

RADIO REPORT FCC 47 CFR Part 15C ISED Canada RSS-247 Digital transmission systems operating within the 2400.0 MHz – 2483.5 MHz band	
Report Reference No	G0M-2006-9096-TFC247BL-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    DAkkS - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A-2 DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	Humotion GmbH
Address	Heerdestraße 23 48149 Münster Germany
Test Specification	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 1, 2019-03
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	DX Datalogger
Model(s)	DX 5.0 BTLE
Additional Model(s)	None
Brand Name(s)	None
Hardware Version(s)	Rev 1 (1850100)
Software Version(s)	2.0.519.13613 / 1.0.1.20
FCC-ID	2AO4RDX5036SP
IC	N/A
Test Result	PASSED

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2020-08-19	Test Sample ID 30803
Report:		
Compiled by	Abdullah Al Jamal	
Tested by (+ signature) (Responsible for Test)	Wilfried Treffke	
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn	
Date of Issue	2020-12-15	
Total number of pages	76	
General Remarks:		
The test results presented in this report relate only to the object tested. 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. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		
Internal photos provided by applicant.		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2020-12-15	Initial Release	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
N/A	Not applicable
RBW	Resolution bandwidth
RMS	Root mean square
T _{NOM}	Nominal temperature
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

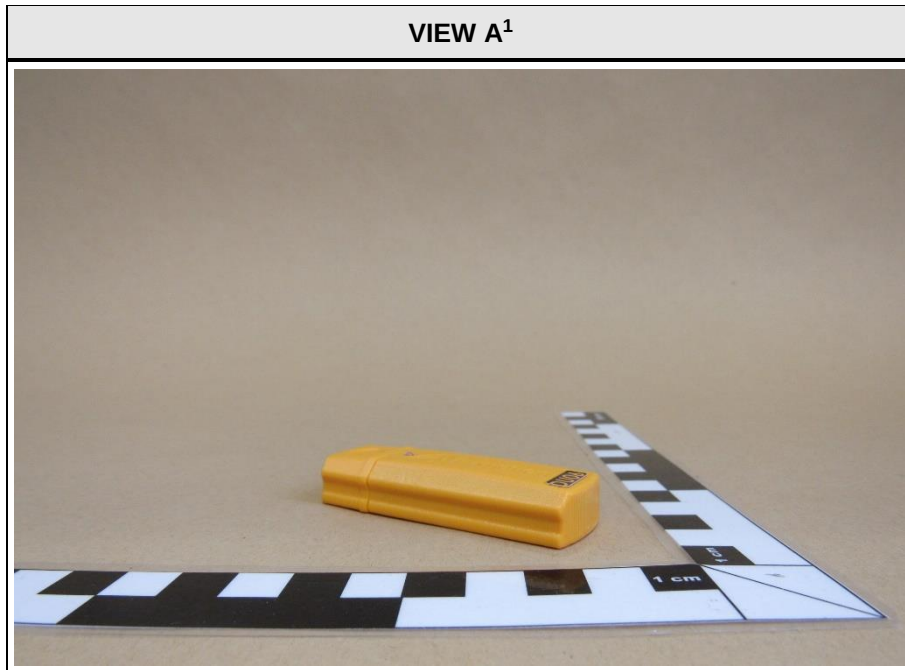
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1 Equipment (Test Item) Under Test

Description	DX Datalogger	
Model	DX 5.0 BTLE	
Additional Model(s)	None	
Brand Name(s)	None	
Serial Number(s)	Not specified.	
Hardware Version(s)	Rev 1 (1850100)	
Software Version(s)	2.0.519.13613 / 1.0.1.20	
PMN	N/A	
HVIN	N/A	
FVIN	N/A	
HMN	N/A	
FCC-ID	2AO4RDX5036SP	
IC	N/A	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400.0 MHz - 2483.5 MHz	
Radio technology	Bluetooth LE 5.0	
Bluetooth Specification	LE 1M PHY	Yes
	LE 2M PHY	Yes
	LE Coded PHY S=8 (125 kbit)	No
	LE Coded PHY S=2 (500 kbit)	No
	Stable Modulation Index - Transmitter	No
	Stable Modulation Index - Receiver	No
Modulation	GFSK	
Number of antenna ports	1	
Radio Module	Type	Bluetooth 5.0 Module with Built-in Antenna
	Model	ISP1807
	Manufacturer	Insight SiP
	HW Version	Data Code 1916A
	SW Version	No module specific firmware used.
Antenna	Type	Integrated built-in antenna of the radio module
	Model	Not specified.
	Manufacturer	Not specified.
	Gain	0.6 dBi (declared by applicant)
Supply Voltage	V _{NOM}	3.7 VDC (internal lithium battery)
Operating Temperature	T _{NOM}	25 °C
AC/DC-Adaptor	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A
Manufacturer	dresden elektronik ingenieurtechnik gmbh Enno-Heidebroek-Straße 12 01237 Dresden GERMANY	

1.1 Photos – Equipment External



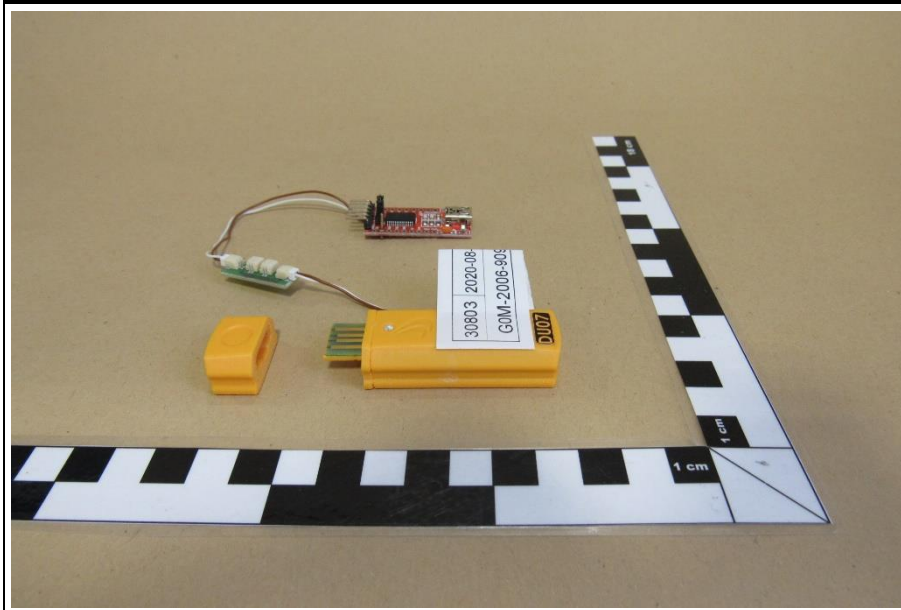
¹EUT measurement position HORIZONTAL

²EUT measurement position VERTICAL

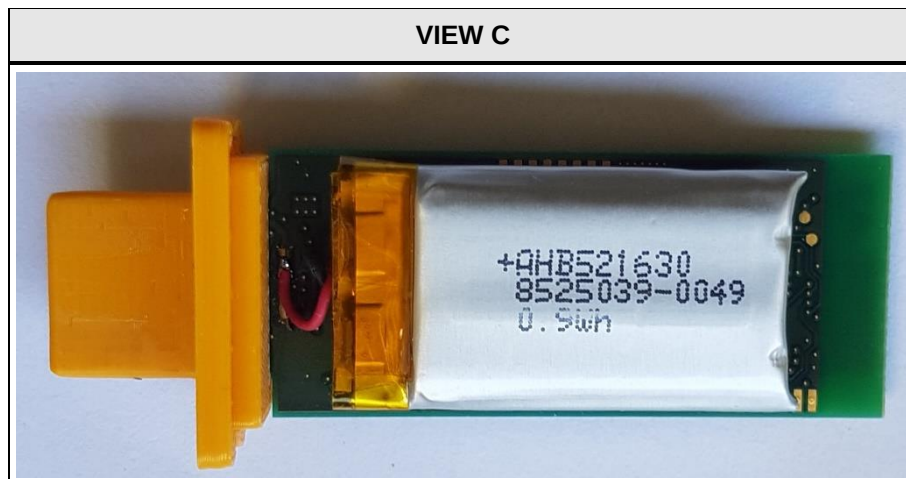
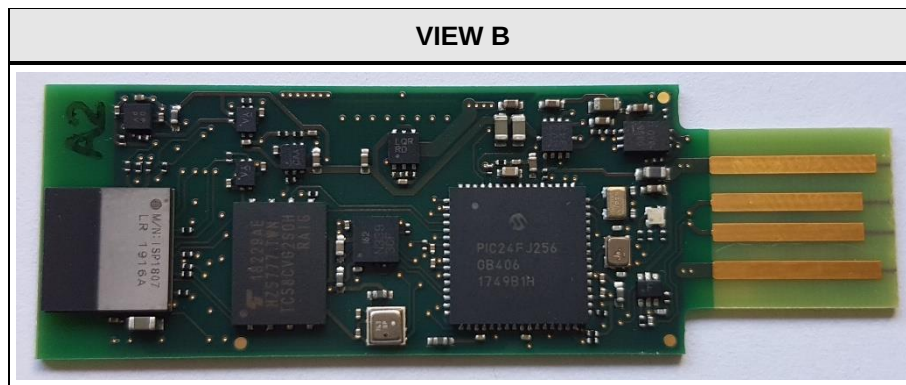
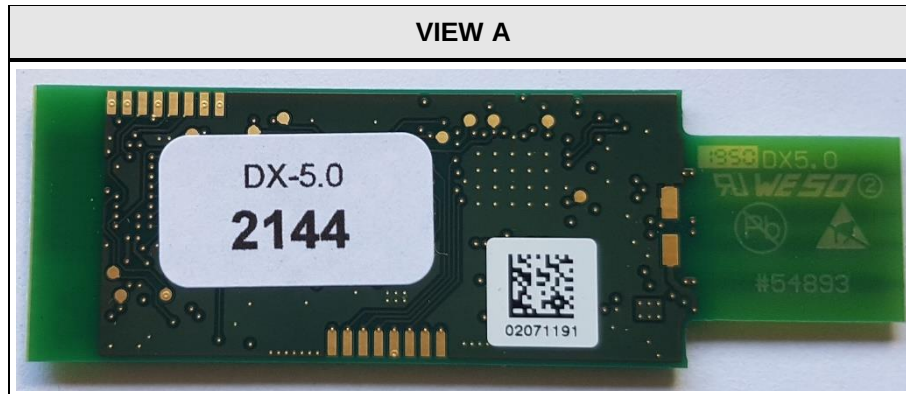
VIEW C



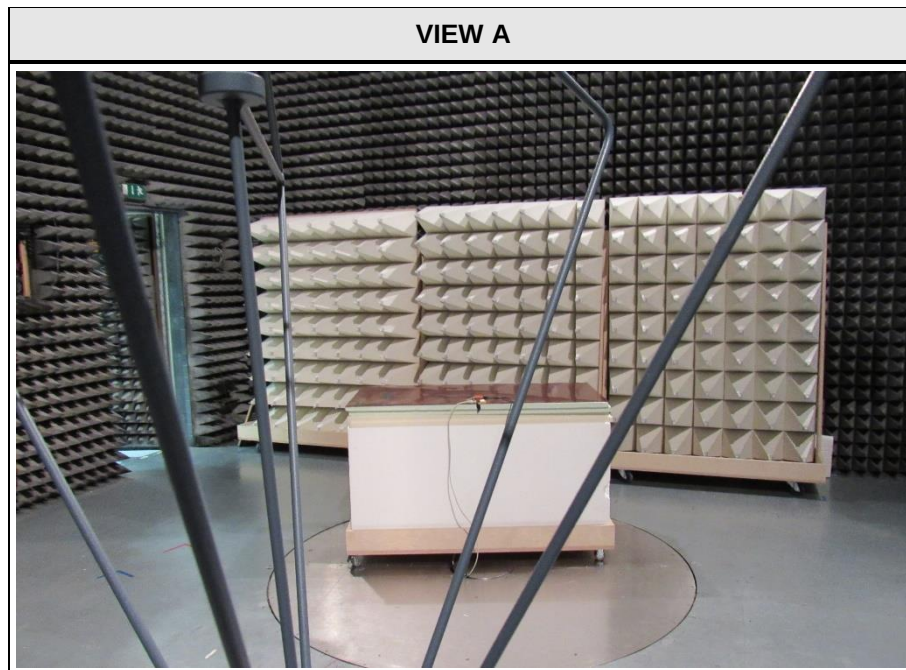
VIEW D



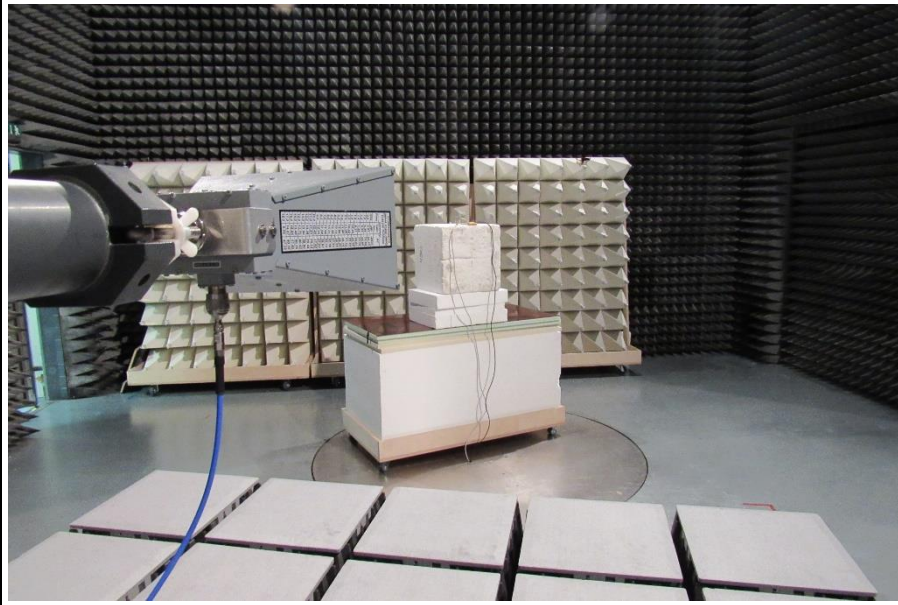
1.2 Photos – Equipment Internal



1.3 Photos – Test Setup



VIEW C



VIEW D



1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE1	Notebook	Lenovo	L470	Serial number PF0VH6SK
AE2	Power Supply AC Adapter	Lenovo	ADLX65NCC3A	2015/07
SFT	nRF Connect	Nordic Semiconductor	Version 3.4.2	Test mode selection EUT
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment: None.				

1.5 Test Modes

Mode	Description
Mode 1	Mode = Transmit (Tx) Modulation = GFSK Spreading = None Data rate = 1 MBit/s Duty cycle = 87 %
Mode 2	Mode = Transmit (Tx) Modulation = GFSK Spreading = None Data rate = 2 MBit/s Duty cycle = 59 %
Mode 3	Mode = Receive (Rx)
Comment: None.	

1.6 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Mode 1 + mode 2	0	2402
F2	Mode 1, mode 2, mode 3	19	2440
F3	Mode 1 + mode 2	39	2480

1.7 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 dBμV. 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:

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

Net:

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

Limit:

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

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

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:

Reading + AF	= Net Reading	:	Net reading - FCC limit	= Margin
+21.5 dBμV + 26 dB/m	= 47.5 dBμV/m	:	47.5 dBμV/m - 57.0 dBμV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 (section 6.6)	Occupied Bandwidth	ANSI C63.10-2013	N/R	
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	N/T	
FCC § 15.247(b)(1) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	N/T	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	N/T	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	N/T	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	N/T	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.10-2013	PASS	
Comment: None.				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - AC powerline conducted emissions

3.1.1 Information

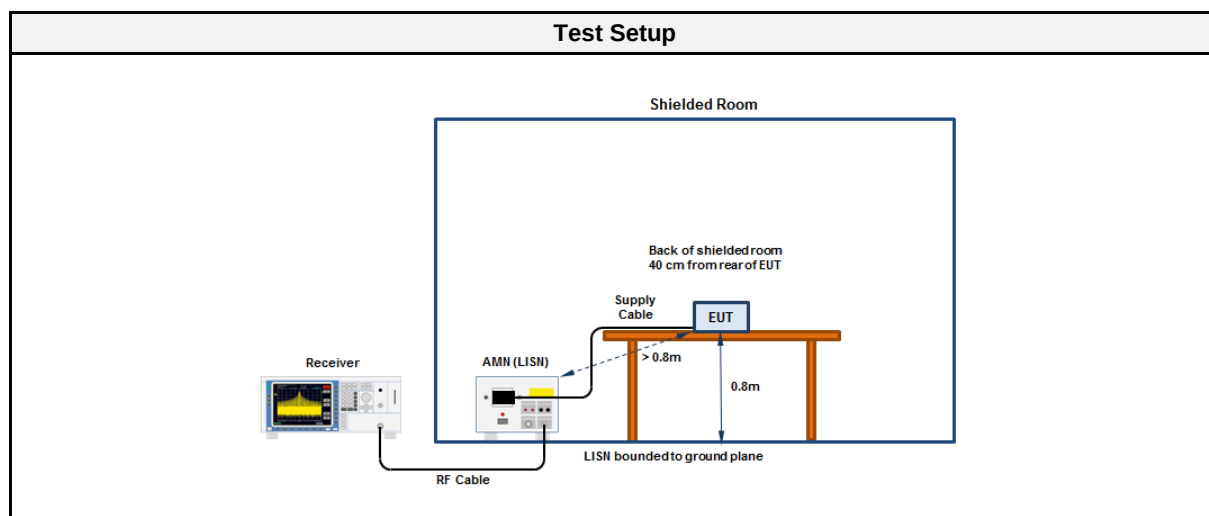
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Stephan Liebich
Date	2020-09-07

3.1.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBμV]	Average [dBμV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50

* Limit decreases linearly with the logarithm of the frequency

3.1.3 Setup



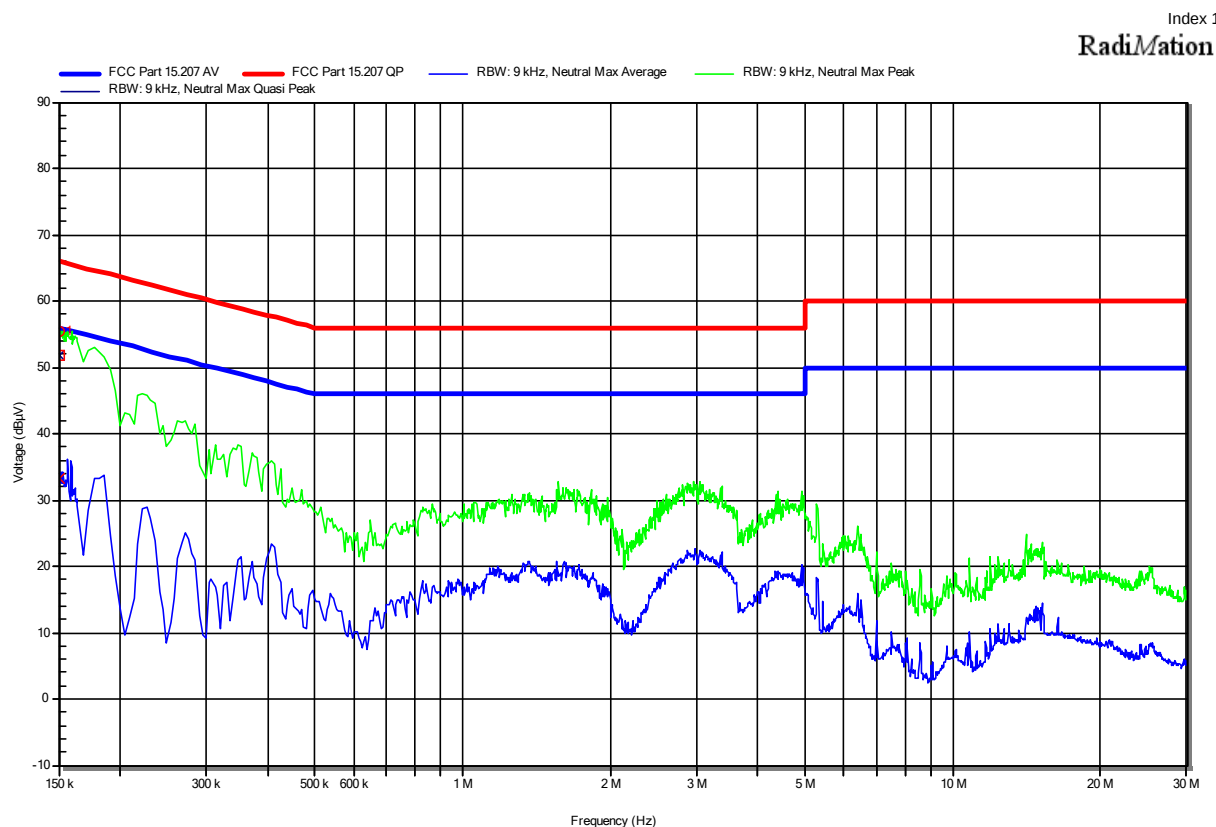
3.1.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESR7	EF00943	2020-07	2021-07
Pulse Limiter	R&S	ESH3-Z2	EF01222	2020-07	2021-07
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2020-07	2021-07

Conducted emissions at the mains power port according to FCC part 15B

Project Number: G0M-2006-9096
 Applicant: Humotion GmbH
 Model Description: DX Datalogger
 Model: DX 5.0 BTLE
 Test Sample ID: 30801
 Test Site: Eurofins Product Service Germany
 Test Date: Monday, September 7, 2020
 Operating Conditions: ambient temperature: 20 °Celsius
 power input: 5.0 V DC via USB connection (connected to Laptop powered by 110 V / 60 Hz)
 LISN: Schwarzbek NSLK 8127 RC N
 Mode: 1
 Applied to Port: USB
 Note 1:



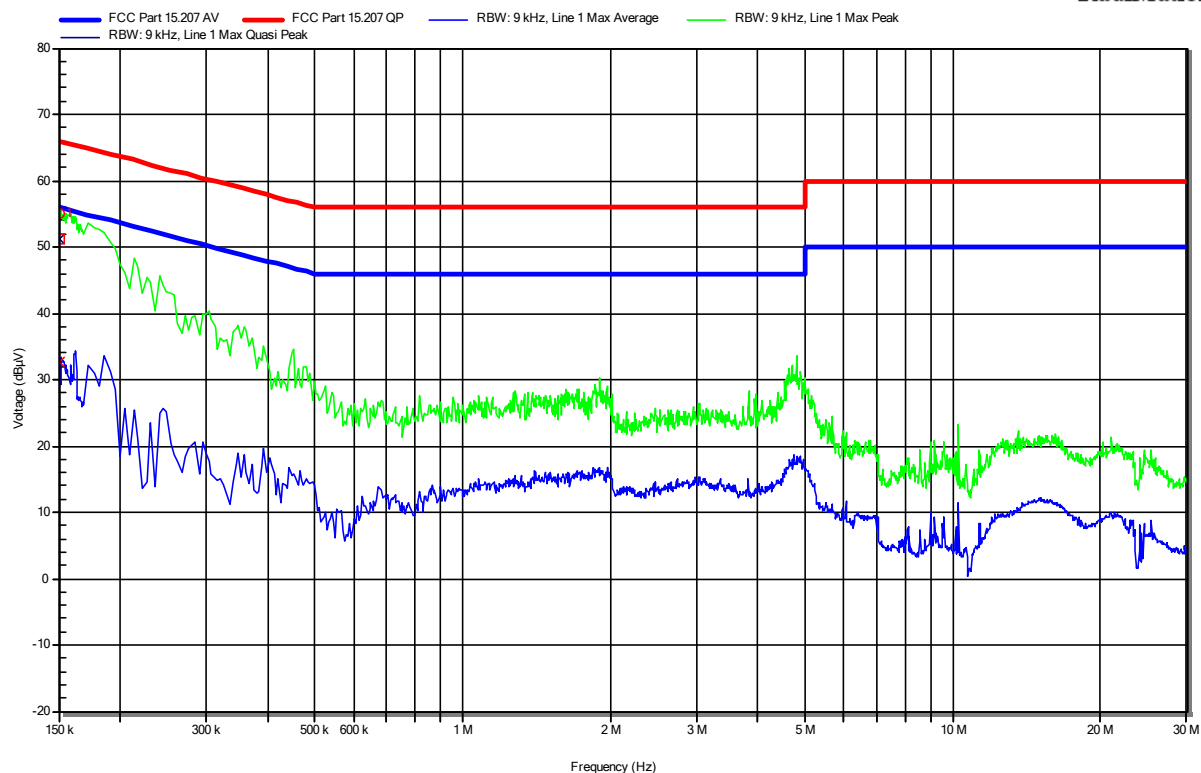
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	150 kHz	51.72 dBµV	66 dBµV	-14.28 dB	Pass	Neutral
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	150 kHz	33.35 dBµV	56 dBµV	-22.65 dB	Pass	Neutral

