

**ETS Dr.GenZ Taiwan PS Co., Ltd.**

**FCC Registration No.: 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679**

**Accredited Testing Laboratory**



**A2LA Cert.No.: 2300.01**

**PTCRB Accredited Type Certification Test House**

# **FCC**

# **TEST - REPORT**

**FCC Part 15C for IEEE 802.11 g device**

**FCC ID: S83-AWK-1100A**

**Test report no.: W6M20606-7070-C-2**

## TABLE OF CONTENTS

|                 |                                                               |           |
|-----------------|---------------------------------------------------------------|-----------|
| <b>1</b>        | <b>GENERAL INFORMATION .....</b>                              | <b>3</b>  |
| 1.1             | NOTES .....                                                   | 3         |
| 1.2             | TESTING LABORATORY .....                                      | 4         |
| 1.2.1           | Location .....                                                | 4         |
| 1.2.2           | Details of accreditation status .....                         | 4         |
| 1.3             | DETAILS OF APPROVAL HOLDER .....                              | 4         |
| 1.4             | APPLICATION DETAILS .....                                     | 4         |
| 1.5             | GENERAL INFORMATION OF TEST ITEM .....                        | 5         |
| 1.6             | TEST STANDARDS .....                                          | 6         |
| <b>2</b>        | <b>TECHNICAL TEST .....</b>                                   | <b>7</b>  |
| 2.1             | SUMMARY OF TEST RESULTS .....                                 | 7         |
| 2.2             | TEST ENVIRONMENT .....                                        | 7         |
| 2.3             | TEST EQUIPMENT LIST .....                                     | 8         |
| <b>3</b>        | <b>TEST RESULTS (ENCLOSURE).....</b>                          | <b>13</b> |
| 3.1             | PEAK OUTPUT POWER (TRANSMITTER) .....                         | 14        |
| 3.2             | EQUIVALENT ISOTROPIC RADIATED POWER .....                     | 15        |
| 3.2.1           | Transmitter .....                                             | 15        |
| 3.3             | RF EXPOSURE COMPLIANCE REQUIREMENTS .....                     | 15        |
| 3.4             | TRANSMITTER RADIATED EMISSIONS IN RESTRICTED BANDS .....      | 16        |
| 3.5             | SPURIOUS EMISSIONS (TX) .....                                 | 17        |
| 3.6             | MINIMUM 6 dB BANDWIDTH .....                                  | 21        |
| 3.7             | PEAK POWER SPECTRAL DENSITY .....                             | 22        |
| 3.8             | RADIATED EMISSIONS FROM RECEIVER SECTION OF TRANSCEIVER ..... | 23        |
| 3.9             | POWER LINE CONDUCTED EMISSION .....                           | 26        |
| <b>APPENDIX</b> | <b>.....</b>                                                  | <b>28</b> |
| APPENDIX A      | .....                                                         | 29        |
| APPENDIX B      | .....                                                         | 30        |
| APPENDIX C      | .....                                                         | 31        |
| APPENDIX D      | .....                                                         | 32        |
| APPENDIX E      | .....                                                         | 33        |
| APPENDIX F      | .....                                                         | 34        |
| APPENDIX G      | .....                                                         | 35        |
| APPENDIX H      | .....                                                         | 36        |

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

## 1 General Information

### 1.1 Notes

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

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

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

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

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

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Reproduction or publication of extracts from the report requires the prior written approval of the ETS DR. GENZ TAIWAN PS CO., LTD.

#### Specific Conditions:

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

The test sample is able to work according IEEE 802.11 g.

This report is related to FCC Part 15 C (OFDM device).

#### Tester:

July 17, 2006

Jay Chaing



Date

ETS-Lab.

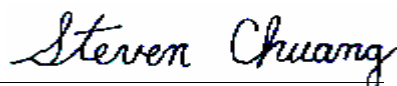
Name

Signature

#### Technical responsibility for area of testing:

July 17, 2006

Steven Chuang



Date

ETS

Name

Signature

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS

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

Company

ETS Dr.Genx Taiwan PS 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-registration number: 2300.01**

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

**Industry Canada filed test laboratory Reg. No. IC 5679**

**PTCRB Accredited Type Certification Test House**

## **1.3 Details of approval holder**

|           |                                                             |
|-----------|-------------------------------------------------------------|
| Name      | : Moxa Networking Co.,Ltd.                                  |
| Street    | : F1.8,No.6,Alley 6,Lane235, Pao-Chiao Rd. Shing Tien City, |
| Town      | : Taipei                                                    |
| Country   | : Taiwan, R.O.C.                                            |
| Telephone | : +886-2-2910-1230                                          |
| Fax       | : +886-2-2910-1231                                          |

FCC ID: S83-AWK-1100A

Date of receipt of application : June 21, 2006  
Date of receipt of test item : June 22, 2006  
Date of test : from June 23, 2006 to July 17, 2006

Type of test item : Industrial IEEE 802.11g Wireless AP/Bridge/AP Client  
Model Number : AWK-1100-US  
Brand Name : MOXA

## Technical data

|                    |                        |
|--------------------|------------------------|
| Frequency band     | : 2.4 GHz – 2.4835 GHz |
| Frequency ( ch A)  | : 2.412 GHz            |
| Frequency ( ch B)  | : 2.437 GHz            |
| Frequency ( ch C)  | : 2.462 GHz            |
| Number of Channels | : 11                   |
| Operation modes    | : duplex               |
| Modulation Type    | : DSSS/OFDM            |

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

Type of Antenna                               : Swivel Type, 1/4 $\lambda$  Dipole Antenna RP-SMA (M) (Black)

Antenna gain of Antenna                   : 2 dBi

Power supply                                Input   : 120 VAC( ac/dc adaptor )

                                                  Output : 12 VDC

Emission designator                       : 16M3W7D

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

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"/>            |

**Transmitter**

**Unom**

**Power ( ch A)** : Conducted: 15.99dBm

**Power ( ch B)** : Conducted: 15.02dBm

**Power ( ch C)** : Conducted: 14.06dBm

**Manufacturer:**

(if different from applicant)

Name : ./.

Street : ./.

Town : ./.

Country : ./.

Additional information: The sample is using WLAN technology according IEEE 802.11 b/g. For this report the function according IEEE 802.11g is considered only. The scheme for frequency generation, spectrum spreading, receiver parameters, synchronization procedure, and other parameters are determined by the mentioned standard above.

**1.6 Test standards**

Technical standard : FCC RULES PART 15 SUBPART B / SUBPART C § 15.247 : September 2005

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

## **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                  | Input  | : 120 VAC( ac/dc adaptor ) |
|                               | Output | : 12 VDC                   |
| Extreme conditions parameters | :      | --                         |

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

## 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                                   | 2005/10/27           | 2006/10/26     |
| ETSTW-CE 003 | AC POWER SOURCE                                    | APS-9102               | D161137        | GW                                    | Function Test        |                |
| ETSTW-CE 004 | ZWEILEITER-V-NETZNACHBILDUNG<br>TWO-LINE V-NETWORK | ESH3-Z5                | 840731/011     | R&S                                   | 2005/10/25           | 2006/10/24     |
| ETSTW-CE 005 | Line-Impedance Stabilisation<br>Network            | NNBM 8126D             | 137            | Schwarzbeck                           | 2005/10/21           | 2006/10/20     |
| ETSTW-CE 006 | IMPULS-BEGRENZER<br>PULSE LIMITER                  | ESH3-Z2                | 100226         | R&S                                   | 2004/11/11           | 2006/11/10     |
| ETSTW-CE 008 | ABSORBING CLAMP                                    | MDS 21                 | 3469           | ABSORPTIONS-<br>MESSWANDLER-<br>ZANGE | 2005/10/24           | 2007/10/23     |
| ETSTW-CE 009 | TEMP.&HUMIDITY<br>CHAMBER                          | GTH-225-40-1P-U        | MAA0305-009    | GIANT FORCE                           | 2005/8/18            | 2006/8/17      |
| ETSTW-CE 011 | Power Line Conducted<br>Emission Only              | None                   | None           | ETS                                   | 2005/10/25           | 2006/10/24     |
| ETSTW-CE 012 | Dual-Phase-V-Network                               | NNB-2/16Z              | 03/10201       | Telemeter                             | 2006/6/13            | 2007/6/12      |
| ETSTW-CS 001 | SIGNAL GENERATOR                                   | SMX                    | 849254/003     | R&S                                   | 2005/10/14           | 2006/10/13     |
| ETSTW-CS 002 | COUPLING AND<br>DECOUPLING NETWORK                 | CDN S751               | 19263          | SCHAFFNER                             | 2005/10/14           | 2006/10/13     |
| ETSTW-CS 003 | COUPLING AND<br>DECOUPLING NETWORK                 | CDN T400               | 19820          | SCHAFFNER                             | 2005/10/14           | 2006/10/13     |
| ETSTW-CS 004 | COUPLING AND<br>DECOUPLING NETWORK                 | CDN M016               | 20053          | SCHAFFNER                             | 2005/10/27           | 2006/10/26     |
| ETSTW-CS 005 | RF Power Amplifier                                 | 100A250A               | 306547         | AR                                    | 2005/10/14           | 2006/10/13     |
| ETSTW-CS 008 | 6 dB Attenuator                                    | HFP-5100-3/06 N<br>M/F | 2010876106     |                                       | In House Certificate |                |
| ETSTW-RE 002 | Function Generator                                 | 33220A                 | MY43004982     | Agilent                               | 2005/10/14           | 2007/10/13     |
| ETSTW-RE 003 | EMI TEST RECEIVER                                  | ESI 26                 | 831438/001     | R&S                                   | 2005/10/24           | 2006/10/23     |
| ETSTW-RE 004 | EMI TEST RECEIVER                                  | ESI 40                 | 832427/004     | R&S                                   | 2005/10/29           | 2006/10/30     |
| ETSTW-RE 005 | EMI TEST RECEIVER                                  | ESVS10                 | 843207/020     | R&S                                   | 2005/10/16           | 2006/10/15     |
| ETSTW-RE 010 | PROGRAMMABLE LINEAR<br>POWER SUPPLY                | LPS-305                | 30503070181    | MOTECH                                | Function Test        |                |
| ETSTW-RE 011 | PROGRAMMABLE LINEAR<br>POWER SUPPLY                | LPS-305                | 30503070165    | MOTECH                                | Function Test        |                |
| ETSTW-RE 017 | ANTENNA                                            | HL025                  | 352886/001     | R&S                                   | 2006/5/4             | 2008/5/3       |
| ETSTW-RE 018 | ANTENNA                                            | AT4560                 | 27212          | AR                                    | 2004/11/8            | 2007/11/7      |
| ETSTW-RE 021 | SWEEP GENERATOR                                    | SWM05                  | 835130/010     | R&S                                   | 2005/10/14           | 2006/10/13     |
| ETSTW-RE 022 | AMPLIFIER                                          | 8447D                  | 2944A09837     | Agilent                               | 2005/10/14           | 2006/10/13     |
| ETSTW-RE 027 | Passive Loop Antenna                               | 6512                   | 34563          | EMCO                                  | 2004/6/30            | 2007/6/29      |
| ETSTW-RE 028 | Log-Periodic Dipole Array<br>Antenna               | 3148                   | 34429          | EMCO                                  | 2006/5/26            | 2008/5/25      |
| ETSTW-RE 029 | Biconical Antenna                                  | 3109                   | 33524          | EMCO                                  | 2006/5/26            | 2008/5/25      |
| ETSTW-RE 030 | Double-Ridged Waveguide<br>Horn Antenna            | 3117                   | 35224          | EMCO                                  | 2006/5/3             | 2008/5/2       |
| ETSTW-RE 032 | Millivoltmeter                                     | URV 55                 | 849086/013     | R&S                                   | 2005/10/17           | 2006/10/16     |
| ETSTW-RE 033 | 4CH 1GHz 5GS/s DSO                                 | WAVERUNNER<br>6100A    | LCRY0604P14508 | LeCory                                | 2005/8/11            | 2006/8/10      |

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

|               |                                       |                |               |             |               |            |
|---------------|---------------------------------------|----------------|---------------|-------------|---------------|------------|
| ETSTW-RE 034  | Power Sensor                          | URV5-Z4        | 839313/006    | R&S         | 2005/10/17    | 2006/10/16 |
| ETSTW-RE 037  | Log-Periodic DipoleArray Antenna      | 3148           | 00034546      | EMCO        | 2004/11/18    | 2006/11/17 |
| ETSTW-RE 038  | Log-Periodic DipoleArray Antenna      | 3148           | 00034547      | EMCO        | 2004/11/18    | 2006/11/17 |
| ETSTW-RE 039  | Biconical Antenna                     | 3110B          | 41760         | EMCO        | 2004/11/18    | 2006/11/17 |
| ETSTW-RE 040  | Biconical Antenna                     | 3110B          | 41761         | EMCO        | 2004/11/18    | 2006/11/17 |
| ETSTW-RE 042  | ANTENNA                               | HK116          | 100172        | R&S         | 2005/1/14     | 2007/1/13  |
| ETSTW-RE 043  | ANTENNA                               | HL223          | 100166        | R&S         | 2006/5/8      | 2008/5/7   |
| ETSTW-RE 044  | ANTENNA                               | HL050          | 100094        | R&S         | 2006/5/29     | 2008/5/28  |
| ETSTW-RE 048  | Triple Loop Antenna                   | HXYZ 9170      | HXYZ 9170-134 | Schwarzbeck | 2005/3/22     | 2008/3/21  |
| ETSTW-RE 049  | TRILOG Super Broadband test Antenna   | VULB 9160      | 9160-3185     | Schwarzbeck | 2005/5/19     | 2007/5/18  |
| ETSTW-RE 055  | SPECTRUM ANALYZER                     | FSU-26         | 200074        | R&S         | 2005/9/6      | 2006/9/5   |
| ETSTW-EMI 001 | HARMONICS 1000                        | HAR1000-1P     | 93            | EMC-PARTNER | 2005/9/12     | 2006/9/11  |
| ETSTW-EMS 001 | Clamp BASELSTRASSE 160 CH-4242 LAUFEN | CN-EFT1000     | 354           | EMC-PARTNER | 2004/11/2     | 2006/11/1  |
| ETSTW-EMS 002 | Frequency Converter                   | YF-6020        | 0308014       |             | Function Test |            |
| ETSTW-EMS 003 | EMC Immunity Test System              | TRA2000IN6     | 579           | EMC-PARTNER | 2005/10/27    | 2006/10/26 |
| ETSTW-EMS 004 | ESD generator minizap                 | ESD2000        | 016           | EMC-PARTNER | 2005/10/27    | 2006/10/26 |
| ETSTW-EMS 005 | Attenautor (50Ω)                      | VERI50         | 051           | EMC-PARTNER | 2004/8/31     | 2006/8/30  |
| ETSTW-EMS 006 | Attenautor (1 KΩ)                     | VERI1K         | 019           | EMC-PARTNER | 2004/10/21    | 2006/10/20 |
| ETSTW-EMS 007 | 20GΩ Divider                          | ESD-VERI-V     | 021           | EMC-PARTNER | 2006/6/13     | 2008/6/12  |
| ETSTW-EMS 008 | Safety Test Solutions                 | ELT-400        | E-0039        | Narda       | 2005/5/4      | 2007/5/3   |
| ETSTW-EMS 009 | Magnetic Field Antenna                | MF1000-1       | 104           | EMC-PARTNER | 2004/12/3     | 2007/12/2  |
| ETSTW-EMS 010 | Coupling De-coupling Network          | CDN-UTP8       | 014           | EMC-PARTNER | 2005/9/1      | 2008/8/31  |
| ETSTW-EMS 011 | Calibration Fixture                   | F-2031-CF-23MM | 451           | FCC         | 2005/8/11     | 2007/8/11  |
| ETSTW-EMS 012 | EM Injection Clamp                    | F-2031-23MM    | 476           | FCC         | 2005/8/11     | 2007/8/10  |
| ETSTW-RS 003  | RF Power Amplifier                    | 30S1G3         | 306933        | AR          |               |            |
| ETSTW-RS 004  | RF Power Amplifier                    | 150W1000       | 307009        | AR          | 2005/10/21    | 2006/10/20 |
| ETSTW-RS 005  | Electric Field Probe Type 8.3         | EMR-20         | BN 2244/20    | Narda       | 2005/9/7      | 2007/9/6   |
| ETSTW-RS 006  | SIGNAL GENERATOR                      | SML03          | 101551        | R&S         | 2005/10/21    | 2006/10/20 |
| ETSTW-GSM 01  | SIM Simulator                         | IT3            | B2004-50106   | ORGA        | 2005/9/15     | 2006/9/14  |
| ETSTW-GSM 02  | Universal Radio Communication Tester  | CMU 200        | 103489        | R&S         | 2005/11/15    | 2006/11/14 |
| ETSTW-GSM 03  | Agilent 8960 Test Set 1               | E5515C         | GB44052675    | Agilent     | 2006/7/13     | 2008/7/12  |
| ETSTW-GSM 04  | Agilent 8960 Test Set 2               | E5515C         | GB44052665    | Agilent     | 2006/7/13     | 2008/7/12  |
| ETSTW-GSM 05  | Agilent 8960 Test Set 3               | E5515C         | GB44052652    | Agilent     | 2006/7/16     | 2008/7/15  |
| ETSTW-GSM 06  | Agilent 8960 Test Set 4               | E5515C         | GB44052684    | Agilent     | 2006/7/16     | 2008/7/15  |
| ETSTW-GSM 07  | Agilent 8960 Test Set 5               | E5515C         | GB44052658    | Agilent     | 2006/7/13     | 2008/7/12  |
| ETSTW-GSM 08  | Agilent 8960 Test Set 6               | E5515C         | GB44052666    | Agilent     | 2006/7/16     | 2008/7/15  |

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

|              |                                      |                 |            |                |            |            |
|--------------|--------------------------------------|-----------------|------------|----------------|------------|------------|
| ETSTW-GSM 10 | Combiner Wessex / Anite              | B4605/100       | 053        | Wessex / Anite | 2006/7/13  | 2008/7/12  |
| ETSTW-GSM 11 | GSM 850,900,1800,1900<br>Test system | TS8950G         |            | R&S            | 2005/11/1  | 2006/10/31 |
| ETSTW-GSM 12 | Acoustical Calibrator                | 4231            | 2463874    | Brüel&Kjær     | 2005/10/31 | 2006/10/30 |
| ETSTW-GSM 13 | Conditioning Amplifier               | 2690-0S2        | 2437856    | Brüel&Kjær     |            |            |
| ETSTW-GSM 14 | Telephone Test Head                  | 4602B           | 2465324    | Brüel&Kjær     |            |            |
| ETSTW-GSM 15 | Mouth Simulator                      | 4227            | 2462516    | Brüel&Kjær     |            |            |
| ETSTW-GSM 16 | TEMP.&HUMIDITY<br>CHAMBER            | GTH-120-40-1P-U | MAA0501002 | GIANT FORCE    | 2005/12/29 | 2006/12/28 |
| ETSTW-GSM 18 | AUDIO ANALYZER                       | UPL16           | 100173     | R&S            | 2005/10/29 | 2006/10/28 |
| ETSTW-GSM 24 | Vibration Testing System             | VS-100V         | 5494       | Vibration      | 2005/12/20 | 2006/12/19 |

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

## 2.4 General Test Procedure

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

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

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

Example:

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

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

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

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

Measurements were made by ETS Dr.Genx Taiwan PS Co., Ltd. at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.) The Registration Number: 930600.

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

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

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

The formula is as follows:

Average = Peak + Duty Factor

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

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

ANTENNA & GROUND:

**This unit uses Swivel Type,  $1/4 \lambda$  Dipole Antenna RP-SMA (M) (Black). (see photos)**

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

**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)    | <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 And Receiver L.O. | 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: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

### 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).

| Test condition                 |                           | Conducted Power |           |           |
|--------------------------------|---------------------------|-----------------|-----------|-----------|
|                                |                           | Channel A       | Channel B | Channel C |
|                                |                           | [dBm]           | [dBm]     | [dBm]     |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120 \text{ V}$ | 15.99           | 15.02     | 14.06     |
| Measurement uncertainty        |                           | < 3 dB          |           |           |

|                                                                              |                                                                   |
|------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Test condition<br>$T_{nom} = 23^{\circ}\text{C}$ , $V_{nom} = 120 \text{ V}$ | Signal Field strength TX highest power mode<br>dB $\mu\text{V/m}$ |
| Frequency [MHz]                                                              |                                                                   |
| 2437                                                                         | 105.41                                                            |
| Measurement uncertainty                                                      | < 3 dB                                                            |

Remarks: The diagrams for the field strength measurements are included in Appendix.

Limits:

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

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

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

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

### 3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 15.99dBm + 2dBi

= 17.99dBm

Limit: EIRP = +36 dBm for Antenna gain &lt;6dBi

#### 3.2.1 Transmitter

##### Integral Antenna:

At the transmitter the measurement was transacted with the modulation declared by the manufacturer and the maximum available output power of the EUT.

In this arrangement the EUT fulfils the requirements of the FCC rules § 15.247, subpart C, section b.

### 3.3 RF Exposure Compliance Requirements

The test sample is a WLAN access point intended for fixed installation.

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 G = AG-D

| Item | Unit               | Value    | Remarks          |
|------|--------------------|----------|------------------|
| P    | mW                 | 39.71915 | Peak value       |
| D    | dB                 |          |                  |
| AG   | dBi                | 1.6      |                  |
| G    |                    | 2        | Calculated Value |
| R    | cm                 | 20       | Assumed value    |
| S    | mW/cm <sup>2</sup> | 0.015804 | Calculated value |

Limits:

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

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

### 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 1000 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: 100Hz (Average measurements)

Limits.

For frequencies below 1GHz:

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

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of DSSS 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 =  $20 \log (\text{dwell time} / 100\text{ms})$

No duty cycle correction was added to the reading.

$54.0\text{dB } \mu\text{V/m} + 20 \text{ dB} = 74 \text{ dB } \mu\text{V/m}$

Remarks: see attached diagrams

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

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

### **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 below 1GHz:

Max. reading – 20 dB

105.41dB  $\mu$  V/m- 20 dB= 85.41dB  $\mu$  V/m

Guidance on Measurement of DSSS 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 =  $20 \log (\text{dwell time}/100\text{ms})$

For frequencies above 1GHz (Peak measurements).

Limit = max. aver. Reading-20dB+20dB(because Peak detector is used)

85.41dB  $\mu$  V/m

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

No duty cycle correction was added to the reading

105.41dB  $\mu$  V/m- 20 dB= 85.41dB  $\mu$  V/m

Remarks: see attached diagrams

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 017

ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 042 ETSTW-RE 043

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

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 "Duty-Cycle Correction Factor".

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

#### Low Channel

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 2389.579               | 40.86                    | 2.05                   | PK       | 42.91                | 54.00                     | 11.09       | 212                    | 342                 |
|                      | 250.010                | 2.20                     | 13.72                  | QP       | 45.00                | 46.00                     | 13.20       | 55                     | 347                 |
|                      | 499.800                | 27.00                    | 19.80                  | PK       | 46.80                | 85.41                     | 38.61       | 170                    | 352                 |
|                      | 166.613                | 22.20                    | 15.20                  | PK       | 37.40                | 43.52                     | 6.12        | 48                     | 321                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 2389.459               | 62.23                    | 2.05                   | PK       | 64.28                | 74.00                     | 9.72        | 247                    | 196                 |
|                      | 2389.459               | 46.27                    | 2.05                   | AV       | 48.32                | 54.00                     | 5.68        | 247                    | 196                 |
|                      | 250.002                | 30.68                    | 13.72                  | QP       | 44.40                | 46.00                     | 1.60        | 113                    | 246                 |
|                      | 499.800                | 23.06                    | 19.80                  | PK       | 42.86                | 85.41                     | 42.55       | 176                    | 206                 |
|                      | 37.835                 | 24.41                    | 13.41                  | QP       | 37.82                | 40.00                     | 2.18        | 91                     | 214                 |

#### Middle Channel

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 2483.500               | 44.00                    | -1.09                  | PK       | 42.91                | 54.00                     | 11.09       | 221                    | 358                 |
|                      | 250.010                | 2.20                     | 13.72                  | QP       | 44.90                | 46.00                     | 13.20       | 55                     | 348                 |
|                      | 499.800                | 26.33                    | 19.80                  | PK       | 46.13                | 85.41                     | 39.28       | 172                    | 357                 |
|                      | 166.613                | 22.20                    | 15.20                  | PK       | 37.40                | 43.52                     | 6.12        | 47                     | 319                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 2389.579               | 47.68                    | 2.05                   | PK       | 49.73                | 54.00                     | 4.27        | 256                    | 201                 |
|                      | 4881.764               | 42.48                    | 4.84                   | PK       | 47.32                | 54.00                     | 6.68        | 261                    | 204                 |
|                      | 250.002                | 30.78                    | 13.72                  | QP       | 44.50                | 46.00                     | 1.50        | 111                    | 247                 |
|                      | 499.800                | 24.26                    | 19.80                  | PK       | 44.06                | 85.41                     | 41.35       | 173                    | 206                 |
|                      | 37.835                 | 24.51                    | 13.41                  | QP       | 37.92                | 40.00                     | 2.08        | 92                     | 211                 |

### High Channel

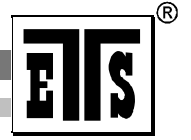
| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 2483.500               | 52.43                    | -1.09                  | PK       | 51.34                | 54.00                     | 2.66        | 222                    | 364                 |
|                      | 250.010                | 2.20                     | 13.72                  | QP       | 45.10                | 46.00                     | 13.20       | 56                     | 347                 |
|                      | 499.800                | 26.63                    | 19.80                  | PK       | 46.43                | 85.41                     | 38.98       | 171                    | 353                 |
|                      | 166.613                | 21.90                    | 15.20                  | PK       | 37.10                | 43.52                     | 6.42        | 47                     | 314                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 2483.599               | 70.56                    | -1.09                  | PK       | 69.47                | 74.00                     | 4.53        | 184                    | 221                 |
|                      | 2483.599               | 54.21                    | -1.09                  | AV       | 53.12                | 54.00                     | 0.88        | 184                    | 221                 |
|                      | 4913.828               | 43.73                    | 4.35                   | PK       | 48.08                | 54.00                     | 5.92        | 192                    | 247                 |
|                      | 250.002                | 30.58                    | 13.72                  | QP       | 44.30                | 46.00                     | 1.70        | 112                    | 245                 |
|                      | 499.800                | 23.86                    | 19.80                  | PK       | 43.66                | 85.41                     | 41.75       | 172                    | 204                 |
|                      | 37.835                 | 24.69                    | 13.41                  | QP       | 38.10                | 40.0                      | 1.90        | 94                     | 219                 |

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
  2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor
  3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average

Freq. – Frequency Range:

- 1: 30 - 200 MHz
- 2: 200 - 1000 MHz
- 3: 1 - 4 GHz
- 4: 4 - 8 GHz
- 5: 8 - 12 GHz
- 6: 12 - 17 GHz
- 7: 17 - 26.5 GHz



Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

All not in the table noted test results are more than 20 dB below the relevant limits.  
All other not noted test polts do not contain significant test results in relation to the limits.

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

Comment: see attached diagrams

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 017

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

### 3.6 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.

| Test conditions                |                           | 6 dB Bandwidth |           |            |
|--------------------------------|---------------------------|----------------|-----------|------------|
|                                |                           | Channel A      | Channel B | Channel C  |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120 \text{ V}$ | 16.506 MHz     | 16.506MHz | 16.506 MHz |
| Measurement uncertainty        |                           |                | < 10 Hz   |            |

#### Limits:

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

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

Comment: see attached diagram

Registration number: W6M20606-7070-C-2

FCC ID: S83-AWK-1100A

### 3.7 Peak Power Spectral Density

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

The Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, and Set VBW > RBW, sweep= (SPAN/3 kHz) e.g., for a span of 1.5 MHz, the sweep should be  $1.5 \times 10^6 \div 3 \times 10^3 = 500$  seconds. The peak level measured must be no greater than + 8 dBm.

| Test conditions                |                           | Peak Power Spectral Density (3 kHz) |                    |                    |
|--------------------------------|---------------------------|-------------------------------------|--------------------|--------------------|
|                                |                           | Channel A<br>[dBm]                  | Channel B<br>[dBm] | Channel C<br>[dBm] |
| $T_{nom} = 23^{\circ}\text{C}$ | $V_{nom} = 120 \text{ V}$ | -17.24                              | -18.13             | -19.44             |
| Measurement uncertainty        |                           | < 3 Hz                              |                    |                    |

#### Limits:

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

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

Comment: see attached diagram

### 3.8 Radiated Emissions from Receiver Section of Transceiver

FCC Rule: 15.109

Summary table with radiated data of the test plots

RX

Low Channel

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 1066.132               | 40.35                    | -9.40                  | PK       | 30.95                | 54.0                      | 23.05       | 271                    | 344                 |
|                      | 3218.437               | 2.20                     | 0.31                   | PK       | 45.82                | 54.0                      | 13.20       | 179                    | 342                 |
|                      | 299.992                | 29.86                    | 15.24                  | QP       | 45.10                | 46.0                      | 0.90        | 142                    | 314                 |
|                      | 908.624                | 18.79                    | 26.41                  | QP       | 45.20                | 46.0                      | 0.80        | 154                    | 308                 |
|                      | 934.496                | 18.17                    | 26.93                  | QP       | 45.10                | 46.0                      | 0.90        | 84                     | 341                 |
|                      | 166.613                | 22.00                    | 15.20                  | PK       | 37.20                | 43.5                      | 6.30        | 147                    | 319                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 1198.397               | 44.96                    | -7.77                  | PK       | 37.19                | 54.0                      | 16.81       | 266                    | 171                 |
|                      | 3218.437               | 45.51                    | 0.31                   | PK       | 45.82                | 54.0                      | 8.18        | 78                     | 141                 |
|                      | 299.399                | 27.22                    | 15.24                  | PK       | 42.46                | 46.0                      | 3.54        | 142                    | 212                 |
|                      | 934.267                | 17.17                    | 26.93                  | QP       | 44.10                | 46.0                      | 1.90        | 79                     | 182                 |
|                      | 34.439                 | 24.79                    | 13.20                  | QP       | 37.99                | 40.0                      | 2.01        | 43                     | 214                 |

Middle Channel

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 1066.132               | 40.18                    | -9.40                  | PK       | 30.78                | 54.0                      | 23.22       | 271                    | 347                 |
|                      | 3218.437               | 2.20                     | 0.31                   | PK       | 45.27                | 54.0                      | 13.20       | 90                     | 318                 |
|                      | 299.398                | 29.76                    | 15.24                  | QP       | 45.00                | 46.0                      | 1.00        | 143                    | 315                 |
|                      | 499.486                | 23.91                    | 19.81                  | QP       | 43.72                | 46.0                      | 2.28        | 194                    | 247                 |
|                      | 934.269                | 17.77                    | 26.93                  | QP       | 44.70                | 46.0                      | 1.30        | 85                     | 350                 |
|                      | 160.613                | 22.00                    | 15.20                  | PK       | 37.20                | 43.5                      | 6.30        | 134                    | 319                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 1198.397               | 42.98                    | -7.77                  | PK       | 35.21                | 54.0                      | 18.79       | 265                    | 170                 |
|                      | 3218.437               | 45.07                    | 0.31                   | PK       | 45.38                | 54.0                      | 8.62        | 78                     | 140                 |
|                      | 249.699                | 40.73                    | 1.90                   | PK       | 42.63                | 46.0                      | 3.37        | 102                    | 185                 |
|                      | 934.269                | 15.44                    | 26.93                  | PK       | 42.37                | 46.0                      | 3.63        | 78                     | 179                 |
|                      | 34.439                 | 24.81                    | 13.20                  | QP       | 38.01                | 40.0                      | 1.99        | 42                     | 211                 |

Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

**High Channel**

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H                    | 1066.132               | 41.11                    | -9.40                  | PK       | 31.71                | 54.00                     | 22.29       | 270                    | 342                 |
|                      | 3218.437               | 2.20                     | 0.31                   | PK       | 38.18                | 54.00                     | 13.20       | 93                     | 356                 |
|                      | 299.399                | 27.72                    | 15.24                  | PK       | 42.96                | 46.00                     | 3.04        | 144                    | 316                 |
|                      | 499.800                | 23.49                    | 19.81                  | PK       | 43.30                | 46.00                     | 2.70        | 195                    | 249                 |
|                      | 166.613                | 20.94                    | 15.20                  | PK       | 36.14                | 43.50                     | 7.36        | 120                    | 365                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V                    | 1030.060               | 40.74                    | -9.65                  | PK       | 31.09                | 54.00                     | 22.91       | 272                    | 149                 |
|                      | 3218.437               | 44.96                    | 0.31                   | PK       | 45.27                | 54.00                     | 8.73        | 77                     | 139                 |
|                      | 249.699                | 41.50                    | 1.90                   | PK       | 43.40                | 46.00                     | 2.60        | 103                    | 183                 |
|                      | 299.399                | 27.97                    | 15.24                  | PK       | 43.21                | 46.00                     | 2.79        | 142                    | 214                 |
|                      | 34.439                 | 25.39                    | 13.20                  | QP       | 38.59                | 40.00                     | 1.41        | 41                     | 210                 |
|                      | 42.265                 | 23.87                    | 13.62                  | QP       | 37.49                | 40.00                     | 2.51        | 49                     | 195                 |

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
  2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor
  3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average

### Digital

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) |       | Correction Factor (dB) | Test Result (dBuV/m) |       | Compliance Limit (dBuV/m) | Margin (dB) |       | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|-------|------------------------|----------------------|-------|---------------------------|-------------|-------|------------------------|---------------------|
|                      |                        | PK                       | QP    |                        | PK                   | QP    |                           | PK          | QP    |                        |                     |
| H                    | 499.799                | 13.63                    | --    | 20.09                  | 33.72                | --    | 37.0                      | 3.28        | --    | 217                    | 296                 |
|                      | 967.936                | 3.65                     | --    | 27.83                  | 31.48                | --    | 37.0                      | 5.52        | --    | 312                    | 383                 |
|                      | 200                    | --                       | 16.06 | 11.56                  | --                   | 27.62 | 30.0                      | --          | 2.38  | 255                    | 214                 |
|                      | 47.715                 | 12.68                    | --    | 12.91                  | 25.59                | --    | 30.0                      | 4.41        | --    | 38                     | 217                 |
|                      | 166.682                | --                       | 14.24 | 14.33                  | --                   | 28.57 | 30.0                      | --          | 1.43  | 214                    | 256                 |
|                      | 179.929                | --                       | 5.51  | 13.27                  | --                   | 18.78 | 30.0                      | --          | 11.22 | 83                     | 243                 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuV) |       | Correction Factor (dB) | Test Result (dBuV/m) |       | Compliance Limit (dBuV/m) | Margin (dB) |      | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|-------|------------------------|----------------------|-------|---------------------------|-------------|------|------------------------|---------------------|
|                      |                        | PK                       | QP    |                        | PK                   | QP    |                           | PK          | QP   |                        |                     |
| V                    | 200                    | --                       | 17.43 | 11.56                  | --                   | 28.99 | 30.0                      | --          | 1.01 | 312                    | 176                 |
|                      | 523.848                | 8.07                     | --    | 20.51                  | 28.58                | --    | 37.0                      | 8.42        | --   | 217                    | 177                 |
|                      | 801.202                | 5.22                     | --    | 25.67                  | 30.89                | --    | 37.0                      | 6.11        | --   | 156                    | 196                 |
|                      | 34.429                 | --                       | 15.65 | 12.53                  | --                   | 28.18 | 30.0                      | --          | 1.82 | 173                    | 214                 |
|                      | 98.477                 | --                       | 16.47 | 10.75                  | --                   | 27.22 | 30.0                      | --          | 2.78 | 216                    | 183                 |
|                      | 166.954                | --                       | 12.50 | 14.33                  | --                   | 26.83 | 30.0                      | --          | 3.17 | 179                    | 264                 |

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
  2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor
  3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average

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 028  
ETSTW-RE 029, ETSTW-RE 042, ETSTW-RE 043

Comment: see attached diagram

### 3.9 Power Line Conducted Emission

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

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

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

| LISN type | Frequency Marker | Corrected Reading (dBuV) |    | Correction Factor | Test Result (dBuV) |    | Compliance Limit (dBuV) |       | Margin (dB) |    |
|-----------|------------------|--------------------------|----|-------------------|--------------------|----|-------------------------|-------|-------------|----|
|           |                  | QP                       | AV |                   | QP                 | AV | QP                      | AV    | QP          | AV |
| N         | MHz              | QP                       | AV | dB                | QP                 | AV | QP                      | AV    | QP          | AV |
|           | 0.150            | 21.70                    | -- | 10.10             | 31.80              | -- | 66.00                   | 56.00 | 34.20       | -- |
|           | 0.185            | 20.30                    | -- | 10.10             | 30.40              | -- | 64.25                   | 54.25 | 33.85       | -- |
|           | 0.235            | 17.20                    | -- | 10.10             | 27.30              | -- | 62.27                   | 52.27 | 34.97       | -- |
|           | 0.460            | 9.10                     | -- | 10.10             | 19.20              | -- | 56.69                   | 46.69 | 37.49       | -- |

| LISN type | Frequency Marker | Corrected Reading (dBuV) |    | Correction Factor | Test Result (dBuV) |    | Compliance Limit (dBuV) |       | Margin (dB) |    |
|-----------|------------------|--------------------------|----|-------------------|--------------------|----|-------------------------|-------|-------------|----|
|           |                  | QP                       | AV |                   | QP                 | AV | QP                      | AV    | QP          | AV |
| L1        | MHz              | QP                       | AV | dB                | QP                 | AV | QP                      | AV    | QP          | AV |
|           | 0.150            | 21.60                    | -- | 10.10             | 31.70              | -- | 66.00                   | 56.00 | 34.30       | -- |
|           | 0.190            | 19.50                    | -- | 10.10             | 29.60              | -- | 64.03                   | 54.03 | 34.43       | -- |
|           | 0.295            | 24.50                    | -- | 10.10             | 34.60              | -- | 60.38                   | 50.38 | 25.78       | -- |
|           | 0.555            | 28.40                    | -- | 10.10             | 38.50              | -- | 56.00                   | 46.00 | 17.50       | -- |

**Note: 1. The formula of measured value as: Test Result = Corrected Reading + Correction Factor**

**2. The Correction Factor = Cable Loss + LISN Insertion Loss**

**3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average**



Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

Limits:

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

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

Comment: see attached diagram

## **Appendix**

- A Peak Output Power
- B Spurious Emissions radiated – Transmitter operating
- C Band Edge Measurement
- D Minimum 6dB Bandwidth
- E Peak Power Spectral Density
- F Radiated Emissions from Receiver Section of Transceiver
- G Power Line Conducted Emission
- H Pictures

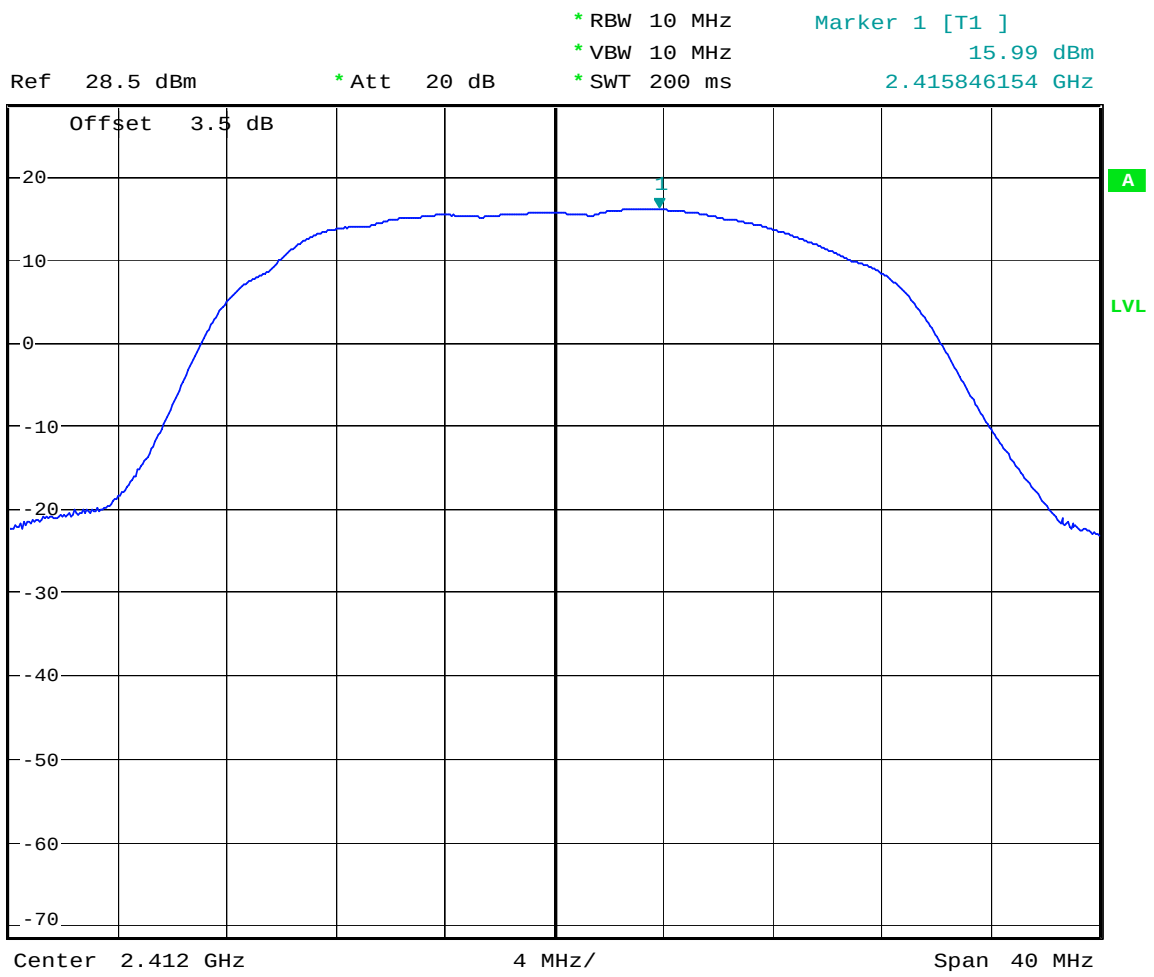
## **Appendix A**

### **Peak Output Power**

**The measurement diagram are wideband pre-scan results; only for reference.**

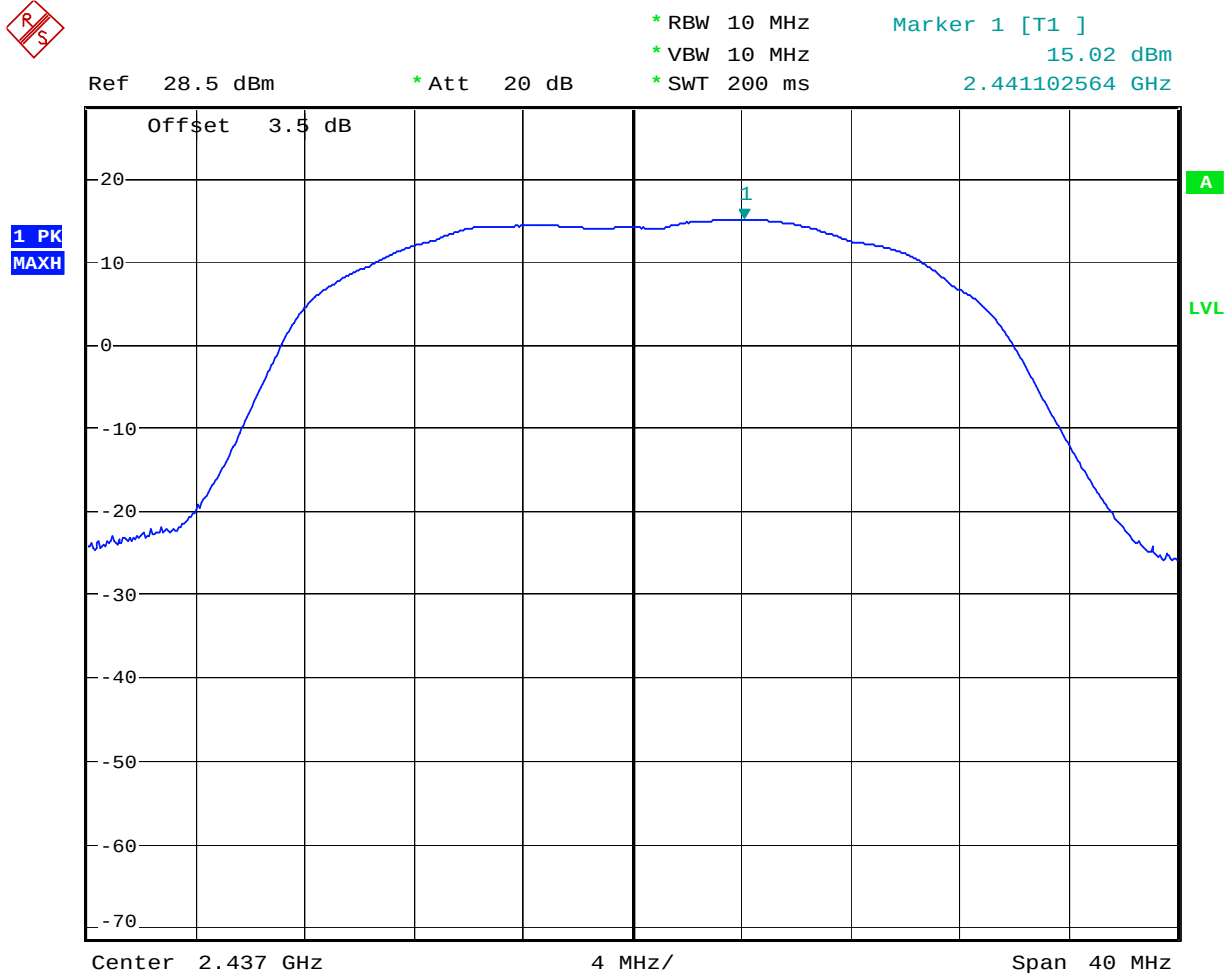


1 PK  
MAXH



Output power 802.11g ch 1

Date: 26.JUN.2006 15:22:41

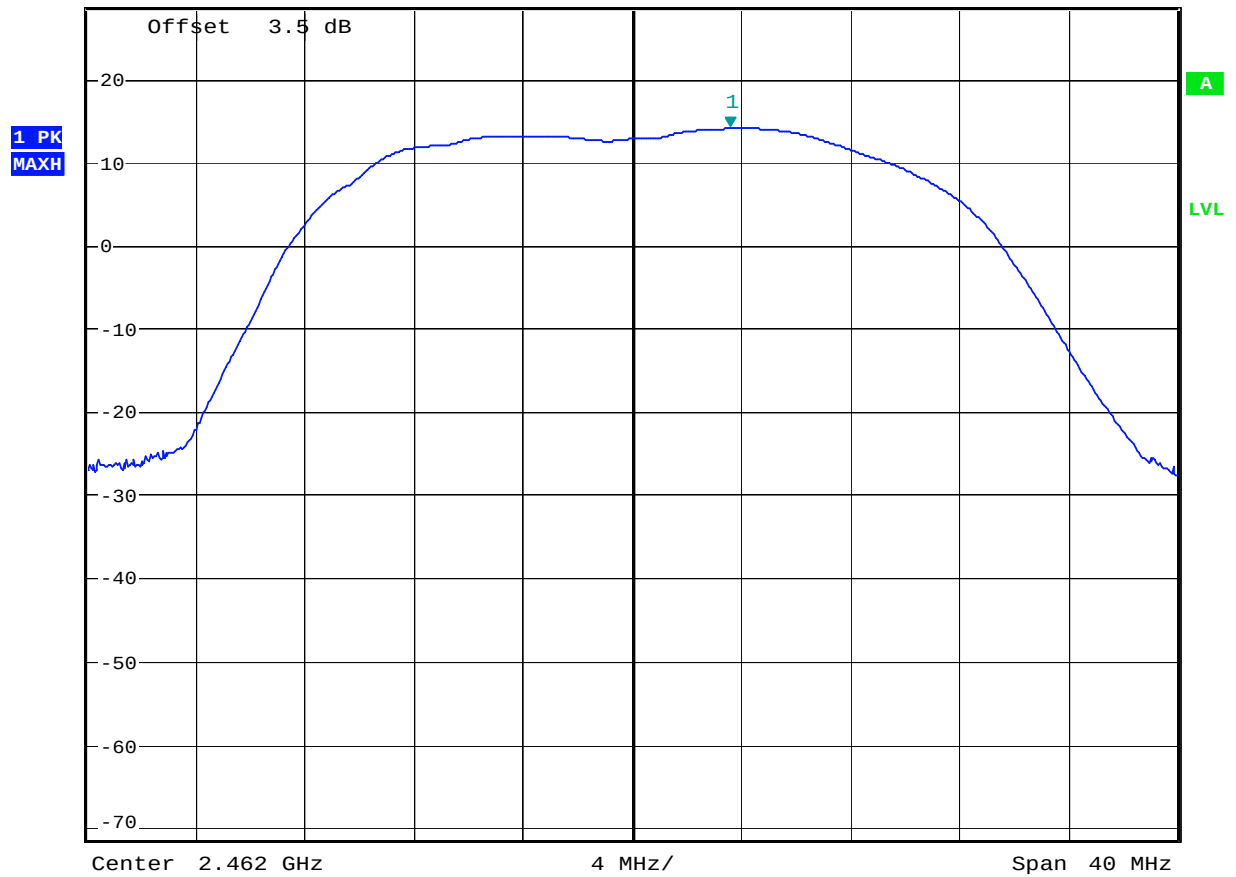


Output power 802.11g ch 6

Date: 26.JUN.2006 15:22:10



Ref 28.5 dBm      \* Att 20 dB      \* RBW 10 MHz      Marker 1 [T1 ]  
\* VBW 10 MHz      14.06 dBm  
\* SWT 200 ms      2.465589744 GHz



