 58.14 | 37.26 |
| 6 | #6920.00 | 52.81 PK | 68.30 | -15.49 | 1.57 H | 42 | 9.85 | 42.96 |
| 7 | #10380.00 | 54.85 PK | 68.30 | -13.45 | 1.65 H | 285 | 8.20 | 46.65 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 43.20 PK | 68.30 | -25.10 | 1.04 V | 21 | 10.33 | 32.87 |
| 2 | 5150.00 | 69.44 PK | 74.00 | -4.56 | 1.36 V | 0 | 32.18 | 37.26 |
| **3** | **5150.00** | **53.28 AV** | **54.00** | **-0.72** | **1.36 V** | **0** | **16.02** | **37.26** |
| 4 | *5190.00 | 110.73 PK | | | 1.36 V | 0 | 73.47 | 37.26 |
| 5 | *5190.00 | 100.39 AV | | | 1.36 V | 0 | 63.13 | 37.26 |
| 6 | #6920.00 | 52.40 PK | 68.30 | -15.90 | 1.06 V | 46 | 9.44 | 42.96 |
| 7 | #10380.00 | 54.40 PK | 68.30 | -13.90 | 1.02 V | 43 | 7.75 | 46.65 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

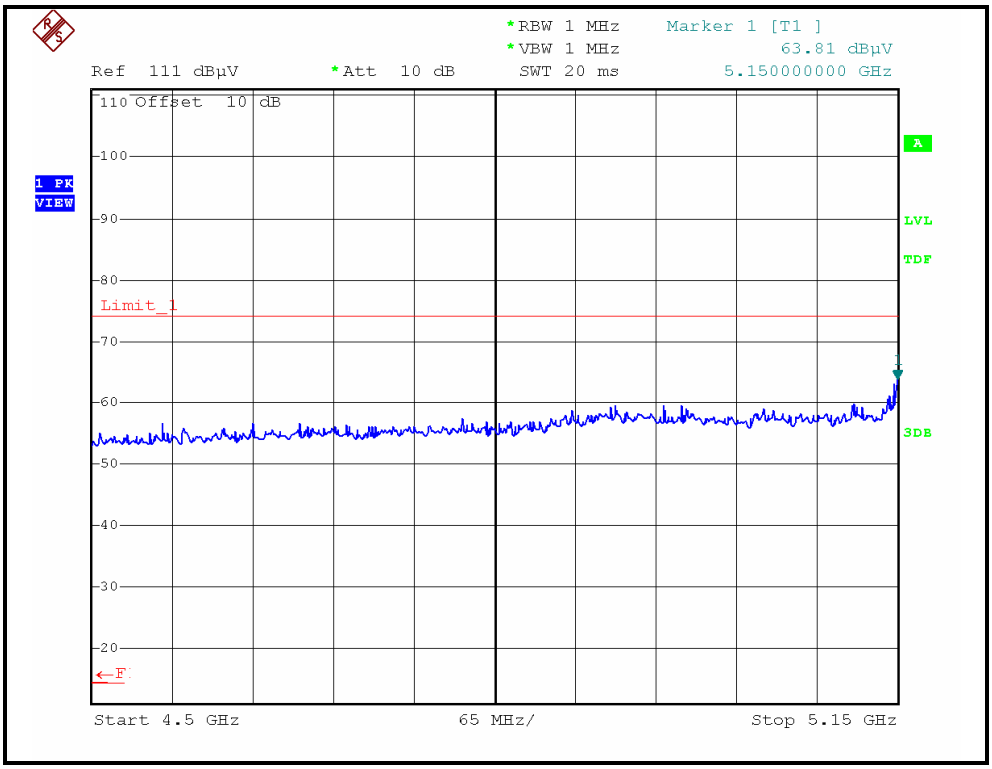
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

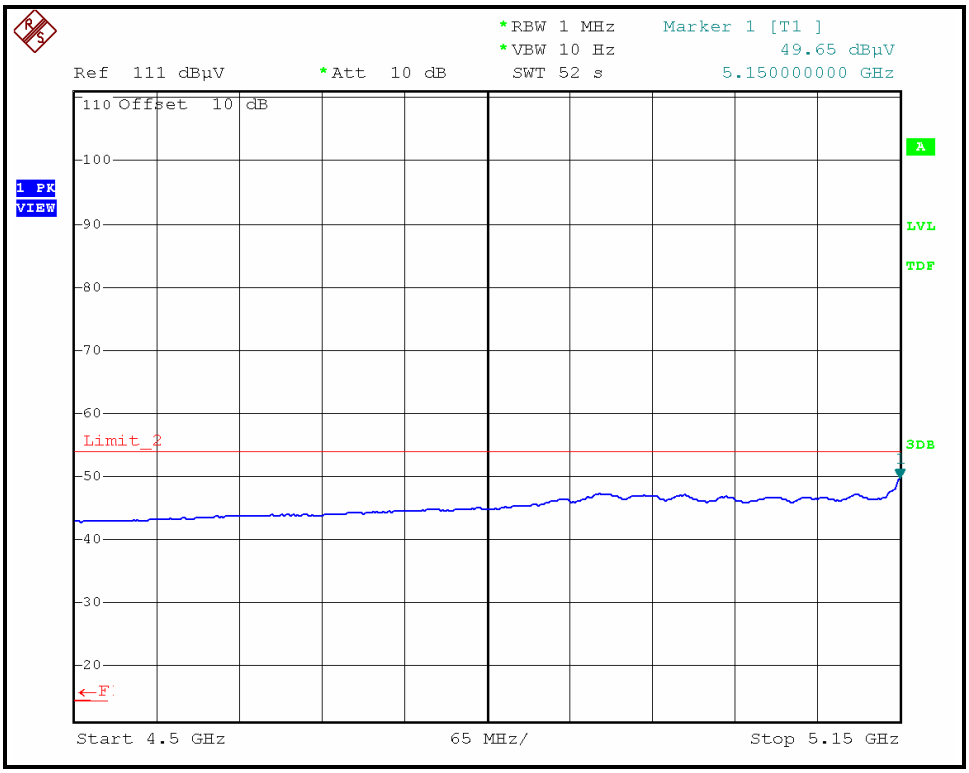
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 2 | **FREQUENCY RANGE** | 1 ~ 40GHz |
| **INPUT POWER** | 120Vac, 60 Hz | **DETECTOR FUNCTION** | Peak (PK)<br>Average (AV) |
| **ENVIRONMENTAL CONDITIONS** | 26.0deg. C, 60.0%RH 965hPa | **TESTED BY** | Eric Lee |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | #3486.60 | 43.82 PK | 68.30 | -24.48 | 1.31 H | 346 | 10.92 | 32.90 |
| 2 | *5230.00 | 109.20 PK | | | 1.24 H | 37 | 71.94 | 37.26 |
| 3 | *5230.00 | 98.20 AV | | | 1.24 H | 37 | 60.94 | 37.26 |
| 4 | 5350.00 | 58.92 PK | 74.00 | -15.08 | 1.03 H | 217 | 21.66 | 37.26 |
| 5 | 5350.00 | 47.78 AV | 54.00 | -6.22 | 1.03 H | 217 | 10.52 | 37.26 |
| 6 | 6973.30 | 52.81 PK | 68.30 | -15.49 | 1.59 H | 47 | 9.72 | 43.09 |
| 7 | #10460.00 | 54.78 PK | 68.30 | -13.52 | 1.66 H | 296 | 8.06 | 46.72 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | #3486.60 | 43.30 PK | 68.30 | -25.00 | 1.04 V | 26 | 10.40 | 32.90 |
| 2 | *5230.00 | 114.69 PK | | | 1.34 V | 351 | 77.43 | 37.26 |
| 3 | *5230.00 | 103.80 AV | | | 1.34 V | 351 | 66.54 | 37.26 |
| 4 | 5350.00 | 62.01 PK | 74.00 | -11.99 | 1.33 V | 357 | 24.75 | 37.26 |
| 5 | 5350.00 | 50.87 AV | 54.00 | -3.13 | 1.33 V | 357 | 13.61 | 37.26 |
| 6 | 6973.30 | 52.40 PK | 68.30 | -15.90 | 1.02 V | 42 | 9.31 | 43.09 |
| 7 | #10460.00 | 54.30 PK | 68.30 | -14.00 | 1.01 V | 43 | 7.58 | 46.72 |

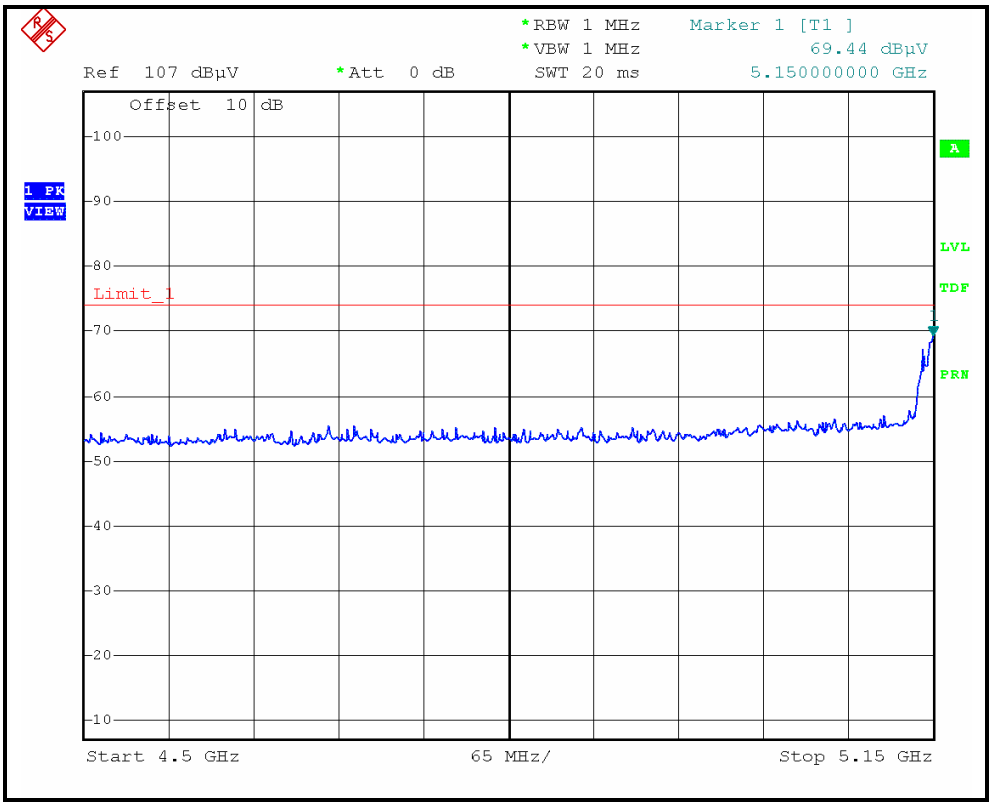
**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

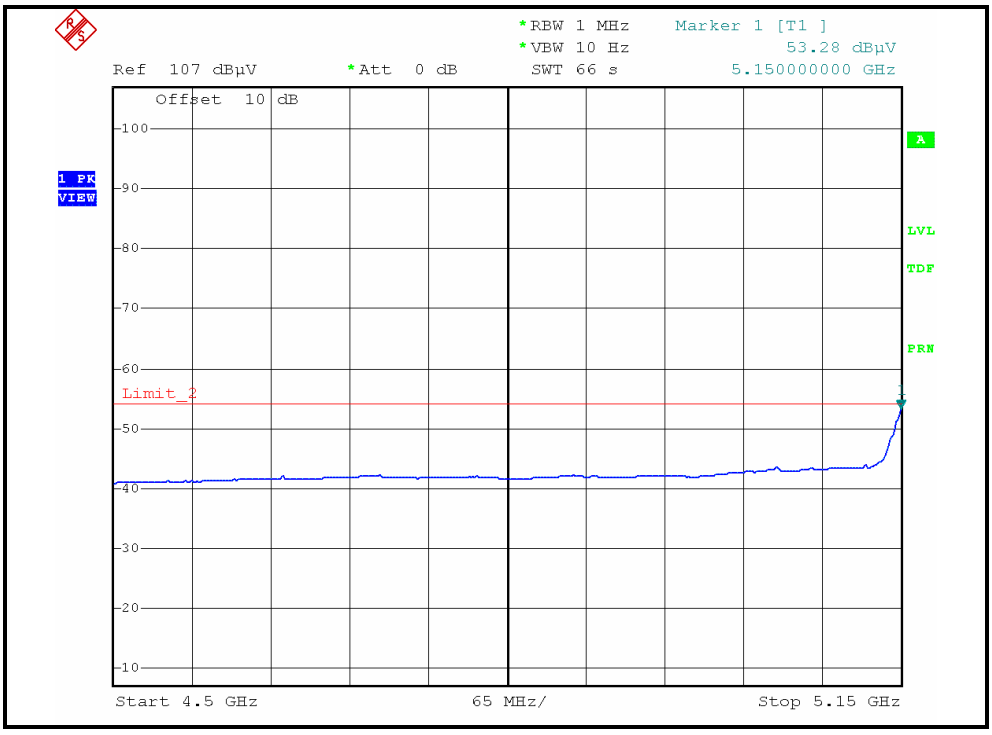
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)



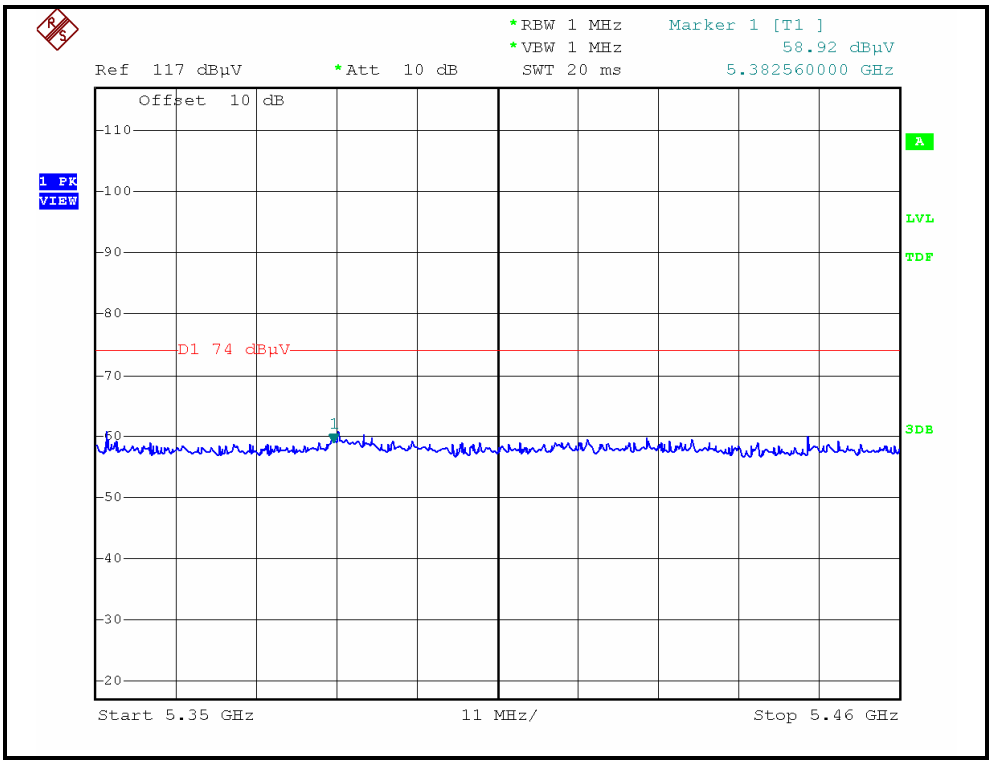



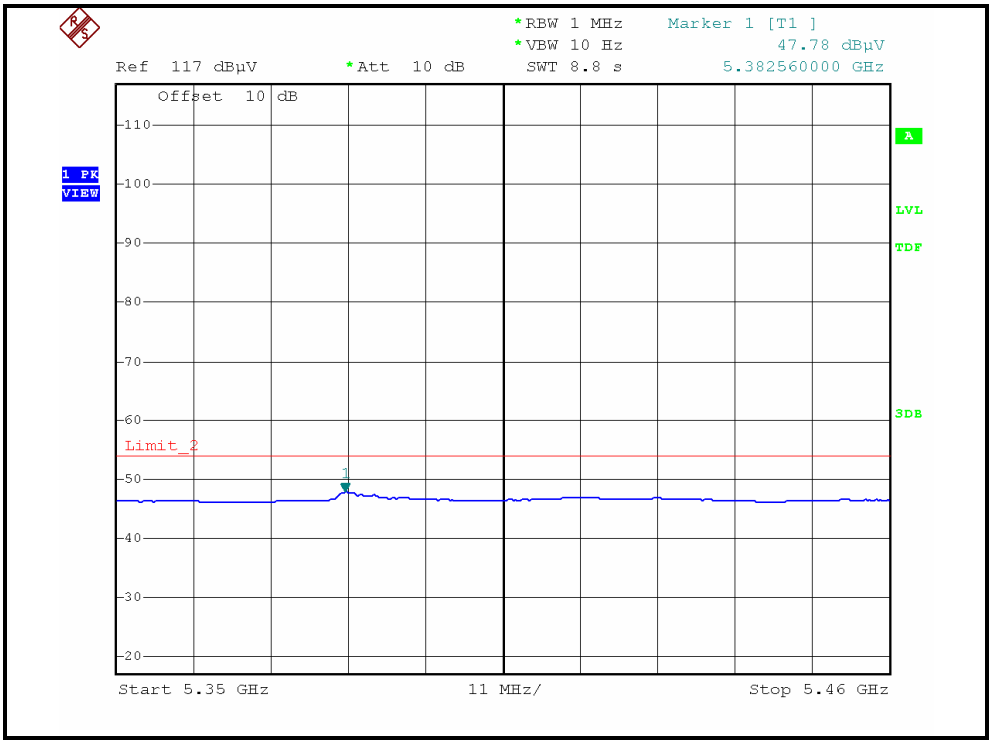
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL )



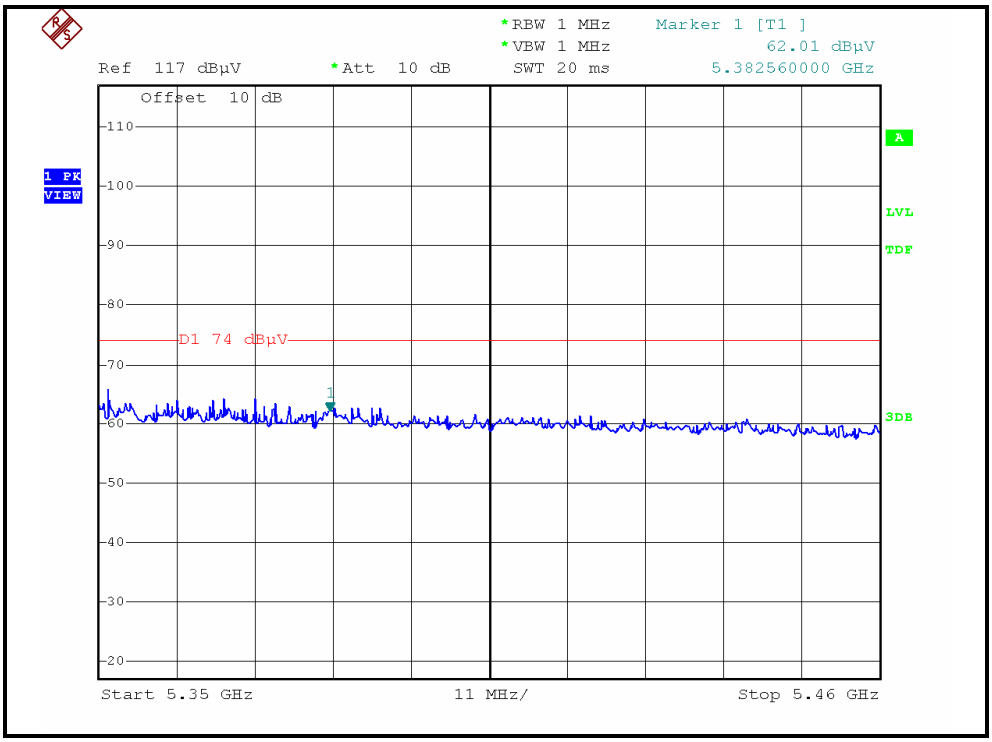



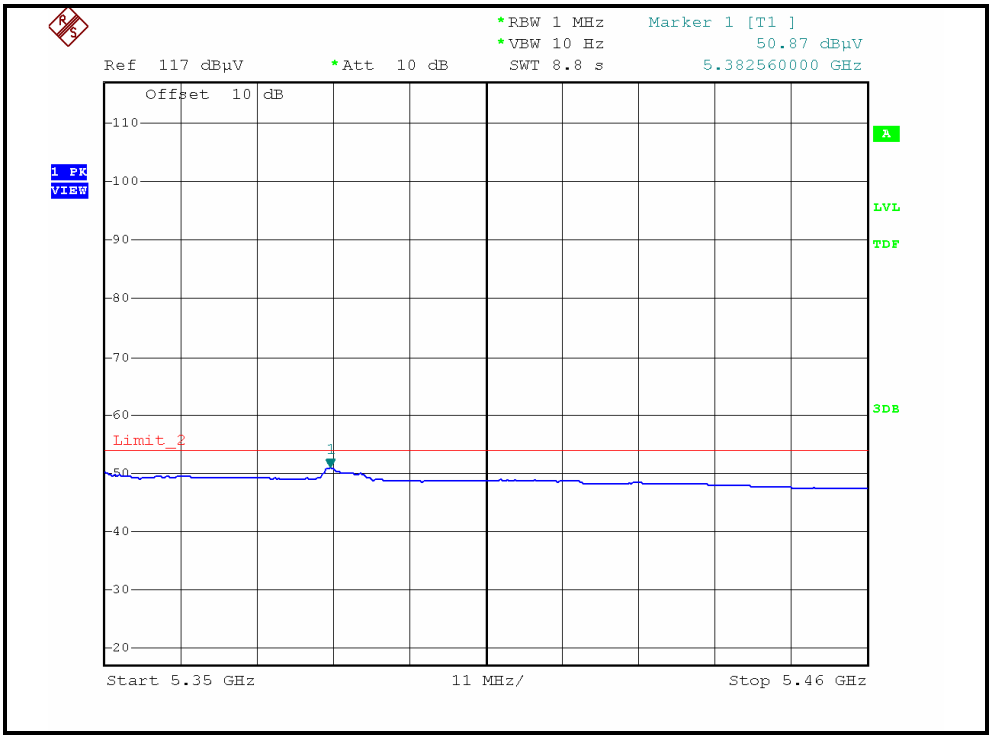
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, HORIZONTAL)



RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, VERTICAL)



## 4.2.9 TEST RESULTS – ANTENNA 5

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | Below 1000MHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Quasi-Peak |
| ENVIRONMENTAL CONDITIONS | 30.0deg. C, 55.0%RH 965hPa | TESTED BY | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 125.00 | 27.12 QP | 43.50 | -16.38 | 1.23 H | 33 | 14.05 | 13.07 |
| 2 | 250.00 | 34.44 QP | 46.00 | -11.56 | 1.21 H | 253 | 20.19 | 14.25 |
| 3 | 375.00 | 38.34 QP | 46.00 | -7.66 | 1.09 H | 300 | 19.53 | 18.81 |
| 4 | 650.00 | 43.67 QP | 46.00 | -2.33 | 1.06 H | 231 | 18.14 | 25.53 |
| 5 | 750.00 | 35.76 QP | 46.00 | -10.24 | 1.09 H | 211 | 8.85 | 26.91 |
| 6 | 875.00 | 37.34 QP | 46.00 | -8.66 | 1.02 H | 134 | 8.05 | 29.29 |
| 7 | 1000.00 | 38.72 QP | 54.00 | -15.28 | 1.01 H | 168 | 7.98 | 30.74 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 57.21 | 32.64 QP | 40.00 | -7.36 | 1.00 V | 259 | 18.95 | 13.69 |
| 2 | 125.00 | 29.87 QP | 43.50 | -13.63 | 1.00 V | 198 | 16.80 | 13.07 |
| 3 | 250.00 | 28.31 QP | 46.00 | -17.69 | 1.00 V | 29 | 14.06 | 14.25 |
| 4 | 375.00 | 39.28 QP | 46.00 | -6.72 | 1.05 V | 294 | 20.47 | 18.81 |
| 5 | 600.00 | 37.89 QP | 46.00 | -8.11 | 1.00 V | 276 | 12.85 | 25.04 |
| 6 | 650.00 | 39.23 QP | 46.00 | -6.77 | 1.00 V | 264 | 13.70 | 25.53 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 49.80 PK | 68.30 | -18.50 | 1.24 H | 351 | 16.94 | 32.86 |
| 2 | 5150.00 | 55.20 PK | 74.00 | -18.80 | 1.21 H | 340 | 17.94 | 37.26 |
| 3 | 5150.00 | 44.19 AV | 54.00 | -9.81 | 1.21 H | 340 | 6.93 | 37.26 |
| 4 | *5180.00 | 99.70 PK | | | 1.22 H | 342 | 62.44 | 37.26 |
| 5 | *5180.00 | 88.89 AV | | | 1.22 H | 342 | 51.63 | 37.26 |
| 6 | #6906.60 | 50.60 PK | 68.30 | -17.70 | 1.21 H | 300 | 7.68 | 42.92 |
| 7 | #10360.00 | 54.09 PK | 68.30 | -14.21 | 1.20 H | 359 | 7.45 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 50.00 PK | 68.30 | -18.30 | 1.29 V | 3 | 17.14 | 32.86 |
| 2 | 5150.00 | 55.01 PK | 74.00 | -18.99 | 1.04 V | 0 | 17.75 | 37.26 |
| 3 | 5150.00 | 42.85 AV | 54.00 | -11.15 | 1.04 V | 0 | 5.59 | 37.26 |
| 4 | *5180.00 | 111.00 PK | | | 1.07 V | 359 | 73.74 | 37.26 |
| 5 | *5180.00 | 98.82 AV | | | 1.07 V | 359 | 61.56 | 37.26 |
| 6 | #6906.60 | 51.36 PK | 68.30 | -16.94 | 1.46 V | 1 | 8.44 | 42.92 |
| 7 | #10360.00 | 53.33 PK | 68.30 | -14.97 | 1.30 V | 9 | 6.69 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.31 PK | 68.30 | -25.99 | 1.24 H | 351 | 9.43 | 32.88 |
| 2 | *5200.00 | 99.10 PK | | | 1.22 H | 341 | 61.84 | 37.26 |
| 3 | *5200.00 | 89.73 AV | | | 1.22 H | 341 | 52.47 | 37.26 |
| 4 | #6933.30 | 51.29 PK | 68.30 | -17.01 | 1.20 H | 352 | 8.30 | 42.99 |
| 5 | #10400.00 | 55.10 PK | 68.30 | -13.20 | 1.21 H | 351 | 8.43 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.65 PK | 68.30 | -25.65 | 1.30 V | 80 | 9.77 | 32.88 |
| 2 | *5200.00 | 111.40 PK | | | 1.04 V | 1 | 74.14 | 37.26 |
| 3 | *5200.00 | 99.94 AV | | | 1.04 V | 1 | 62.68 | 37.26 |
| 4 | #6933.30 | 51.71 PK | 68.30 | -16.59 | 1.44 V | 71 | 8.72 | 42.99 |
| 5 | #10400.00 | 55.22 PK | 68.30 | -13.08 | 1.29 V | 30 | 8.55 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

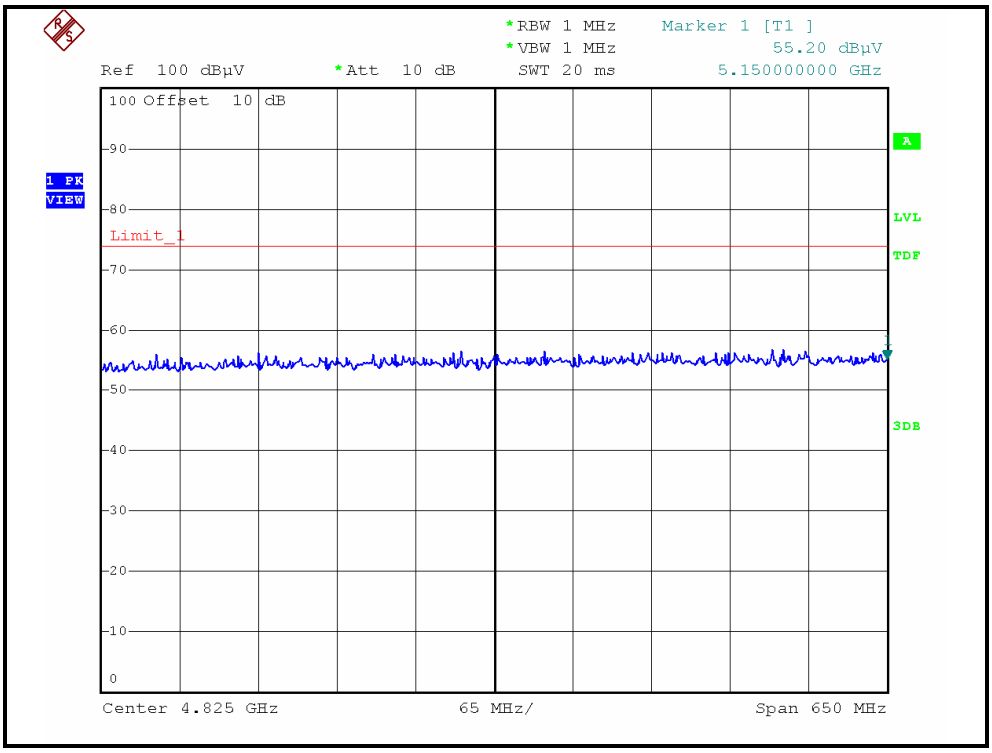
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Eric Lee |

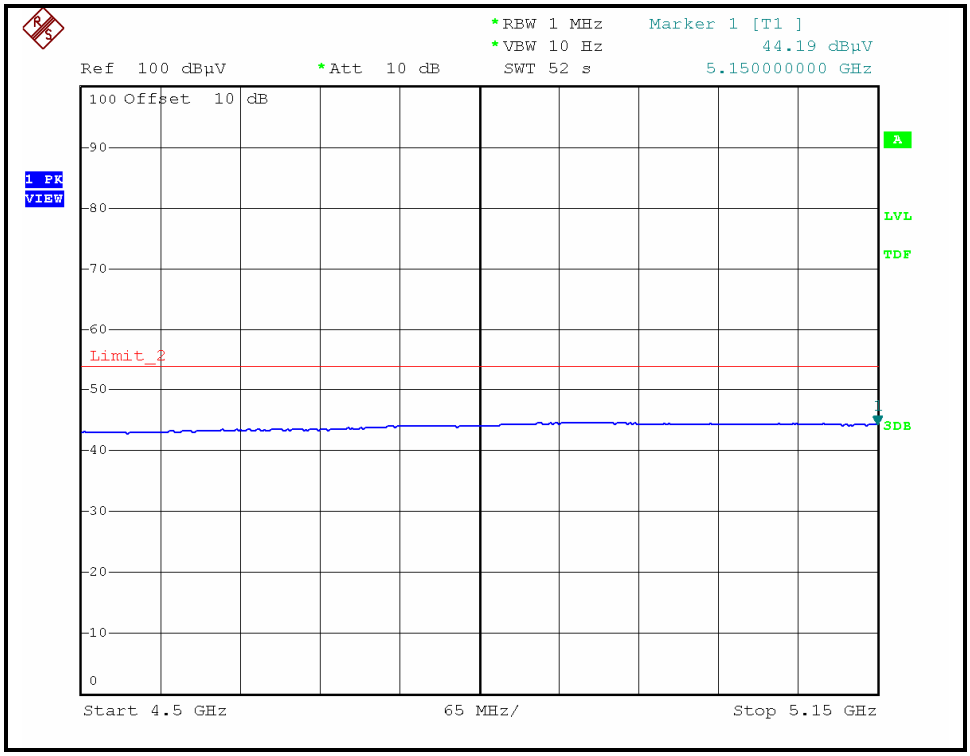
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 39.43 PK | 68.30 | -28.87 | 1.20 H | 343 | 6.53 | 32.90 |
| 2 | *5240.00 | 99.70 PK | | | 1.24 H | 331 | 62.44 | 37.26 |
| 3 | *5240.00 | 91.20 AV | | | 1.24 H | 331 | 53.94 | 37.26 |
| 4 | 5350.00 | 56.99 PK | 74.00 | -17.01 | 1.03 H | 127 | 19.73 | 37.26 |
| 5 | 5350.00 | 45.05 AV | 54.00 | -8.95 | 1.03 H | 127 | 7.79 | 37.26 |
| 6 | 6986.60 | 50.24 PK | 68.30 | -18.06 | 1.23 H | 339 | 7.11 | 43.13 |
| 7 | #10480.00 | 54.13 PK | 68.30 | -14.17 | 1.24 H | 352 | 7.40 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 40.29 PK | 68.30 | -28.01 | 1.22 V | 2 | 7.39 | 32.90 |
| 2 | *5240.00 | 111.98 PK | | | 1.06 V | 2 | 74.72 | 37.26 |
| 3 | *5240.00 | 101.22 AV | | | 1.06 V | 2 | 63.96 | 37.26 |
| 4 | 5350.00 | 54.26 PK | 74.00 | -19.74 | 1.31 V | 171 | 17.00 | 37.26 |
| 5 | 5350.00 | 44.37 AV | 54.00 | -9.63 | 1.31 V | 171 | 7.11 | 37.26 |
| 6 | 6986.60 | 51.44 PK | 68.30 | -16.86 | 1.05 V | 9 | 8.31 | 43.13 |
| 7 | #10480.00 | 54.22 PK | 68.30 | -14.08 | 1.30 V | 20 | 7.49 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

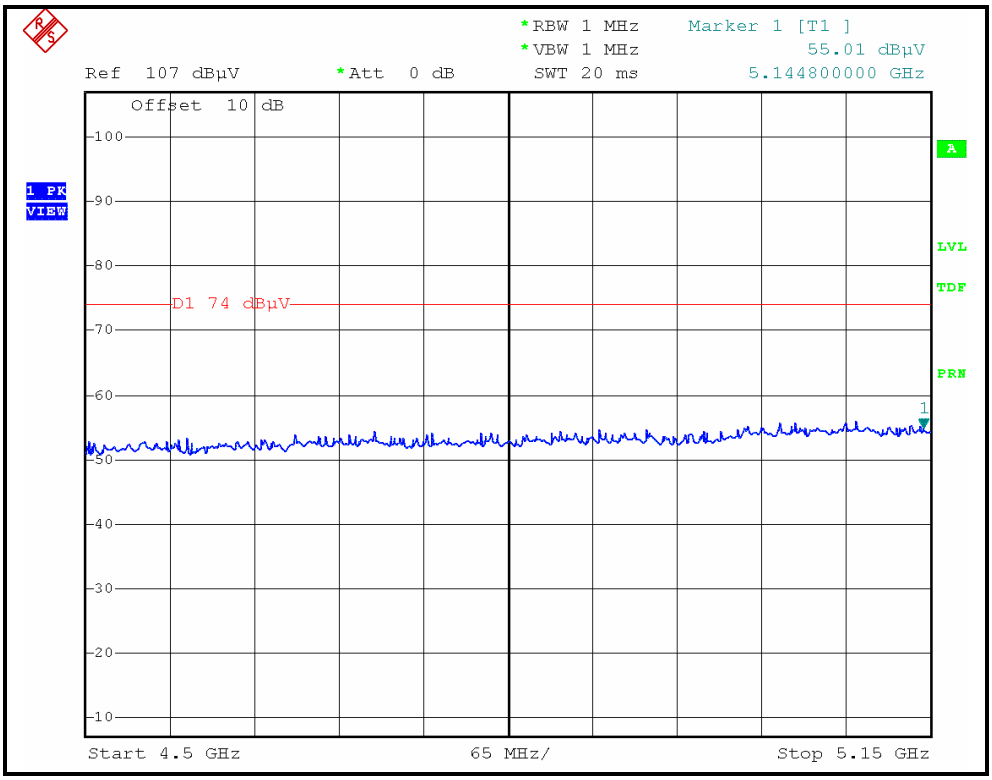
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

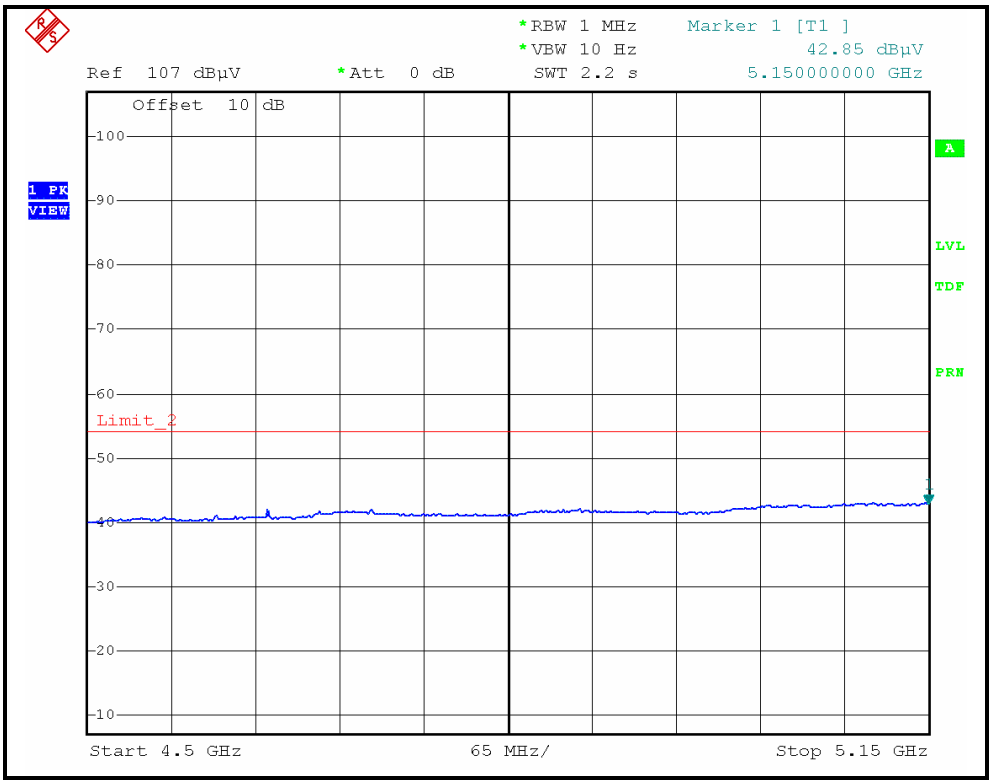
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



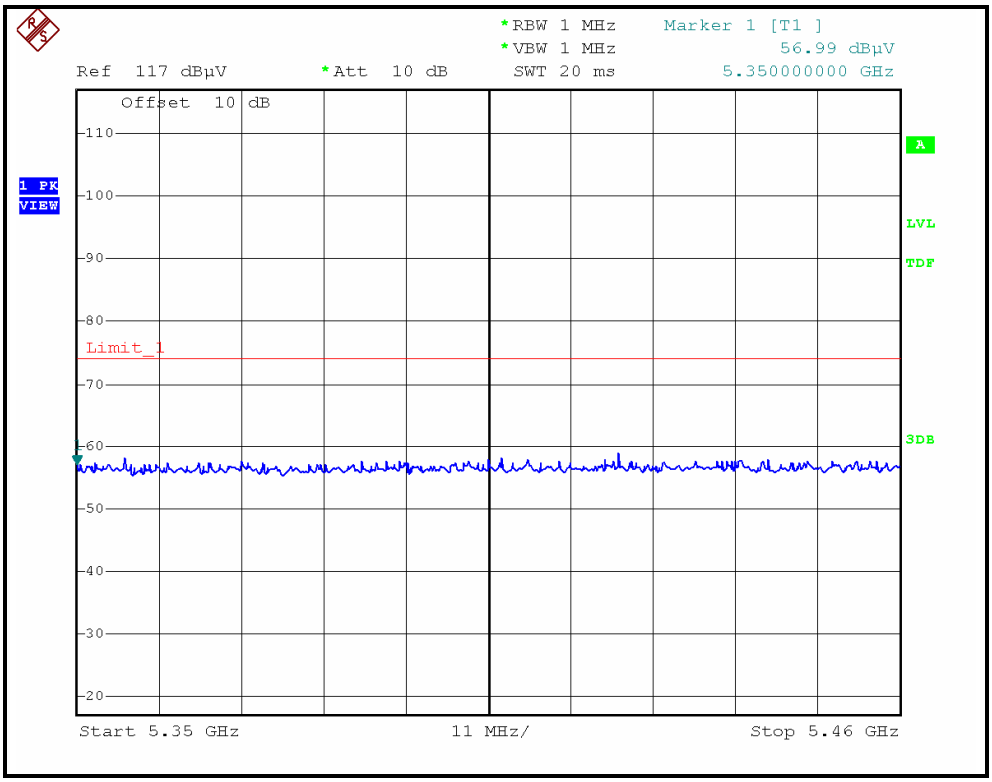



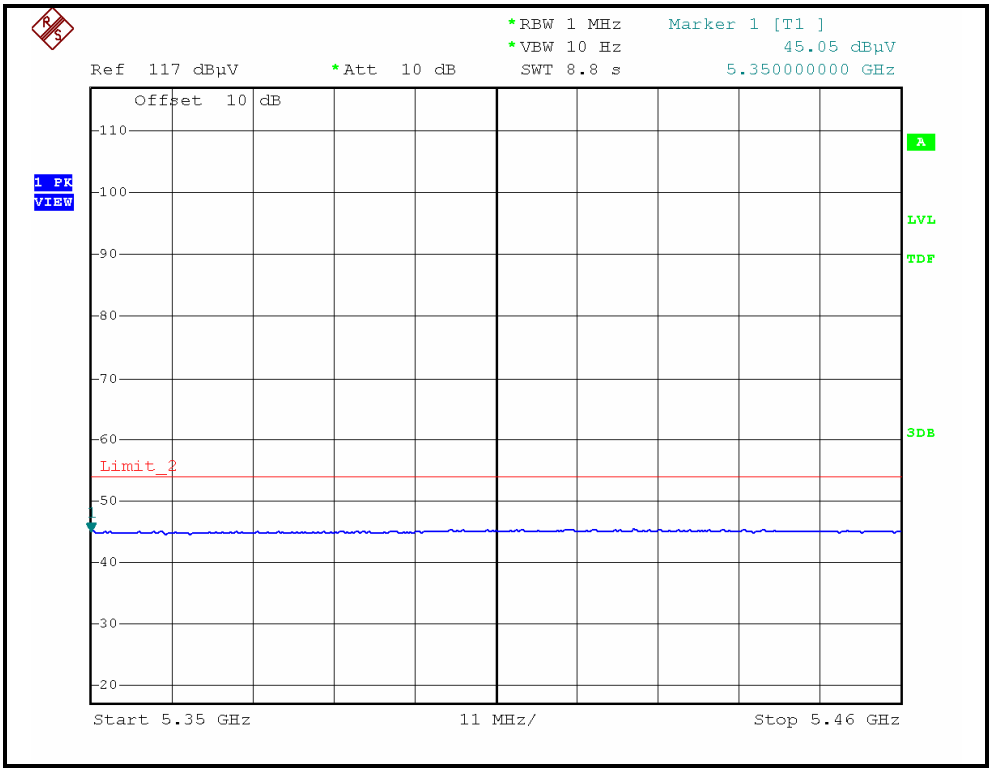
RESTRICTED BANDEDGE (802.11a MODE, CH1, VERTICAL )



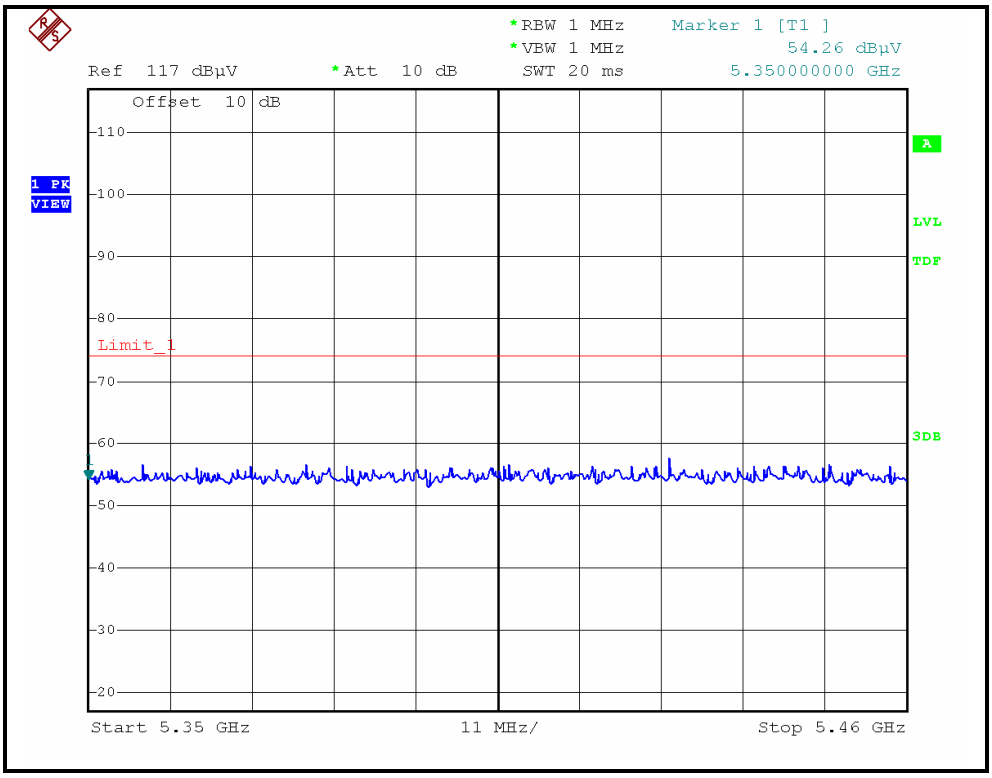



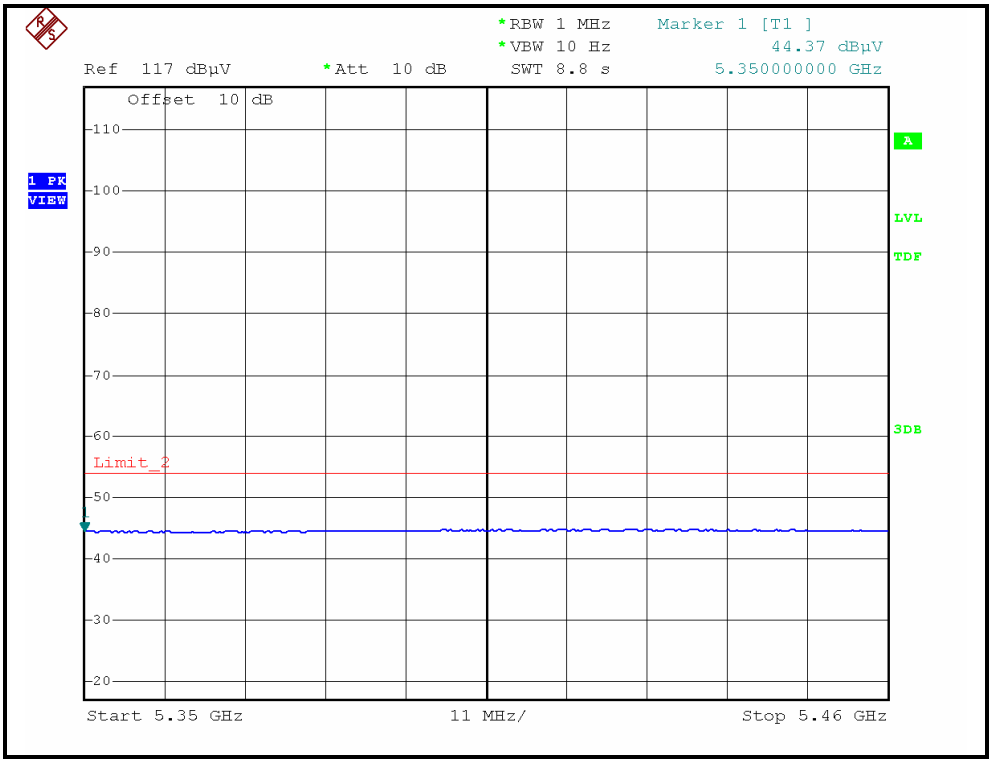
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE,CH4, VERTICAL )



## DRAFT 802.11n (20MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 40.74 PK | 68.30 | -27.56 | 1.24 H | 324 | 7.88 | 32.86 |
| 2 | 5150.00 | 54.67 PK | 74.00 | -19.33 | 1.21 H | 343 | 17.41 | 37.26 |
| 3 | 5150.00 | 44.09 AV | 54.00 | -9.91 | 1.21 H | 343 | 6.83 | 37.26 |
| 4 | *5180.00 | 100.20 PK | | | 1.21 H | 318 | 62.94 | 37.26 |
| 5 | *5180.00 | 89.40 AV | | | 1.21 H | 318 | 52.14 | 37.26 |
| 6 | #6906.60 | 51.84 PK | 68.30 | -16.46 | 1.22 H | 321 | 8.92 | 42.92 |
| 7 | #10360.00 | 53.84 PK | 68.30 | -14.46 | 1.21 H | 332 | 7.20 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 41.08 PK | 68.30 | -27.22 | 1.23 V | 5 | 8.22 | 32.86 |
| 2 | 5082.00 | 55.62 PK | 74.00 | -18.38 | 1.05 V | 1 | 18.36 | 37.26 |
| 3 | 5082.00 | 43.16 AV | 54.00 | -10.84 | 1.05 V | 1 | 5.90 | 37.26 |
| 4 | *5180.00 | 111.29 PK | | | 1.04 V | 360 | 74.03 | 37.26 |
| 5 | *5180.00 | 99.30 AV | | | 1.04 V | 360 | 62.04 | 37.26 |
| 6 | #6906.60 | 52.65 PK | 68.30 | -15.65 | 1.09 V | 358 | 9.73 | 42.92 |
| 7 | #10360.00 | 54.62 PK | 68.30 | -13.68 | 1.19 V | 2 | 7.98 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 39.20 PK | 68.30 | -29.10 | 1.24 H | 321 | 6.32 | 32.88 |
| 2 | *5200.00 | 100.40 PK | | | 1.20 H | 342 | 63.14 | 37.26 |
| 3 | *5200.00 | 89.90 AV | | | 1.20 H | 342 | 52.64 | 37.26 |
| 4 | #6933.30 | 50.40 PK | 68.30 | -17.90 | 1.21 H | 314 | 7.41 | 42.99 |
| 5 | #10400.00 | 52.13 PK | 68.30 | -16.17 | 1.21 H | 326 | 5.46 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 40.65 PK | 68.30 | -27.65 | 1.09 V | 8 | 7.77 | 32.88 |
| 2 | *5200.00 | 111.40 PK | | | 1.05 V | 5 | 74.14 | 37.26 |
| 3 | *5200.00 | 100.20 AV | | | 1.05 V | 5 | 62.94 | 37.26 |
| 4 | #6933.30 | 51.72 PK | 68.30 | -16.58 | 1.11 V | 5 | 8.73 | 42.99 |
| 5 | #10400.00 | 53.14 PK | 68.30 | -15.16 | 1.40 V | 11 | 6.47 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

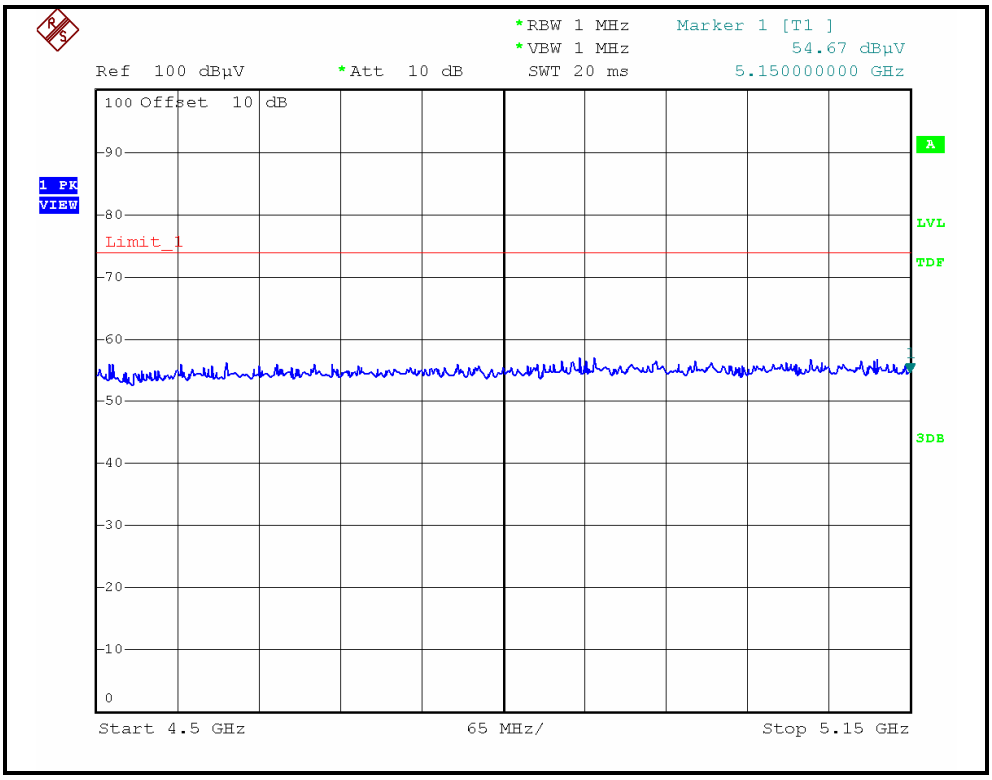
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Eric Lee |

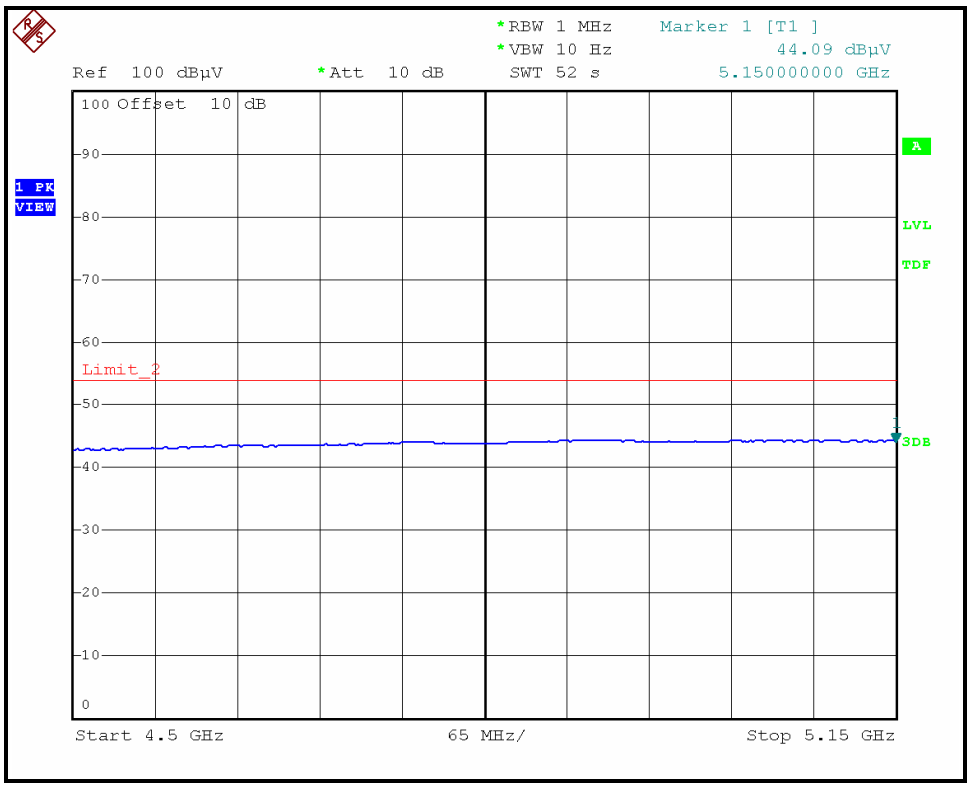
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 40.37 PK | 68.30 | -27.93 | 1.22 H | 326 | 7.47 | 32.90 |
| 2 | *5240.00 | 100.60 PK | | | 1.26 H | 321 | 63.34 | 37.26 |
| 3 | *5240.00 | 90.20 AV | | | 1.26 H | 321 | 52.94 | 37.26 |
| 4 | 5350.00 | 57.28 PK | 74.00 | -16.72 | 1.58 H | 105 | 20.02 | 37.26 |
| 5 | 5350.00 | 44.84 AV | 54.00 | -9.16 | 1.58 H | 105 | 7.58 | 37.26 |
| 6 | 6986.60 | 52.27 PK | 68.30 | -16.03 | 1.23 H | 322 | 9.14 | 43.13 |
| 7 | #10480.00 | 51.40 PK | 68.30 | -16.90 | 1.24 H | 324 | 4.67 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 41.41 PK | 68.30 | -26.89 | 1.05 V | 4 | 8.51 | 32.90 |
| 2 | *5240.00 | 111.98 PK | | | 1.08 V | 4 | 74.72 | 37.26 |
| 3 | *5240.00 | 101.46 AV | | | 1.08 V | 4 | 64.20 | 37.26 |
| 4 | 5350.00 | 55.97 PK | 74.00 | -18.03 | 1.03 V | 127 | 18.71 | 37.26 |
| 5 | 5350.00 | 44.45 AV | 54.00 | -9.55 | 1.03 V | 127 | 7.19 | 37.26 |
| 6 | 6986.60 | 53.02 PK | 68.30 | -15.28 | 1.09 V | 8 | 9.89 | 43.13 |
| 7 | #10480.00 | 52.67 PK | 68.30 | -15.63 | 1.42 V | 20 | 5.94 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

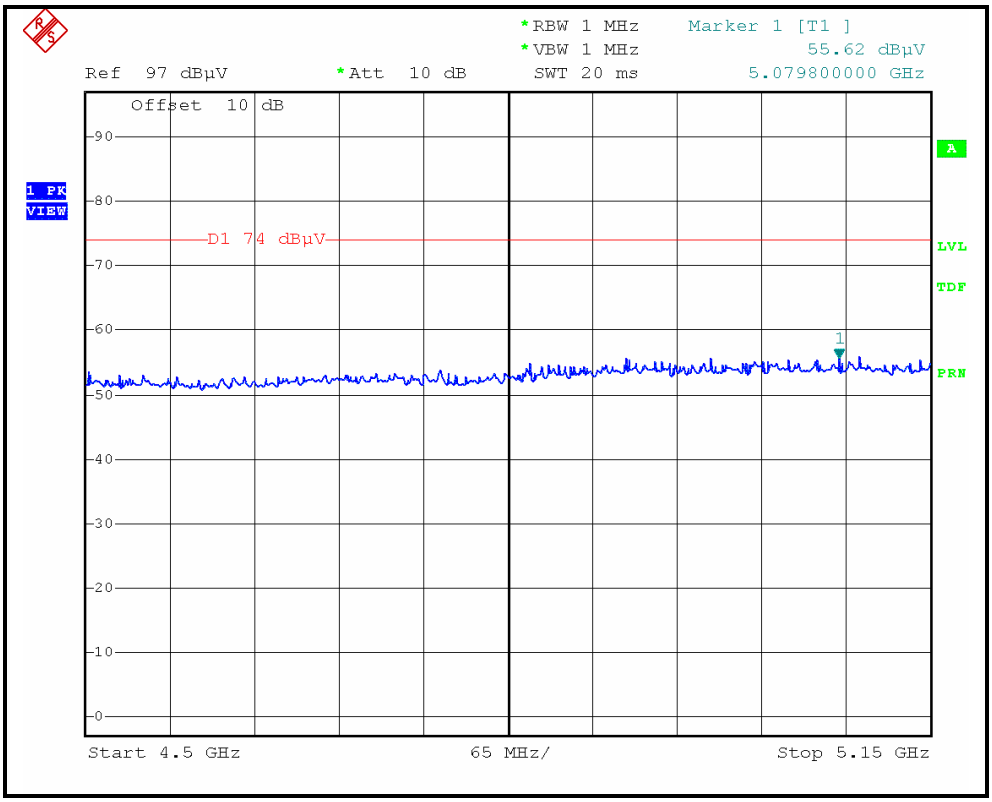
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

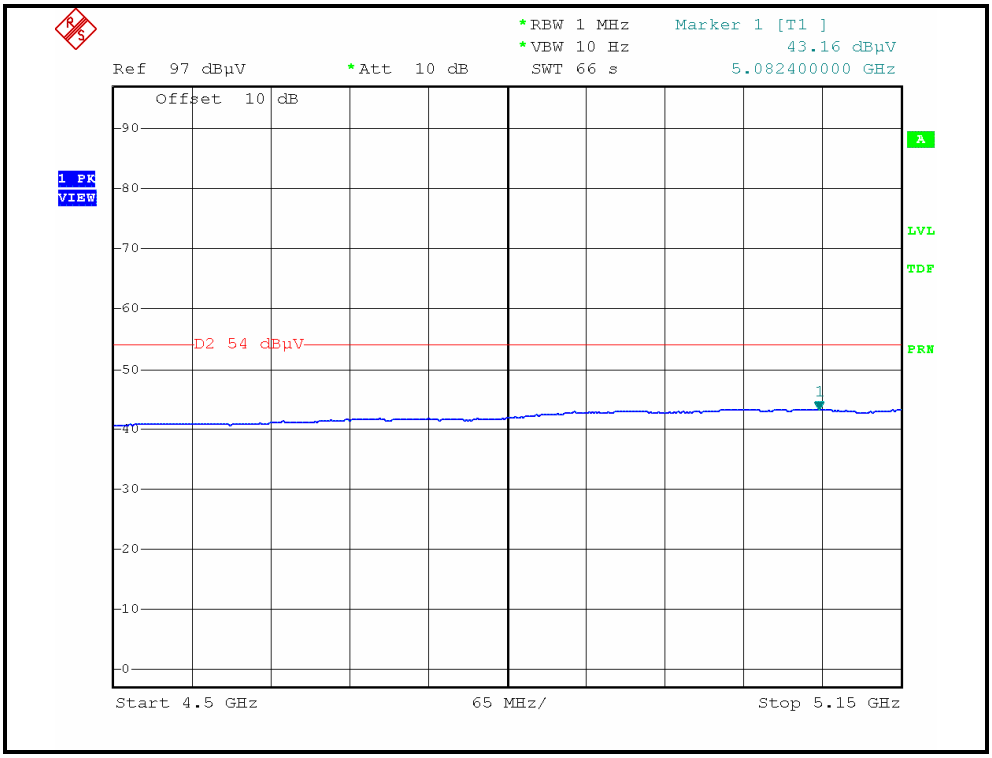
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, HORIZONTAL )



