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FCC TEST REPORT

FCC 47 CFR Part 15C
Industry Canada RSS-247
Digital transmission systems operating within the 2400 – 2483.5 MHz band

Report Reference No.....:	G0M-1503-4620-TFC247WF-V01
Testing Laboratory.....:	Eurofins Product Service GmbH
Address.....:	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation.....:	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A
Applicant's name.....:	BARTEC PIXAVI AS
Address.....:	Domkirkeplassen 2 4006 Stavanger NORWAY
Test specification:	
Standard.....:	47 CFR Part 15C RSS-247, Issue 1, 2015-05 RSS-Gen, Issue 4, 2014-11 ANSI C63.10:2013 ANSI C63.4:2014
Test scope…….....:	complete Radio compliance test
Equipment under test (EUT):	
Product description	Wireless camera (Standard version)
Model No.	OrbitX ST
Additional Model(s)	OrbitX EX
Brand Name(s)	None
Hardware version	Rev 2
Firmware / Software version	478
	FCC-ID: YML-ORBITX IC: 9249A-ORBITX
Test result	**Passed**

Possible test case verdicts:

- neither assessed nor tested .....: N/N
- required by standard but not appl. to test object.....: N/A
- required by standard but not tested.....: N/T
- not required by standard for the test object .....: N/R
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Test Lab Temperature.....: 20 – 23 °C

Test Lab Humidity .....: 32 – 38 %

Date of receipt of test item .....: 2015-04-20

Date (s) of performance of tests .....: 2015-04-21 – 2015-04-24

Compiled by ..... : Wilfried Treffke

Tested by (+ signature)..... : (Responsible for Test) Wilfried Treffke .....W. Treff.....

Approved by (+ signature) ..... : Christian Weber .....C. Weber.....

Date of issue ..... : 2015-08-04

Total number of pages ..... : 155

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:

The OrbitX ST model includes circuitry to support a Micro-HDMI connection and mechanics to give access to the HDMI port. The OrbitX EX model uses the same PCB, but does not have the HDMI components populated. Full Test was performed on the fully version OrbitX ST. The list of equality of structure is attached as annex.

Version History

Version	Issue Date	Remarks	Revised by
01	2015-08-04	Initial Release	

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1 Equipment (Test item) Description

Description	Wireless camera (Standard version)			
Model	OrbitX ST			
Additional Model(s)	OrbitX EX			
Brand Name(s)	None			
Serial number	1			
Hardware version	Rev 2			
Software / Firmware version	478			
FCC-ID	YML-ORBITX			
IC	9249A-ORBITX			
Equipment type	End product			
Radio type	Transceiver			
Radio technology	IEEE 802.11 b/g/n			
Operating frequency range	2412 - 2462 MHz			
Assigned frequency band	2400 - 2483.5 MHz			
Main test frequencies	F_{LOW20}	2412 MHz	F_{LOW40}	2422 MHz
	F_{MID20}	2437 MHz	F_{MID40}	2437 MHz
	F_{HIGH20}	2462 MHz	F_{HIGH40}	2452 MHz
Spreading	CCK, DSSS, OFDM			
Modulations	BPSK, QPSK, 16-QAM, 64-QAM			
Number of channels	11			
Channel spacing	5 MHz			
Number of antennas	1			
Antenna	Type	integrated		
	Model	Printed flex PCB		
	Manufacturer	Custom		
	Gain	+0.0 dBi (by measurement)		
Manufacturer	BARTEC PIXAVI AS Domkirkeplassen 2 4006 Stavanger NORWAY			
Power supply	V_{NOM}	3.7 VDC lithium		
	V_{MIN}	N/R		
	V_{MAX}	N/R		
AC/DC-Adaptor	Model	N/A		
	Vendor	N/A		
	Input	N/A		
	Output	N/A		

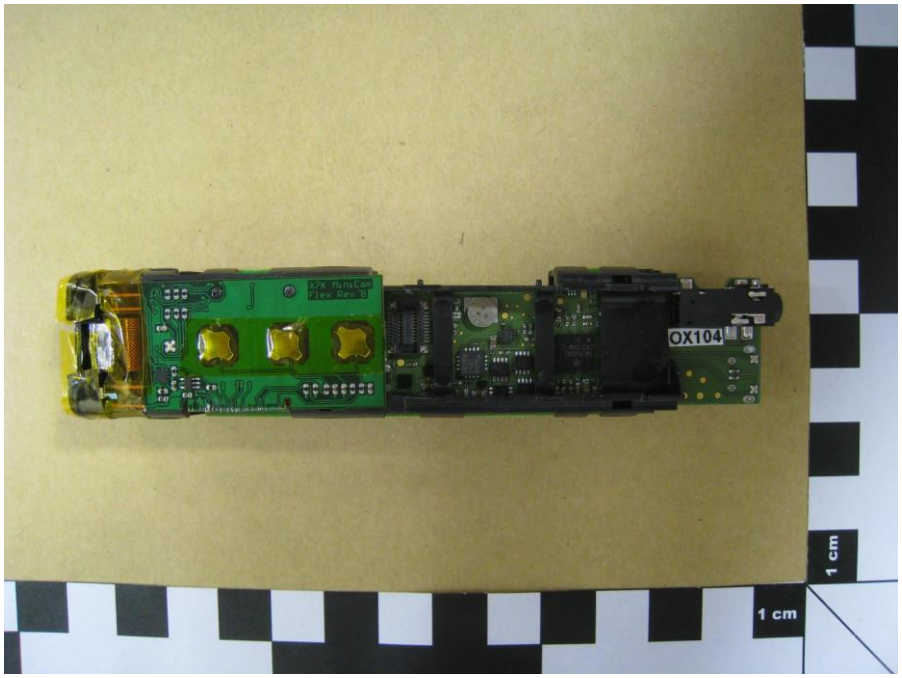
1.1 Photos – Equipment External

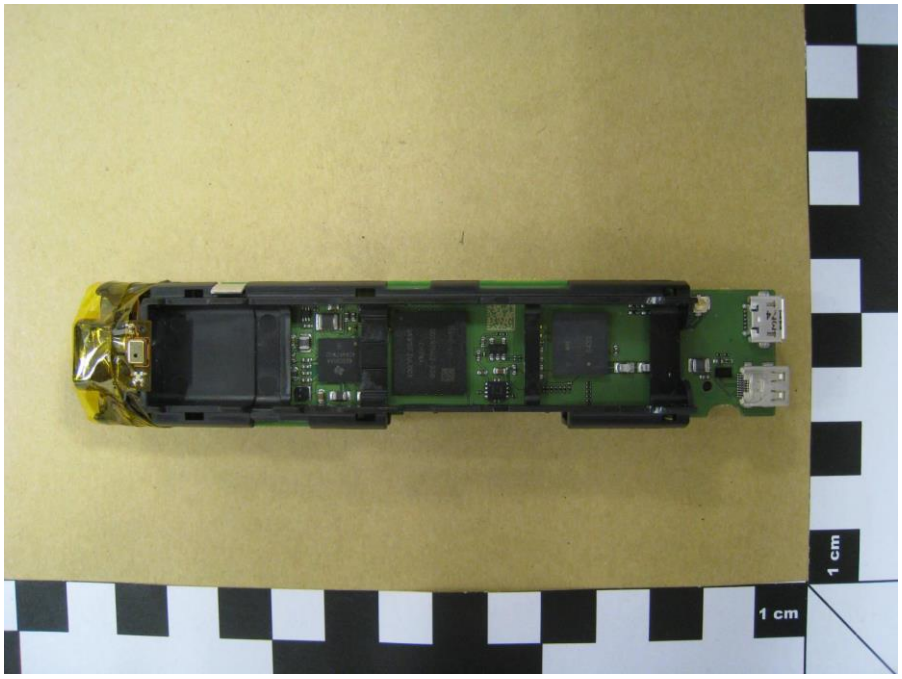
EUT TOP

EUT BOTTOM

EUT SIDE

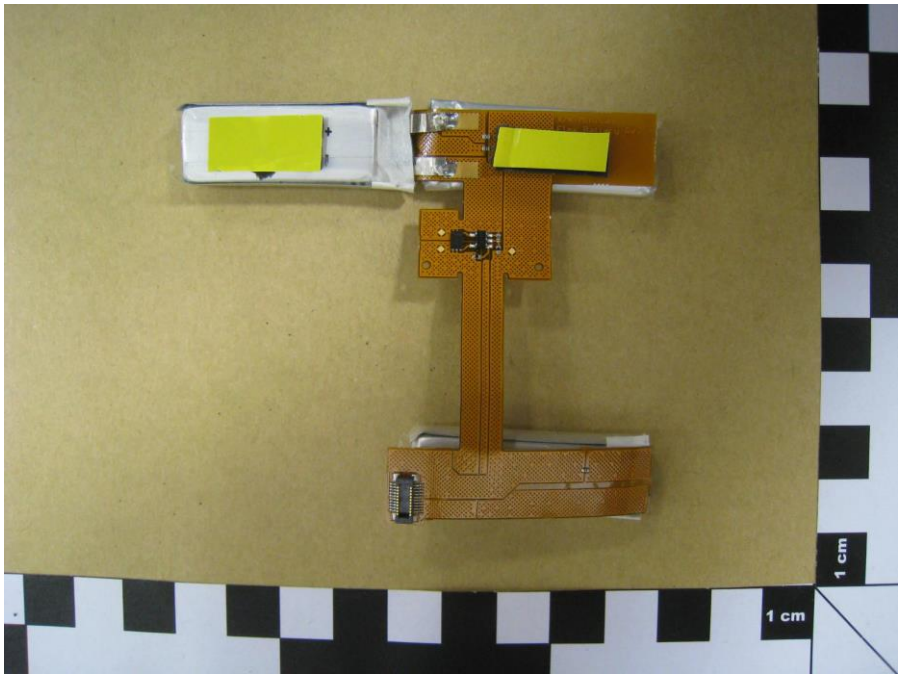
1.2 Photos – Equipment internal

PCB TOP


PCB BOTTOM


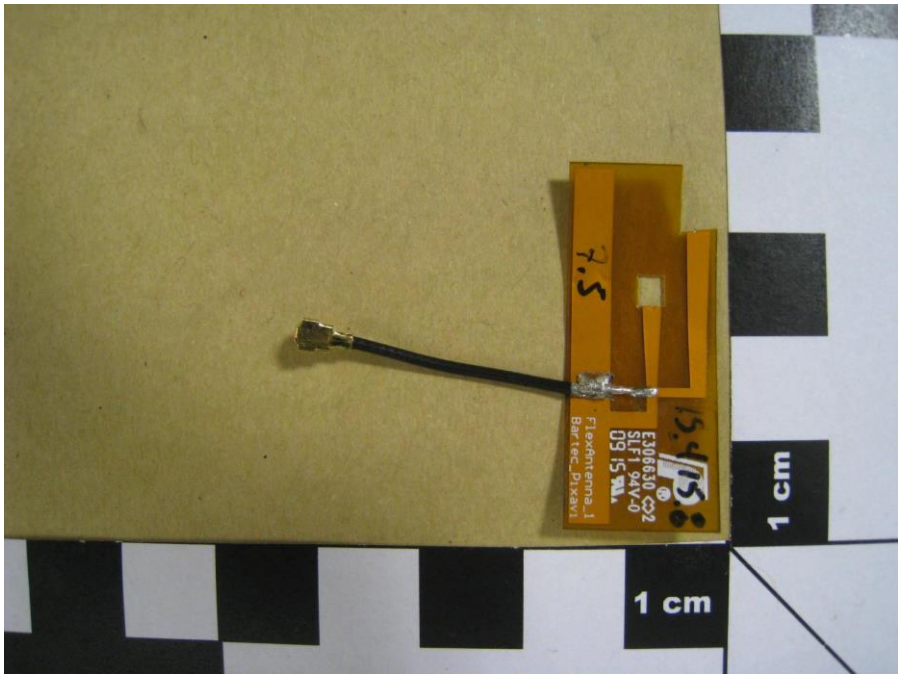
EUT CONNECTORS

BATTERY PACK



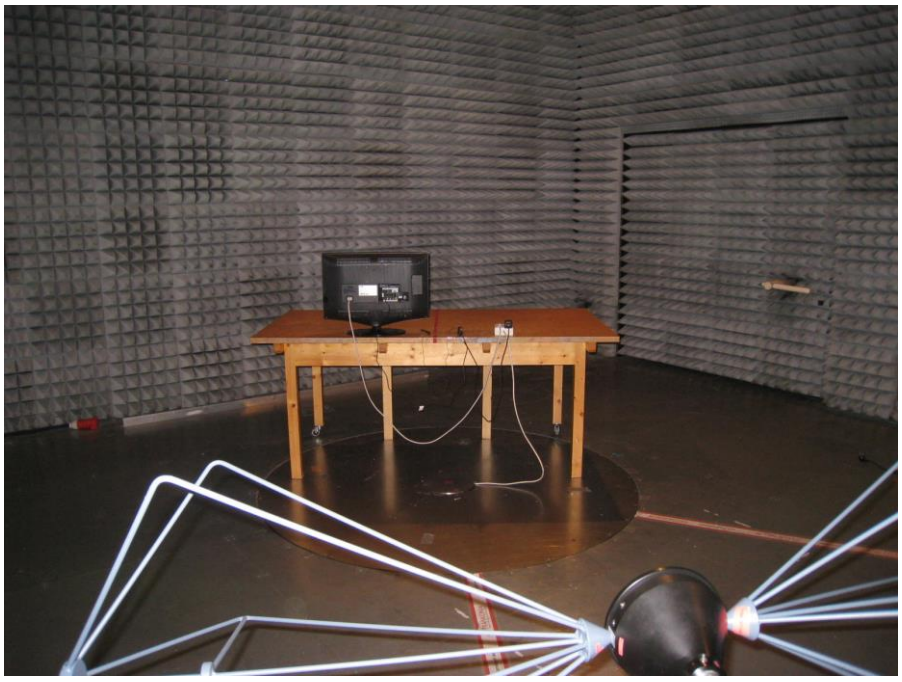
EUT FLEX ANTENNA

FLEX ANTENNA



1.3 Photos – Test setup

SETUP AC POWER LINE

SETUP RADIATED EMISSIONS


1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
none				

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

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Test Modes

Mode #	Description	
DSSS	General conditions:	EUT powered via USB
	Radio conditions:	Mode = standalone transmit Spreading = DSSS Modulation = BPSK Data rate = 1 Mbps Bandwidth = 20 MHz Duty cycle = 90 % Power level = 15 dBm (test mode setting)
OFDM	General conditions:	EUT powered via USB
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = 6 Mbps Bandwidth = 20 MHz Duty cycle = 50 % Power level = 15 dBm (test mode setting)
HT20	General conditions:	EUT powered via USB
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK MCS index = 0 Guard Interval = long Bandwidth = 20 MHz Data rate = 6.5 Mbps Duty cycle = 50 % Power level = 15 dBm (test mode setting)
HT40	General conditions:	EUT powered via USB
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK MCS index = 0 Guard Interval = long Bandwidth = 40 MHz Data rate = 13 Mbps Duty cycle = 50 % Power level = 15 dBm (test mode setting)
Receive	General conditions:	EUT powered via USB
	Radio conditions:	Mode = standalone receive

AC-Powerline	General conditions:	EUT powered by commercial AC/DC-Adapter
	Radio conditions:	Mode = standalone transmit Spreading = DSSS Power level = Maximum

1.6 Test Equipment Used During Testing

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

Occupied Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

6dB Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

Maximum peak conducted power					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

Power spectral density					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

Band edge compliance					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

Conducted spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSP 30	EF00312	2015-02	2016-02
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03
LPD Antenna	R&S	HL 025	EF00327	2013-02	2016-02

AC powerline conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	EF00182	2014-11	2016-11
EMI Test Receiver	R&S	ESCS 30	EF00295	2014-10	2015-10

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:

Reading on Analyzer (dBµV) + A.F. (dB) = Net field strength (dBµV/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:

Limit (dBµV/m) = 20*log (µV/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	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m = -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, IC RSS-247				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 6.6	Occupied Bandwidth	ANSI C63.10	N/R	Informational only
FCC § 15.247(a)(2) IC RSS-247 § 5.2	6dB Bandwidth	ANSI C63.10	PASS	
FCC § 15.247(b)(3) IC RSS-247 § 5.4	Maximum peak conducted power	ANSI C63.10	PASS	
FCC § 15.247(e) IC RSS-247 § 5.2	Power spectral density	ANSI C63.10	PASS	
47 CFR 15.207 IC RSS-247 § 3.1	AC power line conducted emissions	ANSI C63.4	PASS	
FCC § 15.247(d) IC RSS-247 § 5.5	Band edge compliance	ANSI C63.10	PASS	
FCC § 15.247(d) IC RSS-247 § 5.5	Conducted spurious emissions	ANSI C63.10	PASS	
FCC § 15.247(d) FCC § 15.209 IC RSS-247 § 5.5	Transmitter radiated spurious emissions	ANSI C63.10	PASS	
IC RSS-247 § 3.1	Receiver radiated spurious emissions	ANSI C63.10	PASS	
Remarks:				

3 Test Conditions and Results

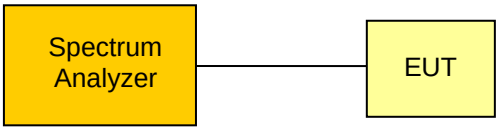
3.1 Test Conditions and Results – Occupied Bandwidth

Occupied Bandwidth acc. to IC RSS-Gen	**Verdict: N/R**
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}

Limits

None (Informational only)

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set to at least twice the emission spectrum
3. Resolution bandwidth set to 1 % of span
4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function

Test results

Channel	Frequency [MHz]	Mode	Occupied Bandwidth [kHz]
F_{LOW20}	2412	DSSS	14700
F_{MID20}	2437	DSSS	14900
F_{HIGH20}	2462	DSSS	14800
F_{LOW20}	2412	OFDM	16600
F_{MID20}	2437	OFDM	17400
F_{HIGH20}	2462	OFDM	16600
F_{LOW20}	2412	HT20	17700
F_{MID20}	2437	HT20	18600
F_{HIGH20}	2462	HT20	17700
F_{LOW40}	2422	HT40	35840
F_{MID40}	2437	HT40	36000
F_{HIGH40}	2452	HT40	36000

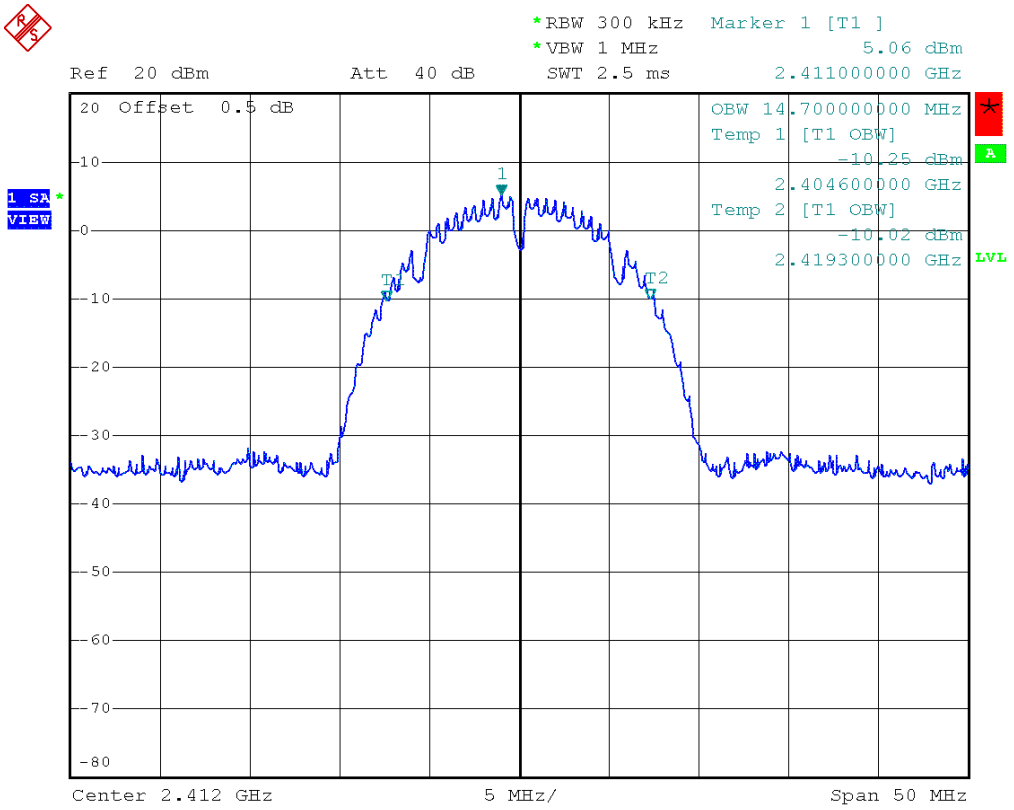
Comments:

Occupied Bandwidth – DSSS F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



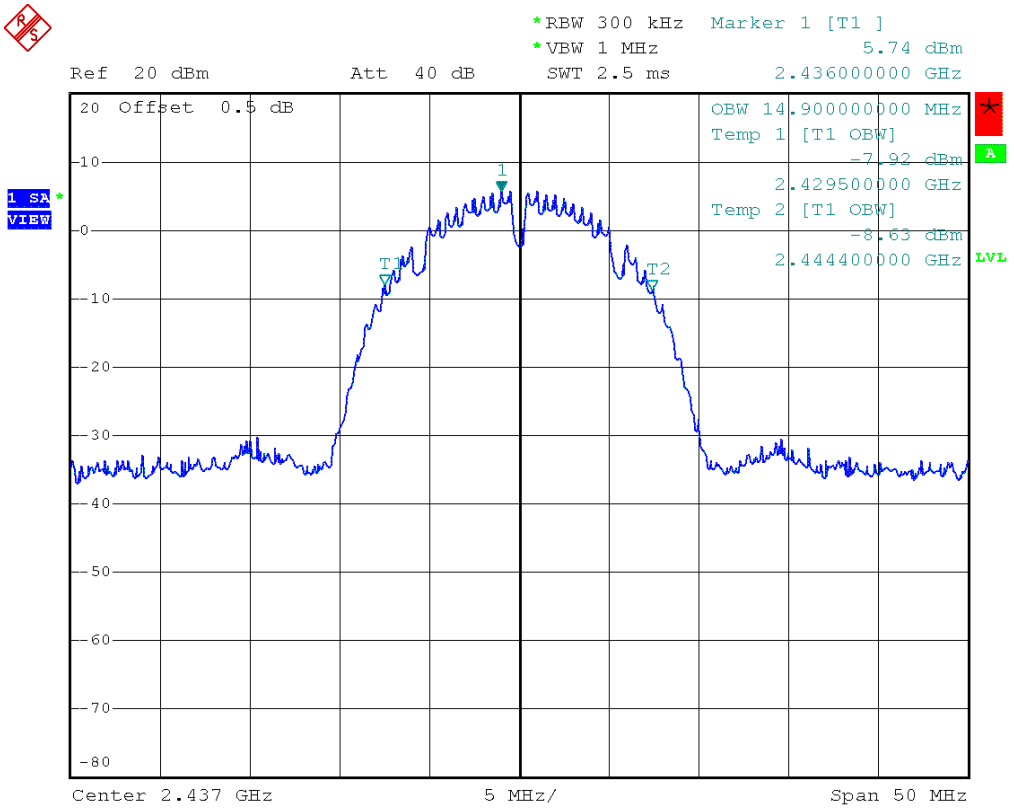
Comment: Occupied bandwidth: 14700 KHz
Date: 1.JAN.2000 01:27:47

