

FCC PART 15 SUBPART C TEST REPORT

for

Pearl II Wireless

Model No.: EXSD9711

FCC ID: ZPP-EX971101

of

Applicant: VTECH Technology Corp.

Address: 12F-1, No.99, Sec. 2, Zhongshan N. RD.
Taipei 104, Taiwan(R.O.C)

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

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

A2LA Accredited No.: 2732.01



Report No.: W6M21106-11600-C-1

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

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

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

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

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Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

July 15, 2011

Rick Chen

Rick Chen.

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

July 15, 2011

Chang Tse-Ming

Chang Tse-Ming

Date

WTS

Name

Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

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1.2 Testing laboratory

1.2.1 Location

OATS

No.5-1, Lishui, Shuang Sing Village,
Wanli Dist., New Taipei City 207,
Taiwan (R.O.C.)

Company

Worldwide Testing Services(Taiwan) Co., Ltd.

6F, NO. 58, LANE 188, RUEY-KUANG RD.

NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877

Fax : 886-2-66068879

1.2.2 Details of accreditation status

Accredited testing laboratory

A2LA accredited number: 2732.01

FCC filed test laboratory Reg. No. 930600

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



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

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

Telephone: ./.

Fax: ./.

1.3 Details of approval holder

Name: VTECH Technology Corp.

Street: 12F-1, No.99, Sec. 2, Zhongshan N. RD.

Town: Taipei 104,

Country: Taiwan(R.O.C)

Telephone: +886-2-2521-3966

Fax: +886-2-2521-6465



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1.4 Application details

Date of receipt of test item: June 22, 2011

Date of test: from June 23, 2011 to July 12, 2011

1.5 General information of Test item

Type of test item: Pearl II Wireless

Model Number: EXSD9711

Brand Name: EXSOUND

Multi-listing model number: ./.

Photos: see Appendix

Technical data

Frequency band: 2.4 GHz – 2.4835 GHz

Frequency (A): 2.404 GHz

Frequency (B): 2.440 GHz

Frequency (C): 2.476 GHz

Number of Channels: 25

Operation modes: simplex

Modulation Type: GFSK

Fixed point-to-point operation: ☐ Yes / ☒ No

Type of Antenna: PIFA Antenna

Antenna gain: 2.08 dBi

Power supply: 5Vdc (power from PC)

Emission designator: 1M80G1D

Host device: none

Classification:

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



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Transmitter

Unom

| | |
|-------------------|----------------------|
| Power (A): | Conducted: 9.74 dBm |
| Power (B): | Conducted: 9.48 dBm |
| Power (C): | Conducted: 10.16 dBm |

Manufacturer: (if applicable)

| | |
|----------|-----|
| Name: | ./. |
| Street: | ./. |
| Town: | ./. |
| Country: | ./. |

| | |
|-------------------------|-----|
| Additional information: | ./. |
|-------------------------|-----|

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART B / SUBPART C § 15.247 (2010-10)



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2 Technical test

2.1 Summary of test results

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

or

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

2.2 Test environment

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



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2.3 Test Equipment List

| No. | Test equipment | Type | Serial No. | Manufacturer | Cal. Date | Next Cal. Date |
|--------------|---|------------------|----------------|--------------|------------------|----------------|
| ETSTW-CE 001 | EMI TEST RECEIVER | ESHS10 | 842121/013 | R&S | 2010/9/2 | 2011/9/1 |
| ETSTW-CE 003 | AC POWER SOURCE | APS-9102 | D161137 | GW | Function Test | |
| ETSTW-CE 004 | ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK | ESH3-Z5 | 840731/011 | R&S | 2011/3/10 | 2012/3/9 |
| ETSTW-CE 005 | Line-Impedance Stabilisation Network | NNBM 8126D | 137 | Schwarzbeck | 2010/9/8 | 2011/9/7 |
| ETSTW-CE 006 | IMPULSBEGRENZER PULSE LIMITER | ESH3-Z2 | 100226 | R&S | 2011/3/8 | 2012/3/7 |
| ETSTW-CE 007 | SPECTRUM ANALYZER 5GHz | FSB | 849670/001 | R&S | Pre-test Use NCR | |
| 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 | 2011/7/4 | 2012/7/3 |
| ETSTW-CE 013 | CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK | FCC-TLISN-T4-02 | 20242 | FCC | 2010/10/21 | 2011/10/20 |
| ETSTW-CE 015 | CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK | FCC-TLISN-T8-02 | 20307 | FCC | 2010/9/6 | 2011/9/5 |
| ETSTW-CE 016 | TWO-LINE V-NETWORK | ENV216 | 100050 | R&S | 2011/2/21 | 2012/2/20 |
| ETSTW-CS 004 | COUPLING AND DECOUPLING NETWORK | CDN M016 | 20053 | SCHAFFNER | 2010/8/20 | 2011/8/19 |
| ETSTW-CS 005 | RF Power Amplifier | 100A250A | 306547 | AR | Function Test | |
| ETSTW-CS 009 | 6 dB Attenuator | 75-A-FFN-06 | 70998 | BIRD | 2011/5/20 | 2012/5/19 |
| ETSTW-RE 003 | EMI TEST RECEIVER | ESI 26 | 831438/001 | R&S | 2010/8/10 | 2011/8/9 |
| ETSTW-RE 004 | EMI TEST RECEIVER | ESI 40 | 832427/004 | R&S | 2010/9/14 | 2011/9/13 |
| ETSTW-RE 005 | EMI TEST RECEIVER | ESVS10 | 843207/020 | R&S | 2010/9/2 | 2011/9/1 |
| ETSTW-RE 010 | ABSORBING CLAMP | MDS 21 | 3469 | Schwarzbeck | 2010/9/6 | 2011/9/5 |
| 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 019 | MICROWAVE HORN ANTENNA | 22240-25 | 121074 | FM | 2011/4/25 | 2012/4/24 |
| ETSTW-RE 020 | MICROWAVE HORN ANTENNA | AT4002A | 306915 | AR | Function Test | |
| ETSTW-RE 021 | SWEEP GENERATOR | SWM05 | 835130/010 | R&S | 2010/8/20 | 2011/8/19 |
| ETSTW-RE 027 | Passive Loop Antenna | 6512 | 00034563 | EMCO | 2011/7/4 | 2012/7/3 |
| ETSTW-RE 030 | Double-Ridged Guide Horn Antenna | 3117 | 00035224 | EMCO | 2011/2/25 | 2012/2/24 |
| ETSTW-RE 032 | Millivoltmeter | URV 55 | 849086/013 | R&S | 2010/10/4 | 2011/10/3 |
| ETSTW-RE 033 | WaveRunner 6000A Serie Oscilloscope | WAVERUNNER 6100A | LCRY0604P14508 | LeCroy | Function Test | |
| ETSTW-RE 034 | Power Sensor | URV5-Z4 | 839313/006 | R&S | 2010/10/4 | 2011/10/3 |
| ETSTW-RE 042 | Biconical Antenna | HK116 | 100172 | R&S | 2011/1/14 | 2012/1/13 |
| ETSTW-RE 043 | Log-Periodic Dipole Antenna | HL223 | 100166 | R&S | 2011/4/26 | 2012/4/25 |
| ETSTW-RE 044 | Log-Periodic Antenna | HL050 | 100094 | R&S | 2011/4/25 | 2012/4/24 |
| ETSTW-RE 045 | ESA-E SERIES SPECTRUM ANALYZER | E4404B | MY45111242 | Agilent | Pre-test Use NCR | |
| ETSTW-RE 048 | Triple Loop Antenna | HXYZ 9170 | HXYZ 9170-134 | Schwarzbeck | 2010/8/30 | 2011/8/29 |
| ETSTW-RE 049 | TRILOG Super Broadband test Antenna | VULB 9160 | 9160-3185 | Schwarzbeck | 2011/4/8 | 2012/4/7 |
| ETSTW-RE 050 | Attenuator 10dB | 50HF-010-1 | None | JFW | 2011/3/4 | 2012/3/3 |



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| | | | | | | |
|---------------|--------------------------------------|--------------------------------|----------------|--------------------------|---------------|------------|
| ETSTW-RE 051 | Attenuator 6dB | 50HF-006-1 | None | JFW | 2011/3/4 | 2012/3/3 |
| ETSTW-RE 053 | Attenuator 3dB | 50HF-003-1 | None | JFW | 2011/3/4 | 2012/3/3 |
| ETSTW-RE 055 | SPECTRUM ANALYZER | FSU 26 | 200074 | R&S | 2011/5/30 | 2012/5/29 |
| ETSTW-RE 060 | Attenuator 30dB | 5015-30 | F651012z-01 | ATM | 2011/3/4 | 2012/3/3 |
| ETSTW-RE 061 | Amplifier Module | CHC 1 | None | ETS | 2011/5/18 | 2012/5/17 |
| ETSTW-RE 062 | Amplifier Module | CHC 2 | None | KMIC | 2010/11/30 | 2011/11/29 |
| ETSTW-RE 064 | Bluetooth Test Set | MT8852B-042 | 6K00005709 | Anritsu | Function Test | |
| ETSTW-RE 065 | Amplifier | AMF-6F-18002650-25-10P | 941608 | MITEQ | 2011/4/8 | 2012/4/7 |
| ETSTW-RE 066 | Highpass Filter | H1G013G1 | 206015 | MICROWAVE CIRCUITS, INC. | 2011/3/4 | 2012/3/3 |
| ETSTW-RE 072 | CELL SITE TEST SET | 8921A | 3339A00375 | HP | 2010/10/7 | 2011/10/6 |
| ETSTW-RE 073 | Power Meter | N1911A | MY45100769 | Agilent | 2011/1/10 | 2012/1/9 |
| ETSTW-RE 074 | Power Sensor | N1921A | MY45241198 | Agilent | 2011/1/10 | 2012/1/9 |
| ETSTW-RE 081 | Highpass Filter | H03G13G1 | 4260-02 DC0428 | MICROWAVE CIRCUITS, INC. | 2011/3/4 | 2012/3/3 |
| ETSTW-RE 096 | SIGNAL GENERATOR | SMIQ 03B | 102274 | R&S | 2011/5/31 | 2012/5/30 |
| ETSTW-RE 099 | DC Block | 50DB-007-1 | None | JFW | 2011/3/10 | 2012/3/9 |
| ETSTW-RE 105 | 2.4GHz Notch Filter | NO124411 | 39555 | MICROWAVE CIRCUITS, INC. | 2011/3/11 | 2012/3/10 |
| ETSTW-RE 106 | Humidity Temperature Meter | TES-1366 | 091011113 | TES | 2011/3/24 | 2012/3/23 |
| ETSTW-RE 111 | Log-Periodic Dipole Array Antenna | VULB 9160 | 9160-3309 | Schwarz beck | 2010/12/17 | 2011/12/16 |
| ETSTW-RE 112 | AC POWER SOURCE | TFC-1005 | None | T-Power | Function test | |
| ETSTW-RE 114 | 2.4GHz Notch Filter | NO124411 | 473873 | MICROWAVE CIRCUITS | 2011/1/13 | 2012/1/12 |
| ETSTW-RE 121 | SPECTRUM ANALYZER | FSU43 | 100013 | R&S | 2011/6/23 | 2012/6/22 |
| ETSTW-EMI 001 | HARMONICS 1000 | HAR1000-1P | 093 | EMC-PARTNER | 2010/8/27 | 2011/8/26 |
| ETSTW-EMS 001 | BASELSTRASSE 160 CH-4242 LAUFEN | CN-EFT1000 | 354 | EMC-PARTNER | Function Test | |
| ETSTW-EMS 002 | Frequency Converter | YF-6020 | 0308014 | None | Function Test | |
| ETSTW-EMS 003 | EMC Immunity Test System | TRA2000IN6 | 579 | EMC-PARTNER | 2010/11/3 | 2011/11/2 |
| ETSTW-EMS 009 | Magnetic Field Antenna | MF1000-1 | 104 | EMC-PARTNER | Function Test | |
| ETSTW-EMS 012 | EM Injection Clamp | F-2031-23MM | 476 | FCC | 2011/6/1 | 2012/5/31 |
| ETSTW-EMS 015 | HVAC Trms Power Clamp Meter | 3079K | 070800649 | TES | 2010/10/5 | 2011/10/4 |
| ETSTW-EMS 016 | EMF Tester | 1390 | 071208732 | TES | 2010/10/5 | 2011/10/4 |
| ETSTW-EMS 017 | Multimeter | DM-1220 | 518614 | HOLA | 2010/8/18 | 2011/8/17 |
| ETSTW-EMS 019 | Electrostatic Discharge Simulator | ESS-2002 | ESS06Y6300 | NoiseKen | 2010/11/25 | 2011/11/24 |
| ETSTW-EMS 020 | Humidity Temperature Meter | TES-1366 | 091011116 | TES | 2011/3/24 | 2012/3/23 |
| ETSTW-RS 003 | RF Power Amplifier | 30S1G3 | 306933 | AR | Function Test | |
| ETSTW-RS 004 | RF Power Amplifier | 150W1000 | 307009 | AR | Function Test | |
| ETSTW-RS 006 | SIGNAL GENERATOR | SML03 | 101551 | R&S | 2011/3/7 | 2012/3/6 |
| ETSTW-RS 007 | 14" COLOR VIDEO MONITOR | HS-CM145A | 0512011548 | None | Function Test | |
| ETSTW-RS 009 | SIGNAL GENERATOR | 8648C | 3642U01656 | HP | 2011/2/23 | 2012/2/22 |
| ETSTW-RS 010 | Broadband Field Meter | NBM-520 | C-0195 | Narda | 2010/10/12 | 2011/10/11 |
| ETSTW-GSM 002 | Universal Radio Communication Tester | CMU 200 | 109439 | R&S | 2010/10/7 | 2011/10/6 |
| ETSTW-GSM 019 | Band Reject Filter | WRCTF824/849-822/851-40/12+9SS | 3 | WI | 2011/1/14 | 2012/1/13 |



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| | | | | | | |
|-----------------|-----------------------------|--|--------------|------------------|---|------------|
| ETSTW-GSM 020 | Band Reject Filter | WRCD1747/1748-1743/1752-32/5SS | 1 | WI | 2011/1/14 | 2012/1/13 |
| ETSTW-GSM 021 | Band Reject Filter | WRCD1879.5/1880.5-1875.5/1884.5-32/5SS | 3 | WI | 2011/1/14 | 2012/1/13 |
| ETSTW-GSM 022 | Band Reject Filter | WRCT901.9/903.1-904.25-50/8SS | 1 | WI | 2011/1/14 | 2012/1/13 |
| ETSTW-GSM 023 | Power Divider | 4901.19.A | None | SUHNER | 2010/9/20 | 2011/9/19 |
| ETSTW-Cable 002 | Microwave Cable | SUCOFLEX 104 (S Cable 7) | 238093 | HUBER+SUHNER | 2011/5/18 | 2012/5/17 |
| ETSTW-Cable 003 | Microwave Cable | SUCOFLEX 104 (S Cable 11) | 209953 | HUBER+SUHNER | 2011/5/18 | 2012/5/17 |
| ETSTW-Cable 010 | BNC Cable | 5 M BNC Cable | None | JYE BAO CO.,LTD. | 2011/3/8 | 2012/3/7 |
| ETSTW-Cable 011 | BNC Cable | BNC Cable 1 | None | JYE BAO CO.,LTD. | Pre-test Use NCR | |
| ETSTW-Cable 012 | BNC Cable | BNC Cable 2 | None | JYE BAO CO.,LTD. | 2011/3/8 | 2012/3/7 |
| ETSTW-Cable 013 | Microwave Cable | SUCOFLEX 104 (S Cable 5) | 232345 | HUBER+SUHNER | Function Test | |
| ETSTW-Cable 016 | BNC Cable | Switch Box | B Cable 1 | Schwarz beck | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 017 | BNC Cable | X Cable | B Cable 2 | Schwarz beck | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 018 | BNC Cable | Y Cable | B Cable 3 | Schwarz beck | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 019 | BNC Cable | Z Cable | B Cable 4 | Schwarz beck | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 022 | N TYPE Cable | OATS Cable 3 | 0002 | JYE BAO CO.,LTD. | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 026 | Microwave Cable | SUCOFLEX 104 | 279075 | HUBER+SUHNER | 2011/3/10 | 2012/3/9 |
| ETSTW-Cable 027 | Microwave Cable | SUCOFLEX 104 | 279083 | HUBER+SUHNER | 2011/3/10 | 2012/3/9 |
| ETSTW-Cable 028 | Microwave Cable | FA147A0015M2020 | 30064-2 | UTIFLEX | 2011/4/26 | 2012/4/25 |
| ETSTW-Cable 029 | Microwave Cable | FA147A0015M2020 | 30064-3 | UTIFLEX | 2011/4/26 | 2012/4/25 |
| ETSTW-Cable 030 | Microwave Cable | SUCOFLEX 104 (S Cable 9) | 279067 | SPECTRUM | 2011/3/10 | 2012/3/9 |
| ETSTW-Cable 031 | Microwave Cable | SUCOFLEX 104 (S Cable 10) | 238092 | HUBER+SUHNER | 2010/11/30 | 2011/11/29 |
| ETSTW-Cable 039 | Microwave Cable | SUCOFLEX 104 (S Cable 19) | 316739 | HUBER+SUHNER | 2011/5/18 | 2012/5/17 |
| ETSTW-Cable 040 | Microwave Cable | SUCOFLEX 104 (S Cable 20) | 316738 | HUBER+SUHNER | Function Test | |
| ETSTW-Cable 043 | Microwave Cable | SUCOFLEX 104 | 317576 | HUBER+SUHNER | 2010/11/30 | 2011/11/29 |
| ETSTW-Cable 047 | Microwave Cable | SUCOFLEX 104 | 325518 | HUBER+SUHNER | 2010/11/30 | 2011/11/29 |
| ETSTW-Cable 051 | BNC Cable | BNC Cable 6 | None | JYE BAO CO.,LTD. | 2011/3/31 | 2012/3/30 |
| ETSTW-Cable 052 | BNC Cable | Clamp Cable | None | Schwarz beck | 2011/3/31 | 2012/3/30 |
| ETSTW-Cable 053 | N TYPE To SMA Cable | OATS Cable 4 | None | JYE BAO CO.,LTD. | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 054 | BNC To SMA Cable | OATS Cable 5 | None | JYE BAO CO.,LTD. | 2011/3/4 | 2012/3/3 |
| ETSTW-Cable 055 | Microwave Cable | SUCOFLEX 104 | None | HUBER+SUHNER | Function Test | |
| ETSTW-Cable 056 | N TYPE Cable | N30N30-JBY240-80CM | 20110621-1.0 | JYE BAO CO.,LTD. | Function Test | |
| ETSTW-Cable 057 | N TYPE Cable | N30N30-JBY240-80CM | 20110621-1.1 | JYE BAO CO.,LTD. | Function Test | |
| WTSTW-SW 001 | EMI TEST SOFTWARE | Harmonics-1000 | None | EMC PARTNER | HARCS Version 4.16 Firmware Version 2.18 | |
| WTSTW-SW 002 | EMI TEST SOFTWARE | EZ EMC | None | Farad | Version ETS-03A1 | |
| WTSTW-SW 003 | EMS TEST SOFTWARE | i2 | None | AUDIX | Version 3.2007-8-17b | |
| WTSTW-SW 005 | GSM Fading Level Correction | GSMFadLevCor | None | R&S | Version 1.66 | |



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2009 5.2 using a 50 μ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.4-2009 6.4 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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

Example:

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

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2009 6.3.1. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

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

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

Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: 930600.

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



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FCC ID: ZPP-EX971101

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

The formula is as follows:

Average = Peak + Duty Factor

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

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

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

ANSI STANDARD C63.4-2009 10.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



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3 Test results (enclosure)

| TEST CASE | Para. Number | Required | Test passed | Test failed |
|---|----------------------|-------------------------------------|-------------------------------------|--------------------------|
| Peak Output Power | 15.247(b)(3) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Equivalent radiated Power | 15.247(b)(3) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spurious Emissions radiated – Transmitter operating | 15.247(c): 15.209 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Band Edge Measurement | 15.247(c) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Minimum 6 dB Bandwidth | 15.247(a)(2) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Peak Power Spectral Density | 15.247(d) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Radiated Emission from Digital Part | 15.109 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Power Line Conducted Emission | 15.207 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The follows is intended to leave blank.



Registration number: W6M21106-11600-C-1

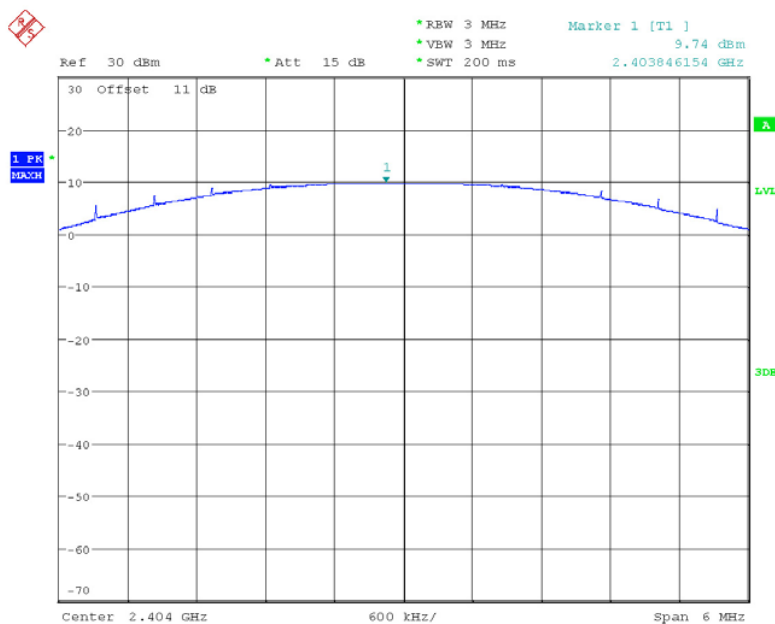
FCC ID: ZPP-EX971101

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

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

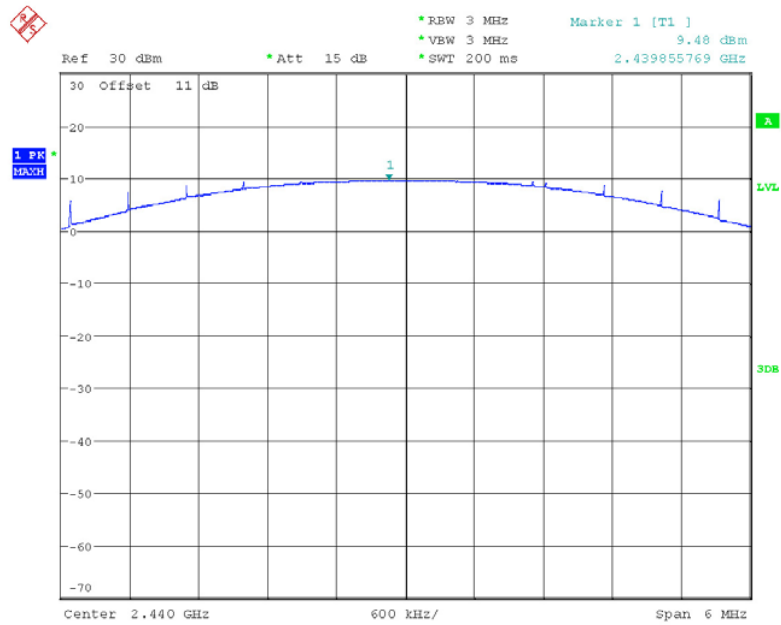
The power was measured with modulation (declared by the applicant).



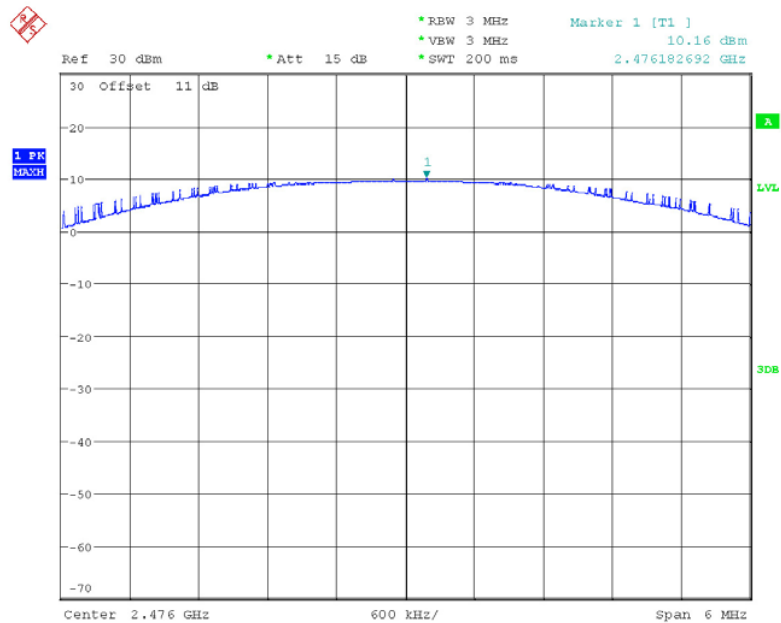
MAX OUTPUT POWER 2404MHz
Date: 8.JUL.2011 18:21:09



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101



MAX OUTPUT POWER 2440MHz
Date: 8.JUL.2011 18:23:09



MAX OUTPUT POWER 2476MHz
Date: 8.JUL.2011 18:24:29



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

| | |
|---|---|
| Test condition $T_{nom} = 23^{\circ}\text{C}$, $V_{nom} = 5\text{ V}$ | Signal Field strength TX highest power mode $\text{dB } \mu\text{V/m}$ |
| Frequency [MHz] | -- |
| -- | |

Limits:

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

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

Test equipment used: ETSTW-RE 055



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 10.16 dBm + (2.08 dBi)

= 12.24 dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

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

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

| Item | Unit | Value | Remarks |
|------|--------------------|---------|------------------|
| P | mW | 10.375 | Peak value |
| D | dB | | |
| AG | dBi | 2.08 | |
| G | | 1.614 | Calculated Value |
| R | cm | 20 | Assumed value |
| S | mW/cm ² | 0.00333 | Calculated value |

Limits:

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



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.4 Transmitter Radiated Emissions in Restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26500 MHz.

For radiated emission tests, the analyzer setting was as followings:

Frequency \leq 1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)

Frequency $>$ 1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)

Frequency $>$ 1 GHz , RBW:1 MHz , VBW: 10 Hz (Average measurements)

Limits.

For frequencies below 1GHz:

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

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:

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

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

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

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

Explanation: see attached diagrams in Appendix.



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.5 Spurious Emissions (tx)

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

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

FCC Rule: 15.247(c), 15.35

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

Limits:

For frequencies above 1GHz (Peak measurements).

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

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

Max. reading – 20 dB

Guidance on Measurement of Digit Transmission Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

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

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

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 030,
ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044

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



Worldwide Testing Services(Taiwan) Co., Ltd.

