

**FCC PART 22/24 TEST REPORT**

**for**

**MoniVox Smart Device**

**Model No.: MVX400**

**FCC ID: 2ABGRMVX400**

**of**

**Applicant: MoniVox do Brasil Ltda.**

**Address: Avenida das Nacoes Unidas, 17891- 13 Andar-Vila Almeida CEP  
Sao Paulo-SP 04795-100 Brazil**

**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.: W6M21309-13566-P-2224**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.

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

Report Number: W6M21309-13566-P-2224  
FCC ID: 2ABGRMVX400

## **Certification of Test Report**

Applicant : MoniVox do Brasil Ltda.  
Avenida das Nacoes Unidas, 17891-13 Andar-Vila Almeida CEP  
04795-100-Sao Paulo-SP Brazil

Manufacturer : AOPEN Incorporated  
5F., No.15, Ln. 128, Sinhu 1<sup>st</sup> Rd., Neihs District,  
Taipei City 114, Taiwan (R.O.C.)

Tested Equipment :

|                     |                                                                            |
|---------------------|----------------------------------------------------------------------------|
| Type Description    | : MoniVox Smart Device                                                     |
| Model Number        | : MVX400                                                                   |
| Brand Name          | : MoniVox                                                                  |
| Operation Frequency | : 824.2-848.8MHz / 1850.2 - 1909.8 MHz                                     |
| RF Output Power     | : 1) Band 850 MHz : 22.98 dBm (ERP)<br>2) Band 1900 MHz : 21.64 dBm (EIRP) |
| Power Supply        | : Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 0.8 A,<br>O/P: 12 Vdc / 2 A )   |

Regulation Applied : 47CFR Part 22 (2011-10) and Part 24 (2011-10)

Test Method : 47CFR Part 2 (2011), TIA/EIA-603C (2004) and  
ANSI C63.4 (2003)

I HEREBY CERTIFY THAT: The test results written in this report were derived conscientiously in accordance with the requirements and procedures of 47CFR Part 2(2011), TIA/EIA-603C (2004), and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22/24.

### **Note:**

1. The result of this test report is valid only in connection to the sample has been tested at the laboratory of Worldwide Testing Services (Taiwan) Co. Ltd.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.

### **Test Engineer:**

December 30, 2013

Rick Chen

*Rick Chen*

Date

WTS-Lab.

Name

Signature

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

December 30, 2013

Kevin Wang

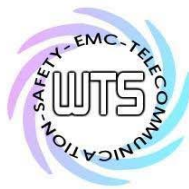
*Kevin Wang*

Date

WTS

Name

Signature

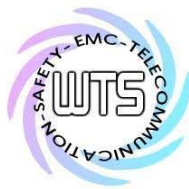


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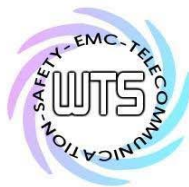
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## **1. Summary**

### **1.1 Description of tested equipment**

This equipment under tested, MVX400, is a MoniVox Smart Device with built-in GSM 850/PCS 1900 MHz.

The operation frequency bands and rated RF output power are listed as follows:

824.2-848.8MHz (Cellular, Part 22), 22.98 dBm / 0.1986 W (ERP)

1850.2-1909.8MHz (Cellular, Part 24), 21.64 dBm / 0.1459 W (EIRP)

This test report only contains test requirements specified in 47CFR Part 22 and Part 24 for GSM function, for other functions; please refer to separate test report with respect to the relevant test standard and specification.

### **1.2 Date of testing processing**

Test sample received: November 15, 2013

Test finished: December 27, 2013

Other Information: None

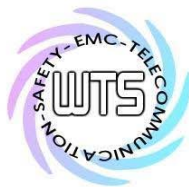
### **1.3 Modification Information**

No modification was made during the all test items been performed.

### **1.4 Test standards**

Technical standard: **FCC Part 2(2011), TIA/EIA-603C (2004), ANSI C63.4(2003)  
47CFR Part 22 (2011-10), and Part 24 (2011-10)**

Deviation from test standard: None



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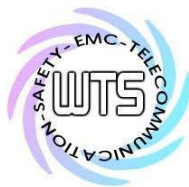
## **1.5 Summary of test result**

Band: 850 MHz

| Section in this Report | Test Item                                     | FCC relevant Section    | Verdict      |
|------------------------|-----------------------------------------------|-------------------------|--------------|
| 3.2                    | RF Power Output<br>(Effective radiated power) | 2.1046(a),<br>22.913(a) | Pass         |
| 4.2                    | Modulation characteristics                    | 2.1047                  | Not Required |
| 5.2                    | Occupied bandwidth                            | 2.1049(h)               | Pass         |
| 6.2                    | Spurious emissions at antenna terminals       | 22.917(a),<br>2.1051    | Pass         |
| 7.2                    | Field strength of spurious radiation          | 22.917(a),<br>2.1053    | Pass         |
| 7.5                    | Band Edge emissions                           | 22.917(a)               | Pass         |
| 8.2                    | Frequency stability                           | 2.1055<br>22.355        | Pass         |

Band: 1900 MHz

| Section in this Report | Test Item                                                    | FCC Relevant Section   | Verdict      |
|------------------------|--------------------------------------------------------------|------------------------|--------------|
| 3.2                    | RF Power Output<br>(Equivalent isotropically radiated power) | 2.1046(a),<br>24.232   | Pass         |
| 4.2                    | Modulation characteristics                                   | 2.1047                 | Not Required |
| 5.2                    | Occupied bandwidth                                           | 2.1049(h)<br>24.238(b) | Pass         |
| 6.2                    | Spurious emissions at antenna terminals                      | 24.238(a),<br>2.1051   | Pass         |
| 7.2                    | Field strength of spurious radiation                         | 24.238(a),<br>2.1053   | Pass         |
| 7.5                    | Band Edge emissions                                          | 24.238(b)              | Pass         |
| 8.2                    | Frequency stability                                          | 2.1055<br>24.235       | Pass         |



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

Report Number: W6M21309-13566-P-2224

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## **2. General Information**

### **2.1 Testing laboratory**

#### **2.1.1 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

#### **2.1.2 Details of accreditation status**

Accredited testing laboratory  
A2LA-registration number: 2732.01  
FCC filed test laboratory Reg. No. 930600  
Industry Canada filed test laboratory Reg. No. IC 5679A-1

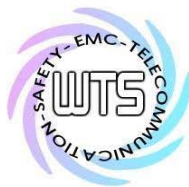


#### **2.1.3 Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.**

|                           |     |
|---------------------------|-----|
| <b>Name:</b>              | ./. |
| <b>Accredited number:</b> | ./. |
| <b>Street:</b>            | ./. |
| <b>Town:</b>              | ./. |
| <b>Country:</b>           | ./. |
| <b>Telephone:</b>         | ./. |
| <b>Fax:</b>               | ./. |

### **2.2 Details of approval holder**

|            |                                                            |
|------------|------------------------------------------------------------|
| Name:      | MoniVox do Brasil Ltda                                     |
| Street:    | Avenida das Nacoes Unidas, 17891-13 Andar-Vila Almeida CEP |
| Town:      | 04795-100-Sao Paulo-SP                                     |
| Country:   | Brazil                                                     |
| Telephone: | +55(11) 3466-5444                                          |
| Fax:       | +55(11) 3466-5444                                          |



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

Name: AOPEN Incorporated  
Street: 5F., No.15, Ln. 128, Sinhu 1st Rd., Neihu District,  
Town: Taipei City 114,  
Country: Taiwan (R.O.C.)

## **2.3 Description of Tested System**

The EUT was tested alone without the Accessories or Peripherals.

| Equipment                               | Model No. | Series No. | Software | Cable information | Note |
|-----------------------------------------|-----------|------------|----------|-------------------|------|
| No accessories were used with this EUT. |           |            |          |                   |      |

Frequencies Selected to be investigated:

**Band: 850 MHz**

Low Frequency ( ch 128): 824.2 MHz

Mid Frequency ( ch 188): 836.2 MHz

High Frequency ( ch 251): 848.8 MHz

**Band: 1900 MHz**

Low Frequency ( ch 512): 1850.2 MHz

Mid Frequency ( ch 661): 1880.0 MHz

High Frequency ( ch 810): 1909.8 MHz

Antenna Type: Dipole Antenna

Antenna Gain: 3.0 dBi

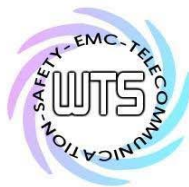
Power supply: Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 0.8 A,  
O/P: 12 Vdc / 2 A )

## **2.4 Test environment**

Temperature: 27 °C

Relative humidity content: 54 %

Air pressure: 86-103 Kpa



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## **2.5 General Test Requirement**

**Radiated Emission:** For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100 kHz respectively with an appropriate sweep speed.

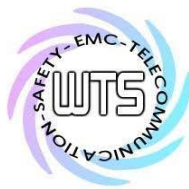
For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

The 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.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

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.



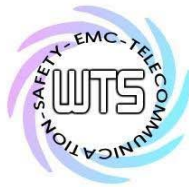
# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 2.6 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                | 2013/9/2      | 2014/9/1       |
| ETSTW-CE 003 | AC POWER SOURCE                             | APS-9102               | D161137       | GW                 | Function Test |                |
| ETSTW-CE 008 | HF-EICHLITUNG 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        | 2013/7/10     | 2014/7/9       |
| ETSTW-CE 016 | TWO-LINE V-NETWORK                          | ENV216                 | 100050        | R&S                | 2013/10/28    | 2014/10/27     |
| ETSTW-RE 004 | EMI TEST RECEIVER                           | ESI 40                 | 832427/004    | R&S                | 2013/9/2      | 2014/9/1       |
| ETSTW-RE 005 | EMI TEST RECEIVER                           | ESVS10                 | 843207/020    | R&S                | 2013/9/2      | 2014/9/1       |
| 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                 | 2013/10/15    | 2014/10/14     |
| ETSTW-RE 027 | Passive Loop Antenna                        | 6512                   | 00034563      | ETS-Lindgren       | 2013/7/3      | 2014/7/2       |
| ETSTW-RE 030 | Double-Ridged Guide Horn Antenna            | 3117                   | 00035224      | EMCO               | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 045 | ESA-E SERIES SPECTRUM ANALYZER              | E4404B                 | MY45111242    | Agilent            | Pre-test Use  |                |
| ETSTW-RE 049 | TRILOG Super Broadband test Antenna         | VULB 9160              | 9160-3185     | Schwarzbeck        | 2013/3/21     | 2014/3/20      |
| ETSTW-RE 050 | Attenuator 10dB                             | 50HF-010-1             | None          | JFW                | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 051 | Attenuator 6dB                              | 50HF-006-1             | None          | JFW                | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 053 | Attenuator 3dB                              | 50HF-003-1             | None          | JFW                | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 055 | SPECTRUM ANALYZER                           | FSU 26                 | 200074        | R&S                | 2013/5/31     | 2014/5/30      |
| ETSTW-RE 060 | Attenuator 30dB                             | 5015-30                | F651012z-01   | ATM                | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 062 | Amplifier Module                            | CHC 2                  | None          | KMIC               | 2013/11/27    | 2014/11/26     |
| ETSTW-RE 064 | Bluetooth Test Set                          | MT8852B-042            | 6K00005709    | Anritsu            | Function Test |                |
| ETSTW-RE 069 | Double-Ridged Guide Horn Antenna            | 3117                   | 00069377      | EMCO               | Function Test |                |
| ETSTW-RE 072 | CELL SITE TEST SET                          | 8921A                  | 3339A00375    | HP                 | 2013/10/7     | 2014/10/6      |
| ETSTW-RE 088 | SOLID STATE AMPLIFIER                       | KMA180265A01           | 99057         | KMIC               | 2013/10/11    | 2014/10/10     |
| ETSTW-RE 099 | DC Block                                    | 50DB-007-1             | None          | JFW                | 2013/3/4      | 2014/3/3       |
| ETSTW-RE 106 | Humidity Temperature Meter                  | TES-1366               | 091011113     | TES                | 2013/12/04    | 2014/12/03     |
| ETSTW-RE 111 | TRILOG Super Broadband test Antenna         | VULB 9160              | 9160-3309     | Schwarz beck       | 2013/12/12    | 2014/12/11     |
| ETSTW-RE 112 | AC POWER SOURCE                             | TFC-1005               | None          | T-Power            | Function test |                |
| ETSTW-RE 115 | 2.4GHz Notch Filter                         | N0124411               | 473874        | MICROWAVE CIRCUITS | 2013/1/11     | 2014/1/10      |
| ETSTW-RE 120 | RF Player                                   | MP9200                 | MP9210-111022 | ADIVIC             | Function test |                |
| ETSTW-RE 122 | SIGNAL GENERATOR                            | SMF100A                | 102149        | R&S                | 2013/6/28     | 2014/6/27      |
| ETSTW-RE 125 | 5GHz Notch filter                           | 5NSL11-5200/E221.3-O/O | 1             | K&L Microwave      | 2013/8/16     | 2014/8/15      |
| ETSTW-RE 126 | 5GHz Notch filter                           | 5NSL11-5800/E221.3-O/O | 1             | K&L Microwave      | 2013/8/16     | 2014/8/15      |



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

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|                 |                                      |                                        |              |                    |                  |            |
|-----------------|--------------------------------------|----------------------------------------|--------------|--------------------|------------------|------------|
| ETSTW-RE 127    | RF Switch Box                        | RFS-01                                 | None         | WTS                | 2013/3/4         | 2014/3/3   |
| ETSTW-RE 128    | 5.3GHz Notch filter                  | N0153001                               | SN487233     | Microwave Circuits | 2013/8/13        | 2014/8/12  |
| ETSTW-RE 129    | 5.5GHz Notch filter                  | N0555984                               | SN487234     | Microwave Circuits | 2013/8/13        | 2014/8/12  |
| ETSTW-RE 130    | Handheld RF Spectrum Analyzer        | N9340A                                 | CN0147000204 | Agilent            | Pre-test Use     |            |
| ETSTW-GSM 002   | Universal Radio Communication Tester | CMU 200                                | 109439       | R&S                | 2013/10/7        | 2014/10/6  |
| ETSTW-GSM 019   | Band Reject Filter                   | WRCTF824/849-822/851-40 /12+9SS        | 3            | WI                 | 2013/1/11        | 2014/1/10  |
| ETSTW-GSM 020   | Band Reject Filter                   | WRCD1747/1748-1743/1752-32/5SS         | 1            | WI                 | 2013/1/11        | 2014/1/10  |
| ETSTW-GSM 021   | Band Reject Filter                   | WRCD1879.5/1880.5-1875.5/1884.5-32/5SS | 3            | WI                 | 2013/1/11        | 2014/1/10  |
| ETSTW-GSM 022   | Band Reject Filter                   | WRCT901.9/903.1-904.25-50/8SS          | 1            | WI                 | 2013/1/11        | 2014/1/10  |
| ETSTW-GSM 023   | Power Divider                        | 4901.19.A                              | None         | SUHNER             | 2013/9/18        | 2014/9/17  |
| ETSTW-Cable 010 | BNC Cable                            | 5 M BNC Cable                          | None         | JYE BAO CO.,LTD.   | 2013/3/4         | 2014/3/3   |
| 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.   | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 016 | BNC Cable                            | Switch Box                             | B Cable 1    | Schwarz beck       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 017 | BNC Cable                            | X Cable                                | B Cable 2    | Schwarz beck       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 018 | BNC Cable                            | Y Cable                                | B Cable 3    | Schwarz beck       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 019 | BNC Cable                            | Z Cable                                | B Cable 4    | Schwarz beck       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 022 | N TYPE Cable                         | 5006                                   | 0002         | JYE BAO CO.,LTD.   | 2013/3/26        | 2014/3/25  |
| ETSTW-Cable 026 | Microwave Cable                      | SUCOFLEX 104                           | 279075       | HUBER+SUHNER       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 027 | Microwave Cable                      | SUCOFLEX 104                           | 279083       | HUBER+SUHNER       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 028 | Microwave Cable                      | FA147A0015M2020                        | 30064-2      | UTIFLEX            | 2013/10/11       | 2014/10/10 |
| ETSTW-Cable 029 | Microwave Cable                      | FA147A0015M2020                        | 30064-3      | UTIFLEX            | 2013/10/11       | 2014/10/10 |
| ETSTW-Cable 030 | Microwave Cable                      | SUCOFLEX 104 (S_Cable 9)               | 279067       | HUBER+SUHNER       | 2013/3/4         | 2014/3/3   |
| ETSTW-Cable 031 | Microwave Cable                      | SUCOFLEX 104 (S_Cable 10)              | 238092       | HUBER+SUHNER       | 2013/11/27       | 2014/11/26 |
| ETSTW-Cable 043 | Microwave Cable                      | SUCOFLEX 104                           | 317576       | HUBER+SUHNER       | 2013/11/27       | 2014/11/26 |
| ETSTW-Cable 047 | Microwave Cable                      | SUCOFLEX 104                           | 325518       | HUBER+SUHNER       | 2013/11/27       | 2014/11/26 |
| ETSTW-Cable 053 | N TYPE To SMA Cable                  | RG142                                  | None         | JYE BAO CO.,LTD.   | 2013/3/26        | 2014/3/25  |
| ETSTW-Cable 058 | Microwave Cable                      | SUCOFLEX 104                           | none         | HUBER+SUHNER       | 2013/6/20        | 2014/6/19  |
| WTSTW-SW 002    | EMI TEST SOFTWARE                    | EZ EMC                                 | None         | Farad              | Version ETS-03A1 |            |

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FCC ID: 2ABGRMVX400

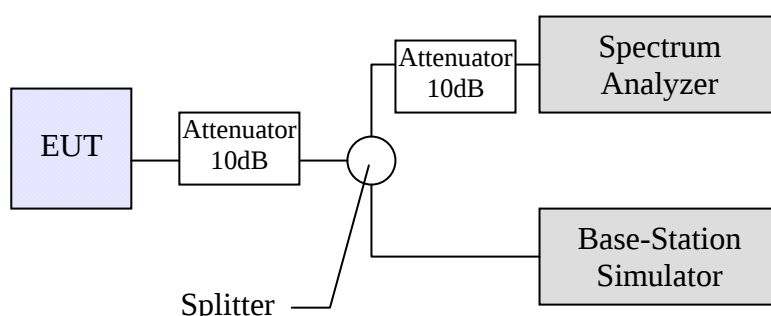
## 3. RF Power Output

### 3.1 Test procedure

#### 3.1.1 Conducted Method

Per 47CFR Part 2.1046, the RF power output shall be measured at the RF output terminals and following procedure is employed:

The transmitter output was connected as the following figure:



The whole connection system is calibrated with a standard signal generator. Power on and make a link from simulator to EUT and then set the EUT to maximum output power.

Measure the RF power with the spectrum analyzer in accordance the following settings:

RBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.

VBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.

Span: 2MHz

Sweep: 3s

The power output at the transmitter antenna terminal is then determined by assign the value of the corrected factor to the spectrum analyzer reading.

Tests were performed at three frequencies (low, middle and high channels ) and operation mode selected.

#### 3.1.2 Radiated Method

If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8m above the ground on an open test site.

The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer.

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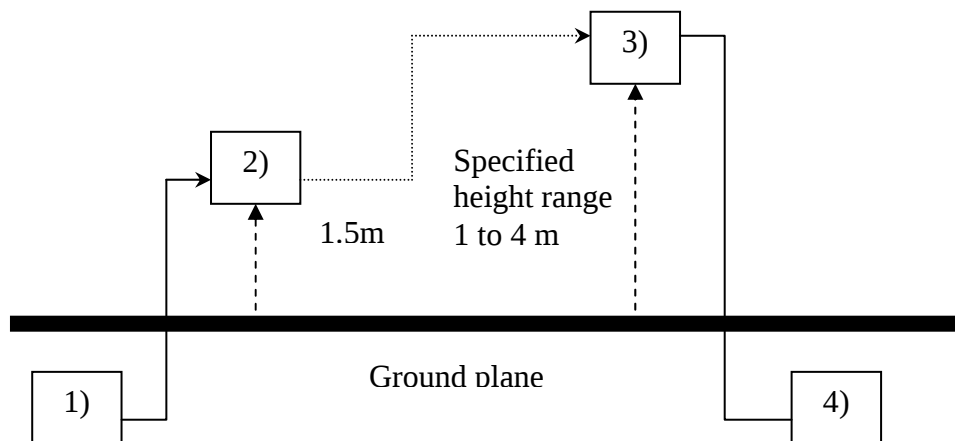
FCC ID: 2ABGRMVX400

Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

Substitution RF power Measurement at WTS Taiwan  
General:

The applied substitution method follows ANSI/TIA/EIA-603, ANSI/TIA/EIA-102.CAAA or the appropriate ETSI rules respectively.

The actual signal generated by the EUT can be determined by means of a substitution measurement in which a known signal source replaces the device to be measured.



- 1) Signal generator;
- 2) Substitution antenna;
- 3) Test antenna;
- 4) Spectrum analyzer or selective voltmeter.

The substitution antenna replaces the transmitter antenna at the same position and in vertical polarization. The frequency of the signal generator shall be adjusted to the measurement frequency.

The test antenna shall be raised or lowered, if necessary, to ensure that the maximum signal is still received. The input signal to the substitution antenna shall be adjusted in level until an equal or a known related level to that detected from the transmitter is obtained in the measurement receiver.

If a fully anechoic chamber is used as test site in order to provide free space conditions there is no need to change the height of the antenna.

The measurement will be repeated in horizontal position.

Calibration:

In order to make this kind of measurement more effective and to avoid subjective measurement faults ETS has installed automatic computer controlled measurement procedures.

With the above described substitution method a test site is calibrated over the full frequency range which is used in suitable frequency steps. For a certain power level on the substitution antenna the received power over the whole frequency range is documented. All necessary antenna gains, cable losses, filter losses and amplifications of preamplifiers are taken in

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consideration. The summary of this calibration measurement performs a transducer factor that is related to the considered test site and a certain measurement distance. Differences of the radiated power levels of different test samples are determined by internal attenuation of measurement receiver. The proper function of such test site will be maintained by short term plausibility checks and periodical re-calibration.

## Testing:

The test sample will be putted on the table at the defined position and the radiated power will be receiver and documented by the measurement receiver.

On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.

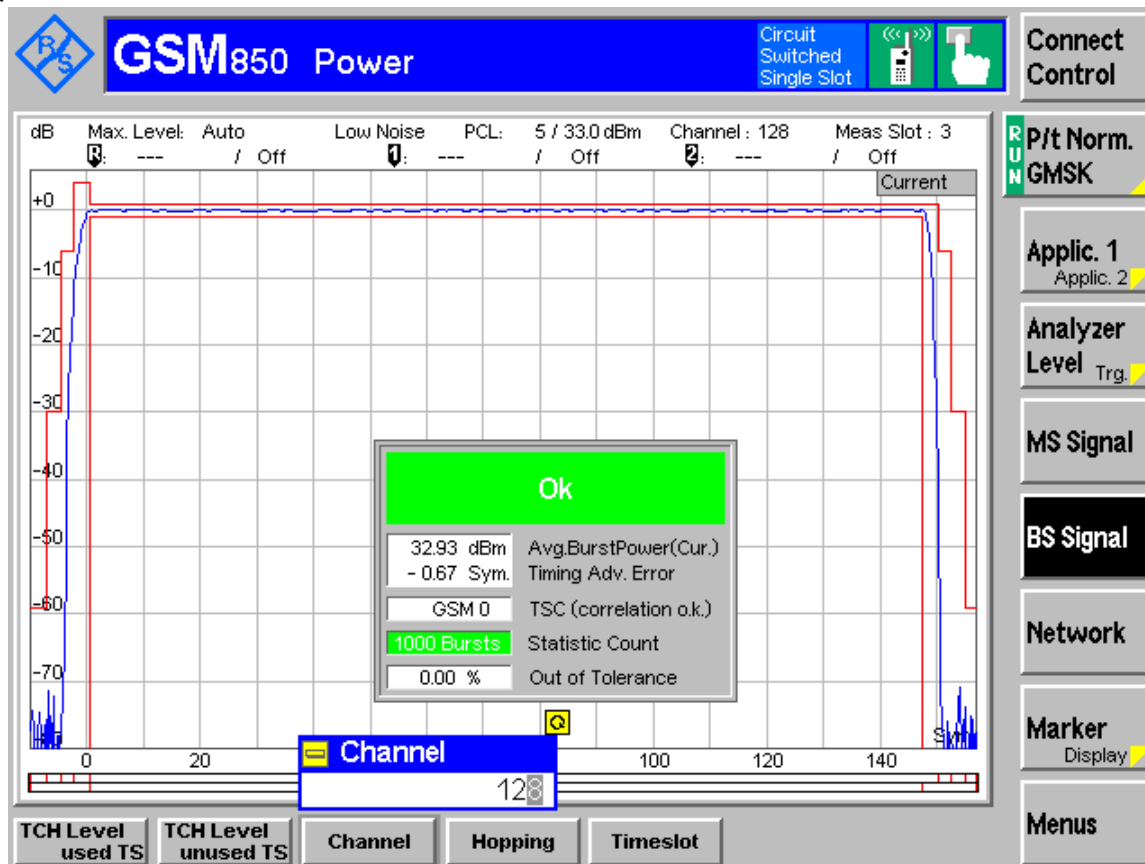
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

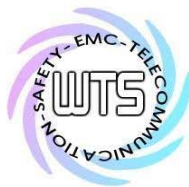
## 3.2 Test Results

- ☒ Conducted Measurement
- ☐ Radiated Measurement

**Band 850 MHz & 1900MHz**

**108 V**

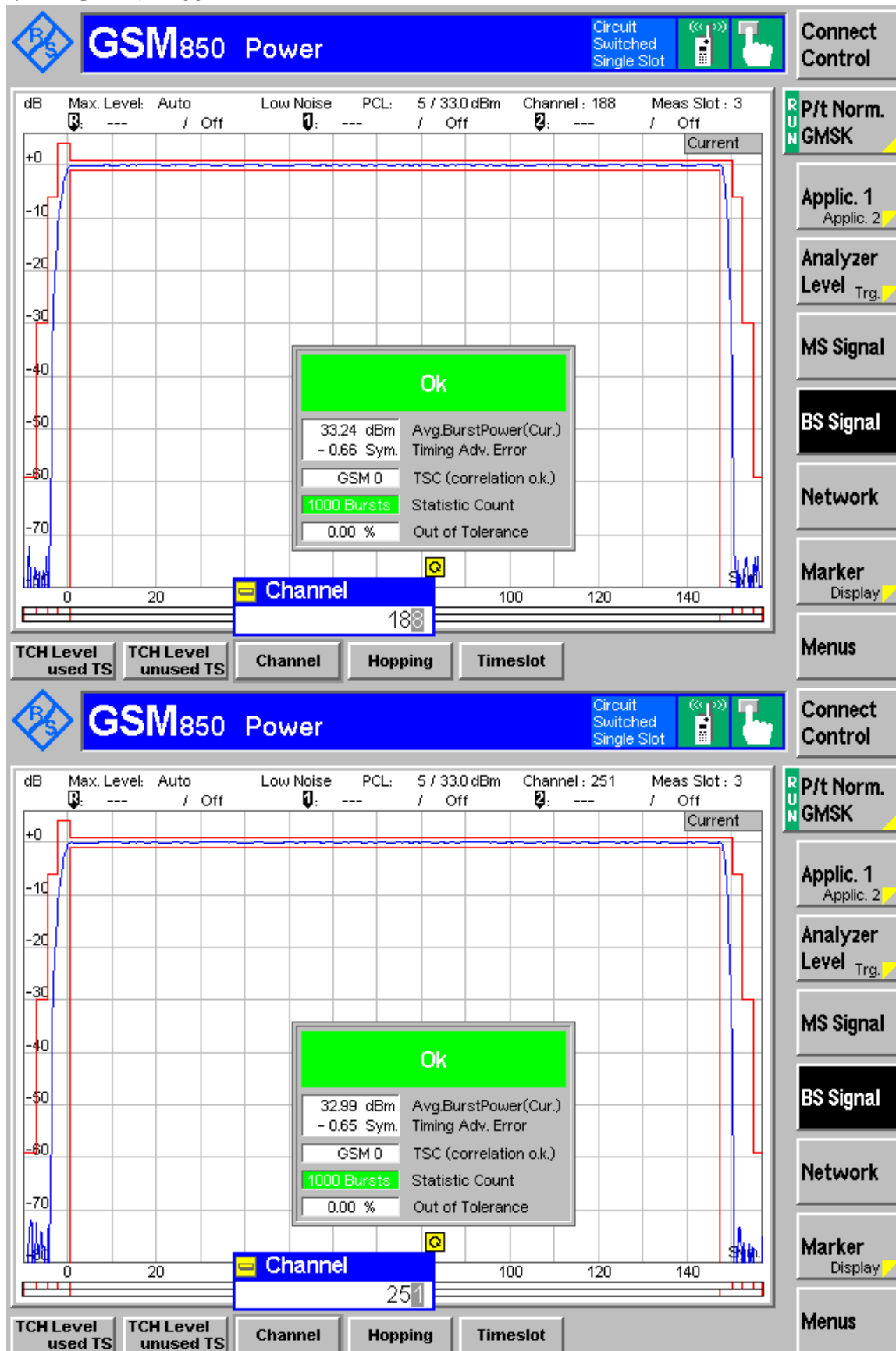


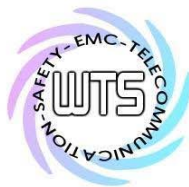


# Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: 2ABGRMVX400

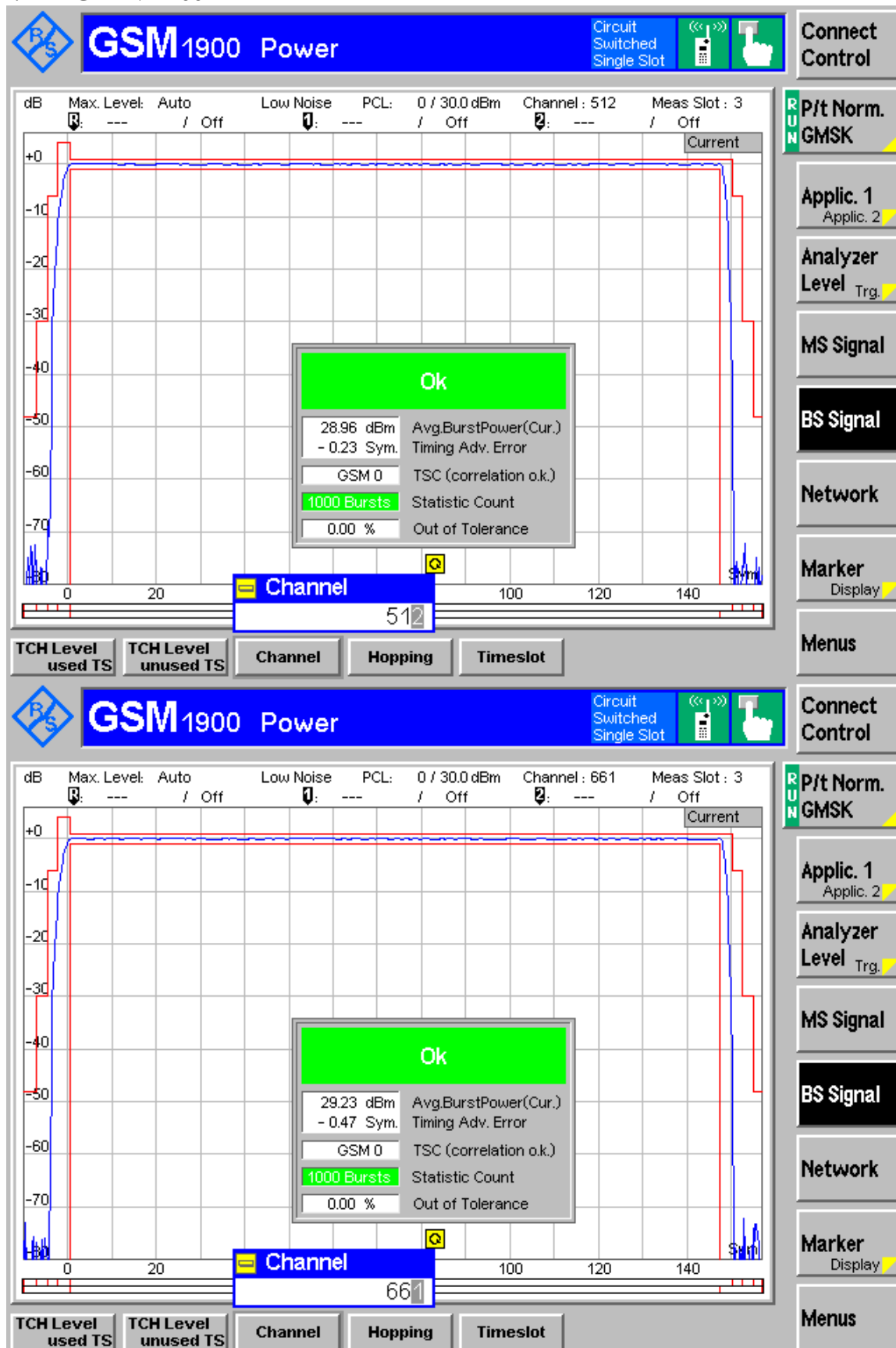




# Worldwide Testing Services(Taiwan) Co., Ltd.

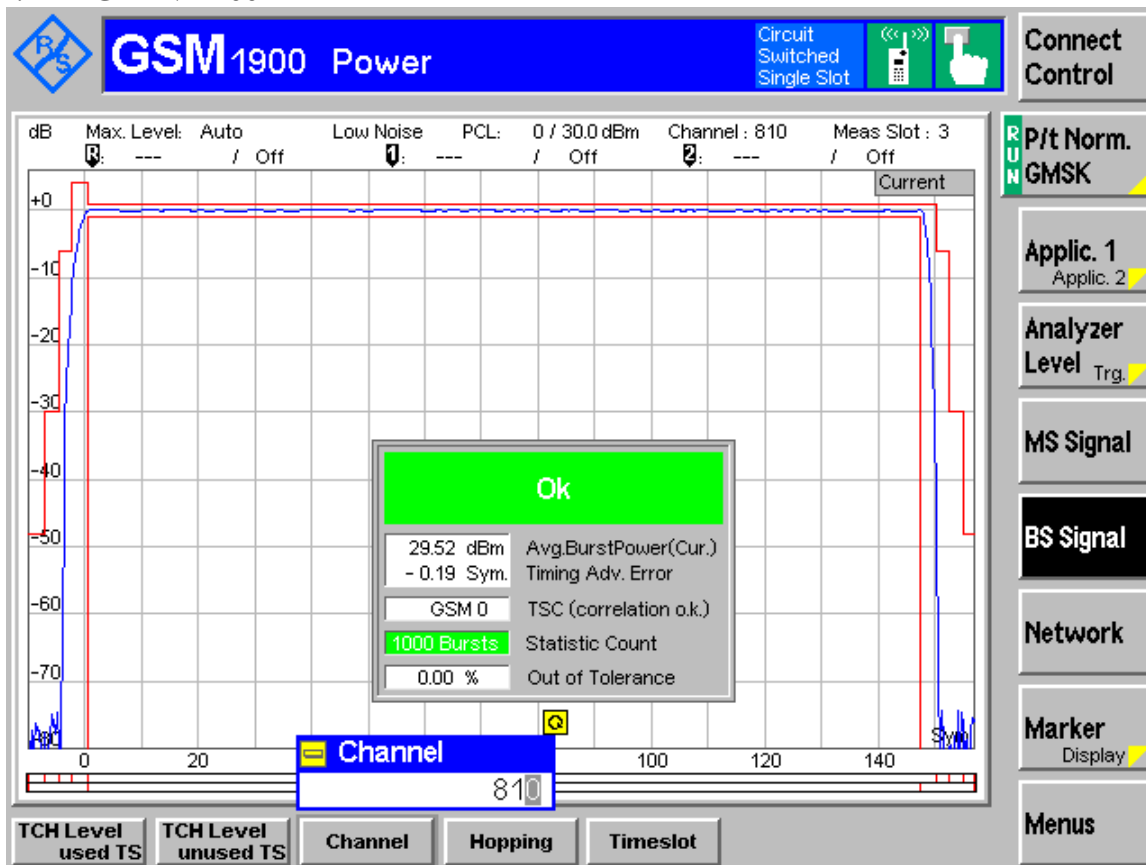
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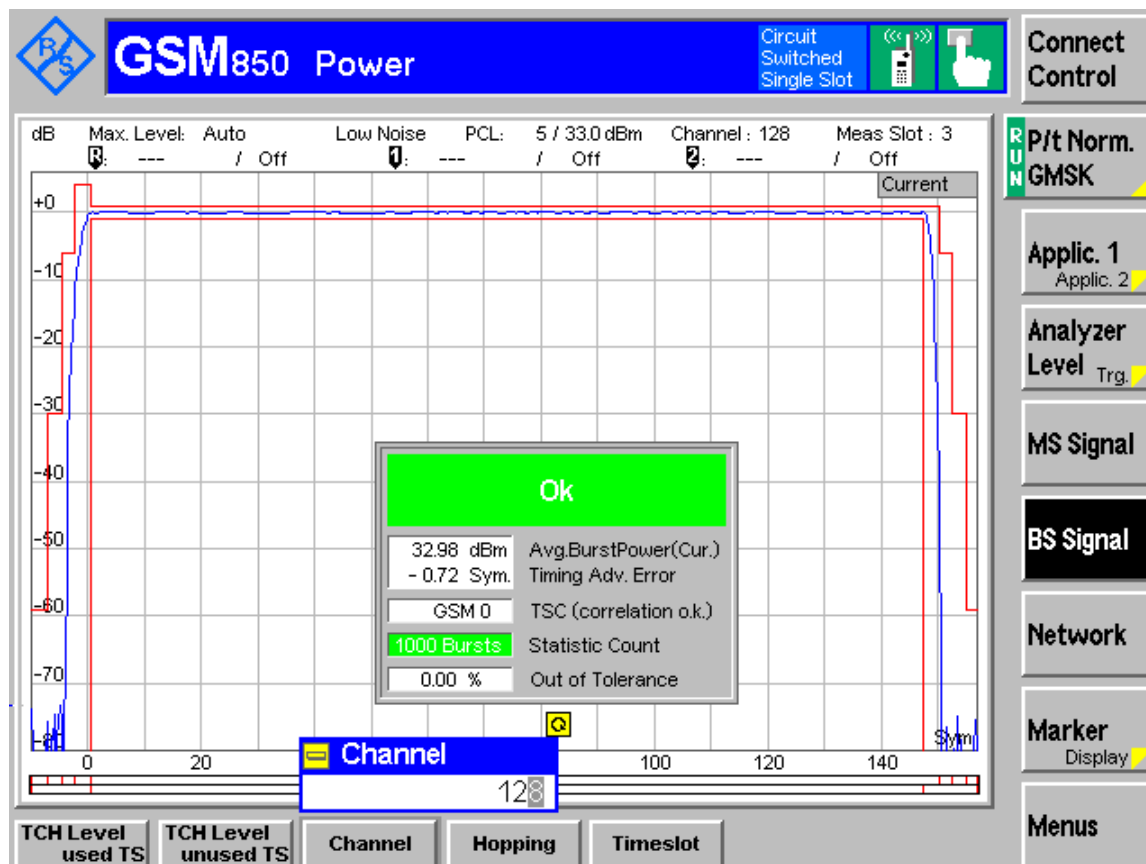


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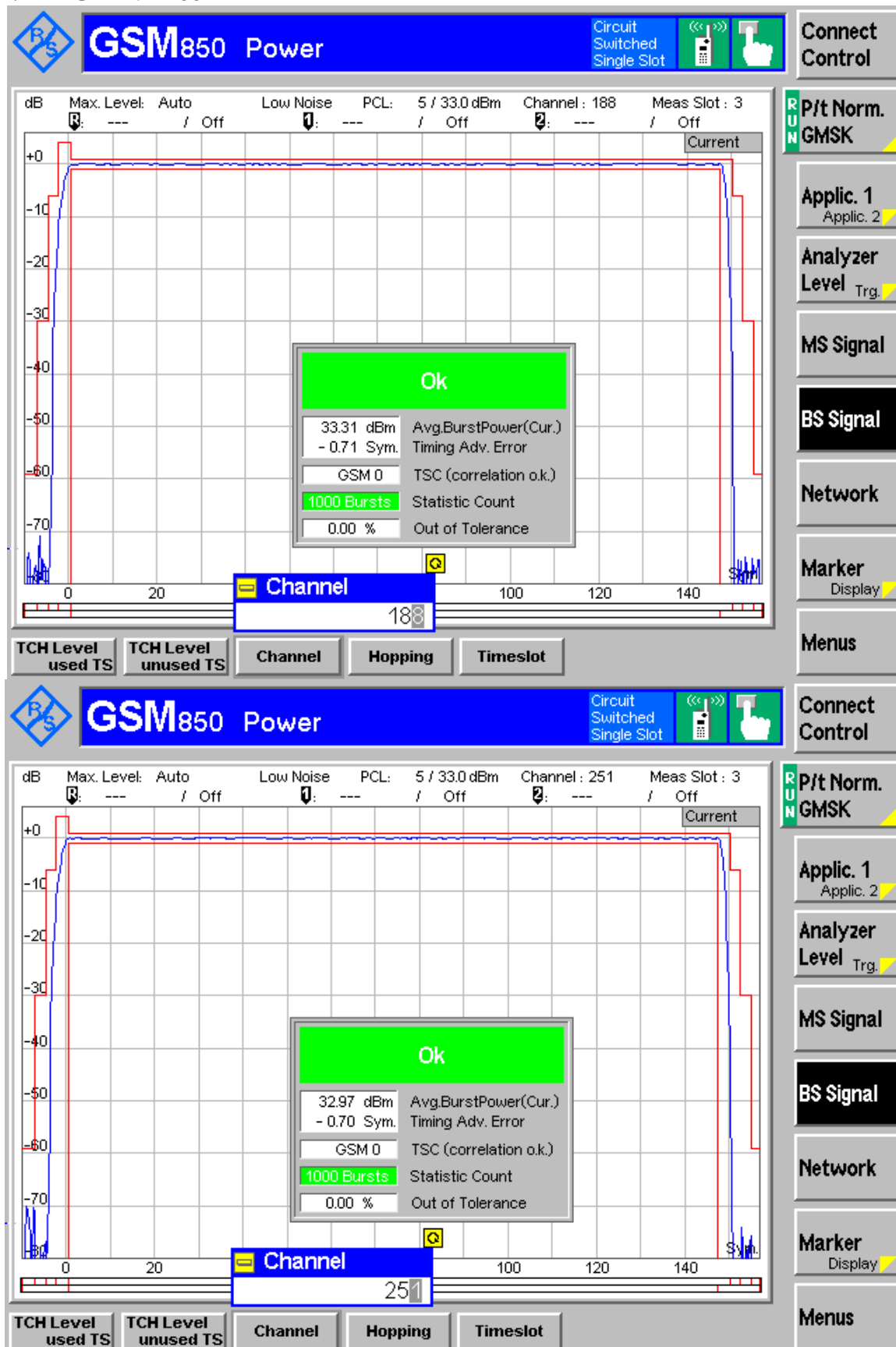


132 V



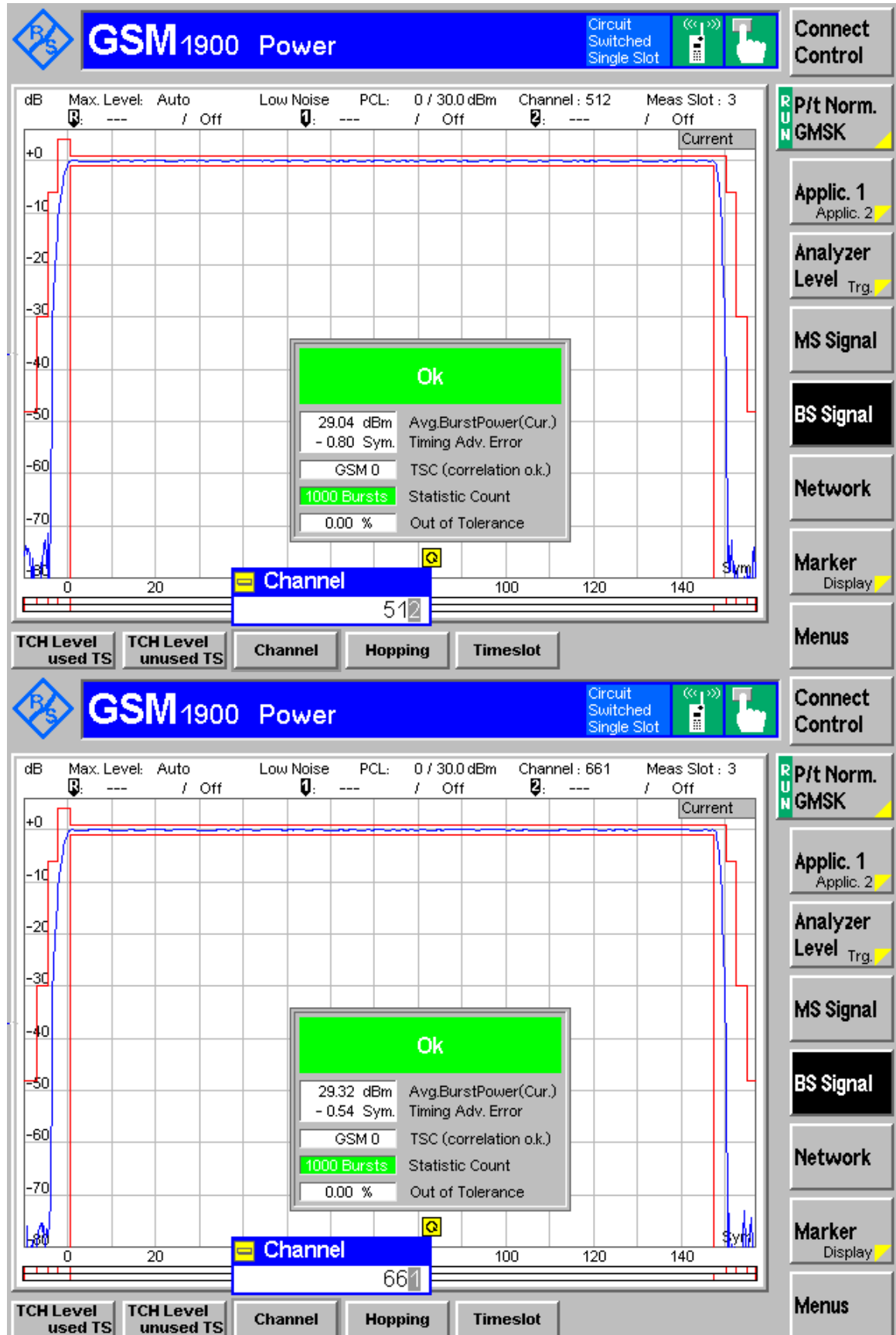
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



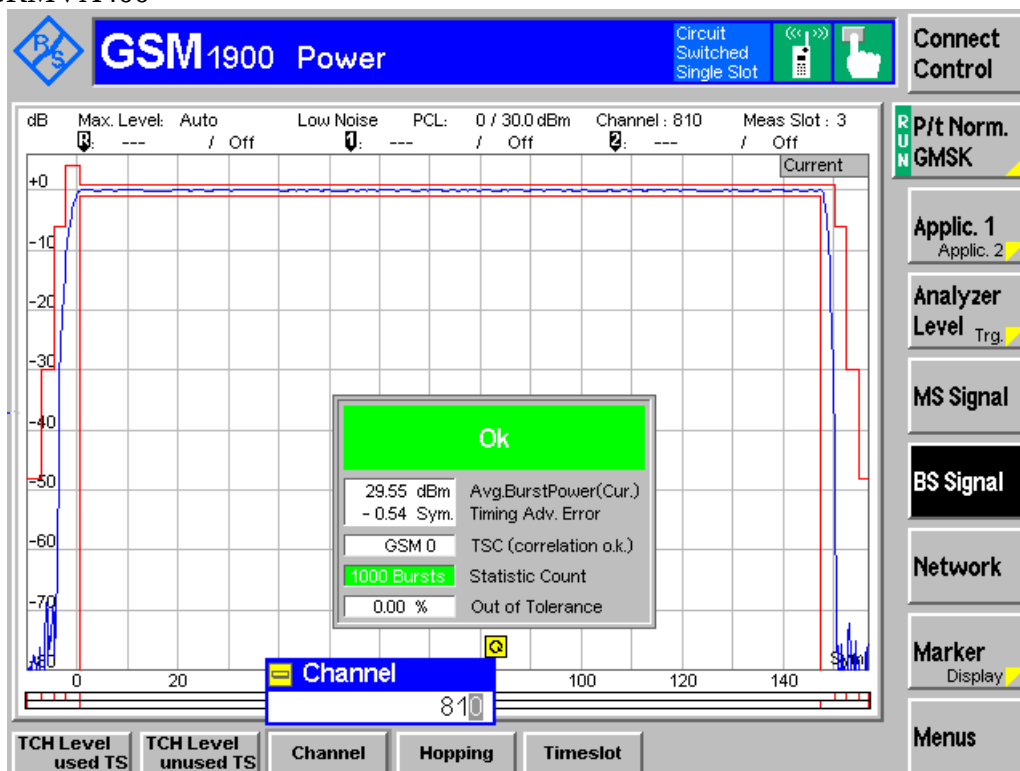
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



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FCC ID: 2ABGRMVX400



- ☐ Conducted Measurement  
☒ Radiated Measurement

## Band 850 MHz & 1900 MHz

### 108 V

| Frequency (MHz) | ERP (dBm) | EIRP (dBm) | Limit (dBm) | Result |
|-----------------|-----------|------------|-------------|--------|
| 824.2511        | 22.78     | 24.93      | 38.45       | Pass   |
| 836.2511        | 22.98     | 25.13      | 38.45       | Pass   |
| 848.8471        | 21.54     | 23.69      | 38.45       | Pass   |
| 1850.1270       | 19.14     | 21.29      | 33          | Pass   |
| 1879.9270       | 18.41     | 20.56      | 33          | Pass   |
| 1909.8630       | 15.43     | 17.58      | 33          | Pass   |

### 132 V

| Frequency (MHz) | ERP (dBm) | EIRP (dBm) | Limit (dBm) | Result |
|-----------------|-----------|------------|-------------|--------|
| 824.2551        | 22.68     | 24.83      | 38.45       | Pass   |
| 836.1188        | 22.97     | 25.12      | 38.45       | Pass   |
| 848.8571        | 21.48     | 23.63      | 38.45       | Pass   |
| 1850.1290       | 19.31     | 21.64      | 33          | Pass   |
| 1880.0610       | 18.45     | 20.60      | 33          | Pass   |
| 1909.7290       | 15.42     | 17.57      | 33          | Pass   |

Test equipment: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111, ETSTW-GSM 002

Note: Please refer to appendix for plot data.

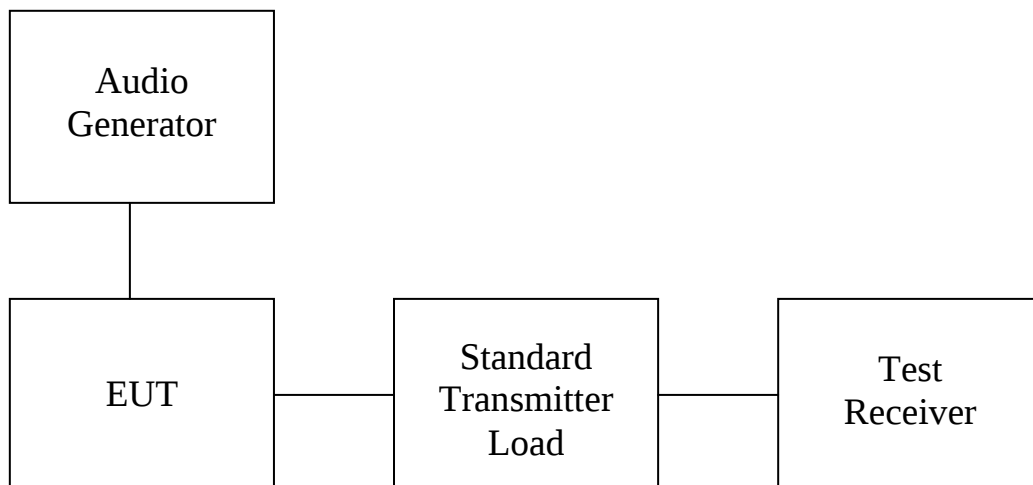
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

## **4. Modulation Characteristics**

### **4.1 Test procedure**

- ☐ A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.  
The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation response is measured at certain modulation frequencies, related to 1000Hz reference signal. Tests are performed for positive and negative modulation.
- ☐ Equipment which employs modulation Limiting: A curve or family of curves showing the percentage of modulation versus the modulation input voltage shall be supplied. The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation limiting is measured at certain modulation frequencies from 100Hz to 15kHz.



### **4.2 Test Results**

For digital modulation employed, this test item is not applicable.

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FCC ID: 2ABGRMVX400

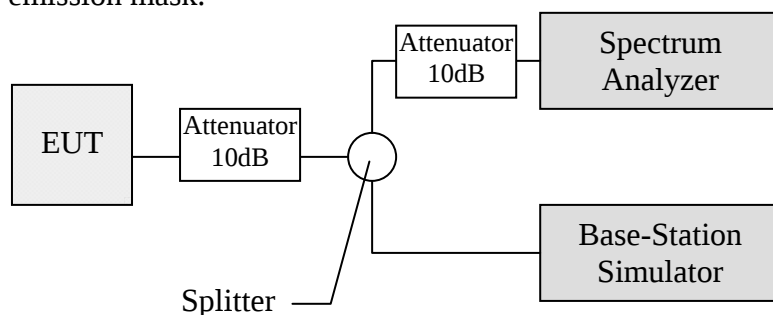
## 5. Occupied Bandwidth

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power. Near the carrier an Emission Mask is defined by the standard.

### 5.1 Test procedure

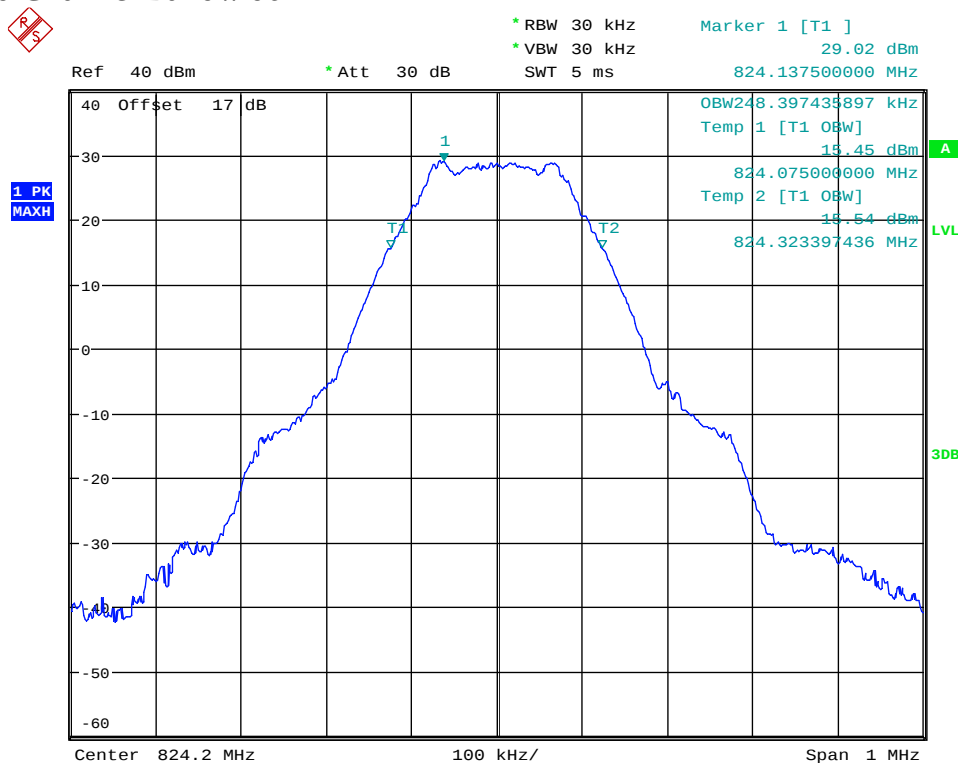
The RF output of the transceiver was connected as the following figure.

Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer at 99% power was occupied. Then set the spectrum analyzer to cover the upper and lower band edges to measure emission mask.



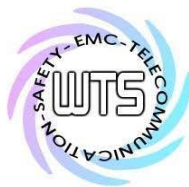
### 5.2 Test Results

#### Occupied Channel Bandwidth



OCCUPIED BANDWIDTH GSM850 CH128

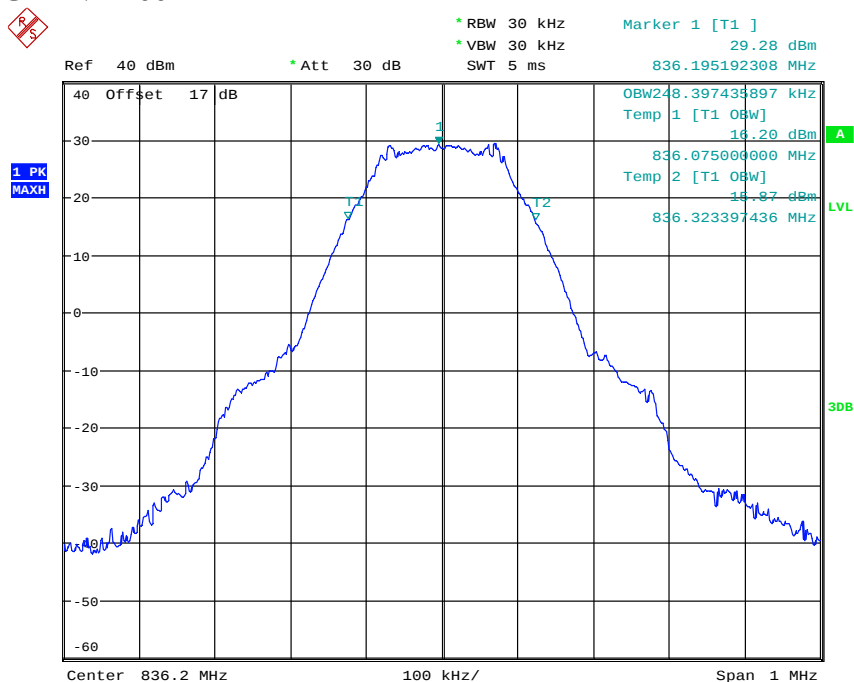
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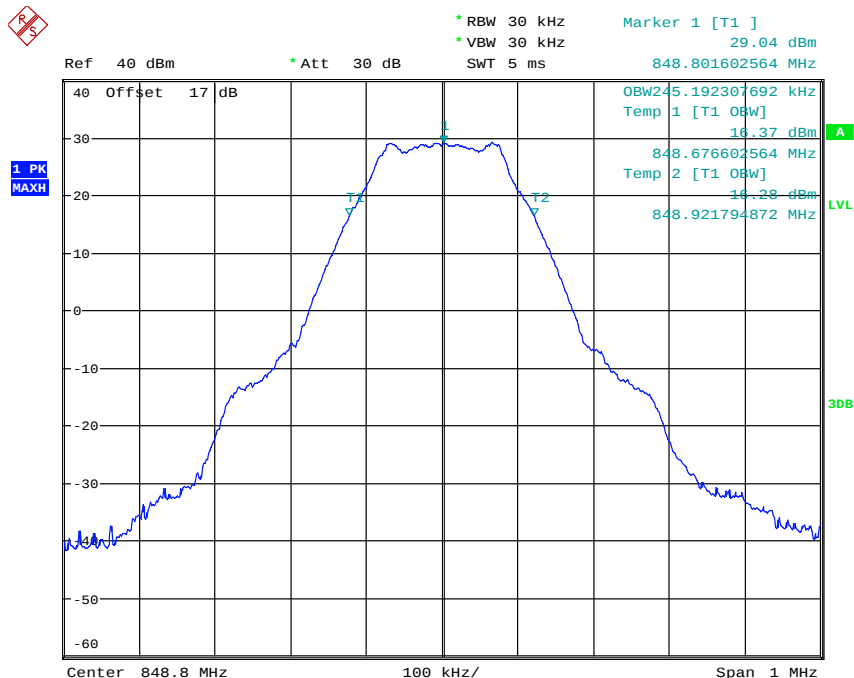
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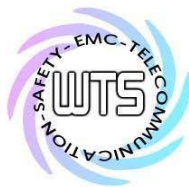
OCCUPIED BANDWIDTH GSM850 CH188

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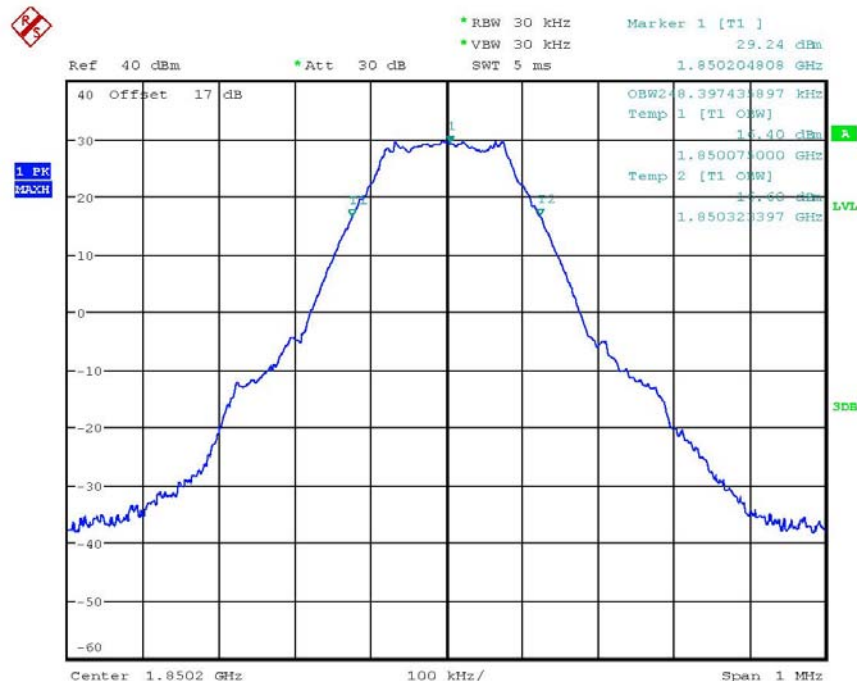
OCCUPIED BANDWIDTH GSM850 CH251

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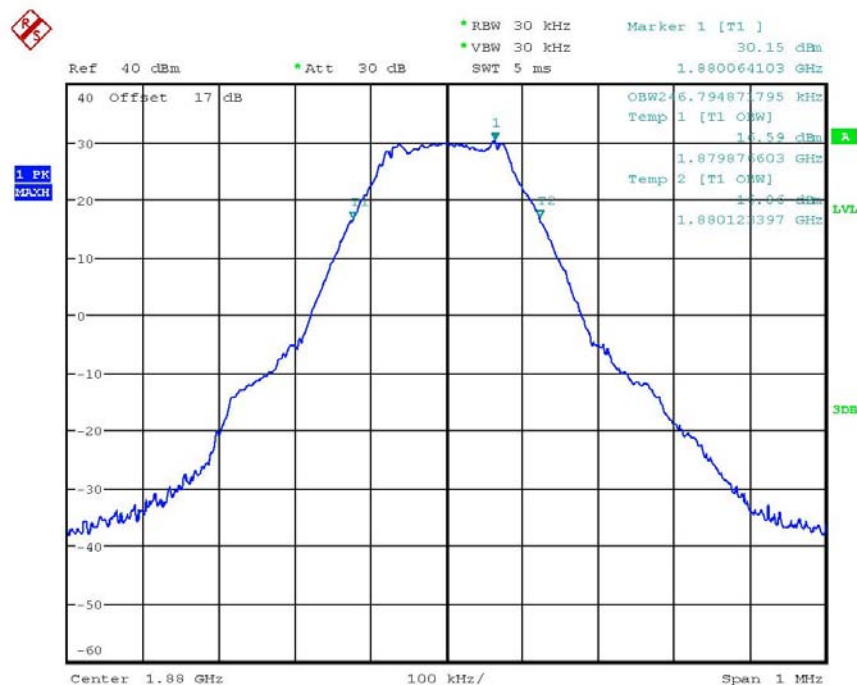
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FCC ID: 2ABGRMVX400



OCCUPIED BANDWIDTH PCS1900 CH512

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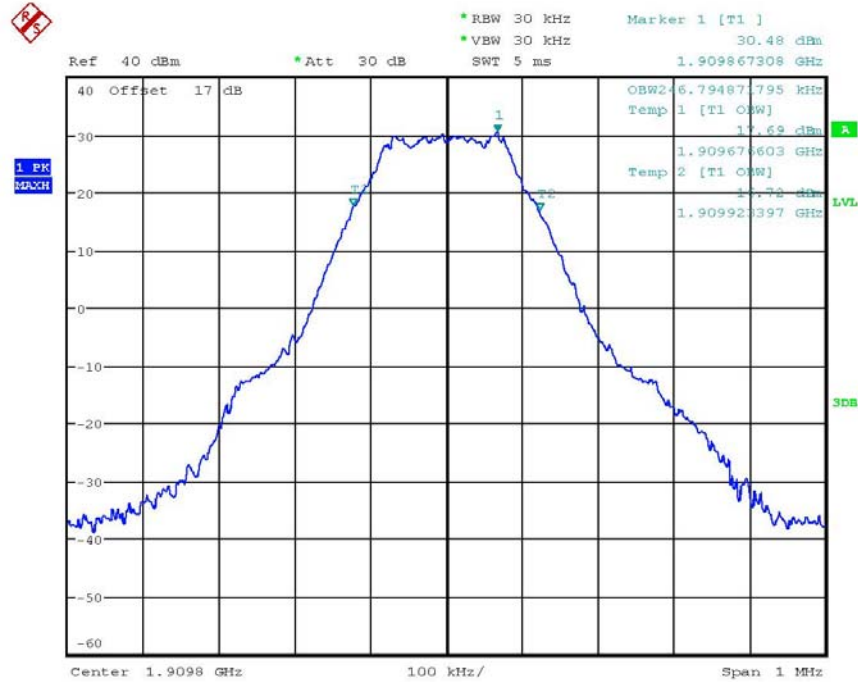


OCCUPIED BANDWIDTH PCS1900 CH661

Date: 22.NOV.2013 14:21:19

Report Number: W6M21309-13566-P-2224

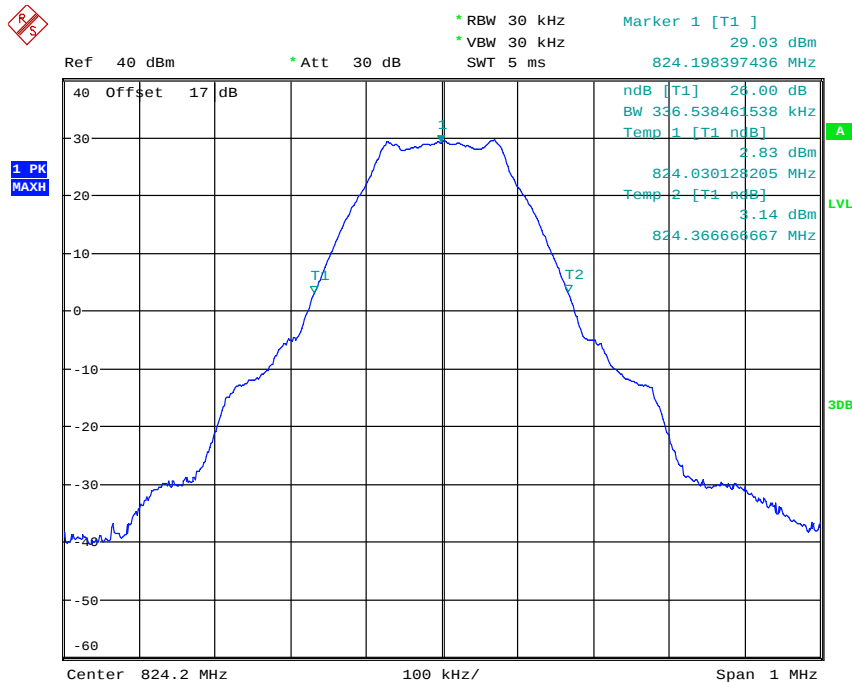
FCC ID: 2ABGRMVX400



OCCUPIED BANDWIDTH PCS1900 CH810

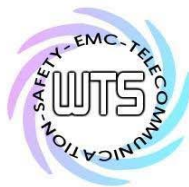
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## 26dB Channel Bandwidth



26DB BANDWIDTH GSM850 CH128

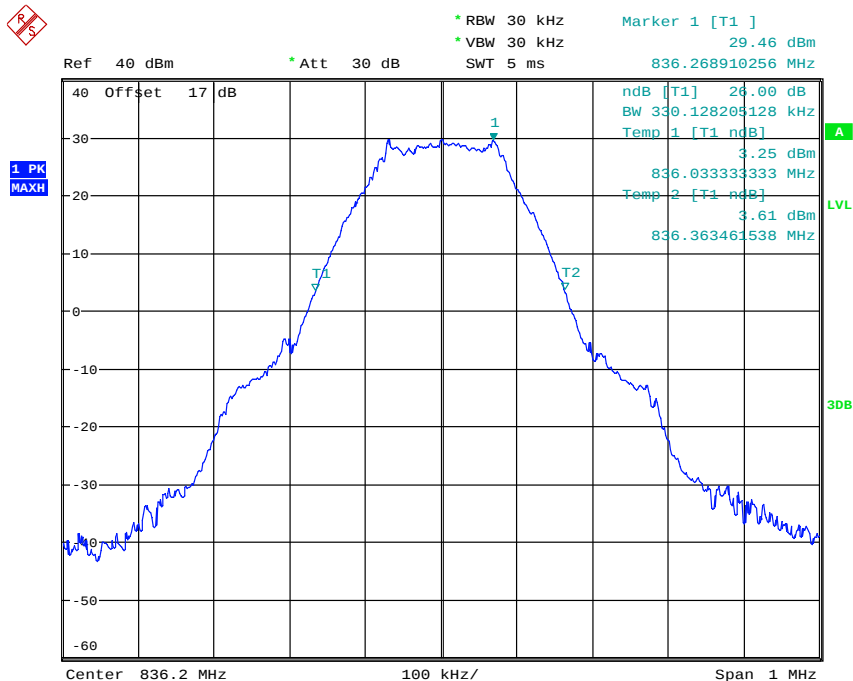
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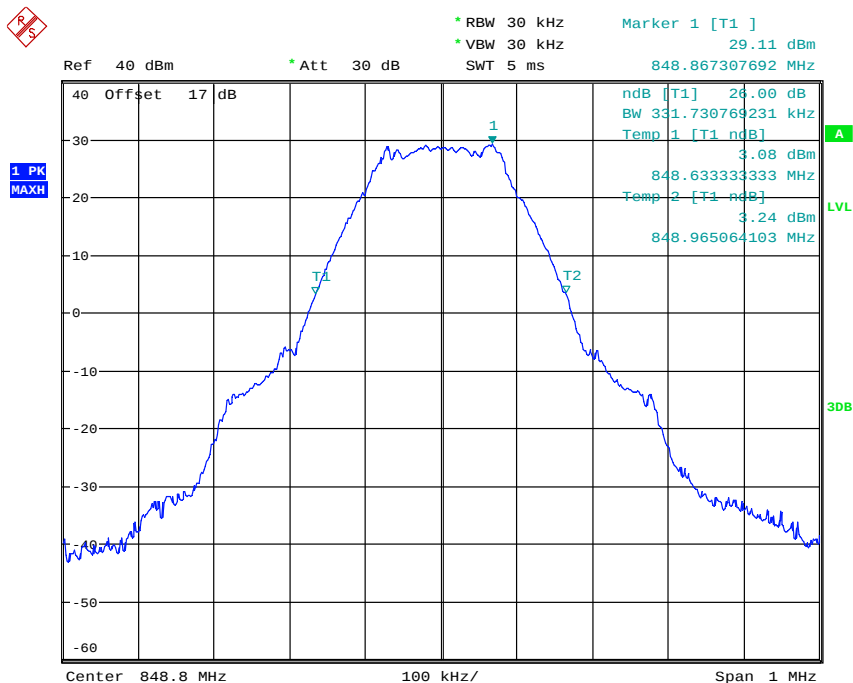
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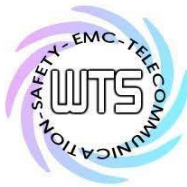
26DB BANDWIDTH GSM850 CH188

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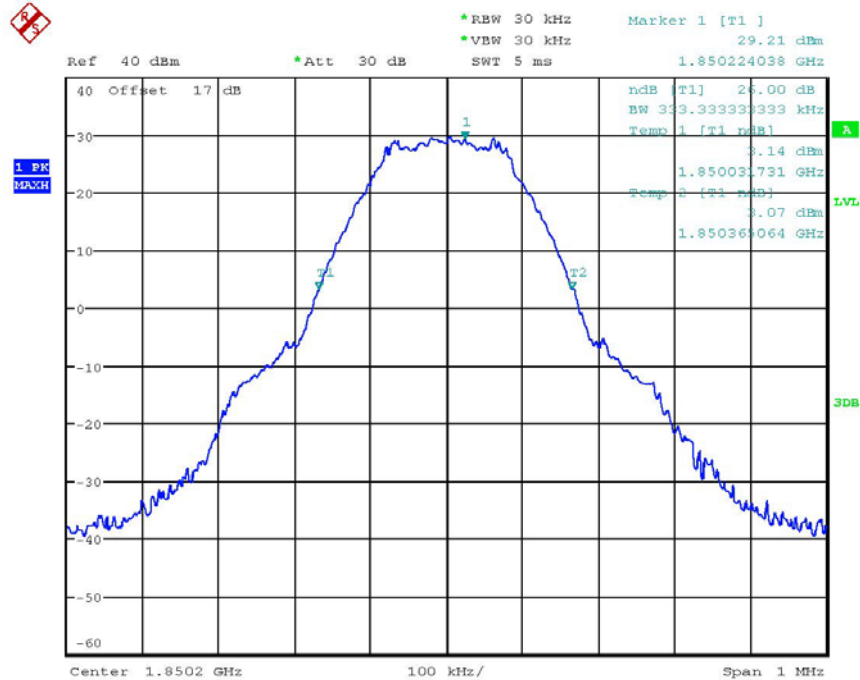
26DB BANDWIDTH GSM850 CH251

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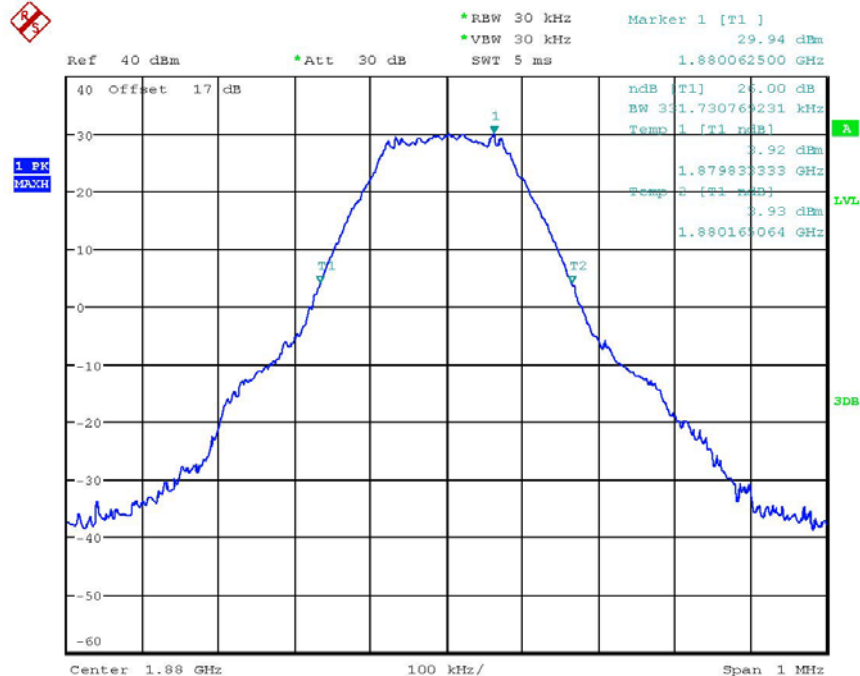
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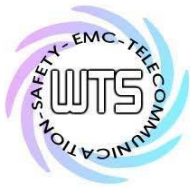
26DB BANDWIDTH PCS1900 CH512

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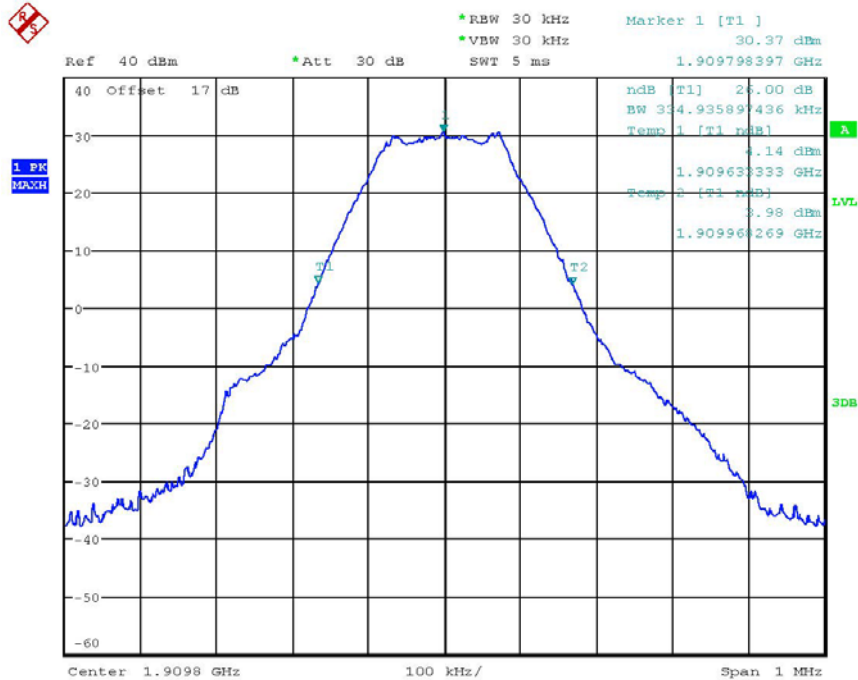
26DB BANDWIDTH PCS1900 CH661

Date: 22.NOV.2013 14:17:50



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



26DB BANDWIDTH PCS1900 CH810  
Date: 22.NOV.2013 14:17:01

Test equipment: ETSTW-RE 055, ETSTW-GSM 002

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

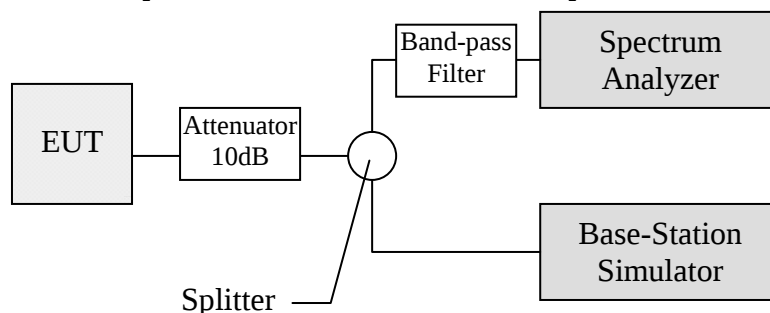
## 6. Spurious Emissions at Antenna Terminals

### 6.1 Test procedure

This transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer via a three-port splitter. Please refer to the following figure. Transmitter output was derived with the spectrum analyzer in dBm.

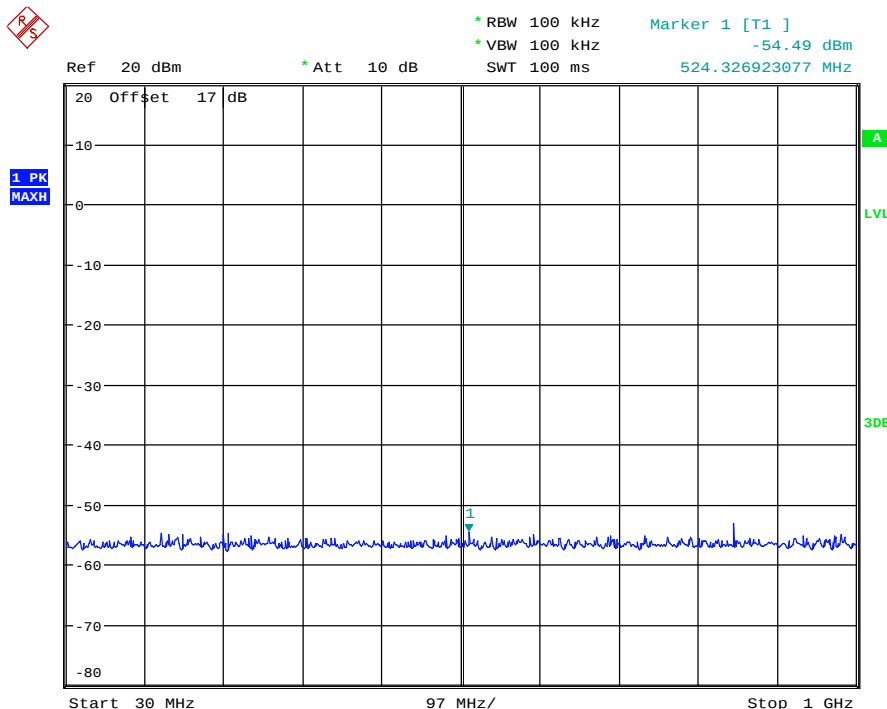
The Spurious Emissions at Antenna Terminals was measured by the spectrum analyzer with a suitable notch filter and/or Band-pass filter.

Tests were performed with an unmodulated carrier at three frequencies (low, middle and high channels ) and on all power levels , which can be set-up on the transmitters.



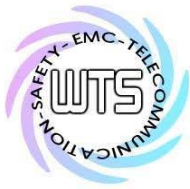
### 6.2 Test Results

CH128



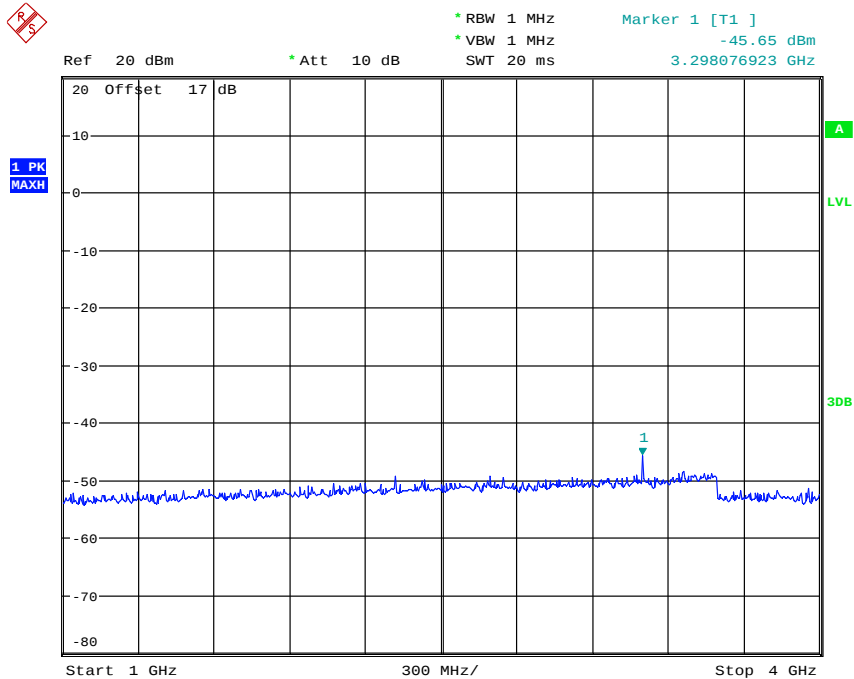
CONDUCTED SPURIOUS EMISSION GSM850 CH128

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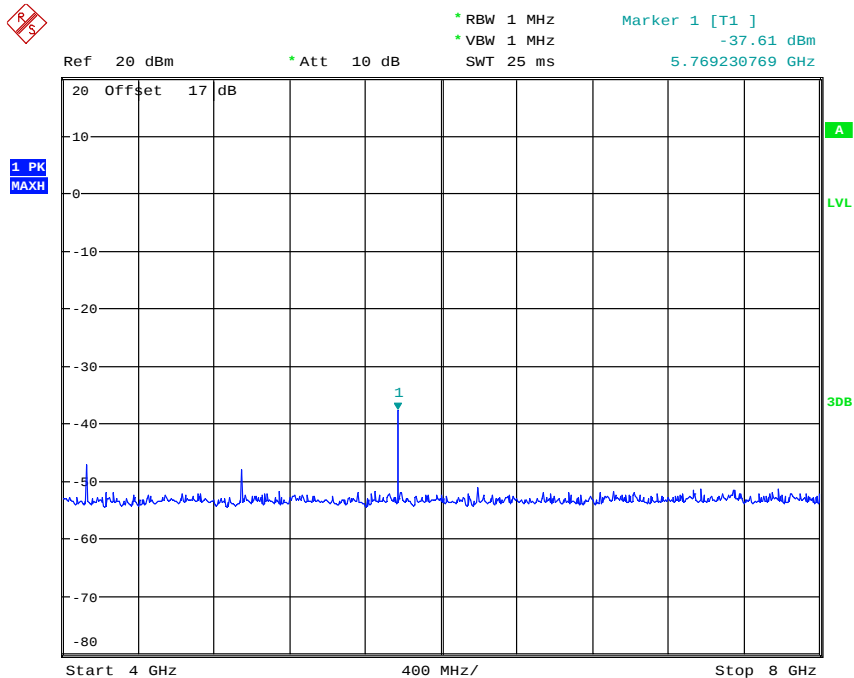
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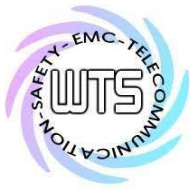
CONDUCTED SPURIOUS EMISSION GSM850 CH128

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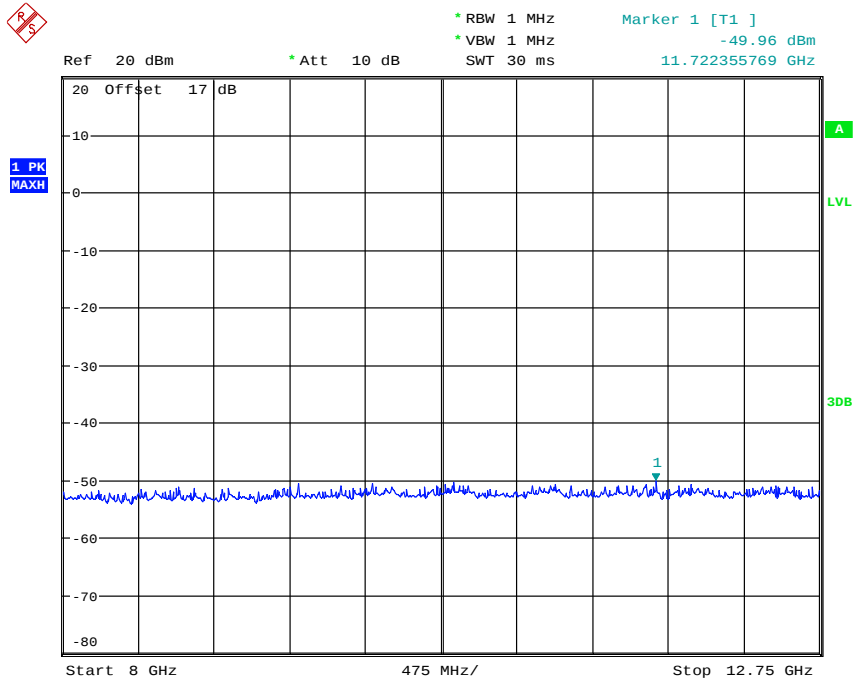
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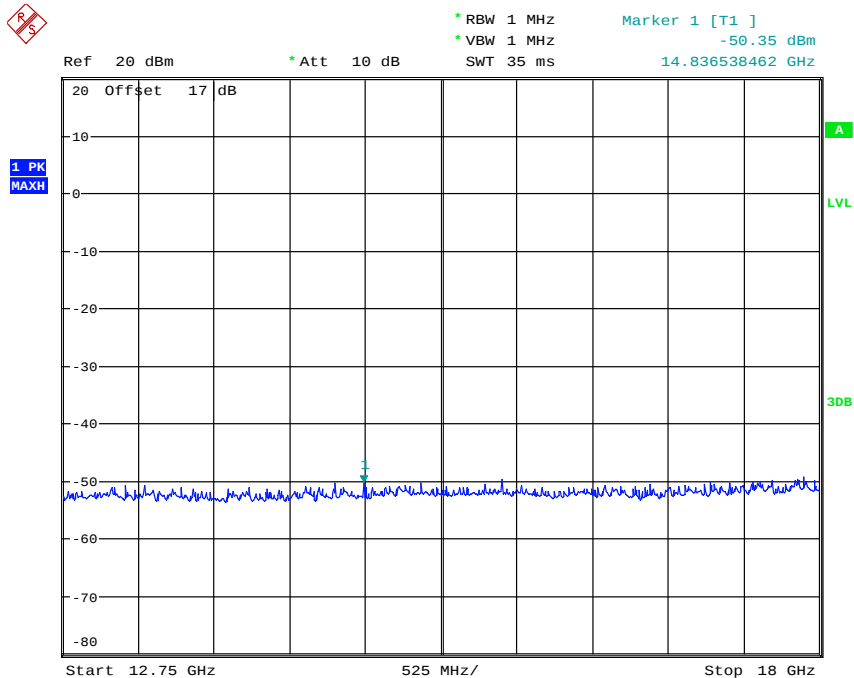
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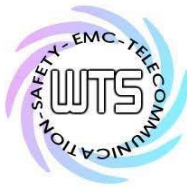
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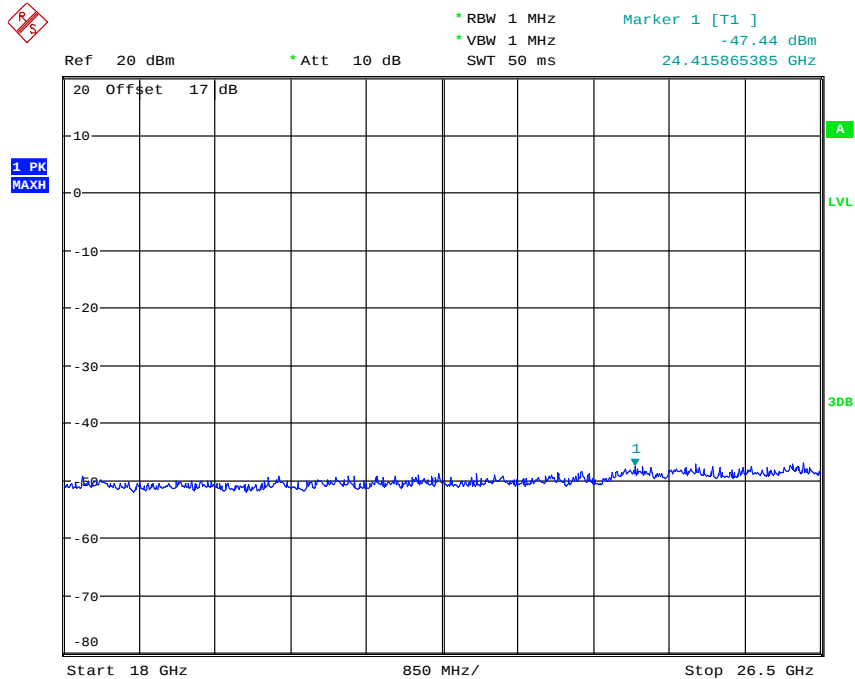
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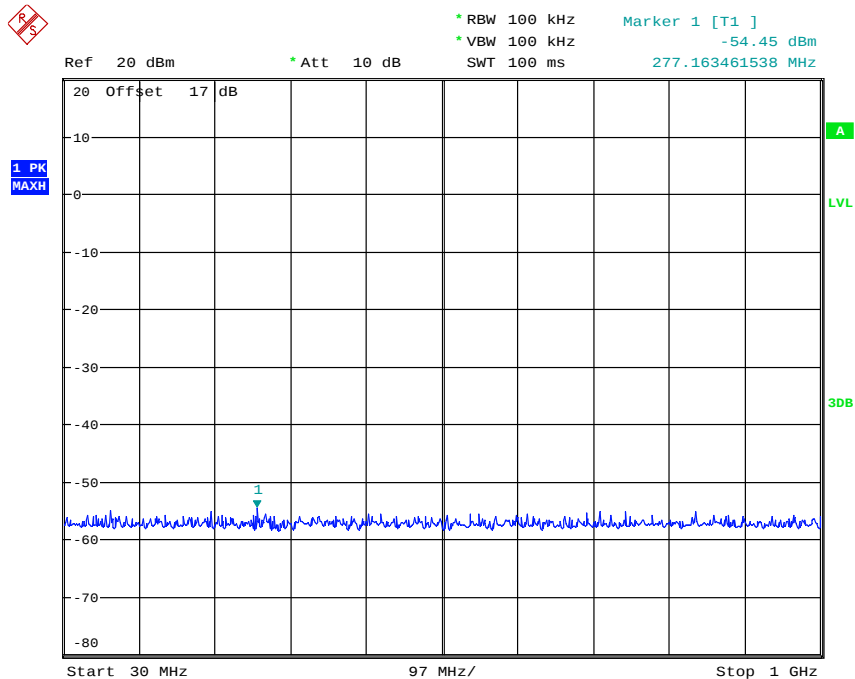
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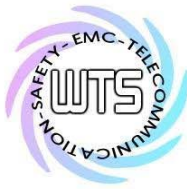


CONDUCTED SPURIOUS EMISSION GSM850 CH128  
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CH188

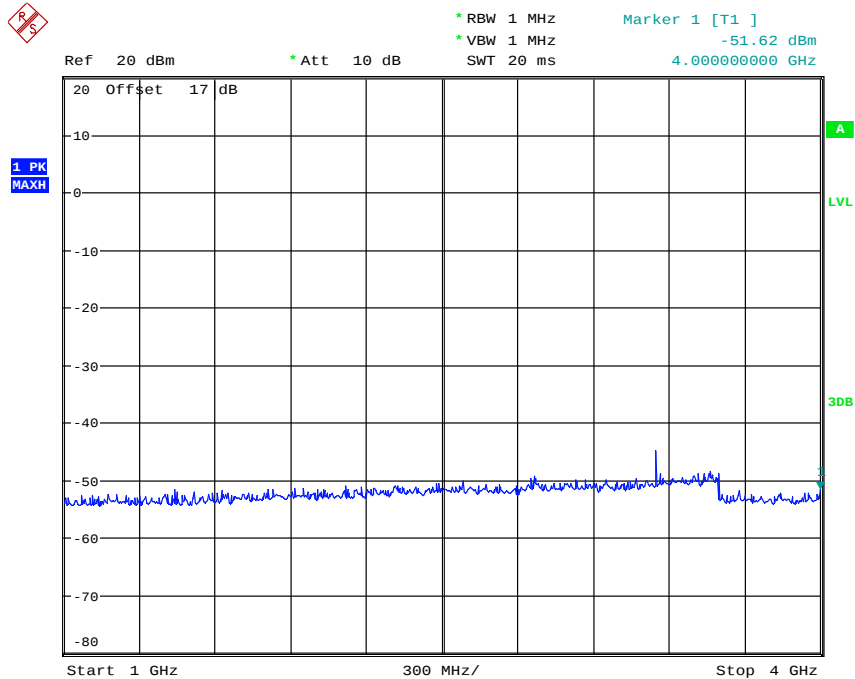


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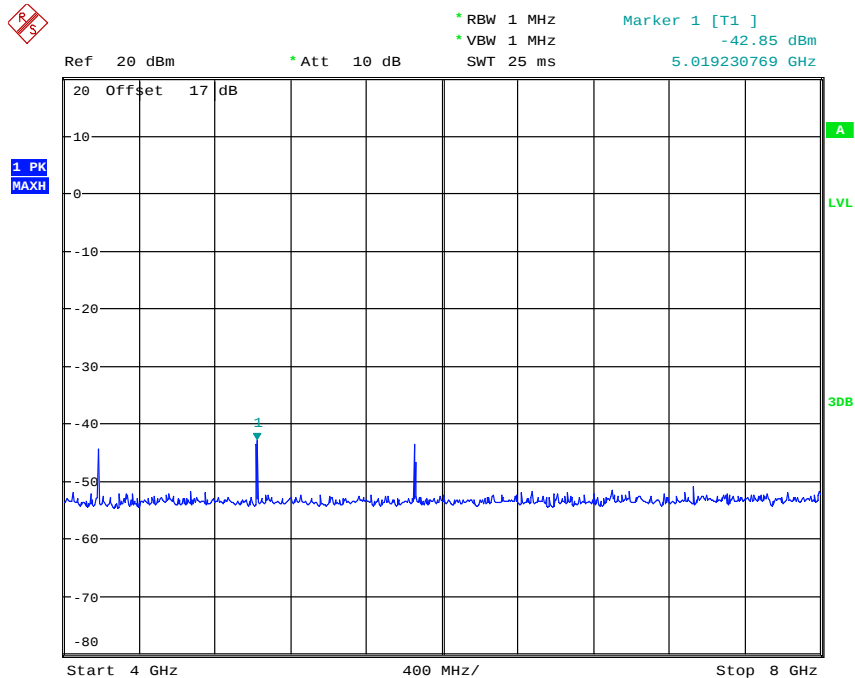
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FCC ID: 2ABGRMVX400



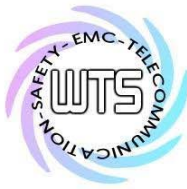
CONDUCTED SPURIOUS EMISSION GSM850 CH188

Date: 22.NOV.2013 13:51:28



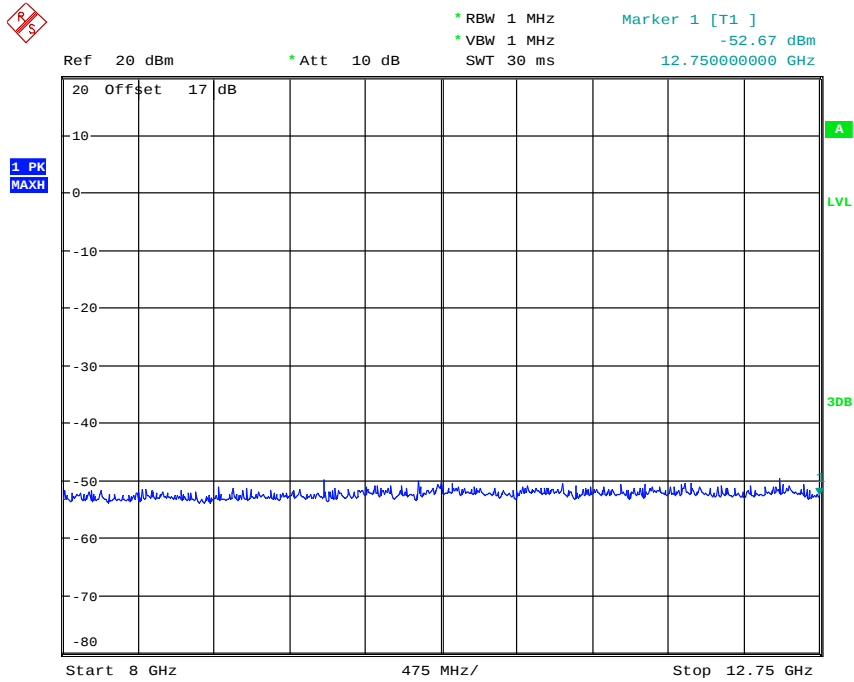
CONDUCTED SPURIOUS EMISSION GSM850 CH188

Date: 22.NOV.2013 13:51:04



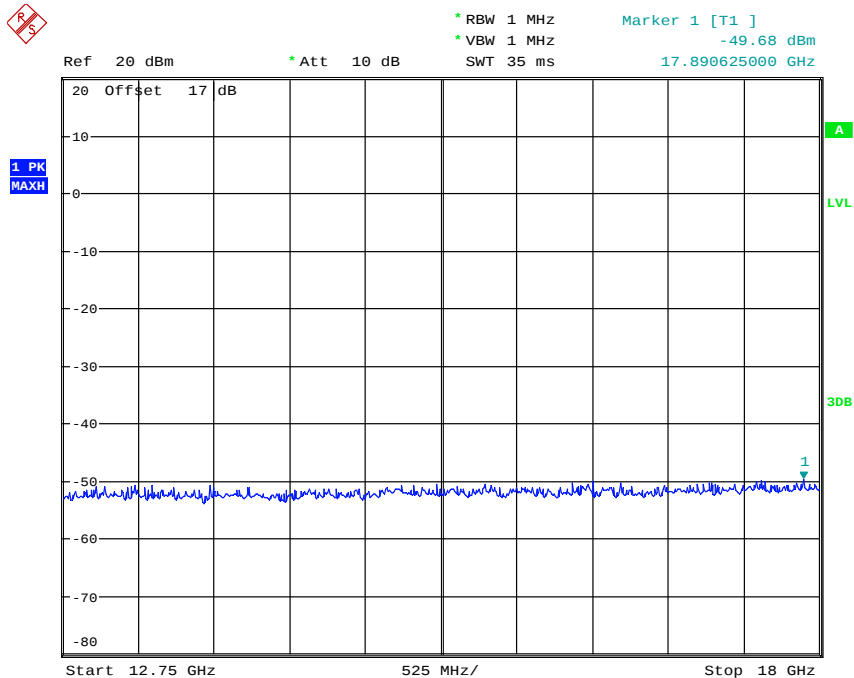
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



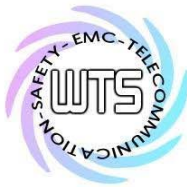
CONDUCTED SPURIOUS EMISSION GSM850 CH188

Date: 22.NOV.2013 13:50:42



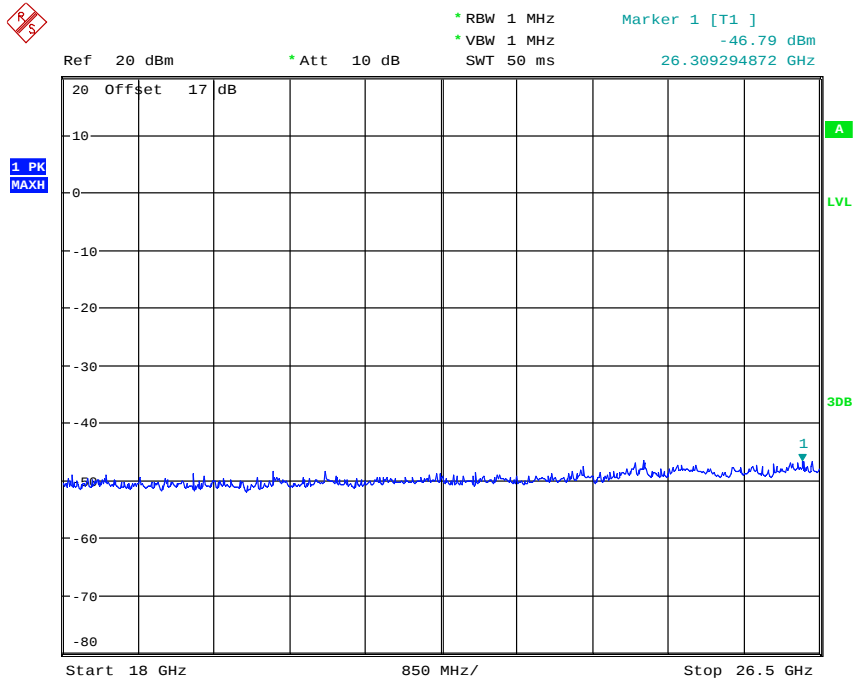
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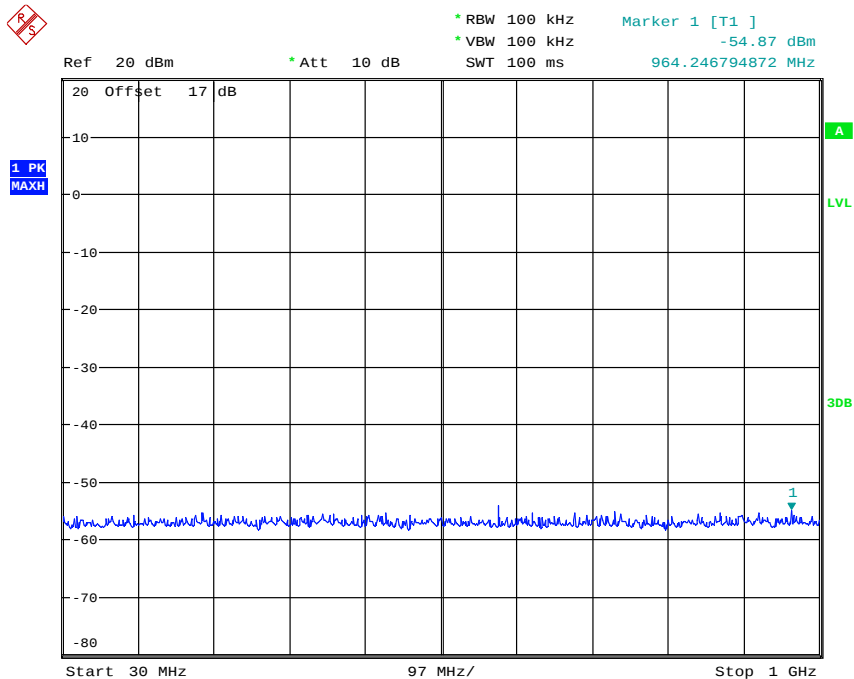
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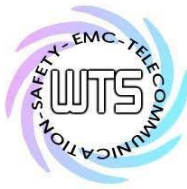
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CH251



CONDUCTED SPURIOUS EMISSION GSM850 CH251

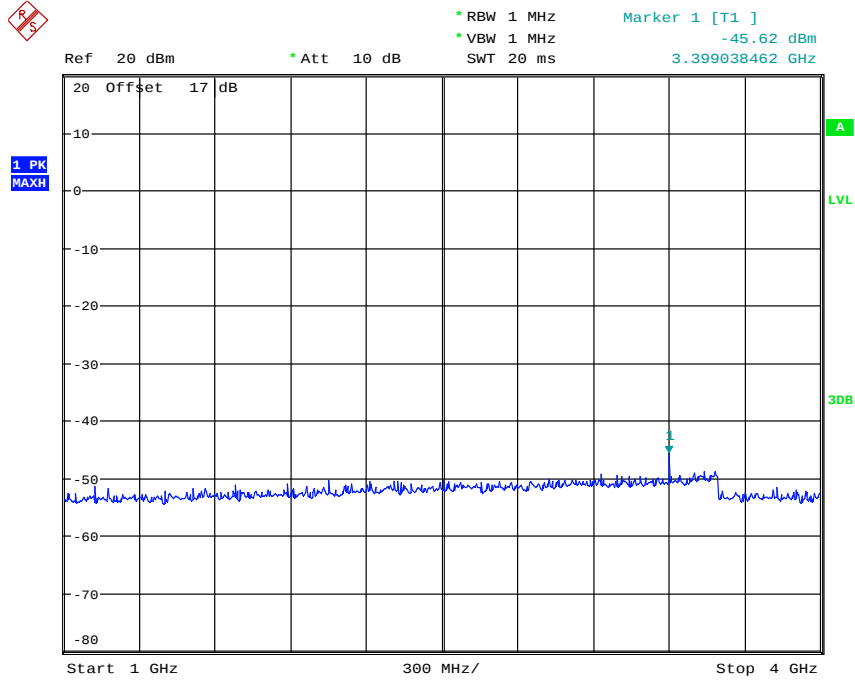
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# Worldwide Testing Services(Taiwan) Co., Ltd.

