

**FCC PART 15 SUBPART C TEST REPORT**

**for**

**Handheld Transmitter Microphone**

**Model No.: ACT-30H**

**FCC ID: M5X-30313250HNHR**

**of**

Applicant: **MIPRO Electronics Co., Ltd.**

Address: **814 Pei-kang Road Chia-yi 600 Taiwan, R.O.C**

Tested and Prepared

by

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

**FCC Registration No.: 930600**

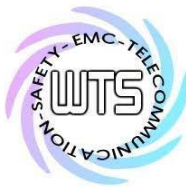
**Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1**

**A2LA Accredited No.: 2732.01**



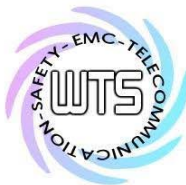
**Report No.: W6M21604-15794-C-1**

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



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## **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:**

May 06, 2016

Robert Ren

Date

WTS-Lab.

Name

Signature

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

May 06, 2016

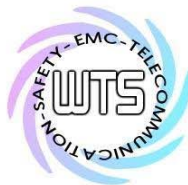
Kevin Wang

Date

WTS

Name

Signature



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

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## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS

No.5-1, Lishui, Shuang Sing Village,

Wanli Dist., New Taipei City 207,

Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

TEL:886-2-6613-0228

FAX:886-2-2791-5046

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: 2730.01**

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

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

**Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :**

Name: ./.

Accredited number: ./.

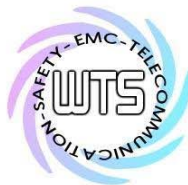
Street: ./.

Town: ./.

Country: ./.

Telephone: ./.

Fax: ./.



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

Registration number: W6M21604-15794-C-1

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## **1.3 Details of approval holder**

Name: MIPRO Electronics Co., Ltd.  
Street: 814 Pei-kang Road  
Town: Chia-yi 600  
Country: Taiwan, R.O.C  
Telephone: +886-5-238-0809  
Fax: +886-5-238-0803

## **1.4 Application details**

Date of receipt of test item: April 29, 2016  
Date of test: From May 03, 2016 to May 06, 2016

## **1.5 General information of Test item**

Type of test item: Handheld Transmitter Microphone  
Model Number: ACT-30H  
Multi-listing model number: ACT-50H, ACT-32Hr, ACT-32H, ACT-31H, ACT-3XXX,  
ACT-5XXX (X=0~9,A~Z,a~z or blank)  
Brand Name: MIPRO  
Photos: see Annex

## **Technical data**

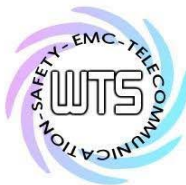
Frequency band: 902-928 MHz  
Operation Frequency: 902-928 MHz  
Frequency 1: 902.4 MHz  
Frequency 2: 915 MHz  
Frequency 3: 927.6 MHz  
Operation modes: simplex  
Modulation Type: FM  
Antenna type: Build in Antenna  
Power supply: Battery AA3 (1.5V\*2)

## **Manufacturer: (if different from applicant)**

Name: ./.  
Street: ./.  
Town: ./.  
Country: ./.  
Additional information: ./.

## **1.6 Test standards**

Technical standard : FCC RULES PART 15 SUBPART C § 15.249 (2015-10)



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## **2 Technical test**

### **2.1 Summary of test results**

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



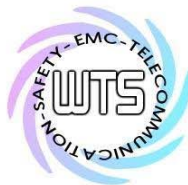
**or**

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



### **2.2 Test environment**

|                                |                      |
|--------------------------------|----------------------|
| Temperature:                   | 23 °C                |
| Relative humidity content:     | 20 ... 75 %          |
| Air pressure:                  | 86 ... 103 kPa       |
| Details Power supply:          | Battery AA3 (1.5V*2) |
| Extreme conditions parameters: | Not required         |



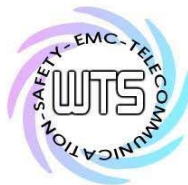
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## 2.3 Test Equipment List

| No.          | Test equipment                               | Type                   | Serial No.    | Manufacturer       | Cal. Date     | Next Cal. Date |
|--------------|----------------------------------------------|------------------------|---------------|--------------------|---------------|----------------|
| ETSTW-CE 001 | EMI TEST RECEIVER                            | ESHS10                 | 842121/013    | R&S                | 2015/9/4      | 2016/9/3       |
| ETSTW-CE 003 | AC POWER SOURCE                              | APS-9102               | D161137       | GW                 | Function Test |                |
| ETSTW-CE 008 | HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP | 334.6010.02            | 844581/024    | R&S                | Function Test |                |
| ETSTW-CE 009 | TEMP.&HUMIDITY CHAMBER                       | GTH-225-40-1P-U        | MAA0305-009   | GIANT FORCE        | 2015/7/13     | 2016/7/12      |
| ETSTW-CE 016 | TWO-LINE V-NETWORK                           | ENV216                 | 100050        | R&S                | 2015/9/7      | 2016/9/6       |
| ETSTW-RE 003 | EMI TEST RECEIVER                            | ESI 26                 | 831438/001    | R&S                | 2015/8/14     | 2016/8/13      |
| ETSTW-RE 004 | EMI TEST RECEIVER                            | ESI 40                 | 832427/004    | R&S                | 2015/9/4      | 2016/9/3       |
| ETSTW-RE 005 | EMI TEST RECEIVER                            | ESVS10                 | 843207/020    | R&S                | 2015/8/14     | 2016/8/13      |
| ETSTW-RE 012 | TUNABLE BANDREJECT FILTER                    | D.C 0309               | 146           | K&L                | Function Test |                |
| ETSTW-RE 013 | TUNABLE BANDREJECT FILTER                    | D.C 0336               | 397           | K&L                | Function Test |                |
| ETSTW-RE 018 | MICROWAVE HORN ANTENNA                       | AT4560                 | 27212         | AR                 | 2015/6/22     | 2016/6/21      |
| ETSTW-RE 027 | Passive Loop Antenna                         | 6512                   | 00034563      | ETS-Lindgren       | 2015/6/16     | 2016/6/15      |
| ETSTW-RE 030 | Double-Ridged Guide Horn Antenna             | 3117                   | 00035224      | ETS-Lindgren       | 2016/3/23     | 2017/3/22      |
| ETSTW-RE 042 | Biconical Antenna                            | HK116                  | 100172        | R&S                | 2016/1/25     | 2017/1/24      |
| ETSTW-RE 043 | Log-Periodic Dipole Antenna                  | HL223                  | 100166        | R&S                | 2016/3/28     | 2017/3/27      |
| ETSTW-RE 044 | Log-Periodic Antenna                         | HL050                  | 100094        | R&S                | 2016/4/14     | 2017/4/13      |
| ETSTW-RE 045 | ESA-E SERIES SPECTRUM ANALYZER               | E4404B                 | MY45111242    | Agilent            | Pre-test Use  |                |
| ETSTW-RE 050 | Attenuator 10dB                              | 50HF-010-1             | None          | JFW                | 2016/2/25     | 2017/2/24      |
| ETSTW-RE 051 | Attenuator 6dB                               | 50HF-006-1             | None          | JFW                | 2016/2/25     | 2017/2/24      |
| ETSTW-RE 053 | Attenuator 3dB                               | 50HF-003-1             | None          | JFW                | 2016/2/25     | 2017/2/24      |
| ETSTW-RE 055 | SPECTRUM ANALYZER                            | FSU 26                 | 200074        | R&S                | 2016/2/27     | 2017/2/26      |
| ETSTW-RE 060 | Attenuator 30dB                              | 5015-30                | F651012z-01   | ATM                | 2016/2/25     | 2017/2/24      |
| ETSTW-RE 062 | Amplifier Module                             | CHC 2                  | None          | KMIC               | 2016/4/13     | 2017/4/12      |
| ETSTW-RE 064 | Bluetooth Test Set                           | MT8852B-042            | 6K00005709    | Anritsu            | Function Test |                |
| ETSTW-RE 069 | Double-Ridged Guide Horn Antenna             | 3117                   | 00069377      | ETS-Lindgren       | Function Test |                |
| ETSTW-RE 072 | CELL SITE TEST SET                           | 8921A                  | 3339A00375    | HP                 | 2015/9/6      | 2016/9/5       |
| ETSTW-RE 088 | SOLID STATE AMPLIFIER                        | KMA180265A01           | 99057         | KMIC               | 2015/9/21     | 2016/9/20      |
| ETSTW-RE 099 | DC Block                                     | 50DB-007-1             | None          | JFW                | 2016/2/25     | 2017/2/24      |
| ETSTW-RE 112 | AC POWER SOURCE                              | TFC-1005               | T-0A023536    | T-Power            | Function test |                |
| ETSTW-RE 115 | 2.4GHz Notch Filter                          | N0124411               | 473874        | MICROWAVE CIRCUITS | 2016/1/13     | 2017/1/12      |
| ETSTW-RE 120 | RF Player                                    | MP9200                 | MP9210-111022 | ADIVIC             | Function test |                |
| ETSTW-RE 122 | SIGNAL GENERATOR                             | SMF100A                | 102149        | R&S                | 2015/6/8      | 2016/6/7       |
| ETSTW-RE 125 | 5GHz Notch filter                            | 5NSL11-5200/E221.3-O/O | 1             | K&L Microwave      | 2015/8/11     | 2016/8/10      |
| ETSTW-RE 126 | 5GHz Notch filter                            | 5NSL11-                | 1             | K&L Microwave      | 2015/8/11     | 2016/8/10      |



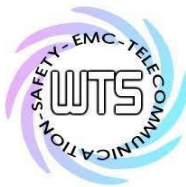
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|                 |                                      |                                        |                 |                    |                  |           |
|-----------------|--------------------------------------|----------------------------------------|-----------------|--------------------|------------------|-----------|
|                 |                                      | 5800/E221.3-O/O                        |                 |                    |                  |           |
| ETSTW-RE 127    | RF Switch Box                        | RFS-01                                 | None            | WTS                | 2016/2/25        | 2017/2/24 |
| ETSTW-RE 128    | 5.3GHz Notch filter                  | N0153001                               | SN487233        | Microwave Circuits | 2015/8/11        | 2016/8/10 |
| ETSTW-RE 129    | 5.5GHz Notch filter                  | N0555984                               | SN487234        | Microwave Circuits | 2015/8/11        | 2016/8/10 |
| ETSTW-RE 130    | Handheld RF Spectrum Analyzer        | N9340A                                 | CN0147000204    | Agilent            | Pre-test Use     |           |
| ETSTW-RE 142    | Amplifier                            | 8447D                                  | 2805A03378      | Agilent            | 2016/4/13        | 2017/4/12 |
| ETSTW-RE 143    | Humidity Temperature Meter           | TES-1260                               | 110104623       | TES                | 2015/9/9         | 2016/9/8  |
| ETSTW-RE 147    | Bi-log Hybrid Antenna                | MCTD 2786B                             | BLB16M04005     | ETC                | 2016/3/31        | 2017/3/30 |
| ETSTW-GSM 002   | Universal Radio Communication Tester | CMU 200                                | 109439          | R&S                | 2016/3/4         | 2017/3/3  |
| ETSTW-GSM 003   | Radio Communication Analyzer         | MT8820C                                | 6201342073      | Anritsu            | 2016/2/3         | 2017/2/2  |
| ETSTW-GSM 019   | Band Reject Filter                   | WRCTF824/849-822/851-40 /12+9SS        | 3               | WI                 | 2016/1/13        | 2017/1/12 |
| ETSTW-GSM 020   | Band Reject Filter                   | WRCD1747/1748-1743/1752-32/5SS         | 1               | WI                 | 2016/1/13        | 2017/1/12 |
| ETSTW-GSM 021   | Band Reject Filter                   | WRCD1879.5/1880.5-1875.5/1884.5-32/5SS | 3               | WI                 | 2016/1/13        | 2017/1/12 |
| ETSTW-GSM 022   | Band Reject Filter                   | WRCT901.9/903.1-904.25-50/8SS          | 1               | WI                 | 2016/1/13        | 2017/1/12 |
| ETSTW-GSM 023   | Power Divider                        | 4901.19.A                              | None            | SUHNER             | 2015/9/16        | 2016/9/15 |
| ETSTW-Cable 010 | BNC Cable                            | 5 M BNC Cable                          | None            | JYE BAO CO.,LTD.   | 2015/9/11        | 2016/9/10 |
| ETSTW-Cable 011 | BNC Cable                            | BNC Cable 1                            | None            | JYE BAO CO.,LTD.   | Pre-test Use NCR |           |
| ETSTW-Cable 012 | N TYPE To SMA Cable                  | Cable 012                              | None            | JYE BAO CO.,LTD.   | 2015/9/11        | 2016/9/10 |
| ETSTW-Cable 016 | BNC Cable                            | Switch Box                             | B Cable 1       | Schwarz beck       | 2016/2/24        | 2017/2/23 |
| ETSTW-Cable 017 | BNC Cable                            | X Cable                                | B Cable 2       | Schwarz beck       | 2016/2/24        | 2017/2/23 |
| ETSTW-Cable 018 | BNC Cable                            | Y Cable                                | B Cable 3       | Schwarz beck       | 2016/2/24        | 2017/2/23 |
| ETSTW-Cable 019 | BNC Cable                            | Z Cable                                | B Cable 4       | Schwarz beck       | 2016/2/24        | 2017/2/23 |
| ETSTW-Cable 020 | N TYPE Cable                         | OATS Cable 1                           | N30N30-L335-15M | JYE BAO CO.,LTD.   | 2016/4/22        | 2017/4/21 |
| ETSTW-Cable 022 | N TYPE Cable                         | 5006                                   | 0002            | JYE BAO CO.,LTD.   | 2016/4/7         | 2017/4/6  |
| ETSTW-Cable 026 | Microwave Cable                      | SUCOFLEX 104                           | 279075          | HUBER+SUHNER       | 2016/2/25        | 2017/2/24 |
| ETSTW-Cable 027 | Microwave Cable                      | SUCOFLEX 104                           | 279083          | HUBER+SUHNER       | 2015/5/14        | 2016/5/13 |
| ETSTW-Cable 028 | Microwave Cable                      | FA147A0015M2020                        | 30064-2         | UTIFLEX            | 2015/9/21        | 2016/9/20 |
| ETSTW-Cable 029 | Microwave Cable                      | FA147A0015M2020                        | 30064-3         | UTIFLEX            | 2015/9/21        | 2016/9/20 |
| ETSTW-Cable 030 | Microwave Cable                      | SUCOFLEX 104 ( S_Cable 9 )             | 279067          | HUBER+SUHNER       | 2016/2/25        | 2017/2/24 |
| ETSTW-Cable 031 | Microwave Cable                      | SUCOFLEX 104 ( S_Cable 10 )            | 238092          | HUBER+SUHNER       | 2016/4/13        | 2017/4/12 |
| ETSTW-Cable 043 | Microwave Cable                      | SUCOFLEX 104                           | 317576          | HUBER+SUHNER       | 2016/4/13        | 2017/4/12 |
| ETSTW-Cable 048 | Microwave Cable                      | SUCOFLEX 104                           | 325518          | HUBER+SUHNER       | 2016/4/13        | 2017/4/12 |
| ETSTW-Cable 058 | Microwave Cable                      | SUCOFLEX 104                           | none            | HUBER+SUHNER       | 2016/4/7         | 2017/4/6  |
| ETSTW-Cable 064 | Microwave Cable                      | SUCOFLEX 104                           | MY28891         | HUBER+SUHNER       | 2016/4/13        | 2017/4/12 |
| WTSTW-SW 002    | EMI TEST SOFTWARE                    | EZ EMC                                 | None            | Farad              | Version ETS-03A1 |           |





## **2.4 General Test Procedure**

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.10-2013 6.2 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 C63.10-2013 6.3 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of 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 |

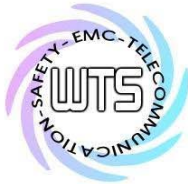
**ANSI STANDARD C63.10-2013 6.2.2 MEASUREMENT PROCEDURES:** The EUT was placed on a table 80 cm height and with dimensions of 1m by 1.5m (non metallic table). The EUT was placed in the centre of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10<sup>th</sup> harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings.

Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 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.

**ANSI STANDARD C63.10-2013 B.2.7:** Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



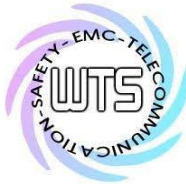
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FCC ID: M5X-30313250HNHR

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

| Test case                                                      | Para. Number | Required                            | Test passed                         | Test failed              |
|----------------------------------------------------------------|--------------|-------------------------------------|-------------------------------------|--------------------------|
| Peak Output Power                                              | 15.249 (a)   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spurious Emissions radiated – Transmitter operating            | 15.249 (e)   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spurious Emissions conducted – Transmitter operating           | 15.249 (e)   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| Radiated Emission from Digital Part                            | 15.109       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| Out of Band Spurious Emission, Band edge-Transmitter operating | 15.249 (e)   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Power Line Conducted Emission                                  | 15.207       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |

The following is intentionally left blank.



Registration number: W6M21604-15794-C-1

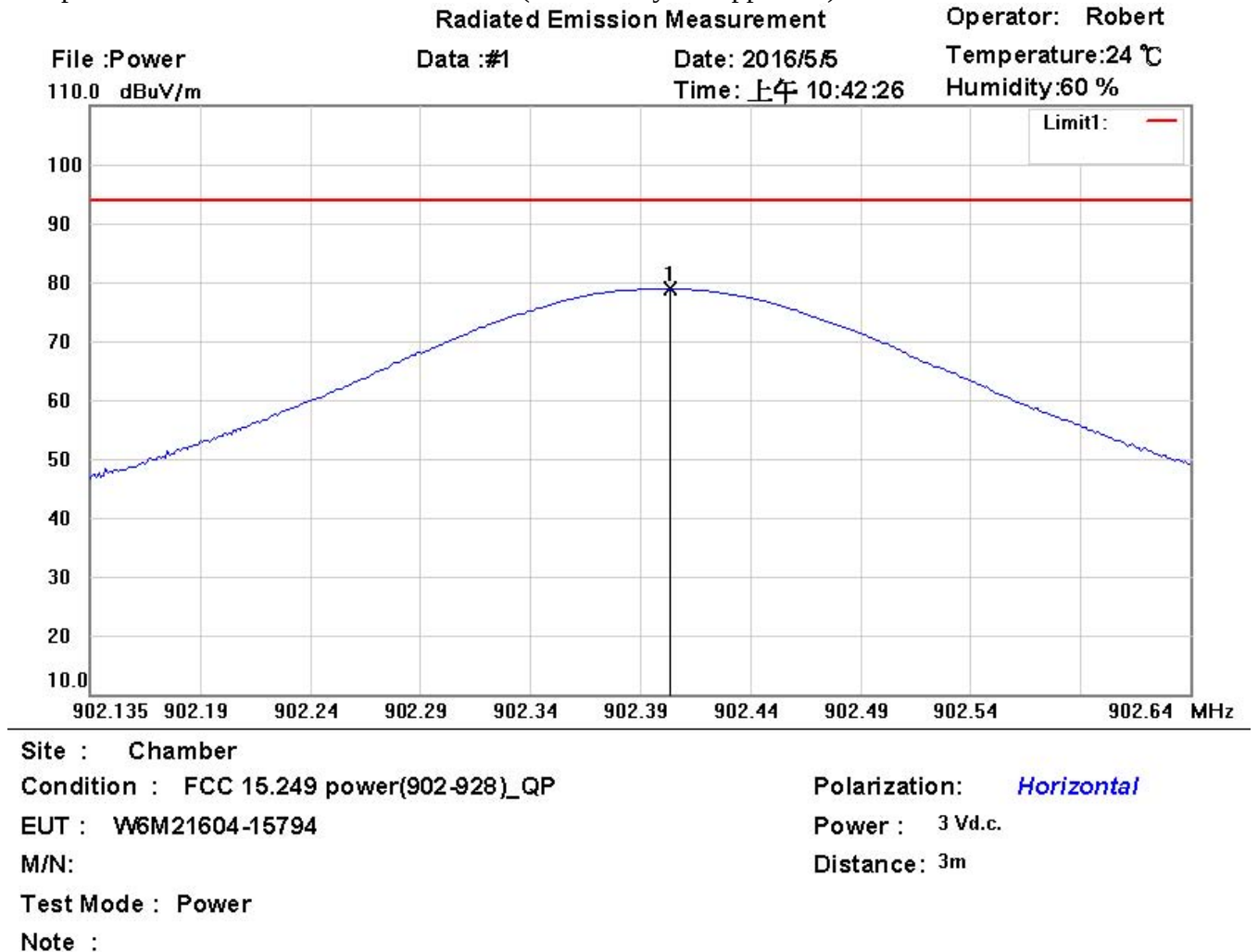
FCC ID: M5X-30313250HNHR

## 3.1 Peak Output Power (transmitter)

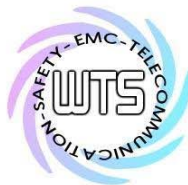
FCC Rule: 15.249 (b)

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).



| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 902.3983        | 51.83          | peak     | 27.05               | 78.88           | 94.00          | 100          | 32             | -15.12      |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Power  
110.0 dBuV/m

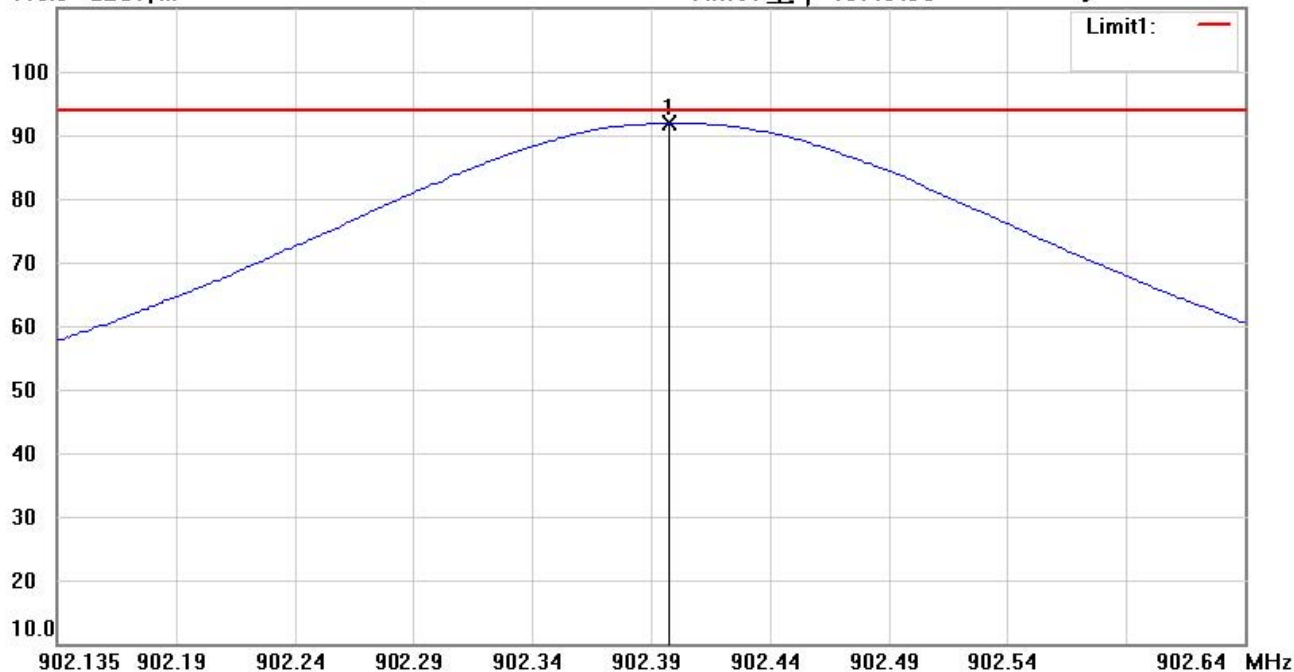
Data :#2

Date: 2016/5/5

Temperature:24 °C

Time: 上午 10:43:36

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 power(902-928)\_QP

Polarization: *Vertical*

EUT : W6M21604-15794

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : Power

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 902.3923        | 64.82          | peak     | 27.05               | 91.87           | 94.00          | 100          | 226            | -2.13       |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Power  
120.0 dBuV/m

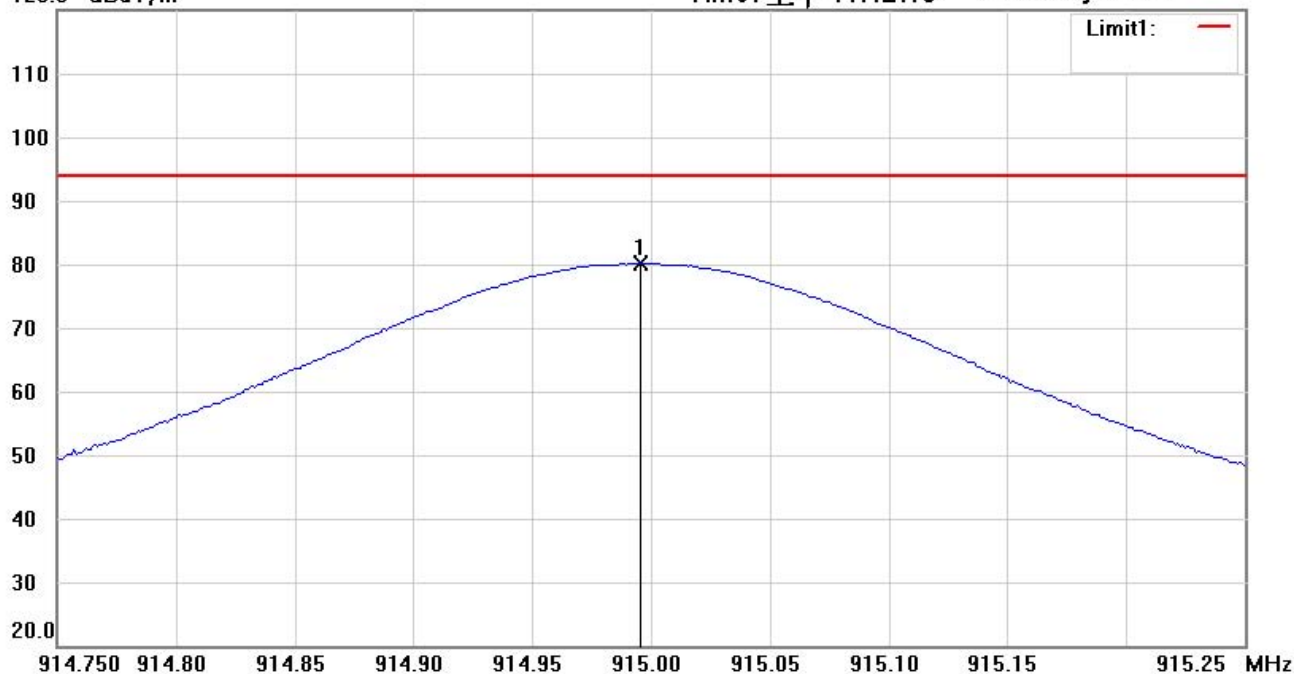
Data :#1

Date: 2016/5/5

Temperature:24 °C

Time: 上午 11:12:16

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 power(902-928)\_QP

Polarization: *Horizontal*

EUT : W6M21604-15794

Power : 3 Vd.c.