Conducted emissions at the mains power port according to FCC part 15B

Project Number: G0M-2006-9096
 Applicant: Humotion GmbH
 Model Description: DX Datalogger
 Model: DX 5.0 BTLE
 Test Sample ID: 30801
 Test Site: Eurofins Product Service Germany
 Test Date: Monday, September 7, 2020
 Operating Conditions: ambient temperature: 20 °Celsius
 power input: 5.0 V DC via USB connection (connected to Laptop powered by 110 V / 60 Hz)
 LISN: Schwarzbek NSLK 8127 RC L
 Mode: 1
 Applied to Port: USB
 Note 1:

Index 2

RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	150 kHz	51.3 dBµV	66 dBµV	-14.7 dB	Pass	Line 1
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	150 kHz	32.63 dBµV	56 dBµV	-23.37 dB	Pass	Line 1

3.2 Test Conditions and Results - Transmitter radiated emissions

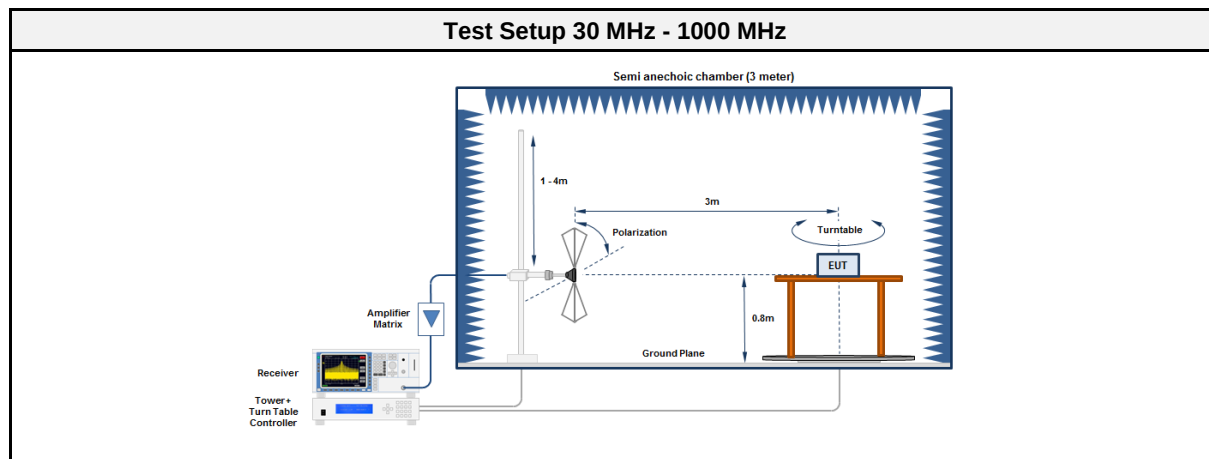
3.2.1 Information

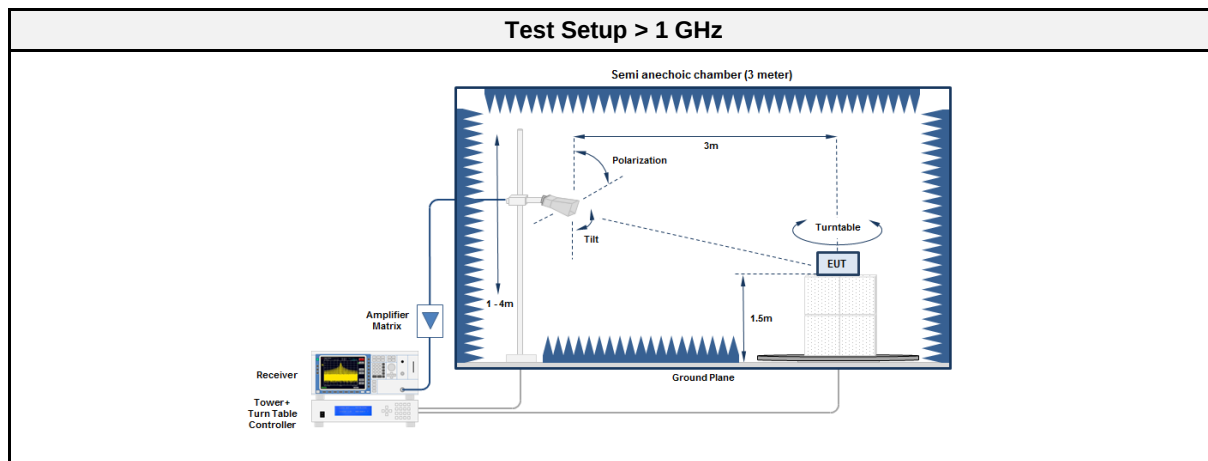
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 (section 6.13)
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Measurement Uncertainty	± 5.95 dB
Operator	Abdullah Al Jamal
Date	2020-08-20
Test Sample ID	30803
Measurement note	Measurement plots not listed in this test report (related to the frequency range to be measured) contain noise floor only. No significant emissions detected in these measurement ranges. An evaluation was performed manually with the spectrum analyser.

3.2.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [μ V/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.2.3 Setup





3.2.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2020-06	2021-06
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2020-06	2021-06
Antenna	Schwarzbeck	BBHA 9120D	EF01153	2019-10	2020-10
Antenna	Amplifier Research	AT4560	EF01152	2018-10	2020-10

3.2.5 Procedure

Test Procedure 30 MHz - 1000 MHz	
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector	

Test Procedure > 1 GHz	
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector	

3.2.6 Results

Test Results							
Mode	Channel Frequency [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
Mode 1	2402	No significant emission detected.					
	2440	7321	56.60	pk	hor	74.00	-17.40
		7321	48.92	avg	hor	54.00	-05.08
		7321	42.76	avg	hor	54.00	-11.24
		7321	55.93	pk	ver	74.00	-18.07
		7321	48.04	avg	ver	54.00	-05.96
		7321	56.17	pk	ver	74.00	-17.83
		7321	48.37	avg	ver	54.00	-05.63
	2480	7441	43.45	avg	hor	54.00	-10.55
		7441	58.13	pk	hor	74.00	-15.87
		7441	50.69	avg	hor	54.00	-03.31
		7441	57.49	pk	ver	74.00	-16.51
		7441	50.00	avg	ver	54.00	-04.00
		7441	45.98	avg	ver	54.00	-08.02
Mode 2	2402	4805	56.26	pk	hor	74.00	-17.74
		4805	45.02	avg	hor	54.00	-08.98
		4805	54.78	pk	ver	74.00	-19.22
		4805	43.95	avg	ver	54.00	-10.05
	2440	7321	55.62	pk	hor	74.00	-18.38
		7321	43.63	avg	hor	54.00	-10.37
		7321	56.58	pk	hor	74.00	-17.42
		7321	44.76	avg	hor	54.00	-09.24
		7321	57.09	pk	ver	74.00	-16.91
		7321	45.36	avg	ver	54.00	-08.64
	2480	7441	57.94	pk	hor	74.00	-16.06
		7441	46.33	avg	hor	54.00	-07.67
		7441	58.41	pk	ver	74.00	-15.59
		7441	46.71	avg	ver	54.00	-07.29
		7442	54.21	pk	ver	74.00	-19.79
		7442	42.15	avg	ver	54.00	-11.85

3.3 Test Conditions and Results - Receiver radiated emissions

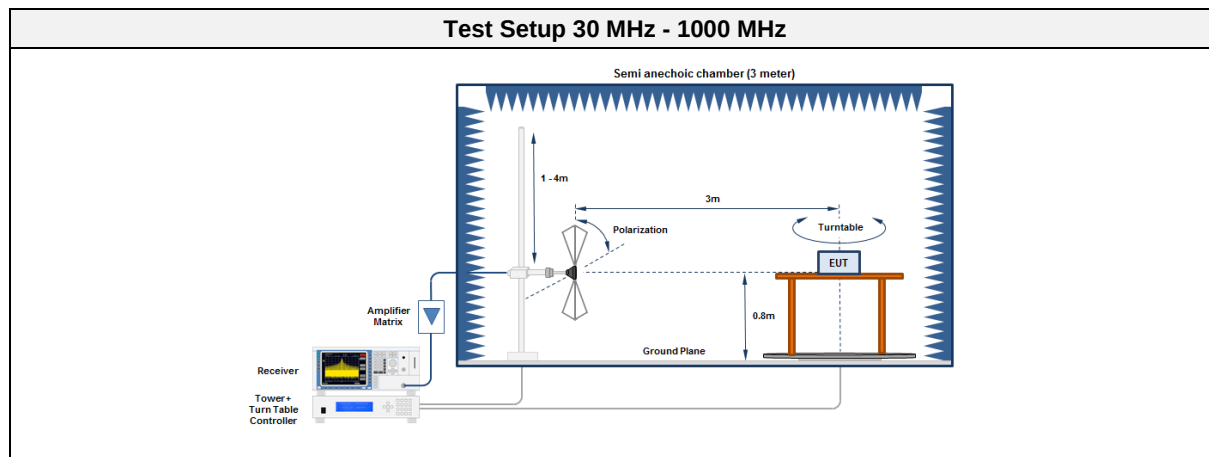
3.3.1 Information

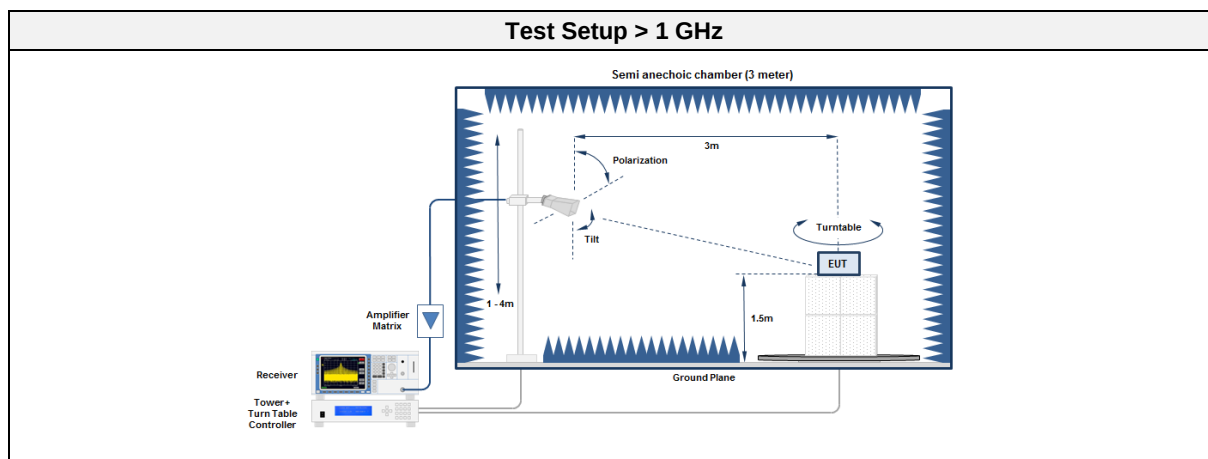
Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.5, 6.6, 11.12
Measurement Uncertainty	± 5.95 dB
Operator	Abdullah Al Jamal
Date	2020-08-20
Test Sample ID	30803
Measurement note	Measurement plots not listed in this test report (related to the frequency range to be measured) contain noise floor only. No significant emissions detected in these measurement ranges. An evaluation was performed manually with the spectrum analyser.

3.3.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [$\mu\text{V/m}$]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.3.3 Setup





3.3.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2020-06	2021-06
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2020-06	2021-06
Antenna	Schwarzbeck	BBHA 9120D	EF01153	2019-10	2020-10
Antenna	Amplifier Research	AT4560	EF01152	2018-10	2020-10

3.3.5 Procedure

Test Procedure 30 MHz - 1000 MHz	
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector	

Test Procedure > 1 GHz	
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector	

3.3.6 Results

Test Results							
Mode	Channel Frequency [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
Mode 3	No significant emission detected.						

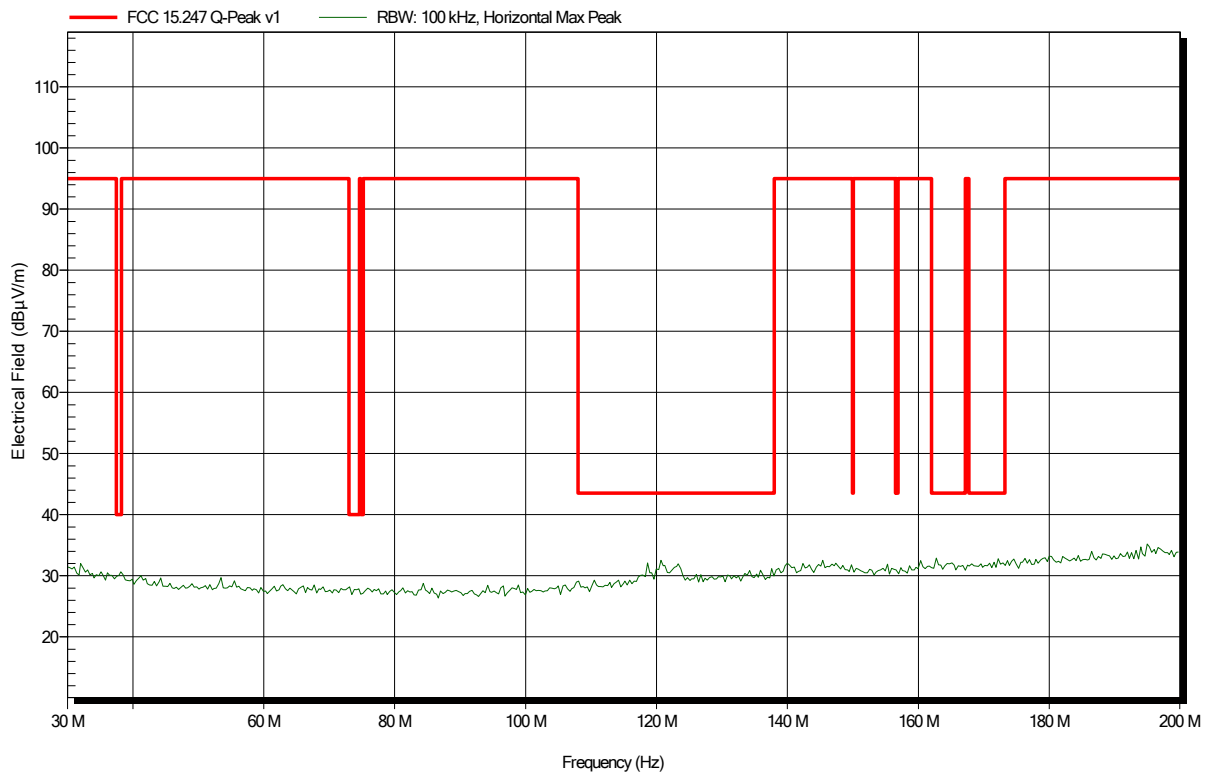
ANNEX A Transmitter spurious emissions

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: HK116, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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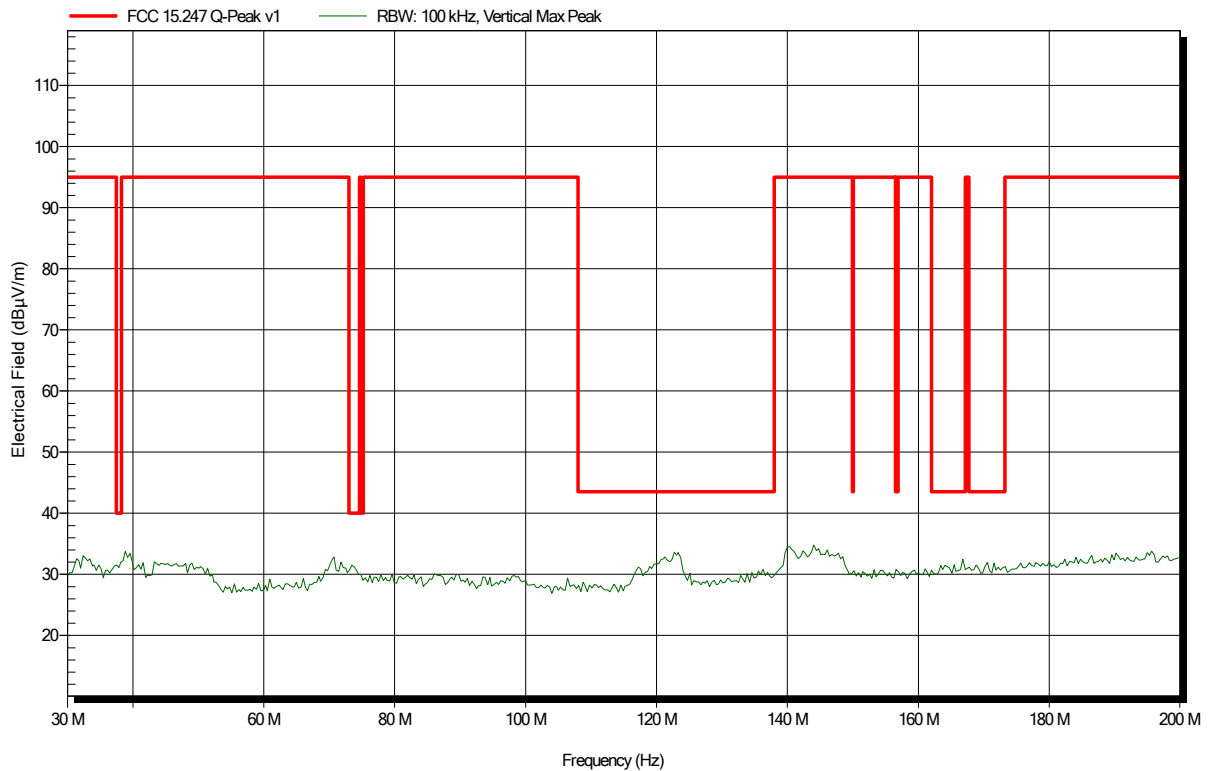


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: HK116, Vertical
Measurement distance: 3 m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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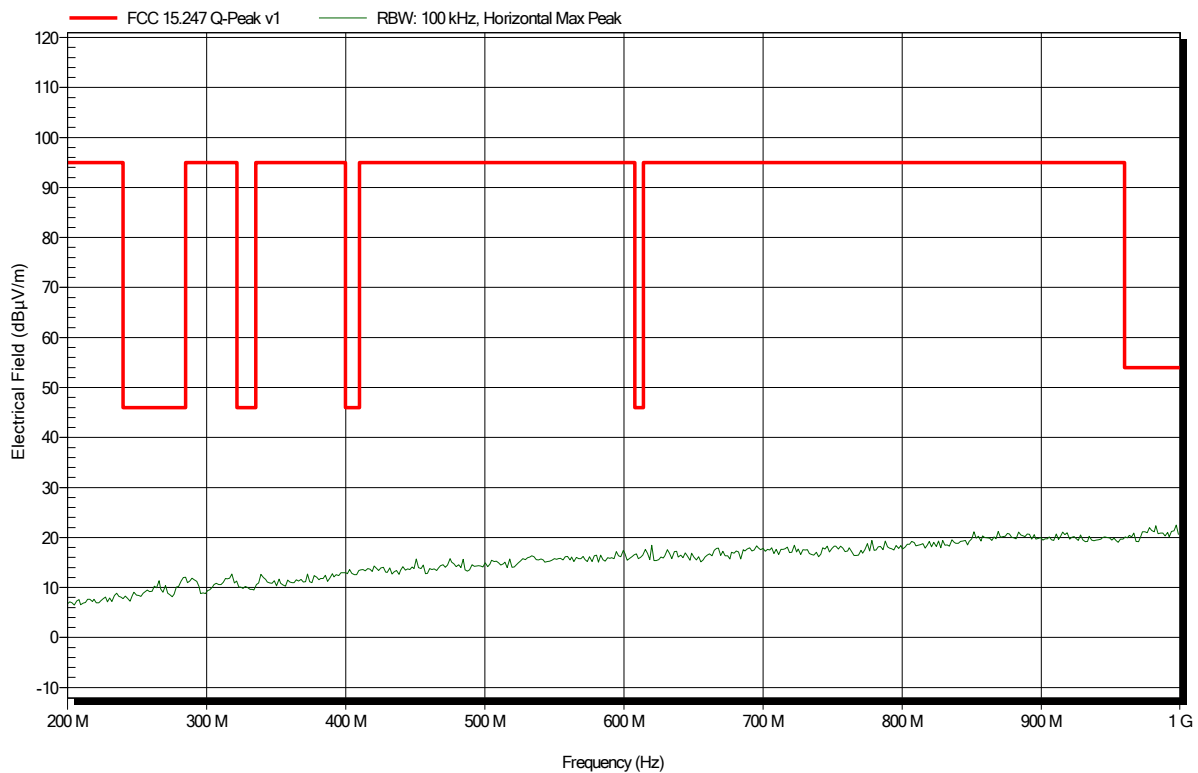


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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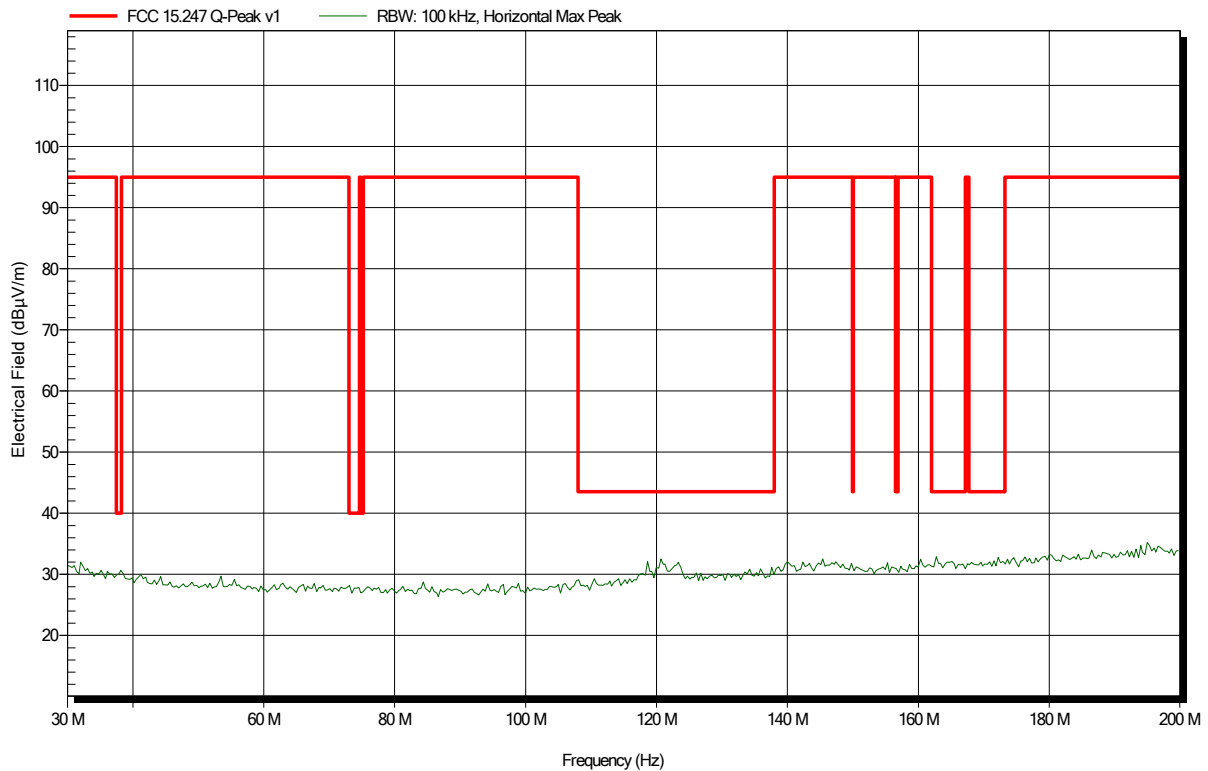


