


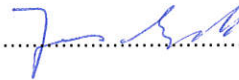


| EMC TEST REPORT FCC 47 CFR Part 15B Industry Canada RSS-Gen Electromagnetic compatibility - Unintentional radiators | |
|--|---|
| Report Reference No. | G0M-1502-4503-EF0115B-V02 |
| Testing Laboratory | Eurofins Product Service GmbH |
| Address | Storkower Str. 38c 15526 Reichenwalde Germany |
| Accreditation | <div style="text-align: center;">   </div> <p>A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A</p> |
| Applicant's name | SMT & Hybrid GmbH |
| Address | An der Priessnitzau 22 01328 Dresden GERMANY |
| Test specification: | |
| Standard..... | 47 CFR Part 15 Subpart B RSS-Gen, Issue 3, 2010-12 ANSI C63.4:2009 |
| Equipment under test (EUT): | |
| Product description | Datenlogger |
| Model No. | data link sensor |
| Additional Models | None |
| Hardware version | R3 |
| Firmware / Software version | 0.90 |
| FCC-ID | 2AELT-08MONILOG |
| CONTAINS IC | 5123A-BGTBLE112; 5131A-HE910 |
| Test result | Passed |

| | |
|--|--|
| Possible test case verdicts: | |
| - not applicable to test object | N/A |
| - test object does meet the requirement..... | P (Pass) |
| - test object does not meet the requirement..... | F (Fail) |
| Testing: | |
| Date of receipt of test item | 2015-03-23 |
| Date (s) of performance of tests | 2015-04-13 - 2015-04-29 |
| Compiled by | Steffen Zunke |
| Tested by (+ signature)..... | Steffen Zunke  |
| Approved by (+ signature) | Jens Marquardt  |
| Date of issue | 2015-06-19 |
| Total number of pages | 56 |
| General remarks: | |
| <p>The test results presented in this report relate only to the object tested.</p> <p>The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> | |
| Additional comments: | |

Version History

| Version | Issue Date | Remarks | Revised by |
|---------|------------|--|------------|
| V01 | 2015-04-30 | Initial Release | |
| V02 | 2015-06-19 | Page 5: FCC ID of the GSM/UMTS Module corrected. | S. Zunke |

REPORT INDEX

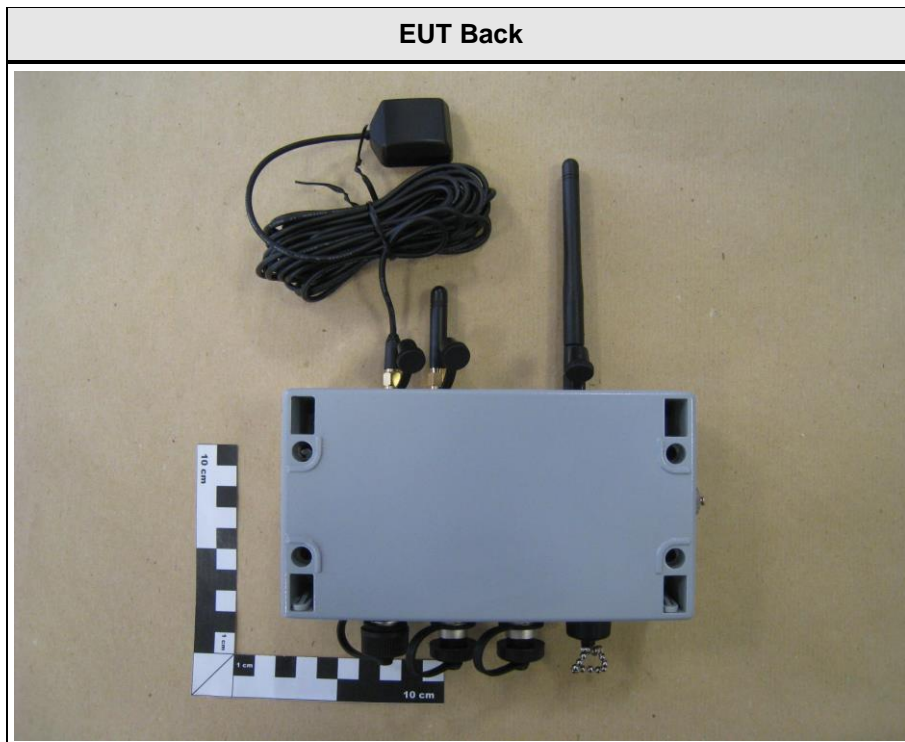
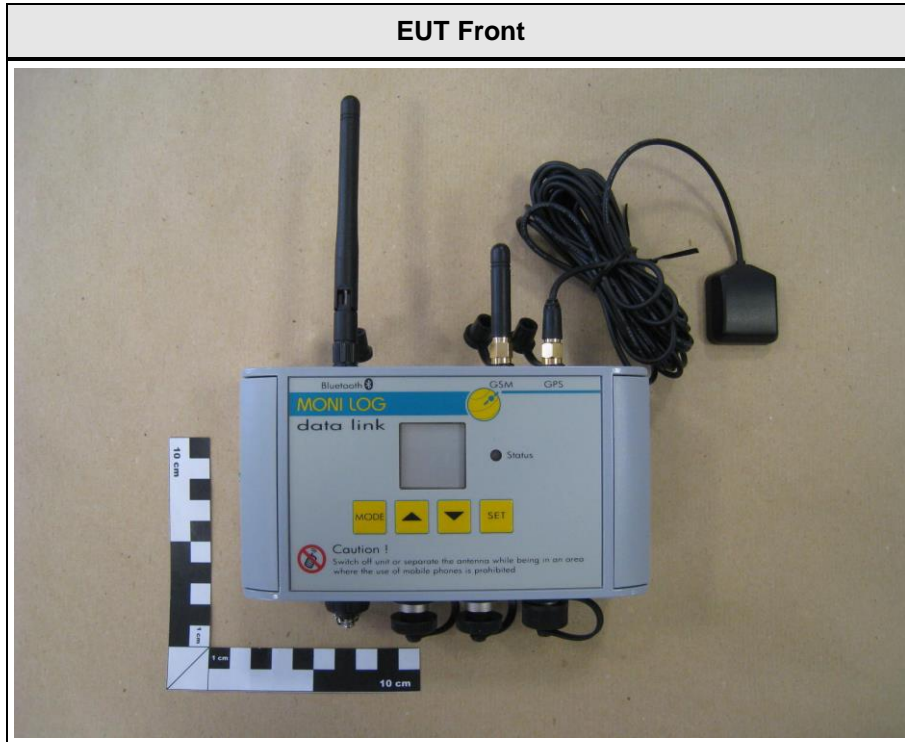
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| 3.1 | Test Conditions and Results – Radiated emissions | 15 |

1 Equipment (Test item) Description

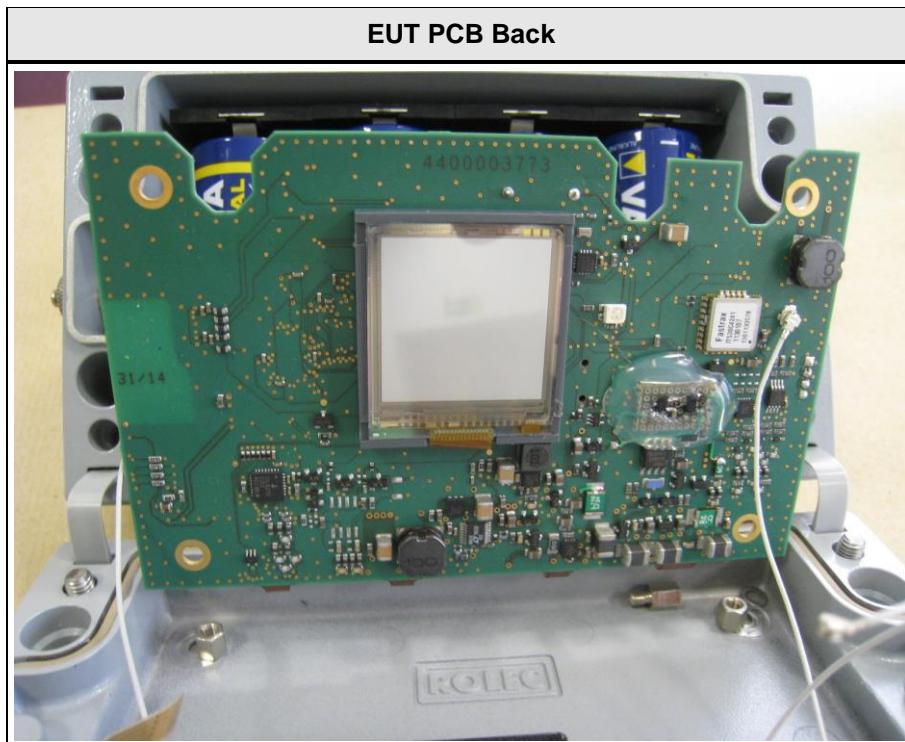
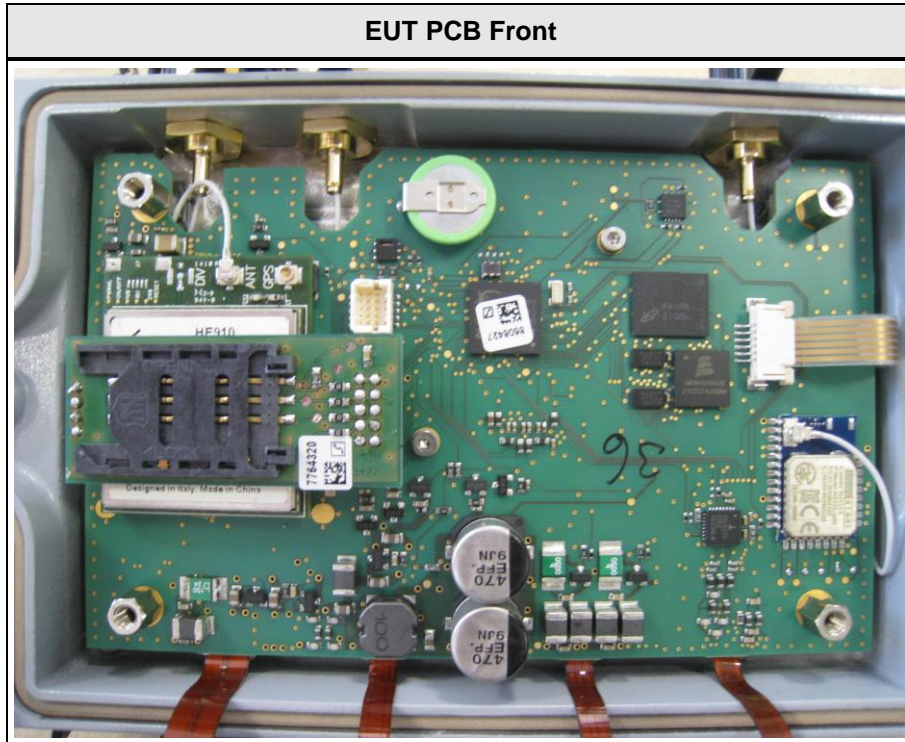
| | | |
|--------------------------------------|---|--------------------------|
| Description | Datenlogger | |
| Model | data link sensor | |
| Additional Models | None | |
| Serial number | 20158xxx | |
| Hardware version | R3 | |
| Software / Firmware version | 0.90 | |
| FCC-ID | 2AELT-08MONILOG | |
| Contains IC Bluetooth Module | 5123A-BGTBLE112 | |
| Contains IC GSM / UMTS Module | 5131A-HE910 | |
| Power supply | 6 VDC via Battery or 12VDC via external Battery | |
| AC/DC-Adaptor | None | |
| Radio module | Type | Bluetooth module |
| | Model | BLE112-E |
| | Manufacturer | Bluegiga |
| | HW Version | 1 |
| | SW Version | 1.3 |
| | FCC-ID | QOQBLE112 |
| | IC | 5123A-BGTBLE112 |
| Radio module | Type | GSM / UMTS module |
| | Model | HE910 G |
| | Manufacturer | Telit Wireless Solutions |
| | HW Version | 00 |
| | SW Version | 12.00.xx5 |
| | FCC-ID | RI7HE910 |
| | IC | 5131A-HE910 |

| | | |
|-----------------------------------|---|---------------------------|
| Radio module | Type | SRD module |
| | Model | IT530 |
| | Manufacturer | U-blox (formerly Fastrax) |
| | HW Version | - |
| | SW Version | C |
| | FCC-ID | - |
| | IC | - |
| Manufacturer | SMT & Hybrid GmbH An der Priessnitzau 22 01328 Dresden GERMANY | |
| Highest emission frequency | Fmax [MHz] = 2400 | |
| Device classification | Class B | |
| Equipment type | Tabletop | |
| Number of tested samples | 1 | |

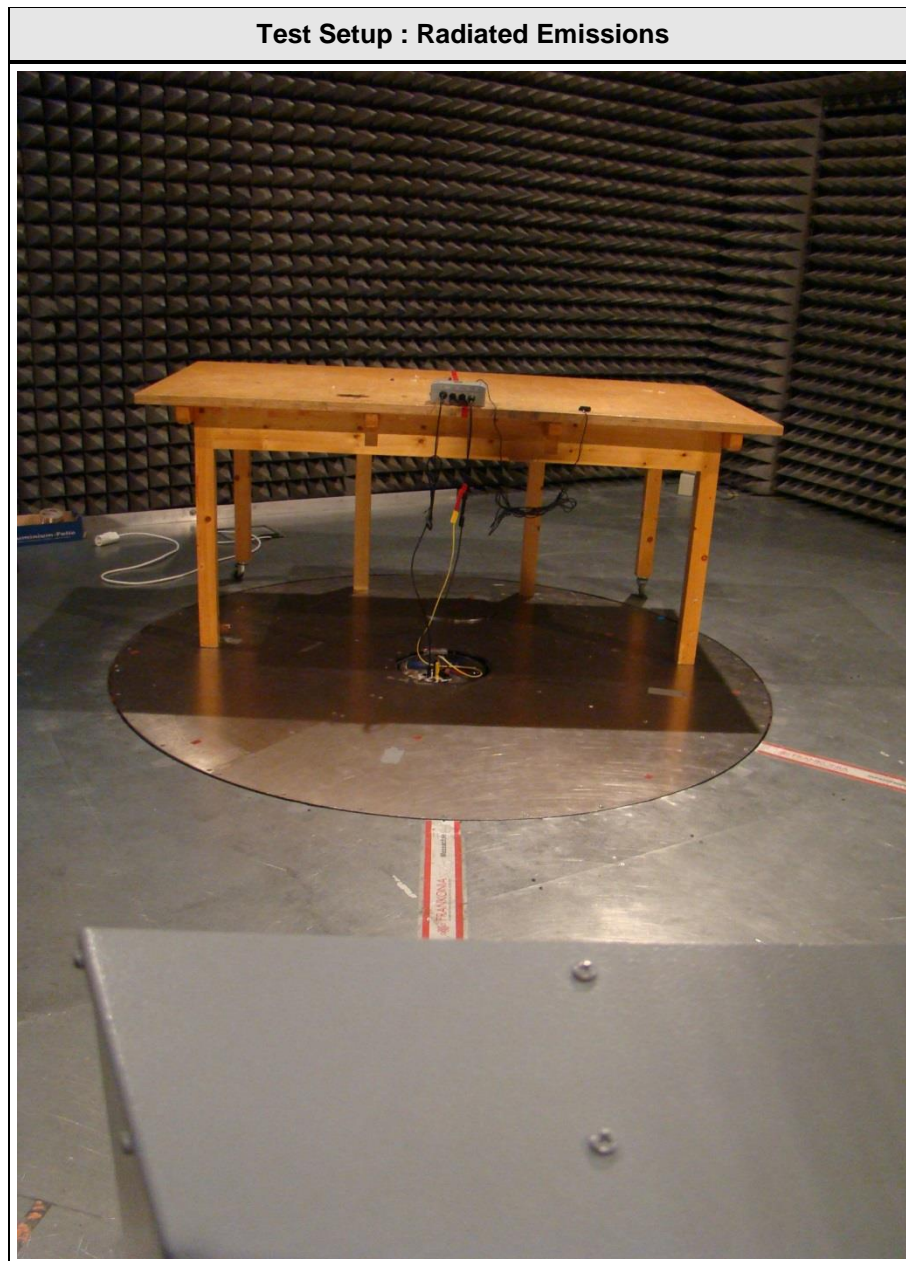
1.1 Photos – Equipment external



1.2 Photos – Equipment internal



1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

| Product Type* | Device | Manufacturer | Model No. | Comments |
|---------------|--------------------------|---------------------|-----------------|----------|
| SIM | Communication tester | Rohde & Schwarz | CMU 200 | - |
| AE | Laptop | Dell | Latitude | - |
| AE | Bluetooth 2.4GHz antenna | Taoglas | GW.15.2113 | - |
| AE | GSM/UMTS antennna | 2J | 2J010 | - |
| AE | GPS antenna | Chinmore | GS-10DSMA3V-002 | - |
| CABL | USB 1.1. mini AB | Haiying Electronics | - | - |

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Input / Output Ports

| Port # | Name | Type* | Max. Cable Length | Cable Shielded | Comments |
|--------|-------------------------|-------|-------------------|----------------|------------------------|
| 1 | Power | DC | 3m | No | - |
| 2 | USB | I/O | 2m | Yes | - |
| 3 | RS232 | I/O | 6m | Yes | 2 pieces, service only |
| 4 | External Input / Output | I/O | 3m | Yes | service only |

***Note:** Use the following abbreviations:

AC : AC power port

DC : DC power port

N/E : Non electrical

I/O : Signal input or output port

TP : Telecommunication port

1.6 Operating Modes and Configurations

| Mode # | Description |
|--------|---|
| 1 | GSM 850 link to CMU |
| 2 | GSM 1900 link to CMU |
| 3 | UMTS FDD II link to CMU |
| 4 | UMTS FDD V link to CMU |
| 5 | Bluetooth link to sensor module and data transmission every 1 second, USB connected to laptop |

| Configuration # | EUT Configuration |
|-----------------|---|
| 1 | EUT fully assembled and powered with external 12VDC |

1.7 Test Equipment Used During Testing

| Measurement Software | | | |
|-----------------------------|------------------|------------|-----------|
| Description | Manufacturer | Name | Version |
| EMC Test Software | Dare Instruments | Radimation | 2014.1.15 |

| Radiated emissions | | | | | |
|---------------------------|--------------|------------|------------|-----------|----------|
| Description | Manufacturer | Model | Identifier | Cal. Date | Cal. Due |
| Biconical Antenna | R&S | HK 116 | EF00012 | 2013-02 | 2016-02 |
| LPD-Antenne | R&S | HL 223 | EF00187 | 2014-03 | 2017-03 |
| Horn antenna | Schwarzbeck | BBHA 9120D | EF00018 | 2013-09 | 2016-09 |
| EMI Test Receiver | R&S | ESU26 | EF00887 | 2015-01 | 2016-01 |

1.8 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dB μ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

$$\begin{array}{rclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading - FCC limit} & = & \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} & = & -9.5 \text{ dB} \end{array}$$

2 Result Summary

| FCC 47 CFR Part 15B, Industry Canada RSS-Gen | | | | |
|--|-----------------------------------|------------------|--------|----------------------------|
| Product Specific Standard | Requirement – Test | Reference Method | Result | Remarks |
| 47 CFR 15.109 RSS-Gen 4.9 & 4.10 | Radiated emissions | ANSI C 63.4 | PASS | - |
| 47 CFR 15.107 RSS-Gen 7.2.4 | AC power line conducted emissions | ANSI C63.4 | N/A | No relevant port available |
| Remarks: | | | | |

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

| Radiated emissions acc. FCC 47 CFR 15.109 / IC RSS-Gen | | Verdict: PASS | | | | |
|--|----------------------------|-----------------|------------------|--------|---------------|--------|
| Laboratory Parameters: | Required prior to the test | During the test | | | | |
| Ambient Temperature | 15 to 35 °C | 23°C | | | | |
| Relative Humidity | 30 to 60 % | 35% | | | | |
| Test according referenced standards | Reference Method | | | | | |
| | ANSI C63.4 | | | | | |
| Sample is tested with respect to the requirements of the equipment class | Equipment class | | | | | |
| | Class B | | | | | |
| Test frequency range determined from highest emission frequency | Highest emission frequency | | | | | |
| | Fmax [MHz] = 2400 | | | | | |
| Fully configured sample scanned over the following frequency range | Frequency range | | | | | |
| | 30 MHz to 14 GHz | | | | | |
| Operating mode | 1 / 2 / 3 / 4 / 5 | | | | | |
| Configuration | 1 | | | | | |
| Limits and results Class B | | | | | | |
| Frequency [MHz] | Quasi-Peak [dBµV/m] | Result | Average [dBµV/m] | Result | Peak [dBµV/m] | Result |
| 30 – 88 | 40 | PASS | - | | - | - |
| 88 – 216 | 43.5 | PASS | - | | - | - |
| 216 – 960 | 46 | PASS | - | | - | - |
| 960 – 1000 | 54 | PASS | - | | - | - |
| > 1000 | - | - | 54 | PASS | 74 | PASS |
| Comments: | | | | | | |

Test Procedure:

The test site is in accordance with ANSI C63-4:2009 requirements and is listed by FCC.

