# FCC PART 15 SUBPART C TEST REPORT

# for

# 11n USB Dongle

# Model No.: WU206n

# FCC ID: U6A-WU206N

of

Applicant: **E-Top Network Technology Inc.**

Address: **No.82,Gongye 2nd Rd., Tainan City 70095, Taiwan,R.O.C.**

Tested and Prepared

by

**Worldwide Testing Services (Taiwan) Co., Ltd.**

**FCC Registration No.: 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

**A2LA Accredited No.: 2732.01**

**Report No.: W6M20812-9466-C-1**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wts@wts-lab.com

# TABLE OF CONTENTS

# 1 General Information

## 1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.
The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.
Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.
Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.
The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.
The test report may only be reproduced or published in full.
Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

Specific Conditions:
Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.
The test sample is able to work according IEEE 802.11 b/g/n.
This report is related to FCC Part 15 C (DSSS and OFDM device).

**Tester:**

| Date | WTS-Lab. | Name | Signature |
|---|---|---|---|
| December 16, 2008 | | Danny | Danny |

**Technical responsibility for area of testing:**

| Date | WTS | Name | Signature |
|---|---|---|---|
| December 16, 2008 | | Chang Tse-Ming | Chang Tse-Ming |

## 1.2 Testing laboratory

### 1.2.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)

Company
Worldwide Testing Services(Taiwan) Co., Ltd.
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

### 1.2.2 Details of accreditation status

**Accredited testing laboratory**

**A2LA accredited number: 2732.01**

**FCC filed test laboratory Reg. No. 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

## 1.3 Details of approval holder

| | |
|---|---|
| Name: | E-Top Network Technology Inc. |
| Street: | No.82,Gongye 2nd Rd., |
| Town: | Tainan City 70095, |
| Country: | Taiwan,R.O.C. |
| Telephone: | +886-6-384-0077 |
| Fax: | +886-6-384-1808 |

## 1.4 Application details

| | |
|---|---|
| Date of receipt of test item: | November 28, 2008 |
| Date of test: | from November 28, 2008 to December 12, 2008 |

## 1.5 General information of Test item

| | |
|---|---|
| Type of test item: | 11n USB Dongle |
| Model Number: | WU206n |
| Brand Name: | ETOP |
| Hardware: | RTL8192 |
| Software: | RTL8192U_V0021 |
| Multi-listing model number: | see Appendix |
| Photos: | see Appendix |

**Technical data**

| | |
|---|---|
| Frequency band: | 2.4 GHz – 2.4835 GHz |

**11b, 11g, 11n 20MHz**

| | |
|---|---|
| Frequency ( ch 1 or A): | 2.412 GHz |
| Frequency ( ch 6 or B): | 2.437 GHZ |
| Frequency ( ch 11 or C): | 2.462 GHz |

**11n 40MHz**

| | |
|---|---|
| Frequency ( ch 1 or A): | 2.422 GHz |
| Frequency ( ch 4 or B): | 2.437 GHZ |
| Frequency ( ch 7 or C): | 2.452 GHz |

| | |
|---|---|
| Number of Channels: | 11b, 11g, 11n 20MHz: 11<br>11n 40MHz: 7 |
| Operation modes: | duplex |
| Modulation Type: | DSSS / OFDM |
| Fixed point-to-point operation: | ☐ Yes / ☒ No |
| Type of Antenna: | PCB Antenna |
| Antenna gain: | 2 dBi |
| Power supply: | |
| Emission designator: | 11b: DSSS: 15M1G1D<br>11g: OFDM: 16M6W7D<br>11n 20MHz: OFDM: 18M2W7D<br>11N 40MHz: OFDM: 36M6W7D |

Host device: none

Classification :

| | |
|---|---|
| Fixed Device | ☒ |
| Mobile Device (Human Body distance ＞ 20cm) | ☐ |
| Portable Device (Human Body distance ＜ 20cm) | ☐ |
| Modular Radio Device | ☐ |

**Transmitter** **Unom**

**Mode A (DSSS)**
Power ( ch 1 or A): Conducted: 10.20 dBm
Power ( ch 6 or B): Conducted: 11.01 dBm
Power ( ch 11 or C): Conducted: 10.53 dBm

**Mode B (OFDM)**
Power ( ch 1 or A): Conducted: 10.80 dBm
Power ( ch 6 or B): Conducted: 10.90 dBm
Power ( ch 11 or C): Conducted: 10.41 dBm

**Mode C (OFDM)**
Power ( ch 1 or A): Conducted: 10.96 dBm
Power ( ch 6 or B): Conducted: 10.80 dBm
Power ( ch 11 or C): Conducted: 10.80 dBm

**Mode D (OFDM)**
Power ( ch 1 or A): Conducted: 10.48 dBm
Power ( ch 4 or B): Conducted: 10.88 dBm
Power ( ch 7 or C): Conducted: 10.91 dBm

**Manufacturer: (if applicable)**
Name: ./.
Street: ./.
Town: ./.
Country: ./.

## 1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2008-07)

# 2 Technical test

## 2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

**or**

The deviations as specified in 2.5 were ascertained in the course of the tests performed. ☐

## 2.2 Test environment

| | |
|---|---|
| Temperature: | 23 °C |
| Relative humidity content: | 20 ... 75 % |
| Air pressure: | 86 ... 103 kPa |
| Power supply: | 5 Vdc from PC |
| Extreme conditions parameters: | ./. |

## 2.3 Test Equipment List

| No. | Test equipment | Type | Serial No. | Manufacturer | Cal. Date | Next Cal. Date |
|---|---|---|---|---|---|---|
| ETSTW-CE 001 | EMI TEST RECEIVER | ESHS10 | 842121/013 | R&S | 2008/9/18 | 2009/9/17 |
| ETSTW-CE 002 | PREREULATOR MODE DC POWER SUPPLY | None | None | | Function Test | |
| ETSTW-CE 003 | AC POWER SOURCE | APS-9102 | D161137 | GW | Function Test | |
| ETSTW-CE 004 | ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK | ESH3-Z5 | 840731/011 | R&S | 2008/9/15 | 2009/9/14 |
| ETSTW-CE 005 | Line-Impedance Stabilisation Network | NNBM 8126D | 137 | Schwarzbeck | 2008/9/15 | 2009/9/14 |
| ETSTW-CE 006 | IMPULSBEGRENZER PULSE LIMITER | ESH3-Z2 | 100226 | R&S | 2008/5/10 | 2009/5/09 |
| ETSTW-CE 008 | ABSORBING CLAMP | MDS 21 | 3469 | Schwarzbeck | 2008/9/18 | 2009/9/17 |
| ETSTW-CE 009 | TEMP.&HUMIDITY CHAMBER | GTH-225-40-1P-U | MAA0305-009 | GIANT FORCE | 2008/7/25 | 2009/7/24 |
| ETSTW-CE 015 | CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK | FCC-TLISN-T8-02 | 20307 | FCC | 2008/9/22 | 2009/9/21 |
| ETSTW-CE 016 | TWO-LINE V-NETWORK | ENV216 | 100050 | R&S | 2008/9/24 | 2009/9/23 |
| ETSTW-RE 003 | EMI TEST RECEIVER | ESI 26 | 831438/001 | R&S | 2008/10/8 | 2009/10/7 |
| ETSTW-RE 004 | EMI TEST RECEIVER | ESI 40 | 832427/004 | R&S | 2008/9/22 | 2009/9/21 |
| ETSTW-RE 005 | EMI TEST RECEIVER | ESVS10 | 843207/020 | R&S | 2008/9/18 | 2009/9/17 |
| ETSTW-RE 011 | PROGRAMMABLE LINEAR POWER SUPPLY | LPS-305 | 30503070165 | MOTECH | Function Test | |
| ETSTW-RE 017 | Log-Periodic Antenna | HL025 | 352886/001 | R&S | 2008/5/5 | 2009/5/4 |
| ETSTW-RE 018 | MICROWAVE HORN ANTENNA | AT4560 | 27212 | AR | 2008/10/27 | 2009/10/26 |
| ETSTW-RE 020 | MICROWAVE HORN ANTENNA | AT4002A | 306915 | AR | Function Test | |
| ETSTW-RE 021 | SWEEP GENERATOR | SWM05 | 835130/010 | R&S | 2008/8/27 | 2009/8/26 |
| ETSTW-RE 028 | Log-Periodic DipoleArray Antenna | 3148 | 34429 | EMCO | 2008/4/23 | 2009/4/22 |
| ETSTW-RE 029 | Biconical Antenna | 3109 | 33524 | EMCO | 2008/4/23 | 2009/4/22 |
| ETSTW-RE 030 | Double-Ridged Guide Horn Antenna | 3117 | 00035224 | EMCO | 2008/3/26 | 2009/3/25 |
| ETSTW-RE 032 | Millivoltmeter | URV 55 | 849086/013 | R&S | 2008/9/1 | 2009/8/31 |
| ETSTW-RE 033 | WaveRunner 6000A Serise Oscilloscope | WAVERUNNER 6100A | LCRY0604P14508 | LeCroy | 2008/6/27 | 2009/6/26 |
| ETSTW-RE 034 | Power Sensor | URV5-Z4 | 839313/006 | R&S | 2008/9/1 | 2009/8/31 |
| ETSTW-RE 042 | Biconical Antenna | HK116 | 100172 | R&S | 2007/1/11 | 2009/1/10 |
| ETSTW-RE 043 | Log-Periodic Dipole Antenna | HL223 | 100166 | R&S | 2008/5/2 | 2009/5/1 |
| ETSTW-RE 044 | Log-Periodic Antenna | HL050 | 100094 | R&S | 2008/5/22 | 2009/5/21 |
| ETSTW-RE 047 | ESA-E SERIES SPECTRUM ANALYZER | E4445A | MY46181369 | Agilent | 2008/6/26 | 2009/6/25 |
| ETSTW-RE 048 | Triple Loop Antenna | HXYZ 9170 | HXYZ 9170-134 | Schwarzbeck | 2008/9/1 | 2009/8/31 |
| ETSTW-RE 049 | TRILOG Super Broadband test Antenna | VULB 9160 | 9160-3185 | Schwarzbeck | 2007/5/2 | 2009/5/1 |
| ETSTW-RE 055 | SPECTRUM ANALYZER | FSU-26 | 200074 | R&S | 2008/7/1 | 2009/6/30 |
| ETSTW-RE 064 | Bluetooth Test Set | MT8852B-042 | 6K00005709 | Anritsu | 2008/9/1 | 2009/8/31 |

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

| | | | | | | |
|---|---|---|---|---|---|---|
| ETSTW-RE 072 | CELL SITE TEST SET | 8921A | 3339A00375 | HP | 2008/10/28 | 2009/10/27 |
| ETSTW-RE 105 | Match Pad | MDCS1500 | None | WOKEN | 2008/10/9 | 2009/10/8 |
| ETSTW-RE 106 | Match Pad | MDCS1510 | None | WOKEN | 2008/10/9 | 2009/10/8 |
| ETSTW-GSM 02 | Universal Radio Communication Tester | CMU 200 | 109439 | R&S | 2008/9/23 | 2009/9/22 |
| ETSTW-GSM 23 | SPLITTER | 4901.19.A | None | SUHNER | 2008/9/22 | 2009/9/21 |

## 2.4 General Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 using a 50µH LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBµV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

| Freq (MHz) | METER READING + ACF + CABLE LOSS (to the receiver) = FS |
|---|---|
| 33 | 20 dBµV + 10.36 dB + 6 dB = 36.36 dBµV/m @3m |

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2003 Section 13.1.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
(4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.
Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.) The Registration Number: 930600.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:
Average = Peak + Duty Factor
Duty Factor = 20 log (dwell time/T)
T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

## 3 Test results (enclosure)

| TEST CASE | Para. Number | Required | Test passed | Test failed |
|---|---|---|---|---|
| Peak Output Power | 15.247(b)(3) | ☒ | ☒ | ☐ |
| Equivalent radiated Power | 15.247(b)(3) | ☒ | ☒ | ☐ |
| Spurious Emissions radiated – Transmitter operating | 15.247(c); 15.209 | ☒ | ☒ | ☐ |
| Band Edge Measurement | 15.247(c) | ☒ | ☒ | ☐ |
| Minimum 6 dB Bandwidth | 15.247(a)(2) | ☒ | ☒ | ☐ |
| Peak Power Spectral Density | 15.247(d) | ☒ | ☒ | ☐ |
| Radiated Emission from Digital Part | 15.109 | ☐ | ☐ | ☐ |
| Power Line Conducted Emission | 15.207 | ☒ | ☒ | ☐ |

## 3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

Mode A

| Test condition | | Conducted Power | | |
|---|---|---|---|---|
| | | Channel A | Channel B | Channel C |
| $T_{nom}$= 25 °C | $V_{nom}$ = 5 V | [dBm] | [dBm] | [dBm] |
| | | 10.20 | 11.01 | 10.53 |

Mode B

| Test condition | | Conducted Power | | |
|---|---|---|---|---|
| | | Channel A | Channel B | Channel C |
| $T_{nom}$= 25 °C | $V_{nom}$ = 5 V | [dBm] | [dBm] | [dBm] |
| | | 10.80 | 10.90 | 10.41 |

Mode C

| Test condition | | Conducted Power | | |
|---|---|---|---|---|
| | | Channel A | Channel B | Channel C |
| $T_{nom}$= 25 °C | $V_{nom}$ = 5 V | [dBm] | [dBm] | [dBm] |
| | | 10.96 | 10.80 | 10.80 |

Mode D

| Test condition | | Conducted Power | | |
|---|---|---|---|---|
| | | Channel A | Channel B | Channel C |
| $T_{nom}$= 25 °C | $V_{nom}$ = 5 V | [dBm] | [dBm] | [dBm] |
| | | 10.48 | 10.88 | 10.91 |

| Test condition<br>$T_{nom}$= --°C, $V_{nom}$ = -- V | Signal Field strength TX highest power mode<br>dB $\mu$ V/m |
|---|---|
| Frequency [MHz] | -- |
| -- | |

Limits:

| Frequency<br>MHz | Power<br>dBm |
|---|---|
| 902 - 928 | 30 |
| 2400 – 2483.5 | 30 |
| 5725 – 5850 | 30 |

In case of employing transmitter antennas having antenna gain ＞ 6 dBi and using fixed point-to point operation consider §15.247 (b)(4)

Test equipment used: ETSTW-RE 055

Explanation: The diagrams for the peak output power measurements are included in Appendix.

## 3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain
EIRP = 11.01 dBm + 2 dBi
= 13.01 dBm
Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 021
ETSTW-RE 028 ETSTW-RE 030 ETSTW-RE 043 ETSTW-RE 044

## 3.3 RF Exposure Compliance Requirements

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.
The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

$$S = \frac{PG}{4\pi R^2}$$

S – Power Density
P – Output power ERP
R – Distance
D – Cable Loss
AG – Antenna Gain

| Item | Unit | Value | **Remarks** |
|---|---|---|---|
| P | mW | 12.618 | Peak value |
| D | dB | | |
| AG | dBi | 2 | |
| G | | 1.585 | Calculated Value |
| R | cm | 20 | Assumed value |
| S | $mW/cm^2$ | 0.004 | Calculated value |

Limits:

| **Limit for General Population / Uncontrolled Exposure** | |
|---|---|
| Frequency (MHz) | Power Density ($mW/cm^2$) |
| 1500 – 100.000 | 1.0 |

## 3.4 Transmitter Radiated Emissions in Restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35
Radiated emission measurements were performed from 30 MHz to 26500 MHz.
For radiated emission tests, the analyzer setting was as followings:

Frequency ≦ 1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)
Frequency ＞1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)
Frequency ＞1 GHz , RBW:1 MHz , VBW: 10 Hz (Average measurements)

Limits.

For frequencies below 1GHz:

| Frequency of Emission (MHz) | Field strength (microvolts/meter) | Field Strength (dB microvolts/meter) |
|---|---|---|
| 30 - 88 | 100 | 40.0 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46.0 |
| Above | 500 | 54.0 |

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:
“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction = 20 log (dwell time/ 100ms)

Note: No duty cycle correction was added to the reading of this EUT.

Explanation: see attached diagrams in Appendix.

## 3.5 Spurious Emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

FCC Rule: 15.247(c), 15.35
For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

Limits:

For frequencies above 1GHz (Peak measurements).
Modified Limit for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

For frequencies above 1GHz (Average measurements).
Max. reading – 20dB

Max. reading – 20 dB
Guidance on Measurement of Digit Transmission Systems:
“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction = 20 log (dwell time/100ms)

Test equipment used: ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028 ETSTW-RE 029 ETSTW-RE 030 ETSTW-RE 042 ETSTW-RE 043 ETSTW-RE 044

Note: No duty cycle correction was added to the reading of EUT.

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance with point 2.3.

Calculation of test results:
Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.
In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Correction Factor".

**Summary table with radiated data of the test plots**

**Mode A**

Model: WU206n Date: 2008/12/8
Mode: 802.11b CH1 Tx mode Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 51 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 14.68 | peak | 15.20 | 29.88 | 43.50 | -13.62 | 115 | 150 |
| 608.617 | 8.16 | peak | 22.22 | 30.38 | 46.00 | -15.62 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4825.651 | 42.88 | -- | -1.30 | 41.58 | -- | 74.00 | 54.00 | -32.42 | 135 | 150 |
| 7236.000 | 40.50 | -- | 1.86 | 42.36 | -- | 74.00 | 54.00 | -31.64 | 130 | 150 |
| 9648.000 | 19.38 | -- | 25.06 | 38.44 | -- | 74.00 | 54.00 | -35.56 | 140 | 150 |
| 12060.000 | 20.17 | -- | 29.44 | 43.61 | -- | 74.00 | 54.00 | -30.39 | 130 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.353 | 16.40 | peak | 15.15 | 31.55 | 43.50 | -11.95 | 110 | 150 |
| 611.423 | 7.82 | peak | 22.23 | 30.05 | 46.00 | -15.95 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4825.651 | 42.66 | -- | -1.30 | 41.36 | -- | 74.00 | 54.00 | -32.64 | 140 | 150 |
| 7236.000 | 40.46 | -- | 1.86 | 42.32 | -- | 74.00 | 54.00 | -31.68 | 135 | 150 |
| 9648.000 | 19.71 | -- | 25.06 | 38.77 | -- | 74.00 | 54.00 | -35.23 | 135 | 150 |
| 12060.000 | 21.14 | -- | 29.44 | 44.58 | -- | 74.00 | 54.00 | -29.42 | 140 | 150 |

Mode: 802.11b CH6 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 168.517 | 16.23 | peak | 15.04 | 31.27 | 43.50 | -12.23 | 105 | 150 |
| 611.423 | 7.09 | peak | 22.23 | 29.32 | 46.00 | -16.68 | 120 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4873.748 | 41.59 | -- | -1.30 | 40.29 | -- | 74.00 | 54.00 | -33.71 | 135 | 150 |
| 7311.000 | 42.07 | -- | 1.82 | 43.89 | -- | 74.00 | 54.00 | -30.11 | 140 | 150 |
| 9748.000 | 19.32 | -- | 24.94 | 38.26 | -- | 74.00 | 54.00 | -35.74 | 140 | 150 |
| 12185.000 | 20.10 | -- | 29.74 | 43.84 | -- | 74.00 | 54.00 | -30.16 | 145 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.812 | 20.42 | peak | 15.18 | 35.60 | 43.50 | -7.90 | 110 | 150 |
| 610.020 | 7.83 | peak | 22.22 | 30.05 | 46.00 | -15.95 | 125 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4873.748 | 41.83 | -- | -1.30 | 40.53 | -- | 74.00 | 54.00 | -33.47 | 140 | 150 |
| 7311.000 | 41.73 | -- | 1.82 | 43.55 | -- | 74.00 | 54.00 | -30.45 | 135 | 150 |
| 9748.000 | 20.21 | -- | 24.94 | 39.15 | -- | 74.00 | 54.00 | -34.85 | 130 | 150 |
| 12185.000 | 20.41 | -- | 29.74 | 44.15 | -- | 74.00 | 54.00 | -29.85 | 140 | 150 |

Mode: 802.11b CH11 Tx mode Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 51 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 242.645 | 17.69 | peak | 13.64 | 31.33 | 46.00 | -14.67 | 110 | 150 |
| 984.569 | 7.28 | peak | 27.30 | 34.58 | 54.00 | -19.42 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4924.000 | 39.58 | -- | -1.20 | 38.38 | -- | 74.00 | 54.00 | -35.62 | 140 | 150 |
| 7386.000 | 41.85 | -- | 1.97 | 43.82 | -- | 74.00 | 54.00 | -30.18 | 130 | 150 |
| 9848.000 | 21.21 | -- | 25.49 | 40.70 | -- | 74.00 | 54.00 | -33.30 | 140 | 150 |
| 12310.000 | 20.49 | -- | 30.04 | 44.53 | -- | 74.00 | 54.00 | -29.47 | 145 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.353 | 21.11 | peak | 15.15 | 36.26 | 43.50 | -7.24 | 115 | 150 |
| 612.826 | 7.74 | peak | 22.24 | 29.98 | 46.00 | -16.02 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4921.844 | 41.95 | -- | -1.21 | 40.74 | -- | 74.00 | 54.00 | -33.26 | 135 | 150 |
| 7386.000 | 42.36 | -- | 1.97 | 44.33 | -- | 74.00 | 54.00 | -29.67 | 130 | 150 |
| 9848.000 | 20.64 | -- | 25.49 | 40.13 | -- | 74.00 | 54.00 | -33.87 | 140 | 150 |
| 12310.000 | 20.25 | -- | 30.04 | 44.29 | -- | 74.00 | 54.00 | -29.71 | 145 | 150 |

**Mode B**

Model: WU206n Date: 2008/12/8
Mode: 802.11g CH1 Tx mode Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 51 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.353 | 13.80 | peak | 15.15 | 28.95 | 43.50 | -14.55 | 105 | 150 |
| 610.020 | 8.04 | peak | 22.22 | 30.26 | 46.00 | -15.74 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4824.000 | 39.76 | -- | -1.30 | 38.46 | -- | 74.00 | 54.00 | -35.54 | 130 | 150 |
| 7236.000 | 40.96 | -- | 1.86 | 42.82 | -- | 74.00 | 54.00 | -31.18 | 135 | 150 |
| 9648.000 | 19.05 | -- | 25.06 | 38.11 | -- | 74.00 | 54.00 | -35.89 | 140 | 150 |
| 12060.000 | 21.51 | -- | 29.44 | 44.95 | -- | 74.00 | 54.00 | -29.05 | 140 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 21.45 | peak | 15.20 | 36.65 | 43.50 | -6.85 | 110 | 150 |
| 406.613 | 8.93 | peak | 17.93 | 26.86 | 46.00 | -19.14 | 120 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4825.651 | 42.66 | -- | -1.30 | 41.36 | -- | 74.00 | 54.00 | -32.64 | 140 | 150 |
| 7236.000 | 40.46 | -- | 1.86 | 42.32 | -- | 74.00 | 54.00 | -31.68 | 135 | 150 |
| 9648.000 | 19.71 | -- | 25.06 | 38.77 | -- | 74.00 | 54.00 | -35.23 | 135 | 150 |
| 12060.000 | 21.14 | -- | 29.44 | 44.58 | -- | 74.00 | 54.00 | -29.42 | 140 | 150 |

Mode: 802.11g CH6 Tx mode

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 21.45 | peak | 15.20 | 36.65 | 43.50 | -6.85 | 110 | 150 |
| 612.826 | 7.26 | peak | 22.24 | 29.50 | 46.00 | -16.50 | 125 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4824.000 | 39.70 | -- | -1.30 | 38.40 | -- | 74.00 | 54.00 | -35.60 | 135 | 150 |
| 7236.000 | 40.77 | -- | 1.86 | 42.63 | -- | 74.00 | 54.00 | -31.37 | 140 | 150 |
| 9648.000 | 19.19 | -- | 25.06 | 38.25 | -- | 74.00 | 54.00 | -35.75 | 140 | 150 |
| 12060.000 | 20.08 | -- | 29.44 | 43.52 | -- | 74.00 | 54.00 | -30.48 | 135 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 18.95 | peak | 15.20 | 34.15 | 43.50 | -9.35 | 110 | 150 |
| 611.423 | 6.90 | peak | 22.23 | 29.13 | 46.00 | -16.87 | 115 | 150 |

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4874.000 | 39.61 | -- | -1.30 | 38.31 | -- | 74.00 | 54.00 | -35.69 | 140 | 150 |
| 7411.000 | 41.85 | -- | 1.95 | 43.80 | -- | 74.00 | 54.00 | -30.20 | 135 | 150 |
| 9748.000 | 20.32 | -- | 24.94 | 39.26 | -- | 74.00 | 54.00 | -34.74 | 140 | 150 |
| 12185.000 | 20.77 | -- | 29.74 | 44.51 | -- | 74.00 | 54.00 | -29.49 | 140 | 150 |

Mode: 802.11g CH11 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 12.91 | peak | 15.20 | 28.11 | 43.50 | -15.39 | 115 | 150 |
| 608.617 | 7.13 | peak | 22.22 | 29.35 | 46.00 | -16.65 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4924.000 | 38.97 | -- | -1.20 | 37.77 | -- | 74.00 | 54.00 | -36.23 | 135 | 150 |
| 7386.000 | 41.65 | -- | 1.97 | 43.62 | -- | 74.00 | 54.00 | -30.38 | 140 | 150 |
| 9848.000 | 20.07 | -- | 25.49 | 39.56 | -- | 74.00 | 54.00 | -34.44 | 145 | 150 |
| 12310.000 | 21.77 | -- | 30.04 | 45.81 | -- | 74.00 | 54.00 | -28.19 | 135 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 20.23 | peak | 15.20 | 35.43 | 43.50 | -8.07 | 110 | 150 |
| 991.583 | 6.89 | peak | 27.34 | 34.23 | 54.00 | -19.77 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4924.000 | 39.71 | -- | -1.20 | 38.51 | -- | 74.00 | 54.00 | -35.49 | 140 | 150 |
| 7386.000 | 42.18 | -- | 1.97 | 44.15 | -- | 74.00 | 54.00 | -29.85 | 145 | 150 |
| 9848.000 | 20.47 | -- | 25.49 | 39.96 | -- | 74.00 | 54.00 | -34.04 | 145 | 150 |
| 12310.000 | 20.52 | -- | 30.04 | 44.56 | -- | 74.00 | 54.00 | -29.44 | 140 | 150 |

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

**Mode C**

Model: WU206n Date: 2008/12/8
Mode: 802.11n, 20MHz CH1 Tx mode Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 51 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.353 | 14.97 | peak | 15.15 | 30.12 | 43.50 | -13.38 | 105 | 150 |
| 992.986 | 7.48 | peak | 27.35 | 34.83 | 54.00 | -19.17 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | | | |
| 4824.000 | 40.27 | -- | -1.30 | 38.97 | -- | 74.00 | 54.00 | -35.03 | 135 | 150 |
| 7236.000 | 40.65 | -- | 1.86 | 42.51 | -- | 74.00 | 54.00 | -31.49 | 130 | 150 |
| 9648.000 | 19.08 | -- | 25.06 | 38.14 | -- | 74.00 | 54.00 | -35.86 | 135 | 150 |
| 12060.000 | 20.89 | -- | 29.44 | 44.33 | -- | 74.00 | 54.00 | -29.67 | 140 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.894 | 19.90 | peak | 15.12 | 35.02 | 43.50 | -8.48 | 115 | 150 |
| 611.423 | 7.69 | peak | 22.23 | 29.92 | 46.00 | -16.08 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | | | |
| 4824.000 | 39.67 | -- | -1.30 | 38.37 | -- | 74.00 | 54.00 | -35.63 | 140 | 150 |
| 7236.000 | 40.77 | -- | 1.86 | 42.63 | -- | 74.00 | 54.00 | -31.37 | 135 | 150 |
| 9648.000 | 19.22 | -- | 25.06 | 38.28 | -- | 74.00 | 54.00 | -35.72 | 135 | 150 |
| 12060.000 | 21.99 | -- | 29.44 | 45.43 | -- | 74.00 | 54.00 | -28.57 | 140 | 150 |

Mode: 802.11n, 20MHz CH6 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 20.53 | peak | 15.20 | 35.73 | 43.50 | -7.77 | 110 | 150 |
| 610.020 | 6.56 | peak | 22.22 | 28.78 | 46.00 | -17.22 | 130 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4874.000 | 40.12 | -- | -1.30 | 38.82 | -- | 74.00 | 54.00 | -35.18 | 140 | 150 |
| 7311.000 | 40.44 | -- | 1.82 | 42.26 | -- | 74.00 | 54.00 | -31.74 | 145 | 150 |
| 9748.000 | 20.34 | -- | 24.94 | 39.28 | -- | 74.00 | 54.00 | -34.72 | 145 | 150 |
| 12185.000 | 20.03 | -- | 29.74 | 43.77 | -- | 74.00 | 54.00 | -30.23 | 145 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.894 | 21.41 | peak | 15.12 | 36.53 | 43.50 | -6.97 | 100 | 150 |
| 612.826 | 7.86 | peak | 22.24 | 30.10 | 46.00 | -15.90 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4874.000 | 39.47 | -- | -1.30 | 38.17 | -- | 74.00 | 54.00 | -35.83 | 140 | 150 |
| 7311.000 | 41.50 | -- | 1.82 | 43.32 | -- | 74.00 | 54.00 | -30.68 | 130 | 150 |
| 9748.000 | 19.91 | -- | 24.94 | 38.85 | -- | 74.00 | 54.00 | -35.15 | 140 | 150 |
| 12185.000 | 22.76 | -- | 29.74 | 46.50 | -- | 74.00 | 54.00 | -27.50 | 135 | 150 |

Mode: 802.11n, 20MHz CH11 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.353 | 13.84 | peak | 15.15 | 28.99 | 43.50 | -14.51 | 110 | 150 |
| 611.423 | 7.82 | peak | 22.23 | 30.05 | 46.00 | -15.95 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4924.000 | 39.74 | -- | -1.20 | 38.54 | -- | 74.00 | 54.00 | -35.46 | 135 | 150 |
| 7386.000 | 41.86 | -- | 1.97 | 43.83 | -- | 74.00 | 54.00 | -30.17 | 140 | 150 |
| 9848.000 | 20.85 | -- | 25.49 | 40.34 | -- | 74.00 | 54.00 | -33.66 | 140 | 150 |
| 12310.000 | 20.79 | -- | 30.04 | 44.83 | -- | 74.00 | 54.00 | -29.17 | 140 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 167.976 | 19.24 | peak | 15.07 | 34.31 | 43.50 | -9.19 | 105 | 150 |
| 608.617 | 7.96 | peak | 22.22 | 30.18 | 46.00 | -15.82 | 125 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4924.000 | 39.60 | -- | -1.20 | 38.40 | -- | 74.00 | 54.00 | -35.60 | 140 | 150 |
| 7386.000 | 41.76 | -- | 1.97 | 43.73 | -- | 74.00 | 54.00 | -30.27 | 145 | 150 |
| 9848.000 | 21.22 | -- | 25.49 | 40.71 | -- | 74.00 | 54.00 | -33.29 | 140 | 150 |
| 12310.000 | 19.89 | -- | 30.04 | 43.93 | -- | 74.00 | 54.00 | -30.07 | 145 | 150 |

**Mode D**

Model: WU206n Date: 2008/12/8
Mode: 802.11n, 40MHz CH1 Tx mode Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 51 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 167.976 | 13.63 | peak | 15.07 | 28.70 | 43.50 | -14.80 | 115 | 150 |
| 611.423 | 7.35 | peak | 22.23 | 29.58 | 46.00 | -16.42 | 120 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4844.000 | 39.75 | -- | -1.30 | 38.45 | -- | 74.00 | 54.00 | -35.55 | 135 | 150 |
| 7266.000 | 41.69 | -- | 1.83 | 43.52 | -- | 74.00 | 54.00 | -30.48 | 130 | 150 |
| 9688.000 | 21.28 | -- | 24.78 | 40.06 | -- | 74.00 | 54.00 | -33.94 | 145 | 150 |
| 12110.000 | 20.63 | -- | 29.56 | 44.19 | -- | 74.00 | 54.00 | -29.81 | 140 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 167.976 | 20.73 | peak | 15.07 | 35.80 | 43.50 | -7.70 | 110 | 150 |
| 610.020 | 7.08 | peak | 22.22 | 29.30 | 46.00 | -16.70 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4844.000 | 39.54 | -- | -1.30 | 38.24 | -- | 74.00 | 54.00 | -35.76 | 140 | 150 |
| 7266.000 | 41.25 | -- | 1.83 | 43.08 | -- | 74.00 | 54.00 | -30.92 | 145 | 150 |
| 9688.000 | 19.70 | -- | 24.78 | 38.48 | -- | 74.00 | 54.00 | -35.52 | 140 | 150 |
| 12110.000 | 20.62 | -- | 29.56 | 44.18 | -- | 74.00 | 54.00 | -29.82 | 145 | 150 |

Mode: 802.11n, 40MHz CH4 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 166.894 | 15.57 | peak | 15.12 | 30.69 | 43.50 | -12.81 | 110 | 150 |
| 978.958 | 8.15 | peak | 27.26 | 35.41 | 54.00 | -18.59 | 120 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4874.000 | 39.71 | -- | -1.30 | 38.41 | -- | 74.00 | 54.00 | -35.59 | 140 | 150 |
| 7311.000 | 42.09 | -- | 1.82 | 43.91 | -- | 74.00 | 54.00 | -30.09 | 130 | 150 |
| 9748.000 | 20.65 | -- | 24.94 | 39.59 | -- | 74.00 | 54.00 | -34.41 | 135 | 150 |
| 12185.000 | 20.94 | -- | 29.74 | 44.68 | -- | 74.00 | 54.00 | -29.32 | 140 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.812 | 17.06 | peak | 15.18 | 32.24 | 43.50 | -11.26 | 110 | 150 |
| 611.423 | 7.60 | peak | 22.23 | 29.83 | 46.00 | -16.17 | 125 | 150 |

| Frequency (MHz) | Reading (dBuV) Peak | Ave. | Factor (dB) Corr. | Result @3m (dBuV/m) Peak | Ave. | Limit @3m (dBuV/m) Peak | Ave. | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4874.000 | 39.75 | -- | -1.30 | 38.45 | -- | 74.00 | 54.00 | -35.55 | 135 | 150 |
| 7311.000 | 43.23 | -- | 1.82 | 45.05 | -- | 74.00 | 54.00 | -28.95 | 140 | 150 |
| 9748.000 | 20.35 | -- | 24.94 | 39.29 | -- | 74.00 | 54.00 | -34.71 | 140 | 150 |
| 12185.000 | 21.27 | -- | 29.74 | 45.01 | -- | 74.00 | 54.00 | -28.99 | 145 | 150 |

Mode: 802.11n, 40MHz CH7 Tx mode
Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 169.058 | 13.09 | peak | 15.02 | 28.11 | 43.50 | -15.39 | 100 | 150 |
| 612.826 | 7.19 | peak | 22.24 | 29.43 | 46.00 | -16.57 | 130 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4904.000 | 39.21 | -- | -1.28 | 37.93 | -- | 74.00 | 54.00 | -36.07 | 135 | 150 |
| 7356.000 | 41.70 | -- | 1.91 | 43.61 | -- | 74.00 | 54.00 | -30.39 | 140 | 150 |
| 9808.000 | 19.69 | -- | 25.25 | 38.94 | -- | 74.00 | 54.00 | -35.06 | 135 | 150 |
| 12260.000 | 20.48 | -- | 29.92 | 44.40 | -- | 74.00 | 54.00 | -29.60 | 145 | 150 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|---|---|---|---|---|---|---|---|---|
| 165.271 | 18.63 | peak | 15.20 | 33.83 | 43.50 | -9.67 | 105 | 150 |
| 608.617 | 7.87 | peak | 22.22 | 30.09 | 46.00 | -15.91 | 125 | 150 |

| Frequency | Reading (dBuV) | | Factor (dB) | Result @3m (dBuV/m) | | Limit @3m (dBuV/m) | | Margin | Table Degree | Ant. High |
|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Peak | Ave. | Corr. | Peak | Ave. | Peak | Ave. | (dB) | (Deg.) | (cm) |
| 4904.000 | 39.68 | -- | -1.28 | 38.40 | -- | 74.00 | 54.00 | -35.60 | 135 | 150 |
| 7356.000 | 42.46 | -- | 1.91 | 44.37 | -- | 74.00 | 54.00 | -29.63 | 140 | 150 |
| 9808.000 | 19.81 | -- | 25.25 | 39.06 | -- | 74.00 | 54.00 | -34.94 | 140 | 150 |
| 12260.000 | 21.24 | -- | 29.92 | 45.16 | -- | 74.00 | 54.00 | -28.84 | 130 | 150 |

**Note**
1. **Correction Factor = Antenna factor + Cable loss - Preamplifier**
2. **The formula of measured value as: Test Result = Reading + Correction Factor**
3. **Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
4. **All not in the table noted test results are more than 20 dB below the relevant limits.**
5. **See the attached diagram as appendix.**

**TEST RESULT (Transmitter):** The unit DOES meet the FCC requirements.

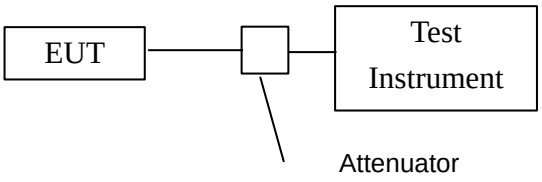
Test equipment used: ETSTW-RE003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028
ETSTW-RE029 ETSTW-RE 030 ETSTW-RE 042 ETSTW-RE 043 ETSTW-RE 044

## 3.6 Radiated Emission on the band edge

According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

### 3.6.1 Test Setup




### 3.6.2 Procedure

a. To use internal calibrator of instrument or external signal generator to confirm the calibration instrument of known level.
b. As test setup, the antenna of transmitter through appropriate attenuate and connect to test instrument directly and start EUT. To set that the transmitted frequency of EUT is lowest frequency channel.
c. Use the following spectrum analyzer settings:
    1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation
    2. RBW = 1% of the span; VBW >= RBW.
    3. Sweep = auto; Detector function = peak; Trace = max hold
    4. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge.
d. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. The marker-delta value now displayed must comply with the limit specified in this Section. To save measured spectrum wave and print to report.
e. To repeat above testing steps but set the transmitted frequency of EUT in highest channel in turn.

### 3.6.3 Test Results

Mode A

| Test conditions | | Attenuation at or outside band-edges | |
|---|---|---|---|
| | | Lower Band-edge | Upper Band-edge |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 37.70 dB | 46.09 dB |

Mode B

| Test conditions | | Attenuation at or outside band-edges | |
|---|---|---|---|
| | | Lower Band-edge | Upper Band-edge |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 32.77 dB | 45.09 dB |

Mode C

| Test conditions | | Attenuation at or outside band-edges | |
|---|---|---|---|
| | | Lower Band-edge | Upper Band-edge |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 33.00 dB | 44.04 dB |

Mode D

| Test conditions | | Attenuation at or outside band-edges | |
|---|---|---|---|
| | | Lower Band-edge | Upper Band-edge |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 34.86 dB | 39.92 dB |

Limit:

| Frequency Range / MHz | Limit |
|---|---|
| 902 –928<br>2400 – 2483.5<br>5725 - 5850 | - 20 dB |

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028 ETSTW-RE 030 ETSTW-RE 043 ETSTW-RE 044

Explanation: Please see attached diagram as appendix.

## 3.7 Minimum 6 dB Bandwidth

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission.
The 6 dB bandwidth is the frequency difference between the two markers.

Mode A

| Test conditions | | 6 dB Bandwidth | | |
|---|---|---|---|---|
| | | Channel 1 | Channel 6 | Channel 11 |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 10.128205128 MHz | 10.096153846 MHz | 10.096153846 MHz |

Mode B

| Test conditions | | 6 dB Bandwidth | | |
|---|---|---|---|---|
| | | Channel 1 | Channel 6 | Channel 11 |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 16.570512821 MHz | 16.570512821 MHz | 16.570512821 MHz |

Mode C

| Test conditions | | 6 dB Bandwidth | | |
|---|---|---|---|---|
| | | Channel 1 | Channel 6 | Channel 11 |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 17.788461538 MHz | 17.788461538 MHz | 17.788461538 MHz |

Mode D

| Test conditions | | 6 dB Bandwidth | | |
|---|---|---|---|---|
| | | Channel 1 | Channel 4 | Channel 7 |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | 36.588141026 MHz | 36.524038462 MHz | 36.524038462 MHz |

**Limits:**

| Frequency Range MHz | **Limits** |
|---|---|
| 902-928 | min 500 kHz |
| 2400-2483.5 | min 500 kHz |
| 5725-5850 | min 500 kHz |

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 055

Explanation: see attached diagrams in Appendix.

## 3.8 Peak Power Spectral Density

Peak Power Spectral density is a measured at low, middle and high channel.
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Mode A

| Test conditions | | Peak Power Spectral Density (3 kHz) | | |
|---|---|---|---|---|
| | | Channel 1 [dBm] | Channel 6 [dBm] | Channel 11 [dBm] |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | -25.88 | -22.31 | -24.26 |

Mode B

| Test conditions | | Peak Power Spectral Density (3 kHz) | | |
|---|---|---|---|---|
| | | Channel 1 [dBm] | Channel 6 [dBm] | Channel 11 [dBm] |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | -22.55 | -22.49 | -22.65 |

Mode C

| Test conditions | | Peak Power Spectral Density (3 kHz) | | |
|---|---|---|---|---|
| | | Channel 1 [dBm] | Channel 6 [dBm] | Channel 11 [dBm] |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | -22.88 | -22.90 | -22.67 |

Mode D

| Test conditions | | Peak Power Spectral Density (3 kHz) | | |
|---|---|---|---|---|
| | | Channel 1 [dBm] | Channel 4 [dBm] | Channel 7 [dBm] |
| $T_{nom}$= 25°C | $V_{nom}$ = 5 V | -24.18 | -24.50 | -24.60 |

**Limits:**

| Frequency Range MHz | dBm |
|---|---|
| 902-928 | 8 |
| 2400-2483.5 | 8 |
| 5725-5850 | 8 |

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 055

Explanation: see attached diagrams in Appendix.

## 3.9 Radiated Emission from Digital Part

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| Frequency of Emission (MHz) | Field Strength (microvolts/meter) | Field Strength (dBmicrovolts/meter) |
|---|---|---|
| 30 – 88 | 100 | 40.0 |
| 88 – 216 | 150 | 43.5 |
| 216 – 960 | 200 | 46.0 |
| Above 960 | 500 | 54.0 |

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028 ETSTW-RE 029 ETSTW-RE 030 ETSTW-RE 042 ETSTW-RE 043 ETSTW-RE 044

Explanation: The test results are listed in the separated test report no.: W6M20812-9466-P-15B.

## 3.9 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Model: WU206n Date: 2008/12/10
Mode: Temperature: 24 °C Engineer: Danny
Polarization: N Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) QP | Reading (dBuV) Ave. | Factor (dB) Corr. | Result (dBuV) QP | Result (dBuV) Ave. | Limit (dBuV) QP | Limit (dBuV) Ave. | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 0.1850 | 39.42 | 23.52 | 10.11 | 49.53 | 33.63 | 64.26 | 54.26 | -14.73 |
| 0.2888 | 33.59 | 22.22 | 10.01 | 43.60 | 32.23 | 60.56 | 50.56 | -16.96 |
| 0.4035 | 28.30 | 14.45 | 10.05 | 38.35 | 24.50 | 57.78 | 47.78 | -19.43 |
| 5.1389 | 22.39 | 15.10 | 10.11 | 32.50 | 25.21 | 60.00 | 50.00 | -24.79 |
| 11.5833 | 25.96 | 18.58 | 10.49 | 36.45 | 29.07 | 60.00 | 50.00 | -20.93 |
| 16.1388 | 26.32 | 19.06 | 10.45 | 36.77 | 29.51 | 60.00 | 50.00 | -20.49 |

Polarization: L1

| Frequency (MHz) | Reading (dBuV) QP | Reading (dBuV) Ave. | Factor (dB) Corr. | Result (dBuV) QP | Result (dBuV) Ave. | Limit (dBuV) QP | Limit (dBuV) Ave. | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 0.1841 | 39.88 | 22.87 | 10.11 | 49.99 | 32.98 | 64.30 | 54.30 | -14.31 |
| 0.2787 | 32.51 | 15.67 | 10.03 | 42.54 | 25.70 | 60.85 | 50.85 | -18.31 |
| 0.3962 | 29.85 | 16.87 | 10.04 | 39.89 | 26.91 | 57.93 | 47.93 | -18.04 |
| 5.1667 | 20.18 | 13.55 | 10.11 | 30.29 | 23.66 | 60.00 | 50.00 | -26.34 |
| 11.5824 | 24.91 | 17.56 | 10.49 | 35.40 | 28.05 | 60.00 | 50.00 | -21.95 |
| 16.2500 | 27.21 | 19.55 | 10.45 | 37.66 | 30.00 | 60.00 | 50.00 | -20.00 |

**Note**
**1. The formula of measured value as: Test Result = Reading + Correction Factor**
**2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
**3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
**4. All not in the table noted test results are more than 20 dB below the relevant limits.**
**5. See attached diagrams as appendix.**

| Frequency | Level (dBµV) | |
|---|---|---|
| | quasi-peak | average |
| 150 kHz | lower limit line | Lower limit line |

**Limits:**

| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi Peak | Average |
| 0.15-0.5 | 66 to 56 | 56 to 46 |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Test equipment used: ETSTW-CE 001 ETSTW-CE 003 ETSTW-CE 004 ETSTW-CE 006

Explanation: see attached diagrams in Appendix.

# 4 Measurement Techniques

**Section 15.403(f) – Digital Modulation**
Digital modulation is required for Digital Transmission Systems (DTS).
Digital modulation: The process by which the characteristics of a carrier wave are varied among a set of predetermined discrete values in accordance with a digital modulating function as specified in document ANSI C63.17-1998.

**Section 15.31(m) – Number of Operating Frequencies**
This rule specifies the number of operating frequencies to be examined for tunable equipment.

**Section 15.207 – Power line conducted emissions**
If the unit is AC powered, an AC power line conducted test is also required per this rule.

**Section 15.247(a)(2) – Bandwidth.**
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.

**Section 15.247(b) – Power output.**
This is an RF conducted test. Use a direct connection between the antenna port of the transmitter and the spectrum analyzer, through suitable attenuation. Power Output Option 1 is a peak measurement. Power Output Option 2 is the same procedure used for UNII output power measurements. The equipment under test is not for UNII. Therefore, Power Output Option 1 is used as below.

**Power Output Option 1**
Set the RBW greater than 6 dB bandwidth of the emission or use a peak power meter.

**Section 15.247(c) – Spurious emissions.**
**Radiated emission test:** Applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp (and possibly a high-pass filter) is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation. See Section 15.35(b) and (c).

**Section 15.247(d) – Power spectral density (PSD).**
The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used. Use PSD Option 1 if Power output Option 1 was used. Use PSD Option 2 if power output Option 2 was used. Therefore, PSD Option 1 is used as below.

