



Eurofins ETS Product Service (HK) Co., Ltd.

# TEST - REPORT

**FCC RULES 47CFR PART 15 / SUBPART C (Section 15.231)**

**Test report no.: H4M20804-6341-P-15**

**FCC ID: VJT13000**

**Accredited Laboratory by:**



Eurofins ETS Product Service (HK) Co., Ltd.  
26/F., Tamson Plaza, 161 Wai Yip Street  
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## 1. General Information

### 1.1 Notes

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

The tests were carried out and passed in accordance to the standards:

**FCC Rules 47CFR Part 15 Subpart C: Sept 2007 /1/**

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 (only telecommunication products).

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

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

The test results of this test report relate exclusively to the item tested as specified in 1.6.

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

Reproduction or publication of extracts from the report requires the prior written approval of the

Eurofins ETS Product Service (HK) Co., Ltd.

## 1.2 Tester

30.05.2008

Scott Li



Date

Test Engineer

Signature

Technical responsibility for area of testing:

30.05.2008

Schulz



Date

Name

Signature

---

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## 1.3 Testing laboratory

### 1.3.1 Location

Name : Eurofins ETS Product Service (HK) Co., Ltd.  
Street : 26/F., Tamson Plaza, 161 Wai Yip Street  
Town : Kwun Tong, Kowloon  
Country : Hong Kong  
Telephone : +852 2389 2200  
Fax : +852 2389 3073

**Note:** Test environment and test equipment available in accordance to ISO/IEC/EN 17025 requirements. Accreditation certificates for confirmation can be shown on request.

### 1.3.2 Details of accreditation status

#### **A2LA Accredited Testing Laboratory**

Testing Cert# 1983.03

### 1.3.3 Test location, where different (where different as specified in 1.3.1)

Name : Eurofins ETS Product Service GmbH  
Street : Storkower Str. 38C  
Town : D-15526 Reichenwalde b. Berlin  
Country : Germany  
Telephone : +49 33631 888 0  
Fax : +49 33631 888 660

**Note:** Radiated emission tests were carrying out in a 3m Semi-anechoic chamber in accordance to the equivalent standard ANSI 63.4 and under ISO/IEC/EN 17025 requirements. Accreditation certificates for confirmation can be shown on request.

### 1.3.4 Details of accreditation status

#### **DAR Accredited Testing Laboratory**

DAR-Registration number: DAT-P-201/96

#### **A2LA Accredited Testing Laboratory**

Testing Cert# 1983.01

#### **FCC registered measurement facility**

Reg. No. 96970

#### **Conformity Assessment Body (USA)**

B-NetzA-CAB-02/21-103

## 1.4 Details of applicant

Name : Vio Products Company, Inc.  
Street : 4236 SE Home Way, Port Saint Lucie

Town : 34952 Florida  
Country : U.S.A.  
Telephone : +1 772 692 5666  
Fax : +1 772 692 8676

Contact : MR. PHILIP G. SEMPREVIO  
Telephone : +1 772 692 5666

## 1.5 Application details

Date of receipt of application : 21.04.2008  
Date of receipt of test item : 21.04.2008  
Date of test : 21.04.2008 - 30.05.2008

## 1.6 Test item

### 1.6.1 Description of test item

Type of product : WIRELESS DOORBELL

Type identification : 13000

Brand name : VIOPRODUCTS

Details of power supply : Transmitter: 110VAC (16VAC AC/AC adaptor)  
Receiver: DC 4.5V (3 x AA size battery)

Operation frequency : Transmitter = 315 MHz (  $\pm$  500 kHz )  
Receiver = 315 MHz (  $\pm$  500 kHz )

Antenna Type : Integral antenna

Operating mode : Simplex

Duty Cycle : 1% (Declared by Customer)

Photos : Please find in Appendix A.

### 1.6.2 Manufacturer

Name : Zhongshan j-xing Electrical Co., Ltd.  
Street : Block K, Yong An Industrial Park, Yong An Road, Dongfeng  
Town

Town : Zhongshan, Guangdong  
Country : China

Contact : jinlun Hu  
Phone : +86 760 2636 881

### 1.7 Test standards

**FCC RULES 47CFR PART 15 / SUBPART C (Section 15.231), Section §15.35(c) /1/  
Radio Frequency Devices**



## 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 2.4 were ascertained in the course of the tests performed.



### 2.2 Test environment

Temperature:	21 ... 25 °C
Relative humidity content	30 ... 60 %
Air pressure:	860 ... 1030 hPa

## 2.3 Test equipment utilized

No.	Test equipment	Type	Manufacturer
ETS 0001	ESD Gun	SESD 30000	Schlöder
ETS 0002	Test receiver	ESVP	R & S
ETS 0003	Diode Power Sensor	NRV-Z2	R & S
ETS 0004	Spektrum- and Network-Analyzer	FSMS 26	R & S
ETS 0005	RF amplifier matrix	RSU-ETS-CTR6	ETS
ETS 0006	HP-Filter	H1G04G01	Microwave
ETS 0007	Horn antenna	AT 4004	ar
ETS 0008	Antenna	Loop antenna	Siemens
ETS 0009	Comb Generator Emitter	CGE 02	York EMC Services
ETS 0011	Antenna (van Veen/Frame)	HM020Z3	R & S
ETS 0012	Biconical Antenna	HK 116	R & S
ETS 0013	LPD Antenna	HL 223	R & S
ETS 0014	Log Periodical Antenna	HL 025	R & S
ETS 0015	Log Periodical Antenna	HL 025	R & S
ETS 0016	Precision antenna kit	VHAP	Schwarzbeck
ETS 0017	Precision antenna kit	UHAP	Schwarzbeck
ETS 0018	Horn antenna	BBHA 9120 D	Schwarzbeck
ETS 0019	Horn antenna	BBHA 9120 D	Schwarzbeck
ETS 0020	Antenna	DP 21	MEB
ETS 0021	Antenna	DP 3	MEB
ETS 0022	Antenna	SAS-200/ 521	A.H. Systeme+D65
ETS 0023	Antenna	DP 1	MEB
ETS 0024	Antenna mast	AF 2	MEB
ETS 0025	Antenna mast	AF 2	MEB
ETS 0026	Tripod		Heinrich Deisel
ETS 0027	Tripod		Heinrich Deisel
ETS 0028	Tripod	STA 2	C. Lorenz AG
ETS 0029	Tripod		Berlebach
ETS 0030	Biconical Antenna	HK 116	R & S
ETS 0031	Turn table	DS 412	Heinrich Deisel
ETS 0032	Controller	HD 050	Heinrich Deisel
ETS 0033	Calibr. Set CDN	3x Adaptor 50-150 Ohm	ETS
ETS 0034	RF Generator/ Amplifier	SMLR	R & S
ETS 0035	RF Generator/ Amplifier	SMLM	R & S
ETS 0036	Zirc. Antenna	3102	EMCO
ETS 0037	Zirc. Antenna	3102L	EMCO
ETS 0038	RF amplifier	150L	Amplifier Research
ETS 0039	Absorbing clamp	MDS 21	R & S
ETS 0040	Artificial Mains Network	ESH3-Z5	R & S
ETS 0041	T-Artificial Mains Network	ESH3-Z4	R & S
ETS 0042	Artificial Mains	ESH3-Z6	R & S
ETS 0043	Directional Coupler	1850	KRYTAR
ETS 0044	Vehicle LISN	NNBM 8125	Schwarzbeck
ETS 0045	Vehicle LISN	NNBM 8126D	Schwarzbeck
ETS 0046	Power supply	2224.7	Statron
ETS 0047	Power supply	2224.7	Statron
ETS 0048	Power supply	2224.7	Statron
ETS 0049	Power supply	2228.1	Statron
ETS 0050	Power supply	2224.2	Statron
ETS 0051	EMI Test Receiver	ESCS 30	R & S
ETS 0052	Spectrum Analyzer	FSEK 30	R & S
ETS 0053	Anechoic chamber	AC 4	Frankonia

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## 2.4 Test procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 5.2 using a 50 $\mu$ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was ANSI STANDARD C63.4-2003 6.4 using a spectrum analyzer. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was the 100 kHz and the video bandwidth was 300 kHz.

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

Example:

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

**ANSI STANDARD C63.4-2003 6.2.1 MEASUREMENT PROCEDURES:** The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table). The UUT was placed in the center of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10<sup>th</sup> harmonic of the fundamental.

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

Measurements were made by Eurofins ETS Product Service GmbH at the registered open field test site located at Storkower Str. 38c, 15526 Reichenwalde, Germany.

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.