The measurement procedure is as follows:

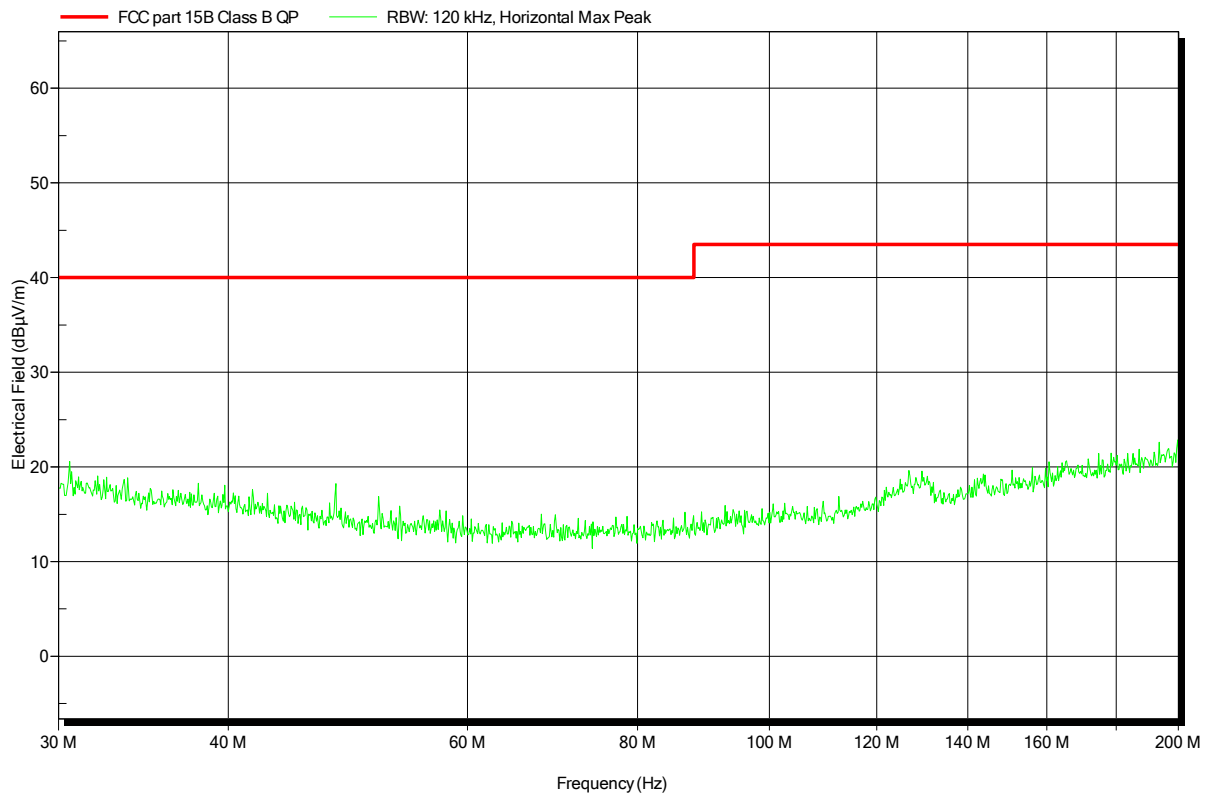
- 1) The EUT was placed on a 0.8 m non conductive table at a 3 m distance from the receive antenna (ANSI C63.4: 2009 item 6.2)
- 2) The antenna output was connected to the measurement receiver
- 3) A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast
- 4) Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Horizontal |
| Measurement distance: | 3m |
| Mode: | GSM850 |
| Test Date: | 2015-04-24 |
| Note: | |

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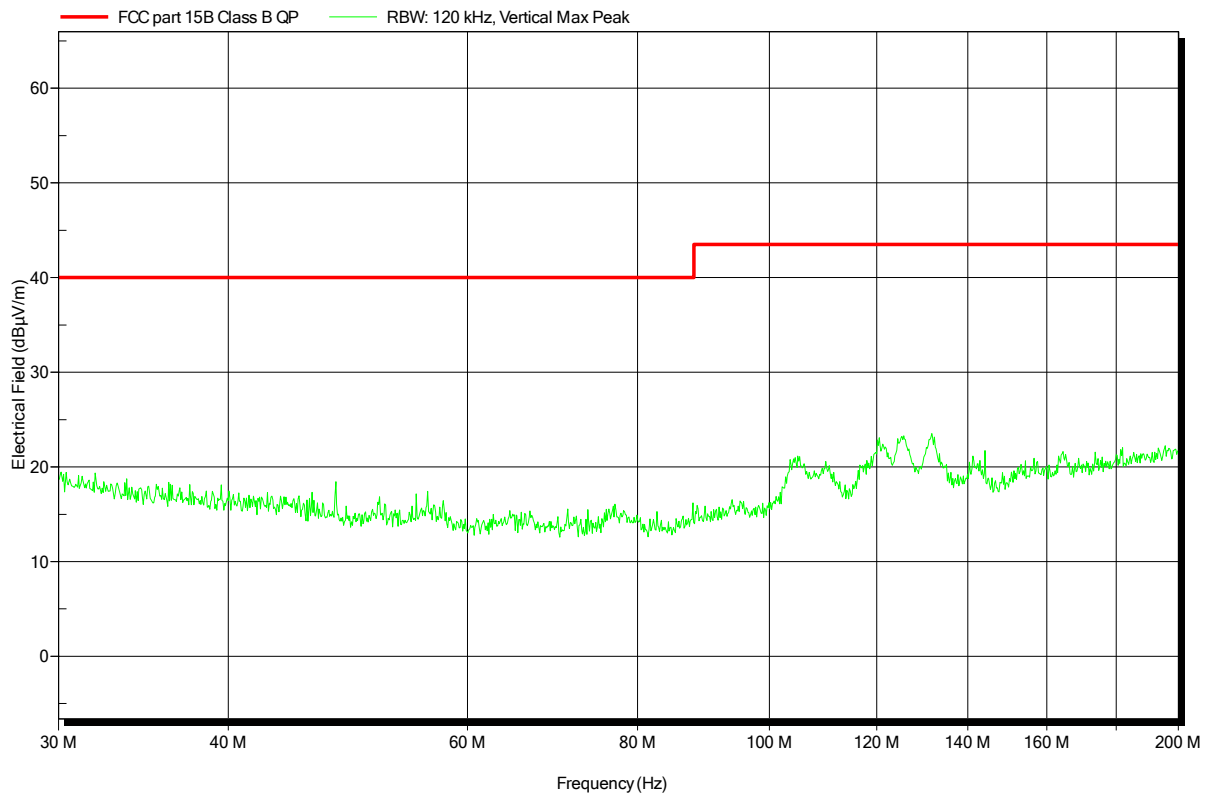


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| Measurement distance: | 3m |
| Mode: | GSM850 |
| Test Date: | 2015-04-24 |
| Note: | |

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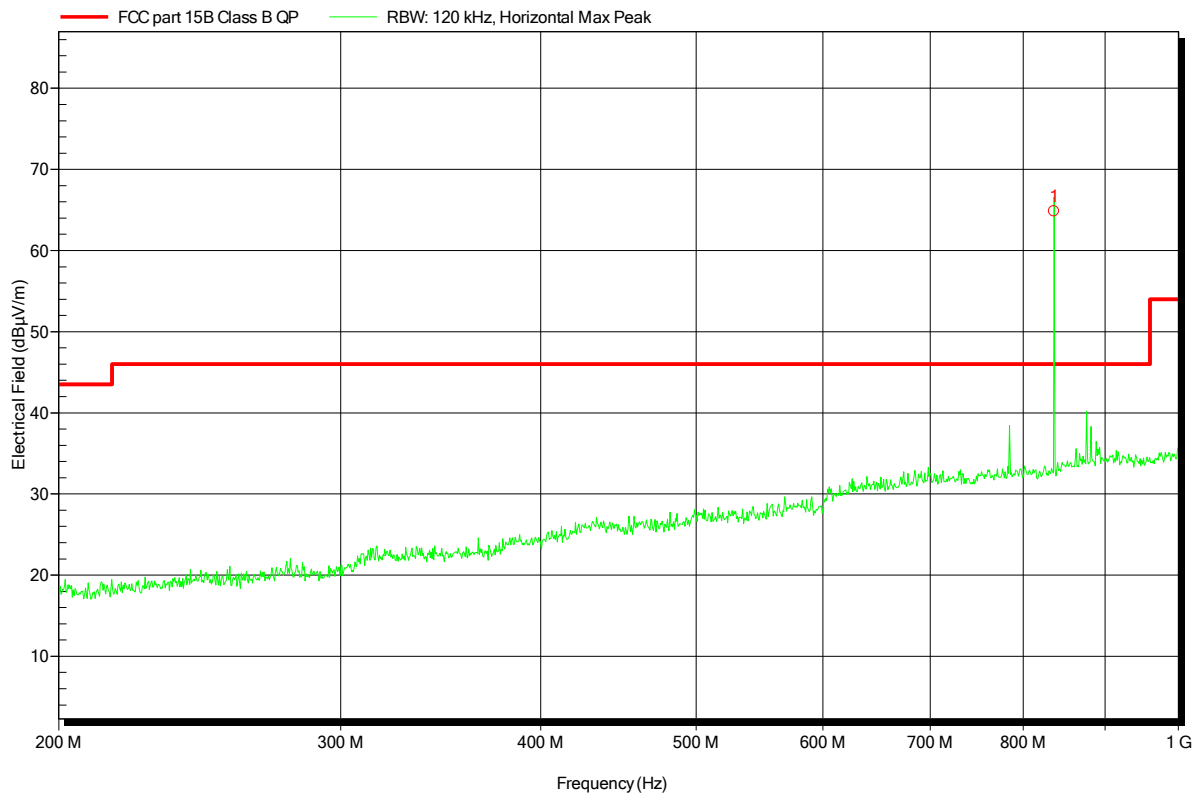


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| Test Site: | Eurofins Product Service GmbH |
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| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Horizontal |
| Measurement distance: | 3m |
| Mode: | GSM850 |
| Test Date: | 2015-04-23 |
| Note: | |

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 Frequency
836.196 MHz

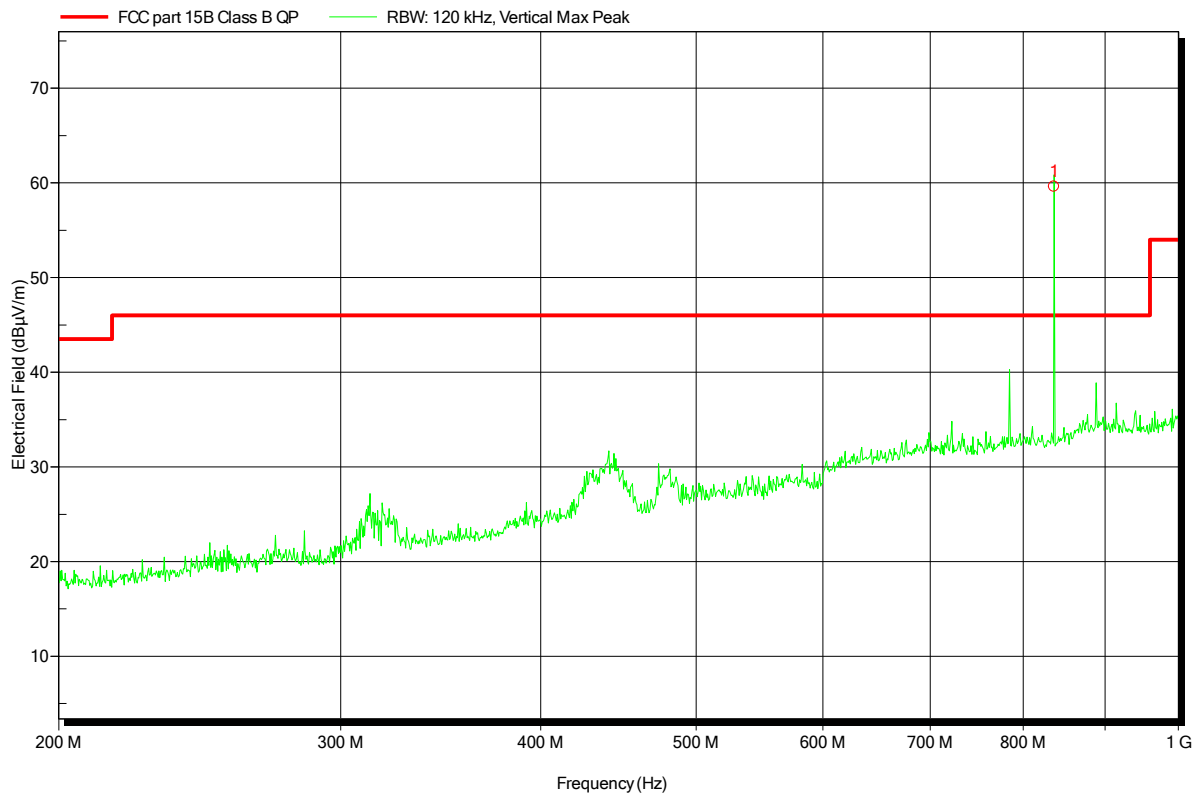
GSM 850

Spurious emissions under normal conditions according to FCC Part 15b

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| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Vertical |
| Measurement distance: | 3m |
| Mode: | GSM850 |
| Test Date: | 2015-04-23 |
| Note: | |

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 Frequency
836.18 MHz

GSM 850

 Test Report No.: G0M-1502-4503-EF0115B-V02

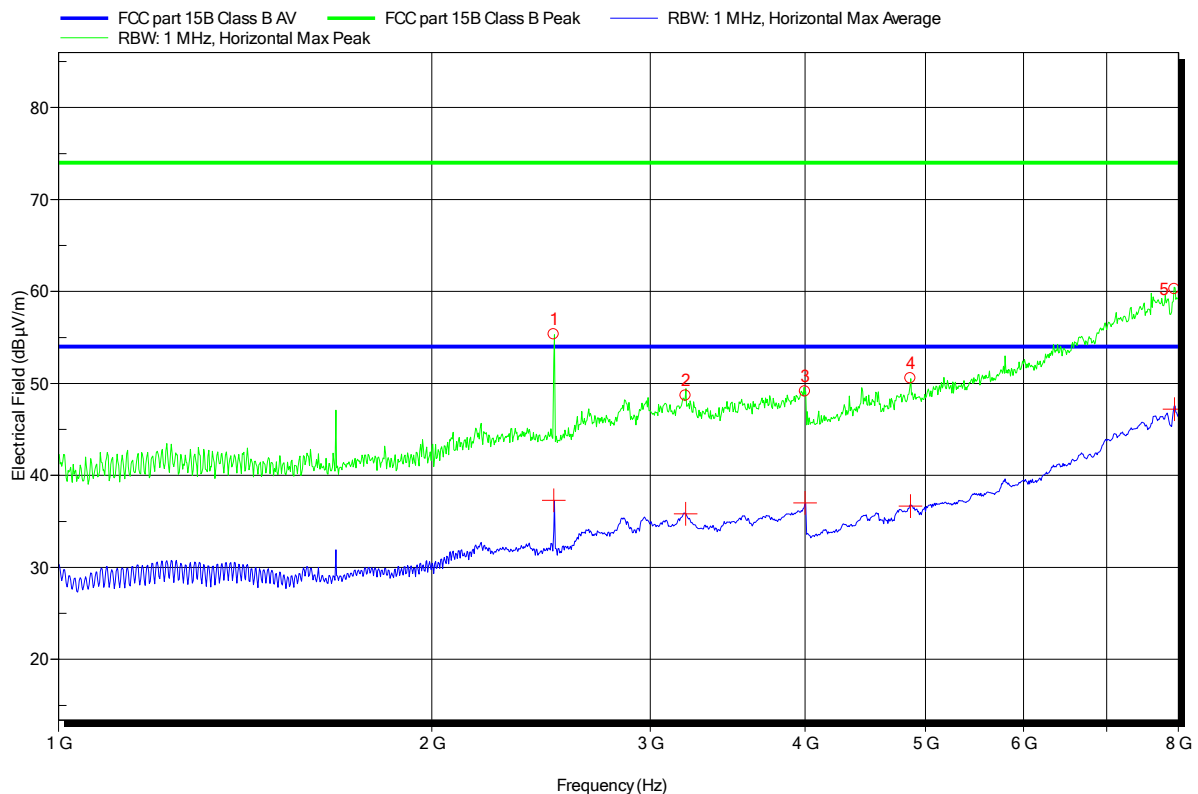
 Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: GSM850
 Test Date: 2015-04-23
 Note:

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| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|----------------|
| 2.509 GHz | 37.3 dBµV/m | 54 dBµV/m | -16.7 dB | Pass |
| 3.205 GHz | 35.82 dBµV/m | 54 dBµV/m | -18.18 dB | Pass |
| 4 GHz | 37.02 dBµV/m | 54 dBµV/m | -16.98 dB | Pass |
| 4.864 GHz | 36.66 dBµV/m | 54 dBµV/m | -17.34 dB | Pass |
| 7.943 GHz | 47.2 dBµV/m | 54 dBµV/m | -6.8 dB | Pass |

Test Report No.: G0M-1502-4503-EF0115B-V02

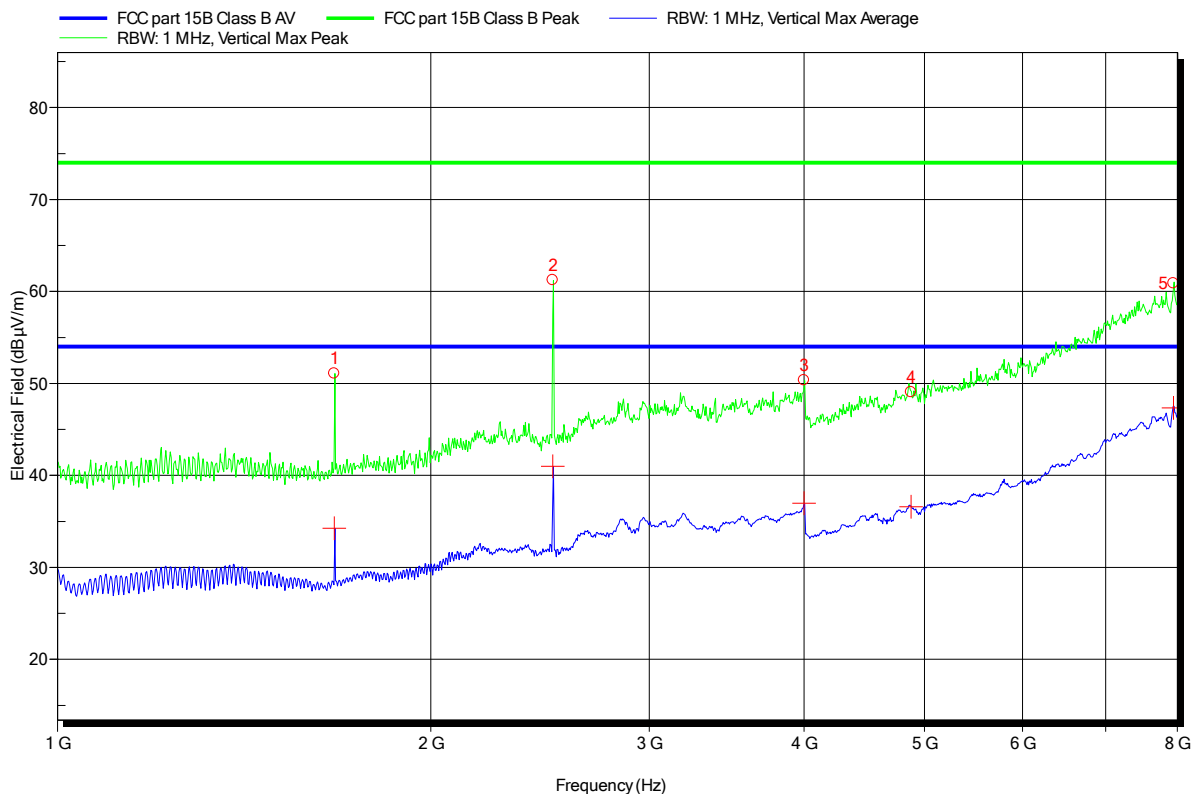
 Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

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 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
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 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: GSM850
 Test Date: 2015-04-23
 Note:

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| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|----------------|
| 1.673 GHz | 34.25 dBµV/m | 54 dBµV/m | -19.75 dB | Pass |
| 2.509 GHz | 40.98 dBµV/m | 54 dBµV/m | -13.02 dB | Pass |
| 4 GHz | 36.96 dBµV/m | 54 dBµV/m | -17.04 dB | Pass |
| 4.88 GHz | 36.6 dBµV/m | 54 dBµV/m | -17.4 dB | Pass |
| 7.942 GHz | 47.33 dBµV/m | 54 dBµV/m | -6.67 dB | Pass |

Test Report No.: G0M-1502-4503-EF0115B-V02

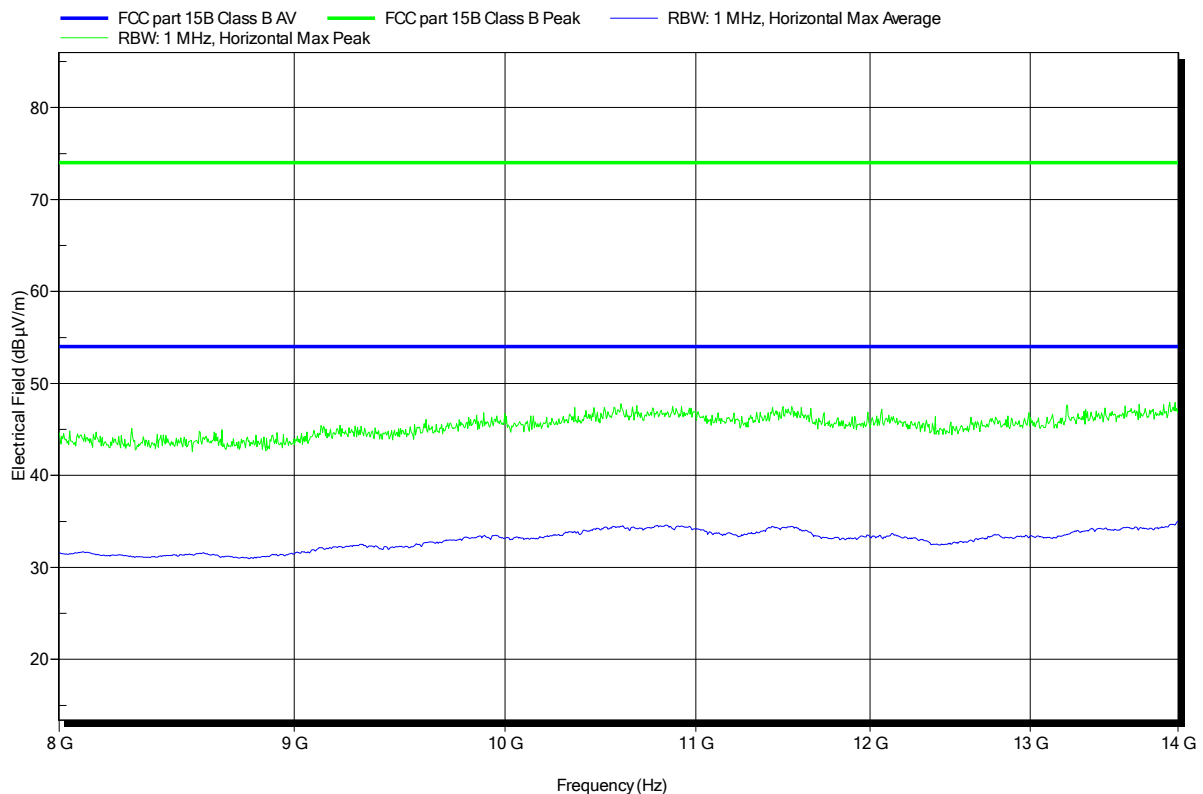
 Eurofins Product Service GmbH
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| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | GSM850 |
| Test Date: | 2015-04-27 |
| Note: | |

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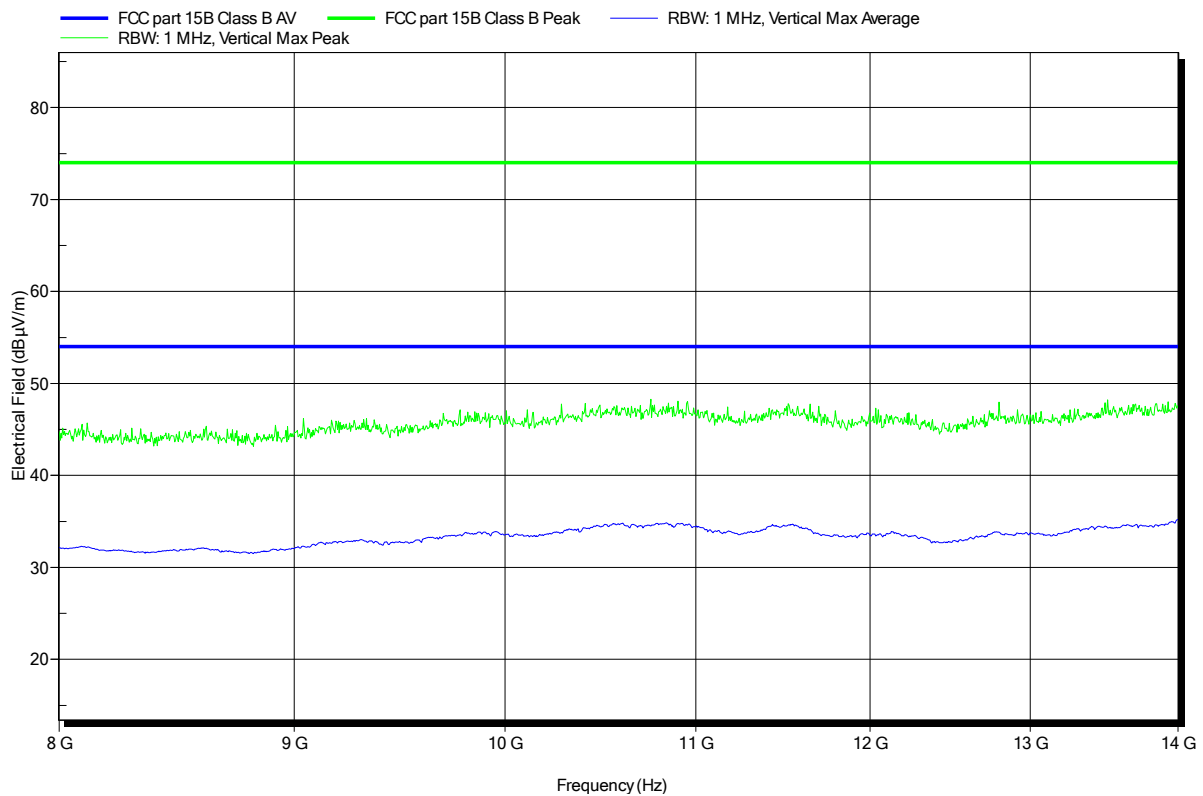


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| Mode: | GSM850 |
| Test Date: | 2015-04-27 |
| Note: | |

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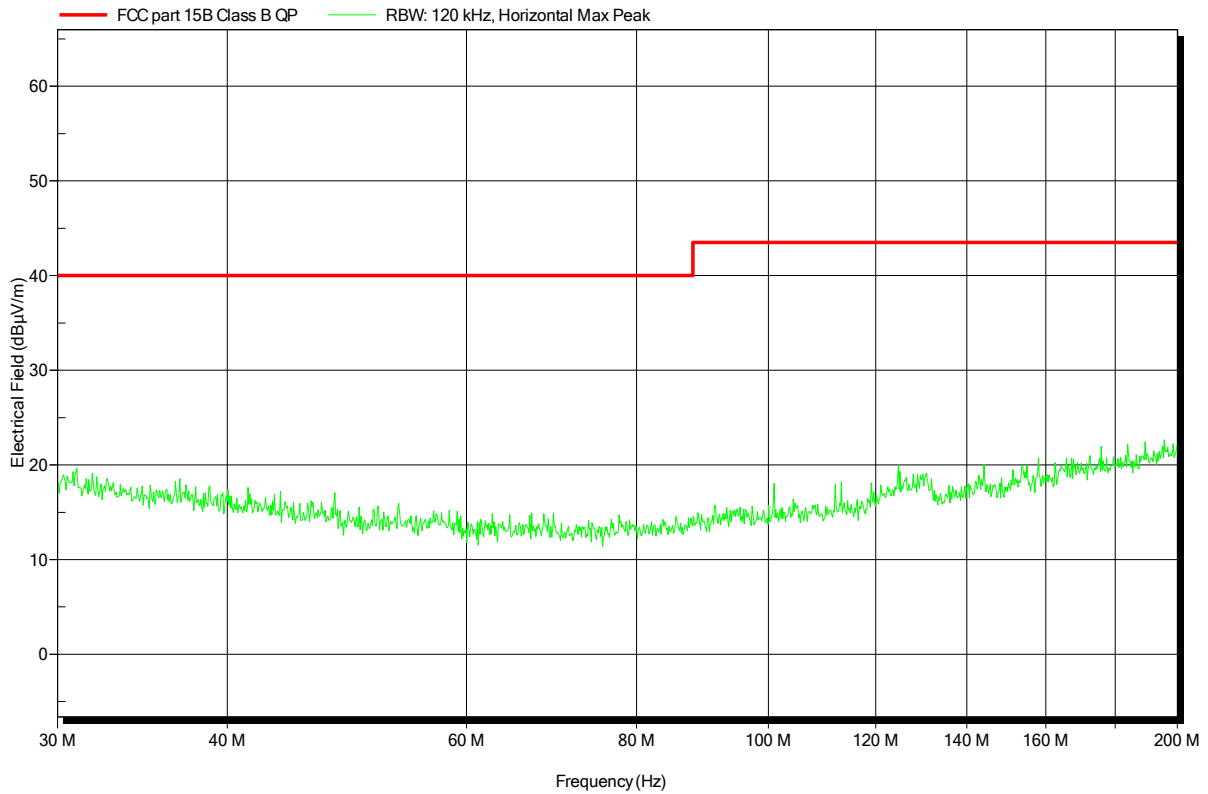


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| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Horizontal |
| Measurement distance: | 3m |
| Mode: | GSM1900 |
| Test Date: | 2015-04-24 |
| Note: | |

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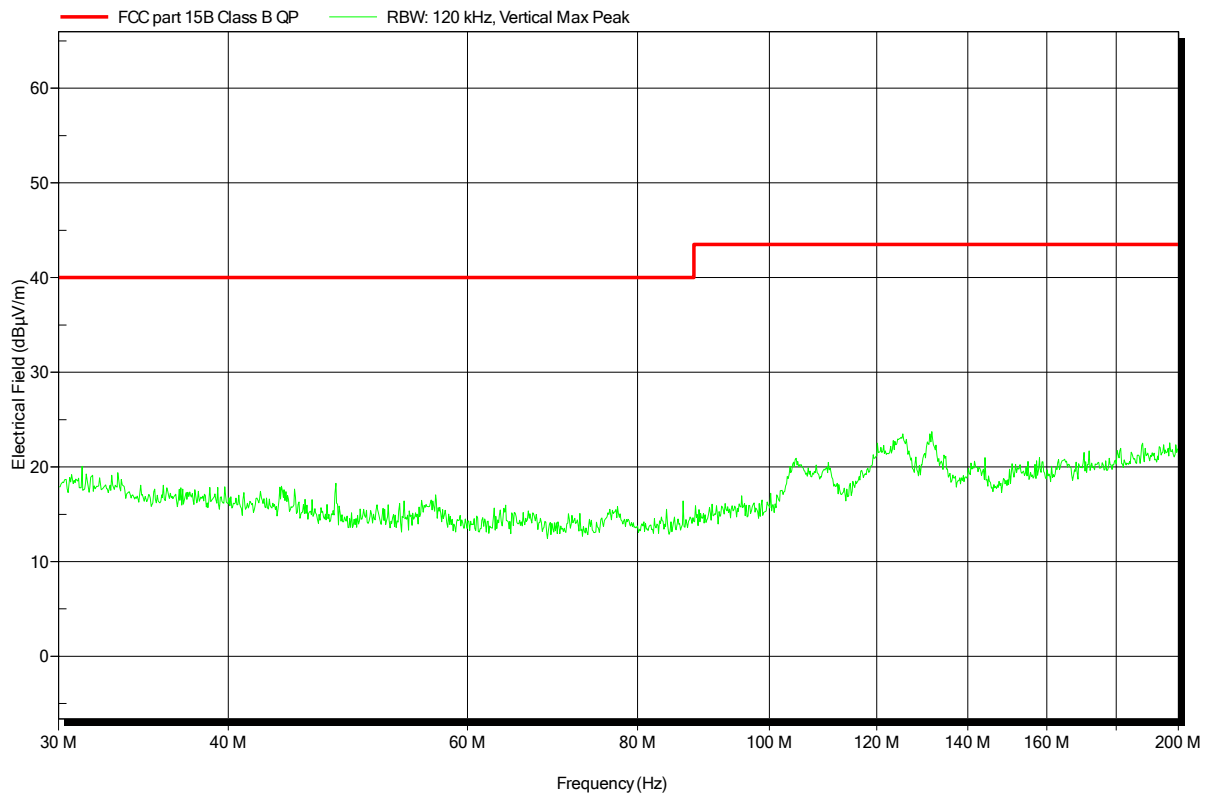