**PSD Option 1**

Locate and zoom in on emission peak(s) within the passband. Set RBW = 3 kHz, VBW > RBW, sweep= (SPAN/3 kHz) e.g., for a span of 1.5 MHz, the sweep should be $1.5 \times 10^6 \div 3 \times 10^3 = 500$ seconds. The peak level measured must be no greater than + 8 dBm. If external attenuation is used, don't forget to add this value to the reading. Use the following guidelines for modifying the power spectral density measurement procedure when necessary.

- For devices with spectrum line spacing greater than 3 kHz no change is required.
- For devices with spectrum line spacing equal to or less than 3 kHz, the resolution bandwidth must be reduced below 3 kHz until the individual lines in the spectrum are resolved. The measurement data must then be normalized to 3 kHz by summing the power of all the individual spectral lines within a 3kHz band (in linear power units) to determine compliance.
- If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 35 dB for correction to 3 kHz.
- Should all the above fail or any controversy develop regarding accuracy of measurement, the FCC Laboratory will use the HP 89440A Vector Signal Analyzer for final measurement unless a clear showing can be made for a further alternate.

**ALTERNATIVE TEST PROCEDURES**

If antenna conducted tests cannot be performed on this device, radiated tests to show compliance with the various conducted requirements of Section 15.247 are acceptable. As stated previously, a pre-amp must be used in making the following measurements.

1. Calculate the transmitter's peak power using the following equation:
   Where: E = the measured maximum field strength in V/m.
   Set the RBW > 6dB bandwidth of the emission or use a peak power meter.
   P = (E x d) squared / (30 x G)
   G = the numeric gain of the transmitting antenna over an isotropic radiator.
   d = the distance in meters from which the field strength was measured.
   P = the power in watts for which you are solving:
2. Measure the power spectral density as follows:
   A. Tune the analyzer to the highest point of the maximized fundamental emission. Reset the analyzer to a RBW = 3 kHz, VBW > RBW, span = 300 kHz, sweep =100 sec.
   B. From the peak level obtained in (A), derive the field strength, E, by applying the appropriate antenna factor, cable loss, pre-amp gain, etc. Using the equation listed in (1), calculate a power level for comparison to the + 8 dBm limit.

Note: The above settings are used for peak measurements. The optional procedures for output power and power spectral density measurements can be used when applicable.

# Appendix

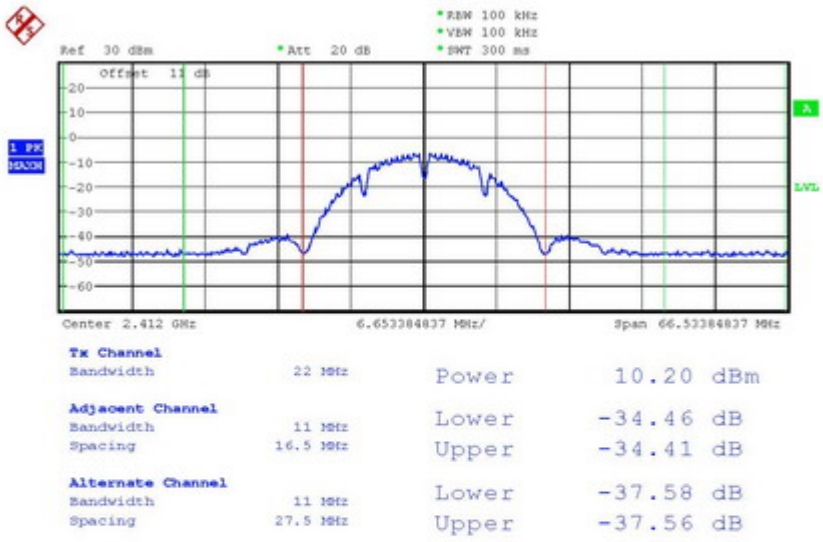
## A Measurement diagrams

1. Peak Output Power
2. Spurious Emissions radiated
3. Band Edge Measurement
4. Minimum 6dB Bandwidth
5. Peak Power Spectral Density
6. Power Line Conducted Emission

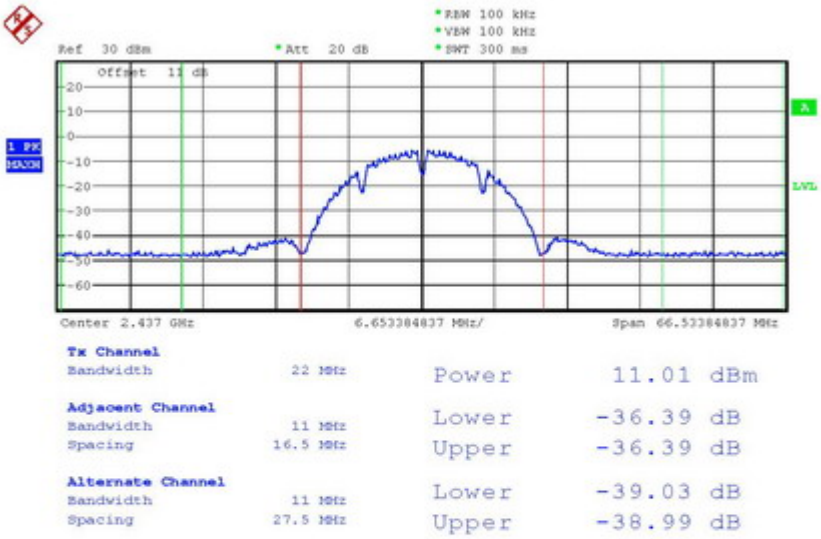
## B Multi-listing model number

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Peak Output Power
## Mode A

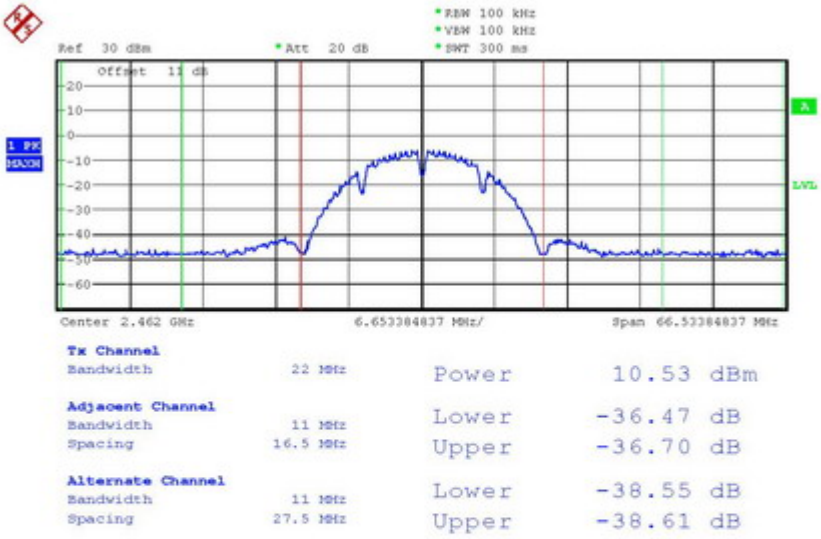



MAX OUTPUT POWER 802.11b CH1
Date: 9.DEC.2008 08:02:55




MAX OUTPUT POWER 802.11b CH6

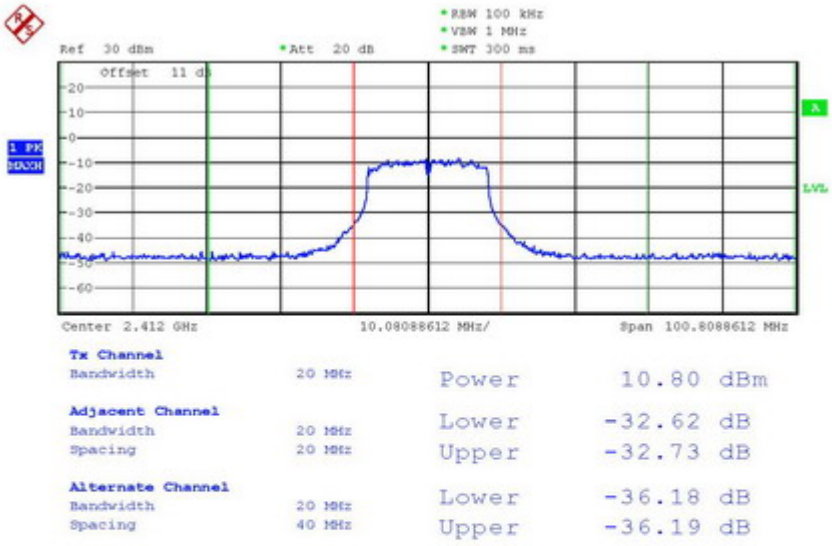
Date: 9.DEC.2008 08:04:27



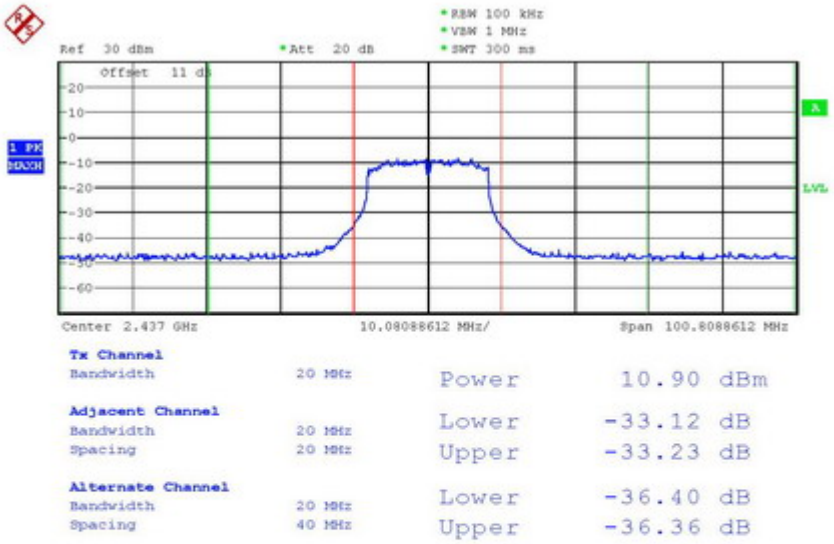

MAX OUTPUT POWER 802.11b CH11

Date: 9.DEC.2008 08:05:27

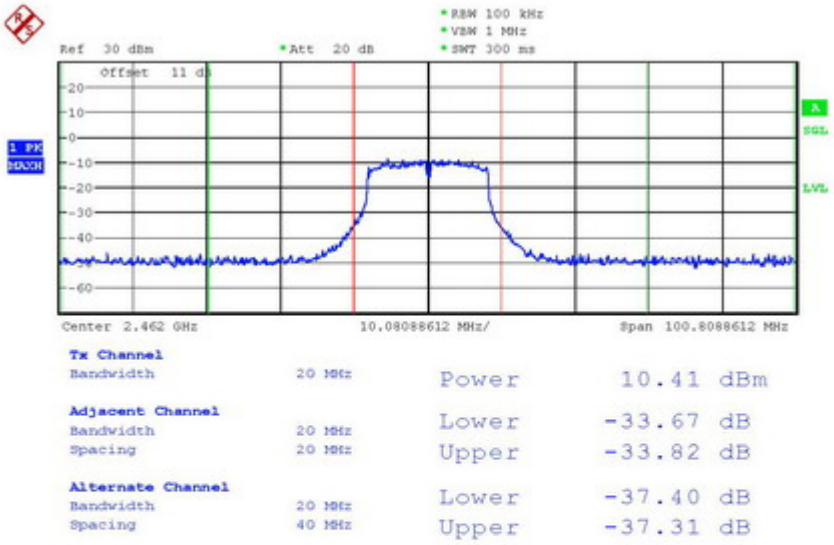
Mode B




MAX OUTPUT POWER 802.11g CH1
Date: 9.DEC.2008 08:09:49

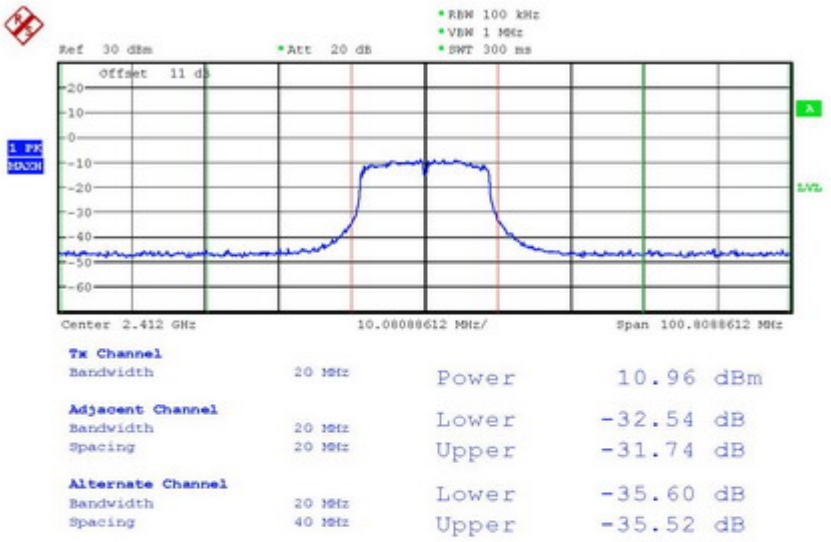



MAX OUTPUT POWER 802.11g CH6
Date: 9.DEC.2008 08:09:24



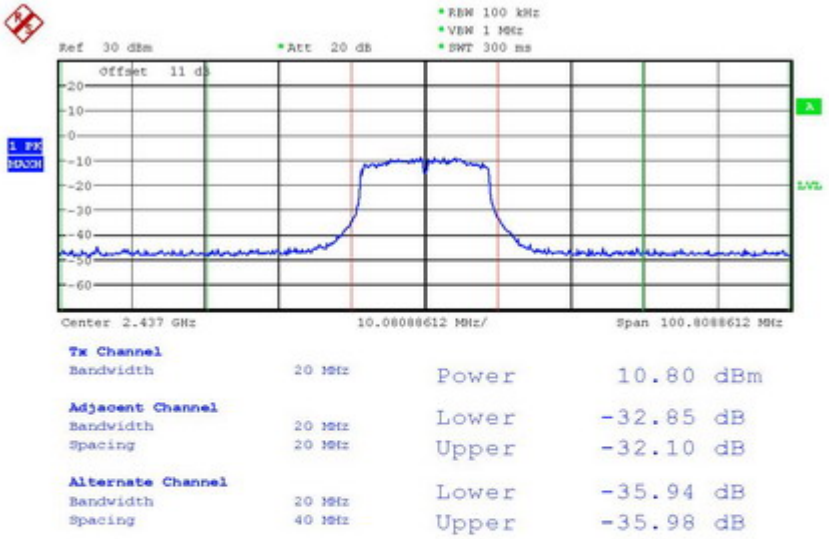

MAX OUTPUT POWER 802.11g CH11
Date: 9.DEC.2008 08:07:37

# Mode C

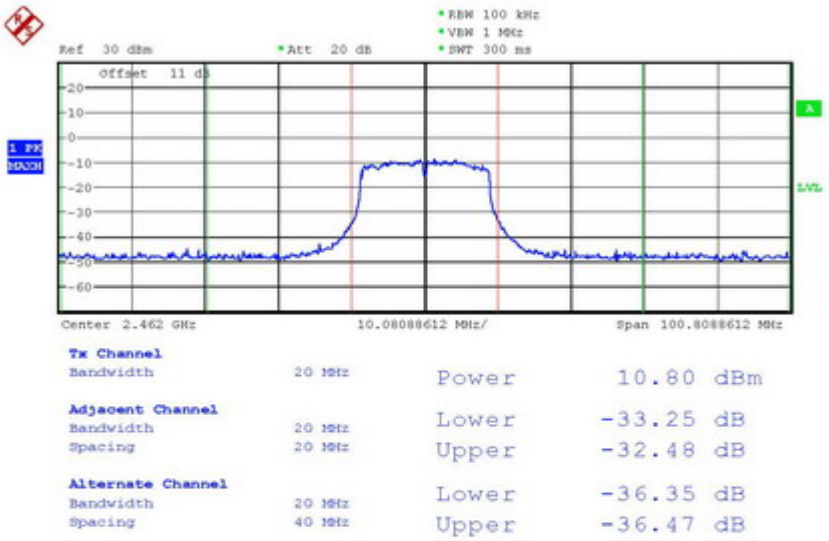



MAX OUTPUT POWER 802.11n 20MHz CH1
Date: 9.DEC.2008 08:10:28

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

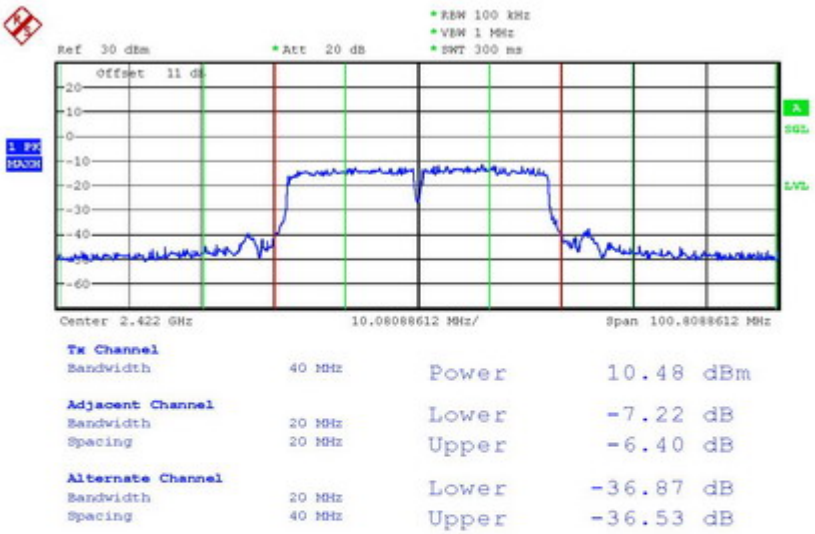



MAX OUTPUT POWER 802.11n 20MHz CH6
Date: 9.DEC.2008 08:10:49

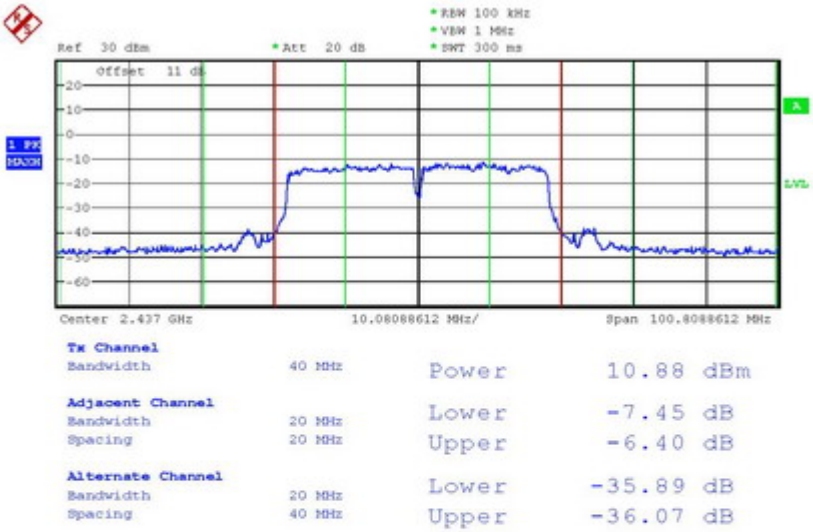



MAX OUTPUT POWER 802.11n 20MHz CH11
Date: 9.DEC.2008 08:11:37

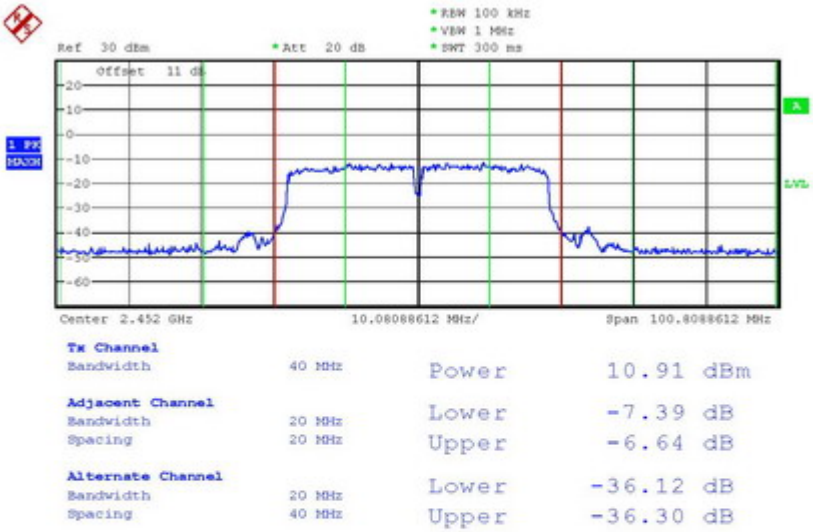
Mode D




MAX OUTPUT POWER 802.11n 40MHz CH1
Date: 9.DEC.2008 08:15:13



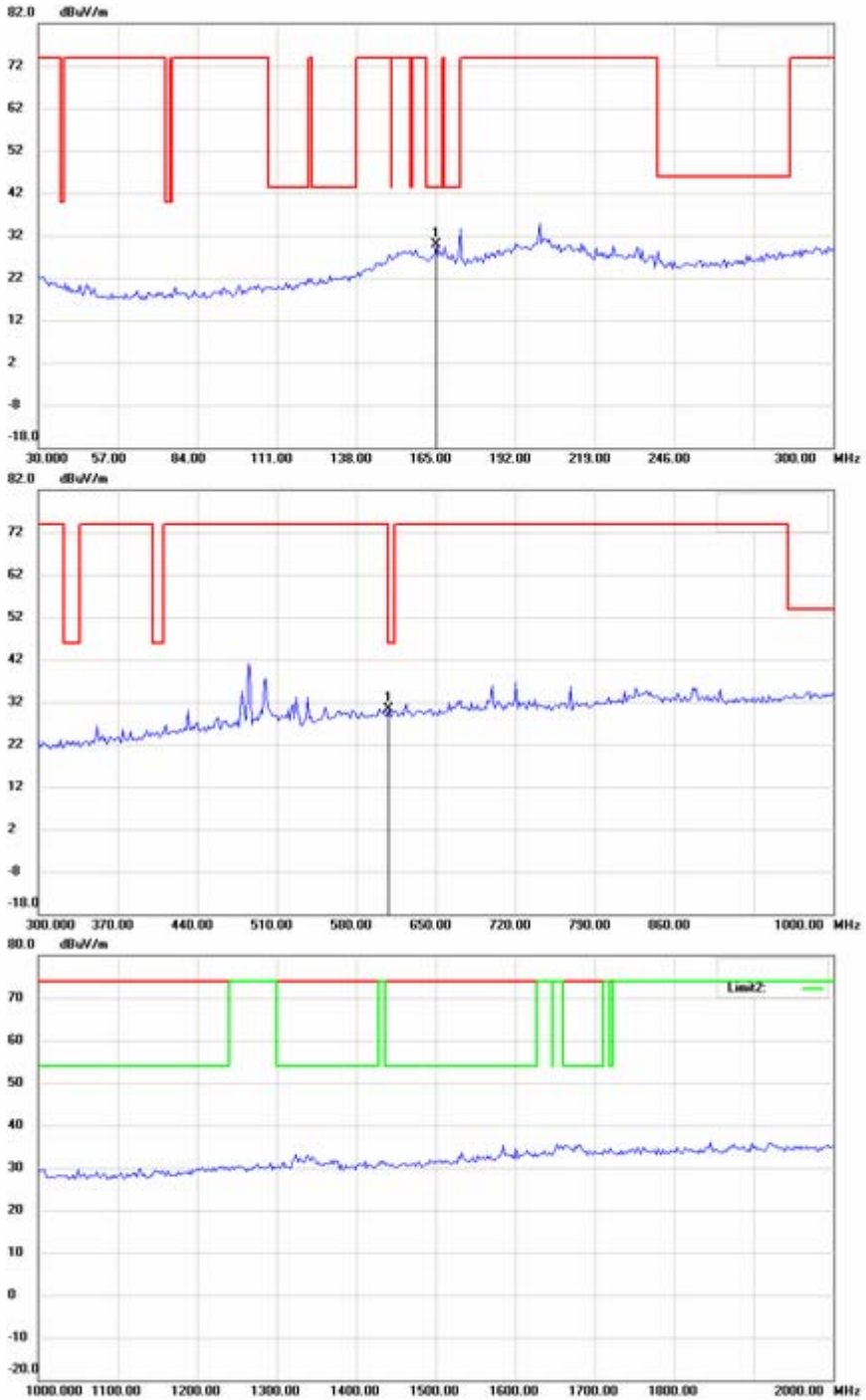

MAX OUTPUT POWER 802.11n 40MHz CH4
Date: 9.DEC.2008 08:14:37




MAX OUTPUT POWER 802.11n 40MHz CH7
Date: 9.DEC.2008 08:13:16

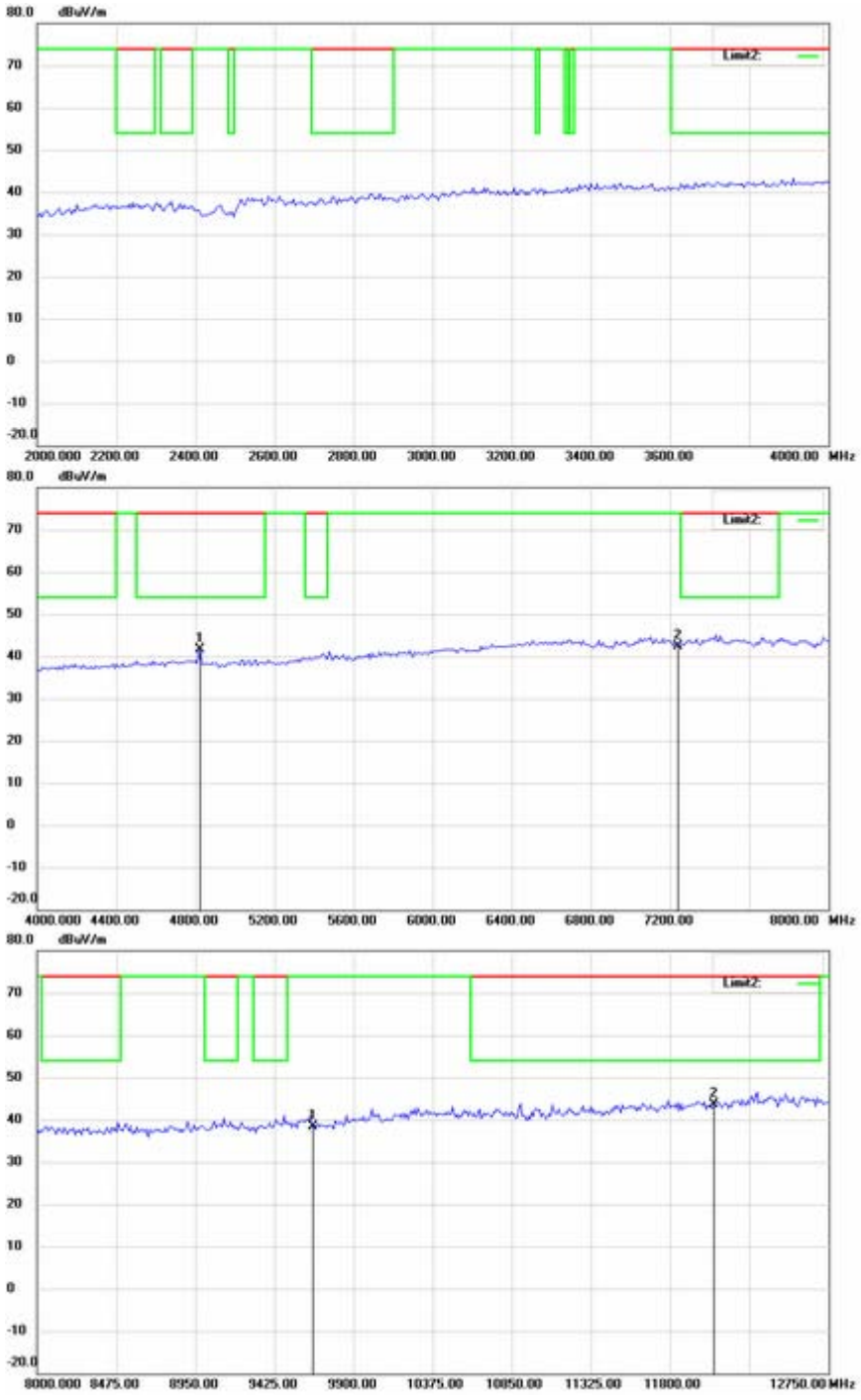
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

Spurious Emissions radiated
Mode A_Channel 1
Antenna Polarization H



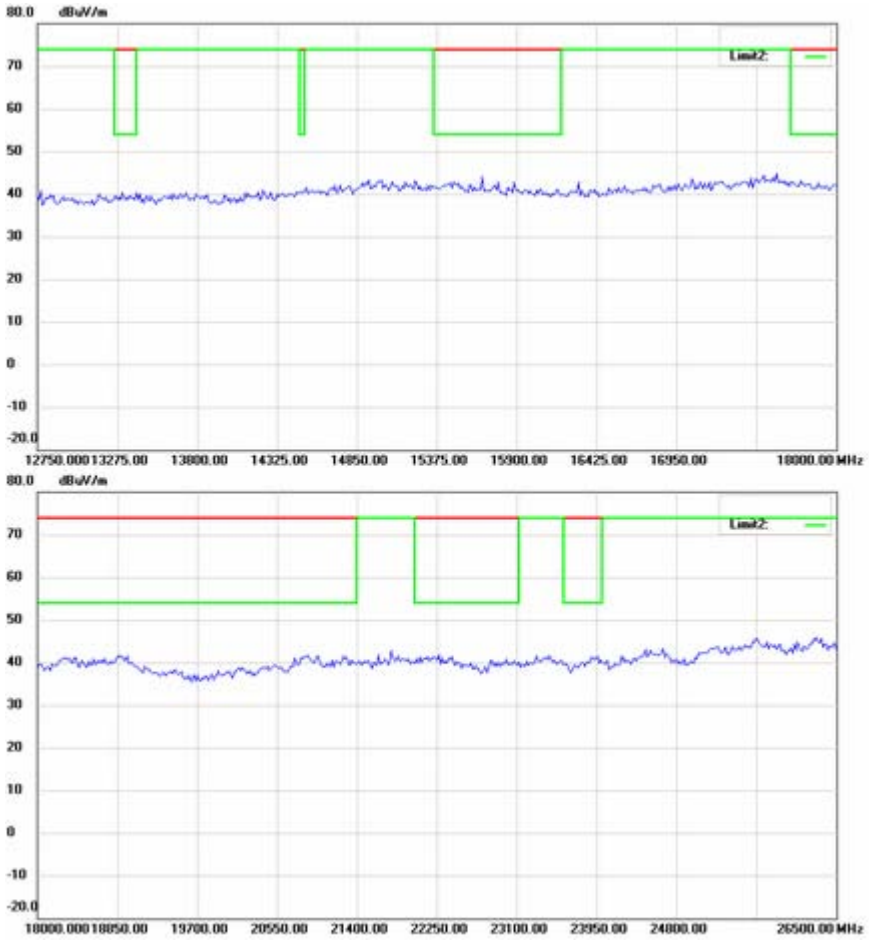

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

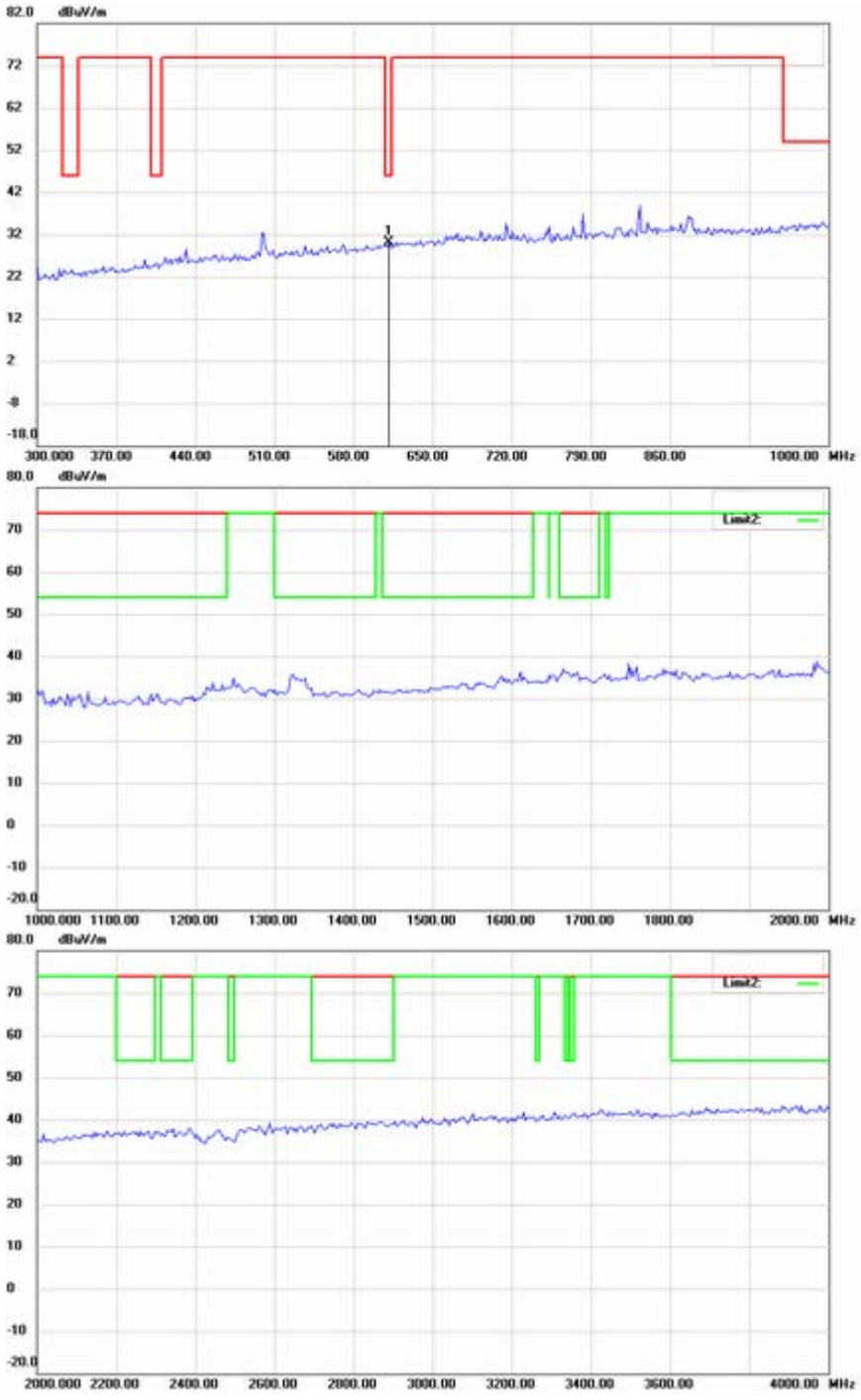
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




## Antenna Polarization V

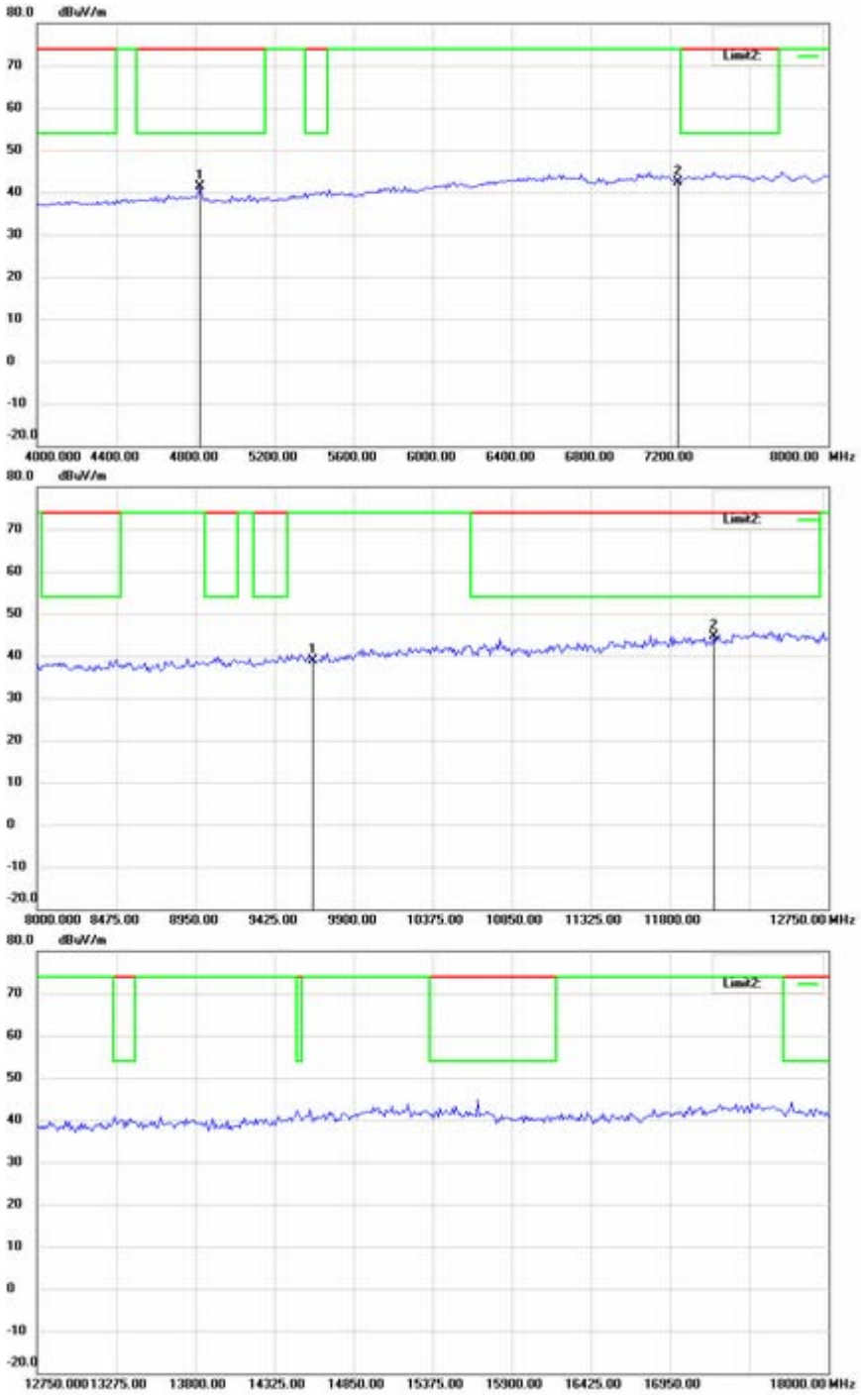

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

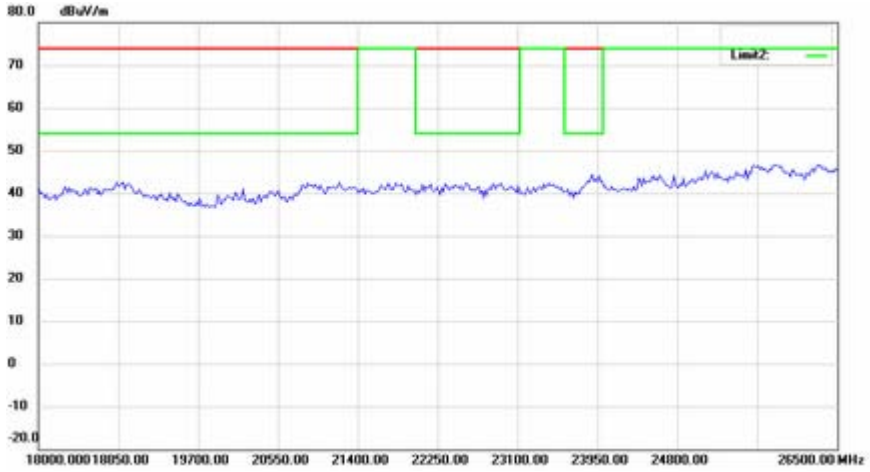
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



