

**FCC PART 15 SUBPART C TEST REPORT**

**for**

**PWS-8033M**

**Model No.: PWS-8033M-R0AE**

**FCC ID: M82-PWS-8033M**

**of**

**Applicant: Advantech Co., Ltd**

**Address: 1, Alley 20, Lane 26, Rueiguang Rd, Neihu District,**

**Taipei, Taiwan**

**Tested and Prepared**

**by**

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

**FCC Registration No.: 930600**

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

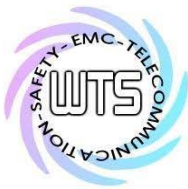
**A2LA Accredited No.: 2732.01**

**Report No.: W6D20812-9515-C-1**



## **TABLE OF CONTENTS**

|                 |   |           |
|-----------------|---|-----------|
| <b>1</b>        | <b>General Information</b>                              | <b>2</b>  |
| 1.1             | Notes   | 2         |
| 1.2             | Testing laboratory                                      | 3         |
| 1.2.1           | Location  | 3         |
| 1.2.2           | Details of accreditation status                         | 3         |
| 1.3             | Details of approval holder                              | 3         |
| 1.4             | Application details                                     | 4         |
| 1.5             | General information of Test item                        | 4         |
| 1.6             | Test standards  | 5         |
| <b>2</b>        | <b>Technical test</b>                                   | <b>6</b>  |
| 2.1             | Summary of test results                                 | 6         |
| 2.2             | Test environment  | 6         |
| 2.3             | Test Equipment List                                     | 7         |
| 2.4             | General Test Procedure                                  | 9         |
| <b>3</b>        | <b>Test results (enclosure)</b>                         | <b>11</b> |
| 3.1             | Peak Output Power (transmitter)                         | 12        |
| 3.2             | Equivalent isotropic radiated power                     | 14        |
| 3.3             | RF Exposure Compliance Requirements                     | 14        |
| 3.4             | Transmitter Radiated Emissions in restricted Bands      | 15        |
| 3.5             | Spurious emissions (tx)                                 | 16        |
| 3.6             | Carrier Frequency Separation                            | 24        |
| 3.7             | Number of Hopping Frequencies                           | 25        |
| 3.7.1           | Pseudorandom Frequency Hopping Sequence                 | 25        |
| 3.7.2           | Coordination of hopping sequences to other transmitters | 25        |
| 3.7.3           | System Receiver Hopping Capability                      | 25        |
| 3.8             | Time of Occupancy (Dwell Time)                          | 26        |
| 3.9             | 20dB Bandwidth  | 28        |
| 3.9.1           | System Receiver Input Bandwidth                         | 28        |
| 3.10            | Minimum 6 dB Bandwidth                                  | 29        |
| 3.11            | Band-edge Compliance of RF Emissions                    | 30        |
| 3.12            | Peak Power Spectral Density                             | 32        |
| 3.13            | Radiated Emissions from Digital Part                    | 33        |
| 3.14            | Power Line Conducted Emission                           | 34        |
| <b>Appendix</b> |   | <b>36</b> |



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

## 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.

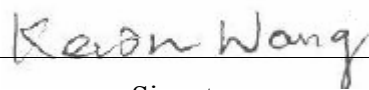
Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

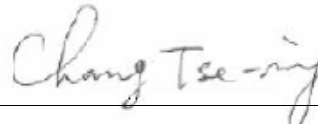
The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services (Taiwan) Co., Ltd.

### **Tester:**

|                   |          |            |  |
|-------------------|----------|------------|--|
| February 11, 2009 |          | Kevin Wang |  |
| Date              | WTS-Lab. | Name       | Signature  |

### **Technical responsibility for area of testing:**

|                   |          |                |  |
|-------------------|----------|----------------|--|
| February 11, 2009 |          | Chang Tse-Ming |  |
| Date              | WTS-Lab. | Name           | Signature  |



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

## **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:      | Advantech Co., Ltd                                  |
| Street:    | 1, Alley 20, Lane 26, Rueiguang Rd, Neihu District, |
| City:      | Taipei  |
| Country:   | Taiwan  |
| Telephone: | +886-2-2792-7818                                    |
| Fax:       | +886-2-2794-7333                                    |



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 1.4 Application details

Date of receipt of test item: ./.

Date of test: from December 9, 2008 to February 6, 2009

## 1.5 General information of Test item

Type of test item: PWS-8033M  
Model number: PWS-8033M-R0AE  
Multi-listing model number: ./.  
Brand name: ./.  
Photos: see Annex

### Technical data

Frequency band for WLAN: 2.412 – 2.462 GHz  
Frequency ( ch Low): 2.412 GHz  
Frequency ( ch Middle): 2.437 GHz  
Frequency ( ch High): 2.462 GHz

Frequency band for Bluetooth: 2.402 – 2.480 GHz  
Frequency ( ch Low): 2.402 GHz  
Frequency ( ch Middle): 2.441 GHz  
Frequency ( ch High): 2.480 GHz

Number of Channels: WLAN: 11 channels  
Bluetooth: 79 channels

Power supply: Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 1.5 A,  
O/P: 11.0-13.5 Vdc / 3.82-3.11 A )  
Battery ( 7.4V, 1900 mAh, rechargeable Li-ion )

Operation modes: duplex

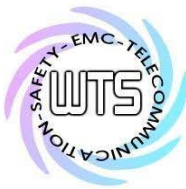
Modulation Type: WLAN: DSSS / OFDM  
Bluetooth: GFSK、 $\pi$  / 4DQPSK、8DPSK

Antenna Type:  $1/2 \lambda$  dipole antenna

Antenna gain: 2 dBi

Emission designator: 11b: DSSS: 15M2G1D  
11g: OFDM: 16M4W7D  
Bluetooth (Normal mode): 962KF7D  
Bluetooth (EDR mode): 1M29F1D

Additional information: There are four testing modes in the test report.  
Mode A: IEEE 802.11b  
Mode B: IEEE 802.11g  
Mode C: Bluetooth (Normal mode)  
Mode D: Bluetooth (EDR mode)



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M  
Host device: none

Classification:

|  |                                     |
|--|-------------------------------------|
| Fixed Device                                 | <input type="checkbox"/>            |
| Mobile Device (Human Body distance > 20cm)   | <input type="checkbox"/>            |
| Portable Device (Human Body distance < 20cm) | <input checked="" type="checkbox"/> |
| Modular Radio Device                         | <input type="checkbox"/>            |

## Transmitter

## Unom

### **Mode A (DSSS)**

Power ( ch 1 or Low): Conducted: 15.80 dBm  
Power ( ch 6 or Middle): Conducted: 14.40 dBm  
Power ( ch 11 or High): Conducted: 14.24 dBm

### **Mode B (OFDM)**

Power ( ch 1 or Low): Conducted: 17.29 dBm  
Power ( ch 6 or Middle): Conducted: 16.02 dBm  
Power ( ch 11 or High): Conducted: 16.56 dBm

### **Mode C Normal Mode**

Power ( ch 0 or ch Low): Conducted: -2.04 dBm  
Power ( ch 39 or ch Middle): Conducted: -2.95 dBm  
Power ( ch 78 or ch High): Conducted: -2.91 dBm

### **Mode D EDR Mode**

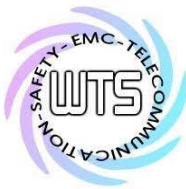
Power ( ch 0 or ch Low): Conducted: -0.38 dBm  
Power ( ch 39 or ch Middle): Conducted: -0.93 dBm  
Power ( ch 78 or ch High): Conducted: -0.44 dBm

## **Manufacturer: (if applicable)**

Name: ACA Digital Corporation  
Street: 17F, NO. 866-7 Zhongzheng Rd.,  
City: Zhonghe City Taipei county, 235  
Country: Taiwan R.O.C.

## **1.6 Test standards**

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



Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

## **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 3 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  
Details of power supply: Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 1.5 A,  
O/P: 11.0-13.5 Vdc / 3.82-3.11 A )  
Battery ( 7.4V, 1900 mAh, rechargeable Li-ion )  
Extreme conditions parameters: test voltage : -- extreme  
min : -- V  
max : -- V

Measurement Uncertainty:

| Measurement item                                    | Uncertainty |
|---|-------------|
| Peak Output Power                                   | 0.51 dB     |
| Spurious Emissions radiated – Transmitter operating | 1.67 dB     |
| Carrier Frequency Separation                        | 2060.94 Hz  |
| Time of Occupancy (Dwell Time)                      | 0.04 ms     |
| 20 dB Bandwidth                                     | 14.243 kHz  |
| Minimum 6 dB Bandwidth                              | 0.04 ms     |
| Band-edge Compliance of RF Emission                 | 1.52 dBc    |
| Peak Power Spectral Density                         | 0.746 dB    |
| Power Line Conducted Emission                       | 1.77 dB     |

Special statement:

This test report is based on test report no.: W6M20812-9482-C-1. (Model no.: P37B, FCC ID: UVZP37B) The relevant Circuitry, PCB Layout, Inner element, Function, and Appearance of PWS-8033M-R0AE are exactly the same as the original model no. P37B. Therefore the test result is also based on the original test report no.: W6M20812-9482-C-1 without re-testing.



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

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 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           | 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 002 | Function Generator  | 33220A           | MY43004982     | Agilent      | 2007/10/12    | 2009/10/11     |
| 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 Dipole Array 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 Serie 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          | 2009/1/8      | 2011/1/7       |
| 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      |





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

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

|              |                                      |             |               |             |            |            |
|--------------|--------------------------------------|-------------|---------------|-------------|------------|------------|
| 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  |
| 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-RE 107 | LUMPED ELEMENT POWER DIVIDER         | PL2-10      | 146           | MCLI        | 2008/11/24 | 2009/11/23 |
| ETSTW-GSM 02 | Universal Radio Communication Tester | CMU 200     | 109439        | R&S         | 2008/9/23  | 2009/9/22  |
| ETSTW-GSM 23 | Power Divider                        | 4901.19.A   | None          | SUHNER      | 2008/9/22  | 2009/9/21  |



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 2.4 General Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 using a 50 $\mu$ H 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. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

**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 dB $\mu$ V) 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 dB $\mu$ V + 10.36 dB + 6 dB = 36.36 dB $\mu$ V/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 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.



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

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

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 =  $20 \log (\text{dwell time}/T)$

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



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

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## **3 Test results (enclosure)**

| TEST CASE  | Para. Number     | Required                            | Test passed                         | Test failed              |
|--|------------------|-------------------------------------|-------------------------------------|--------------------------|
| Peak Output Power                                    | 15.247(b)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Equivalent radiated Power                            | 15.247(b)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spurious Emissions radiated – Transmitter operating  | 15.247(c)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spurious Emissions conducted – Transmitter operating | 15.247           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| Carrier Frequency Separation                         | 15.247(a) (1)    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Number of Hopping Frequencies                        | 15.247(a) (1)(i) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Time of Occupancy (Dwell Time)                       | 15.247(a) (1)(i) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 20 dB Bandwidth                                      | 15.247(a) (1)(i) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Minimum 6 dB Bandwidth                               | 15.247(a)(2)     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Band-edge Compliance of RF Emission                  | 15.247(c)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Peak Power Spectral Density                          | 15.247(d)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Radiated Emission from Digital Part                  | 15.109           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| Power Line Conducted Emission                        | 15.207(a)        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The follows is intended to leave blank.



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

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

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 conditions                |                          | Conducted Power      |                         |                       |
|--------------------------------|--------------------------|----------------------|-------------------------|-----------------------|
|                                |                          | Channel Low<br>[dBm] | Channel Middle<br>[dBm] | Channel High<br>[dBm] |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120\text{ V}$ | 15.80                | 14.40                   | 14.24                 |

### Mode B:

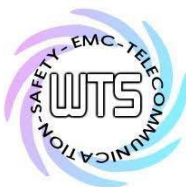
| Test conditions                |                          | Conducted Power      |                         |                       |
|--------------------------------|--------------------------|----------------------|-------------------------|-----------------------|
|                                |                          | Channel Low<br>[dBm] | Channel Middle<br>[dBm] | Channel High<br>[dBm] |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120\text{ V}$ | 17.29                | 16.02                   | 16.56                 |

### Mode C:

| Test conditions                |                          | Conducted Power      |                         |                       |
|--------------------------------|--------------------------|----------------------|-------------------------|-----------------------|
|                                |                          | Channel Low<br>[dBm] | Channel Middle<br>[dBm] | Channel High<br>[dBm] |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120\text{ V}$ | -2.04                | -2.95                   | -2.91                 |

### Mode D:

| Test conditions                |                          | Conducted Power      |                         |                       |
|--------------------------------|--------------------------|----------------------|-------------------------|-----------------------|
|                                |                          | Channel Low<br>[dBm] | Channel Middle<br>[dBm] | Channel High<br>[dBm] |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120\text{ V}$ | -0.38                | -0.93                   | -0.44                 |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

| Test conditions          |                         | Radiated Power       |                         |                       |
|--------------------------|-------------------------|----------------------|-------------------------|-----------------------|
|                          |                         | Channel Low<br>[dBm] | Channel Middle<br>[dBm] | Channel High<br>[dBm] |
| T <sub>nom</sub> = -- °C | V <sub>nom</sub> = -- V | --                   | --                      | --                    |

| Test conditions<br>T <sub>nom</sub> = -- °C, V <sub>nom</sub> = -- V<br>Frequency [MHz] | Signal Field strength TX highest power mode<br>dBμV/m |
|---|---|
| --  | --  |
| Measurement uncertainty   | < 3 dB  |

## Maximum Peak Output Power

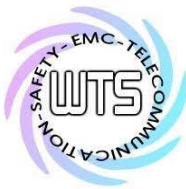
Limits:

| Frequency<br>MHz | Number of hopping channels |        |         |         |
|------------------|----------------------------|--------|---------|---------|
|                  | ≥ 75                       | ≥ 50   | 49 ≥ 25 | 74 ≥ 15 |
| 902-928          |                            | 30 dBm | 24 dBm  |         |
| 2400-2483.5 MHz  | 30 dBm                     | -      |         | 21 dbm  |
| 5725-5850 MHz    | 30 dBm                     | -      |         |         |

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

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: See attached diagrams in appendix.



Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.2 Equivalent isotropic radiated power**

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain  
 EIRP = 17.29 dBm + 2 dBi  
 = 19.29 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                 | 53.58  | Peak value       |
| D    | dB                 |        |                  |
| AG   | dBi                | 2      |                  |
| G    |                    | 1.6    | Calculated Value |
| R    | cm                 | 20     | Assumed value    |
| S    | mW/cm <sup>2</sup> | 0.0171 | Calculated value |

Limits:

| Limit for General Population / Uncontrolled Exposure |                                     |
|--|-------------------------------------|
| Frequency (MHz)                                      | Power Density (mW/cm <sup>2</sup> ) |
| 1500 – 100.000                                       | 1,0                                 |



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

### **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  $\leq$  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<br>(MHz) | Field strength<br>(microvolts/meter) | Field Strength<br>(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.”

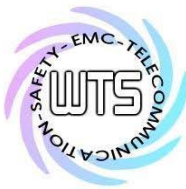
The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction =  $20 \log (\text{dwell time} / 100\text{ms})$

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

Explanation: See attached diagrams in Appendix.





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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

### 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))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to 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 an 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 "Marker-Delta-Method" or the „Duty-Cycle Correction Factor“.

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

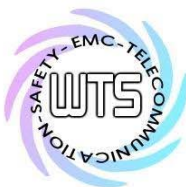
Model: PWS-8033M-R0AE Date: 2009/1/9-2/2  
 Mode: 802.11b TX CH1 Temperature: 26 °C Engineer: Kevin  
 Polarization: Horizontal Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 368.738         | 12.02          | peak     | 16.94       | 28.96           | 74.00          | -45.04      | 140                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4824.000        | 39.45          | ---  | -1.30             | 38.15               | ---  | 74.00              | 54.00 | -35.85      | 270                 | 150            |
| 7236.000        | 40.71          | ---  | 1.86              | 42.57               | ---  | 74.00              | 54.00 | -31.43      | 30                  | 150            |
| 9648.000        | 20.42          | ---  | 25.06             | 39.48               | ---  | 74.00              | 54.00 | -34.52      | 240                 | 150            |
| 12060.000       | 19.96          | ---  | 29.44             | 43.40               | ---  | 74.00              | 54.00 | -30.60      | 150                 | 150            |
| 14472.000       | 21.75          | ---  | 31.65             | 41.40               | ---  | 74.00              | 54.00 | -32.60      | 180                 | 150            |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 361.723         | 15.06          | peak     | 16.74       | 31.80           | 74.00          | -42.20      | 110                 | 150            |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4824.000        | 40.13          | ---  | -1.30             | 38.83               | ---  | 74.00              | 54.00 | -35.17      | 220                 | 150            |
| 7236.000        | 40.72          | ---  | 1.86              | 42.58               | ---  | 74.00              | 54.00 | -31.42      | 180                 | 150            |
| 9648.000        | 19.49          | ---  | 25.06             | 38.55               | ---  | 74.00              | 54.00 | -35.45      | 210                 | 150            |
| 12060.000       | 21.78          | ---  | 29.44             | 45.22               | ---  | 74.00              | 54.00 | -28.78      | 250                 | 150            |
| 14472.000       | 21.92          | ---  | 31.65             | 41.57               | ---  | 74.00              | 54.00 | -32.43      | 120                 | 150            |

Mode: 802.11b TX CH6      Temperature: 26 °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 374.349         | 15.52          | peak     | 17.10       | 32.62           | 74.00          | -41.38      | 220                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4874.000        | 39.24          | ---  | -1.30             | 37.94               | ---  | 74.00              | 54.00 | -36.06      | 170                 | 150            |
| 7331.000        | 41.22          | ---  | 1.86              | 43.08               | ---  | 74.00              | 54.00 | -30.92      | 160                 | 150            |
| 9748.000        | 20.77          | ---  | 24.94             | 39.71               | ---  | 74.00              | 54.00 | -34.29      | 180                 | 150            |
| 12185.000       | 20.10          | ---  | 29.74             | 43.84               | ---  | 74.00              | 54.00 | -30.16      | 170                 | 150            |
| 14622.000       | 20.37          | ---  | 32.14             | 40.51               | ---  | 74.00              | 54.00 | -33.49      | 210                 | 150            |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 361.723         | 20.33          | peak     | 16.74       | 37.07           | 74.00          | -36.93      | 200                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 2437.000        | 40.86          | ---  | -5.10             | 35.76               | ---  | 74.00              | 54.00 | -38.24      | 170                 | 150            |
| 4874.000        | 39.17          | ---  | -1.30             | 37.87               | ---  | 74.00              | 54.00 | -36.13      | 180                 | 150            |
| 7331.000        | 40.78          | ---  | 1.86              | 42.64               | ---  | 74.00              | 54.00 | -31.36      | 120                 | 150            |
| 9748.000        | 19.65          | ---  | 24.94             | 38.59               | ---  | 74.00              | 54.00 | -35.41      | 210                 | 150            |
| 12185.000       | 20.49          | ---  | 29.74             | 44.23               | ---  | 74.00              | 54.00 | -29.77      | 280                 | 150            |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

Mode: 802.11b TX CH11 Temperature: 26 °C Engineer: Kevin  
 Polarization: Horizontal Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 374.349         | 16.08          | peak     | 17.10       | 33.18           | 74.00          | -40.82      | 220                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4924.000        | 39.40          | ---  | -1.20             | 38.20               | ---  | 74.00              | 54.00 | -35.80      | 120                 | 150            |
| 7386.000        | 42.07          | ---  | 1.97              | 44.04               | ---  | 74.00              | 54.00 | -29.96      | 110                 | 150            |
| 9848.000        | 21.40          | ---  | 25.49             | 40.89               | ---  | 74.00              | 54.00 | -33.11      | 200                 | 150            |
| 12310.000       | 20.60          | ---  | 30.04             | 44.64               | ---  | 74.00              | 54.00 | -29.36      | 80                  | 150            |
| 14772.000       | 20.60          | ---  | 32.56             | 41.16               | ---  | 74.00              | 54.00 | -32.84      | 100                 | 150            |

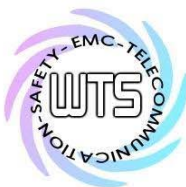
Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 361.723         | 20.46          | peak     | 16.74       | 37.20           | 74.00          | -36.80      | 170                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4924.000        | 39.43          | ---  | -1.20             | 38.23               | ---  | 74.00              | 54.00 | -35.77      | 210                 | 150            |
| 7386.000        | 42.34          | ---  | 1.97              | 44.31               | ---  | 74.00              | 54.00 | -29.69      | 130                 | 150            |
| 9848.000        | 20.16          | ---  | 25.49             | 39.65               | ---  | 74.00              | 54.00 | -34.35      | 120                 | 150            |
| 12310.000       | 20.22          | ---  | 30.04             | 44.26               | ---  | 74.00              | 54.00 | -29.74      | 100                 | 150            |
| 14772.000       | 21.67          | ---  | 32.56             | 42.23               | ---  | 74.00              | 54.00 | -31.77      | 210                 | 150            |

Mode: 802.11gTX CH1 Temperature: 26 °C Engineer: Kevin  
 Polarization: Horizontal Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 374.349         | 17.74          | peak     | 17.10       | 34.84           | 74.00          | -39.16      | 140                 | 150            |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4824.000           | 39.79             | ---  | -1.30                   | 38.49                  | ---  | 74.00                 | 54.00 | -35.51         | 240                       | 150                  |
| 7236.000           | 40.38             | ---  | 1.86                    | 42.24                  | ---  | 74.00                 | 54.00 | -31.76         | 310                       | 150                  |
| 9648.000           | 20.00             | ---  | 25.06                   | 39.06                  | ---  | 74.00                 | 54.00 | -34.94         | 280                       | 150                  |
| 12060.000          | 21.64             | ---  | 29.44                   | 45.08                  | ---  | 74.00                 | 54.00 | -28.92         | 350                       | 150                  |
| 14472.000          | 21.62             | ---  | 31.65                   | 41.27                  | ---  | 74.00                 | 54.00 | -32.73         | 340                       | 150                  |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 361.723            | 22.26             | peak     | 16.74          | 39.00              | 74.00             | -35.00         | 110                       | 150                  |

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4824.000           | 39.72             | ---  | -1.30                   | 38.42                  | ---  | 74.00                 | 54.00 | -35.58         | 210                       | 150                  |
| 7236.000           | 40.56             | ---  | 1.86                    | 42.42                  | ---  | 74.00                 | 54.00 | -31.58         | 170                       | 150                  |
| 9648.000           | 19.57             | ---  | 25.06                   | 38.63                  | ---  | 74.00                 | 54.00 | -35.37         | 210                       | 150                  |
| 12060.000          | 20.63             | ---  | 29.44                   | 44.07                  | ---  | 74.00                 | 54.00 | -29.93         | 130                       | 150                  |
| 14472.000          | 21.05             | ---  | 31.65                   | 40.70                  | ---  | 74.00                 | 54.00 | -33.30         | 100                       | 150                  |

Mode: 802.11g TX CH6      Temperature: 26 °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50 %

| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 374.349            | 19.06             | peak     | 17.10          | 36.16              | 74.00             | -37.84         | 210                       | 150                  |

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4874.000           | 39.54             | ---  | -1.30                   | 38.24                  | ---  | 74.00                 | 54.00 | -35.76         | 210                       | 150                  |
| 7331.000           | 41.52             | ---  | 1.86                    | 43.38                  | ---  | 74.00                 | 54.00 | -30.62         | 250                       | 150                  |
| 9748.000           | 20.15             | ---  | 24.94                   | 39.09                  | ---  | 74.00                 | 54.00 | -34.91         | 20                        | 150                  |
| 12185.000          | 19.80             | ---  | 29.74                   | 43.54                  | ---  | 74.00                 | 54.00 | -30.46         | 360                       | 150                  |
| 14622.000          | 20.61             | ---  | 32.14                   | 40.75                  | ---  | 74.00                 | 54.00 | -33.25         | 210                       | 150                  |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 361.723            | 23.03             | peak     | 16.74          | 39.77              | 74.00             | -34.23         | 340                       | 150                  |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4874.000           | 39.81             | ---  | -1.30                   | 38.51                  | ---  | 74.00                 | 54.00 | -35.49         | 280                       | 150                  |
| 7331.000           | 41.84             | ---  | 1.86                    | 43.70                  | ---  | 74.00                 | 54.00 | -30.30         | 350                       | 150                  |
| 9748.000           | 20.95             | ---  | 24.94                   | 39.89                  | ---  | 74.00                 | 54.00 | -34.11         | 350                       | 150                  |
| 12185.000          | 21.77             | ---  | 29.74                   | 45.51                  | ---  | 74.00                 | 54.00 | -28.49         | 320                       | 150                  |
| 14622.000          | 20.69             | ---  | 32.14                   | 40.83                  | ---  | 74.00                 | 54.00 | -33.17         | 210                       | 150                  |

Mode: 802.11g TX CH11      Temperature: 26      °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50      %

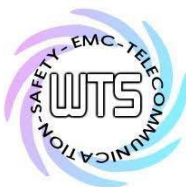
| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 374.349            | 19.58             | peak     | 17.10          | 36.68              | 74.00             | -37.32         | 250                       | 150                  |

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4924.000           | 39.57             | ---  | -1.20                   | 38.37                  | ---  | 74.00                 | 54.00 | -35.63         | 210                       | 150                  |
| 7386.000           | 41.91             | ---  | 1.97                    | 43.88                  | ---  | 74.00                 | 54.00 | -30.12         | 220                       | 150                  |
| 9848.000           | 19.80             | ---  | 25.49                   | 39.29                  | ---  | 74.00                 | 54.00 | -34.71         | 210                       | 150                  |
| 12310.000          | 21.61             | ---  | 30.04                   | 45.65                  | ---  | 74.00                 | 54.00 | -28.35         | 350                       | 150                  |
| 14772.000          | 21.84             | ---  | 32.56                   | 42.40                  | ---  | 74.00                 | 54.00 | -31.60         | 210                       | 150                  |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 361.723            | 22.30             | peak     | 16.74          | 39.04              | 74.00             | -34.96         | 220                       | 150                  |

| Frequency<br>(MHz) | Reading<br>(dBuV) |      | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m) |      | Limit @3m<br>(dBuV/m) |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|------|-------------------------|------------------------|------|-----------------------|-------|----------------|---------------------------|----------------------|
|                    | Peak              | Ave. |                         | Peak                   | Ave. | Peak                  | Ave.  |                |                           |                      |
| 4924.000           | 39.17             | ---  | -1.20                   | 37.97                  | ---  | 74.00                 | 54.00 | -36.03         | 310                       | 150                  |
| 7386.000           | 41.52             | ---  | 1.97                    | 43.49                  | ---  | 74.00                 | 54.00 | -30.51         | 40                        | 150                  |
| 9848.000           | 20.13             | ---  | 25.49                   | 39.62                  | ---  | 74.00                 | 54.00 | -34.38         | 220                       | 150                  |
| 12310.000          | 21.15             | ---  | 30.04                   | 45.19                  | ---  | 74.00                 | 54.00 | -28.81         | 350                       | 150                  |
| 14772.000          | 21.43             | ---  | 32.56                   | 41.99                  | ---  | 74.00                 | 54.00 | -32.01         | 120                       | 150                  |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

Mode: Bluetooth TX CH0      Temperature: 26      °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50      %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 152.826         | 26.26          | peak     | 15.41       | 41.67           | 74.00          | -32.33      | 210                 | 150            |
| 415.030         | 25.87          | peak     | 18.10       | 43.97           | 74.00          | -30.03      | 140                 | 150            |

| Frequency (MHz) | Reading (dBuV) |       | Factor (dB) Corr. | Result @3m (dBuV/m) |       | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|-------|-------------------|---------------------|-------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave.  |                   | Peak                | Ave.  | Peak               | Ave.  |             |                     |                |
| 4801.603        | 54.48          | 47.96 | -1.30             | 53.18               | 46.66 | 74.00              | 54.00 | -7.34       | 210                 | 150            |
| 7206.000        | 42.17          | ---   | 1.89              | 44.06               | ---   | 74.00              | 54.00 | -29.94      | 250                 | 150            |
| 9608.000        | 20.34          | ---   | 25.34             | 39.68               | ---   | 74.00              | 54.00 | -34.32      | 210                 | 150            |
| 12010.000       | 19.73          | ---   | 29.32             | 43.05               | ---   | 74.00              | 54.00 | -30.95      | 250                 | 150            |

Polarization: Vertical

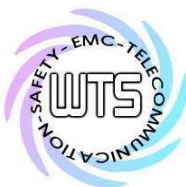
| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 212.345         | 28.72          | peak     | 12.38       | 41.10           | 74.00          | -32.90      | 210                 | 150            |
| 624.048         | 22.68          | peak     | 22.29       | 44.97           | 74.00          | -29.03      | 155                 | 150            |

| Frequency (MHz) | Reading (dBuV) |       | Factor (dB) Corr. | Result @3m (dBuV/m) |       | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|-------|-------------------|---------------------|-------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave.  |                   | Peak                | Ave.  | Peak               | Ave.  |             |                     |                |
| 4803.985        | 55.01          | 41.77 | -1.30             | 53.71               | 40.47 | 74.00              | 54.00 | -13.53      | 210                 | 150            |
| 7206.000        | 42.03          | ---   | 1.89              | 43.92               | ---   | 74.00              | 54.00 | -30.08      | 220                 | 150            |
| 9608.000        | 20.91          | ---   | 25.34             | 40.25               | ---   | 74.00              | 54.00 | -33.75      | 170                 | 150            |
| 12010.000       | 21.39          | ---   | 29.32             | 44.71               | ---   | 74.00              | 54.00 | -29.29      | 160                 | 150            |

Mode: Bluetooth TX CH39      Temperature: 26      °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50      %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 153.908         | 25.03          | peak     | 15.42       | 40.45           | 74.00          | -33.55      | 210                 | 150            |
| 415.030         | 25.84          | peak     | 18.10       | 43.94           | 74.00          | -30.06      | 170                 | 150            |

| Frequency (MHz) | Reading (dBuV) |      | Factor (dB) Corr. | Result @3m (dBuV/m) |      | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|---------------------|------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave. |                   | Peak                | Ave. | Peak               | Ave.  |             |                     |                |
| 4881.764        | 54.00          | ---  | -1.30             | 52.70               | ---  | 74.00              | 54.00 | -21.30      | 280                 | 150            |
| 7323.000        | 41.15          | ---  | 1.85              | 43.00               | ---  | 74.00              | 54.00 | -31.00      | 260                 | 150            |
| 9764.000        | 20.14          | ---  | 25.02             | 39.16               | ---  | 74.00              | 54.00 | -34.84      | 210                 | 150            |
| 12205.000       | 19.48          | ---  | 29.79             | 43.27               | ---  | 74.00              | 54.00 | -30.73      | 250                 | 150            |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 211.263         | 29.02          | peak     | 12.36       | 41.38           | 74.00          | -32.62      | 210                 | 150            |
| 624.048         | 21.80          | peak     | 22.29       | 44.09           | 74.00          | -29.91      | 210                 | 150            |

| Frequency (MHz) | Reading (dBuV) |       | Factor (dB) Corr. | Result @3m (dBuV/m) |       | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|-------|-------------------|---------------------|-------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave.  |                   | Peak                | Ave.  | Peak               | Ave.  |             |                     |                |
| 4881.764        | 56.86          | 42.03 | -1.30             | 55.56               | 40.73 | 74.00              | 54.00 | -13.27      | 250                 | 150            |
| 7323.000        | 41.25          | ---   | 1.85              | 43.10               | ---   | 74.00              | 54.00 | -30.90      | 260                 | 150            |
| 9764.000        | 19.91          | ---   | 25.02             | 38.93               | ---   | 74.00              | 54.00 | -35.07      | 210                 | 150            |
| 12205.000       | 19.92          | ---   | 29.79             | 43.71               | ---   | 74.00              | 54.00 | -30.29      | 230                 | 150            |

Mode: Bluetooth TX CH78      Temperature: 26 °C      Engineer: Kevin  
 Polarization: Horizontal      Humidity: 50 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 153.908         | 25.76          | peak     | 15.42       | 41.18           | 74.00          | -32.82      | 200                 | 150            |
| 415.030         | 25.19          | peak     | 18.10       | 43.29           | 74.00          | -30.71      | 320                 | 150            |

| Frequency (MHz) | Reading (dBuV) |       | Factor (dB) Corr. | Result @3m (dBuV/m) |       | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|-------|-------------------|---------------------|-------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave.  |                   | Peak                | Ave.  | Peak               | Ave.  |             |                     |                |
| 4961.924        | 57.25          | 42.83 | -1.05             | 56.20               | 41.78 | 74.00              | 54.00 | -12.22      | 280                 | 150            |
| 7440.000        | 42.43          | ---   | 1.80              | 44.23               | ---   | 74.00              | 54.00 | -29.77      | 120                 | 150            |
| 9920.000        | 19.58          | ---   | 26.04             | 39.62               | ---   | 74.00              | 54.00 | -34.38      | 140                 | 150            |
| 12400.000       | 19.91          | ---   | 30.26             | 44.17               | ---   | 74.00              | 54.00 | -29.83      | 110                 | 150            |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 213.968         | 28.23          | peak     | 12.41       | 40.64           | 74.00          | -33.36      | 230                 | 150            |
| 624.048         | 21.48          | peak     | 22.29       | 43.77           | 74.00          | -30.23      | 280                 | 150            |

| Frequency (MHz) | Reading (dBuV) |       | Factor (dB) Corr. | Result @3m (dBuV/m) |       | Limit @3m (dBuV/m) |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|-------|-------------------|---------------------|-------|--------------------|-------|-------------|---------------------|----------------|
|                 | Peak           | Ave.  |                   | Peak                | Ave.  | Peak               | Ave.  |             |                     |                |
| 4953.908        | 56.51          | 42.52 | -1.08             | 55.43               | 41.44 | 74.00              | 54.00 | -12.56      | 280                 | 150            |
| 7440.000        | 42.55          | ---   | 1.80              | 44.35               | ---   | 74.00              | 54.00 | -29.65      | 350                 | 150            |
| 9920.000        | 20.27          | ---   | 26.04             | 40.31               | ---   | 74.00              | 54.00 | -33.69      | 220                 | 150            |
| 12400.000       | 20.69          | ---   | 30.26             | 44.95               | ---   | 74.00              | 54.00 | -29.05      | 280                 | 150            |



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

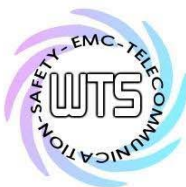
- Note**
- 1. Correction Factor = Antenna factor + Cable loss - Preamplifier**
  - 2. The formula of measured value as: Test Result = Reading + Correction Factor**
  - 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
  - 4. All not in the table noted test results are more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

All other not noted test plots do not contain significant test results in relation to the limits.

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

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 017, ETSTW-RE 018,  
ETSTW-RE 021, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030,  
ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 064





Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.6 Carrier Frequency Separation**

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

**Mode C and Mode D:**

| Test conditions         |                          | Channel Separation |             |
|-------------------------|--------------------------|--------------------|-------------|
|                         |                          | Channel 0          | Channel 0+1 |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 1000 kHz           |             |

| Test conditions         |                          | Channel Separation |              |
|-------------------------|--------------------------|--------------------|--------------|
|                         |                          | Channel 39         | Channel 39+1 |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 1006.410256 kHz    |              |

| Test conditions         |                          | Channel Separation |              |
|-------------------------|--------------------------|--------------------|--------------|
|                         |                          | Channel 78         | Channel 78+1 |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 1000 kHz           |              |

**Limits:**

| Frequency Range<br>MHz     | Limits                   |                          |
|----------------------------|--------------------------|--------------------------|
|                            | 20 dB bandwidth < 25 kHz | 20 dB bandwidth > 25 kHz |
| 902-928                    | 25 kHz                   | 20 dB bandwidth          |
| 2400-2483.5<br>5725-5850.0 | 25 kHz                   | 20 dB bandwidth          |

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A and Mode B because these two modes are not FHSS modulation. See attached diagrams in appendix.



Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.7 Number of Hopping Frequencies**

According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

**Mode C and Mode D:**

| Test conditions         |                          | Operating Mode      | Number of Channels |
|-------------------------|--------------------------|---------------------|--------------------|
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | normal transmitting | 79                 |

**Limits:**

| Frequency Range<br>MHz | Limit               |                    |
|------------------------|---------------------|--------------------|
|                        | 20dB Bandwidth      | Number of Channels |
| 902-928 MHz            | Bandwidth < 250 kHz | ≥ 50               |
|                        | Bandwidth ≥ 250 kHz | ≥ 25               |
| 2400-2483.5            | not defined         | 15                 |
| 5725-5850.0 MHz        | 1 MHz               | 75                 |

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A and Mode B because these two modes are not FHSS modulation. See attached diagrams in appendix.

**3.7.1 Pseudorandom Frequency Hopping Sequence**

The generation of the hopping sequence is determined by the Bluetooth cord specification and complies with the FCC requirements.

**3.7.2 Coordination of hopping sequences to other transmitters**

According to the Bluetooth core specification V1.1 such a coordination is not possible. During scatternet function only one of the two hopping sequences will be used at a definite moment.

**3.7.3 System Receiver Hopping Capability**

According to the Bluetooth core specification. The system receivers shift frequencies in synchronization with the transmitted signals.



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

### 3.8 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

In 2400-2483,5 MHz band the average time of occupancy on any channel shall not be greater than 0,4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

#### Mode C and Mode D:

| Test conditions   | Operating mode           | Measurement period | Time of Occupancy |
|---|--------------------------|--------------------|-------------------|
| $T_{nom} = 23^{\circ}C$<br>$V_{nom} = 120 V$<br>Channel 0 | normal transmitting-DH 1 | 31.6 s             | 147.52 ms         |
|   | normal transmitting-DH 3 | 31.6 s             | 275.84 ms         |
|   | normal transmitting-DH 5 | 31.6 s             | 321.53 ms         |

| Test conditions  | Operating mode           | Measurement period | Time of Occupancy |
|--|--------------------------|--------------------|-------------------|
| $T_{nom} = 23^{\circ}C$<br>$V_{nom} = 120 V$<br>Channel 39 | normal transmitting-DH 1 | 31.6 s             | 147.52 ms         |
|  | normal transmitting-DH 3 | 31.6 s             | 274.88 ms         |
|  | normal transmitting-DH 5 | 31.6 s             | 327.14 ms         |

| Test conditions  | Operating mode           | Measurement period | Time of Occupancy |
|--|--------------------------|--------------------|-------------------|
| $T_{nom} = 23^{\circ}C$<br>$V_{nom} = 120 V$<br>Channel 78 | normal transmitting-DH 1 | 31.6 s             | 127.04 ms         |
|  | normal transmitting-DH 3 | 31.6 s             | 274.88 ms         |
|  | normal transmitting-DH 5 | 31.6 s             | 327.14 ms         |



Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

## **Limits and measurement periods:**

| Frequency MHz | Number of channels | Measurement Periode             | Limit |
|---------------|--------------------|---------------------------------|-------|
| 902 – 928     | $\geq 50$          | 20 s                            | 0,4 s |
|               | $49 \geq 25$       | 10 s                            | 0,4 s |
| 2400 – 2483,5 | $\geq 15$          | 0,4 s * number of used channels | 0,4 s |
| 5725- 5850    | $\geq 75$          | 30 s                            | 0,4s  |

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A and Mode B because these two modes are not FHSS modulation. See attached diagrams in appendix, which show the On-time and the number of counted events during the measurement period



Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.9 20dB Bandwidth**

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

**Mode C:**

| Test conditions         |                   | 20 dB Bandwidth   |                   |                   |
|-------------------------|-------------------|-------------------|-------------------|-------------------|
|                         |                   | Channel Low       | Channel Middle    | Channel High      |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 961.538461538 kHz | 961.538461538 kHz | 955.128205128 kHz |

**Mode D:**

| Test conditions         |                   | 20 dB Bandwidth |                 |                 |
|-------------------------|-------------------|-----------------|-----------------|-----------------|
|                         |                   | Channel Low     | Channel Middle  | Channel High    |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 1.294871795 MHz | 1.282051282 MHz | 1.282051282 MHz |

**Limits:**

| Frequency Range / MHz | Limit                  |
|-----------------------|------------------------|
| 902-928               | $\leq 500 \text{ kHz}$ |
| 2400-2483.5           | not defined            |
| 5725-5850             | $\leq 1 \text{ MHz}$   |

Test equipment used: ETSTW-RE 055 ETSTW-RE 064

Explanation: This test is not applicable for Mode A and Mode B because these two modes are not FHSS modulation. See attached diagrams in appendix.

**3.9.1 System Receiver Input Bandwidth**

It is determined in the Bluetooth core specification. The value matches to the bandwidth of transmitter signal.



Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.10 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 <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 10.160256410 MHz | 10.160256410 MHz | 10.192307692 MHz |

**Mode B:**

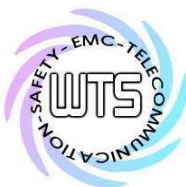
| Test conditions         |                          | 6 dB Bandwidth   |                  |                  |
|-------------------------|--------------------------|------------------|------------------|------------------|
|                         |                          | Channel 1        | Channel 6        | Channel 11       |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 16.570512821 MHz | 16.570512821 MHz | 16.538461538 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 055

Explanation: This test is not applicable for Mode C and Mode D because these two modes are not DSSS / OFDM modulation. See attached diagrams in appendix.



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

**3.11 Band-edge Compliance of RF Emissions**

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.

**Mode A:**

| Test conditions         |                   | Attenuation at or outside band-edges |                 |
|-------------------------|-------------------|--------------------------------------|-----------------|
|                         |                   | Lower Band-edge                      | Upper Band-edge |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 36.05 dB                             | 33.76 dB        |

**Mode B:**

| Test conditions         |                   | Attenuation at or outside band-edges |                 |
|-------------------------|-------------------|--------------------------------------|-----------------|
|                         |                   | Lower Band-edge                      | Upper Band-edge |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 31.25 dB                             | 32.70 dB        |

**Mode C:**

| Test conditions         |                   | Attenuation at or outside band-edges<br>Single Frequency |                 |
|-------------------------|-------------------|--|-----------------|
|                         |                   | Lower Band-edge  | Upper Band-edge |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 38.76 dB   | 42.79 dB        |

| Test conditions         |                   | Attenuation at or outside band-edges<br>Hopping Frequency |                 |
|-------------------------|-------------------|---|-----------------|
|                         |                   | Lower Band-edge   | Upper Band-edge |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120 V$ | 39.01 dB  | 42.79 dB        |



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

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**Mode D:**

| Test conditions         |                          | Attenuation at or outside band-edges<br>Single Frequency |                 |
|-------------------------|--------------------------|--|-----------------|
|                         |                          | Lower Band-edge  | Upper Band-edge |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 36.15 dB   | 35.75 dB        |

| Test conditions         |                          | Attenuation at or outside band-edges<br>Hopping Frequency |                 |
|-------------------------|--------------------------|---|-----------------|
|                         |                          | Lower Band-edge   | Upper Band-edge |
| T <sub>nom</sub> = 23°C | V <sub>nom</sub> = 120 V | 36.08 dB  | 35.75 dB        |

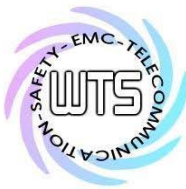
**Limits:**

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

Test equipment used: ETSTW-RE 055

Explanation: See attached diagrams in appendix.





Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

**3.12 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<br>[dBm]                  | Channel 6<br>[dBm] | Channel 11<br>[dBm] |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120\ V$ | -15.76                              | -13.10             | -18.01              |

**Mode B:**

| Test conditions         |                    | Peak Power Spectral Density (3 kHz) |                    |                     |
|-------------------------|--------------------|-------------------------------------|--------------------|---------------------|
|                         |                    | Channel 1<br>[dBm]                  | Channel 6<br>[dBm] | Channel 11<br>[dBm] |
| $T_{nom} = 23^{\circ}C$ | $V_{nom} = 120\ V$ | -16.31                              | -17.91             | -18.53              |

**Limits:**

| Frequency Range<br>MHz | dBm |
|------------------------|-----|
| 902-928                | 8   |
| 2400-2483,5            | 8   |
| 5725-5850              | 8   |

Test equipment used: ETSTW-RE 055

Explanation: This test is not applicable for Mode C and Mode D because these two modes are not DSSS / OFDM modulation. See attached diagrams in appendix.



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

**3.13 Radiated Emissions 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 064

Explanation: The test results are listed in the separated test report no. W6M20812-9482-P-15B.



Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

### 3.14 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.

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

PWS-8033M-

|                 |                   |           |  |
|-----------------|-------------------|-----------|--|
| Model: R0AE     | Date: 2008/12/9   |           |  |
| Mode:           | Temperture: 24 °C | Engineer: |  |
| Polarization: N | Humidity: 50 %    | Kevin     |  |

| Frequency<br>(MHz) | Reading (dBuV) |       | Factor<br>(dB)<br>Corr. | Result (dBuV) |       | Limit (dBuV) |       | Margin<br>(dB) |
|--------------------|----------------|-------|-------------------------|---------------|-------|--------------|-------|----------------|
|                    | QP             | Ave.  |                         | QP            | Ave.  | QP           | Ave.  |                |
| 0.1655             | 18.65          | 16.10 | 10.15                   | 28.80         | 26.25 | 65.18        | 55.18 | -28.93         |
| 0.5950             | 19.23          | 17.30 | 10.16                   | 29.39         | 27.46 | 56.00        | 46.00 | -18.54         |
| 0.8600             | 18.73          | 15.96 | 10.12                   | 28.85         | 26.08 | 56.00        | 46.00 | -19.92         |
| 2.9150             | 20.80          | 14.70 | 10.06                   | 30.86         | 24.76 | 56.00        | 46.00 | -21.24         |
| 12.2222            | 22.20          | 19.20 | 10.48                   | 32.68         | 29.68 | 60.00        | 50.00 | -20.32         |
| 25.9444            | 23.10          | 20.90 | 10.61                   | 33.71         | 31.51 | 60.00        | 50.00 | -18.49         |

Polarization: L1

| Frequency<br>(MHz) | Reading (dBuV) |       | Factor<br>(dB)<br>Corr. | Result (dBuV) |       | Limit (dBuV) |       | Margin<br>(dB) |
|--------------------|----------------|-------|-------------------------|---------------|-------|--------------|-------|----------------|
|                    | QP             | Ave.  |                         | QP            | Ave.  | QP           | Ave.  |                |
| 0.1547             | 21.24          | 19.10 | 10.18                   | 31.42         | 29.28 | 65.74        | 55.74 | -26.46         |
| 0.4020             | 20.10          | 18.20 | 10.05                   | 30.15         | 28.25 | 57.81        | 47.81 | -19.56         |
| 1.8650             | 18.00          | 10.60 | 10.07                   | 28.07         | 20.67 | 56.00        | 46.00 | -25.33         |
| 3.3300             | 20.30          | 11.10 | 10.09                   | 30.39         | 21.19 | 56.00        | 46.00 | -24.81         |
| 11.9167            | 22.20          | 19.40 | 10.49                   | 32.69         | 29.89 | 60.00        | 50.00 | -20.11         |
| 27.9722            | 22.40          | 19.40 | 10.63                   | 33.03         | 30.03 | 60.00        | 50.00 | -19.97         |

- 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 in Appendix.**



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

## **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 ETSTW-RE 064



## **Appendix**

### **Measurement diagrams**

1. Peak Output Power
2. Spurious Emissions radiated
3. Carrier Frequency Separation
4. Number of Hopping Frequencies
5. Time of Occupancy (Dwell Time)
6. 20dB Bandwidth
7. Minimum 6dB Bandwidth
8. Band-edge Compliance of RF Conducted Emissions
9. Peak Power Spectral Density
10. Power Line Conducted Emission



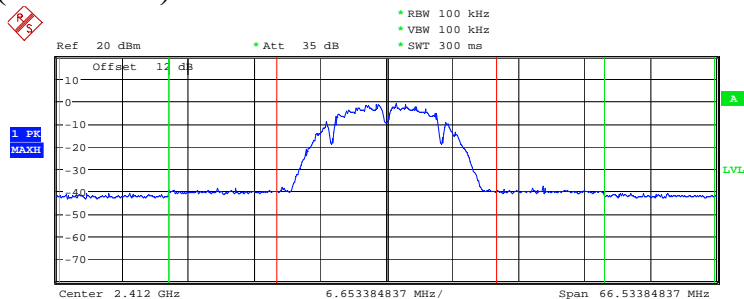
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

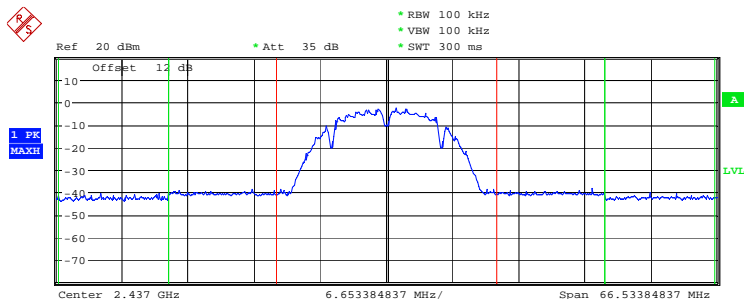
## Peak Output Power

### WLAN Mode ( Mode A )



| Tx Channel        |          | WLAN 802.11B |           |
|-------------------|----------|--------------|-----------|
| Bandwidth         | 22 MHz   | Power        | 15.80 dBm |
| Adjacent Channel  |          | Lower        | -36.16 dB |
| Bandwidth         | 11 MHz   | Upper        | -35.95 dB |
| Spacing           | 16.5 MHz |              |           |
| Alternate Channel |          | Lower        | -38.14 dB |
| Bandwidth         | 11 MHz   | Upper        | -37.95 dB |
| Spacing           | 27.5 MHz |              |           |

MAX OUTPUT POWER 802.11b CH1  
Date: 5.FEB.2009 07:54:09



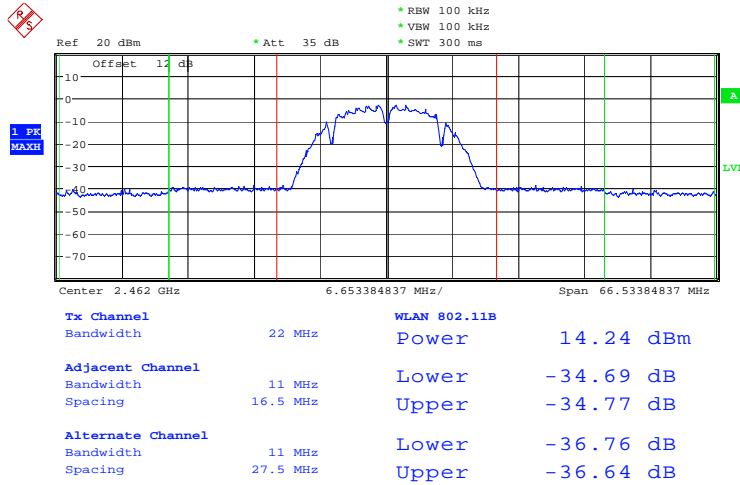
| Tx Channel        |          | WLAN 802.11B |           |
|-------------------|----------|--------------|-----------|
| Bandwidth         | 22 MHz   | Power        | 14.40 dBm |
| Adjacent Channel  |          | Lower        | -35.04 dB |
| Bandwidth         | 11 MHz   | Upper        | -34.96 dB |
| Spacing           | 16.5 MHz |              |           |
| Alternate Channel |          | Lower        | -36.97 dB |
| Bandwidth         | 11 MHz   | Upper        | -36.88 dB |
| Spacing           | 27.5 MHz |              |           |

MAX OUTPUT POWER 802.11b CH6  
Date: 5.FEB.2009 07:55:13



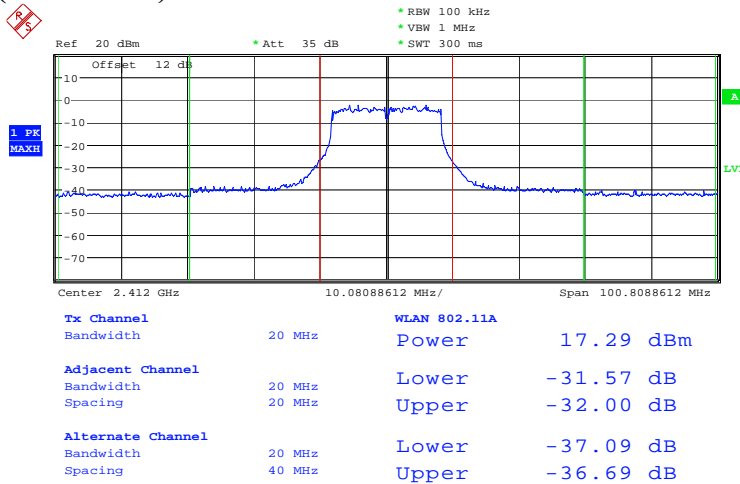
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M



MAX OUTPUT POWER 802.11b CH11  
 Date: 5.FEB.2009 07:55:52

## WLAN Mode ( Mode B )

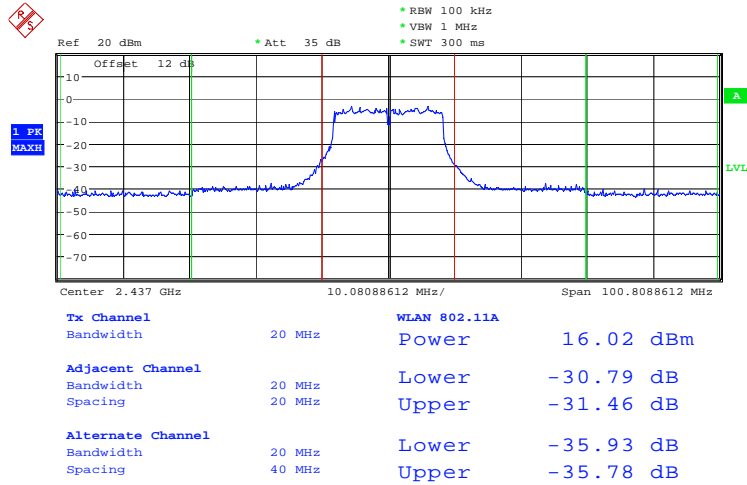


MAX OUTPUT POWER 802.11g CH1  
 Date: 5.FEB.2009 08:01:13

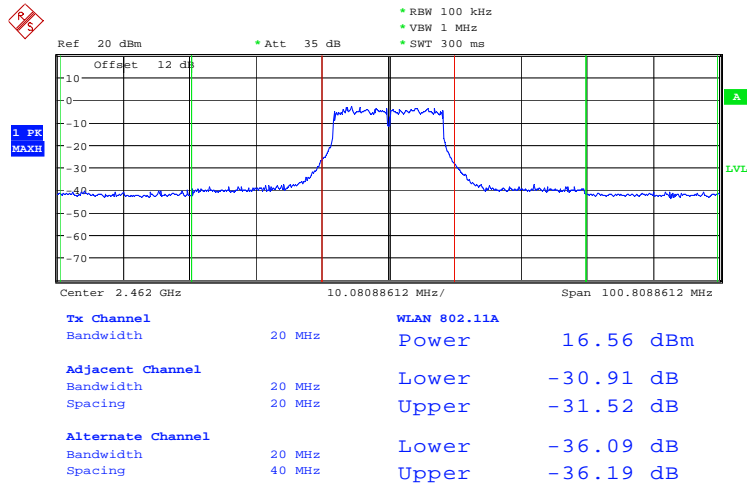


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M

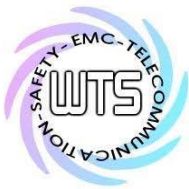


MAX OUTPUT POWER 802.11g CH6  
 Date: 5.FEB.2009 08:01:59



MAX OUTPUT POWER 802.11g CH11  
 Date: 5.FEB.2009 08:02:34



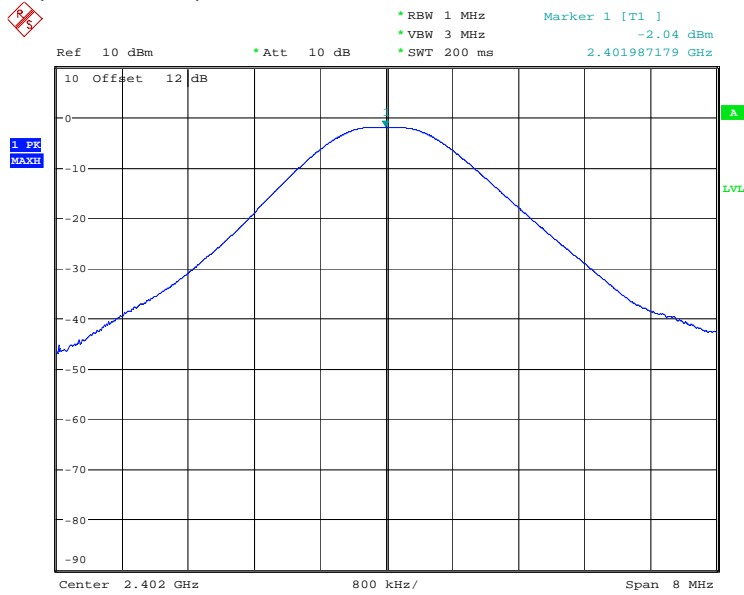


# Worldwide Testing Services(Taiwan) Co., Ltd.

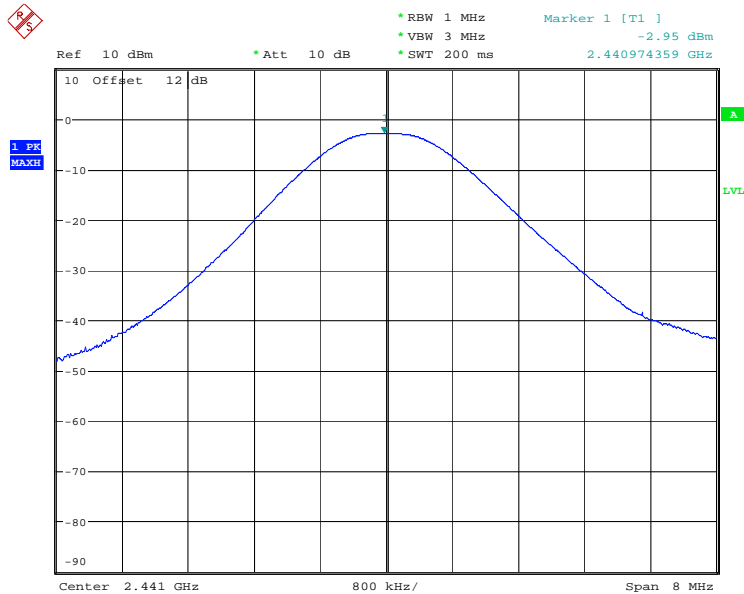
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Bluetooth Mode ( Mode C )



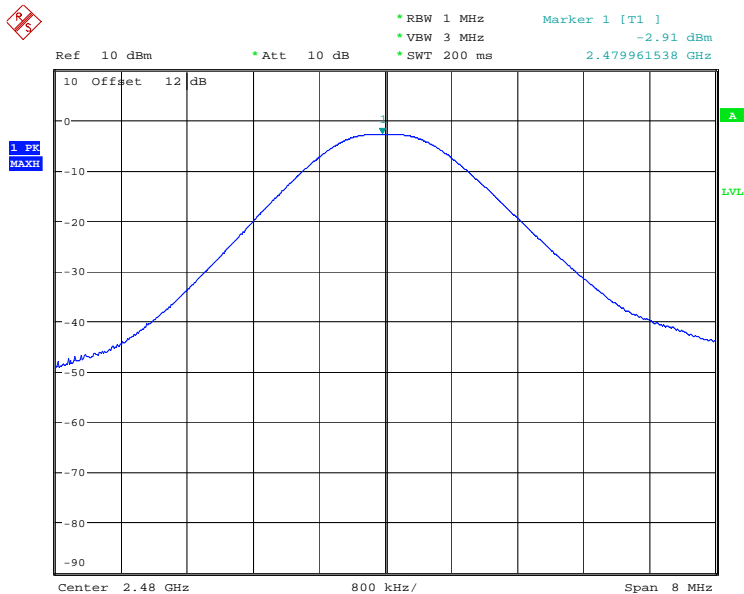
MAX OUTPUT POWER CH0  
Date: 10.JAN.2009 13:16:47



MAX OUTPUT POWER CH39  
Date: 10.JAN.2009 13:19:47

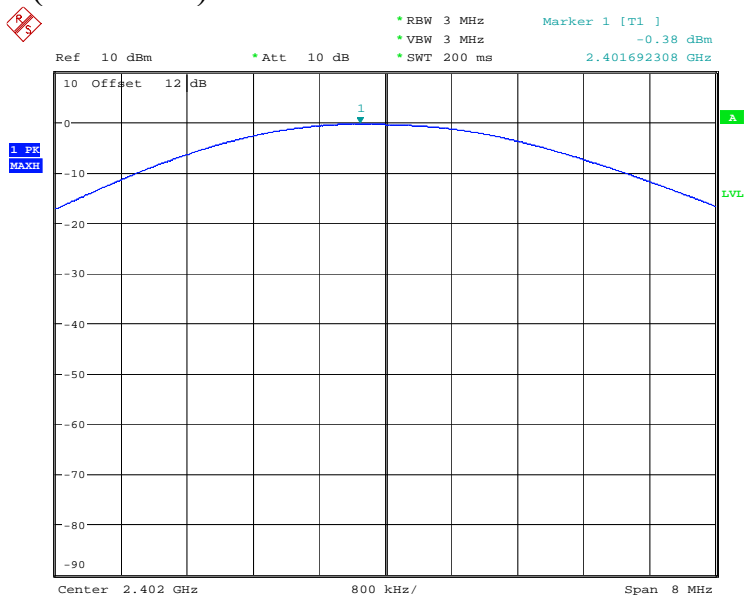


Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

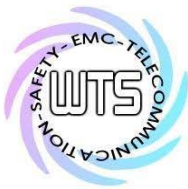


MAX OUTPUT POWER CH78  
Date: 10.JAN.2009 13:22:46

## Bluetooth Mode ( Mode D )

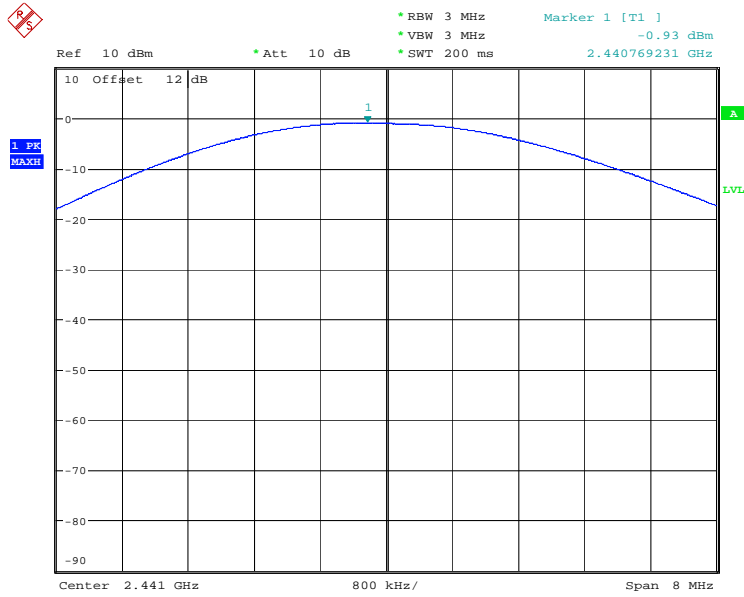


MAX OUTPUT POWER CH0 EDR MODE  
Date: 12.JAN.2009 08:01:25

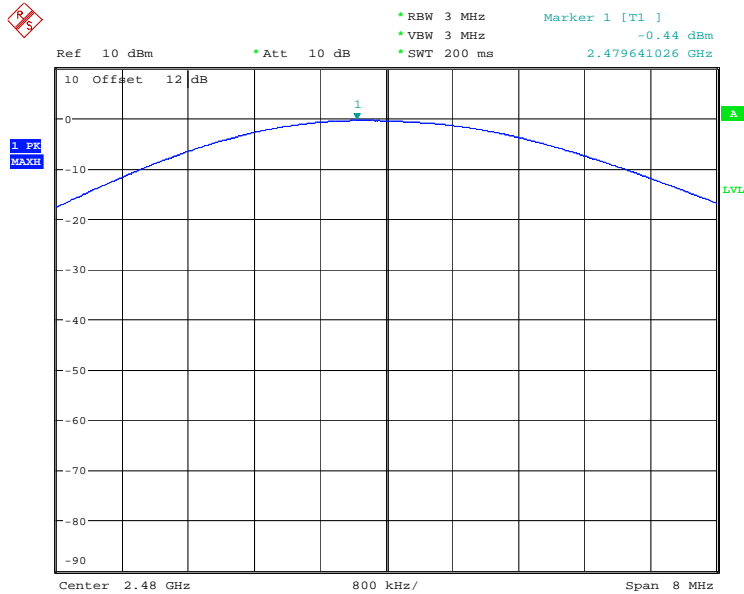


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



MAX OUTPUT POWER CH39 EDR MODE  
Date: 12.JAN.2009 08:03:31



MAX OUTPUT POWER CH78 EDR MODE  
Date: 12.JAN.2009 08:04:10



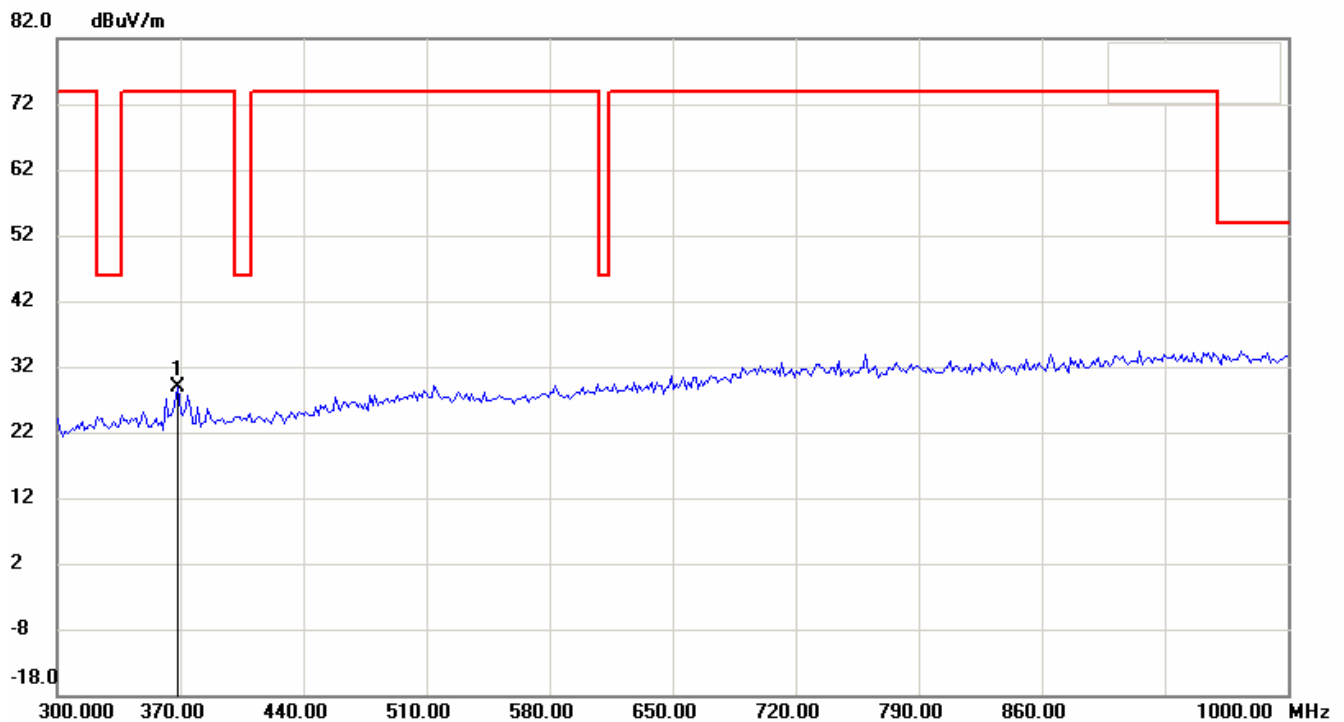
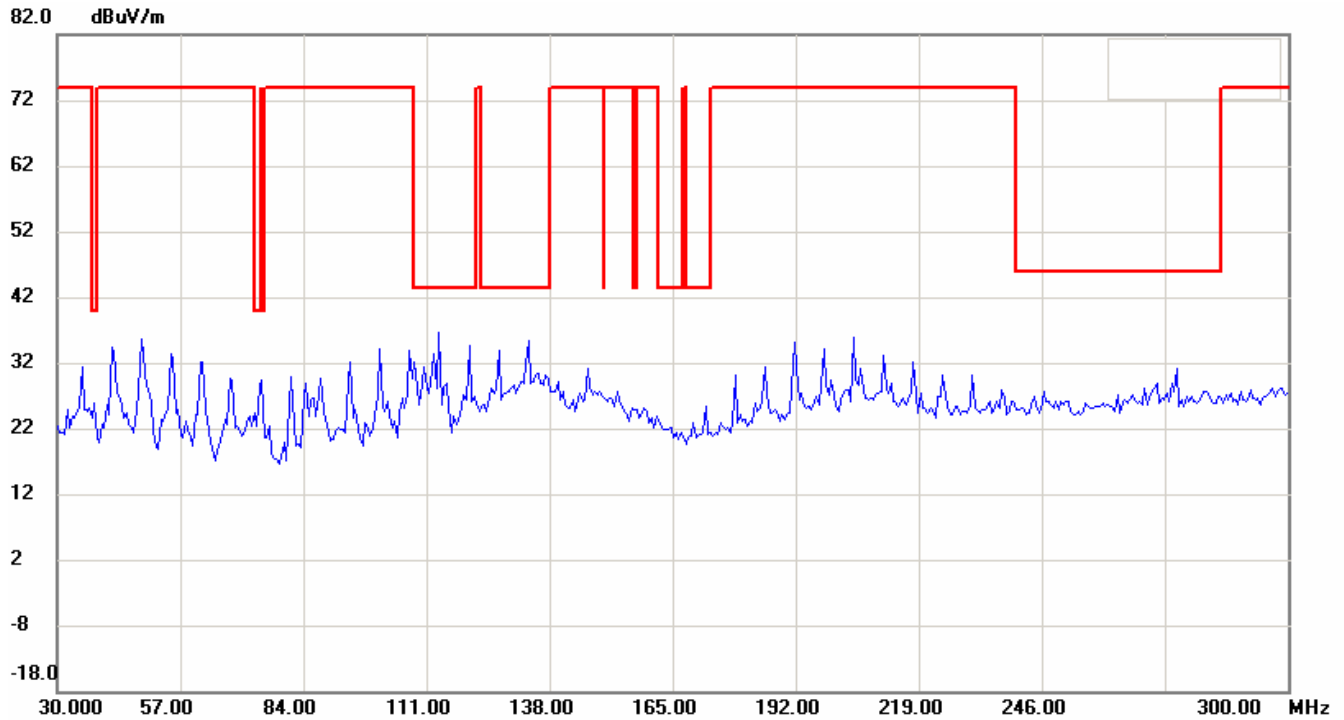
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

Spurious Emissions radiated

WLAN Mode ( Mode A )\_ CH 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.