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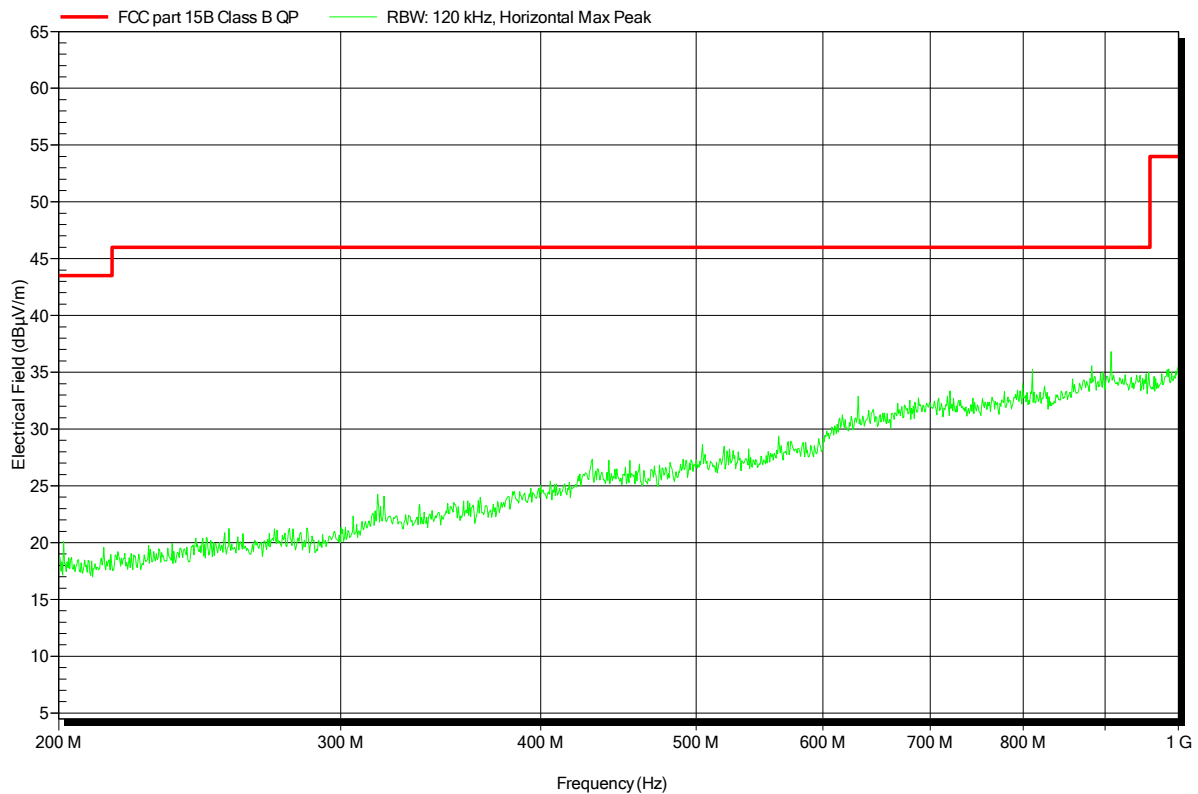
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| Antenna: | Rohde & Schwarz HL 223, Horizontal |
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| Test Date: | 2015-04-24 |
| Note: | |

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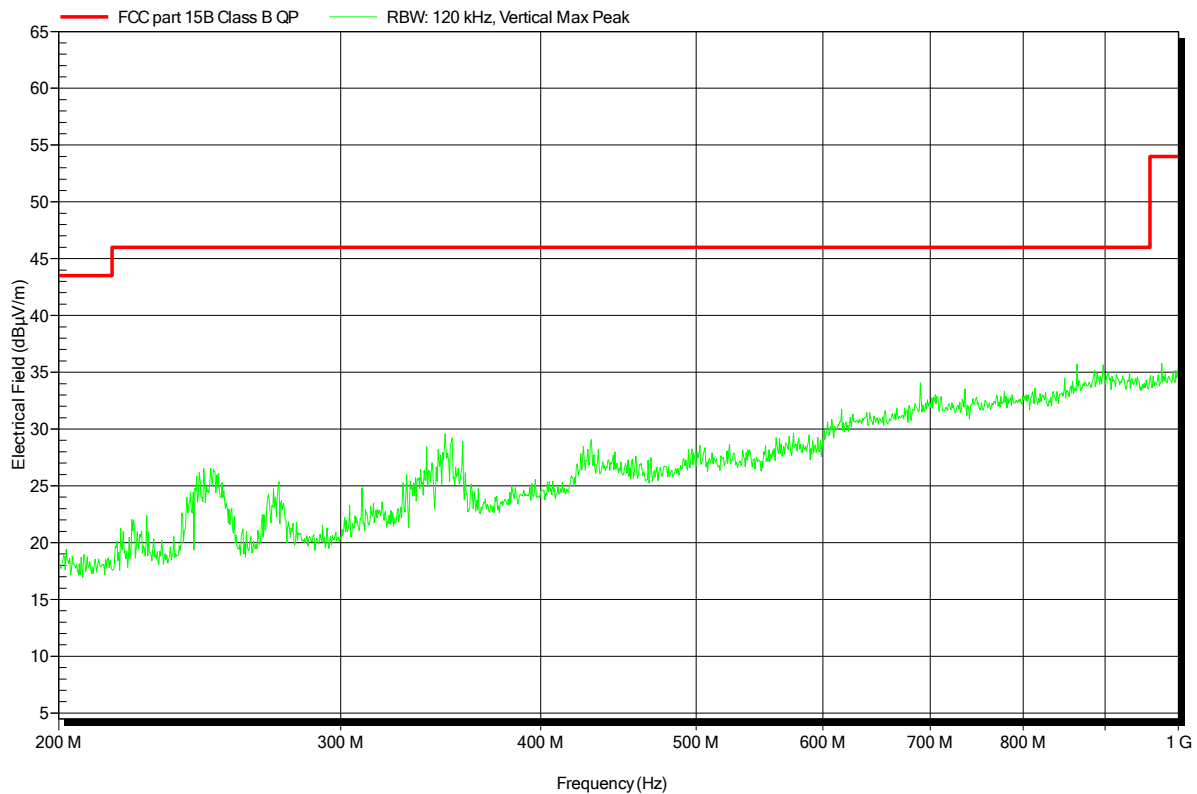


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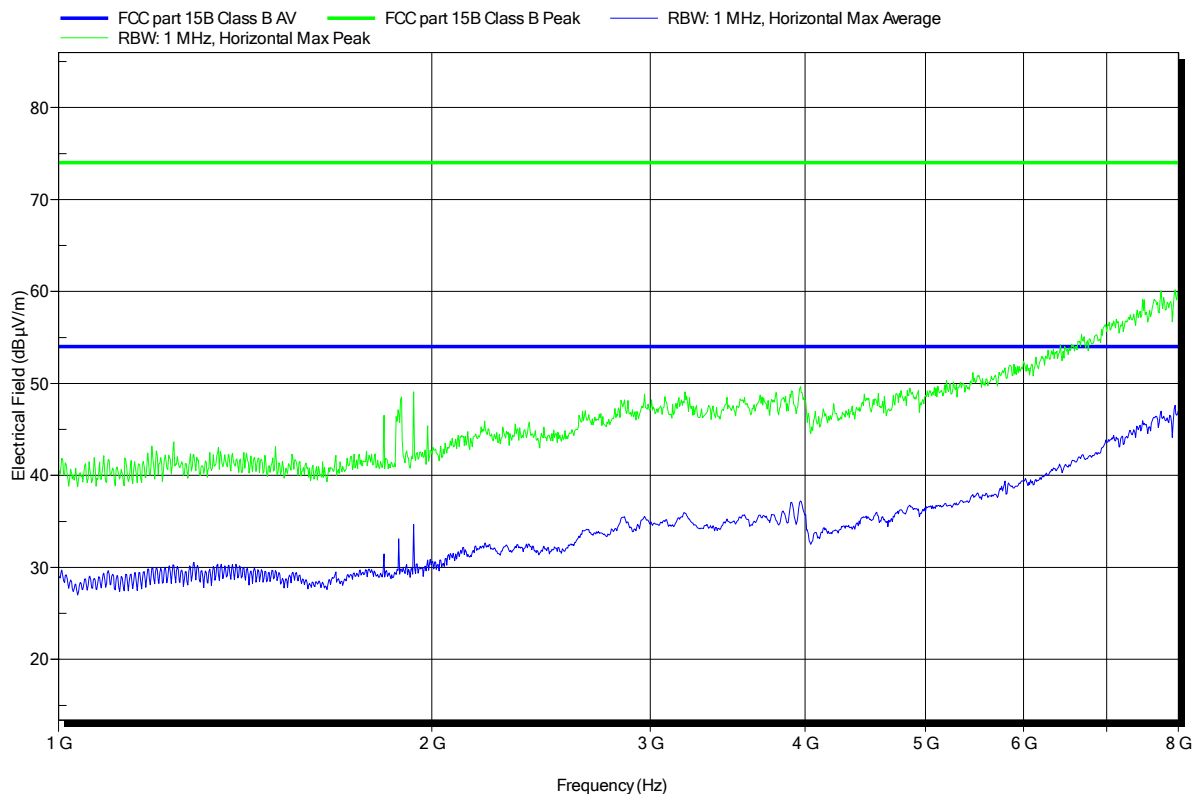


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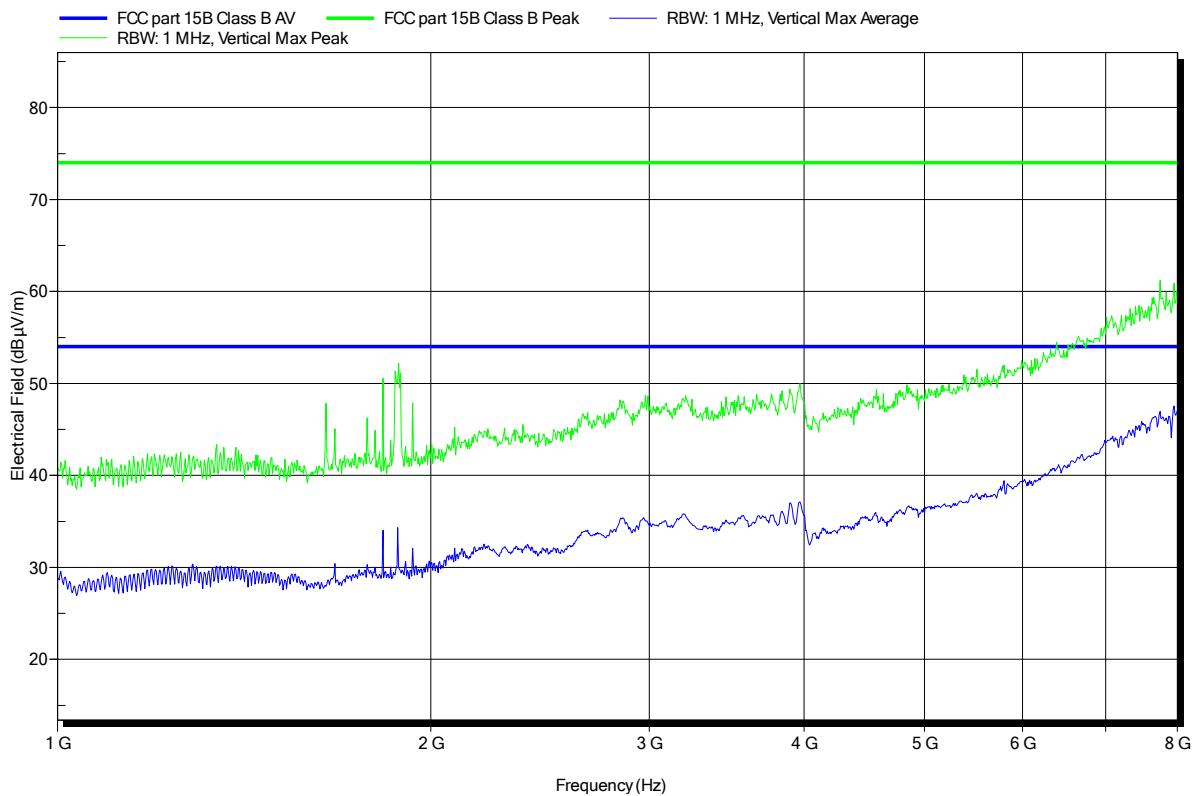


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | GSM1900 |
| Test Date: | 2015-04-24 |
| Note: | |

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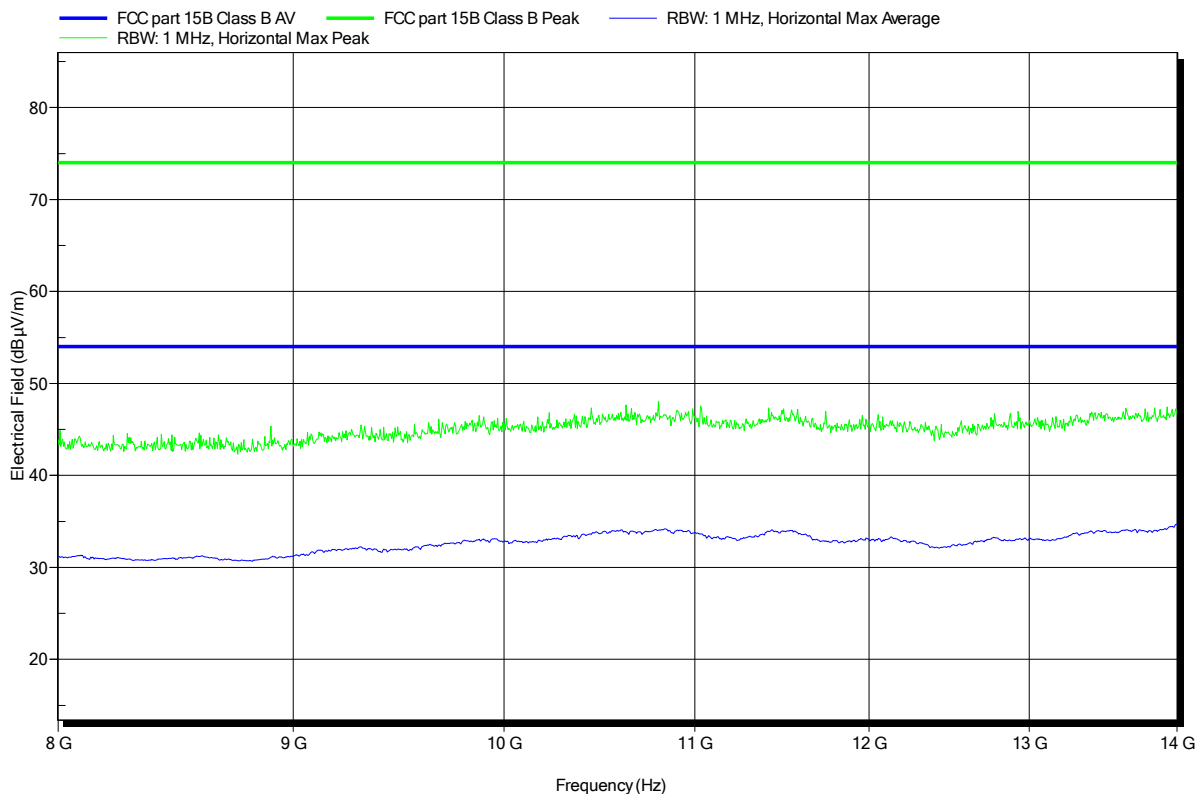


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | GSM1900 |
| Test Date: | 2015-04-27 |
| Note: | |

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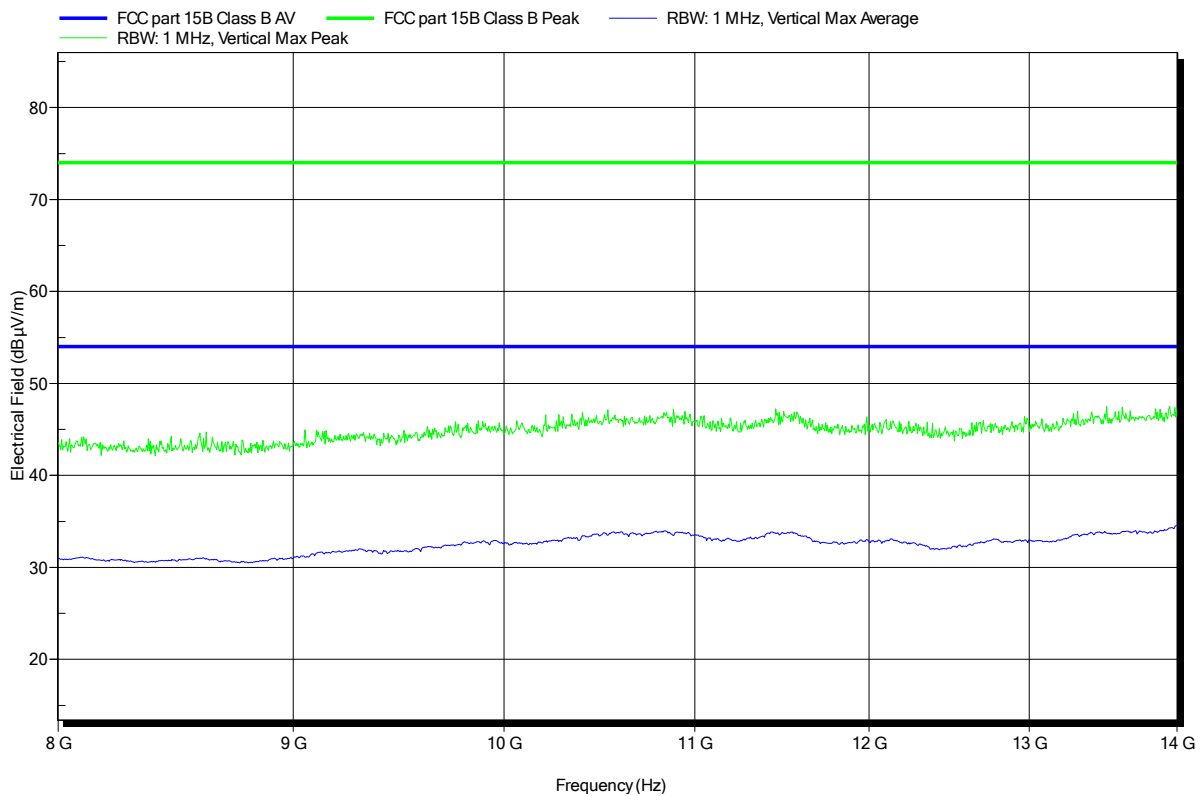


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | GSM1900 |
| Test Date: | 2015-04-27 |
| Note: | |