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: HK116, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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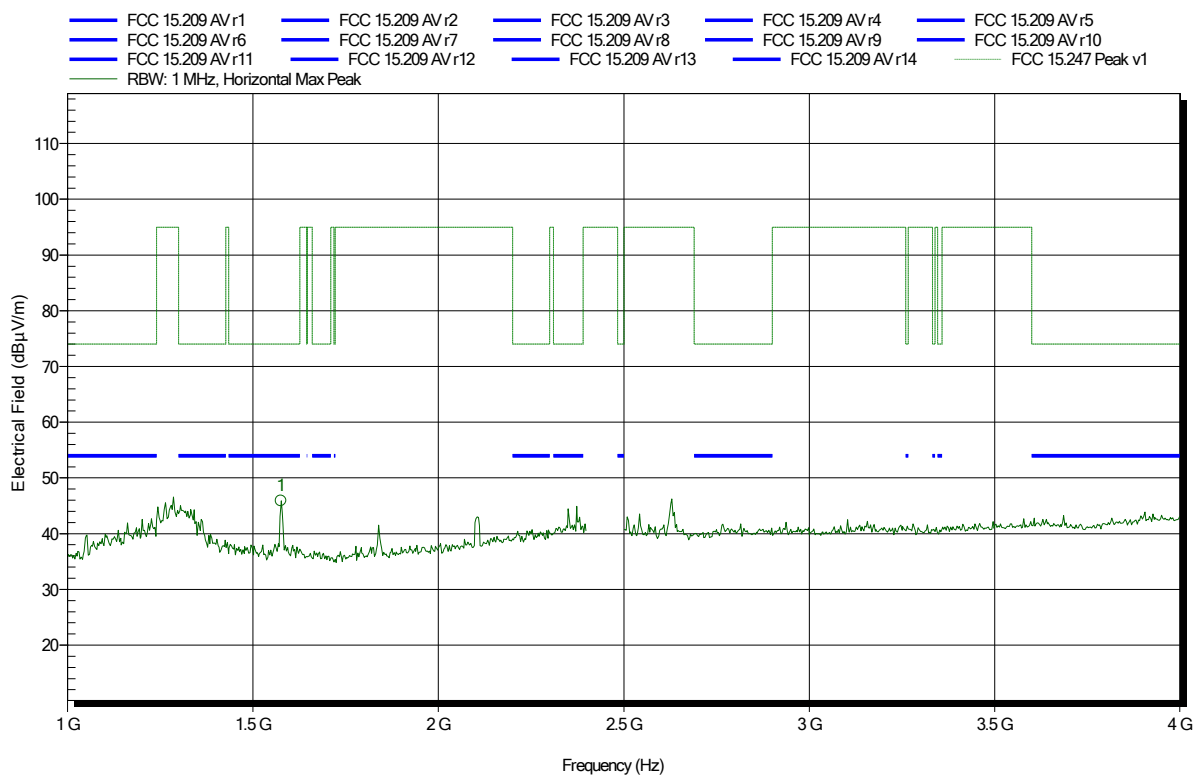


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; Mode 1 – 2480 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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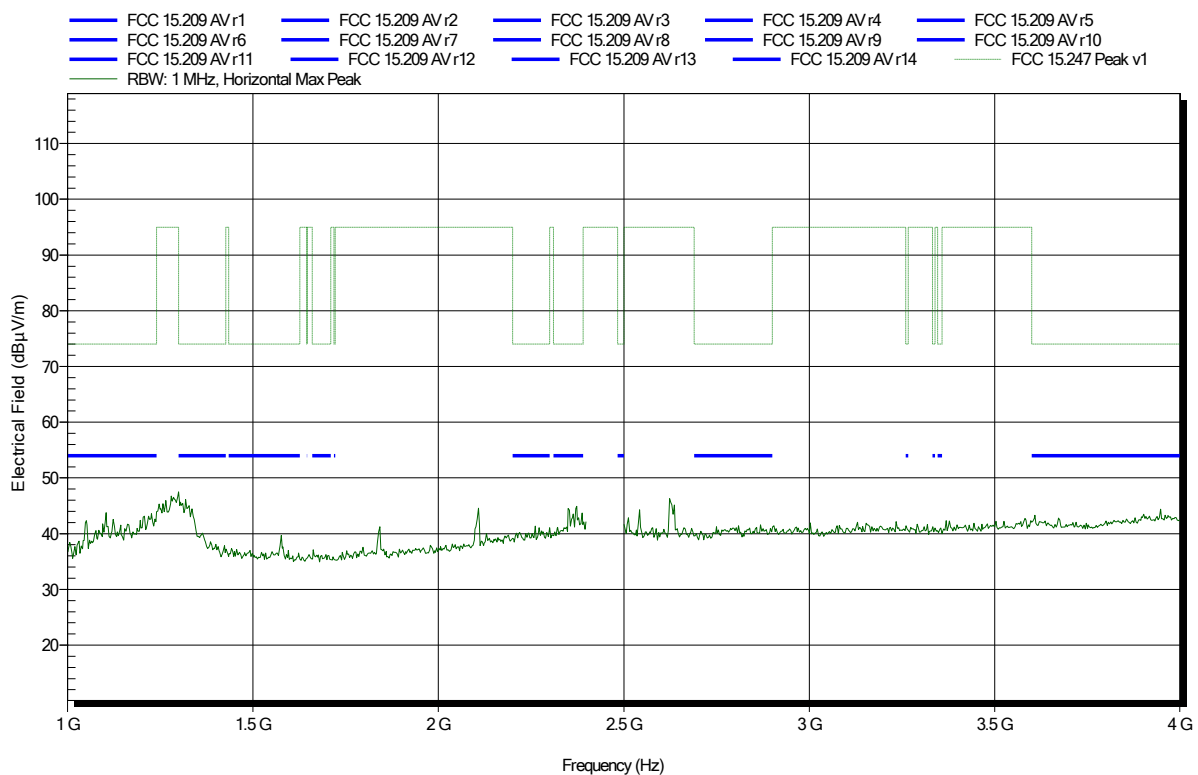
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.576 GHz	45.91 dBμV/m	74 dBμV/m	-28.09 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 2 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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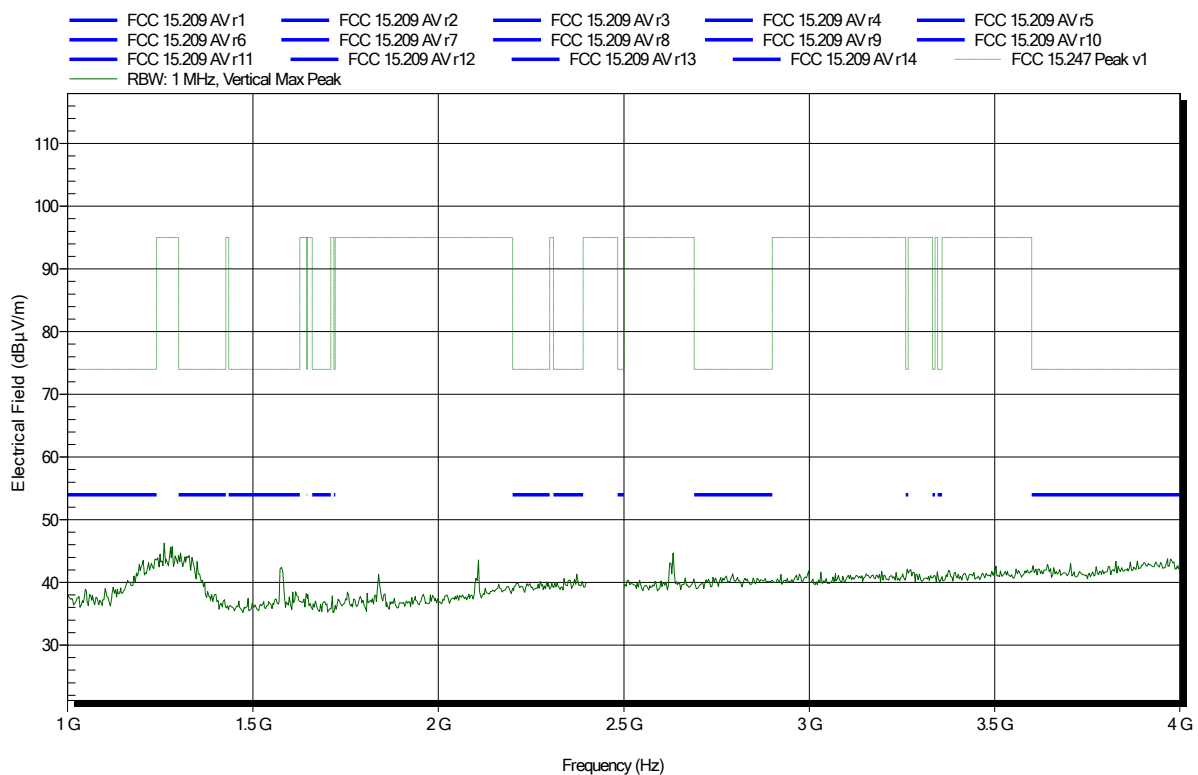


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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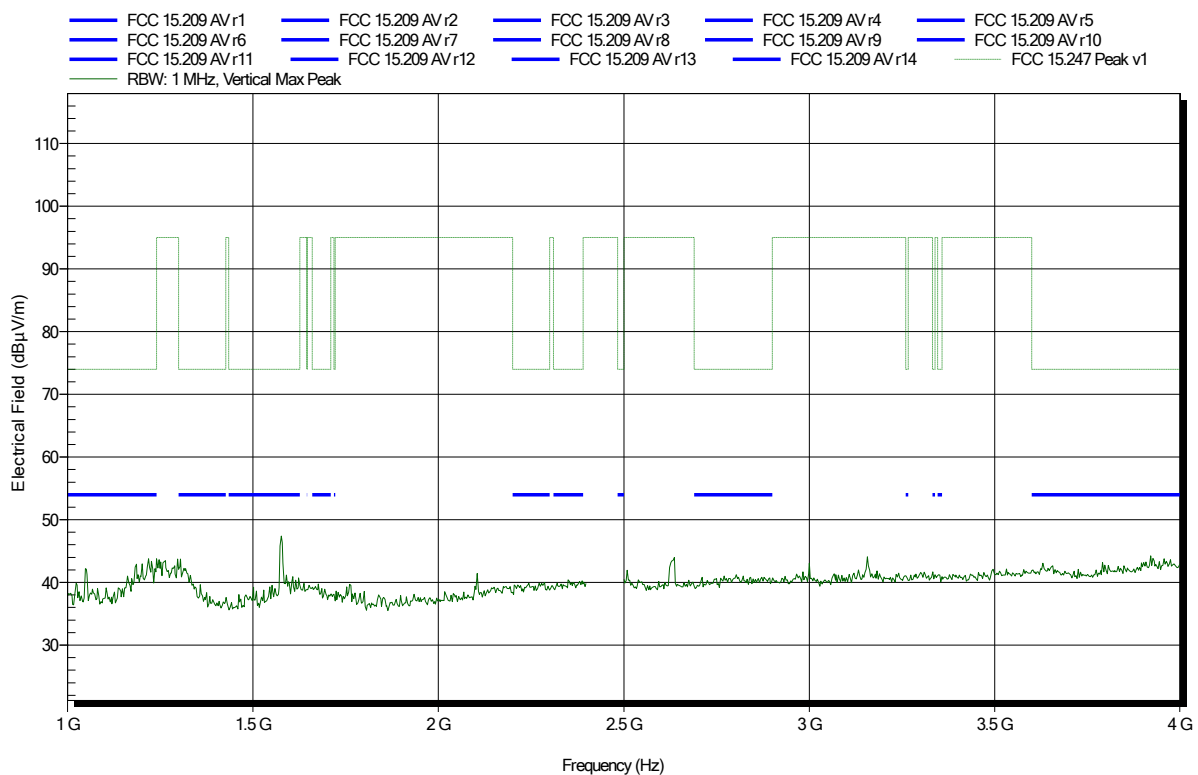


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; Mode 2 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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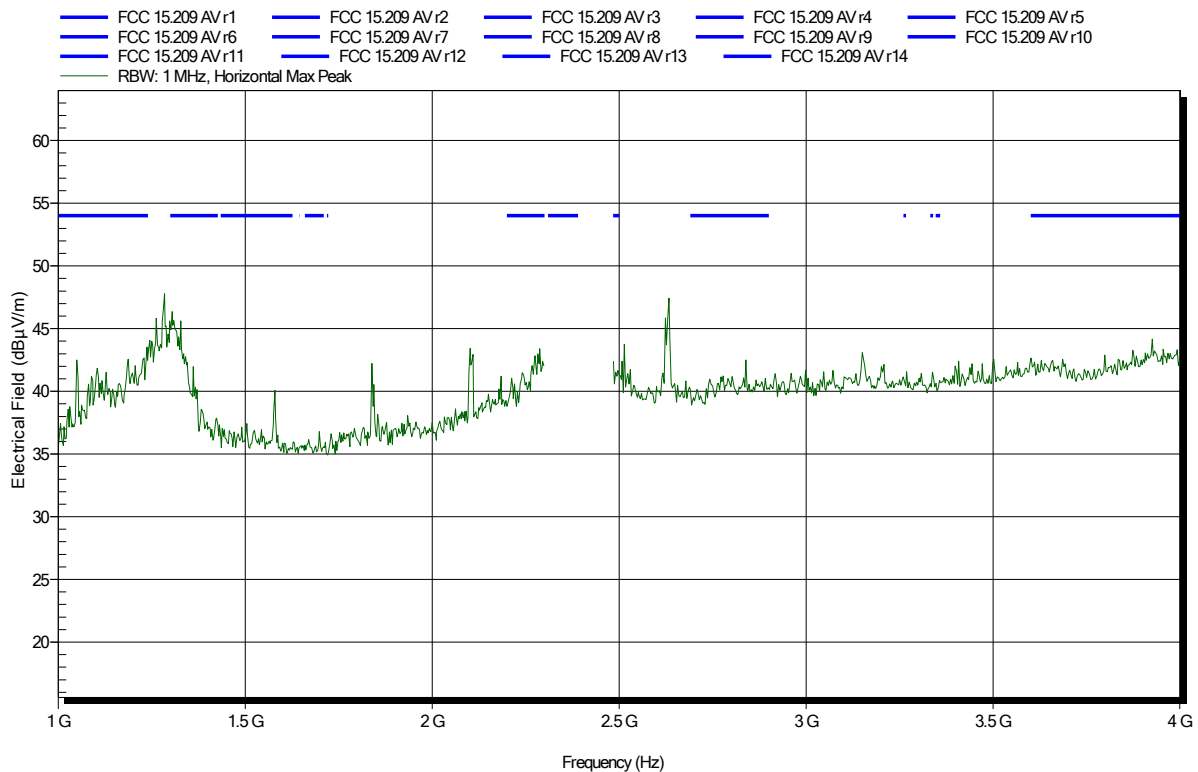


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 1 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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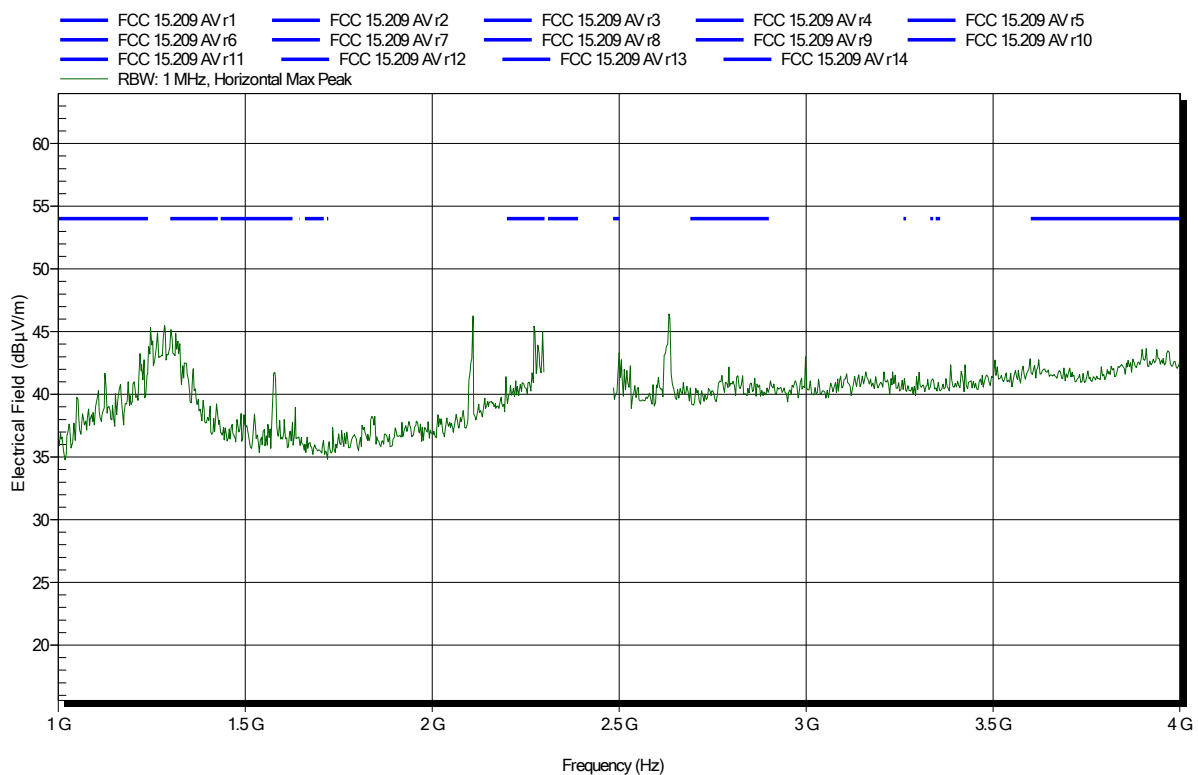


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; Mode 2 – 2402 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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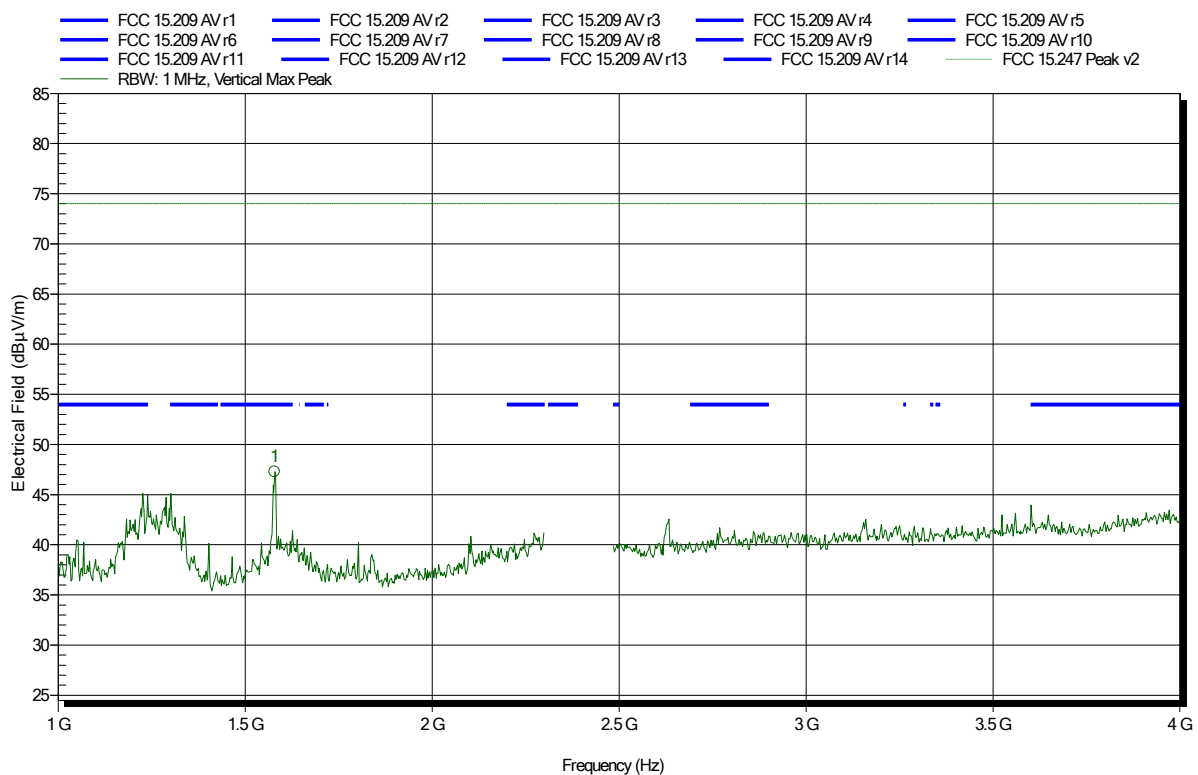


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; Mode 1 – 2402 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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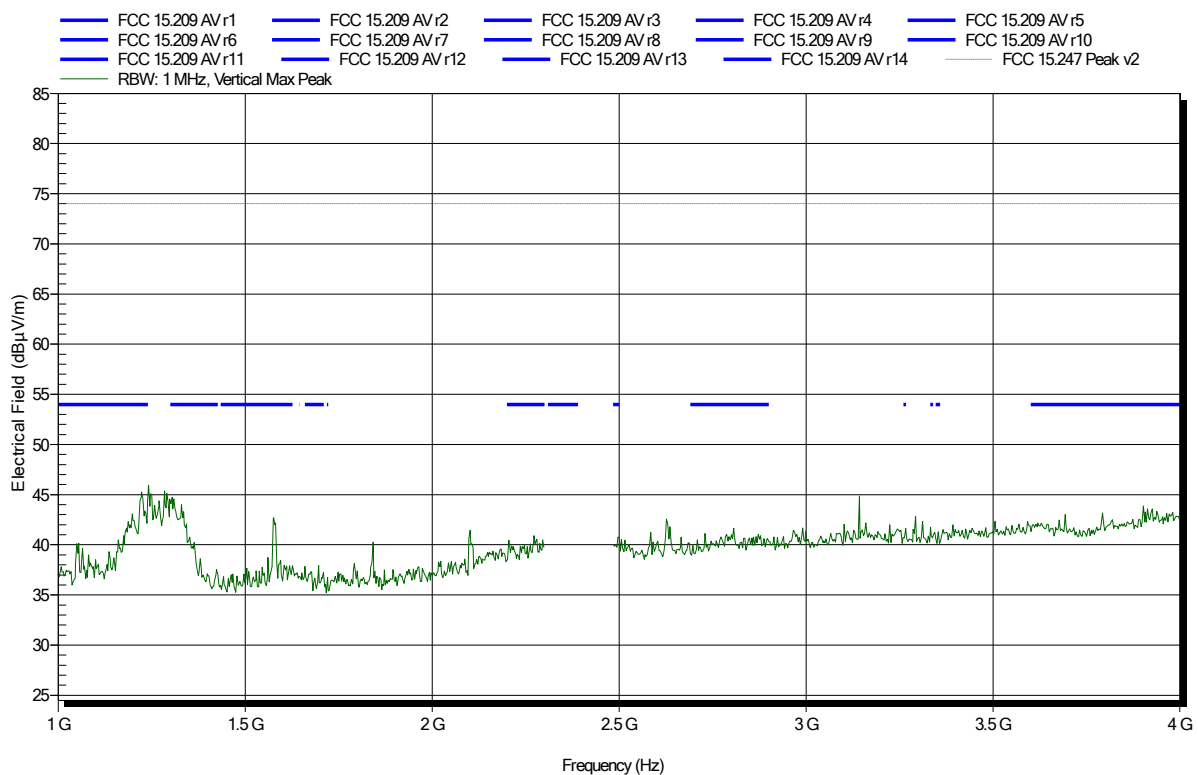
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.579 GHz	47.29 dBµV/m	74 dBµV/m	-26.71 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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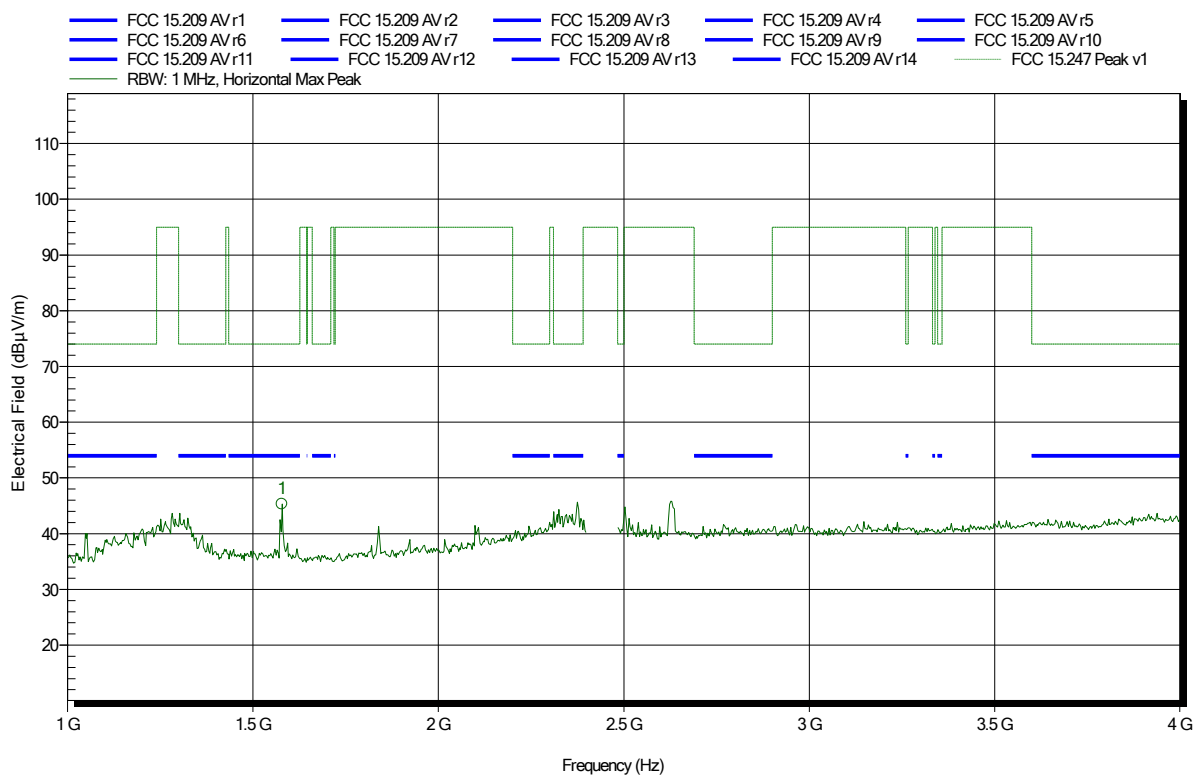