## 2.5 Test results

Test case	FCC Rules 47CFR PART15	Verdict
<b>Transmitter Parameter</b>		
Field strength of the Fundamental Wave	15.231	P
Correction for Pulse Operation	15.35(c)	P
Radiated spurious emission	15.231, 15.209	P
Emission bandwidth	15.231(c)	P
Automatically deactivation	15.231(a)	P
Conducted emission	15.207	P
<b>Receiver Parameter</b>		
Radiated spurious emission	15.109	P

### 3 Transmitter parameter

#### 3.1 Field Strength of the Fundamental Wave

##### Test results

Test conditions	Polarization	Frequency [MHz]	Measured result [dB $\mu$ V/m]	Passed
T <sub>nom</sub> = 24 °C V <sub>nom</sub> = 16V AC	Horizontal	315.122	81.68	<input checked="" type="checkbox"/>
	Vertical	315.126	82.33	<input checked="" type="checkbox"/>
Measurement uncertainty	< 3 dB			

Limit 15.231(b)

Fundamental Frequency [MHz]	Field strength of fundamental limit [ $\mu$ V/m]
40,66 – 40,70	2.250
70 - 130	1.250
130 - 174	1.250 to 3.750**
174 - 260	3.750
260 - 470	3.750 to 12.000**
Above 470	12.000

Limit 15.231(e)

Fundamental Frequency [MHz]	Field strength of fundamental, limit [ $\mu$ V/m]
40,66 – 40,70	1,000
70 - 130	500
130 - 174	500 to 1.500**
174 - 260	1.500
260 - 470	1.500 to 5.000**
Above 470	5.000

\*\* Linear interpolation

**Remark:** The limit is met. For the diagram see appendix B.

## 3.2 Radiated Spurious Emissions

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

The limits on the field strength of the spurious emission in the table § 15.231(b) are based on the fundamental frequency of the intentional radiator. Spurious emission shall be attenuated to the average (or alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in § 15.209, whichever limit permits a higher field strength.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

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

### Calculation of test results:

**Such factors like antenna correction, cable loss, Pre Amplifier are already included in the provided measurement results.**

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

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

### Test results

Summary table with critical radiated data of the test plots

Freq. range	Frequency Marker [MHz]	Polarization	Max. Field Strength [dBµV/m]	Detector	Passed
1	197.615	Horizontal	33.42	Peak	☒
1	197.615	Vertical	33.76	Peak	☒
2	629.659	Horizontal	68.47	Peak	☒
2	629.659	Vertical	70.35	Peak	☒
3	1571	Horizontal	59.95	Peak	☒
3	1571	Vertical	65.60	Peak	☒

Freq. – Frequency Range:

1: 30 – 200 MHz  
 2: 200 – 1000 MHz  
 3: 1000 – 4000 MHz

**Remark: The limit is met. The measurement was performed up to the 10<sup>th</sup> harmonic.  
 For the diagram see appendix C.**

## Limits: Out of Band Radiated Emissions

FCC Rule: 15.231(b) , 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 permitted average Limits = Max. Reading - 20 dB

82.33 dB $\mu$ V/m - 20 dB = 62.33 dB $\mu$ V/m

For frequencies above 1GHz (Peak measurements).

Correction factor conform 15.35 (c) (Average measurements).

Duty cycle correction:

Max. Reading - duty cycle correction:

No duty cycle correction was added to the reading

Limits:

82.33 dB $\mu$ V/m

## Limits: Radiated Emissions in restricted Bands

FCC Rules: 15.231 (b), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 4000 MHz.

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

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements)

Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (Average measurements)

## Limits for restricted Bands

Frequency of Emission [MHz]	Field strength [microvolts/meter]	Field Strength [dB microvolt/meter]
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

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### 3.3 Emission Bandwidth

#### Limit

The bandwidth of the emission shall be no wider than 0,25% of the centre frequency for devices operating above 70 MHz and below 900MHz. For devices operating above 900 MHz, the emission shall be no wider than 0,5% of the centre frequency. Bandwidth is determined at the points 20dB down from the modulated carrier.

#### Test result

Measurement of Necessary Bandwidth (BN)

Used Frequency	Measured Bandwidth	Limit	Passed
315 MHz	126.252 kHz	787.5 kHz	<input checked="" type="checkbox"/>
Measurement uncertainty	<10Hz		

**Remark:** The limit is met. For the diagram see appendix D.



### 3.4 Automatically Deactivation

#### Limit

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

#### Test result

Measured Result (ON time) [seconds]	Limit [seconds]	Passed
2.789579	5	<input checked="" type="checkbox"/>

**Remark:** The limit is met. The duration of the transmission is 2.789579 seconds each time the button is pushed which meets the requirement of ceasing transmission within 5 seconds of the button being released. For the diagram see appendix E.

### 3.5 Conducted Emissions

FCC Rules: 15.207

Radiated emission measurements were performed from 150 kHz to 30 MHz.

#### Test results

Test Condition (Normal operating, Input L & N)

Performed under a 110VAC (16VAC AC/AC adaptor)

Frequency	Limit [dB $\mu$ V]		Number of rechecks	Passed
	Quasi-peak	Average		
150 kHz – 500 kHz	66 to 56*	56 – 46*	0	<input checked="" type="checkbox"/>
500 kHz – 5 MHz	56	46	0	<input checked="" type="checkbox"/>
150 kHz – 30 MHz	60	50	0	<input checked="" type="checkbox"/>

\* Decreases with logarithm of the frequency

**Remark:** The limit is met. For the diagram see appendix F.

## 4 Receiver parameter

### 4.1 Radiated Emissions

FCC Rules: 15.109

Radiated emission measurements were performed from 30 MHz to 4000 MHz.

The compliance of the EUT Receiver with the Limits of spurious emissions was performed according to the radiated measurement method. The spectrum analyzer RBW was set to 100 kHz for measurements below 100 kHz and 1.0 MHz above 1.0 GHz.

#### Limits

Frequency of emission [MHz]	Field Strength [ $\mu\text{V} / \text{m}$ ]	Field Strength [dB $\mu\text{V} / \text{m}$ ]
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

#### Test results

Summary table with critical radiated data of the test plots

Freq. range	Frequency Marker [MHz]	Polarization	Max. Field Strength [dB $\mu\text{V}/\text{m}$ ]	Detector	Passed
1	196.934	Horizontal	27.50	Peak	☒
1	71.222	Vertical	27.85	Peak	☒
2	958.317	Horizontal	37.75	Peak	☒
2	315.431	Vertical	36.59	Peak	☒
3	4000	Horizontal	36.70	Peak	☒
3	3964	Vertical	36.58	Peak	☒

Freq. – Frequency Range:

1: 30 – 200 MHz  
2: 200 – 1000 MHz  
3: 1000 – 4000 MHz

**Remark:** The limit is met. The measurement was performed up to the 10<sup>th</sup> harmonic.  
For the diagram see appendix G.

## 5 Normative references

- /1/ FCC Rules 47 CFR PART 15: 2007  
Radio Frequency Devices
- /2/ CISPR 22:2005  
Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
- /3/ ANSI C63.4-2003  
Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

## **Appendix**

- A Pictures
- B Field Strength of the Fundamental Wave
- C Radiated Spurious Emissions
- D Emission Bandwidth
- E Automatically Deactivation
- F Conducted Emissions
- G Radiated Emissions

## **Appendix A**

Pictures

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## **Appendix B**

### Field Strength of the Fundamental Wave

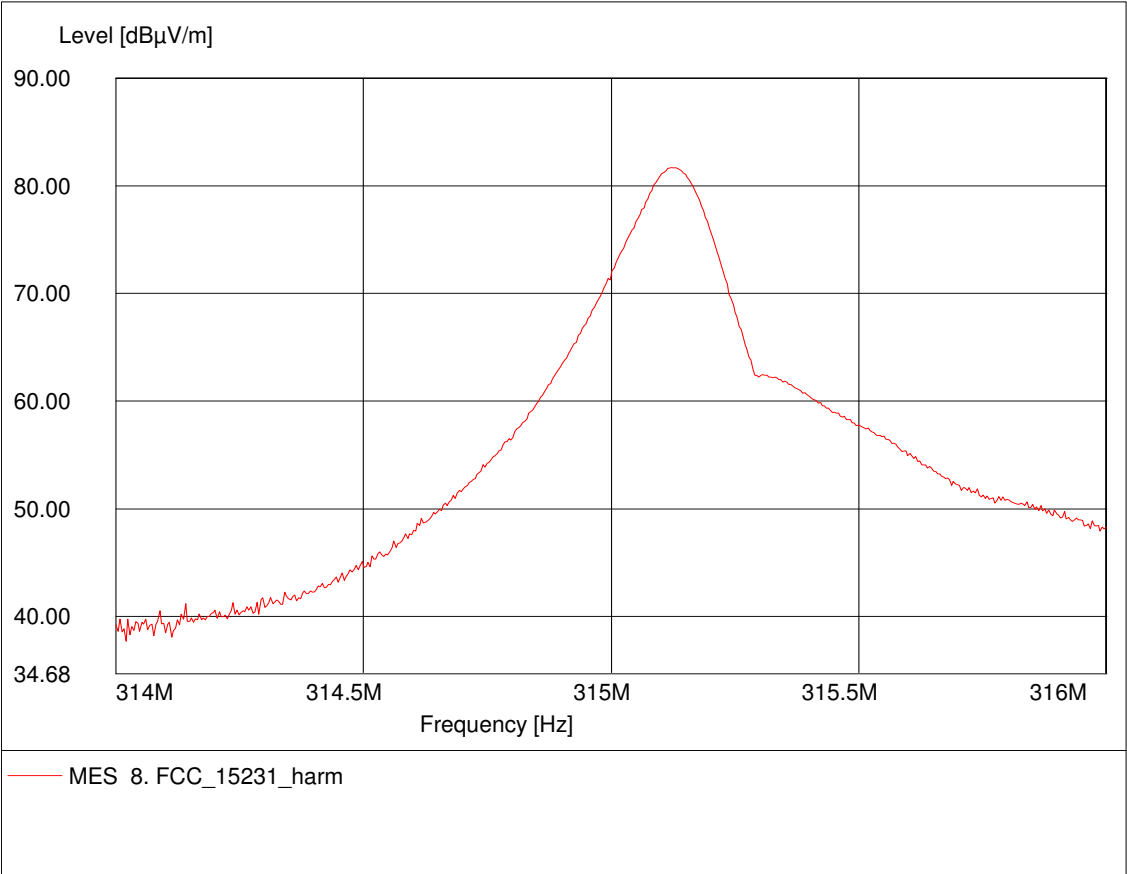
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Field Strength of Fundamental

FCC RULES PART 15, SUBPART C

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HL223  
Freq: 315.122MHz, Emax: 81.68dBµV/m, RBW: 100kHz