Occupied Bandwidth – DSSS F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



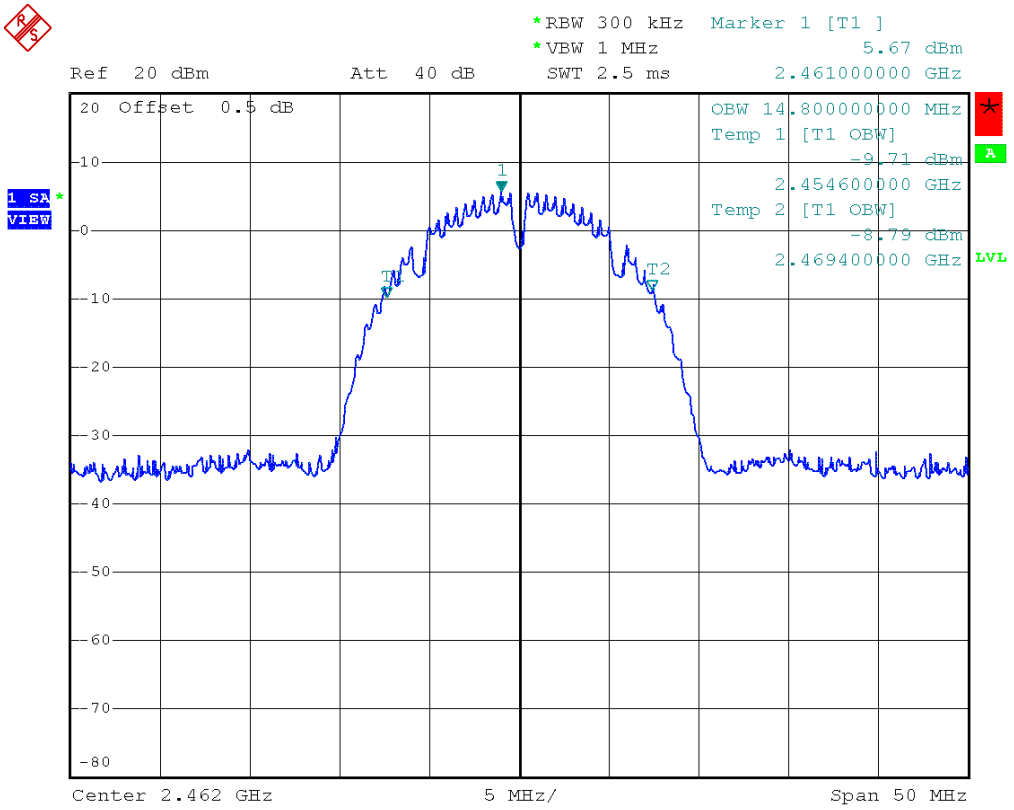
Comment: Occupied bandwidth: 14900 KHz
Date: 1.JAN.2000 01:35:53

Occupied Bandwidth – DSSS F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



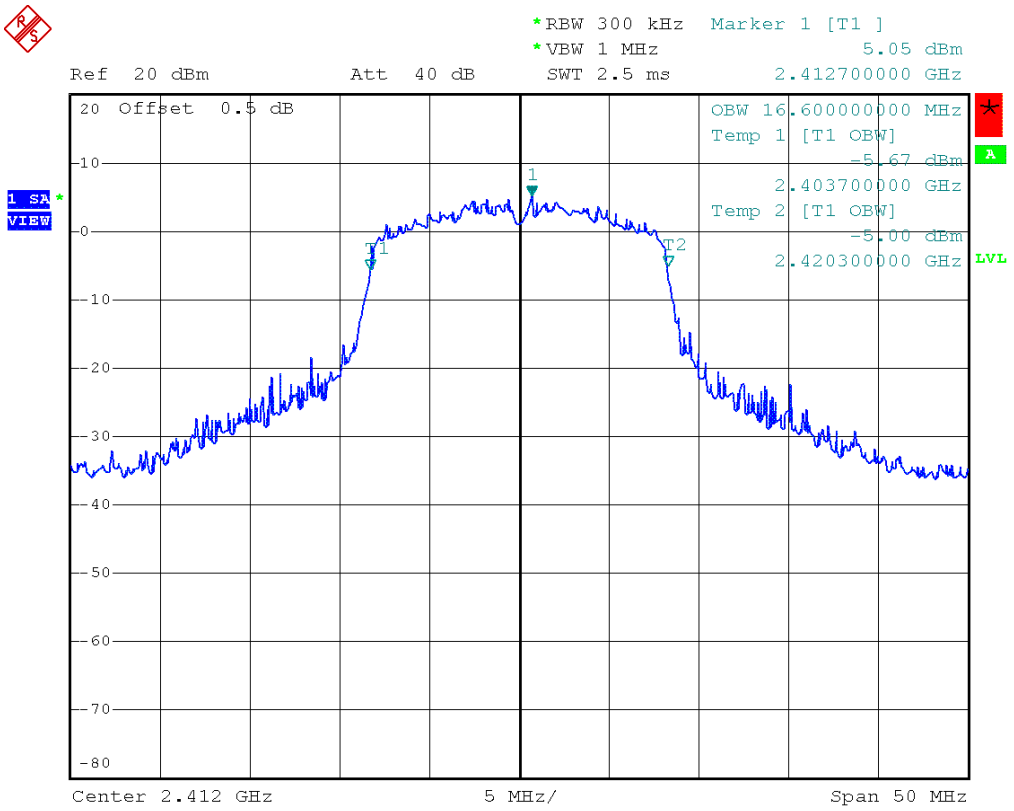
Comment: Occupied bandwidth: 14800 KHz
Date: 1.JAN.2000 01:37:46

Occupied Bandwidth – OFDM F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



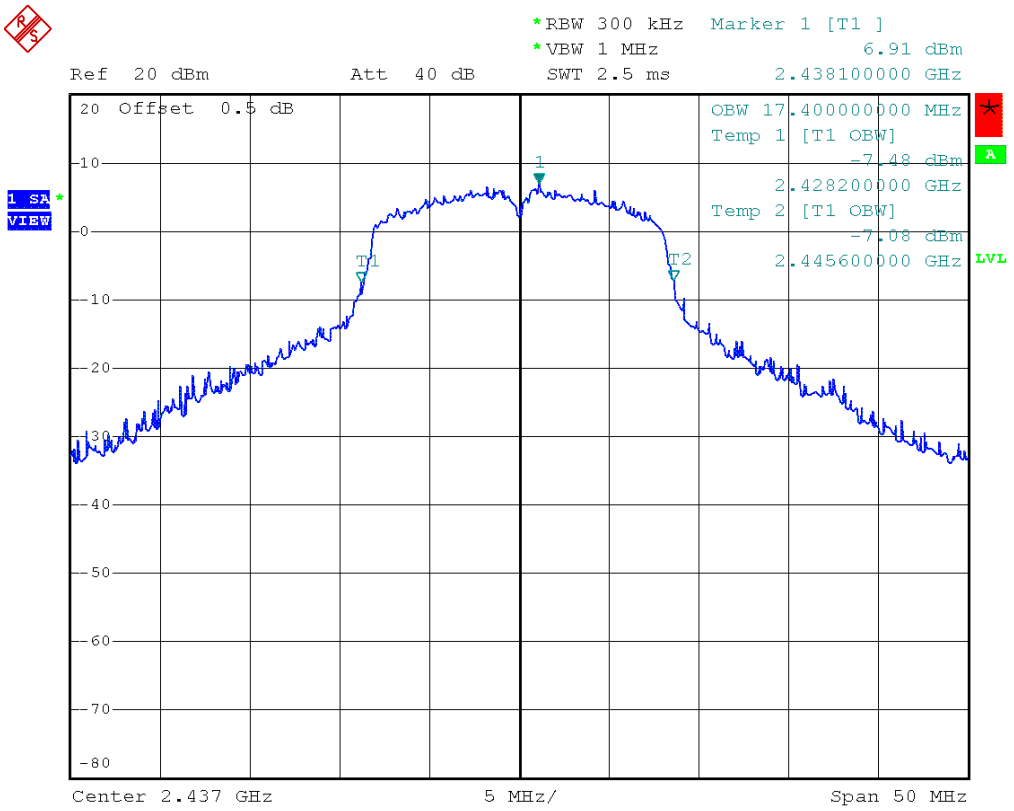
Comment: Occupied bandwidth: 16600 KHz
Date: 1.JAN.2000 01:40:30

Occupied Bandwidth – OFDM F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



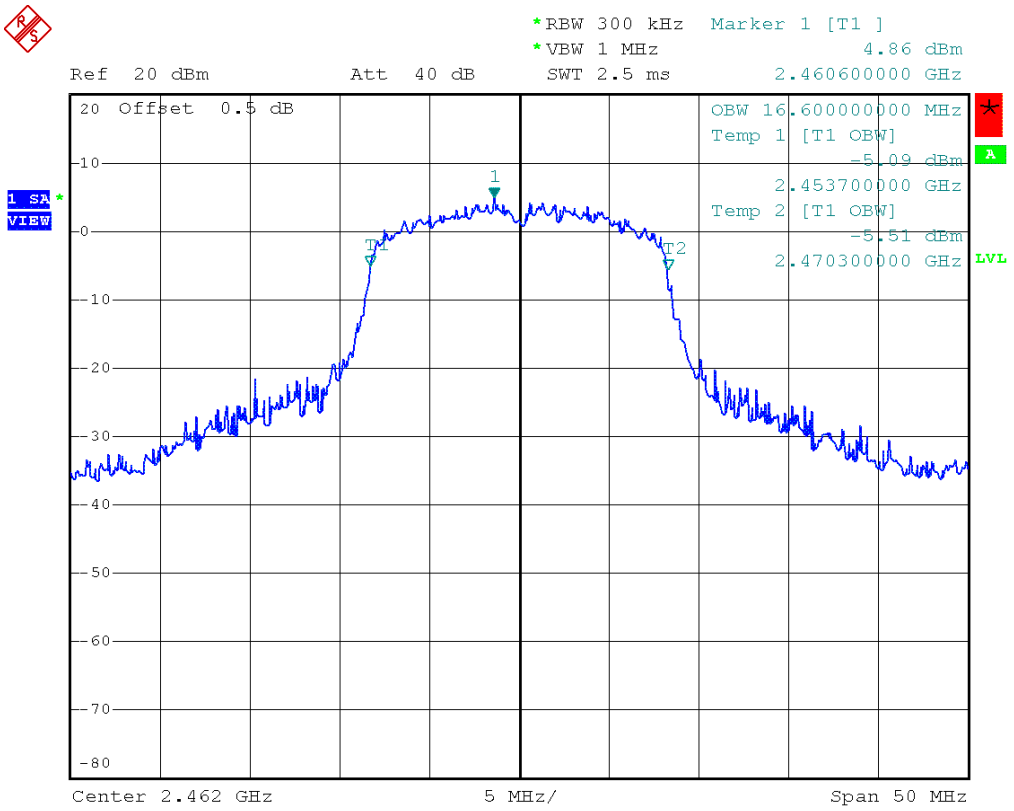
Comment: Occupied bandwidth: 17400 KHz
Date: 1.JAN.2000 01:44:53

Occupied Bandwidth – OFDM F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



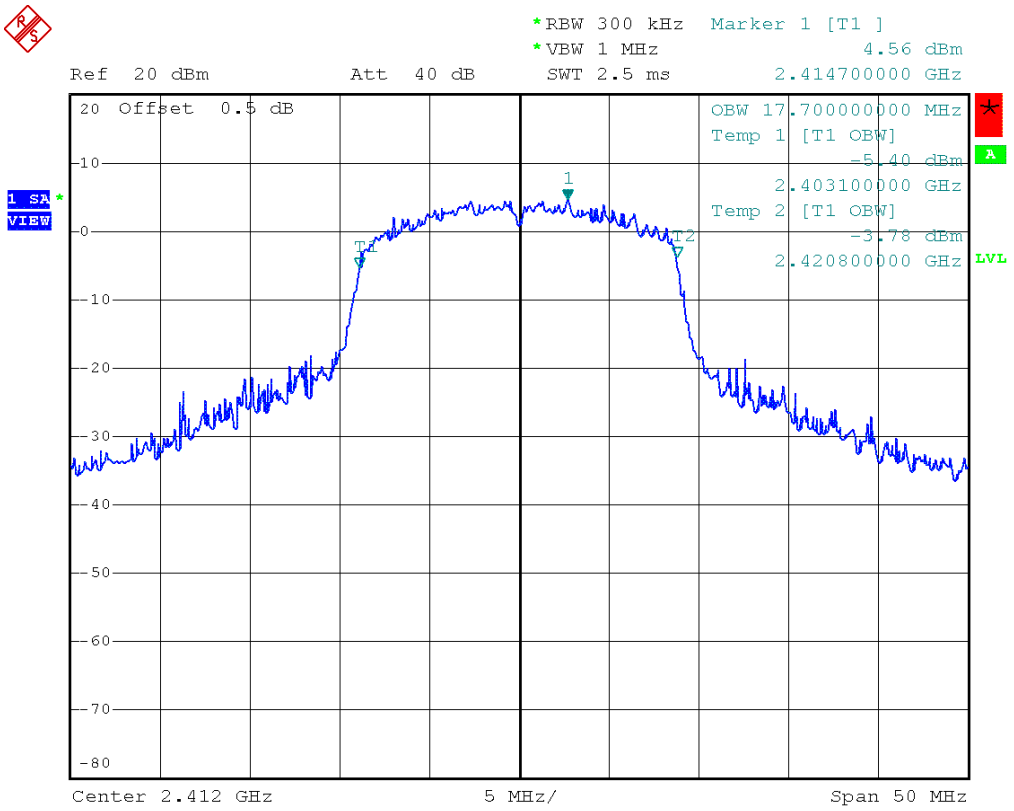
Comment: Occupied bandwidth: 16600 KHz
Date: 1.JAN.2000 01:45:58

Occupied Bandwidth – HT20 F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



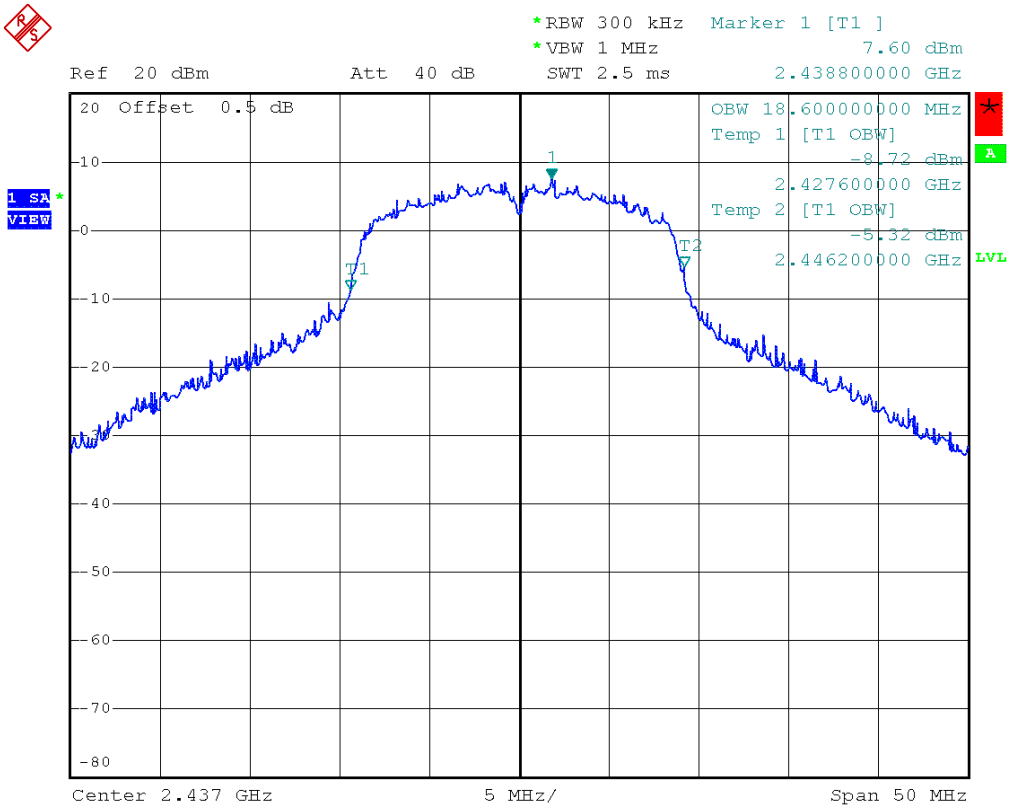
Comment: Occupied bandwidth: 17700 KHz
Date: 1.JAN.2000 01:49:15

Occupied Bandwidth – HT20 F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



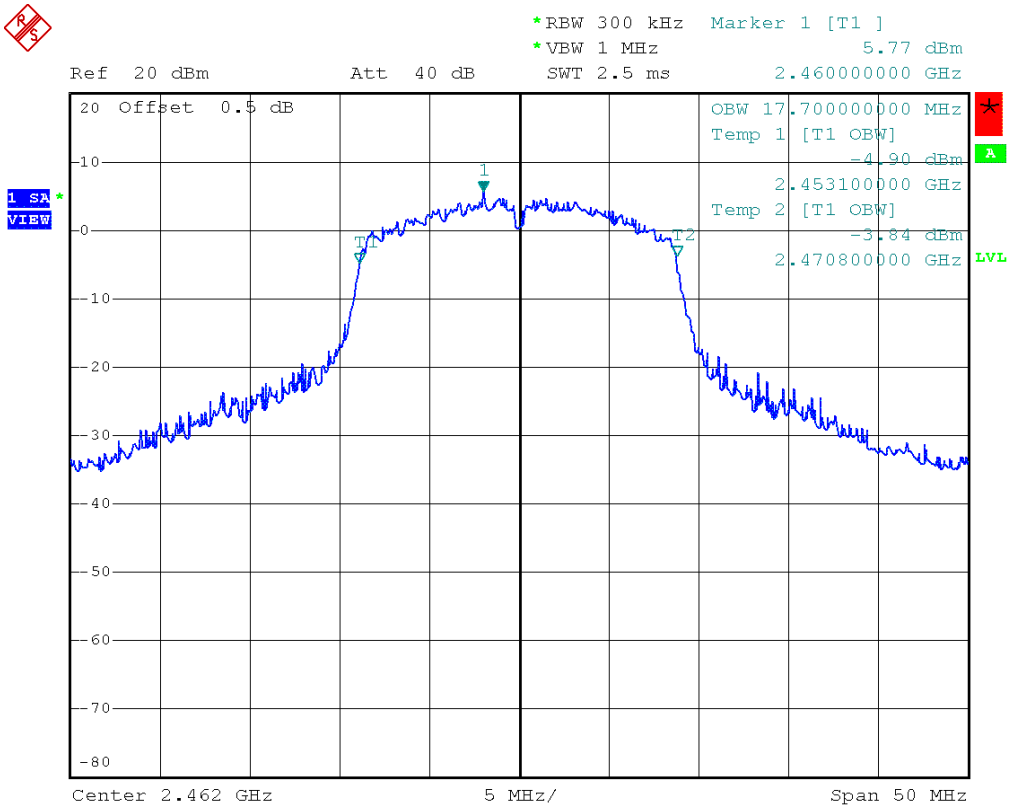
Comment: Occupied bandwidth: 18600 KHz
Date: 1.JAN.2000 01:58:09

Occupied Bandwidth – HT20 F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



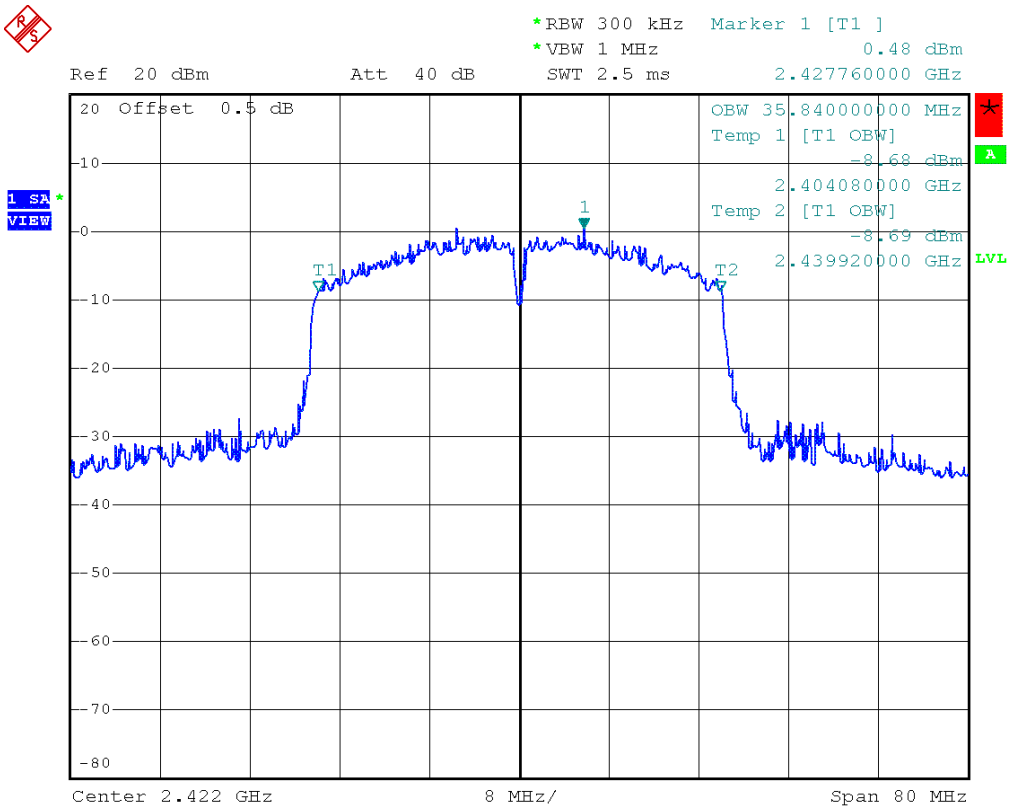
Comment: Occupied bandwidth: 17700 KHz
Date: 1.JAN.2000 02:00:03

Occupied Bandwidth – HT40 F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2422 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