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

Calculation of test results:

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

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

In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

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

Summary table with radiated data of the test plots

Model: EXSD9711 Date: 2011/6/28
 Mode: 2404MHz Temperature: 24 °C Engineer: Kevin
 Polarization: Horizontal Humidity: 60 %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 250.2204 | 18.90 | peak | 14.49 | 33.39 | 46.00 | -12.61 | 140 | 100 |
| 970.5411 | 4.74 | peak | 27.79 | 32.53 | 54.00 | -21.47 | 230 | 100 |

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------|-----------------|------|----------------|-------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4808.0000 | 41.92 | --- | 4.56 | 46.48 | --- | 74.00 | 54.00 | -27.52 | 270 | 100 |
| 7212.0000 | 40.78 | --- | 6.93 | 47.71 | --- | 74.00 | 54.00 | -26.29 | 130 | 100 |
| 9616.0000 | 35.30 | --- | 9.48 | 44.78 | --- | 74.00 | 54.00 | -29.22 | 220 | 100 |
| 12020.0000 | 33.22 | --- | 13.33 | 46.55 | --- | 74.00 | 54.00 | -27.45 | 150 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 250.2204 | 11.52 | peak | 14.49 | 26.01 | 46.00 | -19.99 | 330 | 100 |
| 967.7355 | 7.83 | peak | 27.78 | 35.61 | 54.00 | -18.39 | 270 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------|-----------------|------|----------------|-------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4808.0000 | 44.13 | --- | 4.56 | 48.69 | --- | 74.00 | 54.00 | -25.31 | 125 | 100 |
| 7212.0000 | 42.10 | --- | 6.93 | 49.03 | --- | 74.00 | 54.00 | -24.97 | 50 | 100 |
| 9618.2370 | 39.59 | --- | 9.48 | 49.07 | --- | 74.00 | 54.00 | -24.93 | 120 | 100 |
| 12020.0000 | 33.51 | --- | 13.33 | 46.84 | --- | 74.00 | 54.00 | -27.16 | 310 | 100 |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Mode: 2440MHz

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 250.2204 | 19.43 | peak | 14.49 | 33.92 | 46.00 | -12.08 | 230 | 100 |
| 967.7355 | 9.53 | peak | 27.78 | 37.31 | 54.00 | -16.69 | 80 | 100 |

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|-----------------|------|----------------|-------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4880.0000 | 41.49 | --- | 4.59 | 46.08 | --- | 74.00 | 54.00 | -27.92 | 140 | 100 |
| 7320.0000 | 40.57 | --- | 6.92 | 47.49 | --- | 74.00 | 54.00 | -26.51 | 60 | 100 |
| 9760.0000 | 34.33 | --- | 9.66 | 43.99 | --- | 74.00 | 54.00 | -30.01 | 170 | 100 |
| 12200.0000 | 32.50 | --- | 14.79 | 47.29 | --- | 74.00 | 54.00 | -26.71 | 40 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 250.2204 | 11.91 | peak | 14.49 | 26.40 | 46.00 | -19.60 | 170 | 100 |
| 998.5972 | 6.67 | peak | 27.88 | 34.55 | 54.00 | -19.45 | 130 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|-----------------|------|----------------|-------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4880.0000 | 42.02 | --- | 4.59 | 46.61 | --- | 74.00 | 54.00 | -27.39 | 220 | 100 |
| 7320.0000 | 41.02 | --- | 6.92 | 47.94 | --- | 74.00 | 54.00 | -26.06 | 170 | 100 |
| 9760.0000 | 34.76 | --- | 9.66 | 44.42 | --- | 74.00 | 54.00 | -29.58 | 220 | 100 |
| 12200.0000 | 32.63 | --- | 14.79 | 47.42 | --- | 74.00 | 54.00 | -26.58 | 350 | 100 |

Mode: 2476MHz

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| 250.2204 | 18.70 | peak | 14.49 | 33.19 | 46.00 | -12.81 | 280 | 100 |
| 405.2104 | 12.32 | peak | 18.49 | 30.81 | 46.00 | -15.19 | 110 | 100 |



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Polarization: Horizontal

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|--------------------|-------------------|------|-------------------------|--------------------|------|-------------------|-------|----------------|---------------------------|----------------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4952.0000 | 41.29 | --- | 4.77 | 46.06 | --- | 74.00 | 54.00 | -27.94 | 60 | 100 |
| 7428.0000 | 39.76 | --- | 6.73 | 46.49 | --- | 74.00 | 54.00 | -27.51 | 190 | 100 |
| 9904.0000 | 34.98 | --- | 9.81 | 44.79 | --- | 74.00 | 54.00 | -29.21 | 170 | 100 |
| 12380.0000 | 33.52 | --- | 14.33 | 47.85 | --- | 74.00 | 54.00 | -26.15 | 120 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|--------------------|-------------------|----------|----------------|--------------------|-------------------|----------------|---------------------------|----------------------|
| 250.2204 | 10.41 | peak | 14.49 | 24.90 | 46.00 | -21.10 | 310 | 100 |
| 995.7916 | 8.15 | peak | 27.87 | 36.02 | 54.00 | -17.98 | 205 | 100 |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|--------------------|-------------------|------|-------------------------|--------------------|------|-------------------|-------|----------------|---------------------------|----------------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| 4953.9080 | 45.87 | --- | 4.77 | 50.64 | --- | 74.00 | 54.00 | -23.36 | 130 | 100 |
| 7428.0000 | 40.25 | --- | 6.73 | 46.98 | --- | 74.00 | 54.00 | -27.02 | 220 | 100 |
| 9904.0000 | 35.42 | --- | 9.81 | 45.23 | --- | 74.00 | 54.00 | -28.77 | 230 | 100 |
| 12380.0000 | 33.25 | --- | 14.33 | 47.58 | --- | 74.00 | 54.00 | -26.42 | 250 | 100 |

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

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

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 030,
ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044



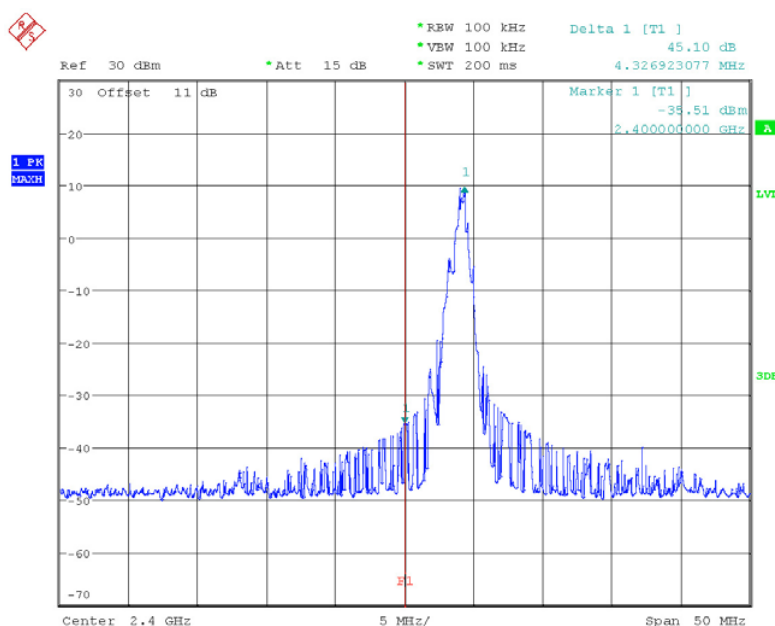
Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.6 Radiated Emission on the band edge

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

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



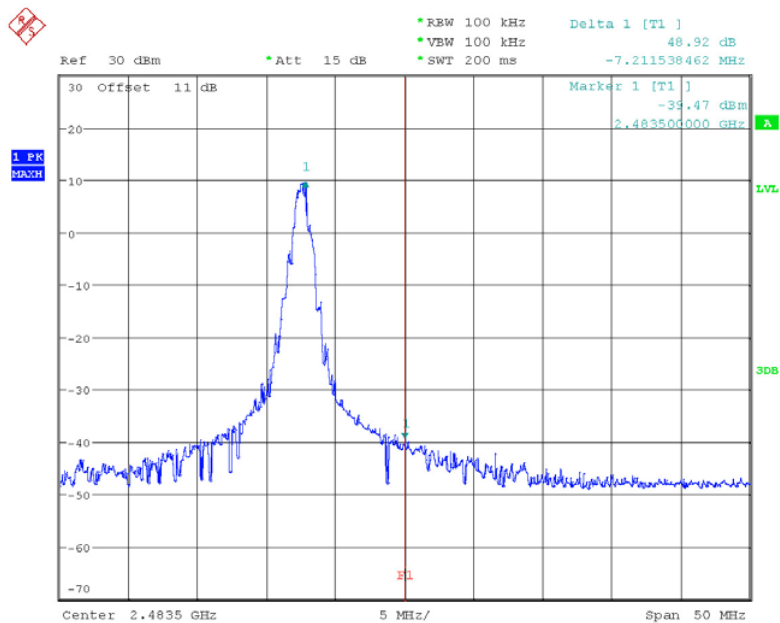
BANDEDGE 2404MHz

Date: 8.JUL.2011 18:18:36



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



BANDEDGE 2476MHz
Date: 8.JUL.2011 18:15:55

Limit:

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

Test equipment used: ETSTW-RE 055

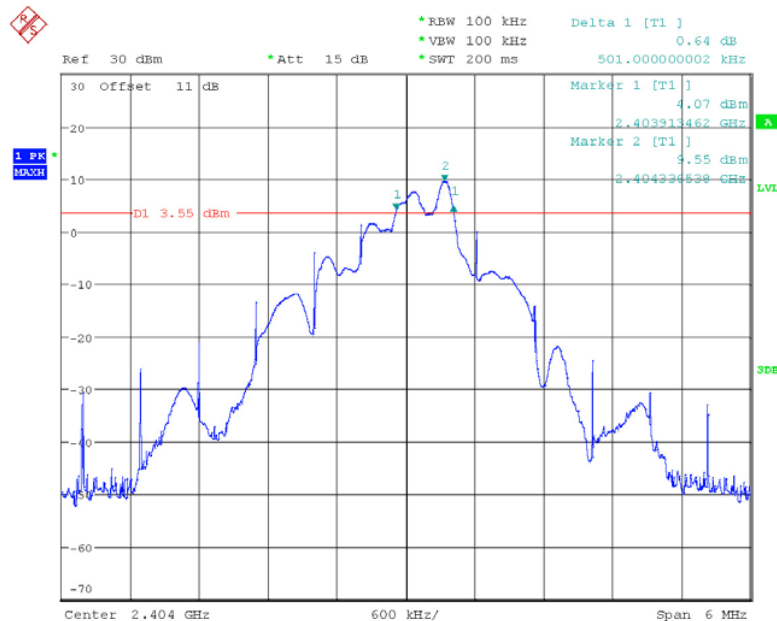
Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.7 Minimum 6 dB Bandwidth

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

The 6 dB bandwidth is the frequency difference between the two markers.

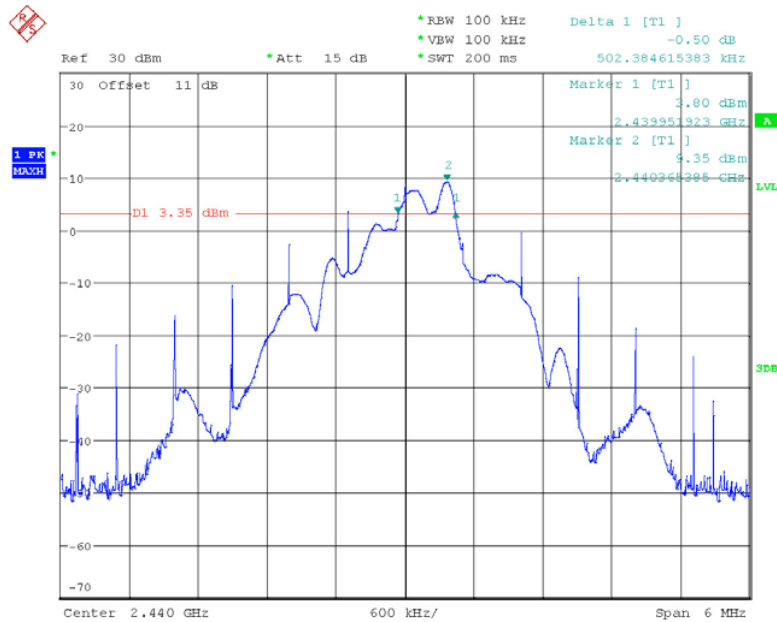


6DB BANDWIDTH 2404MHz

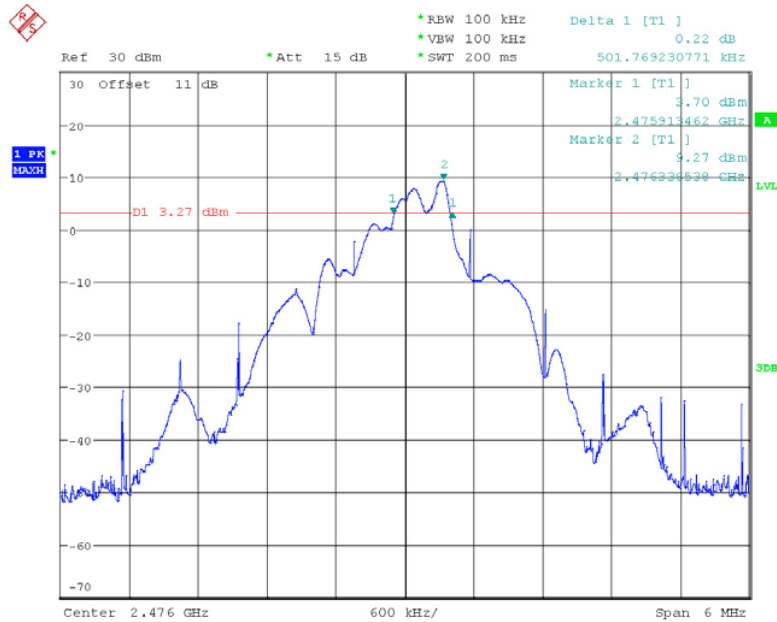
Date: 8.JUL.2011 18:32:40



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101



6DB BANDWIDTH 2440MHz
Date: 8.JUL.2011 18:30:47



6DB BANDWIDTH 2476MHz
Date: 8.JUL.2011 18:27:12



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Limits:

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

Test equipment used: ETSTW-RE 055



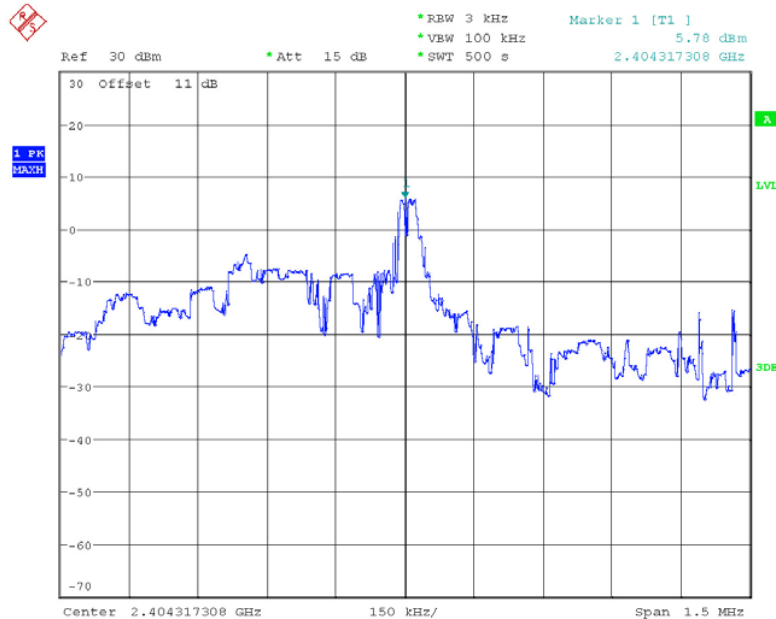
Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.8 Peak Power Spectral Density

Peak Power Spectral density is a measured at low, middle and high channel.

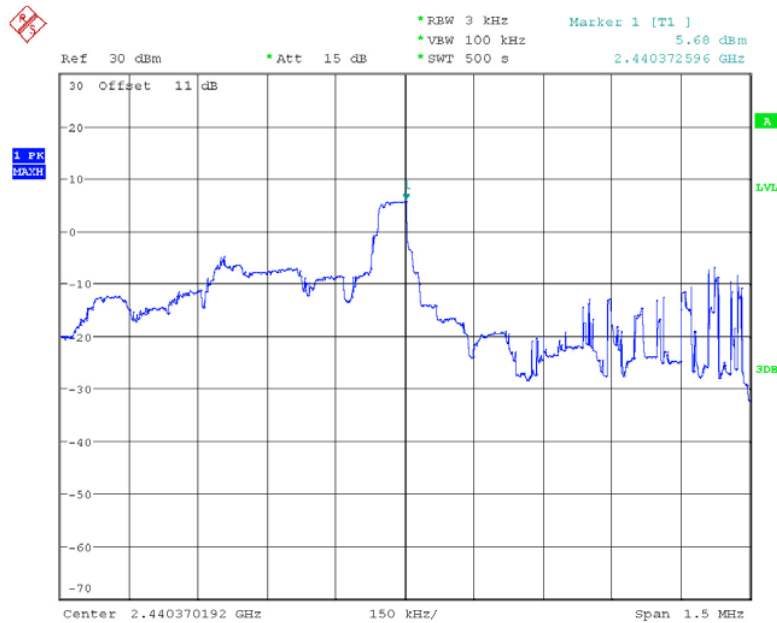
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.



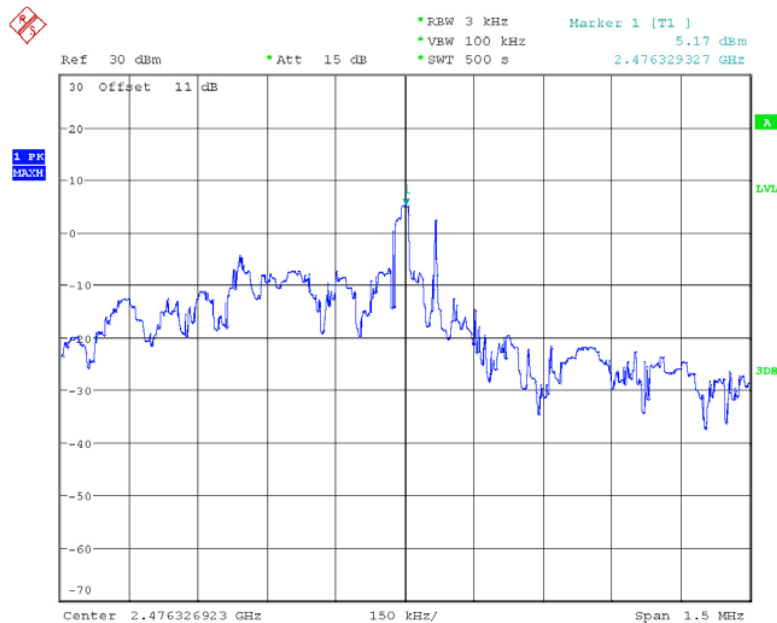
POWER DENSITY 2404MHz
Date: 8.JUL.2011 18:37:55



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101



POWER DENSITY 2440MHz
Date: 8.JUL.2011 18:39:21



POWER DENSITY 2476MHz
Date: 8.JUL.2011 18:40:45



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

Limits:

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

Test equipment used: ETSTW-RE 055

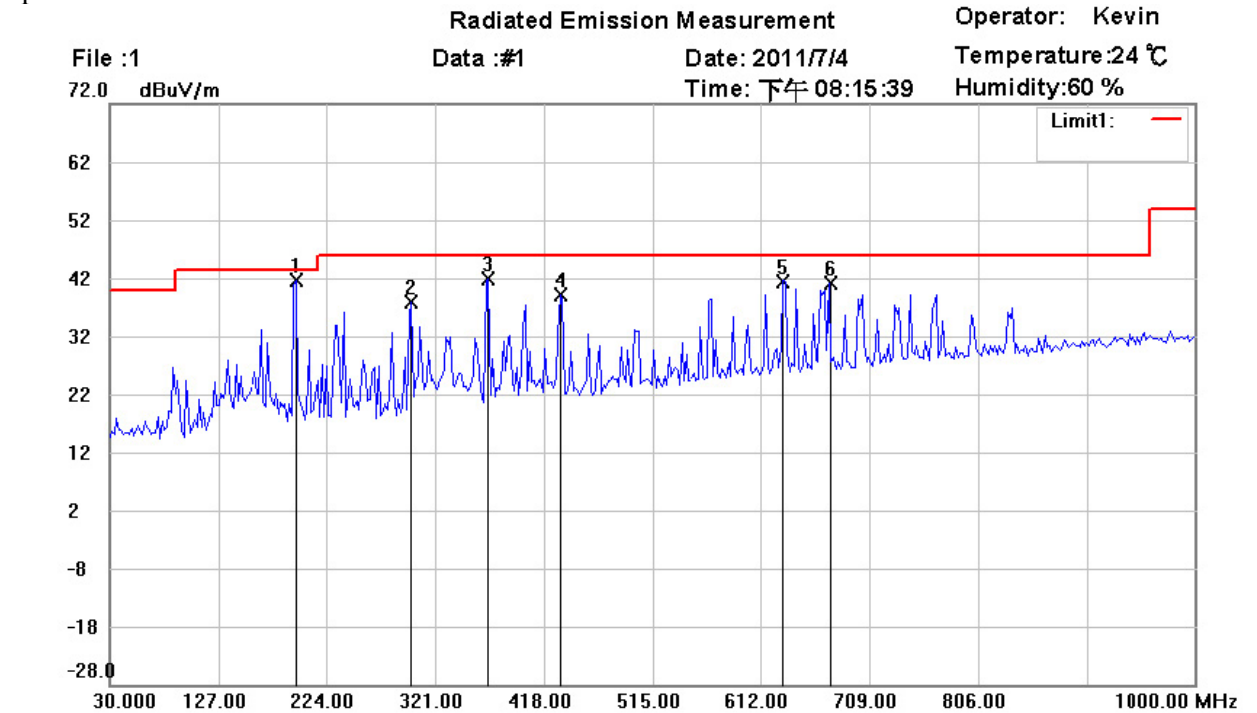


Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

3.9 Radiated Emissions from Digital Part

Ipod Mode



Site : Chamber

Condition : FCC_part 15 RE-Class B_30-1000MHz

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Ipod mode

Note :

Polarization: *Horizontal*

Power : 5VDC

Distance: 3m

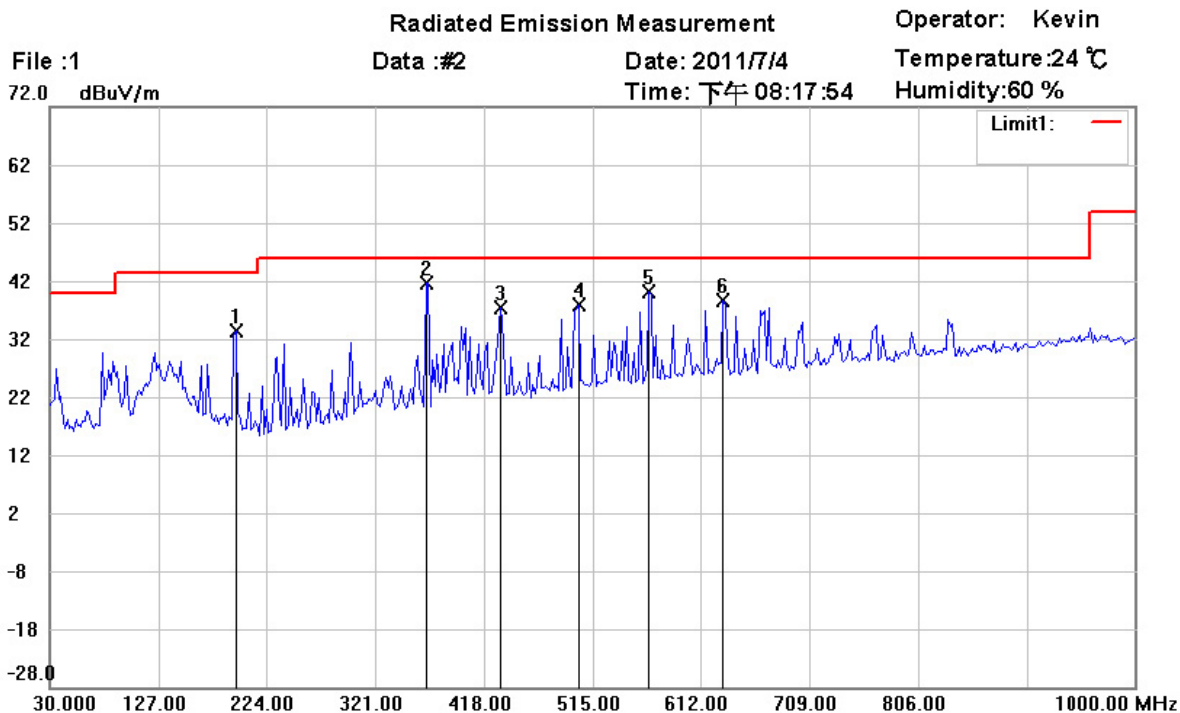
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 197.1743 | 28.77 | QP | 12.91 | 41.68 | 43.50 | 100 | 50 | -1.82 | |
| | 300.2004 | 21.88 | QP | 15.94 | 37.82 | 46.00 | 100 | 270 | -8.18 | |
| | 368.2364 | 24.35 | QP | 17.55 | 41.90 | 46.00 | 100 | 130 | -4.10 | |
| | 432.3848 | 19.91 | QP | 19.17 | 39.08 | 46.00 | 100 | 240 | -6.92 | |
| | 632.6052 | 18.41 | QP | 23.09 | 41.50 | 46.00 | 100 | 110 | -4.50 | |
| | 673.4270 | 17.59 | QP | 23.58 | 41.17 | 46.00 | 100 | 250 | -4.83 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_30-1000MHz

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Ipod mode

Note :