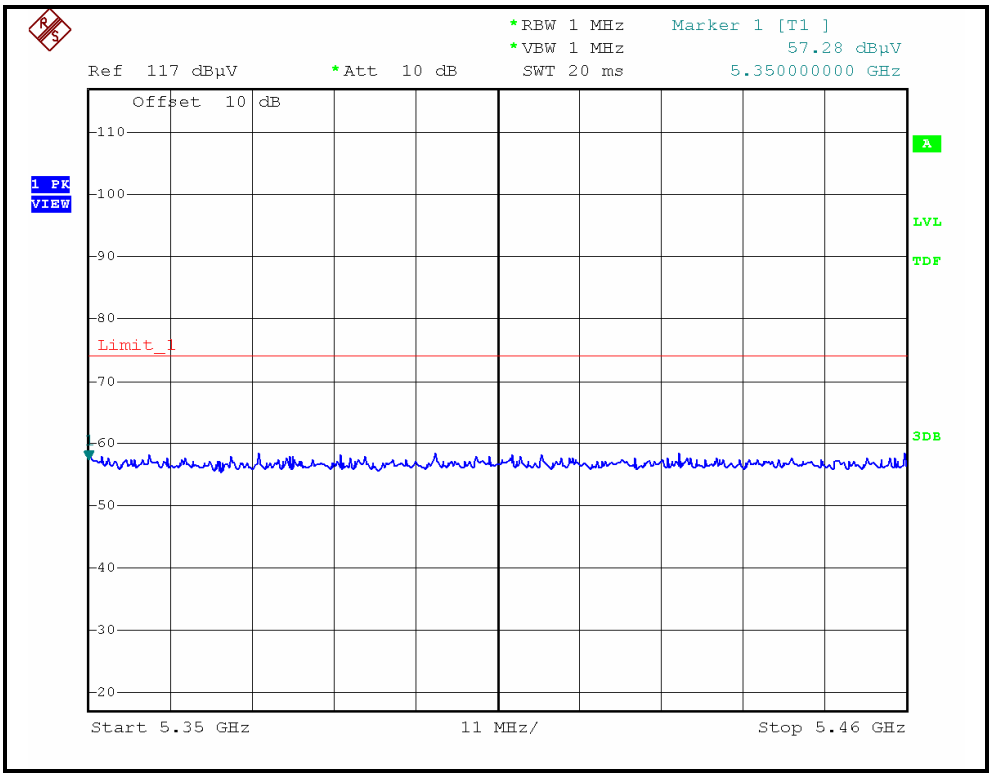



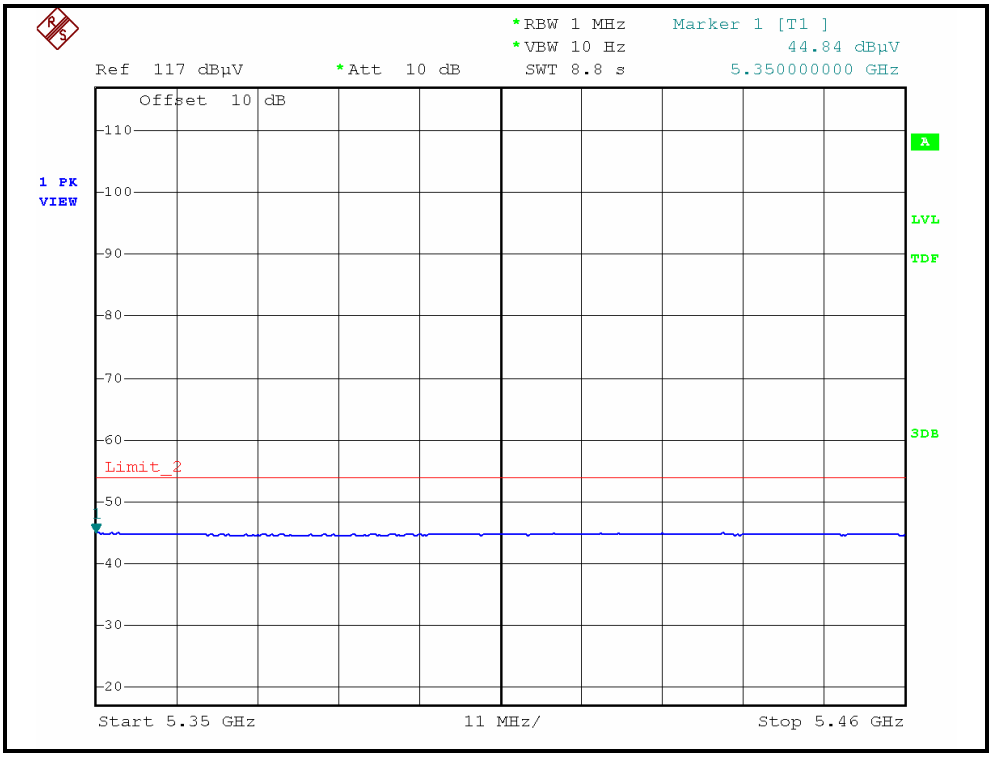
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL )



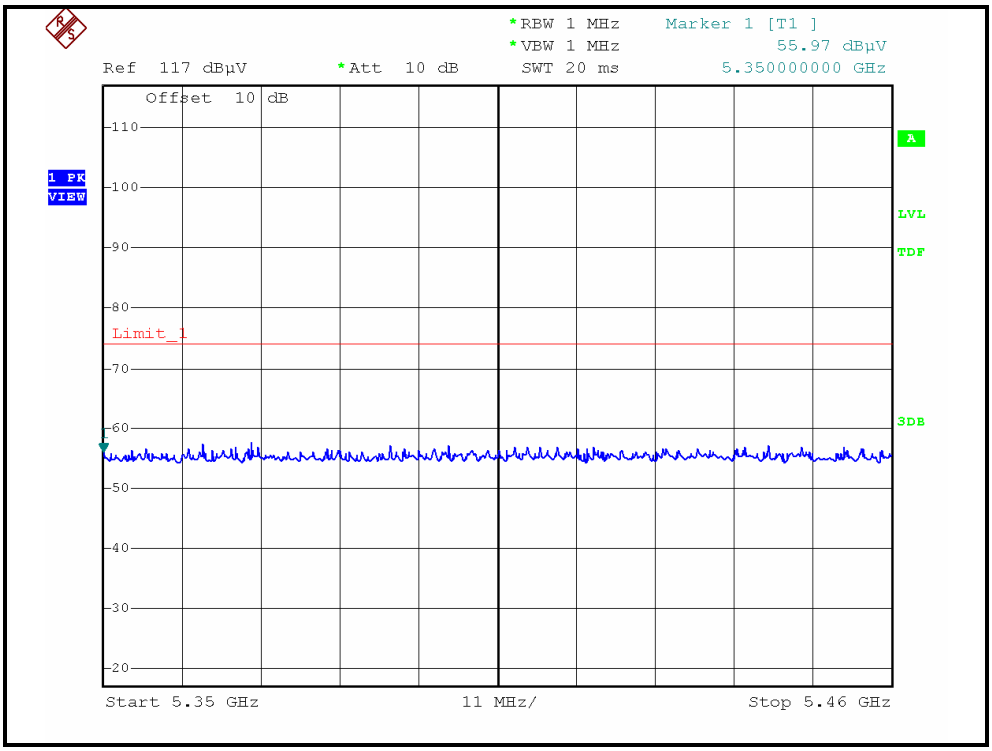



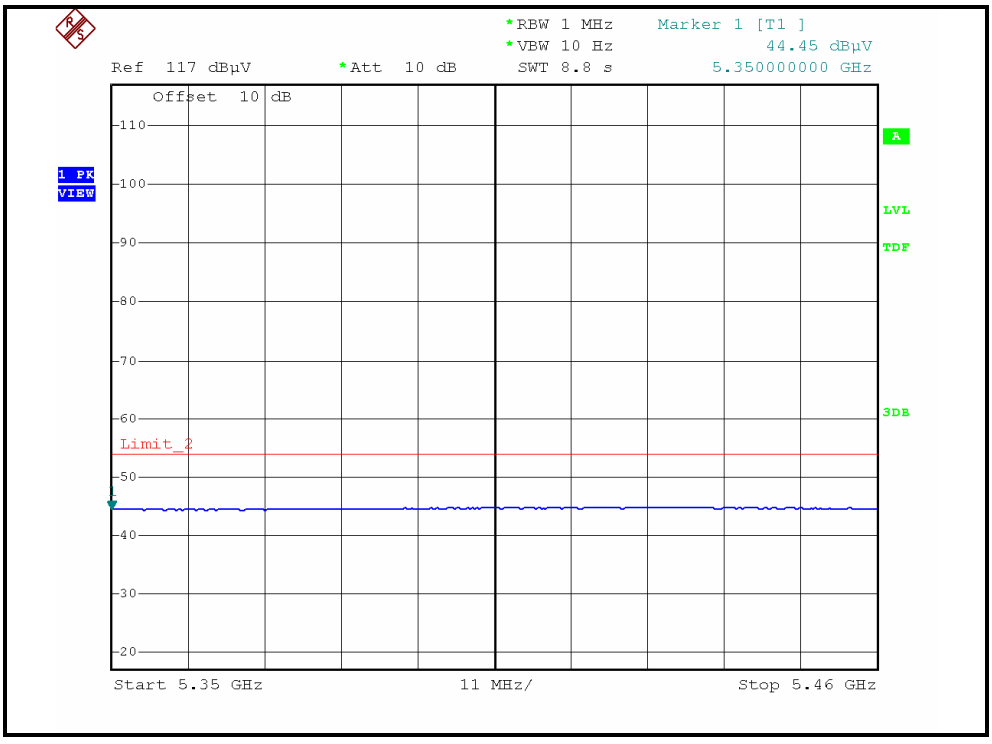
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, HORIZONTAL )



RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, VERTICAL )



## DRAFT 802.11n (40MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 40.57 PK | 68.30 | -27.73 | 1.24 H | 321 | 7.70 | 32.87 |
| 2 | 5150.00 | 55.00 PK | 74.00 | -19.00 | 1.24 H | 351 | 17.74 | 37.26 |
| 3 | 5150.00 | 44.03 AV | 54.00 | -9.97 | 1.24 H | 351 | 6.77 | 37.26 |
| 4 | *5190.00 | 99.42 PK | | | 1.21 H | 354 | 62.16 | 37.26 |
| 5 | *5190.00 | 86.24 AV | | | 1.21 H | 354 | 48.98 | 37.26 |
| 6 | #6920.00 | 51.34 PK | 68.30 | -16.96 | 1.29 H | 324 | 8.38 | 42.96 |
| 7 | #10380.00 | 52.93 PK | 68.30 | -15.37 | 1.26 H | 326 | 6.28 | 46.65 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 41.09 PK | 68.30 | -27.21 | 1.10 V | 5 | 8.22 | 32.87 |
| 2 | 5150.00 | 62.41 PK | 74.00 | -11.59 | 1.20 V | 3 | 25.15 | 37.26 |
| 3 | 5150.00 | 50.17 AV | 54.00 | -3.83 | 1.20 V | 3 | 12.91 | 37.26 |
| 4 | *5190.00 | 109.77 PK | | | 1.26 V | 2 | 72.51 | 37.26 |
| 5 | *5190.00 | 96.99 AV | | | 1.26 V | 2 | 59.73 | 37.26 |
| 6 | #6920.00 | 52.65 PK | 68.30 | -15.65 | 1.09 V | 10 | 9.69 | 42.96 |
| 7 | #10380.00 | 53.59 PK | 68.30 | -14.71 | 1.04 V | 4 | 6.94 | 46.65 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

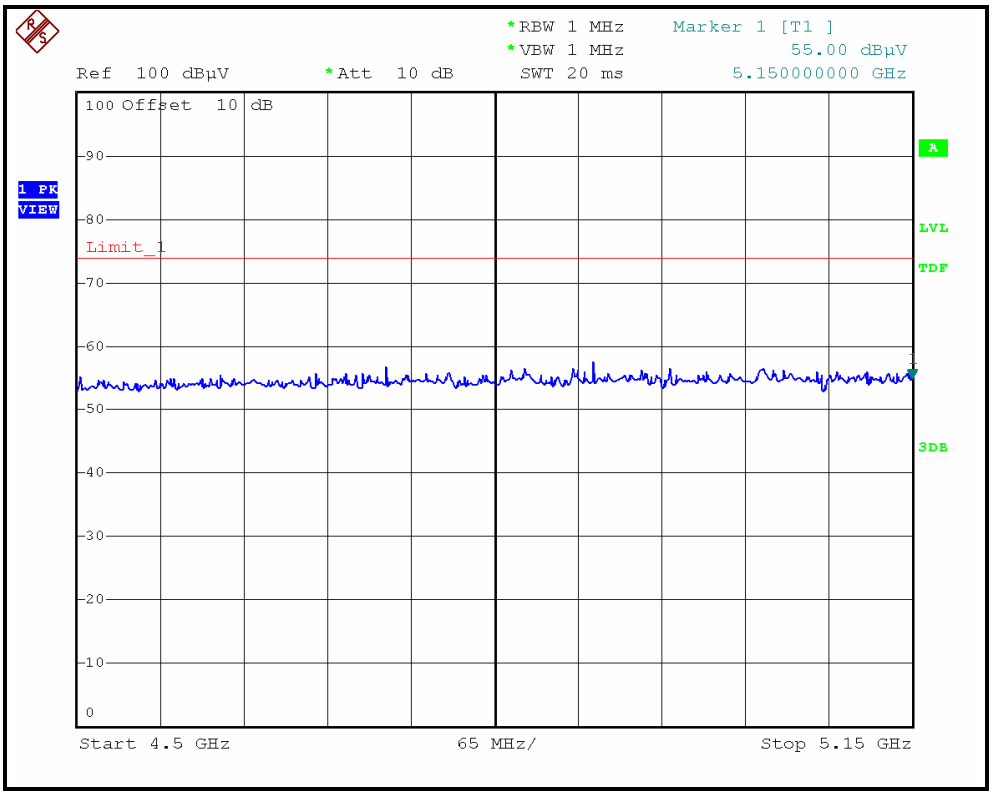
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Eric Lee |

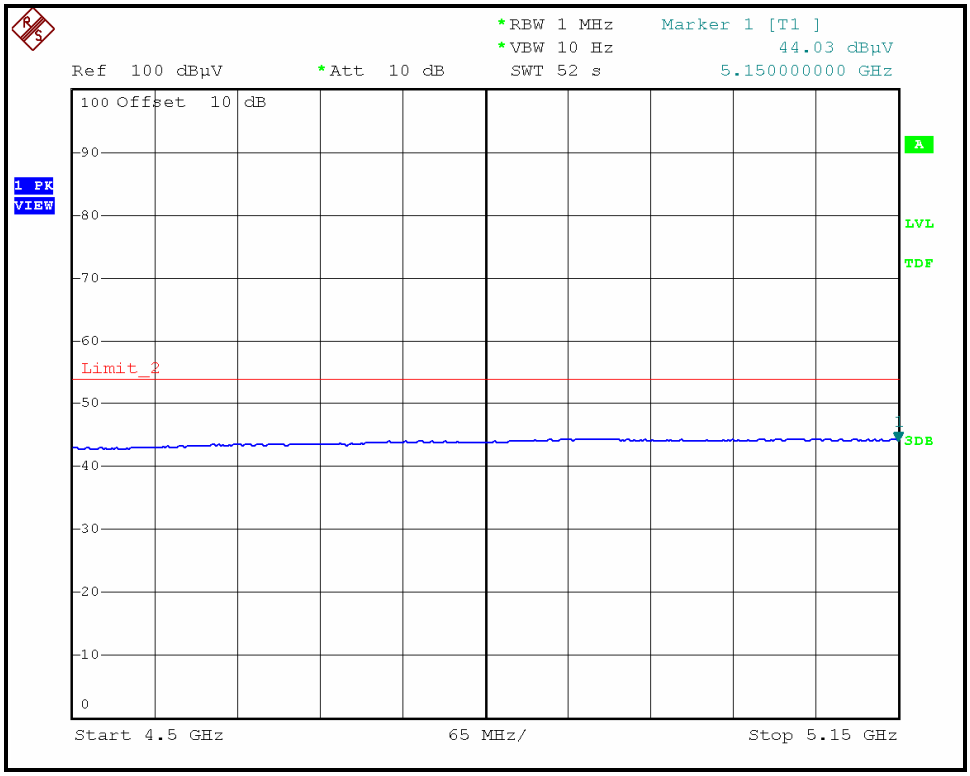
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 38.46 PK | 68.30 | -29.84 | 1.28 H | 324 | 5.56 | 32.90 |
| 2 | *5230.00 | 98.40 PK | | | 1.20 H | 314 | 61.14 | 37.26 |
| 3 | *5230.00 | 86.10 AV | | | 1.20 H | 314 | 48.84 | 37.26 |
| 4 | 5350.00 | 58.31 PK | 74.00 | -15.69 | 1.08 H | 129 | 21.05 | 37.26 |
| 5 | 5350.00 | 48.14 AV | 54.00 | -5.86 | 1.08 H | 129 | 10.88 | 37.26 |
| 6 | 6973.30 | 50.64 PK | 68.30 | -17.66 | 1.23 H | 339 | 7.55 | 43.09 |
| 7 | #10460.00 | 54.23 PK | 68.30 | -14.07 | 1.24 H | 329 | 7.51 | 46.72 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 39.65 PK | 68.30 | -28.65 | 1.10 V | 10 | 6.75 | 32.90 |
| 2 | *5230.00 | 107.64 PK | | | 1.20 V | 1 | 70.38 | 37.26 |
| 3 | *5230.00 | 96.87 AV | | | 1.20 V | 1 | 59.61 | 37.26 |
| 4 | 5350.00 | 61.84 PK | 74.00 | -12.16 | 1.04 V | 112 | 24.58 | 37.26 |
| 5 | 5350.00 | 47.74 AV | 54.00 | -6.26 | 1.04 V | 112 | 10.48 | 37.26 |
| 6 | 6973.30 | 51.57 PK | 68.30 | -16.73 | 1.03 V | 8 | 8.48 | 43.09 |
| 7 | #10460.00 | 54.82 PK | 68.30 | -13.48 | 1.05 V | 2 | 8.10 | 46.72 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

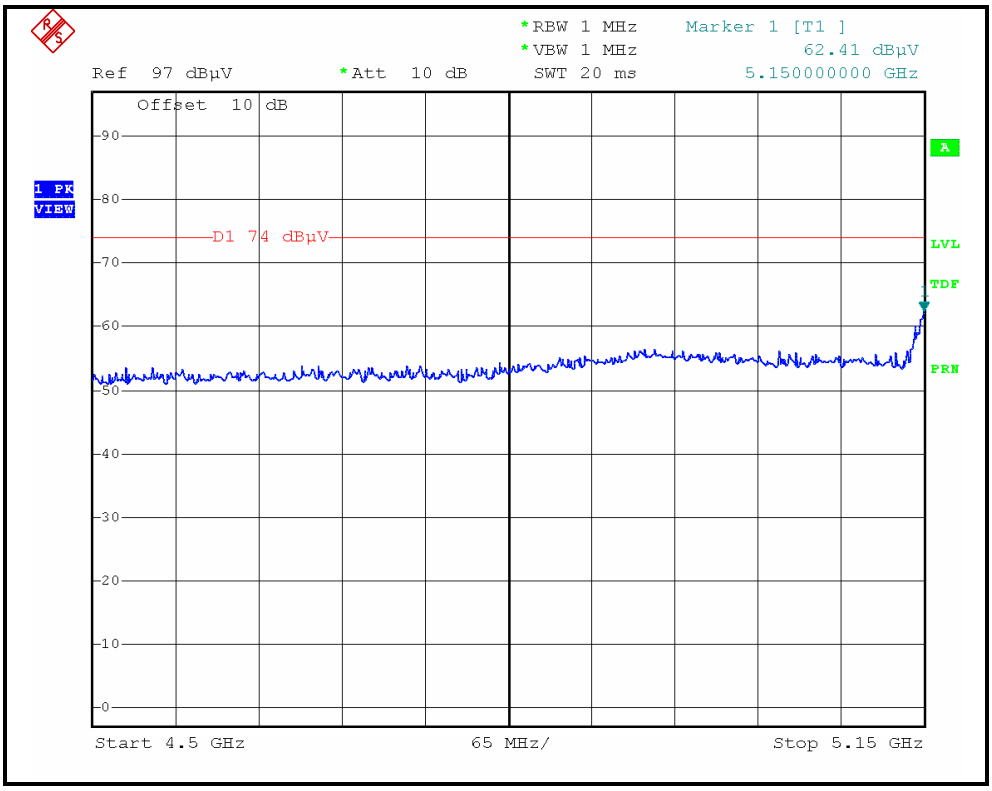
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

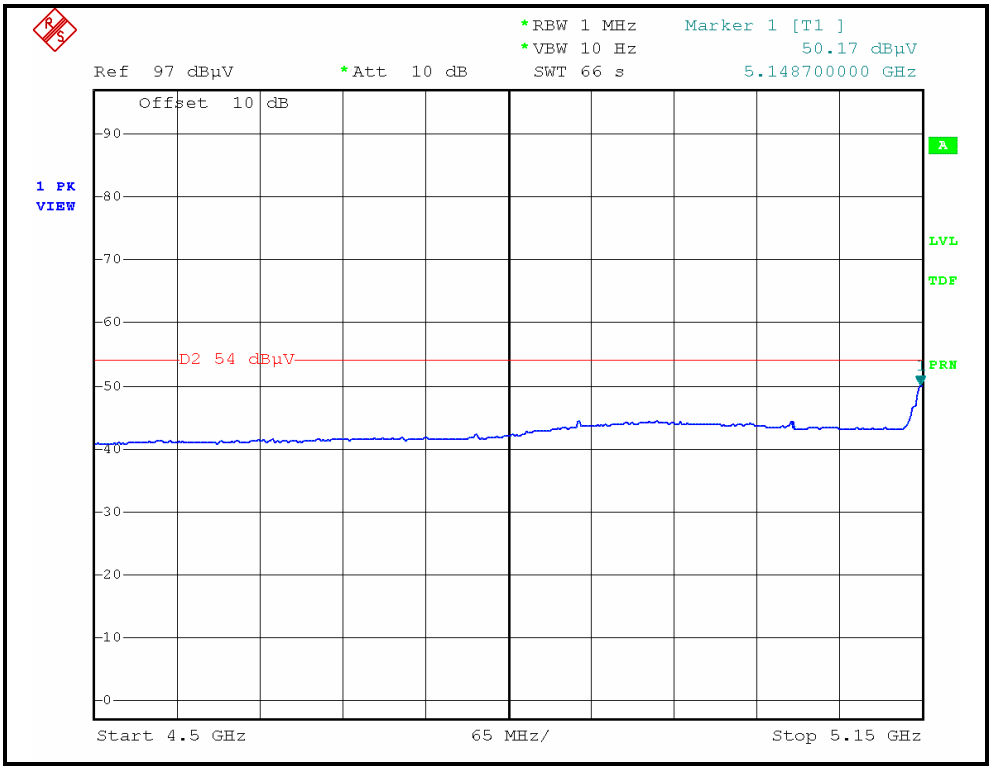
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)



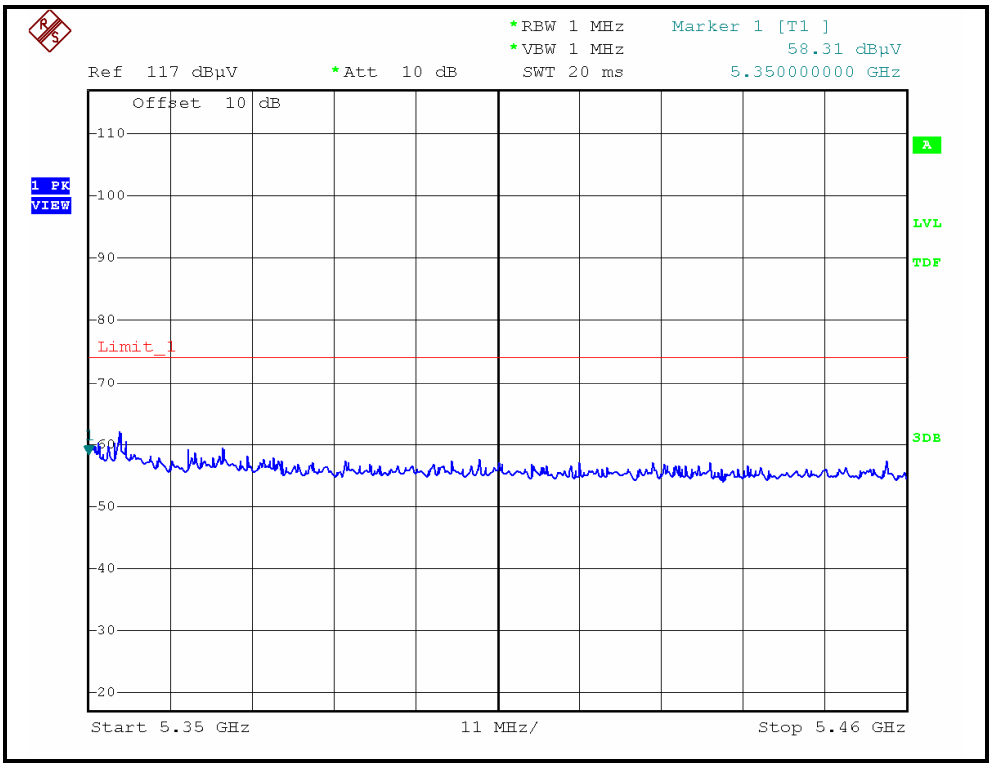



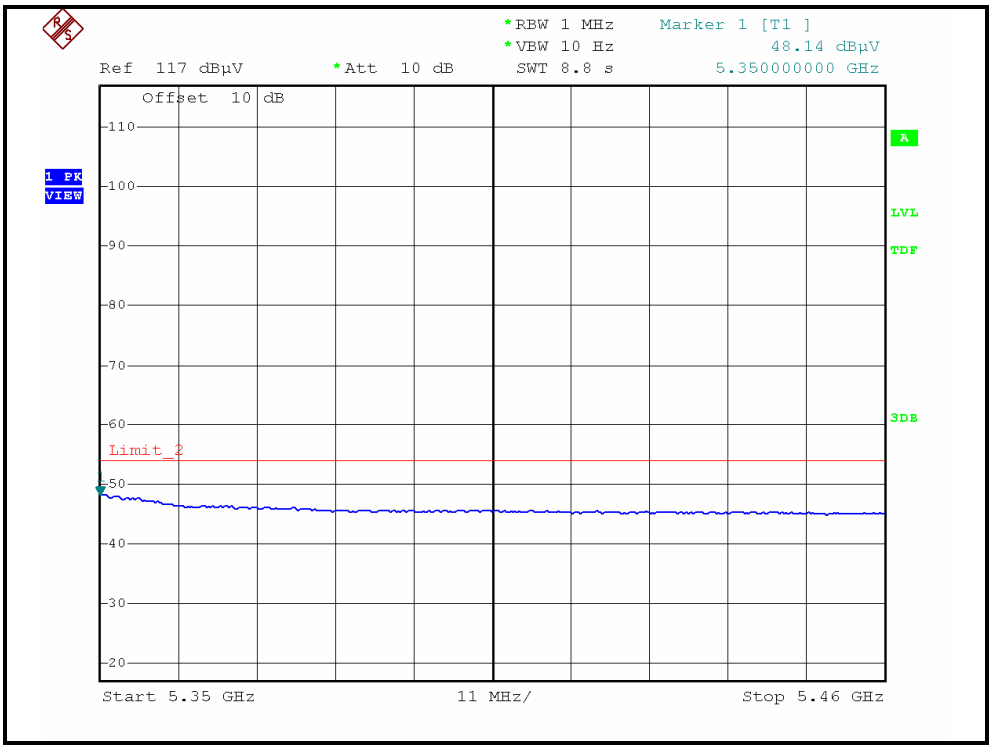
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL )



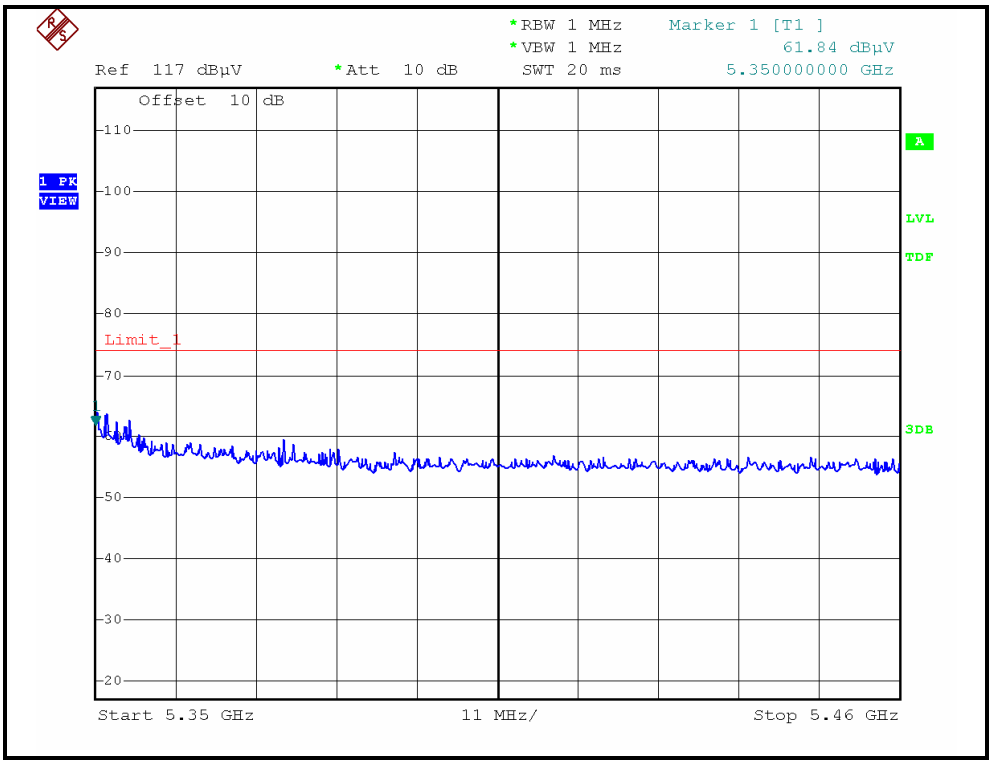



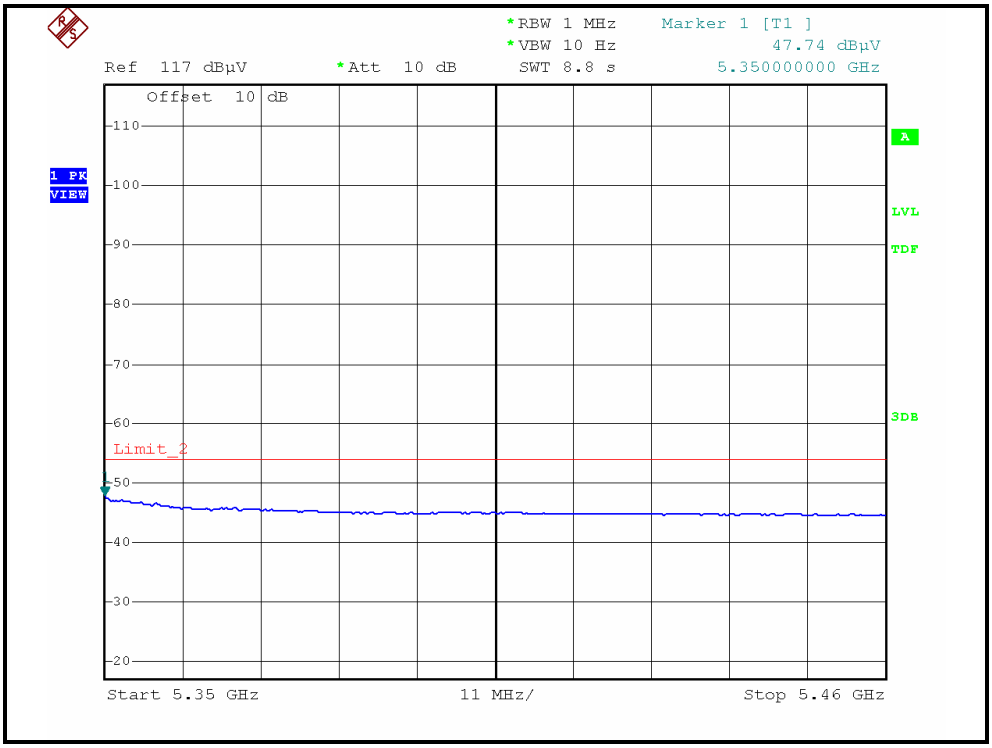
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, HORIZONTAL)



RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, VERTICAL)



## 4.2.10 TEST RESULTS – ANTENNA 7

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **FREQUENCY RANGE** | Below 1000MHz |
| **INPUT POWER** | 120Vac, 60 Hz | **DETECTOR FUNCTION** | Quasi-Peak |
| **ENVIRONMENTAL CONDITIONS** | 30.0deg. C, 55.0%RH 965hPa | **TESTED BY** | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 125.00 | 27.63 QP | 43.50 | -15.87 | 1.39 H | 144 | 14.56 | 13.07 |
| 2 | 250.00 | 34.23 QP | 46.00 | -11.77 | 1.29 H | 241 | 19.98 | 14.25 |
| 3 | 375.00 | 38.84 QP | 46.00 | -7.16 | 1.04 H | 343 | 20.03 | 18.81 |
| 4 | 650.00 | 43.52 QP | 46.00 | -2.48 | 1.05 H | 246 | 17.99 | 25.53 |
| 5 | 750.00 | 35.23 QP | 46.00 | -10.77 | 1.04 H | 221 | 8.32 | 26.91 |
| 6 | 875.00 | 37.43 QP | 46.00 | -8.57 | 1.06 H | 84 | 8.14 | 29.29 |
| 7 | 1000.00 | 38.44 QP | 54.00 | -15.56 | 1.09 H | 155 | 7.70 | 30.74 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 57.21 | 32.73 QP | 40.00 | -7.27 | 1.00 V | 213 | 19.04 | 13.69 |
| 2 | 125.00 | 29.66 QP | 43.50 | -13.84 | 1.00 V | 164 | 16.59 | 13.07 |
| 3 | 250.00 | 28.23 QP | 46.00 | -17.77 | 1.00 V | 41 | 13.98 | 14.25 |
| 4 | 375.00 | 39.59 QP | 46.00 | -6.41 | 1.05 V | 242 | 20.78 | 18.81 |
| 5 | 600.00 | 37.43 QP | 46.00 | -8.57 | 1.00 V | 256 | 12.39 | 25.04 |
| 6 | 650.00 | 39.82 QP | 46.00 | -6.18 | 1.00 V | 269 | 14.29 | 25.53 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.23 PK | 68.30 | -26.07 | 1.02 H | 104 | 9.37 | 32.86 |
| 2 | 5150.00 | 55.05 PK | 74.00 | -18.95 | 1.00 H | 32 | 17.79 | 37.26 |
| 3 | 5150.00 | 43.94 AV | 54.00 | -10.06 | 1.00 H | 32 | 6.68 | 37.26 |
| 4 | *5180.00 | 108.40 PK | | | 1.00 H | 29 | 71.14 | 37.26 |
| 5 | *5180.00 | 98.24 AV | | | 1.00 H | 29 | 60.98 | 37.26 |
| 6 | #6906.60 | 54.29 PK | 68.30 | -14.01 | 1.00 H | 111 | 11.37 | 42.92 |
| 7 | #10360.00 | 54.10 PK | 68.30 | -14.20 | 1.01 H | 102 | 7.46 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.68 PK | 68.30 | -25.62 | 1.00 V | 358 | 9.82 | 32.86 |
| 2 | 5150.00 | 57.00 PK | 74.00 | -17.00 | 1.00 V | 126 | 19.74 | 37.26 |
| 3 | 5150.00 | 44.16 AV | 54.00 | -9.84 | 1.00 V | 126 | 6.90 | 37.26 |
| 4 | *5180.00 | 115.83 PK | | | 1.00 V | 125 | 78.57 | 37.26 |
| 5 | *5180.00 | 105.43 AV | | | 1.00 V | 125 | 68.17 | 37.26 |
| 6 | #6906.60 | 54.75 PK | 68.30 | -13.55 | 1.00 V | 32 | 11.83 | 42.92 |
| 7 | #10360.00 | 54.27 PK | 68.30 | -14.03 | 1.00 V | 47 | 7.63 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.63 PK | 68.30 | -25.67 | 1.01 H | 106 | 9.75 | 32.88 |
| 2 | *5200.00 | 107.60 PK | | | 1.00 H | 27 | 70.34 | 37.26 |
| 3 | *5200.00 | 97.80 AV | | | 1.00 H | 27 | 60.54 | 37.26 |
| 4 | #6933.30 | 53.14 PK | 68.30 | -15.16 | 1.00 H | 112 | 10.15 | 42.99 |
| 5 | #10400.00 | 54.24 PK | 68.30 | -14.06 | 1.00 H | 103 | 7.57 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.83 PK | 68.30 | -25.47 | 1.00 V | 356 | 9.95 | 32.88 |
| 2 | *5200.00 | 115.42 PK | | | 1.00 V | 127 | 78.16 | 37.26 |
| 3 | *5200.00 | 104.62 AV | | | 1.00 V | 127 | 67.36 | 37.26 |
| 4 | #6933.30 | 53.74 PK | 68.30 | -14.56 | 1.00 V | 7 | 10.75 | 42.99 |
| 5 | #10400.00 | 54.69 PK | 68.30 | -13.61 | 1.00 V | 47 | 8.02 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

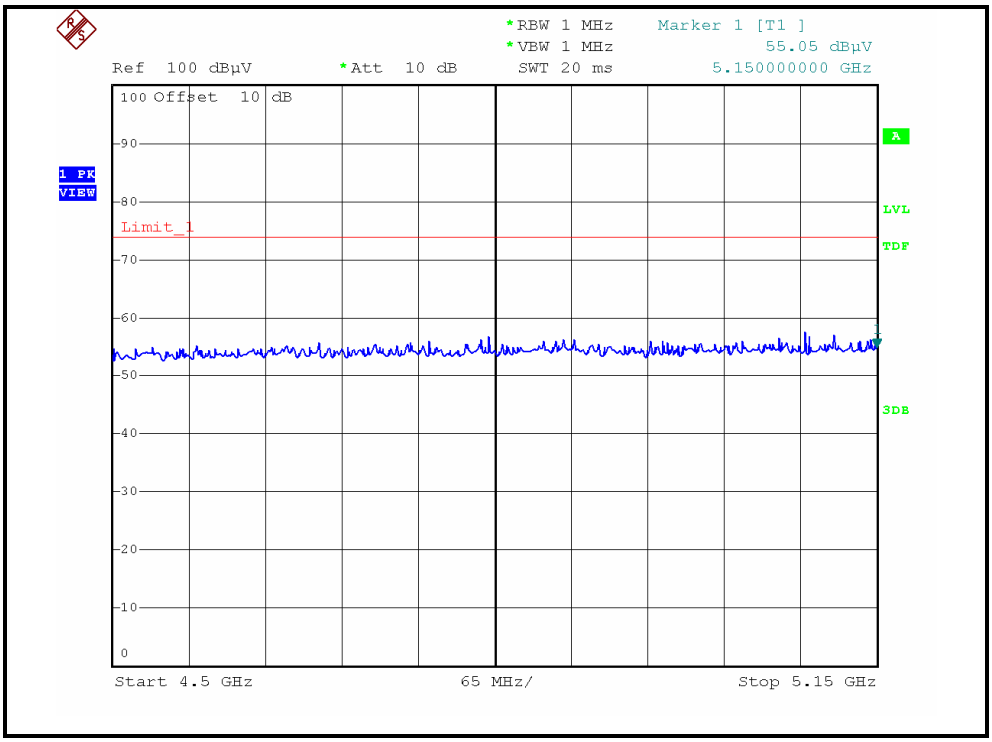
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

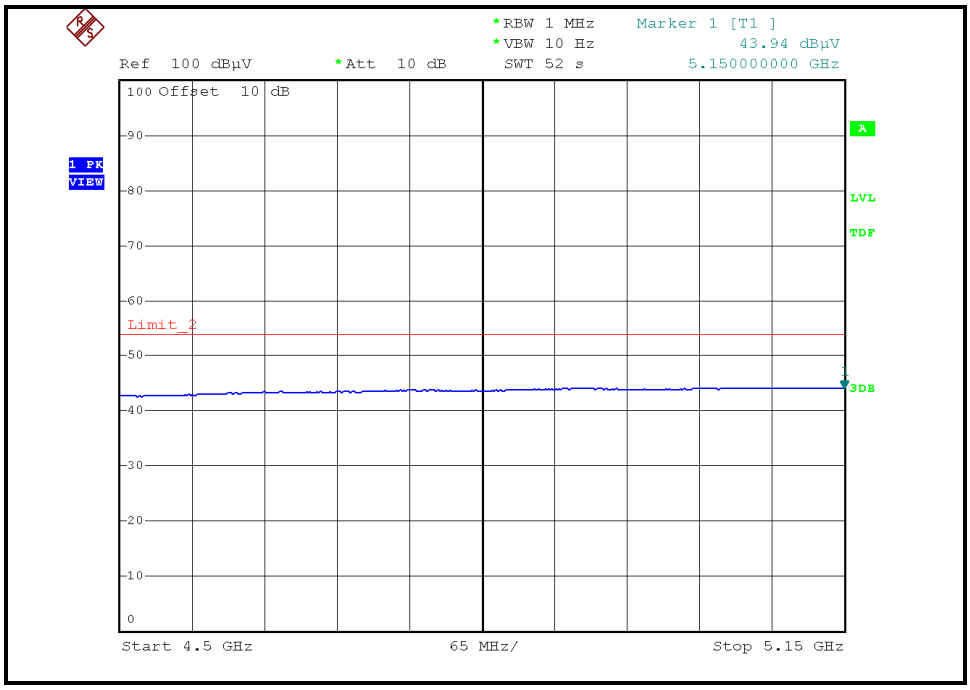
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.63 PK | 68.30 | -25.67 | 1.00 H | 109 | 9.73 | 32.90 |
| 2 | *5240.00 | 107.80 PK | | | 1.00 H | 24 | 70.54 | 37.26 |
| 3 | *5240.00 | 97.90 AV | | | 1.00 H | 24 | 60.64 | 37.26 |
| 4 | 5350.00 | 55.03 PK | 74.00 | -18.97 | 1.17 H | 231 | 17.77 | 37.26 |
| 5 | 5350.00 | 44.81 AV | 54.00 | -9.19 | 1.17 H | 231 | 7.55 | 37.26 |
| 6 | 6896.60 | 52.03 PK | 68.30 | -16.27 | 1.00 H | 114 | 9.13 | 42.90 |
| 7 | #10480.00 | 53.27 PK | 68.30 | -15.03 | 1.01 H | 104 | 6.54 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.76 PK | 68.30 | -25.54 | 1.00 V | 359 | 9.86 | 32.90 |
| 2 | *5240.00 | 114.98 PK | | | 1.00 V | 125 | 77.72 | 37.26 |
| 3 | *5240.00 | 104.88 AV | | | 1.00 V | 125 | 67.62 | 37.26 |
| 4 | 5350.00 | 55.80 PK | 74.00 | -18.20 | 1.21 V | 134 | 18.54 | 37.26 |
| 5 | 5350.00 | 44.91 AV | 54.00 | -9.09 | 1.21 V | 134 | 7.65 | 37.26 |
| 6 | 6986.60 | 52.13 PK | 68.30 | -16.17 | 1.00 V | 35 | 9.00 | 43.13 |
| 7 | #10480.00 | 53.89 PK | 68.30 | -14.41 | 1.00 V | 48 | 7.16 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

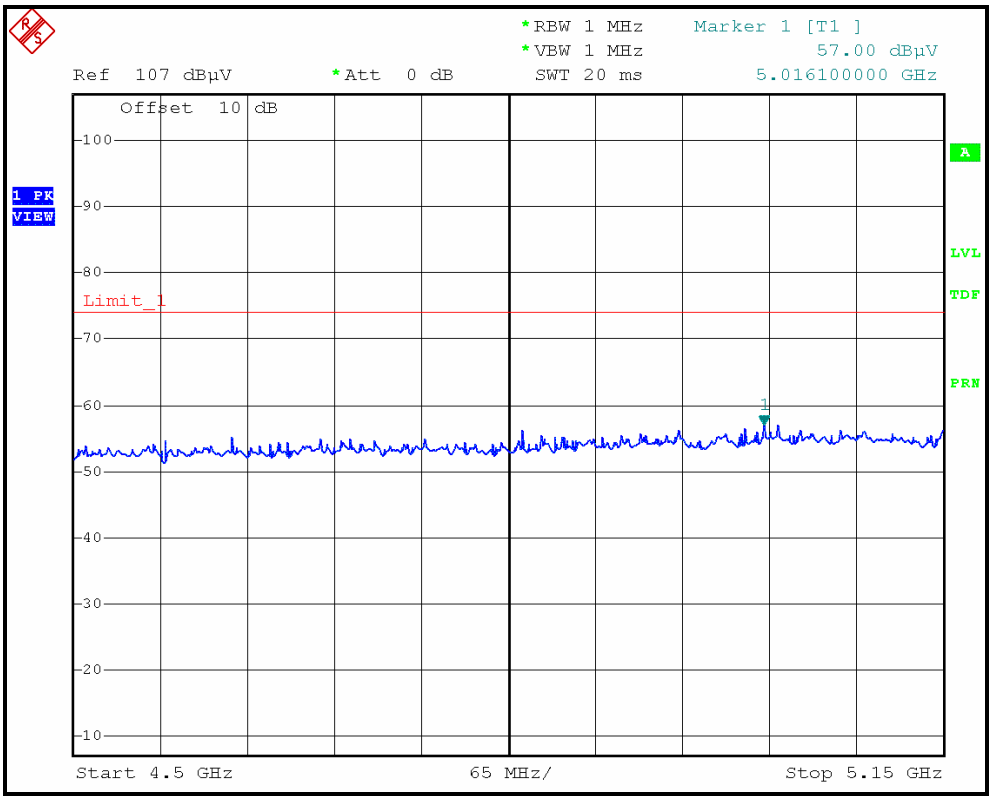
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

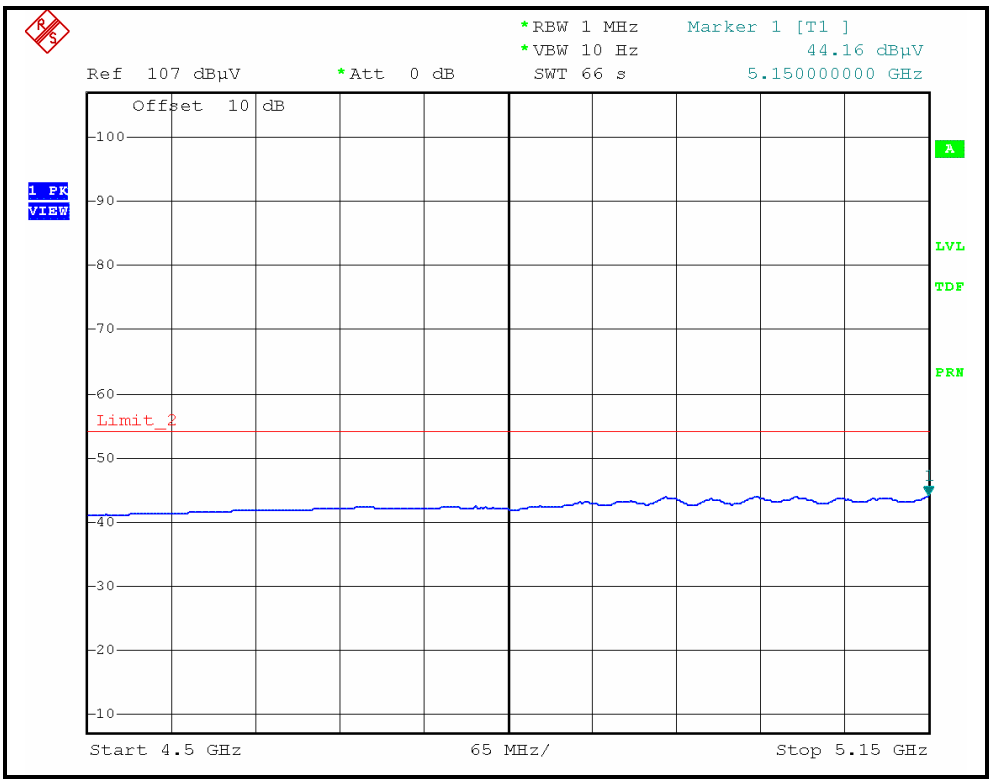
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



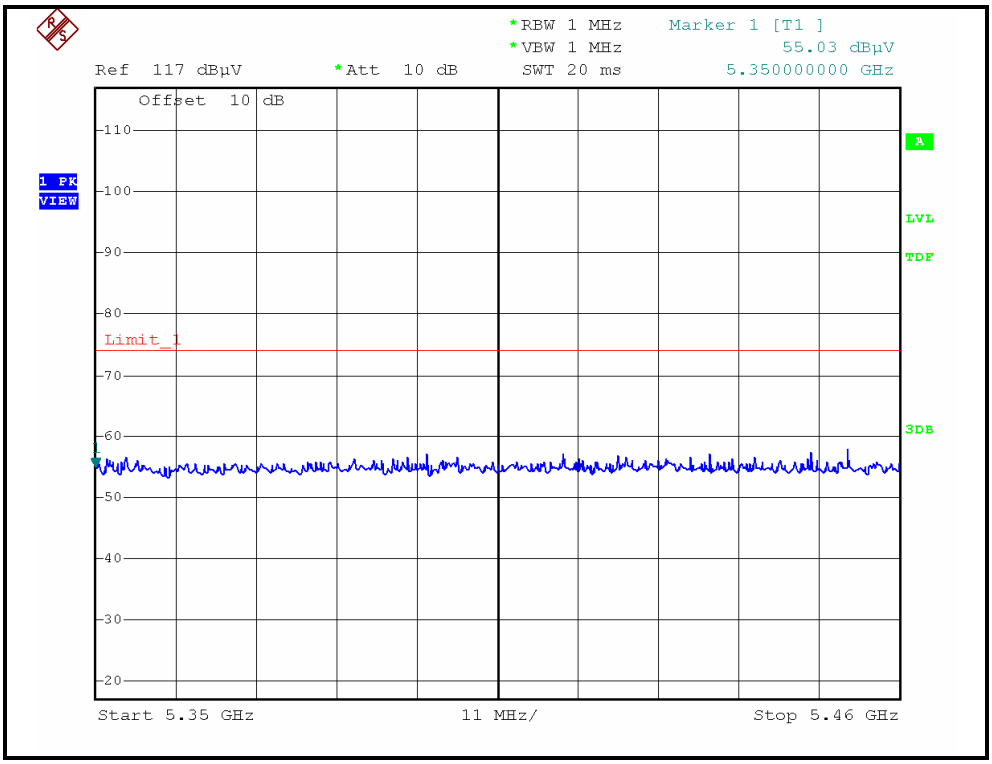



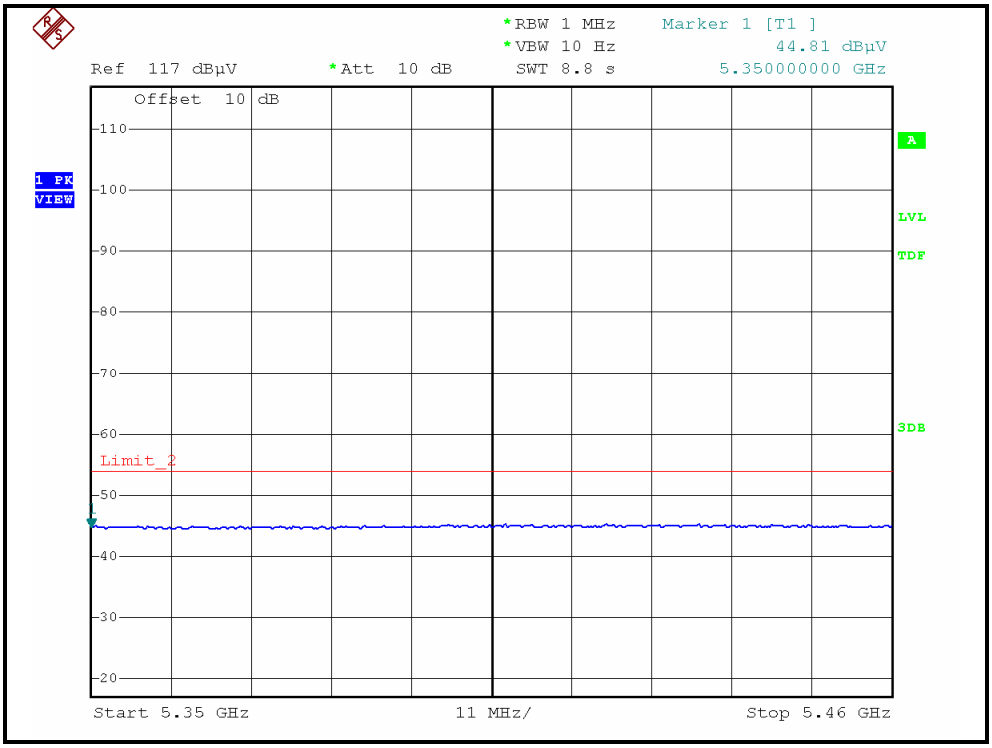
RESTRICTED BANDEDGE (802.11a MODE,CH1, VERTICAL )



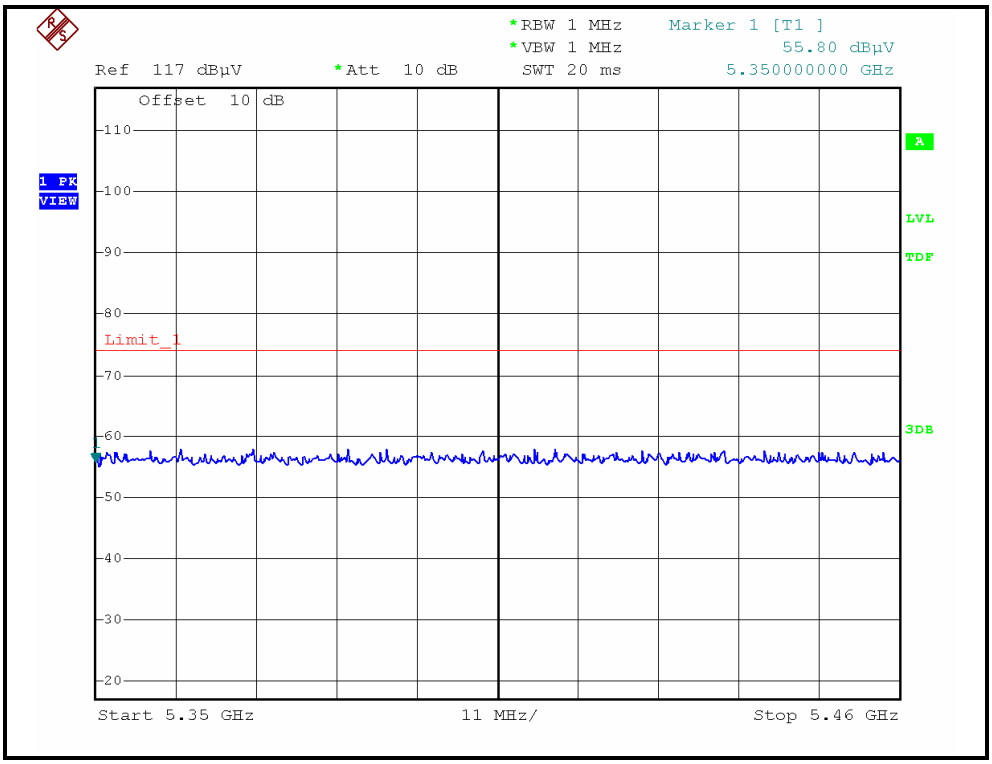



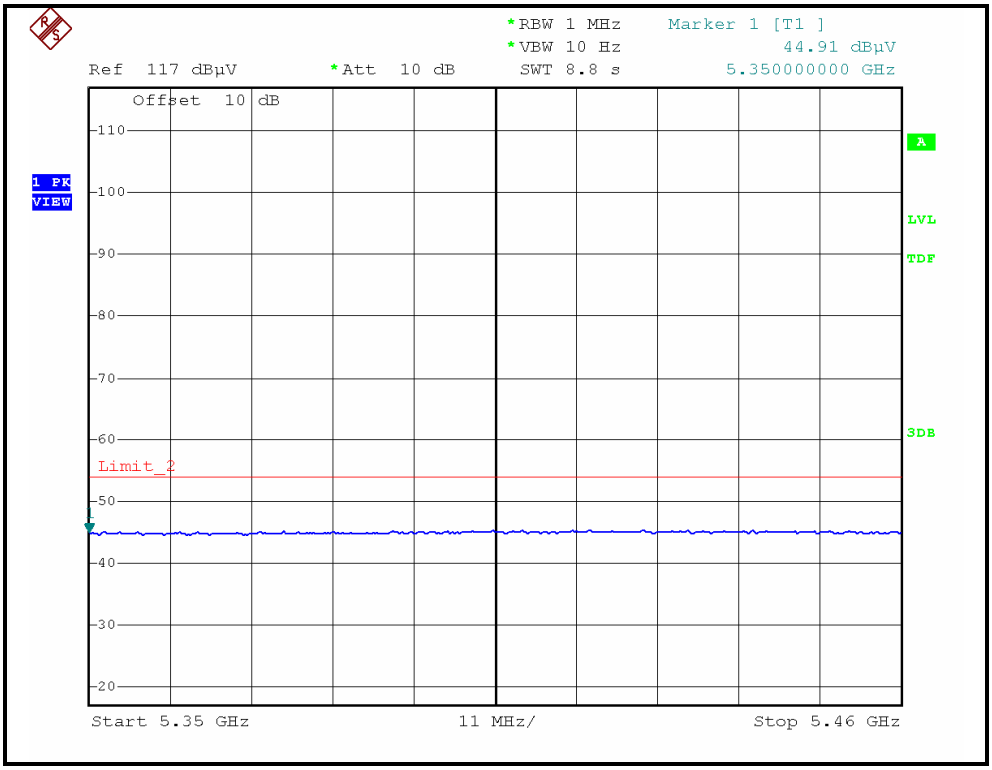
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE,CH4, VERTICAL )



## DRAFT 802.11n (20MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.63 PK | 68.30 | -25.67 | 1.00 H | 101 | 9.77 | 32.86 |
| 2 | 5150.00 | 55.18 PK | 74.00 | -18.82 | 1.02 H | 26 | 17.92 | 37.26 |
| 3 | 5150.00 | 43.93 AV | 54.00 | -10.07 | 1.02 H | 26 | 6.67 | 37.26 |
| 4 | *5180.00 | 108.30 PK | | | 1.00 H | 37 | 71.04 | 37.26 |
| 5 | *5180.00 | 98.20 AV | | | 1.00 H | 37 | 60.94 | 37.26 |
| 6 | #6906.60 | 54.64 PK | 68.30 | -13.66 | 1.00 H | 107 | 11.72 | 42.92 |
| 7 | #10360.00 | 54.12 PK | 68.30 | -14.18 | 1.00 H | 108 | 7.48 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.78 PK | 68.30 | -25.52 | 1.00 V | 13 | 9.92 | 32.86 |
| 2 | 5150.00 | 54.36 PK | 74.00 | -19.64 | 1.00 V | 127 | 17.10 | 37.26 |
| 3 | 5150.00 | 43.98 AV | 54.00 | -10.02 | 1.00 V | 127 | 6.72 | 37.26 |
| 4 | *5180.00 | 115.94 PK | | | 1.00 V | 136 | 78.68 | 37.26 |
| 5 | *5180.00 | 105.24 AV | | | 1.00 V | 136 | 67.98 | 37.26 |
| 6 | #6906.60 | 54.81 PK | 68.30 | -13.49 | 1.00 V | 25 | 11.89 | 42.92 |
| 7 | #10360.00 | 54.36 PK | 68.30 | -13.94 | 1.00 V | 56 | 7.72 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.83 PK | 68.30 | -25.47 | 1.00 H | 101 | 9.95 | 32.88 |
| 2 | *5200.00 | 108.10 PK | | | 1.00 H | 24 | 70.84 | 37.26 |
| 3 | *5200.00 | 98.00 AV | | | 1.00 H | 24 | 60.74 | 37.26 |
| 4 | #6933.30 | 53.26 PK | 68.30 | -15.04 | 1.00 H | 111 | 10.27 | 42.99 |
| 5 | #10400.00 | 54.12 PK | 68.30 | -14.18 | 1.00 H | 102 | 7.45 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.96 PK | 68.30 | -25.34 | 1.00 V | 359 | 10.08 | 32.88 |
| 2 | *5200.00 | 116.01 PK | | | 1.00 V | 310 | 78.75 | 37.26 |
| 3 | *5200.00 | 105.05 AV | | | 1.00 V | 310 | 67.79 | 37.26 |
| 4 | #6933.30 | 53.83 PK | 68.30 | -14.47 | 1.00 V | 16 | 10.84 | 42.99 |
| 5 | #10400.00 | 54.73 PK | 68.30 | -13.57 | 1.00 V | 47 | 8.06 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

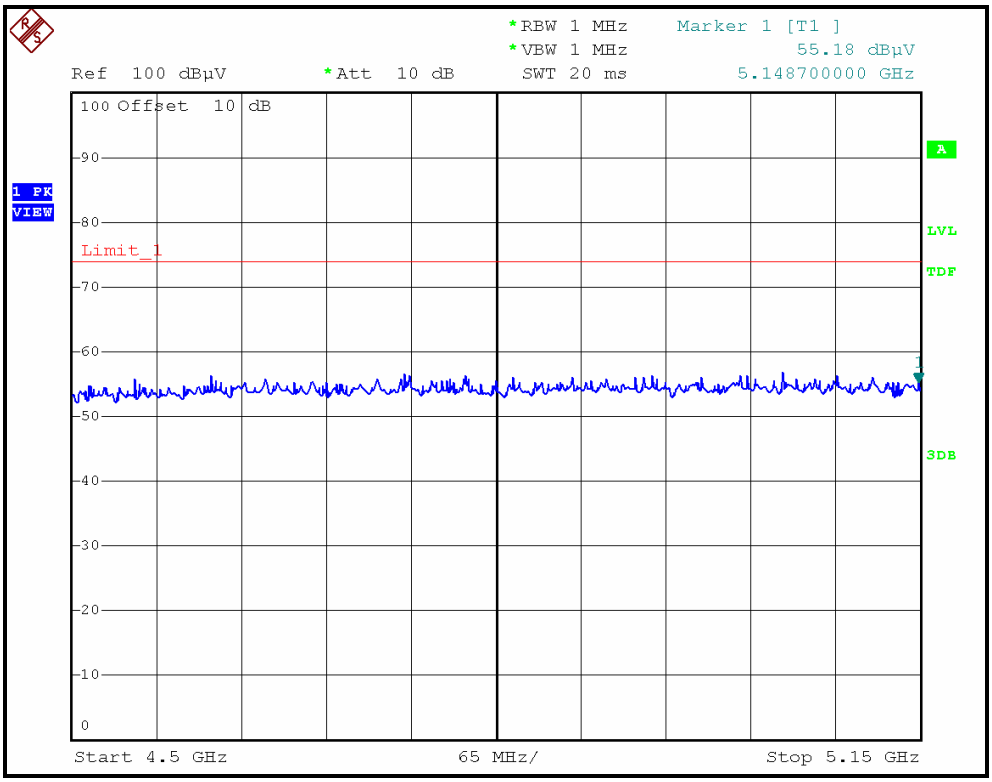
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

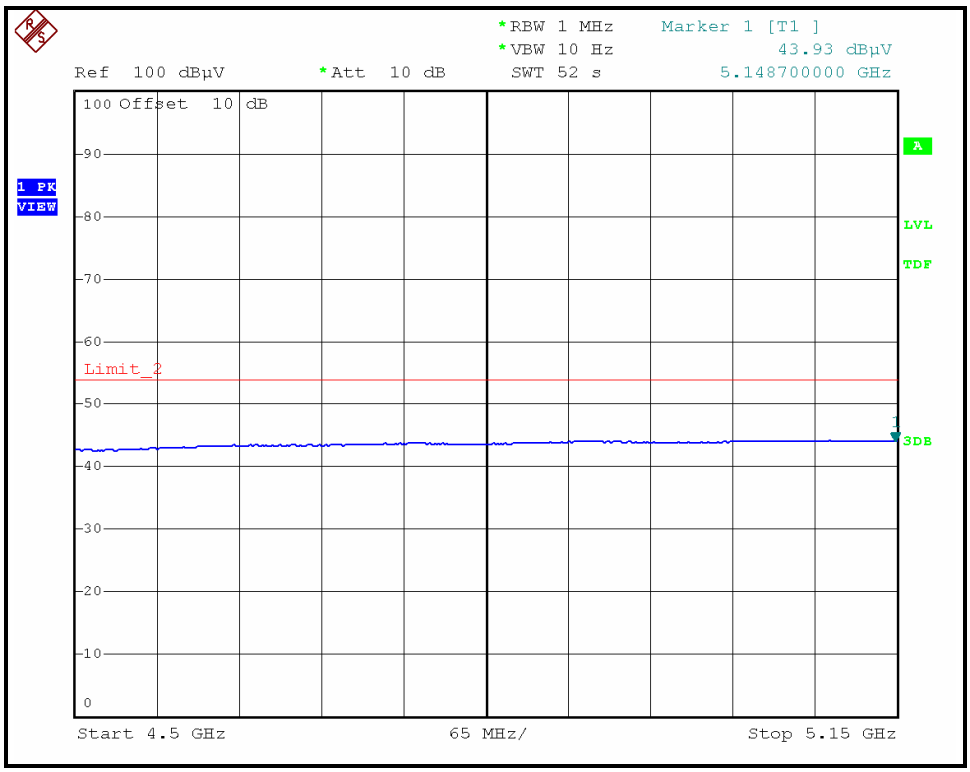
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.64 PK | 68.30 | -25.66 | 1.02 H | 106 | 9.74 | 32.90 |
| 2 | *5240.00 | 108.70 PK | | | 1.00 H | 27 | 71.44 | 37.26 |
| 3 | *5240.00 | 98.40 AV | | | 1.00 H | 27 | 61.14 | 37.26 |
| 4 | 5350.00 | 56.40 PK | 74.00 | -17.60 | 1.02 H | 237 | 19.14 | 37.26 |
| 5 | 5350.00 | 44.39 AV | 54.00 | -9.61 | 1.02 H | 237 | 7.13 | 37.26 |
| 6 | 6986.60 | 52.10 PK | 68.30 | -16.20 | 1.00 H | 107 | 8.97 | 43.13 |
| 7 | #10480.00 | 53.84 PK | 68.30 | -14.46 | 1.04 H | 104 | 7.11 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.81 PK | 68.30 | -25.49 | 1.00 V | 0 | 9.91 | 32.90 |
| 2 | *5240.00 | 116.28 PK | | | 1.00 V | 242 | 79.02 | 37.26 |
| 3 | *5240.00 | 105.51 AV | | | 1.00 V | 242 | 68.25 | 37.26 |
| 4 | 5350.00 | 56.41 PK | 74.00 | -17.59 | 1.24 V | 137 | 19.15 | 37.26 |
| 5 | 5350.00 | 44.85 AV | 54.00 | -9.15 | 1.24 V | 137 | 7.59 | 37.26 |
| 6 | 6986.60 | 52.29 PK | 68.30 | -16.01 | 1.00 V | 19 | 9.16 | 43.13 |
| 7 | #10480.00 | 53.96 PK | 68.30 | -14.34 | 1.00 V | 45 | 7.23 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