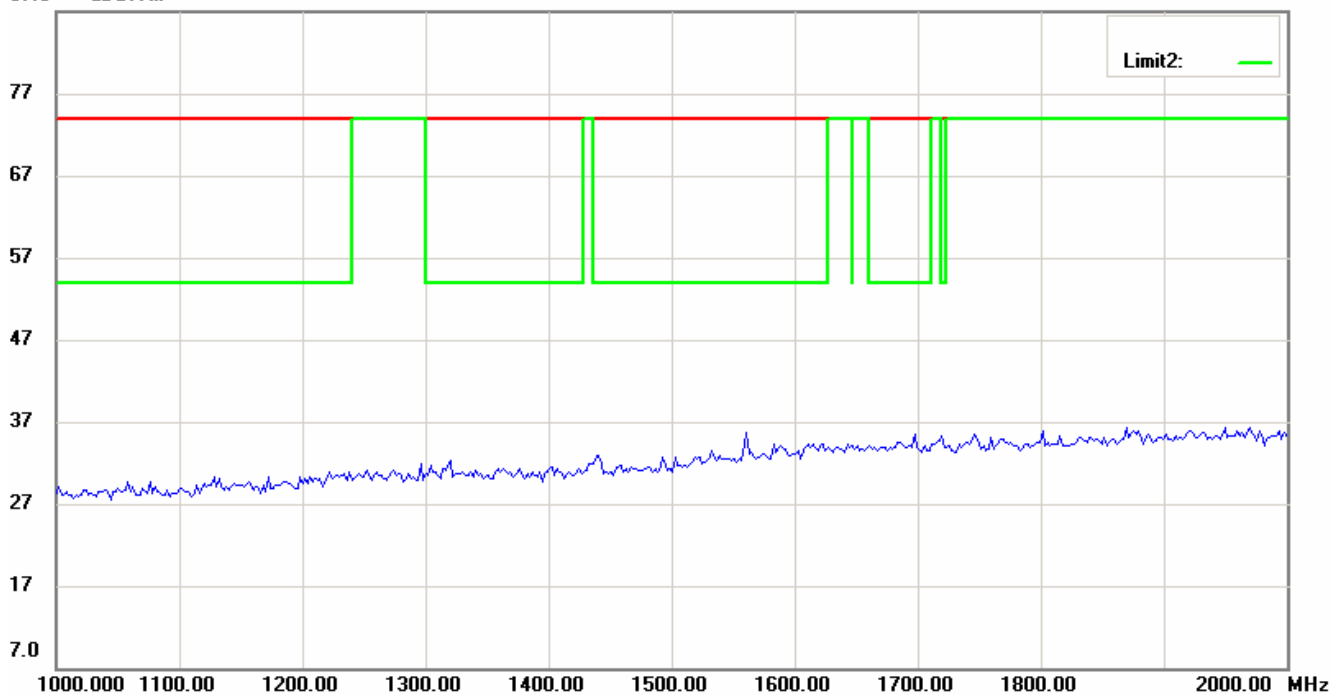


# Worldwide Testing Services(Taiwan) Co., Ltd.

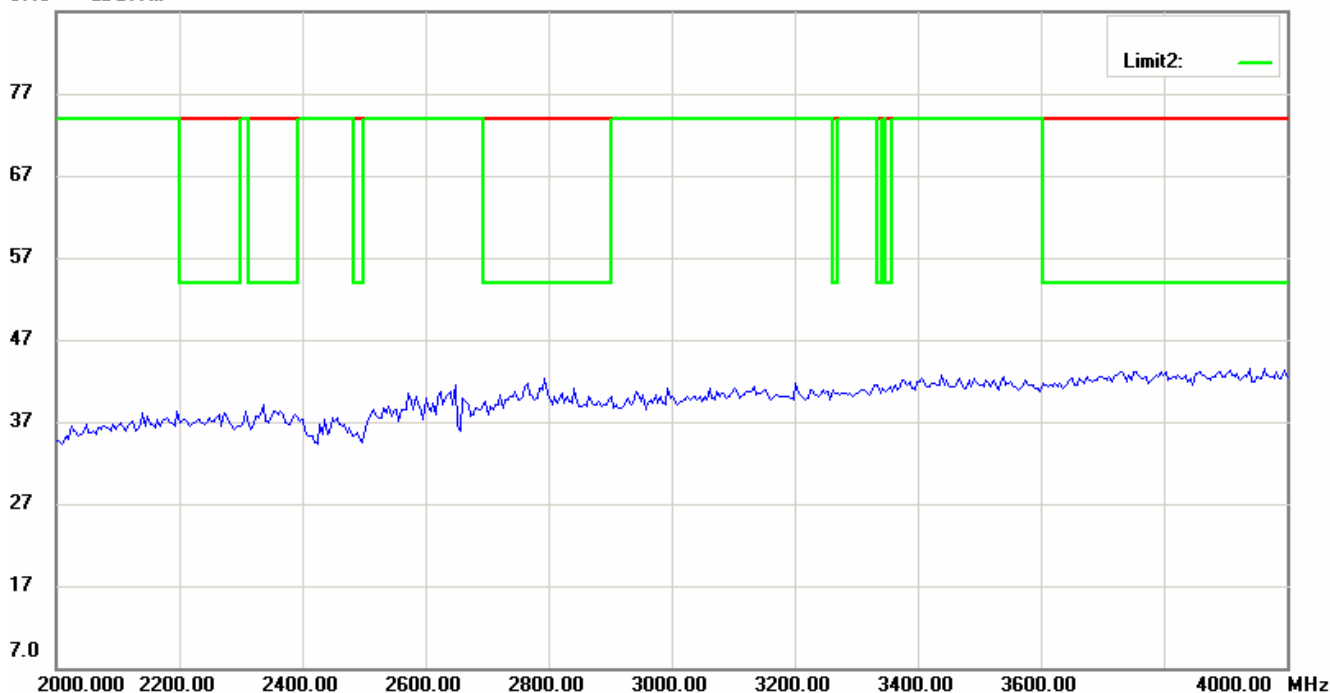
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

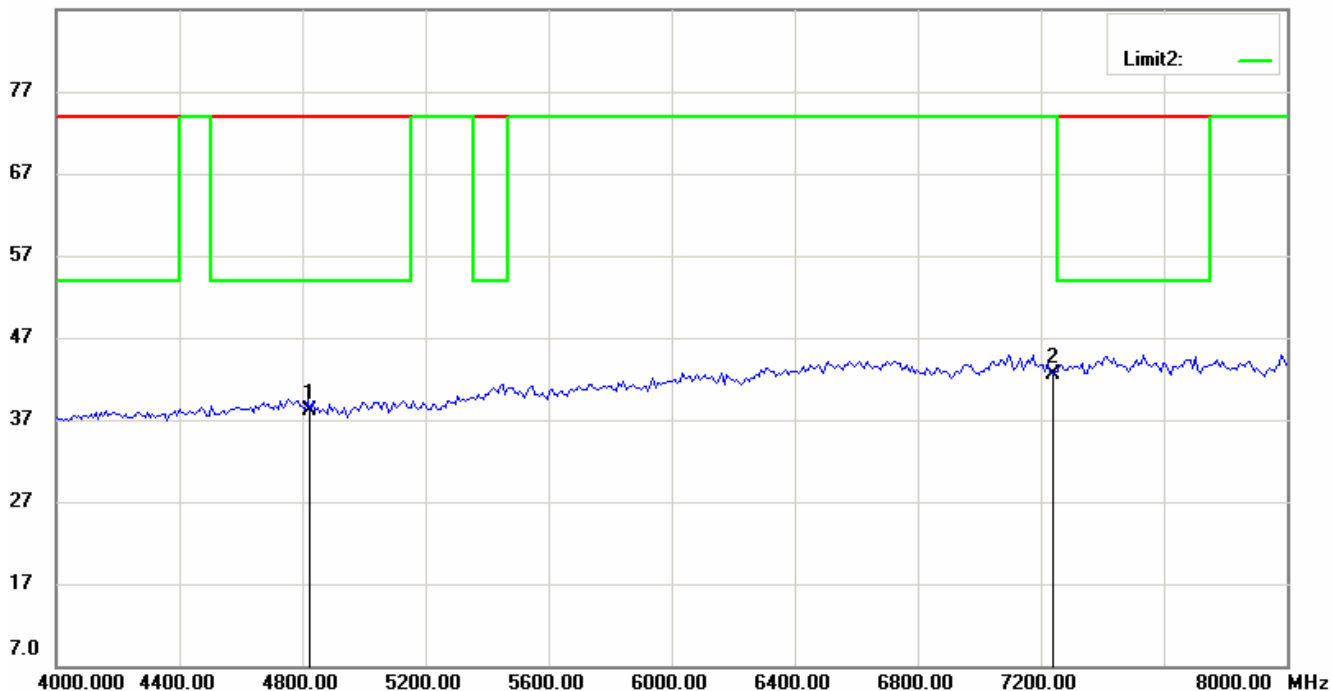


# Worldwide Testing Services(Taiwan) Co., Ltd.

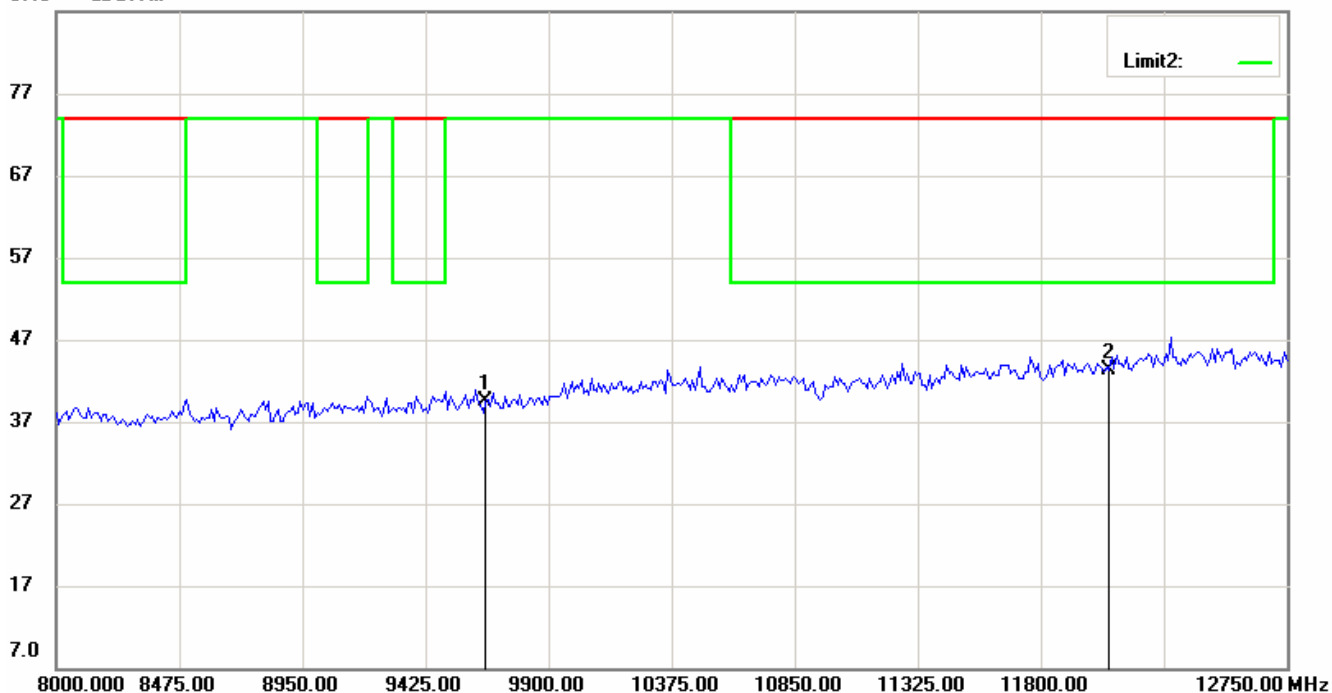
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



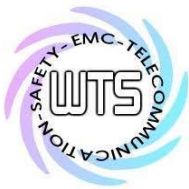
87.0 dBuV/m



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.

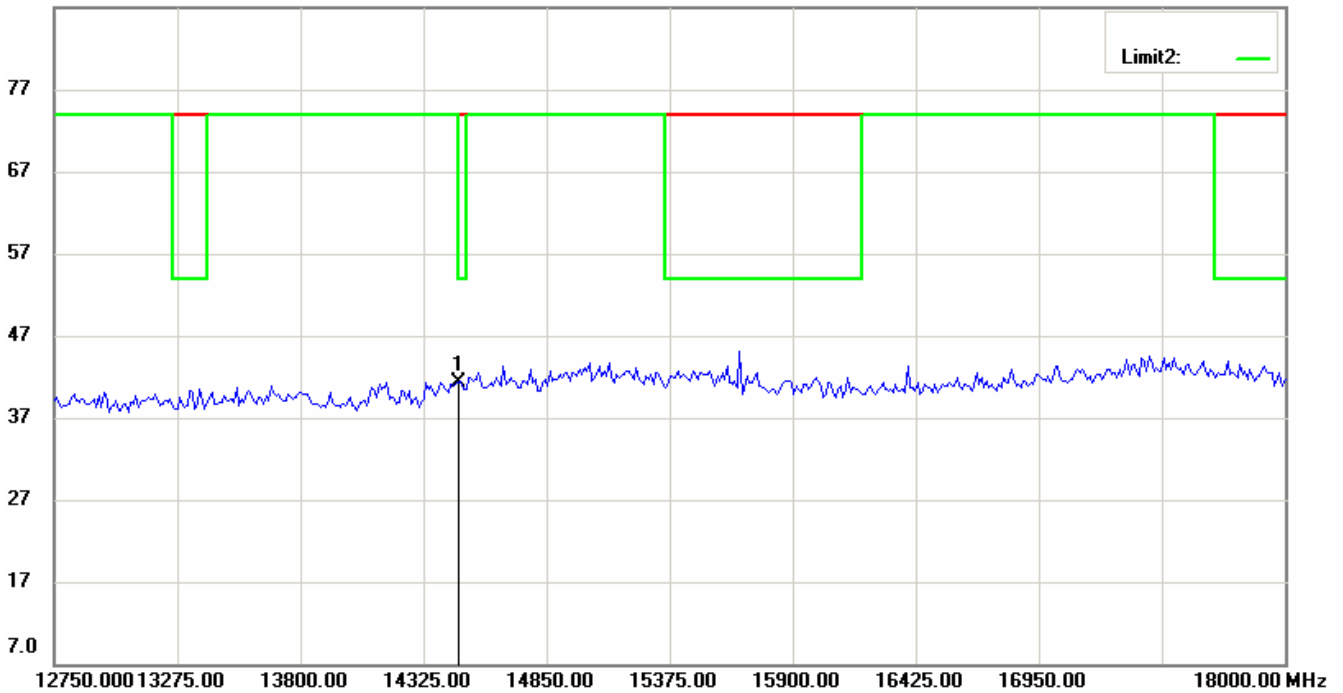


# Worldwide Testing Services(Taiwan) Co., Ltd.

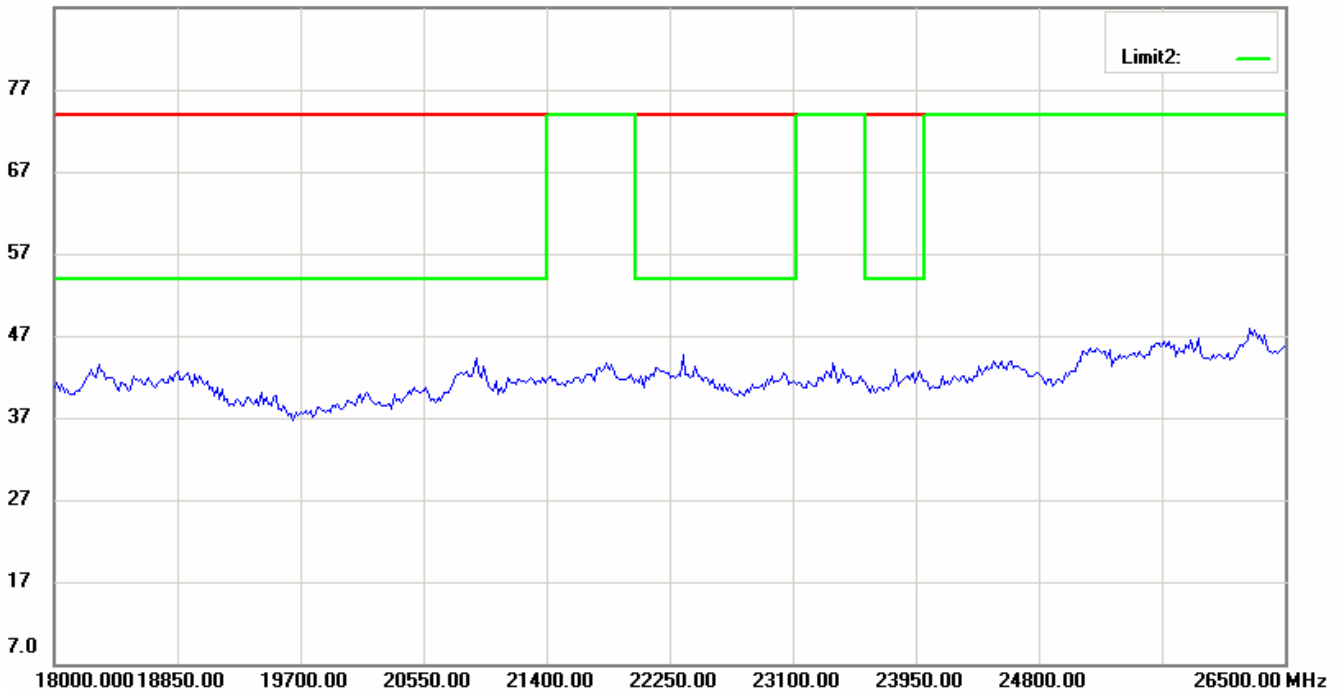
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

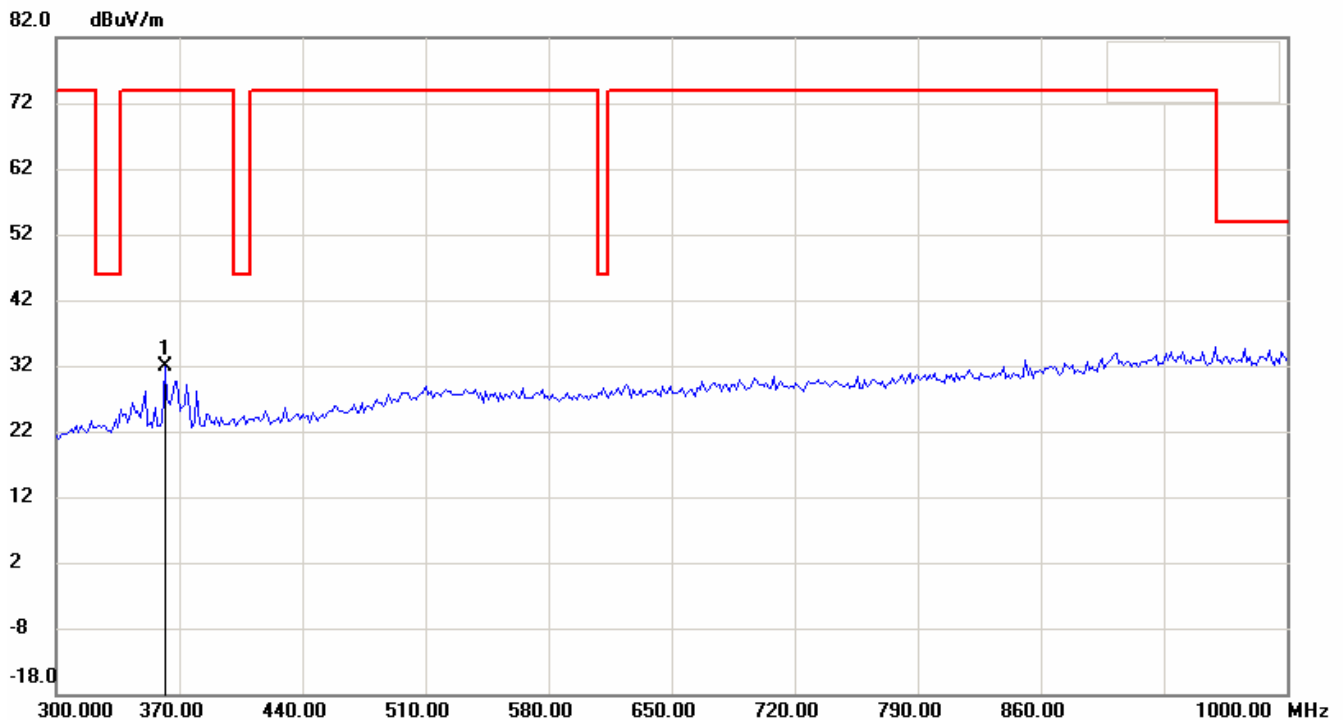
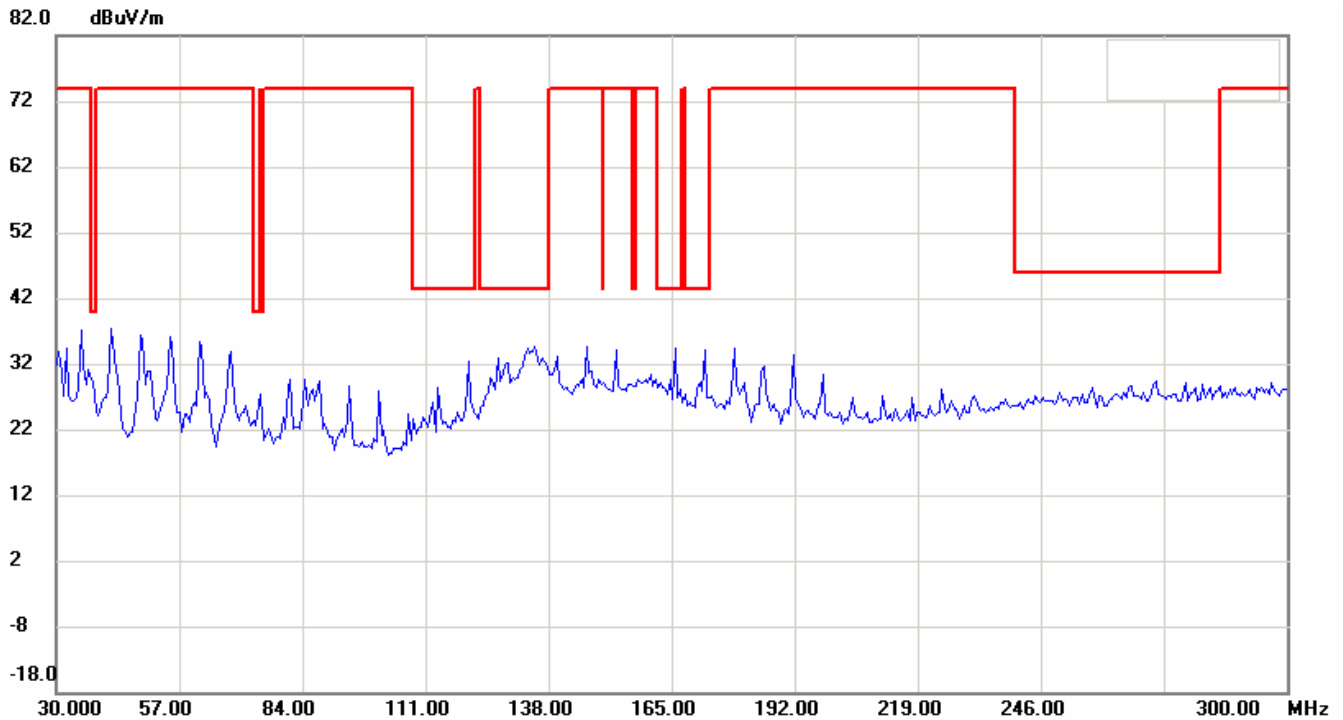
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 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.

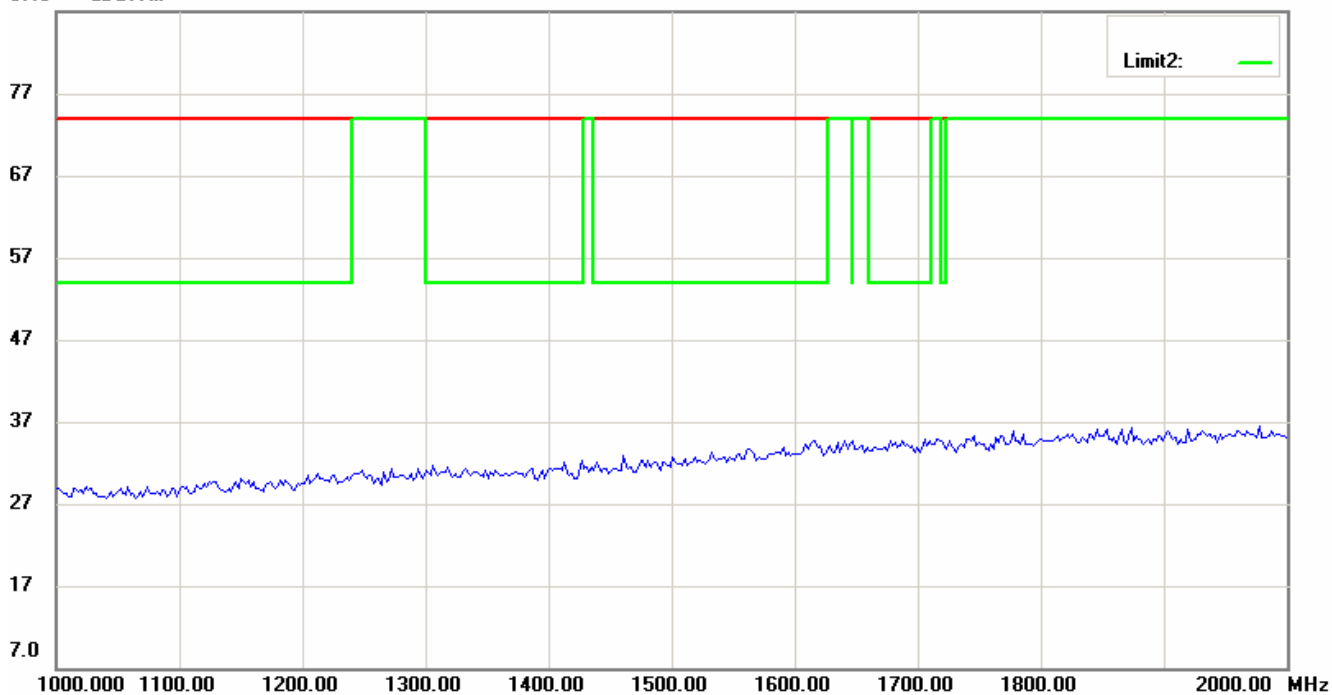




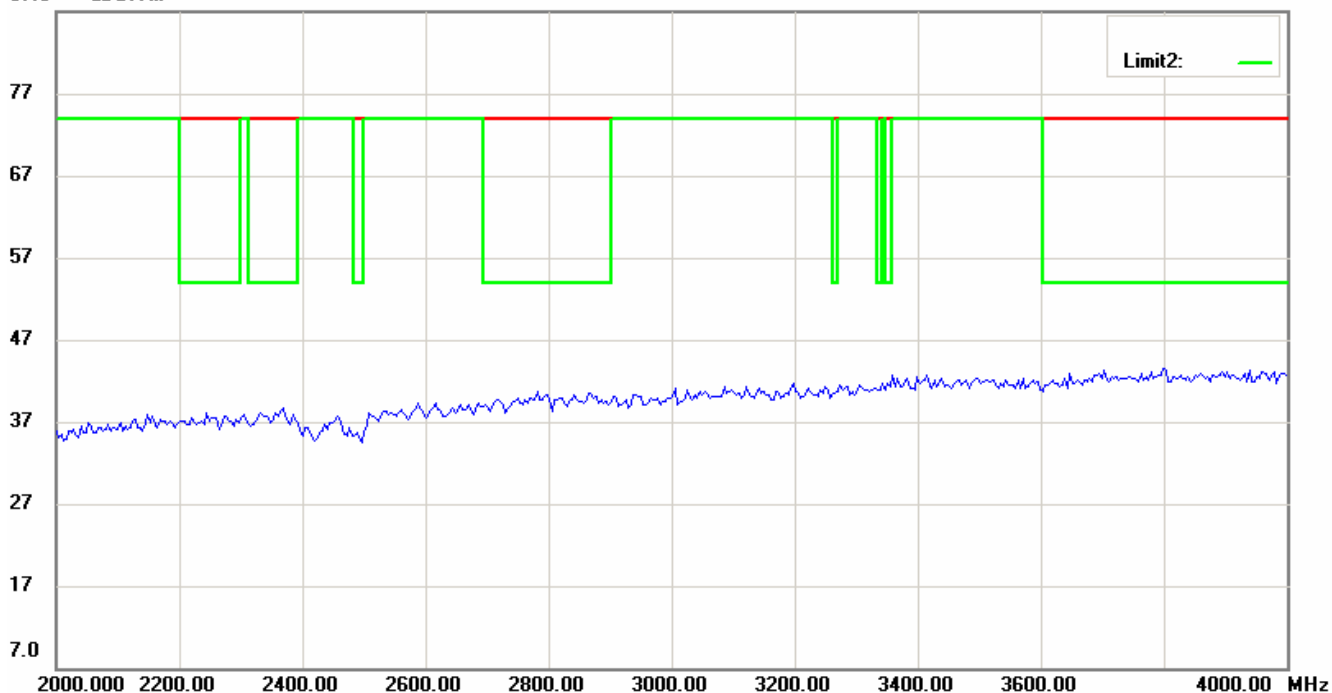
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

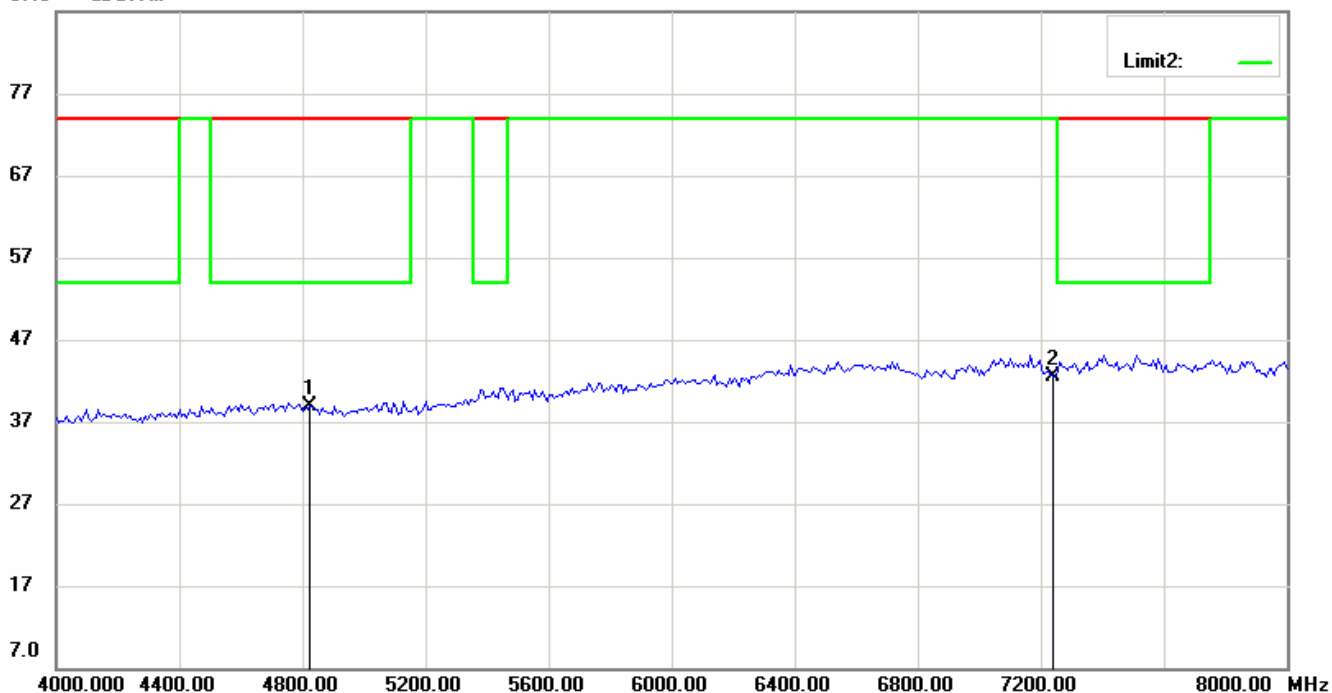


# Worldwide Testing Services(Taiwan) Co., Ltd.

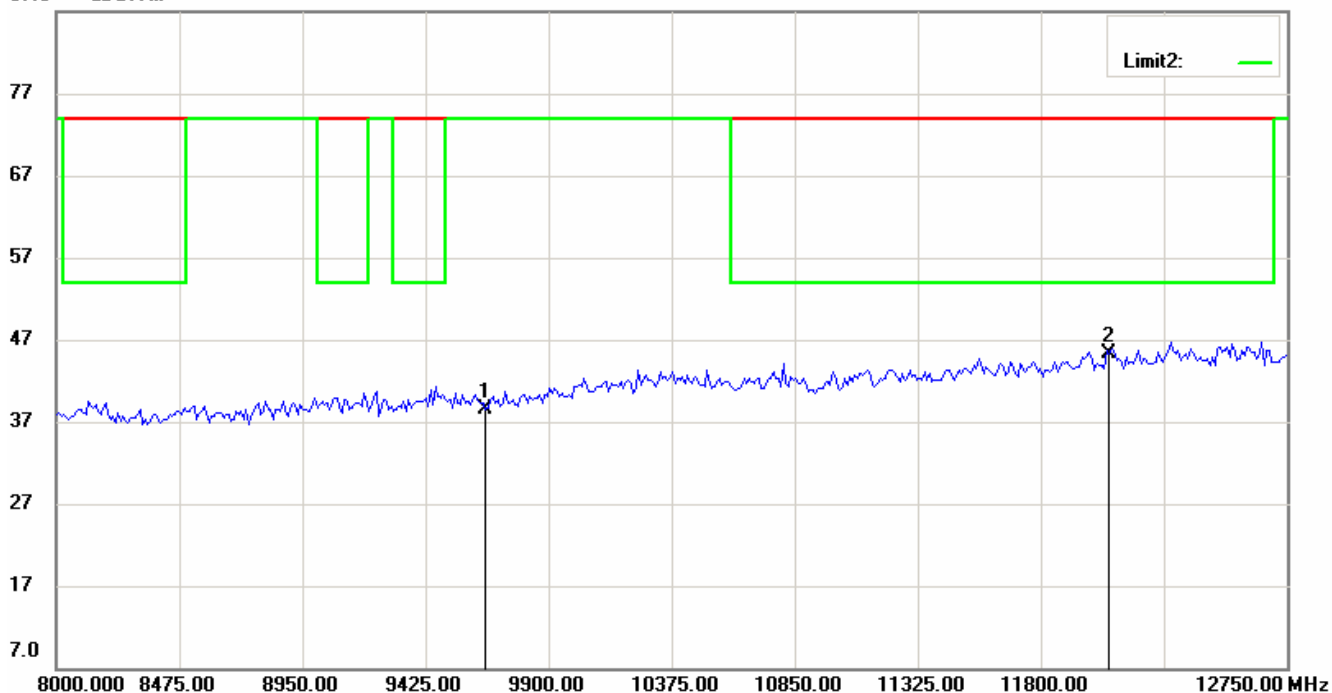
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

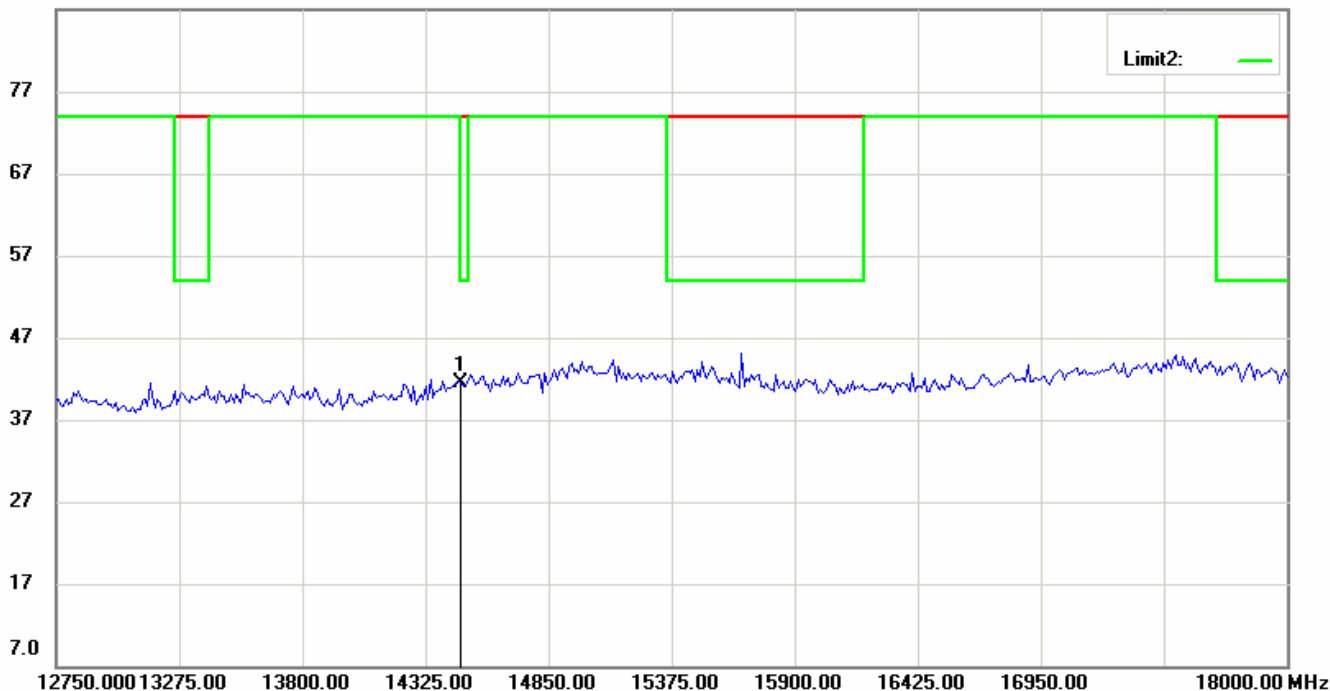


# Worldwide Testing Services(Taiwan) Co., Ltd.

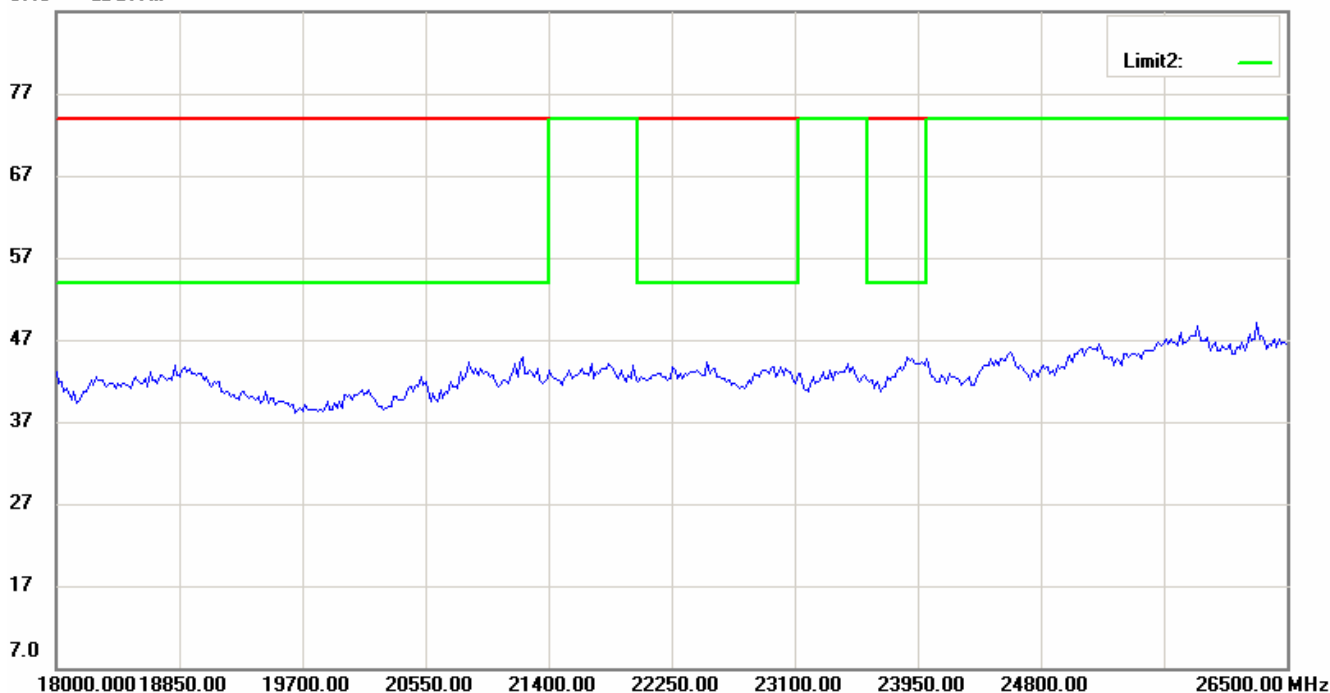
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

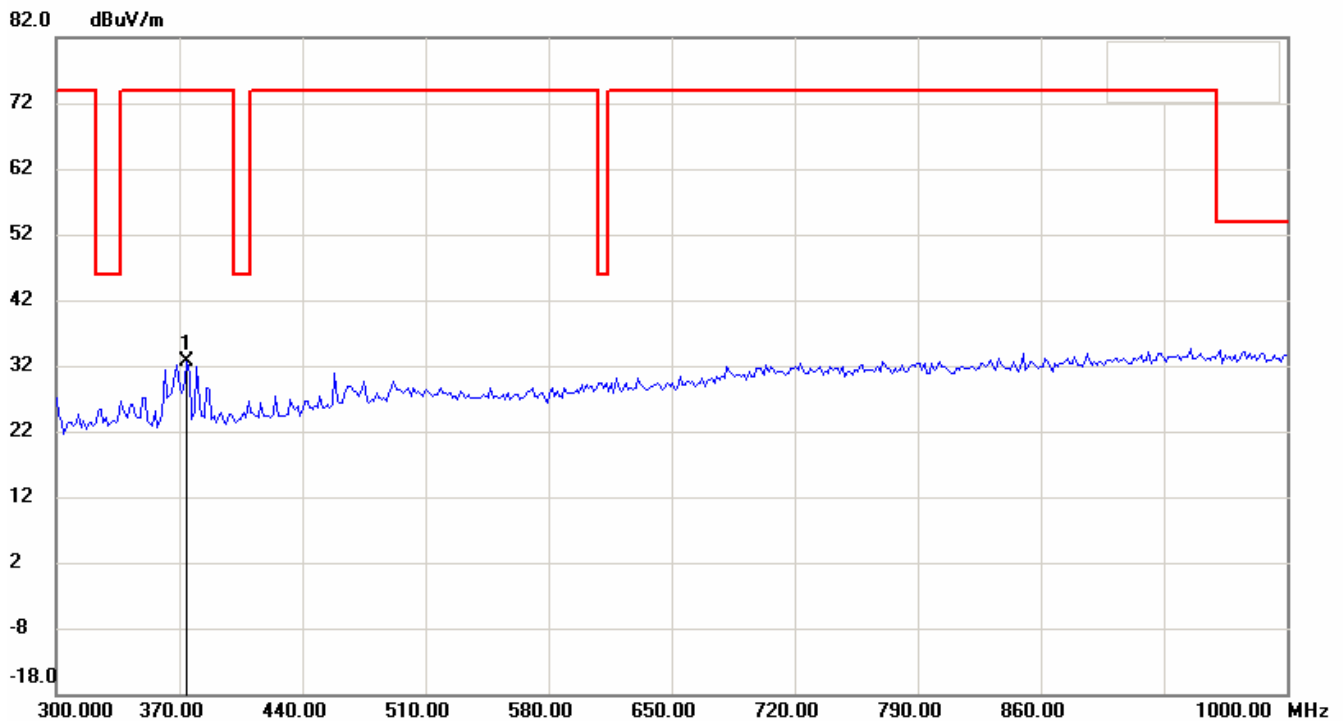
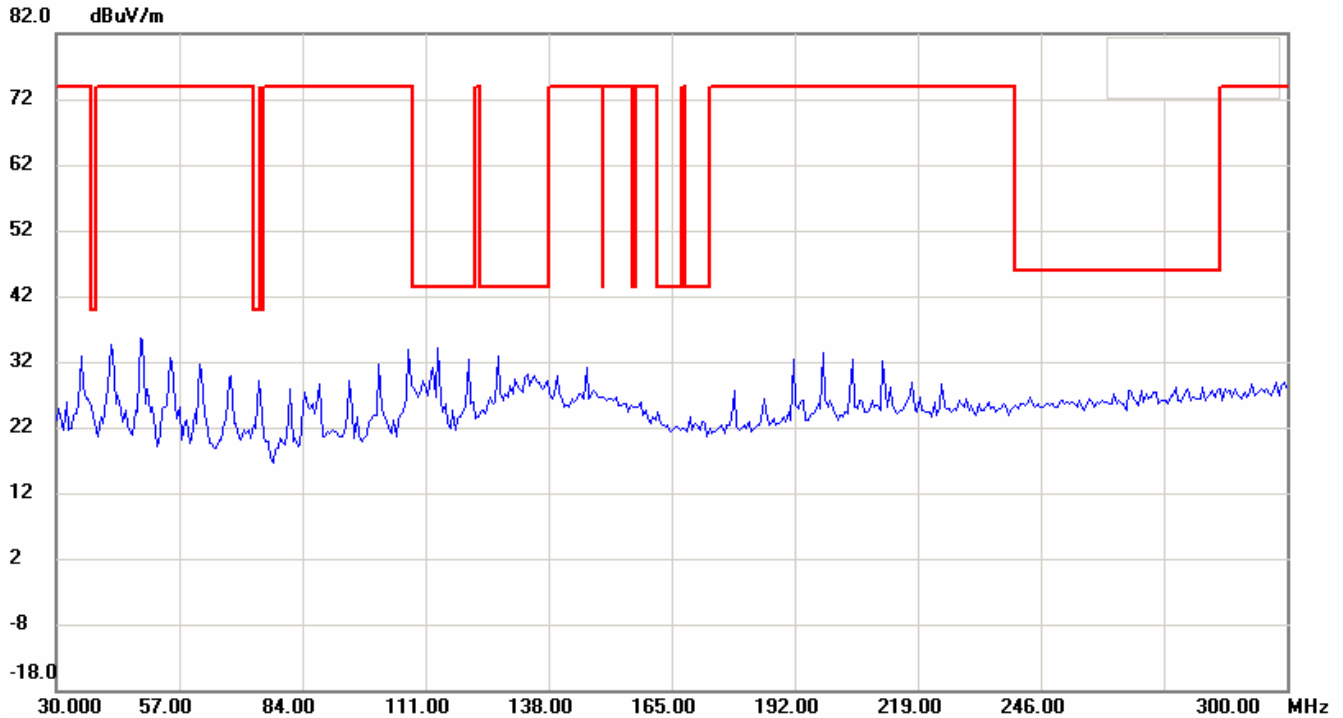


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

WLAN Mode ( Mode A )\_ CH 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 limit standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

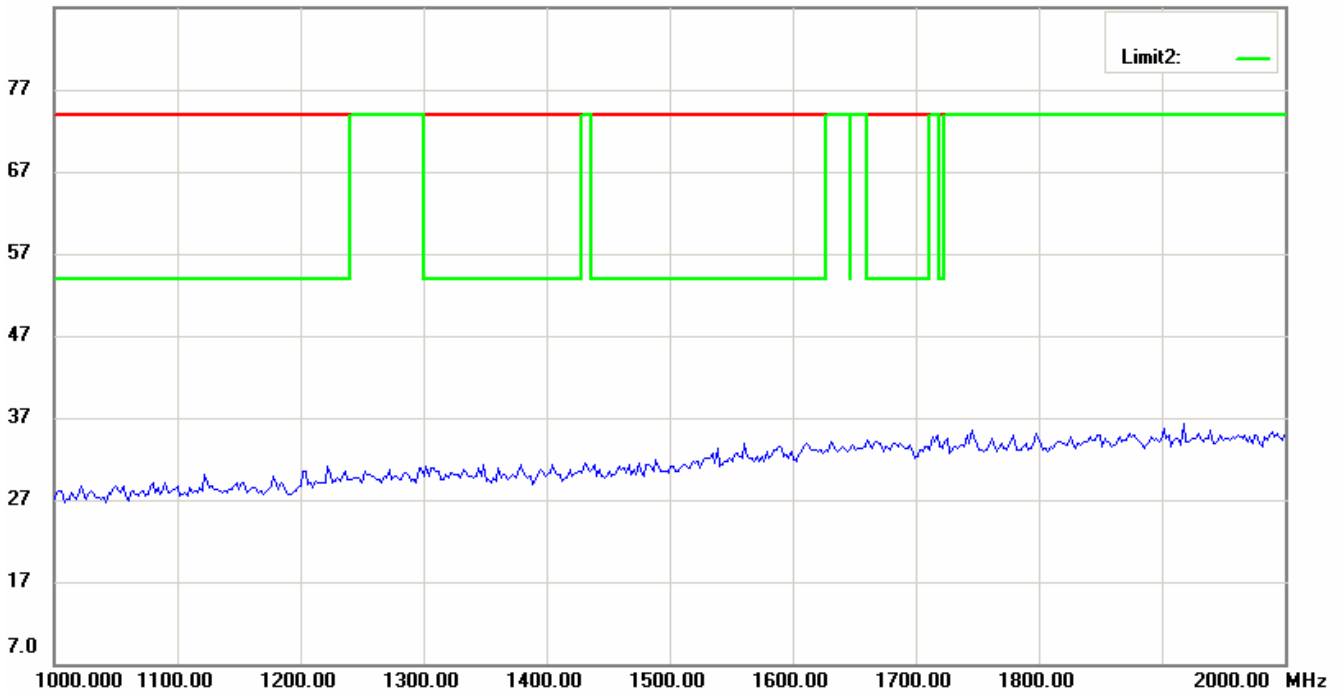


# ***Worldwide Testing Services(Taiwan) Co., Ltd.***

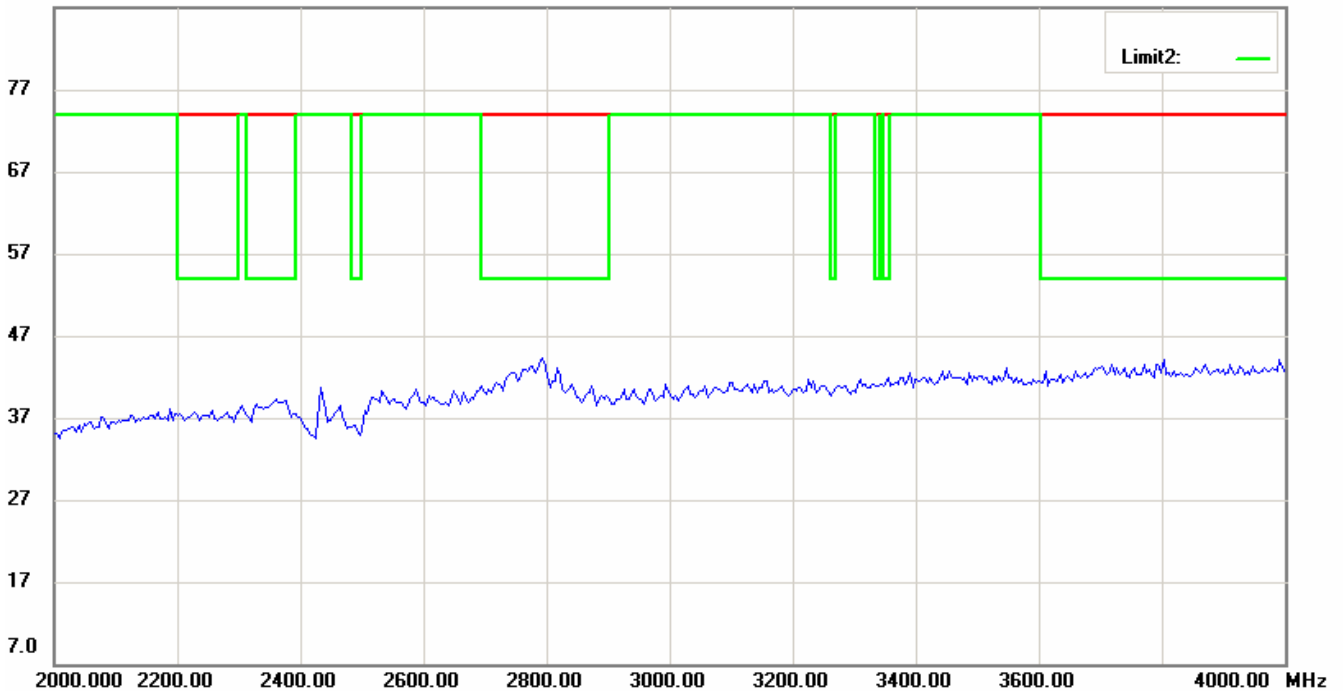
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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

**Note:**

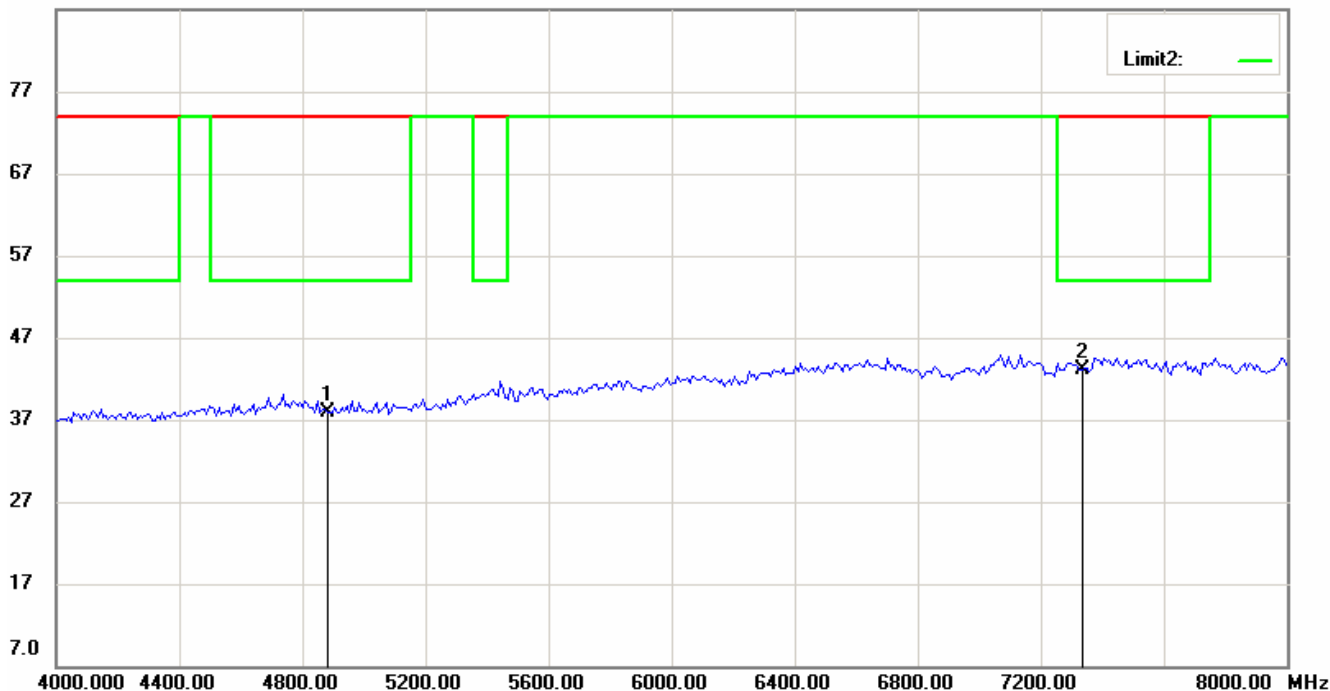
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



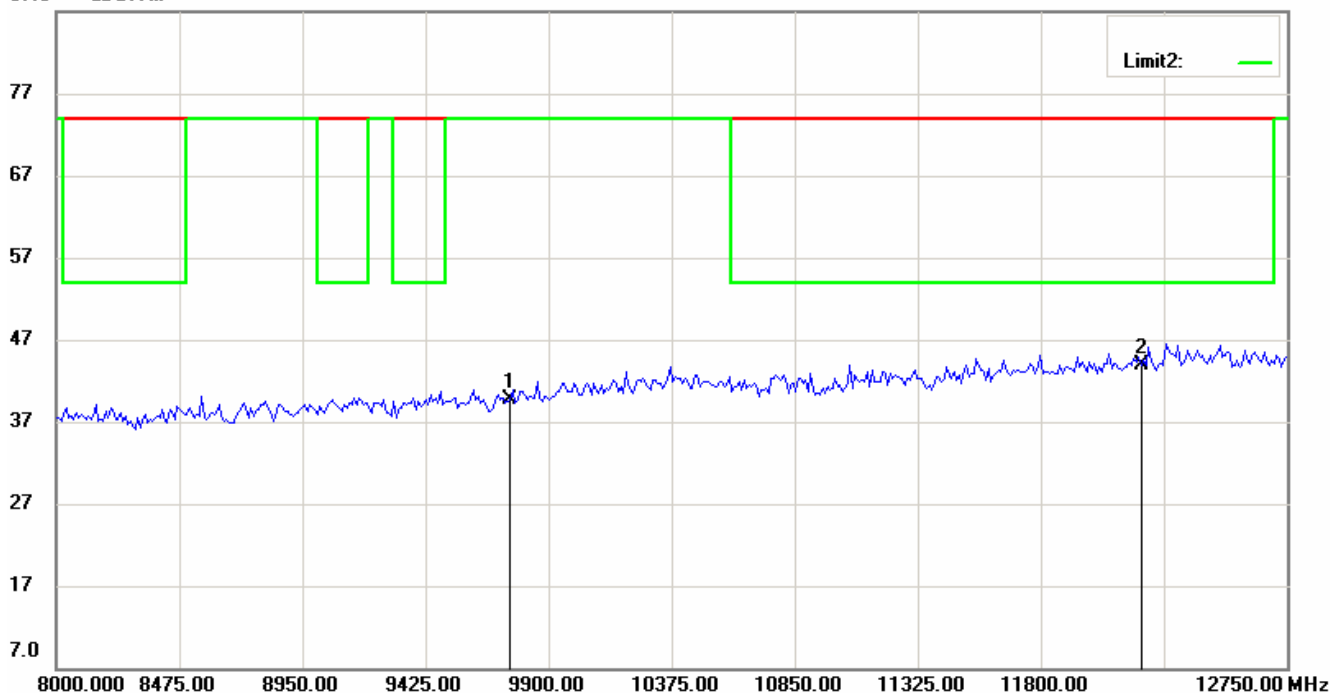
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

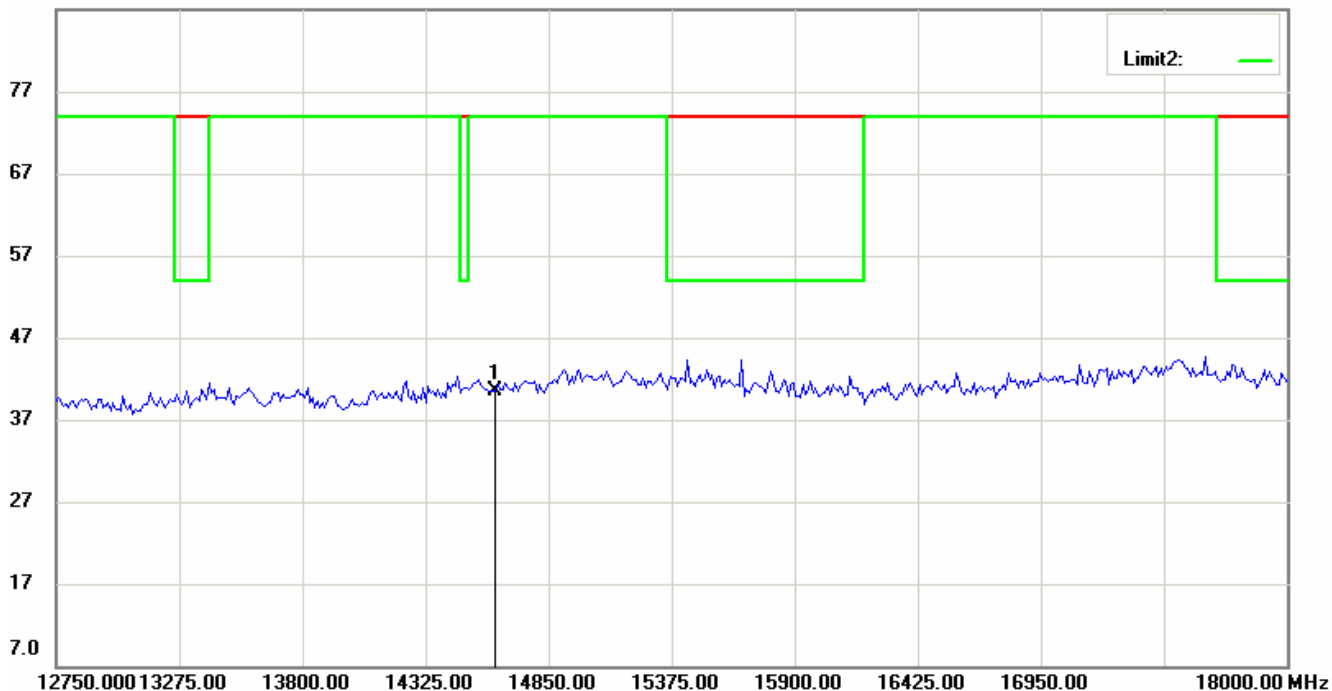


# Worldwide Testing Services(Taiwan) Co., Ltd.

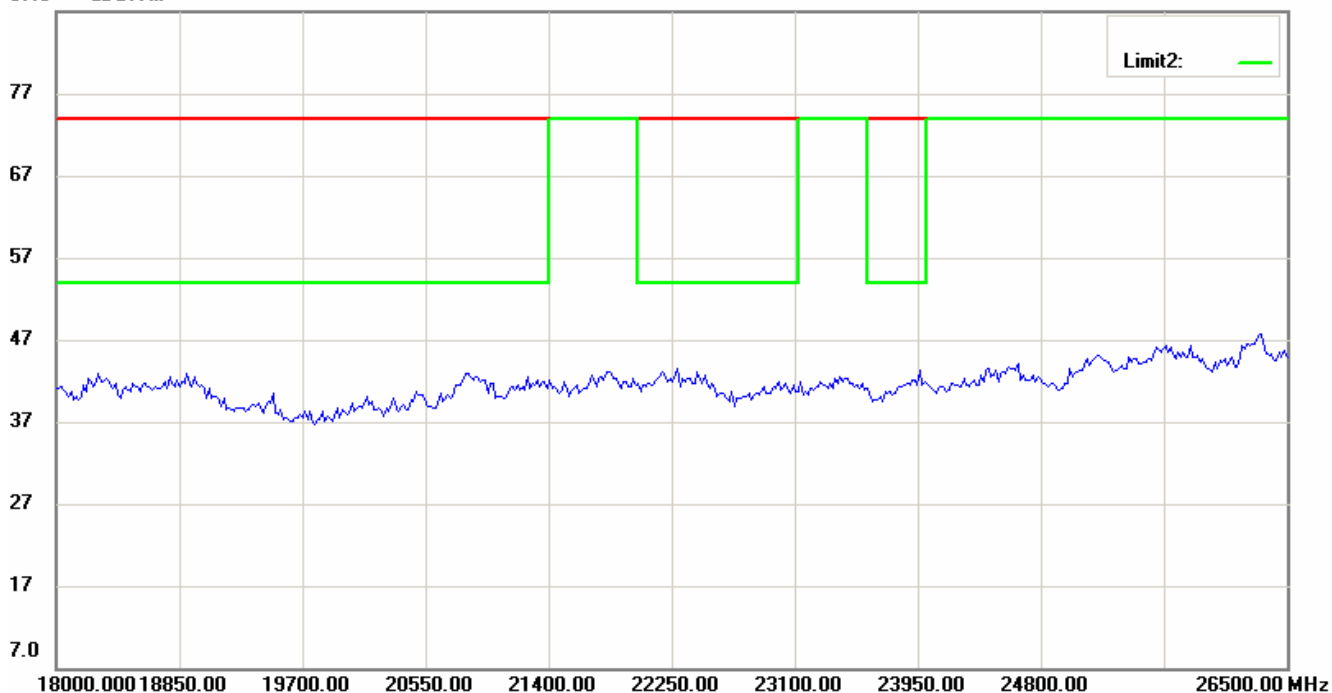
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

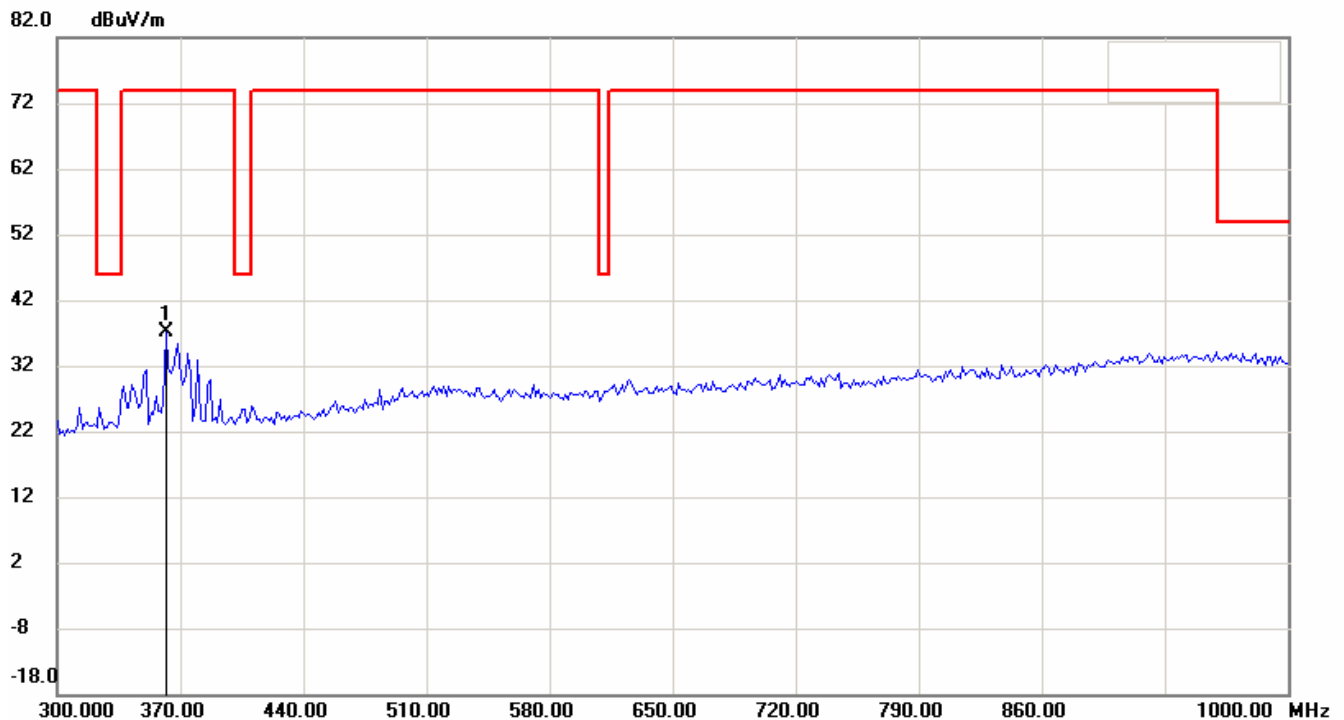
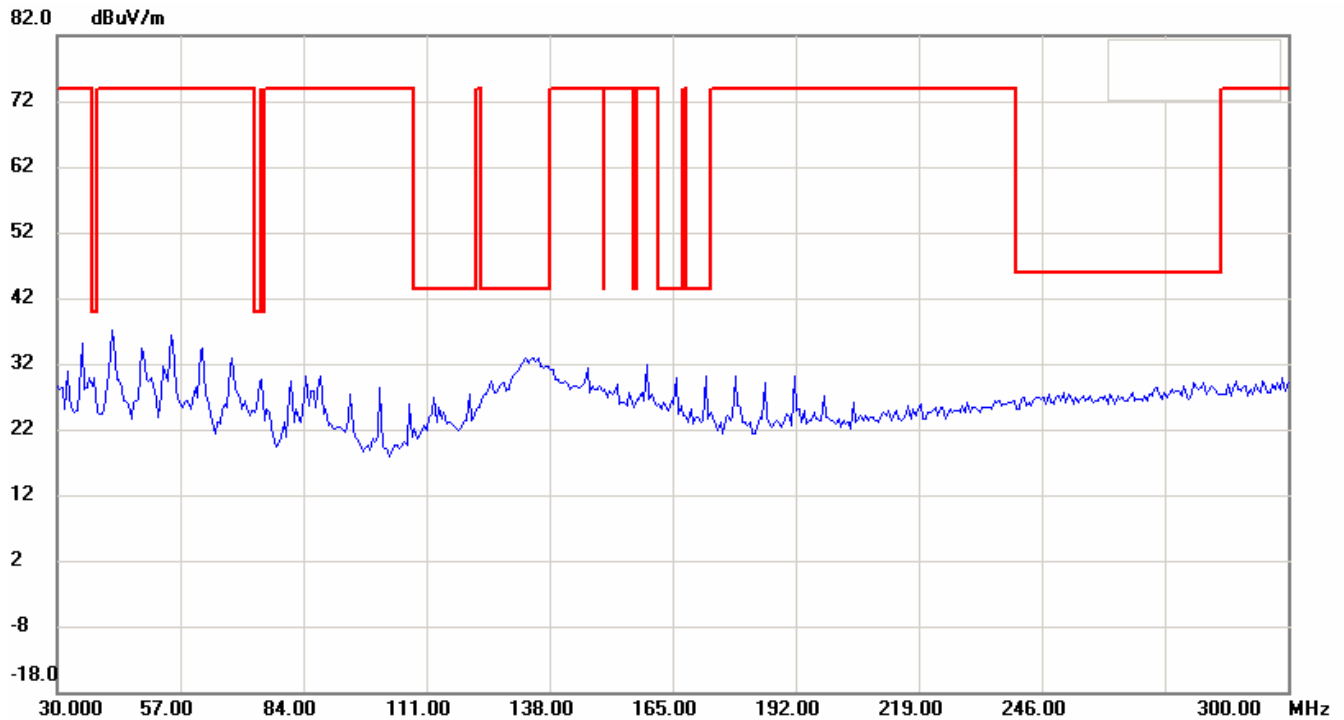
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 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.