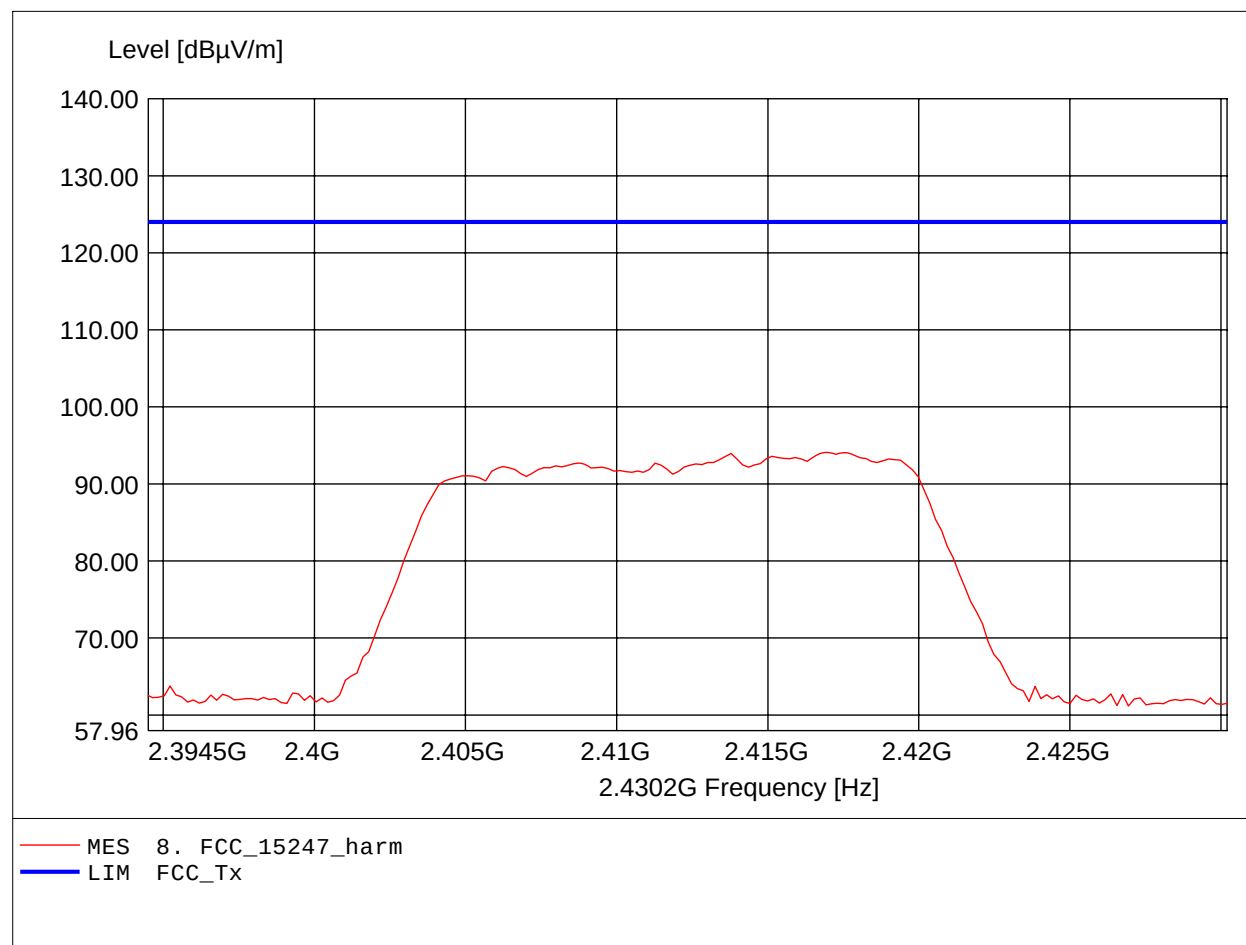
Output power 802.11g ch 11

Date: 26.JUN.2006 15:21:42

## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

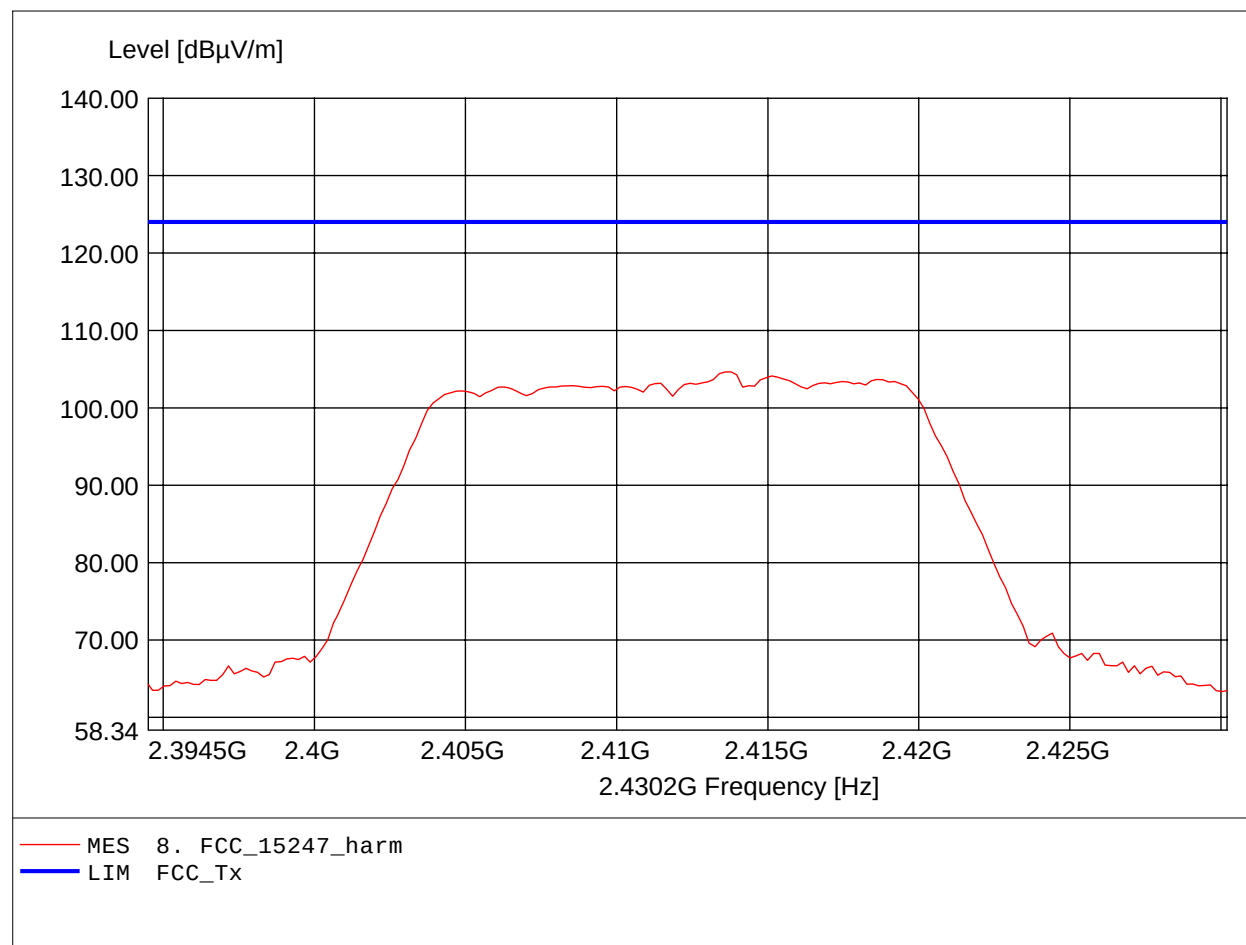
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.417GHz, Emax: 94.07dBμV/m, RBW: 1MHz



## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

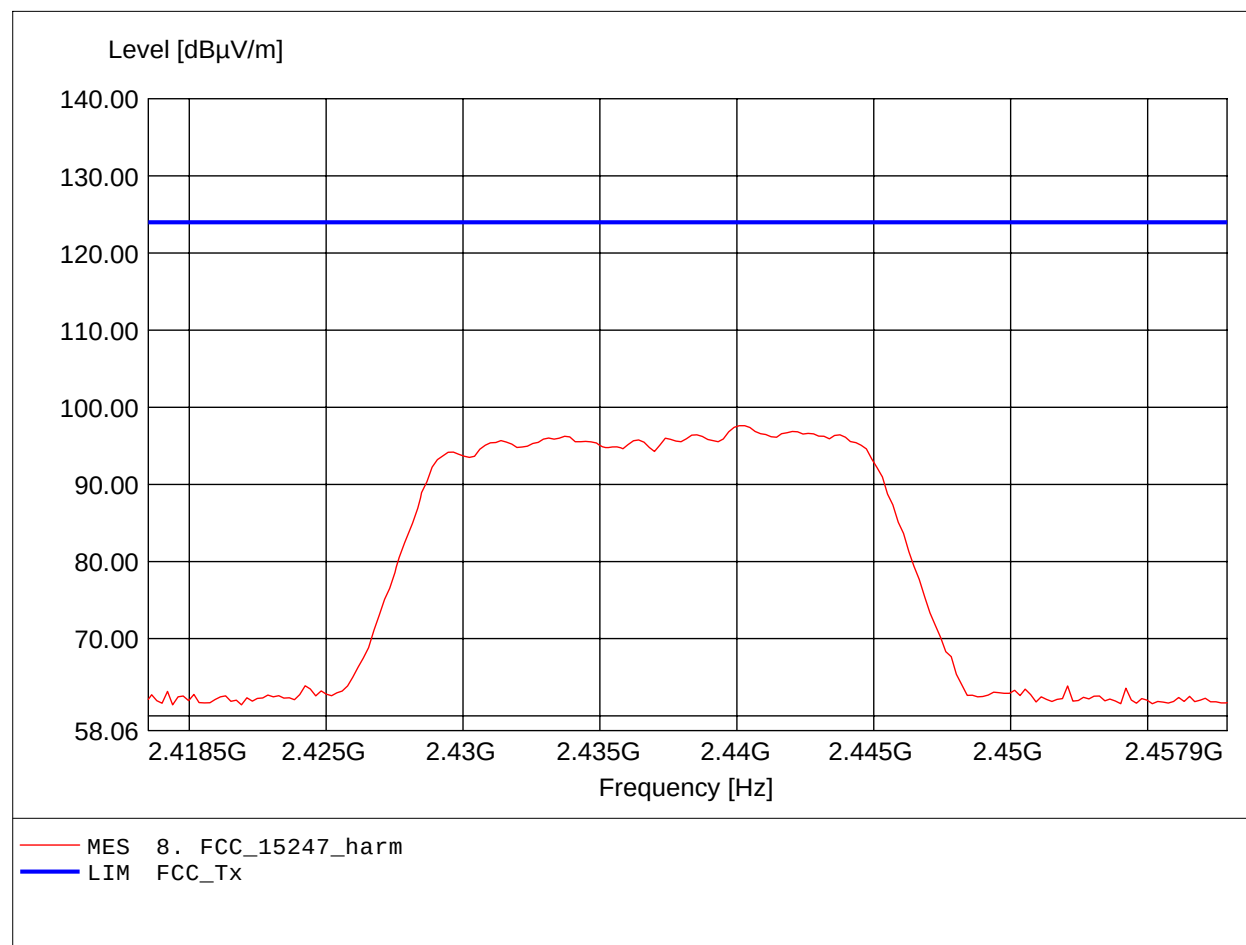
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.414GHz, Emax: 104.64dBμV/m, RBW: 1MHz



## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

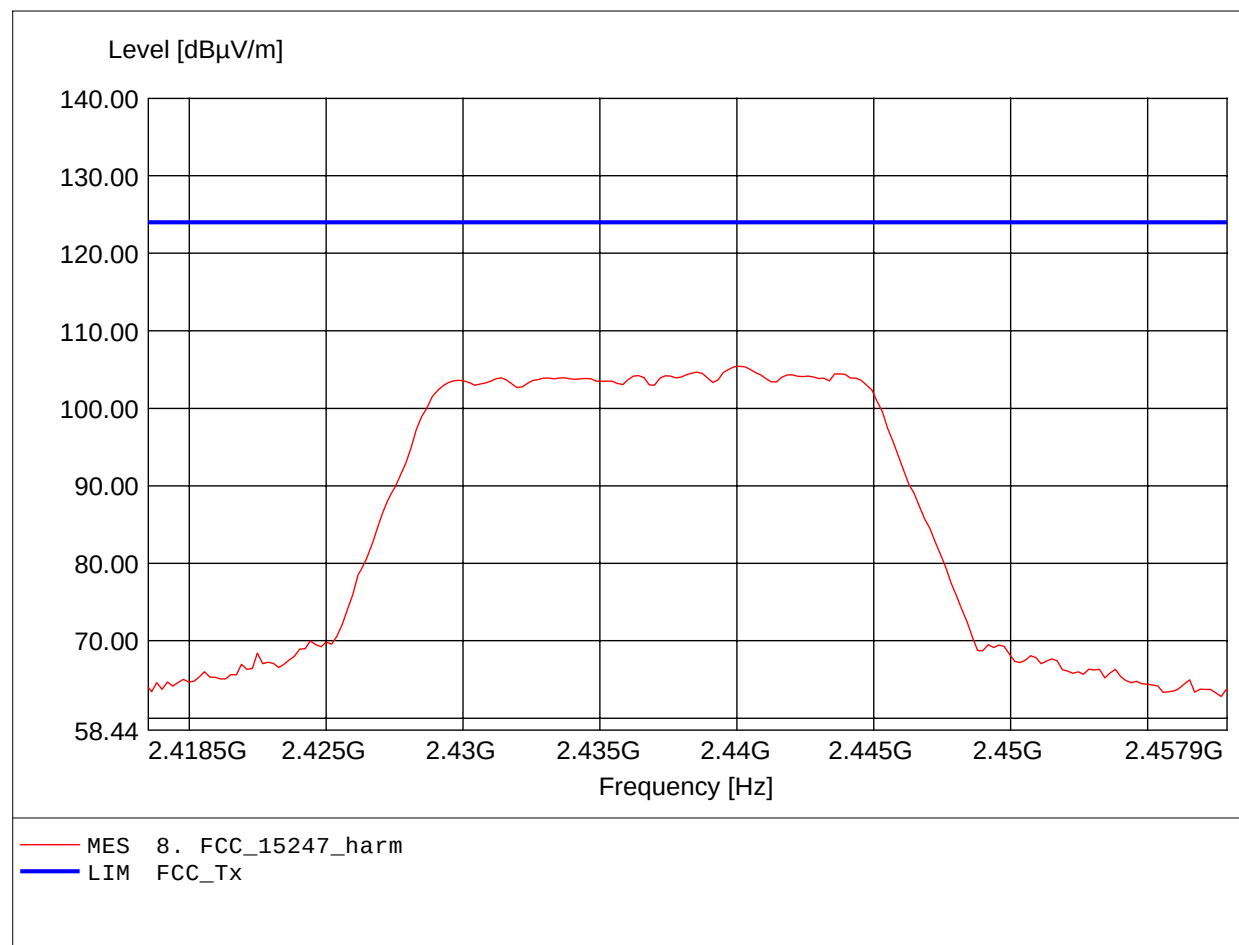
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.440GHz, Emax: 97.60dBμV/m, RBW: 1MHz



## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

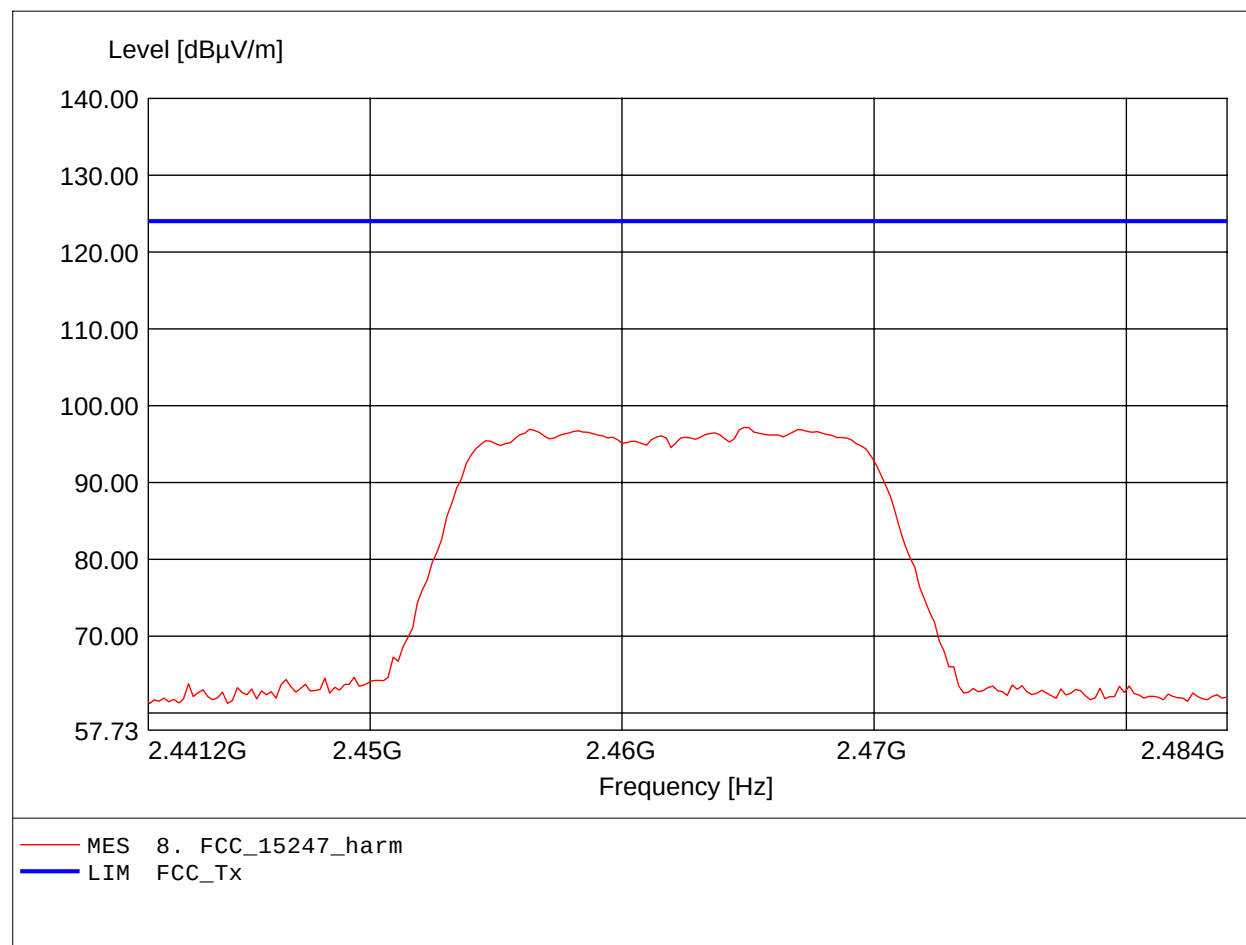
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.440GHz, Emax: 105.41dBμV/m, RBW: 1MHz



## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

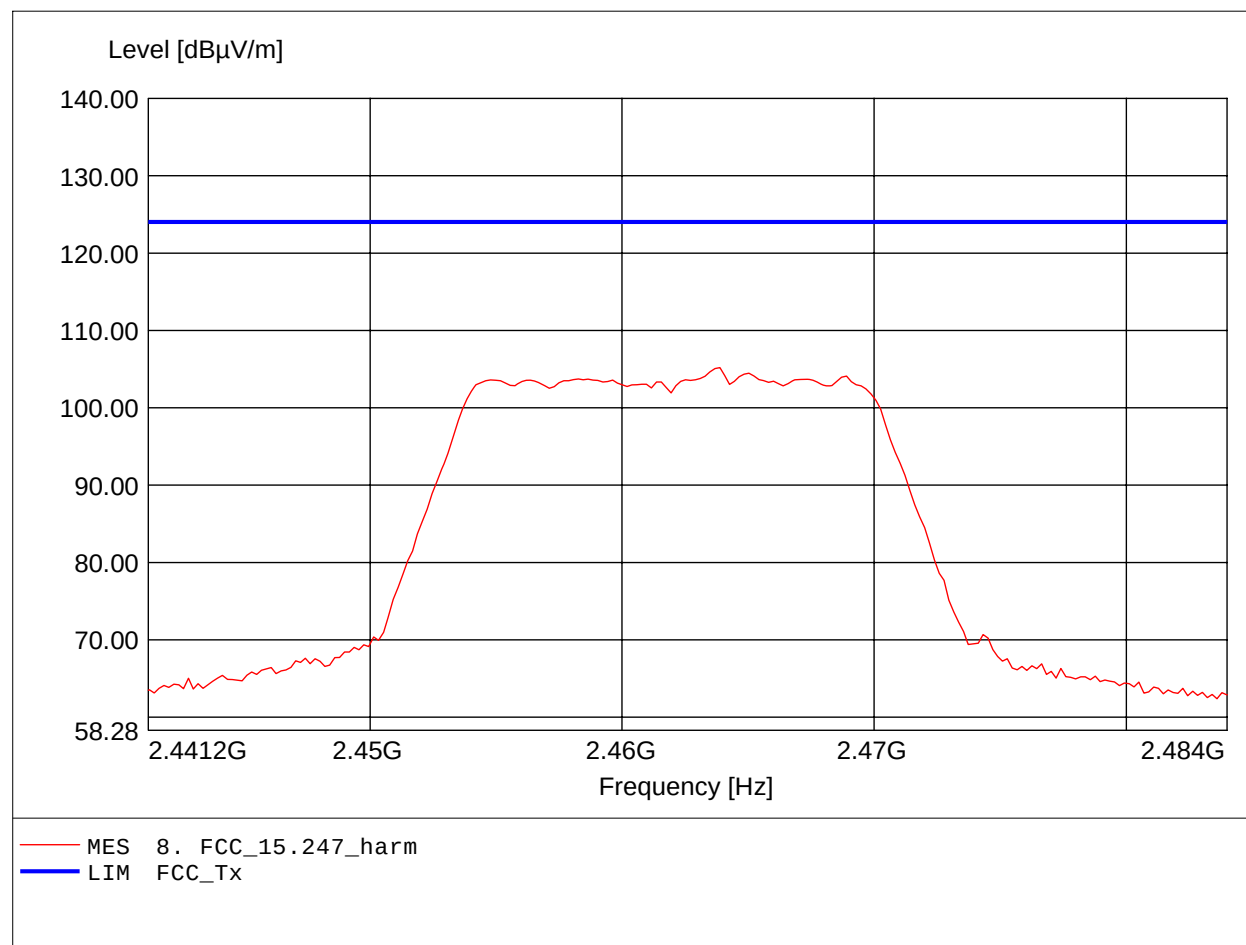
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.465GHz, Emax: 97.16dBµV/m, RBW: 1MHz



## Carrier power (Field Strength)

### FCC RULES PART 15, SUBPART C / LP002

Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.464GHz, Emax: 105.17dBμV/m, RBW: 1MHz



## **Appendix B**

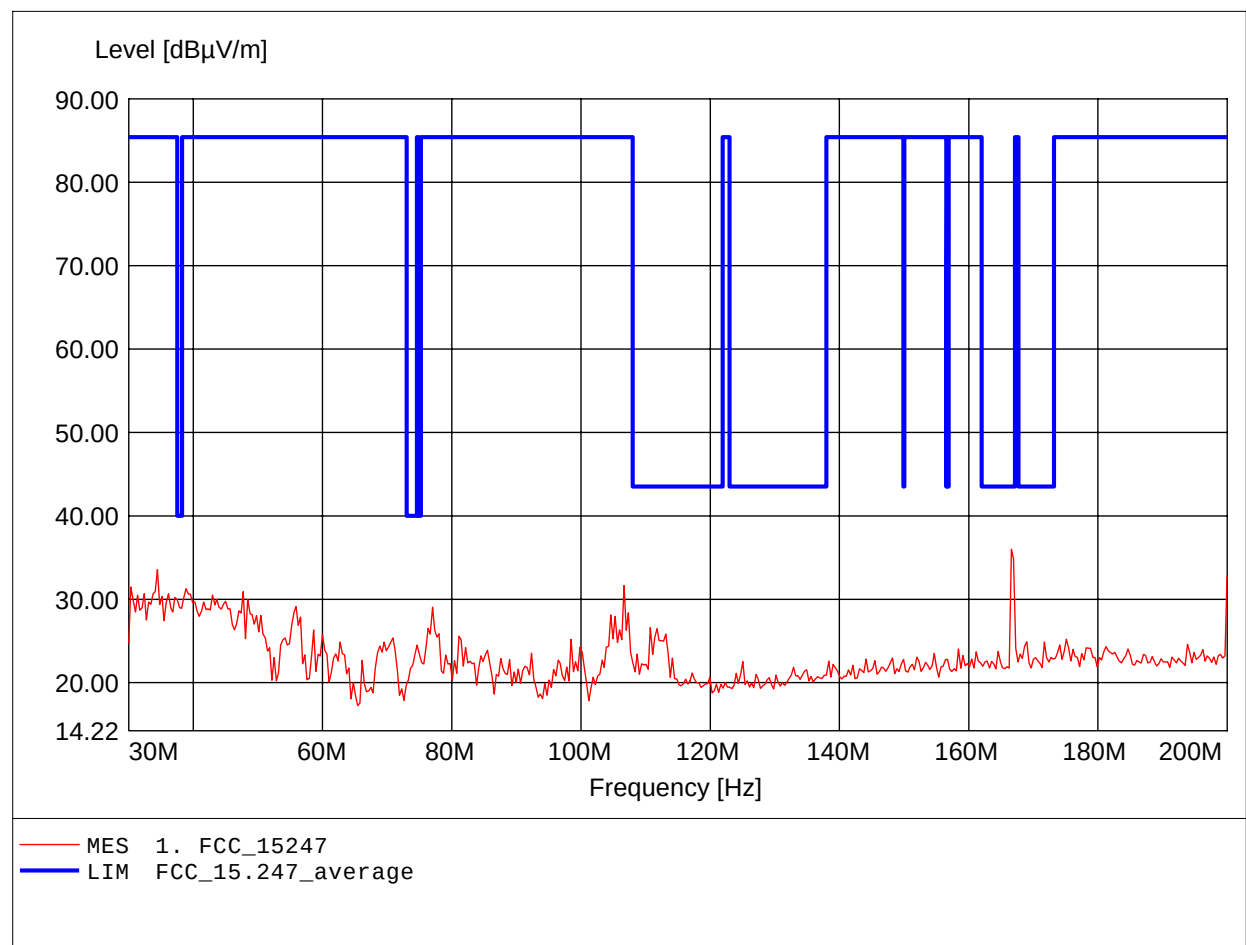
Spurious Emissions radiated – Transmitter operating

**The measurement diagram are wideband pre-scan results; only for reference.**

## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

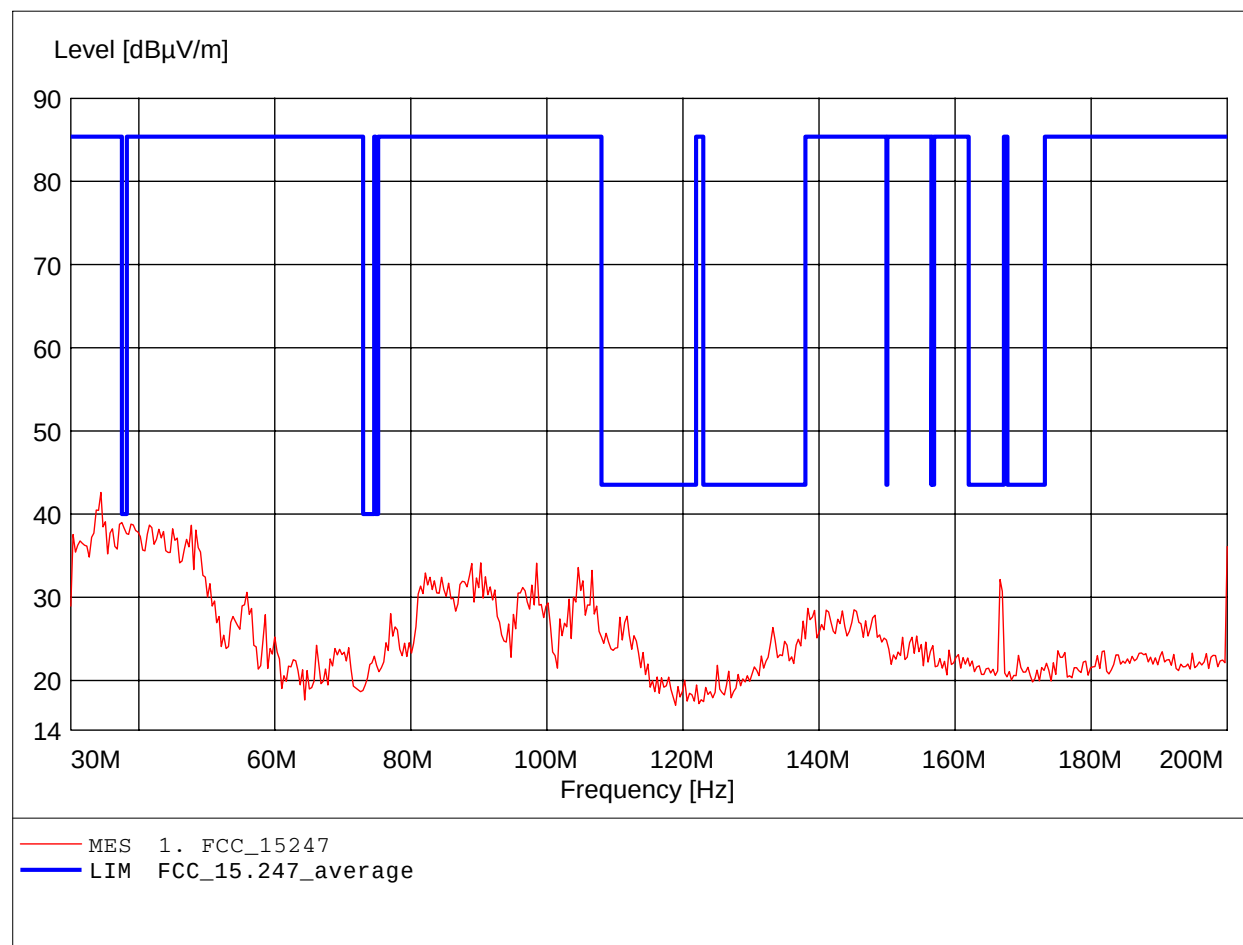
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 166.613MHz, Emax: 36.00dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

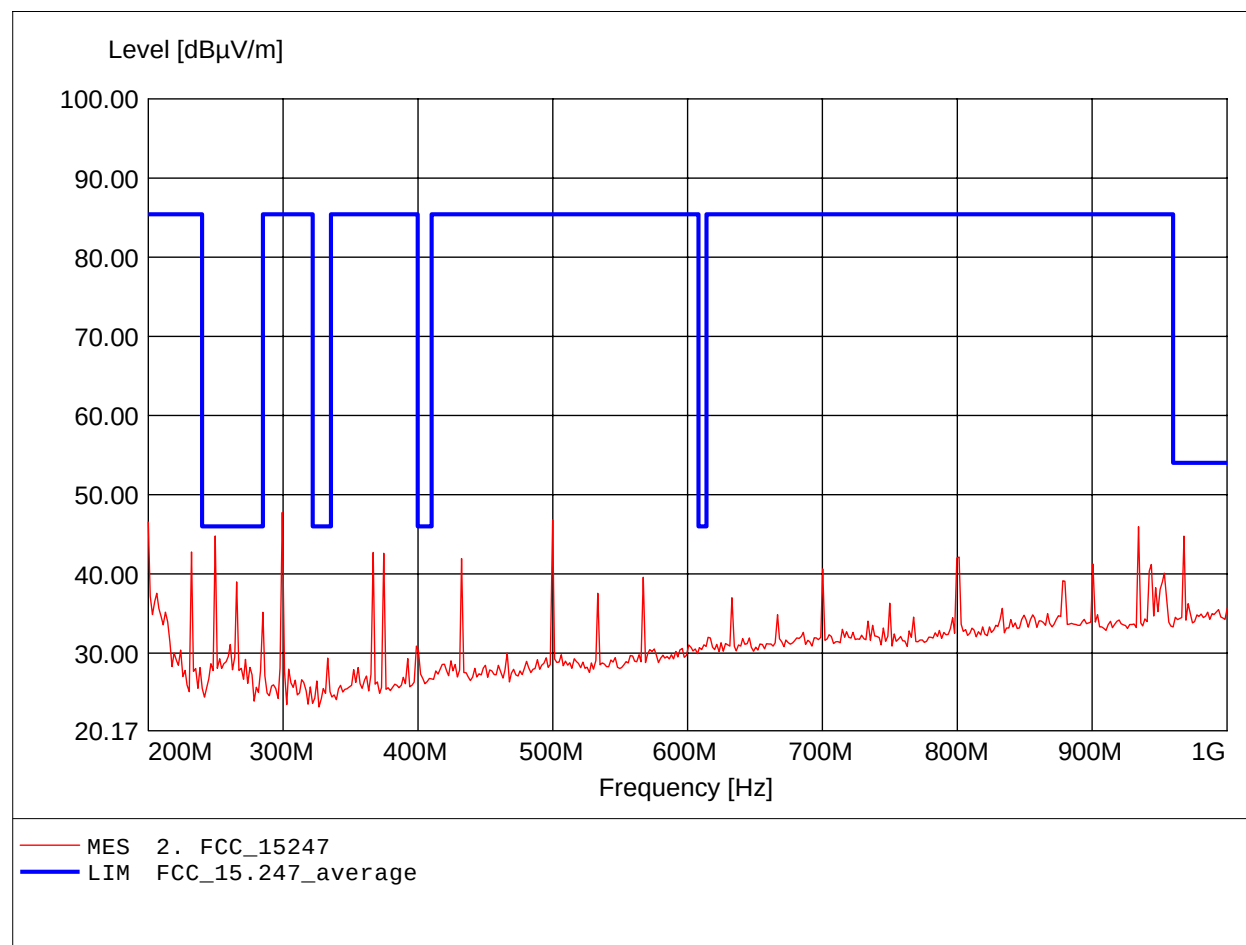
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 34.429MHz, Emax: 42.60dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

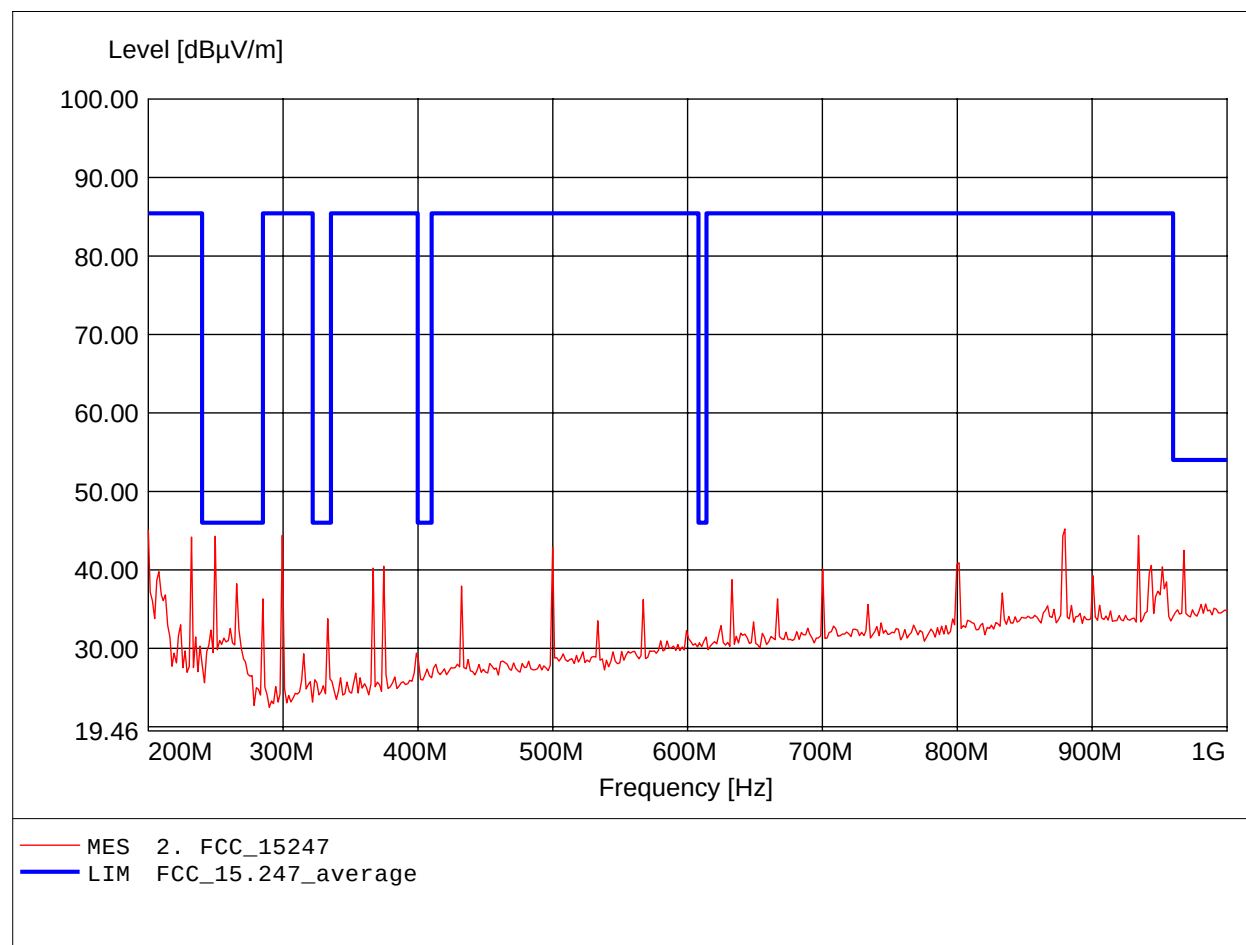
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 299.399MHz, Emax: 47.75dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

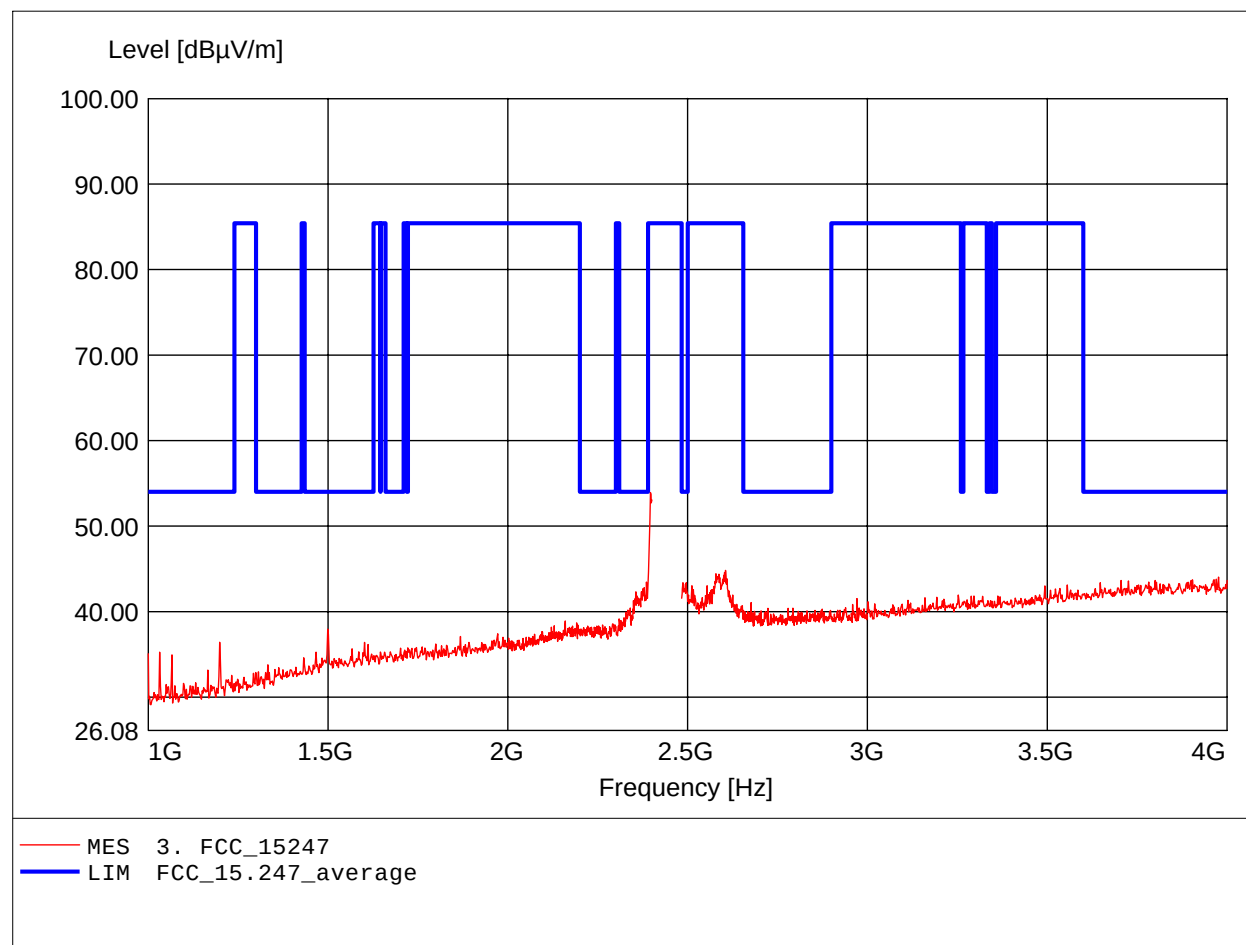
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 879.760MHz, Emax: 45.23dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

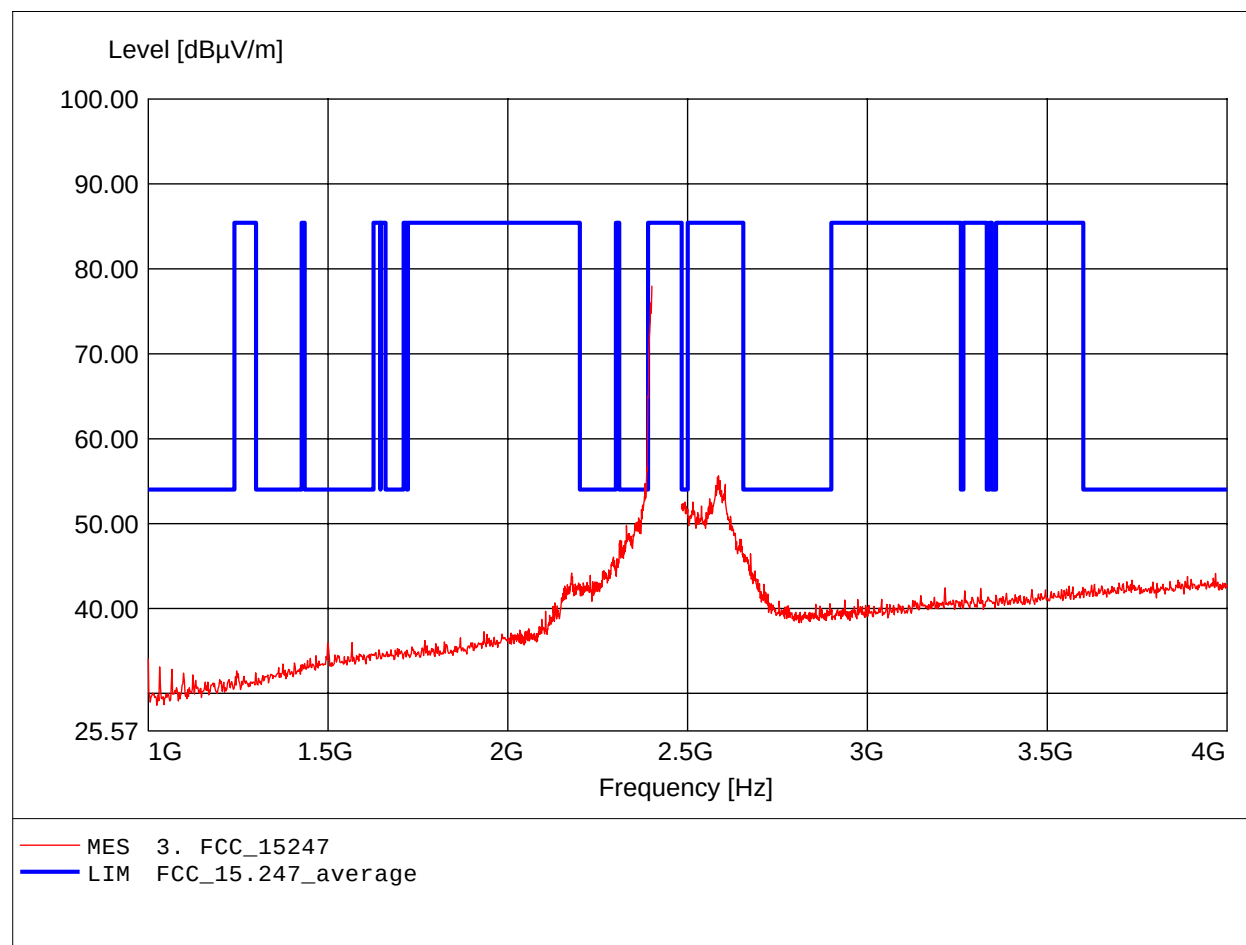
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.397GHz, Emax: 53.90dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

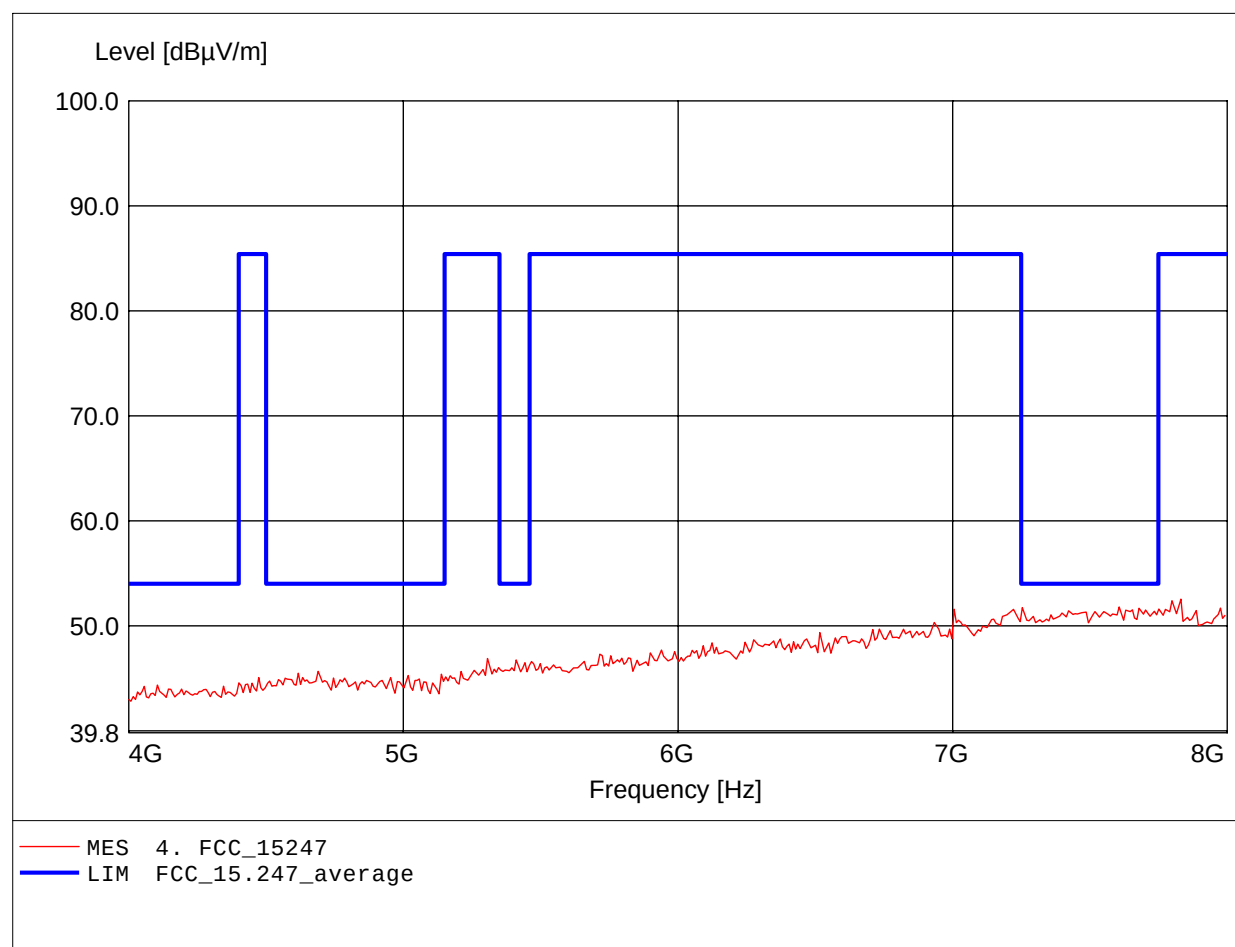
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.400GHz, Emax: 77.95dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

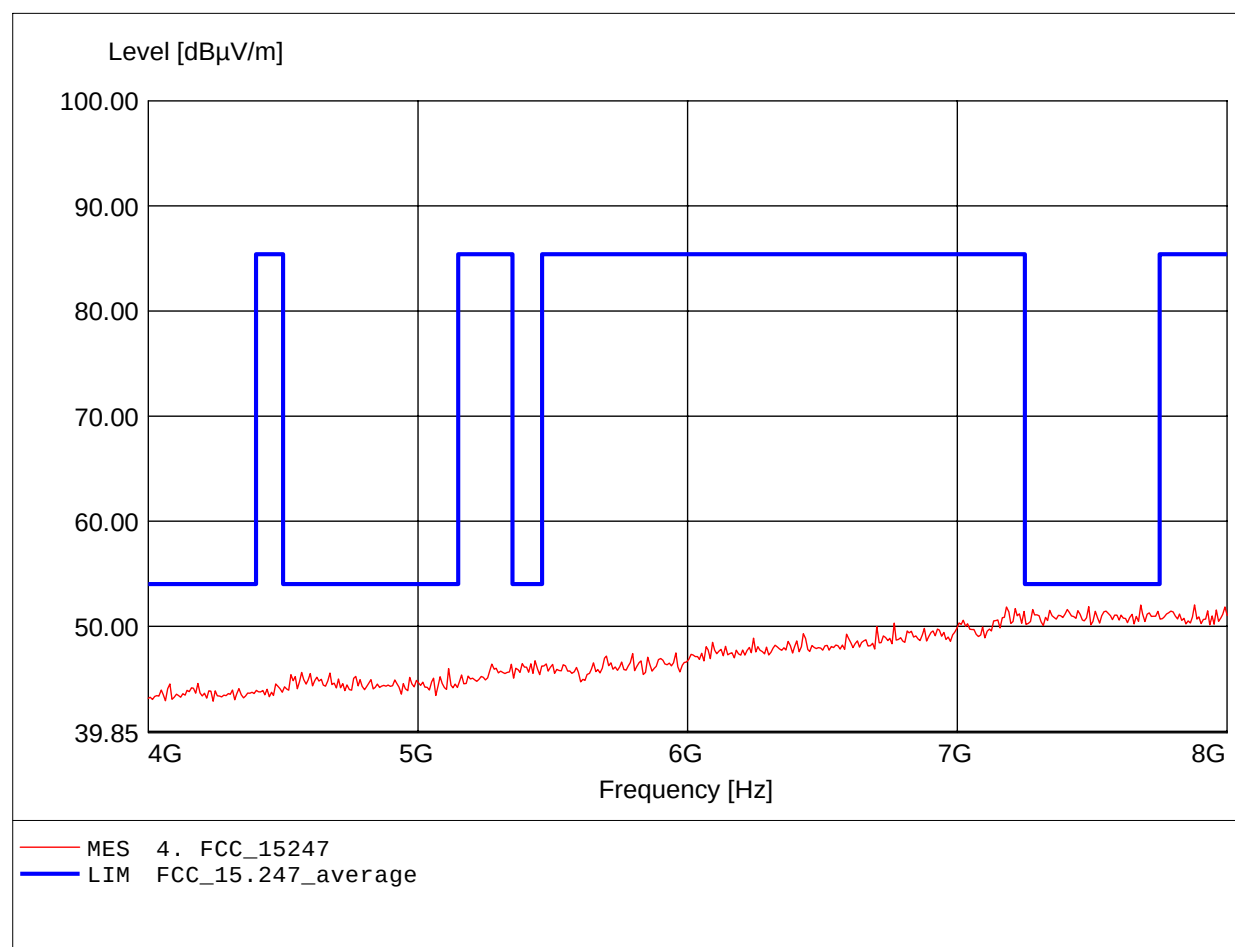
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.832GHz, Emax: 52.54dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