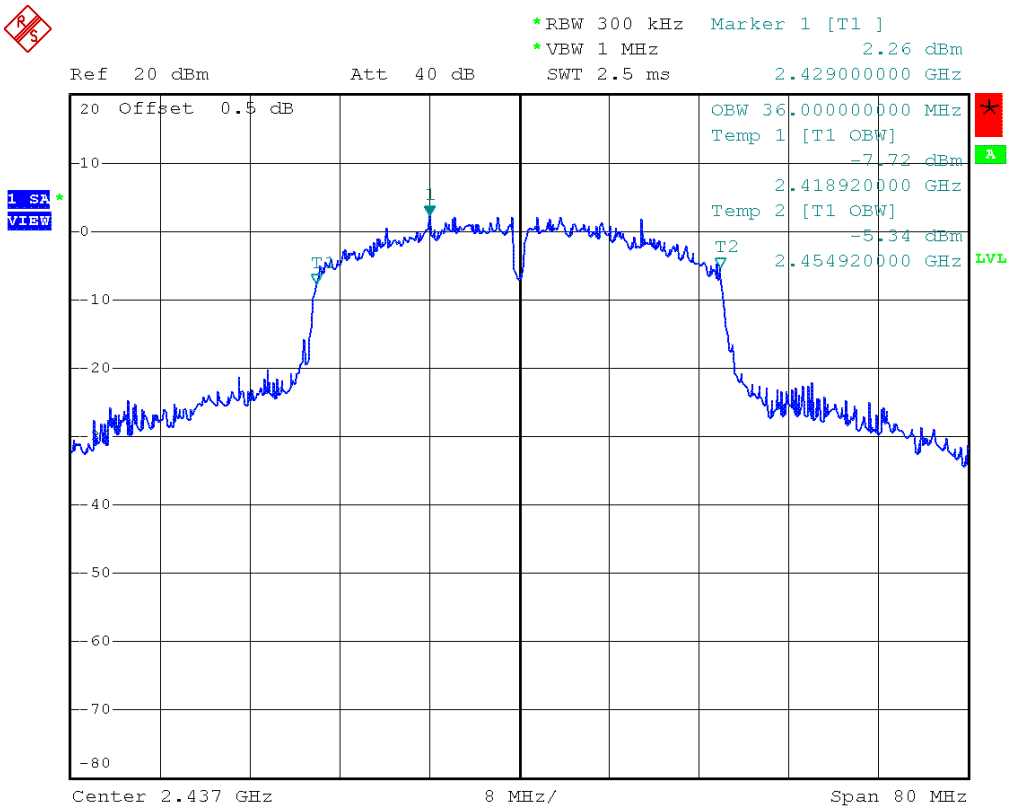
Comment: Occupied bandwidth: 35840 KHz
Date: 1.JAN.2000 02:03:45

Occupied Bandwidth – HT40 F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



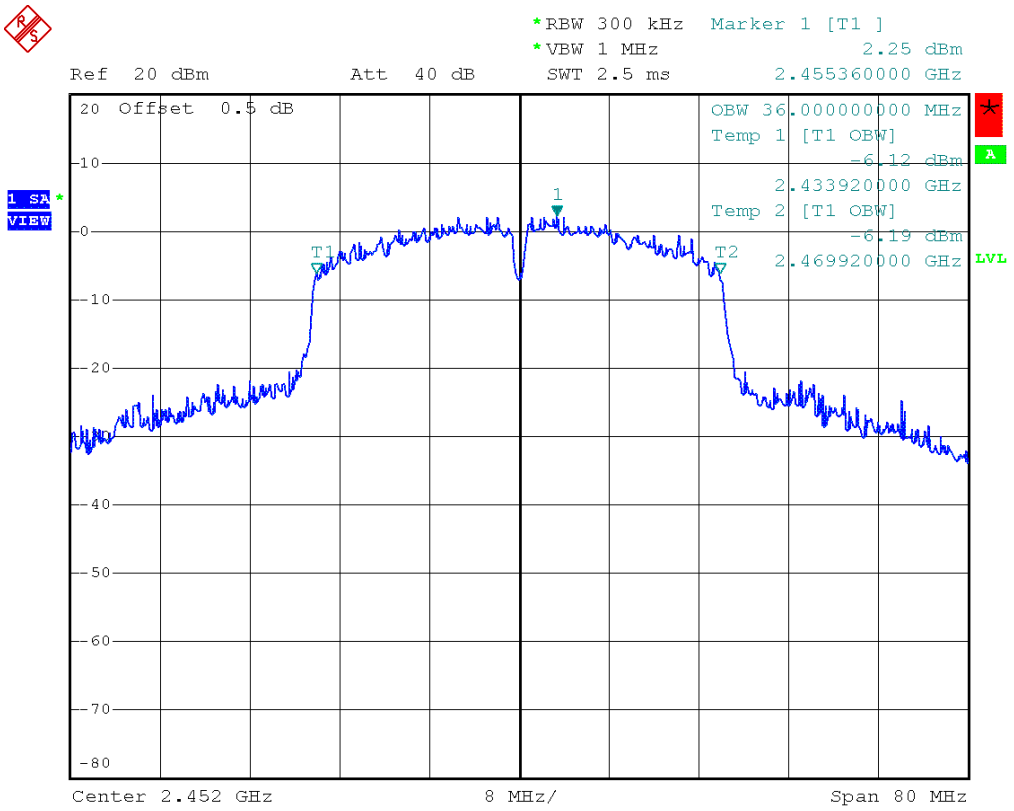
Comment: Occupied bandwidth: 36000 KHz
Date: 1.JAN.2000 02:06:06

Occupied Bandwidth – HT40 F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

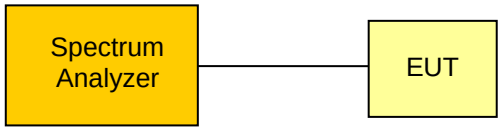
Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2452 MHz, modulated
Test Date:	2015-04-24
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



Comment: Occupied bandwidth: 36000 KHz
Date: 1.JAN.2000 02:40:51

3.2 Test Conditions and Results – 6 dB Bandwidth

6dB Bandwidth acc. to FCC 15.247 / IC RSS-247	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(a)(2) / IC RSS-247 5.2
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Limits	
Limit	
≥ 500kHz	
Test setup	
	
Test procedure	
1. EUT set to test mode 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold and RBW is set to 100 kHz 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -6 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -6 dB to the right of the peak 7. 6 dB Bandwidth is determined by marker frequency separation	

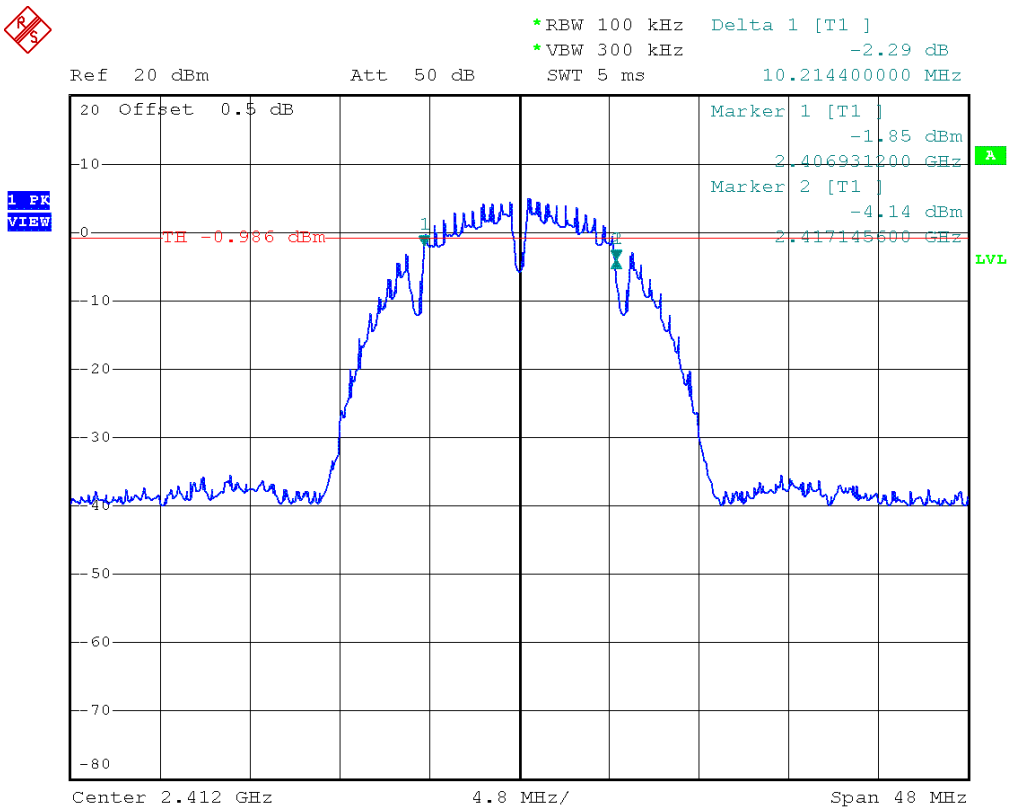
Test results					
Channel	Frequency [MHz]	Mode	6 dB Bandwidth [kHz]	Limit [kHz]	Result
F_{LOW20}	2412	DSSS	10214.4	500	PASS
F_{MID20}	2437	DSSS	10214.4	500	PASS
F_{HIGH20}	2462	DSSS	10214.4	500	PASS
F_{LOW20}	2412	OFDM	15225.6	500	PASS
F_{MID20}	2437	OFDM	15187.2	500	PASS
F_{HIGH20}	2462	OFDM	15744.0	500	PASS
F_{LOW20}	2412	HT20	15206.4	500	PASS
F_{MID20}	2437	HT20	15225.6	500	PASS
F_{HIGH20}	2462	HT20	15225.6	500	PASS
F_{LOW40}	2422	HT40	32961.6	500	PASS
F_{MID40}	2437	HT40	31665.6	500	PASS
F_{HIGH40}	2452	HT40	32961.6	500	PASS
Comments:					

6 dB Bandwidth – DSSS F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



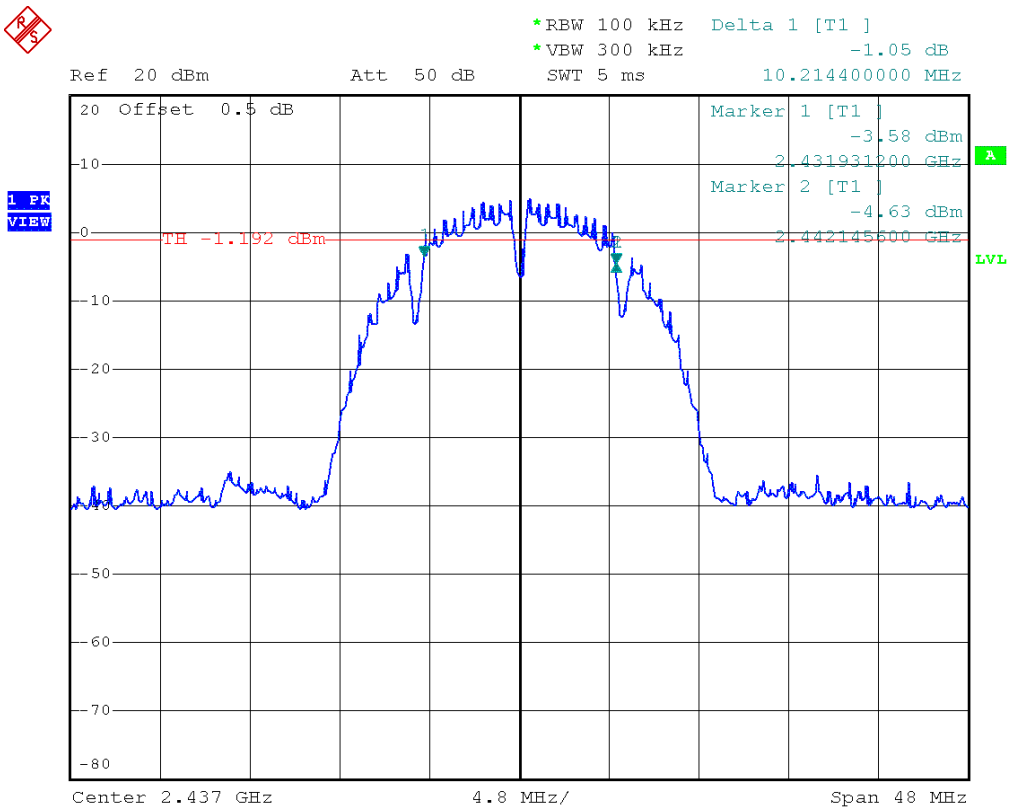
Comment: 6 dB bandwidth: 10214.4 KHz > 500 KHz
Date: 1.JAN.2000 02:54:48

6 dB Bandwidth – DSSS F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



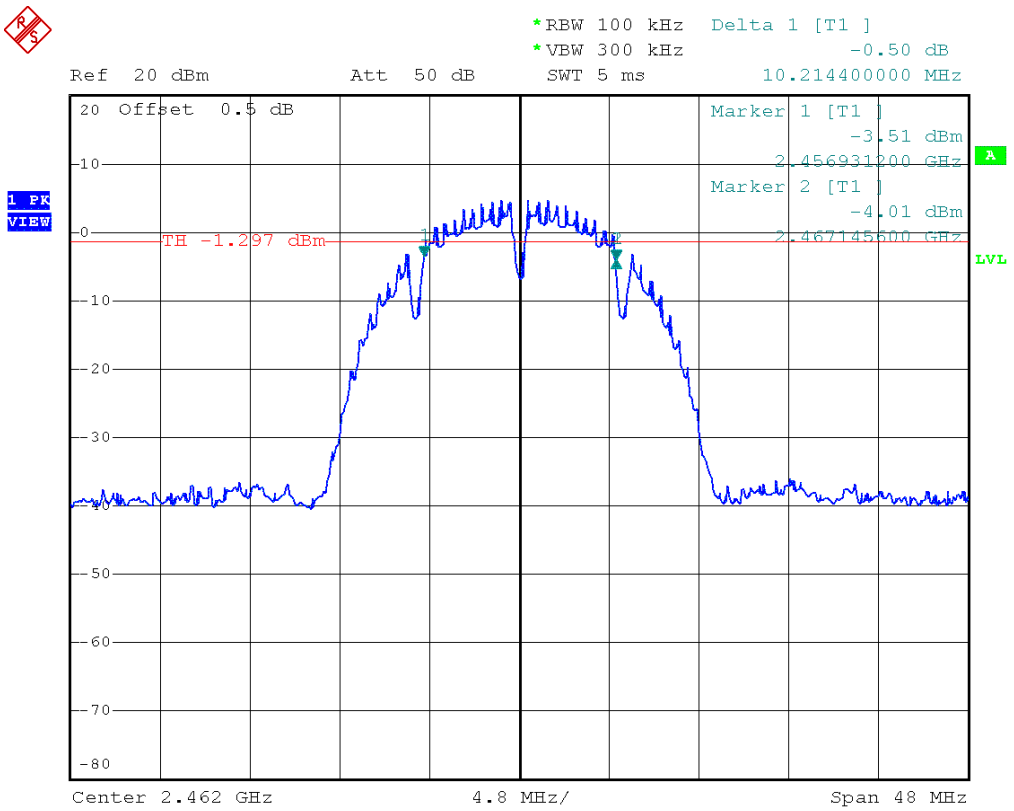
Comment: 6 dB bandwidth: 10214.4 KHz > 500 KHz
Date: 1.JAN.2000 02:56:15

6 dB Bandwidth – DSSS F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1 Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



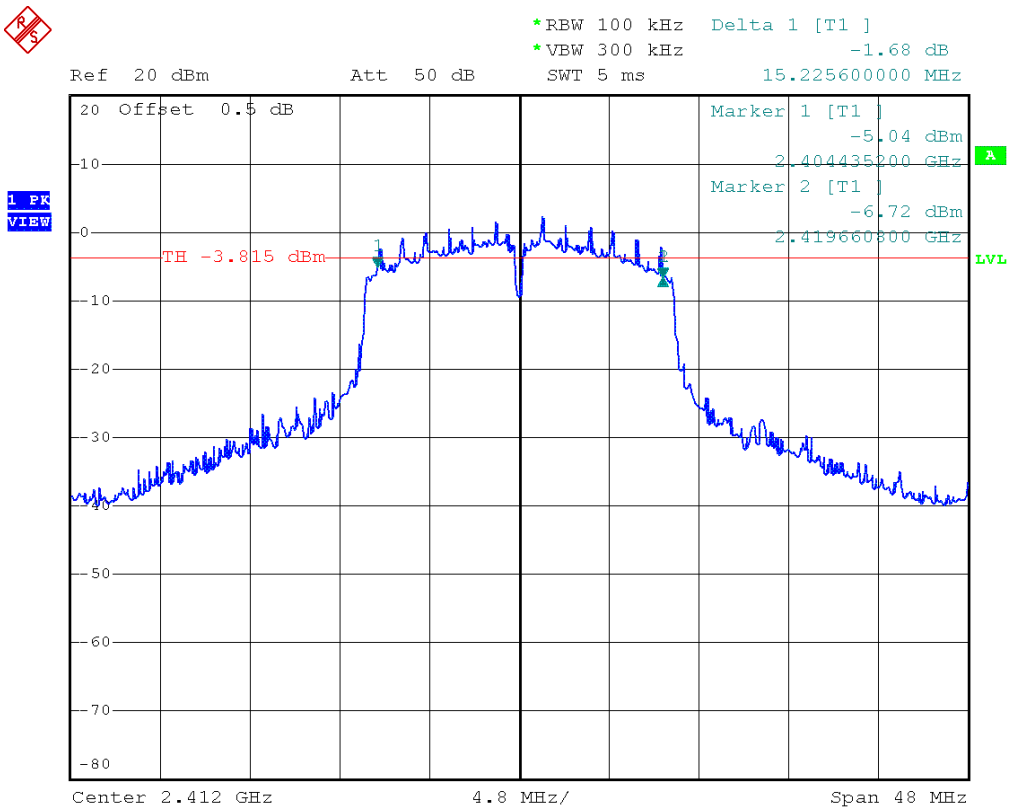
Comment: 6 dB bandwidth: 10214.4 KHz > 500 KHz
Date: 1.JAN.2000 02:57:51

6 dB Bandwidth – OFDM F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



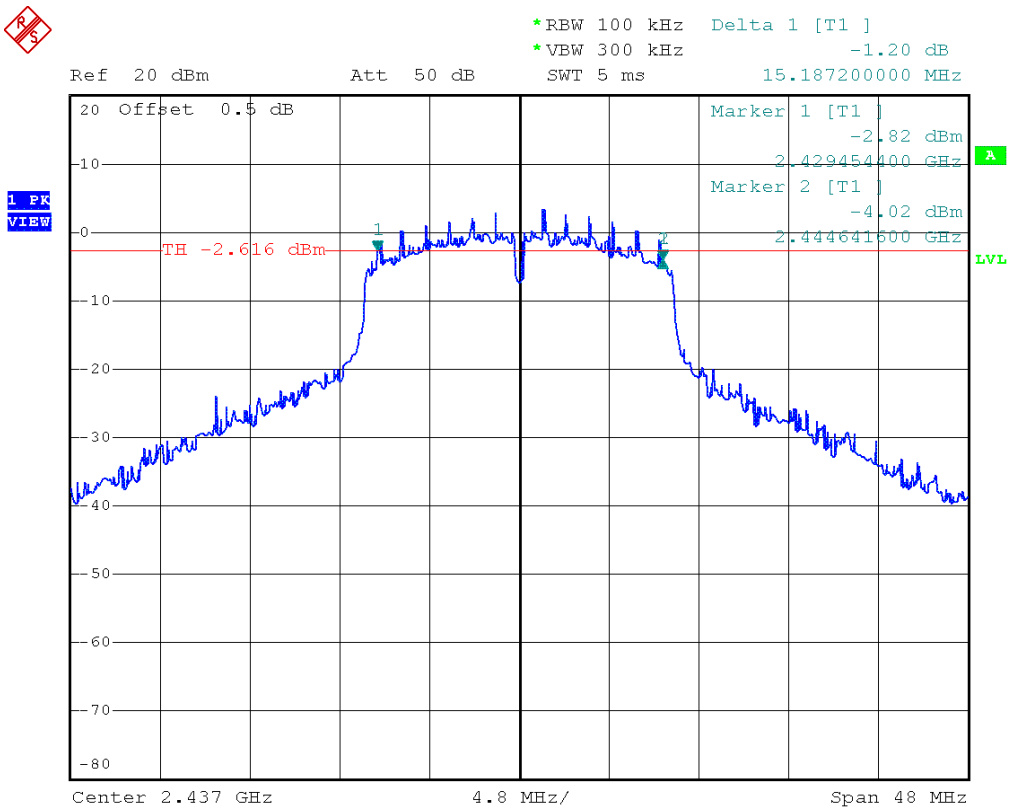
Comment: 6 dB bandwidth: 15225.6 KHz > 500 KHz
Date: 1.JAN.2000 02:59:28

6 dB Bandwidth – OFDM F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



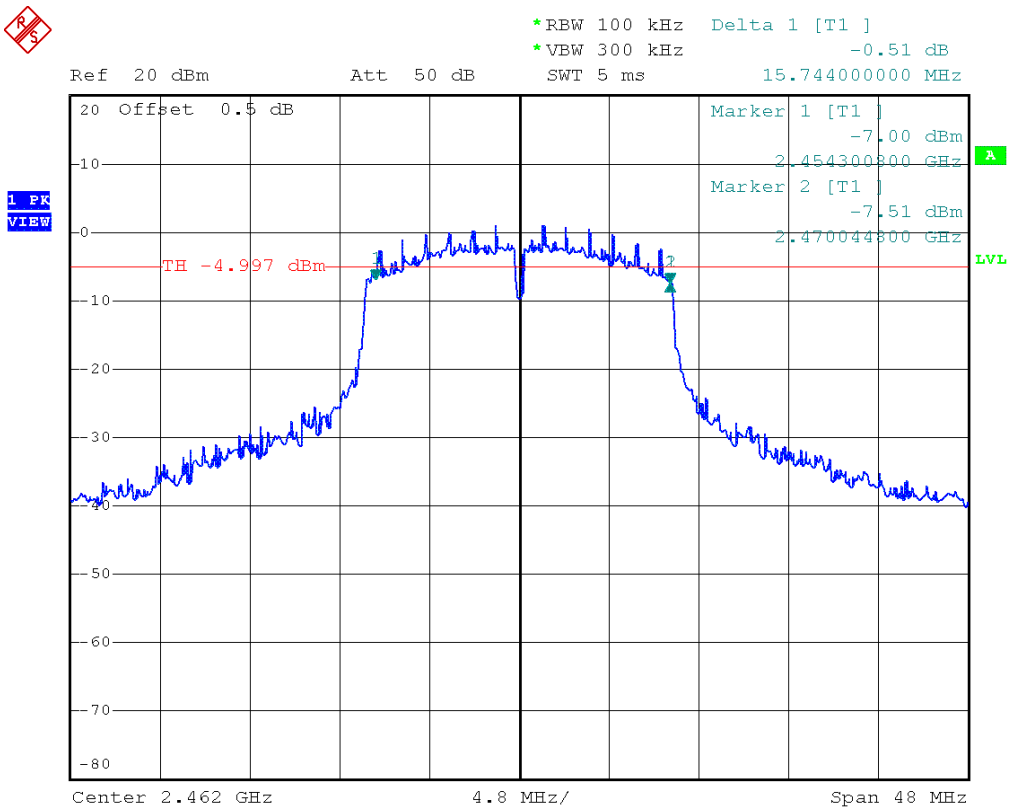
Comment: 6 dB bandwidth: 15187.2 KHz > 500 KHz
Date: 1.JAN.2000 03:00:40