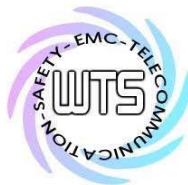
M/N:

Distance: 3m

Test Mode : Power

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 914.9955        | 52.72          | peak     | 27.34               | 80.06           | 94.00          | 100          | 221            | -13.94      |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Power  
120.0 dBuV/m

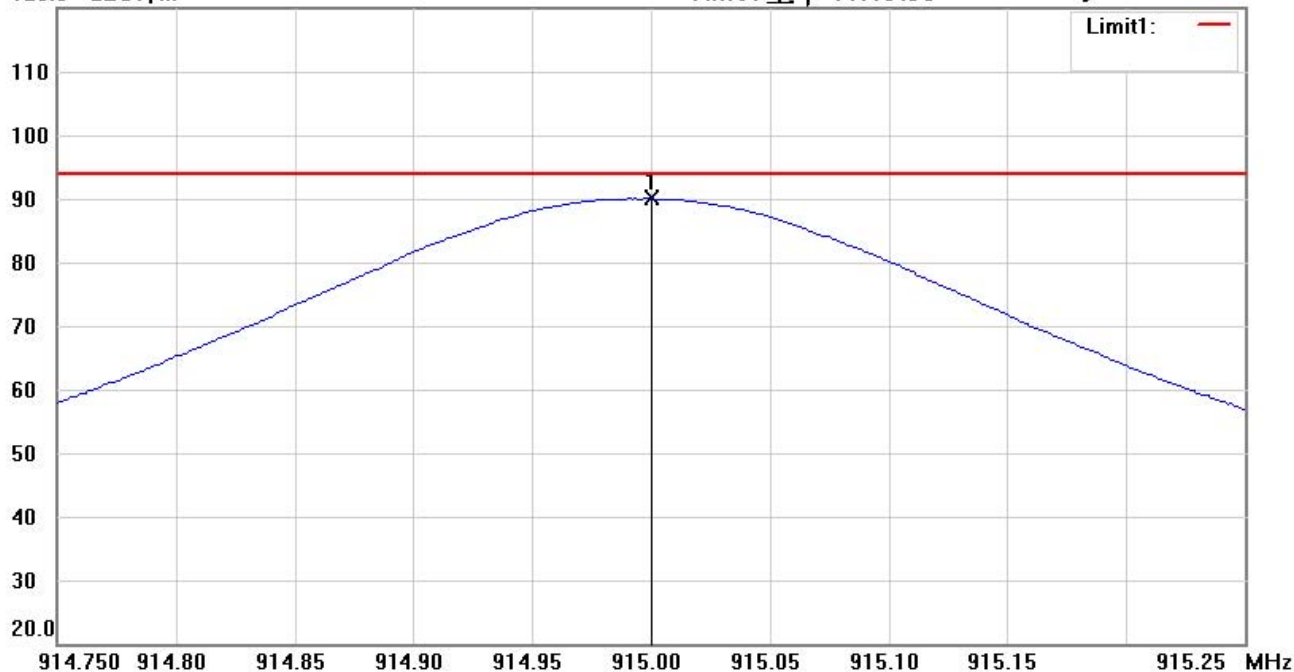
Data :#2

Date: 2016/5/5

Temperature:24 °C

Time: 上午 11:13:35

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 power(902-928)\_QP

Polarization: *Vertical*

EUT : W6M21604-15794

Power : 3 Vd.c.

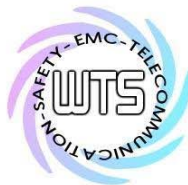
M/N:

Distance: 3m

Test Mode : Power

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 915.0005        | 62.67          | peak     | 27.34               | 90.01           | 94.00          | 100          | 54             | -3.99       |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Power  
120.0 dBuV/m

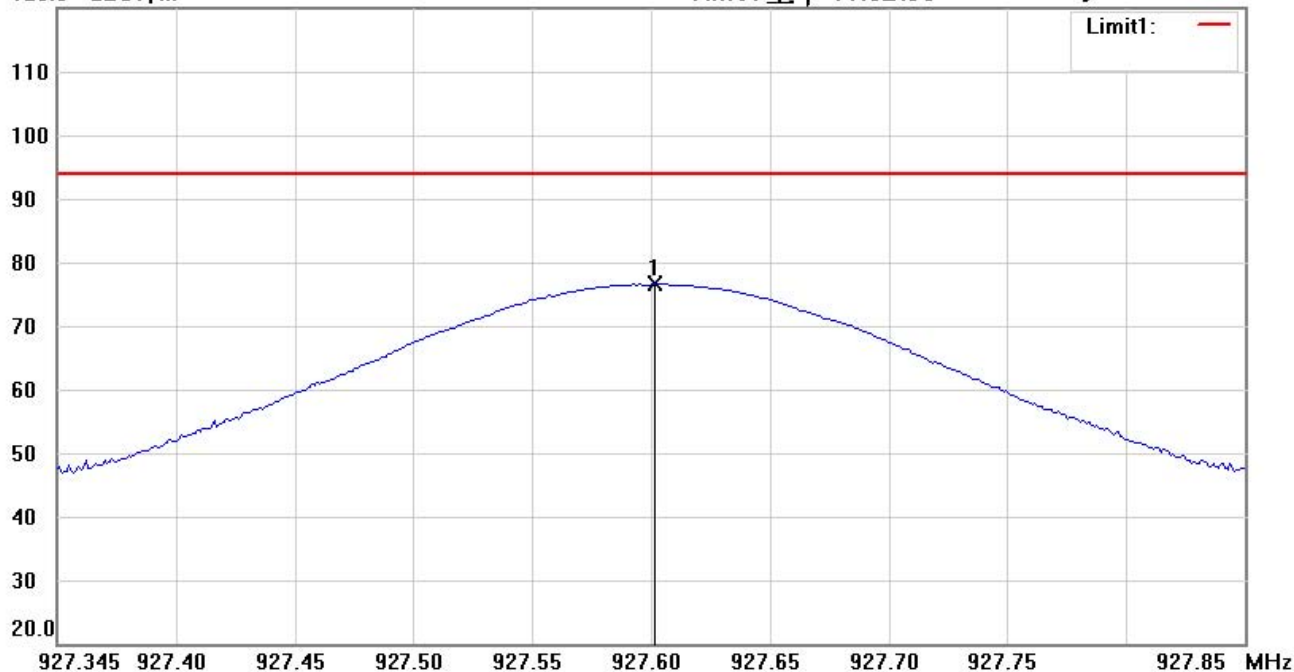
Data :#1

Date: 2016/5/5

Temperature:24 °C

Time: 上午 11:32:06

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 power(902-928)\_QP

Polarization: *Horizontal*

EUT : W6M21604-15794

Power : 3 Vd.c.

M/N:

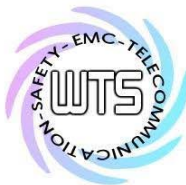
Distance: 3m

Test Mode : Power

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 927.5957        | 48.93          | peak     | 27.63               | 76.56           | 94.00          | 100          | 302            | -17.44      |         |





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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Power  
120.0 dBuV/m

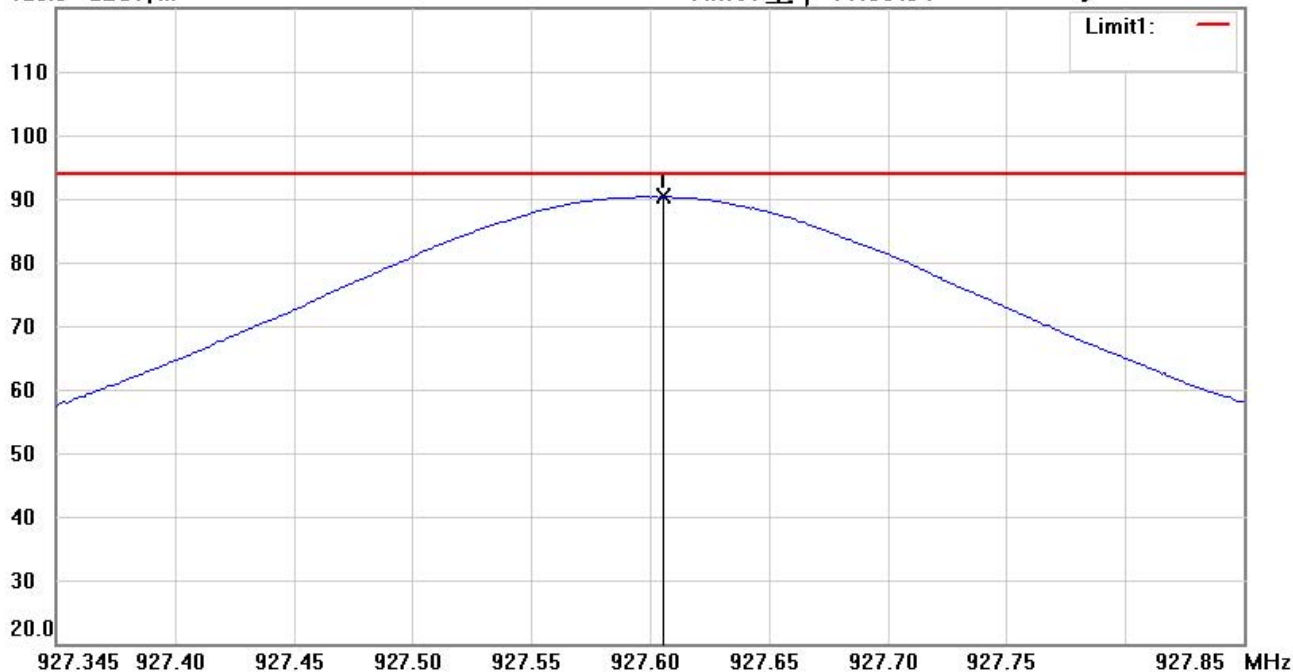
Data :#2

Date: 2016/5/5

Temperature:24 °C

Time: 上午 11:33:01

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 power(902-928)\_QP

Polarization: *Vertical*

EUT : W6M21604-15794

Power : 3 Vd.c.

M/N:

Distance: 3m

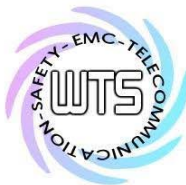
Test Mode : Power

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 927.5997        | 62.63          | peak     | 27.63               | 90.26           | 94.00          | 100          | 214            | -3.74       |         |

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147





Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

### **3.2 Equivalent isotropic radiated power**

Because using an permanent antenna there are no deviations from the radiated test results according 3.1.

### **3.3 RF Exposure Compliance Requirements**

Not applicable for this EUT for the low power level.

### **3.4 Out of Band Radiated Emissions**

FCC Rule: 15.249 (d)(e), 15.35(b)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequency above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

Limits:

| 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                                  | 46.5                                    |
| Above 960                      | 500                                  | 54.0                                    |

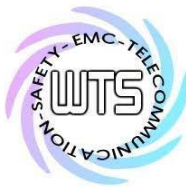
For frequencies above 1 GHz (Peak measurements).

Limit + 20 dB     54.0 dB $\mu$ V/m + 20 dB= 74dB $\mu$ V/m

Or

Must be attenuated at least 50dB below the level of fundament

Test equipment used: ETSTW-RE 004, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147,  
ETSTW-RE 030



Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## **3.5 Spurious emission (tx)**

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

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

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

The peak and average spurious emission plots was measured with the average limits.

The critical peak value listed in the table agree with the above calculated limits.

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

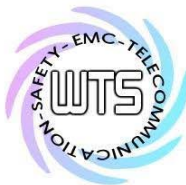
Model: ACT-30H Date: --  
Mode: -- Temperature: -- °C Engineer: --  
Polarization: Horizontal Humidity: -- %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| --              | --             | --       | --          | --              | --             | --          | --                  | --             |
| --              | --             | --       | --          | --              | --             | --          | --                  | --             |

| 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. |             |                     |                |
| --              | --             | --   | --                | --                  | --   | --                 | --   | --          | --                  | --             |
| --              | --             | --   | --                | --                  | --   | --                 | --   | --          | --                  | --             |
| --              | --             | --   | --                | --                  | --   | --                 | --   | --          | --                  | --             |
| --              | --             | --   | --                | --                  | --   | --                 | --   | --          | --                  | --             |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| --              | --             | --       | --          | --              | --             | --          | --                  | --             |
| --              | --             | --       | --          | --              | --             | --          | --                  | --             |



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

Registration number: W6M21604-15794-C-1

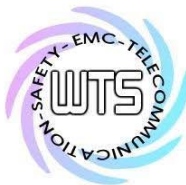
FCC ID: M5X-30313250HNHR

| 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. |                |                           |                      |
| --                 | --                | --   | --                      | --                     | --   | --                    | --   | --             | --                        | --                   |
| --                 | --                | --   | --                      | --                     | --   | --                    | --   | --             | --                        | --                   |
| --                 | --                | --   | --                      | --                     | --   | --                    | --   | --             | --                        | --                   |
| --                 | --                | --   | --                      | --                     | --   | --                    | --   | --             | --                        | --                   |

- 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. **Measurement uncertainty for 3m measurement: 30-1000 MHz =  $\pm 4.69$  dB, 1-18 GHz =  $\pm 4.78$  dB, 18-40 GHz =  $\pm 2.44$  dB ; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.**
  6. **Up Line: PK Limit Line, Down Line: Ave Limit Line.**
  7. **See attached diagrams in appendix.**

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

Test equipment used: ETSTW-RE 004, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147,  
ETSTW-RE 030, ETSTW-RE 088, ETSTW-RE 018



Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## **3.6 Radiated Emissions from Digital Part**

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

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:

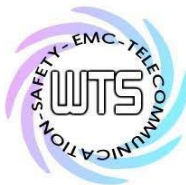
| Frequency of Emission<br>(MHz) | Field Strength<br>(microvolts/meter) | Field Strength<br>(dBmicrovolts/meter) |
|--------------------------------|--------------------------------------|----------------------------------------|
| 30 – 88                        | 100                                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

#### **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. **Measurement uncertainty for 3m measurement : 30-1000 MHz =  $\pm 3.72$  dB, 1-18 GHz =  $\pm 5.33$  dB, 18-40 GHz =  $\pm 3.43$  dB ; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .**

ETSTW-RE 004, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147, ETSTW-RE 030

Explanation: This test is not required.