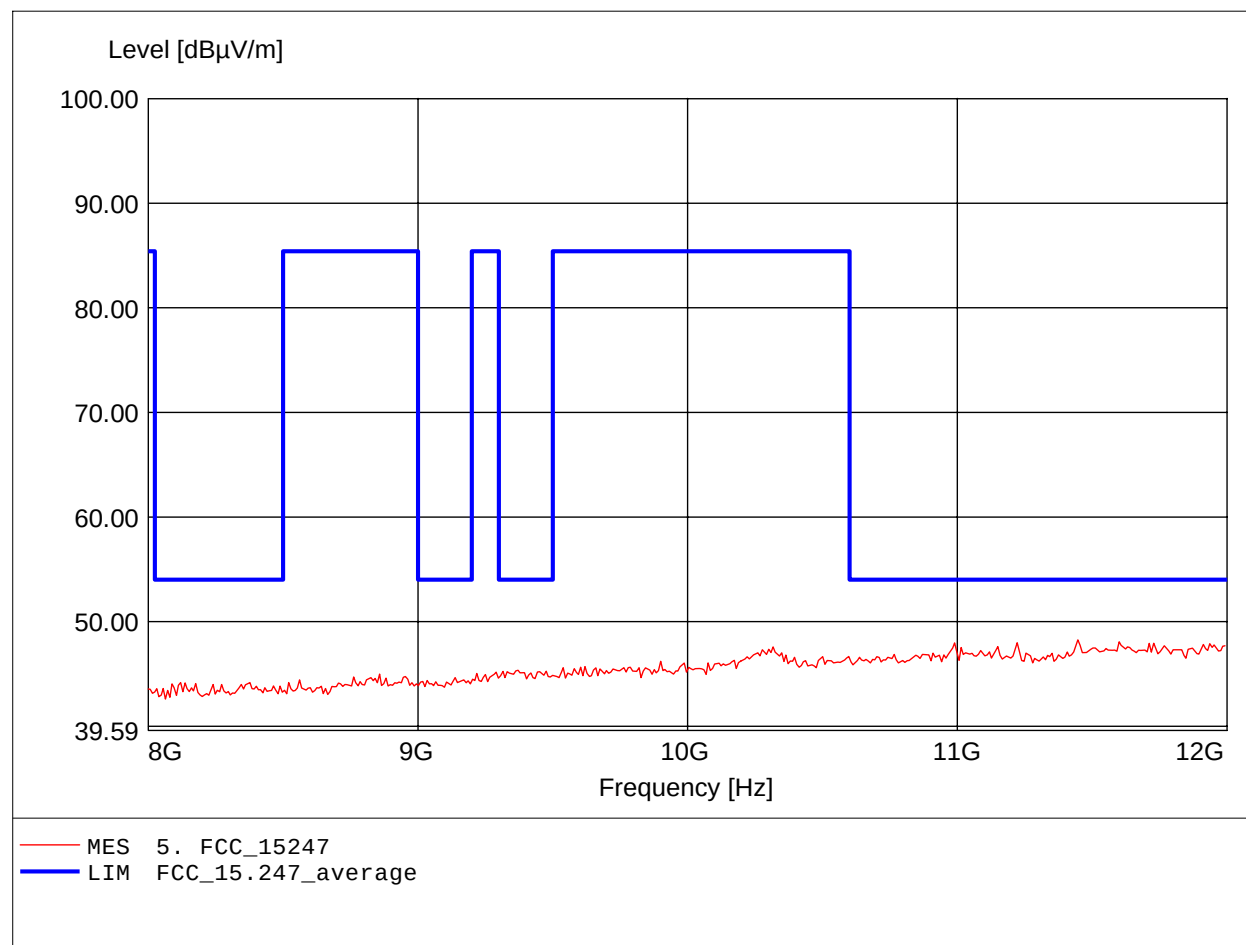
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.880GHz, Emax: 52.04dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

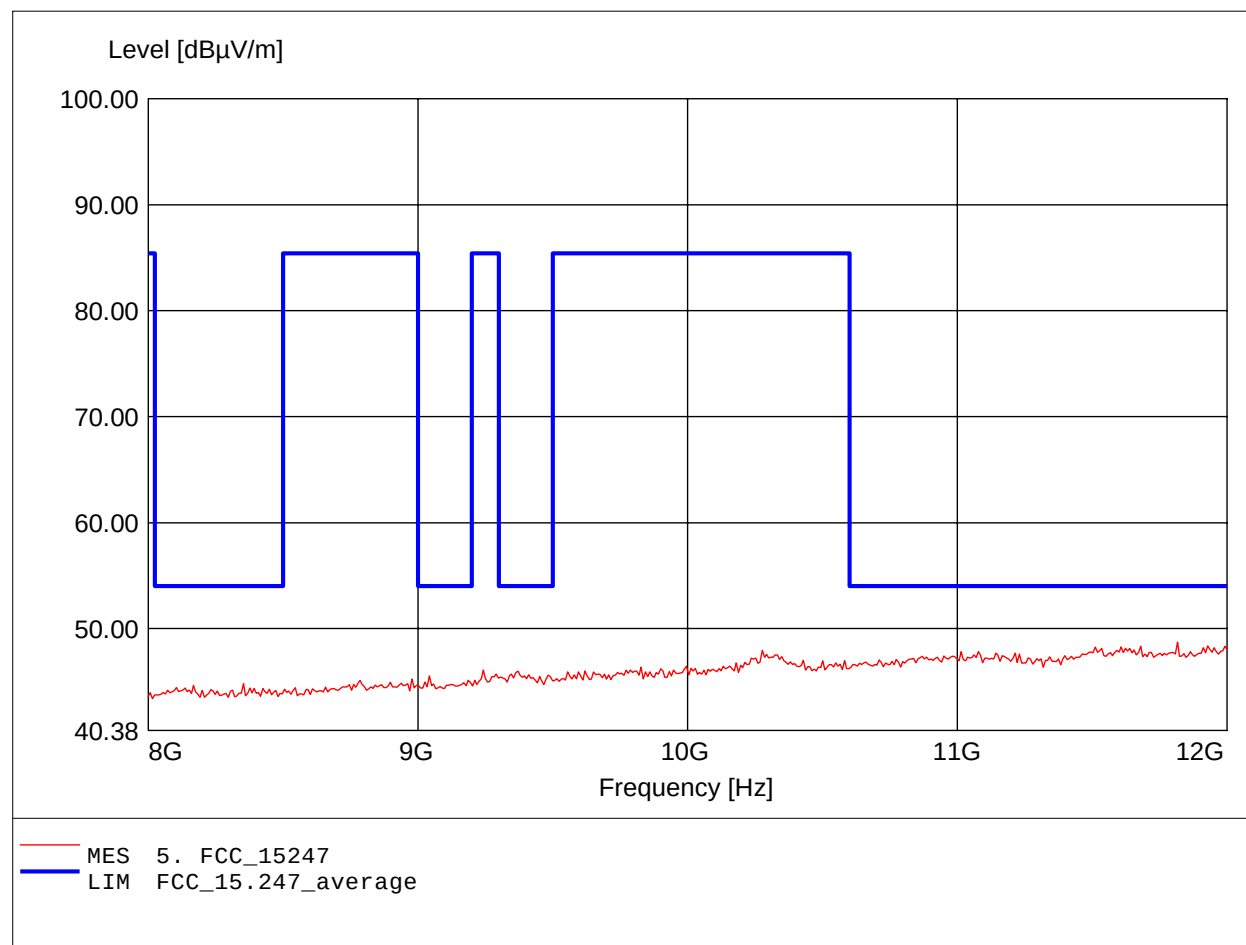
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.447GHz, Emax: 48.26dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

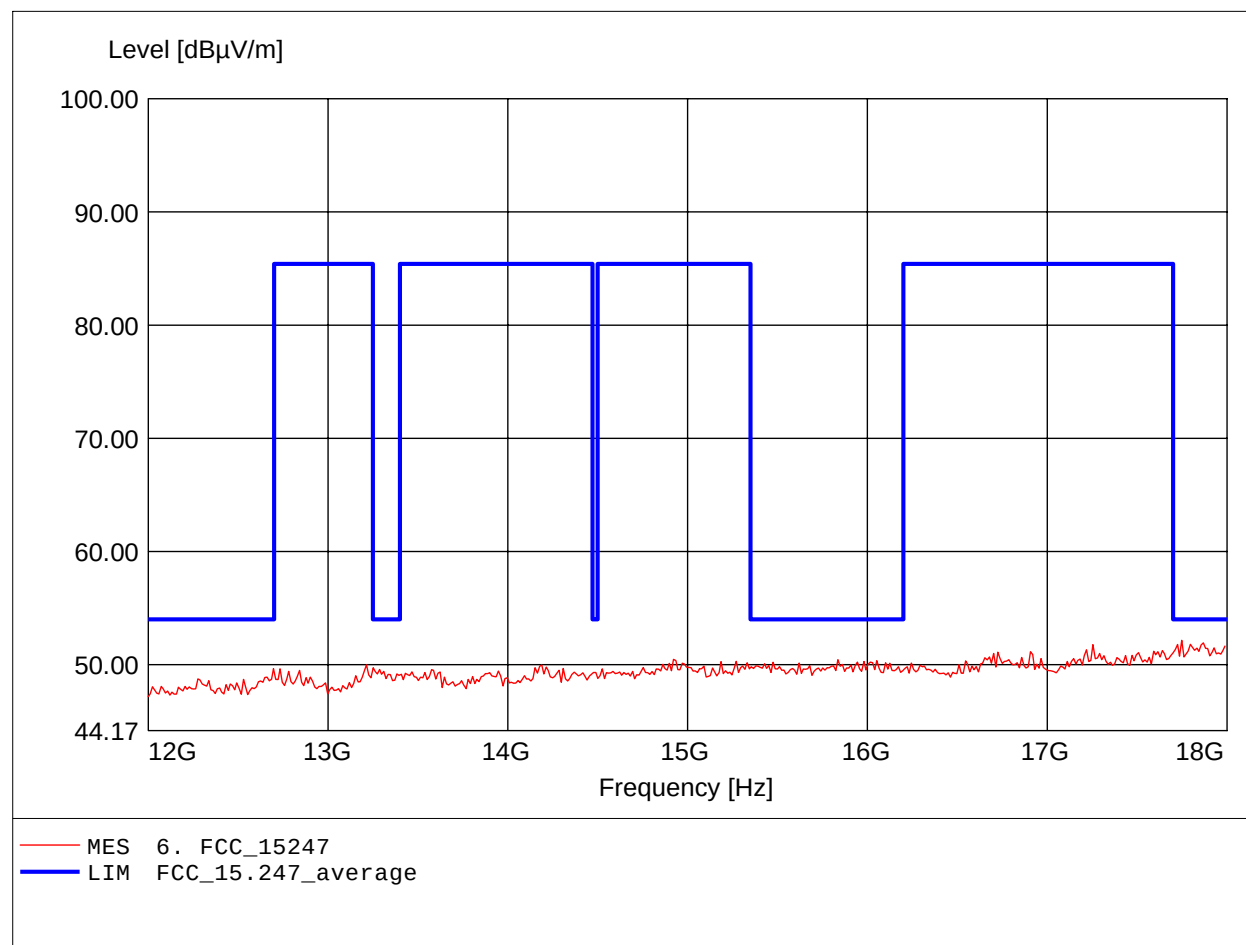
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.816GHz, Emax: 48.75dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

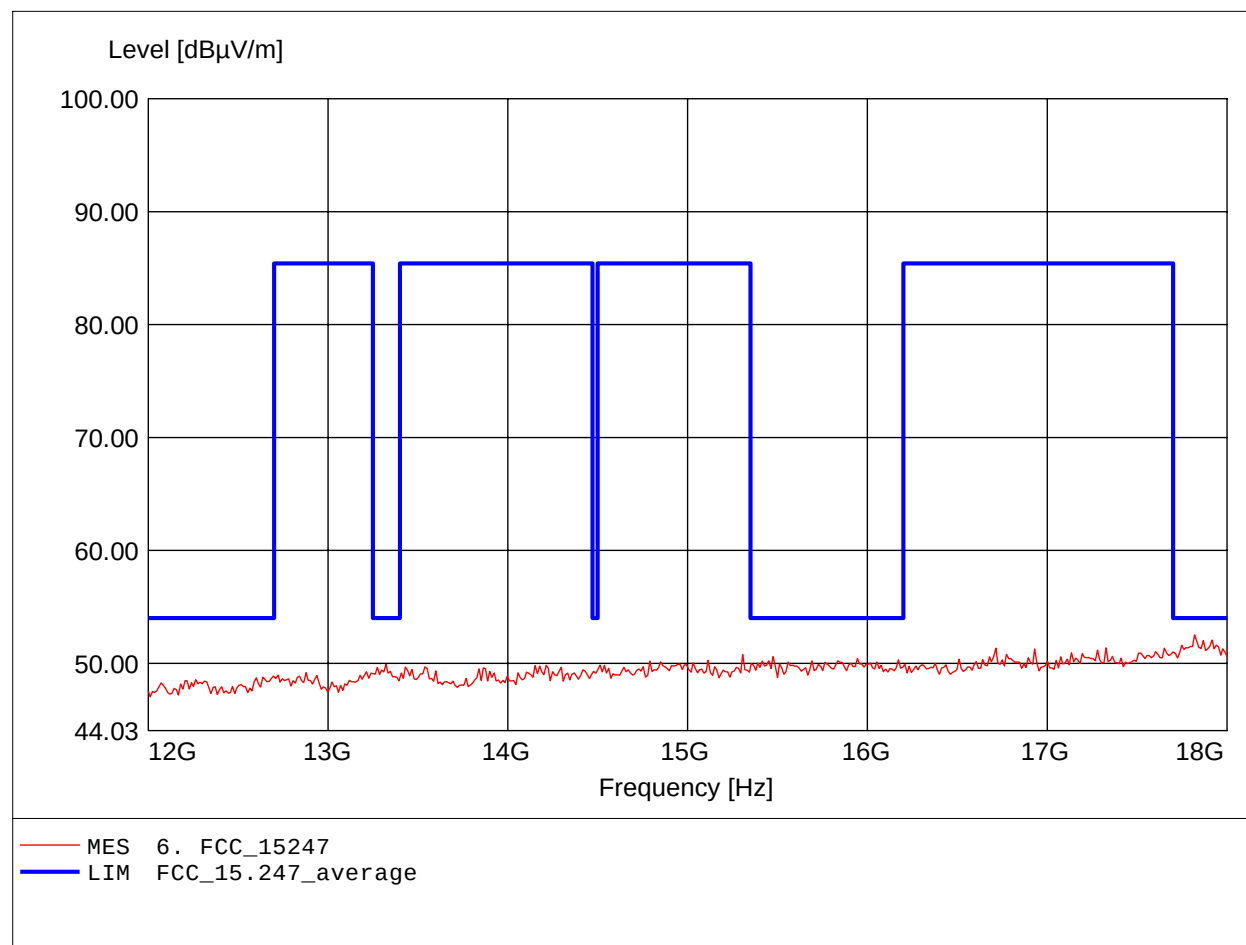
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.747GHz, Emax: 52.16dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

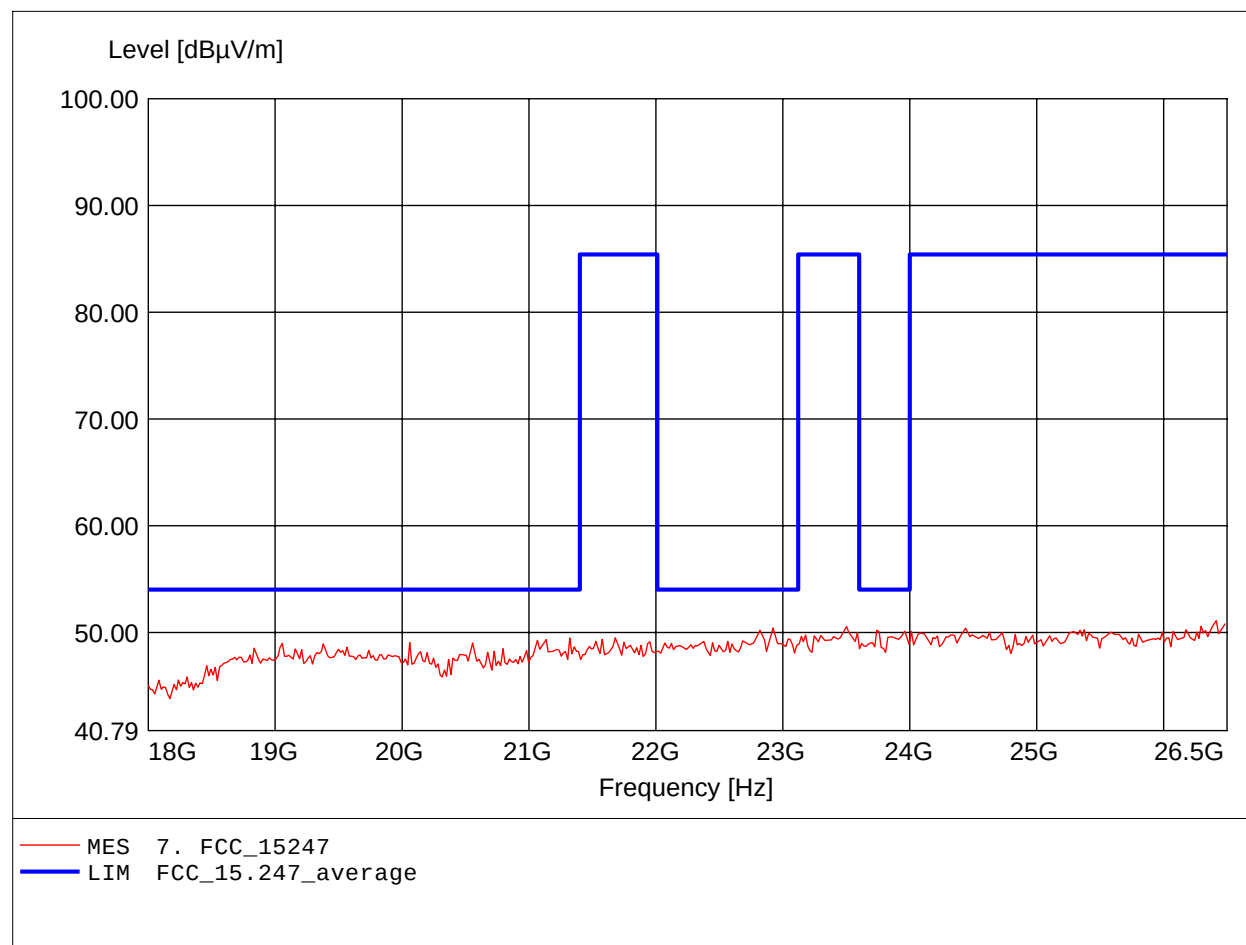
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.820GHz, Emax: 52.51dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

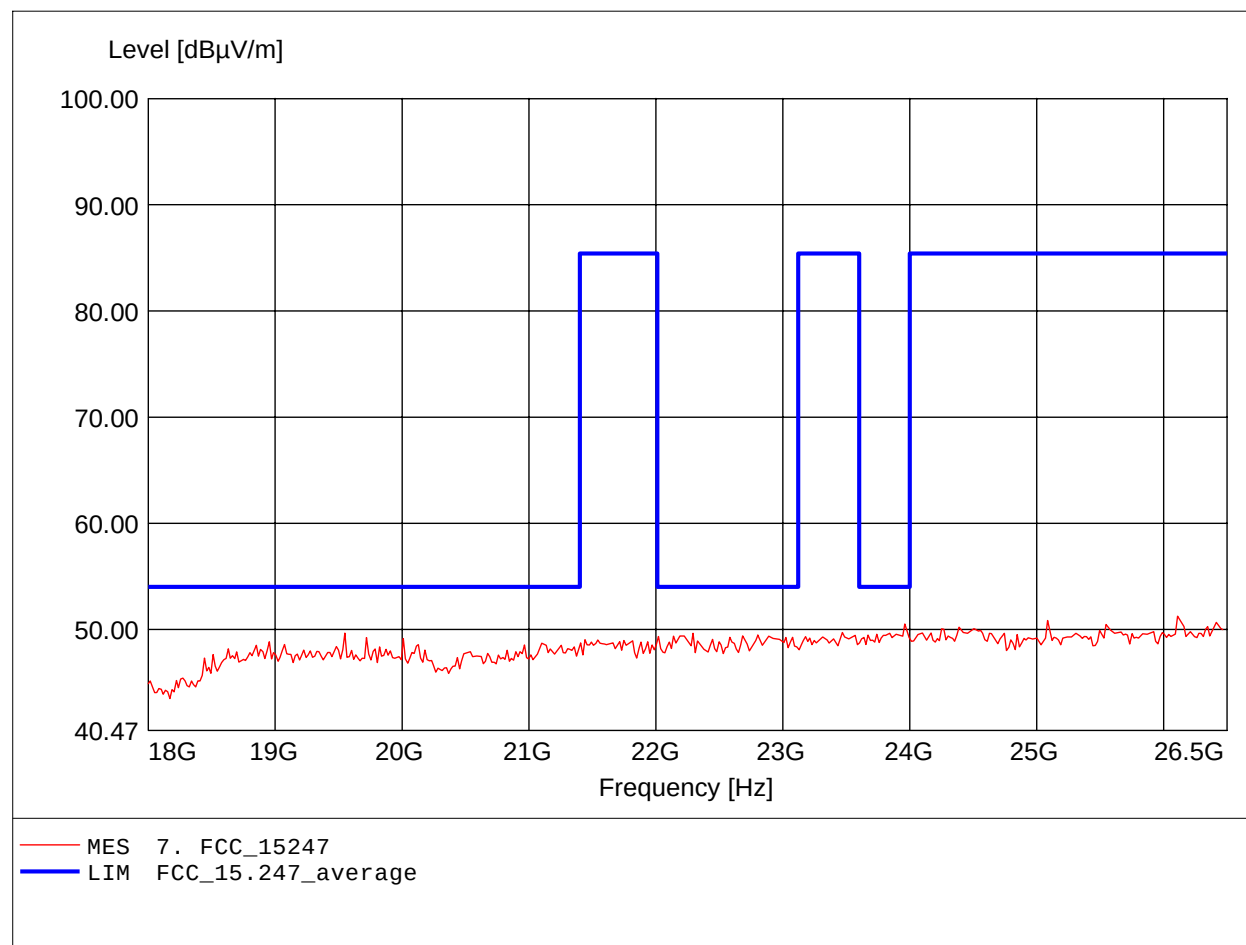
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 26.415GHz, Emax: 51.10dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

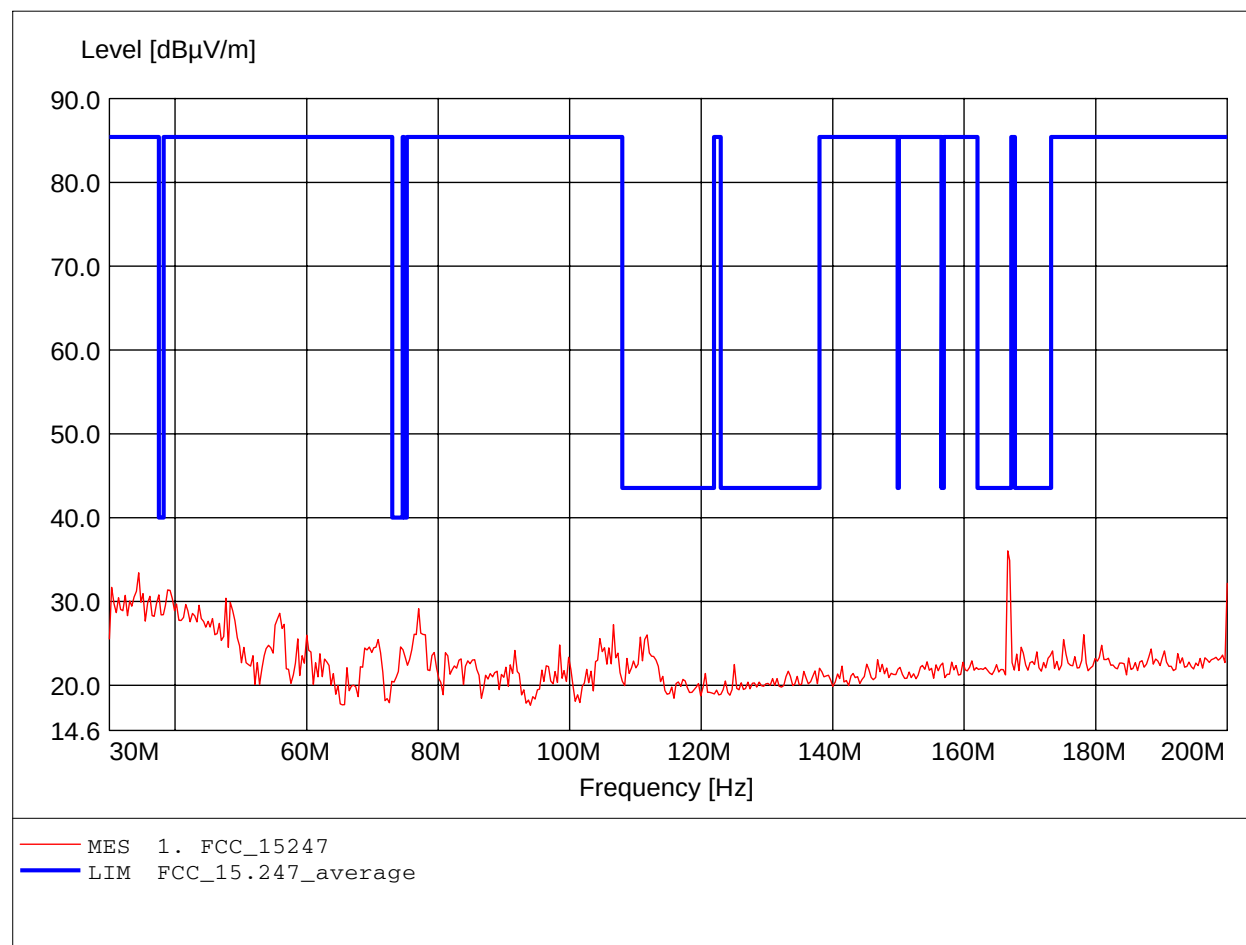
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 26.108GHz, Emax: 51.25dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

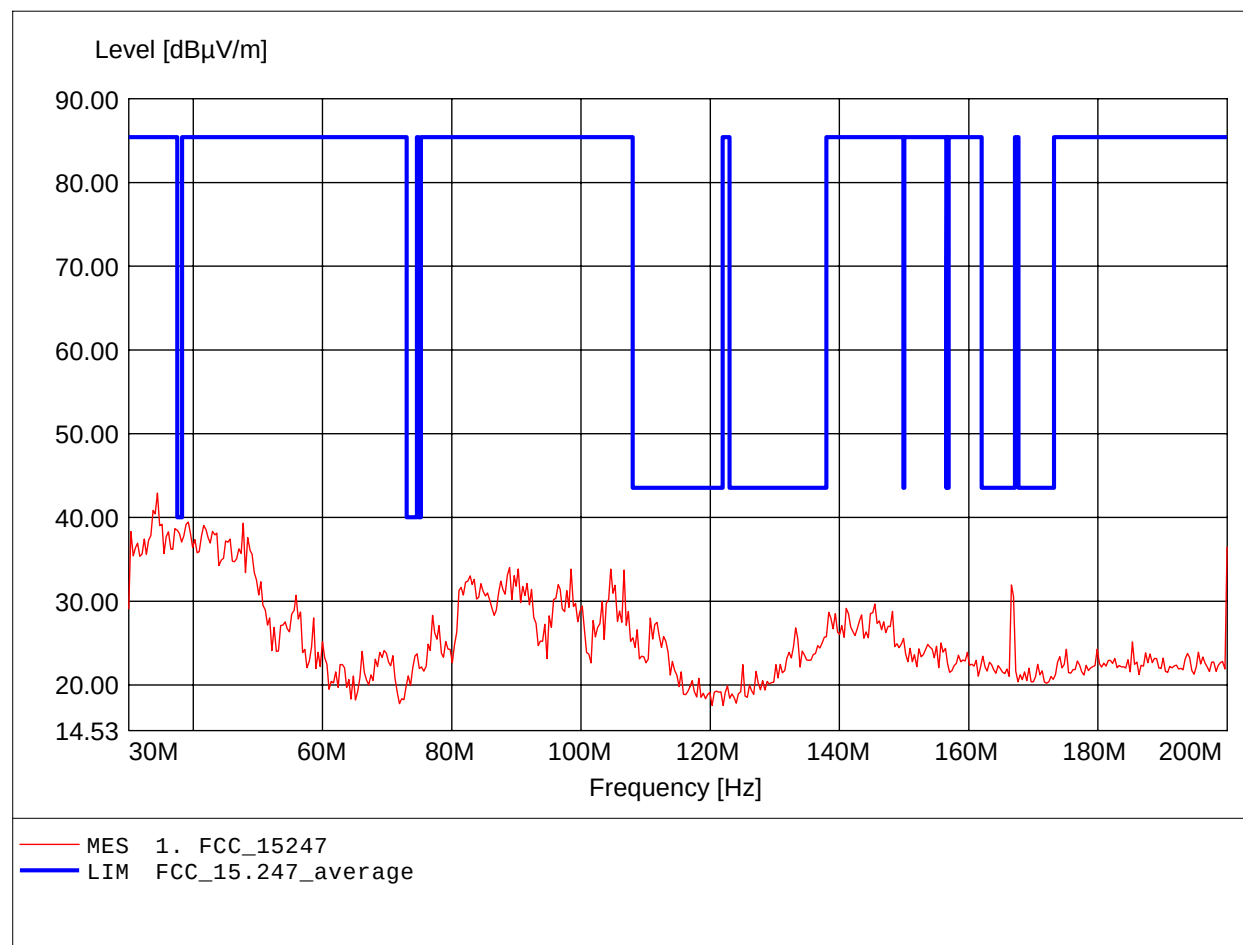
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 166.613MHz, Emax: 36.04dBμV/m, RBW: 100kHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

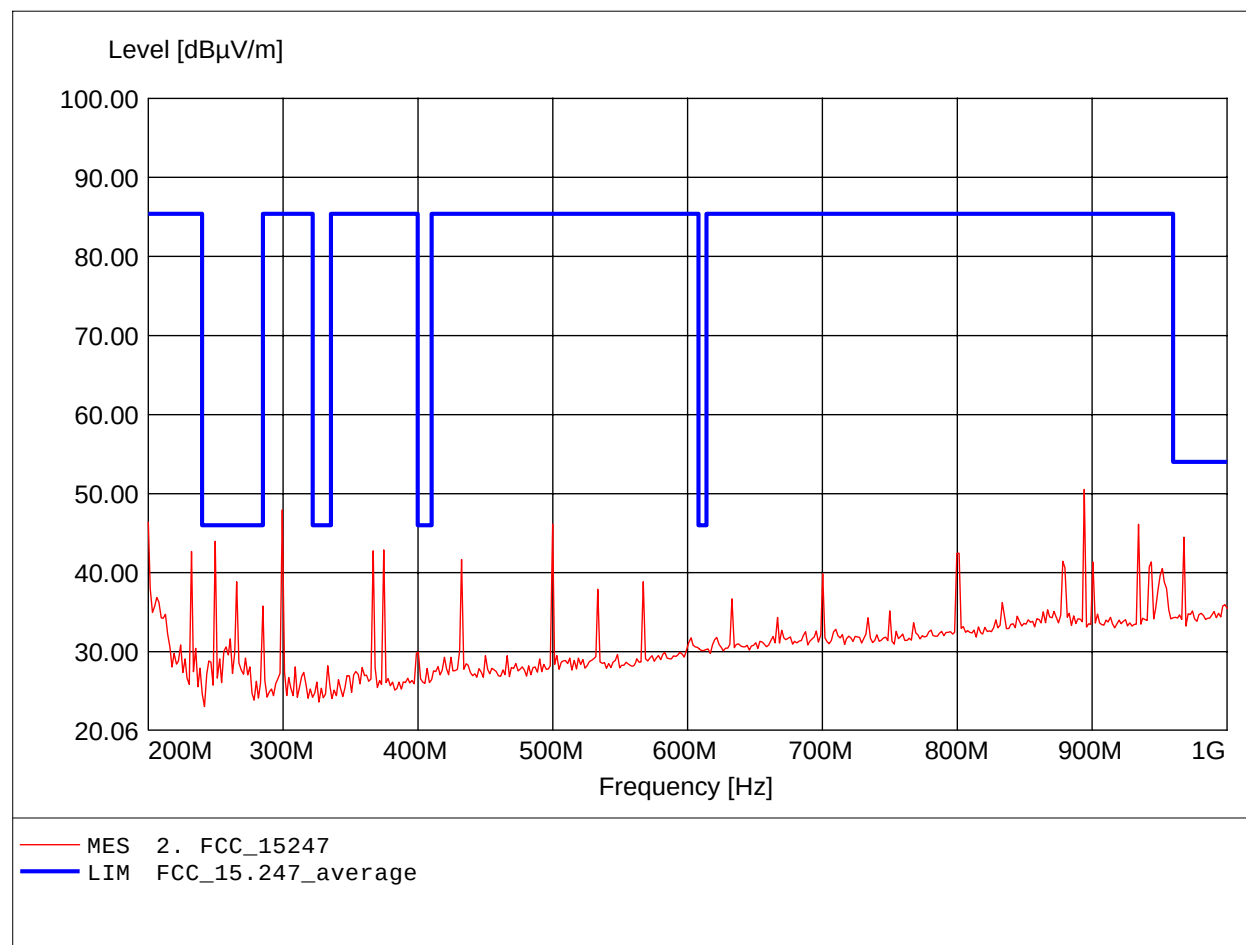
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 34.429MHz, Emax: 42.92dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

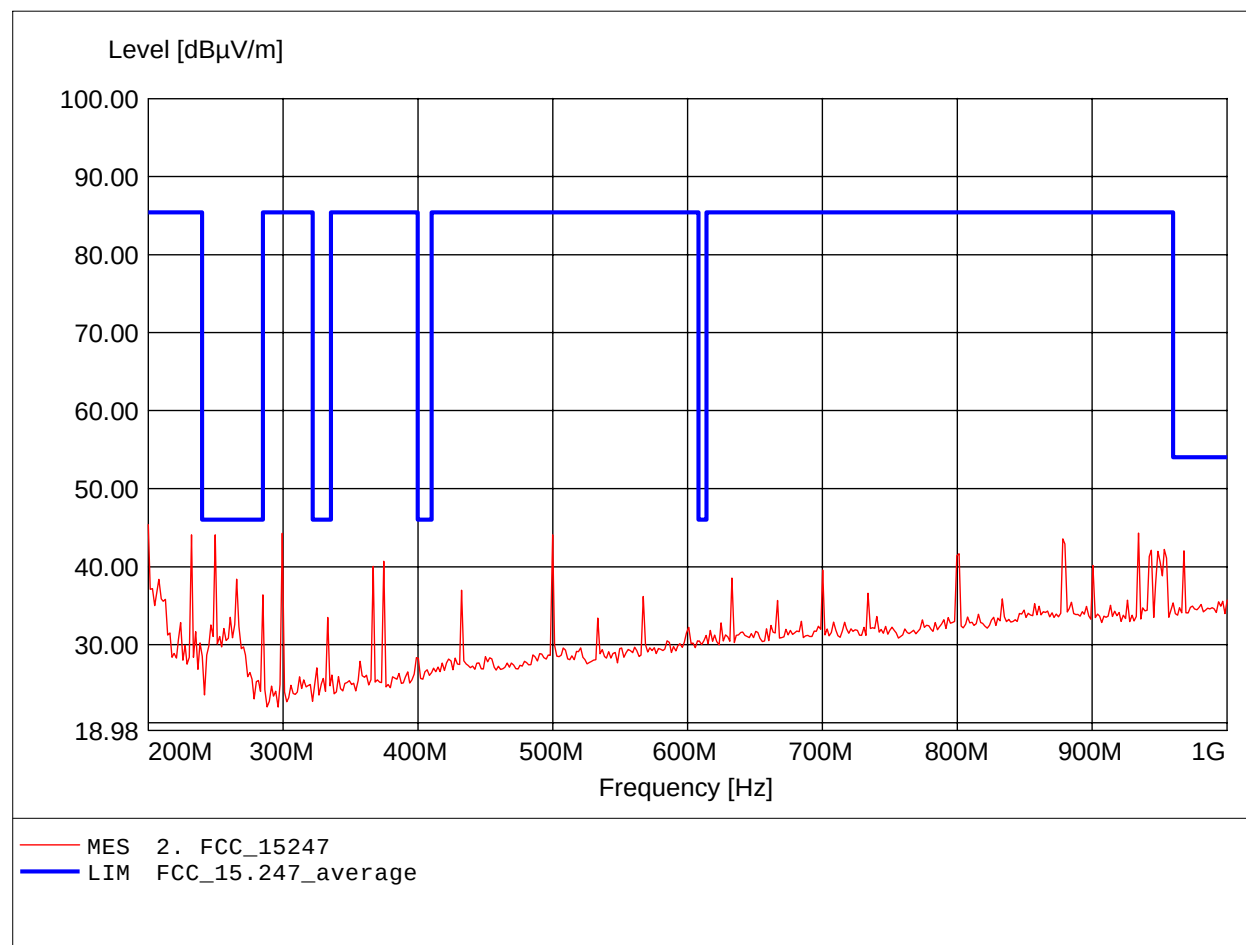
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 894.188MHz, Emax: 50.51dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

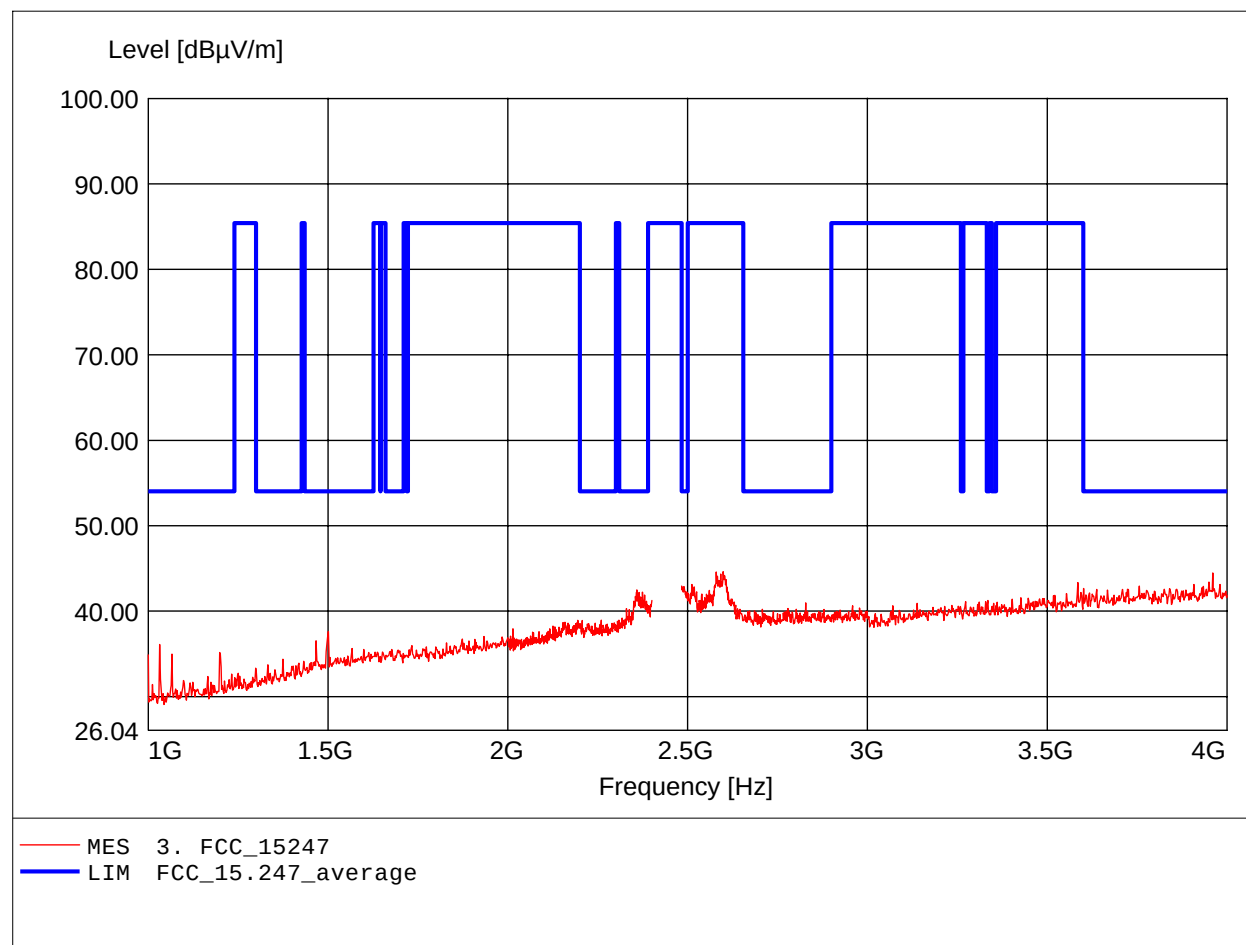
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 200.000MHz, Emax: 45.39dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

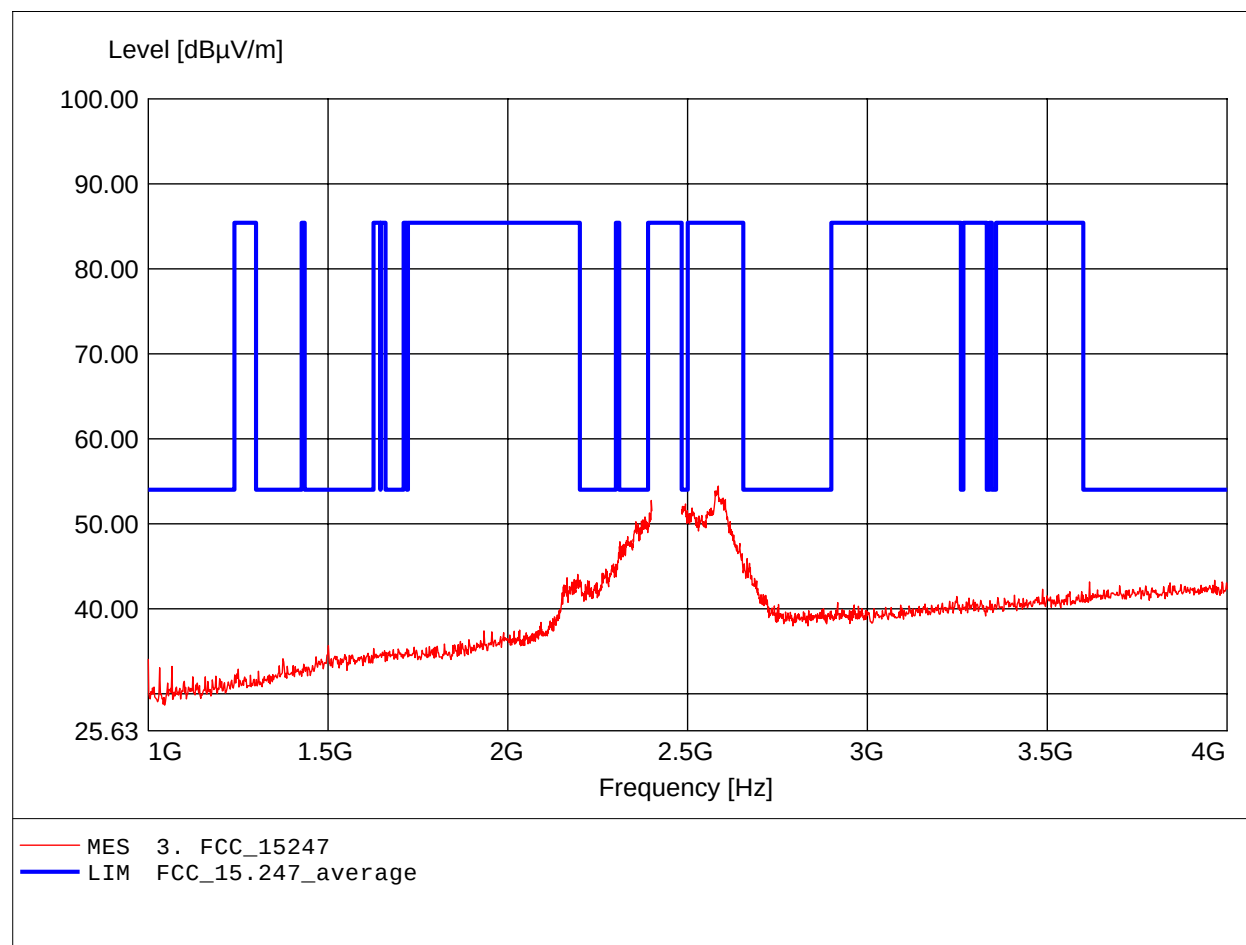
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.598GHz, Emax: 44.63dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

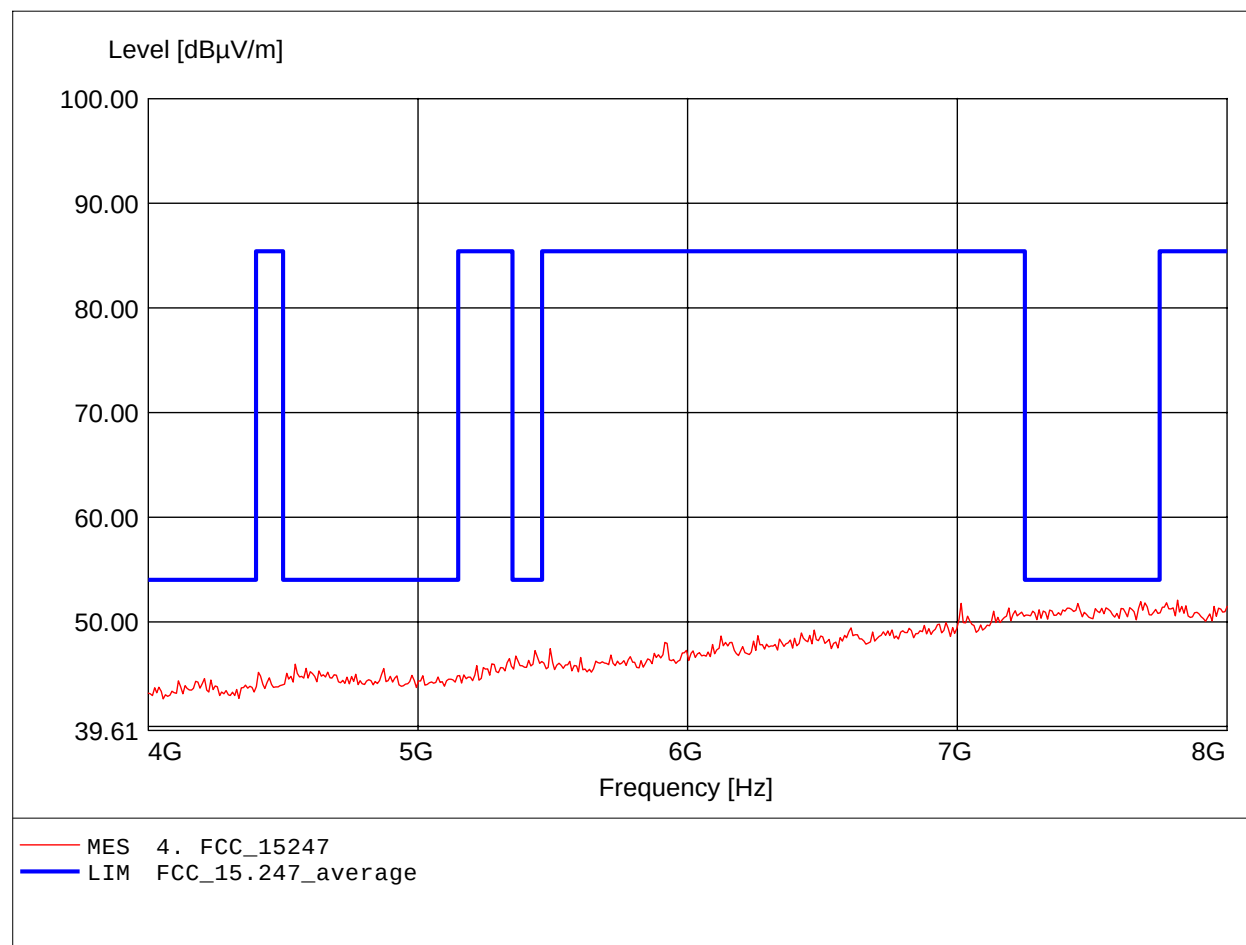
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.585GHz, Emax: 54.42dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

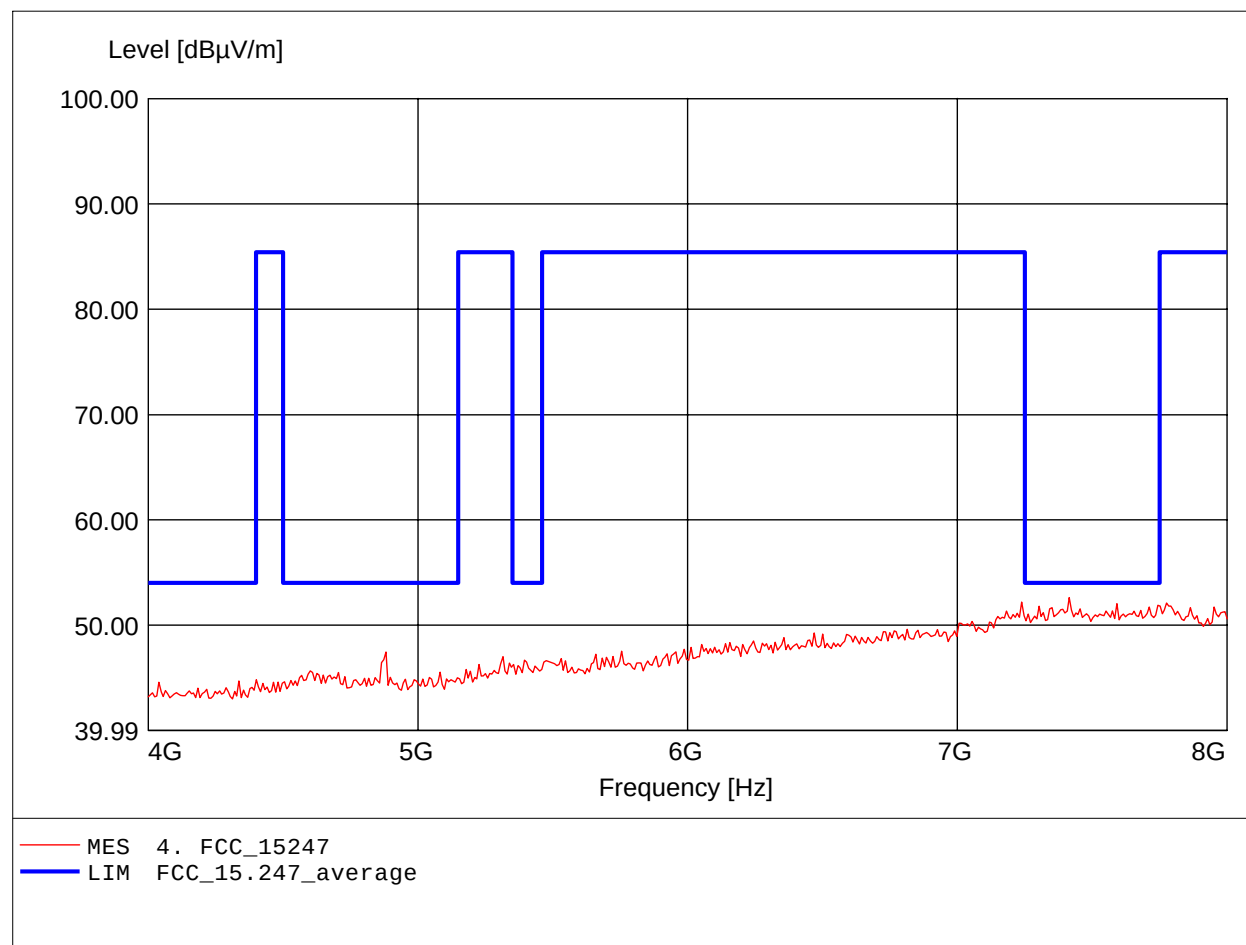
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.816GHz, Emax: 52.07dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