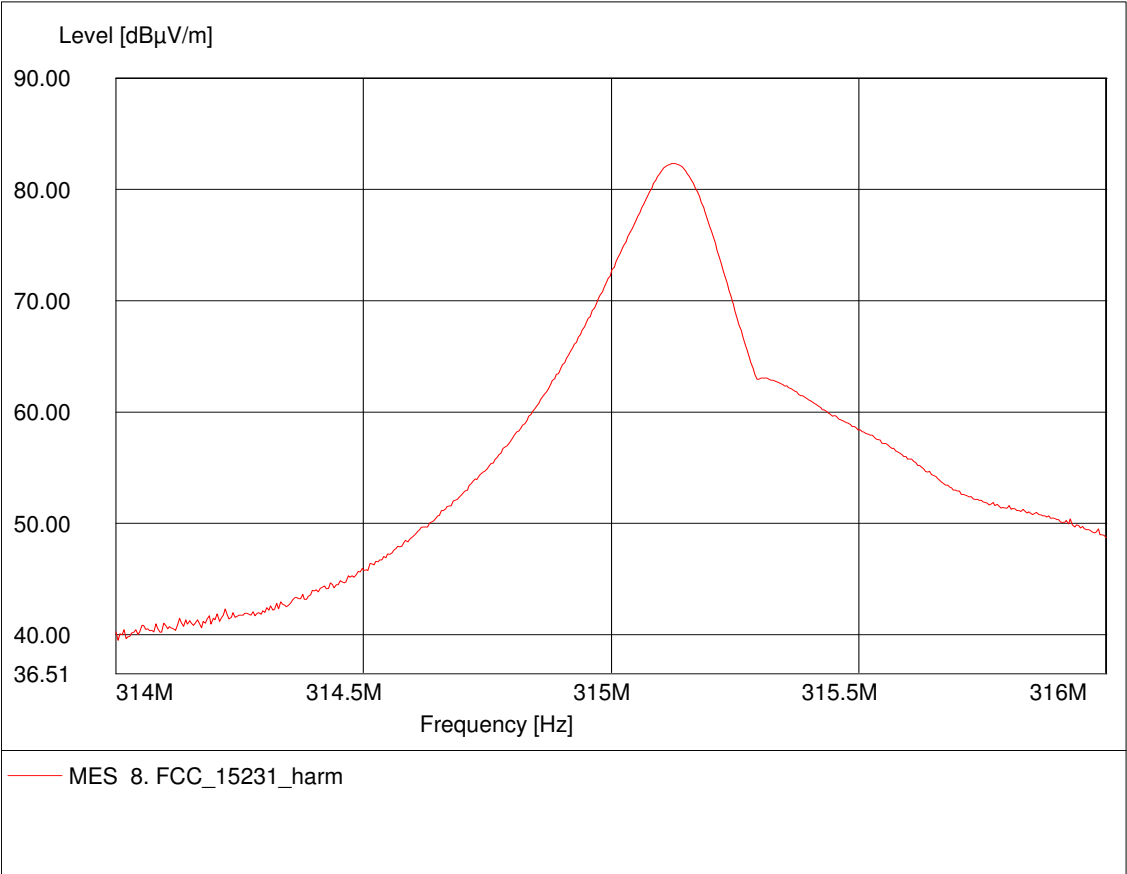
Antenna horizontal



Field Strength of Fundamental

FCC RULES PART 15, SUBPART C

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HL223  
Freq: 315.126MHz, Emax: 82.33dBµV/m, RBW: 100kHz



Antenna vertical

## **Appendix C**

### Radiated Spurious Emissions

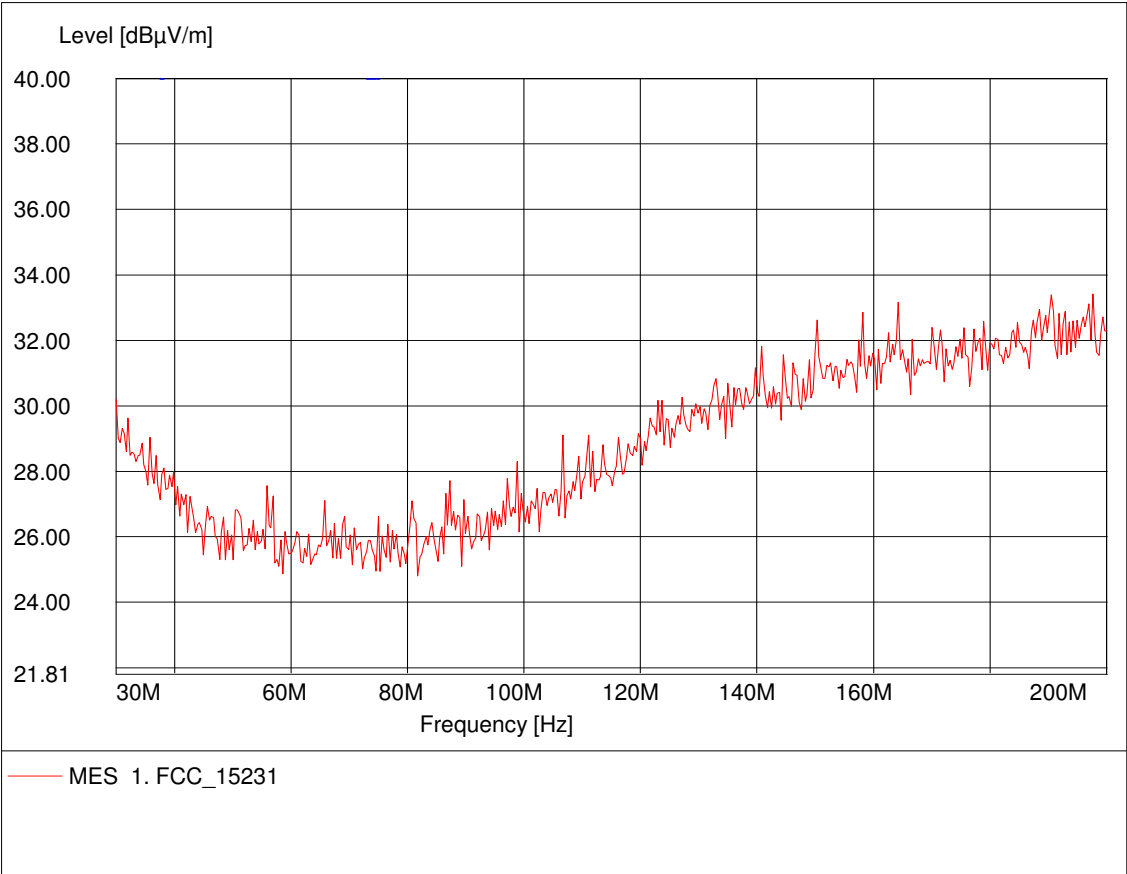
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Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 197.615MHz, Emax: 33.42dBµV/m, RBW: 100kHz

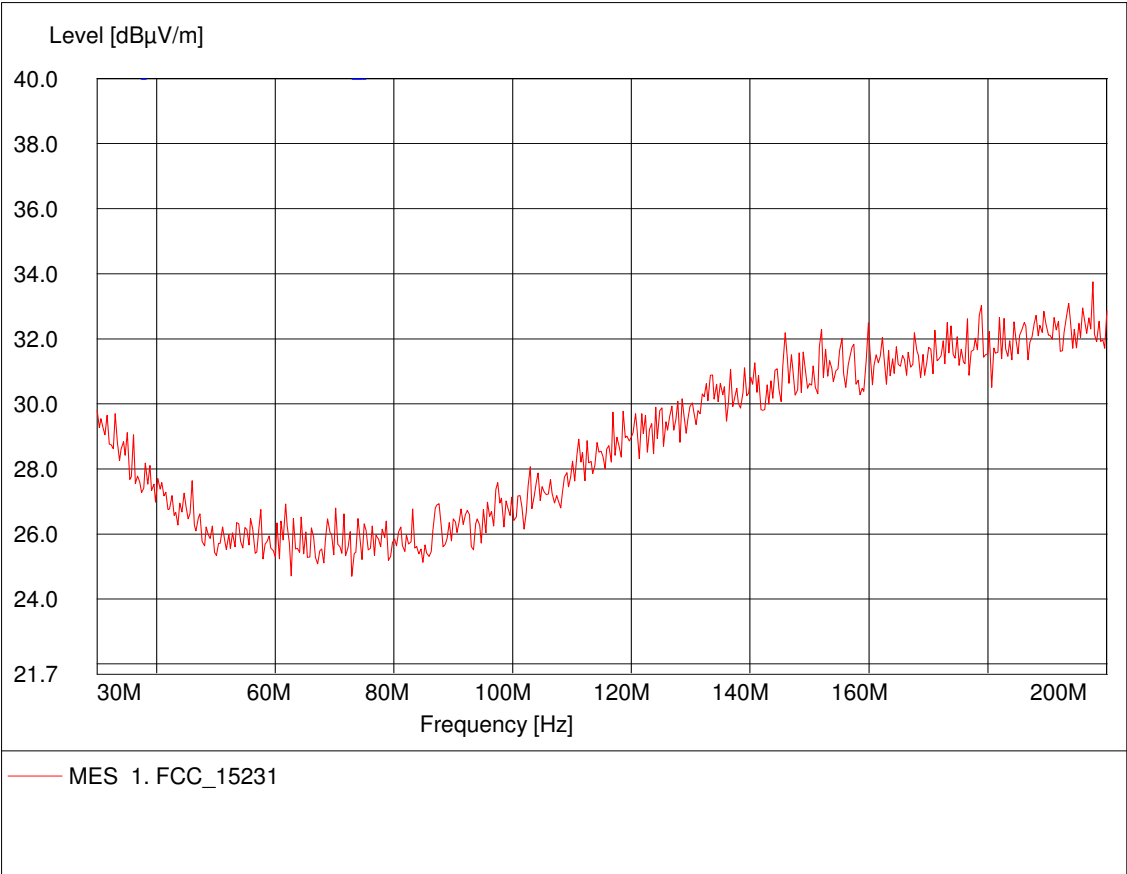


Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq: 197.615MHz, Emax: 33.76dBµV/m, RBW: 100kHz