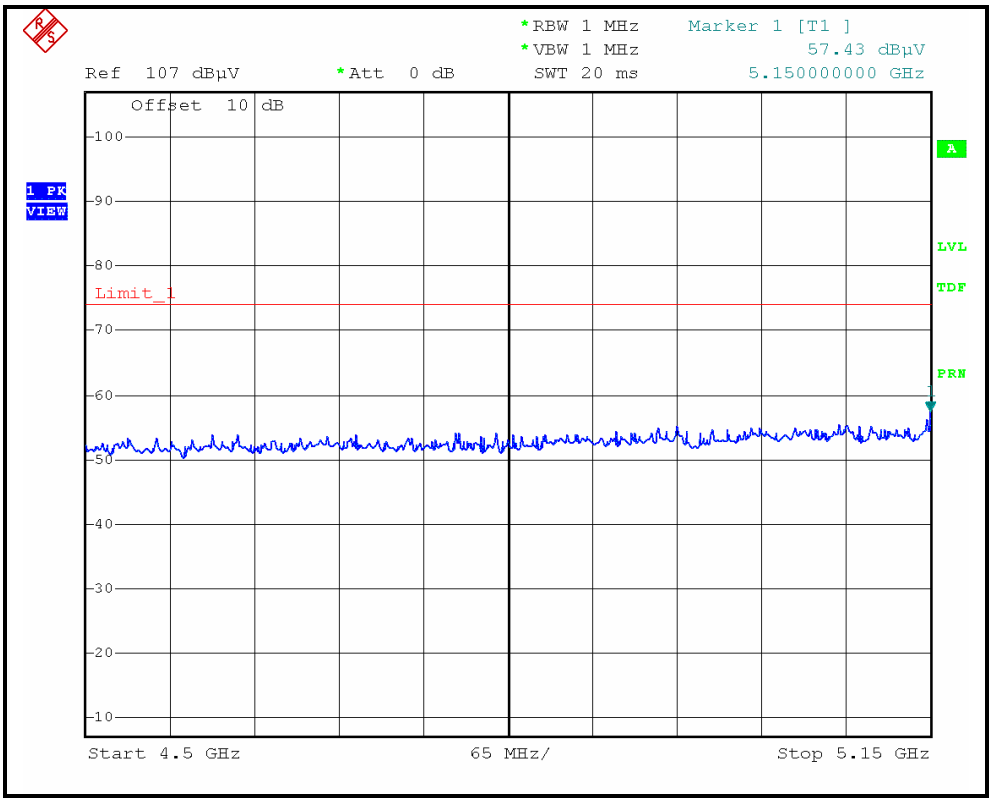
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

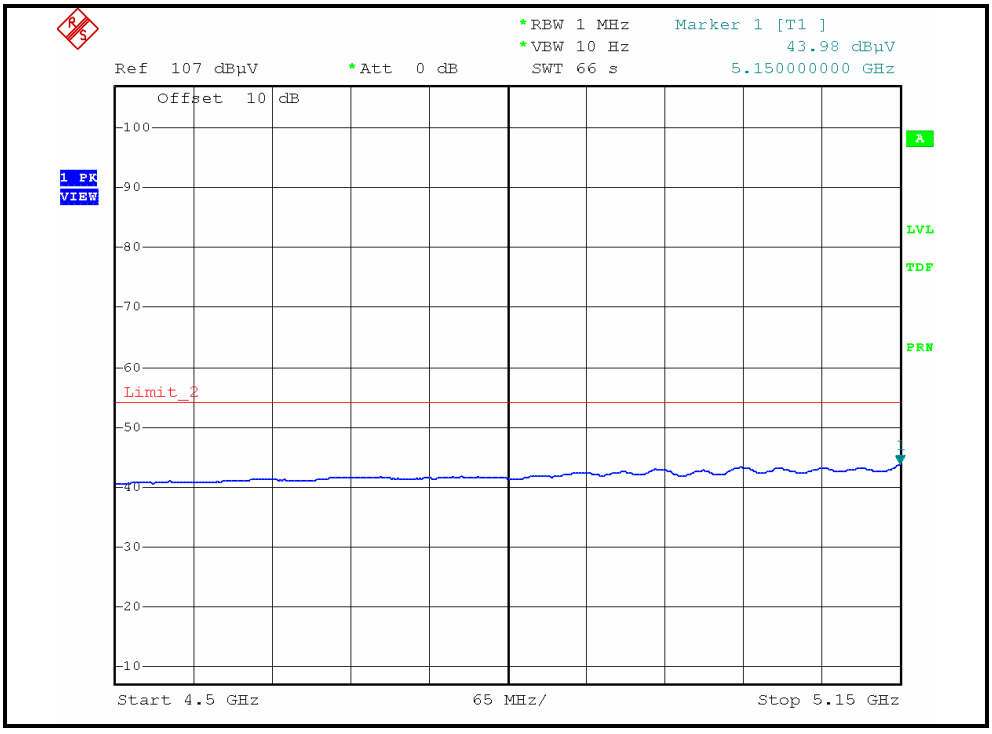
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, HORIZONTAL )



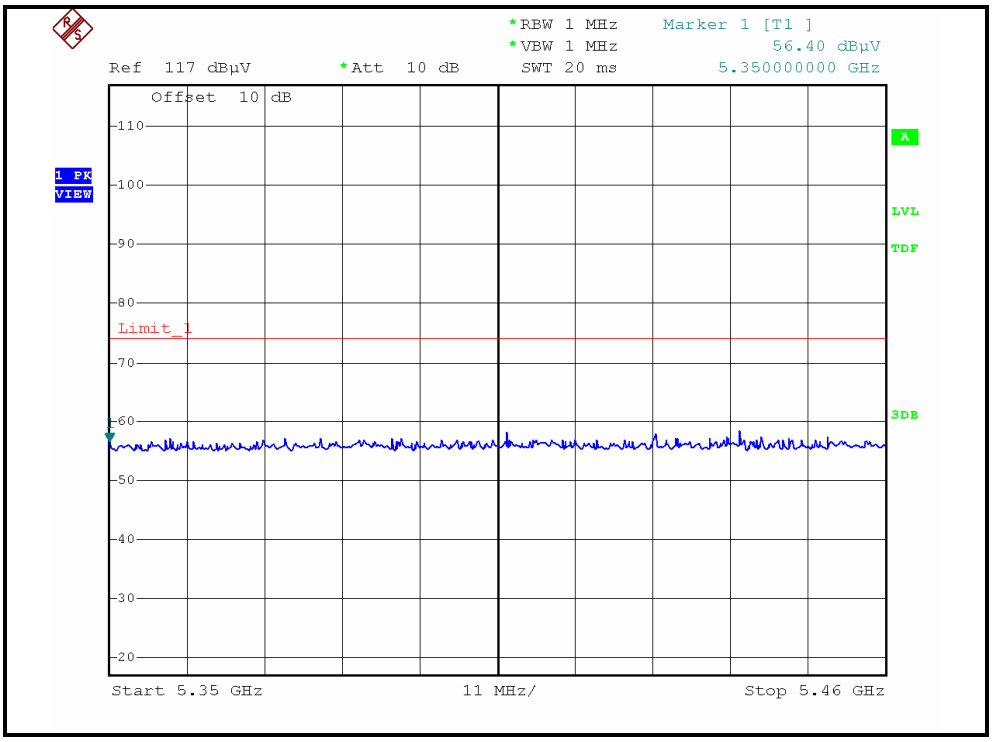



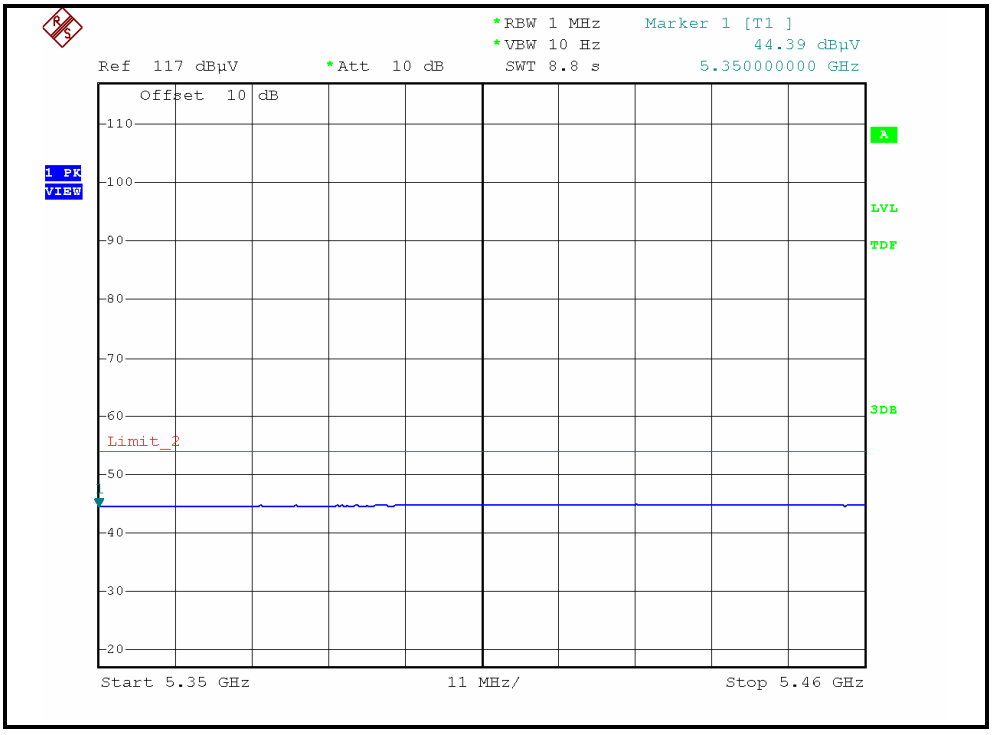
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL )



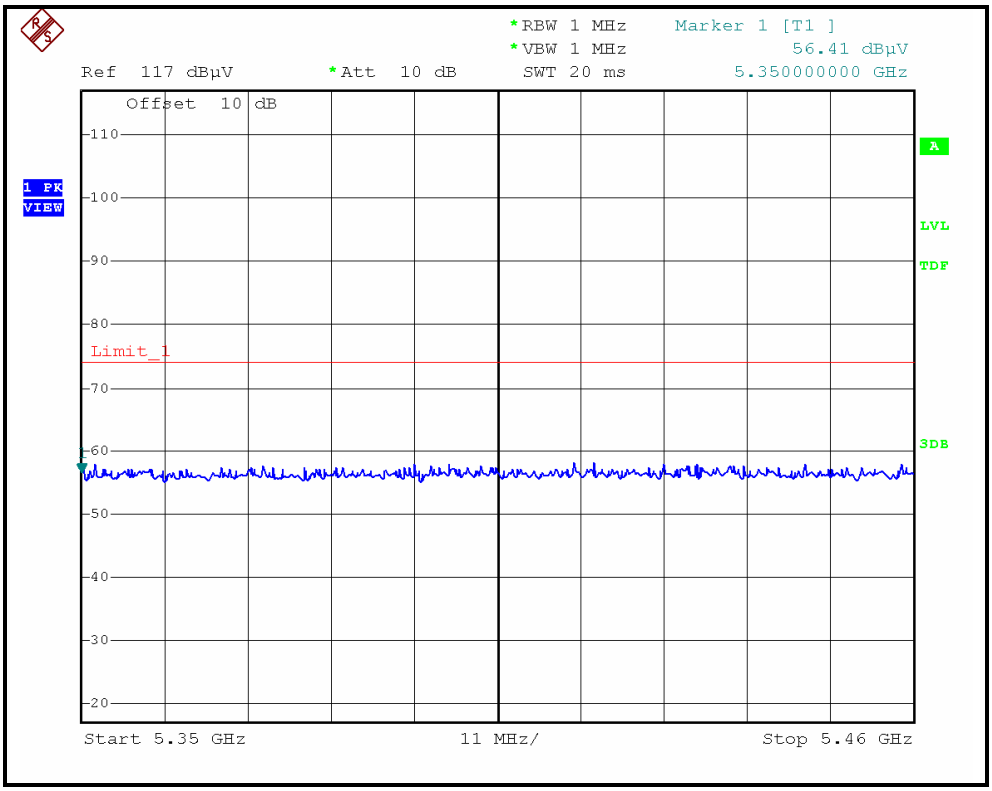



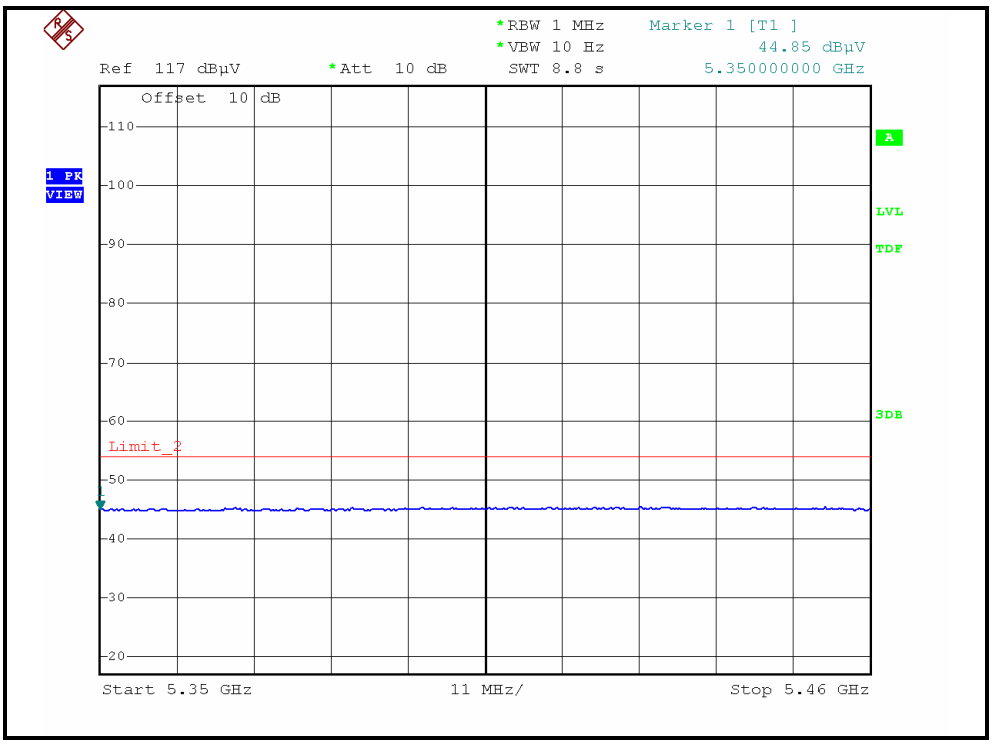
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, HORIZONTAL )



RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, VERTICAL )



## DRAFT 802.11n (40MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 42.30 PK | 68.30 | -26.00 | 1.02 H | 102 | 9.43 | 32.87 |
| 2 | 5150.00 | 54.96 PK | 74.00 | -19.04 | 1.02 H | 39 | 17.70 | 37.26 |
| 3 | 5150.00 | 44.03 AV | 54.00 | -9.97 | 1.02 H | 39 | 6.77 | 37.26 |
| 4 | *5190.00 | 106.10 PK | | | 1.01 H | 34 | 68.84 | 37.26 |
| 5 | *5190.00 | 95.60 AV | | | 1.01 H | 34 | 58.34 | 37.26 |
| 6 | 6920.00 | 54.23 PK | 68.30 | -14.07 | 1.01 H | 112 | 11.27 | 42.96 |
| 7 | #10380.00 | 54.10 PK | 68.30 | -14.20 | 1.04 H | 18 | 7.45 | 46.65 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 42.77 PK | 68.30 | -25.53 | 1.00 V | 0 | 9.90 | 32.87 |
| 2 | 5150.00 | 70.08 PK | 74.00 | -3.92 | 1.00 V | 242 | 32.82 | 37.26 |
| 3 | 5150.00 | 52.74 AV | 54.00 | -1.26 | 1.00 V | 242 | 15.48 | 37.26 |
| 4 | *5190.00 | 113.24 PK | | | 1.00 V | 127 | 75.98 | 37.26 |
| 5 | *5190.00 | 102.66 AV | | | 1.00 V | 127 | 65.40 | 37.26 |
| 6 | 6920.00 | 54.83 PK | 68.30 | -13.47 | 1.00 V | 29 | 11.87 | 42.96 |
| 7 | #10380.00 | 54.38 PK | 68.30 | -13.92 | 1.00 V | 48 | 7.73 | 46.65 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

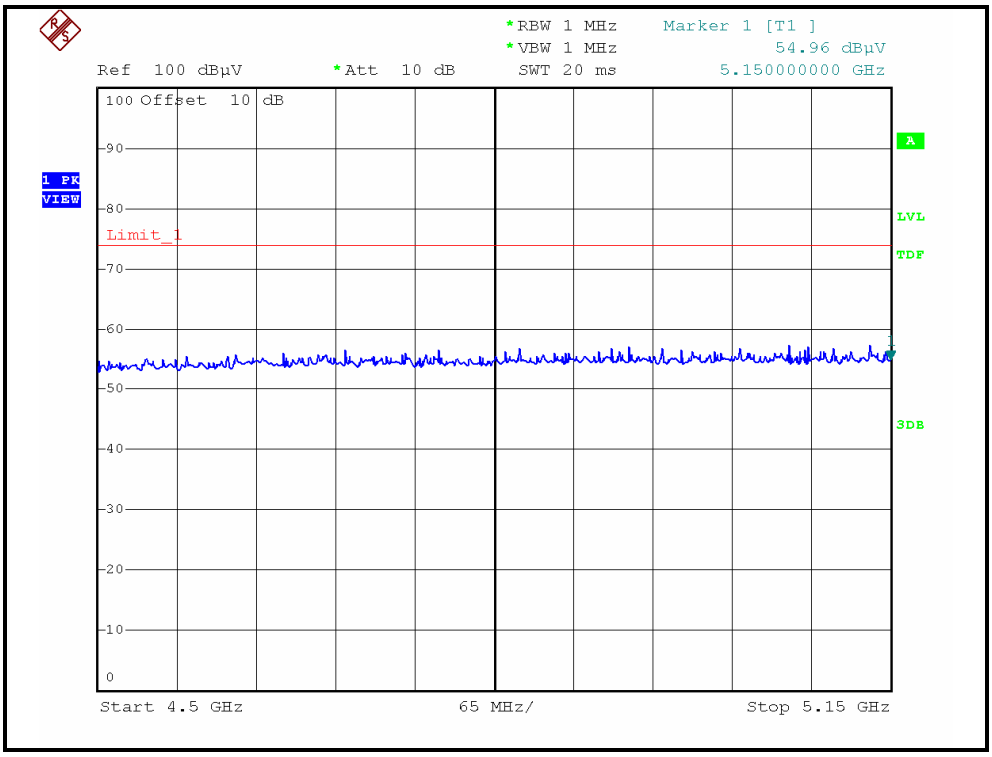
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

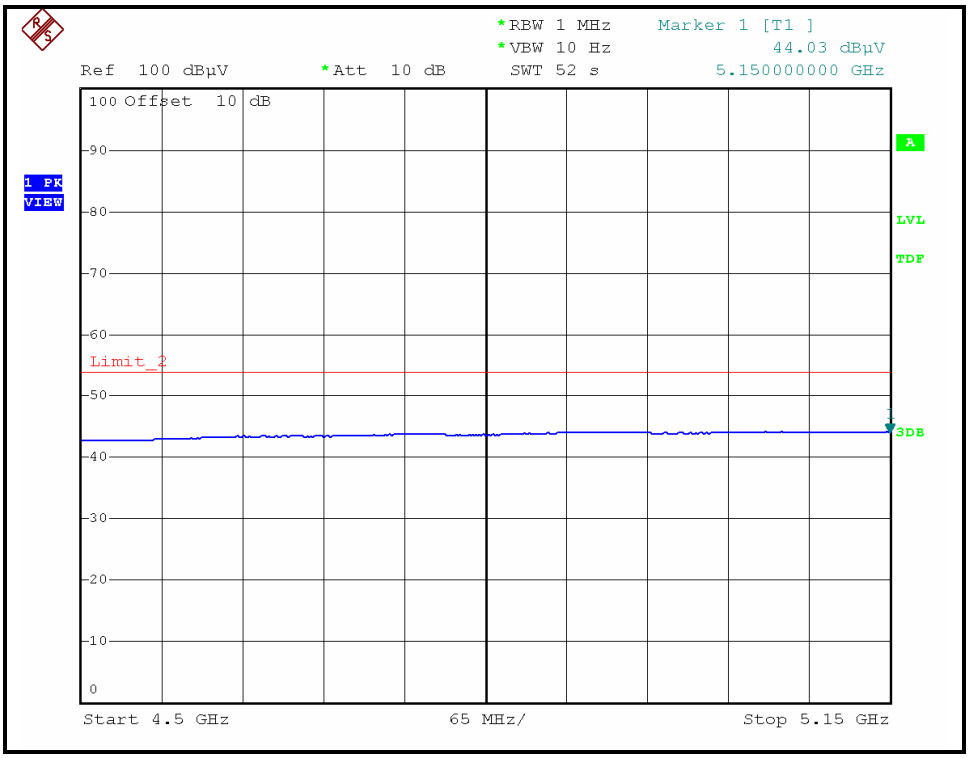
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 42.30 PK | 68.30 | -26.00 | 1.02 H | 106 | 9.40 | 32.90 |
| 2 | *5230.00 | 108.40 PK | | | 1.04 H | 38 | 71.14 | 37.26 |
| 3 | *5230.00 | 97.20 AV | | | 1.04 H | 38 | 59.94 | 37.26 |
| 4 | 5350.00 | 60.63 PK | 74.00 | -13.37 | 1.04 H | 239 | 23.37 | 37.26 |
| 5 | 5350.00 | 48.60 AV | 54.00 | -5.40 | 1.04 H | 239 | 11.34 | 37.26 |
| 6 | 6973.30 | 51.80 PK | 68.30 | -16.50 | 1.04 H | 113 | 8.71 | 43.09 |
| 7 | #10460.00 | 52.60 PK | 68.30 | -15.70 | 1.00 H | 104 | 5.88 | 46.72 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 42.74 PK | 68.30 | -25.56 | 1.00 V | 351 | 9.84 | 32.90 |
| 2 | *5230.00 | 115.24 PK | | | 1.00 V | 240 | 77.98 | 37.26 |
| 3 | *5230.00 | 104.54 AV | | | 1.00 V | 240 | 67.28 | 37.26 |
| 4 | 5350.00 | 62.83 PK | 74.00 | -11.17 | 1.26 V | 139 | 25.57 | 37.26 |
| 5 | 5350.00 | 48.60 AV | 54.00 | -5.40 | 1.26 V | 139 | 11.34 | 37.26 |
| 6 | 6973.30 | 52.06 PK | 68.30 | -16.24 | 1.00 V | 20 | 8.97 | 43.09 |
| 7 | #10460.00 | 53.79 PK | 68.30 | -14.51 | 1.00 V | 47 | 7.07 | 46.72 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

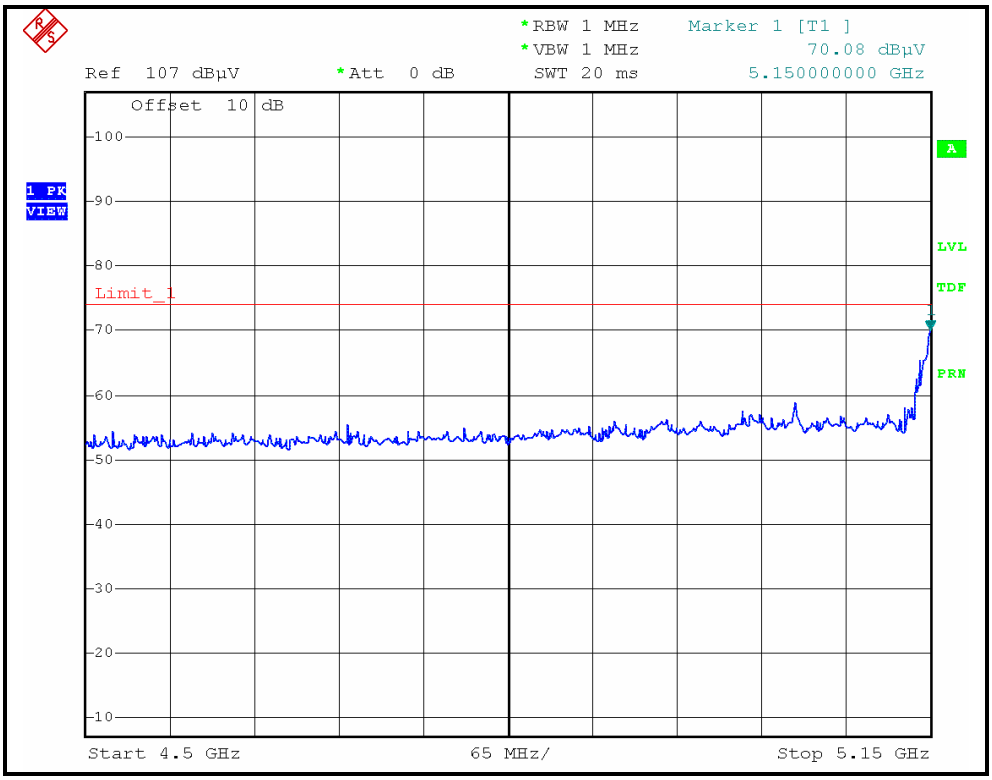
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

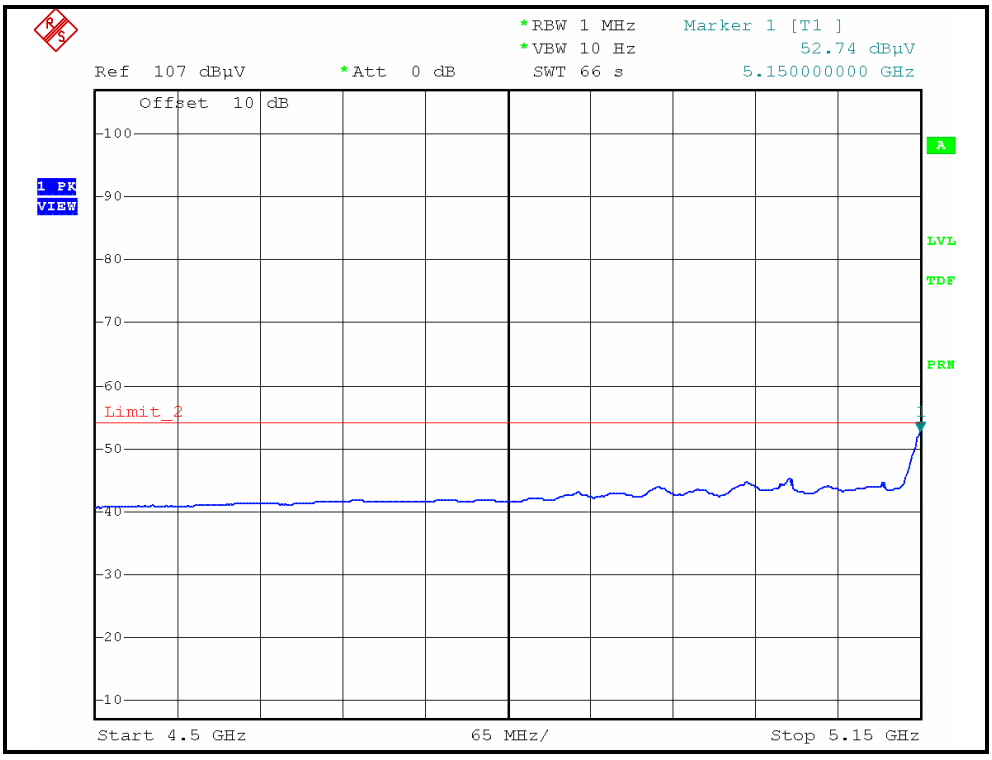
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)



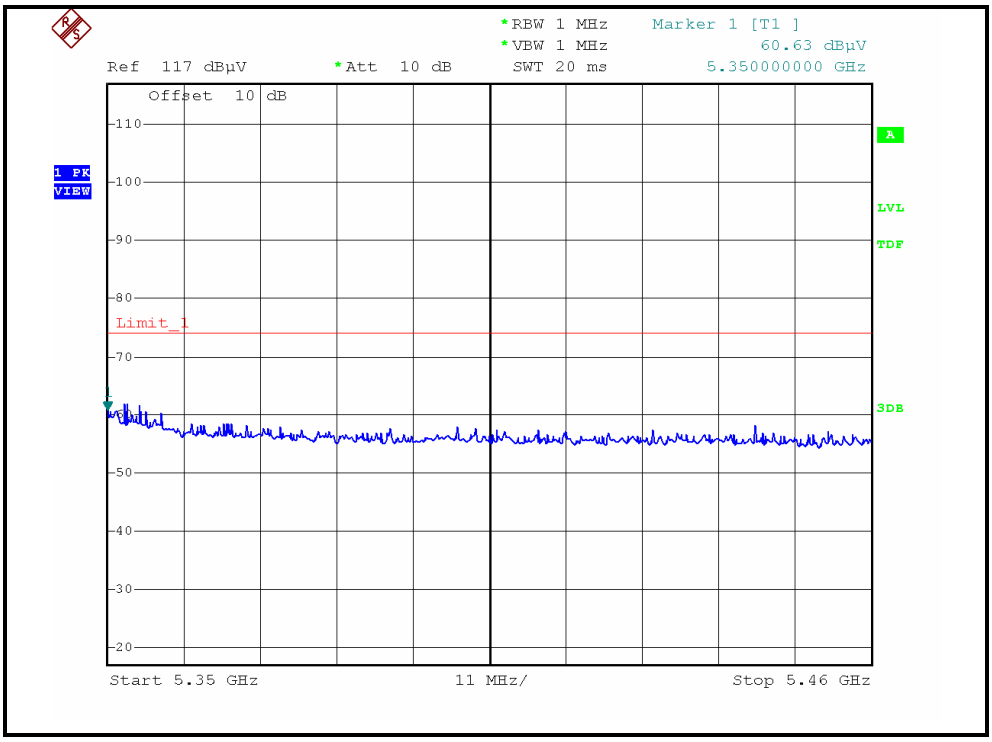



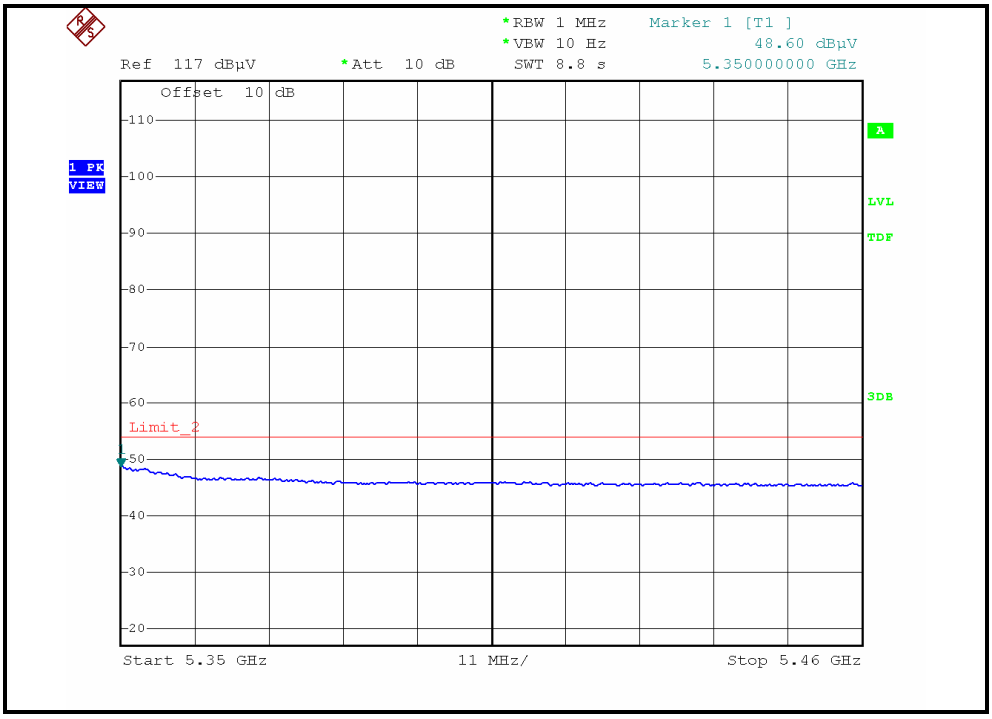
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL )



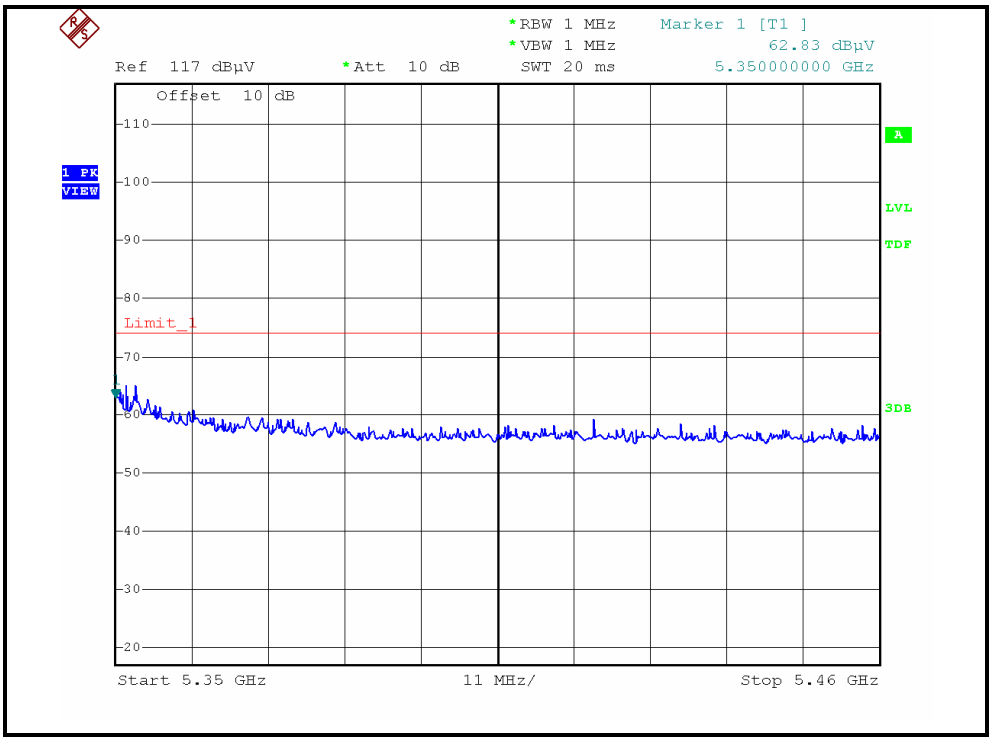



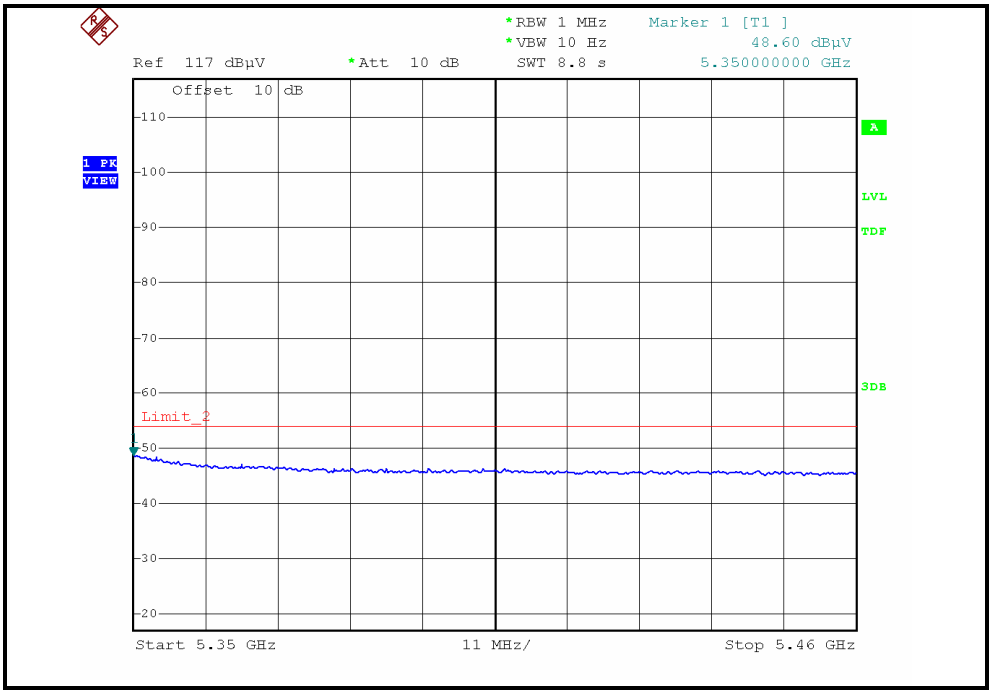
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, HORIZONTAL)



RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, VERTICAL)



## 4.2.11 TEST RESULTS – ANTENNA 8

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **FREQUENCY RANGE** | Below 1000MHz |
| **INPUT POWER** | 120Vac, 60 Hz | **DETECTOR FUNCTION** | Quasi-Peak |
| **ENVIRONMENTAL CONDITIONS** | 30.0deg. C, 55.0%RH 965hPa | **TESTED BY** | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 125.00 | 27.56 QP | 43.50 | -15.94 | 1.44 H | 153 | 14.49 | 13.07 |
| 2 | 250.00 | 34.83 QP | 46.00 | -11.17 | 1.13 H | 243 | 20.58 | 14.25 |
| 3 | 375.00 | 38.64 QP | 46.00 | -7.36 | 1.04 H | 323 | 19.83 | 18.81 |
| 4 | 650.00 | 43.56 QP | 46.00 | -2.44 | 1.00 H | 267 | 18.03 | 25.53 |
| 5 | 750.00 | 35.89 QP | 46.00 | -10.11 | 1.01 H | 231 | 8.98 | 26.91 |
| 6 | 875.00 | 37.65 QP | 46.00 | -8.35 | 1.00 H | 48 | 8.36 | 29.29 |
| 7 | 1000.00 | 38.89 QP | 54.00 | -15.11 | 1.00 H | 64 | 8.15 | 30.74 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 57.21 | 32.88 QP | 40.00 | -7.12 | 1.00 V | 294 | 19.19 | 13.69 |
| 2 | 125.00 | 29.52 QP | 43.50 | -13.98 | 1.00 V | 153 | 16.45 | 13.07 |
| 3 | 250.00 | 28.74 QP | 46.00 | -17.26 | 1.00 V | 59 | 14.49 | 14.25 |
| 4 | 375.00 | 39.48 QP | 46.00 | -6.52 | 1.05 V | 226 | 20.67 | 18.81 |
| 5 | 600.00 | 37.69 QP | 46.00 | -8.31 | 1.00 V | 251 | 12.65 | 25.04 |
| 6 | 650.00 | 39.74 QP | 46.00 | -6.26 | 1.00 V | 293 | 14.21 | 25.53 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.56 PK | 68.30 | -25.74 | 1.00 H | 287 | 9.70 | 32.86 |
| 2 | 5150.00 | 55.85 PK | 74.00 | -18.15 | 1.40 H | 285 | 18.59 | 37.26 |
| 3 | 5150.00 | 43.03 AV | 54.00 | -10.97 | 1.40 H | 285 | 5.77 | 37.26 |
| 4 | *5180.00 | 114.39 PK | | | 1.40 H | 285 | 77.13 | 37.26 |
| 5 | *5180.00 | 104.29 AV | | | 1.40 H | 285 | 67.03 | 37.26 |
| 6 | #6906.60 | 54.66 PK | 68.30 | -13.64 | 1.34 H | 314 | 11.74 | 42.92 |
| 7 | #10360.00 | 54.01 PK | 68.30 | -14.29 | 1.40 H | 283 | 7.37 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.13 PK | 68.30 | -26.17 | 1.02 V | 211 | 9.27 | 32.86 |
| 2 | 5150.00 | 54.67 PK | 74.00 | -19.33 | 1.61 V | 243 | 17.41 | 37.26 |
| 3 | 5150.00 | 44.04 AV | 54.00 | -9.96 | 1.61 V | 243 | 6.78 | 37.26 |
| 4 | *5180.00 | 106.61 PK | | | 1.61 V | 248 | 69.35 | 37.26 |
| 5 | *5180.00 | 96.36 AV | | | 1.61 V | 248 | 59.10 | 37.26 |
| 6 | #6906.60 | 54.27 PK | 68.30 | -14.03 | 1.04 V | 219 | 11.35 | 42.92 |
| 7 | #10360.00 | 53.79 PK | 68.30 | -14.51 | 1.00 V | 188 | 7.15 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.95 PK | 68.30 | -25.35 | 1.00 H | 289 | 10.07 | 32.88 |
| 2 | *5200.00 | 114.58 PK | | | 1.37 H | 296 | 77.32 | 37.26 |
| 3 | *5200.00 | 104.02 AV | | | 1.37 H | 296 | 66.76 | 37.26 |
| 4 | #6933.30 | 53.53 PK | 68.30 | -14.77 | 1.26 H | 314 | 10.54 | 42.99 |
| 5 | #10400.00 | 54.73 PK | 68.30 | -13.57 | 1.38 H | 282 | 8.06 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.44 PK | 68.30 | -25.86 | 1.00 V | 218 | 9.56 | 32.88 |
| 2 | *5200.00 | 106.73 PK | | | 1.62 V | 257 | 69.47 | 37.26 |
| 3 | *5200.00 | 96.24 AV | | | 1.62 V | 257 | 58.98 | 37.26 |
| 4 | #6933.30 | 53.26 PK | 68.30 | -15.04 | 1.04 V | 221 | 10.27 | 42.99 |
| 5 | #10400.00 | 54.27 PK | 68.30 | -14.03 | 1.00 V | 184 | 7.60 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

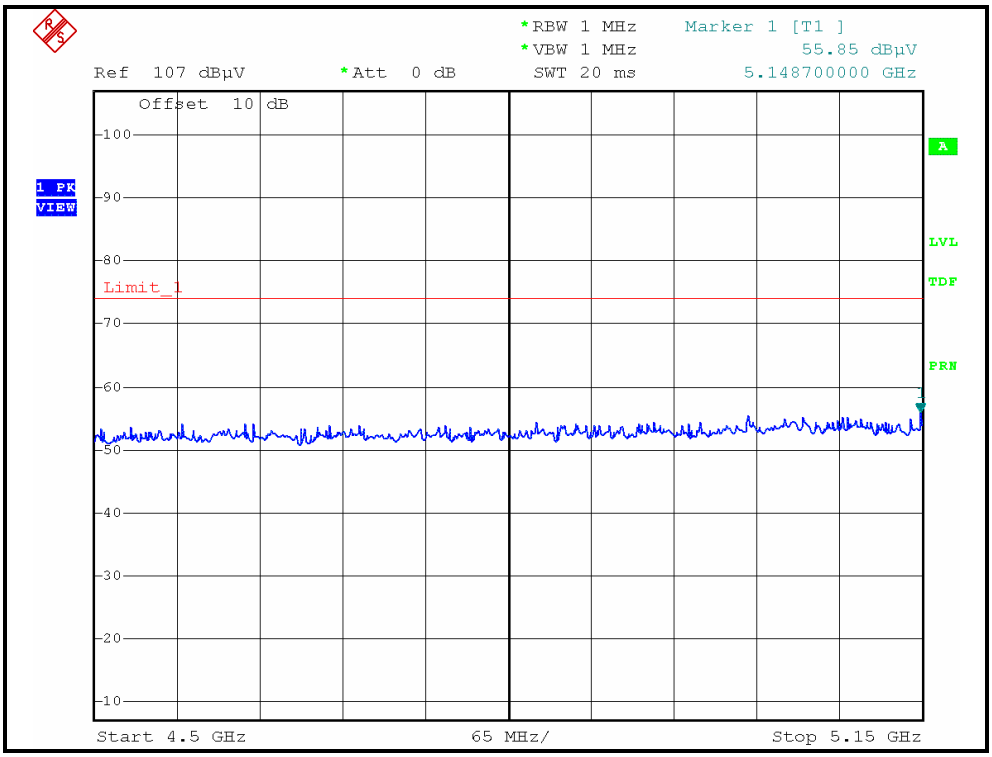
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

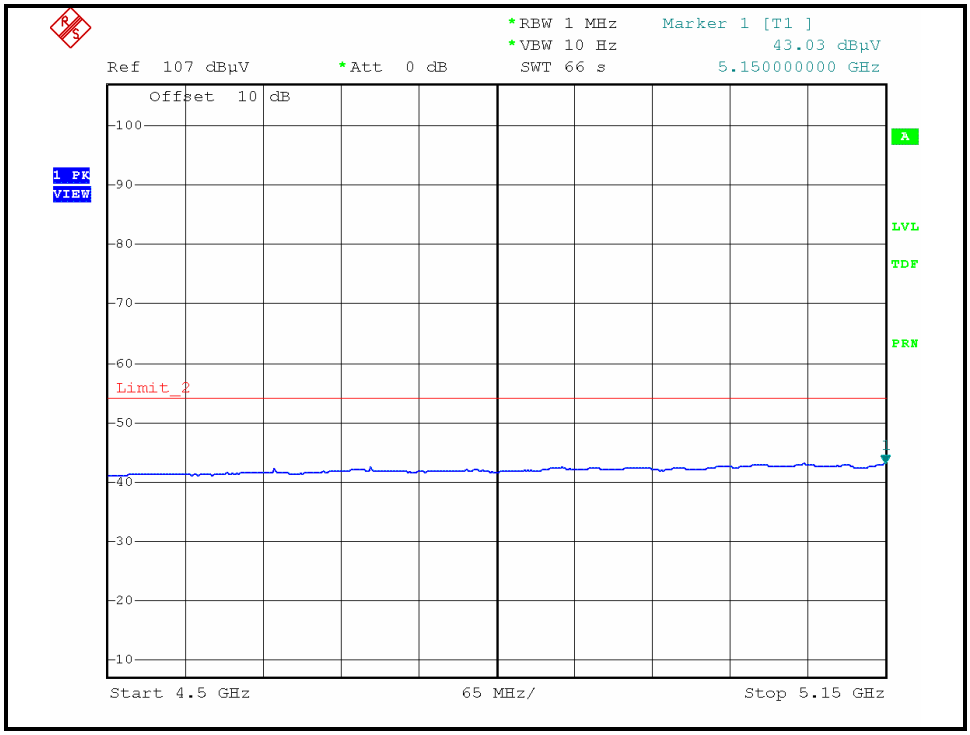
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.87 PK | 68.30 | -25.43 | 1.00 H | 286 | 9.97 | 32.90 |
| 2 | *5240.00 | 115.13 PK | | | 1.34 H | 289 | 77.87 | 37.26 |
| 3 | *5240.00 | 104.84 AV | | | 1.34 H | 289 | 67.58 | 37.26 |
| 4 | 5350.00 | 55.27 PK | 74.00 | -18.73 | 1.09 H | 127 | 18.01 | 37.26 |
| 5 | 5350.00 | 44.65 AV | 54.00 | -9.35 | 1.09 H | 127 | 7.39 | 37.26 |
| 6 | 6986.60 | 51.69 PK | 68.30 | -16.61 | 1.23 H | 314 | 8.56 | 43.13 |
| 7 | #10480.00 | 53.79 PK | 68.30 | -14.51 | 1.37 H | 278 | 7.06 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.33 PK | 68.30 | -25.97 | 1.00 V | 220 | 9.43 | 32.90 |
| 2 | *5240.00 | 106.94 PK | | | 1.64 V | 251 | 69.68 | 37.26 |
| 3 | *5240.00 | 96.83 AV | | | 1.64 V | 251 | 59.57 | 37.26 |
| 4 | 5350.00 | 56.78 PK | 74.00 | -17.22 | 1.48 V | 213 | 19.52 | 37.26 |
| 5 | 5350.00 | 44.99 AV | 54.00 | -9.01 | 1.48 V | 213 | 7.73 | 37.26 |
| 6 | 6986.60 | 51.48 PK | 68.30 | -16.82 | 1.06 V | 253 | 8.35 | 43.13 |
| 7 | #10480.00 | 53.48 PK | 68.30 | -14.82 | 1.01 V | 179 | 6.75 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

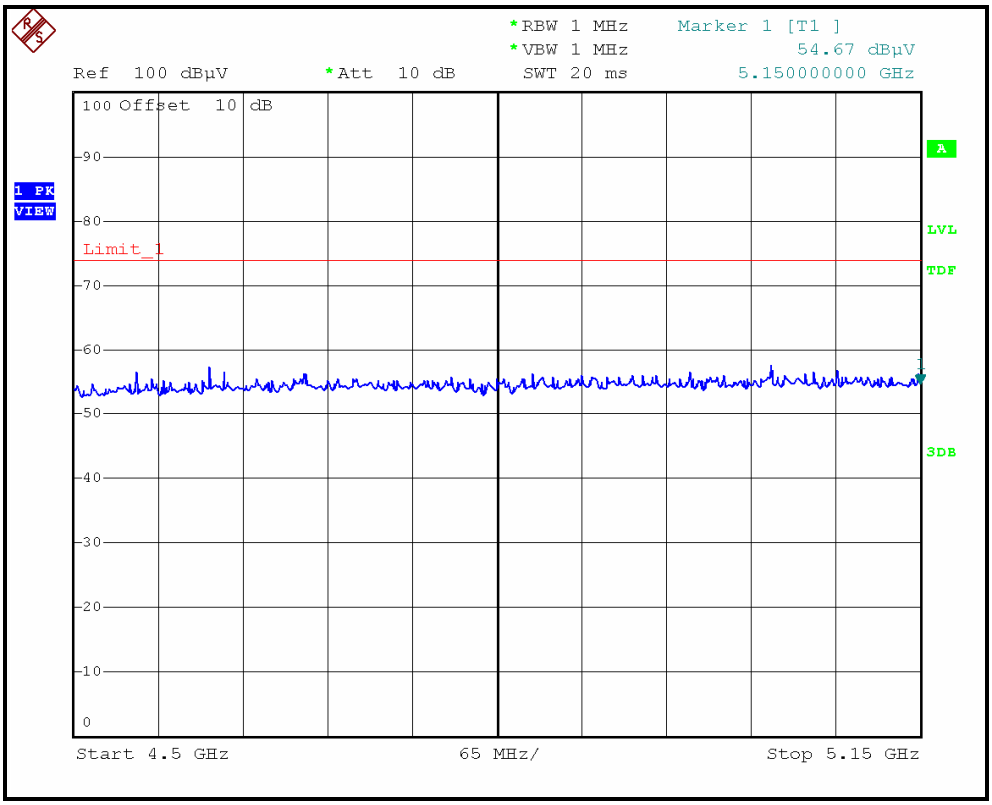
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

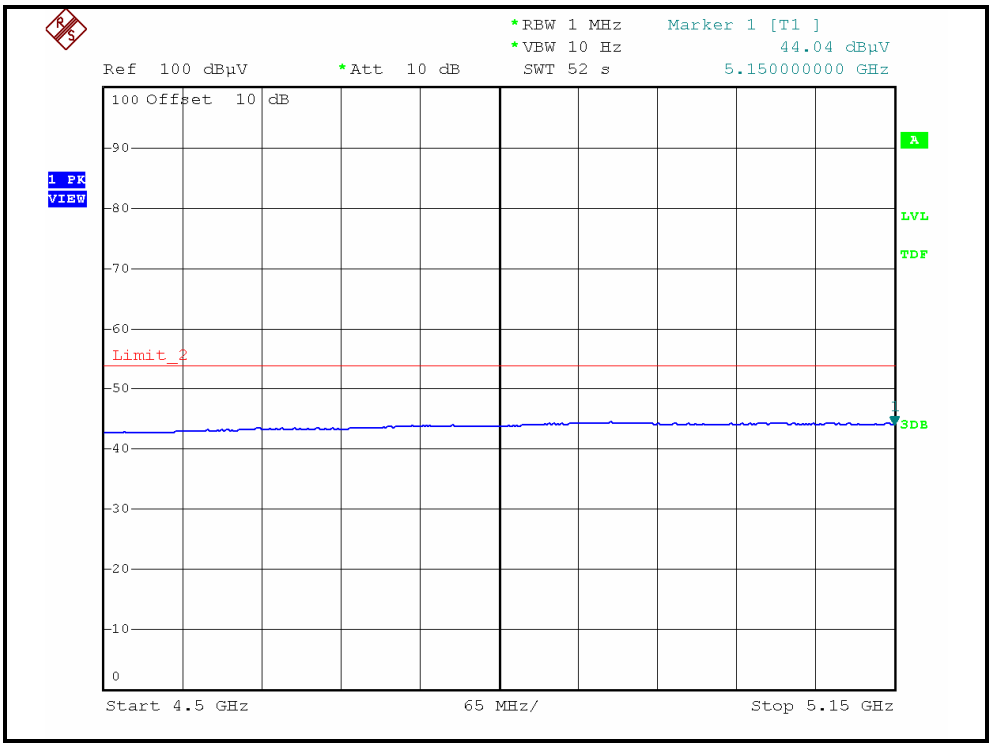
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



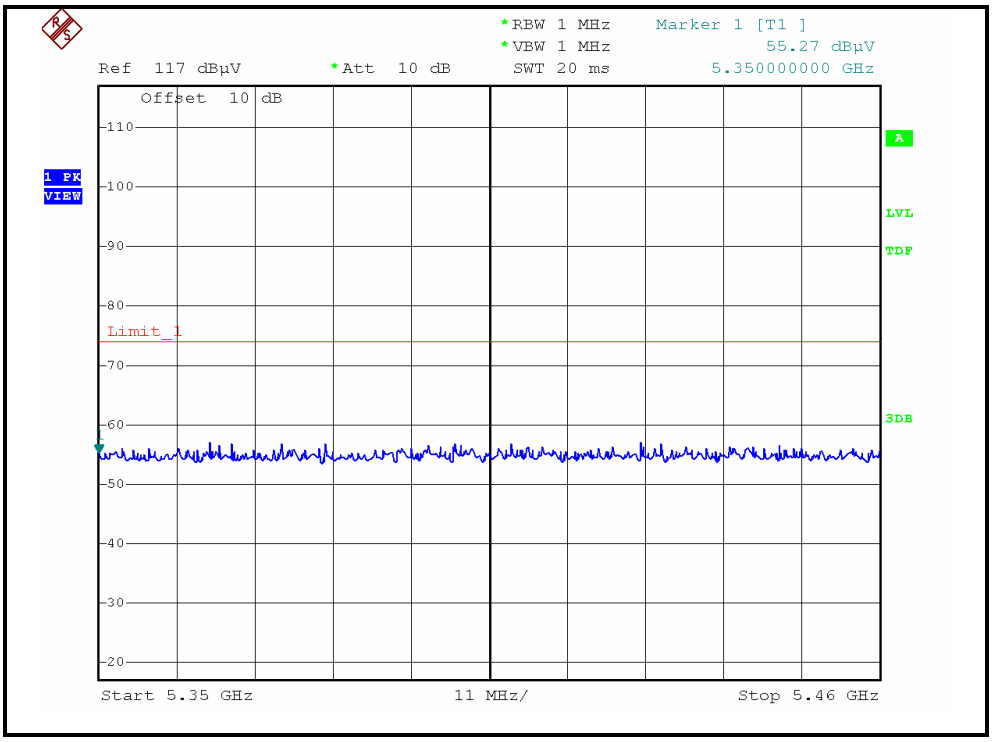



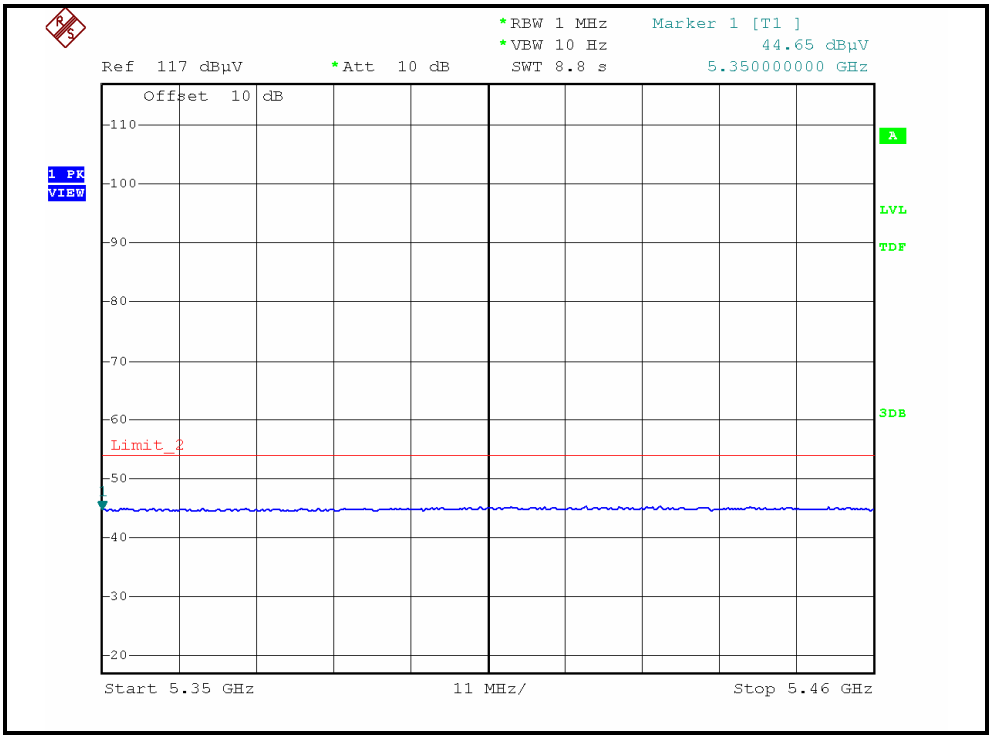
RESTRICTED BANDEDGE (802.11a MODE, CH1, VERTICAL )



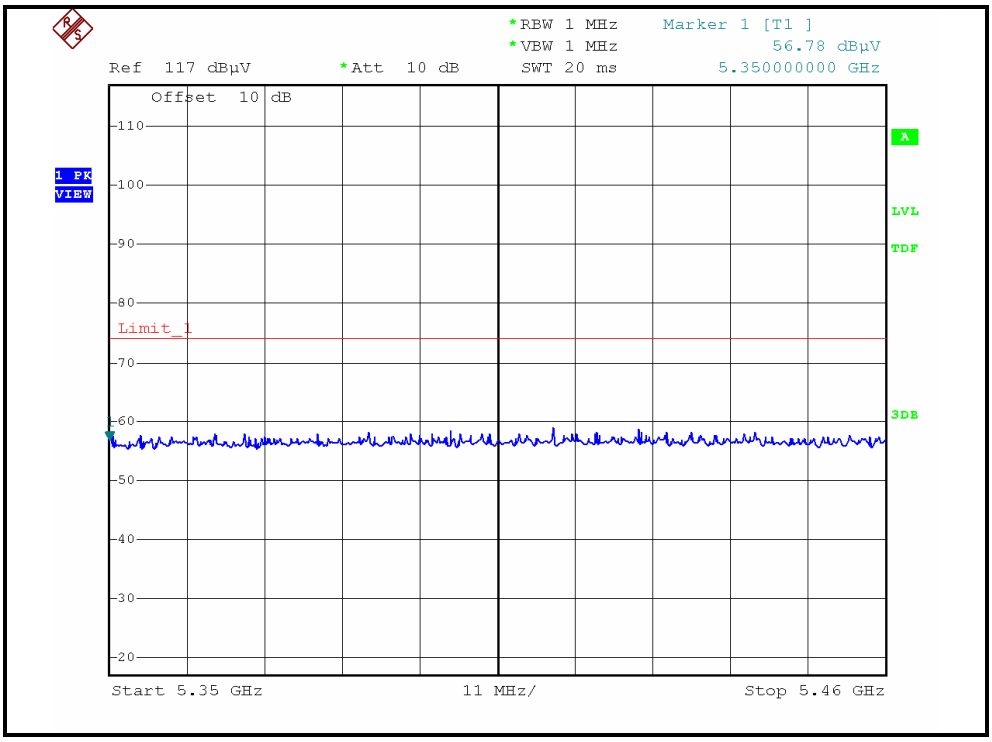



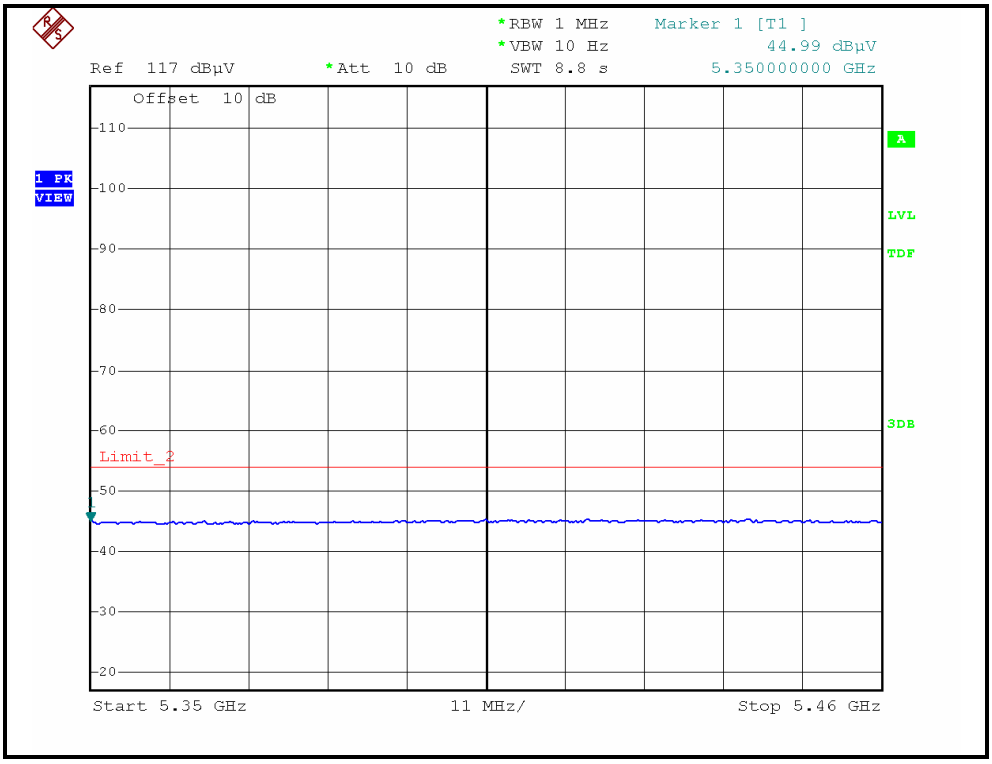
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE,CH4, VERTICAL )



## DRAFT 802.11n (20MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.63 PK | 68.30 | -25.67 | 1.00 H | 288 | 9.77 | 32.86 |
| 2 | 5150.00 | 55.65 PK | 74.00 | -18.35 | 1.39 H | 290 | 18.39 | 37.26 |
| 3 | 5150.00 | 42.65 AV | 54.00 | -11.35 | 1.39 H | 290 | 5.39 | 37.26 |
| 4 | *5180.00 | 113.68 PK | | | 1.39 H | 288 | 76.42 | 37.26 |
| 5 | *5180.00 | 103.22 AV | | | 1.39 H | 288 | 65.96 | 37.26 |
| 6 | #6906.60 | 54.73 PK | 68.30 | -13.57 | 1.33 H | 315 | 11.81 | 42.92 |
| 7 | #10360.00 | 54.11 PK | 68.30 | -14.19 | 1.41 H | 285 | 7.47 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 42.53 PK | 68.30 | -25.77 | 1.04 V | 186 | 9.67 | 32.86 |
| 2 | 5150.00 | 54.95 PK | 74.00 | -19.05 | 1.60 V | 254 | 17.69 | 37.26 |
| 3 | 5150.00 | 44.01 AV | 54.00 | -9.99 | 1.60 V | 254 | 6.75 | 37.26 |
| 4 | *5180.00 | 105.10 PK | | | 1.60 V | 210 | 67.84 | 37.26 |
| 5 | *5180.00 | 94.30 AV | | | 1.60 V | 210 | 57.04 | 37.26 |
| 6 | #6906.60 | 53.28 PK | 68.30 | -15.02 | 1.03 V | 196 | 10.36 | 42.92 |
| 7 | #10360.00 | 53.84 PK | 68.30 | -14.46 | 1.04 V | 184 | 7.20 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.99 PK | 68.30 | -25.31 | 1.00 H | 288 | 10.11 | 32.88 |
| 2 | *5200.00 | 114.15 PK | | | 1.34 H | 292 | 76.89 | 37.26 |
| 3 | *5200.00 | 103.67 AV | | | 1.34 H | 292 | 66.41 | 37.26 |
| 4 | #6933.30 | 53.63 PK | 68.30 | -14.67 | 1.22 H | 315 | 10.64 | 42.99 |
| 5 | #10400.00 | 54.82 PK | 68.30 | -13.48 | 1.38 H | 279 | 8.15 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.83 PK | 68.30 | -25.47 | 1.02 V | 181 | 9.95 | 32.88 |
| 2 | *5200.00 | 105.40 PK | | | 1.62 V | 209 | 68.14 | 37.26 |
| 3 | *5200.00 | 95.70 AV | | | 1.62 V | 209 | 58.44 | 37.26 |
| 4 | #6933.30 | 53.54 PK | 68.30 | -14.76 | 1.04 V | 193 | 10.55 | 42.99 |
| 5 | #10400.00 | 53.70 PK | 68.30 | -14.60 | 1.01 V | 182 | 7.03 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