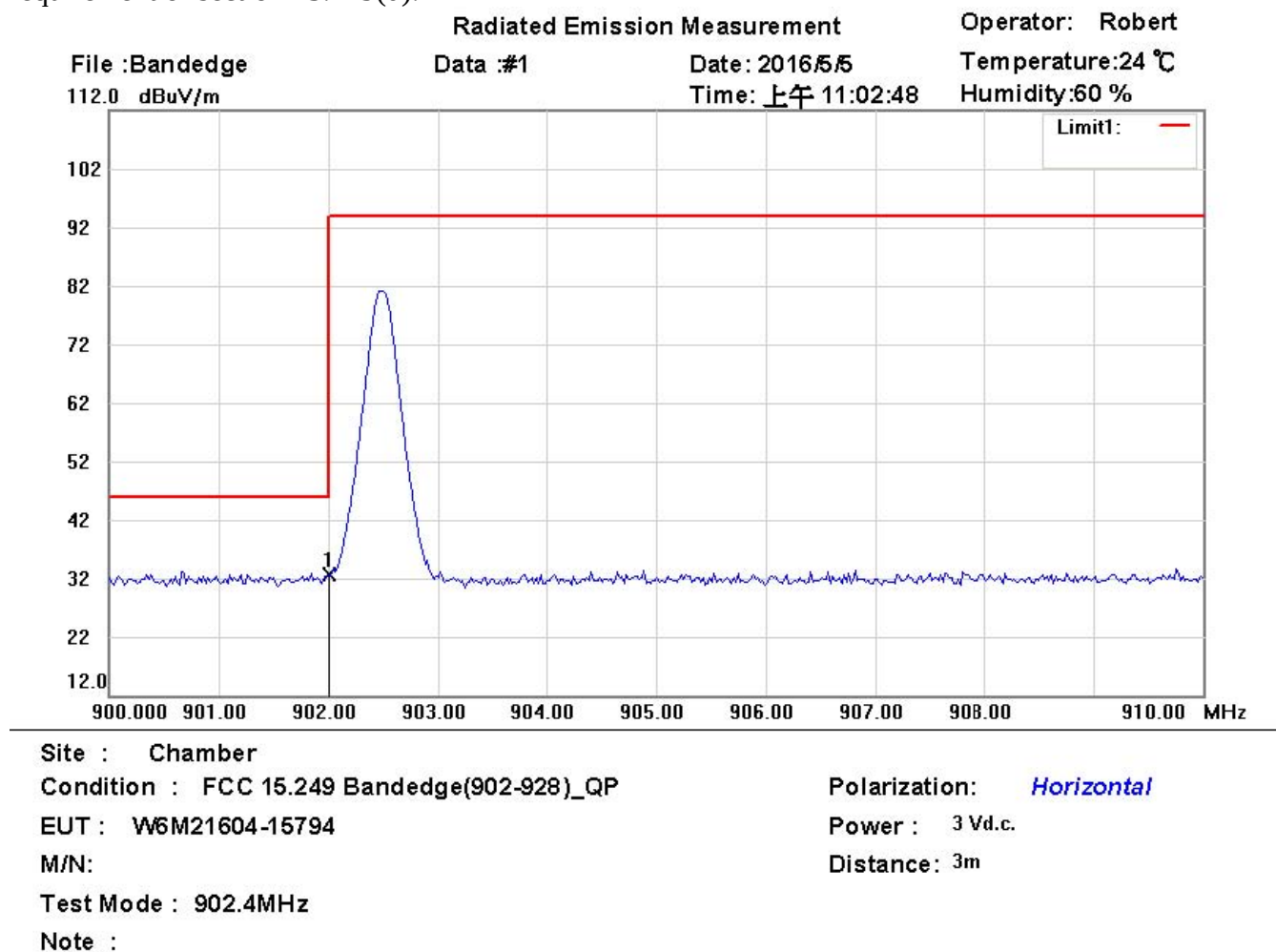


Registration number: W6M21604-15794-C-1

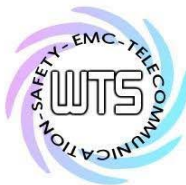
FCC ID: M5X-30313250HNHR

## 3.7 Radiated Emission on the band edge

From the following plots, they show that the fundamental emissions are confined in the specified band and hey at least 50 dB below the carrier level at band edge (2400 and 2483.5 MHz). It meets the requirement of section 15.249(d).



| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 902.0000        | 5.52           | peak     | 27.05               | 32.57           | 46.00          | 100          | 42             | -13.43      |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Bandedge

Data :#2

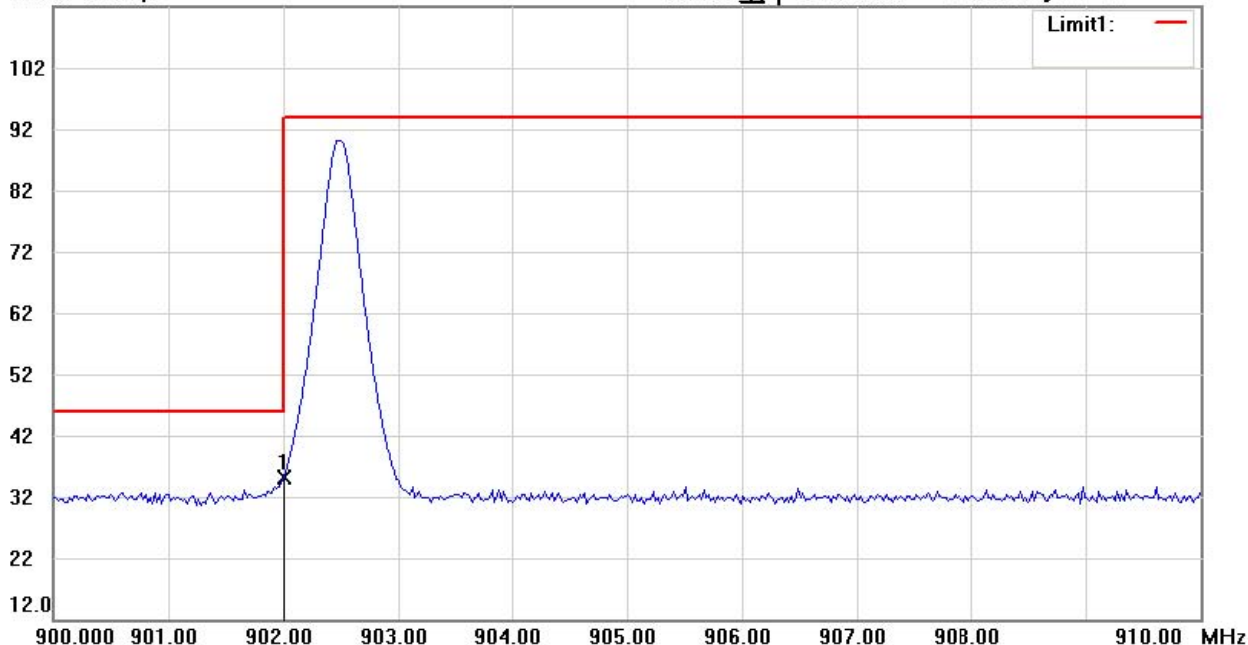
Date: 2016/5/5

Temperature:24 °C

112.0 dBuV/m

Time: 上午 11:03:59

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)\_QP

Polarization: *Vertical*

EUT : W6M21604-15794

Power : 3 Vd.c.

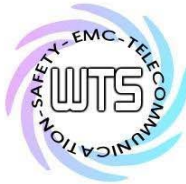
M/N:

Distance: 3m

Test Mode : 902.4MHz

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 902.0000        | 8.16           | peak     | 27.05               | 35.21           | 46.00          | 100          | 123            | -10.79      |         |



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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Bandedge

Data :#1

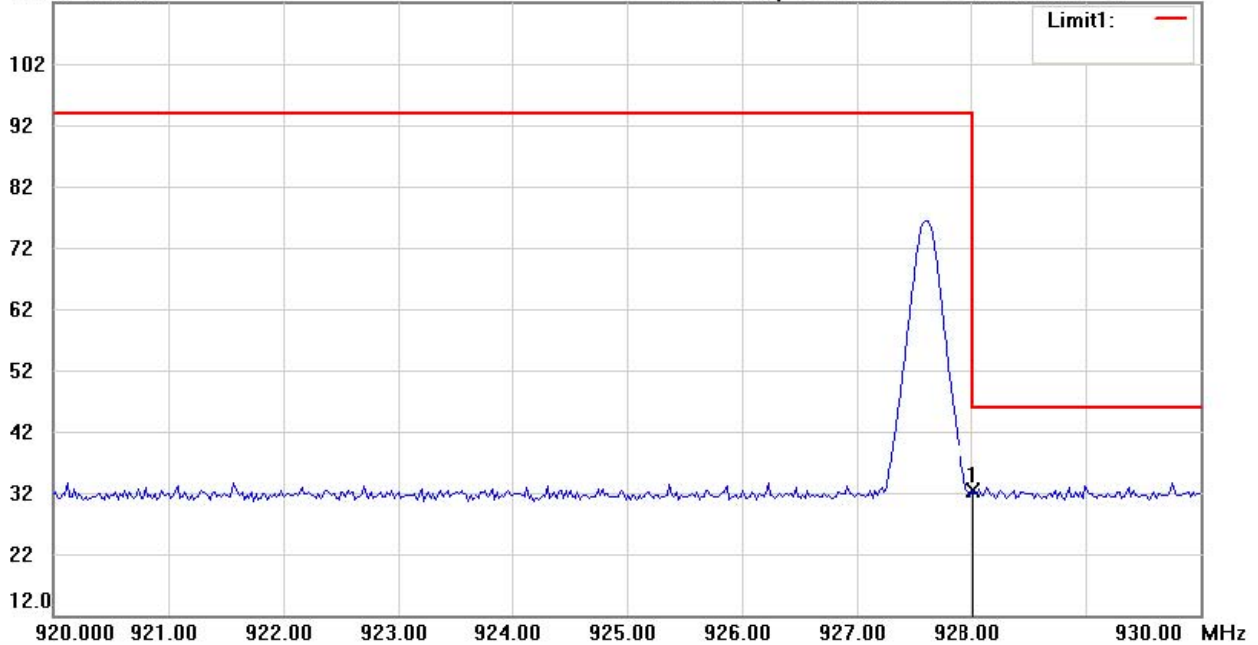
Date: 2016/5/5

Temperature:24 °C

112.0 dBuV/m

Time: 上午 11:27:01

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)\_QP

Polarization: *Horizontal*

EUT : W6M21604-15794

Power : 3 Vd.c.

M/N:

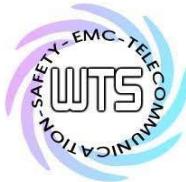
Distance: 3m

Test Mode : 927.6MHz

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 928.0000        | 4.73           | peak     | 27.64               | 32.37           | 46.00          | 100          | 42             | -13.63      |         |





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

Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## Radiated Emission Measurement

Operator: Robert

File :Bandedge

Data :#2

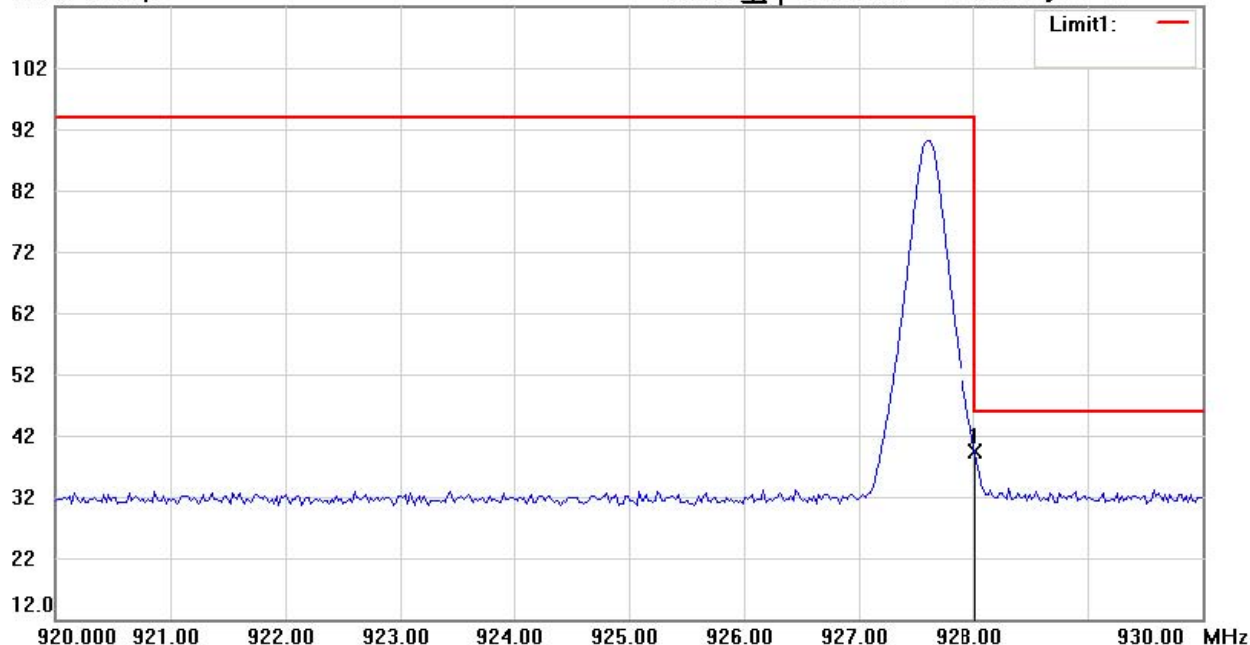
Date: 2016/5/5

Temperature:24 °C

112.0 dBuV/m

Time: 上午 11:27:59

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)\_QP

Polarization: *Vertical*

EUT : W6M21604-15794

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : 927.6MHz

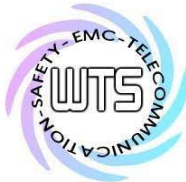
Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 928.0000        | 11.78          | peak     | 27.64               | 39.42           | 46.00          | 100          | 301            | -6.58       |         |

Limit:

| Frequency Range (MHz) | Limit (dB $\mu$ V/m) |         |
|-----------------------|----------------------|---------|
|                       | Peak                 | Average |
| 902 – 928             | 114                  | 94      |
| 2400 – 2483.5         | 74                   | 54      |
| 5725 – 5875           | 74                   | 54      |

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147



Registration number: W6M21604-15794-C-1

FCC ID: M5X-30313250HNHR

## 3.8 Power Line Conducted Emission

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

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

| Model:             | ACT-30H                      | Date:        | --                      |                             |    |                            |    |                |
|--------------------|------------------------------|--------------|-------------------------|-----------------------------|----|----------------------------|----|----------------|
| Mode:              | --                           | Temperature: | --                      | °C                          |    | Engineer:                  | -- |                |
| Polarization:      | --                           | Humidity:    | --                      | %                           |    |                            |    |                |
| Frequency<br>(MHz) | Reading<br>(dBuV)<br>QP Ave. |              | Factor<br>(dB)<br>Corr. | Result<br>(dBuV)<br>QP Ave. |    | Limit<br>(dBuV)<br>QP Ave. |    | Margin<br>(dB) |
| --                 | --                           | --           | --                      | --                          | -- | --                         | -- | --             |
| --                 | --                           | --           | --                      | --                          | -- | --                         | -- | --             |

Polarization: --

| Frequency<br>(MHz) | Reading<br>(dBuV)<br>QP Ave. |    | Factor<br>(dB)<br>Corr. | Result<br>(dBuV)<br>QP Ave. |    | Limit<br>(dBuV)<br>QP Ave. |    | Margin<br>(dB) |
|--------------------|------------------------------|----|-------------------------|-----------------------------|----|----------------------------|----|----------------|
| --                 | --                           | -- | --                      | --                          | -- | --                         | -- | --             |
| --                 | --                           | -- | --                      | --                          | -- | --                         | -- | --             |

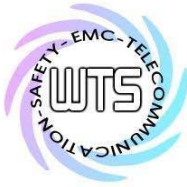
- Note:**
1. The formula of measured value as:  $\text{Test Result} = \text{Reading} + \text{Correction Factor}$
  2. The Correction Factor = Cable Loss + LISN Insertion Loss
  3. Detector function in the form : PK = Peak, QP = Qusai Peak, AV = Average
  4. All not in the table noted test results are more than 20 dB below the relevant limits.
  5. Measurement uncertainty =  $\pm 1.14$  dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .
  6. Up Line: QP Limit Line, Down Line: Ave Limit Line.
  7. This test is not required because the EUT is battery-used.