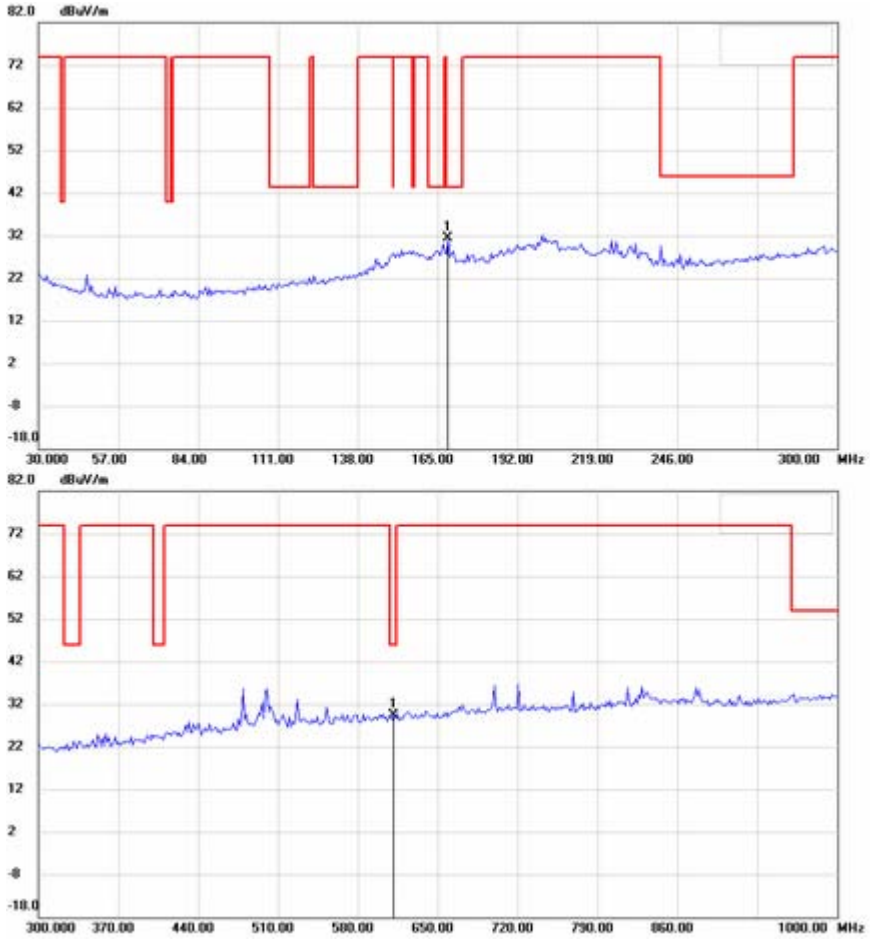

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

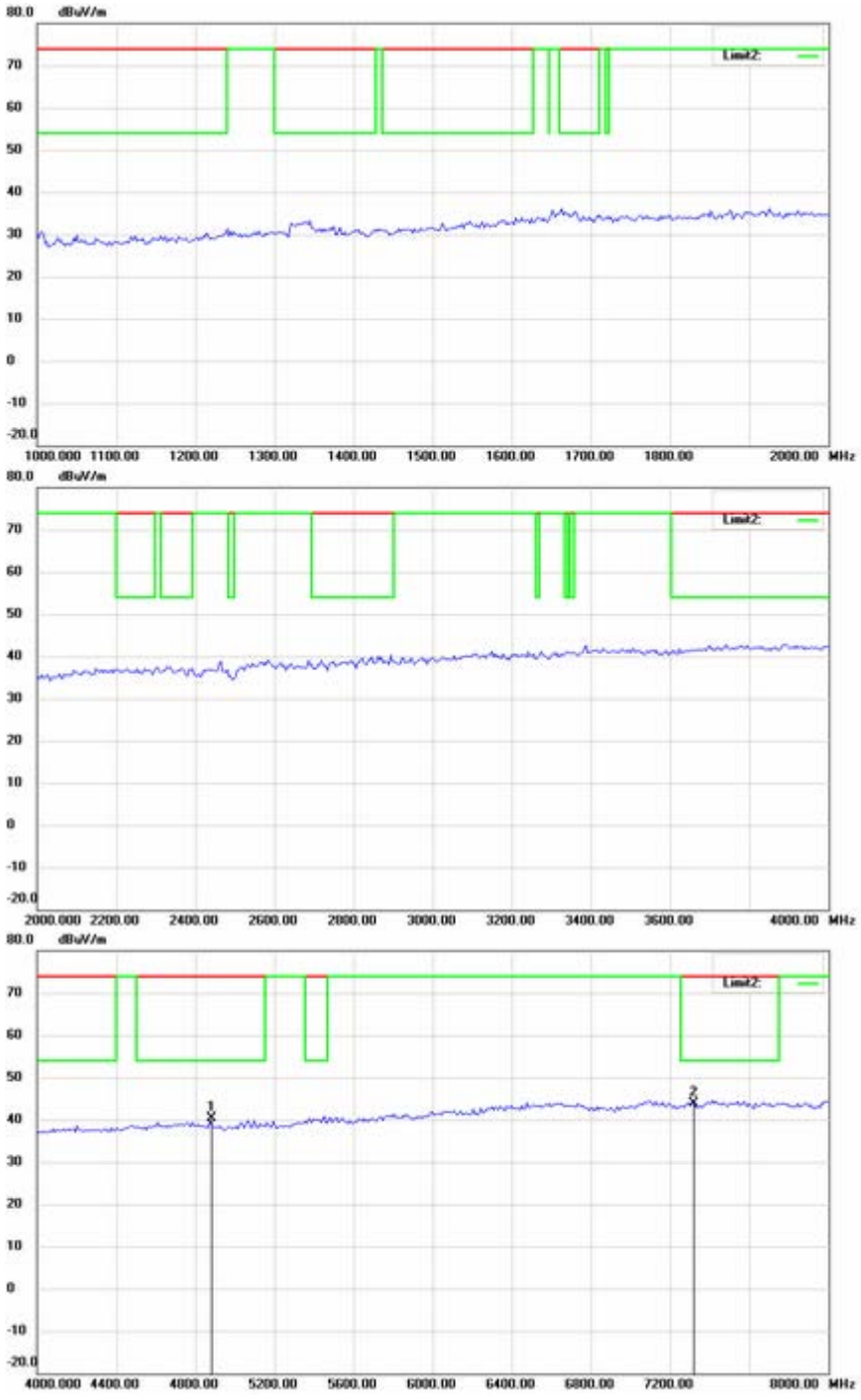



Channel 6
Antenna Polarization H



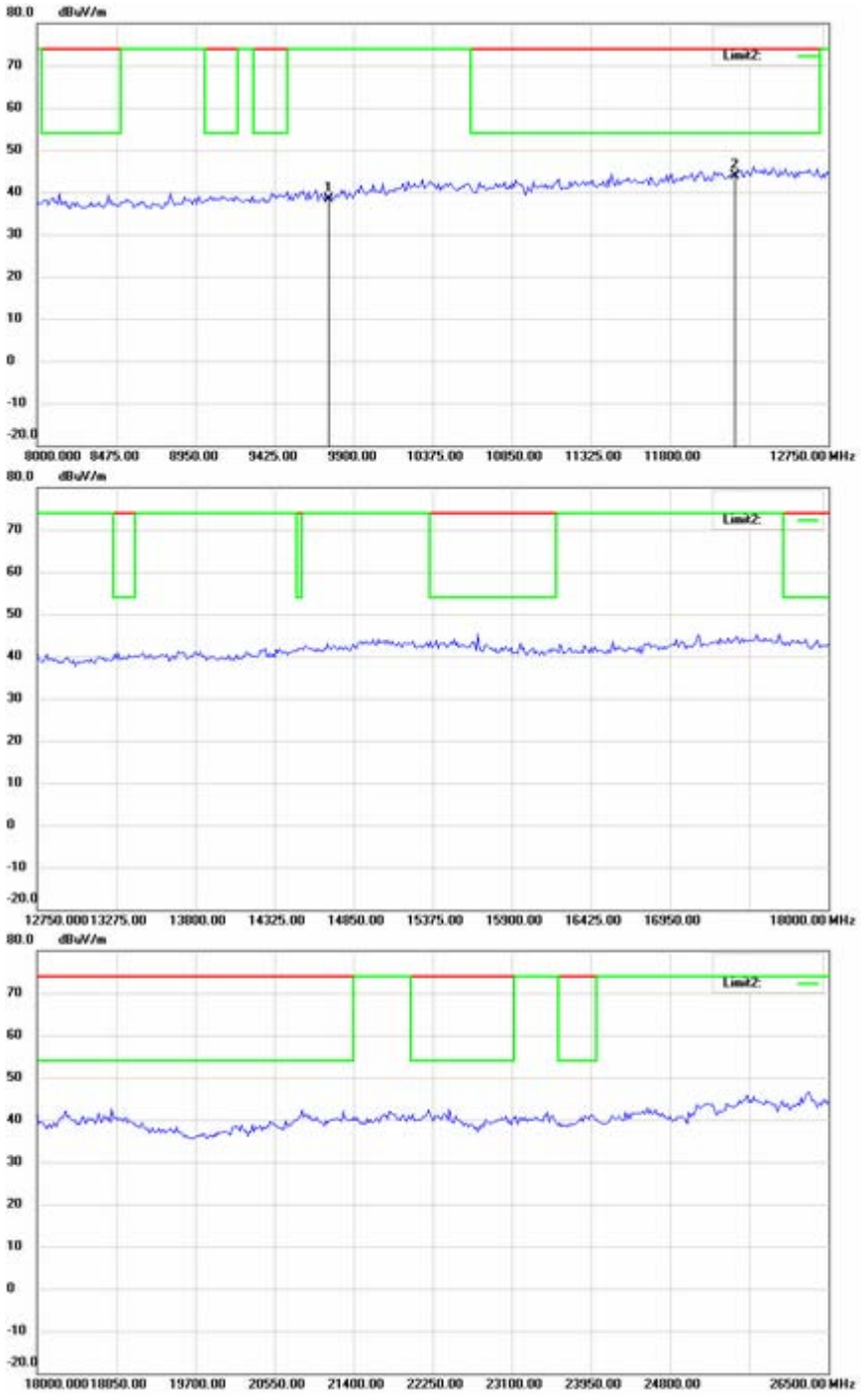

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

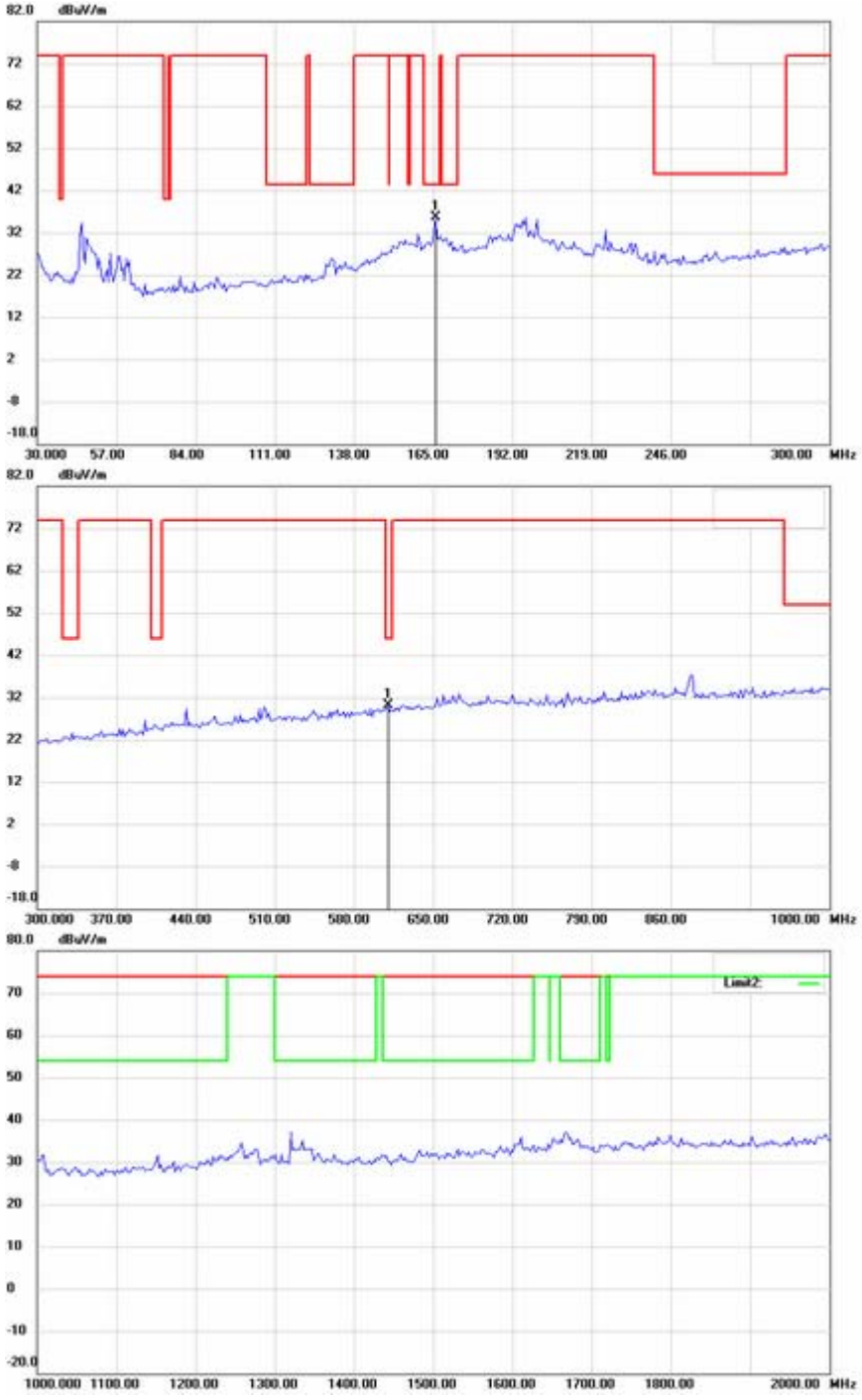



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

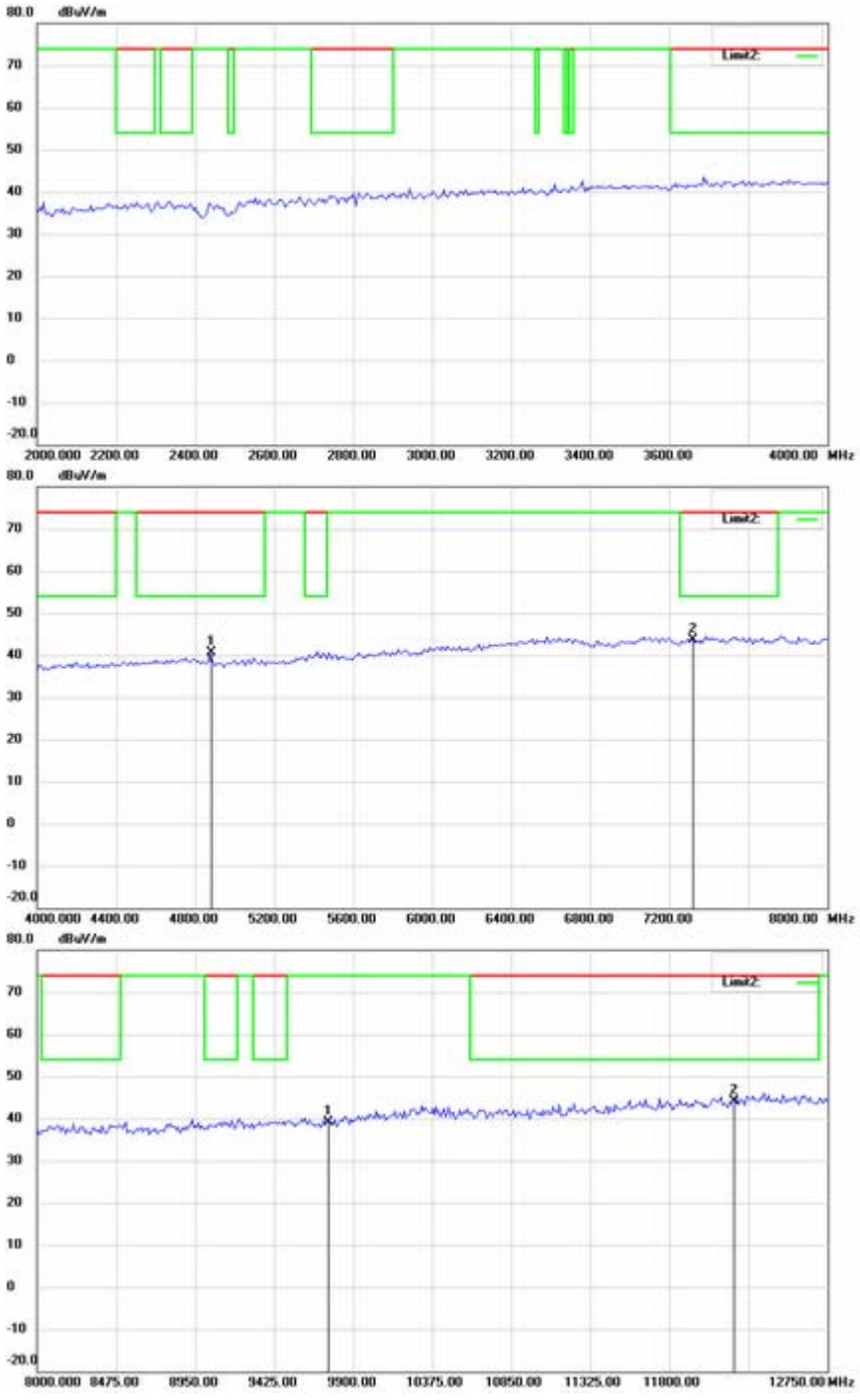
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

## Antenna Polarization V




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

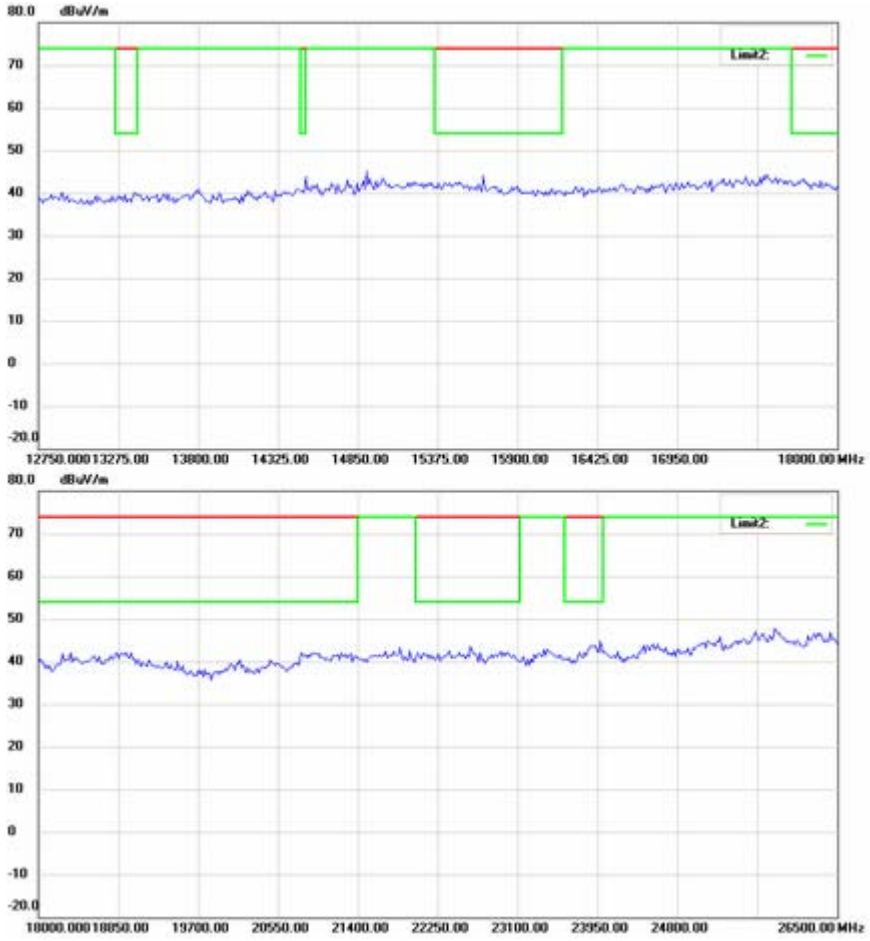
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

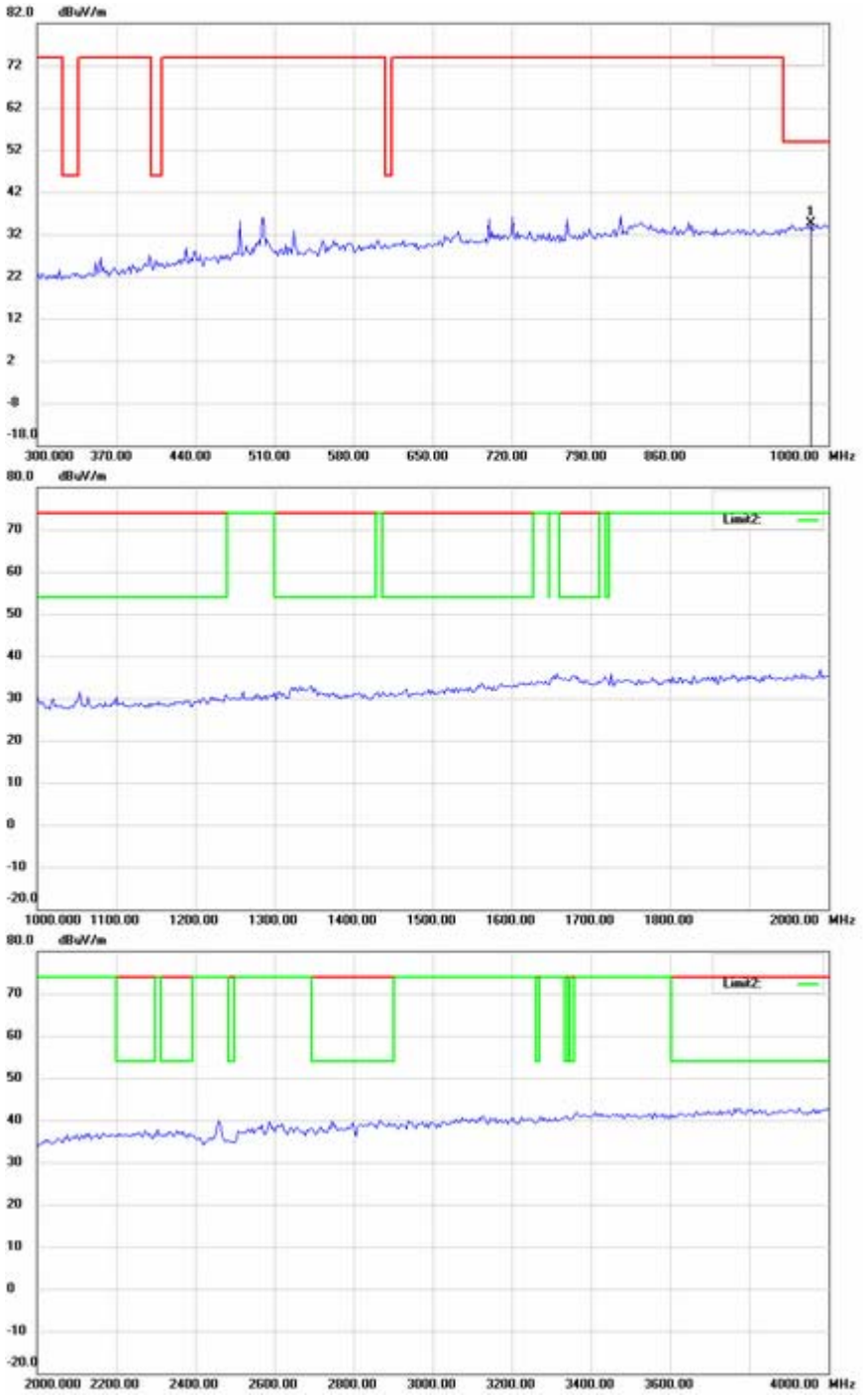
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N




Channel 11
Antenna Polarization H

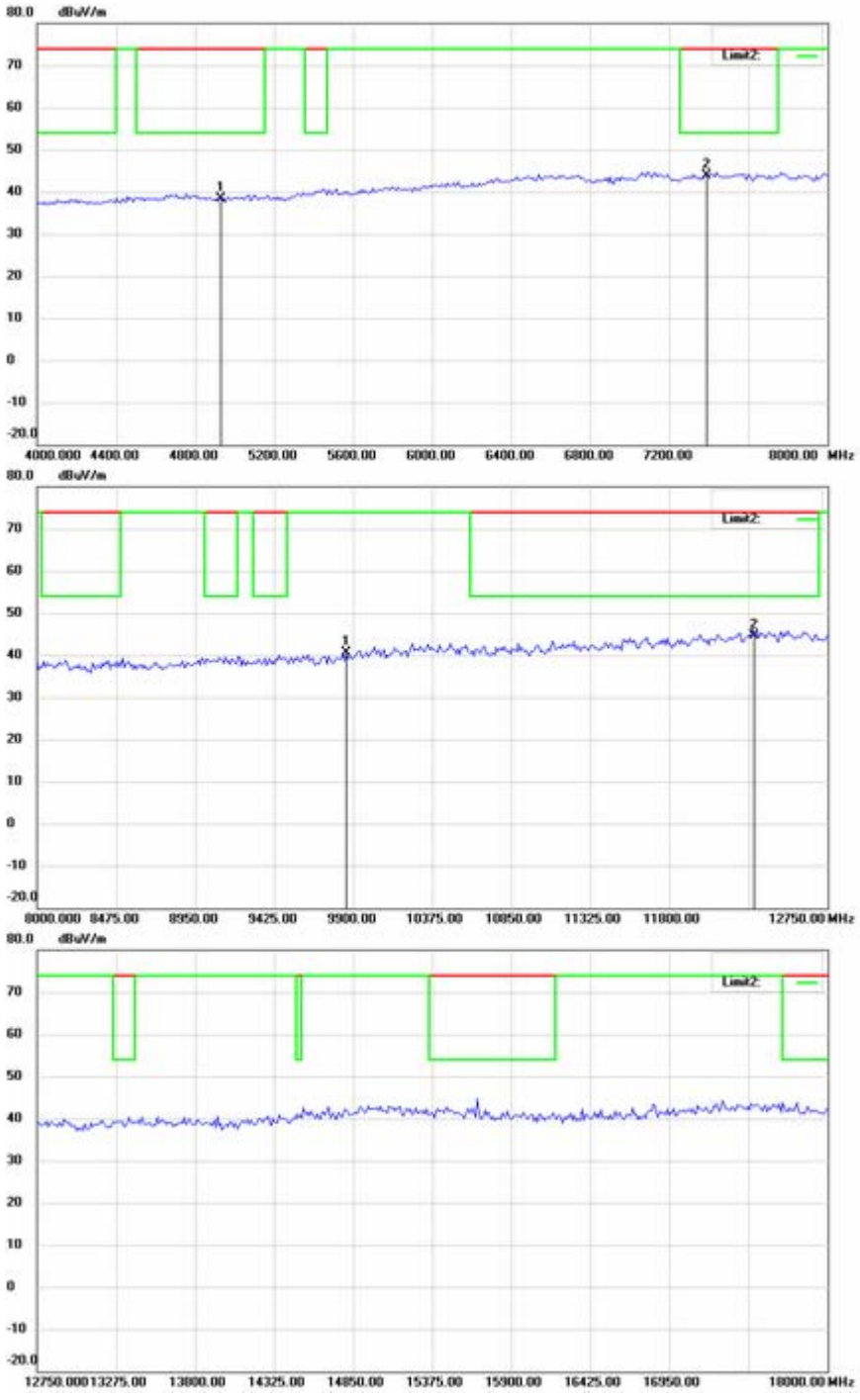

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



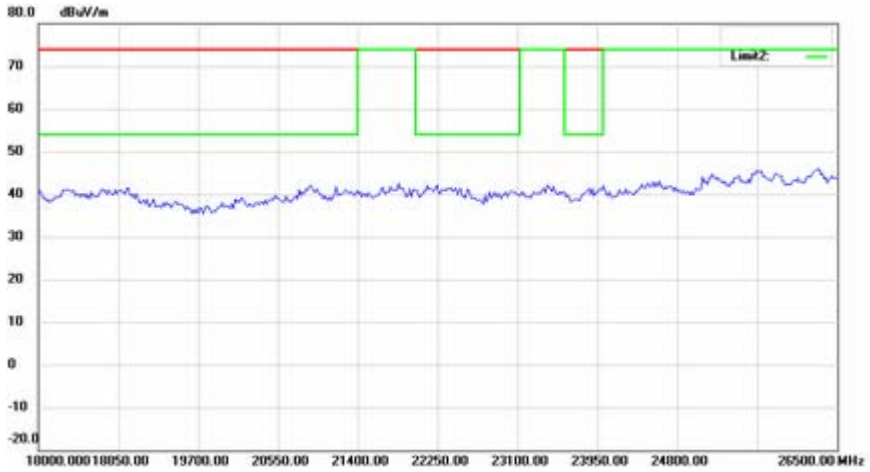

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

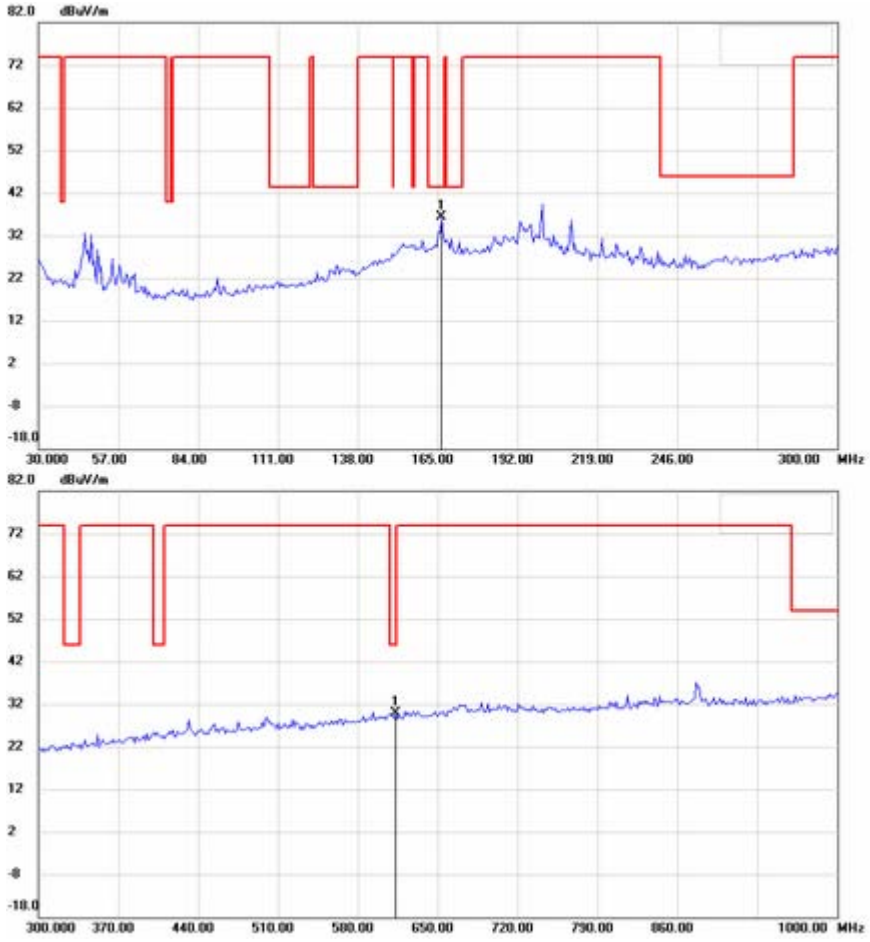



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

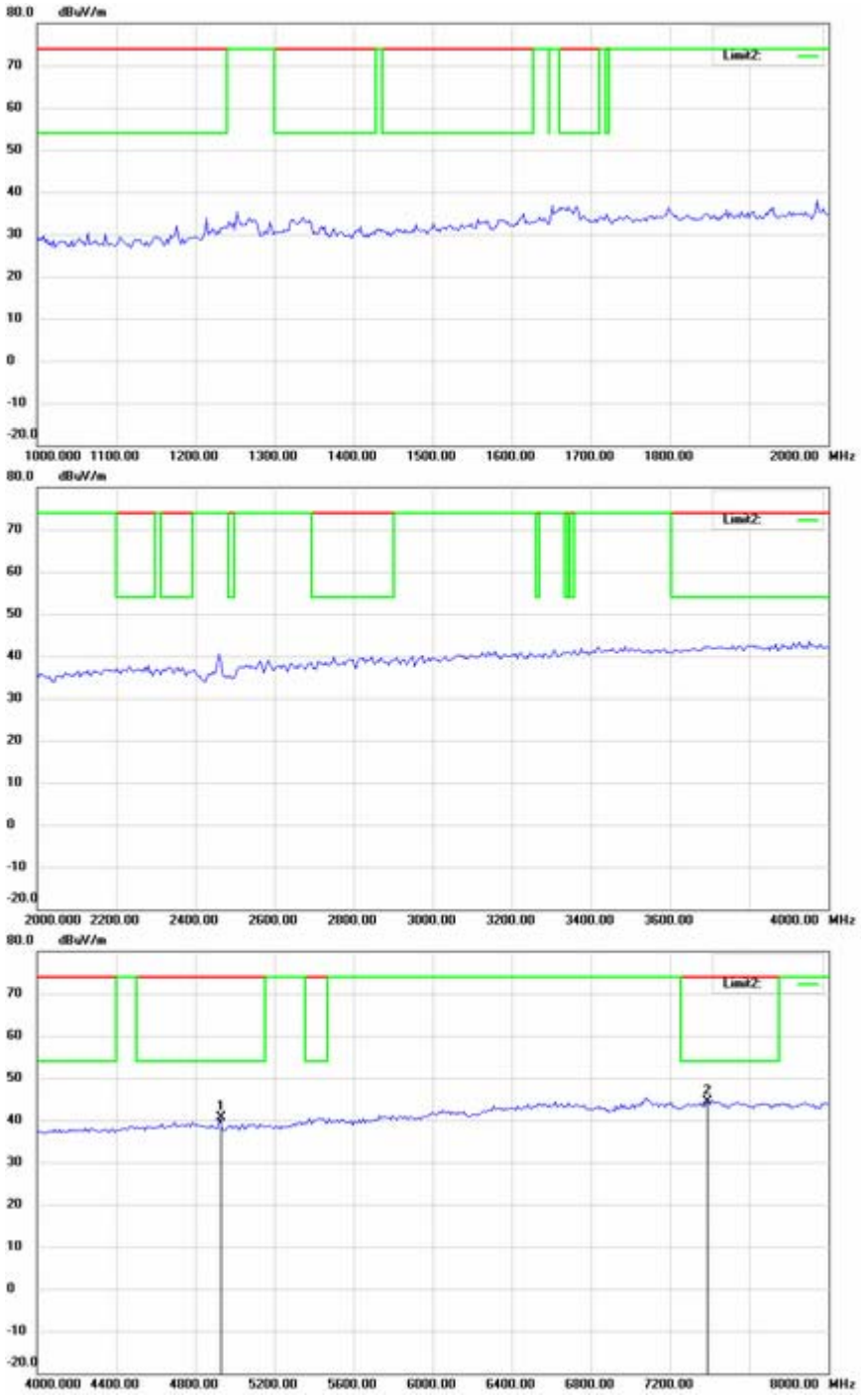



Antenna Polarization V



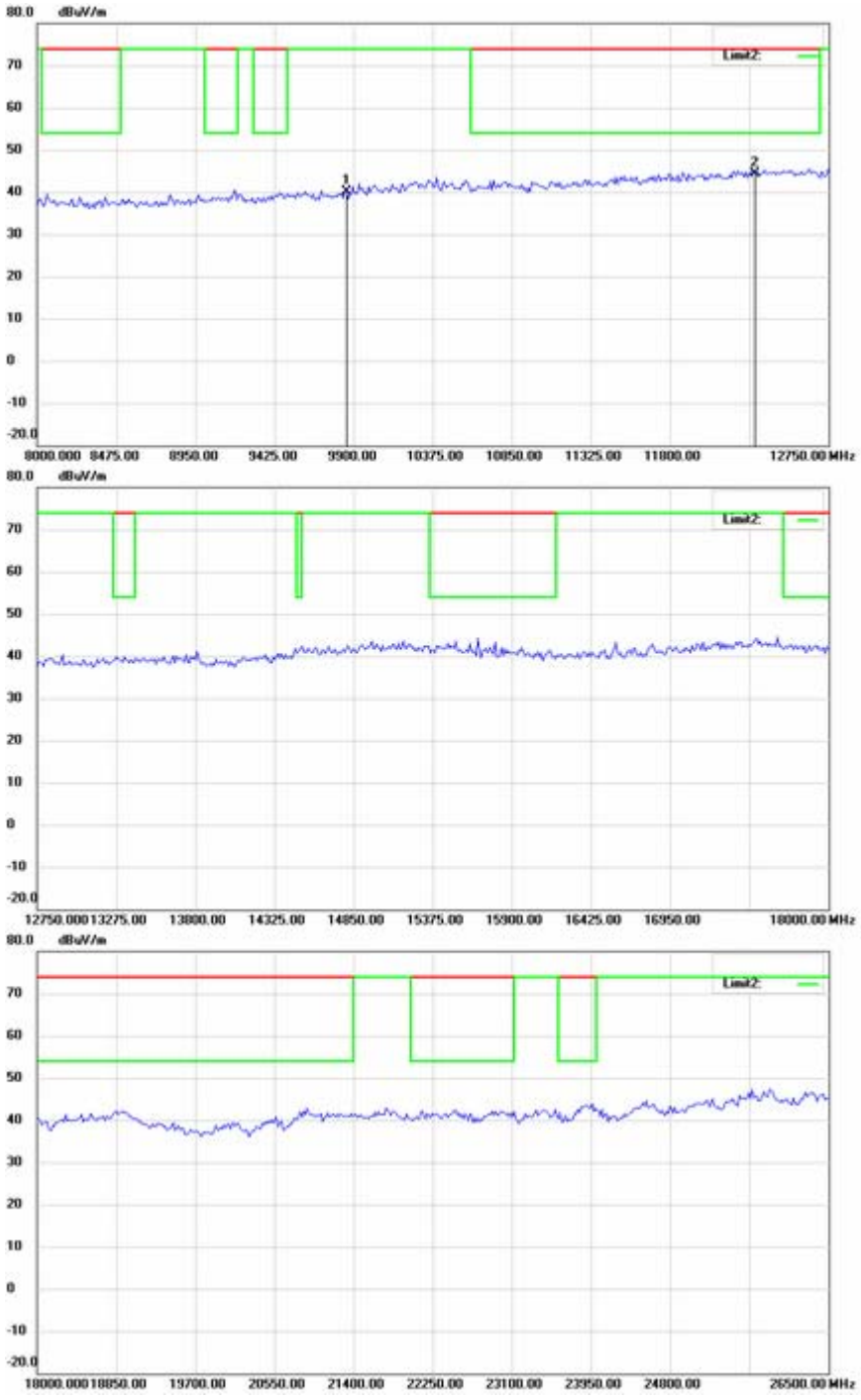

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

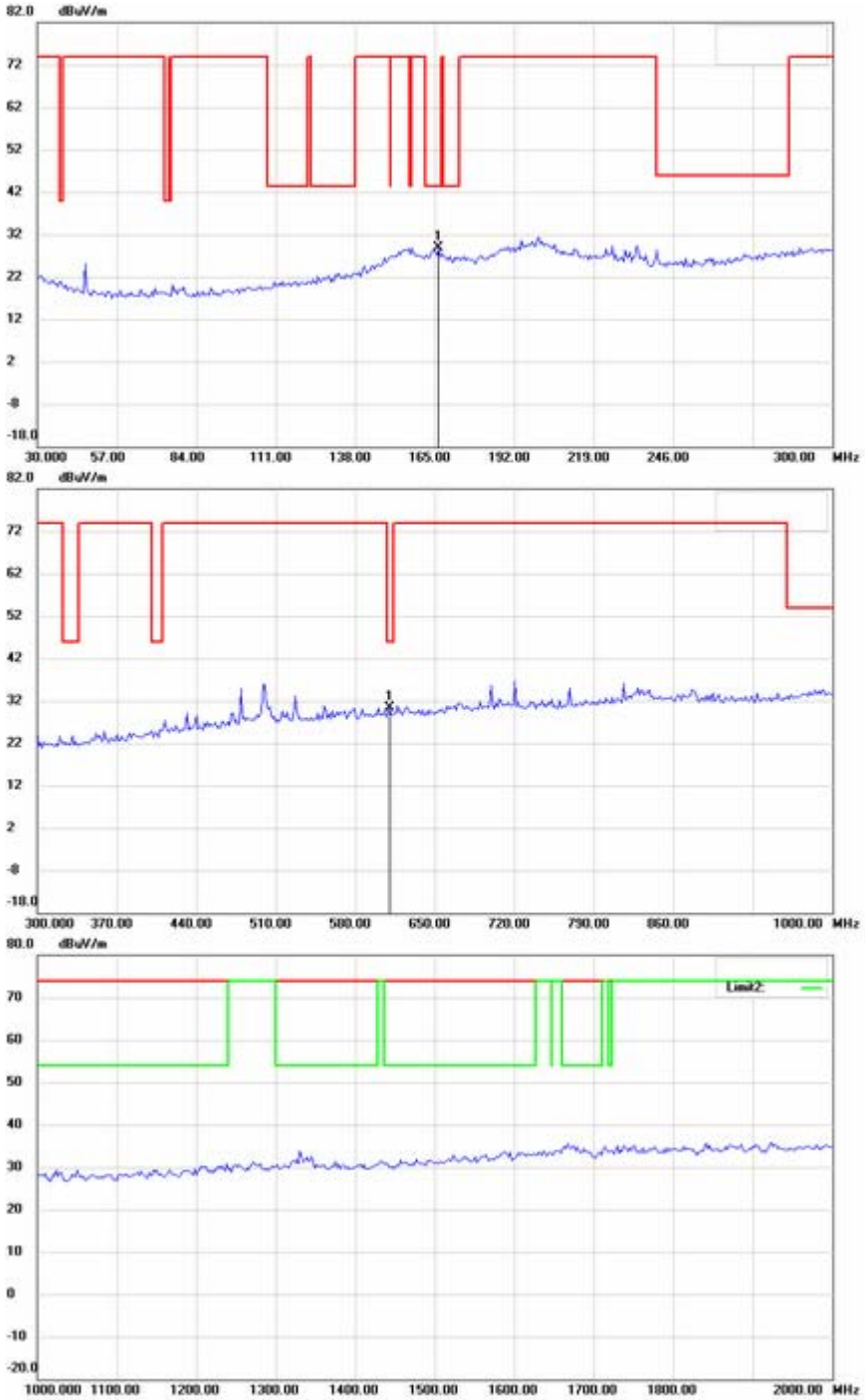
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

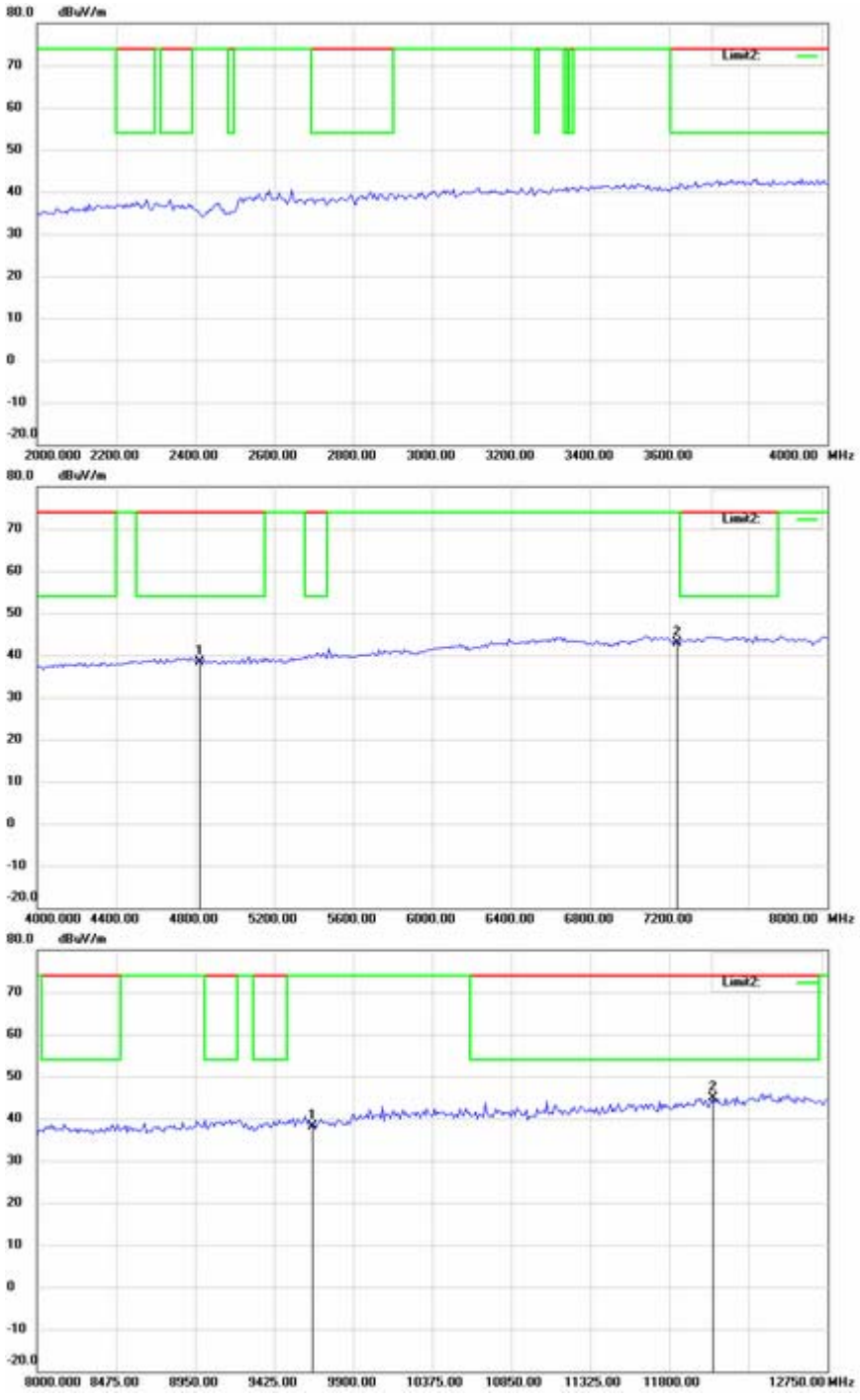
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Mode B_Channel 1
Antenna Polarization H



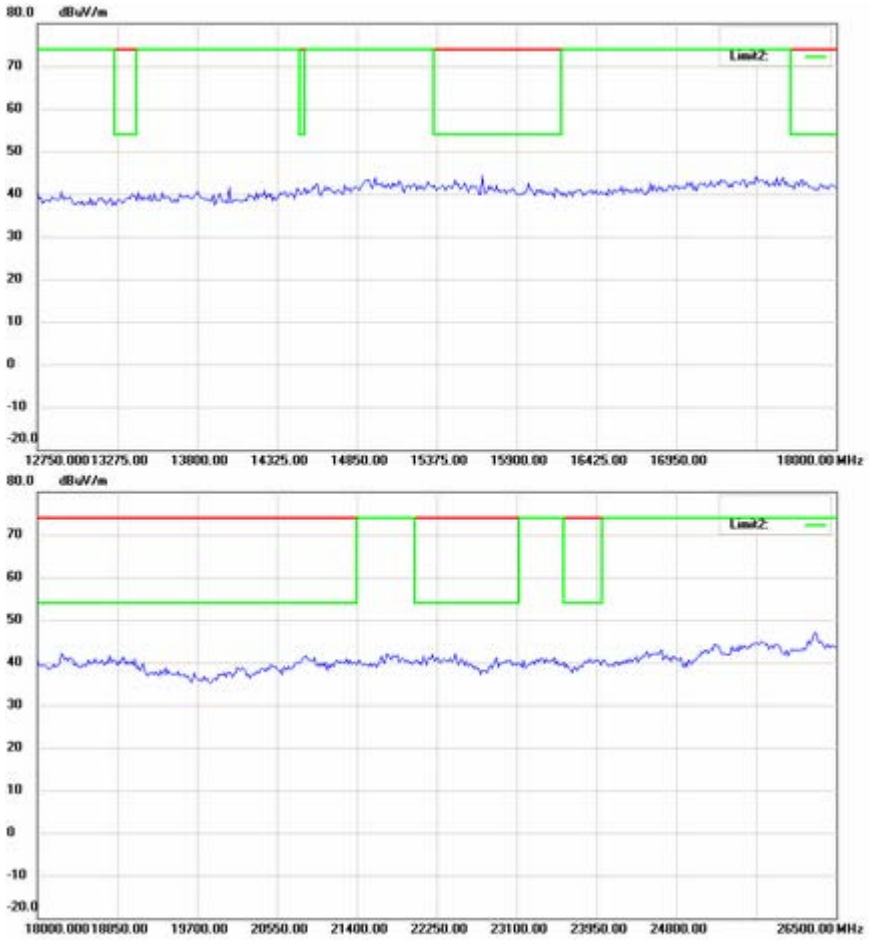

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

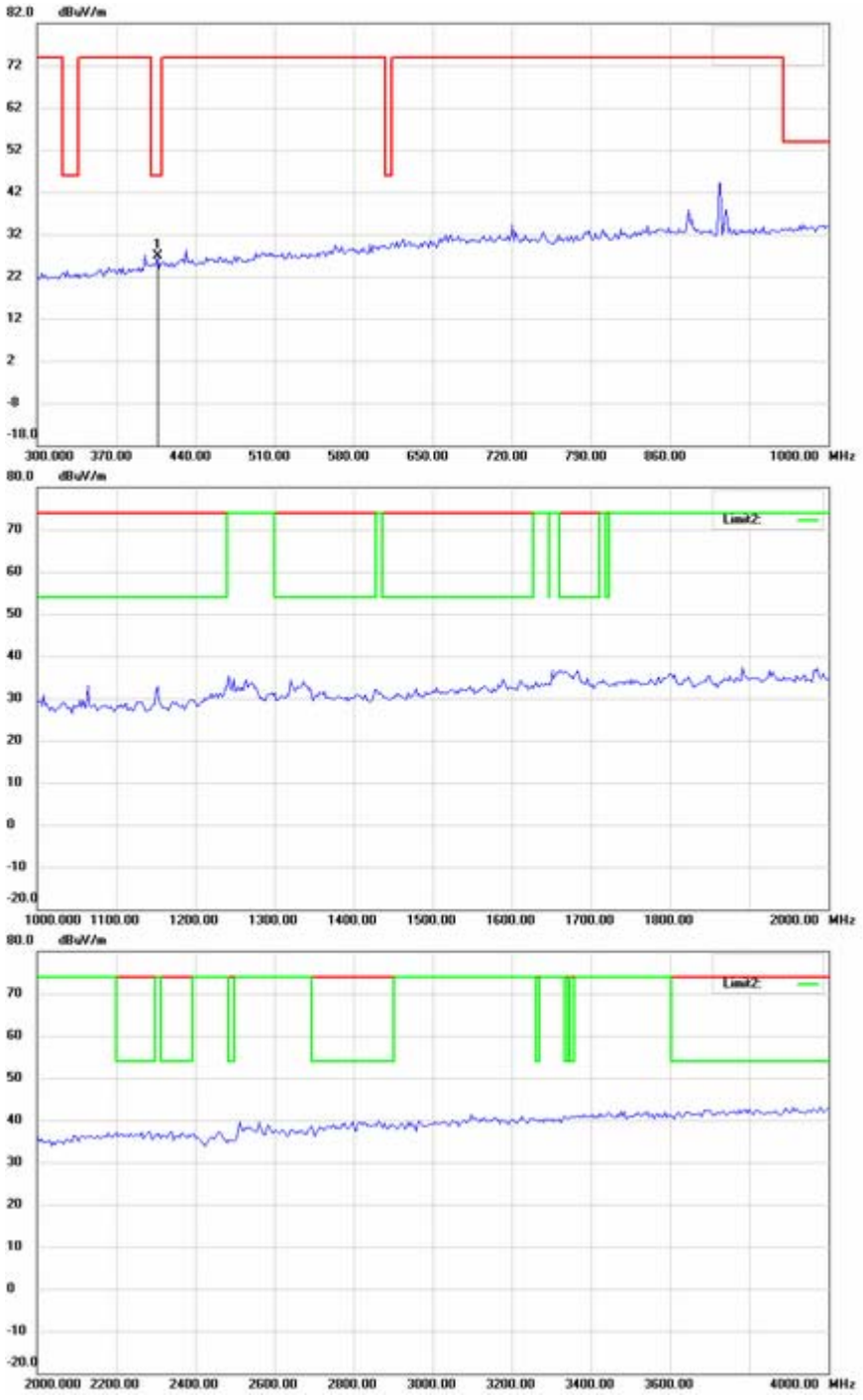
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