Polarization: **Vertical**

Power : 5VDC

Distance: 3m

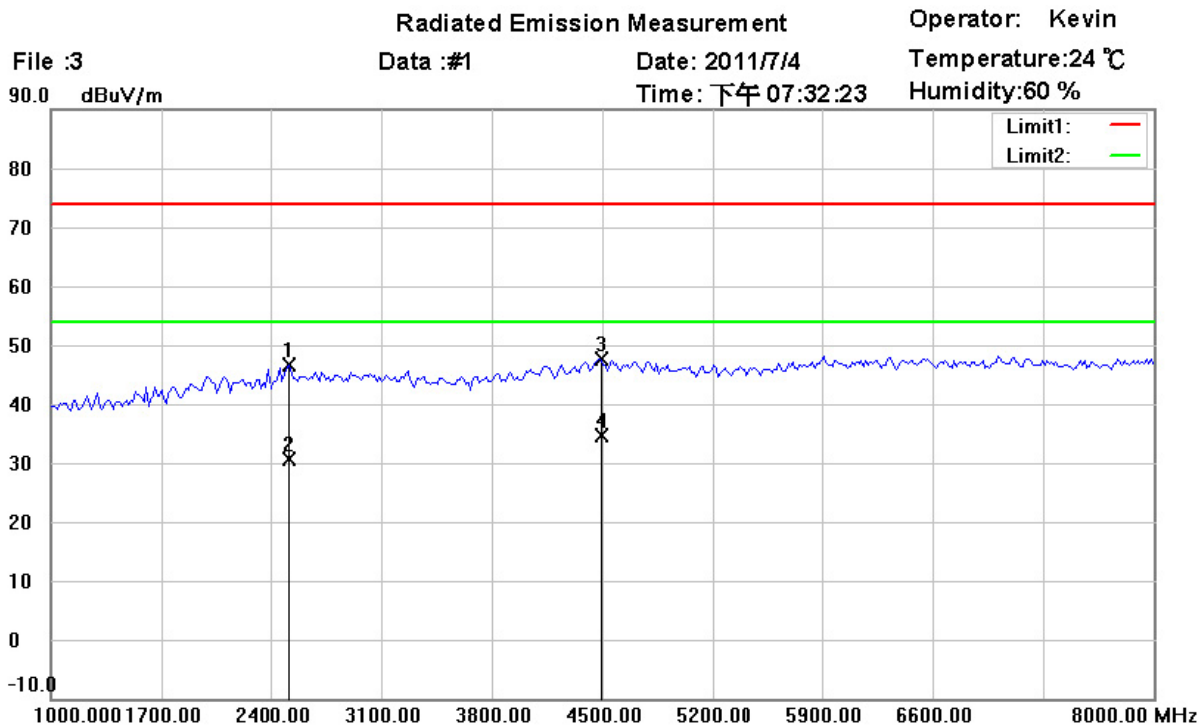
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 197.1743 | 20.42 | QP | 12.91 | 33.33 | 43.50 | 100 | 220 | -10.17 | |
| * | 366.2926 | 24.20 | QP | 17.50 | 41.70 | 46.00 | 100 | 310 | -4.30 | |
| | 432.3848 | 18.11 | QP | 19.17 | 37.28 | 46.00 | 100 | 60 | -8.72 | |
| | 502.3647 | 17.35 | QP | 20.42 | 37.77 | 46.00 | 100 | 170 | -8.23 | |
| | 566.5130 | 18.37 | QP | 21.81 | 40.18 | 46.00 | 100 | 200 | -5.82 | |
| | 632.6052 | 15.46 | QP | 23.09 | 38.55 | 46.00 | 100 | 140 | -7.45 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Ipod mode

Note :

Polarization: *Horizontal*

Power : 5VDC

Distance: 3m

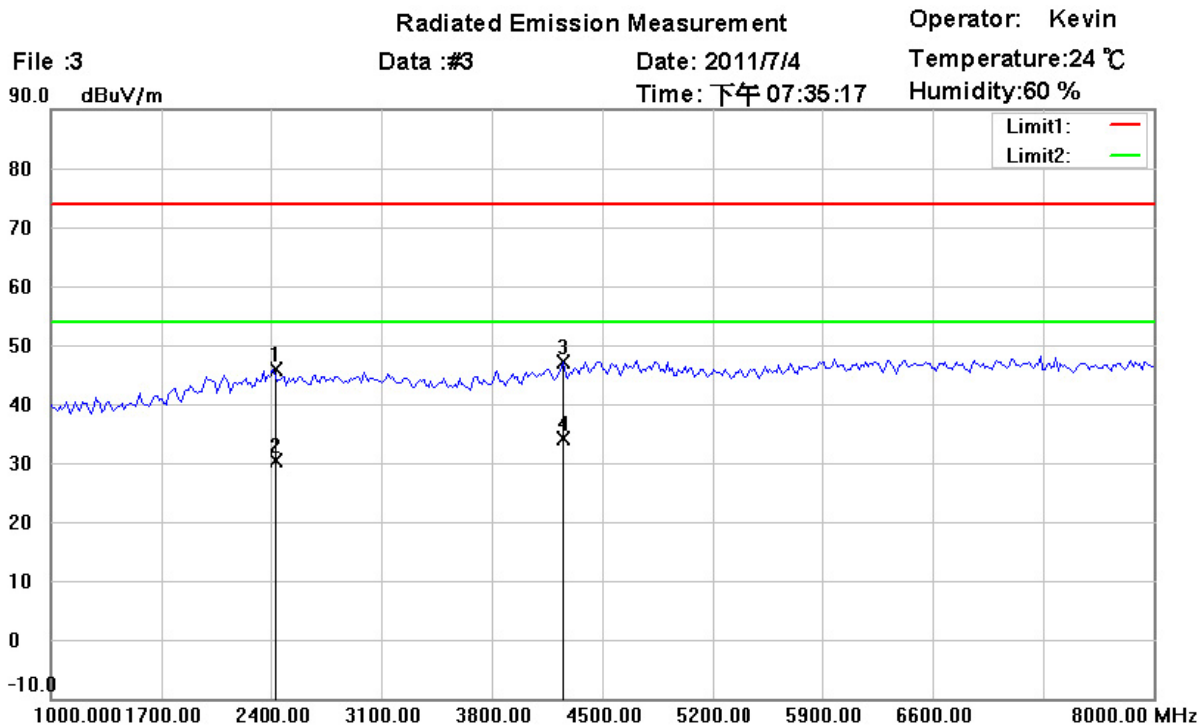
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 2515.030 | 44.75 | peak | 1.93 | 46.68 | 74.00 | 100 | 250 | -27.32 | |
| | 2515.030 | 28.79 | AVG | 1.93 | 30.72 | 54.00 | 100 | 250 | -23.28 | |
| | 4478.958 | 42.98 | peak | 4.54 | 47.52 | 74.00 | 100 | 250 | -26.48 | |
| * | 4478.958 | 30.16 | AVG | 4.54 | 34.70 | 54.00 | 100 | 110 | -19.30 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Ipod mode

Note :

Polarization: *Vertical*

Power : 5VDC

Distance: 3m

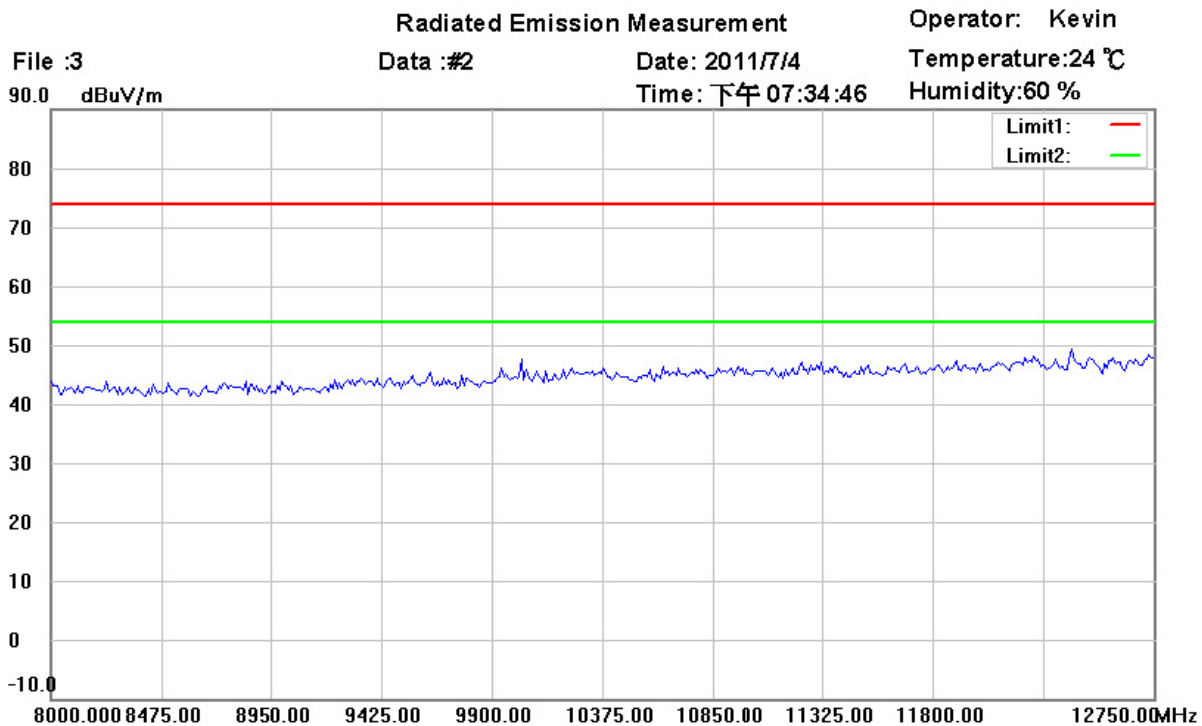
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 2416.834 | 44.43 | peak | 1.53 | 45.96 | 74.00 | 100 | 60 | -28.04 | |
| | 2416.834 | 28.96 | AVG | 1.53 | 30.49 | 54.00 | 100 | 60 | -23.51 | |
| | 4254.509 | 43.12 | peak | 4.04 | 47.16 | 74.00 | 100 | 230 | -26.84 | |
| * | 4254.509 | 30.13 | AVG | 4.04 | 34.17 | 54.00 | 100 | 230 | -19.83 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Ipod mode

Note :

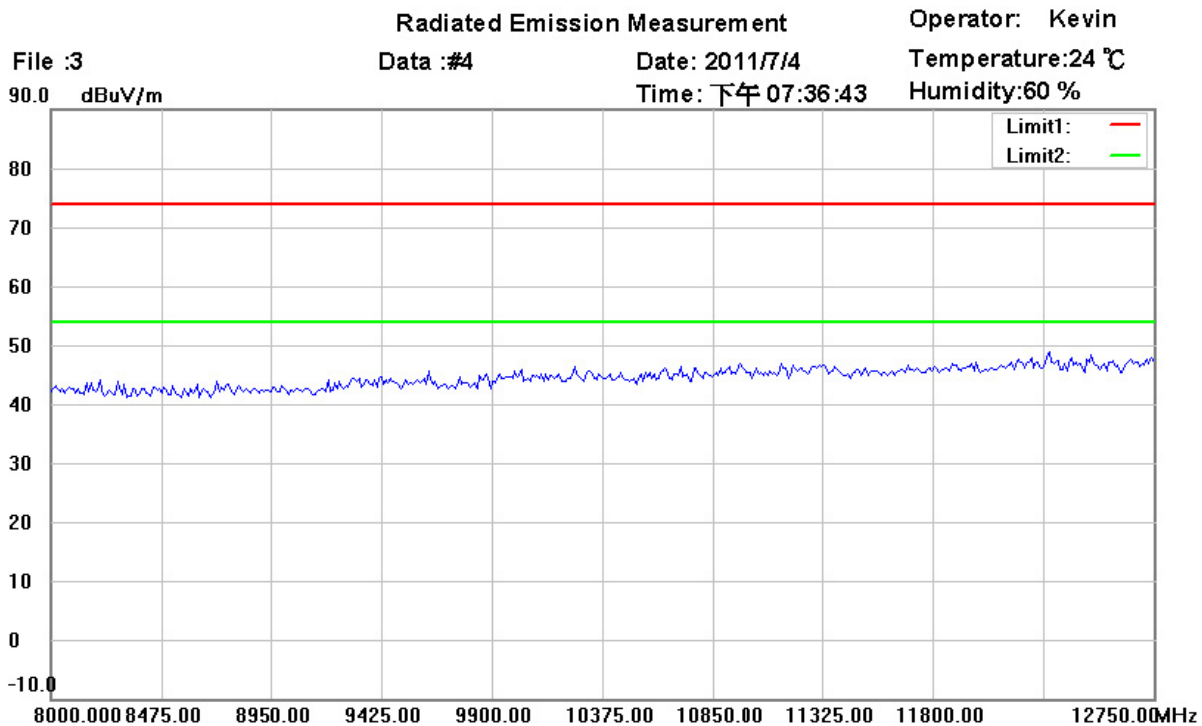
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Ipod mode

Note :

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

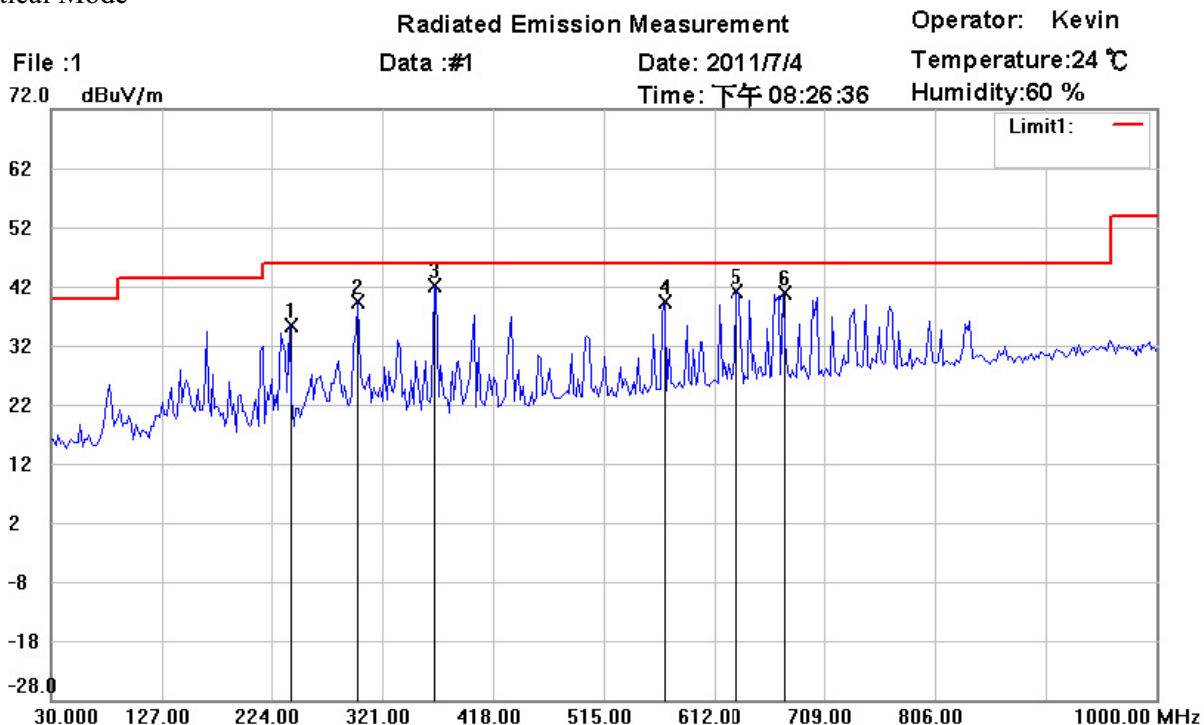


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Optical Mode



Site : Chamber

Condition : FCC_part 15 RE-Class B_30-1000MHz

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Optical mode

Note :

Polarization: *Horizontal*

Power : 5VDC

Distance: 3m

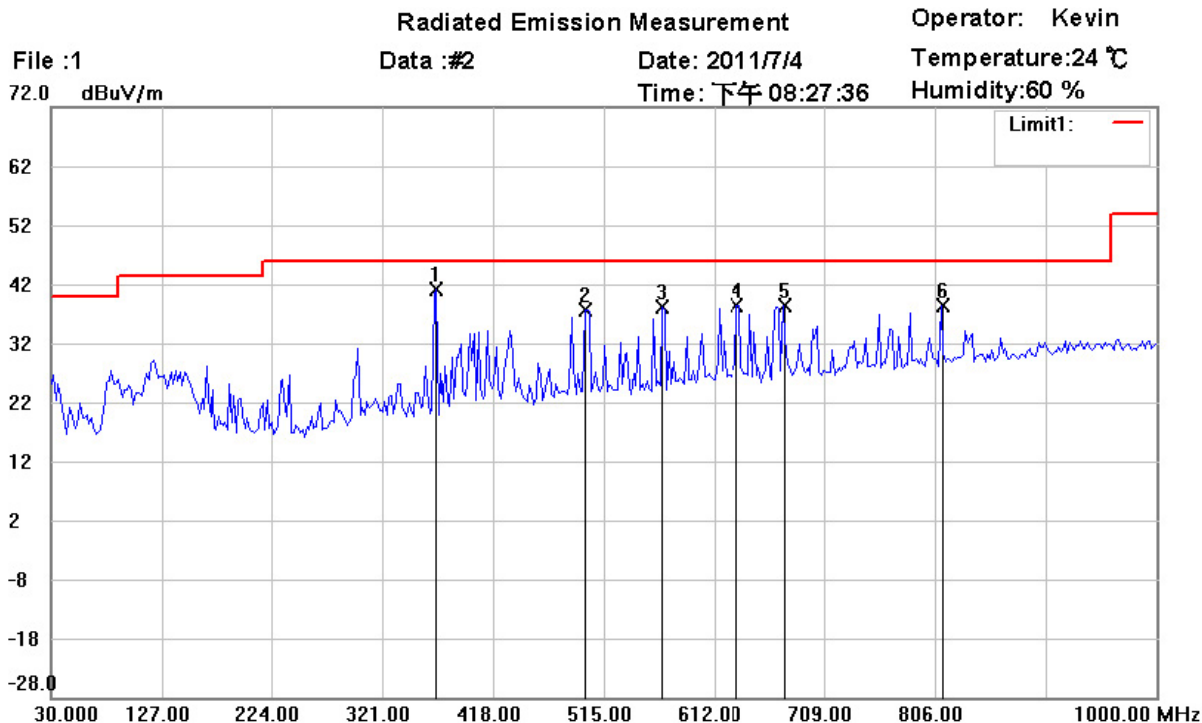
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 239.9400 | 21.21 | QP | 14.24 | 35.45 | 46.00 | 100 | 220 | -10.55 | |
| | 300.2004 | 23.32 | QP | 15.94 | 39.26 | 46.00 | 100 | 140 | -6.74 | |
| * | 366.2926 | 24.66 | QP | 17.50 | 42.16 | 46.00 | 100 | 50 | -3.84 | |
| | 568.4568 | 17.41 | QP | 21.86 | 39.27 | 46.00 | 100 | 120 | -6.73 | |
| | 632.6052 | 18.16 | QP | 23.09 | 41.25 | 46.00 | 100 | 300 | -4.75 | |
| | 673.4270 | 17.20 | QP | 23.58 | 40.78 | 46.00 | 100 | 260 | -5.22 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_30-1000MHz

EUT : W6M21106-11600

M/N: EXSD9711

Test Mode : Optical mode

Note :

Polarization: Vertical

Power : 5VDC

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 368.2364 | 23.56 | QP | 17.55 | 41.11 | 46.00 | 100 | 230 | -4.89 | |
| | 498.4770 | 17.31 | QP | 20.36 | 37.67 | 46.00 | 100 | 130 | -8.33 | |
| | 566.5130 | 16.40 | QP | 21.81 | 38.21 | 46.00 | 100 | 25 | -7.79 | |
| | 632.6052 | 15.37 | QP | 23.09 | 38.46 | 46.00 | 100 | 150 | -7.54 | |
| | 673.4270 | 14.84 | QP | 23.58 | 38.42 | 46.00 | 100 | 175 | -7.58 | |
| | 811.4430 | 12.61 | QP | 25.83 | 38.44 | 46.00 | 100 | 200 | -7.56 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Radiated Emission Measurement

Operator: Kevin

File :3

Data :#1

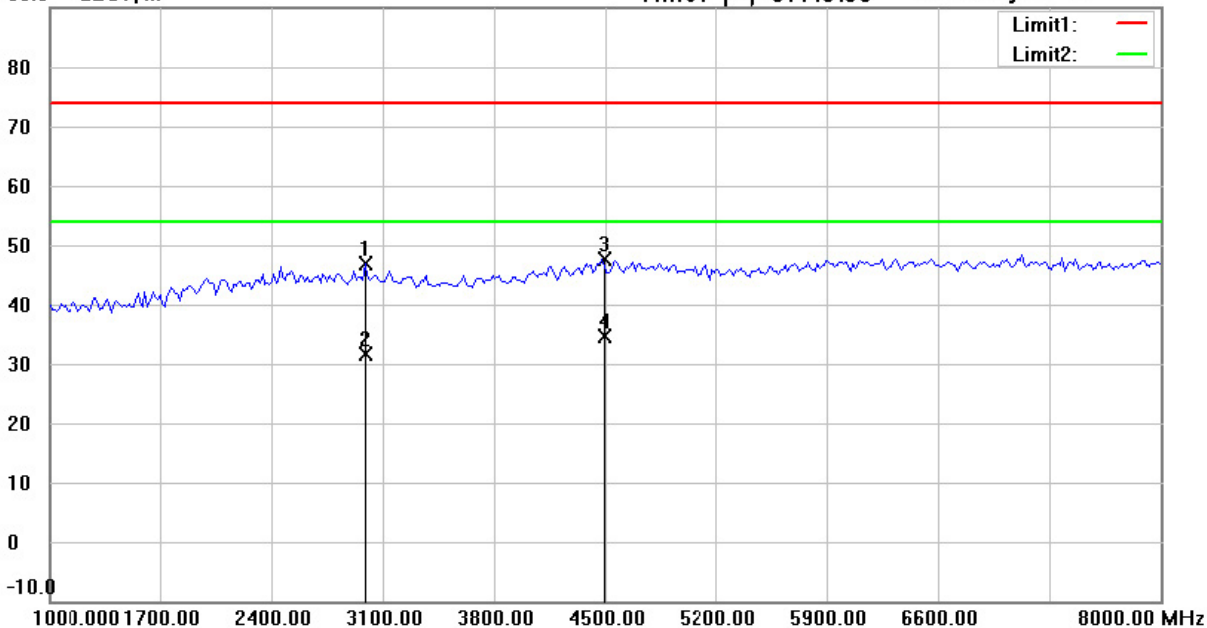
Date: 2011/7/4

Temperature:24 °C

90.0 dBuV/m

Time: 下午 07:40:36

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Optical mode

Note :

| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 2991.984 | 44.28 | peak | 2.66 | 46.94 | 74.00 | 100 | 130 | -27.06 | |
| | 2991.984 | 28.99 | AVG | 2.66 | 31.65 | 54.00 | 100 | 130 | -22.35 | |
| | 4478.958 | 43.06 | peak | 4.54 | 47.60 | 74.00 | 100 | 270 | -26.40 | |
| * | 4478.958 | 30.13 | AVG | 4.54 | 34.67 | 54.00 | 100 | 270 | -19.33 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Radiated Emission Measurement

Operator: Kevin

File :3

Data :#3

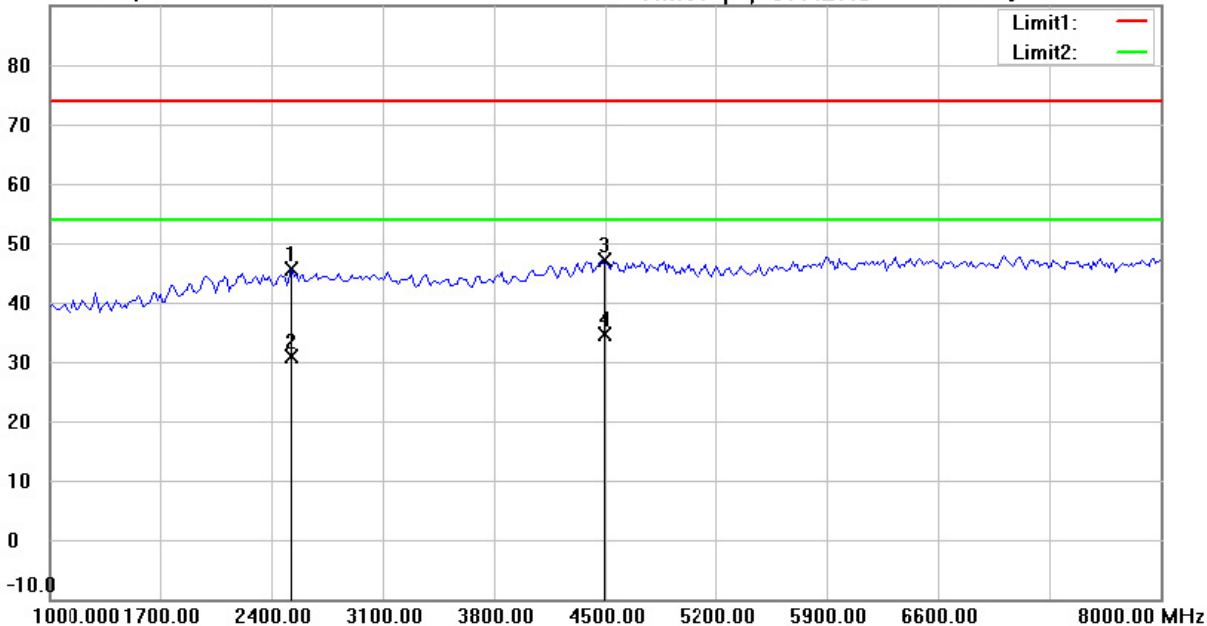
Date: 2011/7/4

Temperature:24 °C

90.0 dBuV/m

Time: 下午 07:42:49

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Optical mode

Note :

| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 2529.058 | 43.70 | peak | 1.94 | 45.64 | 74.00 | 100 | 50 | -28.36 | |
| | 2529.058 | 28.96 | AVG | 1.94 | 30.90 | 54.00 | 100 | 50 | -23.10 | |
| | 4478.958 | 42.56 | peak | 4.54 | 47.10 | 74.00 | 100 | 220 | -26.90 | |
| * | 4478.958 | 30.14 | AVG | 4.54 | 34.68 | 54.00 | 100 | 220 | -19.32 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Radiated Emission Measurement

Operator: Kevin

File :3

Data :#2

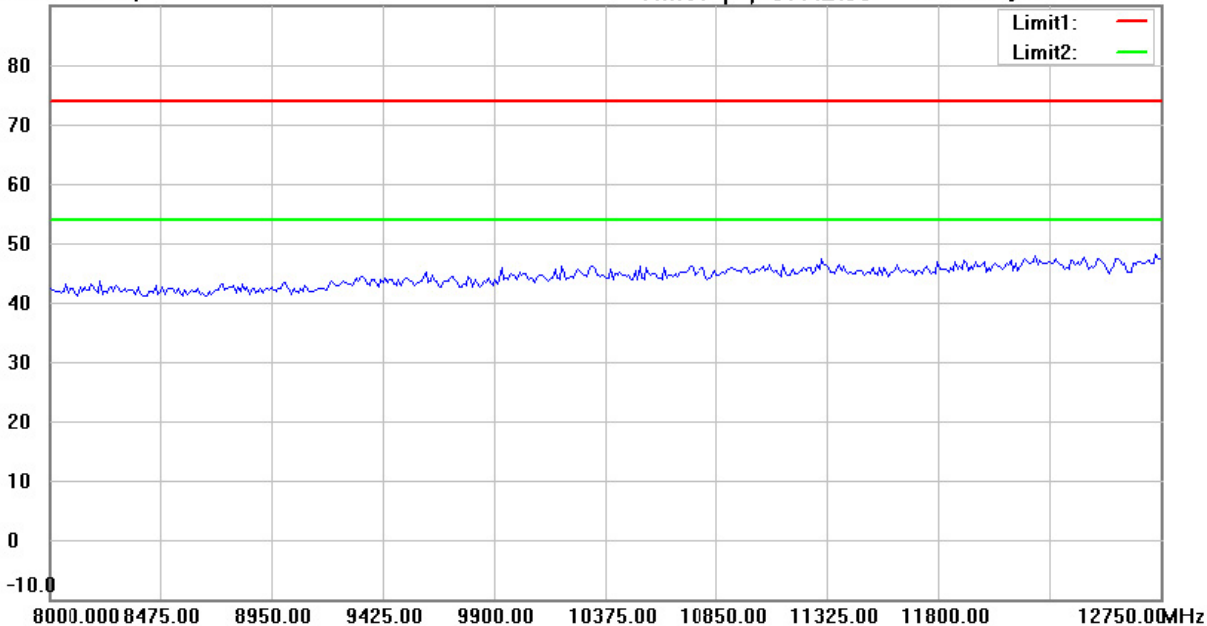
Date: 2011/7/4

Temperature:24 °C

90.0 dBuV/m

Time: 下午 07:42:03

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Optical mode

Note :