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 3 m
Mode: TX; Mode 1 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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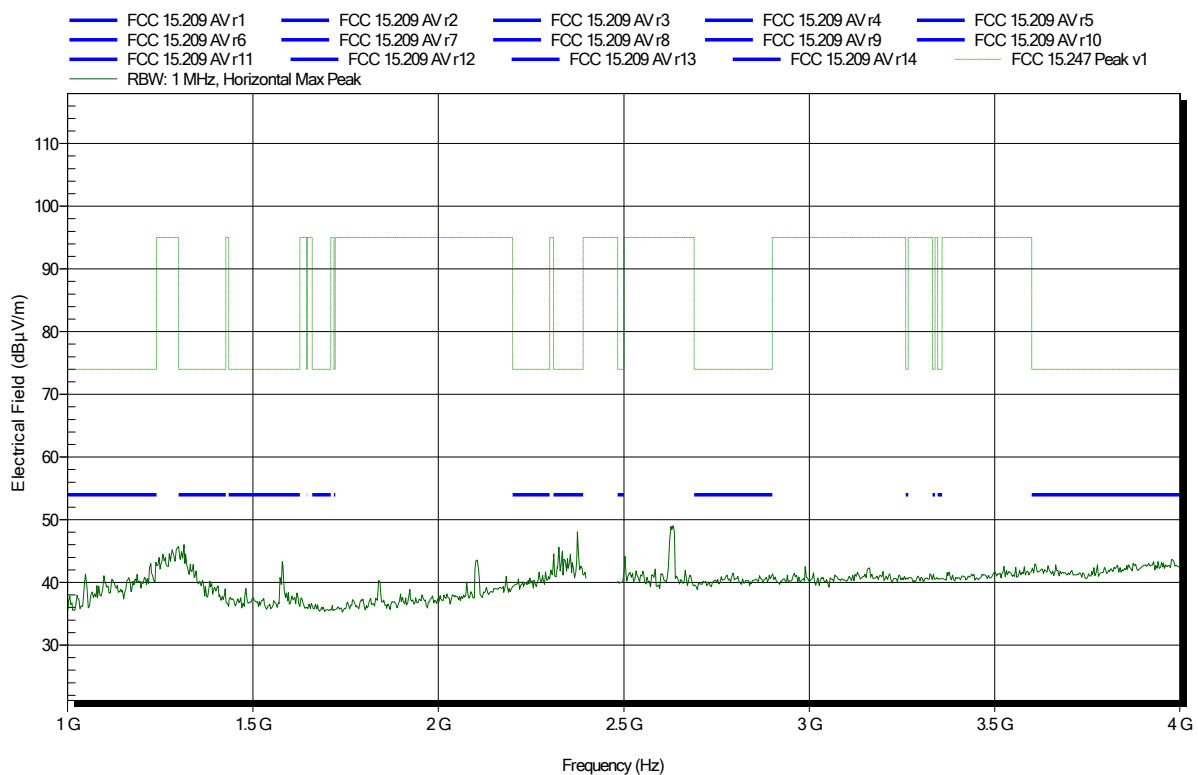
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.578 GHz	45.34 dBμV/m	74 dBμV/m	-28.66 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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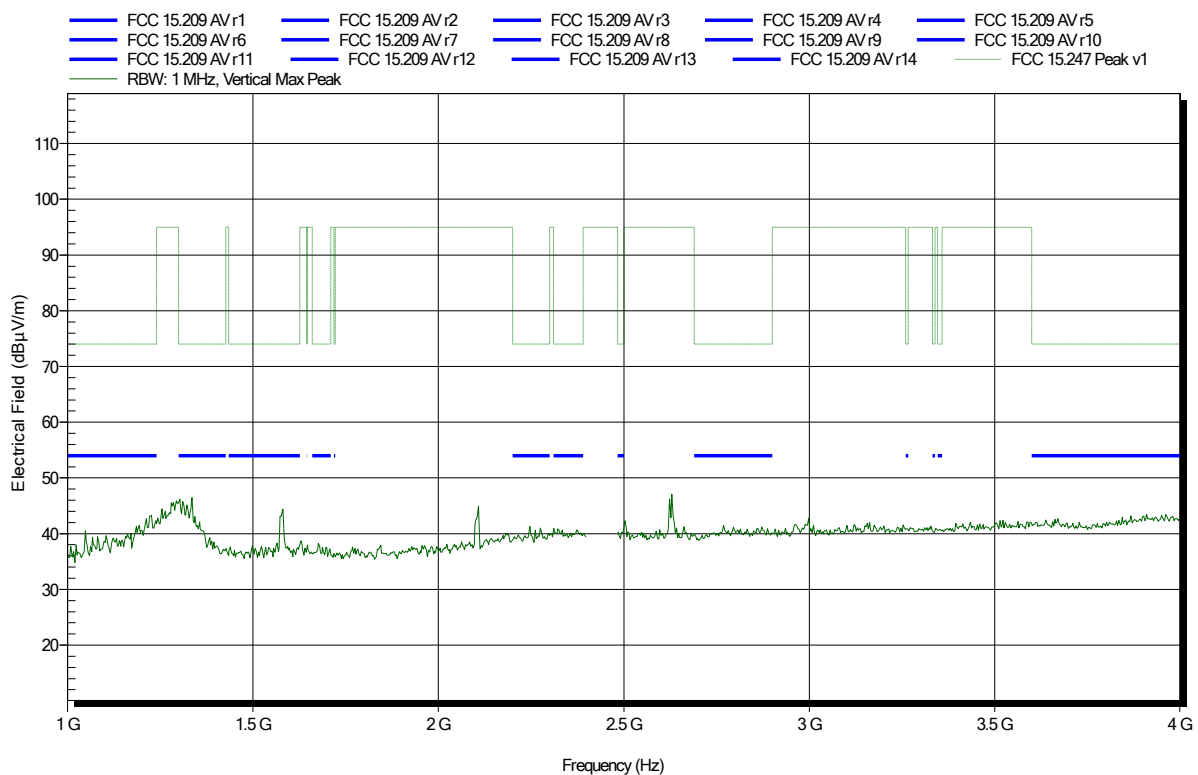


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; Mode 1 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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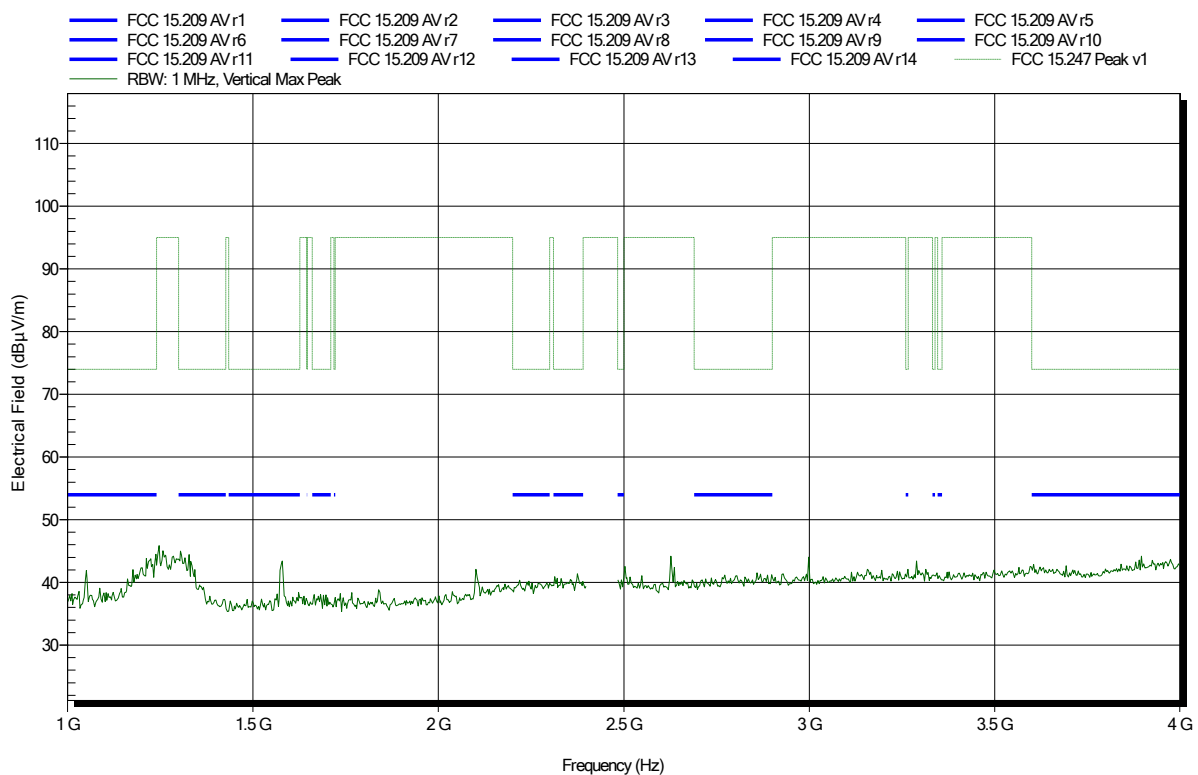


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; Mode 2 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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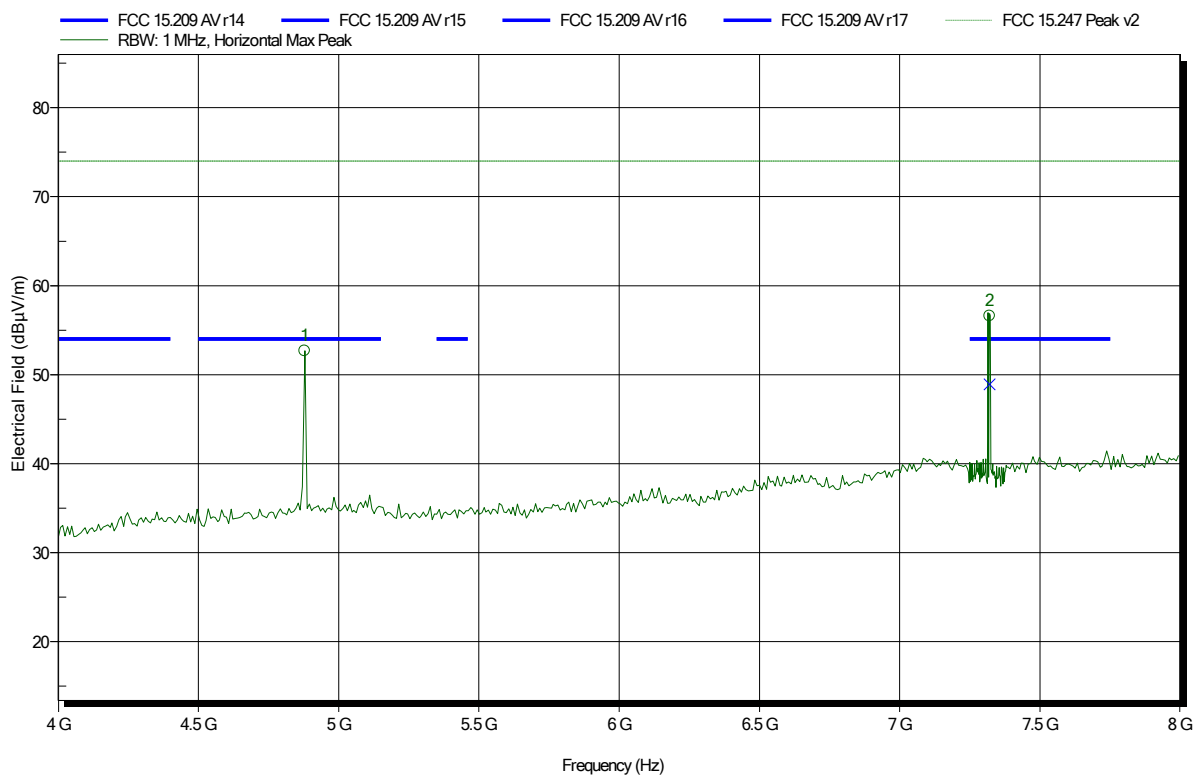


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	52.67 dBµV/m	74 dBµV/m	-21.33 dB	Pass
7.321 GHz	56.6 dBµV/m	74 dBµV/m	-17.4 dB	Pass

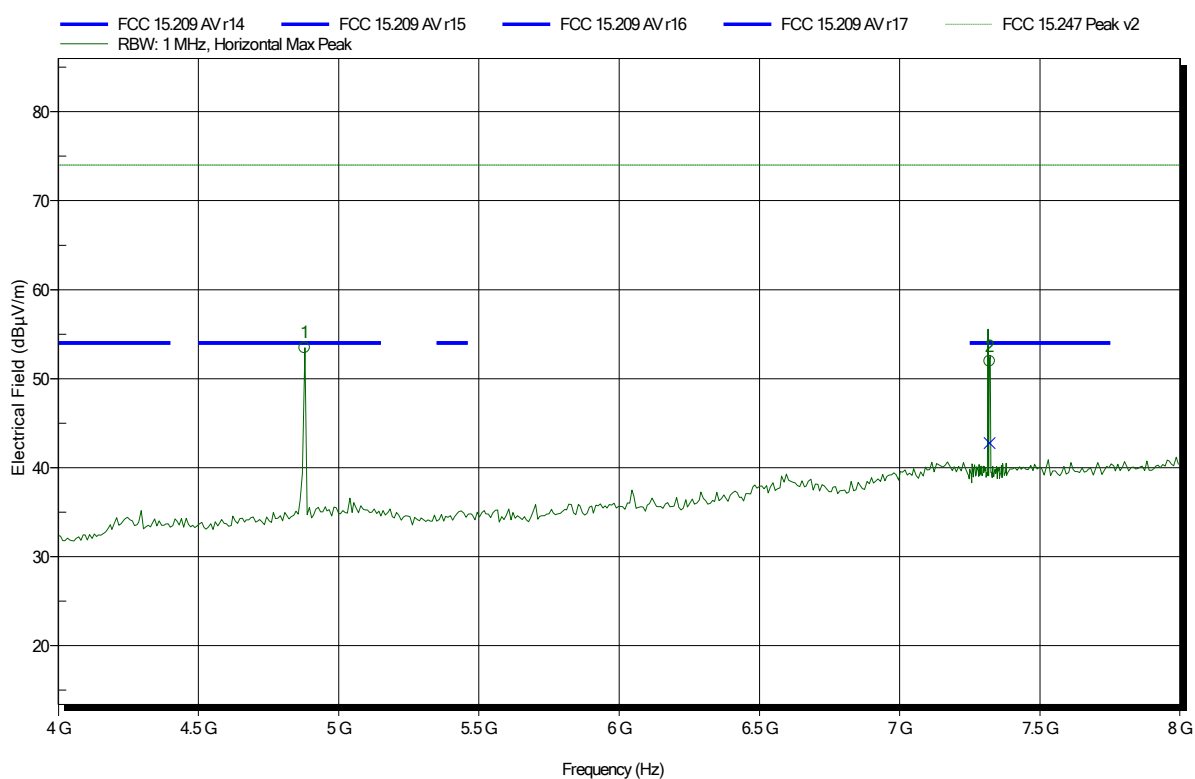
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	48.92 dBµV/m	54 dBµV/m	-5.08 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	53.46 dBµV/m	74 dBµV/m	-20.54 dB	Pass
7.321 GHz	51.97 dBµV/m	74 dBµV/m	-22.03 dB	Pass

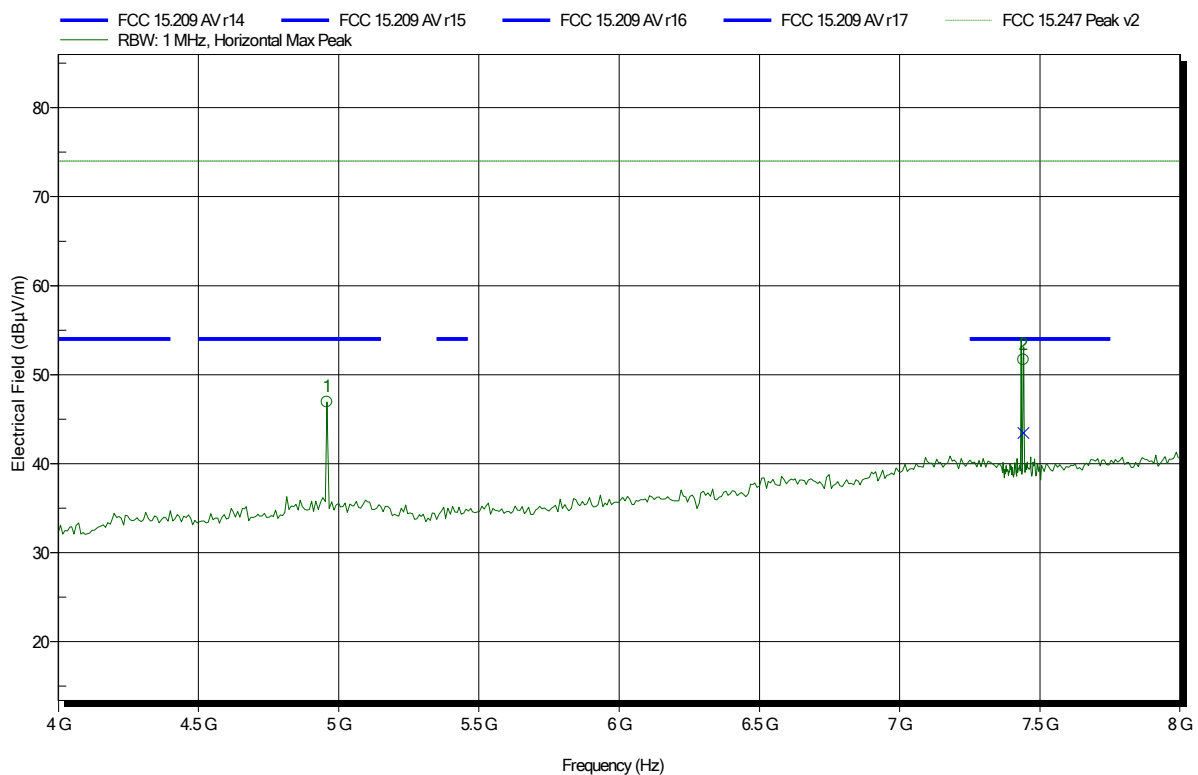
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	42.76 dBµV/m	54 dBµV/m	-11.24 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 90803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	46.94 dBµV/m	74 dBµV/m	-27.06 dB	Pass
7.441 GHz	51.66 dBµV/m	74 dBµV/m	-22.34 dB	Pass

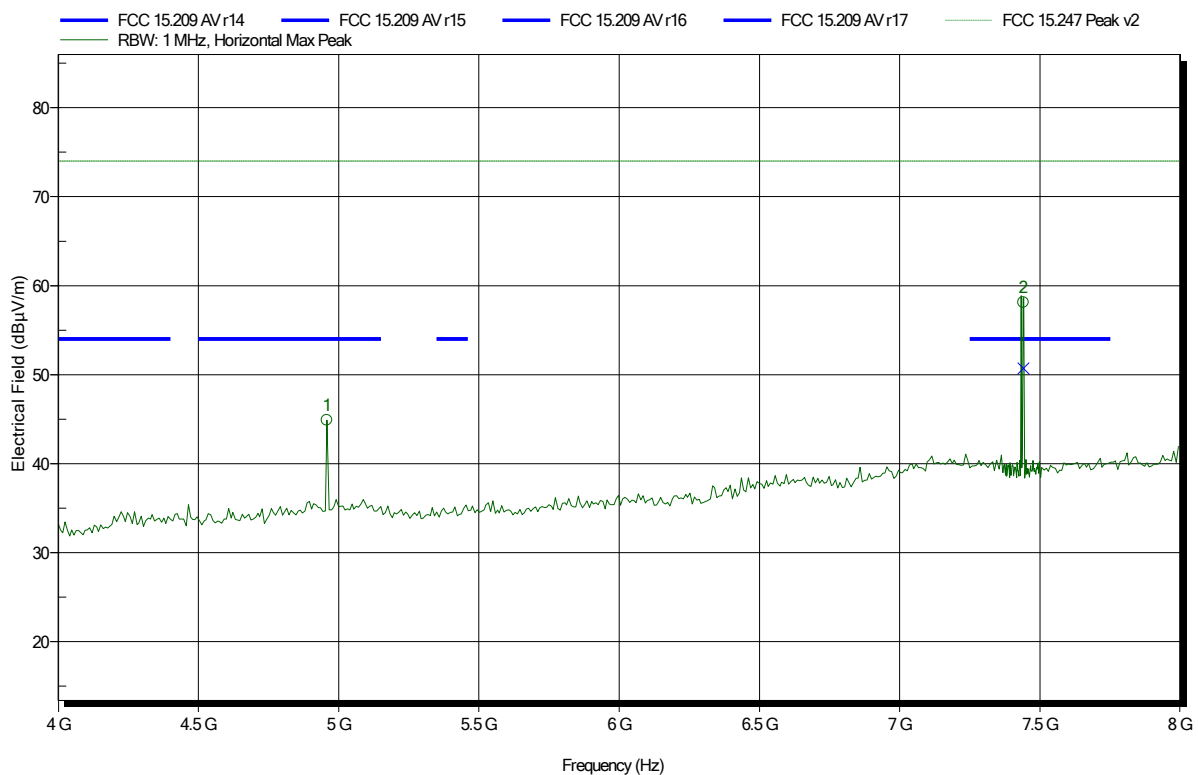
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	43.45 dBµV/m	54 dBµV/m	-10.55 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 90803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	44.89 dBµV/m	74 dBµV/m	-29.11 dB	Pass
7.441 GHz	58.13 dBµV/m	74 dBµV/m	-15.87 dB	Pass