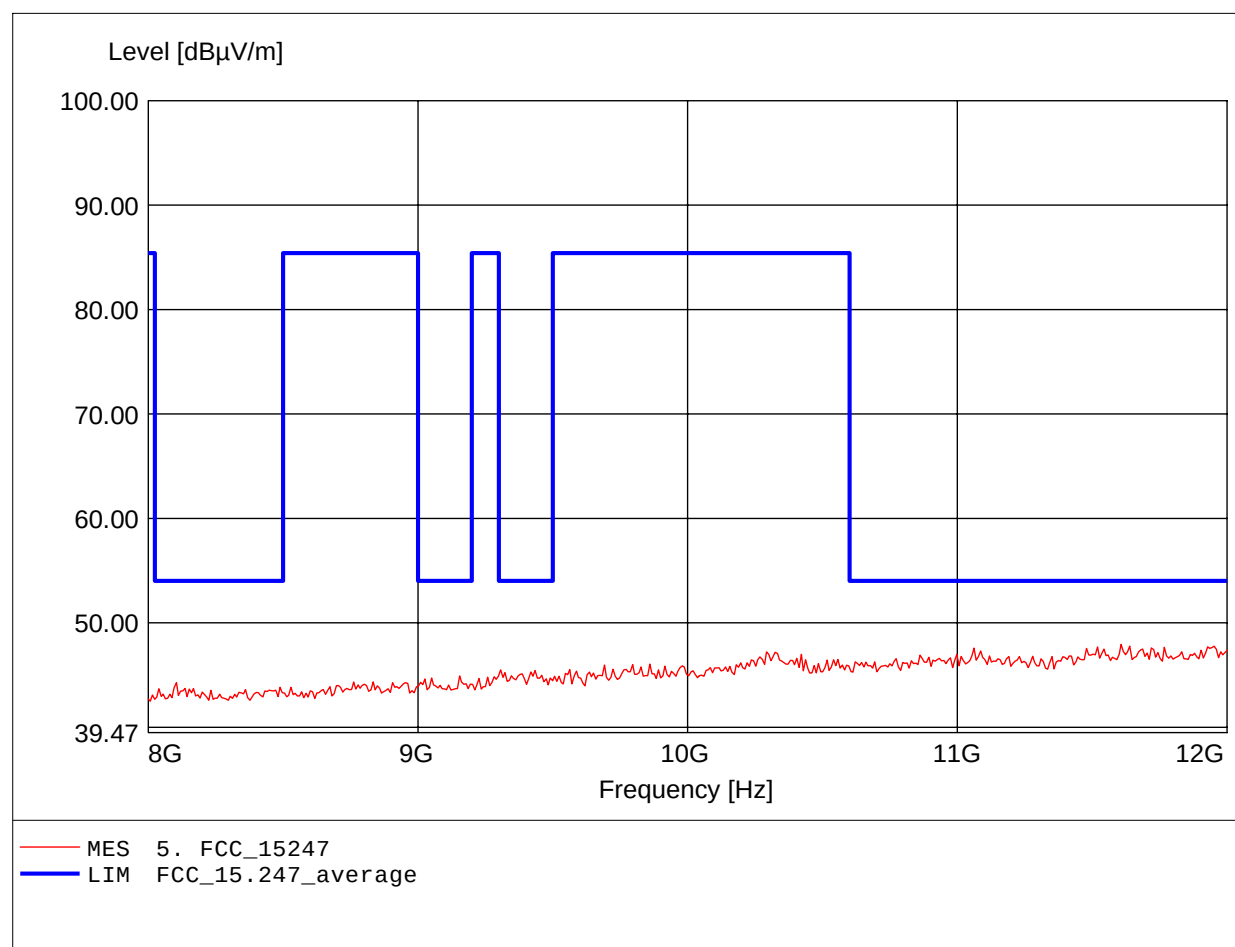
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.415GHz, Emax: 52.61dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

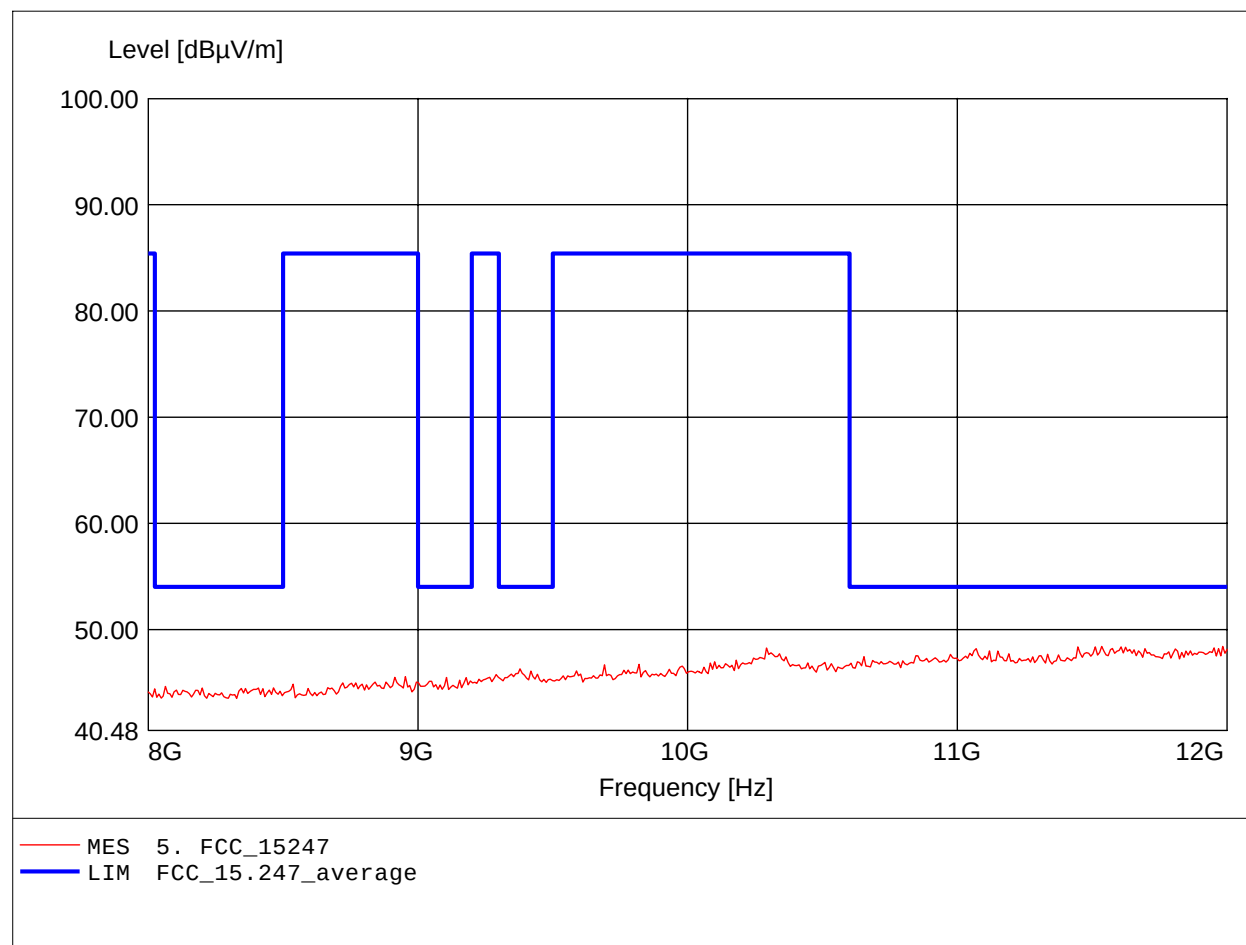
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.607GHz, Emax: 47.93dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

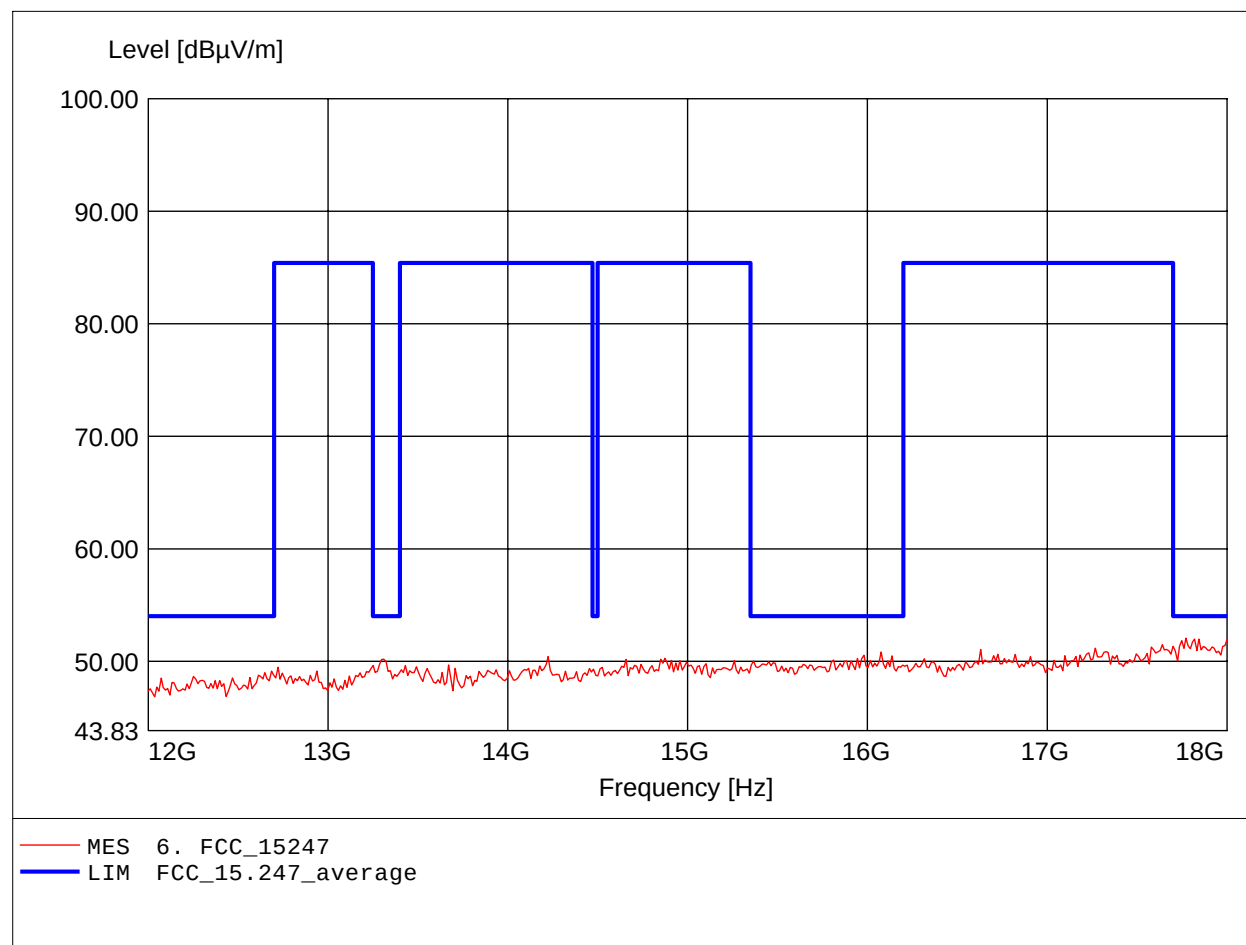
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.535GHz, Emax: 48.40dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

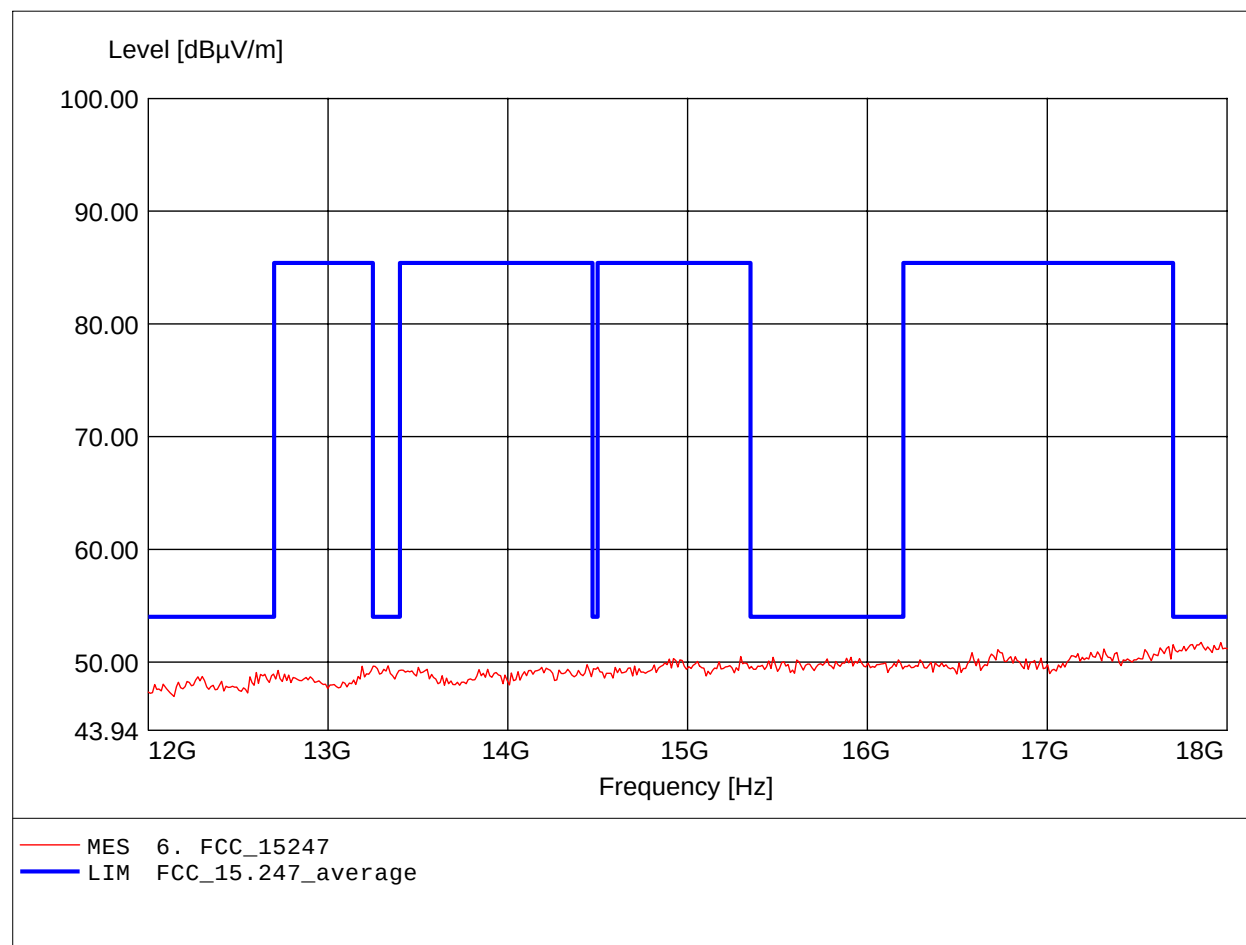
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.772GHz, Emax: 52.06dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

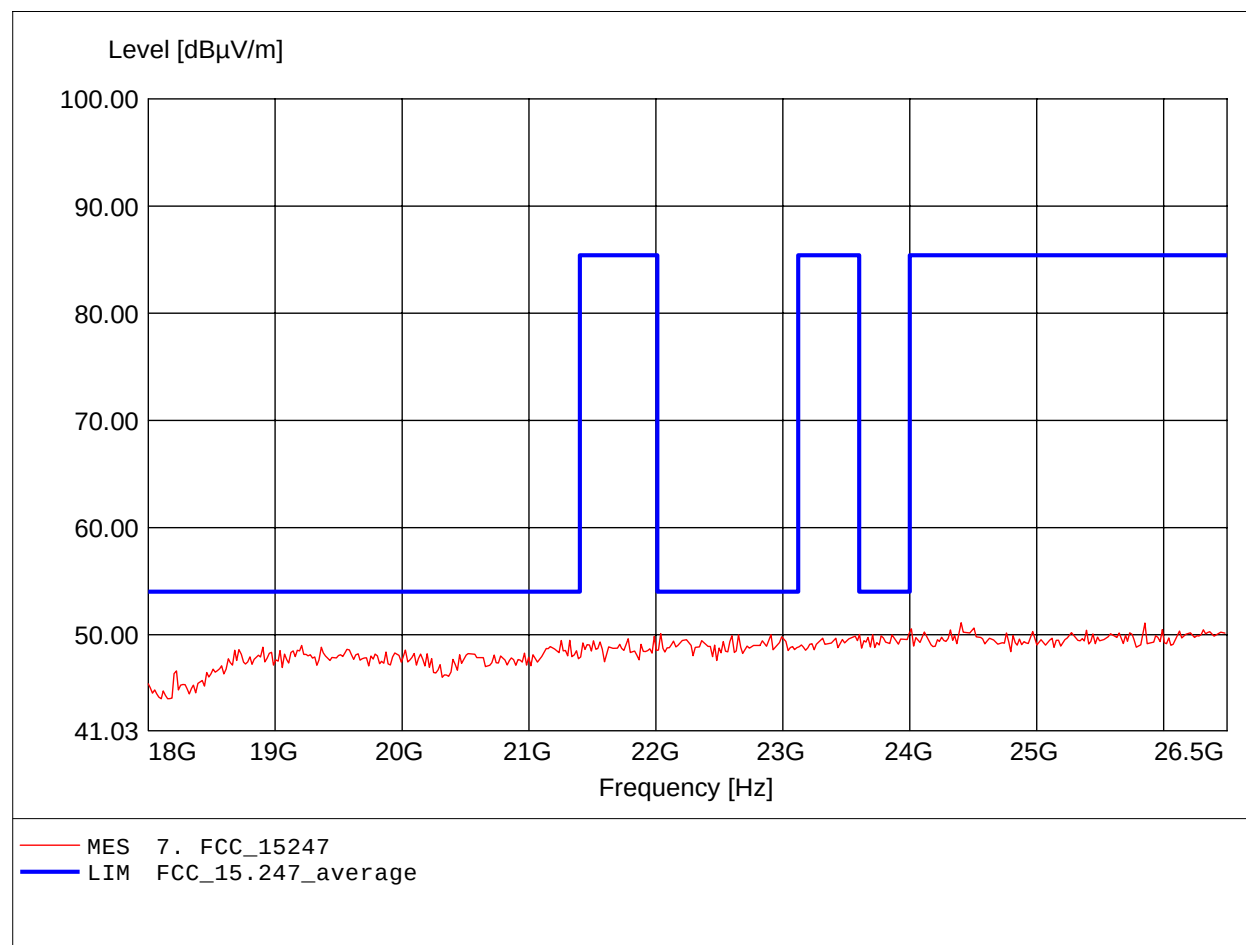
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.856GHz, Emax: 51.75dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

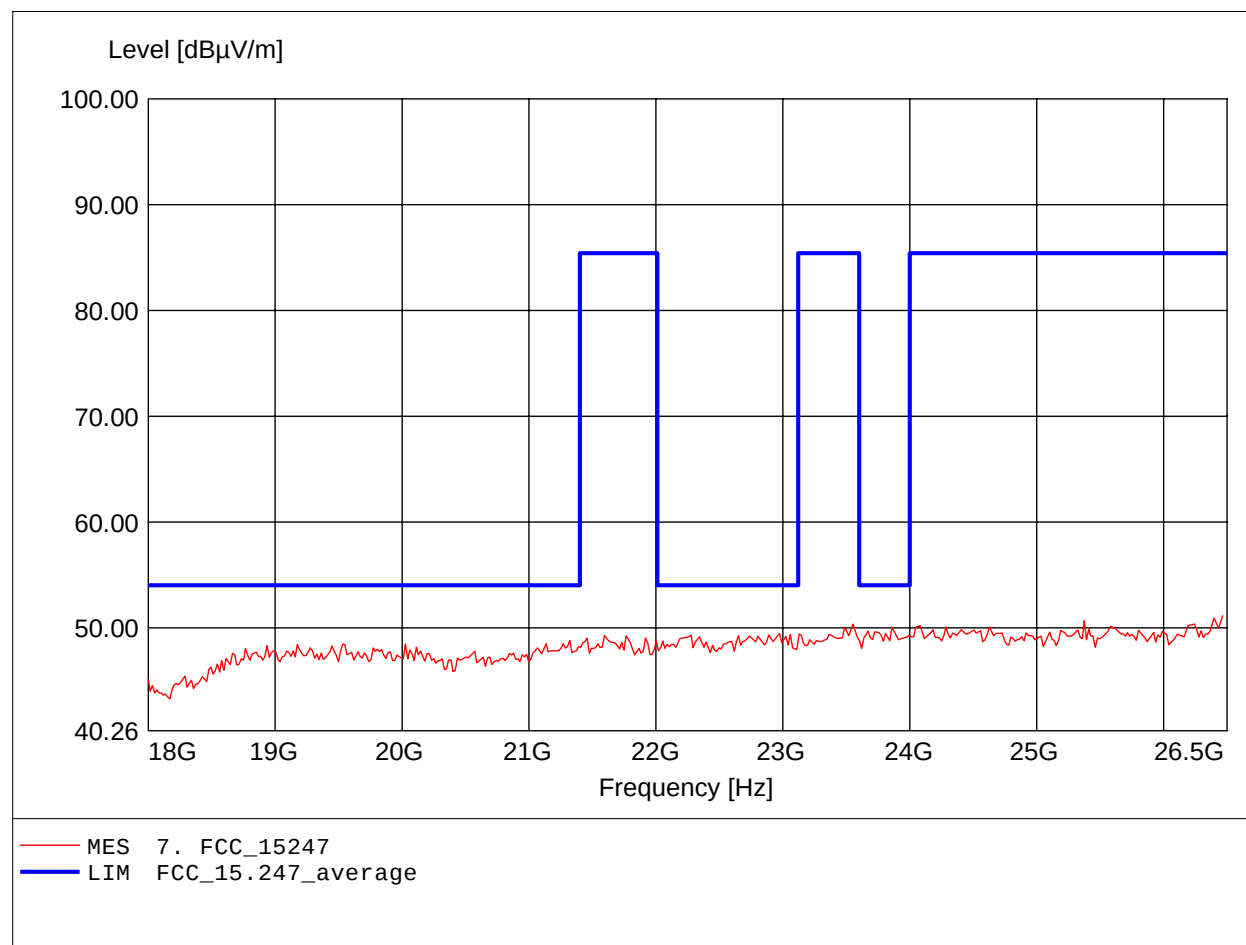
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 24.405GHz, Emax: 51.13dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

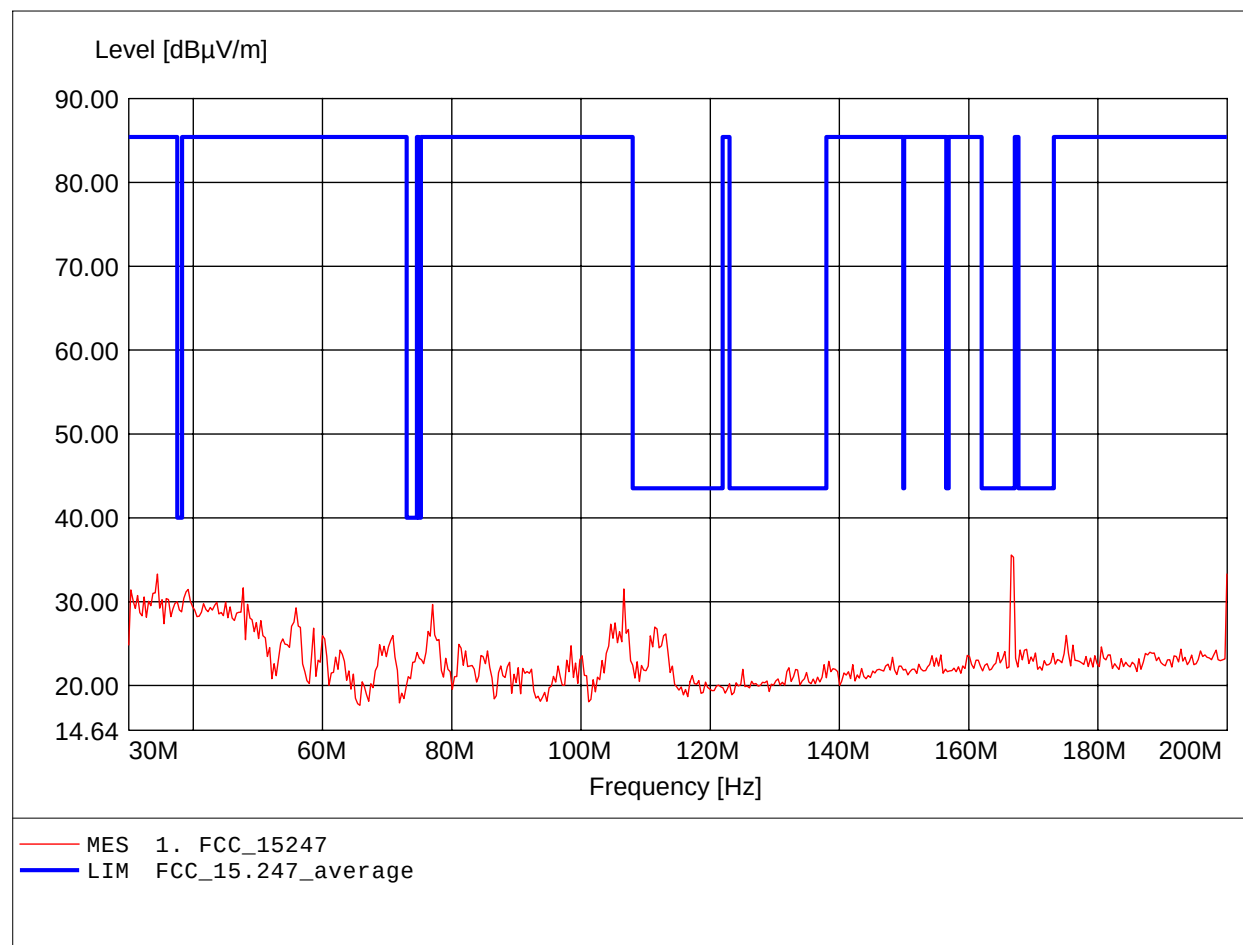
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 26.466GHz, Emax: 51.13dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

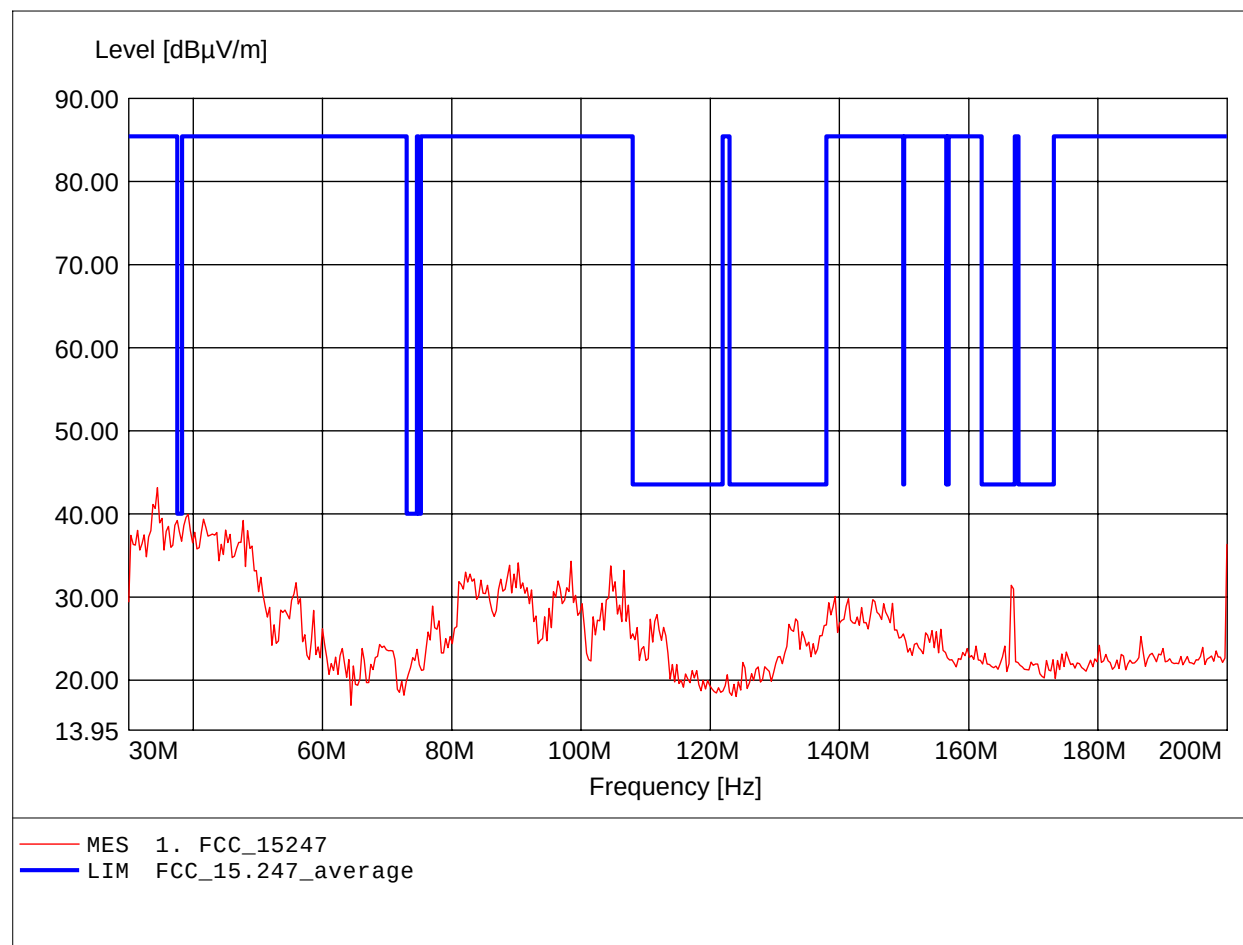
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 166.613MHz, Emax: 35.56dBμV/m, RBW: 100kHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

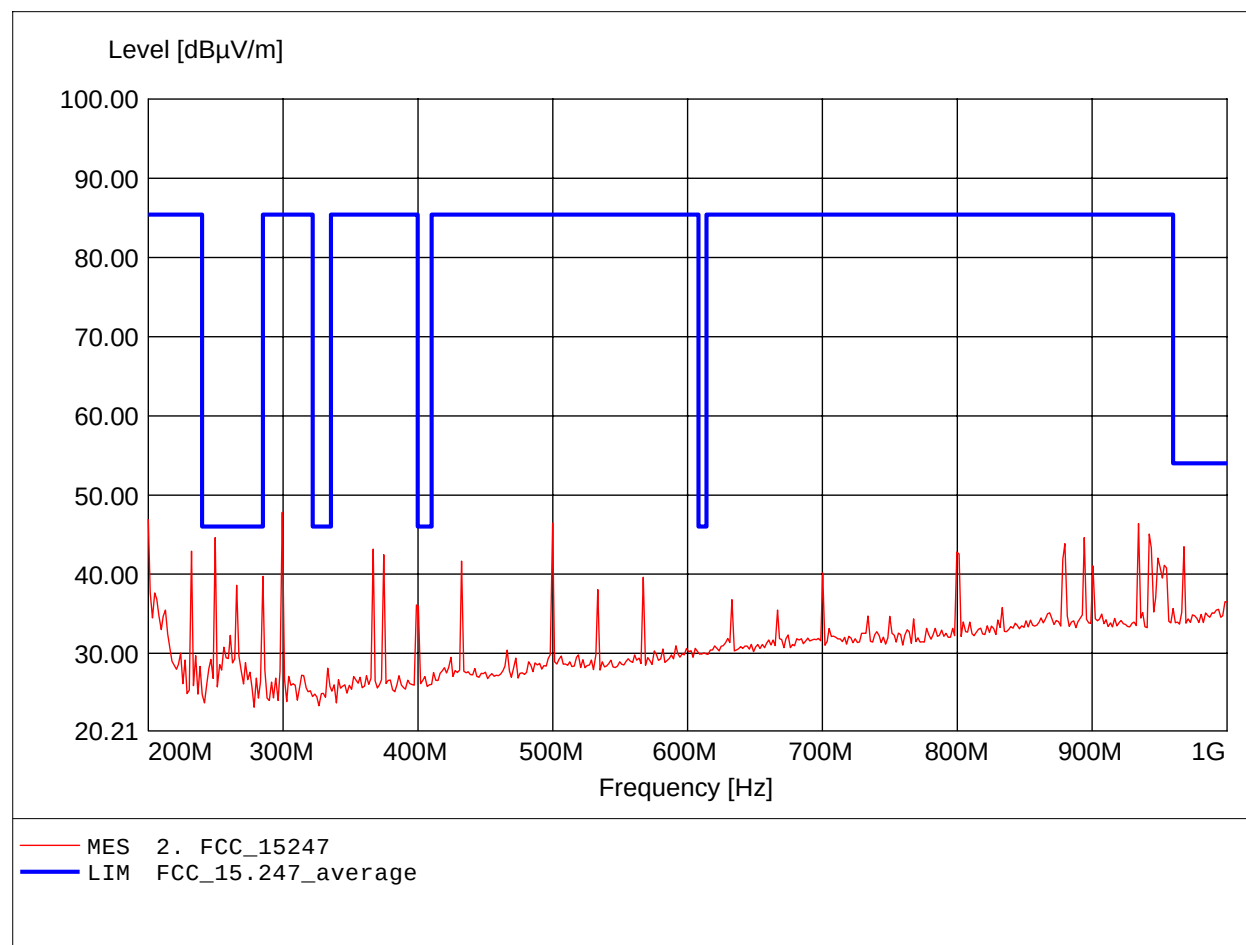
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 34.429MHz, Emax: 43.14dBμV/m, RBW: 100kHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

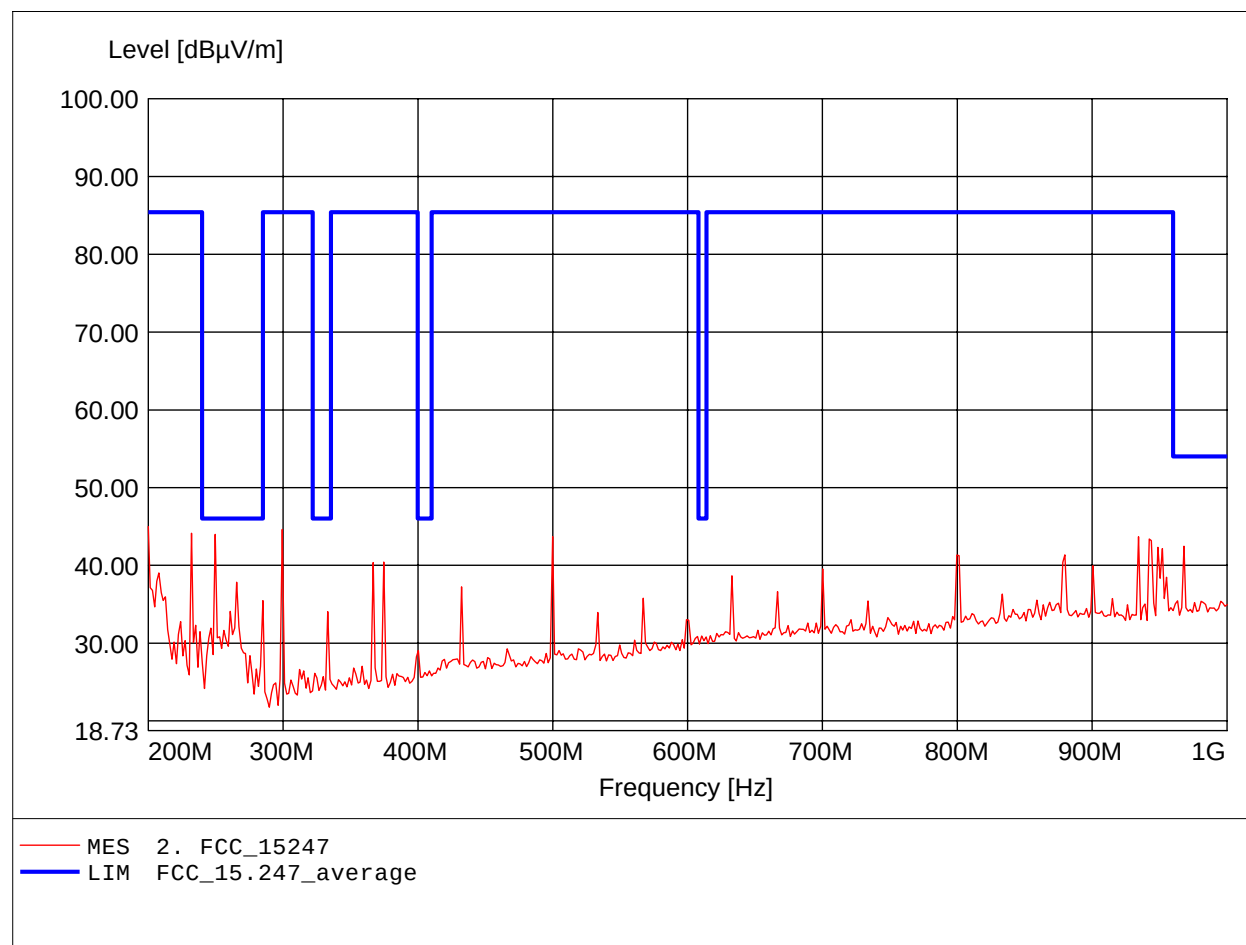
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 299.399MHz, Emax: 47.85dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

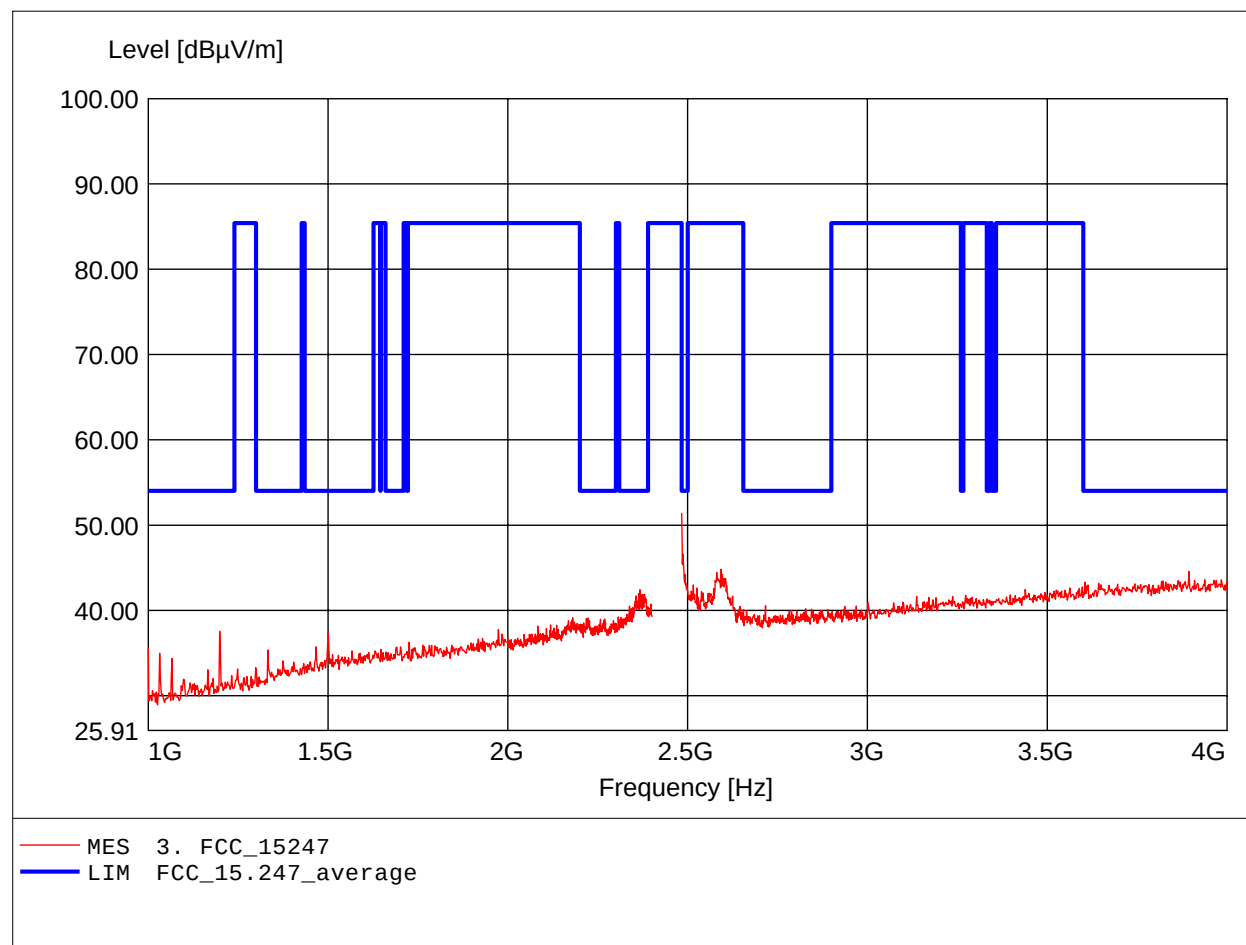
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223,  
Freq: 200.000MHz, Emax: 44.98dBμV/m, RBW: 100kHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

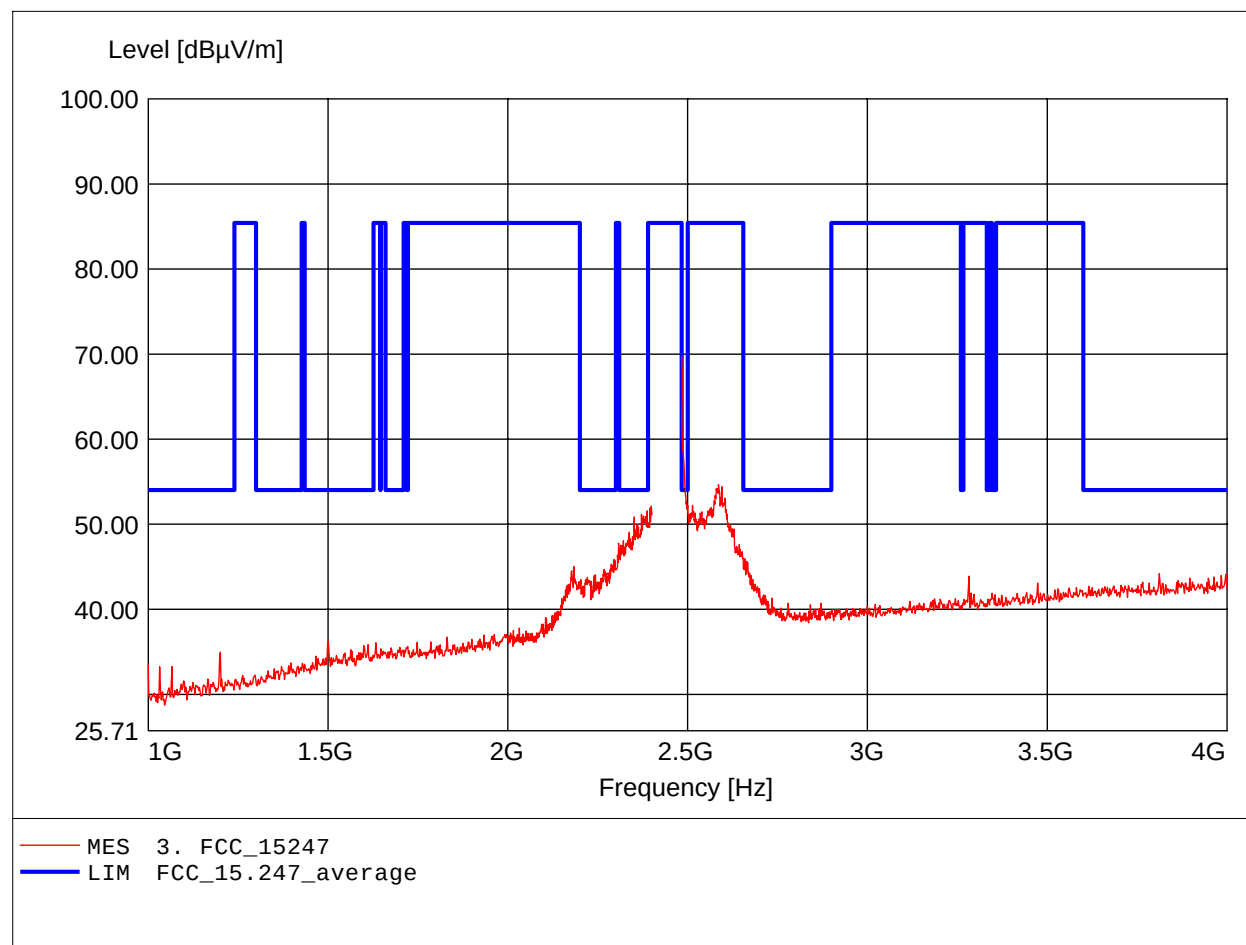
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.484GHz, Emax: 51.34dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

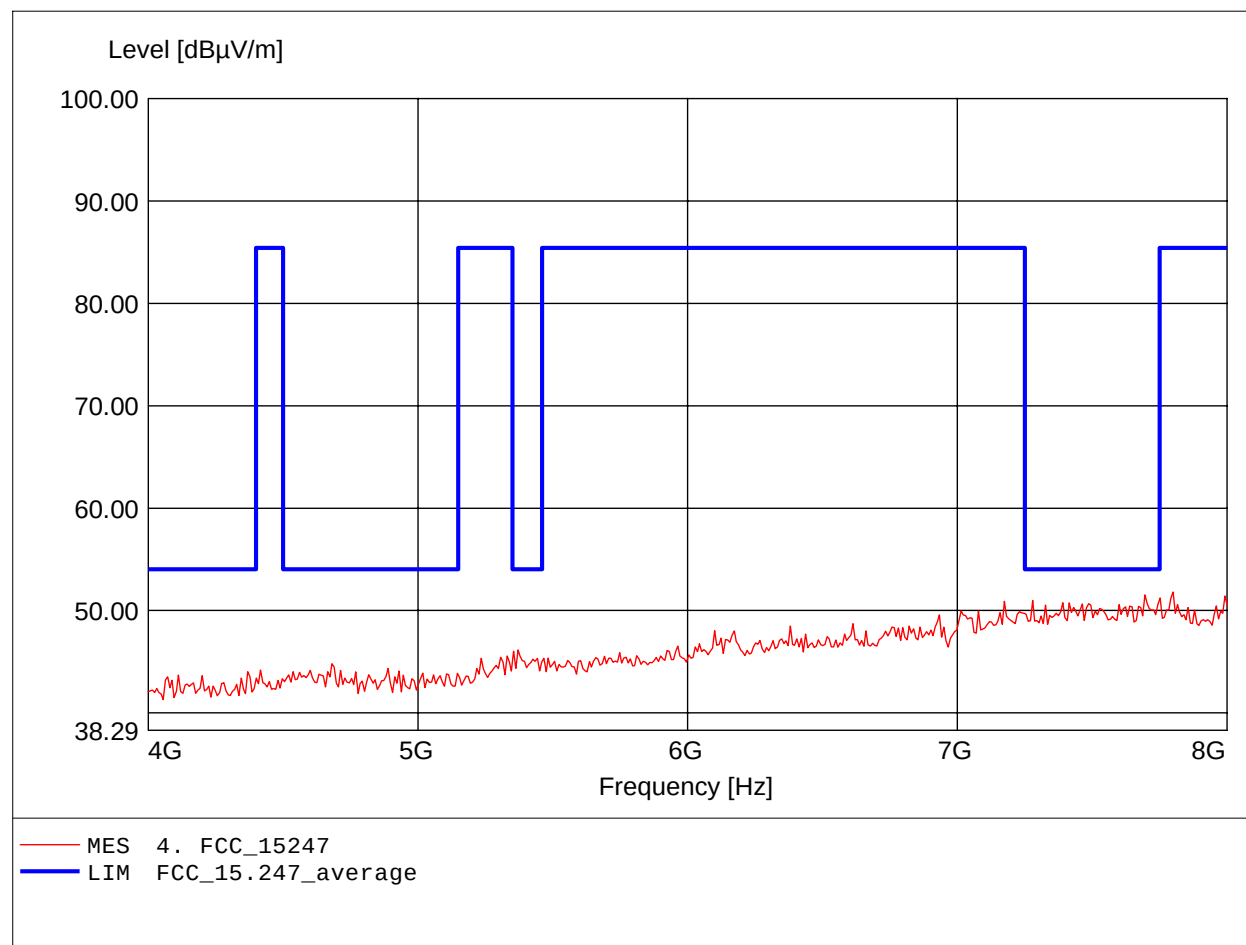
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 2.484GHz, Emax: 69.71dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

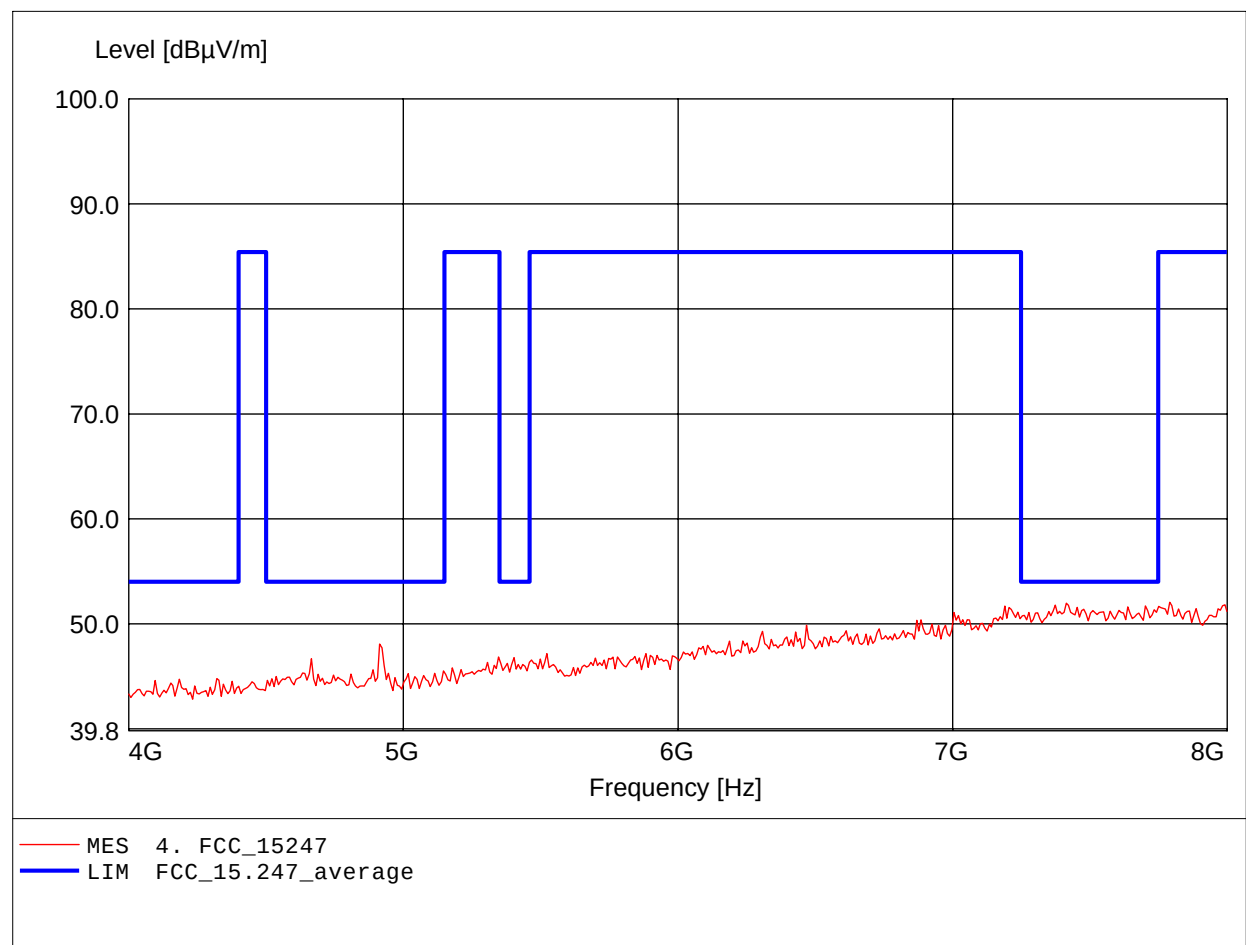
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.800GHz, Emax: 51.82dBμV/m, RBW: 1MHz