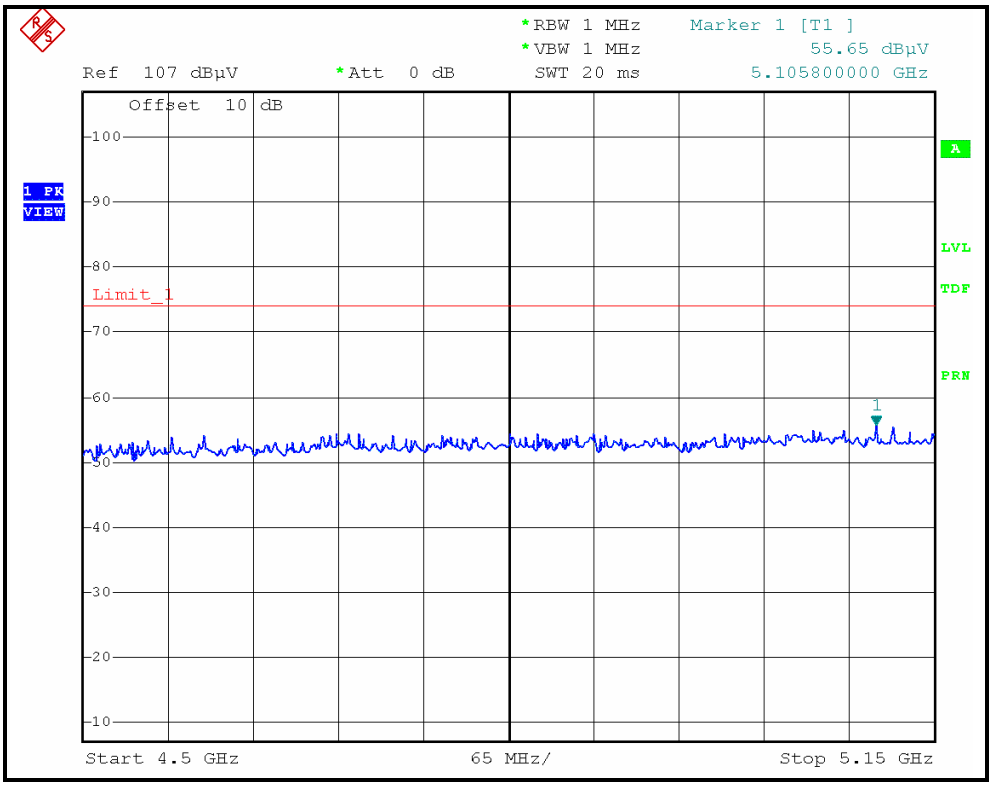
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

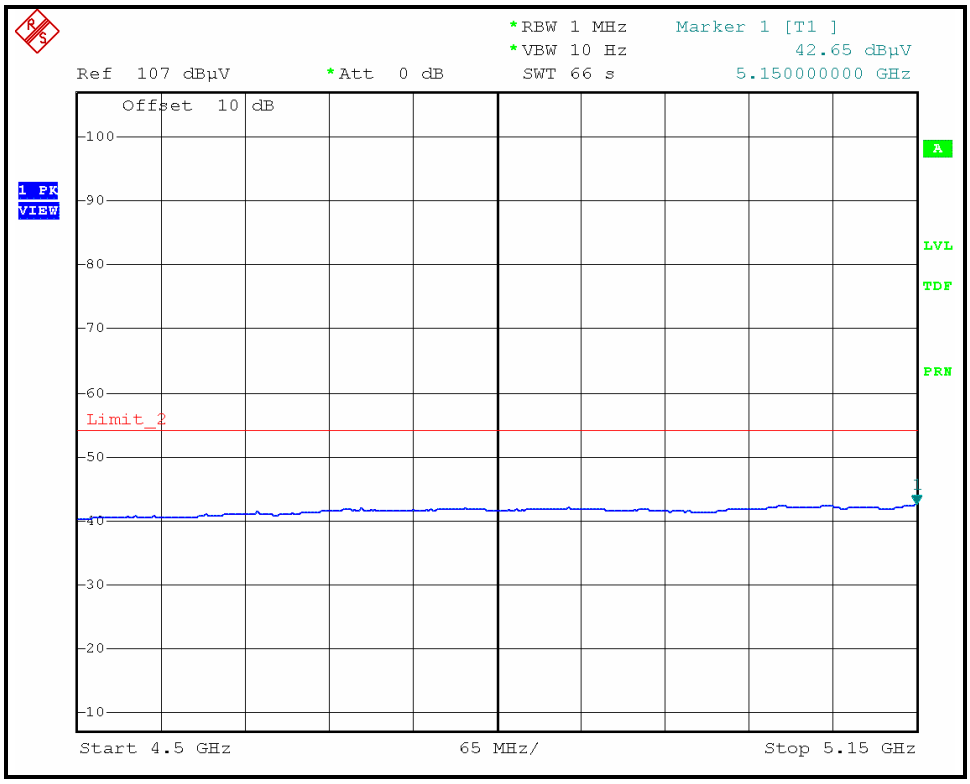
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.82 PK | 68.30 | -25.48 | 1.00 H | 288 | 9.92 | 32.90 |
| 2 | *5240.00 | 115.20 PK | | | 1.34 H | 292 | 77.94 | 37.26 |
| 3 | *5240.00 | 104.65 AV | | | 1.34 H | 292 | 67.39 | 37.26 |
| 4 | 5350.00 | 56.00 PK | 74.00 | -18.00 | 1.11 H | 129 | 18.74 | 37.26 |
| 5 | 5350.00 | 45.32 AV | 54.00 | -8.68 | 1.11 H | 129 | 8.06 | 37.26 |
| 6 | 6986.60 | 51.88 PK | 68.30 | -16.42 | 1.23 H | 312 | 8.75 | 43.13 |
| 7 | #10480.00 | 53.81 PK | 68.30 | -14.49 | 1.37 H | 279 | 7.08 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.73 PK | 68.30 | -25.57 | 1.01 V | 182 | 9.83 | 32.90 |
| 2 | *5240.00 | 106.80 PK | | | 1.61 V | 208 | 69.54 | 37.26 |
| 3 | *5240.00 | 96.40 AV | | | 1.61 V | 208 | 59.14 | 37.26 |
| 4 | 5350.00 | 56.04 PK | 74.00 | -17.96 | 1.53 V | 217 | 18.78 | 37.26 |
| 5 | 5350.00 | 44.59 AV | 54.00 | -9.41 | 1.53 V | 217 | 7.33 | 37.26 |
| 6 | 6986.60 | 51.70 PK | 68.30 | -16.60 | 1.04 V | 194 | 8.57 | 43.13 |
| 7 | #10480.00 | 53.20 PK | 68.30 | -15.10 | 1.02 V | 184 | 6.47 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

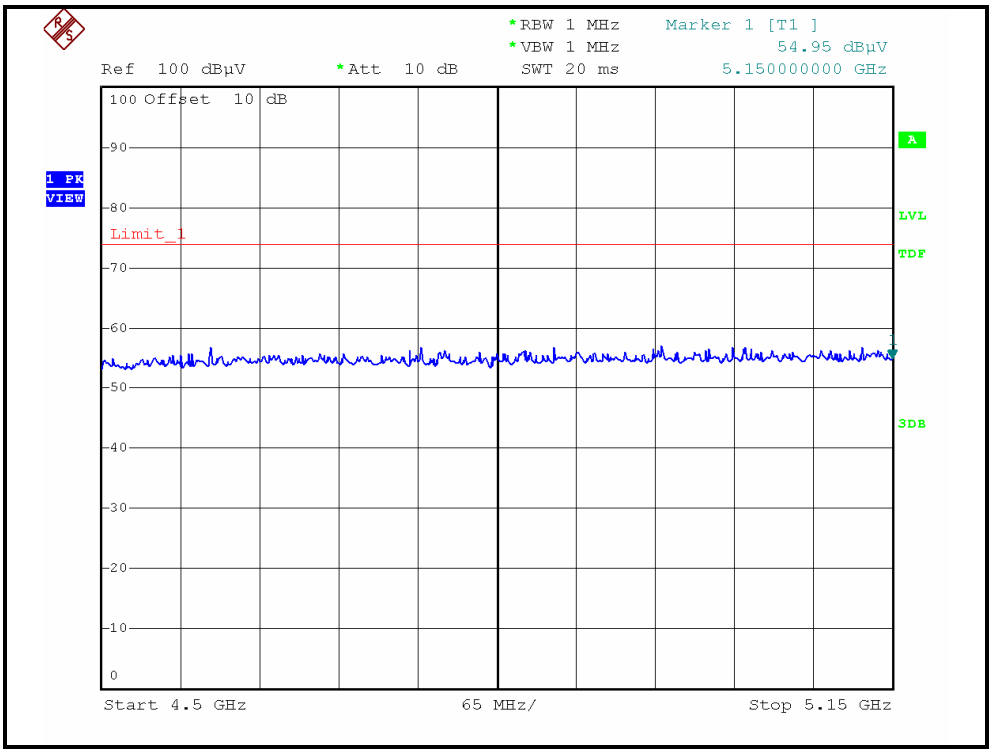
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

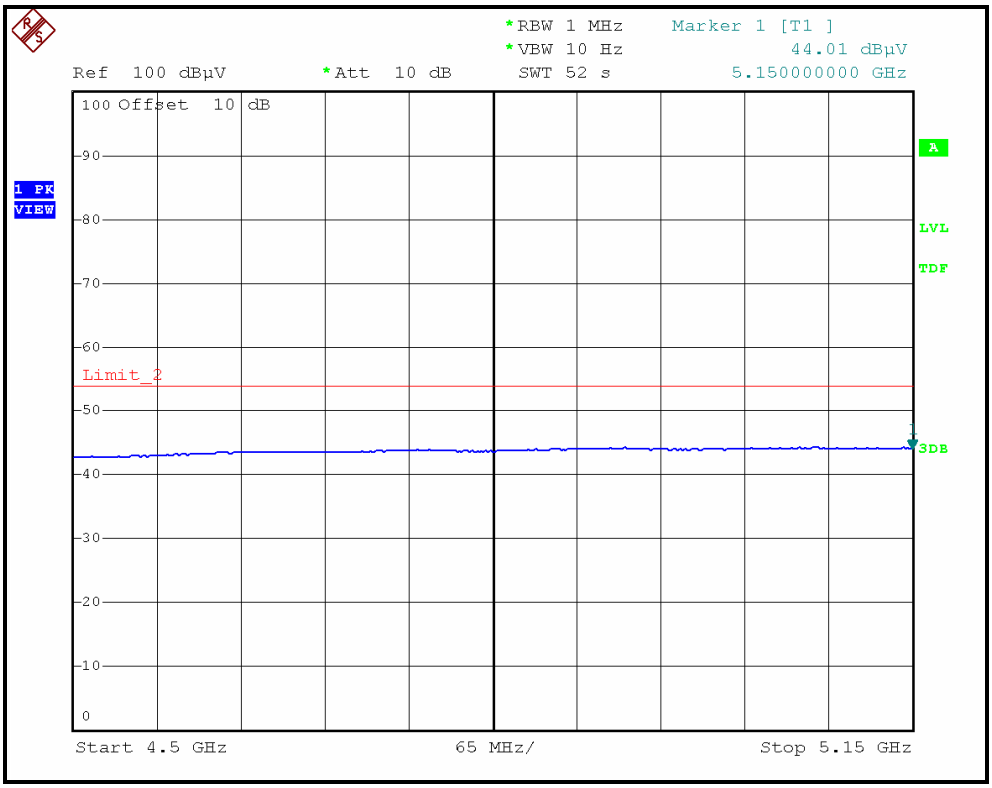
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, HORIZONTAL )



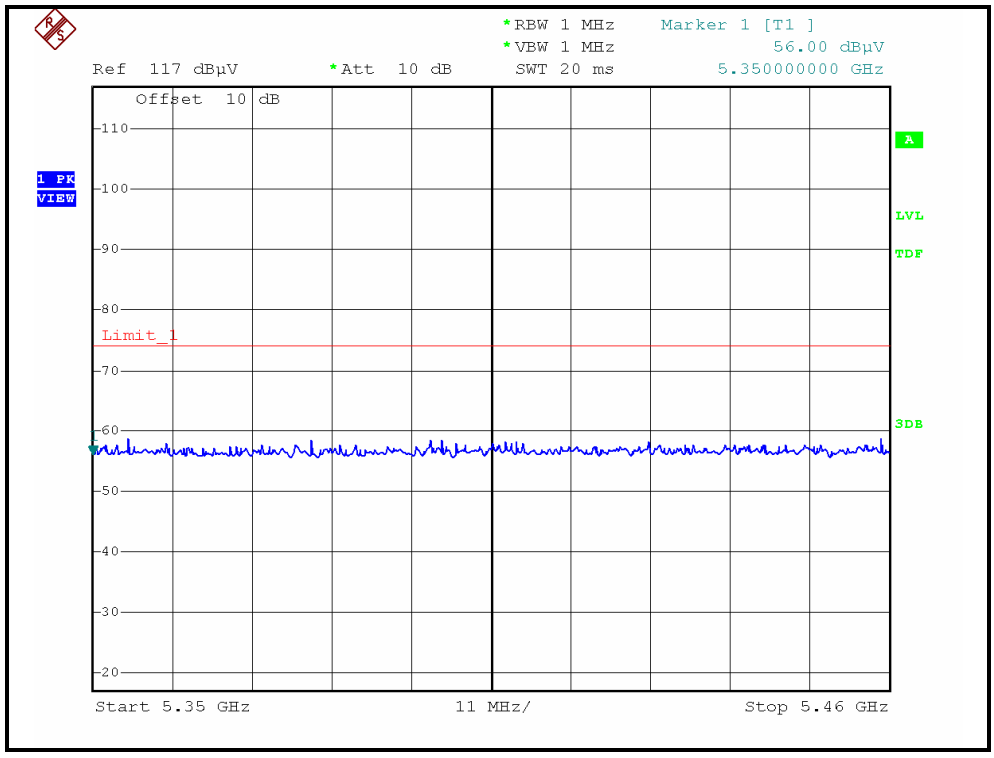



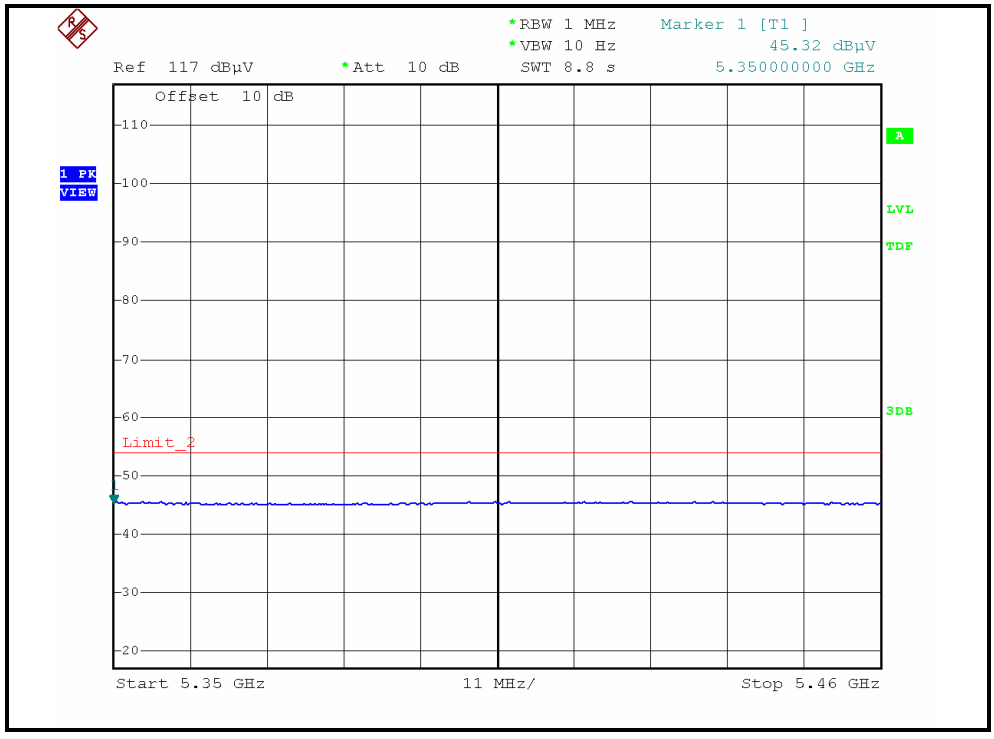
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL )



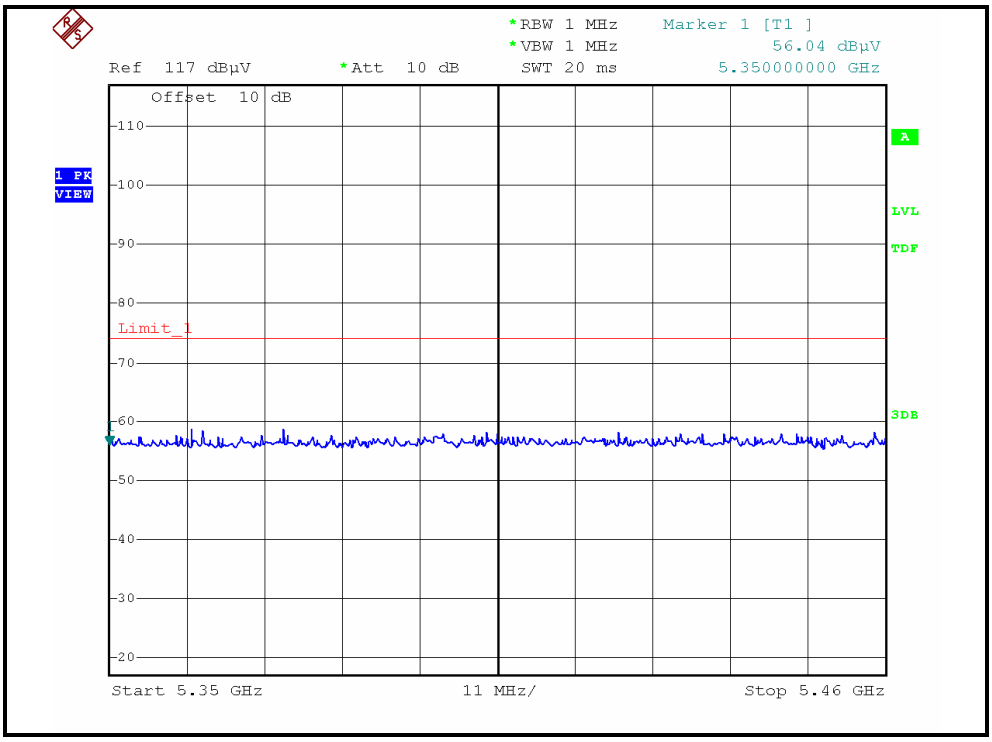



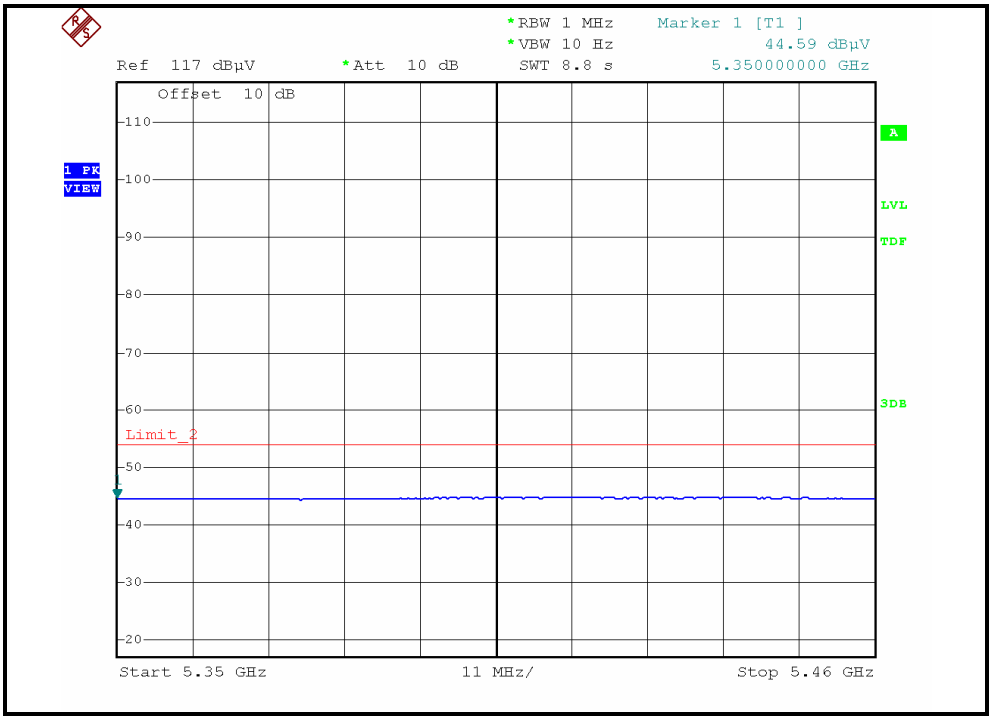
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, HORIZONTAL )



RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, VERTICAL )



## DRAFT 802.11n (40MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 41.96 PK | 68.30 | -26.34 | 1.00 H | 288 | 9.09 | 32.87 |
| 2 | 5150.00 | 66.38 PK | 74.00 | -7.62 | 1.31 H | 295 | 29.12 | 37.26 |
| 3 | 5150.00 | 50.84 AV | 54.00 | -3.16 | 1.31 H | 295 | 13.58 | 37.26 |
| 4 | *5190.00 | 112.01 PK | | | 1.31 H | 295 | 74.75 | 37.26 |
| 5 | *5190.00 | 101.59 AV | | | 1.31 H | 295 | 64.33 | 37.26 |
| 6 | #6920.00 | 52.47 PK | 68.30 | -15.83 | 1.33 H | 315 | 9.51 | 42.96 |
| 7 | #10380.00 | 56.11 PK | 68.30 | -12.19 | 1.41 H | 289 | 9.46 | 46.65 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 40.84 PK | 68.30 | -27.46 | 1.04 V | 183 | 7.97 | 32.87 |
| 2 | 5150.00 | 54.71 PK | 74.00 | -19.29 | 1.61 V | 251 | 17.45 | 37.26 |
| 3 | 5150.00 | 44.04 AV | 54.00 | -9.96 | 1.61 V | 251 | 6.78 | 37.26 |
| 4 | *5190.00 | 103.24 PK | | | 1.62 V | 245 | 65.98 | 37.26 |
| 5 | *5190.00 | 93.70 AV | | | 1.62 V | 245 | 56.44 | 37.26 |
| 6 | #6920.00 | 52.23 PK | 68.30 | -16.07 | 1.03 V | 182 | 9.27 | 42.96 |
| 7 | #10380.00 | 55.80 PK | 68.30 | -12.50 | 1.02 V | 184 | 9.15 | 46.65 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

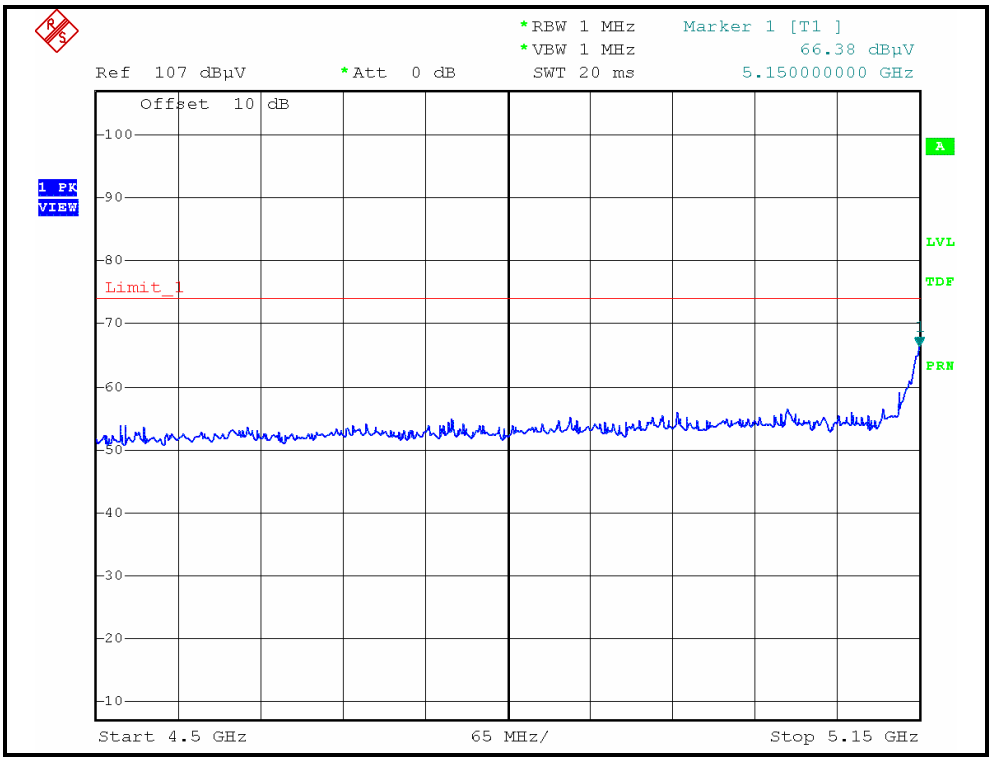
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

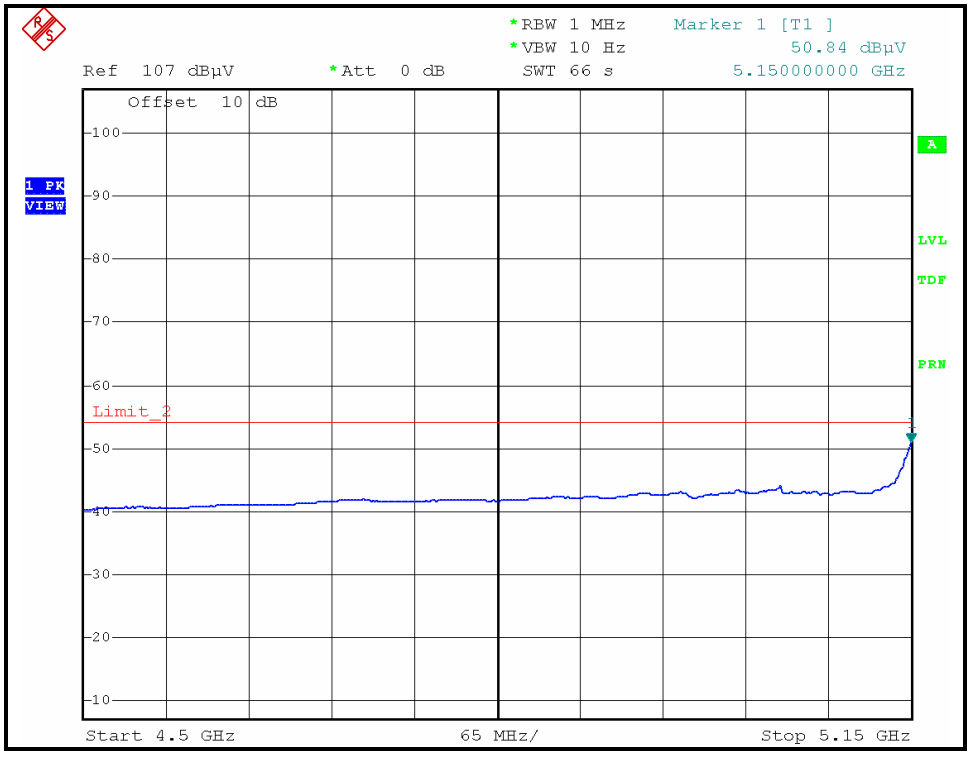
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 43.10 PK | 68.30 | -25.20 | 1.00 H | 288 | 10.20 | 32.90 |
| 2 | *5230.00 | 113.53 PK | | | 1.33 H | 294 | 76.27 | 37.26 |
| 3 | *5230.00 | 102.99 AV | | | 1.33 H | 294 | 65.73 | 37.26 |
| 4 | 5350.00 | 59.31 PK | 74.00 | -14.69 | 1.21 H | 123 | 22.05 | 37.26 |
| 5 | 5350.00 | 47.53 AV | 54.00 | -6.47 | 1.21 H | 123 | 10.27 | 37.26 |
| 6 | 6973.30 | 51.85 PK | 68.30 | -16.45 | 1.22 H | 315 | 8.76 | 43.09 |
| 7 | #10460.00 | 56.28 PK | 68.30 | -12.02 | 1.40 H | 291 | 9.56 | 46.72 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 42.70 PK | 68.30 | -25.60 | 1.01 V | 184 | 9.80 | 32.90 |
| 2 | *5230.00 | 103.80 PK | | | 1.64 V | 241 | 66.54 | 37.26 |
| 3 | *5230.00 | 94.20 AV | | | 1.64 V | 241 | 56.94 | 37.26 |
| 4 | 5350.00 | 62.94 PK | 74.00 | -11.06 | 1.44 V | 214 | 25.68 | 37.26 |
| 5 | 5350.00 | 47.53 AV | 54.00 | -6.47 | 1.44 V | 214 | 10.27 | 37.26 |
| 6 | 6973.30 | 50.70 PK | 68.30 | -17.60 | 1.04 V | 181 | 7.61 | 43.09 |
| 7 | #10400.00 | 55.80 PK | 68.30 | -12.50 | 1.02 V | 181 | 9.13 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

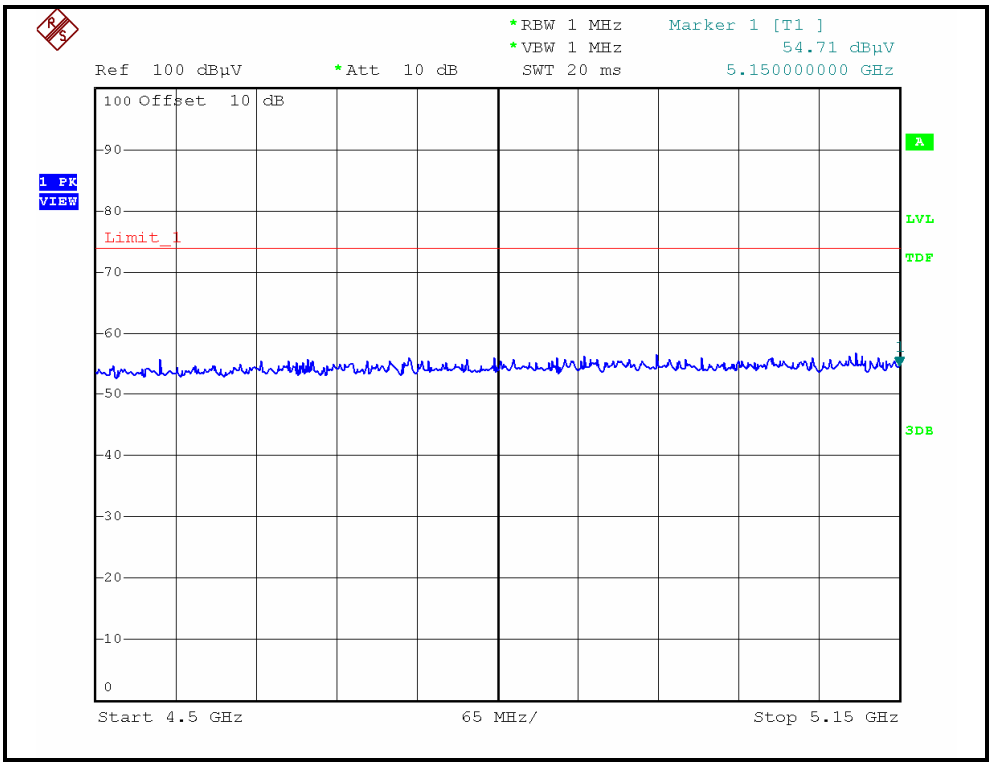
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

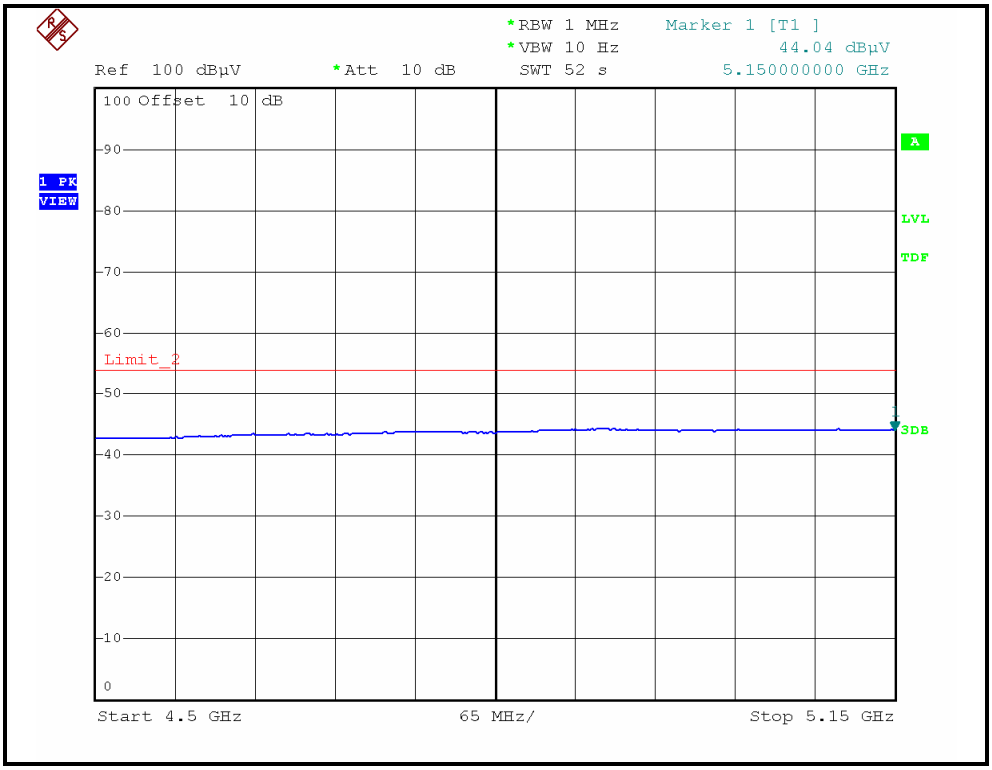
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)



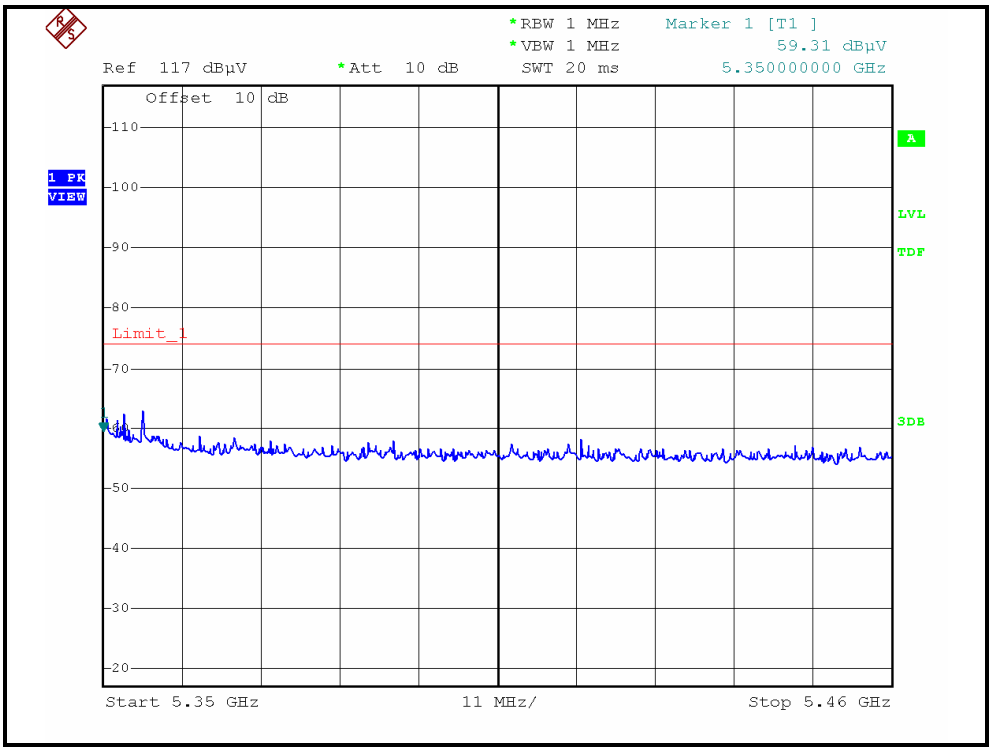



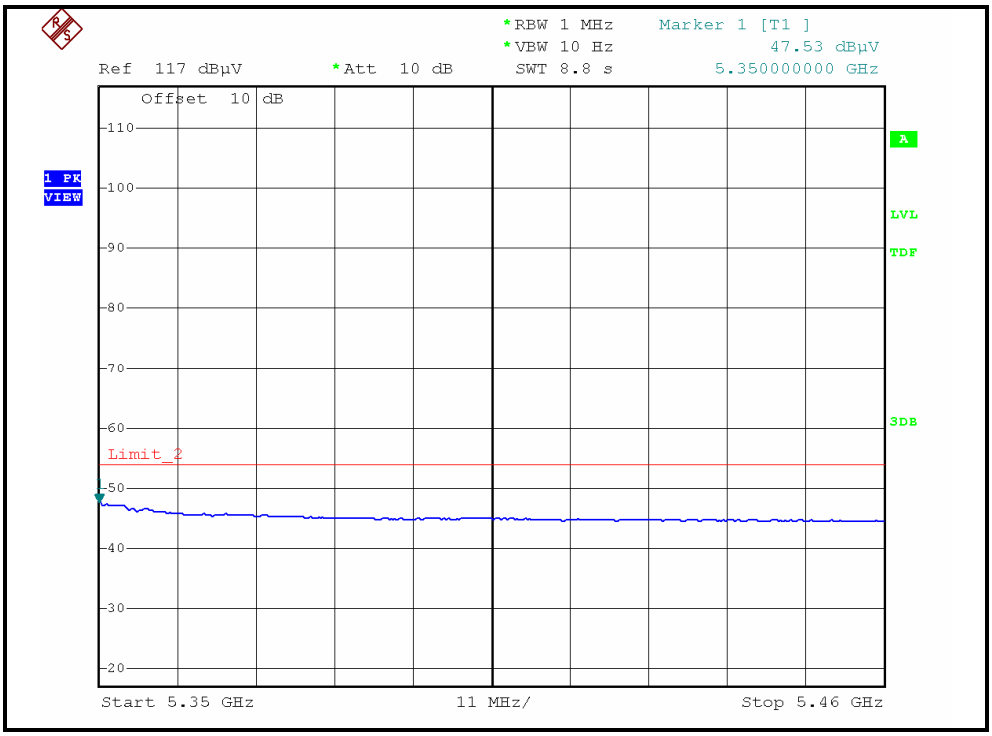
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL )



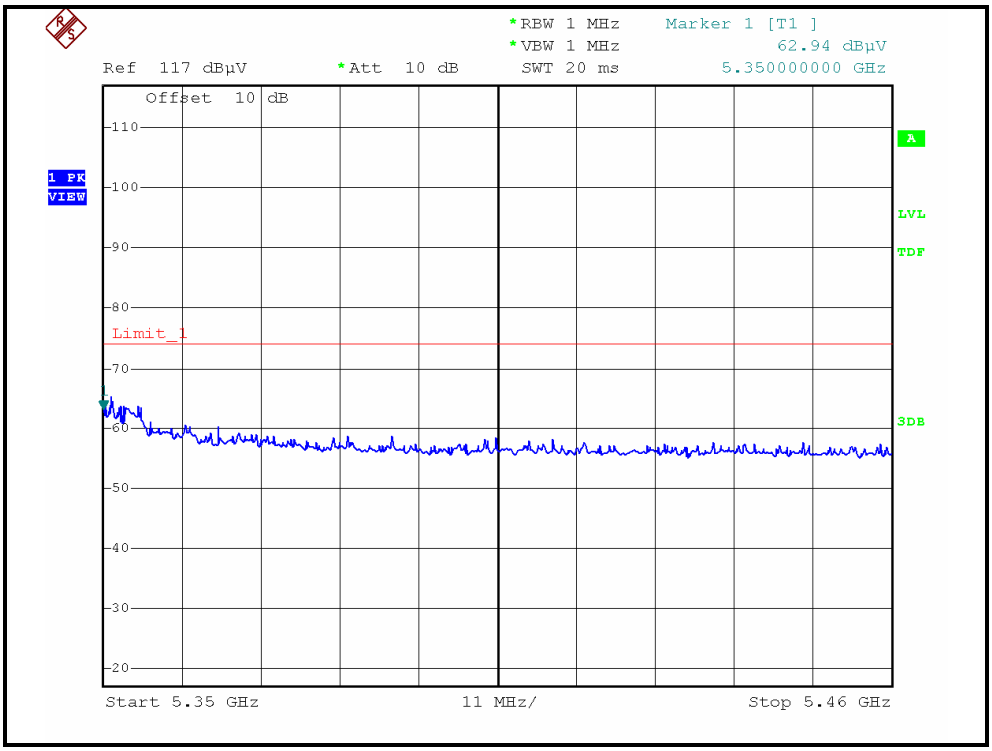



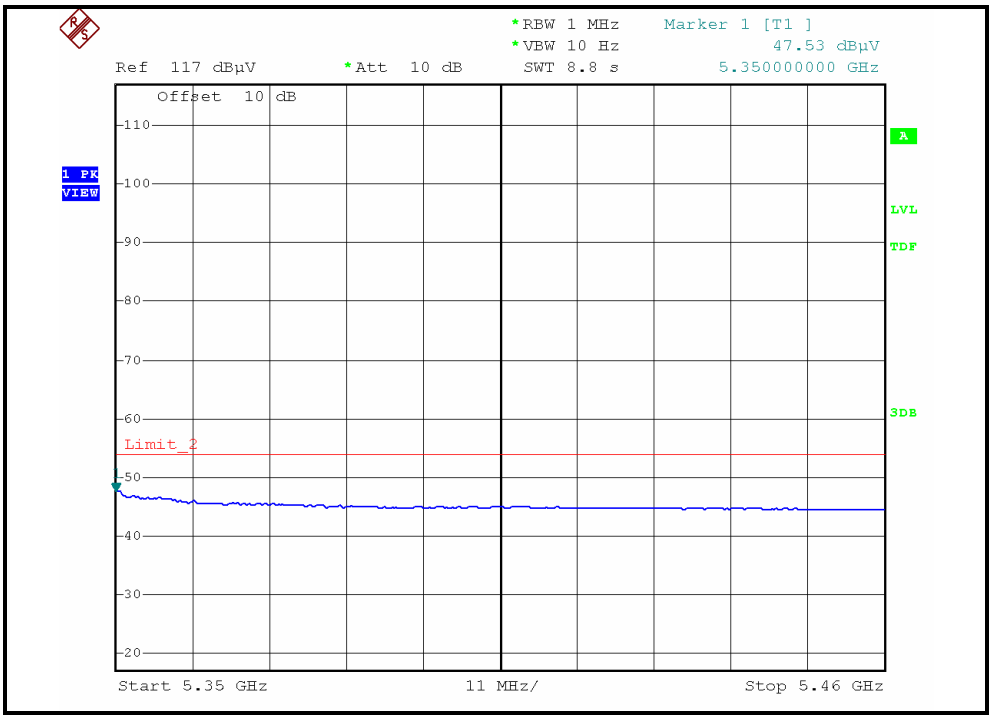
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, HORIZONTAL)



RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, VERTICAL)



## 4.2.12 TEST RESULTS – ANTENNA 11

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **FREQUENCY RANGE** | Below 1000MHz |
| **INPUT POWER** | 120Vac, 60 Hz | **DETECTOR FUNCTION** | Quasi-Peak |
| **ENVIRONMENTAL CONDITIONS** | 30.0deg. C, 55.0%RH 965hPa | **TESTED BY** | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 125.00 | 27.56 QP | 43.50 | -15.94 | 1.37 H | 166 | 14.49 | 13.07 |
| 2 | 250.00 | 34.34 QP | 46.00 | -11.66 | 1.16 H | 237 | 20.09 | 14.25 |
| 3 | 375.00 | 38.59 QP | 46.00 | -7.41 | 1.13 H | 242 | 19.78 | 18.81 |
| 4 | 650.00 | 43.72 QP | 46.00 | -2.28 | 1.26 H | 251 | 18.19 | 25.53 |
| 5 | 750.00 | 35.59 QP | 46.00 | -10.41 | 1.07 H | 248 | 8.68 | 26.91 |
| 6 | 875.00 | 37.43 QP | 46.00 | -8.57 | 1.06 H | 121 | 8.14 | 29.29 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 57.21 | 32.23 QP | 40.00 | -7.77 | 1.00 V | 273 | 18.54 | 13.69 |
| 2 | 125.00 | 29.89 QP | 43.50 | -13.61 | 1.00 V | 34 | 16.82 | 13.07 |
| 3 | 250.00 | 28.76 QP | 46.00 | -17.24 | 1.00 V | 56 | 14.51 | 14.25 |
| 4 | 375.00 | 39.56 QP | 46.00 | -6.44 | 1.06 V | 264 | 20.75 | 18.81 |
| 5 | 600.00 | 37.26 QP | 46.00 | -8.74 | 1.00 V | 329 | 12.22 | 25.04 |
| 6 | 650.00 | 39.58 QP | 46.00 | -6.42 | 1.00 V | 244 | 14.05 | 25.53 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 40.30 PK | 68.30 | -28.00 | 1.00 H | 27 | 7.44 | 32.86 |
| 2 | 5150.00 | 55.36 PK | 74.00 | -18.64 | 1.21 H | 4 | 18.10 | 37.26 |
| 3 | 5150.00 | 44.24 AV | 54.00 | -9.76 | 1.21 H | 4 | 6.98 | 37.26 |
| 4 | *5180.00 | 104.89 PK | | | 1.22 H | 3 | 67.63 | 37.26 |
| 5 | *5180.00 | 94.38 AV | | | 1.22 H | 3 | 57.12 | 37.26 |
| 6 | #6906.60 | 54.20 PK | 68.30 | -14.10 | 1.00 H | 24 | 11.28 | 42.92 |
| 7 | #10360.00 | 54.21 PK | 68.30 | -14.09 | 1.00 H | 20 | 7.57 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 41.88 PK | 68.30 | -26.42 | 1.25 V | 359 | 9.02 | 32.86 |
| 2 | 5150.00 | 58.33 PK | 74.00 | -15.67 | 1.21 V | 357 | 21.07 | 37.26 |
| 3 | 5150.00 | 44.77 AV | 54.00 | -9.23 | 1.21 V | 357 | 7.51 | 37.26 |
| 4 | *5180.00 | 109.05 PK | | | 1.20 V | 0 | 71.79 | 37.26 |
| 5 | *5180.00 | 98.65 AV | | | 1.20 V | 0 | 61.39 | 37.26 |
| 6 | #6906.60 | 54.86 PK | 68.30 | -13.44 | 1.08 V | 6 | 11.94 | 42.92 |
| 7 | #10360.00 | 55.29 PK | 68.30 | -13.01 | 1.37 V | 8 | 8.65 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 41.80 PK | 68.30 | -26.50 | 1.00 H | 24 | 8.92 | 32.88 |
| 2 | *5200.00 | 105.20 PK | | | 1.26 H | 6 | 67.94 | 37.26 |
| 3 | *5200.00 | 95.31 AV | | | 1.26 H | 6 | 58.05 | 37.26 |
| 4 | #6933.30 | 52.90 PK | 68.30 | -15.40 | 1.00 H | 42 | 9.91 | 42.99 |
| 5 | #10400.00 | 56.10 PK | 68.30 | -12.20 | 1.00 H | 29 | 9.43 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.47 PK | 68.30 | -25.83 | 1.23 V | 1 | 9.59 | 32.88 |
| 2 | *5200.00 | 110.34 PK | | | 1.22 V | 357 | 73.08 | 37.26 |
| 3 | *5200.00 | 99.76 AV | | | 1.22 V | 357 | 62.50 | 37.26 |
| 4 | #6933.30 | 53.86 PK | 68.30 | -14.44 | 1.02 V | 3 | 10.87 | 42.99 |
| 5 | #10400.00 | 56.77 PK | 68.30 | -11.53 | 1.11 V | 27 | 10.10 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

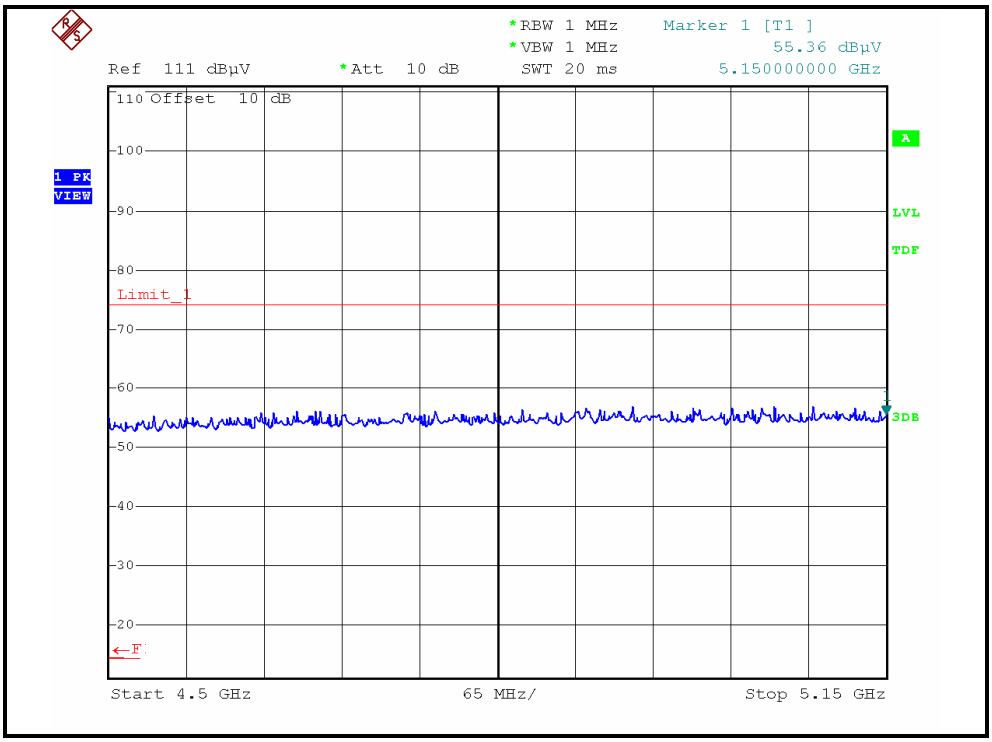
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

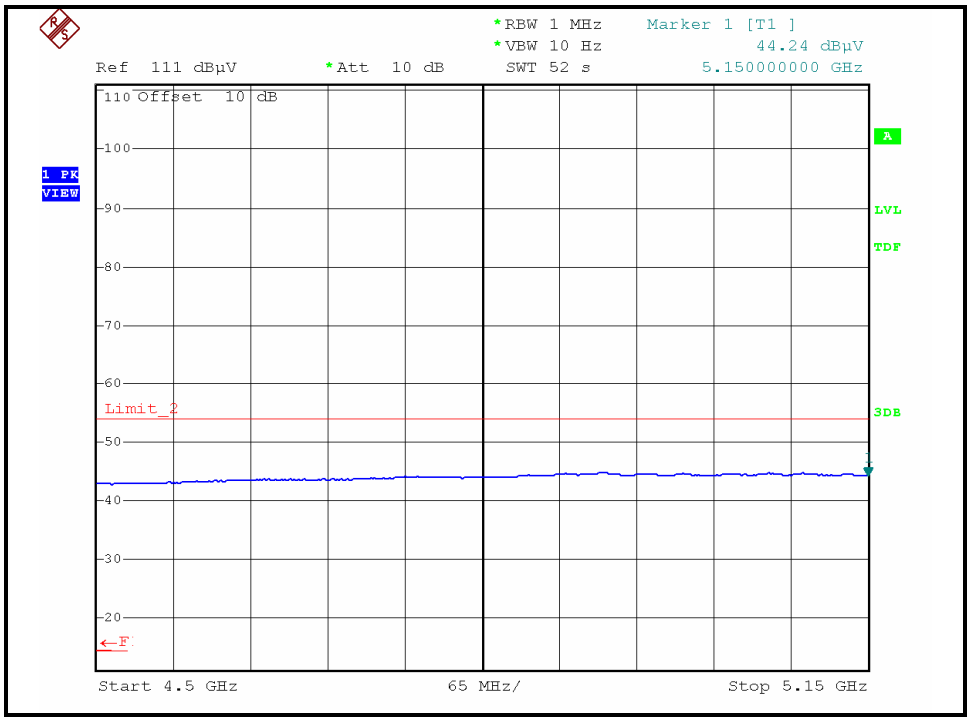
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.80 PK | 68.30 | -25.50 | 1.00 H | 29 | 9.90 | 32.90 |
| 2 | *5240.00 | 107.40 PK | | | 1.20 H | 5 | 70.14 | 37.26 |
| 3 | *5240.00 | 97.20 AV | | | 1.20 H | 5 | 59.94 | 37.26 |
| 4 | 5350.00 | 54.54 PK | 74.00 | -19.46 | 1.02 H | 159 | 17.28 | 37.26 |
| 5 | 5350.00 | 44.74 AV | 54.00 | -9.26 | 1.02 H | 159 | 7.48 | 37.26 |
| 6 | 6986.60 | 52.20 PK | 68.30 | -16.10 | 1.01 H | 31 | 9.07 | 43.13 |
| 7 | #10480.00 | 55.70 PK | 68.30 | -12.60 | 1.00 H | 42 | 8.97 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 43.15 PK | 68.30 | -25.15 | 1.22 V | 358 | 10.25 | 32.90 |
| 2 | *5240.00 | 111.94 PK | | | 1.21 V | 357 | 74.68 | 37.26 |
| 3 | *5240.00 | 101.68 AV | | | 1.21 V | 357 | 64.42 | 37.26 |
| 4 | 5350.00 | 55.05 PK | 74.00 | -18.95 | 1.57 V | 129 | 17.79 | 37.26 |
| 5 | 5350.00 | 45.07 AV | 54.00 | -8.93 | 1.57 V | 129 | 7.81 | 37.26 |
| 6 | 6986.60 | 52.96 PK | 68.30 | -15.34 | 1.05 V | 8 | 9.83 | 43.13 |
| 7 | #10480.00 | 56.89 PK | 68.30 | -11.41 | 1.20 V | 9 | 10.16 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

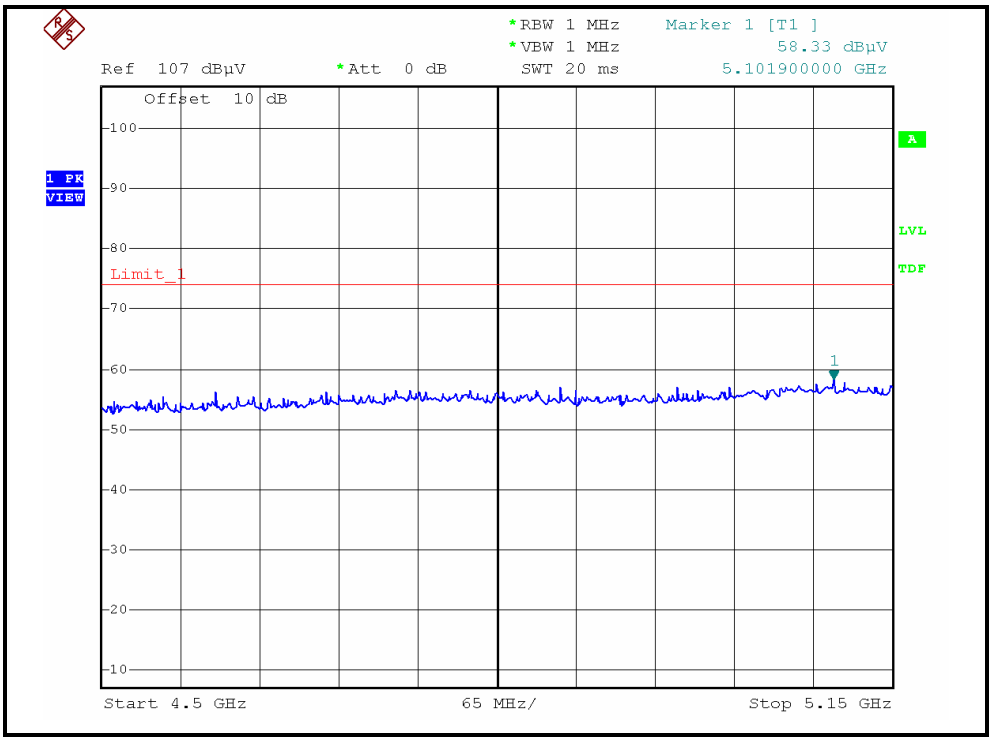
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

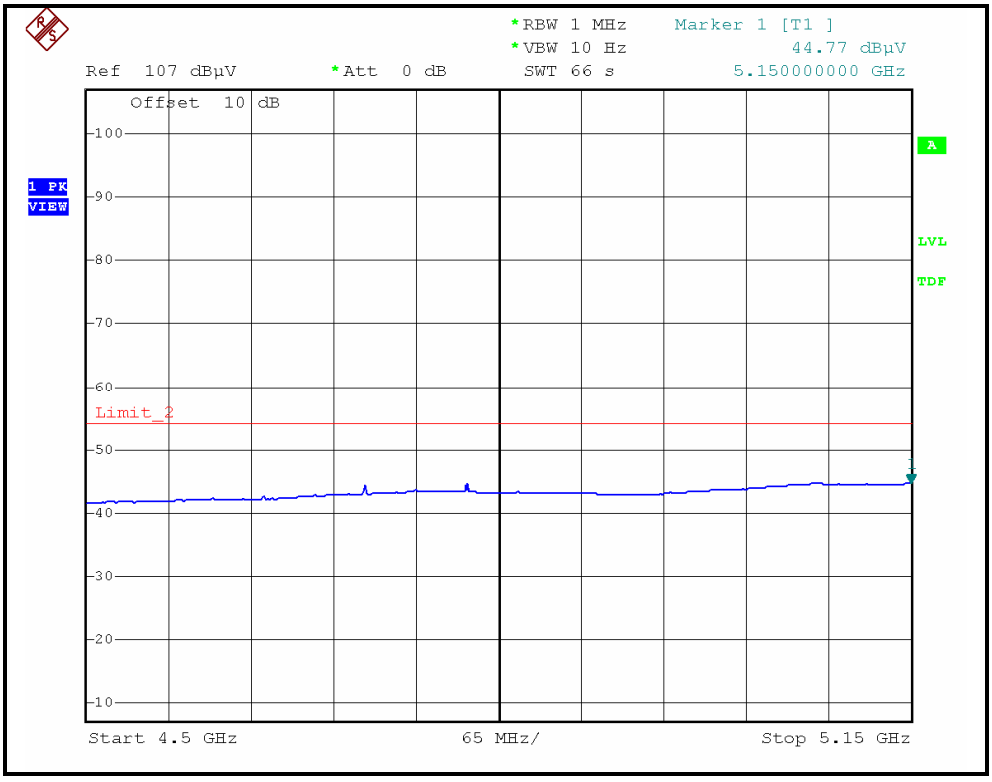
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



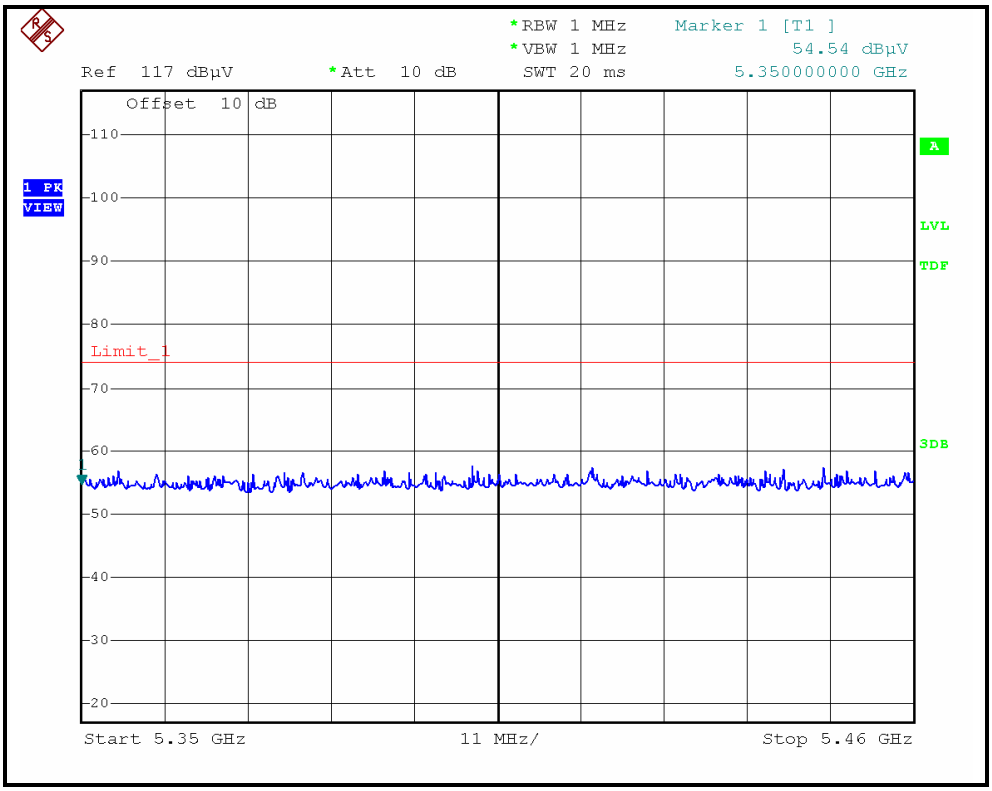



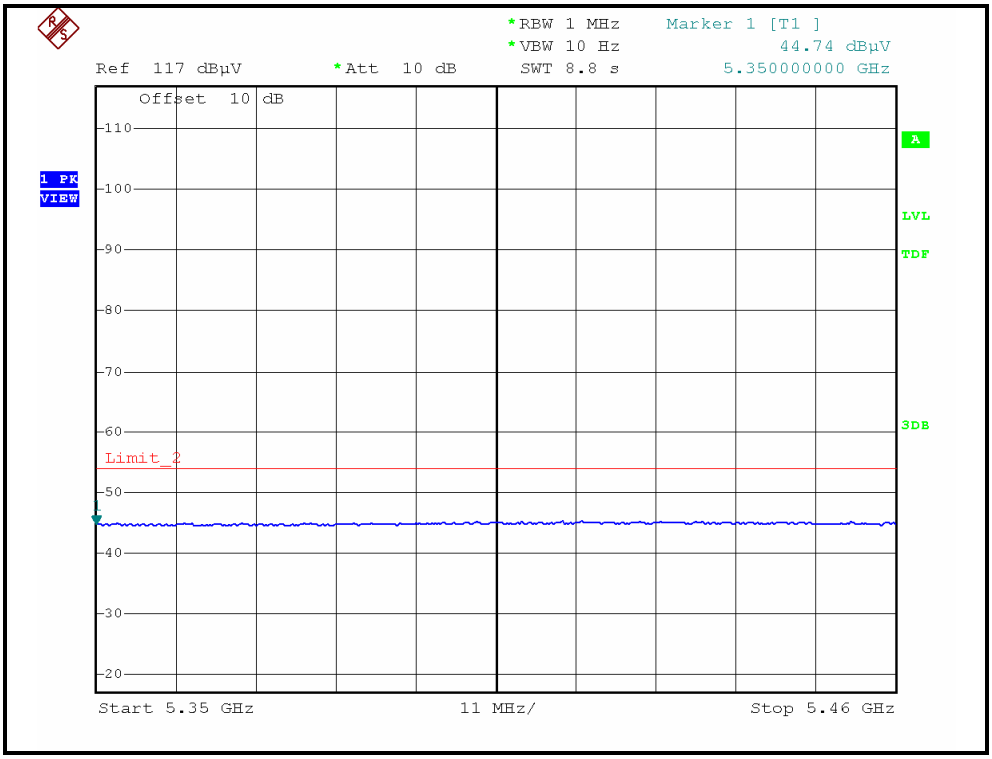
RESTRICTED BANDEDGE (802.11a MODE, CH1, VERTICAL )