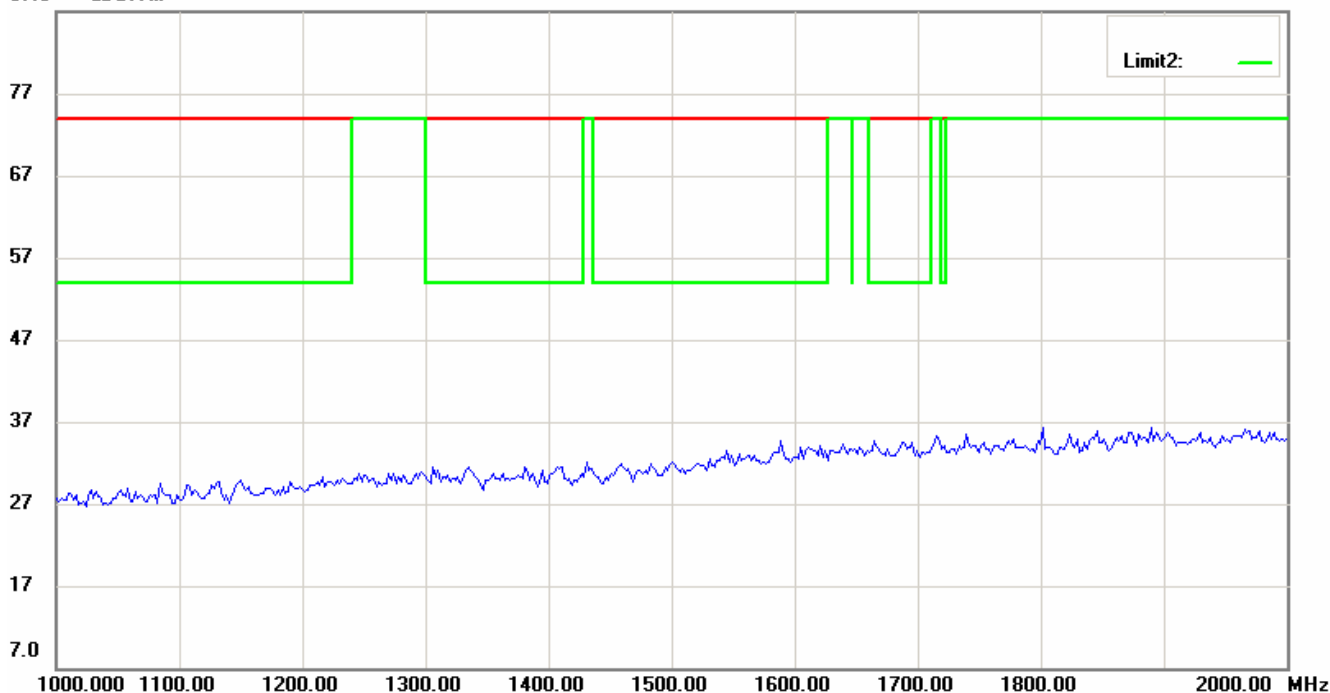


# Worldwide Testing Services(Taiwan) Co., Ltd.

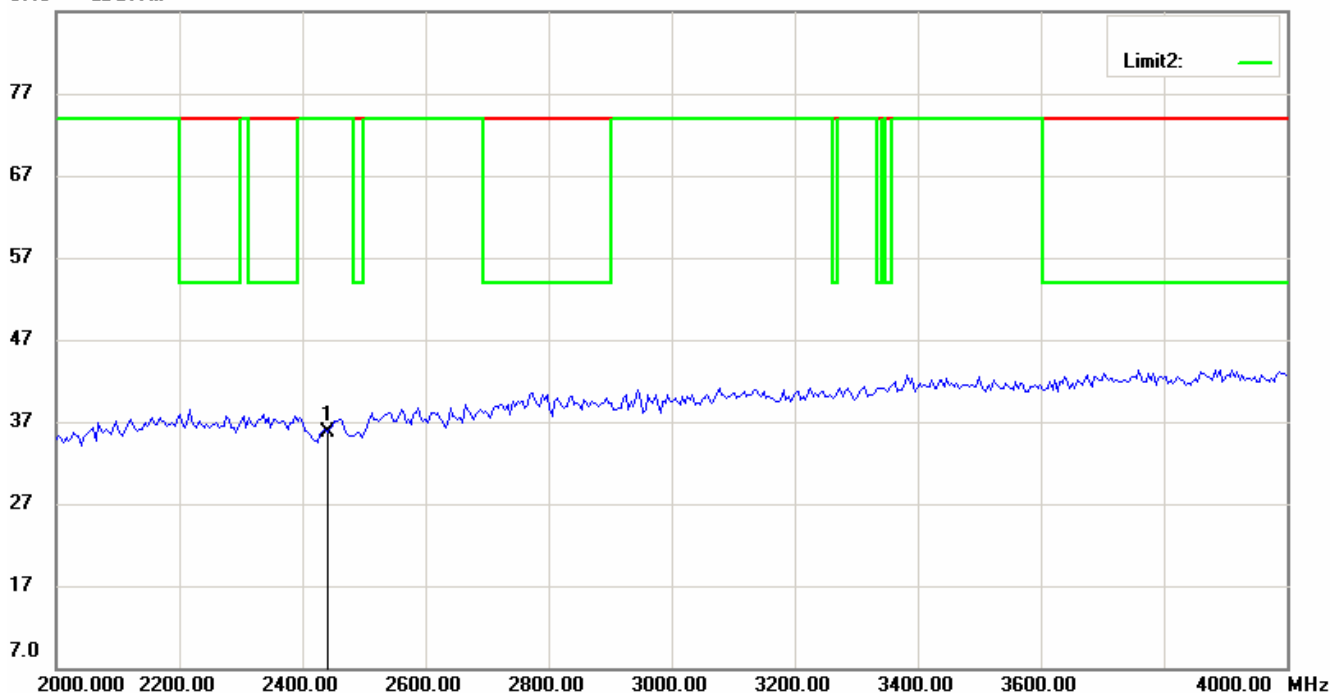
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

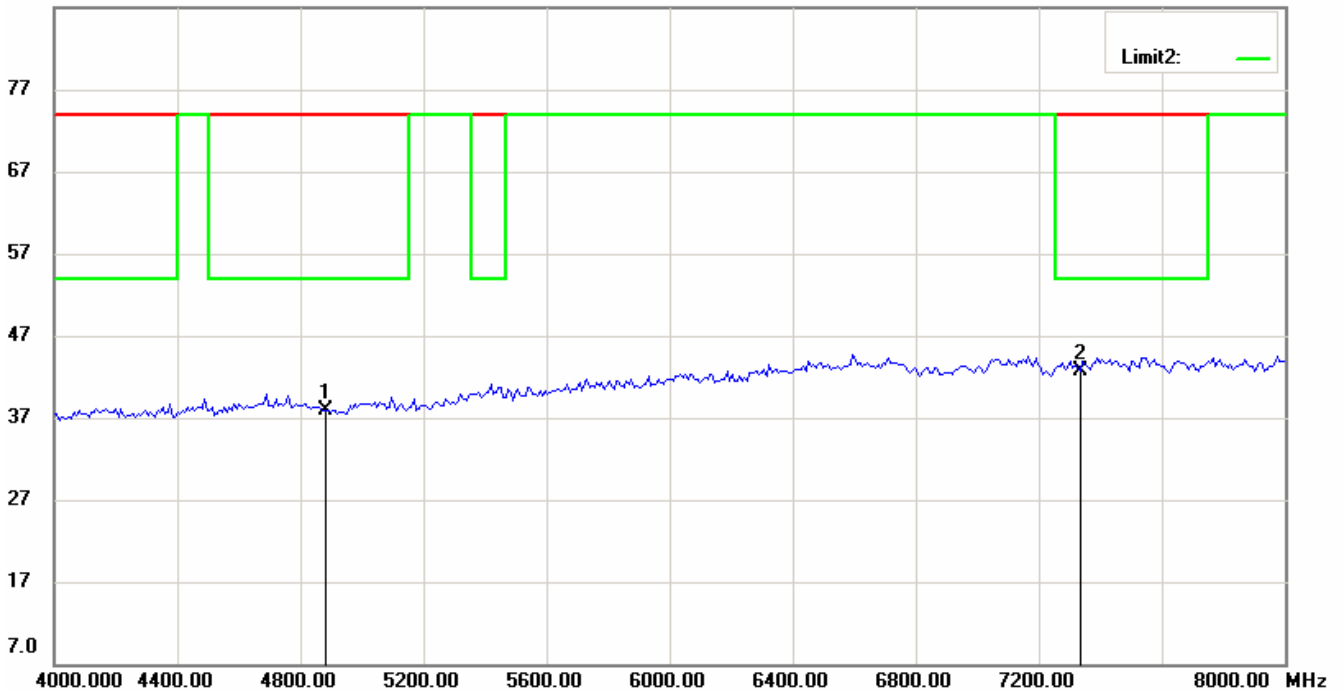


# Worldwide Testing Services(Taiwan) Co., Ltd.

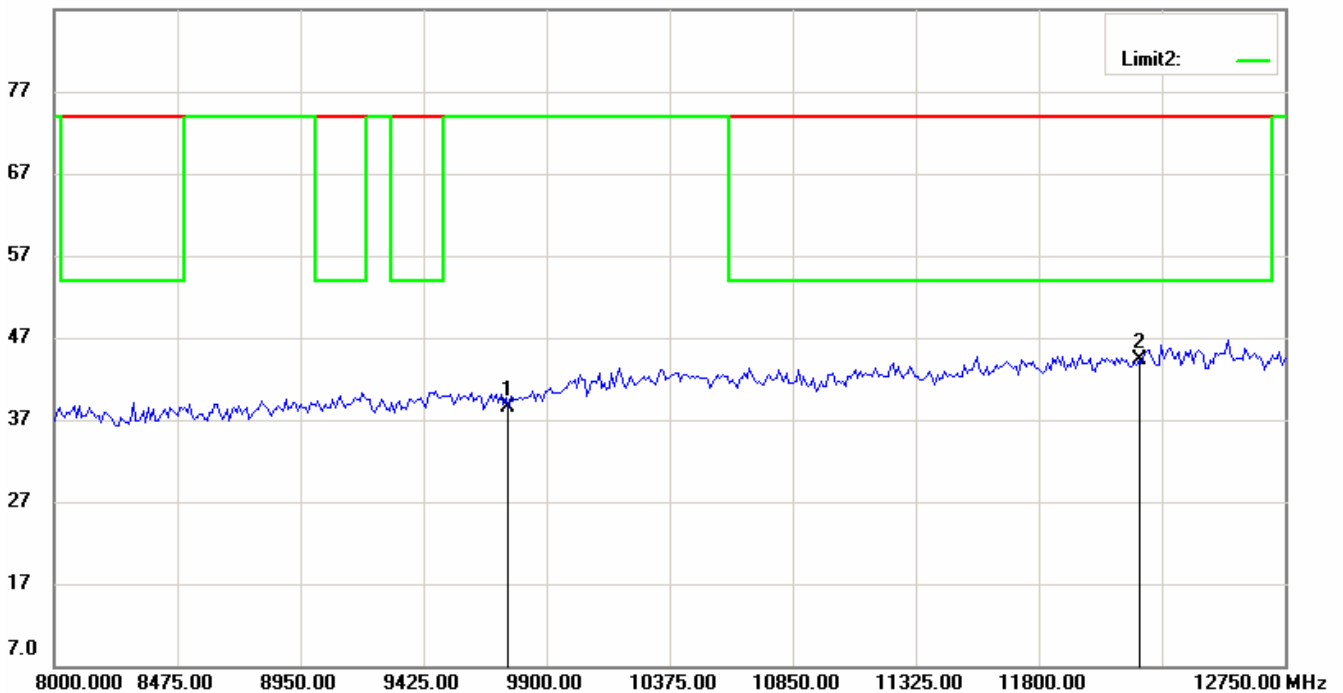
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



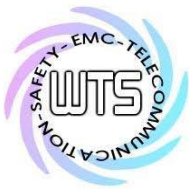
87.0 dBuV/m



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.

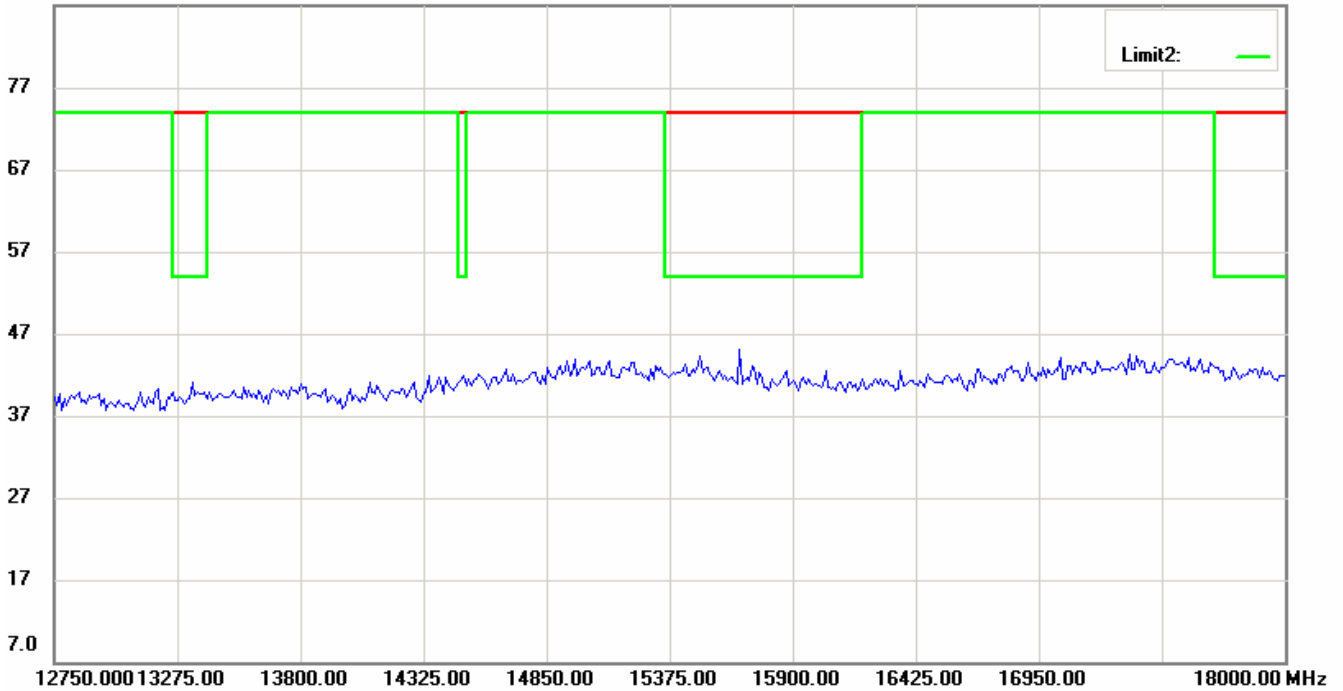


# Worldwide Testing Services(Taiwan) Co., Ltd.

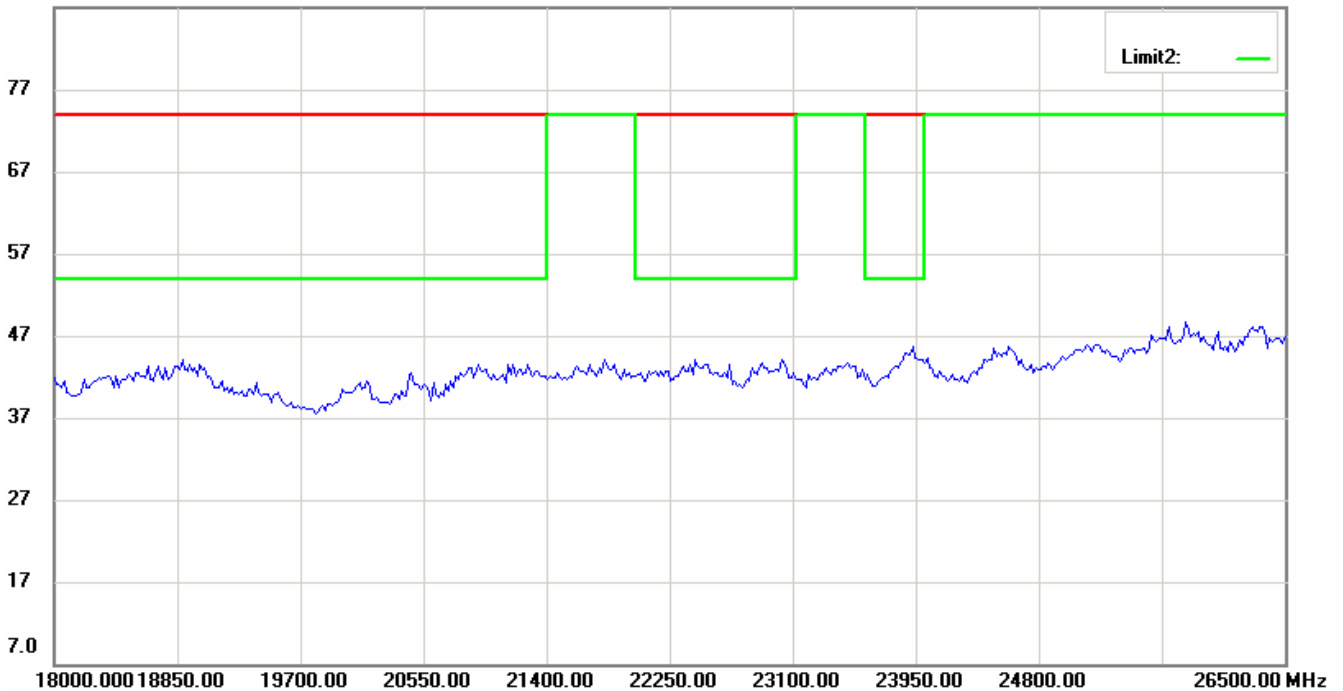
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

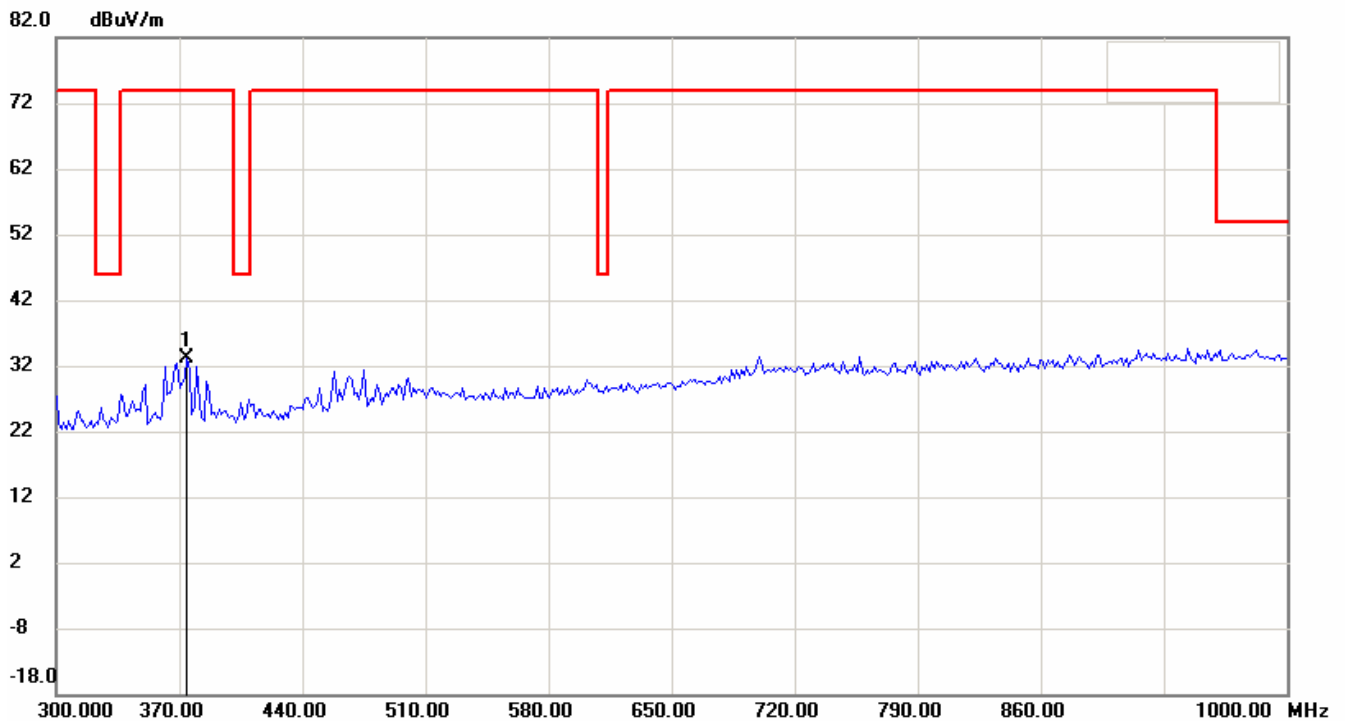
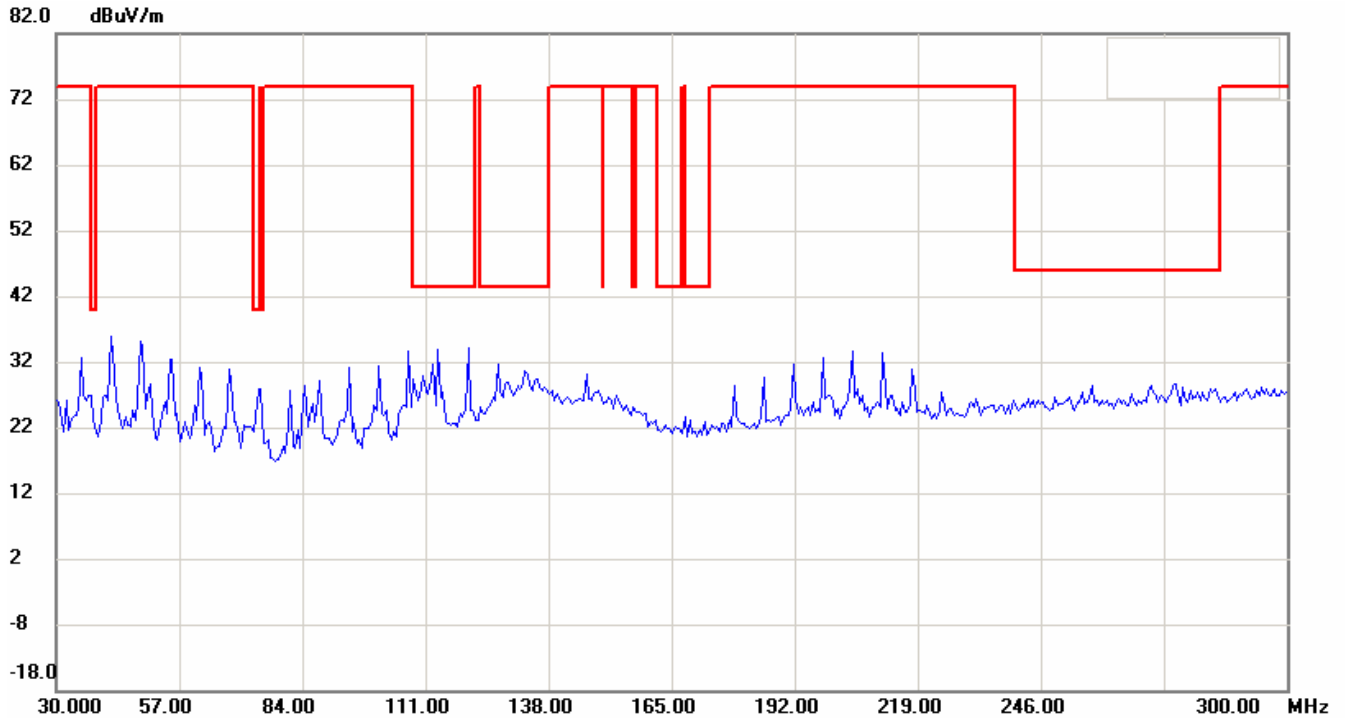


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

WLAN Mode ( Mode A )\_ CH 11

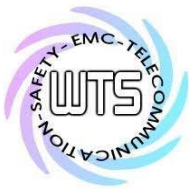
Antenna Polarization H



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.

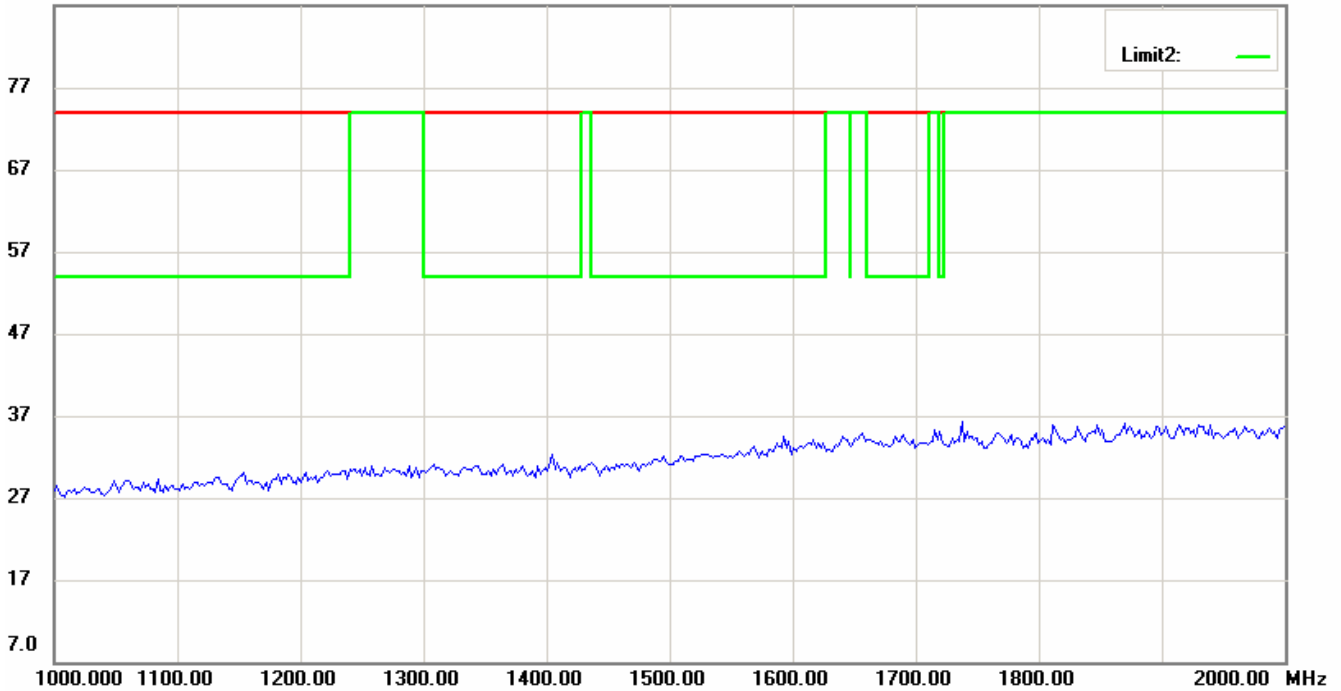


# Worldwide Testing Services(Taiwan) Co., Ltd.

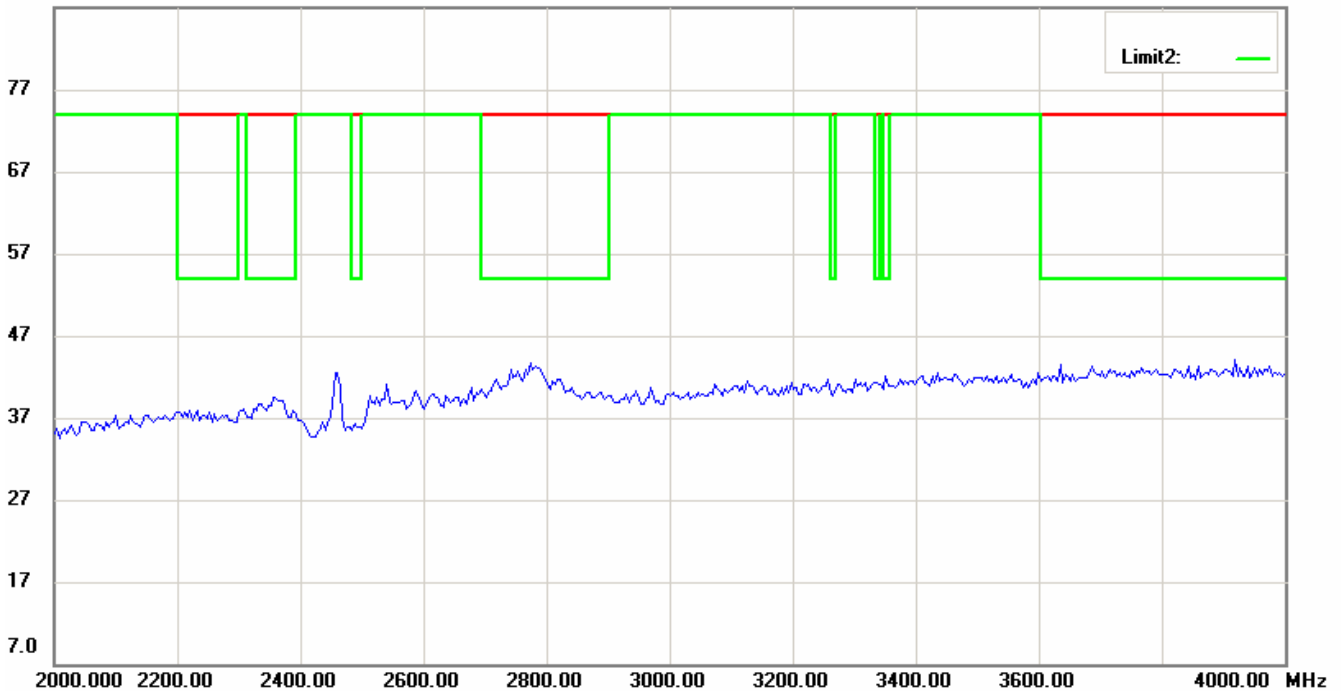
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



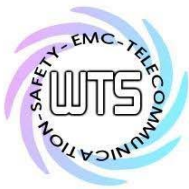
87.0 dBuV/m



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.

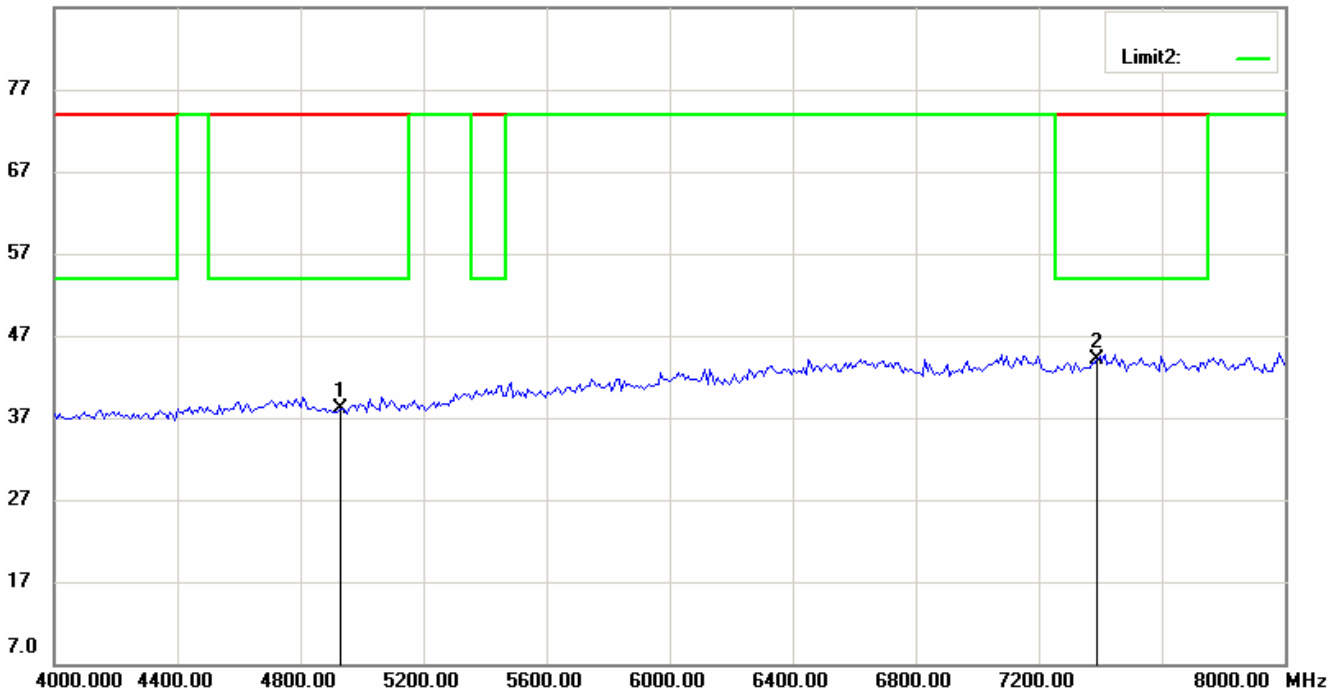


# Worldwide Testing Services(Taiwan) Co., Ltd.

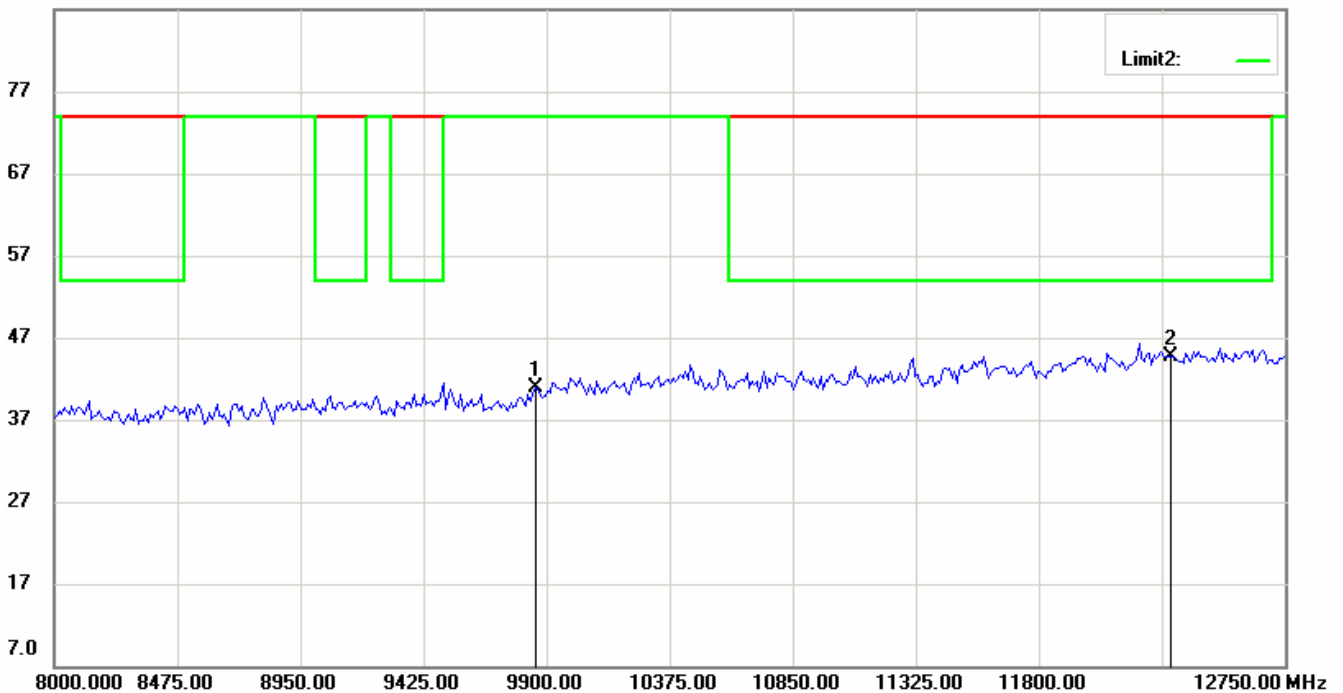
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

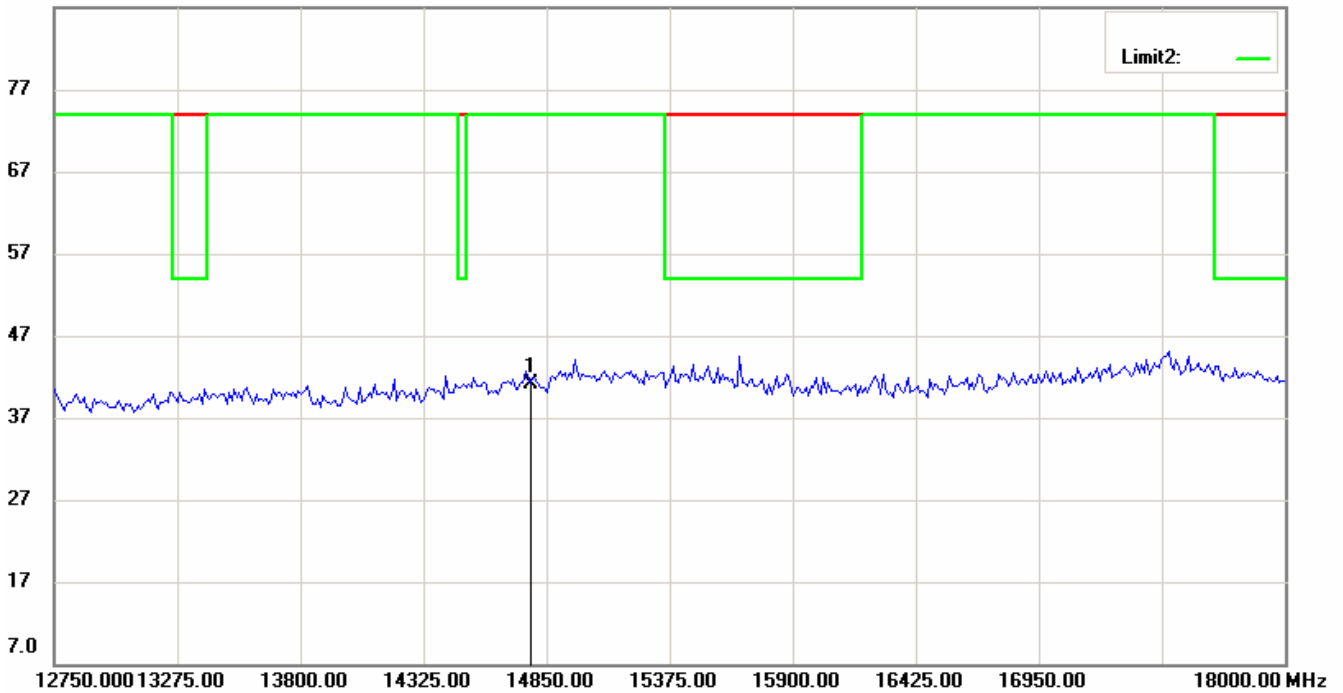


# Worldwide Testing Services(Taiwan) Co., Ltd.

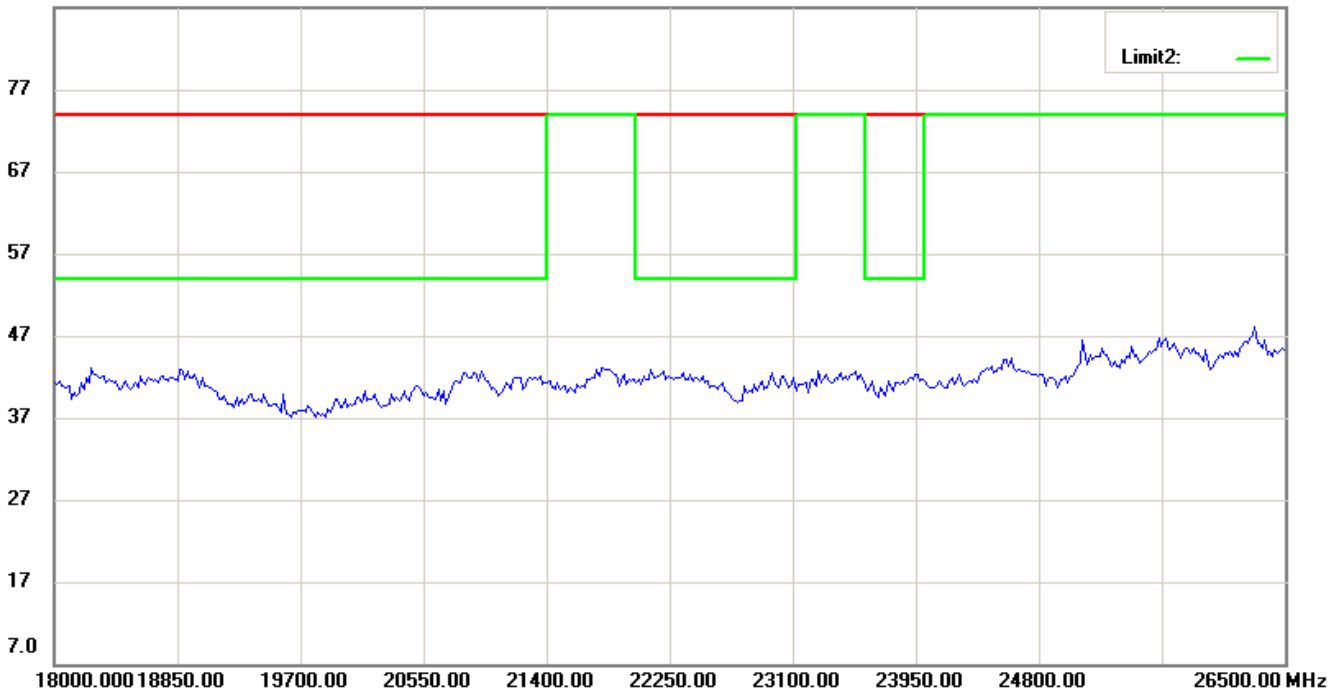
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

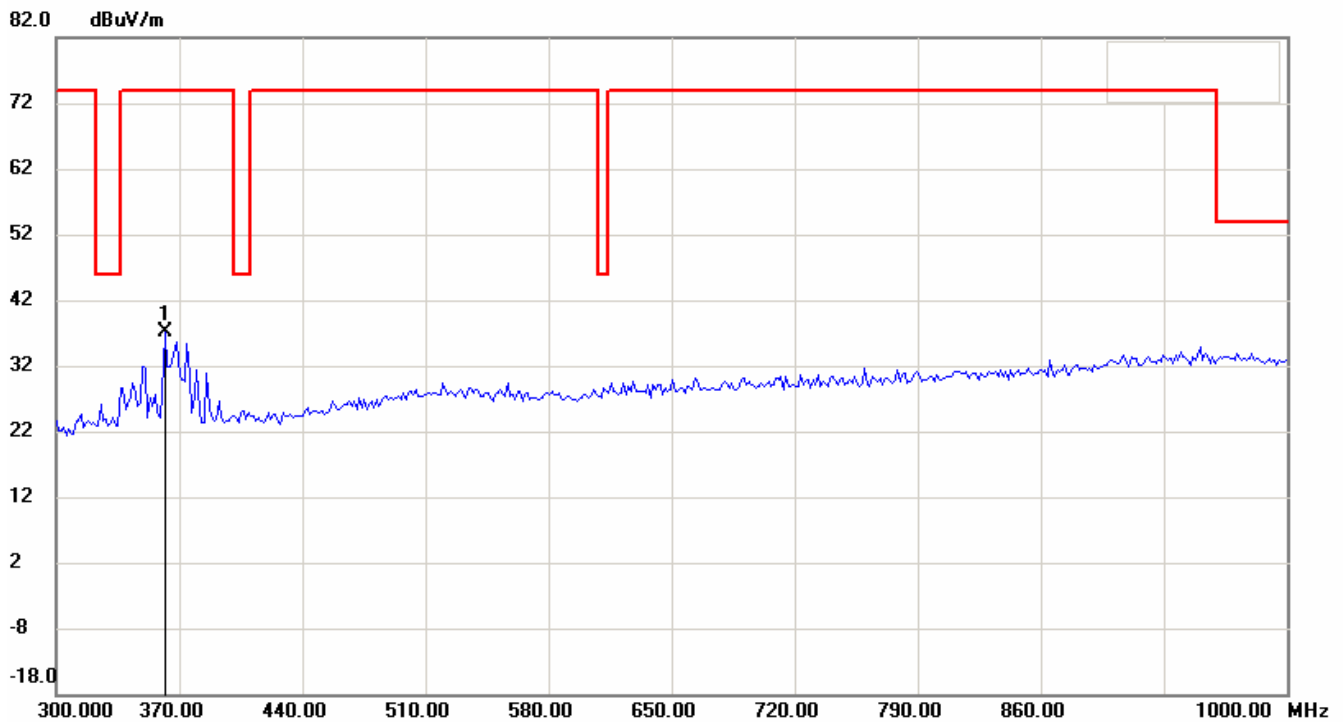
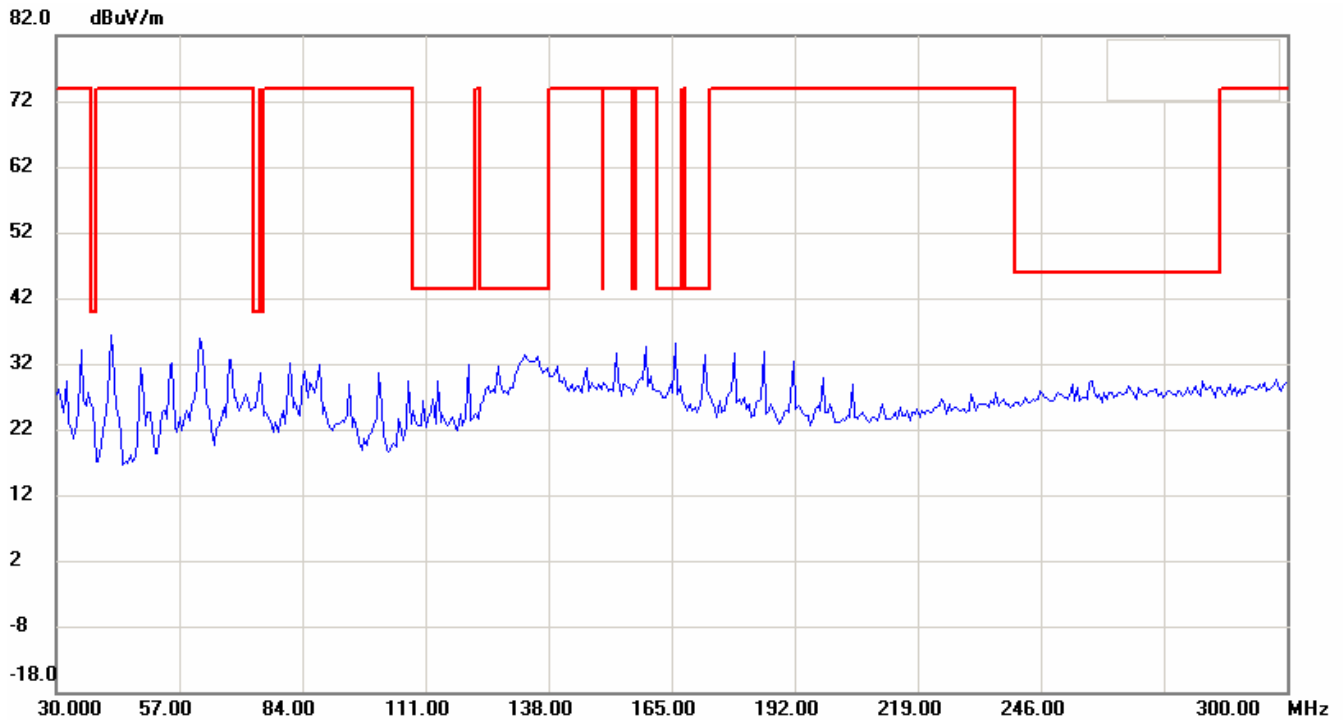
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

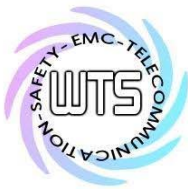


Up Line: Peak Limit Line Down Line: Ave Limit Line

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.



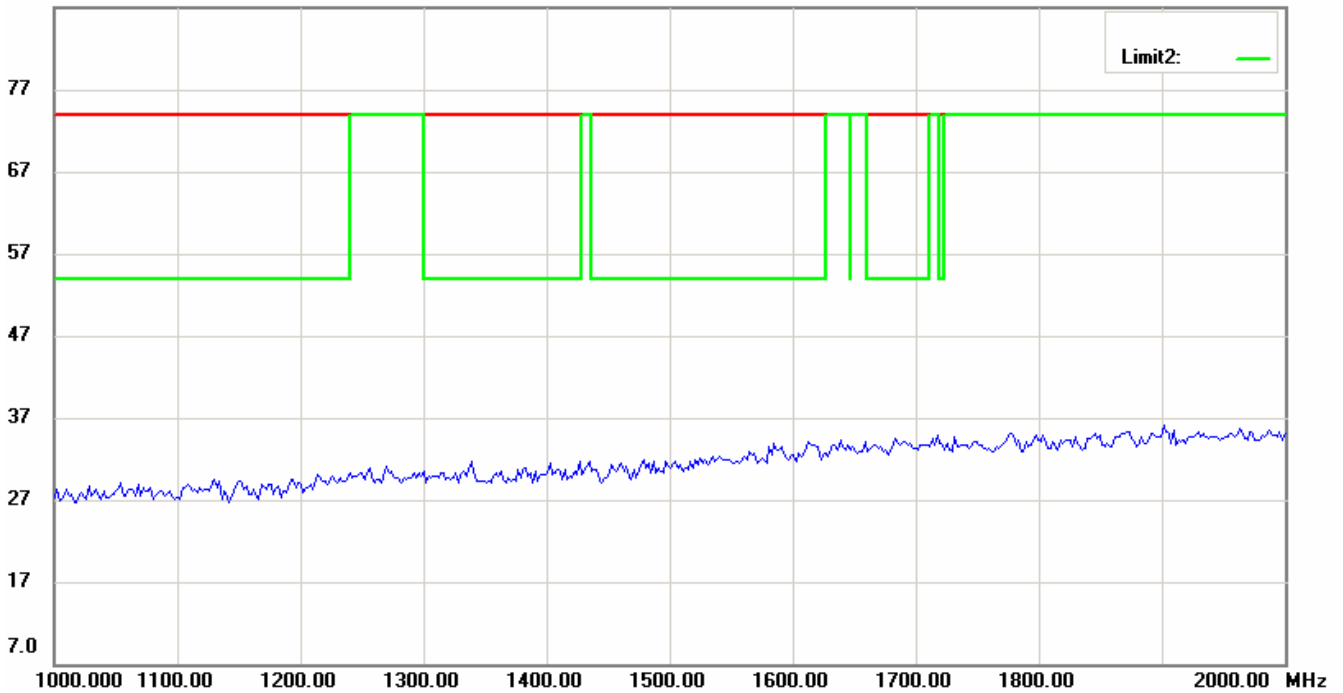


# Worldwide Testing Services(Taiwan) Co., Ltd.

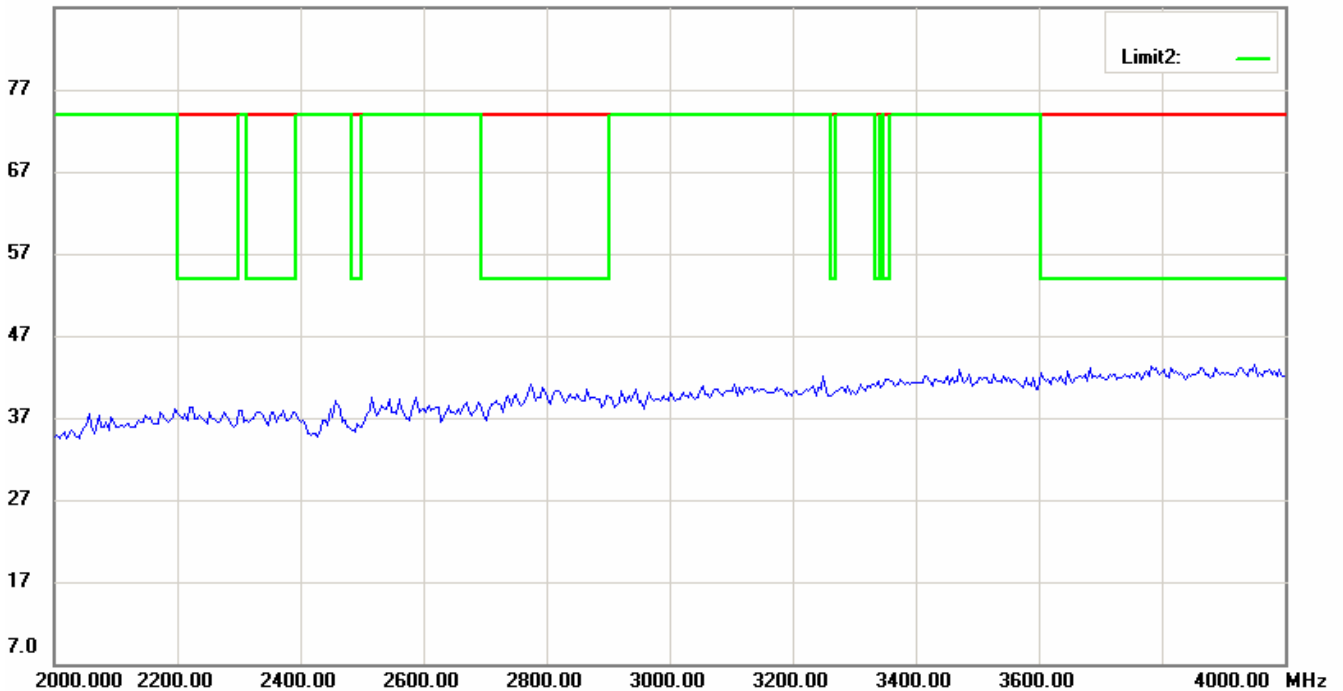
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

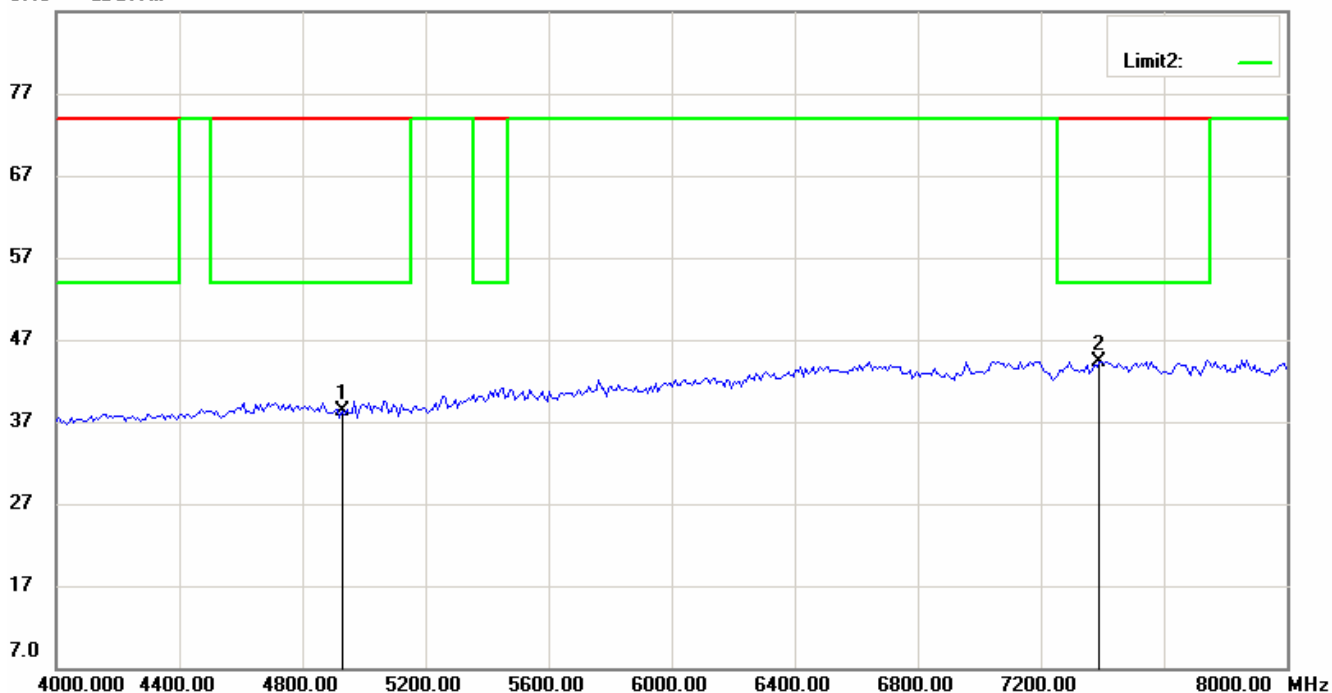
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



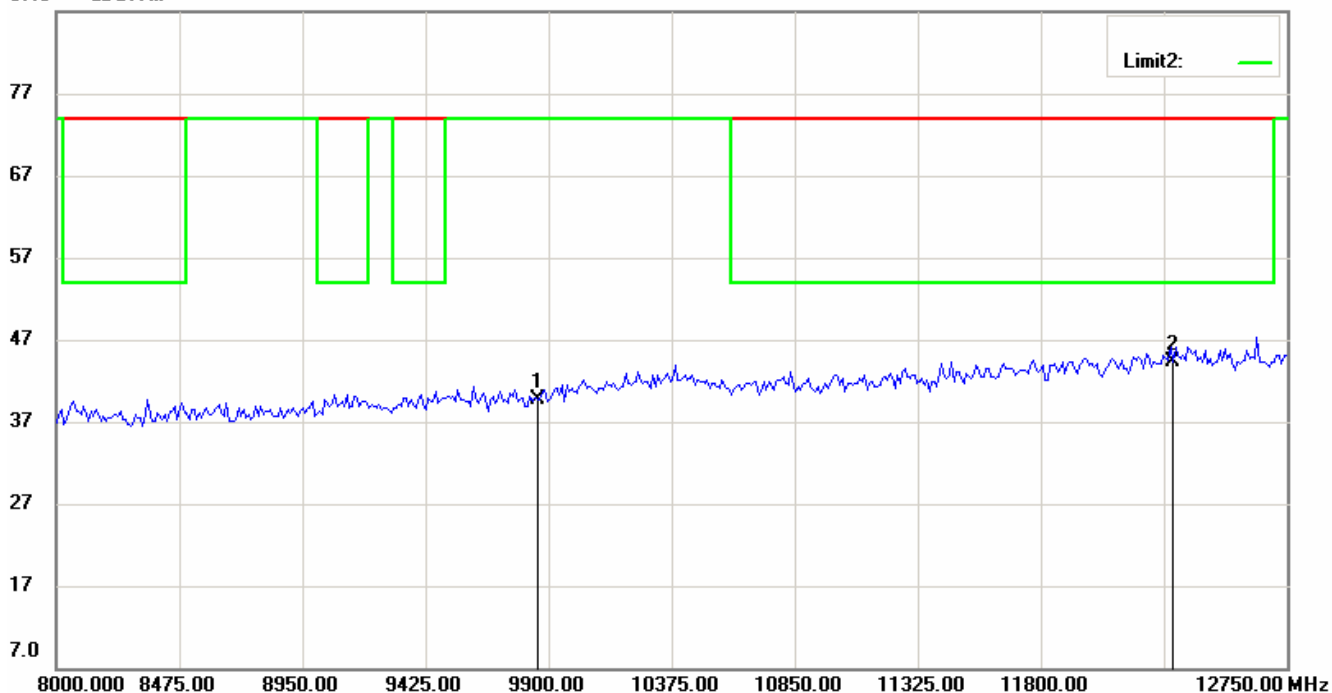
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



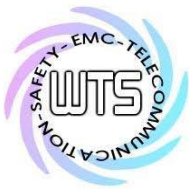
87.0 dBuV/m



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.

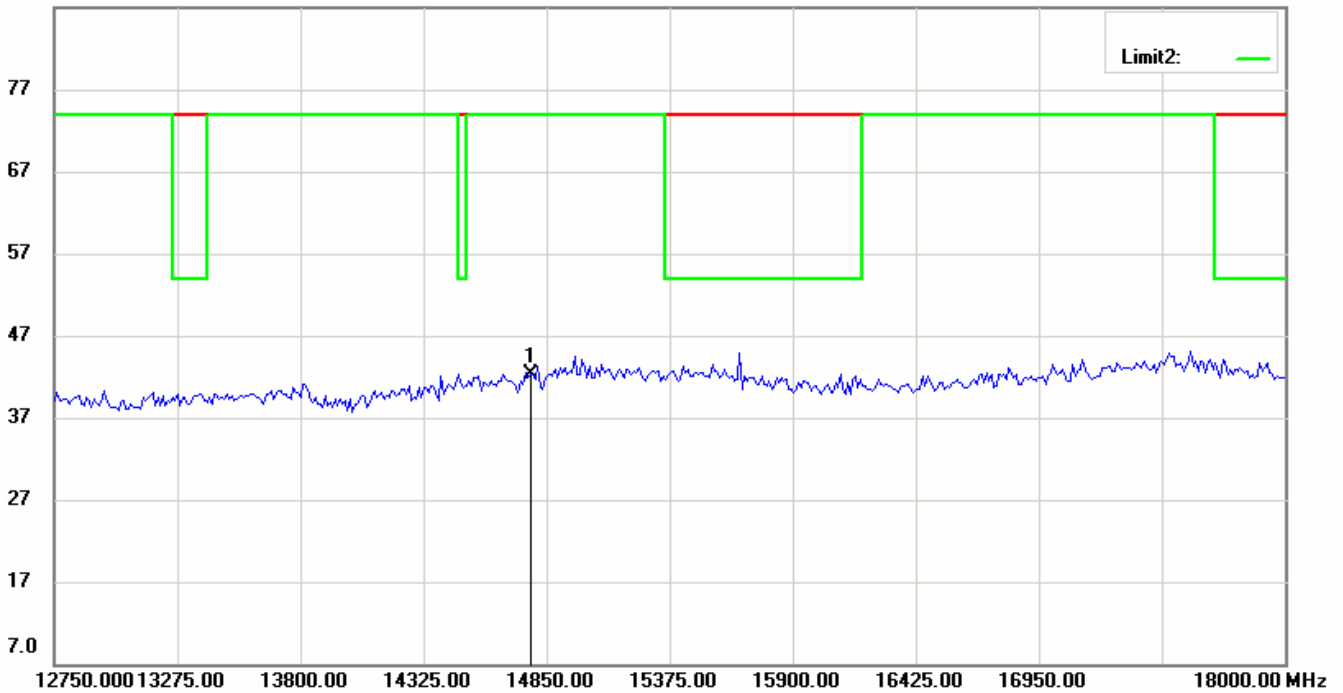


# Worldwide Testing Services(Taiwan) Co., Ltd.

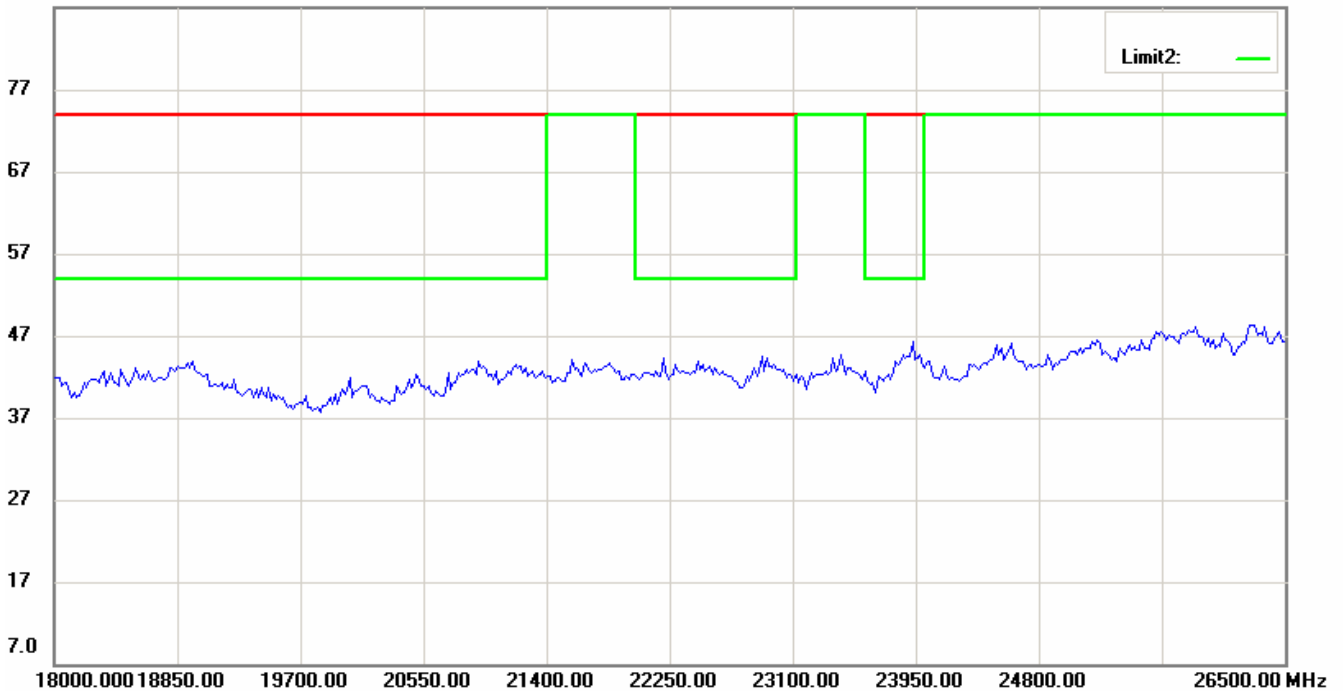
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

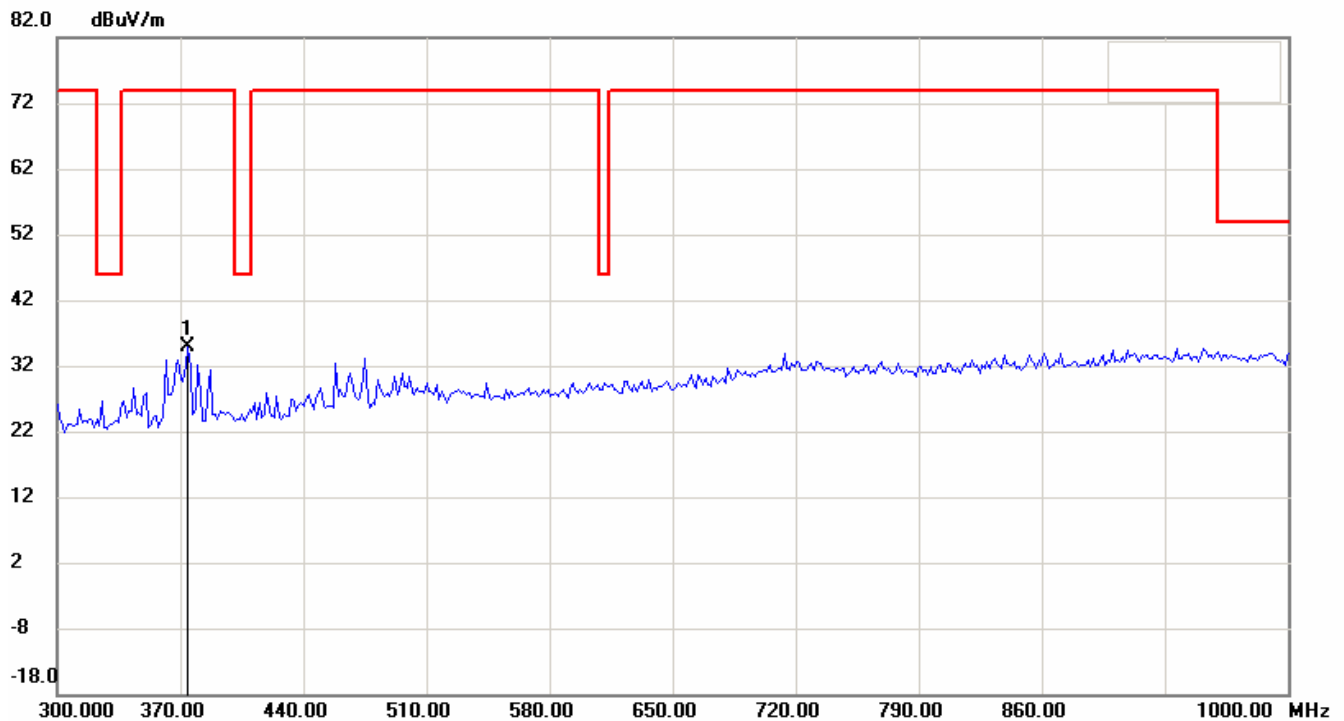
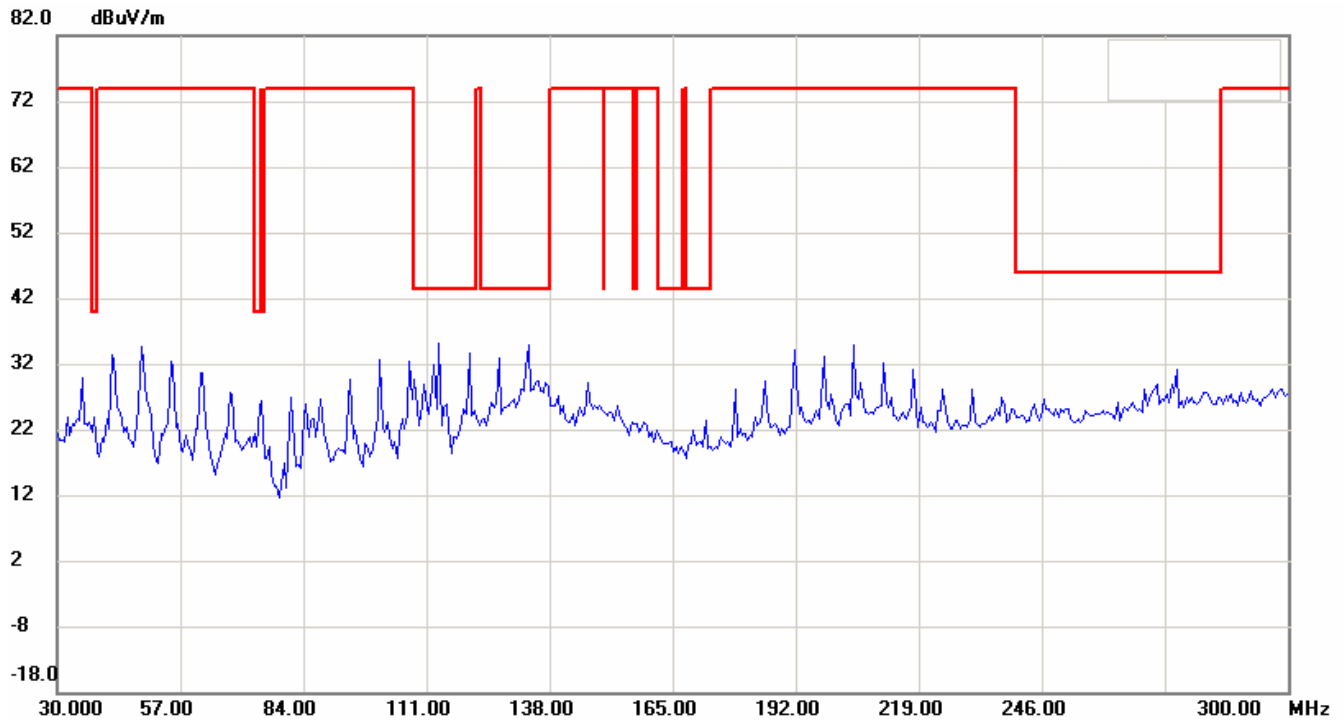