6 dB Bandwidth – OFDM F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6 Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



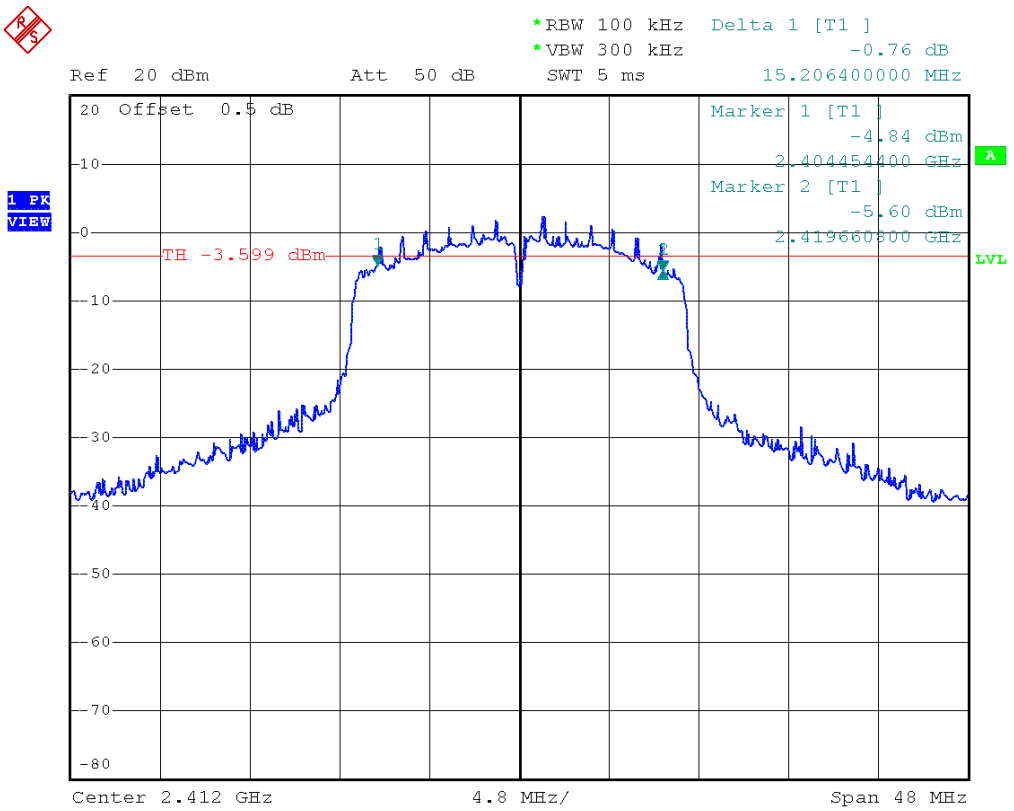
Comment: 6 dB bandwidth: 15744 KHz > 500 KHz
Date: 1.JAN.2000 03:02:32

6 dB Bandwidth – HT20 F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



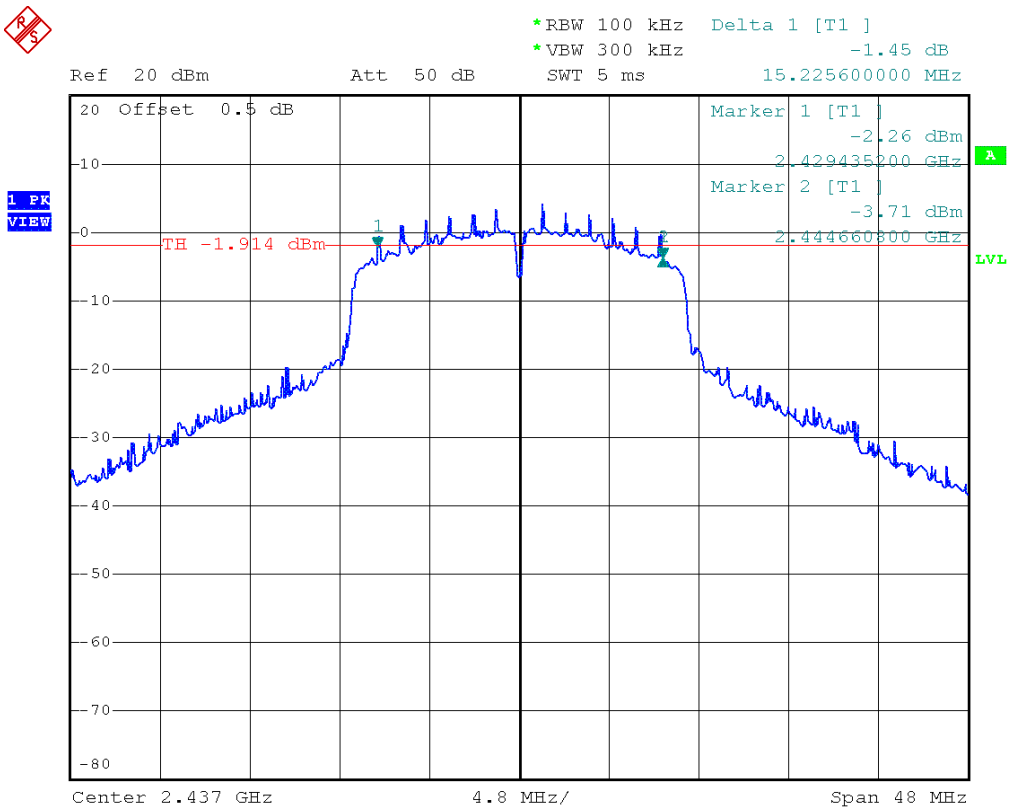
Comment: 6 dB bandwidth: 15206.4 KHz > 500 KHz
Date: 1.JAN.2000 02:51:01

6 dB Bandwidth – HT20 F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



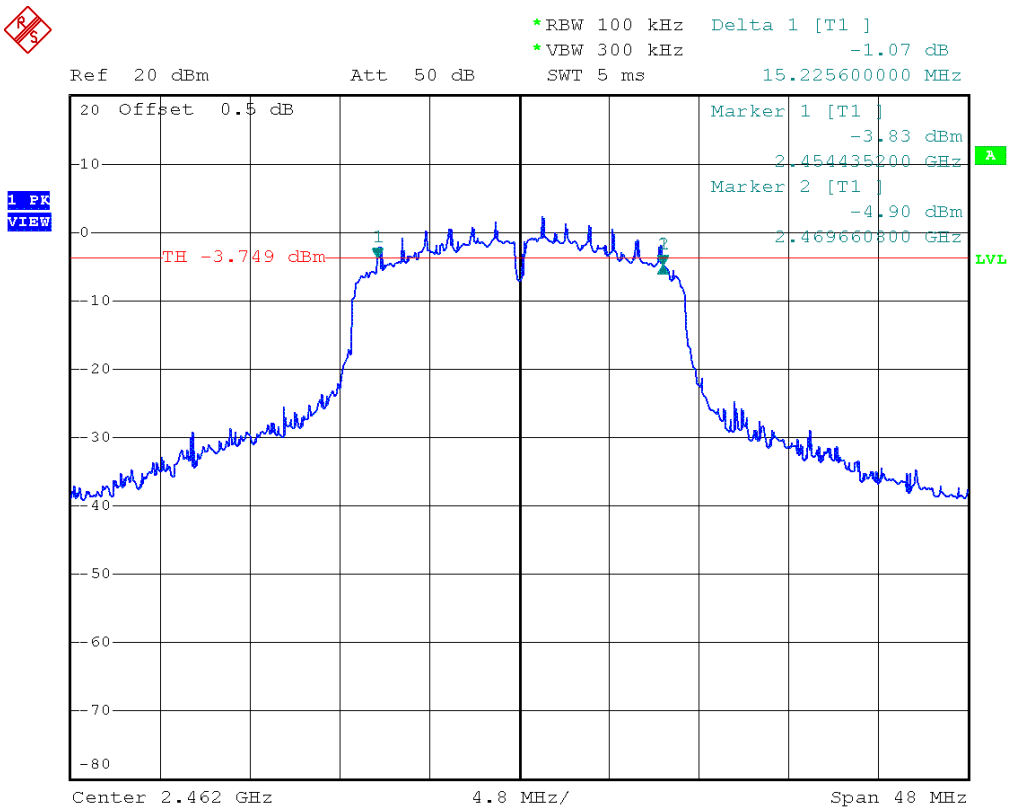
Comment: 6 dB bandwidth: 15225.6 KHz > 500 KHz
Date: 1.JAN.2000 02:46:48

6 dB Bandwidth – HT20 F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



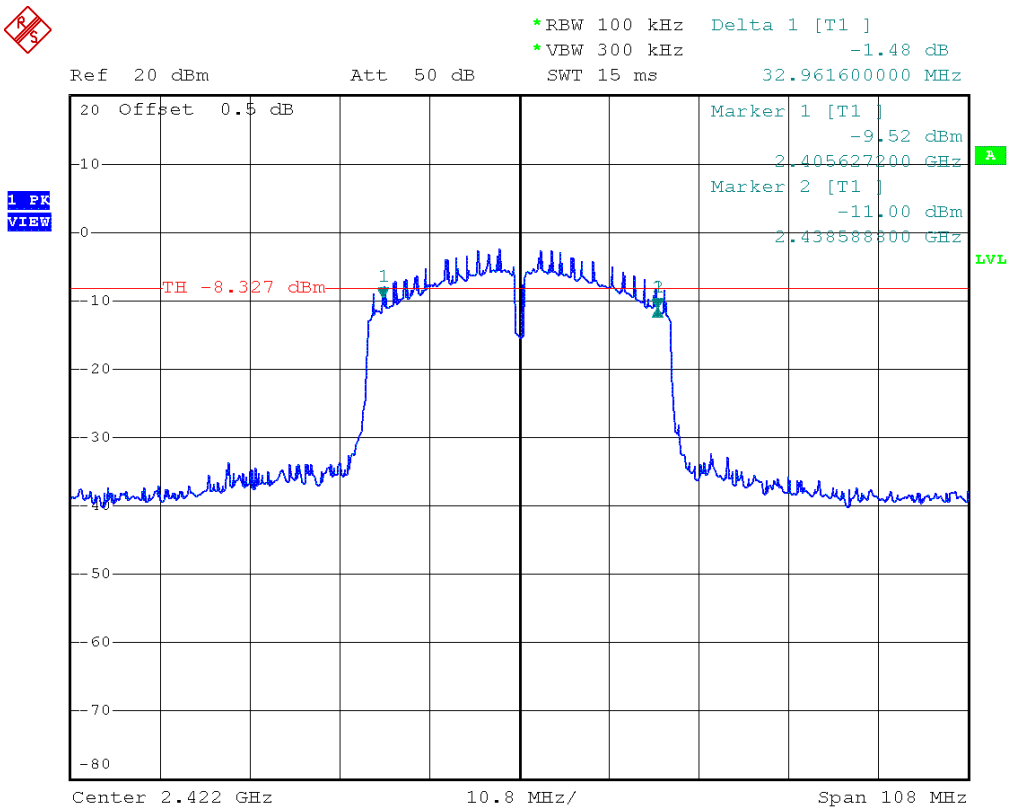
Comment: 6 dB bandwidth: 15225.6 KHz > 500 KHz
Date: 1.JAN.2000 02:49:14

6 dB Bandwidth – HT40 F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2422 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



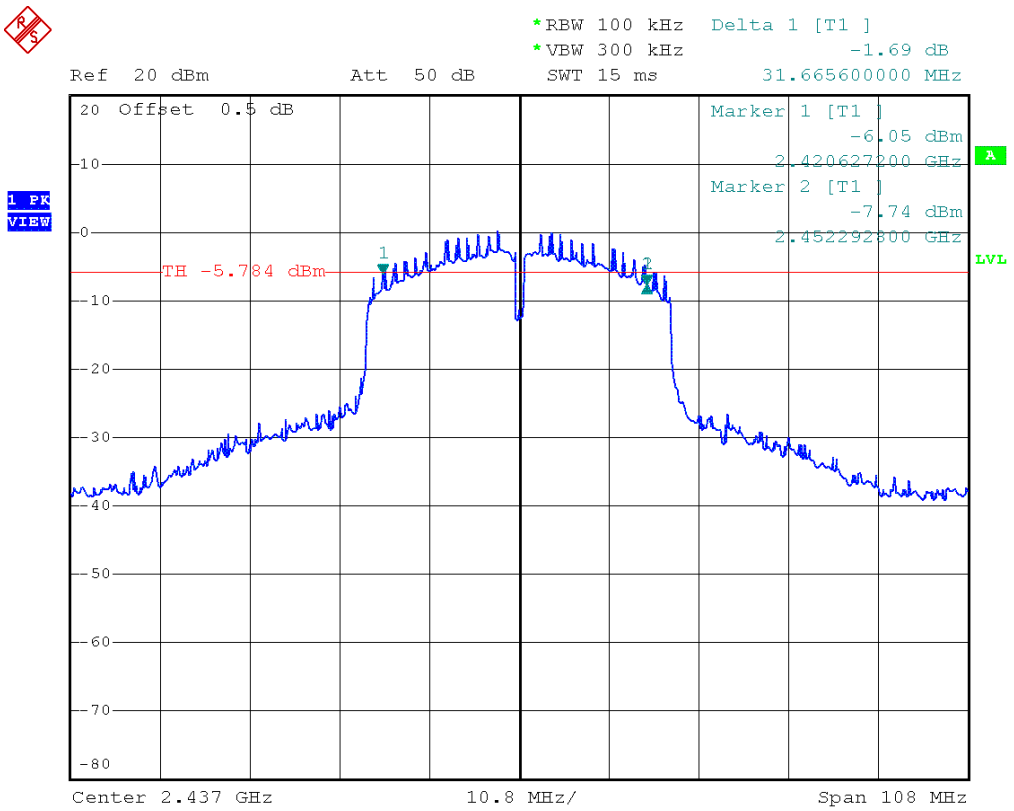
Comment: 6 dB bandwidth: 32961.6 KHz > 500 KHz
Date: 1.JAN.2000 02:26:02

6 dB Bandwidth – HT40 F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



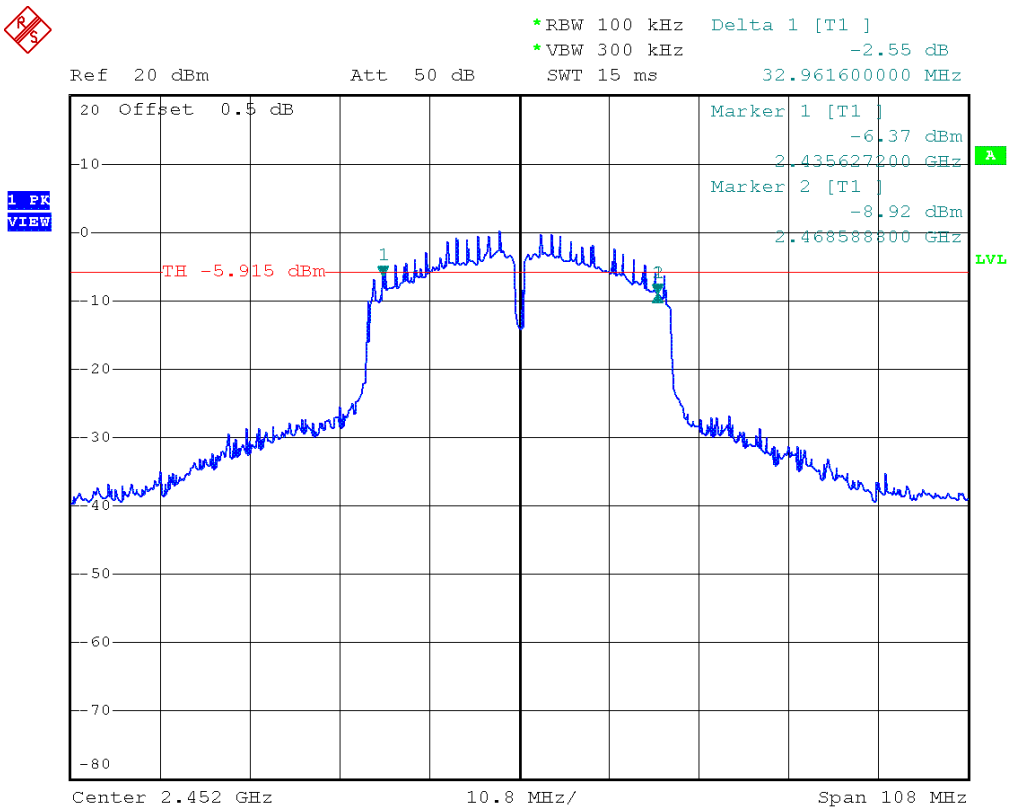
Comment: 6 dB bandwidth: 31665.6 KHz > 500 KHz
Date: 1.JAN.2000 02:24:29

6 dB Bandwidth – HT40 F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

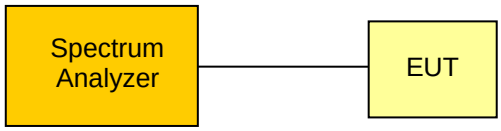
Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2452 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	Minimum 6 dB Bandwidth conducted



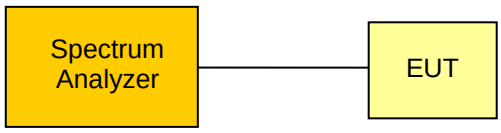
Comment: 6 dB bandwidth: 32961.6 KHz > 500 KHz
Date: 1.JAN.2000 02:21:15

3.3 Test Conditions and Results – Maximum peak conducted power

Maximum peak conducted power acc. to FCC 15.247 / IC RSS-247	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(b)(3) / IC RSS-247 5.4
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Measurement mode	Peak
Maximum antenna gain	0.0 dBi ⇒ Limit correction = 0 dB
Limits	
Limit	
1 W (30 dBm)	
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
Test setup	
	
Test procedure	
1. EUT set to test mode (Communication tester is used if needed) 2. Center frequency set to test channel center frequency 3. Span set to twice the 20 dB bandwidth and detector to peak and max hold 4. Resolution bandwidth is set to 3 MHz 5. Peak conducted power is determined from peak of spectrum envelope	

Test results							
Channel	Frequency [MHz]	Voltage	Mode	Peak power [dbm]	Peak power [W]	Limit [dBm]	Margin [dB]
F_{LOW20}	2412	3.7 VDC	DSSS	16.9	0.049	30	-13.10
F_{MID20}	2437	3.7 VDC	DSSS	17.1	0.051	30	-12.90
F_{HIGH20}	2462	3.7 VDC	DSSS	17.1	0.051	30	-12.90
F_{LOW20}	2412	3.7 VDC	OFDM	18.6	0.072	30	-11.40
F_{MID20}	2437	3.7 VDC	OFDM	18.8	0.076	30	-11.20
F_{HIGH20}	2462	3.7 VDC	OFDM	18.5	0.071	30	-11.50
F_{LOW20}	2412	3.7 VDC	HT20	18.8	0.076	30	-11.20
F_{MID20}	2437	3.7 VDC	HT20	19.4	0.087	30	-10.60
F_{HIGH20}	2462	3.7 VDC	HT20	18.9	0.078	30	-11.10
F_{LOW40}	2422	3.7 VDC	HT40	18.4	0.069	30	-11.60
F_{MID40}	2437	3.7 VDC	HT40	18.6	0.072	30	-11.40
F_{HIGH40}	2452	3.7 VDC	HT40	18.3	0.068	30	-11.70
Comments:							

3.4 Test Conditions and Results – Power spectral density

Power spectral density acc. to FCC 15.247 / IC RSS-247	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(e) / IC RSS-247 5.2
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Measurement mode	Peak
Limits	
8 dBm / 3 kHz	
Test setup	
	
Test procedure	
1. EUT set to test mode (Communication tester is used if needed) 2. Center frequency set to test channel center frequency 3. Span is set large enough to capture maximum emissions in passband, RBW is set to 3kHz 4. Peak power density is determined from peak emission of envelope	

Test results						
Channel	Frequency [MHz]	Test mode	Peak frequency [MHz]	Peak power density [dBm/100kHz]	Limit [dBm/3kHz]	Margin [dB]
F_{LOW20}	2412	DSSS	4.65	2413.08	8.0	-03.35
F_{MID20}	2437	DSSS	4.82	2437.54	8.0	-03.18
F_{HIGH20}	2462	DSSS	4.52	2460.56	8.0	-03.48
F_{LOW20}	2412	OFDM	1.92	2413.26	8.0	-06.08
F_{MID20}	2437	OFDM	3.56	2438.26	8.0	-04.44
F_{HIGH20}	2462	OFDM	1.68	2463.26	8.0	-06.32
F_{LOW20}	2412	HT20	1.98	2410.74	8.0	-06.02
F_{MID20}	2437	HT20	3.74	2438.26	8.0	-04.26
F_{HIGH20}	2462	HT20	2.06	2463.26	8.0	-05.94
F_{LOW40}	2422	HT40	-2.63	2419.57	8.0	-10.63
F_{MID40}	2437	HT40	-0.02	2434.57	8.0	-08.02
F_{HIGH40}	2452	HT40	-0.01	2449.48	8.0	-08.01
Comments: Measurements were performed with RBW = 100 kHz						

3.5 Test Conditions and Results – AC power line conducted emissions

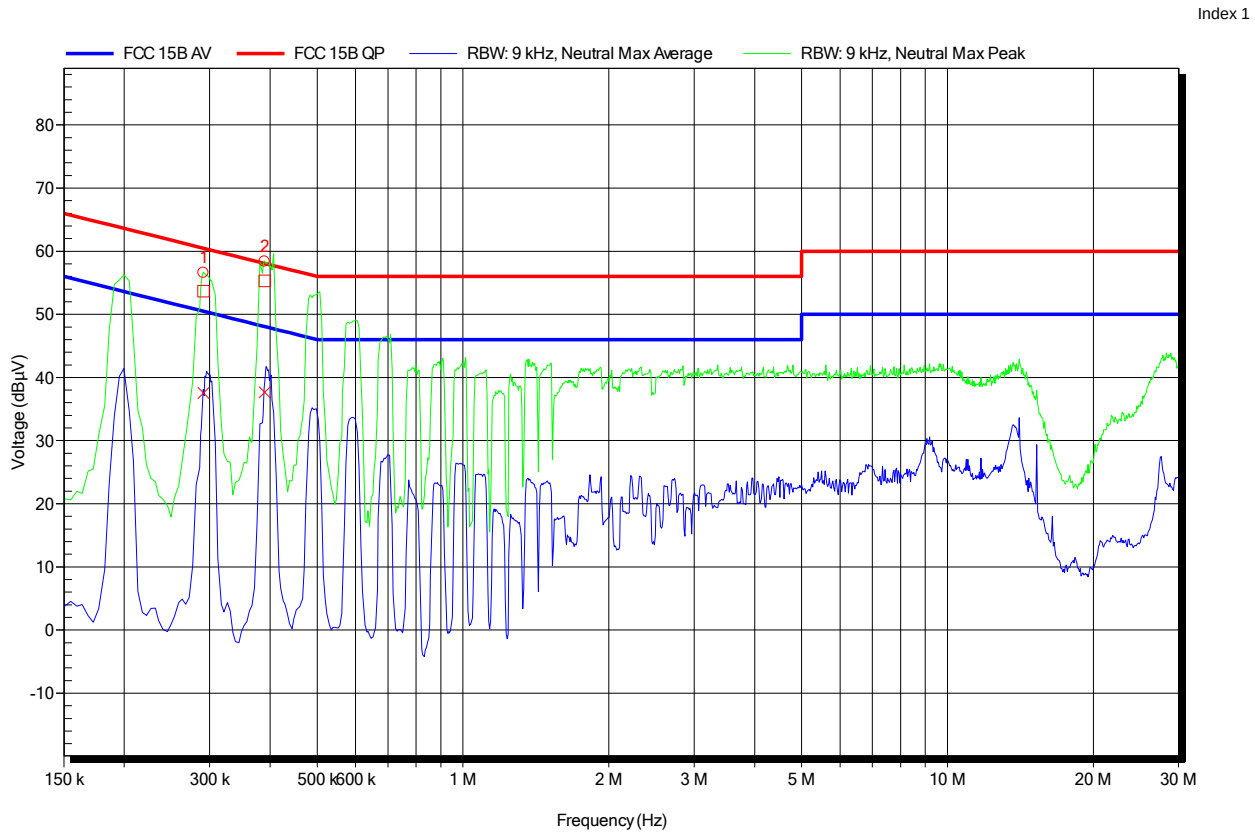
Power line conducted emissions acc. to FCC 47 CFR 15.207 / IC RSS-Gen				Verdict: PASS
Test according referenced standards	Reference Method			
	ANSI C63.4			
Fully configured sample scanned over the following frequency range	Frequency range			
	0.15 MHz to 30 MHz			
Points of Application	Application Interface			
AC Mains	LISN			
EUT test mode	AC-Powerline			
Limits and results				
Frequency [MHz]	Quasi-Peak [dBµV]	Result	Average [dBµV]	Result
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS
0.5 to 5	56	PASS	46	PASS
5 to 30	60	PASS	50	PASS
Comments: * Limit decreases linearly with the logarithm of the frequency.				