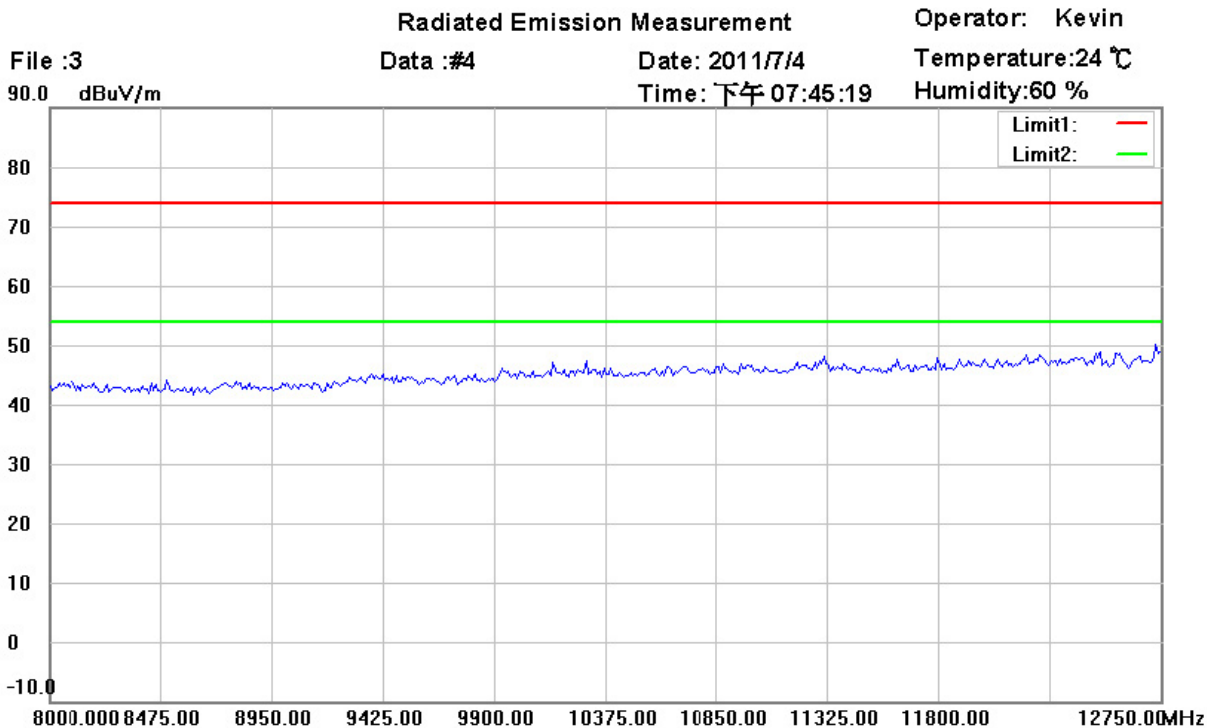
| Mk. | Frequency (MHz) | Reading (dBuV/m) | Detector | Corrected factor(dB) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|------------------|----------|----------------------|-----------------|----------------|--------------|----------------|-------------|---------|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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber

Condition : FCC_part 15 RE-Class B_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21106-11600

Power : 5VDC

M/N: EXSD9711

Distance: 3m

Test Mode : Optical mode

Note :

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

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



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

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

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

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043,
ETSTW-RE 044, ETSTW-RE 064



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

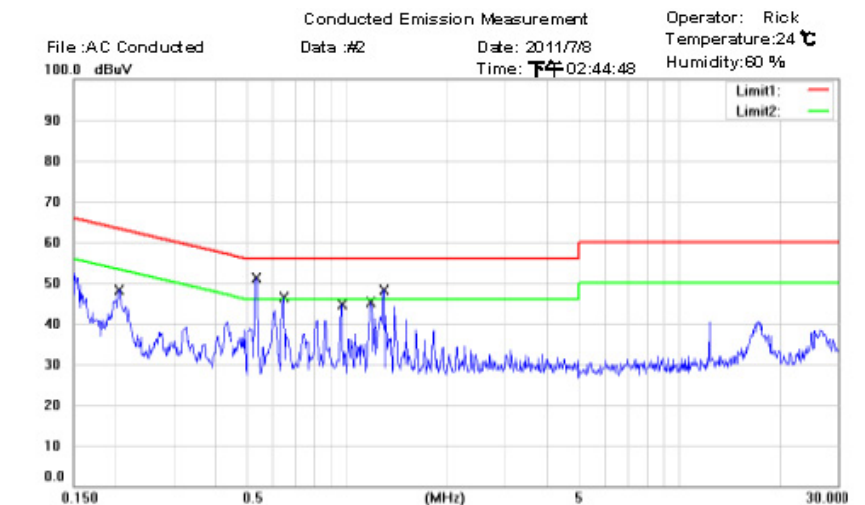
3.10 Power Line Conducted Emission

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

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

| Frequency | Level (dB μ V) | |
|-----------|--------------------|------------------|
| | quasi-peak | average |
| 150 kHz | lower limit line | Lower limit line |

Ipod mode



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase : N

EUT : W6M21106-11600

Power : 110VAC

M/N : EXSD9711

Test Mode : Ipod Mode

Note :

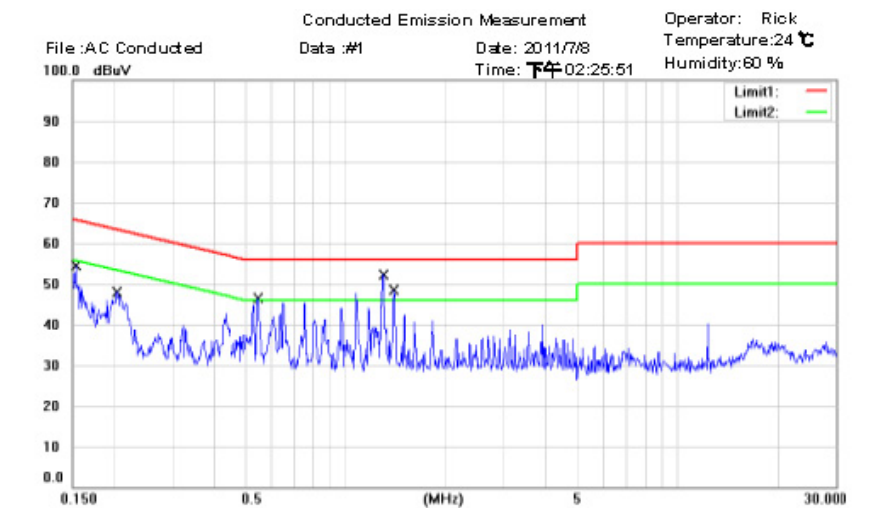
| IN. | Frequency (MHz) | Reading (dB μ V) | Detector | Corrected factor (dB) | Result (dB μ V) | Limit (dB μ V) | Margin (dB) | Comment |
|-----|-----------------|----------------------|----------|-----------------------|---------------------|--------------------|-------------|---------|
| | 0.2044 | 33.50 | QP | 9.89 | 43.39 | 63.43 | -20.04 | |
| | 0.2044 | 23.99 | AVG | 9.89 | 33.88 | 63.43 | -19.55 | |
| * | 0.5360 | 38.54 | QP | 9.93 | 48.47 | 56.00 | -7.53 | |
| | 0.5360 | 21.85 | AVG | 9.93 | 31.78 | 46.00 | -14.22 | |
| | 0.6485 | 31.69 | QP | 9.94 | 41.63 | 56.00 | -14.37 | |
| | 0.6485 | 14.59 | AVG | 9.94 | 24.53 | 46.00 | -21.47 | |
| | 0.9680 | 31.66 | QP | 9.96 | 41.62 | 56.00 | -14.38 | |
| | 0.9680 | 15.94 | AVG | 9.96 | 25.90 | 46.00 | -20.10 | |
| | 1.1818 | 32.35 | QP | 9.97 | 42.32 | 56.00 | -13.68 | |
| | 1.1818 | 18.48 | AVG | 9.97 | 28.45 | 46.00 | -17.55 | |
| | 1.2898 | 36.82 | QP | 9.97 | 46.79 | 56.00 | -9.21 | |
| | 1.2898 | 18.02 | AVG | 9.97 | 27.99 | 46.00 | -18.01 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M21106-11600

Power : 110VAC

M/N : EXSD9711

Test Mode : Ipad Mode

Note :

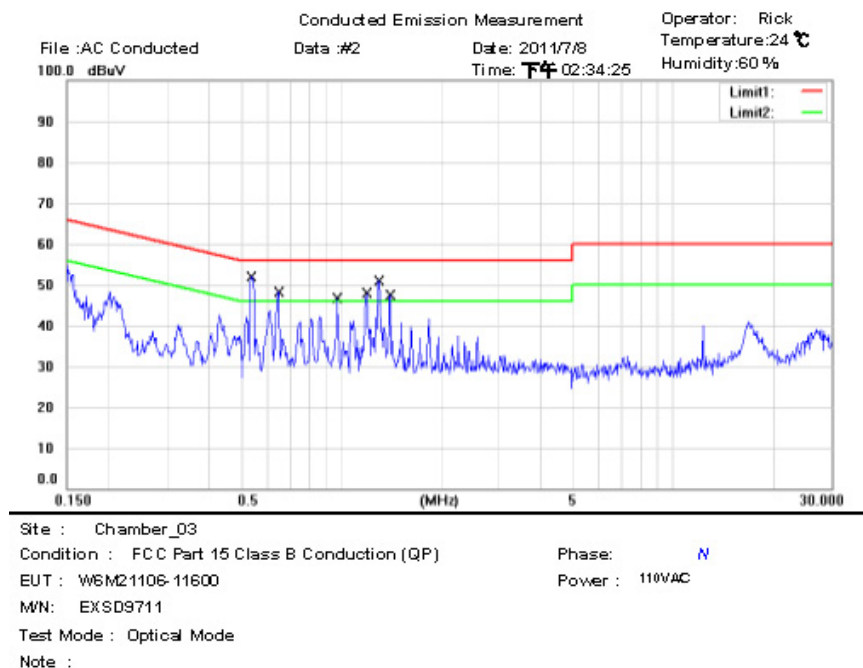
| No. | Frequency (MHz) | Reading (dBuV) | Detector | Corrected factor(dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|----------------------|---------------|--------------|-------------|---------|
| | 0.1530 | 32.24 | QP | 10.00 | 42.24 | 65.84 | -23.60 | |
| | 0.1530 | 20.27 | AVG | 10.00 | 30.27 | 56.84 | -25.57 | |
| | 0.2037 | 33.79 | QP | 9.94 | 43.73 | 63.46 | -19.73 | |
| | 0.2037 | 23.84 | AVG | 9.94 | 33.78 | 53.46 | -19.68 | |
| | 0.5472 | 22.09 | QP | 10.00 | 32.09 | 56.00 | -23.91 | |
| | 0.5472 | 3.54 | AVG | 10.00 | 13.54 | 46.00 | -32.46 | |
| * | 1.2927 | 37.24 | QP | 10.03 | 47.27 | 56.00 | -8.73 | |
| | 1.2927 | 18.20 | AVG | 10.03 | 28.23 | 46.00 | -17.77 | |
| | 1.2965 | 34.82 | QP | 10.03 | 44.85 | 56.00 | -11.15 | |
| | 1.2965 | 15.72 | AVG | 10.03 | 25.75 | 46.00 | -20.25 | |
| | 1.4000 | 33.38 | QP | 10.04 | 43.42 | 56.00 | -12.58 | |
| | 1.4000 | 16.89 | AVG | 10.04 | 26.93 | 46.00 | -19.07 | |



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Optical Mode



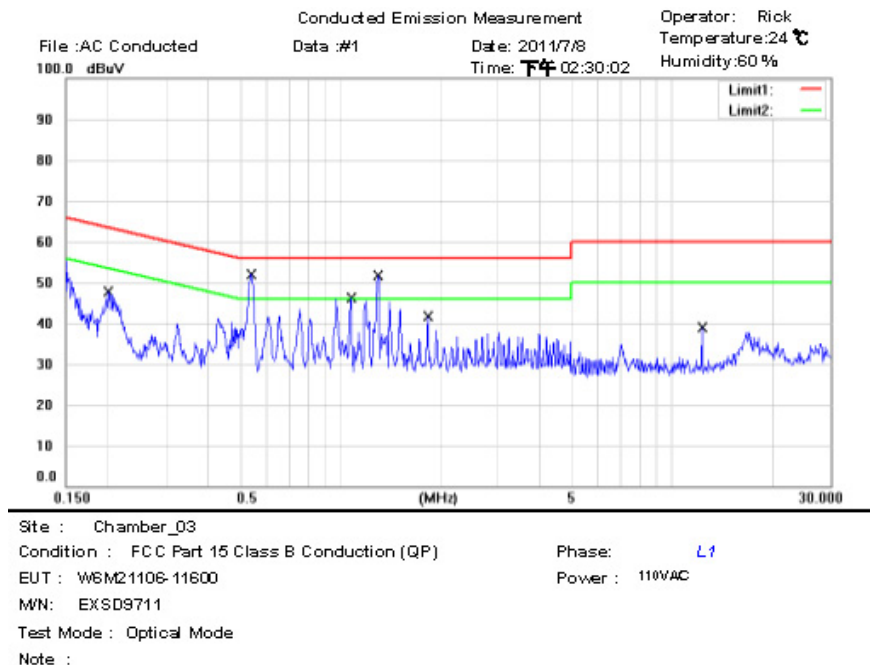
| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corrected factor (dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|-----------------------|---------------|--------------|-------------|---------|
| * | 0.5360 | 38.18 | QP | 9.93 | 48.11 | 56.00 | -7.89 | |
| | 0.5360 | 21.59 | AVG | 9.93 | 31.52 | 46.00 | -14.48 | |
| | 0.6462 | 34.55 | QP | 9.94 | 44.49 | 56.00 | -11.51 | |
| | 0.6462 | 16.85 | AVG | 9.94 | 26.79 | 46.00 | -19.21 | |
| | 0.9680 | 31.86 | QP | 9.96 | 41.82 | 56.00 | -14.18 | |
| | 0.9680 | 16.03 | AVG | 9.96 | 25.99 | 46.00 | -20.01 | |
| | 1.1885 | 26.07 | QP | 9.97 | 36.04 | 56.00 | -19.96 | |
| | 1.1885 | 9.20 | AVG | 9.97 | 19.17 | 46.00 | -26.83 | |
| | 1.2898 | 36.80 | QP | 9.97 | 46.77 | 56.00 | -9.23 | |
| | 1.2898 | 18.01 | AVG | 9.97 | 27.98 | 46.00 | -18.02 | |
| | 1.4000 | 32.82 | QP | 9.98 | 42.80 | 56.00 | -13.20 | |
| | 1.4000 | 16.72 | AVG | 9.98 | 26.70 | 46.00 | -19.30 | |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



| MH. | Frequency (MHz) | Reading (dBuV) | Detector | Corrected factor(dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|----------------------|---------------|--------------|-------------|---------|
| | 0.2002 | 32.44 | QP | 9.94 | 42.38 | 63.60 | -21.22 | |
| | 0.2002 | 22.52 | AVG | 9.94 | 32.46 | 53.60 | -21.14 | |
| * | 0.5382 | 39.05 | QP | 10.00 | 49.05 | 56.00 | -6.95 | |
| | 0.5382 | 20.73 | AVG | 10.00 | 30.73 | 46.00 | -15.27 | |
| | 1.0737 | 32.30 | QP | 10.02 | 42.32 | 56.00 | -13.68 | |
| | 1.0737 | 15.79 | AVG | 10.02 | 25.81 | 46.00 | -20.19 | |
| | 1.2920 | 37.00 | QP | 10.03 | 47.03 | 56.00 | -8.97 | |
| | 1.2920 | 17.94 | AVG | 10.03 | 27.97 | 46.00 | -18.03 | |
| | 1.8253 | 24.49 | QP | 10.06 | 34.55 | 56.00 | -21.45 | |
| | 1.8253 | 21.60 | AVG | 10.06 | 31.66 | 46.00 | -14.34 | |
| | 12.2875 | 26.36 | QP | 10.78 | 37.14 | 60.00 | -22.86 | |
| | 12.2875 | 25.56 | AVG | 10.78 | 36.34 | 50.00 | -13.66 | |

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

Limits:

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

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



Appendix

A Measurement diagrams

Spurious Emissions radiated

B Photos

1. External Photos
2. Internal Photos
3. Set Up Photo of Radiated Emission
4. Set Up Photo of Conducted Emission



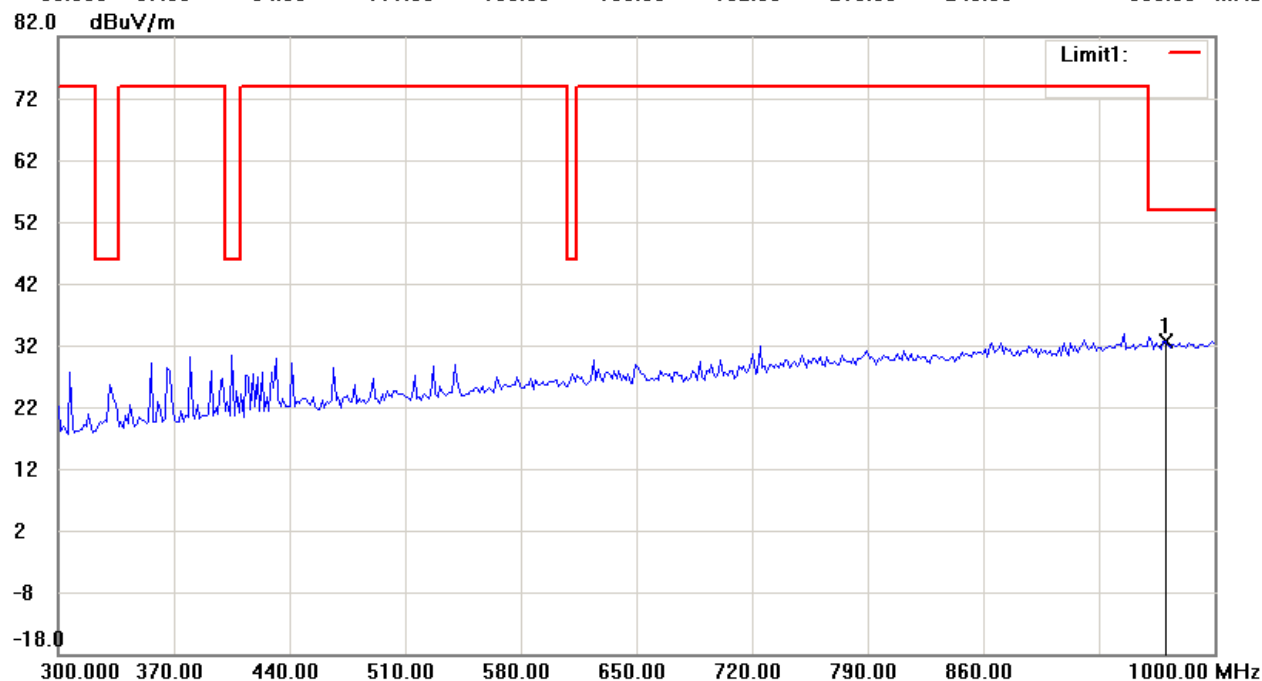
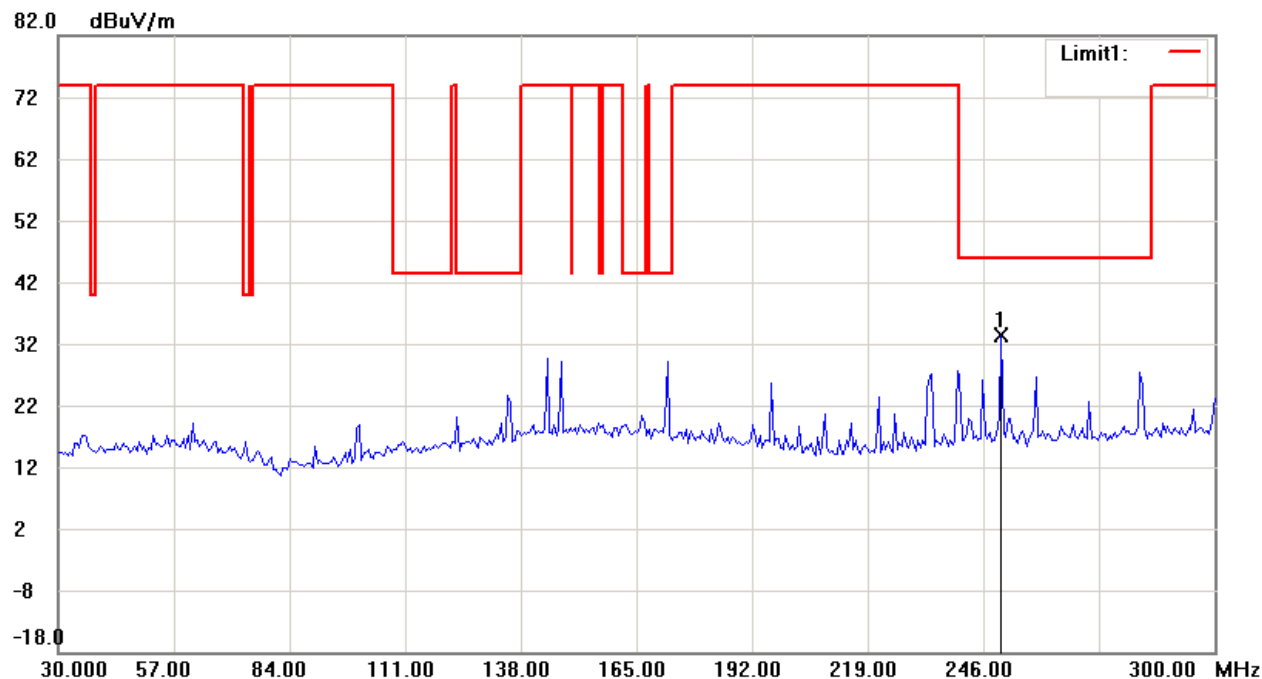
Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Spurious emission radiated

2404 MHz

Antenna Polarization H



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

Note:

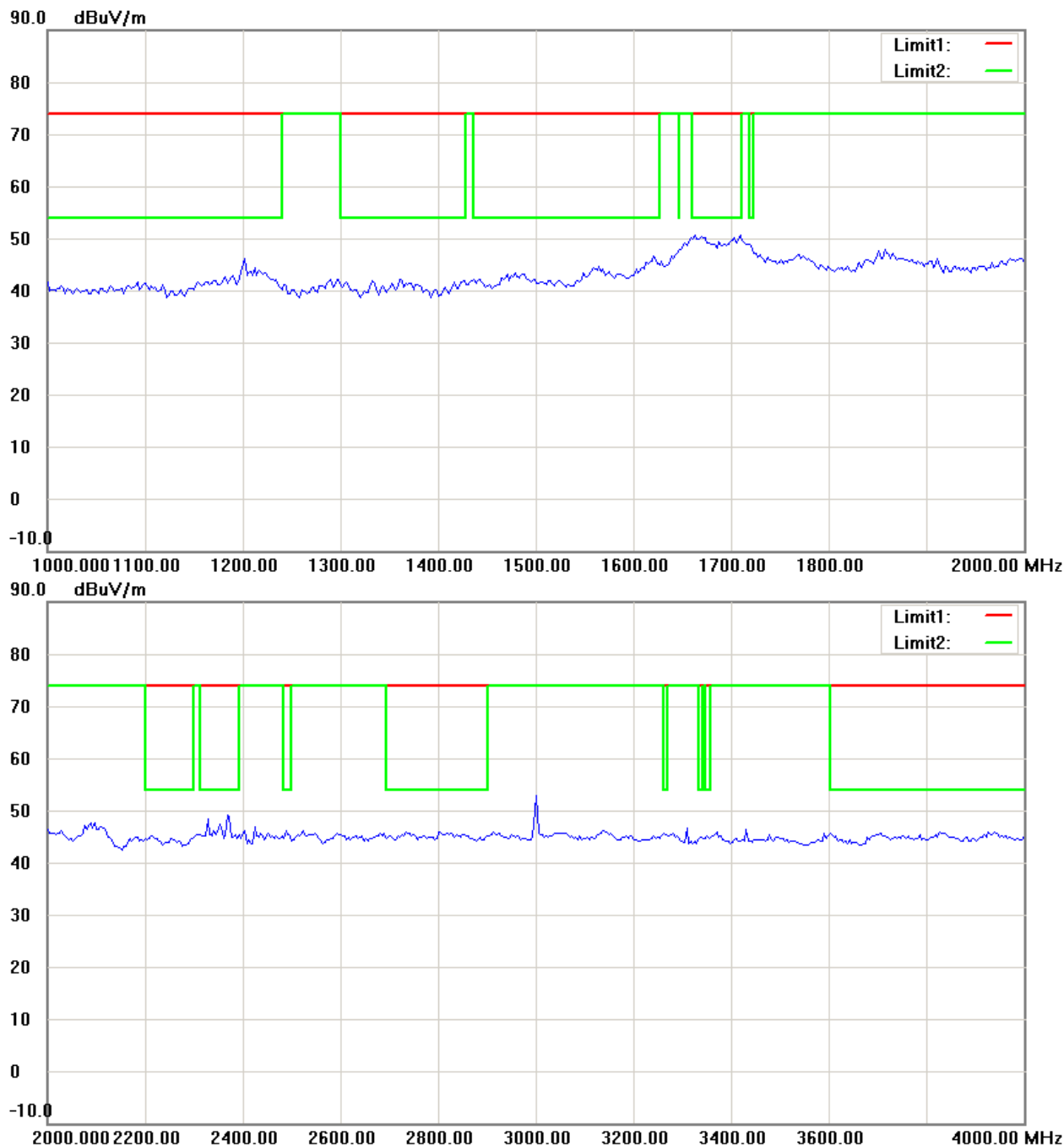
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