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

WLAN Mode ( Mode B )\_ CH 1

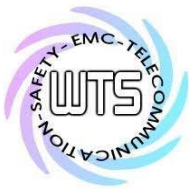
Antenna Polarization H



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 limit test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

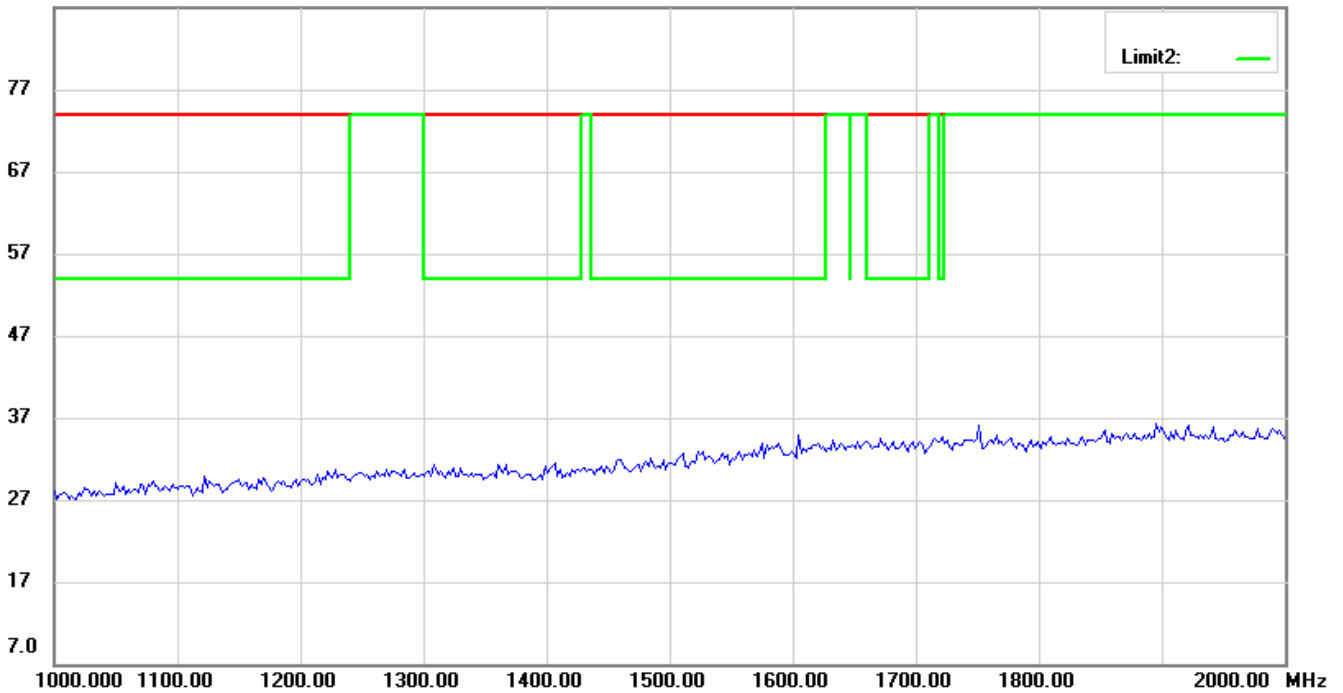


# Worldwide Testing Services(Taiwan) Co., Ltd.

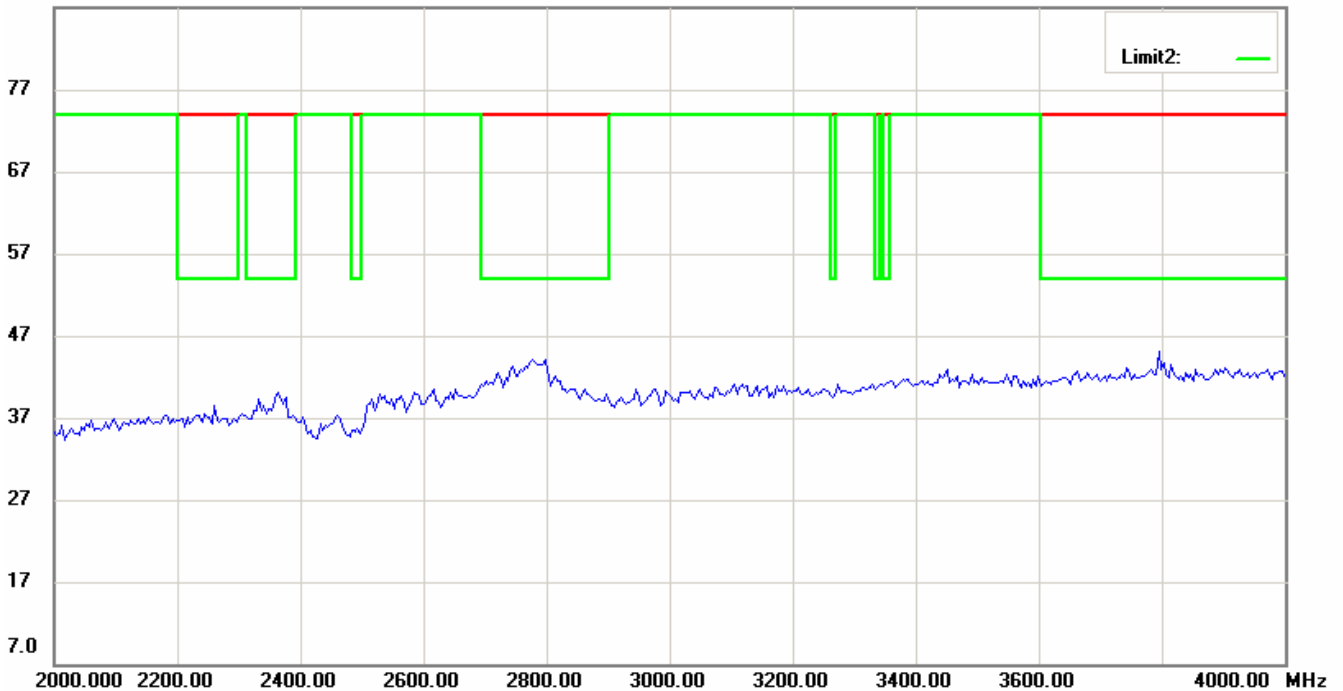
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

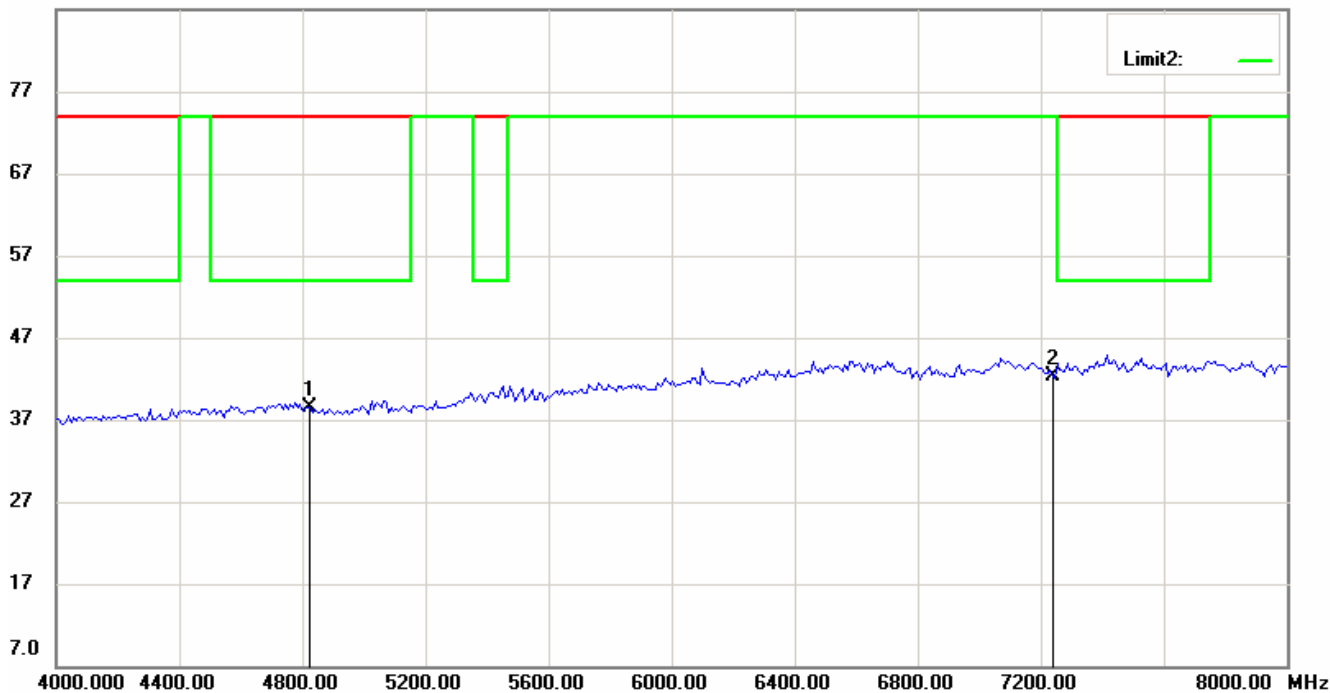


# Worldwide Testing Services(Taiwan) Co., Ltd.

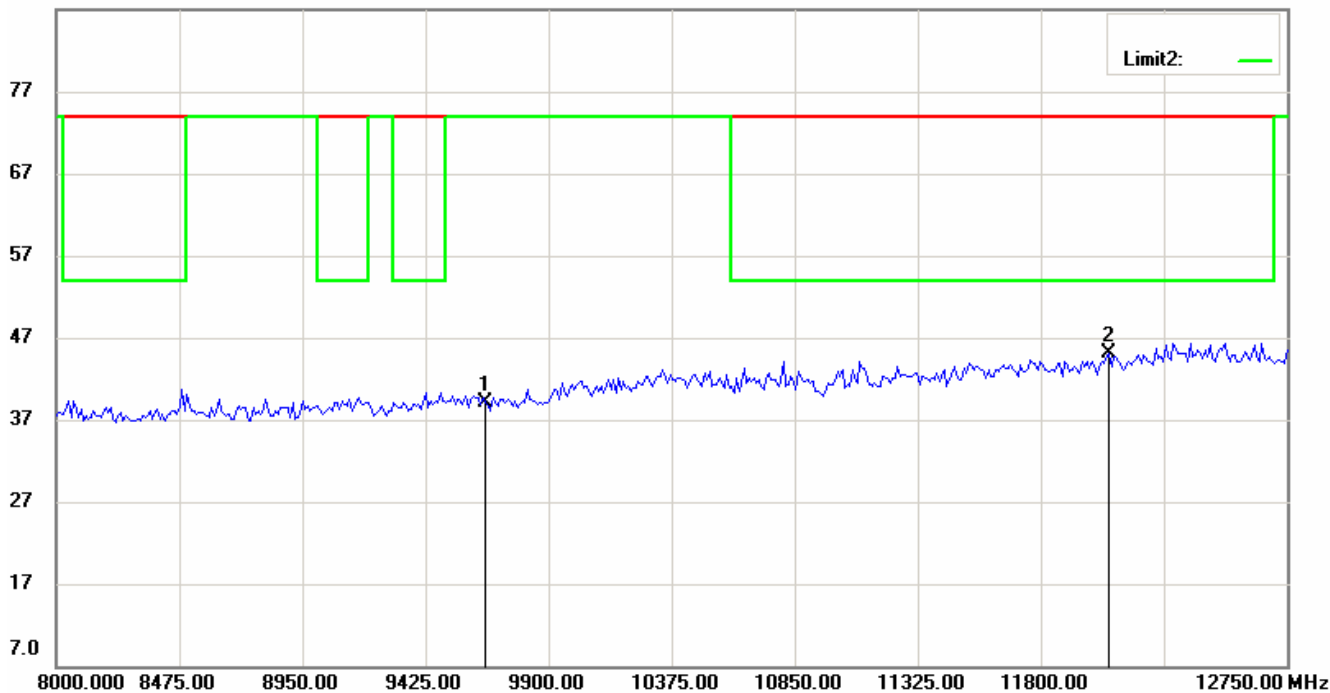
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



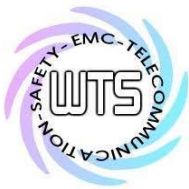
87.0 dBuV/m



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.

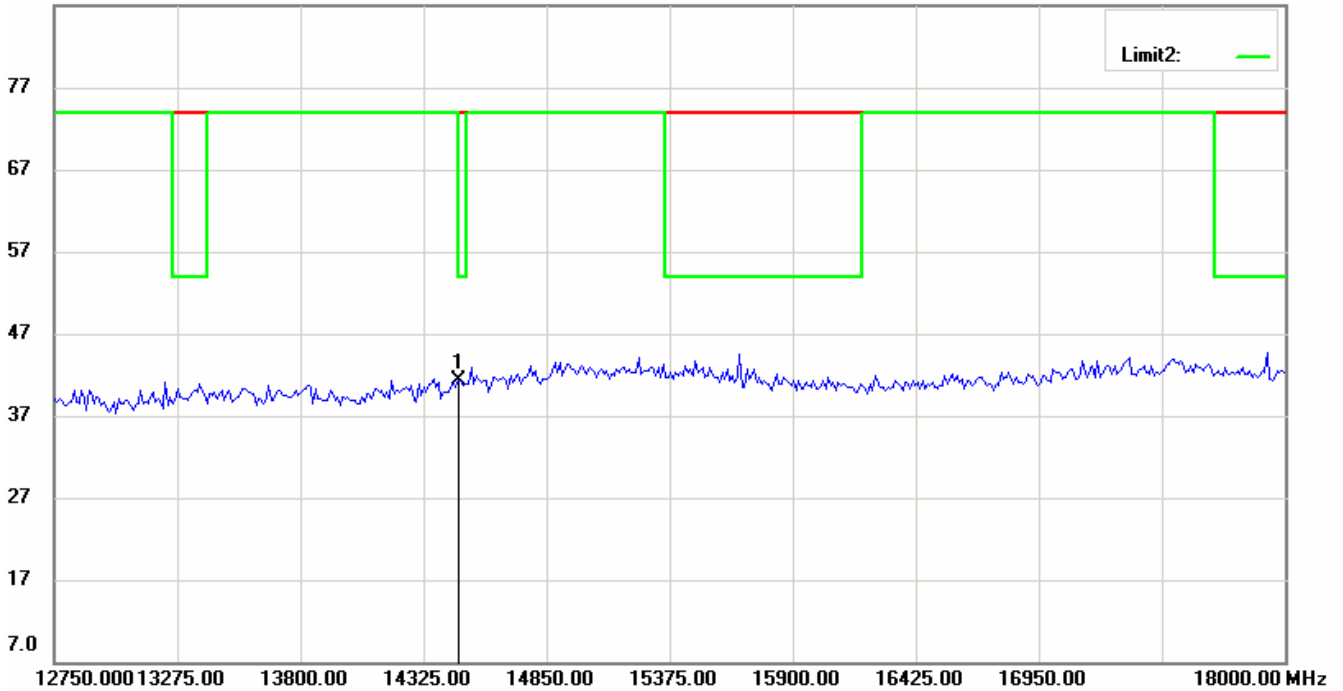


# Worldwide Testing Services(Taiwan) Co., Ltd.

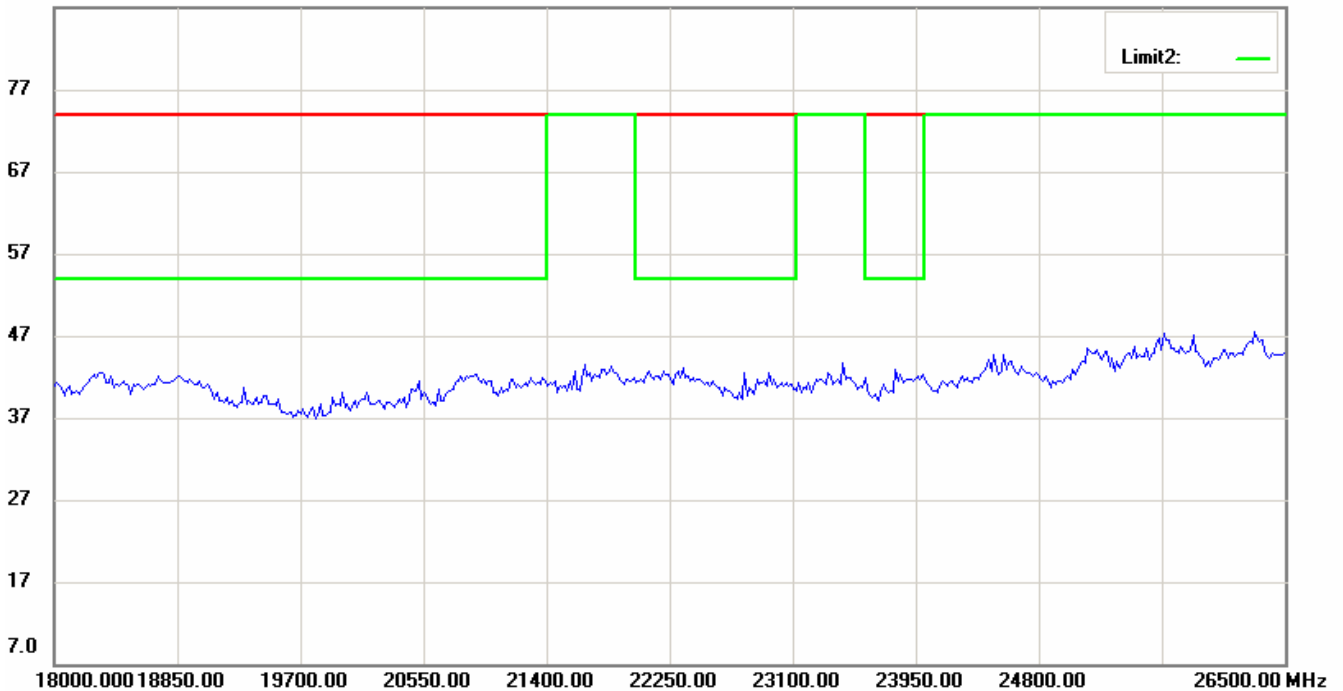
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

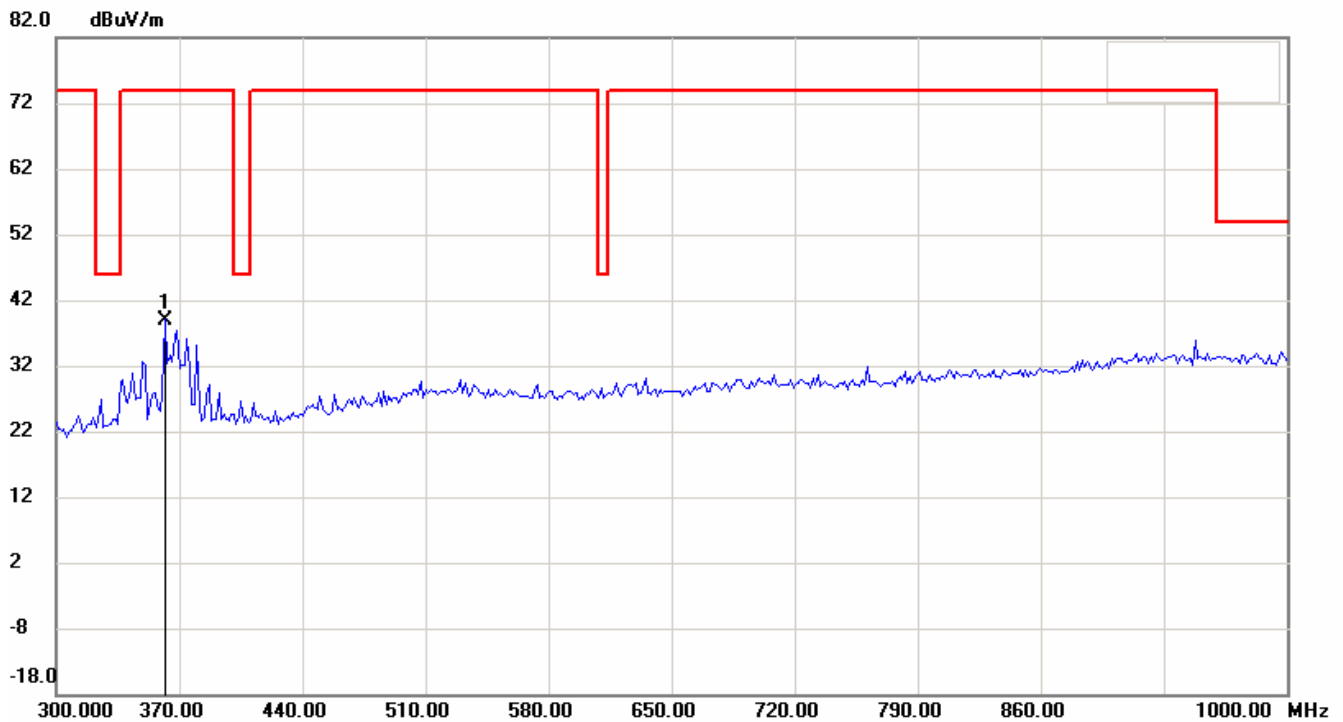
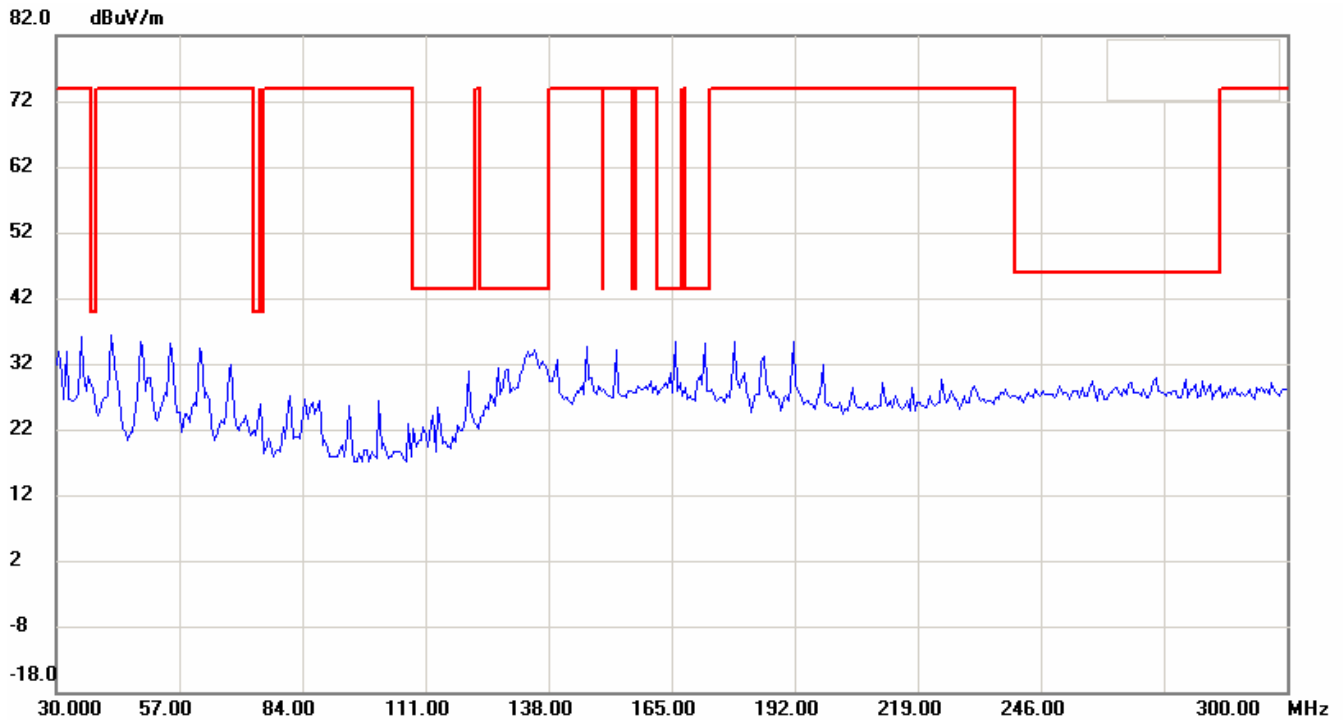
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

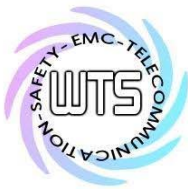


Up Line: Peak Limit Line Down Line: Ave Limit Line

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.



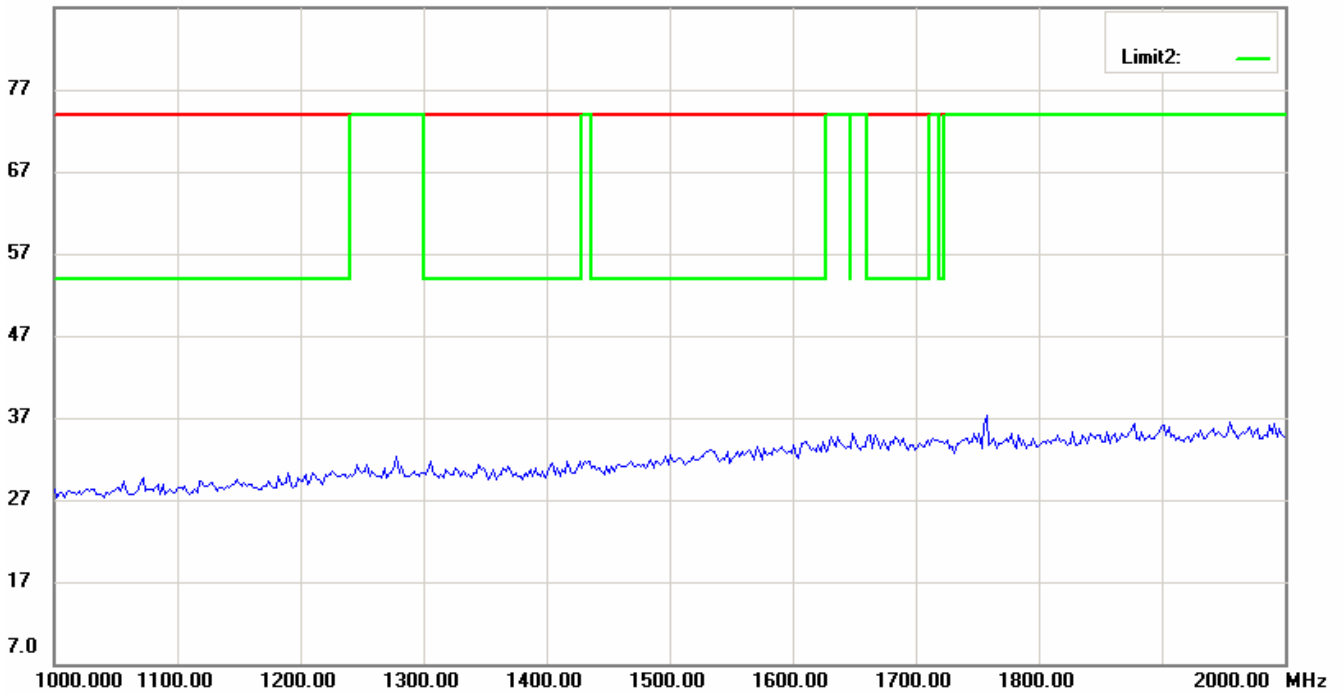


# Worldwide Testing Services(Taiwan) Co., Ltd.

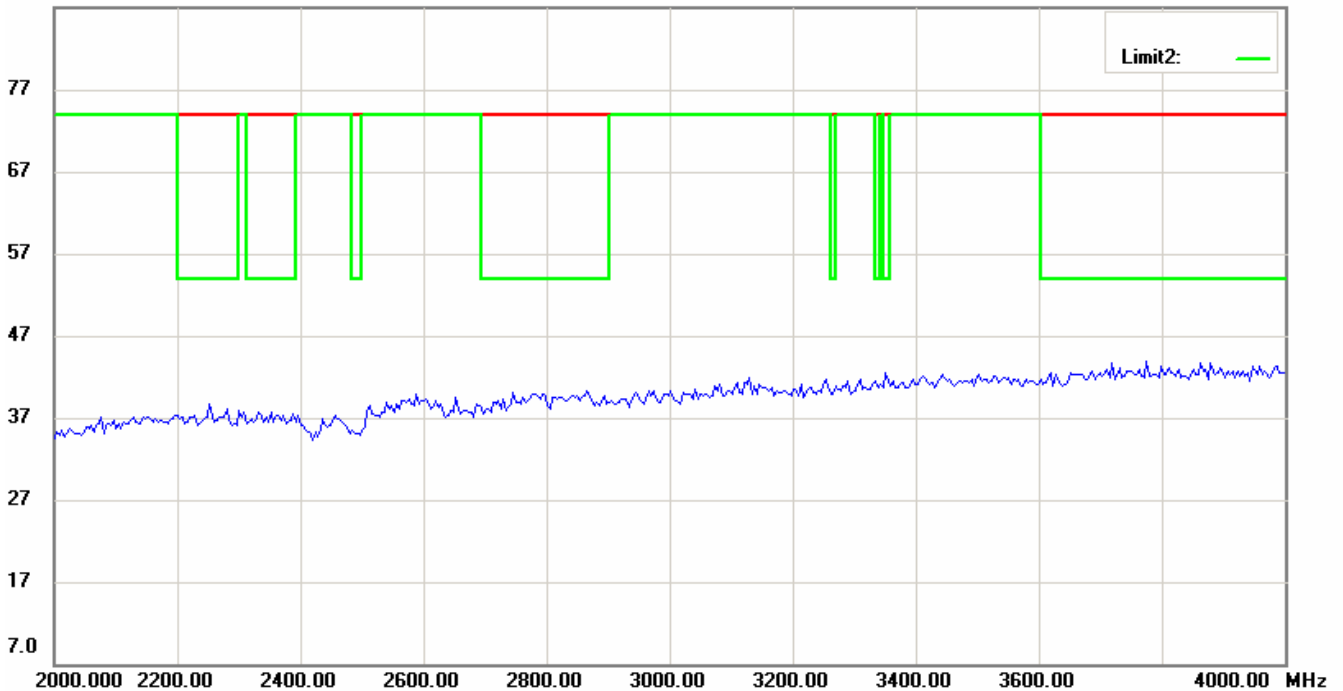
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

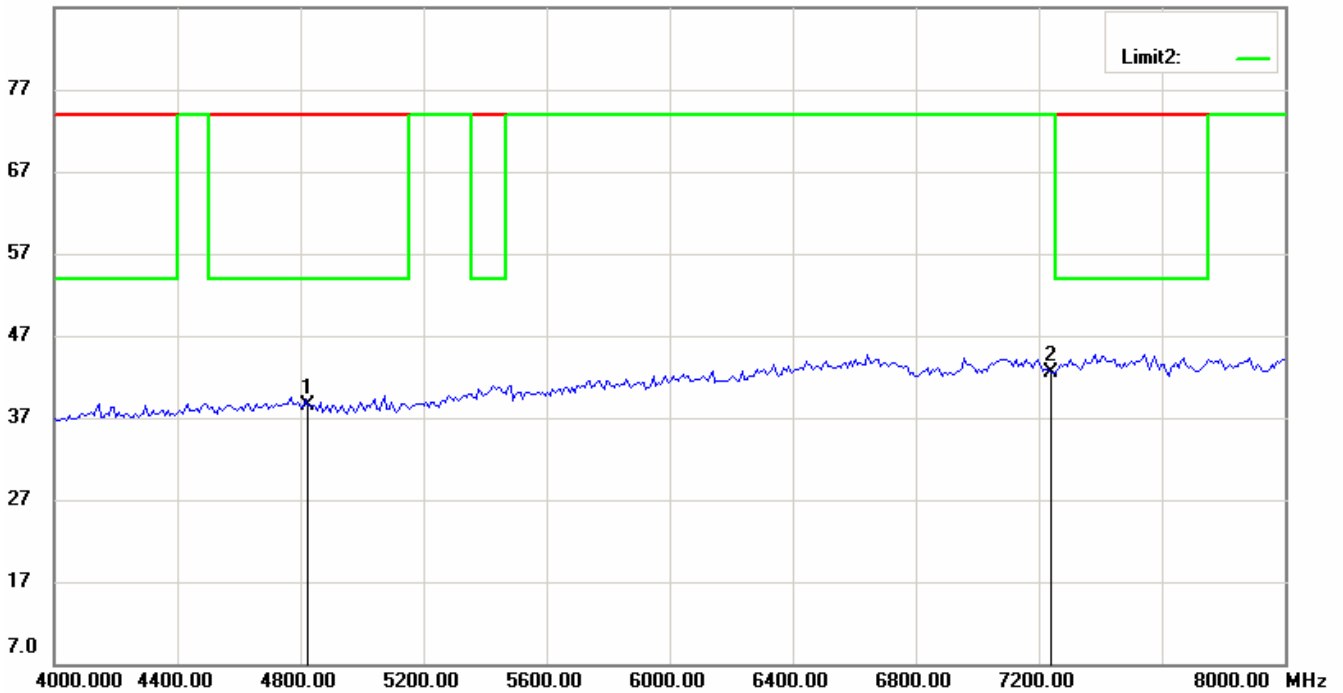


# Worldwide Testing Services(Taiwan) Co., Ltd.

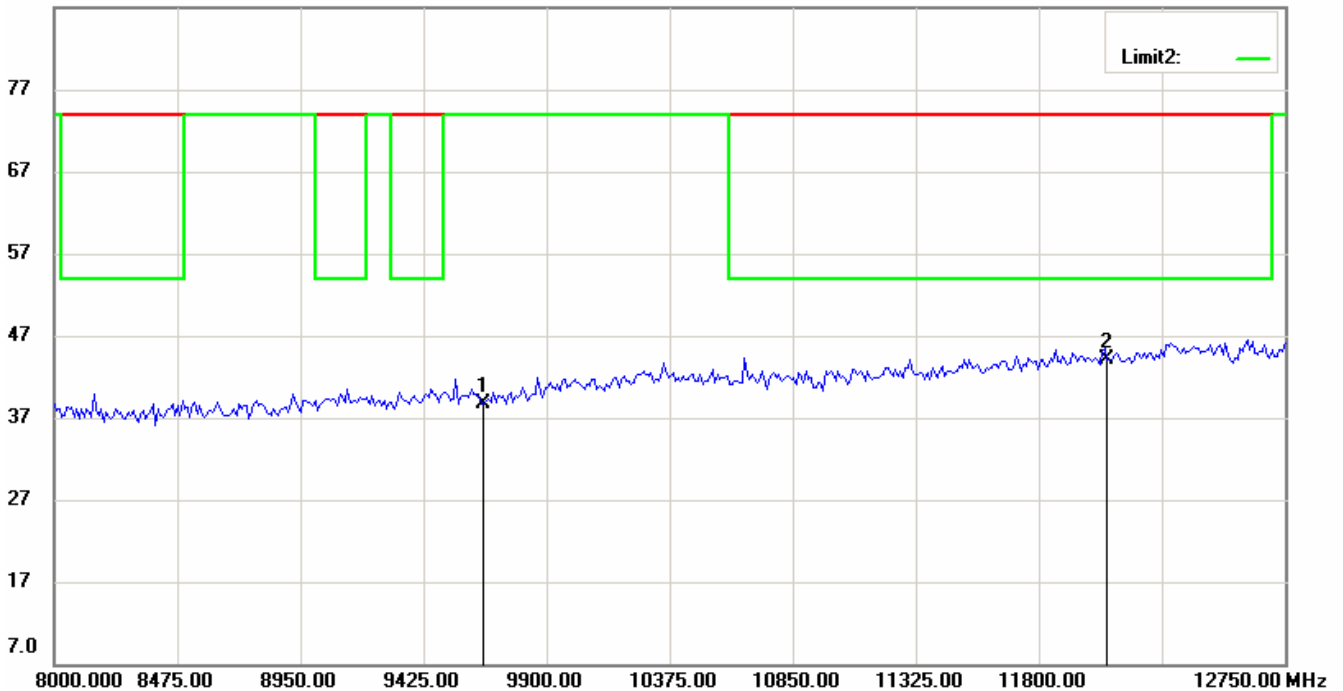
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

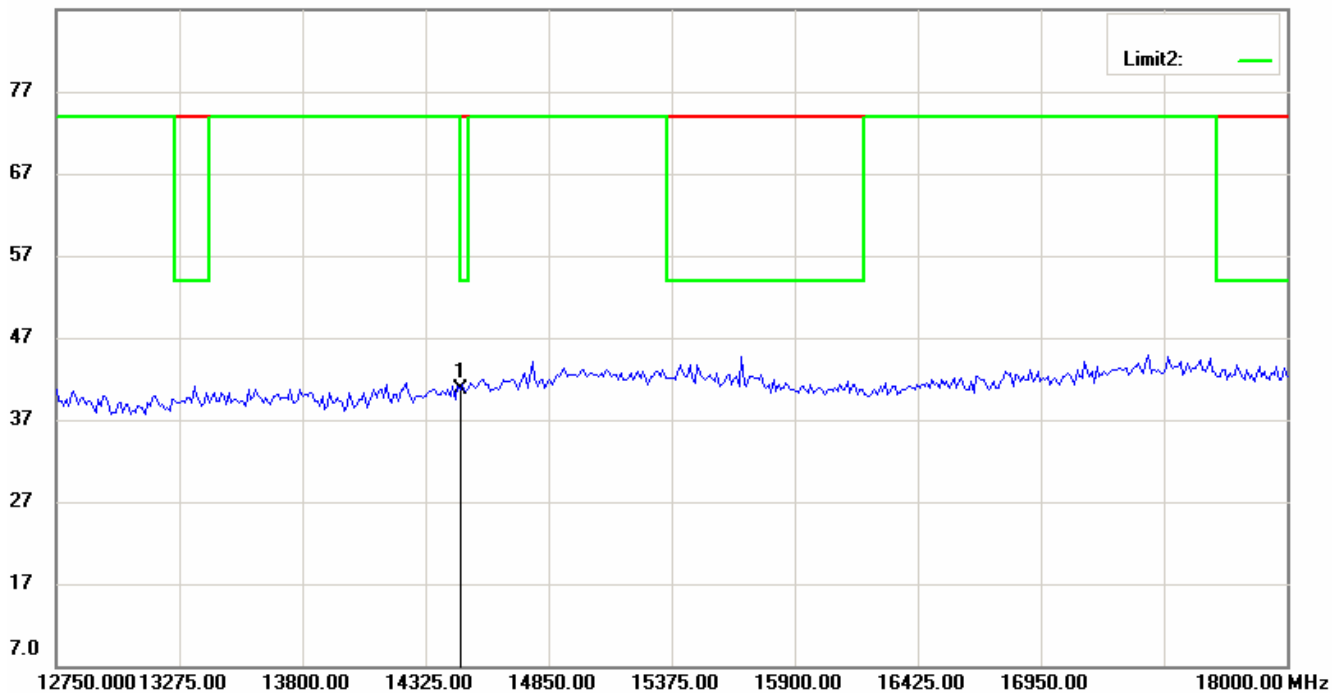


# Worldwide Testing Services(Taiwan) Co., Ltd.

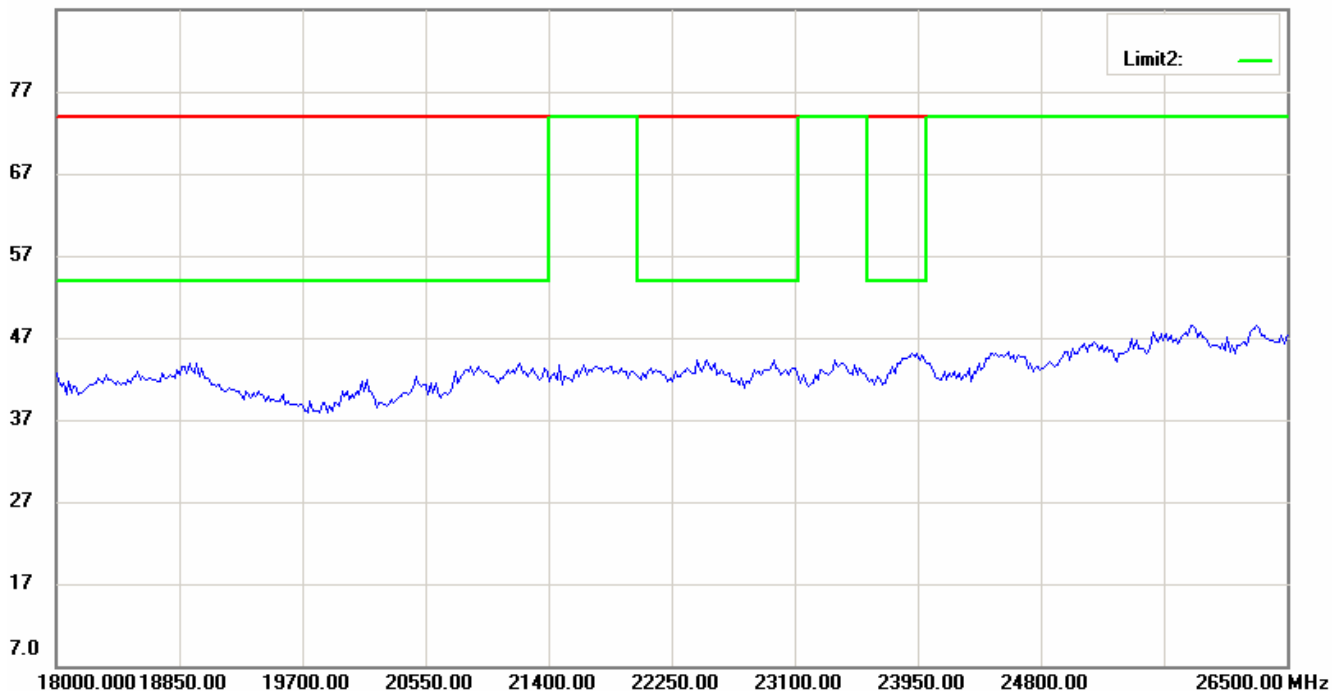
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

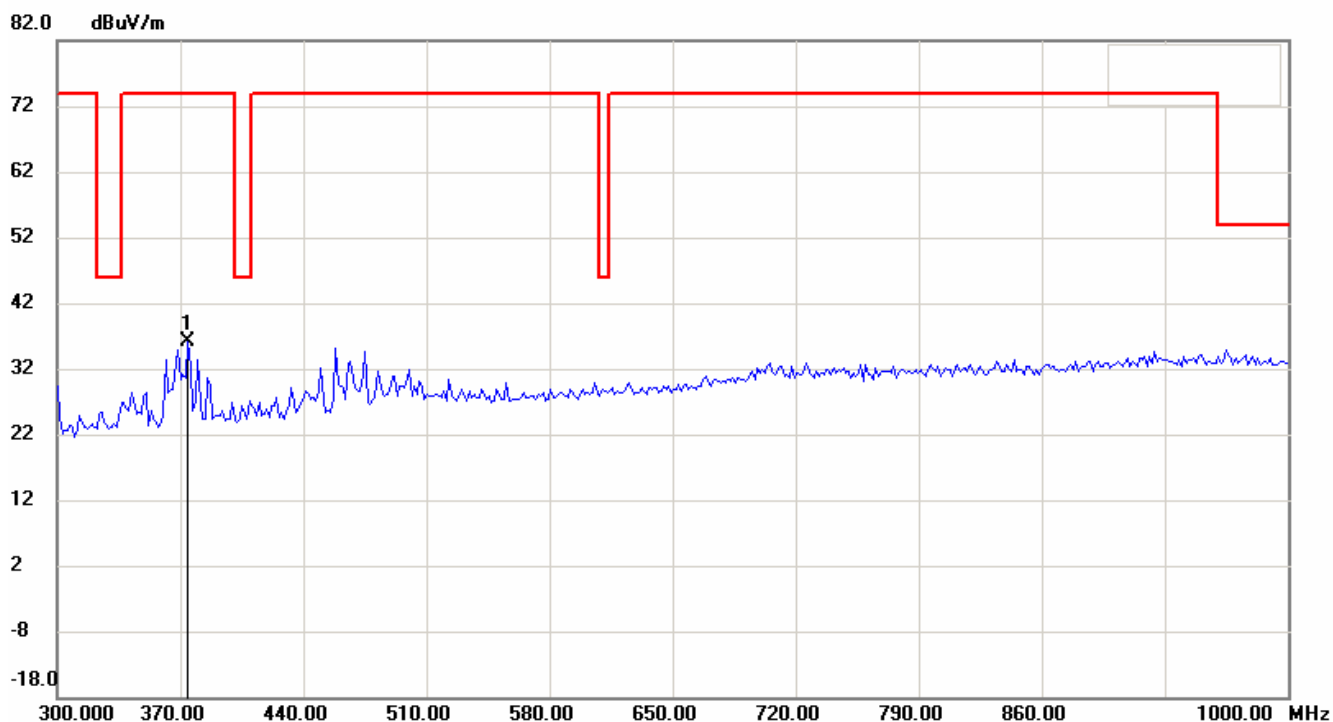
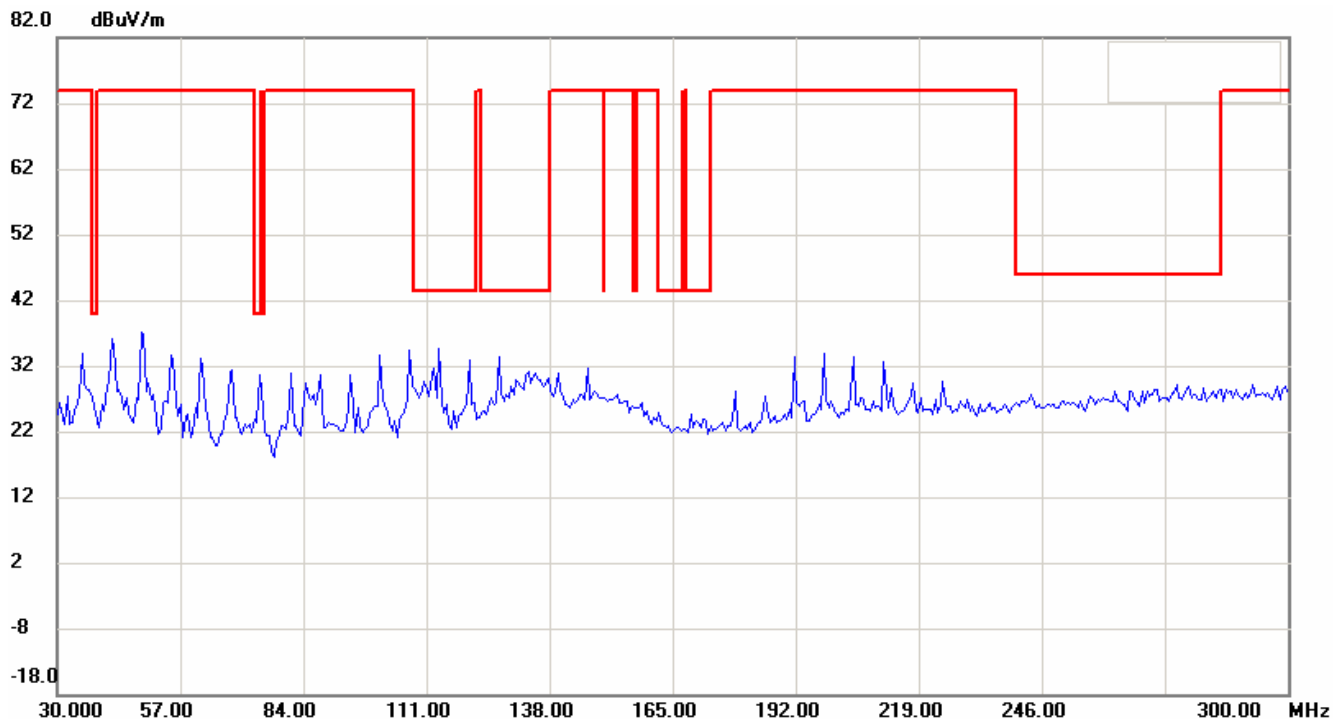


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

WLAN Mode ( Mode B )\_ CH 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 limit test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

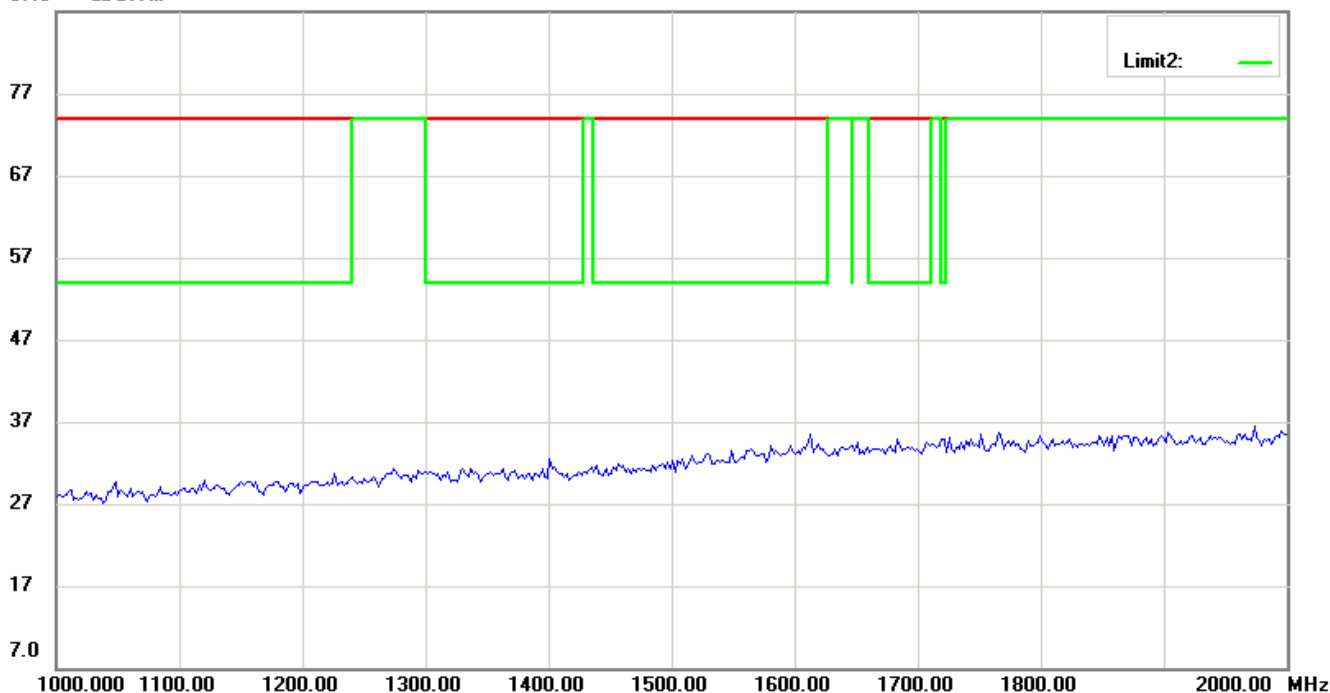


# Worldwide Testing Services(Taiwan) Co., Ltd.

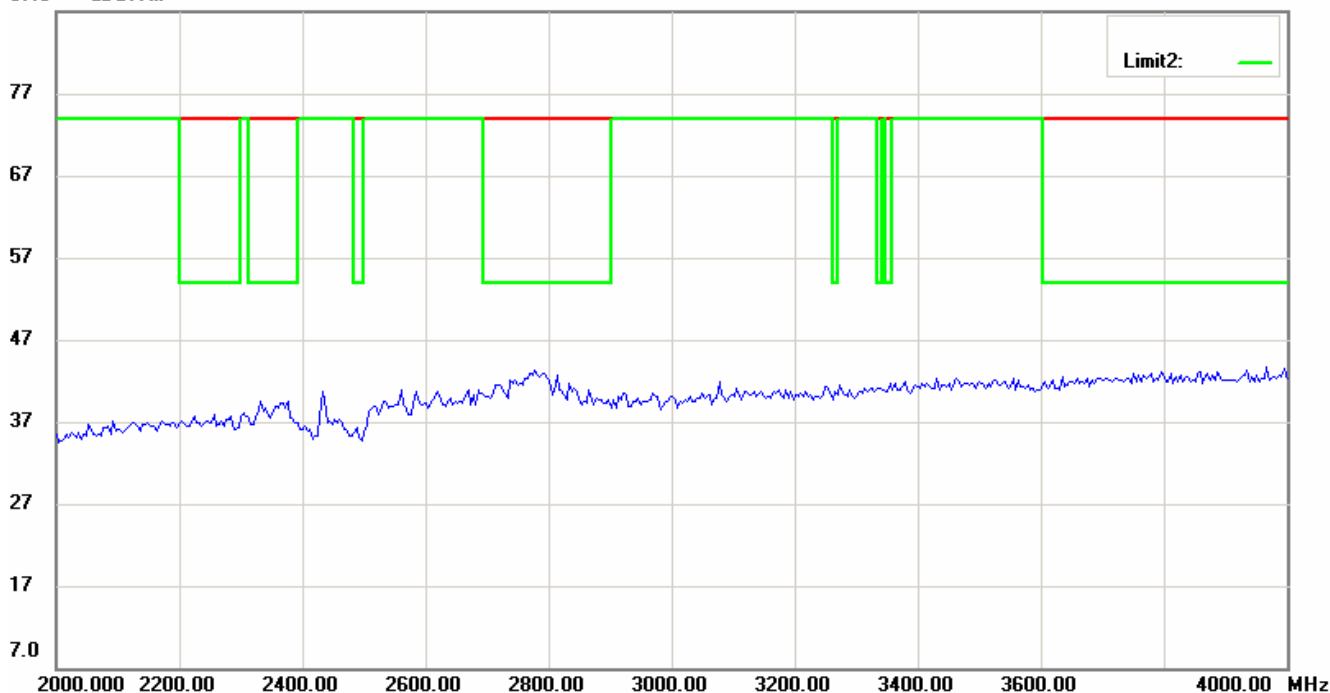
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



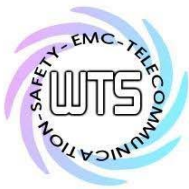
87.0 dBuV/m



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.

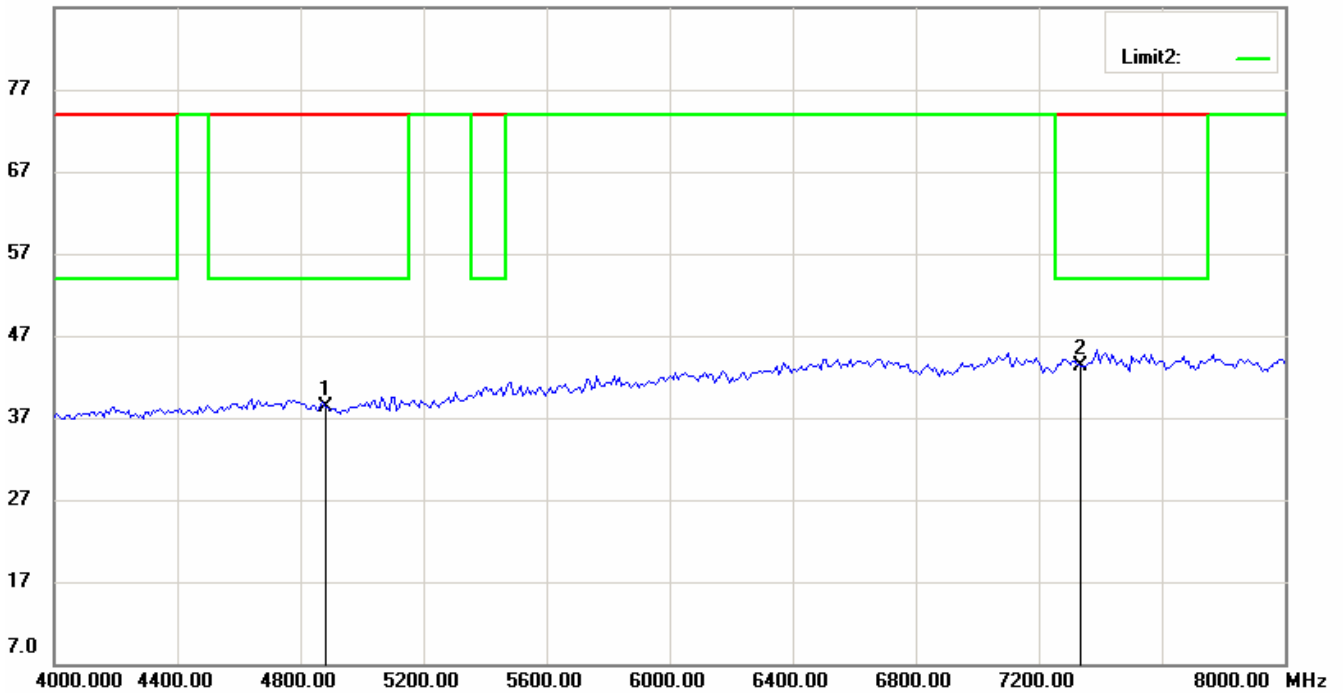


# Worldwide Testing Services(Taiwan) Co., Ltd.

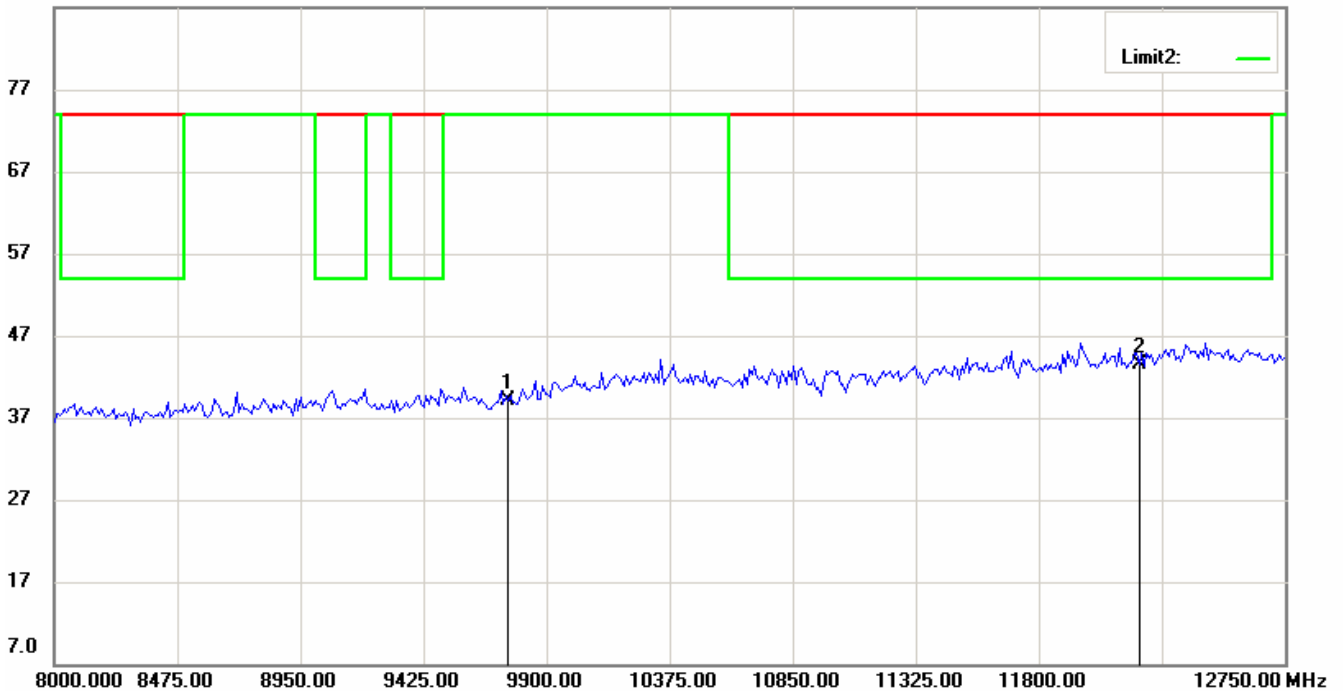
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

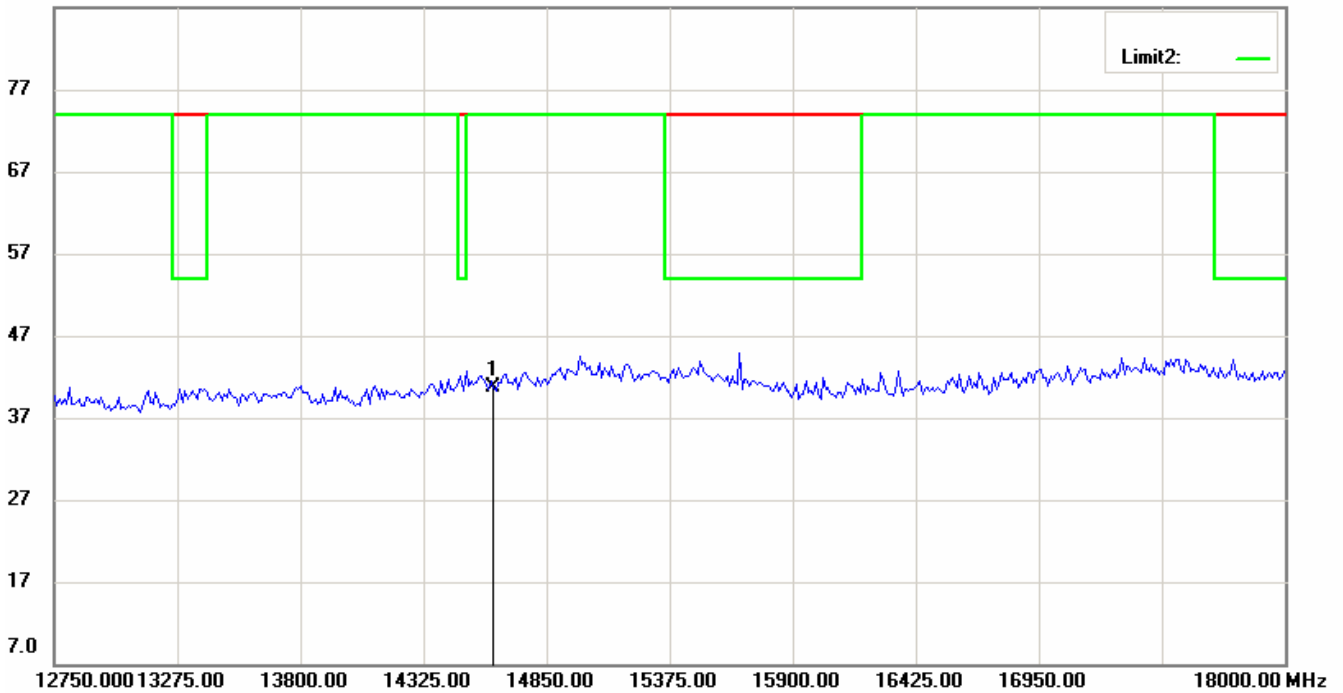


# Worldwide Testing Services(Taiwan) Co., Ltd.

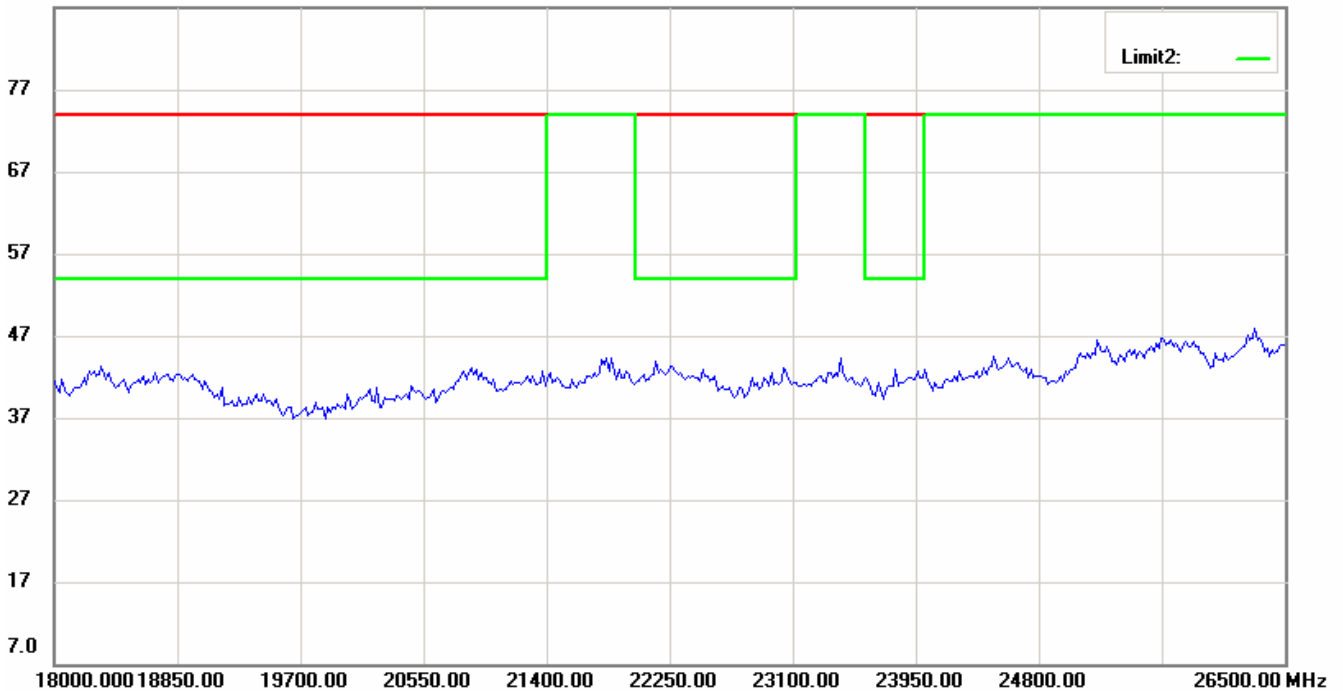
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

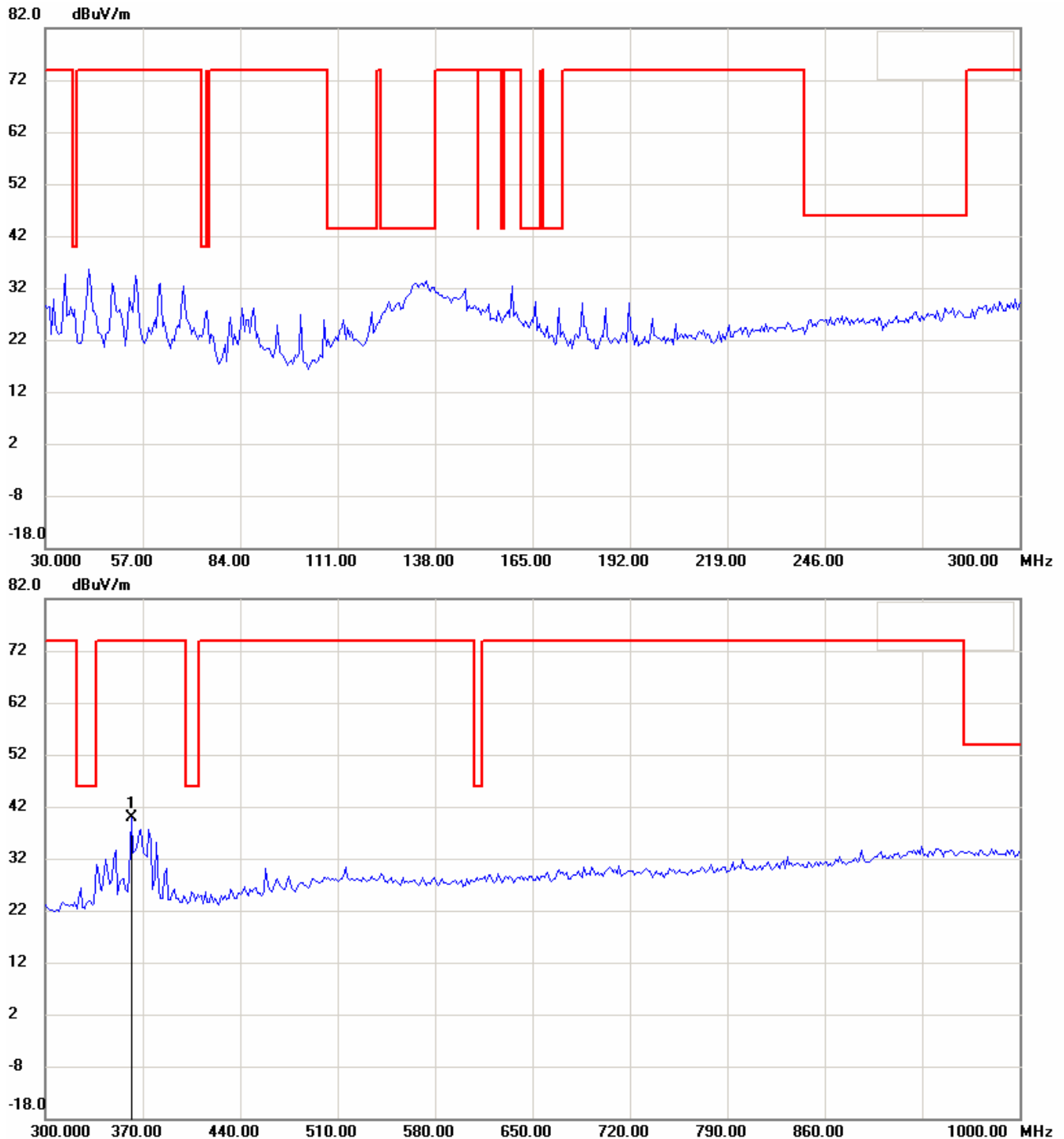
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 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.