# Spurious emissions Field Strength

## FCC RULES PART 15, SUBPART C / LP002

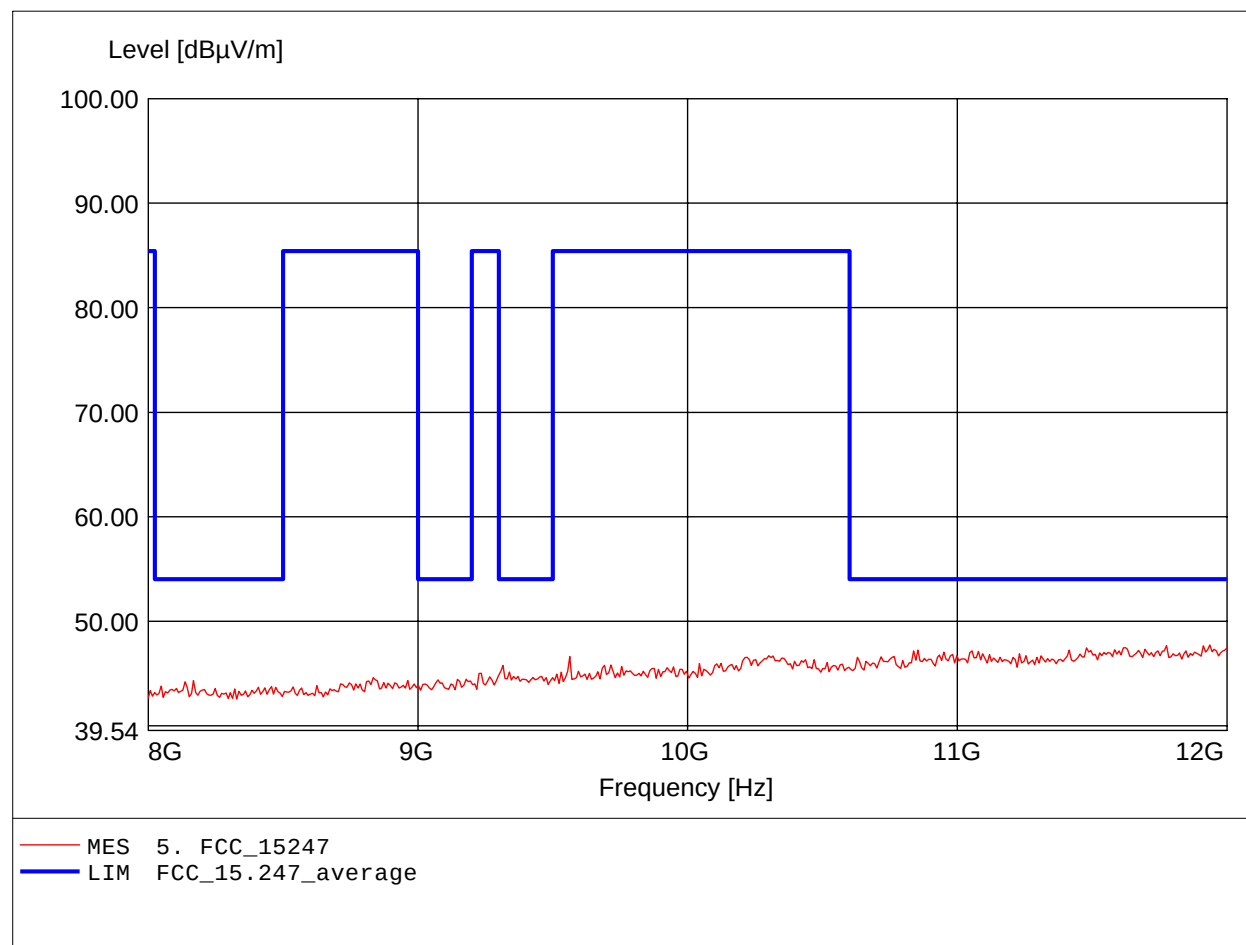
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.792GHz, Emax: 52.05dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

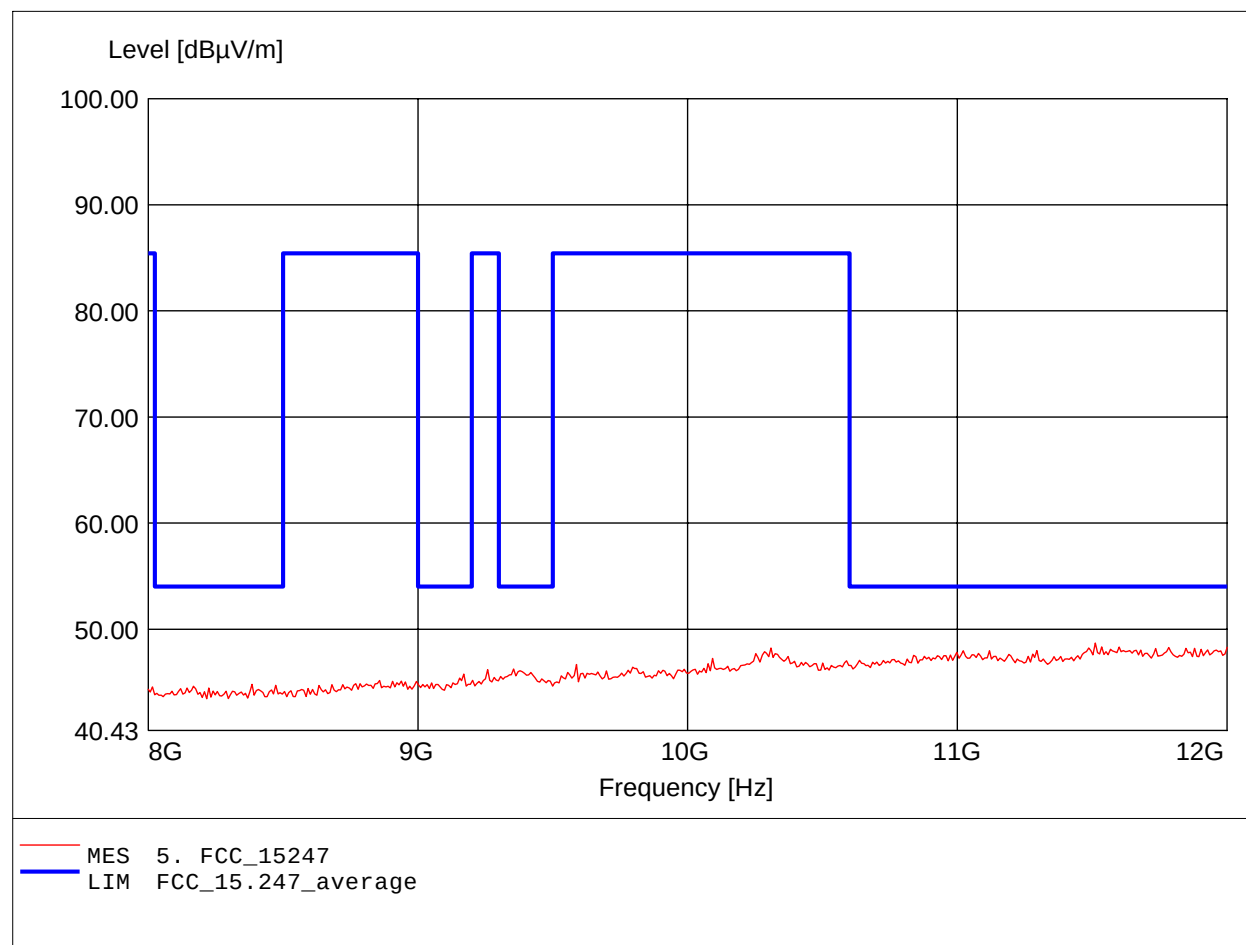
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.936GHz, Emax: 47.74dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

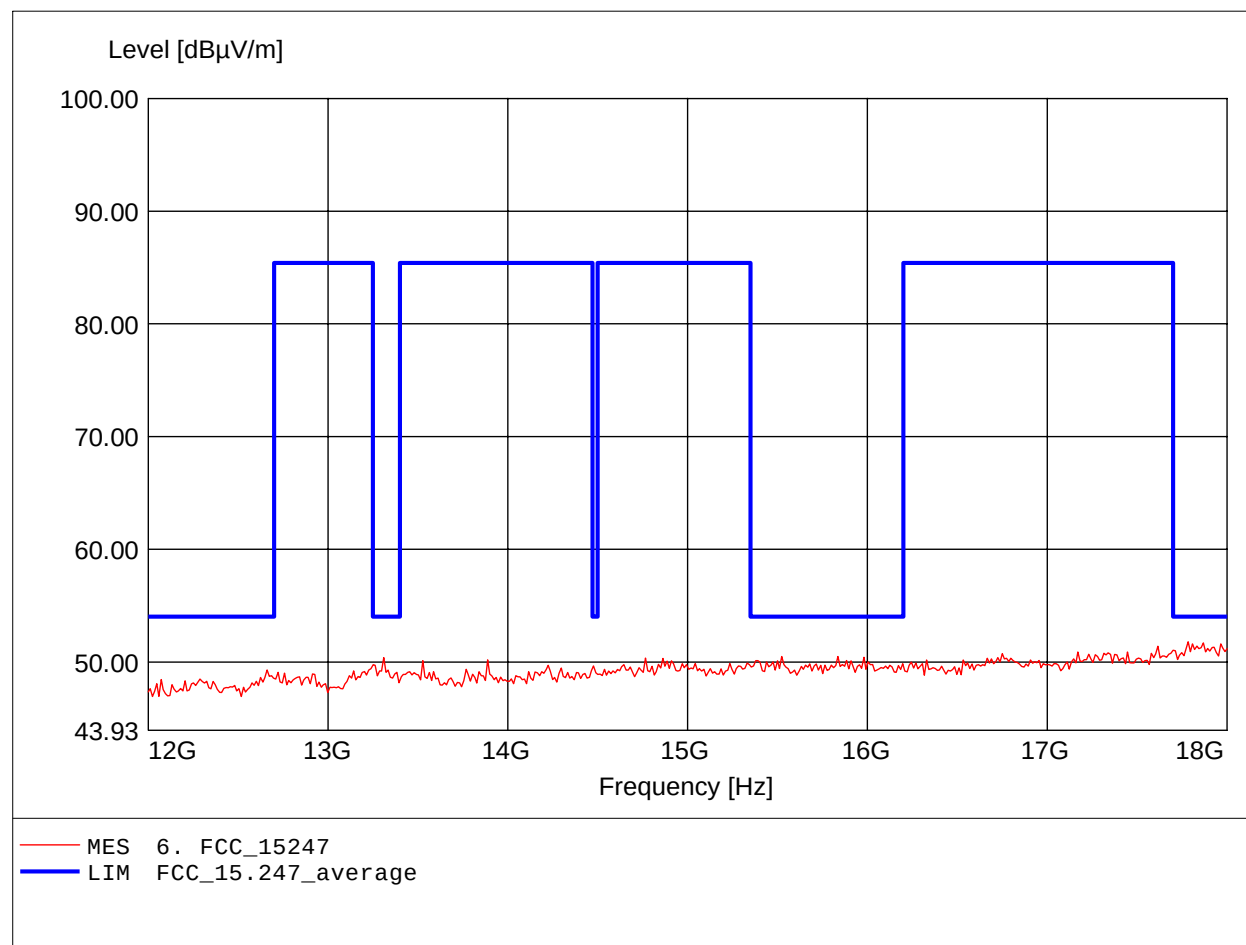
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.511GHz, Emax: 48.69dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

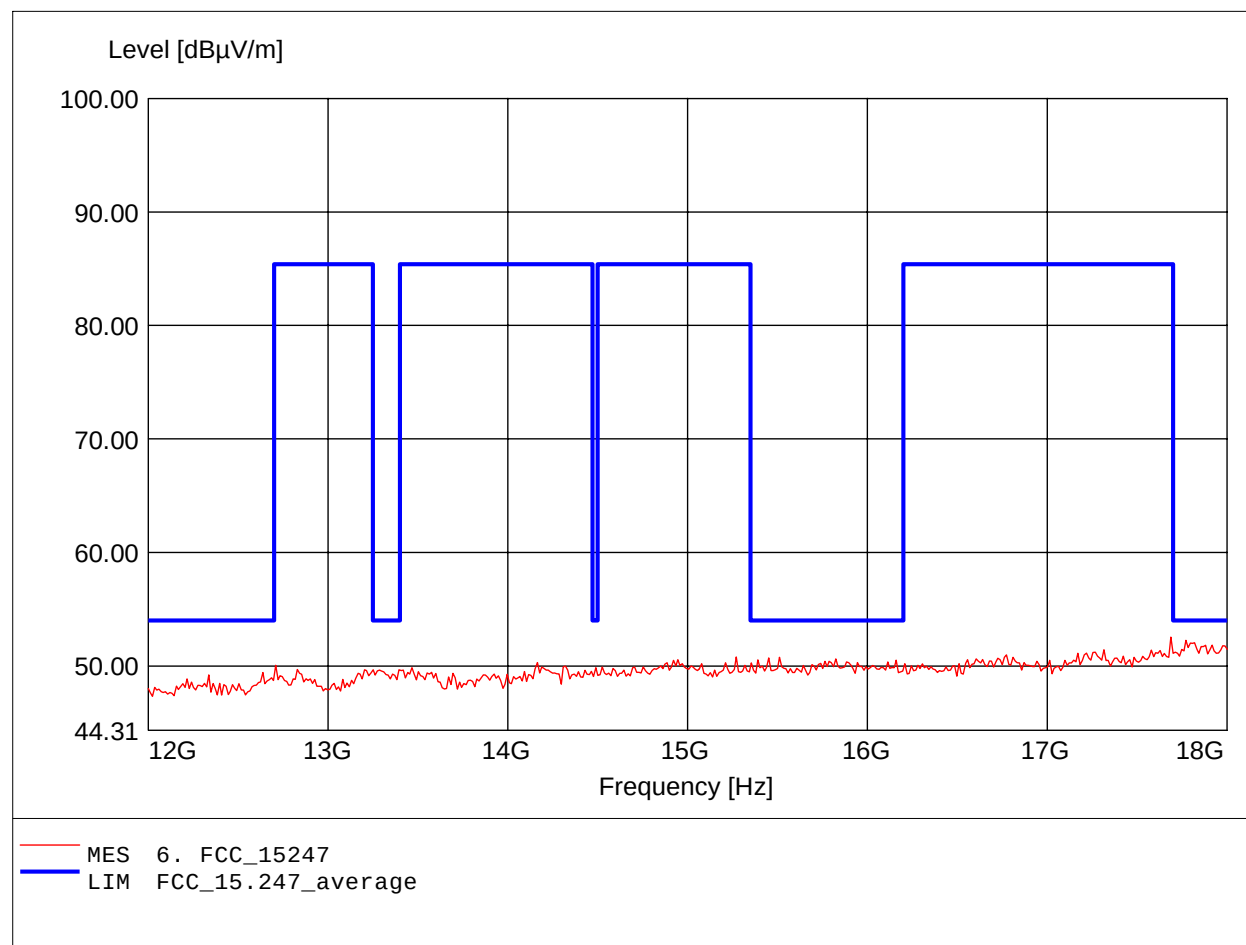
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.784GHz, Emax: 51.80dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

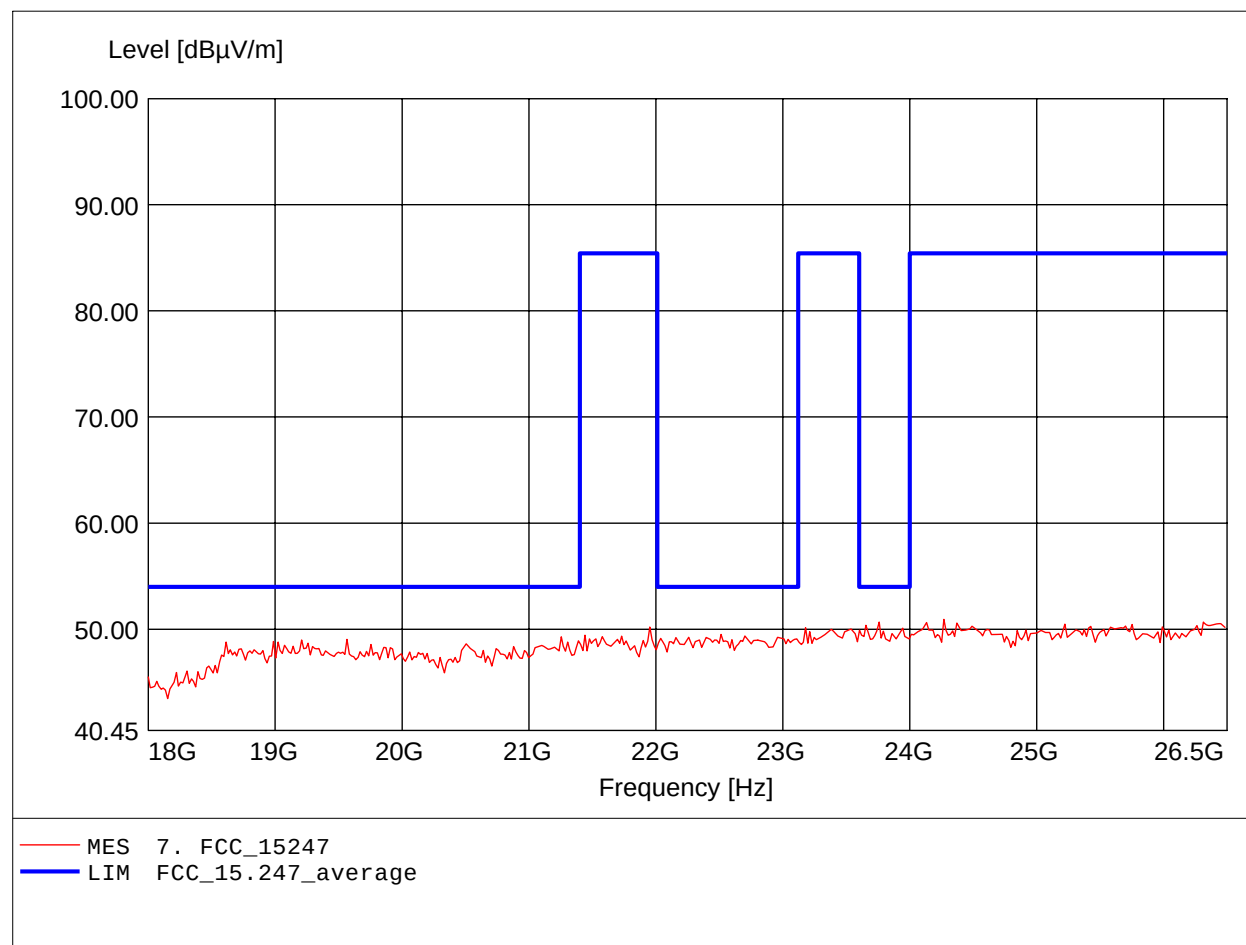
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.687GHz, Emax: 52.55dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

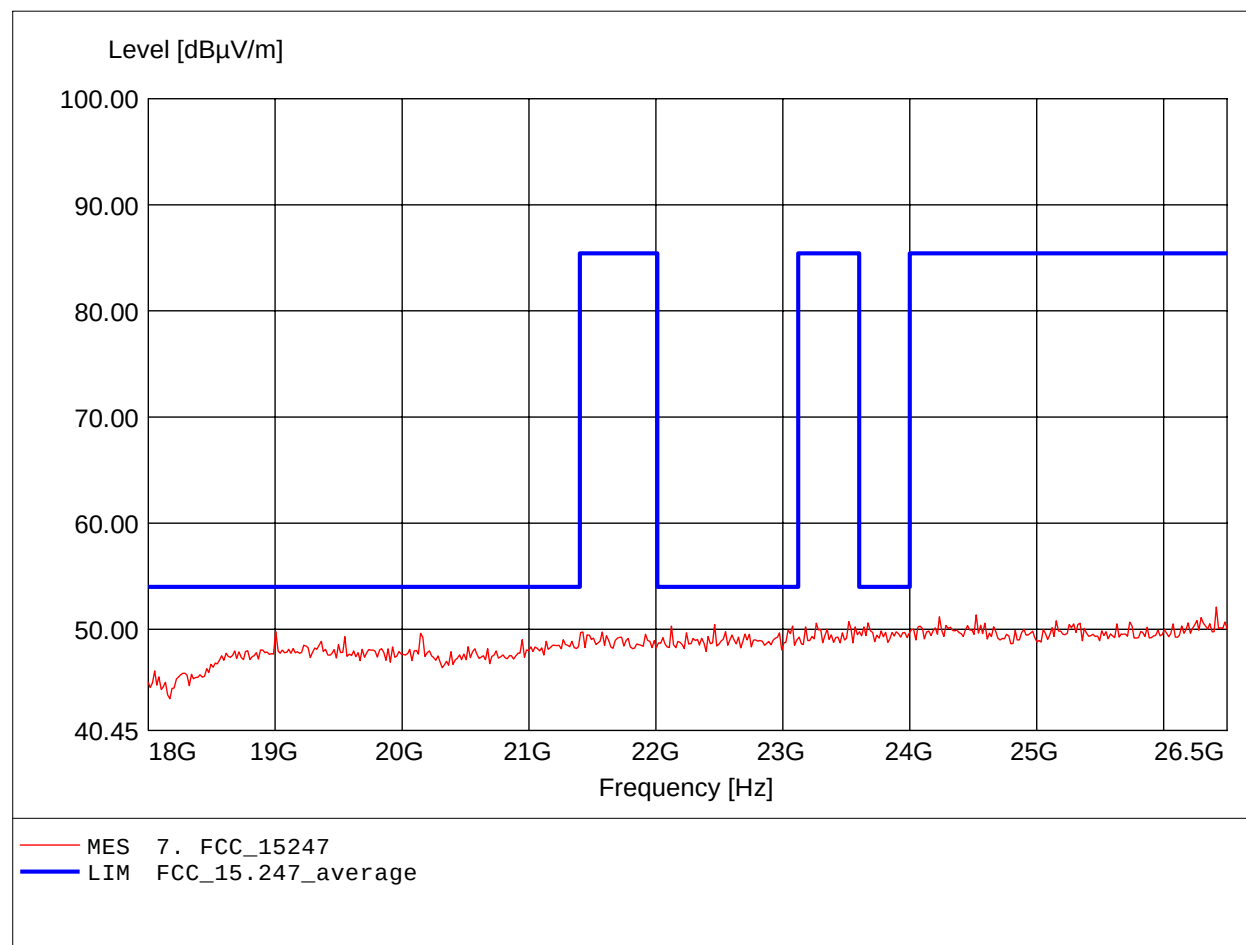
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 24.269GHz, Emax: 50.94dBμV/m, RBW: 1MHz



## Spurious emissions Field Strength

### FCC RULES PART 15, SUBPART C / LP002

Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 26.415GHz, Emax: 52.09dBμV/m, RBW: 1MHz



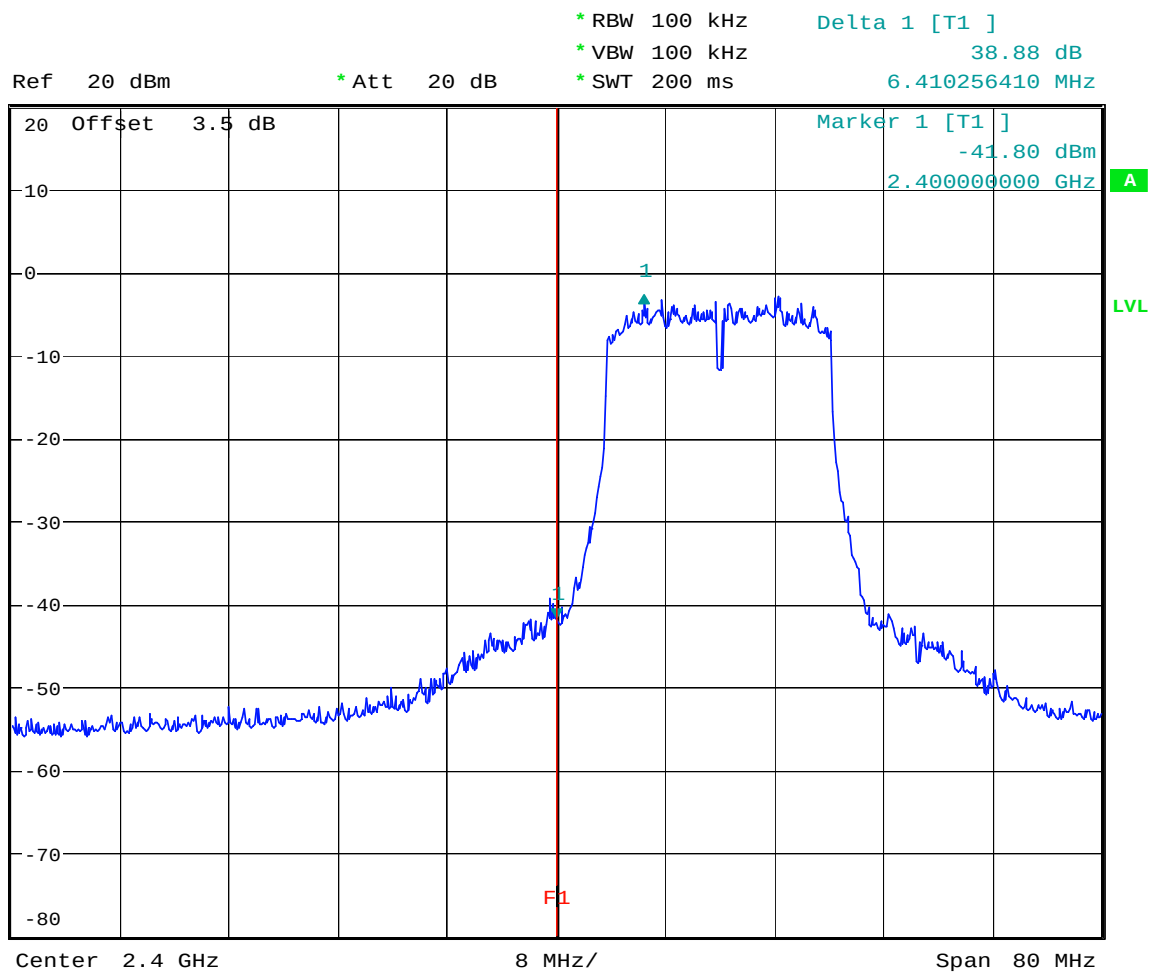


## **Appendix C**

### Band Edge Measurement

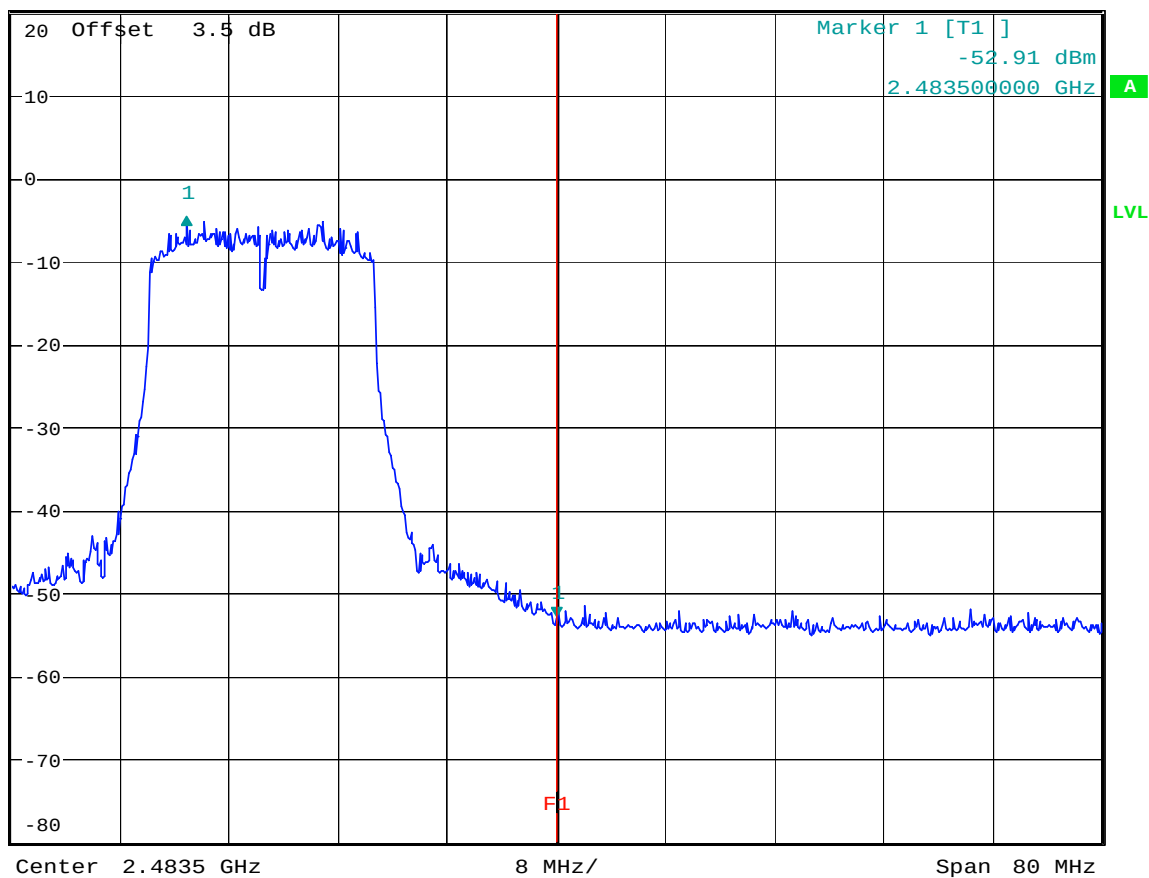


1 PK  
MAXH



Bandedge 802.11g ch 1

Date: 26.JUN.2006 15:30:36



Date: 26.JUN.2006 15:28:00



Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

## **Appendix D**

### Minimum 6dB Bandwidth

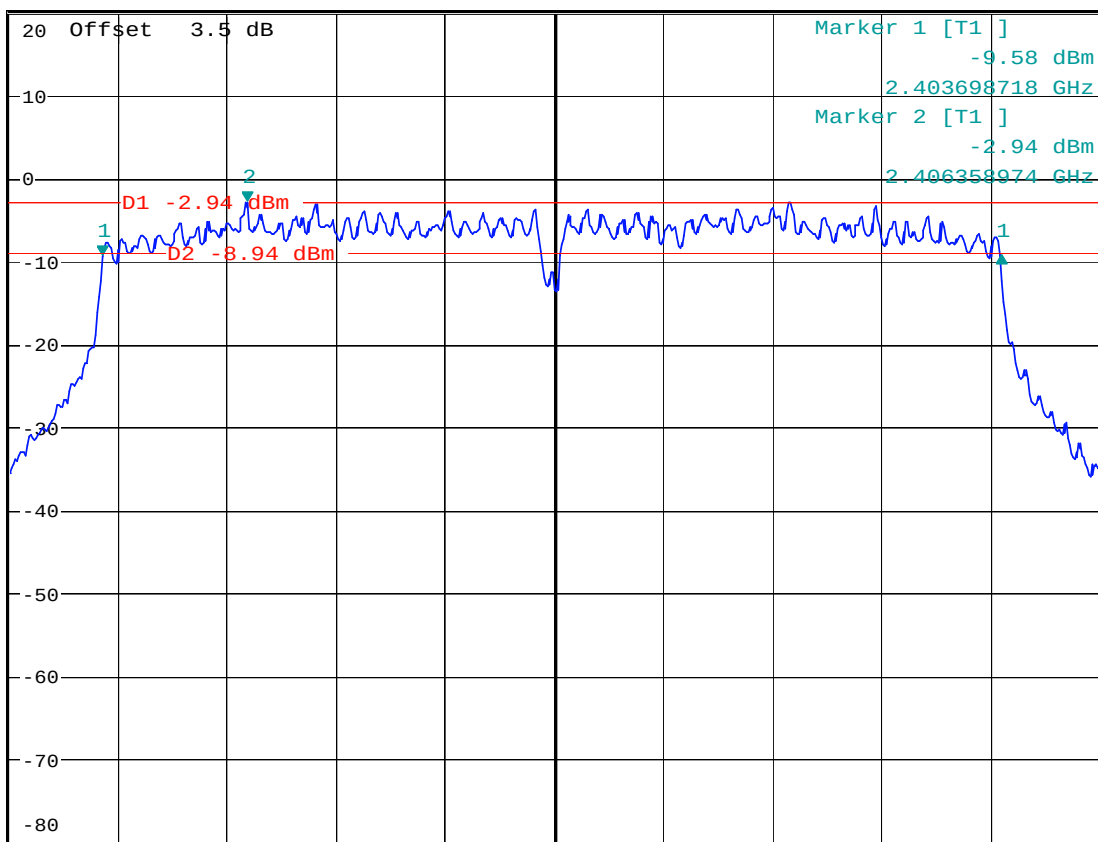


\* RBW 100 kHz      Delta 1 [T1 ]  
\* VBW 100 kHz      0.02 dB  
\* SWT 200 ms      16.506410256 MHz

Ref 20 dBm

\* Att 20 dB

1 PK  
MAXH



LVL

Center 2.412 GHz

2 MHz/

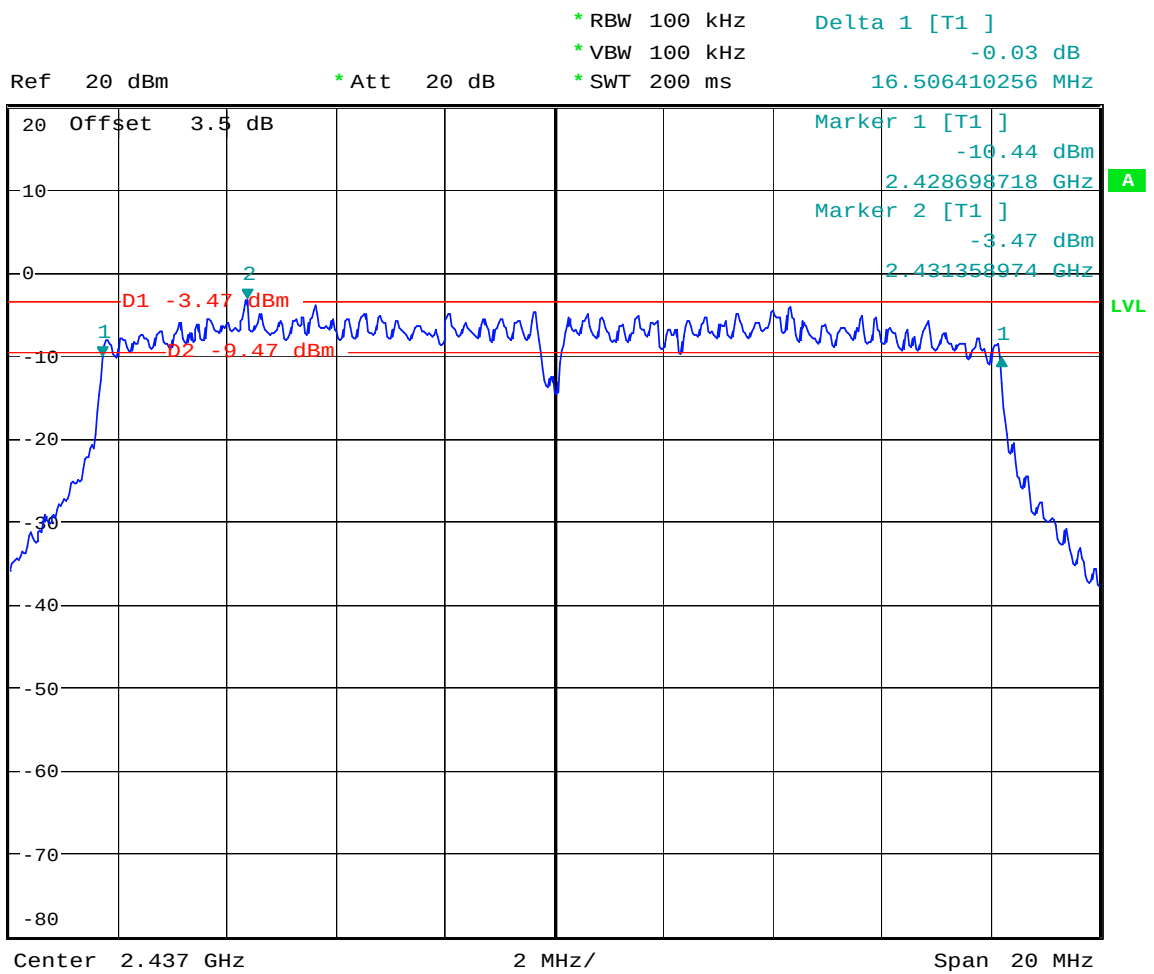
Span 20 MHz

6dB bandwidth 802.11g ch 1

Date: 26.JUN.2006 15:38:11



1 PK  
MAXH

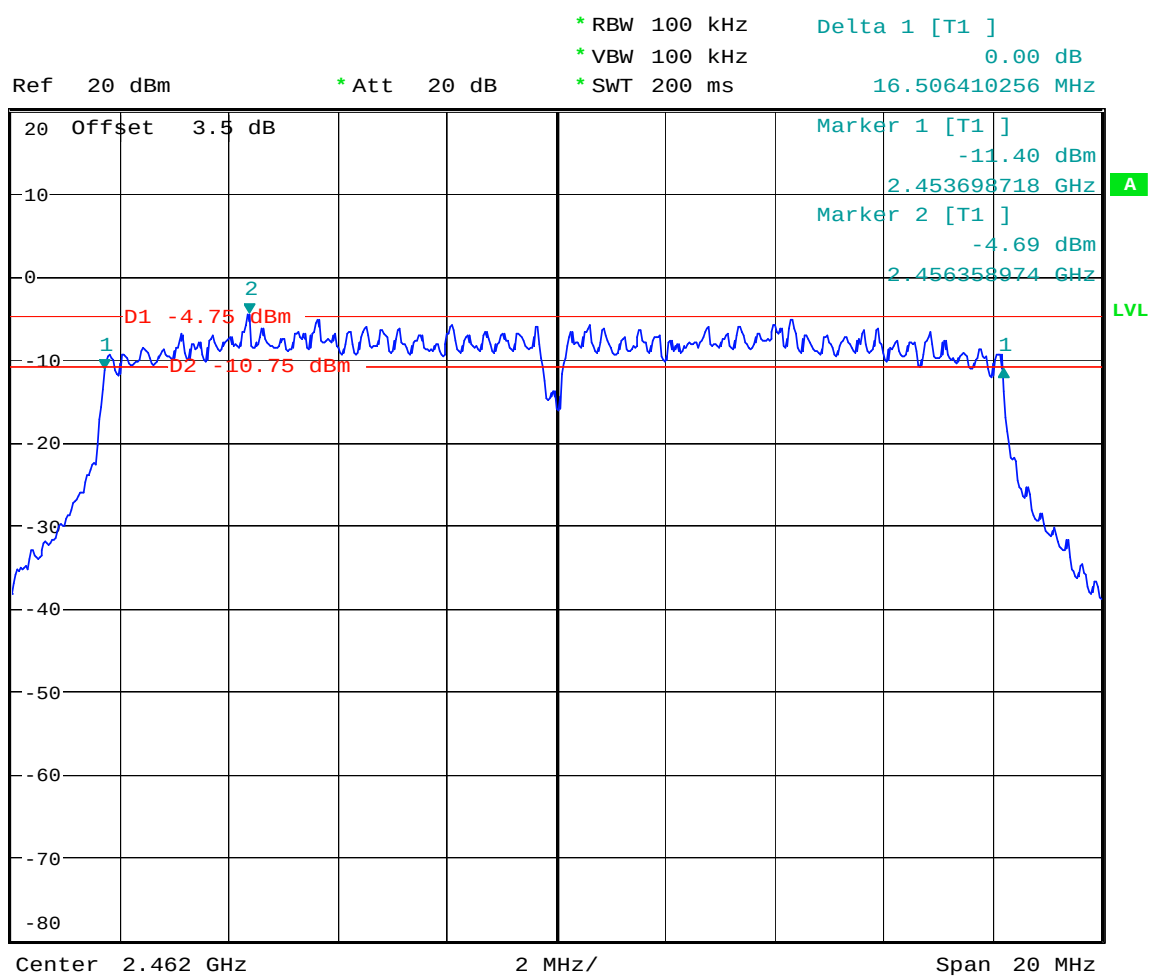


6dB bandwidth 802.11g ch 6

Date: 26.JUN.2006 15:39:02



1 PK  
MAXH



6dB bandwidth 802.11g ch 11  
Date: 26.JUN.2006 15:39:54



Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

## **Appendix E**

### Peak Power Spectral Density



\* RBW 3 kHz

Marker 1 [T1 ]

\* VBW 100 kHz

-17.24 dBm

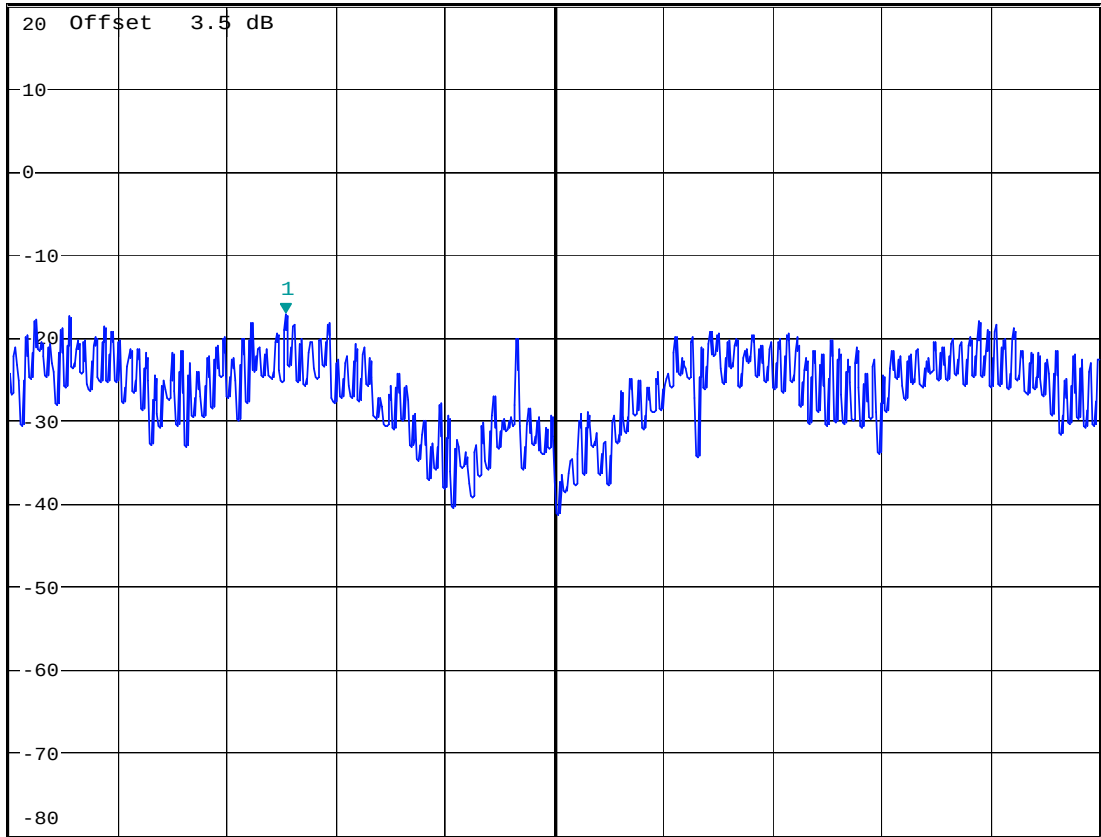
\* SWT 500 s

2.411629808 GHz

Ref 20 dBm

\* Att 20 dB

1 PK  
MAXH



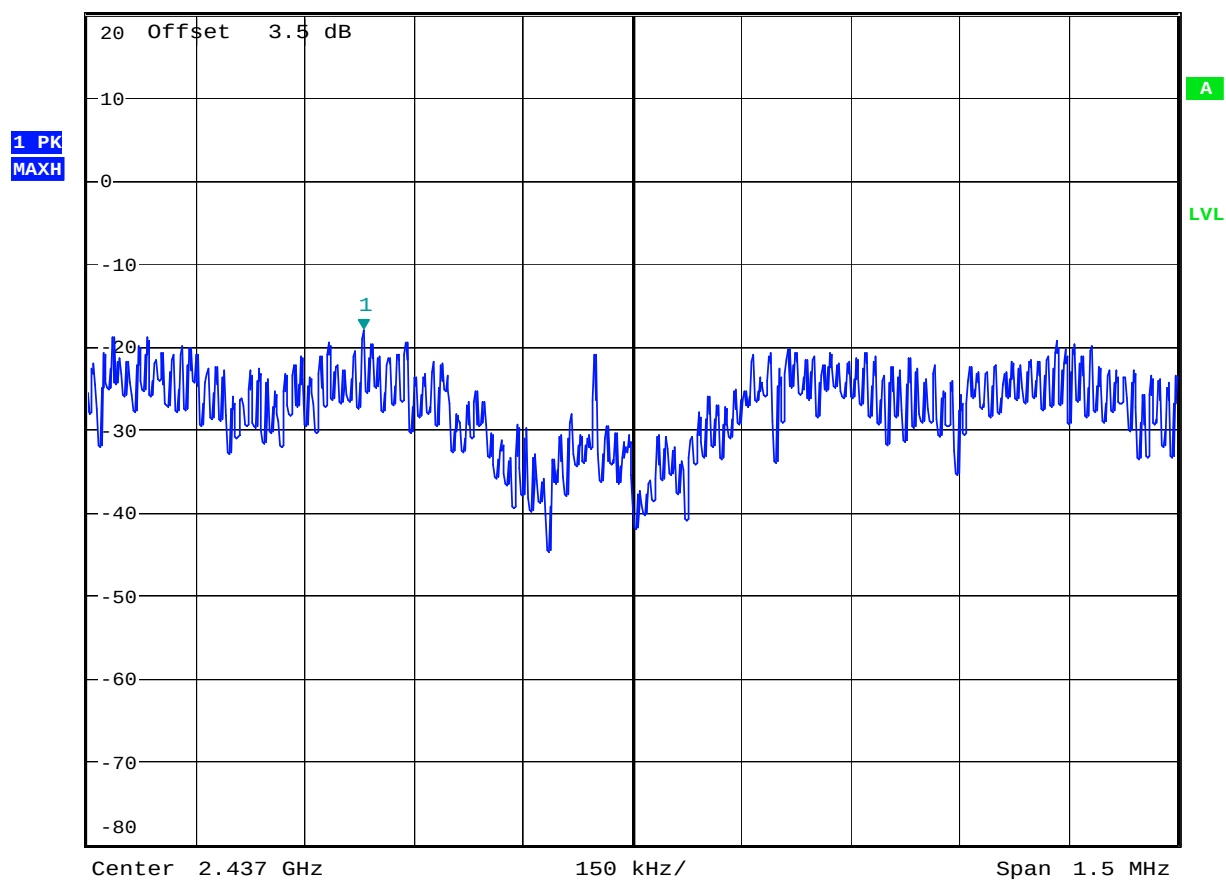
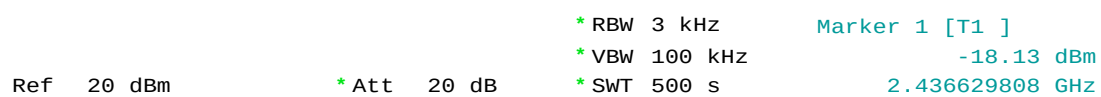
Center 2.412 GHz

150 kHz/

Span 1.5 MHz

Power density 802.11g ch 1

Date: 26.JUN.2006 15:35:43



Power density 802.11g ch 6  
Date: 26.JUN.2006 15:35:10

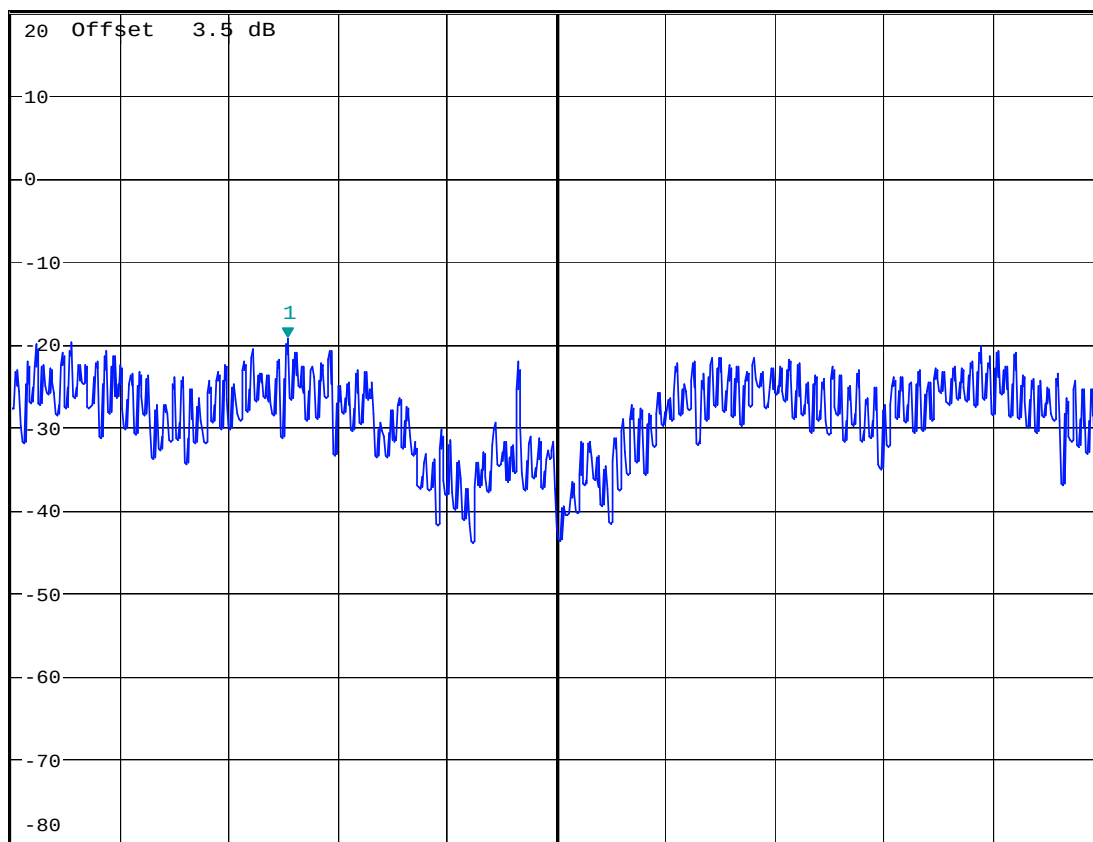


\* RBW 3 kHz  
\* VBW 100 kHz  
\* SWT 500 s

Marker 1 [T1 ]  
-19.44 dBm  
2.461629808 GHz

Ref 20 dBm  
\* Att 20 dB

1 PK  
MAXH



A

LVL

Center 2.462 GHz  
150 kHz/  
Span 1.5 MHz

Power density 802.11g ch 11  
Date: 26.JUN.2006 15:34:24

## **Appendix F**

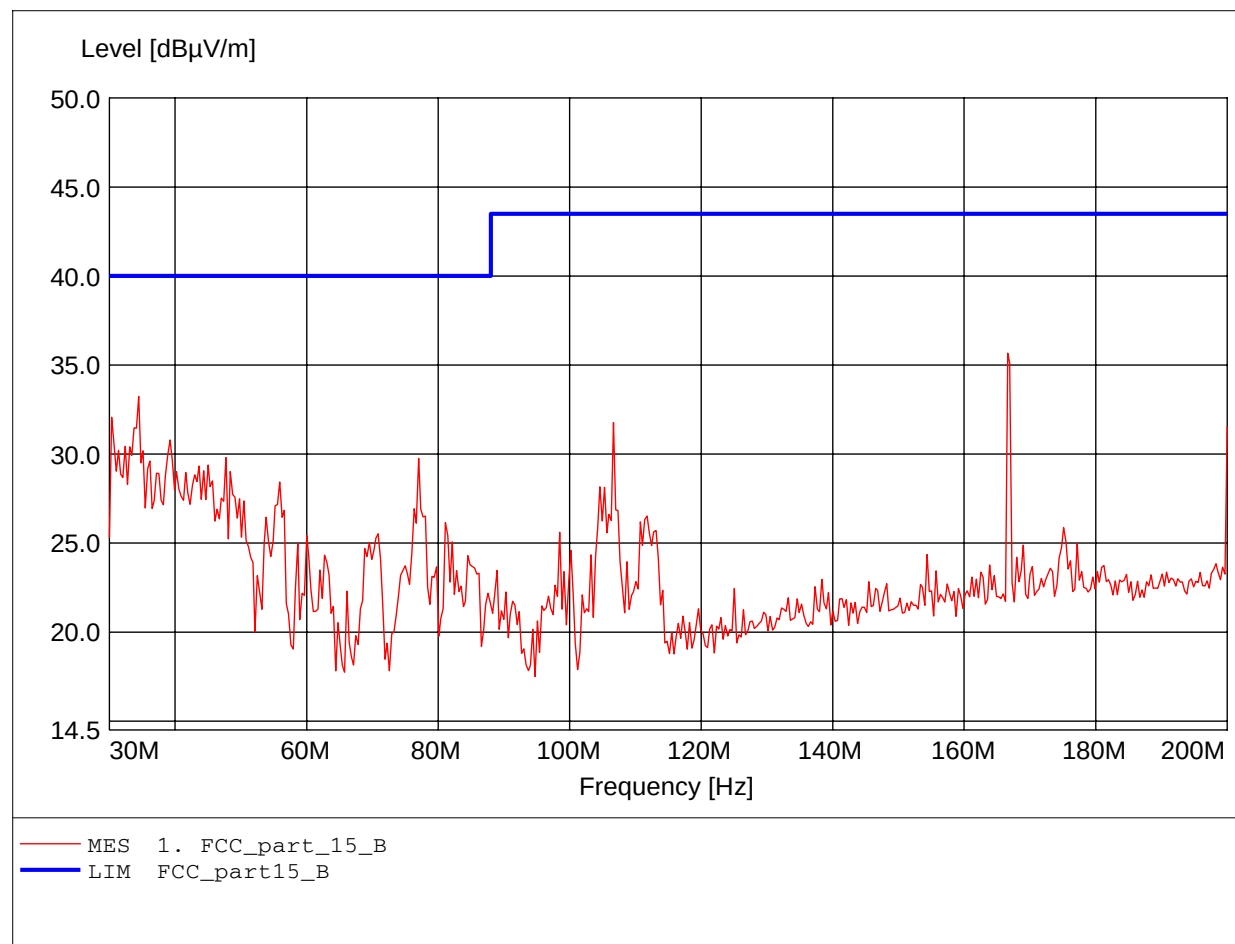
### **Radiated Emissions from Receiver Section of Transceiver**