Conducted Emissions

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

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 22°C, Unom: 120 V AC (AC/DC adaptor)
LISN:	ESH2-Z5 N
Mode:	charging, Wlan (ping), HDMI-Monitor
Test Date:	2015-05-05
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
291.3 kHz	53.68 dBµV	60.49 dBµV	-6.81 dB	Pass
389.4 kHz	55.3 dBµV	58.08 dBµV	-2.78 dB	Pass

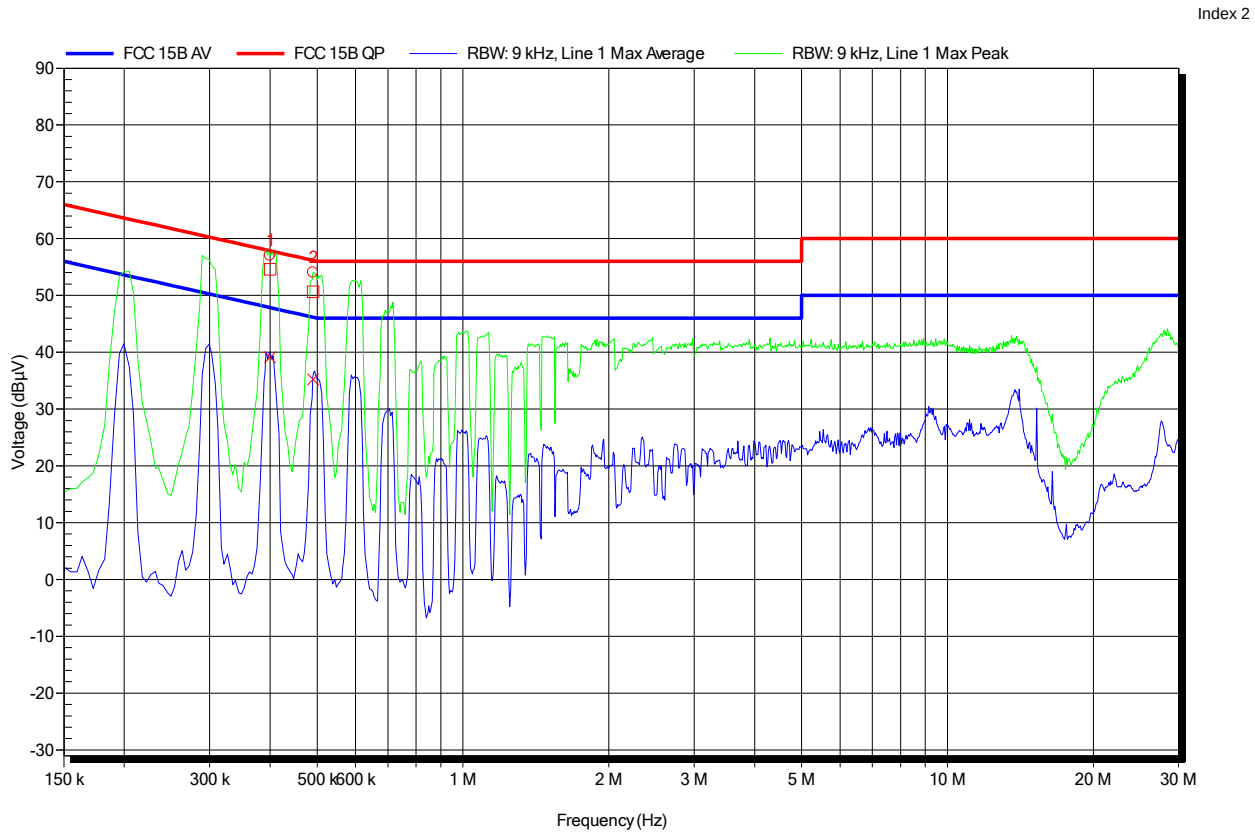
Frequency	Average	Average Limit	Average Difference	Average Status
291.3 kHz	37.56 dBµV	50.49 dBµV	-12.93 dB	Pass
389.4 kHz	37.64 dBµV	48.08 dBµV	-10.44 dB	Pass

Conducted Emissions

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

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 22°C, Unom: 120 V AC (AC/DC adaptor)
LISN:	ESH2-Z5 L
Mode:	charging, Wlan (ping), HDMI-Monitor
Test Date:	2015-05-05
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
399.75 kHz	54.58 dBµV	57.86 dBµV	-3.28 dB	Pass
490.65 kHz	50.62 dBµV	56.16 dBµV	-5.54 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
399.75 kHz	39.09 dBµV	47.86 dBµV	-8.77 dB	Pass
490.65 kHz	35.21 dBµV	46.16 dBµV	-10.95 dB	Pass

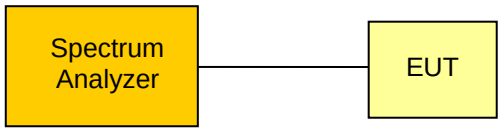
3.6 Test Conditions and Results – Band edge compliance

Band-edge compliance acc. to FCC 15.247 / IC RSS-247	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-247 5.5
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{HIGH}
Measurement mode	Peak

Limits

Limit	Condition
≤ -20 dB / 100 kHz	Peak power measurement detector = Peak
≤ -30 dB / 100 kHz	Peak power measurement detector = RMS

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels within frequency band and outside frequency band
5. Band edge attenuation is determined from level difference

Test results

Channel	Frequency [MHz]	Mode	Level [dBc]	Limit [dBc]	Margin [dB]
F_{LOW20}	2412	DSSS	-40.58	-20	-20.58
F_{HIGH20}	2462	DSSS	-42.24	-20	-22.24
F_{LOW20}	2412	OFDM	-28.68	-20	-08.68
F_{HIGH20}	2462	OFDM	-38.35	-20	-18.35
F_{LOW20}	2412	HT20	-28.70	-20	-08.70
F_{HIGH20}	2462	HT20	-39.52	-20	-19.52
F_{LOW40}	2422	HT40	-31.95	-20	-11.95
F_{HIGH40}	2452	HT40	-30.58	-20	-10.58

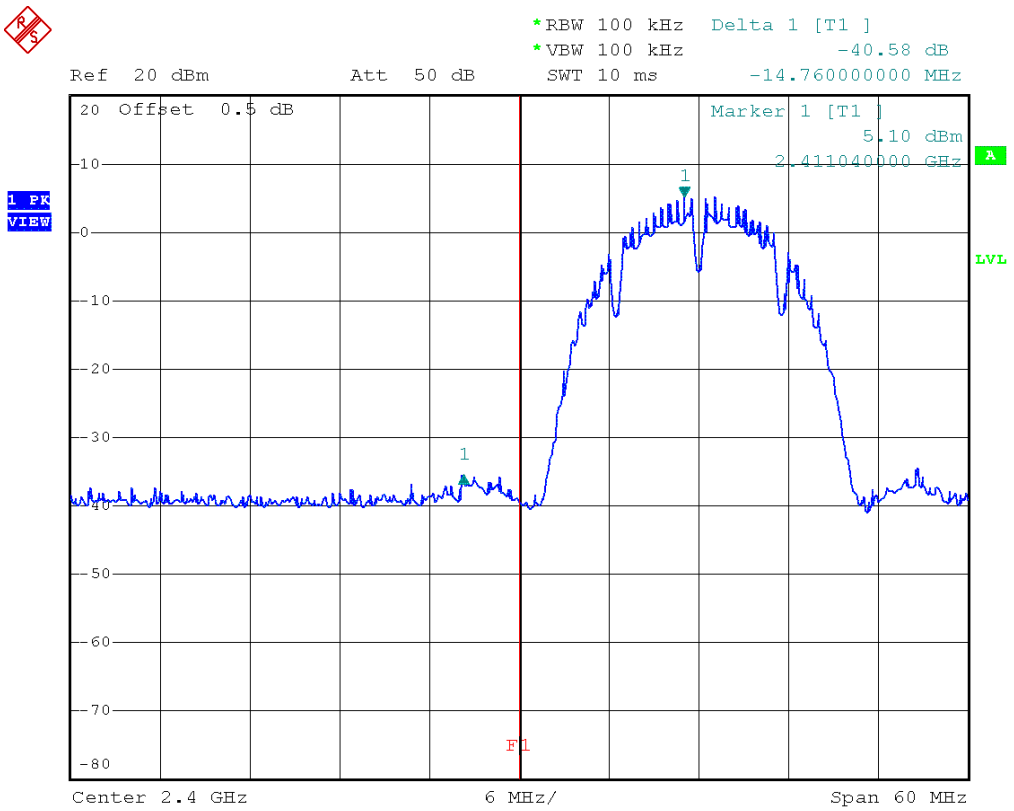
Comments:

Band-edge compliance – DSSS F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	lower Band-edge, conducted measurement



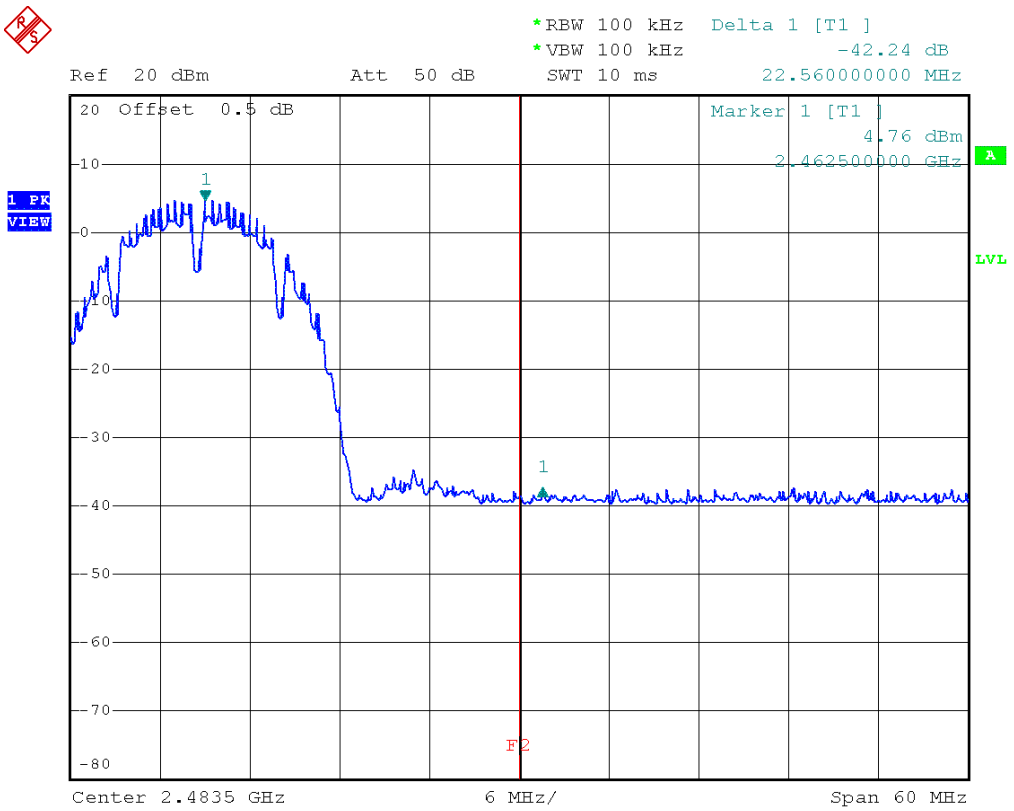
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 04:58:13

Band-edge compliance – DSSS F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	upper Band-edge, conducted measurement



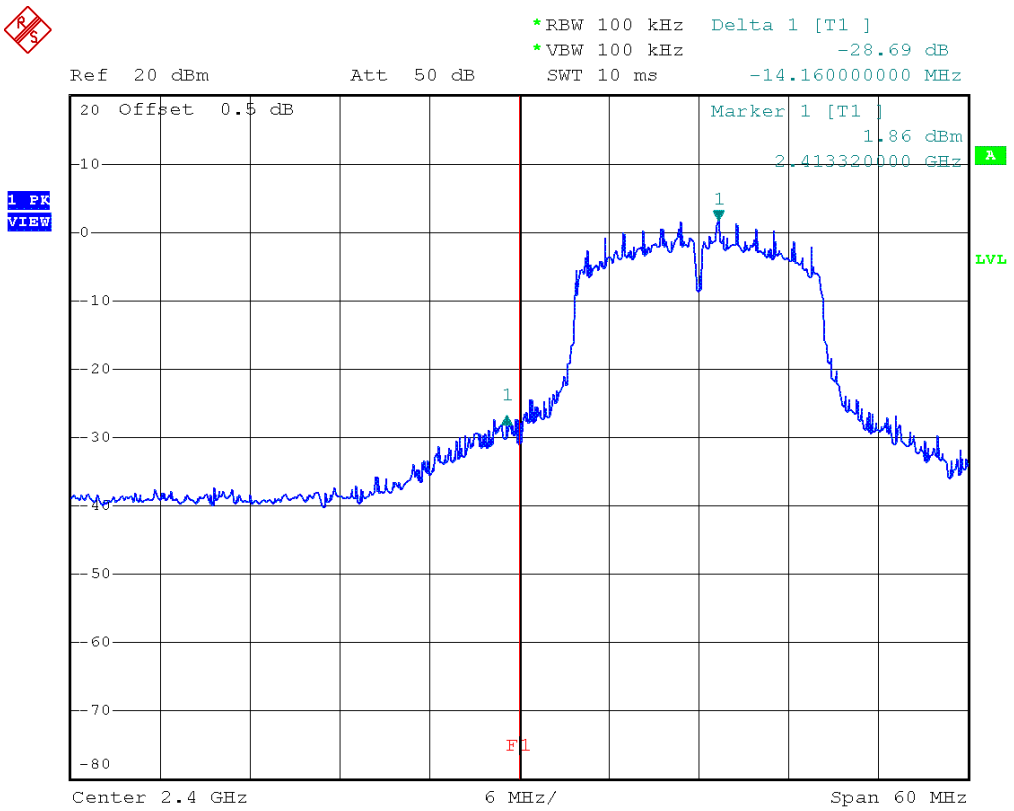
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:00:41

Band-edge compliance – OFDM F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	lower Band-edge, conducted measurement



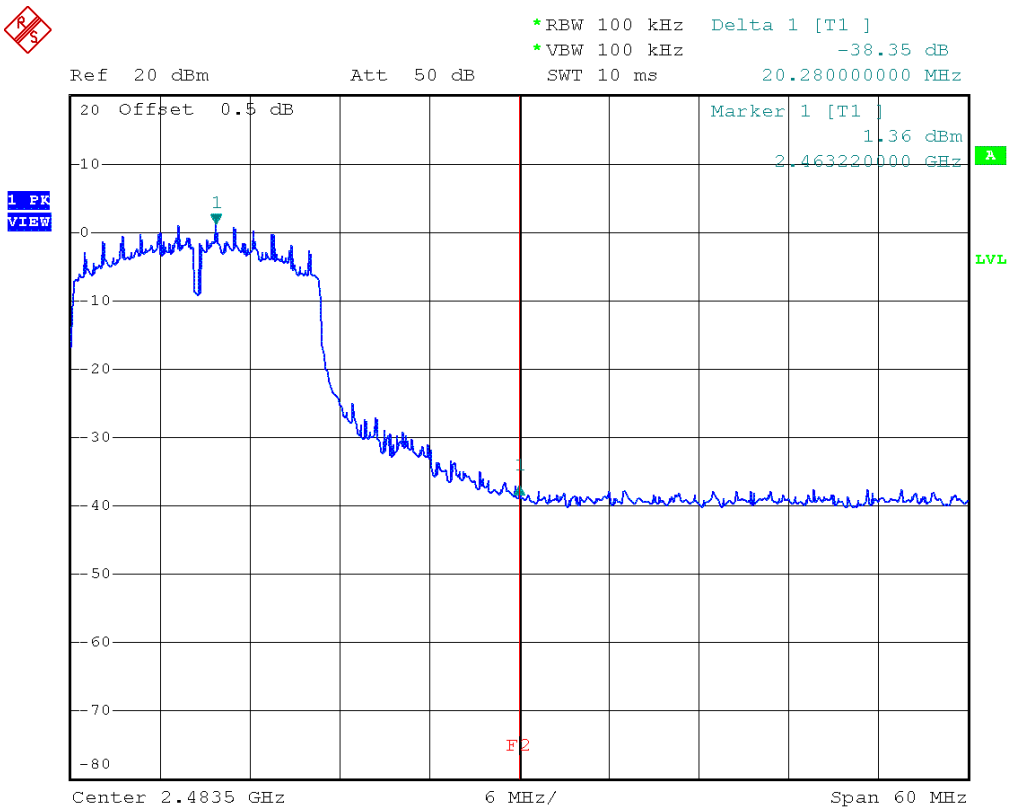
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:02:42

Band-edge compliance – OFDM F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	upper Band-edge, conducted measurement



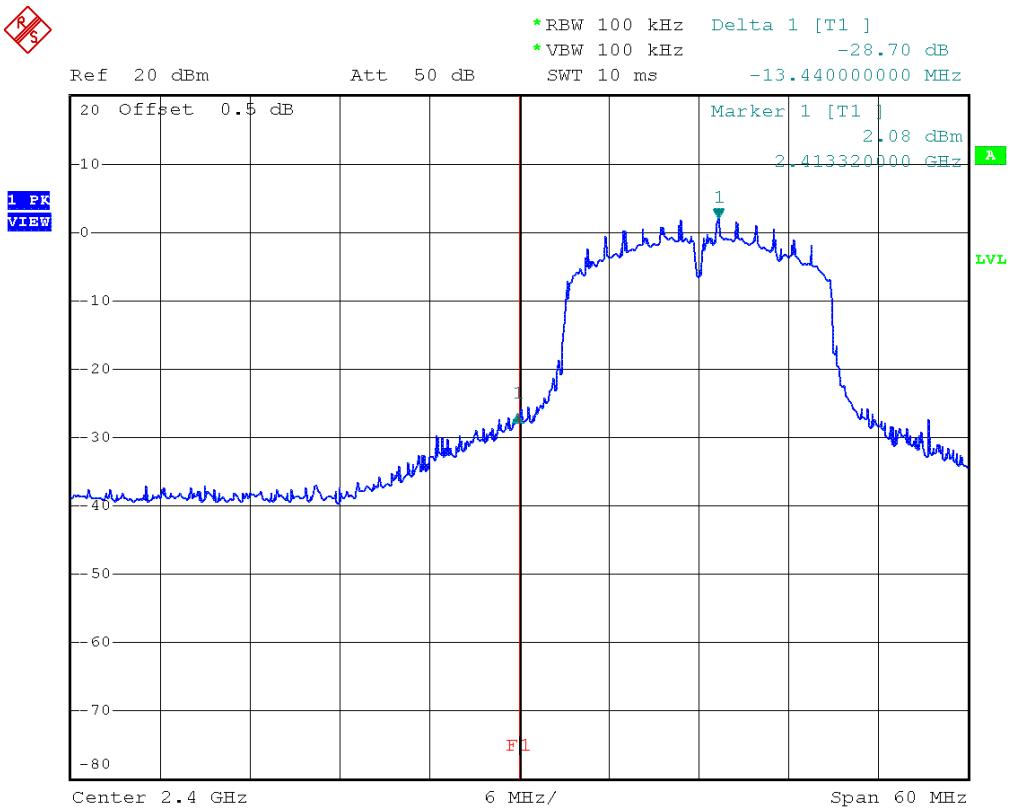
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:04:26

Band-edge compliance – HT20 F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	lower Band-edge, conducted measurement