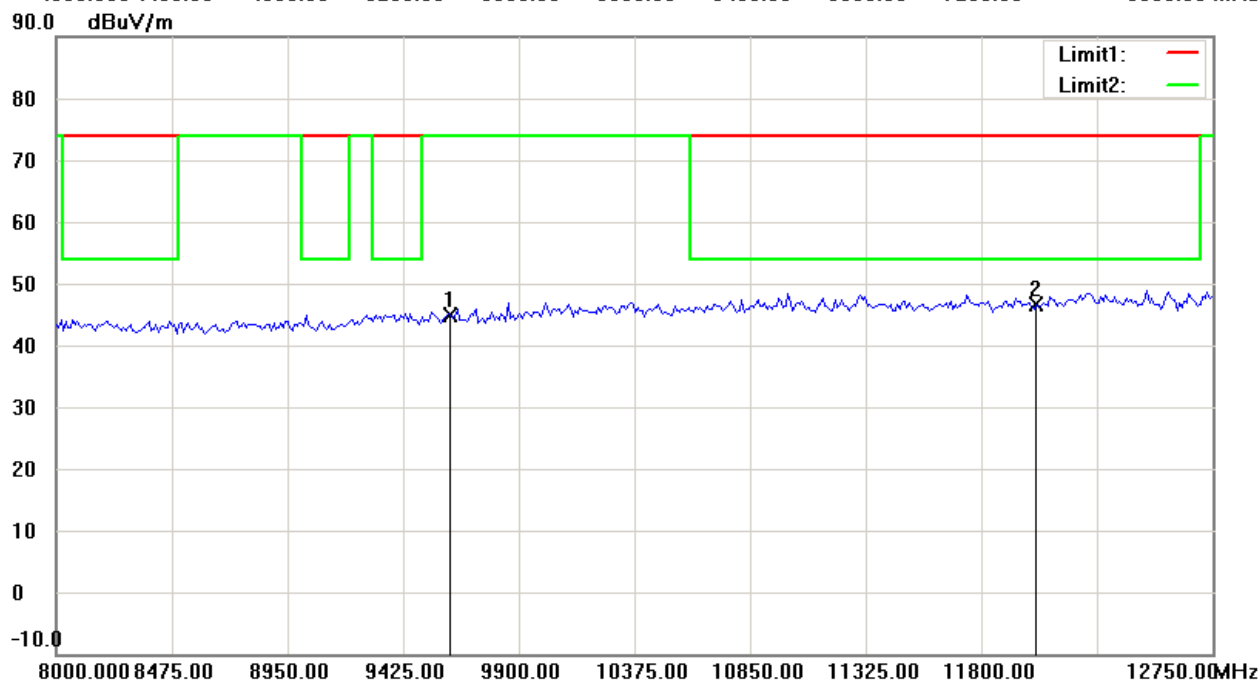
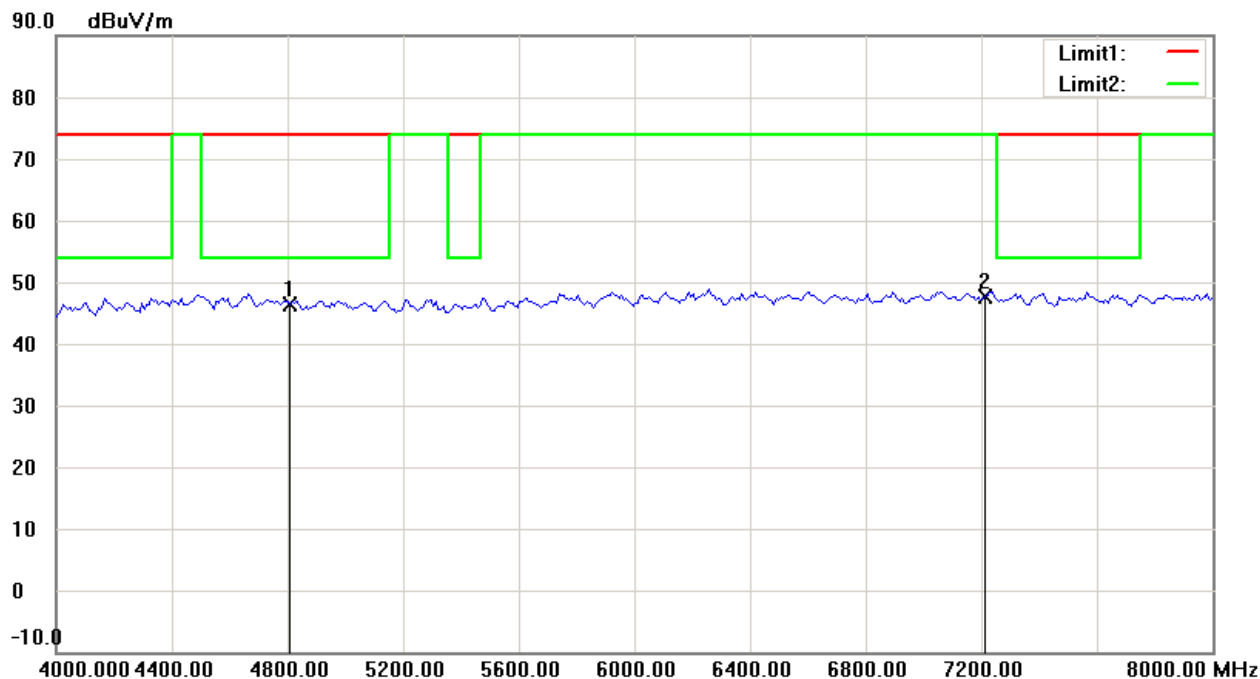
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

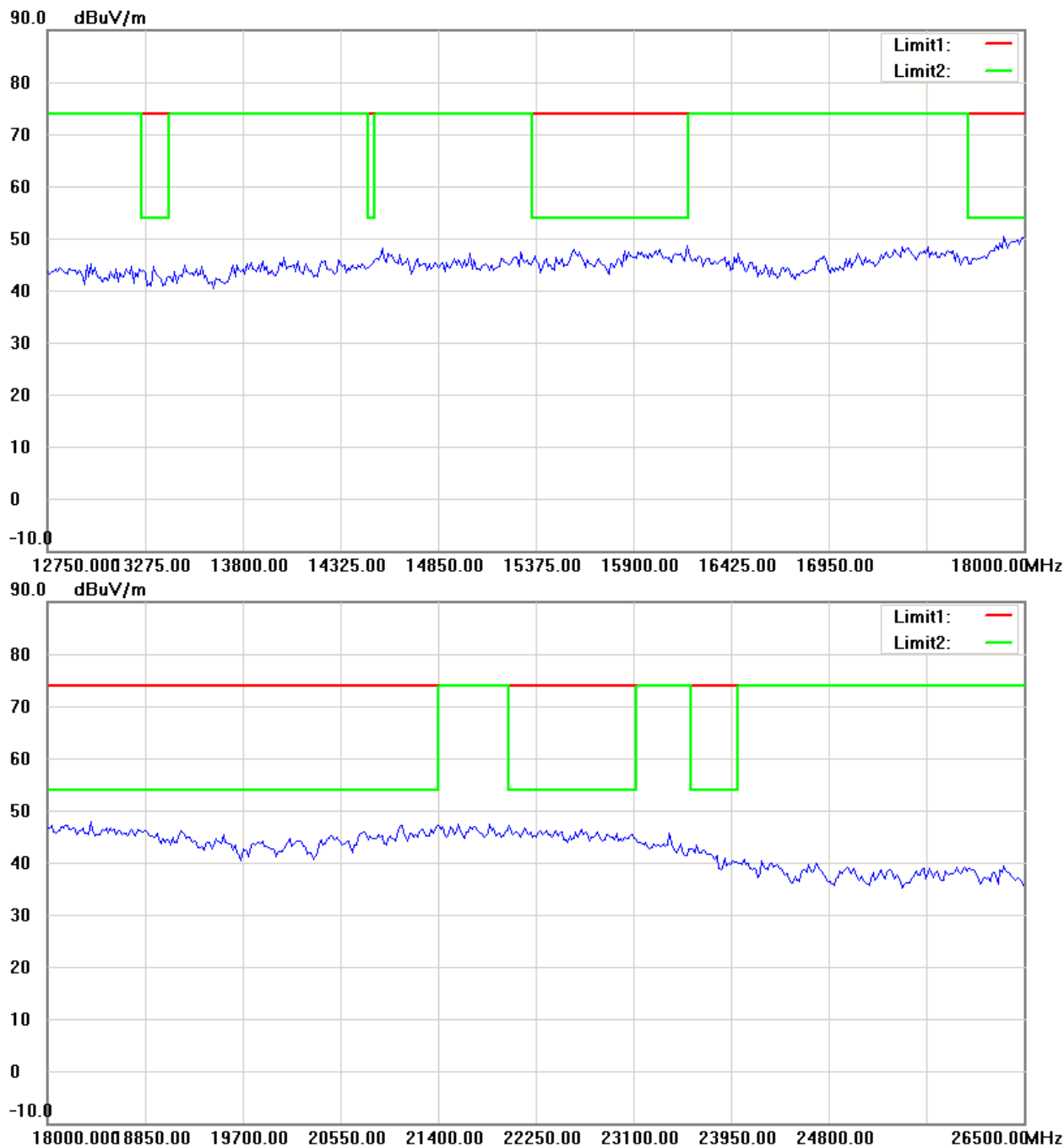
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

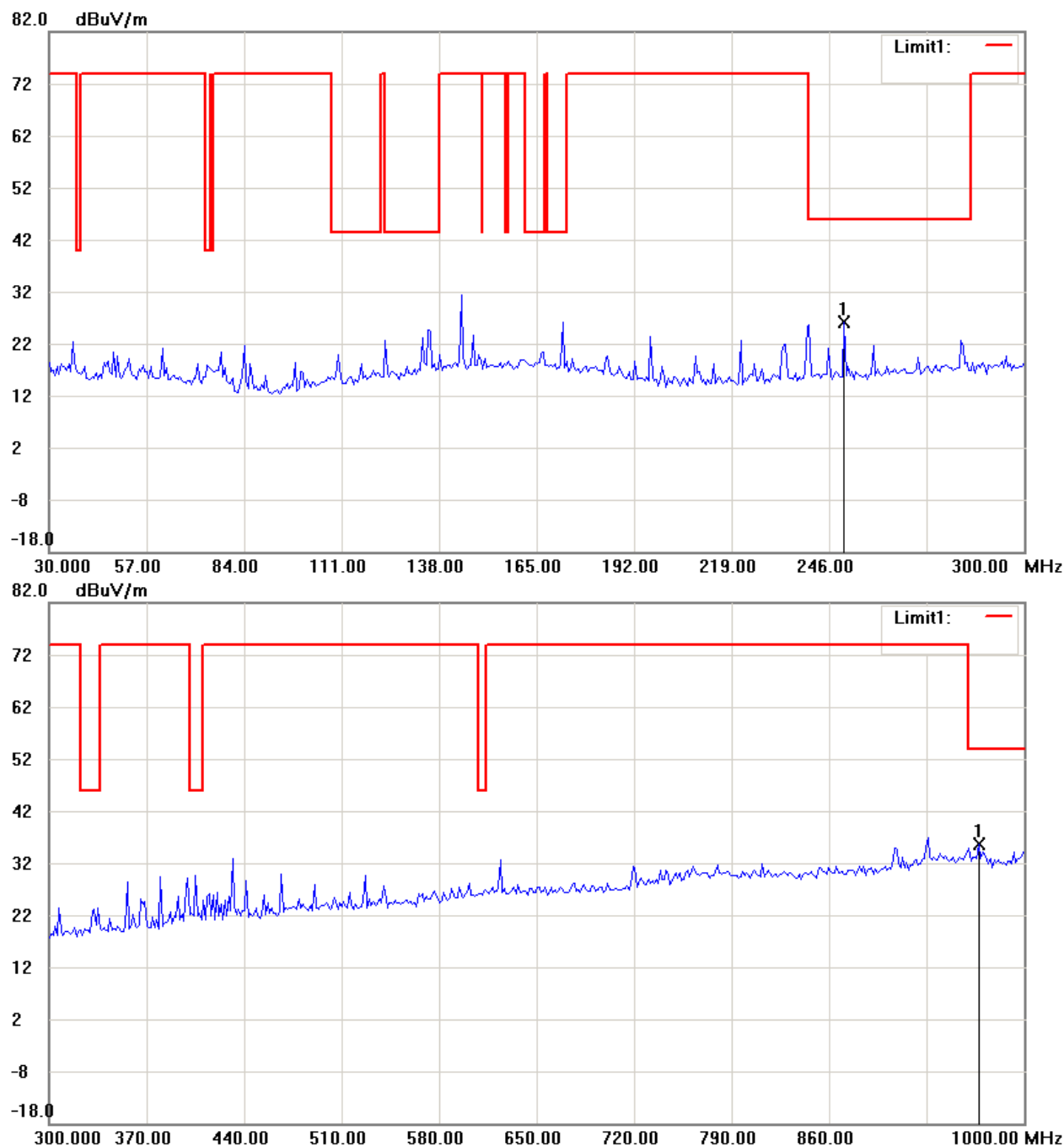
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Antenna Polarization V



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

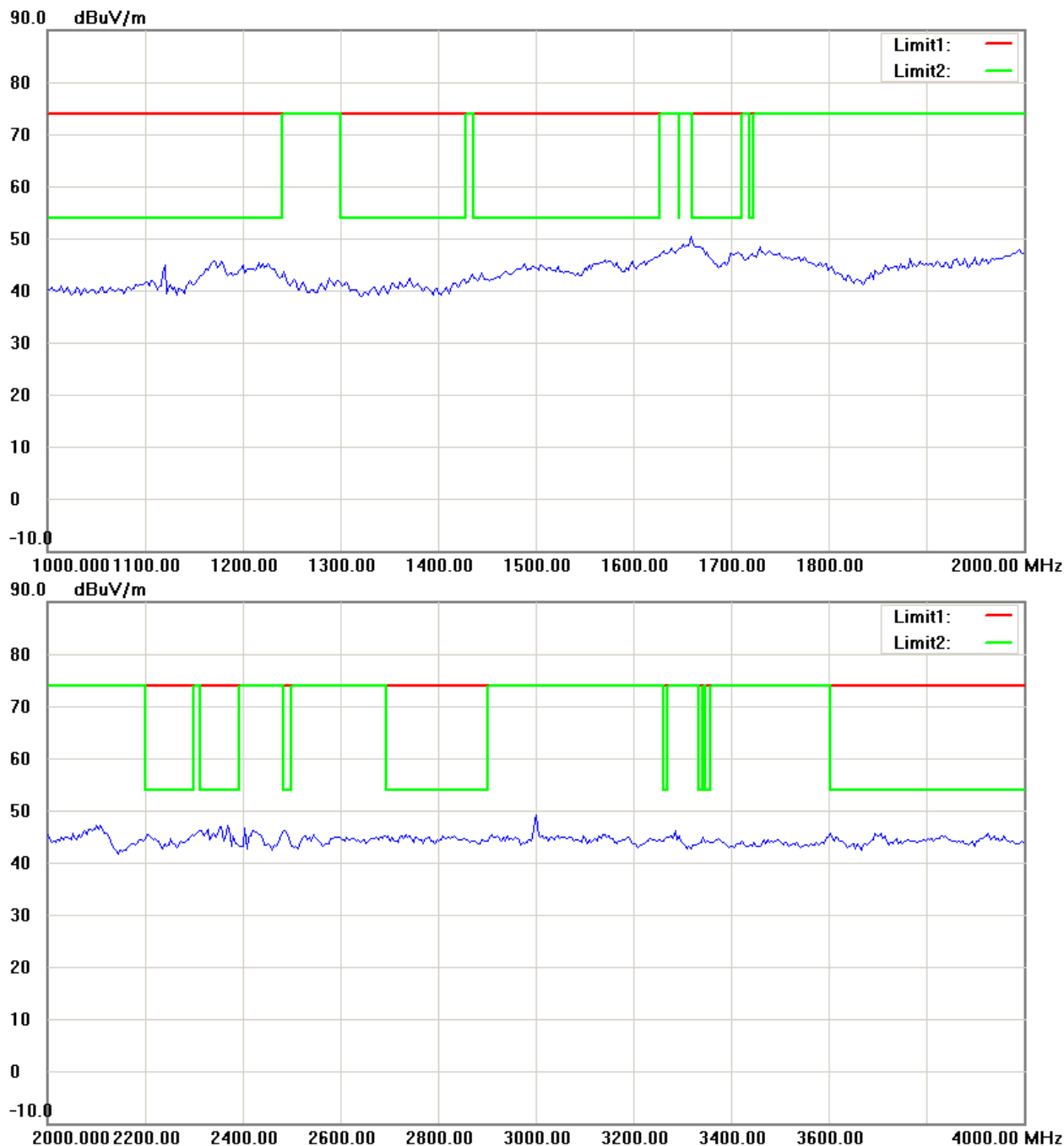
Note:

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



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

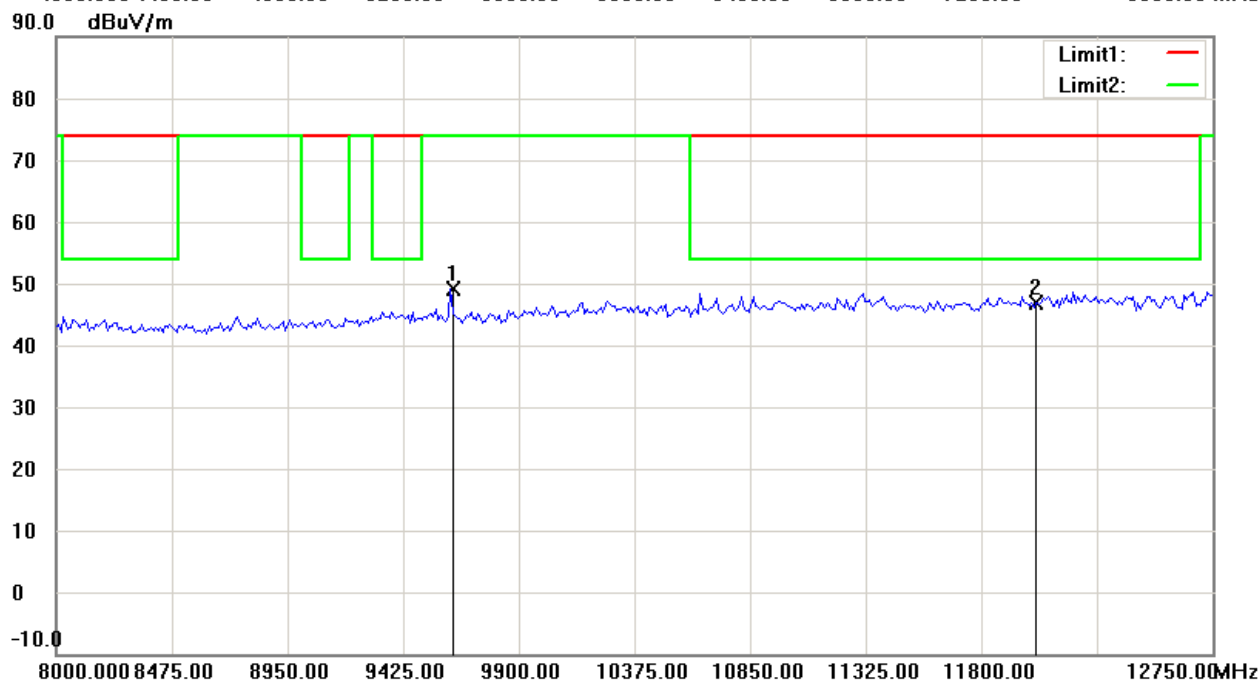
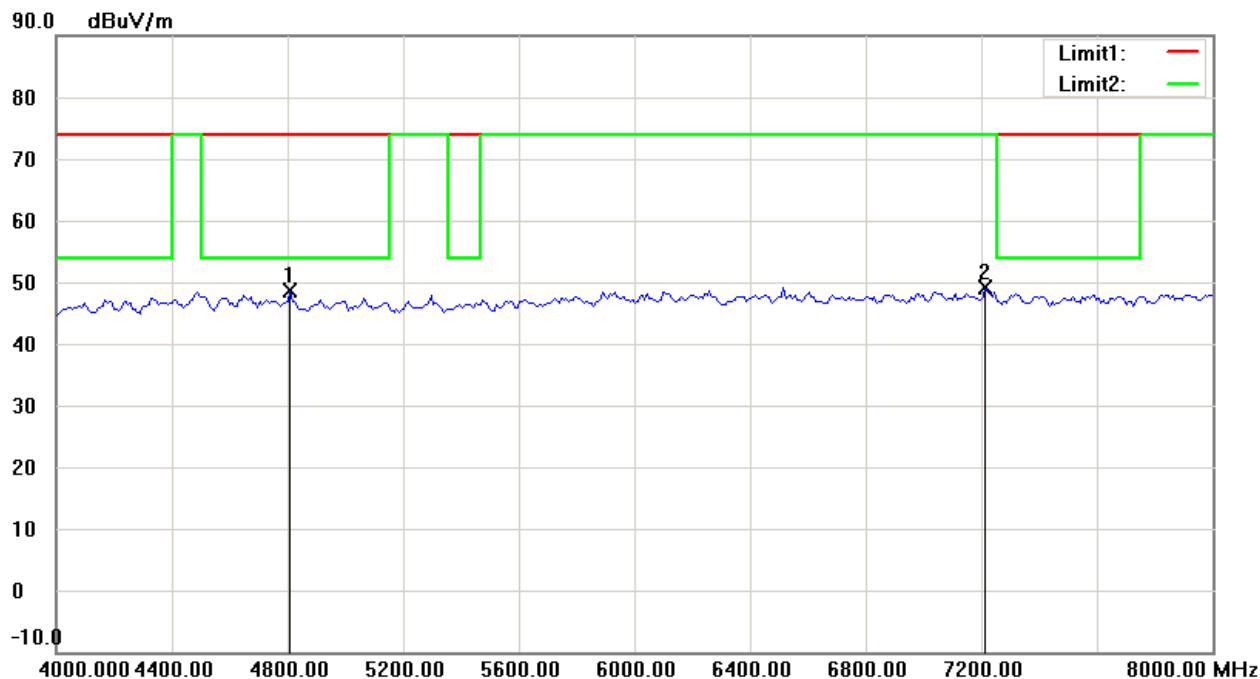
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

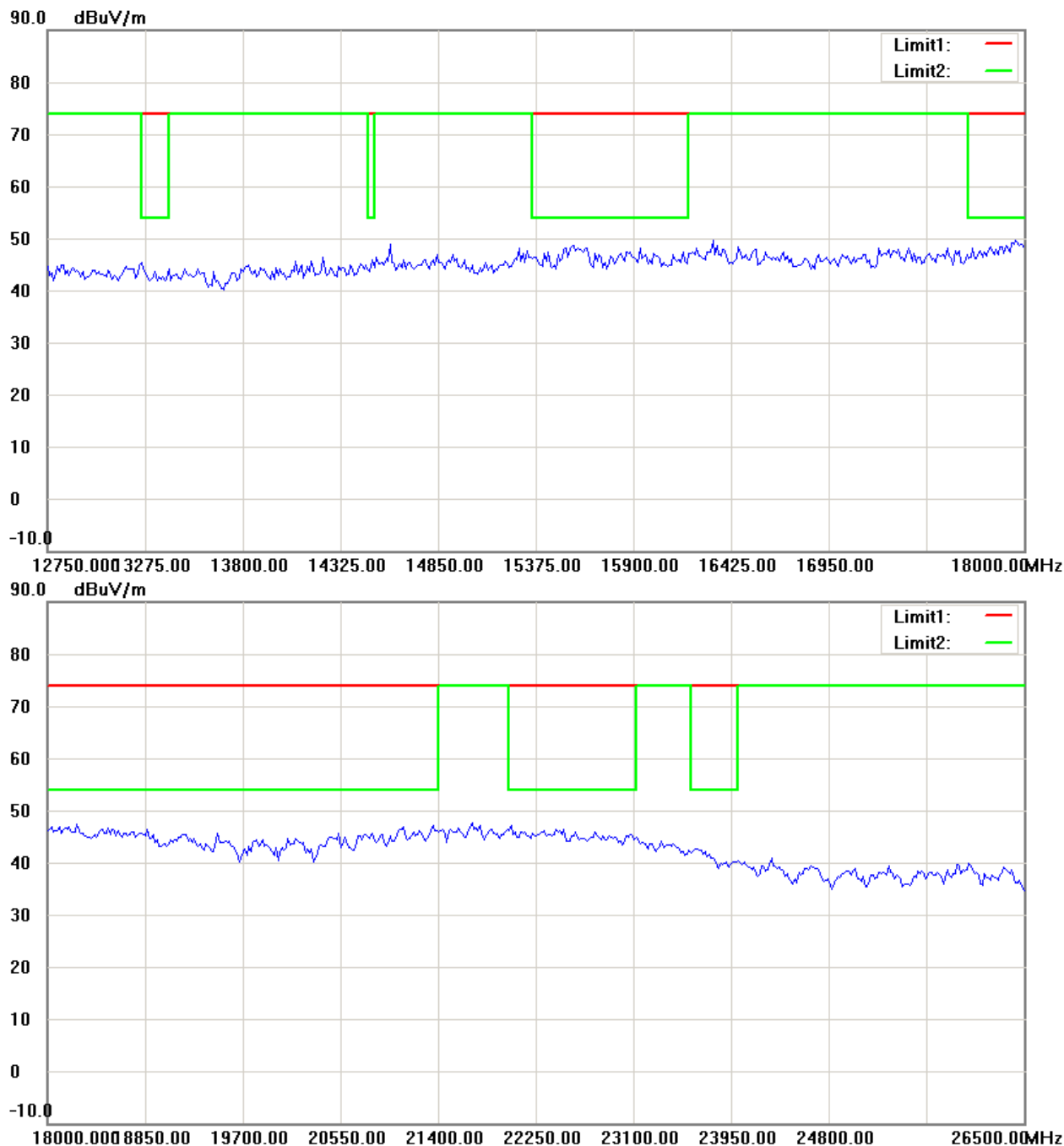
Note:

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



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

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

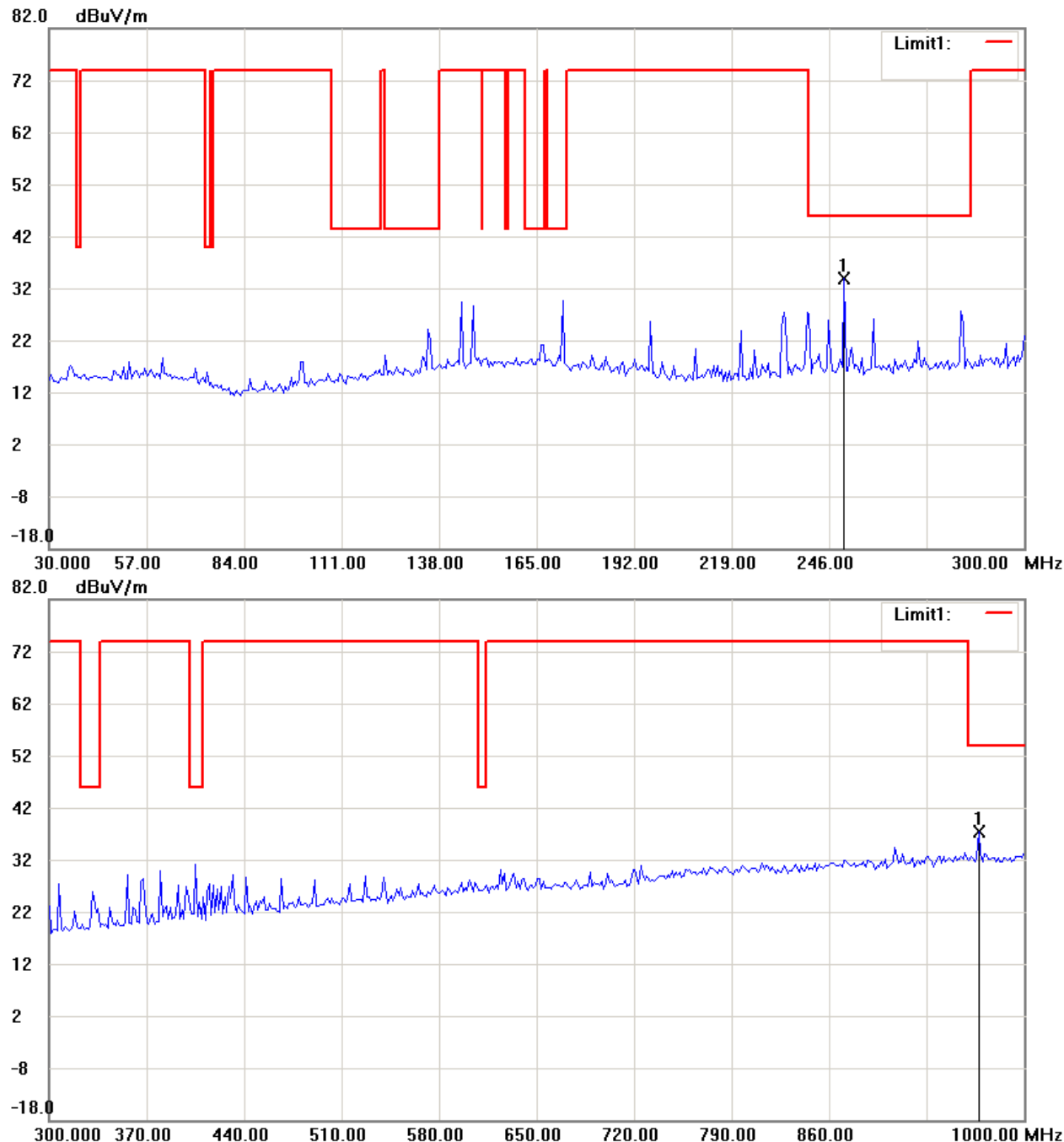


Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

2440 MHz

Antenna Polarization H



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

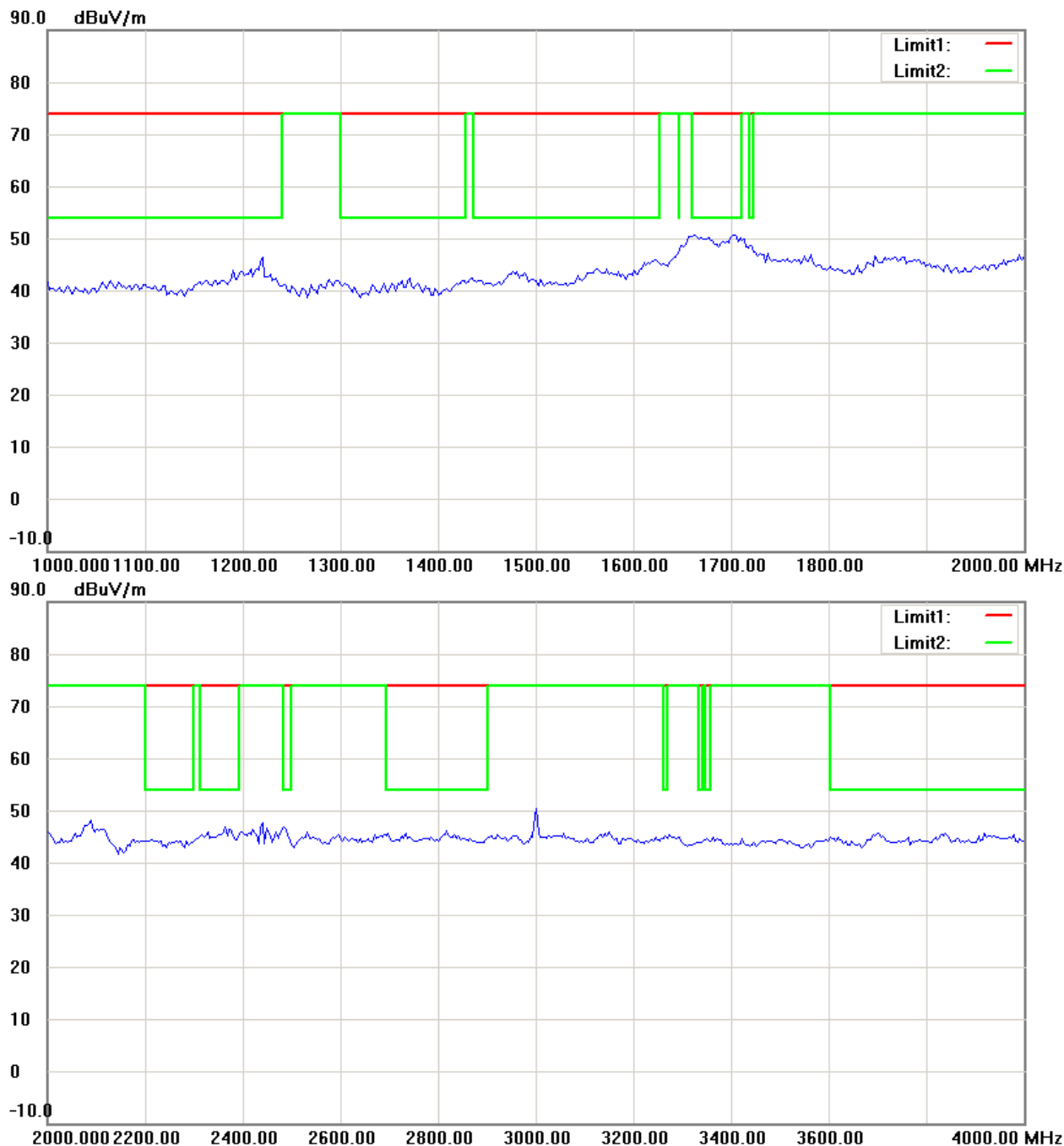
Note:

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.



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

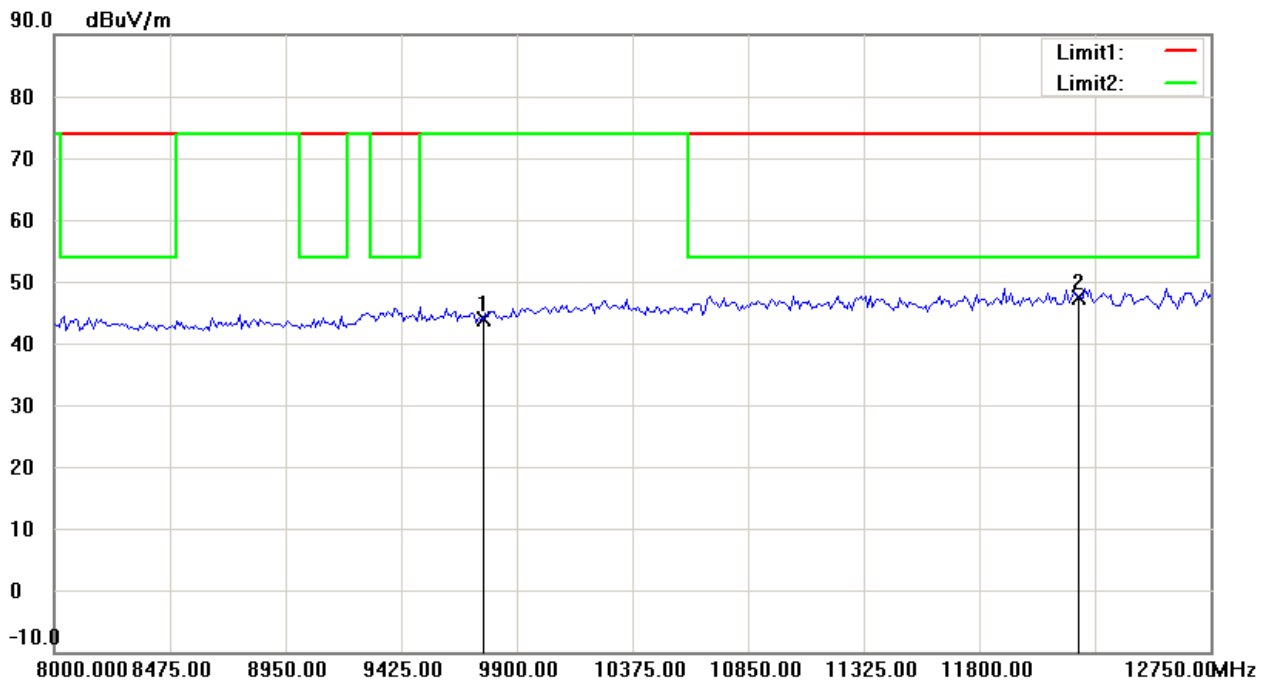
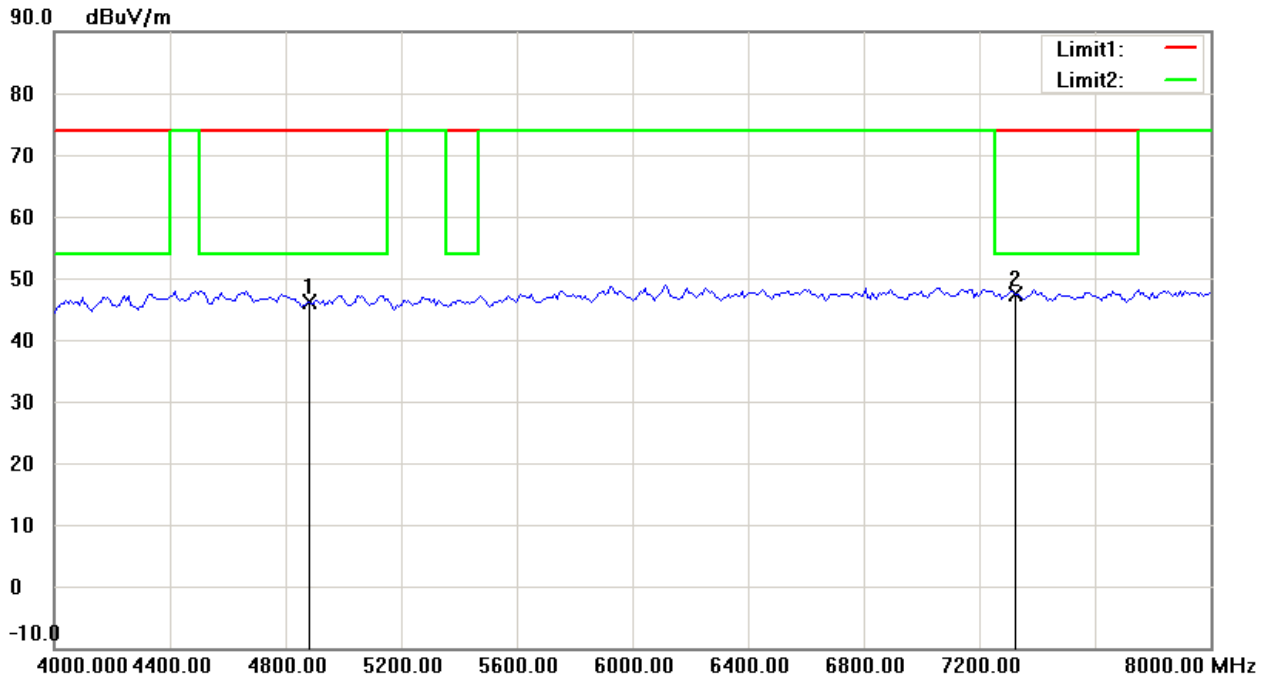
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

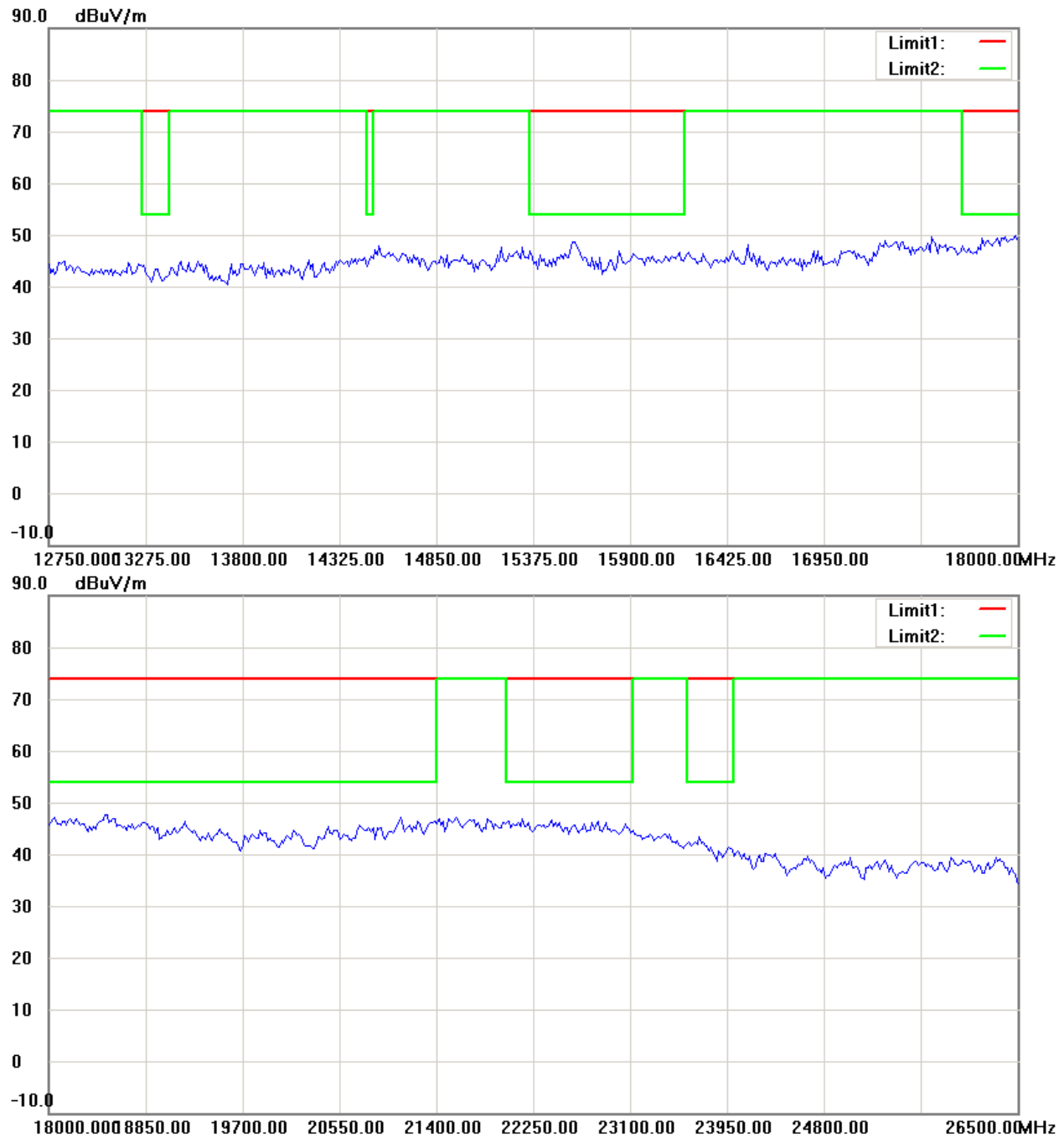
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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.
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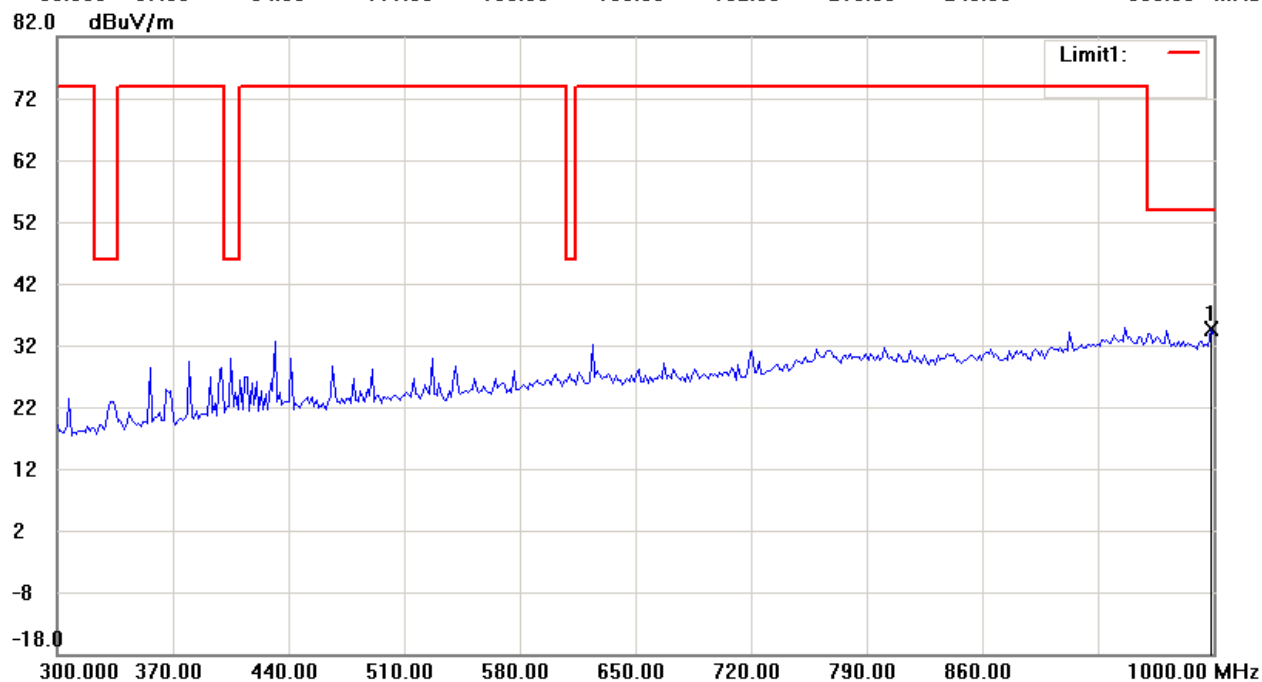
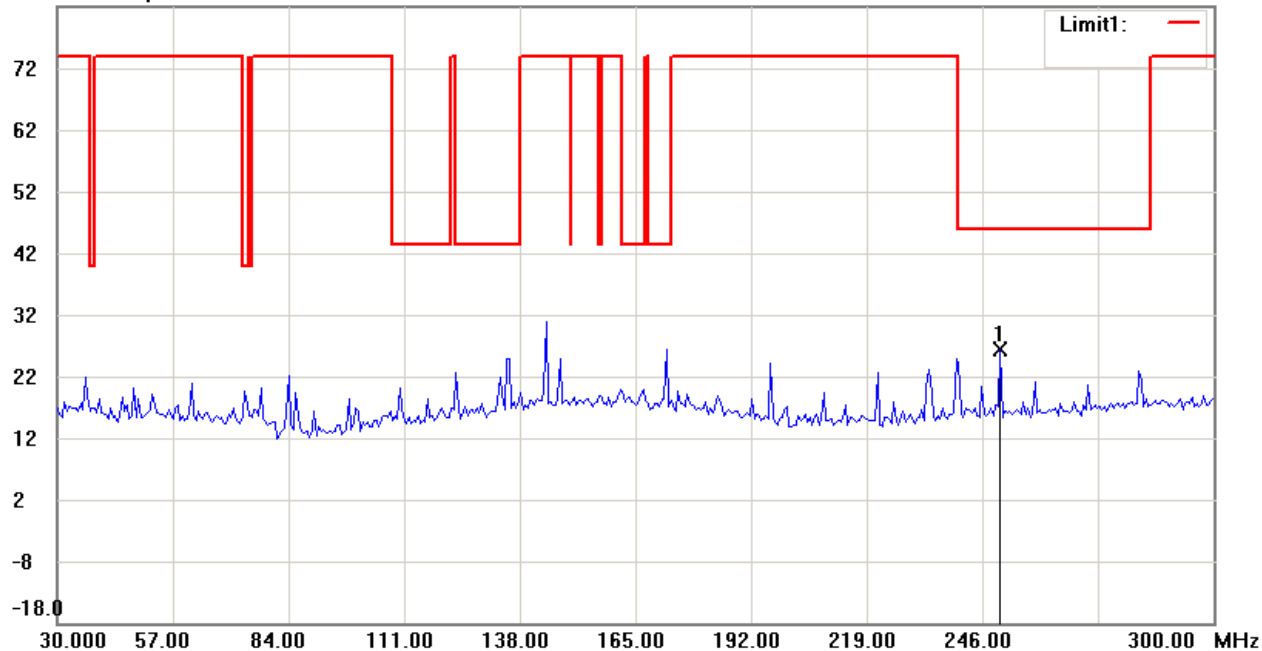


Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Antenna Polarization V

82.0 dBuV/m



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

Note:

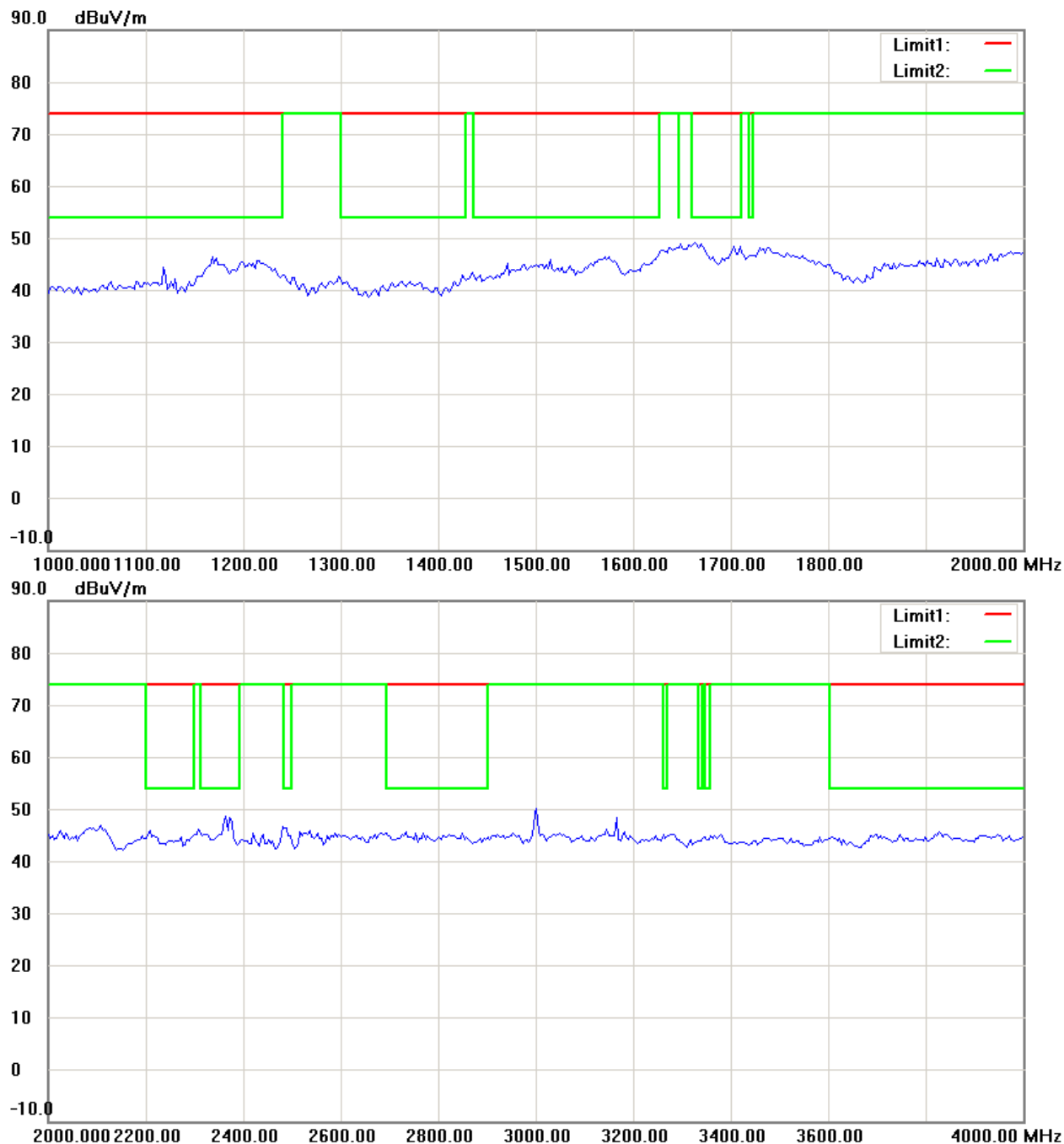
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