## Antenna Polarization V

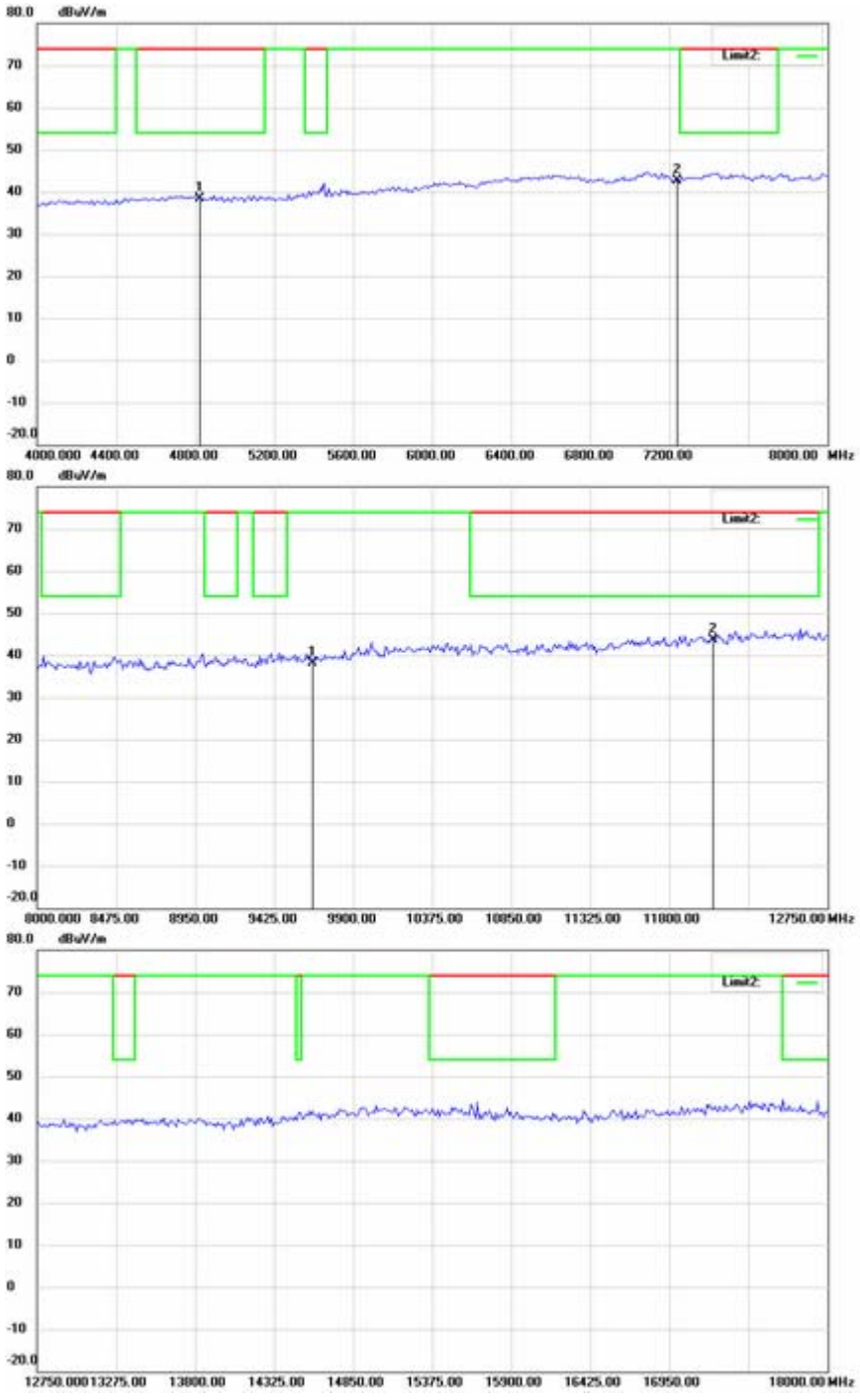

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

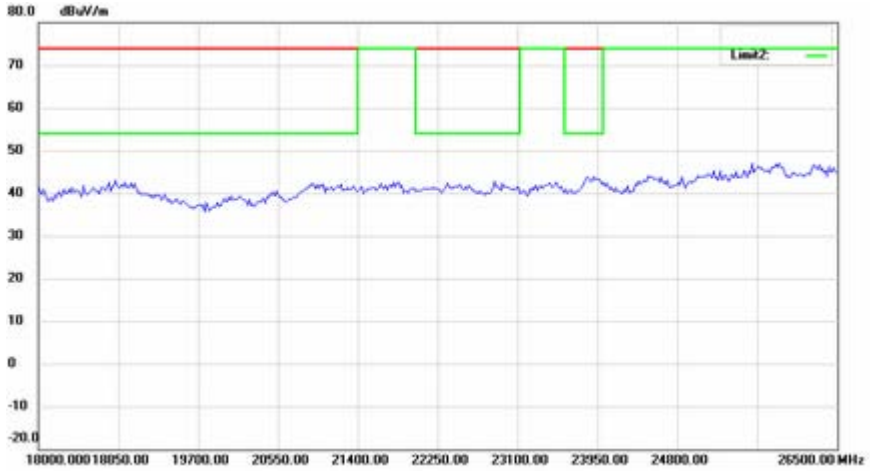
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



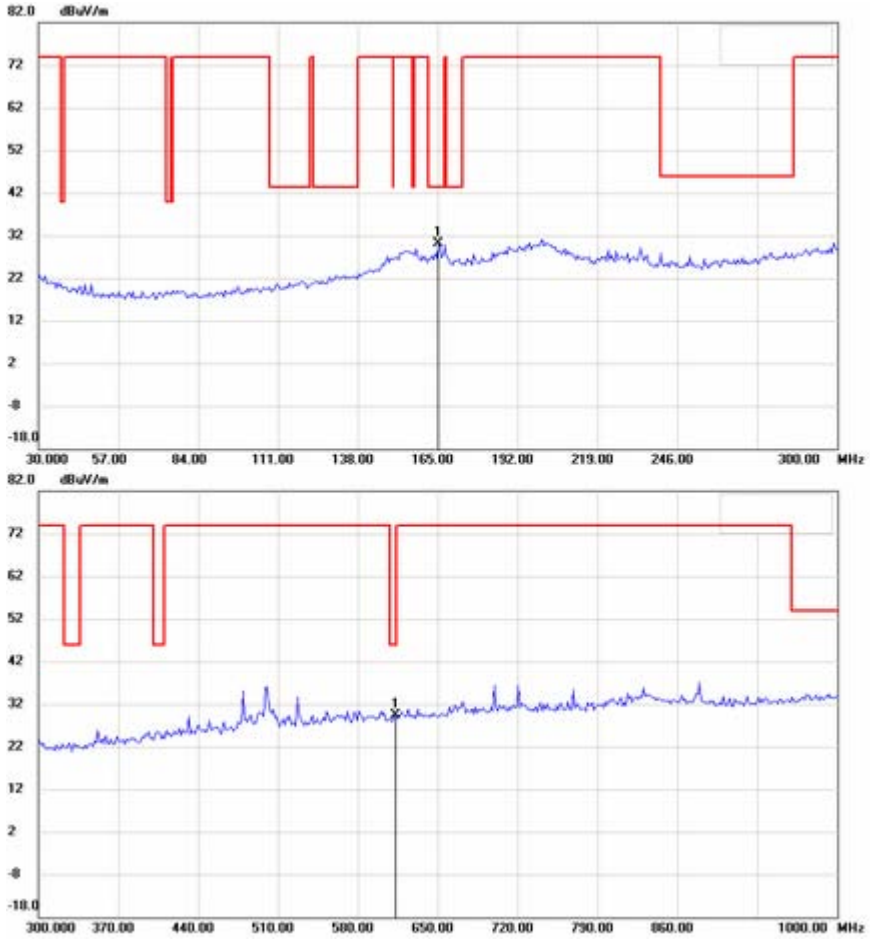

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

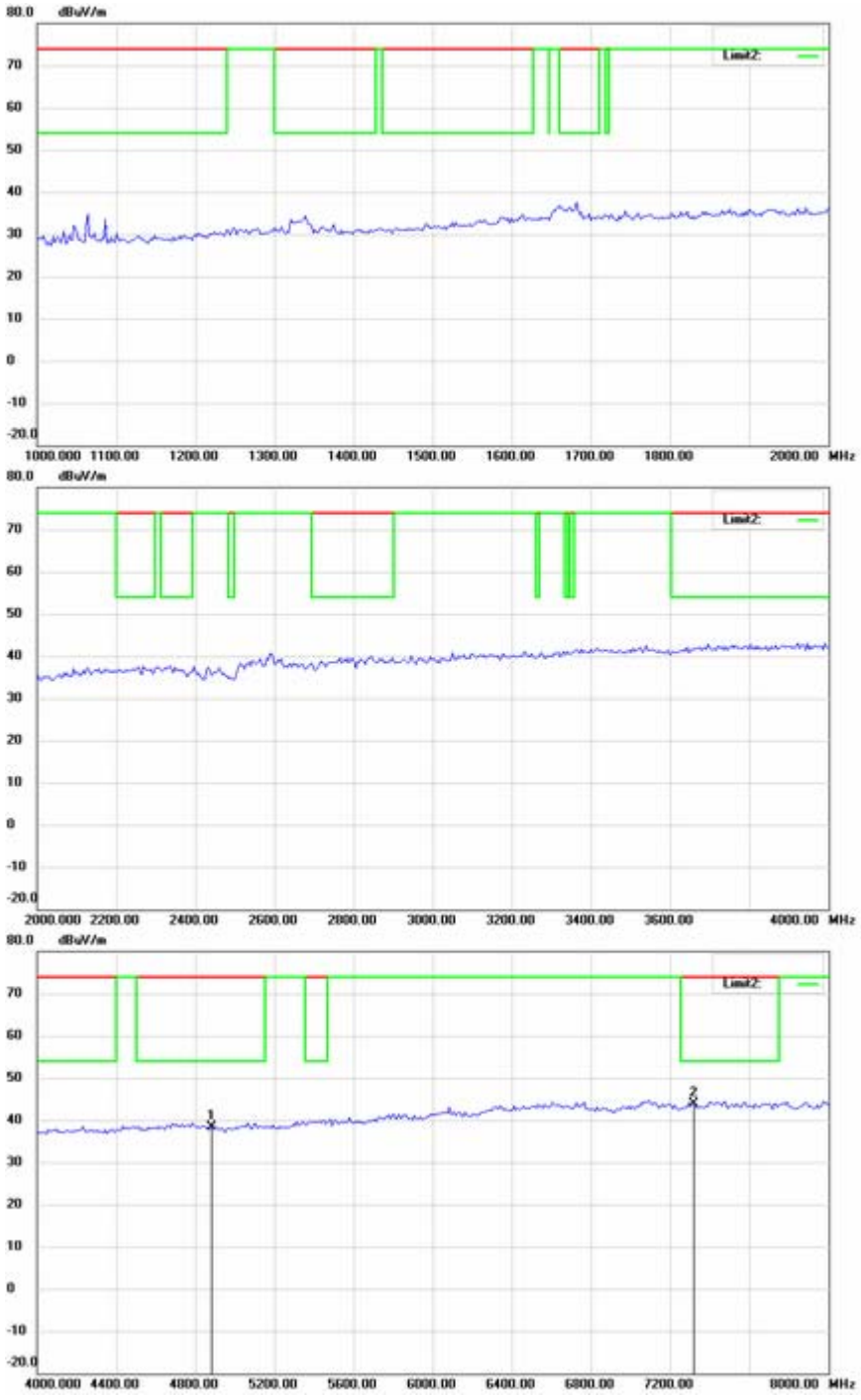



Channel 6
Antenna Polarization H



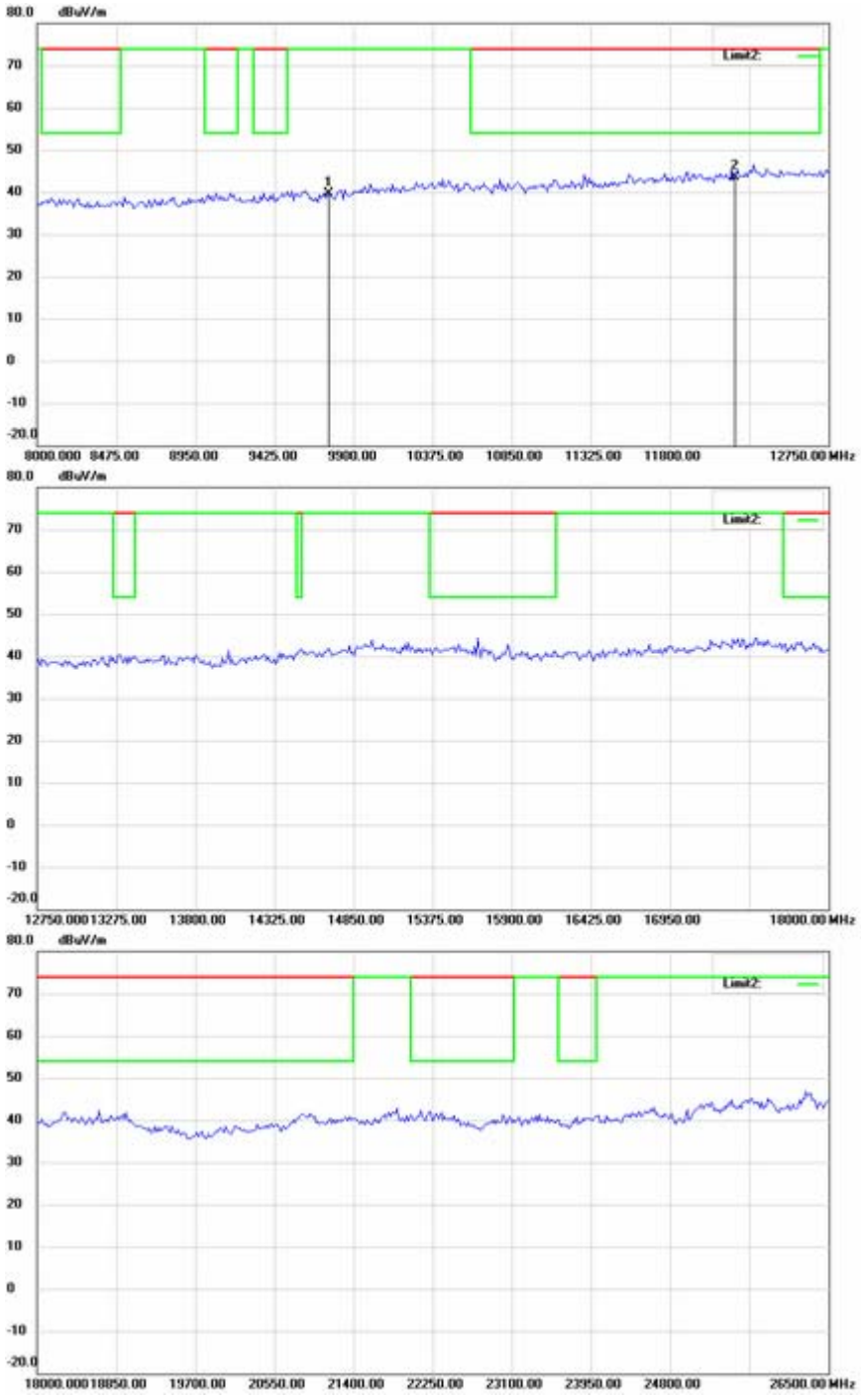

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

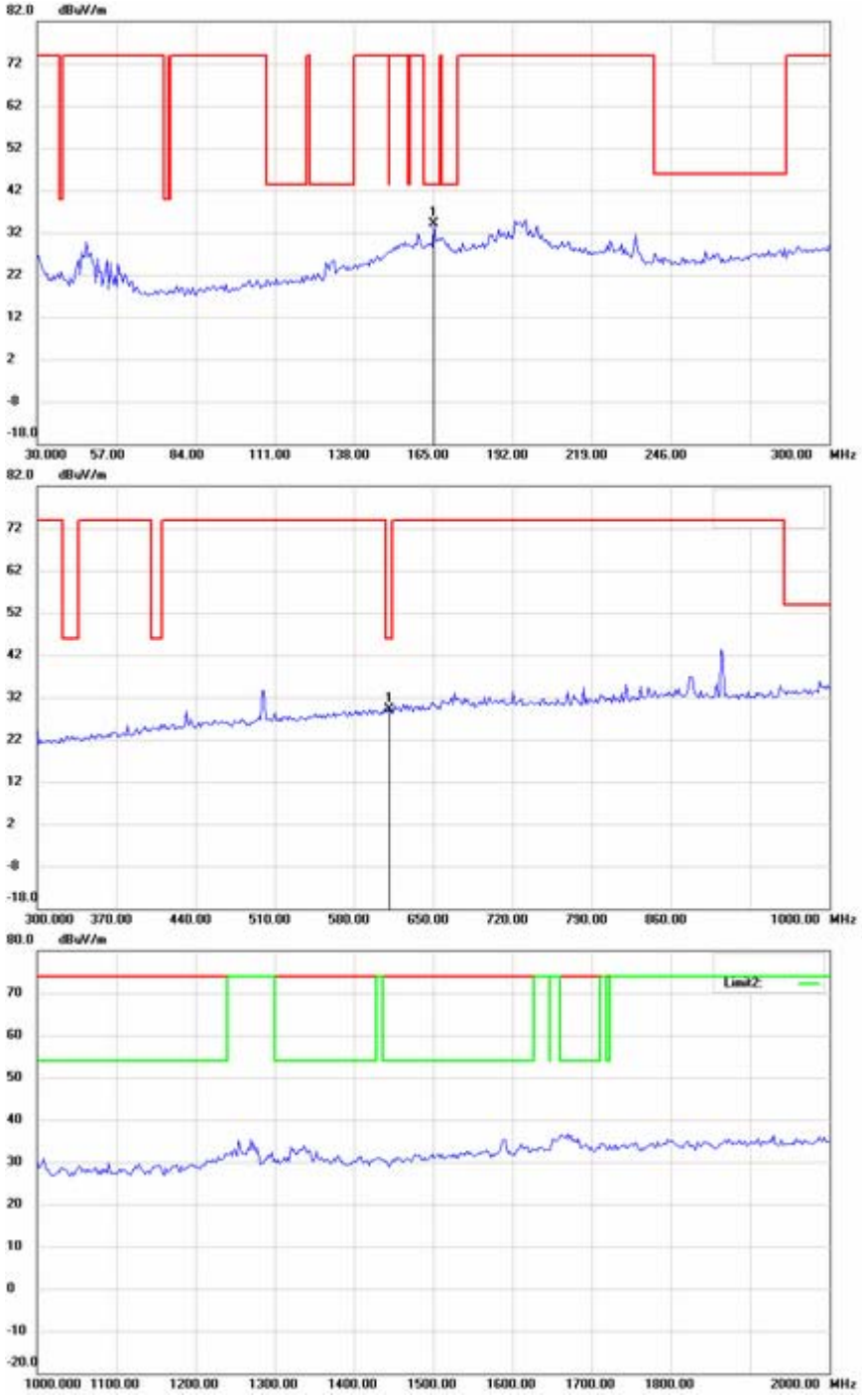



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

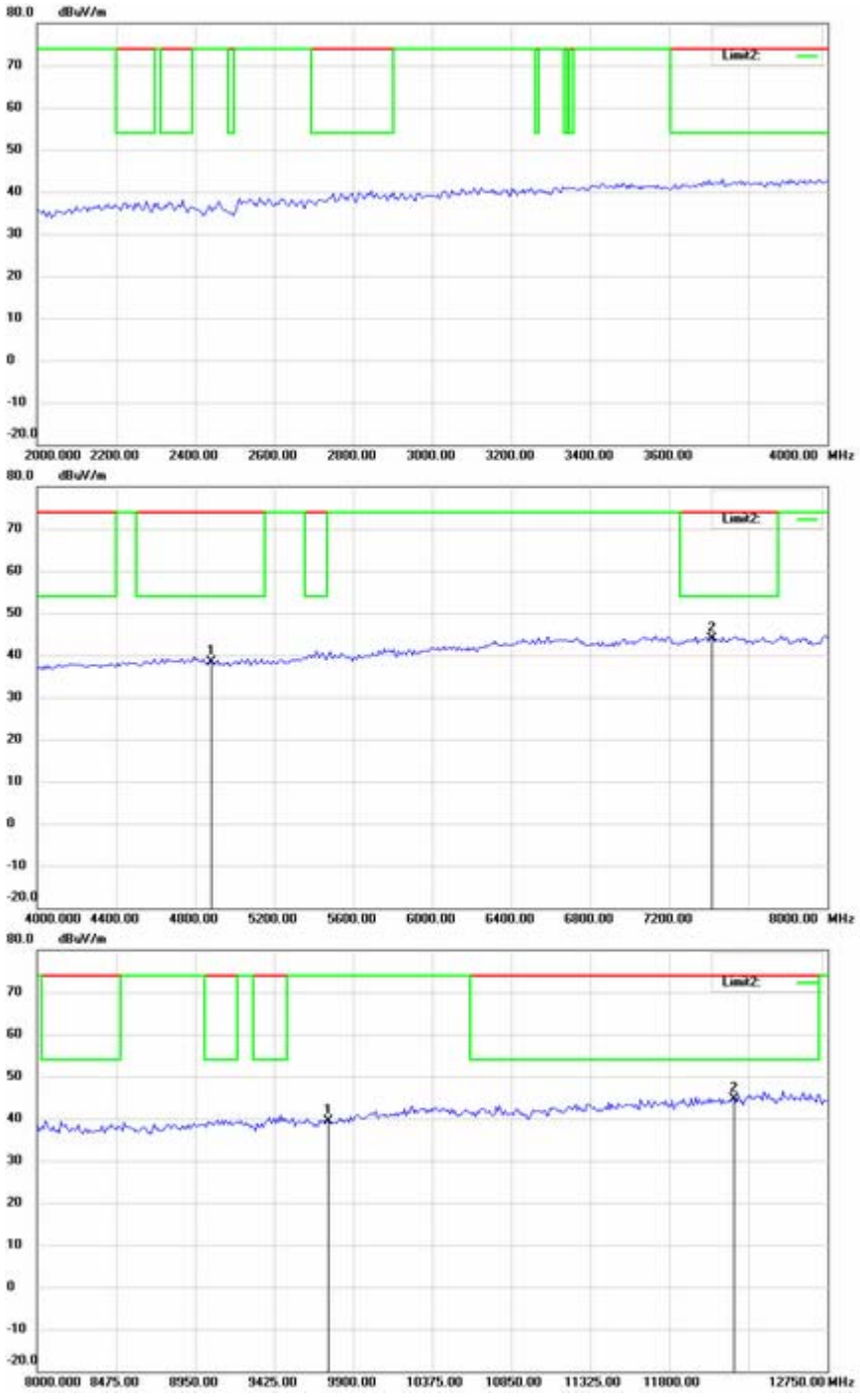
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

## Antenna Polarization V




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

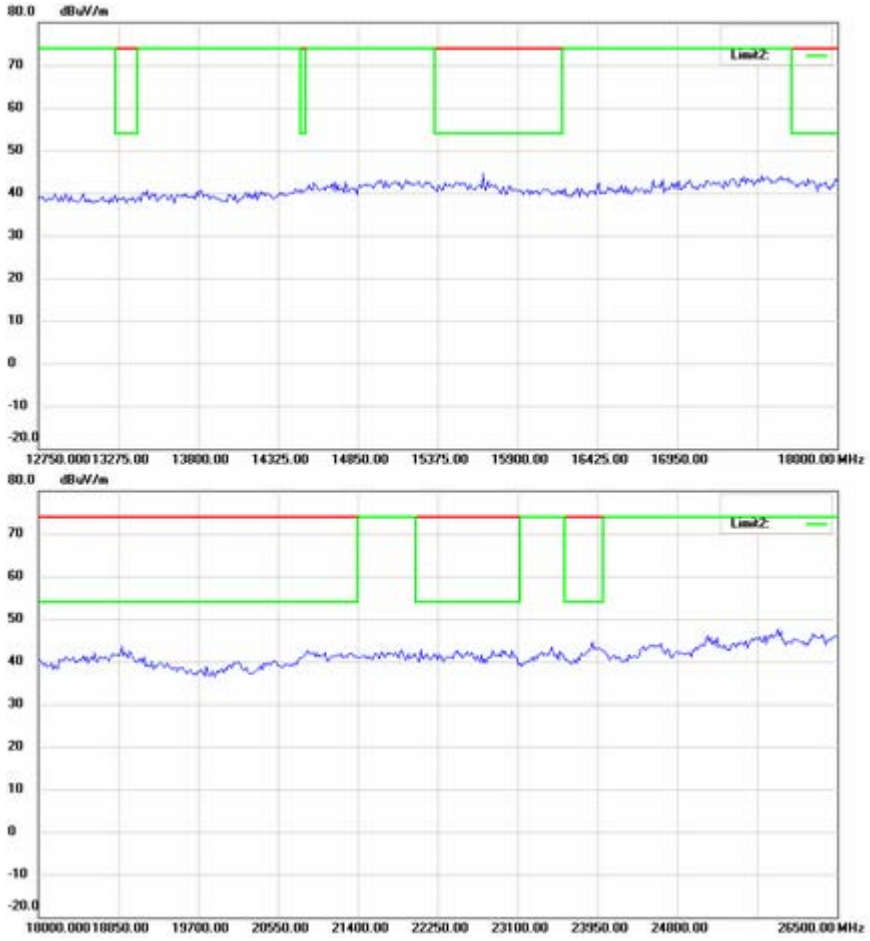
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

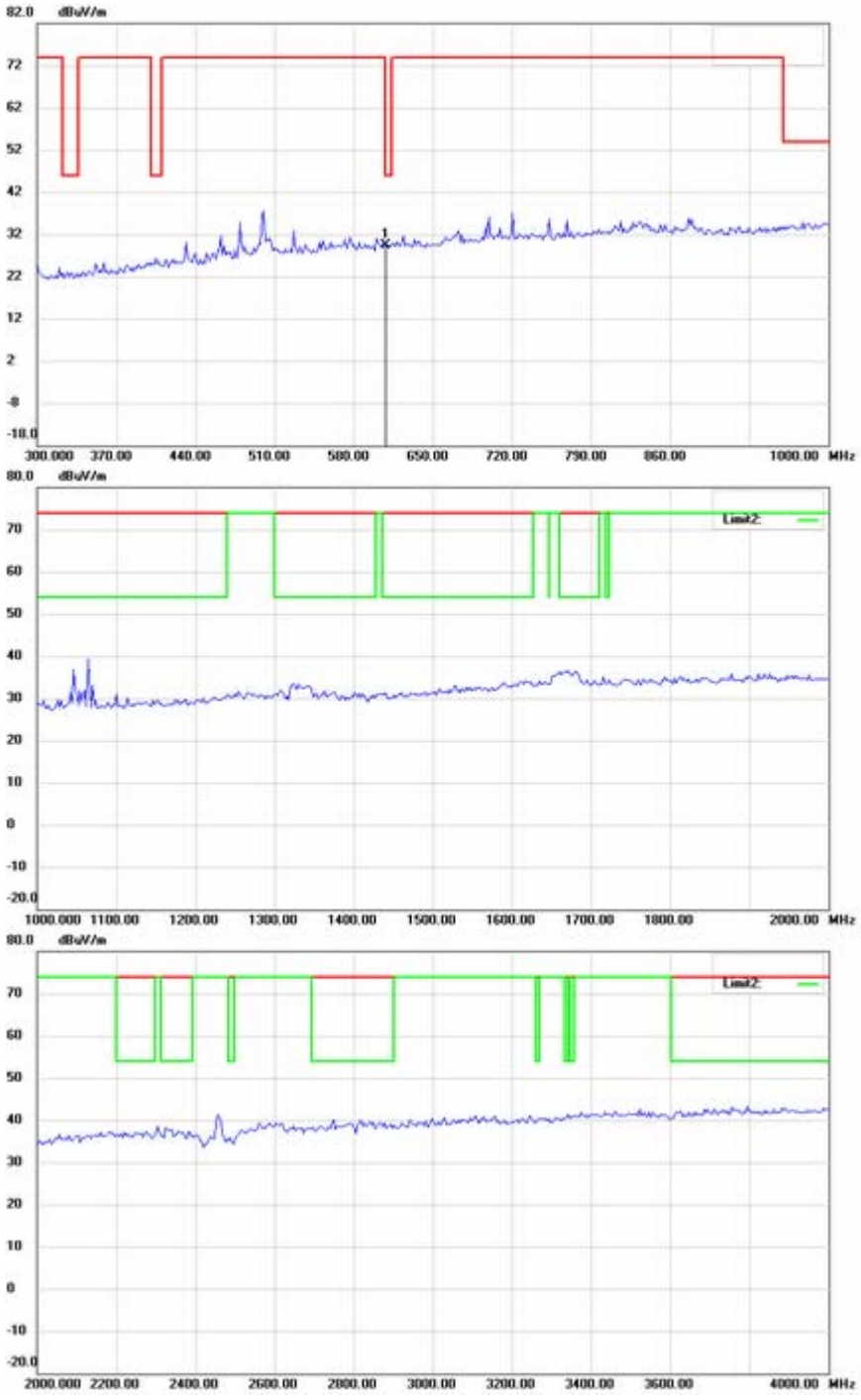
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N




Channel 11
Antenna Polarization H

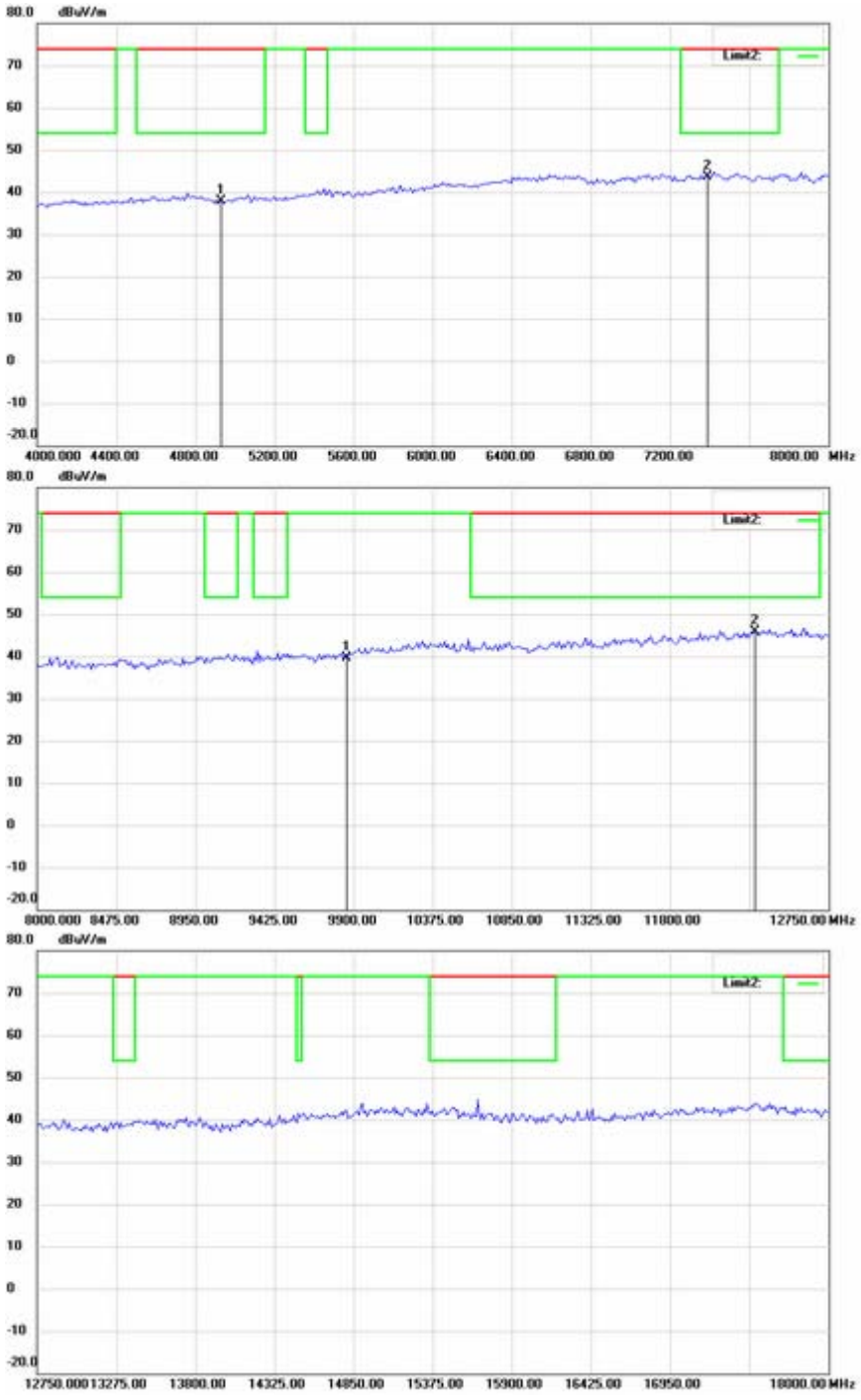

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



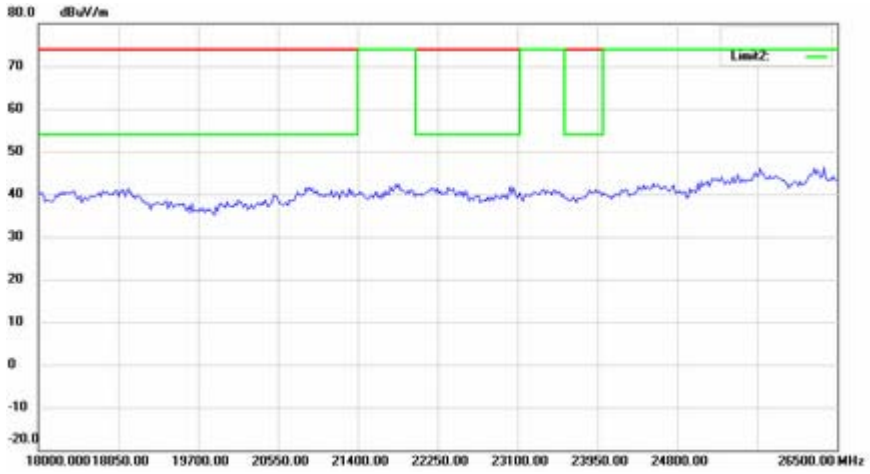

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

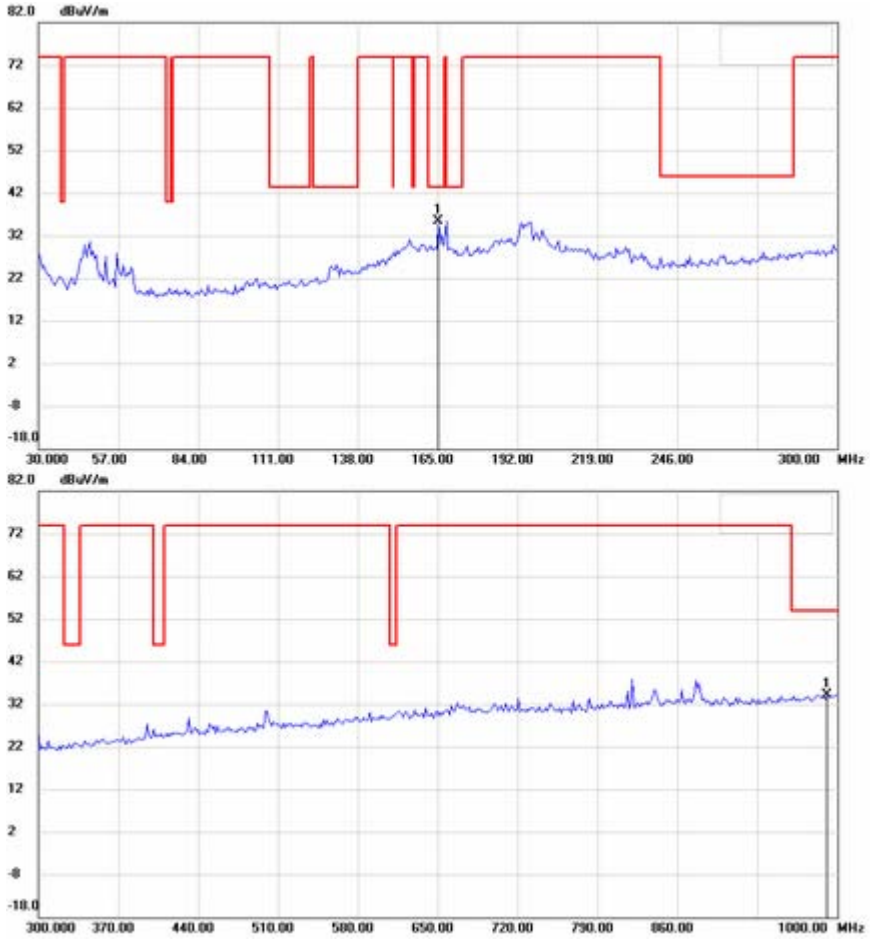



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

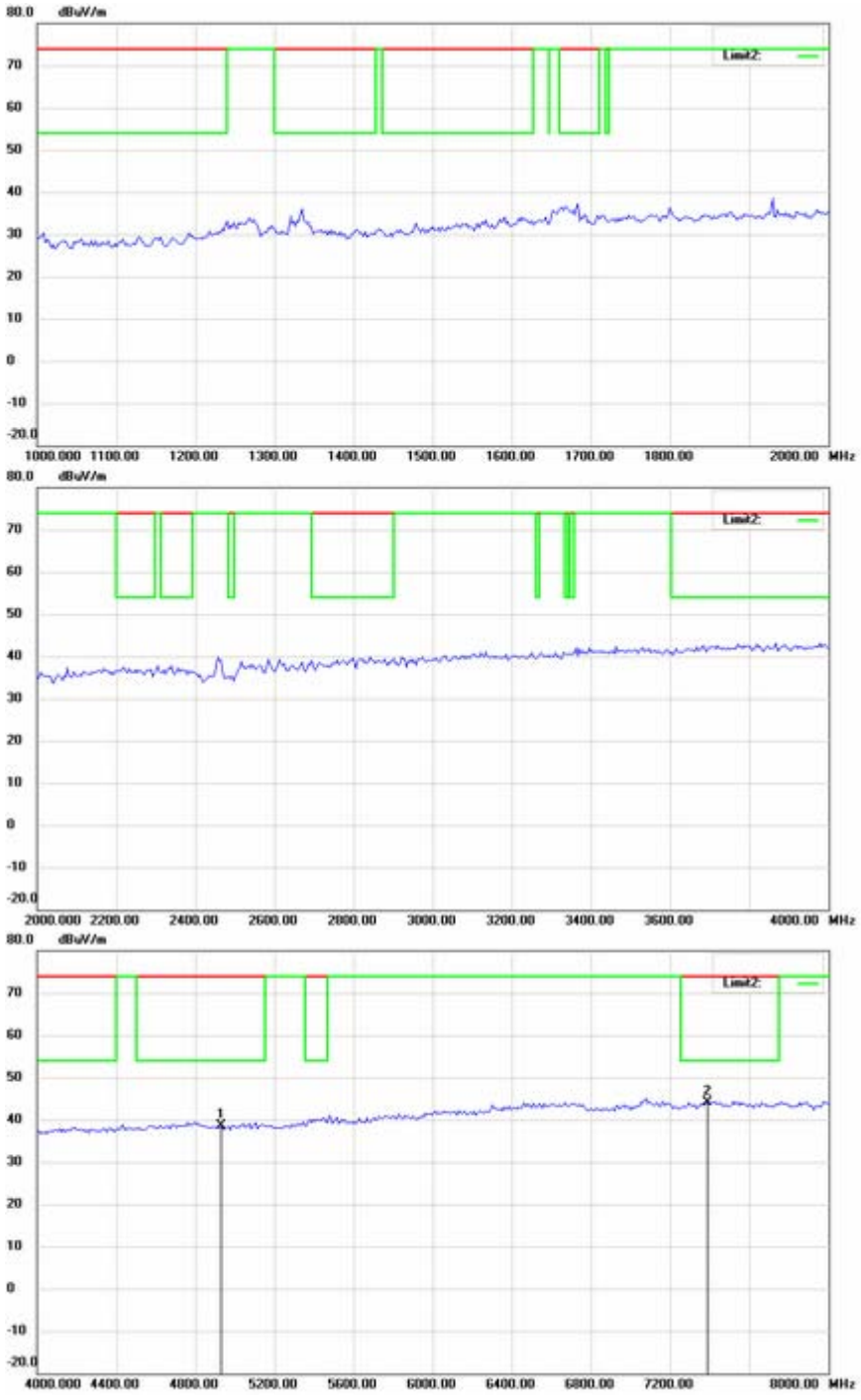



Antenna Polarization V



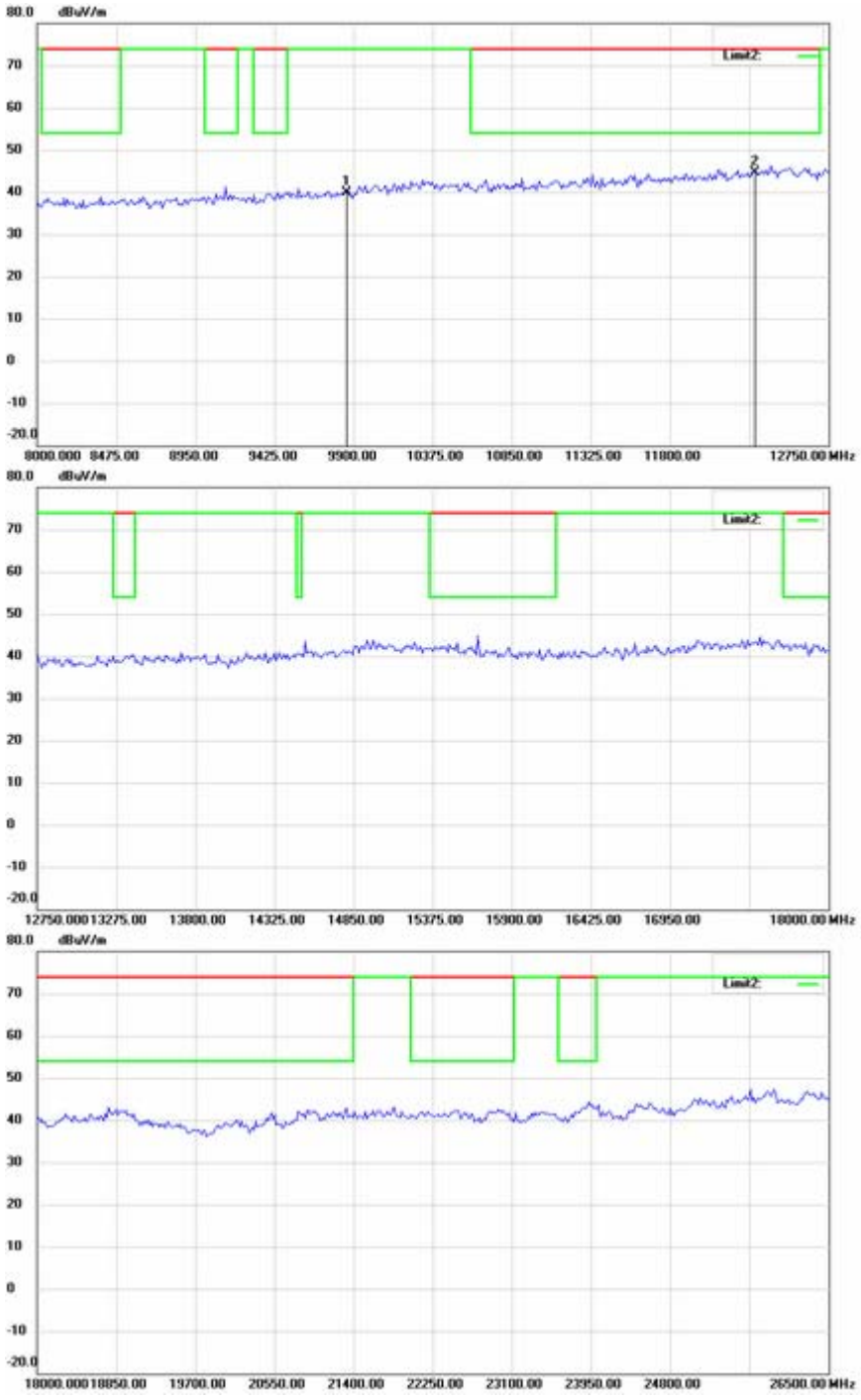

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

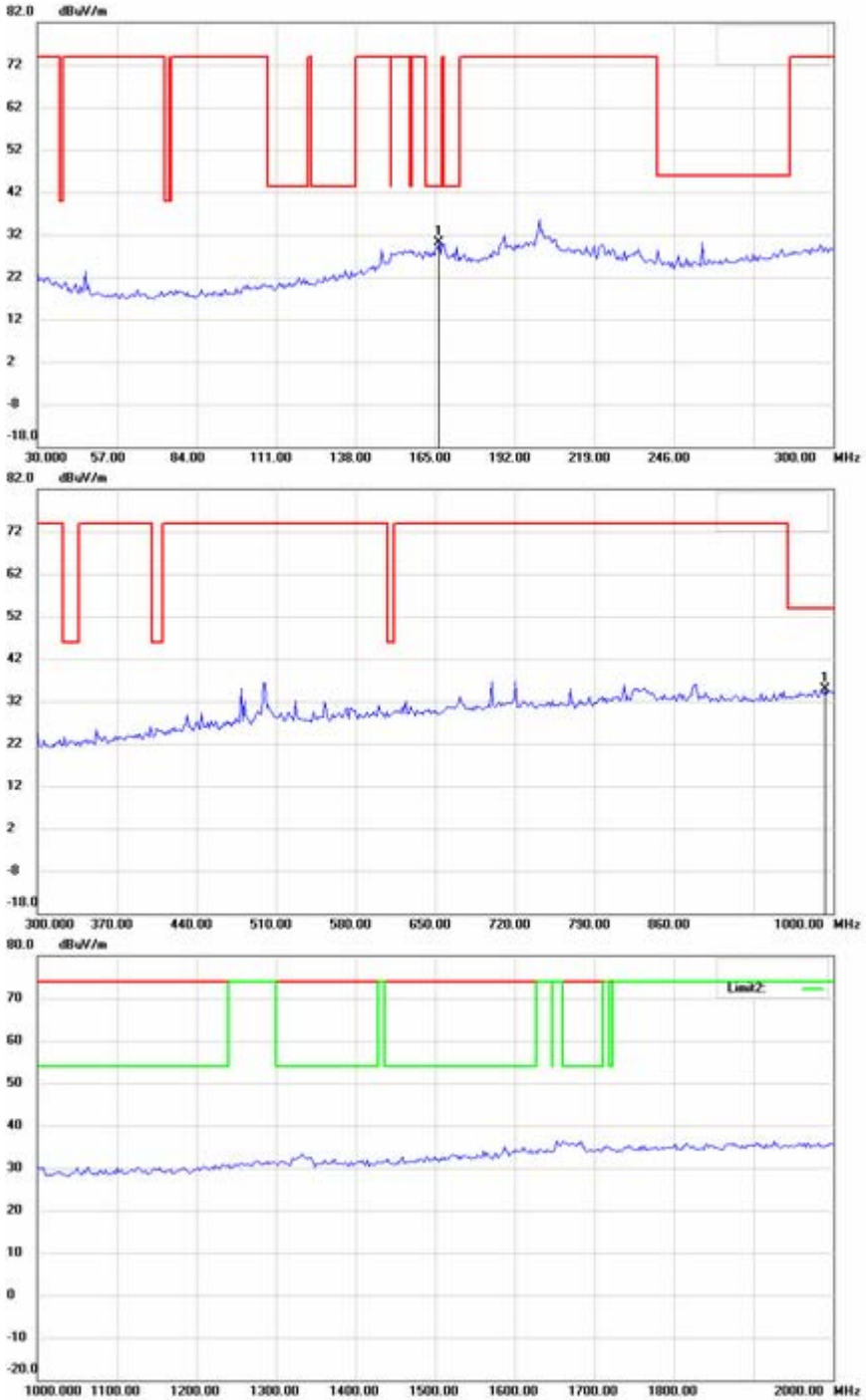



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

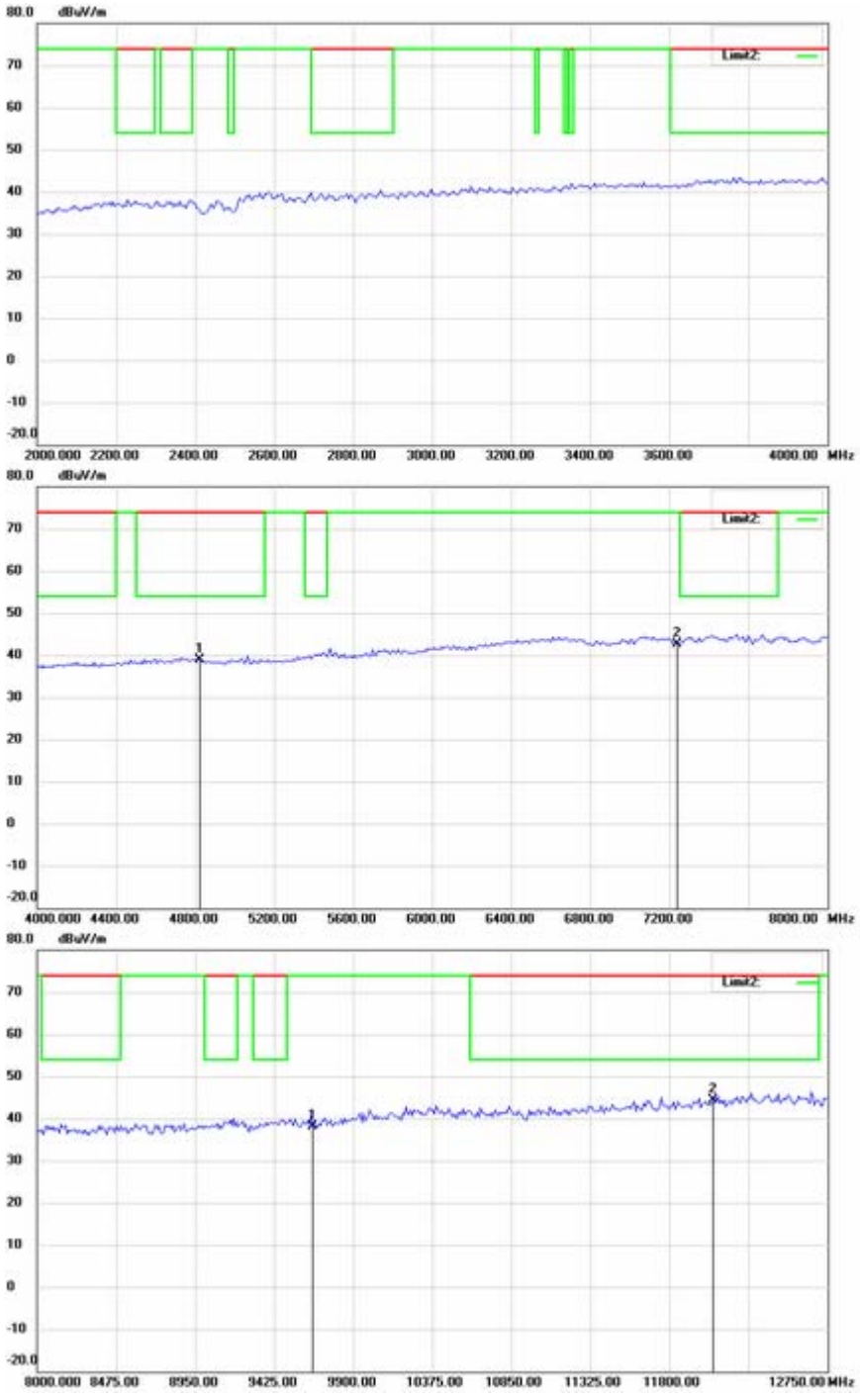
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