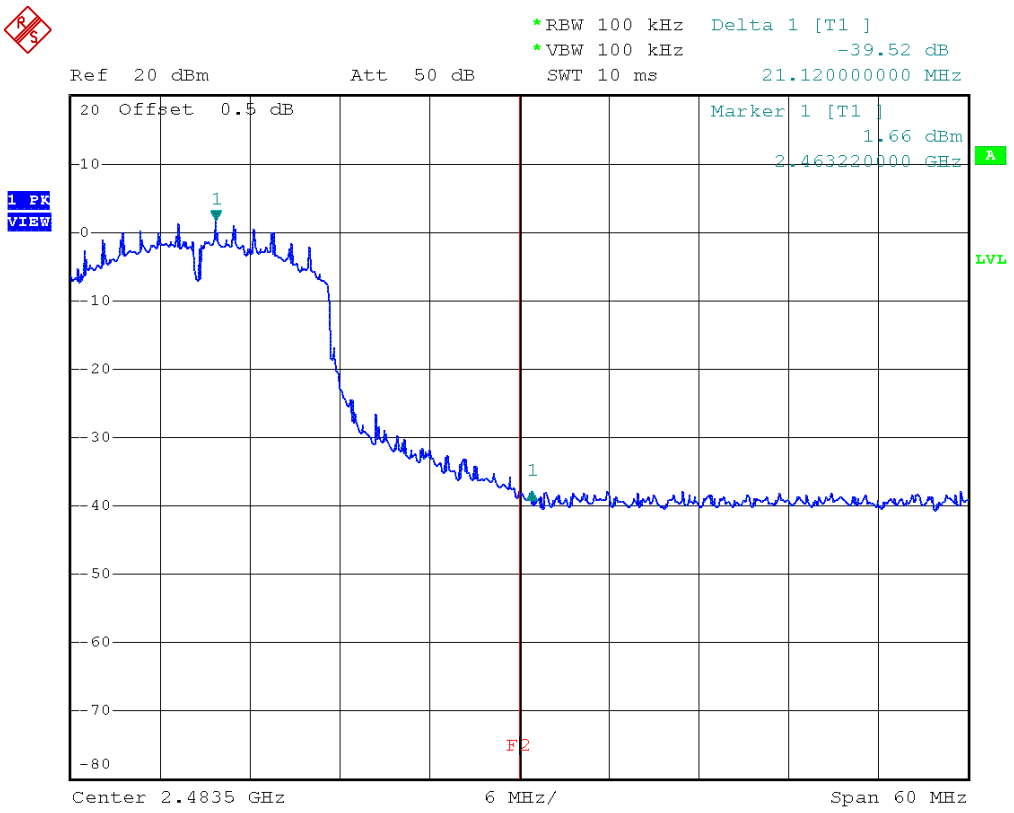
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:07:20

Band-edge compliance – HT20 F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	upper Band-edge, conducted measurement



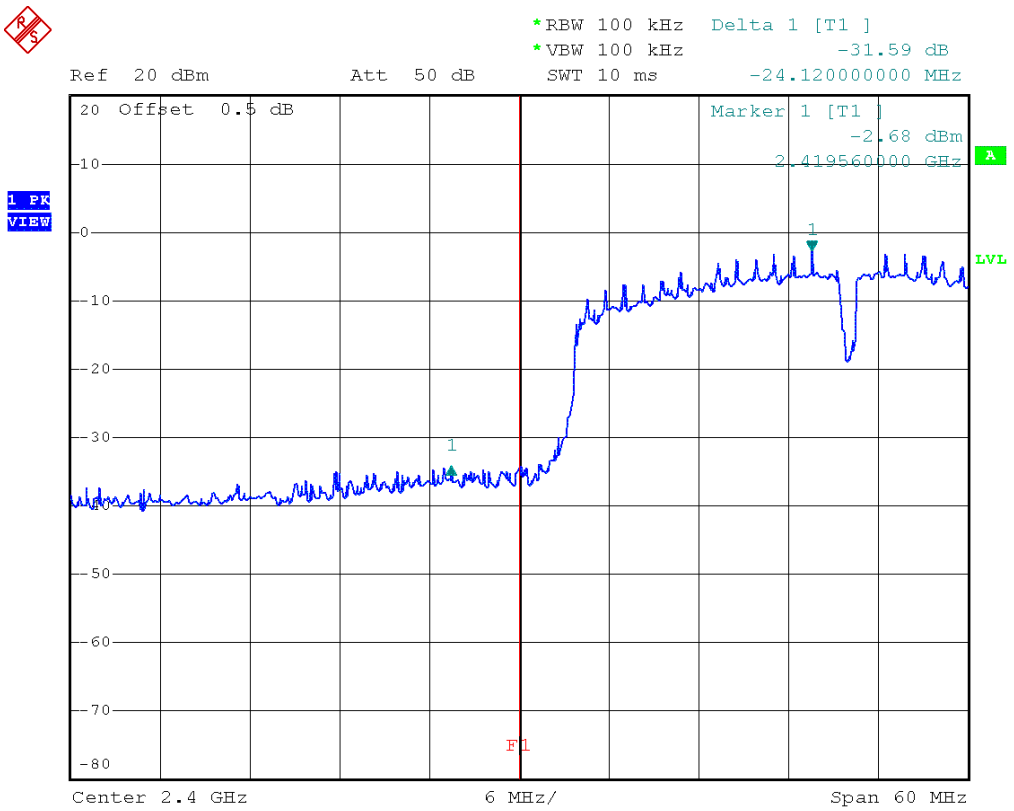
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:08:53

Band-edge compliance – HT40 F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2422 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	lower Band-edge, conducted measurement



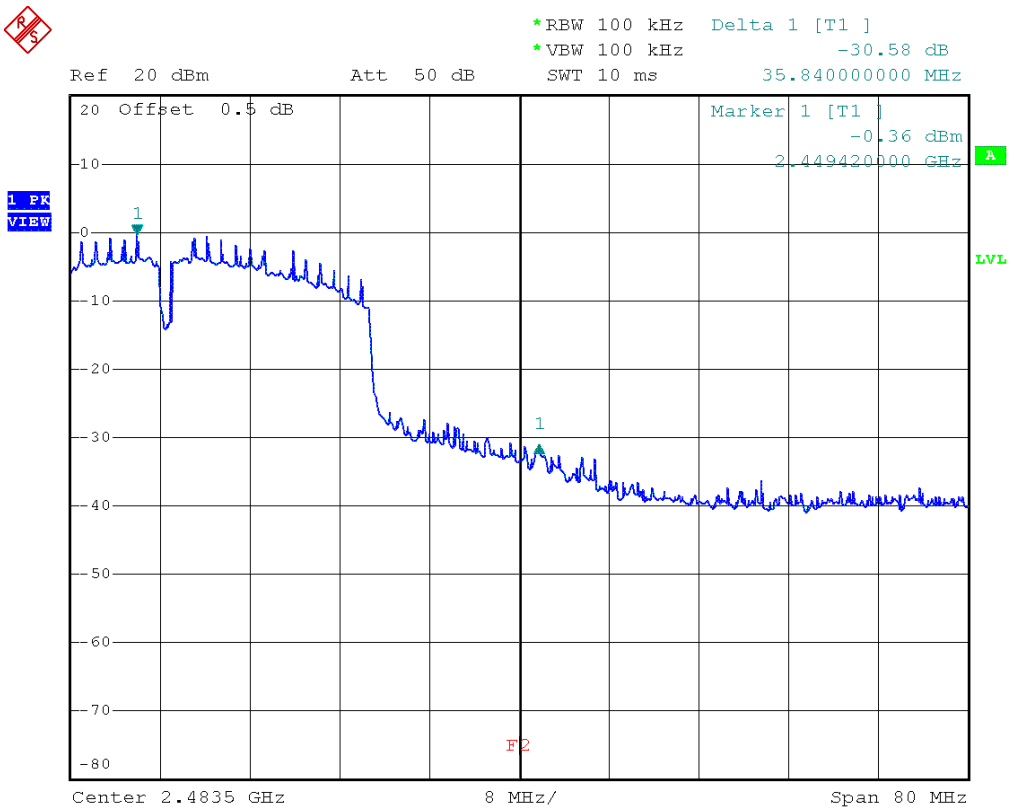
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:10:28

Band-edge compliance – HT40 F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2452 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	upper Band-edge, conducted measurement



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 1.JAN.2000 05:14:48

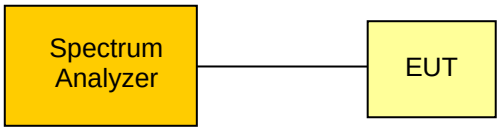
3.7 Test Conditions and Results – Conducted spurious emissions

Conducted spurious emissions acc. to FCC 15.247 / IC RSS-247	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-247 5.5
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	10 MHz – 10th Harmonic
Measurement mode	Peak

Limits

Limit	Condition
≤ -20 dB / 100 kHz	Peak power measurement detector = Peak
≤ -30 dB /100 kHz	Peak power measurement detector = RMS

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span it set according to measurement range
3. Resolution bandwidth is set to 100 kHz and detector to peak and max hold
4. Markers are set to peak emission levels within frequency band
5. Emission level is determined by second marker on emission peak
6. Attenuation is determined from level difference

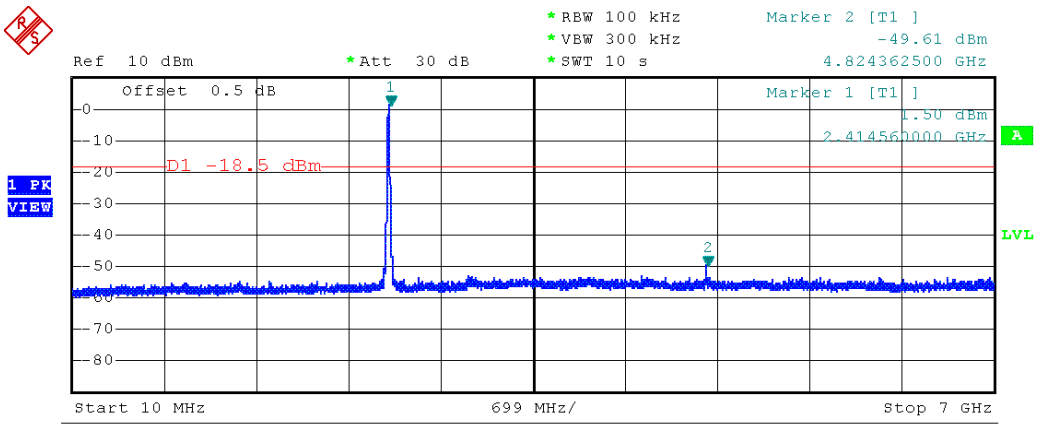
Test results							
Channel	Frequency [MHz]	Mode	Emission [MHz]	Emission Level [dbm]	Peak power [dBm]	Limit [dBm]	Margin [dB]
F_{LOW20}	2412	DSSS	4824.36	-49.61	1.5	-18.5	-31.11
F_{MID20}	2437	DSSS	4874.17	-44.68	2.8	-17.2	-27.48
F_{HIGH20}	2462	DSSS	4923.97	-43.18	3.7	-16.3	-26.88
F_{LOW20}	2412	OFDM	4824.36	-49.3	1.3	-18.7	-30.60
F_{MID20}	2437	OFDM	4874.17	-50.51	1.5	-18.5	-32.01
F_{HIGH20}	2462	OFDM	4923.97	-49.89	0.6	-19.4	-30.49
F_{LOW20}	2412	HT20	4824.36	-50.72	1.7	-18.3	-32.42
F_{MID20}	2437	HT20	4874.17	-50.34	3.4	-16.6	-33.74
F_{HIGH20}	2462	HT20	4923.97	-50.34	1.8	-18.2	-32.14
F_{LOW40}	2422	HT40	4844.46	-48.47	-2.9	-22.9	-25.57
F_{MID40}	2437	HT40	4894.26	-48.93	-0.8	-20.8	-28.13
F_{HIGH40}	2452	HT40	4903.87	-49.55	-0.1	-20.1	-29.45
Comments:							

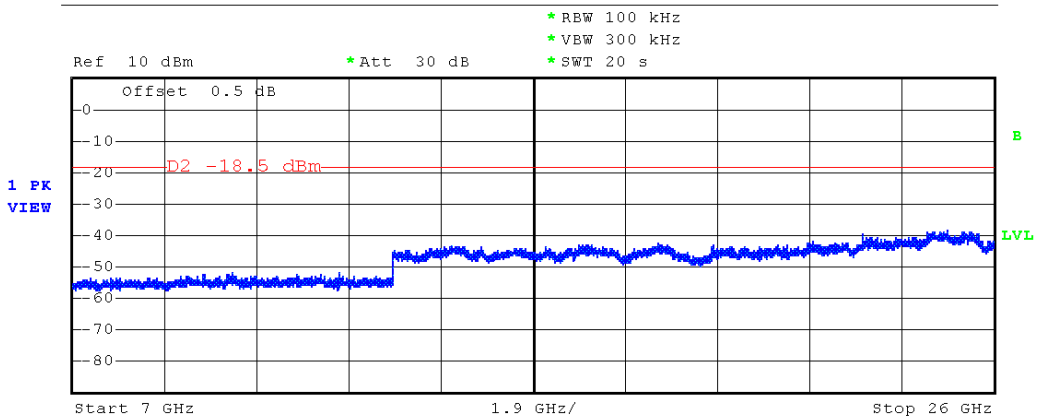
Conducted spurious emissions – DSSS F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





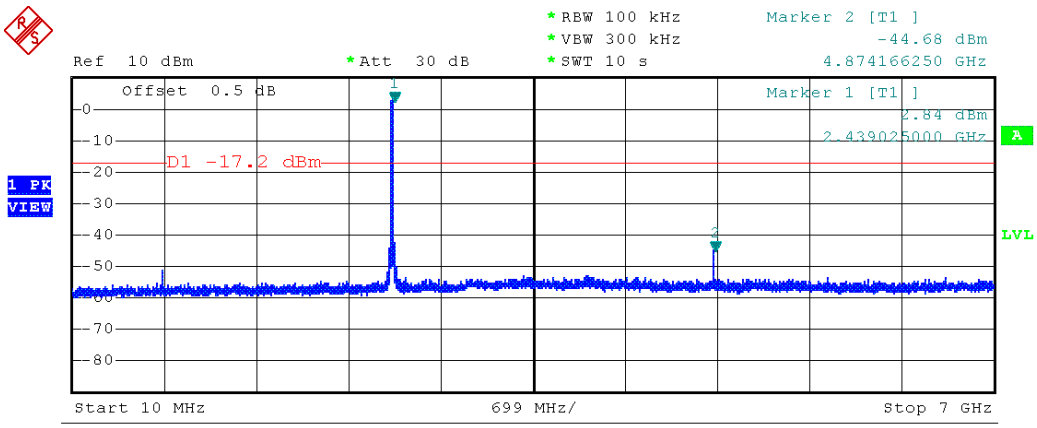
Date: 1.JAN.2000 05:41:12

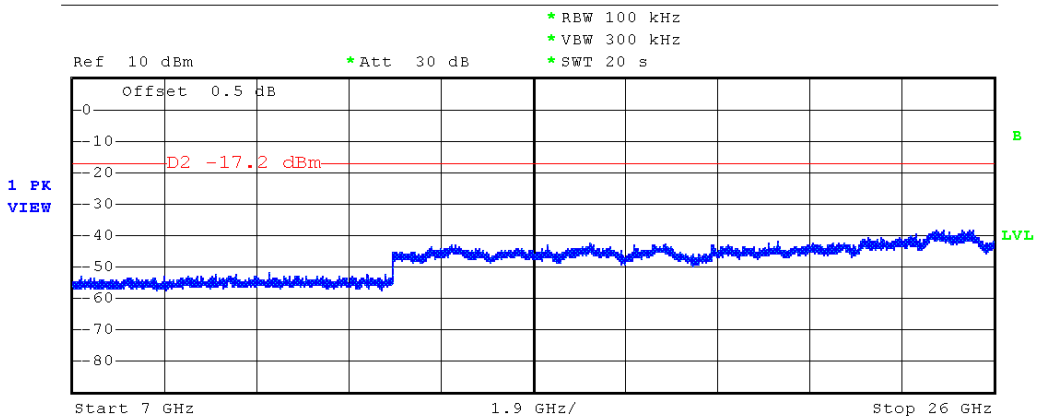
Conducted spurious emissions – DSSS F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





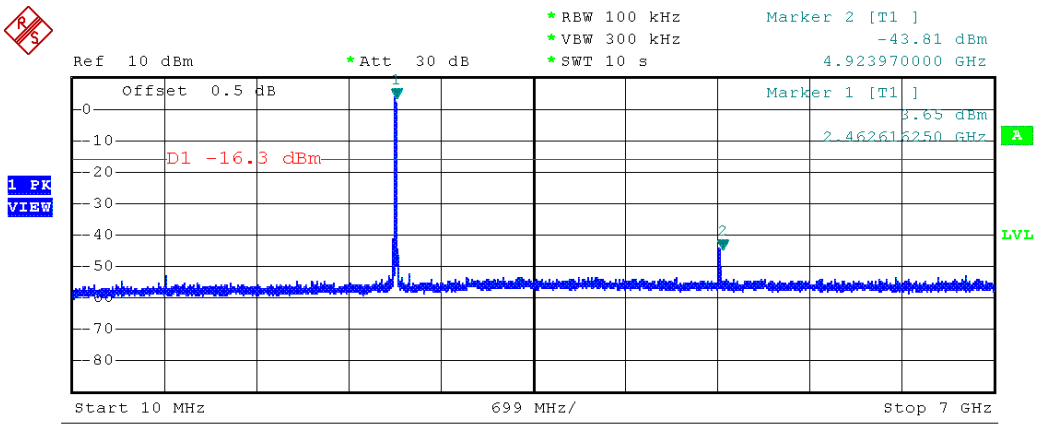
Date: 1.JAN.2000 05:47:16

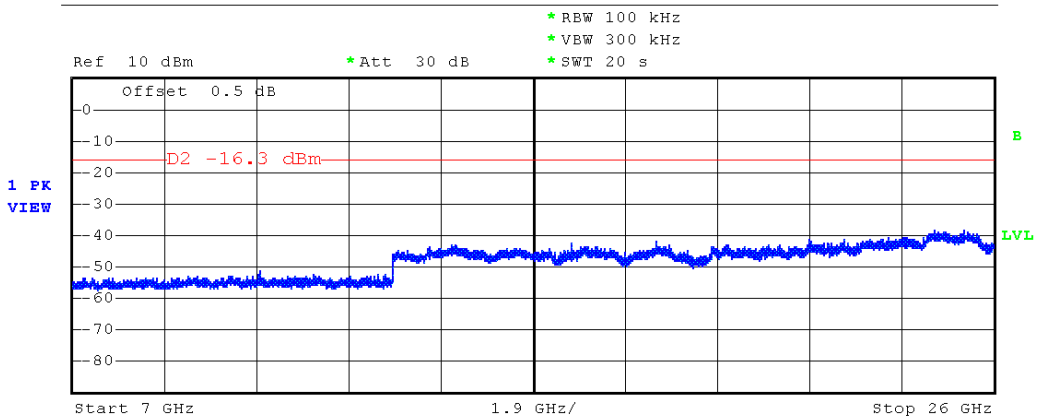
Conducted spurious emissions – DSSS F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11b, 1Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





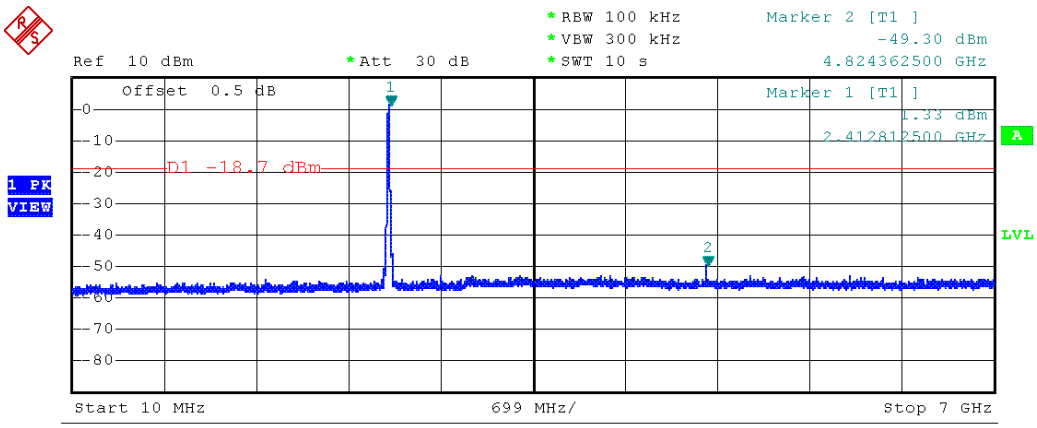
Date: 1.JAN.2000 05:52:06

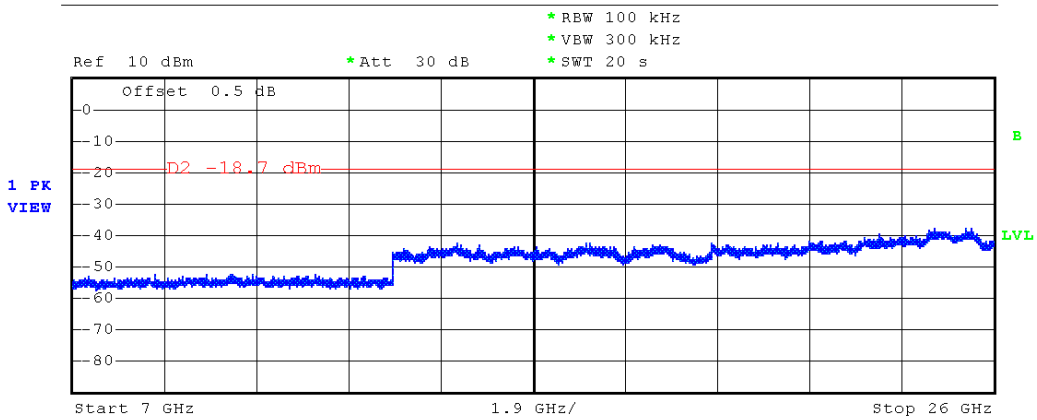
Conducted spurious emissions – OFDM F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6Mbps, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





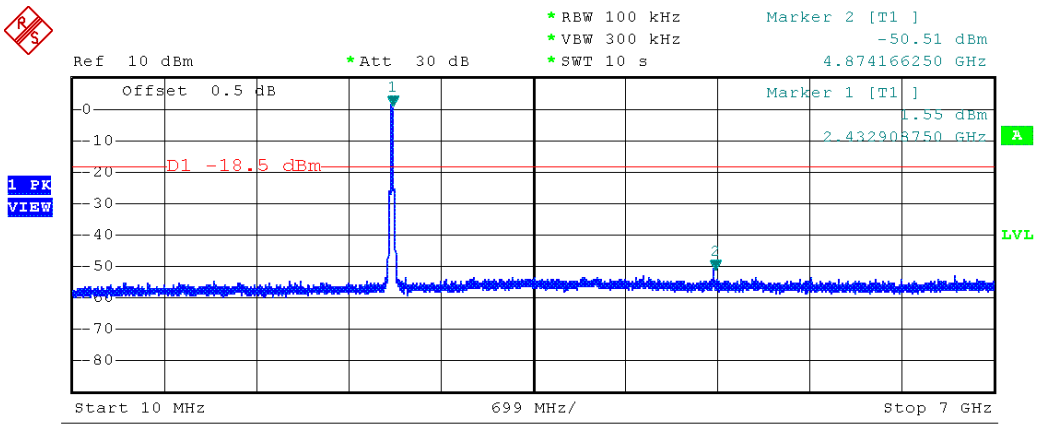
Date: 1.JAN.2000 05:59:54

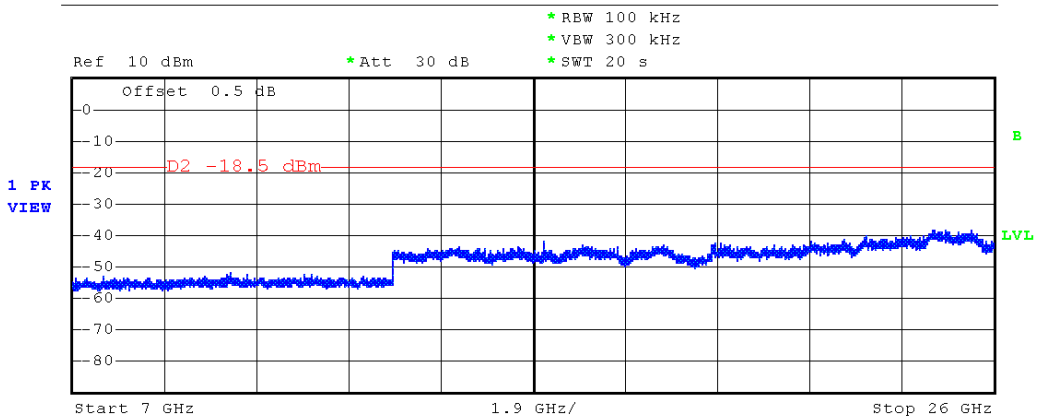
Conducted spurious emissions – OFDM F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6Mbps, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