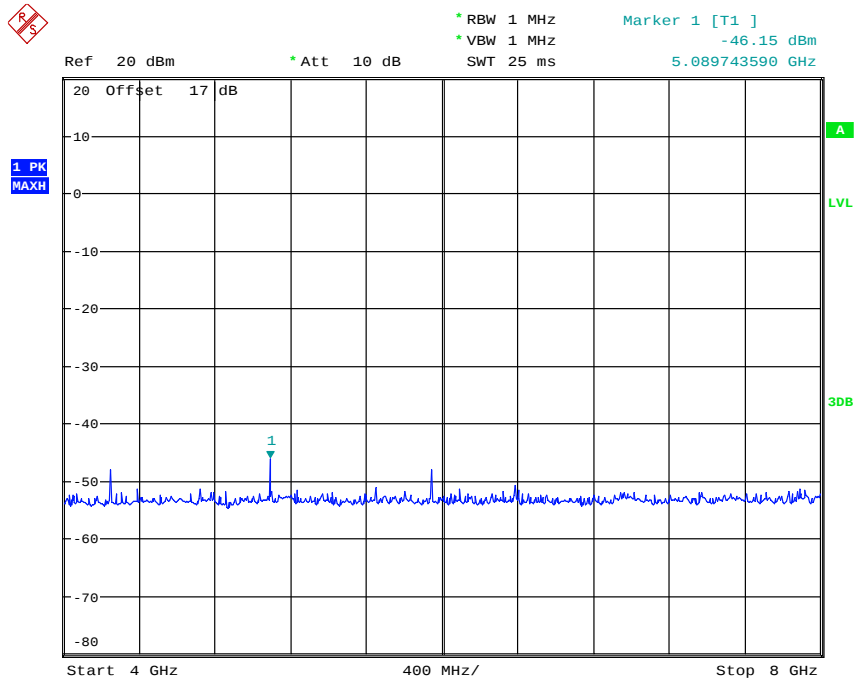
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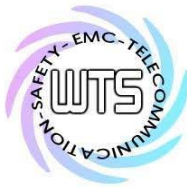
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Date: 22.NOV.2013 13:53:26



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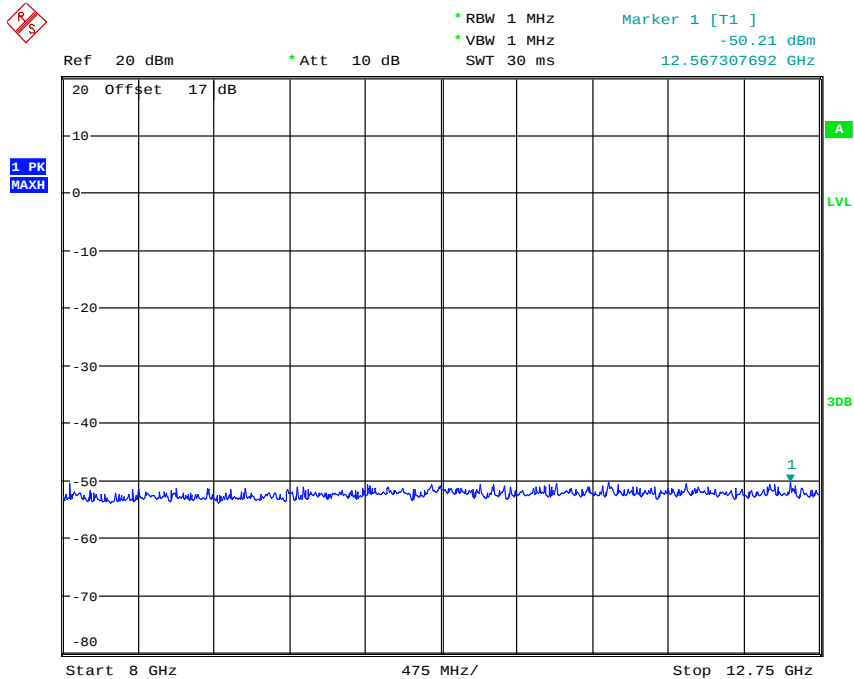
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# Worldwide Testing Services(Taiwan) Co., Ltd.

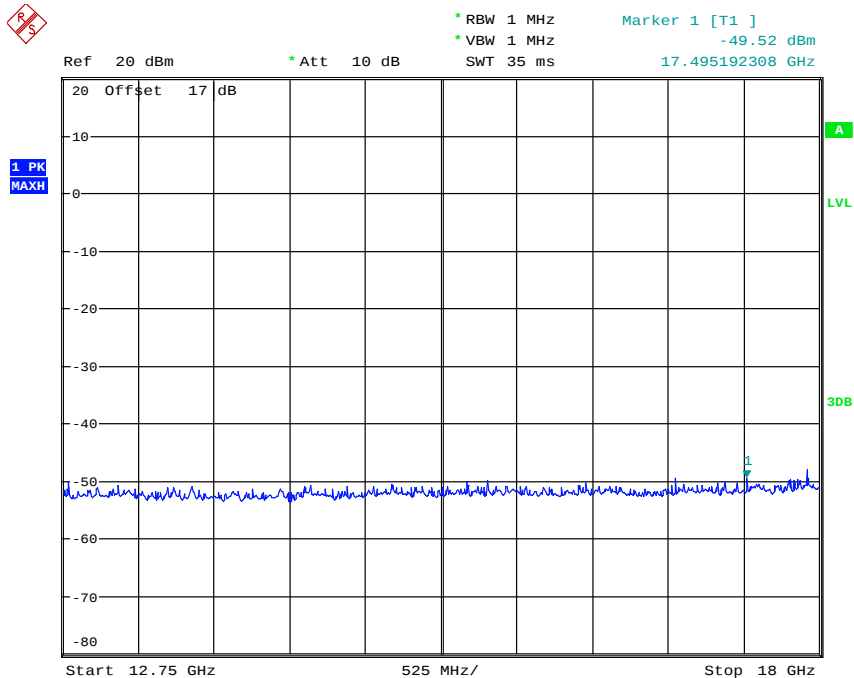
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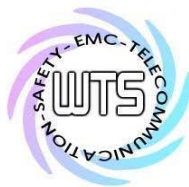
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Date: 22.NOV.2013 13:54:17



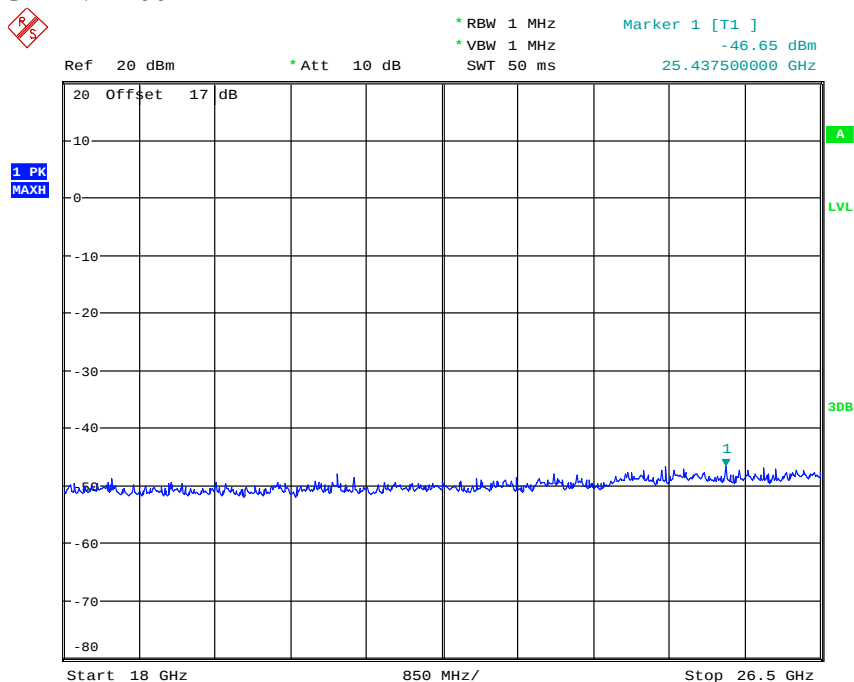
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Date: 22.NOV.2013 13:54:44



Report Number: W6M21309-13566-P-2224

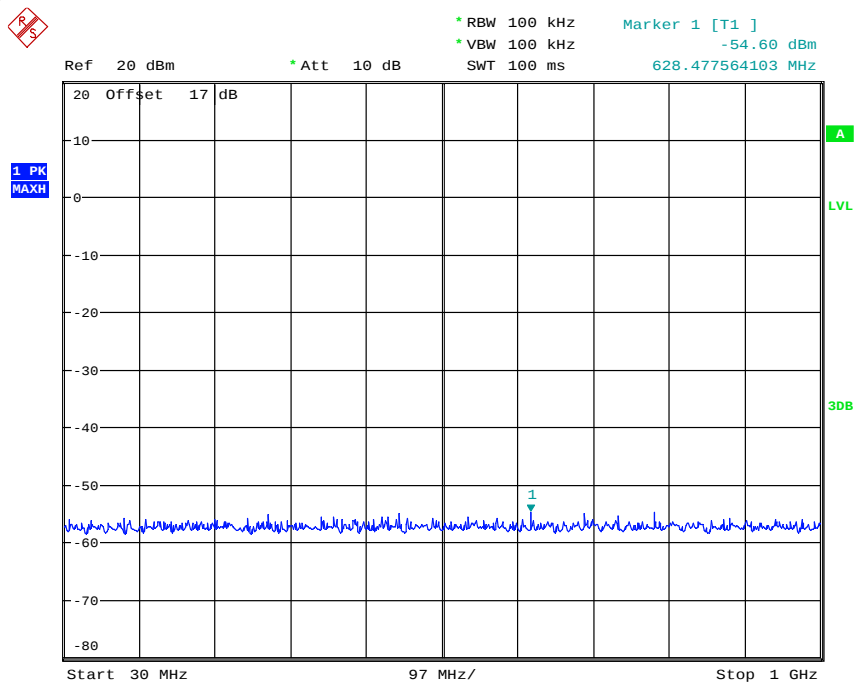
FCC ID: 2ABGRMVX400



CONDUCTED SPURIOUS EMISSION GSM850 CH251

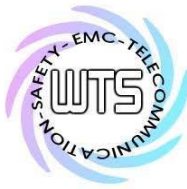
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## 850 Band Idle



CONDUCTED SPURIOUS EMISSION GSM850 IDLE

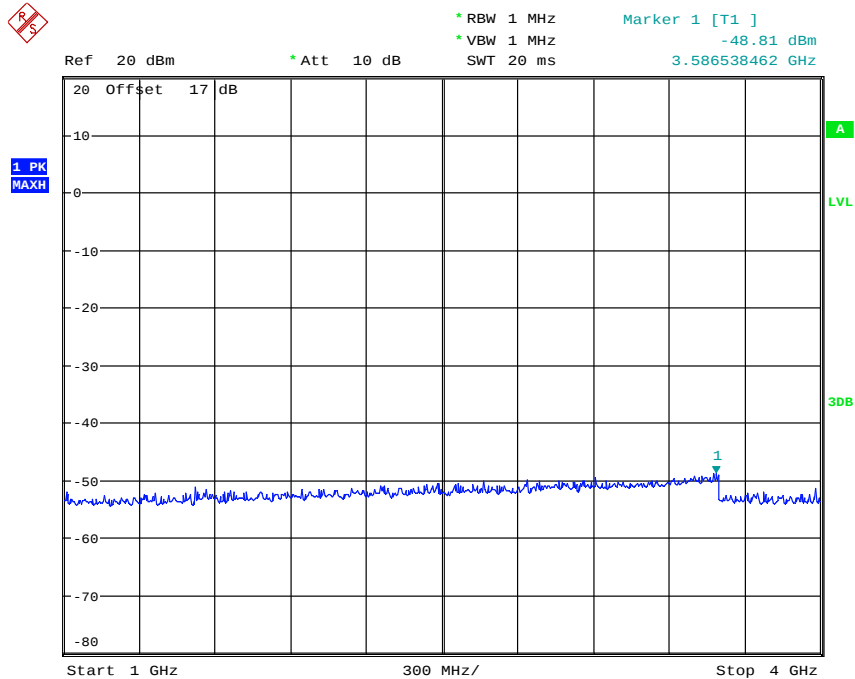
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# Worldwide Testing Services(Taiwan) Co., Ltd.

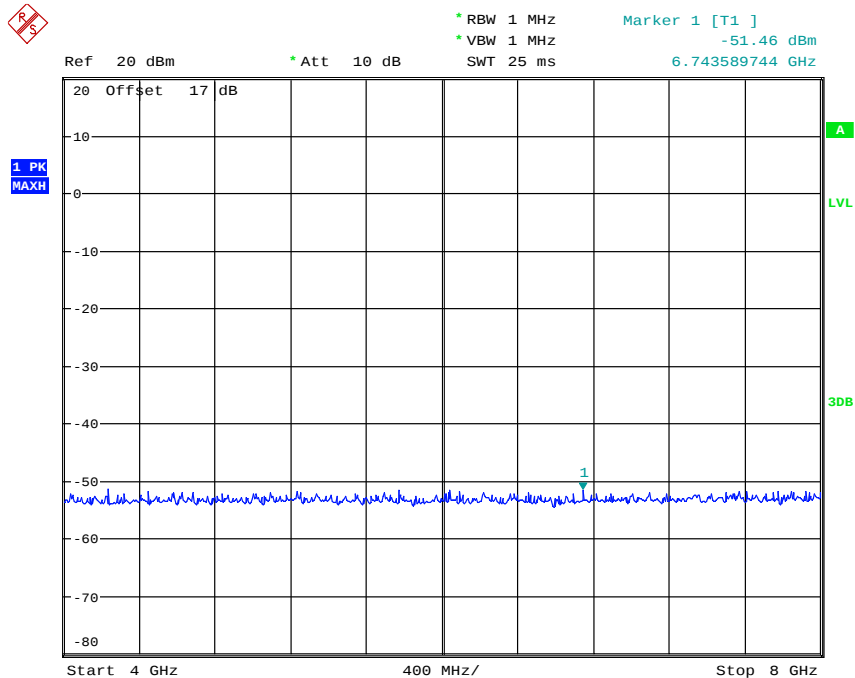
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FCC ID: 2ABGRMVX400



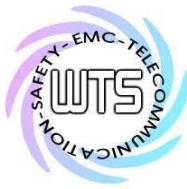
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Date: 22.NOV.2013 13:57:59



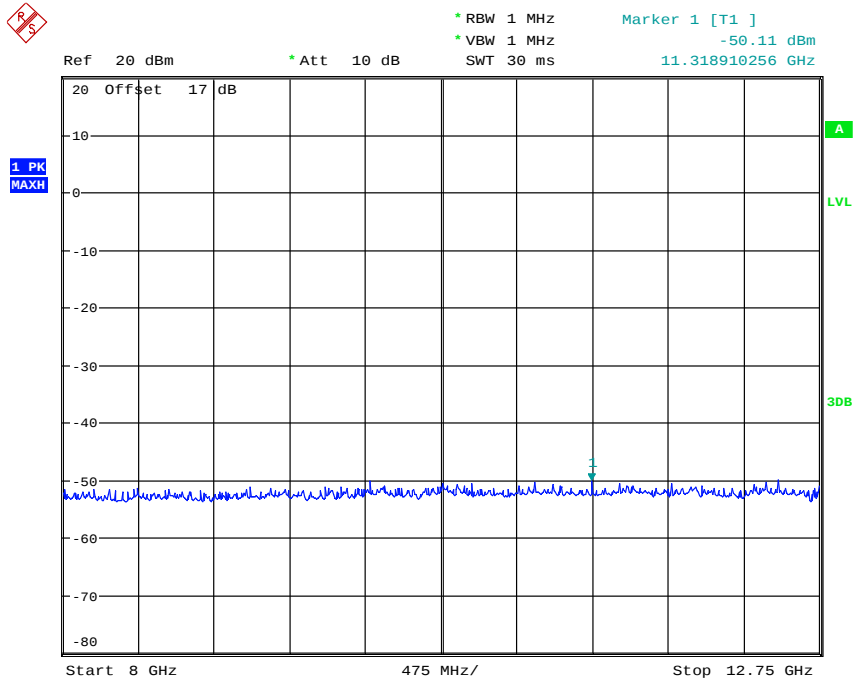
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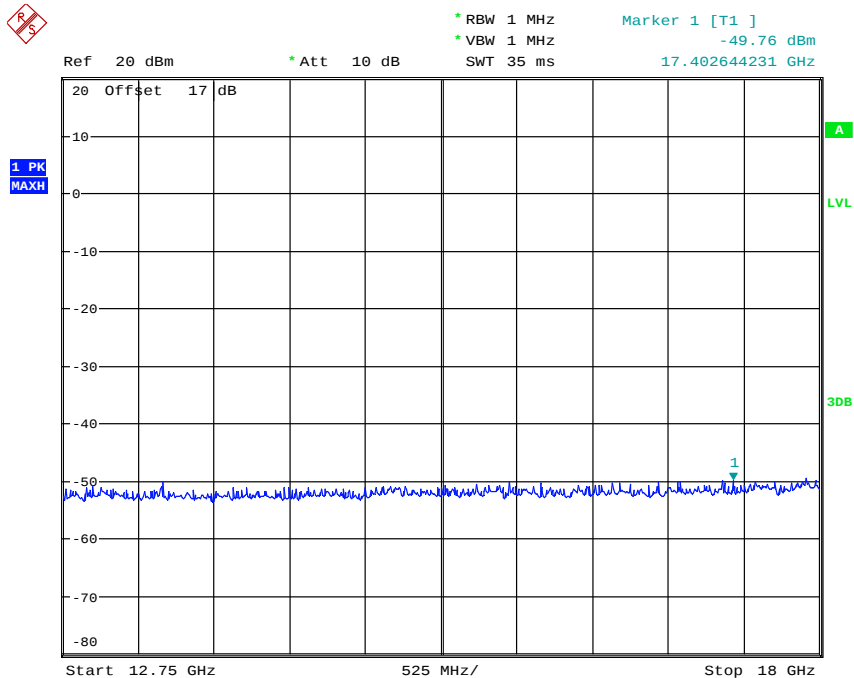
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



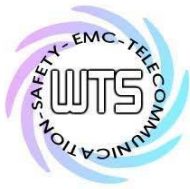
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Date: 22.NOV.2013 13:57:02



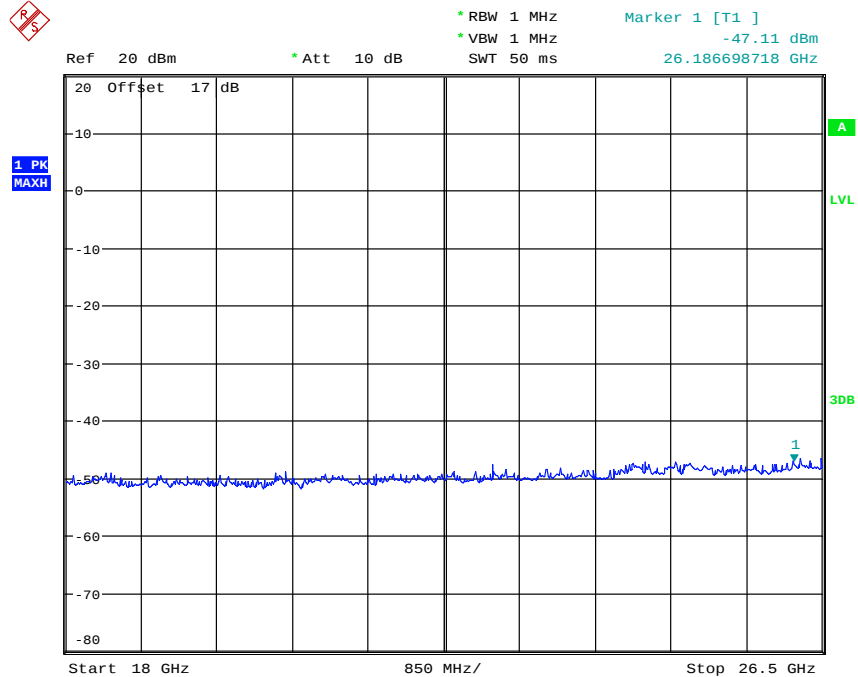
CONDUCTED SPURIOUS EMISSION GSM850 IDLE

Date: 22.NOV.2013 13:56:34



Report Number: W6M21309-13566-P-2224

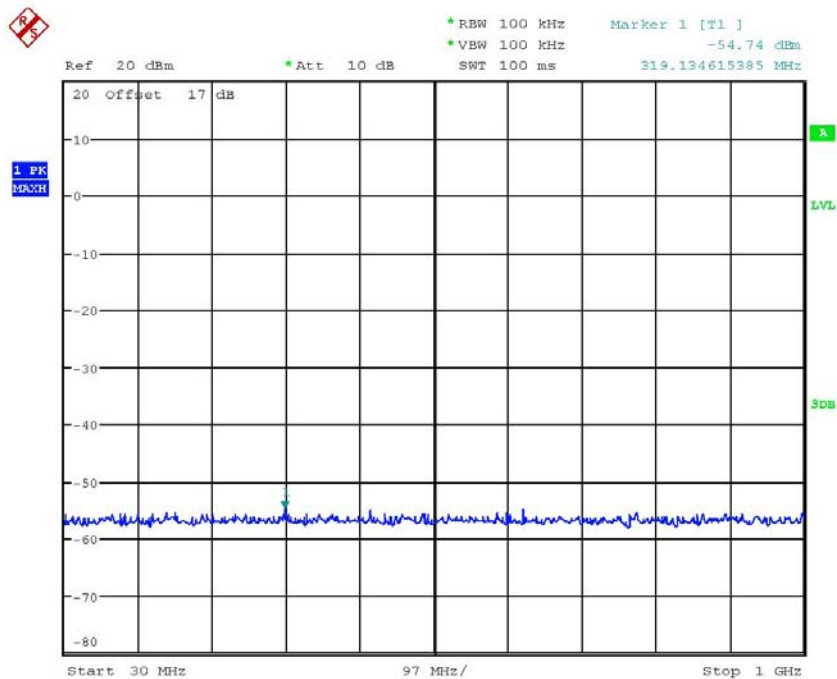
FCC ID: 2ABGRMVX400



CONDUCTED SPURIOUS EMISSION GSM850 IDLE

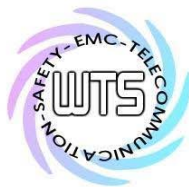
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CH512



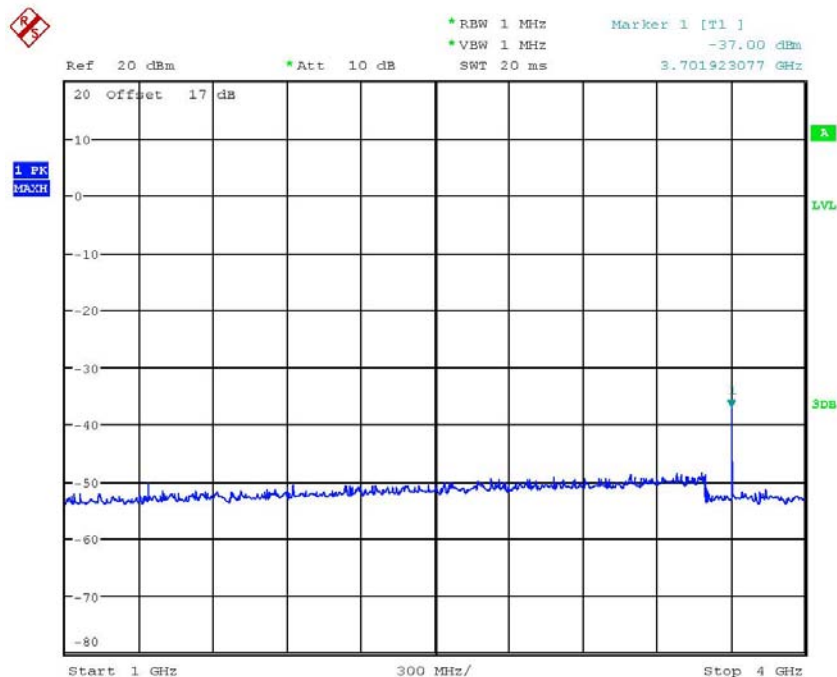
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Date: 22.NOV.2013 14:02:51



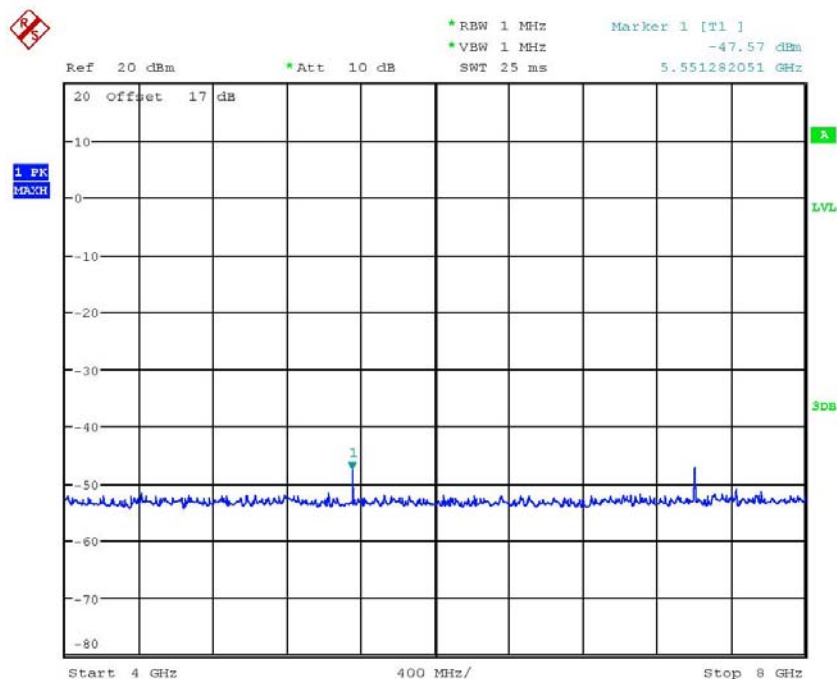
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



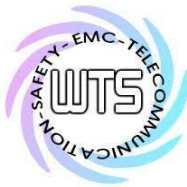
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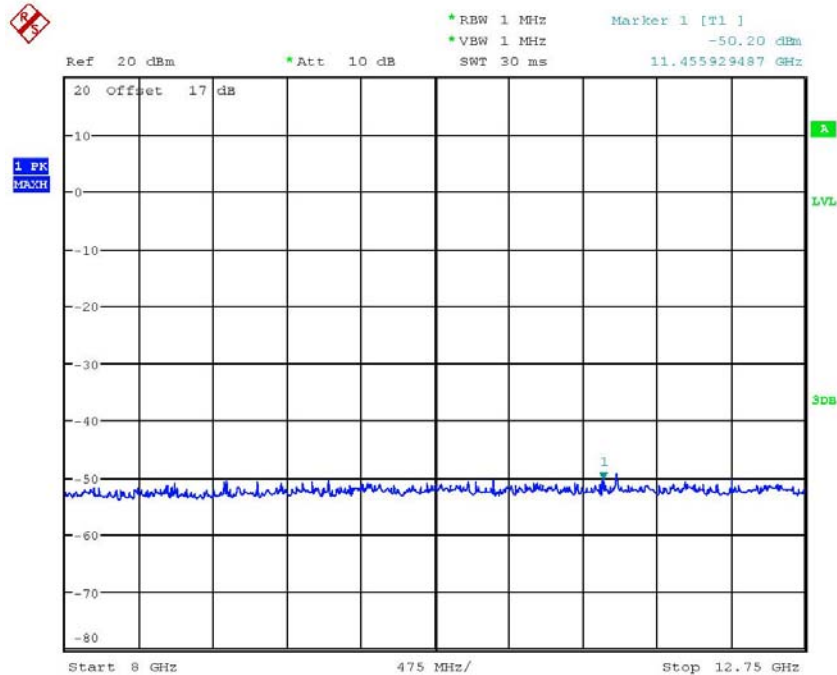
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Date: 22.NOV.2013 14:04:03



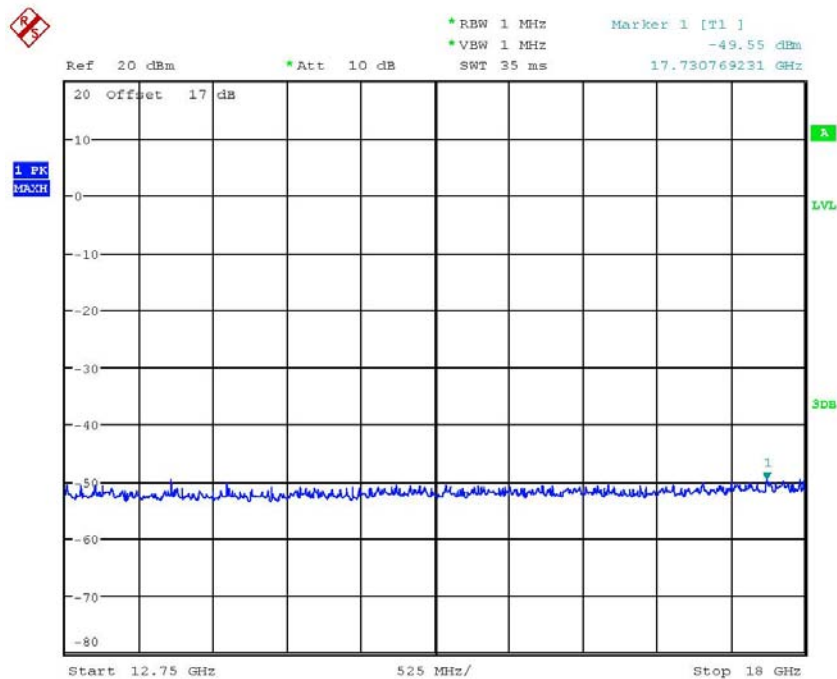
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



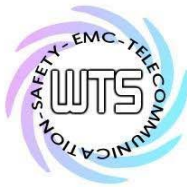
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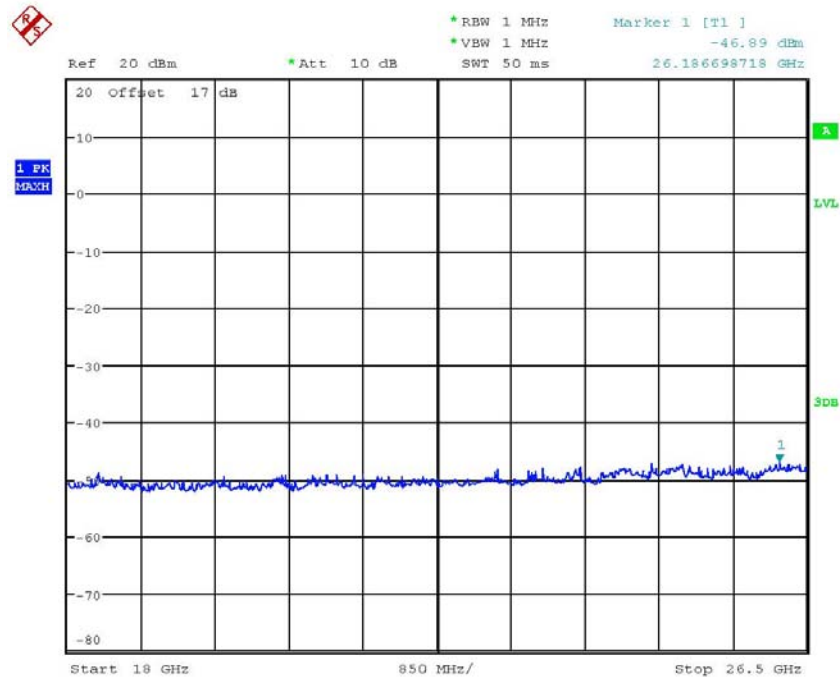
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Report Number: W6M21309-13566-P-2224

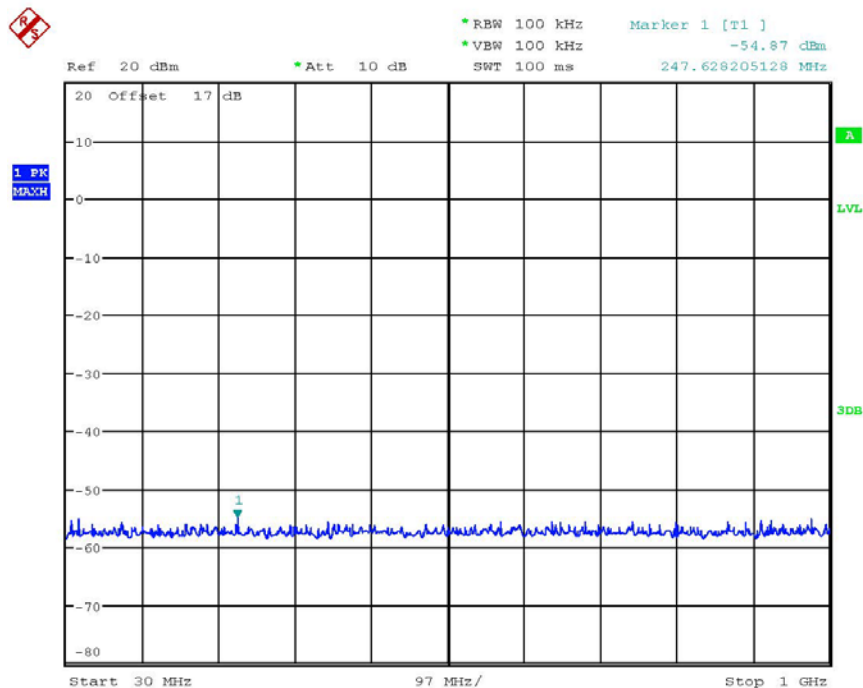
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CONDUCTED SPURIOUS EMISSION PCS1900 CH512

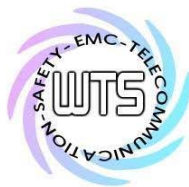
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CH661



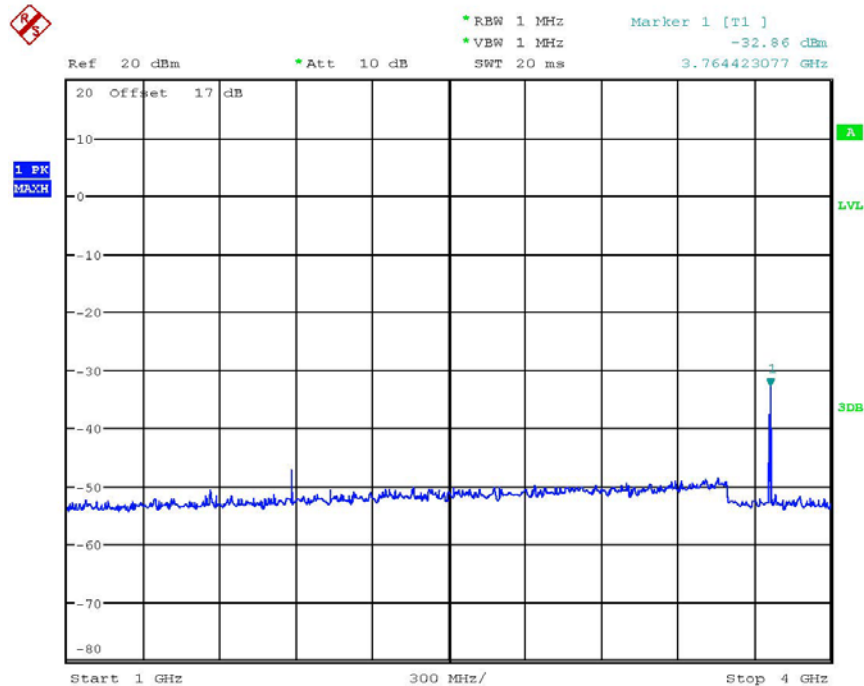
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Date: 22.NOV.2013 14:08:10



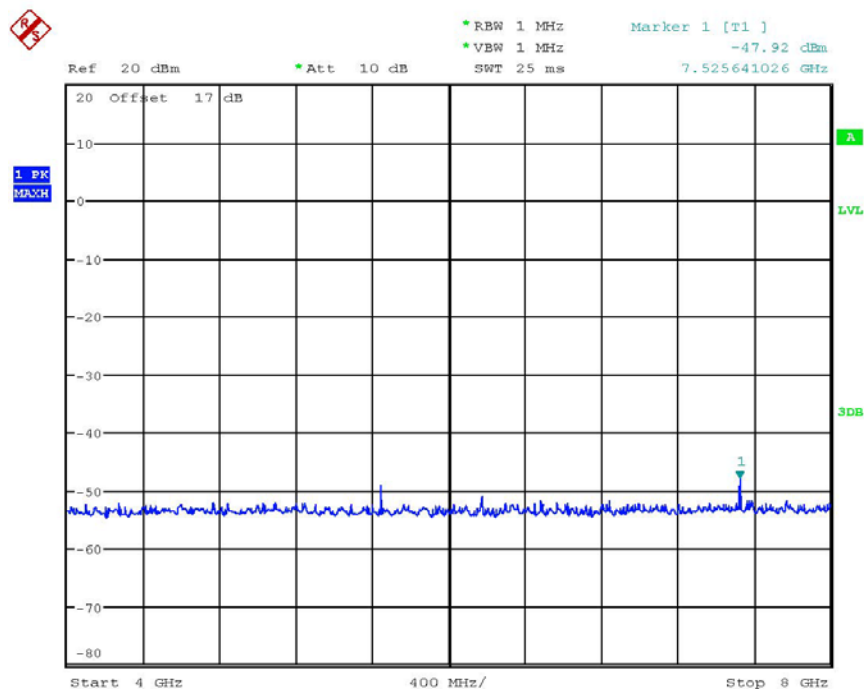
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



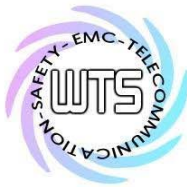
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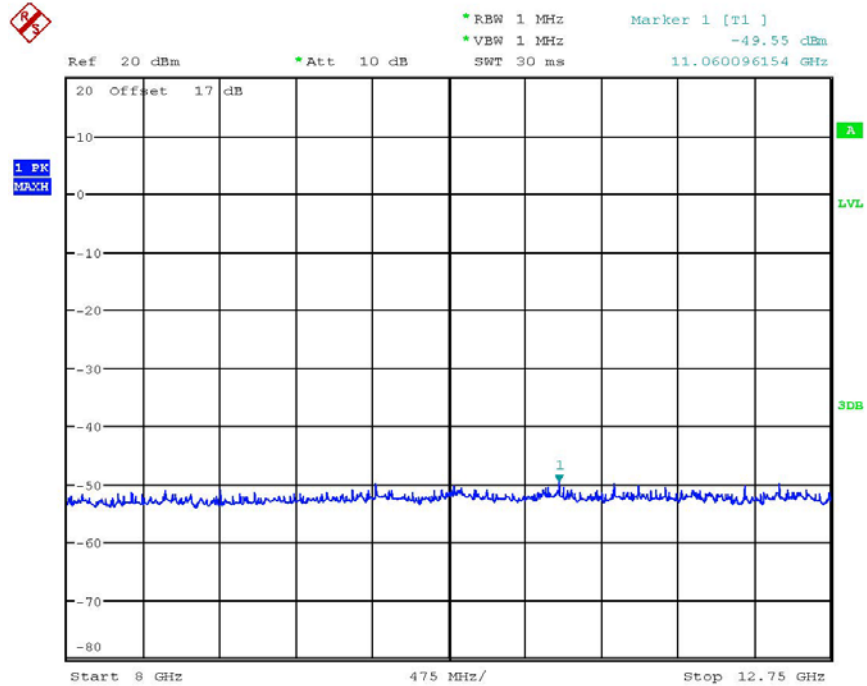
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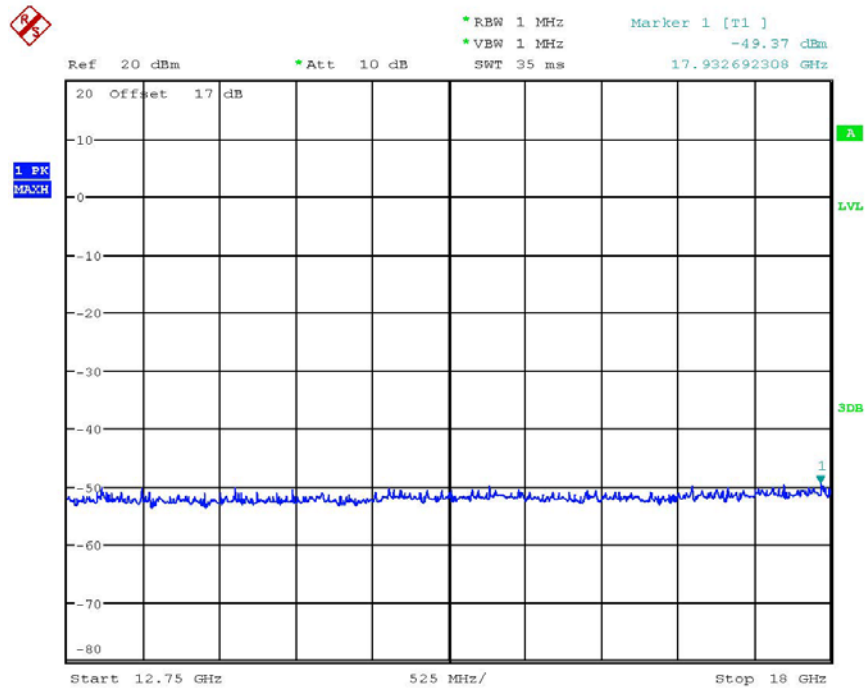
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



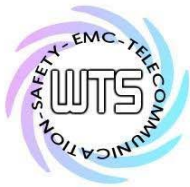
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Date: 22.NOV.2013 14:06:54



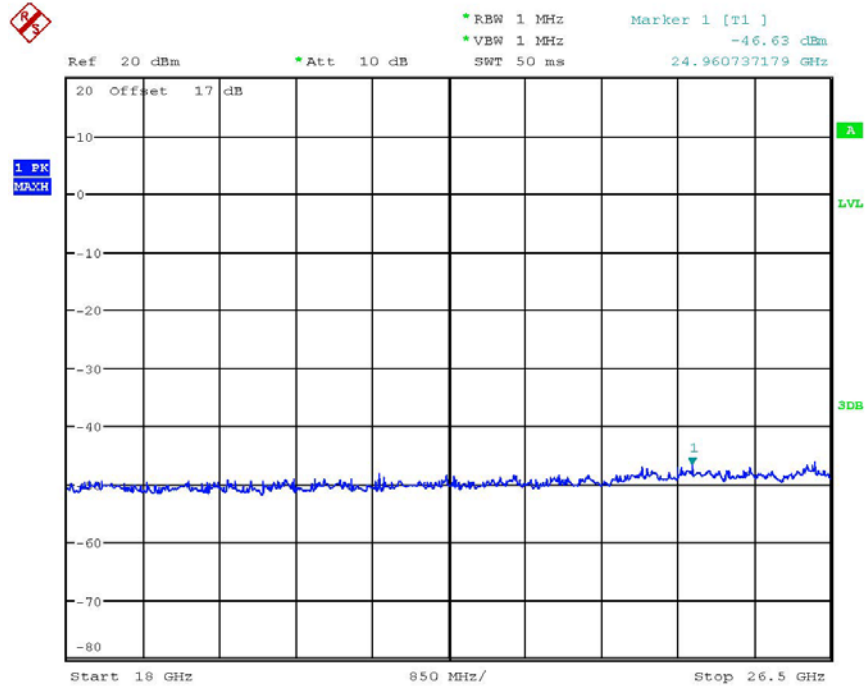
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Date: 22.NOV.2013 14:06:34



Report Number: W6M21309-13566-P-2224

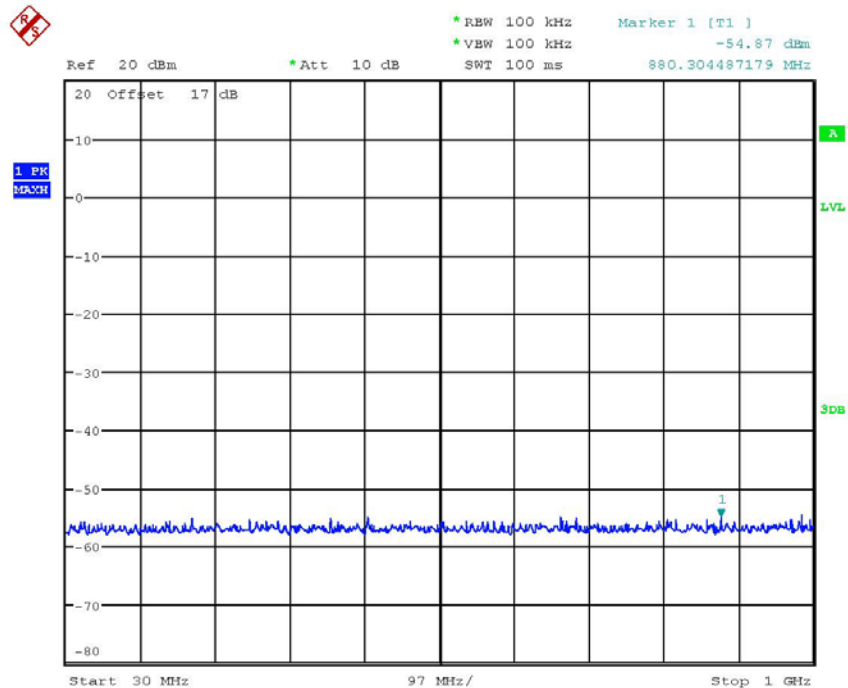
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CONDUCTED SPURIOUS EMISSION PCS1900 CH661

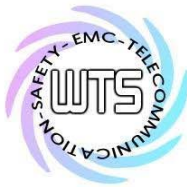
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CH810



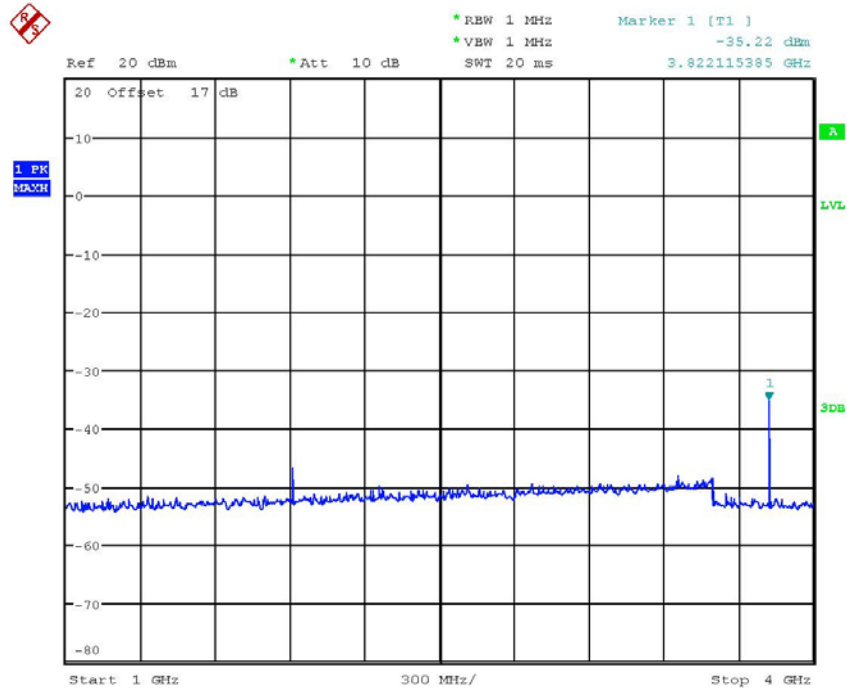
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Date: 22.NOV.2013 14:08:59



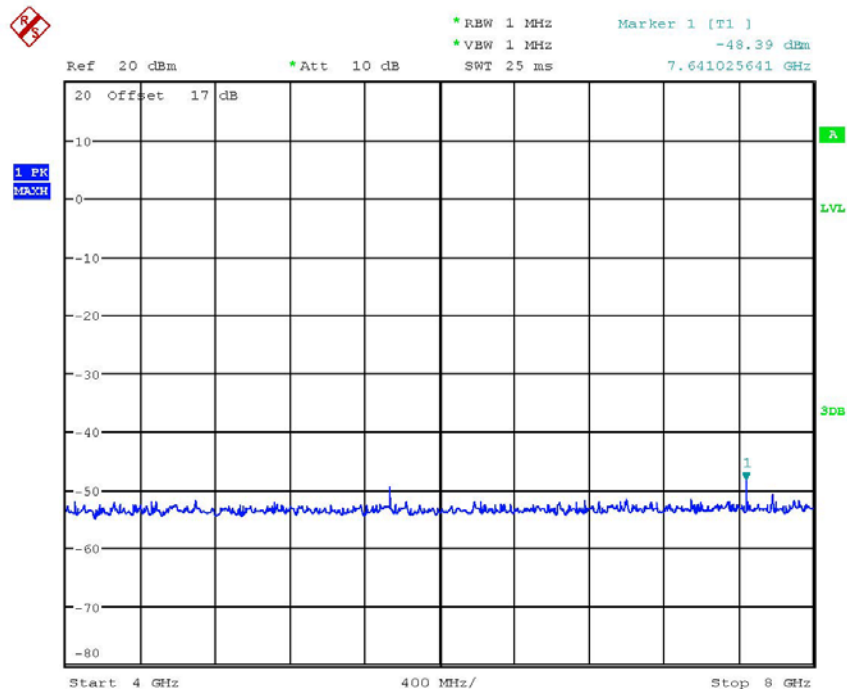
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



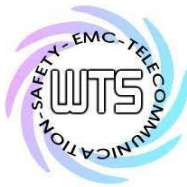
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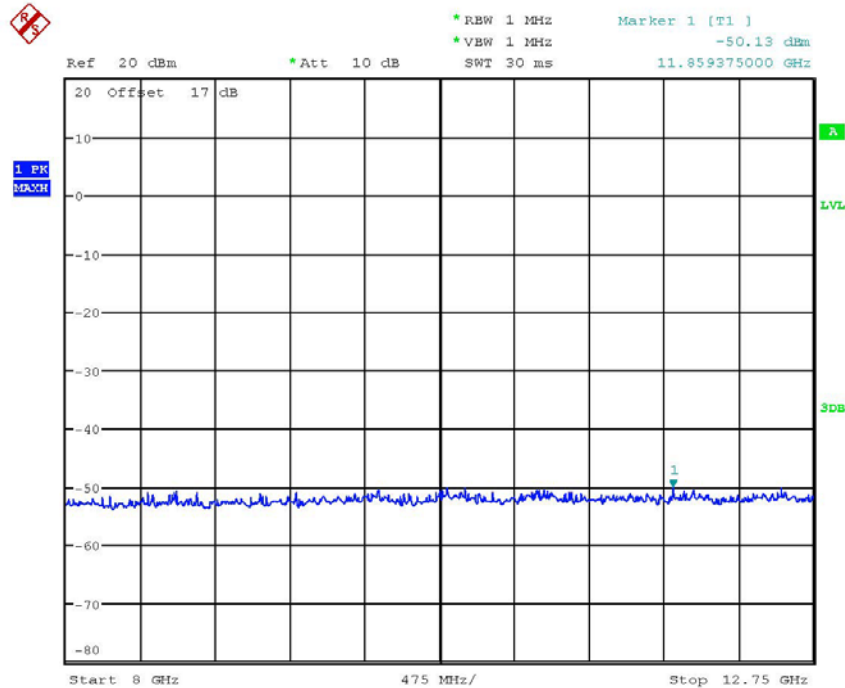
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Date: 22.NOV.2013 14:11:15



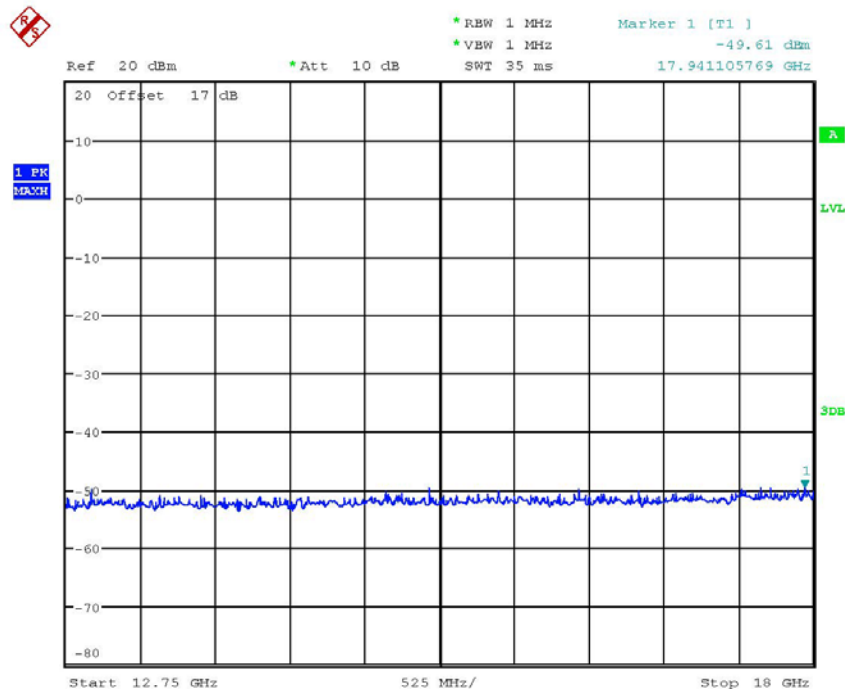
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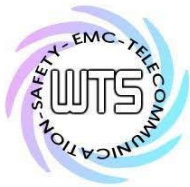
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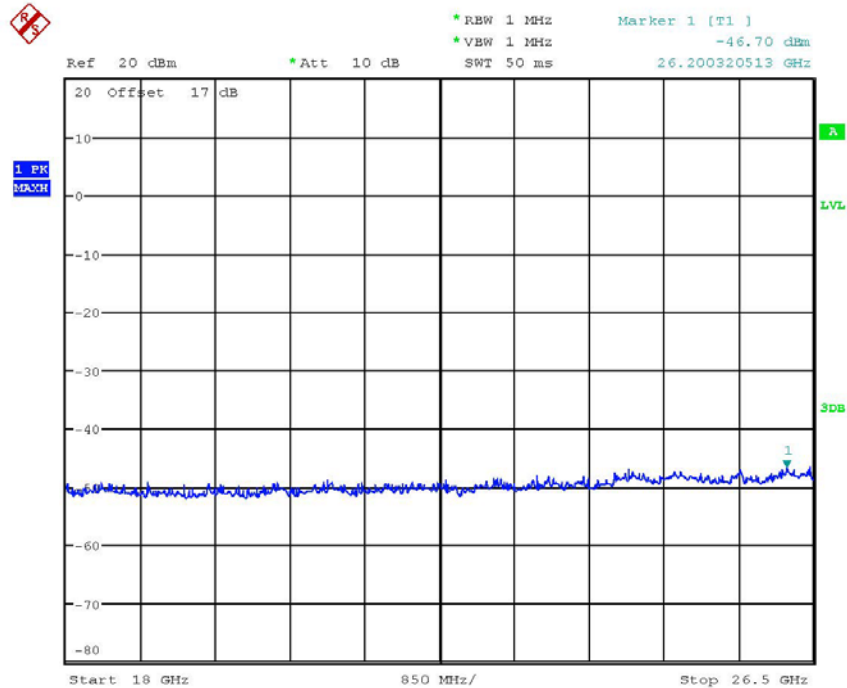
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Date: 22.NOV.2013 14:11:41



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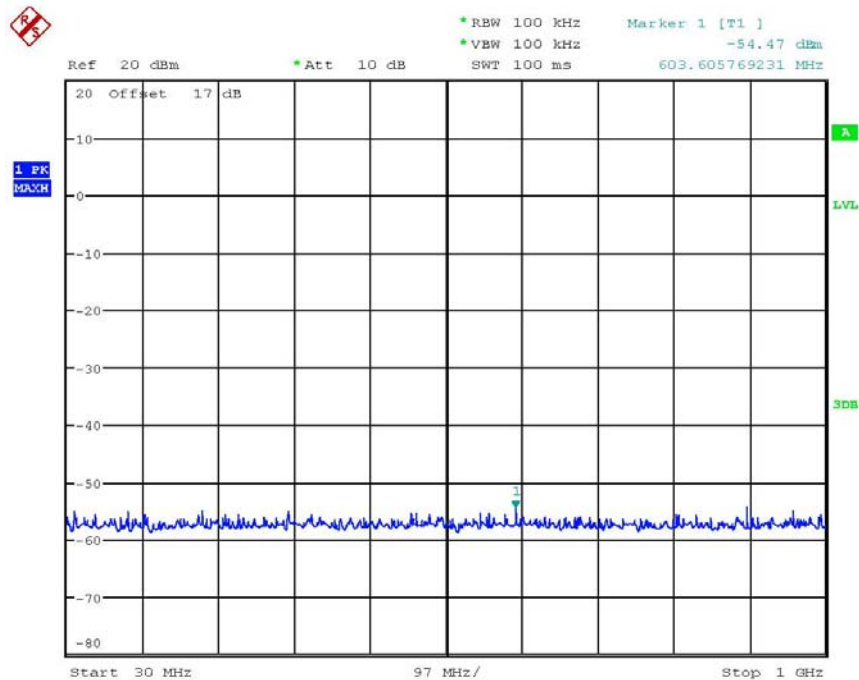
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CONDUCTED SPURIOUS EMISSION PCS1900 CH810

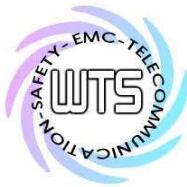
Date: 22.NOV.2013 14:12:12

1900 Band Idle



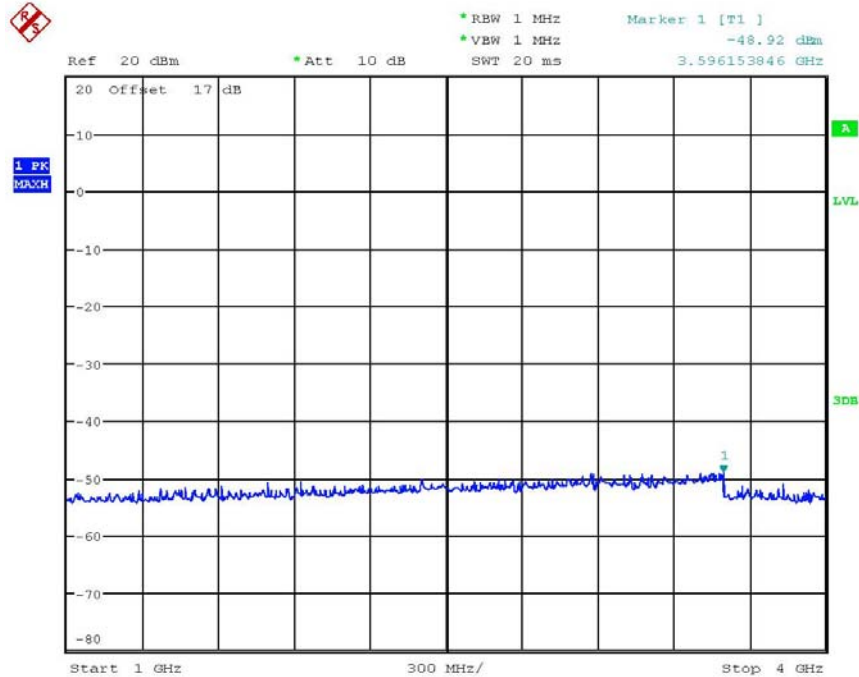
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Date: 22.NOV.2013 14:14:42



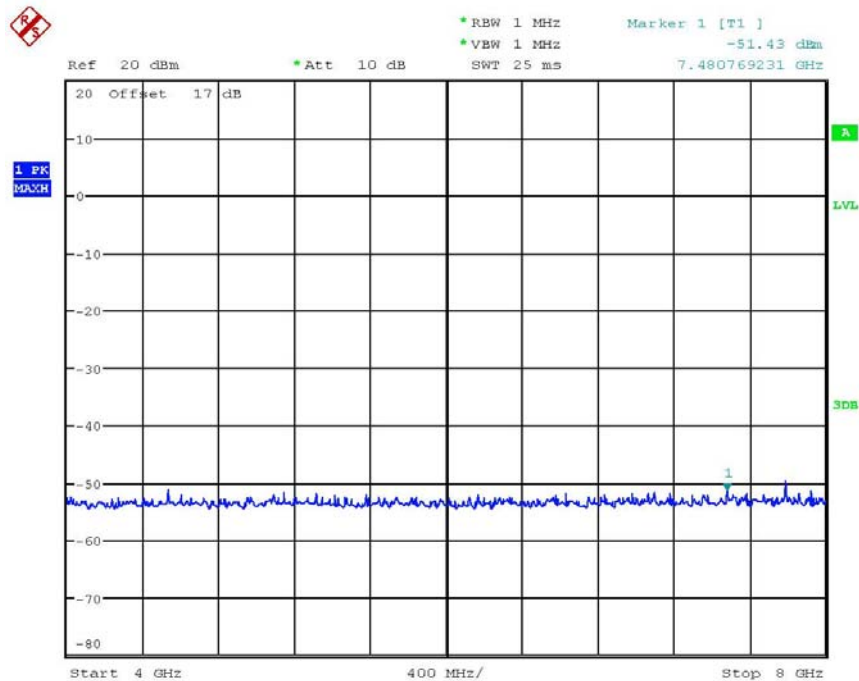
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



CONDUCTED SPURIOUS EMISSION PCS1900 IDLE

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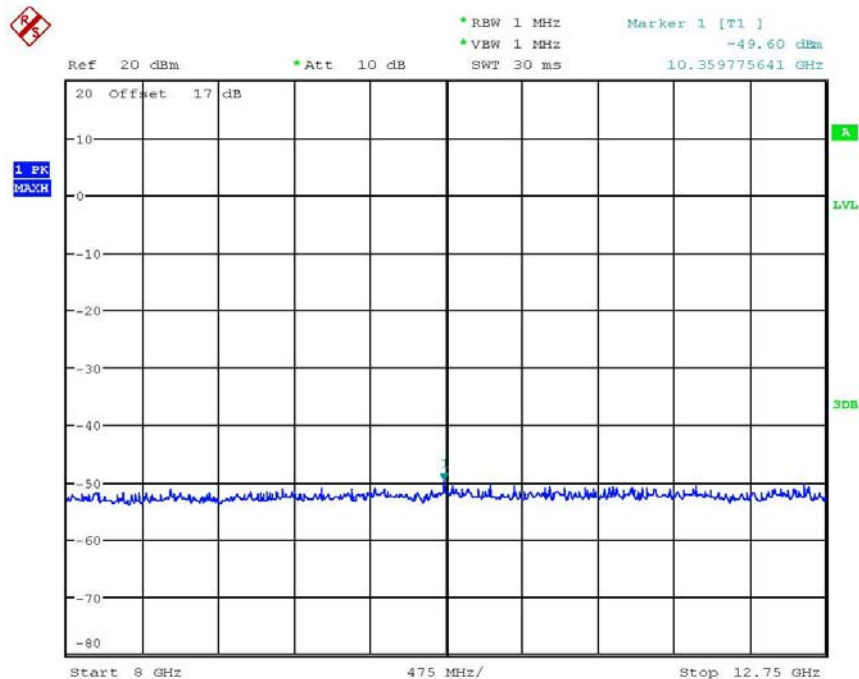


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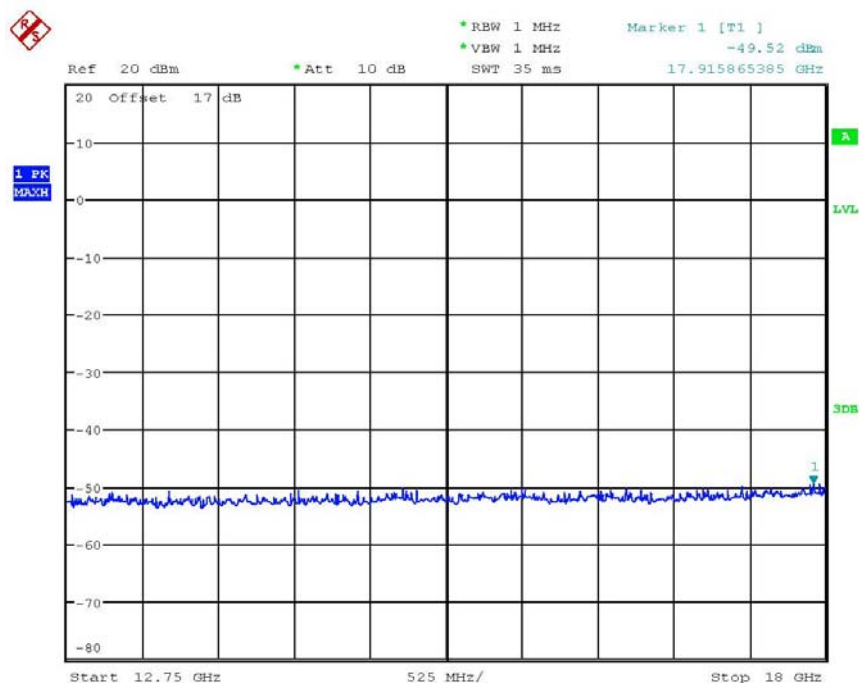
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



CONDUCTED SPURIOUS EMISSION PCS1900 IDLE

Date: 22.NOV.2013 14:13:24

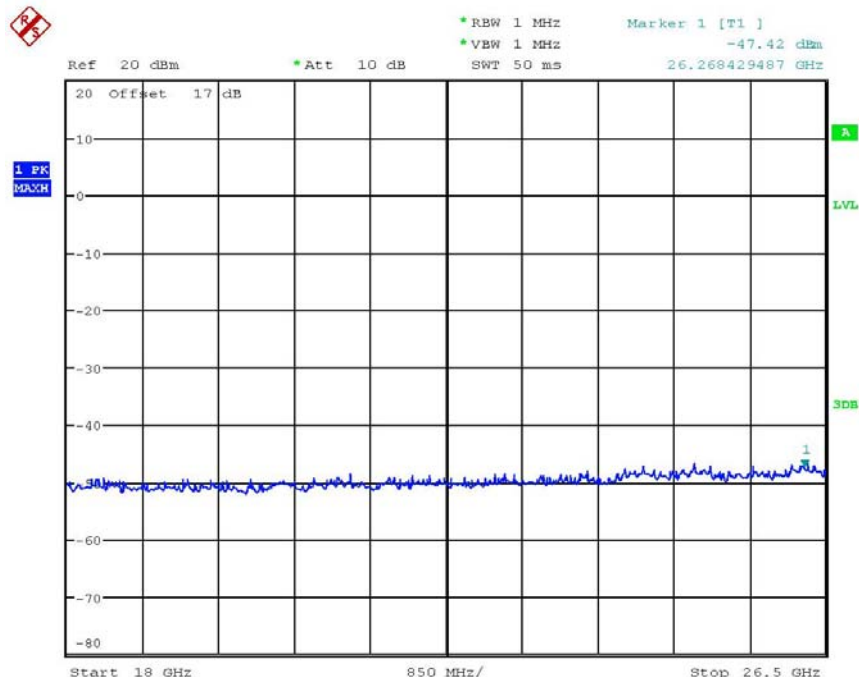


CONDUCTED SPURIOUS EMISSION PCS1900 IDLE

Date: 22.NOV.2013 14:13:05

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



CONDUCTED SPURIOUS EMISSION PCS1900 IDLE  
 Date: 22.NOV.2013 14:12:41

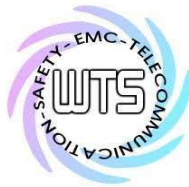
Test equipment: ETSTW-RE 055, ETSTW-GSM 002

## 6.3 Explanation of test result

All factors like cable loss and 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.

## 6.4 Calculation of Limit for Spurious at Antenna Terminals

Compliance with § 22.917(a) requires that any emission be attenuated below the transmitter power at least  $43 + 10 \log P$  (  $P$  = transmitter power in Watts ).  
 Limit for Spurious Emissions at Antenna Terminals:  $L = P - A = -13 \text{ dBm}$



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

## 7. Field Strength of Spurious Radiation

### 7.1 Test procedure

The test procedure for filed strength measurement is same as radiated power except for a notch filter or band pass filter is used to avoid the influence of fundamental to the pre-amplifier.

The measurements below 1GHz were performed with a measurement bandwidth of 100kHz, above 1GHz with a bandwidth of 1 MHz.

### 7.2 Test Results

The measurements of the spurious emission are at the upper, center and lower channel.

CH128\_AC 108V

Model: MVX400

Date: 2013/11/28~2013/12/26

Mode: Active ch128

Temperature: 24 °C

Engineer: Rick

Polarization: Horizontal

Humidity: 60 %

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 115.8518           | -82.38                   | 20.39                   | -61.99          | -13.00      | -48.99         | 140                       | 150                  |
| 169.3387           | -81.72                   | 22.65                   | -59.07          | -13.00      | -46.07         | 240                       | 150                  |
| 268.9380           | -48.23                   | -12.37                  | -60.60          | -13.00      | -47.60         | 240                       | 150                  |
| 644.0882           | -68.92                   | -3.14                   | -72.06          | -13.00      | -59.06         | 100                       | 150                  |
| 1649.2990          | -53.28                   | 0.85                    | -52.43          | -13.00      | -39.43         | 280                       | 150                  |
| 2472.9460          | -51.15                   | 4.27                    | -46.88          | -13.00      | -33.88         | 100                       | 150                  |

Polarization: Vertical

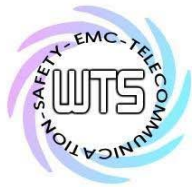
| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 115.1704           | -78.55                   | 21.50                   | -57.05          | -13.00      | -44.05         | 150                       | 150                  |
| 173.4270           | -83.35                   | 23.21                   | -60.14          | -13.00      | -47.14         | 210                       | 150                  |
| 273.7475           | -51.10                   | -10.80                  | -61.90          | -13.00      | -48.90         | 160                       | 150                  |
| 700.2004           | -70.30                   | -3.51                   | -73.81          | -13.00      | -60.81         | 100                       | 150                  |
| 1649.2990          | -43.79                   | -0.86                   | -44.65          | -13.00      | -31.65         | 250                       | 150                  |
| 2472.9460          | -46.01                   | 4.24                    | -41.77          | -13.00      | -28.77         | 110                       | 150                  |

CH128\_AC 132 V

Mode: Active ch128

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 112.1043           | -82.13                   | 20.59                   | -61.54          | -13.00      | -48.54         | 140                       | 150                  |
| 168.9980           | -81.32                   | 22.64                   | -58.68          | -13.00      | -45.68         | 270                       | 150                  |
| 267.3347           | -47.46                   | -12.40                  | -59.86          | -13.00      | -46.86         | 260                       | 150                  |
| 637.6754           | -68.35                   | -3.61                   | -71.96          | -13.00      | -58.96         | 10                        | 150                  |
| 2472.9460          | -54.10                   | 4.27                    | -49.83          | -13.00      | -36.83         | 120                       | 150                  |
| 3296.5930          | -57.12                   | 7.46                    | -49.66          | -13.00      | -36.66         | 200                       | 150                  |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 115.1704           | -78.30                   | 21.50                   | -56.80          | -13.00      | -43.80         | 150                       | 150                  |
| 171.7235           | -82.75                   | 23.19                   | -59.56          | -13.00      | -46.56         | 220                       | 150                  |
| 270.5411           | -51.38                   | -11.05                  | -62.43          | -13.00      | -49.43         | 100                       | 150                  |
| 700.2004           | -68.63                   | -3.51                   | -72.14          | -13.00      | -59.14         | 230                       | 150                  |
| 1643.2860          | -44.18                   | -1.05                   | -45.23          | -13.00      | -32.23         | 110                       | 150                  |
| 2472.9460          | -41.29                   | 4.24                    | -37.05          | -13.00      | -24.05         | 280                       | 150                  |

CH188\_AC 108V

Mode: Active ch188

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 114.8297           | -83.91                   | 20.45                   | -63.46          | -13.00      | -50.46         | 100                       | 150                  |
| 193.1864           | -84.93                   | 21.61                   | -63.32          | -13.00      | -50.32         | 120                       | 150                  |
| 214.4290           | -44.67                   | -15.64                  | -60.31          | -13.00      | -47.31         | 100                       | 150                  |
| 626.4530           | -67.67                   | -4.43                   | -72.10          | -13.00      | -59.10         | 200                       | 150                  |
| 1673.3470          | -55.17                   | 0.93                    | -54.24          | -13.00      | -41.24         | 280                       | 150                  |
| 2509.0180          | -51.77                   | 4.60                    | -47.17          | -13.00      | -34.17         | 120                       | 150                  |

Polarization: Vertical

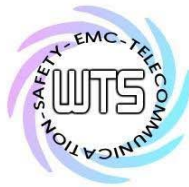
| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 116.1924           | -82.56                   | 21.44                   | -61.12          | -13.00      | -48.12         | 150                       | 150                  |
| 174.1082           | -83.55                   | 23.21                   | -60.34          | -13.00      | -47.34         | 200                       | 150                  |
| 270.5411           | -51.77                   | -11.05                  | -62.82          | -13.00      | -49.82         | 90                        | 150                  |
| 503.0061           | -62.33                   | -7.21                   | -69.54          | -13.00      | -56.54         | 210                       | 150                  |
| 1997.9960          | -55.47                   | 3.36                    | -52.11          | -13.00      | -39.11         | 100                       | 150                  |
| 2509.0180          | -51.15                   | 4.36                    | -46.79          | -13.00      | -33.79         | 270                       | 150                  |

CH188\_AC 132V

Mode: Active ch188

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 112.7856           | -81.07                   | 20.56                   | -60.51          | -13.00      | -47.51         | 120                       | 150                  |
| 173.4270           | -82.39                   | 22.74                   | -59.65          | -13.00      | -46.65         | 150                       | 150                  |
| 268.9380           | -47.73                   | -12.37                  | -60.10          | -13.00      | -47.10         | 100                       | 150                  |
| 624.8497           | -67.61                   | -4.55                   | -72.16          | -13.00      | -59.16         | 280                       | 150                  |
| 2509.0180          | -56.57                   | 4.60                    | -51.97          | -13.00      | -38.97         | 50                        | 150                  |
| 3344.6890          | -56.76                   | 7.58                    | -49.18          | -13.00      | -36.18         | 220                       | 150                  |



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 112.7856           | -82.95                   | 21.64                   | -61.31          | -13.00      | -48.31         | 100                       | 150                  |
| 170.7014           | -83.02                   | 23.19                   | -59.83          | -13.00      | -46.83         | 90                        | 150                  |
| 233.6674           | -49.08                   | -14.00                  | -63.08          | -13.00      | -50.08         | 160                       | 150                  |
| 504.6093           | -61.28                   | -7.14                   | -68.42          | -13.00      | -55.42         | 130                       | 150                  |
| 1673.3470          | -52.82                   | -0.10                   | -52.92          | -13.00      | -39.92         | 100                       | 150                  |
| 2509.0180          | -50.60                   | 4.36                    | -46.24          | -13.00      | -33.24         | 320                       | 150                  |

CH251\_AC 108V

Mode: Active ch 251

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.4670           | -79.63                   | 20.52                   | -59.11          | -13.00      | -46.11         | 180                       | 150                  |
| 164.5692           | -81.52                   | 22.54                   | -58.98          | -13.00      | -45.98         | 240                       | 150                  |
| 267.3347           | -46.71                   | -12.40                  | -59.11          | -13.00      | -46.11         | 150                       | 150                  |
| 655.3106           | -69.73                   | -2.65                   | -72.38          | -13.00      | -59.38         | 100                       | 150                  |
| 1697.3950          | -52.50                   | 1.01                    | -51.49          | -13.00      | -38.49         | 250                       | 150                  |
| 2545.0900          | -51.03                   | 5.09                    | -45.94          | -13.00      | -32.94         | 100                       | 150                  |

Polarization: Vertical

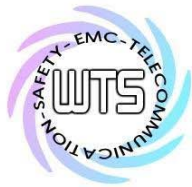
| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 115.1704           | -79.09                   | 21.50                   | -57.59          | -13.00      | -44.59         | 130                       | 150                  |
| 170.3607           | -83.90                   | 23.18                   | -60.72          | -13.00      | -47.72         | 180                       | 150                  |
| 272.1444           | -49.44                   | -10.92                  | -60.36          | -13.00      | -47.36         | 120                       | 150                  |
| 770.7415           | -68.83                   | -3.43                   | -72.26          | -13.00      | -59.26         | 200                       | 150                  |
| 1697.3950          | -43.38                   | 0.67                    | -42.71          | -13.00      | -29.71         | 40                        | 150                  |
| 2545.0900          | -49.77                   | 5.10                    | -44.67          | -13.00      | -31.67         | 250                       | 150                  |

CH251\_AC 132V

Mode: Active ch251

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 42.2645            | -87.15                   | 22.65                   | -64.50          | -13.00      | -51.50         | 100                       | 150                  |
| 140.3808           | -86.34                   | 21.09                   | -65.25          | -13.00      | -52.25         | 240                       | 150                  |
| 268.9380           | -46.72                   | -12.37                  | -59.09          | -13.00      | -46.09         | 140                       | 150                  |
| 644.0882           | -69.06                   | -3.14                   | -72.20          | -13.00      | -59.20         | 280                       | 150                  |
| 1697.3950          | -51.98                   | 1.01                    | -50.97          | -13.00      | -37.97         | 70                        | 150                  |
| 2545.0900          | -50.90                   | 5.09                    | -45.81          | -13.00      | -32.81         | 200                       | 150                  |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 64.7496            | -77.56                   | 20.58                   | -56.98          | -13.00      | -43.98         | 160                       | 150                  |
| 113.8077           | -78.00                   | 21.58                   | -56.42          | -13.00      | -43.42         | 120                       | 150                  |
| 249.6995           | -48.65                   | -12.73                  | -61.38          | -13.00      | -48.38         | 100                       | 150                  |
| 496.5932           | -61.58                   | -7.52                   | -69.10          | -13.00      | -56.10         | 280                       | 150                  |
| 1697.3950          | -44.13                   | 0.67                    | -43.46          | -13.00      | -30.46         | 110                       | 150                  |
| 2545.0900          | -51.52                   | 5.10                    | -46.42          | -13.00      | -33.42         | 280                       | 150                  |

850 Band Idle Mode\_AC 108V

Mode: Idle

Polarization: Horizontal

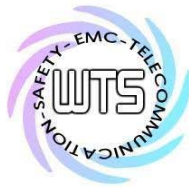
| Frequency<br>(MHz) | Reading<br>(dBuV) | Detector | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 107.7554           | 18.54             | peak     | 12.37          | 30.91              | 43.50             | -12.59         | 305                       | 100                  |
| 224.3888           | 24.63             | peak     | 13.68          | 38.31              | 46.00             | -7.69          | 140                       | 100                  |
| 300.2004           | 26.53             | peak     | 15.91          | 42.44              | 46.00             | -3.56          | 220                       | 100                  |
| 799.7795           | 12.87             | peak     | 25.98          | 38.85              | 46.00             | -7.15          | 85                        | 100                  |

| Frequency<br>(MHz) | Reading<br>(dBuV)<br>Peak Ave. |     | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m)<br>Peak Ave. |     | Limit @3m<br>(dBuV/m)<br>Peak Ave. |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------------|-----|-------------------------|-------------------------------------|-----|------------------------------------|-------|----------------|---------------------------|----------------------|
| 4142.2840          | 43.01                          | --- | -0.42                   | 42.59                               | --- | 74.00                              | 54.00 | -31.41         | 300                       | 100                  |
| 6456.9140          | 40.78                          | --- | 4.22                    | 45.00                               | --- | 74.00                              | 54.00 | -29.00         | 225                       | 100                  |

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) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 39.7194            | 24.28             | peak     | 14.02          | 38.30              | 40.00             | -1.70          | 255                       | 100                  |
| 111.6432           | 16.80             | peak     | 12.92          | 29.72              | 43.50             | -13.78         | 175                       | 100                  |
| 300.2004           | 18.63             | peak     | 15.91          | 34.54              | 46.00             | -11.46         | 200                       | 100                  |
| 801.7233           | 12.42             | peak     | 26.01          | 38.43              | 46.00             | -7.57          | 40                        | 100                  |

| Frequency<br>(MHz) | Reading<br>(dBuV)<br>Peak Ave. |     | Factor<br>(dB)<br>Corr. | Result @3m<br>(dBuV/m)<br>Peak Ave. |     | Limit @3m<br>(dBuV/m)<br>Peak Ave. |       | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------------|-----|-------------------------|-------------------------------------|-----|------------------------------------|-------|----------------|---------------------------|----------------------|
| 5138.2770          | 42.85                          | --- | 1.62                    | 44.47                               | --- | 74.00                              | 54.00 | -29.53         | 155                       | 100                  |
| 6877.7560          | 40.08                          | --- | 5.35                    | 45.43                               | --- | 74.00                              | 54.00 | -28.57         | 70                        | 100                  |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 Band Idle Mode\_AC 132V

Mode: Idle

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 111.6432        | 18.56          | peak     | 12.92       | 31.48           | 43.50          | -12.02      | 280                 | 100            |
| 220.5010        | 25.80          | peak     | 13.60       | 39.40           | 46.00          | -6.60       | 200                 | 100            |
| 300.2004        | 27.28          | peak     | 15.91       | 43.19           | 46.00          | -2.81       | 115                 | 100            |
| 801.7233        | 13.34          | peak     | 26.01       | 39.35           | 46.00          | -6.65       | 25                  | 100            |

| Frequency (MHz) | Reading (dBuV)<br>Peak Ave. |     | Factor (dB)<br>Corr. | Result @3m (dBuV/m)<br>Peak Ave. |     | Limit @3m (dBuV/m)<br>Peak Ave. |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|-----------------------------|-----|----------------------|----------------------------------|-----|---------------------------------|-------|-------------|---------------------|----------------|
| 4464.9300       | 42.84                       | --- | 0.03                 | 42.87                            | --- | 74.00                           | 54.00 | -31.13      | 95                  | 100            |
| 6905.8110       | 40.50                       | --- | 5.46                 | 45.96                            | --- | 74.00                           | 54.00 | -28.04      | 305                 | 100            |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 39.7194         | 24.50          | peak     | 14.02       | 38.52           | 40.00          | -1.48       | 35                  | 100            |
| 113.5872        | 17.91          | peak     | 13.06       | 30.97           | 43.50          | -12.53      | 100                 | 100            |
| 300.2004        | 17.83          | peak     | 15.91       | 33.74           | 46.00          | -12.26      | 190                 | 100            |
| 801.7234        | 11.42          | peak     | 26.01       | 37.43           | 46.00          | -8.57       | 220                 | 100            |

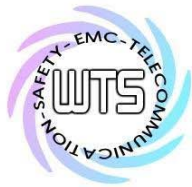
| Frequency (MHz) | Reading (dBuV)<br>Peak Ave. |     | Factor (dB)<br>Corr. | Result @3m (dBuV/m)<br>Peak Ave. |     | Limit @3m (dBuV/m)<br>Peak Ave. |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|-----------------------------|-----|----------------------|----------------------------------|-----|---------------------------------|-------|-------------|---------------------|----------------|
| 4478.9580       | 42.85                       | --- | 0.10                 | 42.95                            | --- | 74.00                           | 54.00 | -31.05      | 255                 | 100            |
| 6653.3060       | 41.20                       | --- | 4.72                 | 45.92                            | --- | 74.00                           | 54.00 | -28.08      | 160                 | 100            |

CH512\_AC 108V

Mode: Active ch 512

Polarization: Horizontal

| Frequency (MHz) | Reading (dBm)<br>Peak | Factor (dB)<br>Corr. | Result (dBm) | Limit (dBm) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|-----------------------|----------------------|--------------|-------------|-------------|---------------------|----------------|
| 114.4890        | -83.31                | 22.61                | -60.70       | -13.00      | -47.70      | 120                 | 150            |
| 170.3607        | -83.44                | 24.82                | -58.62       | -13.00      | -45.62      | 150                 | 150            |
| 328.2565        | -65.24                | -8.80                | -74.04       | -13.00      | -61.04      | 120                 | 150            |
| 801.2024        | -66.63                | -2.34                | -68.97       | -13.00      | -55.97      | 300                 | 150            |
| 3603.2060       | -61.47                | 11.02                | -50.45       | -13.00      | -37.45      | 210                 | 150            |
| 5547.0940       | -65.86                | 12.34                | -53.52       | -13.00      | -40.52      | 80                  | 150            |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 72.2446            | -82.57                   | 22.99                   | -59.58          | -13.00      | -46.58         | 120                       | 150                  |
| 116.1924           | -81.70                   | 23.59                   | -58.11          | -13.00      | -45.11         | 240                       | 150                  |
| 299.3987           | -66.92                   | -7.46                   | -74.38          | -13.00      | -61.38         | 100                       | 150                  |
| 801.2024           | -71.63                   | -1.02                   | -72.65          | -13.00      | -59.65         | 270                       | 150                  |
| 3705.4110          | -56.95                   | 11.22                   | -45.73          | -13.00      | -32.73         | 300                       | 150                  |
| 5547.0940          | -67.03                   | 12.59                   | -54.44          | -13.00      | -41.44         | 110                       | 150                  |

CH512\_AC 132V

Mode: Active ch 512

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.4670           | -85.03                   | 22.67                   | -62.36          | -13.00      | -49.36         | 300                       | 150                  |
| 173.4270           | -85.11                   | 24.89                   | -60.22          | -13.00      | -47.22         | 100                       | 150                  |
| 313.8277           | -62.68                   | -9.36                   | -72.04          | -13.00      | -59.04         | 200                       | 150                  |
| 799.5992           | -66.43                   | -2.38                   | -68.81          | -13.00      | -55.81         | 130                       | 150                  |
| 3705.4110          | -61.62                   | 10.77                   | -50.85          | -13.00      | -37.85         | 200                       | 150                  |
| 5547.0940          | -66.46                   | 12.34                   | -54.12          | -13.00      | -41.12         | 100                       | 150                  |

Polarization: Vertical

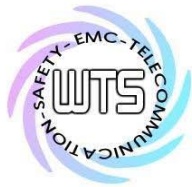
| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 116.1924           | -80.08                   | 23.59                   | -56.49          | -13.00      | -43.49         | 140                       | 150                  |
| 167.9760           | -85.02                   | 25.31                   | -59.71          | -13.00      | -46.71         | 170                       | 150                  |
| 299.3987           | -66.80                   | -7.46                   | -74.26          | -13.00      | -61.26         | 200                       | 150                  |
| 801.2024           | -74.82                   | -1.02                   | -75.84          | -13.00      | -62.84         | 110                       | 150                  |
| 3705.4110          | -56.93                   | 11.22                   | -45.71          | -13.00      | -32.71         | 250                       | 150                  |
| 5803.6070          | -67.65                   | 13.24                   | -54.41          | -13.00      | -41.41         | 100                       | 150                  |

CH661\_AC 108V

Mode: Active ch 661

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 139.3587           | -86.58                   | 23.18                   | -63.40          | -13.00      | -50.40         | 190                       | 150                  |
| 191.1423           | -84.27                   | 23.96                   | -60.31          | -13.00      | -47.31         | 320                       | 150                  |
| 313.8277           | -62.73                   | -9.36                   | -72.09          | -13.00      | -59.09         | 140                       | 150                  |
| 799.5992           | -66.13                   | -2.38                   | -68.51          | -13.00      | -55.51         | 300                       | 150                  |
| 3759.5190          | -61.25                   | 11.09                   | -50.16          | -13.00      | -37.16         | 120                       | 150                  |
| 5386.7740          | -67.89                   | 12.59                   | -55.30          | -13.00      | -42.30         | 200                       | 150                  |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 114.4890           | -79.36                   | 23.69                   | -55.67          | -13.00      | -42.67         | 150                       | 150                  |
| 167.2946           | -85.02                   | 25.31                   | -59.71          | -13.00      | -46.71         | 100                       | 150                  |
| 249.6994           | -62.94                   | -10.58                  | -73.52          | -13.00      | -60.52         | 140                       | 150                  |
| 799.5992           | -66.71                   | -1.03                   | -67.74          | -13.00      | -54.74         | 270                       | 150                  |
| 3759.5190          | -54.90                   | 11.78                   | -43.12          | -13.00      | -30.12         | 230                       | 150                  |
| 4392.7860          | -65.00                   | 10.07                   | -54.93          | -13.00      | -41.93         | 100                       | 150                  |

CH661\_AC 132V

Mode: Active ch 661

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.1263           | -83.40                   | 22.69                   | -60.71          | -13.00      | -47.71         | 120                       | 150                  |
| 171.0421           | -83.76                   | 24.83                   | -58.93          | -13.00      | -45.93         | 240                       | 150                  |
| 315.4310           | -62.88                   | -9.28                   | -72.16          | -13.00      | -59.16         | 250                       | 150                  |
| 799.5992           | -66.20                   | -2.38                   | -68.58          | -13.00      | -55.58         | 170                       | 150                  |
| 3597.1940          | -61.29                   | 10.98                   | -50.31          | -13.00      | -37.31         | 200                       | 150                  |
| 5402.8060          | -68.15                   | 12.78                   | -55.37          | -13.00      | -42.37         | 250                       | 150                  |

Polarization: Vertical

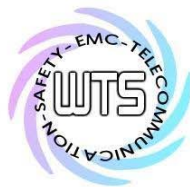
| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 71.9040            | -76.01                   | 22.94                   | -53.07          | -13.00      | -40.07         | 180                       | 150                  |
| 167.6353           | -84.65                   | 25.31                   | -59.34          | -13.00      | -46.34         | 210                       | 150                  |
| 301.0020           | -66.50                   | -7.47                   | -73.97          | -13.00      | -60.97         | 200                       | 150                  |
| 799.5992           | -67.63                   | -1.03                   | -68.66          | -13.00      | -55.66         | 170                       | 150                  |
| 3765.5310          | -54.51                   | 11.85                   | -42.66          | -13.00      | -29.66         | 200                       | 150                  |
| 5643.2870          | -66.08                   | 12.14                   | -53.94          | -13.00      | -40.94         | 60                        | 150                  |

CH810\_AC 108V

Mode: Active ch 810

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.4670           | -84.75                   | 22.67                   | -62.08          | -13.00      | -49.08         | 120                       | 150                  |
| 190.8015           | -83.91                   | 23.99                   | -59.92          | -13.00      | -46.92         | 20                        | 150                  |
| 313.8277           | -61.72                   | -9.36                   | -71.08          | -13.00      | -58.08         | 110                       | 150                  |
| 801.2024           | -65.71                   | -2.34                   | -68.05          | -13.00      | -55.05         | 210                       | 150                  |
| 3603.2060          | -62.10                   | 11.02                   | -51.08          | -13.00      | -38.08         | 200                       | 150                  |
| 5378.7570          | -67.89                   | 12.46                   | -55.43          | -13.00      | -42.43         | 250                       | 150                  |



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.8077           | -80.08                   | 23.73                   | -56.35          | -13.00      | -43.35         | 170                       | 150                  |
| 194.2084           | -82.11                   | 23.90                   | -58.21          | -13.00      | -45.21         | 240                       | 150                  |
| 323.4470           | -65.54                   | -8.32                   | -73.86          | -13.00      | -60.86         | 100                       | 150                  |
| 801.2024           | -66.21                   | -1.02                   | -67.23          | -13.00      | -54.23         | 250                       | 150                  |
| 3819.6390          | -54.78                   | 12.07                   | -42.71          | -13.00      | -29.71         | 70                        | 150                  |
| 5843.6870          | -67.43                   | 13.10                   | -54.33          | -13.00      | -41.33         | 200                       | 150                  |

CH810\_AC 132V

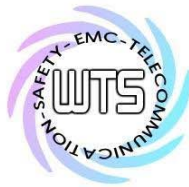
Mode: Active ch 810

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 113.8077           | -82.45                   | 22.65                   | -59.80          | -13.00      | -46.80         | 100                       | 150                  |
| 165.2505           | -83.77                   | 24.71                   | -59.06          | -13.00      | -46.06         | 210                       | 150                  |
| 312.2243           | -62.86                   | -9.43                   | -72.29          | -13.00      | -59.29         | 120                       | 150                  |
| 799.5992           | -66.17                   | -2.38                   | -68.55          | -13.00      | -55.55         | 300                       | 150                  |
| 3603.2060          | -61.74                   | 11.02                   | -50.72          | -13.00      | -37.72         | 200                       | 150                  |
| 4785.5710          | -66.34                   | 11.71                   | -54.63          | -13.00      | -41.63         | 170                       | 150                  |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit (dBm) | Margin<br>(dB) | Table<br>Degree<br>(Deg.) | Ant.<br>High<br>(cm) |
|--------------------|--------------------------|-------------------------|-----------------|-------------|----------------|---------------------------|----------------------|
| 83.8277            | -81.55                   | 23.93                   | -57.62          | -13.00      | -44.62         | 180                       | 150                  |
| 113.8077           | -79.60                   | 23.73                   | -55.87          | -13.00      | -42.87         | 310                       | 150                  |
| 299.3987           | -65.56                   | -7.46                   | -73.02          | -13.00      | -60.02         | 110                       | 150                  |
| 801.2024           | -67.15                   | -1.02                   | -68.17          | -13.00      | -55.17         | 270                       | 150                  |
| 3759.5190          | -54.83                   | 11.78                   | -43.05          | -13.00      | -30.05         | 250                       | 150                  |
| 5410.8220          | -67.83                   | 13.10                   | -54.73          | -13.00      | -41.73         | 250                       | 150                  |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 Band Idle Mode\_AC 108V

Mode: Idle

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 113.5871        | 19.10          | peak     | 13.06       | 32.16           | 43.50          | -11.34      | 260                 | 100            |
| 222.4448        | 25.86          | peak     | 13.64       | 39.50           | 46.00          | -6.50       | 115                 | 100            |
| 300.2004        | 26.28          | peak     | 15.91       | 42.19           | 46.00          | -3.81       | 70                  | 100            |
| 801.7233        | 12.94          | peak     | 26.01       | 38.95           | 46.00          | -7.05       | 155                 | 100            |

| Frequency (MHz) | Reading (dBuV)<br>Peak Ave. |     | Factor (dB)<br>Corr. | Result @3m (dBuV/m)<br>Peak Ave. |     | Limit @3m (dBuV/m)<br>Peak Ave. |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|-----------------------------|-----|----------------------|----------------------------------|-----|---------------------------------|-------|-------------|---------------------|----------------|
| 4464.9300       | 42.69                       | --- | 0.03                 | 42.72                            | --- | 74.00                           | 54.00 | -31.28      | 165                 | 100            |
| 6877.7560       | 40.99                       | --- | 5.35                 | 46.34                            | --- | 74.00                           | 54.00 | -27.66      | 90                  | 100            |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 39.7194         | 24.08          | peak     | 14.02       | 38.10           | 40.00          | -1.90       | 175                 | 100            |
| 113.5872        | 17.97          | peak     | 13.06       | 31.03           | 43.50          | -12.47      | 55                  | 100            |
| 300.2004        | 18.48          | peak     | 15.91       | 34.39           | 46.00          | -11.61      | 130                 | 100            |
| 799.7796        | 11.49          | peak     | 25.98       | 37.47           | 46.00          | -8.53       | 280                 | 100            |

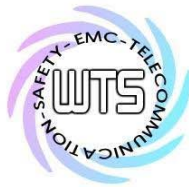
| Frequency (MHz) | Reading (dBuV)<br>Peak Ave. |     | Factor (dB)<br>Corr. | Result @3m (dBuV/m)<br>Peak Ave. |     | Limit @3m (dBuV/m)<br>Peak Ave. |       | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|-----------------------------|-----|----------------------|----------------------------------|-----|---------------------------------|-------|-------------|---------------------|----------------|
| 4703.4070       | 42.98                       | --- | 0.24                 | 43.22                            | --- | 74.00                           | 54.00 | -30.78      | 325                 | 100            |
| 6456.9140       | 40.91                       | --- | 4.22                 | 45.13                            | --- | 74.00                           | 54.00 | -28.87      | 50                  | 100            |

1900 Band Idle Mode\_AC 132V

Mode: Idle

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 111.6432        | 19.21          | peak     | 12.92       | 32.13           | 43.50          | -11.37      | 270                 | 100            |
| 222.4448        | 23.92          | peak     | 13.64       | 37.56           | 46.00          | -8.44       | 165                 | 100            |
| 300.2004        | 26.89          | peak     | 15.91       | 42.80           | 46.00          | -3.20       | 90                  | 100            |
| 799.7795        | 13.53          | peak     | 25.98       | 39.51           | 46.00          | -6.49       | 320                 | 100            |



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| 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.  |                |                           |                      |
| 4675.3510          | 42.94             | ---  | 0.19                    | 43.13                  | ---  | 74.00                 | 54.00 | -30.87         | 40                        | 100                  |
| 6555.1100          | 40.79             | ---  | 4.52                    | 45.31                  | ---  | 74.00                 | 54.00 | -28.69         | 180                       | 100                  |

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) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 39.7194            | 24.46             | peak     | 14.02          | 38.48              | 40.00             | -1.52          | 150                       | 100                  |
| 222.4450           | 17.63             | peak     | 13.64          | 31.27              | 46.00             | -14.73         | 310                       | 100                  |
| 300.2004           | 17.92             | peak     | 15.91          | 33.83              | 46.00             | -12.17         | 40                        | 100                  |
| 801.7234           | 12.13             | peak     | 26.01          | 38.14              | 46.00             | -7.86          | 265                       | 100                  |

| 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.  |                |                           |                      |
| 4703.4070          | 42.25             | ---  | 0.24                    | 42.49                  | ---  | 74.00                 | 54.00 | -31.51         | 125                       | 100                  |
| 6905.8110          | 40.25             | ---  | 5.46                    | 45.71                  | ---  | 74.00                 | 54.00 | -28.29         | 230                       | 100                  |

Note: Please refer to appendix for plot data.