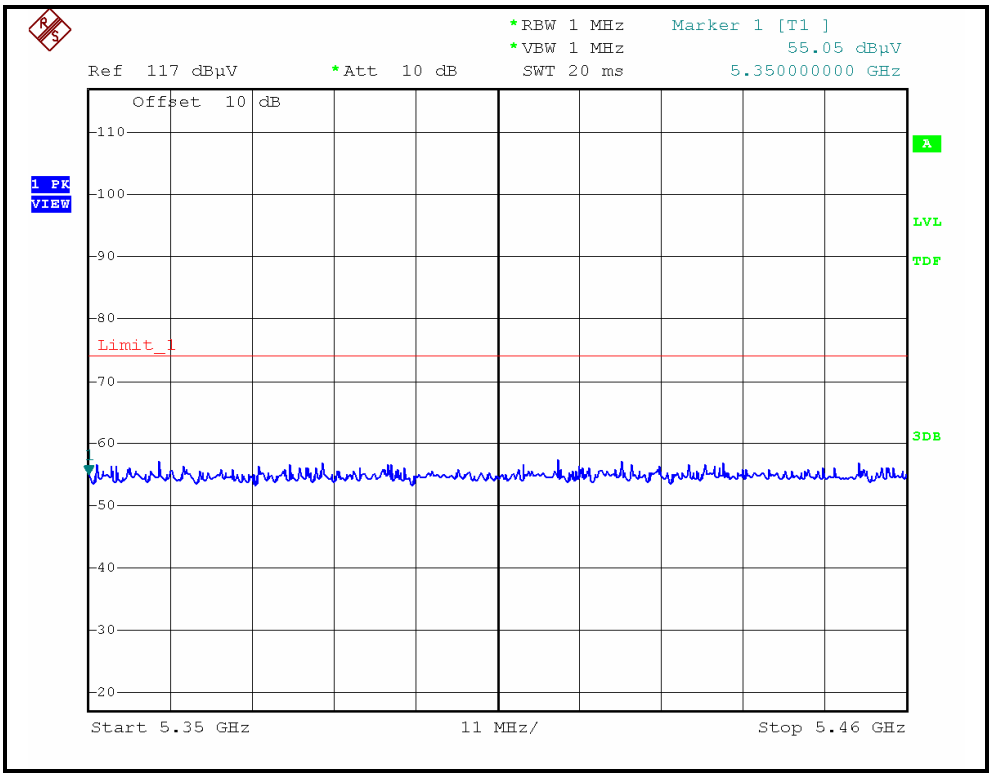



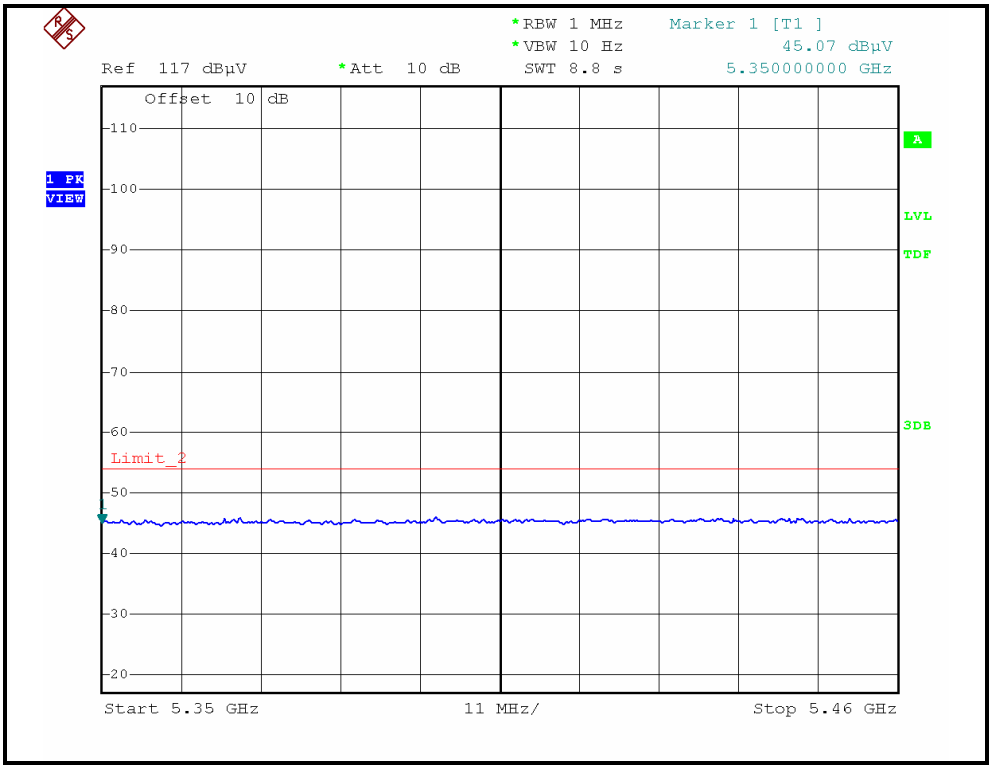
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE,CH4, VERTICAL )



## DRAFT 802.11n (20MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 40.70 PK | 68.30 | -27.60 | 1.03 H | 4 | 7.84 | 32.86 |
| 2 | 5150.00 | 54.92 PK | 74.00 | -19.08 | 1.22 H | 6 | 17.66 | 37.26 |
| 3 | 5150.00 | 44.30 AV | 54.00 | -9.70 | 1.22 H | 6 | 7.04 | 37.26 |
| 4 | *5180.00 | 106.20 PK | | | 1.24 H | 7 | 68.94 | 37.26 |
| 5 | *5180.00 | 94.30 AV | | | 1.24 H | 7 | 57.04 | 37.26 |
| 6 | #6906.60 | 54.60 PK | 68.30 | -13.70 | 1.02 H | 29 | 11.68 | 42.92 |
| 7 | #10360.00 | 54.60 PK | 68.30 | -13.70 | 1.06 H | 27 | 7.96 | 46.64 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 41.82 PK | 68.30 | -26.48 | 1.29 V | 3 | 8.96 | 32.86 |
| 2 | 5150.00 | 57.20 PK | 74.00 | -16.80 | 1.20 V | 356 | 19.94 | 37.26 |
| 3 | 5150.00 | 44.47 AV | 54.00 | -9.53 | 1.20 V | 356 | 7.21 | 37.26 |
| 4 | *5180.00 | 110.46 PK | | | 1.20 V | 358 | 73.20 | 37.26 |
| 5 | *5180.00 | 99.92 AV | | | 1.20 V | 358 | 62.66 | 37.26 |
| 6 | #6906.60 | 54.98 PK | 68.30 | -13.32 | 1.06 V | 7 | 12.06 | 42.92 |
| 7 | #10360.00 | 55.36 PK | 68.30 | -12.94 | 1.25 V | 6 | 8.72 | 46.64 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 41.70 PK | 68.30 | -26.60 | 1.01 H | 21 | 8.82 | 32.88 |
| 2 | *5200.00 | 106.70 PK | | | 1.21 H | 3 | 69.44 | 37.26 |
| 3 | *5200.00 | 95.40 AV | | | 1.21 H | 3 | 58.14 | 37.26 |
| 4 | #6933.30 | 52.40 PK | 68.30 | -15.90 | 1.02 H | 29 | 9.41 | 42.99 |
| 5 | #10400.00 | 55.60 PK | 68.30 | -12.70 | 1.04 H | 43 | 8.93 | 46.67 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 42.31 PK | 68.30 | -25.99 | 1.30 V | 0 | 9.43 | 32.88 |
| 2 | *5200.00 | 110.86 PK | | | 1.20 V | 358 | 73.60 | 37.26 |
| 3 | *5200.00 | 100.34 AV | | | 1.20 V | 358 | 63.08 | 37.26 |
| 4 | #6933.30 | 53.76 PK | 68.30 | -14.54 | 1.10 V | 8 | 10.77 | 42.99 |
| 5 | #10400.00 | 56.82 PK | 68.30 | -11.48 | 1.21 V | 0 | 10.15 | 46.67 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

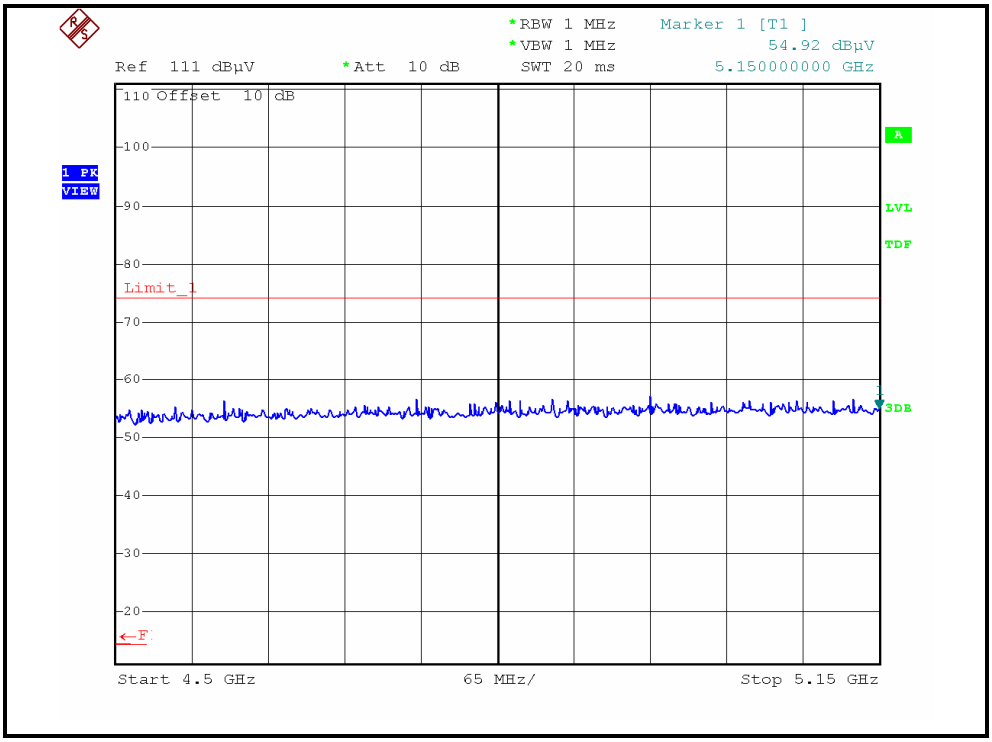
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

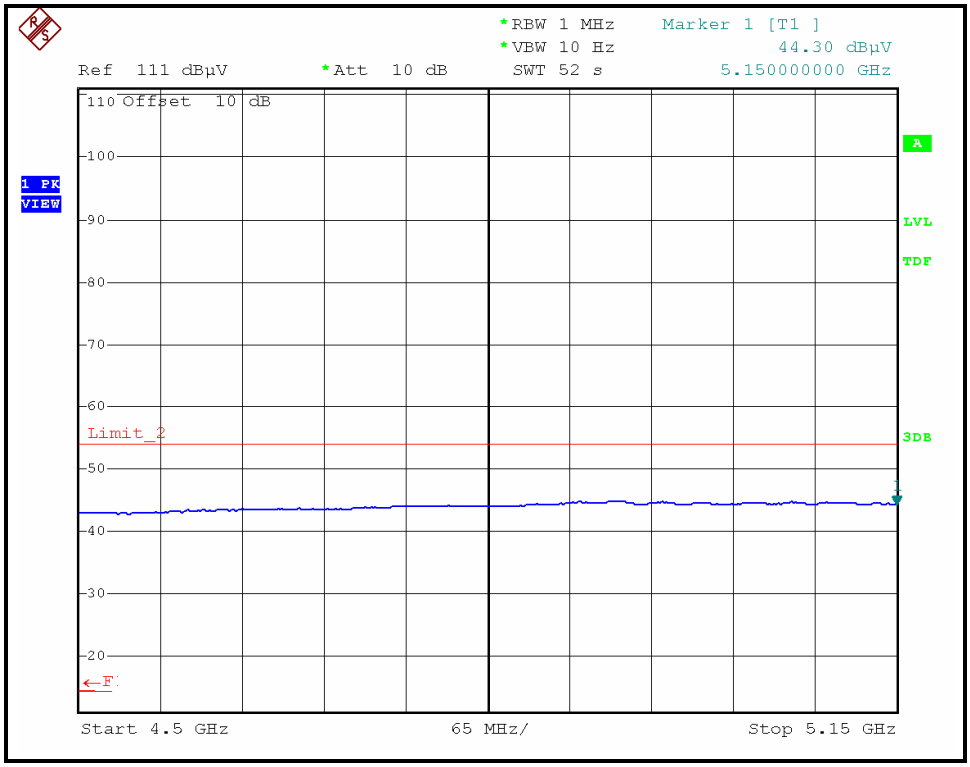
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 42.40 PK | 68.30 | -25.90 | 1.02 H | 42 | 9.50 | 32.90 |
| 2 | *5240.00 | 107.40 PK | | | 1.26 H | 2 | 70.14 | 37.26 |
| 3 | *5240.00 | 96.20 AV | | | 1.26 H | 2 | 58.94 | 37.26 |
| 4 | 5350.00 | 55.09 PK | 74.00 | -18.91 | 1.03 H | 137 | 17.83 | 37.26 |
| 5 | 5350.00 | 44.57 AV | 54.00 | -9.43 | 1.03 H | 137 | 7.31 | 37.26 |
| 6 | 6986.60 | 52.20 PK | 68.30 | -16.10 | 1.04 H | 24 | 9.07 | 43.13 |
| 7 | #10480.00 | 56.30 PK | 68.30 | -12.00 | 1.06 H | 21 | 9.57 | 46.73 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3496.30 | 42.99 PK | 68.30 | -25.31 | 1.32 V | 1 | 10.08 | 32.91 |
| 2 | *5240.00 | 112.63 PK | | | 1.20 V | 358 | 75.37 | 37.26 |
| 3 | *5240.00 | 101.91 AV | | | 1.20 V | 358 | 64.65 | 37.26 |
| 4 | 5350.00 | 56.31 PK | 74.00 | -17.69 | 1.58 V | 136 | 19.05 | 37.26 |
| 5 | 5350.00 | 44.97 AV | 54.00 | -9.03 | 1.58 V | 136 | 7.71 | 37.26 |
| 6 | 6986.60 | 52.86 PK | 68.30 | -15.44 | 1.05 V | 6 | 9.73 | 43.13 |
| 7 | #10480.00 | 56.87 PK | 68.30 | -11.43 | 1.20 V | 1 | 10.14 | 46.73 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

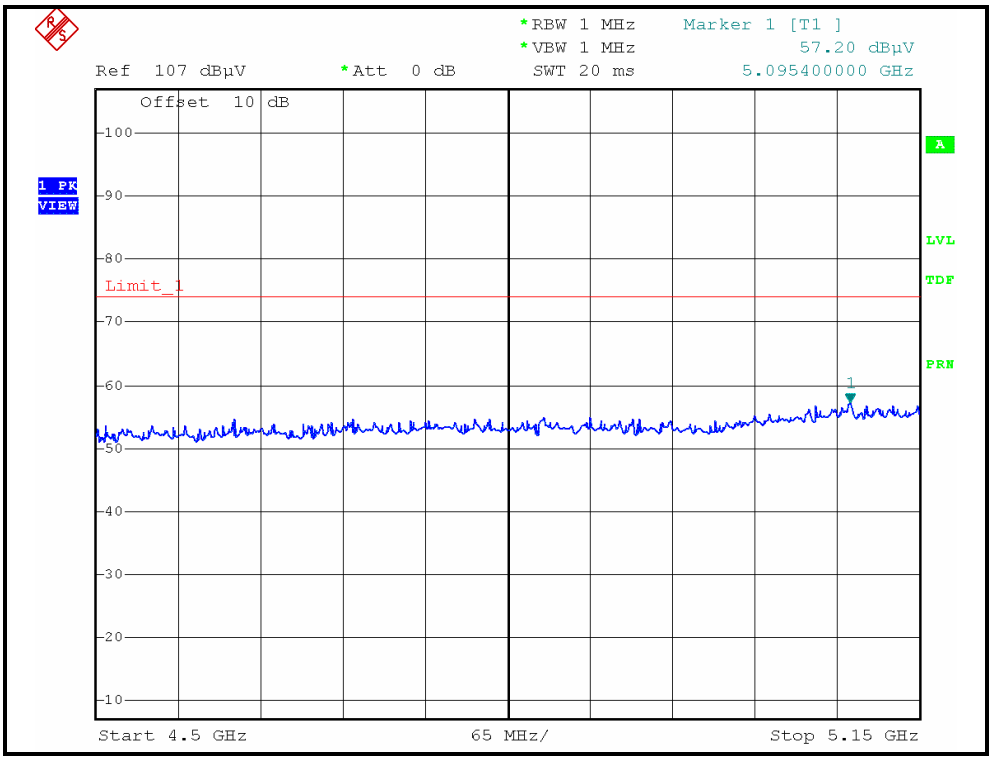
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

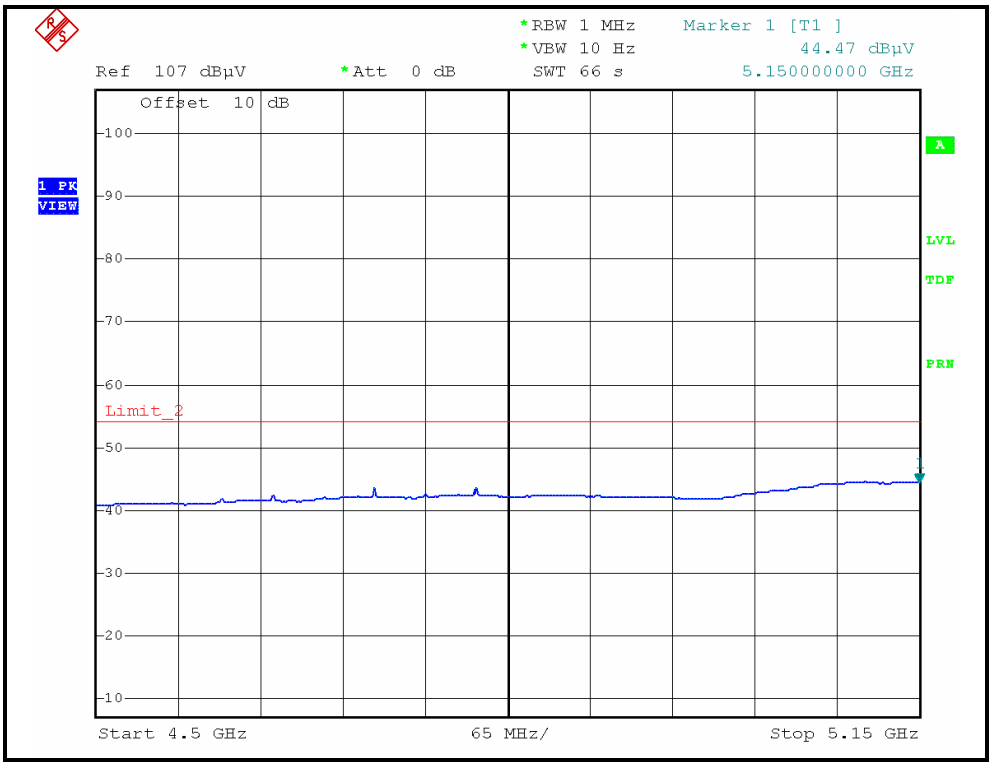
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, HORIZONTAL )



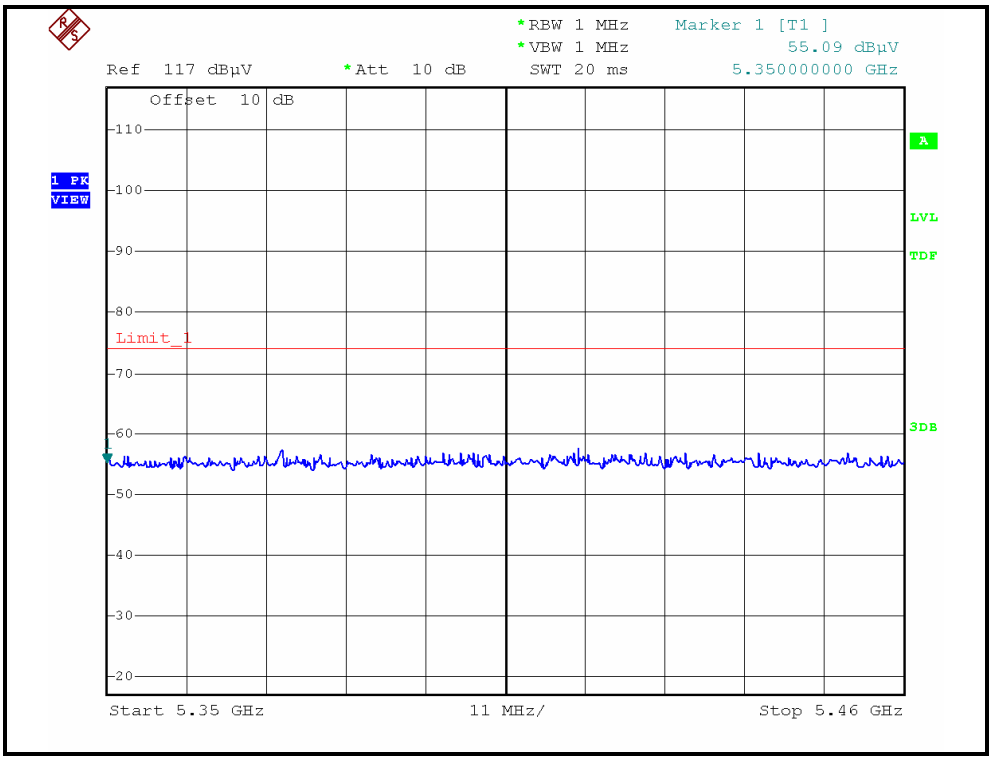



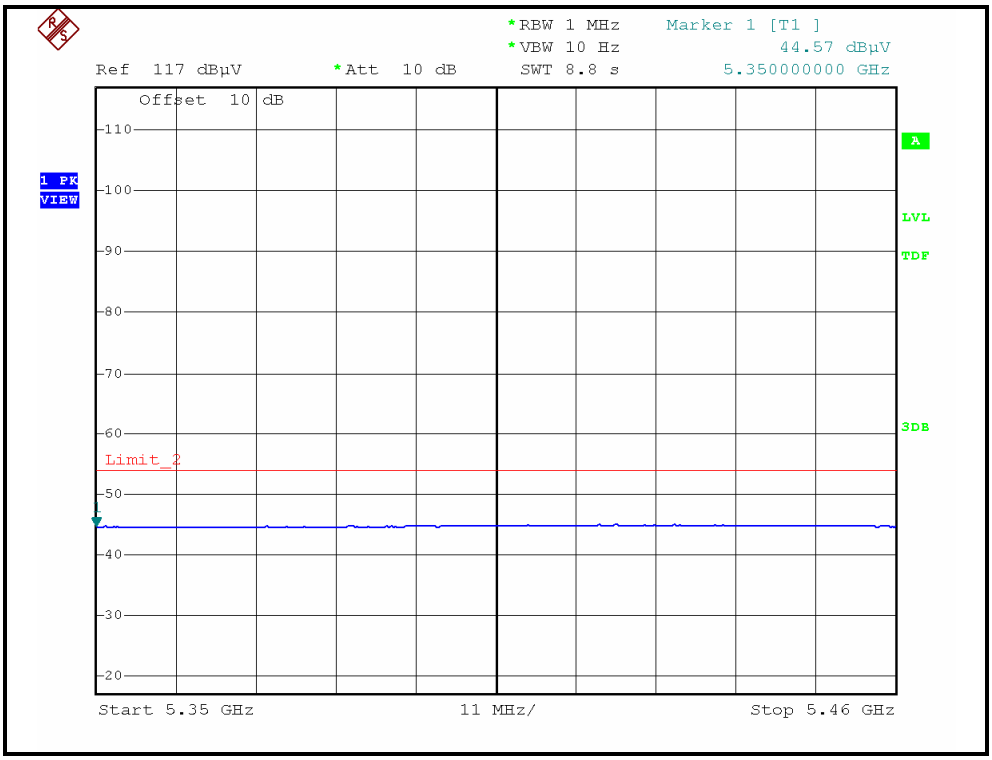
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL )



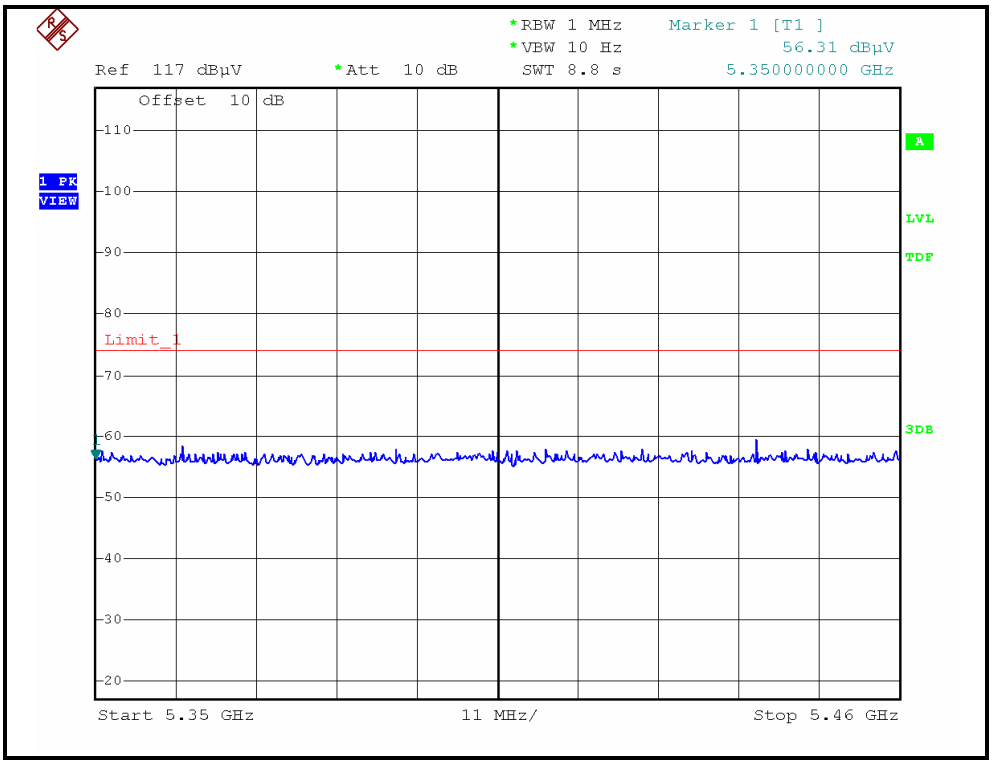



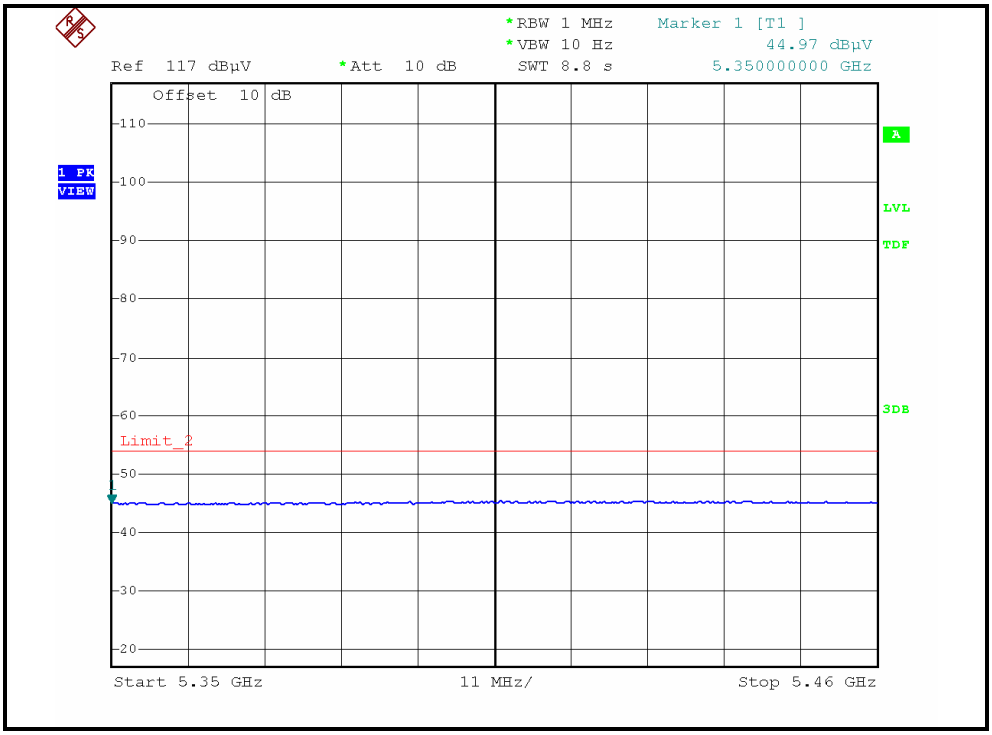
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, HORIZONTAL )



RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH4, VERTICAL )



## DRAFT 802.11n (40MHz) OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 40.90 PK | 68.30 | -27.40 | 1.02 H | 42 | 8.03 | 32.87 |
| 2 | 5150.00 | 54.75 PK | 74.00 | -19.25 | 1.24 H | 4 | 17.49 | 37.26 |
| 3 | 5150.00 | 44.23 AV | 54.00 | -9.77 | 1.24 H | 4 | 6.97 | 37.26 |
| 4 | *5190.00 | 104.10 PK | | | 1.21 H | 7 | 66.84 | 37.26 |
| 5 | *5190.00 | 93.20 AV | | | 1.21 H | 7 | 55.94 | 37.26 |
| 6 | #6920.00 | 54.80 PK | 68.30 | -13.50 | 1.06 H | 26 | 11.84 | 42.96 |
| 7 | #10380.00 | 53.10 PK | 68.30 | -15.20 | 1.04 H | 21 | 6.45 | 46.65 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3460.00 | 41.76 PK | 68.30 | -26.54 | 1.28 V | 357 | 8.89 | 32.87 |
| 2 | 5150.00 | 62.30 PK | 74.00 | -11.70 | 1.21 V | 357 | 25.04 | 37.26 |
| 3 | 5150.00 | 46.65 AV | 54.00 | -7.35 | 1.21 V | 357 | 9.39 | 37.26 |
| 4 | *5190.00 | 108.62 PK | | | 1.21 V | 357 | 71.36 | 37.26 |
| 5 | *5190.00 | 97.90 AV | | | 1.21 V | 357 | 60.64 | 37.26 |
| 6 | #6920.00 | 54.95 PK | 68.30 | -13.35 | 1.07 V | 7 | 11.99 | 42.96 |
| 7 | #10380.00 | 53.59 PK | 68.30 | -14.71 | 1.21 V | 352 | 6.94 | 46.65 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

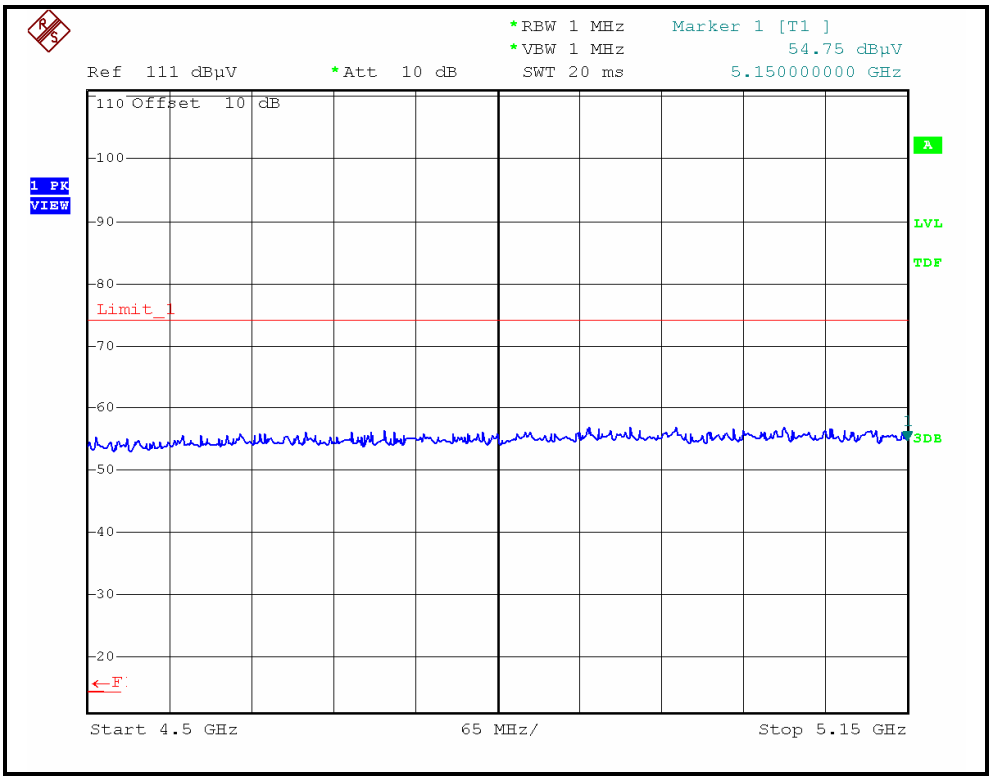
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 28.0deg. C, 68.0%RH 965hPa | TESTED BY | Wen Yu |

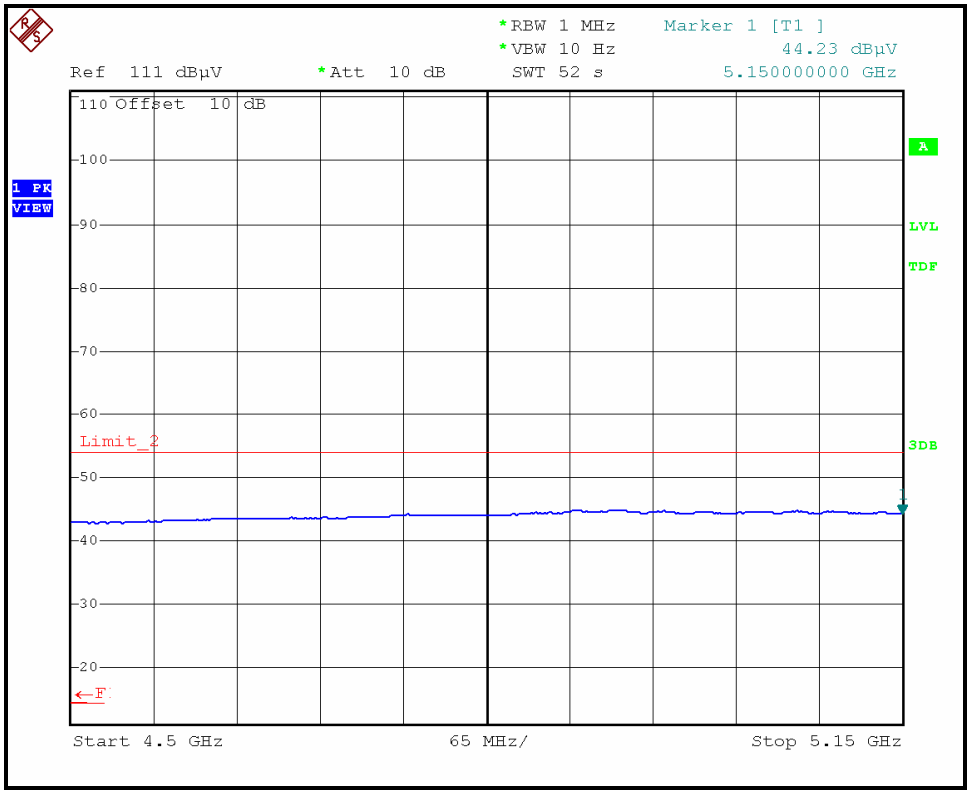
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 43.10 PK | 68.30 | -25.20 | 1.04 H | 42 | 10.20 | 32.90 |
| 2 | *5230.00 | 105.20 PK | | | 1.26 H | 8 | 67.94 | 37.26 |
| 3 | *5230.00 | 95.20 AV | | | 1.26 H | 8 | 57.94 | 37.26 |
| 4 | 5350.00 | 61.59 PK | 74.00 | -12.41 | 1.04 H | 153 | 24.33 | 37.26 |
| 5 | 5350.00 | 48.16 AV | 54.00 | -5.84 | 1.04 H | 153 | 10.90 | 37.26 |
| 6 | 6973.30 | 52.10 PK | 68.30 | -16.20 | 1.02 H | 26 | 9.01 | 43.09 |
| 7 | #10460.00 | 55.20 PK | 68.30 | -13.10 | 1.01 H | 31 | 8.48 | 46.72 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3486.60 | 43.26 PK | 68.30 | -25.04 | 1.23 V | 352 | 10.36 | 32.90 |
| 2 | *5230.00 | 109.81 PK | | | 1.18 V | 356 | 72.55 | 37.26 |
| 3 | *5230.00 | 99.12 AV | | | 1.18 V | 356 | 61.86 | 37.26 |
| 4 | 5350.00 | 62.20 PK | 74.00 | -11.80 | 1.48 V | 121 | 24.94 | 37.26 |
| 5 | 5350.00 | 47.67 AV | 54.00 | -6.33 | 1.48 V | 121 | 10.41 | 37.26 |
| 6 | 6973.30 | 52.38 PK | 68.30 | -15.92 | 1.06 V | 8 | 9.29 | 43.09 |
| 7 | #10460.00 | 55.66 PK | 68.30 | -12.64 | 1.20 V | 6 | 8.94 | 46.72 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

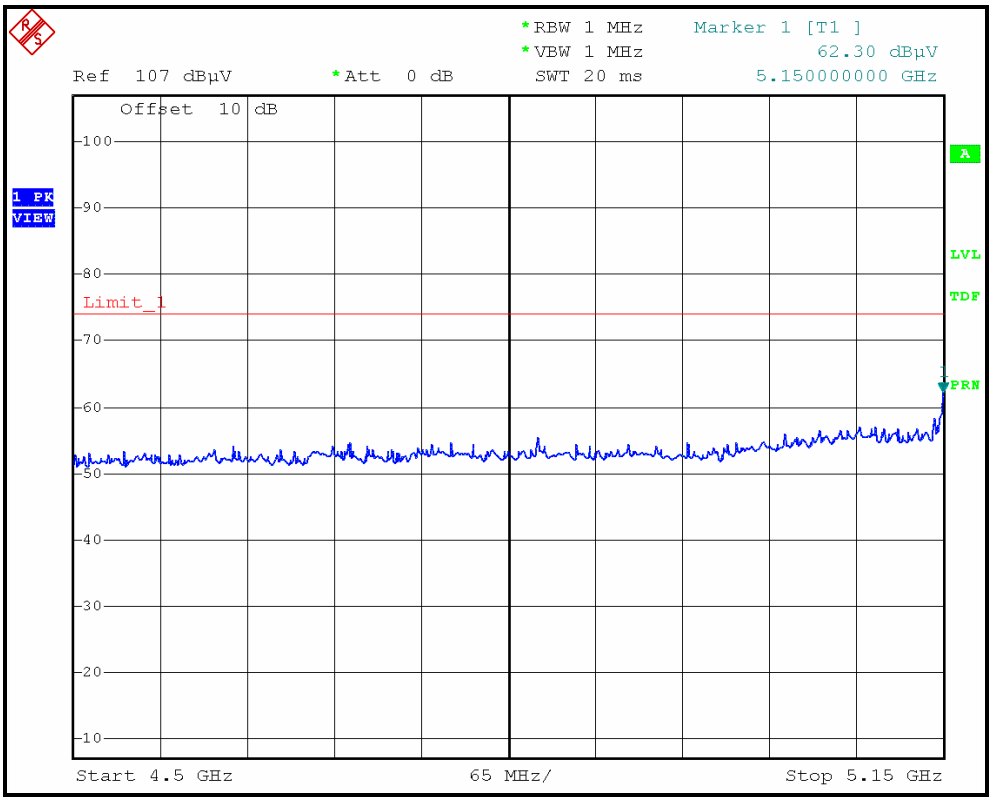
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

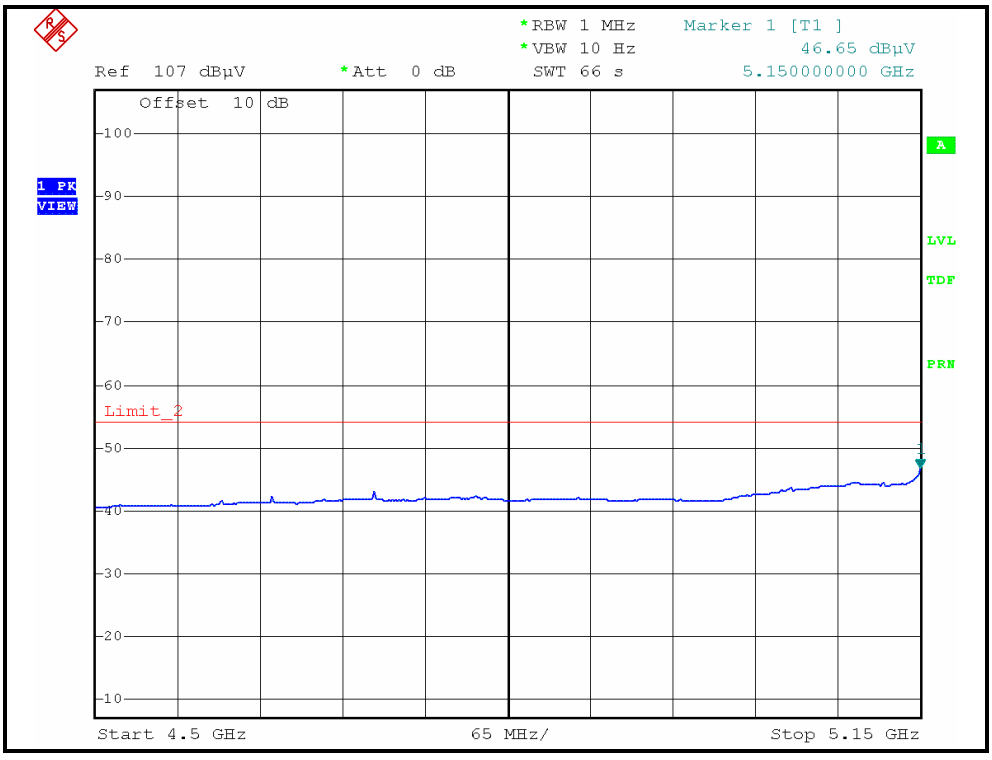
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)



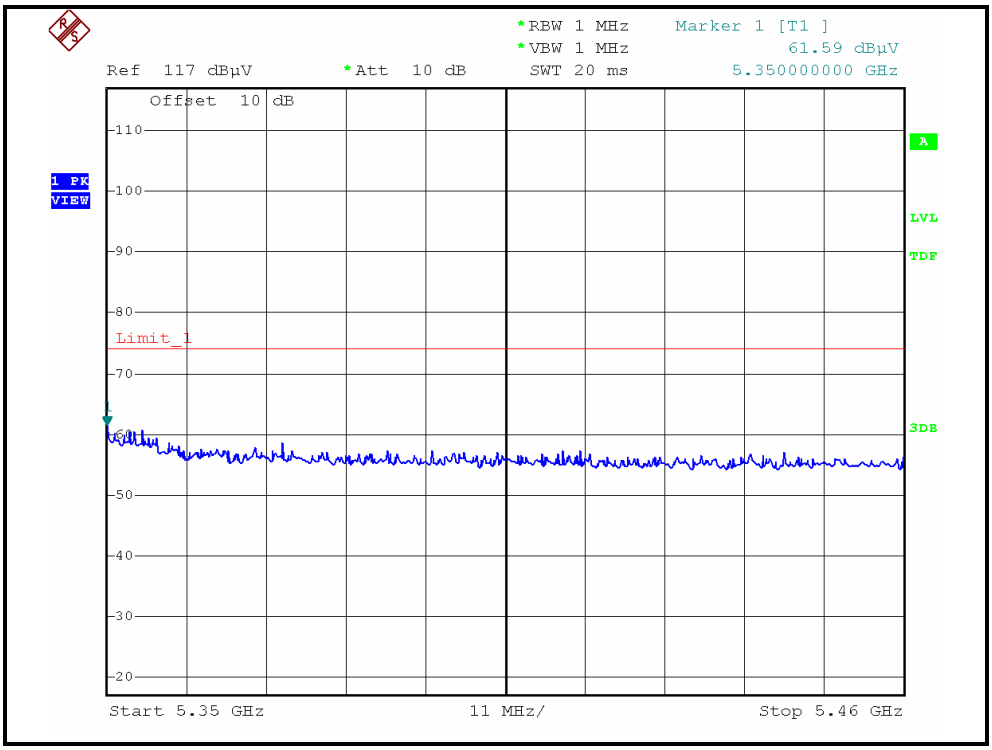



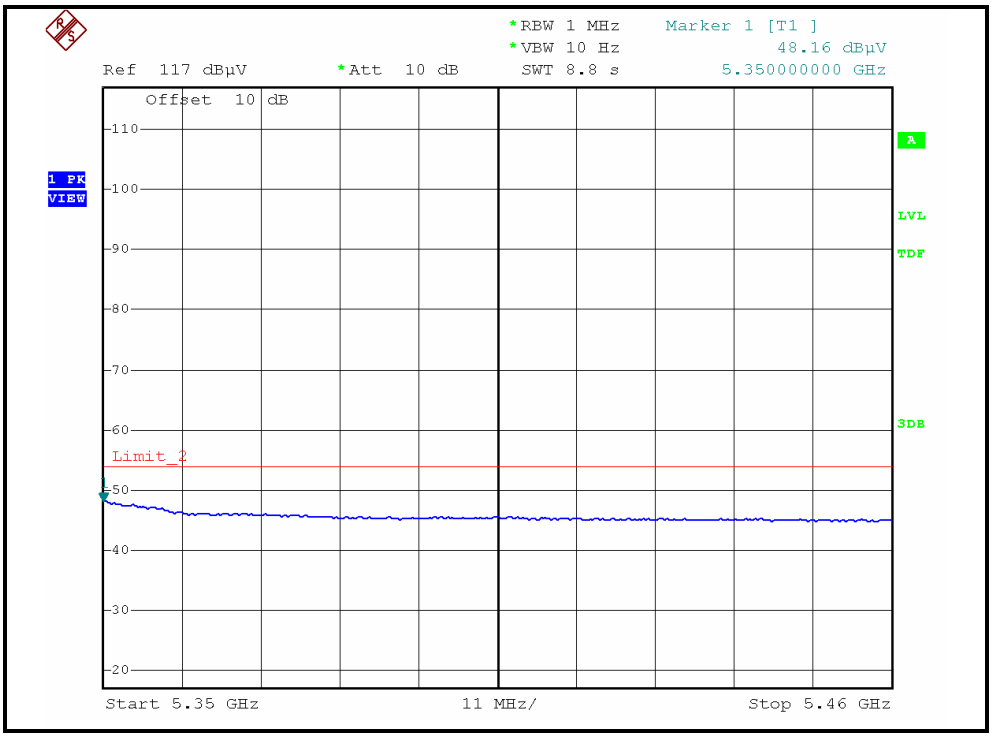
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL )



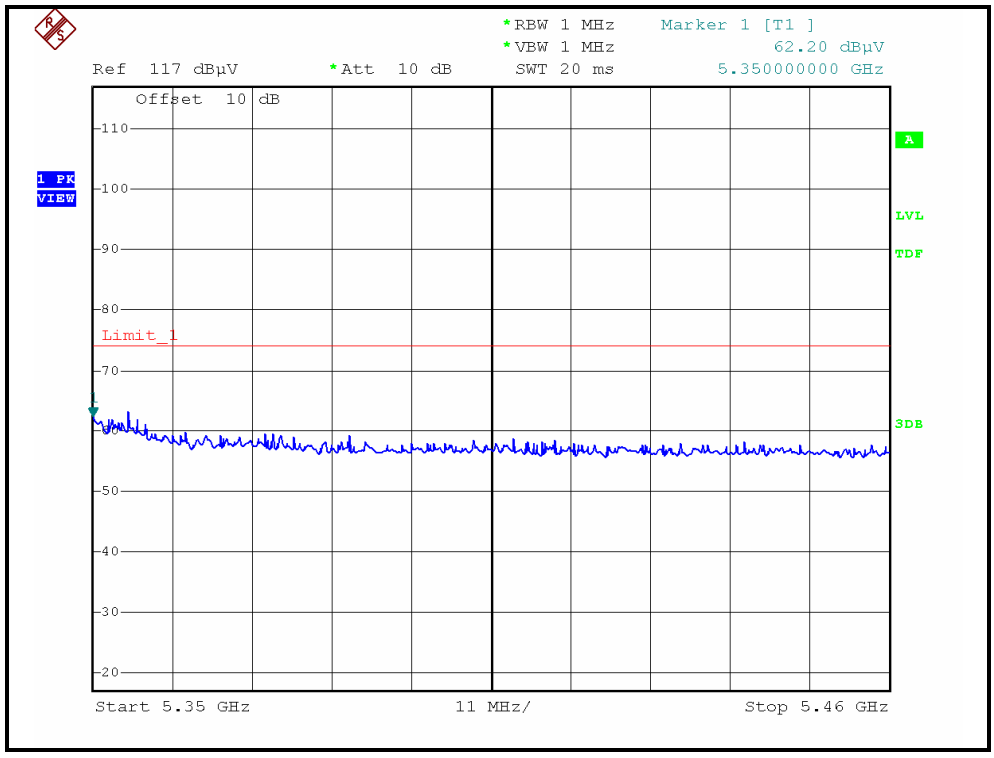



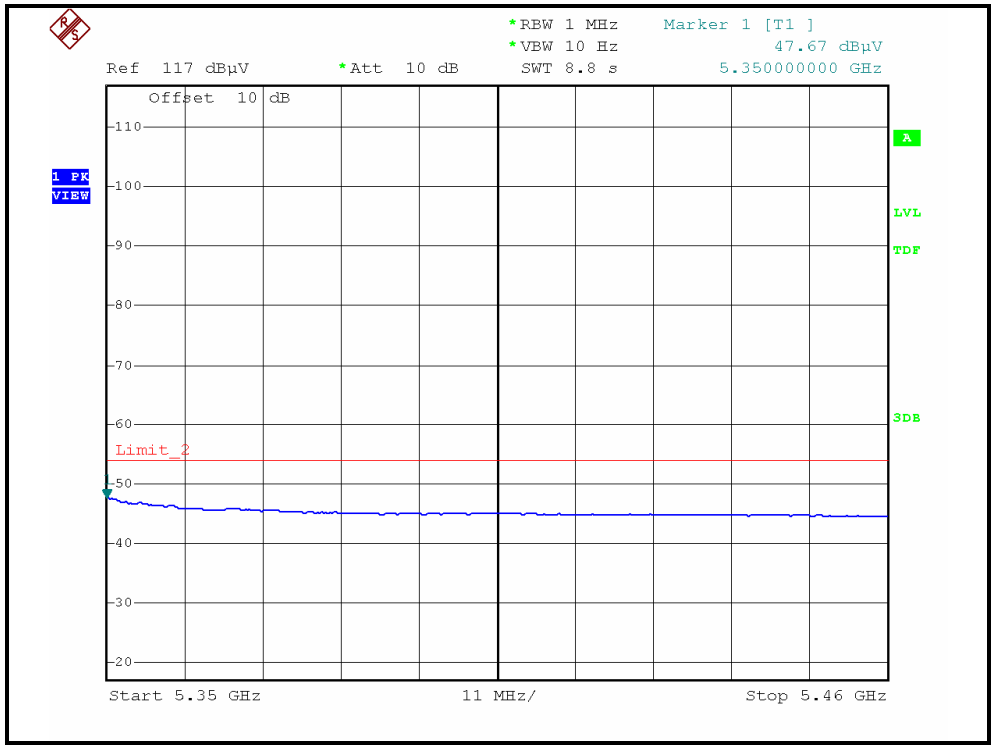
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, HORIZONTAL)



RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH2, VERTICAL)



## 4.2.13 TEST RESULTS – ANTENNA 12

**BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION**

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| **CHANNEL** | Channel 1 | **FREQUENCY RANGE** | Below 1000MHz |
| **INPUT POWER** | 120Vac, 60 Hz | **DETECTOR FUNCTION** | Quasi-Peak |
| **ENVIRONMENTAL CONDITIONS** | 25.0deg. C, 72.0%RH 965hPa | **TESTED BY** | Frank Liu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 125.00 | 30.72 QP | 43.50 | -12.78 | 2.19 H | 184 | 17.65 | 13.07 |
| 2 | 250.00 | 43.73 QP | 46.00 | -2.27 | 1.05 H | 249 | 29.48 | 14.25 |
| 3 | 274.00 | 39.37 QP | 46.00 | -6.63 | 1.01 H | 79 | 23.87 | 15.50 |
| 4 | 375.00 | 39.36 QP | 46.00 | -6.64 | 1.07 H | 184 | 20.55 | 18.81 |
| 5 | 649.99 | 43.62 QP | 46.00 | -2.38 | 1.00 H | 121 | 18.09 | 25.53 |
| 6 | 749.99 | 41.69 QP | 46.00 | -4.31 | 1.01 H | 111 | 14.78 | 26.91 |
| 7 | 999.98 | 37.12 QP | 54.00 | -16.88 | 1.12 H | 257 | 6.38 | 30.74 |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | | | | | | |
| **NO.** | **FREQ. (MHz)** | **EMISSION LEVEL (dBuV/m)** | **LIMIT (dBuV/m)** | **MARGIN (dB)** | **ANTENNA HEIGHT (m)** | **TABLE ANGLE (Degree)** | **RAW VALUE (dBuV)** | **CORRECTION FACTOR (dB/m)** |
| 1 | 57.21 | 32.84 QP | 40.00 | -7.16 | 1.00 V | 268 | 5.68 | 27.16 |
| 2 | 125.00 | 29.99 QP | 43.50 | -13.51 | 1.00 V | 89 | 2.83 | 27.16 |
| 3 | 250.00 | 29.46 QP | 46.00 | -16.54 | 1.00 V | 47 | 2.30 | 27.16 |
| 4 | 375.00 | 40.13 QP | 46.00 | -5.87 | 1.09 V | 269 | 12.97 | 27.16 |
| 5 | 500.00 | 34.69 QP | 46.00 | -11.31 | 1.00 V | 253 | 7.53 | 27.16 |
| 6 | 600.00 | 37.65 QP | 46.00 | -8.35 | 1.00 V | 42 | 10.49 | 27.16 |
| 7 | 650.00 | 39.61 QP | 46.00 | -6.39 | 1.00 V | 223 | 12.45 | 27.16 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 802.11a OFDM MODULATION

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 1 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25.0deg. C, 66.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 43.26 PK | 68.30 | -25.04 | 1.34 H | 164 | 10.99 | 32.27 |
| 2 | 5150.00 | 55.30 PK | 74.00 | -18.70 | 1.00 H | 163 | 19.30 | 36.00 |
| 3 | 5150.00 | 44.07 AV | 54.00 | -9.93 | 1.00 H | 163 | 8.07 | 36.00 |
| 4 | *5180.00 | 98.24 PK | | | 1.00 H | 166 | 62.19 | 36.05 |
| 5 | *5180.00 | 89.30 AV | | | 1.00 H | 166 | 53.25 | 36.05 |
| 6 | #6906.60 | 51.15 PK | 68.30 | -17.15 | 1.13 H | 231 | 10.07 | 41.08 |
| 7 | #10360.00 | 54.13 PK | 68.30 | -14.17 | 1.02 H | 129 | 8.21 | 45.92 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3453.30 | 44.69 PK | 68.30 | -23.61 | 1.62 V | 109 | 12.42 | 32.27 |
| 2 | 5150.00 | 56.36 PK | 74.00 | -17.64 | 1.00 V | 291 | 20.36 | 36.00 |
| 3 | 5150.00 | 42.91 AV | 54.00 | -11.09 | 1.00 V | 291 | 6.91 | 36.00 |
| 4 | *5180.00 | 109.80 PK | | | 1.00 V | 290 | 73.75 | 36.05 |
| 5 | *5180.00 | 99.79 AV | | | 1.00 V | 290 | 63.74 | 36.05 |
| 6 | #6906.60 | 51.86 PK | 68.30 | -16.44 | 1.36 V | 257 | 10.78 | 41.08 |
| 7 | #10360.00 | 55.46 PK | 68.30 | -12.84 | 1.45 V | 187 | 9.54 | 45.92 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 2 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25.0deg. C, 66.0%RH 965hPa | TESTED BY | Wen Yu |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 44.31 PK | 68.30 | -23.99 | 1.28 H | 154 | 12.03 | 32.28 |
| 2 | *5200.00 | 98.70 PK | | | 1.00 H | 162 | 62.62 | 36.08 |
| 3 | *5200.00 | 89.64 AV | | | 1.00 H | 162 | 53.56 | 36.08 |
| 4 | #6933.30 | 51.26 PK | 68.30 | -17.04 | 1.12 H | 233 | 10.13 | 41.13 |
| 5 | #10400.00 | 55.10 PK | 68.30 | -13.20 | 1.04 H | 131 | 9.11 | 45.99 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3466.60 | 44.52 PK | 68.30 | -23.78 | 1.60 V | 182 | 12.24 | 32.28 |
| 2 | *5200.00 | 110.88 PK | | | 1.00 V | 295 | 74.80 | 36.08 |
| 3 | *5200.00 | 100.34 AV | | | 1.00 V | 295 | 64.26 | 36.08 |
| 4 | #6933.30 | 51.86 PK | 68.30 | -16.44 | 1.36 V | 257 | 10.73 | 41.13 |
| 5 | #10400.00 | 55.36 PK | 68.30 | -12.94 | 1.65 V | 237 | 9.37 | 45.99 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

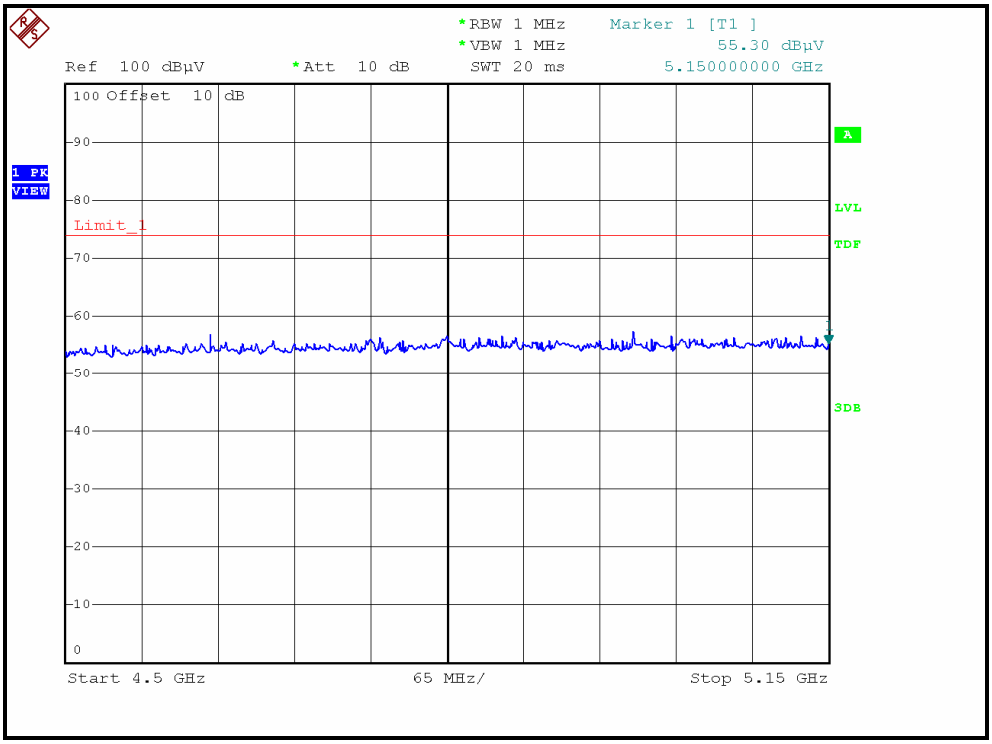
| EUT TEST CONDITION | | MEASUREMENT DETAIL | |
|---|---|---|---|
| CHANNEL | Channel 4 | FREQUENCY RANGE | 1 ~ 40GHz |
| INPUT POWER | 120Vac, 60 Hz | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25.0deg. C, 66.0%RH 965hPa | TESTED BY | Wen Yu |

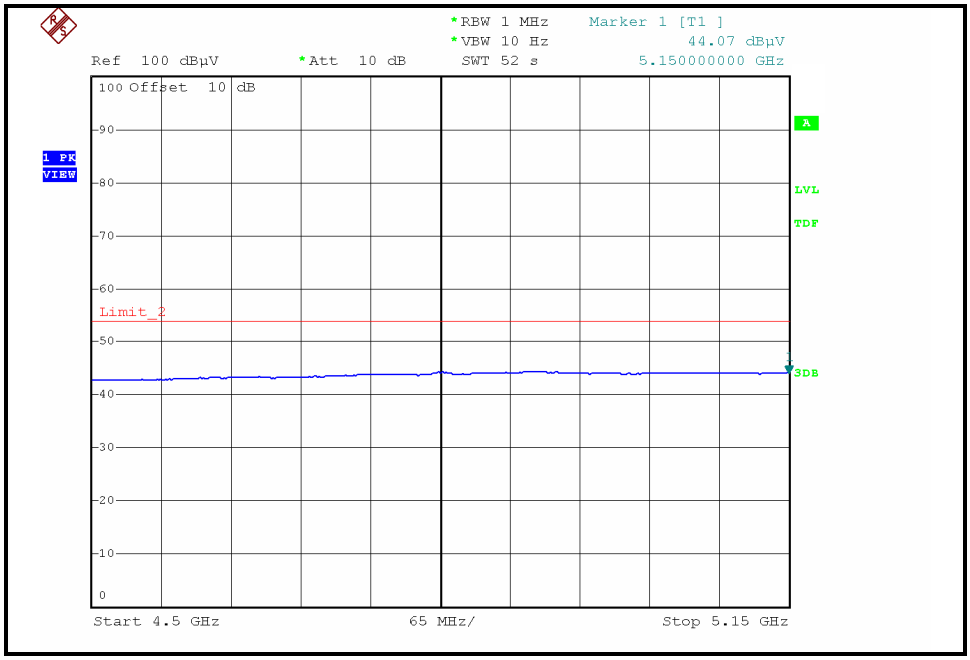
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 44.31 PK | 68.30 | -23.99 | 1.24 H | 159 | 12.01 | 32.30 |
| 2 | *5240.00 | 100.31 PK | | | 1.00 H | 154 | 64.17 | 36.14 |
| 3 | *5240.00 | 90.23 AV | | | 1.00 H | 154 | 54.09 | 36.14 |
| 4 | 5350.00 | 56.52 PK | 74.00 | -17.48 | 1.27 H | 228 | 20.20 | 36.32 |
| 5 | 5350.00 | 45.90 AV | 54.00 | -8.10 | 1.27 H | 228 | 9.58 | 36.32 |
| 6 | 6986.60 | 51.10 PK | 68.30 | -17.20 | 1.10 H | 236 | 9.87 | 41.23 |
| 7 | #10480.00 | 55.24 PK | 68.30 | -13.06 | 1.06 H | 136 | 9.12 | 46.12 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #3493.30 | 44.83 PK | 68.30 | -23.47 | 1.62 V | 195 | 12.53 | 32.30 |
| 2 | *5240.00 | 110.92 PK | | | 1.00 V | 294 | 74.78 | 36.14 |
| 3 | *5240.00 | 100.30 AV | | | 1.00 V | 294 | 64.16 | 36.14 |
| 4 | 5350.00 | 58.78 PK | 74.00 | -15.22 | 1.27 V | 284 | 22.46 | 36.32 |
| 5 | 5350.00 | 45.92 AV | 54.00 | -8.08 | 1.27 V | 284 | 9.60 | 36.32 |
| 6 | 6986.60 | 51.47 PK | 68.30 | -16.83 | 1.33 V | 350 | 10.24 | 41.23 |
| 7 | #10480.00 | 55.47 PK | 68.30 | -12.83 | 1.64 V | 289 | 9.35 | 46.12 |

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

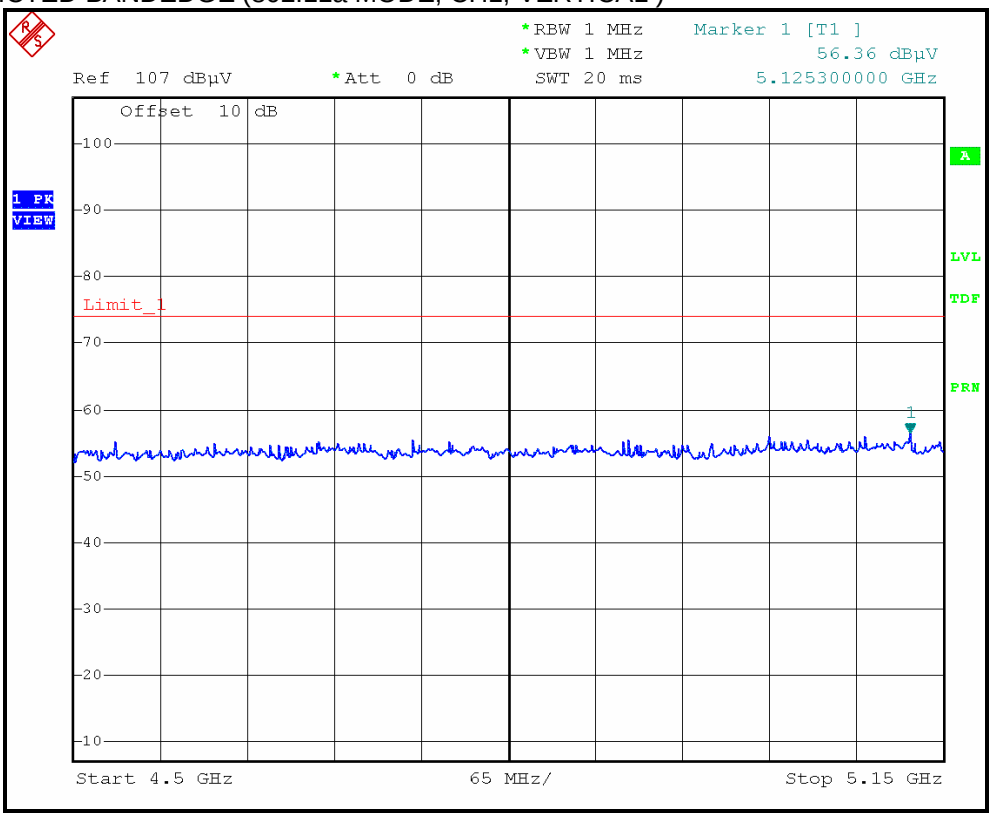
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