### 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 016, ETSTW-RE 045

Explanation: This test is not required because the EUT is battery-used.



Registration number: W6M21604-15794-C-1  
FCC ID: M5X-30313250HNHR

## **Appendix**

**Measurement diagrams**

Spurious Emissions radiated



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :1

Data :#1

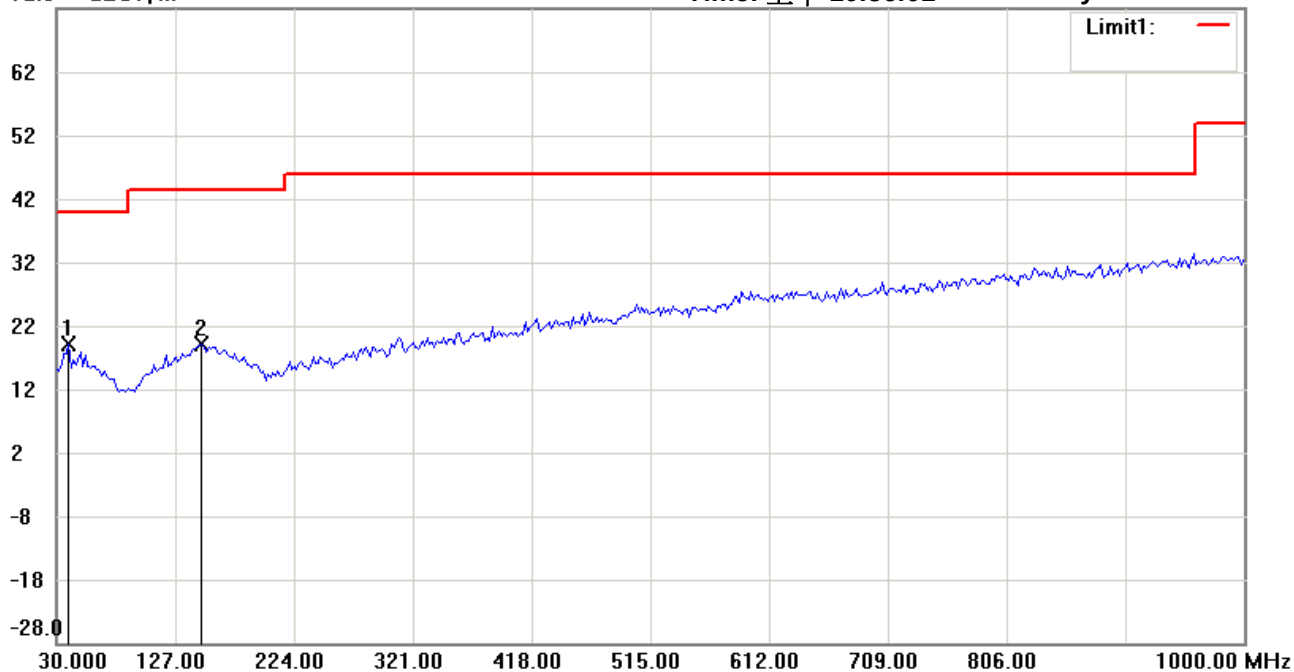
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 10:56:01

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 39.7194         | 5.20           | peak     | 14.02               | 19.22           | 40.00          | 100          | 220            | -20.78      |         |
|     | 148.5772        | 3.77           | peak     | 15.26               | 19.03           | 43.50          | 100          | 35             | -24.47      |         |

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Robert

File :1

Data :#2

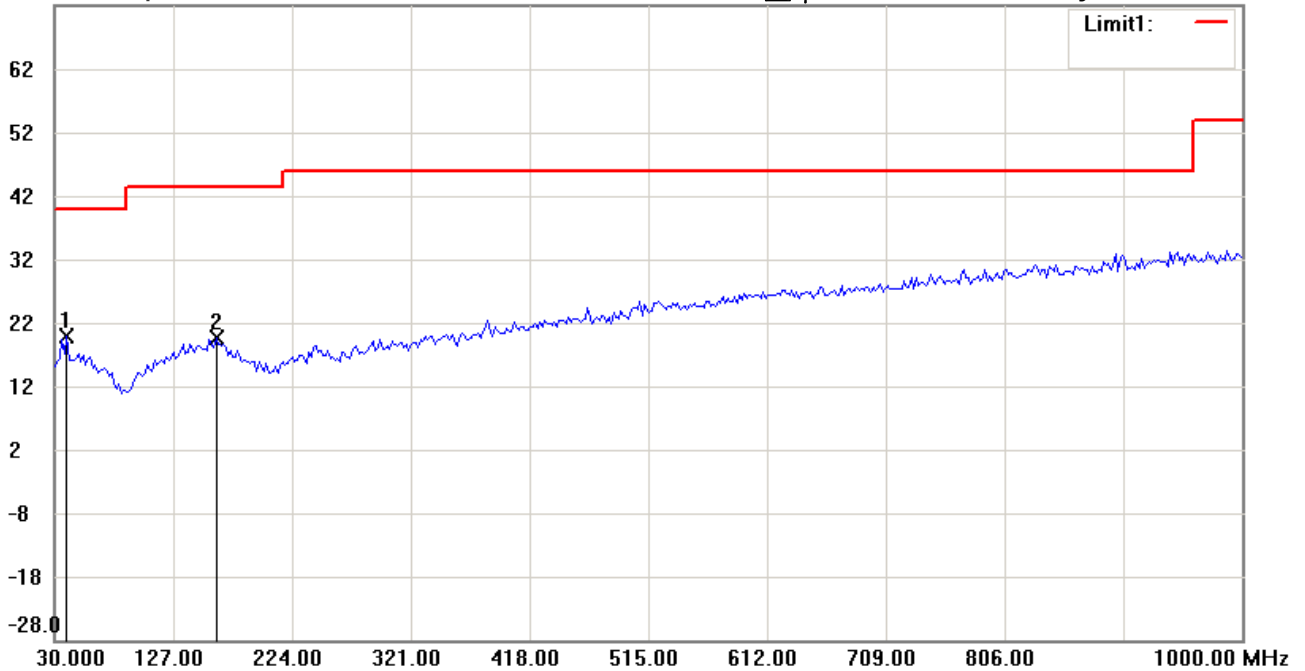
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 10:56:52

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 39.7194         | 5.77           | peak     | 14.02               | 19.79           | 40.00          | 100          | 260            | -20.21      |         |
|     | 162.1844        | 4.40           | peak     | 15.17               | 19.57           | 43.50          | 100          | 70             | -23.93      |         |

\*:Maximum data    x:Over limit    !:over margin



Address: 6F., No. 58, Ln 188, Ruey Kuang Rd, Neihu, Taipei  
Tel: +886-2-6606-8877  
Fax: +886-2-6606-8875

### Radiated Emission Measurement

Operator: Robert

File : 3

Data : #1

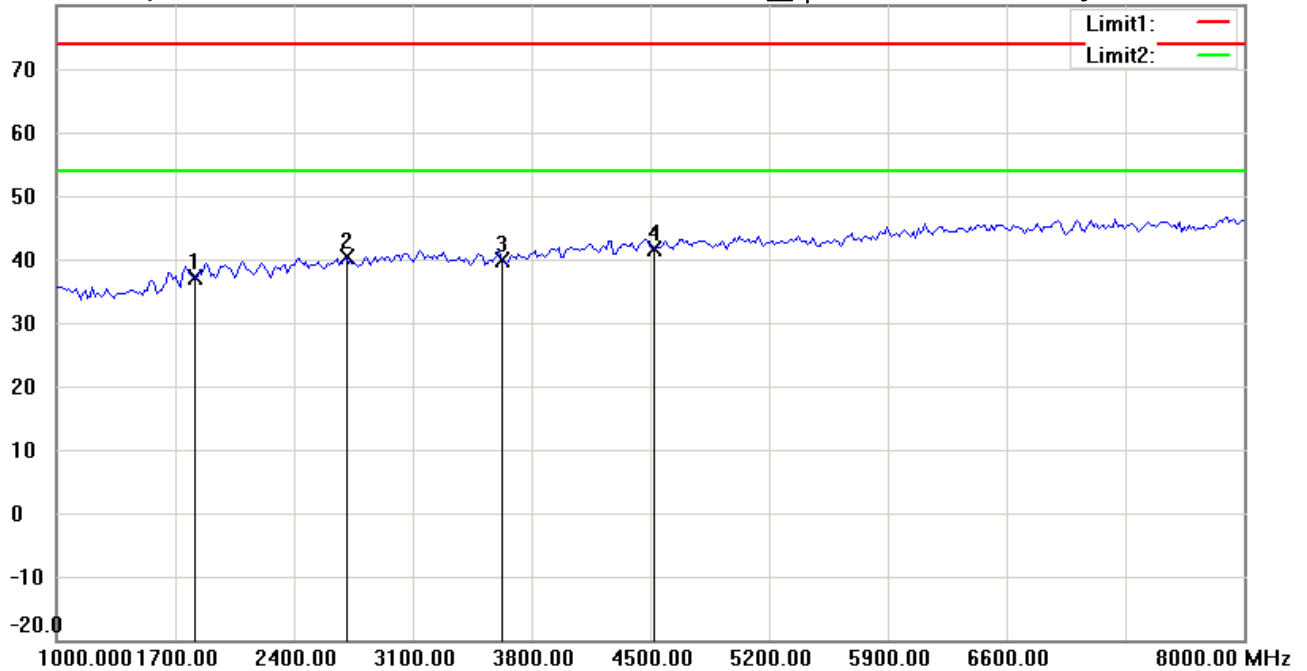
Date: 2016/5/5

Temperature: 24 °C

80.0 dBuV/m

Time: 上午 09:40:36

Humidity: 60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|     | 1804.800        | 43.28          | peak     | -6.04               | 37.24           | 74.00          | 100          | 58             | -36.76      |         |
|     | 2707.200        | 43.40          | peak     | -3.08               | 40.32           | 74.00          | 100          | 122            | -33.68      |         |
|     | 3609.600        | 41.36          | peak     | -1.51               | 39.85           | 74.00          | 100          | 207            | -34.15      |         |
| *   | 4512.000        | 41.49          | peak     | 0.19                | 41.68           | 74.00          | 100          | 175            | -32.32      |         |

\*:Maximum data    x:Over limit    !:over margin



Address: 6F., No. 58, Ln 188, Ruey Kuang Rd, Neihu, Taipei  
Tel: +886-2-6606-8877  
Fax: +886-2-6606-8875

### Radiated Emission Measurement

Operator: Robert

File : 3

Data : #3

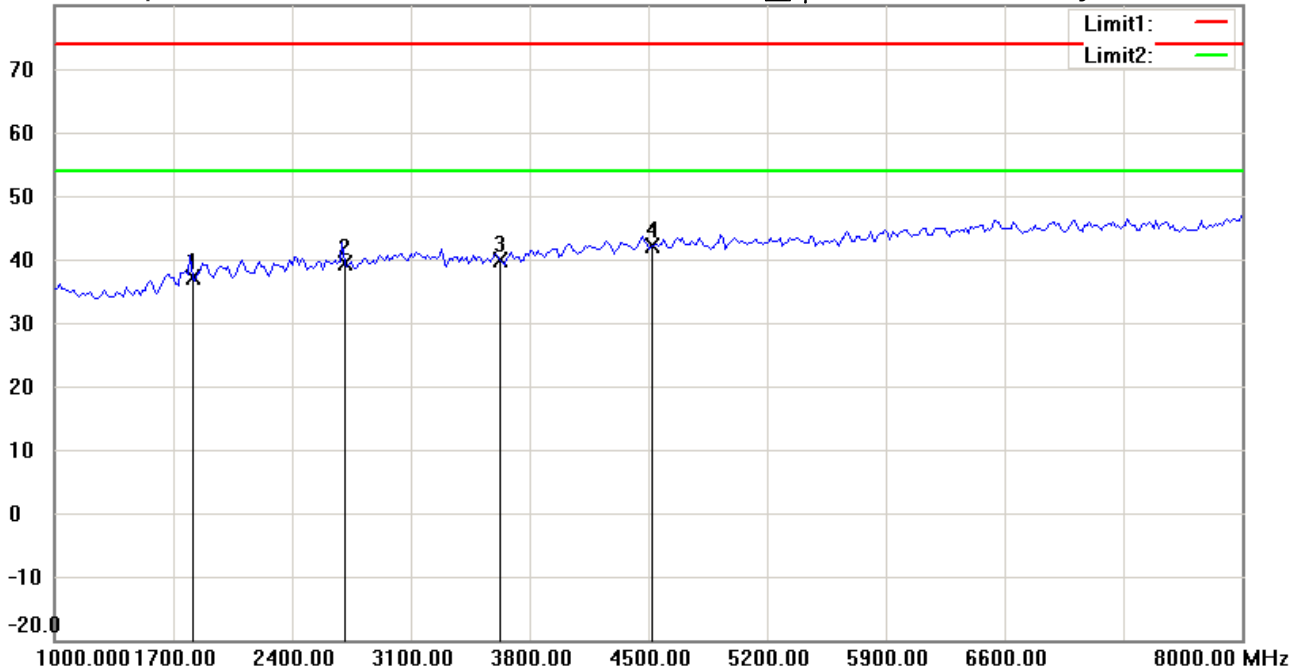
Date: 2016/5/5

Temperature: 24 °C

80.0 dBuV/m

Time: 上午 09:45:41

Humidity: 60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|     | 1804.800        | 43.06          | peak     | -6.04               | 37.02           | 74.00          | 100          | 122            | -36.98      |         |
|     | 2707.200        | 42.48          | peak     | -3.08               | 39.40           | 74.00          | 100          | 45             | -34.60      |         |
|     | 3609.600        | 41.30          | peak     | -1.51               | 39.79           | 74.00          | 100          | 302            | -34.21      |         |
| *   | 4512.000        | 42.00          | peak     | 0.19                | 42.19           | 74.00          | 100          | 173            | -31.81      |         |