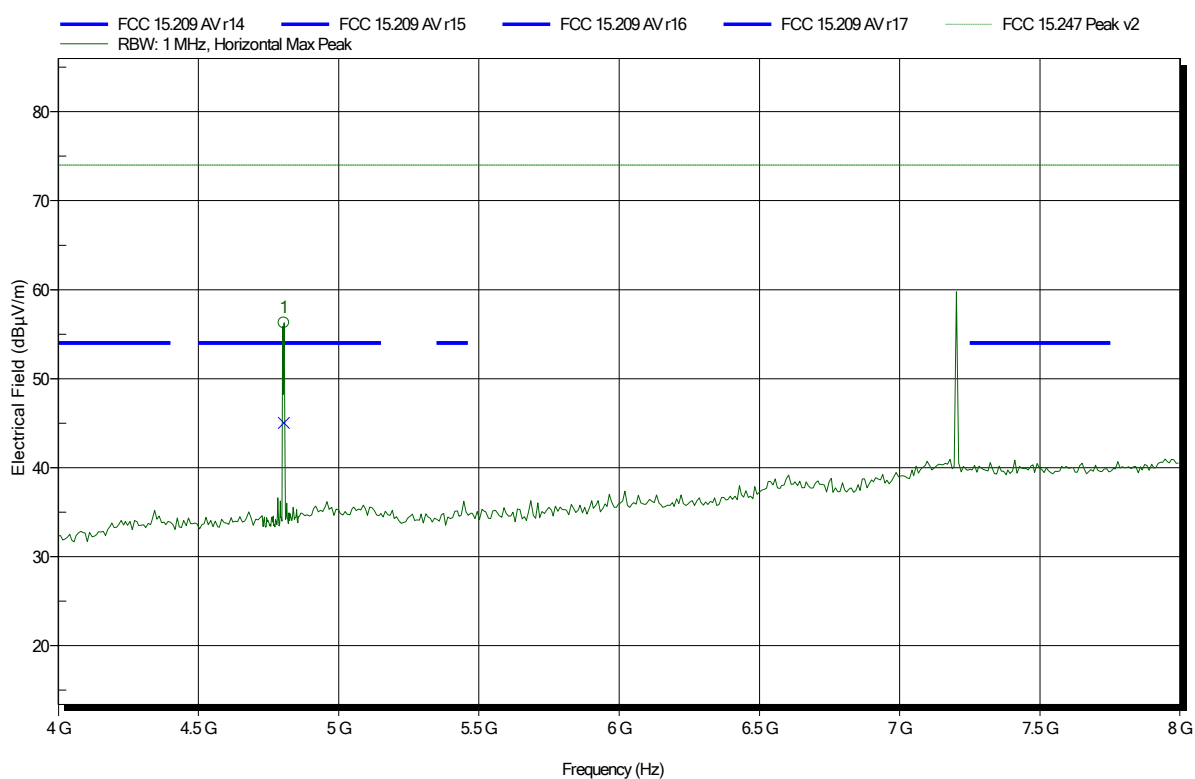
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	50.69 dBµV/m	54 dBµV/m	-3.31 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2402 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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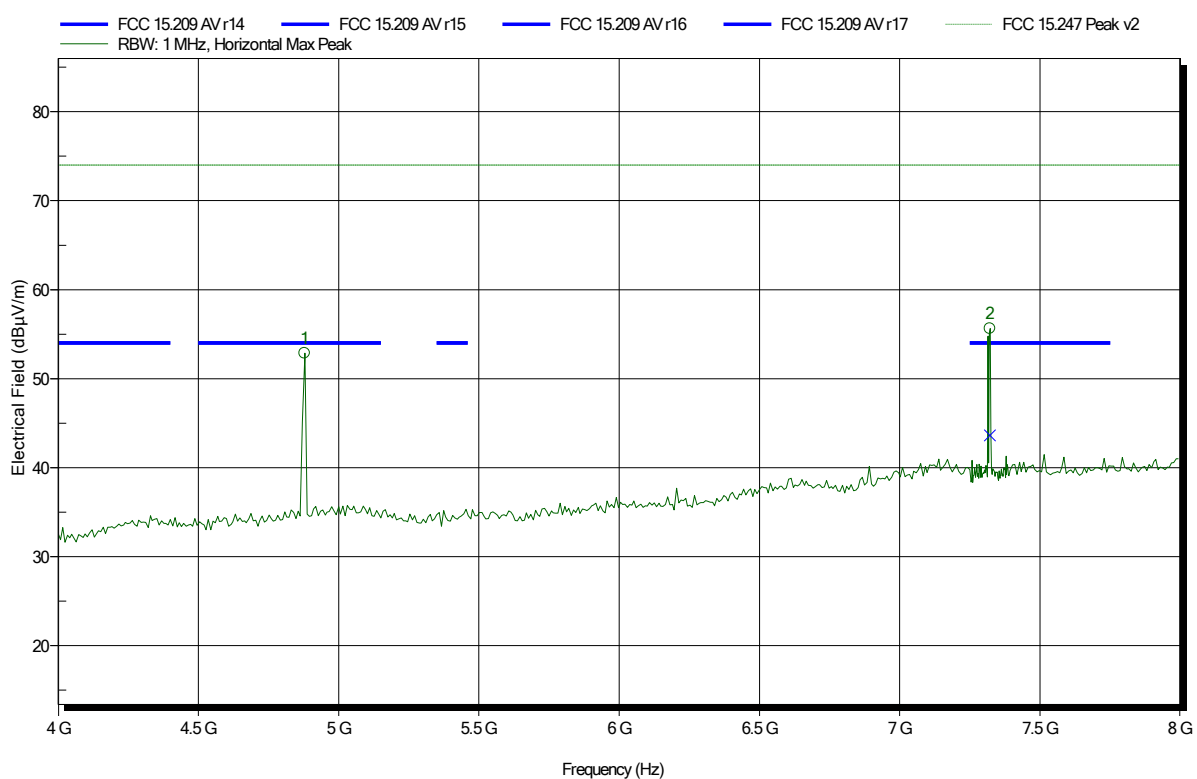
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.805 GHz	56.26 dBµV/m	74 dBµV/m	-17.74 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.805 GHz	45.02 dBµV/m	54 dBµV/m	-8.98 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	52.87 dBµV/m	74 dBµV/m	-21.13 dB	Pass
7.321 GHz	55.62 dBµV/m	74 dBµV/m	-18.38 dB	Pass

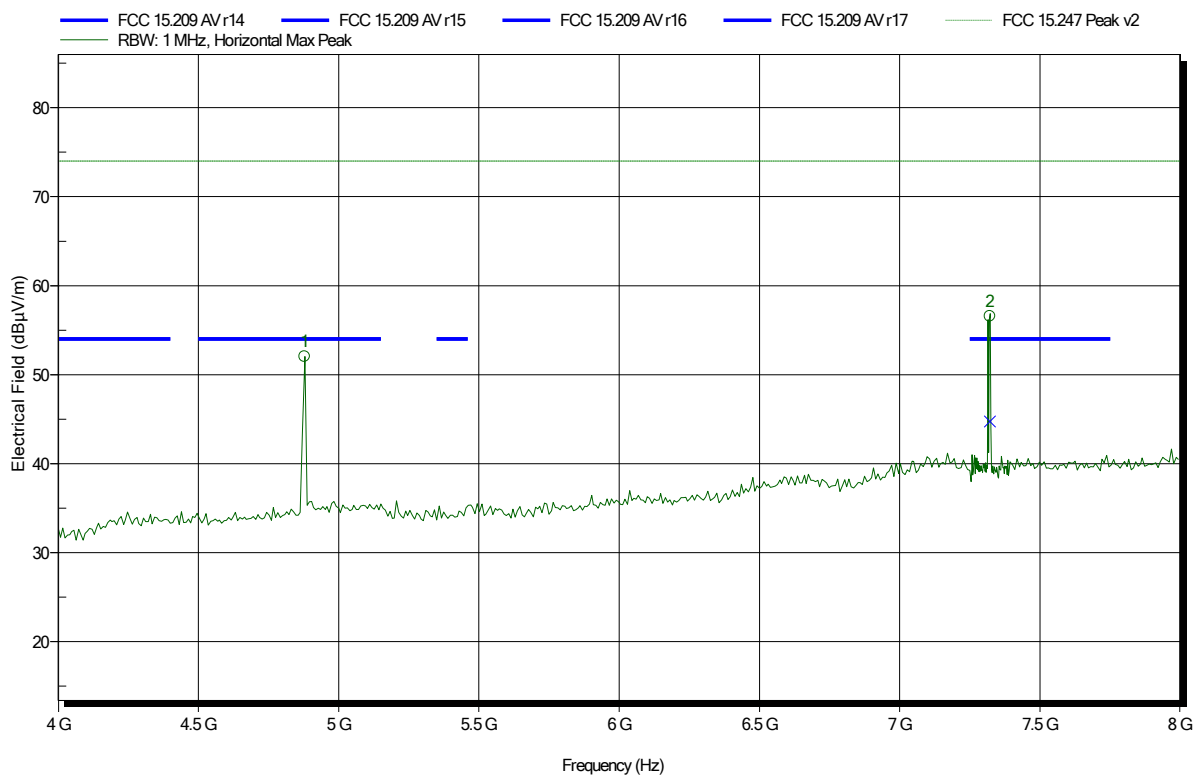
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	43.63 dBµV/m	54 dBµV/m	-10.37 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	52.02 dBµV/m	74 dBµV/m	-21.98 dB	Pass
7.321 GHz	56.58 dBµV/m	74 dBµV/m	-17.42 dB	Pass

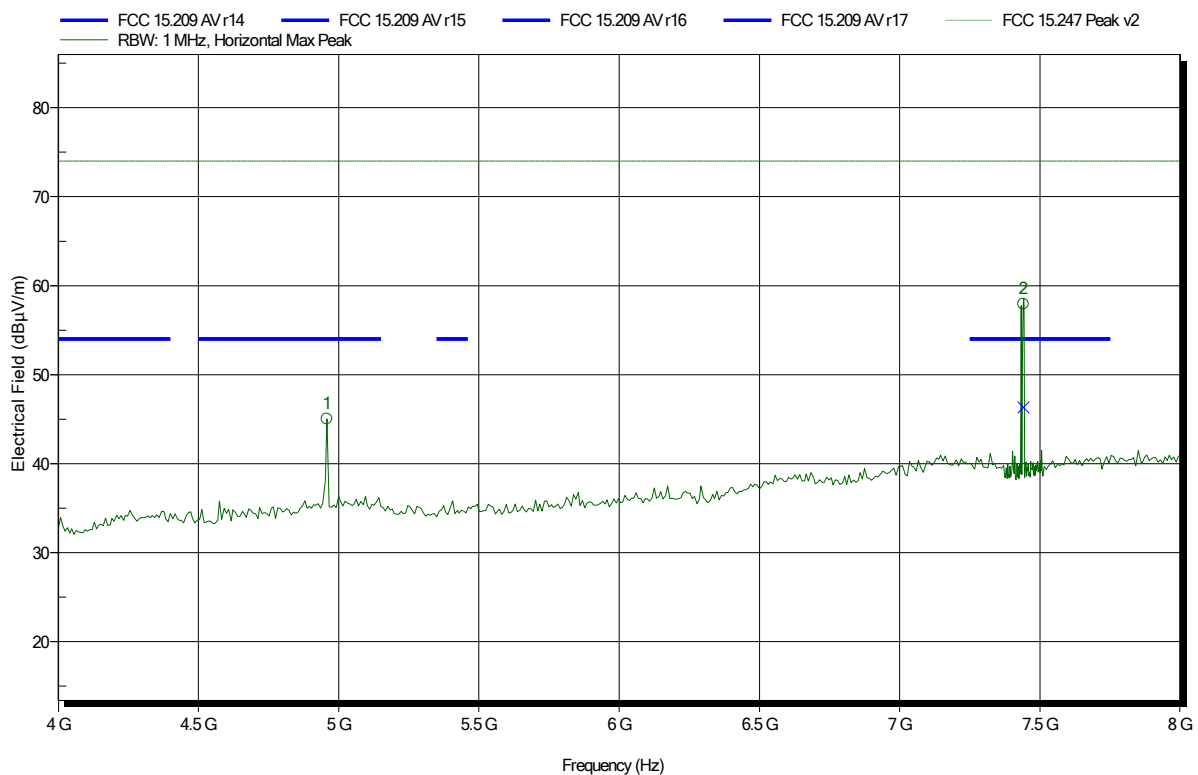
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	44.76 dBµV/m	54 dBµV/m	-9.24 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 90803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	45.02 dBμV/m	74 dBμV/m	-28.98 dB	Pass
7.441 GHz	57.94 dBμV/m	74 dBμV/m	-16.06 dB	Pass

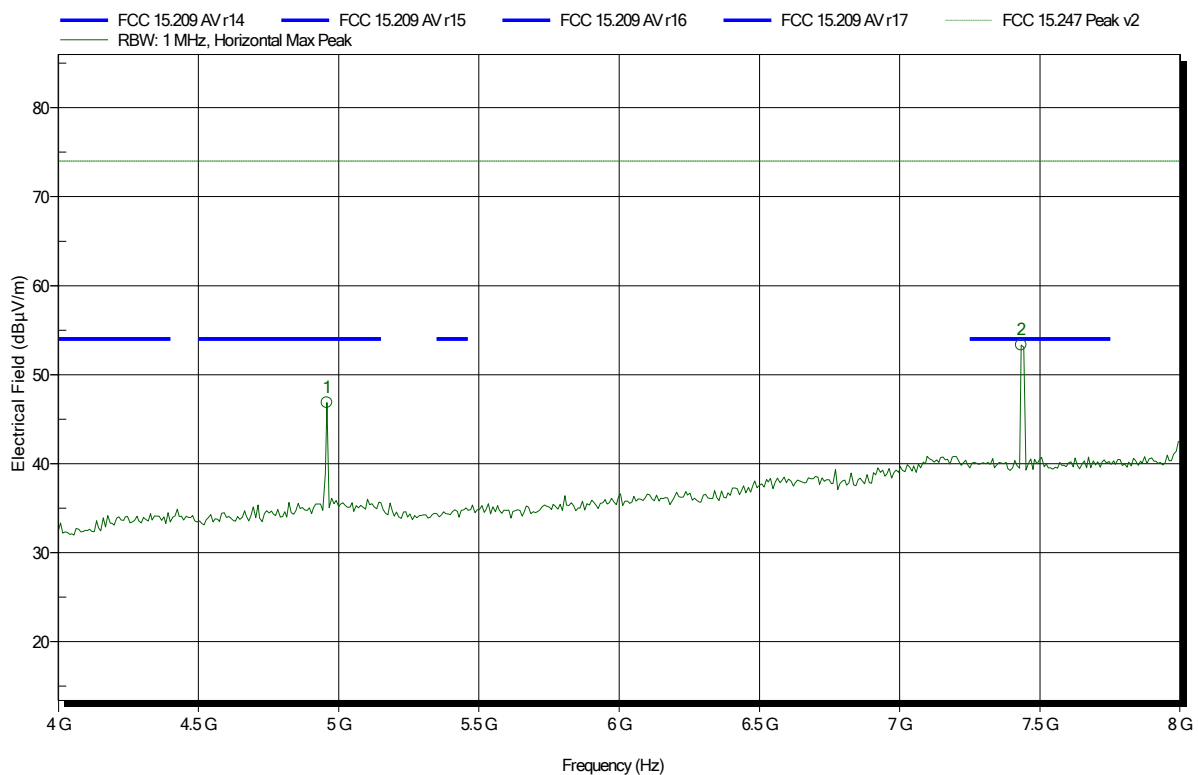
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	46.33 dBμV/m	54 dBμV/m	-7.67 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2480 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 90803 – EUT vertical

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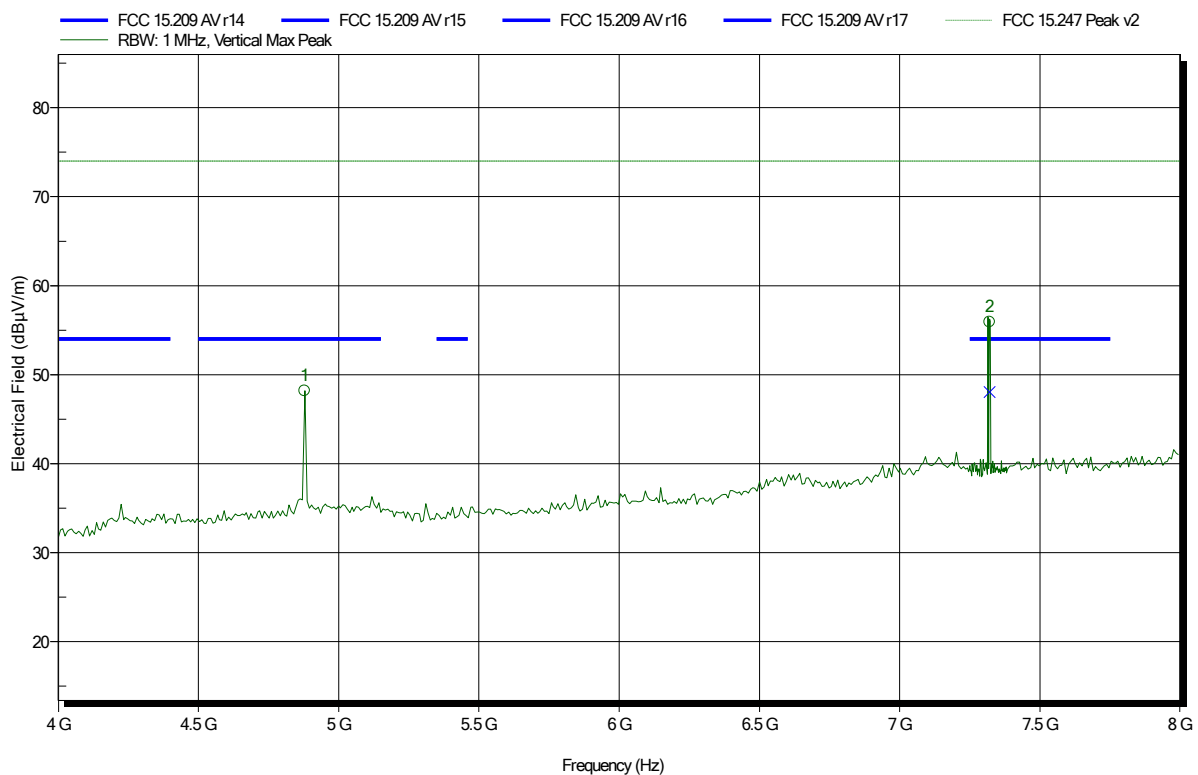
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	46.87 dBµV/m	74 dBµV/m	-27.13 dB	Pass
7.433 GHz	53.34 dBµV/m	74 dBµV/m	-20.66 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 1 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	48.17 dBµV/m	74 dBµV/m	-25.83 dB	Pass
7.321 GHz	55.93 dBµV/m	74 dBµV/m	-18.07 dB	Pass

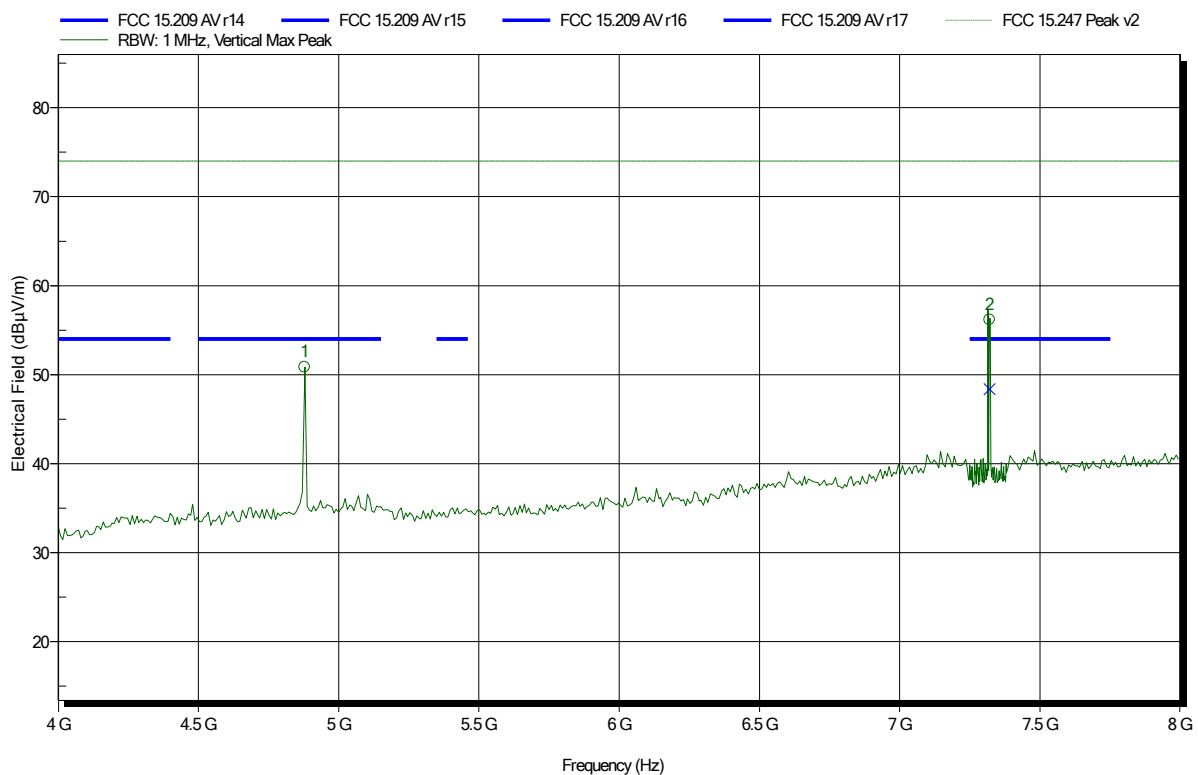
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	48.04 dBµV/m	54 dBµV/m	-5.96 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	50.85 dBµV/m	74 dBµV/m	-23.15 dB	Pass
7.321 GHz	56.17 dBµV/m	74 dBµV/m	-17.83 dB	Pass

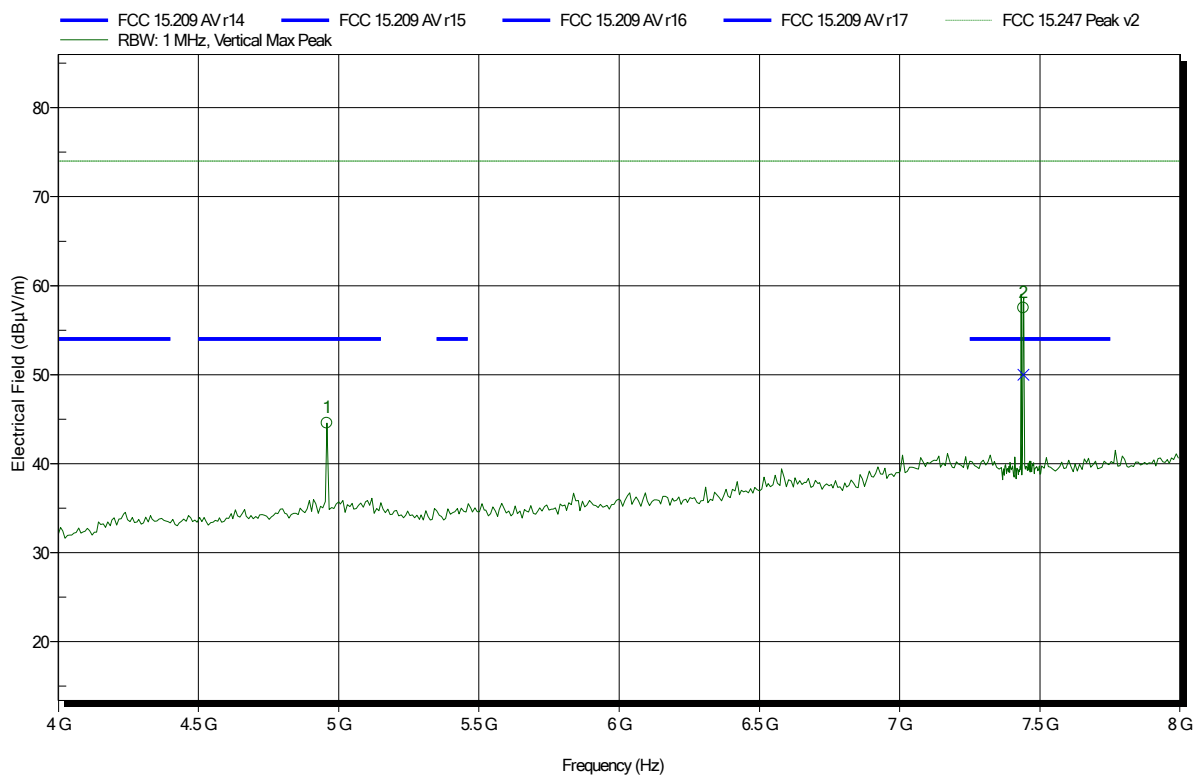
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	48.37 dBµV/m	54 dBµV/m	-5.63 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	44.56 dBµV/m	74 dBµV/m	-29.44 dB	Pass
7.441 GHz	57.49 dBµV/m	74 dBµV/m	-16.51 dB	Pass