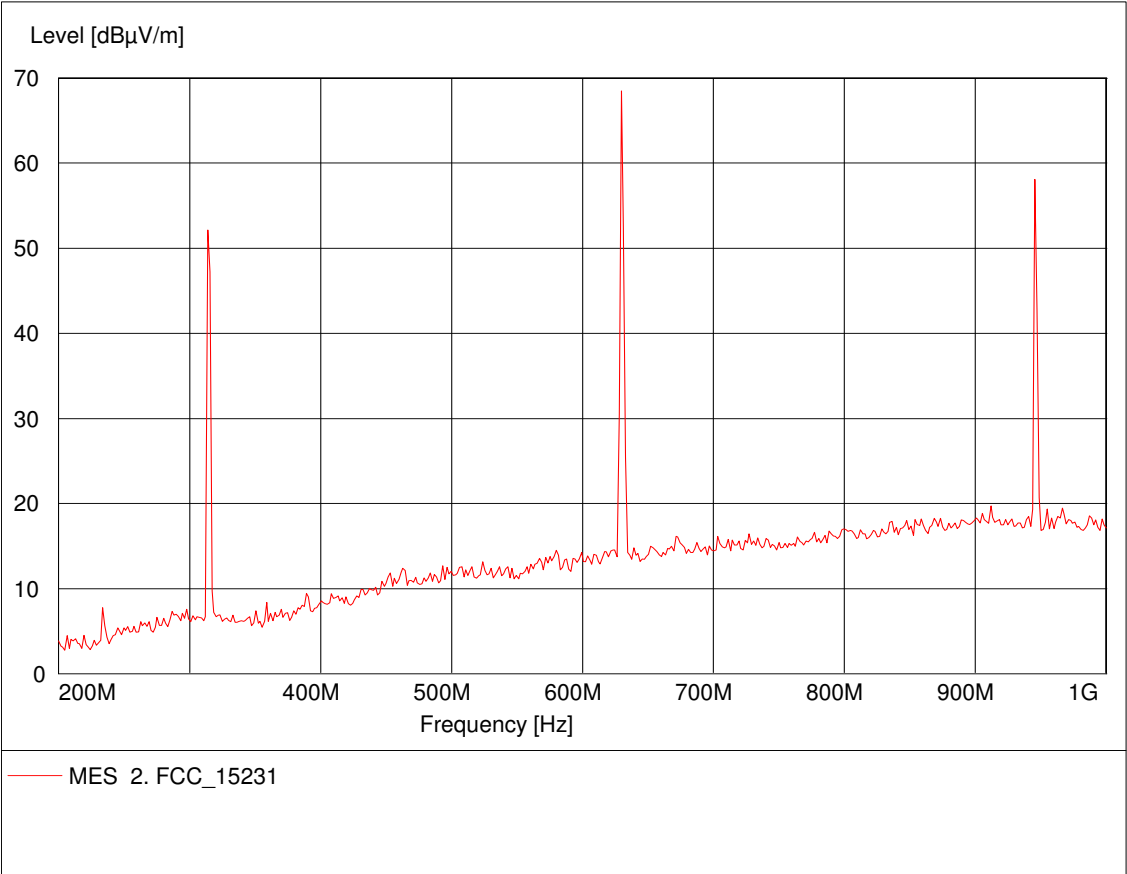


Antenna vertical

**Spurious emissions Field Strength**

**FCC RULES PART 15, SUBPART C**

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Freq: 629.659MHz, Emax: 68.47dBµV/m, RBW: 100kHz

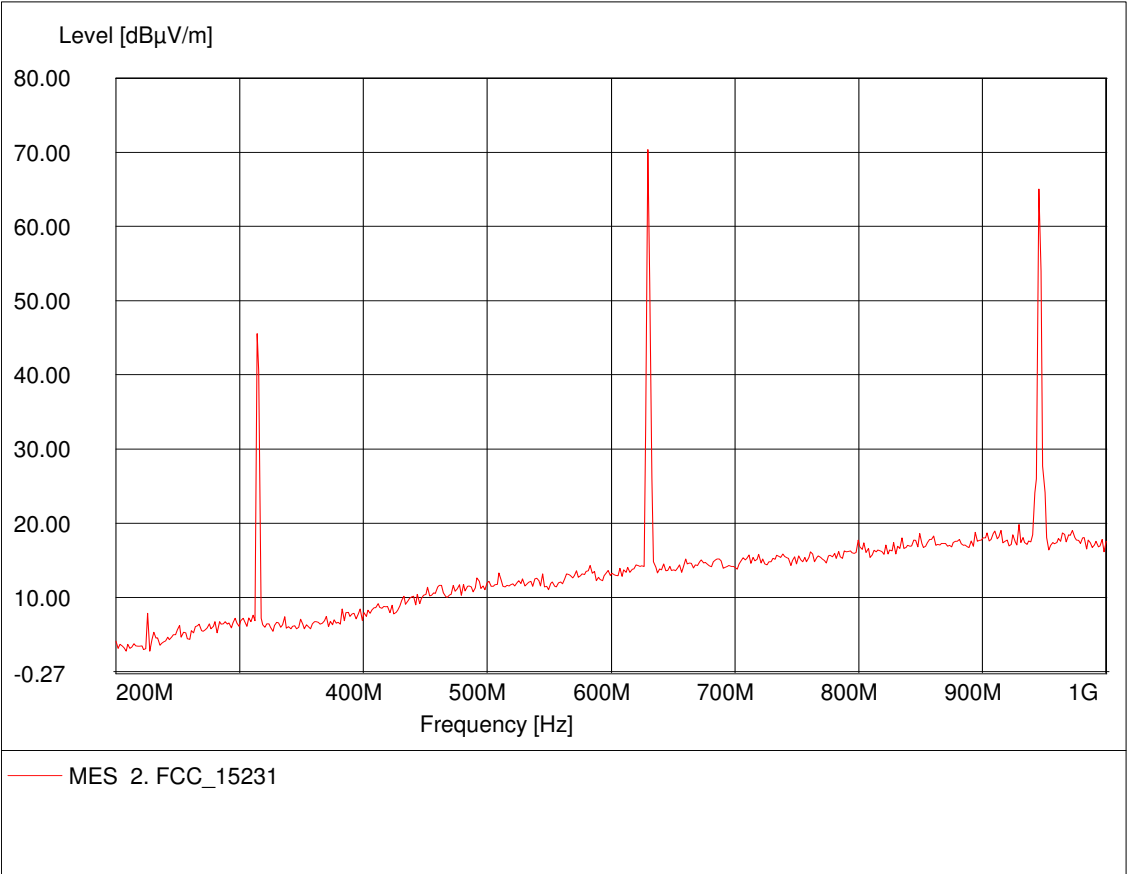


Antenna horizontal

**Spurious emissions Field Strength**

**FCC RULES PART 15, SUBPART C**

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section15.231  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Freq: 629.659MHz, Emax: 70.35dBµV/m, RBW: 100kHz

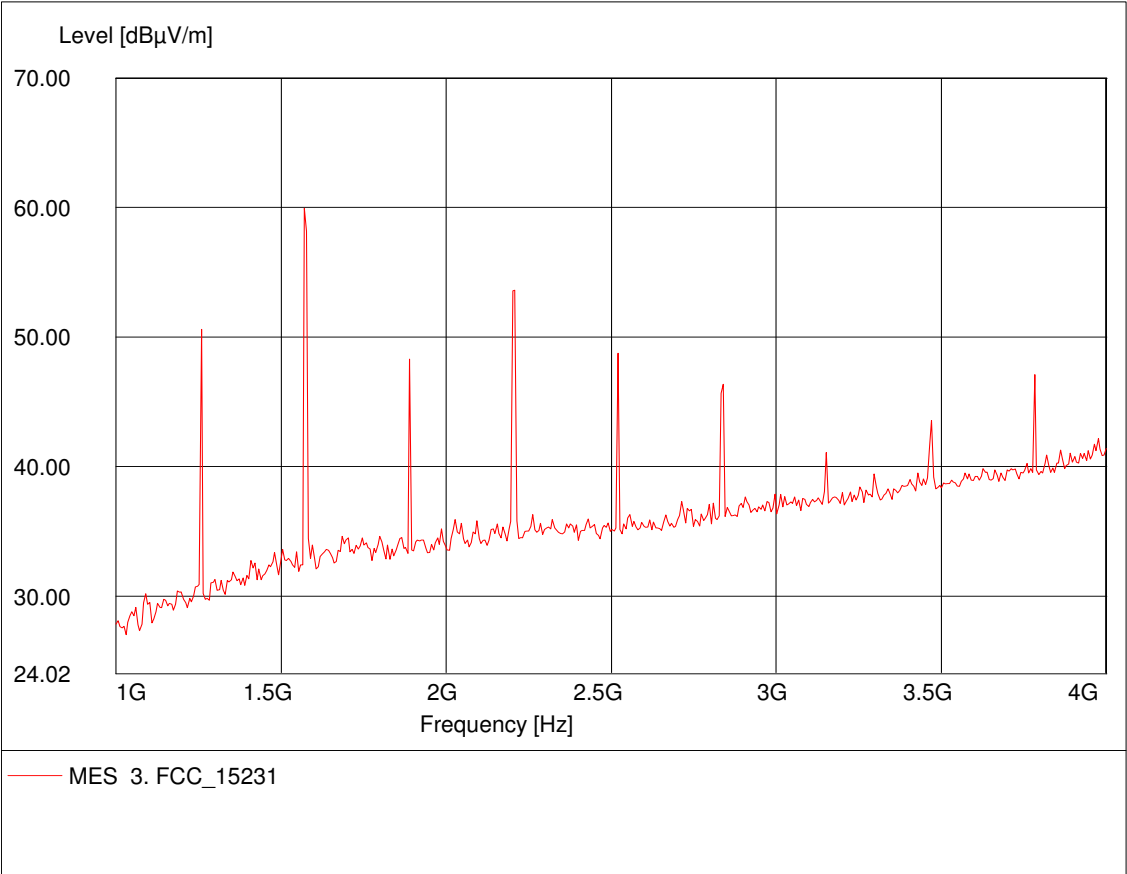


Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section 15.231, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 1.571GHz, Emax: 59.95dBµV/m, RBW: 1MHz