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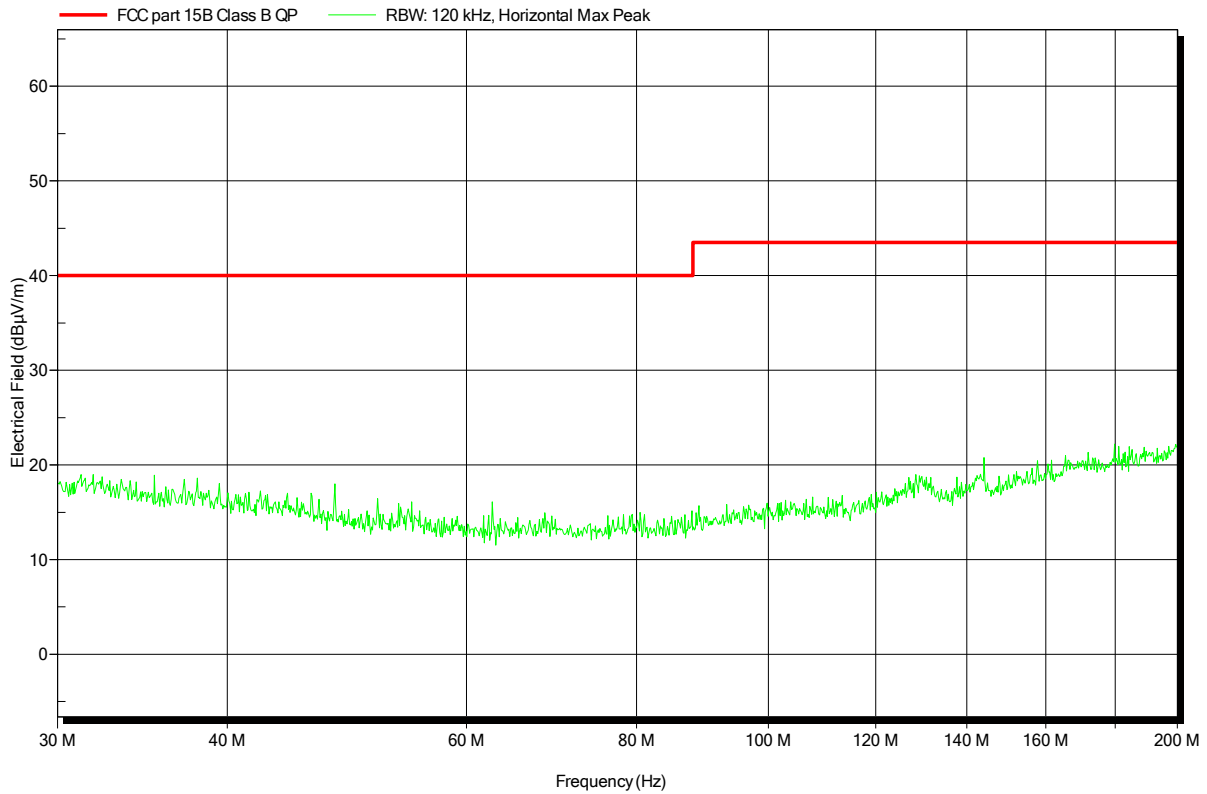


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-24 |
| Note: | |

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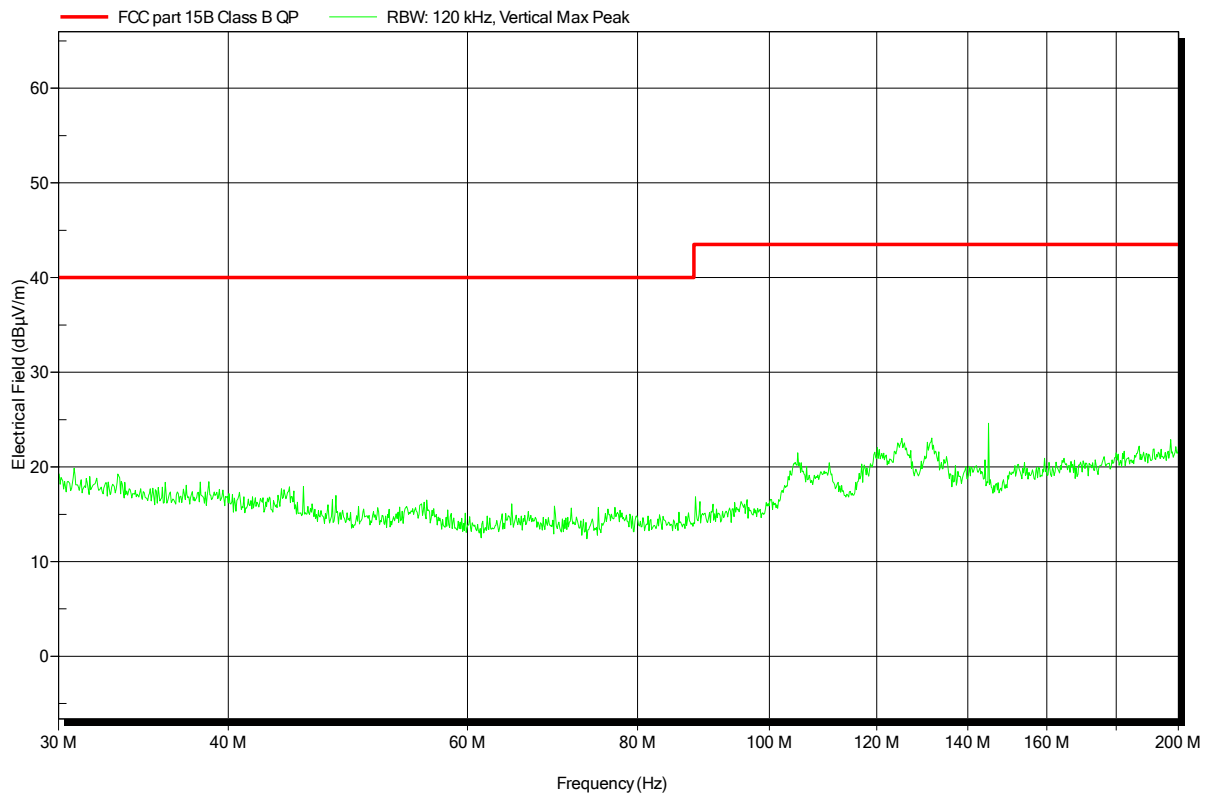


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-24 |
| Note: | |

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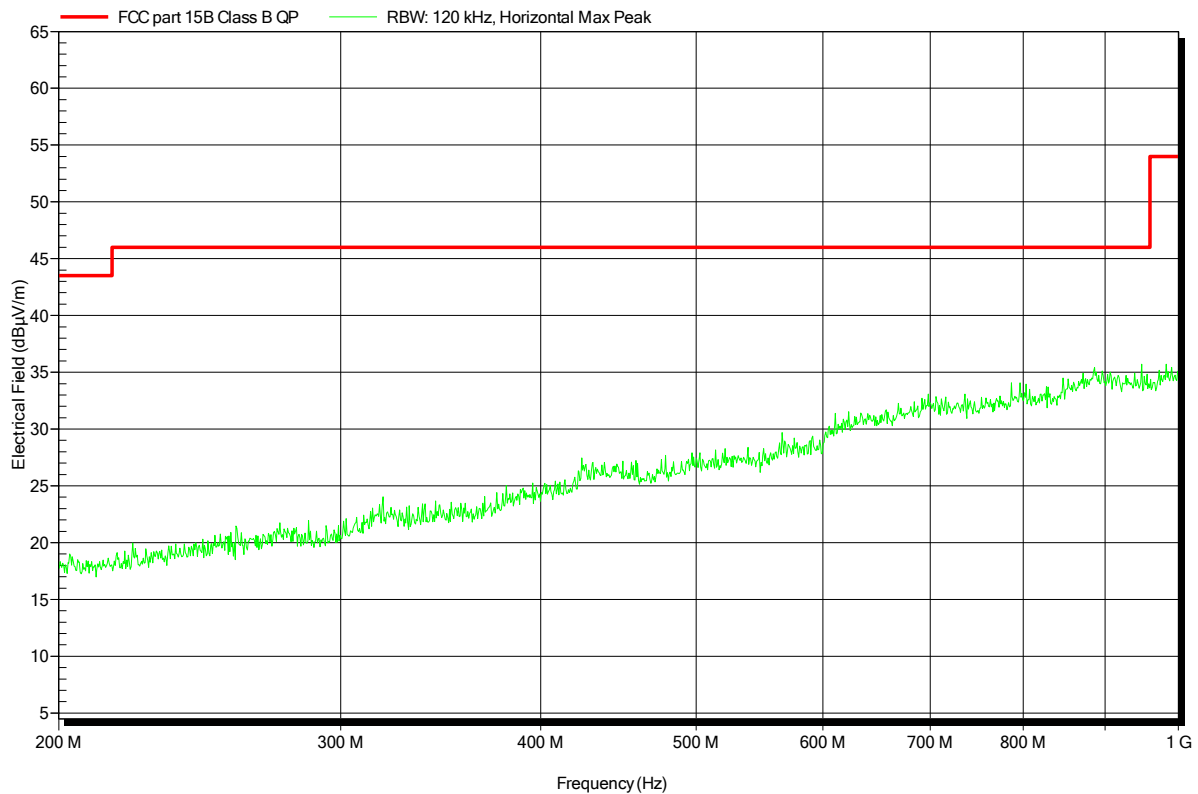


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-24 |
| Note: | |

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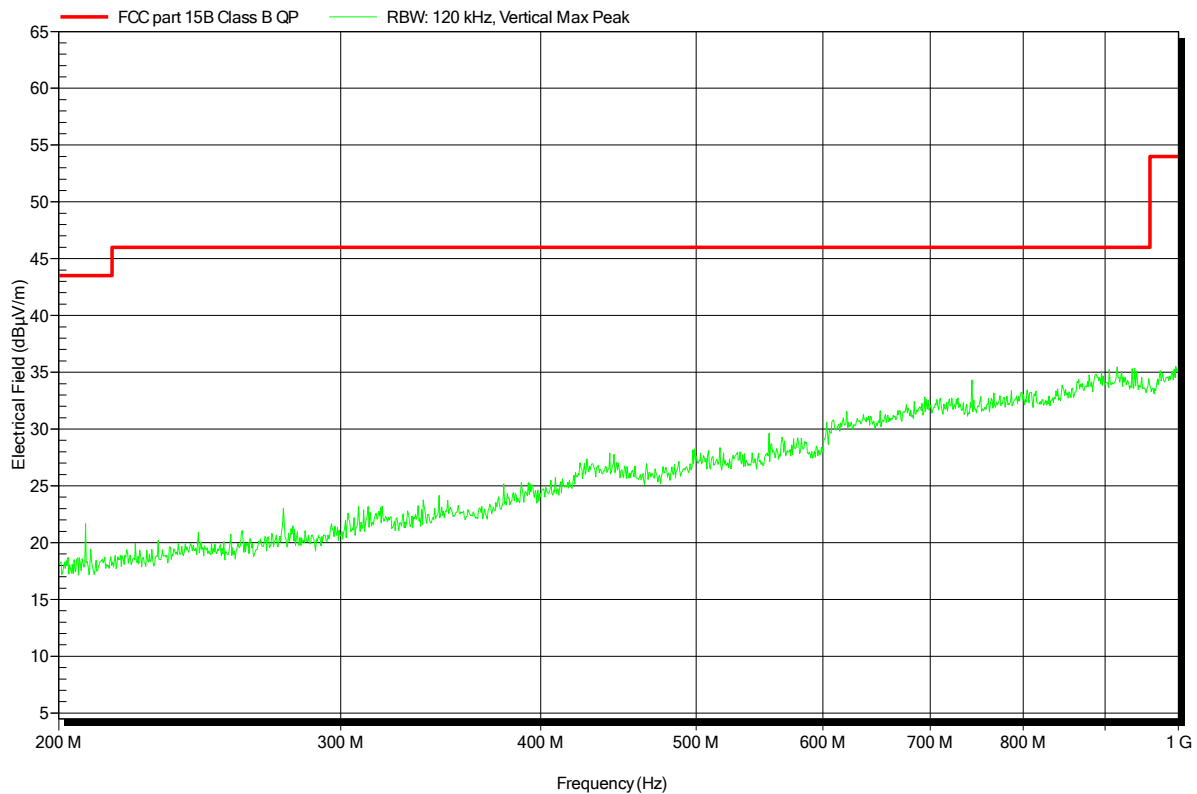


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-24 |
| Note: | |

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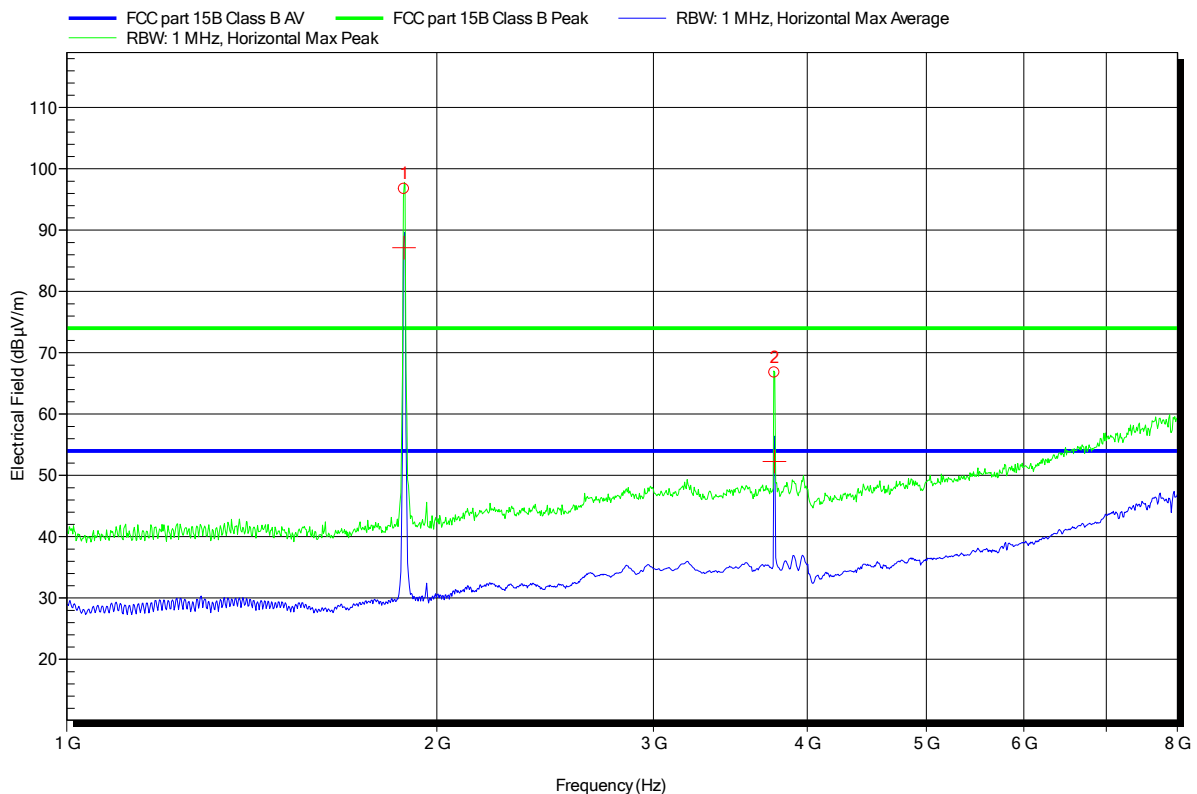


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: UMTS FDD II
 Test Date: 2015-04-24
 Note:

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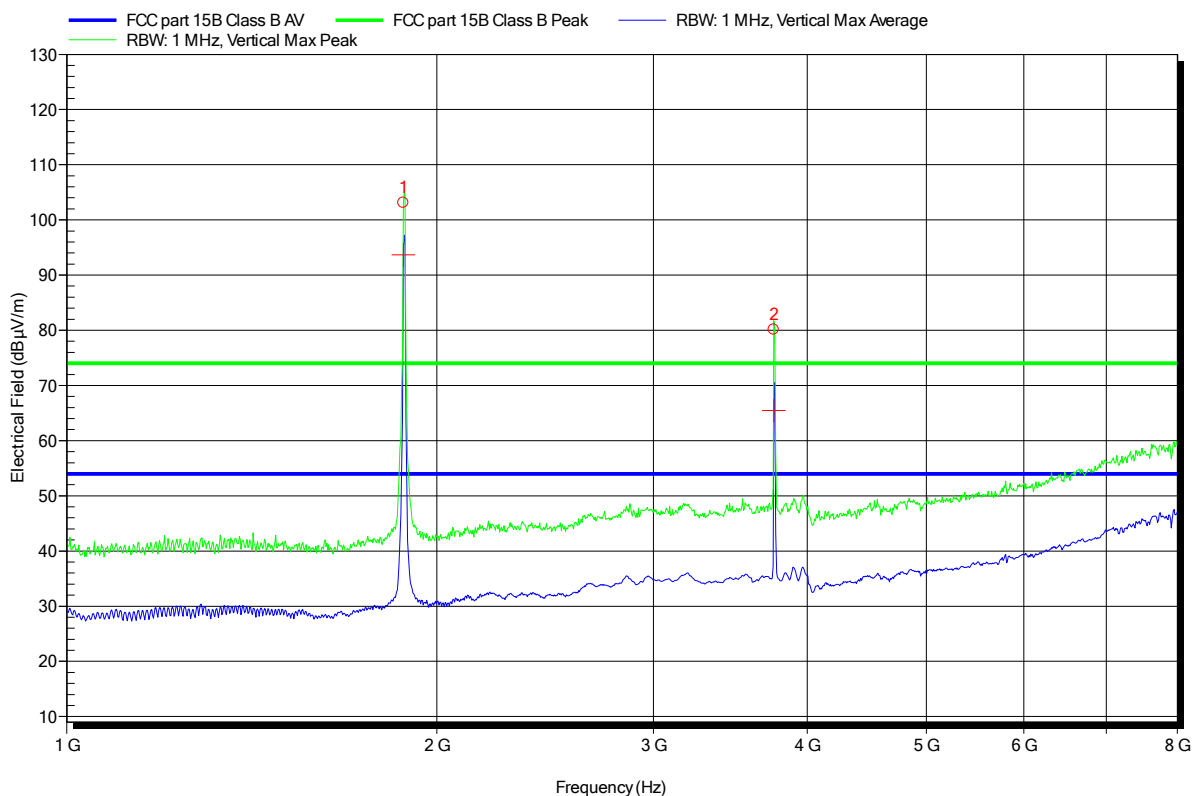
| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|-------------------|
| 1.881 GHz | 87.12 dBµV/m | 54 dBµV/m | 33.12 dB | UMTS FDD II(1900) |
| 3.763 GHz | 52.27 dBµV/m | 54 dBµV/m | -1.73 dB | Harmonics |

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: UMTS FDD II
 Test Date: 2015-04-24
 Note: UMTS FDD II and harmonics