### 7.3 Explanation of test result

Result Level = Reading Level + Corrected Factor

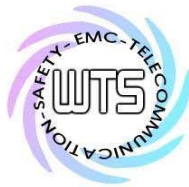
Corrected Factor = SG level – Received level-Cable loss + substitution antenna gain

### 7.4 Calculation of Limit for Field Strength of Spurious

Compliance with § 24.238(a) requires that any emission be attenuated below the transmitter power at least  $43 + 10 \log P$  (  $P$  = transmitter power in Watts ).

Limit for Spurious Emissions at Antenna Terminals:  $L=P-A=-13\text{dBm}$

Test equipment: ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 030, ETSTW-RE 111,  
ETSTW-GSM 002



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

## 7.5 Test result of band edge emissions

### 850 band

Model: MVX400 Date: 2013/11/29  
Mode: 850band Ch128 Temperature: 24 °C Engineer: Rick  
Polarization: Horizontal Humidity: 60 %

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 823.9950           | -49.18                   | 31.74                   | -17.44          | -13.00         | -4.44          |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 823.9970           | -48.88                   | 32.60                   | -16.28          | -13.00         | -3.28          |

Mode: 850band Ch251

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 849.0070           | -51.55                   | 32.79                   | -18.76          | -13.00         | -5.76          |

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 849.0050           | -50.31                   | 32.76                   | -17.55          | -13.00         | -4.55          |

### 1900 band

Mode: 1900band Ch512

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 1849.9910          | -61.40                   | 43.90                   | -17.50          | -13.00         | -4.50          |

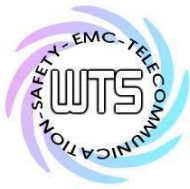
Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 1849.9970          | -64.38                   | 43.86                   | -20.52          | -13.00         | -7.52          |

Mode: 1900band Ch810

Polarization: Horizontal

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 1910.0090          | -69.77                   | 44.07                   | -25.70          | -13.00         | -12.70         |



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FCC ID: 2ABGRMVX400

Polarization: Vertical

| Frequency<br>(MHz) | Reading<br>(dBm)<br>Peak | Factor<br>(dB)<br>Corr. | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|--------------------------|-------------------------|-----------------|----------------|----------------|
| 1910.0090          | -66.49                   | 43.82                   | -22.67          | -13.00         | -9.67          |

Note: Please refer to appendix for plot data.

Test equipment: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111, ETSTW-GSM 002

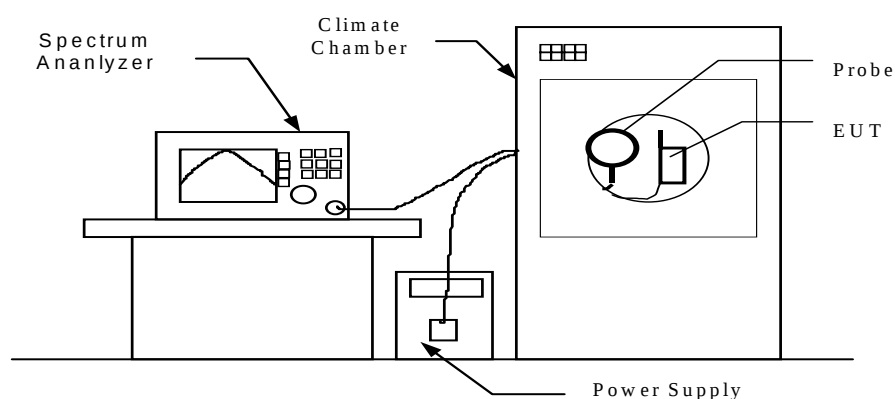
Report Number: W6M21309-13566-P-2224

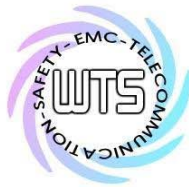
FCC ID: 2ABGRMVX400

## 8. Frequency Stability

### 8.1 Test procedure

- ☒ The equipment under test was supplied with rated power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable, exited the chamber through an opening made for that purpose.  
After the temperature stabilized the frequency output was recorded from the counter.
- ☐ An external variable power supply was used to supply nominal voltage and 85% to 115% of nominal voltage to the EUT under room temperature. Record the frequencies measured from the counter.
- ☒ End point voltage: For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer. Then record the frequencies measured from the counter.





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## 8.2 Test Results

### 8.2.1 Frequency Stability vs. Temperature

CH128 824.2 MHz

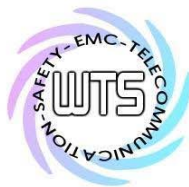
| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 16.000                | 0.019                 | ±2.5        |
|                  | -20              | 15.000                | 0.018                 |             |
|                  | -10              | 13.000                | 0.016                 |             |
|                  | 0                | 14.000                | 0.017                 |             |
|                  | 10               | 13.000                | 0.016                 |             |
|                  | 20               | 18.000                | 0.022                 |             |
|                  | 30               | 18.000                | 0.022                 |             |
|                  | 40               | 12.000                | 0.015                 |             |
|                  | 50               | 20.000                | 0.024                 |             |

CH188 836.2 MHz

| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 14.000                | 0.017                 | ±2.5        |
|                  | -20              | 15.000                | 0.018                 |             |
|                  | -10              | 14.000                | 0.017                 |             |
|                  | 0                | 26.000                | 0.031                 |             |
|                  | 10               | 13.000                | 0.016                 |             |
|                  | 20               | 13.000                | 0.016                 |             |
|                  | 30               | 18.000                | 0.022                 |             |
|                  | 40               | 21.000                | 0.025                 |             |
|                  | 50               | 21.000                | 0.025                 |             |

CH251 848.8 MHz

| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 19.000                | 0.022                 | ±2.5        |
|                  | -20              | 25.000                | 0.029                 |             |
|                  | -10              | 19.000                | 0.022                 |             |
|                  | 0                | 25.000                | 0.029                 |             |
|                  | 10               | 17.000                | 0.020                 |             |
|                  | 20               | 16.000                | 0.019                 |             |
|                  | 30               | 21.000                | 0.025                 |             |
|                  | 40               | 25.000                | 0.029                 |             |
|                  | 50               | 26.000                | 0.031                 |             |



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

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

CH512 1850.2 MHz

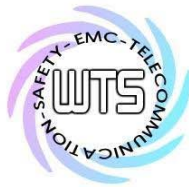
| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 73.000                | 0.039                 | ±2.5        |
|                  | -20              | 73.000                | 0.039                 |             |
|                  | -10              | 71.000                | 0.038                 |             |
|                  | 0                | 62.000                | 0.034                 |             |
|                  | 10               | 63.000                | 0.034                 |             |
|                  | 20               | 70.000                | 0.038                 |             |
|                  | 30               | 60.000                | 0.032                 |             |
|                  | 40               | 58.000                | 0.031                 |             |
|                  | 50               | 65.000                | 0.035                 |             |

CH661 1880.0 MHz

| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 70.000                | 0.037                 | ±2.5        |
|                  | -20              | 76.000                | 0.040                 |             |
|                  | -10              | 69.000                | 0.037                 |             |
|                  | 0                | 68.000                | 0.036                 |             |
|                  | 10               | 65.000                | 0.035                 |             |
|                  | 20               | 66.000                | 0.035                 |             |
|                  | 30               | 63.000                | 0.034                 |             |
|                  | 40               | 62.000                | 0.033                 |             |
|                  | 50               | 62.000                | 0.033                 |             |

CH810 1909.8 MHz

| Supplied Voltage | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|------------------|------------------|-----------------------|-----------------------|-------------|
| AC 120V          | -30              | 69.000                | 0.036                 | ±2.5        |
|                  | -20              | 79.000                | 0.041                 |             |
|                  | -10              | 74.000                | 0.039                 |             |
|                  | 0                | 78.000                | 0.041                 |             |
|                  | 10               | 65.000                | 0.034                 |             |
|                  | 20               | 64.000                | 0.034                 |             |
|                  | 30               | 61.000                | 0.032                 |             |
|                  | 40               | 67.000                | 0.035                 |             |
|                  | 50               | 60.000                | 0.031                 |             |



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

## **8.2.2 Frequency Stability vs. Voltage**

CH128

| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 27.000                | 0.033                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 18.000                | 0.022                 | ±2.5        |

CH188

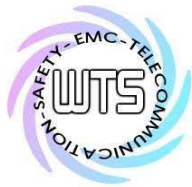
| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 25.000                | 0.030                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 26.000                | 0.031                 | ±2.5        |

CH251

| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 24.000                | 0.028                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 25.000                | 0.029                 | ±2.5        |

CH512

| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 57.000                | 0.031                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 77.000                | 0.042                 | ±2.5        |



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

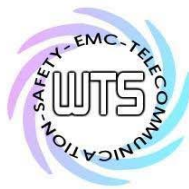
CH661

| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 63.000                | 0.034                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 75.000                | 0.040                 | ±2.5        |

CH810

| Supplied Voltage              | Temperature (°C) | Frequency Drift (kHz) | Frequency Drift (ppm) | Limit (ppm) |
|-------------------------------|------------------|-----------------------|-----------------------|-------------|
| Normal Voltage<br>AC 108 V    | 25               | 70.000                | 0.037                 | ±2.5        |
| End Point Voltage<br>AC 132 V | 25               | 64.000                | 0.034                 | ±2.5        |

Test equipment: ETSTW-CE 009, ETSTW-RE 055, ETSTW-GSM 002



Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

## 9 Maximum Permissible Exposure

### 9.1 Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

### 9.2 MPE Calculation Method

#### (A) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                 |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f <sup>2</sup> )*                  | 6                                                                 |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                 |
| 300-1500              | --                                | --                                | f/300                                   | 6                                                                 |
| 1500-100,000          | --                                | --                                | 5                                       | 6                                                                 |

#### (B) Limits for General Population/Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                  | 30                                                                |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f <sup>2</sup> )*                  | 30                                                                |
| 30-300                | 27.5                              | 0.073                             | 0.2                                     | 30                                                                |
| 300-1500              | --                                | --                                | f/1500                                  | 30                                                                |
| 1500-100,000          | --                                | --                                | 1.0                                     | 30                                                                |

f = frequency in MHz

\*Plane-wave equivalent power density

$$E \text{ (V/m)} \cdot \frac{\sqrt{30 \times P \times G}}{d}$$

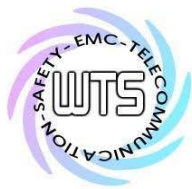
$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} \cdot \frac{E^2}{377}$$

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

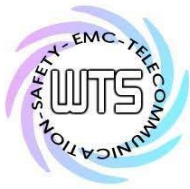
$$Pd \cdot \frac{30 \times P \times G}{377 \times d^2}$$



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| Frequency | Max output power<br>(dBm) / (W) |       | Antenna<br>Gain | Power Density(S)<br>(mW/cm <sup>2</sup> ) | Limit of Power Density (S)<br>(mW/cm <sup>2</sup> ) | Test Result |
|-----------|---------------------------------|-------|-----------------|-------------------------------------------|-----------------------------------------------------|-------------|
| GSM 850   | 33.31                           | 2.143 | 3               | 0.8506                                    | 1.0                                                 | Complies    |
| PCS 1900  | 29.55                           | 0.902 | 3               | 0.3579                                    | 1.0                                                 | Complies    |

From the peak EUT RF output power, the minimum mobile separation distance,  $d=0.2$  m, as well as the gain of the used antenna, the RF power density can be obtained.

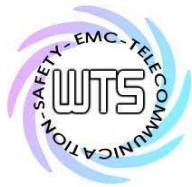


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FCC ID: 2ABGRMVX400

## **Appendix**

### Measurement diagrams

1. RF Power Output
2. Filed Strength of Spurious Emission
3. Band edge emissions



Report Number: W6M21309-13566-P-2224

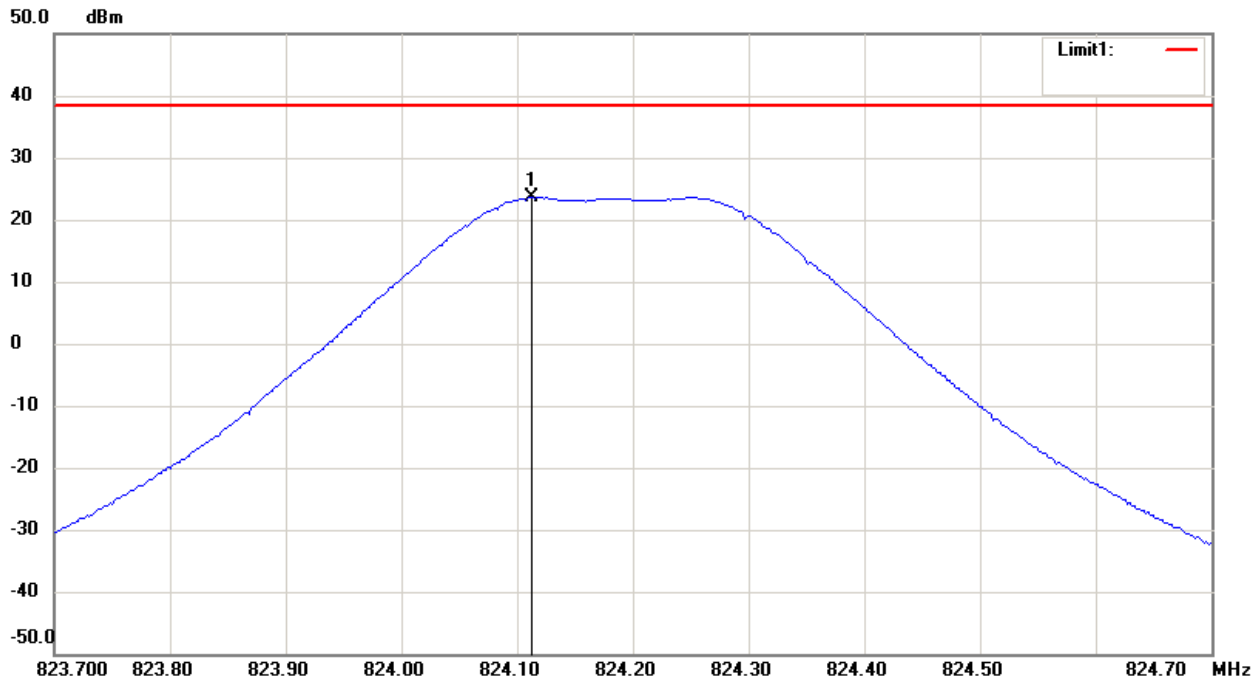
FCC ID: 2ABGRMVX400

RF Power Output

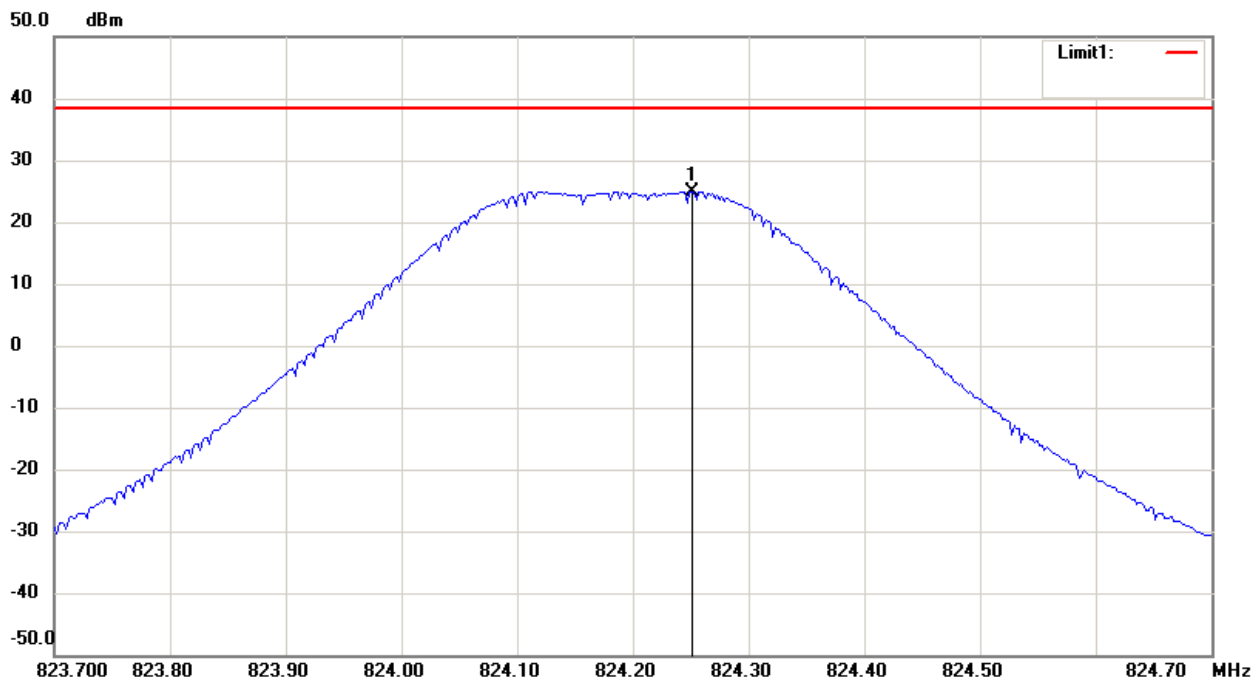
Radiated Measurement

850 band\_ CH 128\_108 V

Antenna Polarization H

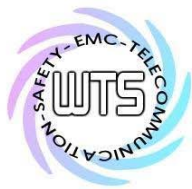


Antenna Polarization V



**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.



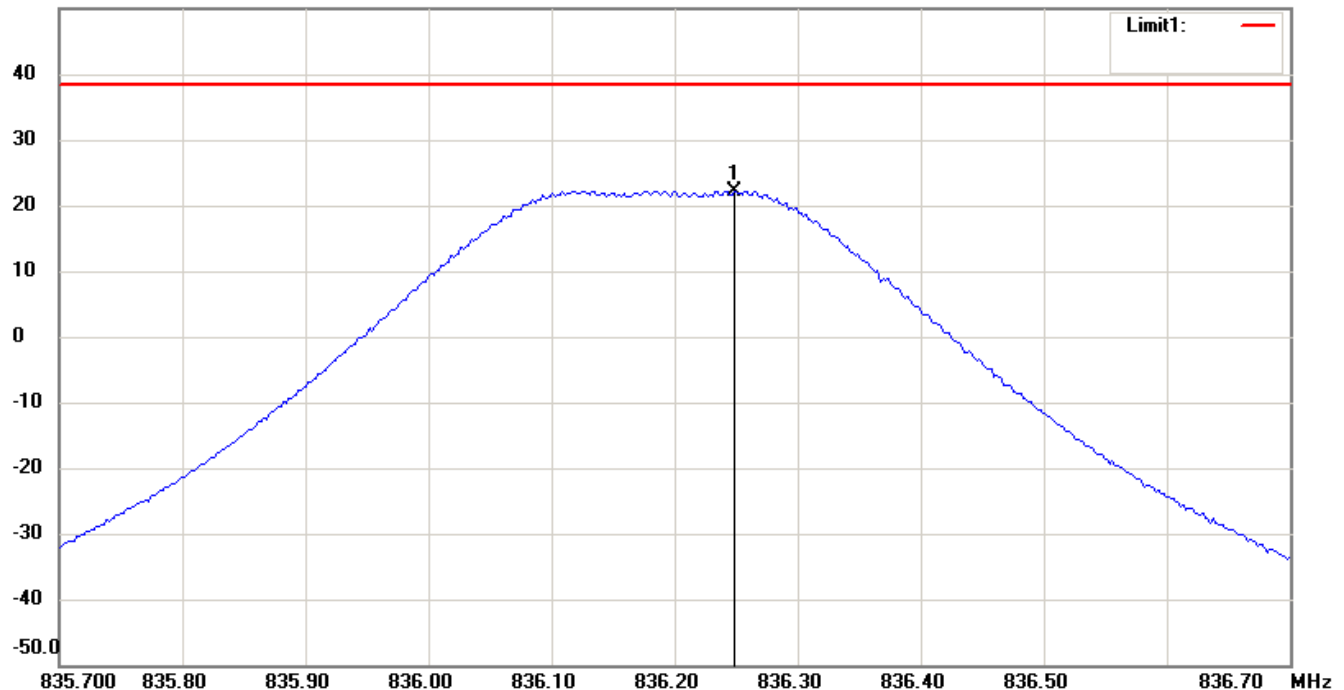
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_ CH 188\_108 V

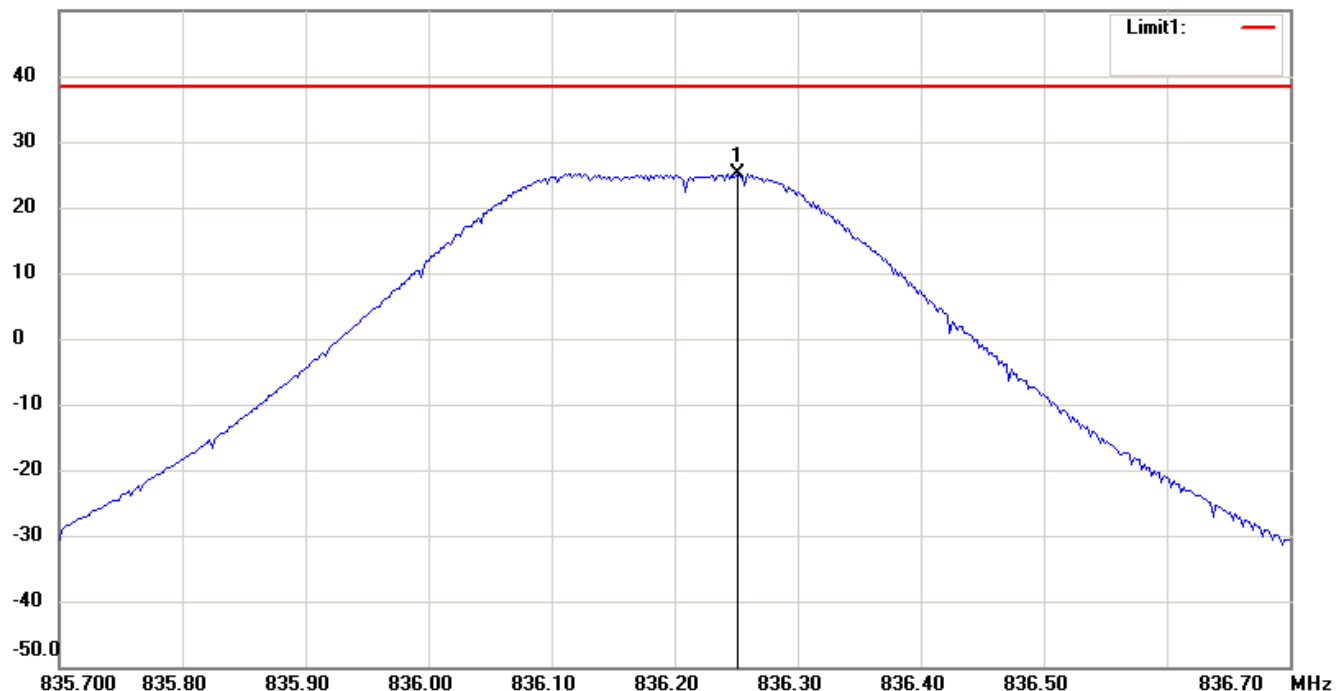
Antenna Polarization H

50.0 dBm



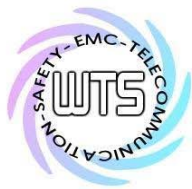
Antenna Polarization V

50.0 dBm



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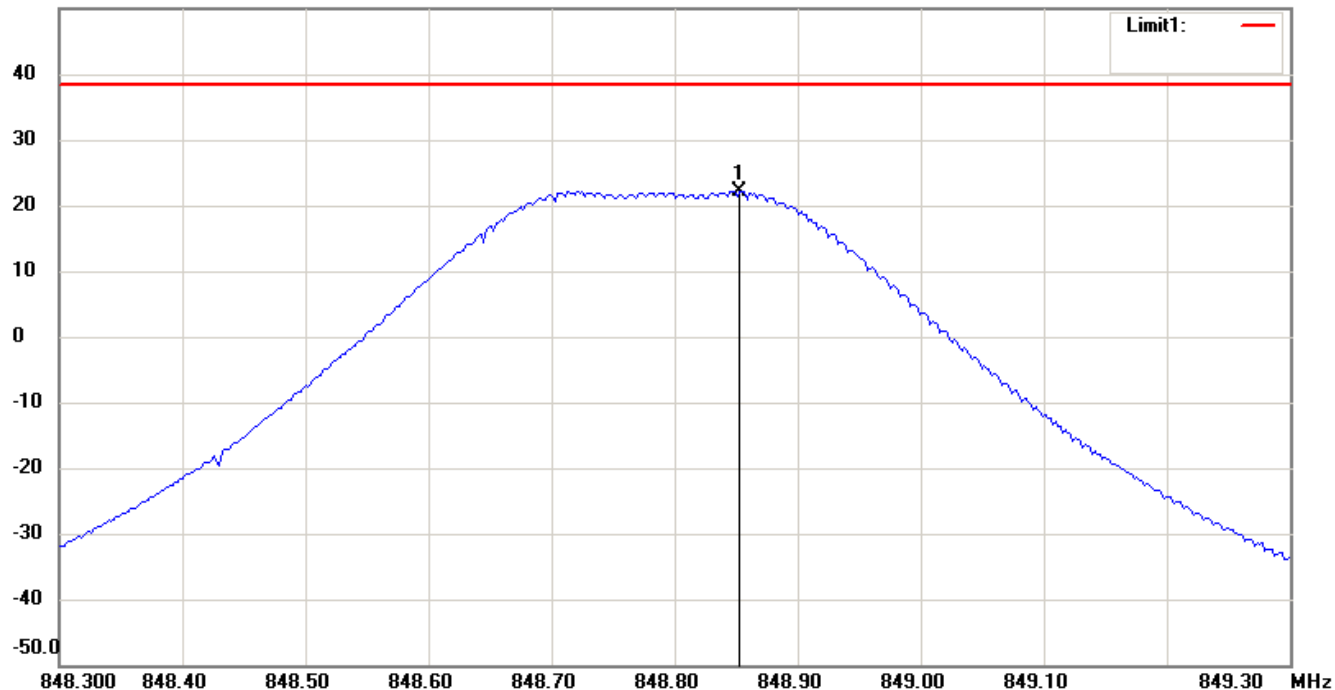
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_ CH 251\_108 V

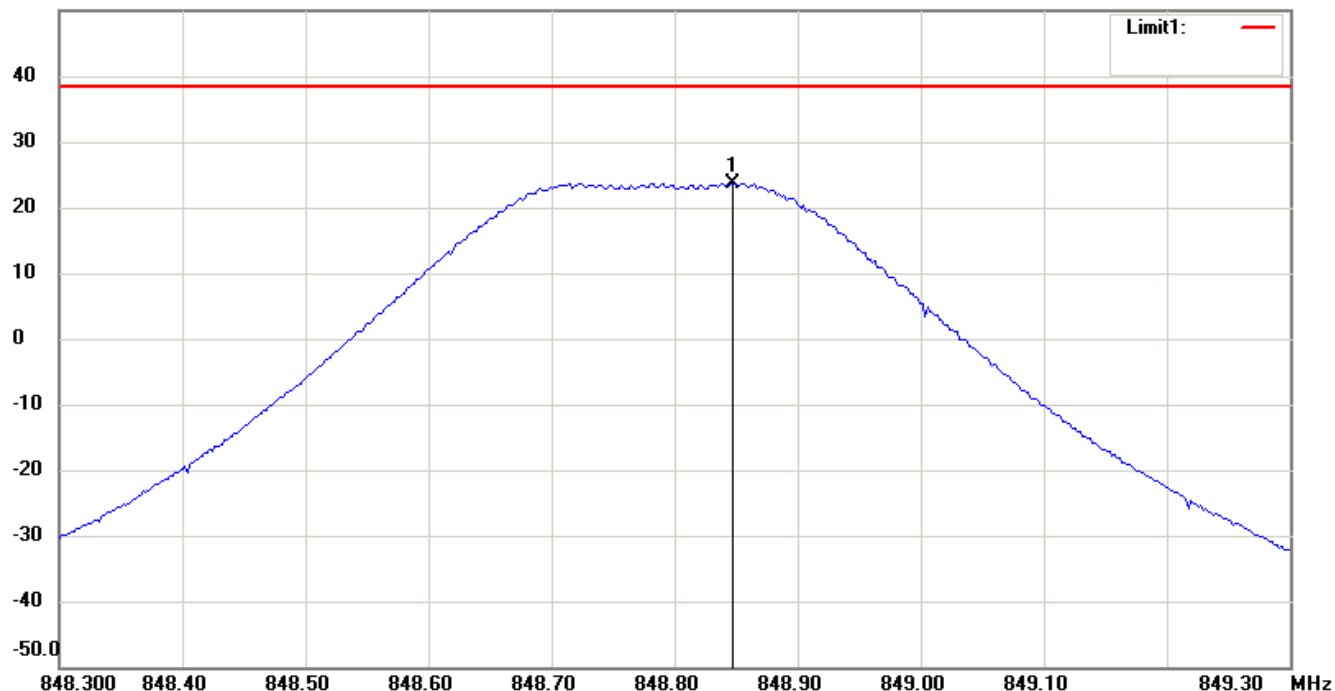
Antenna Polarization H

50.0 dBm



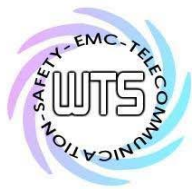
Antenna Polarization V

50.0 dBm



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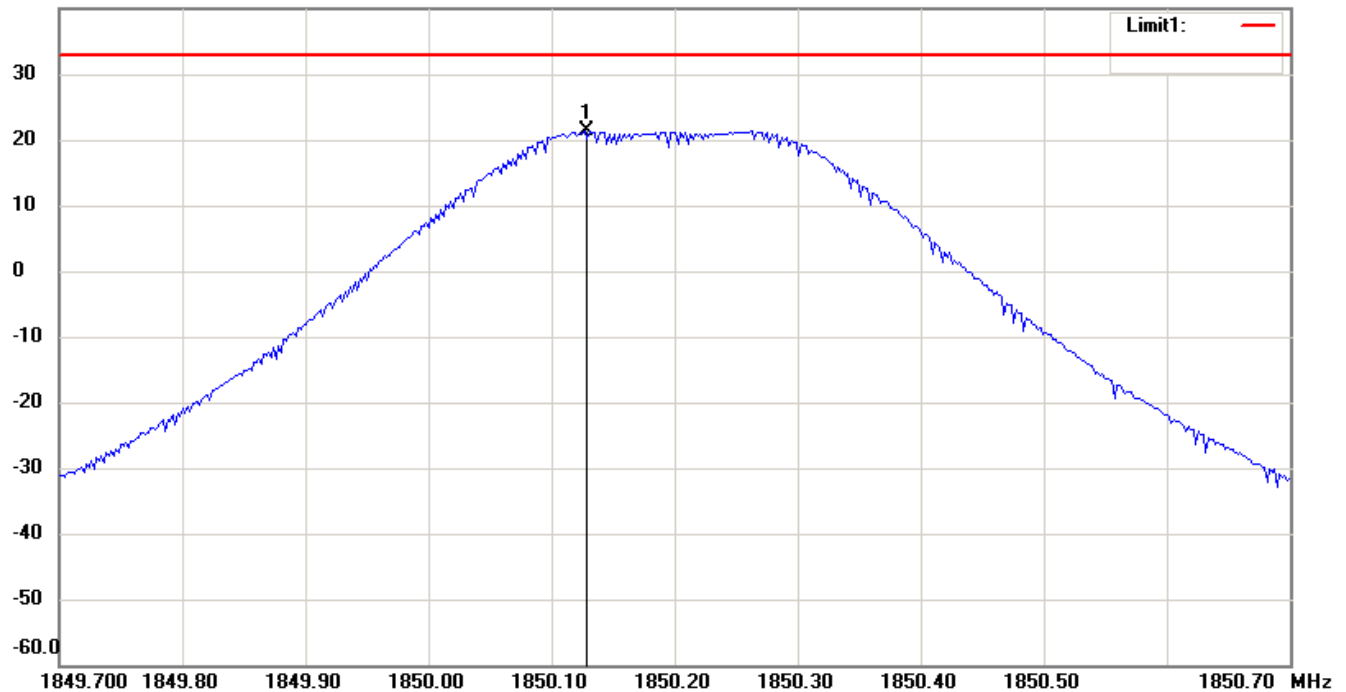
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 512\_108 V

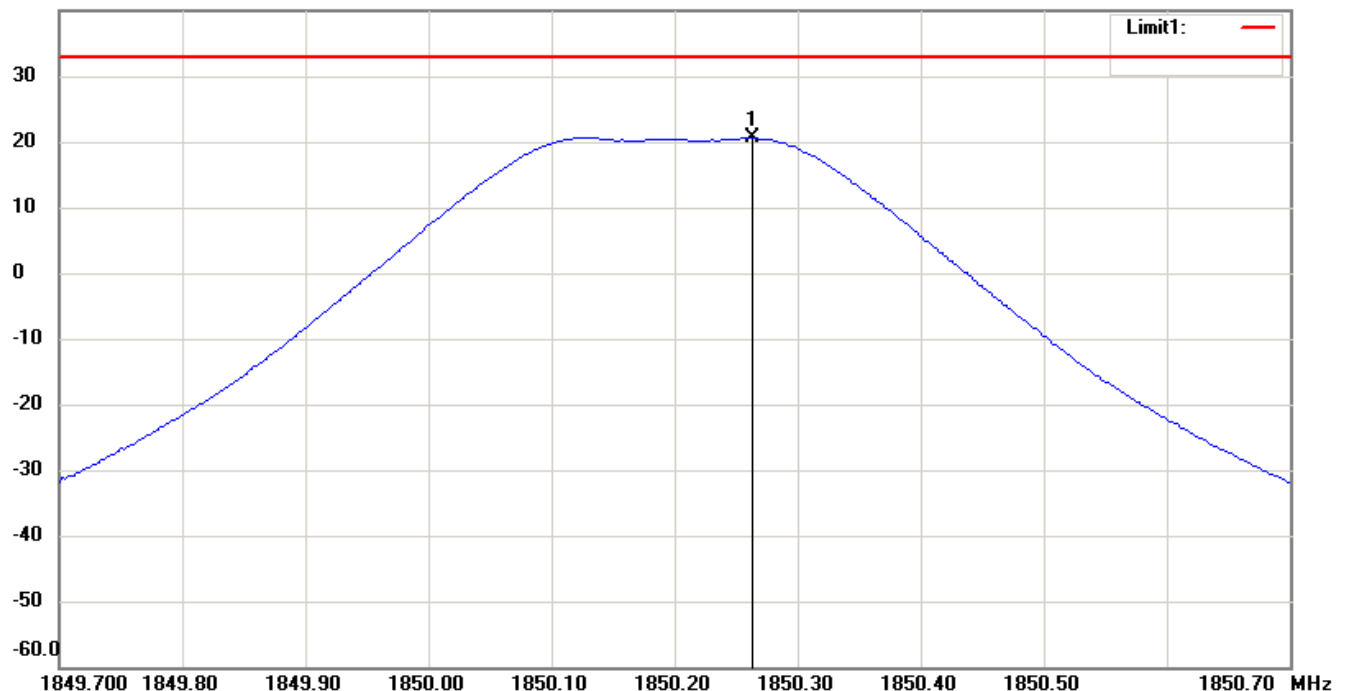
Antenna Polarization H

40.0 dBm



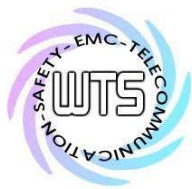
Antenna Polarization V

40.0 dBm



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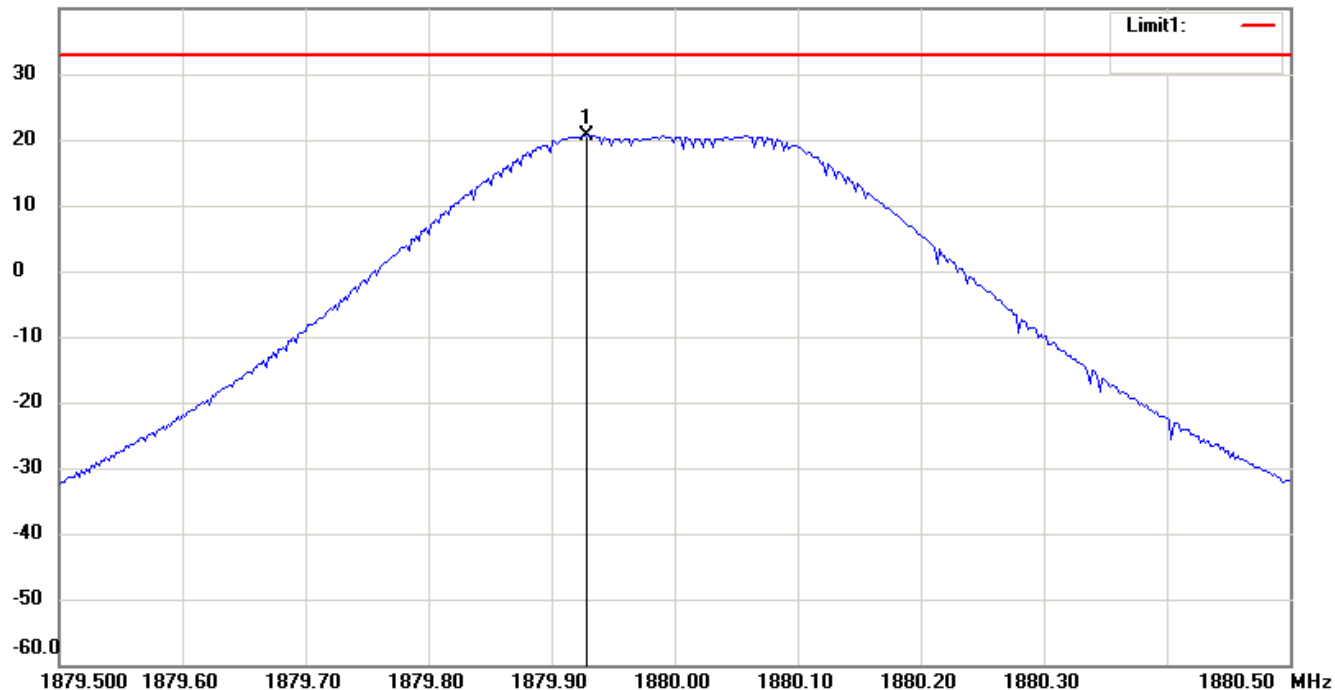
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 661\_108 V

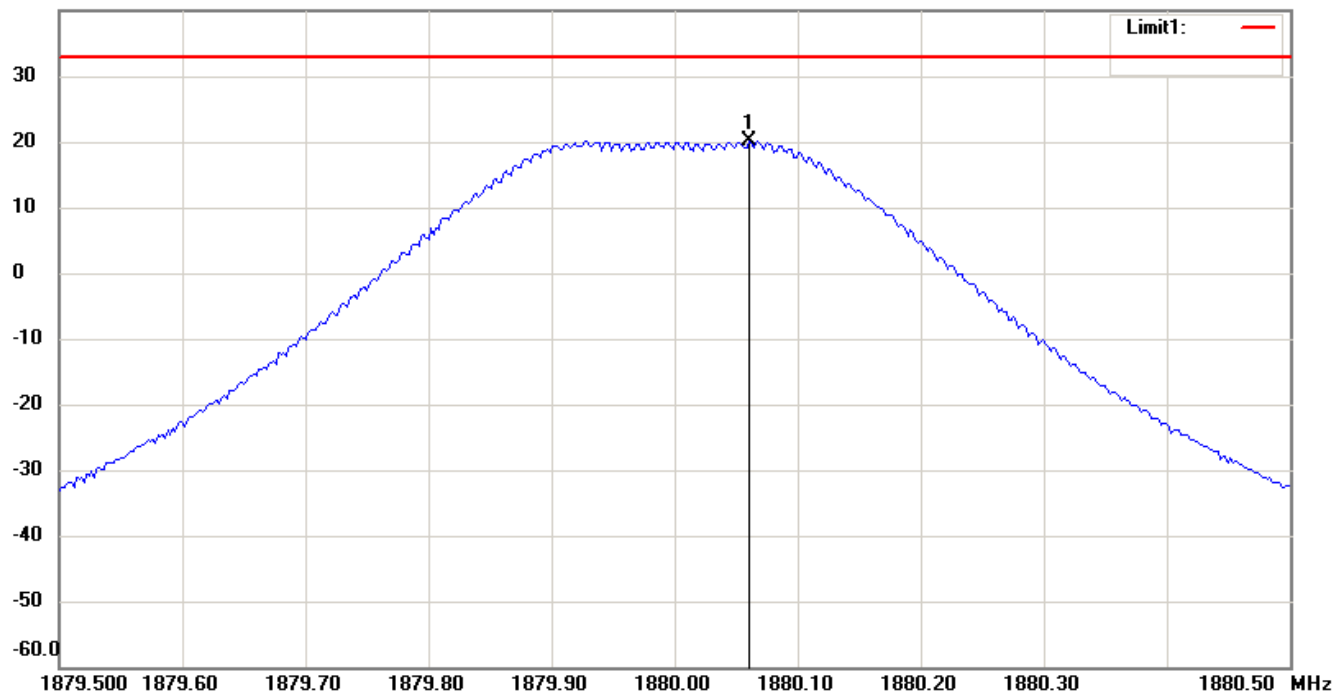
Antenna Polarization H

40.0 dBm



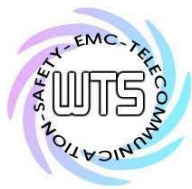
Antenna Polarization V

40.0 dBm



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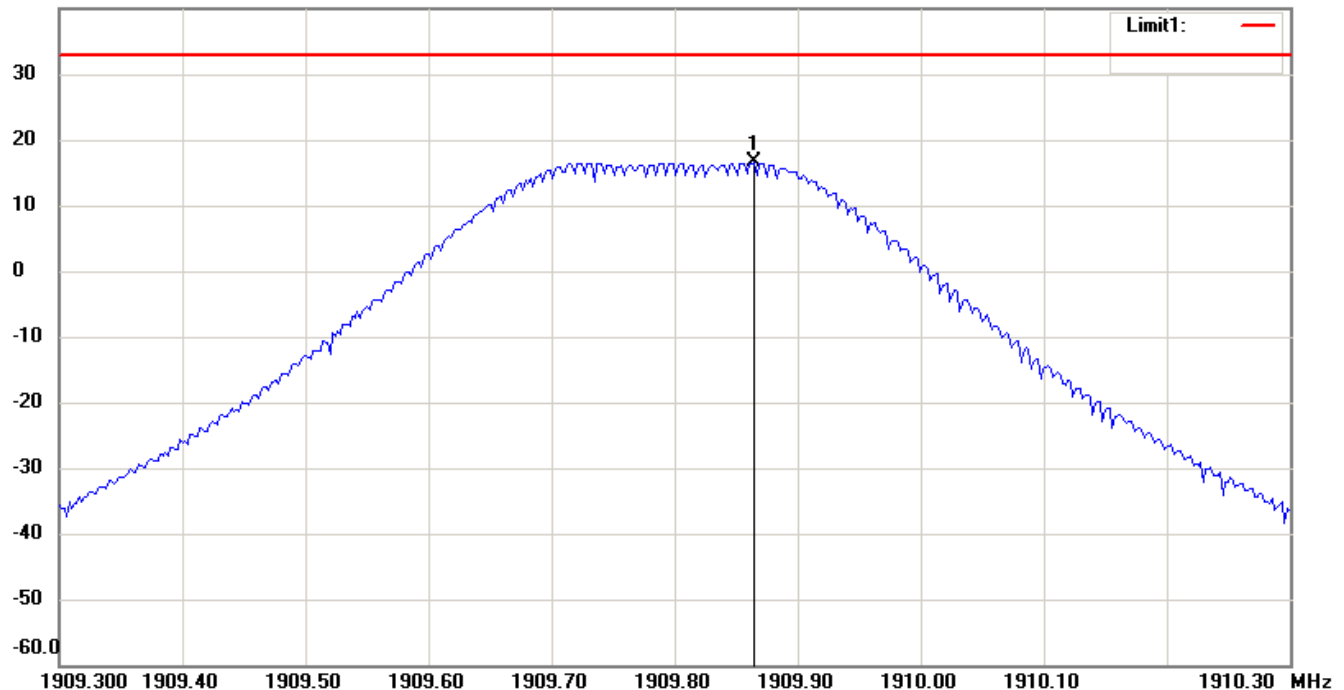
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 810\_108 V

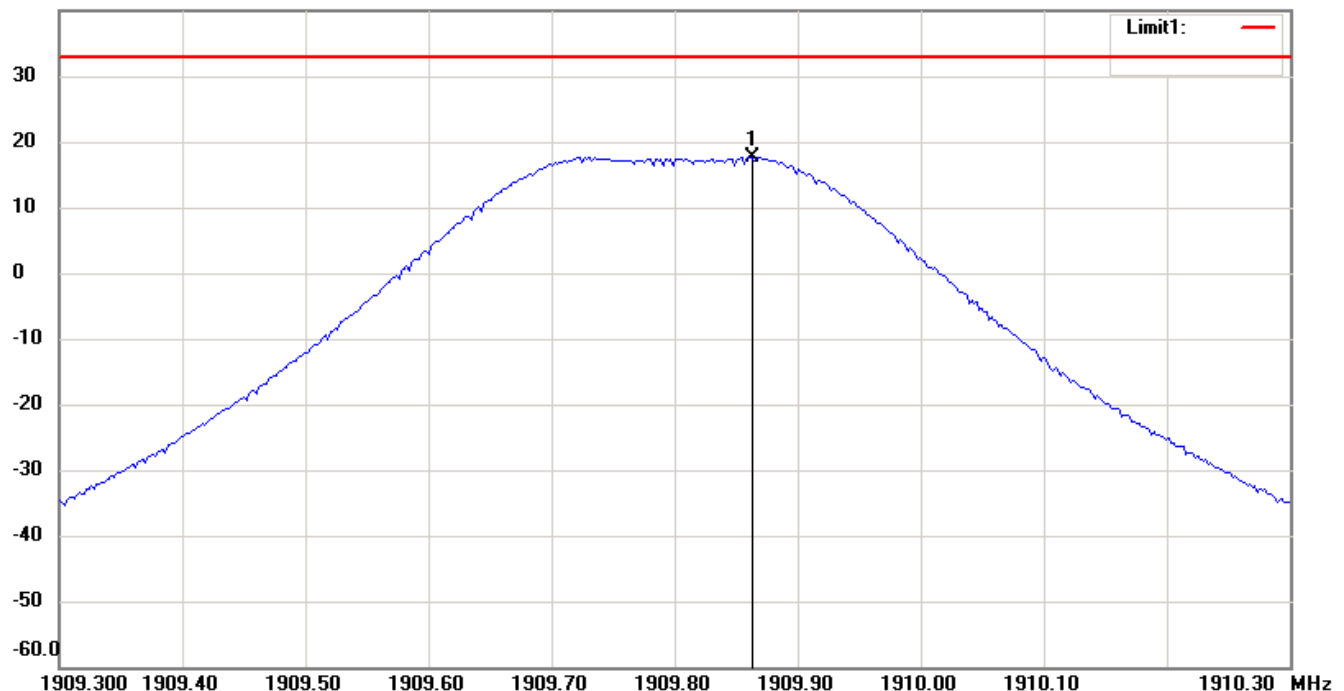
Antenna Polarization H

40.0 dBm



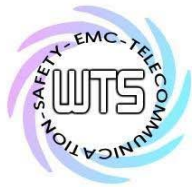
Antenna Polarization V

40.0 dBm



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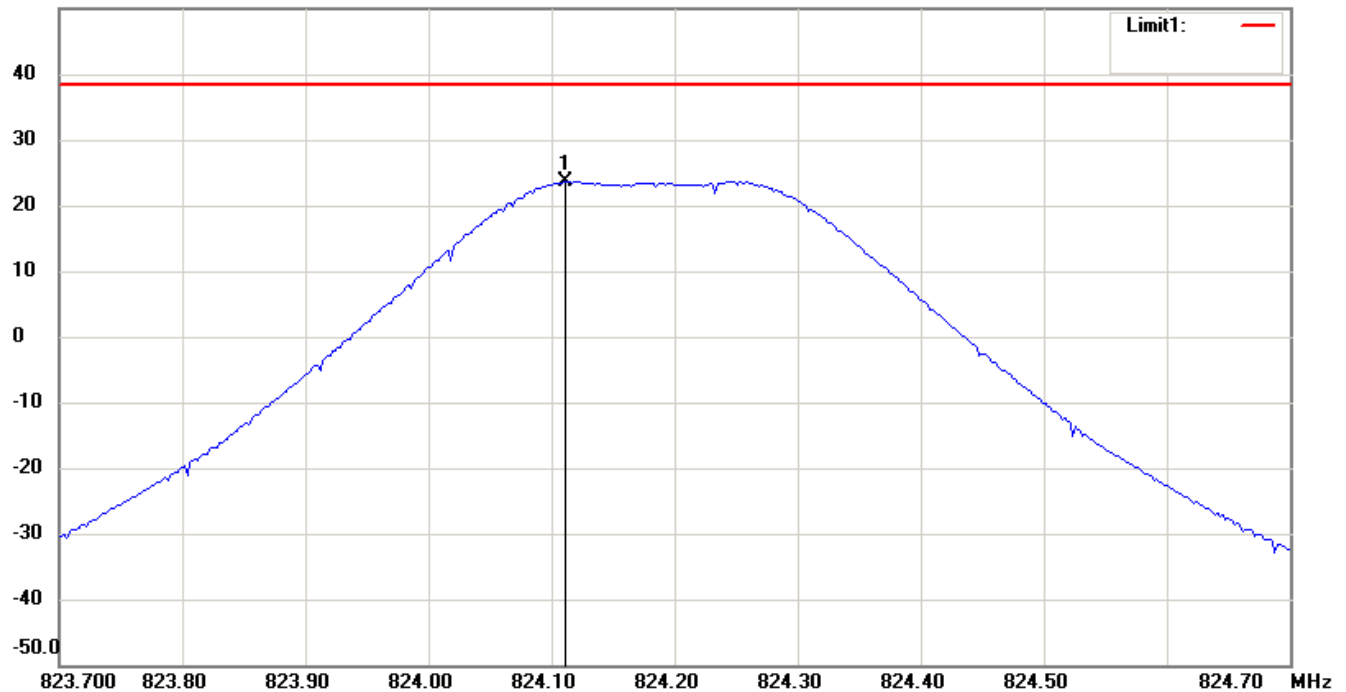
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_ CH 128\_132 V

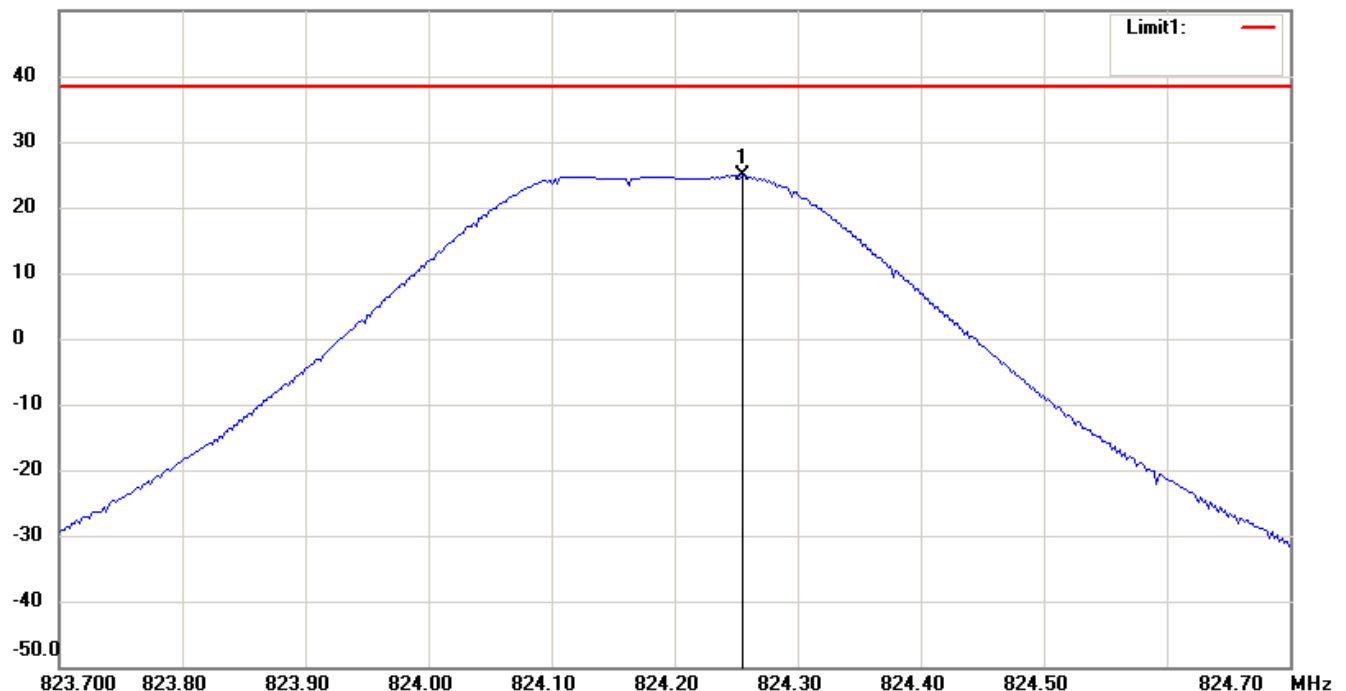
Antenna Polarization H

50.0 dBm



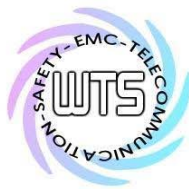
Antenna Polarization V

50.0 dBm



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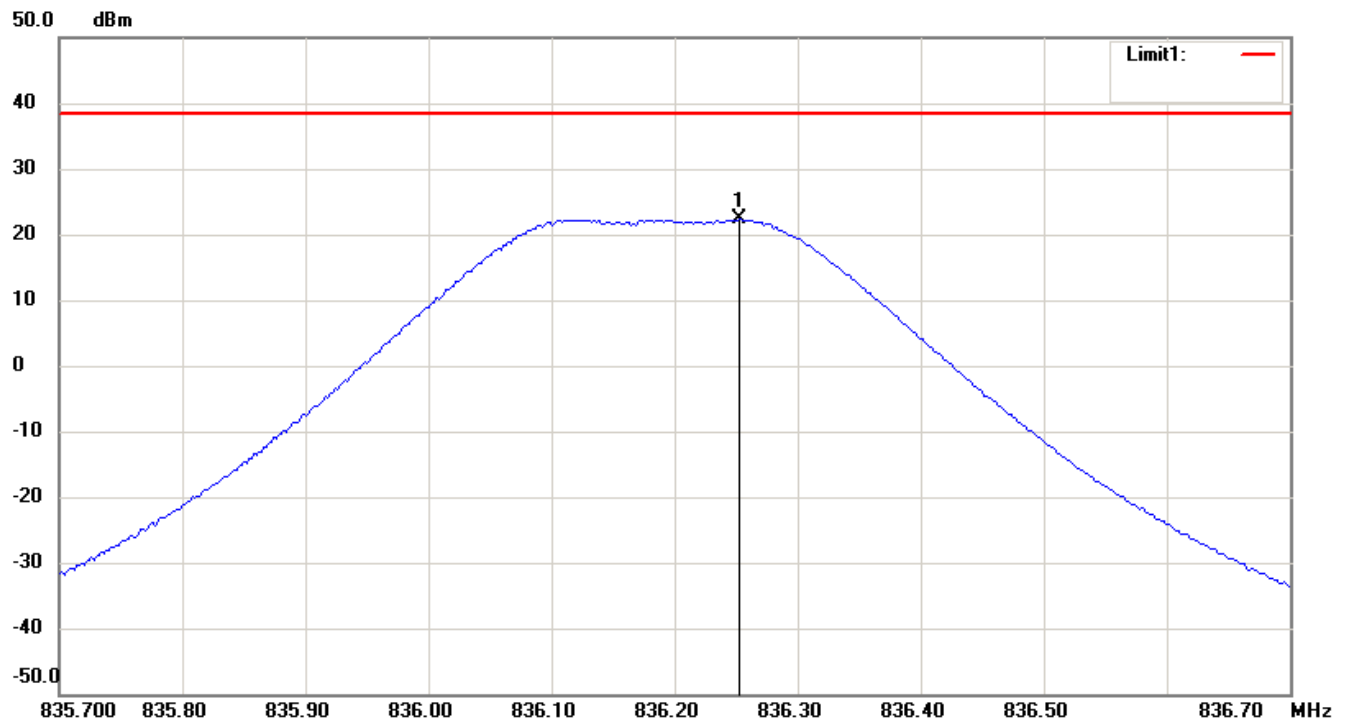


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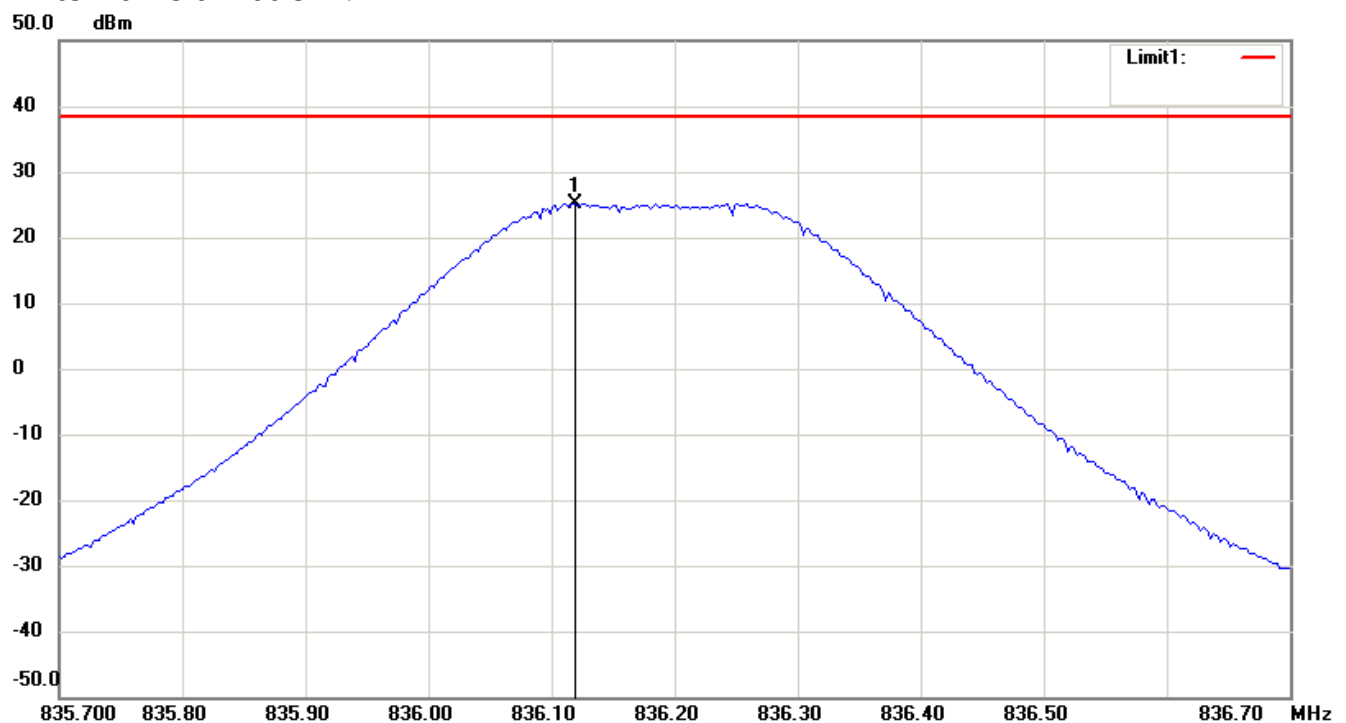
FCC ID: 2ABGRMVX400

850 band\_ CH 188\_132 V

Antenna Polarization H

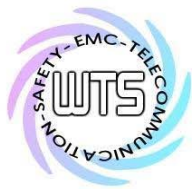


Antenna Polarization V



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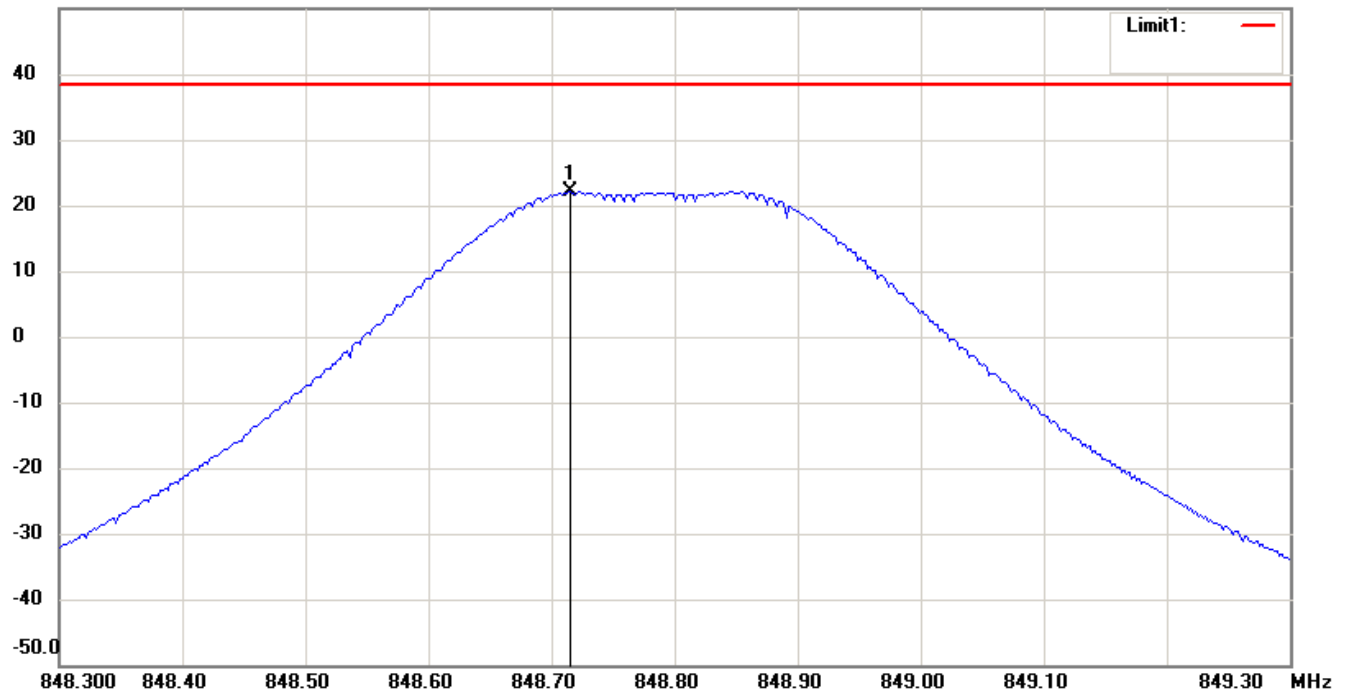
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_ CH 251\_132 V

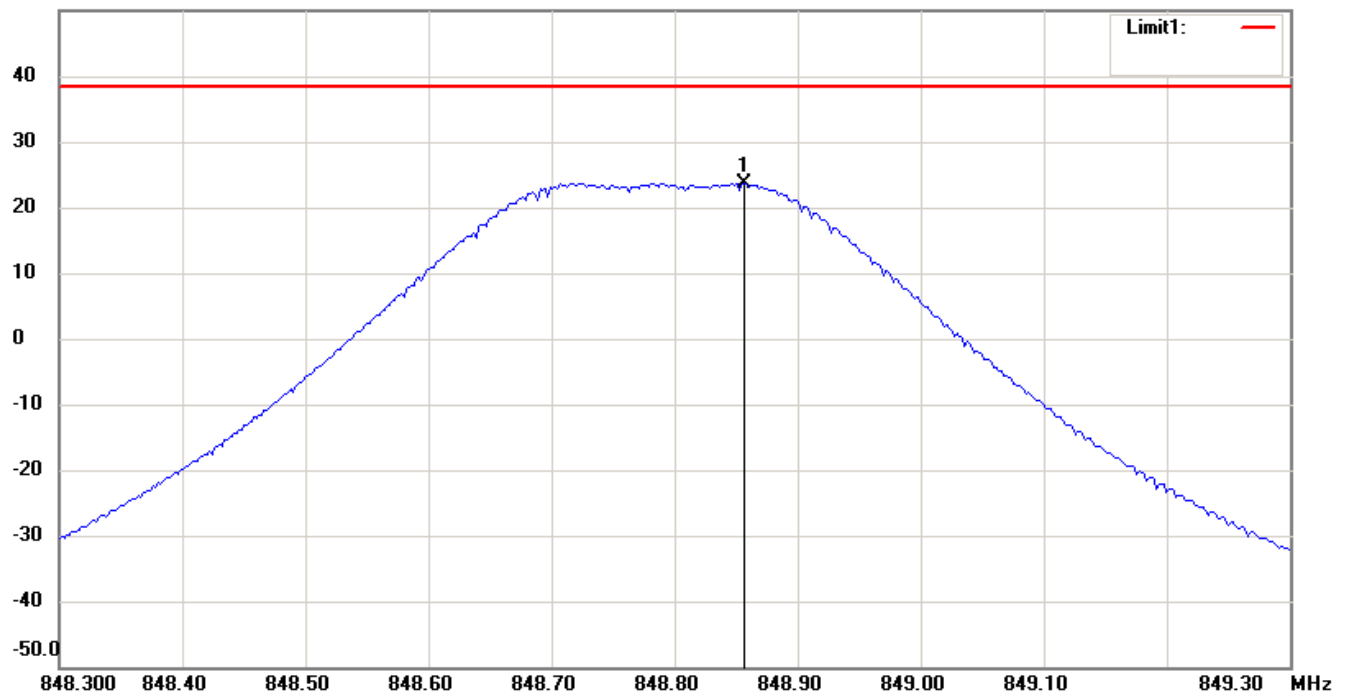
Antenna Polarization H

50.0 dBm



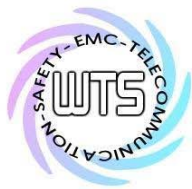
Antenna Polarization V

50.0 dBm



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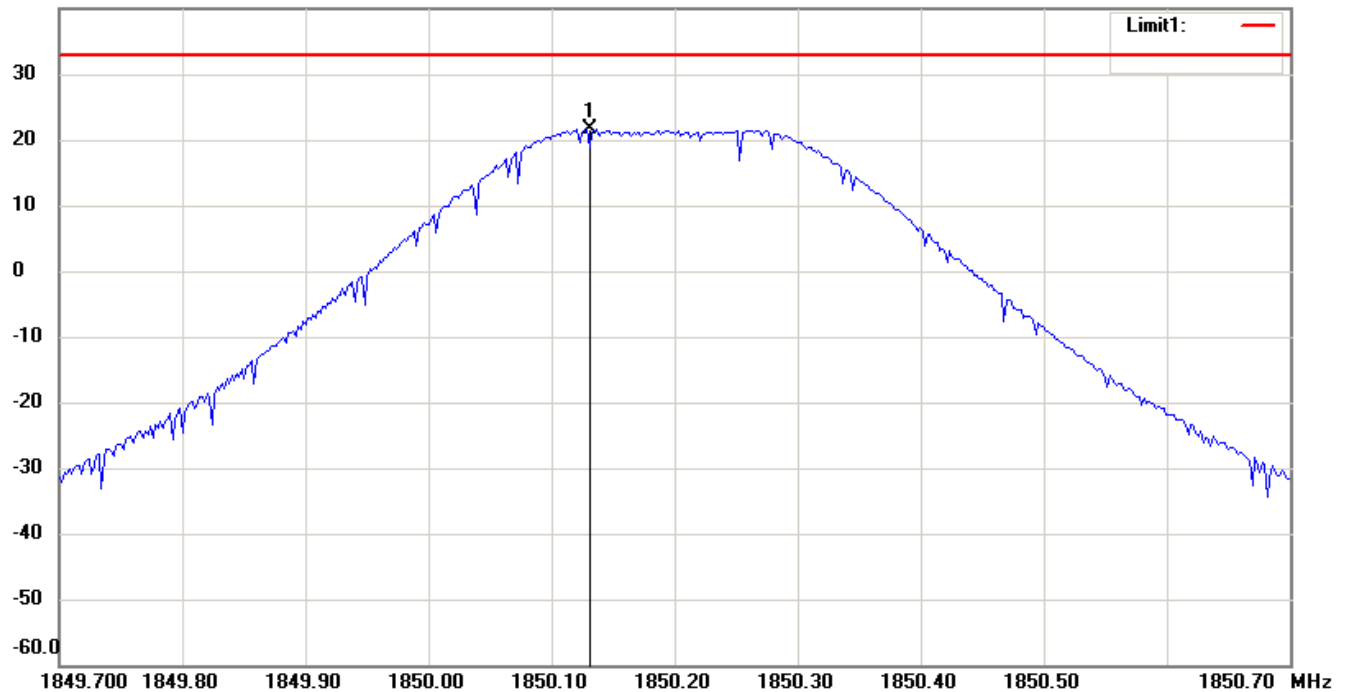
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 512\_132 V

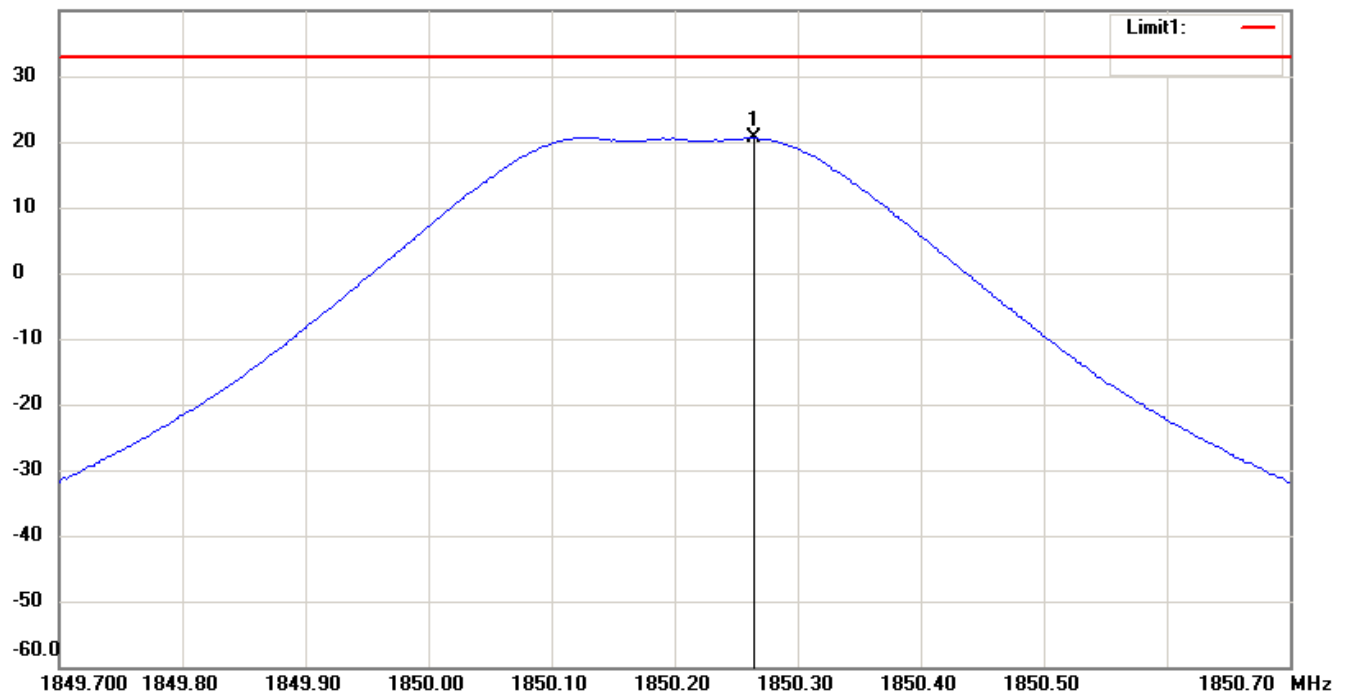
Antenna Polarization H

40.0 dBm



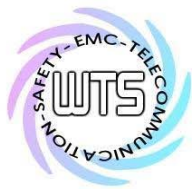
Antenna Polarization V

40.0 dBm



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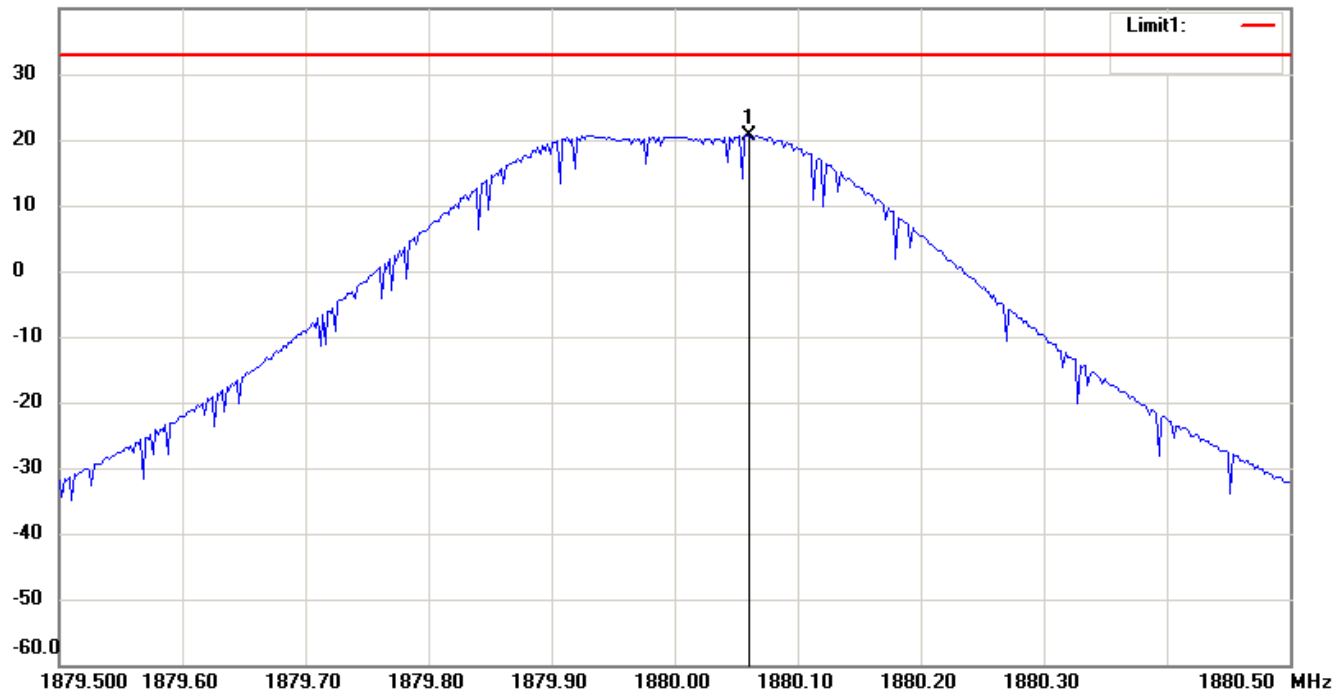
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 661\_132 V

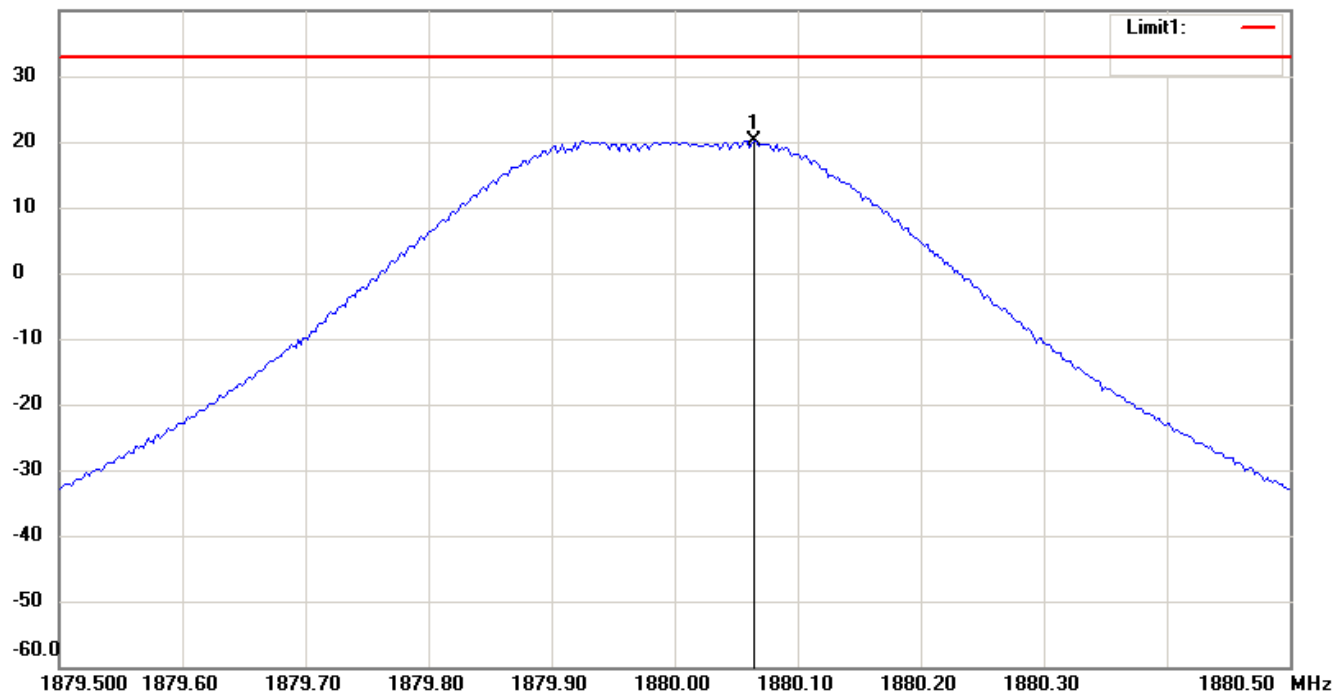
Antenna Polarization H

40.0 dBm



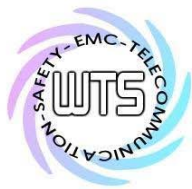
Antenna Polarization V

40.0 dBm



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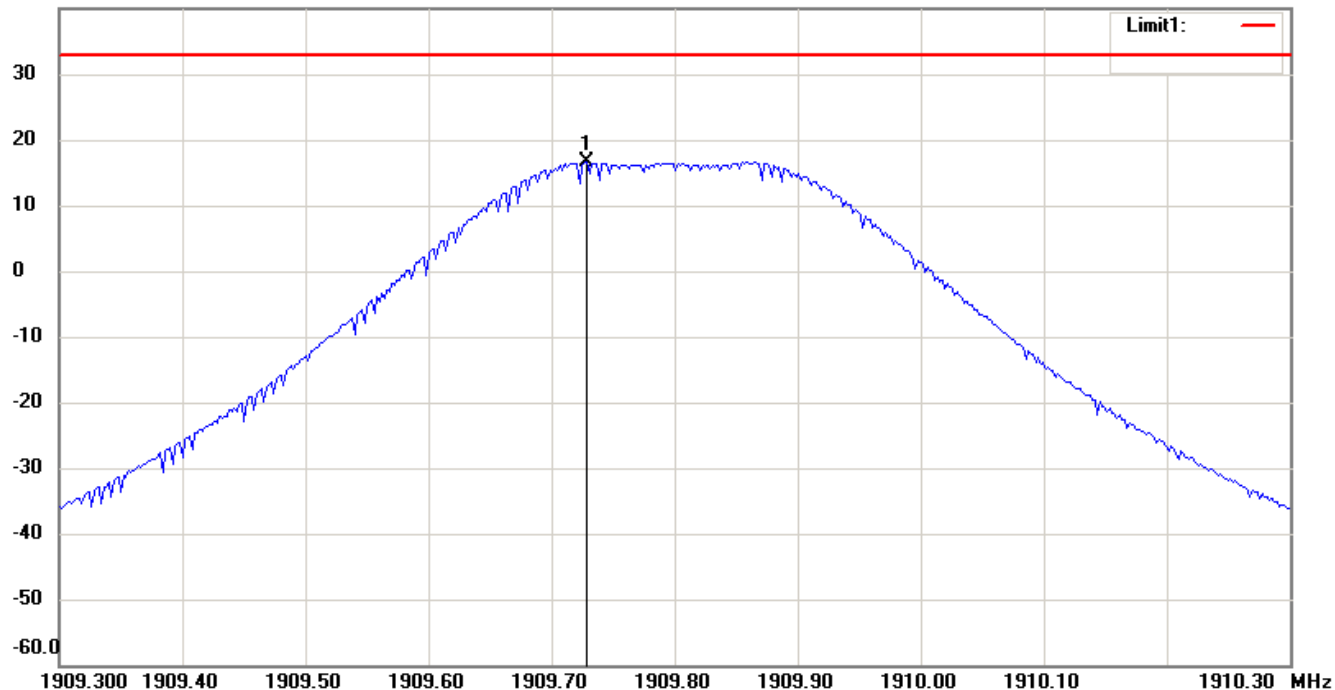
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_ CH 810\_132 V

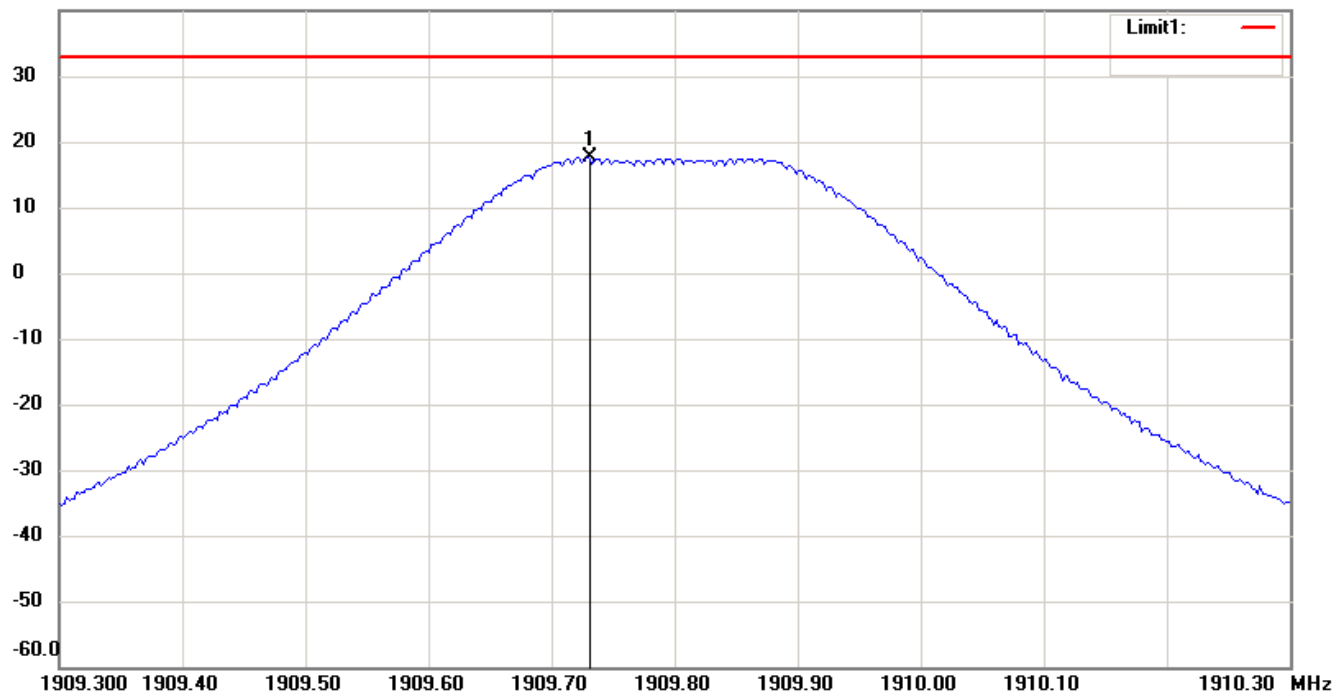
Antenna Polarization H

40.0 dBm



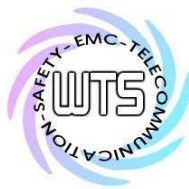
Antenna Polarization V

40.0 dBm



**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

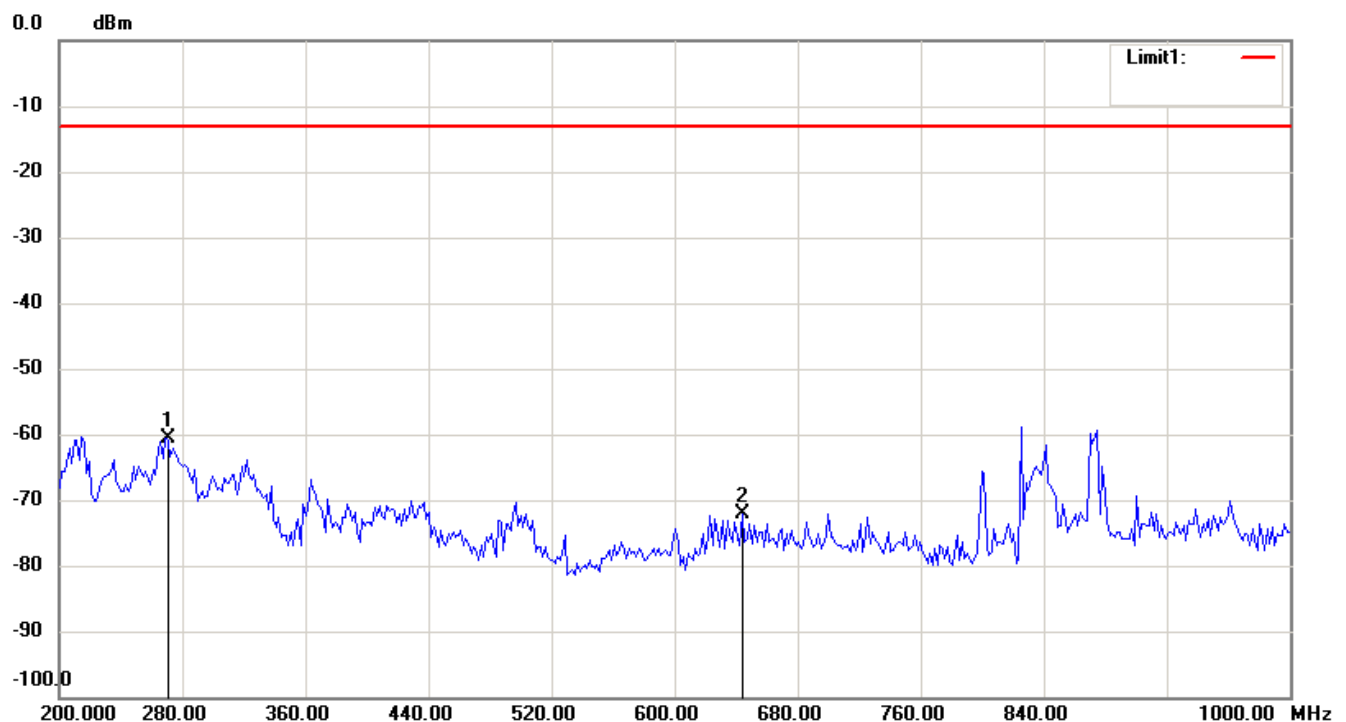
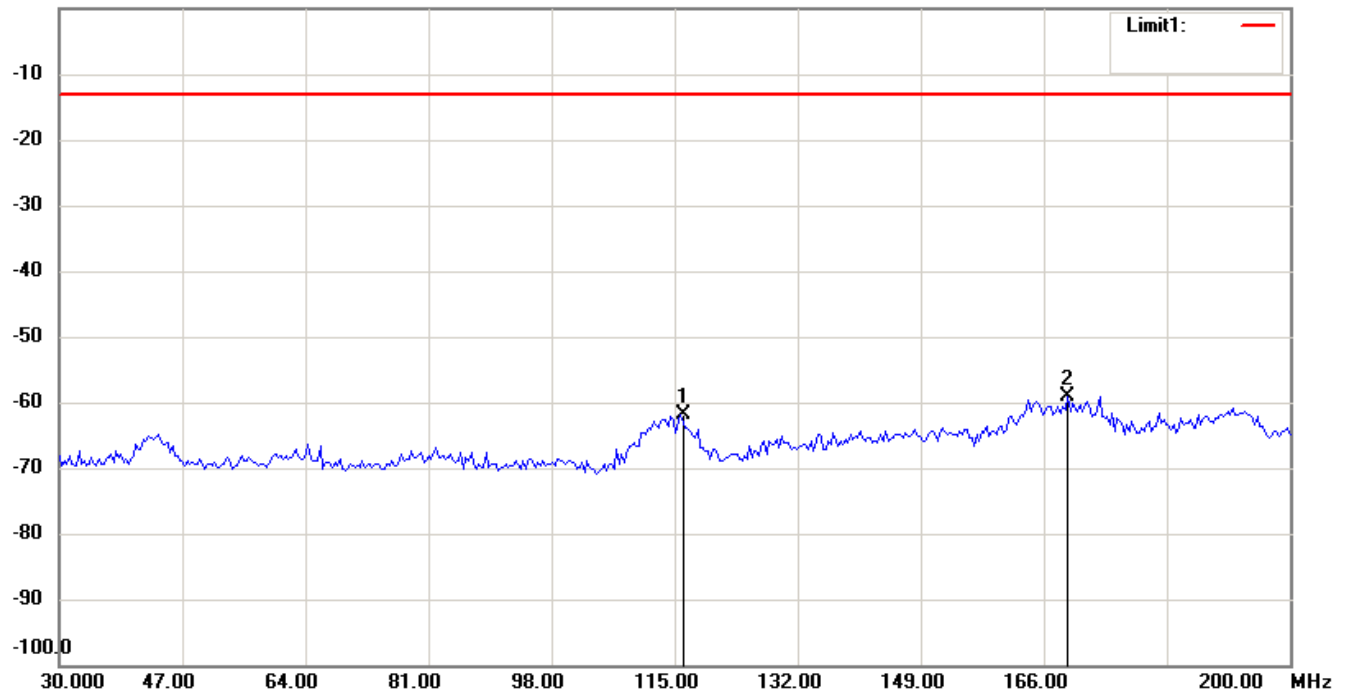
FCC ID: 2ABGRMVX400

Filed Strength of Spurious Emission

850 band\_ CH 128\_108V

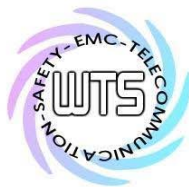
Antenna Polarization H

0.0 dBm



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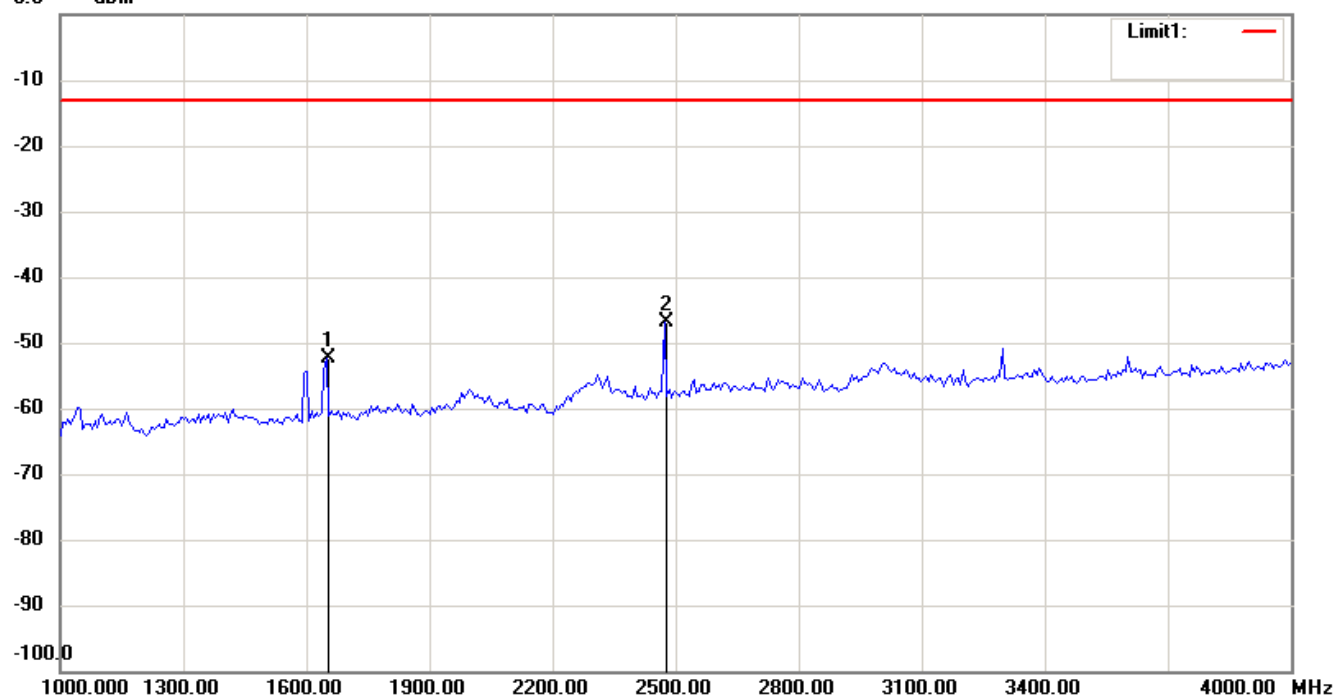


# Worldwide Testing Services(Taiwan) Co., Ltd.

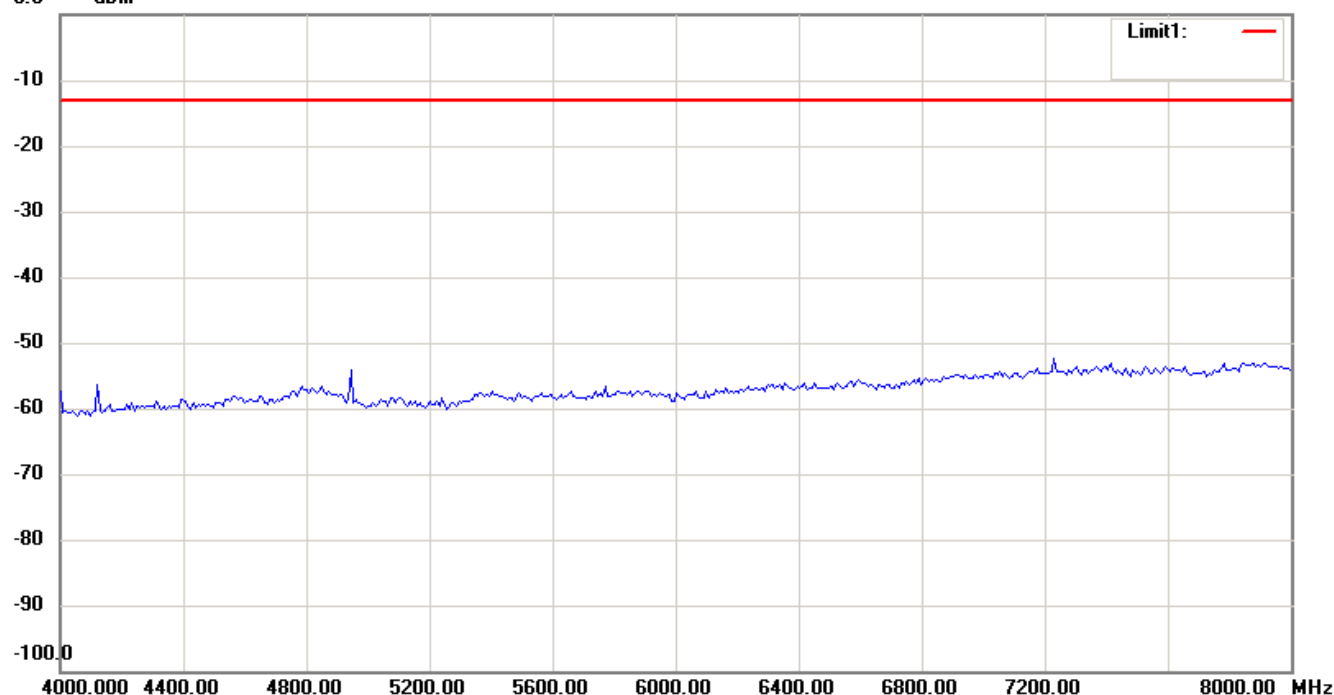
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

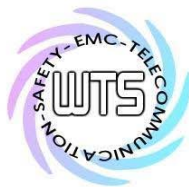


0.0 dBm



## Note:

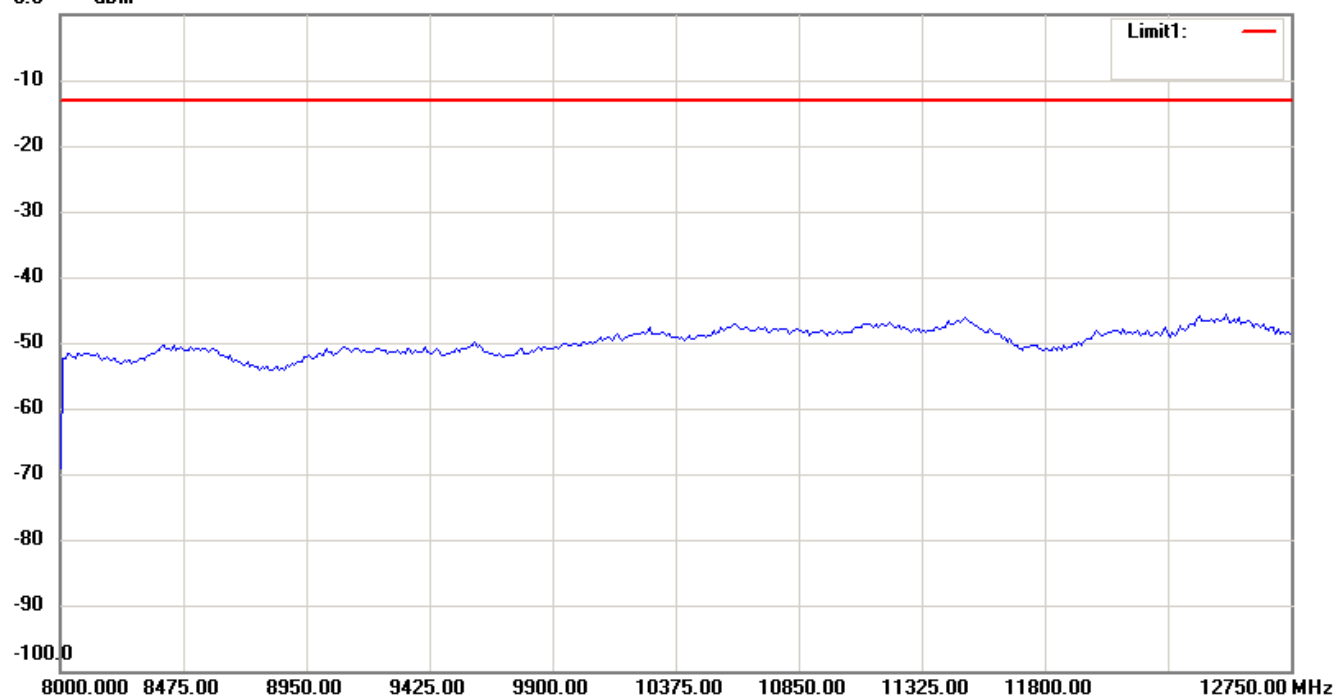
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Report Number: W6M21309-13566-P-2224