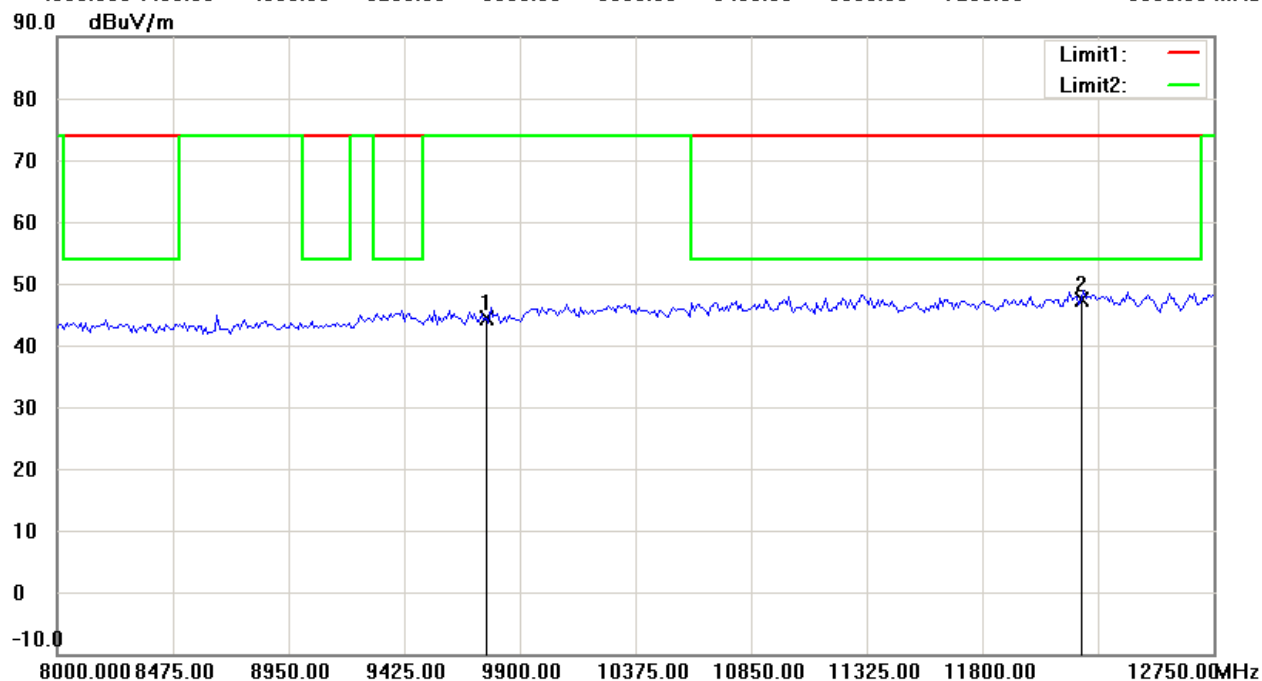
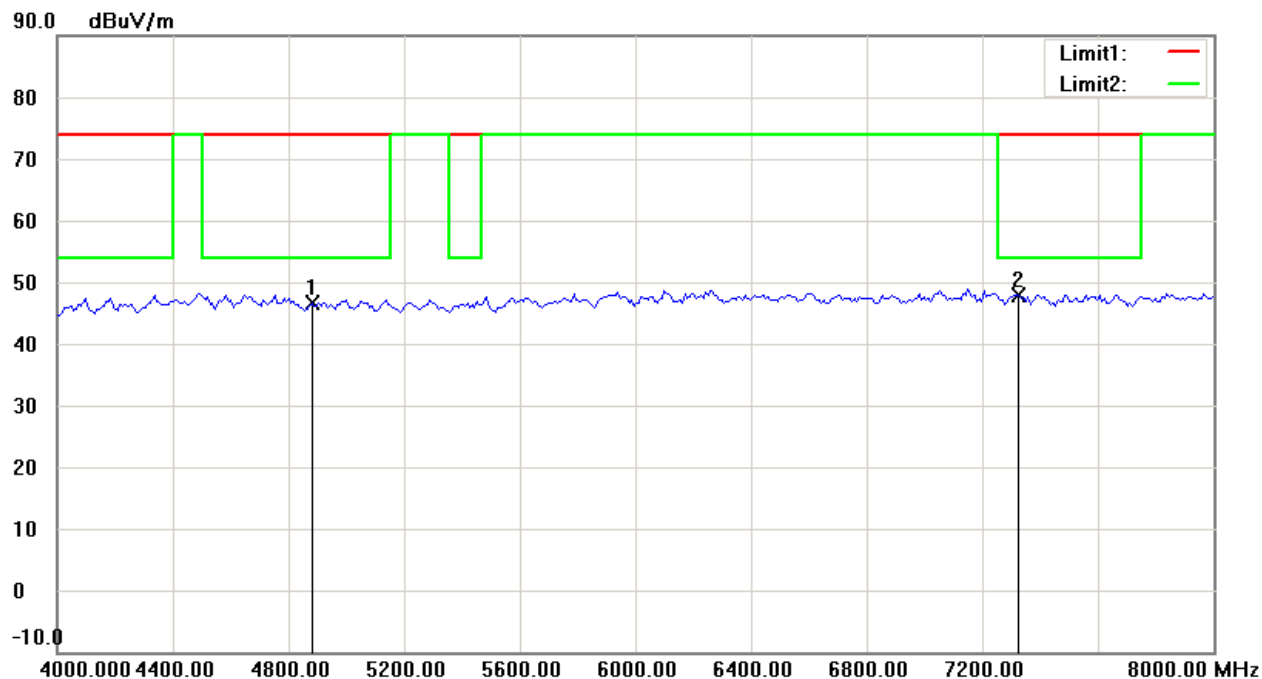
Note:

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



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

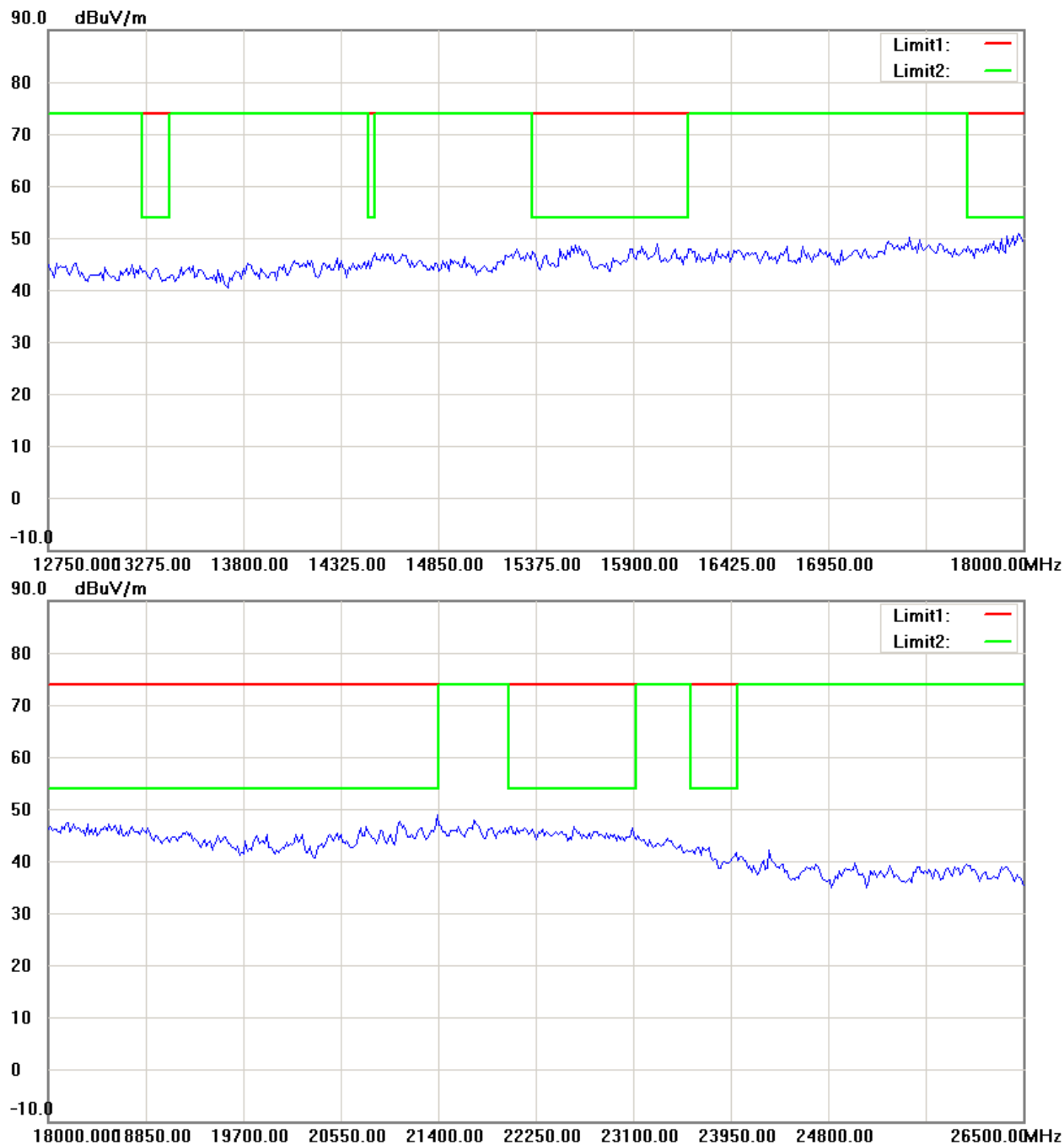
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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.
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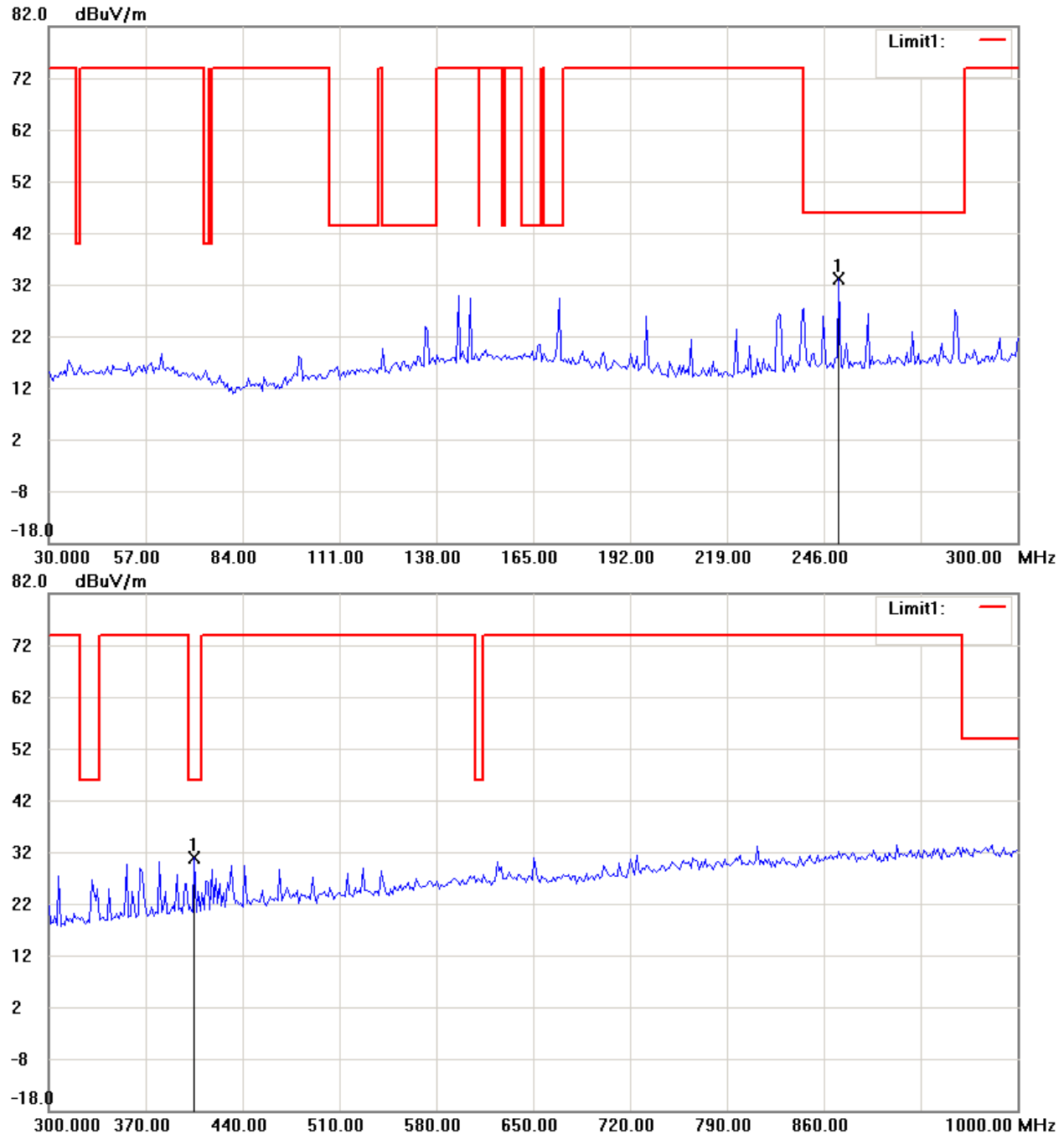


Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

2476 MHz

Antenna Polarization H



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

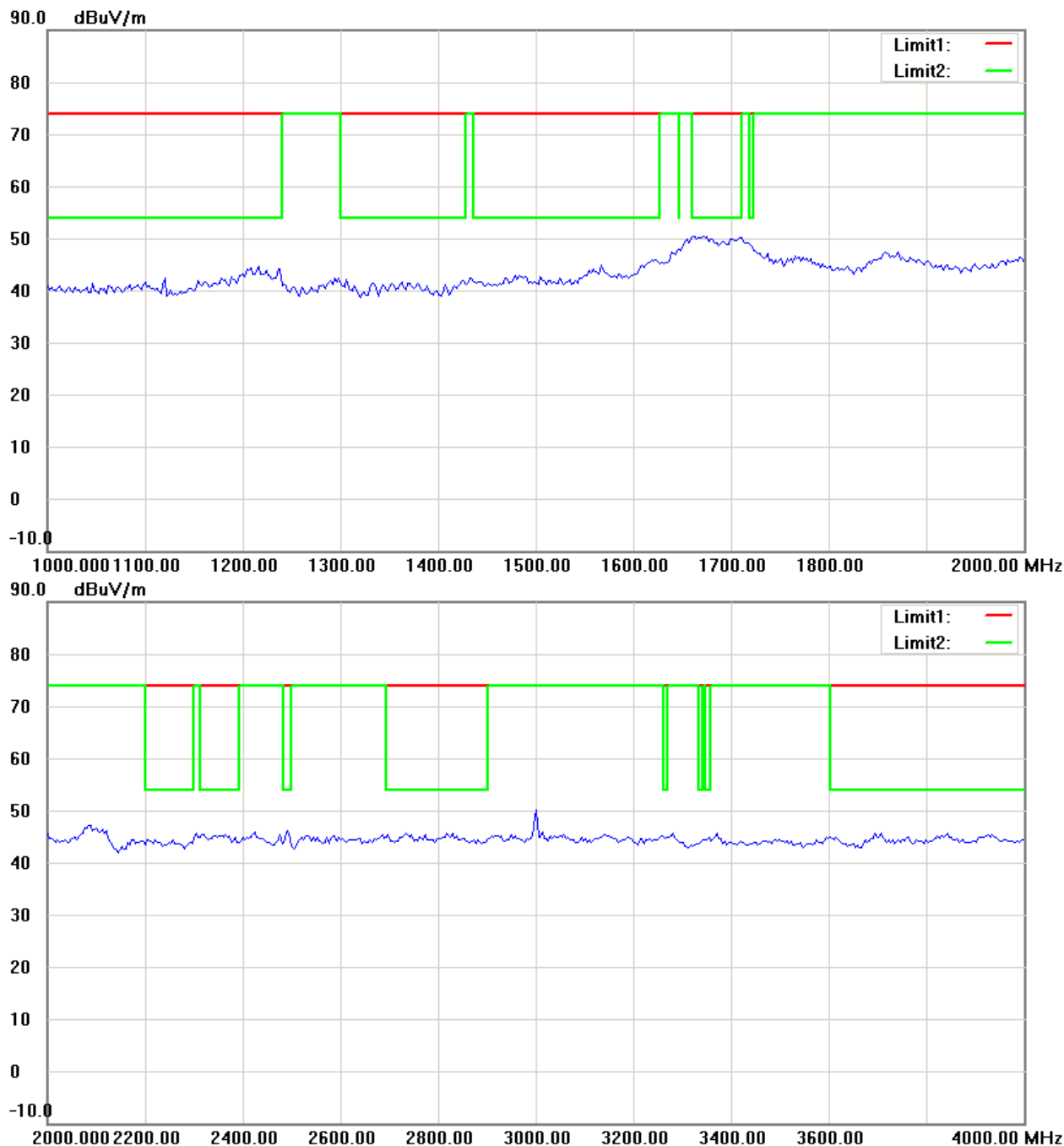
Note:

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.



Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

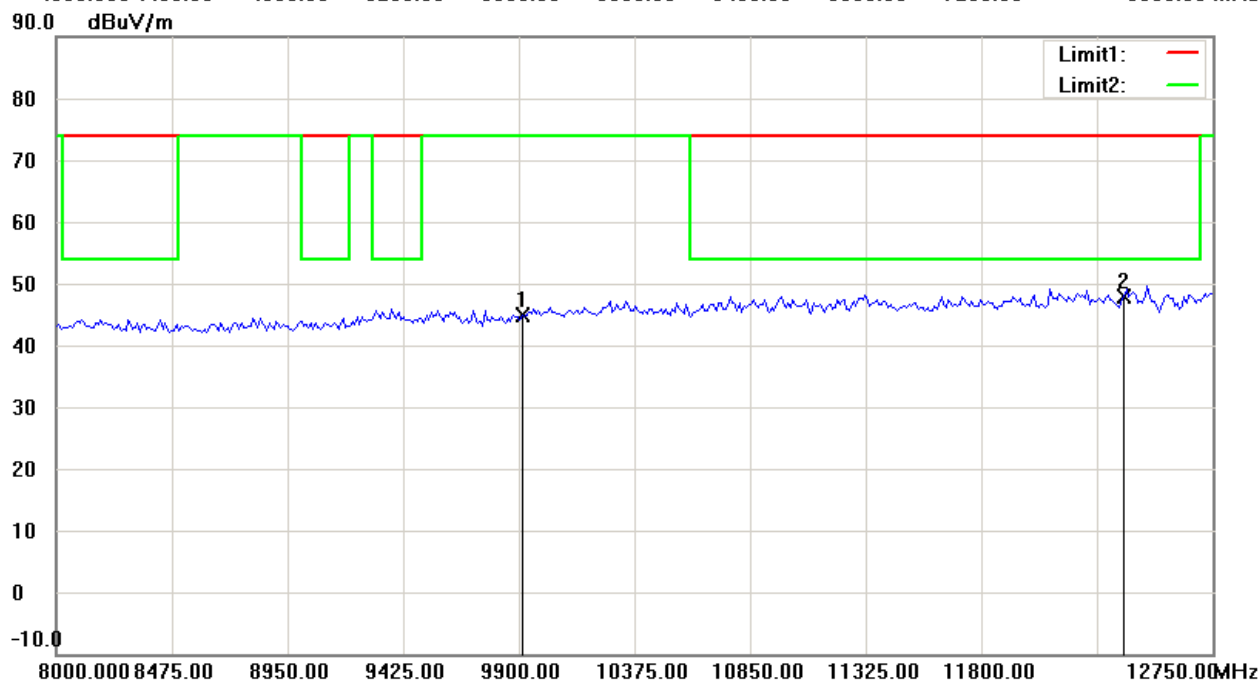
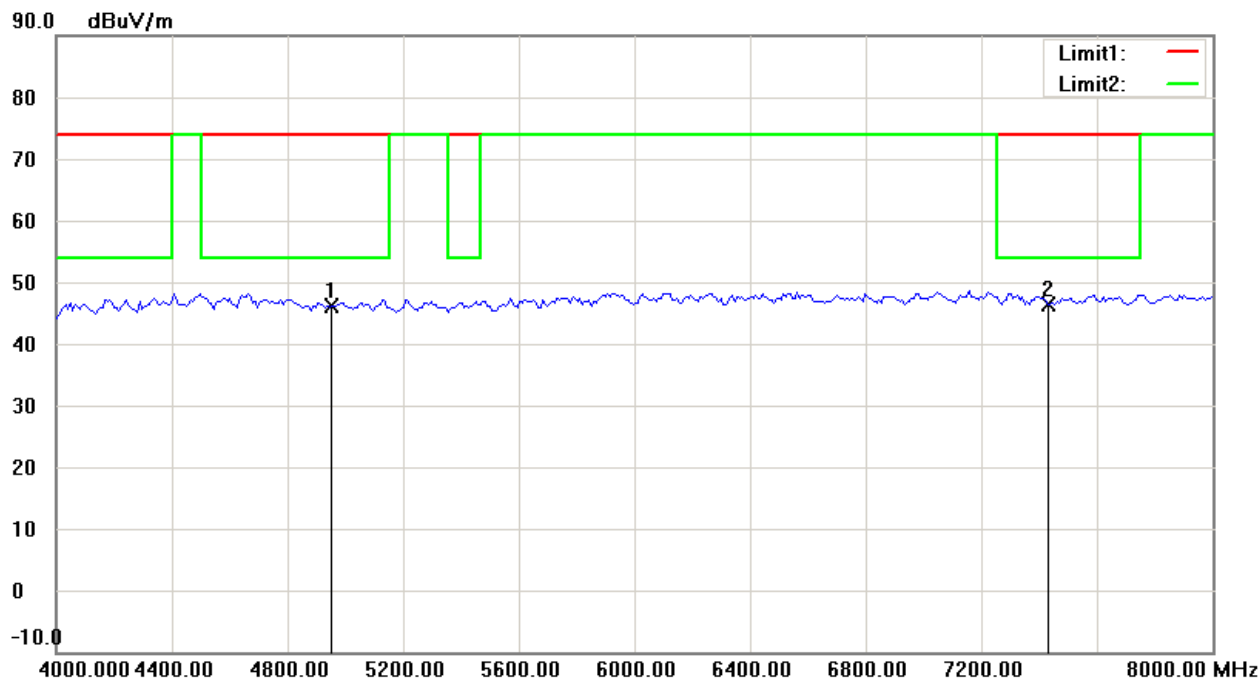
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

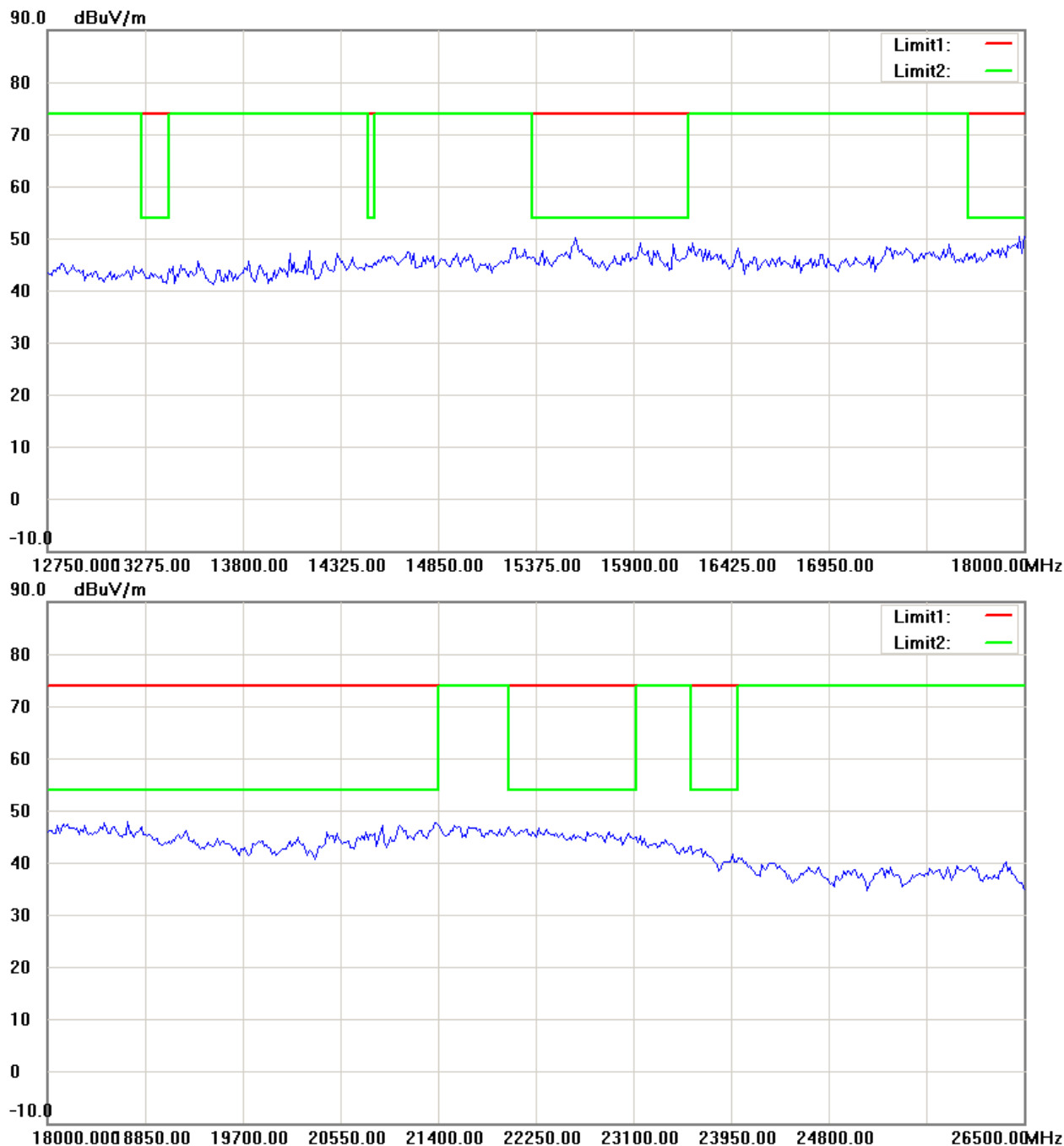
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

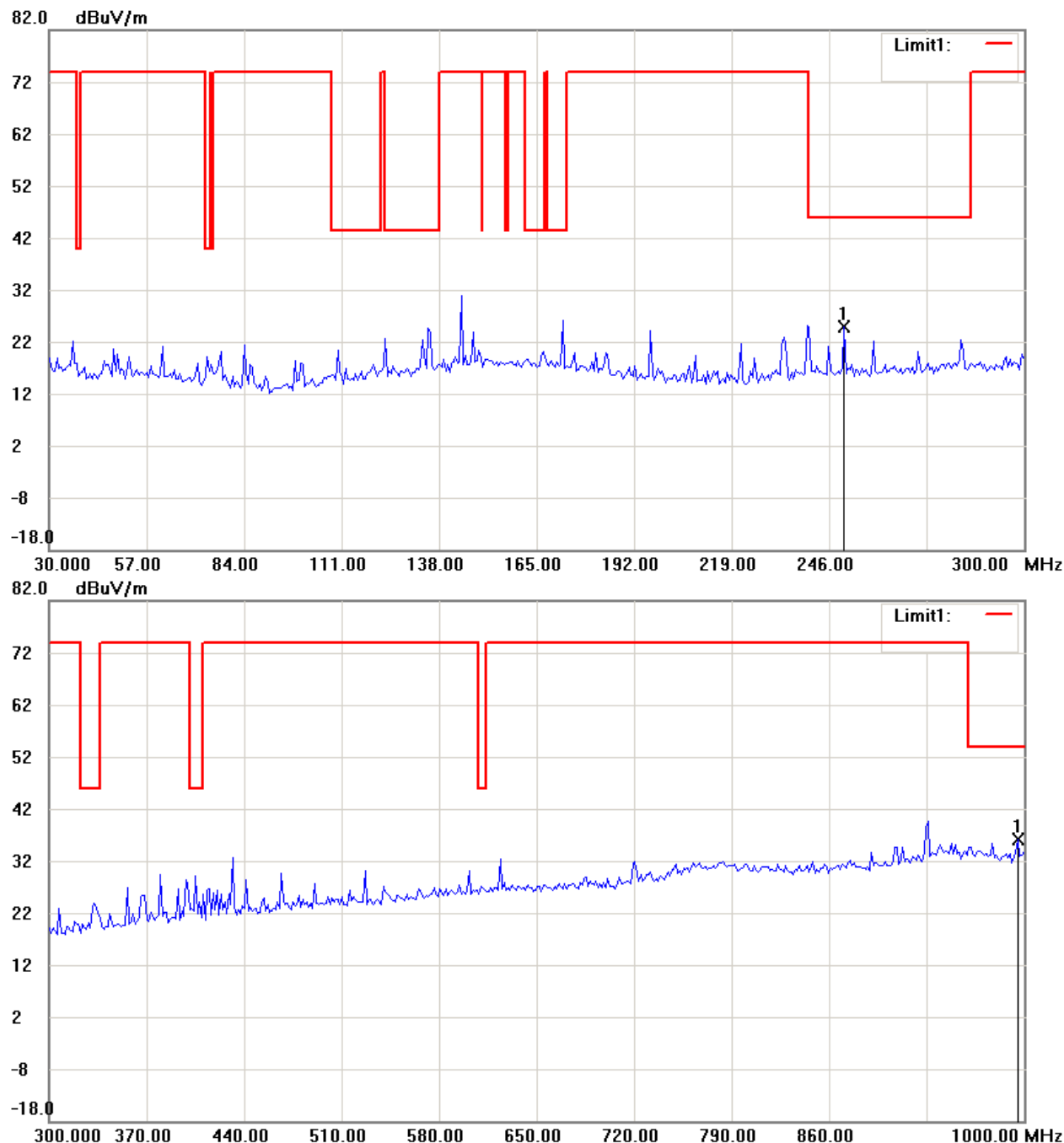
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Antenna Polarization V