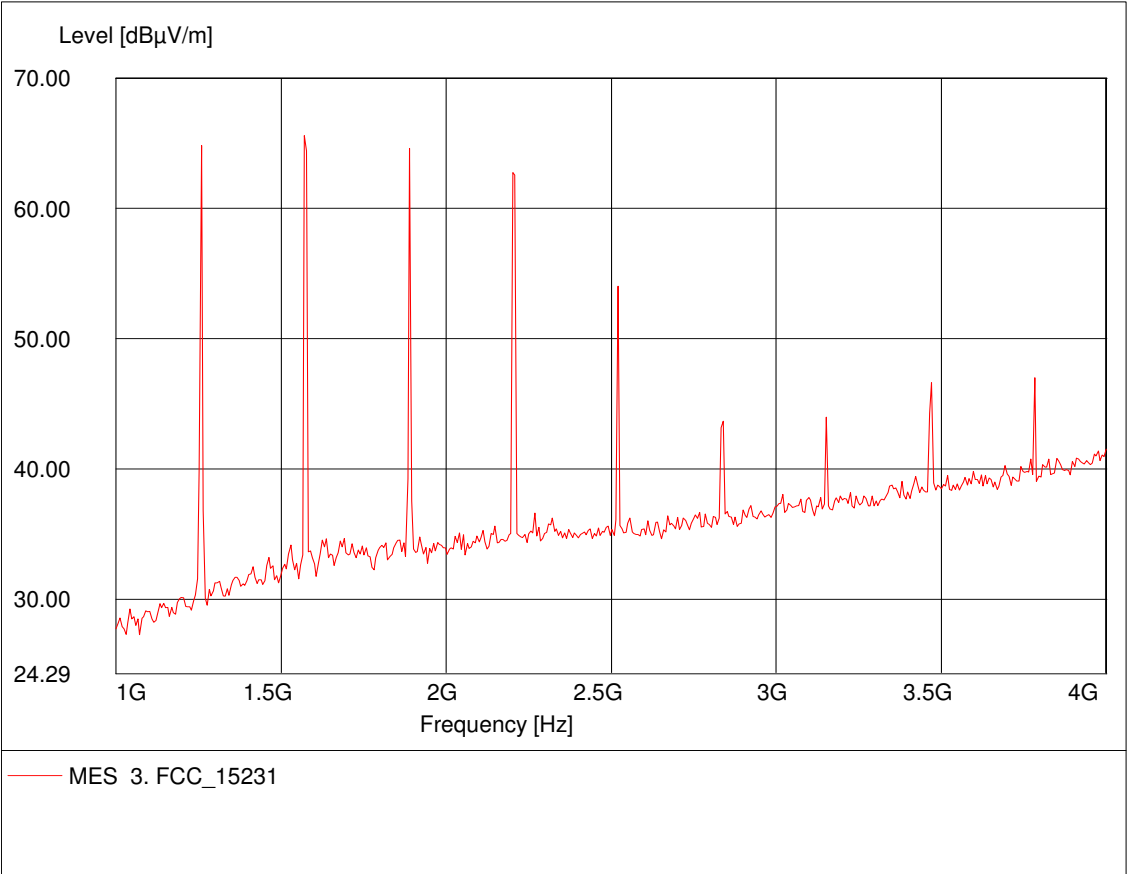


Antenna horizontal

**Spurious emissions Field Strength**

**FCC RULES PART 15, SUBPART C**

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 110VAC (16VAC AC/AC adaptor)  
Test Specification: according to Section 15.231, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 1.571GHz, Emax: 65.60dBμV/m, RBW: 1MHz