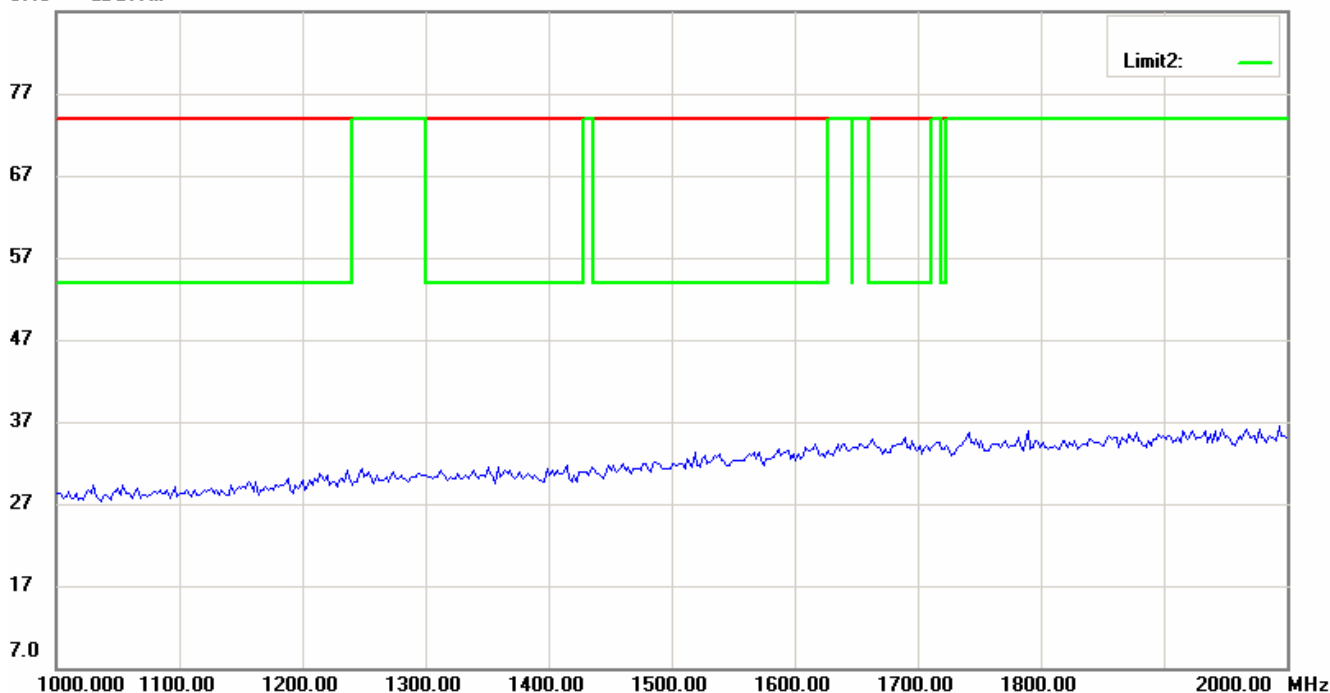


# Worldwide Testing Services(Taiwan) Co., Ltd.

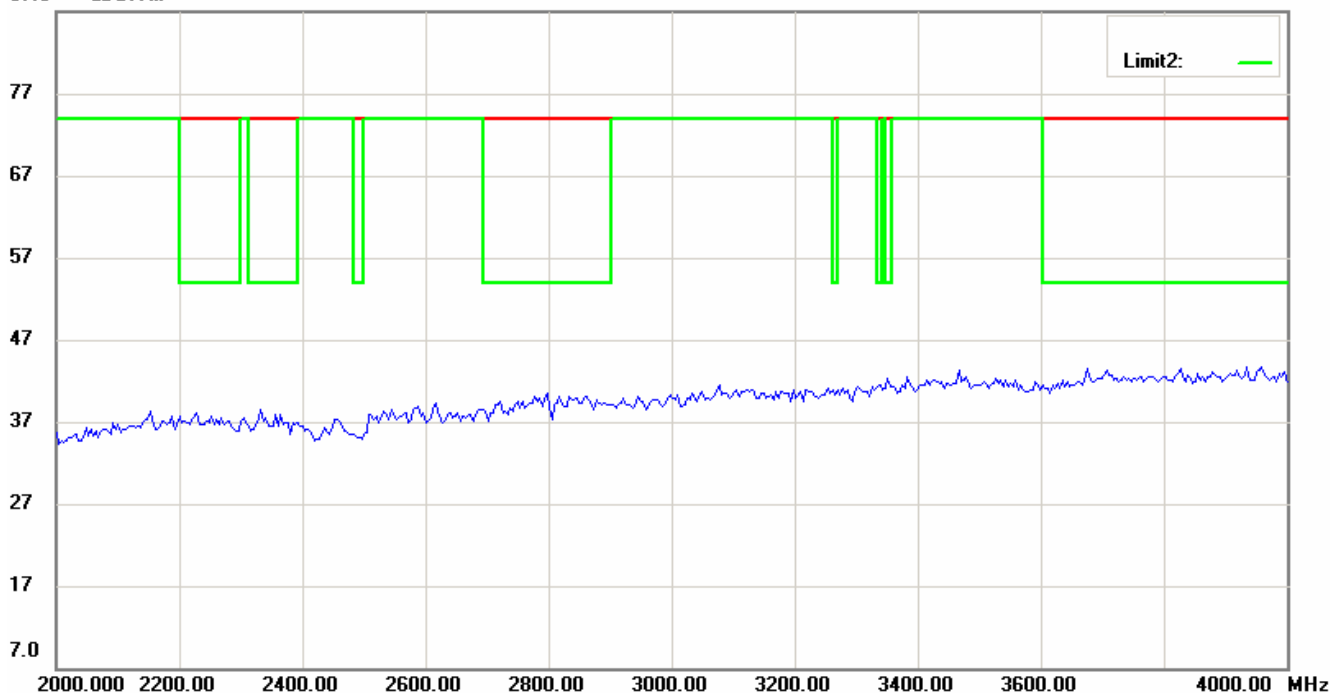
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

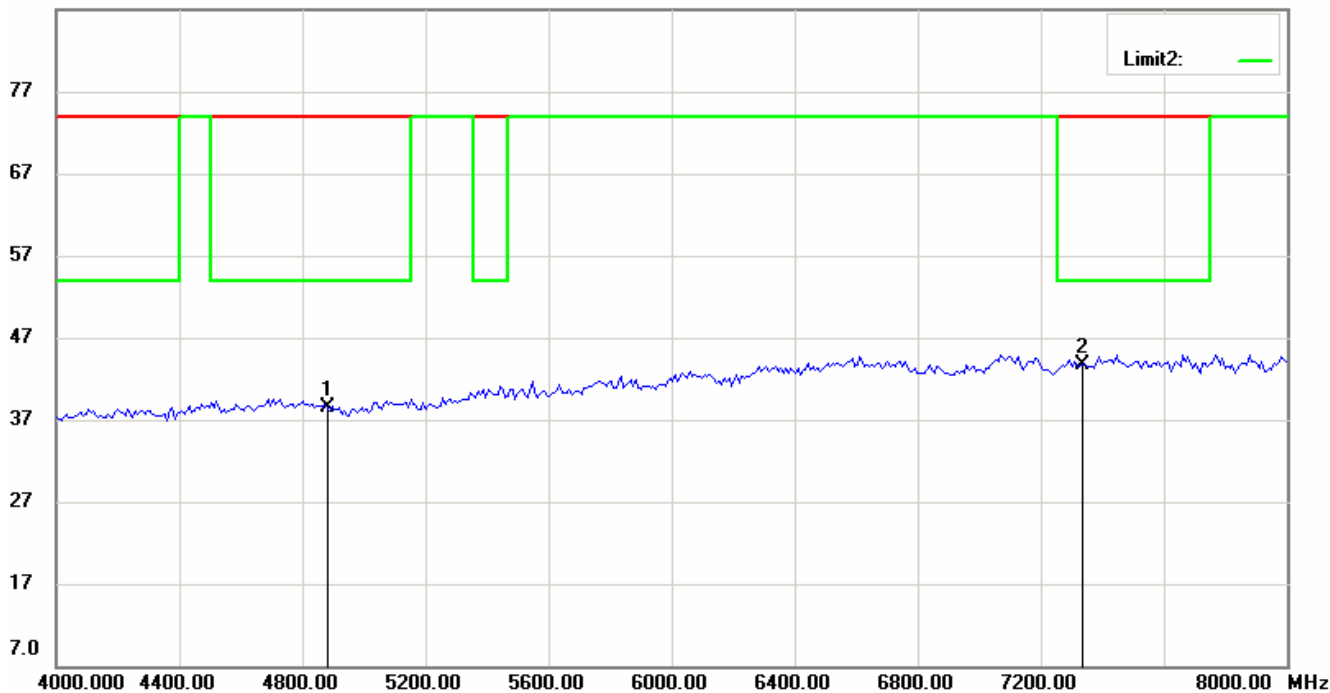


# Worldwide Testing Services(Taiwan) Co., Ltd.

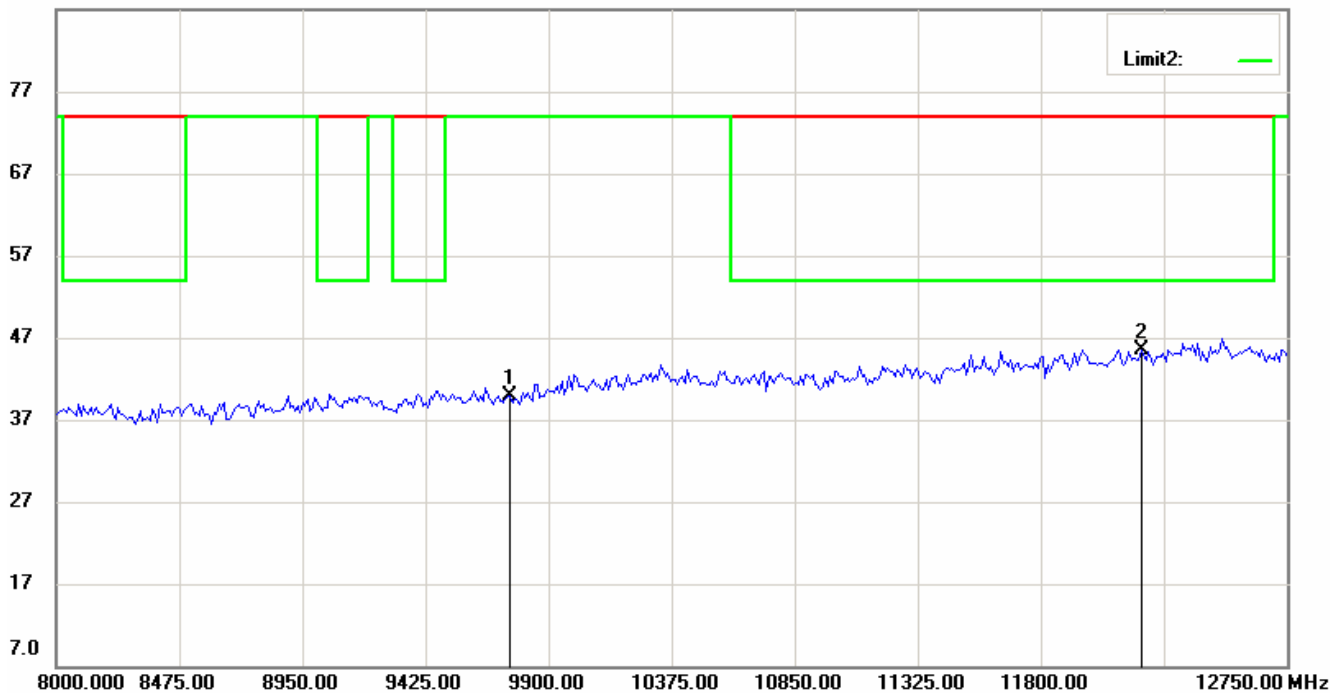
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



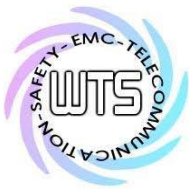
87.0 dBuV/m



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.

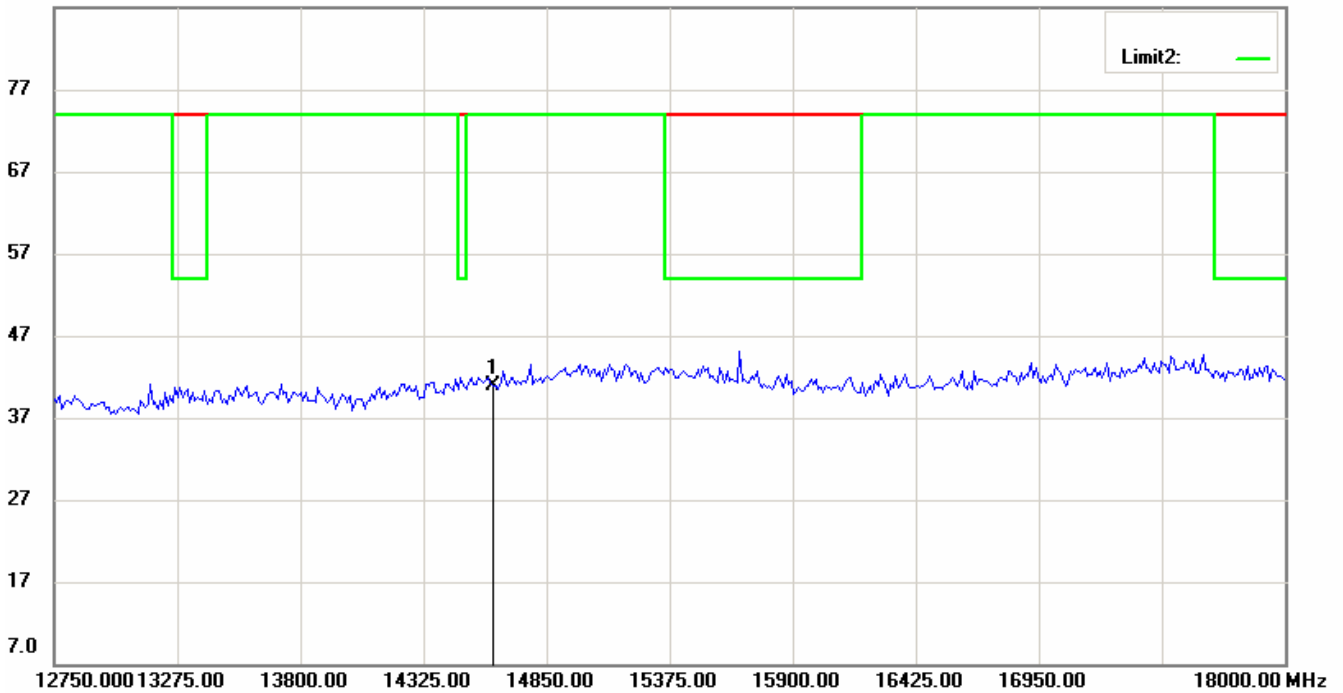


# Worldwide Testing Services(Taiwan) Co., Ltd.

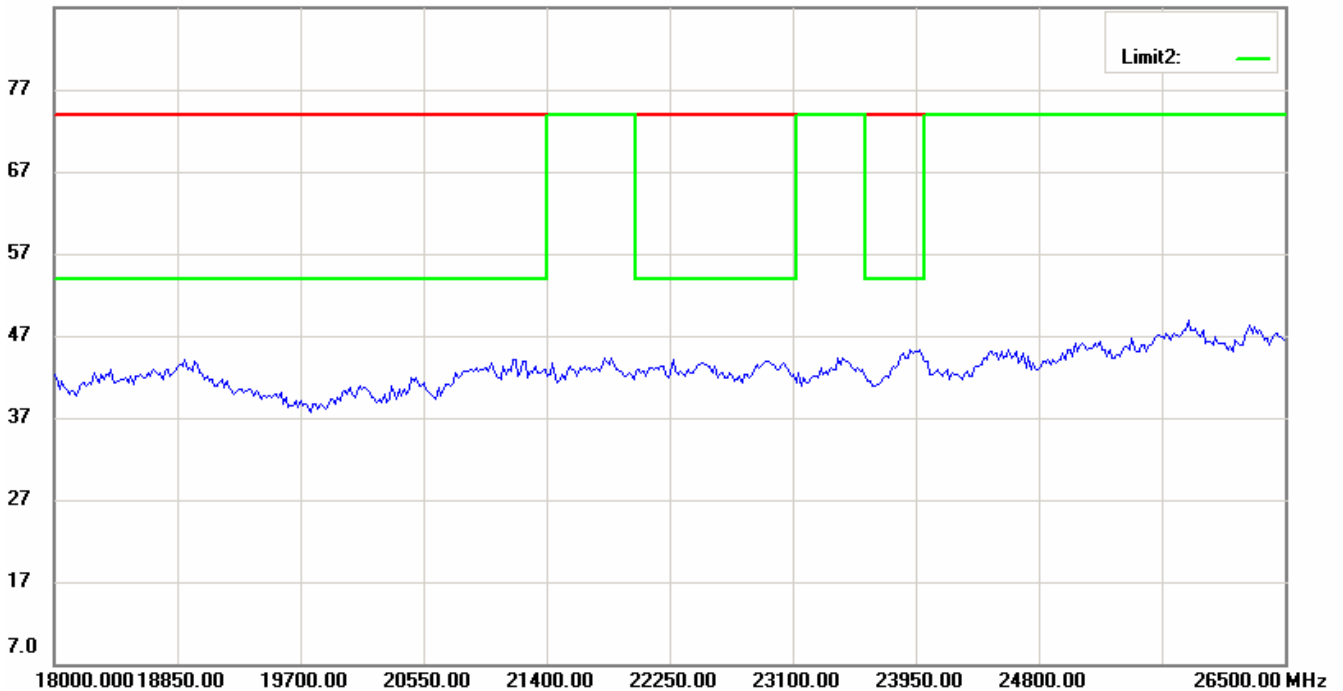
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

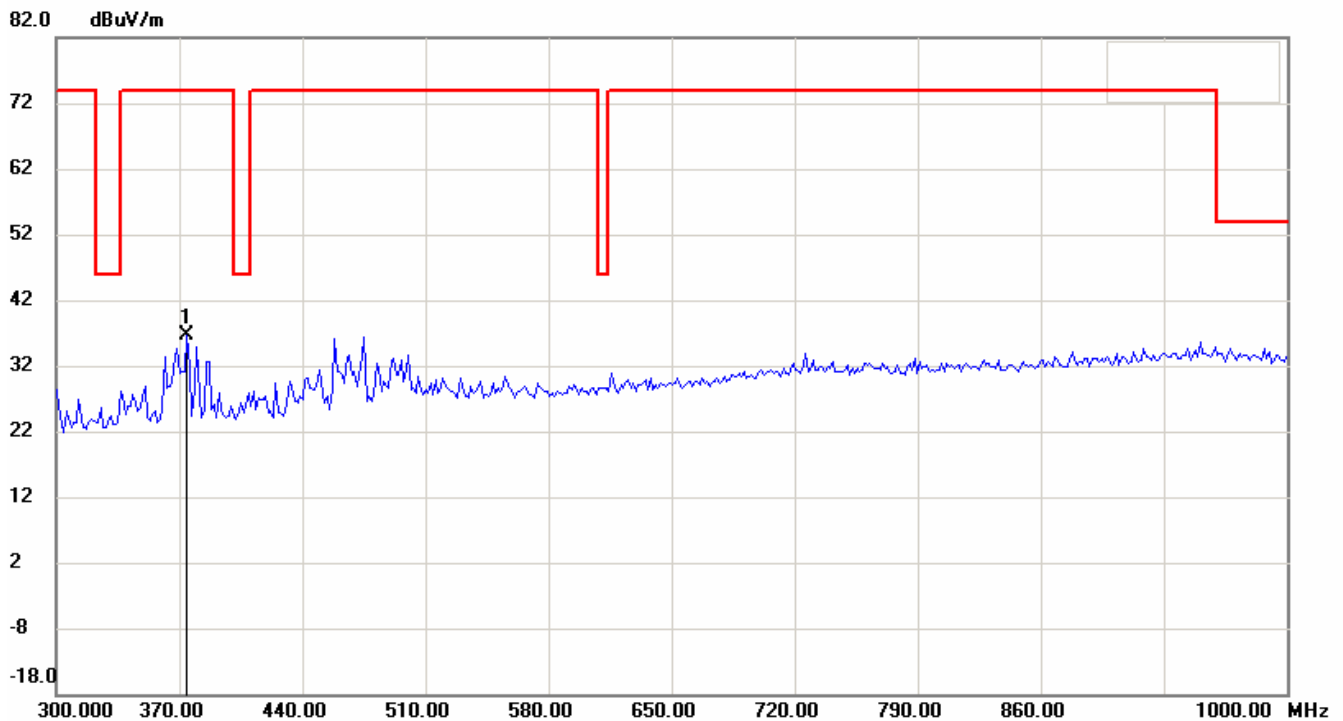
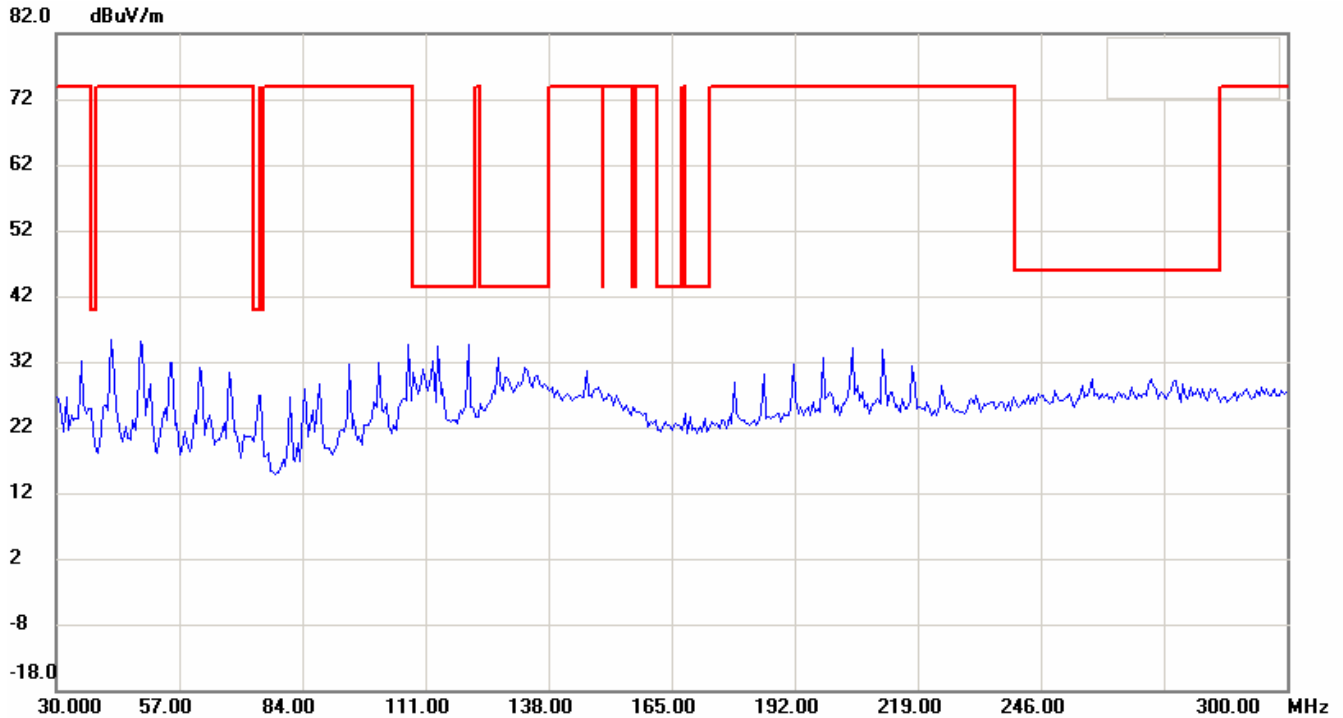


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

WLAN Mode ( Mode B )\_ CH 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.

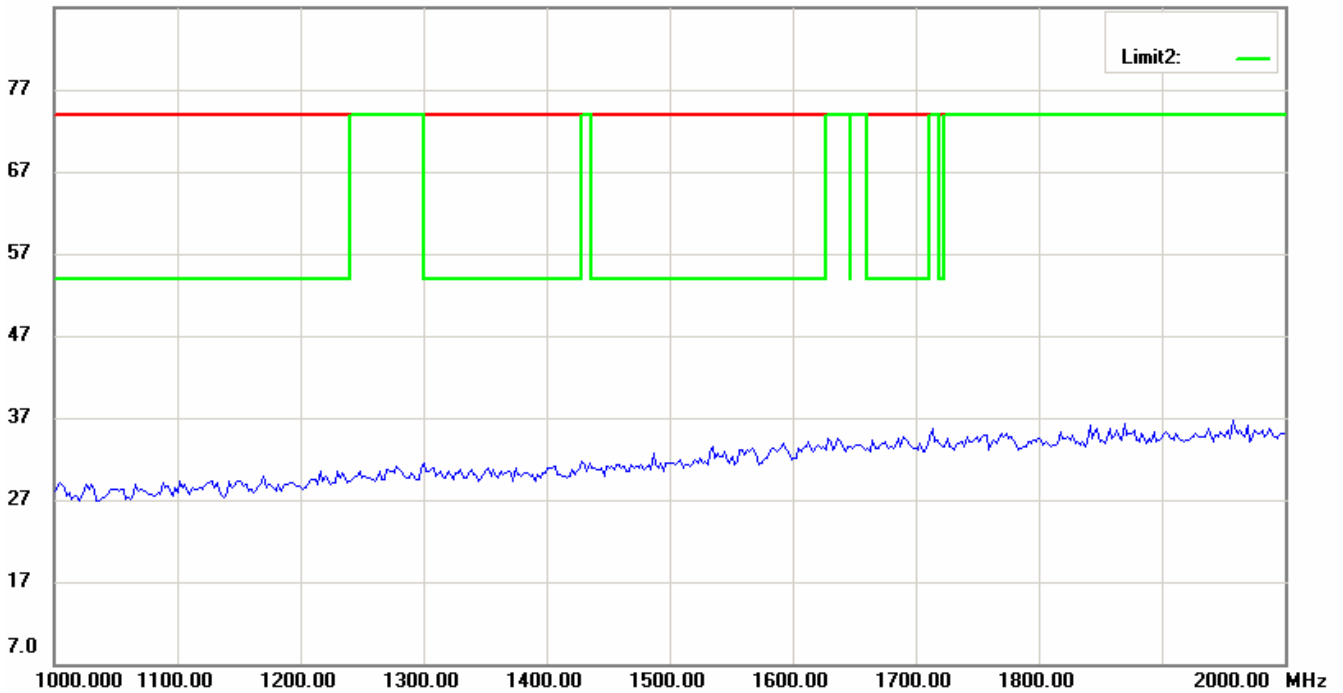


# Worldwide Testing Services(Taiwan) Co., Ltd.

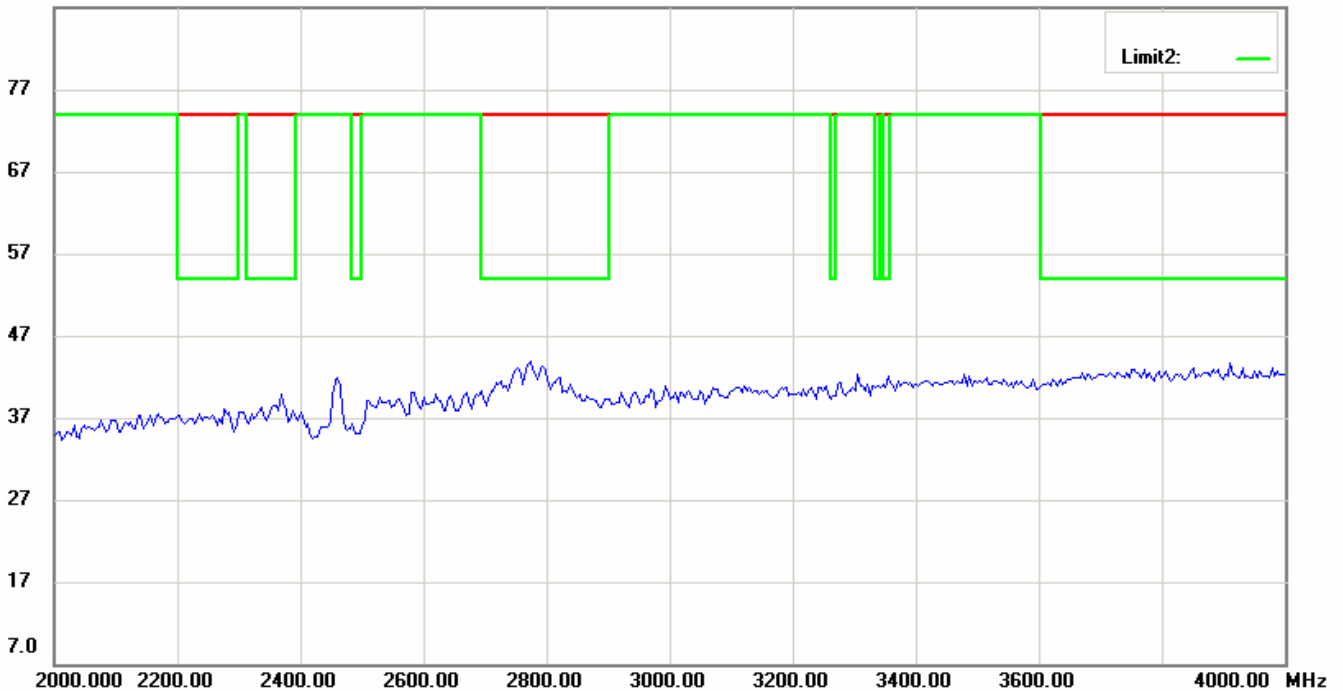
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

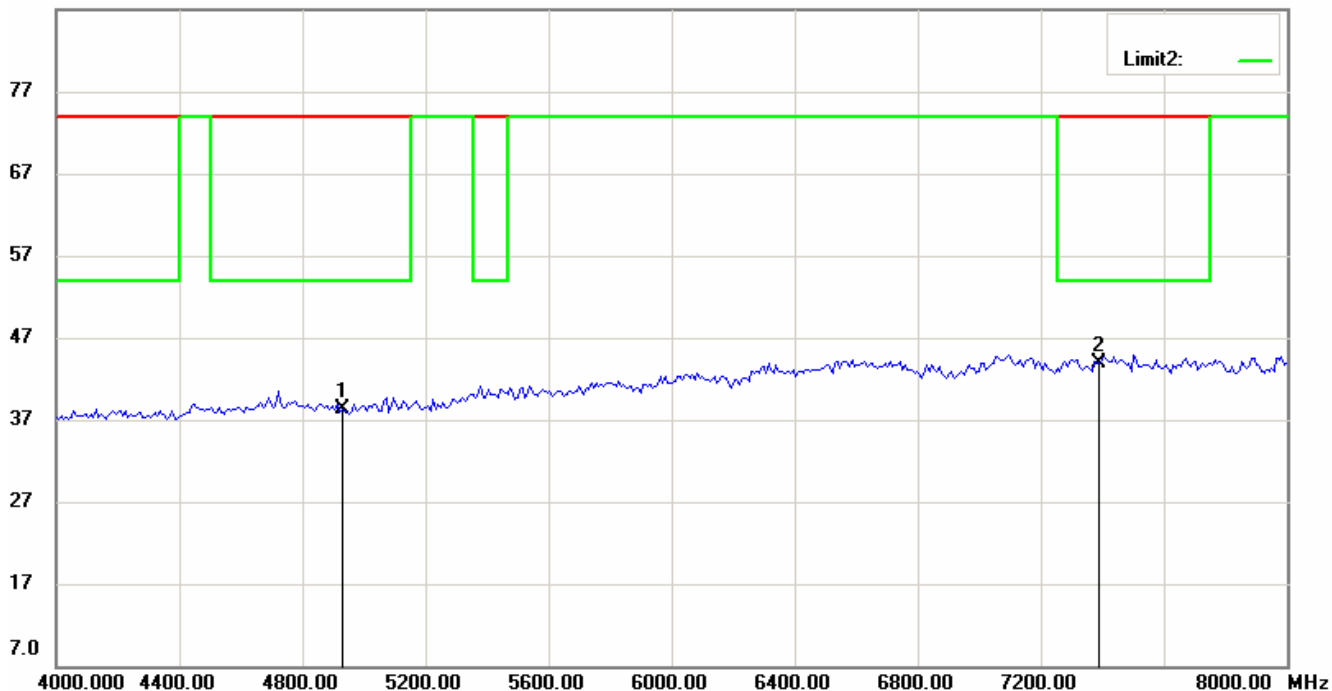


# Worldwide Testing Services(Taiwan) Co., Ltd.

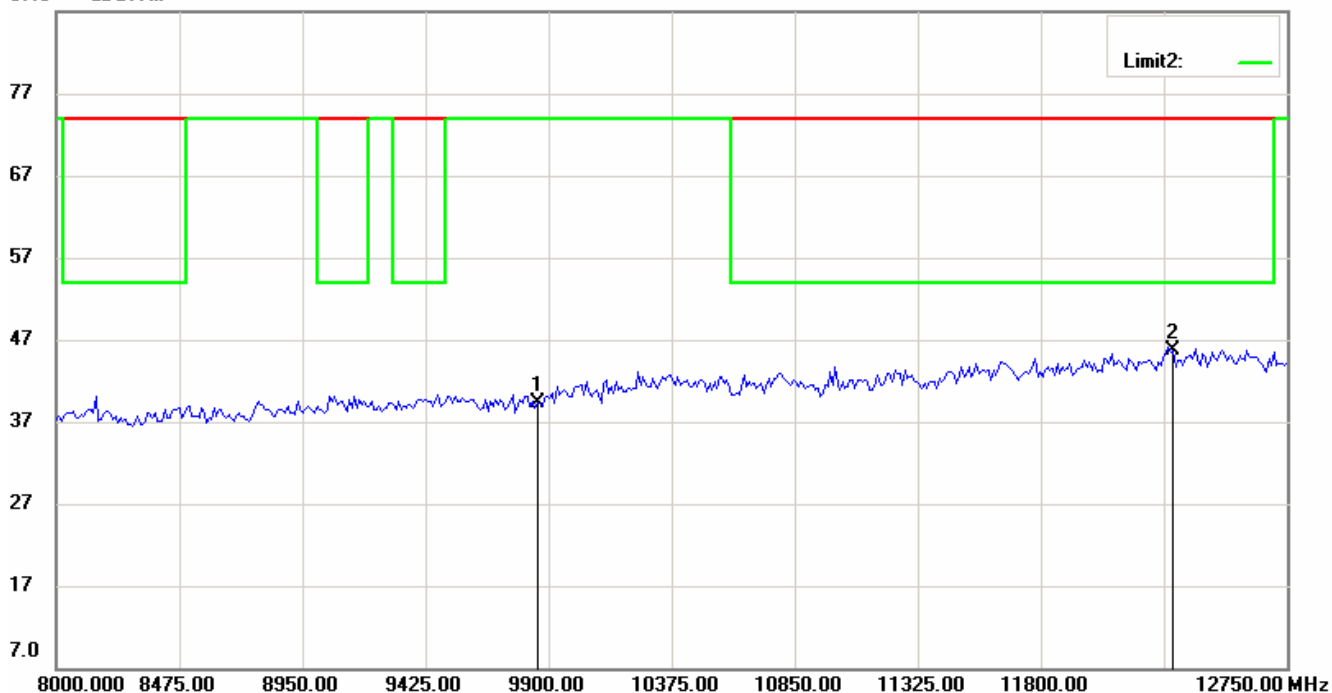
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



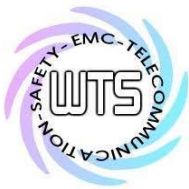
87.0 dBuV/m



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.

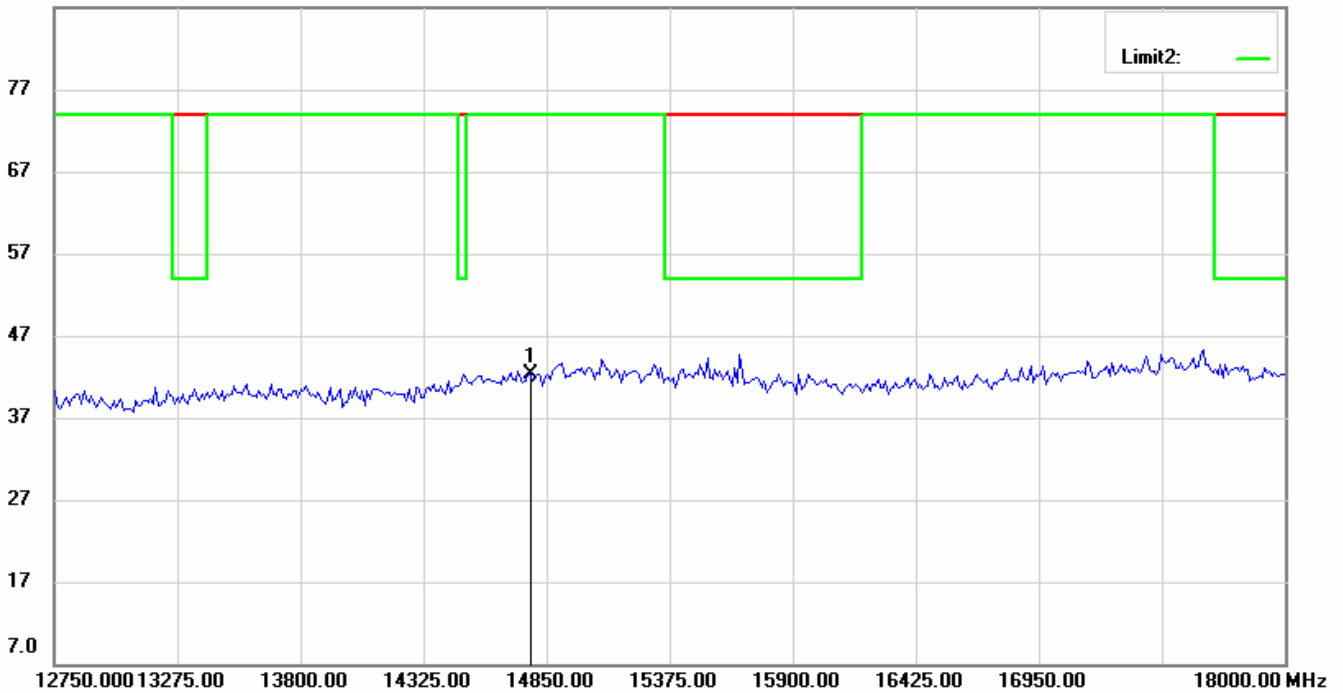


# Worldwide Testing Services(Taiwan) Co., Ltd.

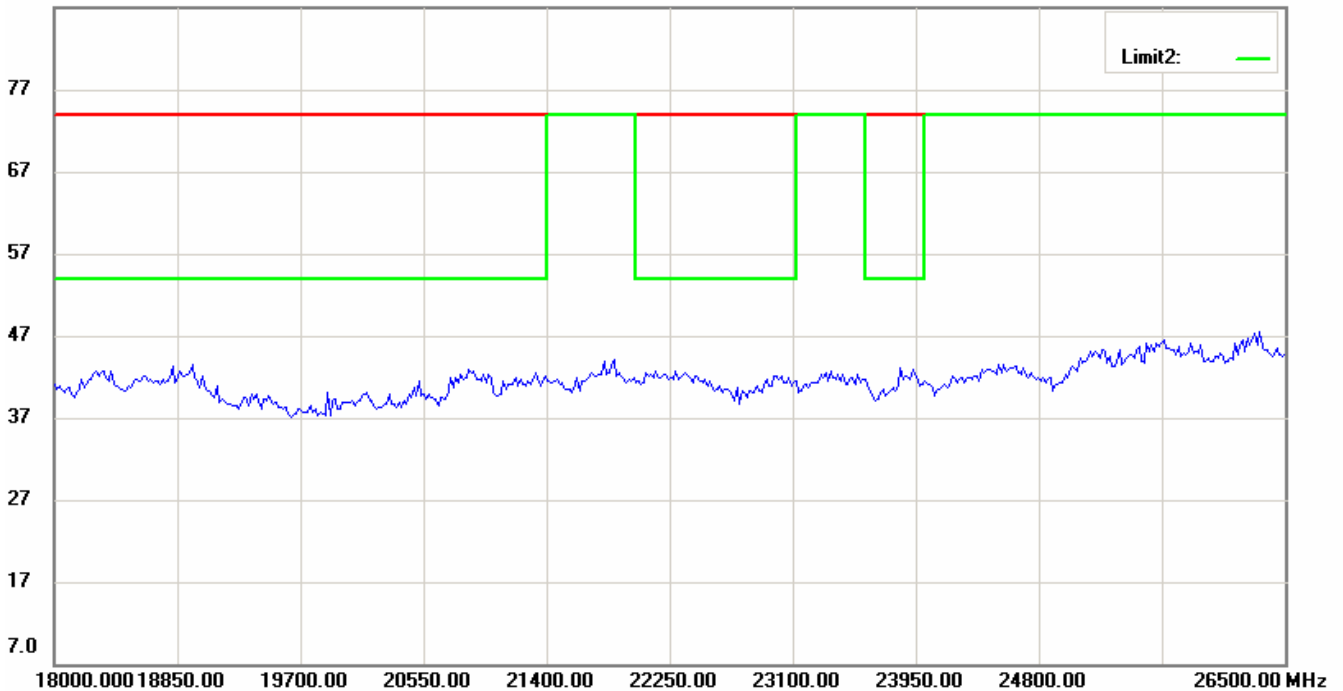
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

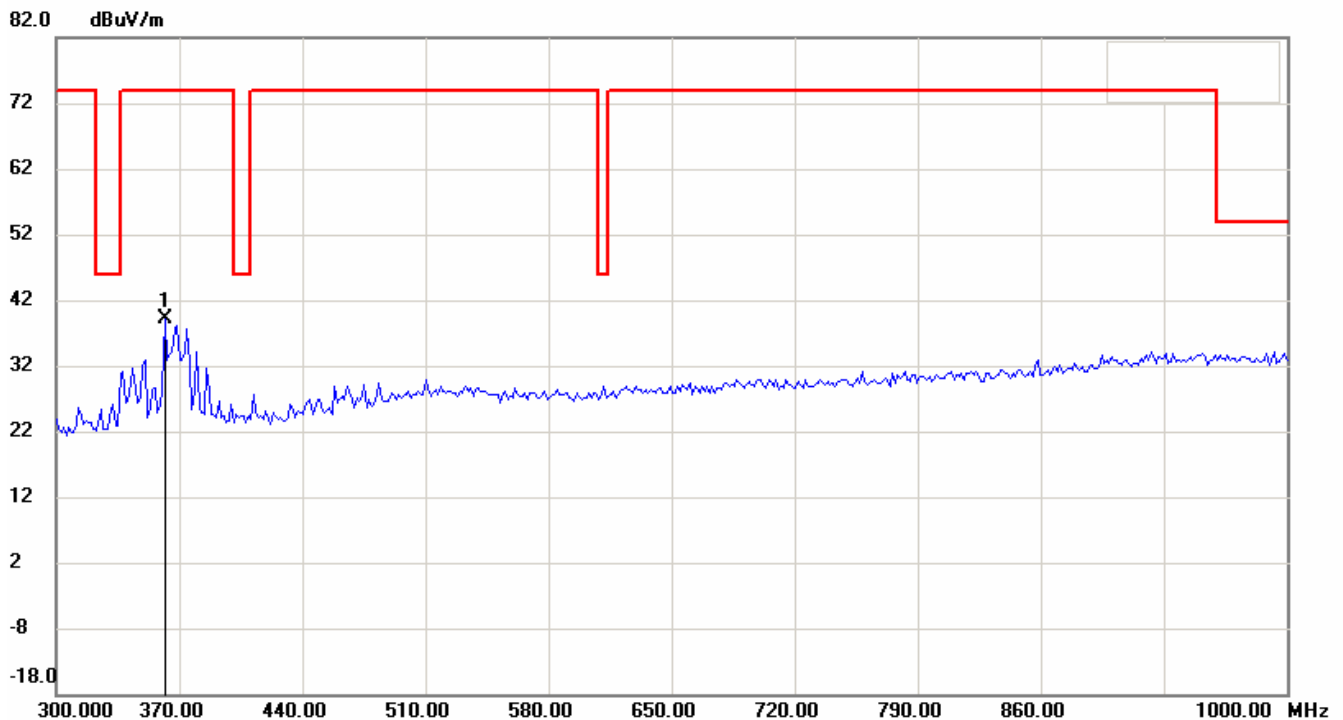
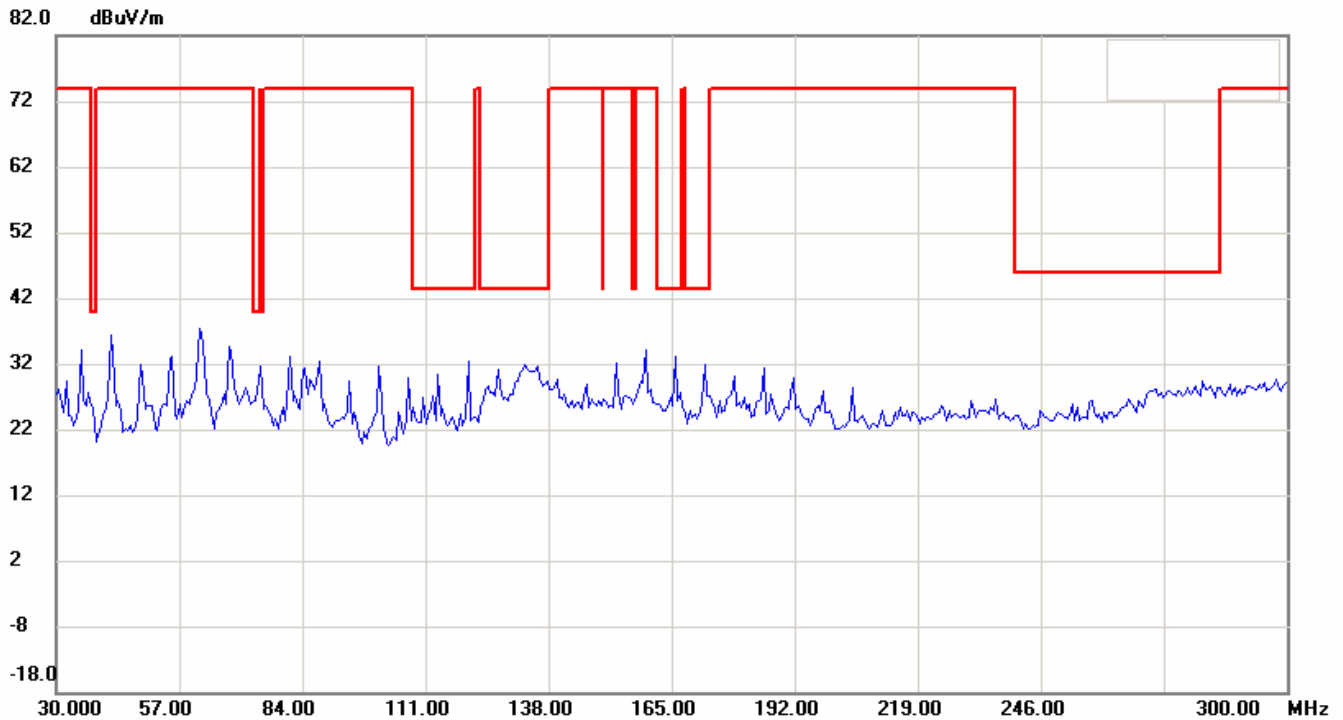
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

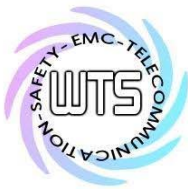


Up Line: Peak Limit Line Down Line: Ave Limit Line

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.



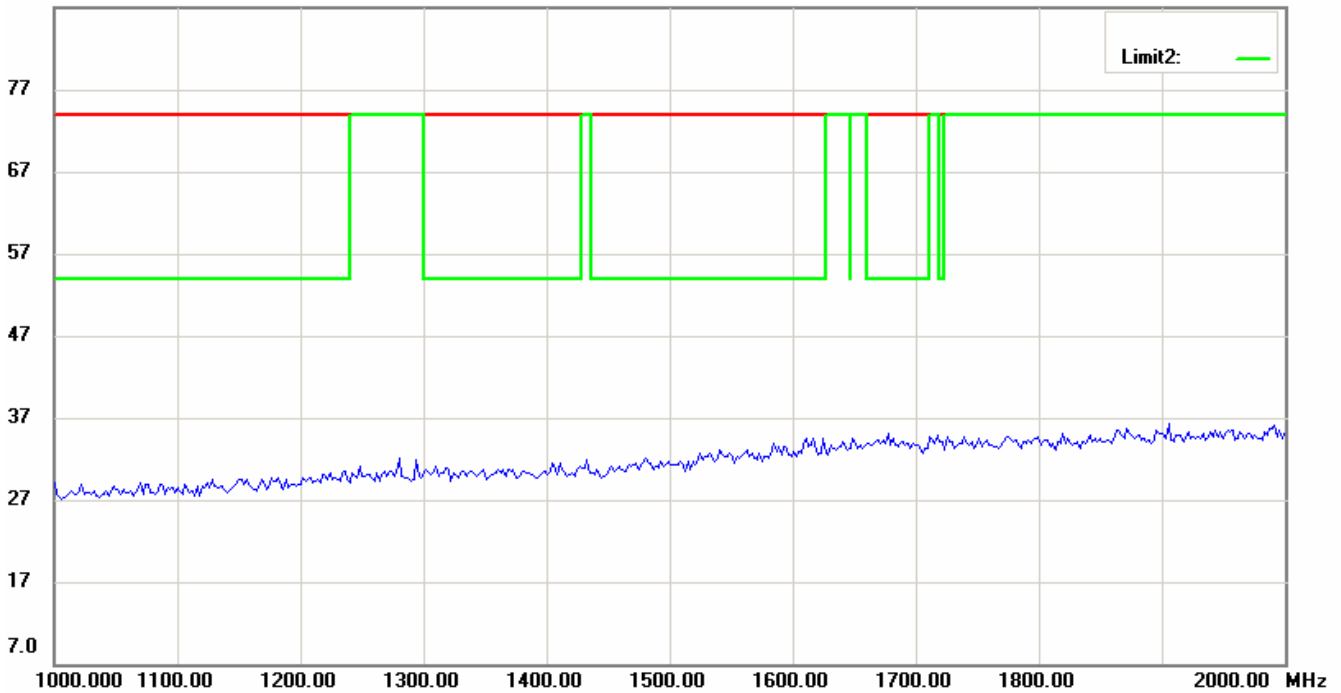


# Worldwide Testing Services(Taiwan) Co., Ltd.

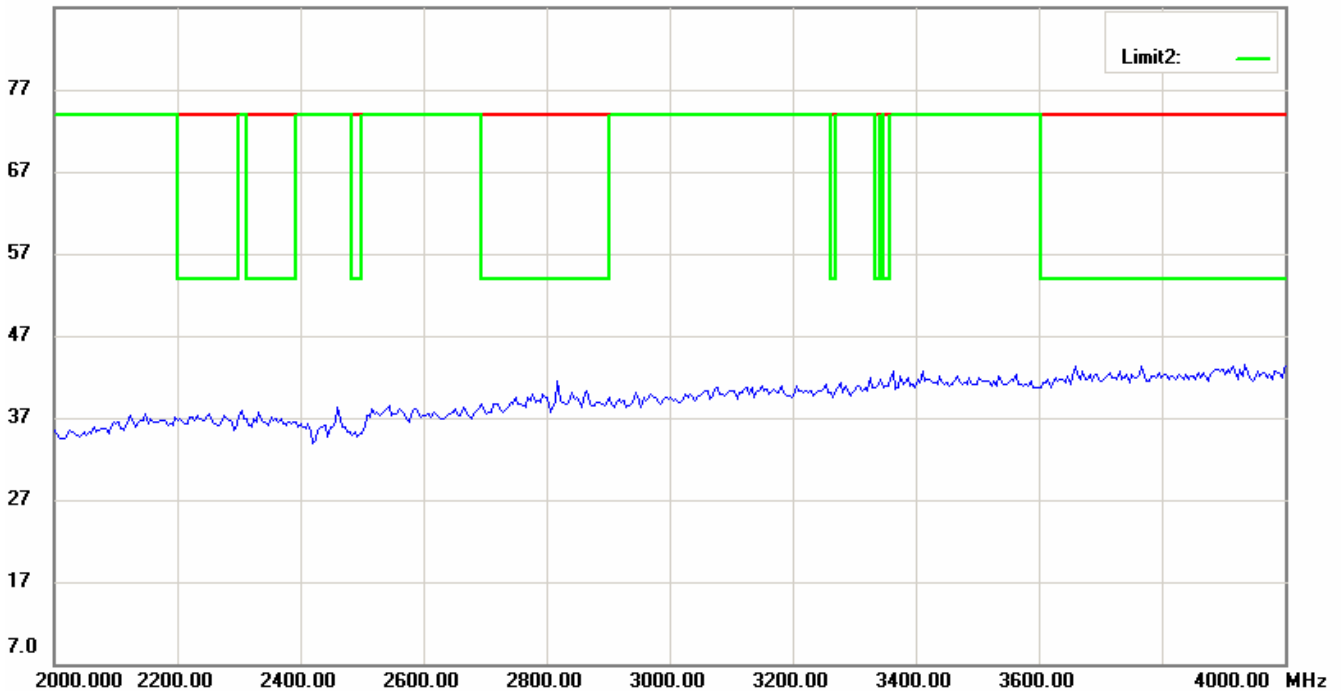
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

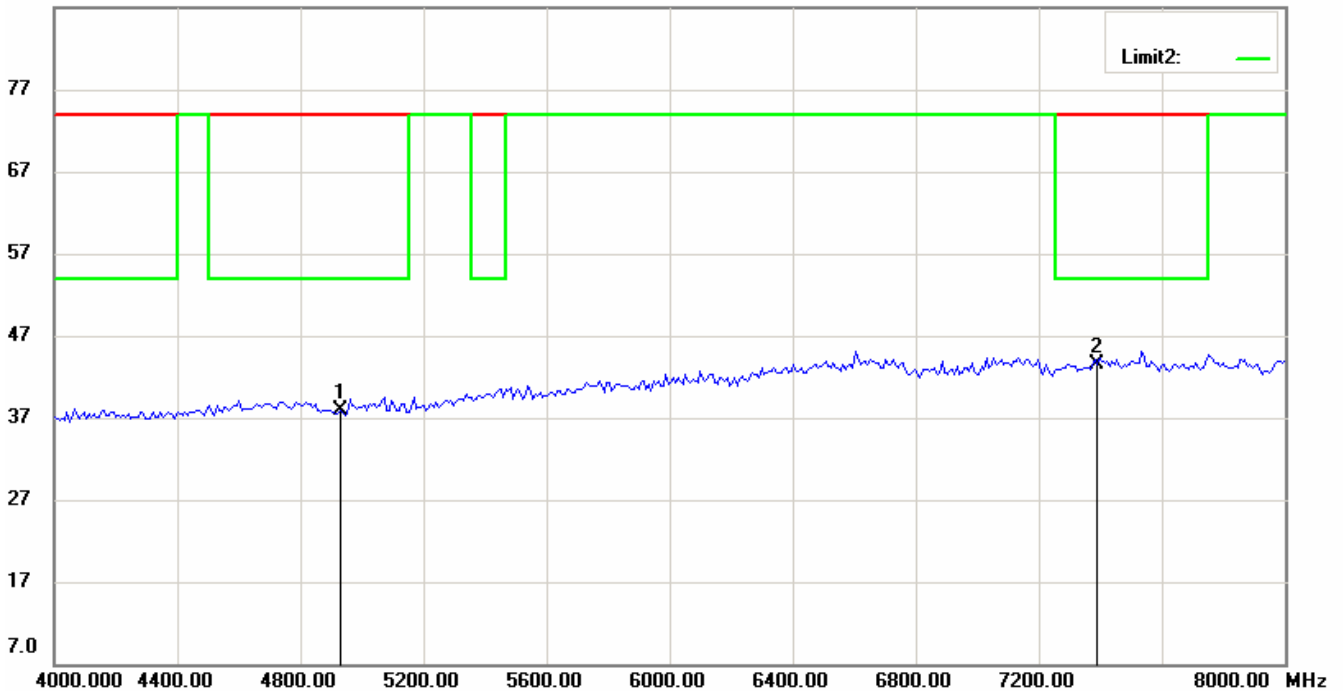


# Worldwide Testing Services(Taiwan) Co., Ltd.

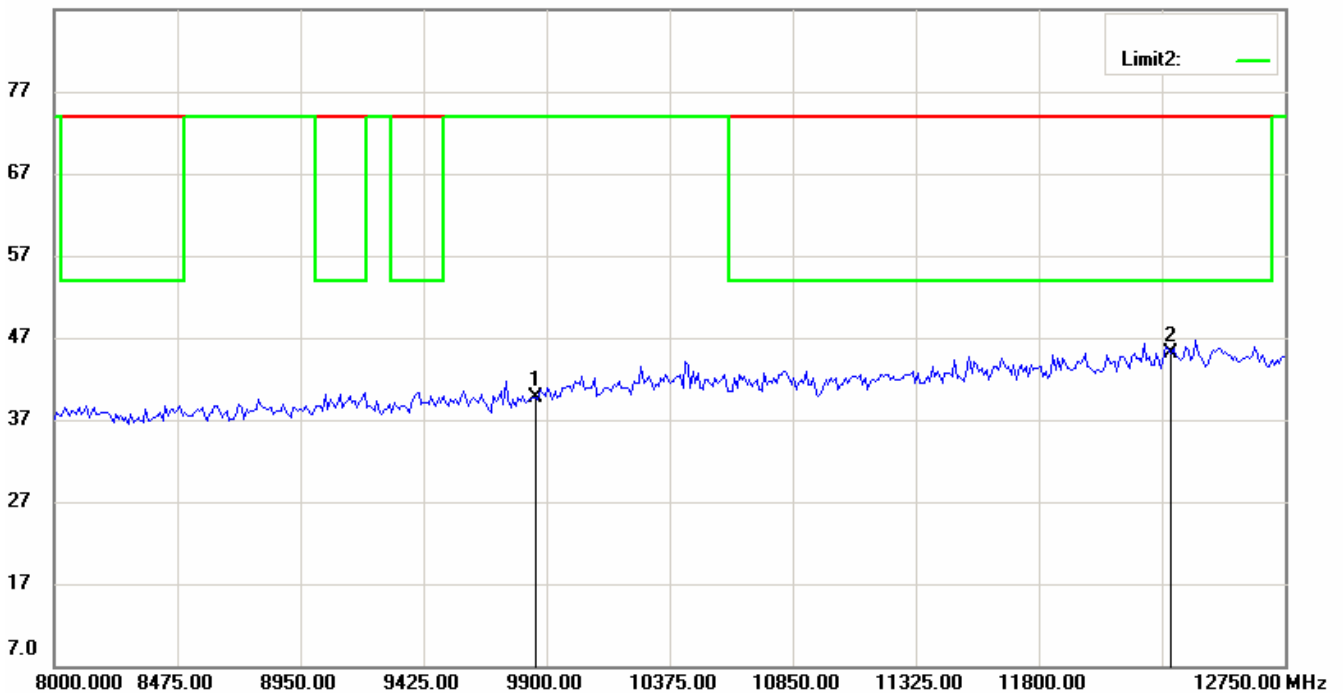
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



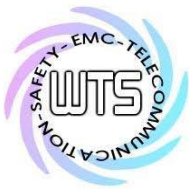
87.0 dBuV/m



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.

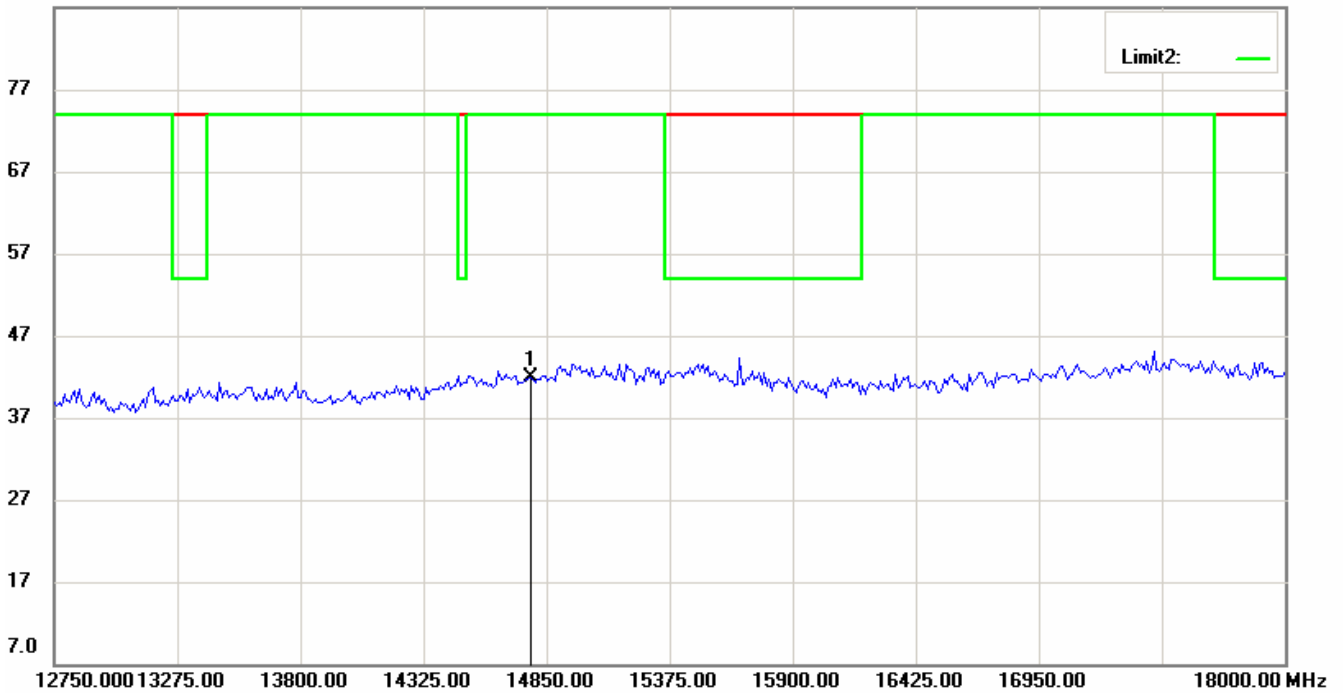


# Worldwide Testing Services(Taiwan) Co., Ltd.

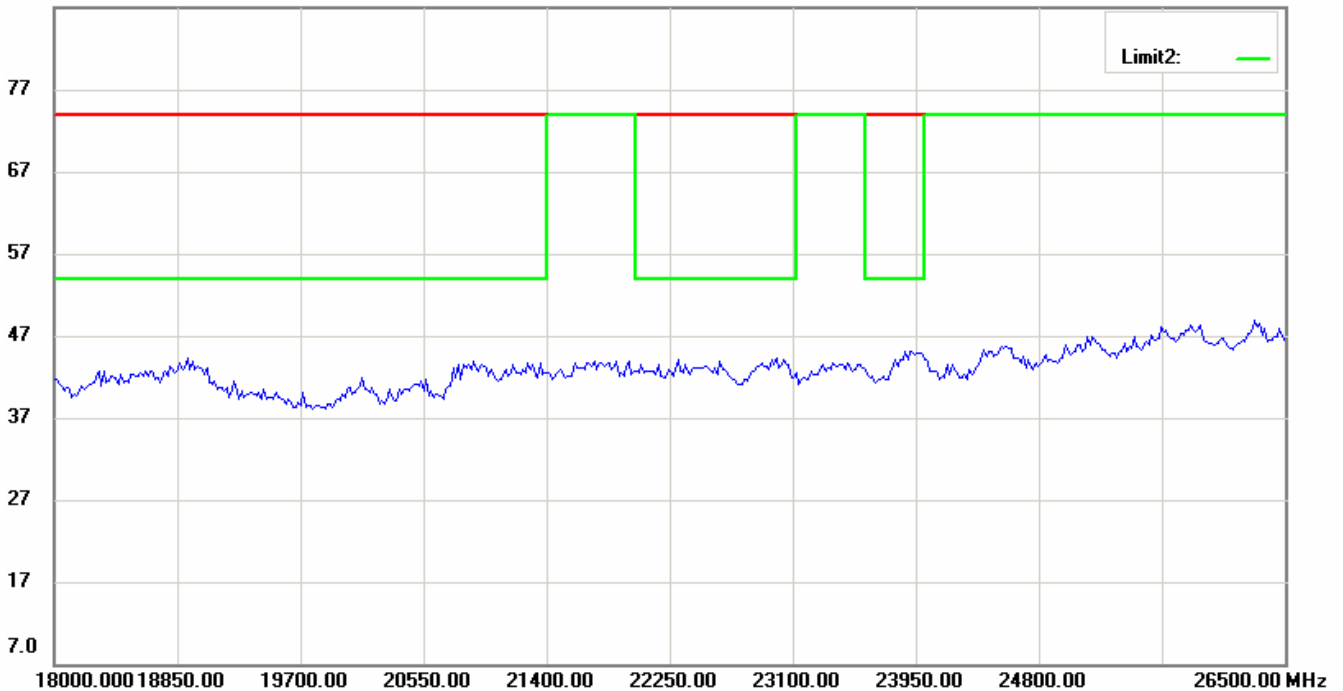
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

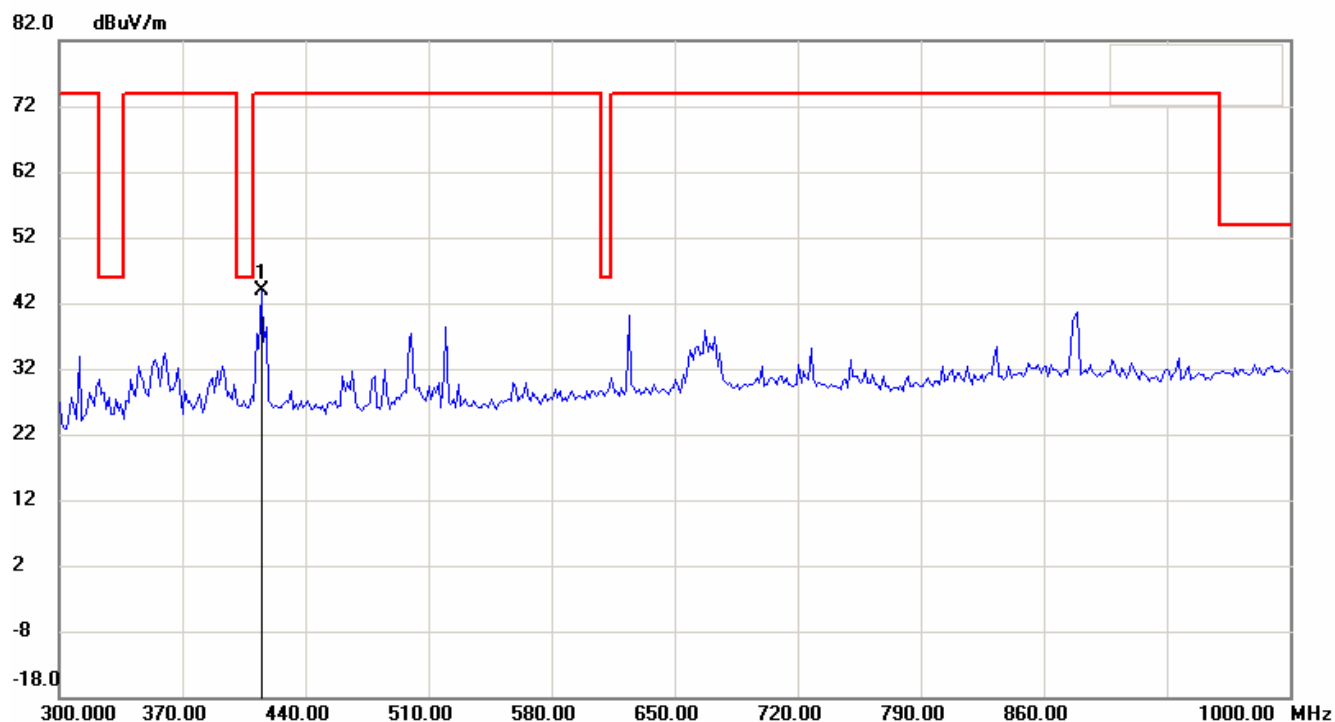
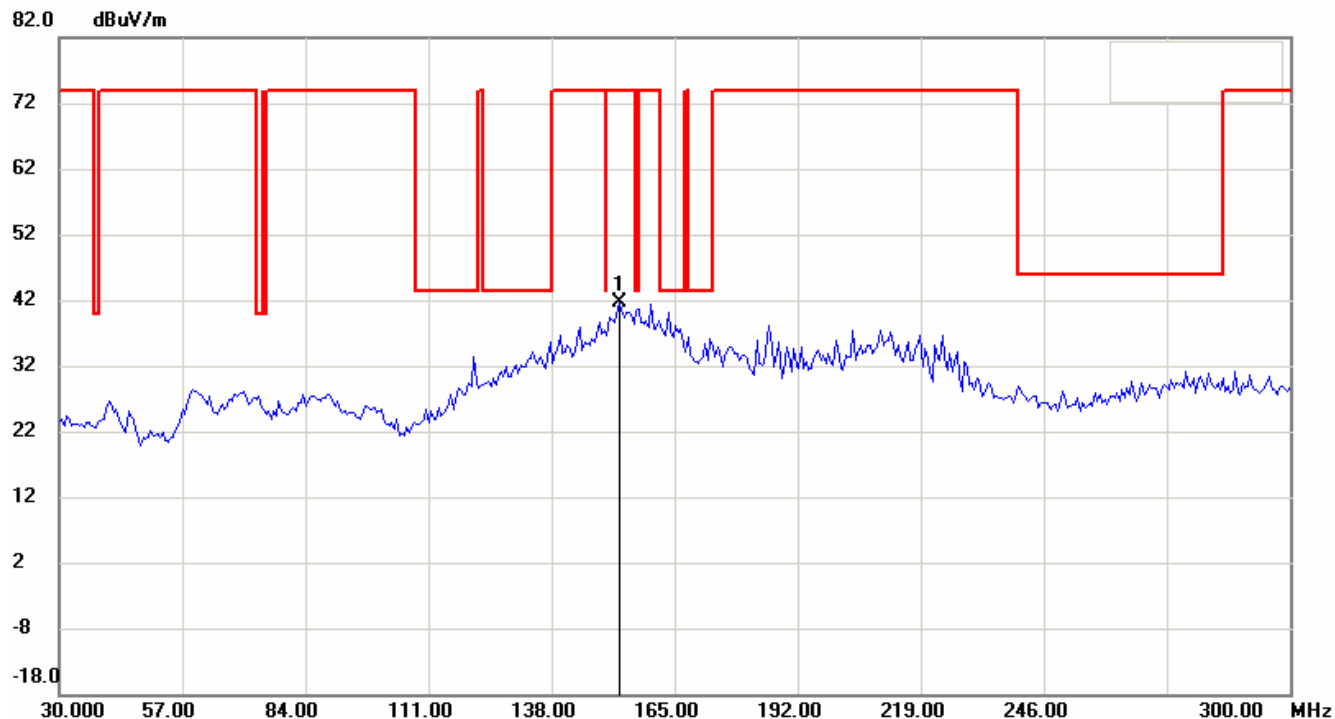


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

Bluetooth Mode\_CH 0

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.