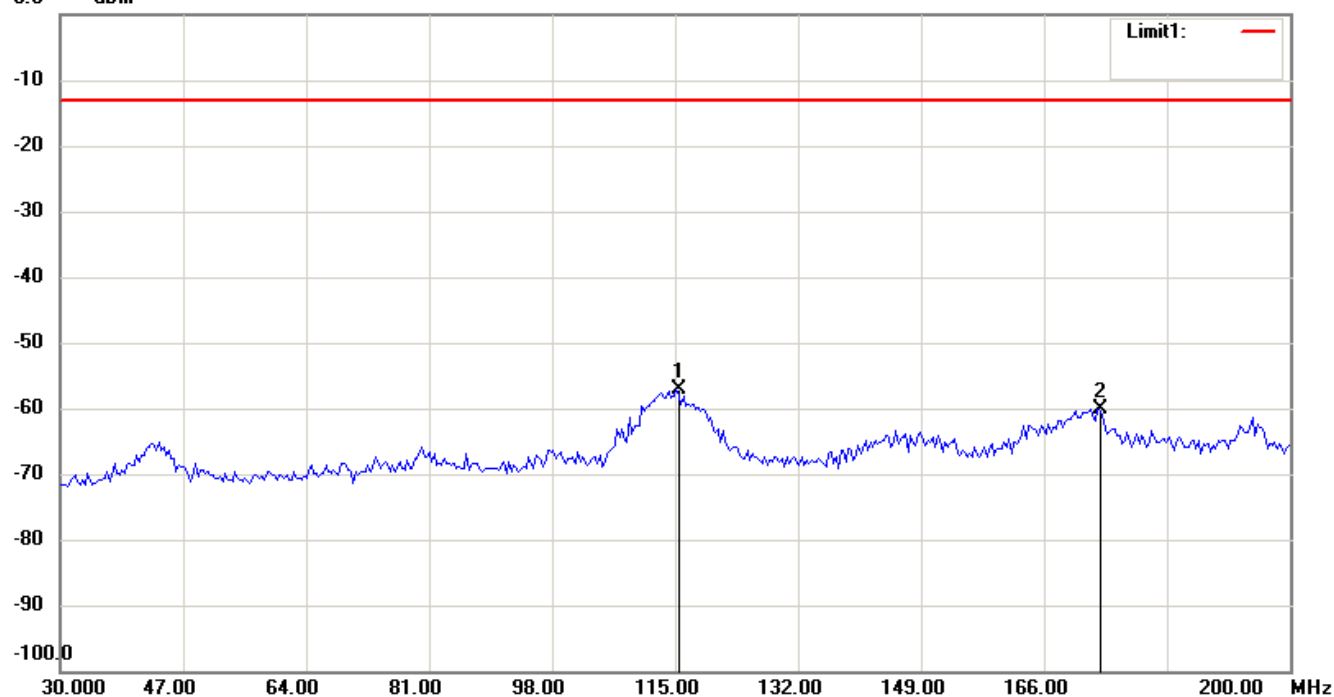
FCC ID: 2ABGRMVX400

0.0 dBm



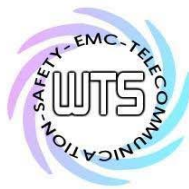
Antenna Polarization V

0.0 dBm



**Note:**

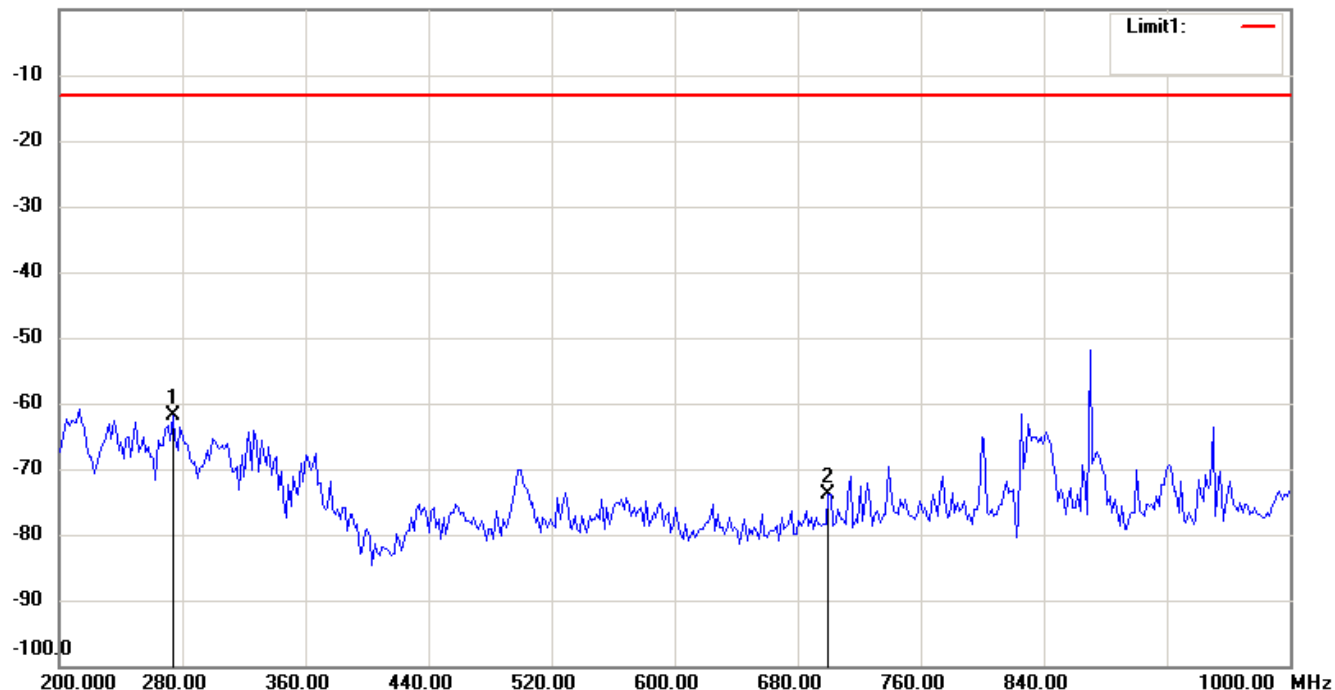
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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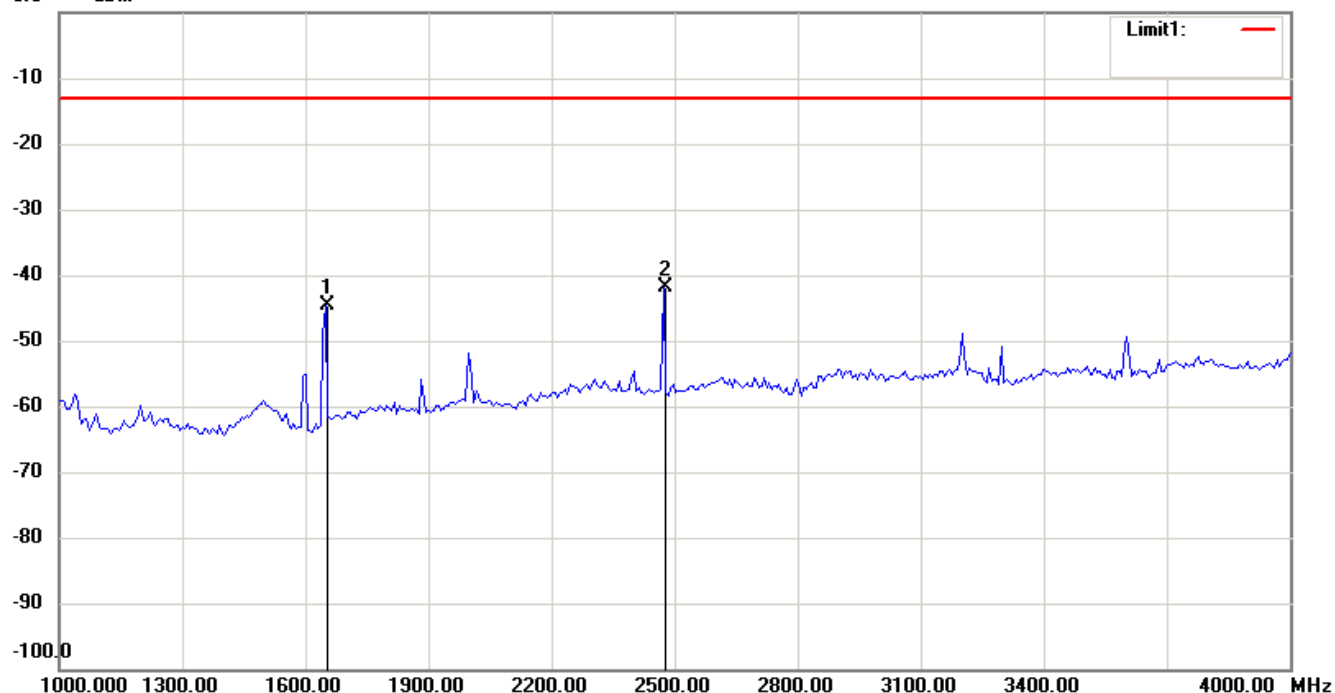
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

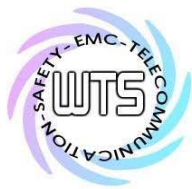


0.0 dBm



**Note:**

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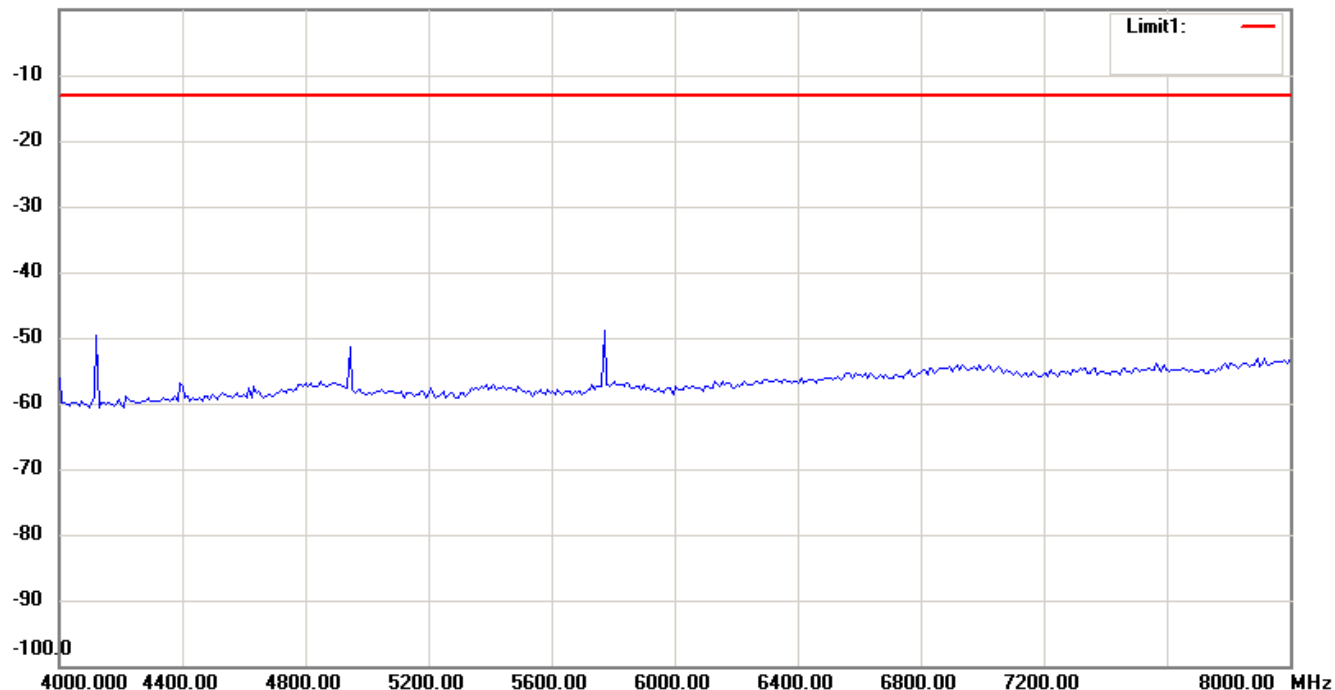


# Worldwide Testing Services(Taiwan) Co., Ltd.

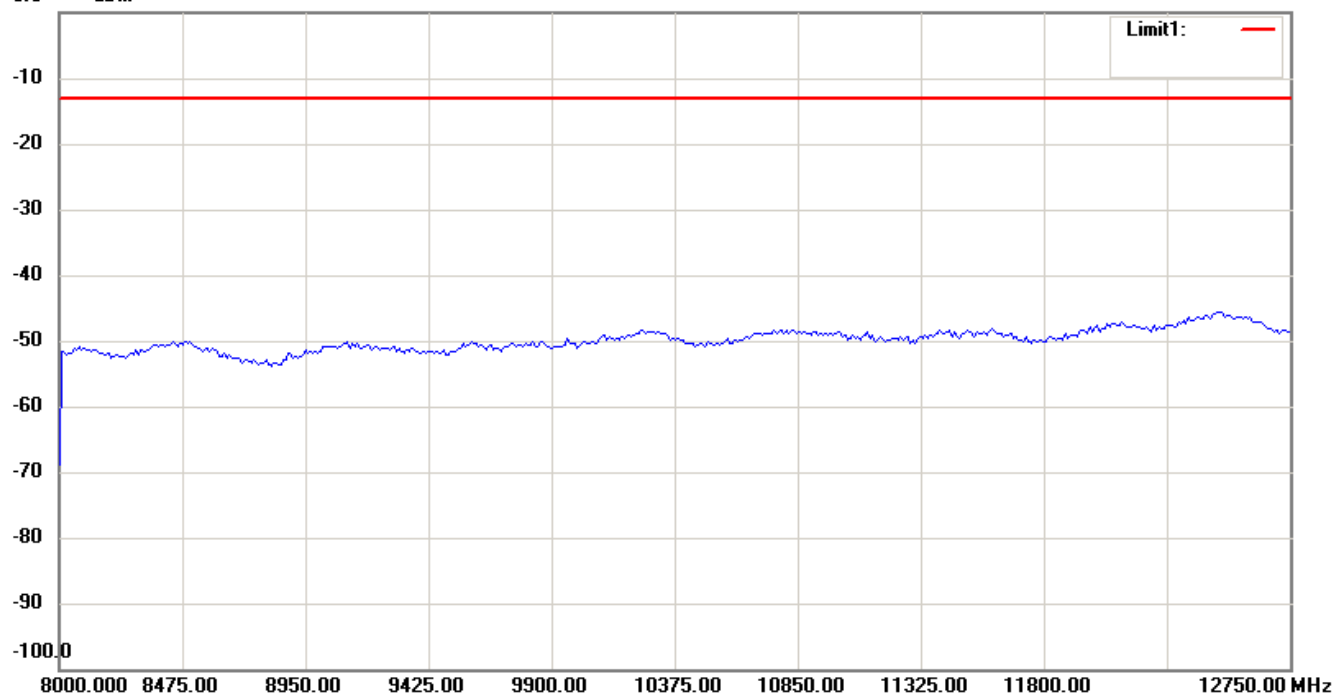
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

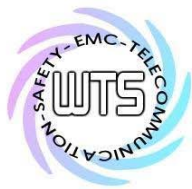


0.0 dBm



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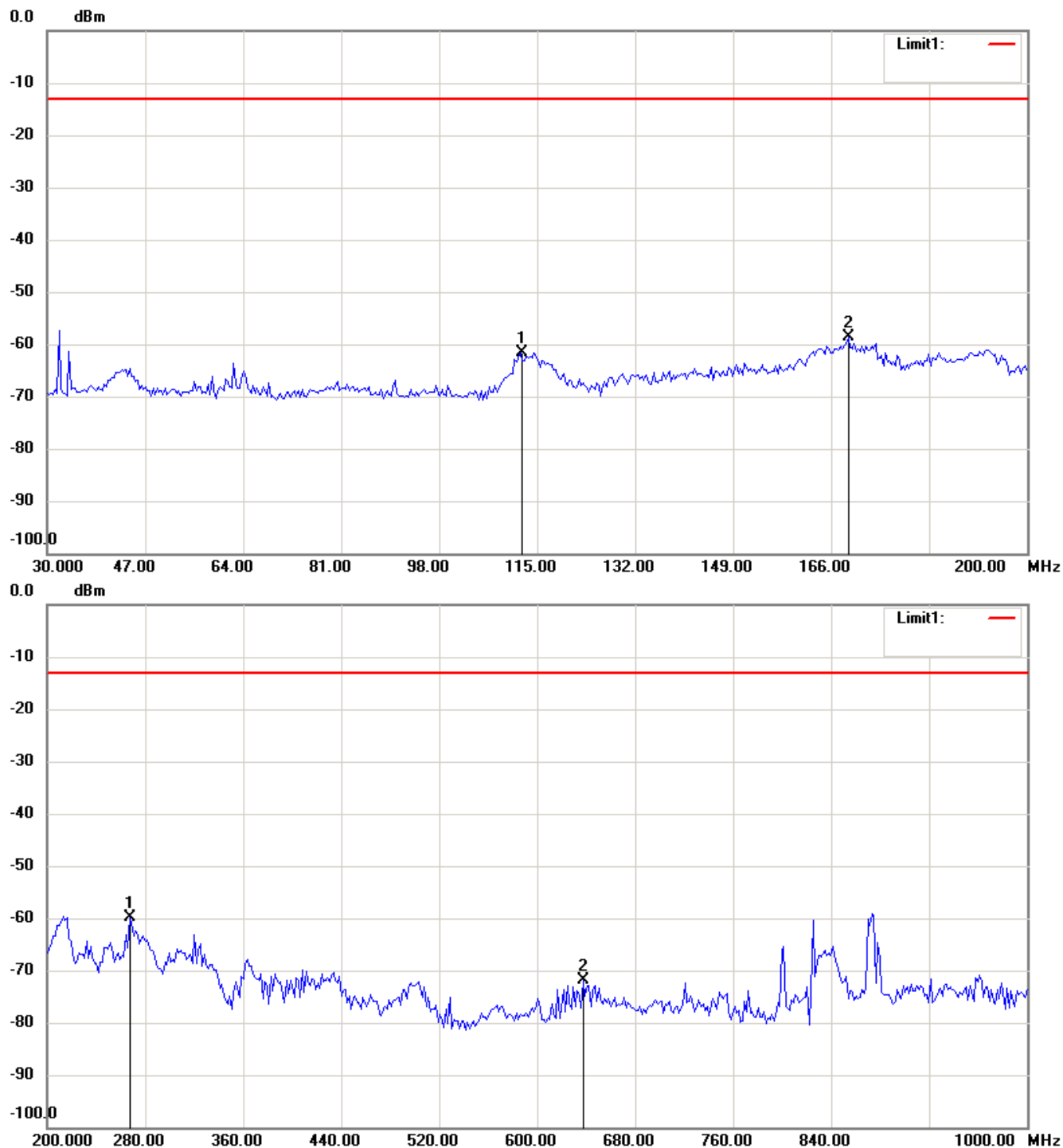
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

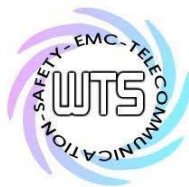
850 band\_ CH 128\_132 V

Antenna Polarization H



## Note:

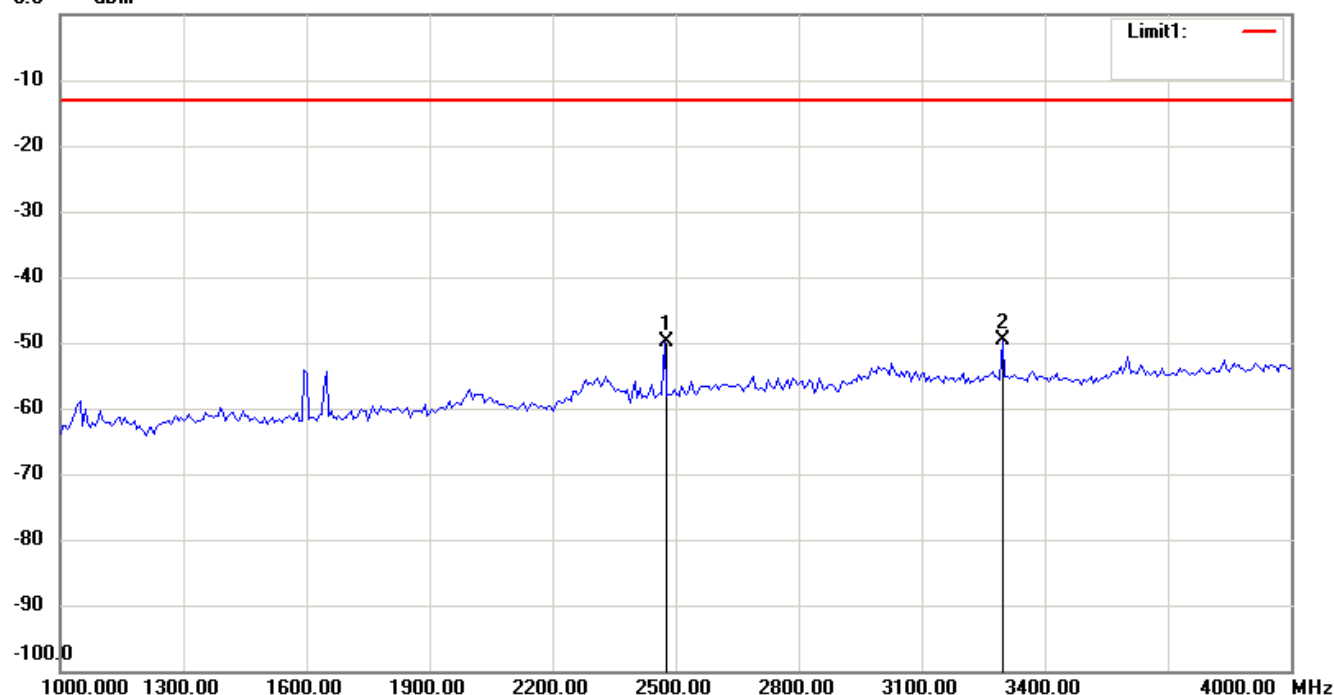
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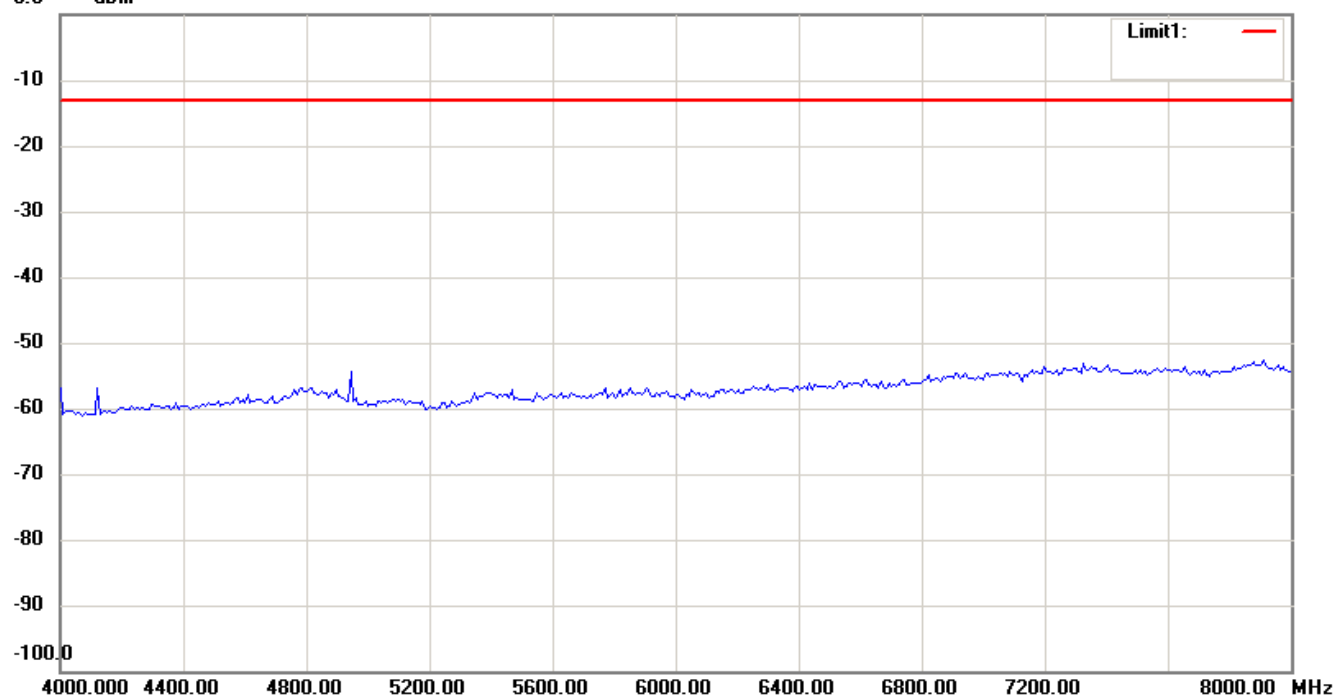
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

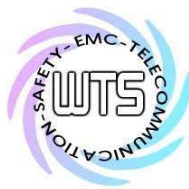


0.0 dBm



**Note:**

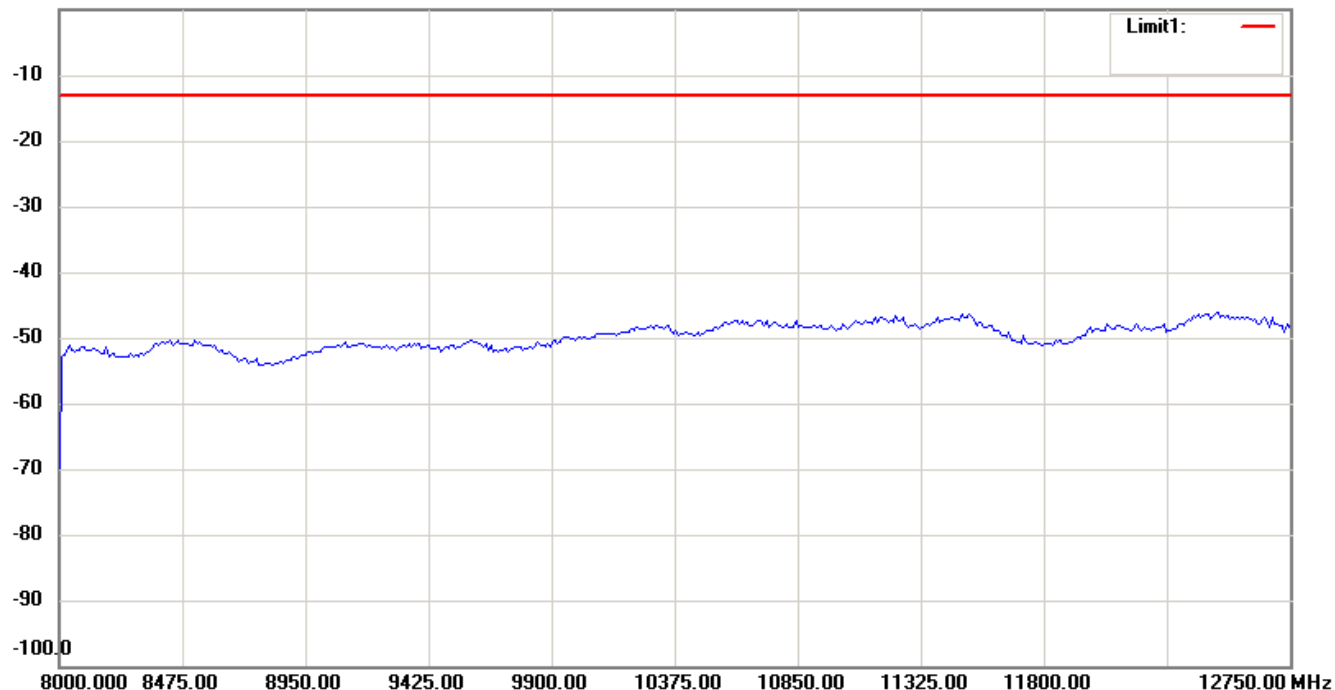
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Report Number: W6M21309-13566-P-2224

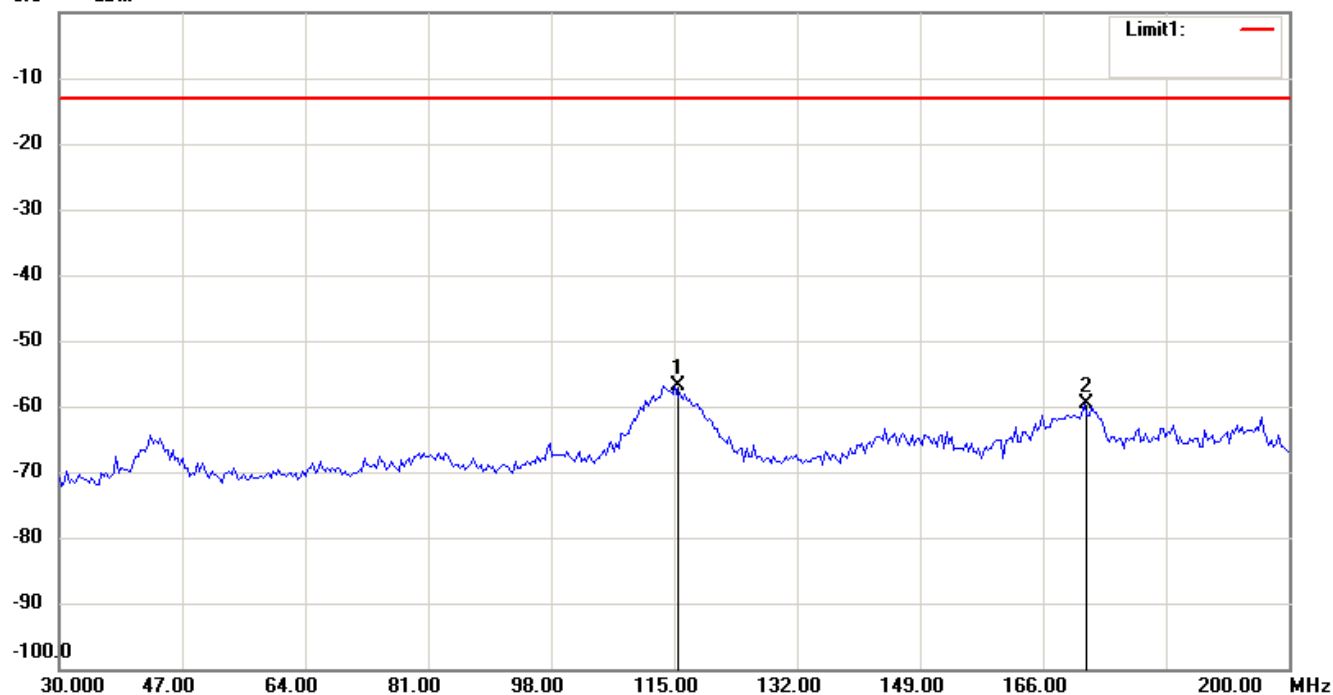
FCC ID: 2ABGRMVX400

0.0 dBm



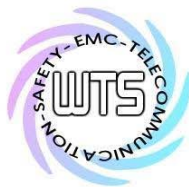
Antenna Polarization V

0.0 dBm



#### Note:

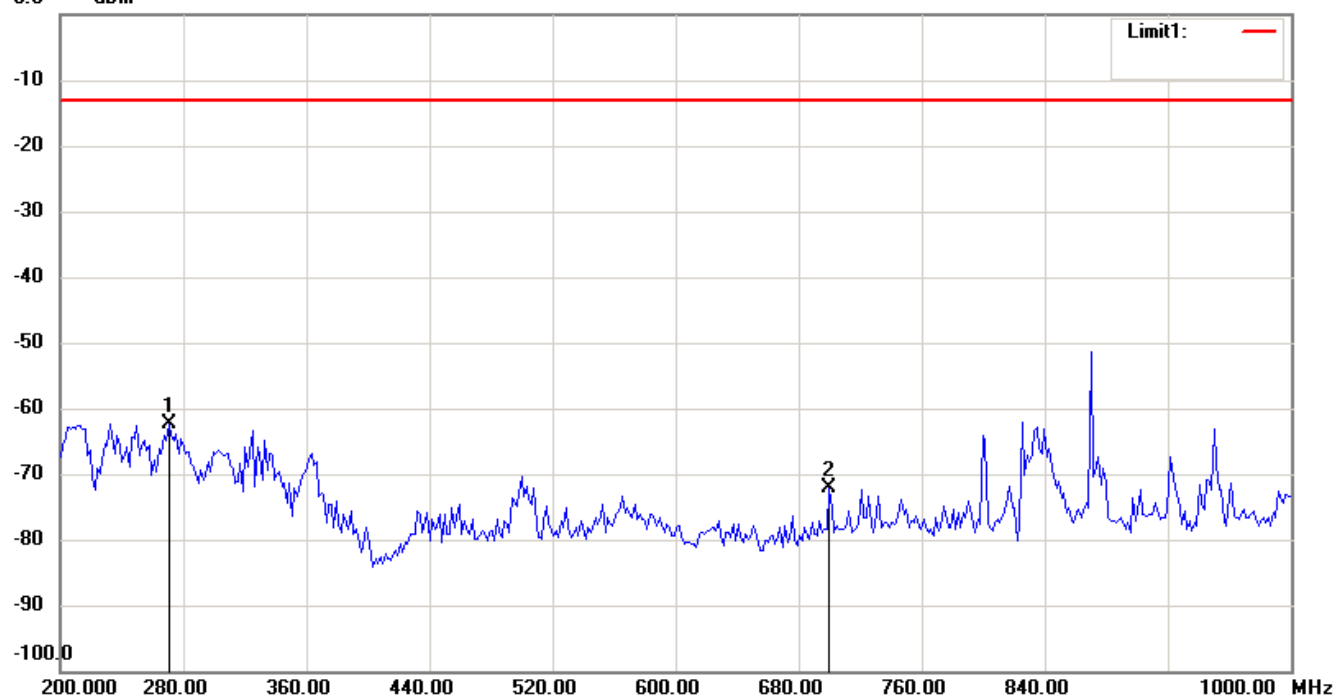
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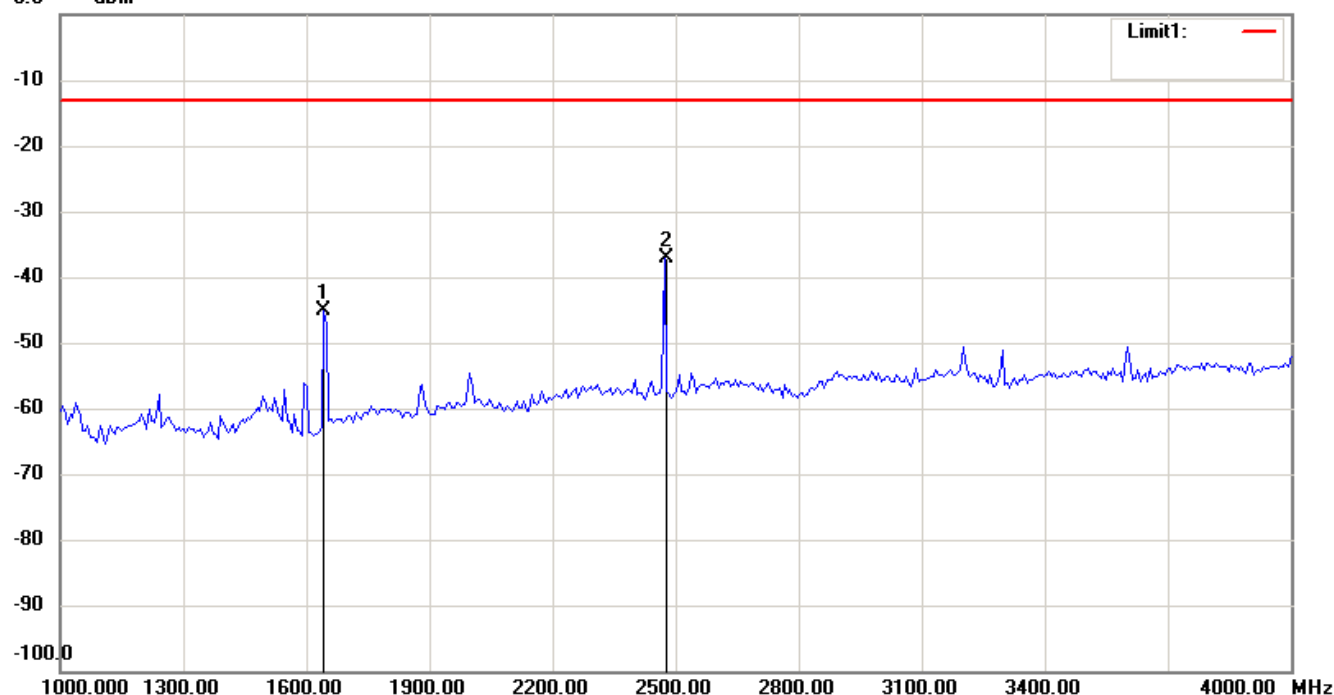
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

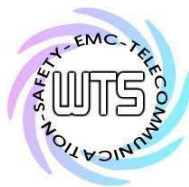


0.0 dBm



**Note:**

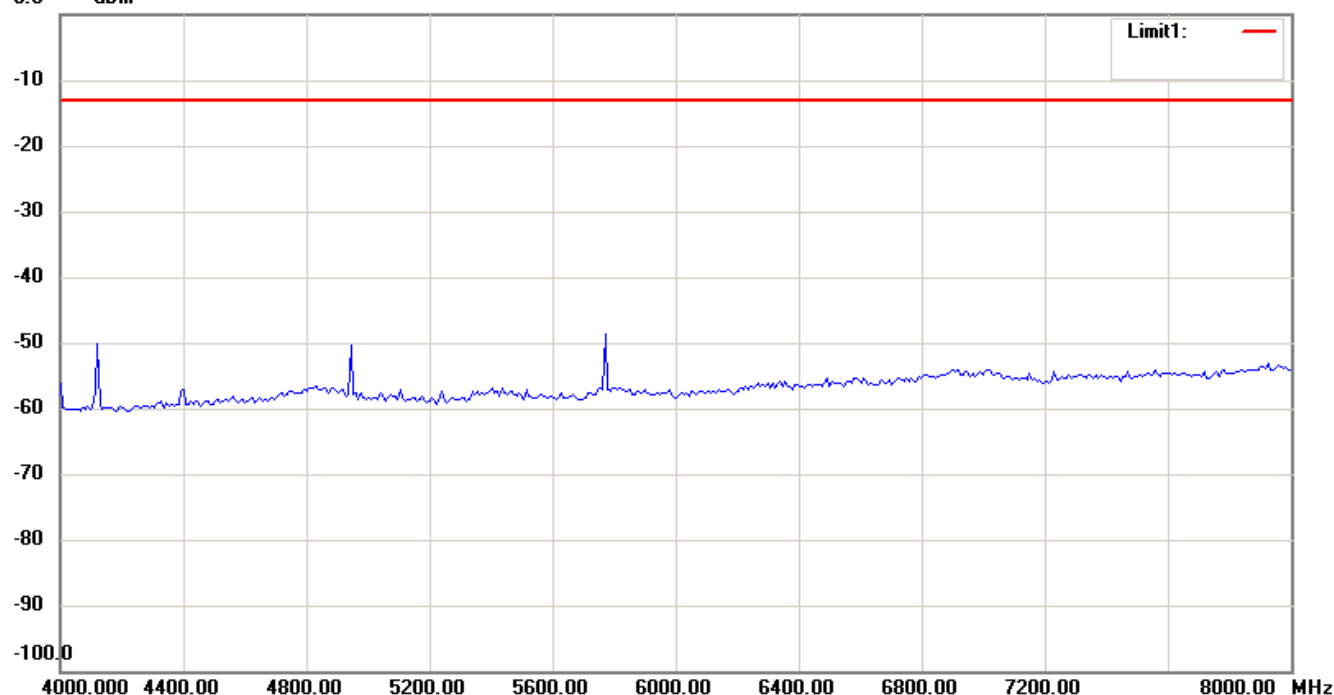
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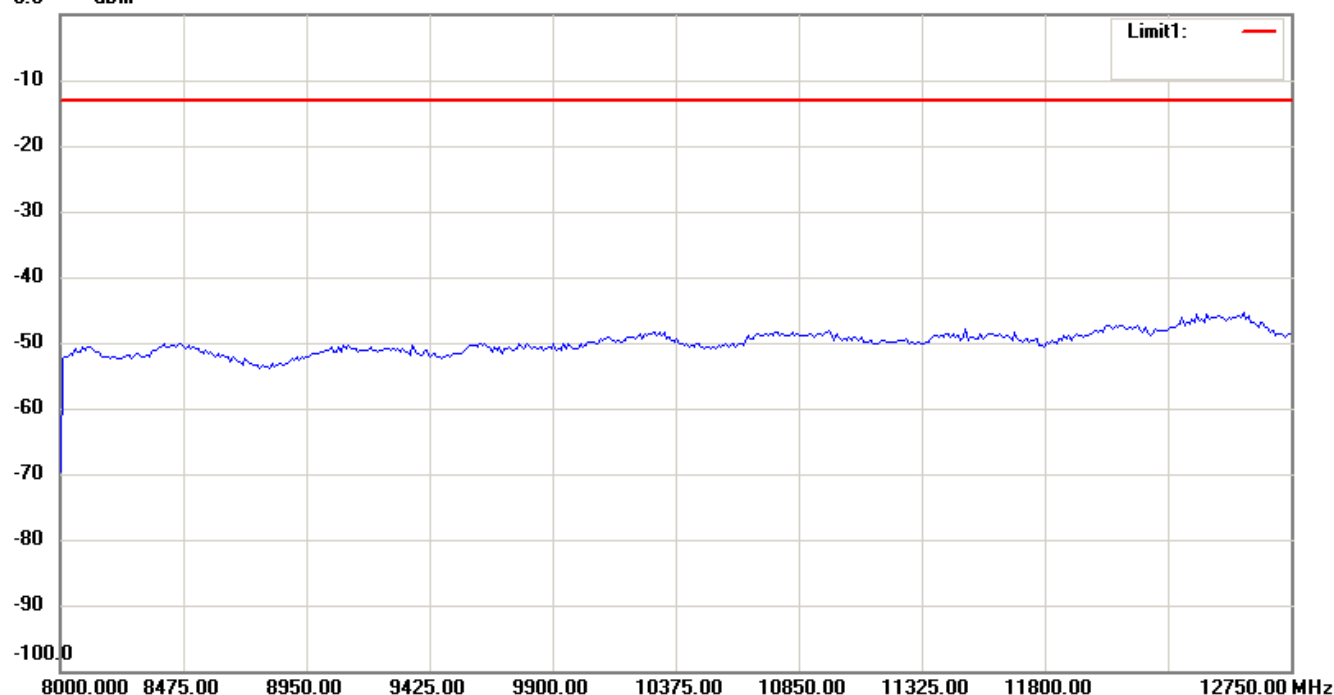
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

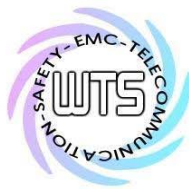


0.0 dBm



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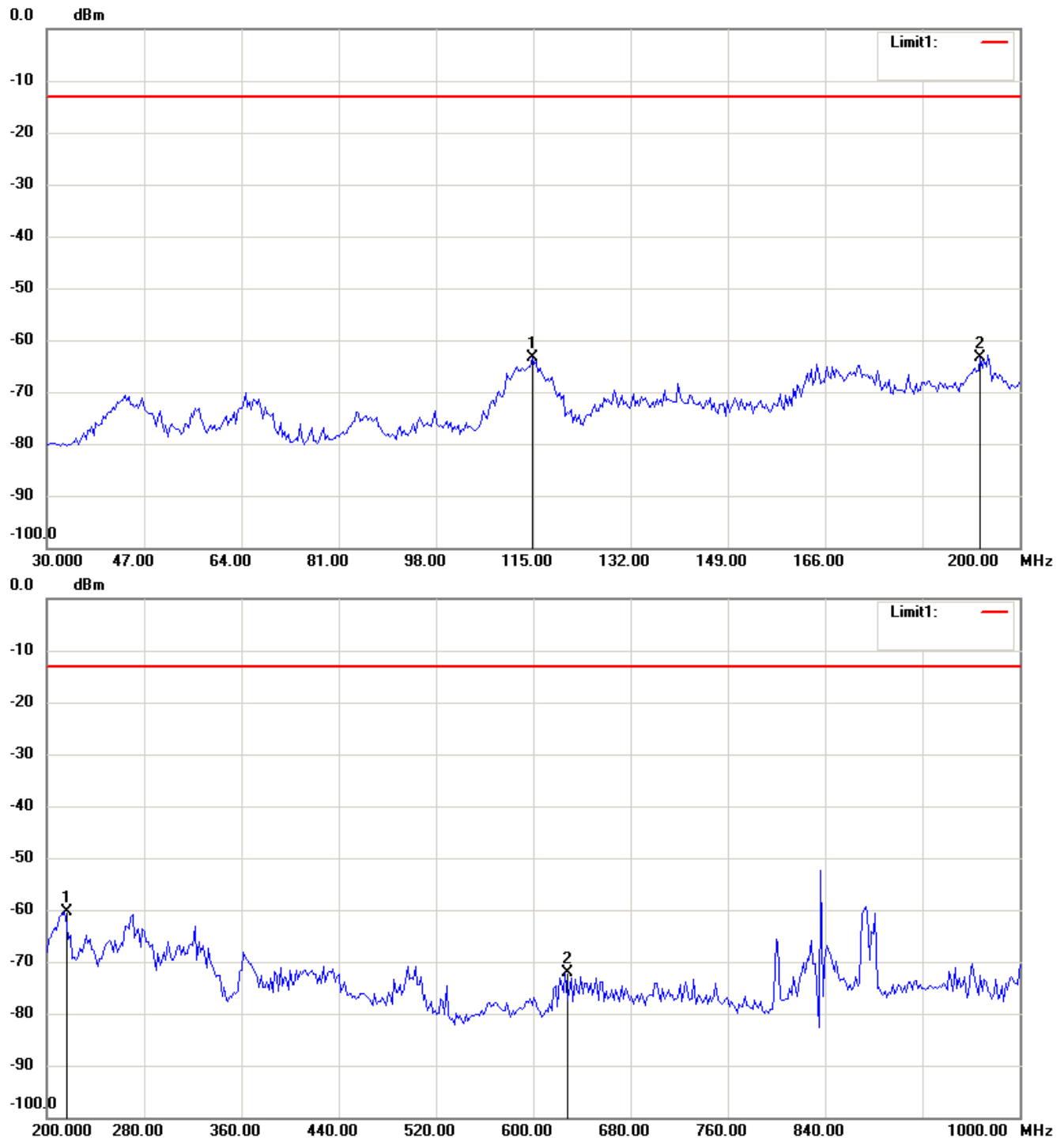
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

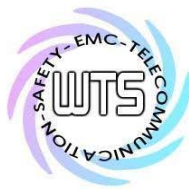
850 band\_ CH 188\_108V

Antenna Polarization H



## Note:

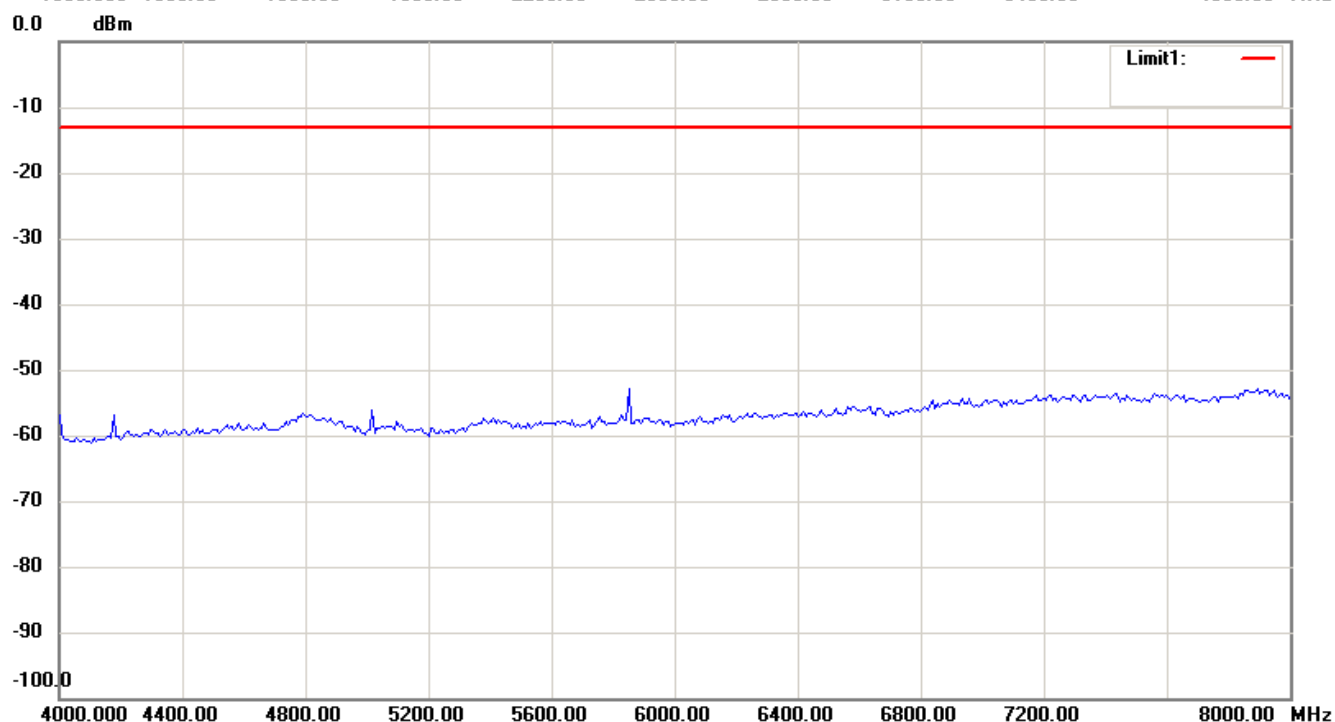
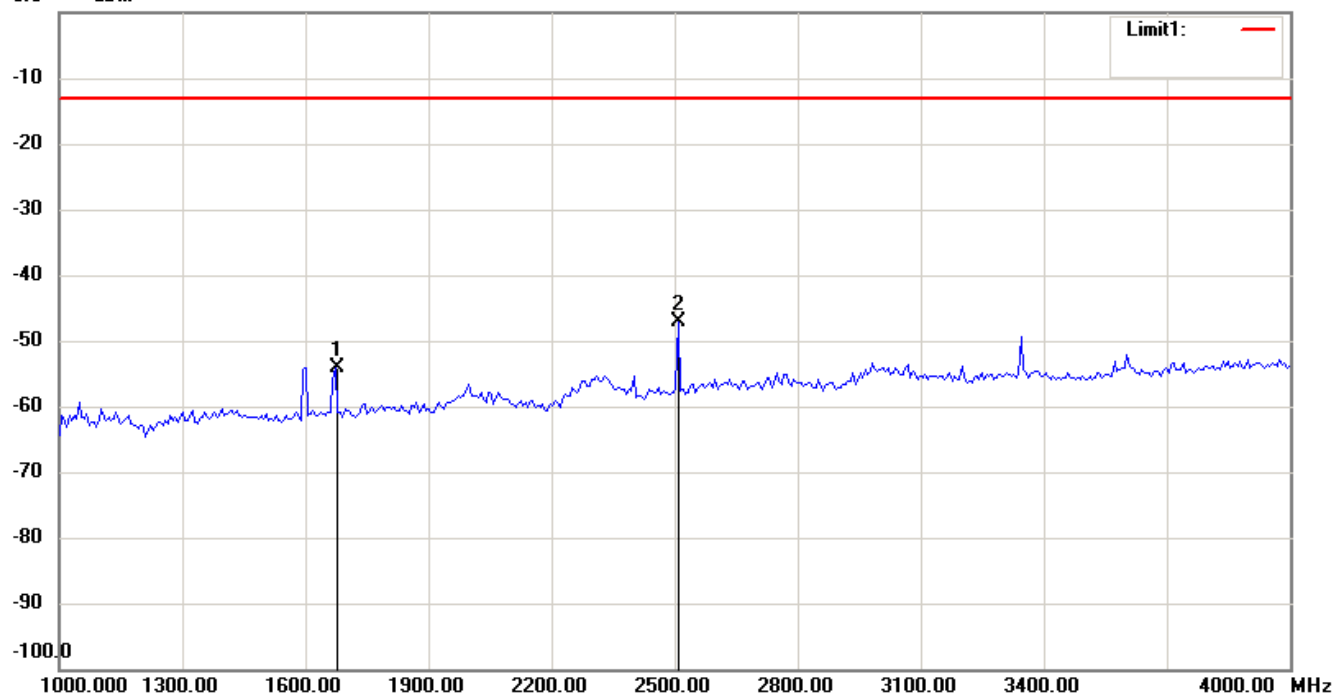
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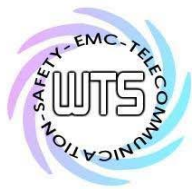
FCC ID: 2ABGRMVX400

0.0 dBm



**Note:**

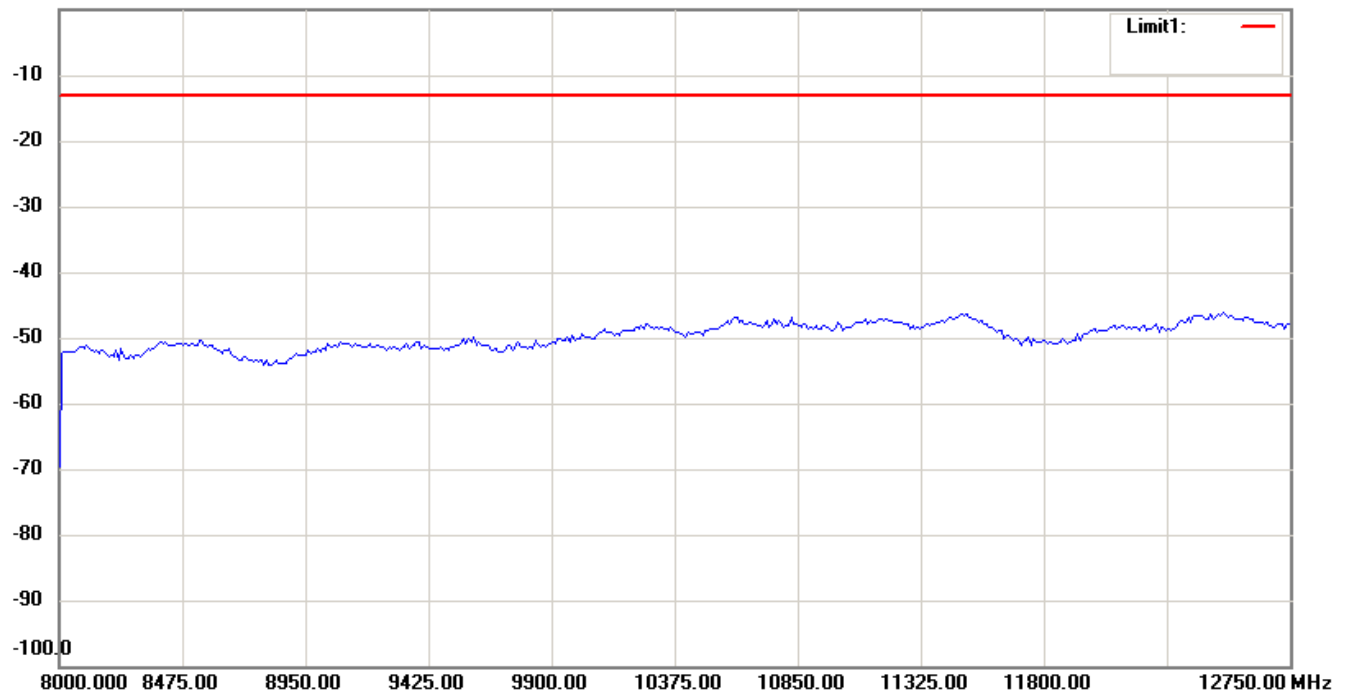
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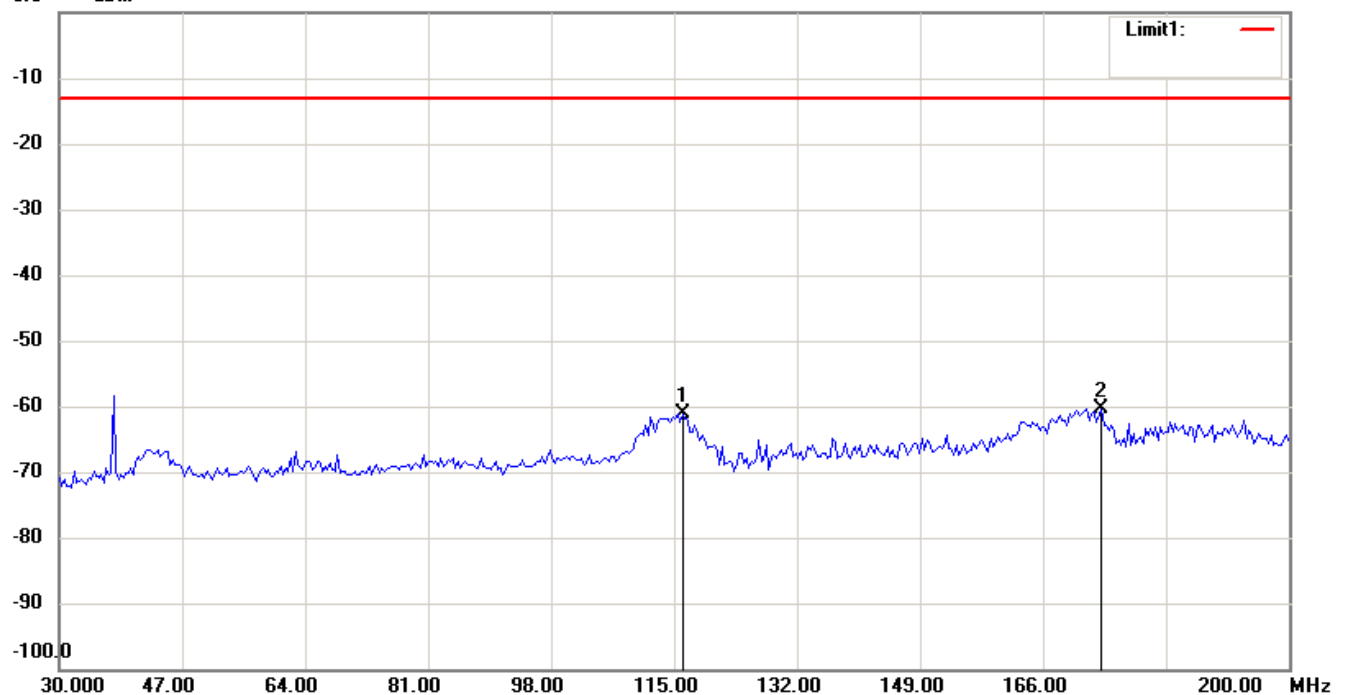
FCC ID: 2ABGRMVX400

0.0 dBm



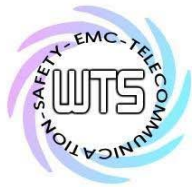
Antenna Polarization V

0.0 dBm



**Note:**

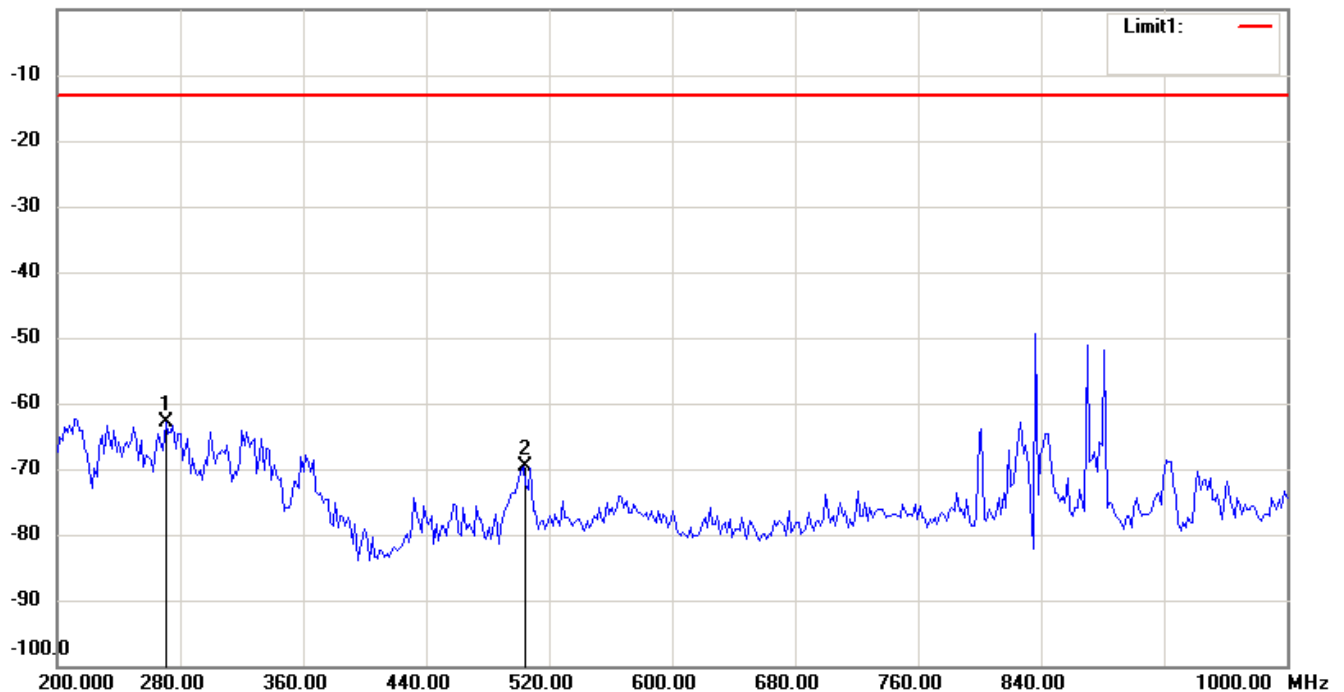
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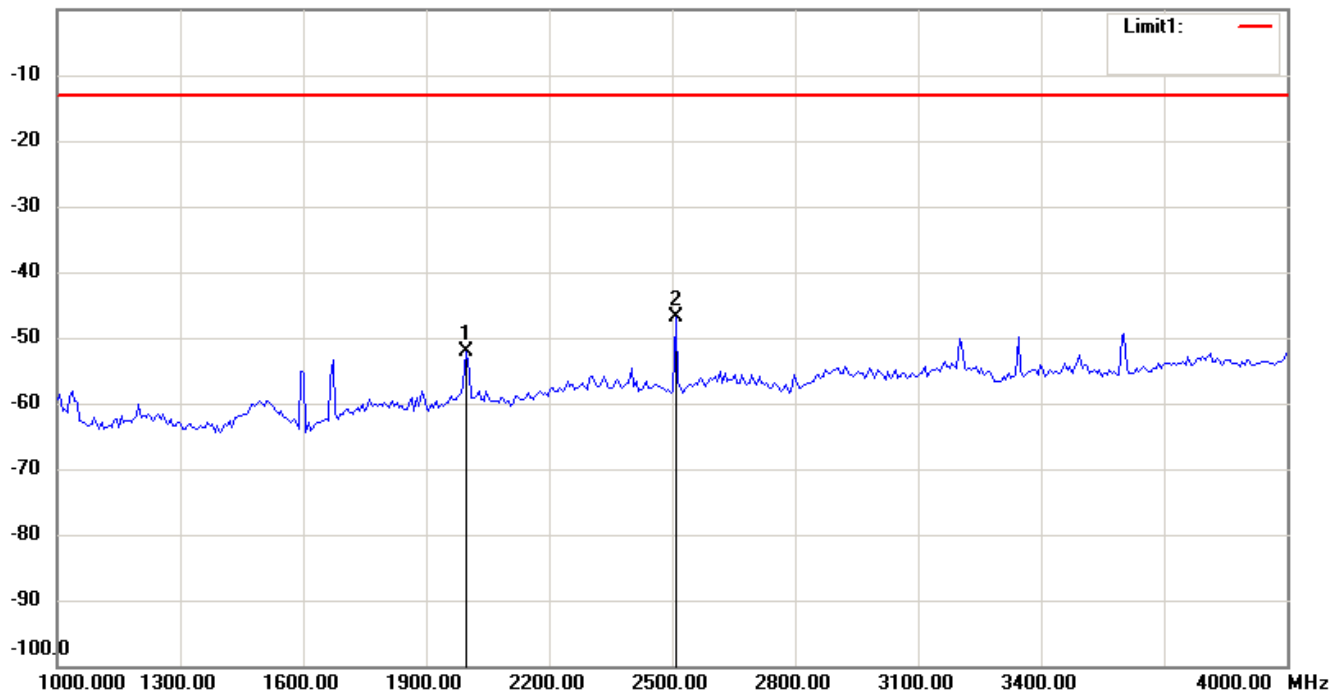
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

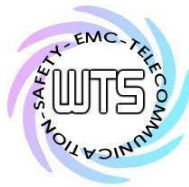


0.0 dBm



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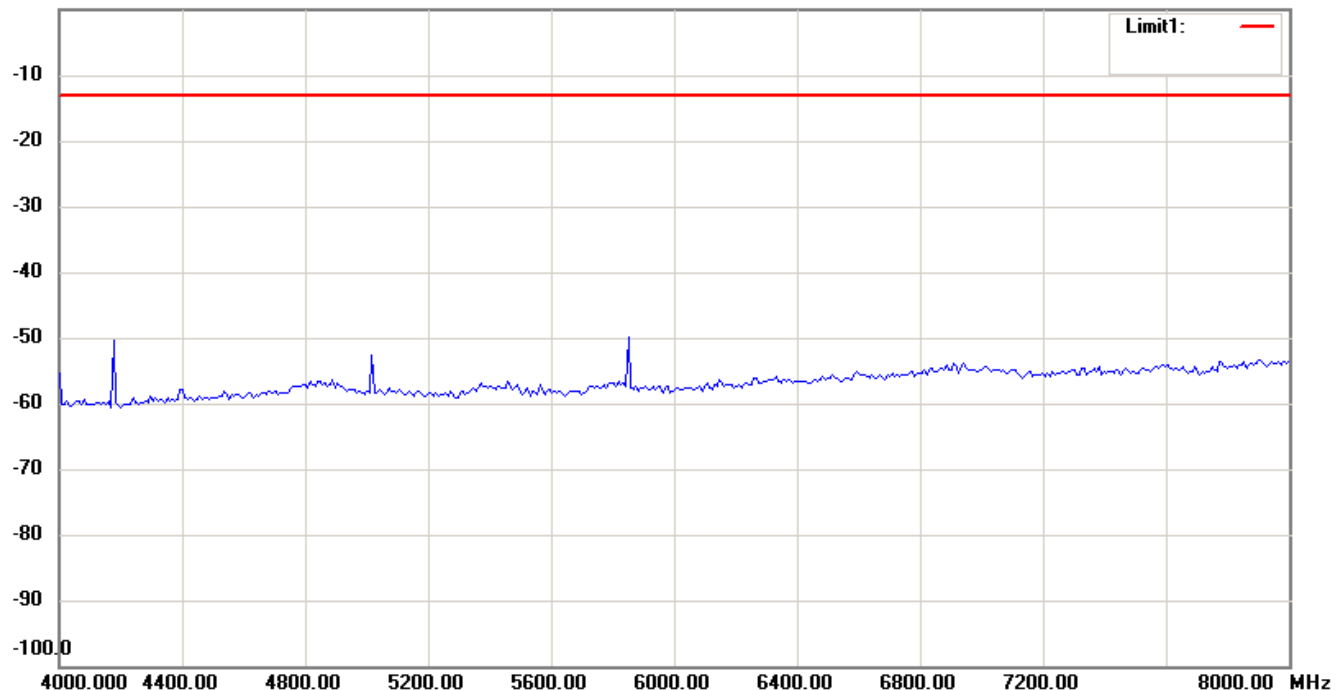


# Worldwide Testing Services(Taiwan) Co., Ltd.

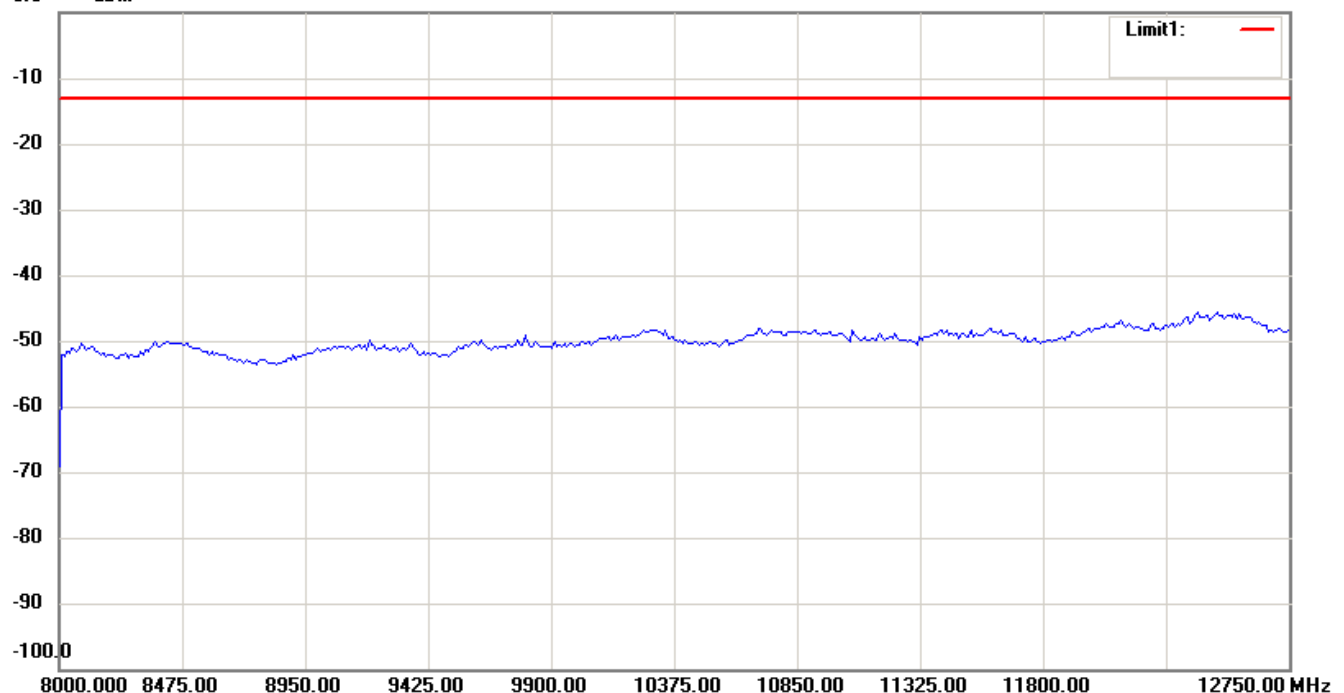
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

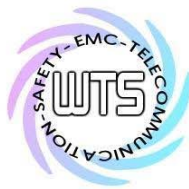


0.0 dBm



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FCC ID: 2ABGRMVX400

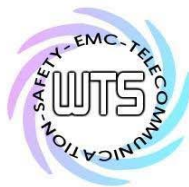
850 band\_ CH 188\_132 V

Antenna Polarization H



## Note:

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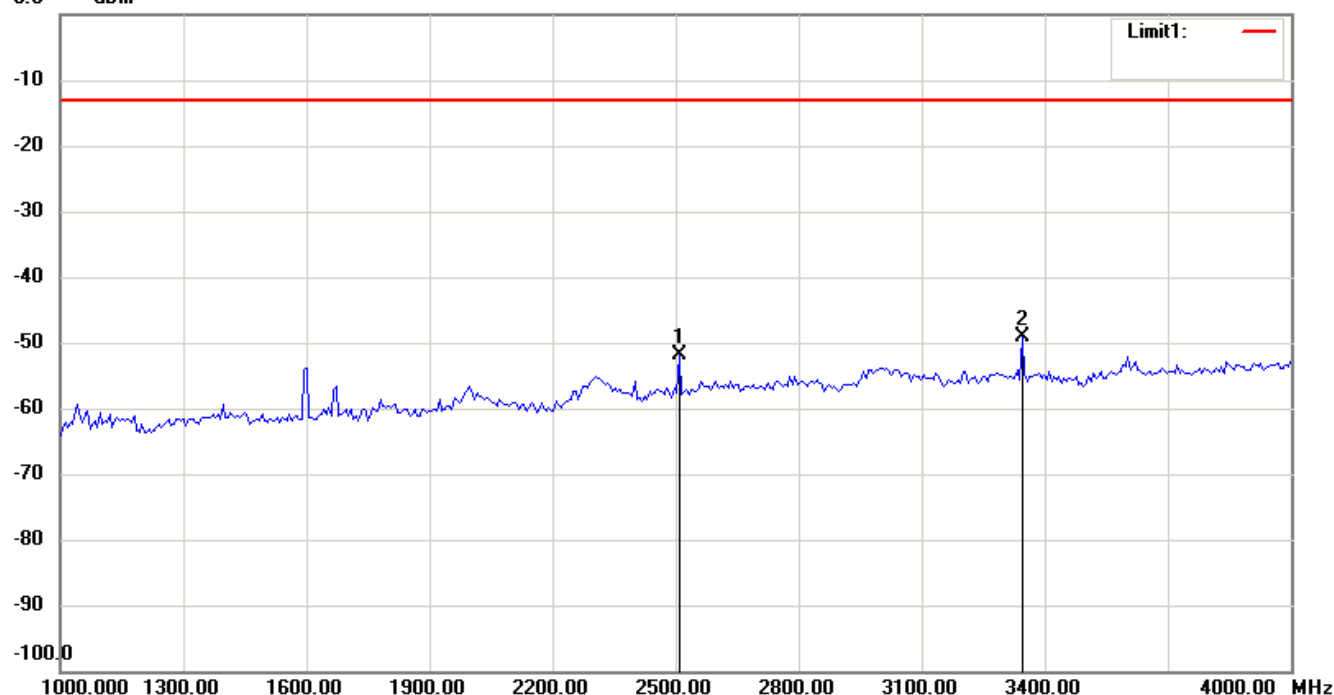


# Worldwide Testing Services(Taiwan) Co., Ltd.

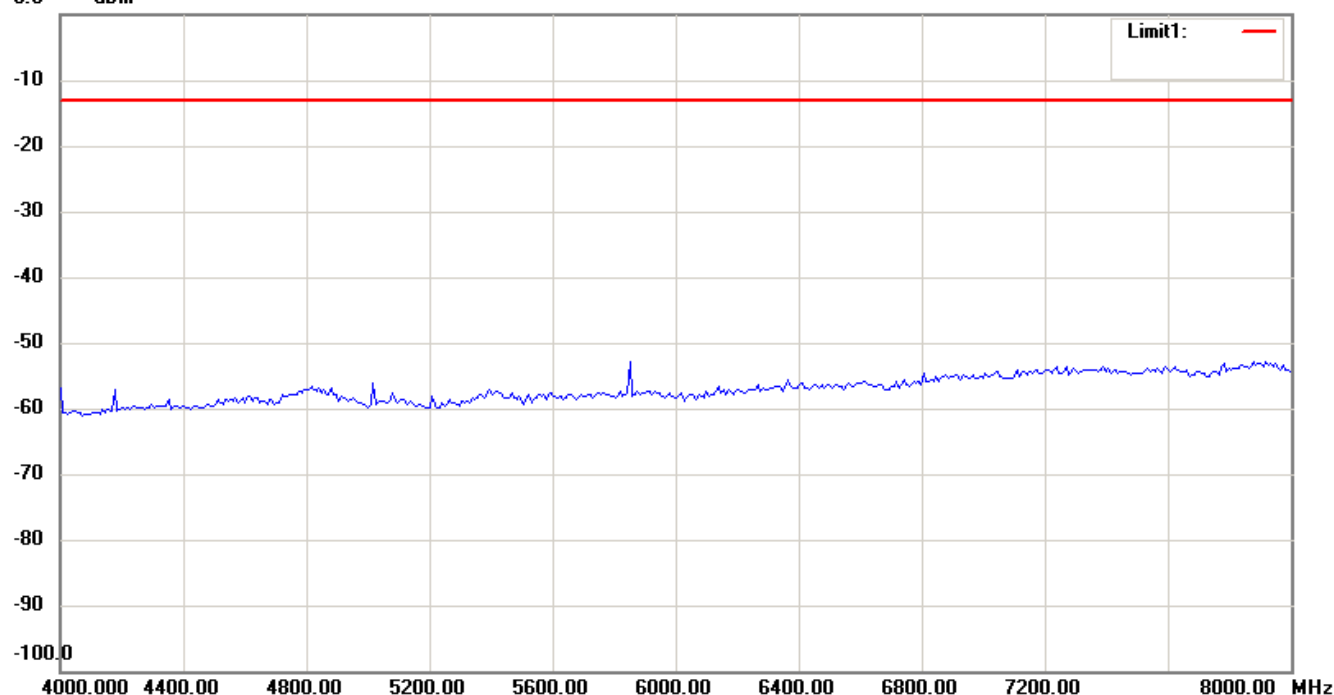
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

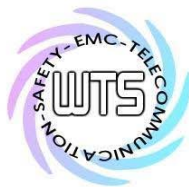


0.0 dBm



## Note:

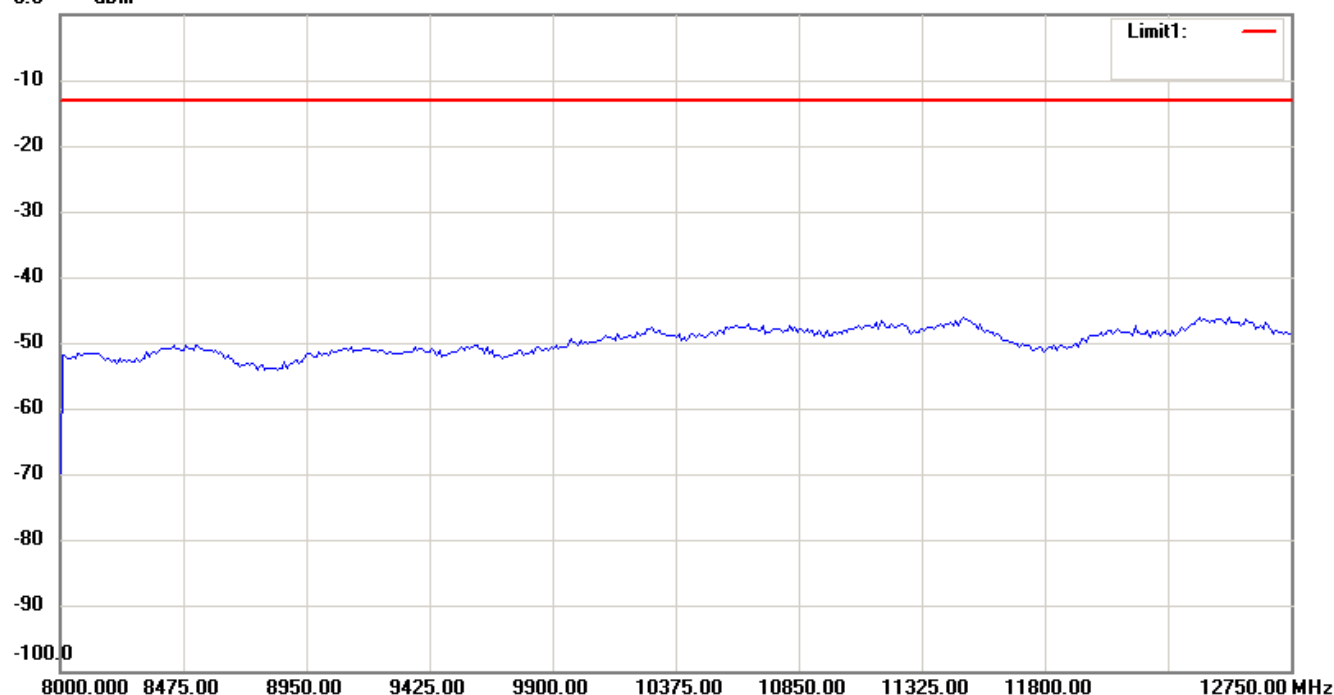
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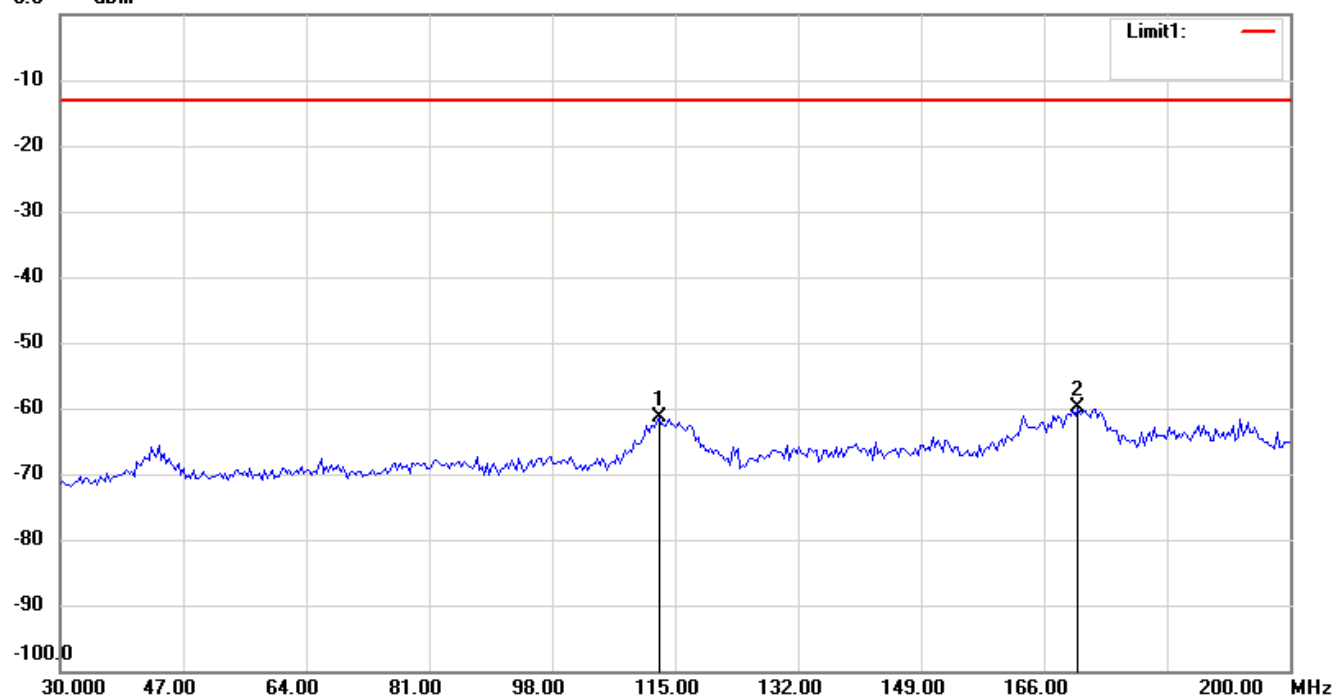
FCC ID: 2ABGRMVX400

0.0 dBm



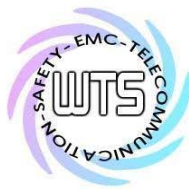
Antenna Polarization V

0.0 dBm



**Note:**

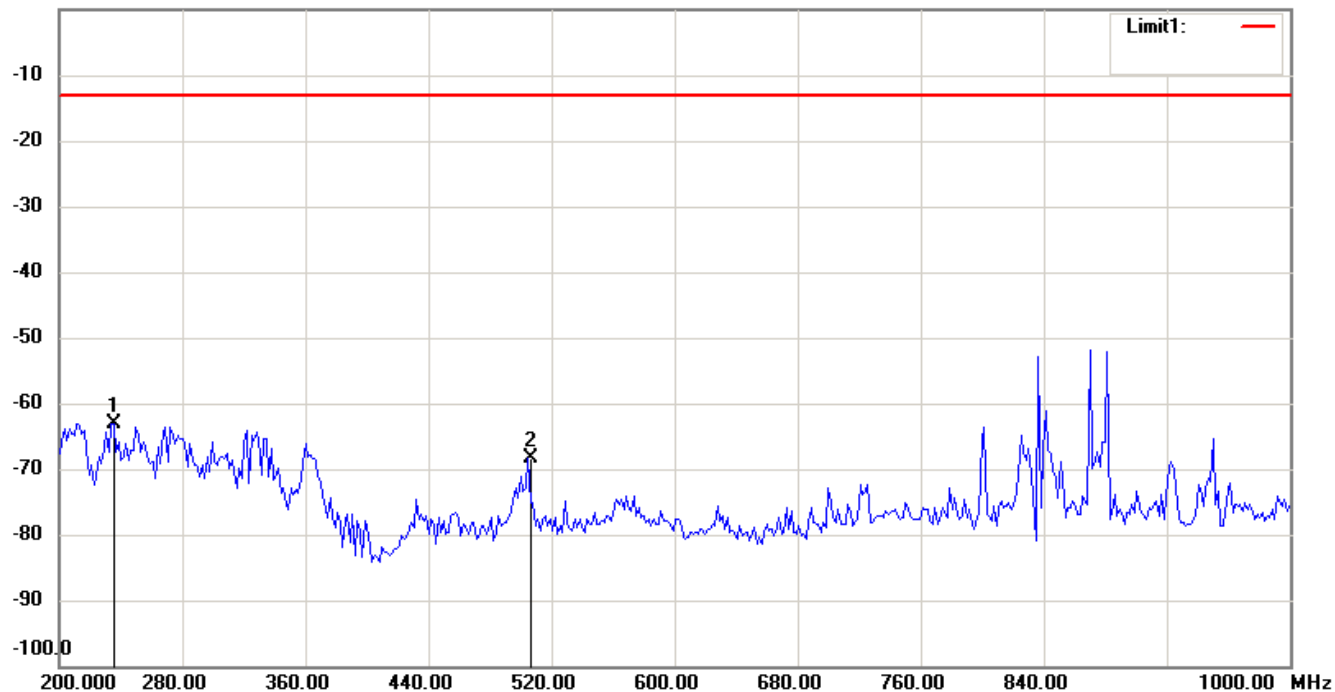
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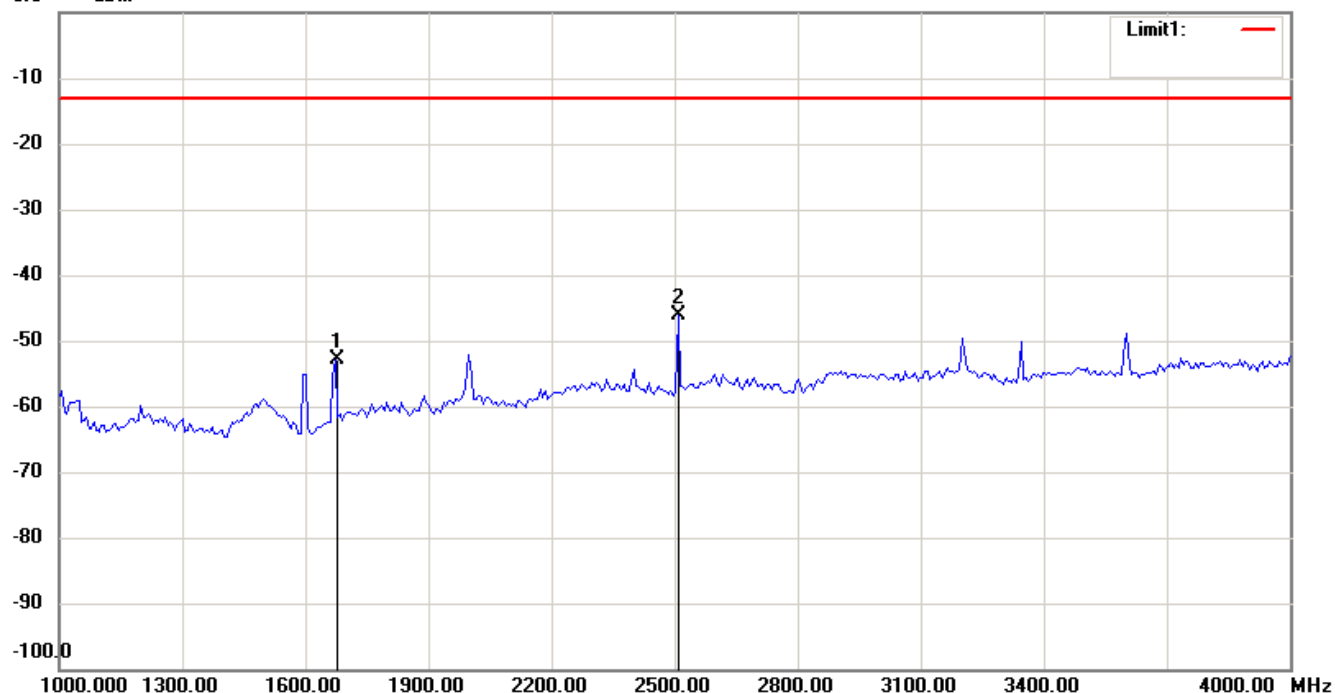
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

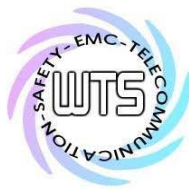


0.0 dBm



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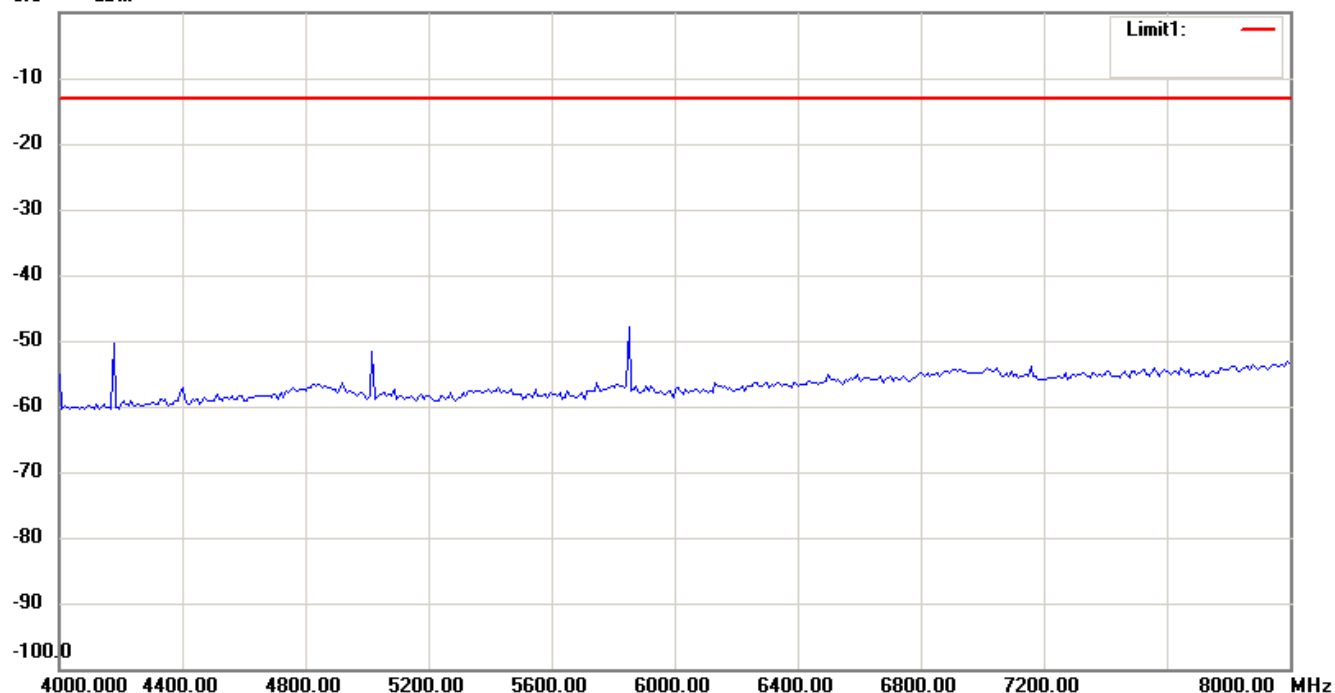


# Worldwide Testing Services(Taiwan) Co., Ltd.

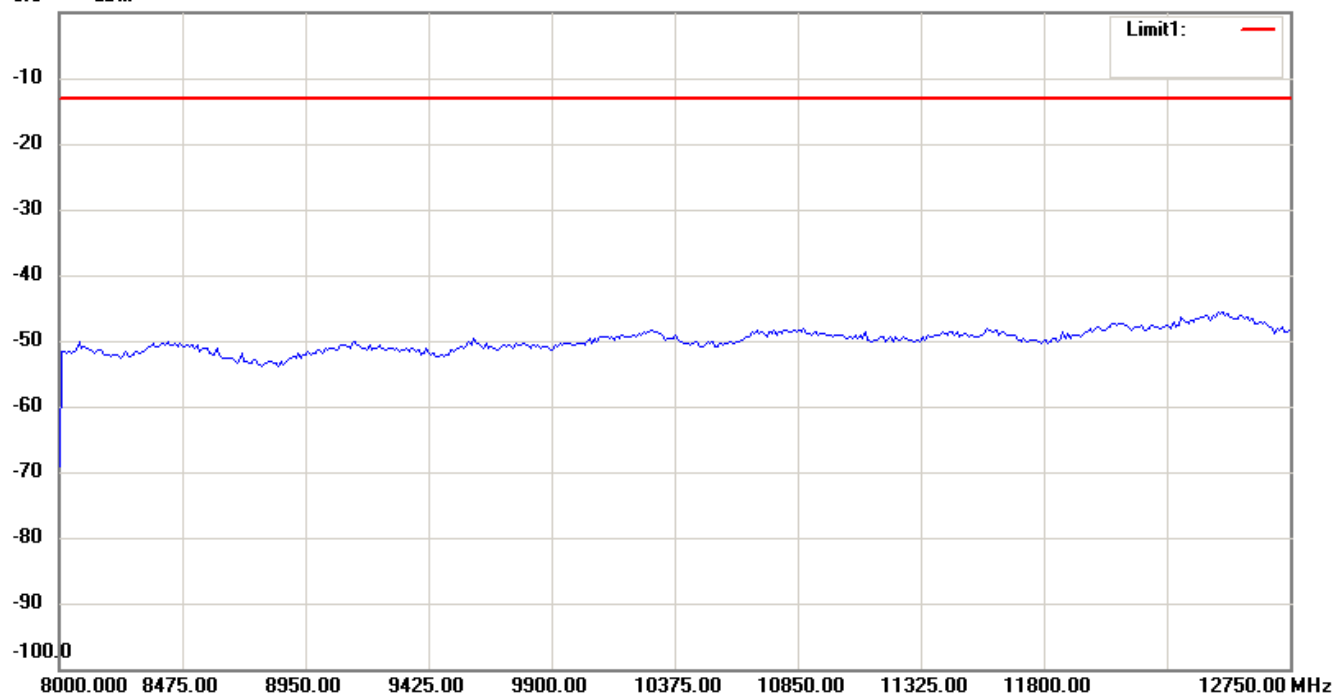
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

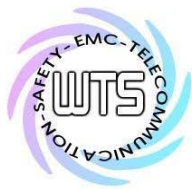


0.0 dBm



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

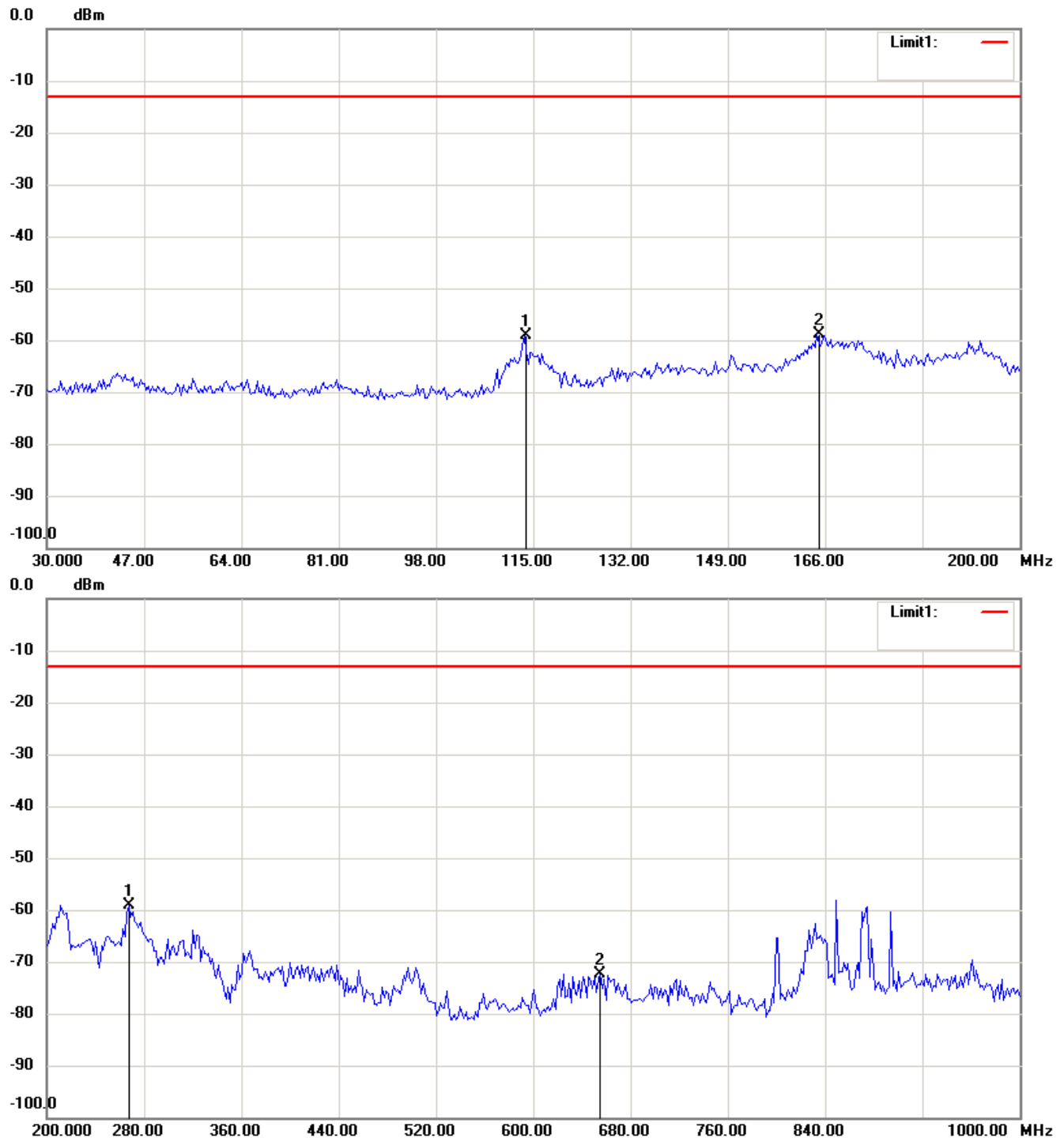


Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

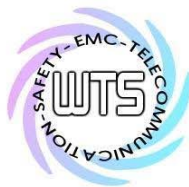
850 band\_ CH 251\_108V

Antenna Polarization H



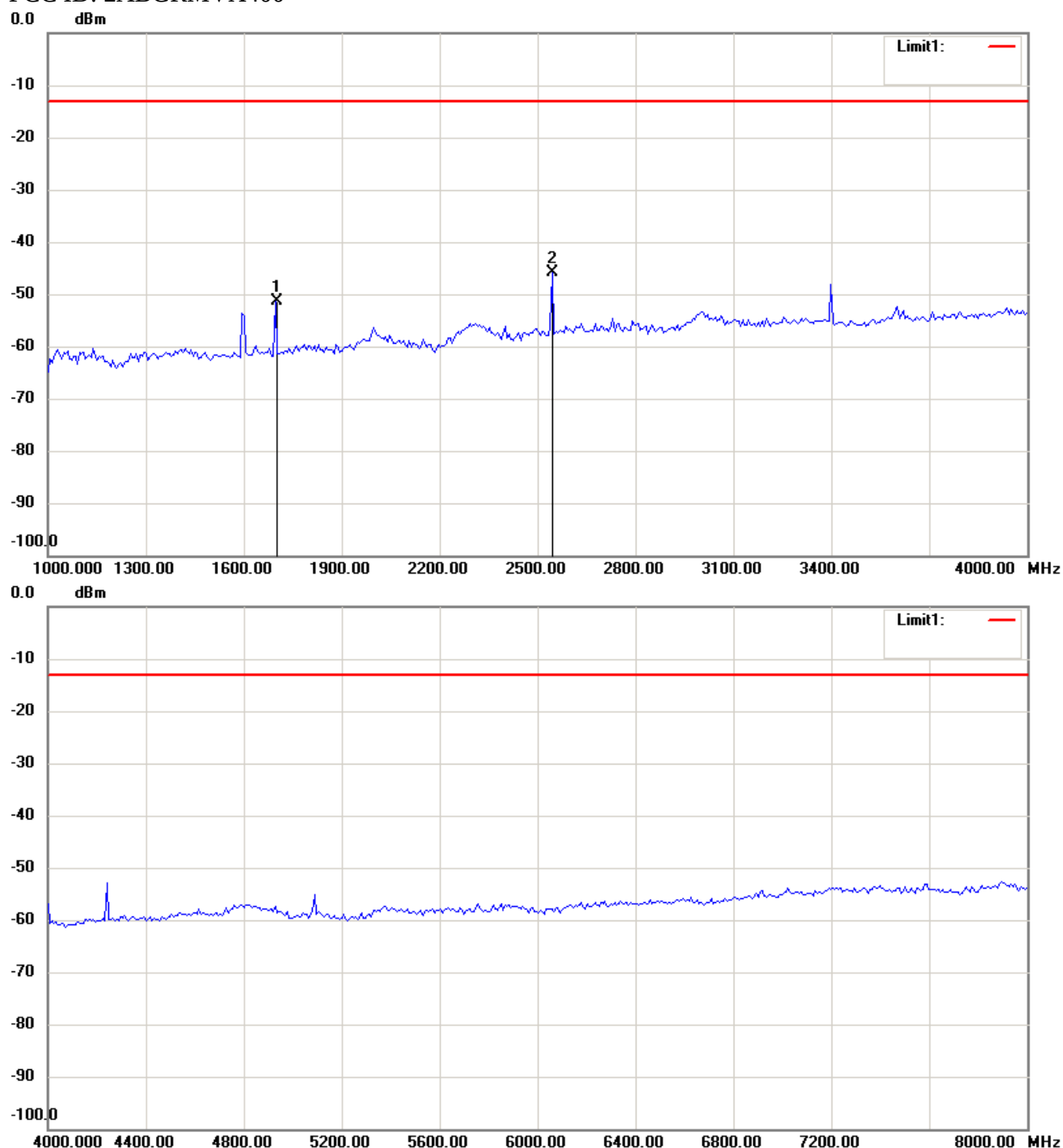
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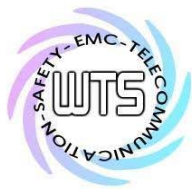
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