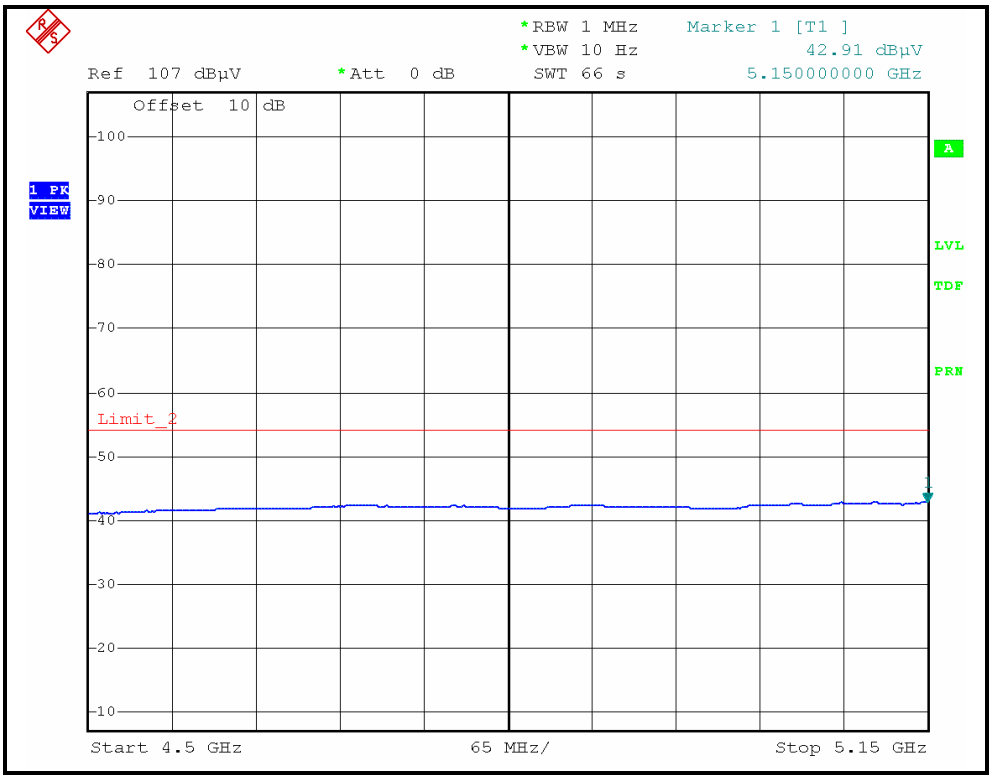
RESTRICTED BANDEDGE (802.11a MODE,CH1, HORIZONTAL )



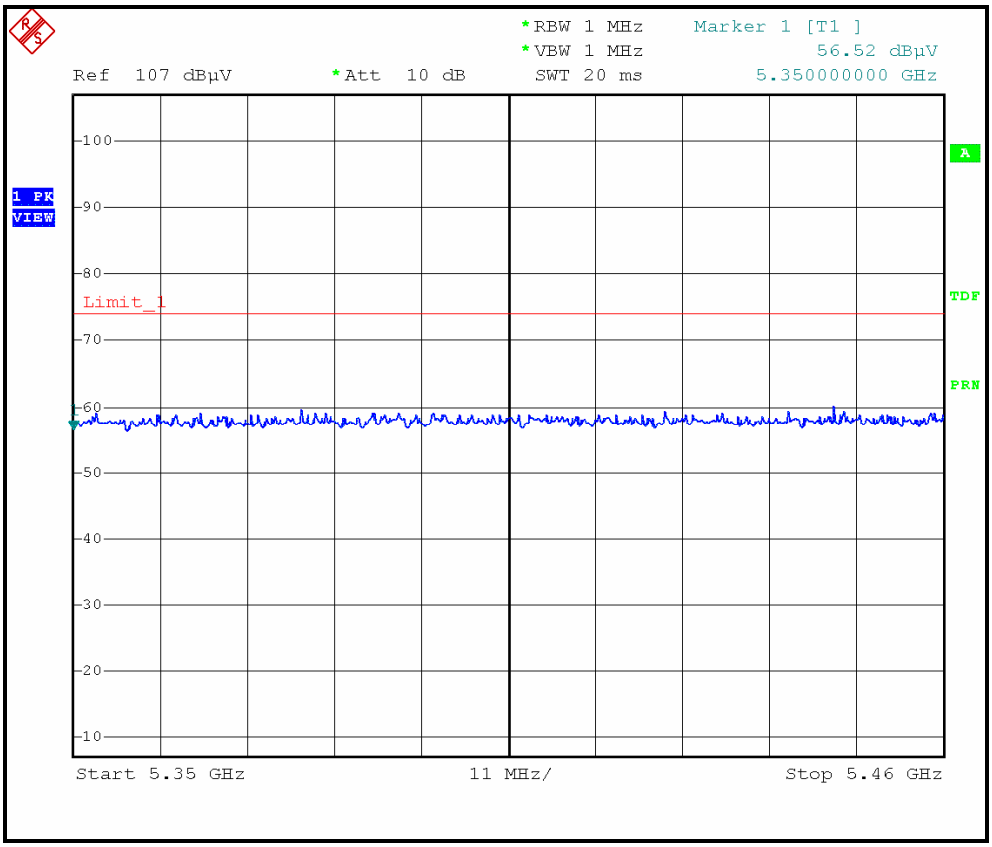



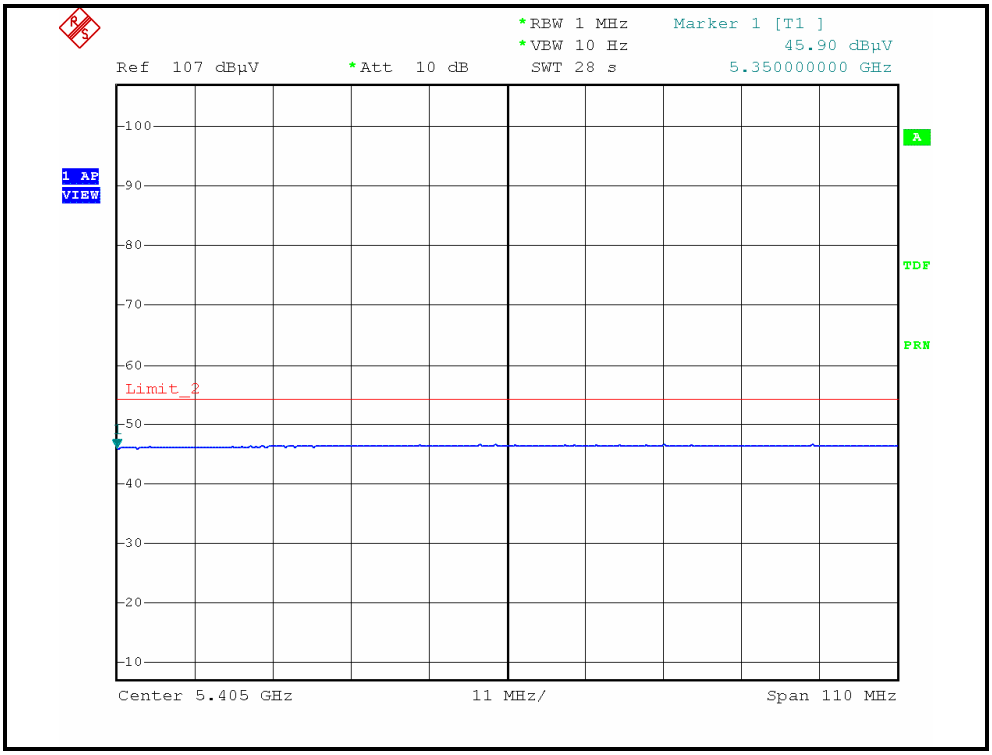
RESTRICTED BANDEDGE (802.11a MODE, CH1, VERTICAL )



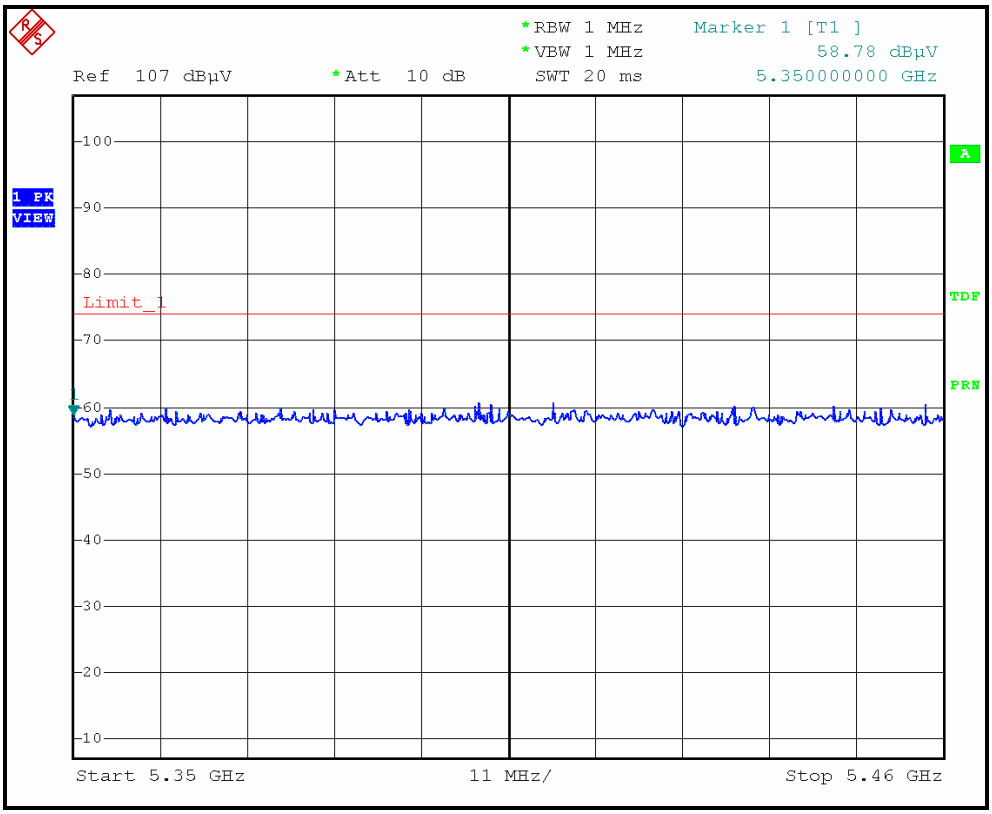



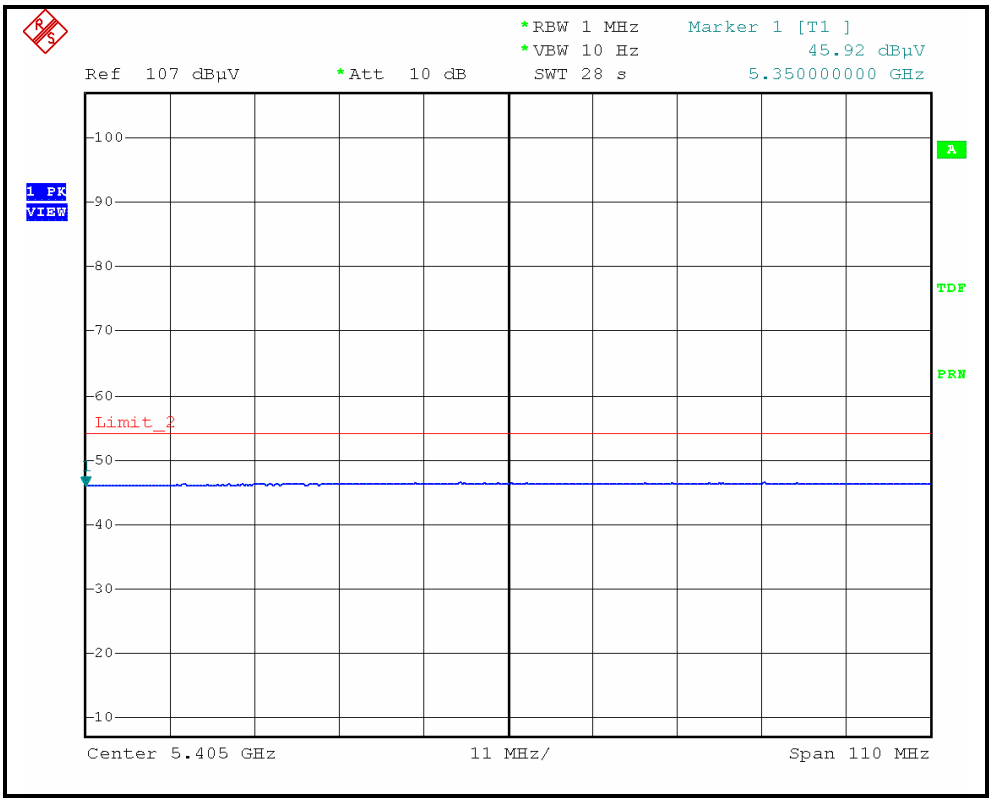
RESTRICTED BANDEDGE (802.11a MODE, CH4, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE, CH4, VERTICAL )



## 4.3 PEAK TRANSMIT POWER MEASUREMENT

### 4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

| Frequency Band | Limit |
|---|---|
| 5.15 – 5.25GHz | The lesser of 50mW (17dBm) or 4dBm + 10logB |
| 5.25 – 5.35GHz | The lesser of 250mW (24dBm) or 11dBm + 10logB |
| 5.47 – 5.725GHz | The lesser of 250mW (24dBm) or 11dBm + 10logB |
| 5.725 – 5.825GHz | The lesser of 1W (30dBm) or 17dBm + 10logB |

**NOTE:** Where B is the 26dB emission bandwidth in MHz.

### 4.3.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| ADVANTEST SPECTRUM ANALYZER | U3772 | 160100280 | July 26, 2008 | July 25, 2009 |

**NOTE:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

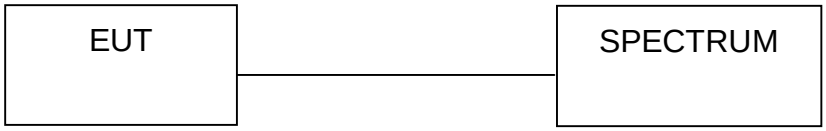
**NOTE:**
The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

### 4.3.4 DEVIATION FROM TEST STANDARD

No deviation

### 4.3.5 TEST SETUP




### 4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

## 4.3.7 TEST RESULTS – ANTENNA 4

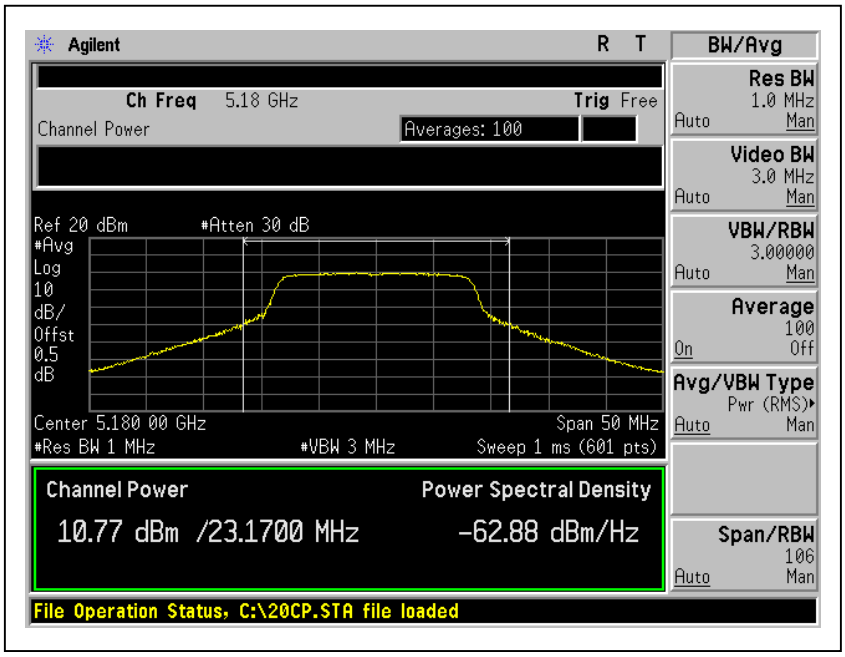
**802.11a OFDM MODULATION:**

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

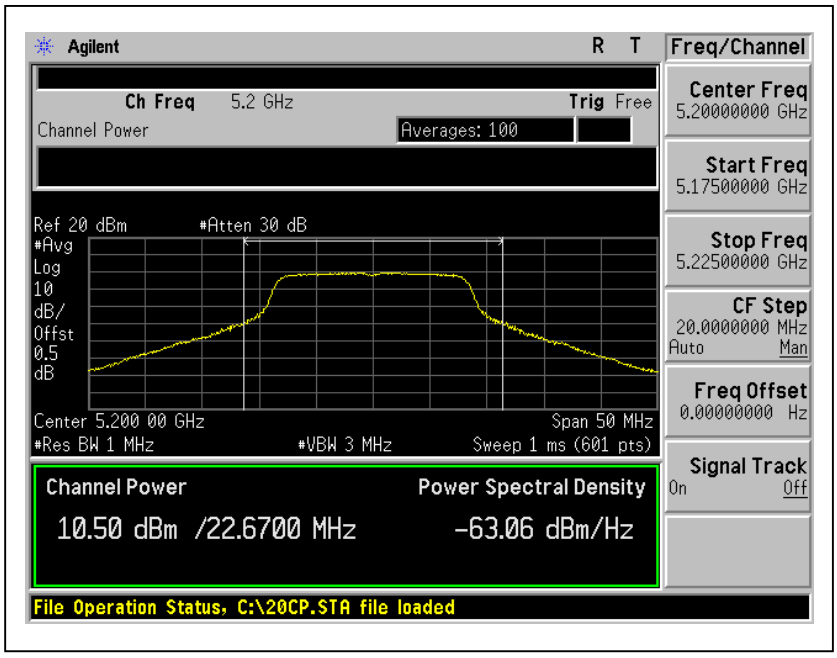
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 10.77 | 9.43 | 10.12 | 11.940 | 8.770 | 10.280 | 14.91 | 30.990 | 17.00 | 23.17 | PASS |
| 2 | 5200 | 10.50 | 9.18 | 10.04 | 11.220 | 8.279 | 10.093 | 14.71 | 29.592 | 17.00 | 22.67 | PASS |
| 4 | 5240 | 10.66 | 9.43 | 10.16 | 11.641 | 8.770 | 10.375 | 14.88 | 30.786 | 17.00 | 22.33 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

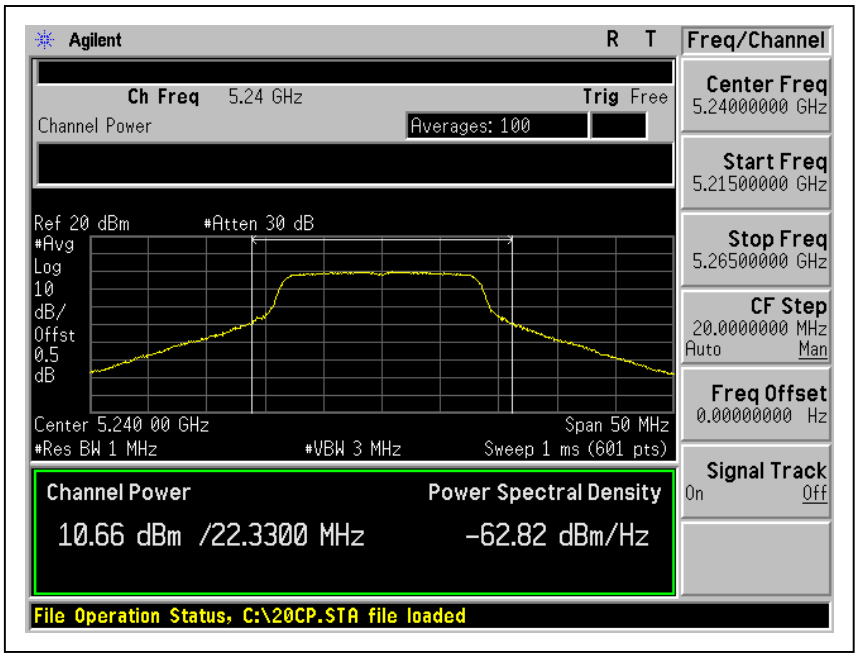
Peak Power Output:
For Chain (0) :CH1



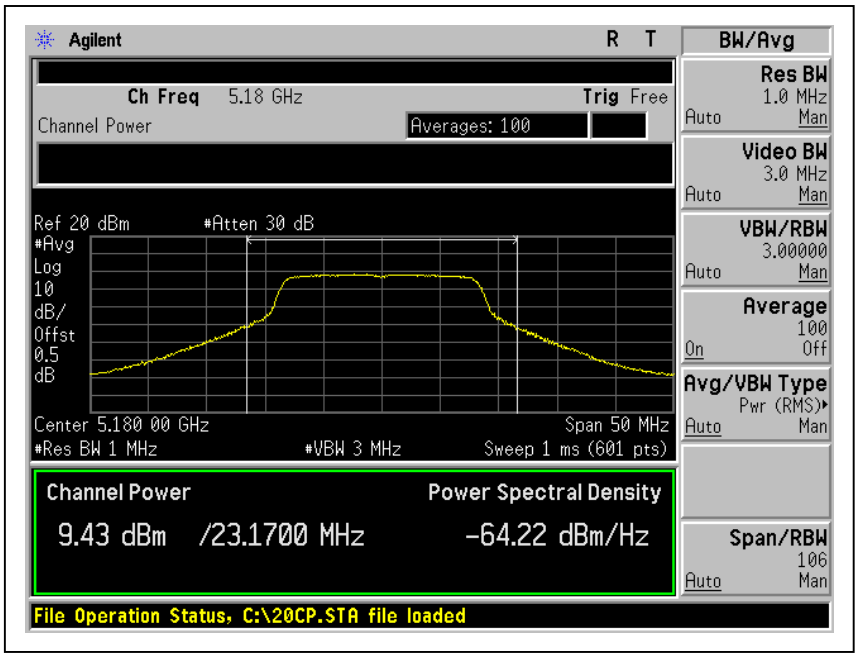

CH2



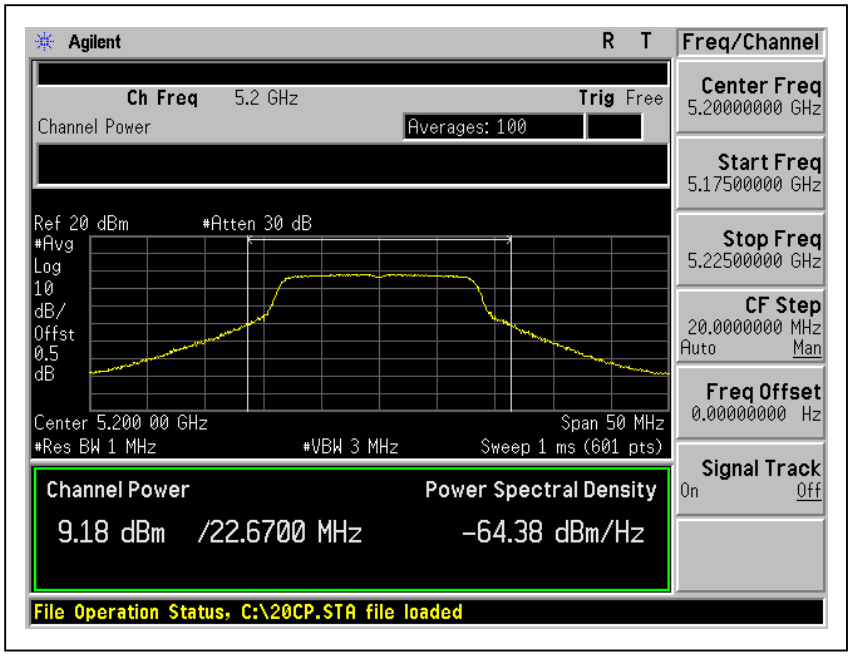
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.66 dBm /22.3300 MHz
Power Spectral Density
-62.82 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

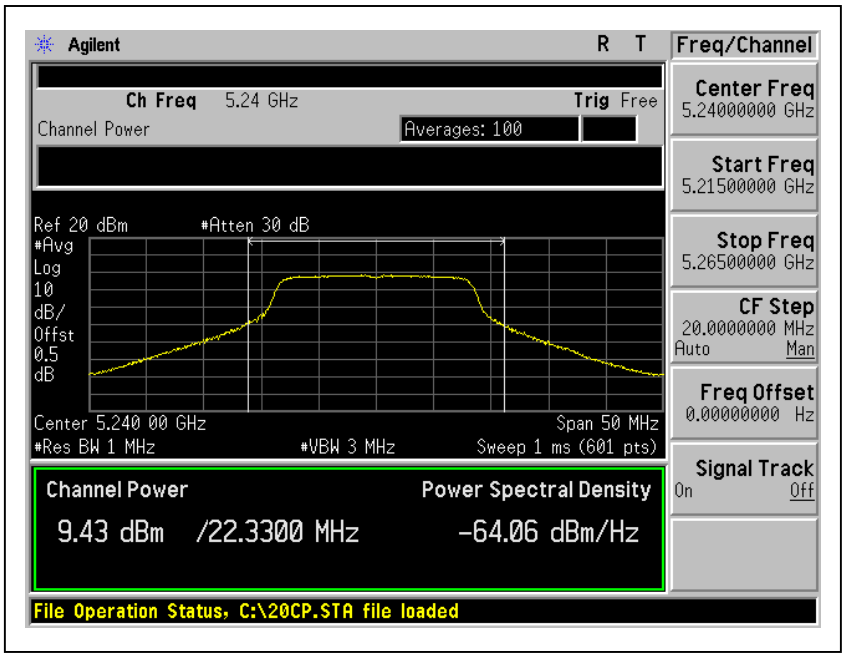
For Chain (1) :CH1



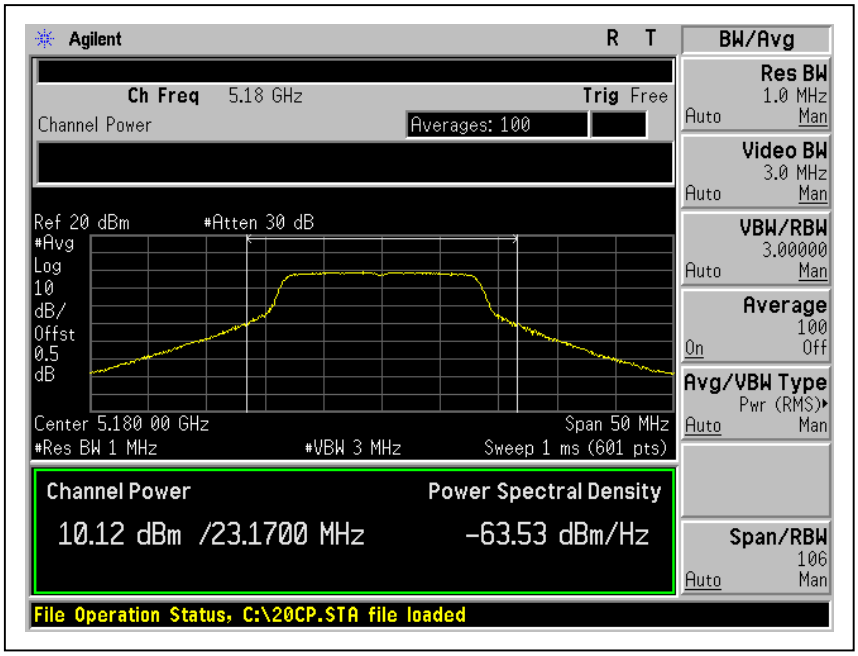

CH2



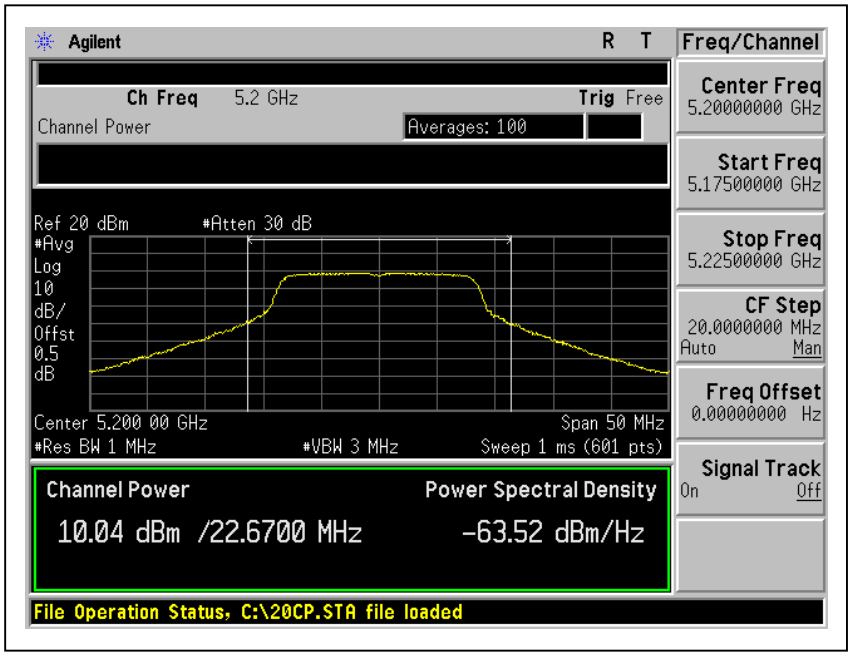
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
9.43 dBm /22.3300 MHz
Power Spectral Density
-64.06 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

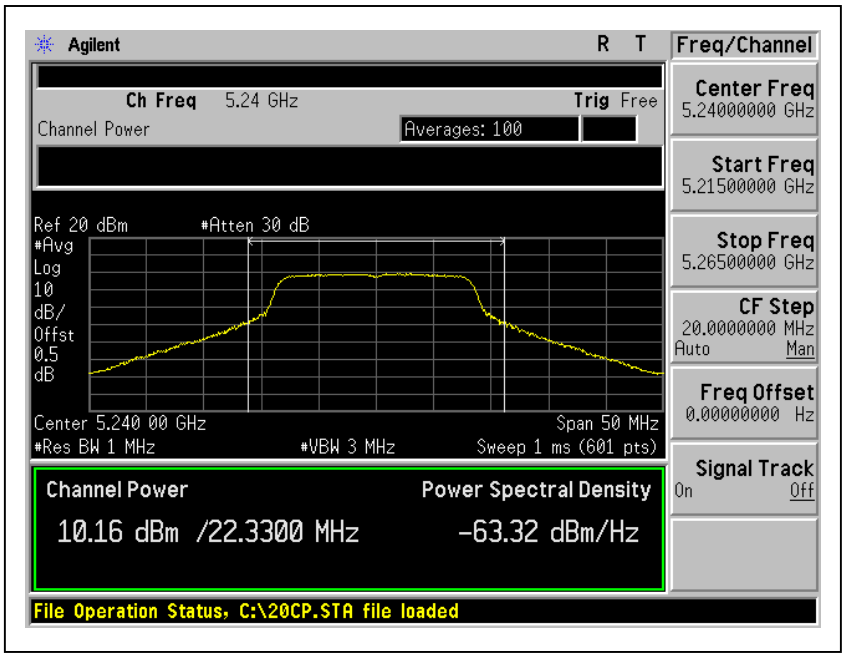
For Chain (2) **:**CH1



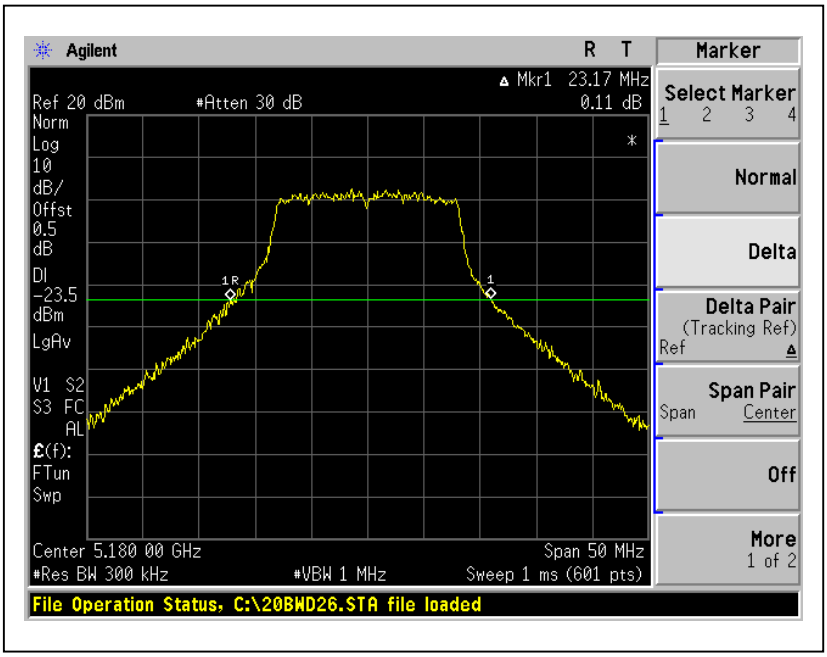

CH2



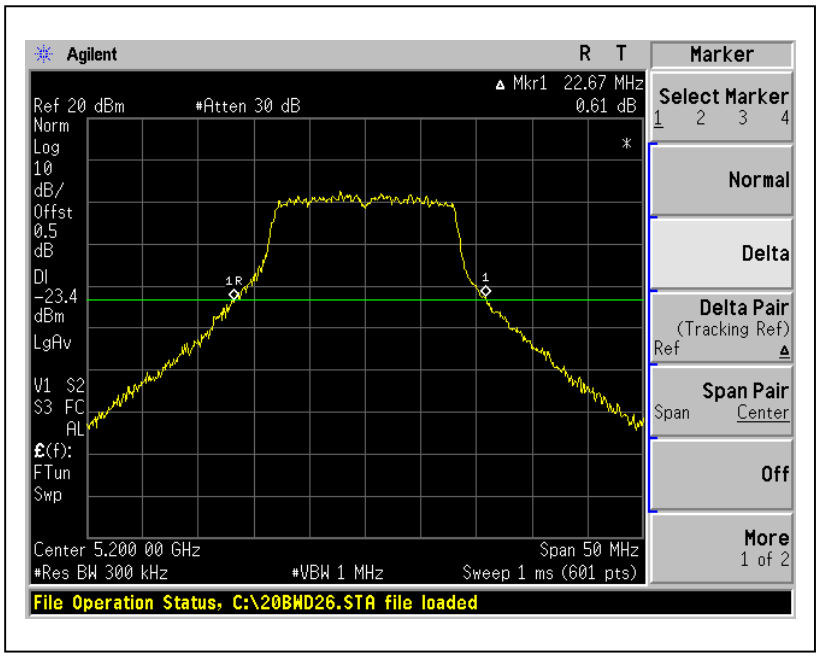
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.16 dBm /22.3300 MHz
Power Spectral Density
-63.32 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

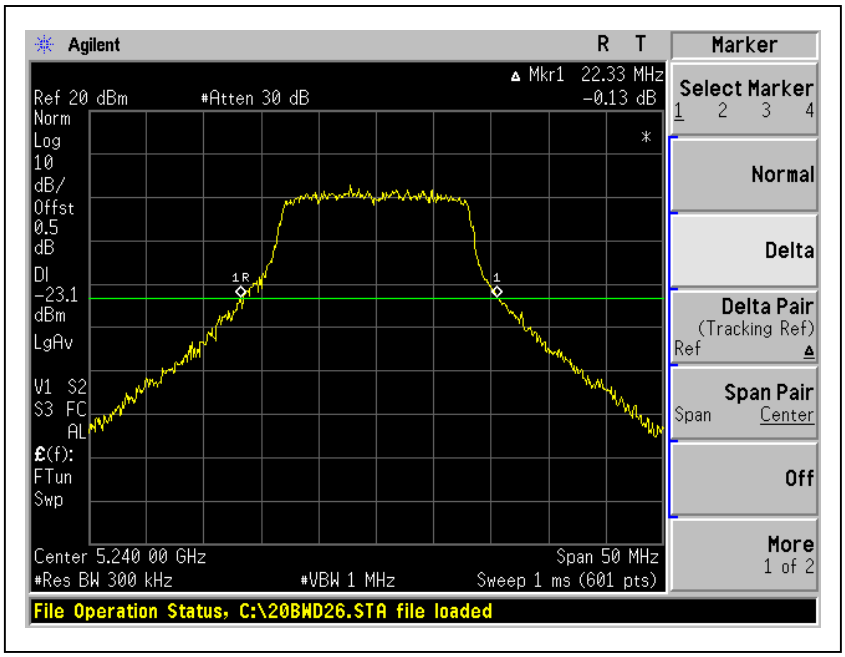
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R T
Marker
Mkr1 22.33 MHz
-0.13 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-23.1
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Center 5.240 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

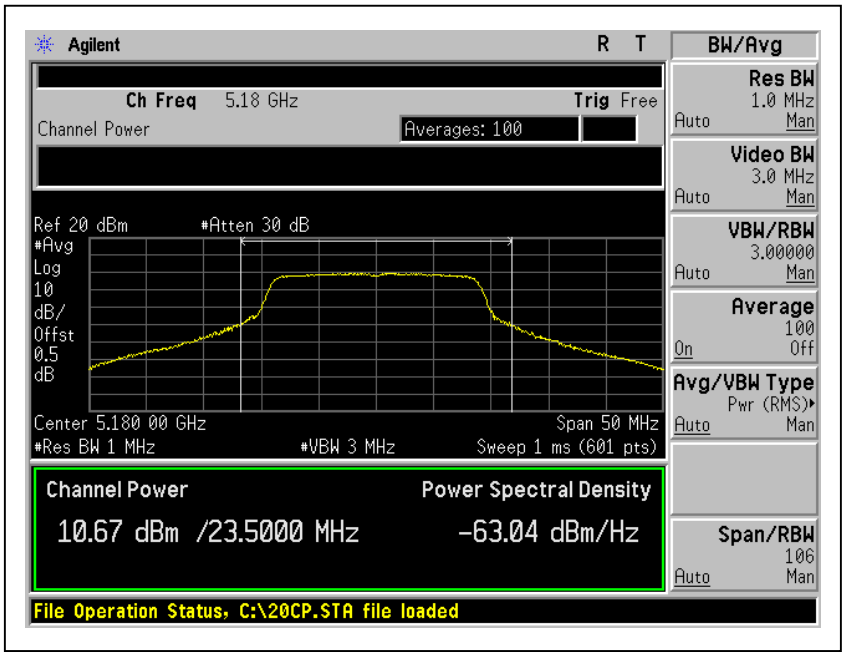
## DRAFT 802.11n (20MHz) OFDM modulation:

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

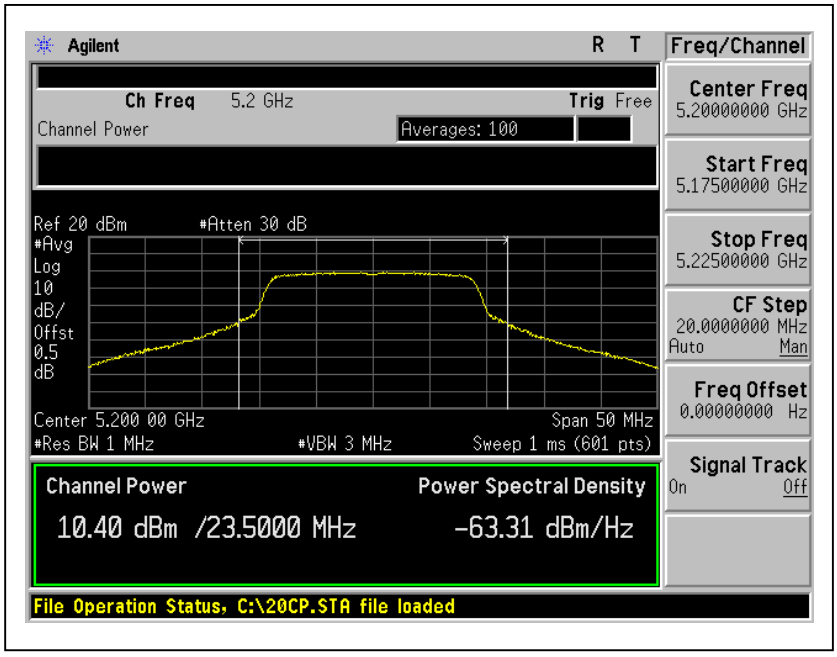
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 10.67 | 9.35 | 10.14 | 11.668 | 8.610 | 10.328 | 14.86 | 30.606 | 17.00 | 23.50 | PASS |
| 2 | 5200 | 10.4 | 9.01 | 9.97 | 10.965 | 7.962 | 9.931 | 14.60 | 28.858 | 17.00 | 23.50 | PASS |
| 4 | 5240 | 10.25 | 8.7 | 10.11 | 10.593 | 7.413 | 10.257 | 14.51 | 28.263 | 17.00 | 23.50 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

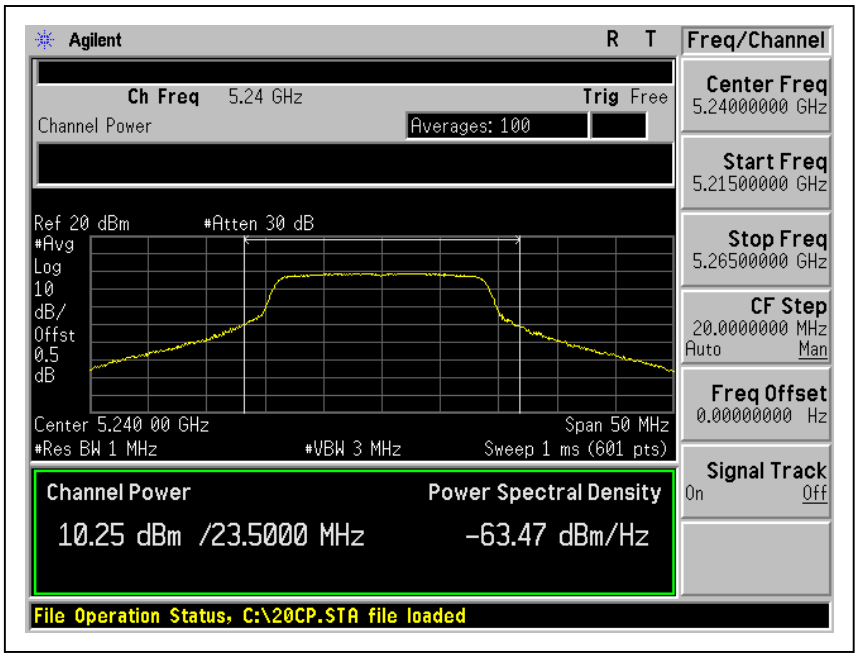
Peak Power Output:
For Chain (0) :CH1



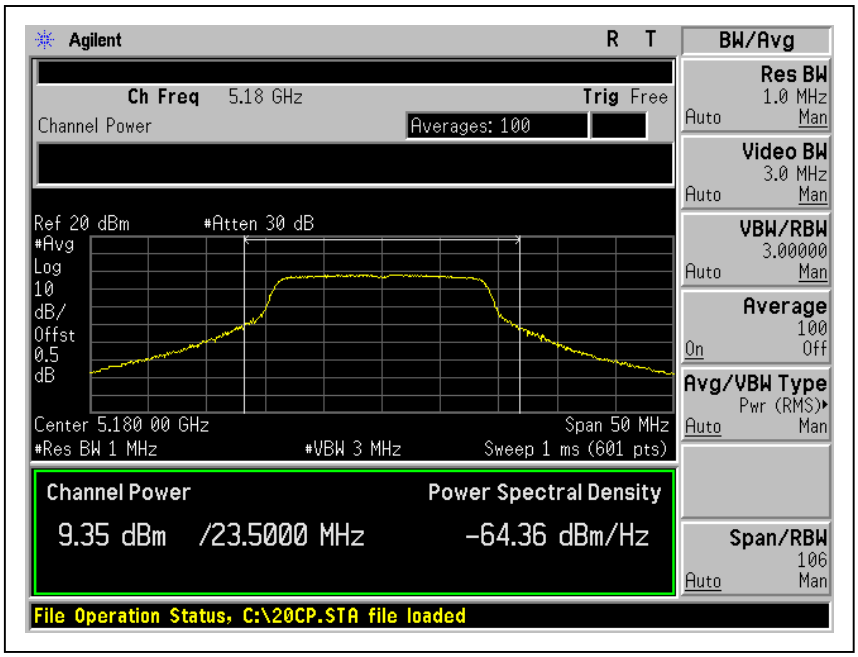

CH2



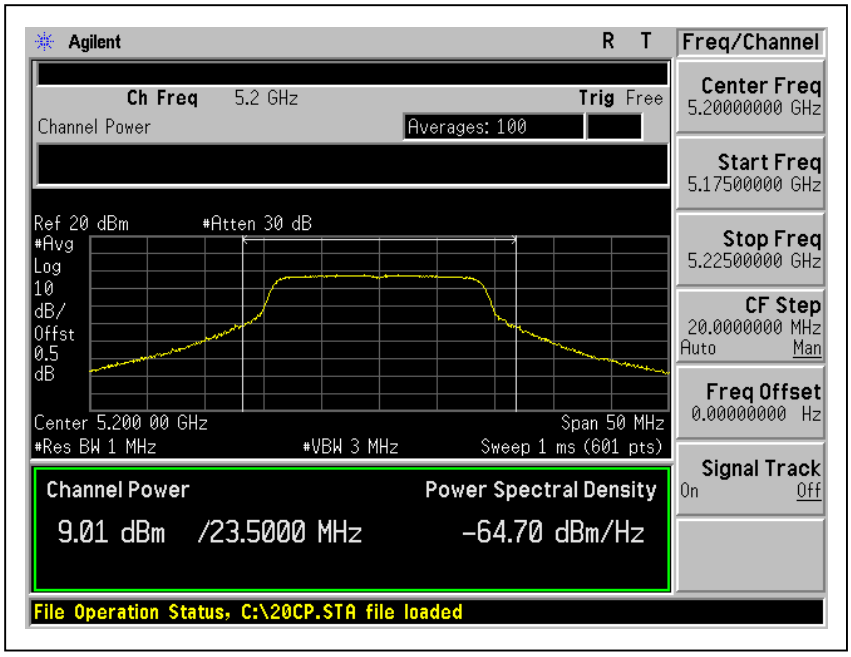
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.25 dBm /23.5000 MHz
Power Spectral Density
-63.47 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

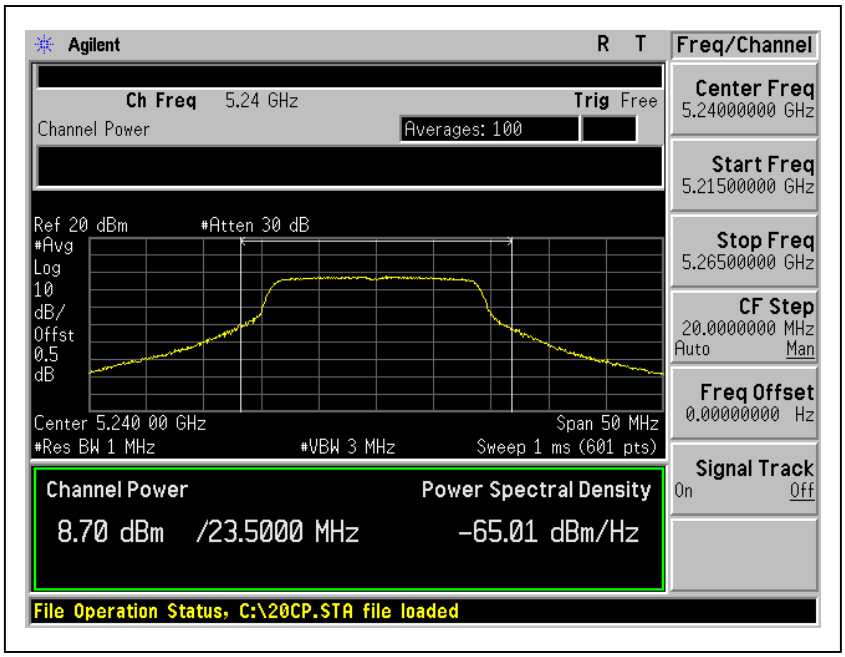
For Chain (1) :CH1



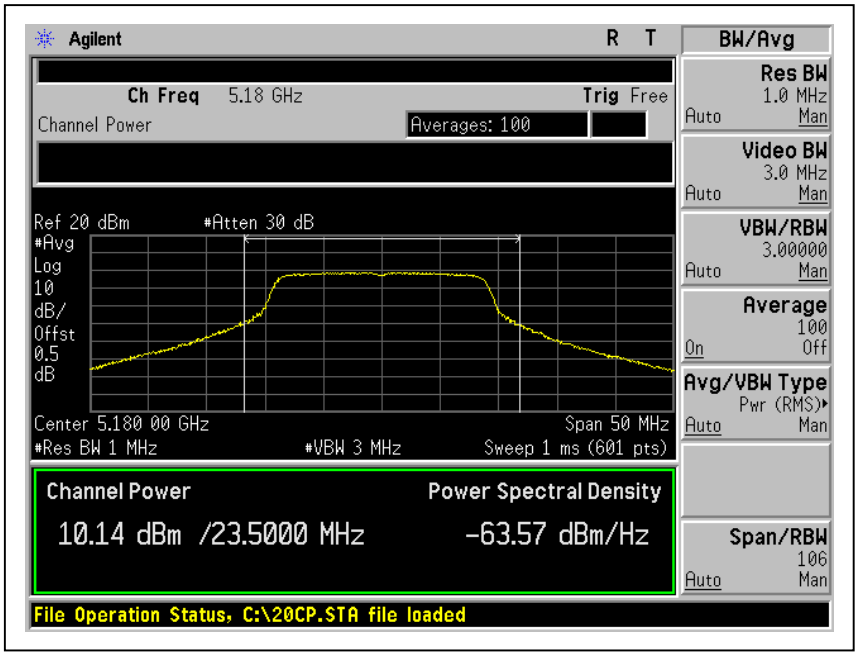

CH2



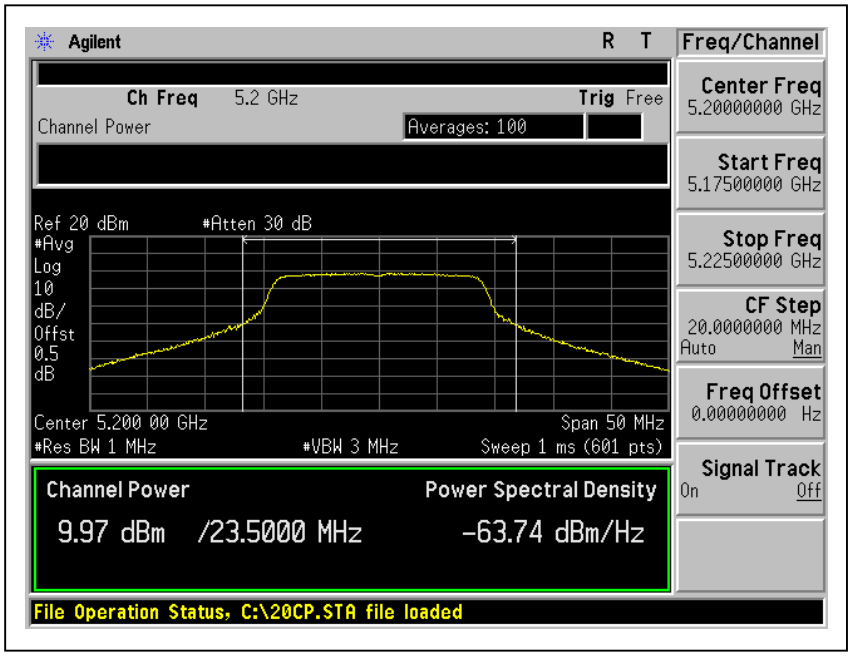
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
8.70 dBm /23.5000 MHz
Power Spectral Density
-65.01 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

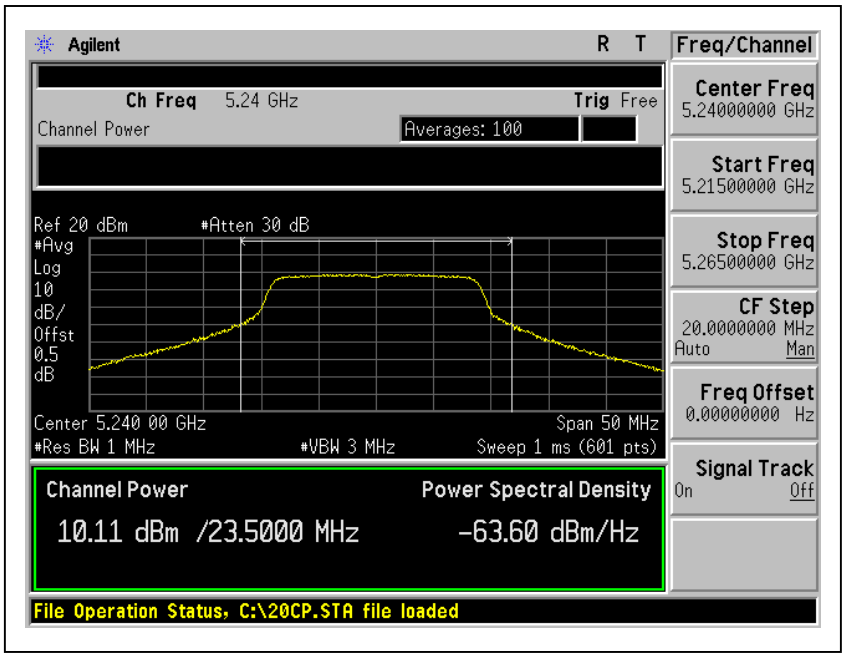
For Chain (2) **:**CH1



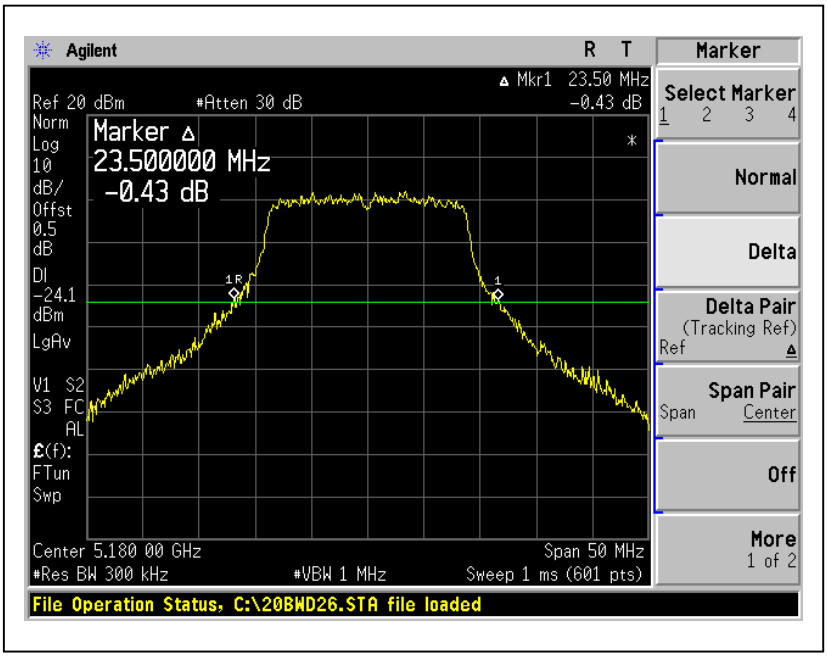

CH2



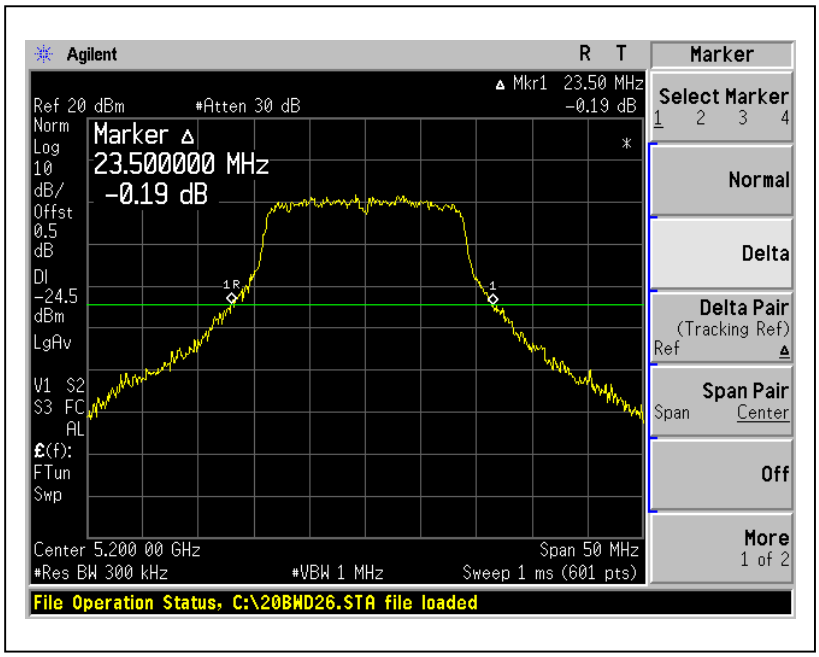
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.11 dBm /23.5000 MHz
Power Spectral Density
-63.60 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

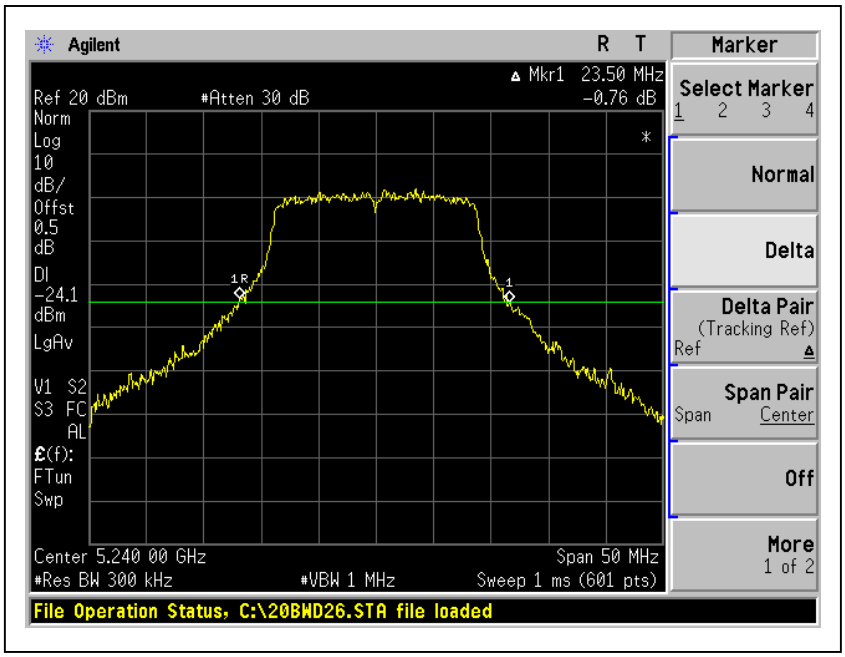
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R T
Marker
Mkr1 23.50 MHz
-0.76 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-24.1
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Center 5.240 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

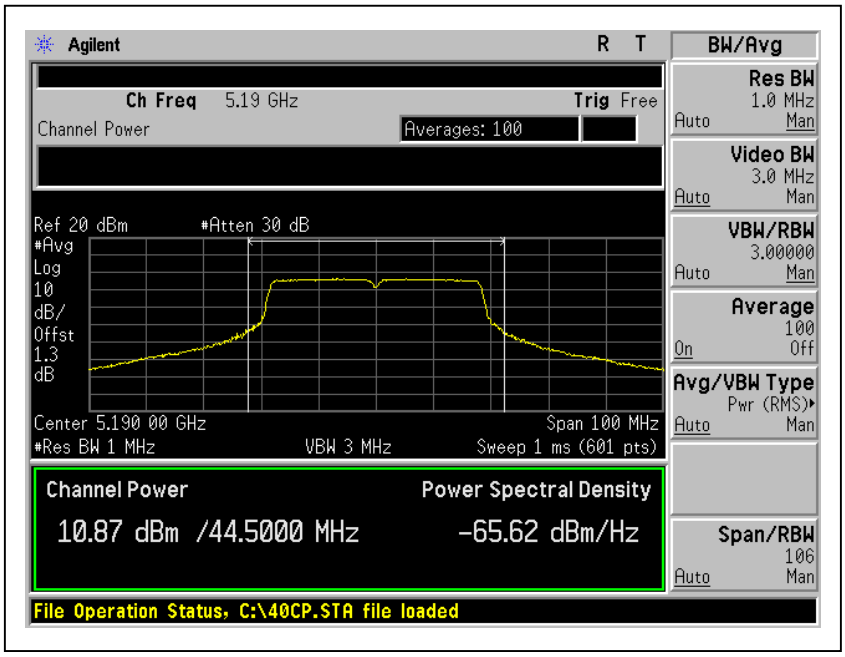
## DRAFT 802.11n (40MHz) OFDM MODULATION:

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 13.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

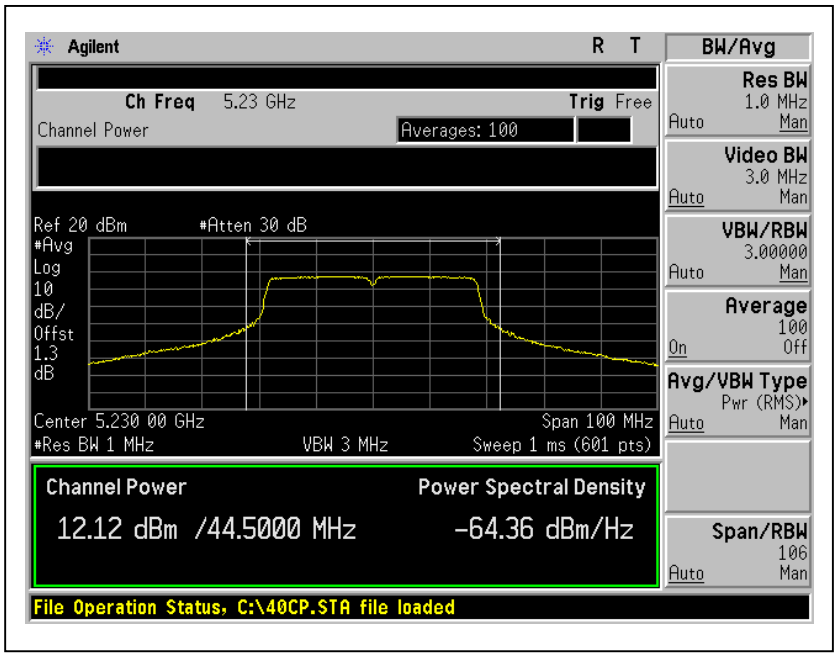
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5190 | 10.87 | 9.57 | 9.59 | 12.218 | 9.057 | 9.099 | 14.83 | 30.374 | 17.00 | 44.50 | PASS |
| 2 | 5230 | 12.12 | 11.46 | 12 | 16.293 | 13.996 | 15.849 | 16.64 | 46.138 | 17.00 | 44.50 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

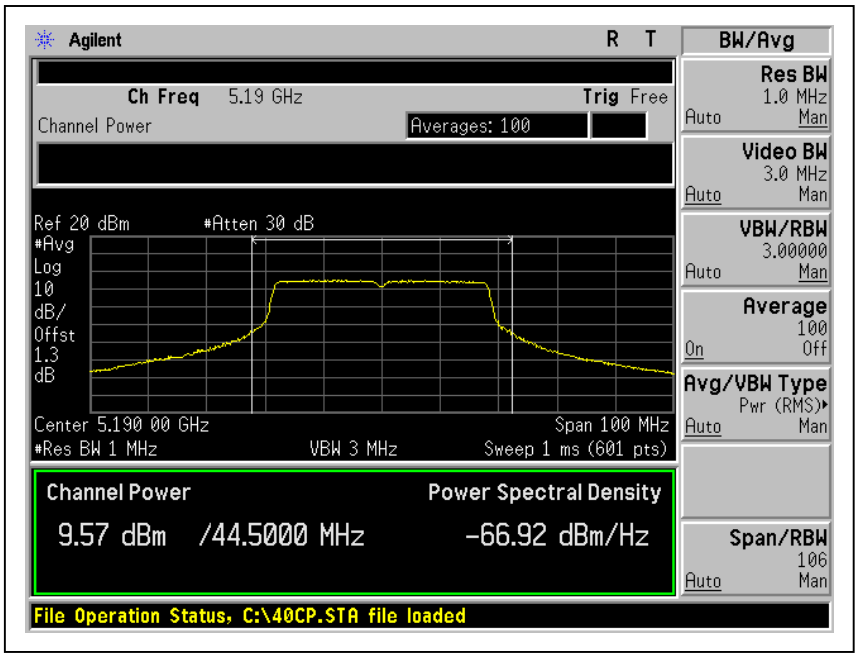
Peak Power Output:
For Chain (0) **:**CH1