**The measurement diagram are wideband pre-scan results; only for reference.**

## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

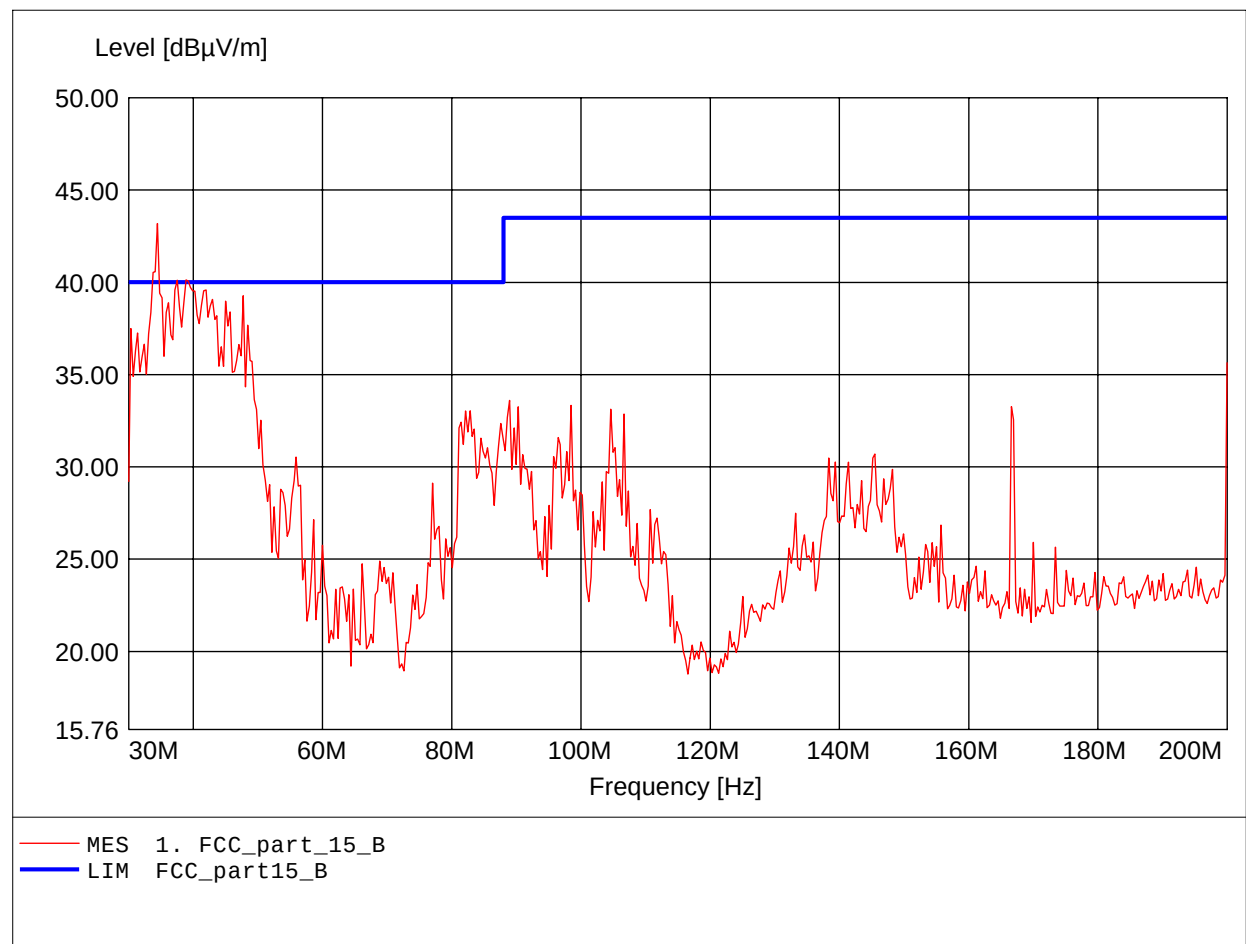
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:166.613MHz Emax:35.66dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

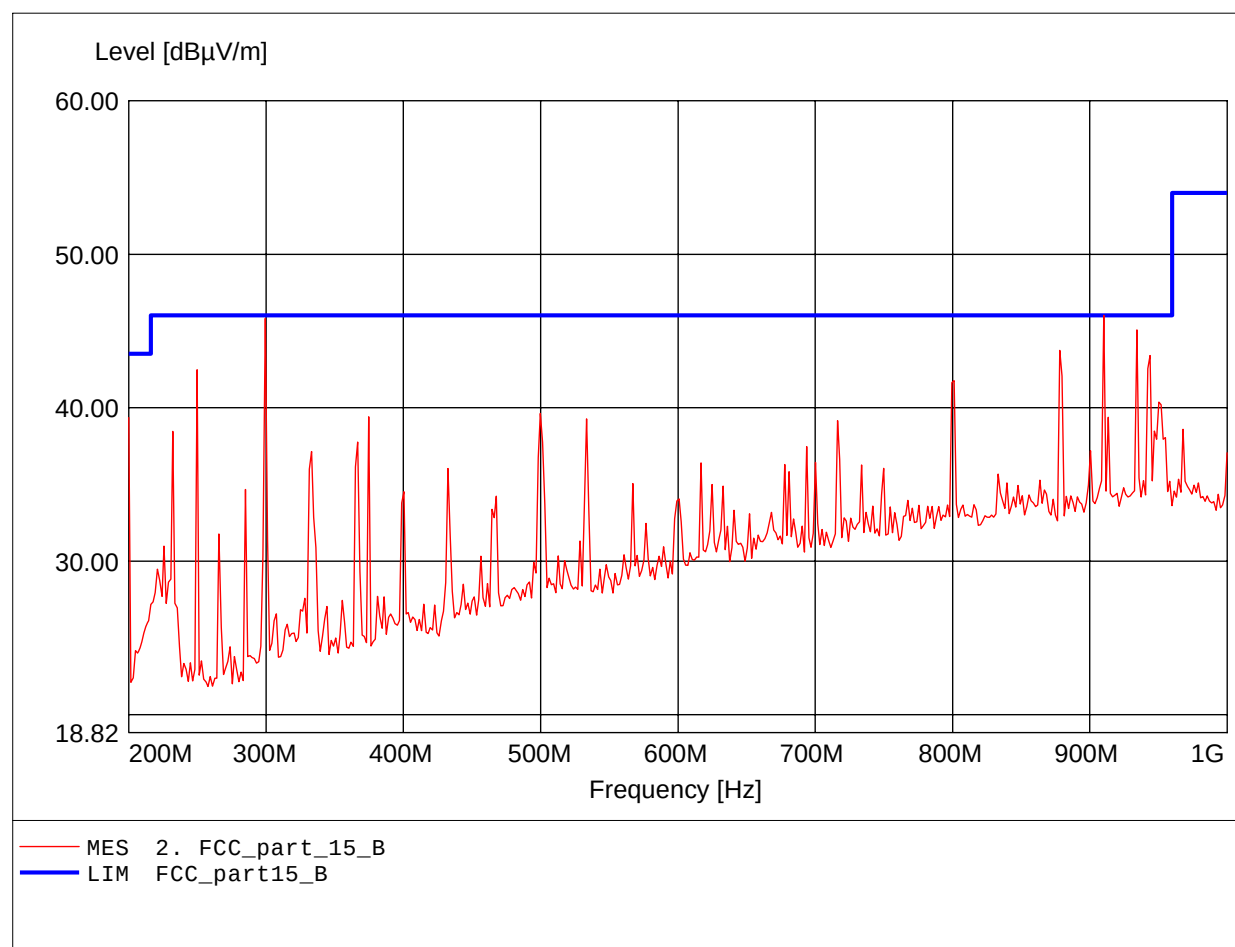
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:34.429MHz Emax:43.18dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

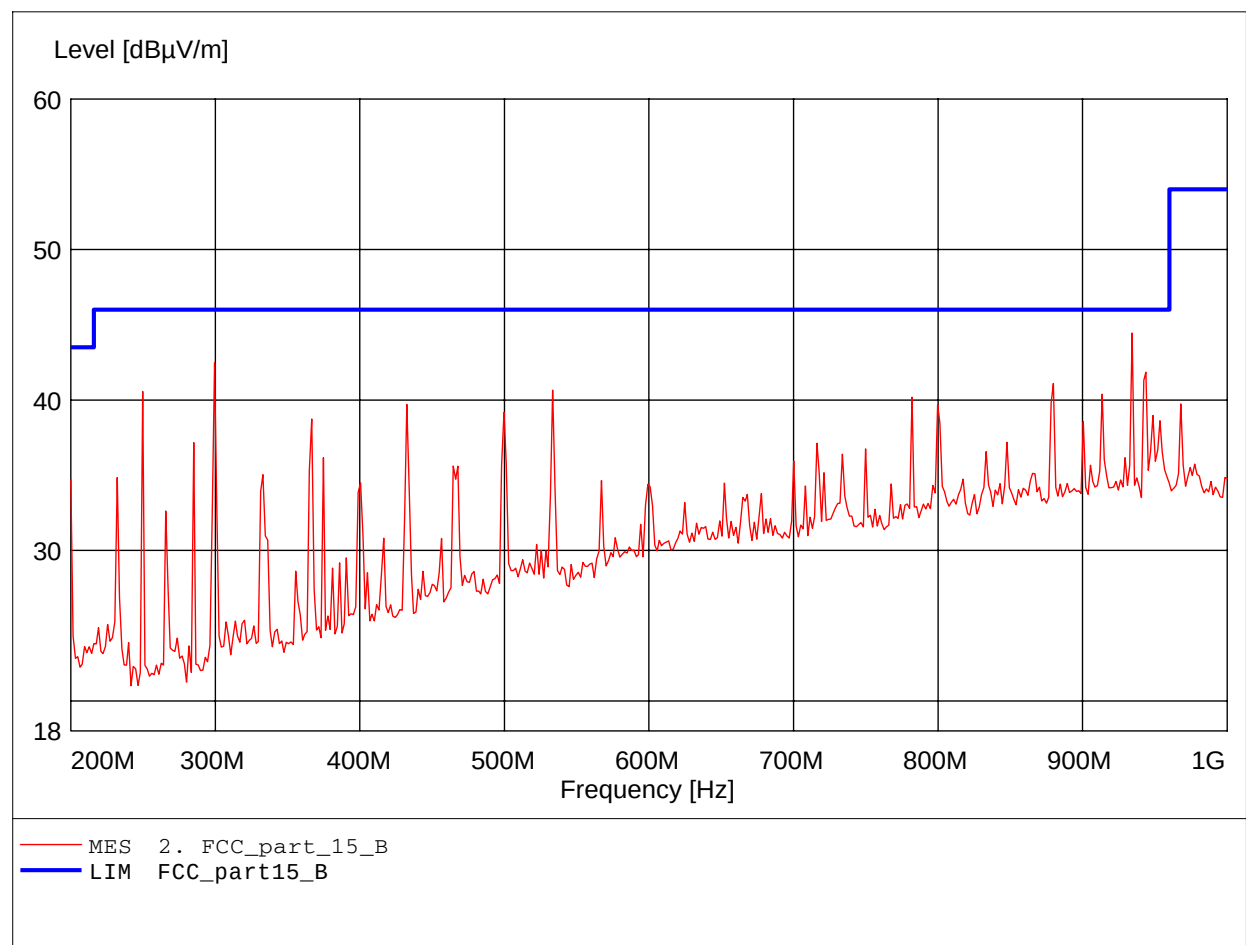
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:910.220MHz Emax:46.02dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

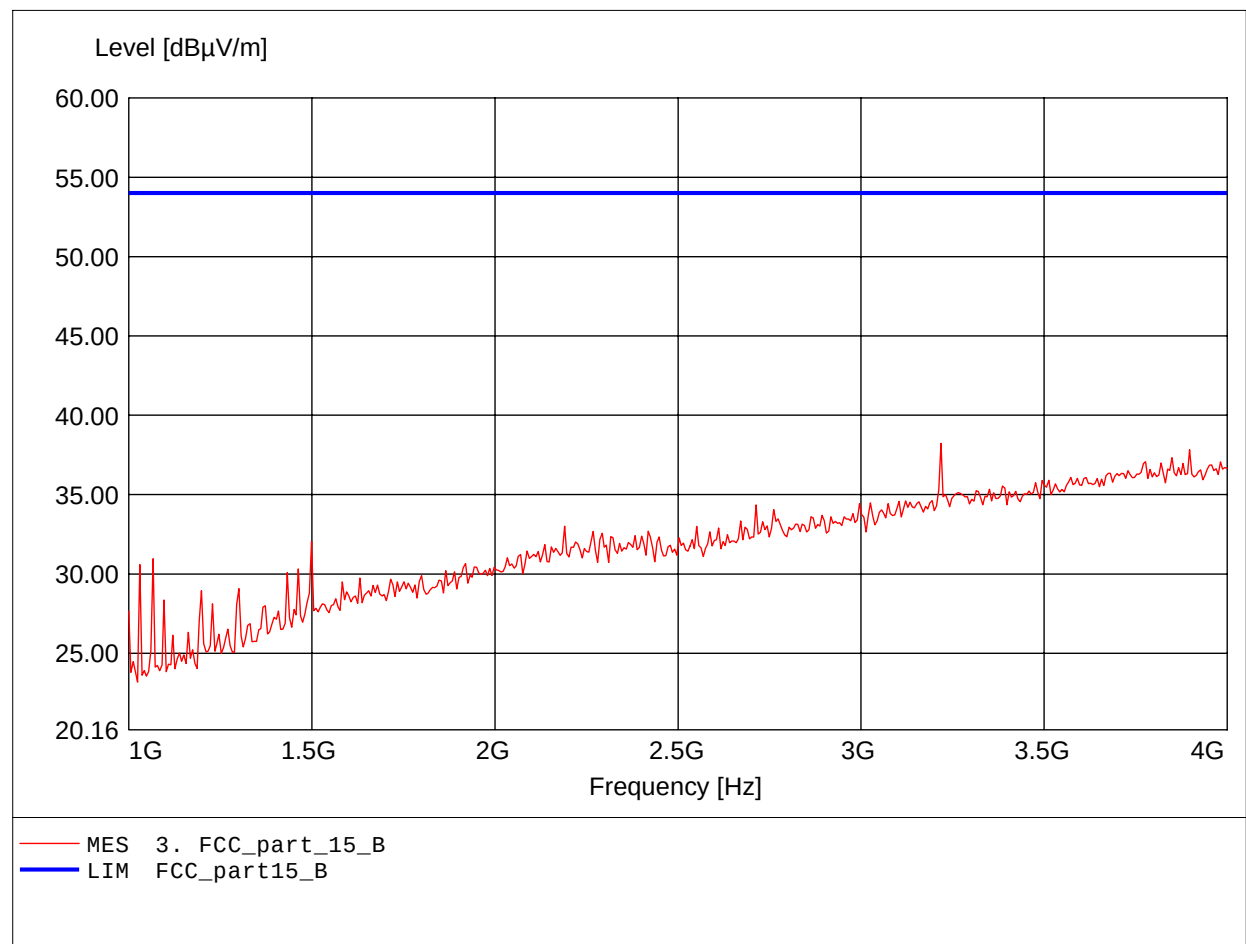
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:934.269MHz Emax:44.45dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

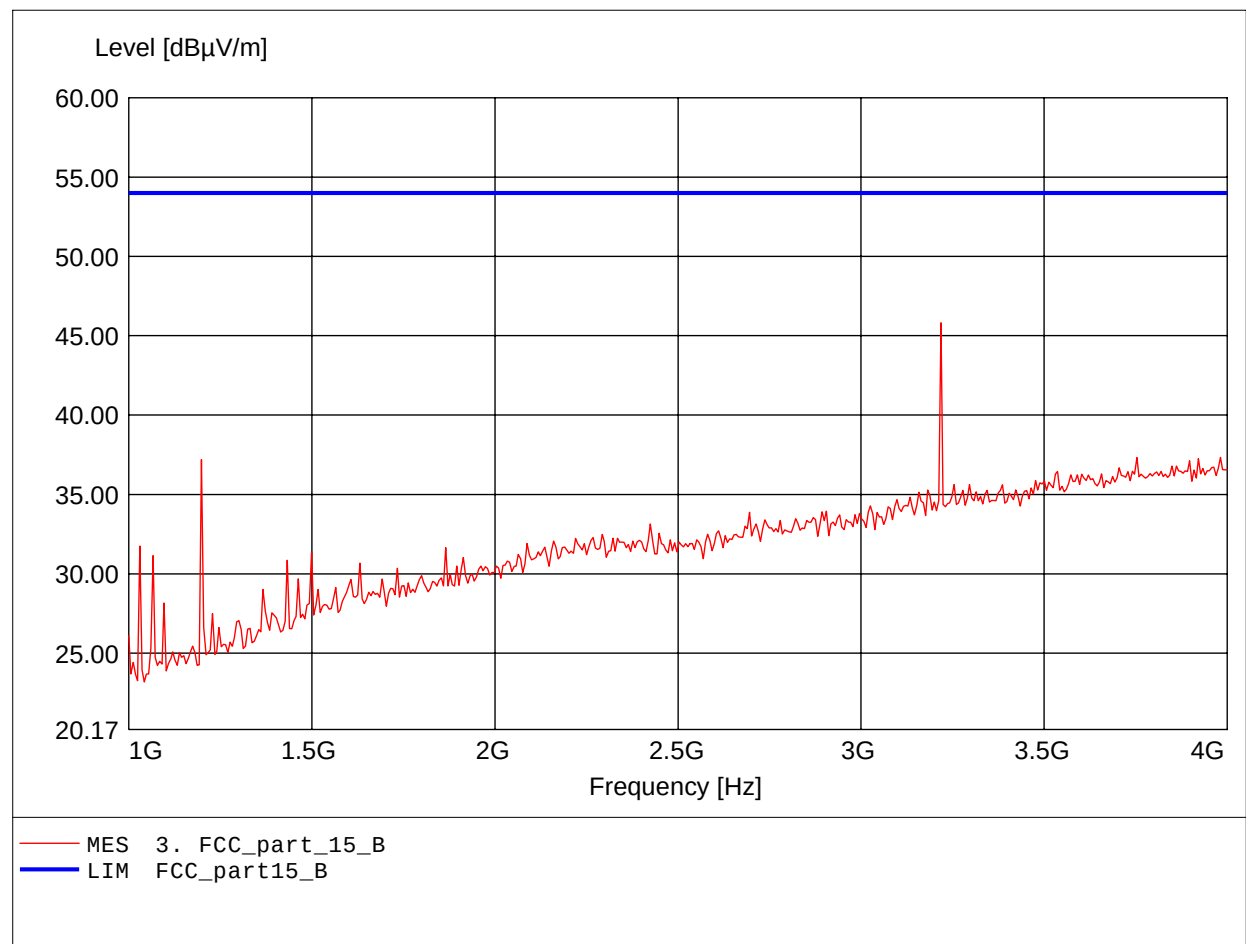
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.218GHz Emax:38.22dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

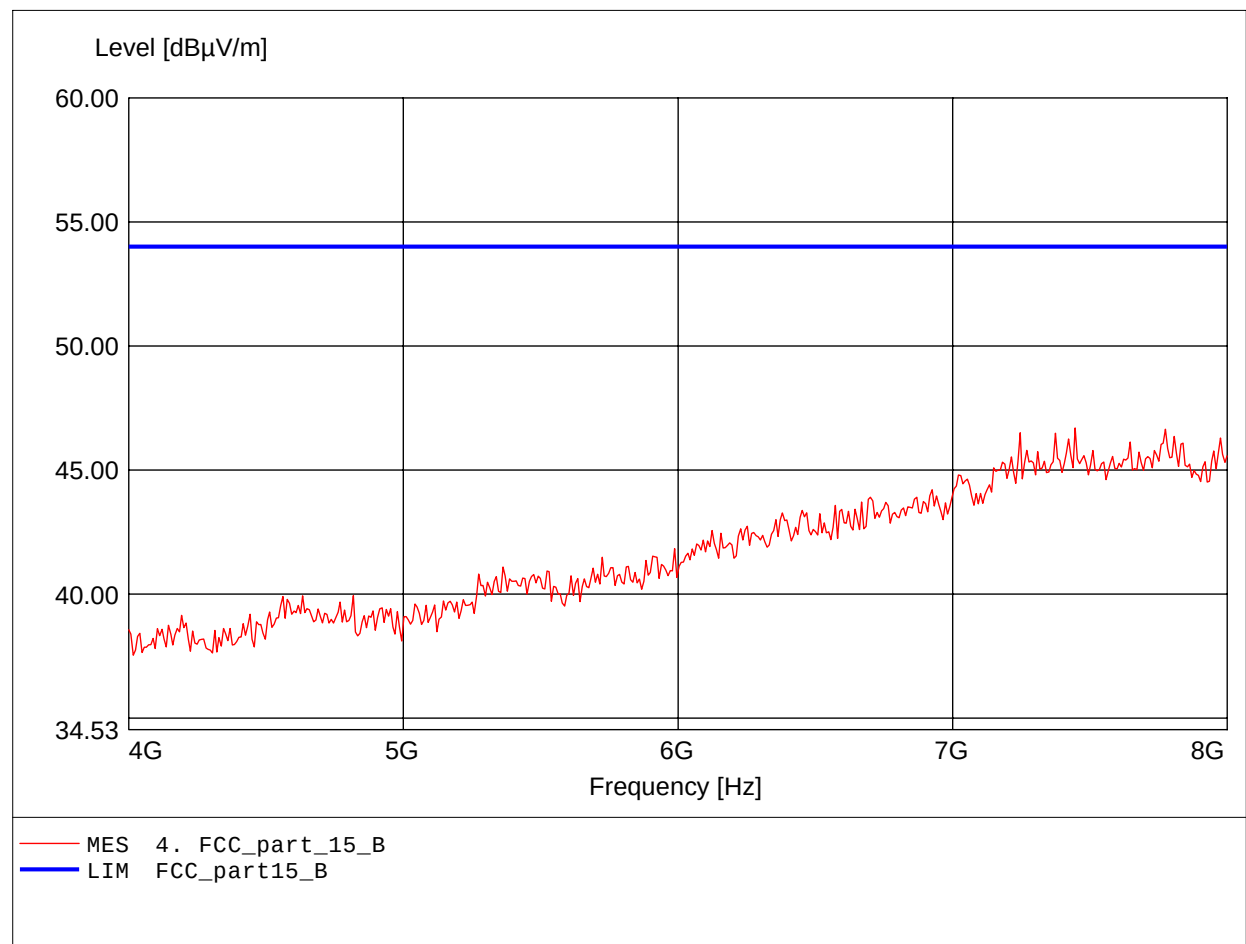
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.218GHz Emax:45.82dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

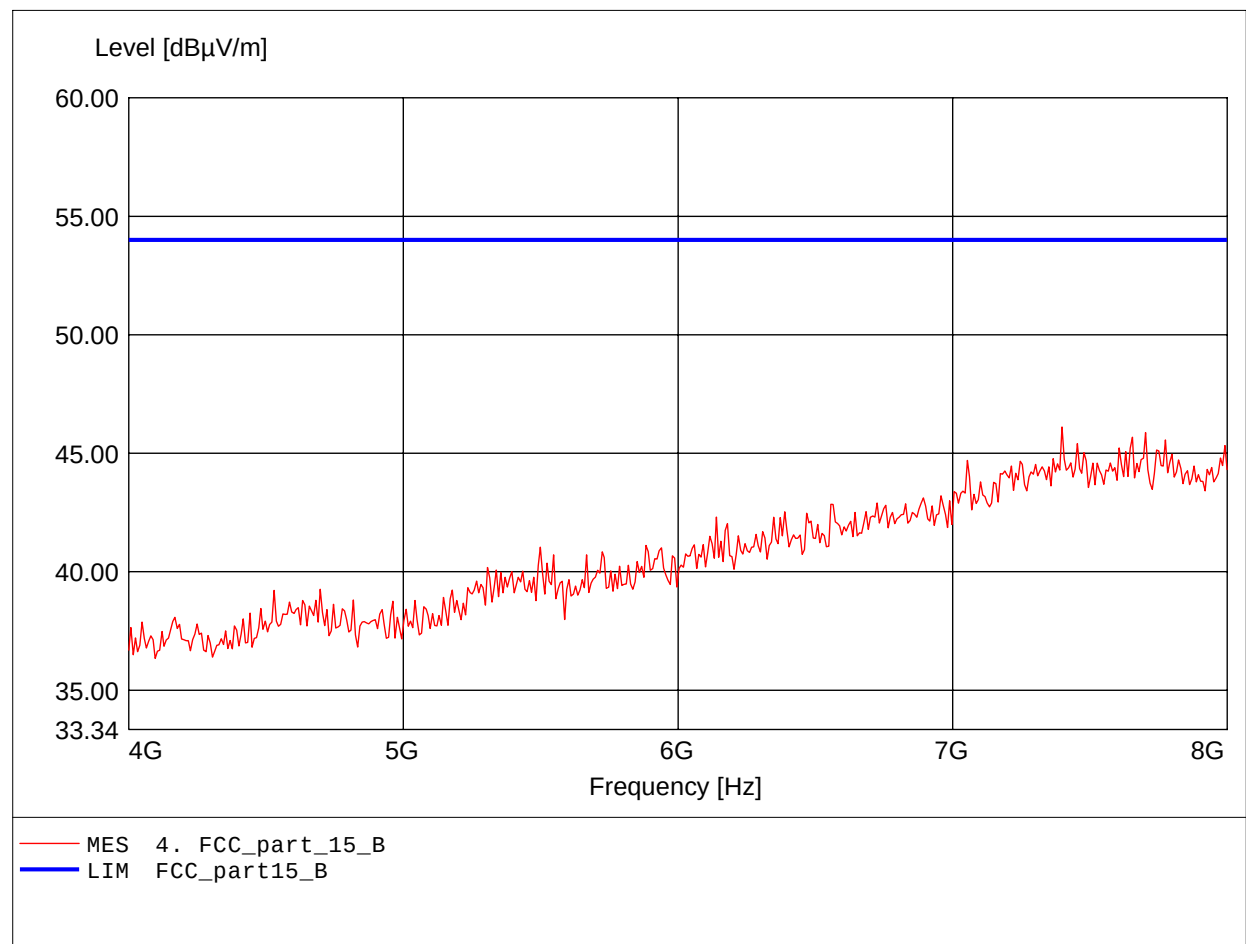
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.447GHz Emax:46.69dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

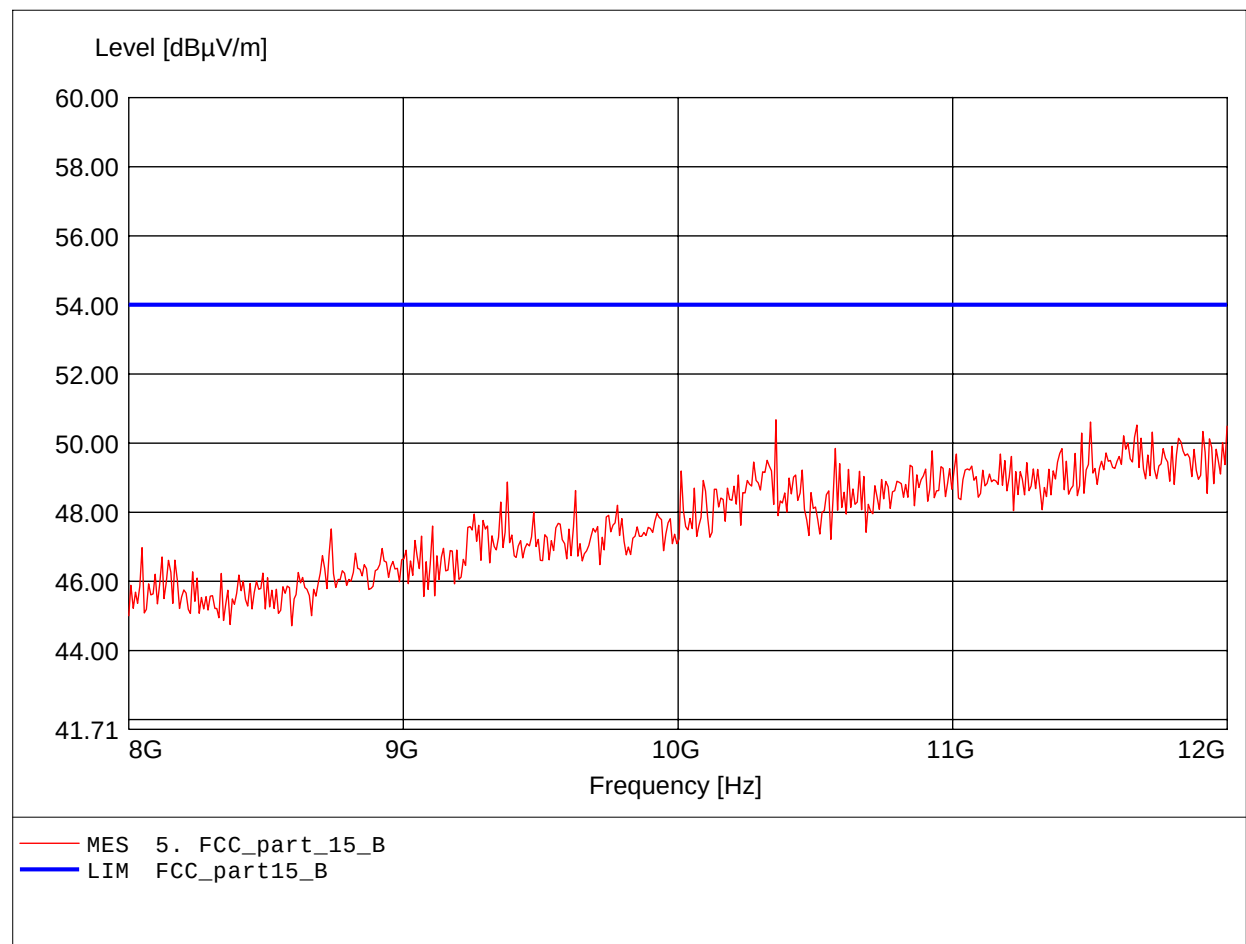
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.399GHz Emax:46.11dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

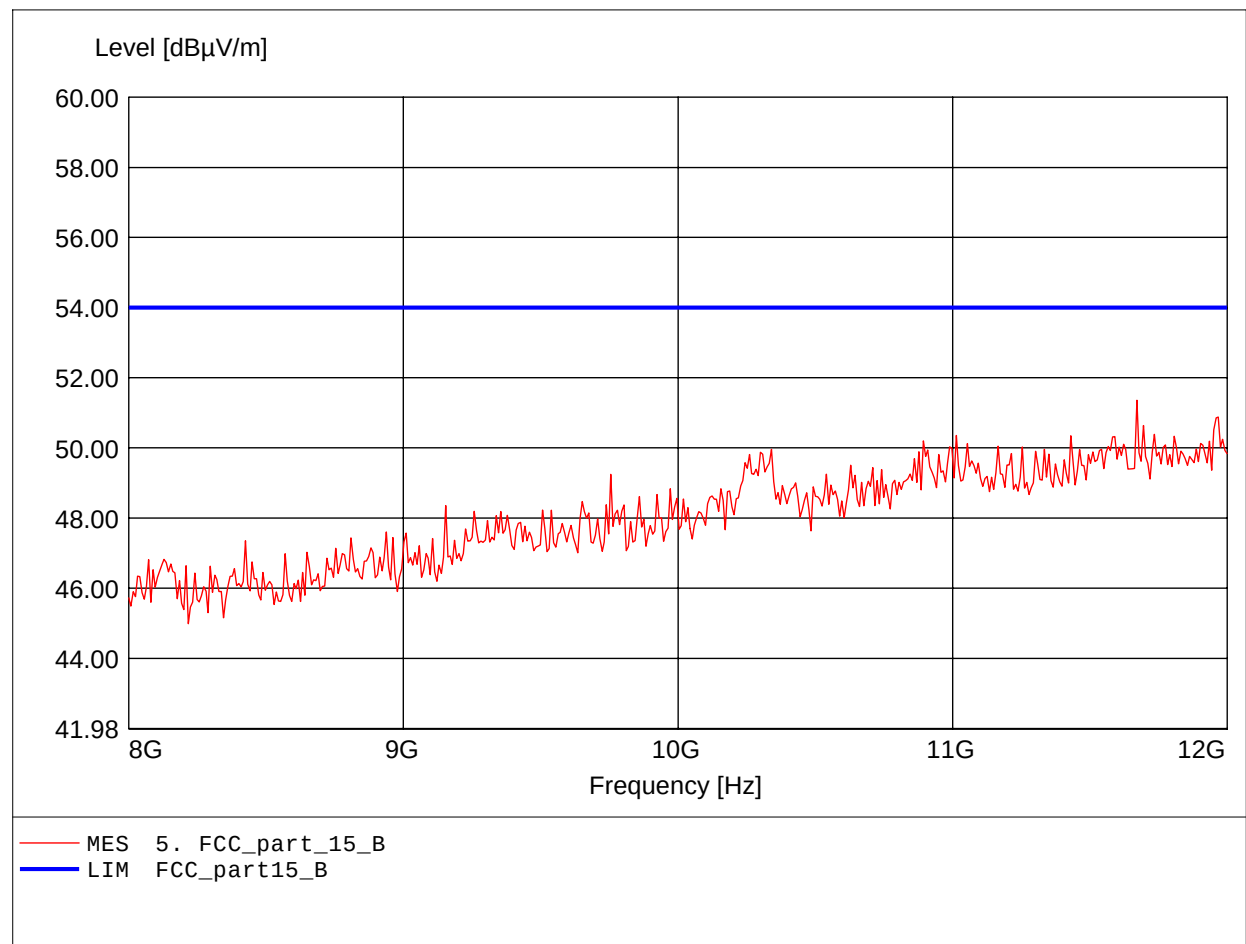
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:10.357GHz Emax:50.67dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

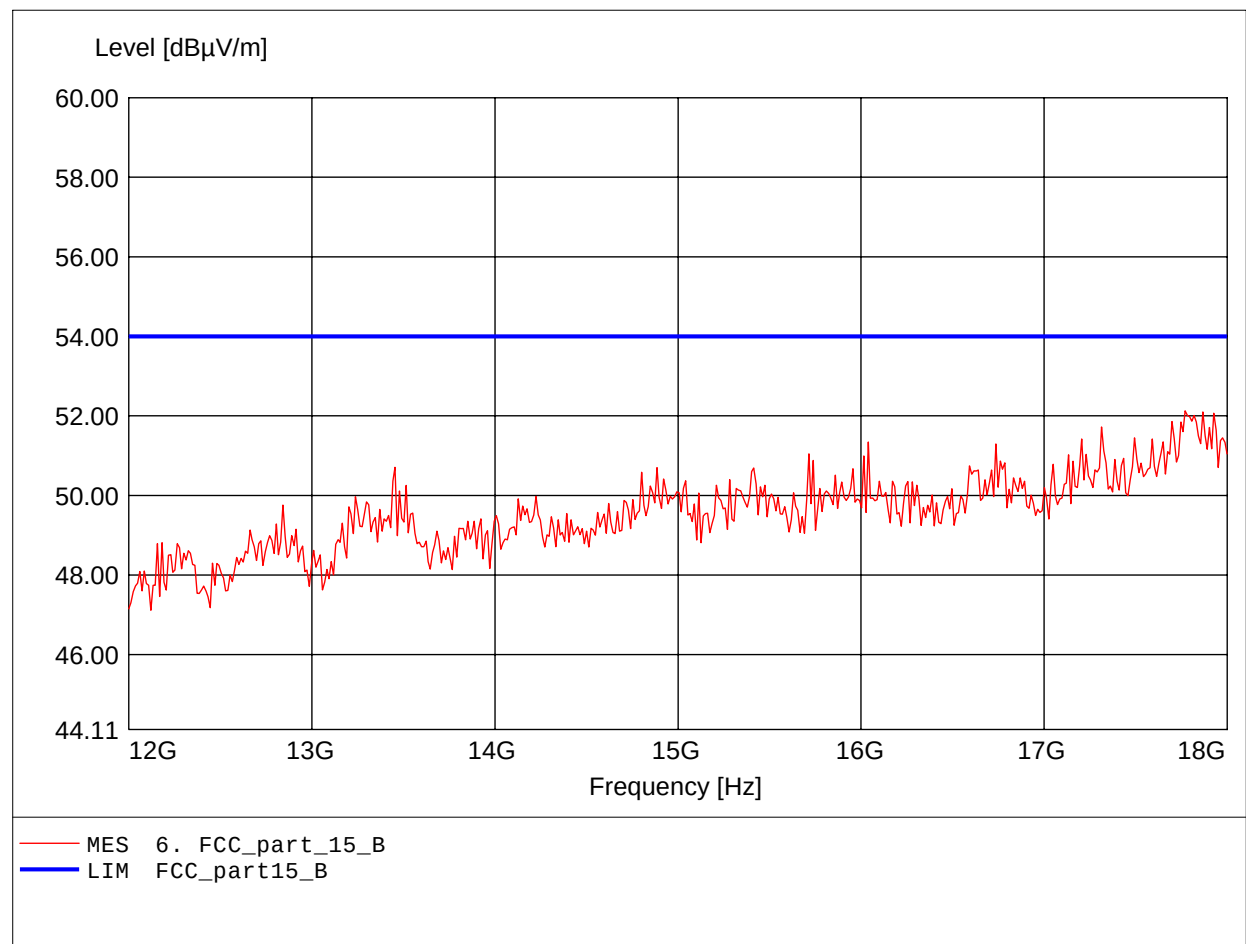
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:11.671GHz Emax:51.36dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

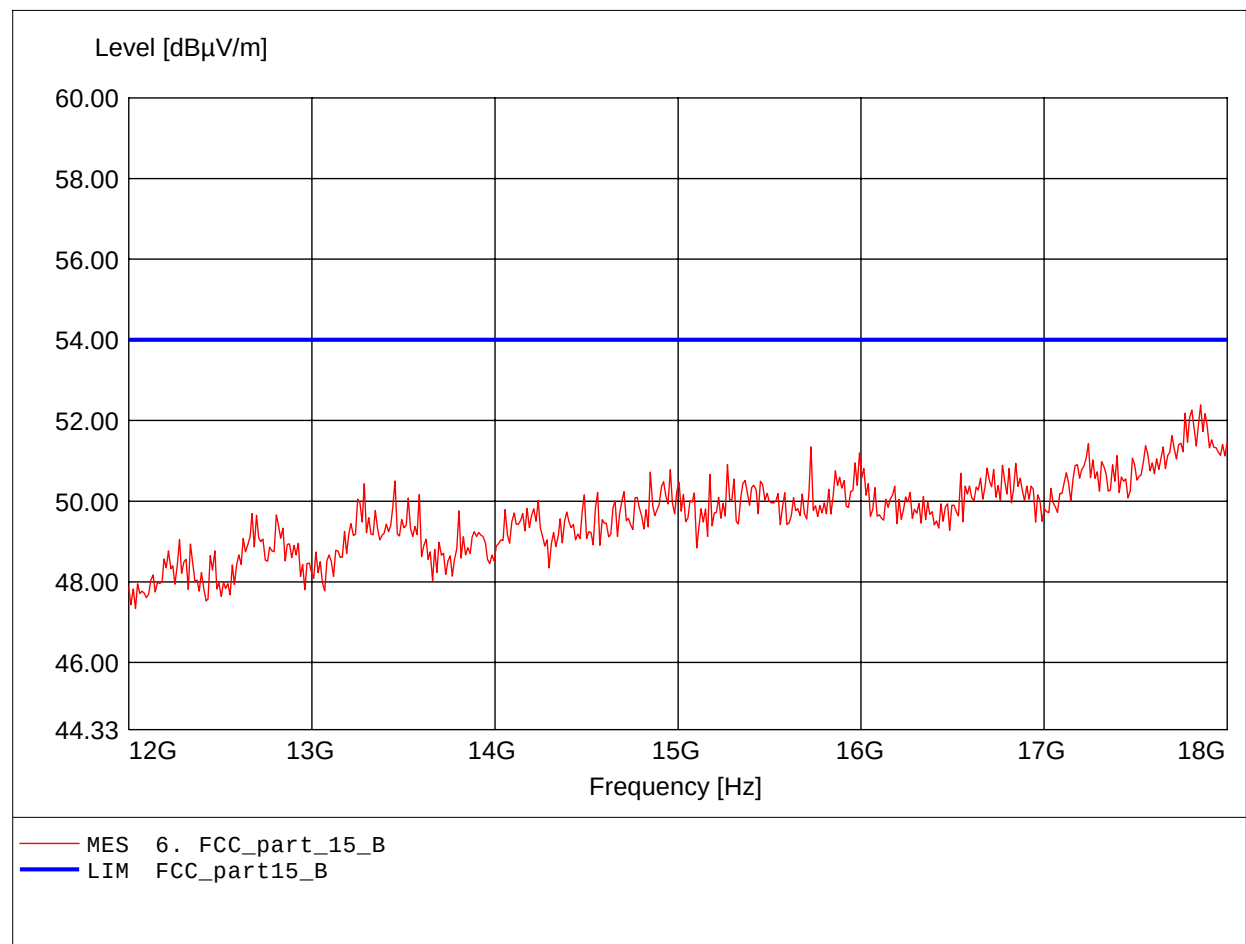
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.772GHz Emax:52.13dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

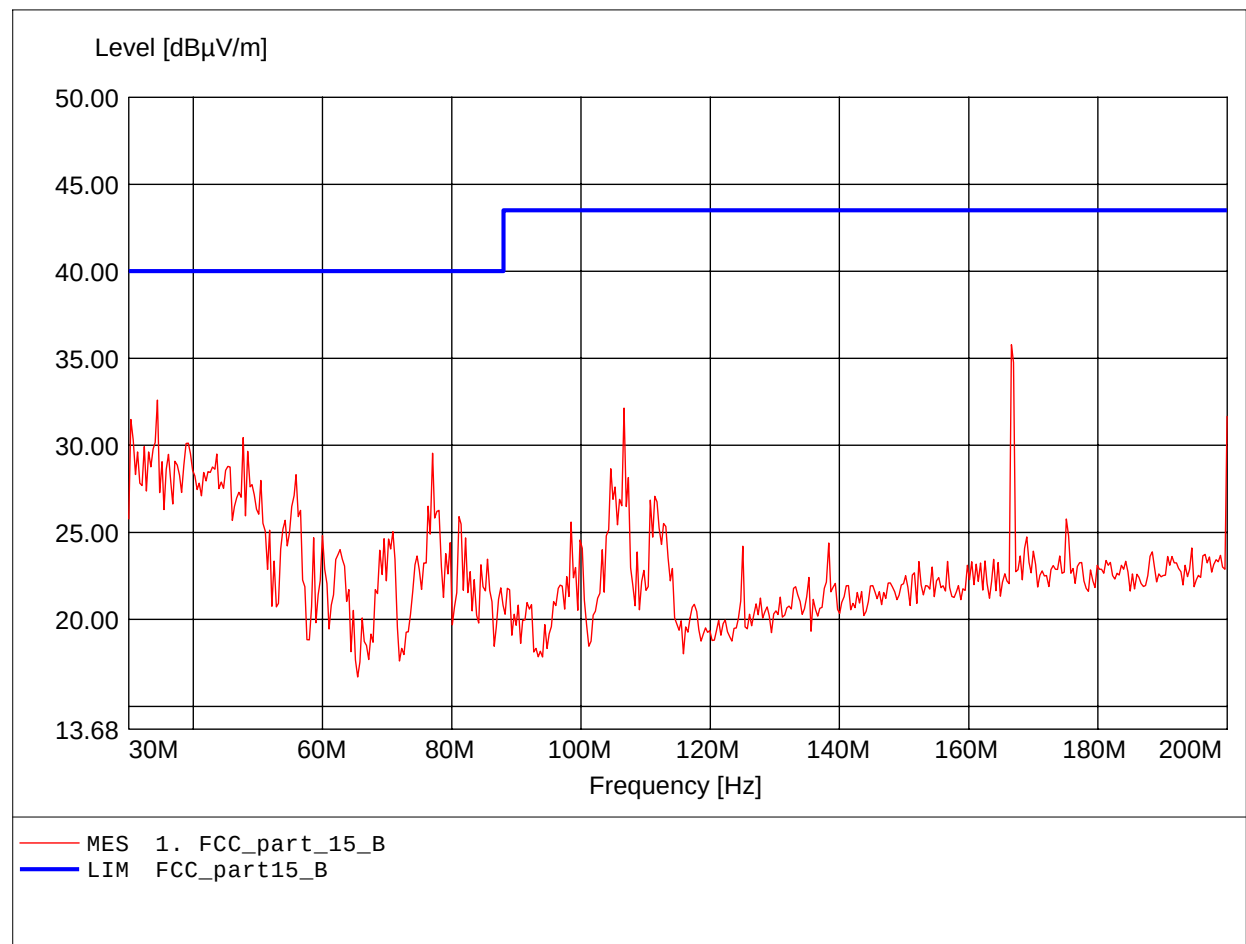
Order Number : W6M20606-7070 802.11g low channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.856GHz Emax:52.38dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

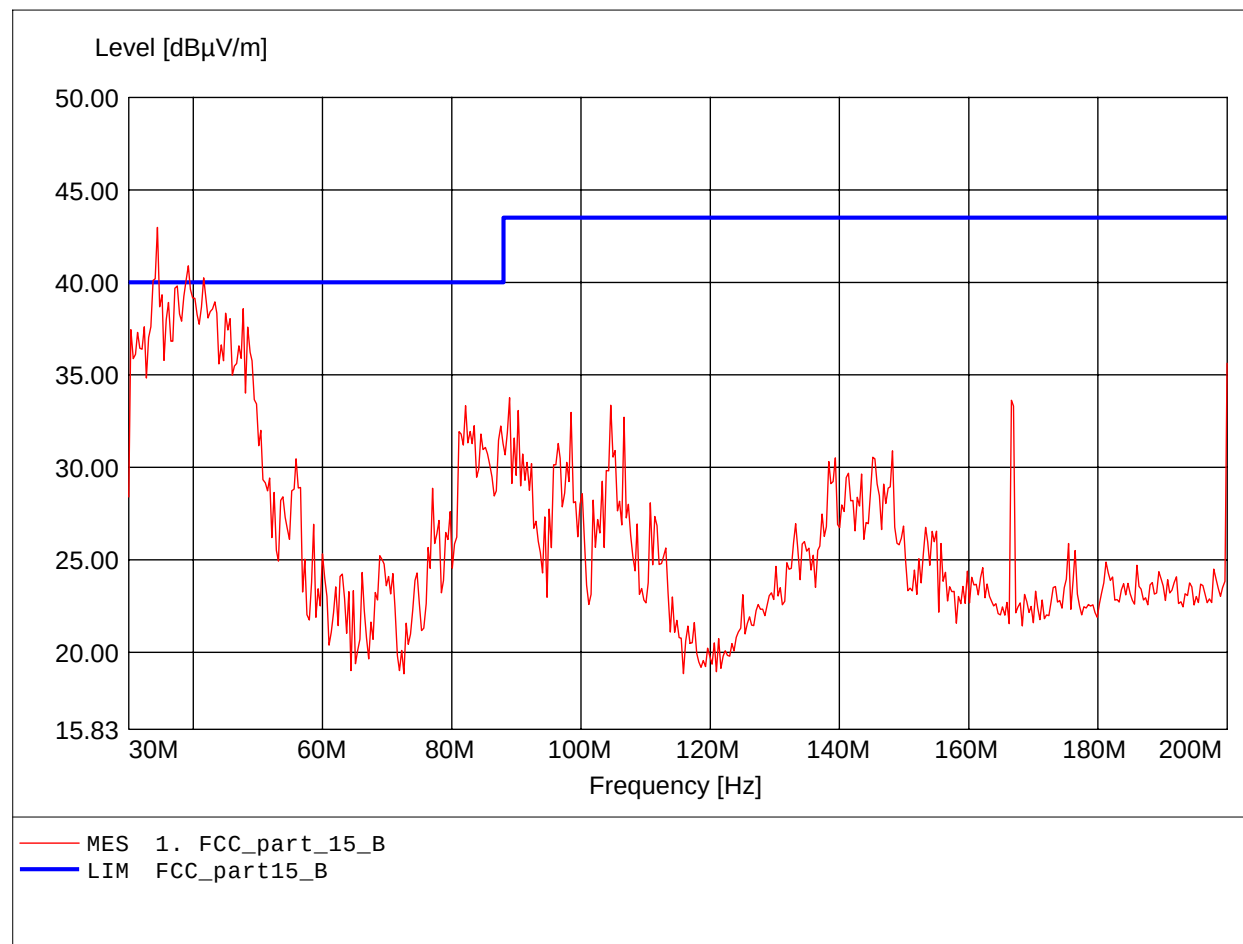
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:166.613MHz Emax:35.78dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

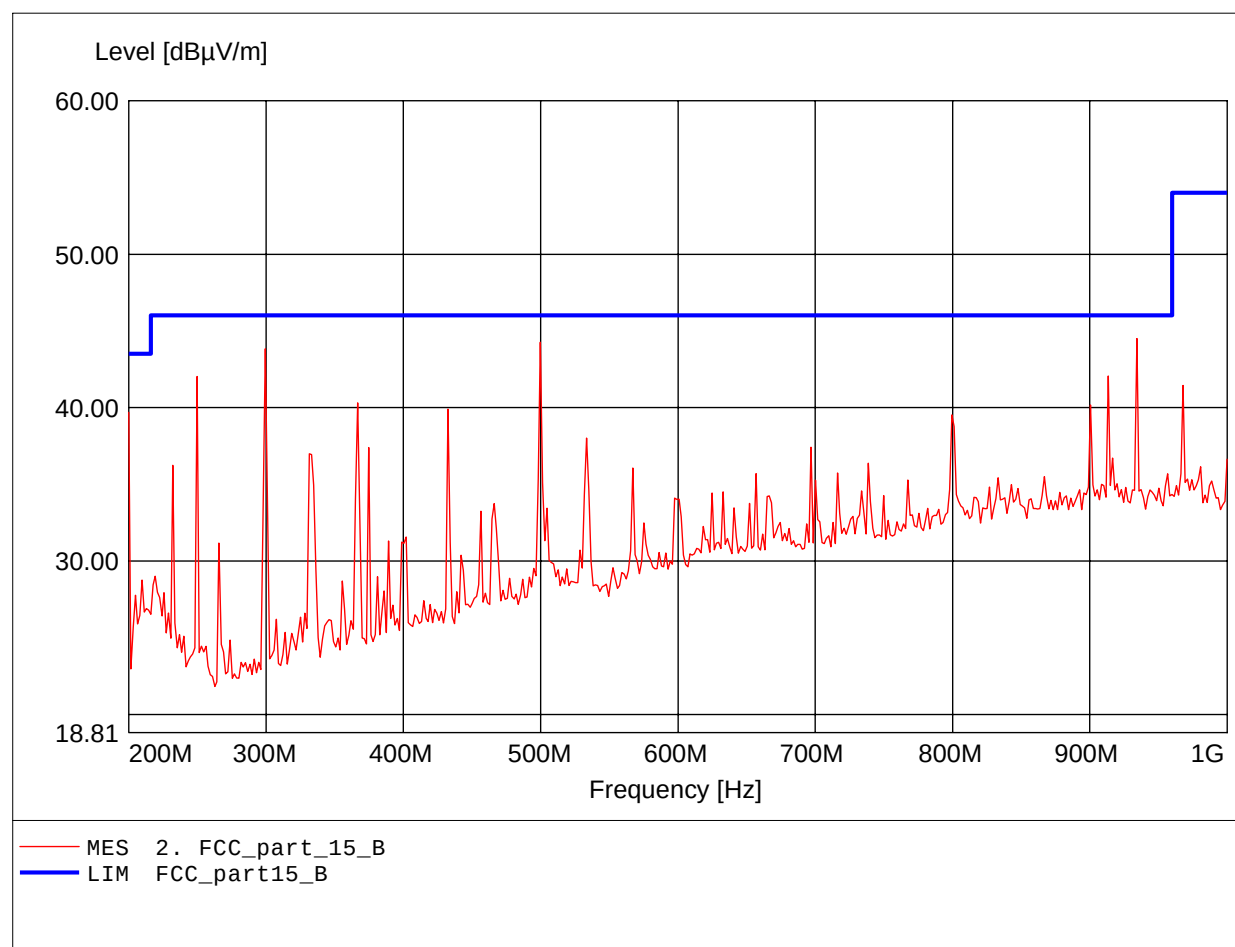
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:34.429MHz Emax:42.97dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