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

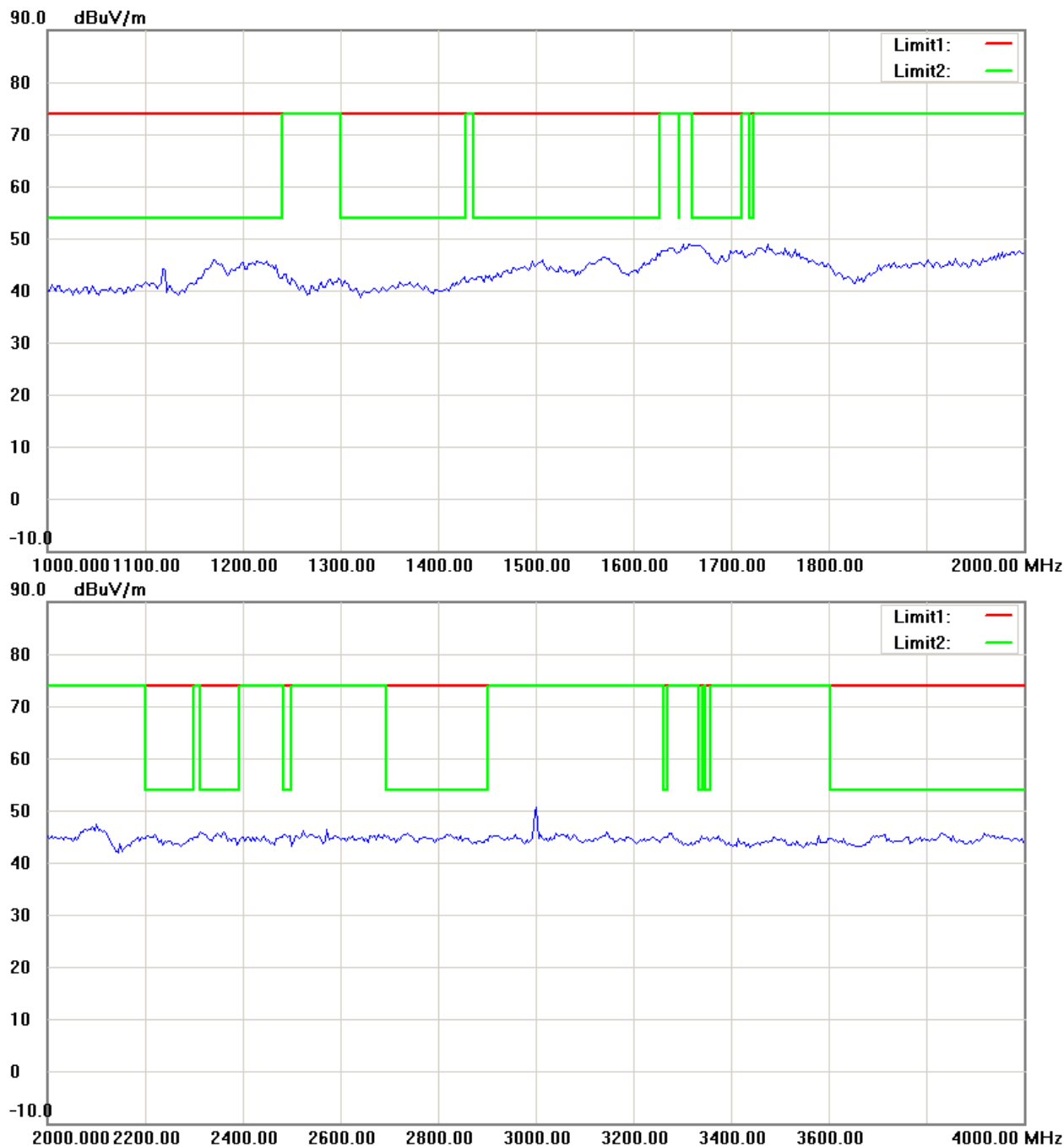
Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

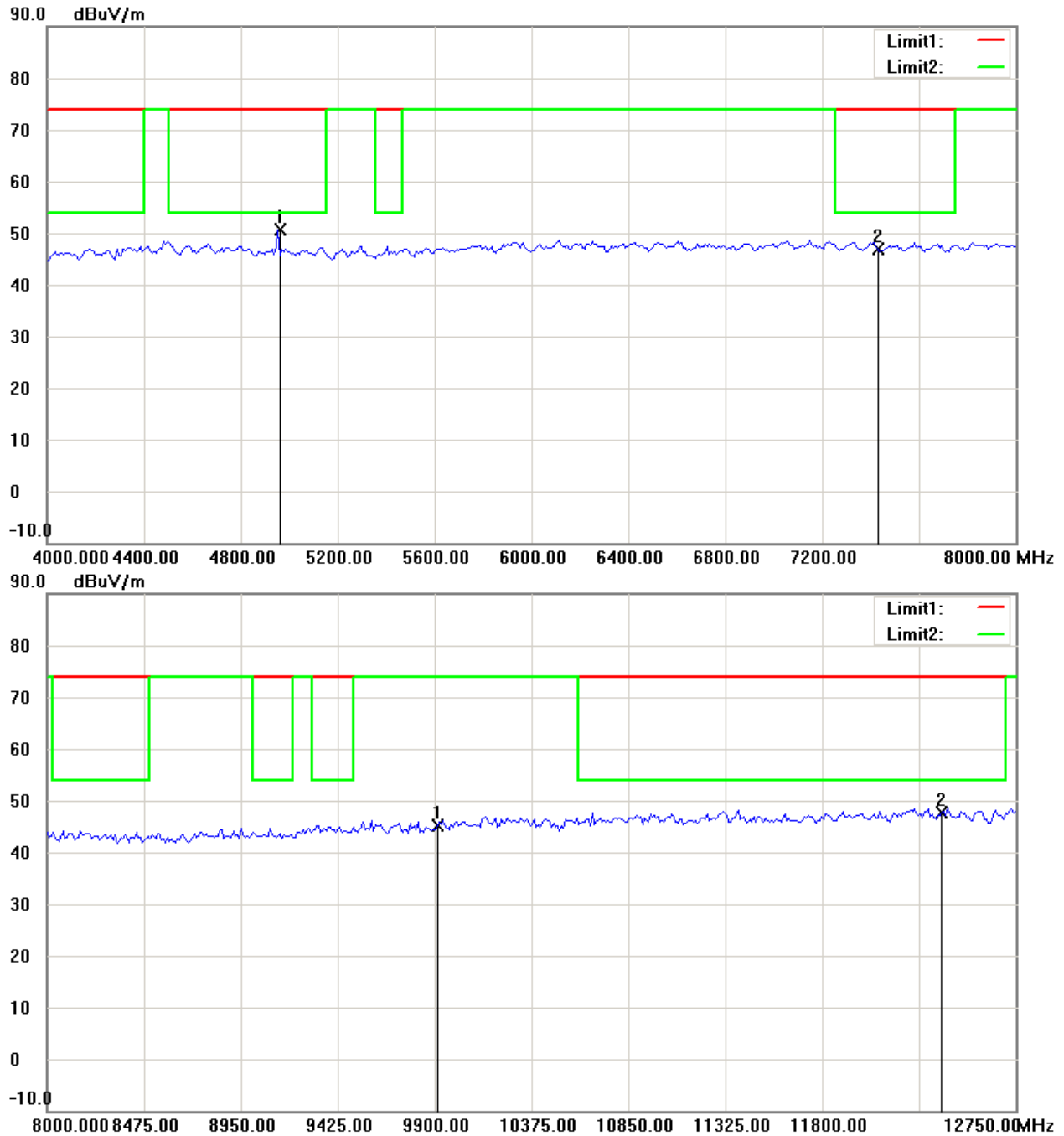
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

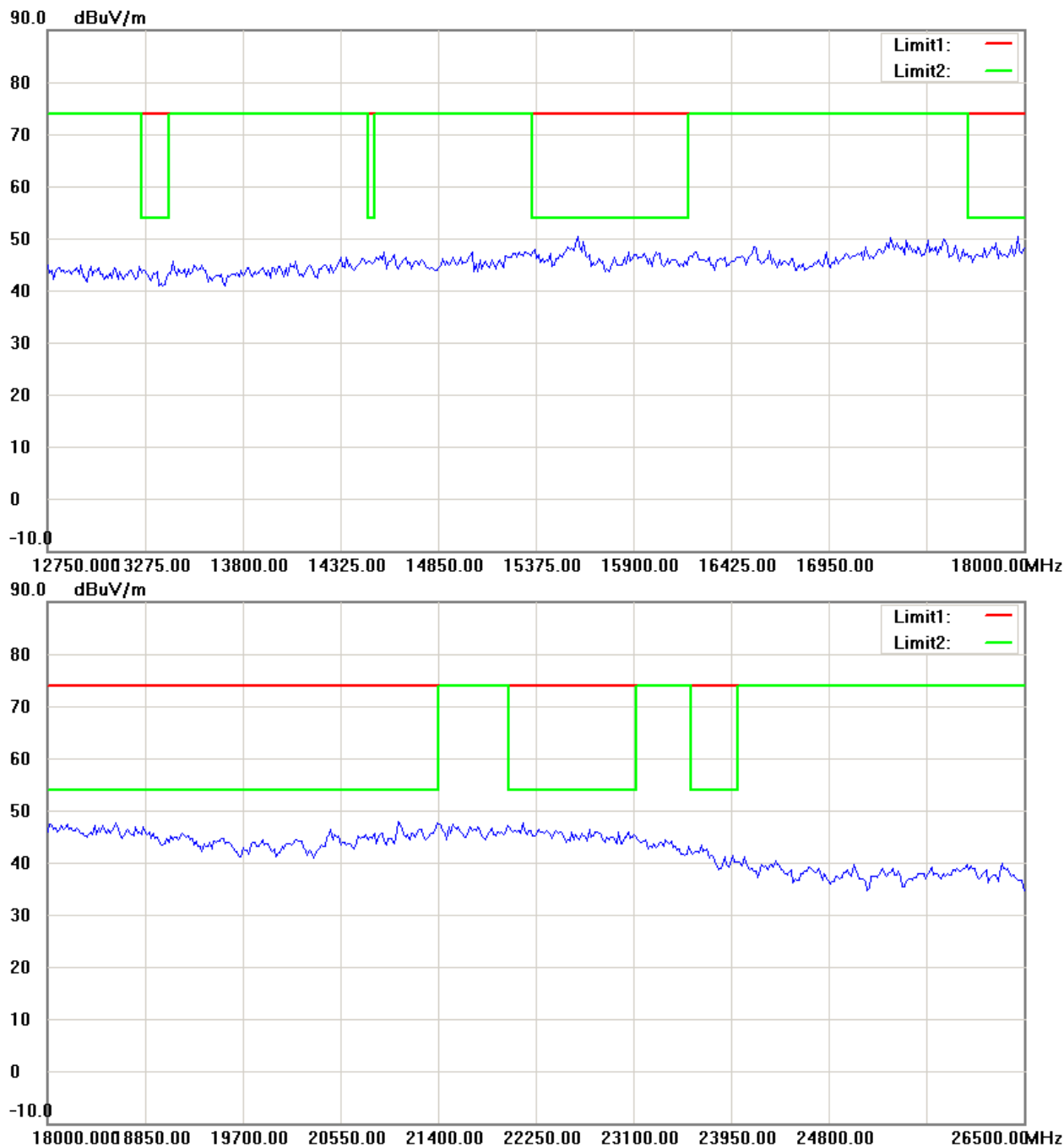
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101



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

Note:

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



Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

External Photos





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

Internal Photos



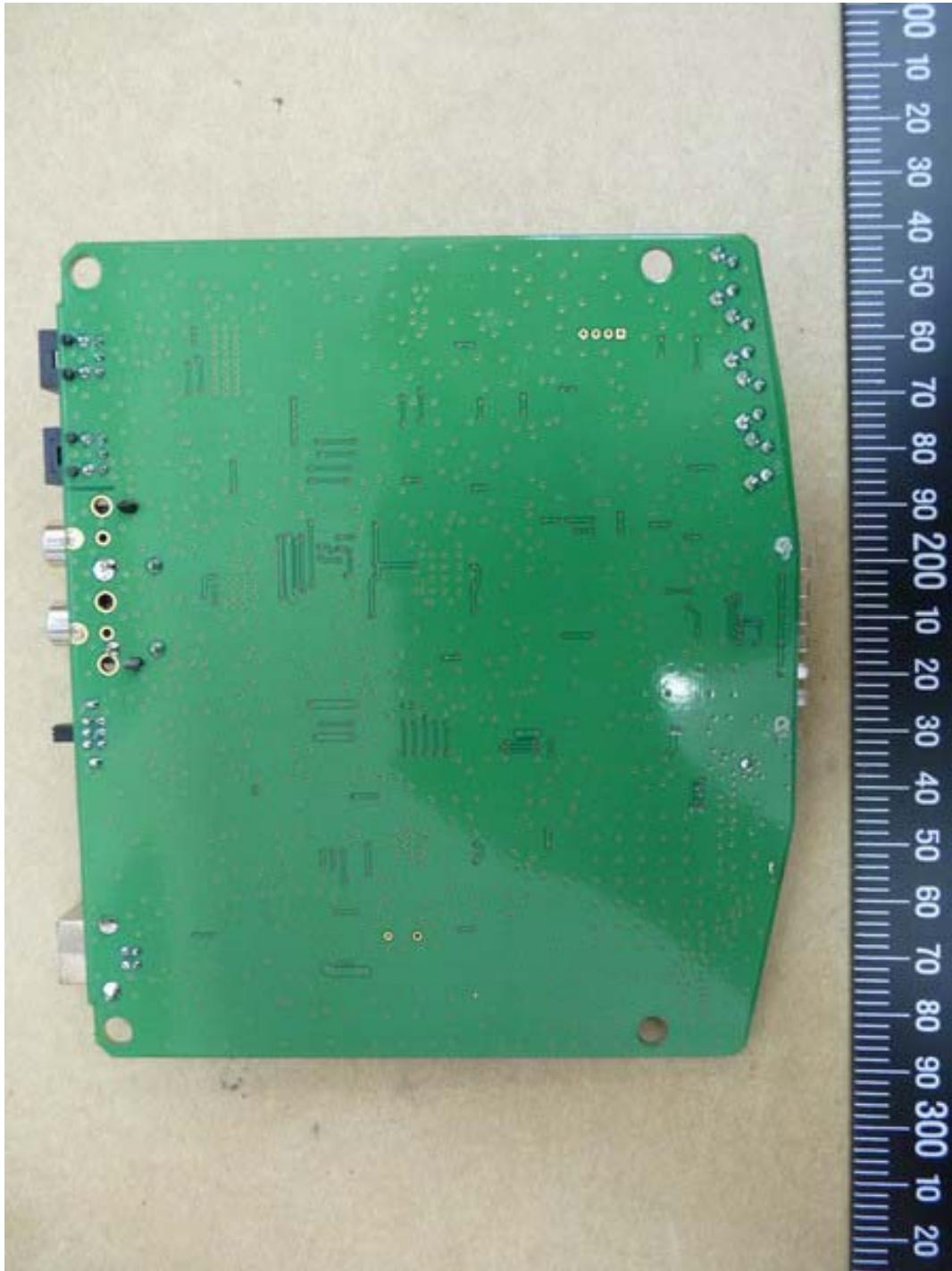


Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101





Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Set Up Photo of Radiated Emission

Ipod Mode

Digital part below 1GHz

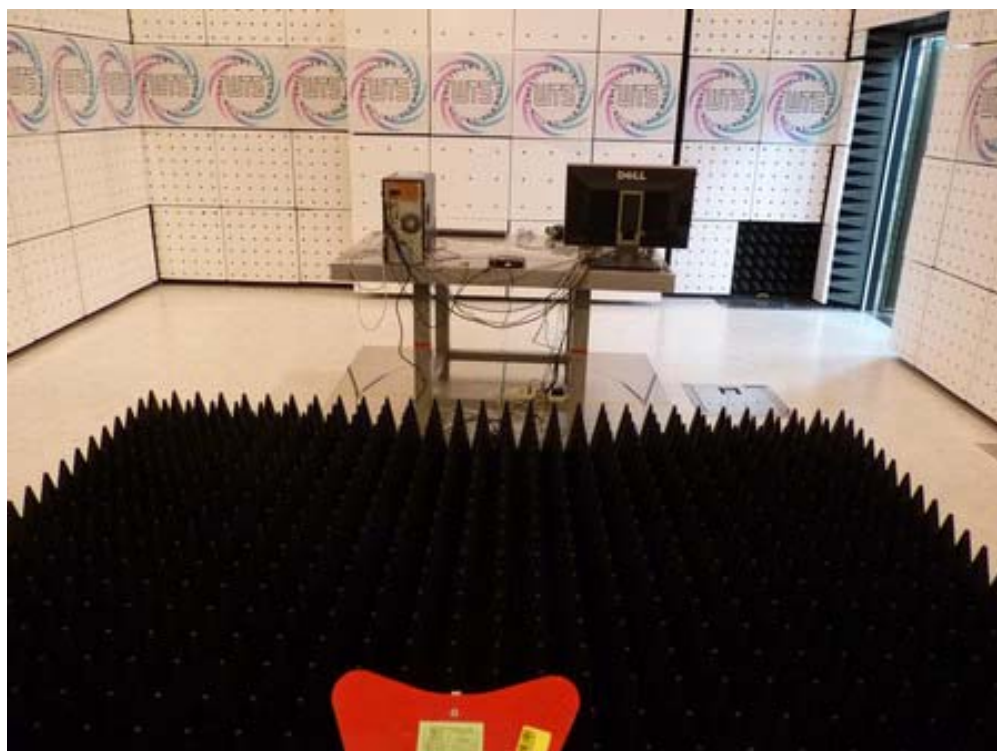
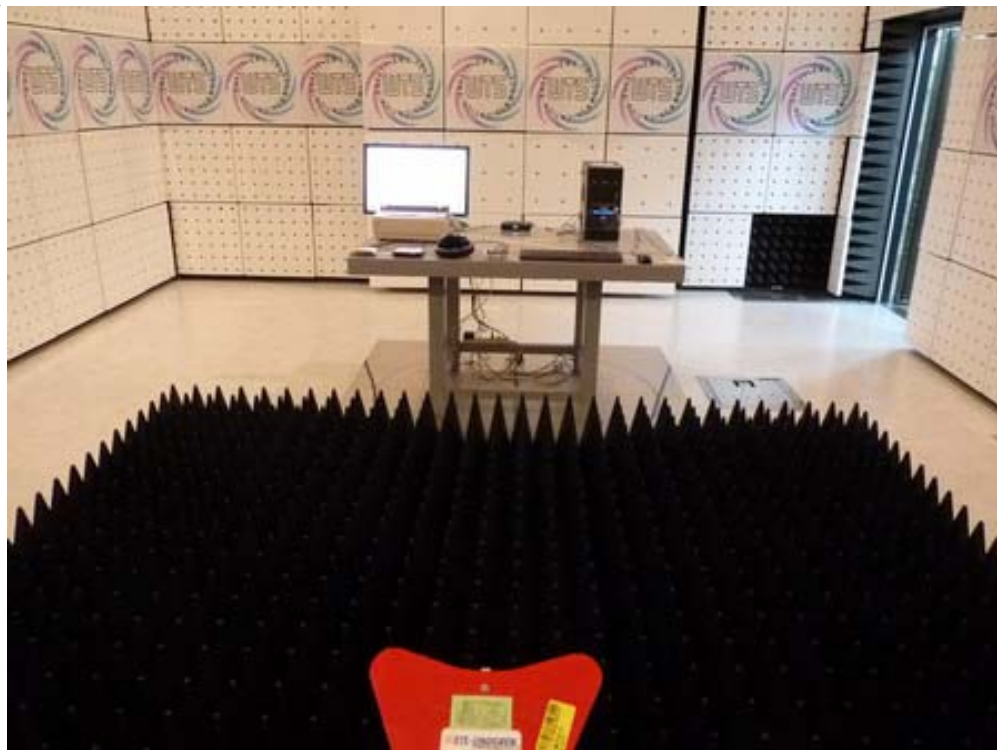




Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Digital part above 1GHz





Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Optical Mode

Digital part below 1GHz

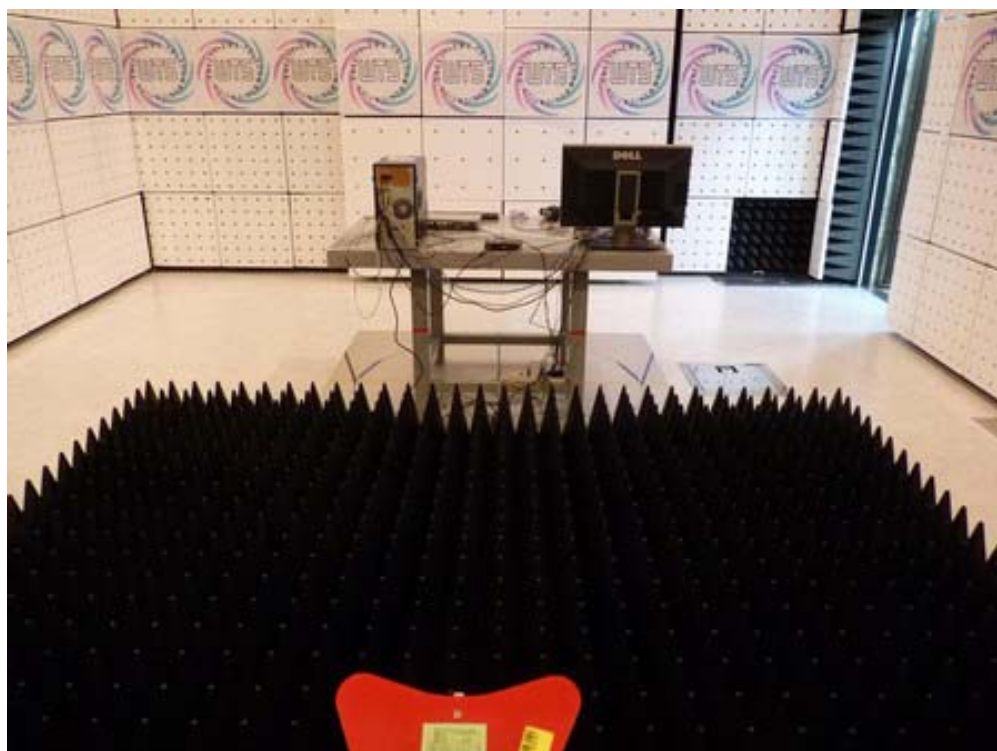
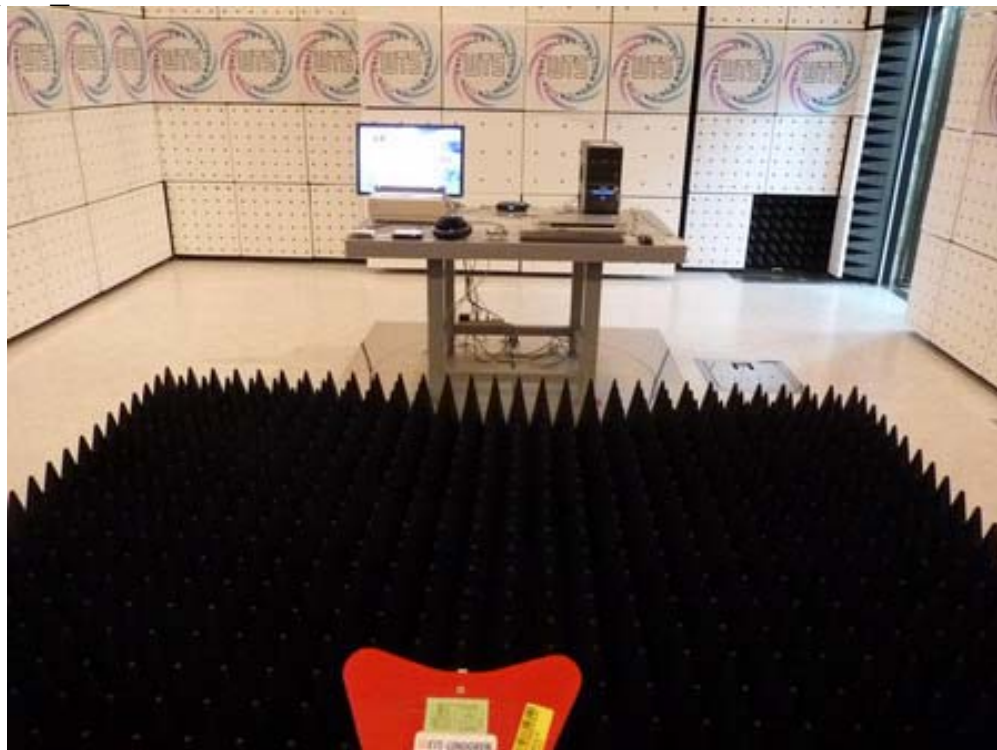




Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Digital part above 1GHz





Registration number: W6M21106-11600-C-1
FCC ID: ZPP-EX971101

RF





Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Set Up Photo of Conducted Emission
Ipod Mode





Registration number: W6M21106-11600-C-1

FCC ID: ZPP-EX971101

Optical Mode