**Note:**

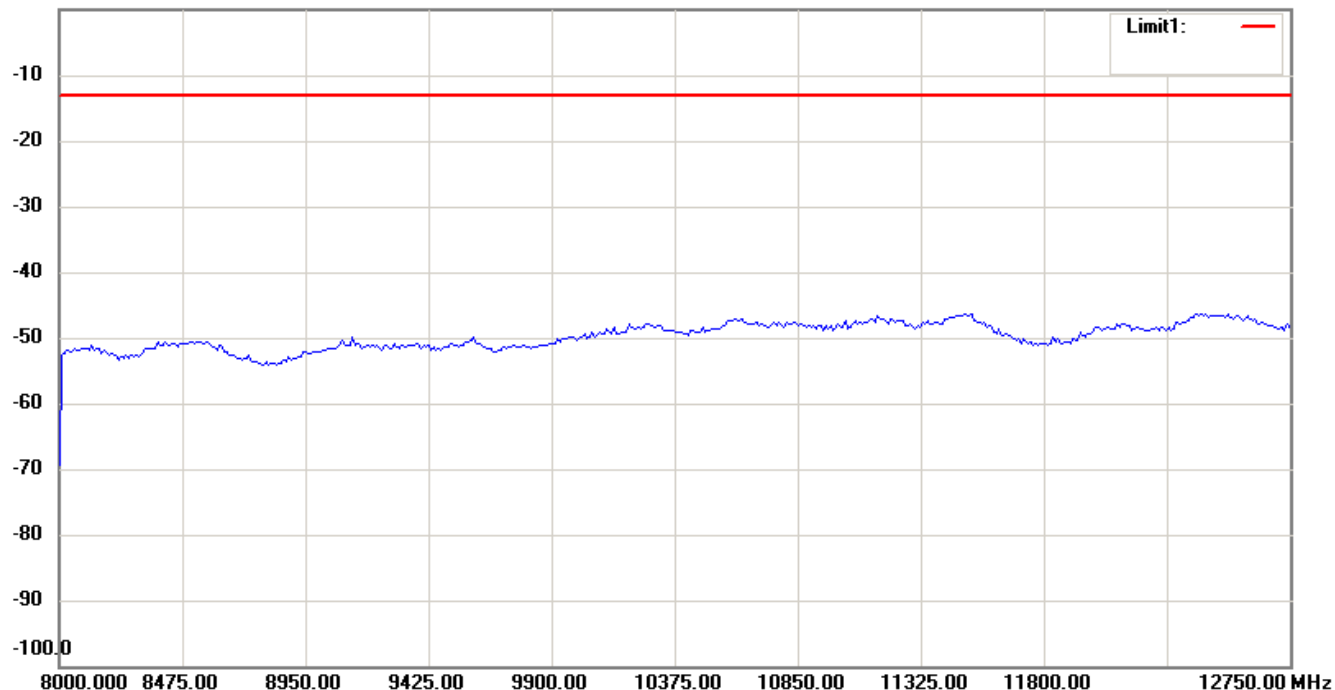
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Report Number: W6M21309-13566-P-2224

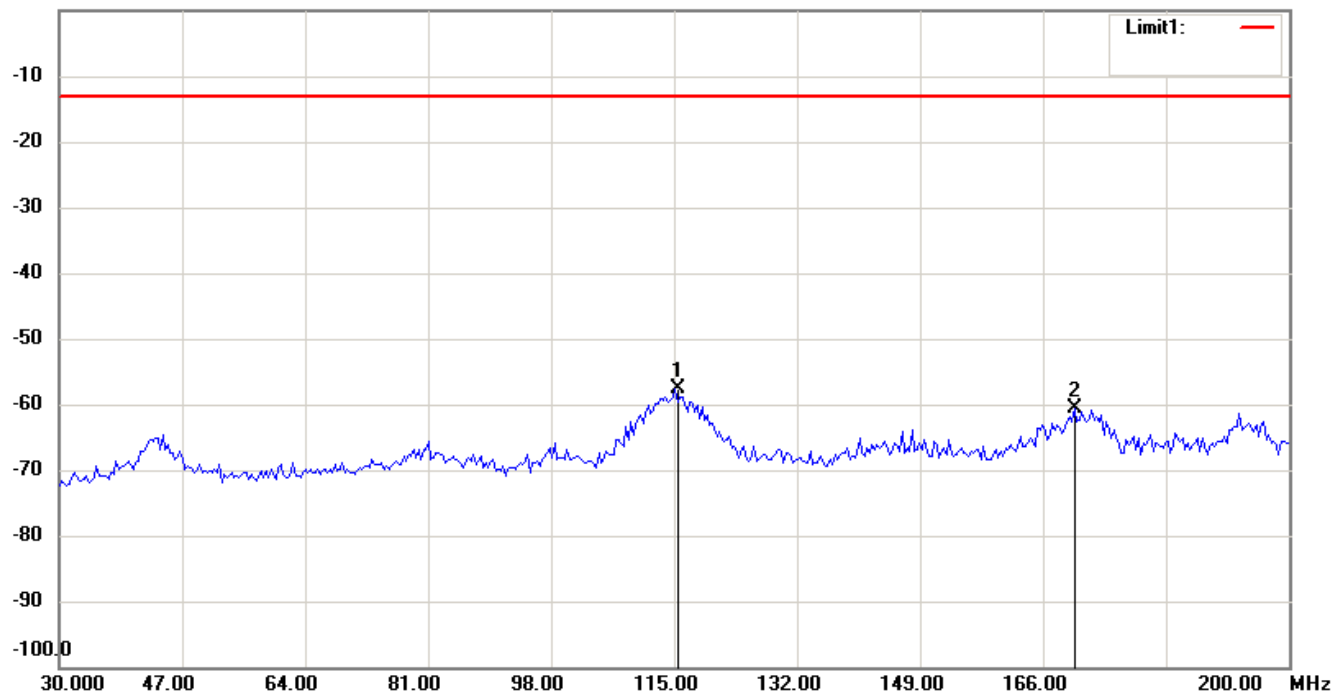
FCC ID: 2ABGRMVX400

0.0 dBm



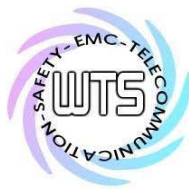
Antenna Polarization V

0.0 dBm



#### Note:

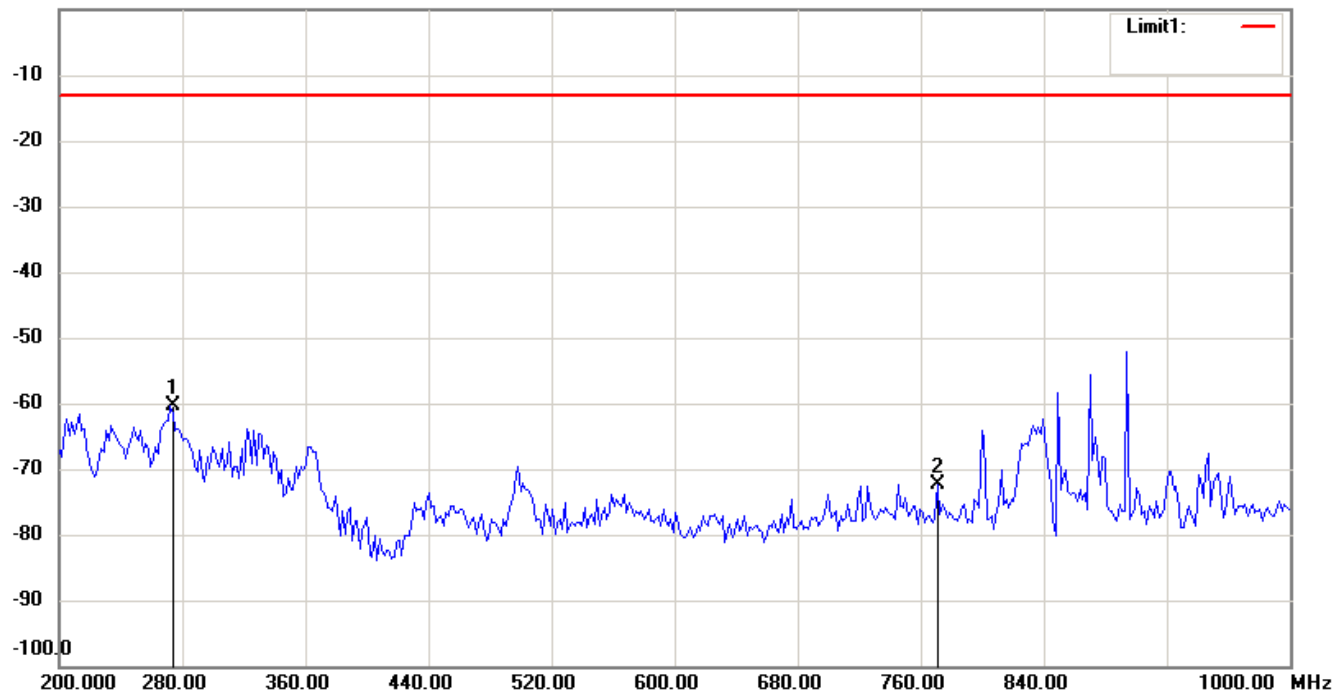
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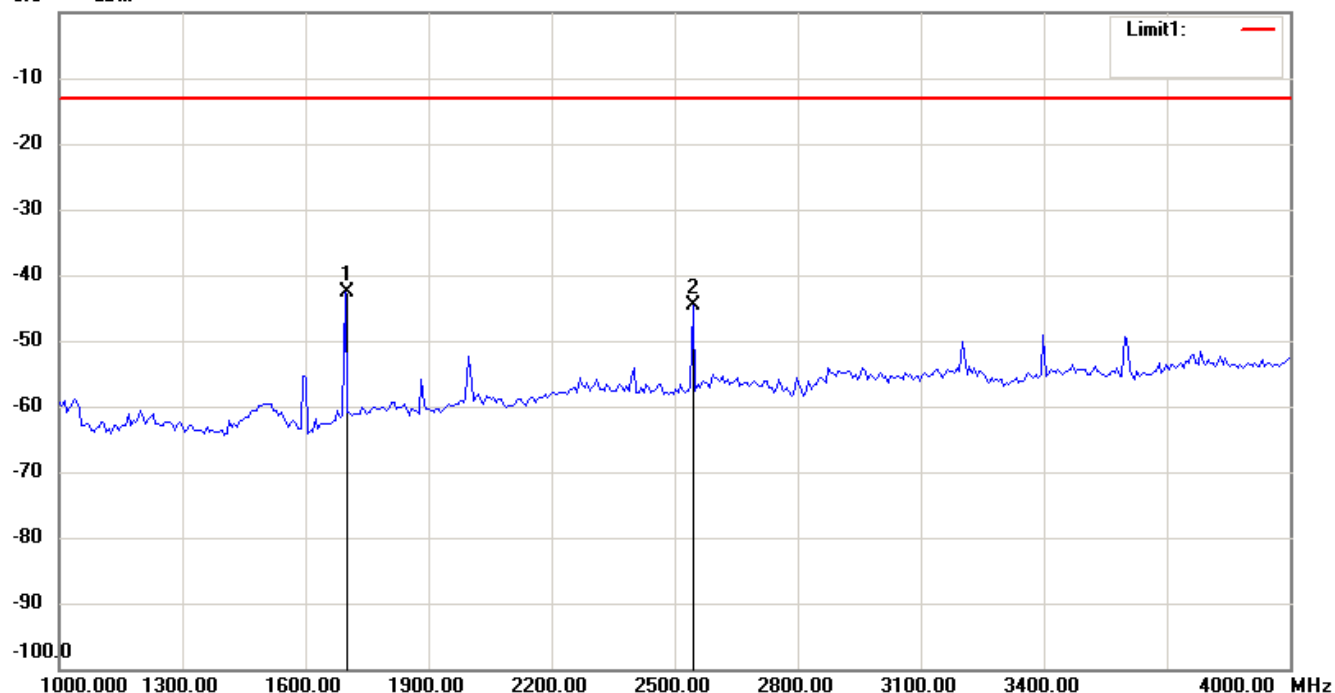
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

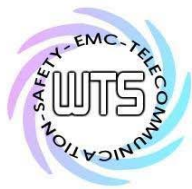


0.0 dBm



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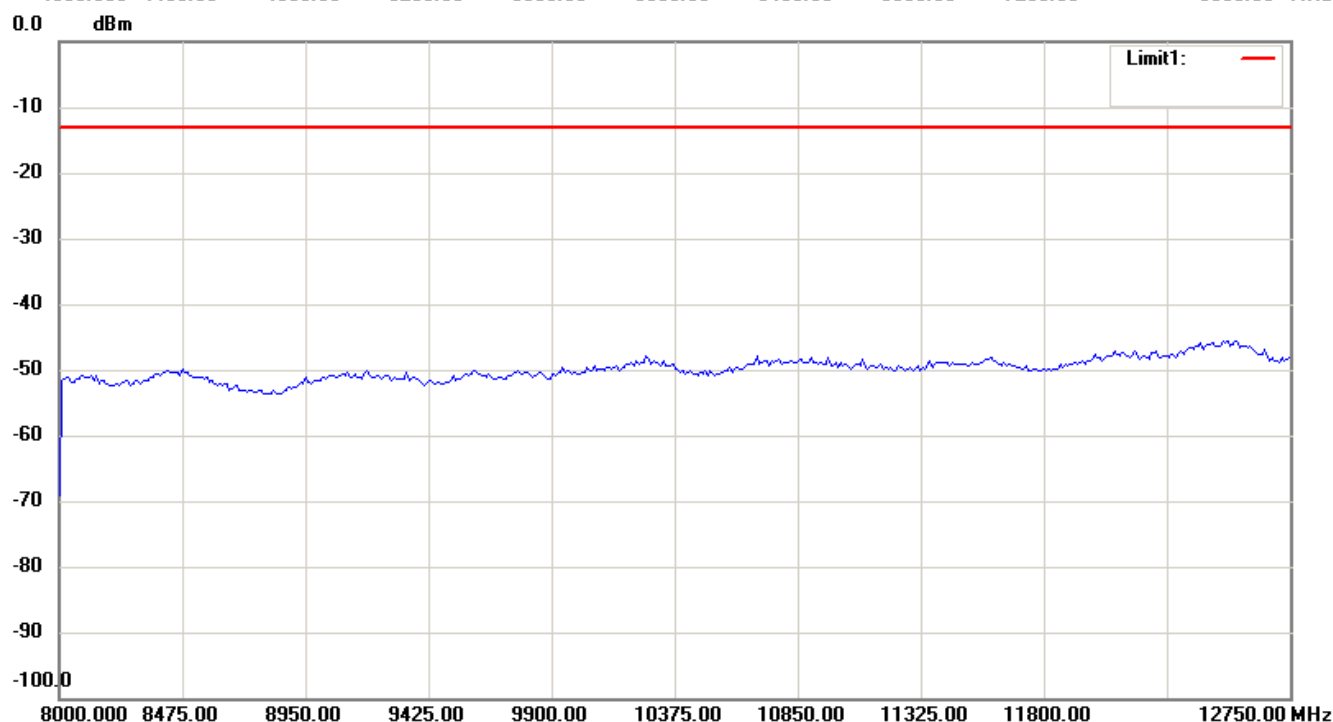
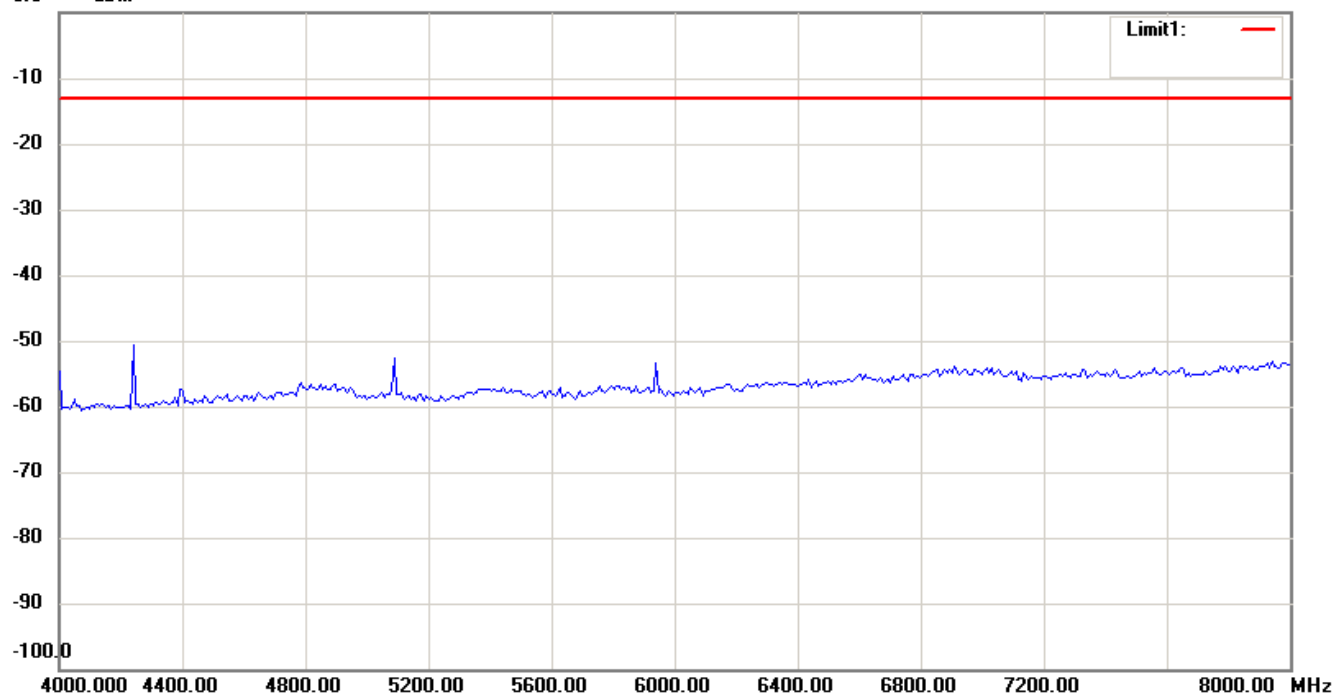


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

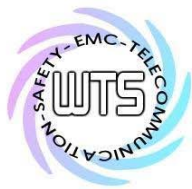
FCC ID: 2ABGRMVX400

0.0 dBm



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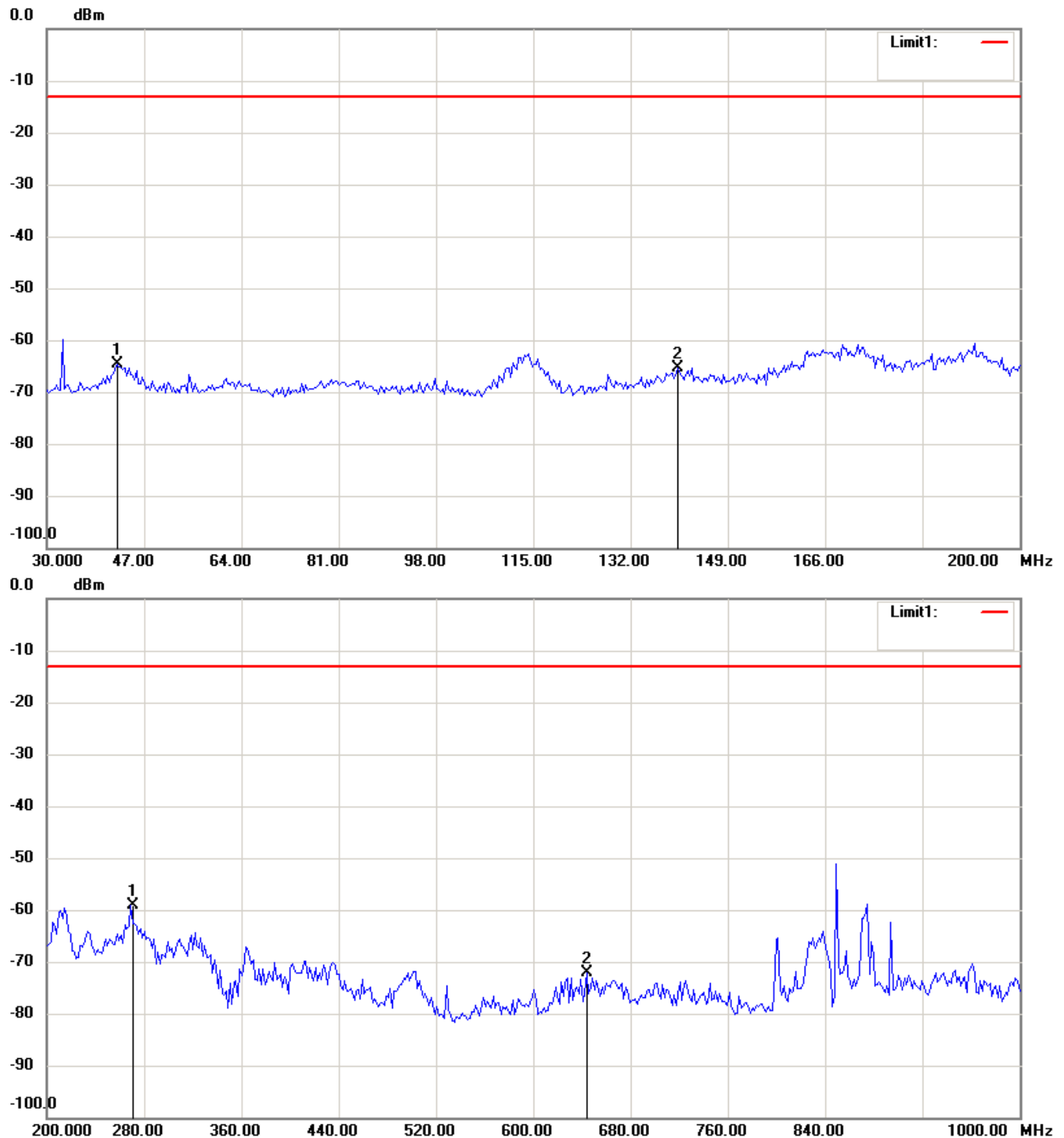
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

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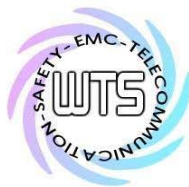
850 band\_ CH 251\_132 V

Antenna Polarization H



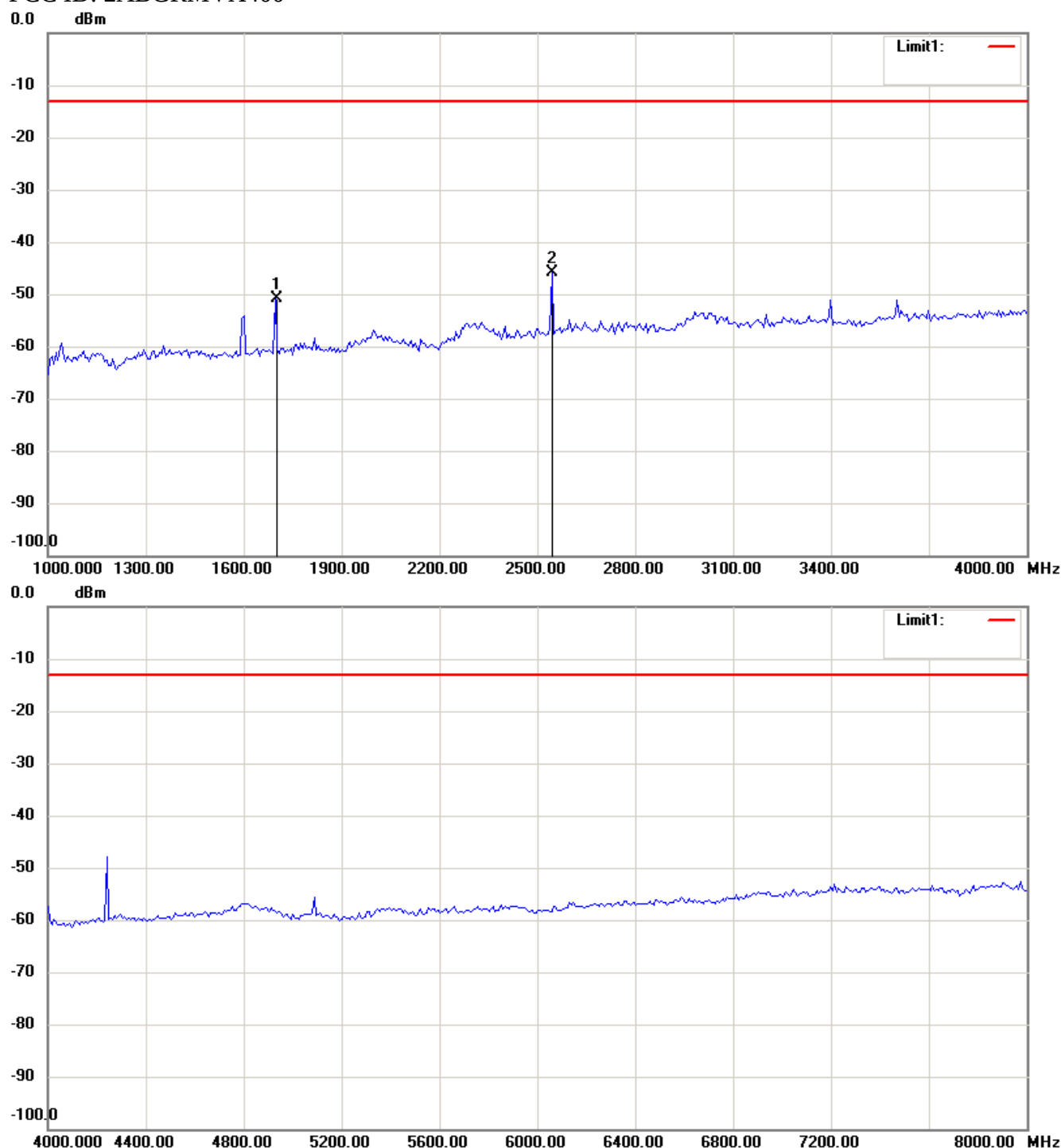
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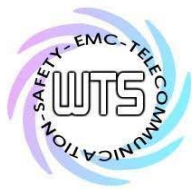
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



**Note:**

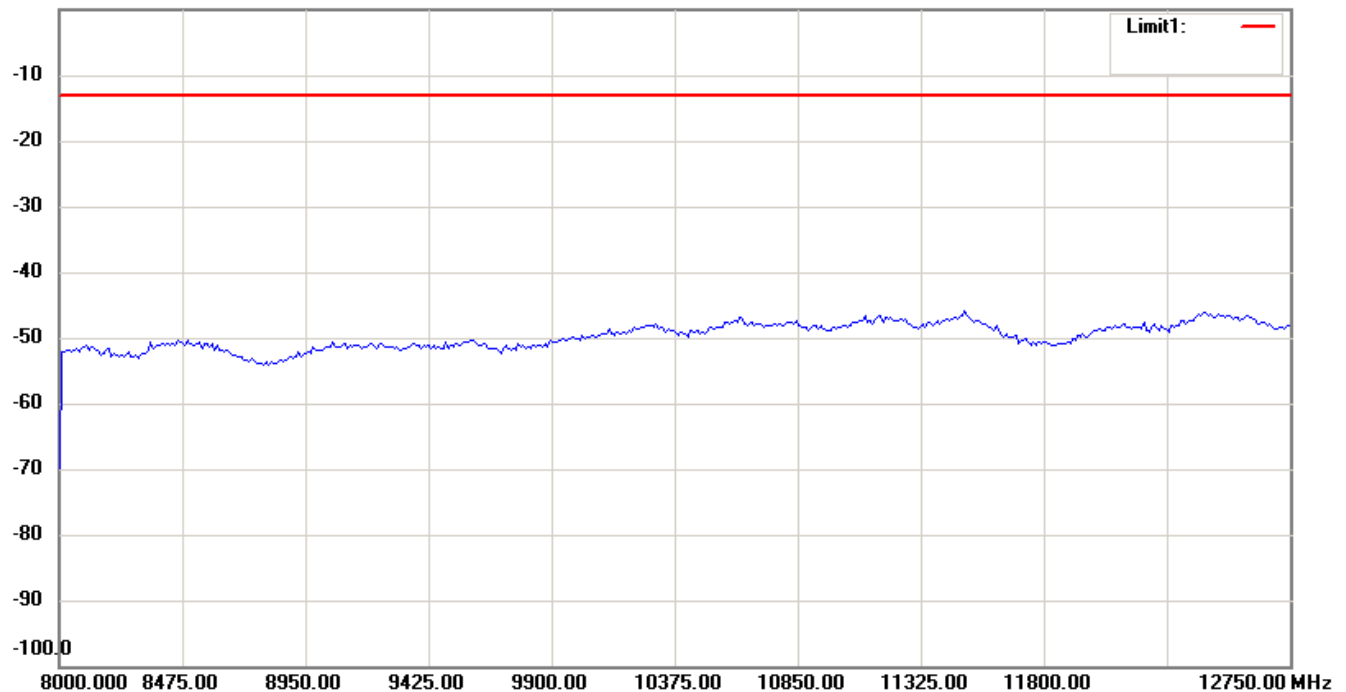
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Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm



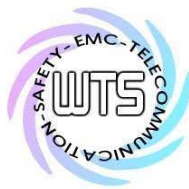
Antenna Polarization V

0.0 dBm



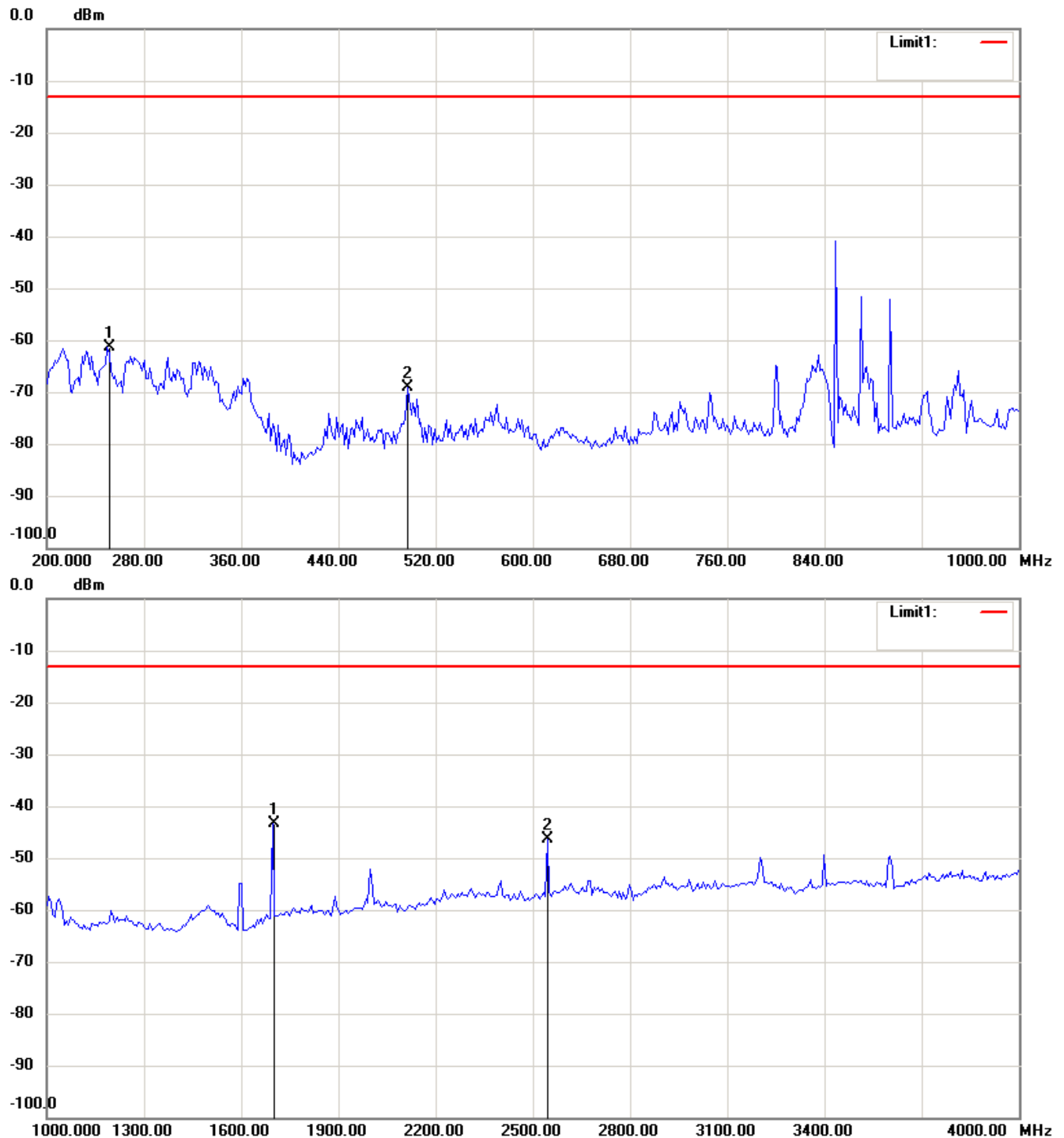
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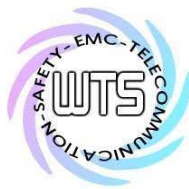
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



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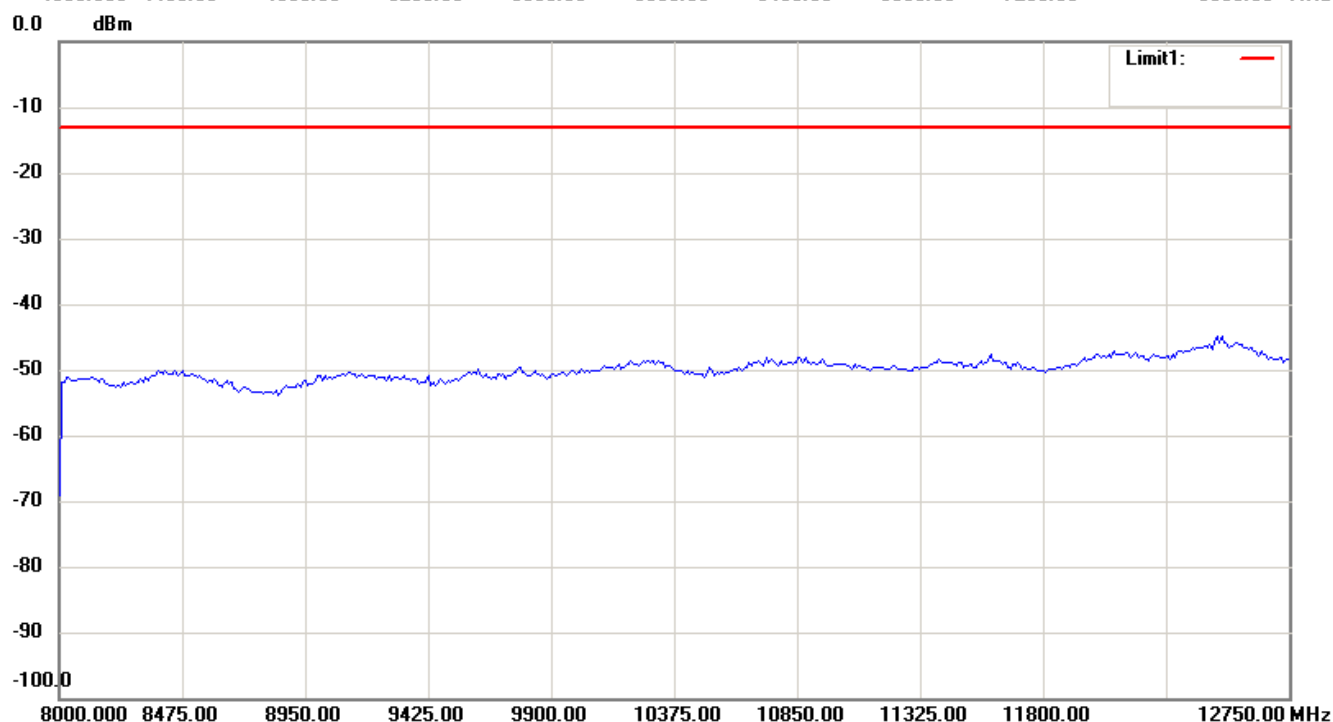
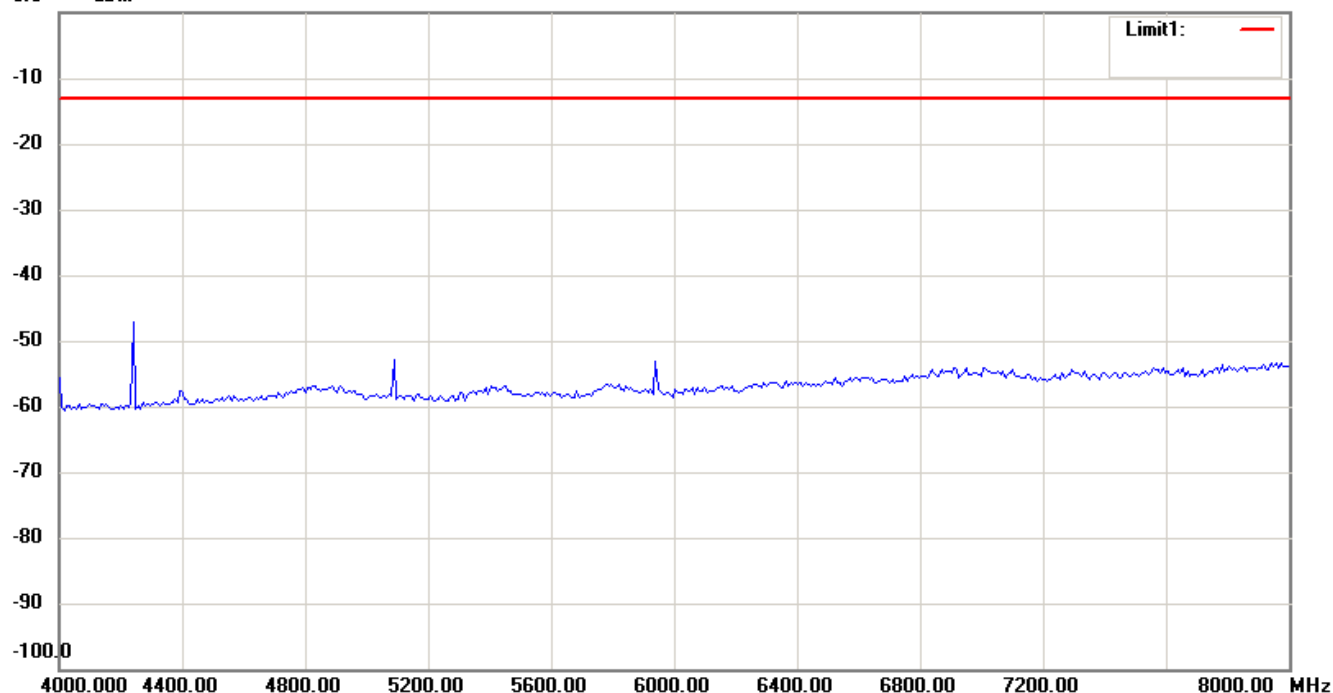


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

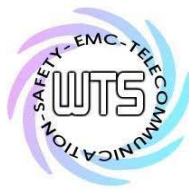
FCC ID: 2ABGRMVX400

0.0 dBm



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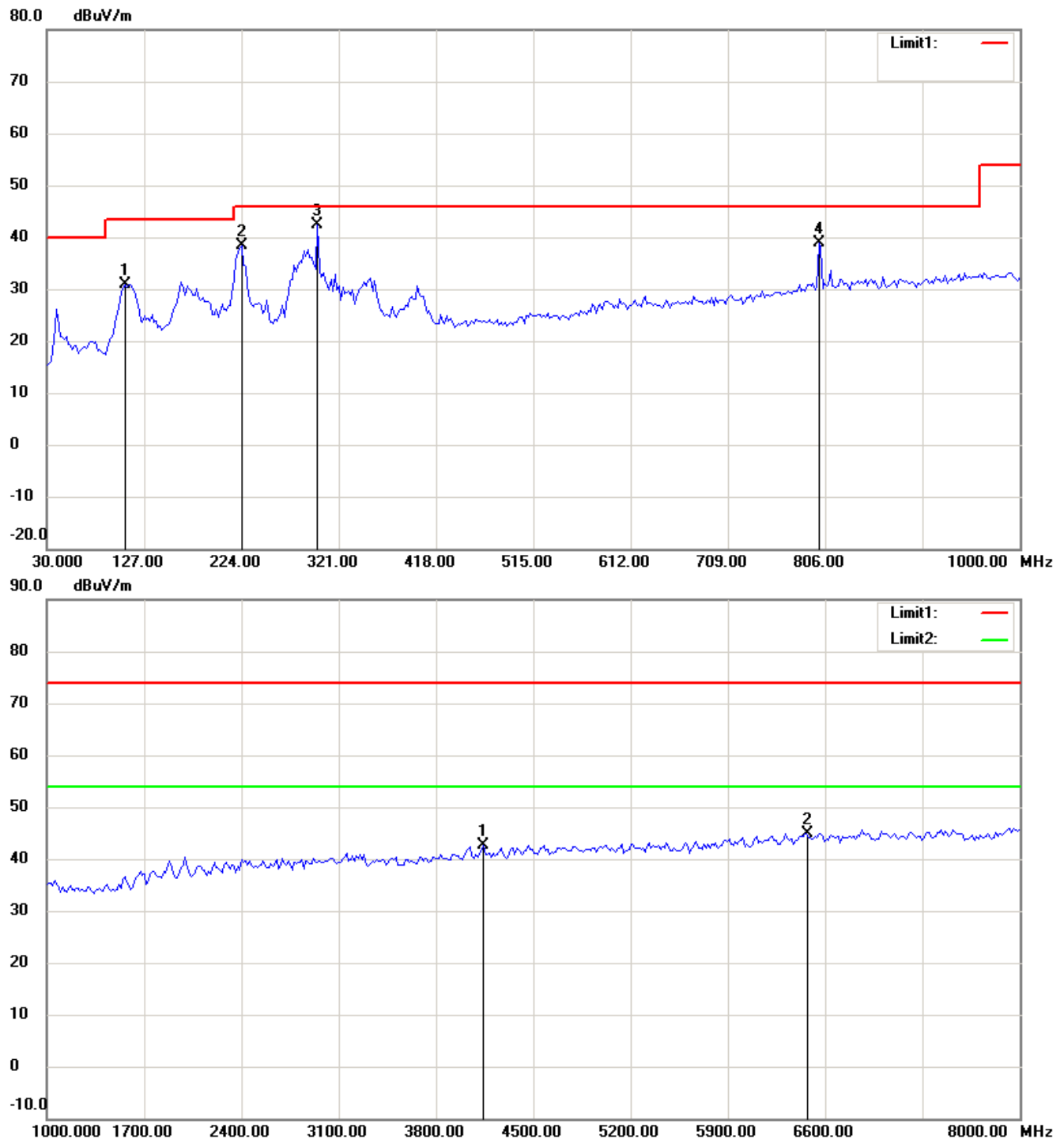
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_Idle Mode\_108V

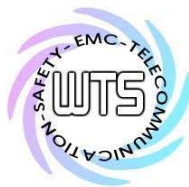
Antenna Polarization H



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

Note:

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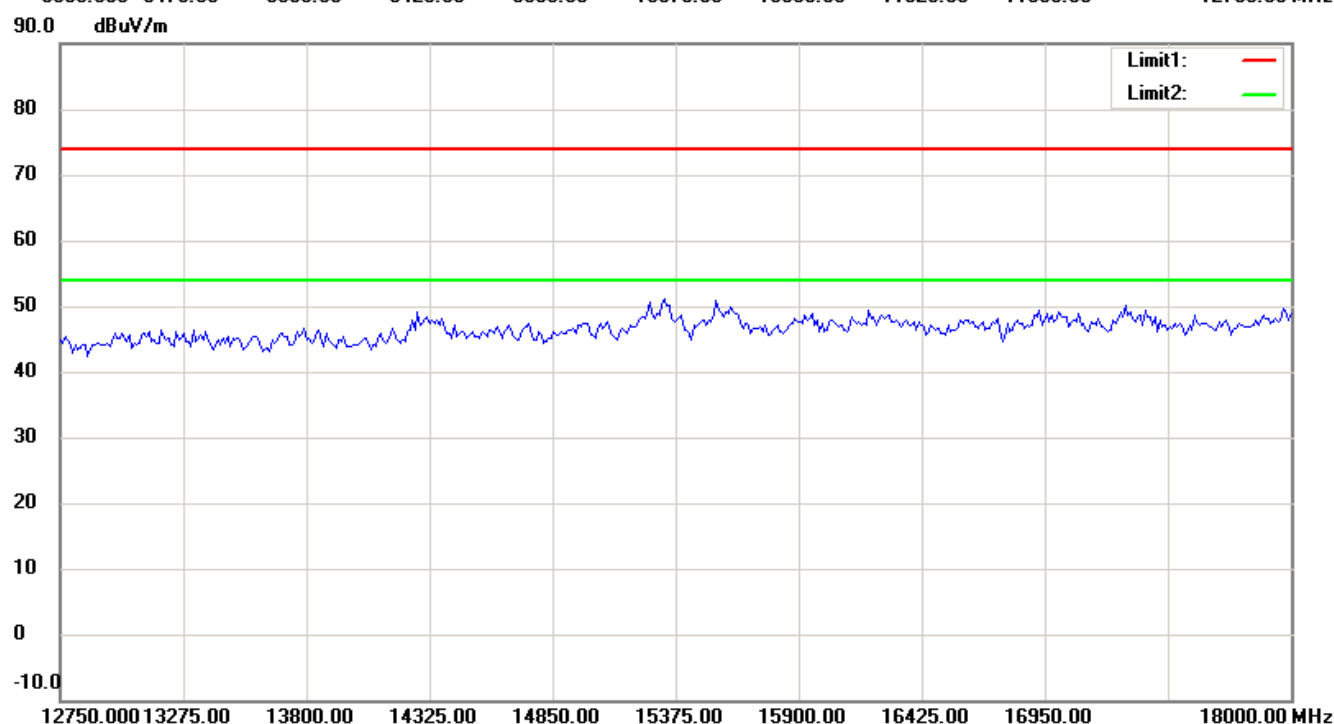
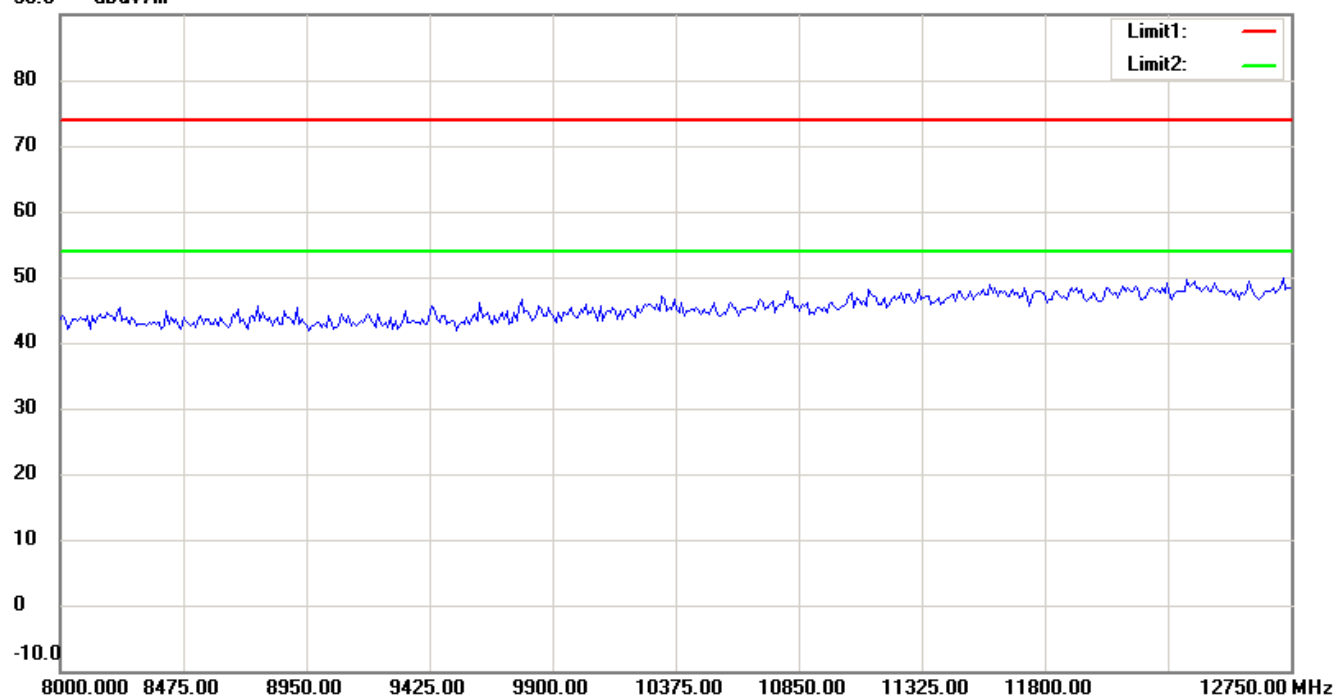


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

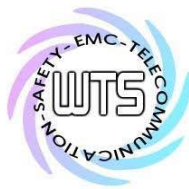
90.0 dBuV/m



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

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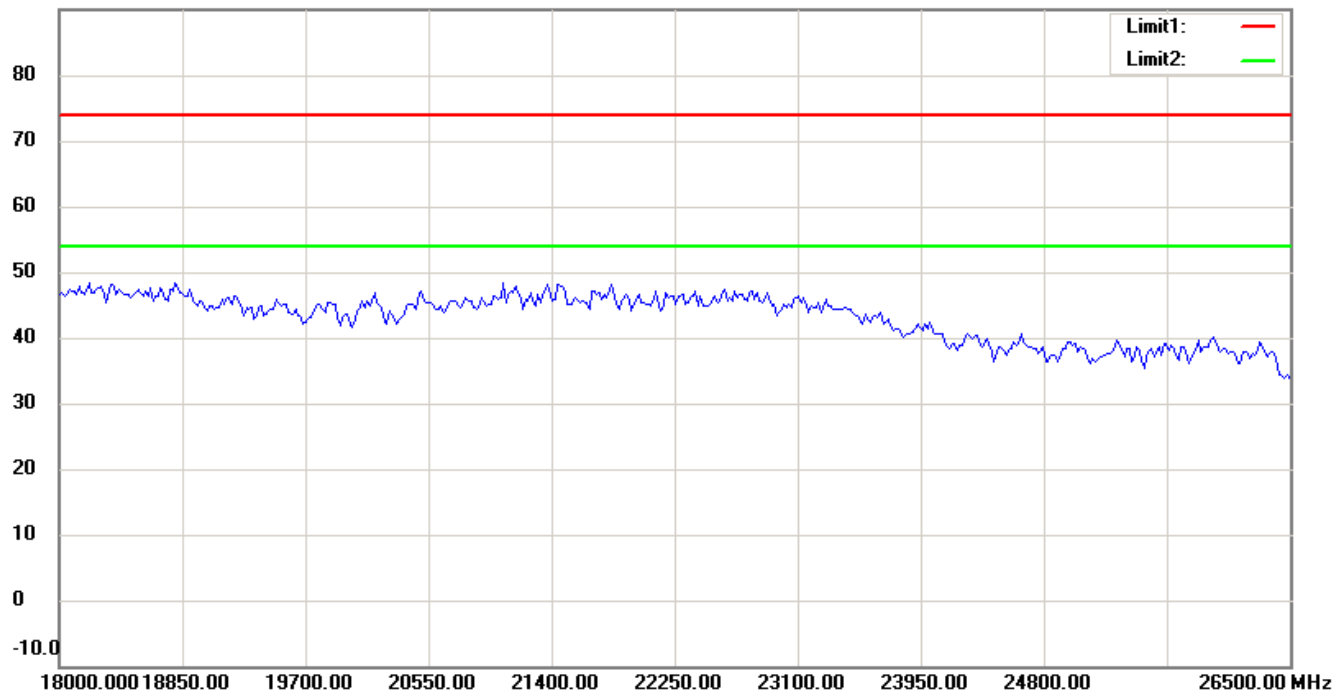


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

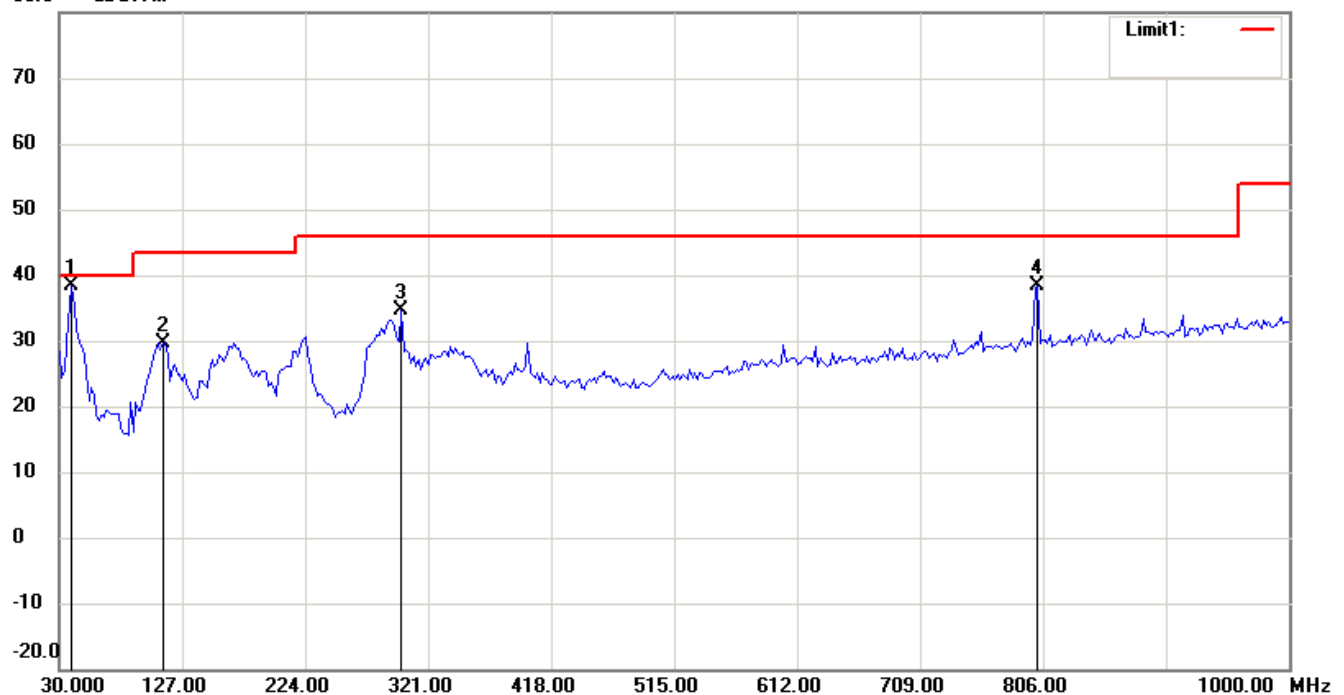
FCC ID: 2ABGRMVX400

90.0 dBuV/m



## Antenna Polarization V

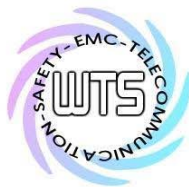
80.0 dBuV/m



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

Note:

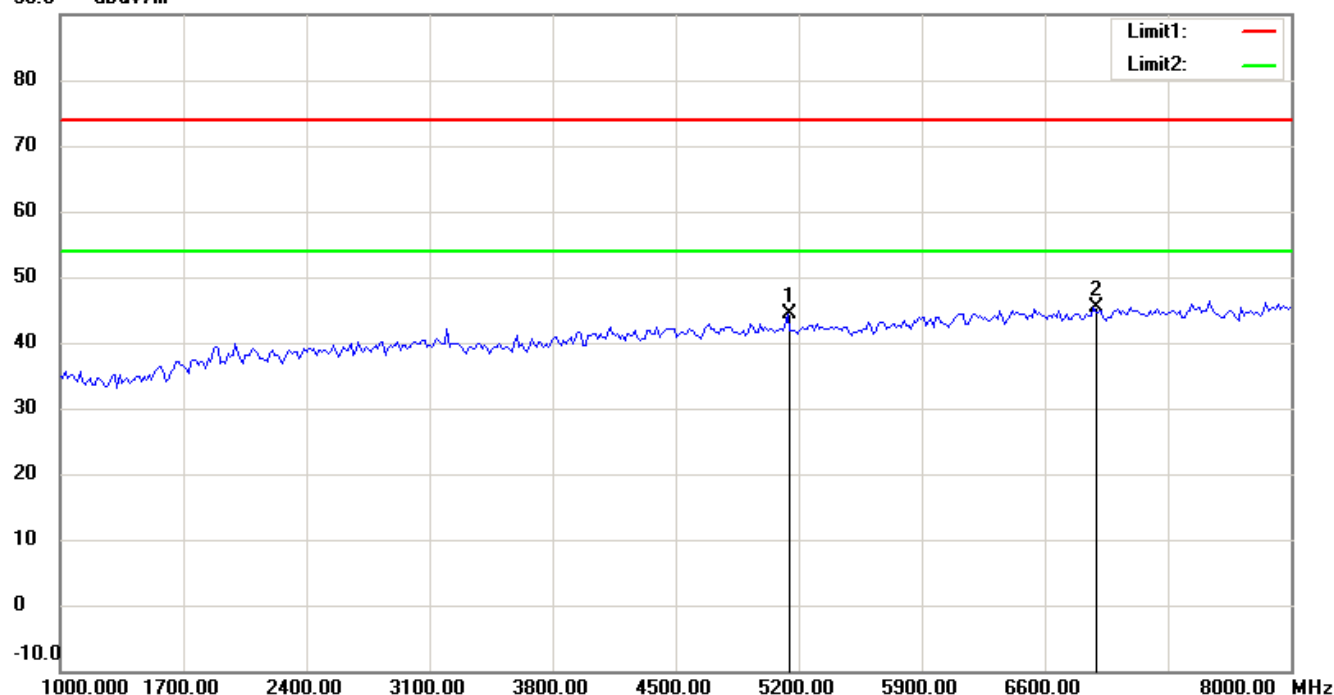
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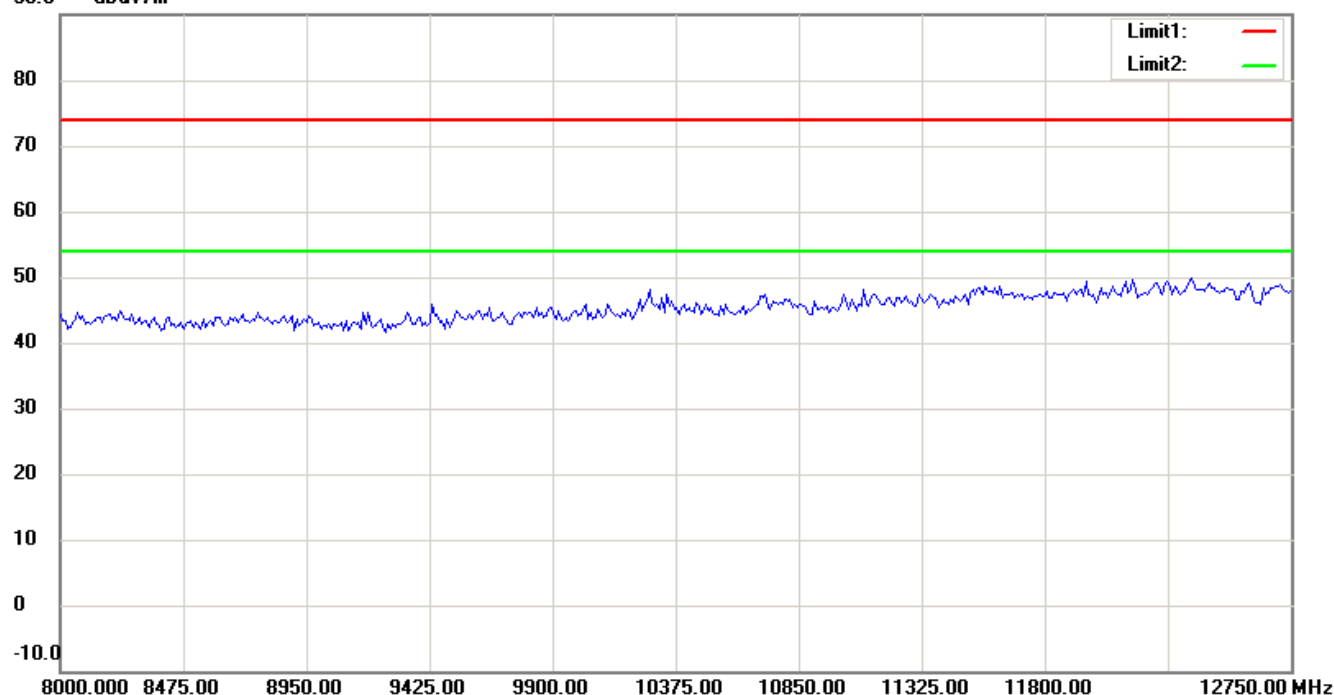
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

90.0 dBuV/m



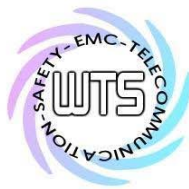
90.0 dBuV/m



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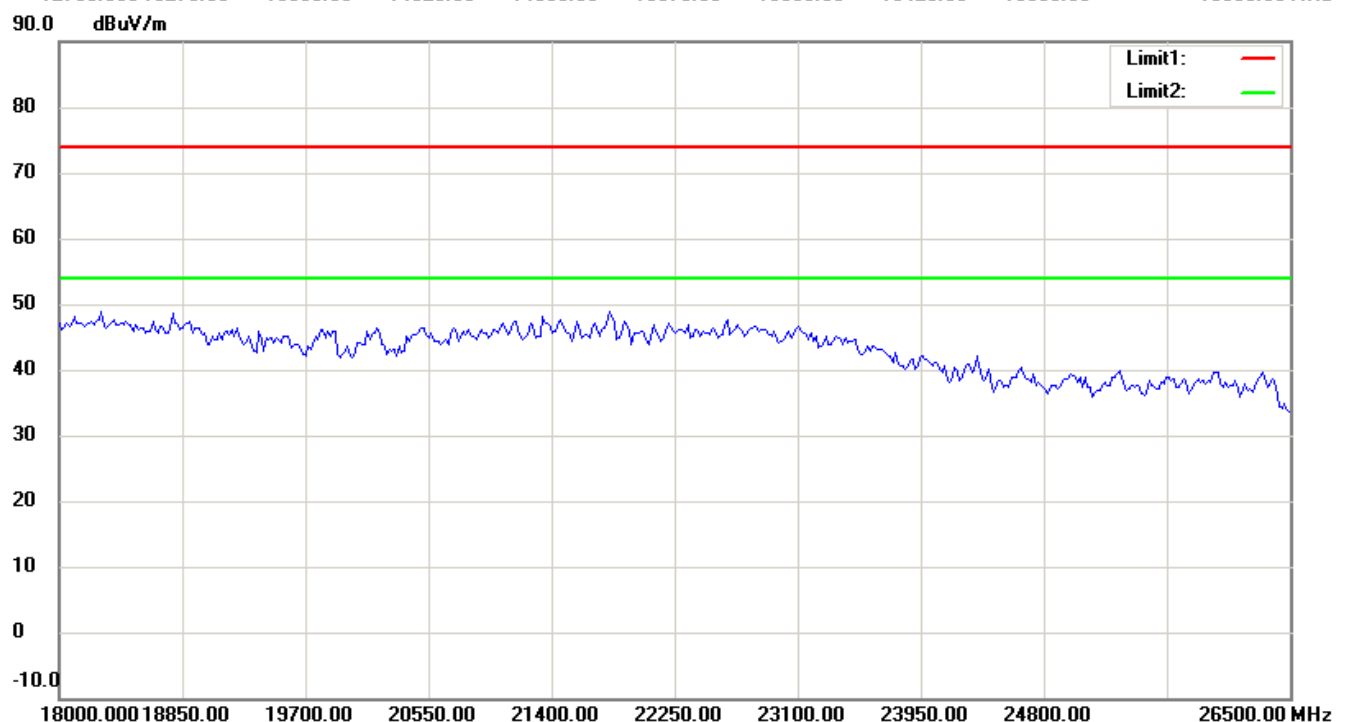
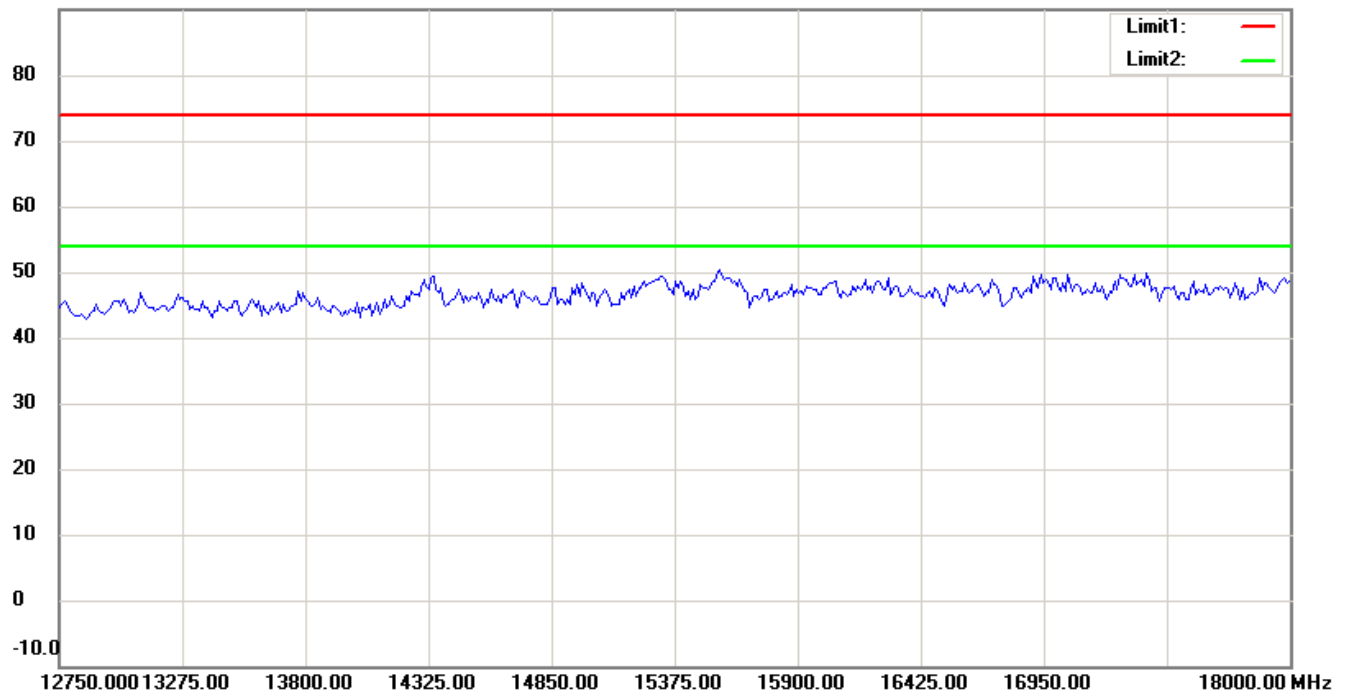


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

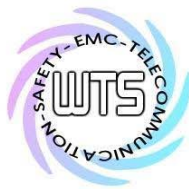
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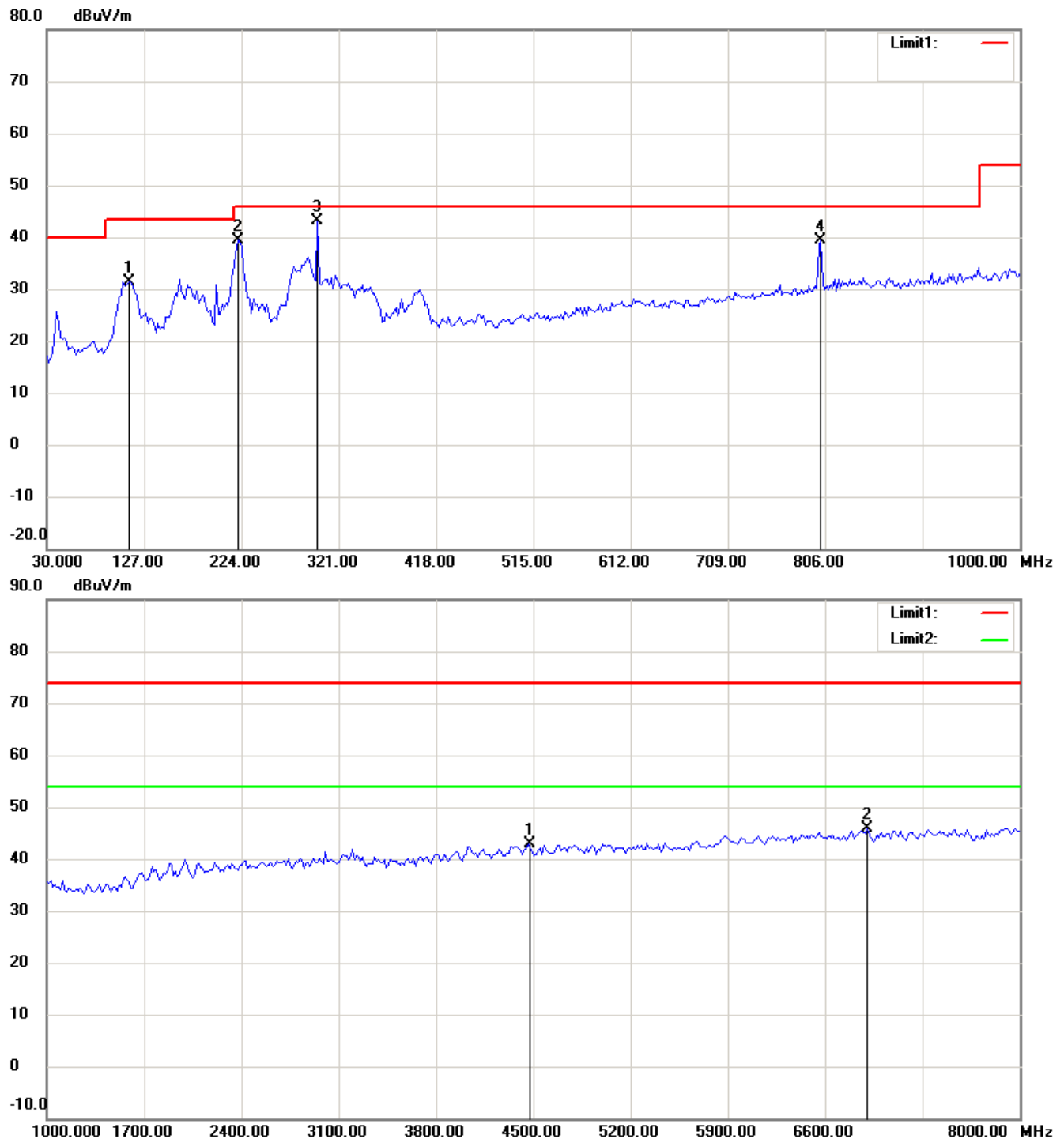
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

850 band\_Idle Mode\_132 V

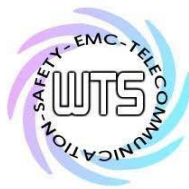
Antenna Polarization H



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

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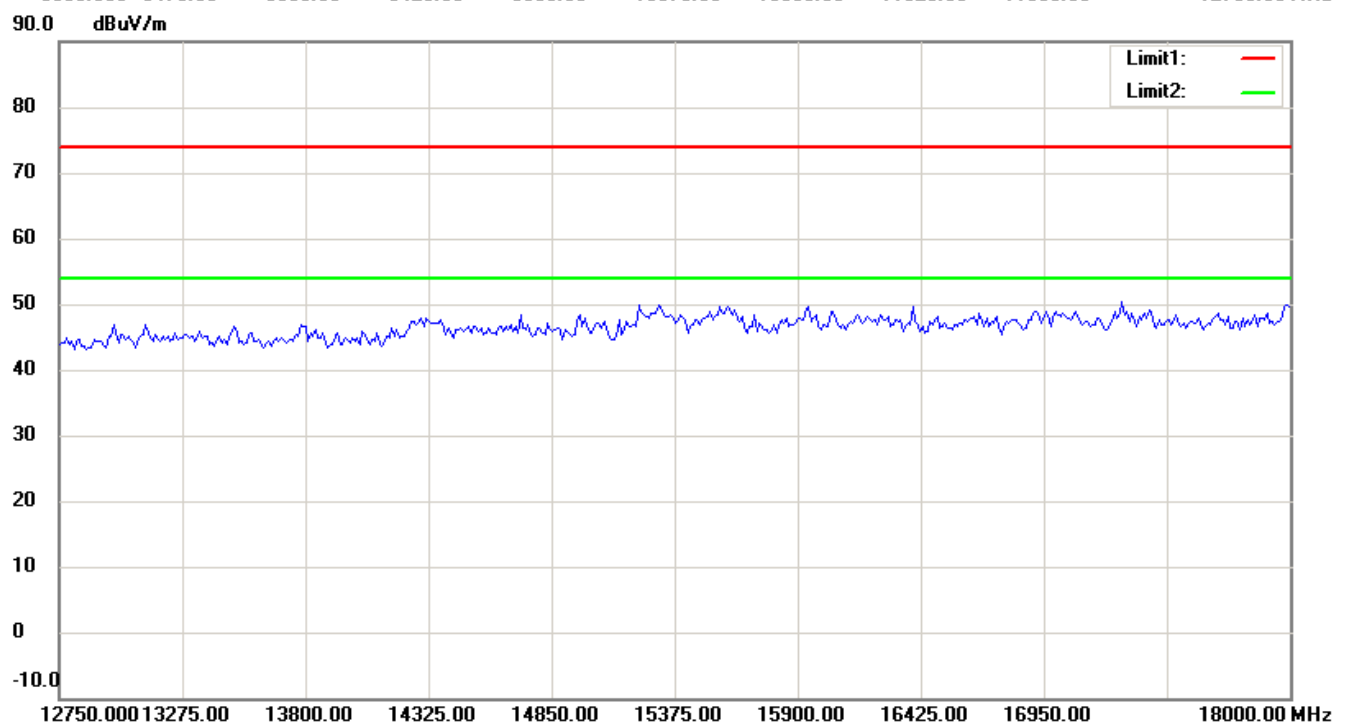
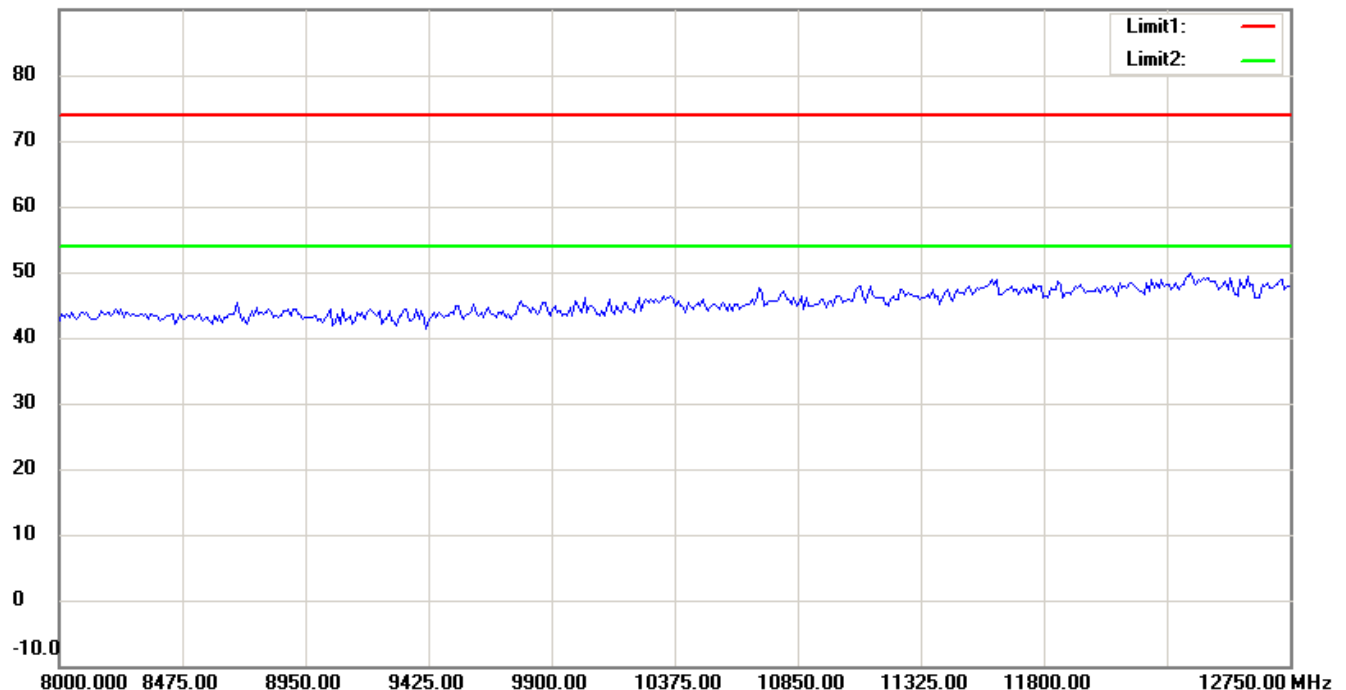


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

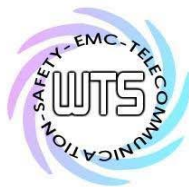
90.0 dBuV/m



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

Note:

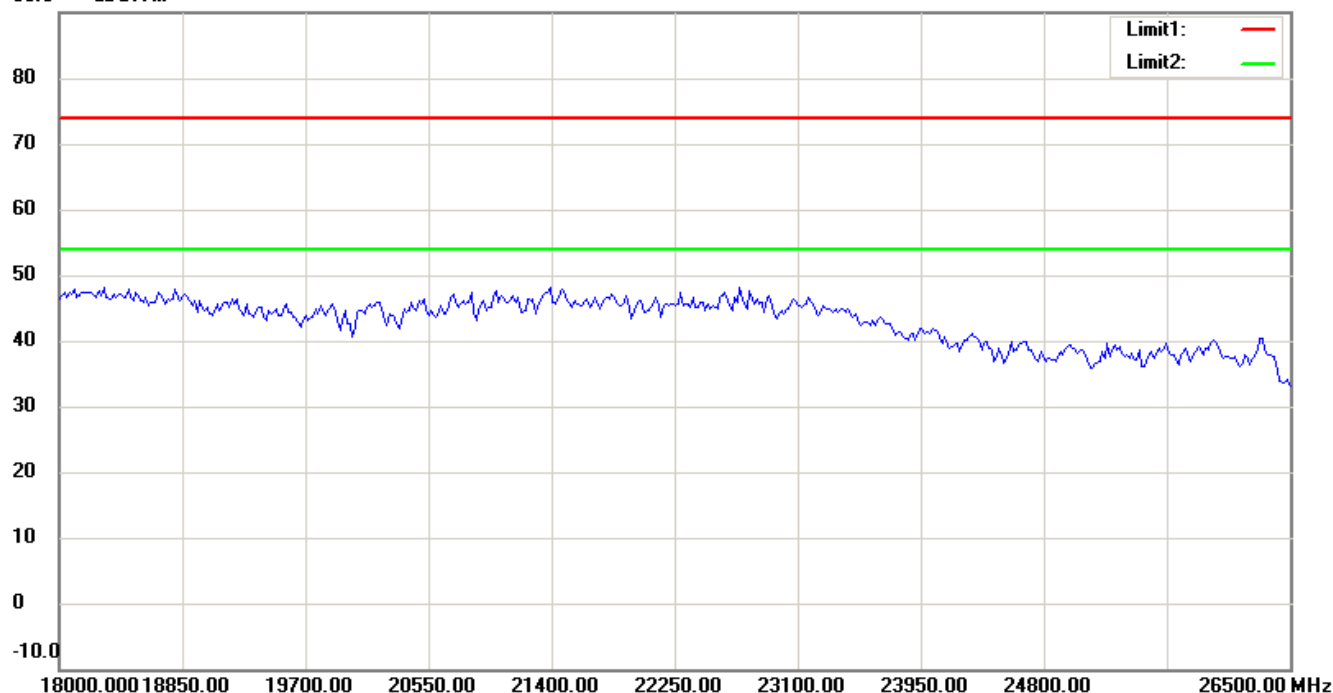
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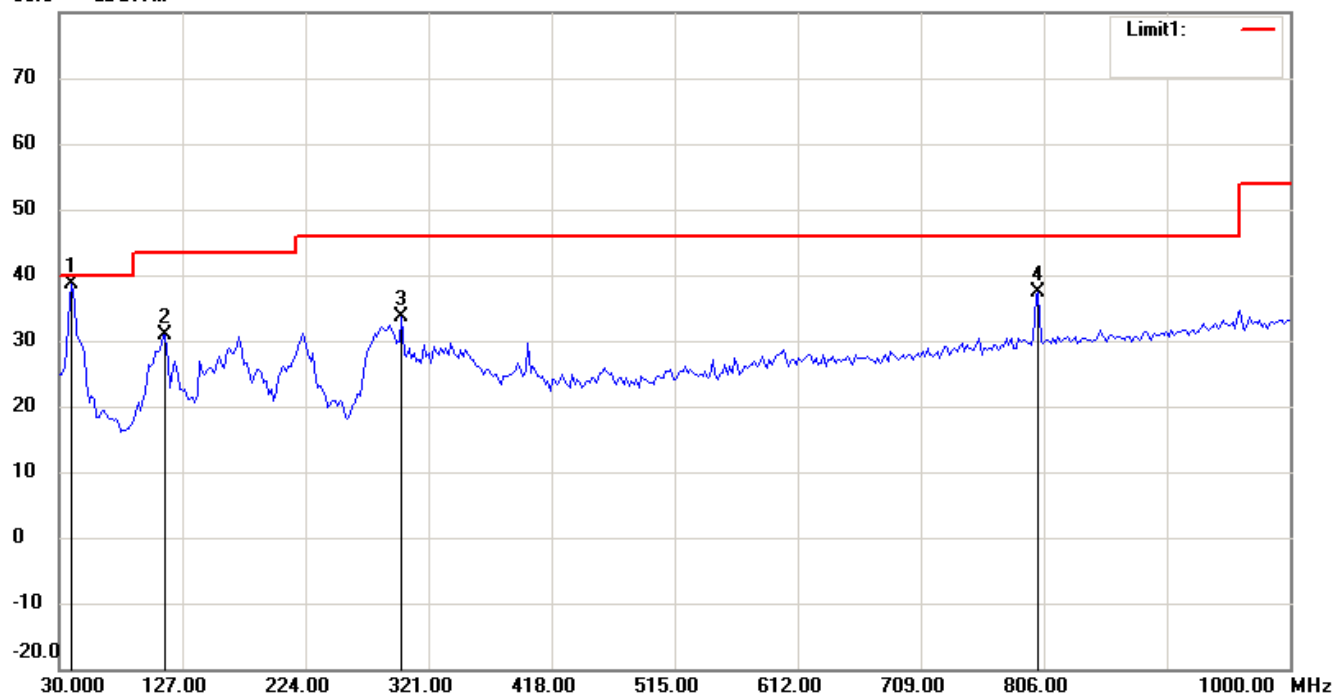
FCC ID: 2ABGRMVX400

90.0 dBuV/m



Antenna Polarization V

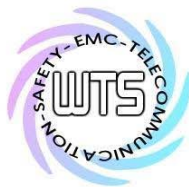
80.0 dBuV/m



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

Note:

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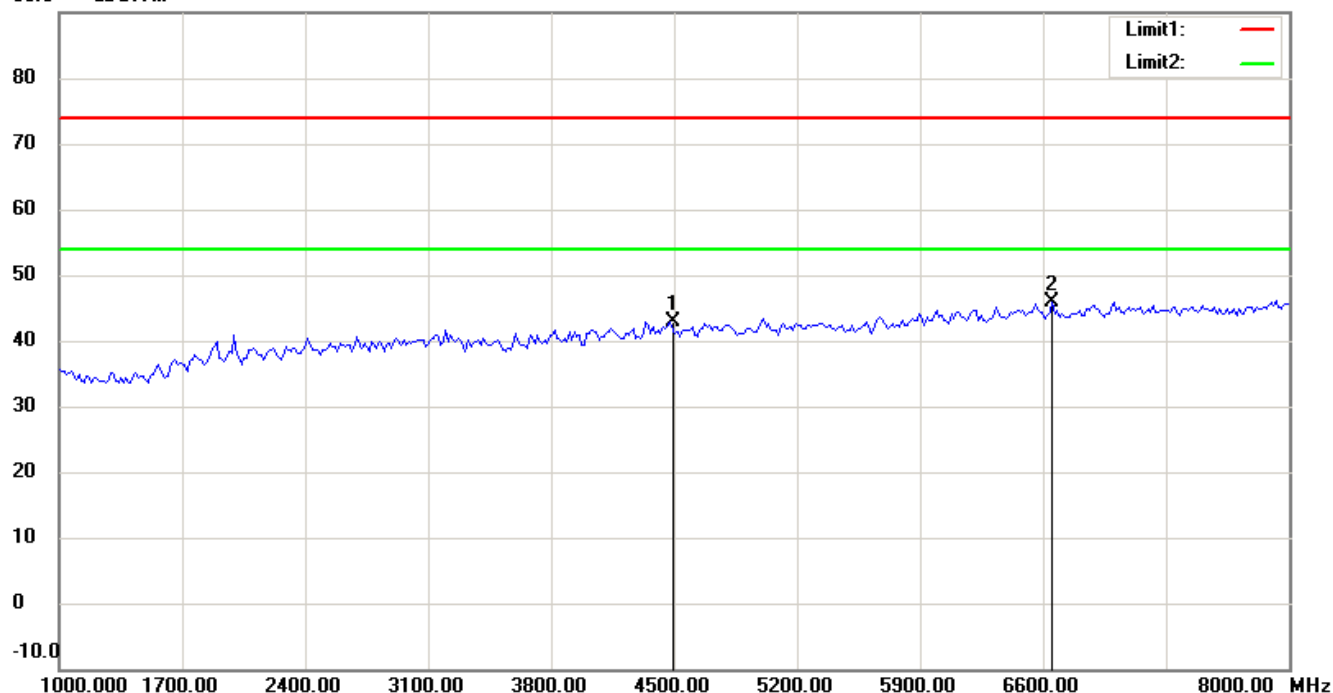


# Worldwide Testing Services(Taiwan) Co., Ltd.

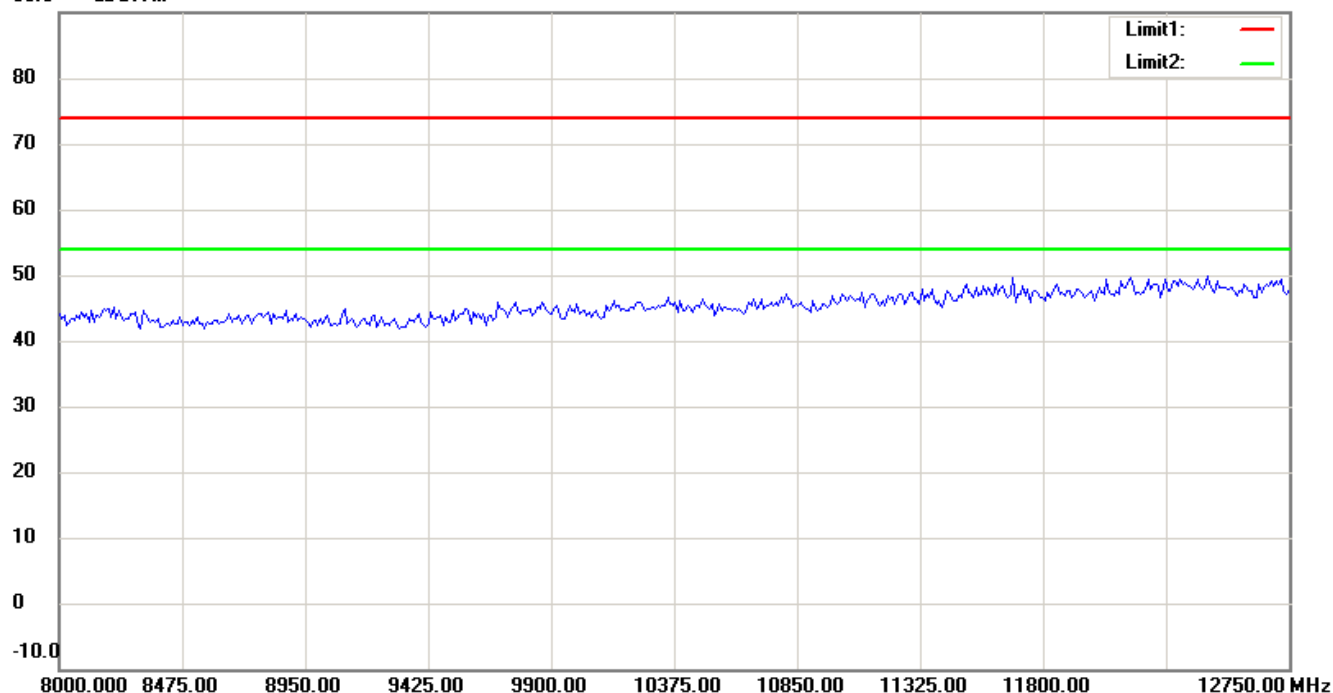
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

90.0 dBuV/m



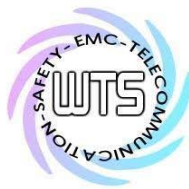
90.0 dBuV/m



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

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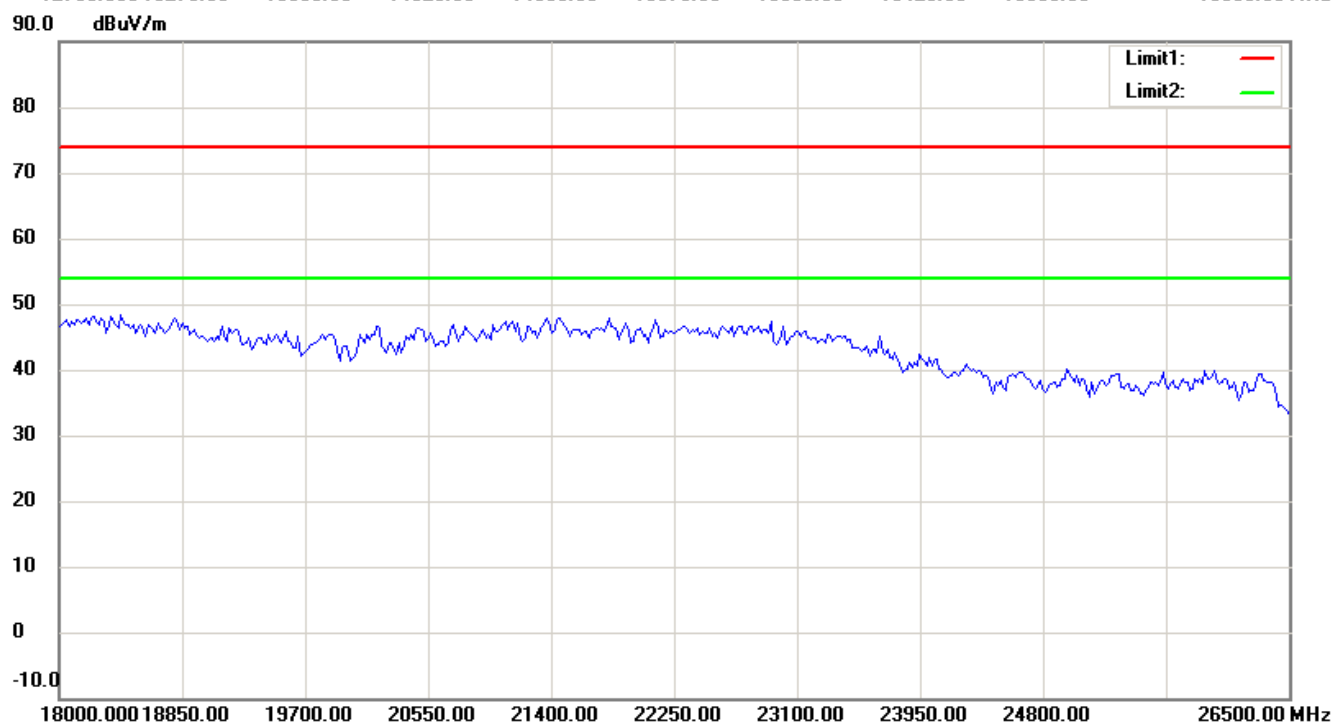
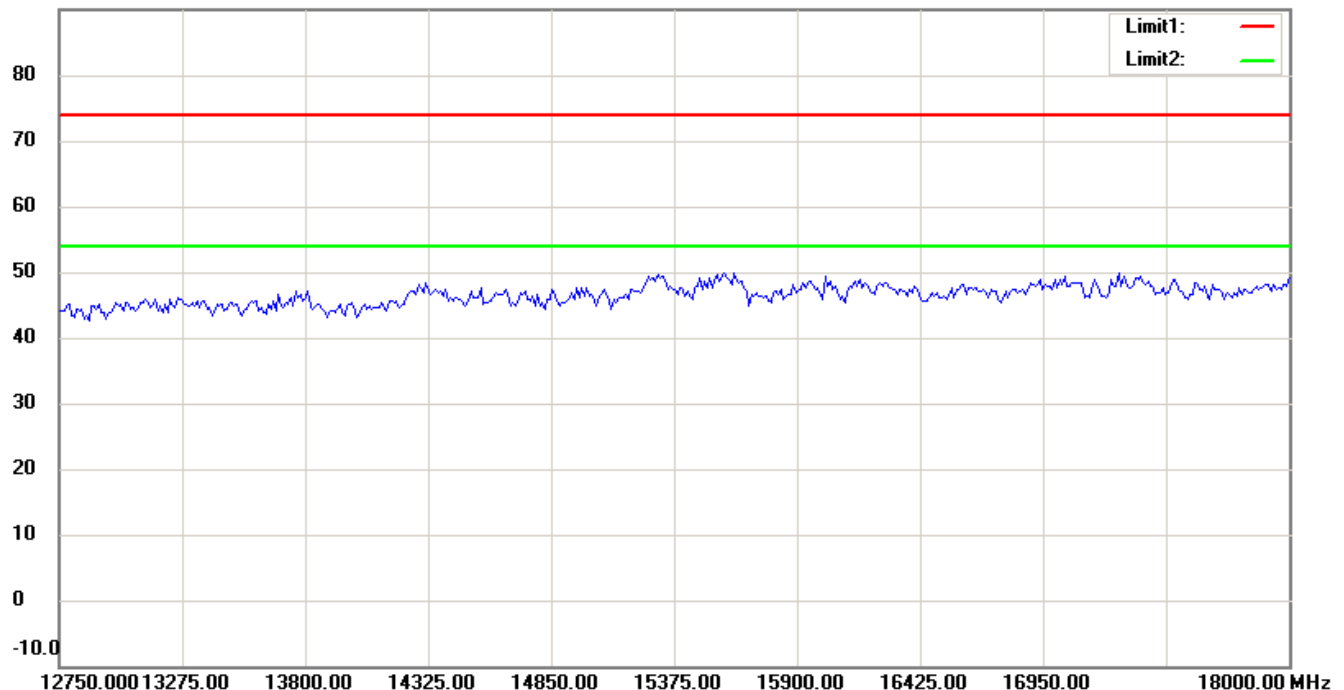


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

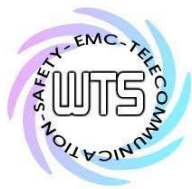
90.0 dBuV/m



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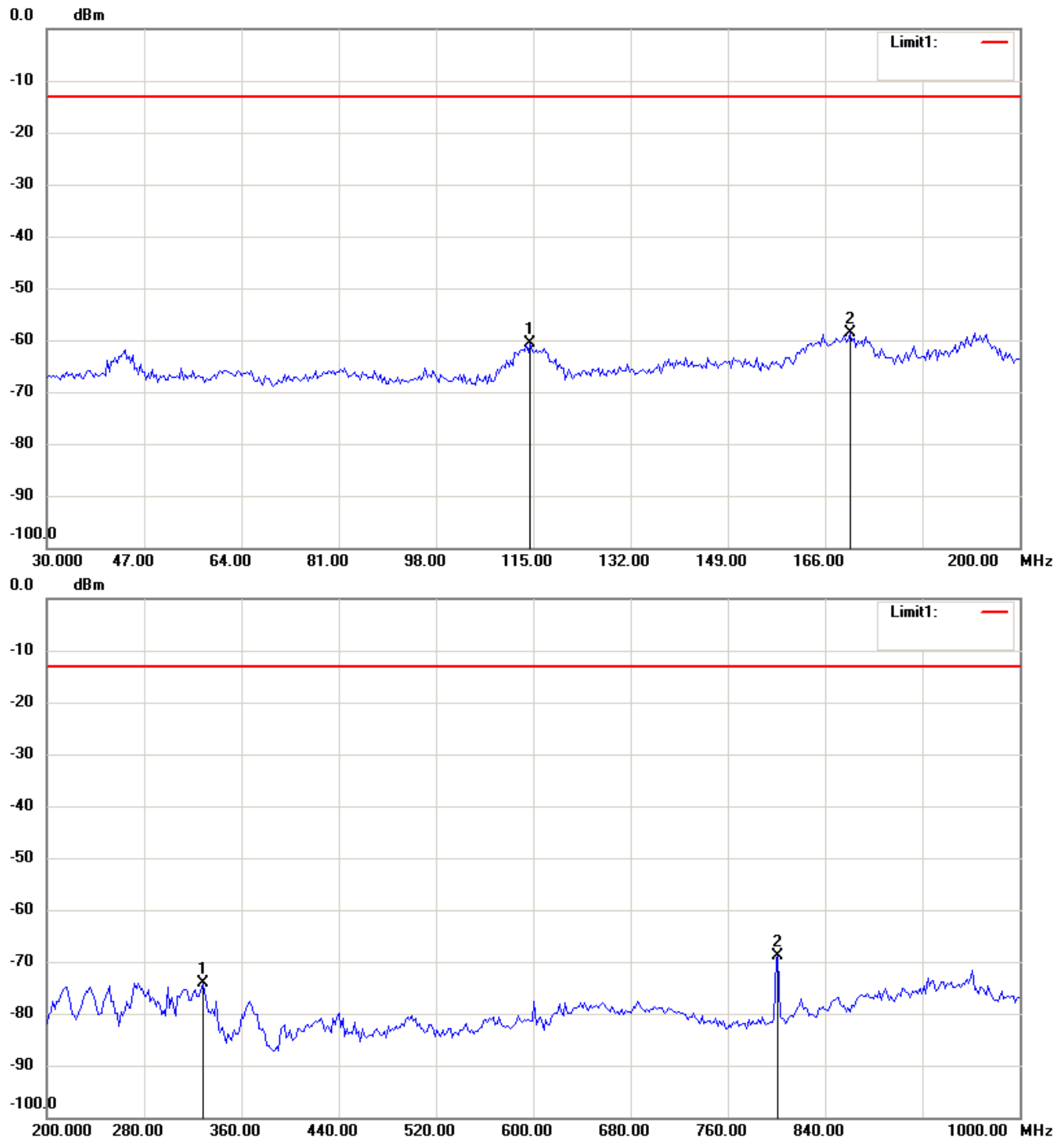
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

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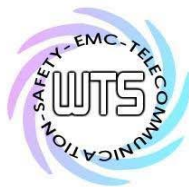
1900 band\_CH 512\_108V

Antenna Polarization H



## Note:

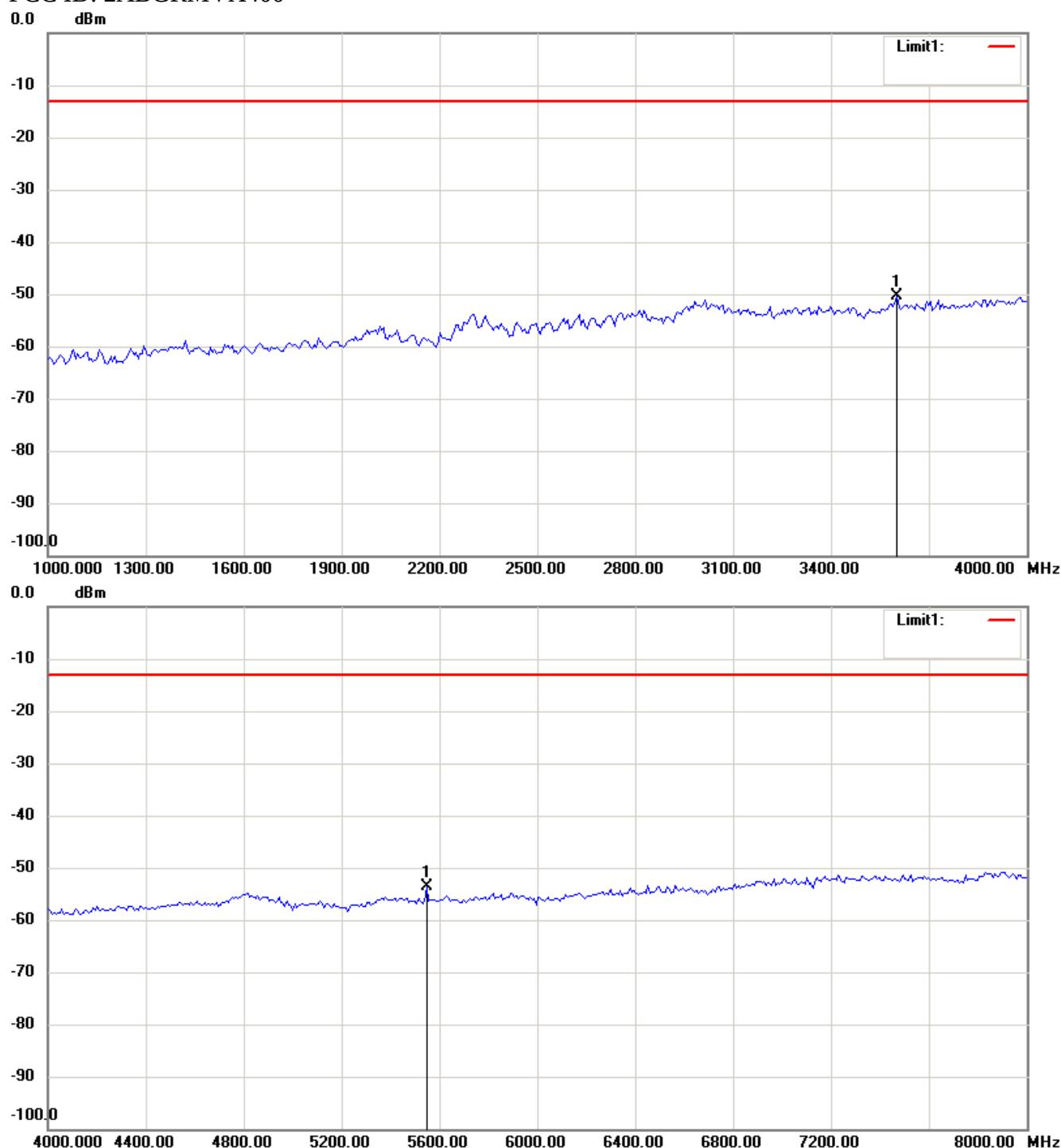
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# Worldwide Testing Services(Taiwan) Co., Ltd.