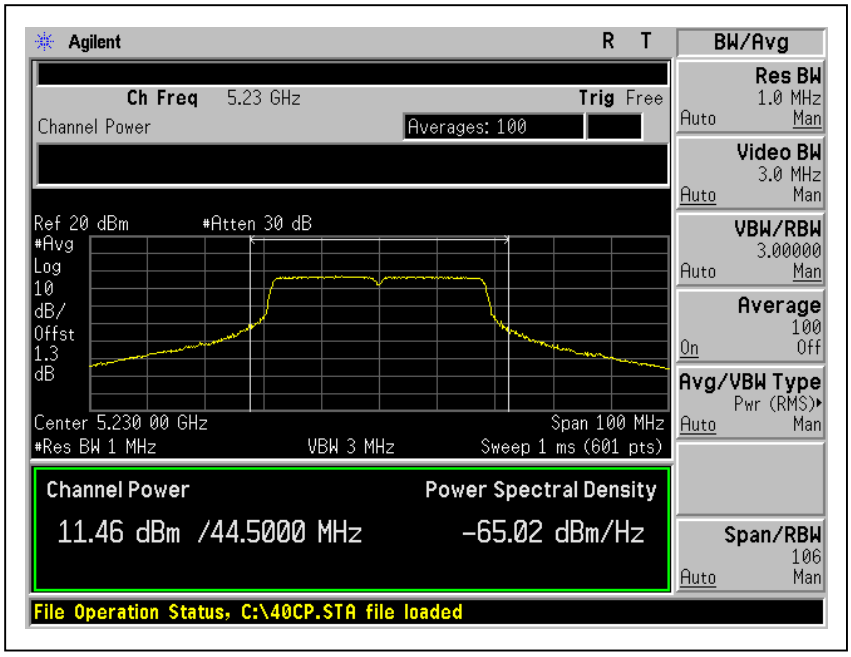

CH2



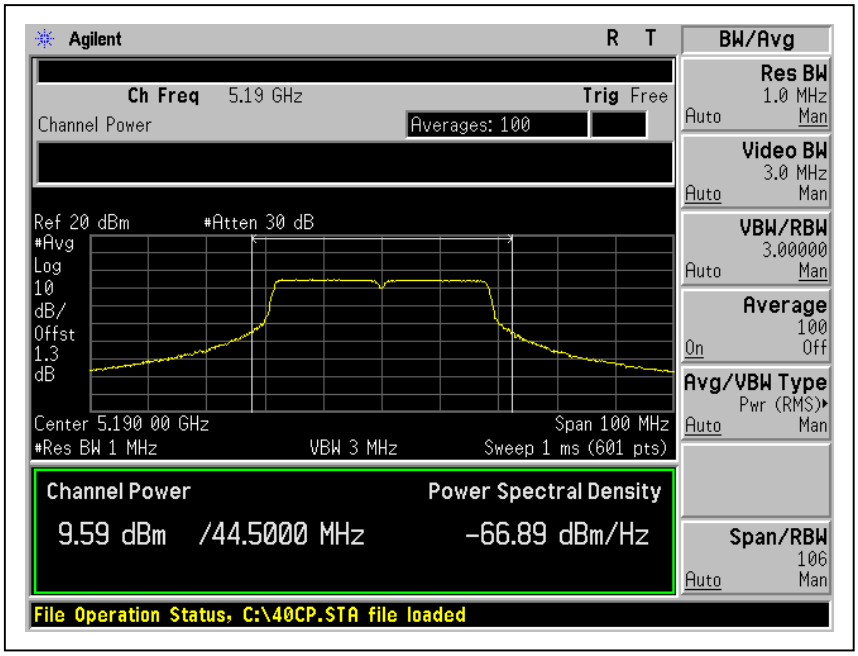
For Chain (1) **:**CH1



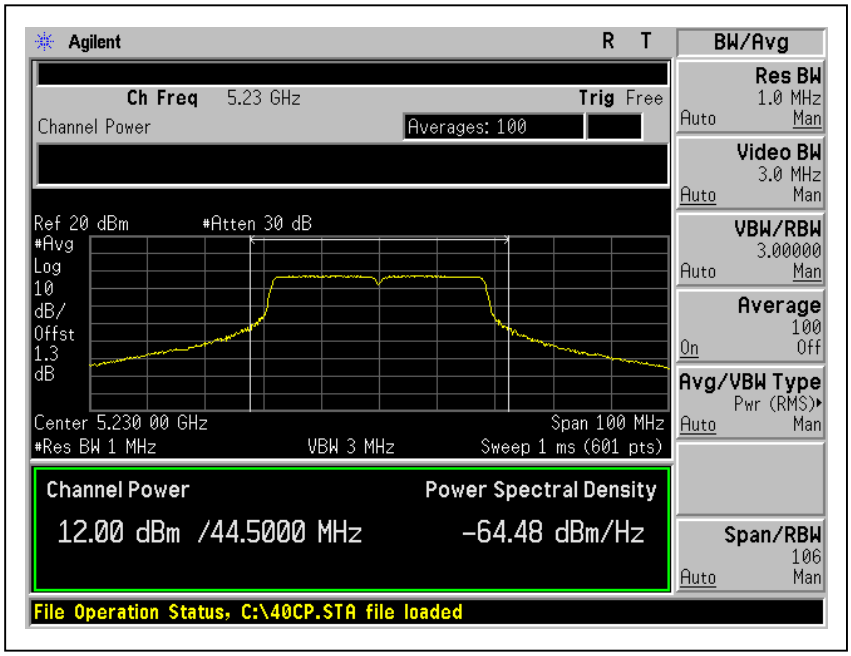

CH2



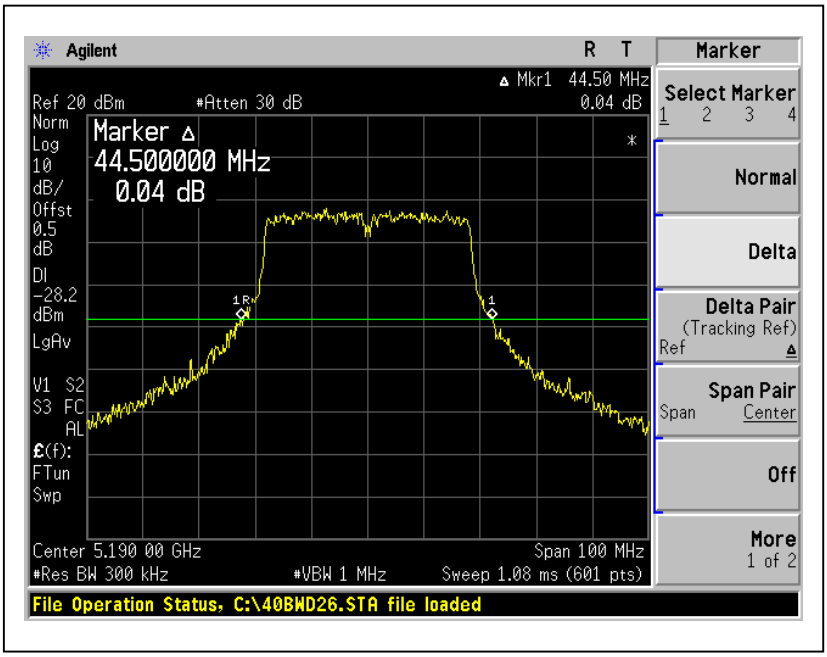
For Chain (2) **:**CH1



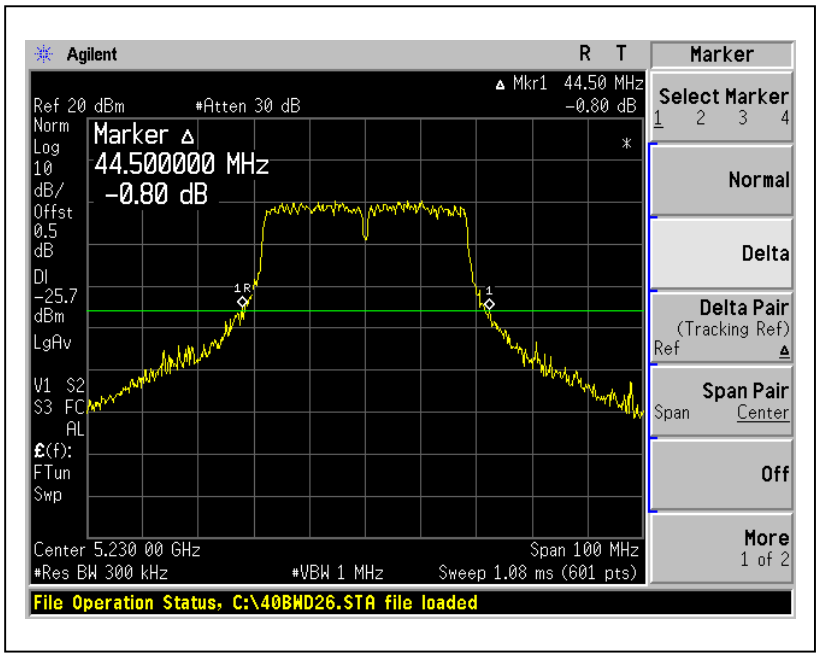

CH2



26dB Occupied Bandwidth:
CH1




CH2



## 4.3.8 TEST RESULTS – ANTENNA 5

**802.11a OFDM MODULATION:**

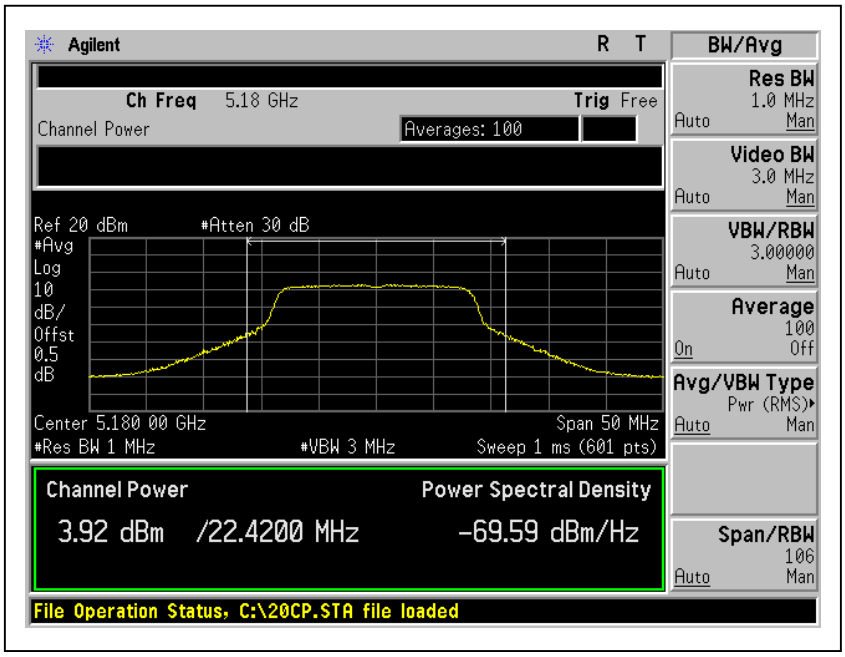
| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 3.92 | 1.4 | 2.79 | 2.466 | 1.380 | 1.901 | 7.59 | 5.747 | 10.00 | 22.42 | PASS |
| 2 | 5200 | 4.3 | 1.73 | 2.9 | 2.692 | 1.489 | 1.950 | 7.88 | 6.131 | 10.00 | 22.25 | PASS |
| 4 | 5240 | 4.07 | 1.75 | 3.22 | 2.553 | 1.496 | 2.099 | 7.89 | 6.148 | 10.00 | 22.00 | PASS |

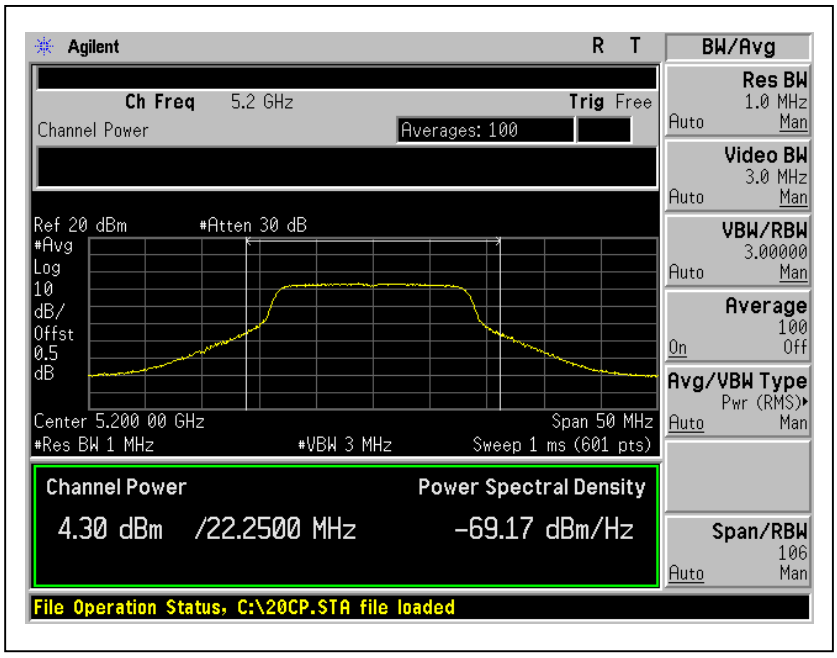
**NOTE:** 1. The 26dBc Occupied Bandwidth plot, please refer to the following pages.

2. Power limitation=17-(13-6) =10dBm (For non-point to point application).

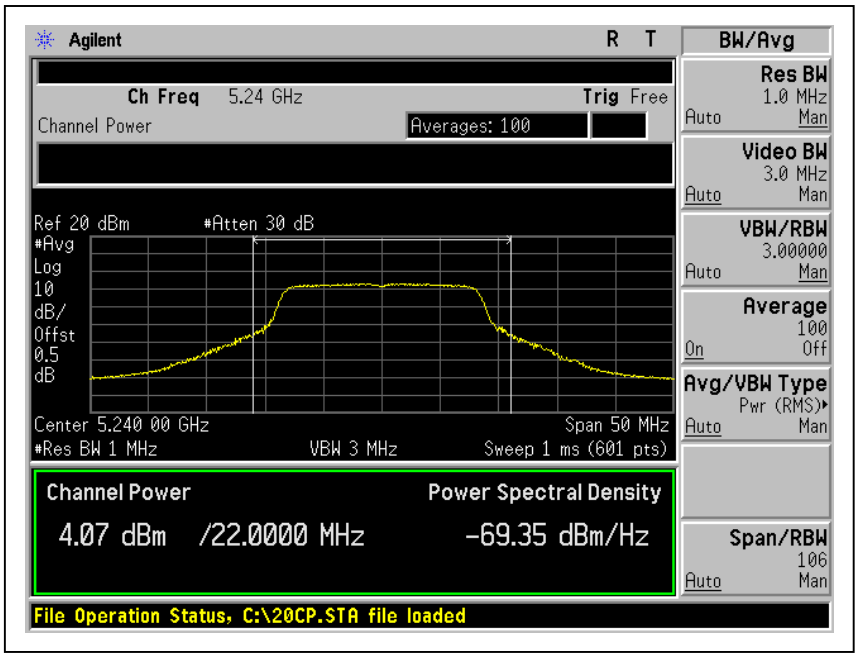
Peak Power Output:
For Chain (0) :CH1



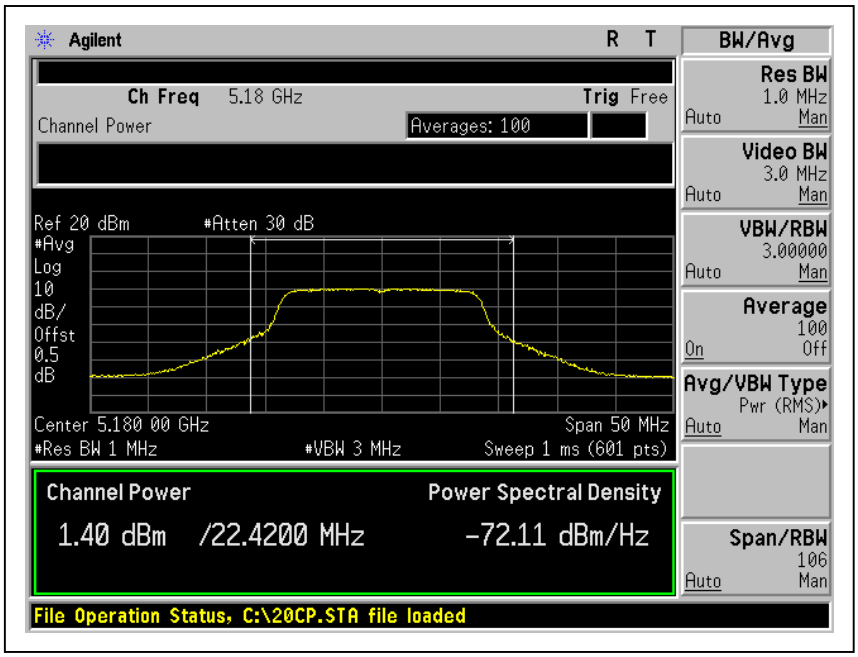

CH2



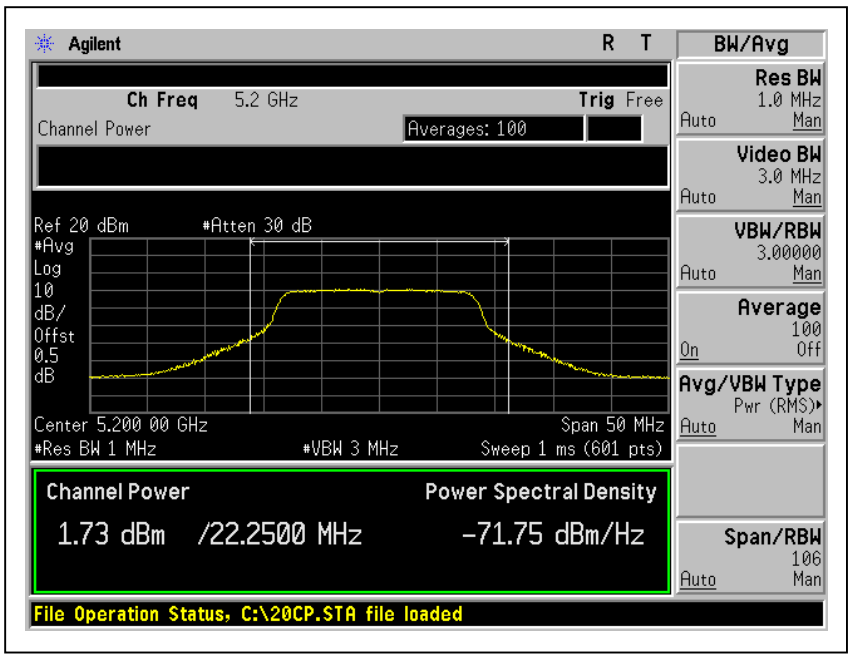
CH4


Agilent
R T
BW/Avg
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Res BW
1.0 MHz
Auto Man
Video BW
3.0 MHz
Auto Man
VBW/RBW
3.00000
Auto Man
Average
100
On Off
Avg/VBW Type
Pwr (RMS)
Auto Man
Span/RBW
106
Auto Man
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
4.07 dBm /22.0000 MHz
Power Spectral Density
-69.35 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

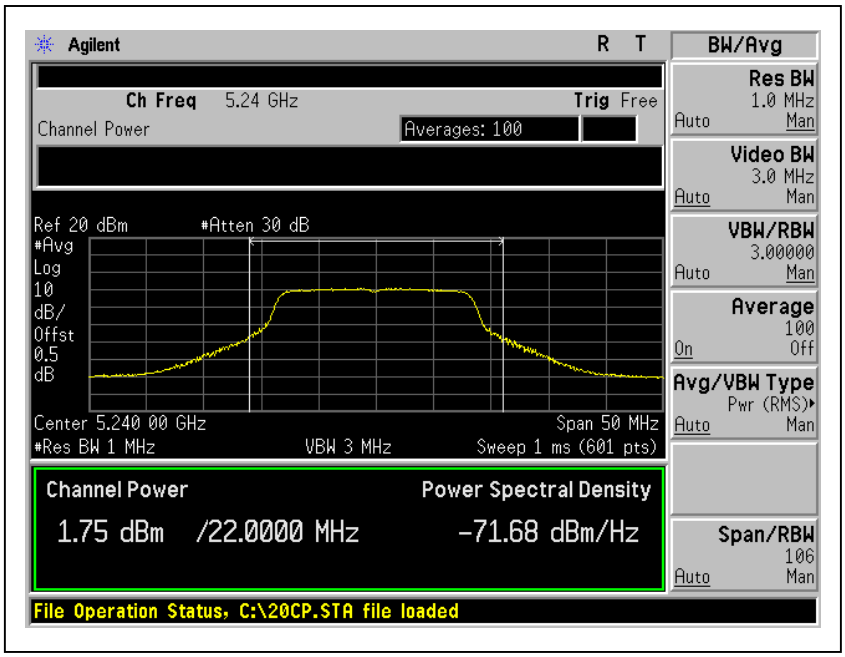
For Chain (1) :CH1



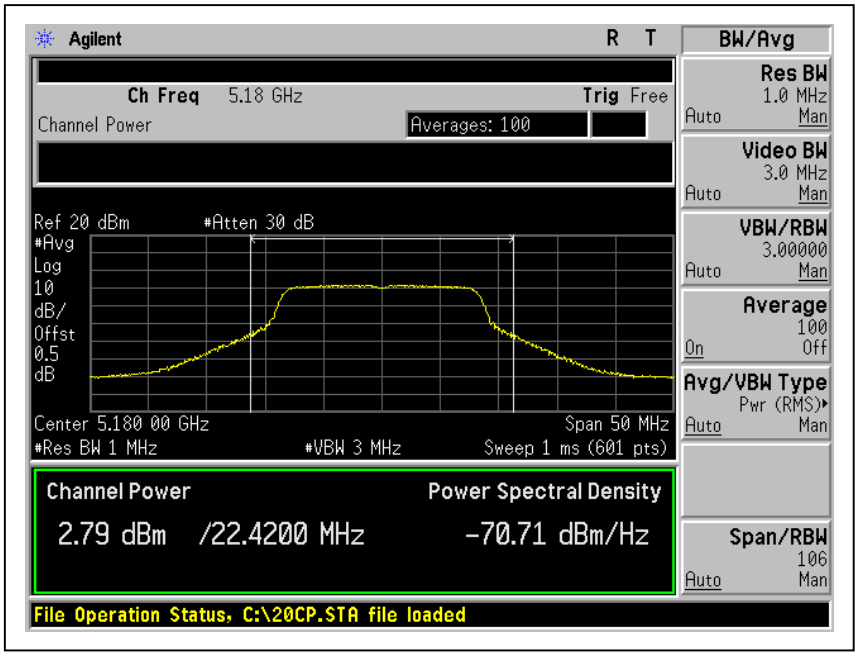

CH2



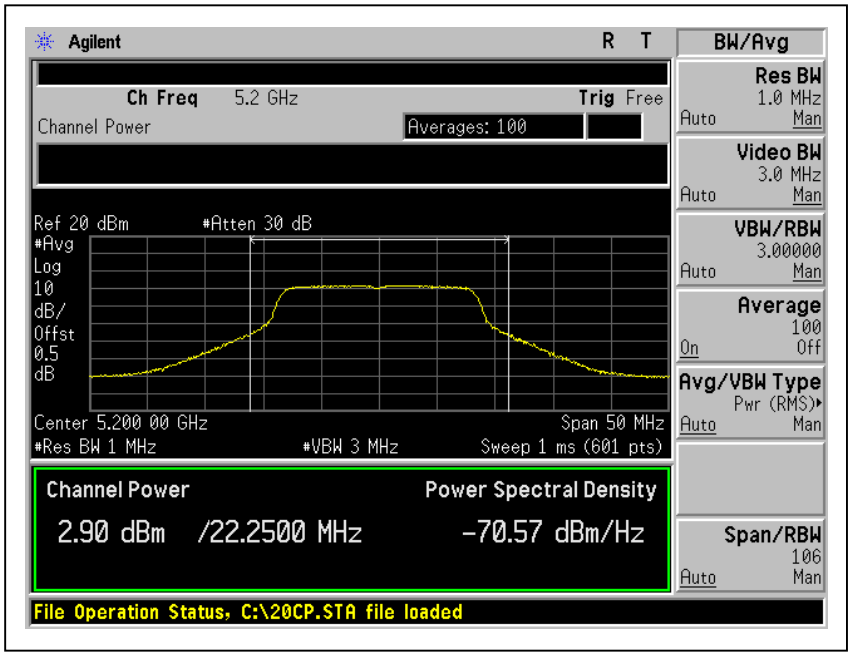
CH4


Agilent
R T
BW/Avg
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Res BW
1.0 MHz
Auto Man
Video BW
3.0 MHz
Auto Man
VBW/RBW
3.00000
Auto Man
Average
100
On Off
Avg/VBW Type
Pwr (RMS)
Auto Man
Span/RBW
106
Auto Man
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
1.75 dBm
/22.0000 MHz
Power Spectral Density
-71.68 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

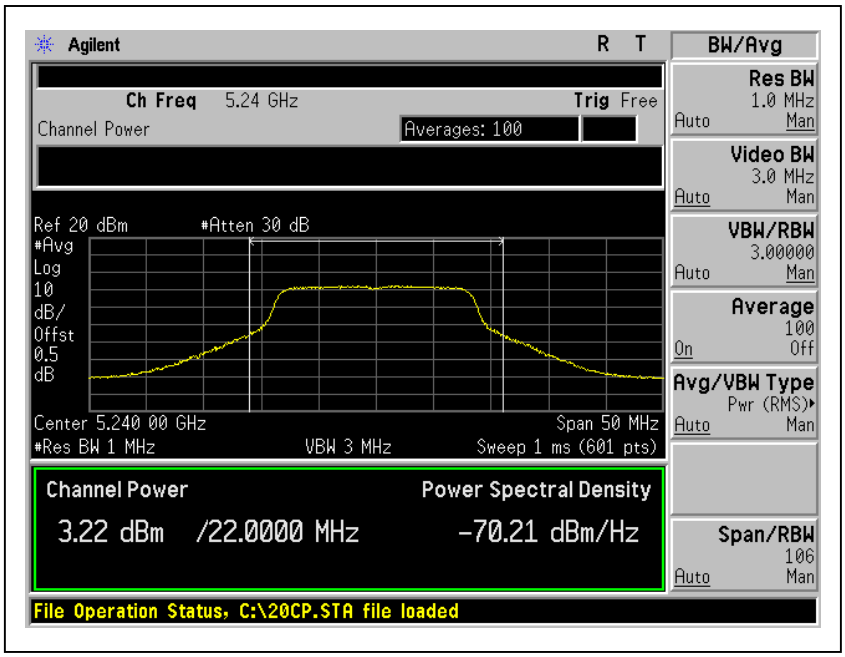
For Chain (2) **:**CH1



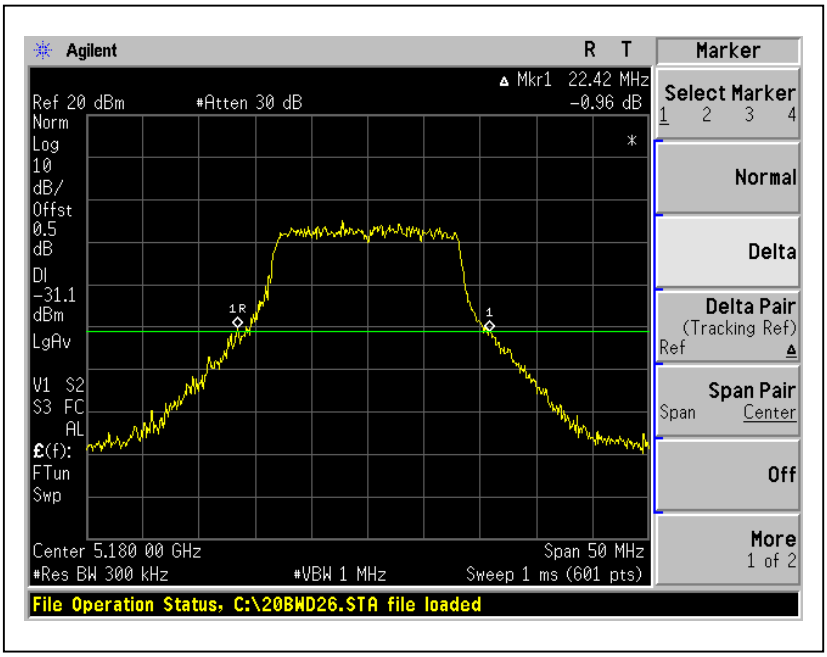

CH2



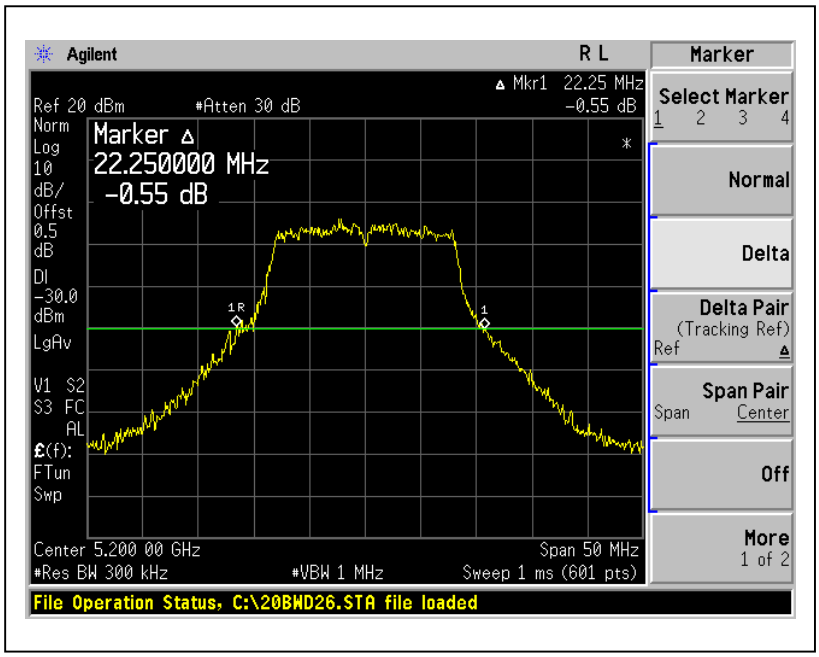
CH4


Agilent
R T
BW/Avg
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Res BW
1.0 MHz
Auto Man
Video BW
3.0 MHz
Auto Man
VBW/RBW
3.00000
Auto Man
Average
100
On Off
Avg/VBW Type
Pwr (RMS)
Auto Man
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
Power Spectral Density
3.22 dBm /22.0000 MHz
-70.21 dBm/Hz
Span/RBW
106
Auto Man
File Operation Status, C:\20CP.STA file loaded

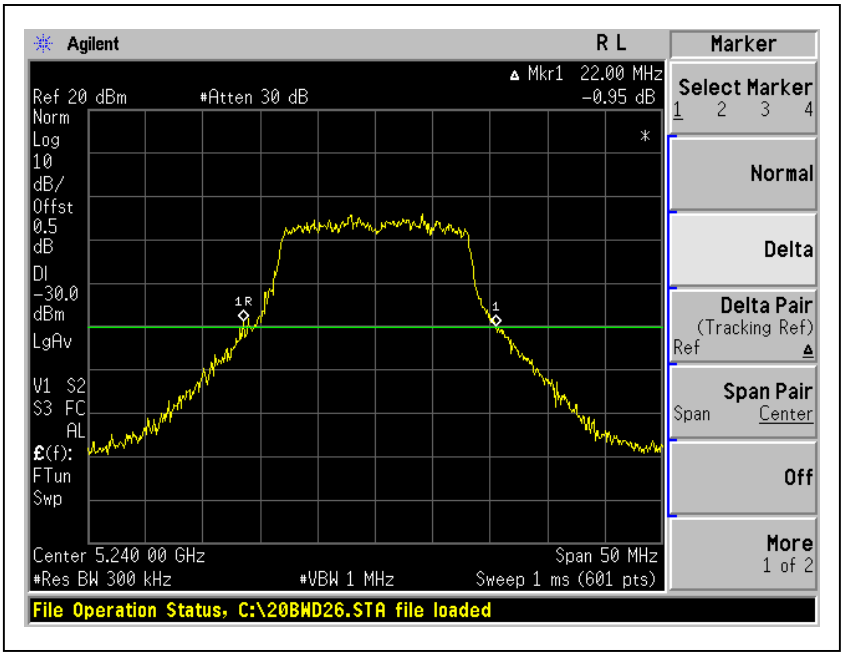
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R L
Marker
Mkr1 22.00 MHz
-0.95 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-30.0
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Center 5.240 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

## DRAFT 802.11n (20MHz) OFDM modulation:

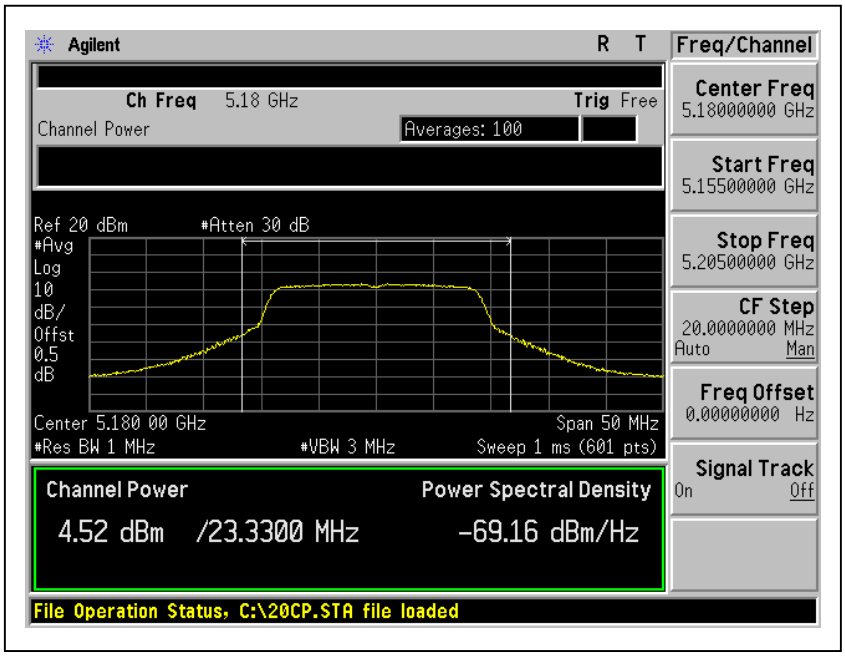
| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 4.52 | 2.53 | 3.75 | 2.831 | 1.791 | 2.371 | 8.45 | 6.993 | 10.00 | 23.33 | PASS |
| 2 | 5200 | 3.76 | 2.18 | 2.79 | 2.377 | 1.652 | 1.901 | 7.73 | 5.930 | 10.00 | 23.00 | PASS |
| 4 | 5240 | 3.55 | 2.23 | 2.56 | 2.265 | 1.671 | 1.803 | 7.59 | 5.739 | 10.00 | 23.17 | PASS |

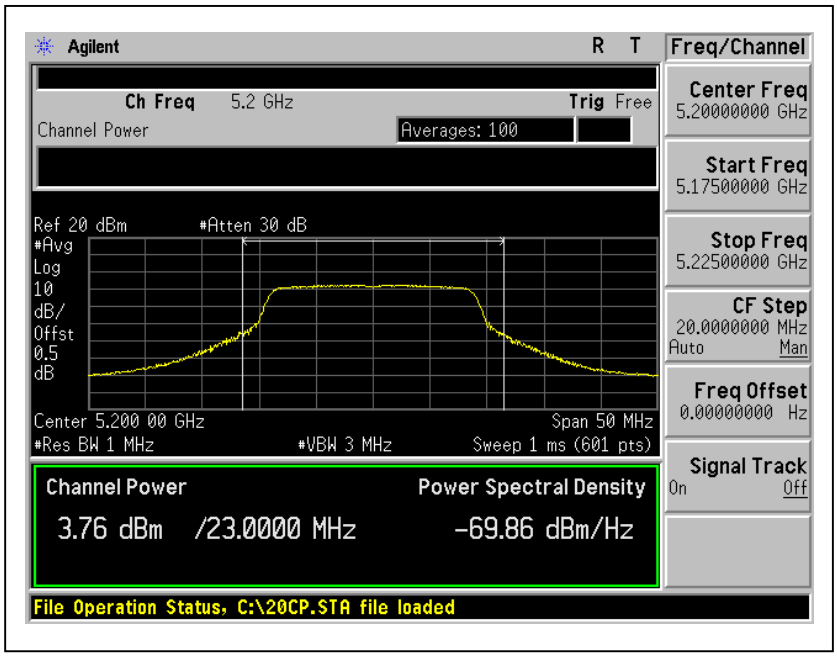
**NOTE:** 1. The 26dBc Occupied Bandwidth plot, please refer to the following pages.

2. Power limitation=17-(13-6) =10dBm (For non-point to point application).

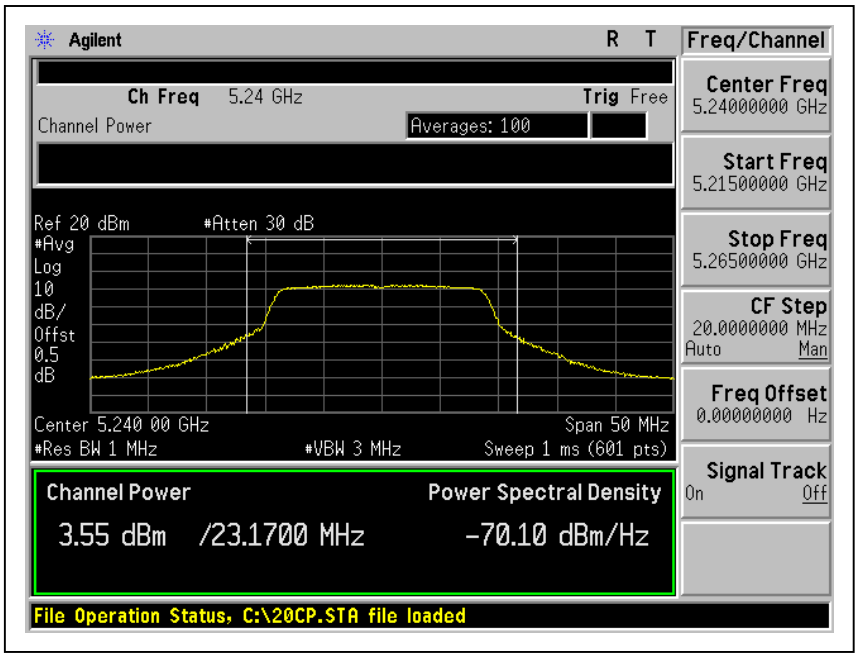
Peak Power Output:
For Chain (0) :CH1



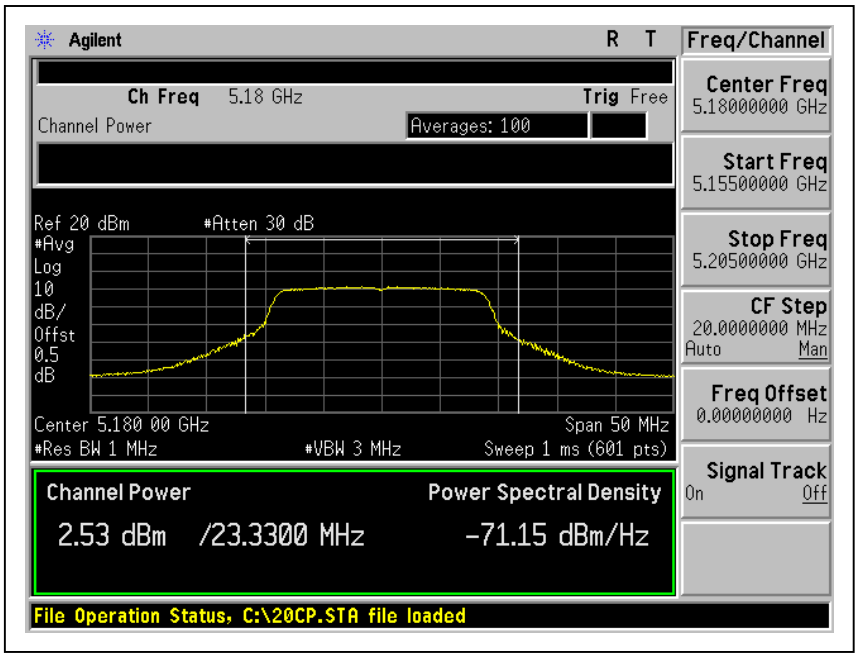

CH2



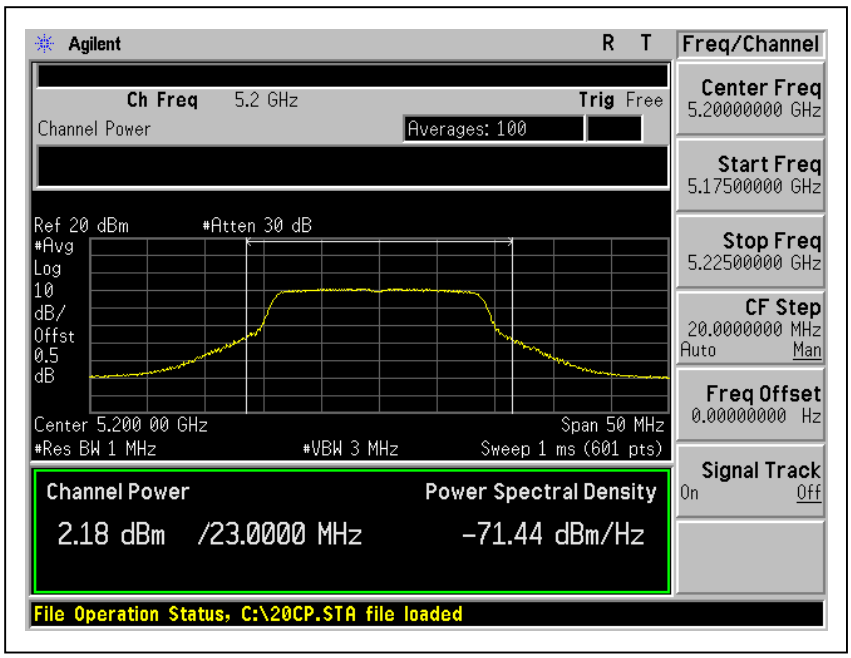
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
3.55 dBm /23.1700 MHz
Power Spectral Density
-70.10 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

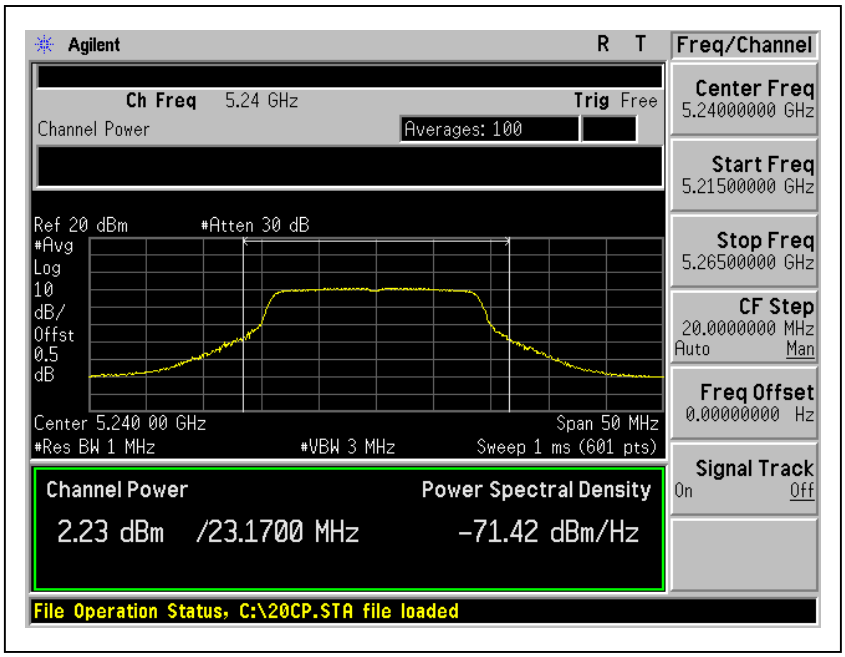
For Chain (1) :CH1



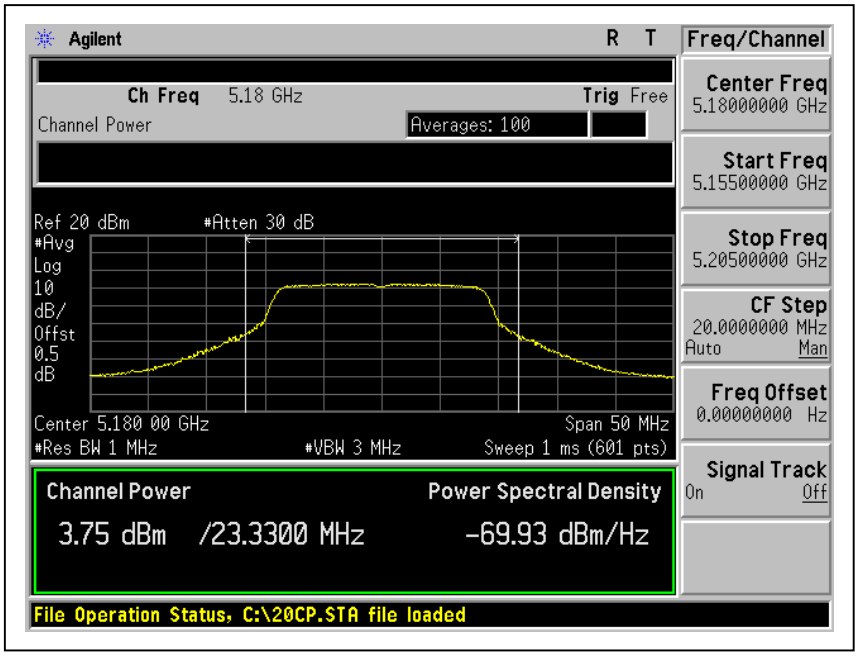

CH2



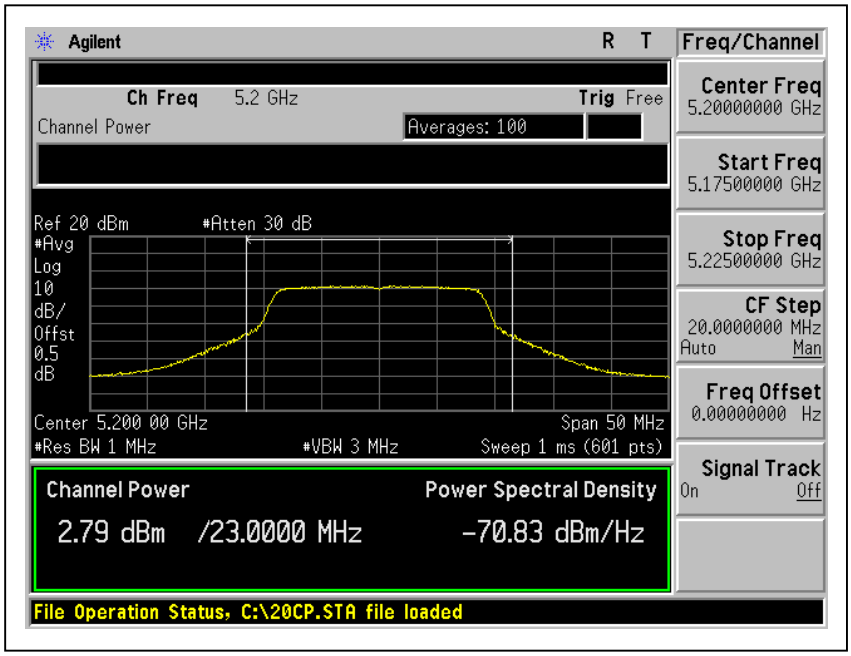
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
2.23 dBm /23.1700 MHz
Power Spectral Density
-71.42 dBm/Hz
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\20CP.STA file loaded

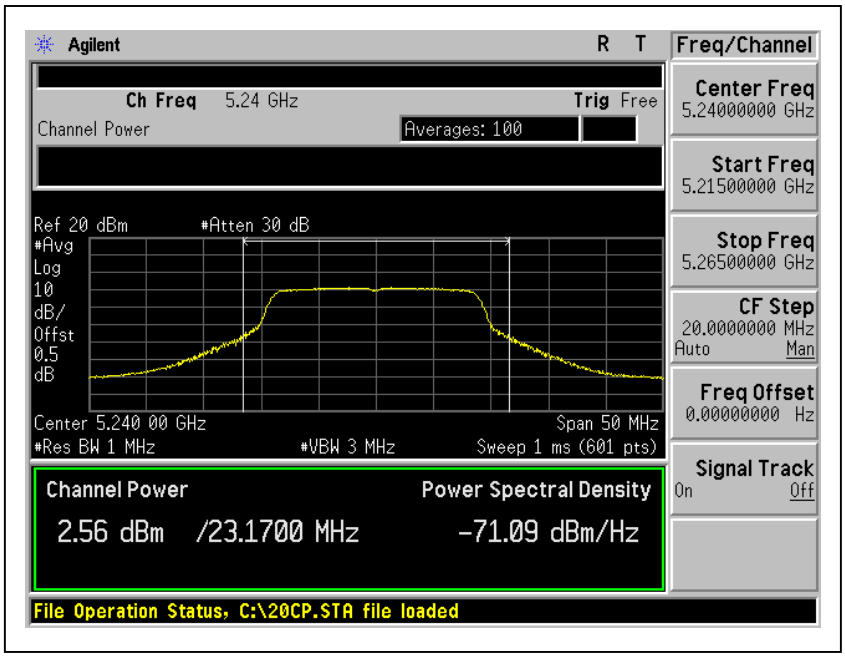
For Chain (2) **:**CH1



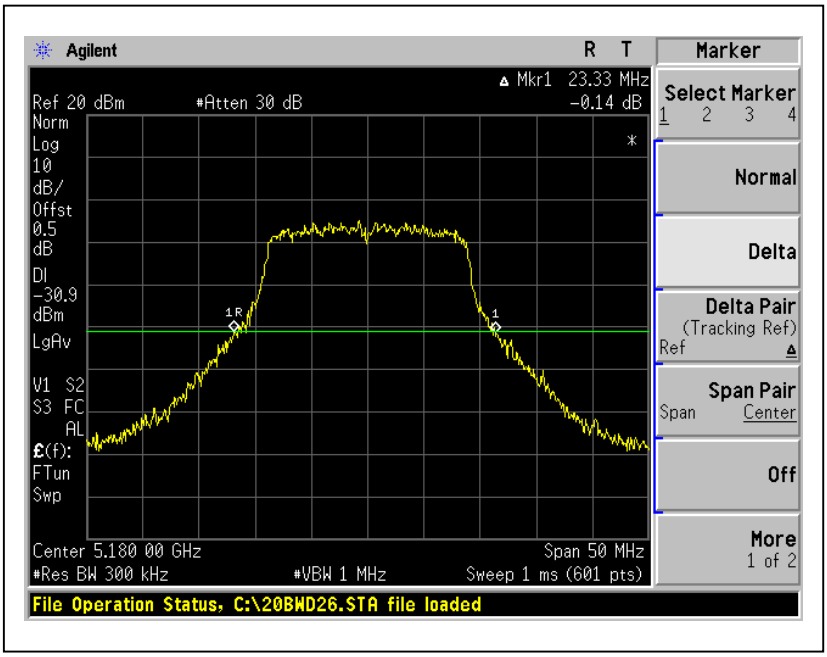

CH2



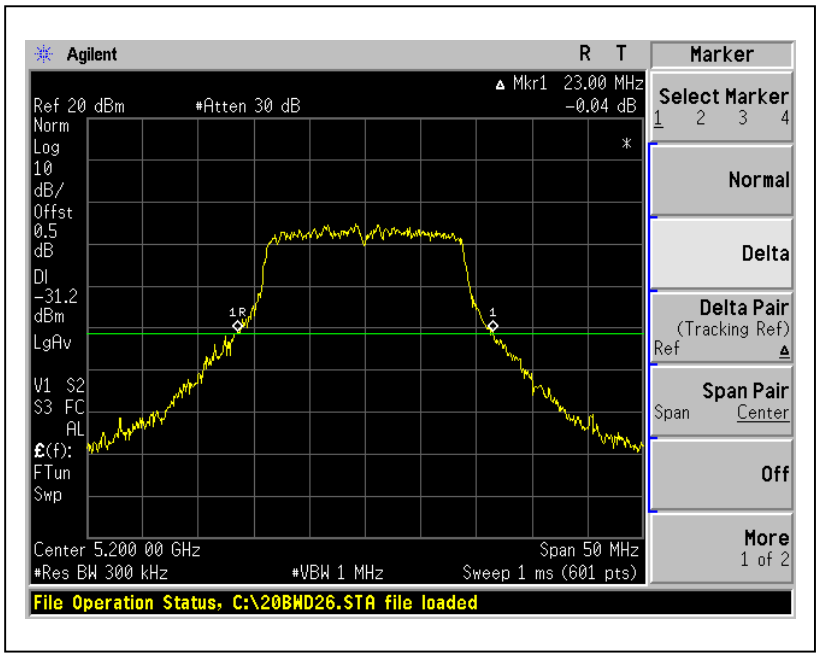
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
2.56 dBm /23.1700 MHz
Power Spectral Density
-71.09 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

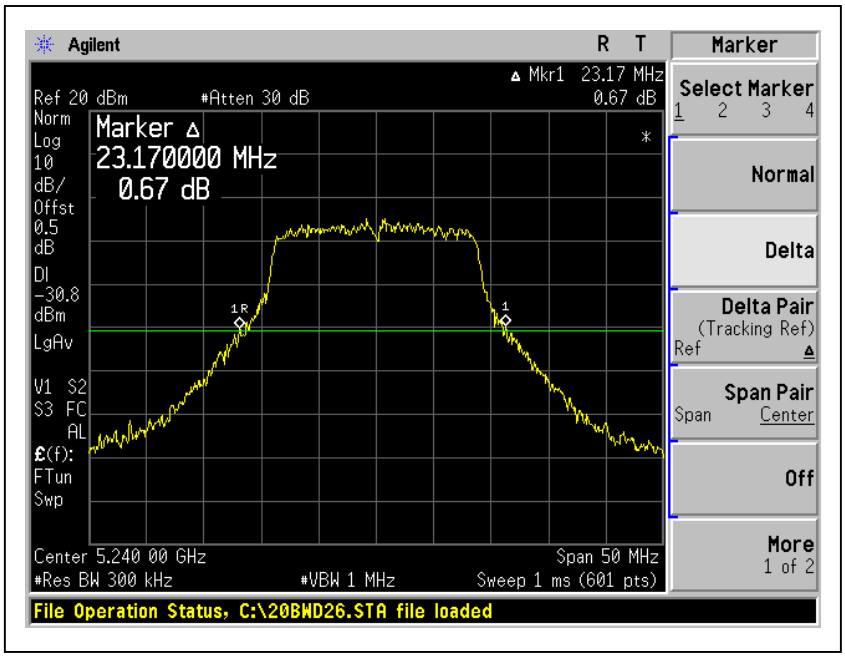
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R T
Marker
Mkr1 23.17 MHz
0.67 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-30.8
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Marker Δ
23.170000 MHz
0.67 dB
1R
1
Center 5.240 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

## DRAFT 802.11n (40MHz) OFDM MODULATION:

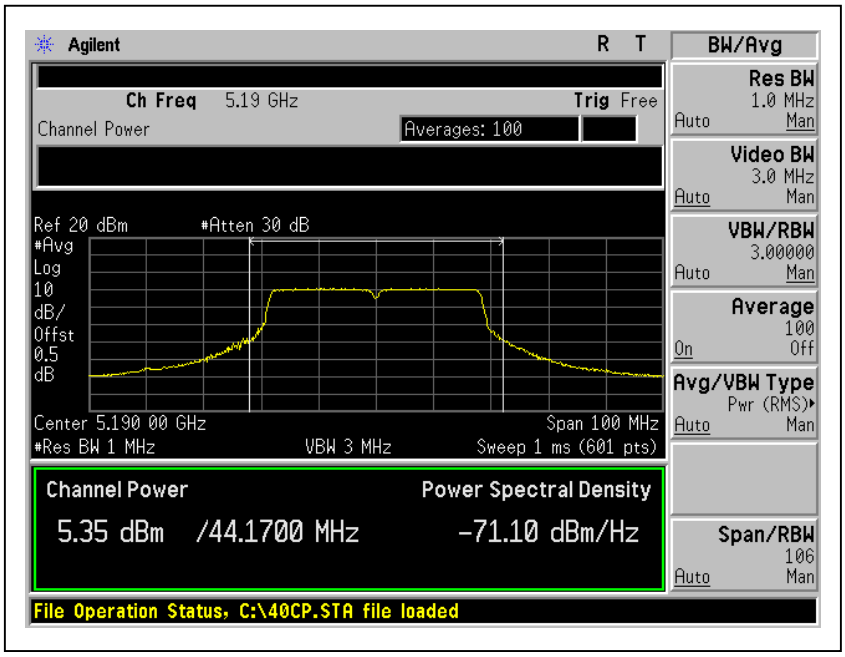
| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 13.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5190 | 5.35 | 4.19 | 4.91 | 3.428 | 2.624 | 3.097 | 9.61 | 9.149 | 10.00 | 44.17 | PASS |
| 2 | 5230 | 5.35 | 4.18 | 5.09 | 3.428 | 2.618 | 3.228 | 9.67 | 9.274 | 10.00 | 44.17 | PASS |

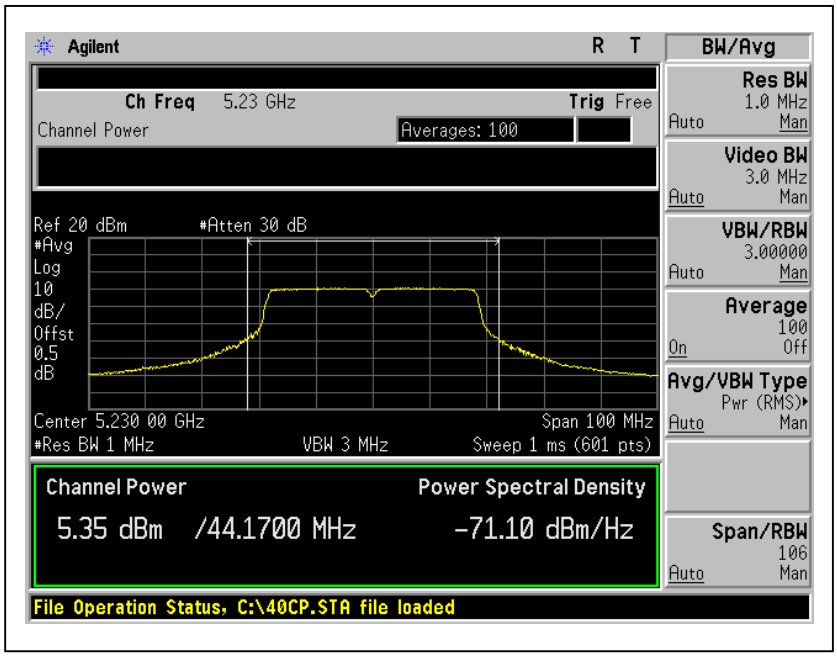
**NOTE:** 1. The 26dBc Occupied Bandwidth plot, please refer to the following pages.