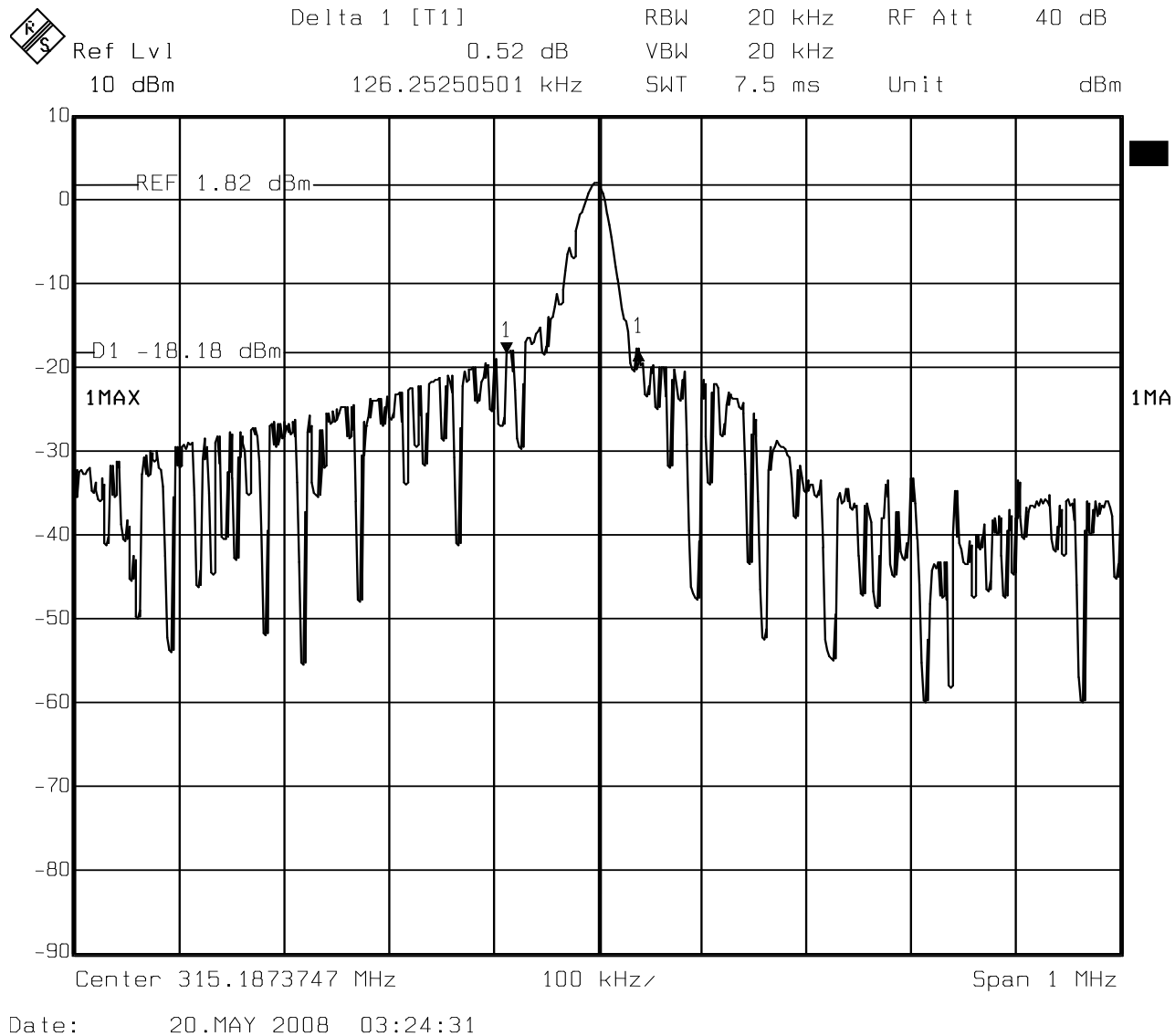


Antenna vertical



## **Appendix D**

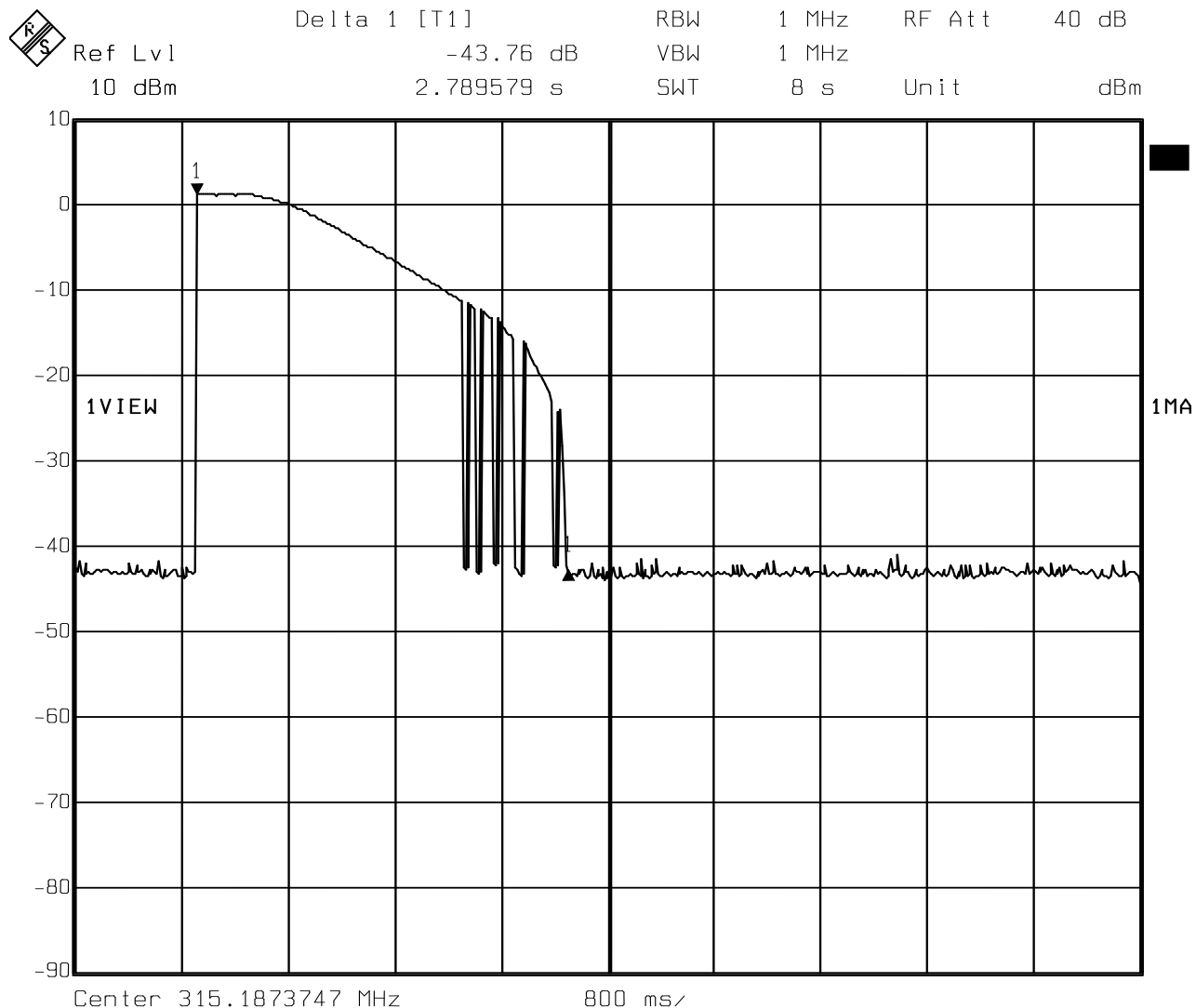
Emission Bandwidth



Test Report No.: H4M20804-6341-P-15

## **Appendix E**

Automatically Deactivation



Date: 20.MAY 2008 03:29:44

Test Report No.: H4M20804-6341-P-15

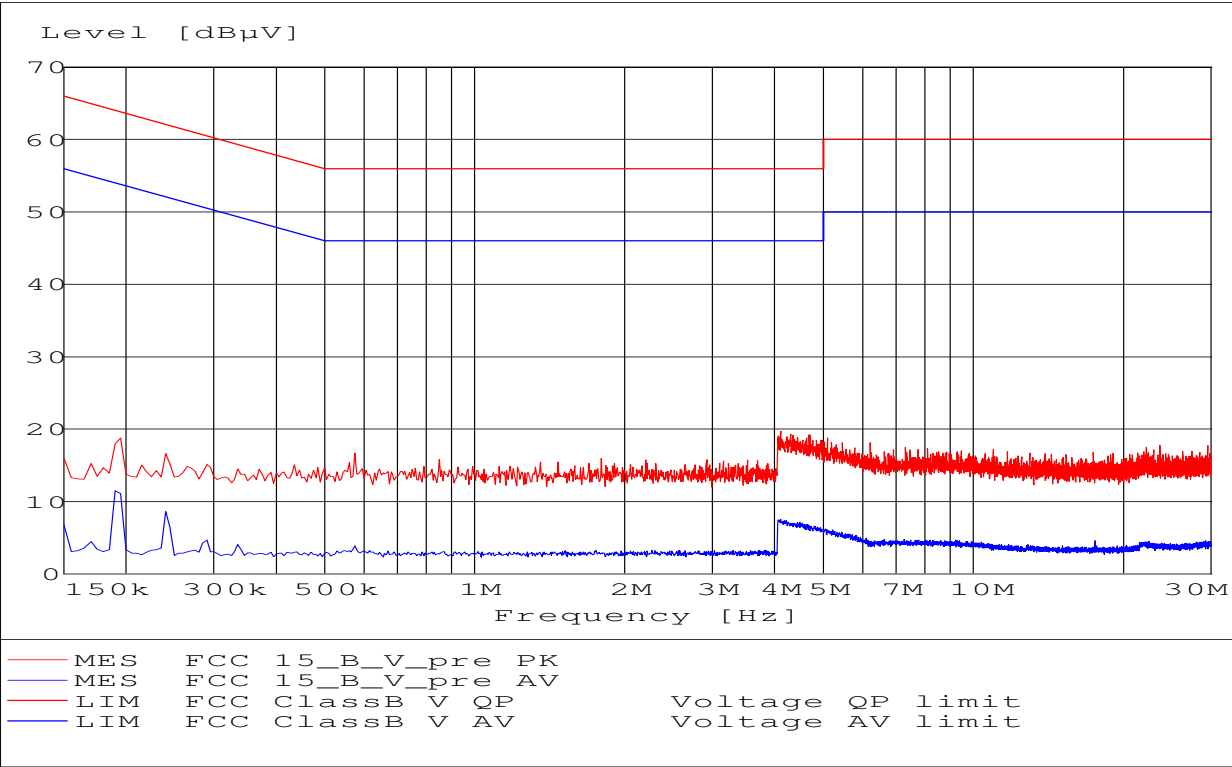
## **Appendix F**

### Conducted Emissions

Voltage mains

according to FCC Part 15

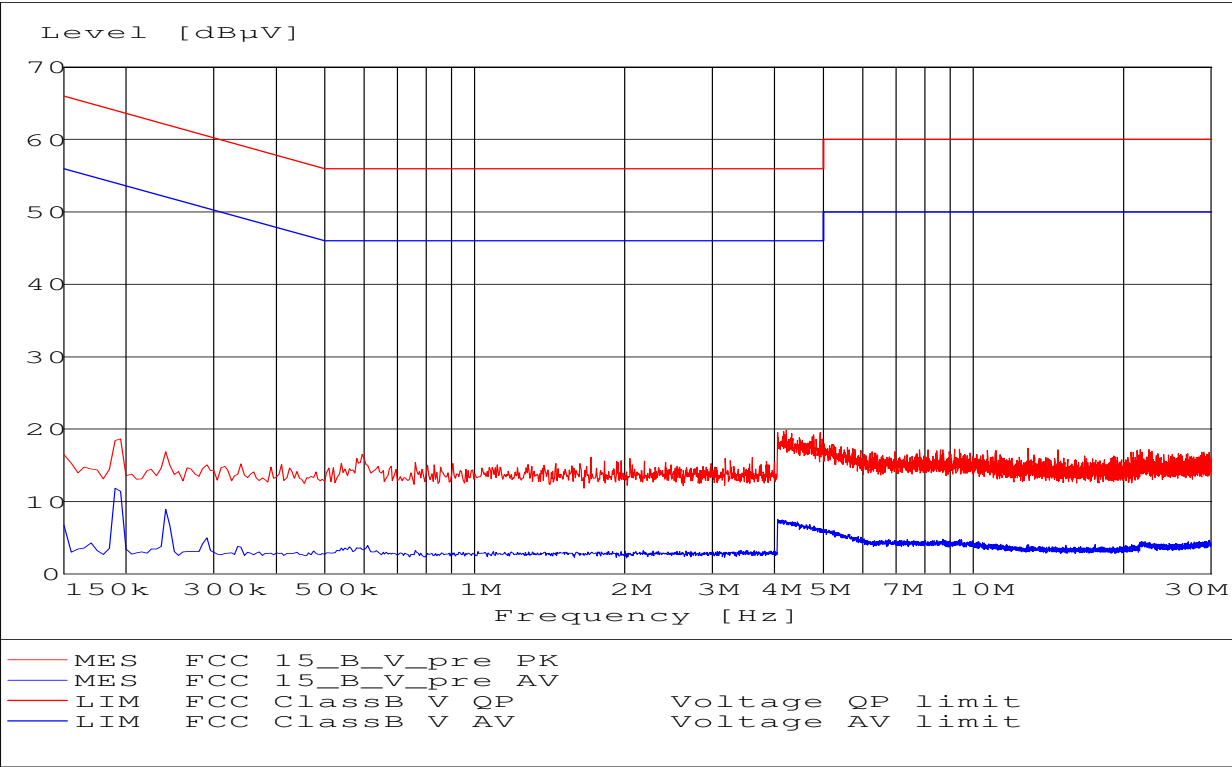
Test Report No.: H4M20804-6341  
Operating Condition: 22°C / 110VAC (16VAC AC/AC adaptor)  
Test Site: ETSPS  
Operator: Mr. Michael  
Test Specification: FCC Part 15.107  
Comment: ESHS 10 / ESH3-Z5 (L)  
Mode: Normal Operating



Voltage mains

according to FCC Part 15

Test Report No.: H4M20804-6341  
Operating Condition: 22°C / 110VAC (16VAC AC/AC adaptor)  
Test Site: ETSPS  
Operator: Mr. Michael  
Test Specification: FCC Part 15.107  
Comment: ESHS 10 / ESH3-Z5 (N)  
Mode: Normal Operating