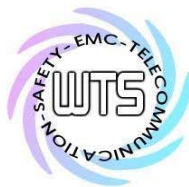
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



## Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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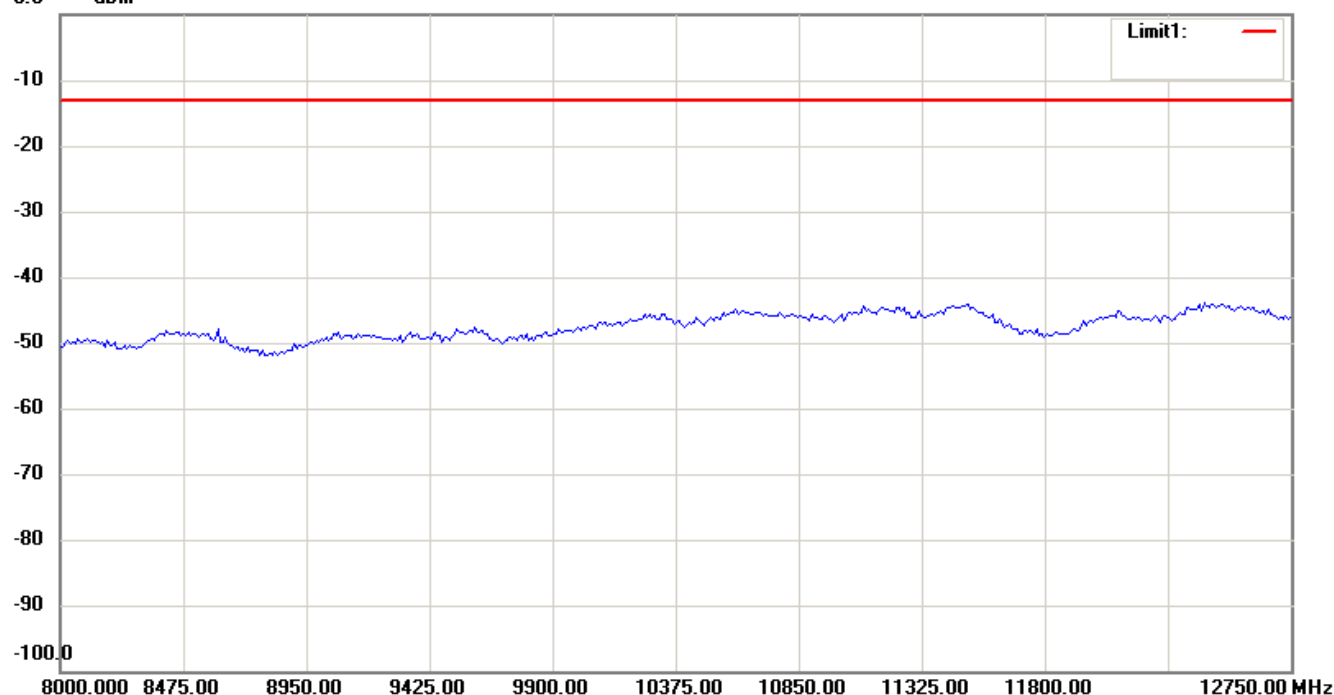


# Worldwide Testing Services(Taiwan) Co., Ltd.

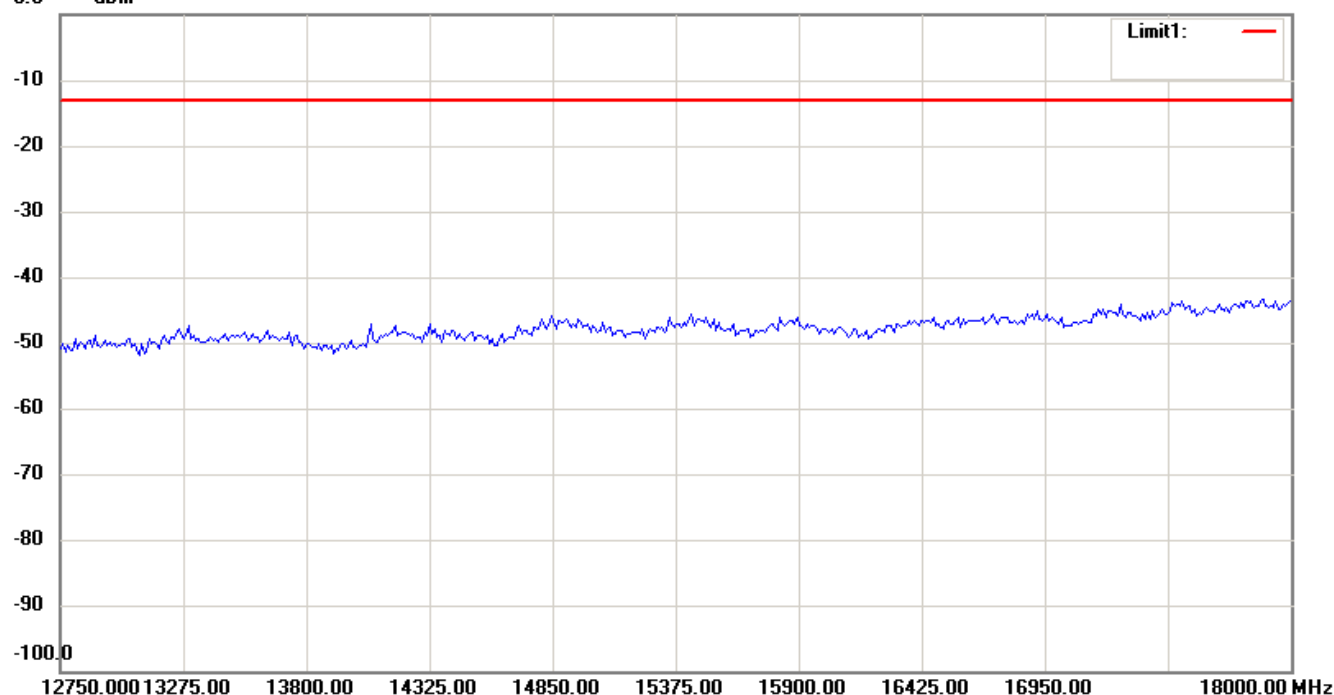
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

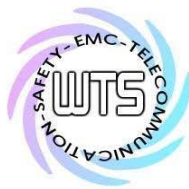


0.0 dBm



## Note:

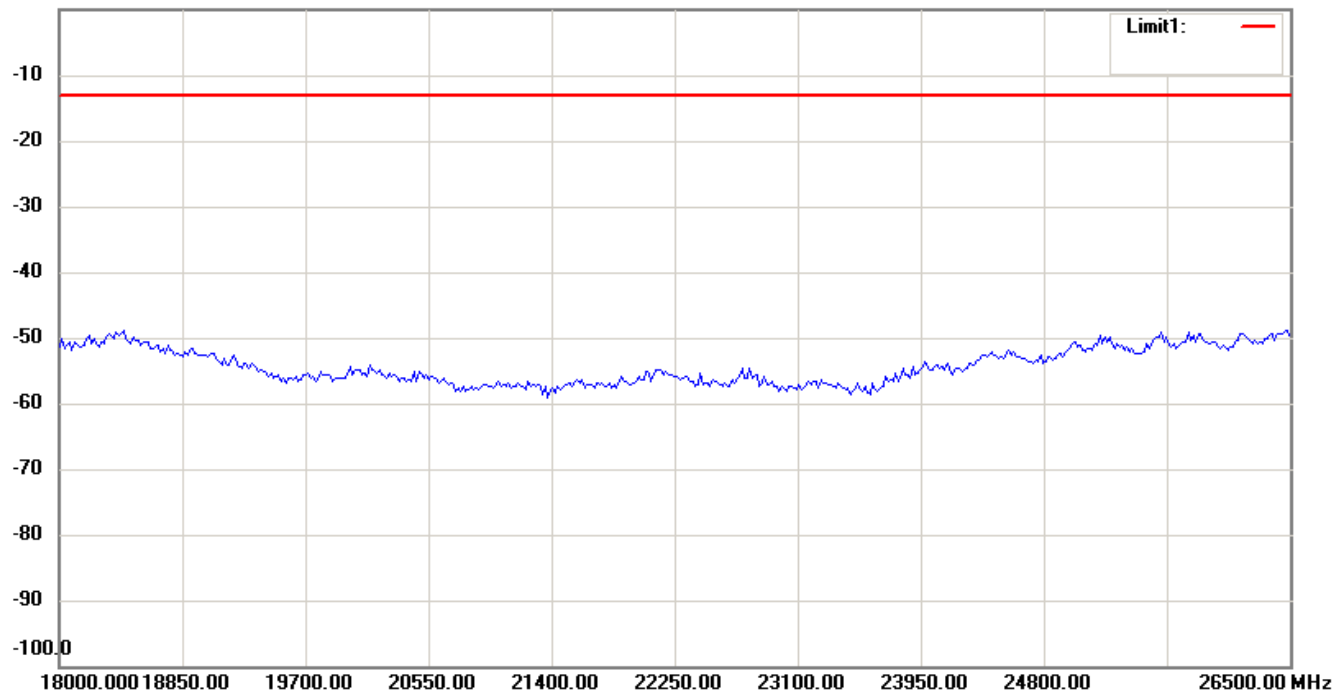
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Report Number: W6M21309-13566-P-2224

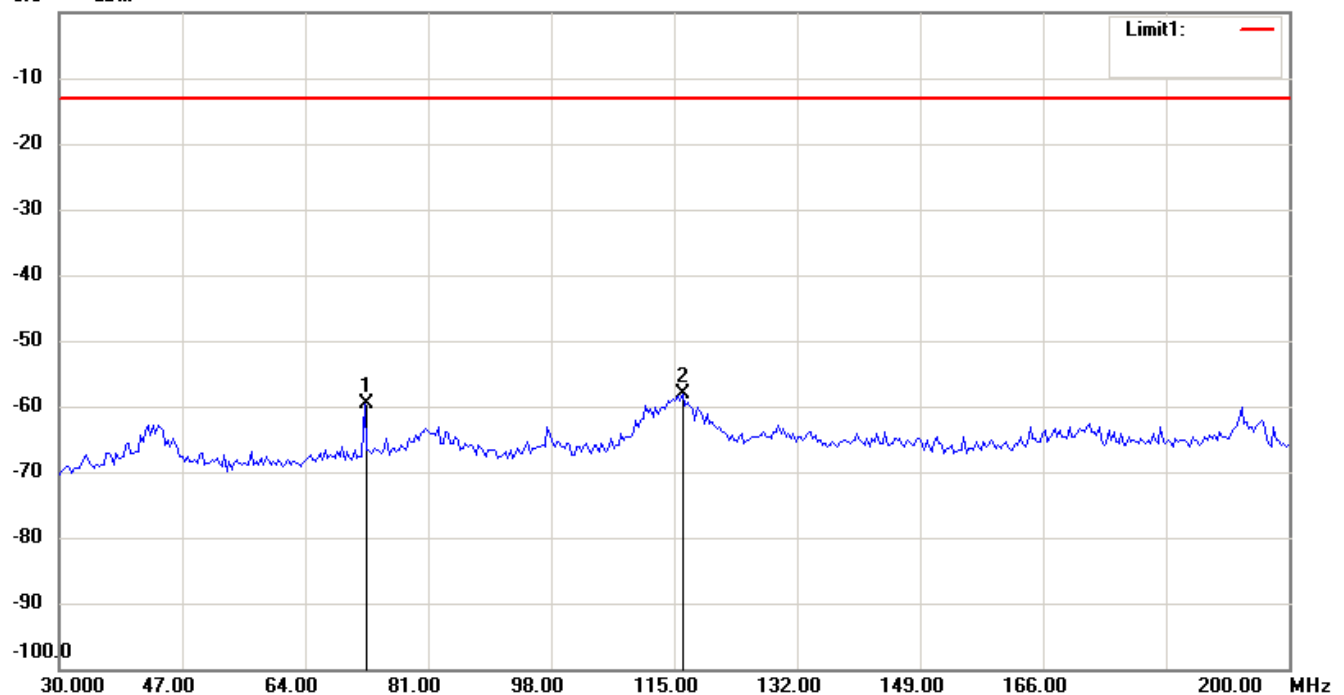
FCC ID: 2ABGRMVX400

0.0 dBm



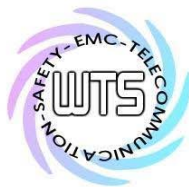
Antenna Polarization V

0.0 dBm



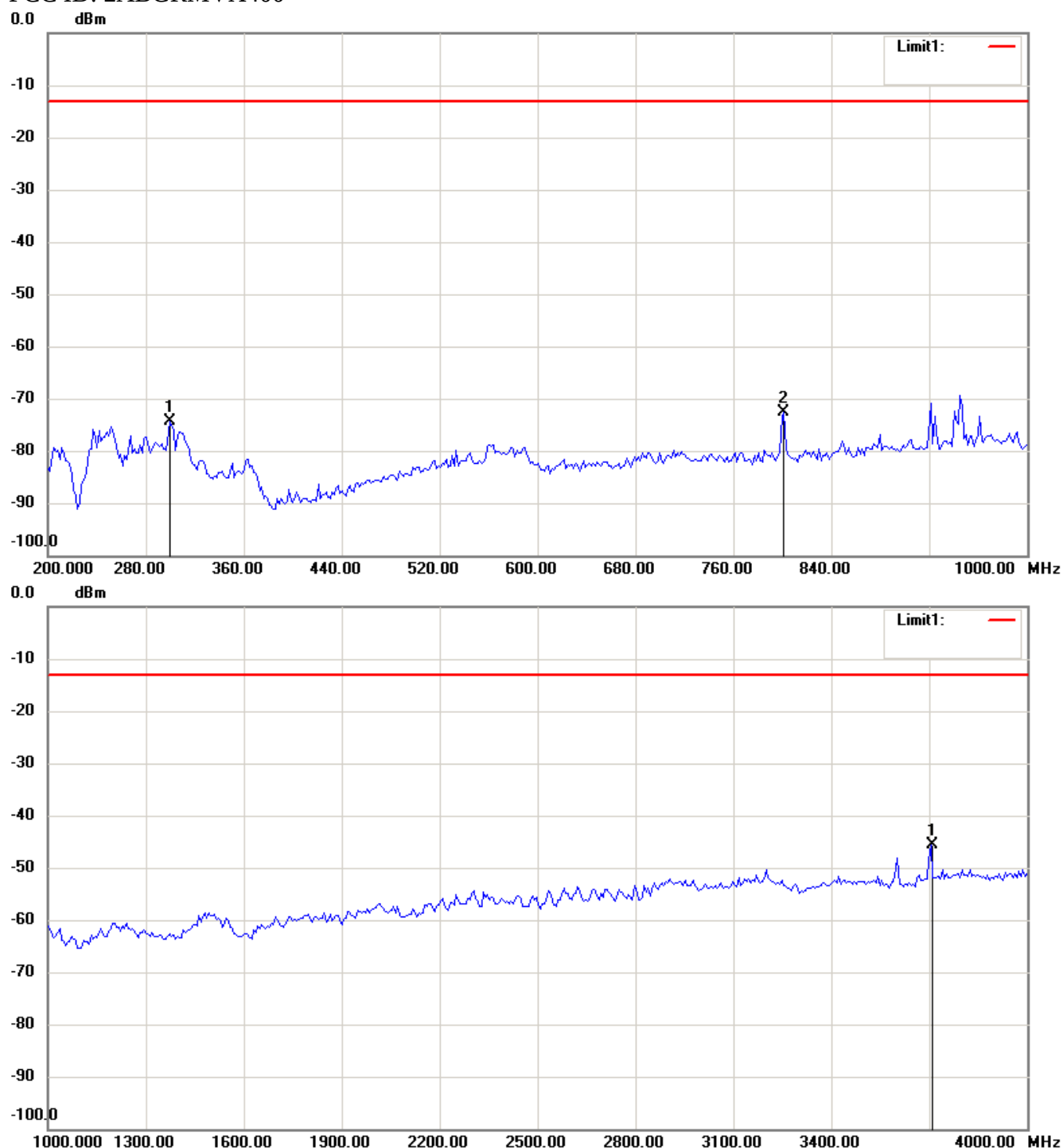
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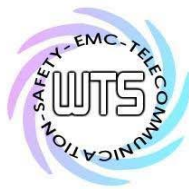
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



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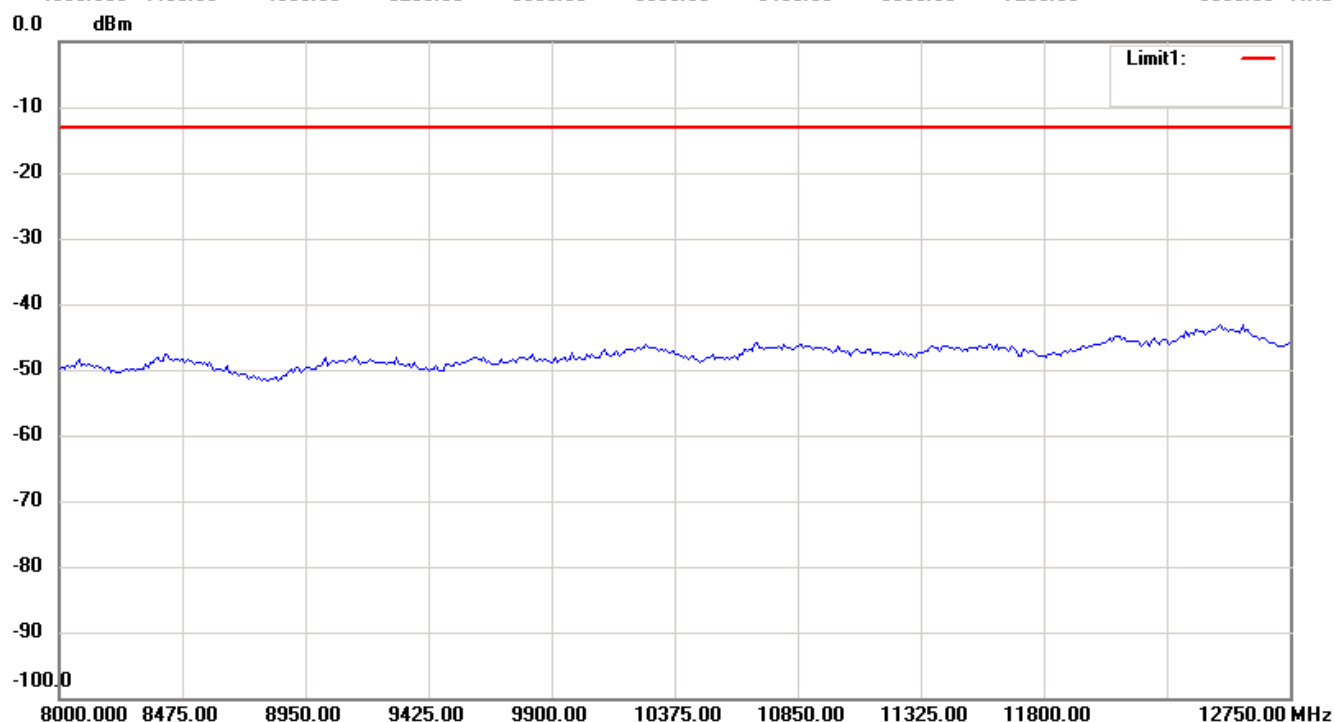
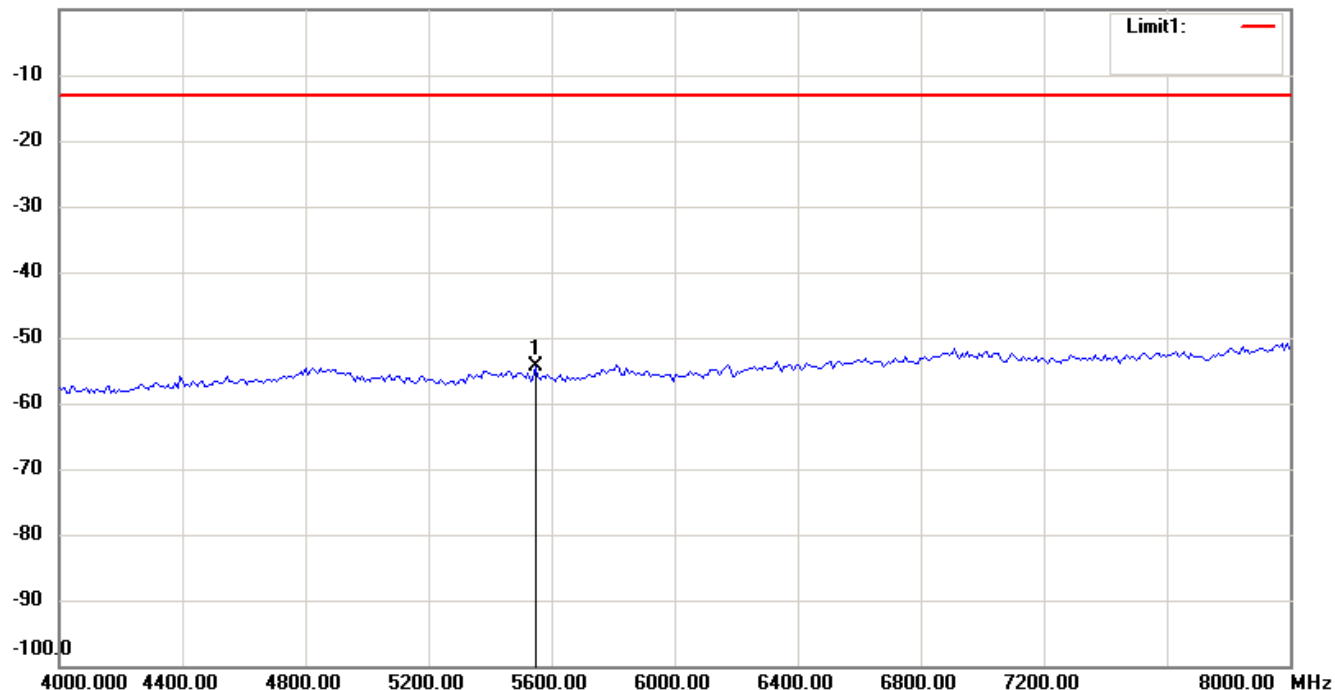


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Report Number: W6M21309-13566-P-2224

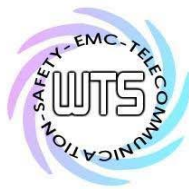
FCC ID: 2ABGRMVX400

0.0 dBm



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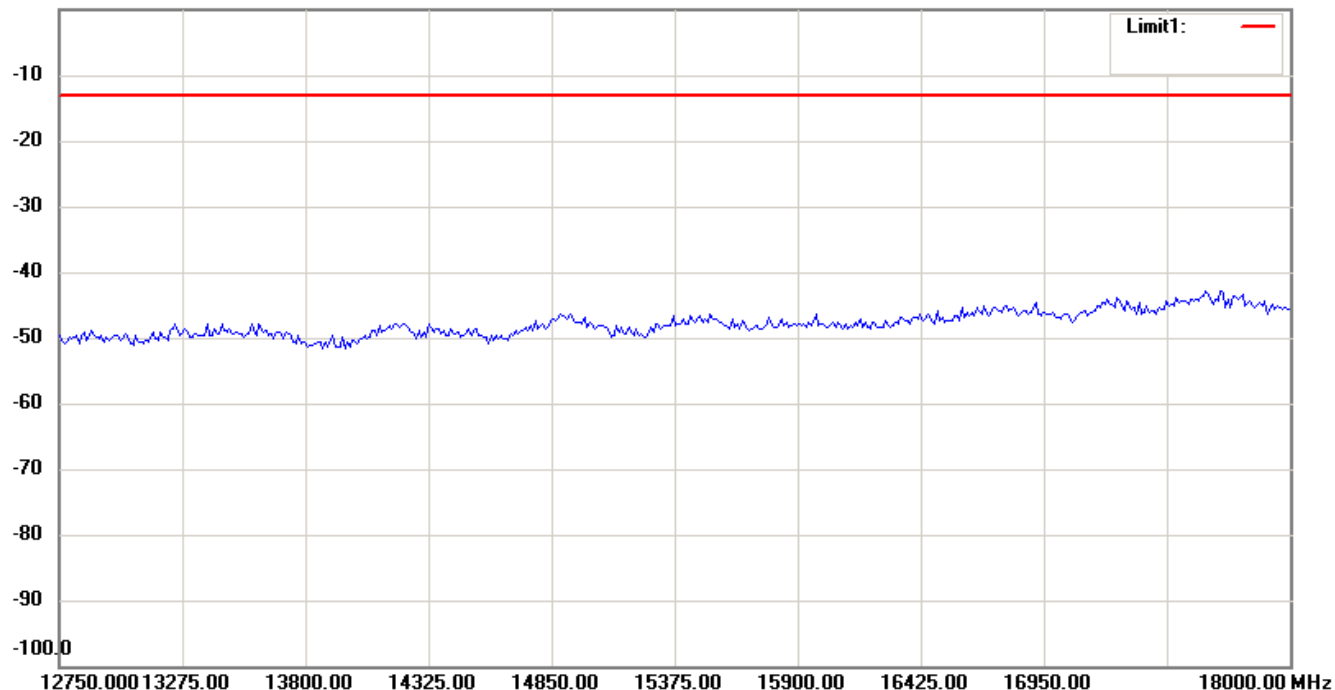


# Worldwide Testing Services(Taiwan) Co., Ltd.

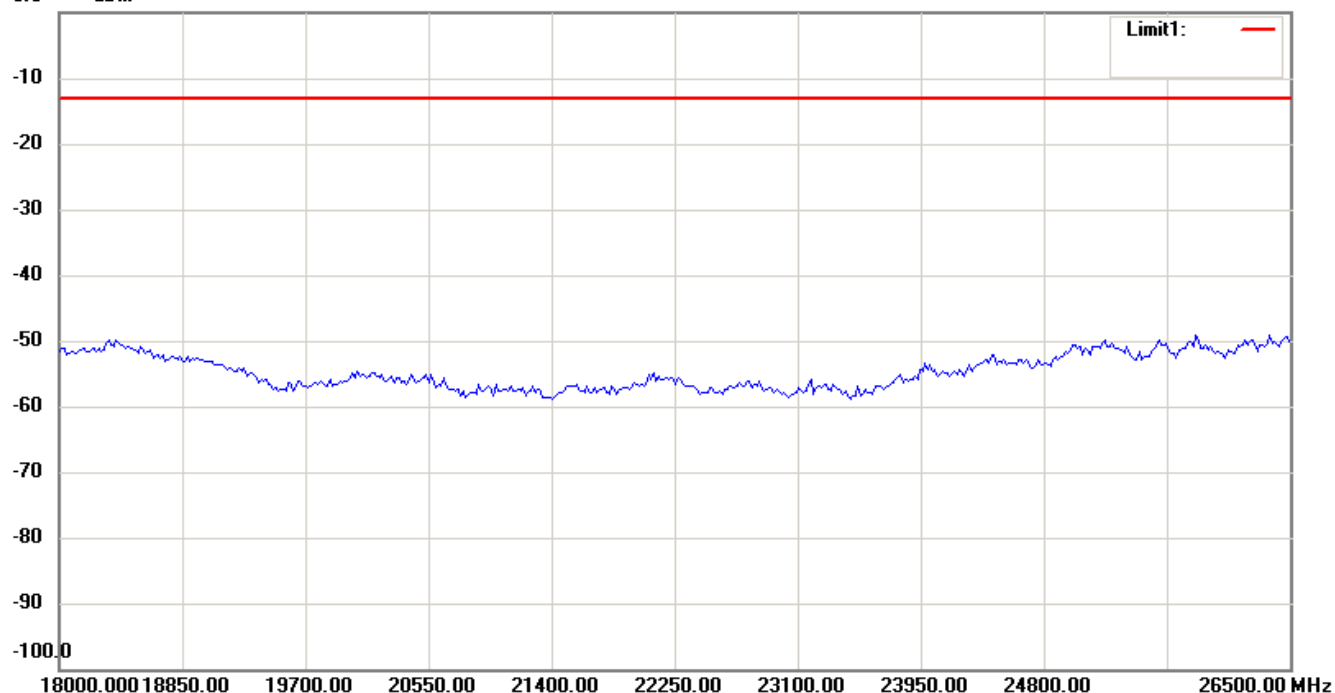
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

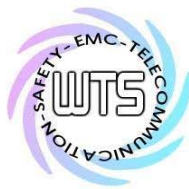


0.0 dBm



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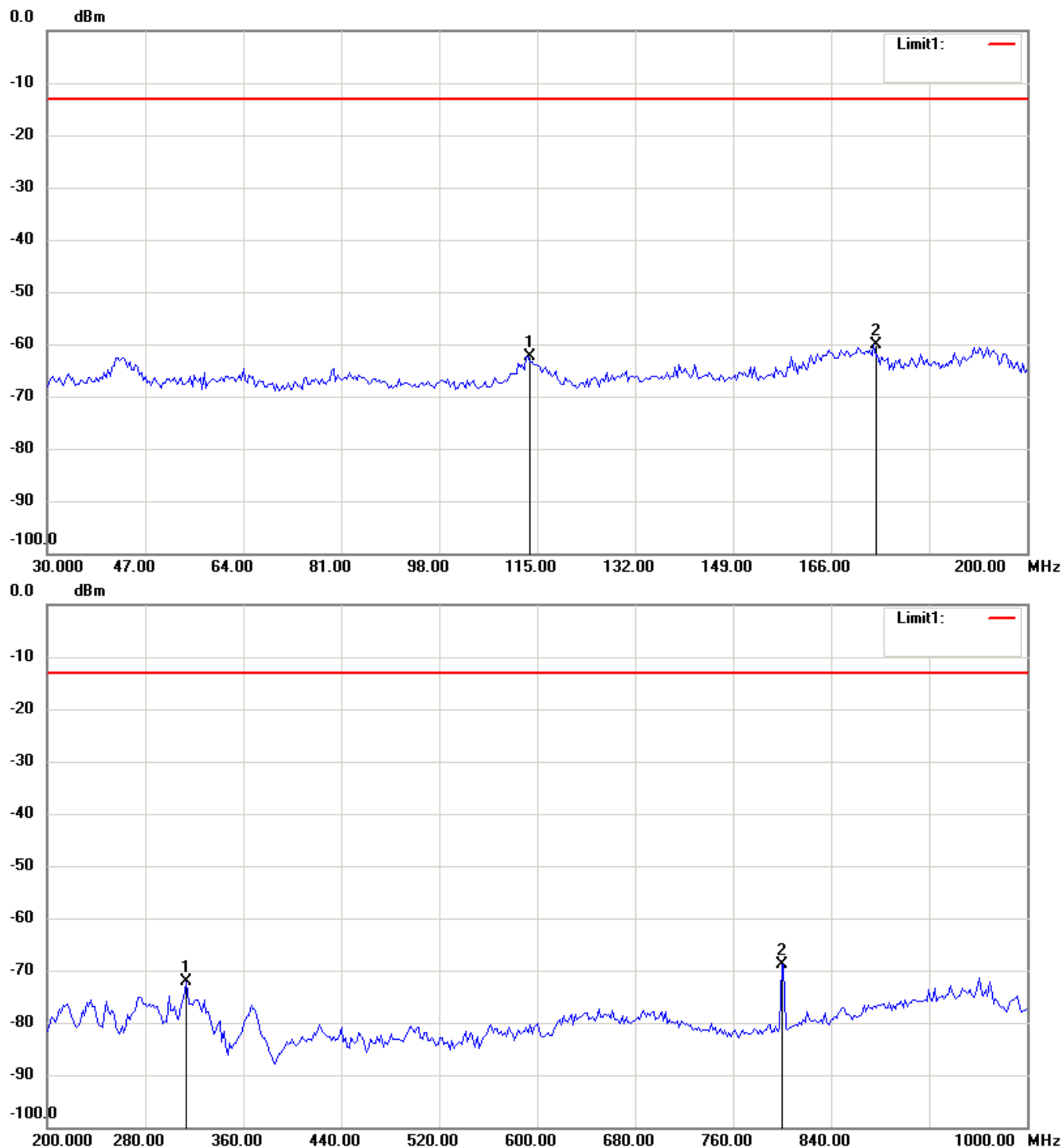
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

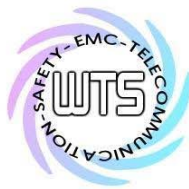
1900 band\_CH 512\_132 V

Antenna Polarization H



## Note:

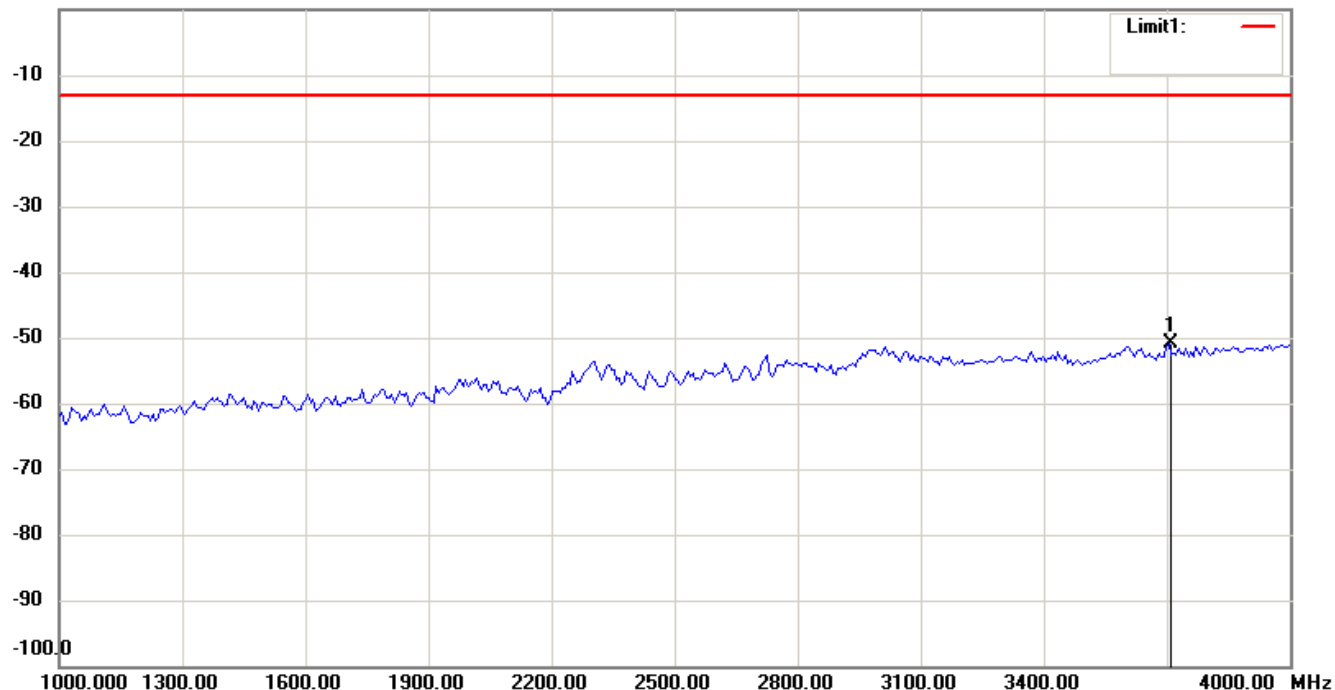
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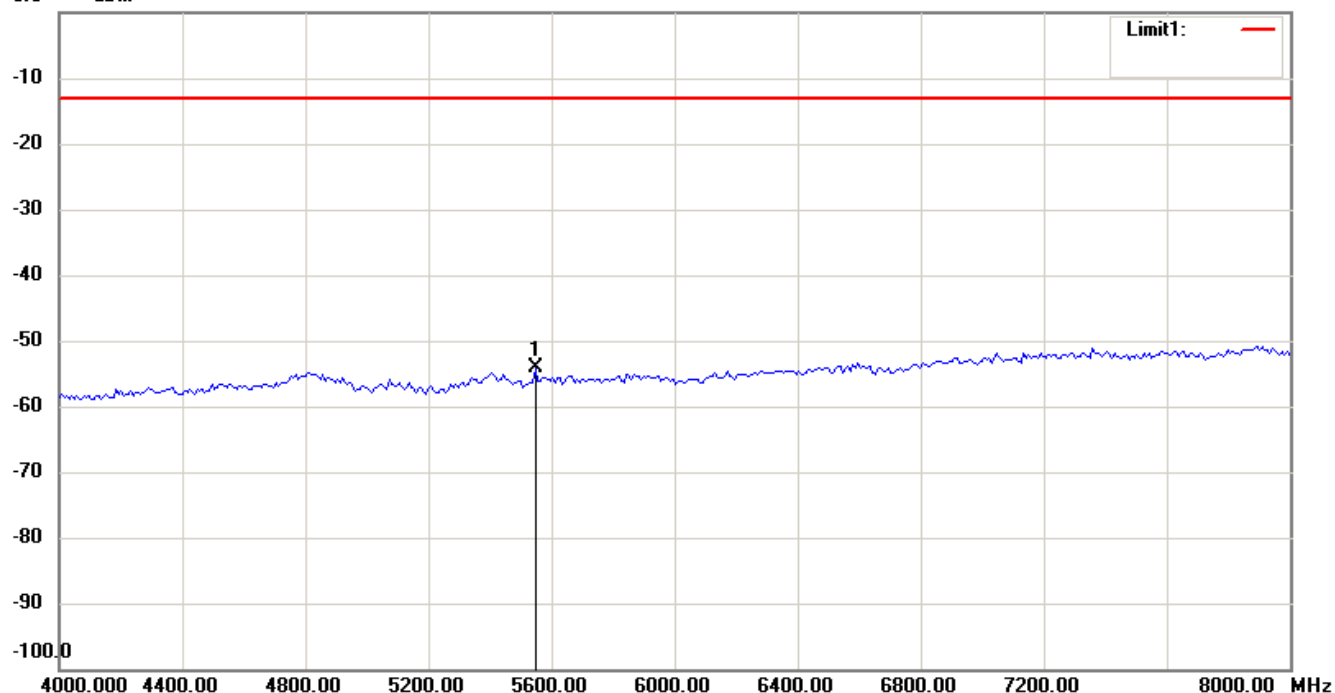
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

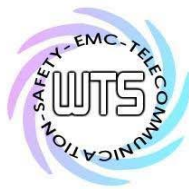


0.0 dBm



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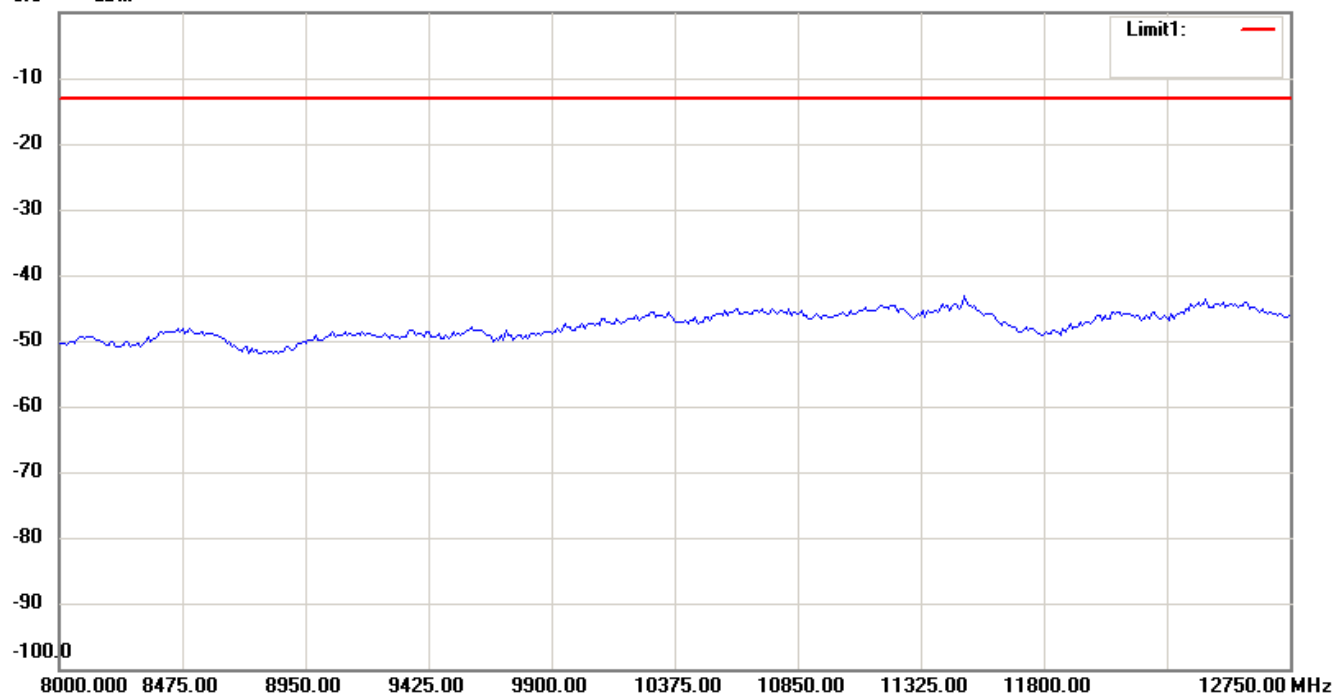


# Worldwide Testing Services(Taiwan) Co., Ltd.

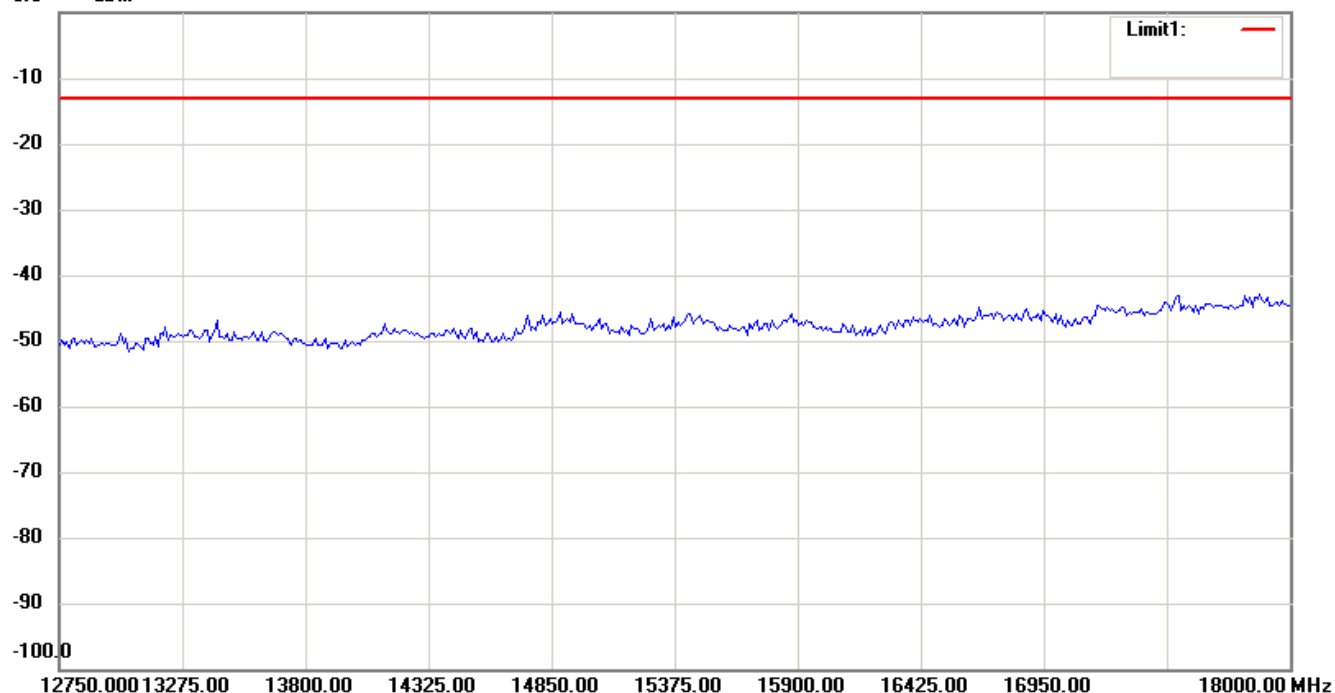
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

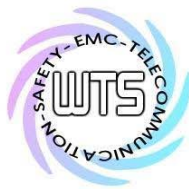


0.0 dBm



## Note:

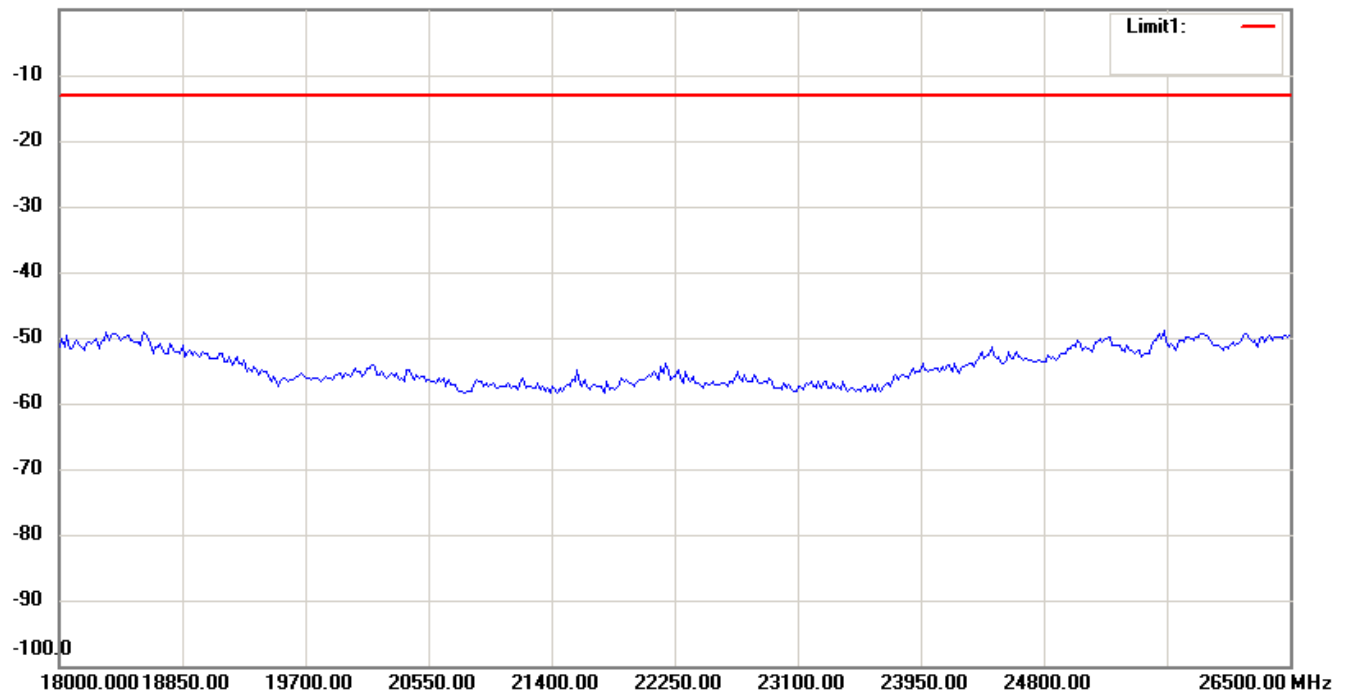
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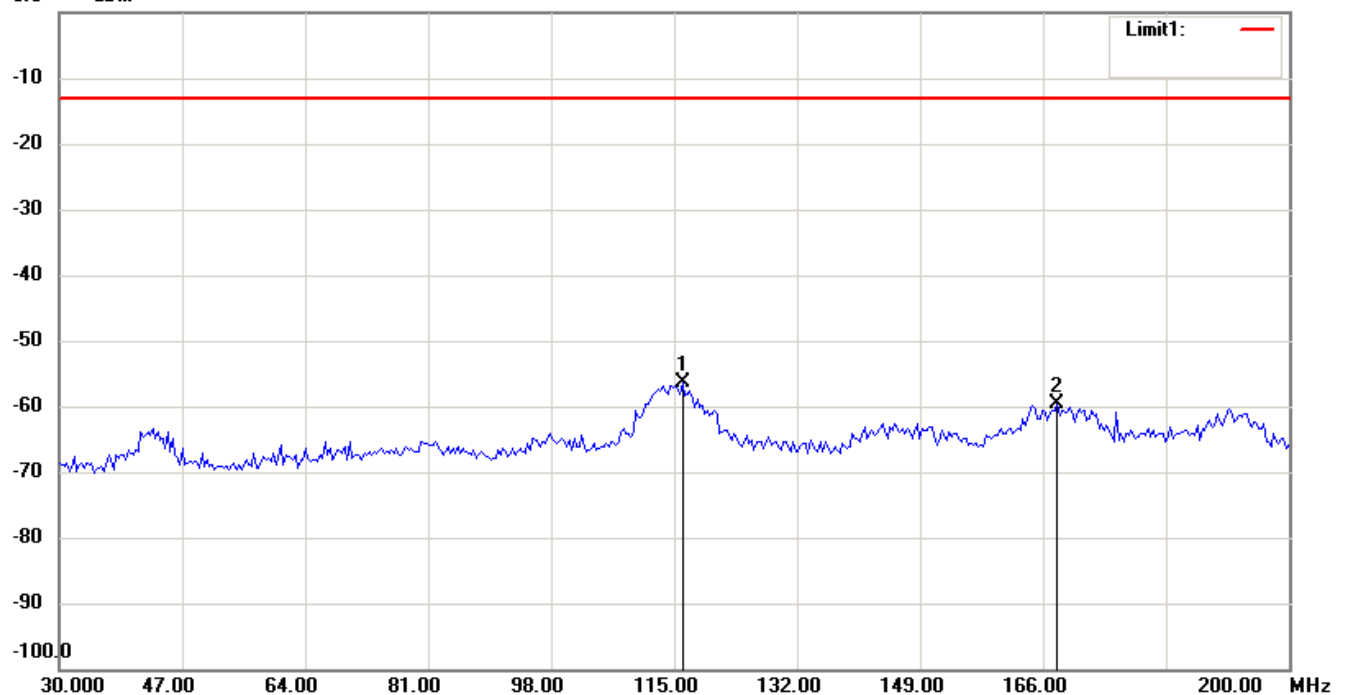
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0.0 dBm



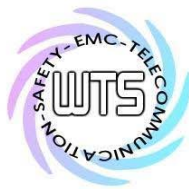
Antenna Polarization V

0.0 dBm



**Note:**

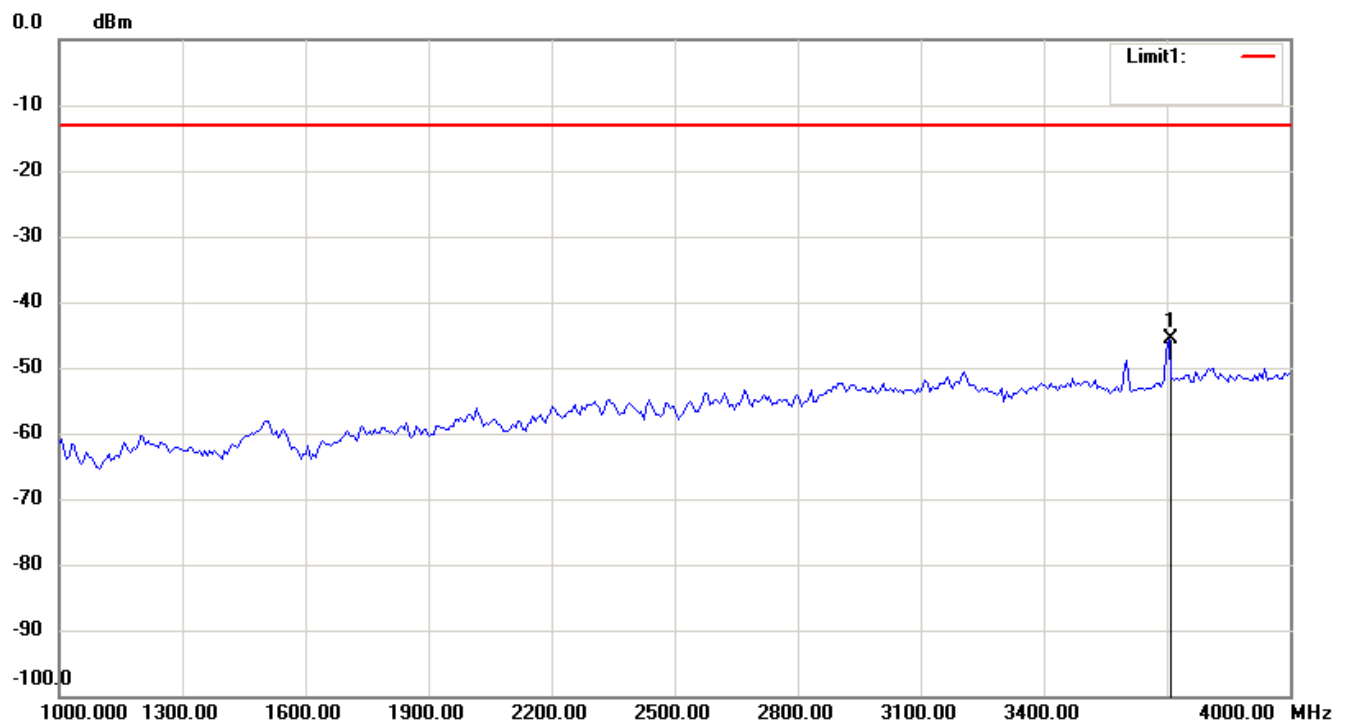
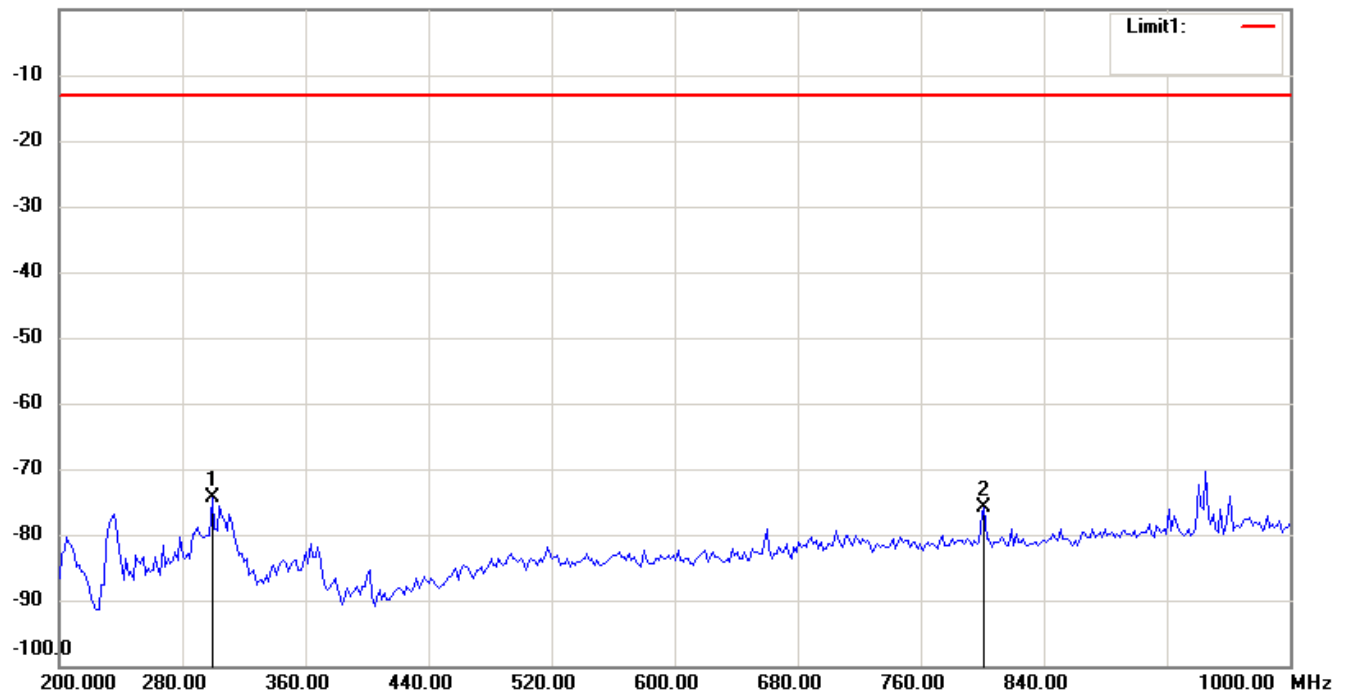
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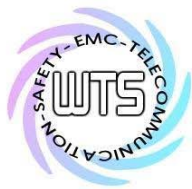
FCC ID: 2ABGRMVX400

0.0 dBm



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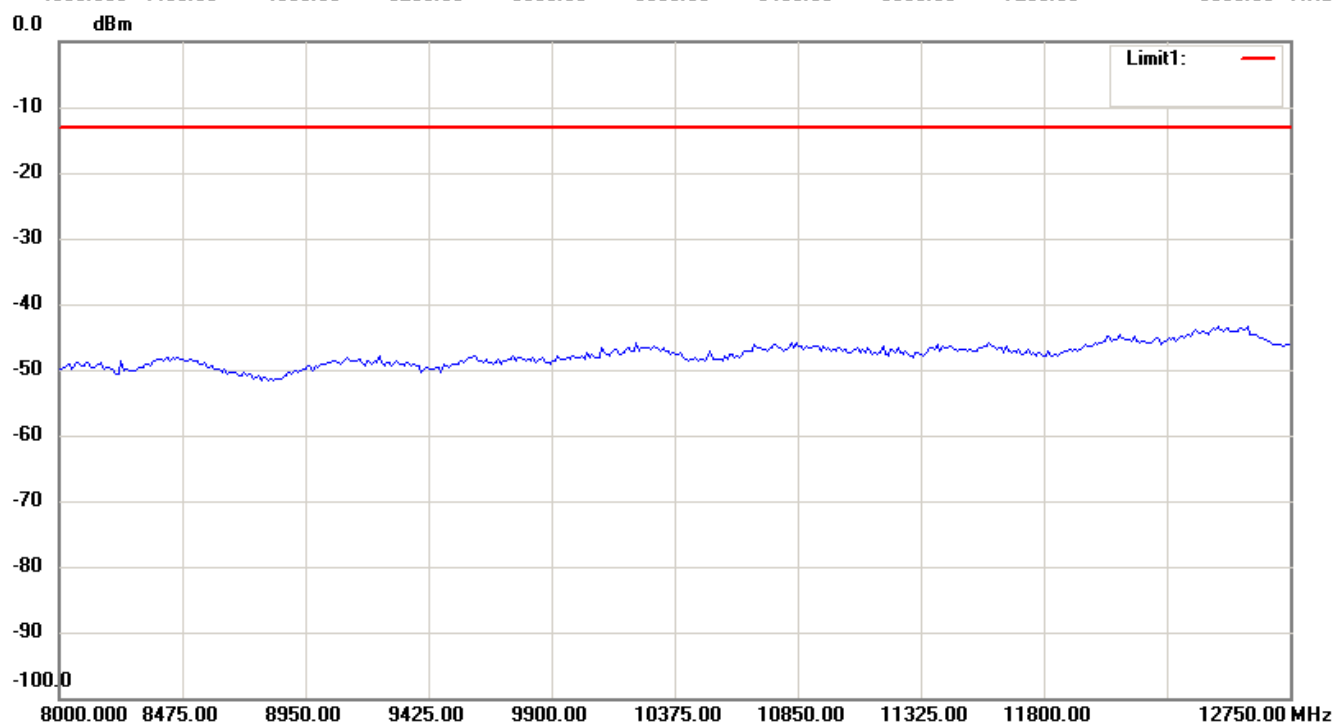
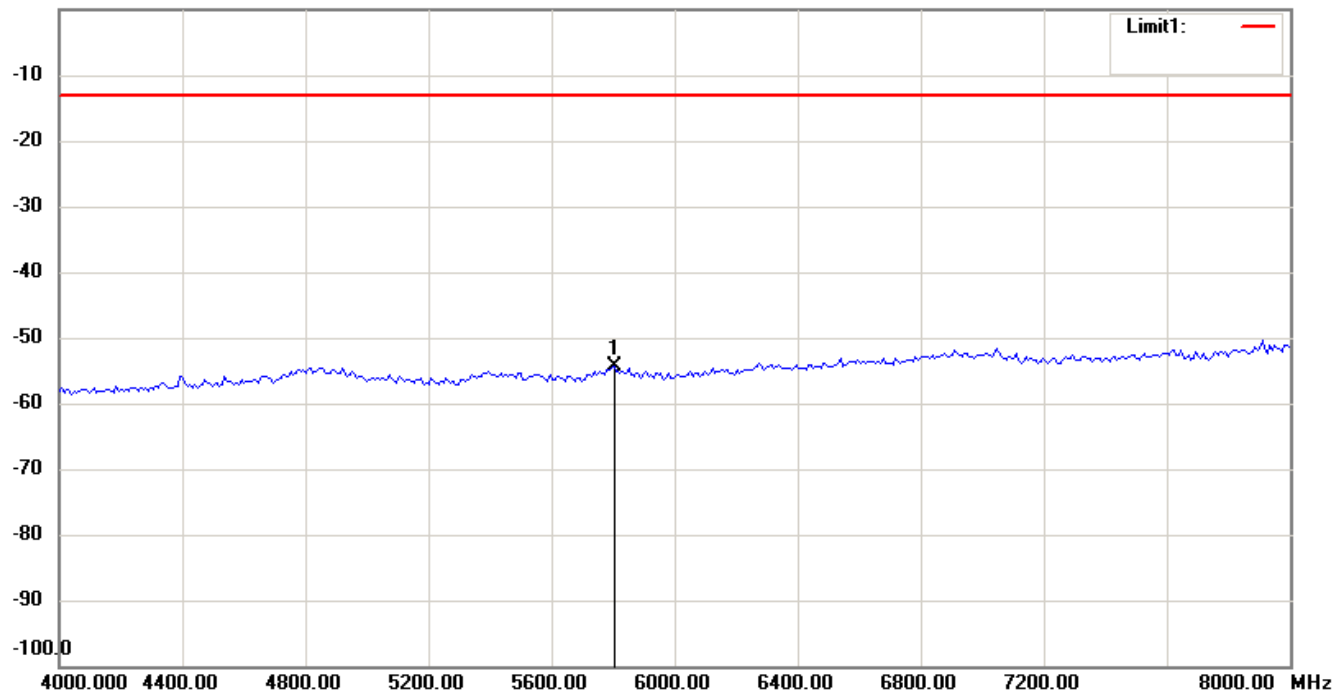


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

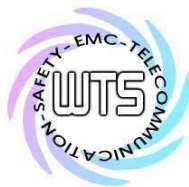
FCC ID: 2ABGRMVX400

0.0 dBm



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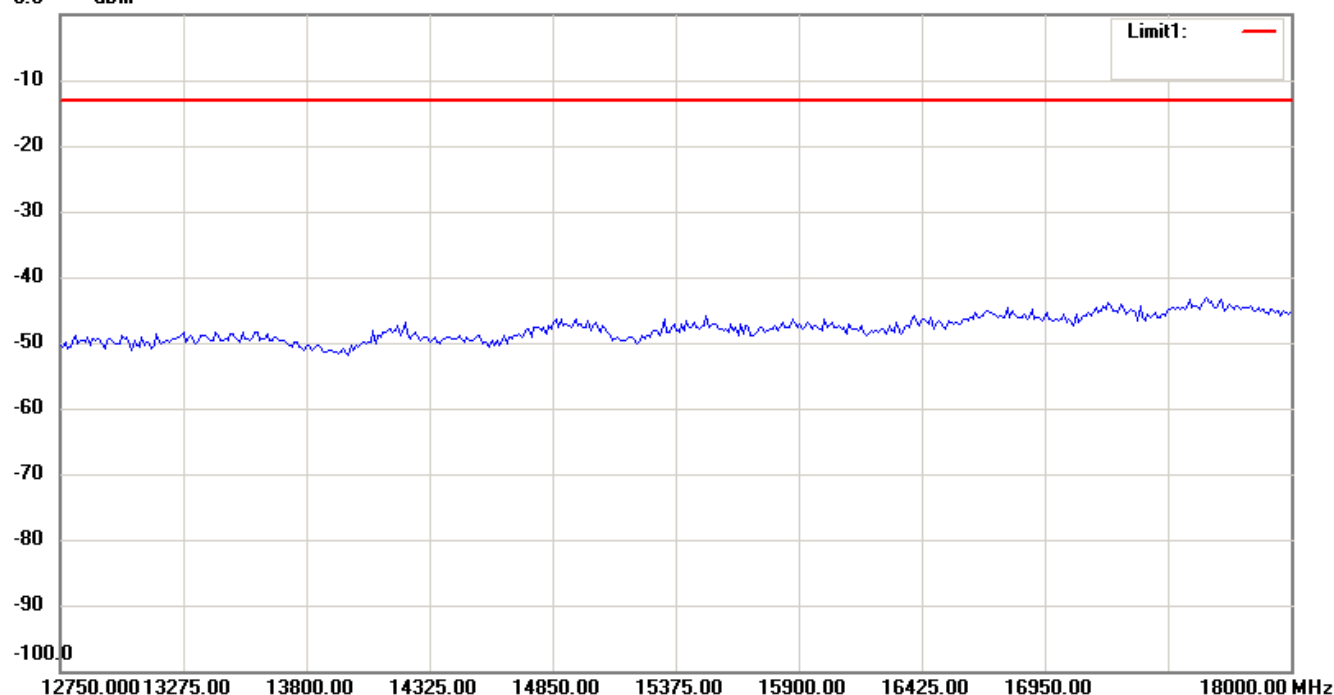


# Worldwide Testing Services(Taiwan) Co., Ltd.

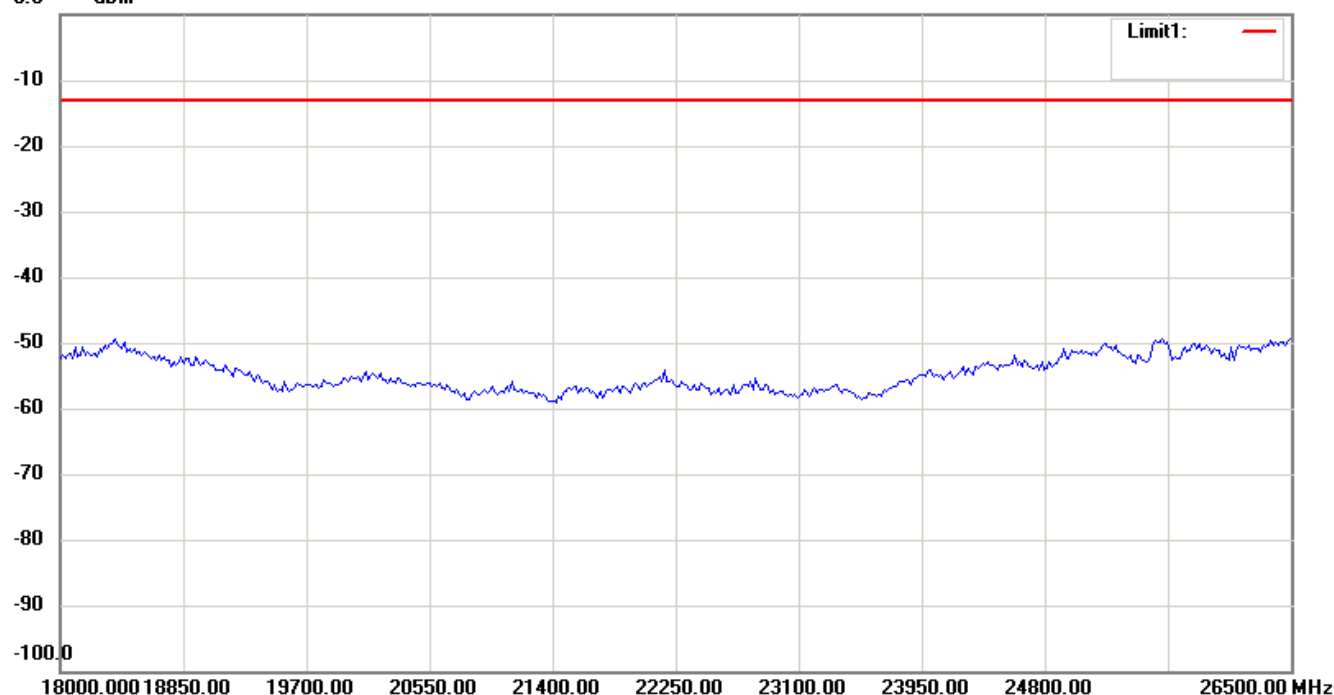
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

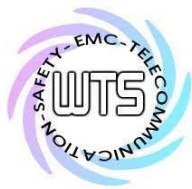


0.0 dBm



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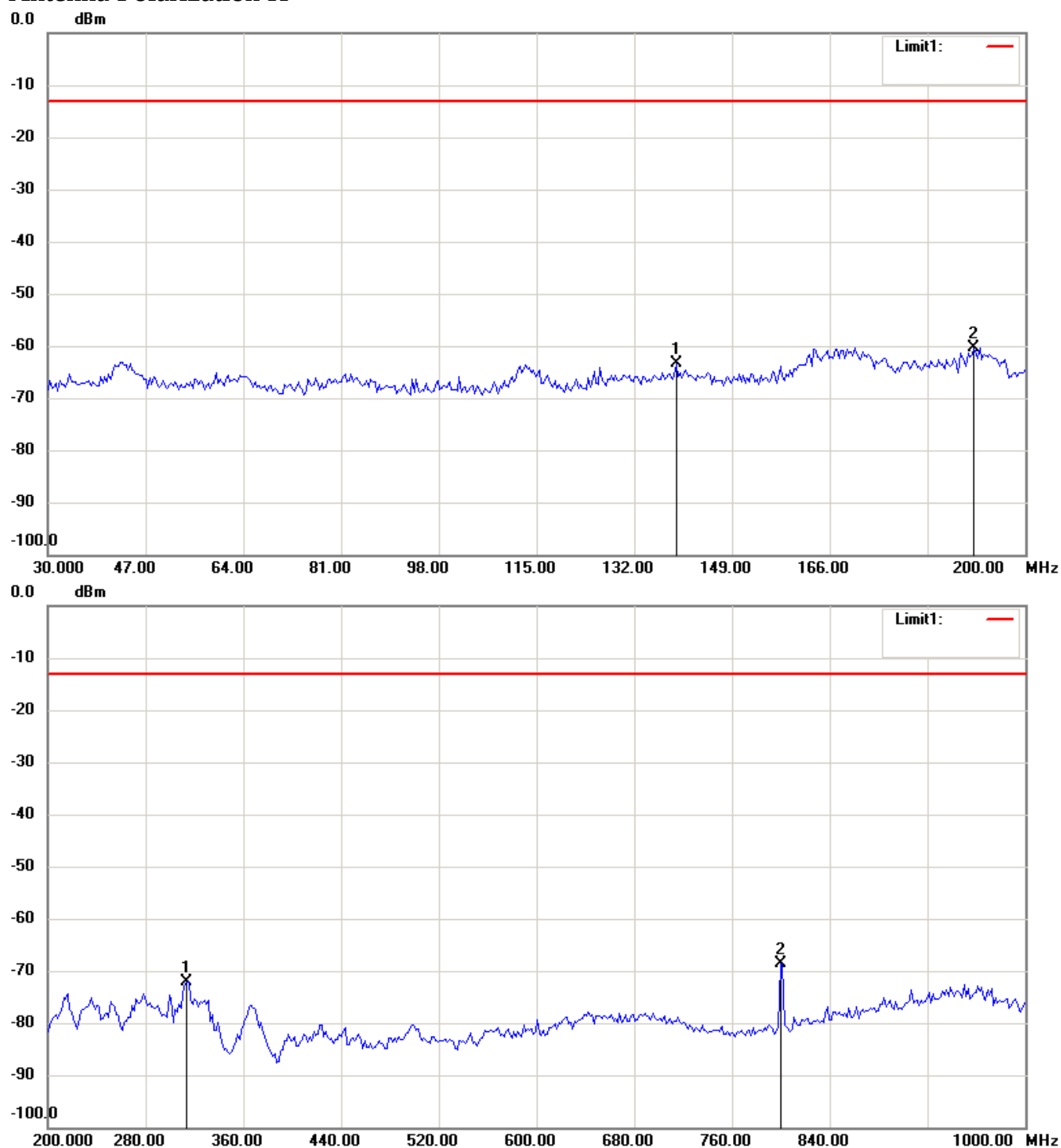
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

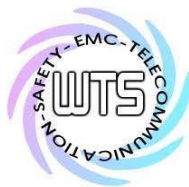
1900 band\_CH 661\_108V

Antenna Polarization H



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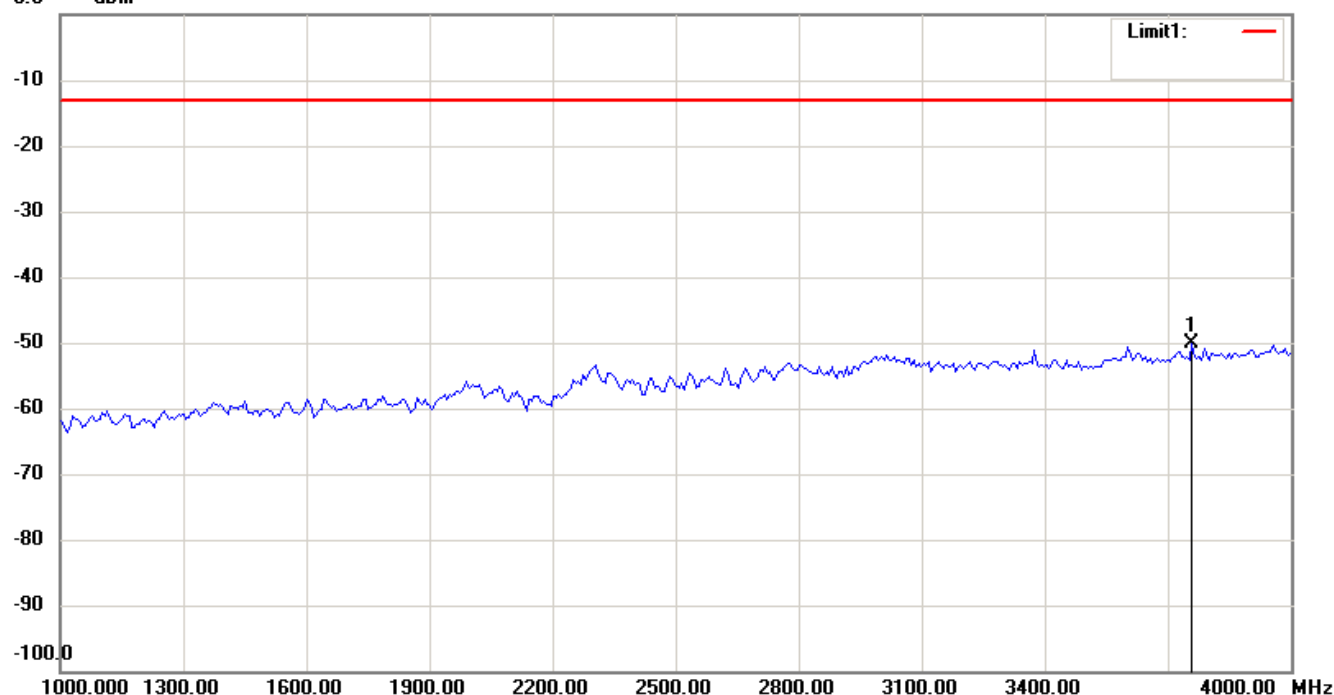


# Worldwide Testing Services(Taiwan) Co., Ltd.

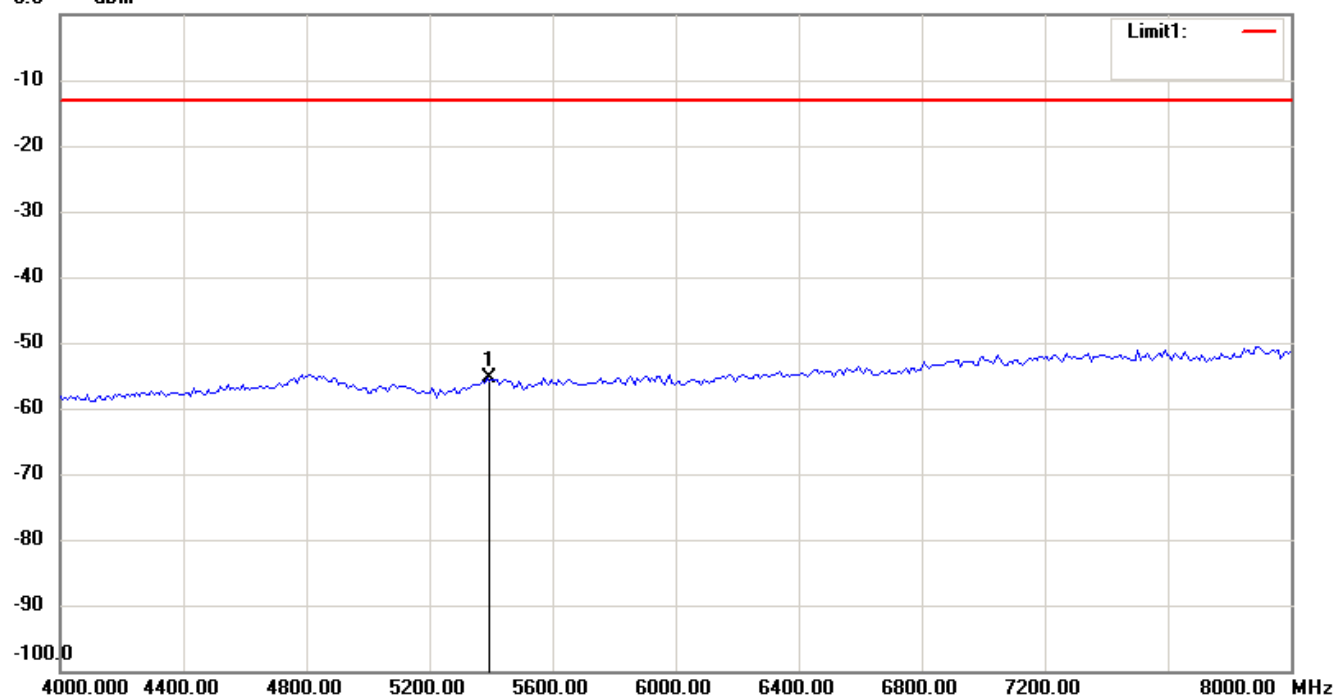
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

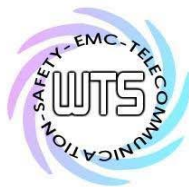


0.0 dBm



## Note:

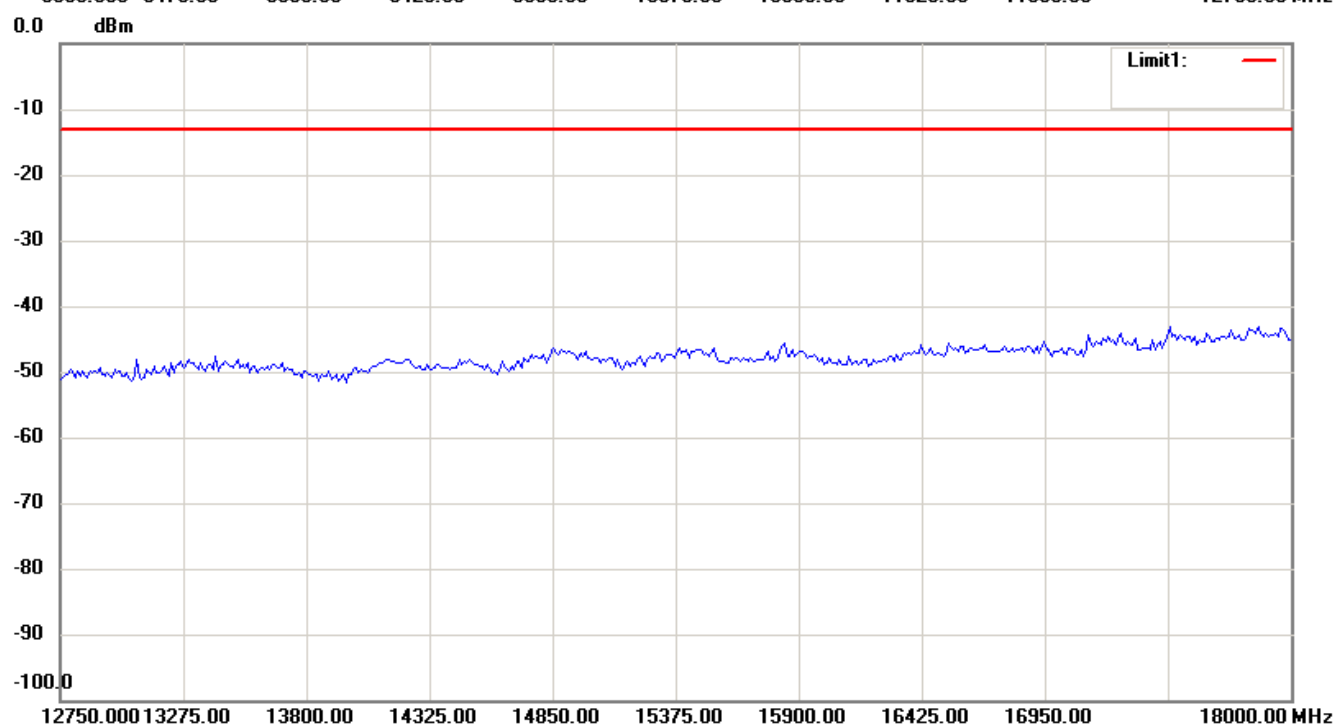
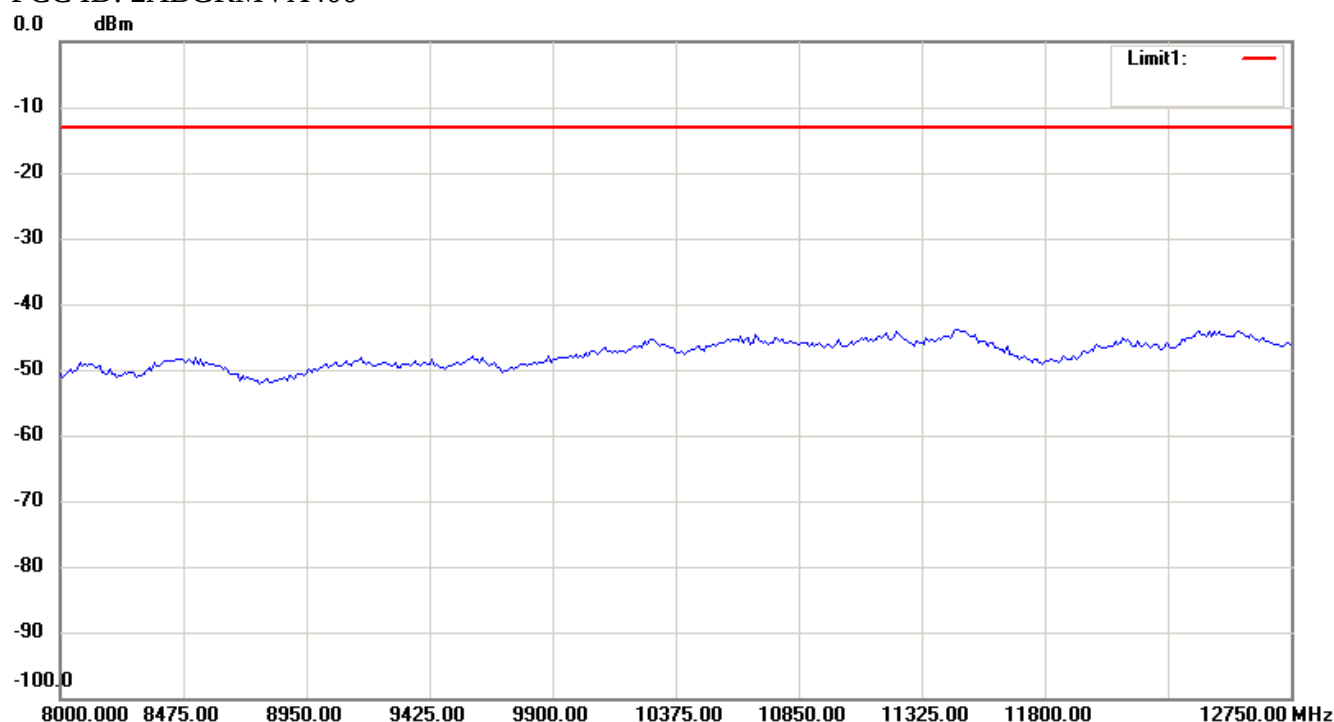
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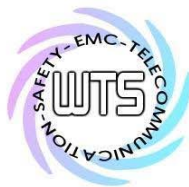
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



**Note:**

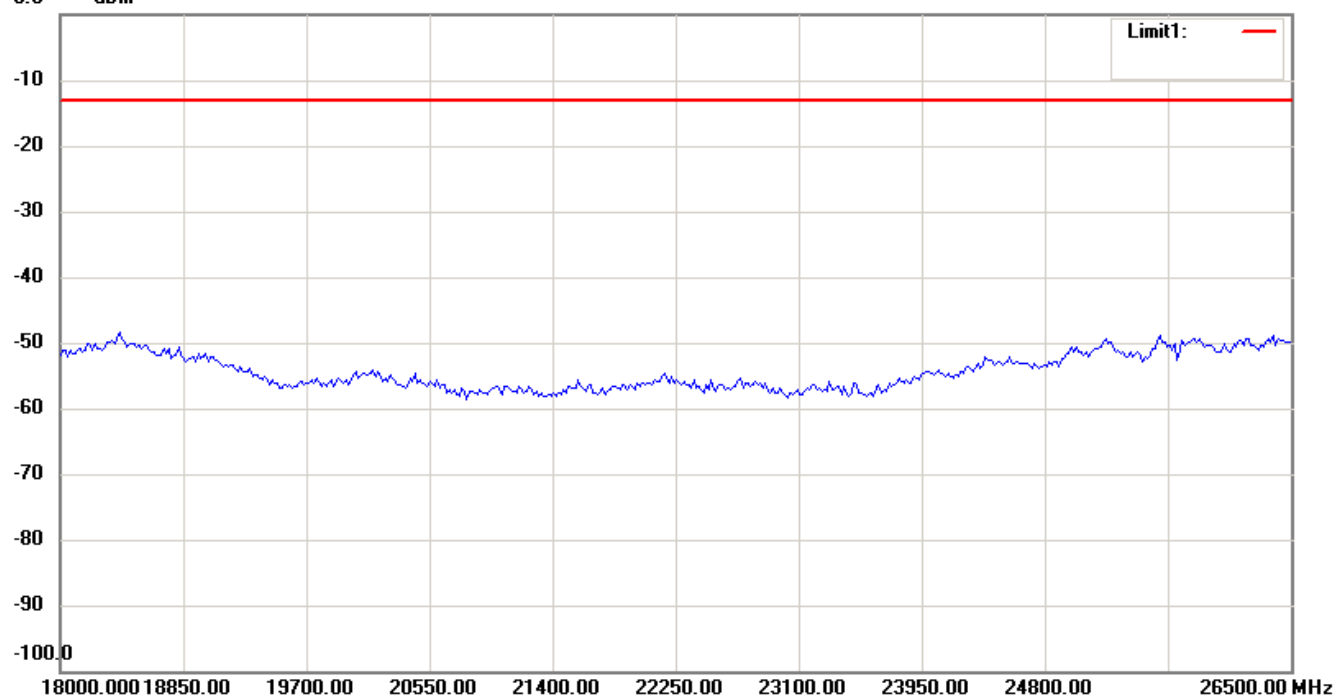
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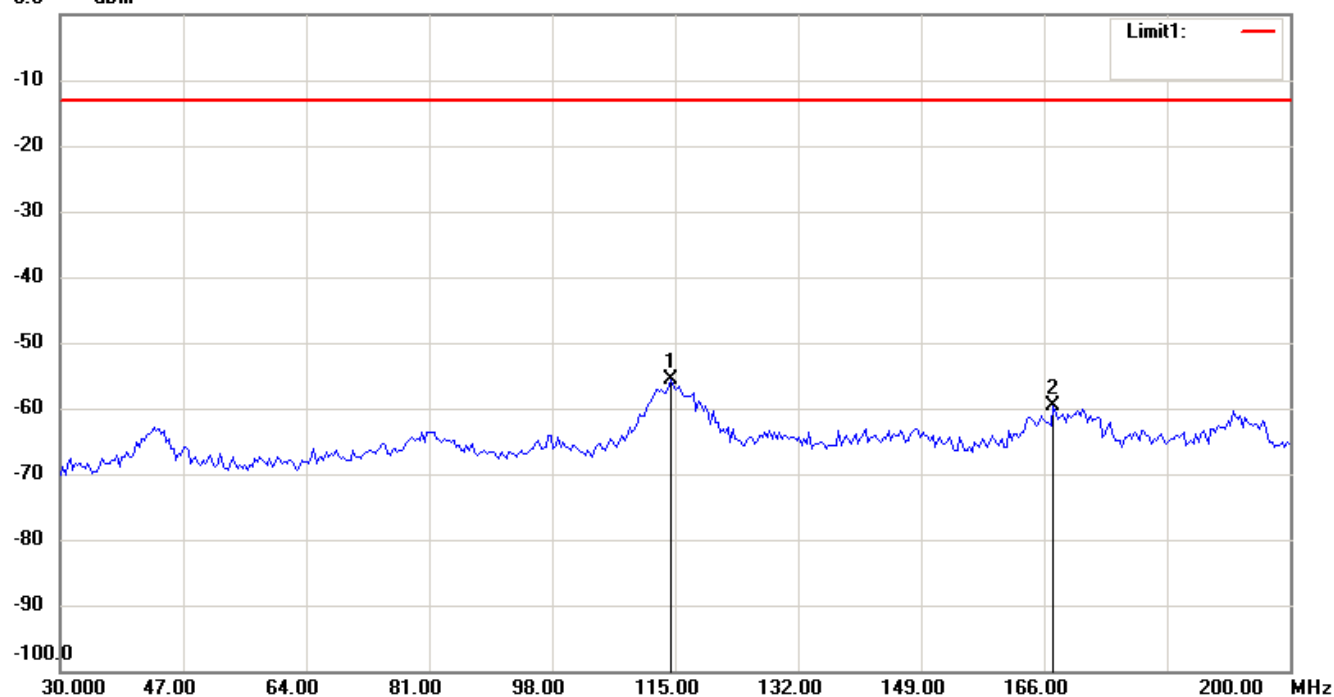
FCC ID: 2ABGRMVX400

0.0 dBm



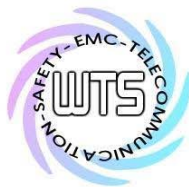
Antenna Polarization V

0.0 dBm



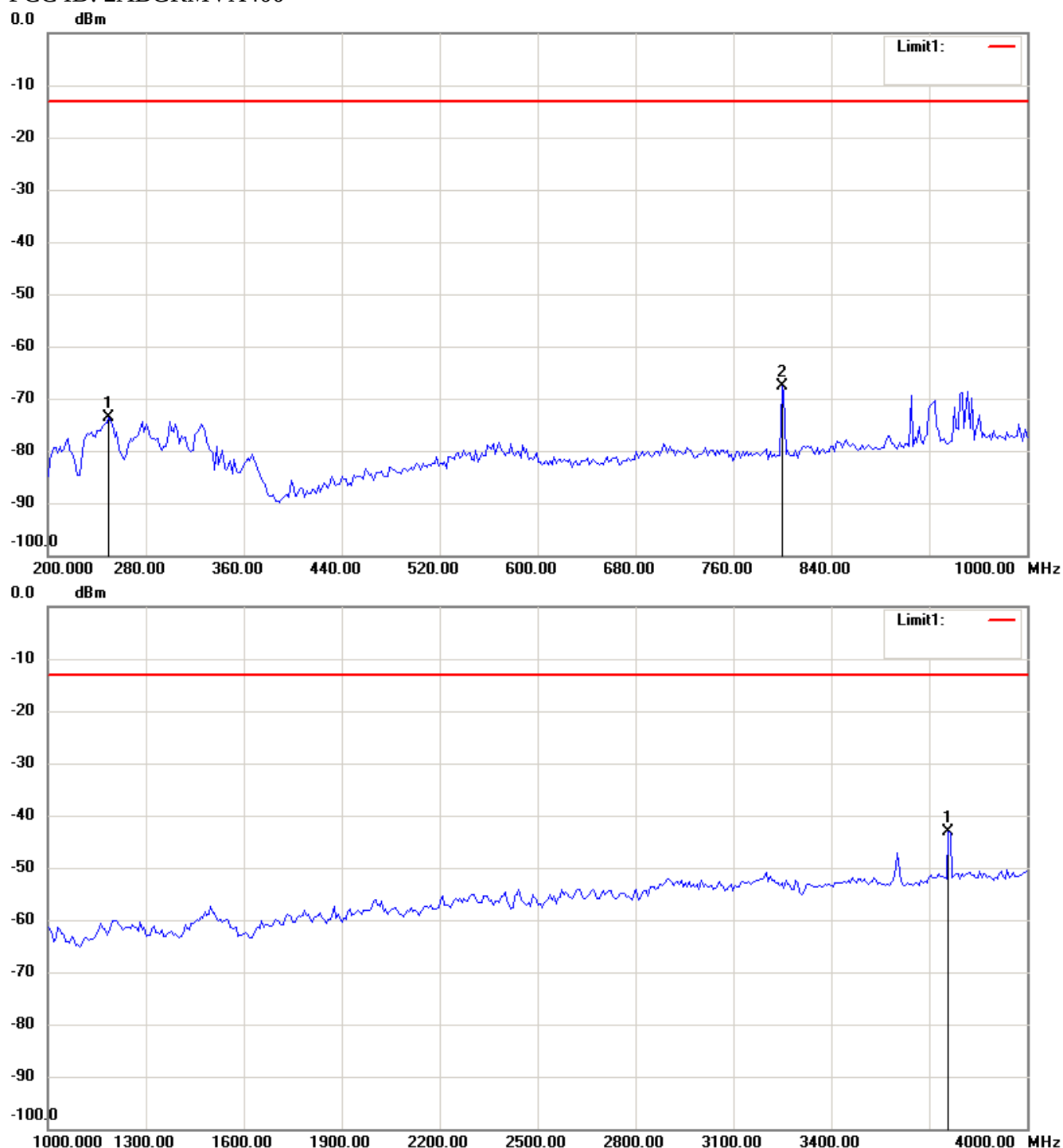
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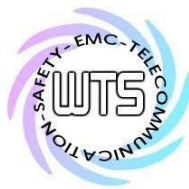
Report Number: W6M21309-13566-P-2224

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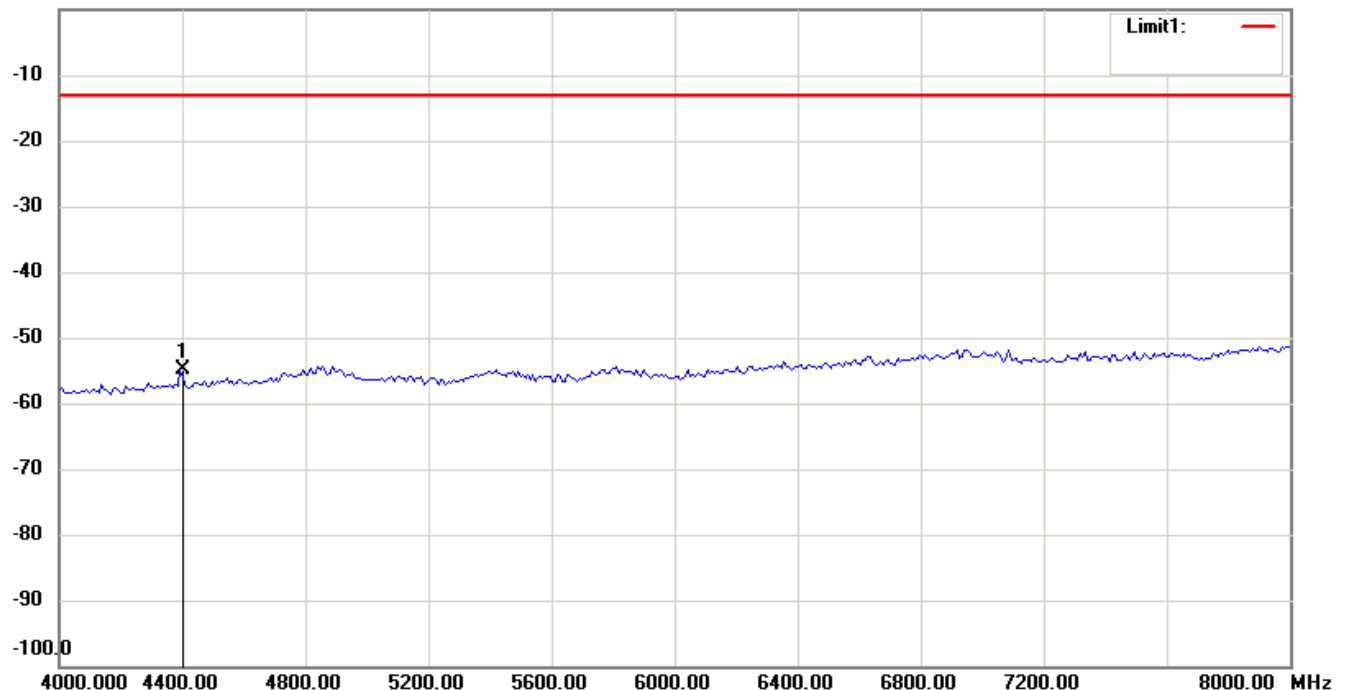