Mode C_Channel 1
Antenna Polarization H



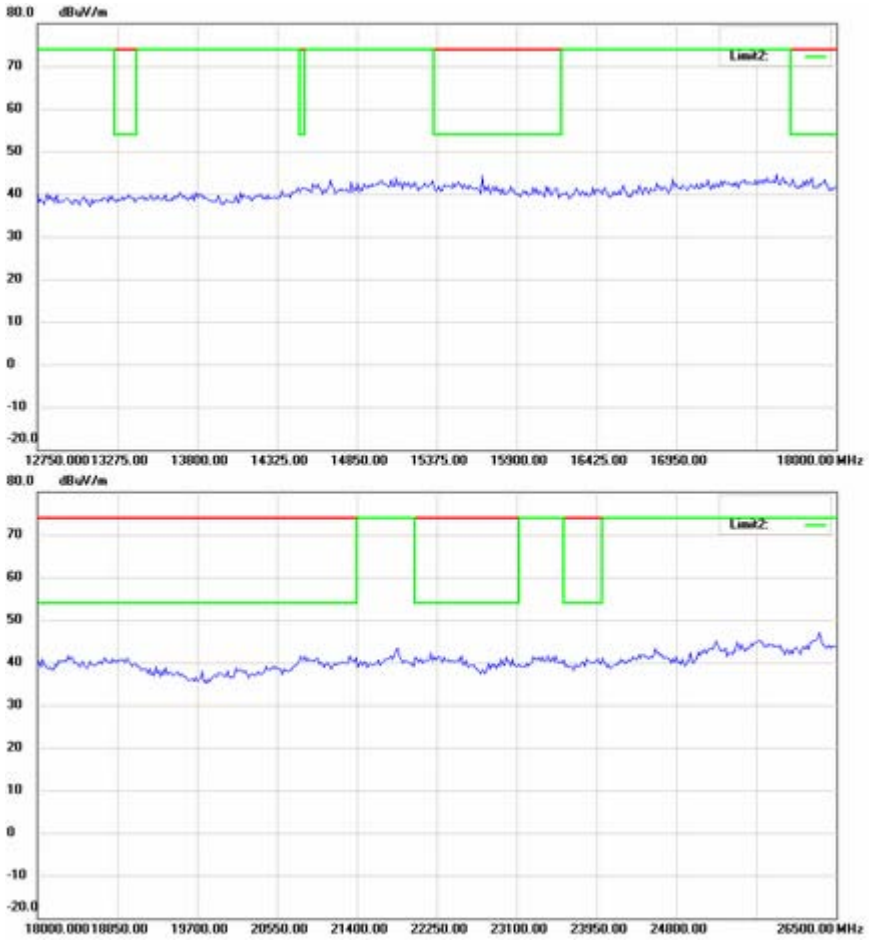

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

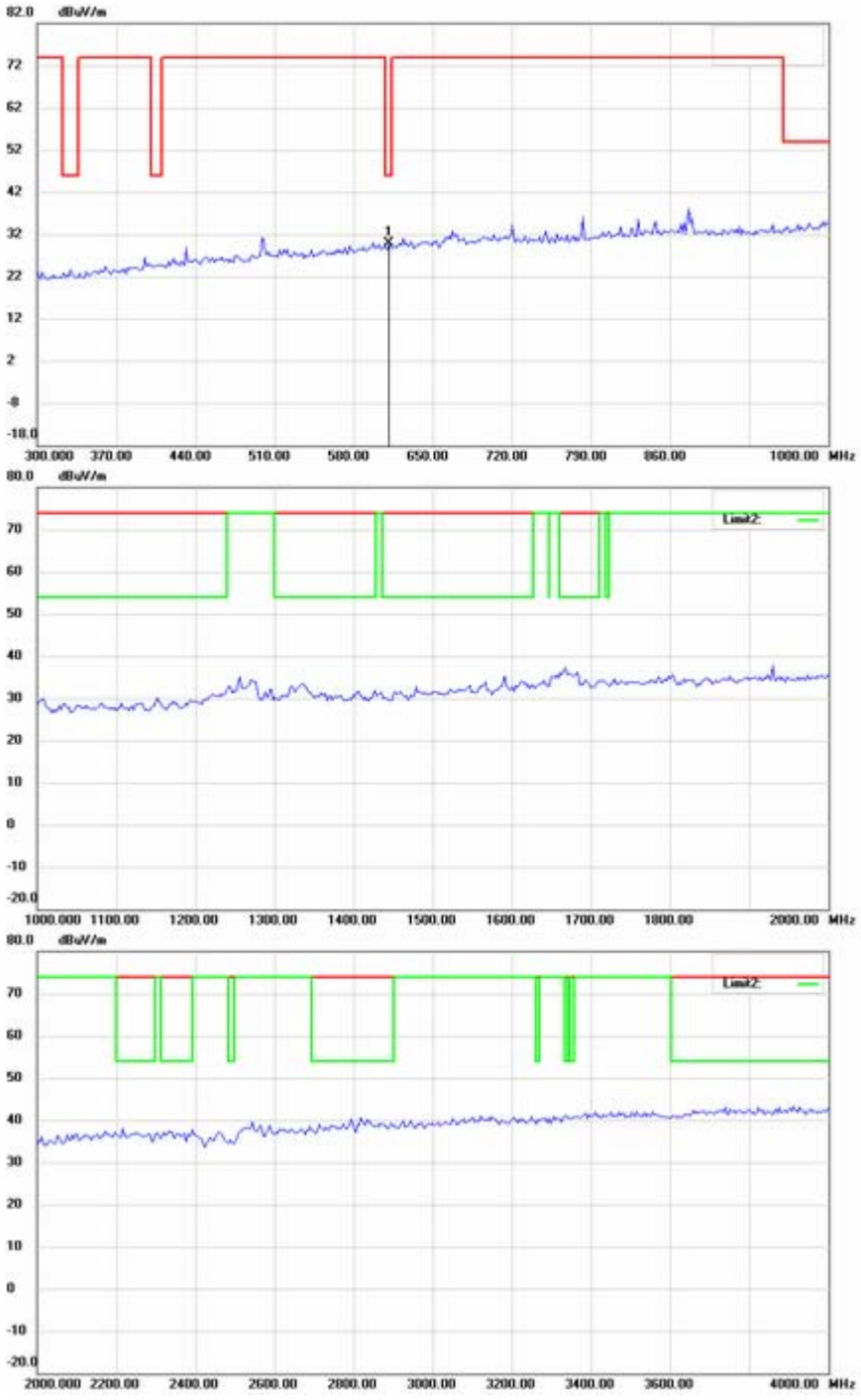
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




## Antenna Polarization V

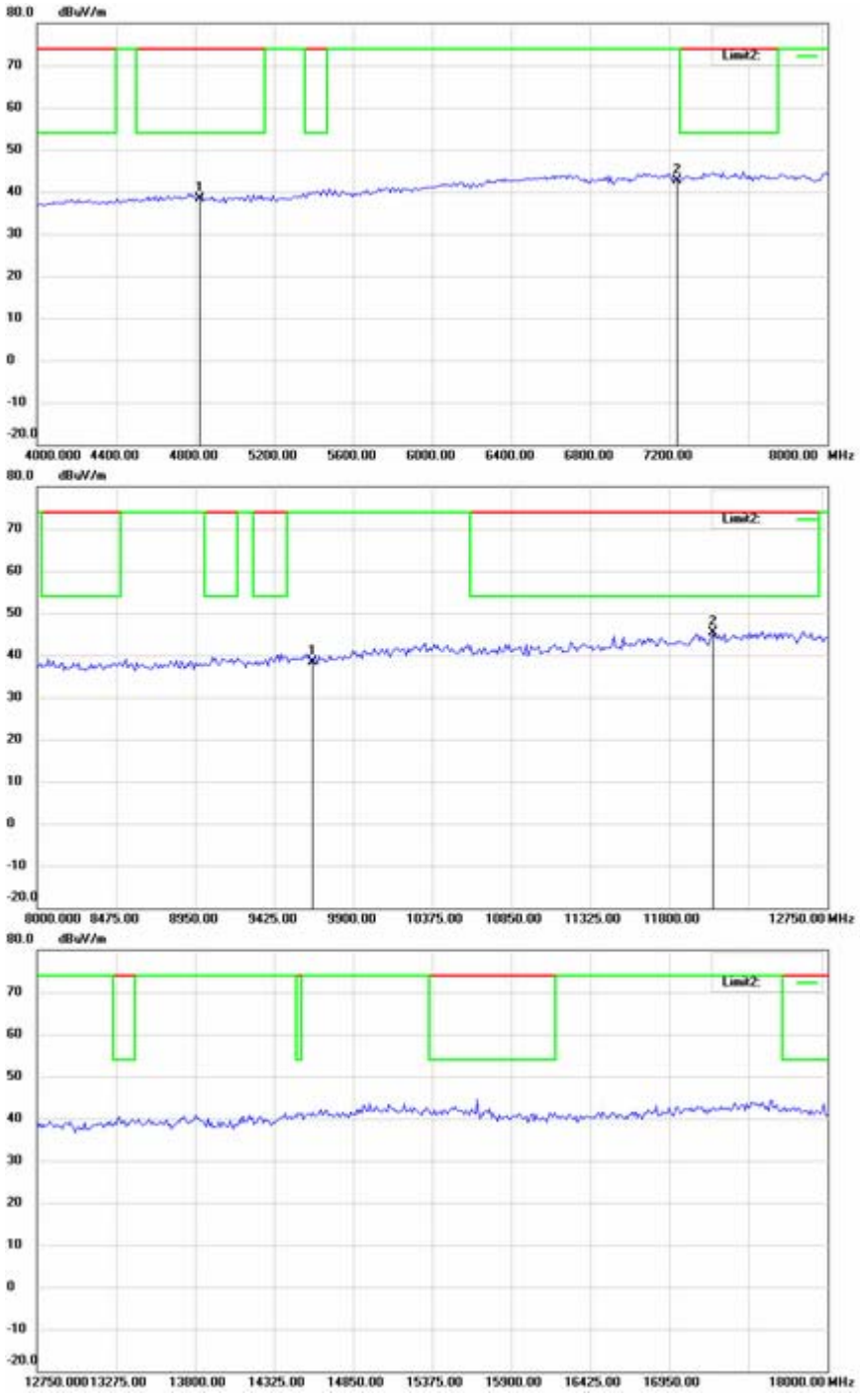

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

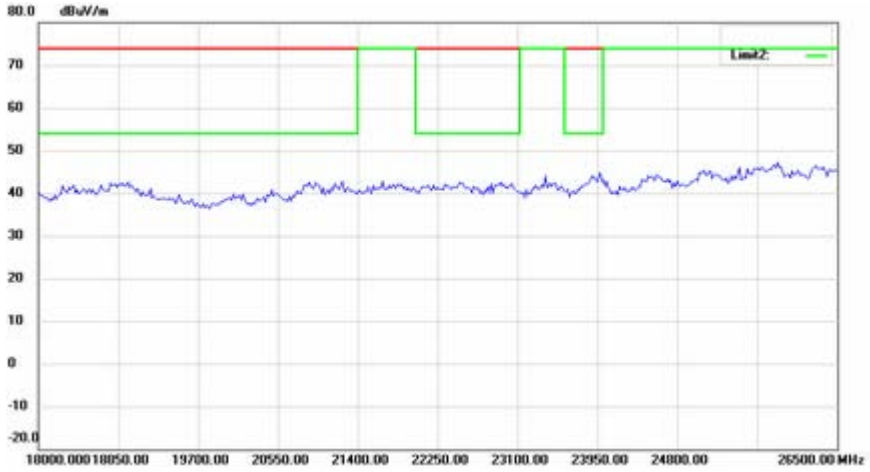
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



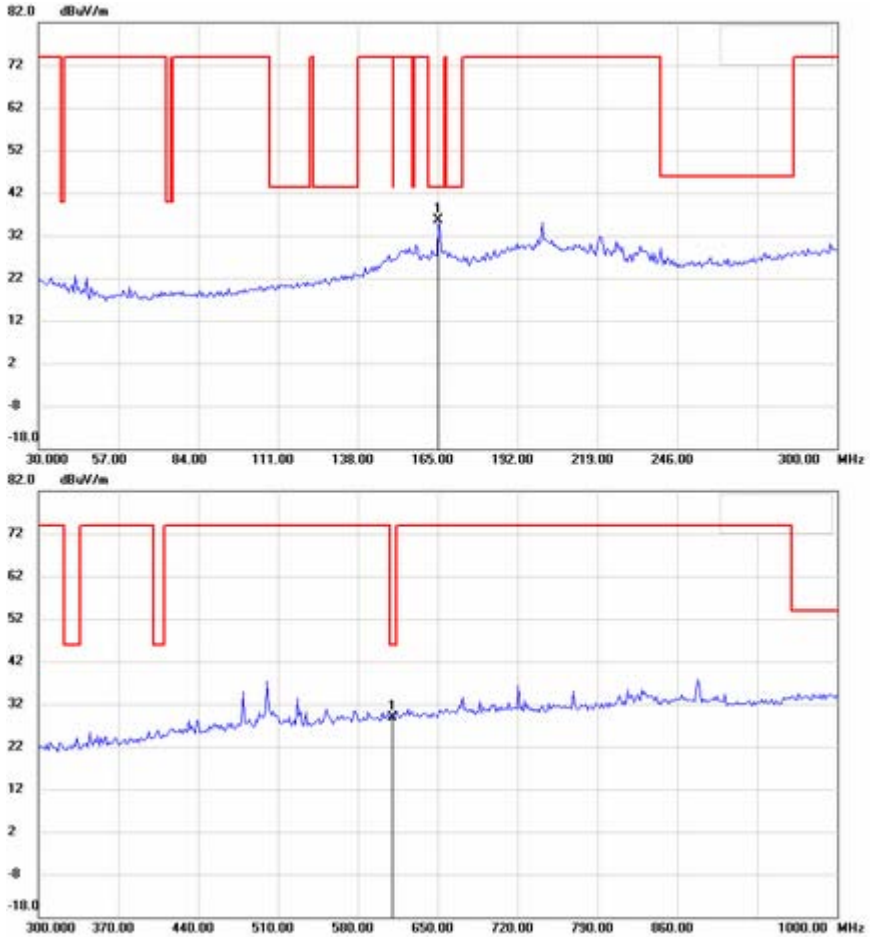

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

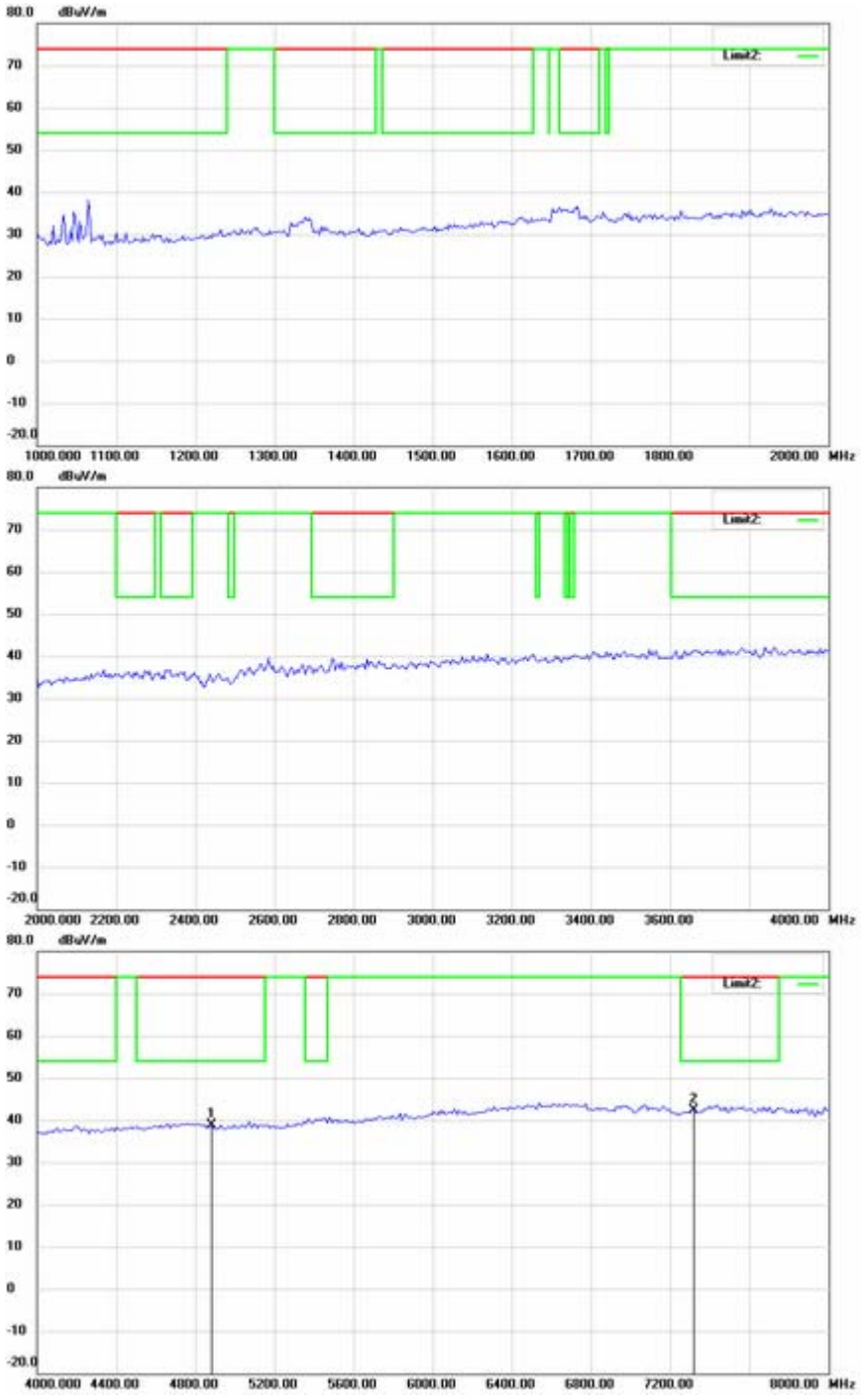



Channel 6
Antenna Polarization H



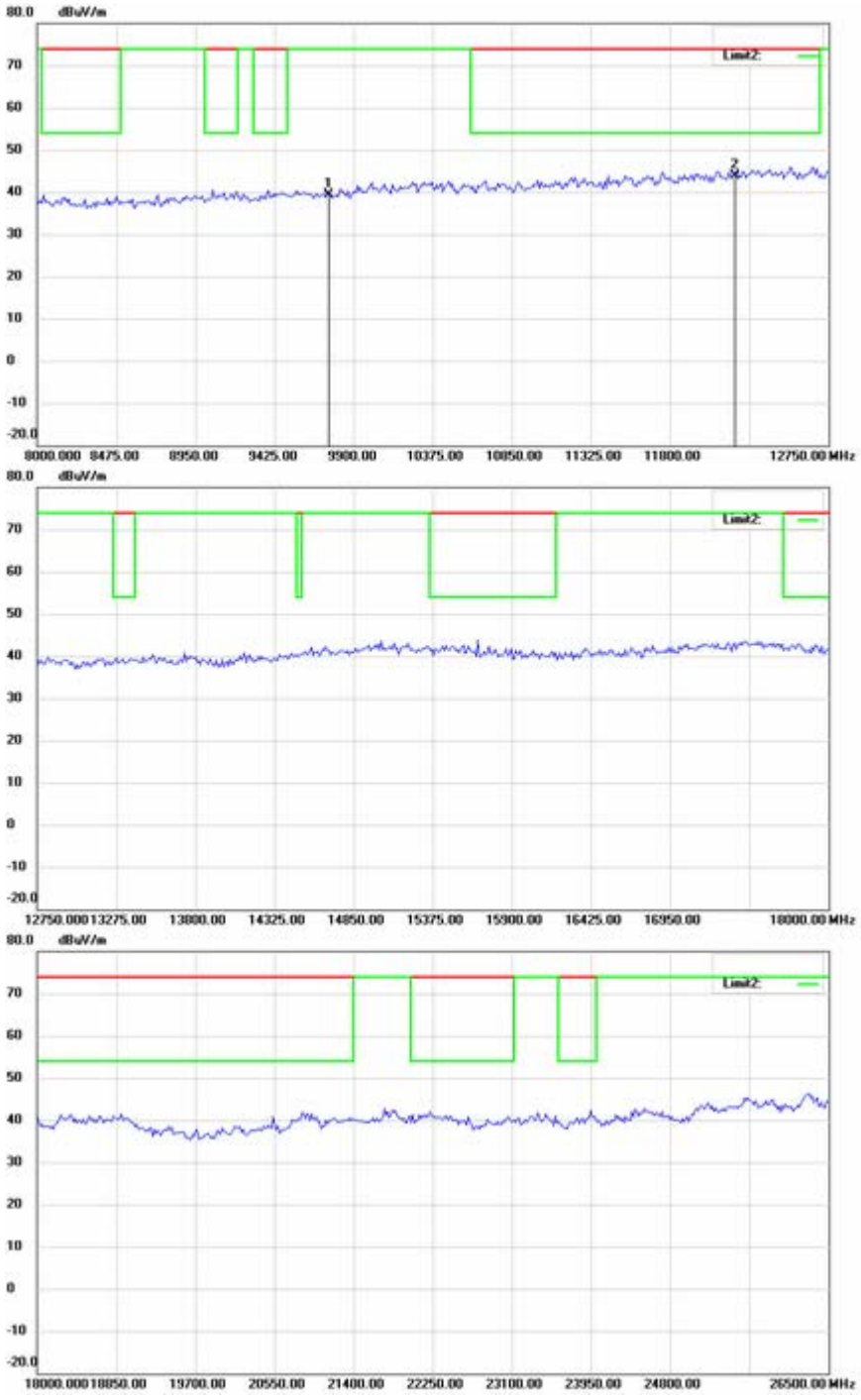

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

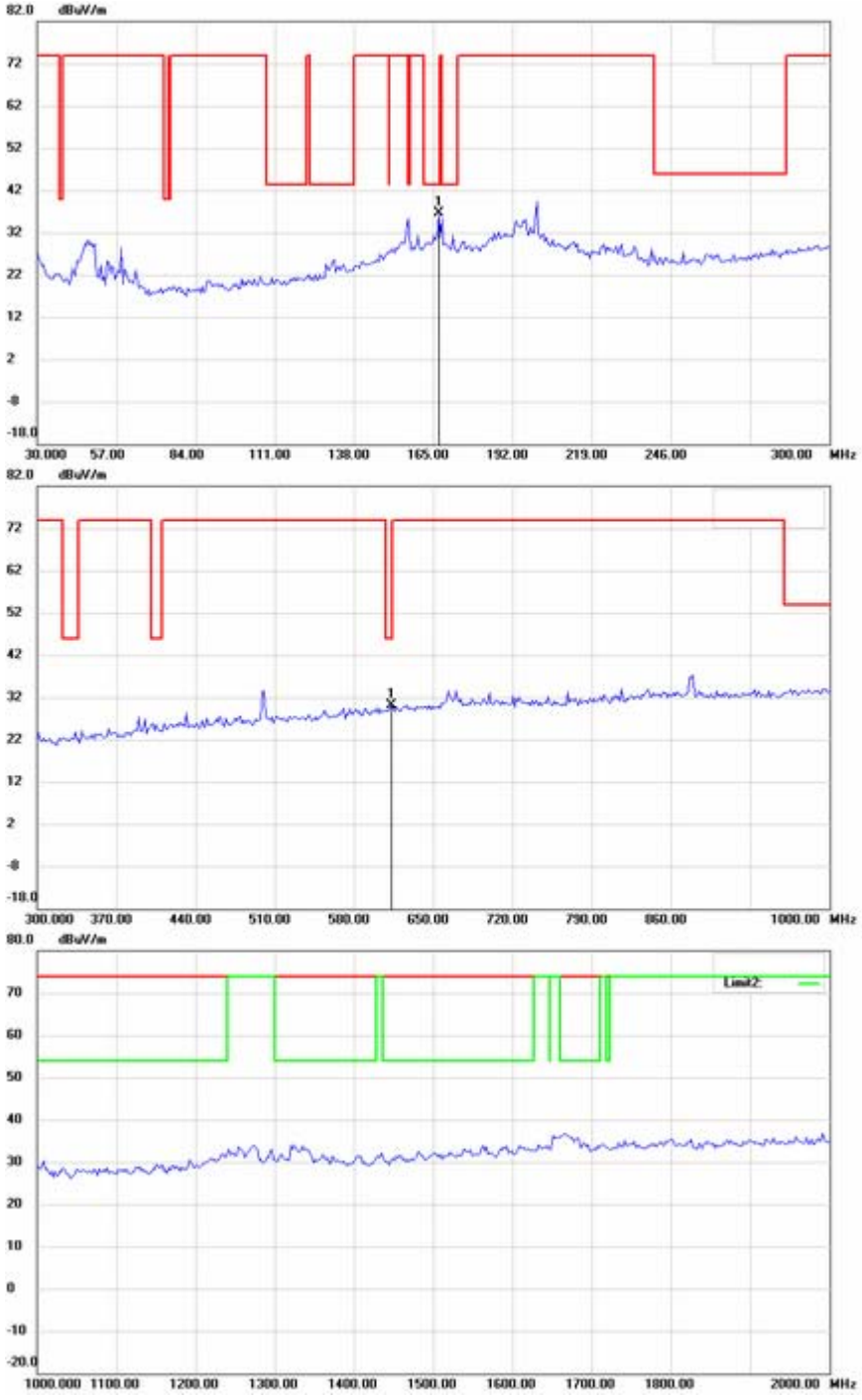



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

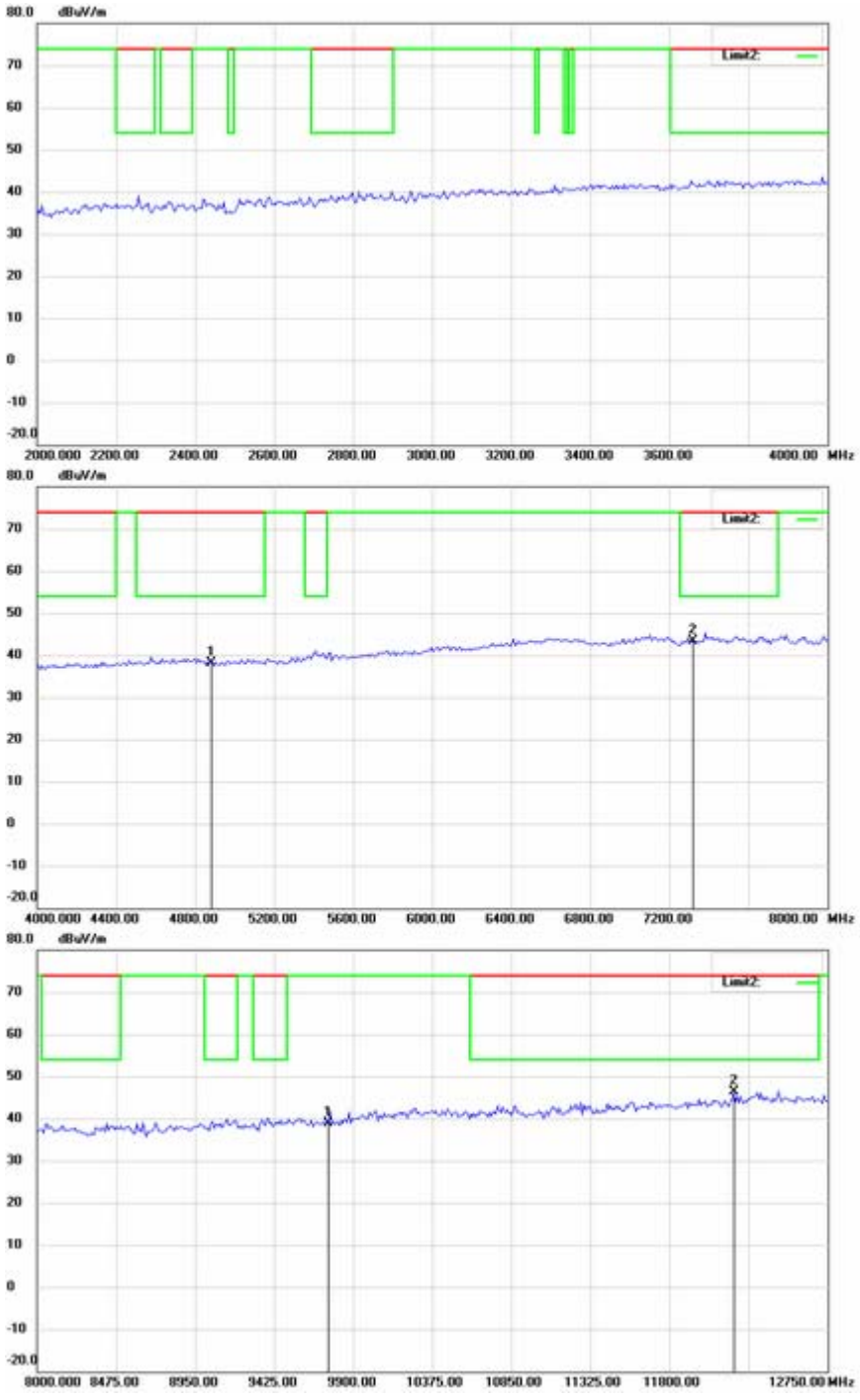
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

## Antenna Polarization V




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

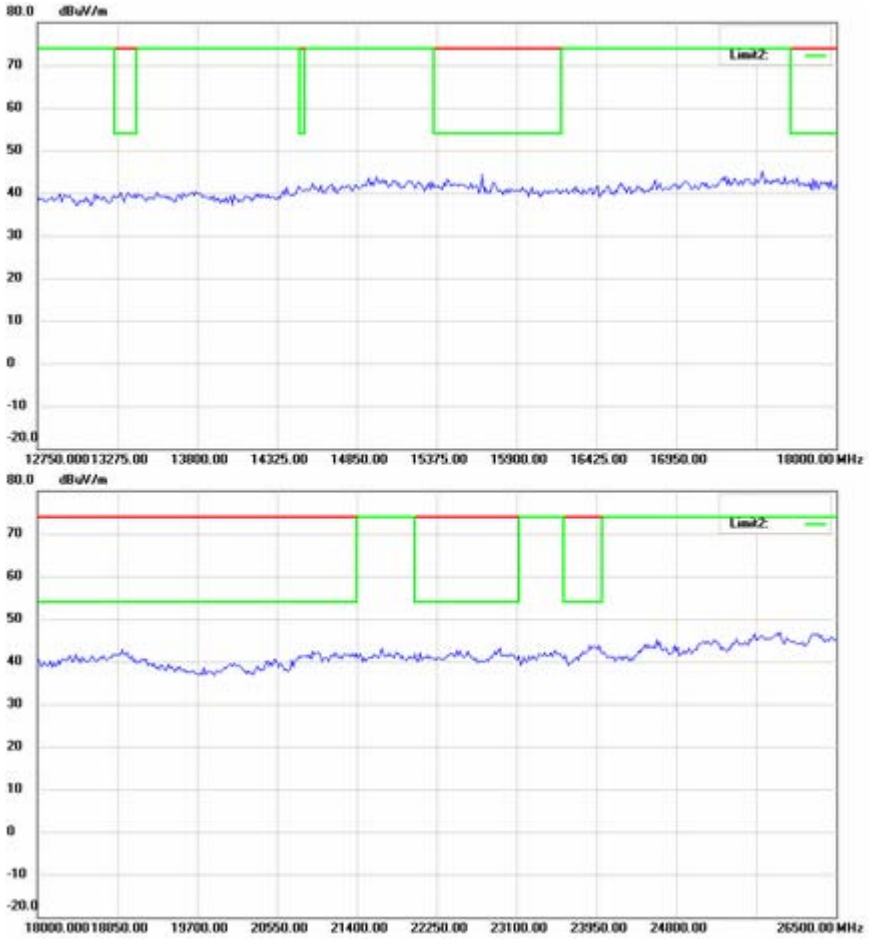
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