## **Appendix G**

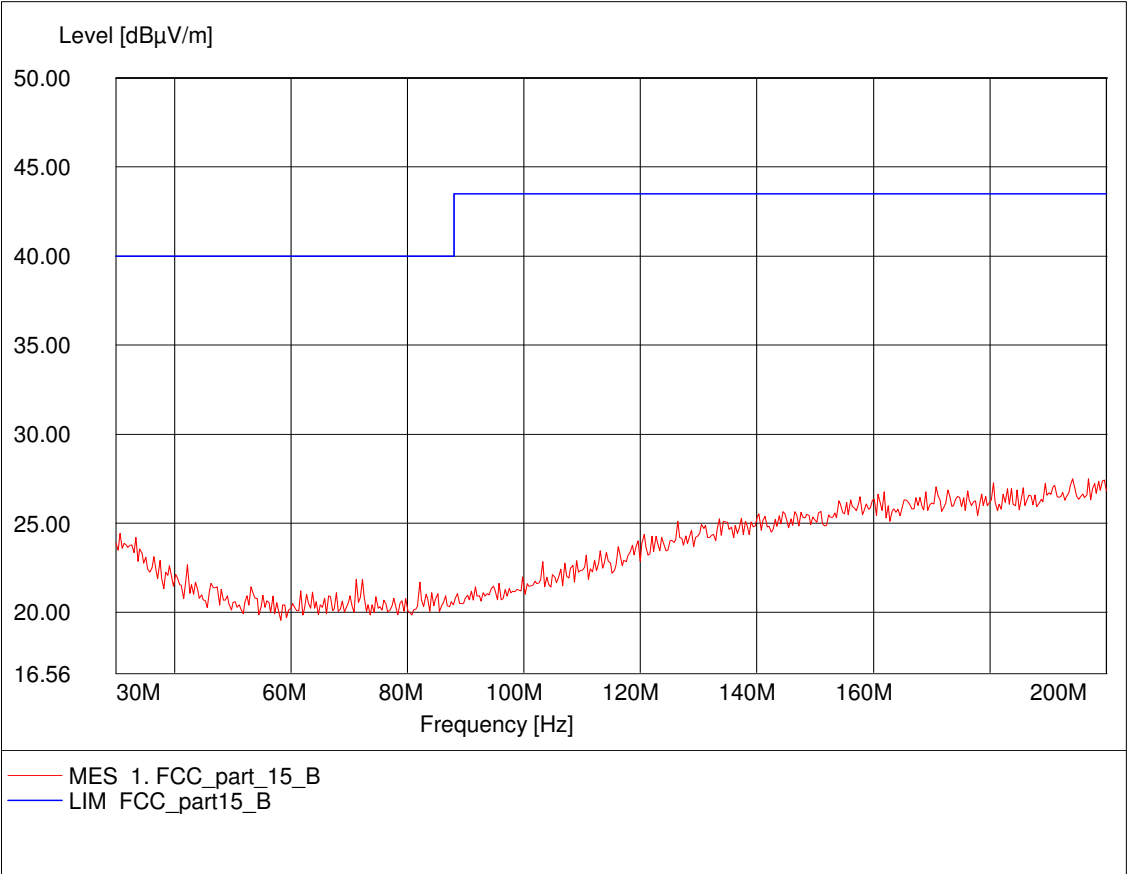
### Radiated Emissions



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:196.934MHz Emax:27.50dBµV/m RBW: 100 kHz

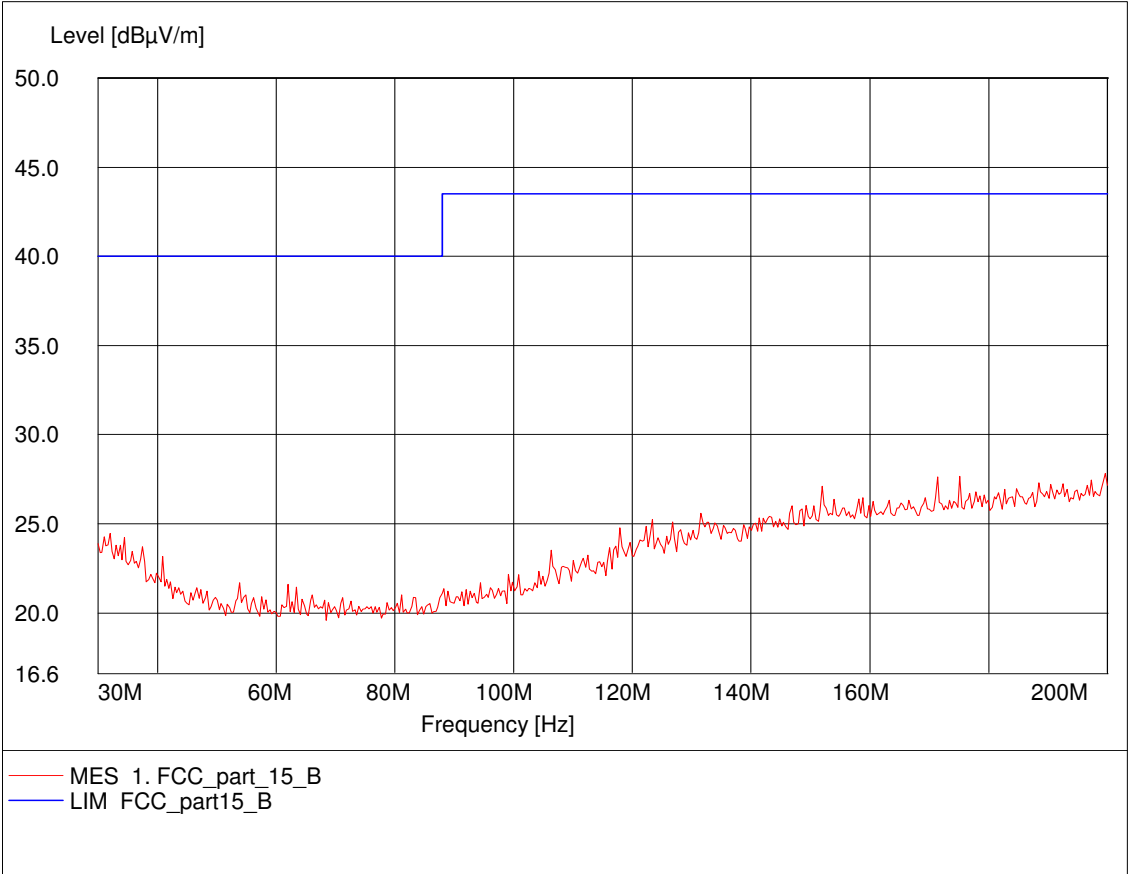


Antenna horizontal

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:71.222MHz Emax:27.85dBµV/m RBW: 100 kHz

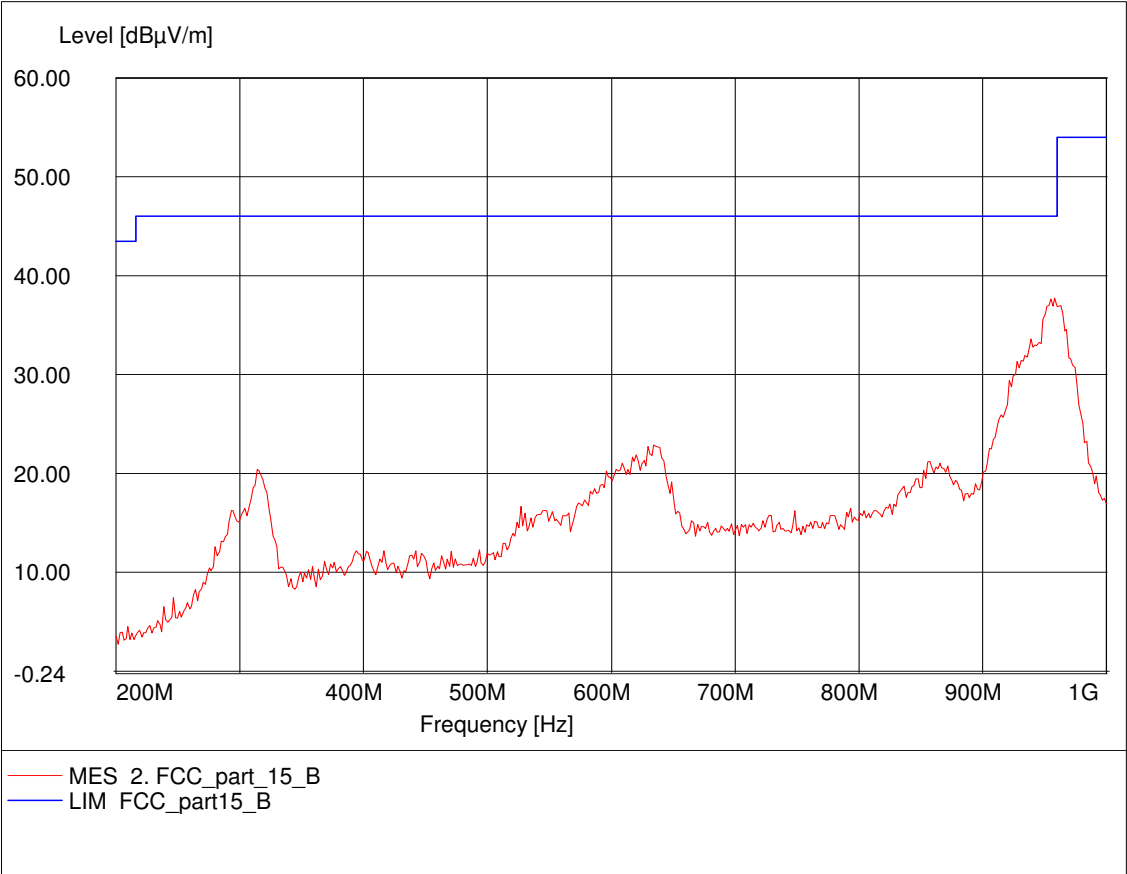


Antenna vertical

**Field Strength under normal conditions**

**FCC RULES PART 15, SUBPART B**

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:958.317MHz Emax:37.75dBµV/m RBW: 100 kHz