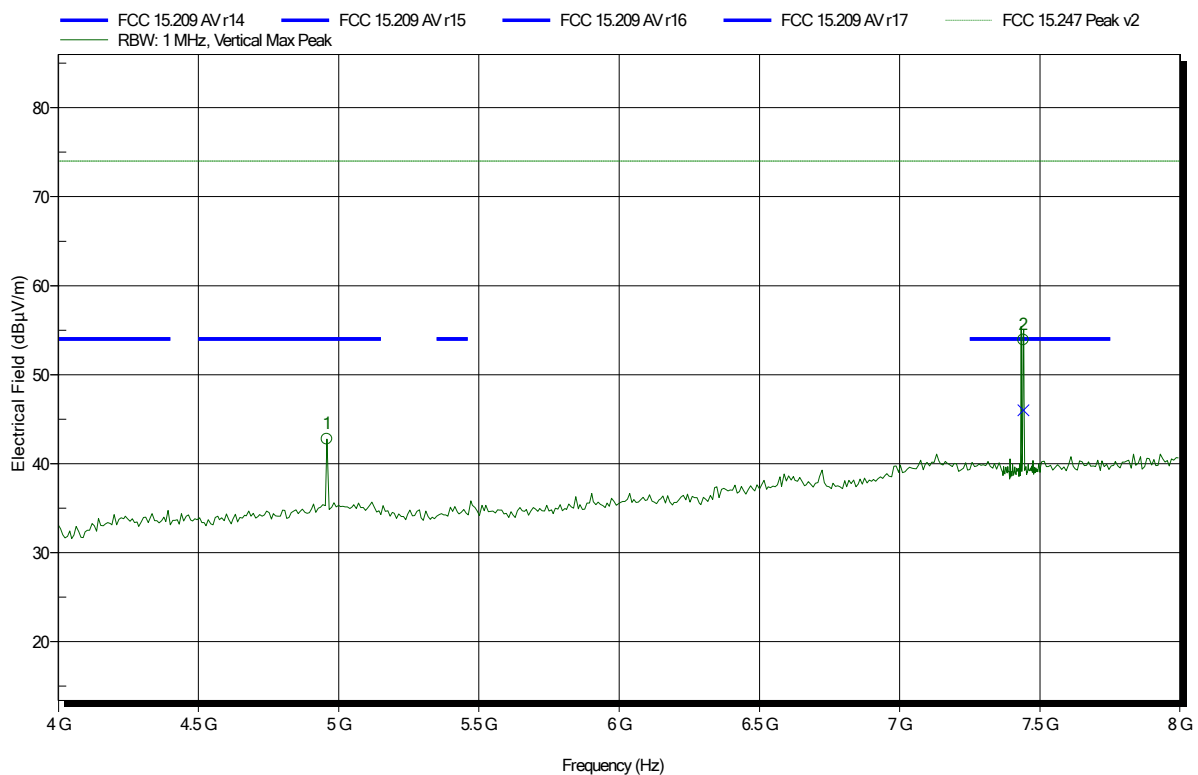
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	50 dBµV/m	54 dBµV/m	-4 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	42.77 dBµV/m	74 dBµV/m	-31.23 dB	Pass
7.441 GHz	53.92 dBµV/m	74 dBµV/m	-20.08 dB	Pass

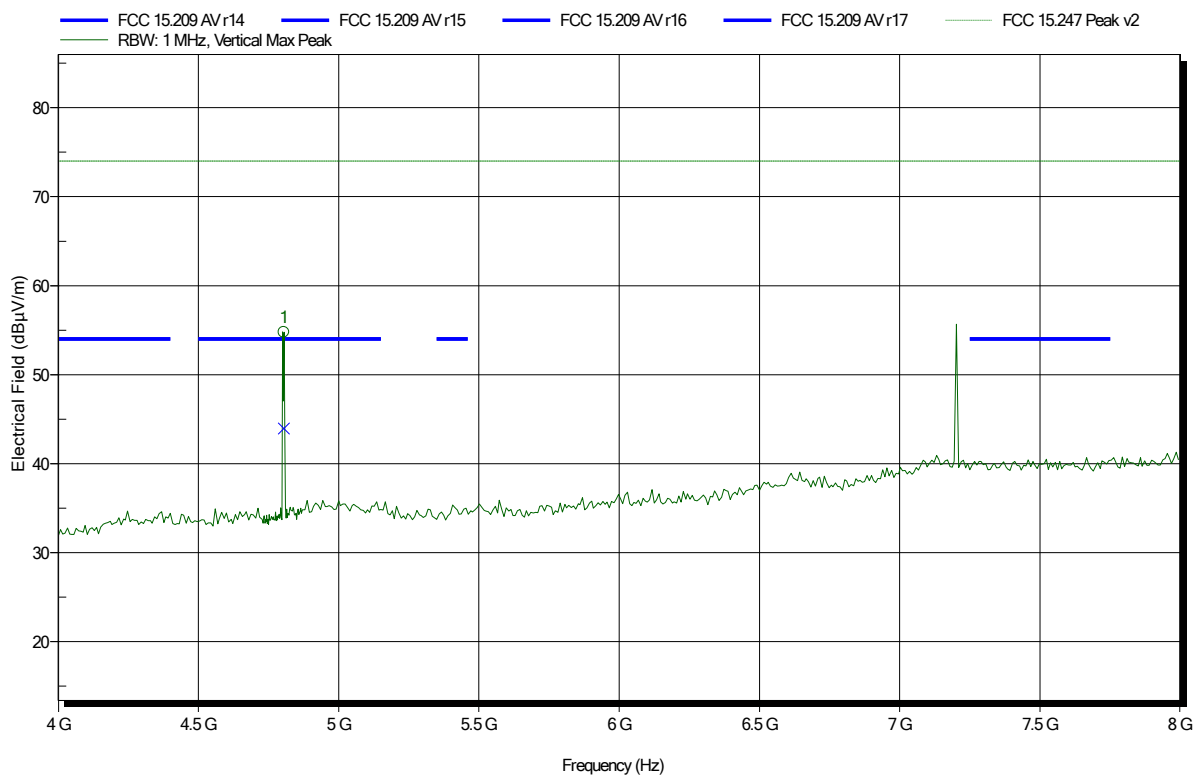
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	45.98 dBµV/m	54 dBµV/m	-8.02 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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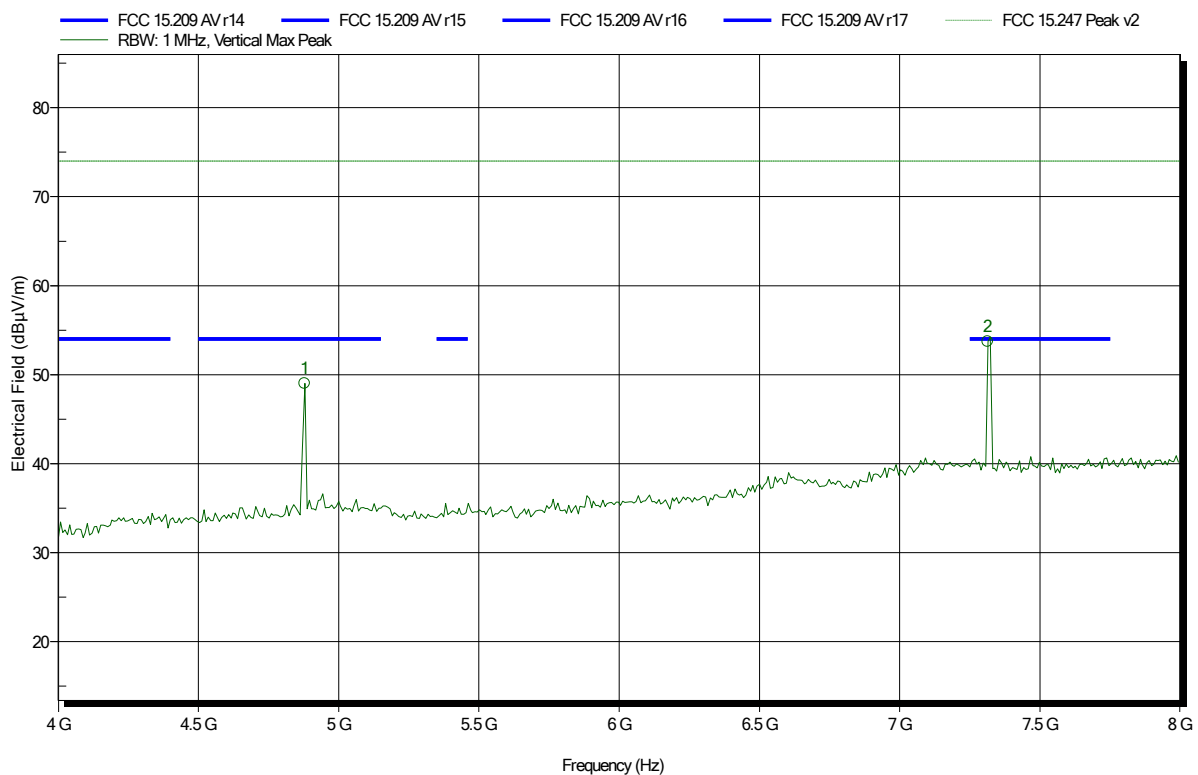
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.805 GHz	54.78 dBµV/m	74 dBµV/m	-19.22 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.805 GHz	43.95 dBµV/m	54 dBµV/m	-10.05 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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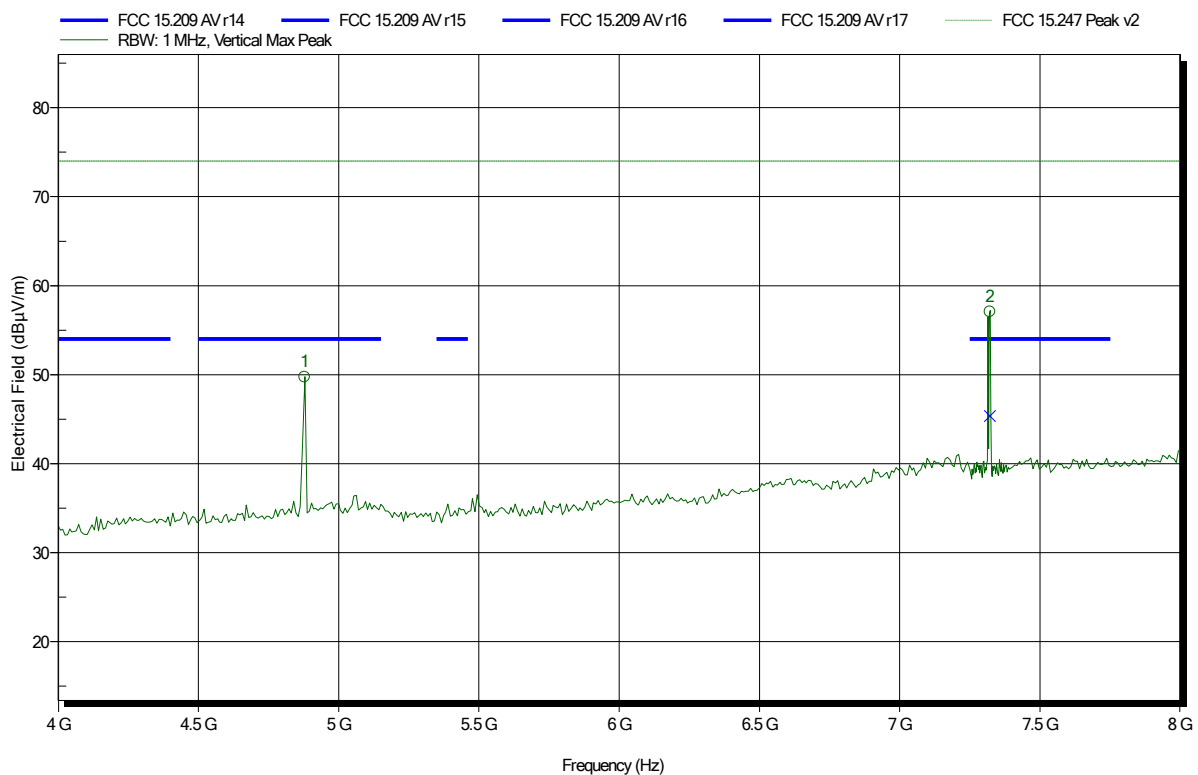
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	49.02 dBµV/m	74 dBµV/m	-24.98 dB	Pass
7.313 GHz	53.72 dBµV/m	74 dBµV/m	-20.28 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	49.75 dBµV/m	74 dBµV/m	-24.25 dB	Pass
7.321 GHz	57.09 dBµV/m	74 dBµV/m	-16.91 dB	Pass

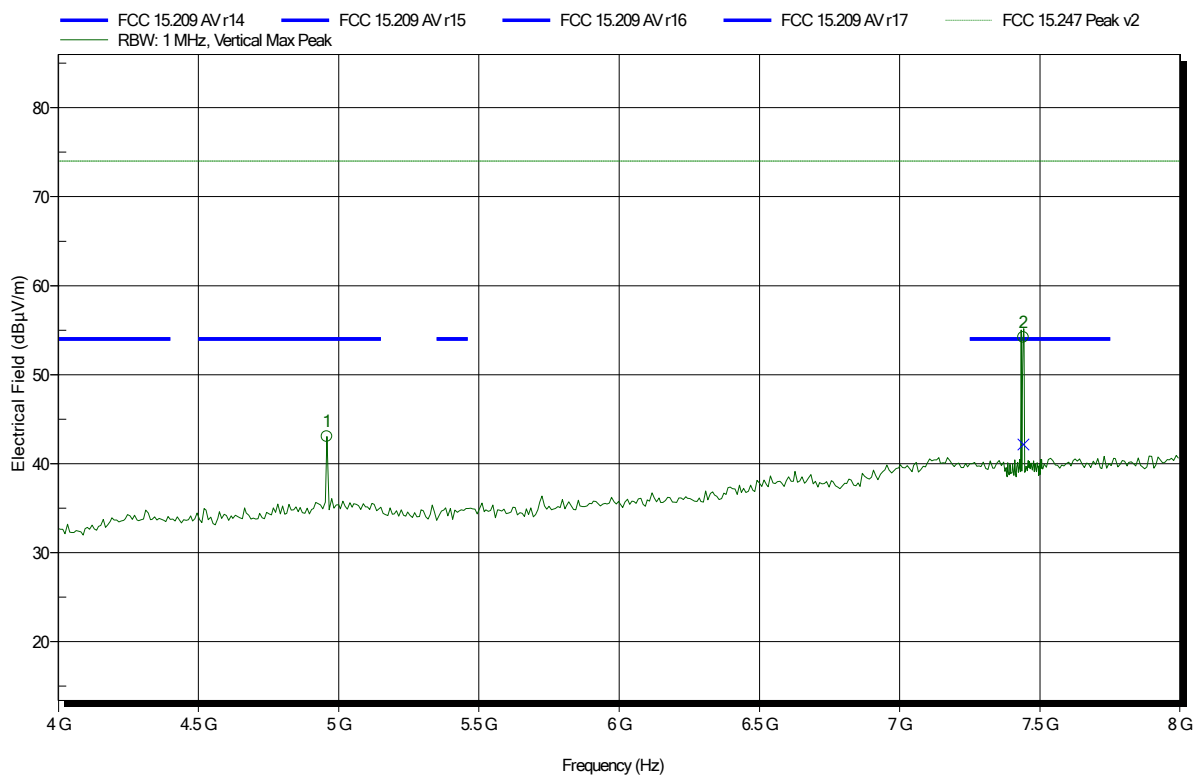
Frequency	Average	Average Limit	Average Difference	Average Status
7.321 GHz	45.36 dBµV/m	54 dBµV/m	-8.64 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2480 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	43.05 dBµV/m	74 dBµV/m	-30.95 dB	Pass
7.442 GHz	54.21 dBµV/m	74 dBµV/m	-19.79 dB	Pass

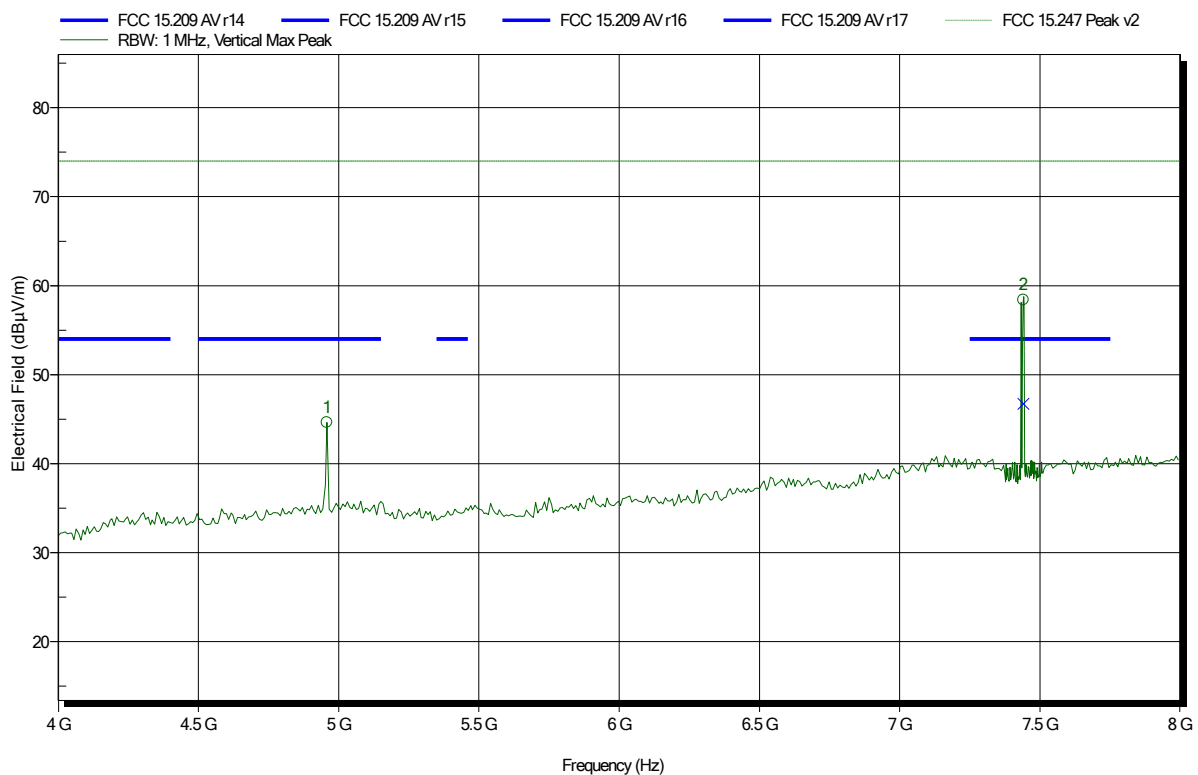
Frequency	Average	Average Limit	Average Difference	Average Status
7.442 GHz	42.15 dBµV/m	54 dBµV/m	-11.85 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2480 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.958 GHz	44.63 dBµV/m	74 dBµV/m	-29.37 dB	Pass
7.441 GHz	58.41 dBµV/m	74 dBµV/m	-15.59 dB	Pass

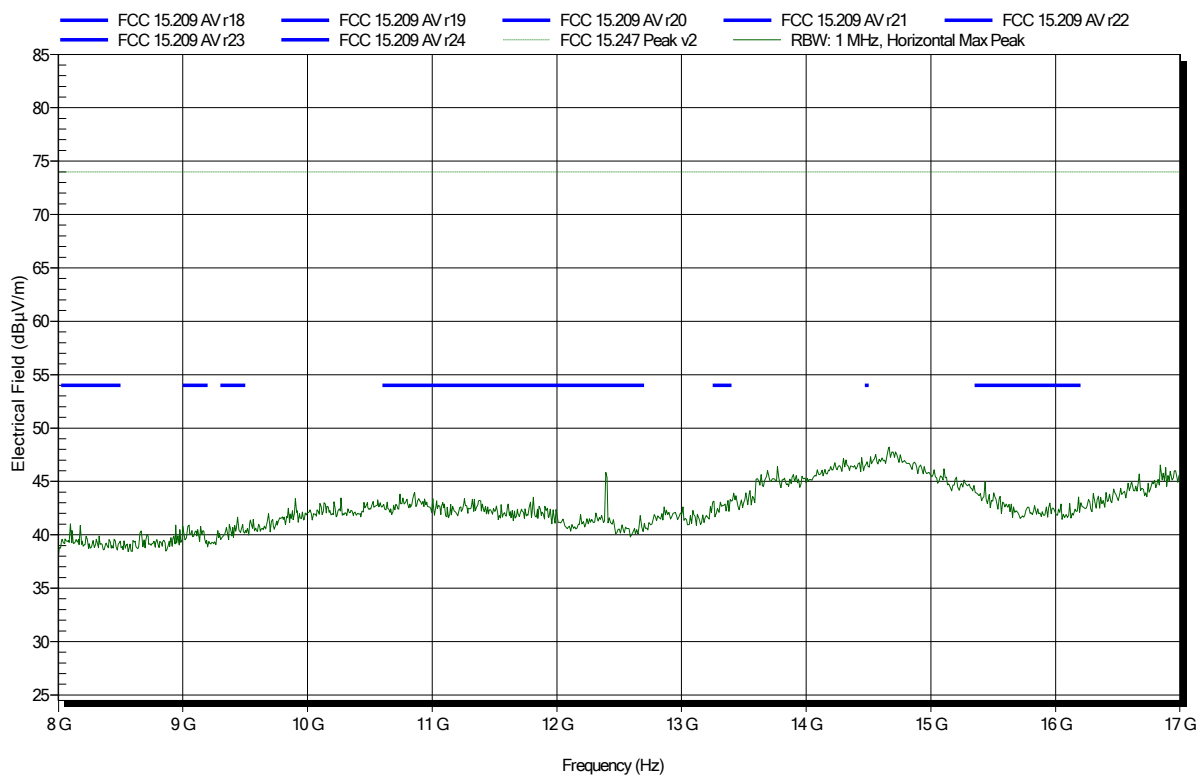
Frequency	Average	Average Limit	Average Difference	Average Status
7.441 GHz	46.71 dBµV/m	54 dBµV/m	-7.29 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 1 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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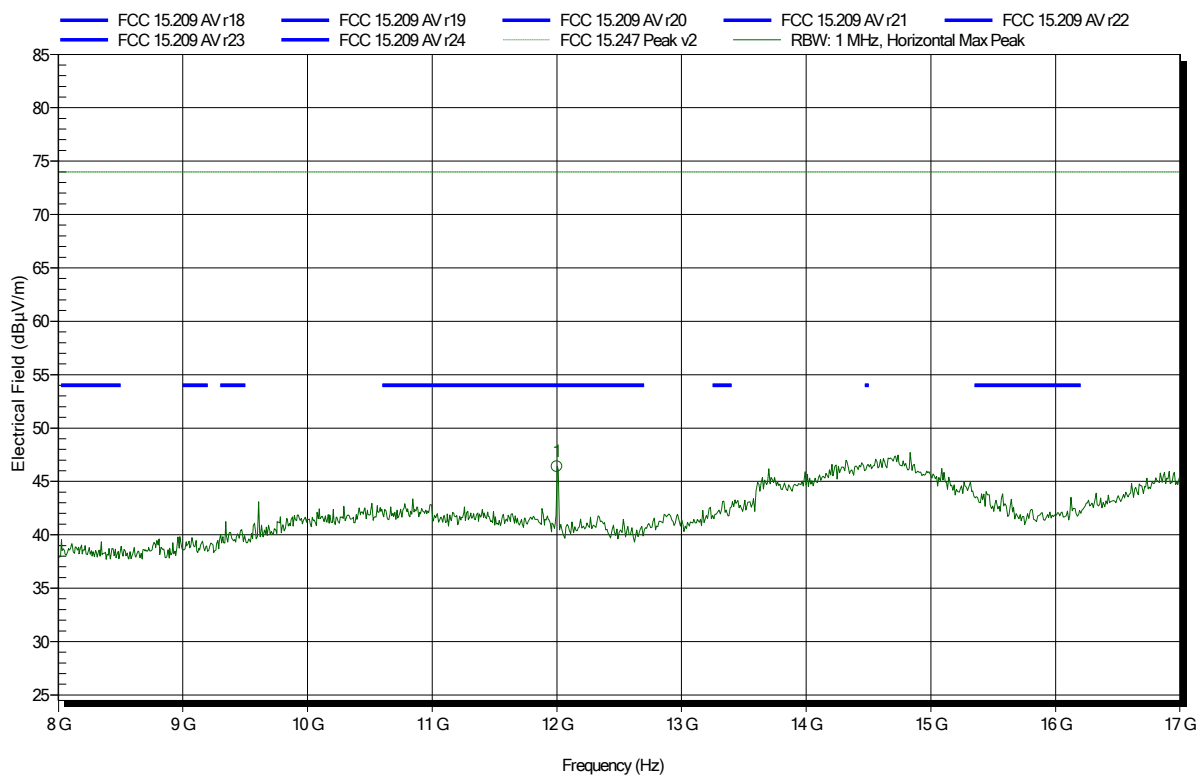