\*:Maximum data    x:Over limit    !:over margin





Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#2

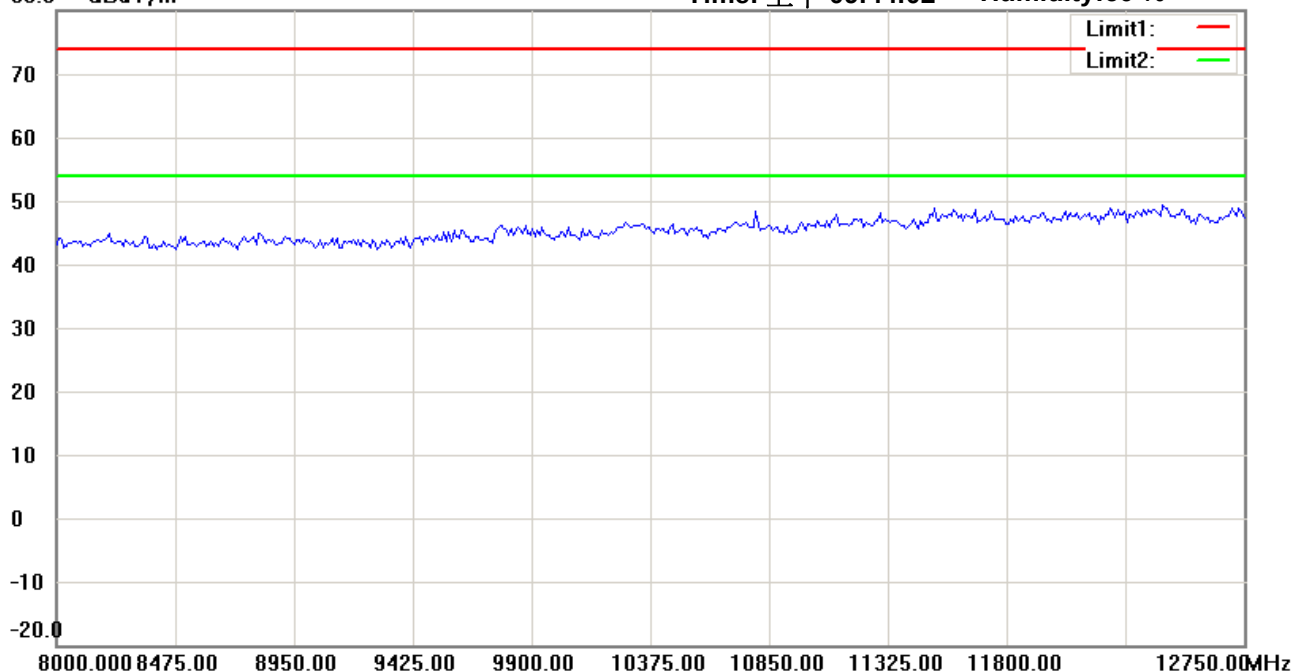
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 09:44:02

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#4

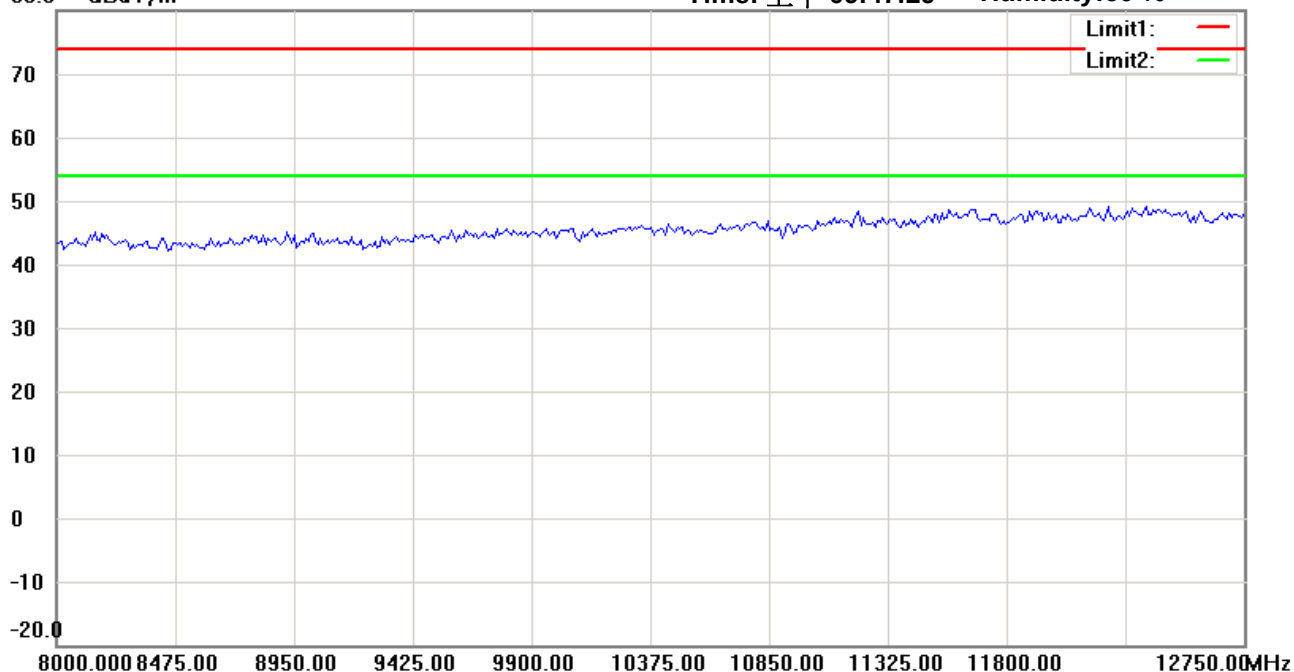
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 09:47:29

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 902.4MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin



Radiated Emission Measurement

Operator: Robert

File :1

Data :#1

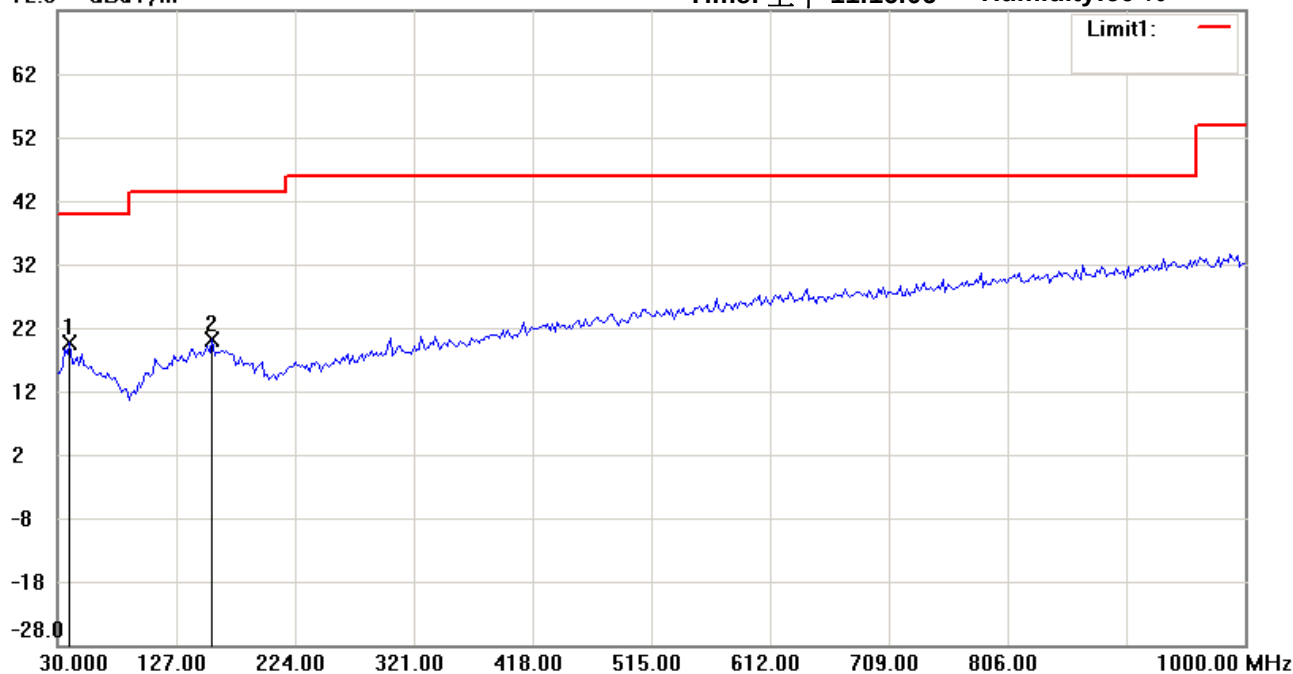
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 11:16:06

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 39.7194         | 5.71           | peak     | 14.02               | 19.73           | 40.00          | 100          | 255            | -20.27      |         |
|     | 156.3526        | 4.91           | peak     | 15.27               | 20.18           | 43.50          | 100          | 60             | -23.32      |         |



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :1

Data :#2

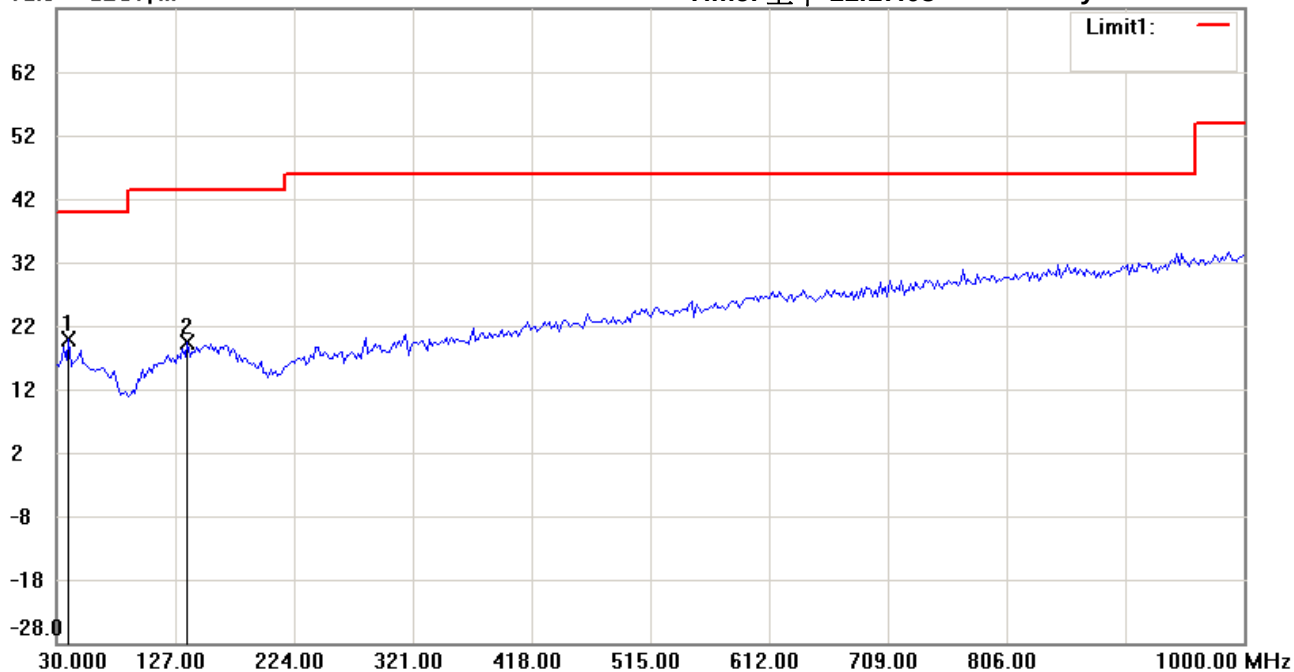
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 11:17:03

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 39.7194         | 5.92           | peak     | 14.02               | 19.94           | 40.00          | 100          | 135            | -20.06      |         |
|     | 136.9138        | 4.68           | peak     | 14.81               | 19.49           | 43.50          | 100          | 310            | -24.01      |         |

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#1

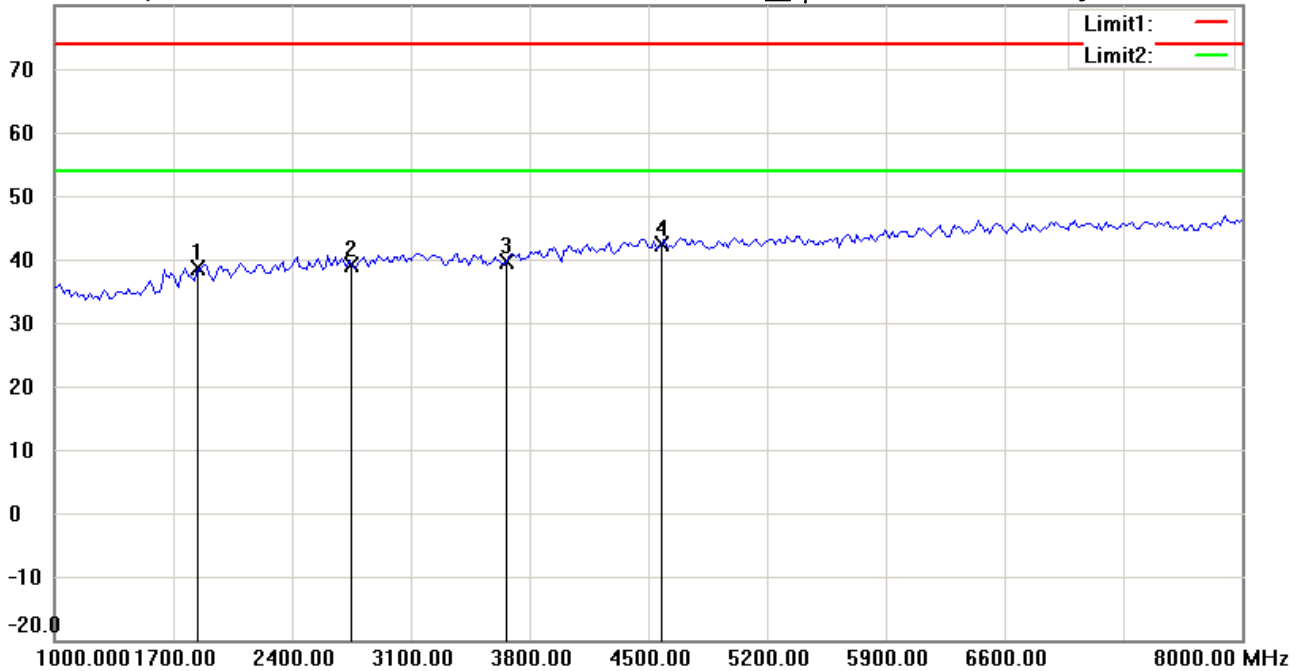
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:09:16