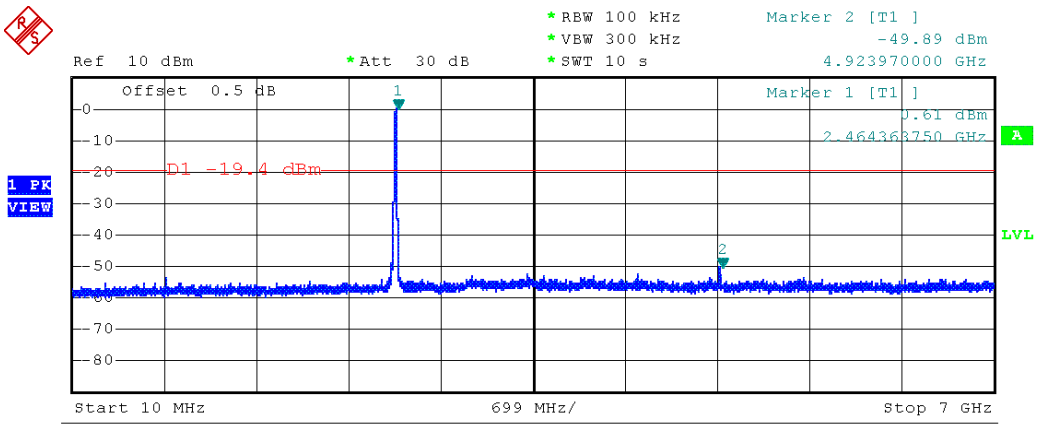
Date: 1.JAN.2000 06:02:51

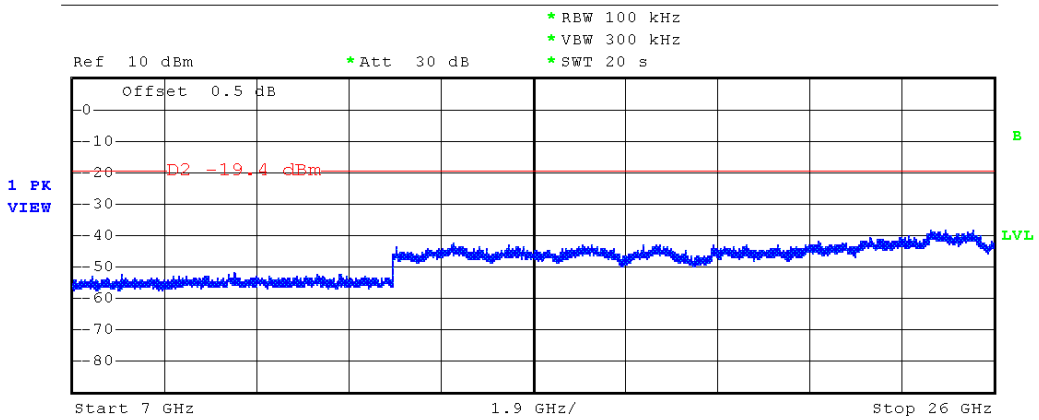
Conducted spurious emissions – OFDM F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11g, 6Mbps, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





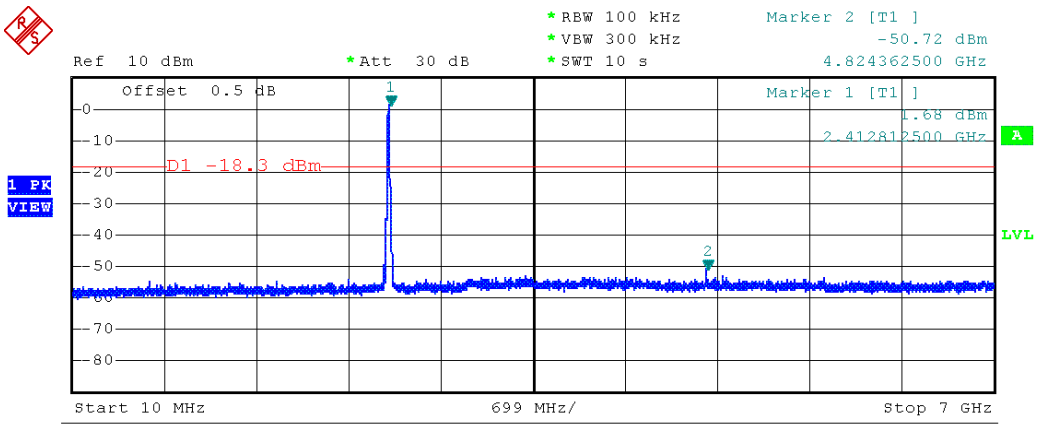
Date: 1.JAN.2000 06:05:33

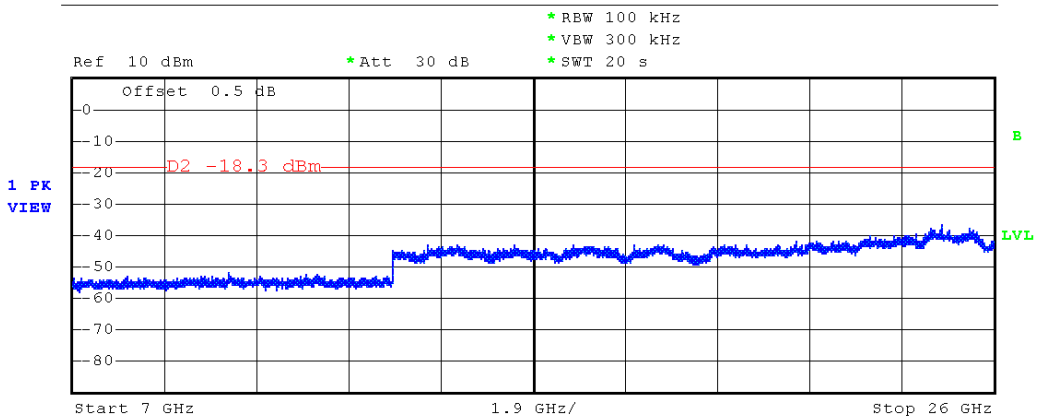
Conducted spurious emissions – HT20 F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2412 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





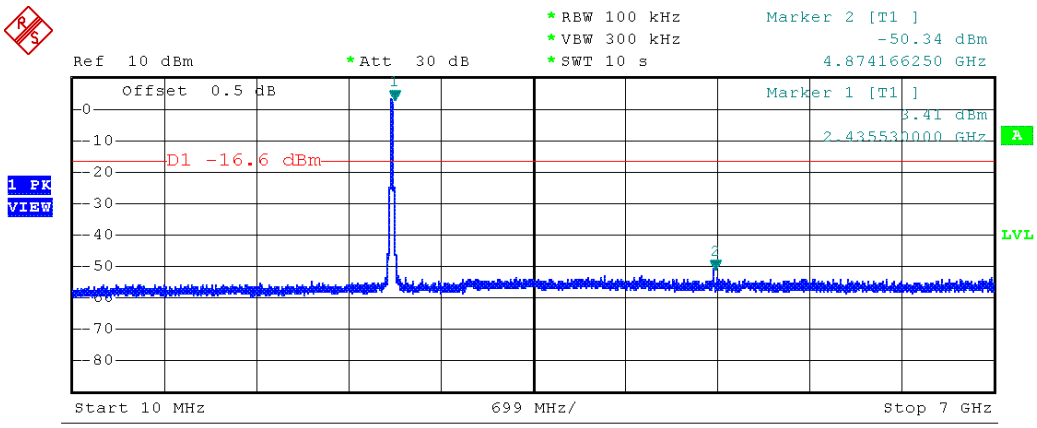
Date: 1.JAN.2000 06:12:19

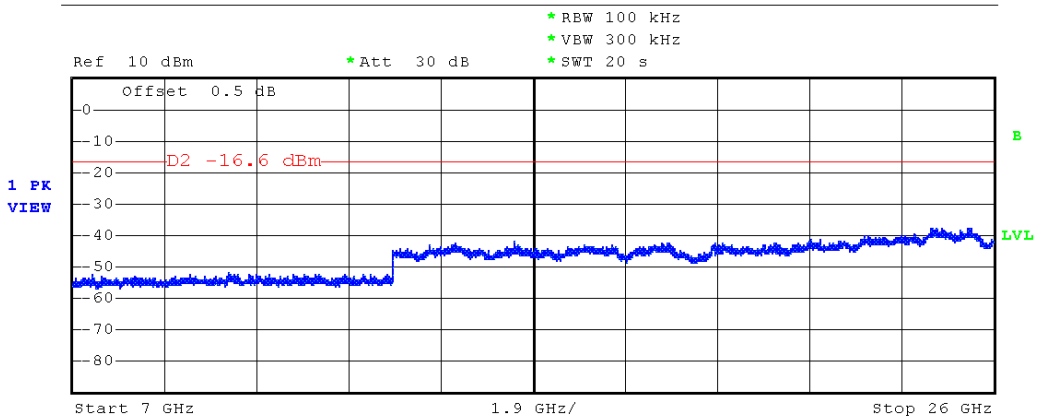
Conducted spurious emissions – HT20 F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





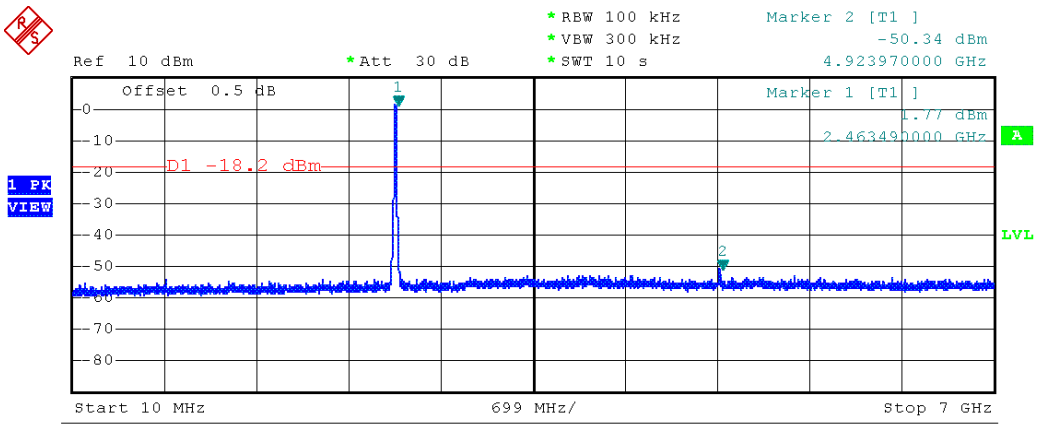
Date: 1.JAN.2000 06:16:21

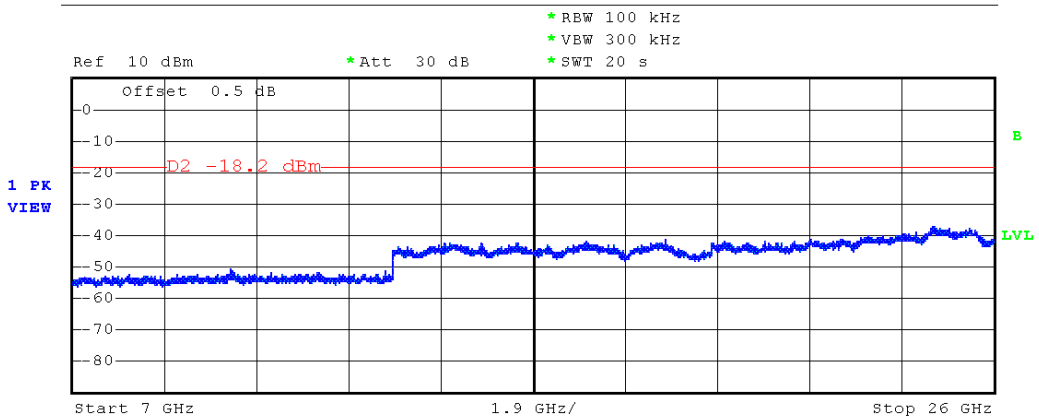
Conducted spurious emissions – HT20 F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT20, 2462 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





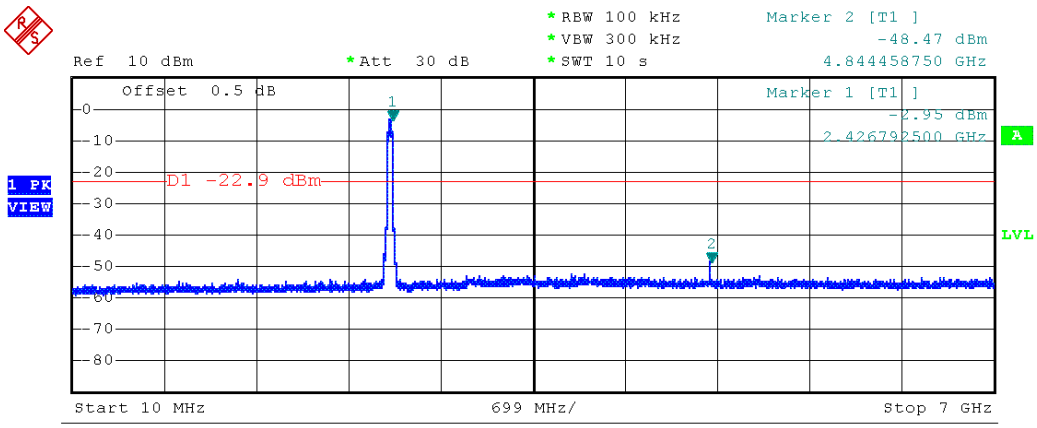
Date: 1.JAN.2000 06:25:35

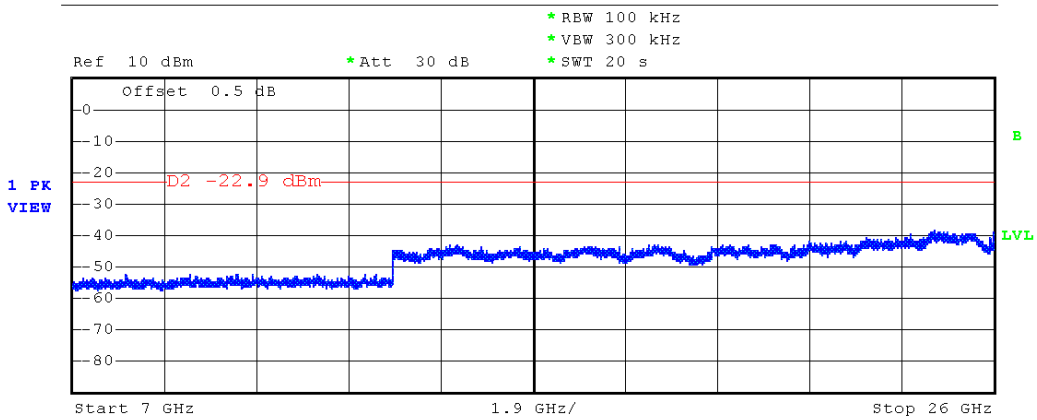
Conducted spurious emissions – HT40 F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2422 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





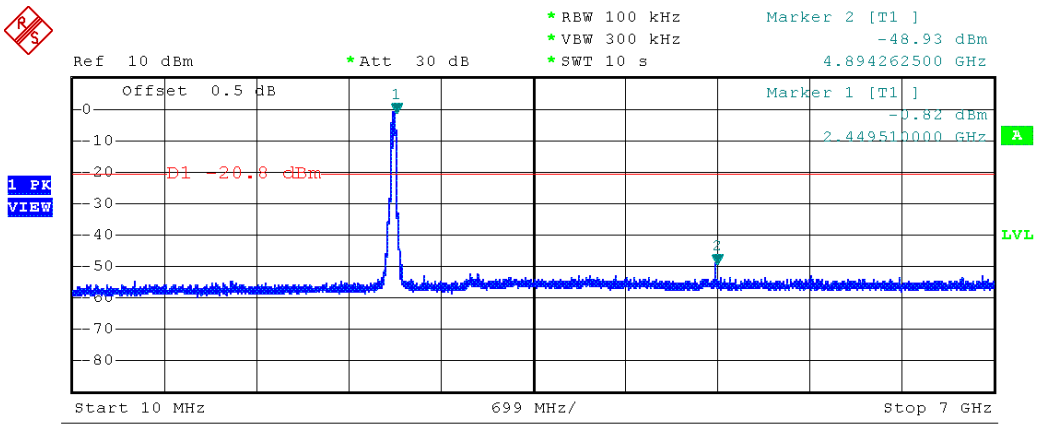
Date: 1.JAN.2000 06:31:48

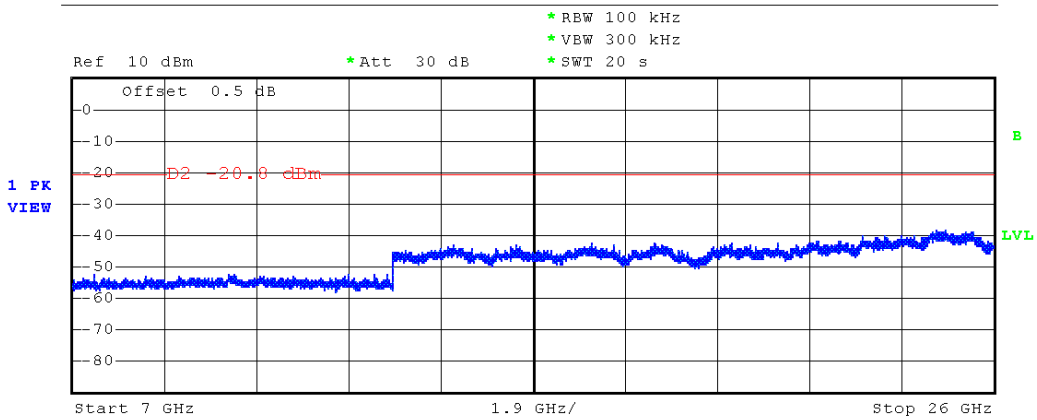
Conducted spurious emissions – HT40 F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2437 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement





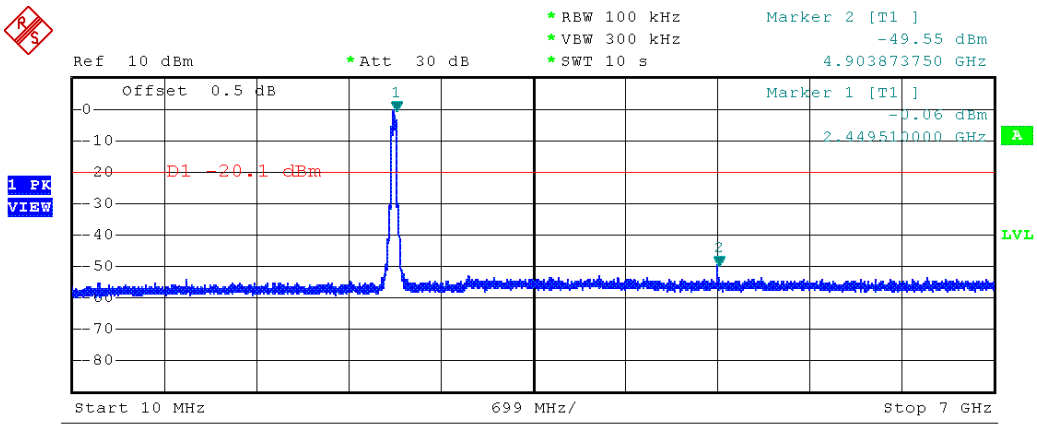
Date: 1.JAN.2000 06:36:15

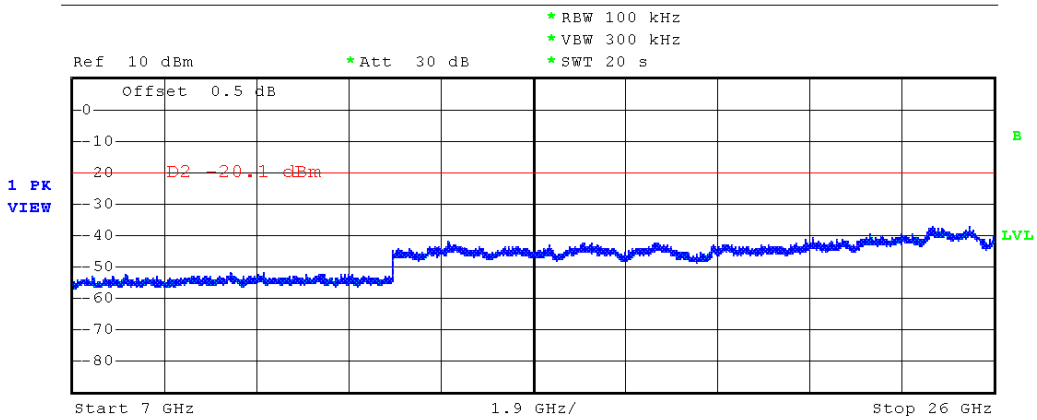
Conducted spurious emissions – HT40 F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, IEEE 802.11n, HT40, 2452 MHz, modulated
Test Date:	2015-04-24
Verdict:	PASS
Note 1:	conducted measurement