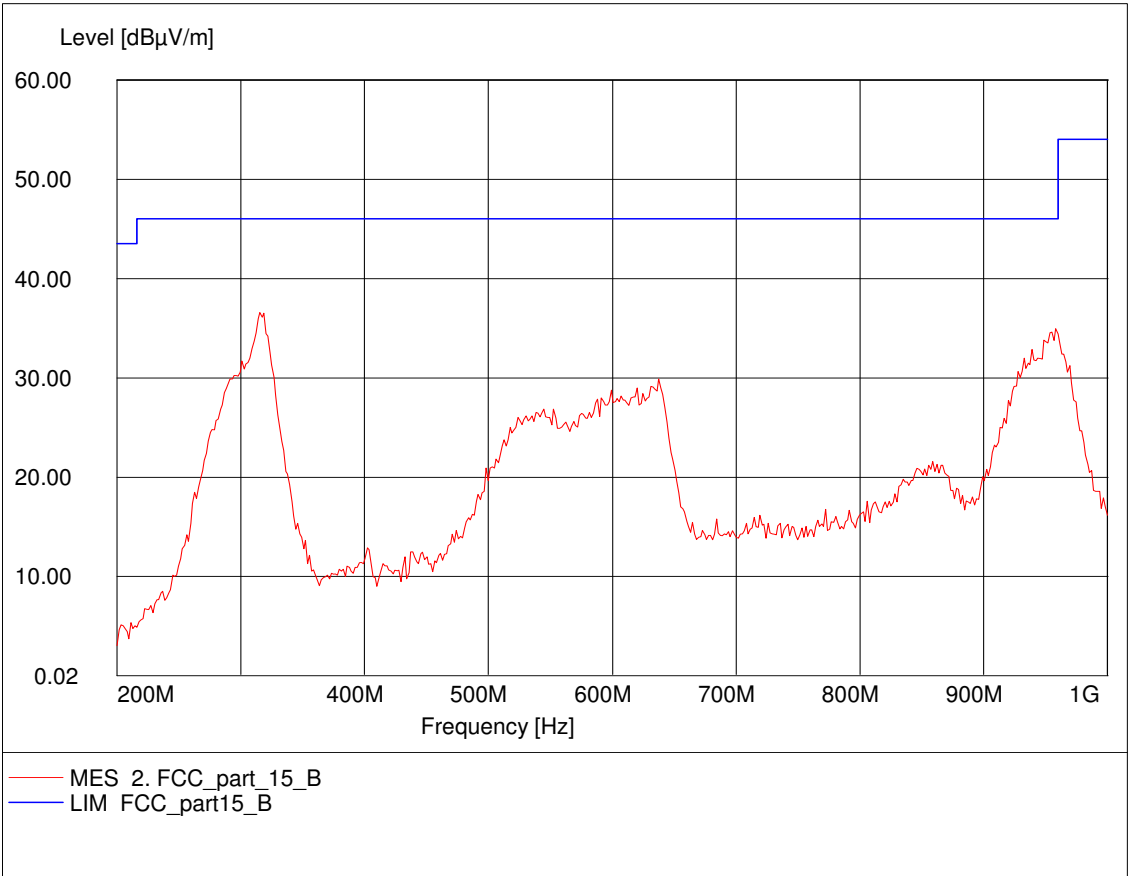


Antenna horizontal

**Field Strength under normal conditions**

**FCC RULES PART 15, SUBPART B**

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.  
Freq:315.431MHz Emax:36.59dBµV/m RBW: 100 kHz

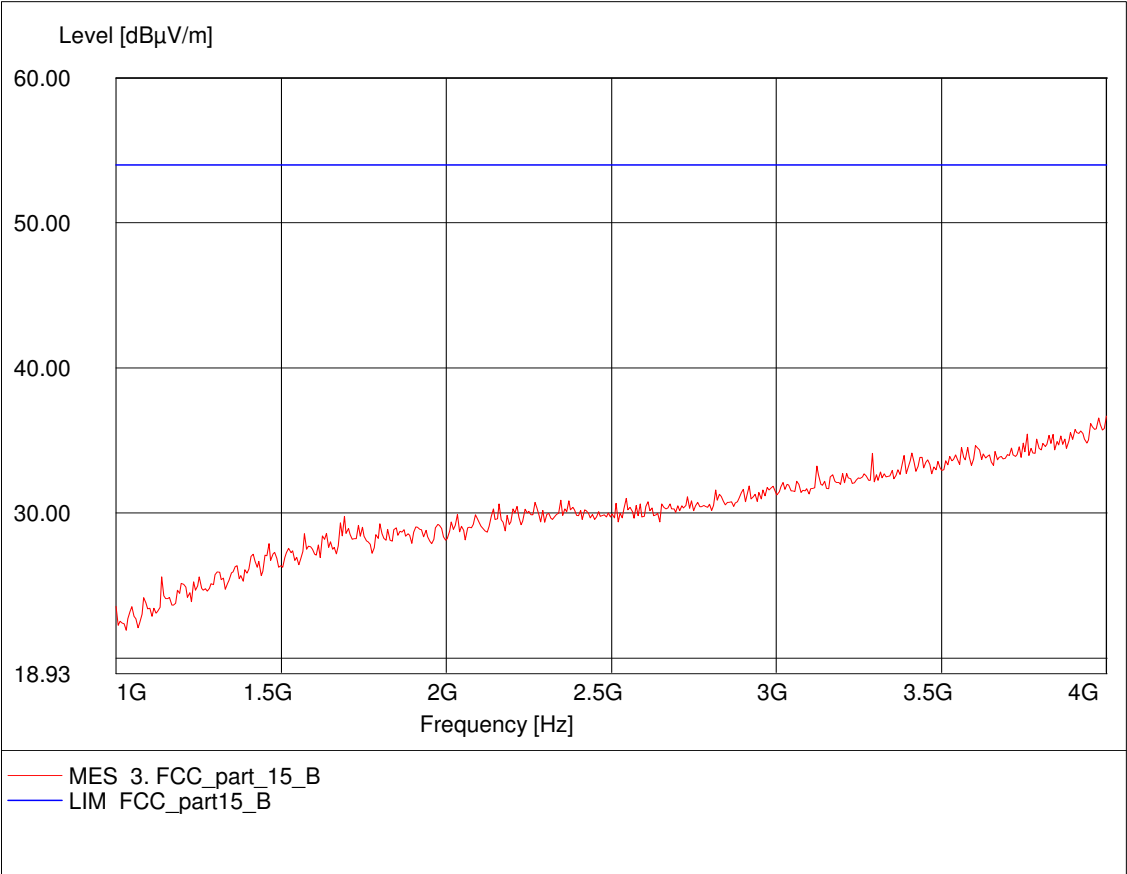


Antenna vertical

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:4.000GHz Emax:36.70dBμV/m RBW: 1 MHz

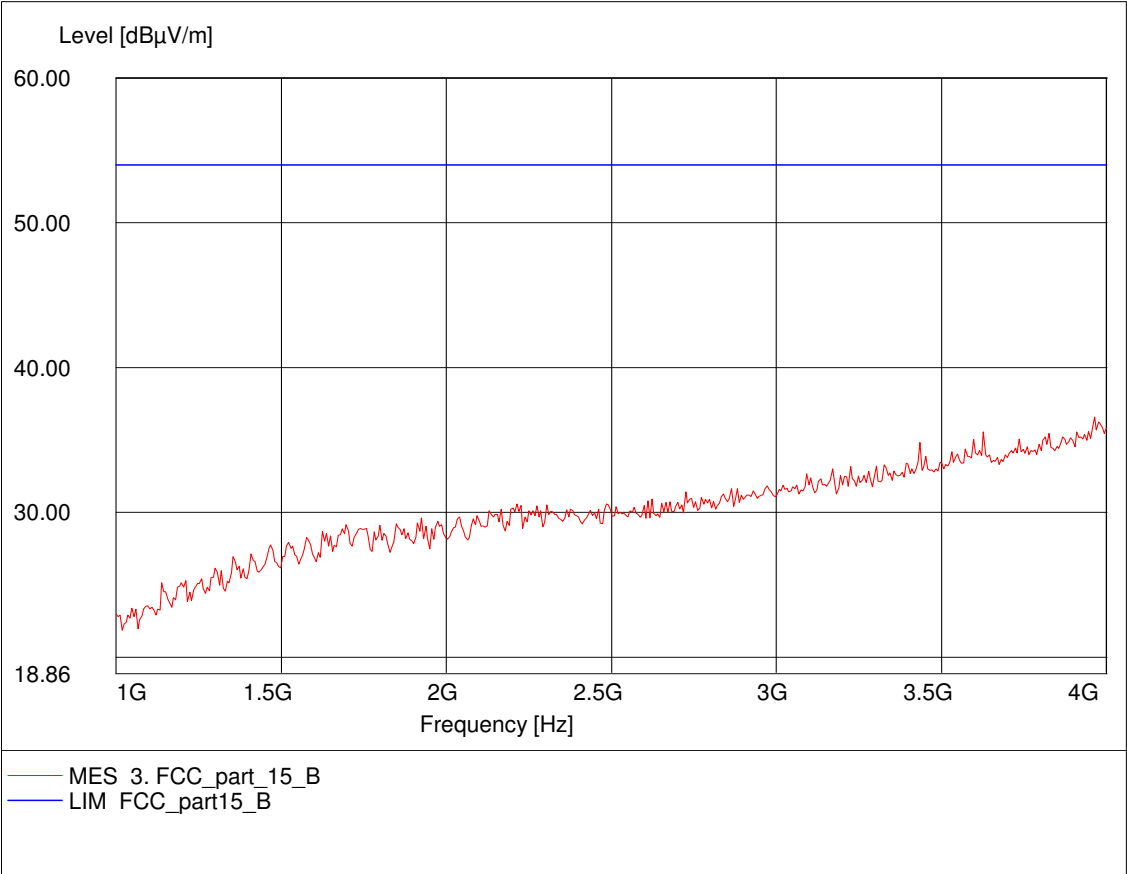


Antenna horizontal

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

Test Report No.: H4M20804-6341  
Test Site / Operator: ETSPS / Mr. Michael  
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5V (3x AA) battery  
Test Specification: according to subpart B  
Comment 1: Dist.: 3m, Ant.: HL25, ampl.  
Freq:3.964GHz Emax:36.58dBμV/m RBW: 1 MHz



Antenna vertical