# Worldwide Testing Services(Taiwan) Co., Ltd.

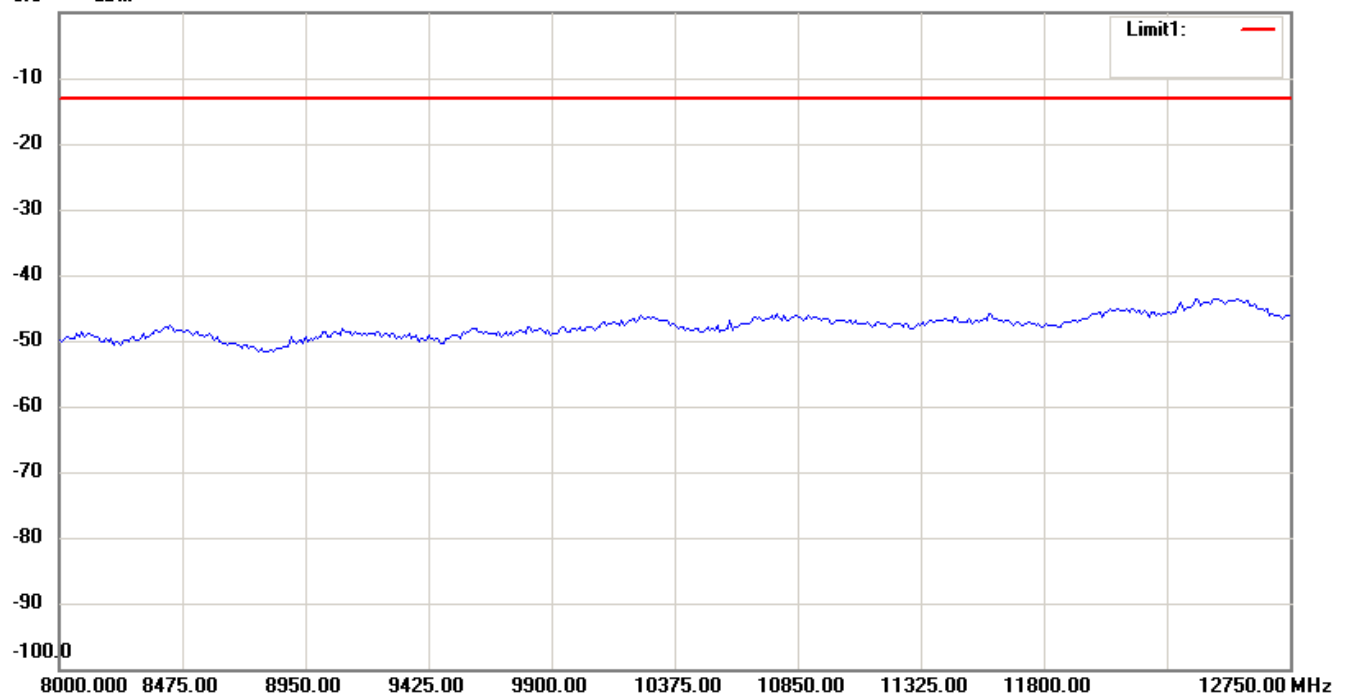
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

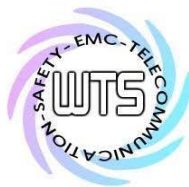


0.0 dBm



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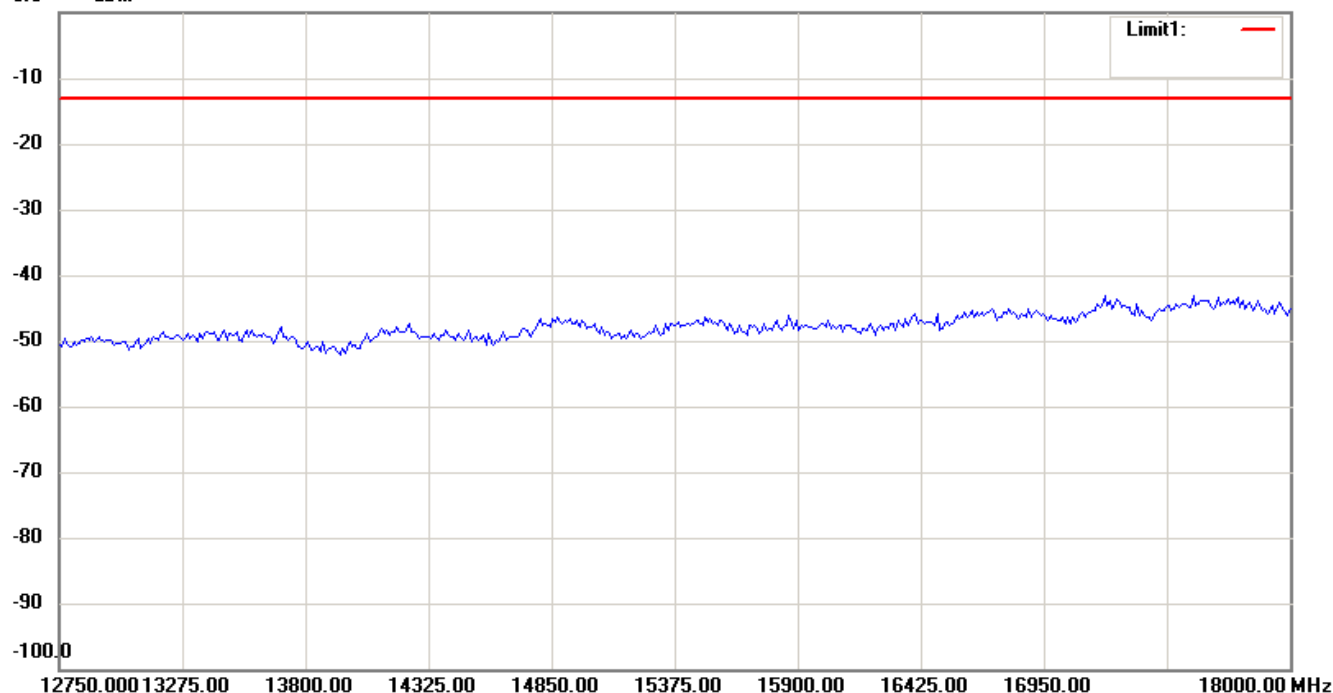


# Worldwide Testing Services(Taiwan) Co., Ltd.

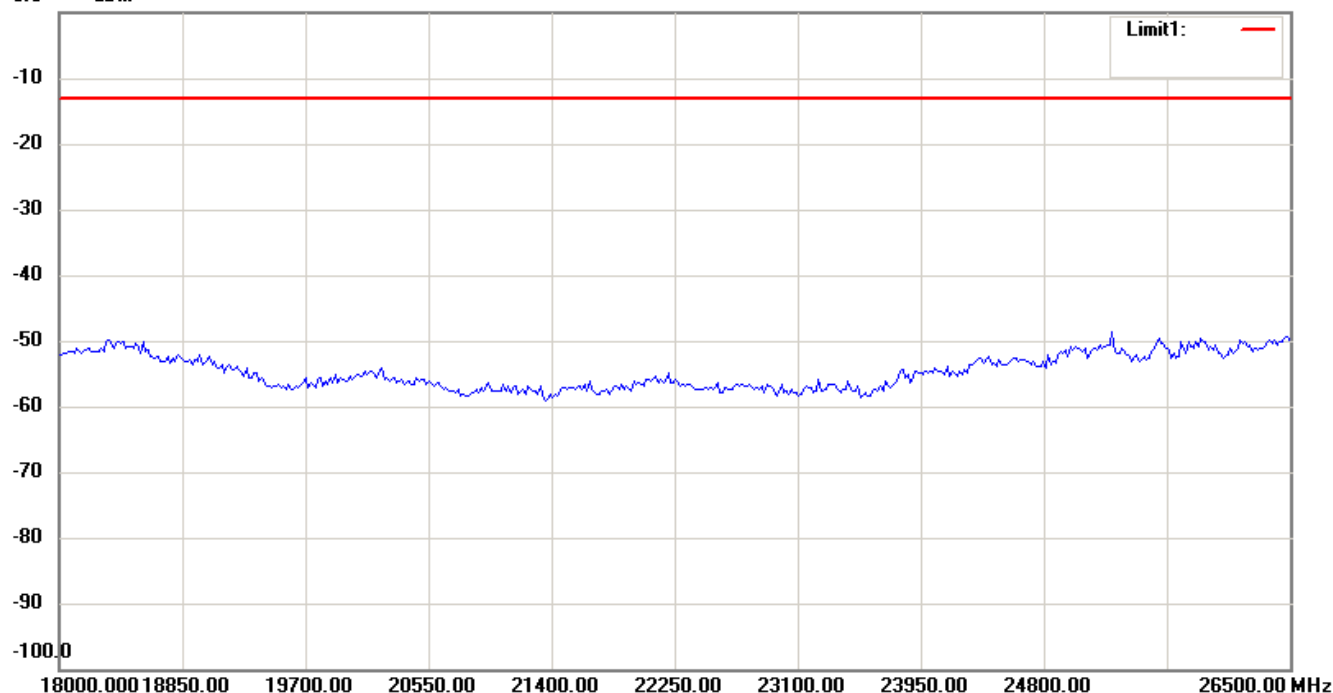
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

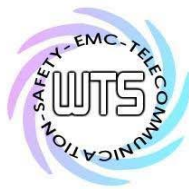


0.0 dBm



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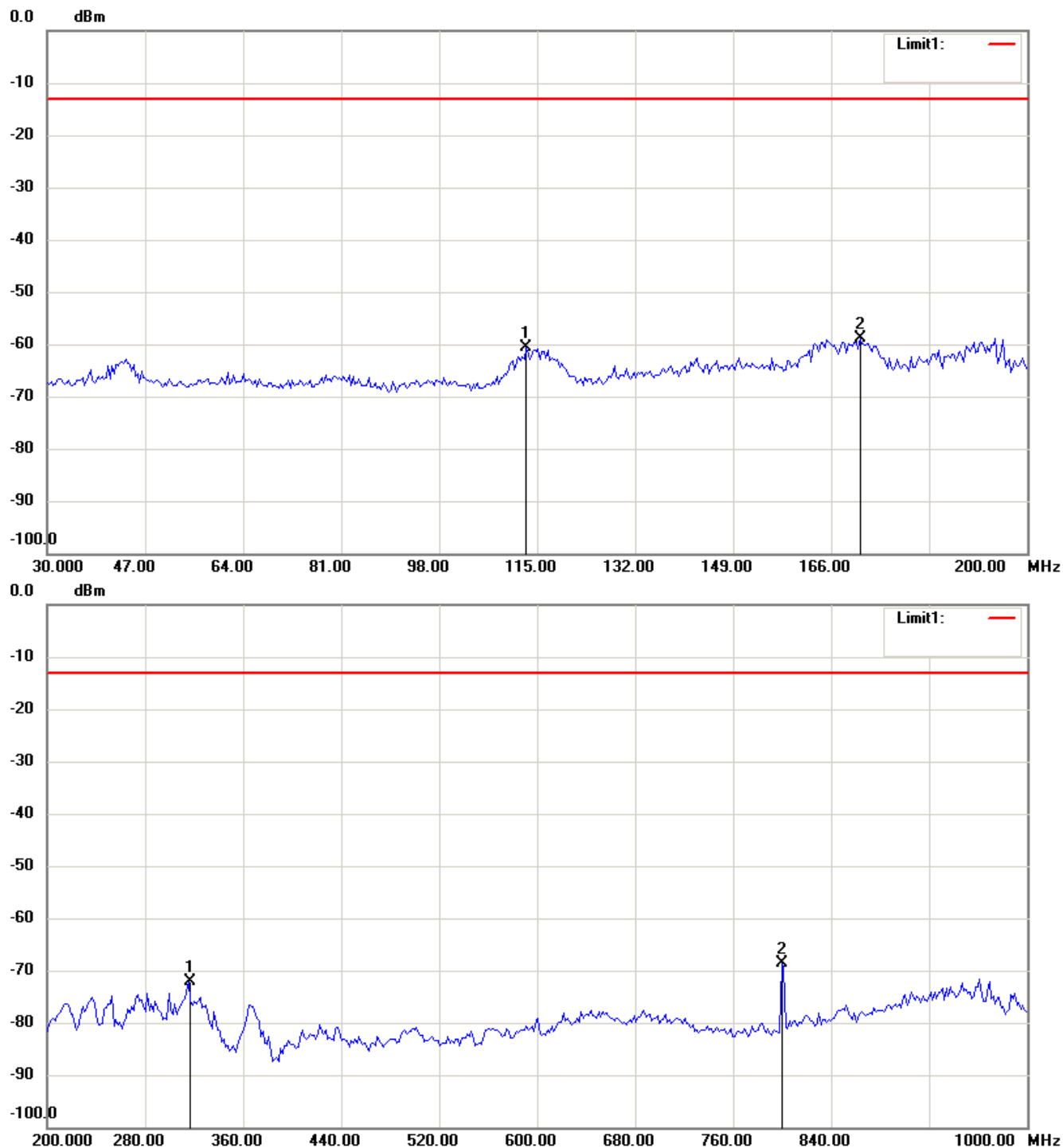


Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

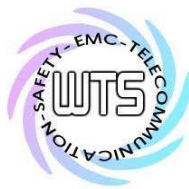
1900 band\_CH 661\_132 V

Antenna Polarization H



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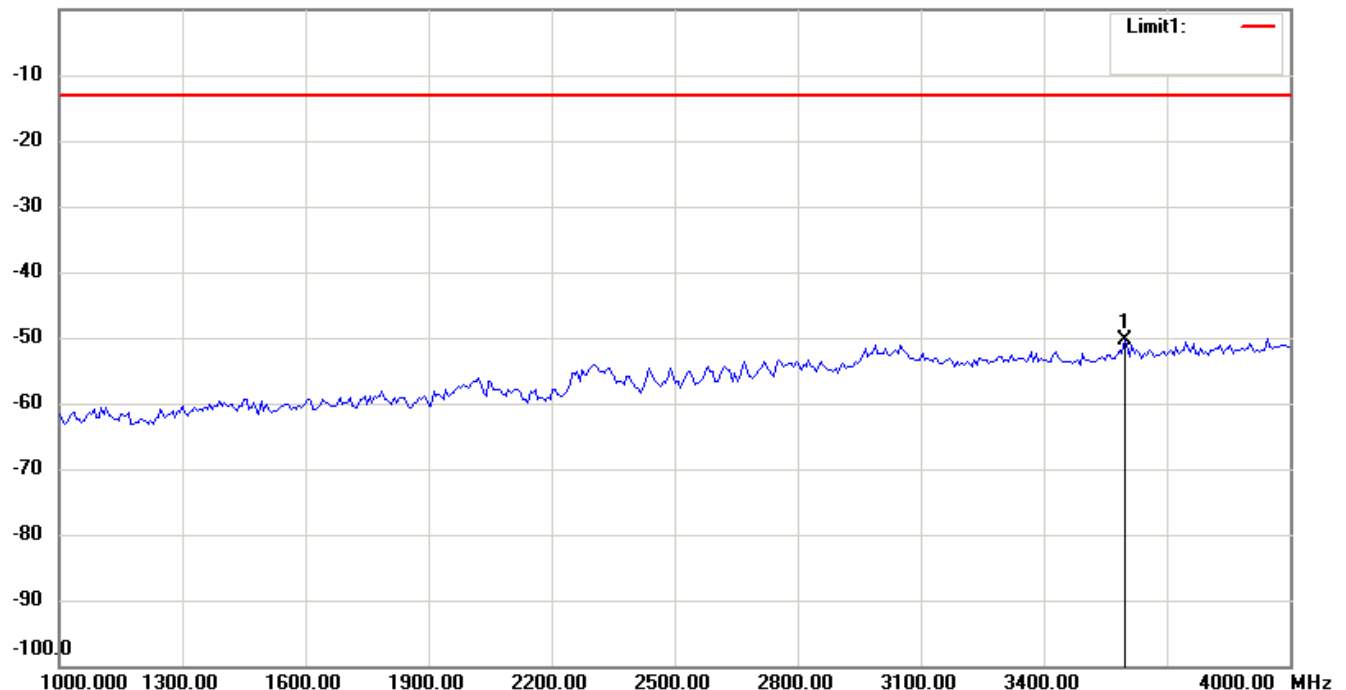


# Worldwide Testing Services(Taiwan) Co., Ltd.

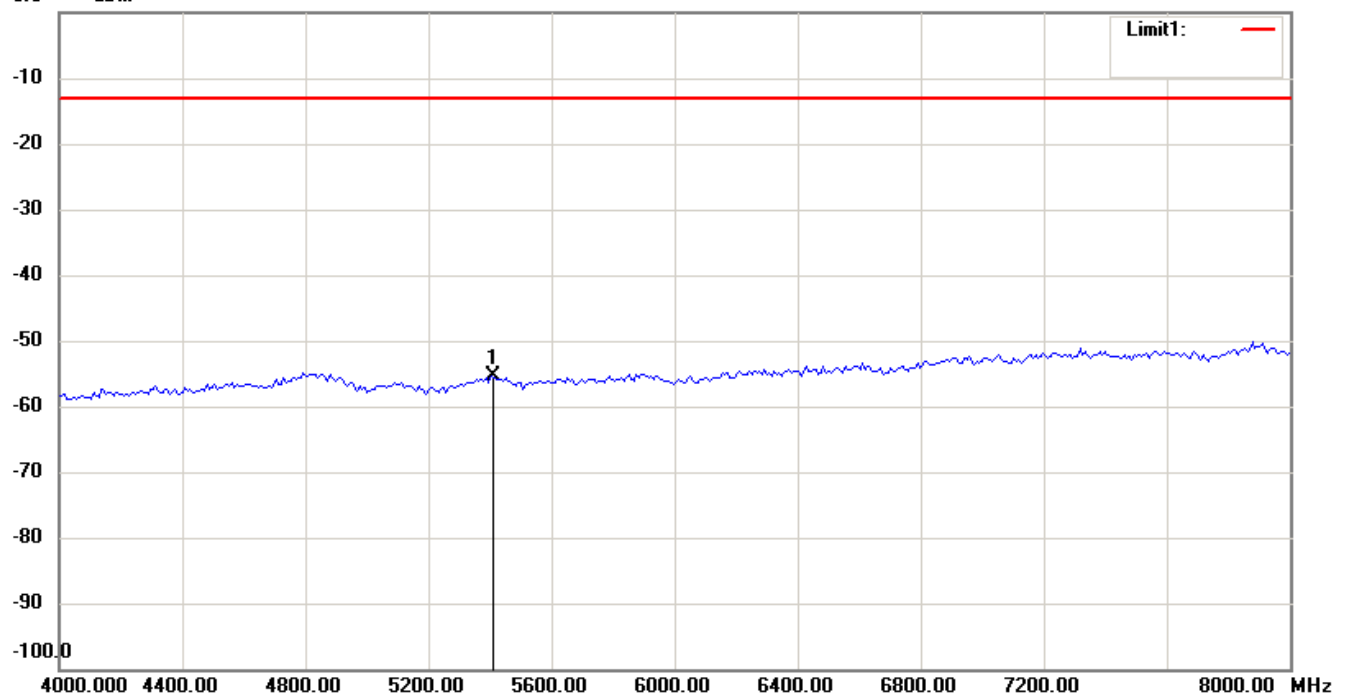
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

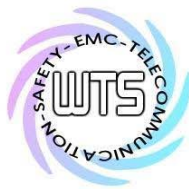


0.0 dBm



## 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.
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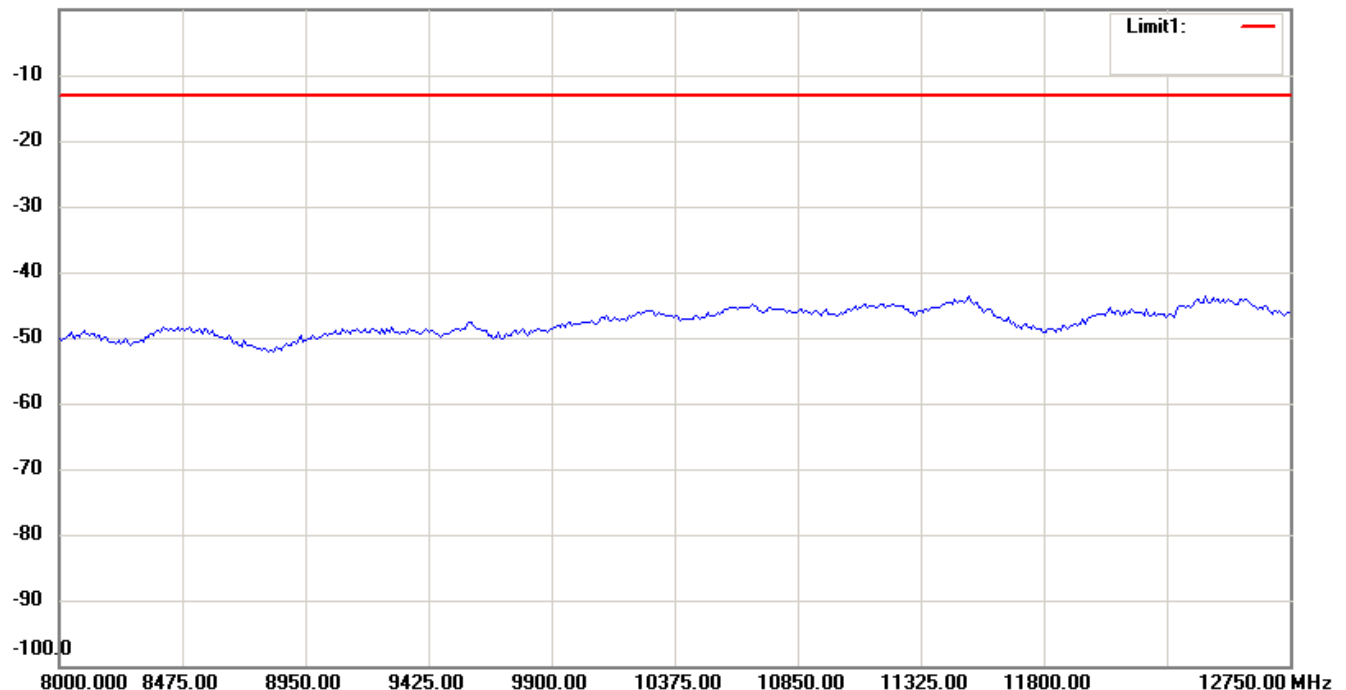


# Worldwide Testing Services(Taiwan) Co., Ltd.

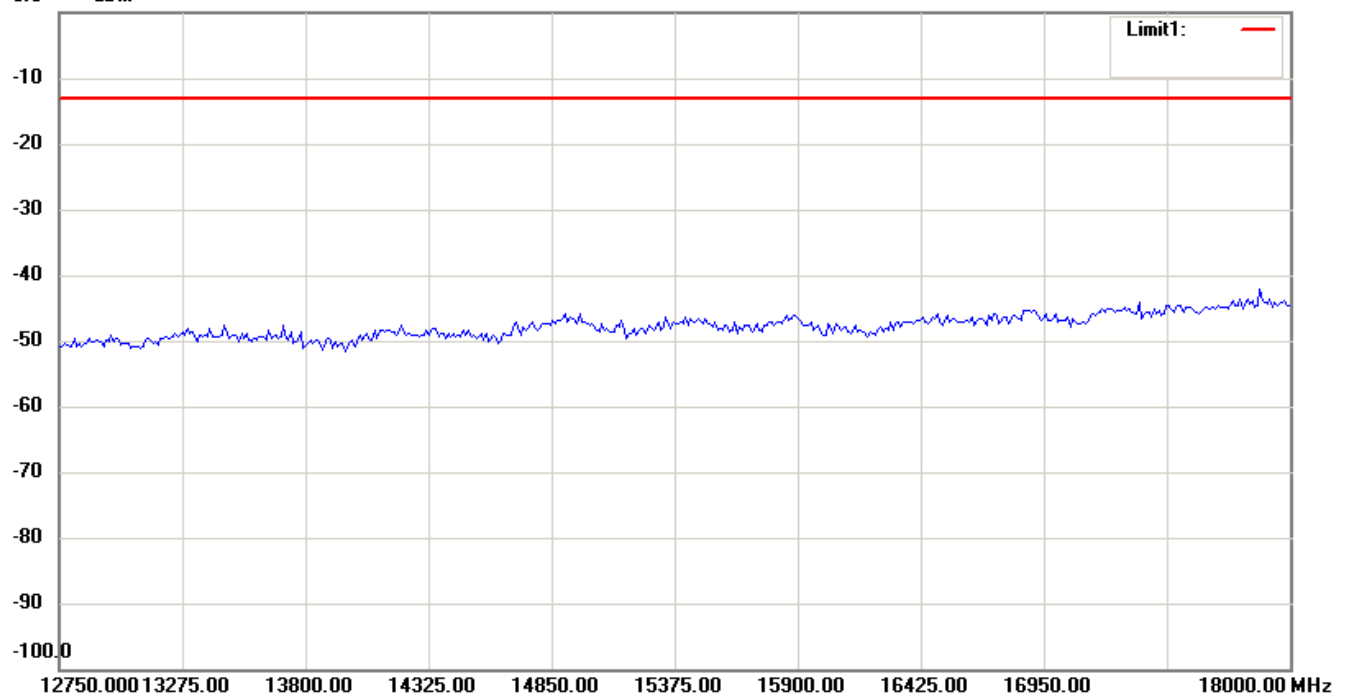
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

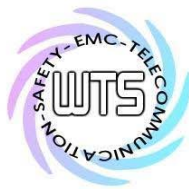


0.0 dBm



## Note:

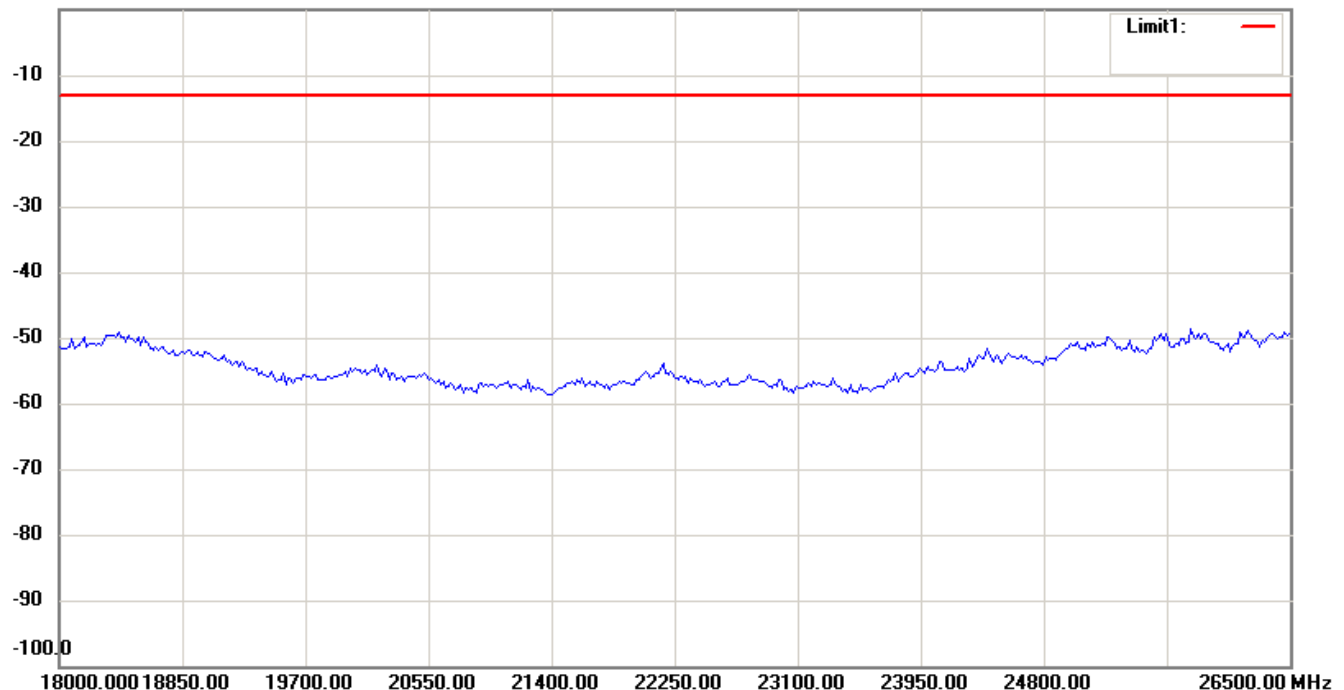
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Report Number: W6M21309-13566-P-2224

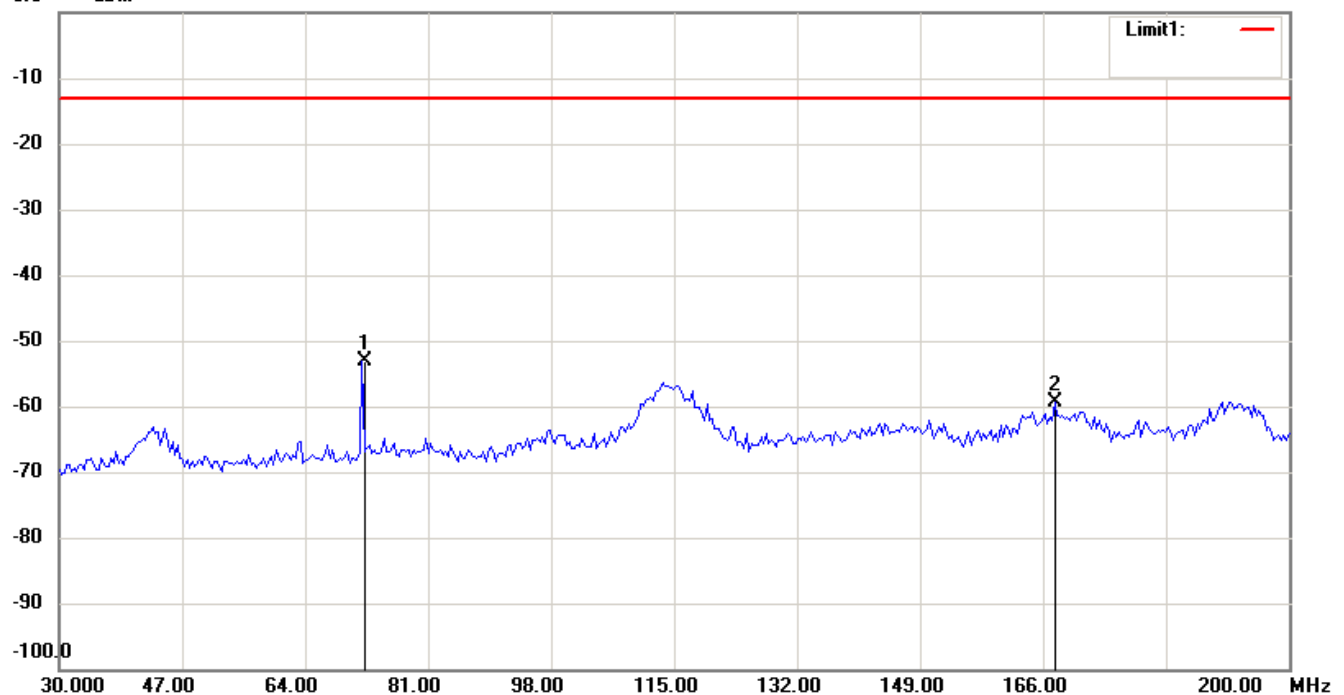
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0.0 dBm



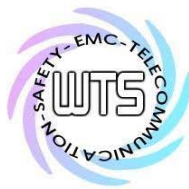
Antenna Polarization V

0.0 dBm



**Note:**

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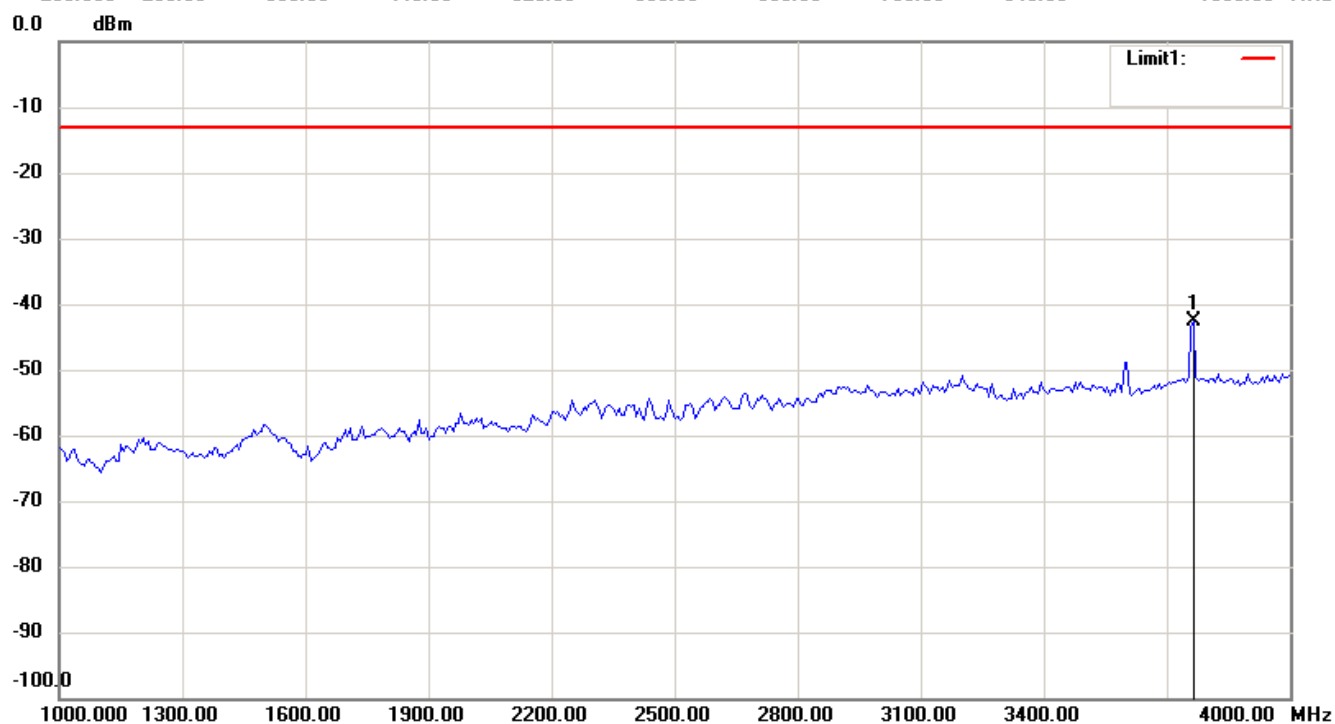
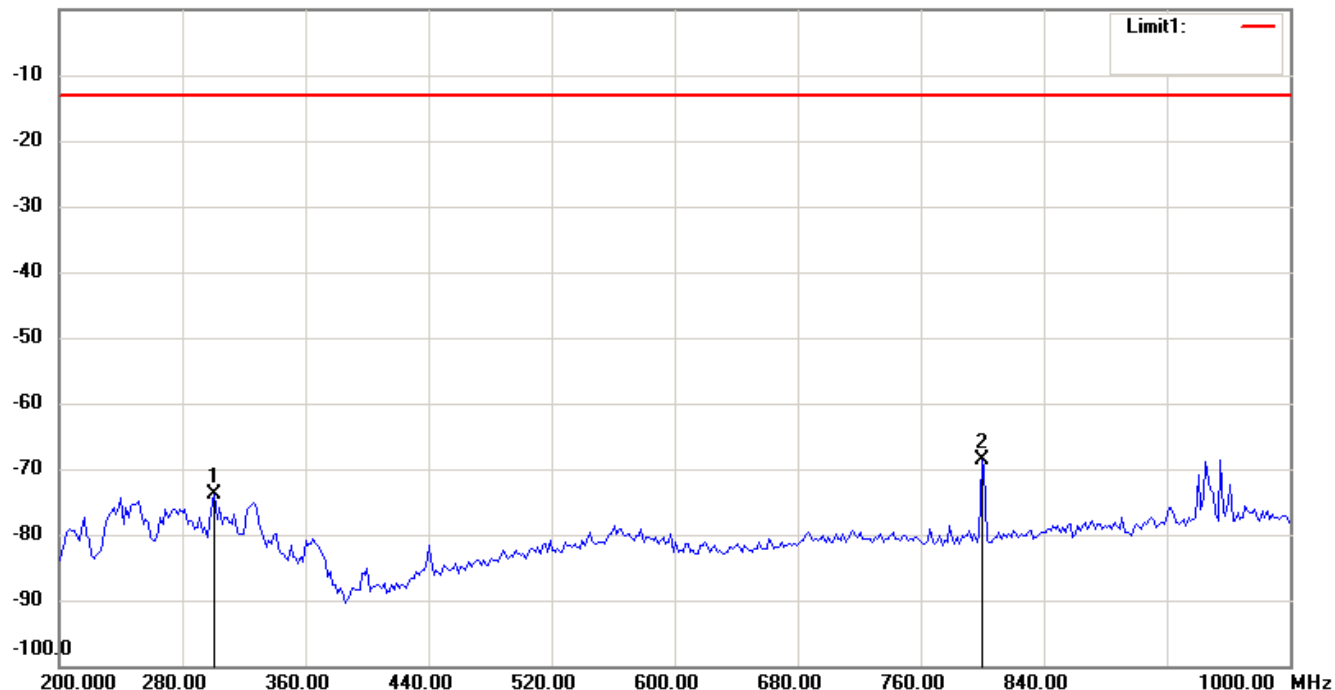


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

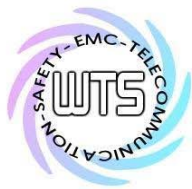
FCC ID: 2ABGRMVX400

0.0 dBm



## Note:

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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.
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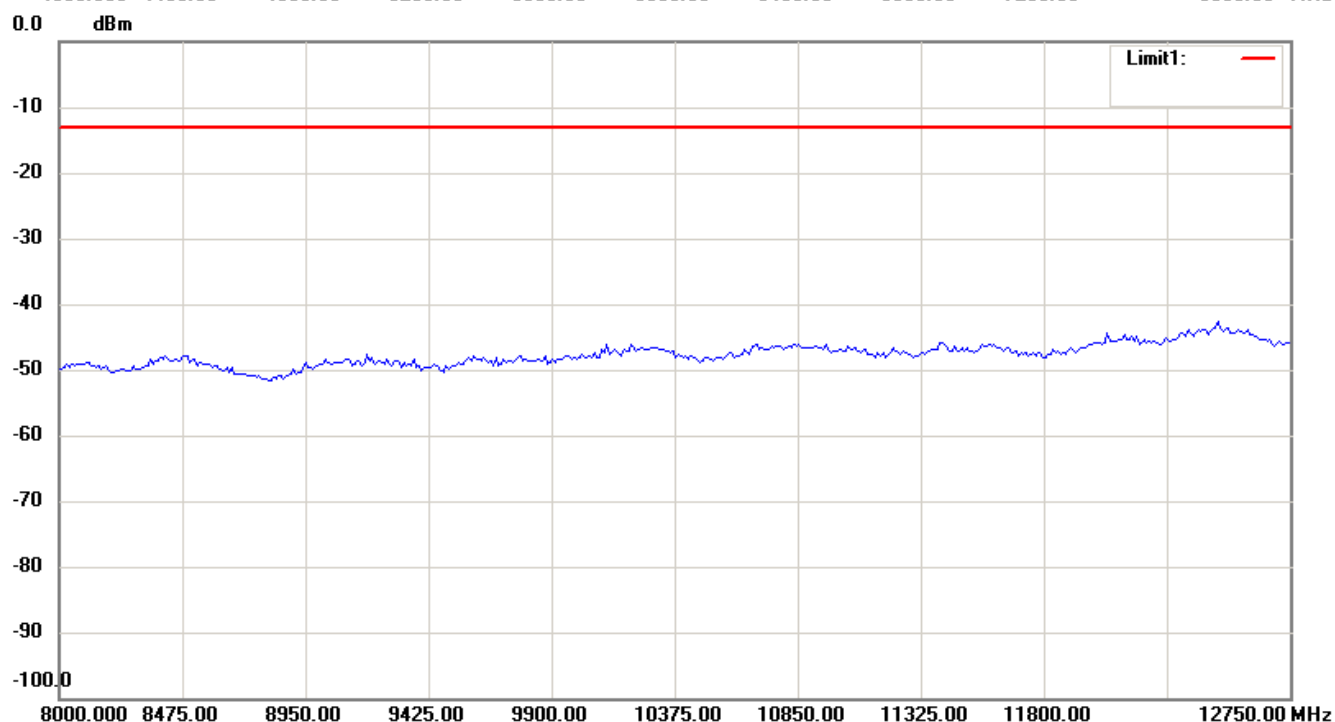
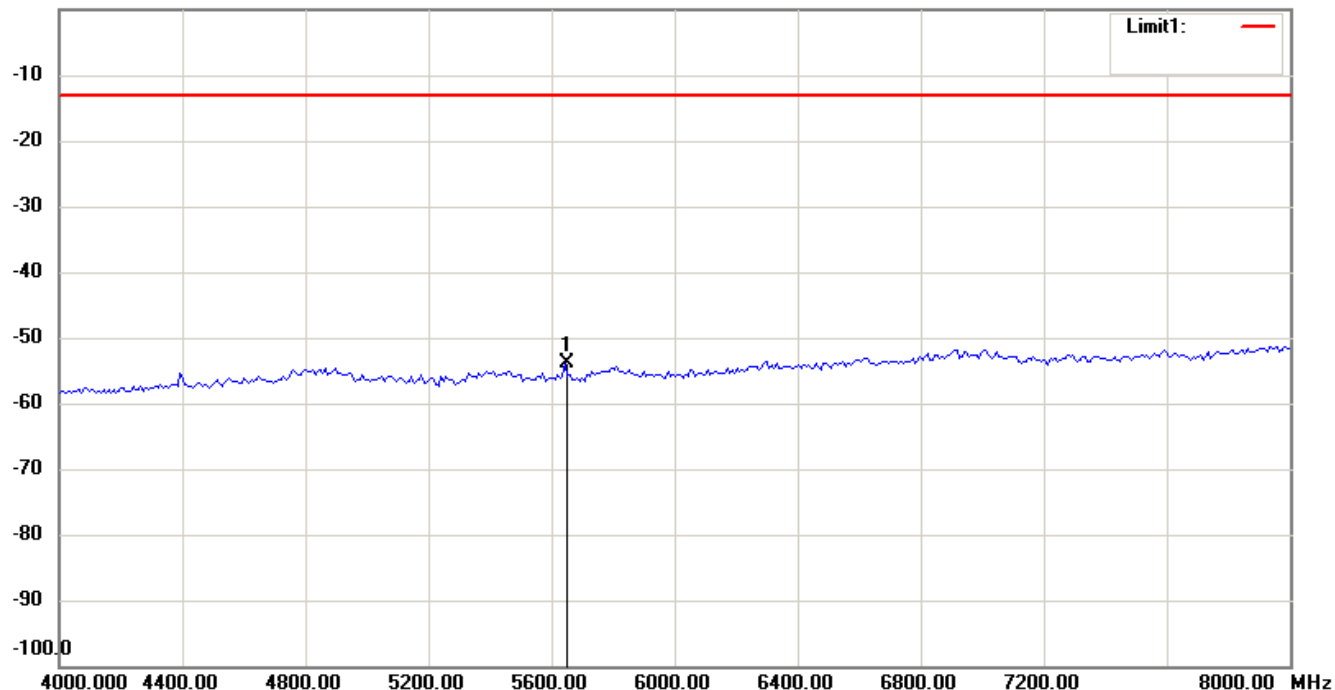


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

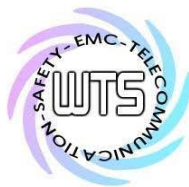
FCC ID: 2ABGRMVX400

0.0 dBm



## Note:

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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.
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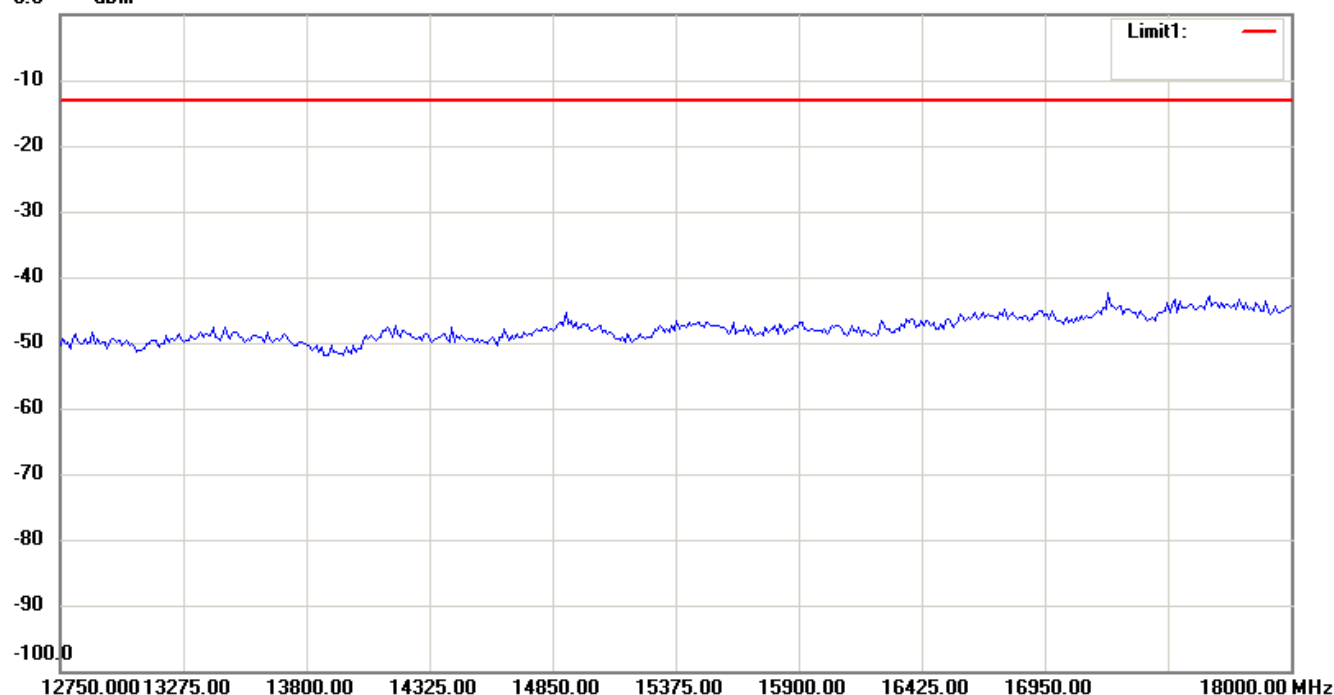


# Worldwide Testing Services(Taiwan) Co., Ltd.

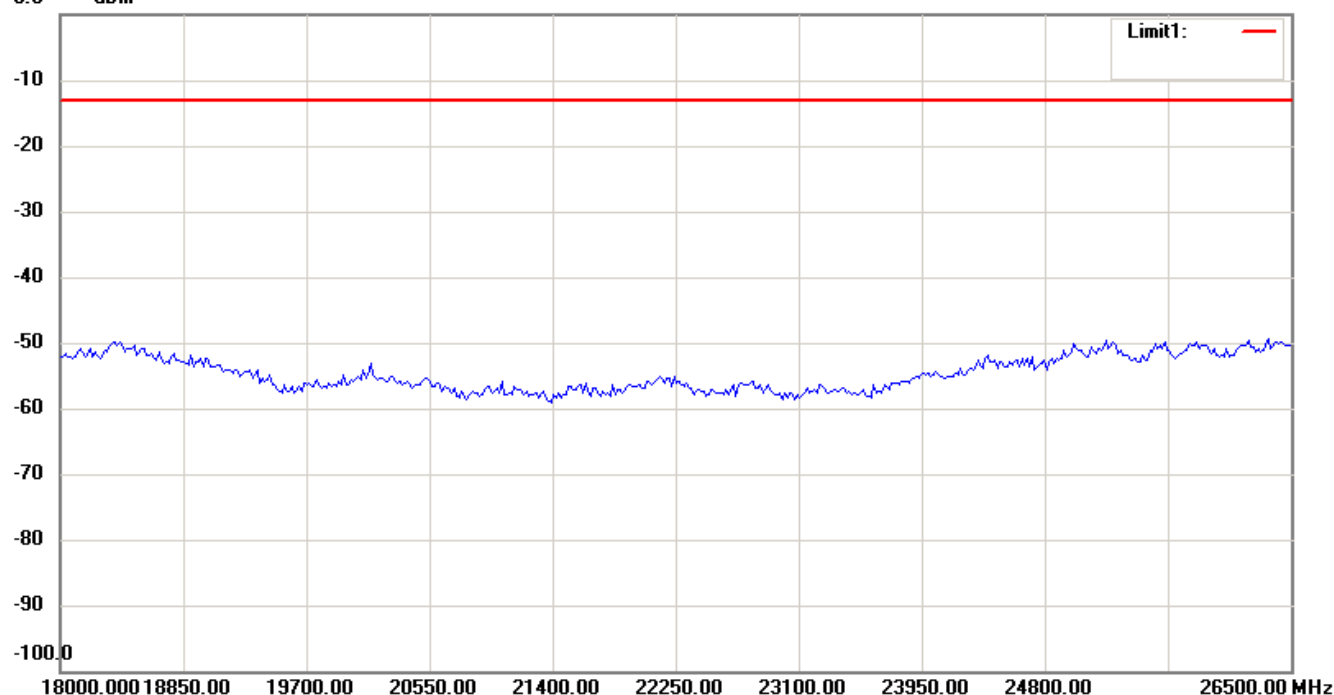
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

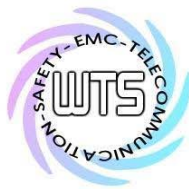


0.0 dBm



## Note:

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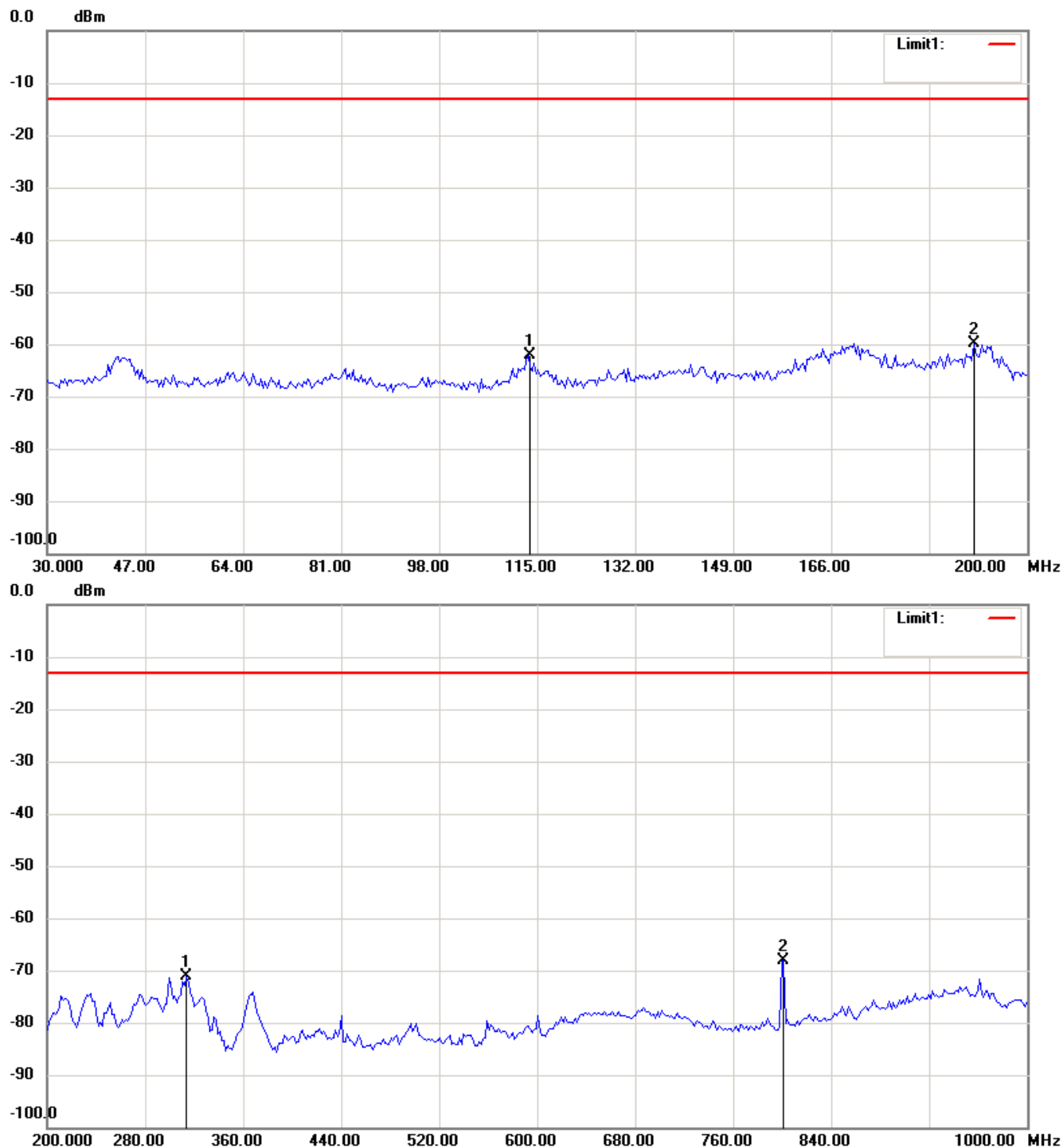


Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

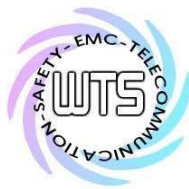
1900 band\_CH 810\_108V

Antenna Polarization H



**Note:**

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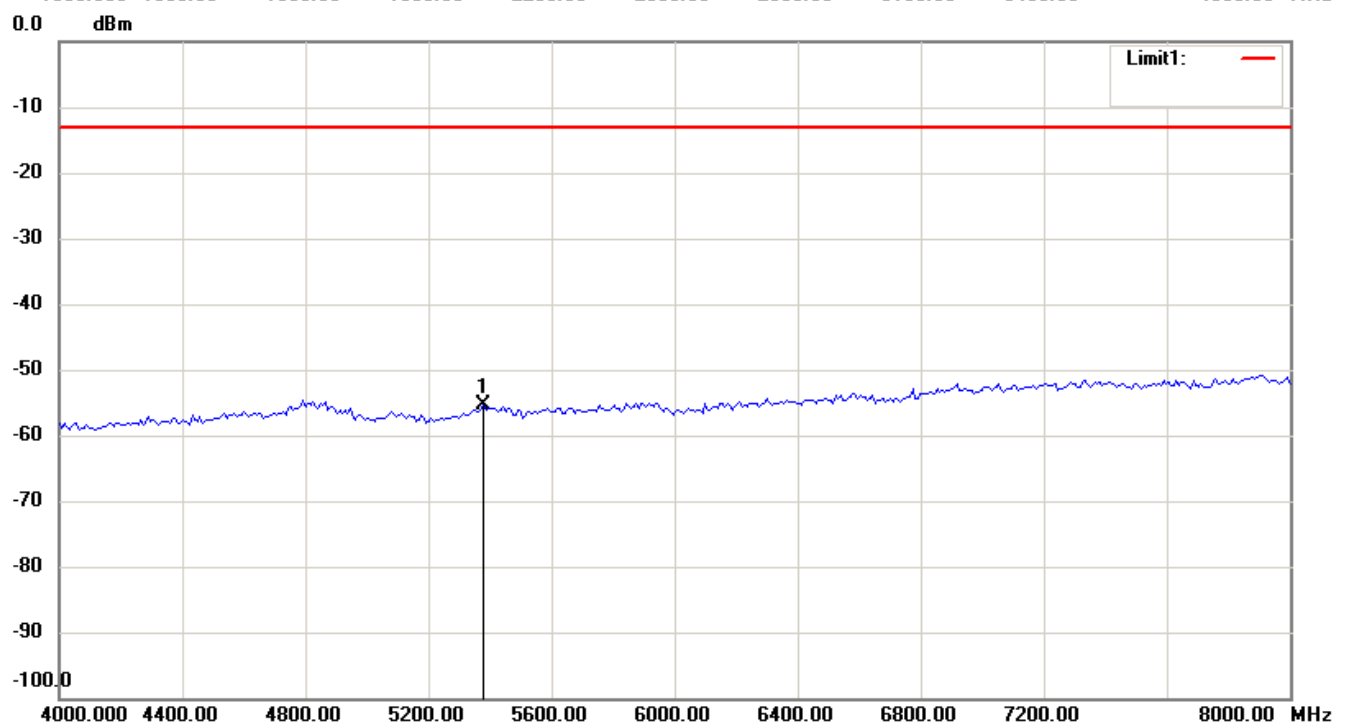
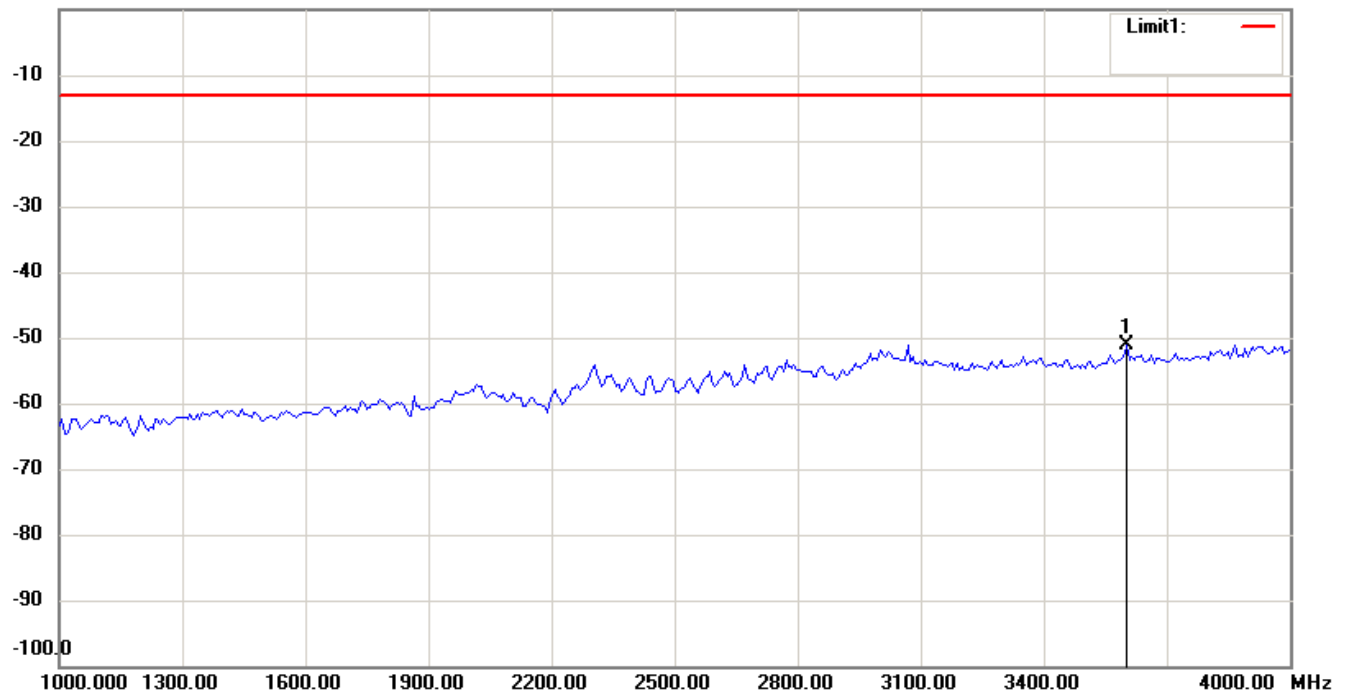


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

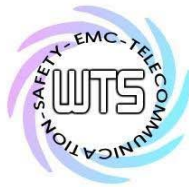
FCC ID: 2ABGRMVX400

0.0 dBm



## 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.
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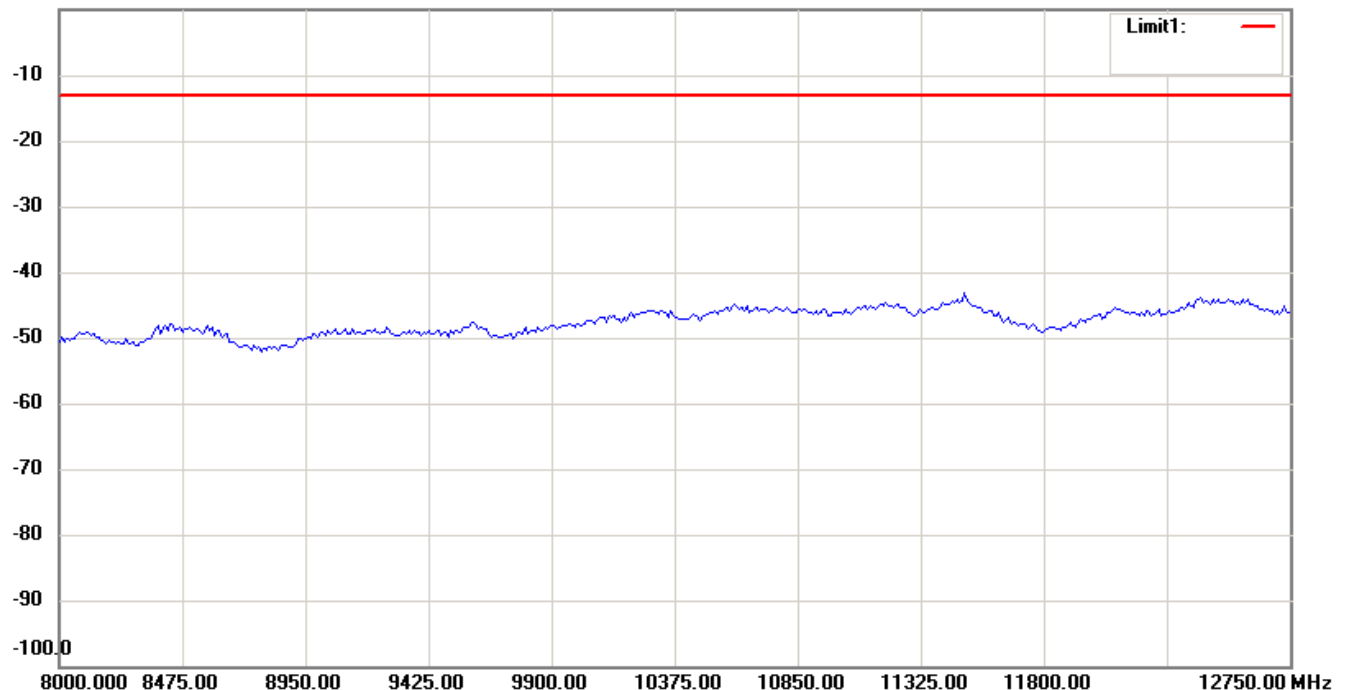


# Worldwide Testing Services(Taiwan) Co., Ltd.

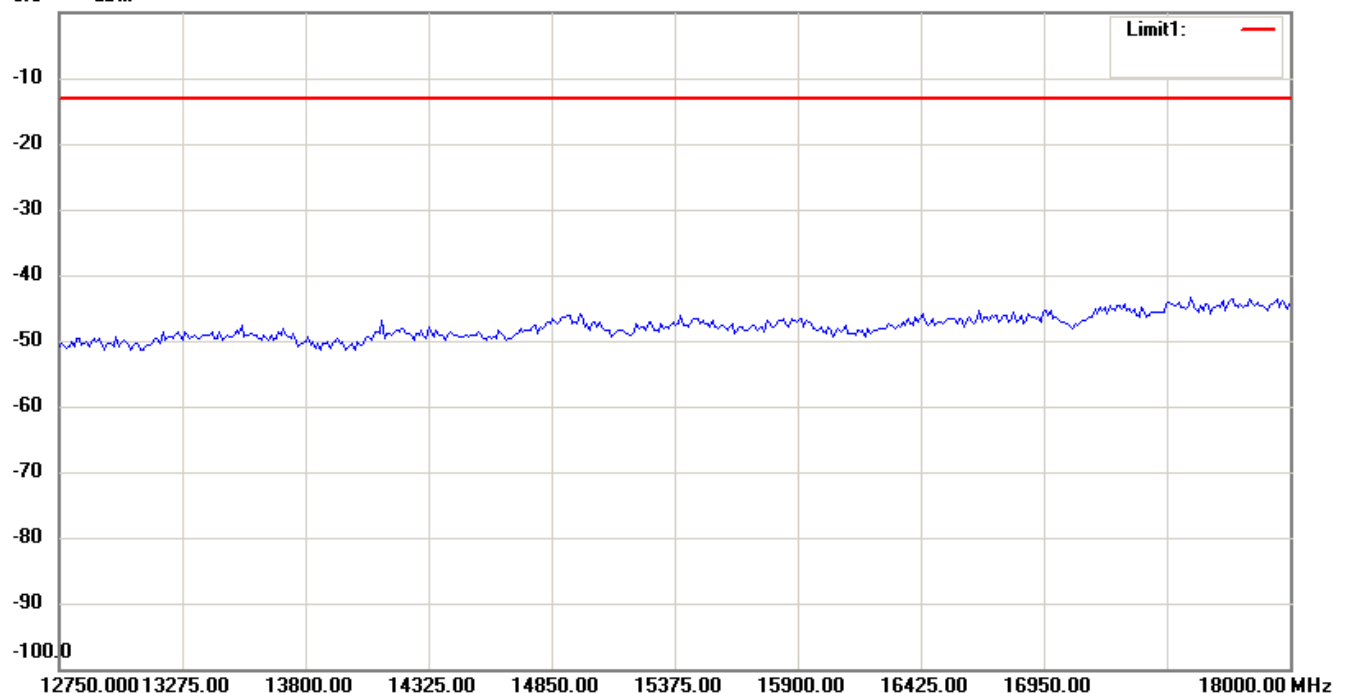
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

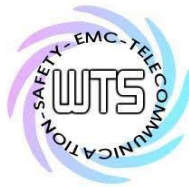


0.0 dBm



## Note:

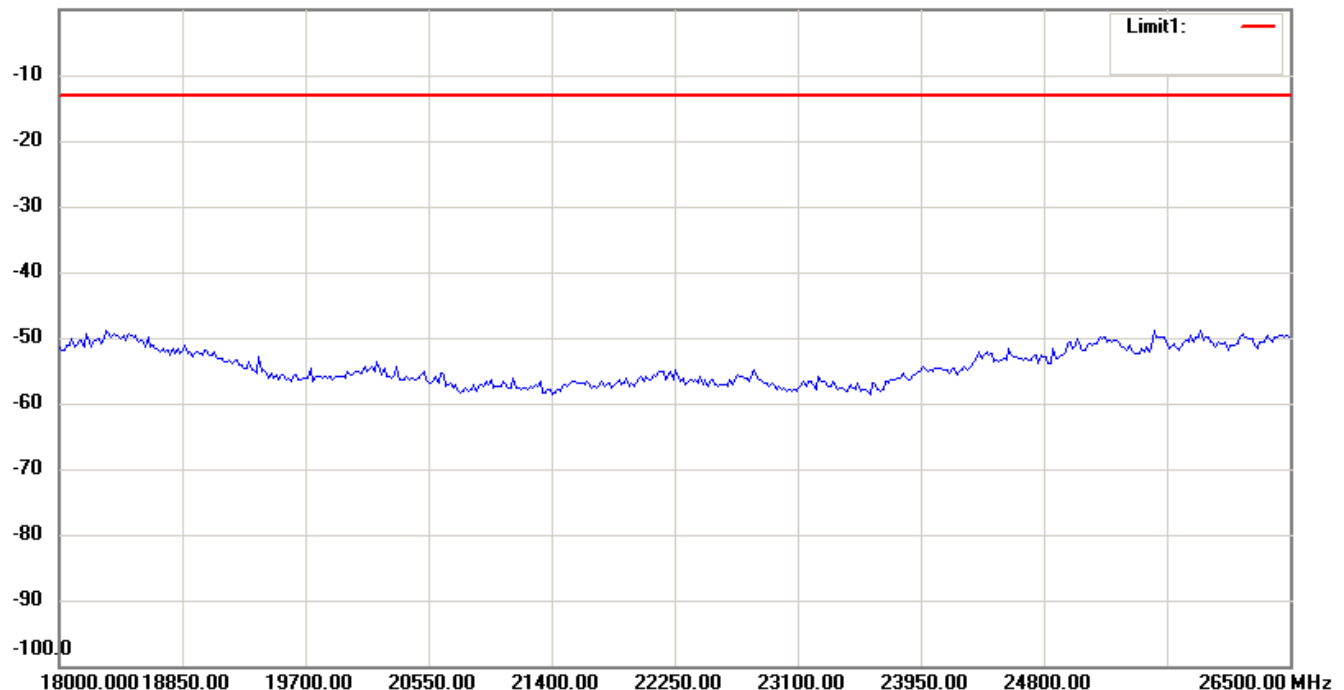
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Report Number: W6M21309-13566-P-2224

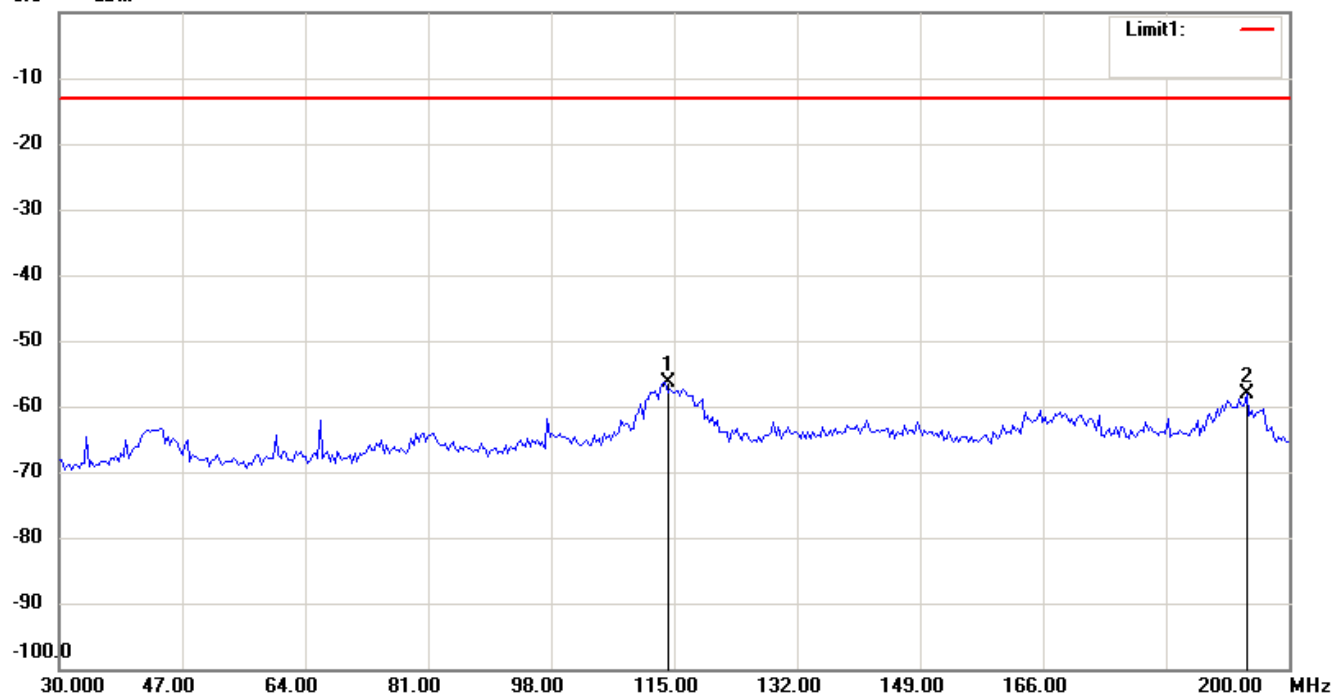
FCC ID: 2ABGRMVX400

0.0 dBm



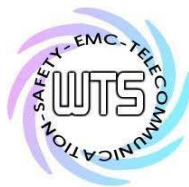
Antenna Polarization V

0.0 dBm



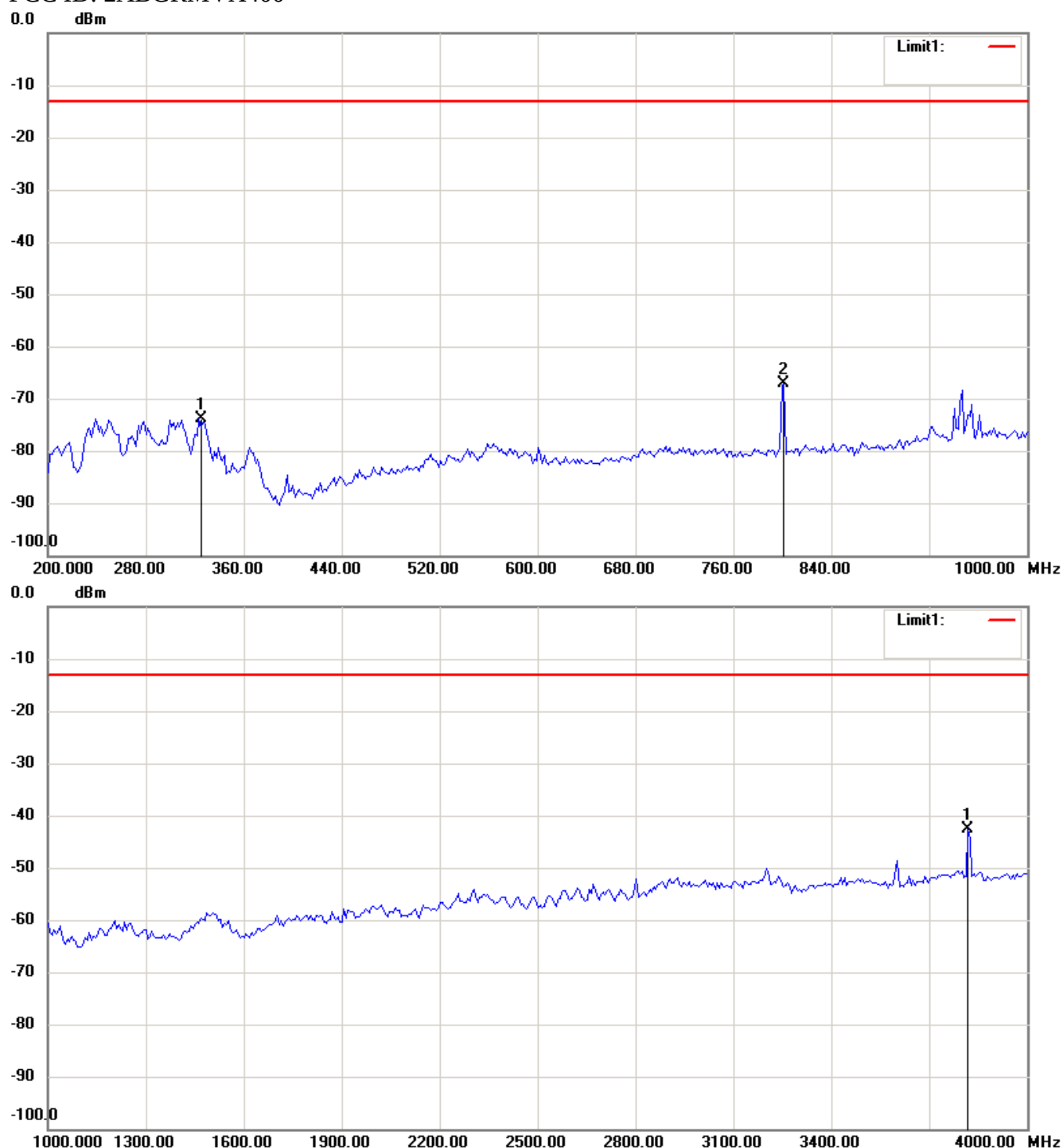
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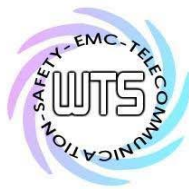
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400



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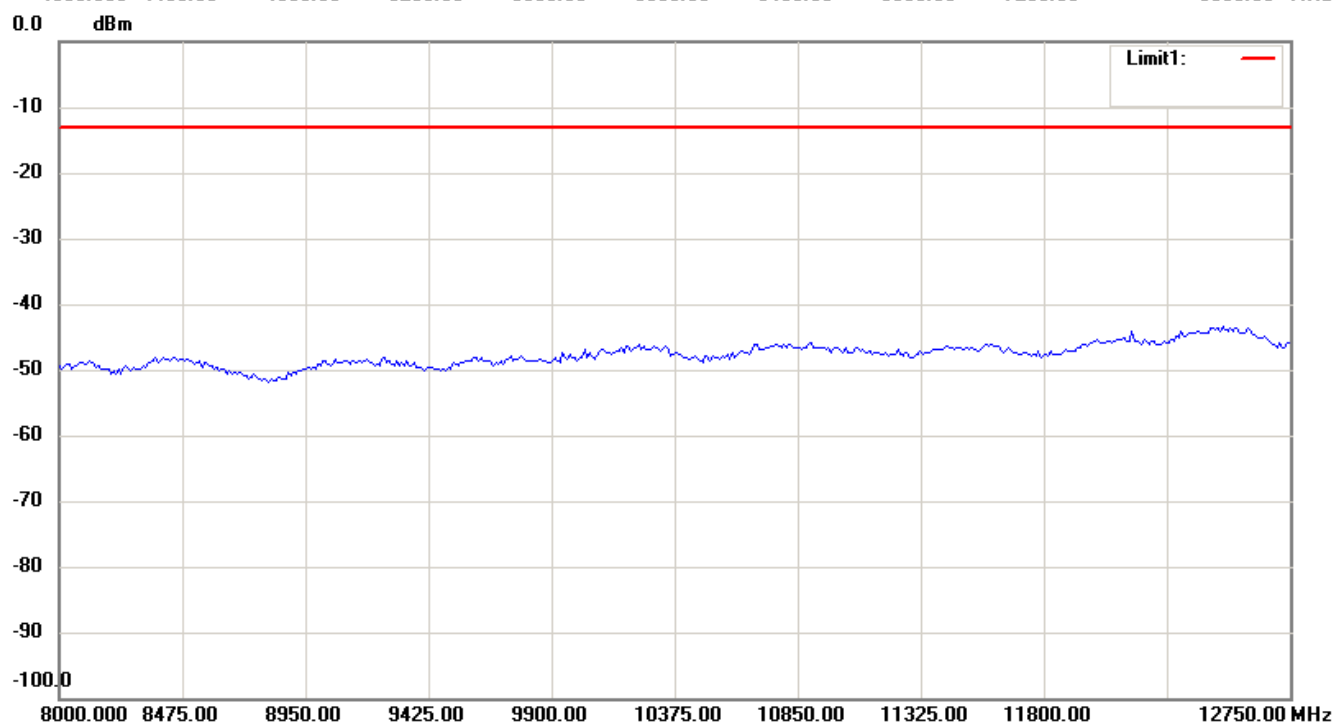
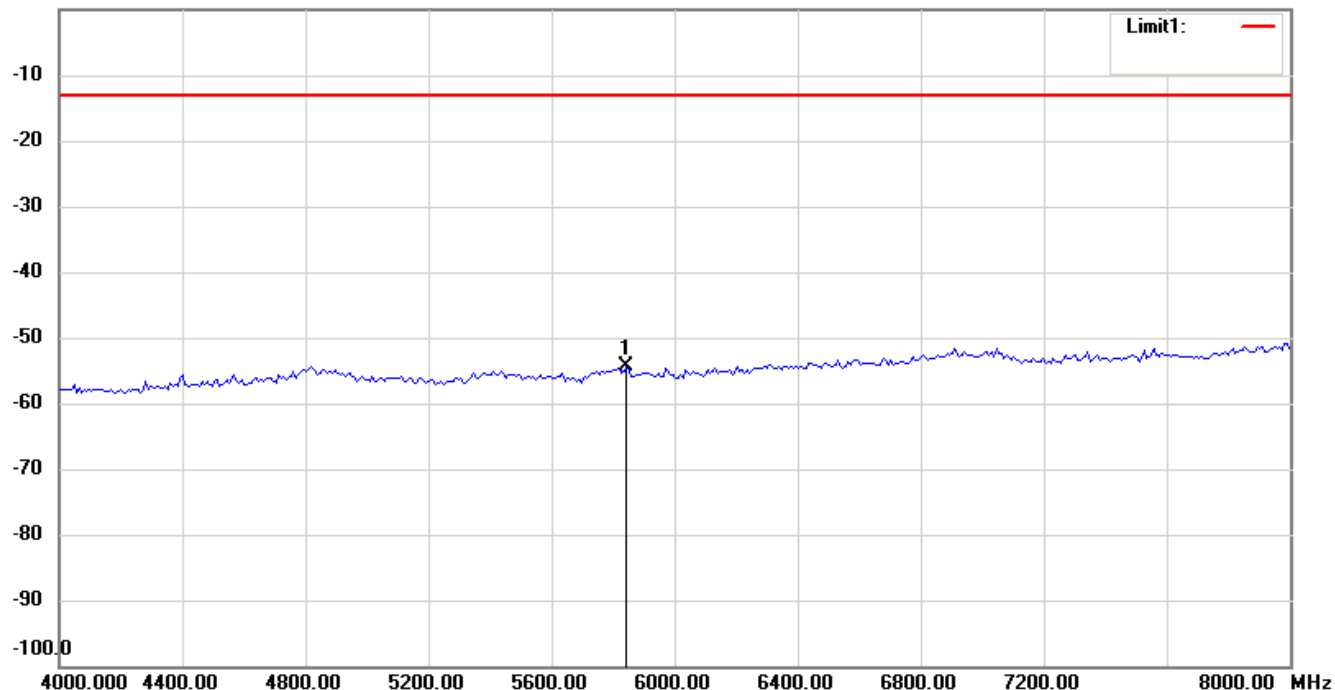


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

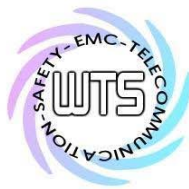
FCC ID: 2ABGRMVX400

0.0 dBm



## Note:

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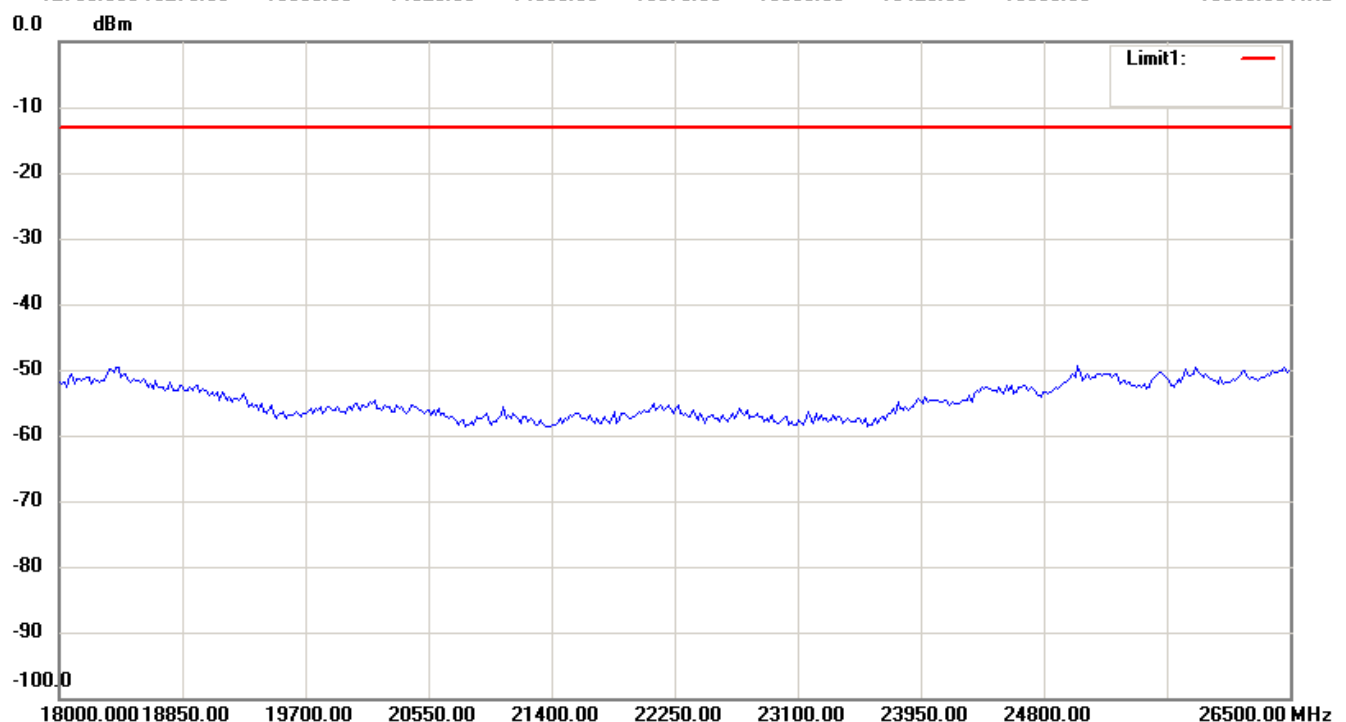
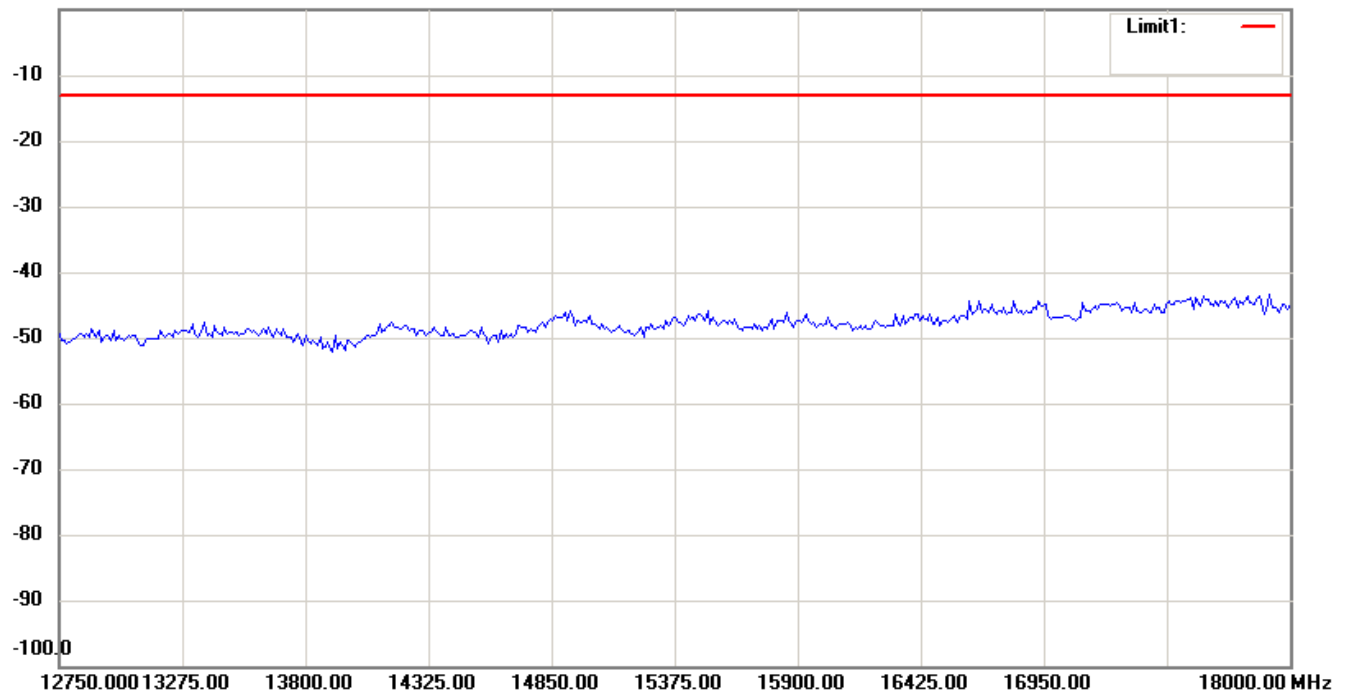


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

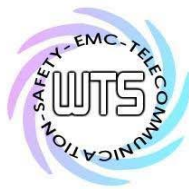
FCC ID: 2ABGRMVX400

0.0 dBm



## Note:

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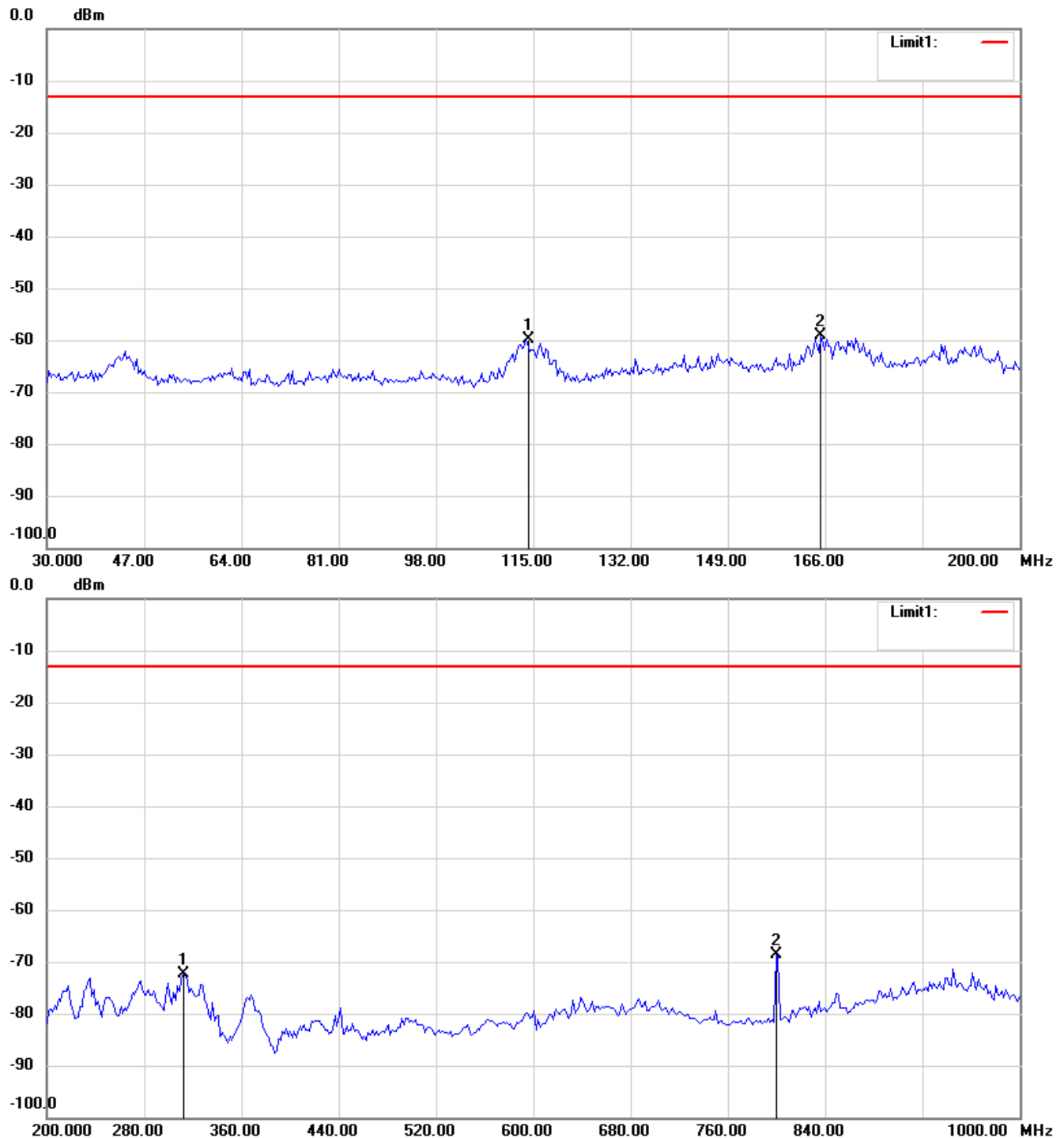
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

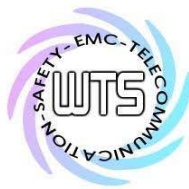
1900 band\_CH 810\_132 V

Antenna Polarization H



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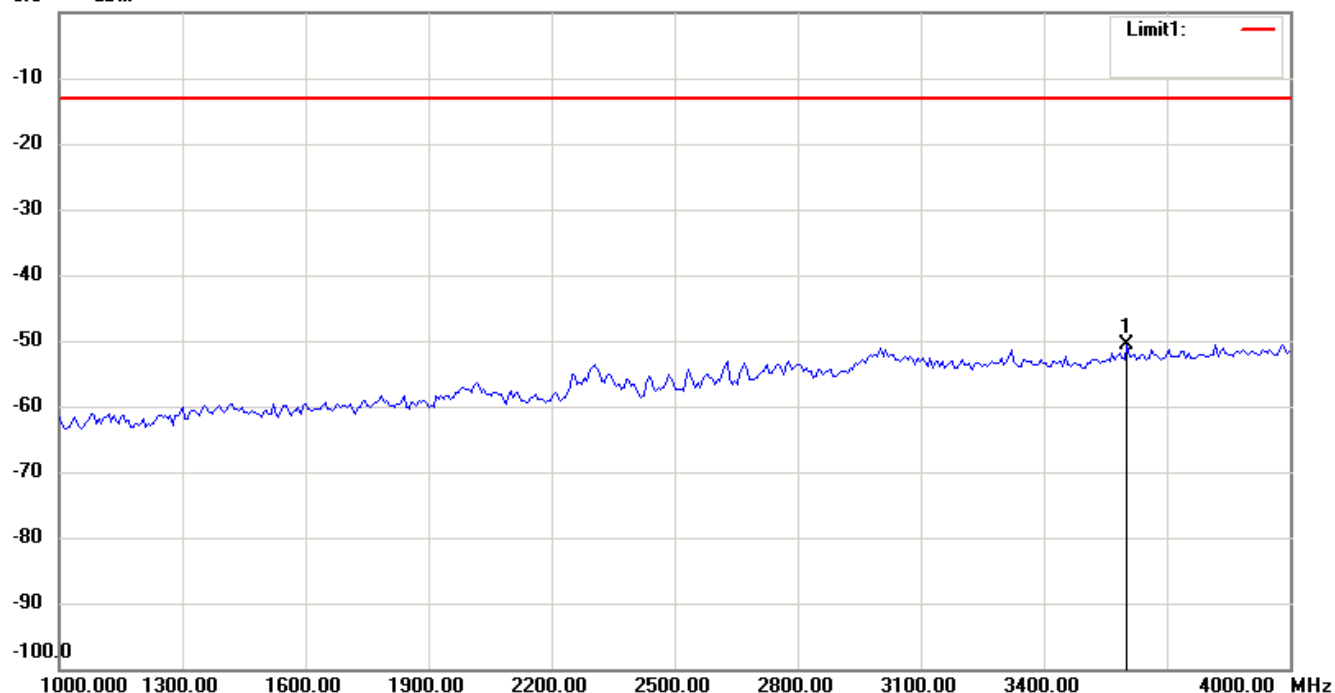


# Worldwide Testing Services(Taiwan) Co., Ltd.

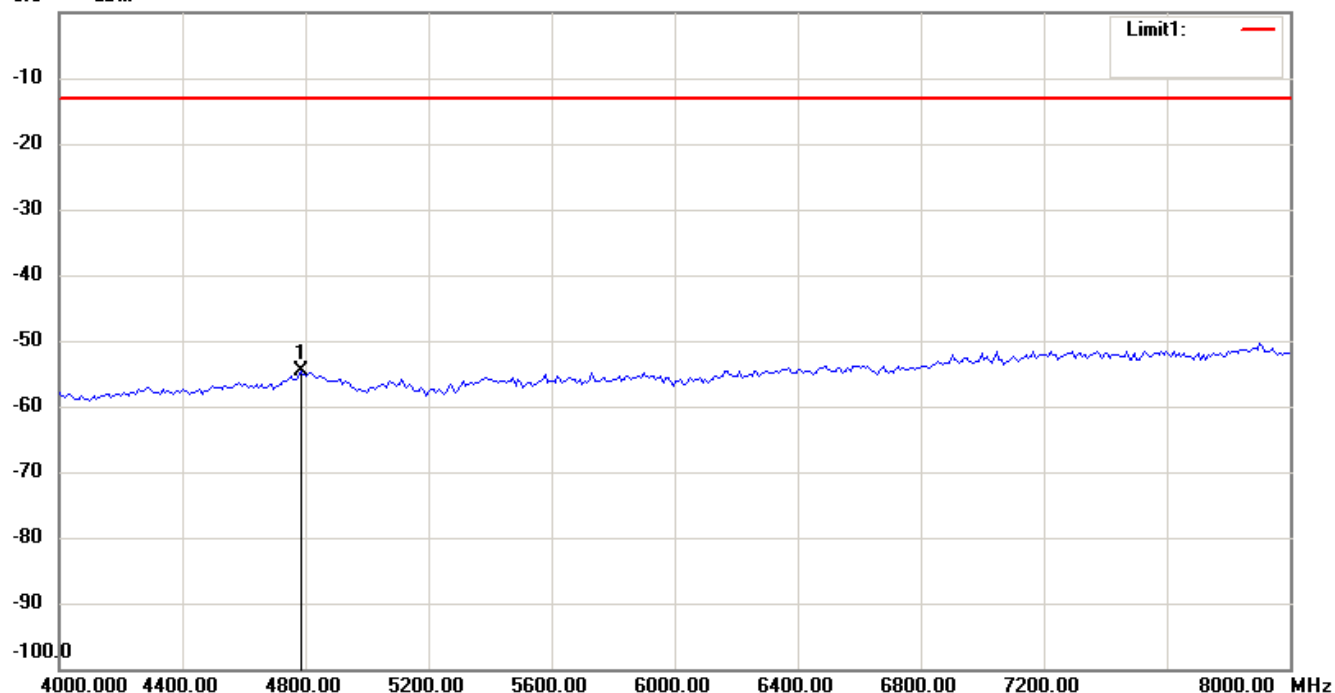
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

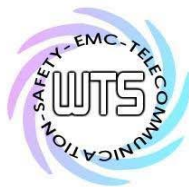


0.0 dBm



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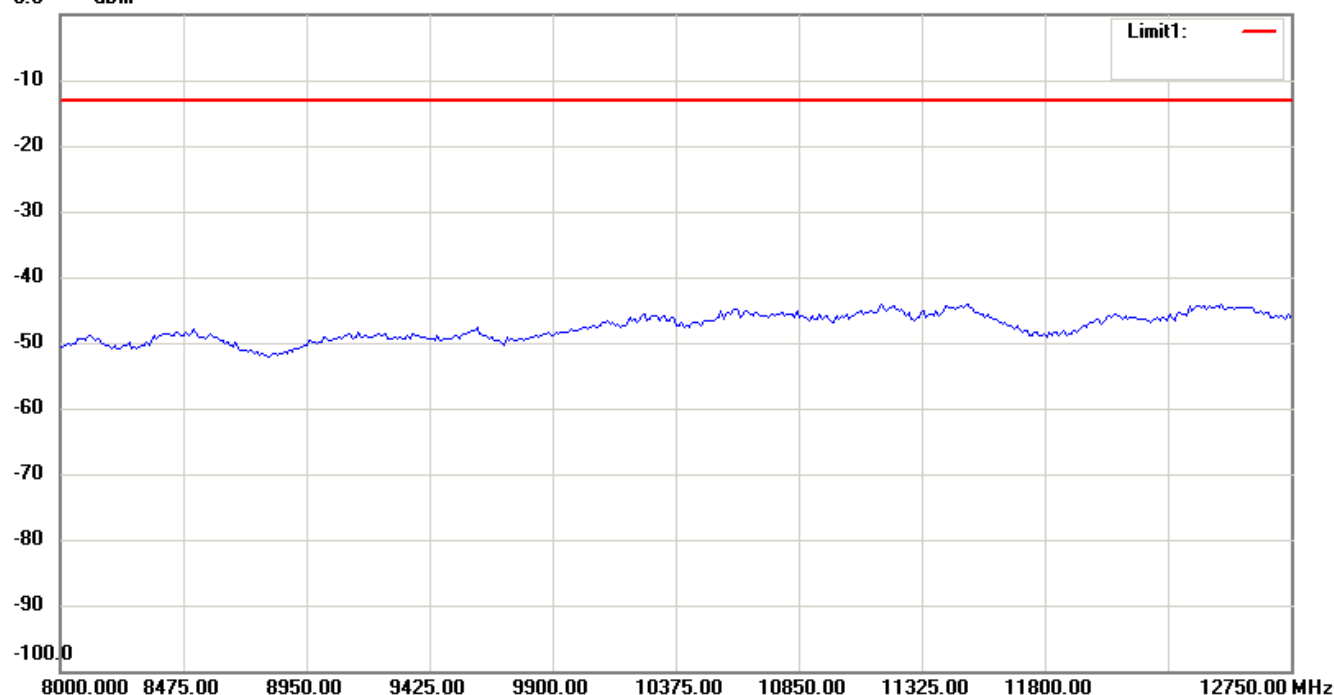