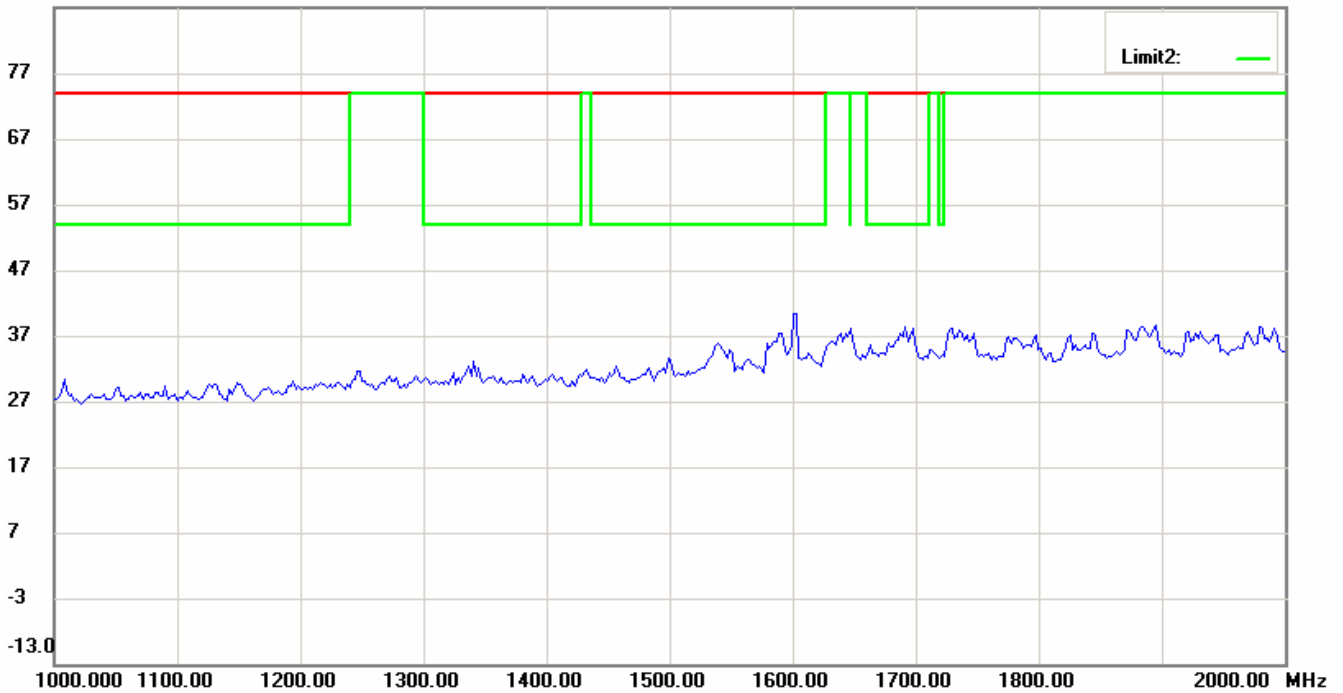


# Worldwide Testing Services(Taiwan) Co., Ltd.

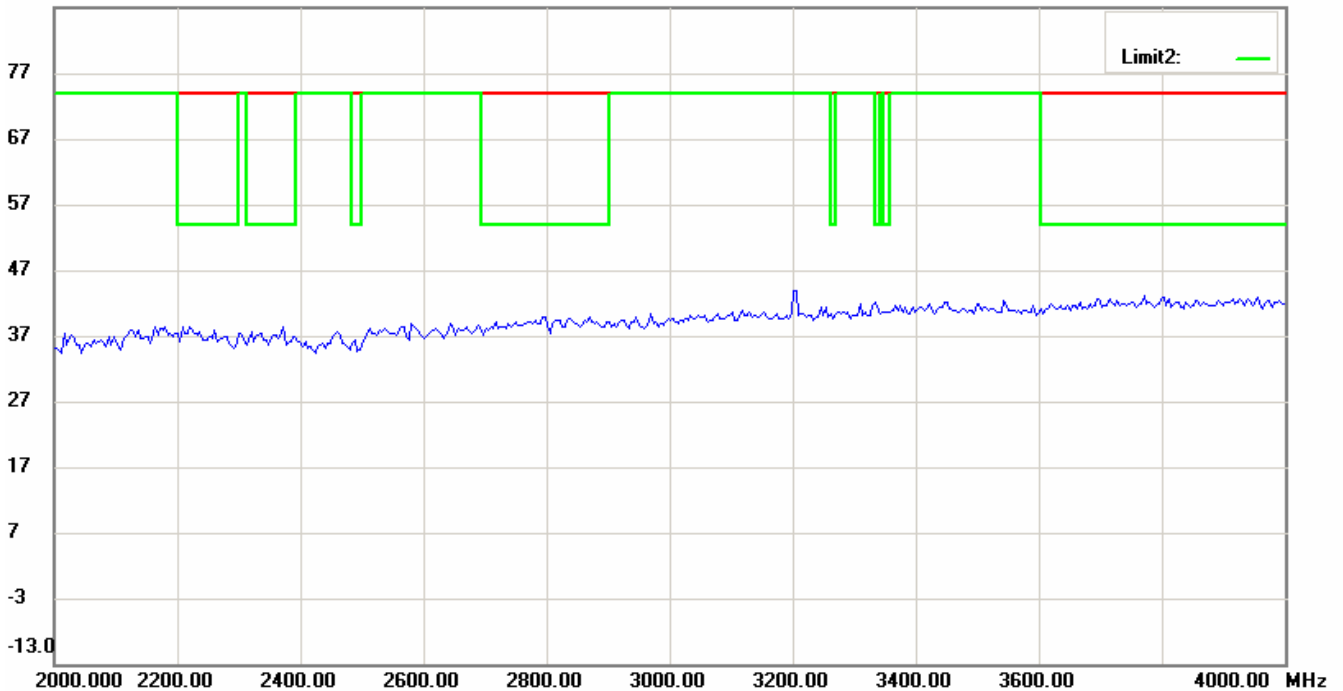
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

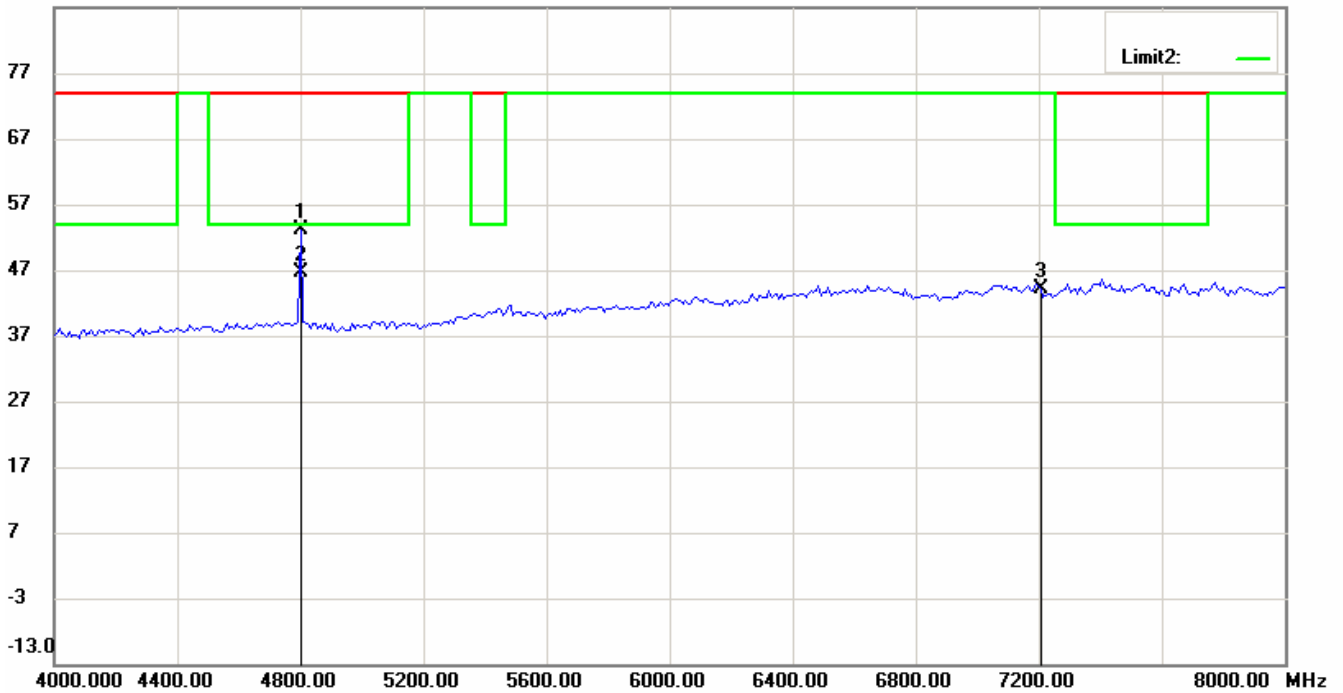


# Worldwide Testing Services(Taiwan) Co., Ltd.

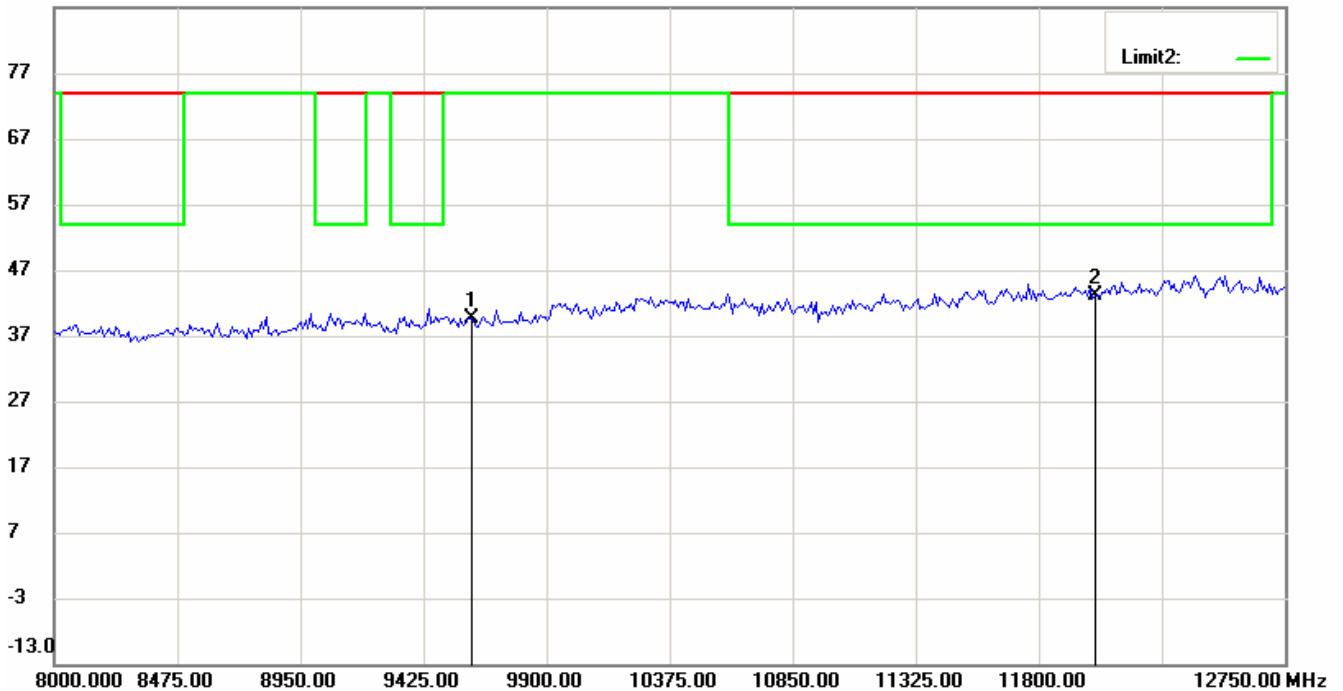
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



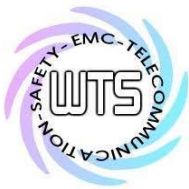
87.0 dBuV/m



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.

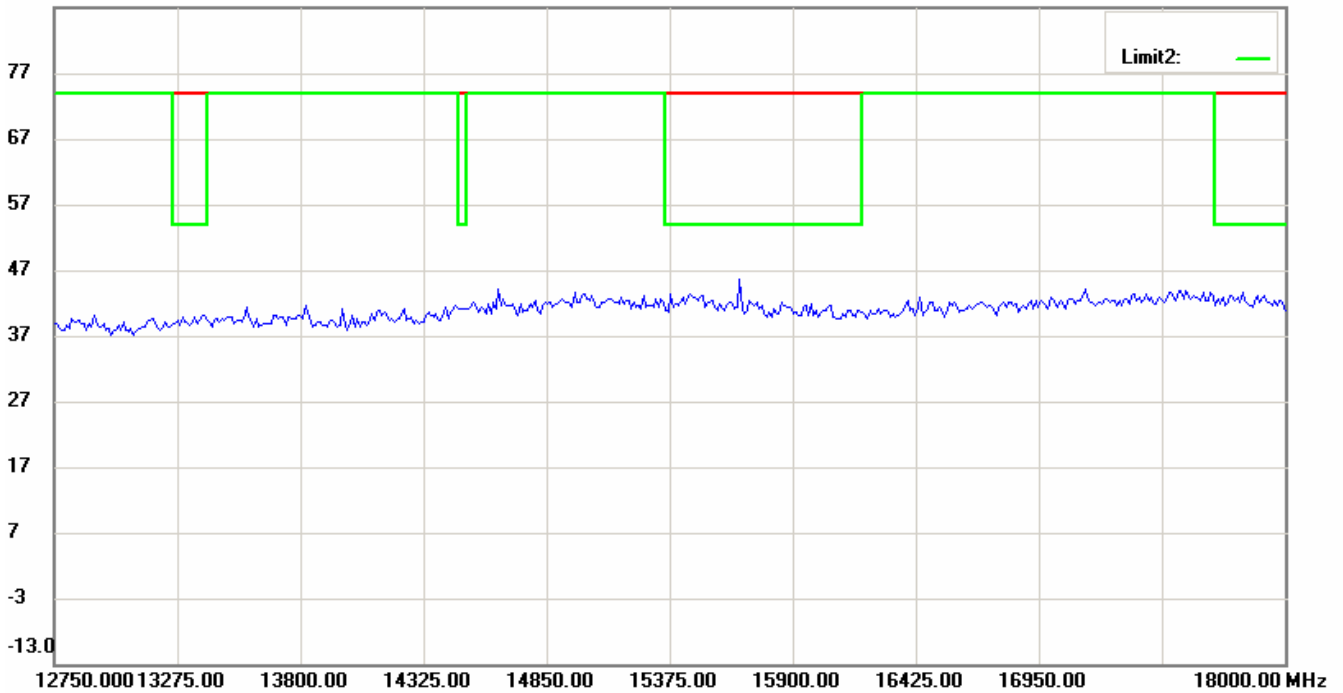


# Worldwide Testing Services(Taiwan) Co., Ltd.

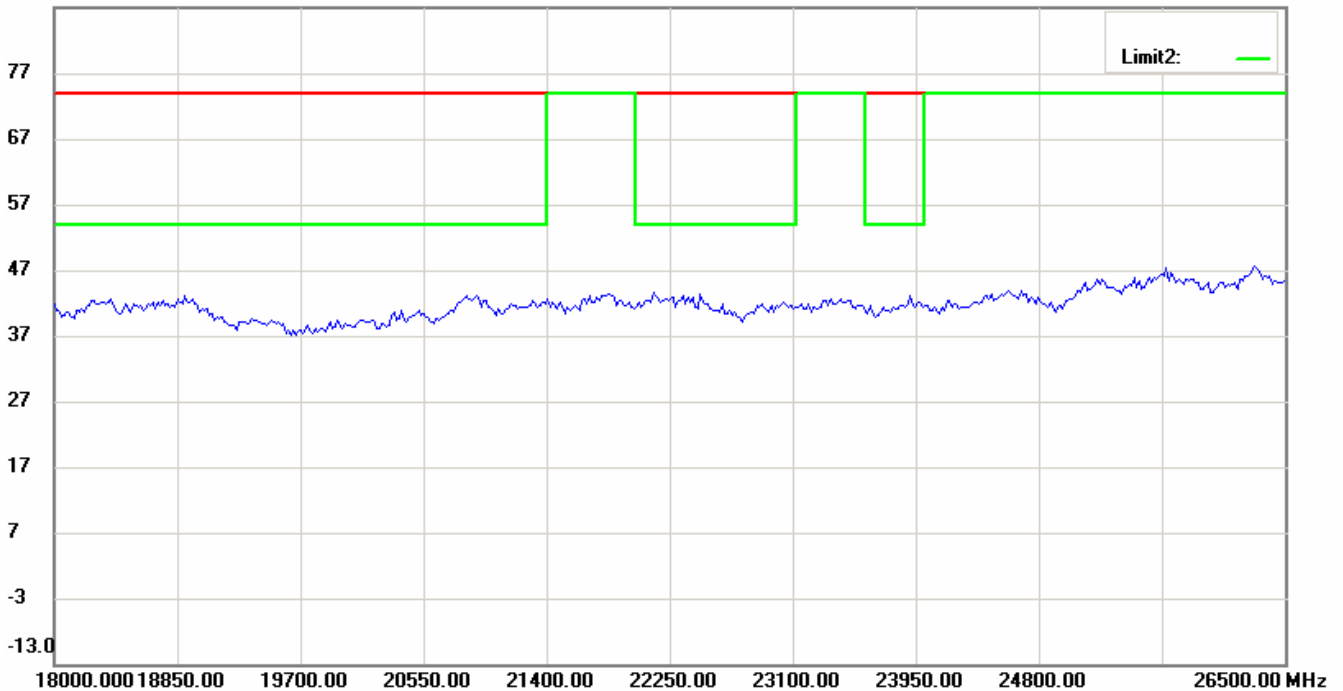
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

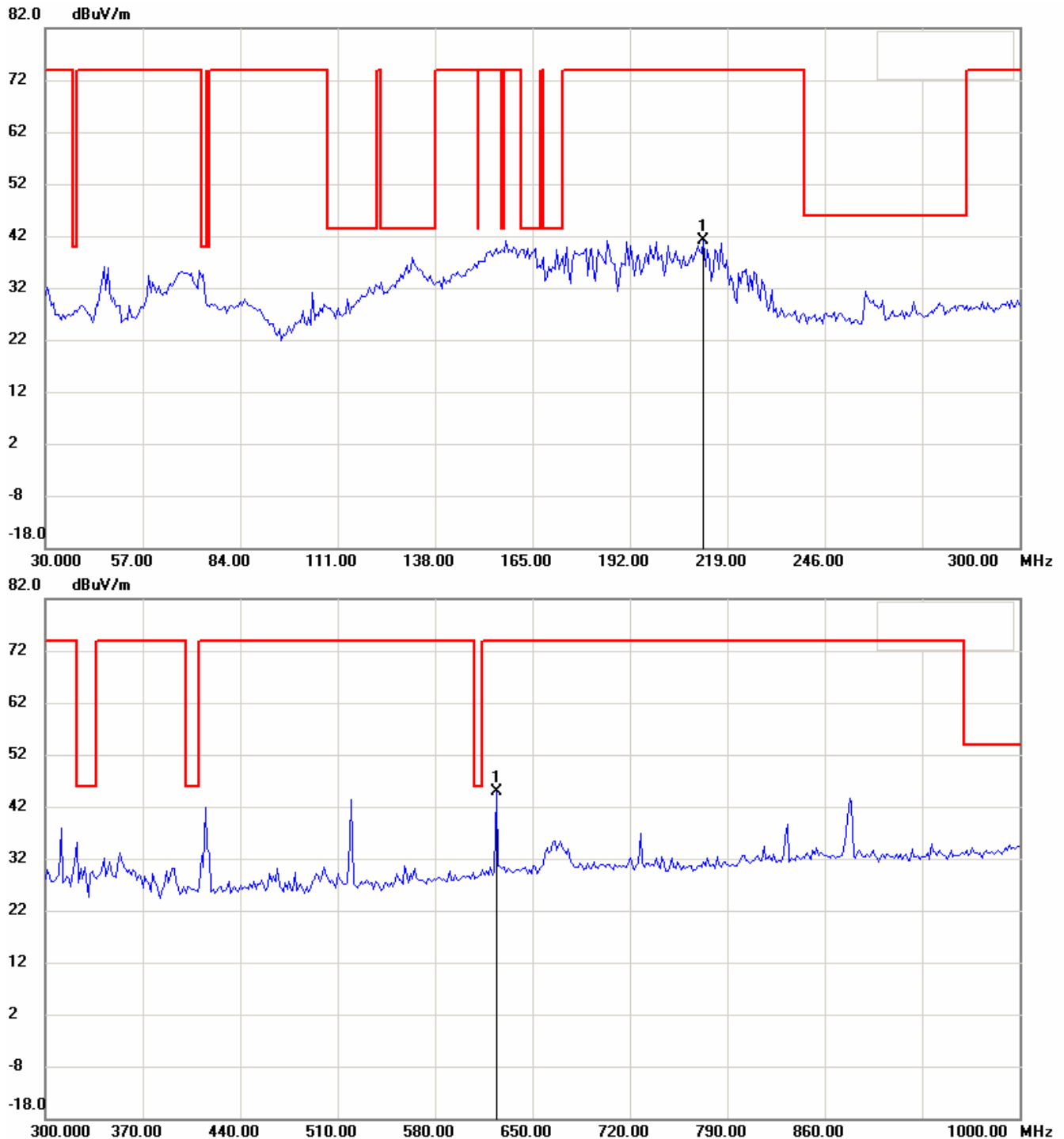
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

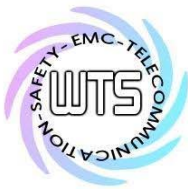


Up Line: Peak Limit Line Down Line: Ave Limit Line

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.



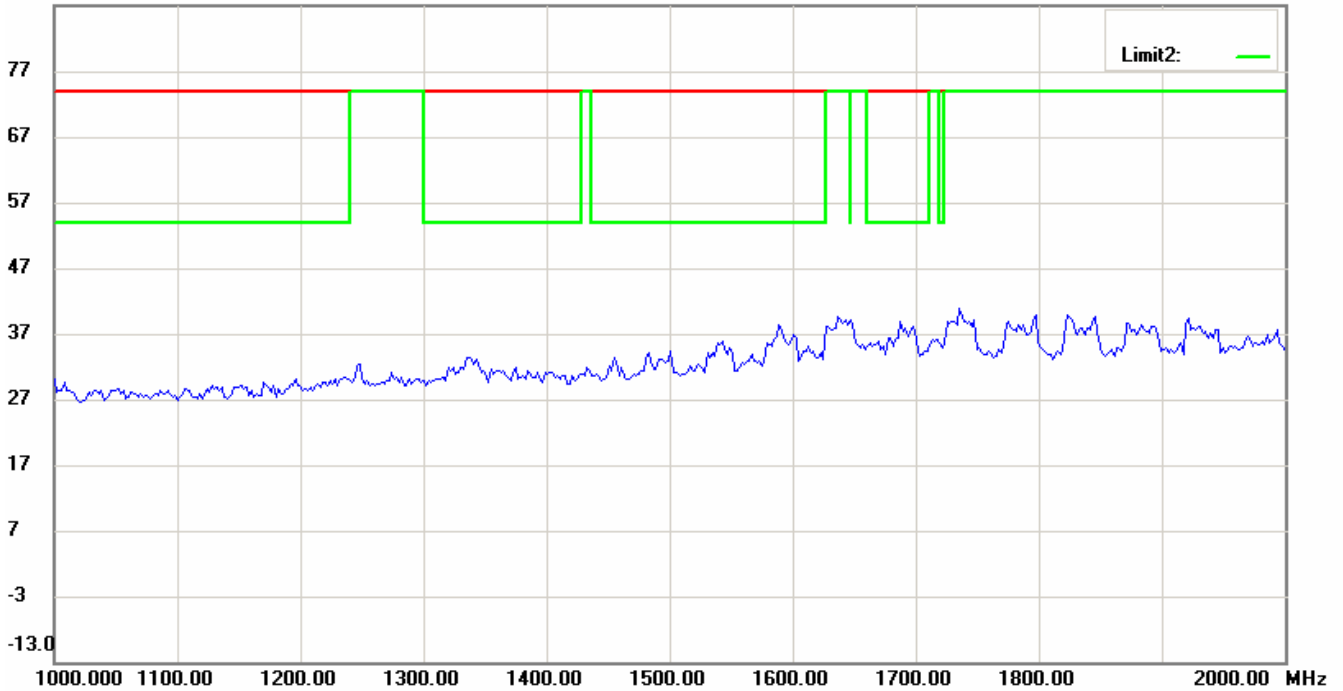


# Worldwide Testing Services(Taiwan) Co., Ltd.

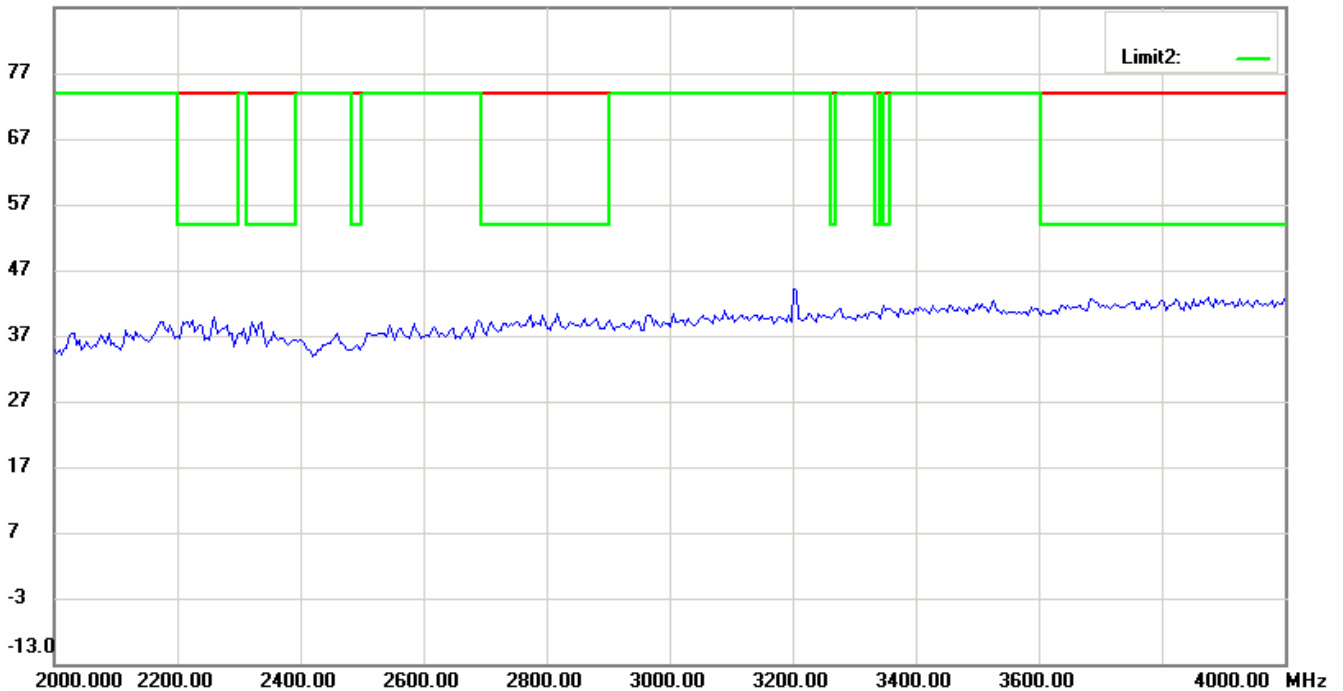
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

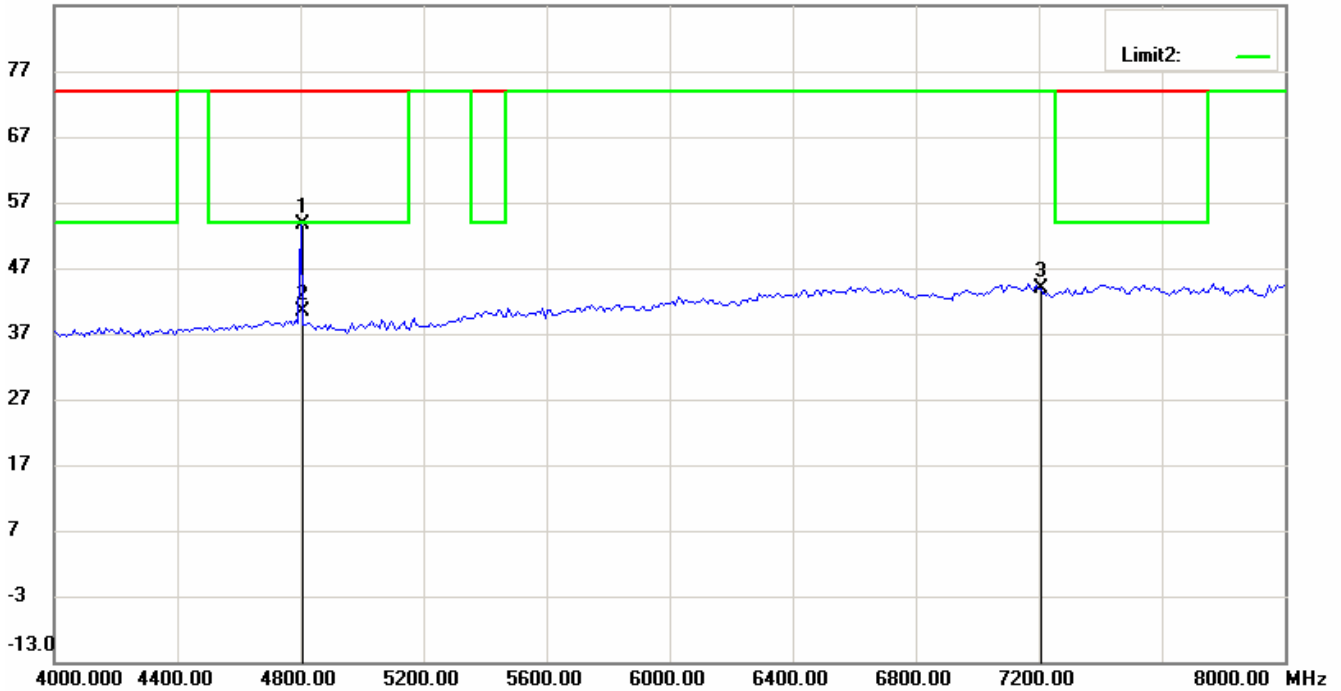


# Worldwide Testing Services(Taiwan) Co., Ltd.

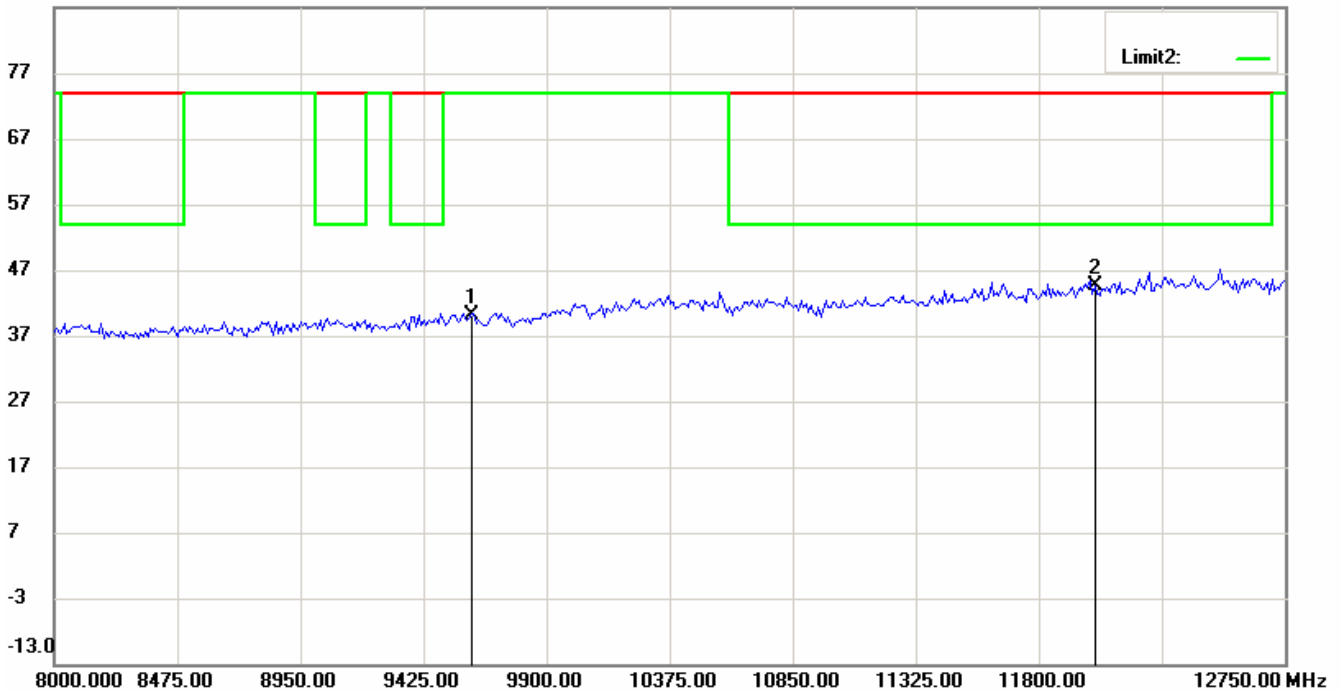
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



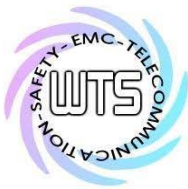
87.0 dBuV/m



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.

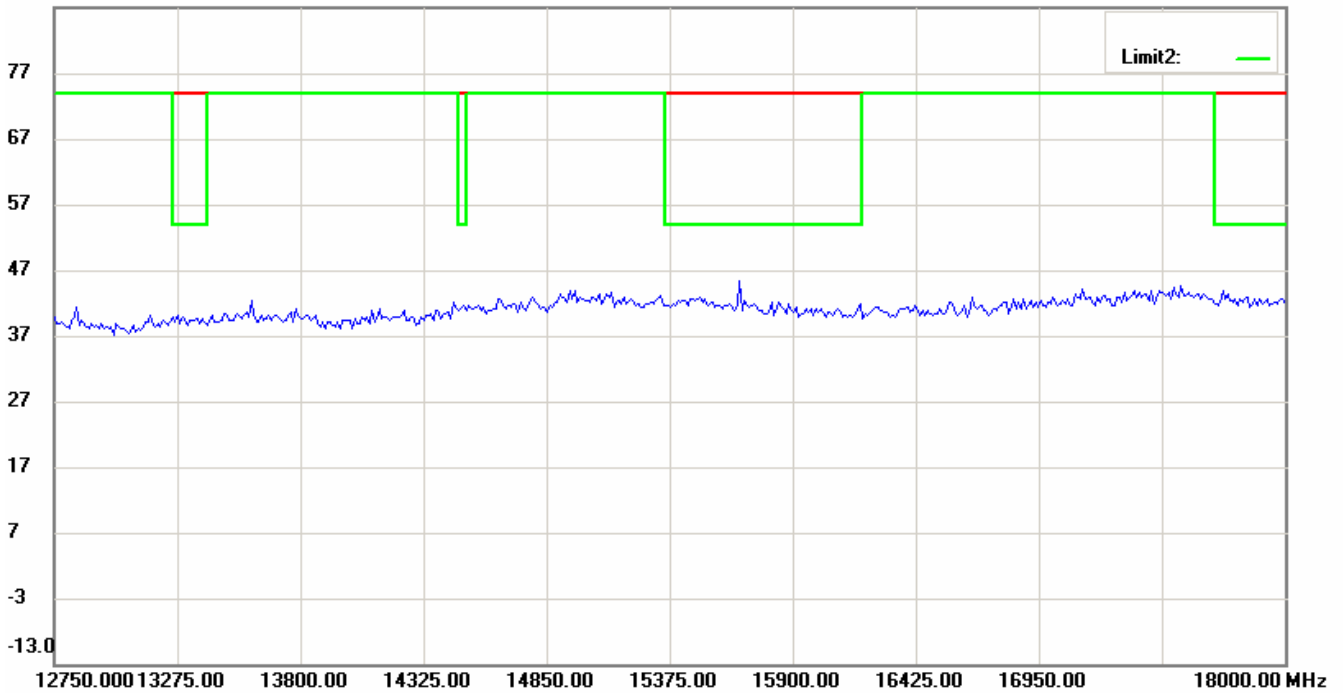


# Worldwide Testing Services(Taiwan) Co., Ltd.

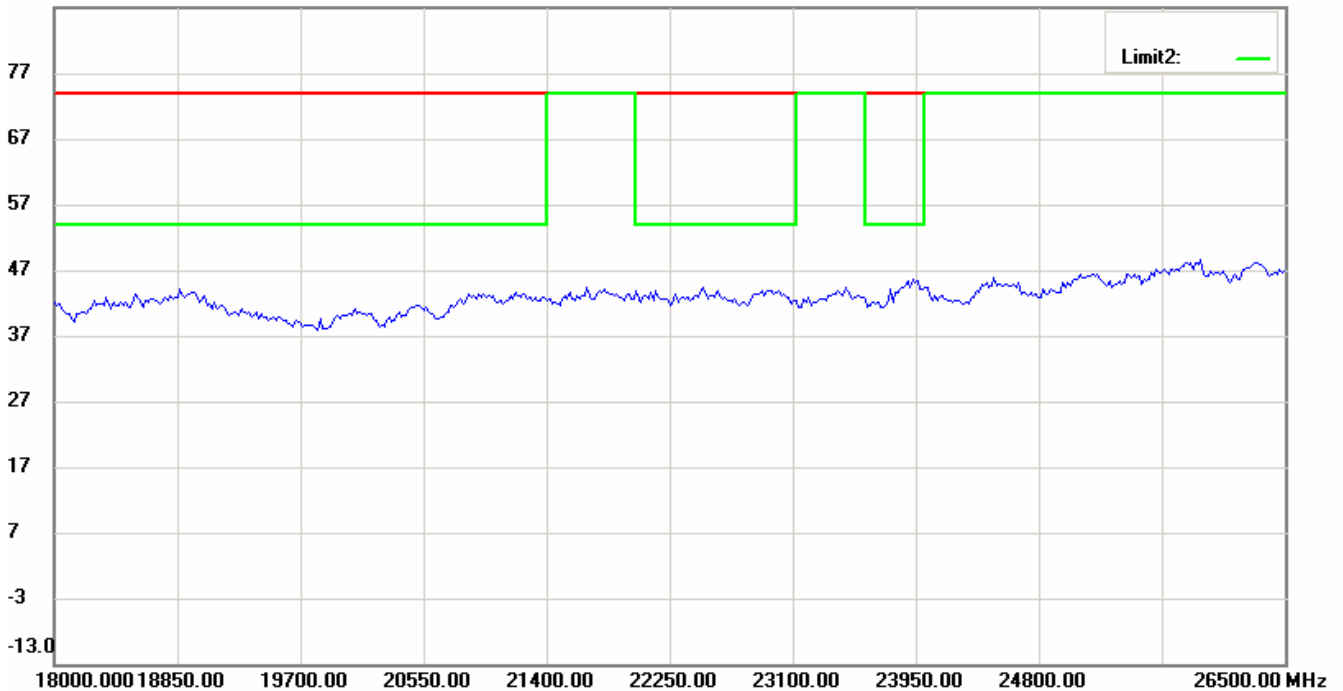
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

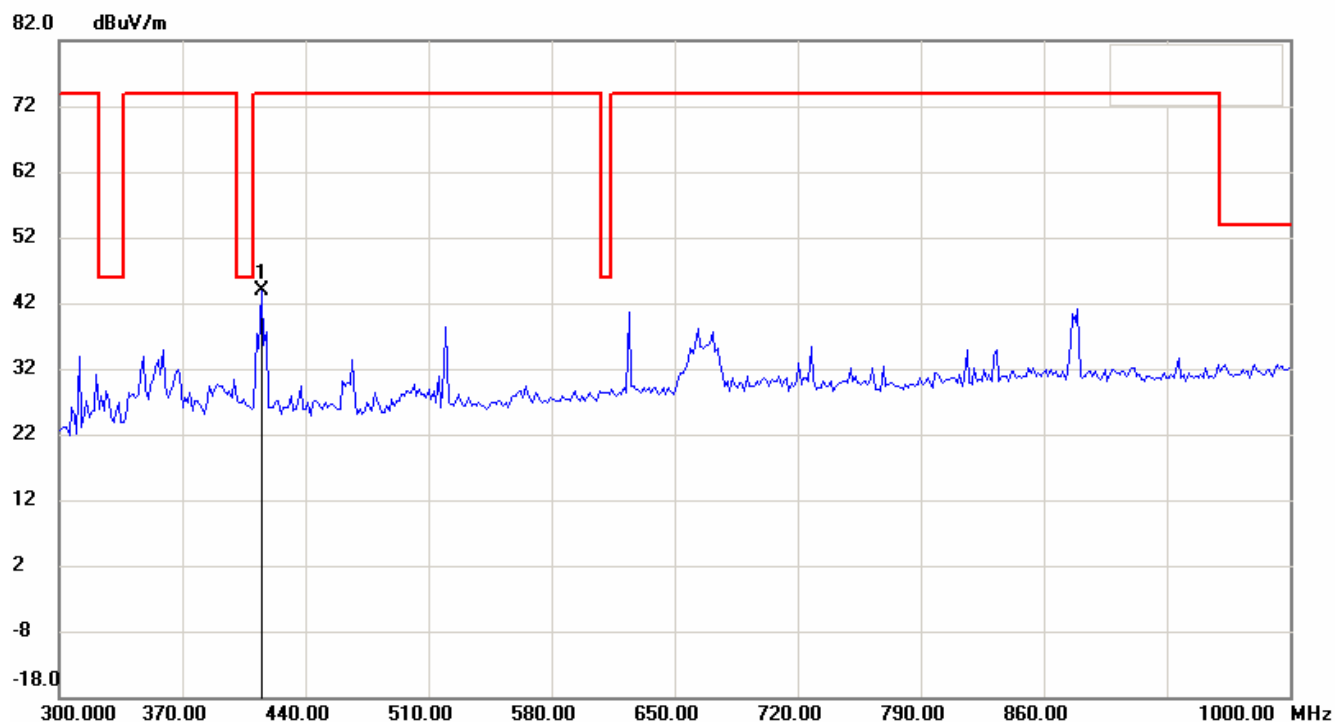
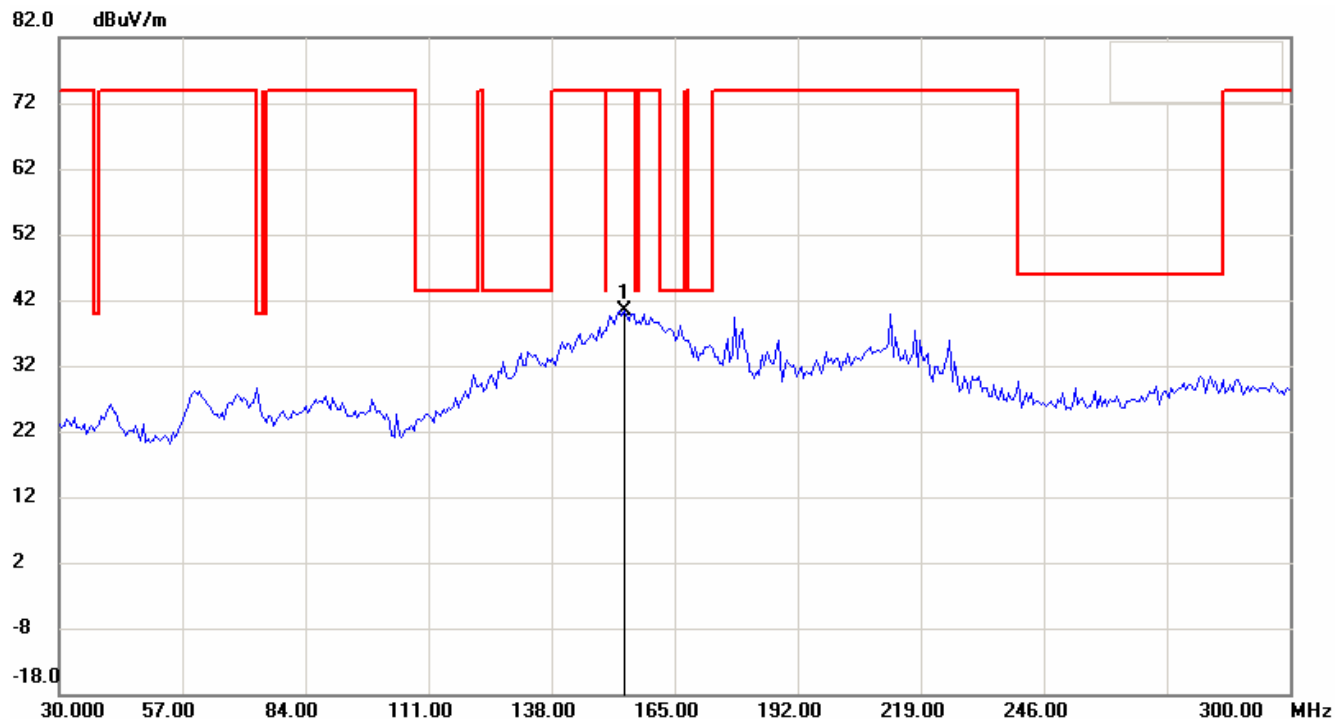


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

Bluetooth Mode\_CH 39

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.

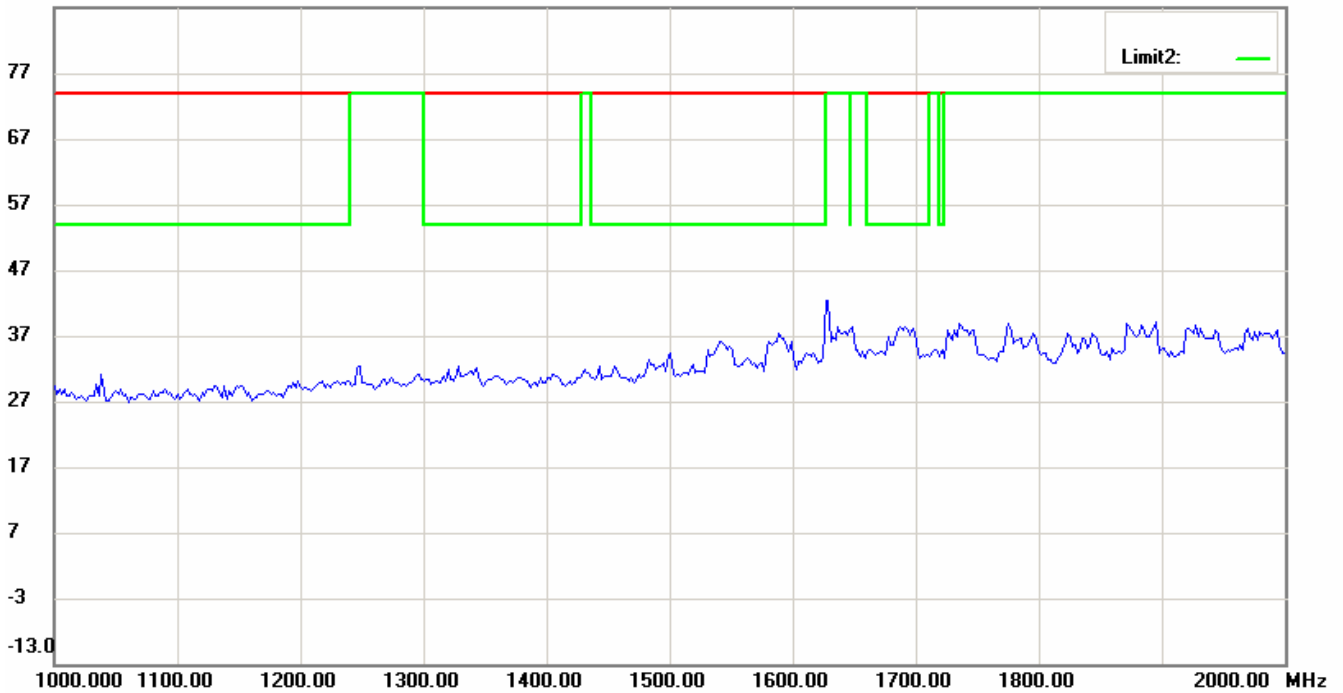


# Worldwide Testing Services(Taiwan) Co., Ltd.

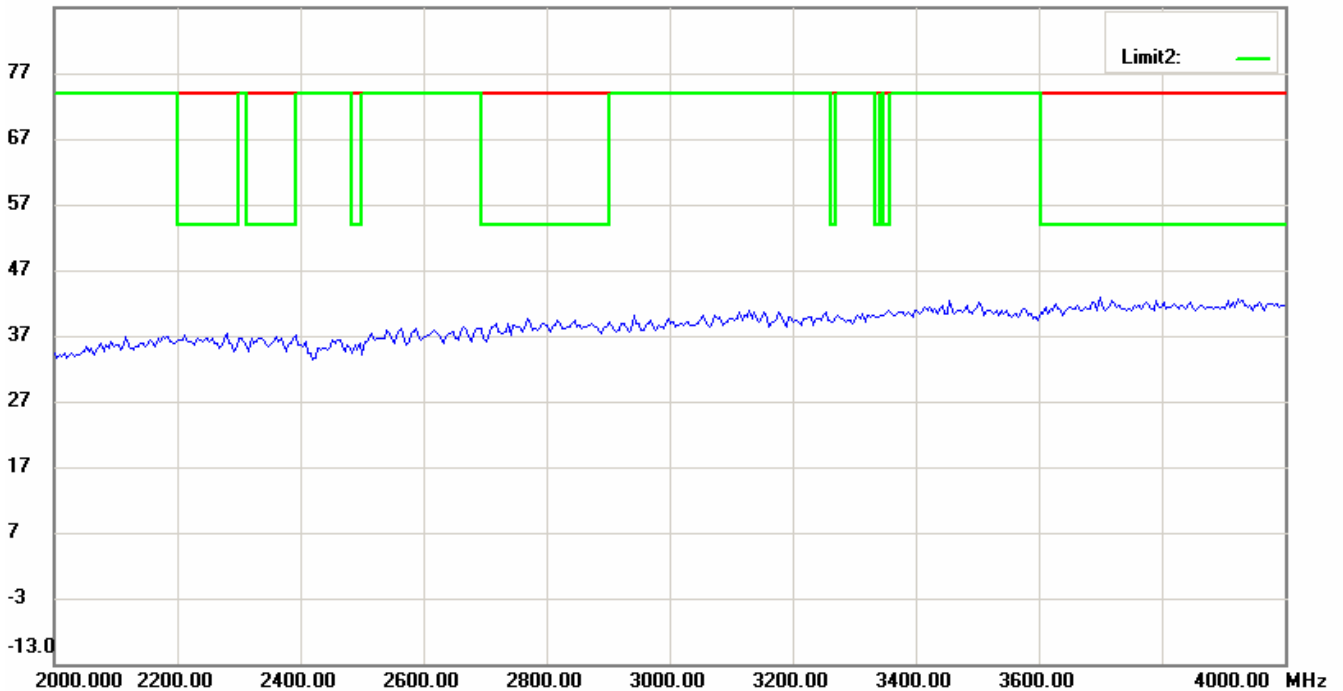
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

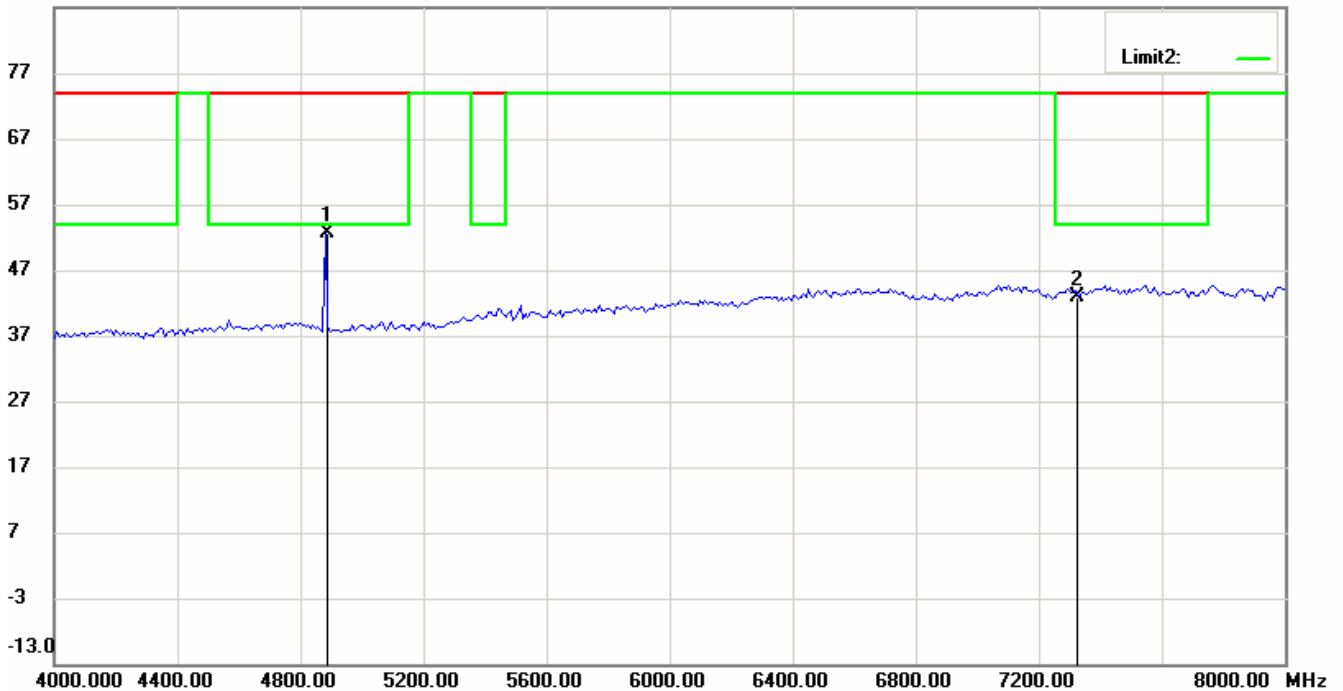


# Worldwide Testing Services(Taiwan) Co., Ltd.

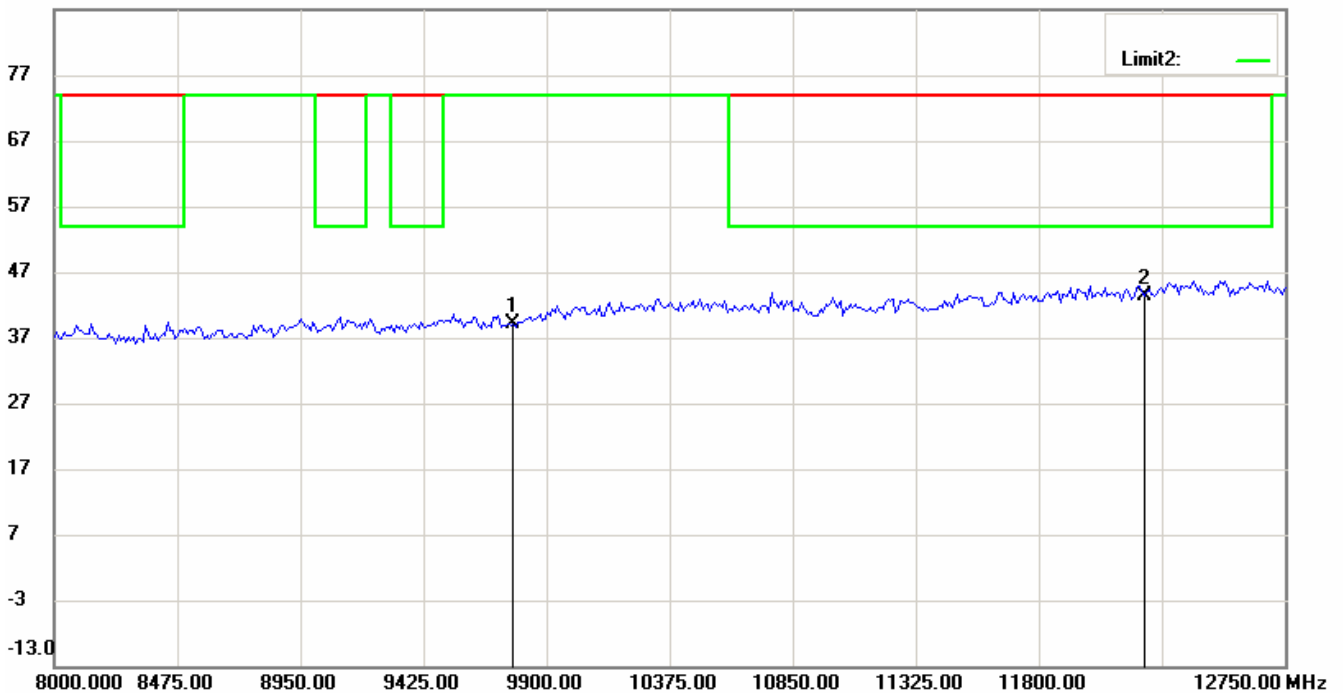
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



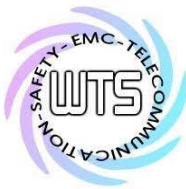
87.0 dBuV/m



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.

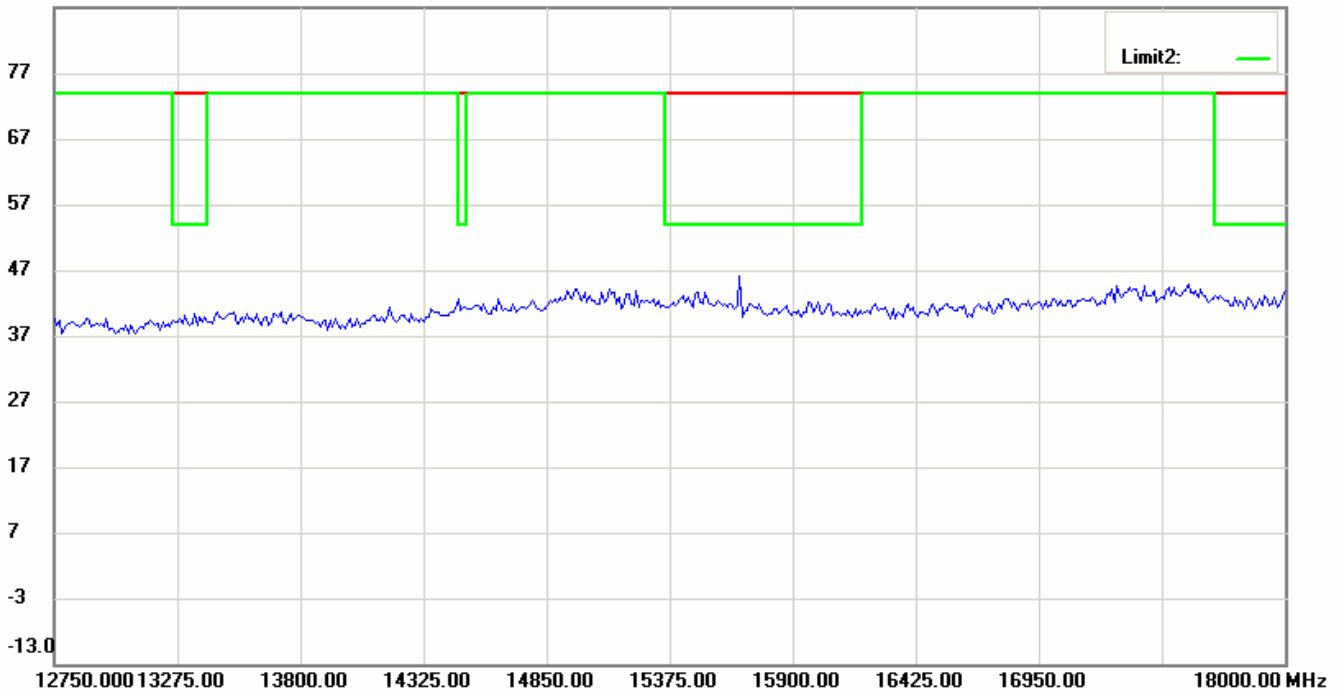


# Worldwide Testing Services(Taiwan) Co., Ltd.

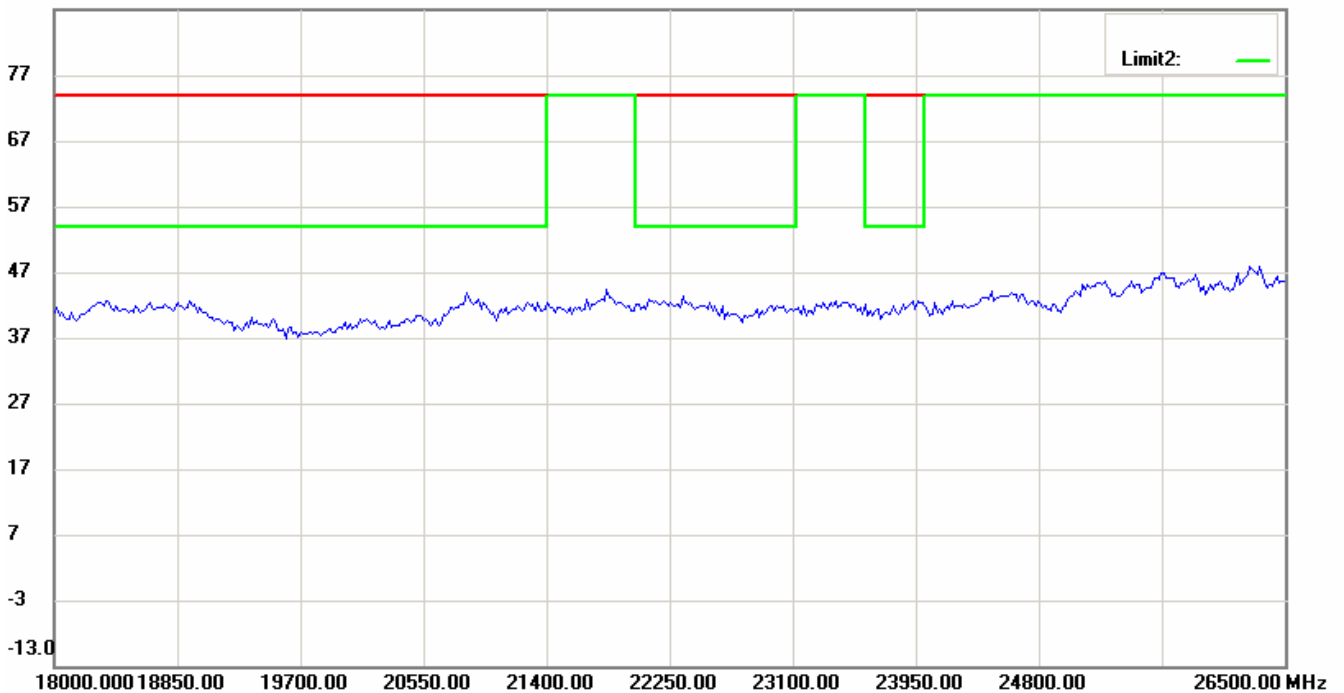
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

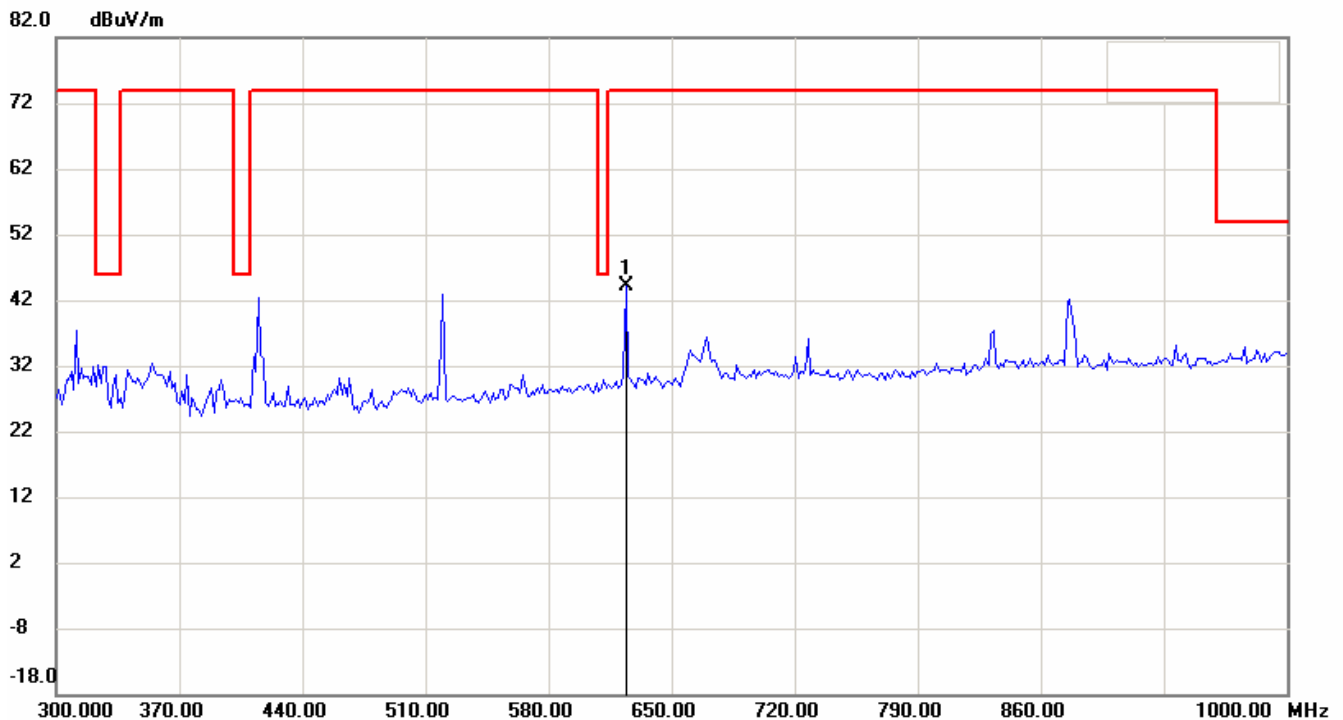
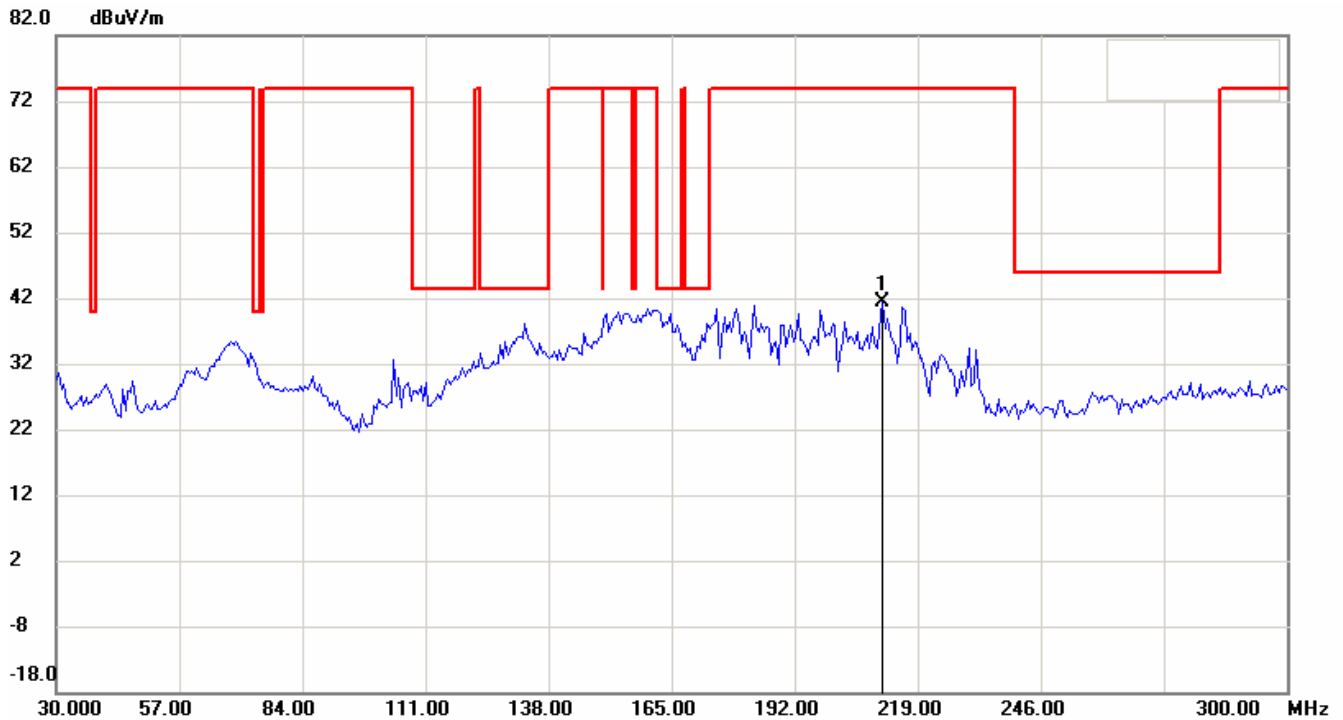
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

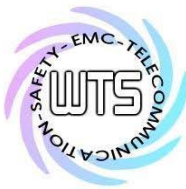


Up Line: Peak Limit Line Down Line: Ave Limit Line

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.



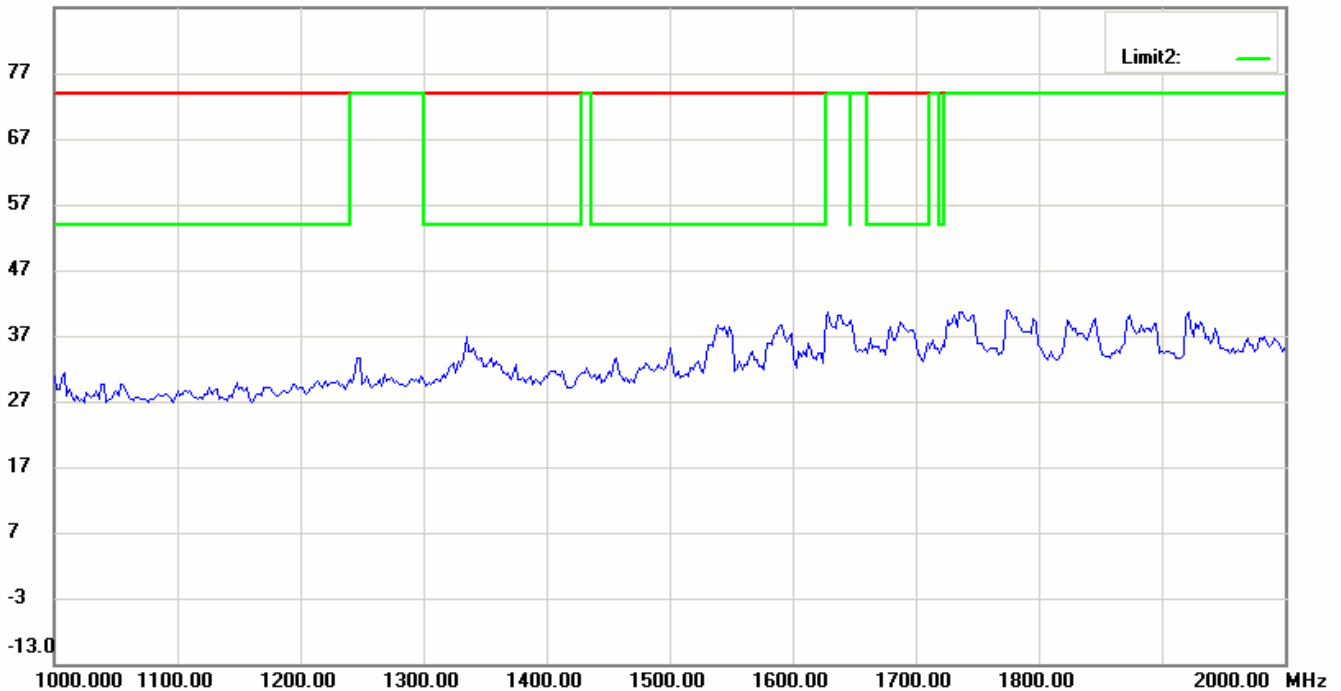


# Worldwide Testing Services(Taiwan) Co., Ltd.

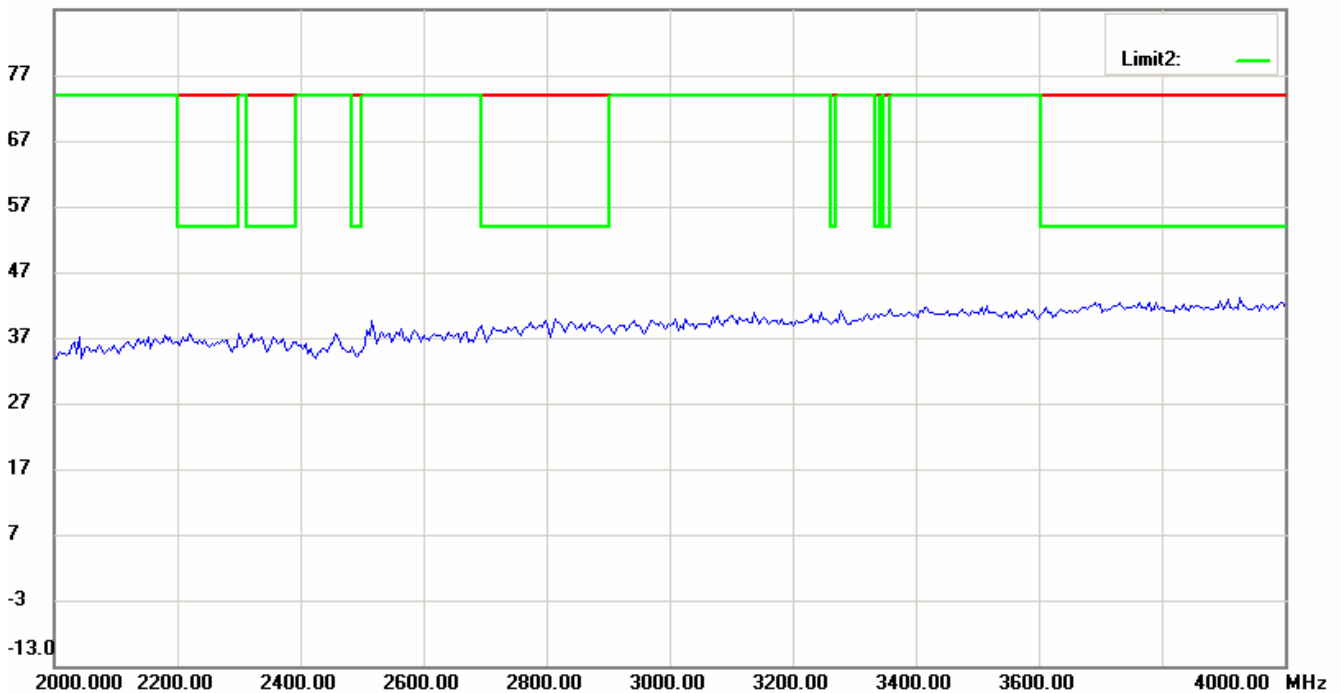
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



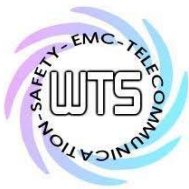
87.0 dBuV/m



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.