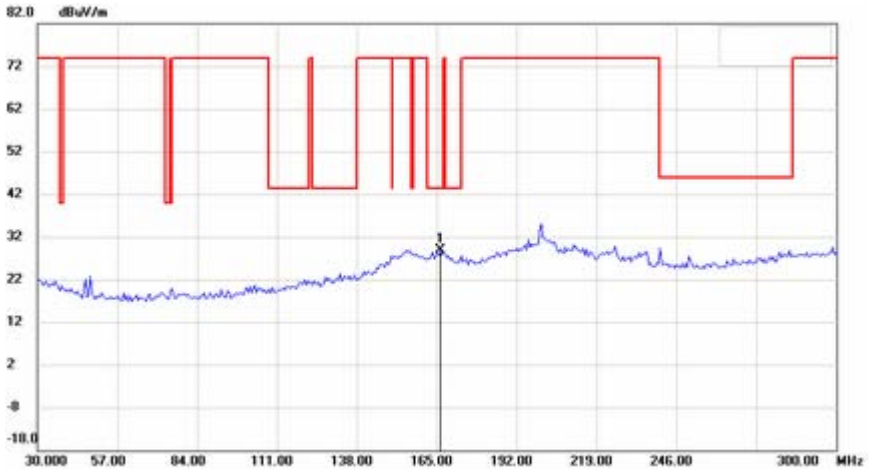

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

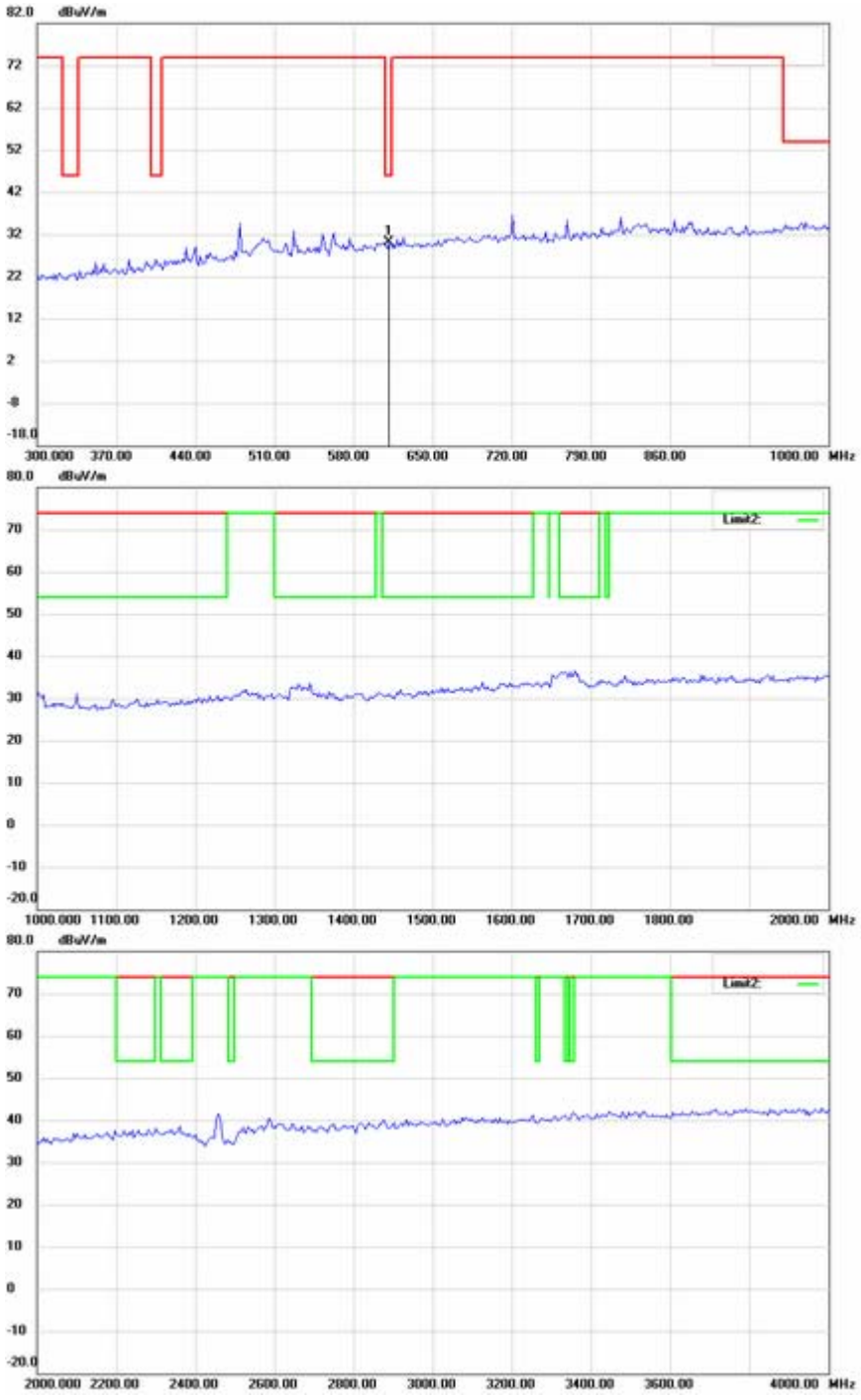



Channel 11
Antenna Polarization H



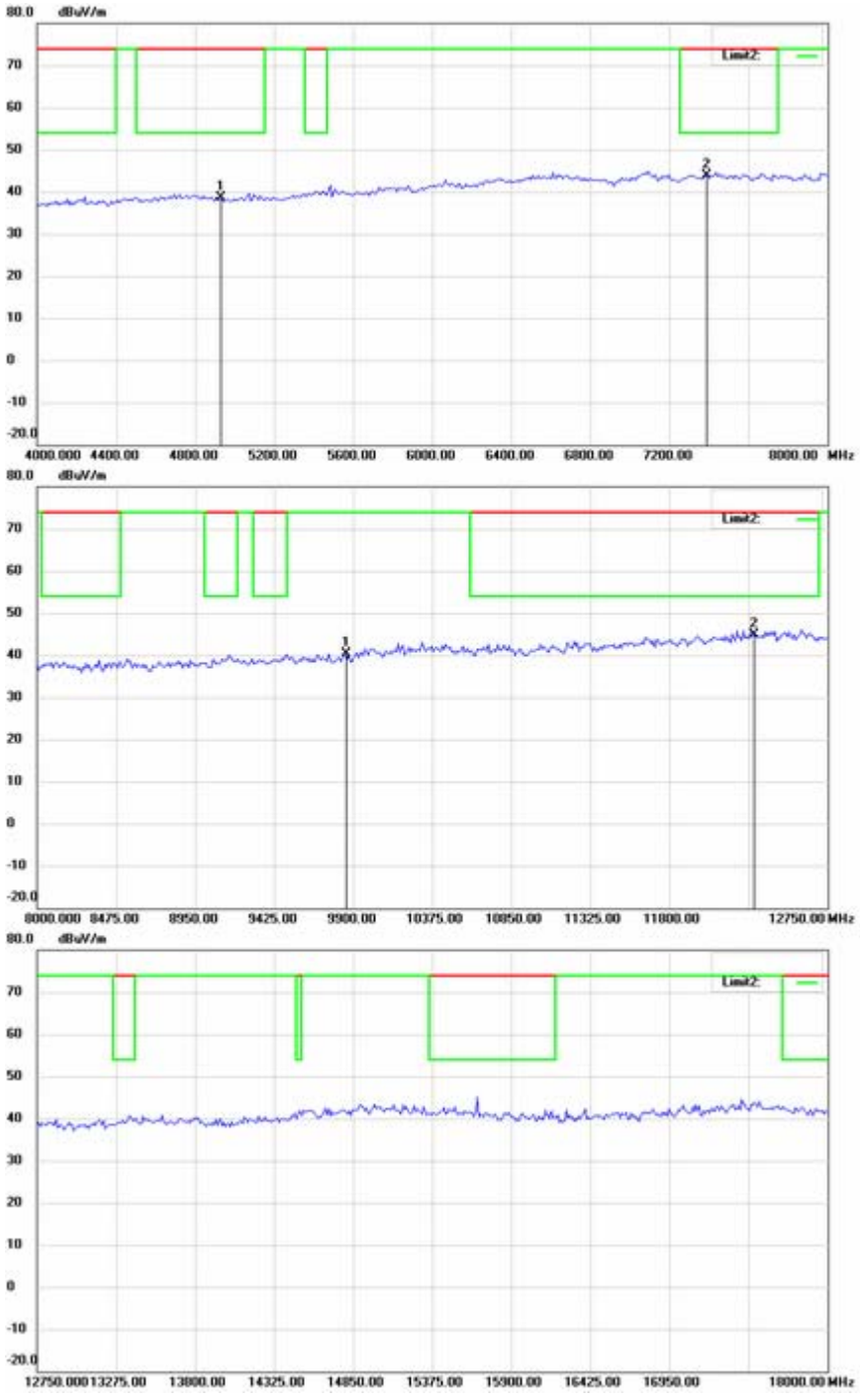

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



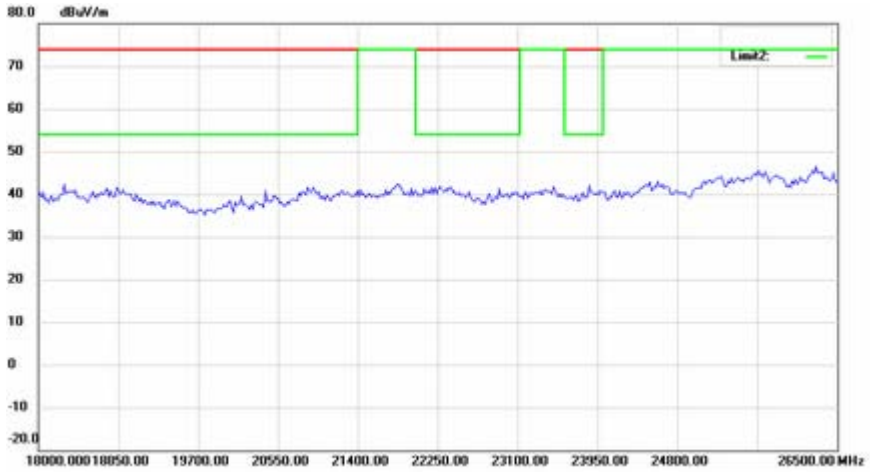

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

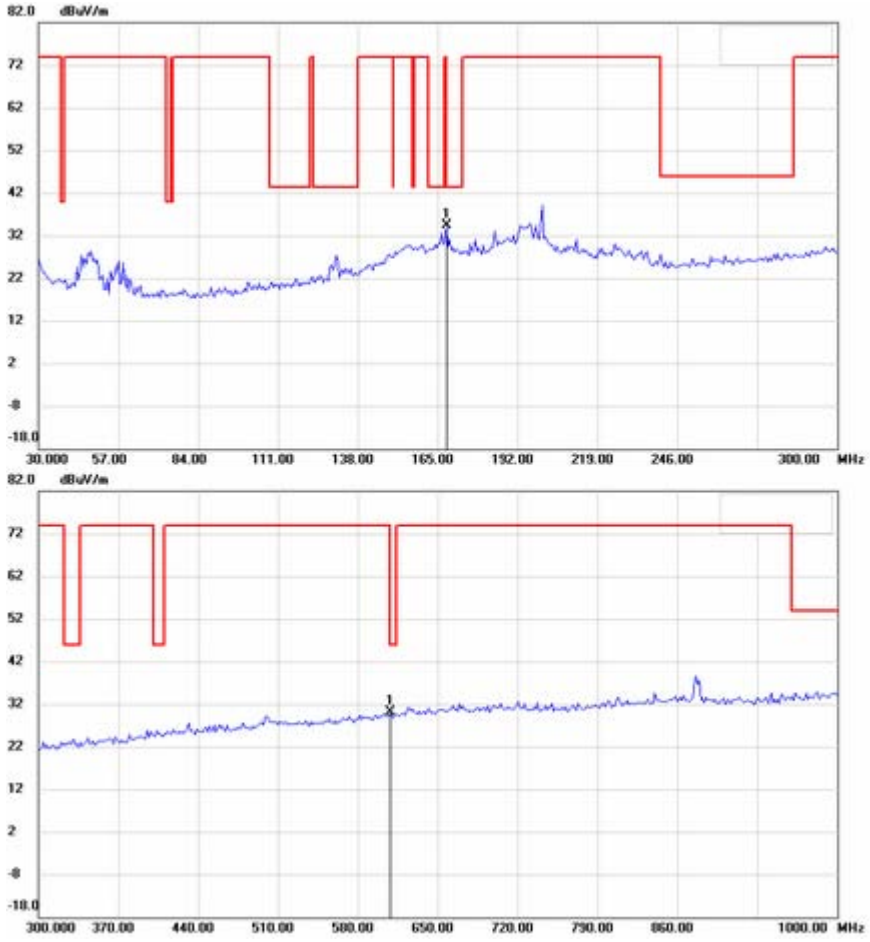



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

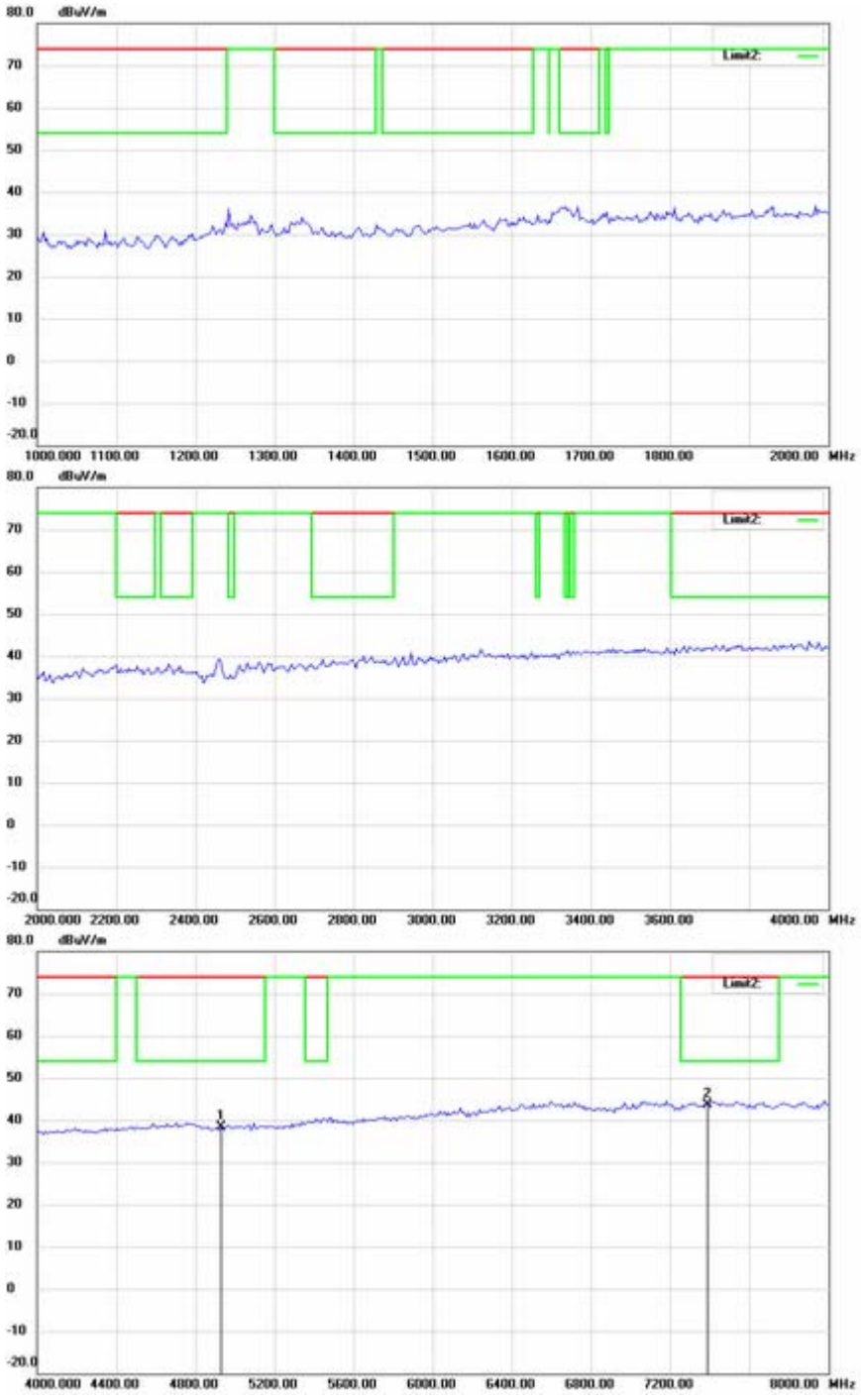



Antenna Polarization V



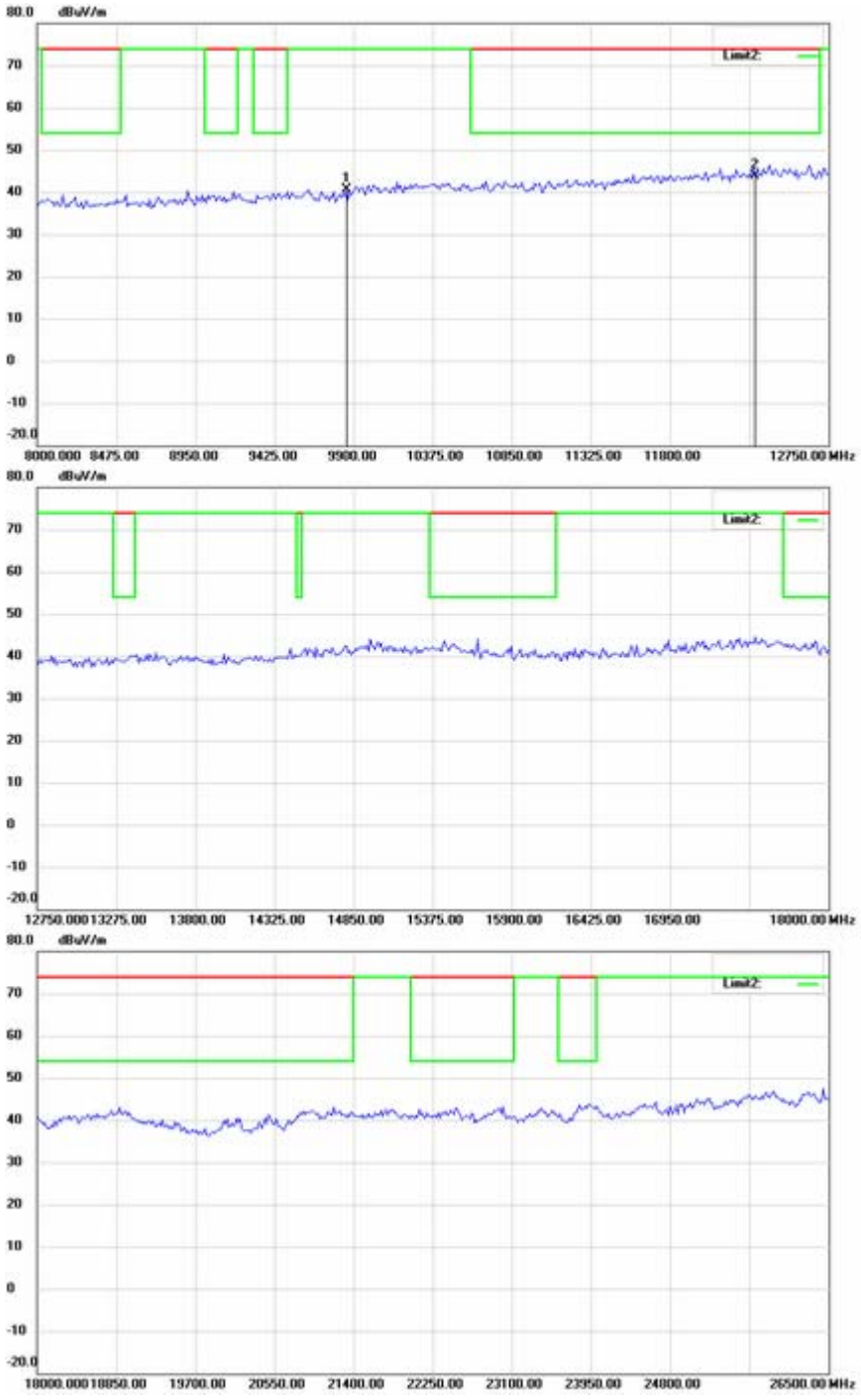

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

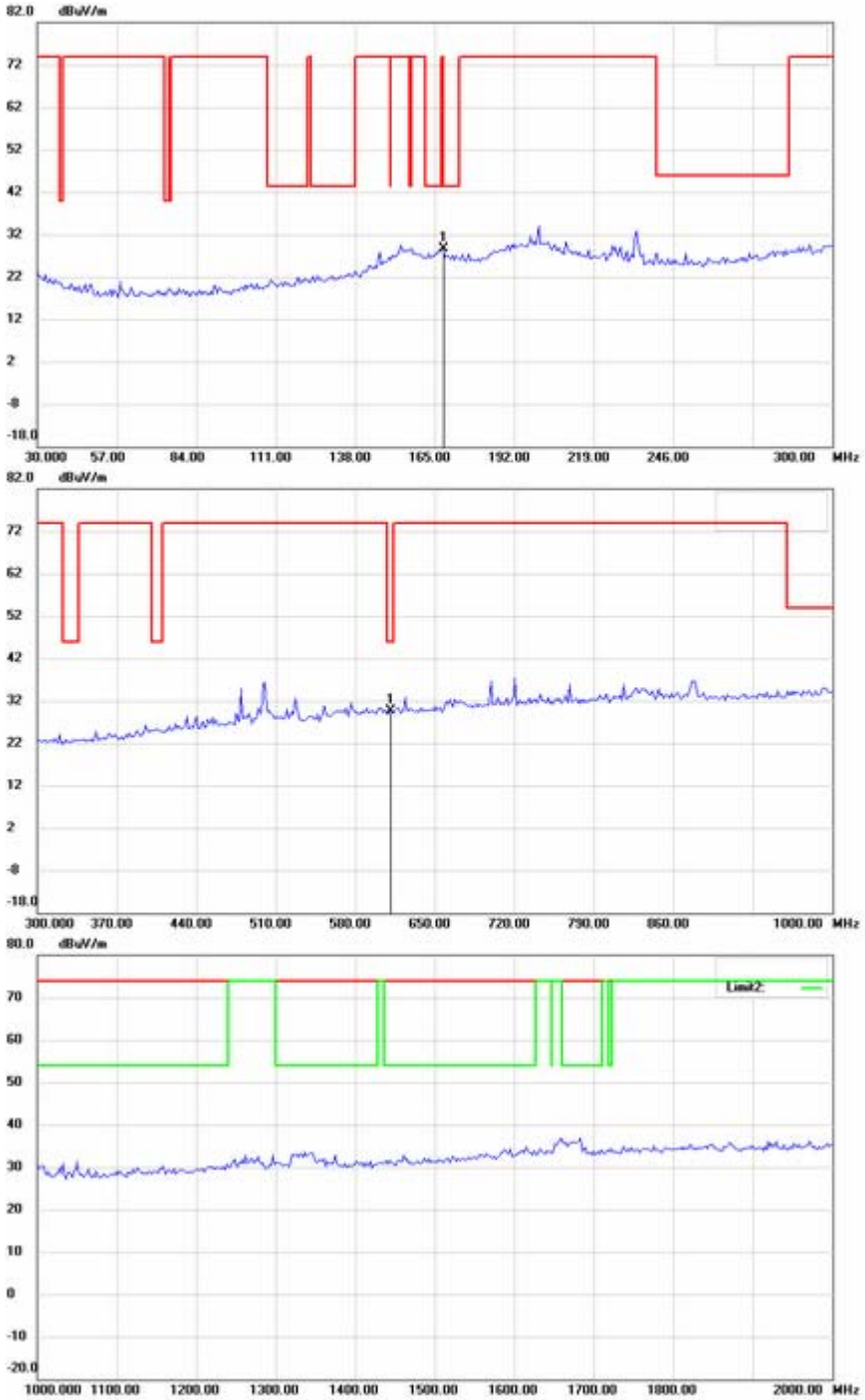



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

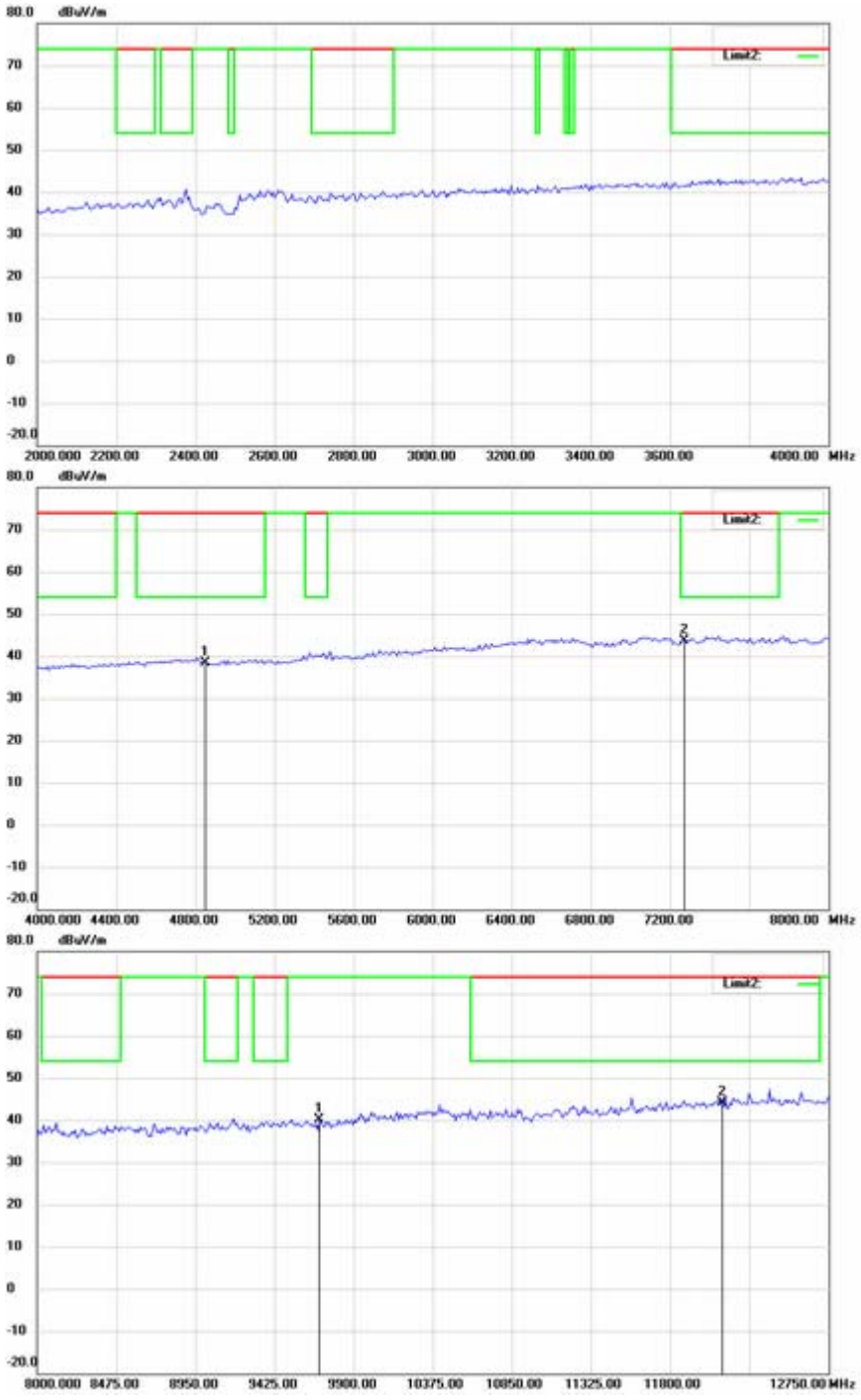
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

Mode D_Channel 1
Antenna Polarization H



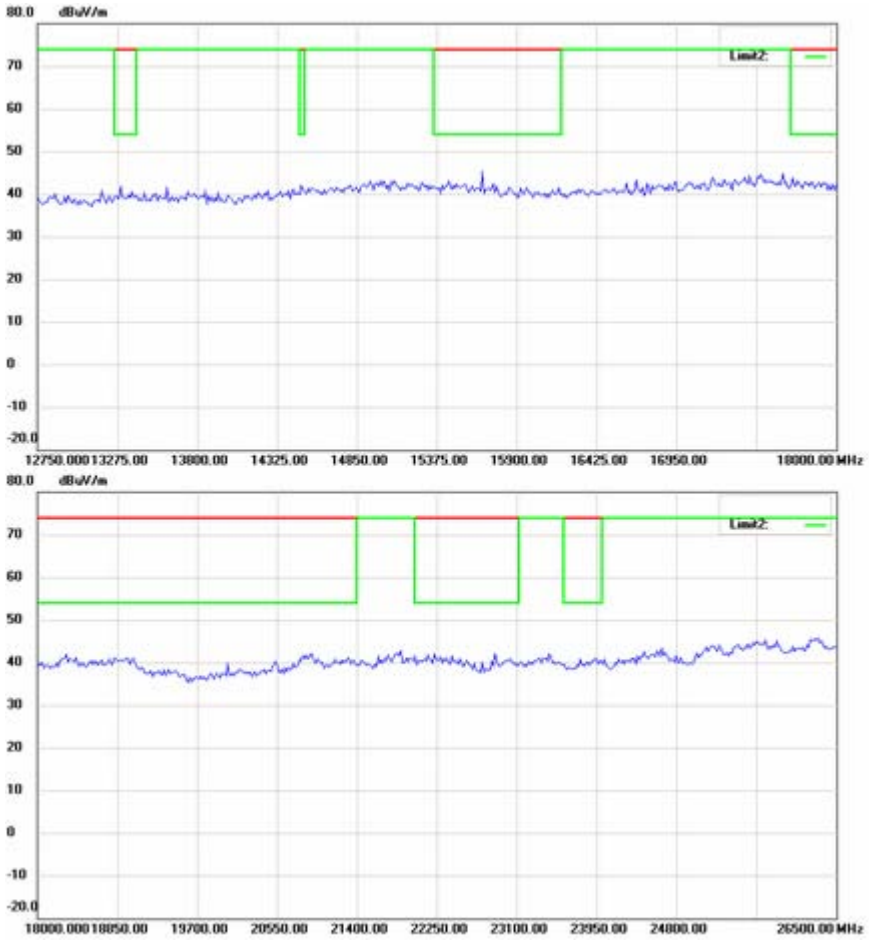

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

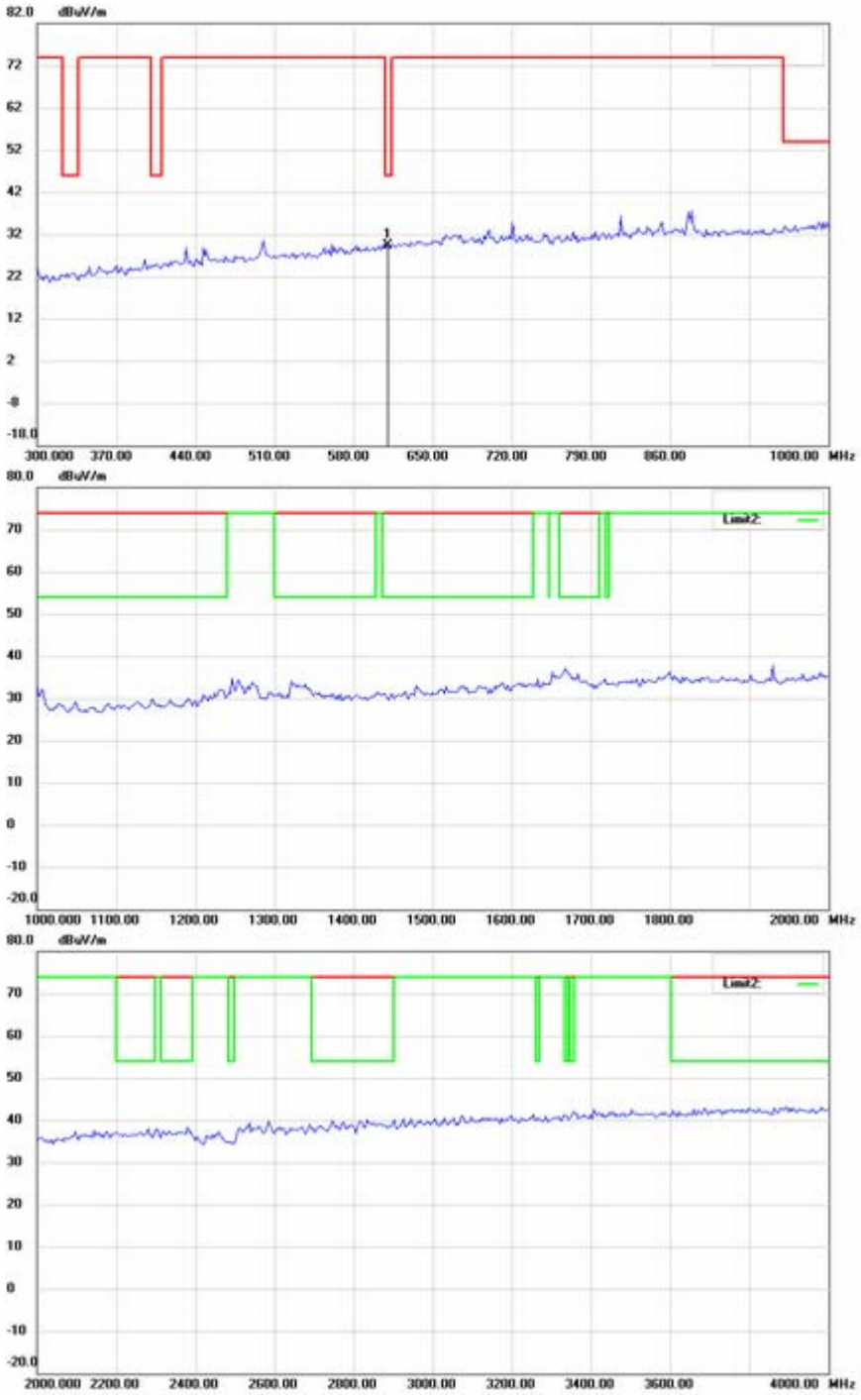
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




## Antenna Polarization V

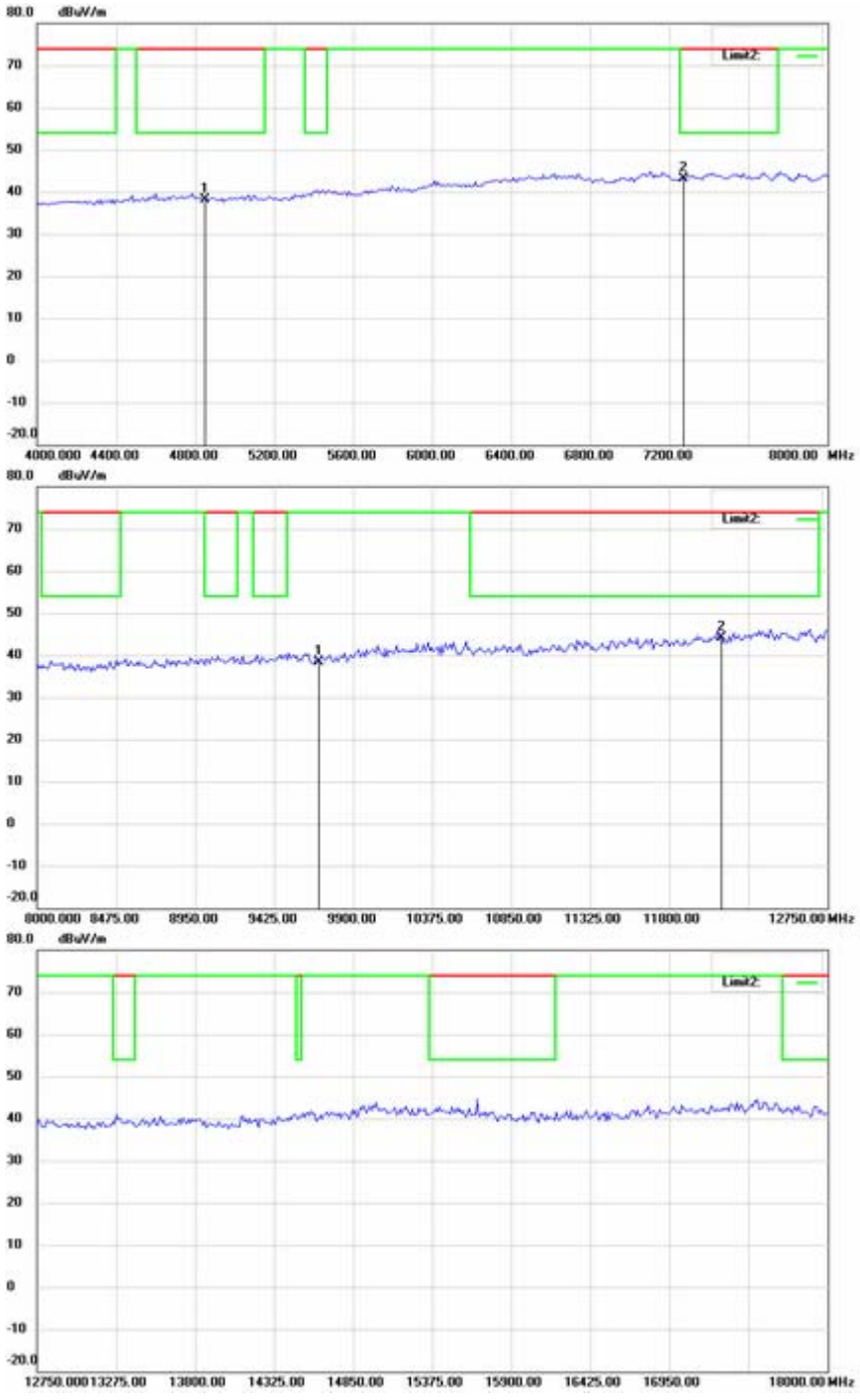

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

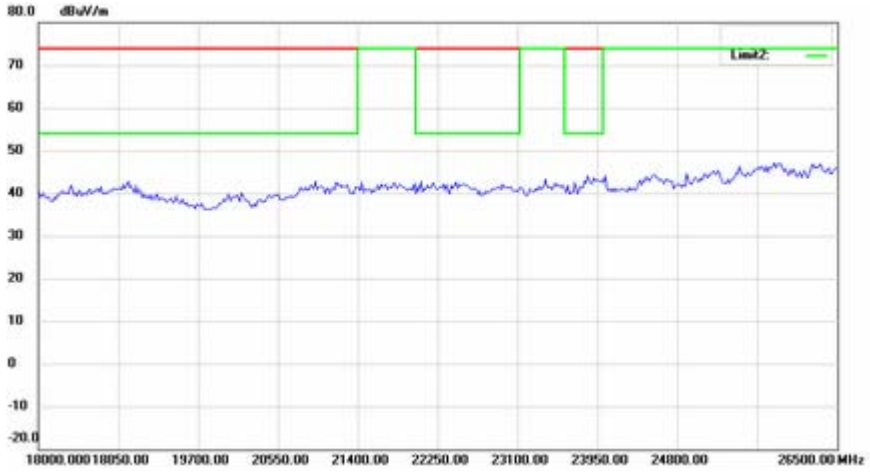
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



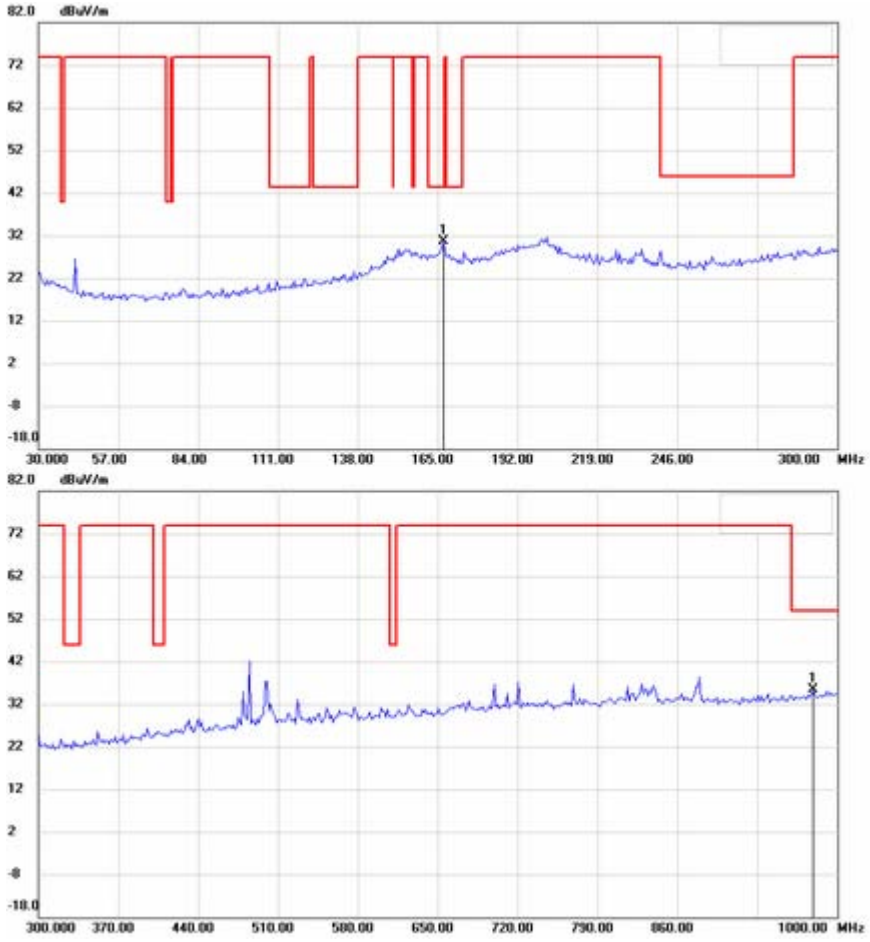

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

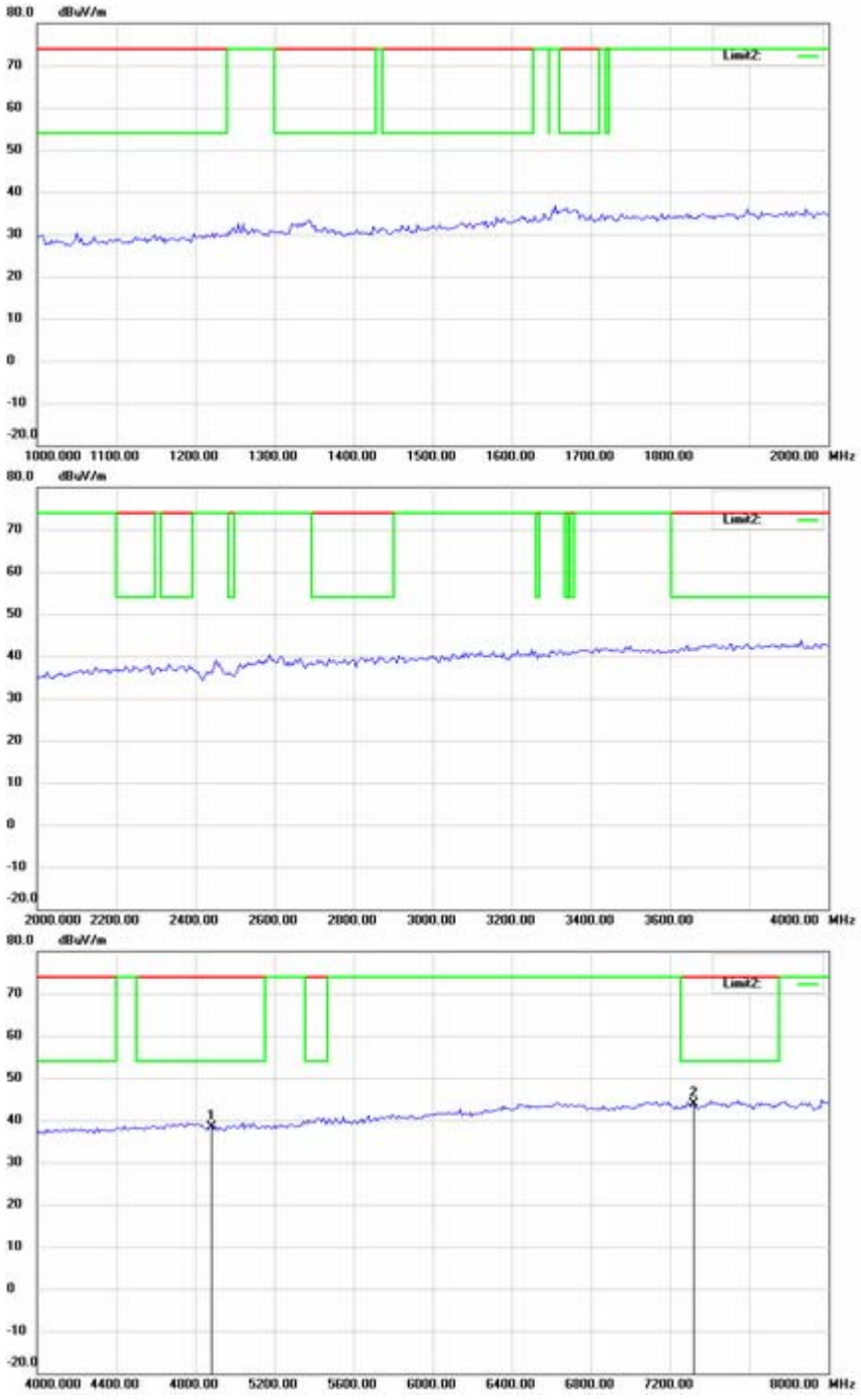



Channel 4
Antenna Polarization H



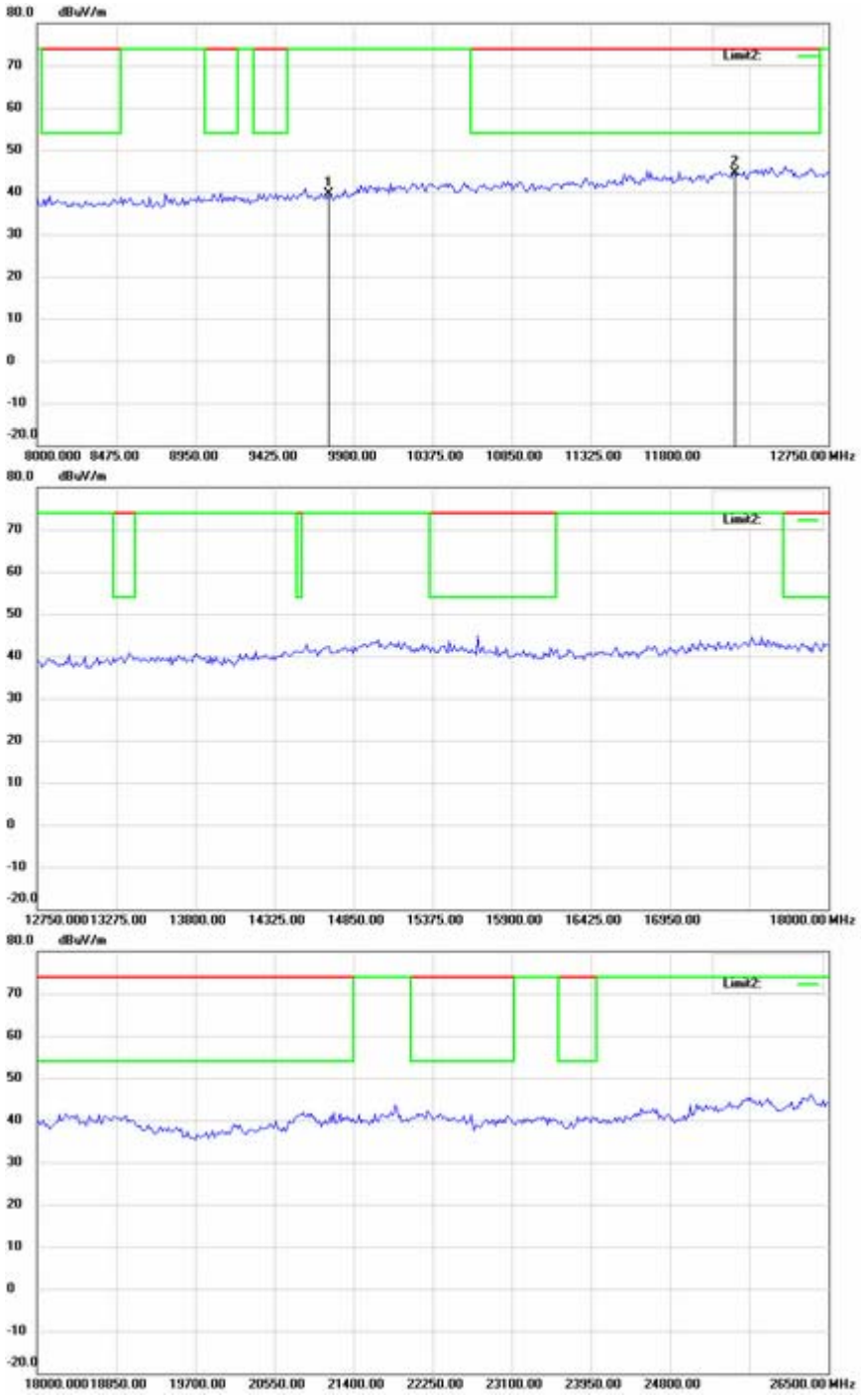

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

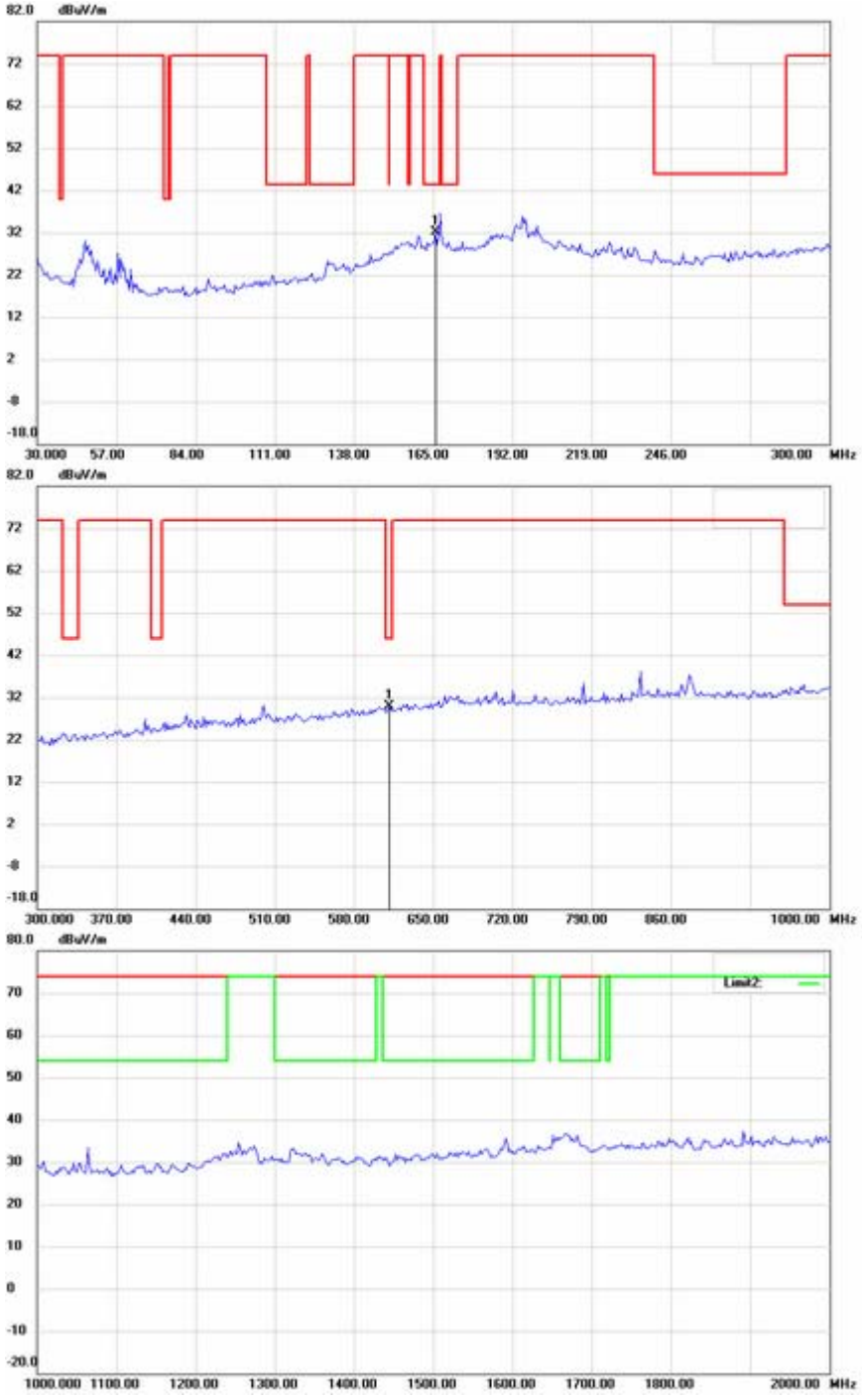



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

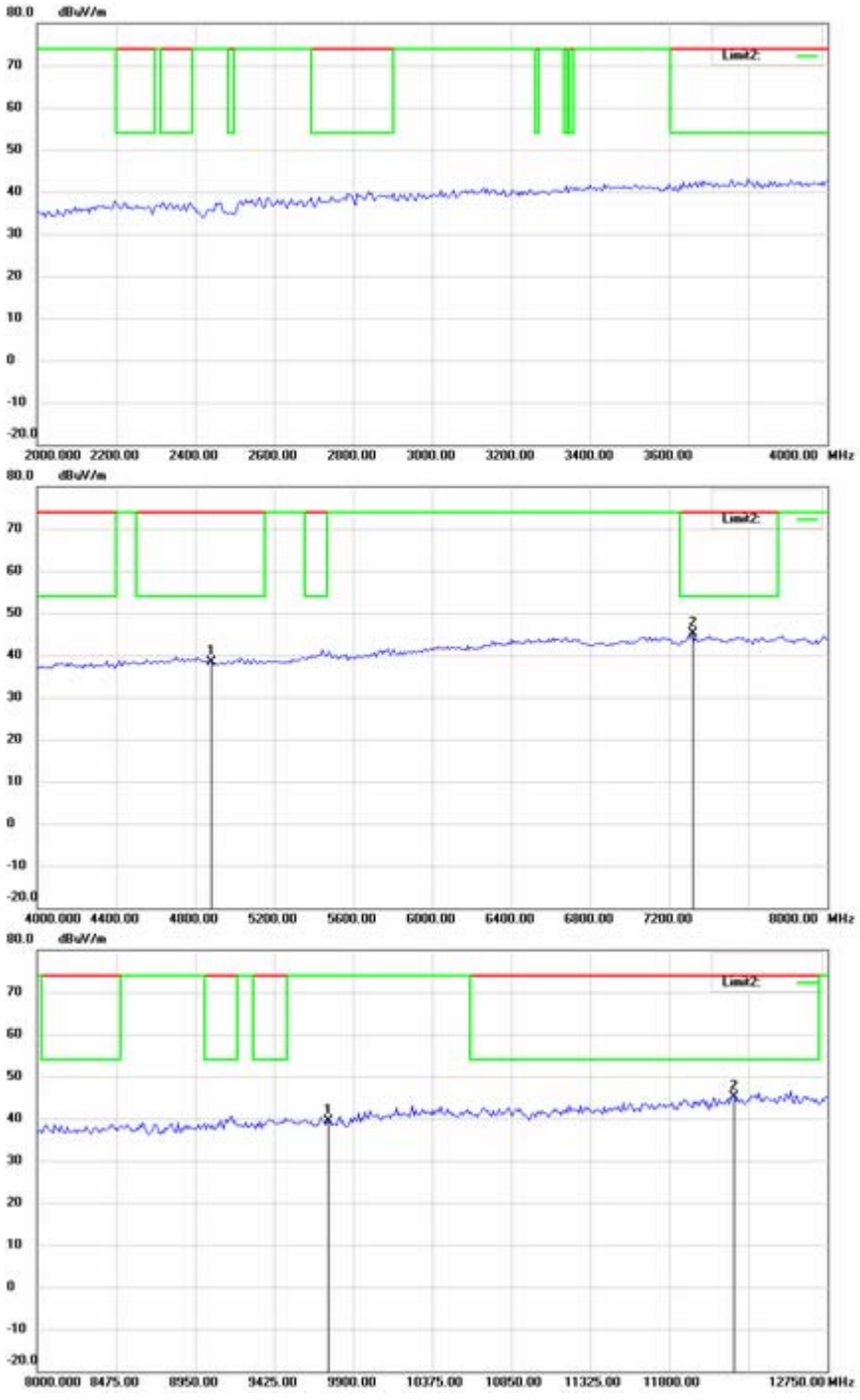
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