# Worldwide Testing Services(Taiwan) Co., Ltd.

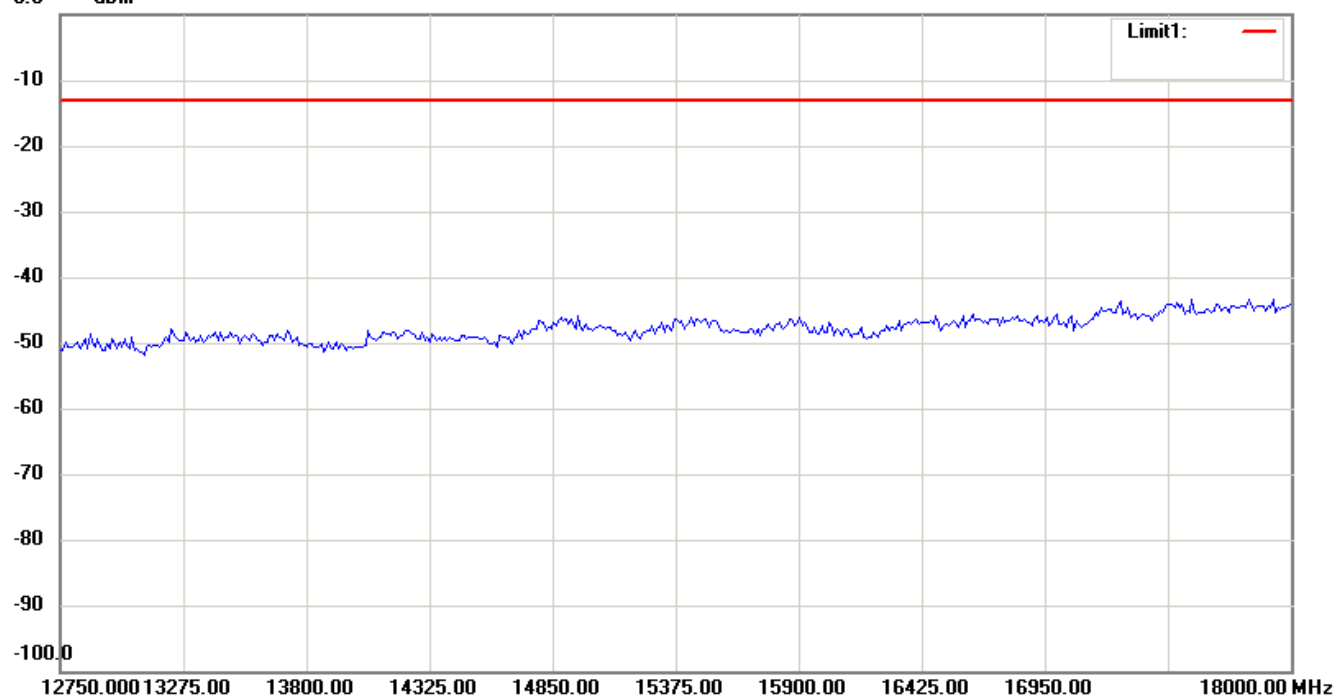
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

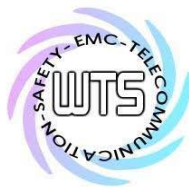


0.0 dBm



## Note:

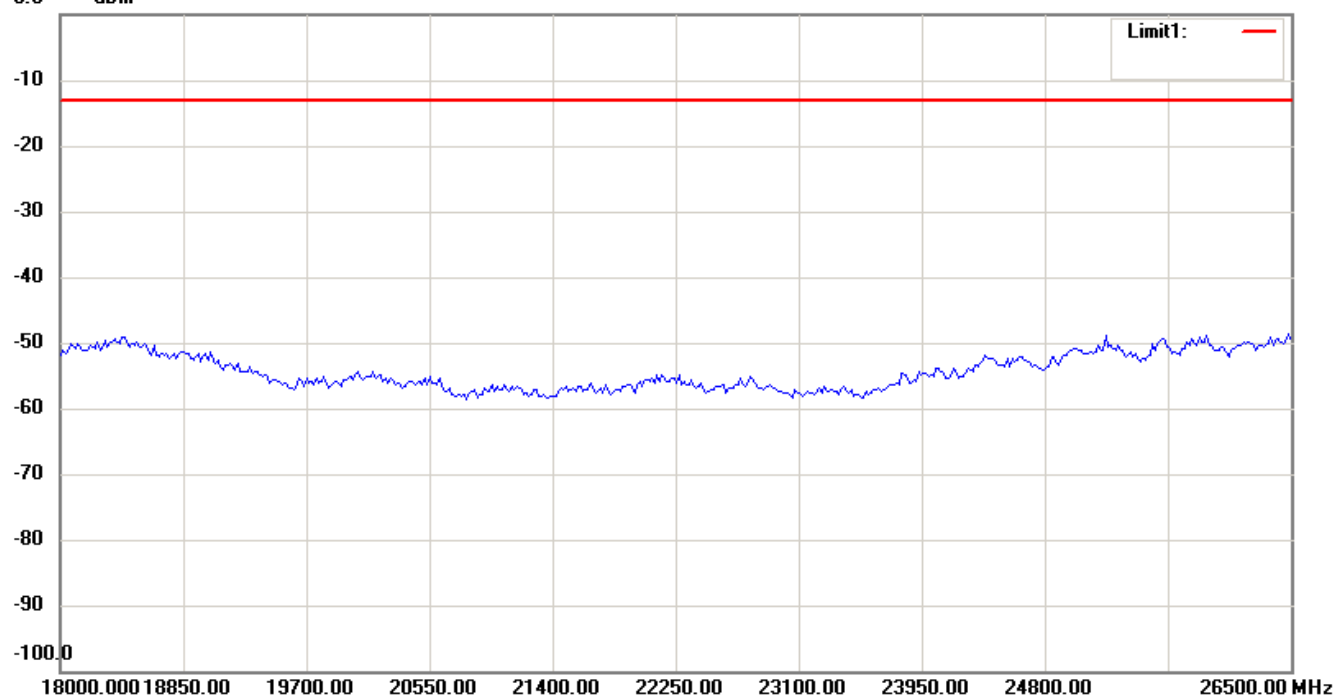
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Report Number: W6M21309-13566-P-2224

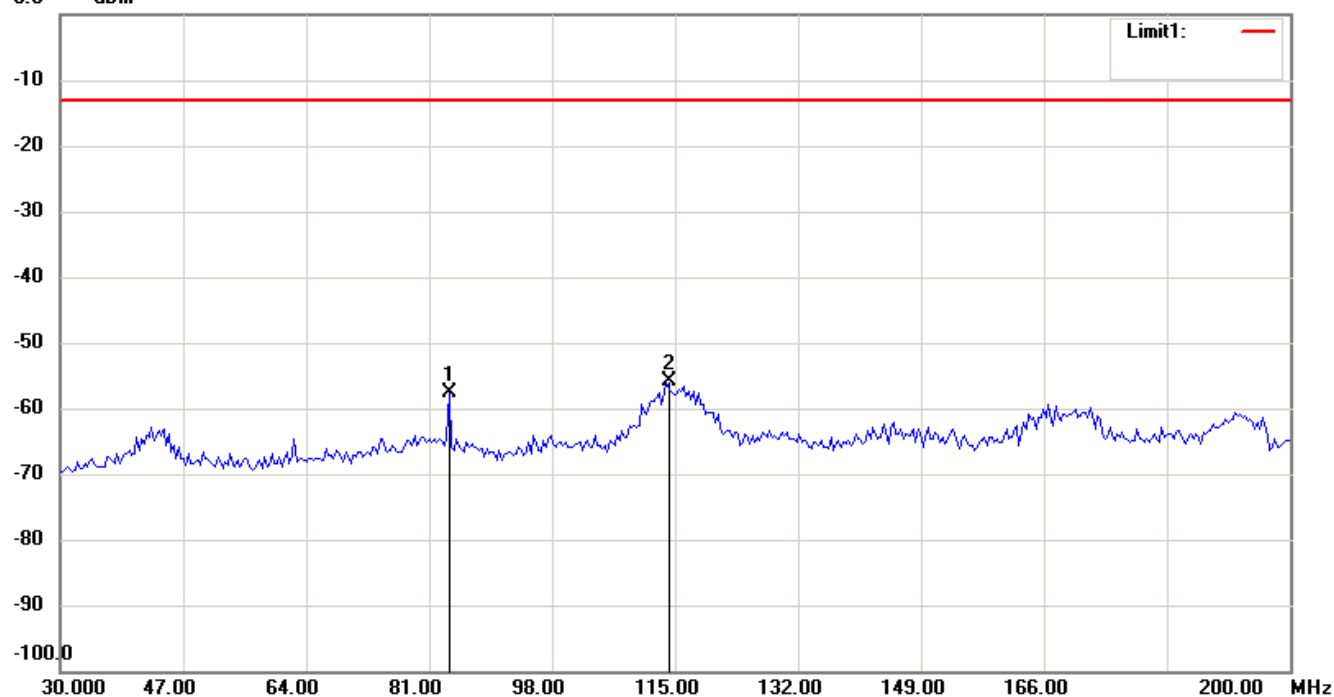
FCC ID: 2ABGRMVX400

0.0 dBm



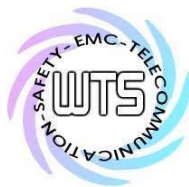
Antenna Polarization V

0.0 dBm



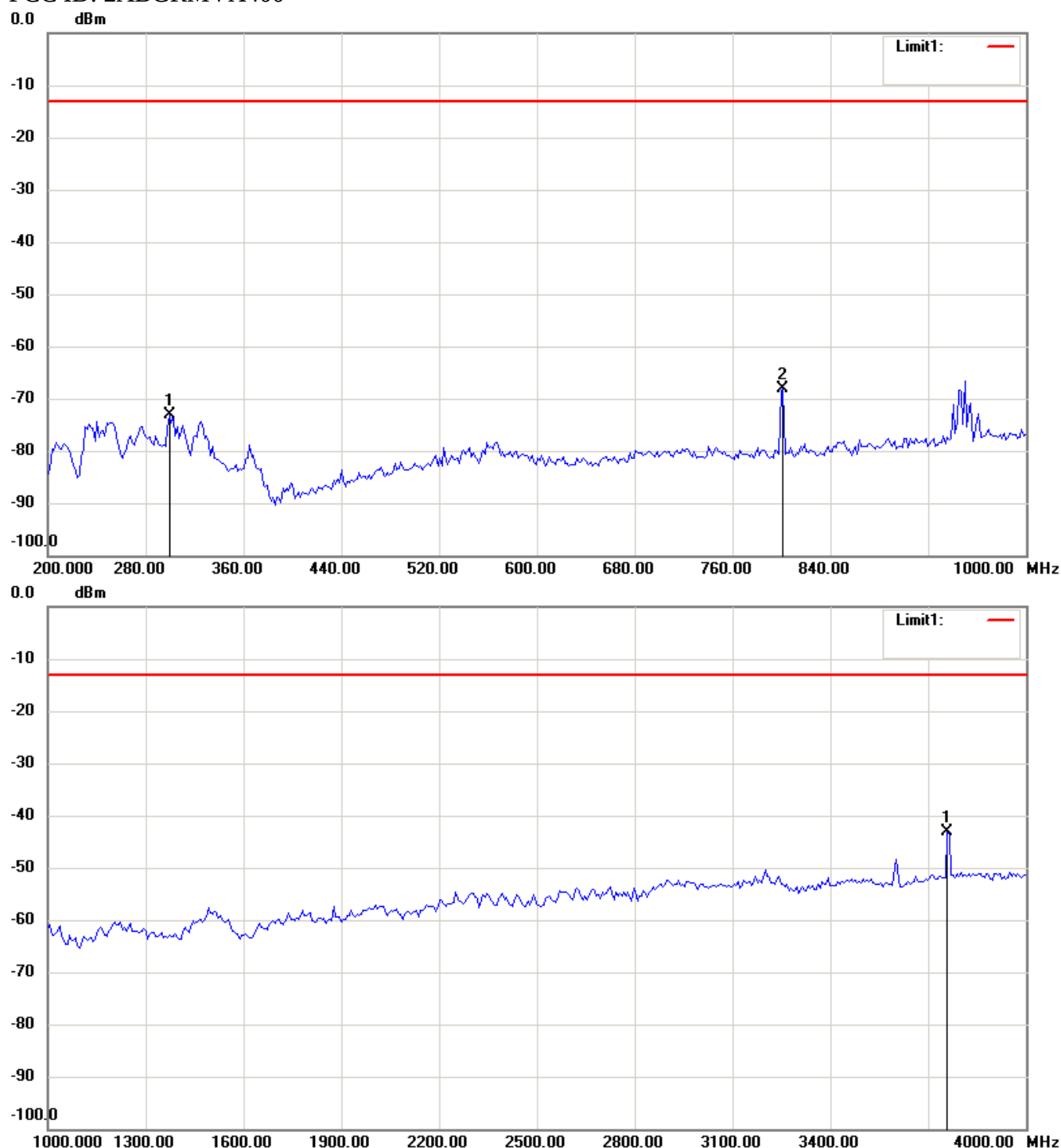
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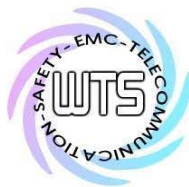
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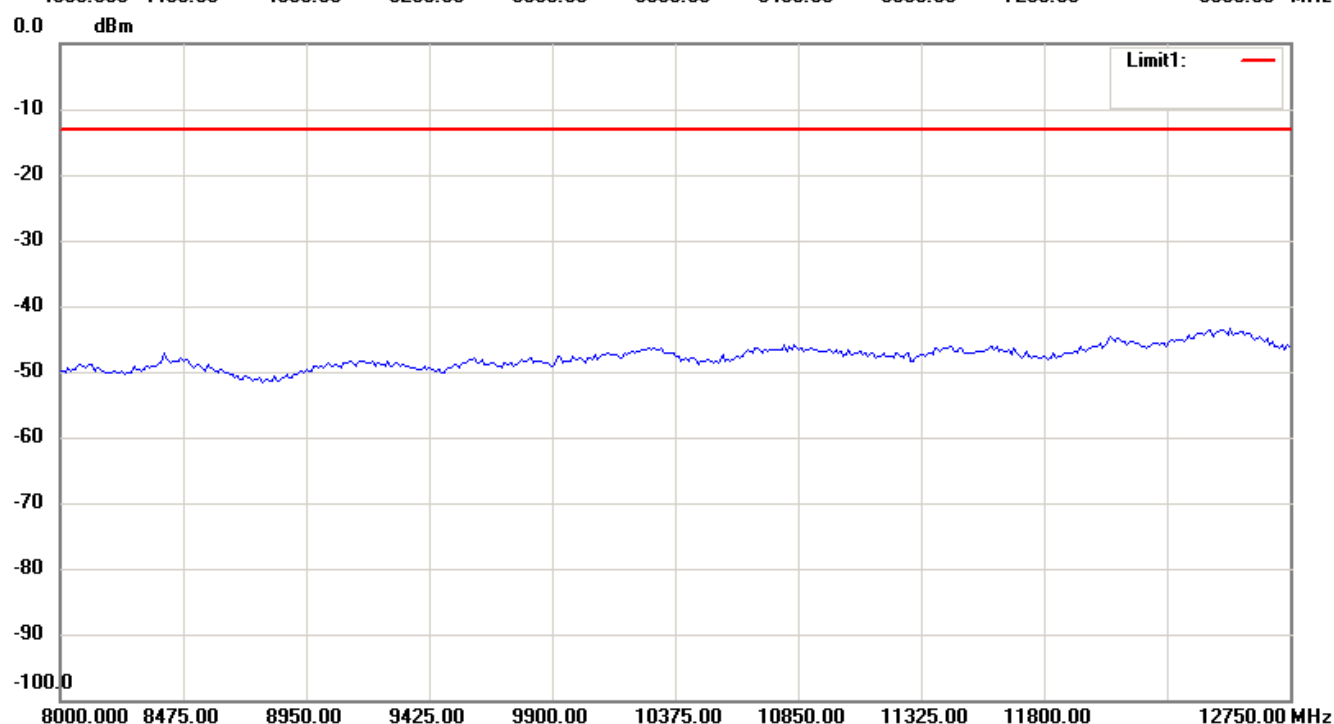
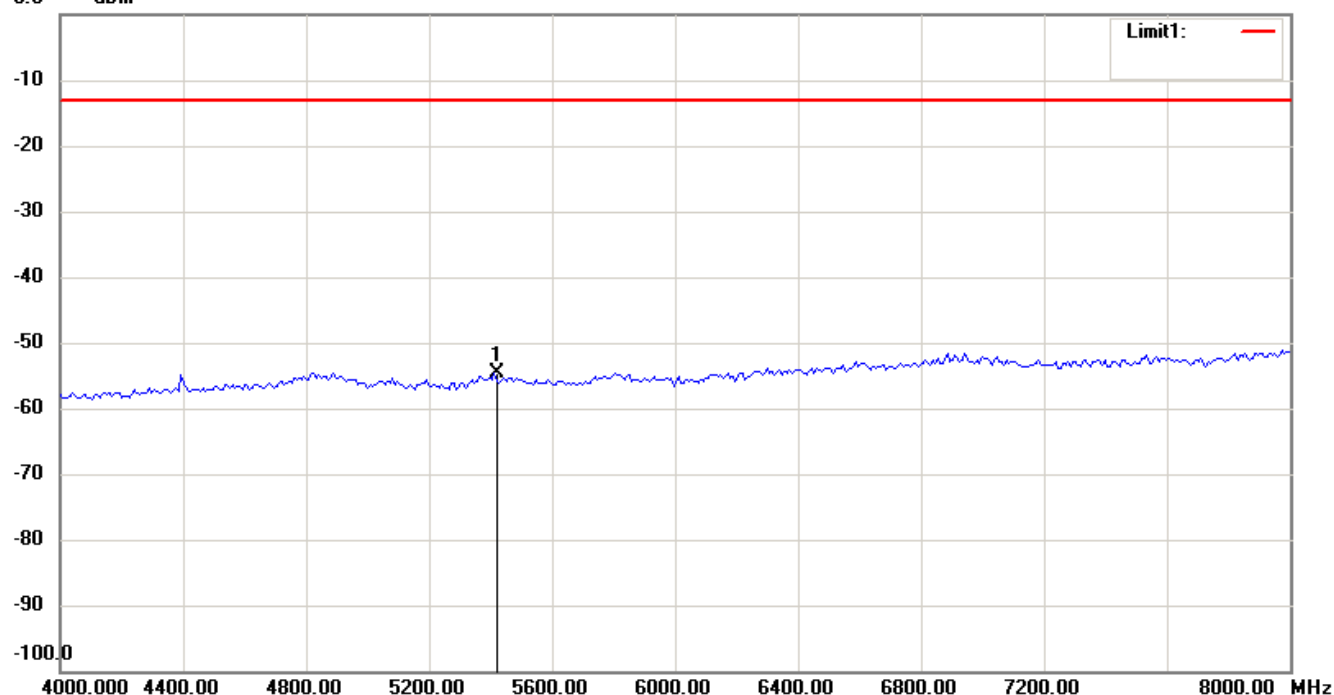


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

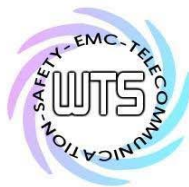
FCC ID: 2ABGRMVX400

0.0 dBm



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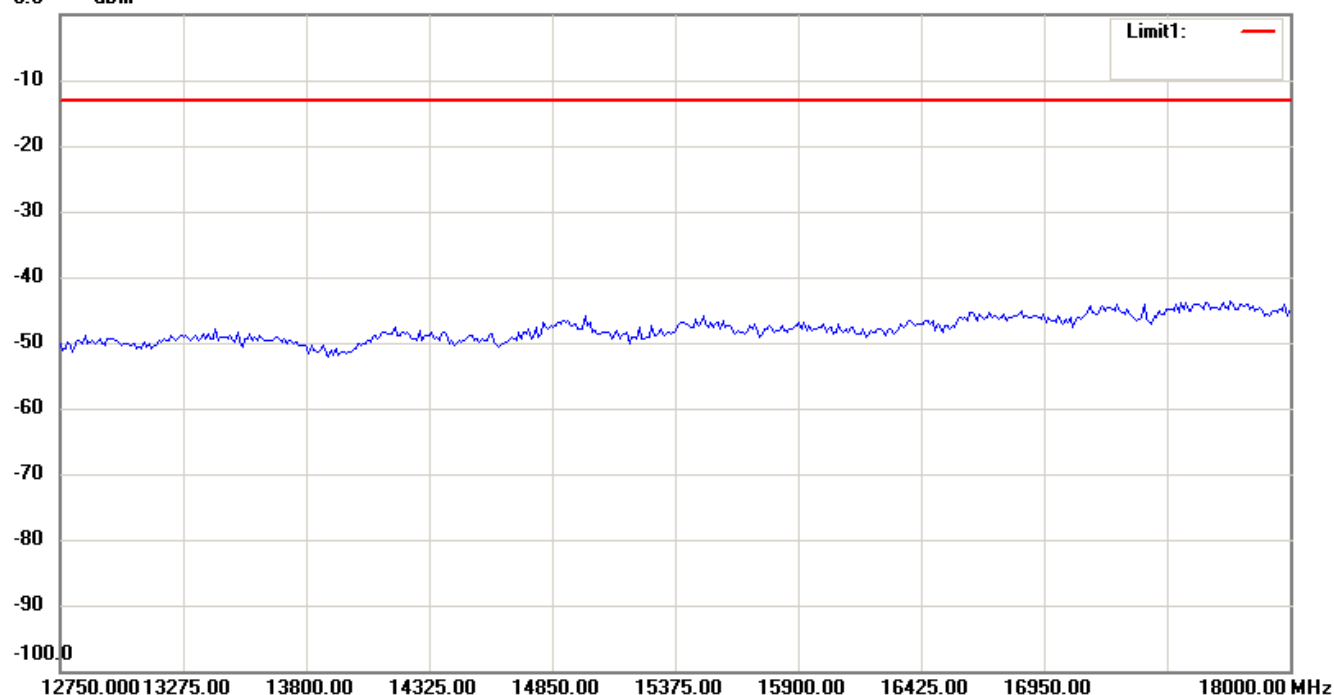


# Worldwide Testing Services(Taiwan) Co., Ltd.

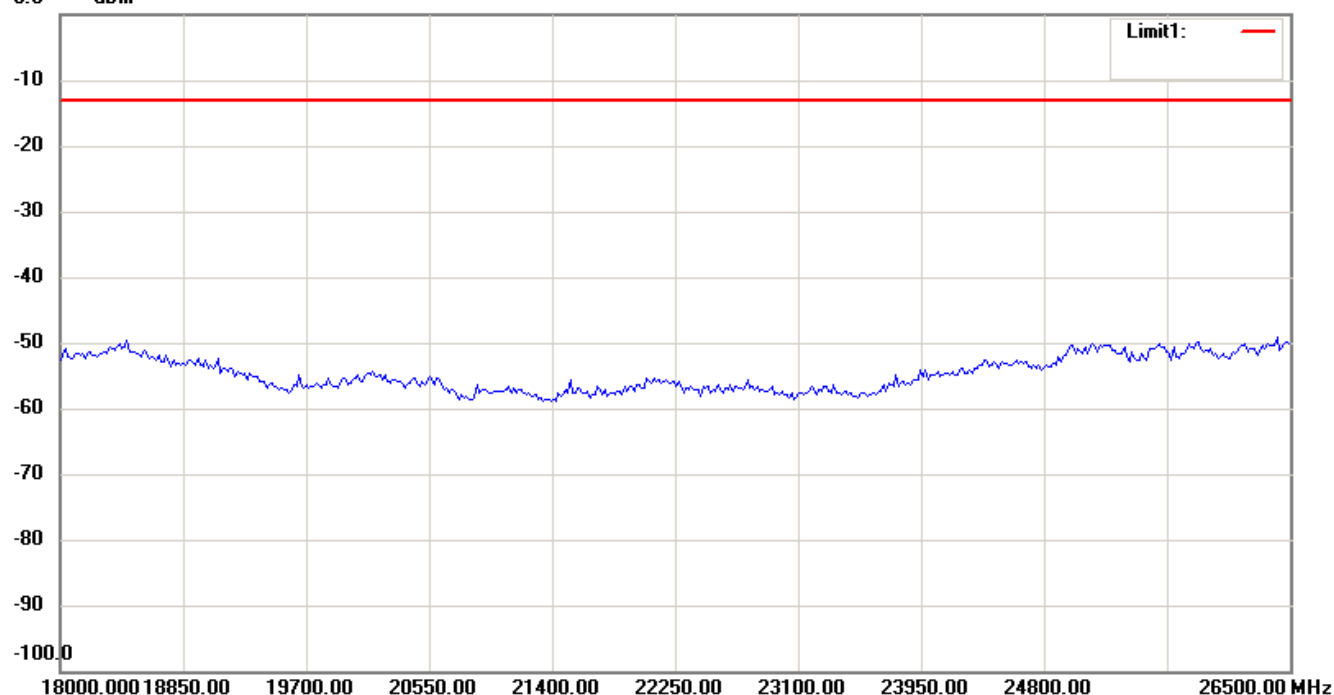
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

0.0 dBm

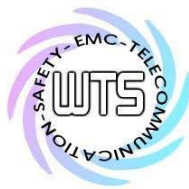


0.0 dBm



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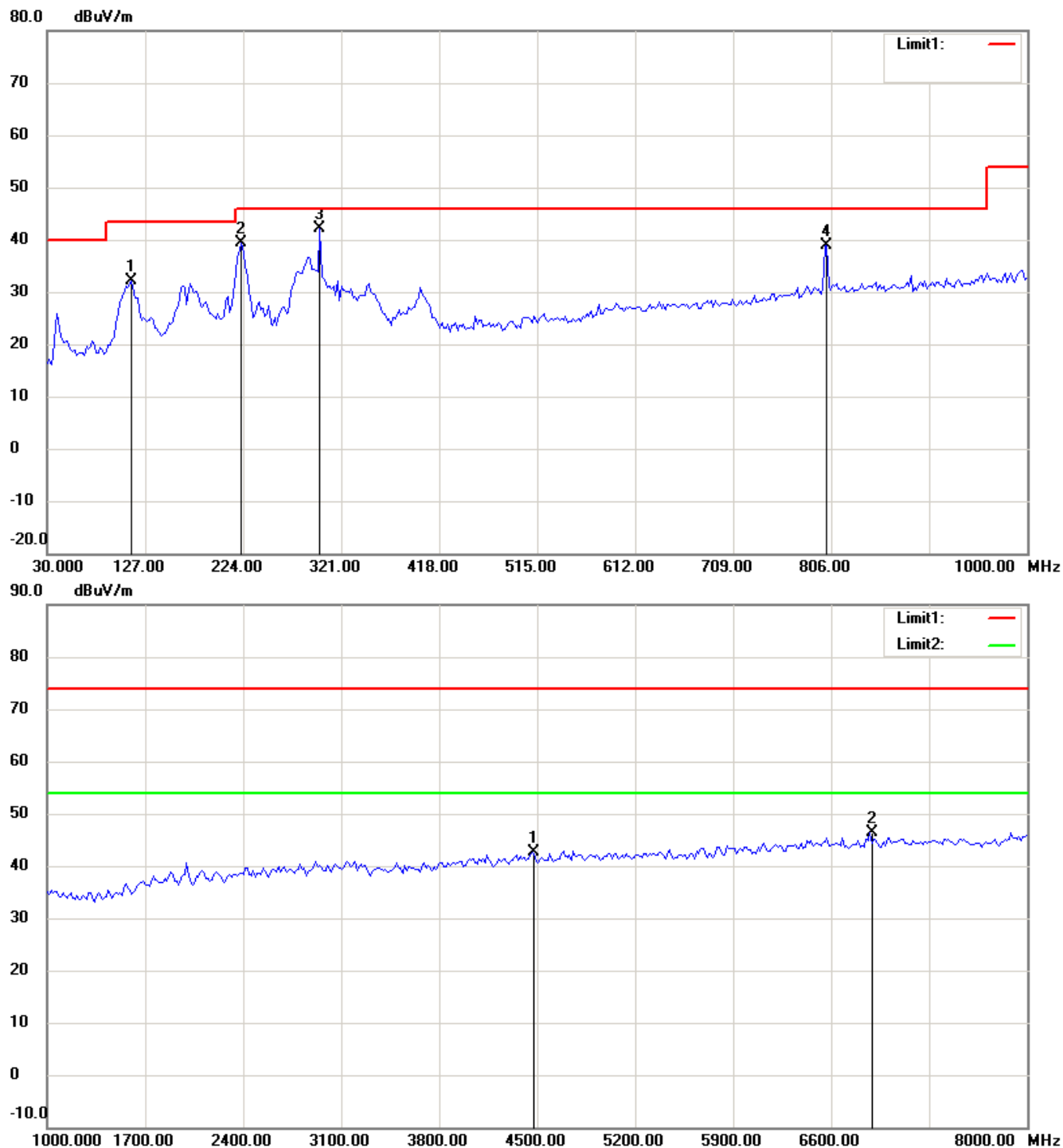
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_Idle Mode\_108V

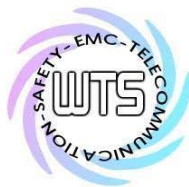
Antenna Polarization H



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.

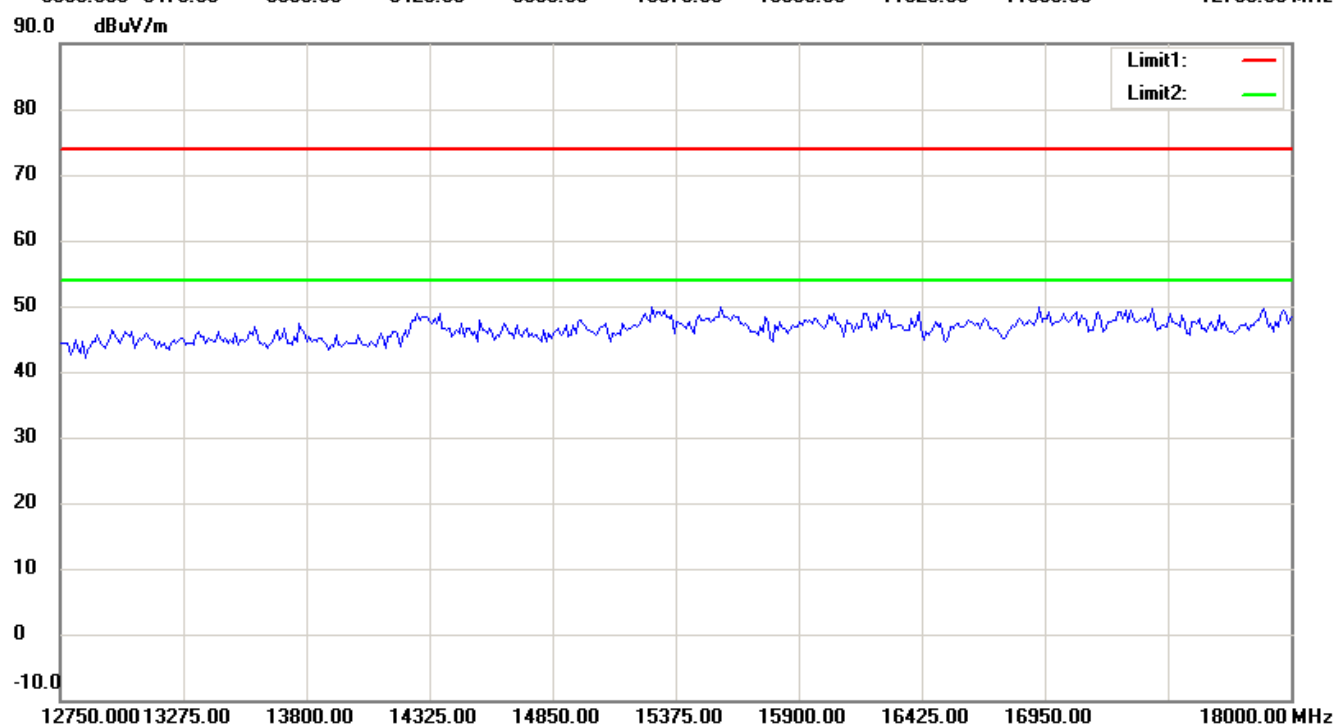
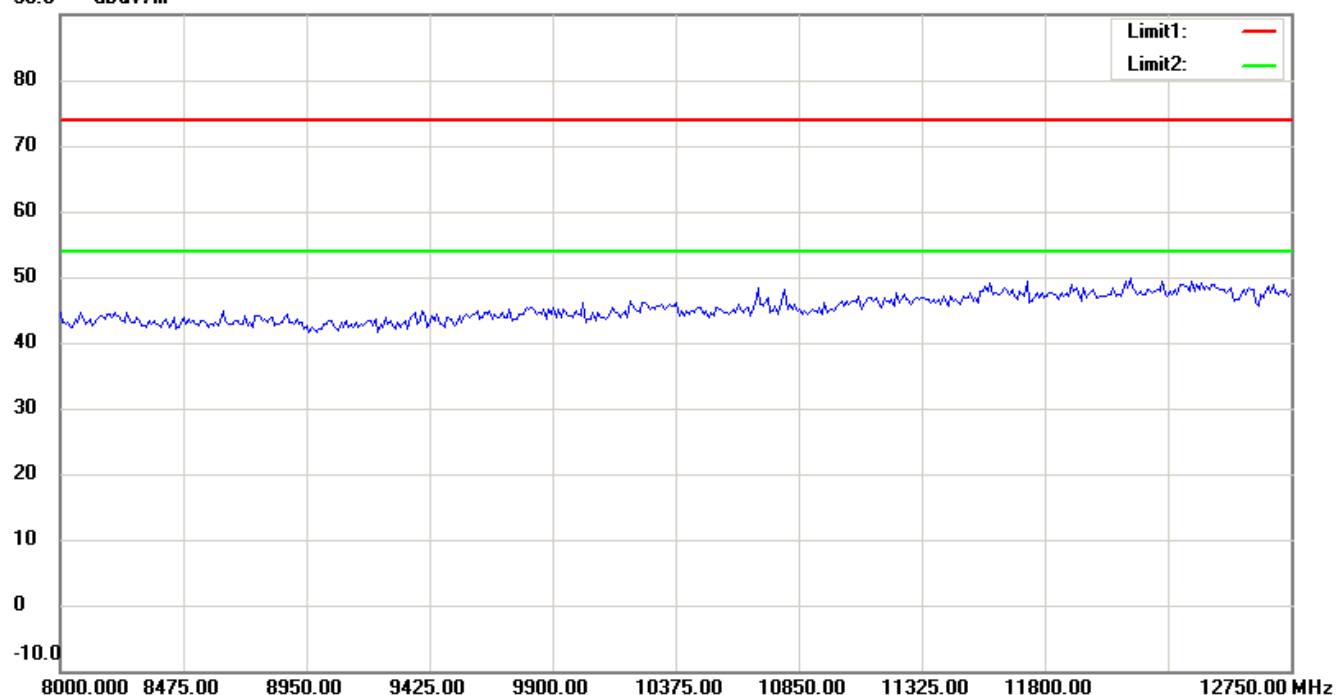


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

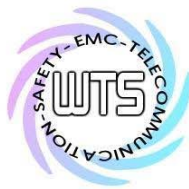
90.0 dBuV/m



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

Note:

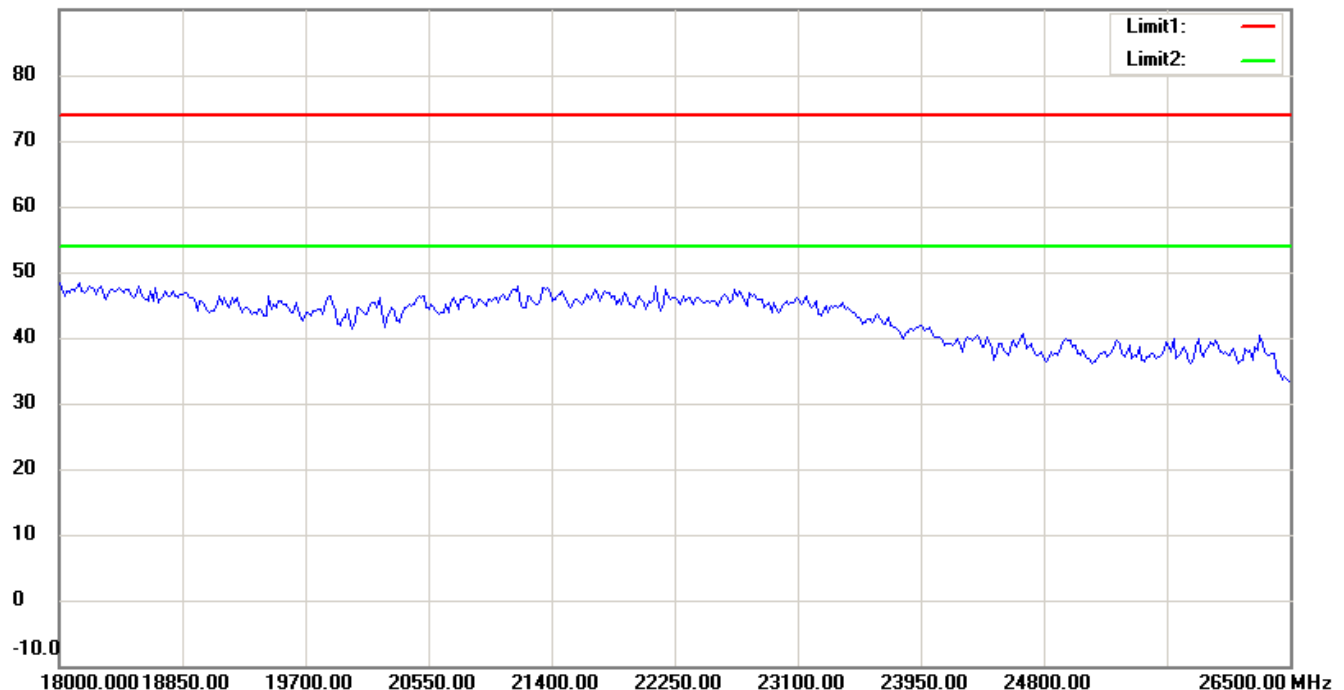
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Report Number: W6M21309-13566-P-2224

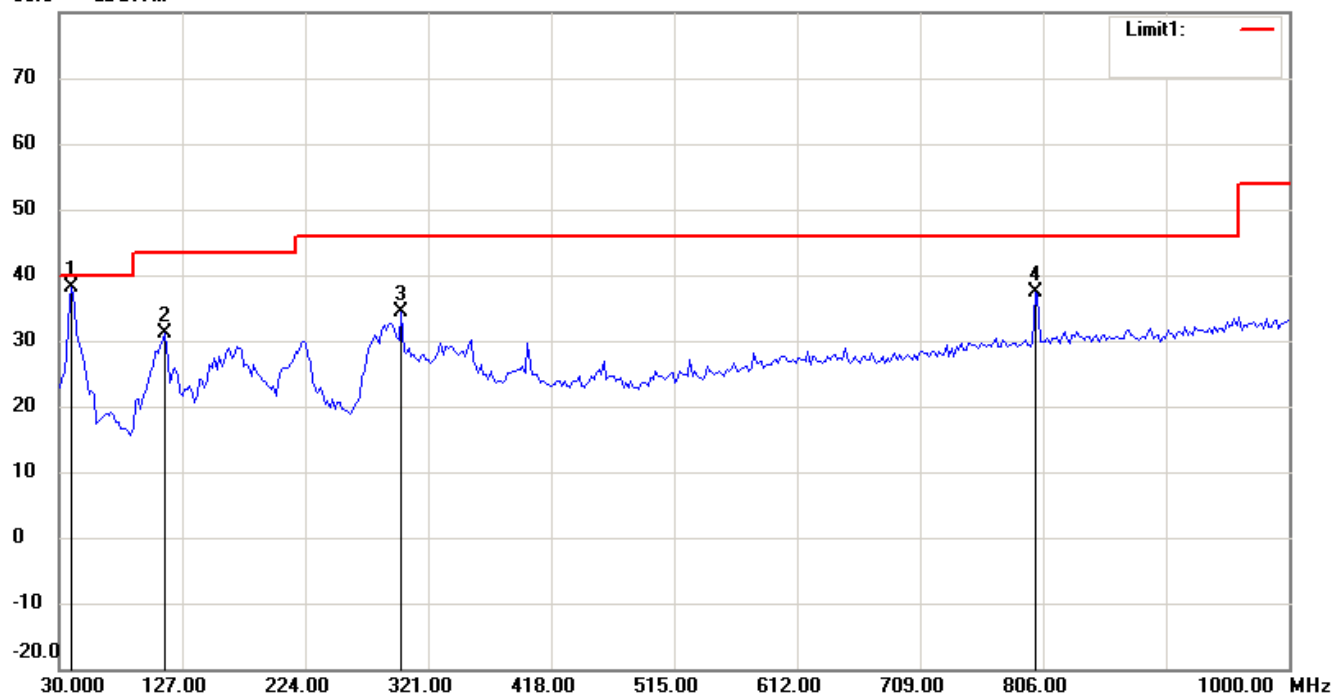
FCC ID: 2ABGRMVX400

90.0 dBuV/m



Antenna Polarization V

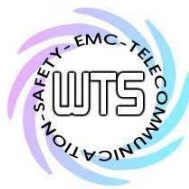
80.0 dBuV/m



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

Note:

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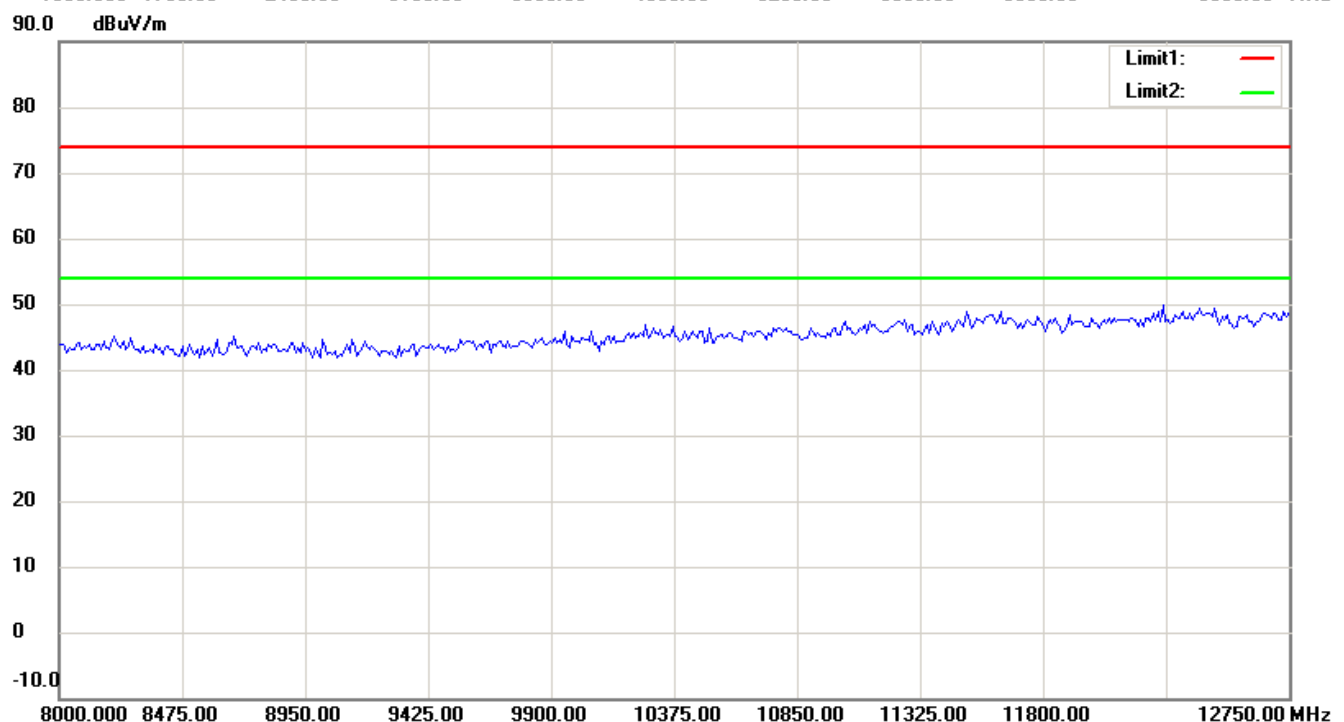
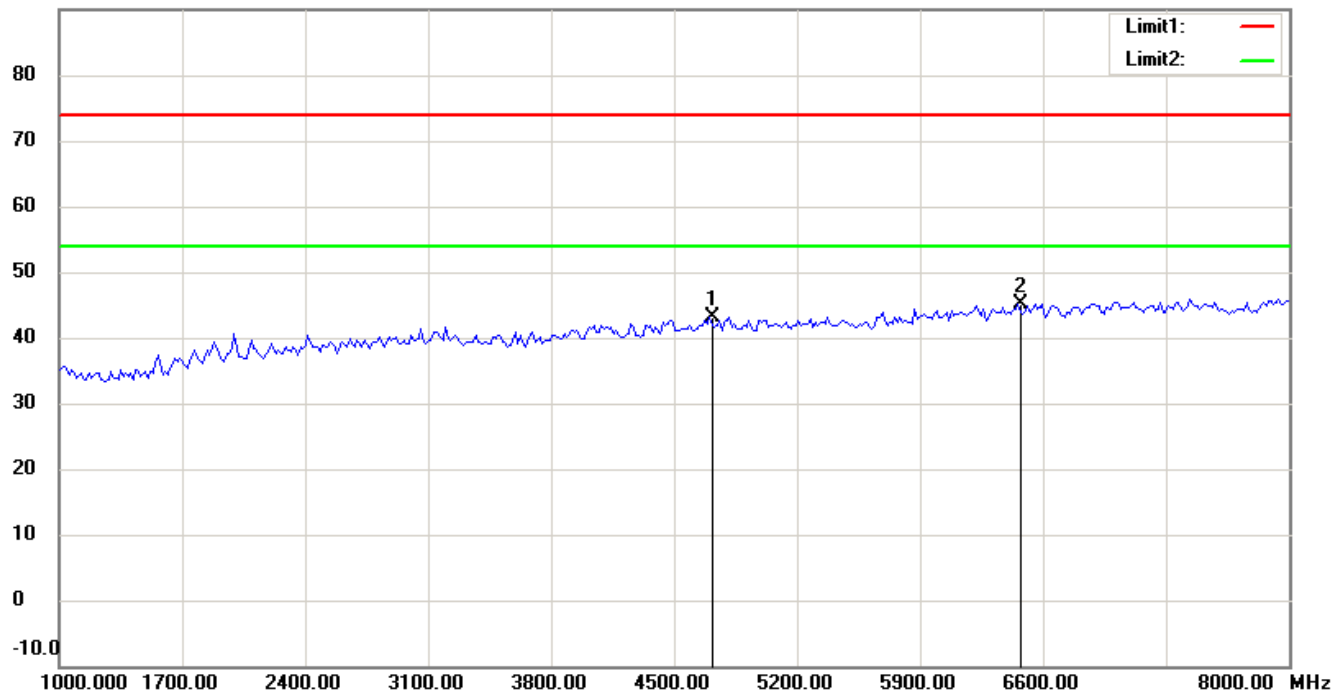


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

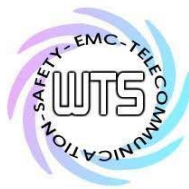
90.0 dBuV/m



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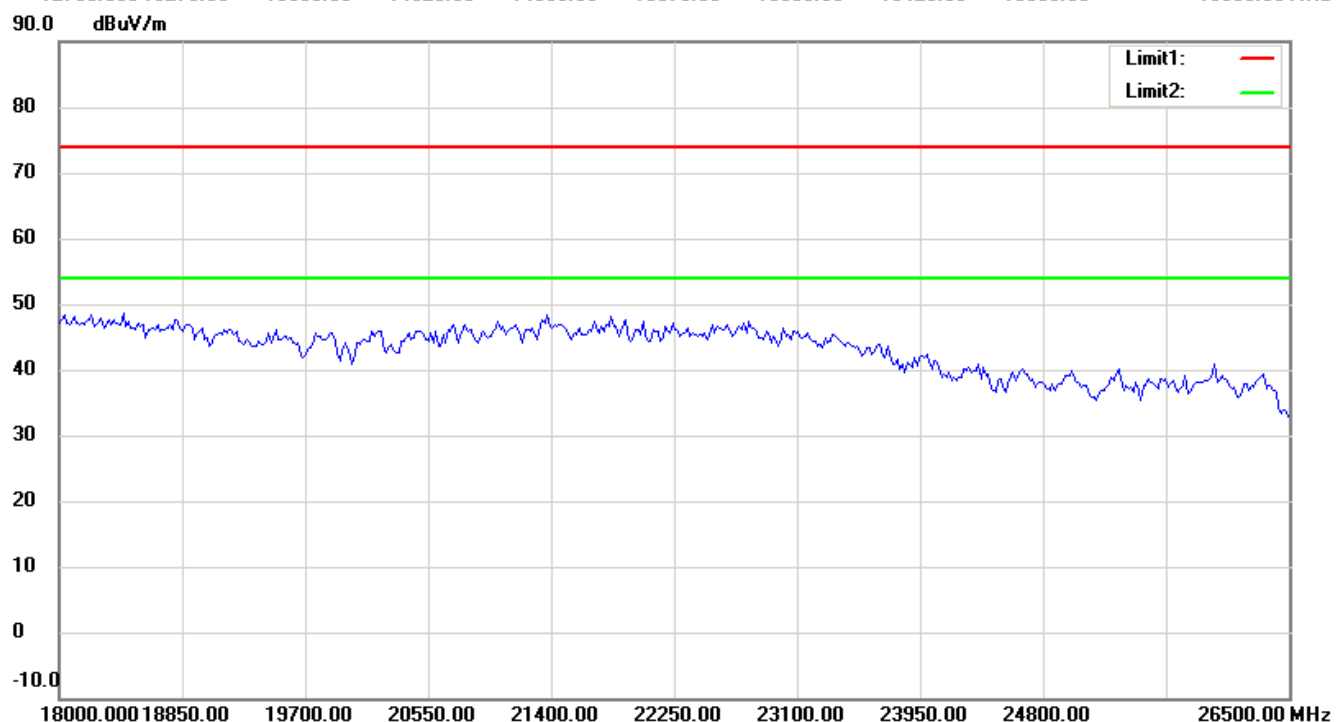
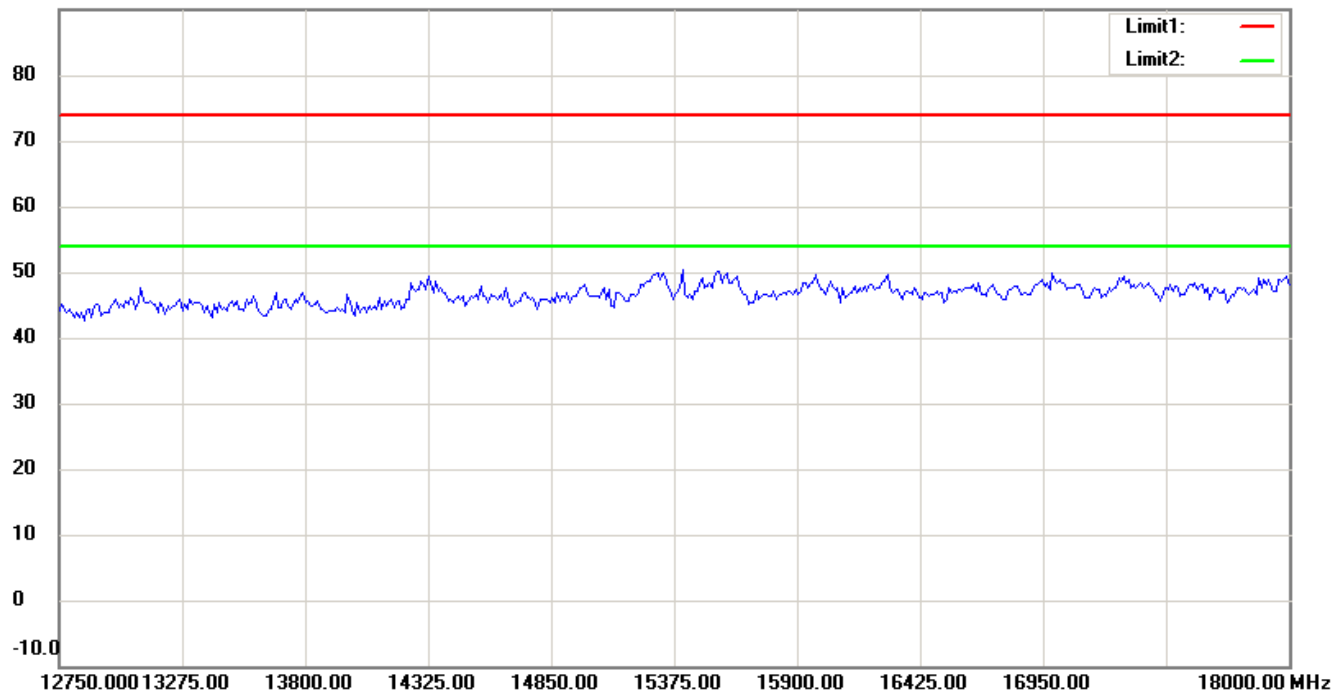


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

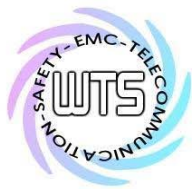
90.0 dBuV/m



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

Note:

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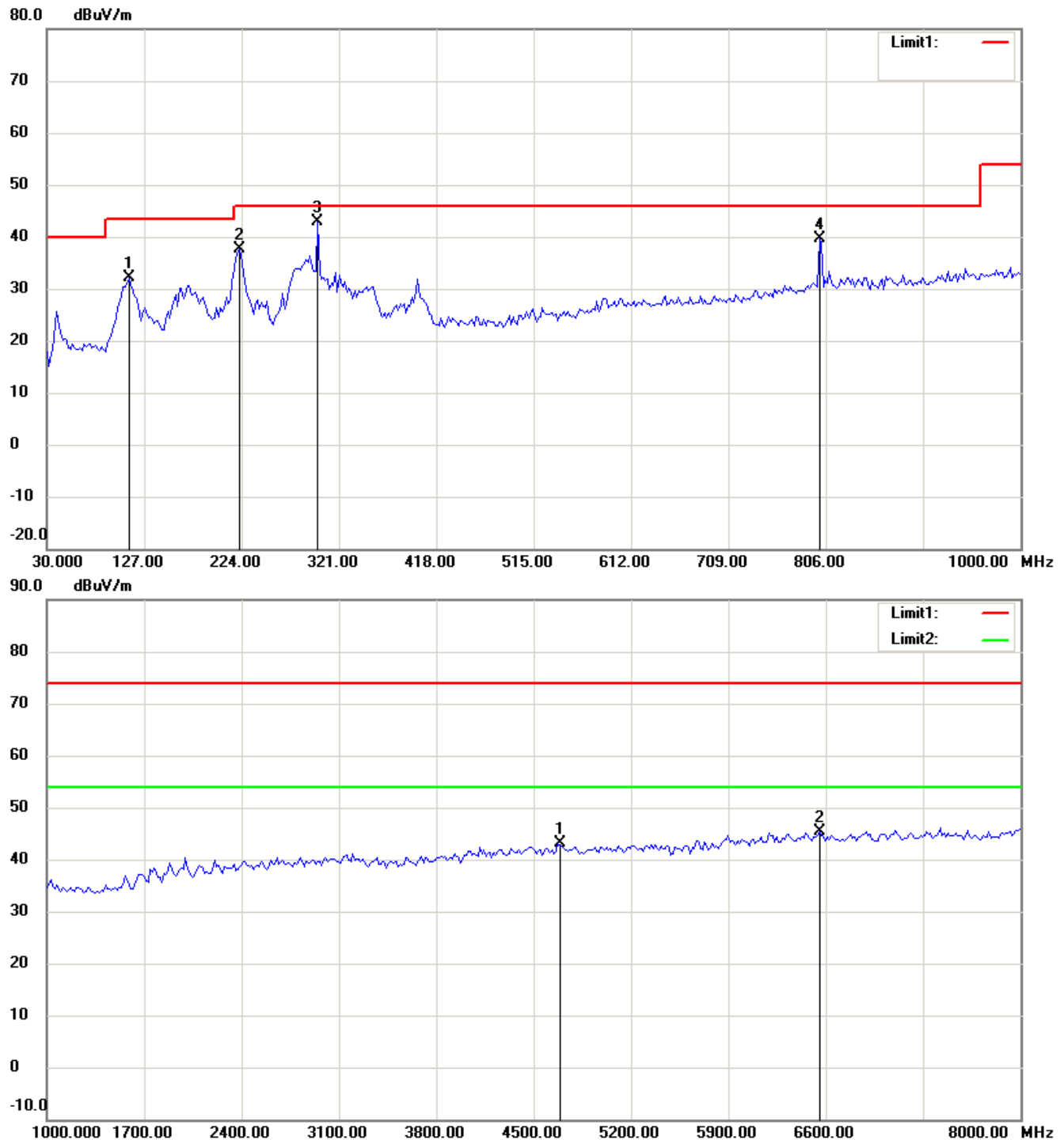
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 band\_Idle Mode\_132 V

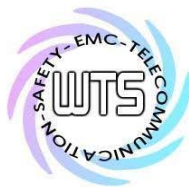
Antenna Polarization H



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

Note:

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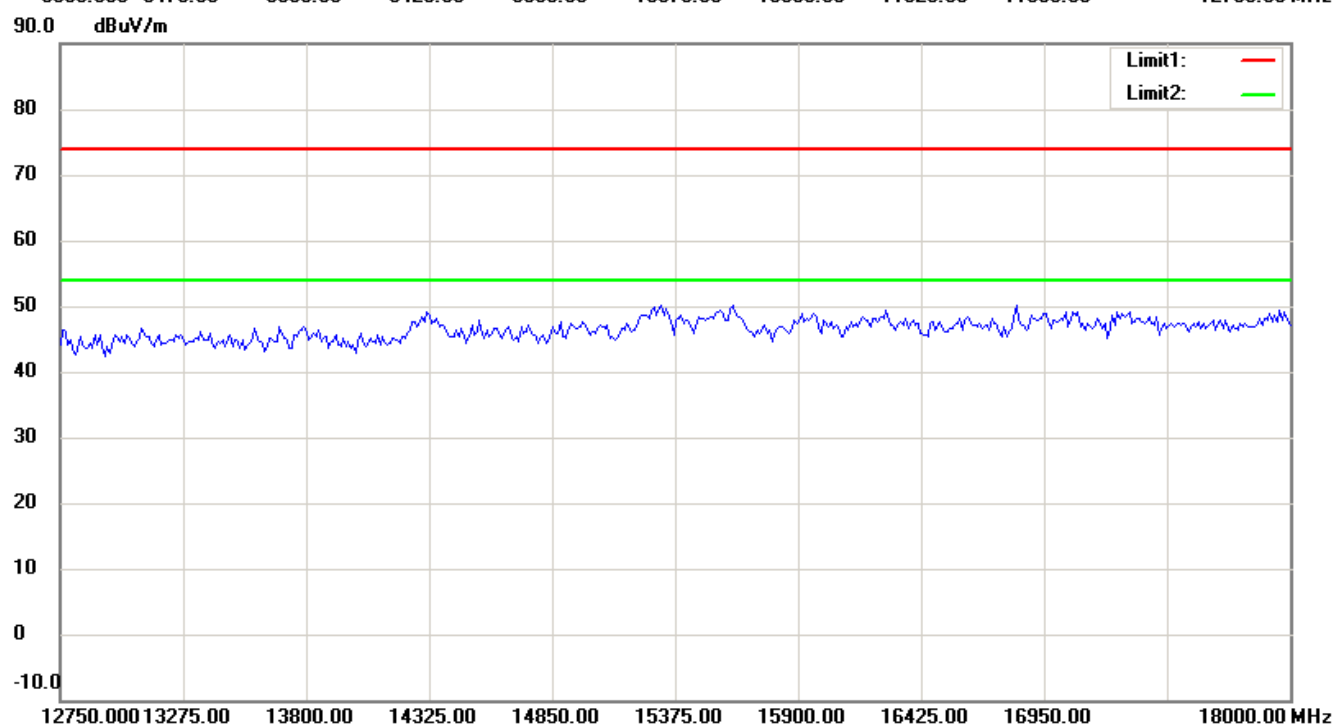
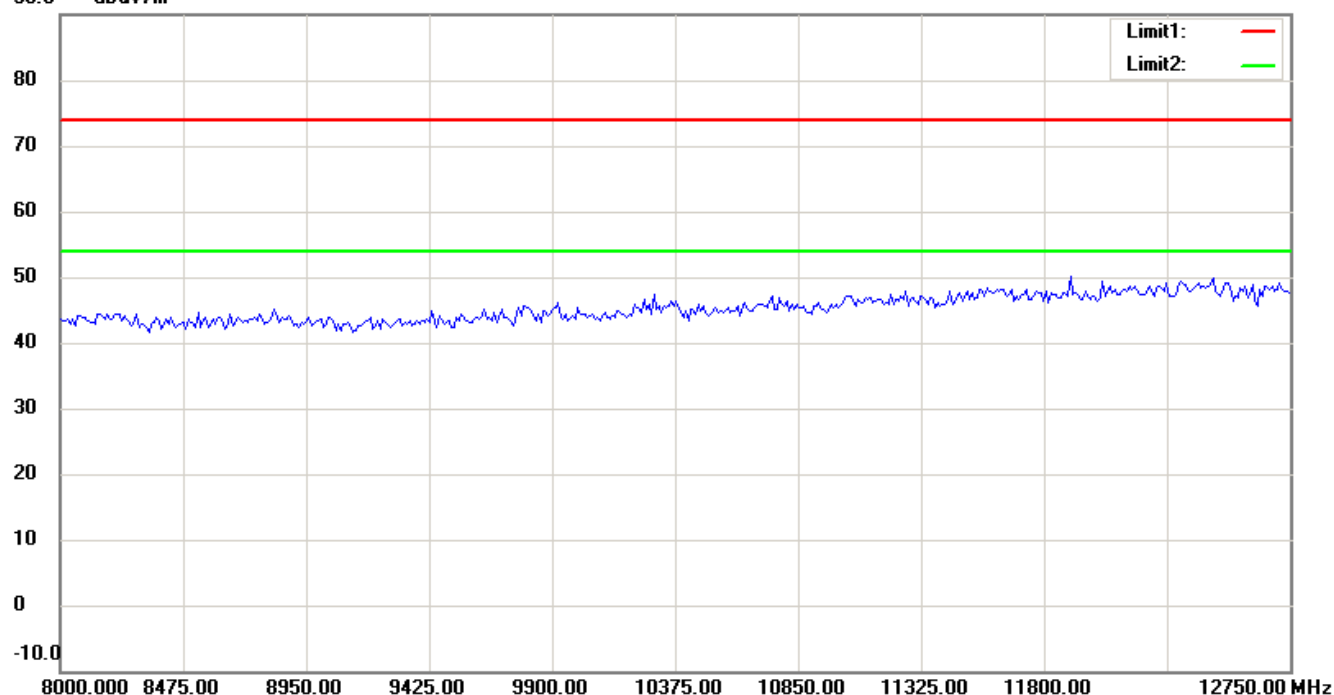


# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

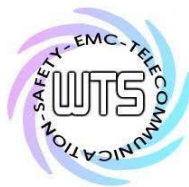
90.0 dBuV/m



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

Note:

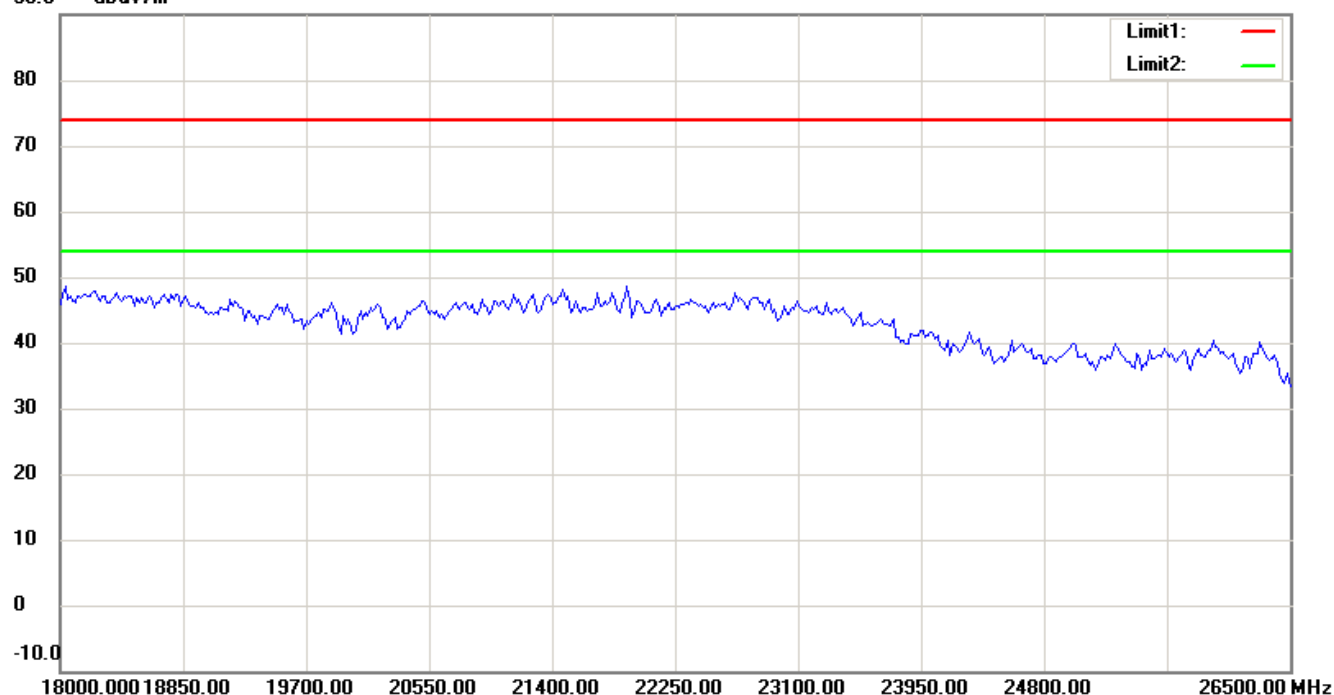
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Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

90.0 dBuV/m



Antenna Polarization V

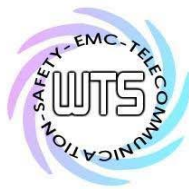
80.0 dBuV/m



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

Note:

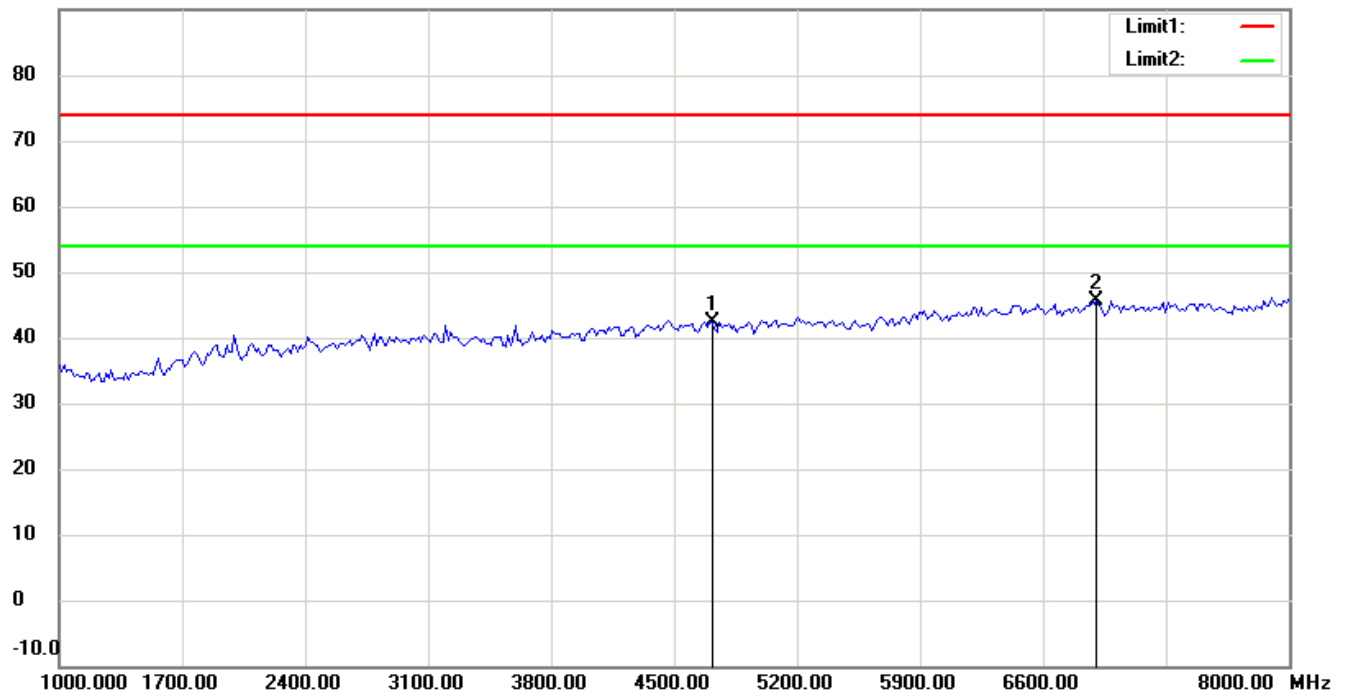
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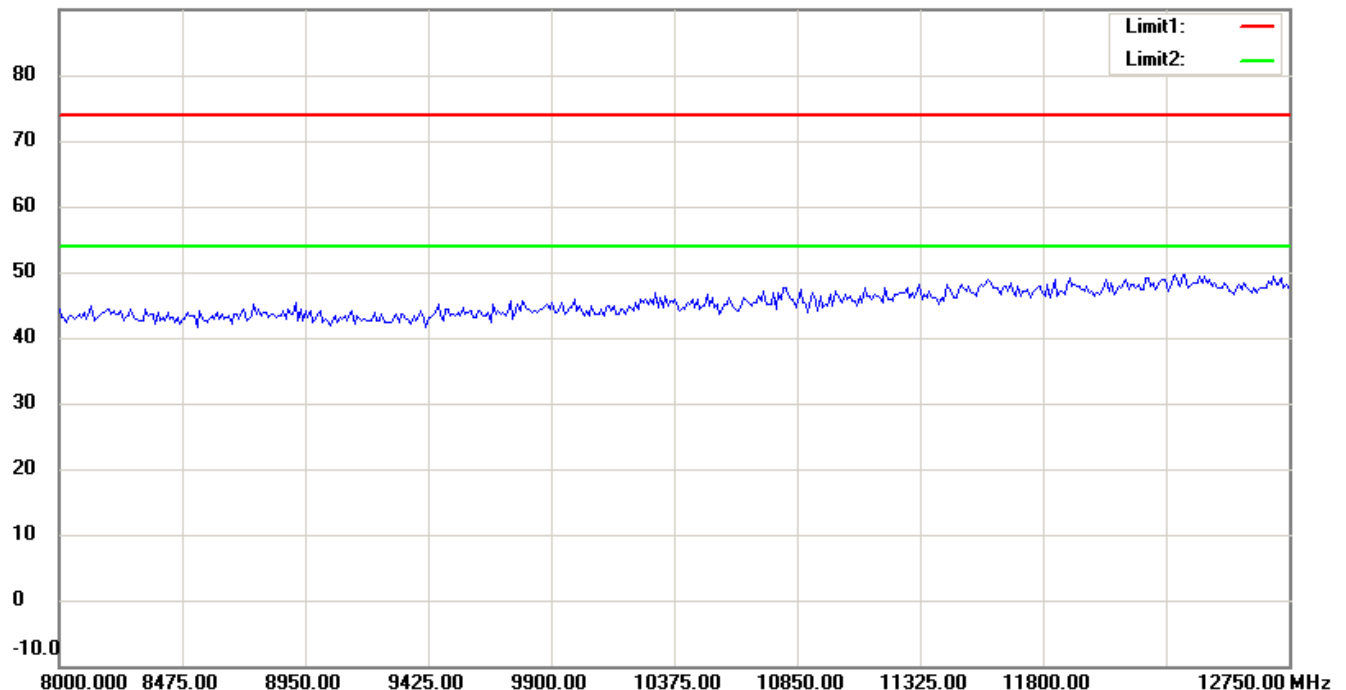
Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

90.0 dBuV/m



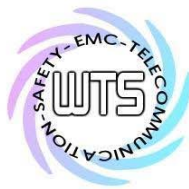
90.0 dBuV/m



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

Note:

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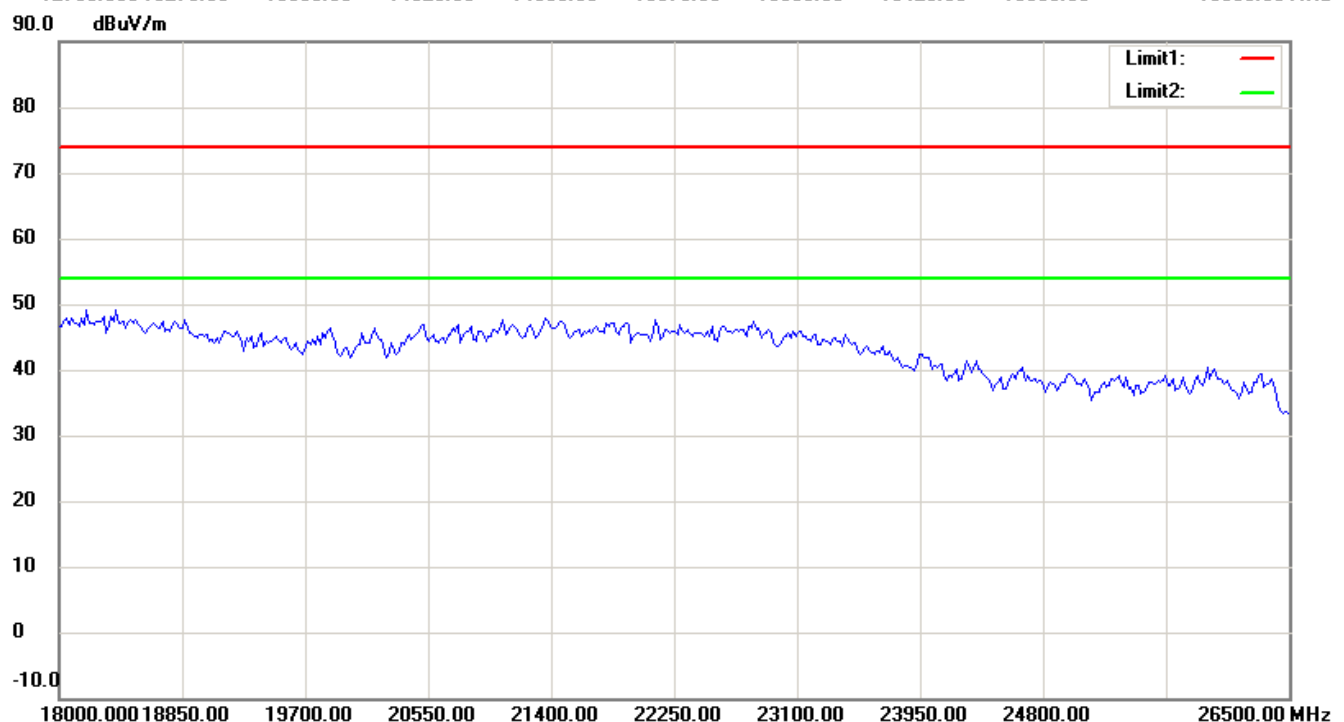
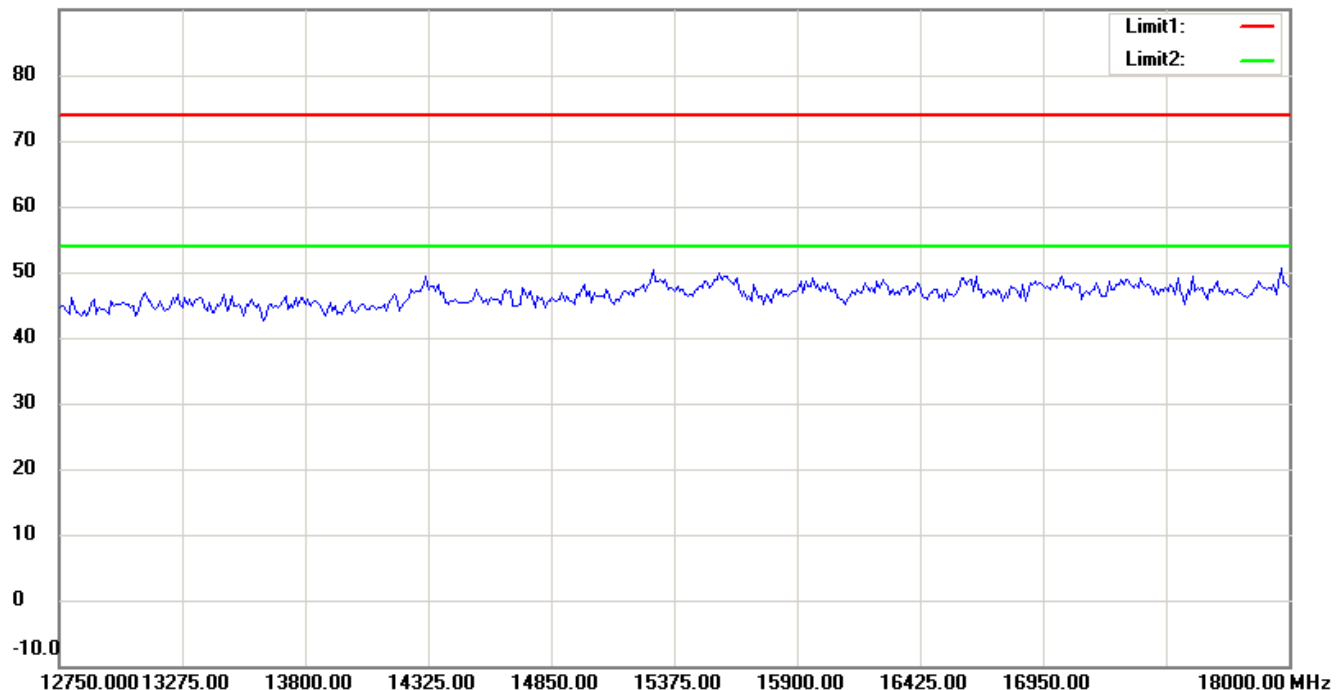


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Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

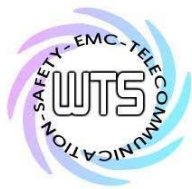
90.0 dBuV/m



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

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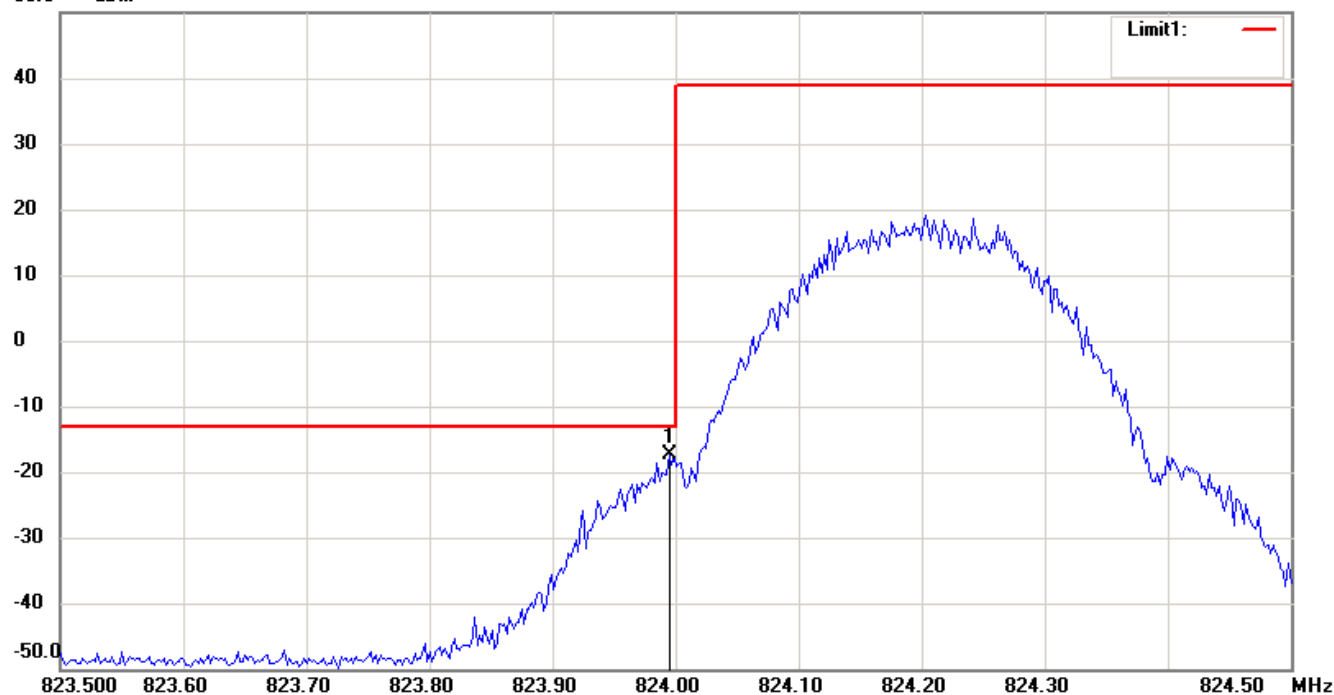
FCC ID: 2ABGRMVX400

Band edge emissions

850 Band – channel 128

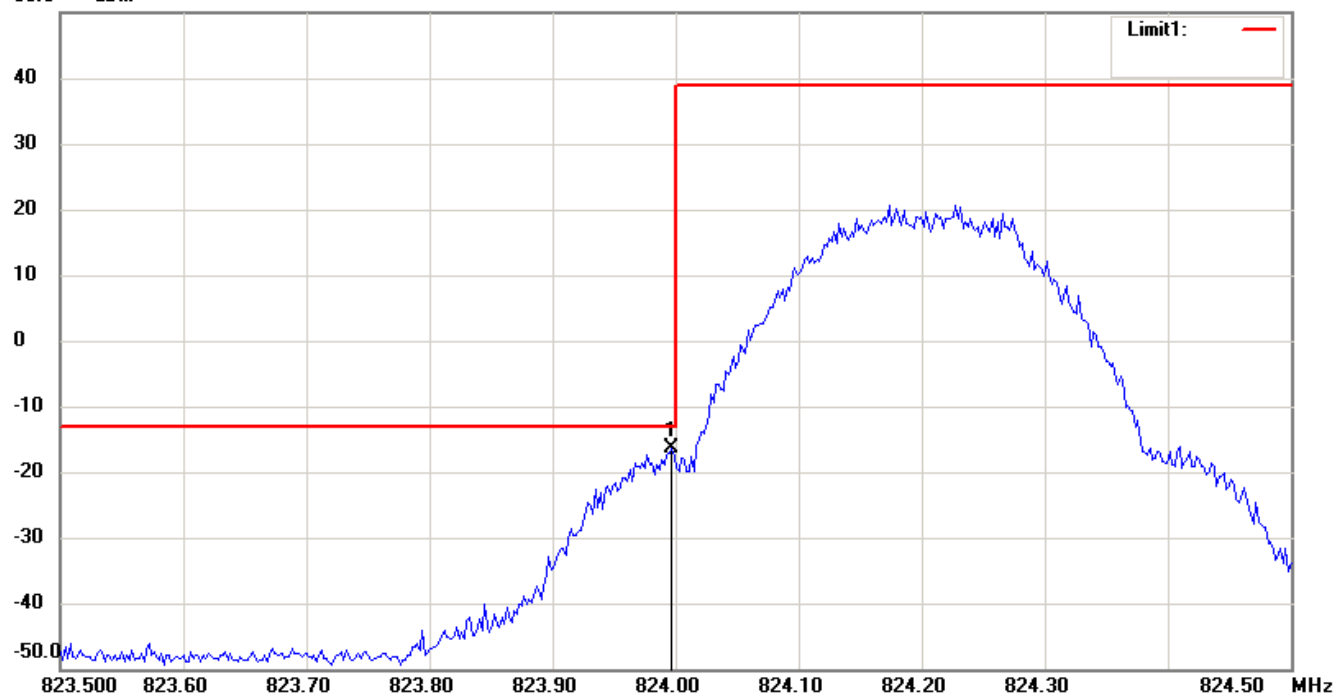
Antenna Polarization H

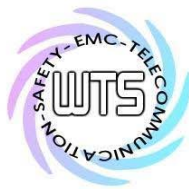
50.0 dBm



Antenna Polarization V

50.0 dBm





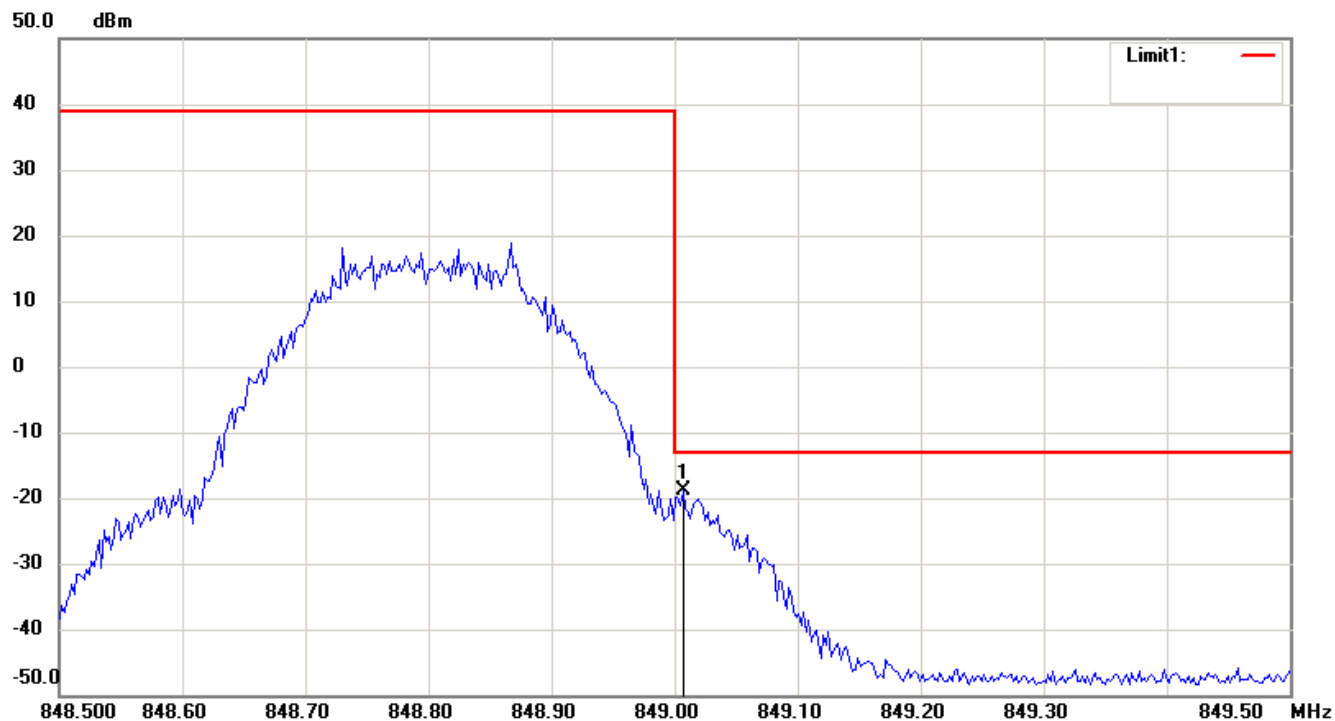
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

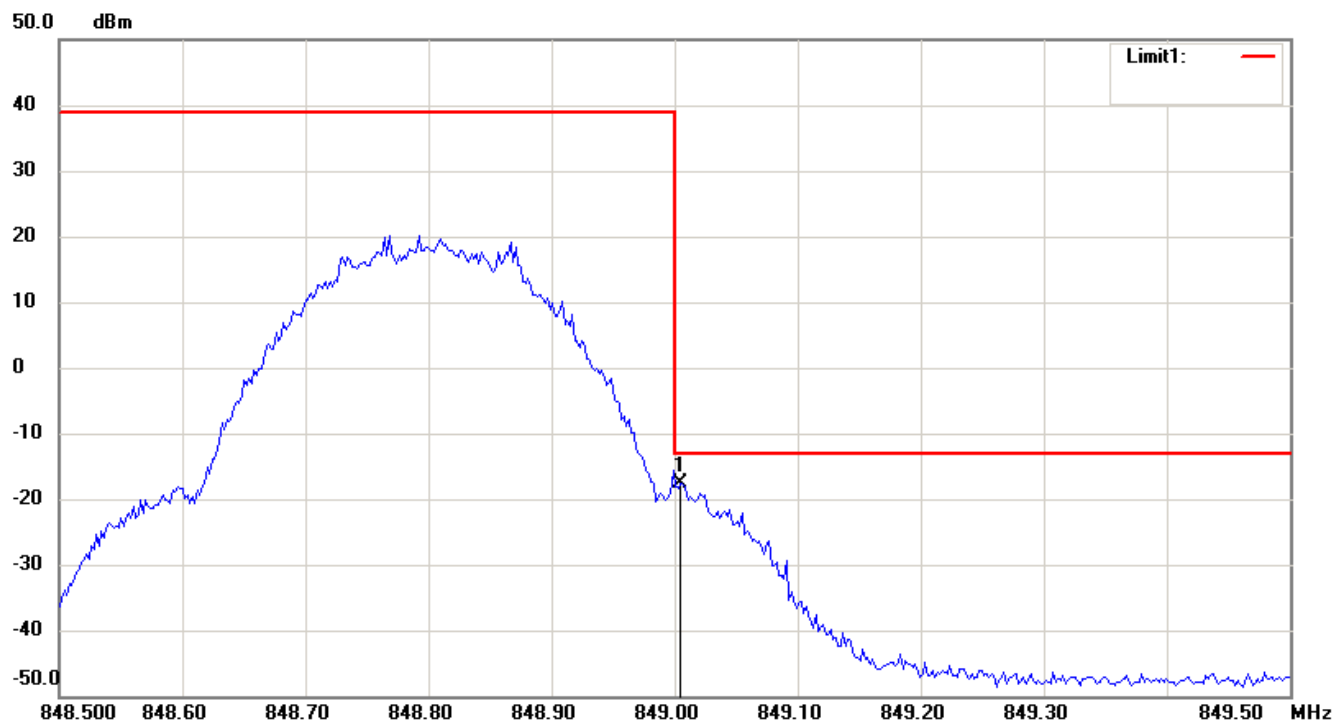
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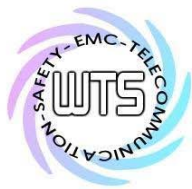
850 Band – channel 251

Antenna Polarization H



Antenna Polarization V





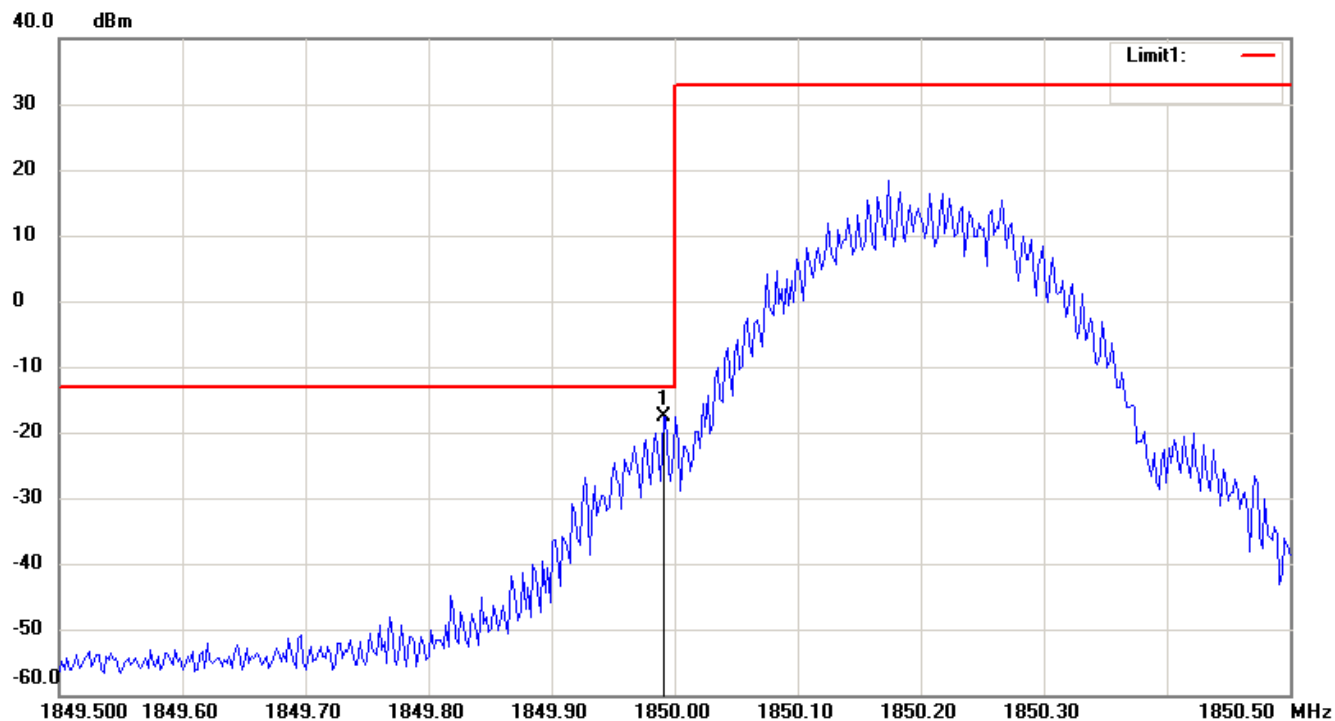
# Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21309-13566-P-2224

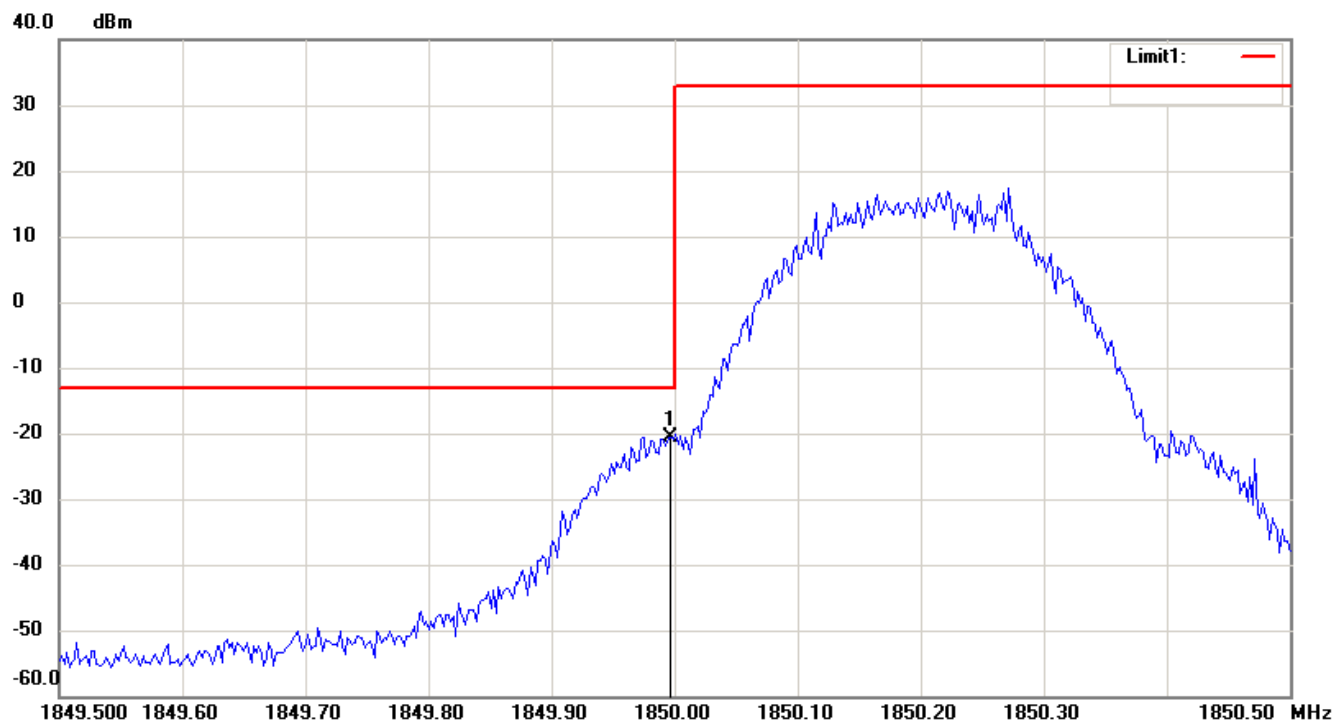
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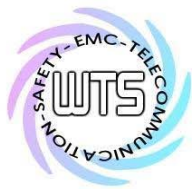
1900 Band – channel 512

Antenna Polarization H



Antenna Polarization V



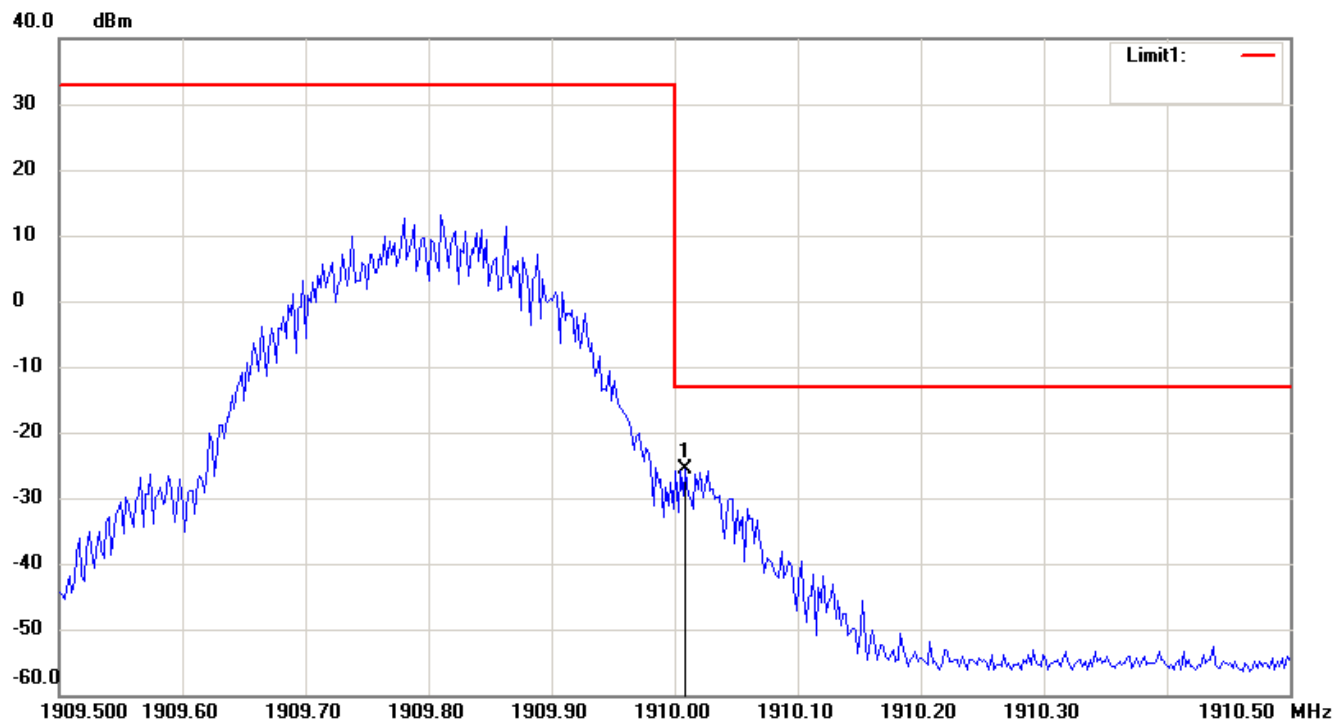


Report Number: W6M21309-13566-P-2224

FCC ID: 2ABGRMVX400

1900 Band – channel 810

Antenna Polarization H



Antenna Polarization V