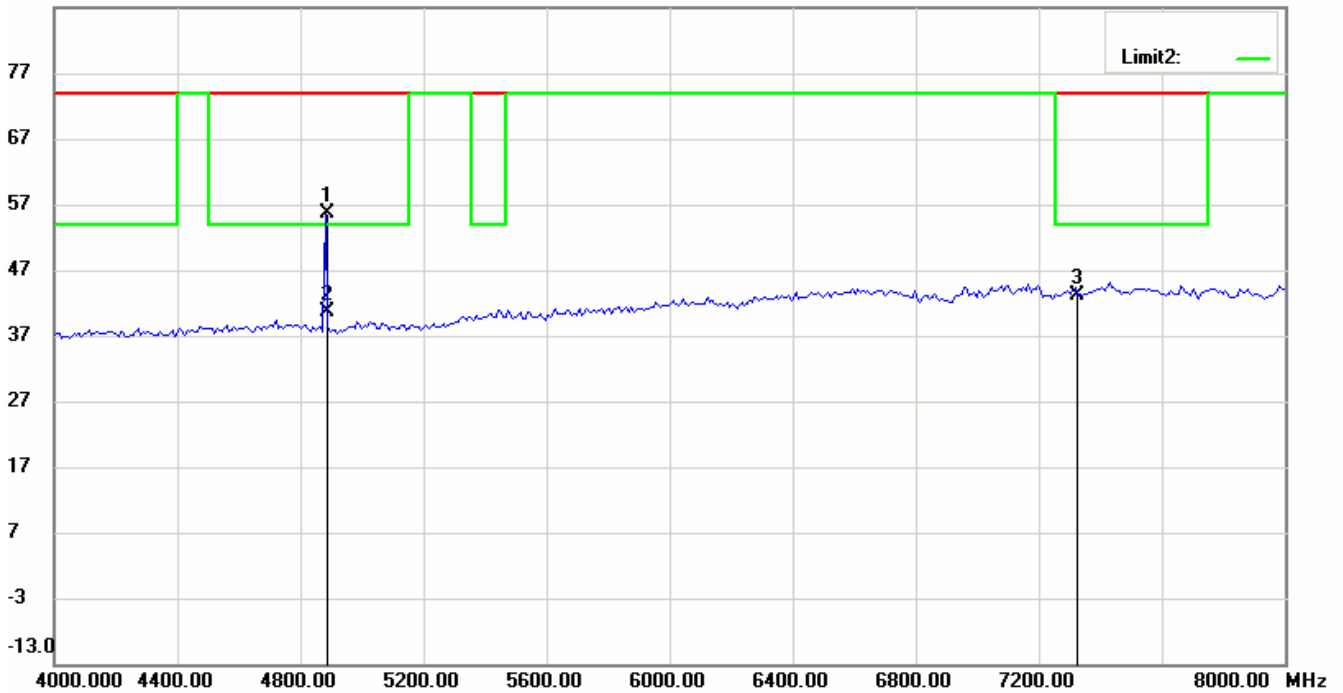


# Worldwide Testing Services(Taiwan) Co., Ltd.

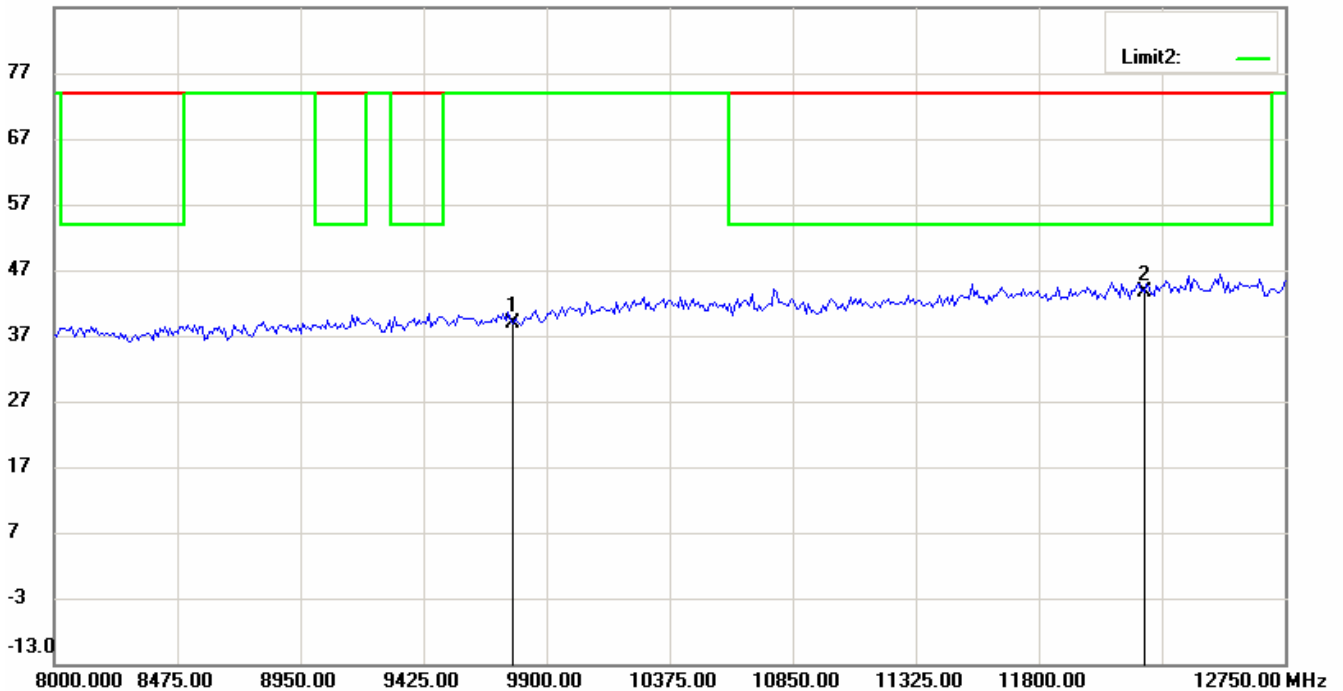
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



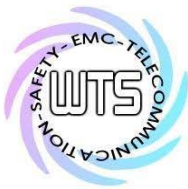
87.0 dBuV/m



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.

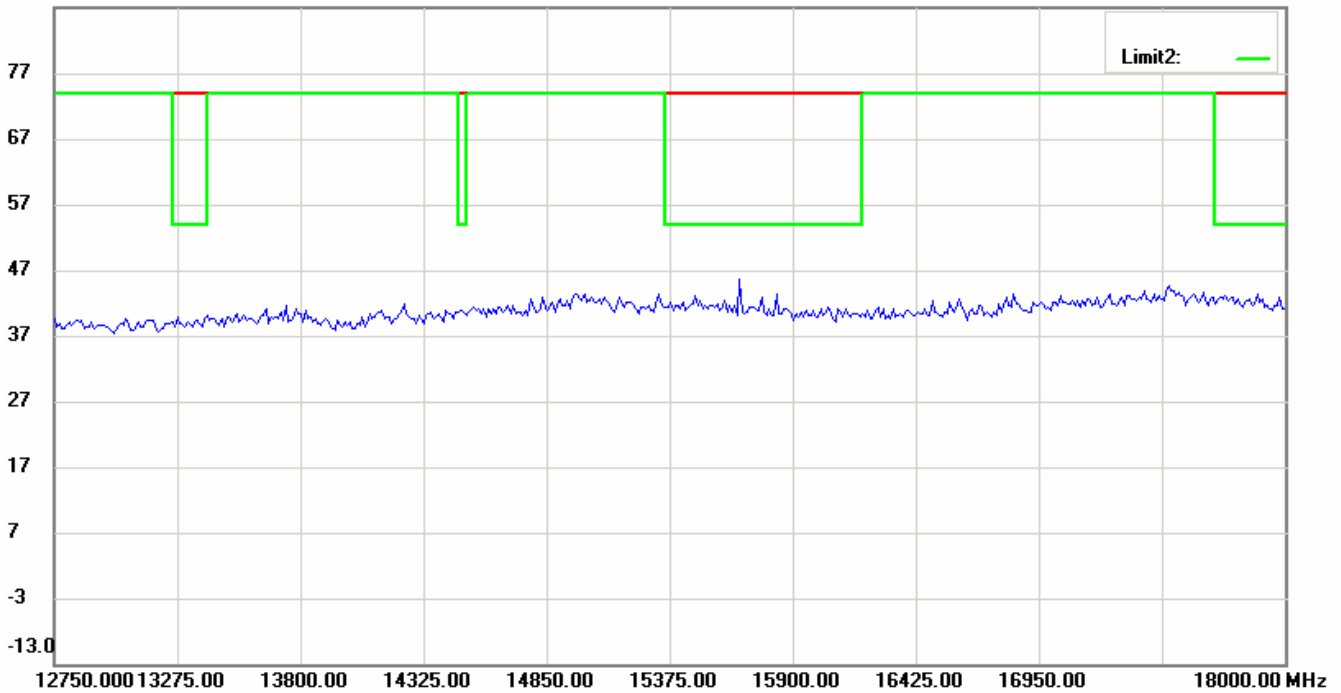


# Worldwide Testing Services(Taiwan) Co., Ltd.

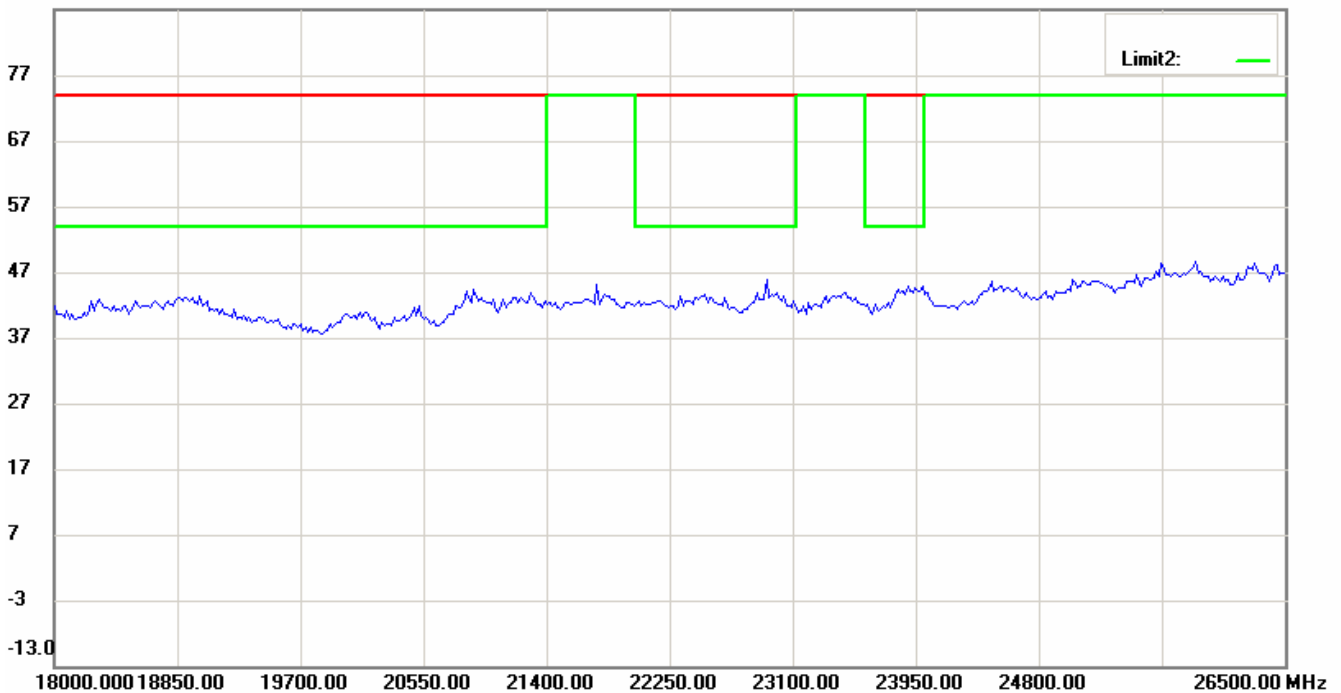
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

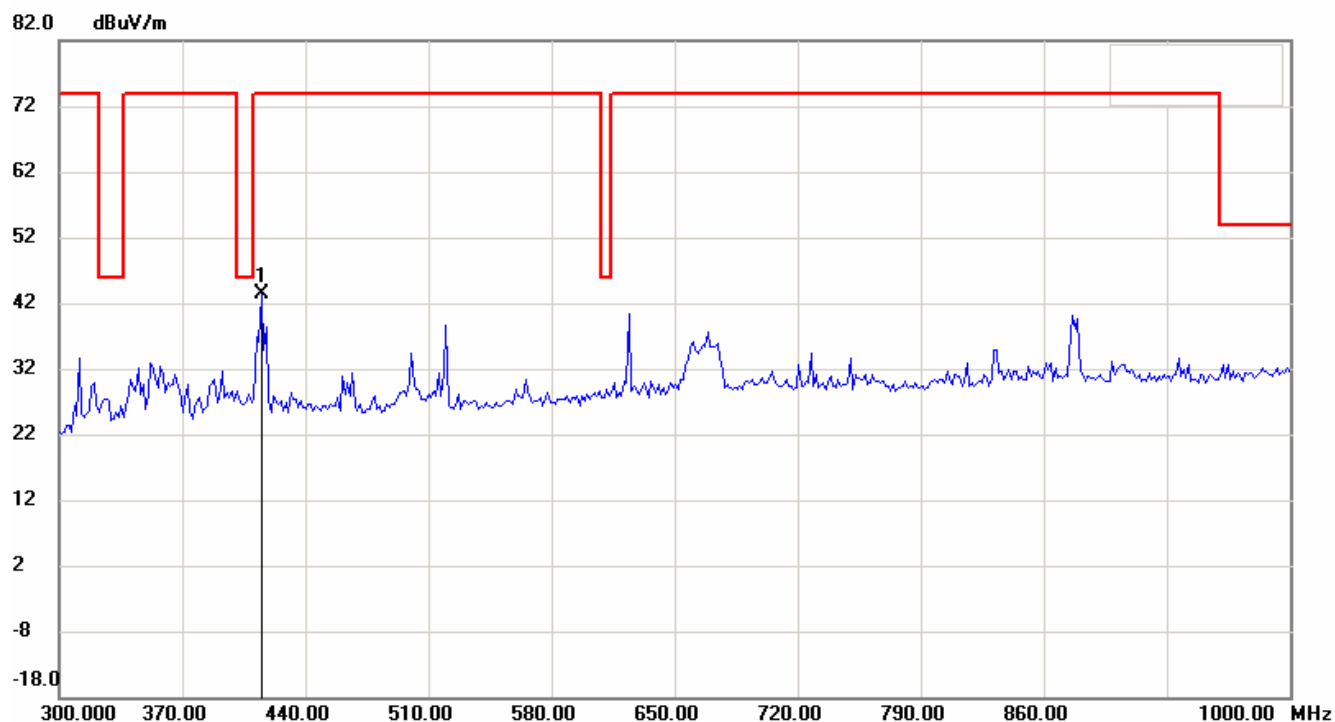
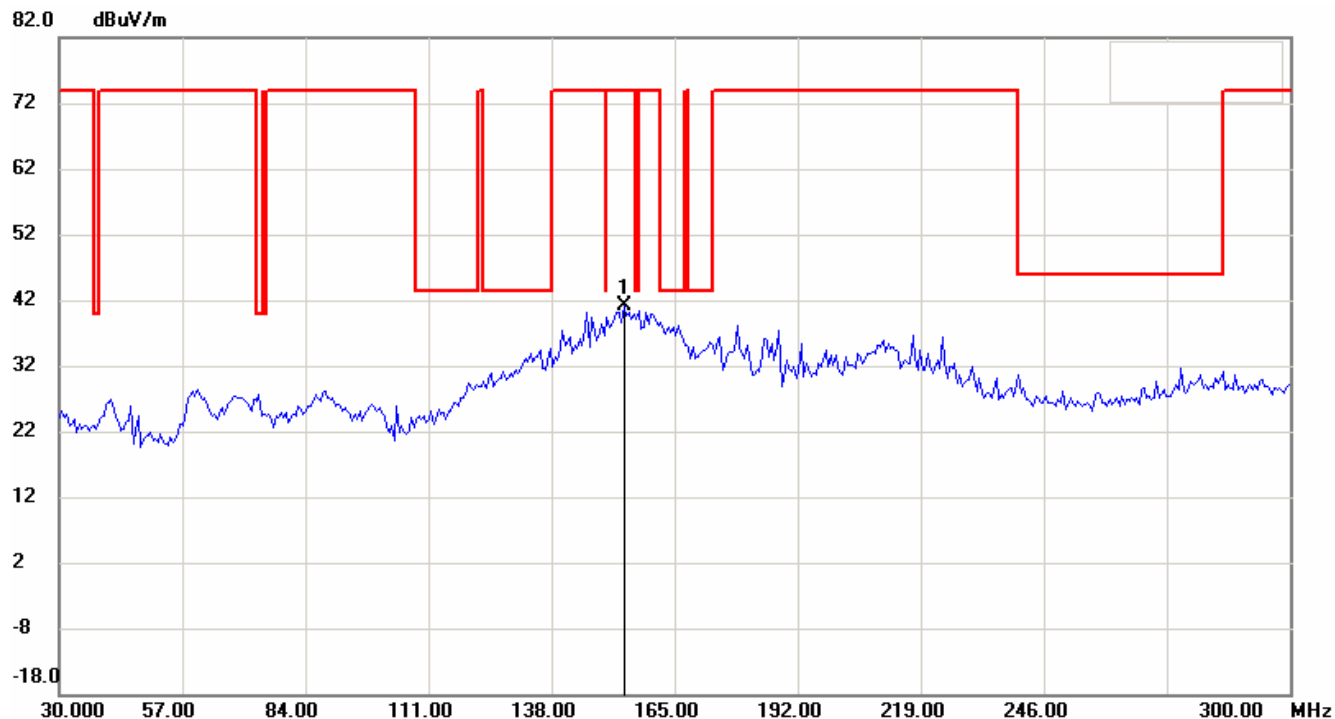


Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

Bluetooth Mode\_CH 78

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 limit standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

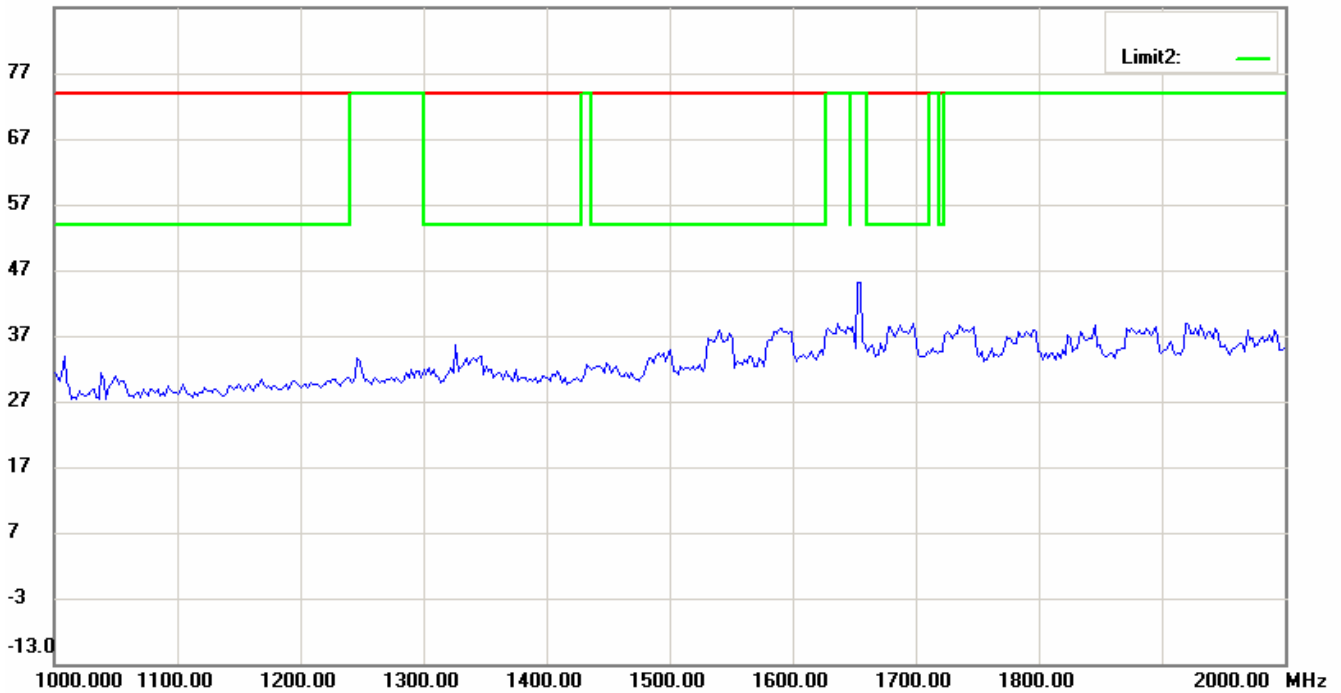


# Worldwide Testing Services(Taiwan) Co., Ltd.

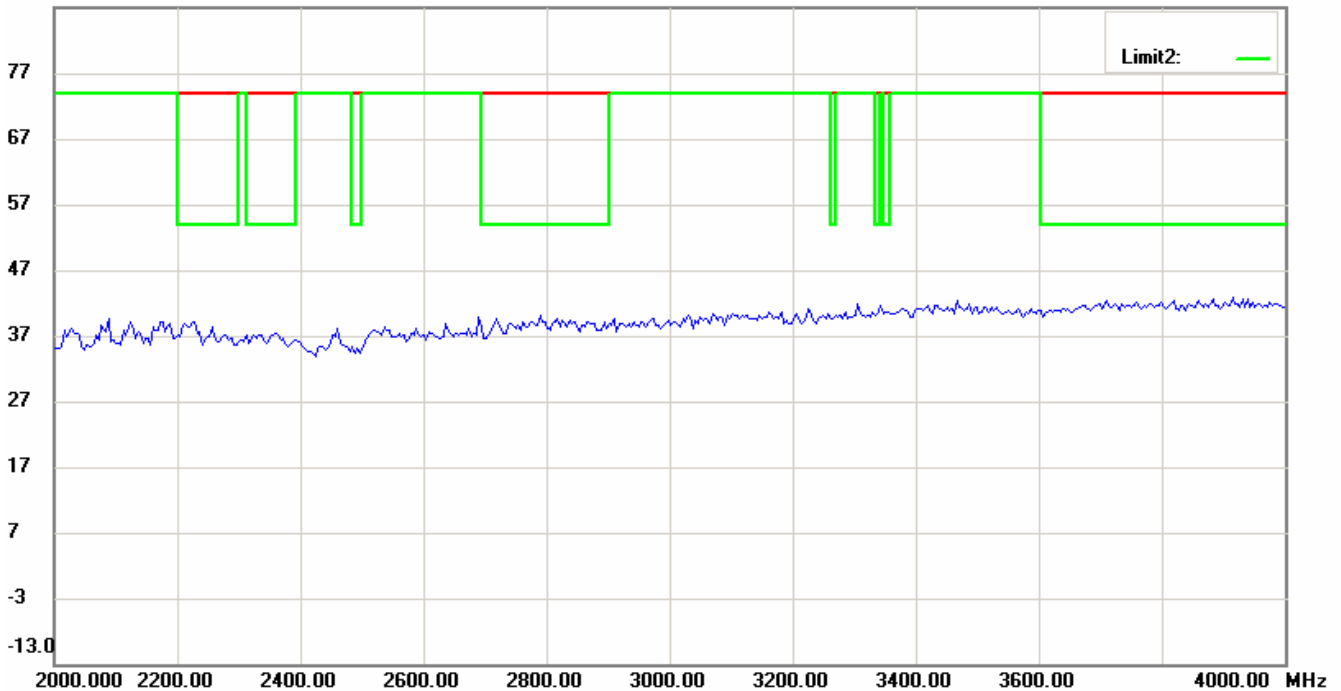
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



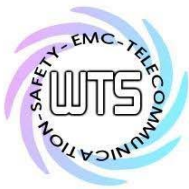
87.0 dBuV/m



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.

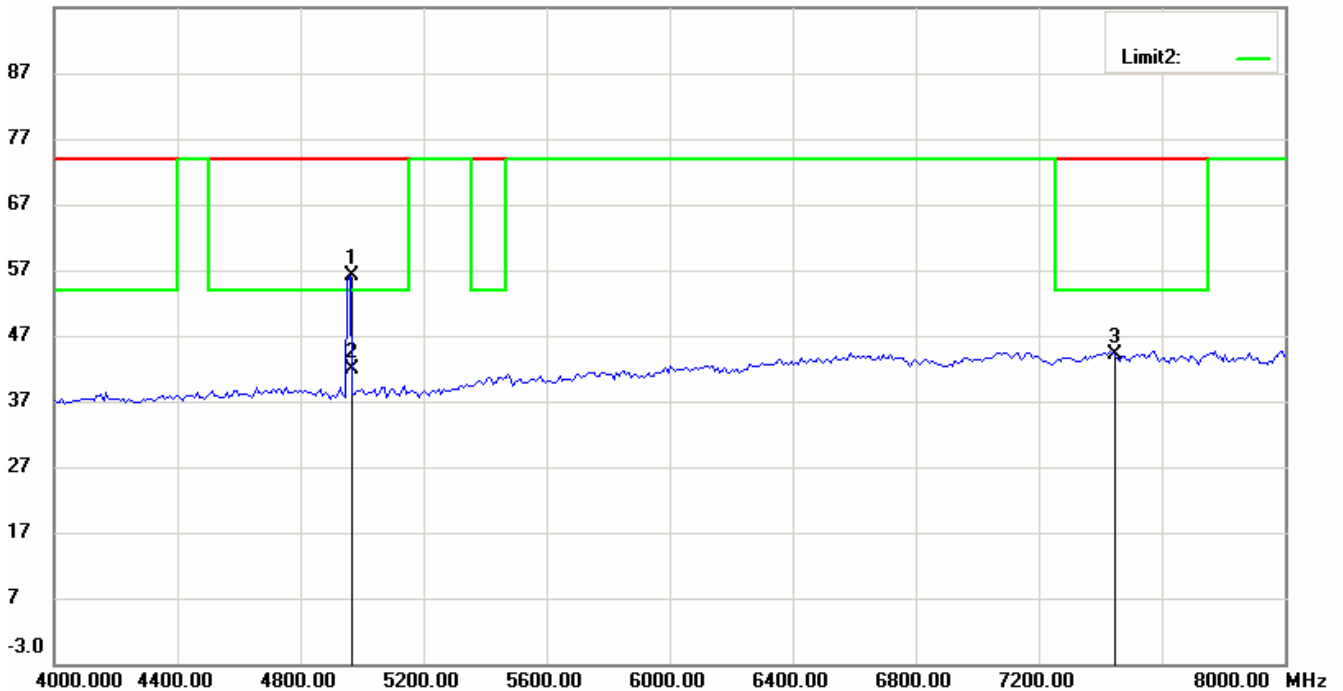


# Worldwide Testing Services(Taiwan) Co., Ltd.

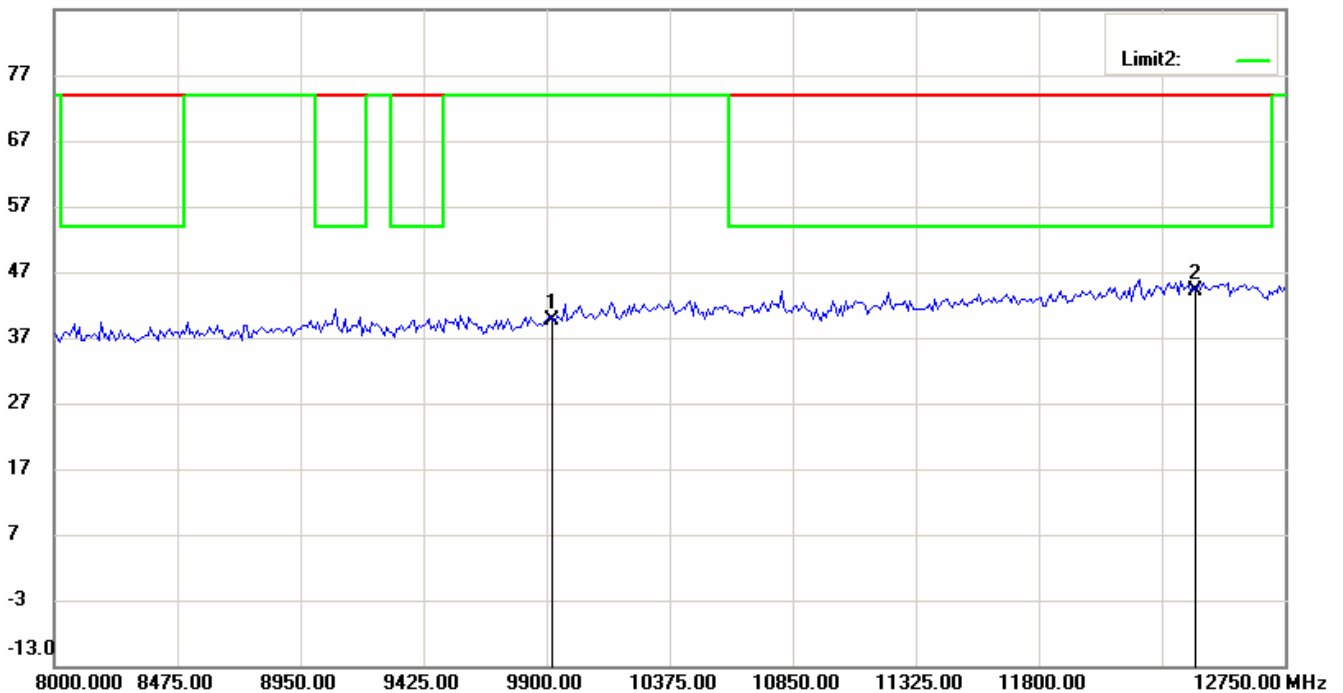
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

97.0 dBuV/m



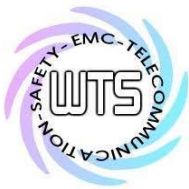
87.0 dBuV/m



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.

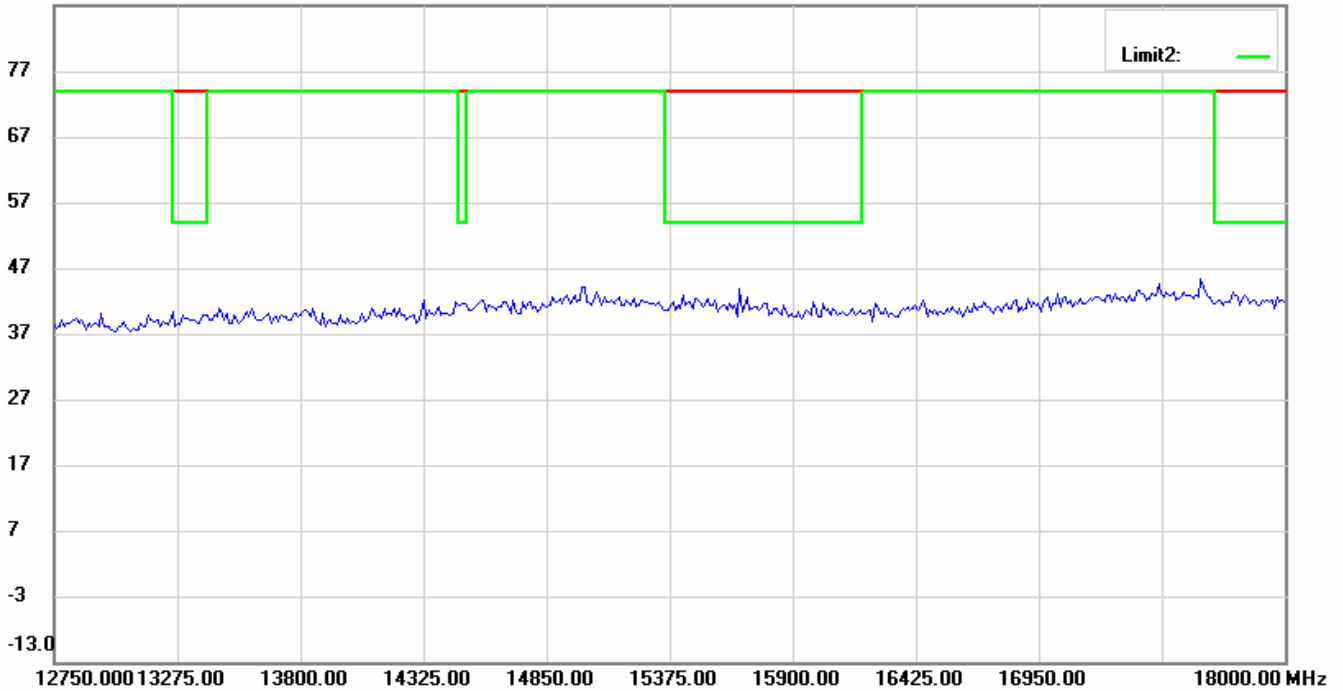


# Worldwide Testing Services(Taiwan) Co., Ltd.

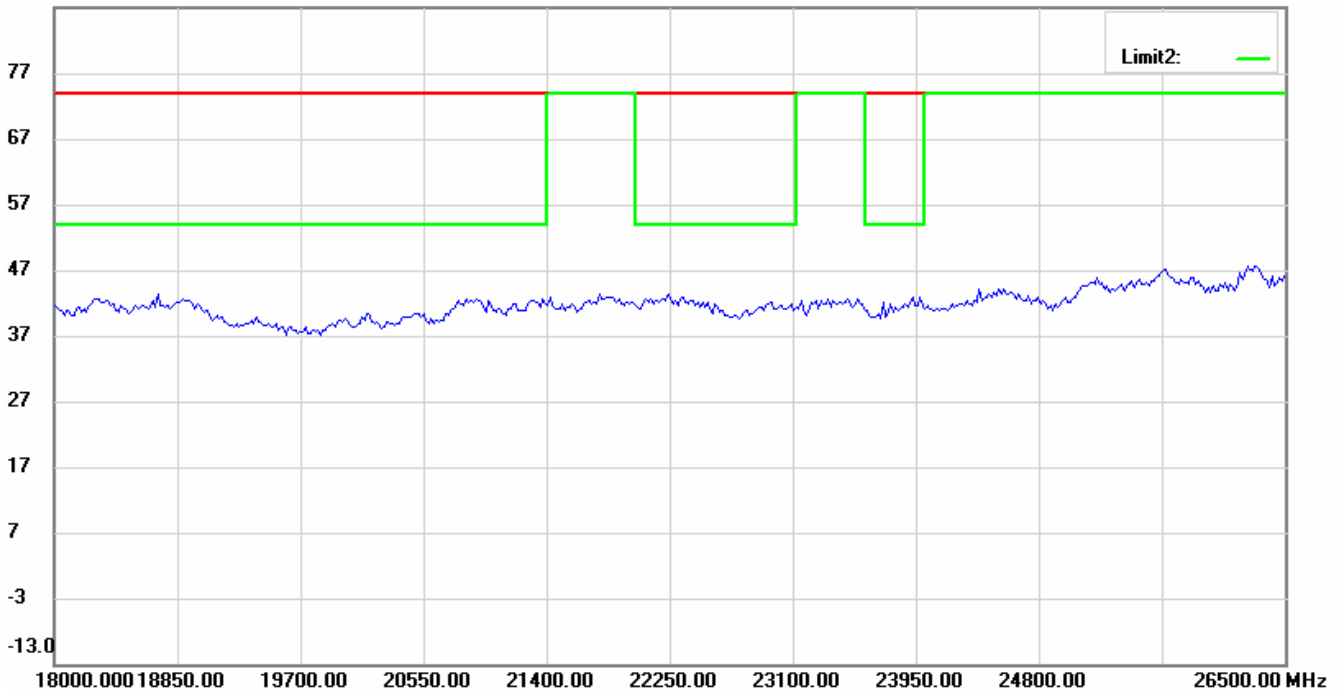
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

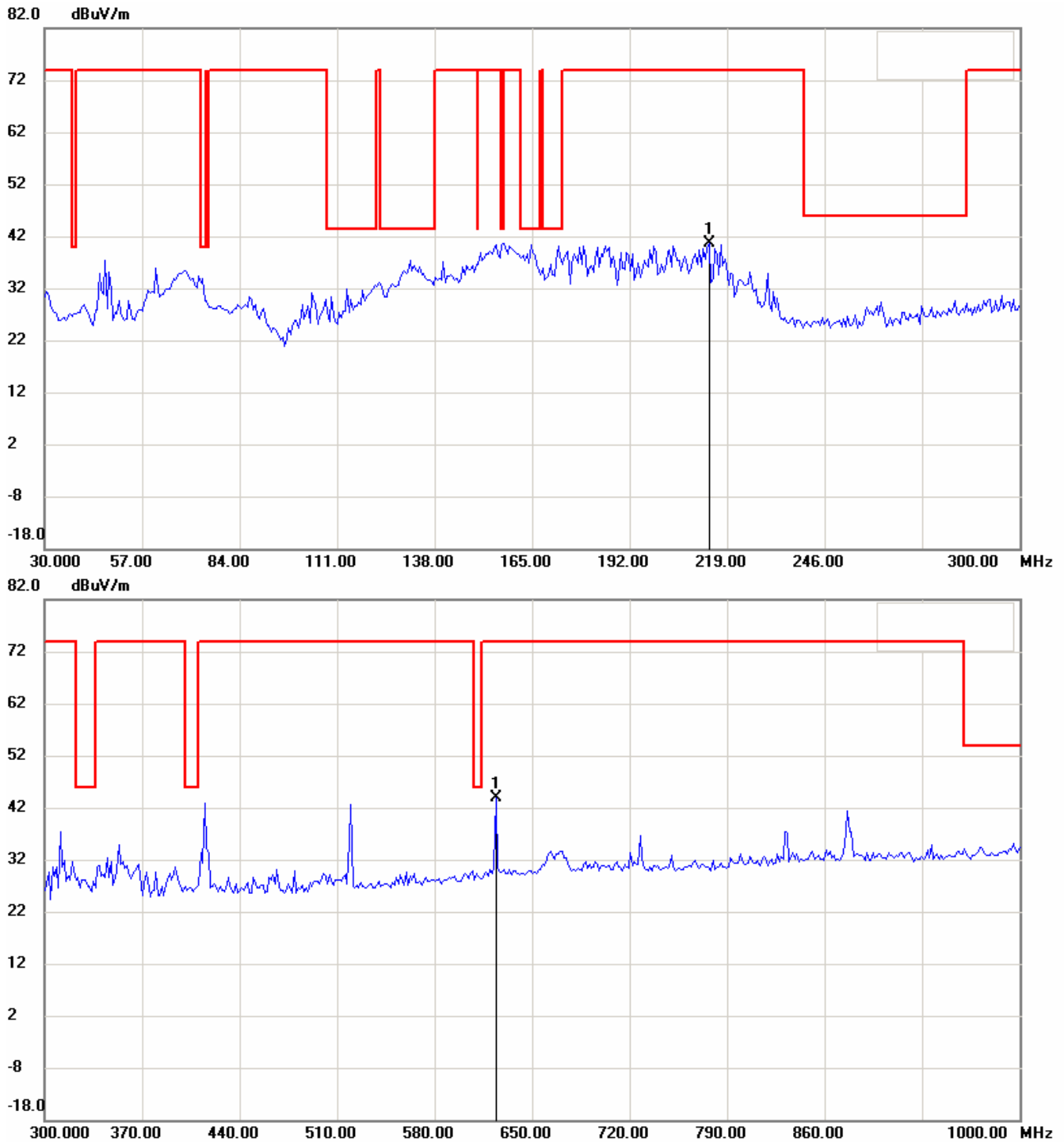
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Antenna Polarization V

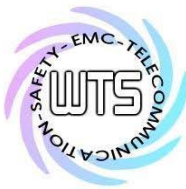


Up Line: Peak Limit Line Down Line: Ave Limit Line

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 limit test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



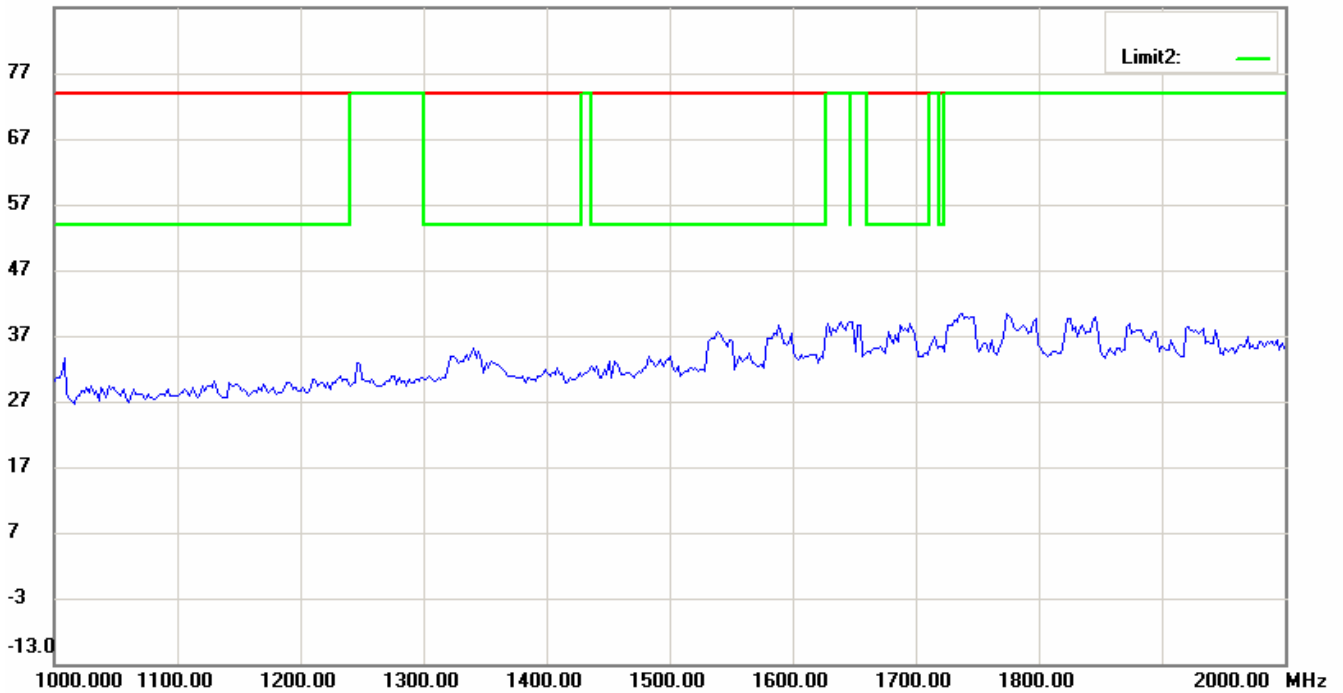


# Worldwide Testing Services(Taiwan) Co., Ltd.

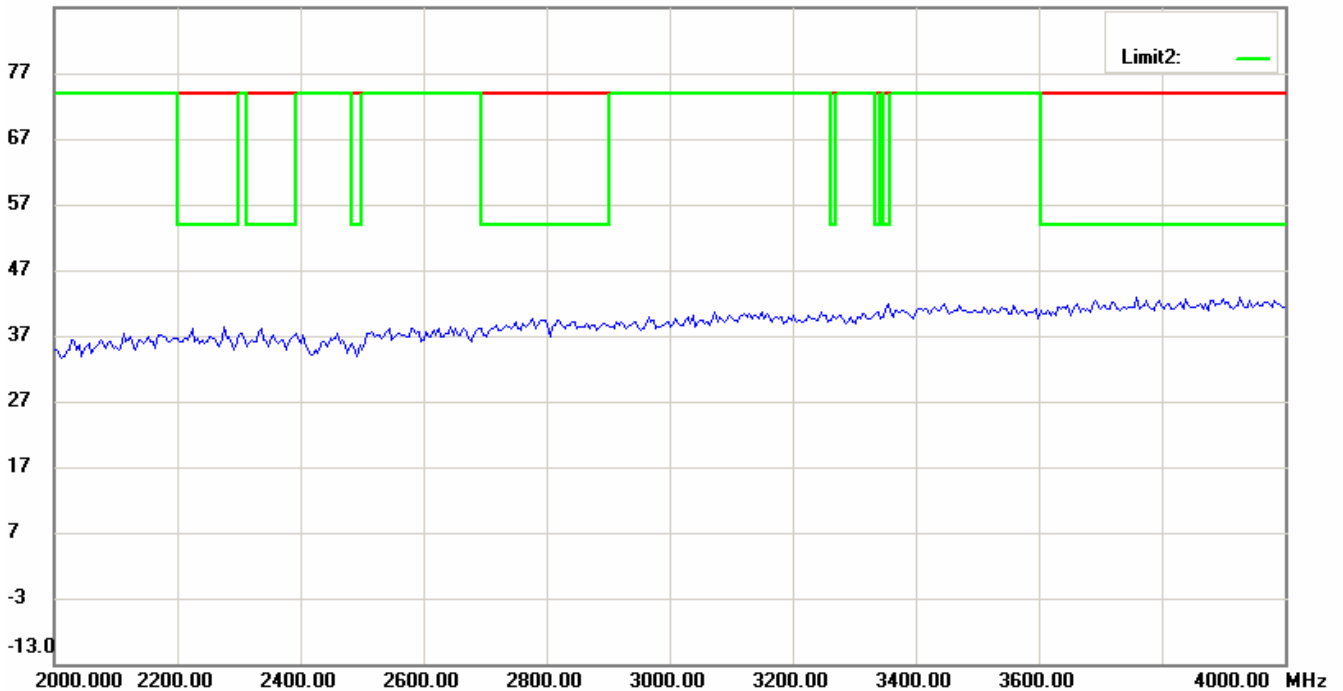
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

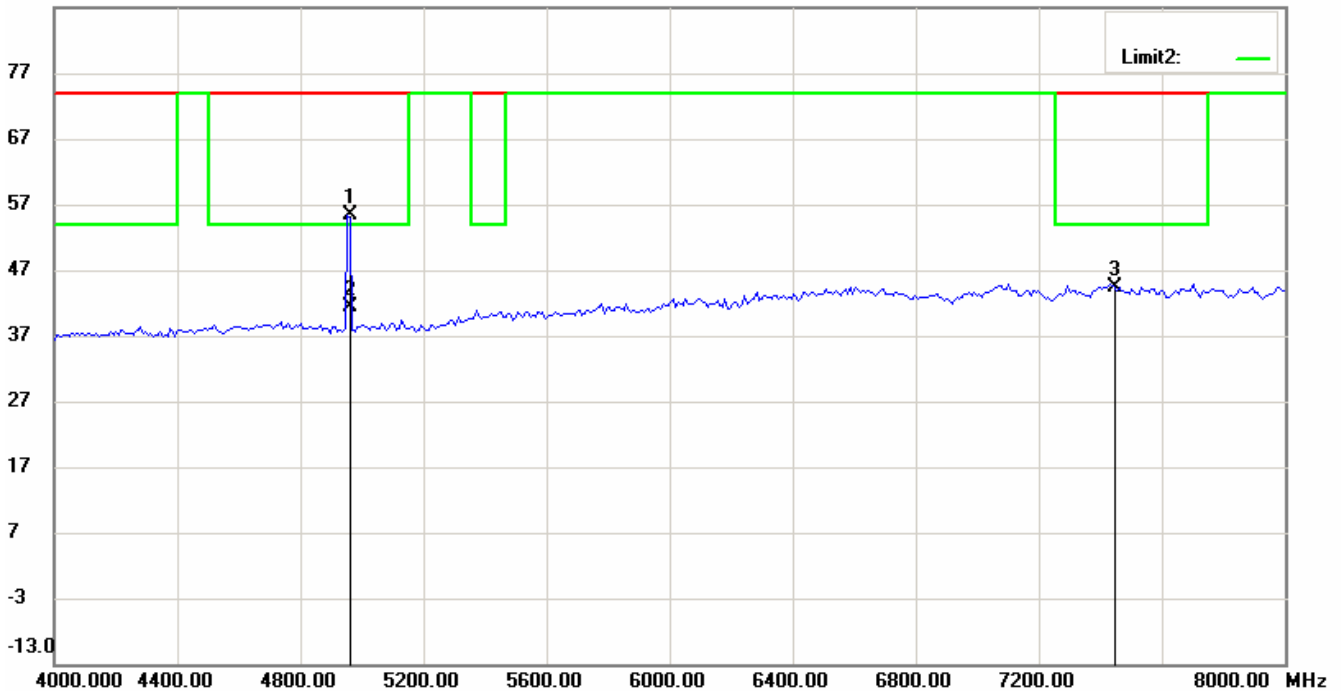


# Worldwide Testing Services(Taiwan) Co., Ltd.

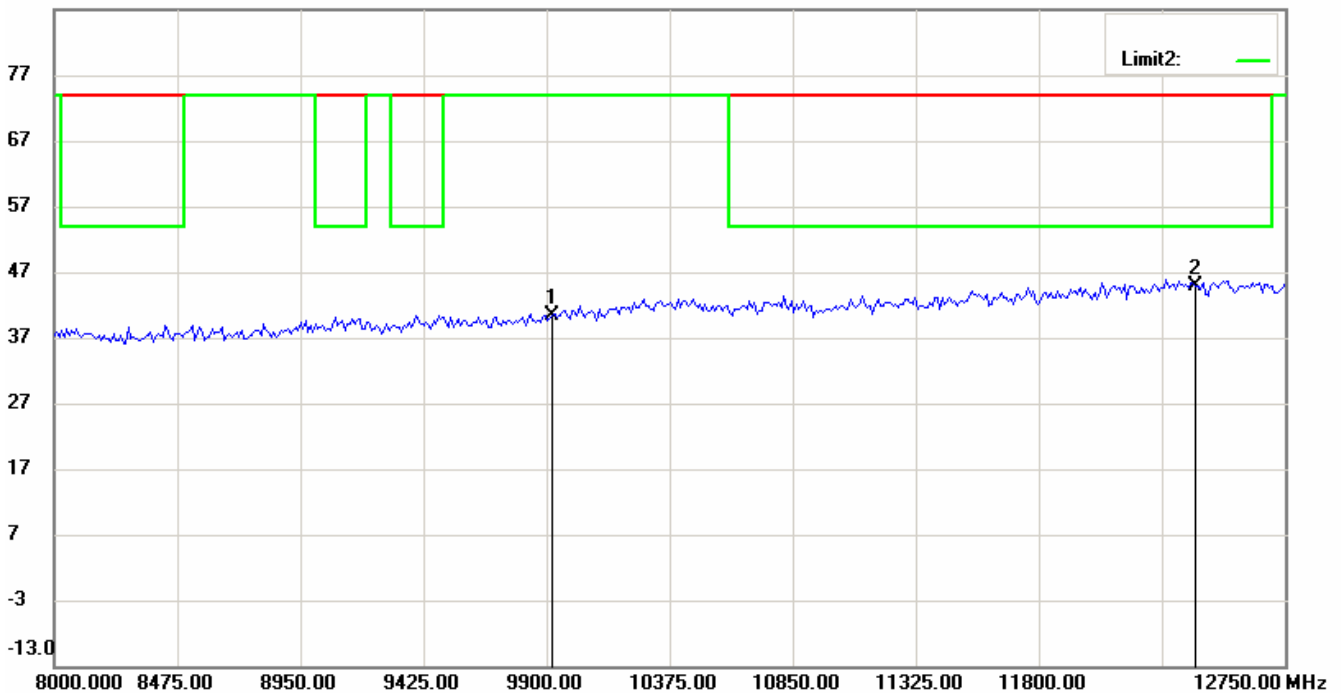
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



87.0 dBuV/m



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.

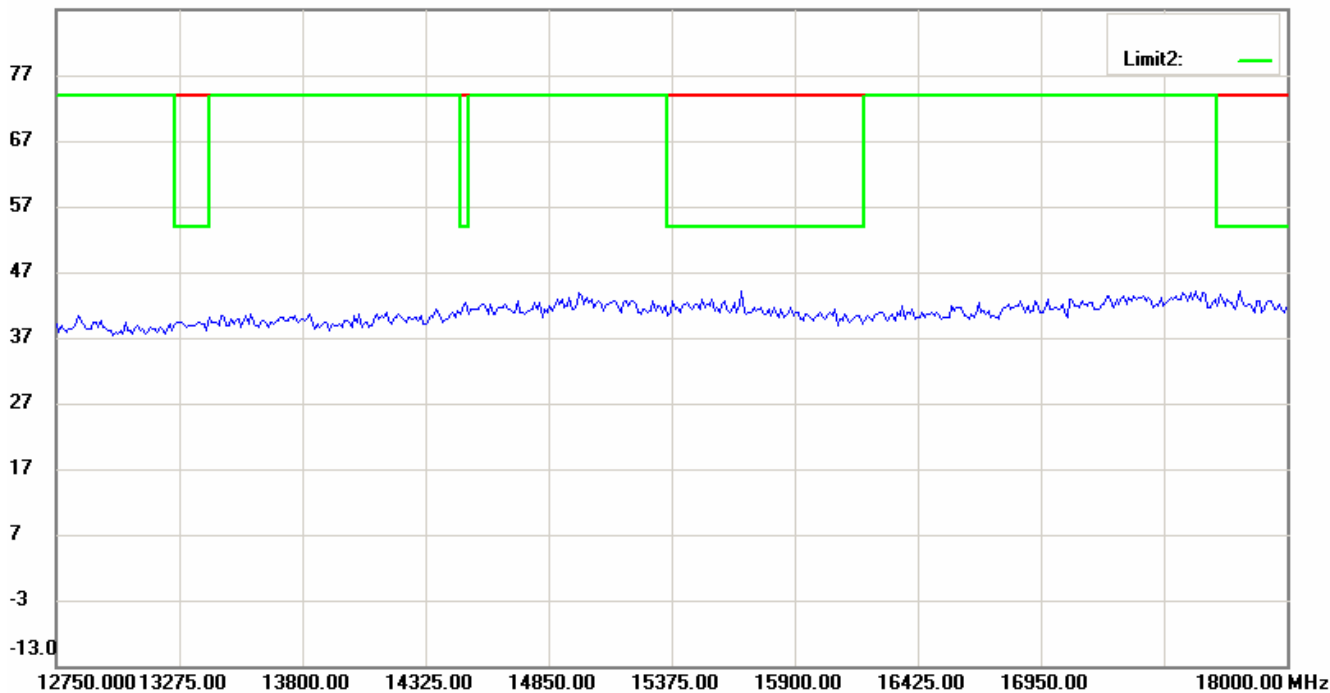


# Worldwide Testing Services(Taiwan) Co., Ltd.

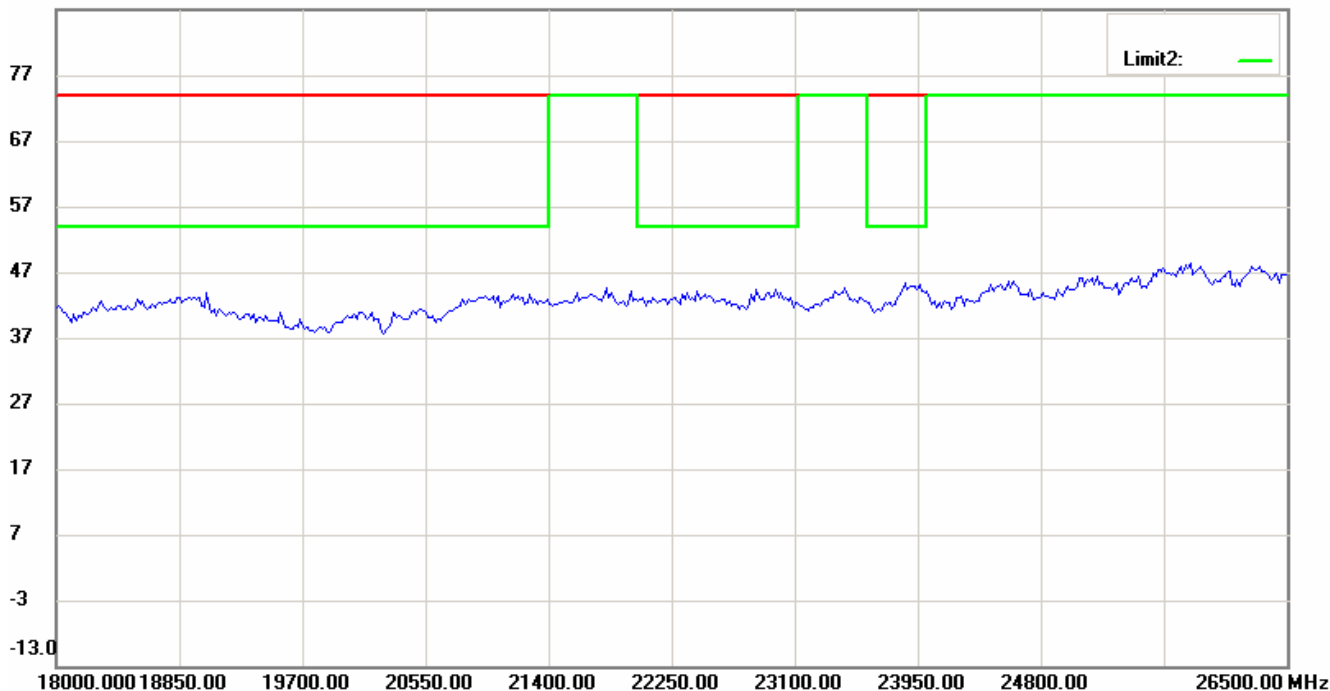
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

87.0 dBuV/m



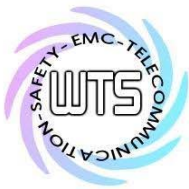
87.0 dBuV/m



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.

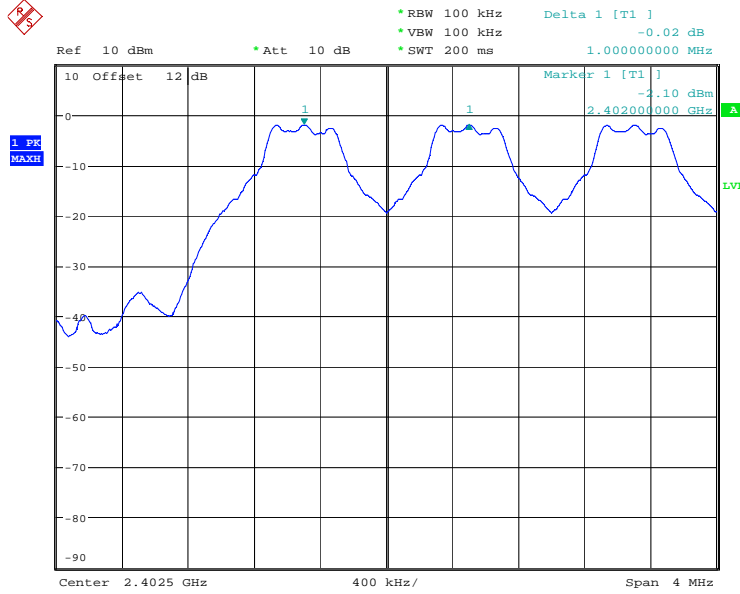


# Worldwide Testing Services(Taiwan) Co., Ltd.

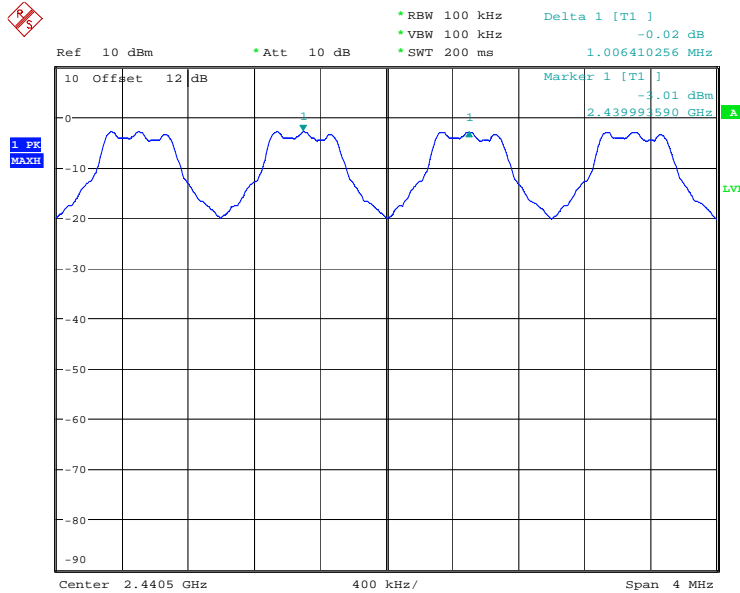
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

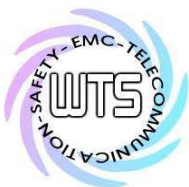
## Carrier Frequency Separation Bluetooth Mode



FREQUENCY SEPARATION CH0  
Date: 10.JAN.2009 15:35:01

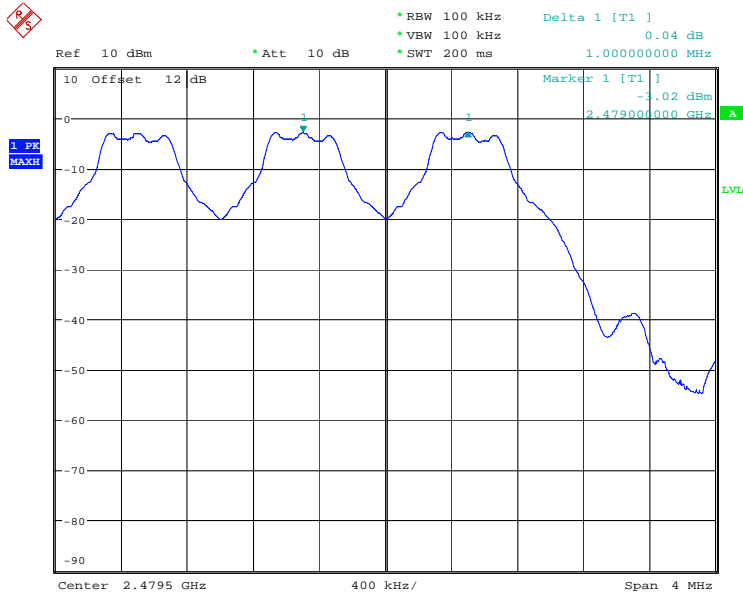


FREQUENCY SEPARATION CH39  
Date: 10.JAN.2009 15:33:28



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



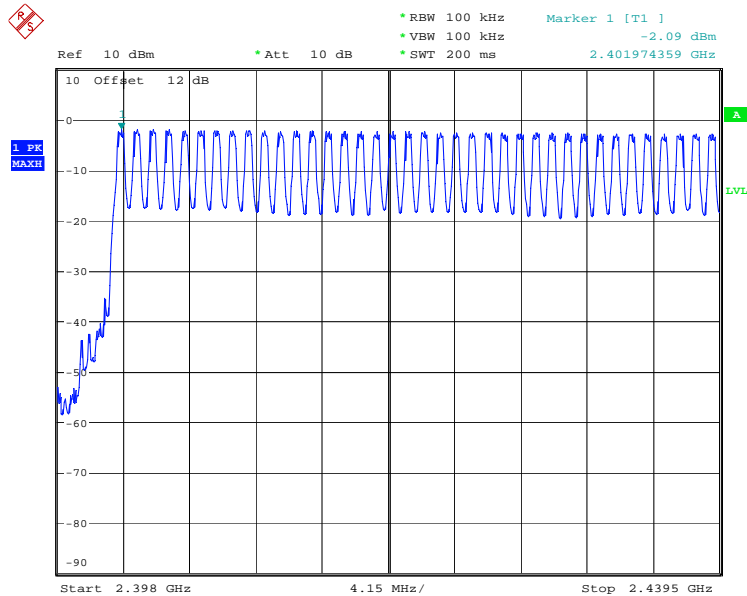
FREQUENCY SEPARATION CH78  
Date: 10.JAN.2009 15:31:43



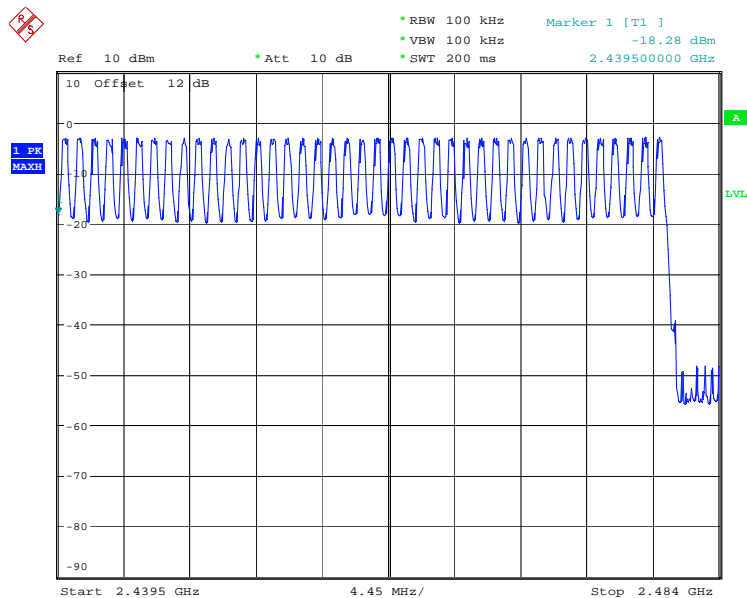
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

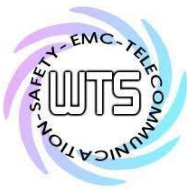
## Number of Hopping Frequencies Bluetooth Mode



NUMBER OF HOPPING CH0-37  
Date: 10.JAN.2009 13:09:17



NUMBER OF HOPPING CH37-78  
Date: 10.JAN.2009 13:14:29



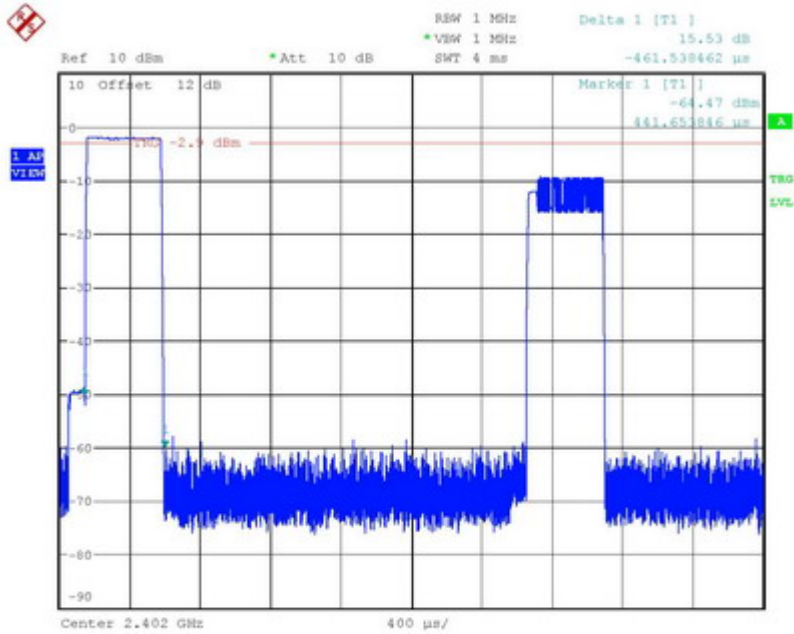
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1

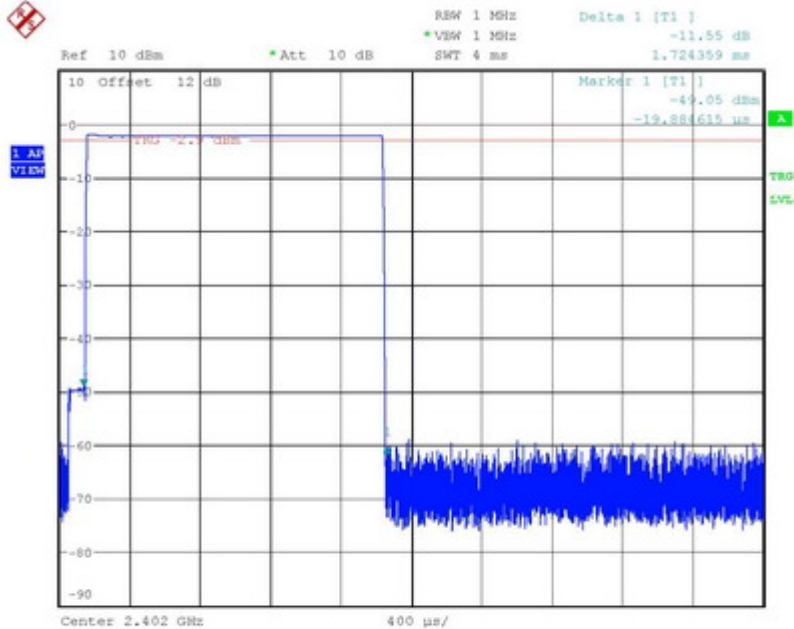
FCC ID: M82-PWS-8033M

Time of Occupancy (Dwell Time)