## Antenna Polarization V



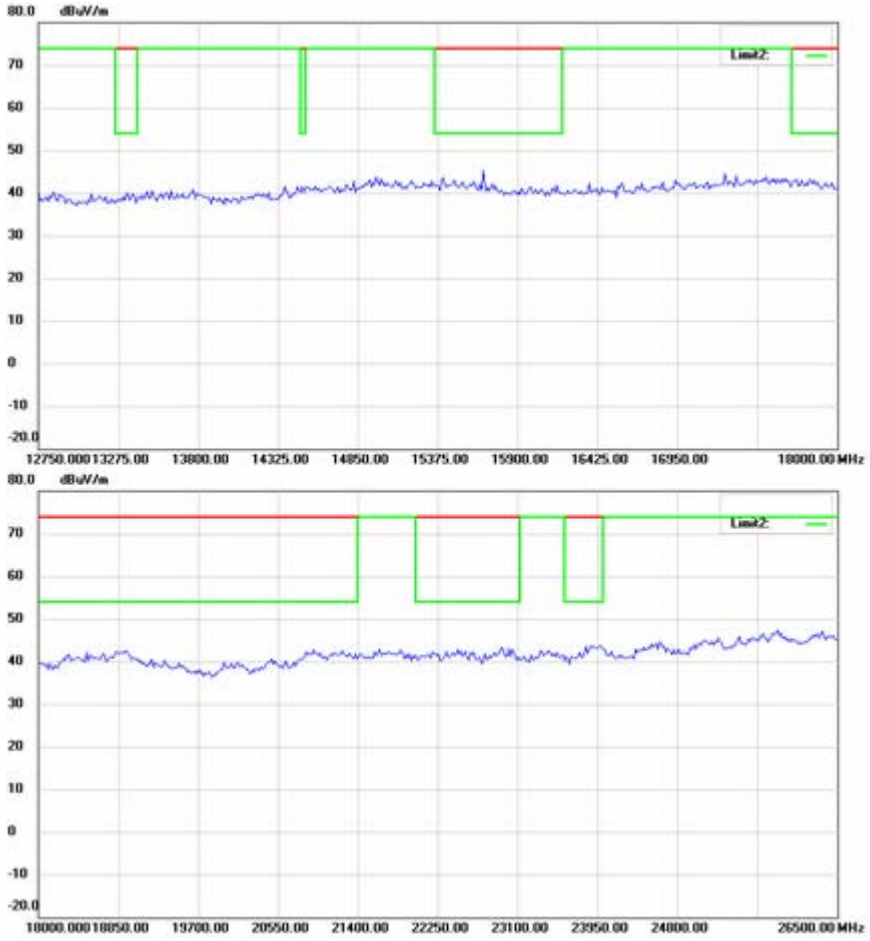

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

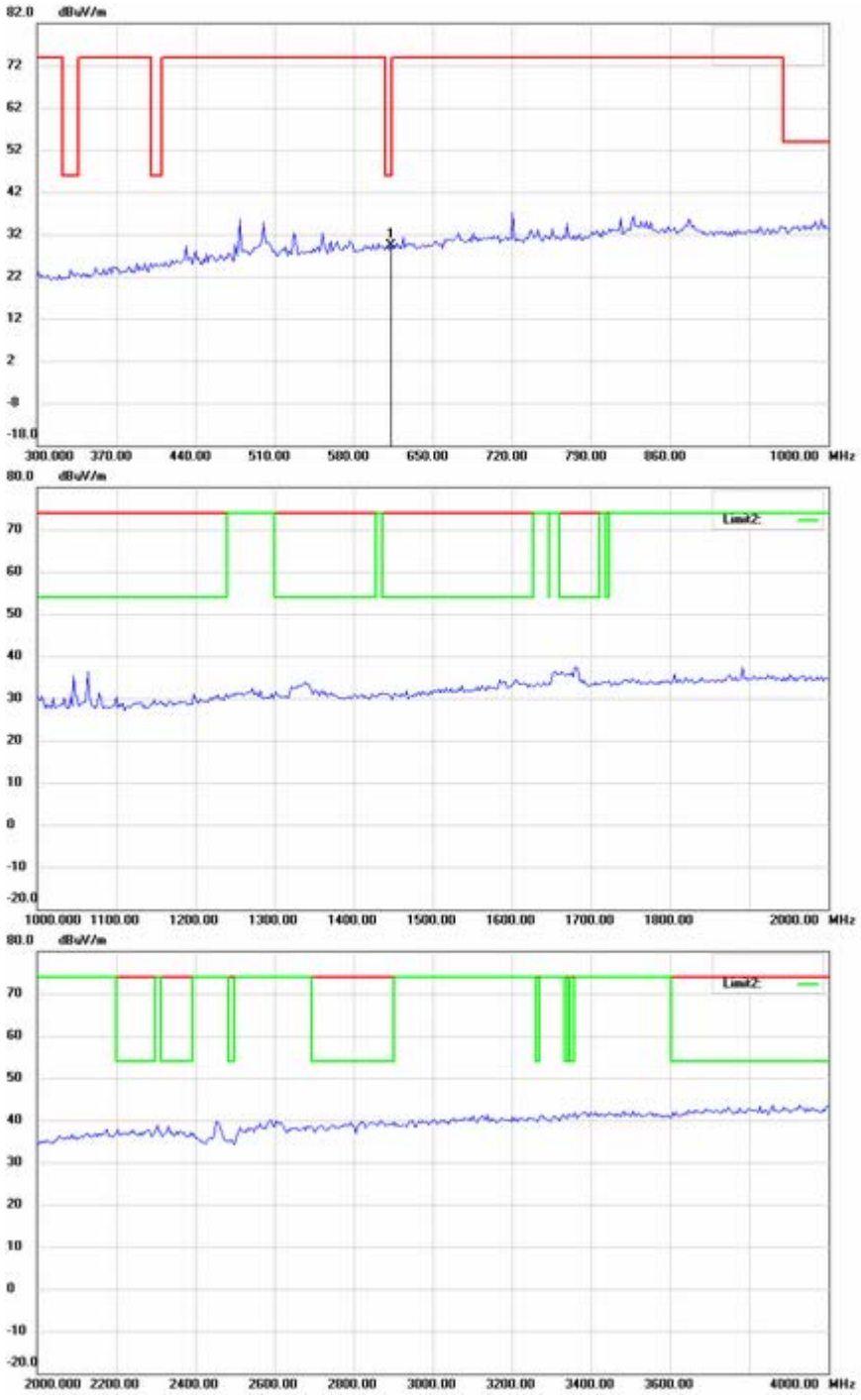
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




Channel 7
Antenna Polarization H

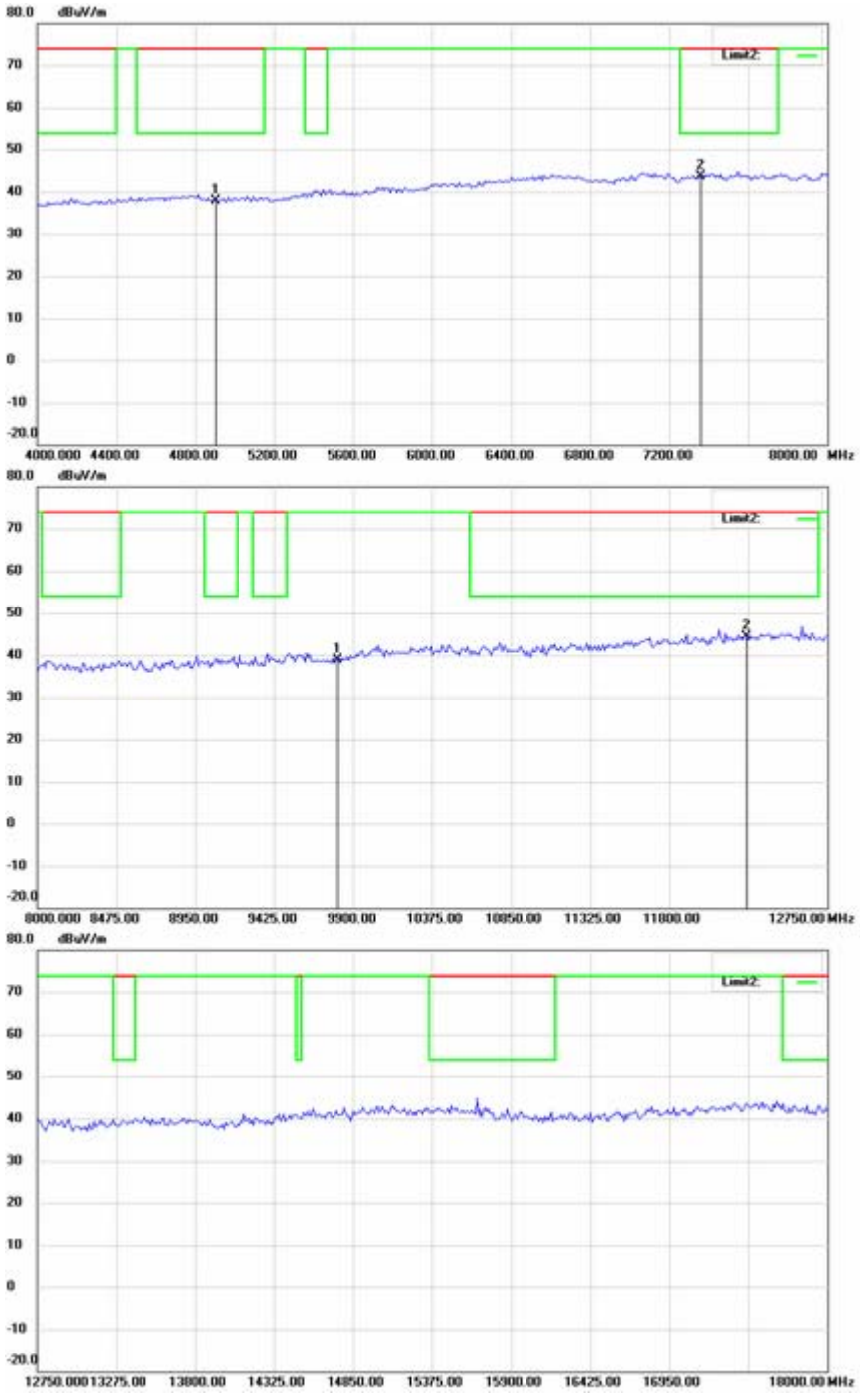

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



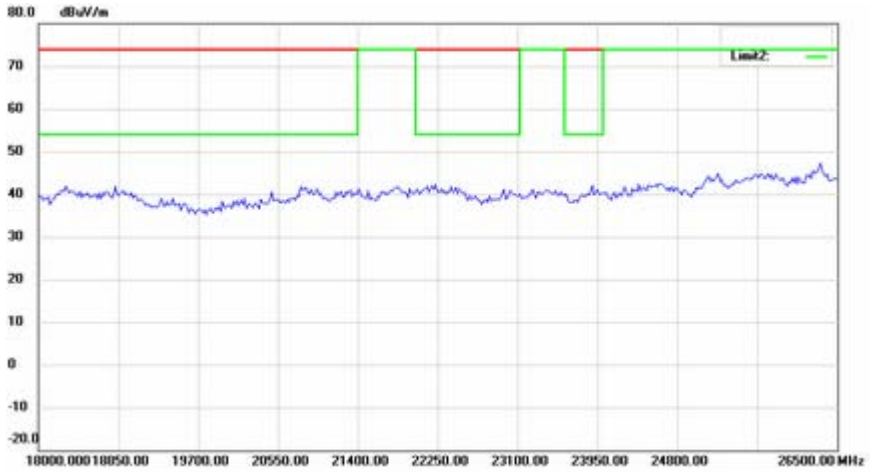

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

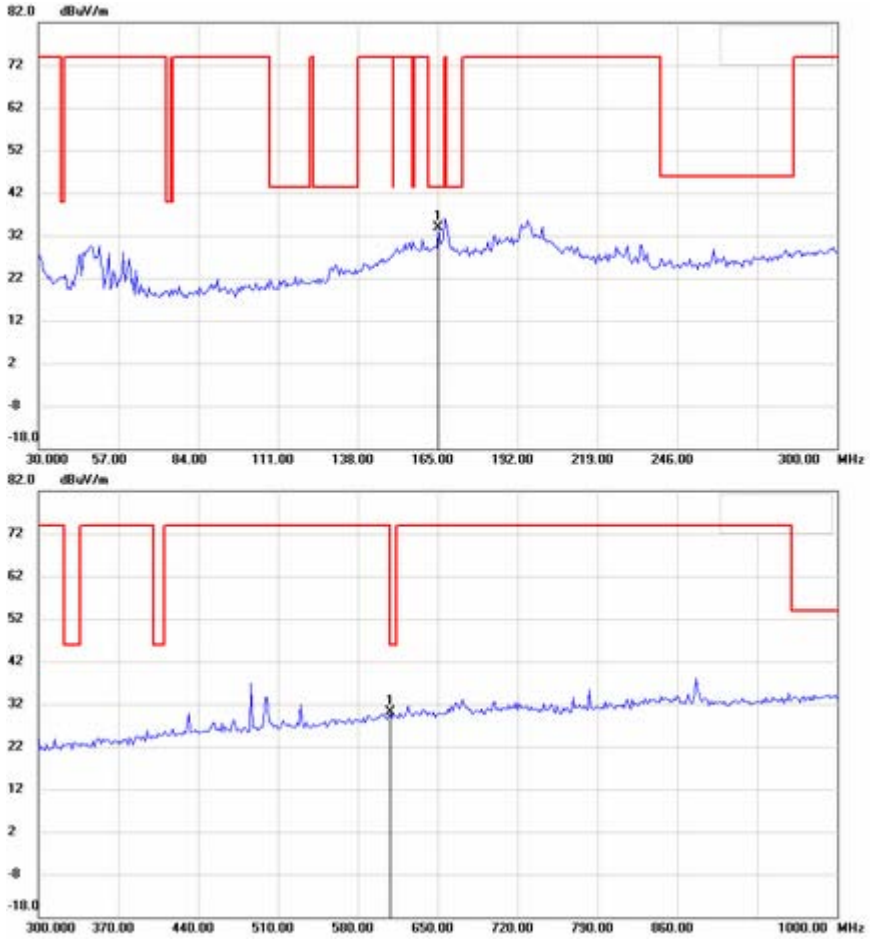



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

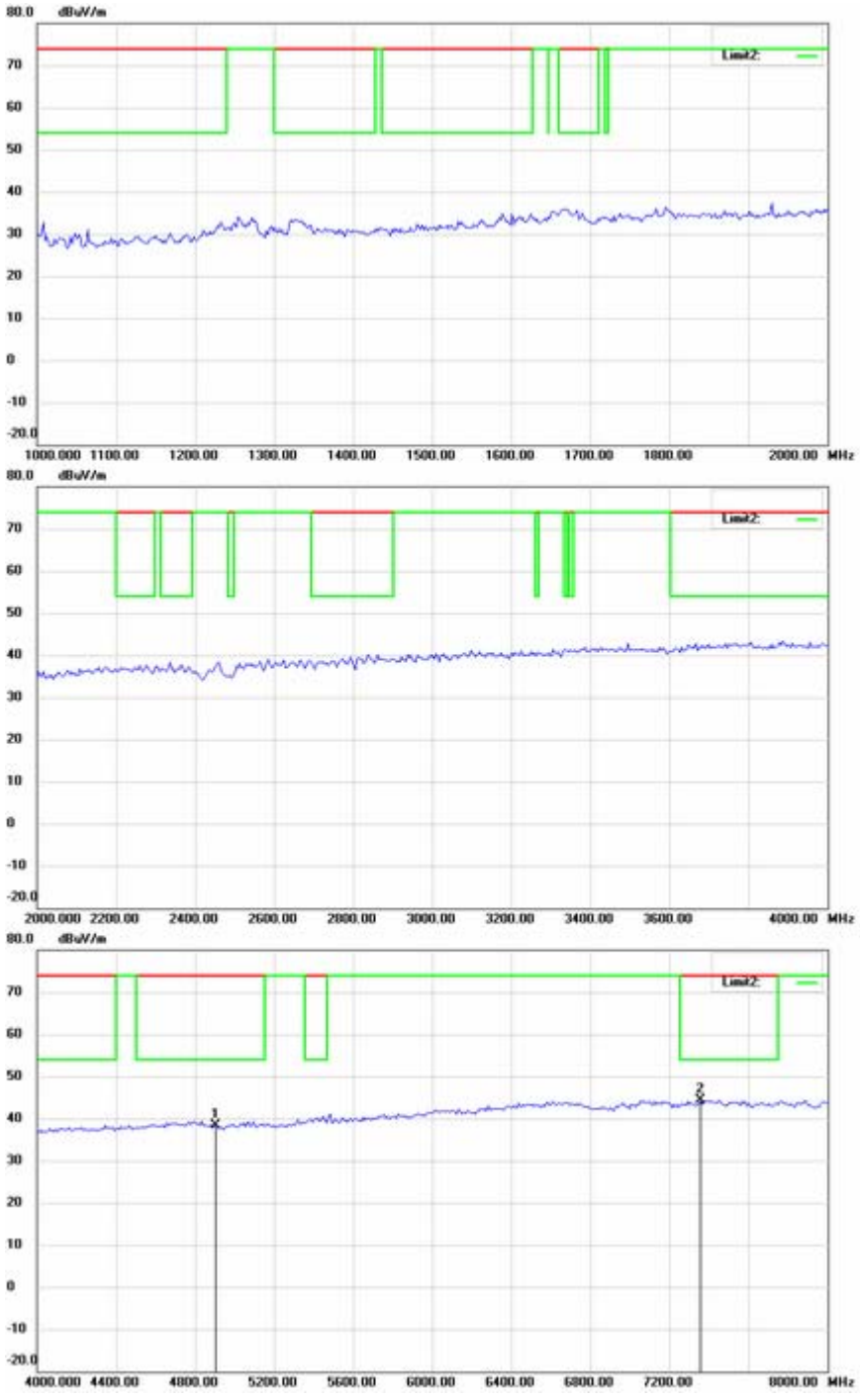



Antenna Polarization V



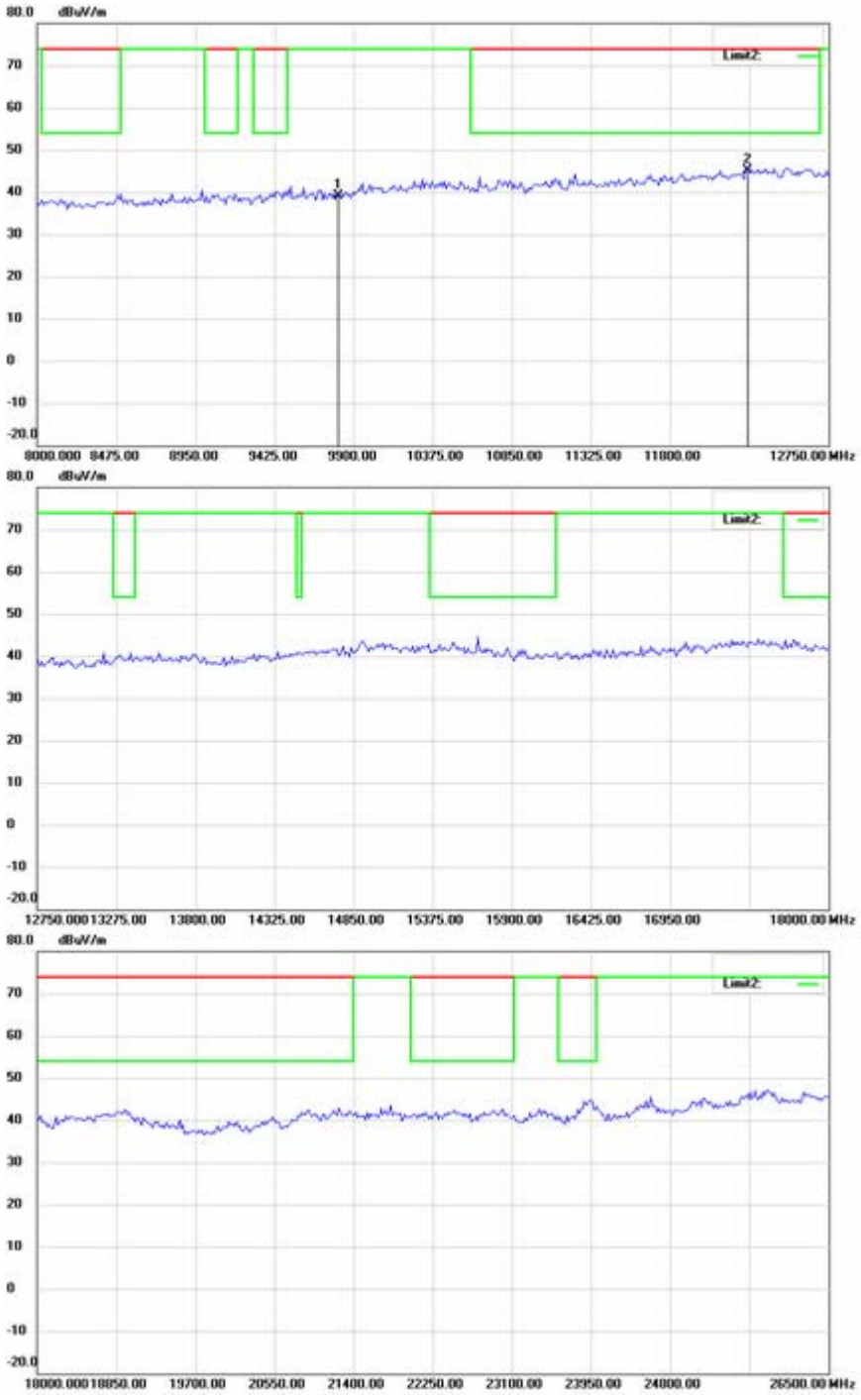

**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**




**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

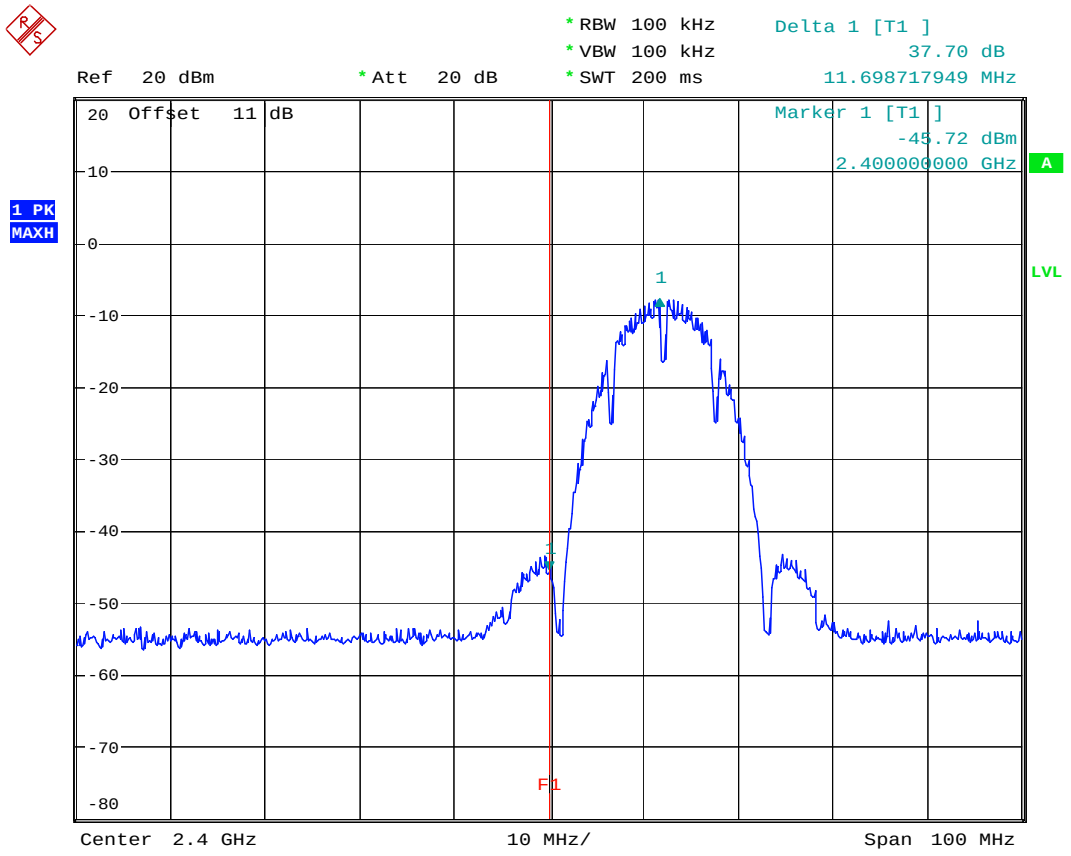



**Up Line: Peak Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

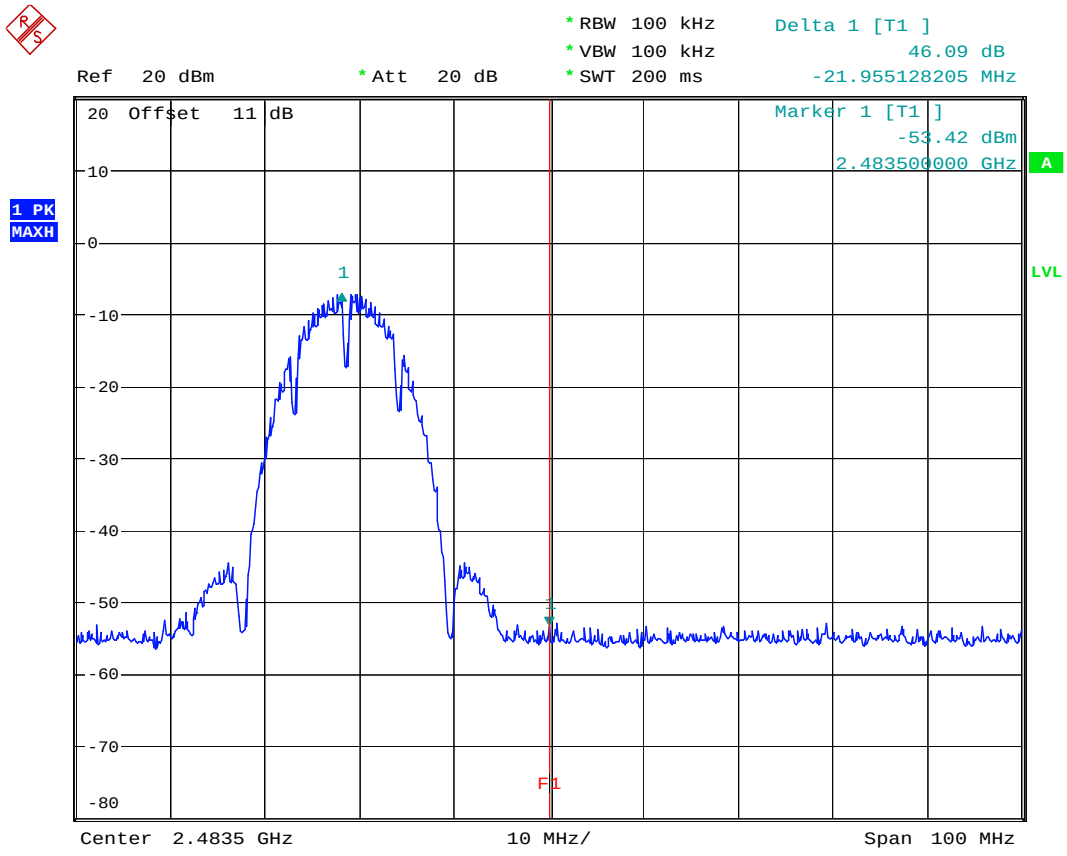
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Band Edge Measurement
# Mode A




BANDEDGE 802.11b CH1

Date: 9.DEC.2008 08:38:45

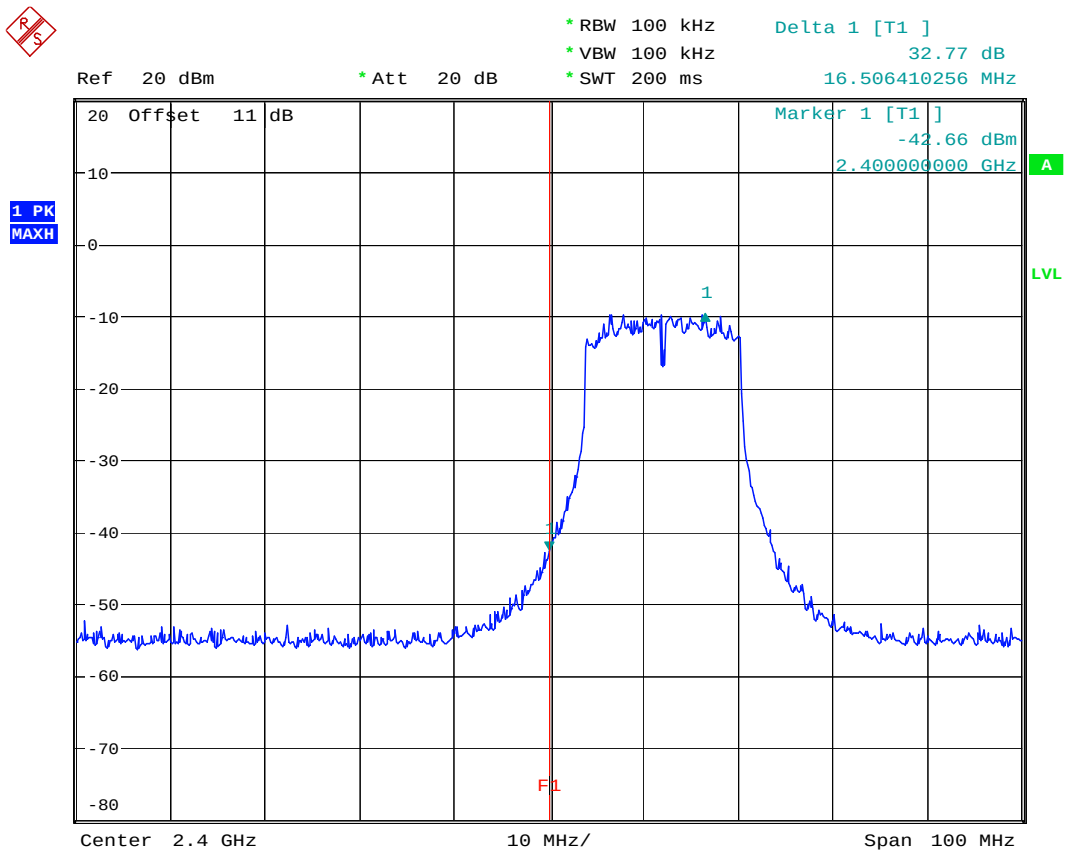



BANDEDGE 802.11b CH11

Date: 9.DEC.2008 08:36:02

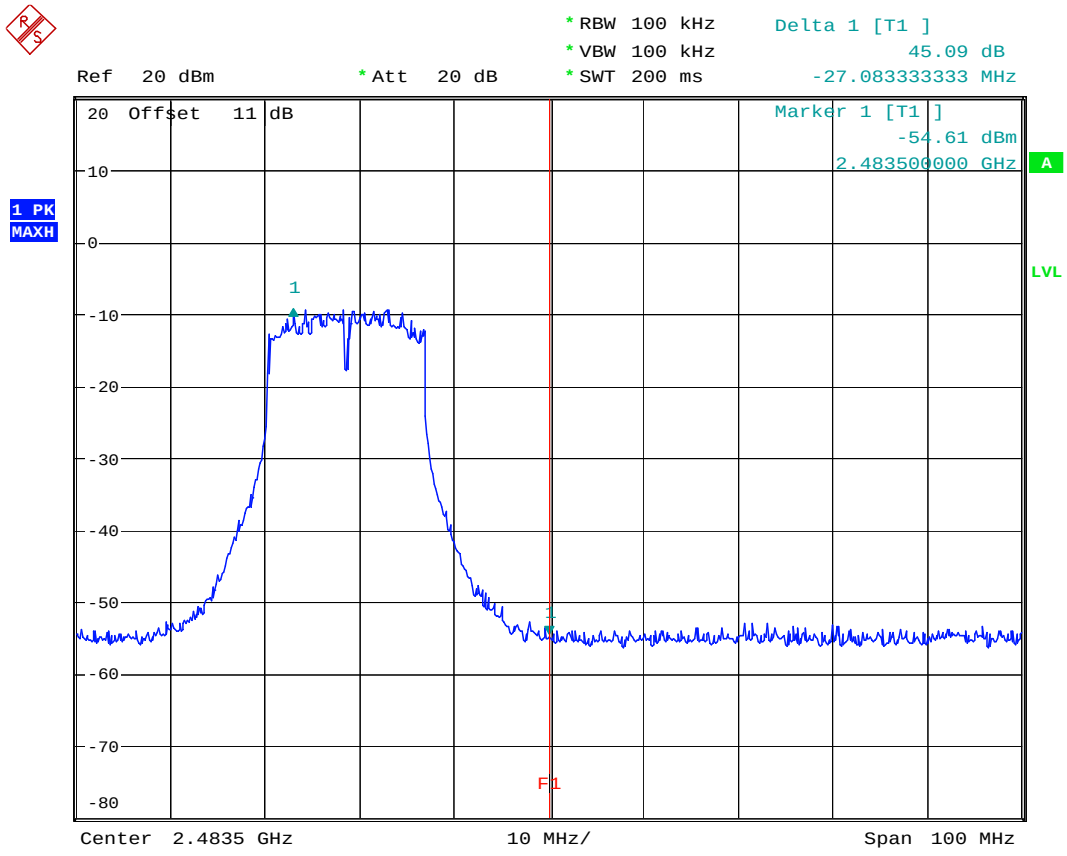
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode B




BANDEDGE 802.11g CH1
Date: 9.DEC.2008 08:38:25

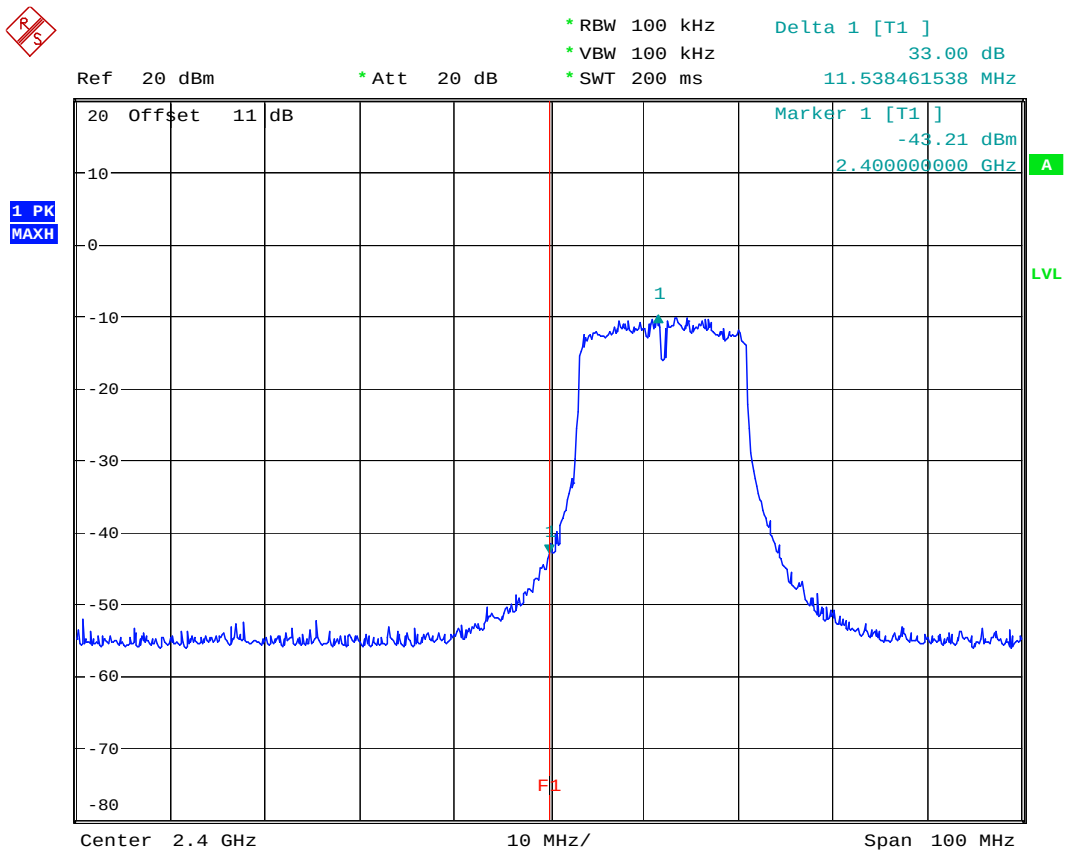
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N



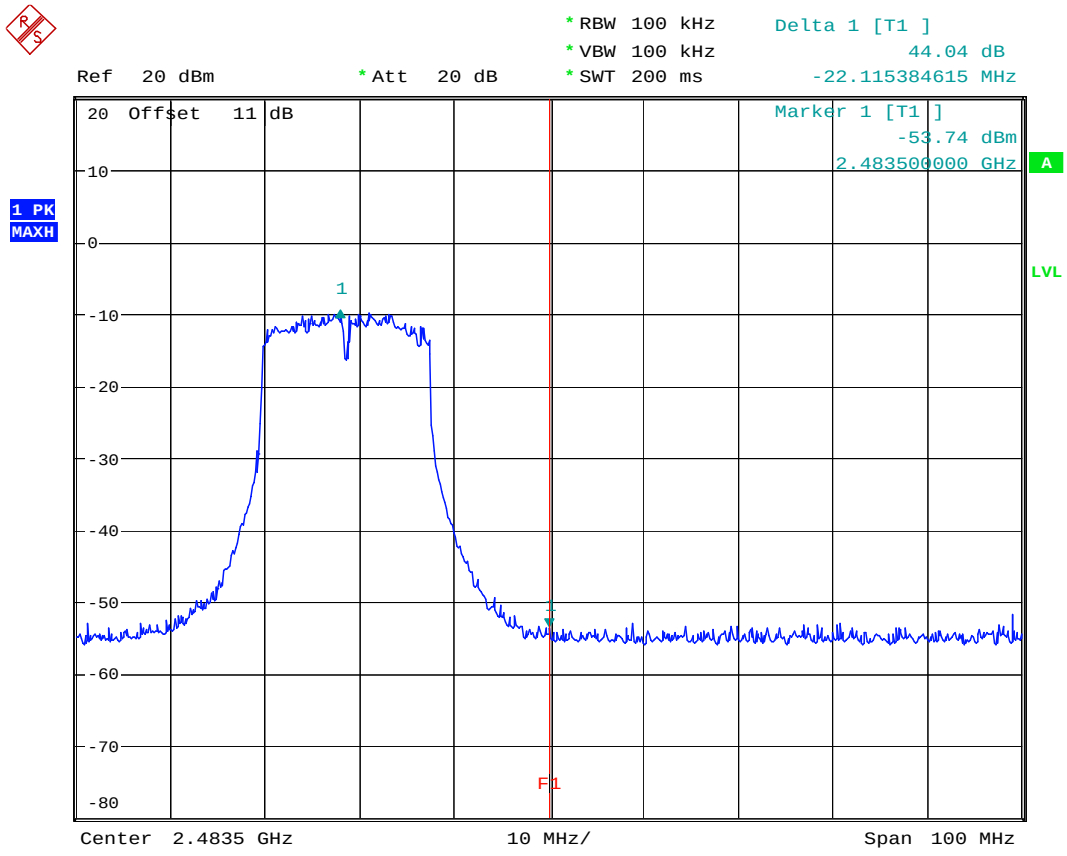

BANDEDGE 802.11g CH11
Date: 9.DEC.2008 08:35:43

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode C




BANDEDGE 802.11n 20MHz CH1
Date: 9.DEC.2008 08:37:57

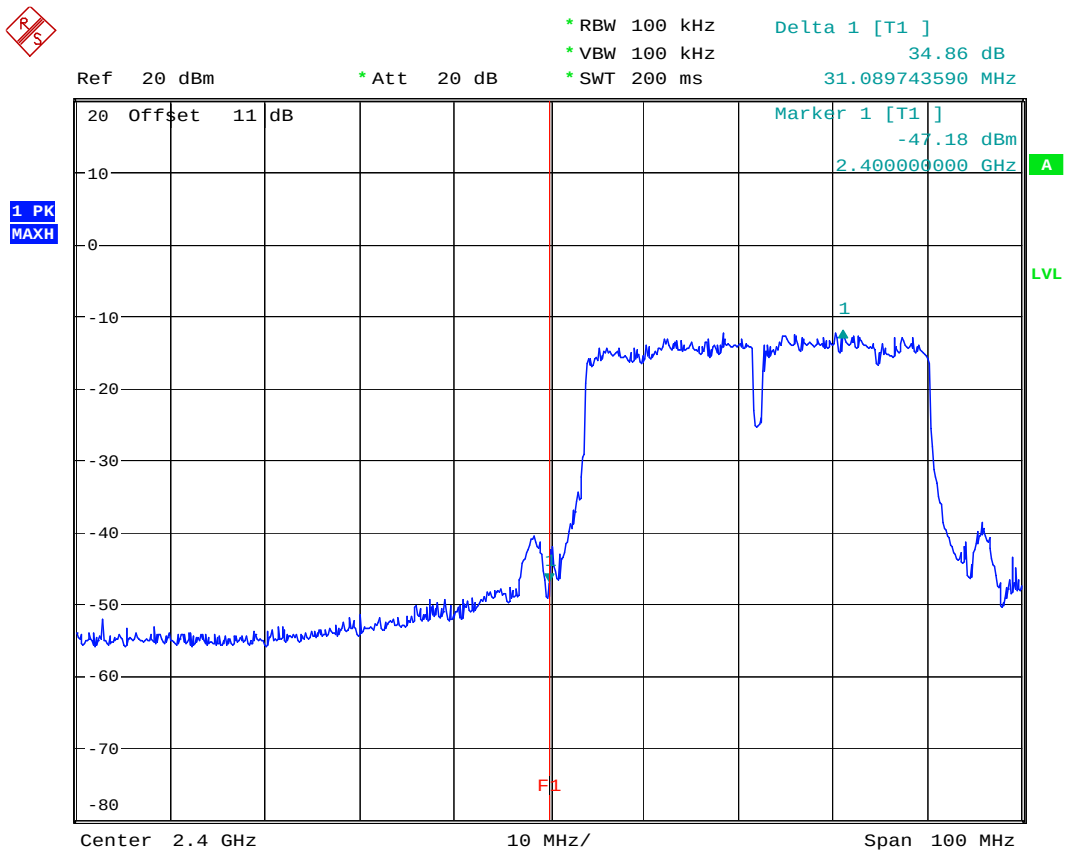



BANDEDGE 802.11n 20MHz CH11

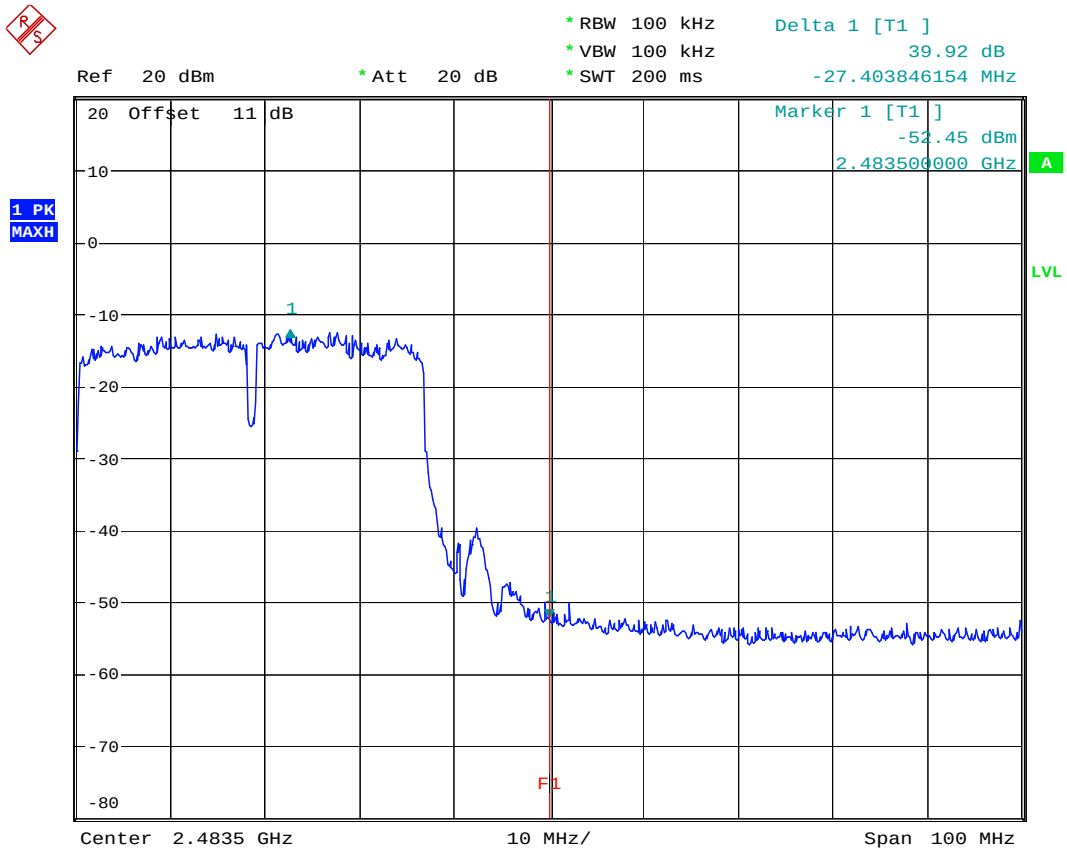
Date: 9.DEC.2008 08:36:33

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode D




BANDEDGE 802.11n 40MHz CH1
Date: 9.DEC.2008 08:37:38

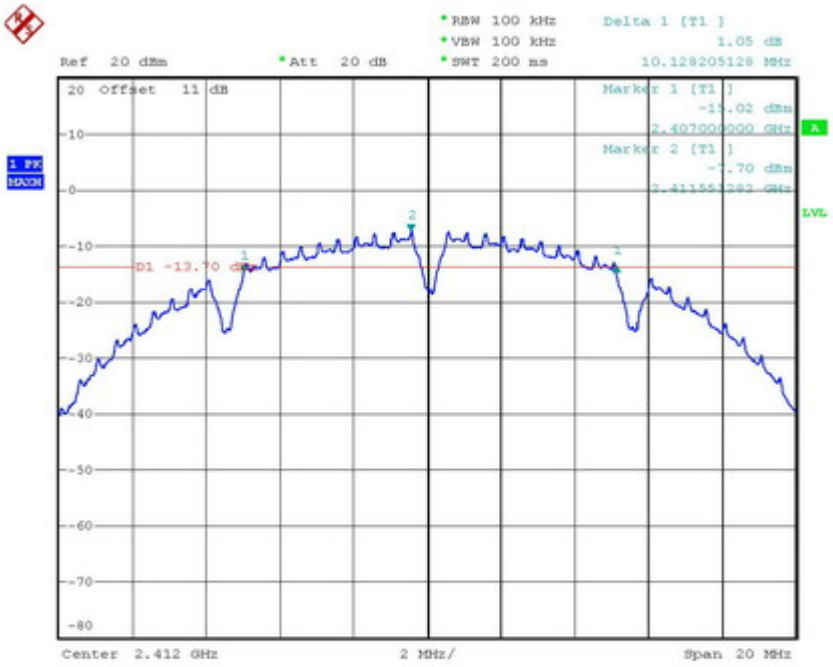



BANDEDGE 802.11n 40MHz CH7

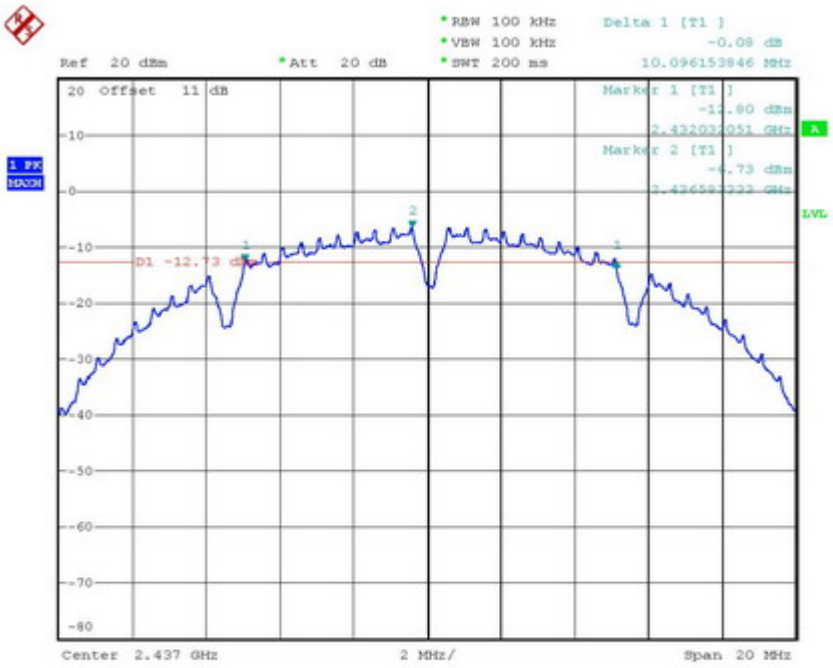
Date: 9.DEC.2008 08:37:00

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Minimum 6dB Bandwidth
## Mode A