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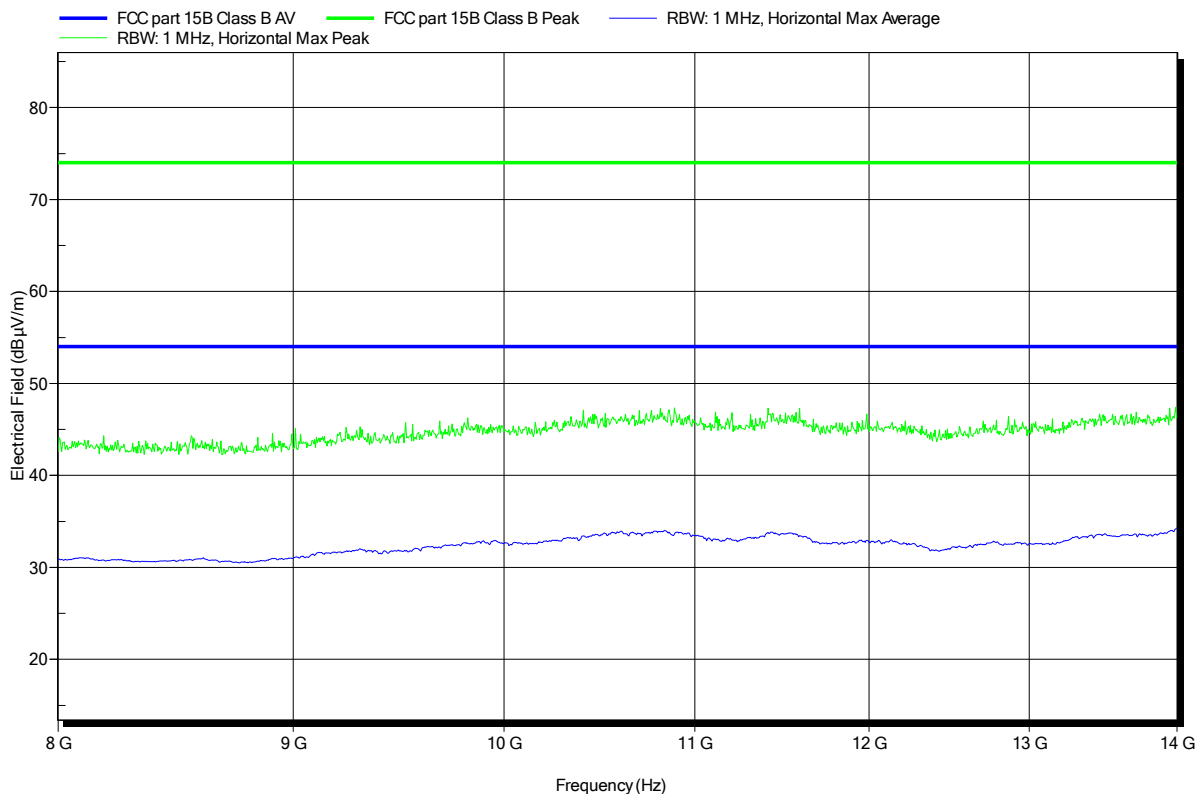
| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|-------------------|
| 1.879 GHz | 93.65 dBµV/m | 54 dBµV/m | 39.65 dB | UMTS FDD II(1900) |
| 3.758 GHz | 65.48 dBµV/m | 54 dBµV/m | 11.48 dB | Harmonics |

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-27 |
| Note: | |

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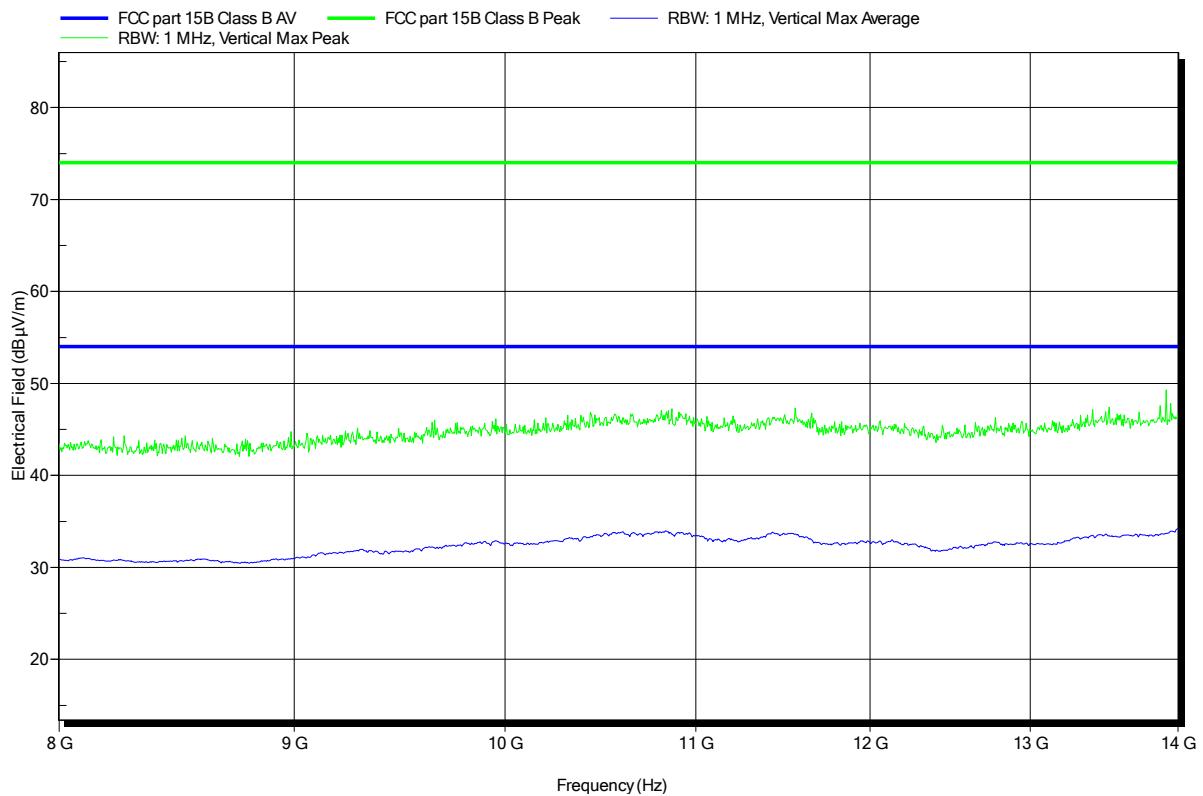


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD II |
| Test Date: | 2015-04-27 |
| Note: | |

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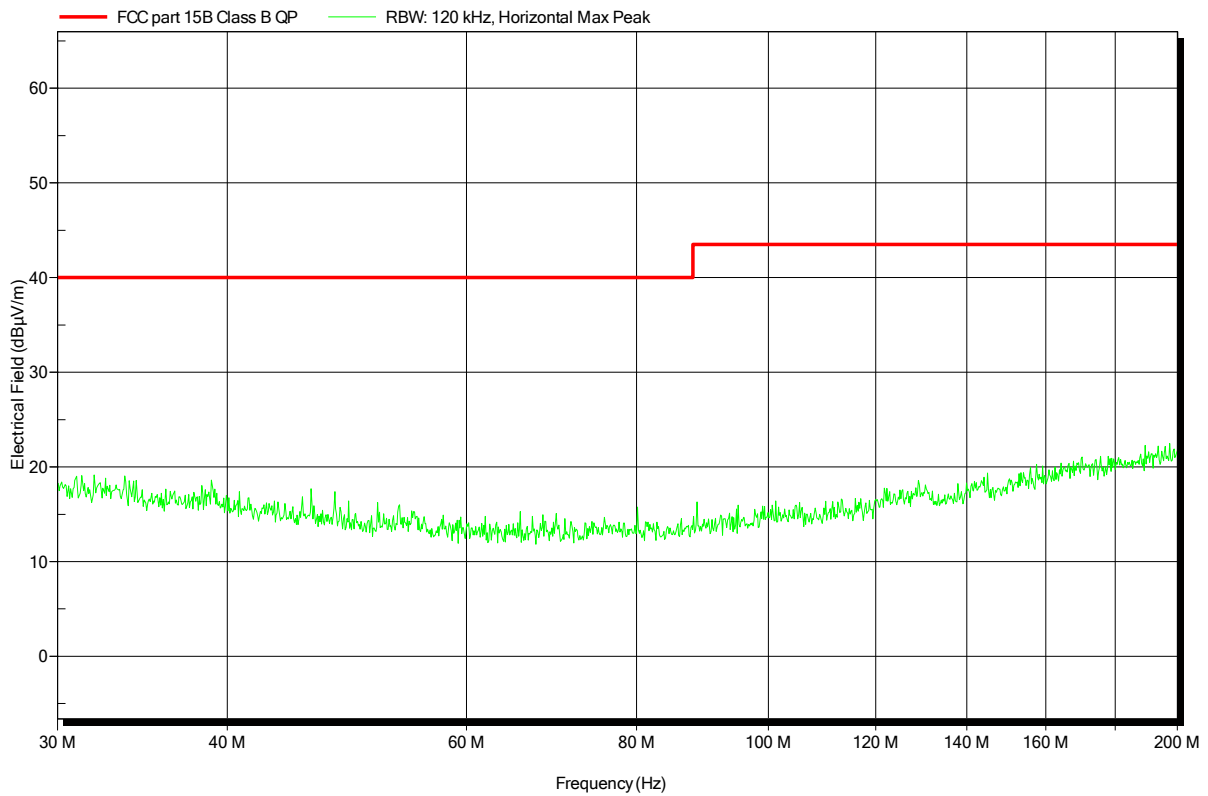


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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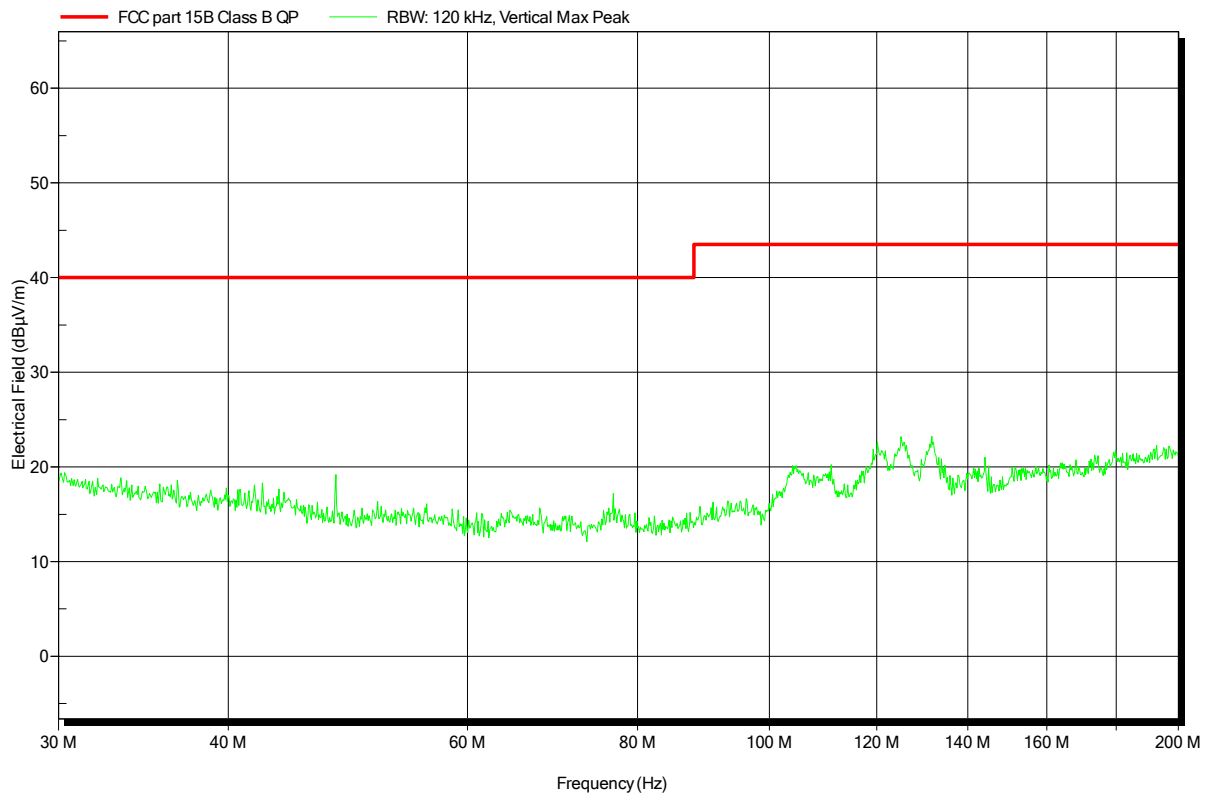


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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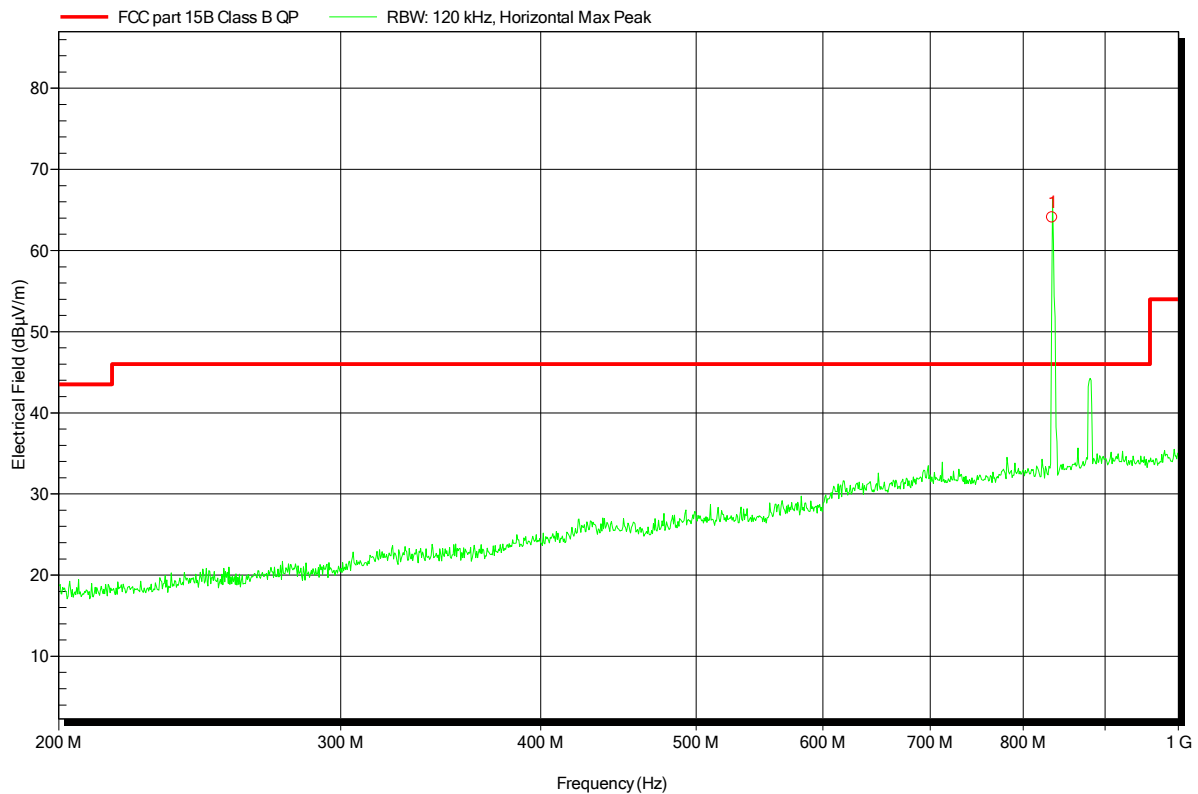


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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 Frequency
834.15 MHz

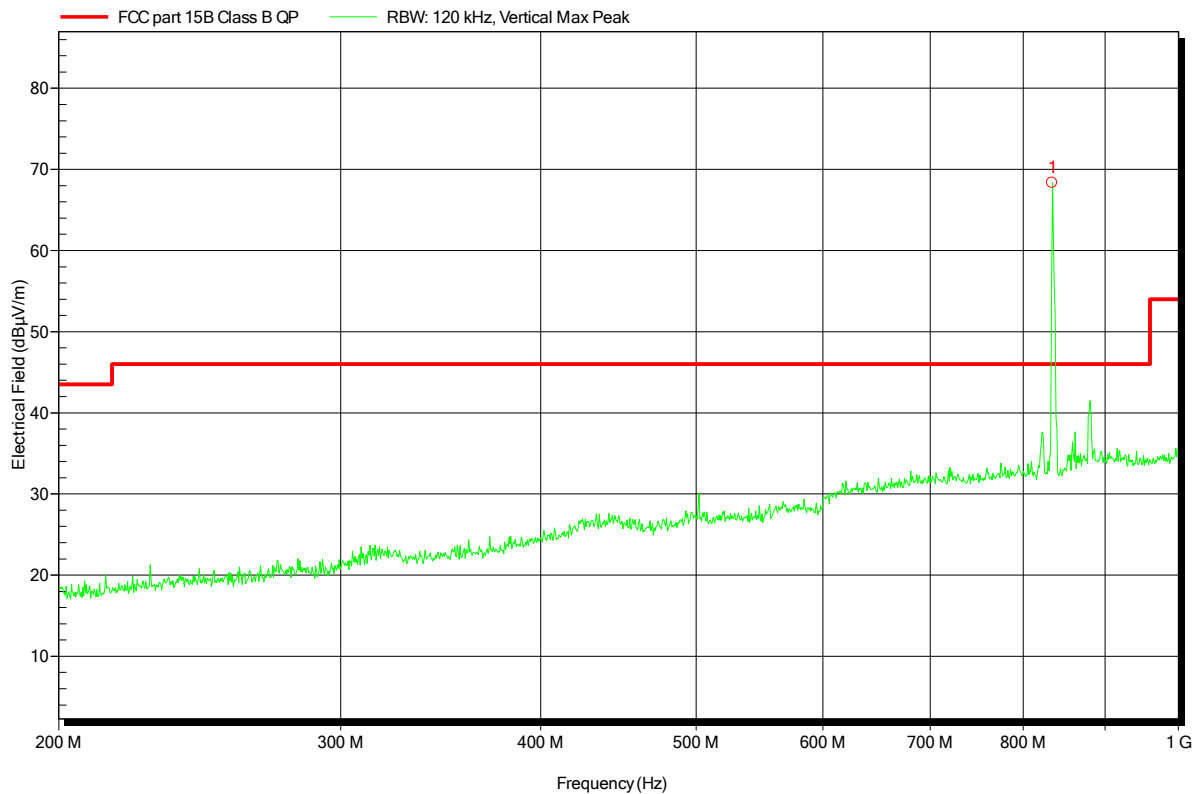
UMTS FDD V(850)

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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 Frequency
 834.099 MHz