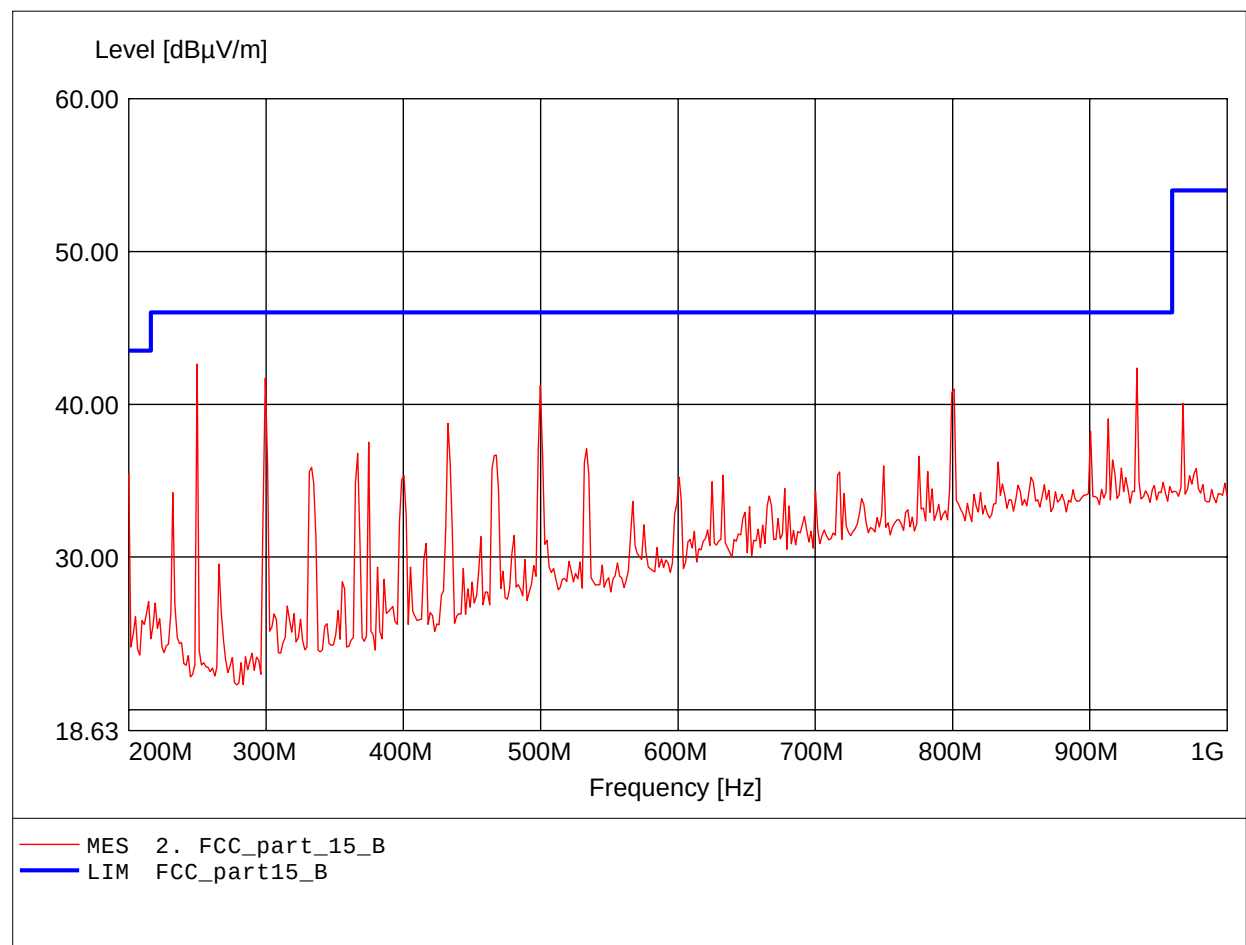
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:934.269MHz Emax:44.50dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

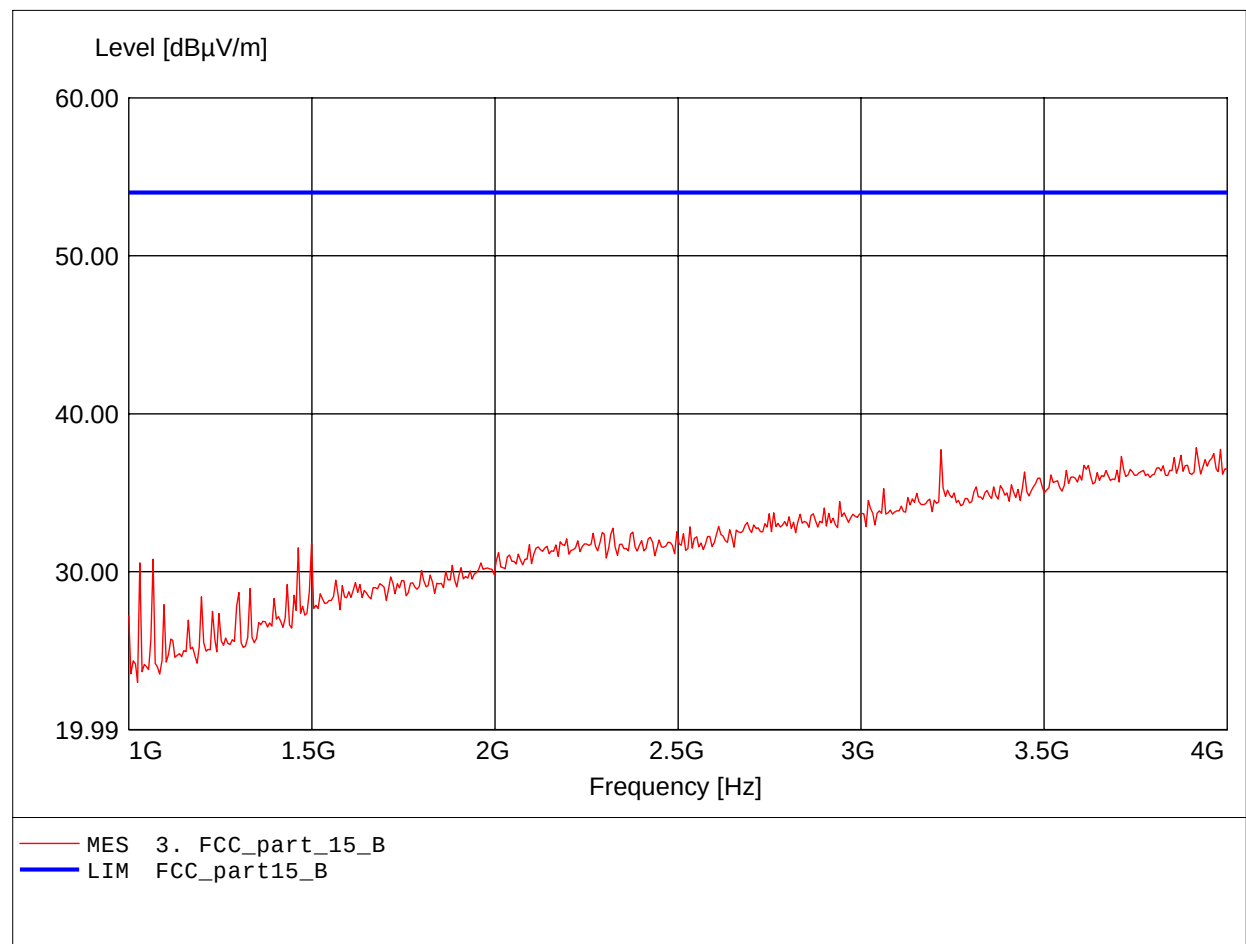
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:249.699MHz Emax:42.63dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

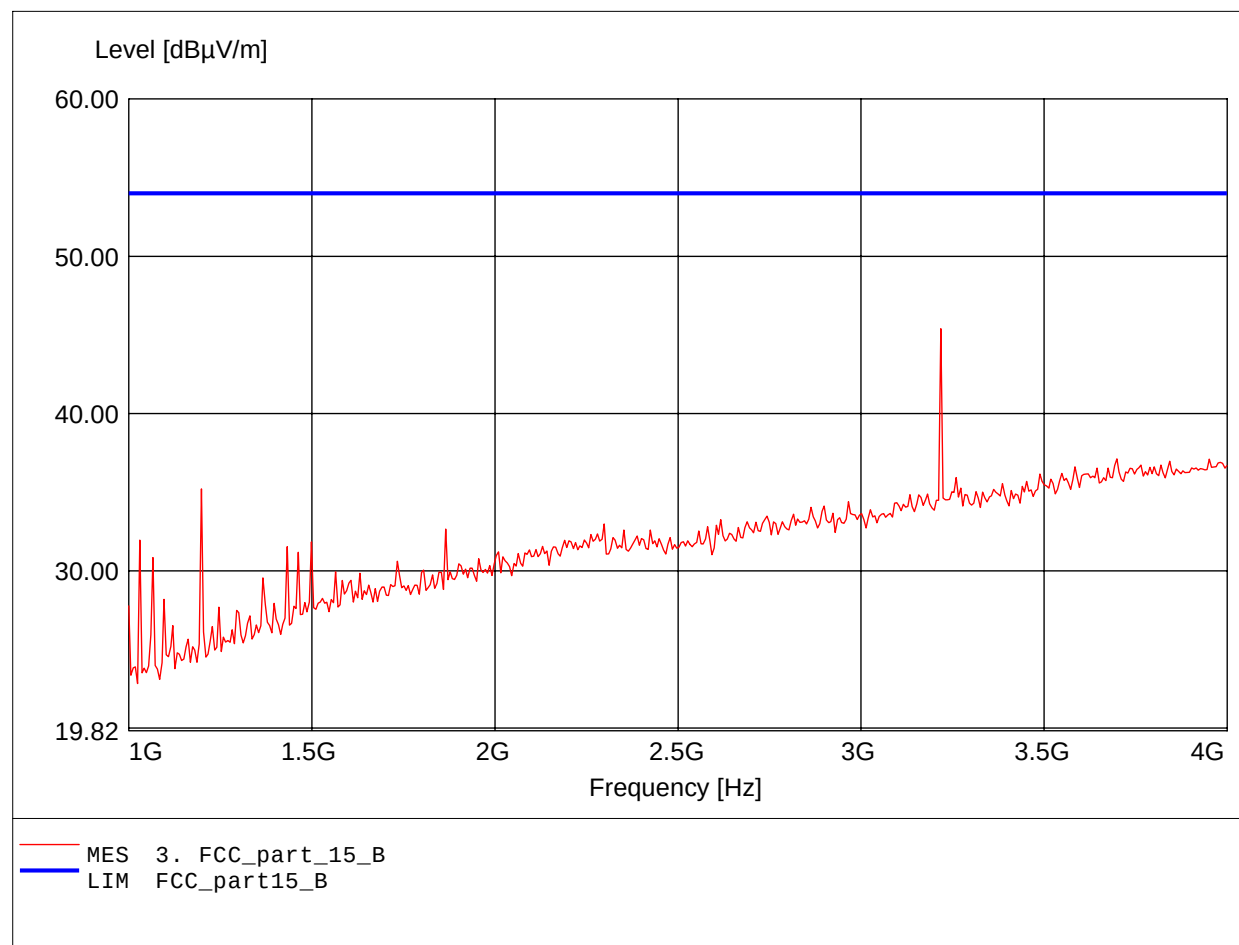
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.916GHz Emax:37.85dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

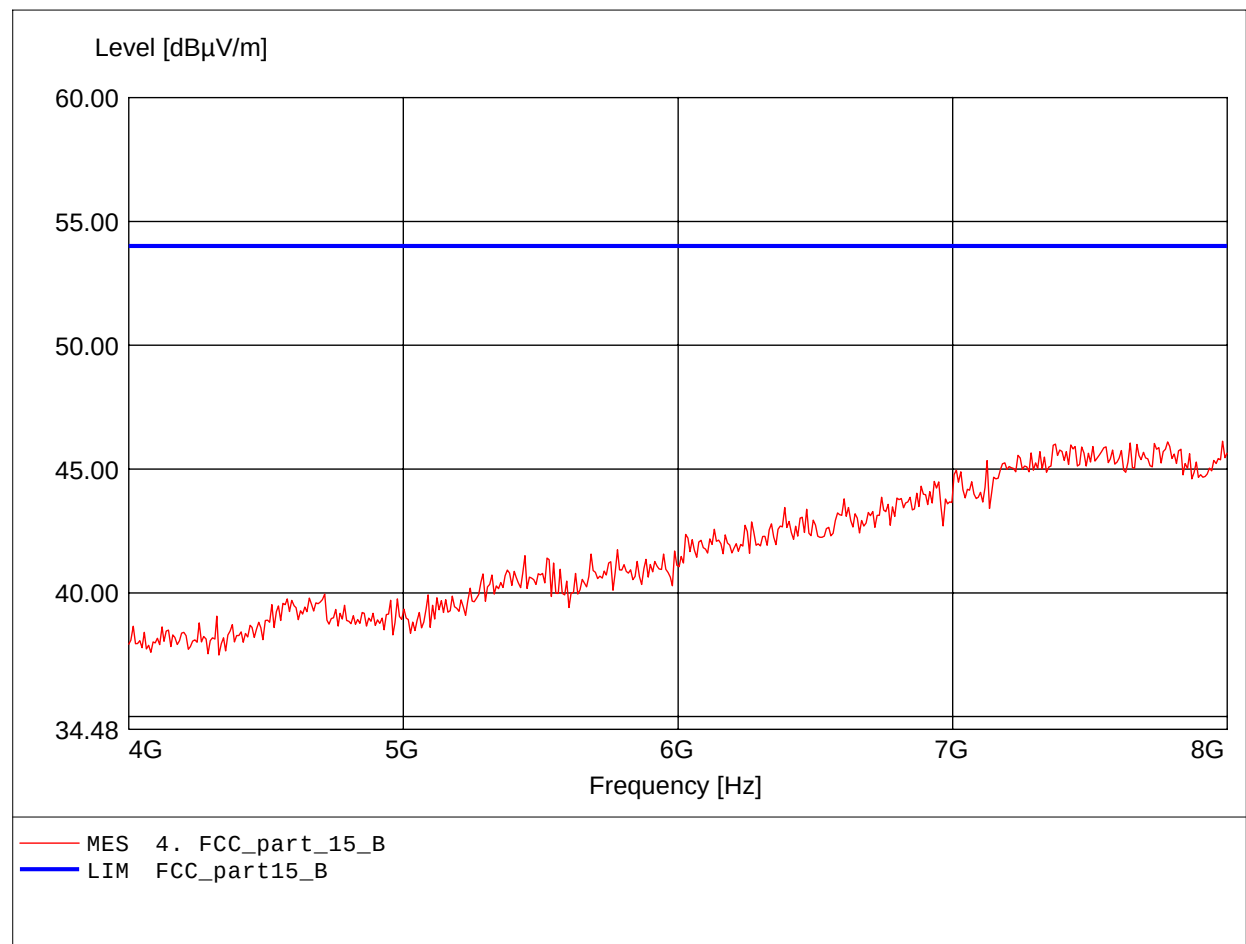
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.218GHz Emax:45.38dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

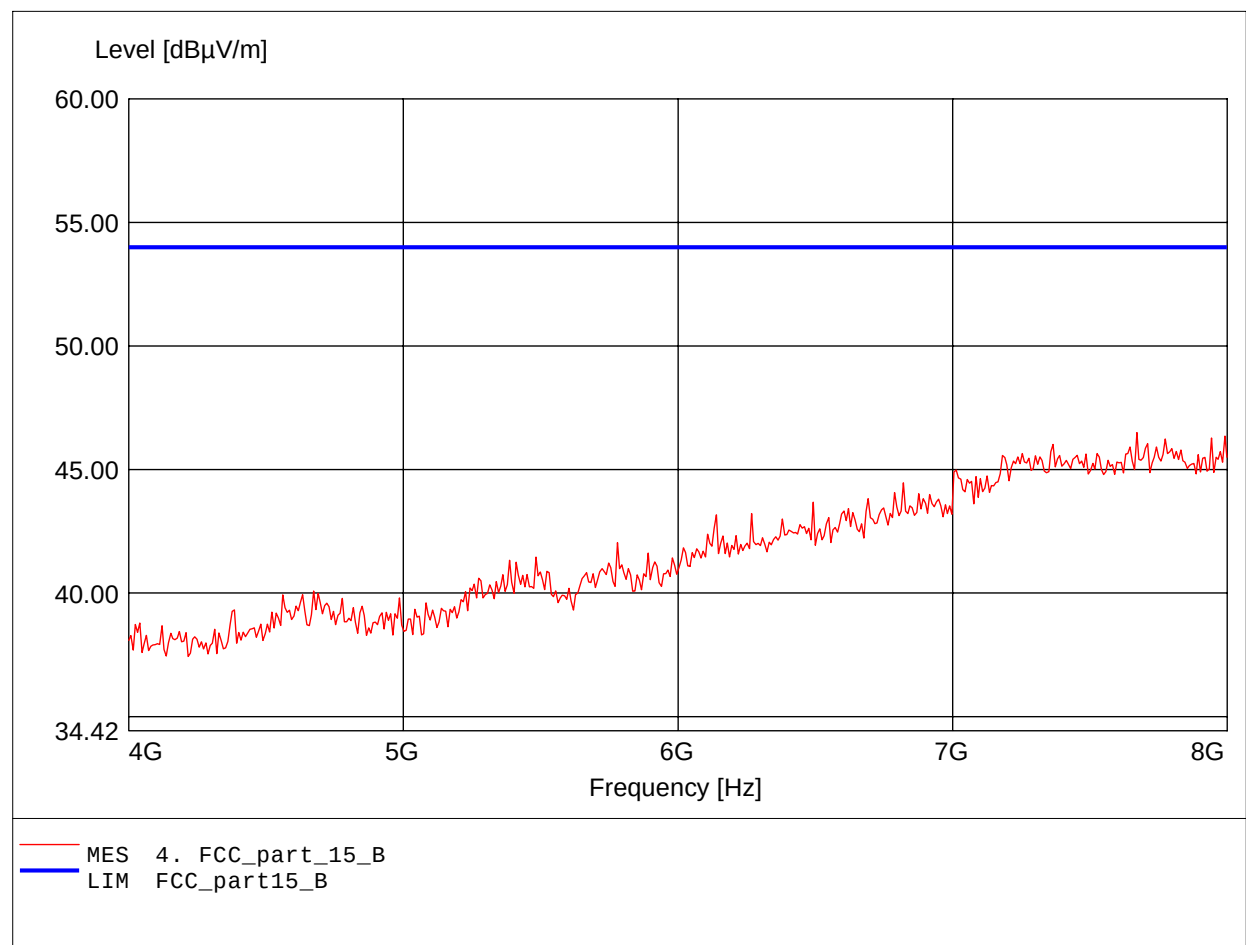
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.984GHz Emax:46.12dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

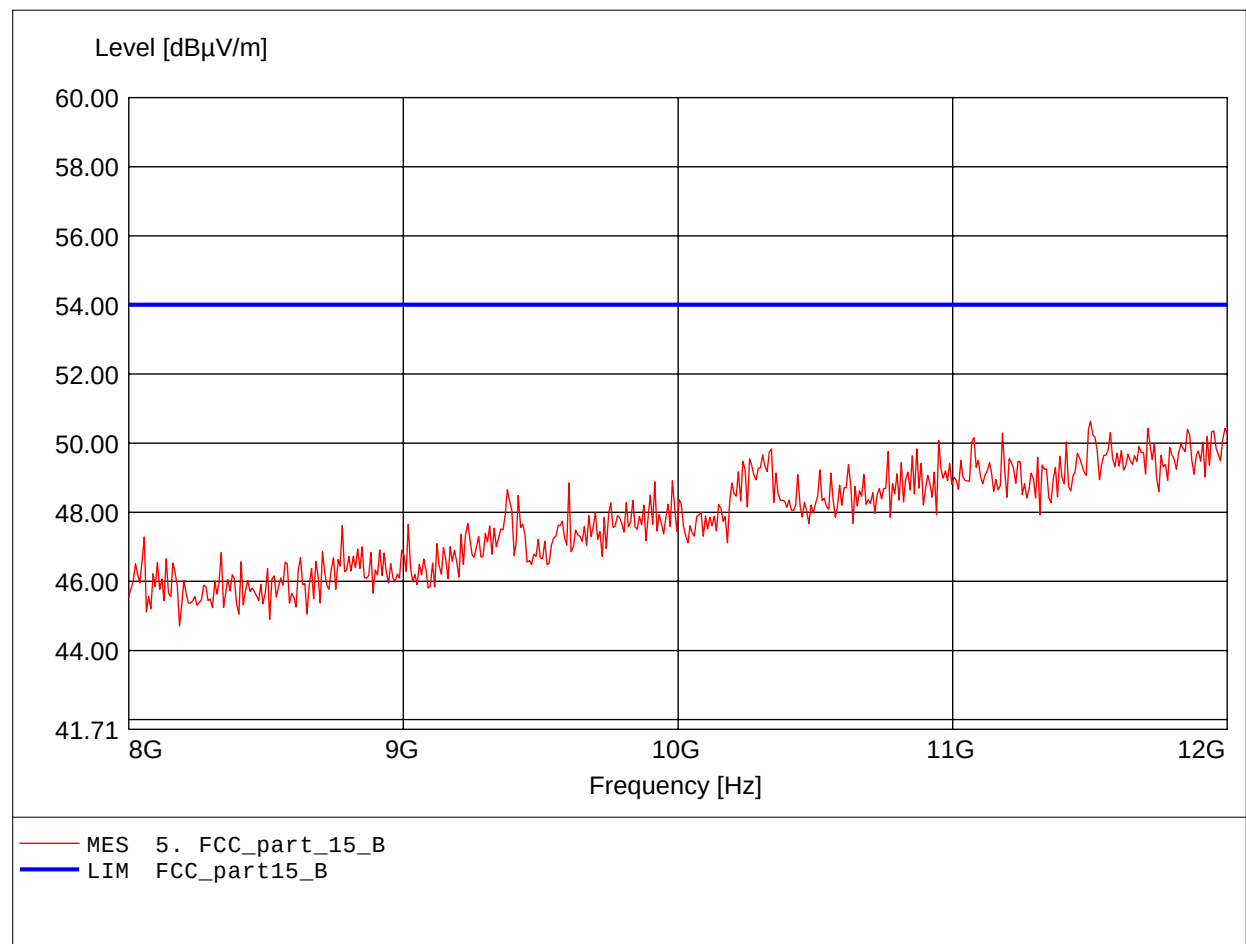
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.671GHz Emax:46.50dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

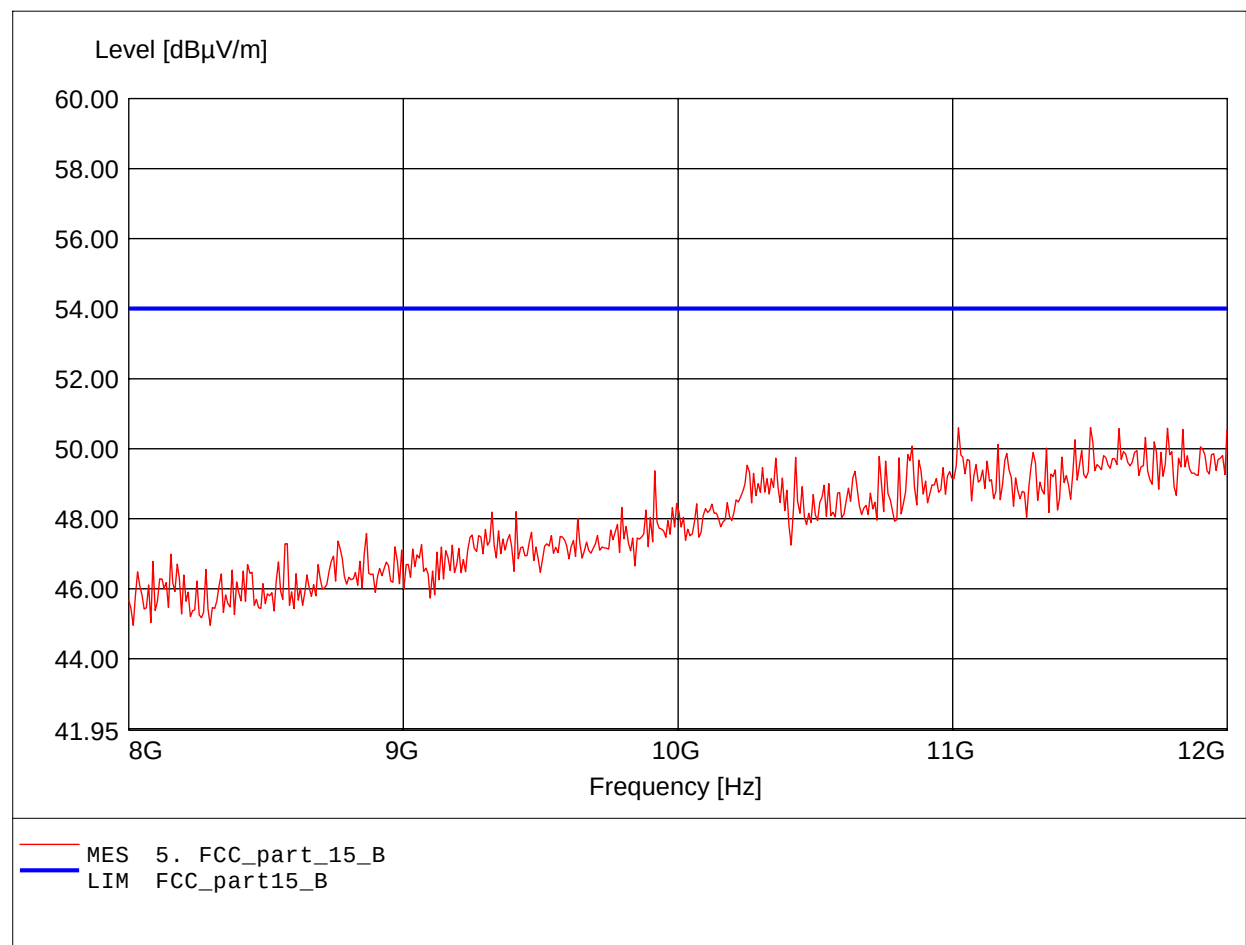
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:11.503GHz Emax:50.64dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

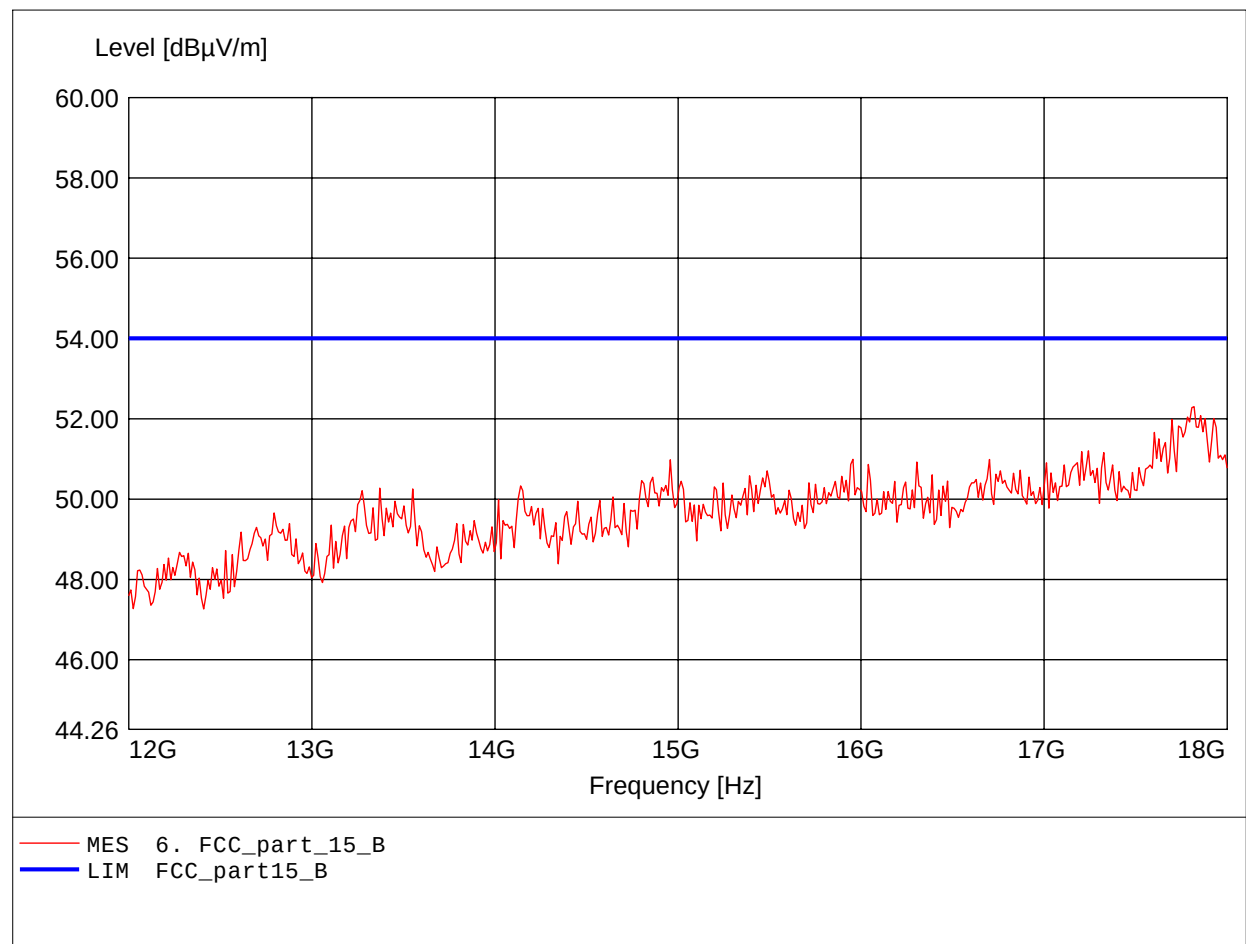
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:11.503GHz Emax:50.61dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

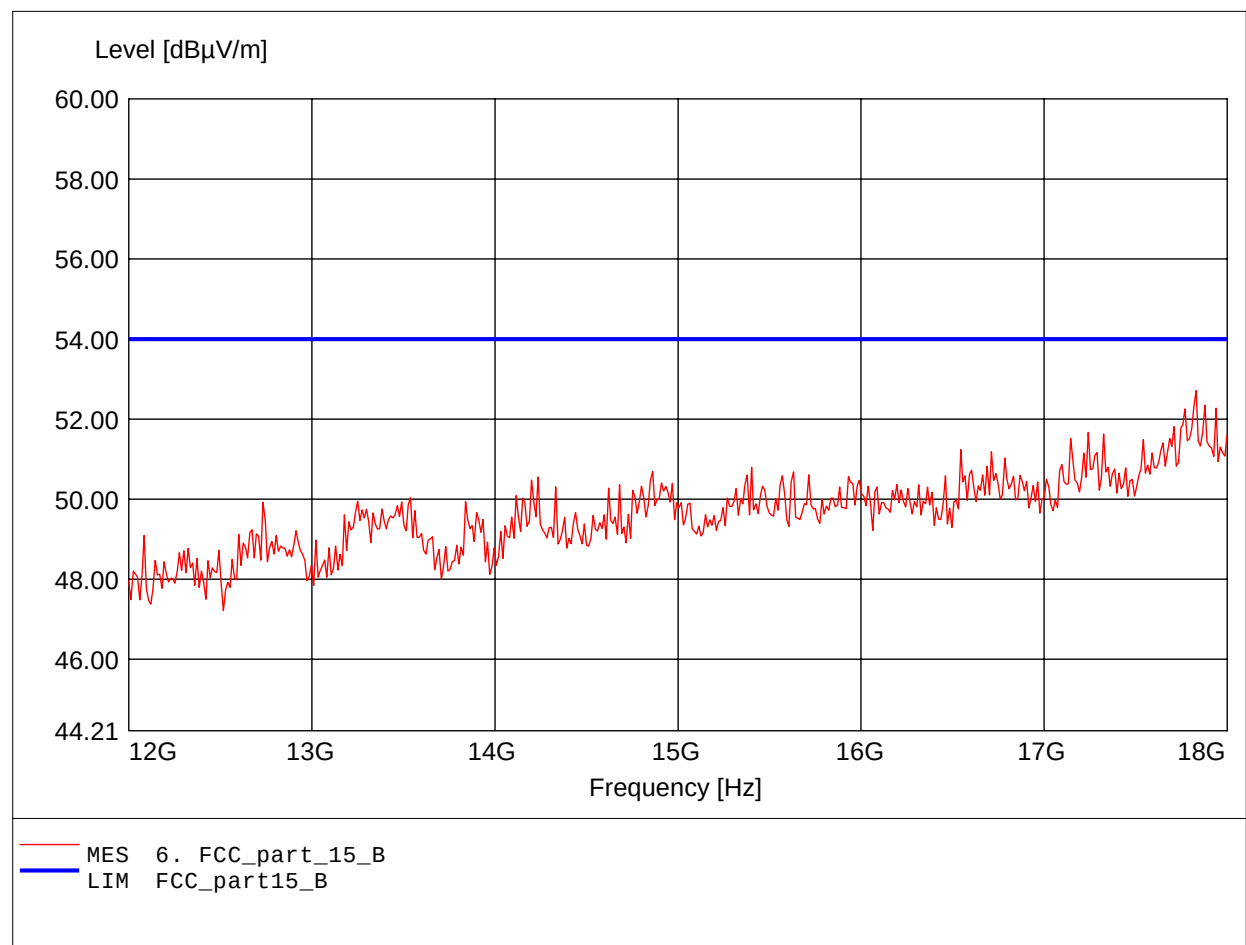
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.820GHz Emax:52.30dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

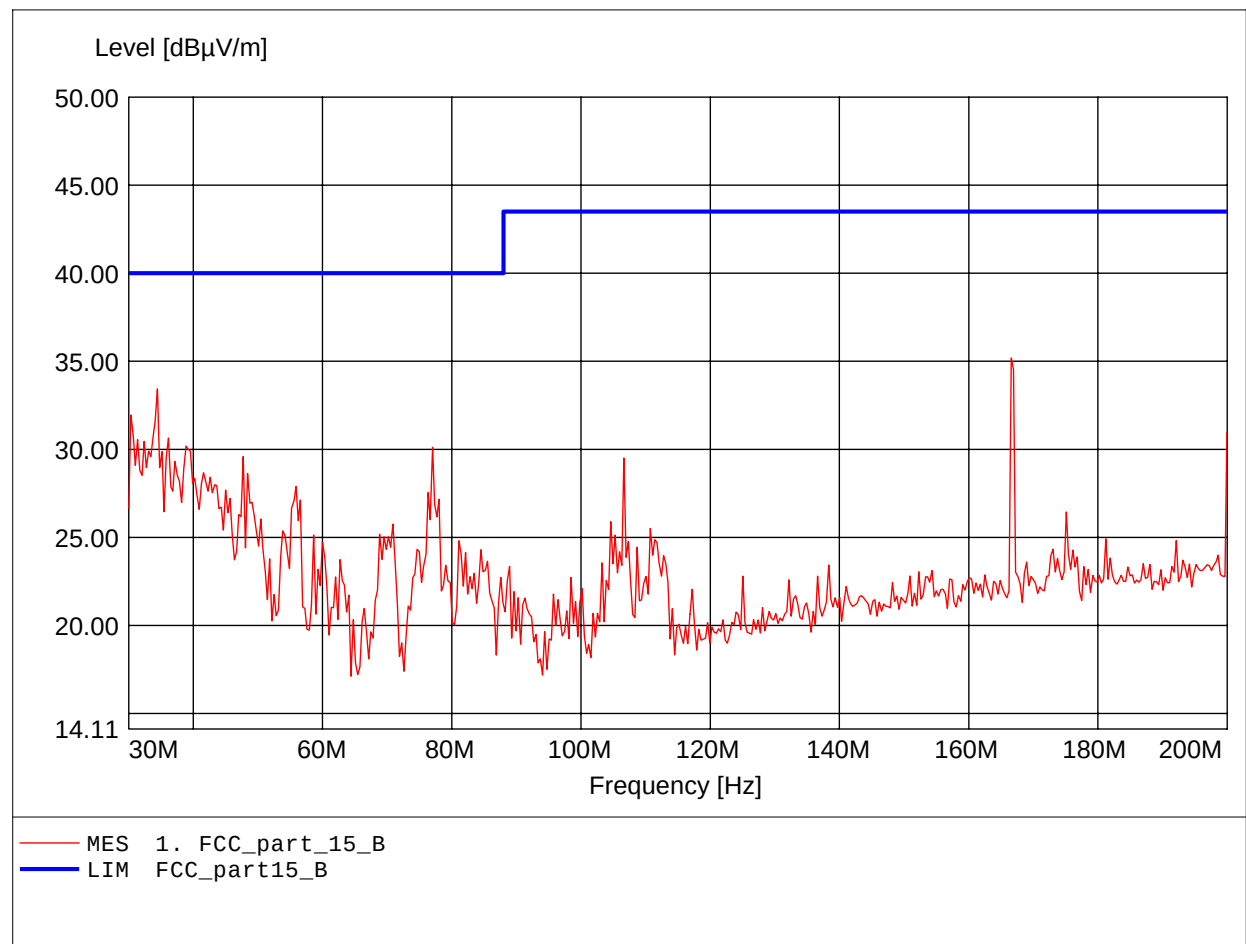
Order Number : W6M20606-7070 802.11g middle channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.832GHz Emax:52.71dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

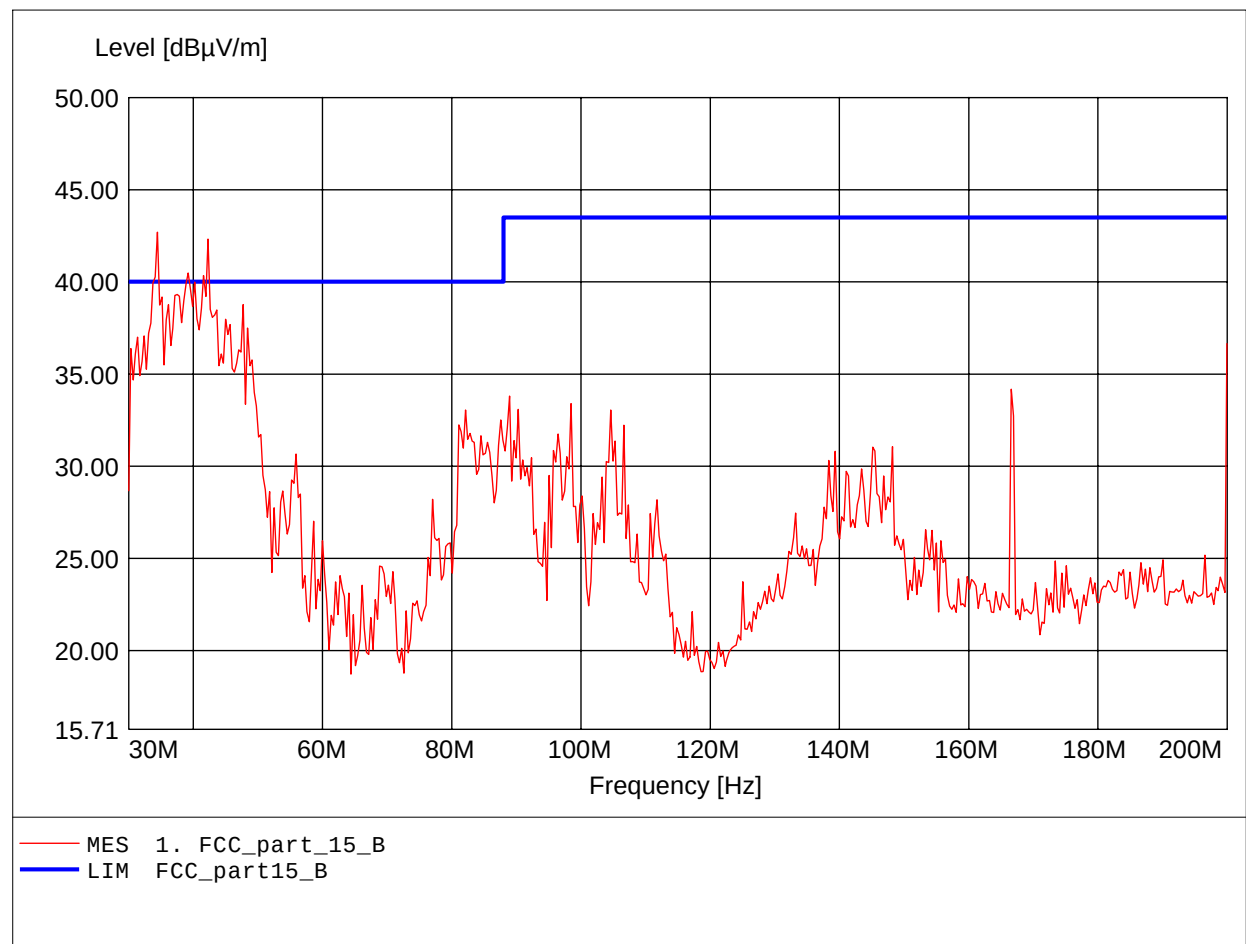
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:166.613MHz Emax:35.19dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

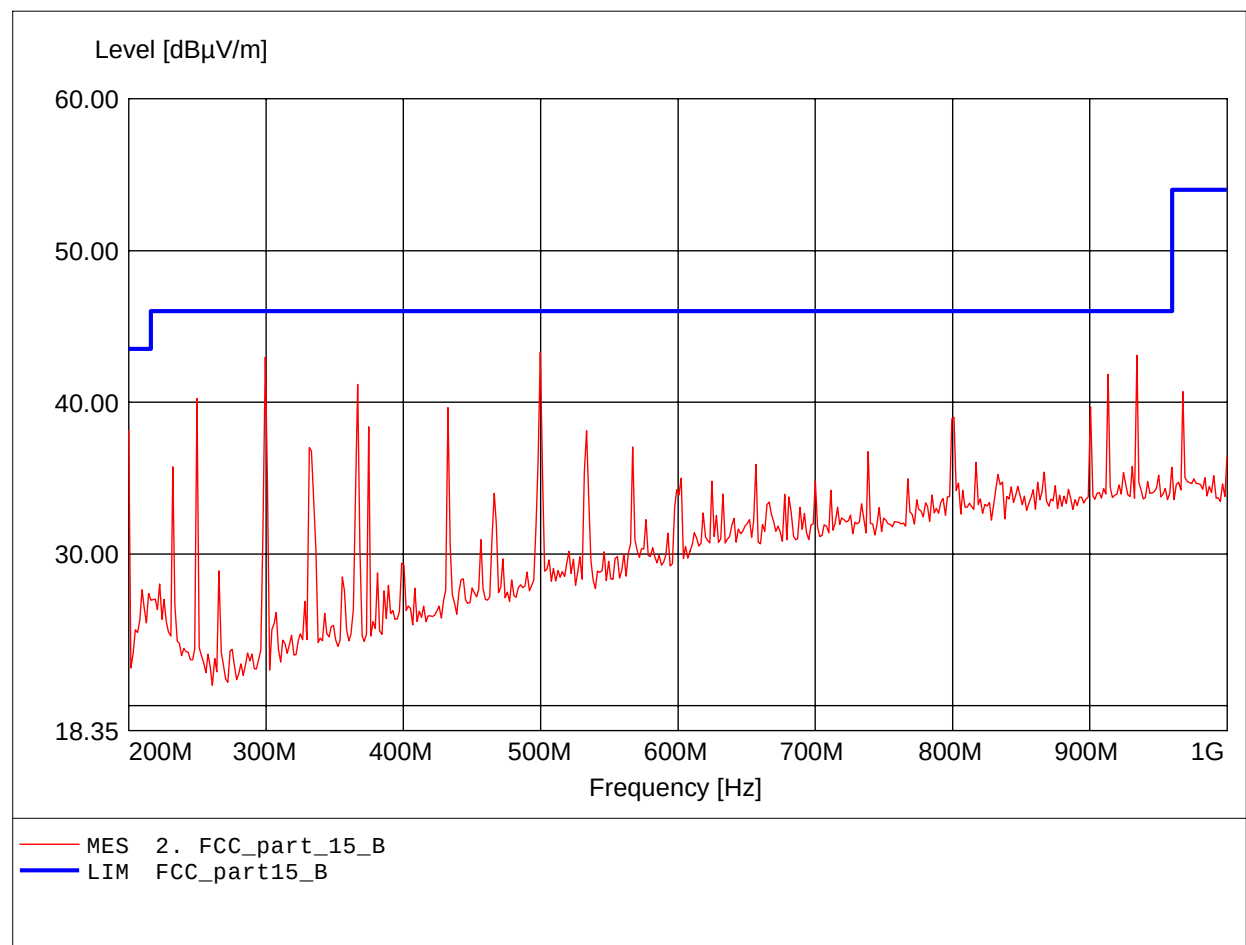
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:34.429MHz Emax:42.70dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

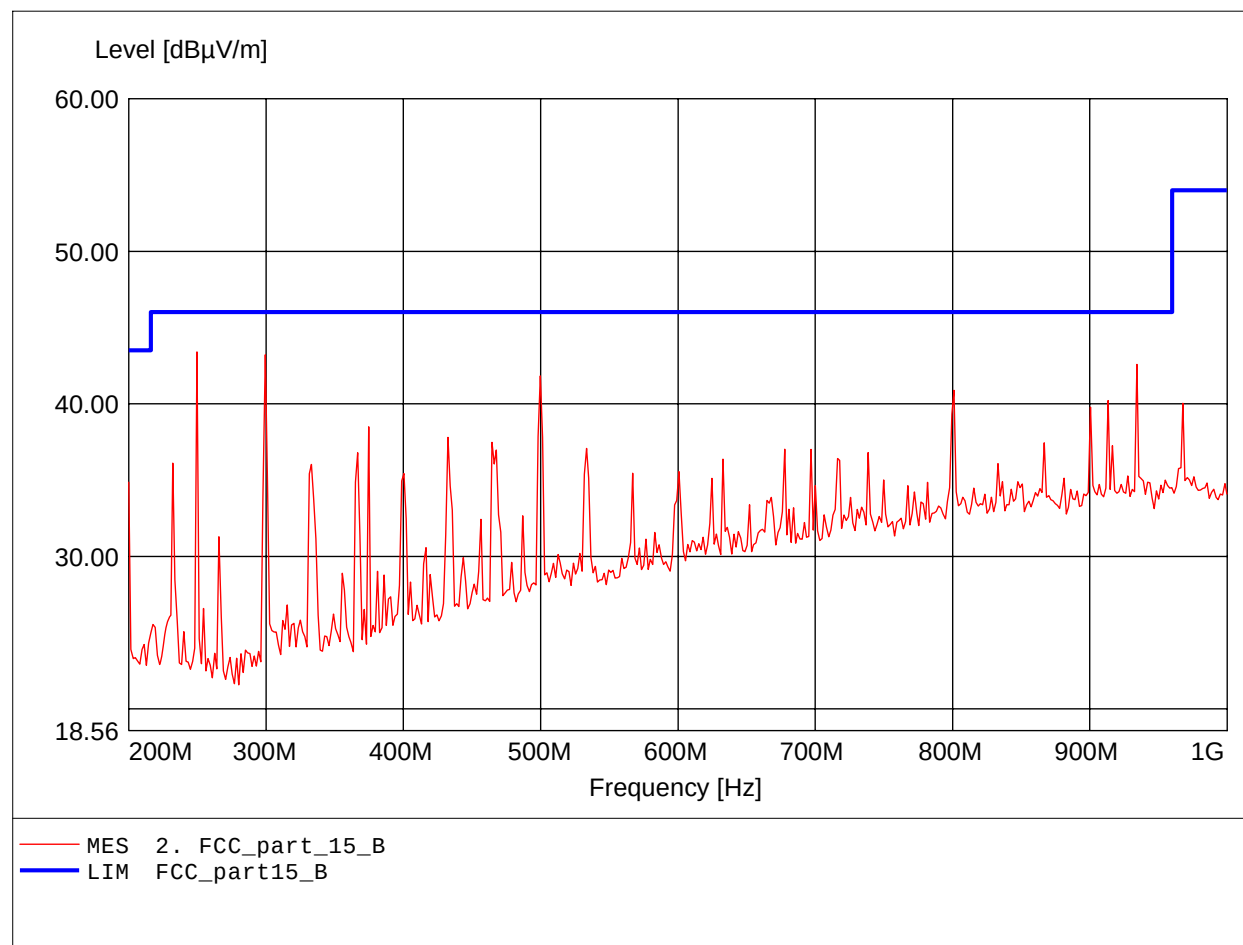
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:499.800MHz Emax:43.30dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

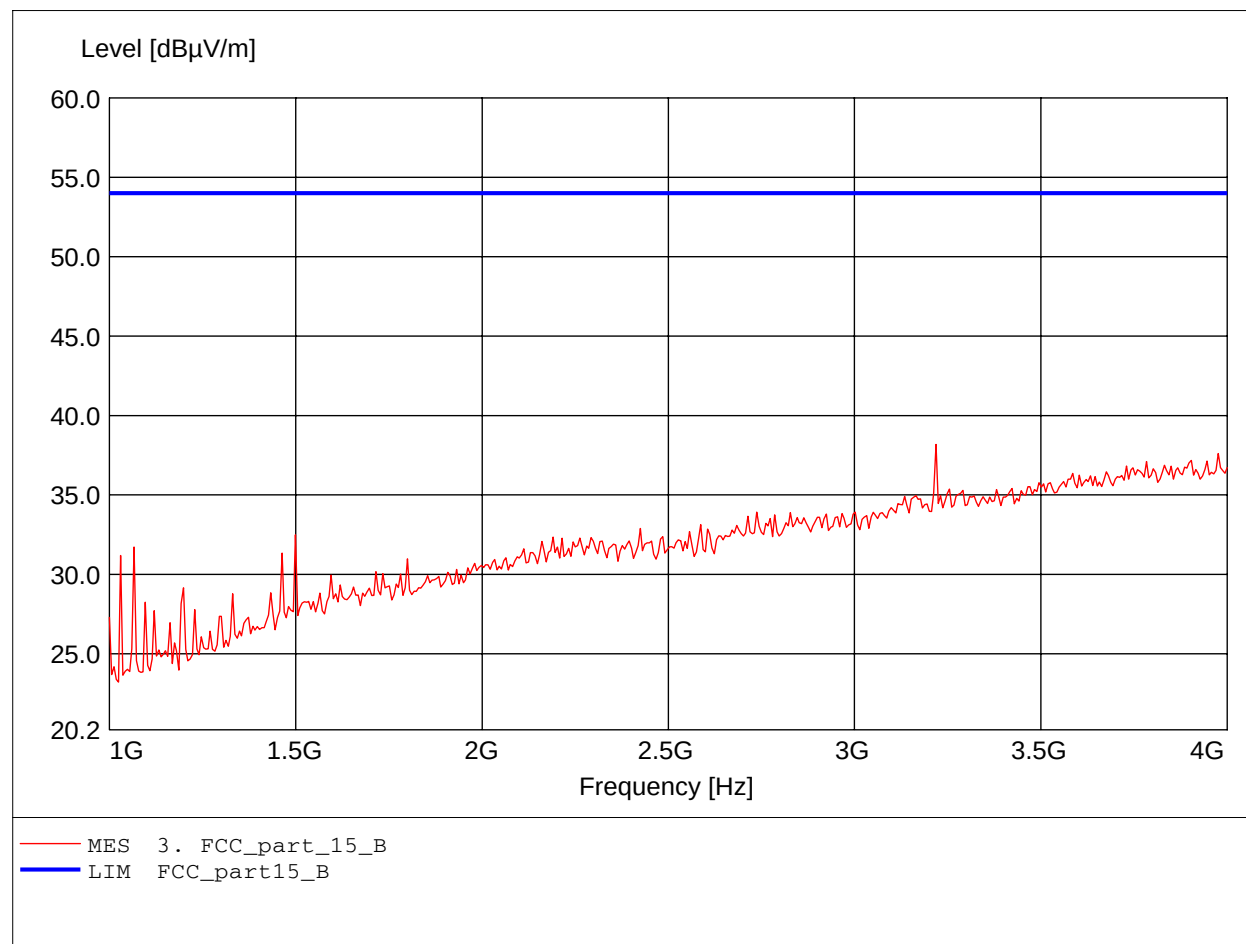
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:249.699MHz Emax:43.40dBμV/m RBW: 100 kHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