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|     | 1830.000        | 44.43          | peak     | -5.77               | 38.66           | 74.00          | 100          | 14             | -35.34      |         |
|     | 2745.000        | 42.26          | peak     | -3.08               | 39.18           | 74.00          | 100          | 204            | -34.82      |         |
|     | 3660.000        | 40.90          | peak     | -1.38               | 39.52           | 74.00          | 100          | 354            | -34.48      |         |
| *   | 4575.000        | 42.16          | peak     | 0.11                | 42.27           | 74.00          | 100          | 25             | -31.73      |         |

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#3

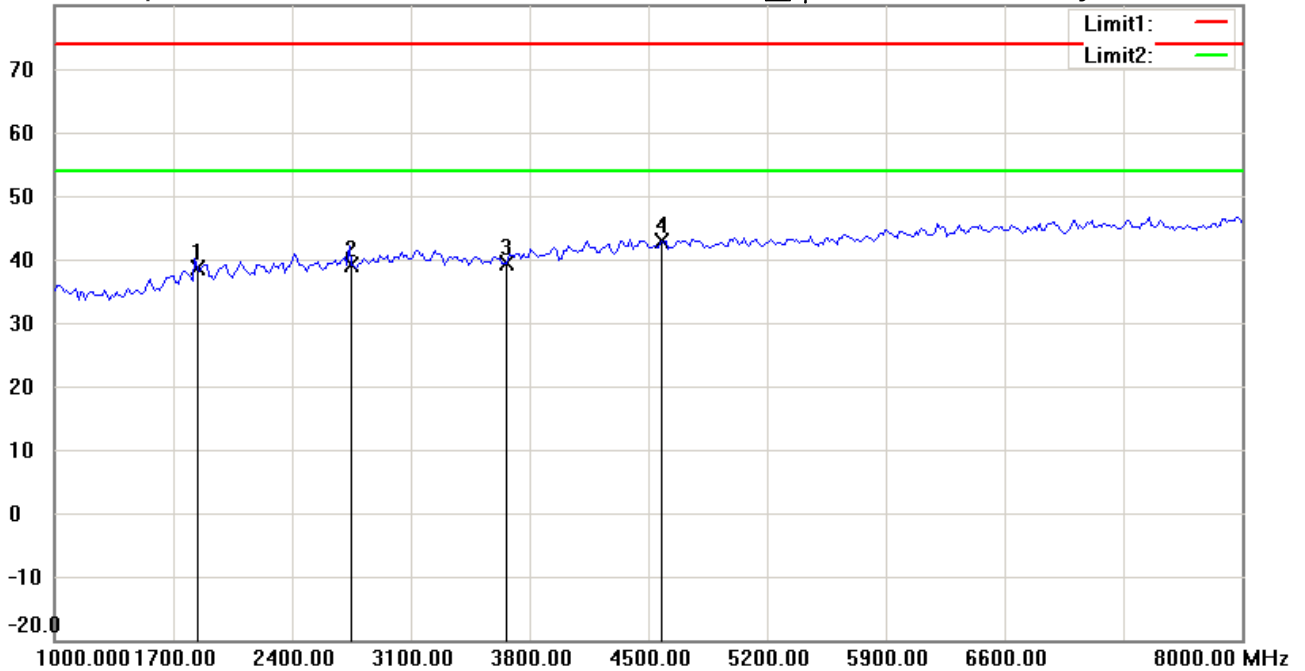
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:12:37

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: Vertical

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|     | 1830.000        | 44.44          | peak     | -5.77               | 38.67           | 74.00          | 100          | 204            | -35.33      |         |
|     | 2745.000        | 42.14          | peak     | -3.08               | 39.06           | 74.00          | 100          | 122            | -34.94      |         |
|     | 3660.000        | 40.87          | peak     | -1.38               | 39.49           | 74.00          | 100          | 304            | -34.51      |         |
| *   | 4575.000        | 42.66          | peak     | 0.11                | 42.77           | 74.00          | 100          | 75             | -31.23      |         |

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#2

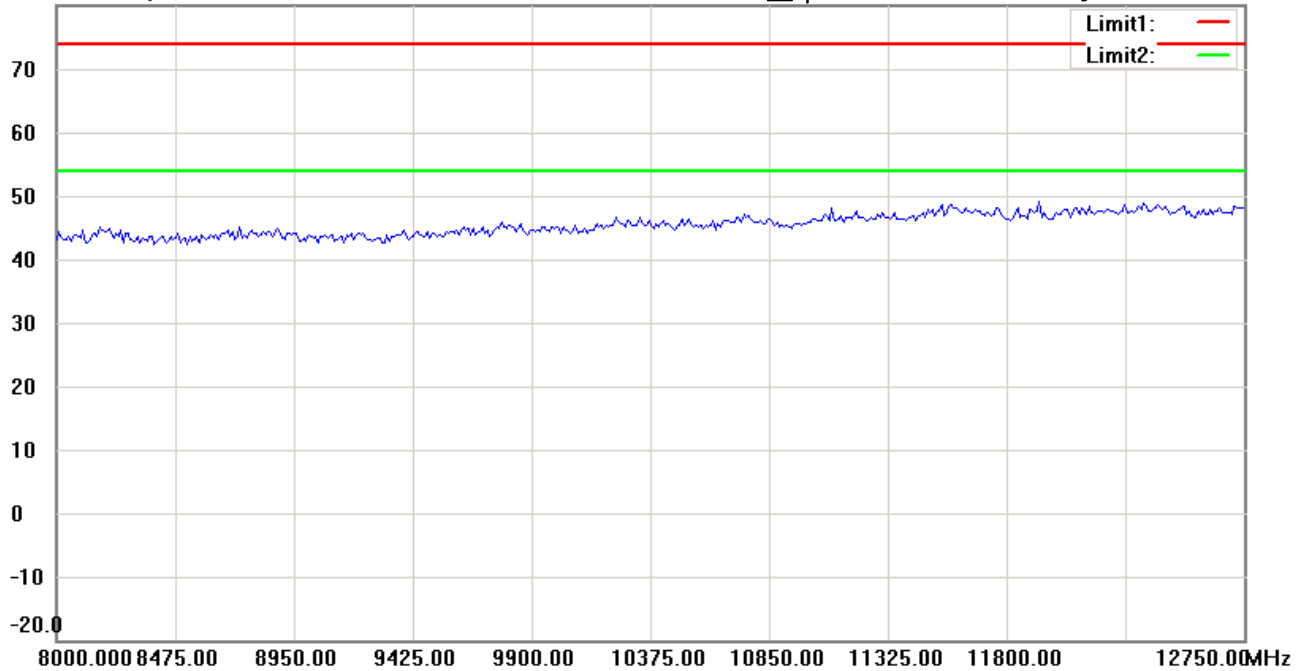
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:11:14

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#4

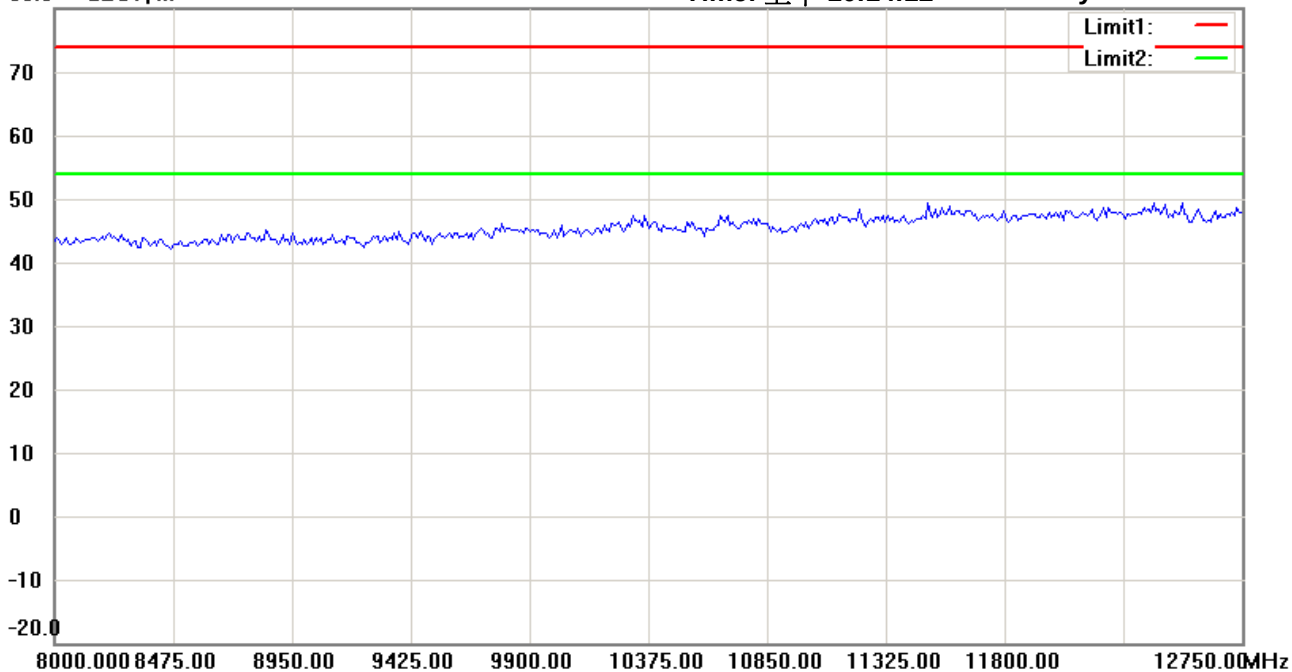
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:14:12

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 915MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin





Radiated Emission Measurement

Operator: Robert

File :1

Data :#1

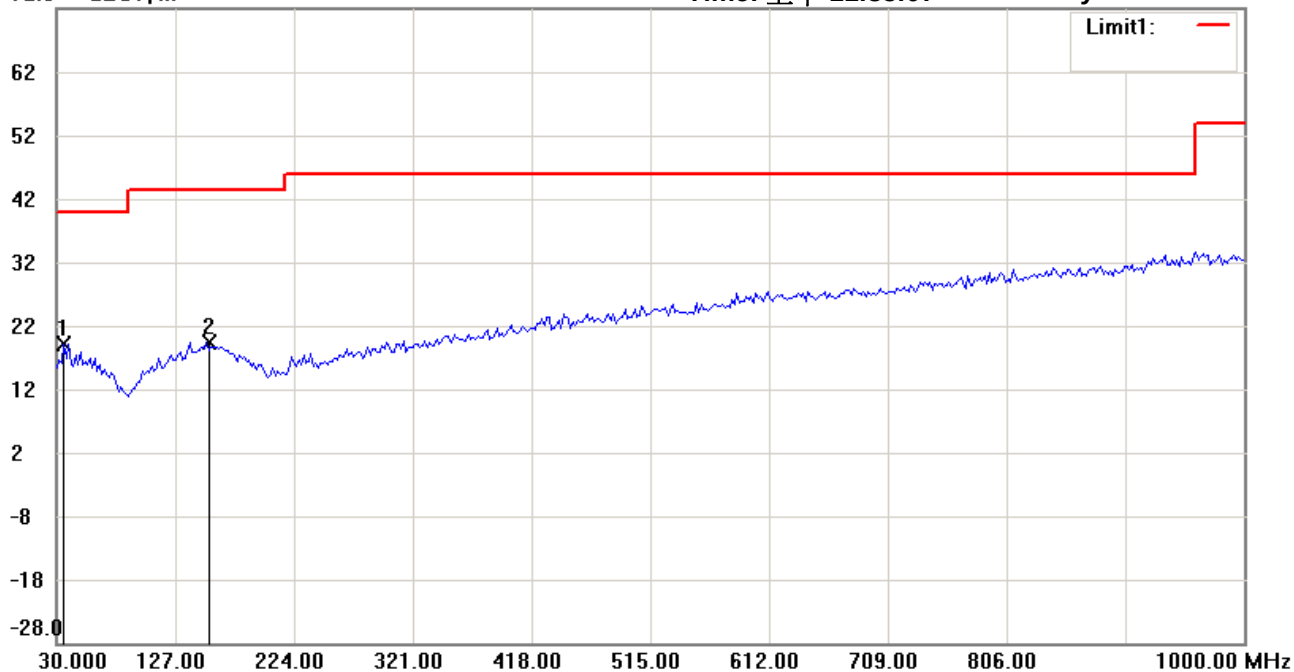
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 11:35:07

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 35.8316         | 5.65           | peak     | 13.60               | 19.25           | 40.00          | 100          | 235            | -20.75      |         |
|     | 152.4650        | 4.16           | peak     | 15.29               | 19.45           | 43.50          | 100          | 40             | -24.05      |         |



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :1

Data :#2

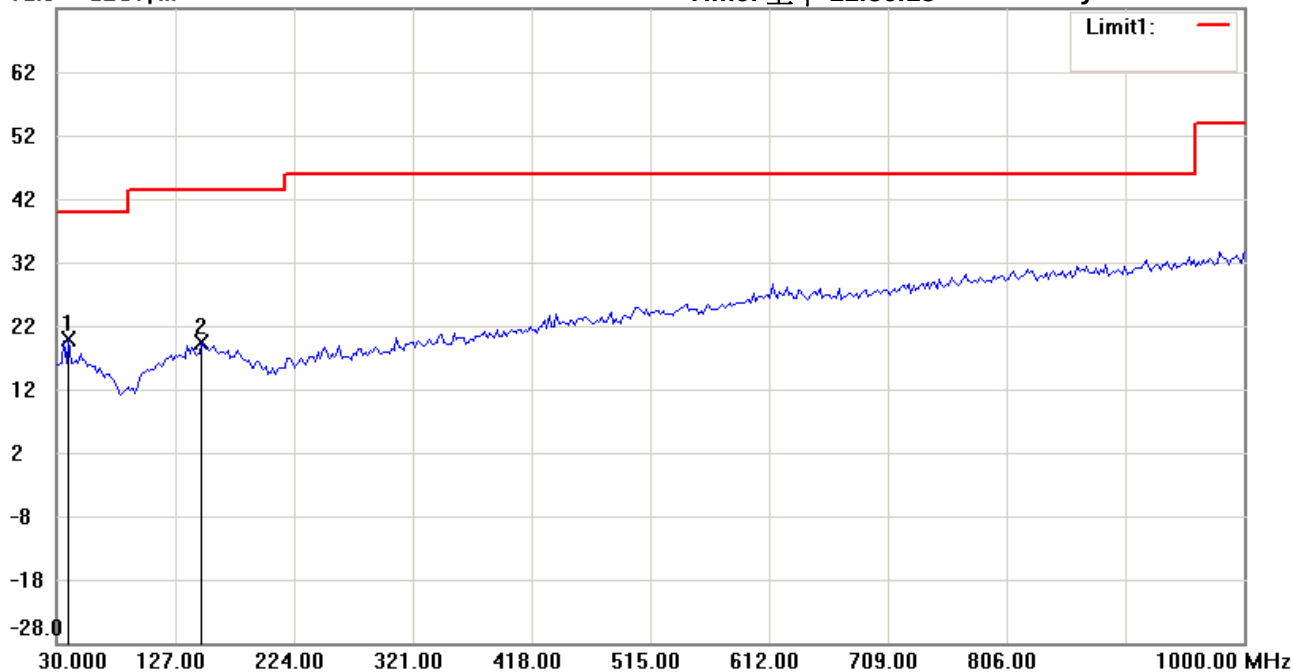
Date: 2016/5/5

Temperature:24 °C

72.0 dBuV/m

Time: 上午 11:36:13

Humidity:60 %



Site : Chamber

Condition : FCC 15.249<1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 39.7194         | 5.87           | peak     | 14.02               | 19.89           | 40.00          | 100          | 185            | -20.11      |         |
|     | 148.5772        | 4.09           | peak     | 15.26               | 19.35           | 43.50          | 100          | 340            | -24.15      |         |