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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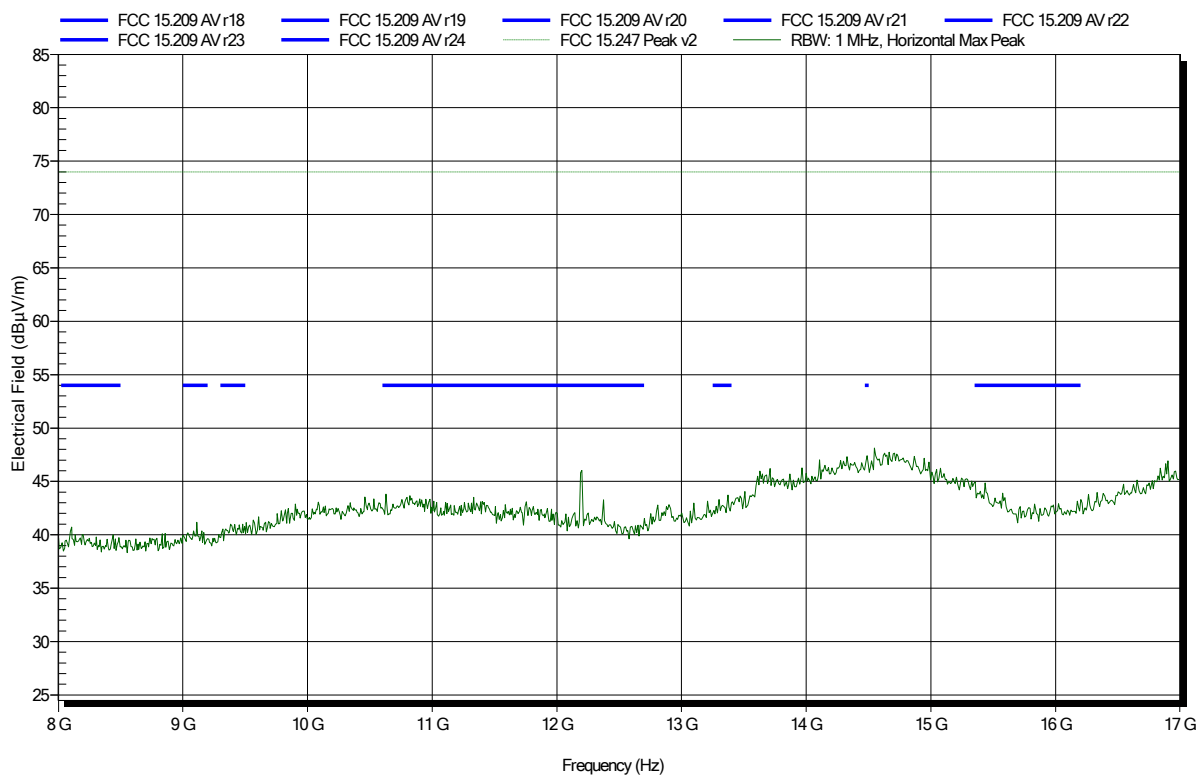
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12 GHz	46.4 dBµV/m	74 dBµV/m	-27.6 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2440 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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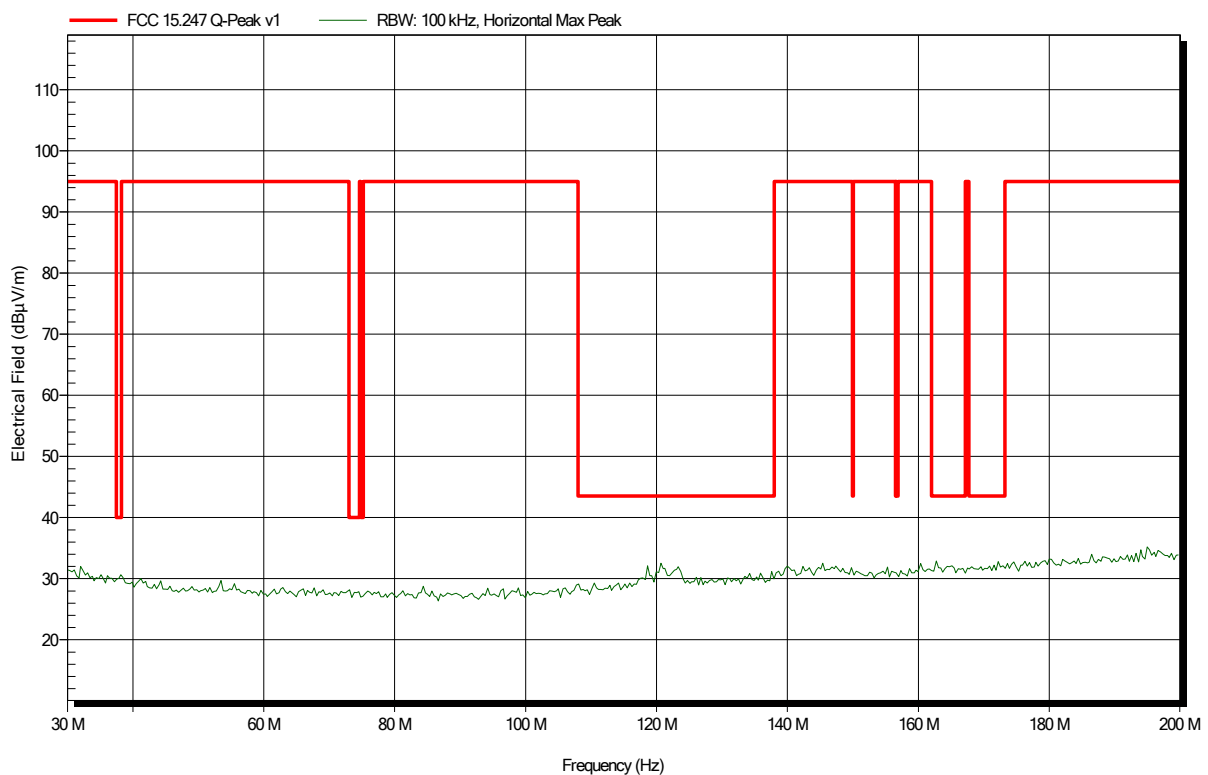


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: HK116, Horizontal
Measurement distance: 3 m converted to 3m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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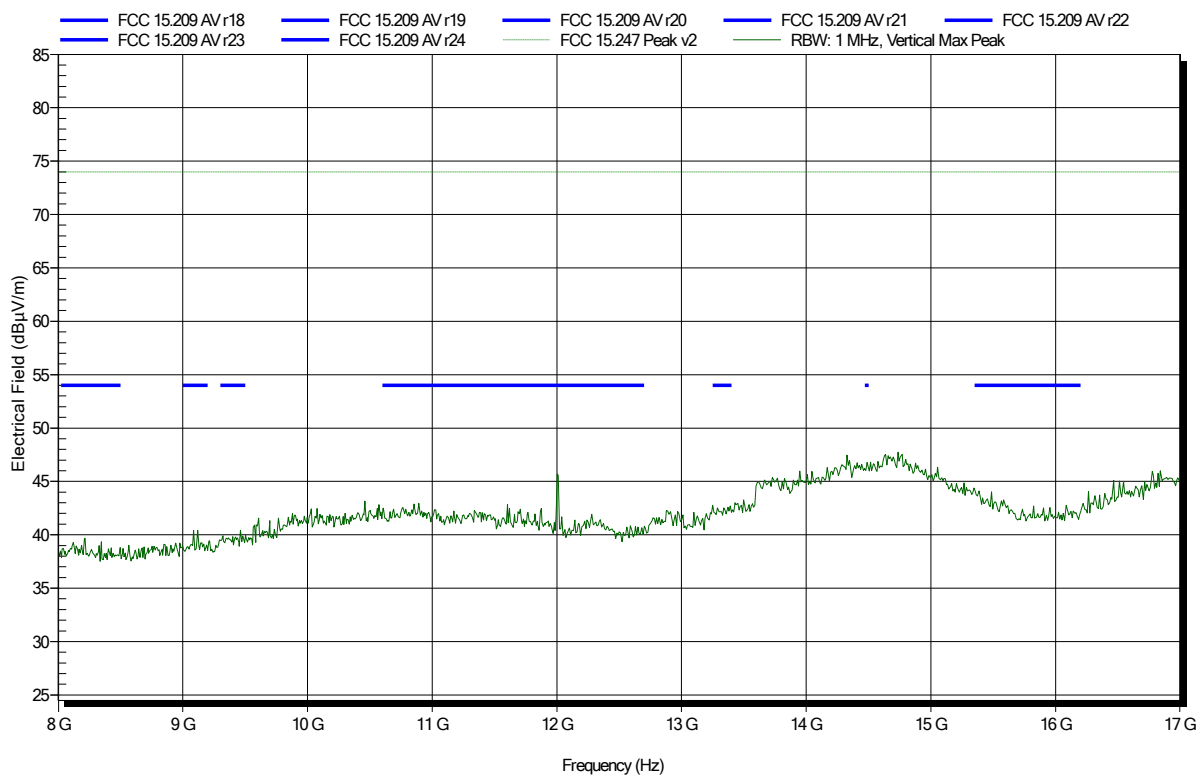


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2402 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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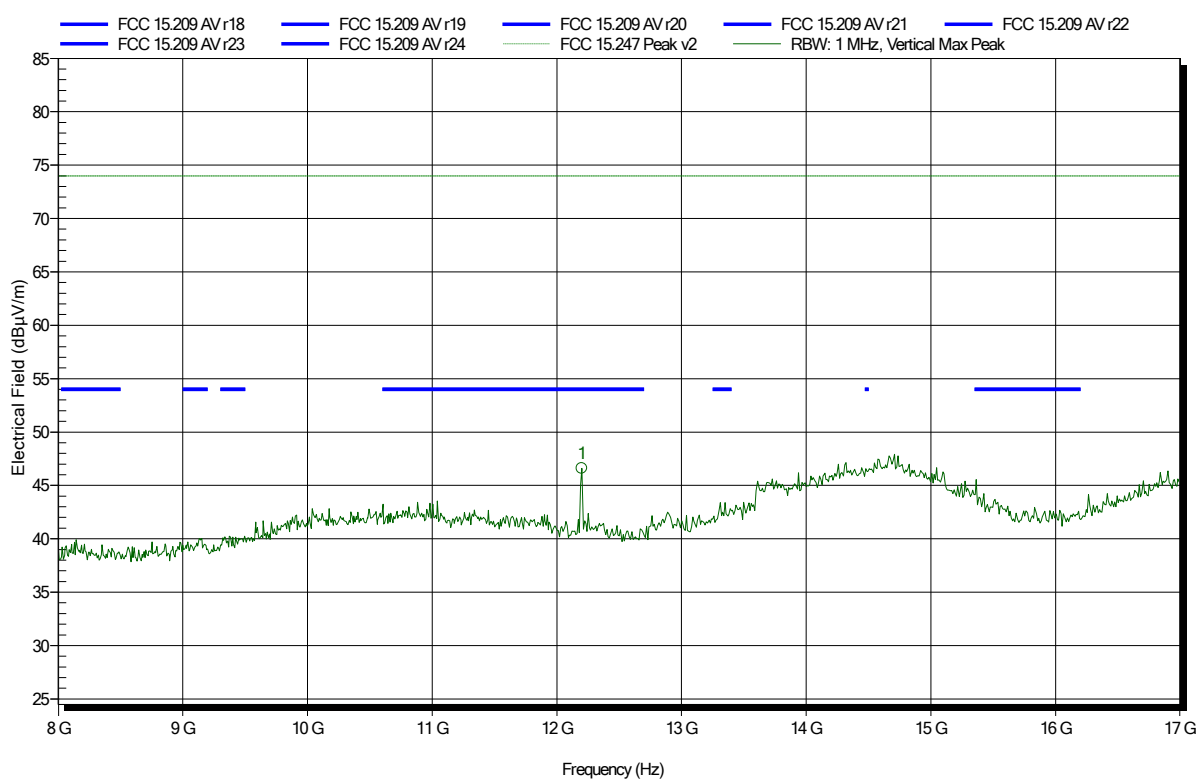


Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; Mode 2 – 2440 MHz
 Test Date: 2020-08-20
 Note: Test Sample ID 30803 – EUT horizontal

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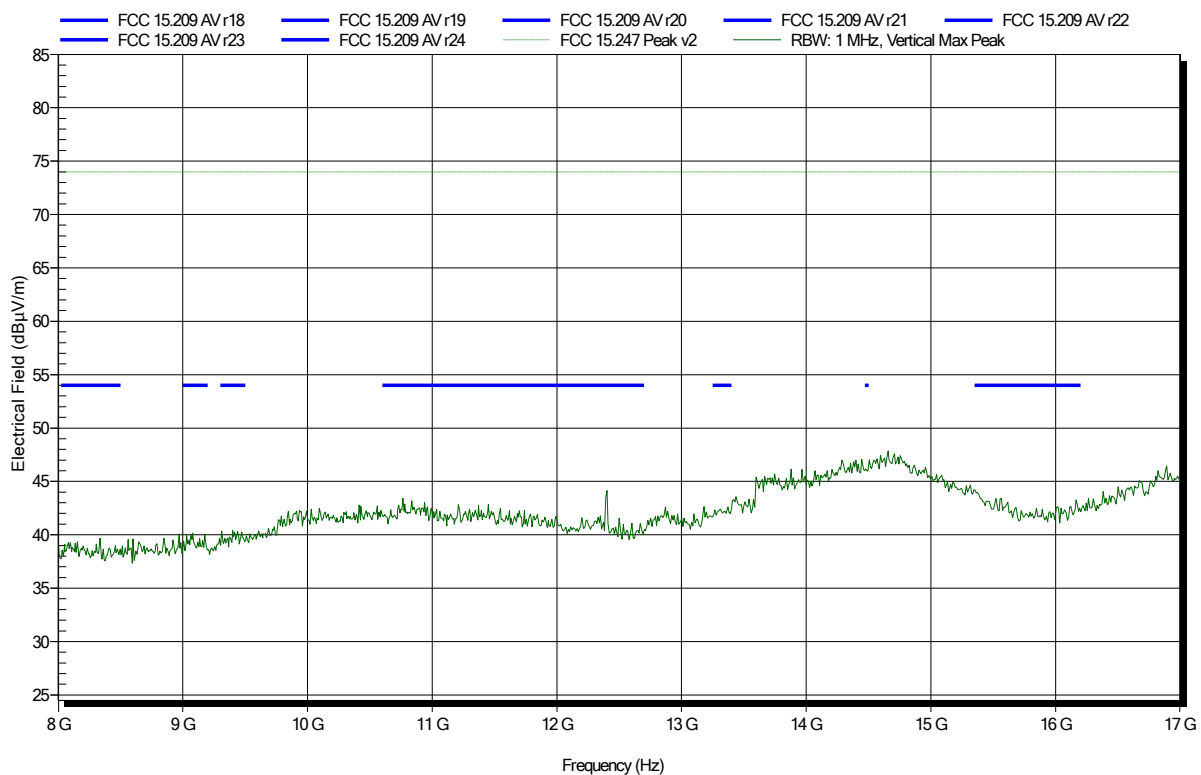
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.2 GHz	46.61 dBµV/m	74 dBµV/m	-27.39 dB	Pass

Spurious emissions according to FCC 47 CFR 15.247

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; Mode 2 – 2480 MHz
Test Date: 2020-08-20
Note: Test Sample ID 30803 – EUT horizontal

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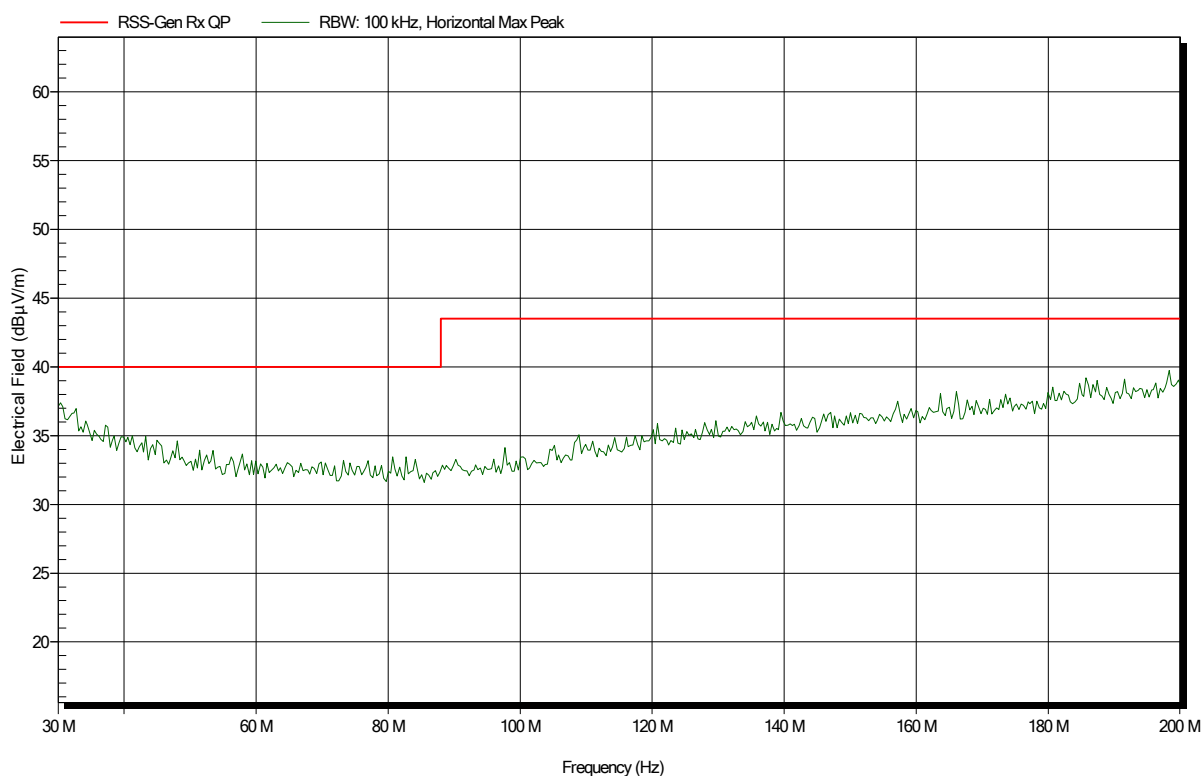
ANNEX B Receiver spurious emissions

Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Measurement software: RadiMation, version 2015.2.4
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: HK116, Horizontal
 Measurement distance: 3 m
 Mode: RX; Mode 3 – 2440 MHz
 Test Date: Thursday, August 20, 2020
 Note: Test Sample ID 30803 – EUT horizontal

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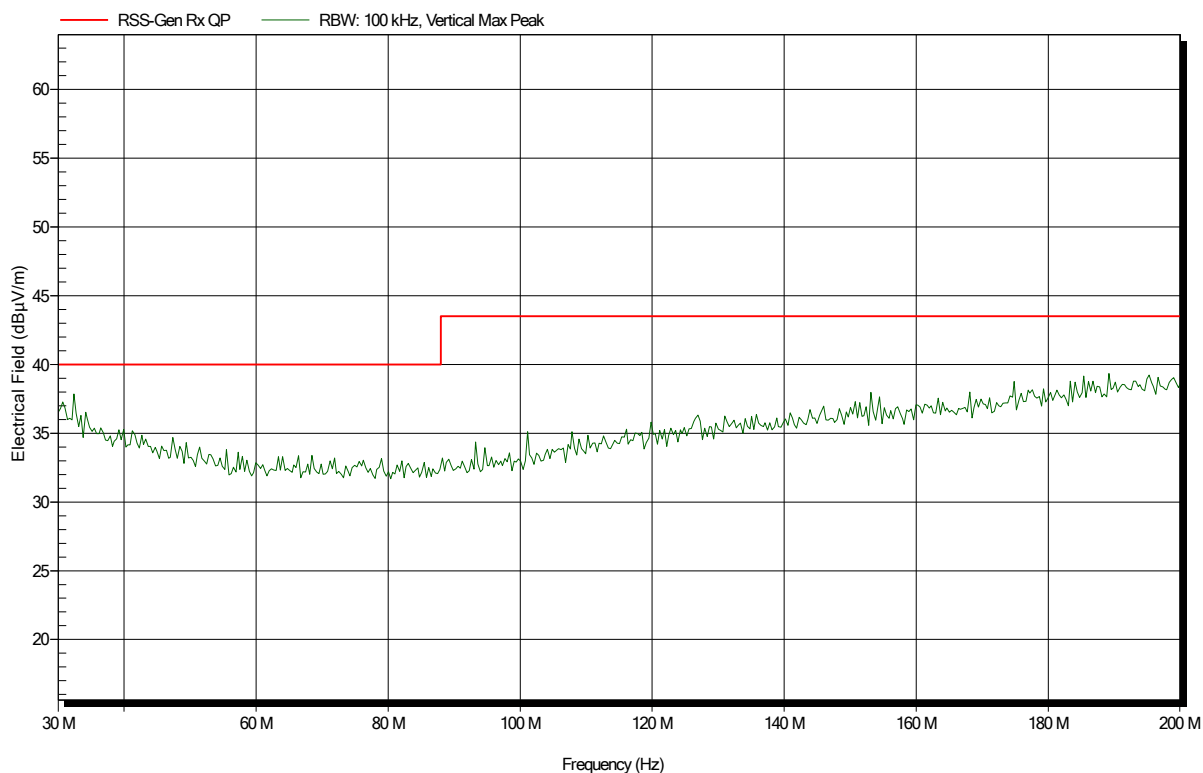