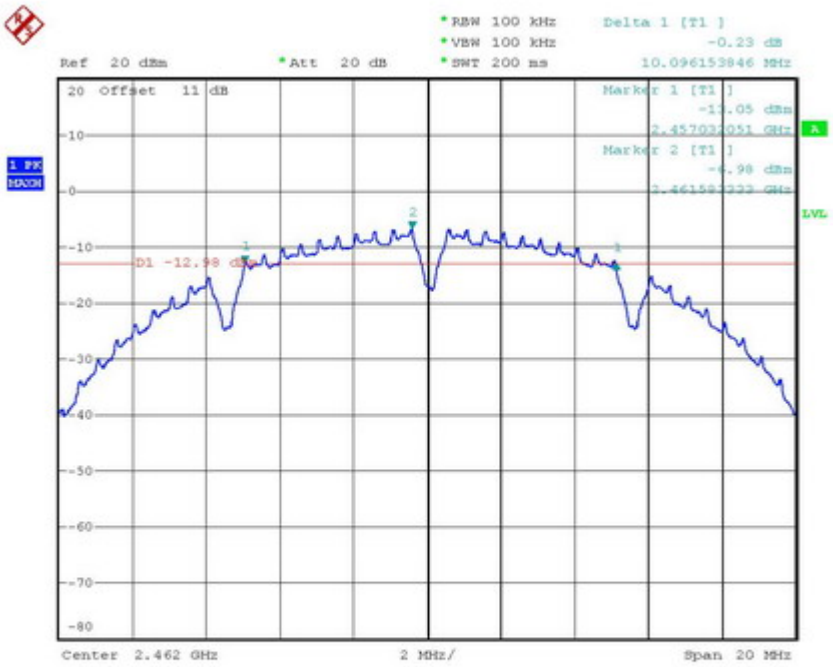



6DB BANDWIDTH 802.11b CH1
Date: 9.DEC.2008 09:05:13




6DB BANDWIDTH 802.11b CH6

Date: 9.DEC.2008 09:06:19

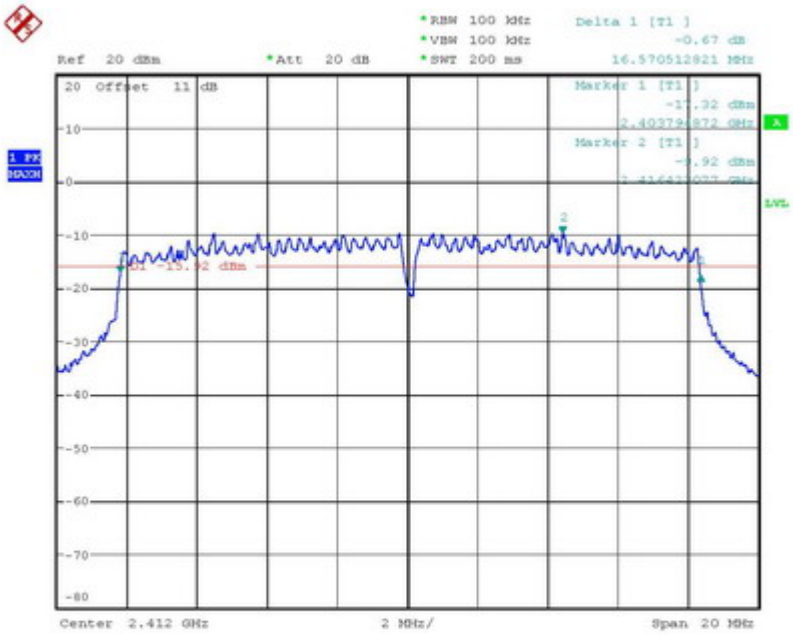



6DB BANDWIDTH 802.11b CH11

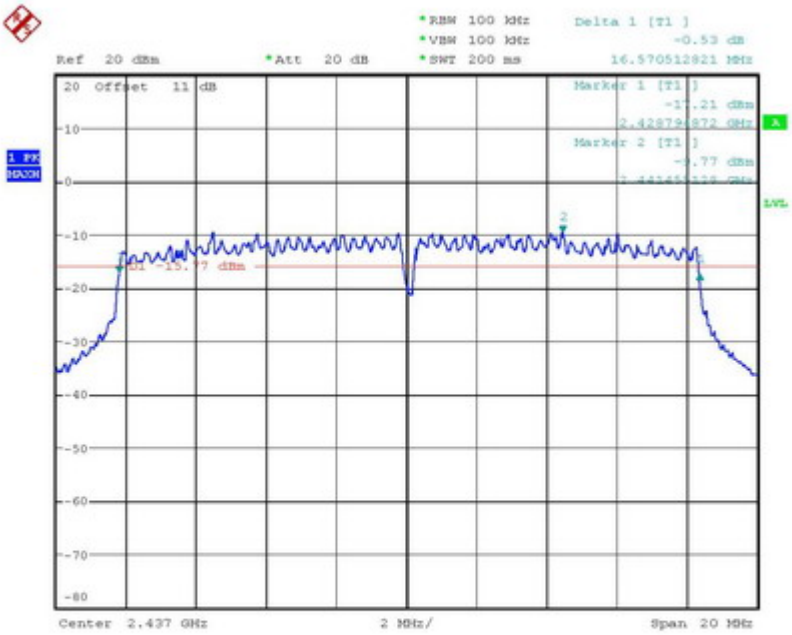
Date: 9.DEC.2008 09:09:45

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode B

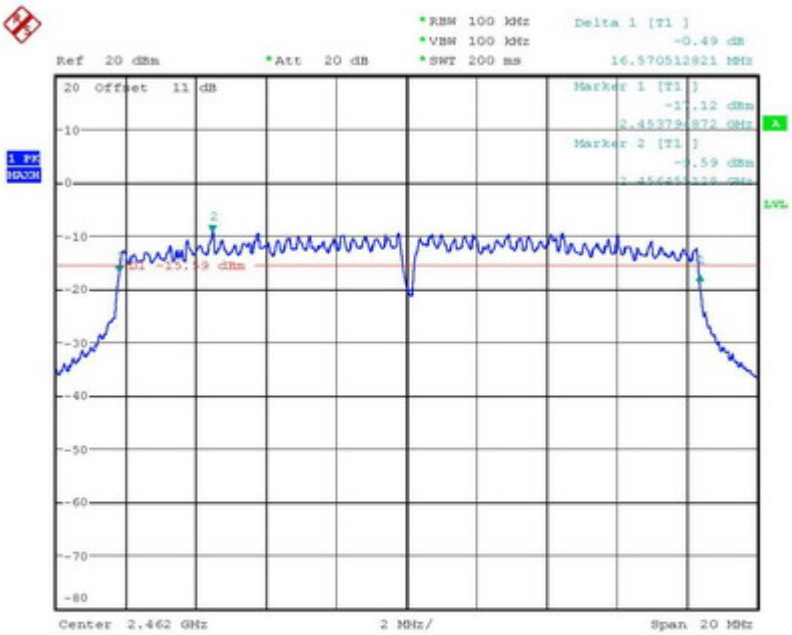



6DB BANDWIDTH 802.11g CH1
Date: 9.DEC.2008 09:03:17




6DB BANDWIDTH 802.11g CH6

Date: 9.DEC.2008 09:02:24

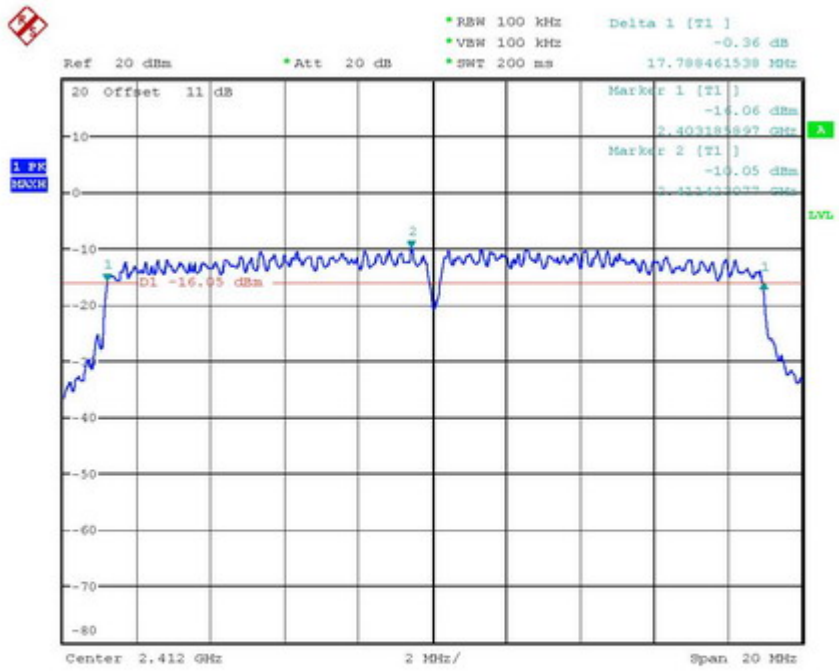



6DB BANDWIDTH 802.11g CH11

Date: 9.DEC.2008 09:00:28

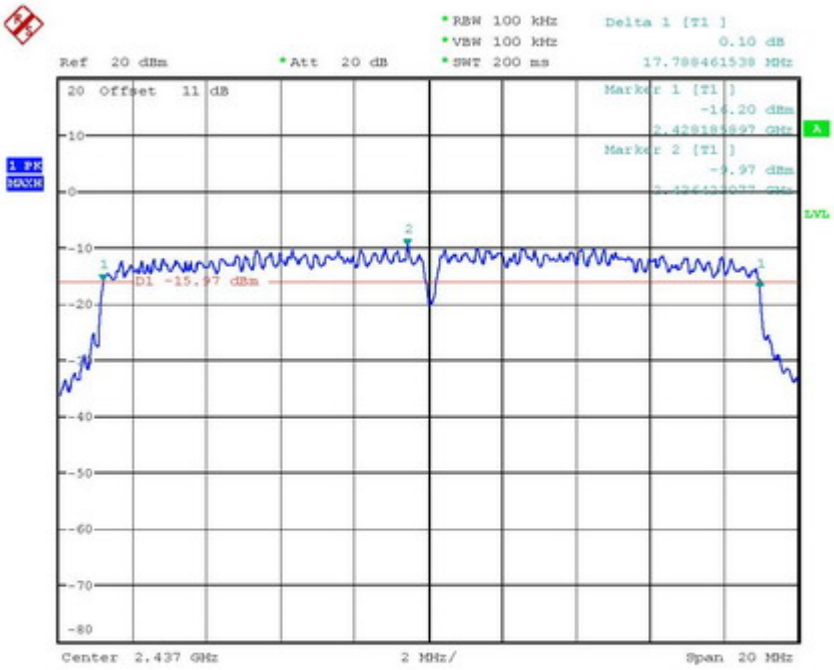
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode C

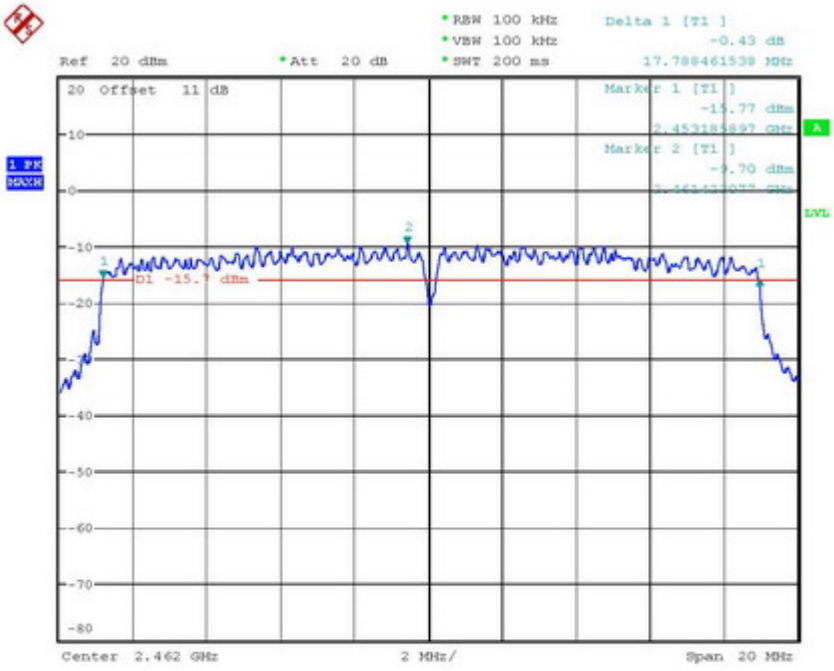



6DB BANDWIDTH 802.11n 20MHz CH1
Date: 9.DEC.2008 08:57:52

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N



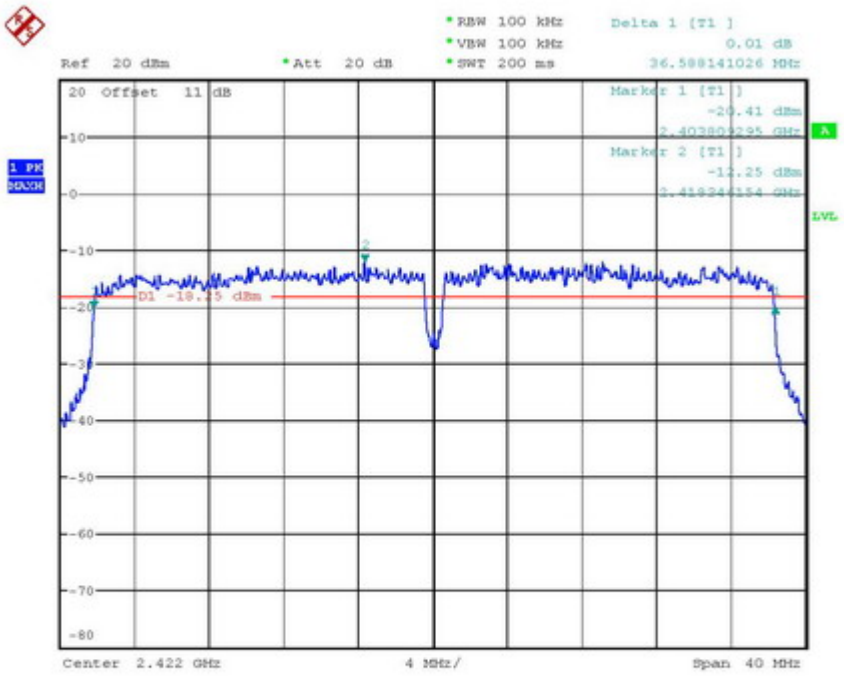

6DB BANDWIDTH 802.11n 20MHz CH6
Date: 9.DEC.2008 08:58:57



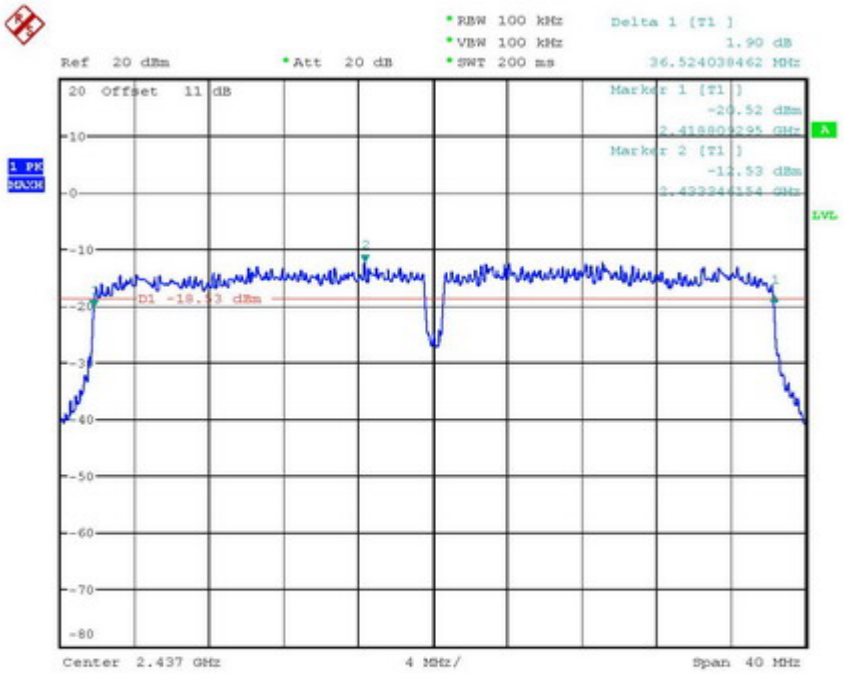

6DB BANDWIDTH 802.11n 20MHz CH11
Date: 9.DEC.2008 08:59:40

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

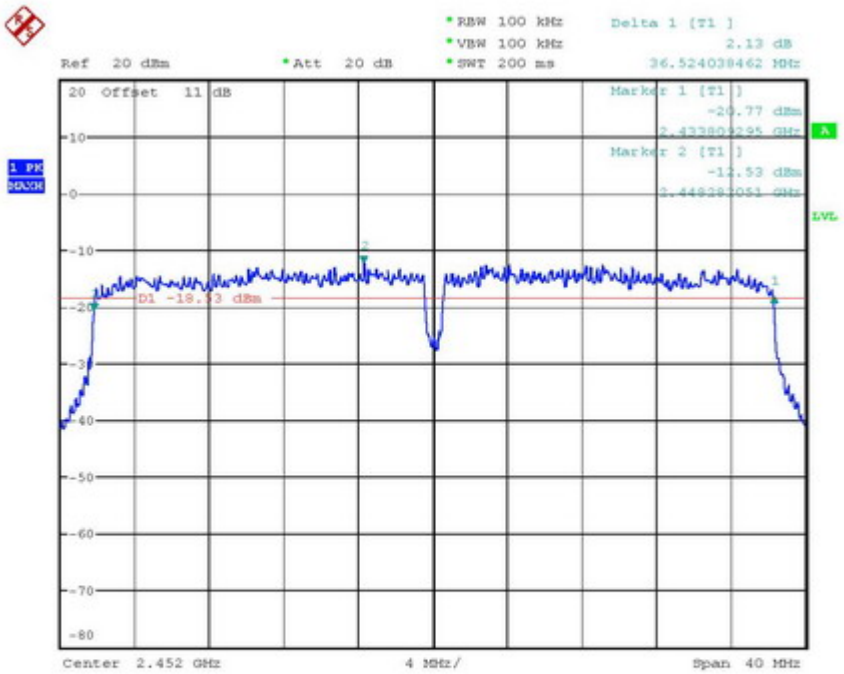
# Mode D




6DB BANDWIDTH 802.11n 40MHz CH1
Date: 9.DEC.2008 08:57:00



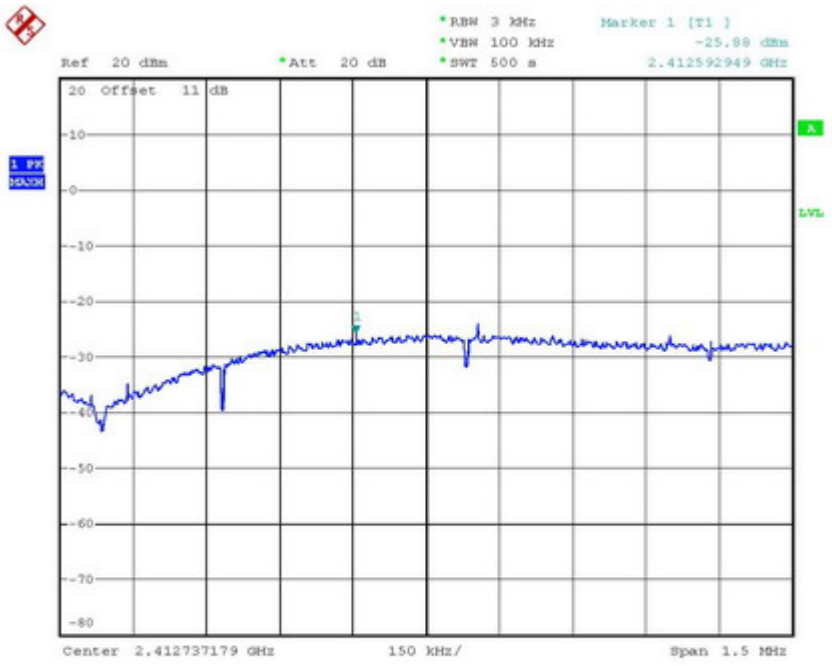

6DB BANDWIDTH 802.11n 40MHz CH4
Date: 9.DEC.2008 08:56:13



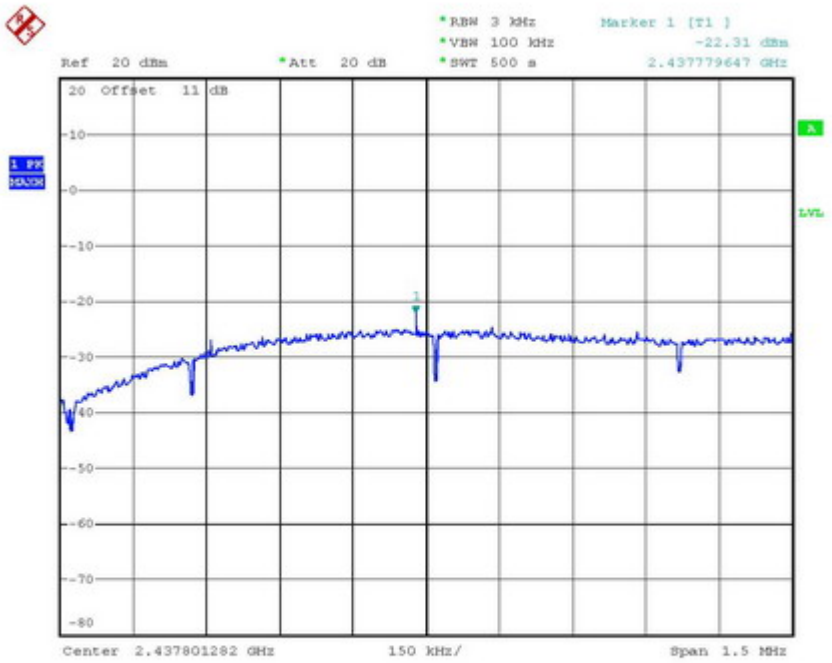

6DB BANDWIDTH 802.11n 40MHz CH7
Date: 9.DEC.2008 08:54:45

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

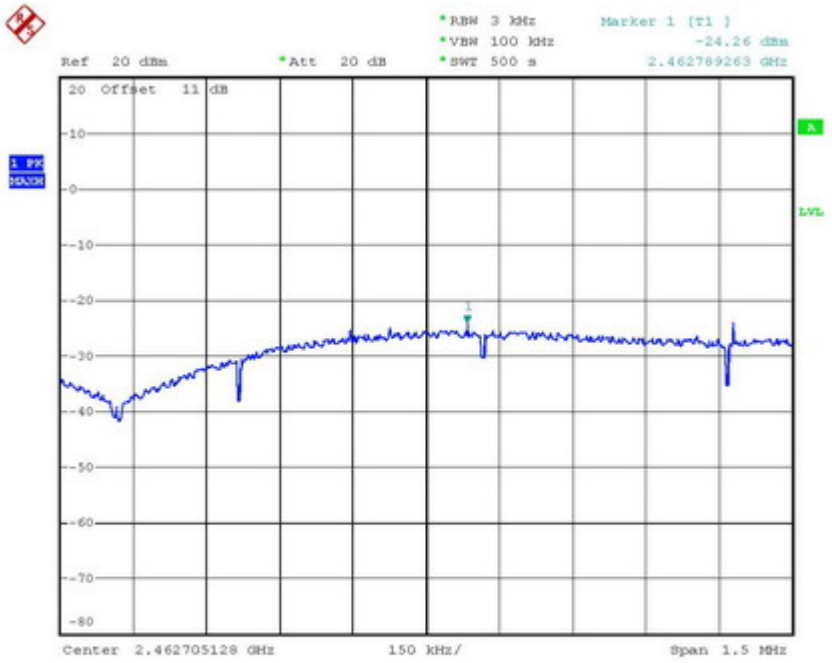
# Peak Power Spectral Density
## Mode A




POWER DENSITY 802.11b CH1
Date: 9.DEC.2008 08:40:17



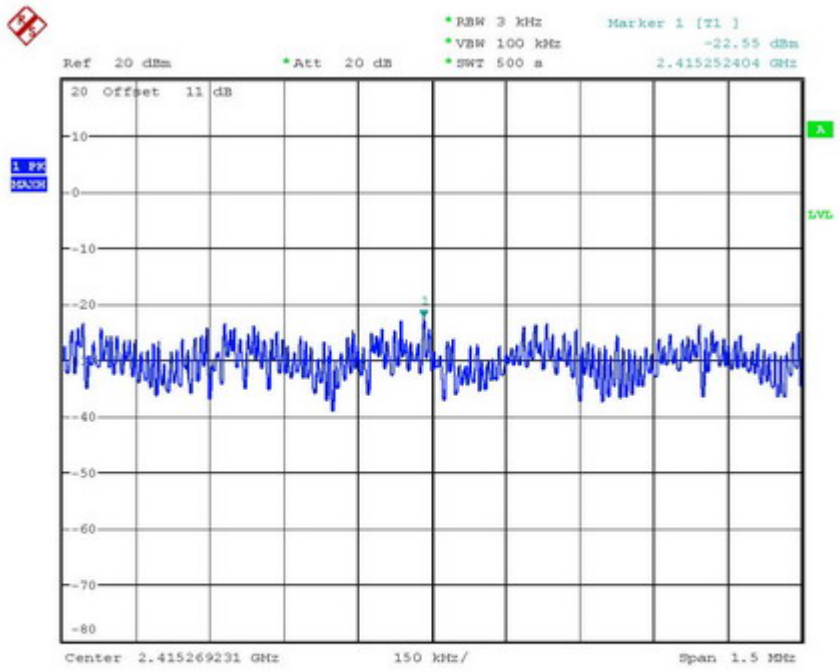

POWER DENSITY 802.11b CH6
Date: 9.DEC.2008 08:40:52




POWER DENSITY 802.11b CH11
Date: 9.DEC.2008 08:41:37

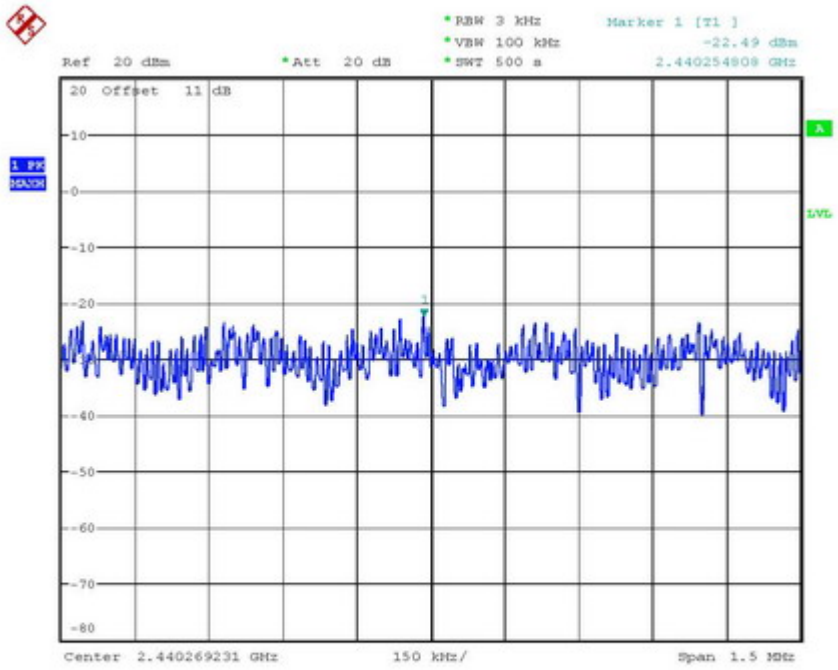
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

## Mode B

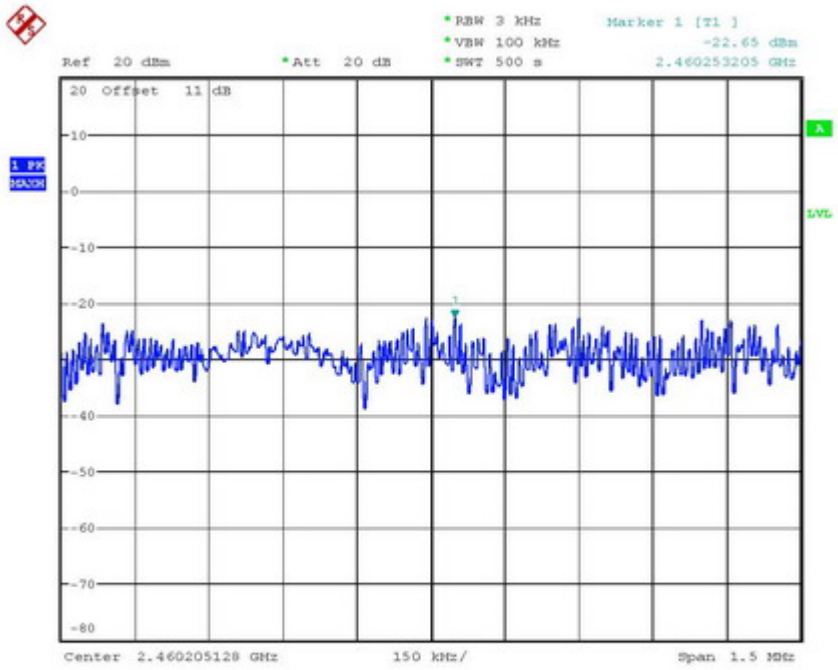



POWER DENSITY 802.11g CH1
Date: 9.DEC.2008 08:43:31

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N



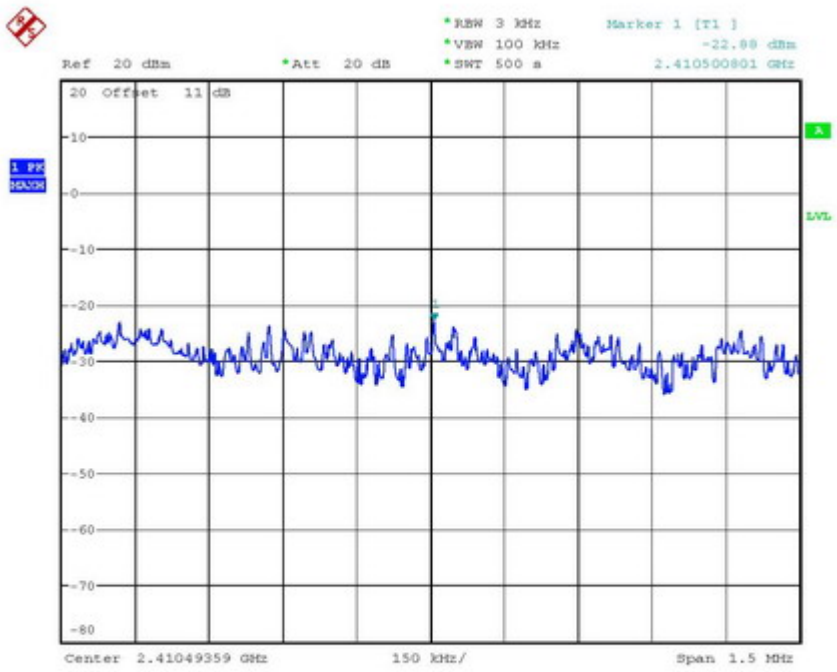

POWER DENSITY 802.11g CH6
Date: 9.DEC.2008 08:42:57




POWER DENSITY 802.11g CH11
Date: 9.DEC.2008 08:42:17

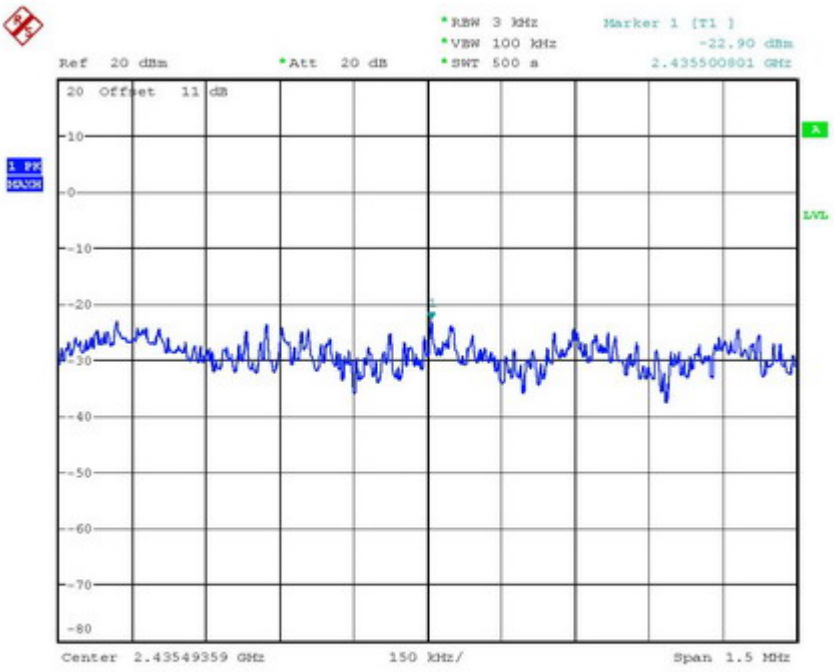
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode C

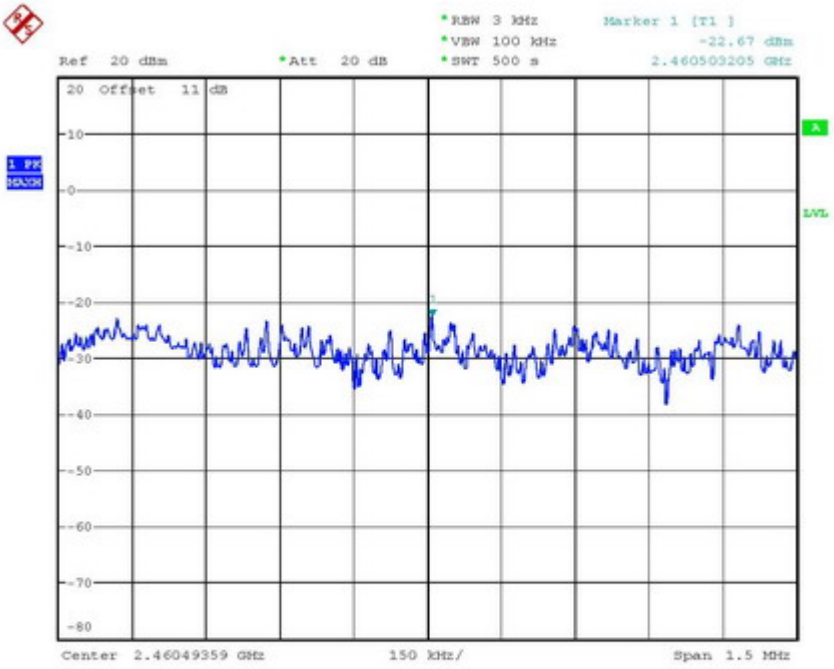



POWER DENSITY 802.11n 20MHz CH1
Date: 9.DEC.2008 08:44:16

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N



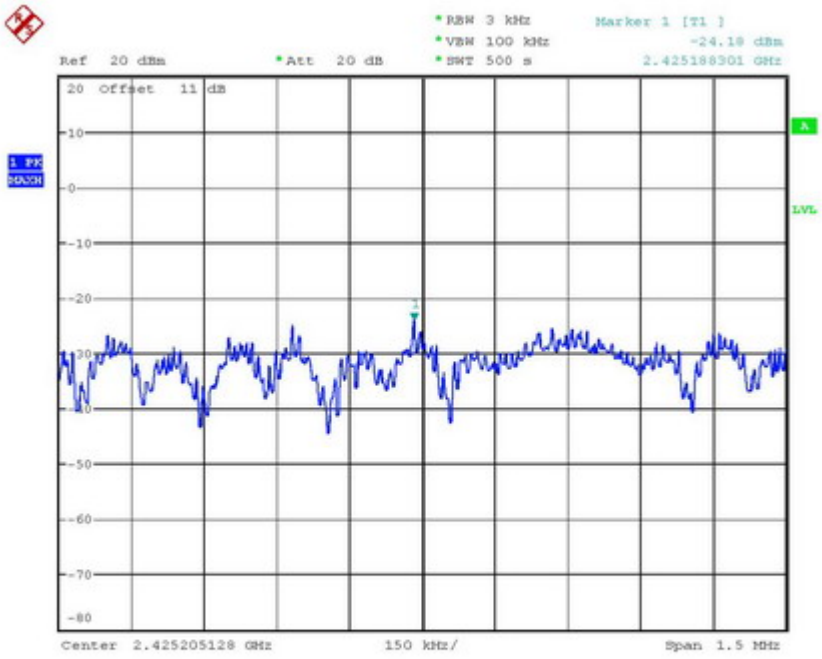

POWER DENSITY 802.11n 20MHz CH6
Date: 9.DEC.2008 08:47:05




POWER DENSITY 802.11n 20MHz CH11
Date: 9.DEC.2008 08:46:14

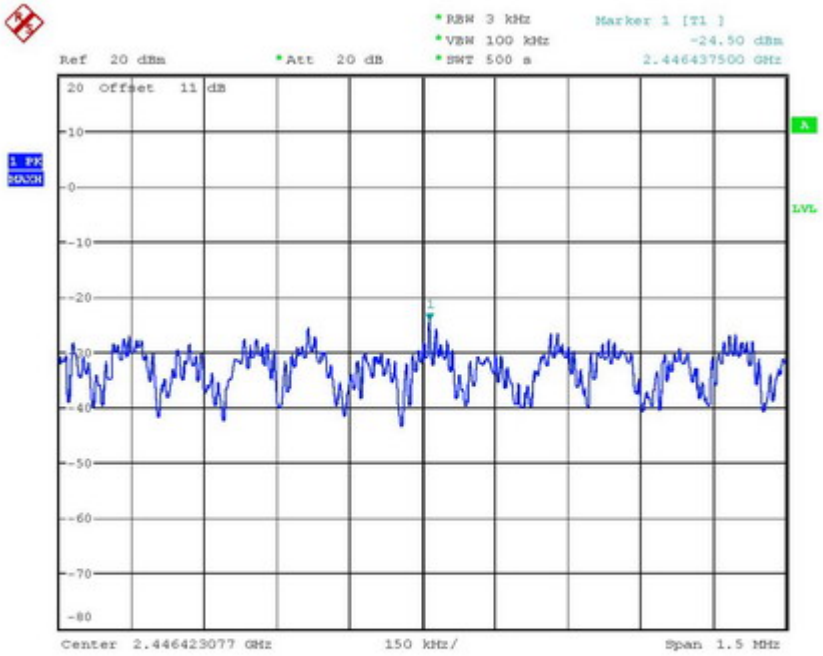
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Mode D

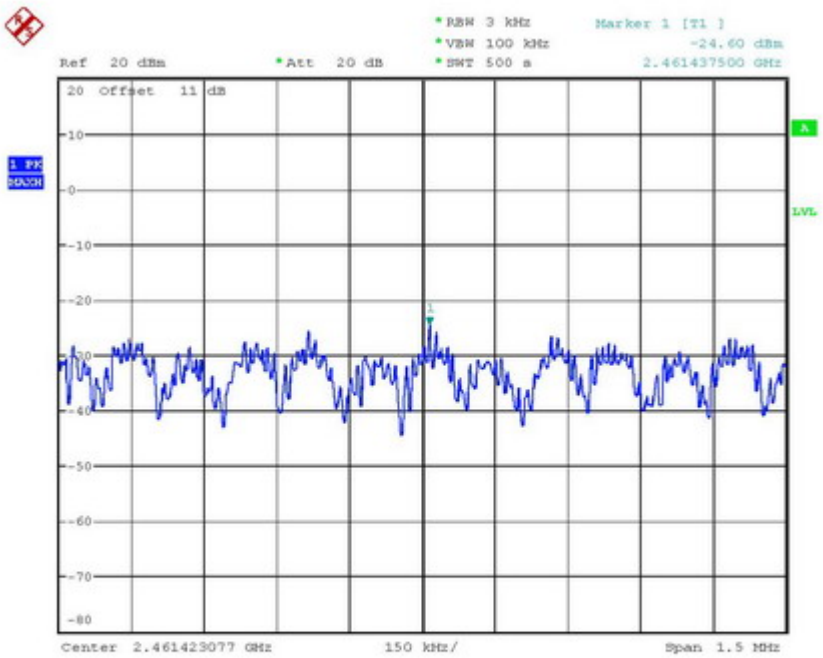



POWER DENSITY 802.11n 40MHz CH1
Date: 9.DEC.2008 08:47:49

Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N




POWER DENSITY 802.11n 40MHz CH4
Date: 9.DEC.2008 08:49:10

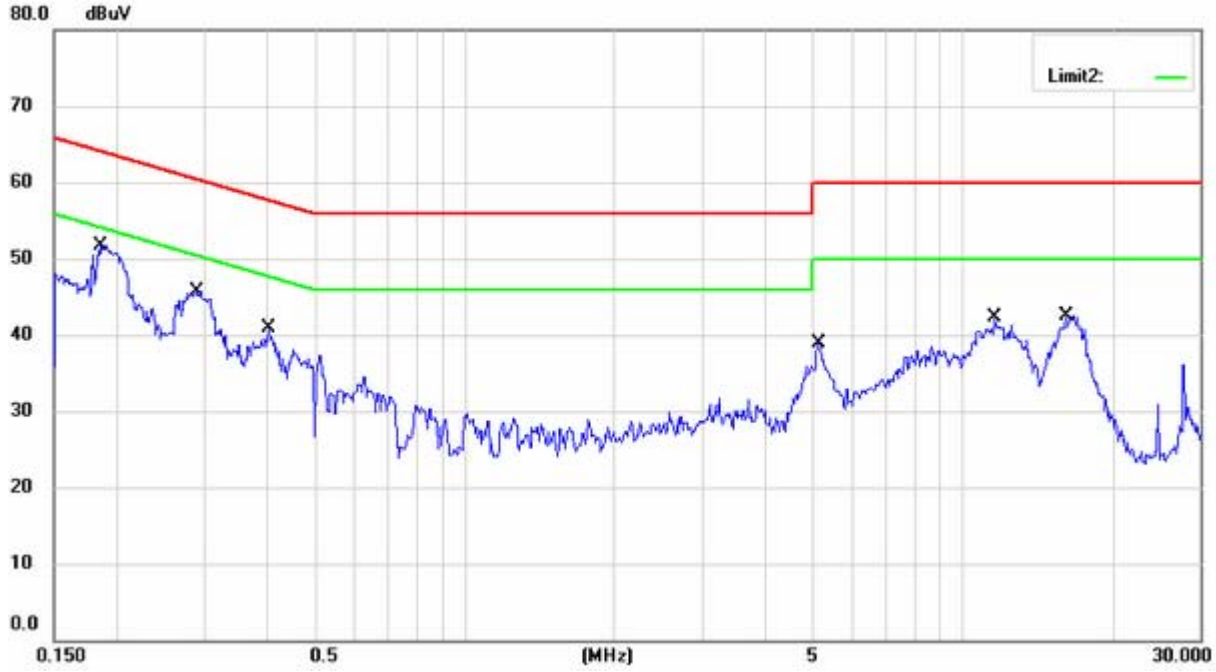



POWER DENSITY 802.11n 40MHz CH7
Date: 9.DEC.2008 08:49:52

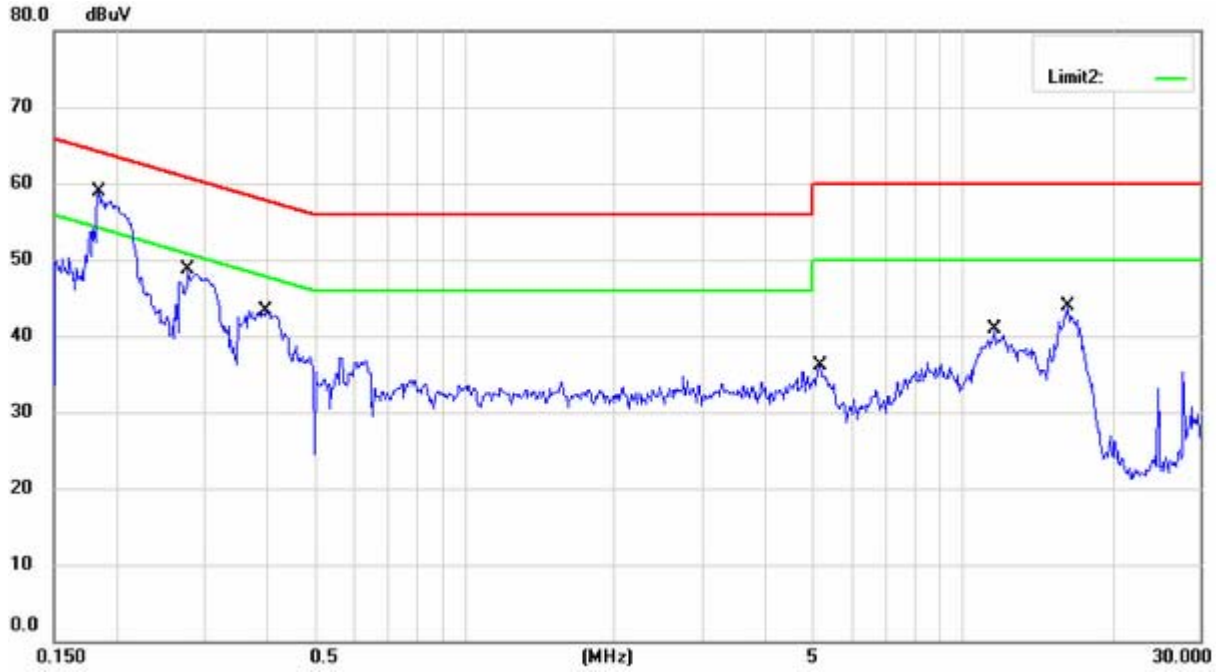
Registration number: W6M20812-9466-C-1
FCC ID: U6A-WU206N

# Power Line Conducted Emission

## LISN N




## LISN L1




**Up Line: QP Limit Line**
**Down Line: Ave Limit Line**
**Note:**

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of AC conducted test data of this test report.**

The following model are declared by the applicant to be identical to the original tested model and hereby listed,

| Brand Name | Product Name | Model |
|---|---|---|
| Amigo | 11n USB Dongle | WU206n |
| CNet | Wireless-N USB Dongle | CWD-905 |
| Sapido | Wireless N USB Adapter | AU-4512 |

Important Notice: The models listed above are supposed to be identical to the tested model no. WU206n. Any deviation to the original model will avoid the certification and shall be the full responsibility of the applicant.