\*:Maximum data    x:Over limit    !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#1

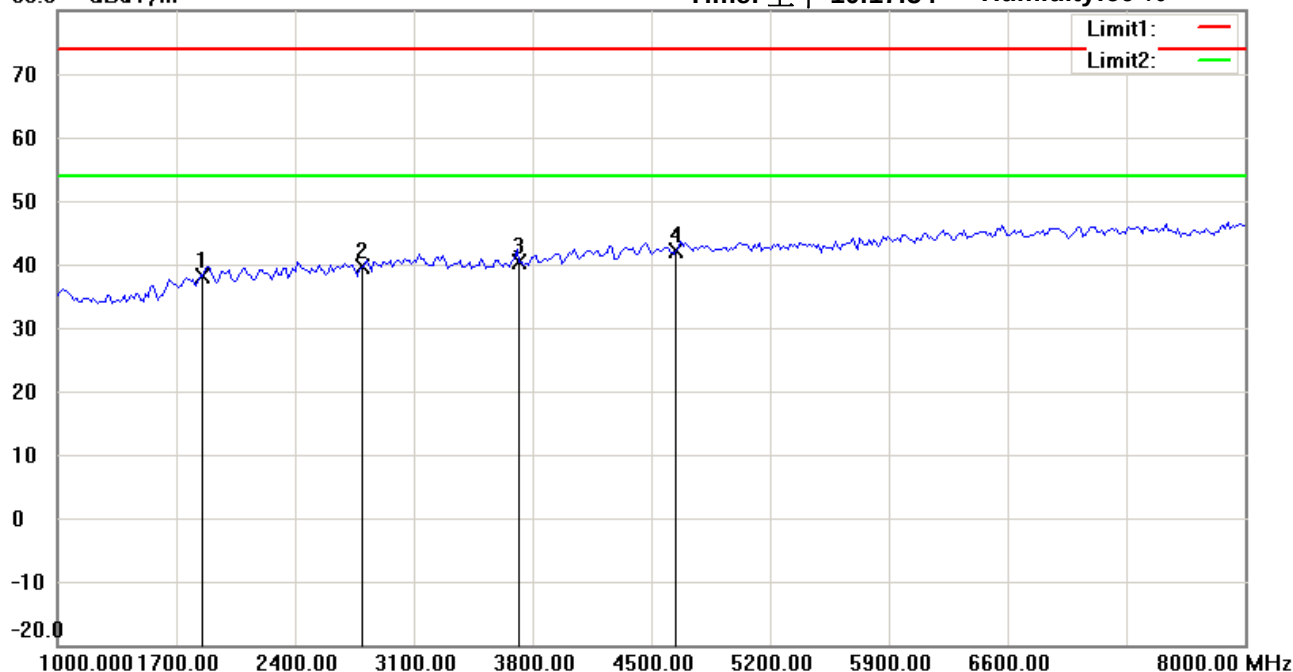
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:17:54

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|     | 1855.200        | 43.65          | peak     | -5.51               | 38.14           | 74.00          | 100          | 75             | -35.86      |         |
|     | 2782.800        | 42.61          | peak     | -3.07               | 39.54           | 74.00          | 100          | 127            | -34.46      |         |
|     | 3710.400        | 41.59          | peak     | -1.27               | 40.32           | 74.00          | 100          | 306            | -33.68      |         |
| *   | 4638.000        | 41.92          | peak     | 0.14                | 42.06           | 74.00          | 100          | 35             | -31.94      |         |

\*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Robert

File :3

Data :#3

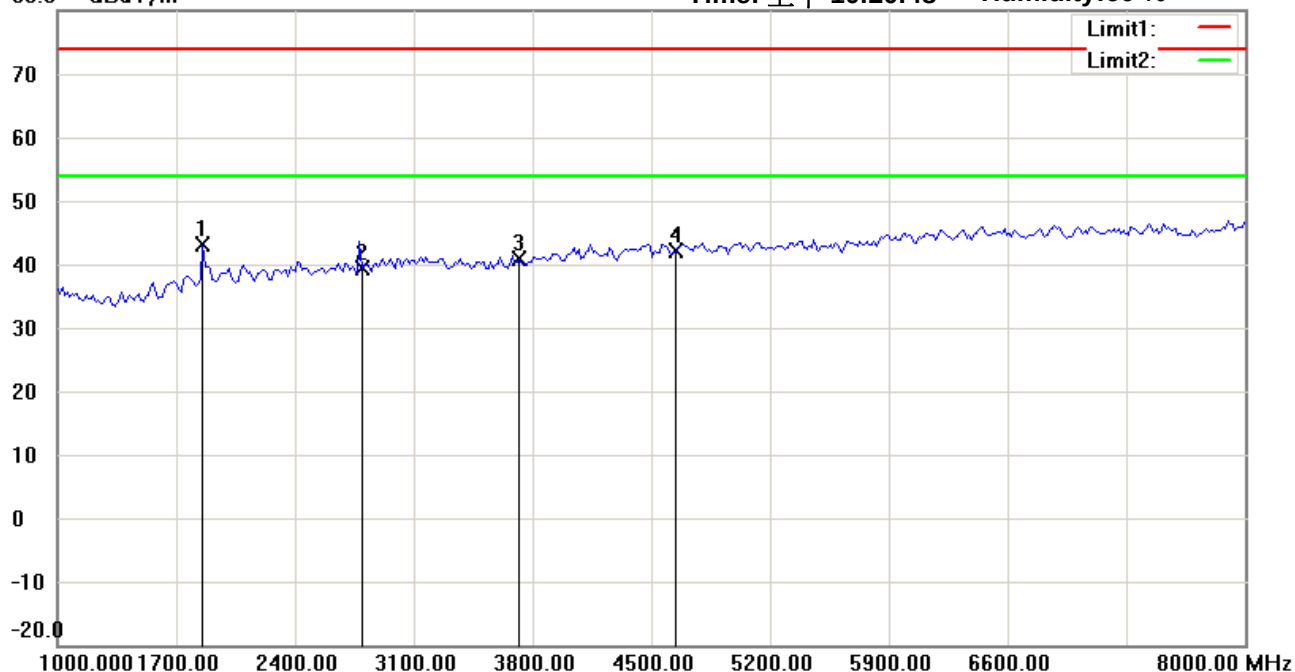
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:20:48

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: Vertical

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| *   | 1855.200        | 48.60          | peak     | -5.51               | 43.09           | 74.00          | 100          | 55             | -30.91      |         |
|     | 2782.800        | 42.46          | peak     | -3.07               | 39.39           | 74.00          | 100          | 345            | -34.61      |         |
|     | 3710.400        | 42.11          | peak     | -1.27               | 40.84           | 74.00          | 100          | 127            | -33.16      |         |
|     | 4638.000        | 42.00          | peak     | 0.14                | 42.14           | 74.00          | 100          | 50             | -31.86      |         |



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei  
Tel:+886-2-6606-8877  
Fax:+886-2-6606-8875

# Radiated Emission Measurement

Operator: Robert

File :3

Data :#2

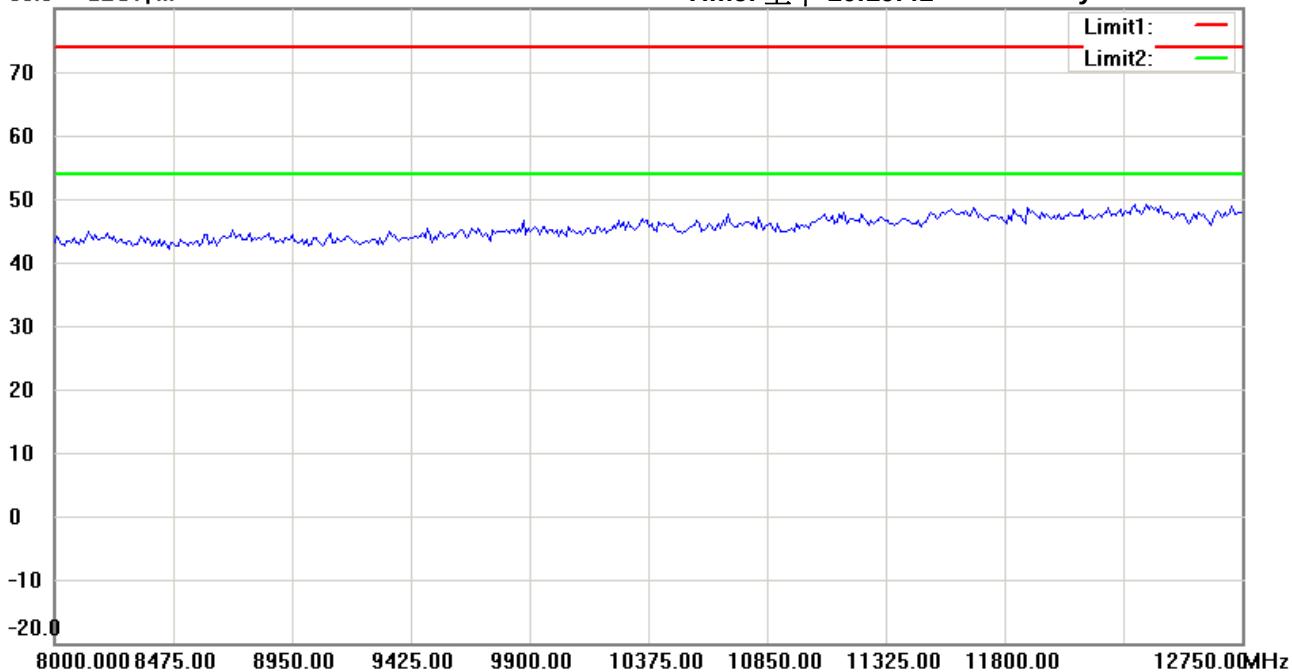
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:19:41

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: *Horizontal*

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin



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### Radiated Emission Measurement

Operator: Robert

File :3

Data :#4

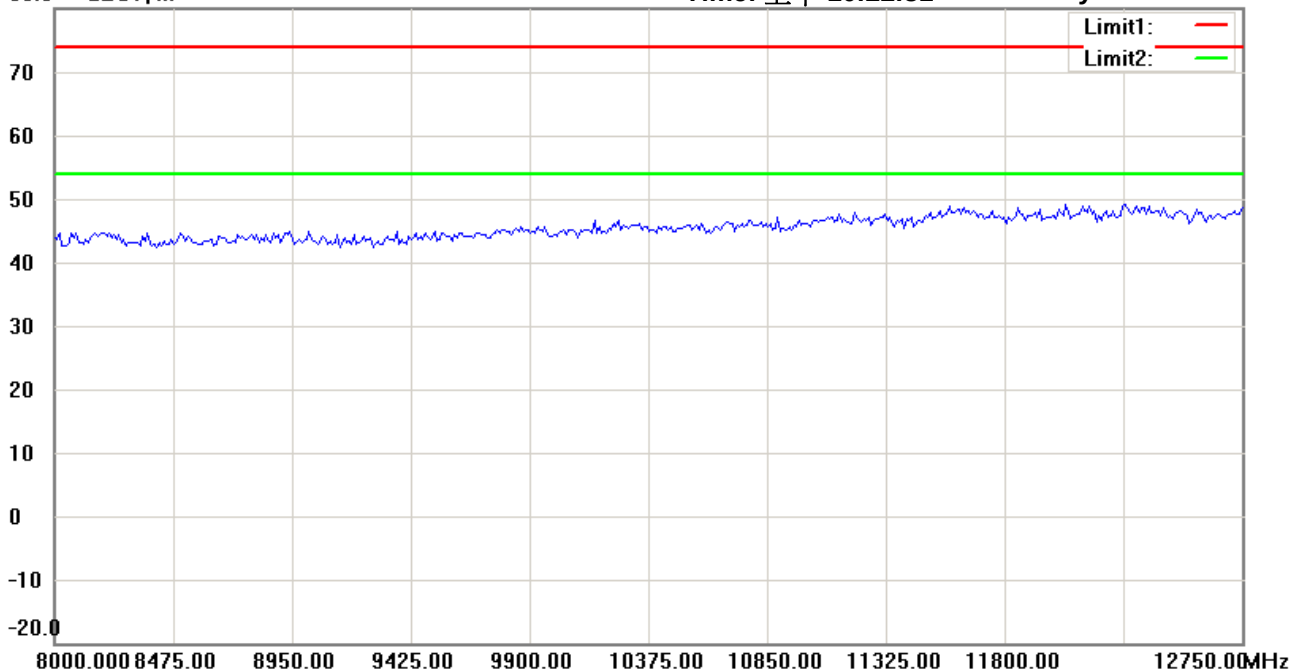
Date: 2016/5/5

Temperature:24 °C

80.0 dBuV/m

Time: 上午 10:22:31

Humidity:60 %



Site : Chamber

Condition : FCC 15.249 PK >1G

EUT : W6M21604-15794

M/N:

Test Mode : 927.6MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

\*:Maximum data    x:Over limit    !:over margin