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: HK116, Vertical
Measurement distance: 3 m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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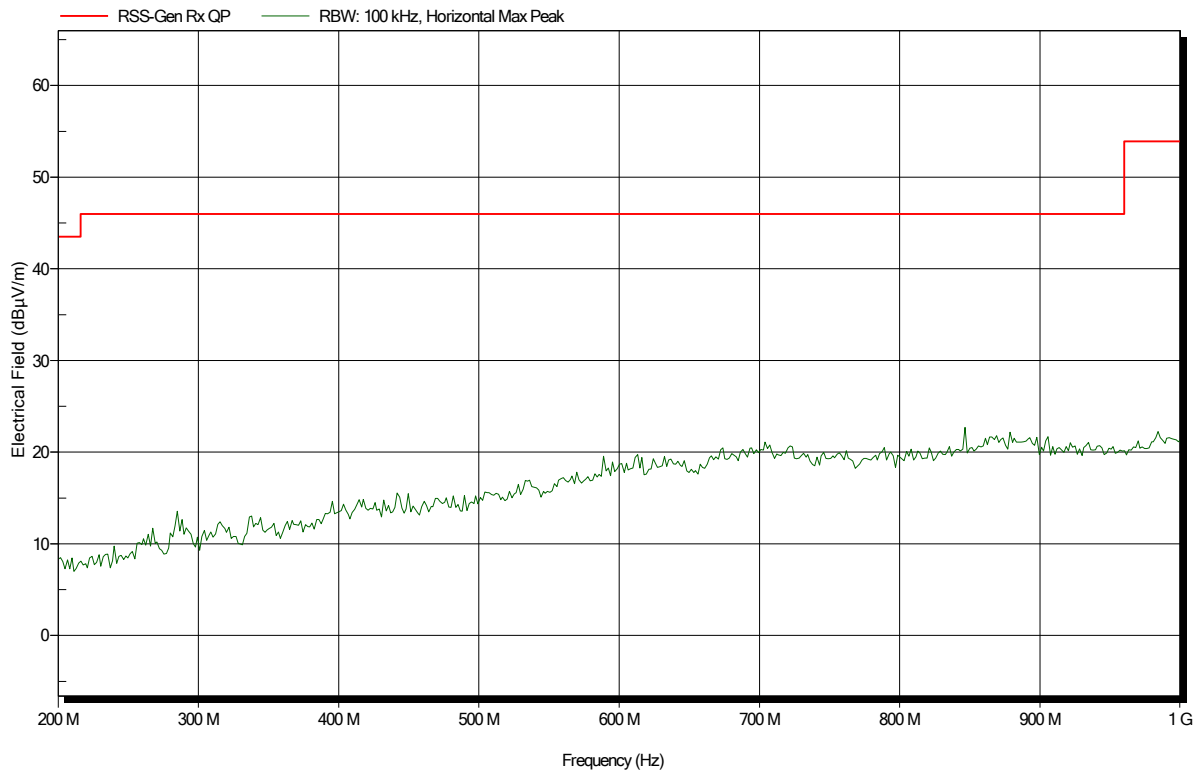


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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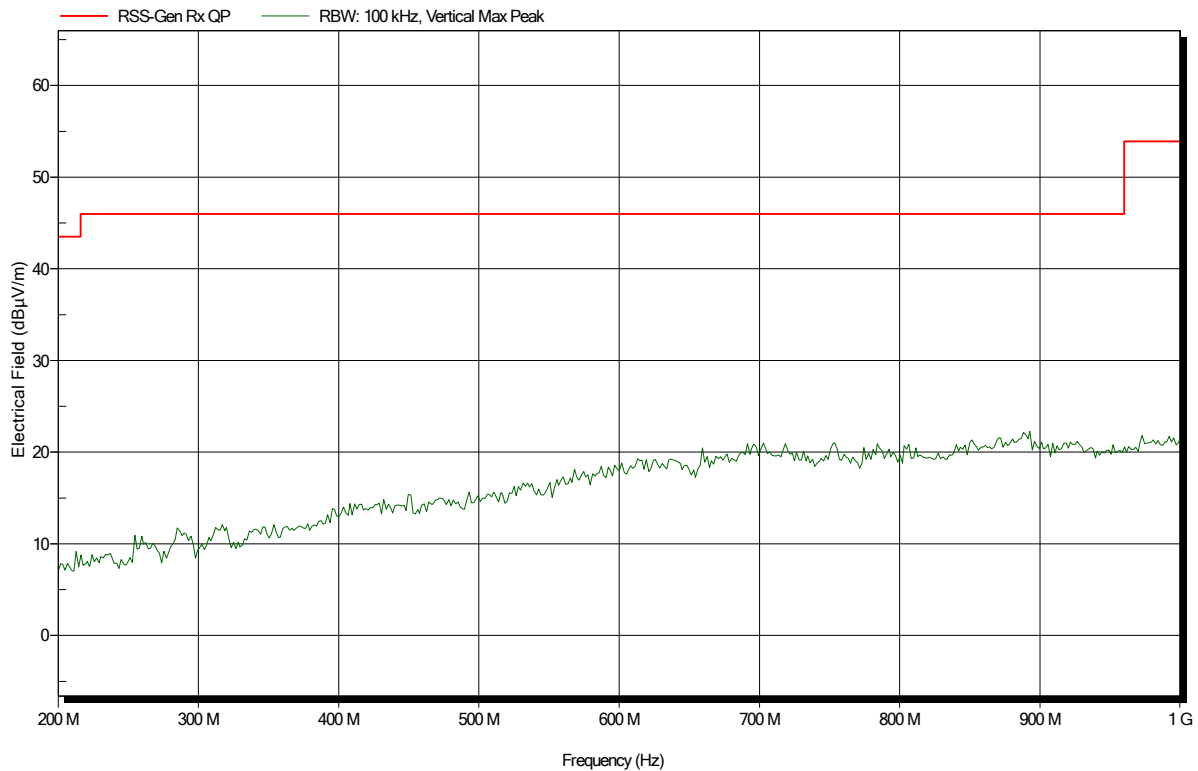


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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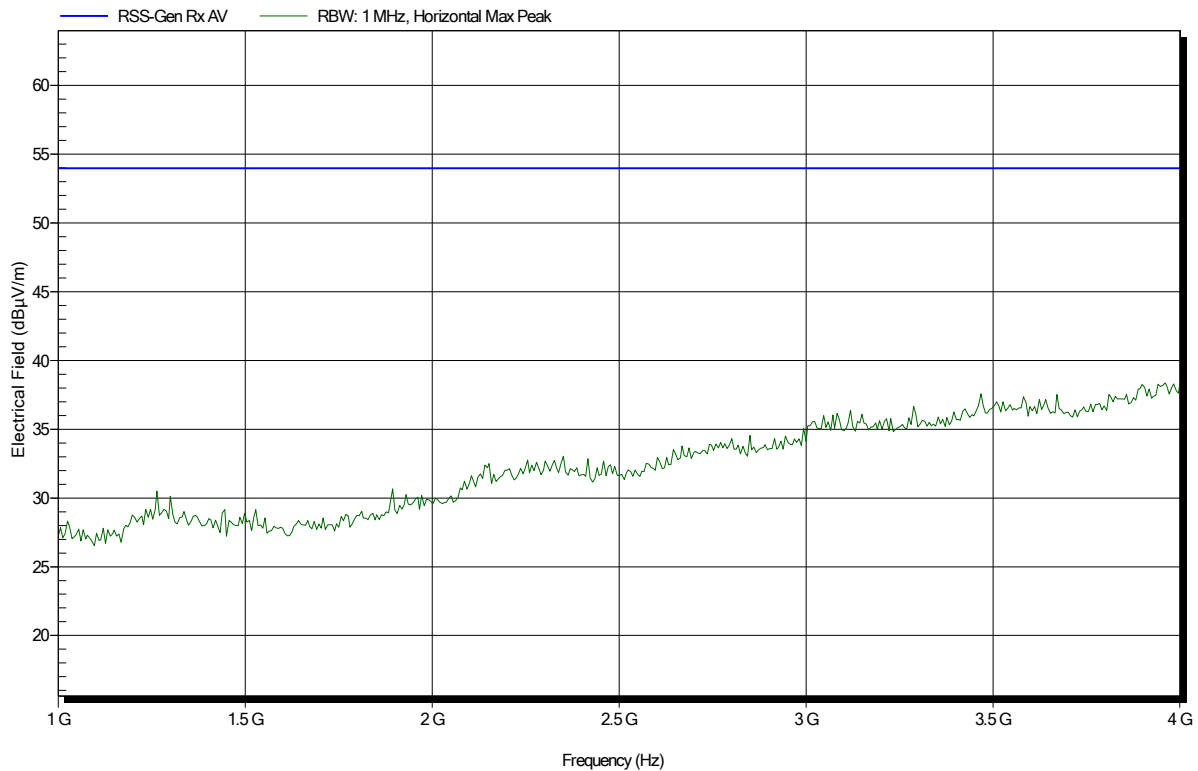


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Measurement software: RadiMation, version 2015.2.4
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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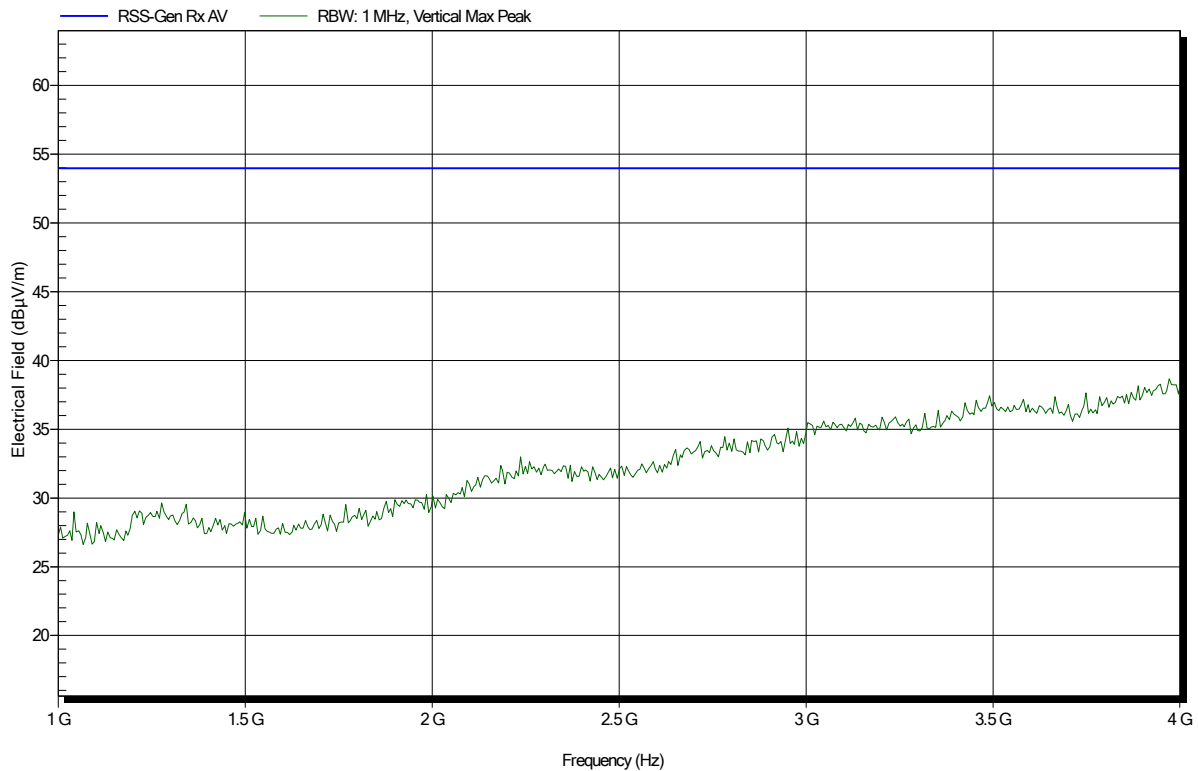


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Measurement software: RadiMation, version 2015.2.4
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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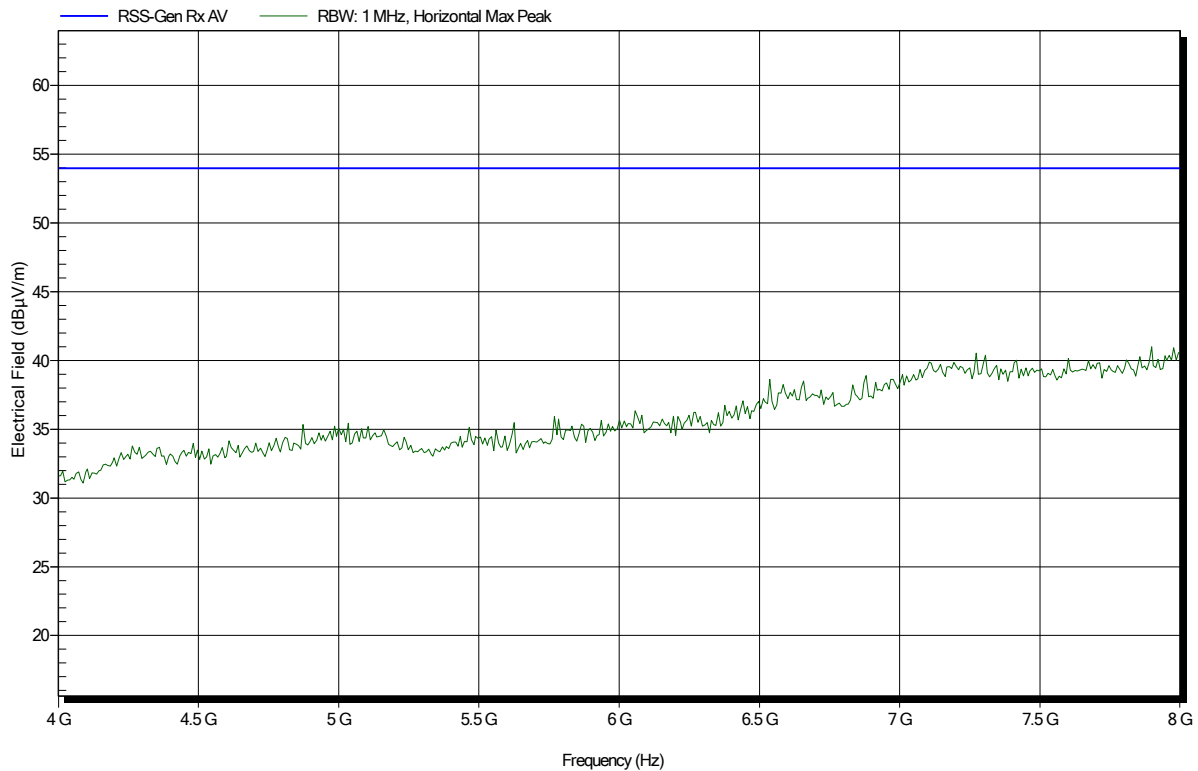


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Operator: Abdullah Al Jamal
Measurement software: RadiMation, version 2015.2.4
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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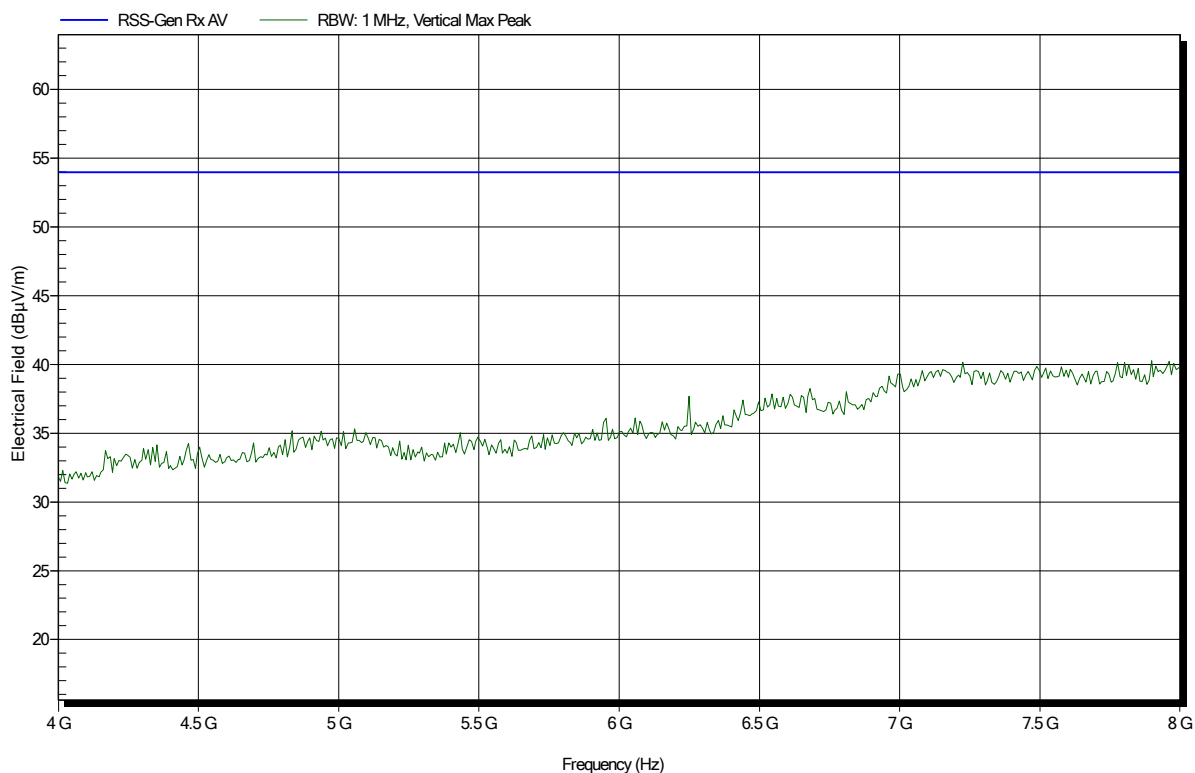


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Measurement software: RadiMation, version 2015.2.4
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m
 Mode: RX; Mode 3 – 2440 MHz
 Test Date: Thursday, August 20, 2020
 Note: Test Sample ID 30803 – EUT horizontal

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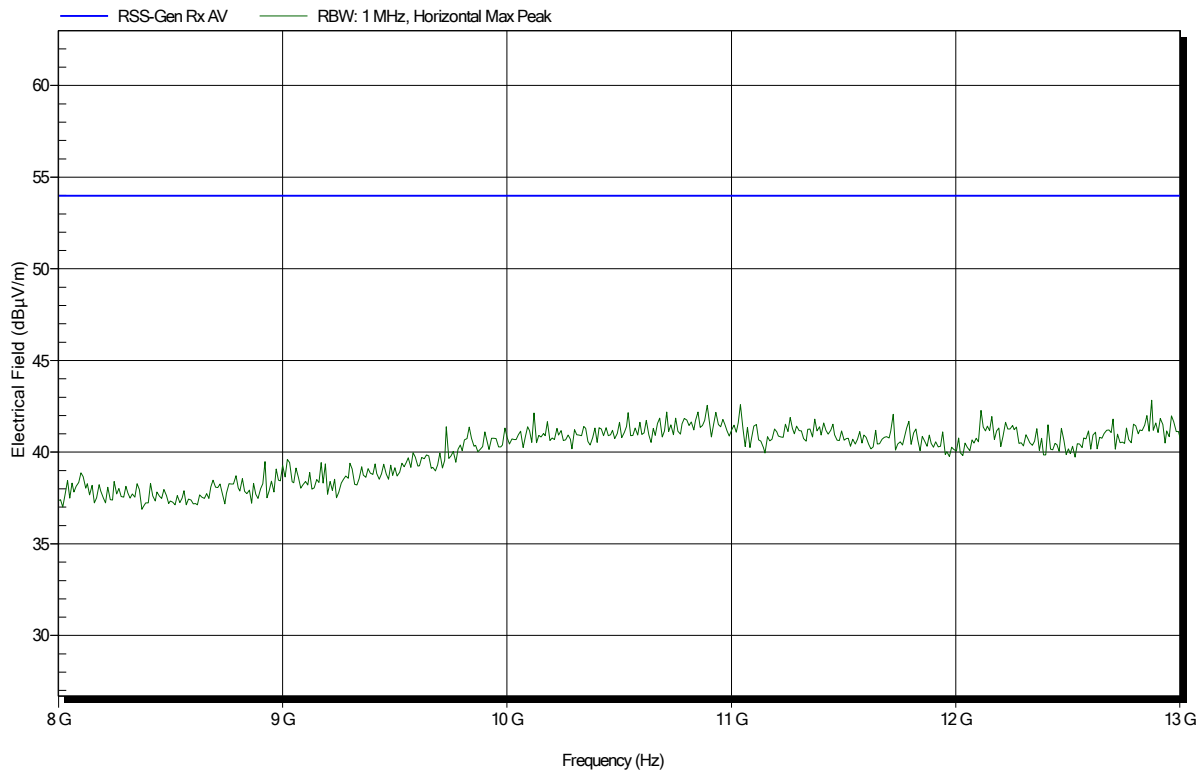


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
EUT Name: DX Datalogger
Model: DX 5.0 BTLE
Test Site: Eurofins Product Service GmbH
Measurement software: RadiMation, version 2015.2.4
Operator: Abdullah Al Jamal
Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; Mode 3 – 2440 MHz
Test Date: Thursday, August 20, 2020
Note: Test Sample ID 30803 – EUT horizontal

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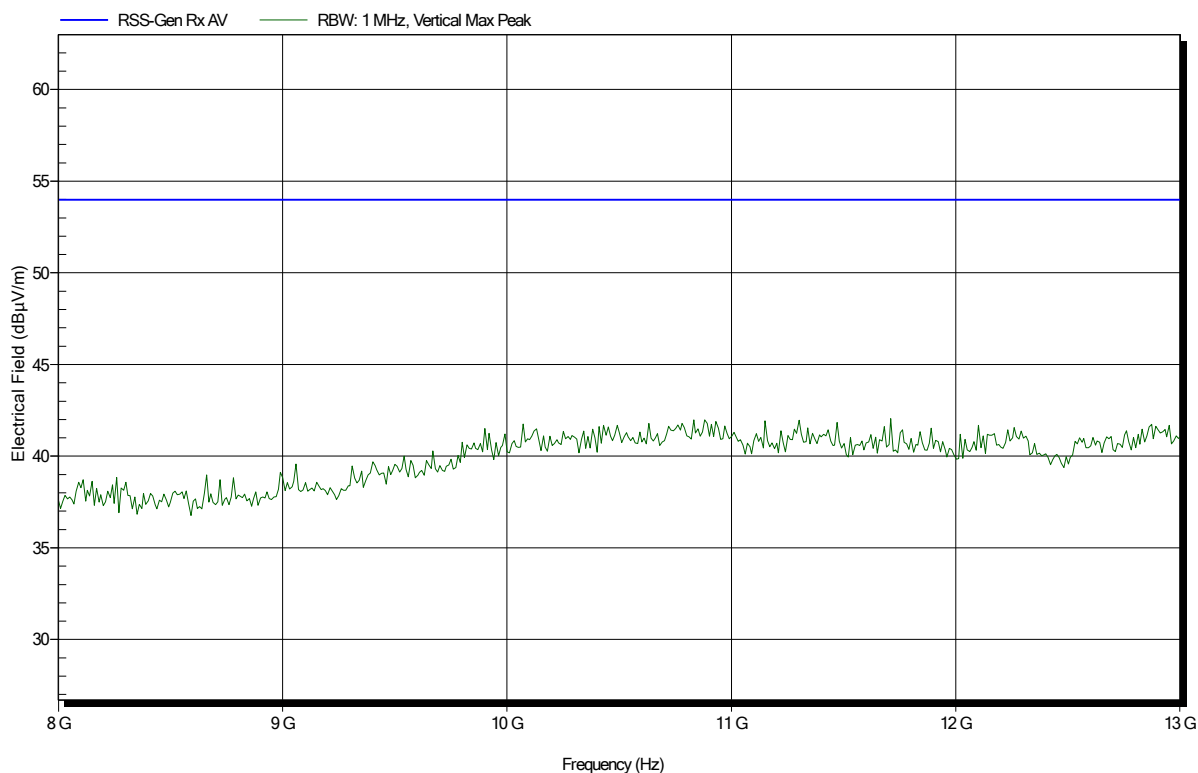


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9096

Applicant: Humotion GmbH
 EUT Name: DX Datalogger
 Model: DX 5.0 BTLE
 Test Site: Eurofins Product Service GmbH
 Measurement software: RadiMation, version 2015.2.4
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 22.4°C, Vnom: 3.7 VDC (internal lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; Mode 3 – 2440 MHz
 Test Date: Thursday, August 20, 2020
 Note: Test Sample ID 30803 – EUT horizontal

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== = END OF TEST REPORT == =

Test Report No.: G0M-2006-9096-TFC247BL-V01

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