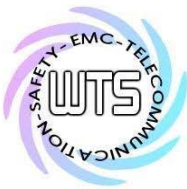
Bluetooth Mode



DELL TIME CH0 DH1(0.461ms \* 320events = 147.52ms)  
 Date: 10.JAN.2009 15:49:20

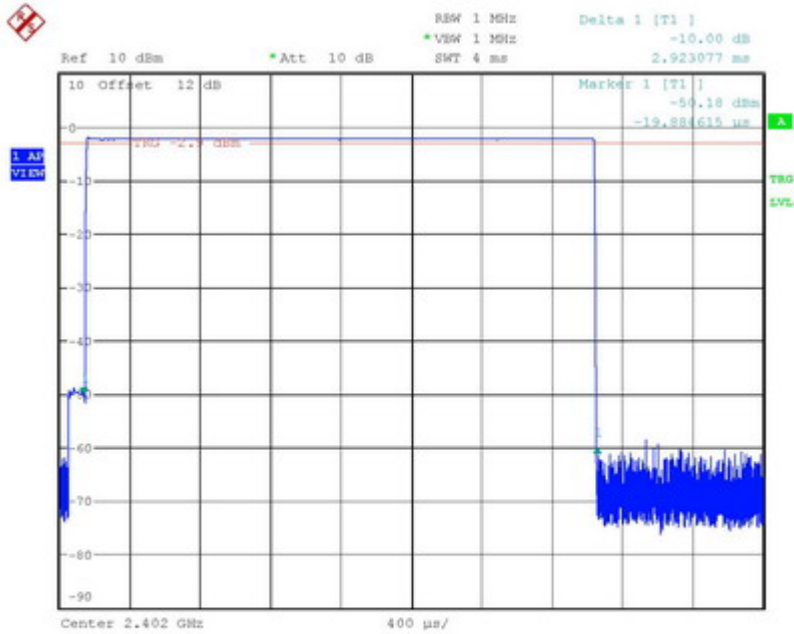


DELL TIME CH0 DH3(1.724ms \* 160events = 275.84ms)  
 Date: 10.JAN.2009 15:51:52

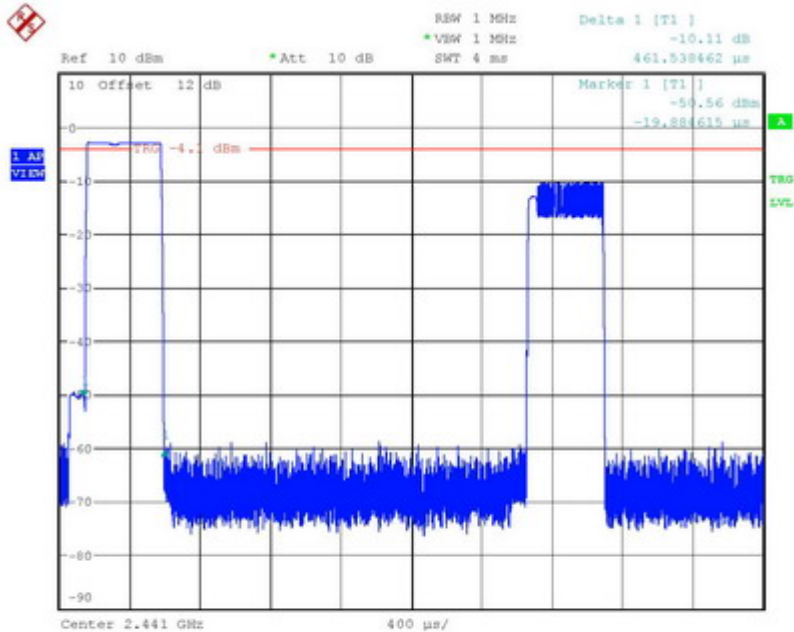


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M

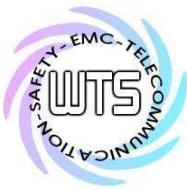


DELL TIME CH0 DH5(2.923ms \* 110events = 321.53ms)  
Date: 10.JAN.2009 15:55:22



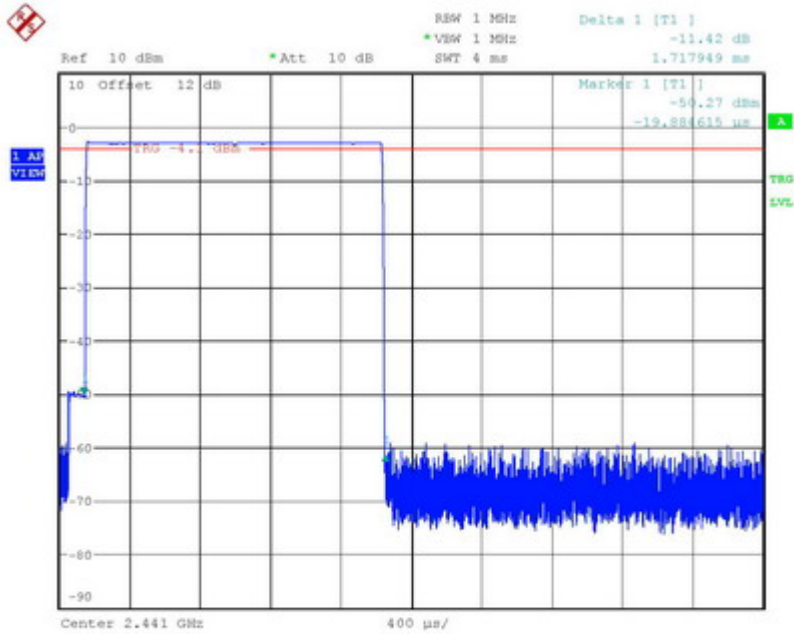
DELL TIME CH39 DH1(0.461ms \* 320events = 147.52ms)  
Date: 10.JAN.2009 16:00:32



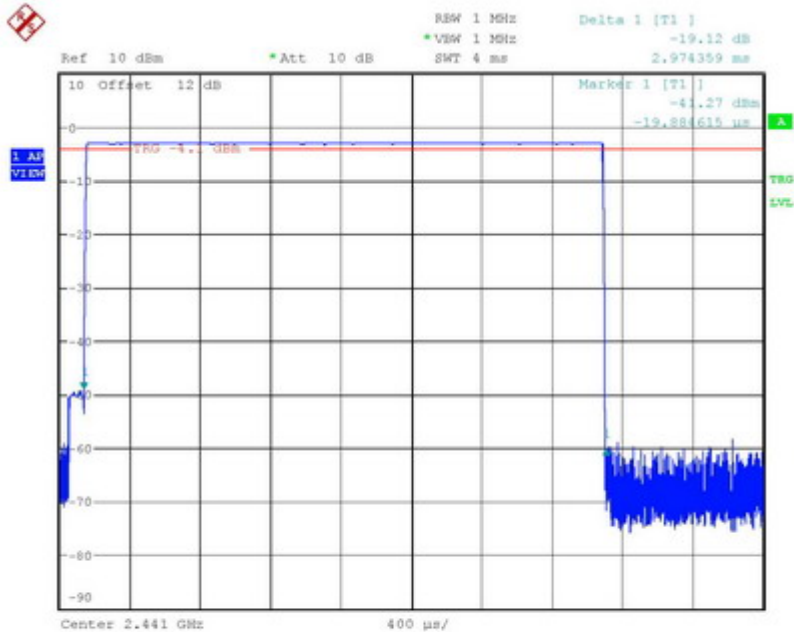


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



DELL TIME CH39 DH3(1.718ms \* 160events = 274.88ms)  
Date: 10.JAN.2009 16:02:36

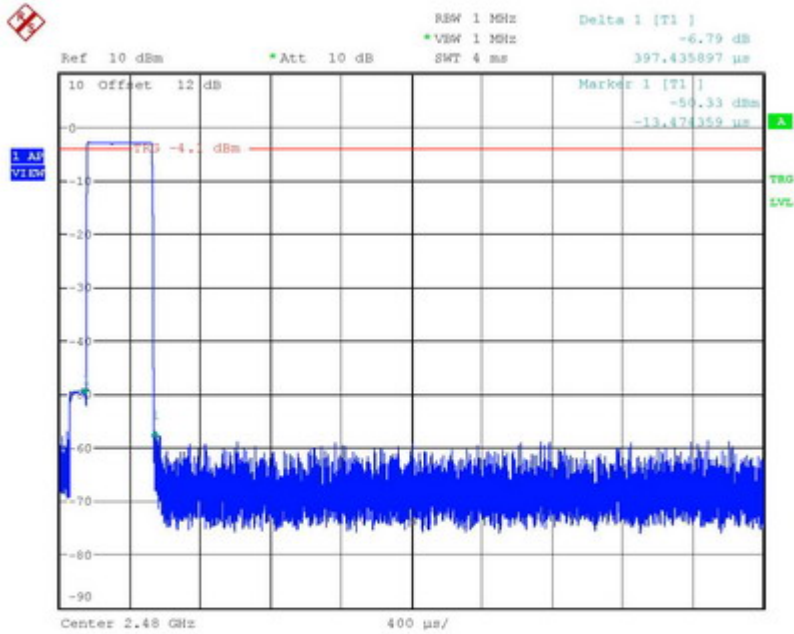


DELL TIME CH39 DH5(2.974ms \* 110events = 327.14ms)  
Date: 10.JAN.2009 16:04:04

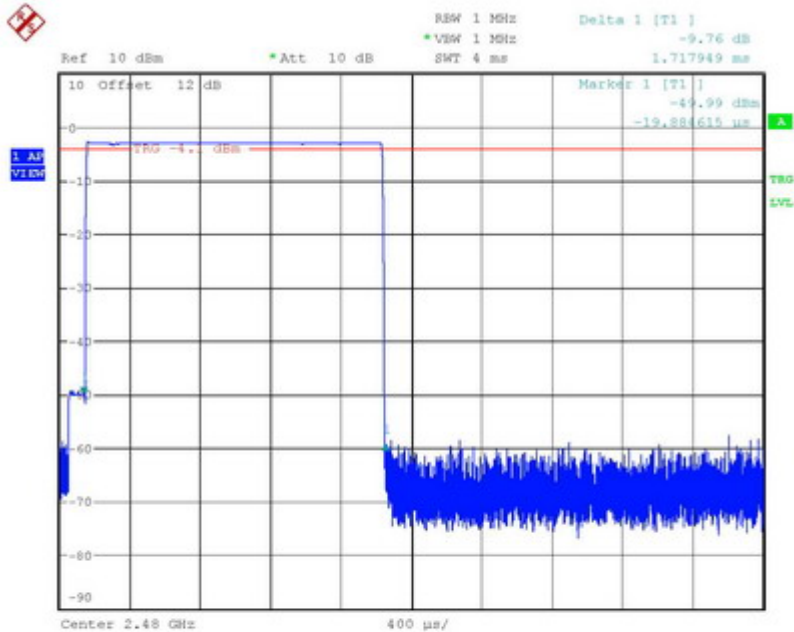


# Worldwide Testing Services(Taiwan) Co., Ltd.

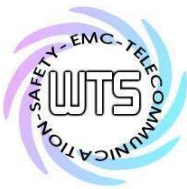
Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



DELL TIME CH78 DH1(0.397ms \* 320events = 127.04ms)  
Date: 10.JAN.2009 16:09:30

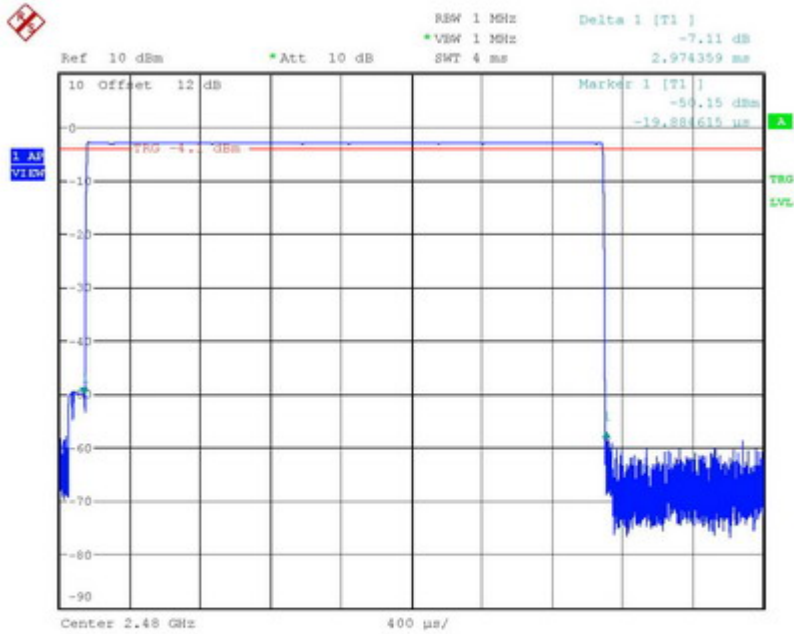


DELL TIME CH78 DH3(1.718ms \* 160events = 274.88ms)  
Date: 10.JAN.2009 16:07:01



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

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



DELL TIME CH78 DB5(2.974ms \* 110events = 327.14ms)  
Date: 10.JAN.2009 16:05:39

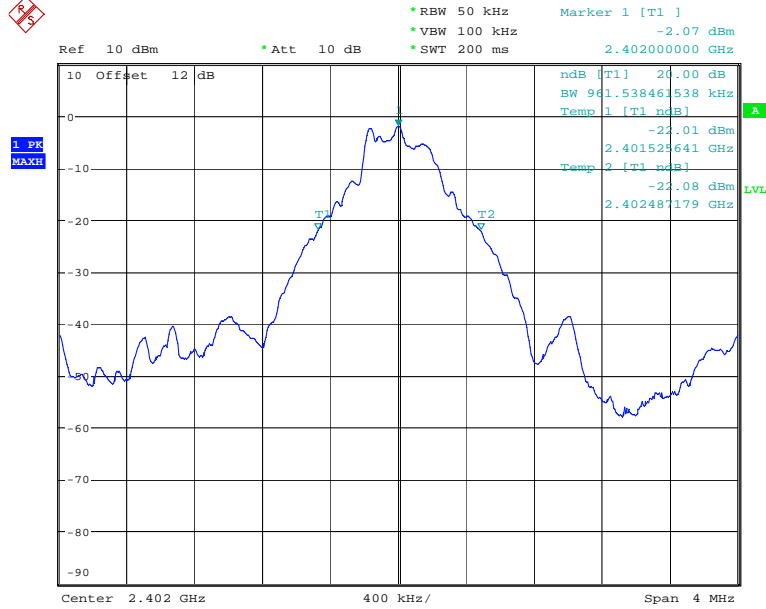


# Worldwide Testing Services(Taiwan) Co., Ltd.

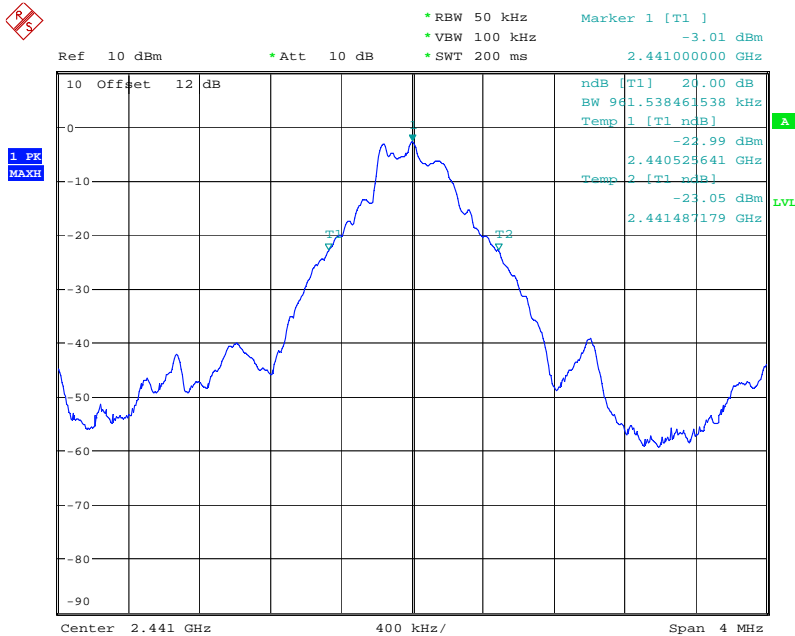
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## 20dB Bandwidth Bluetooth Mode



20DB BANDWIDTH CH0  
Date: 10.JAN.2009 15:18:20

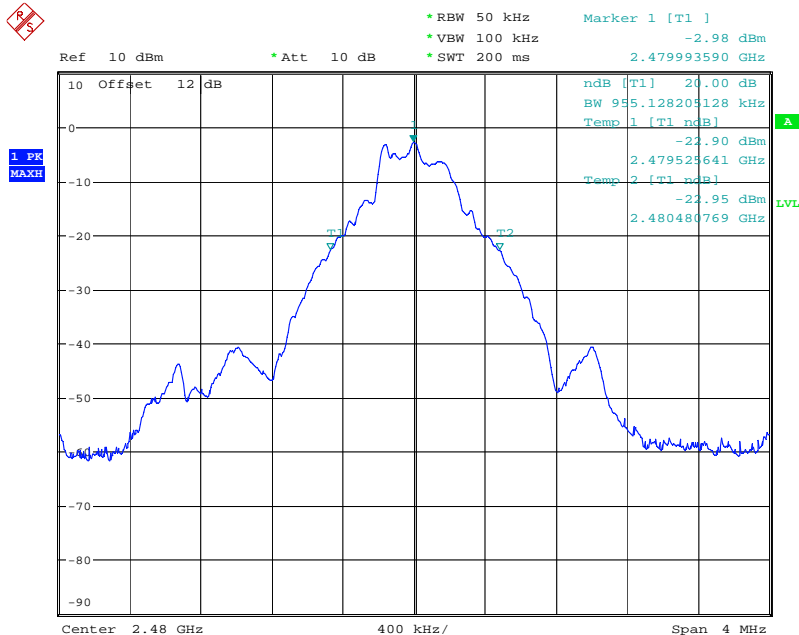


20DB BANDWIDTH CH39  
Date: 10.JAN.2009 15:19:16

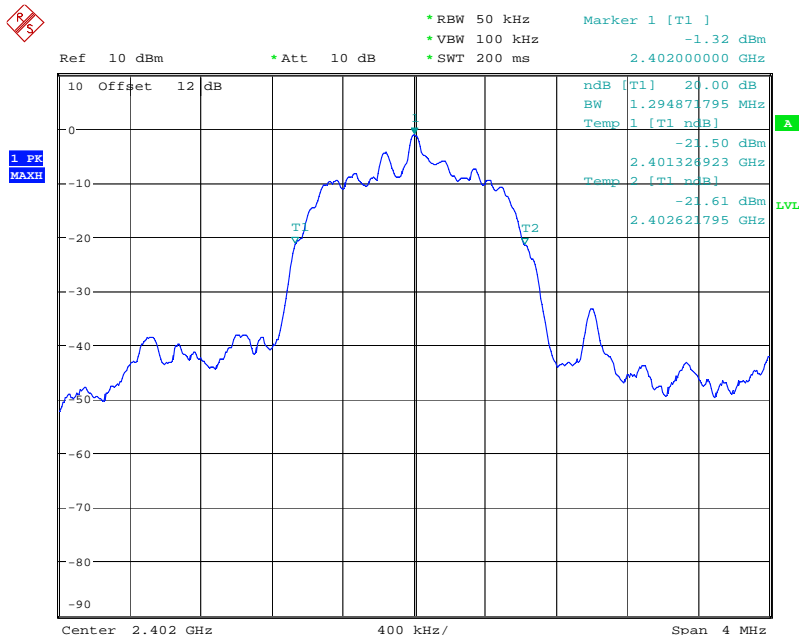


# Worldwide Testing Services(Taiwan) Co., Ltd.

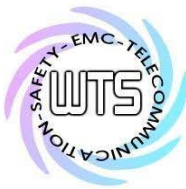
Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M



20DB BANDWIDTH CH78  
 Date: 10.JAN.2009 15:19:59

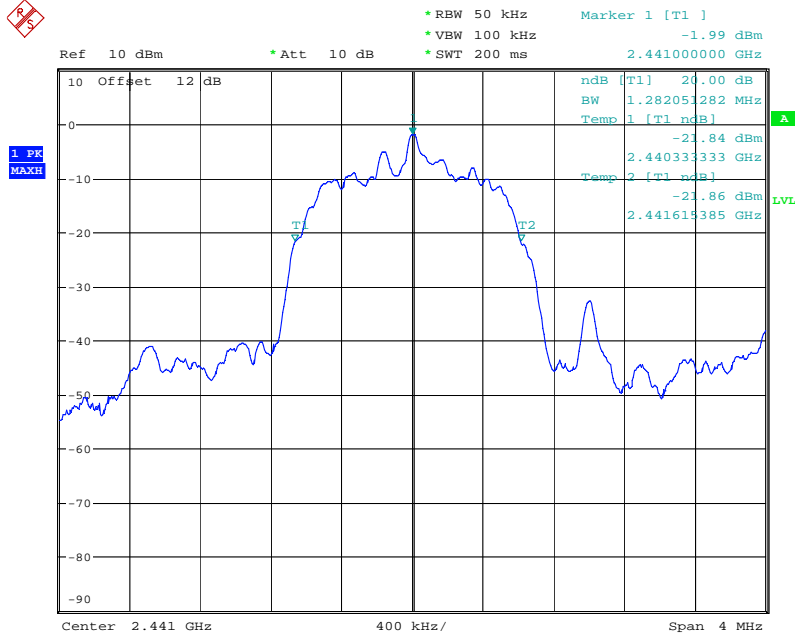


20DB BANDWIDTH CH0 EDR MODE  
 Date: 12.JAN.2009 07:28:57

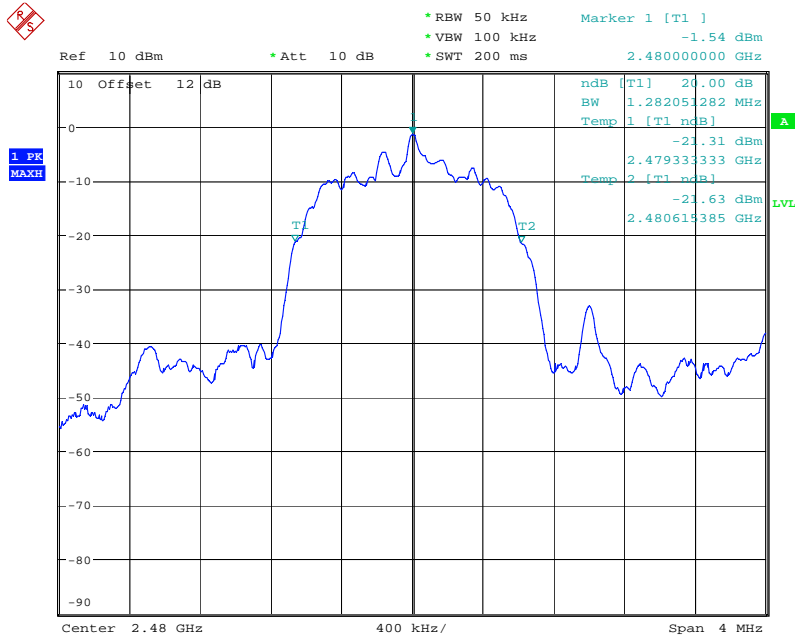


# Worldwide Testing Services(Taiwan) Co., Ltd.

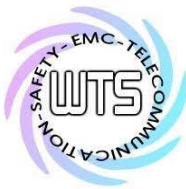
Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M



20DB BANDWIDTH CH39 EDR MODE  
 Date: 12.JAN.2009 07:30:20



20DB BANDWIDTH CH78 EDR MODE  
 Date: 12.JAN.2009 07:31:17



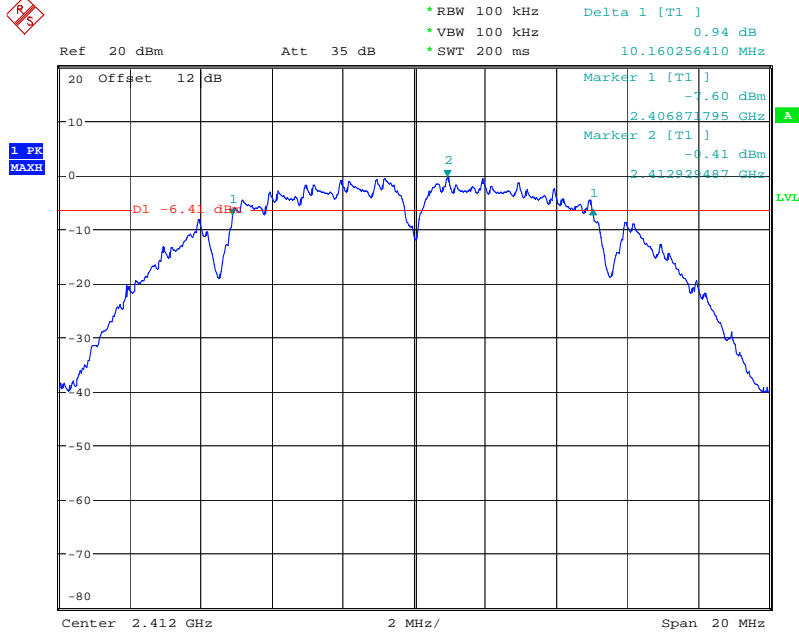
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1

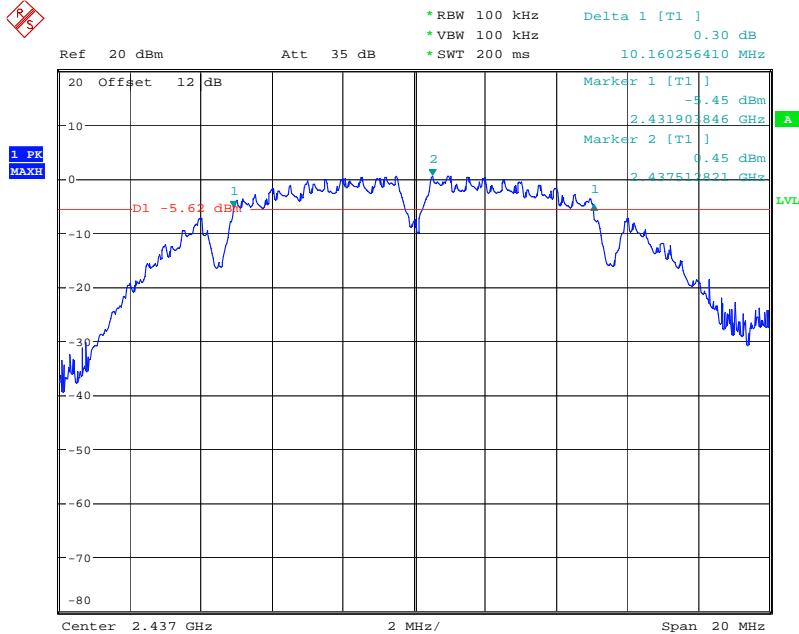
FCC ID: M82-PWS-8033M

Minimum 6dB Bandwidth

WLAN Mode



6DB BANDWIDTH 802.11b CH1  
 Date: 16.JAN.2009 15:16:49

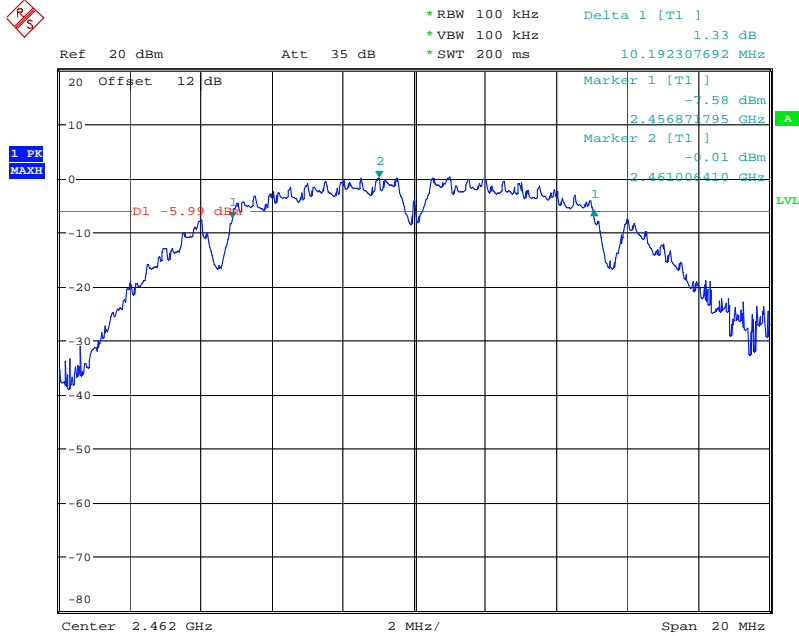


6DB BANDWIDTH 802.11b CH6  
 Date: 16.JAN.2009 15:20:13

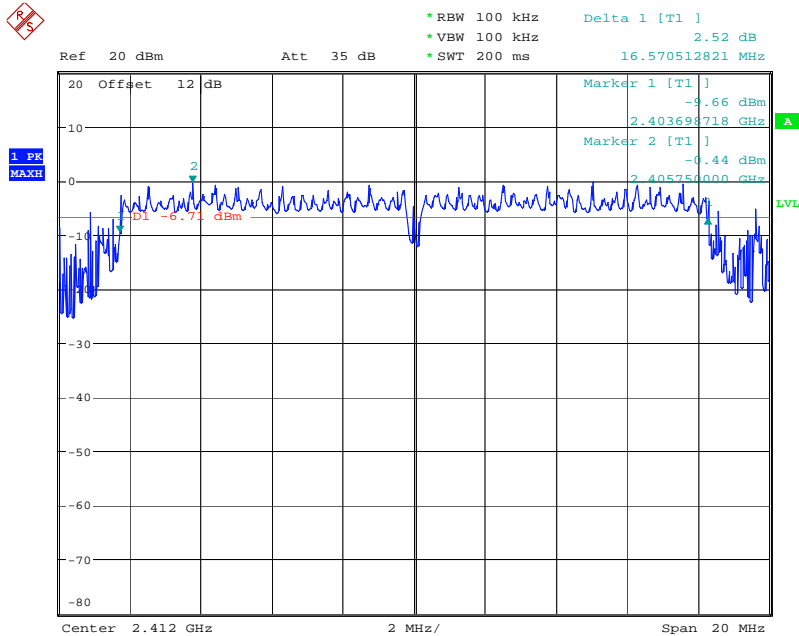


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M



6DB BANDWIDTH 802.11b CH11  
 Date: 16.JAN.2009 15:22:04



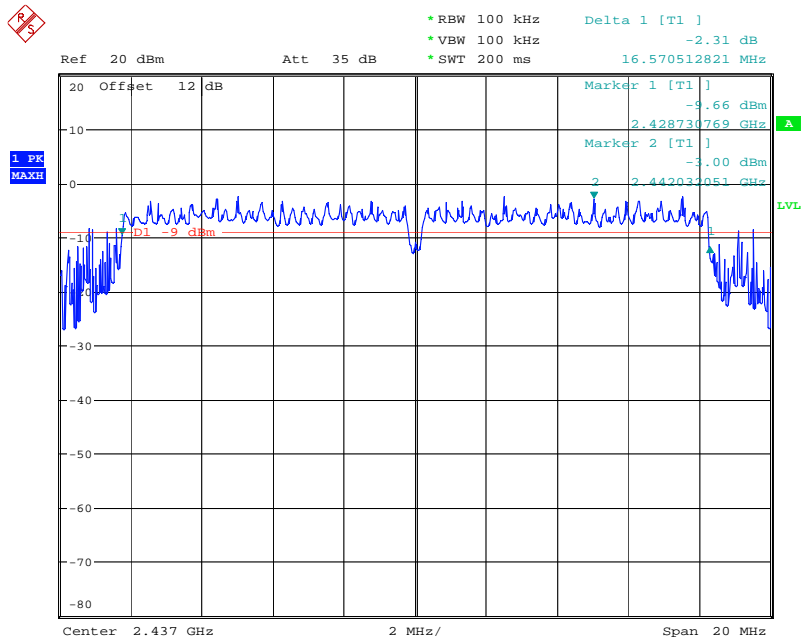
6DB BANDWIDTH 802.11g CH1  
 Date: 16.JAN.2009 15:29:15



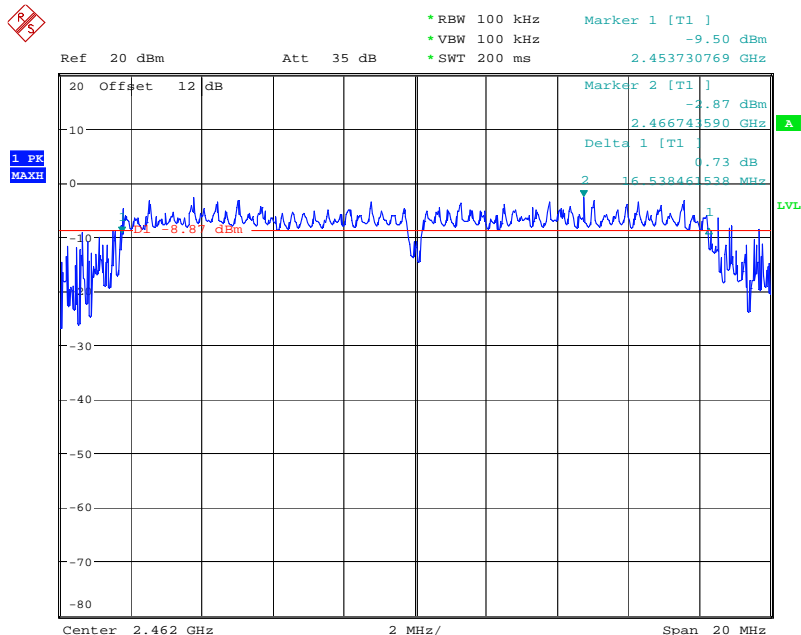


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



6DB BANDWIDTH 802.11g CH6  
Date: 16.JAN.2009 15:27:14



6DB BANDWIDTH 802.11g CH11  
Date: 16.JAN.2009 15:25:43

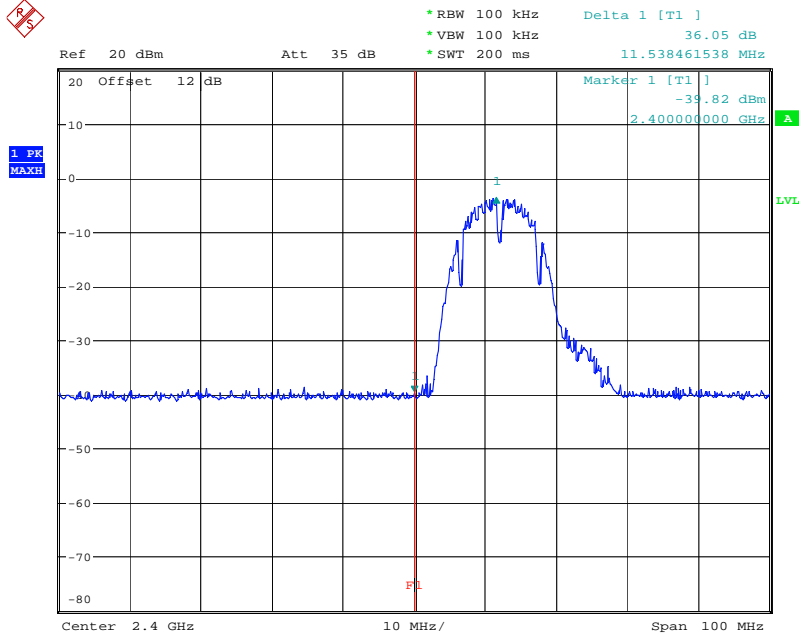


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1

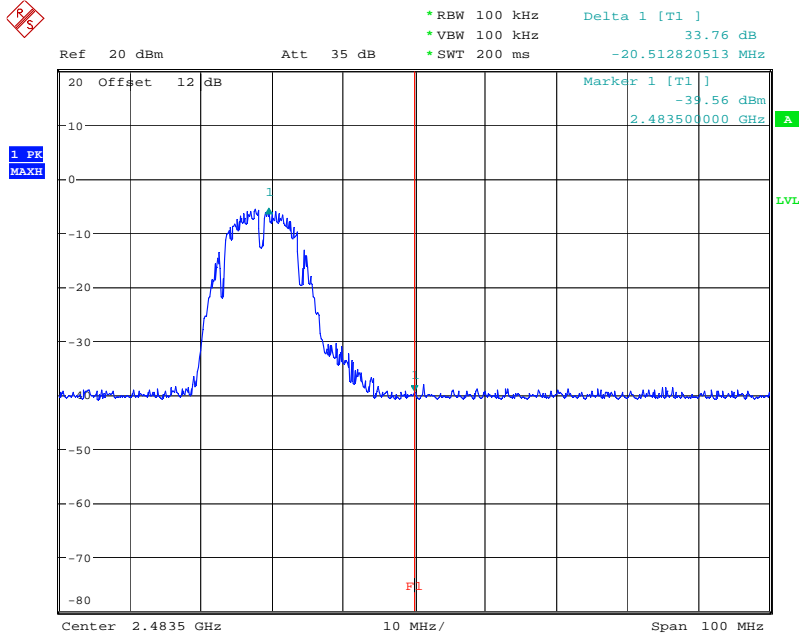
FCC ID: M82-PWS-8033M

## Band-edge Compliance of RF Conducted Emissions WLAN Mode



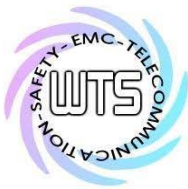
FREQUENCY RANGE 802.11b CH1

Date: 17.JAN.2009 07:27:56



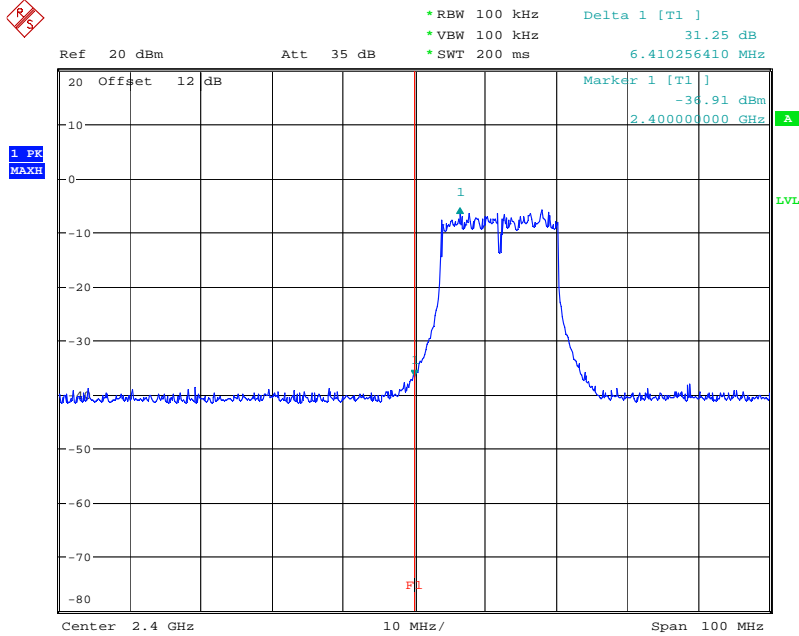
FREQUENCY RANGE 802.11b CH11

Date: 17.JAN.2009 07:32:18

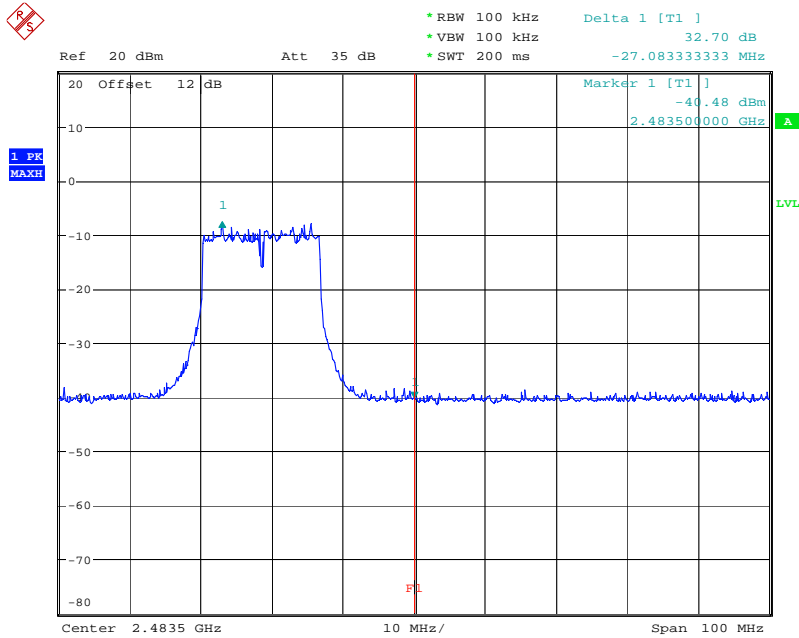


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



FREQUENCY RANGE 802.11g CH1  
Date: 17.JAN.2009 07:43:52



FREQUENCY RANGE 802.11g CH1  
Date: 17.JAN.2009 07:46:13

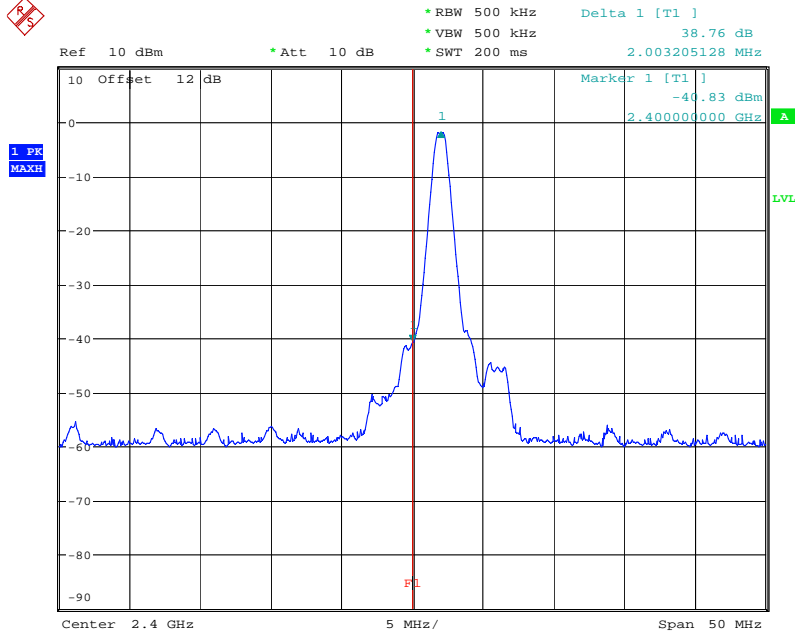


# Worldwide Testing Services(Taiwan) Co., Ltd.

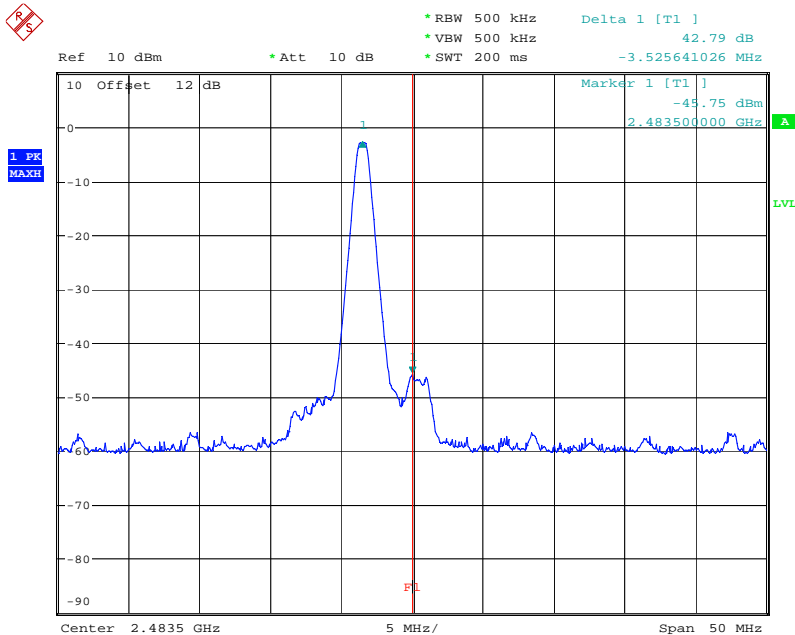
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Bluetooth Mode



BANDEDGE CH0  
Date: 10.JAN.2009 13:33:08

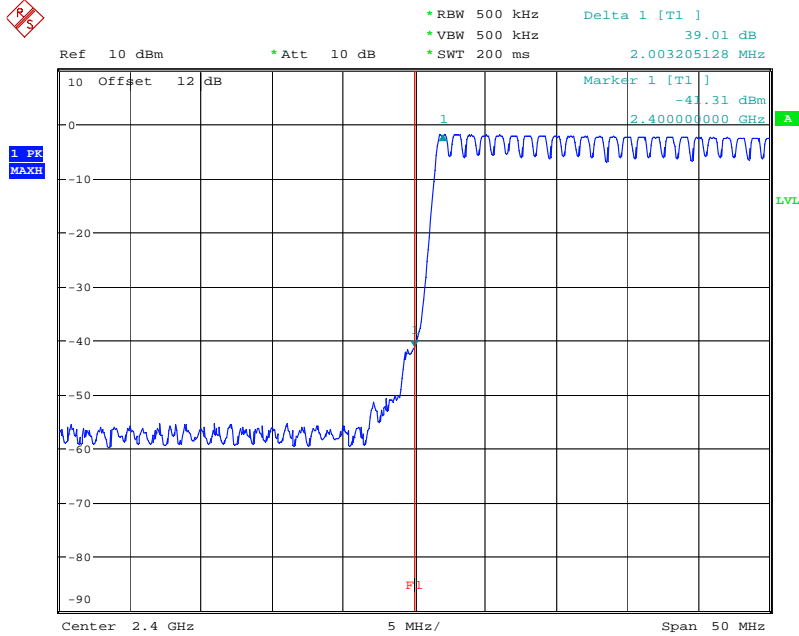


BANDEDGE CH78  
Date: 10.JAN.2009 13:35:18

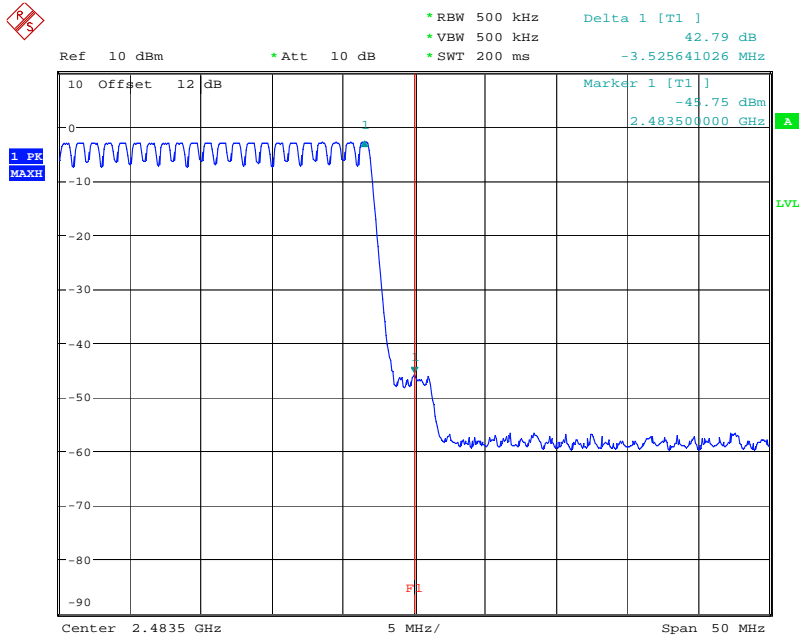


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



BANDEDGE CH0 HOPPING MODE  
Date: 10.JAN.2009 13:42:24

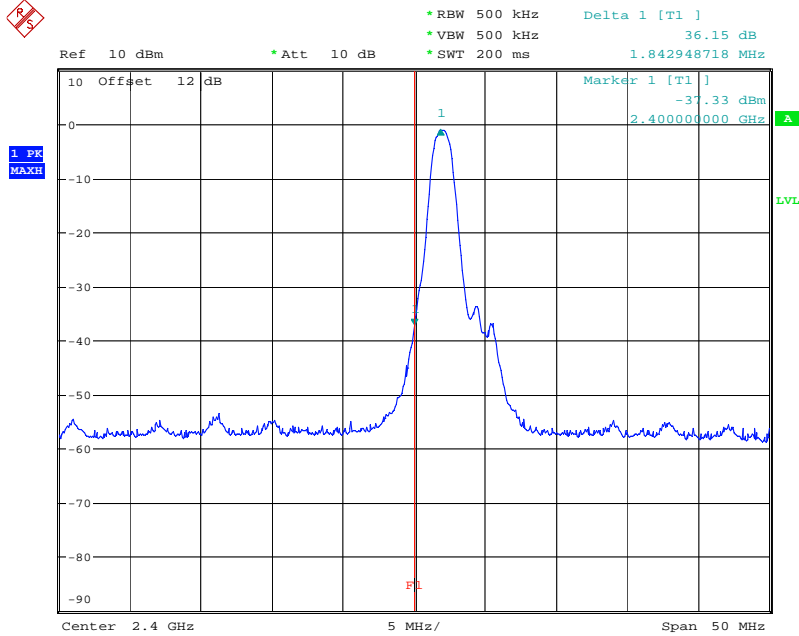


BANDEDGE CH78 HOPPING MODE  
Date: 10.JAN.2009 13:39:23

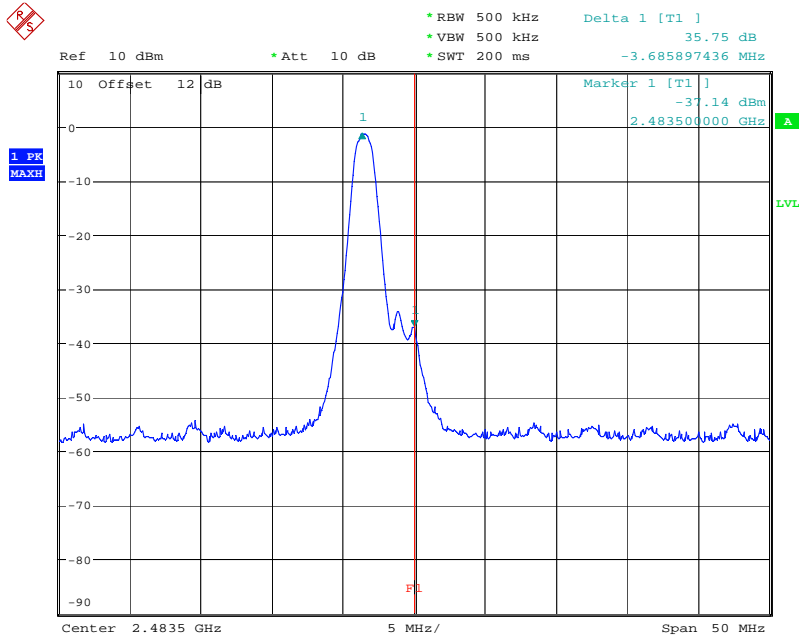


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



BANDEDGE CH0 EDR MODE  
Date: 12.JAN.2009 07:34:26

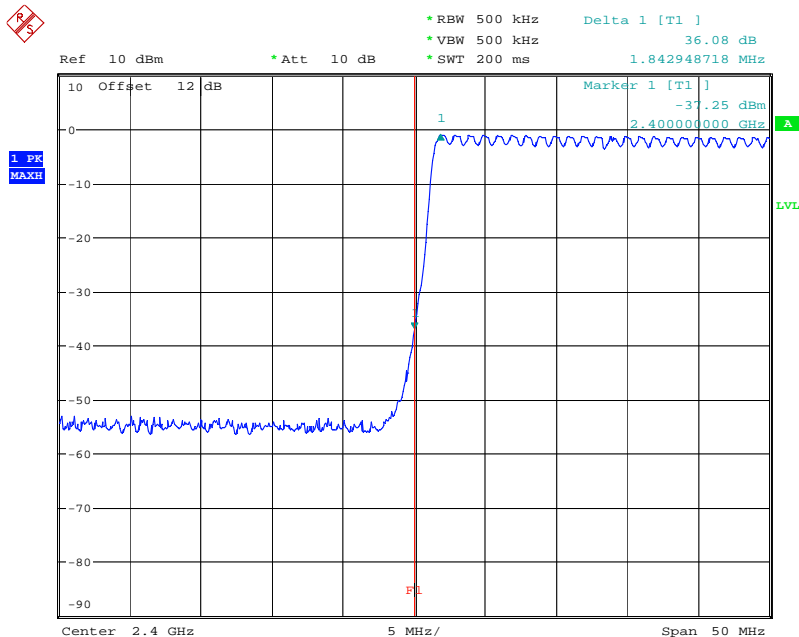


BANDEDGE CH78 EDR MODE  
Date: 12.JAN.2009 07:41:46

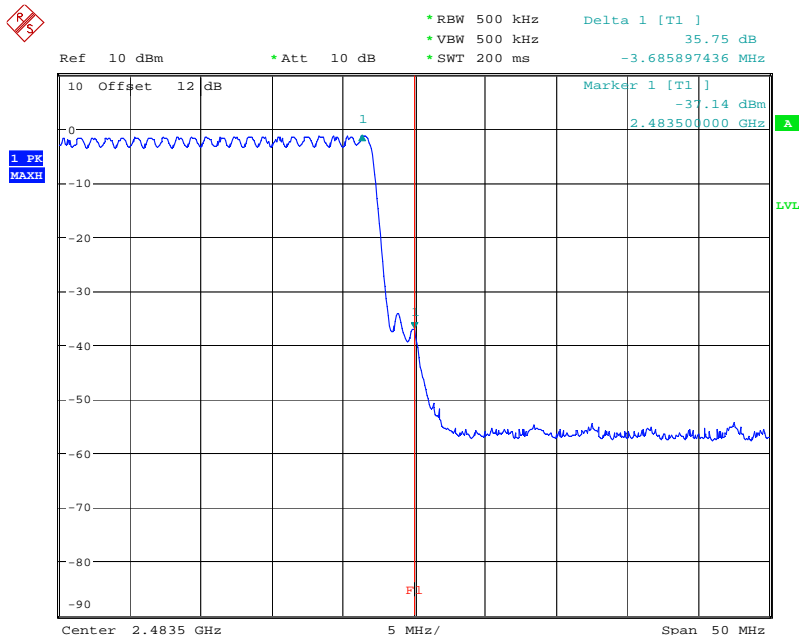


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
 FCC ID: M82-PWS-8033M



BANDEDGE CH0 EDR HOPPING MODE  
 Date: 12.JAN.2009 07:39:38



BANDEDGE CH78 EDR HOPPING MODE  
 Date: 12.JAN.2009 07:46:09

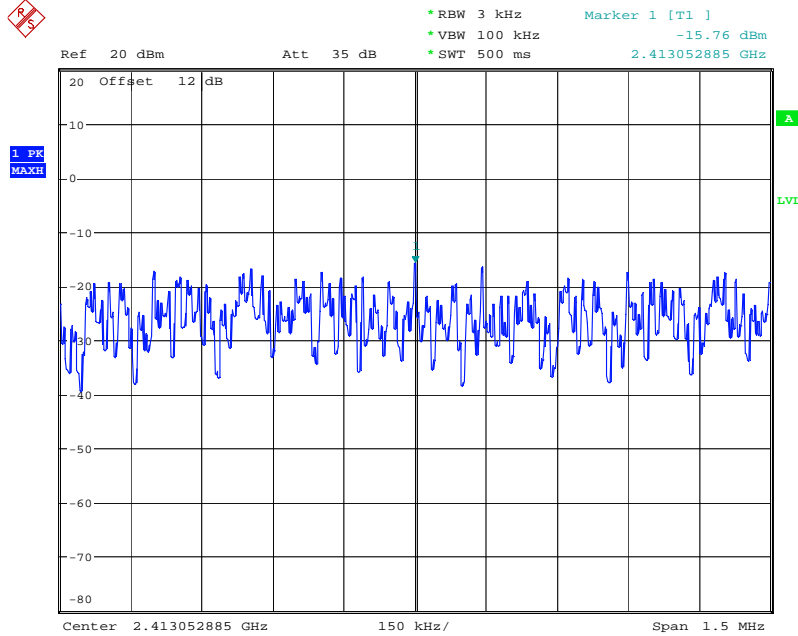


# Worldwide Testing Services(Taiwan) Co., Ltd.

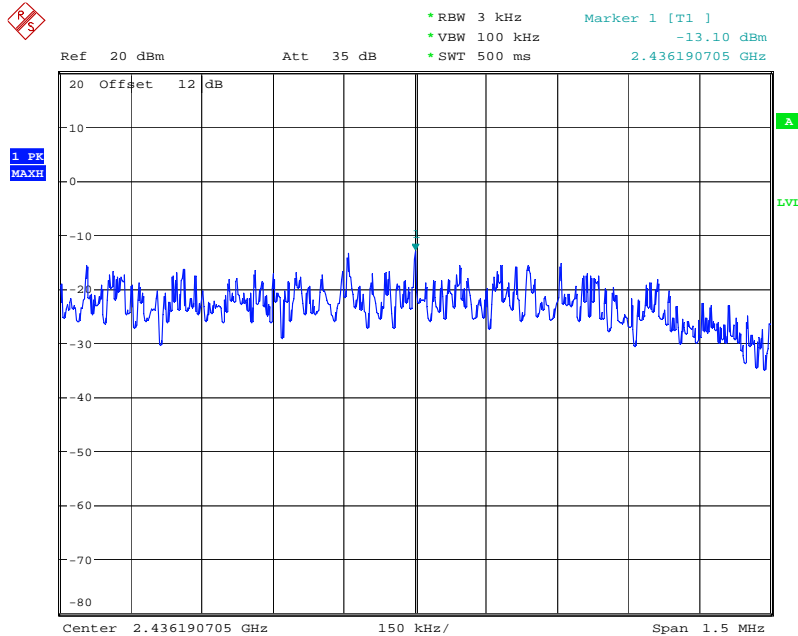
Registration number: W6D20812-9515-C-1

FCC ID: M82-PWS-8033M

## Peak Power Spectral Density WLAN Mode



POWER DENSITY 802.11b CH1  
Date: 17.JAN.2009 07:54:52



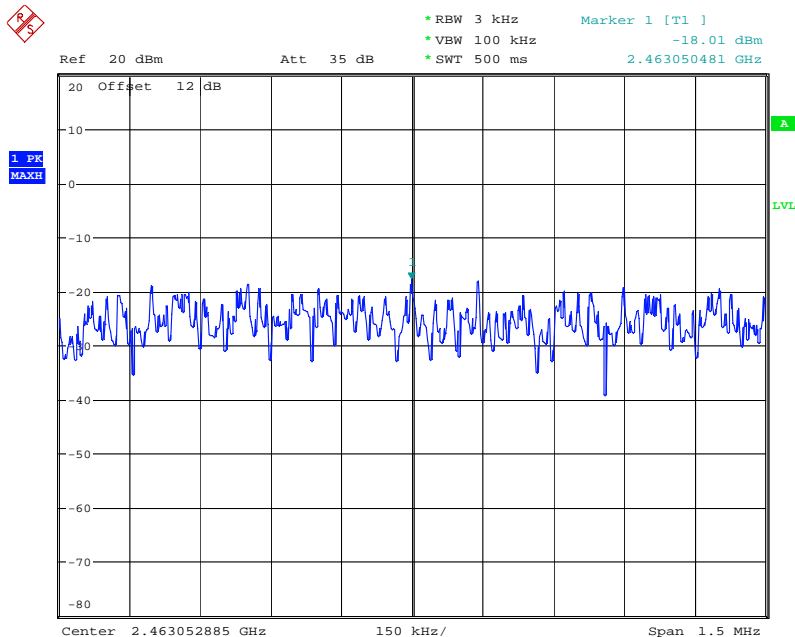
POWER DENSITY 802.11b CH6  
Date: 17.JAN.2009 08:01:15



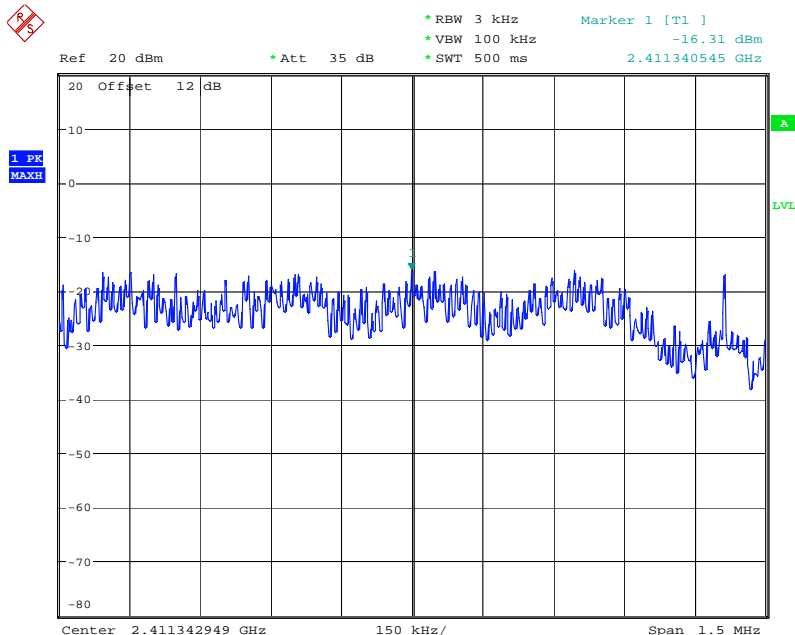


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



POWER DENSITY 802.11b CH11  
Date: 17.JAN.2009 08:10:47

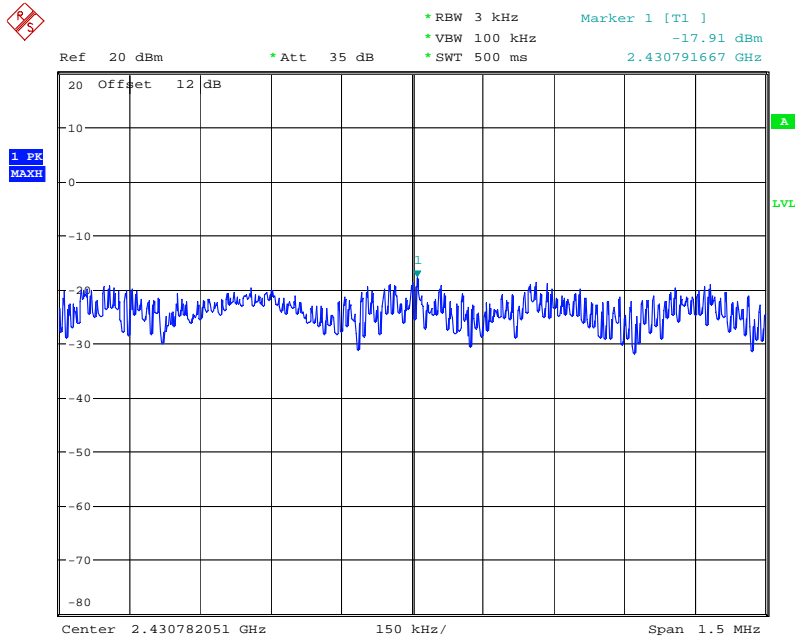


POWER DENSITY 802.11g CH1  
Date: 17.JAN.2009 08:39:33

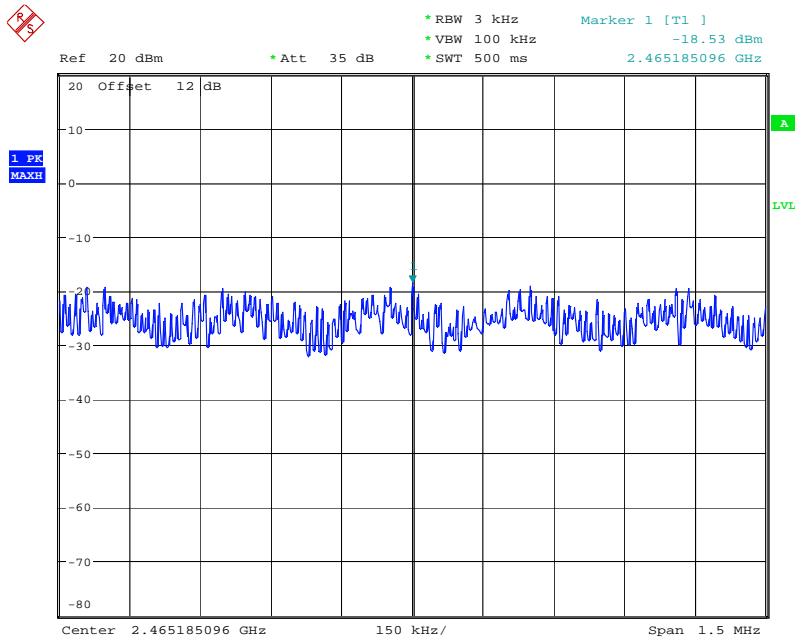


# Worldwide Testing Services(Taiwan) Co., Ltd.

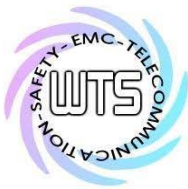
Registration number: W6D20812-9515-C-1  
FCC ID: M82-PWS-8033M



POWER DENSITY 802.11g CH6  
Date: 17.JAN.2009 08:34:23



POWER DENSITY 802.11g CH11  
Date: 17.JAN.2009 08:19:35

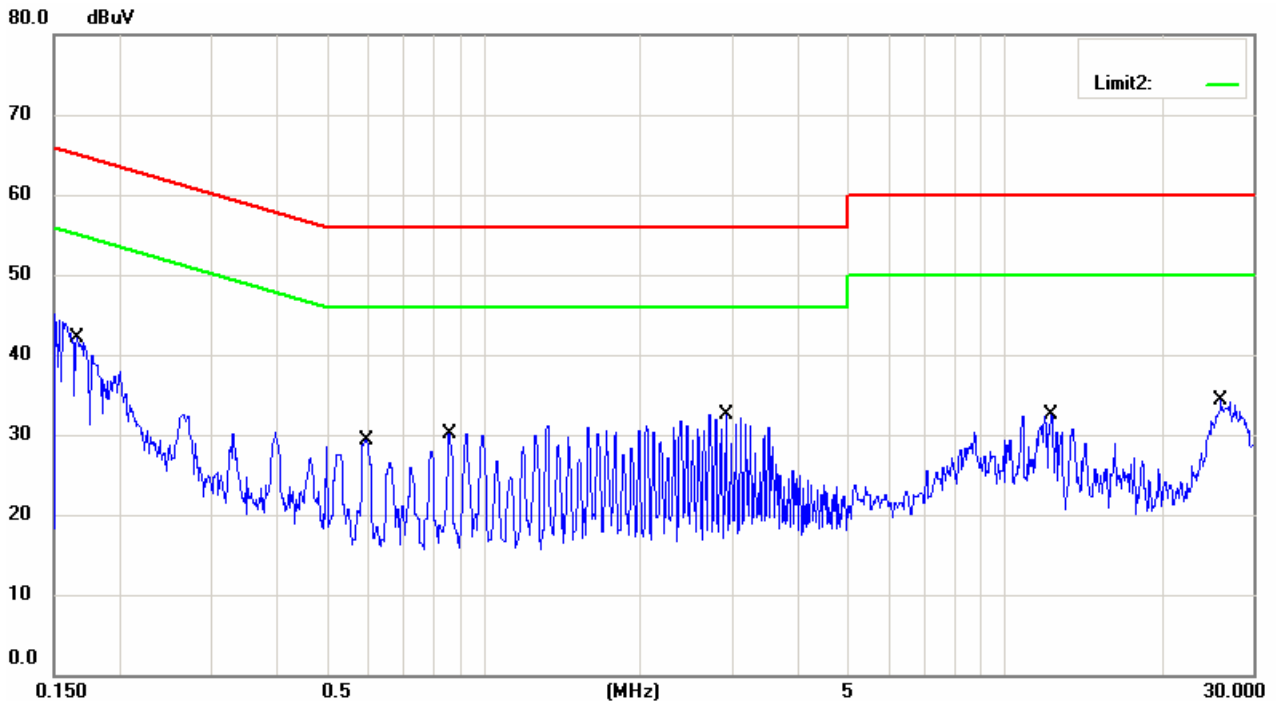


Registration number: W6D20812-9515-C-1

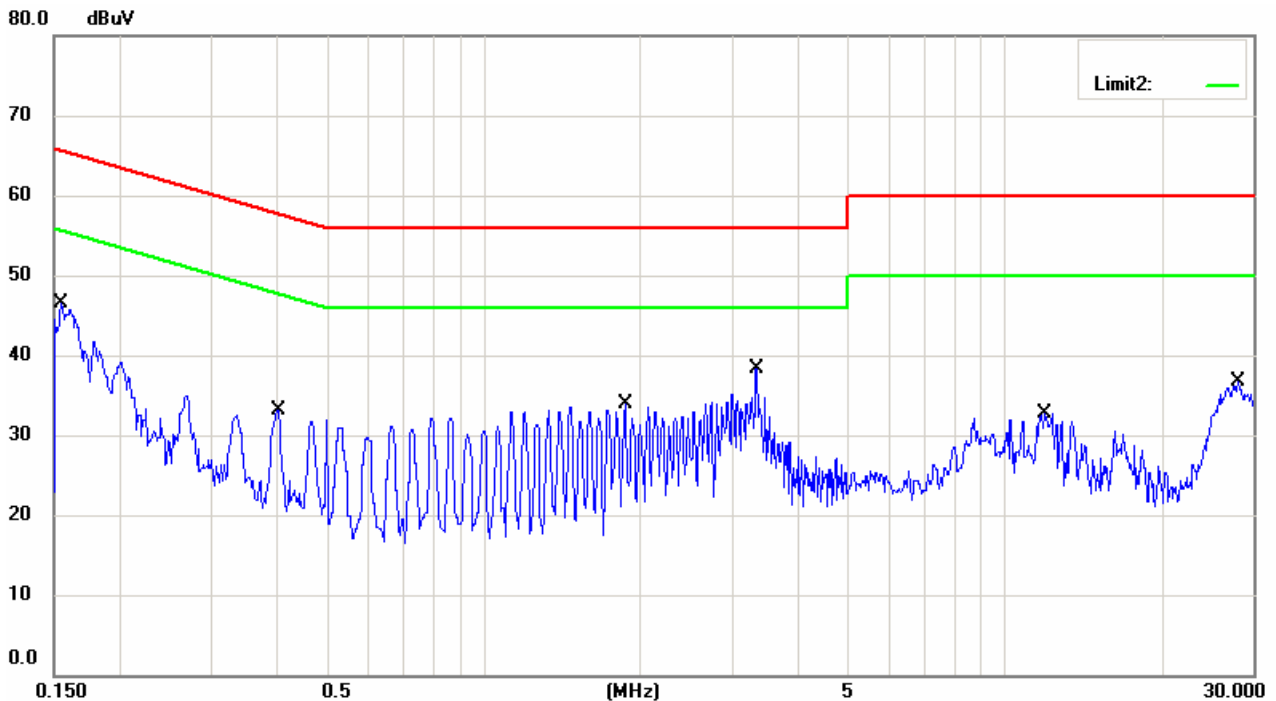
FCC ID: M82-PWS-8033M

## 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.