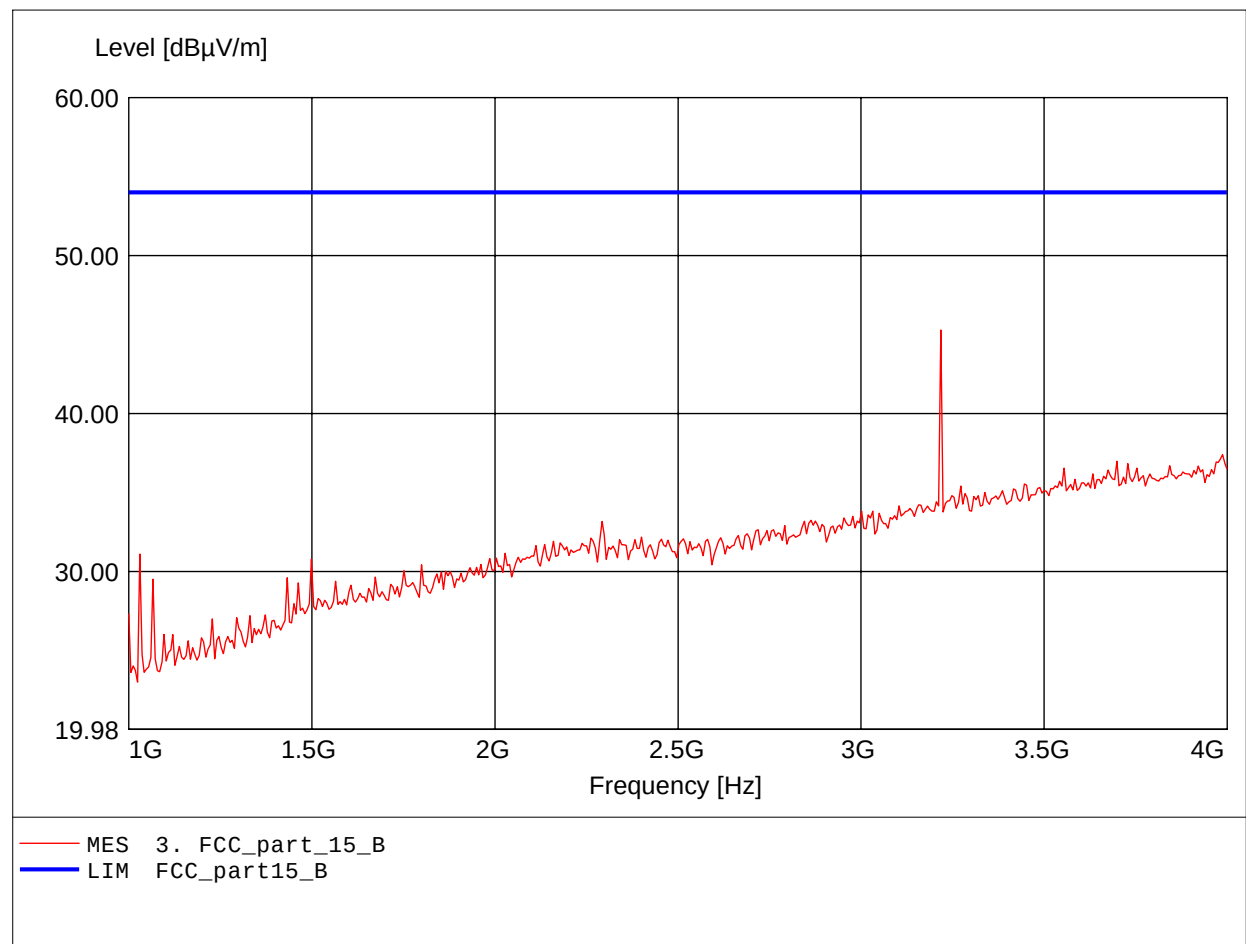
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.218GHz Emax:38.18dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

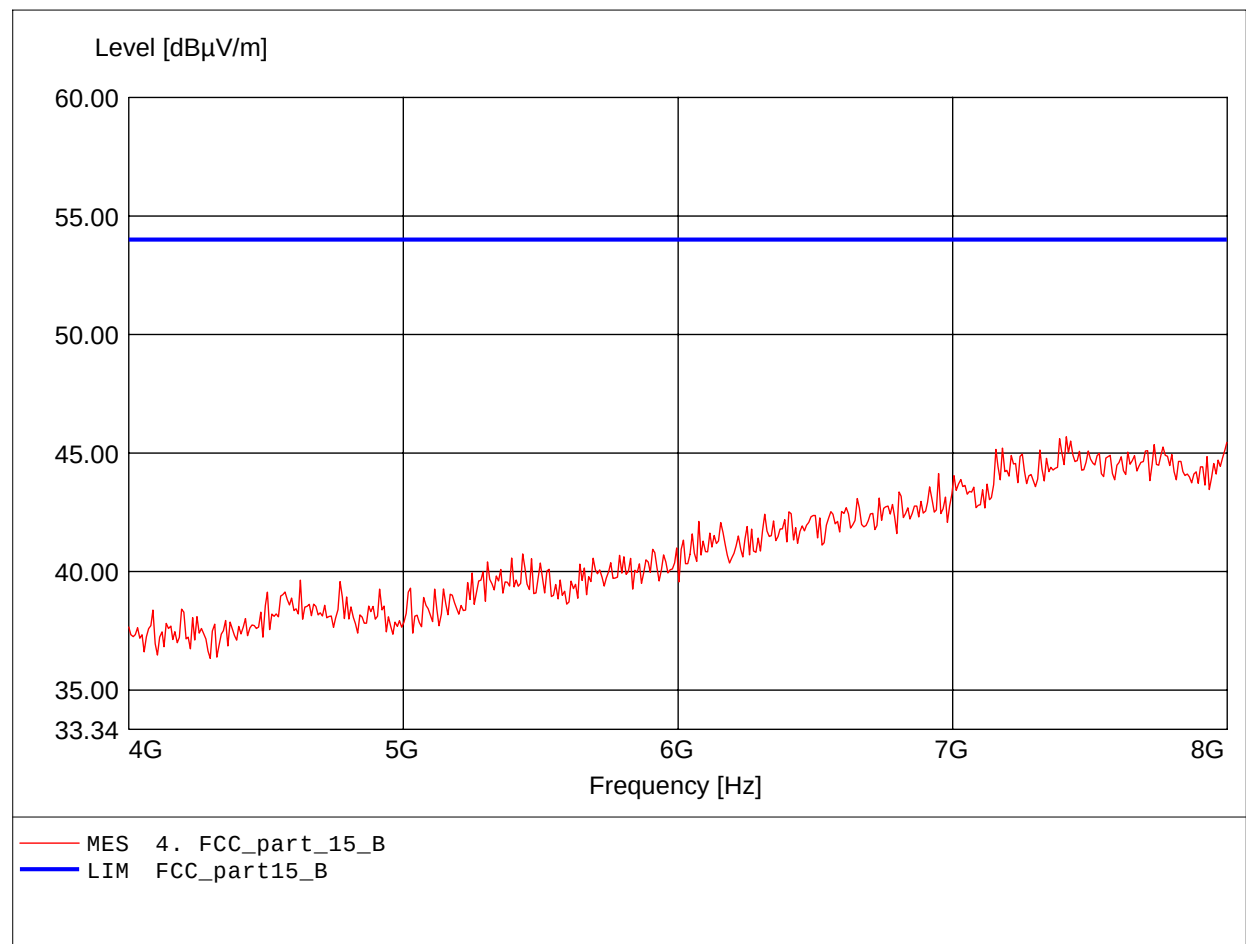
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.218GHz Emax:45.27dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

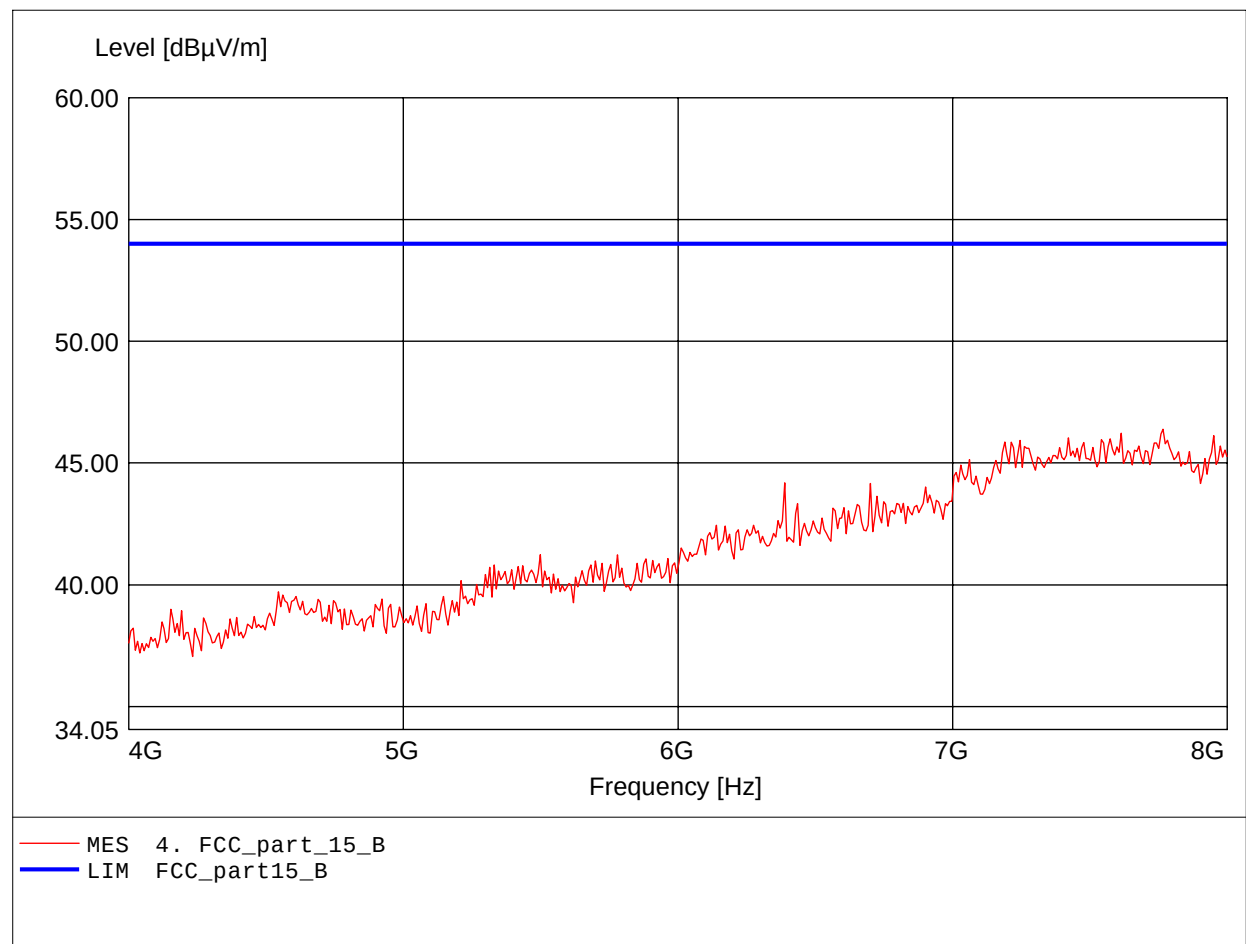
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.415GHz Emax:45.69dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

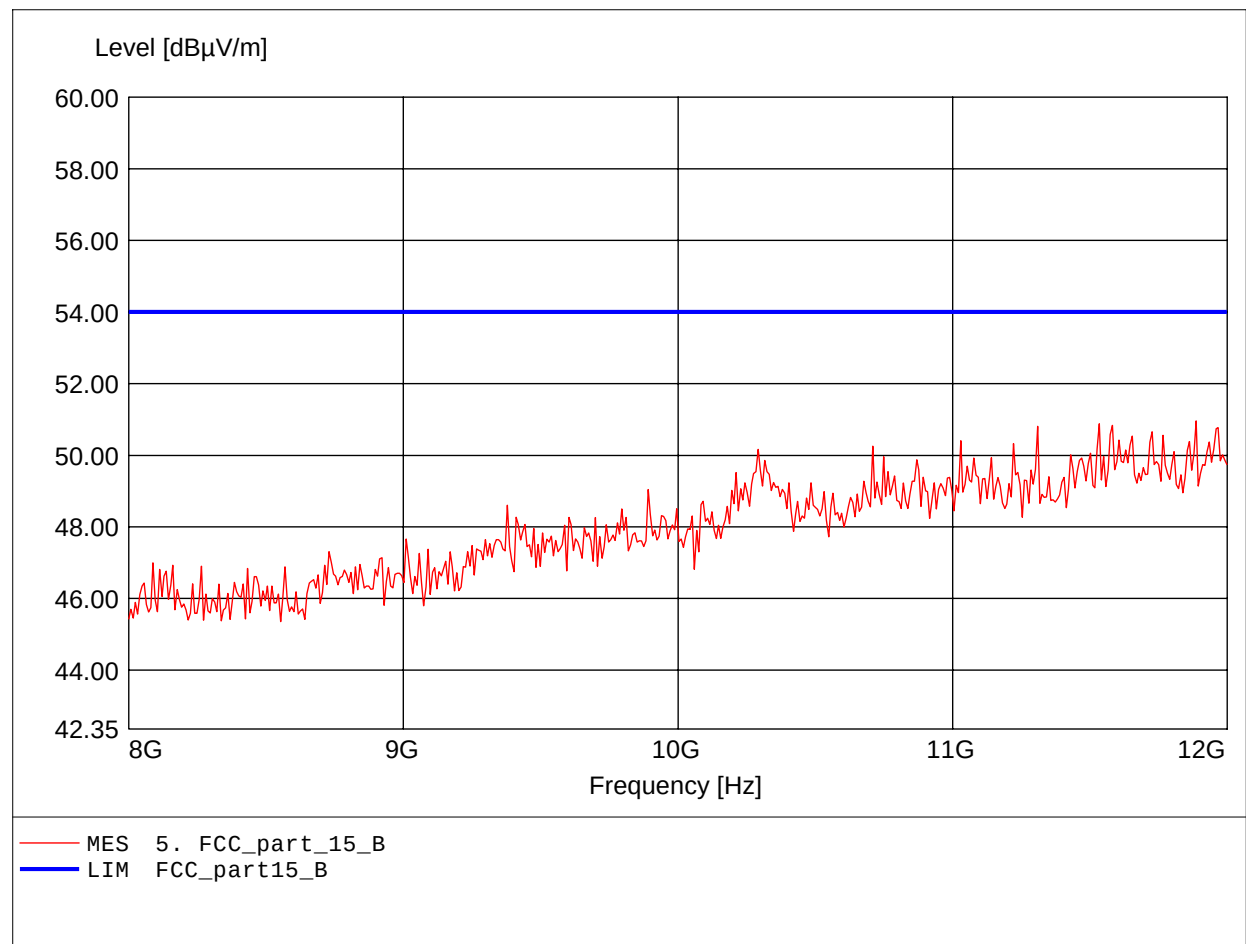
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:7.768GHz Emax:46.39dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

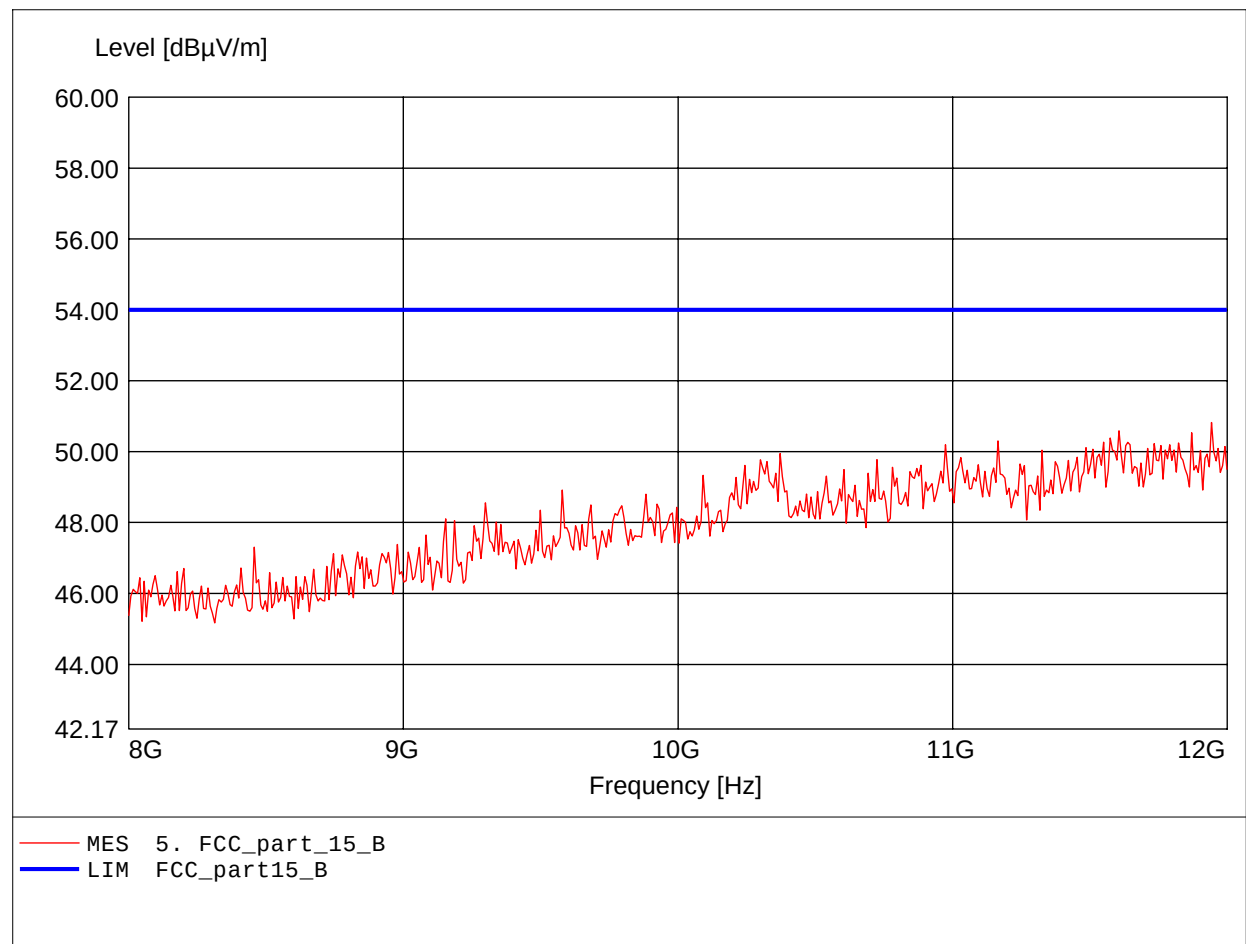
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:11.888GHz Emax:50.96dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

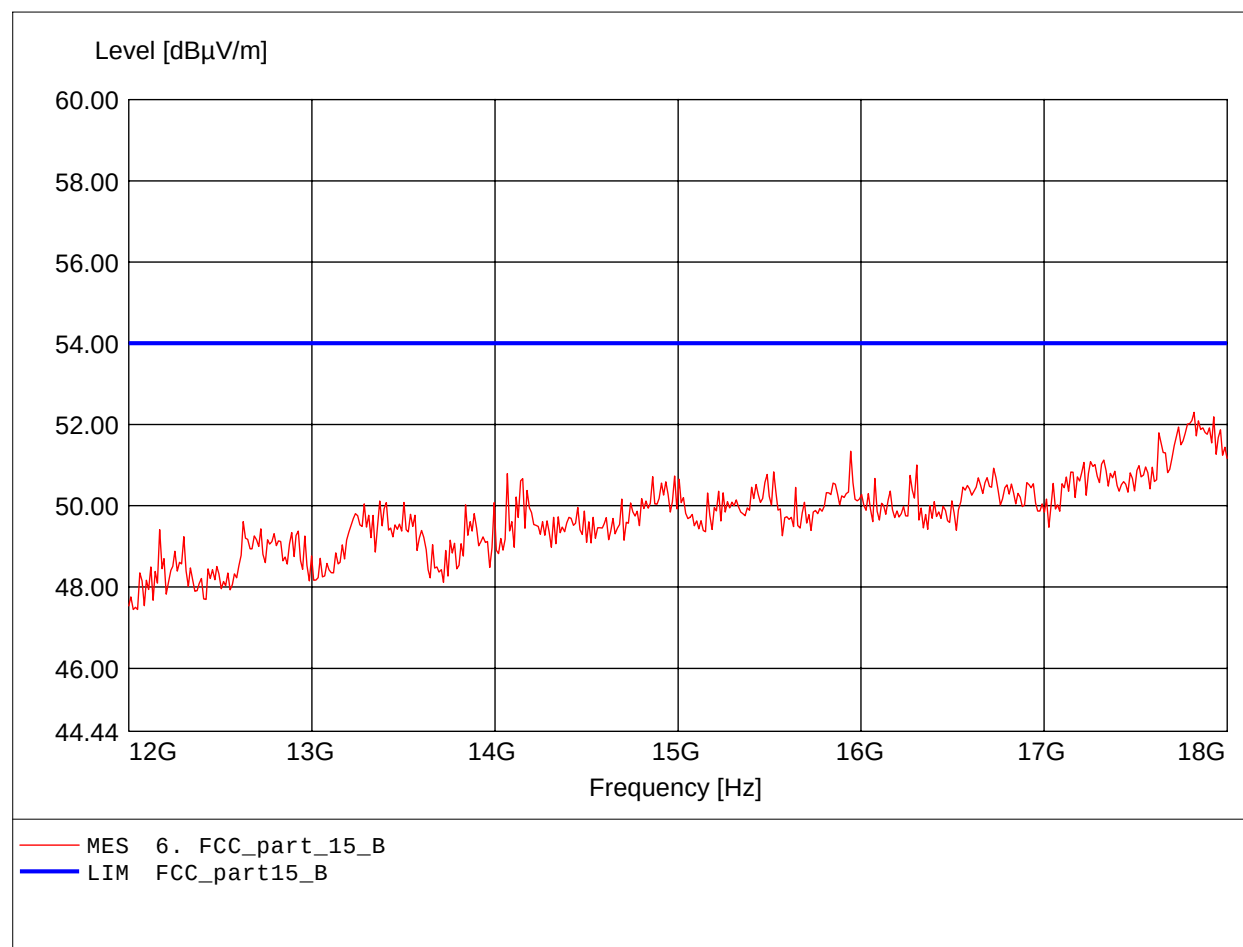
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:11.944GHz Emax:50.82dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

### FCC RULES PART 15, SUBPART B

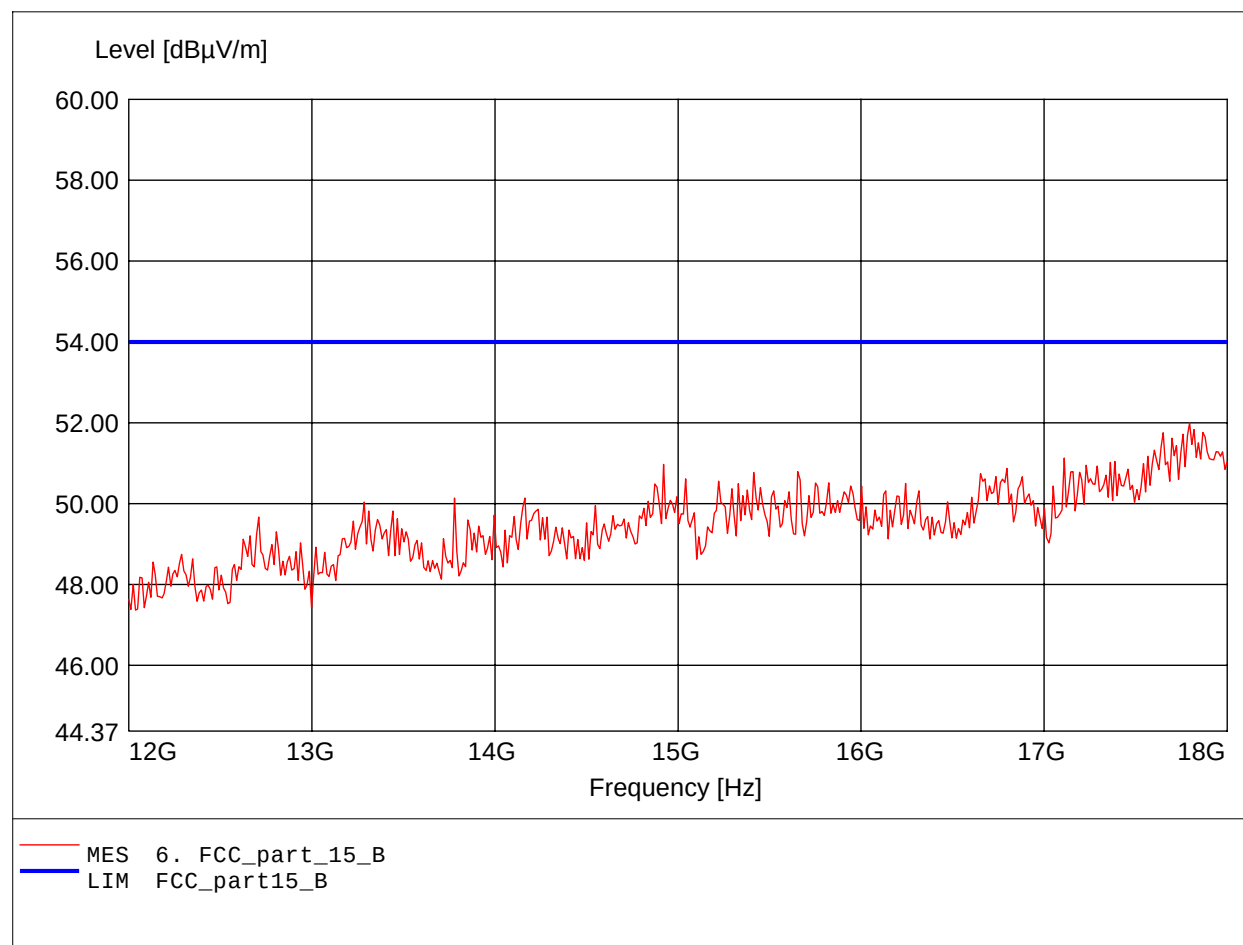
Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.820GHz Emax:52.30dBμV/m RBW: 1 MHz



## Field Strength under normal conditions

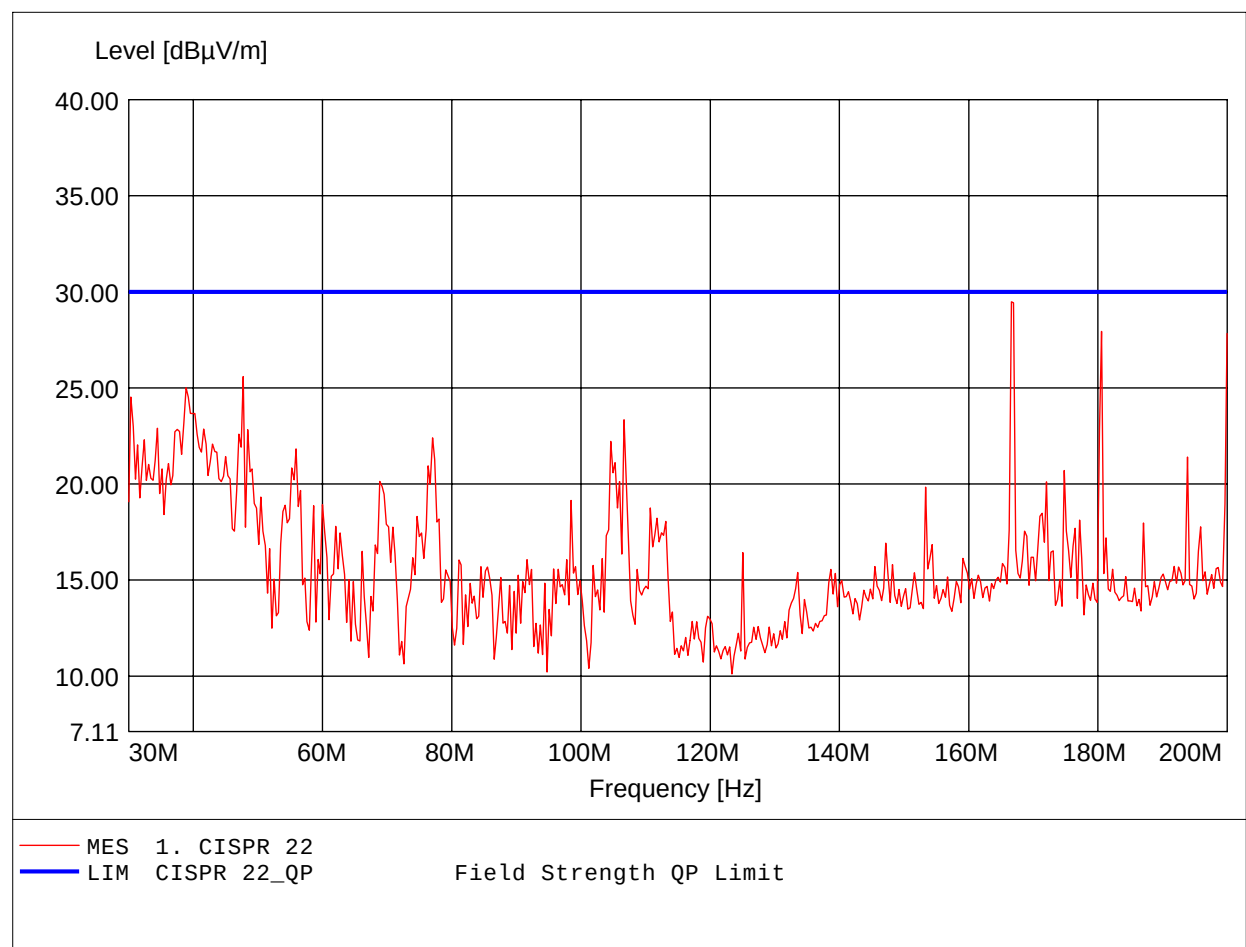
### FCC RULES PART 15, SUBPART B

Order Number : W6M20606-7070 802.11g high channel  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:17.796GHz Emax:52.00dBμV/m RBW: 1 MHz



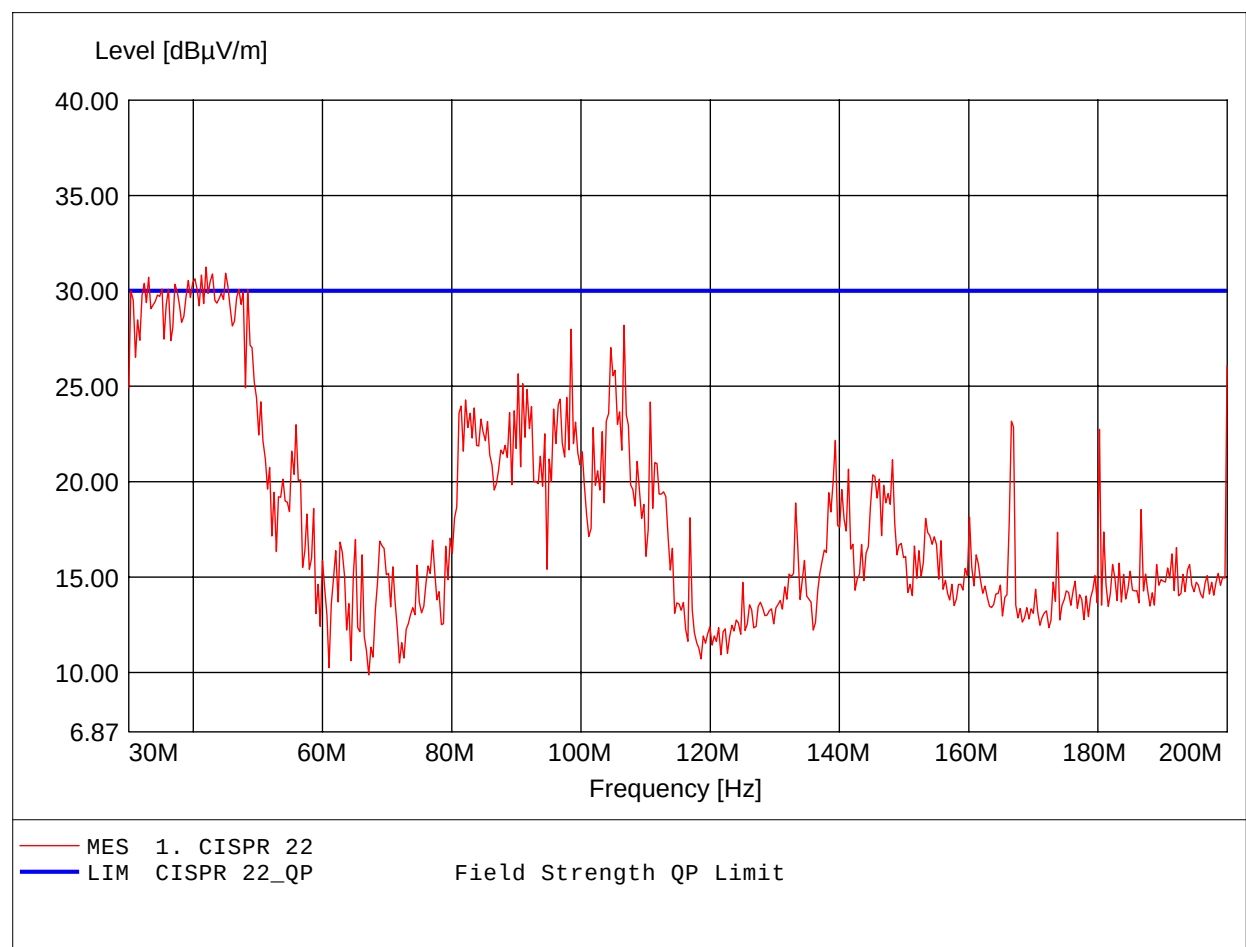
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20606-7070  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: OATS  
Comment 1: Dist.: 10m, Ant.: HK 116  
Freq:166.613MHz Emax:29.48dBμV/m RBW: 100 kHz



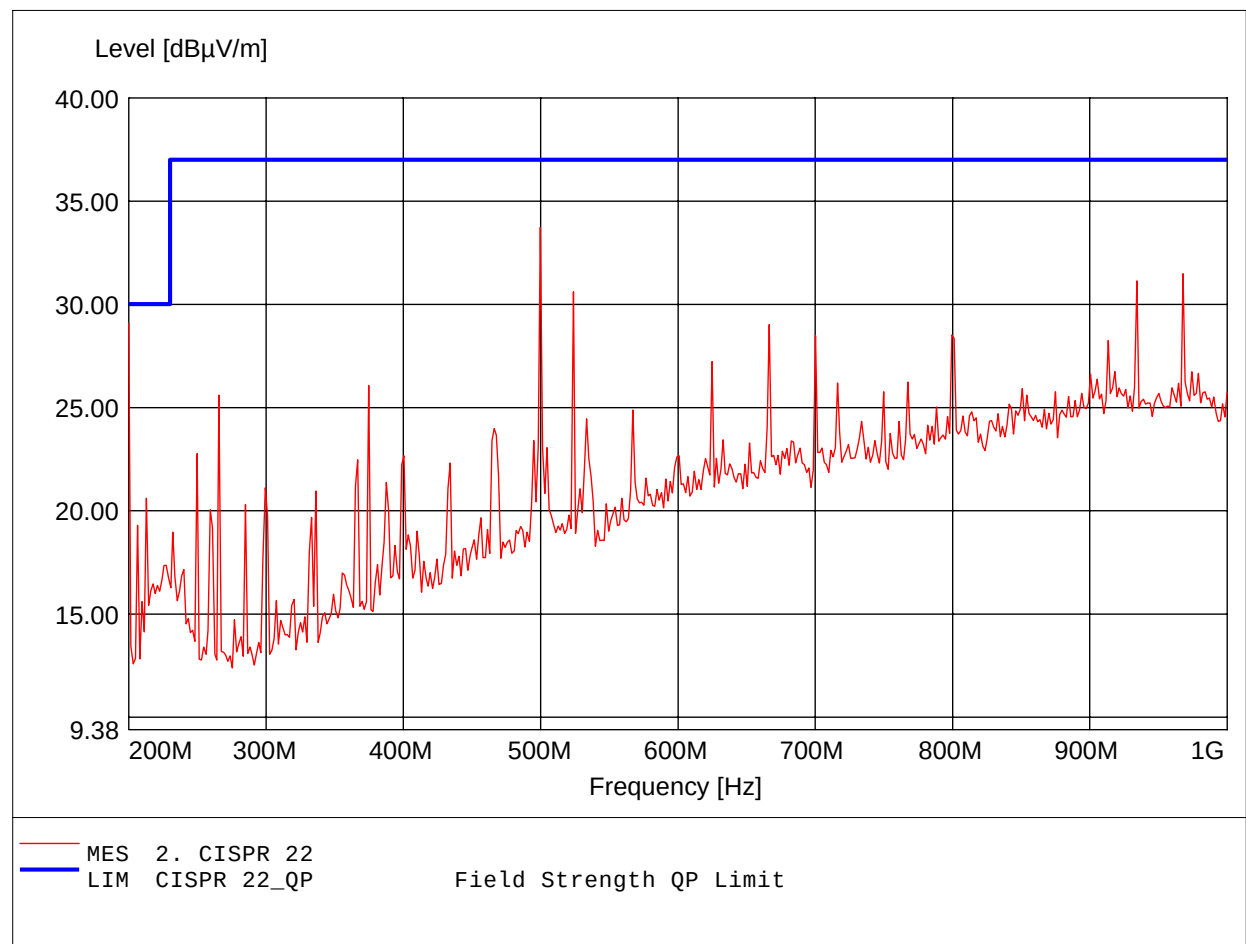
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20606-7070  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: OATS  
Comment 1: Dist.: 10m, Ant.: HK 116  
Freq:41.924MHz Emax:31.24dBμV/m RBW: 100 kHz



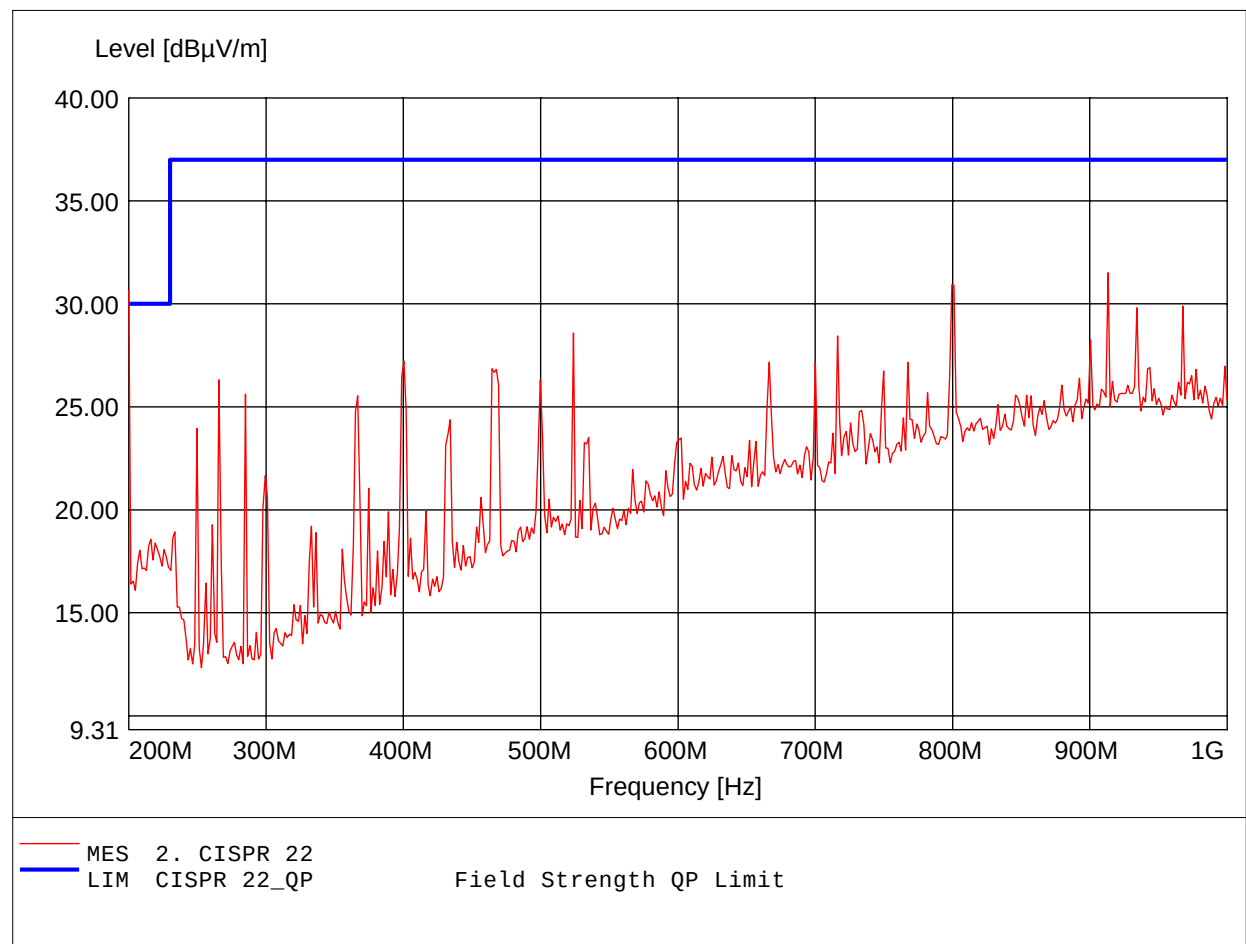
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20606-7070  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: OATS  
Comment 1: Dist.: 10m, Ant.: HL 223  
Freq:499.800MHz Emax:33.72dBμV/m RBW: 100 kHz



**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20606-7070  
Test Site / Operator: ETS / Dennis  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 12 VDC ( power on power supply )  
Test Specification: OATS  
Comment 1: Dist.: 10m, Ant.: HL 223  
Freq:913.427MHz Emax:31.50dBμV/m RBW: 100 kHz



## **Appendix G**

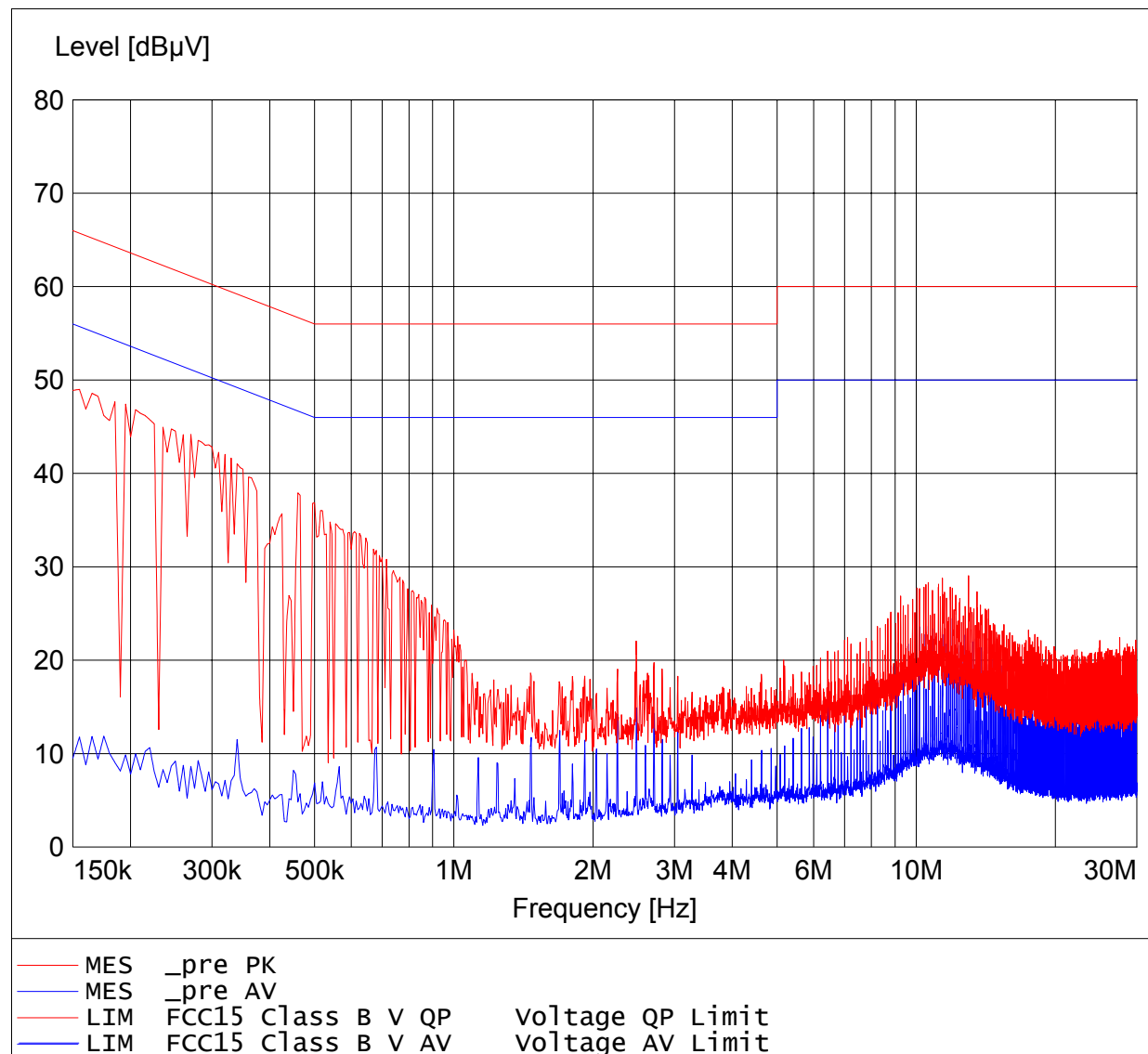
### **Power Line Conducted Emission**

**The measurement diagram are wideband pre-scan results; only for reference.**

# EMI voltage test in the ac-mains according to FCC Part 15

## Class B

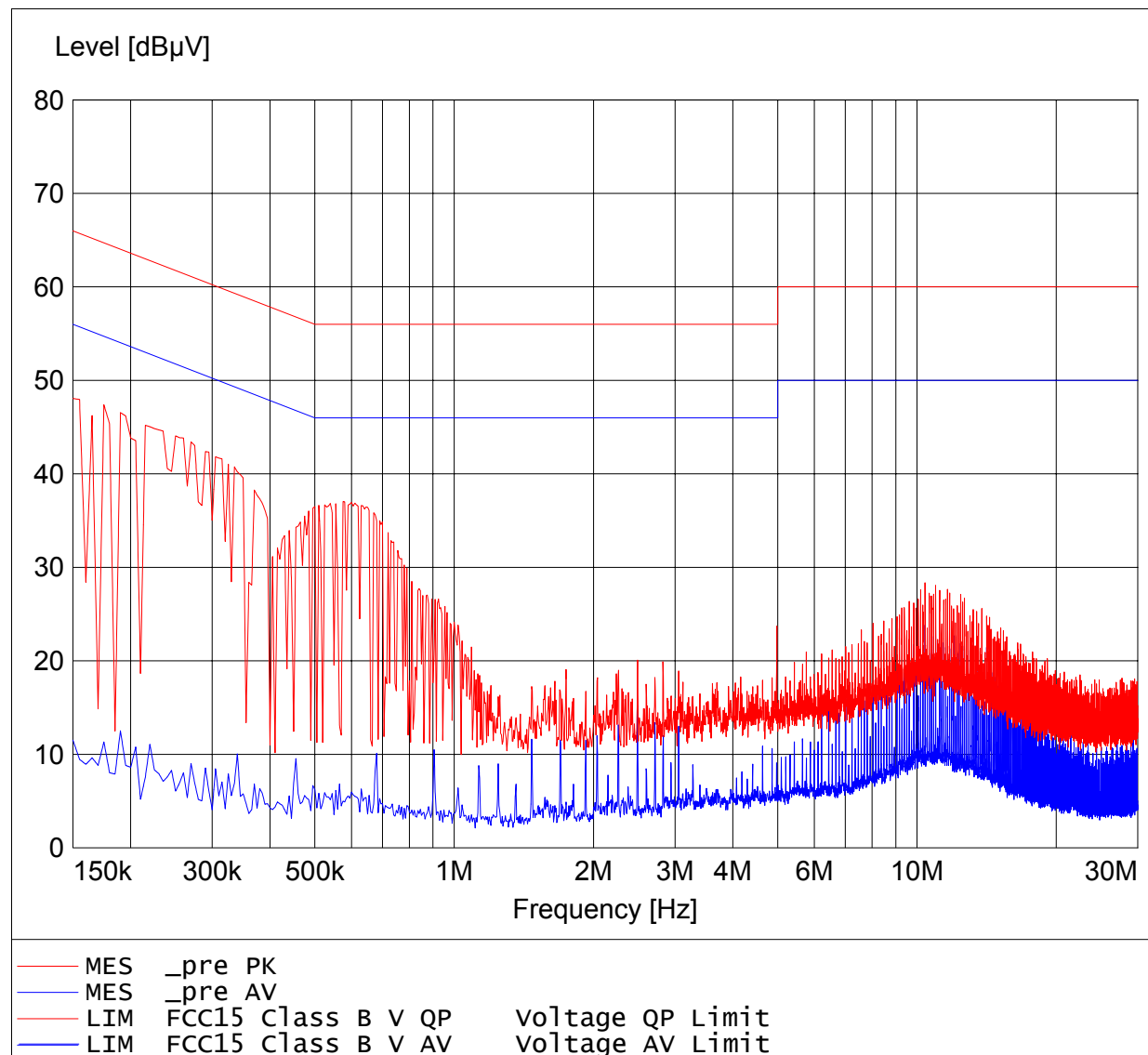
Order Number: W6M20606-7070  
Operating Condition: Unom: 120VDC ( ac /dc adaptor ), Tnom: 23.9°C  
Operator: Dennis  
Test Specification: V-network: ESH3-Z5 N



# EMI voltage test in the ac-mains according to FCC Part 15

## Class B

Order Number: W6M20606-7070  
Operating Condition: Unom: 120 VAC ( ac /dc adaptor ), Tnom: 23.9°C  
Operator: Dennis  
Test Specification: V-network: ESH3-Z5 L1





Registration number: W6M20606-7070-C-2  
FCC ID: S83-AWK-1100A

## **Appendix H**

### Pictures