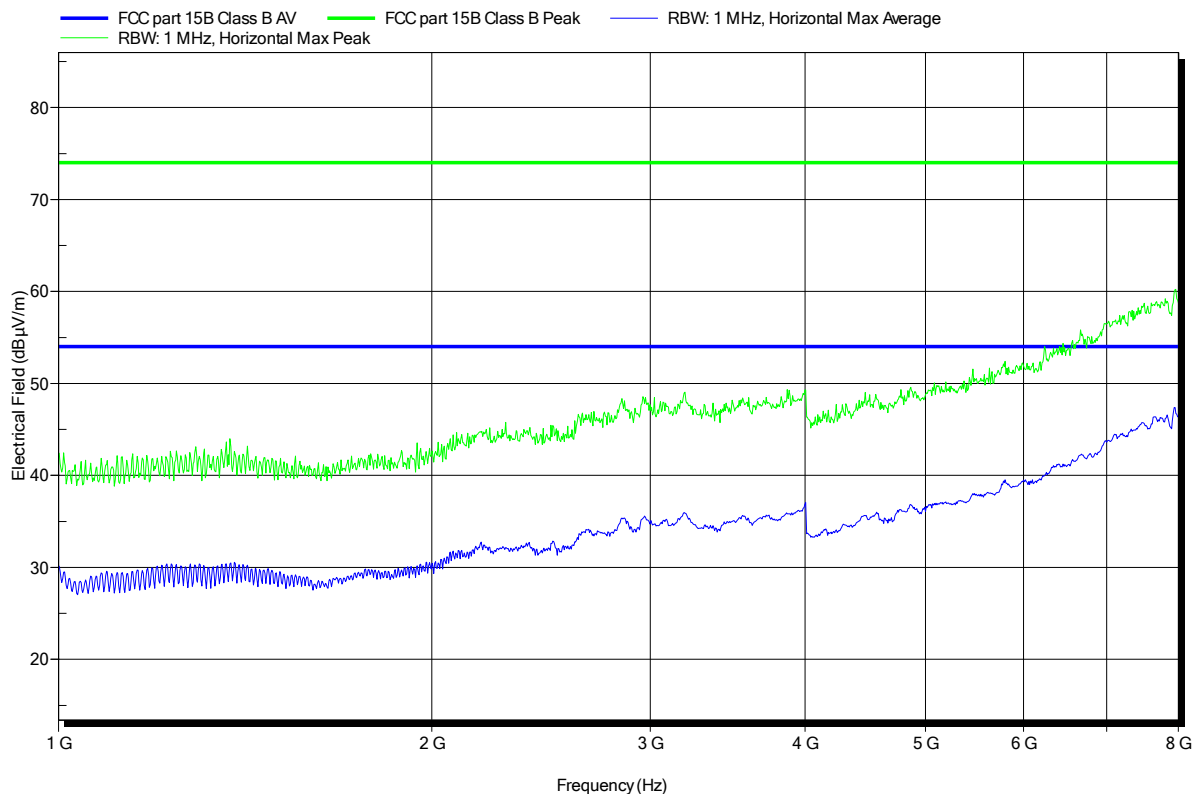
UMTS FDD V(850)

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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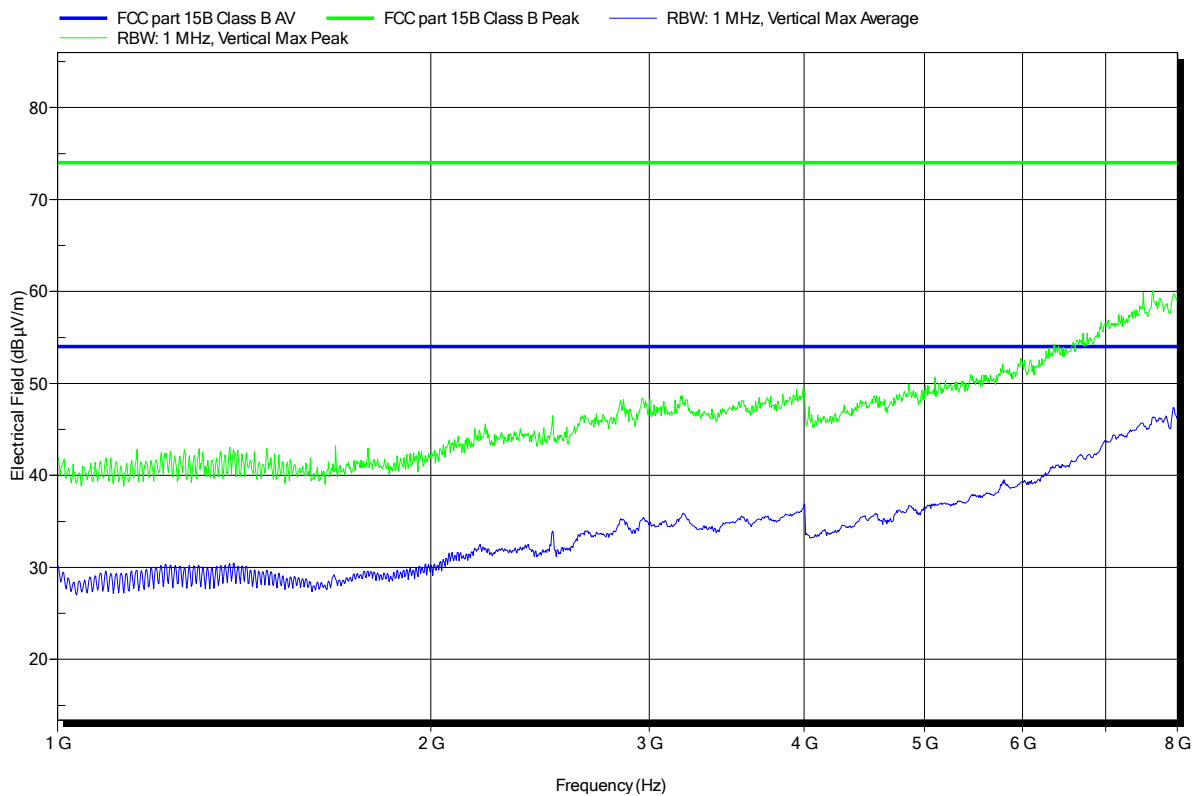


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-24 |
| Note: | |

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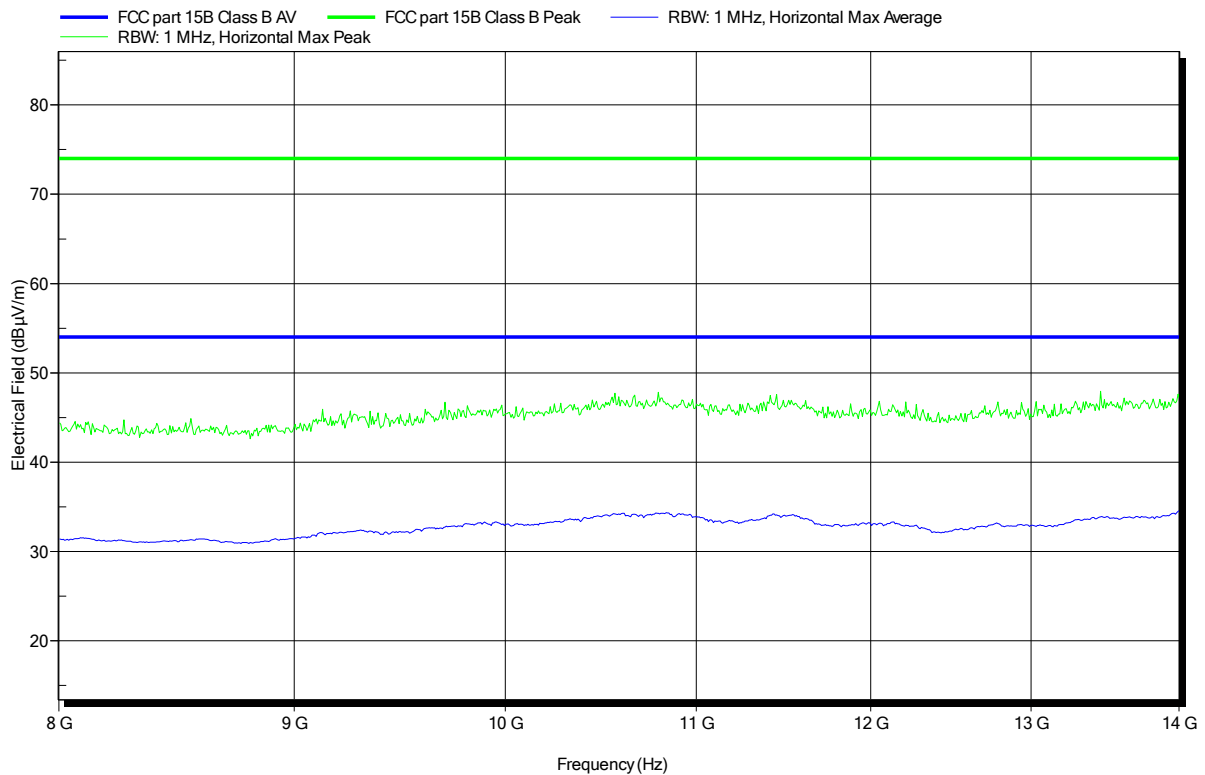


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-27 |
| Note: | |

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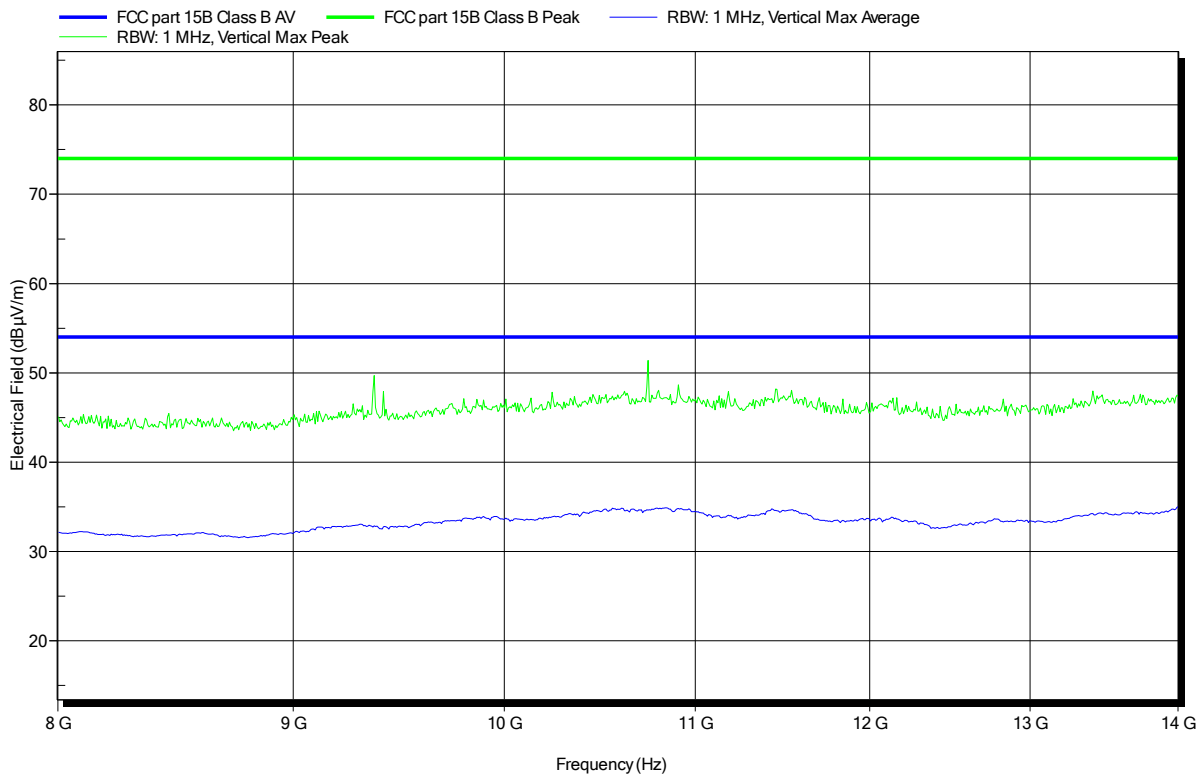


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | UMTS FDD V |
| Test Date: | 2015-04-27 |
| Note: | |

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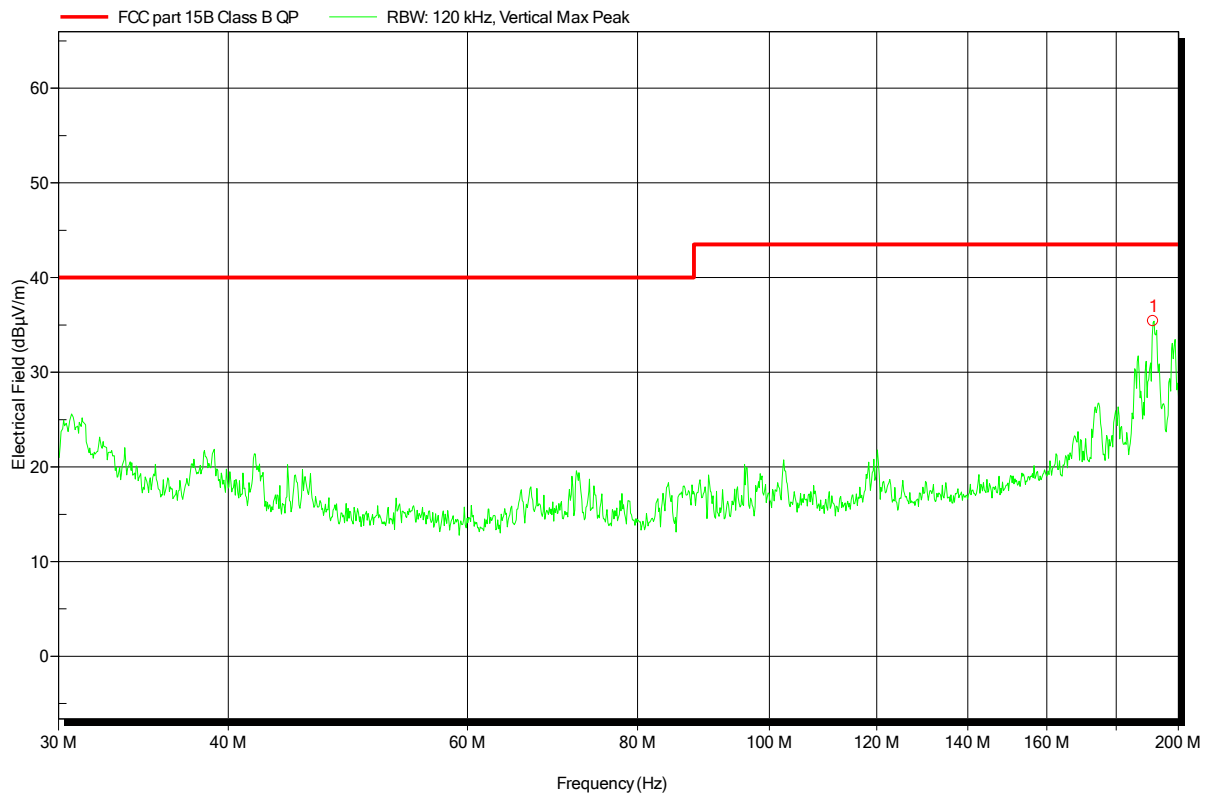


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HK 116, Vertical |
| Measurement distance: | 3m |
| Mode: | BLE+USB |
| Test Date: | 2015-04-14 |
| Note: | |

Index 1

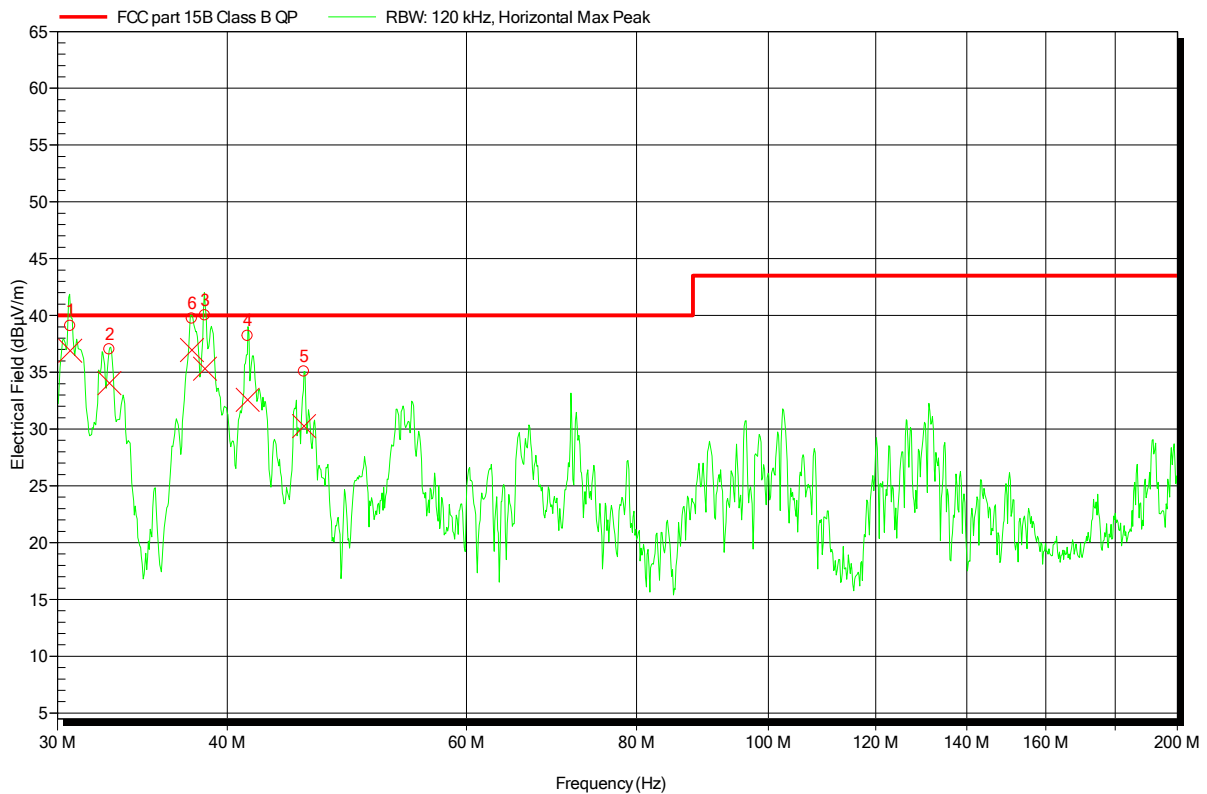

 Frequency
 191.64 MHz

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: BLE+USB
 Test Date: 2015-04-14
 Note:

Index 2



| Frequency | Quasi-Peak | Quasi-Peak Limit | Quasi-Peak Difference | Quasi-Peak Status |
|------------|--------------|------------------|-----------------------|-------------------|
| 30.66 MHz | 36.89 dBµV/m | 40 dBµV/m | -3.11 dB | Pass |
| 32.76 MHz | 34.05 dBµV/m | 40 dBµV/m | -5.95 dB | Pass |
| 37.68 MHz | 36.95 dBµV/m | 40 dBµV/m | -3.05 dB | Pass |
| 38.52 MHz | 35.33 dBµV/m | 40 dBµV/m | -4.67 dB | Pass |
| 41.412 MHz | 32.58 dBµV/m | 40 dBµV/m | -7.42 dB | Pass |
| 45.552 MHz | 30.26 dBµV/m | 40 dBµV/m | -9.74 dB | Pass |

Test Report No.: G0M-1502-4503-EF0115B-V02

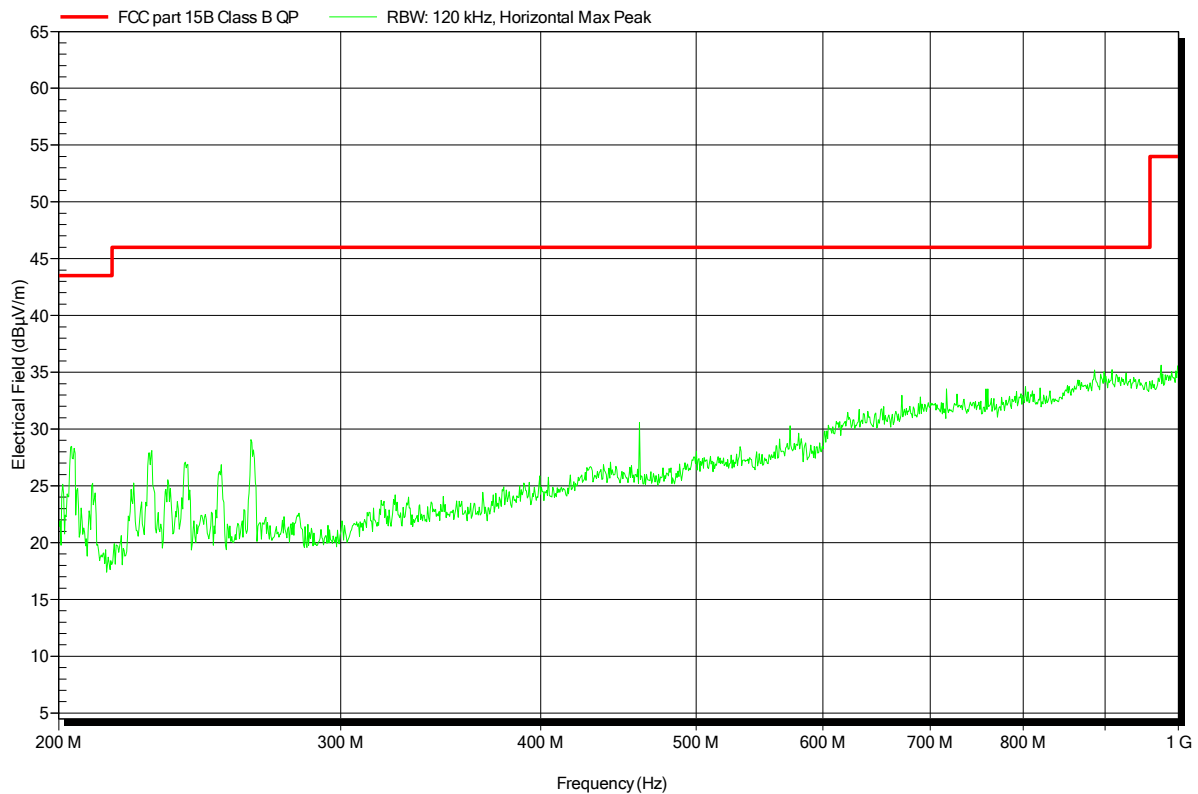
 Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Horizontal |
| Measurement distance: | 3m |
| Mode: | BLE+USB |
| Test Date: | 2015-04-14 |
| Note: | |

Index 3

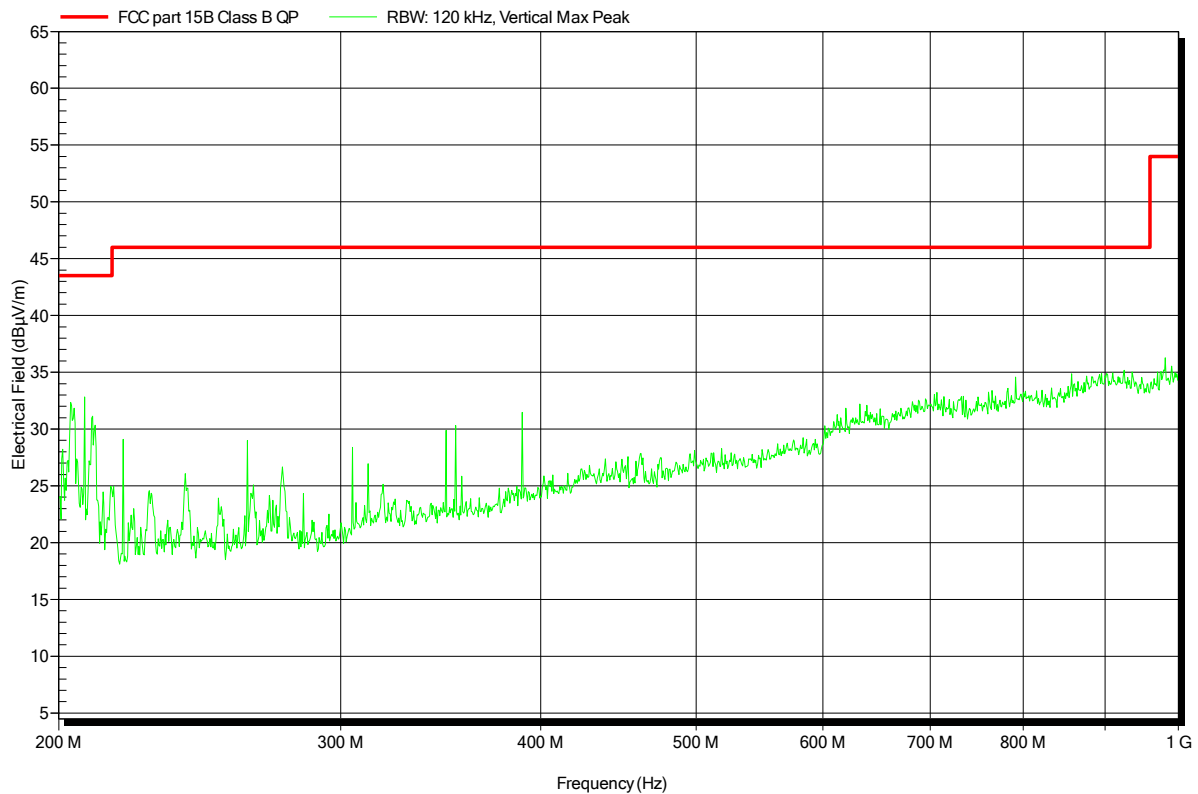


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Rohde & Schwarz HL 223, Vertical |
| Measurement distance: | 3m |
| Mode: | BLE+USB |
| Test Date: | 2015-04-14 |
| Note: | |

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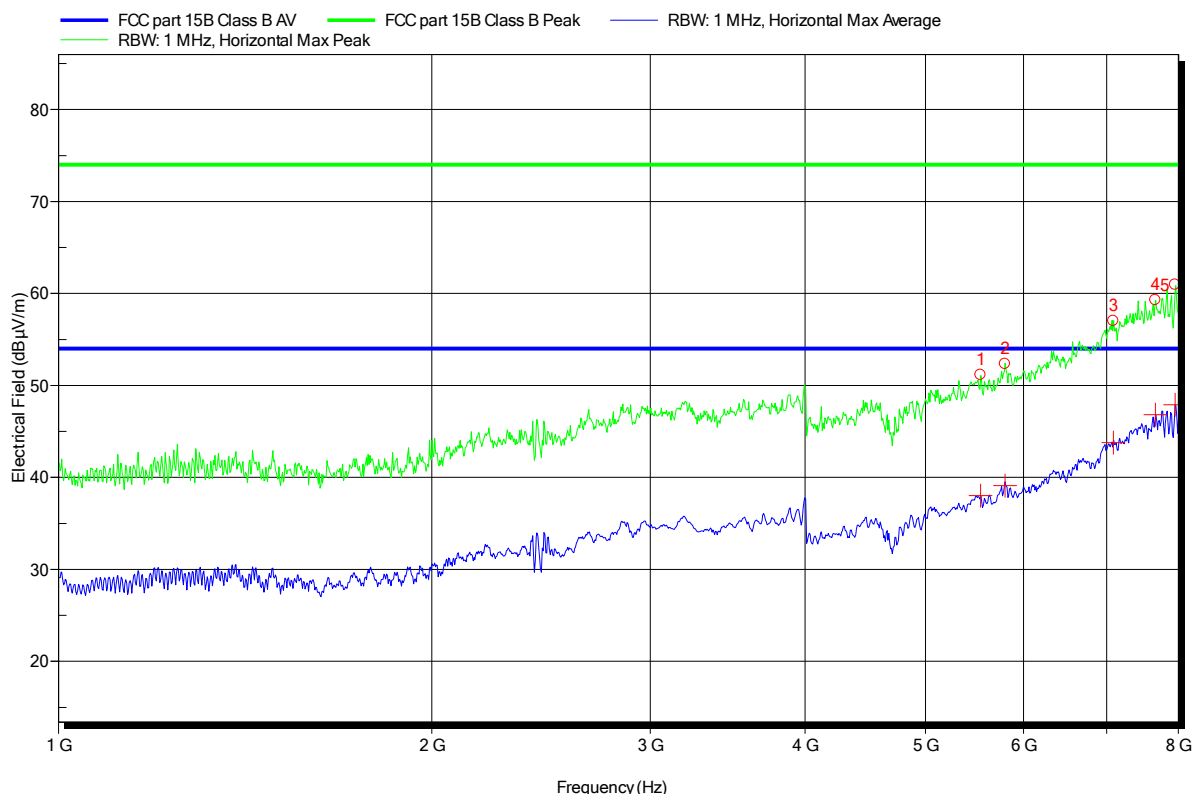


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: BLE+USB
 Test Date: 2015-04-14
 Note:

Index 5



| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|----------------|
| 5.54 GHz | 38.02 dBµV/m | 54 dBµV/m | -15.98 dB | Pass |
| 5.798 GHz | 39.12 dBµV/m | 54 dBµV/m | -14.88 dB | Pass |
| 7.09 GHz | 43.77 dBµV/m | 54 dBµV/m | -10.23 dB | Pass |
| 7.663 GHz | 46.81 dBµV/m | 54 dBµV/m | -7.19 dB | Pass |
| 7.949 GHz | 47.9 dBµV/m | 54 dBµV/m | -6.1 dB | Pass |

Test Report No.: G0M-1502-4503-EF0115B-V02

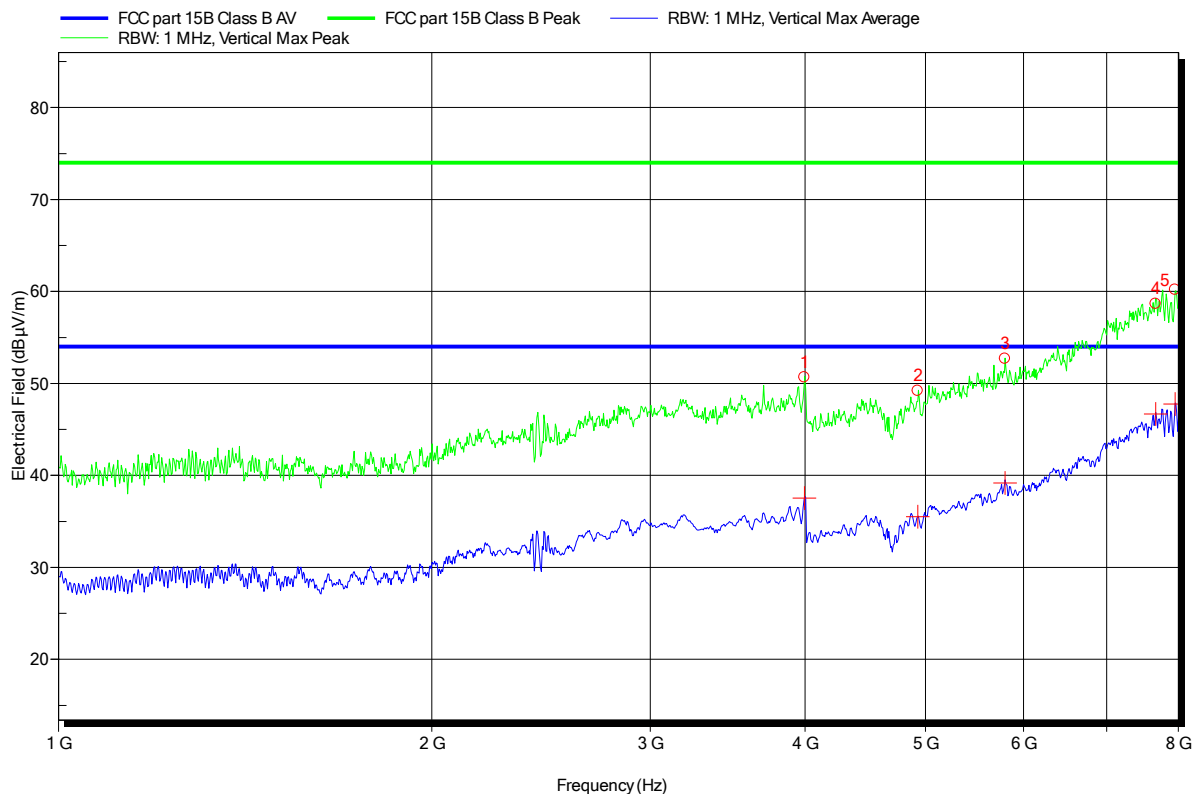
 Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

Applicant: SMT&Hybrid GmbH
 EUT Name: Datenlogger
 Model: MONI LOG data link sensor
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Yu
 Test Conditions: Tnom: 23°C, Unom: 12VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: BLE+USB
 Test Date: 2015-04-14
 Note:

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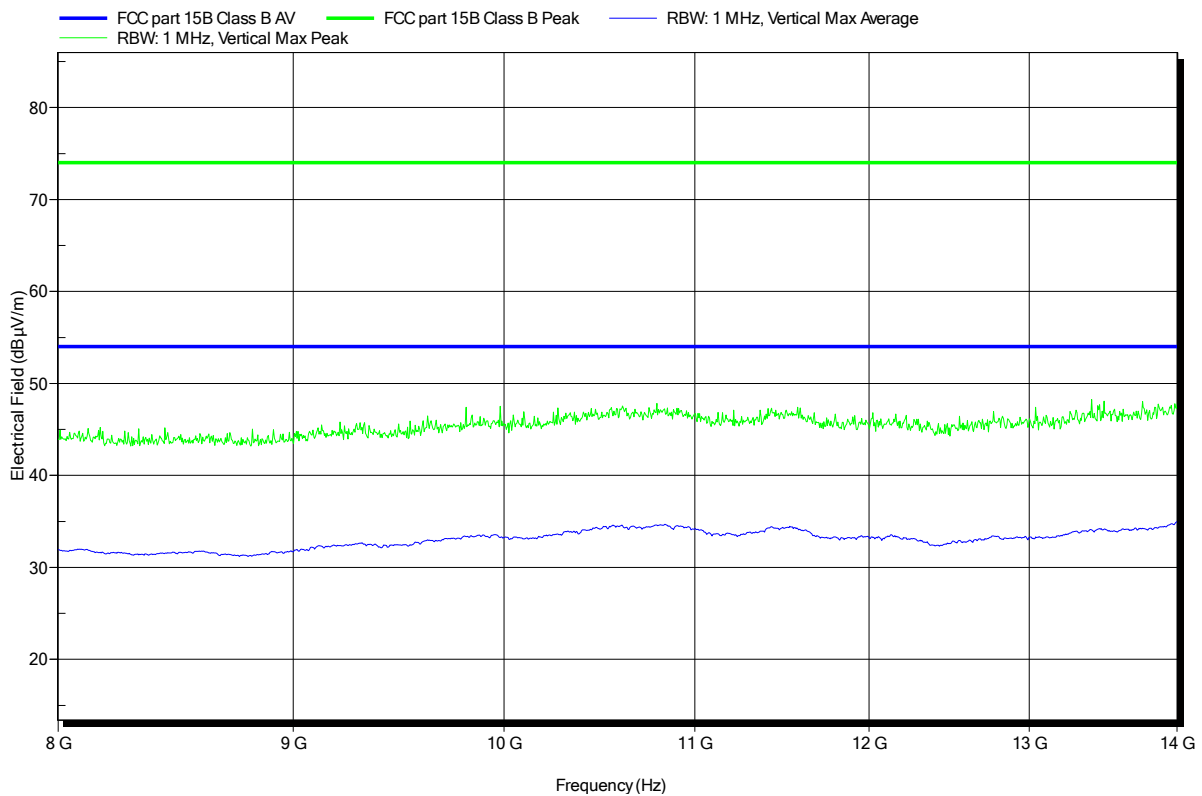
| Frequency | Average | Average Limit | Average Difference | Average Status |
|-----------|--------------|---------------|--------------------|----------------|
| 3.995 GHz | 37.55 dBµV/m | 54 dBµV/m | -16.45 dB | Pass |
| 4.931 GHz | 35.53 dBµV/m | 54 dBµV/m | -18.47 dB | Pass |
| 5.797 GHz | 39.18 dBµV/m | 54 dBµV/m | -14.82 dB | Pass |
| 7.668 GHz | 46.68 dBµV/m | 54 dBµV/m | -7.32 dB | Pass |
| 7.95 GHz | 47.75 dBµV/m | 54 dBµV/m | -6.25 dB | Pass |

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|----------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Vertical |
| Measurement distance: | 3m |
| Mode: | BLE+USB |
| Test Date: | 2015-04-14 |
| Note: | |

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Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1502-4503

| | |
|-----------------------|------------------------------------|
| Applicant: | SMT&Hybrid GmbH |
| EUT Name: | Datenlogger |
| Model: | MONI LOG data link sensor |
| Test Site: | Eurofins Product Service GmbH |
| Operator: | Mr. Yu |
| Test Conditions: | Tnom: 23°C, Unom: 12VDC |
| Antenna: | Schwarzbeck BBHA 9120D, Horizontal |
| Measurement distance: | 3m |
| Mode: | BLE+USB |
| Test Date: | 2015-04-14 |
| Note: | |

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