2. Power limitation=17-(13-6) =10dBm (For non-point to point application).

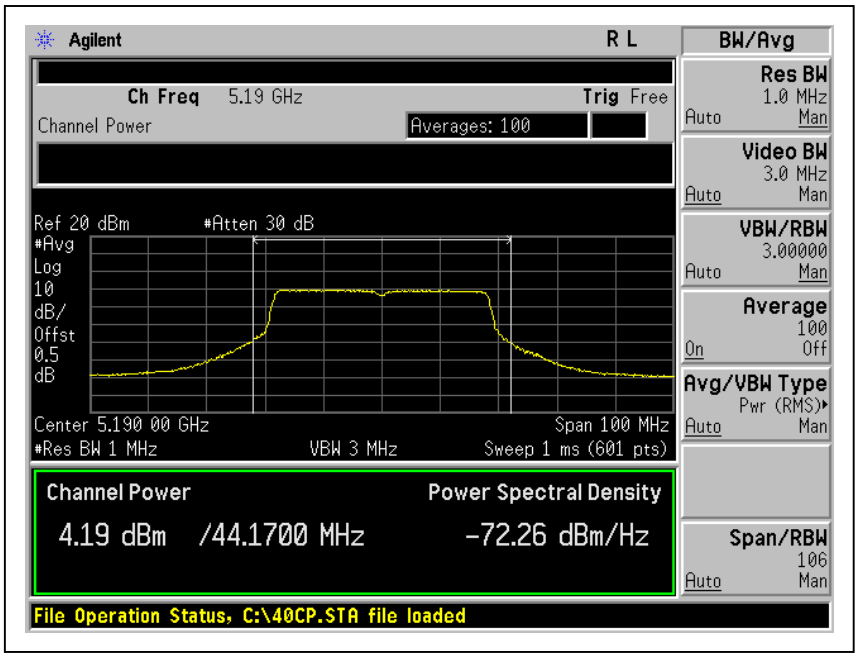
Peak Power Output:
For Chain (0) :CH1



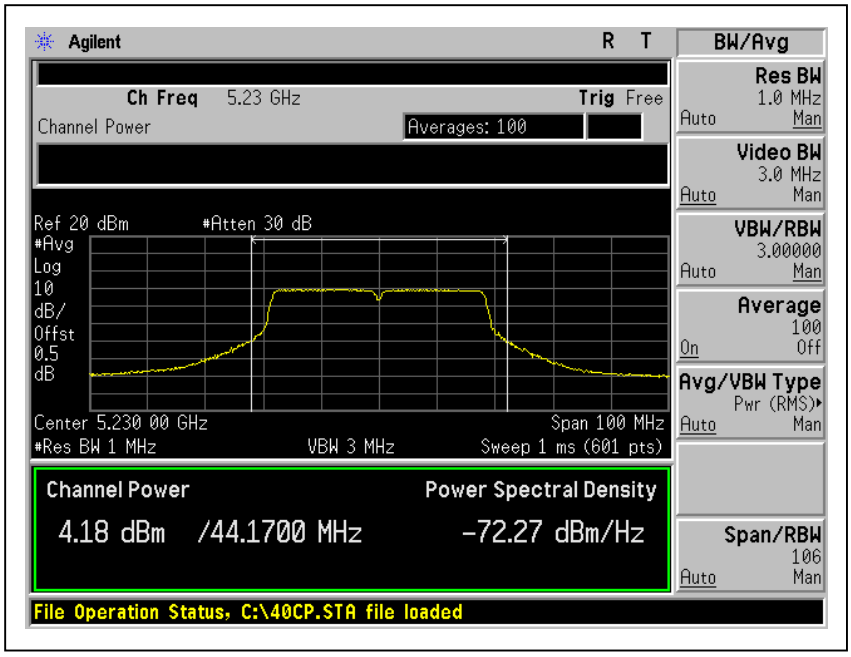

CH2



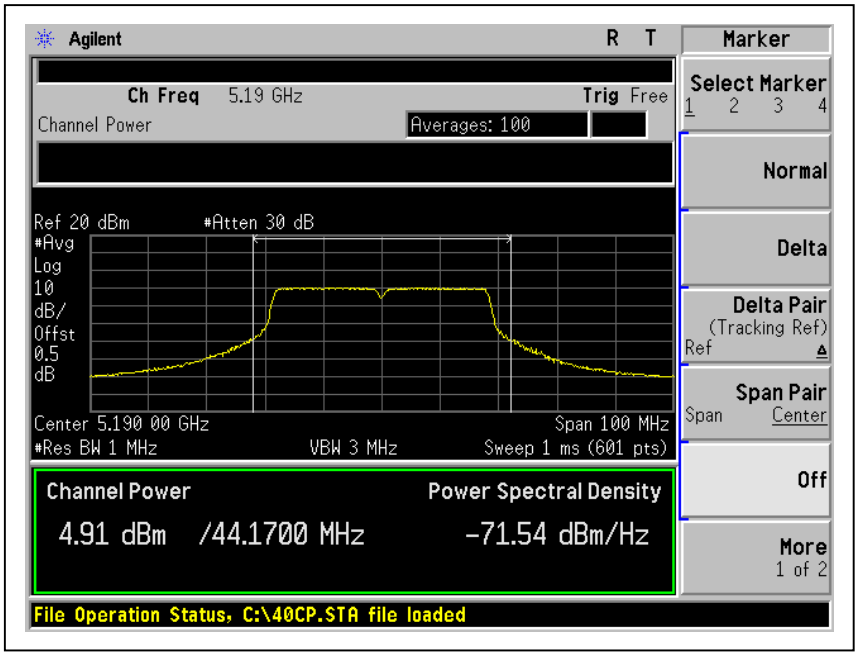
For Chain (1) :CH1



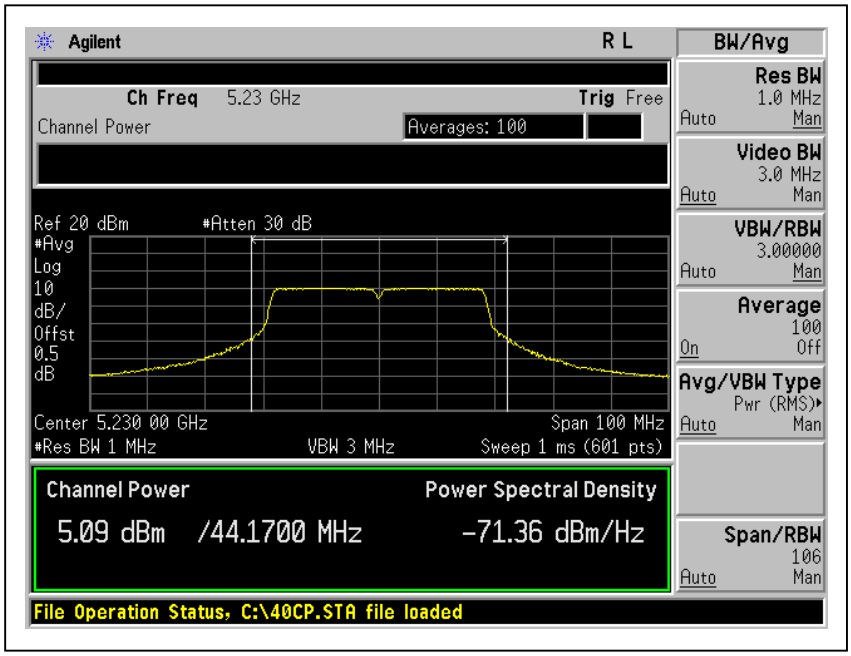

CH2



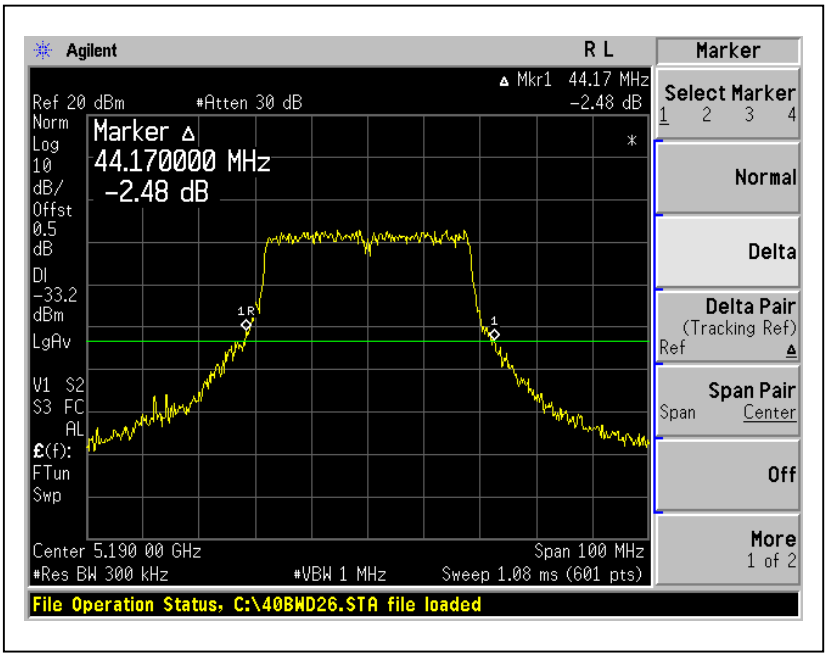
For Chain (2) **:**CH1



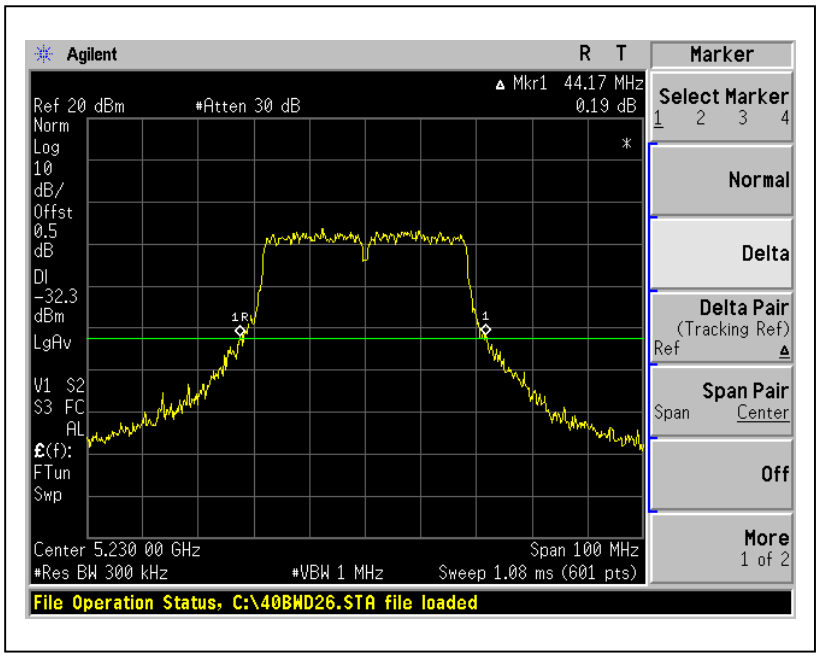

CH2



26dB Occupied Bandwidth:
CH1




CH2



## 4.3.9 TEST RESULTS – ANTENNA 7

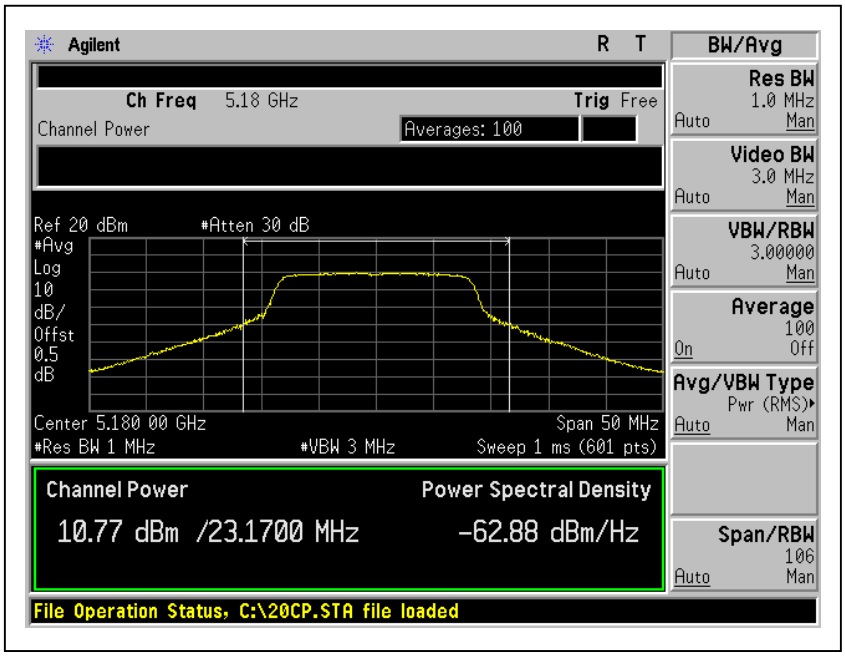
**802.11a OFDM MODULATION:**

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

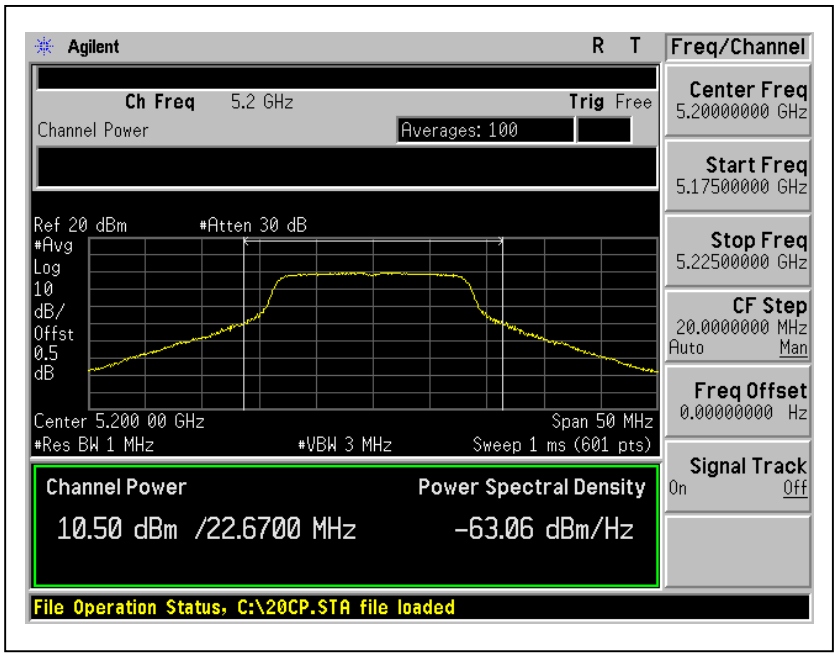
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 10.77 | 9.43 | 10.12 | 11.940 | 8.770 | 10.280 | 14.91 | 30.990 | 17.00 | 23.17 | PASS |
| 2 | 5200 | 10.5 | 9.18 | 10.04 | 11.220 | 8.279 | 10.093 | 14.71 | 29.592 | 17.00 | 22.67 | PASS |
| 4 | 5240 | 10.66 | 9.43 | 10.16 | 11.641 | 8.770 | 10.375 | 14.88 | 30.786 | 17.00 | 22.33 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

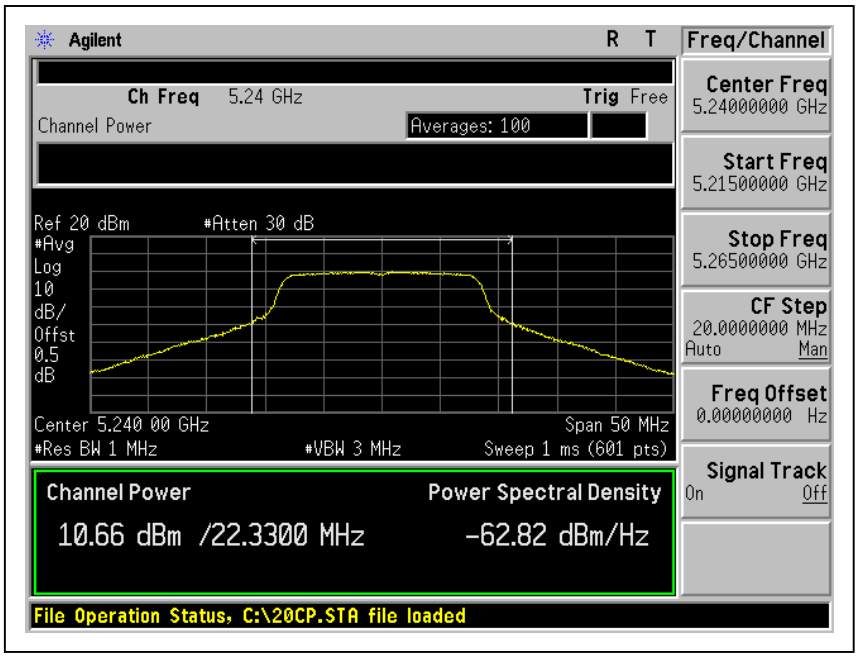
Peak Power Output:
For Chain (0) :CH1



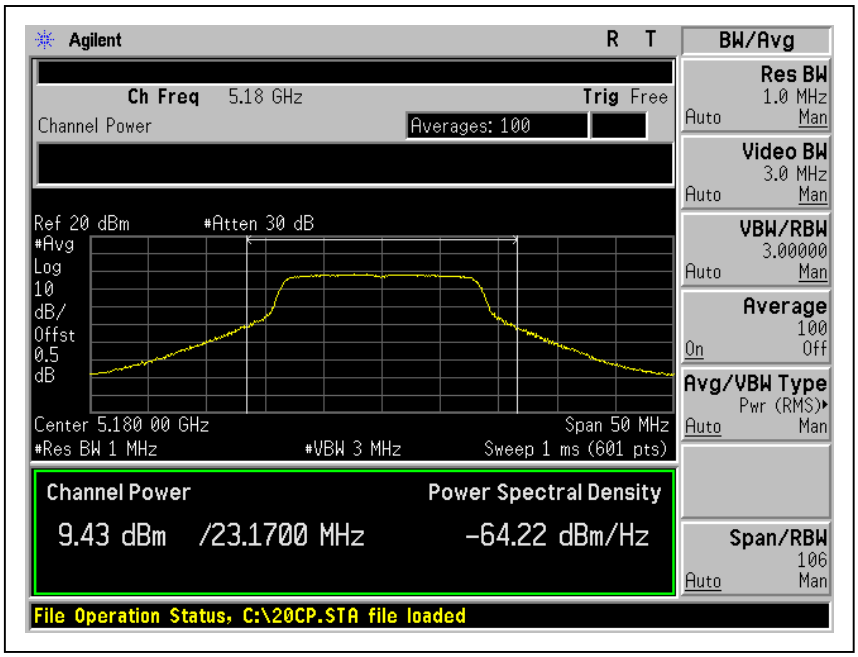

CH2



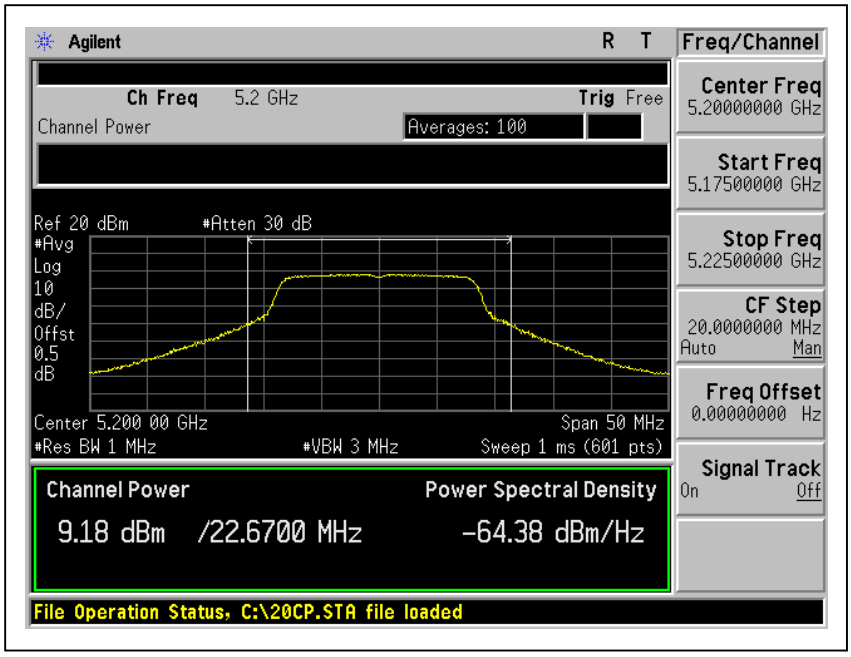
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.66 dBm /22.3300 MHz
Power Spectral Density
-62.82 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

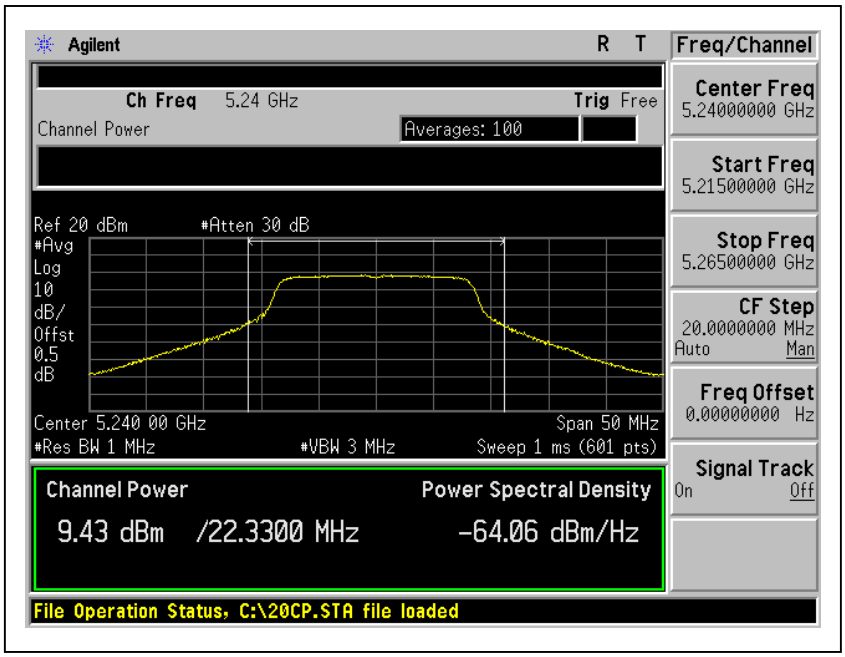
For Chain (1) :CH1



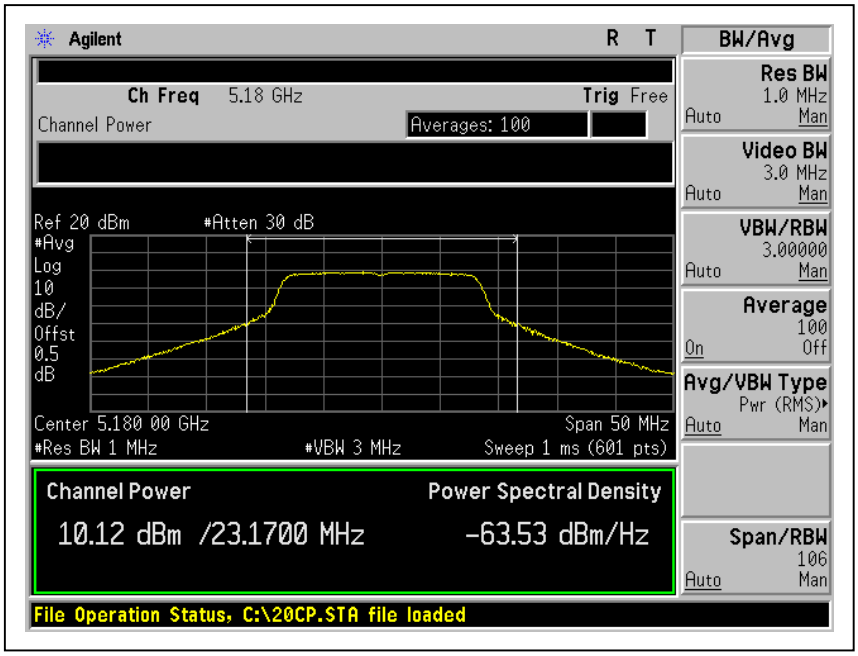

CH2



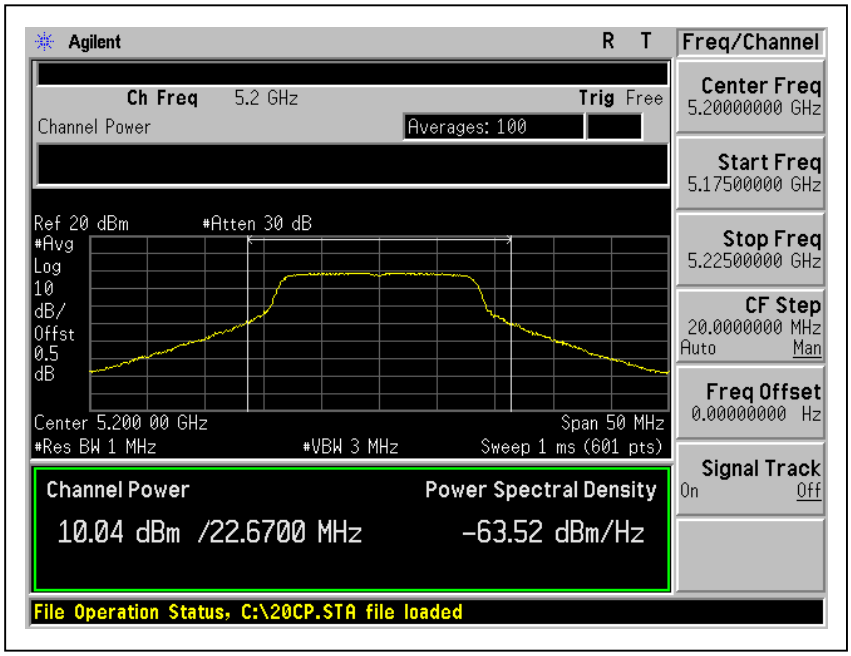
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
9.43 dBm /22.3300 MHz
Power Spectral Density
-64.06 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

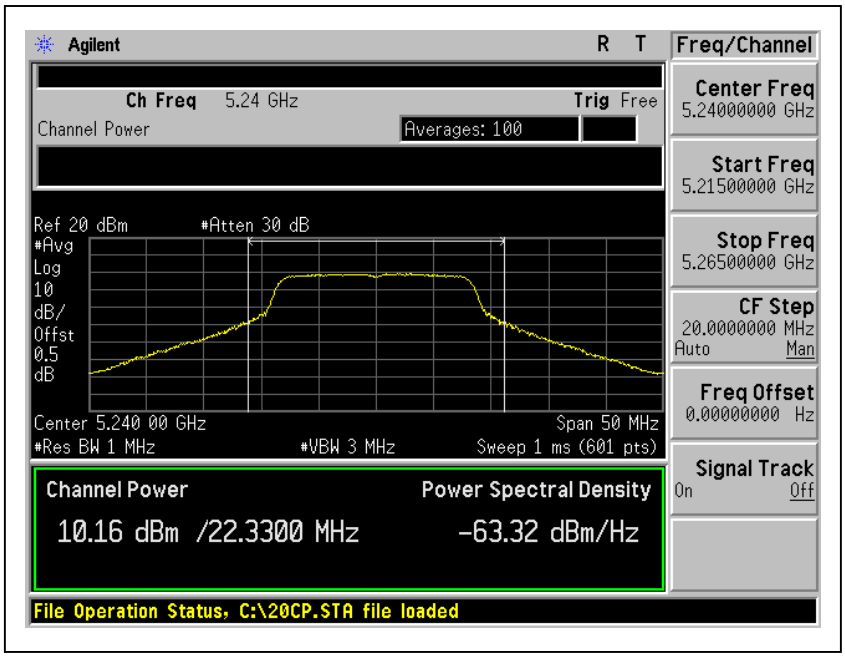
For Chain (2) **:**CH1



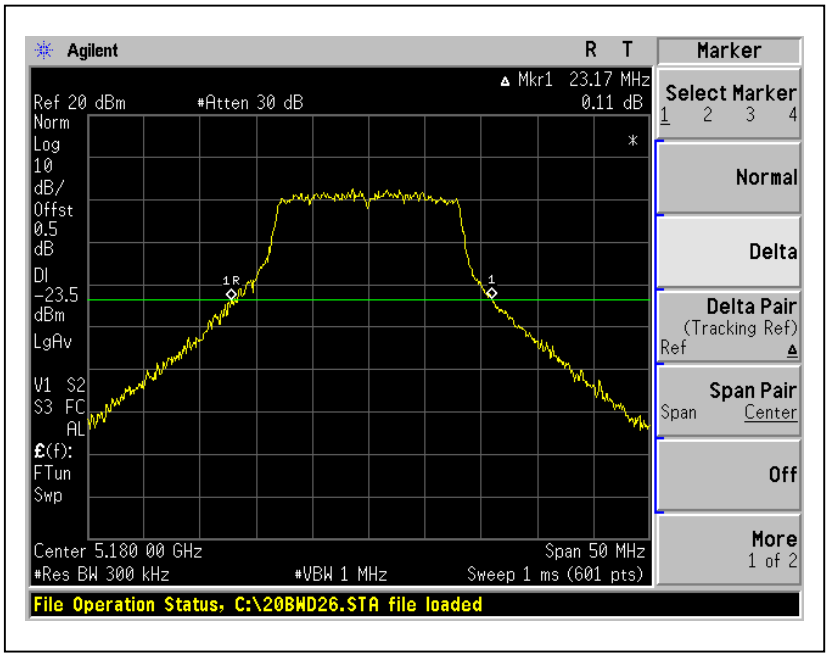

CH2



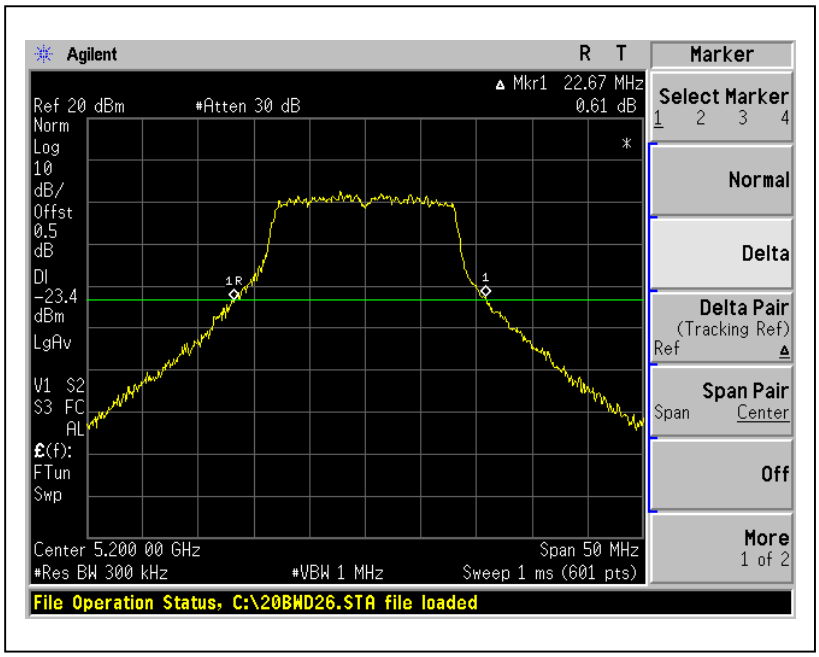
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.16 dBm /22.3300 MHz
Power Spectral Density
-63.32 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

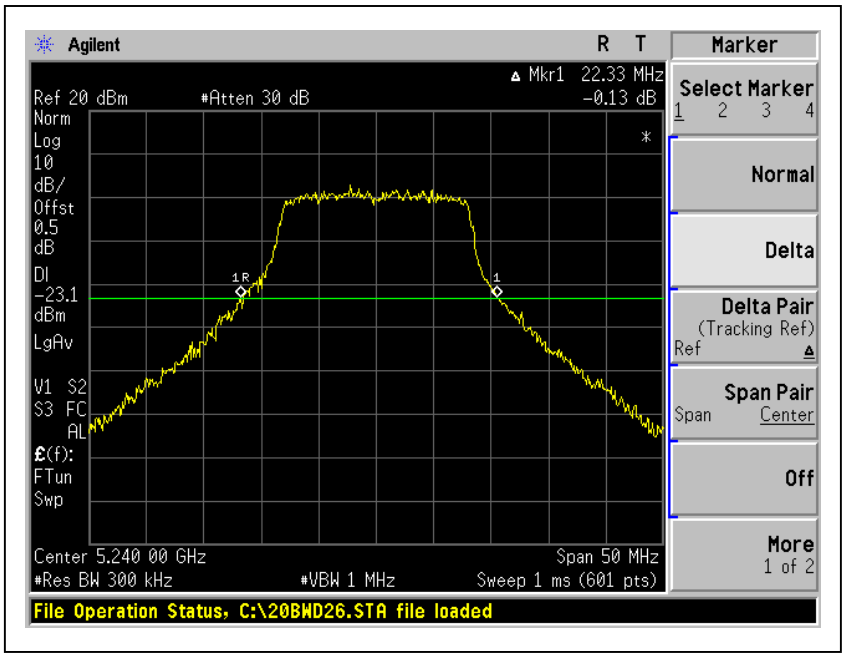
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R T
Marker
Mkr1 22.33 MHz
-0.13 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-23.1
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Center 5.240 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

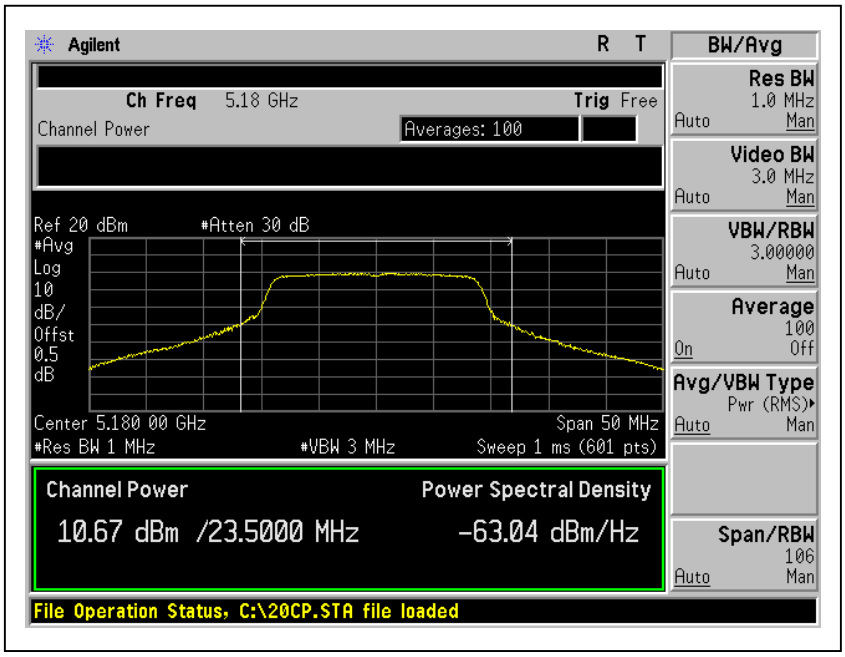
## DRAFT 802.11n (20MHz) OFDM modulation:

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 6.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

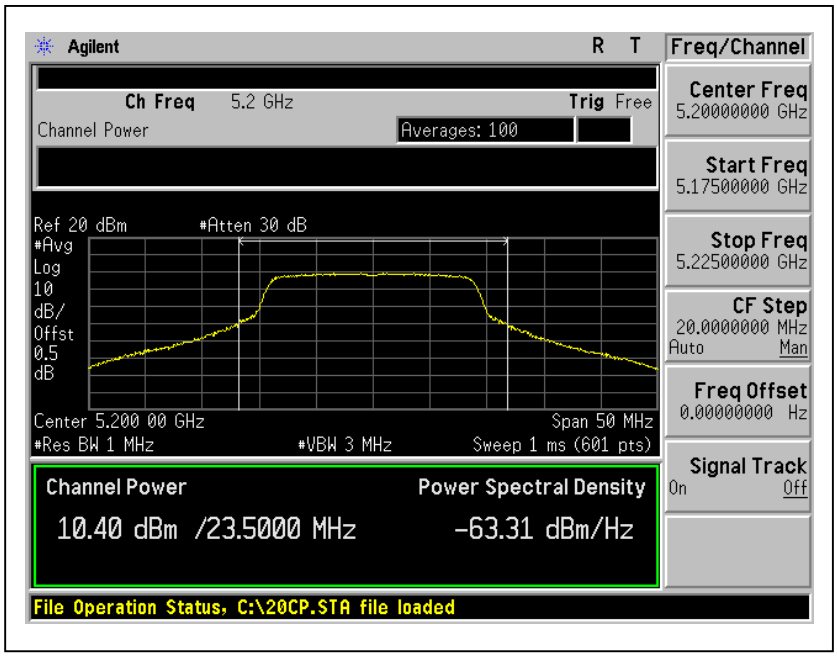
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5180 | 10.67 | 9.35 | 10.14 | 11.668 | 8.610 | 10.328 | 14.86 | 30.606 | 17.00 | 23.50 | PASS |
| 2 | 5200 | 10.4 | 9.01 | 9.97 | 10.965 | 7.962 | 9.931 | 14.60 | 28.858 | 17.00 | 23.50 | PASS |
| 4 | 5240 | 10.25 | 8.7 | 10.11 | 10.593 | 7.413 | 10.257 | 14.51 | 28.263 | 17.00 | 23.50 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

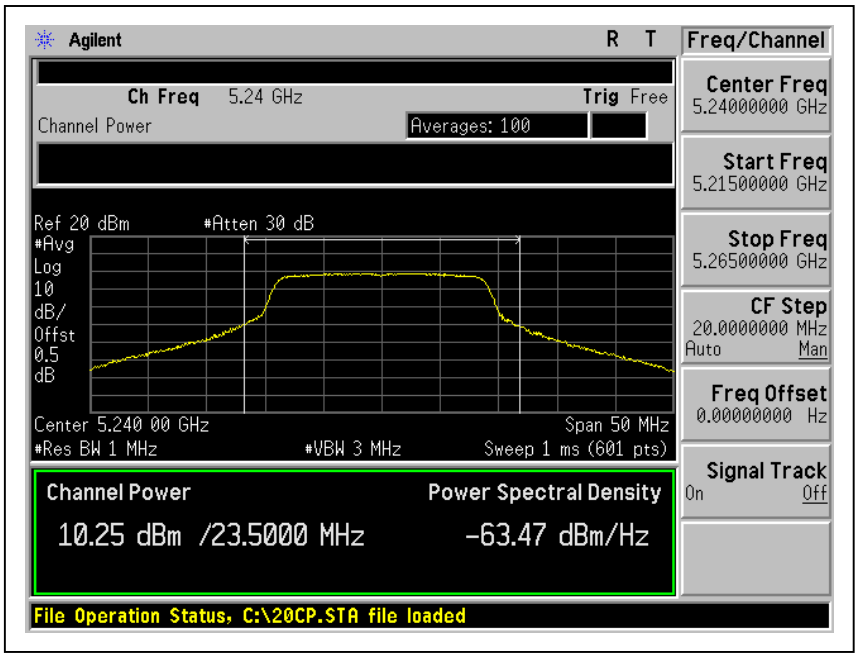
Peak Power Output:
For Chain (0) :CH1



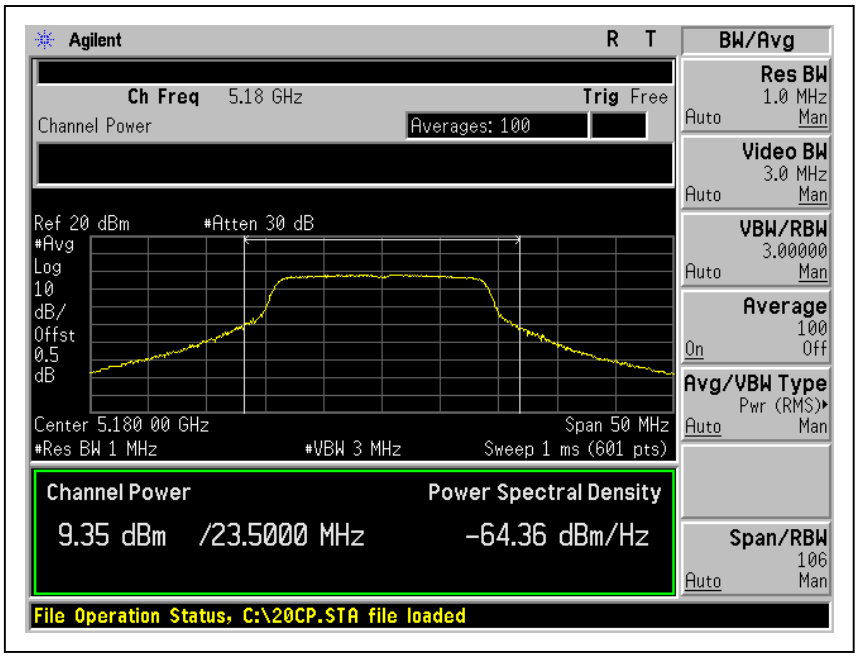

CH2



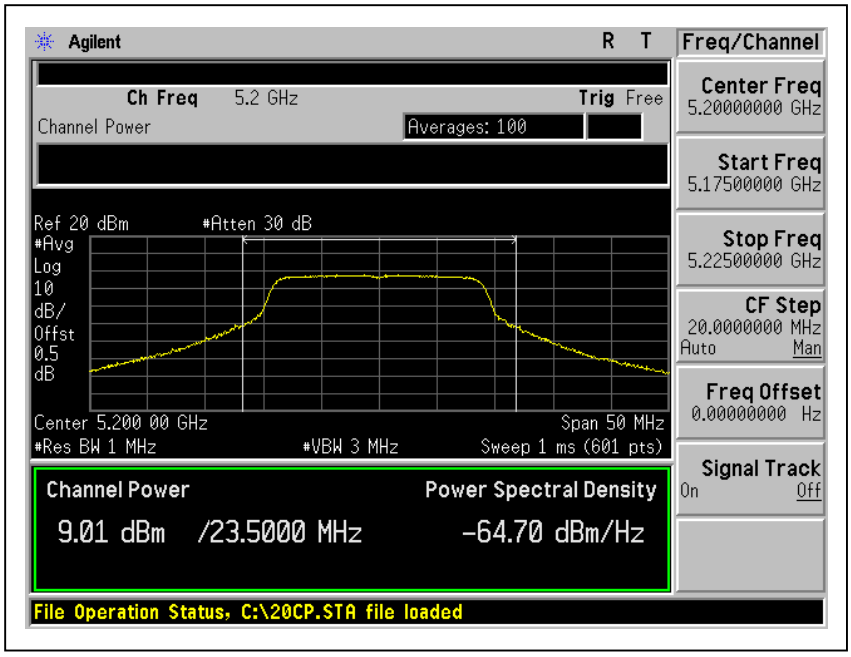
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.25 dBm /23.5000 MHz
Power Spectral Density
-63.47 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

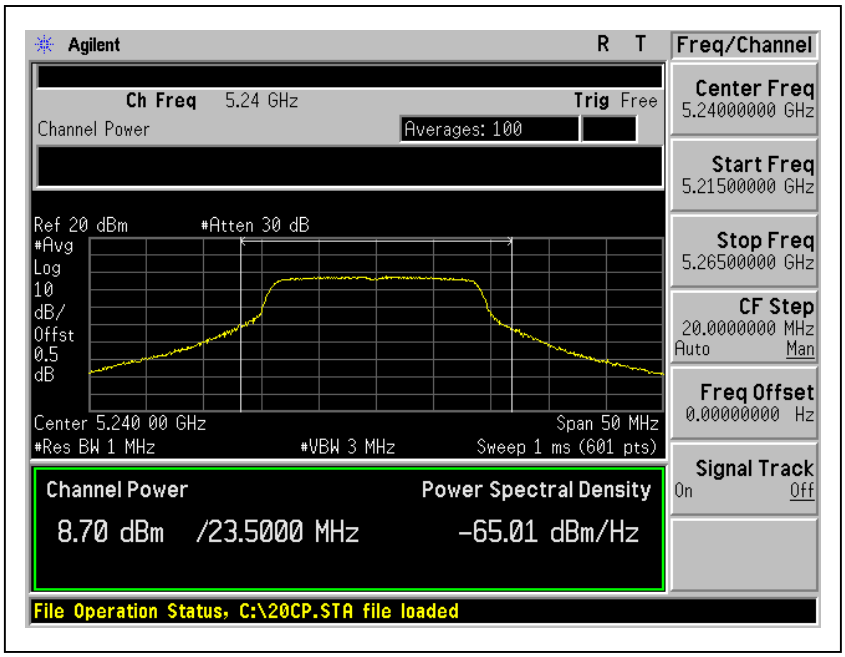
For Chain (1) :CH1



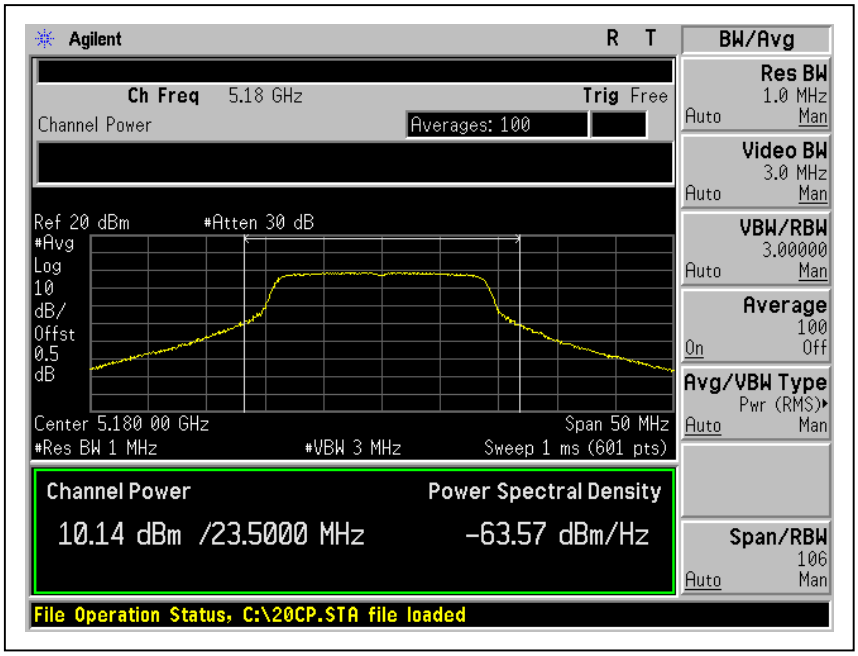

CH2



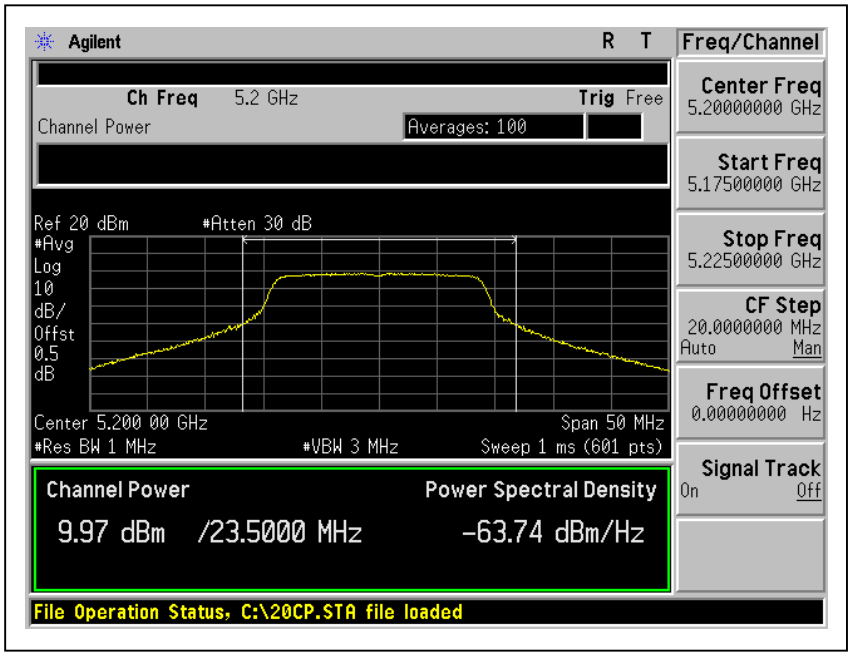
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
8.70 dBm /23.5000 MHz
Power Spectral Density
-65.01 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

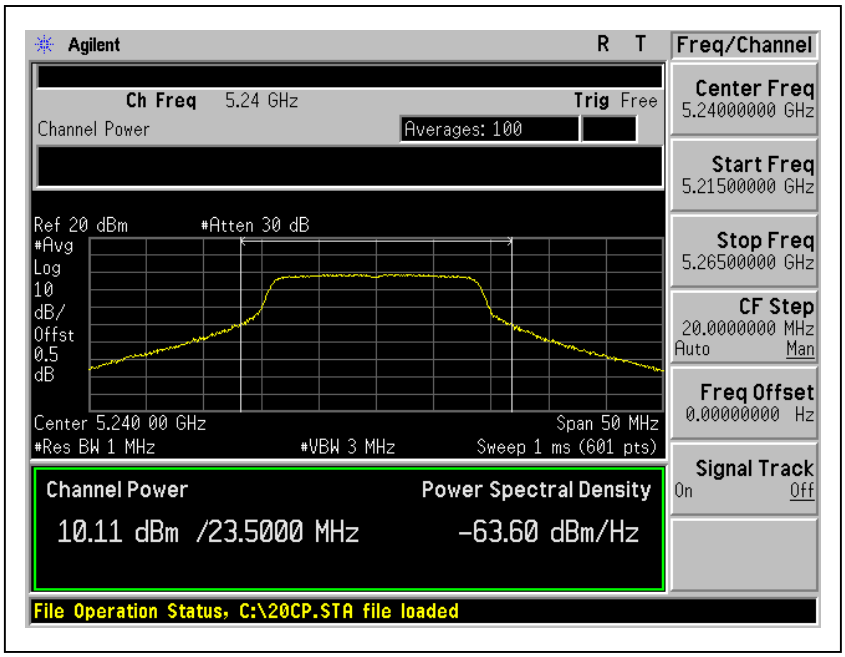
For Chain (2) **:**CH1



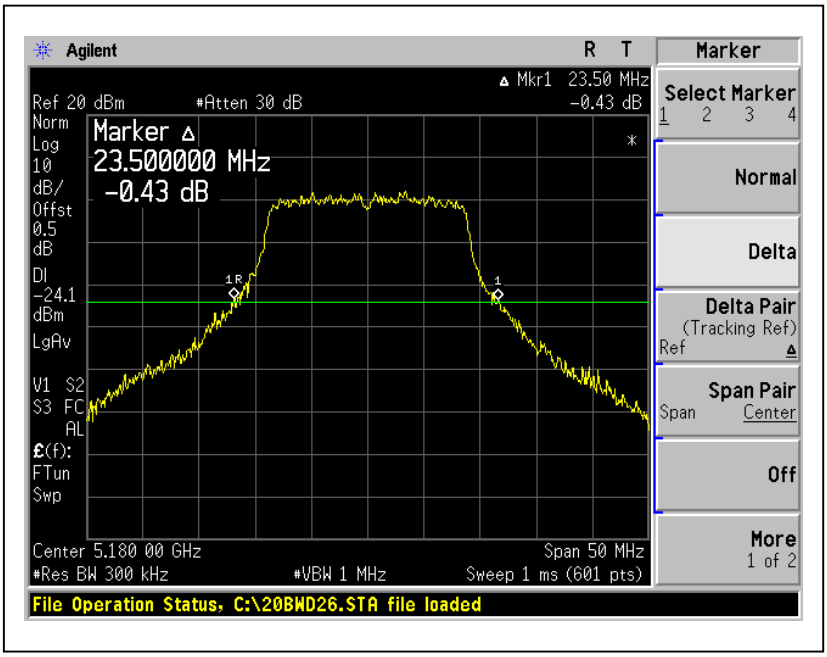

CH2



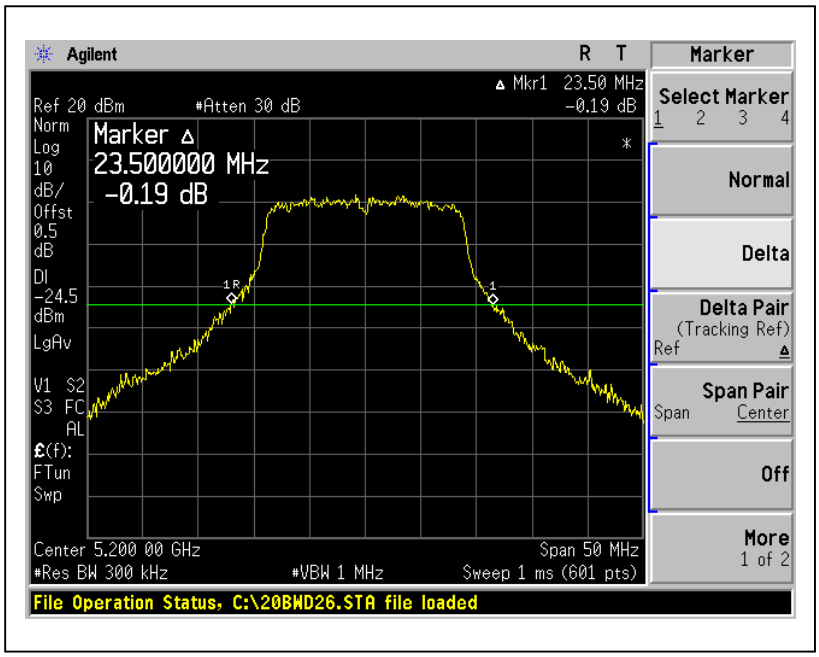
CH4


Agilent
R T
Freq/Channel
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Center Freq
5.24000000 GHz
Start Freq
5.21500000 GHz
Stop Freq
5.26500000 GHz
CF Step
20.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Ref 20 dBm
#Atten 30 dB
#Avg
Log
10
dB/
Offst
0.5
dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
10.11 dBm /23.5000 MHz
Power Spectral Density
-63.60 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

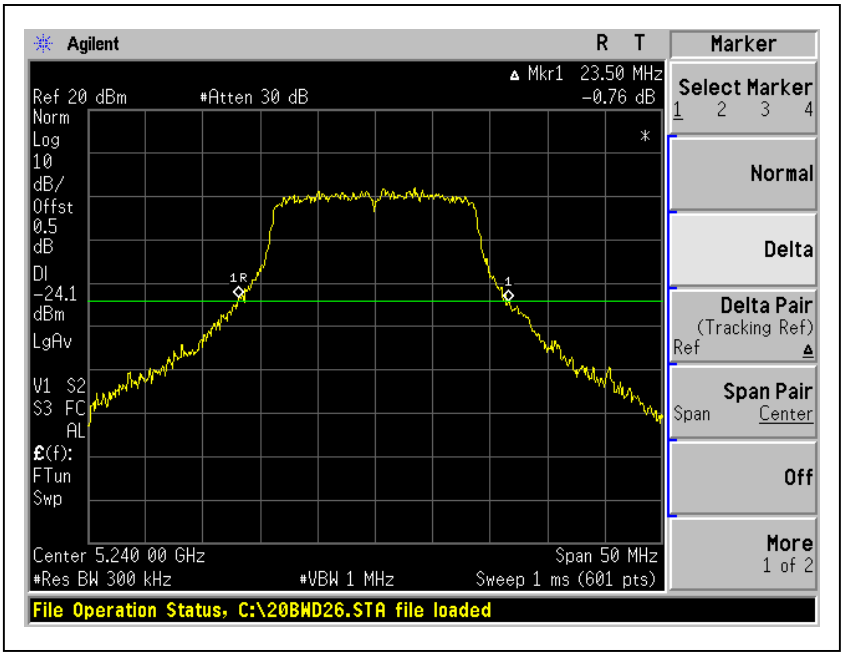
26dB Occupied Bandwidth:
CH1




CH2



CH4


Agilent
R T
Marker
Mkr1 23.50 MHz
-0.76 dB
Ref 20 dBm
#Atten 30 dB
Norm
Log
10
dB/
Offst
0.5
dB
Dl
-24.1
dBm
LgAv
V1 S2
S3 FC
AL
£(f):
FTun
Swp
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Center 5.240 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

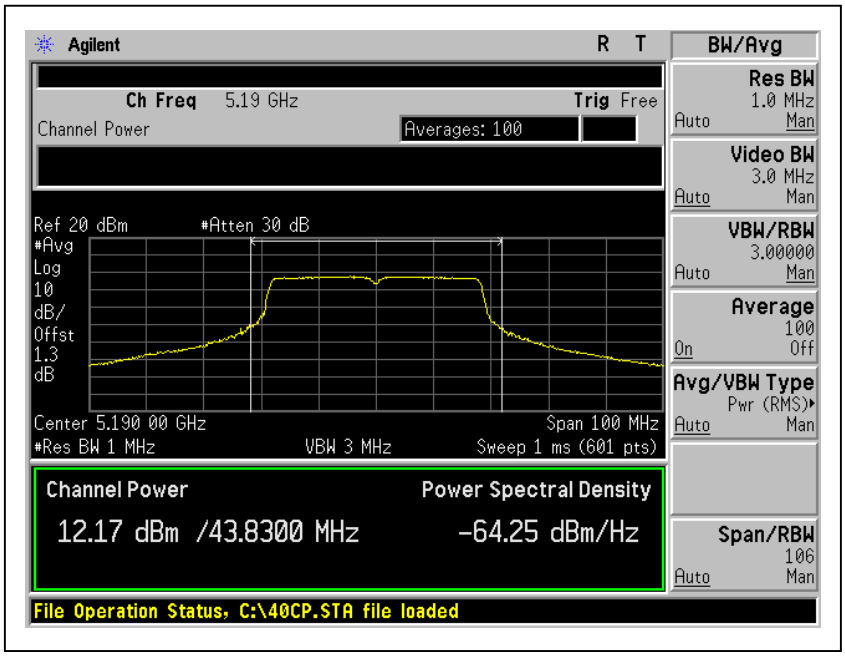
## DRAFT 802.11n (40MHz) OFDM MODULATION:

| | | | |
|---|---|---|---|
| **MODULATION TYPE** | BPSK | **TRANSFER RATE** | 13.5Mbps |
| **INPUT POWER** | 120Vac, 60 Hz | **ENVIRONMENTAL CONDITIONS** | 26deg.C, 63%RH, 965hPa |
| **TESTED BY** | Wen Yu | | |

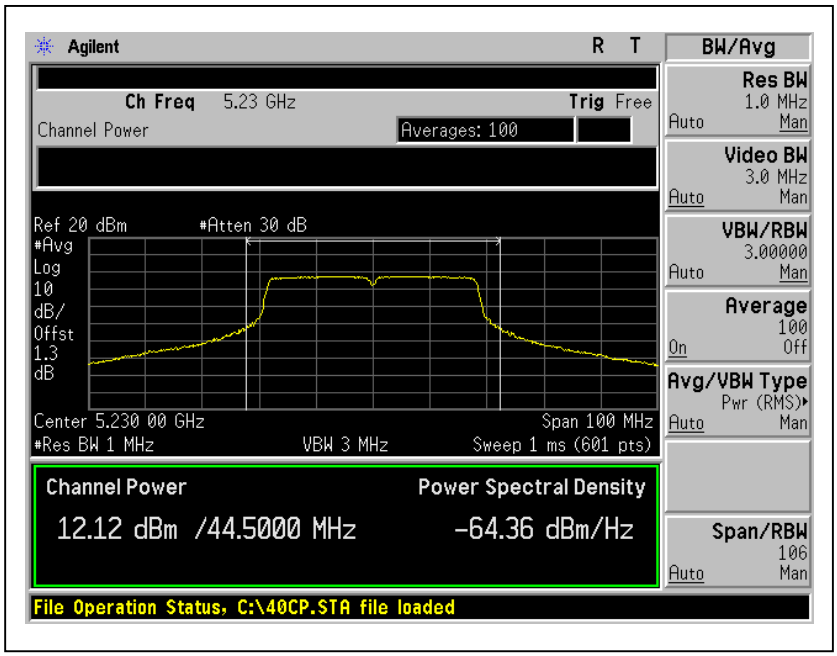
| CHANNEL | CHANNEL FREQUENCY (MHz) | PEAK POWER OUTPUT (dBm) | | | PEAK POWER OUTPUT (mW) | | | TOTAL PEAK POWER (dBm) | TOTAL PEAK POWER (mW) | PEAK POWER LIMIT (dBm) | 26dBc Occupied Bandwidth (MHz) | PASS/ FAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 0 | Chain 1 | Chain 2 | | | | | |
| 1 | 5190 | 12.17 | 11.4 | 11.35 | 16.482 | 13.804 | 13.646 | 16.43 | 43.932 | 17.00 | 43.83 | PASS |
| 2 | 5230 | 12.12 | 11.46 | 12 | 16.293 | 13.996 | 15.849 | 16.64 | 46.138 | 17.00 | 44.50 | PASS |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.

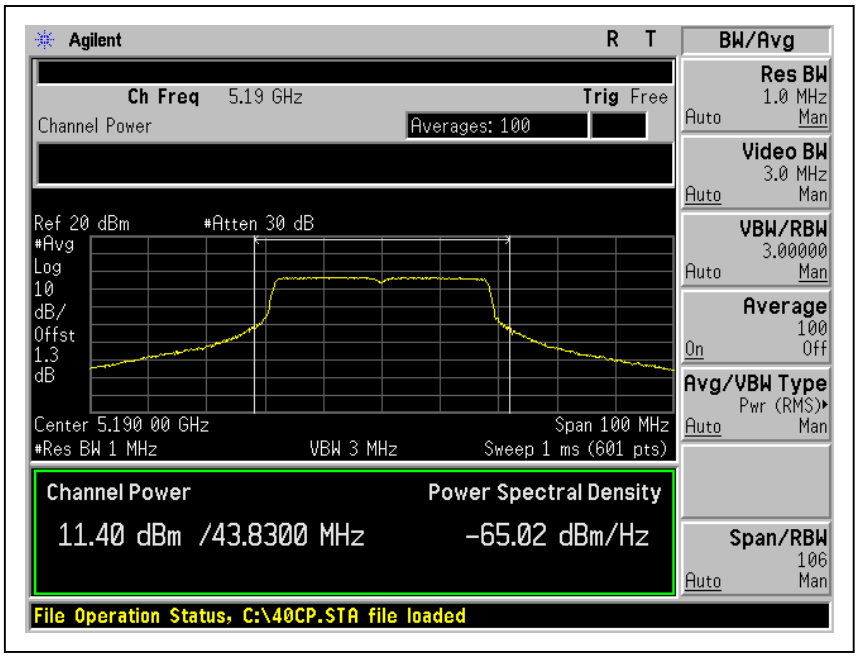
Peak Power Output:
For Chain (0) :CH1



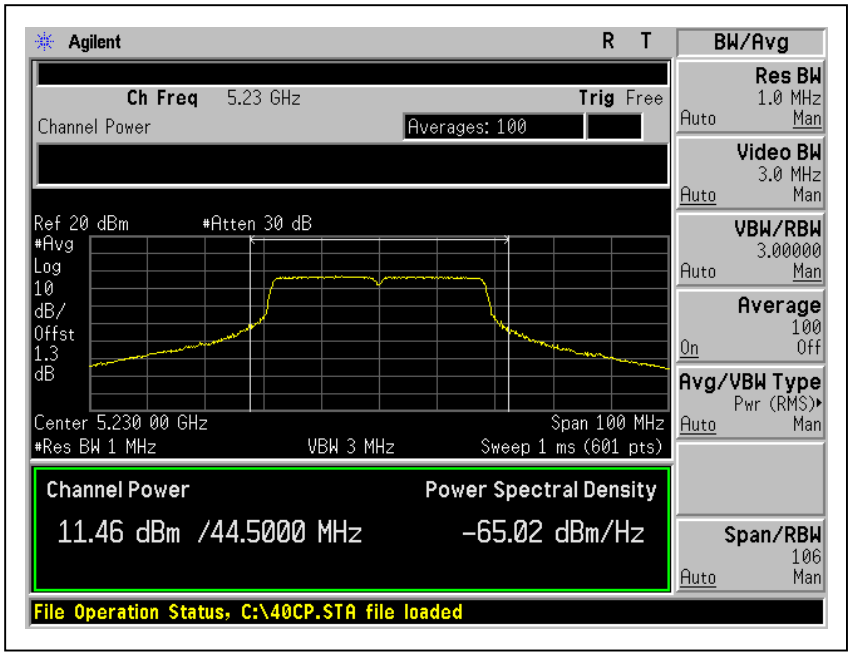

CH2



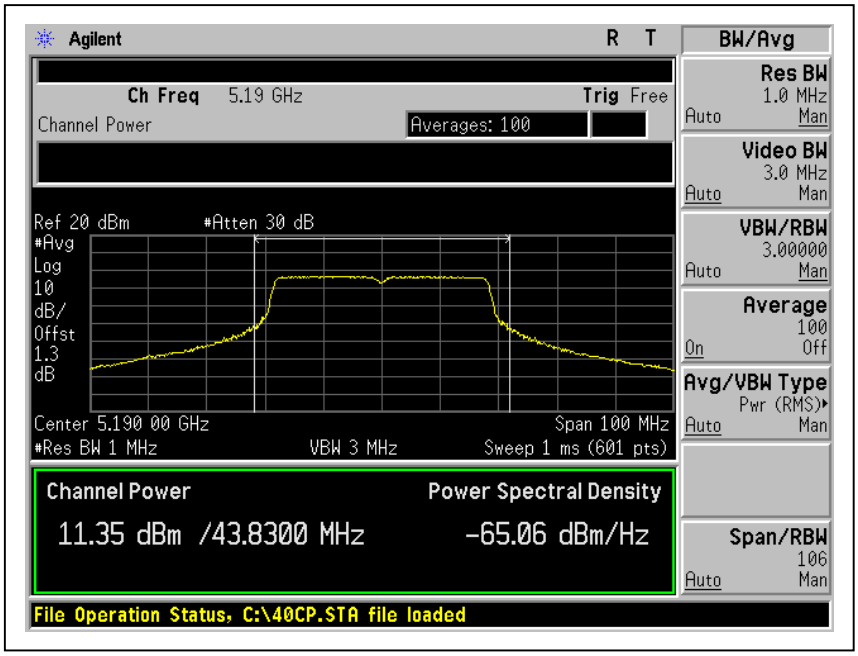
For Chain (1) **:**CH1



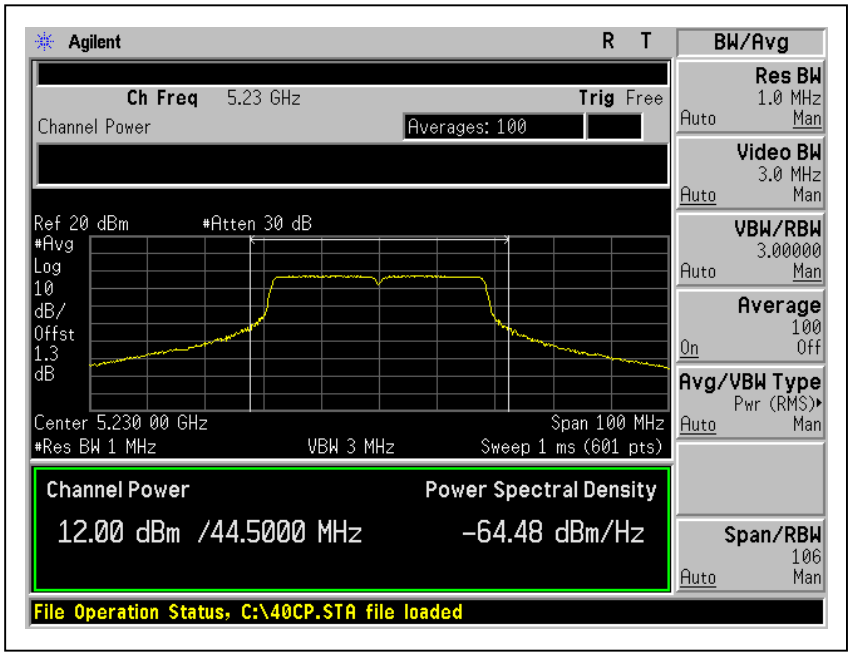

CH2



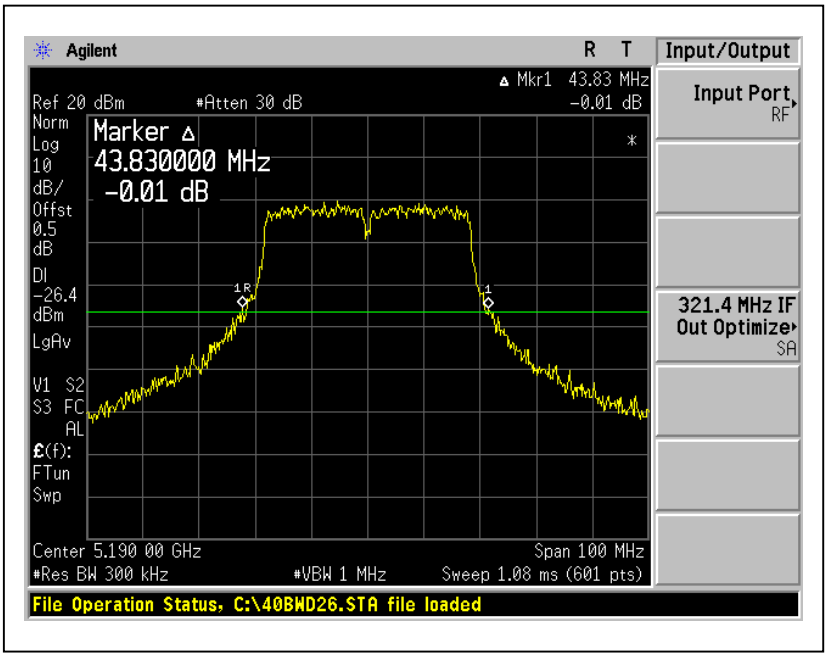
For Chain (2) **:**CH1




CH2



26dB Occupied Bandwidth:
CH1




CH2