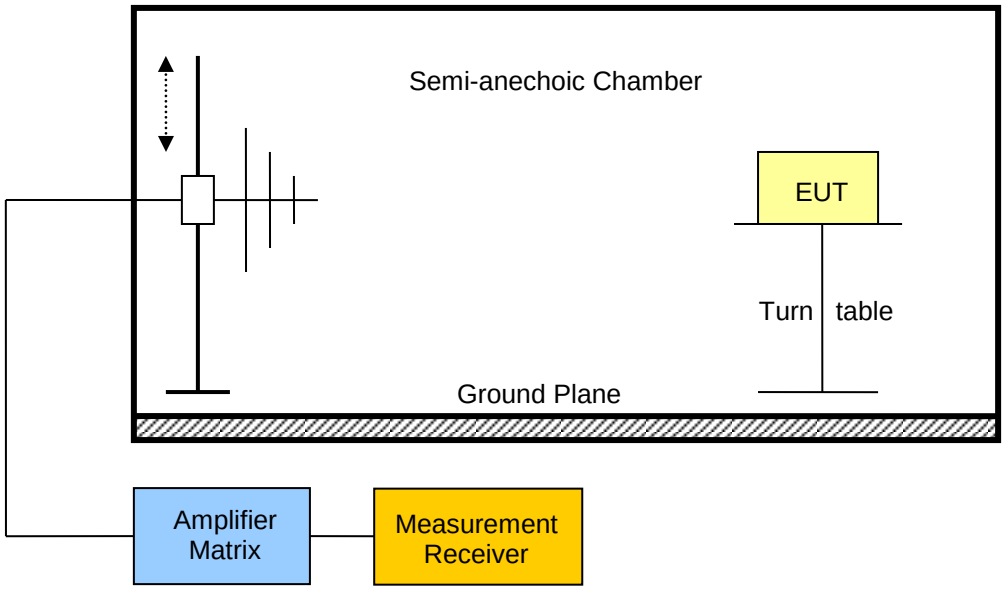




Date: 1.JAN.2000 06:41:03

3.8 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. to FCC 47 CFR 15.247 / IC RSS-247				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.247(d) / IC RSS-247 5.5		
Test according to measurement reference		Reference Method		
		ANSI C63.10		
Test frequency range		Tested frequencies		
		30 MHz – 10th Harmonic		
Limits				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.				
Test setup				



Test procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz 4. Markers are set to peak emission levels within restricted bands

Test results DSSS

Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2412	DSSS	240.208	23.86	pk	hor	46.00	3	-22.14
F_{LOW}	2412	DSSS	2387	52.39	pk	hor	74.00	3	-21.61
F_{LOW}	2412	DSSS	2387	42.51	RMS	hor	54.00	3	-11.49
F_{LOW}	2412	DSSS	2387	58.77	pk	ver	74.00	3	-15.23
F_{LOW}	2412	DSSS	2387	47.48	RMS	ver	54.00	3	-06.52
F_{LOW}	2412	DSSS	4824	47.87	pk	hor	74.00	1	-26.13
F_{LOW}	2412	DSSS	4824	46.11	avg	hor	54.00	1	-07.89
F_{LOW}	2412	DSSS	4824	48.64	pk	ver	74.00	1	-25.36
F_{LOW}	2412	DSSS	4824	47.06	avg	ver	54.00	1	-06.94
F_{MID}	2437	DSSS	4874	50.47	pk	hor	74.00	1	-23.53
F_{MID}	2437	DSSS	4874	48.99	avg	hor	54.00	1	-05.01
F_{MID}	2437	DSSS	4874	51.15	pk	ver	74.00	1	-22.85
F_{MID}	2437	DSSS	4874	49.73	avg	ver	54.00	1	-04.27
F_{HIGH}	2462	DSSS	4924	53.78	pk	hor	74.00	1	-20.22
F_{HIGH}	2462	DSSS	4924	52.46	avg	hor	54.00	1	-01.54
F_{HIGH}	2462	DSSS	4924	53.61	pk	ver	74.00	1	-20.39
F_{HIGH}	2462	DSSS	4924	52.48	avg	ver	54.00	1	-01.52

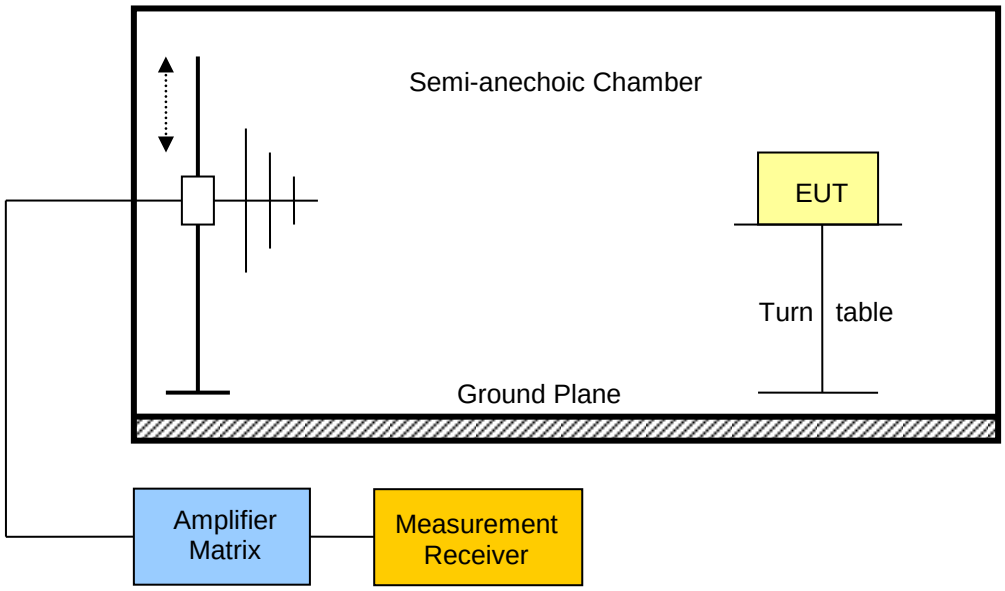
Comments: * Physical distance between EUT and measurement antenna.

Test results HT20									
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2412	HT20	2390	69.75	pk	hor	74.00	3	-04.25
F_{LOW}	2412	HT20	2390	47.47	RMS	hor	54.00	3	-06.53
F_{LOW}	2412	HT20	2390	67.51	pk	ver	74.00	3	-06.49
F_{LOW}	2412	HT20	2390	48.85	RMS	ver	54.00	3	-05.15
F_{LOW}	2412	HT20	4821	50.29	pk	ver	74.00	1	-23.71
F_{LOW}	2412	HT20	4821	39.20	avg	ver	54.00	1	-14.80
F_{MID}	2437	HT20	2485.7	51.72	pk	hor	74.00	3	-22.28
F_{MID}	2437	HT20	2485.7	30.28	avg	hor	54.00	3	-23.72
F_{MID}	2437	HT20	4880	41.97	pk	hor	74.00	1	-32.03
F_{MID}	2437	HT20	4881	52.23	pk	ver	74.00	1	-21.77
F_{MID}	2437	HT20	4881	41.38	avg	ver	54.00	1	-12.62
F_{HIGH}	2462	HT20	2483.6	68.81	pk	hor	74.00	1	-05.19
F_{HIGH}	2462	HT20	2483.6	50.79	RMS	hor	54.00	1	-03.21
F_{HIGH}	2462	HT20	4920	42.28	pk	hor	74.00	3	-31.72
F_{HIGH}	2462	HT20	4925	52.30	pk	ver	74.00	3	-21.70
F_{HIGH}	2462	HT20	4925	40.40	avg	ver	54.00	3	-13.60
Comments: * Physical distance between EUT and measurement antenna.									

Test results HT40									
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2422	HT40	2389	70.73	pk	ver	74.00	3	-03.27
F_{LOW}	2422	HT40	2389	48.84	RMS	ver	54.00	3	-05.16
F_{LOW}	2422	HT40	2390	71.26	pk	hor	74.00	3	-02.74
F_{LOW}	2422	HT40	2390	48.03	RMS	hor	54.00	3	-05.97
F_{LOW}	2422	HT40	4840	37.85	pk	hor	74.00	1	-36.15
F_{LOW}	2422	HT40	4840	44.05	pk	ver	74.00	1	-29.95
F_{MID}	2437	HT40	2388.8	64.22	pk	hor	74.00	3	-09.78
F_{MID}	2437	HT40	2388.8	62.28	pk	ver	74.00	3	-11.72
F_{MID}	2437	HT40	2483.5	62.09	pk	hor	74.00	3	-11.91
F_{MID}	2437	HT40	4894	50.16	pk	ver	74.00	1	-23.84
F_{MID}	2437	HT40	4894	38.40	avg	ver	54.00	1	-15.60
F_{MID}	2437	HT40	4904	39.57	pk	hor	74.00	1	-34.43
F_{HIGH}	2452	HT40	2380	55.08	pk	ver	74.00	3	-18.92
F_{HIGH}	2452	HT40	2389	57.63	pk	hor	74.00	3	-16.37
F_{HIGH}	2452	HT40	2389	51.85	pk	ver	74.00	3	-22.15
F_{HIGH}	2452	HT40	2399	65.34	pk	hor	95.00	3	-29.66
F_{HIGH}	2452	HT40	2483.5	70.24	pk	hor	74.00	3	-03.76
F_{HIGH}	2452	HT40	2483.5	52.56	RMS	hor	54.00	3	-01.44
F_{HIGH}	2452	HT40	2483.6	66.85	pk	ver	74.00	3	-07.15
F_{HIGH}	2452	HT40	2483.6	45.84	RMS	ver	54.00	3	-08.16
F_{HIGH}	2452	HT40	2486.7	72.38	pk	hor	74.00	3	-01.62
F_{HIGH}	2452	HT40	2486.7	51.73	RMS	hor	54.00	3	-02.27
F_{HIGH}	2452	HT40	2486.8	67.24	pk	ver	74.00	3	-06.76
F_{HIGH}	2452	HT40	2486.8	44.61	RMS	ver	54.00	3	-09.39
F_{HIGH}	2452	HT40	2501	62.16	pk	hor	95.00	3	-32.84
F_{HIGH}	2452	HT40	2503	54.54	pk	ver	95.00	1	-40.46
F_{HIGH}	2452	HT40	4924	46.79	pk	ver	74.00	1	-27.21
F_{HIGH}	2452	HT40	4924	35.53	avg	ver	54.00	1	-18.47
Comments: * Physical distance between EUT and measurement antenna.									

3.9 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. to IC RSS-247				**Verdict: PASS**
Test according referenced standards	Reference Method			
	IC RSS-247 3.1			
Test according to measurement reference	Reference Method			
	ANSI C63.10			
Test frequency range	Tested frequencies			
	30 MHz – 5th Harmonic			
EUT test mode	Receive			
Limits				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Test setup				



Test procedure
1. EUT set to receive mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz 4. Markers are set to peak emission levels

Test results

Channel	Frequency [MHz]	Emission [MHz]	Emission Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dBµV/m]
F_{MID}	2427	681.6	23.50	pk	hor	46.00	-22.5 dB
F_{MID}	2427	904	24.22	pk	ver	46.00	-21.78 dB
F_{MID}	2427	3736	40.02	pk	hor	53.98	-13.96 dB
F_{MID}	2427	7432	48.76	pk	hor	53.98	-5.22 dB

Comments:

ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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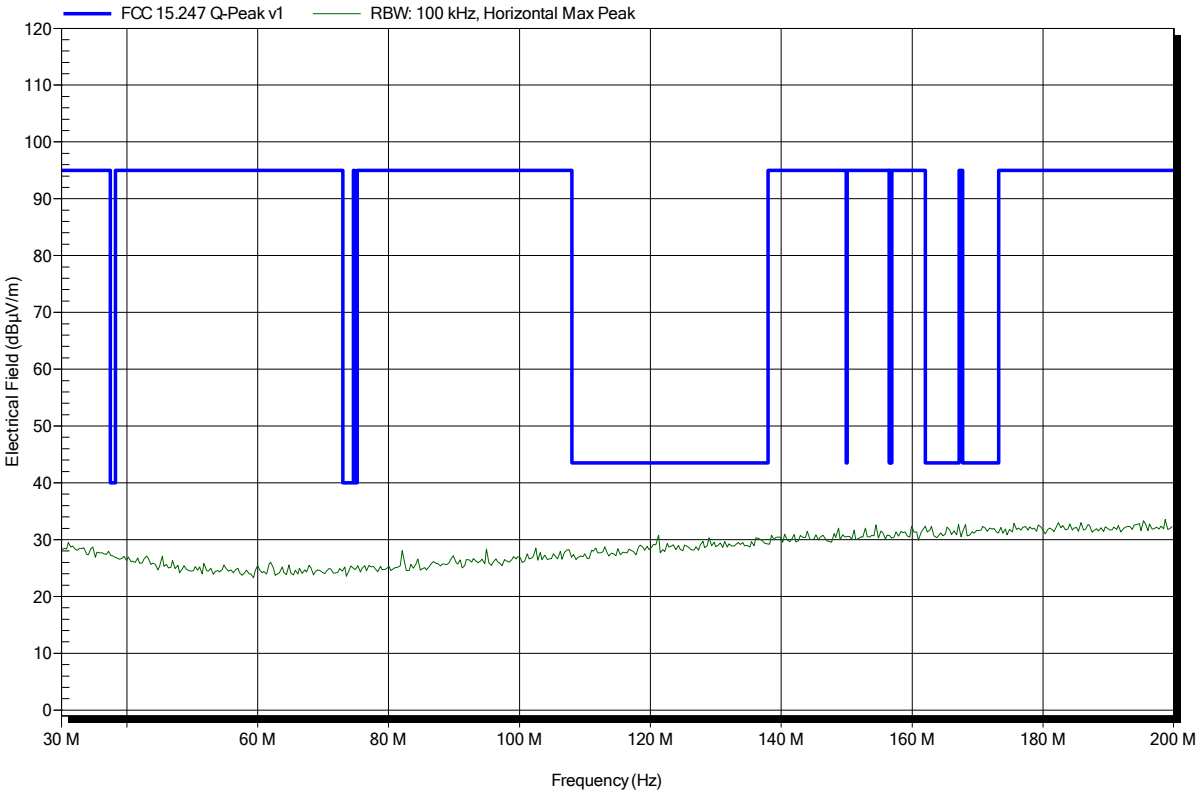

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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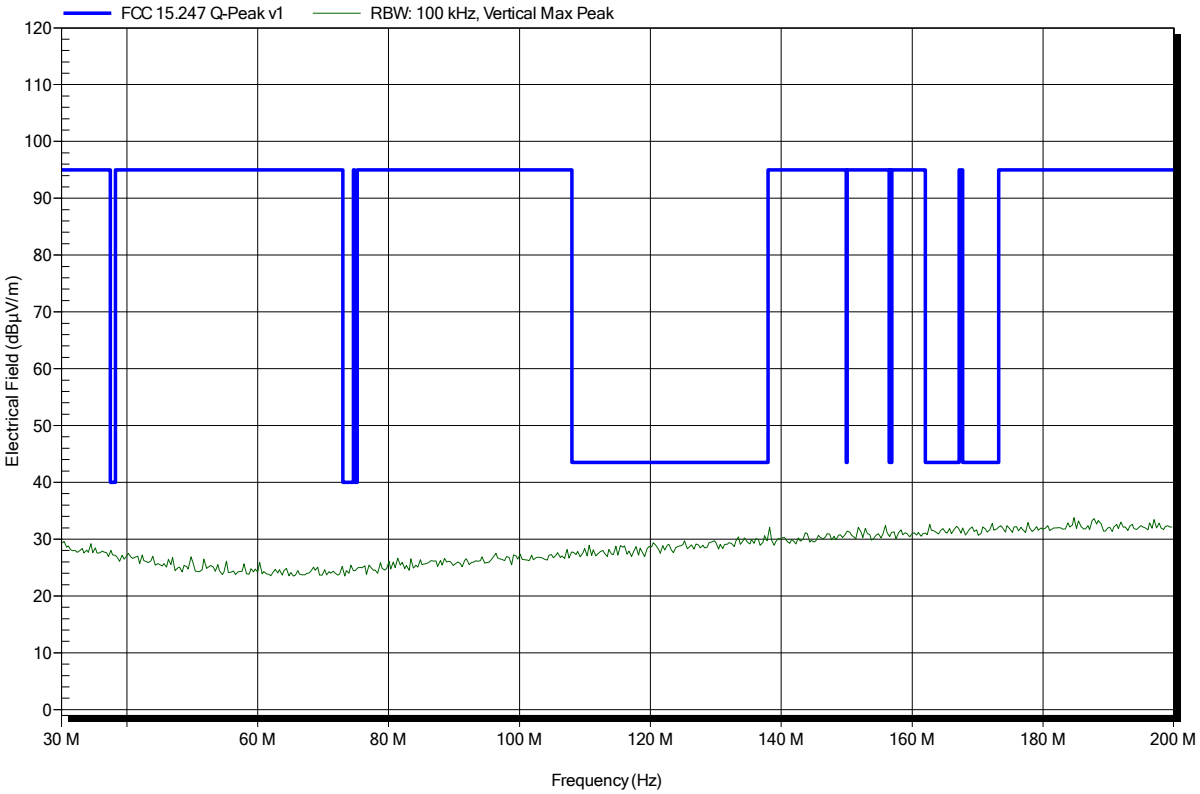

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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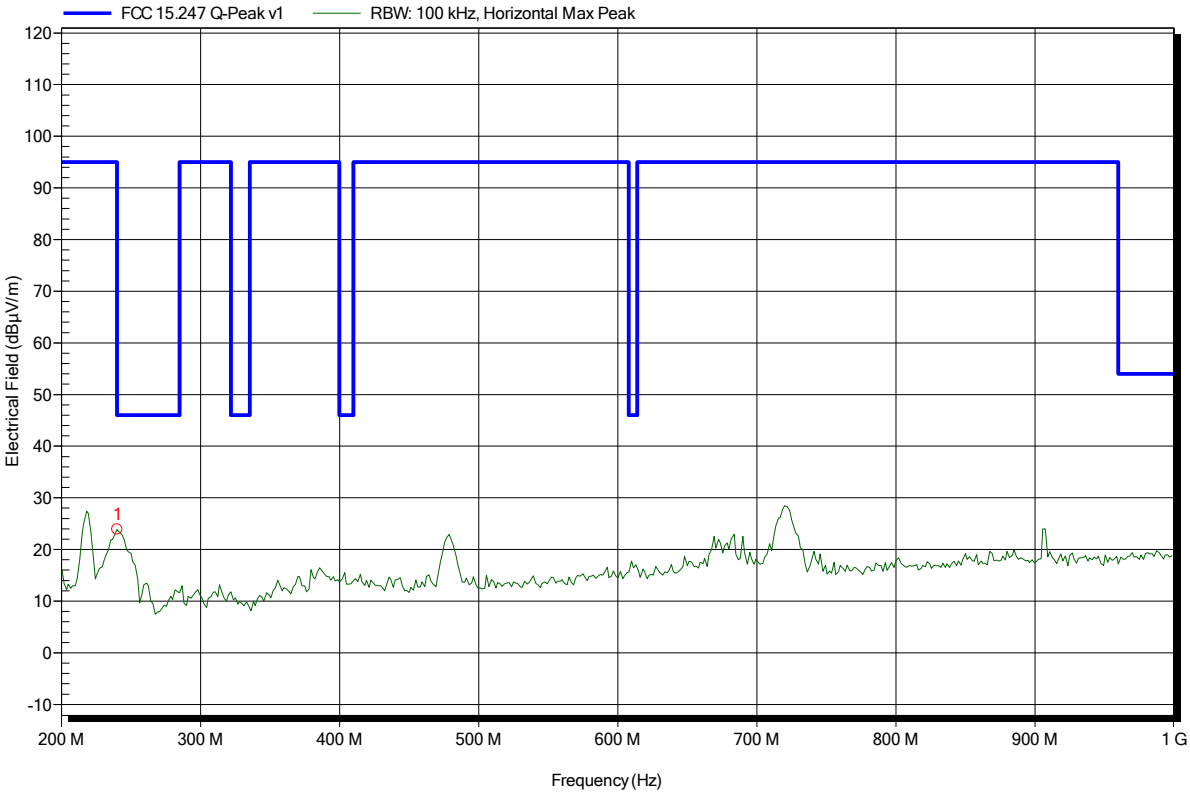

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
240.208 MHz	23.86 dBµV/m	46 dBµV/m	-22.14 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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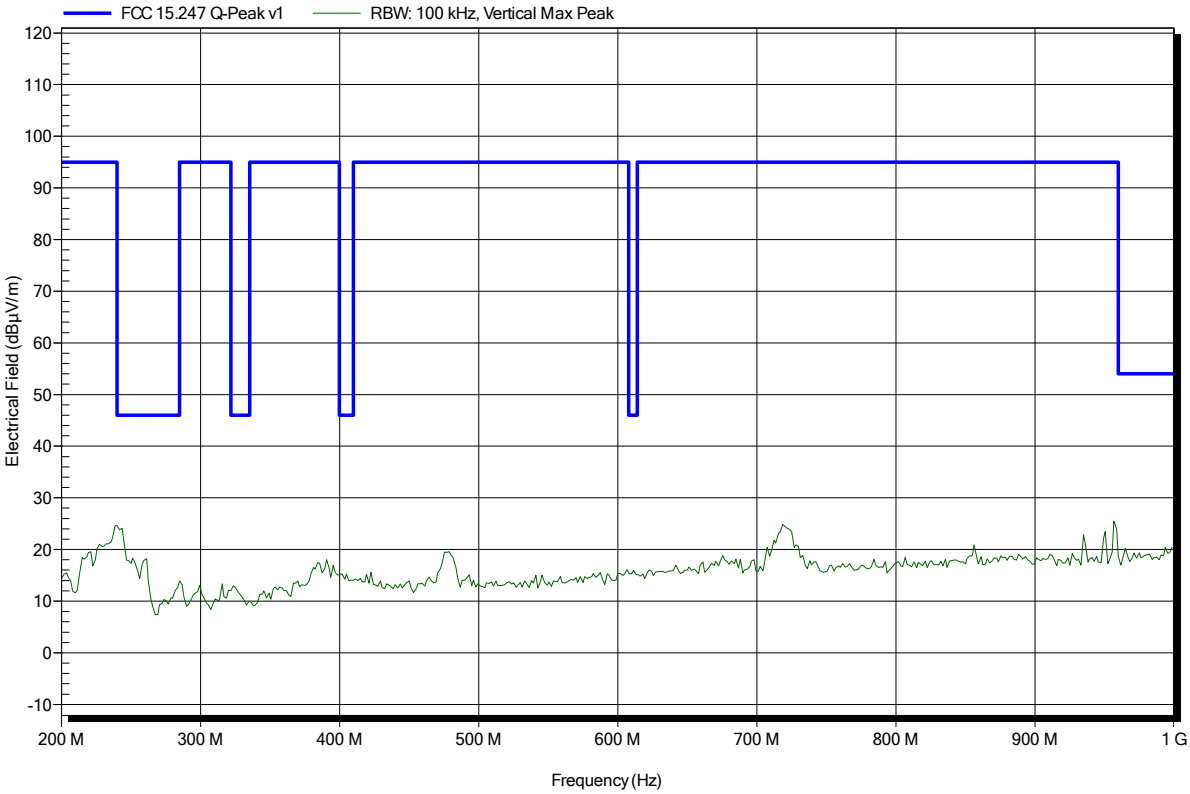

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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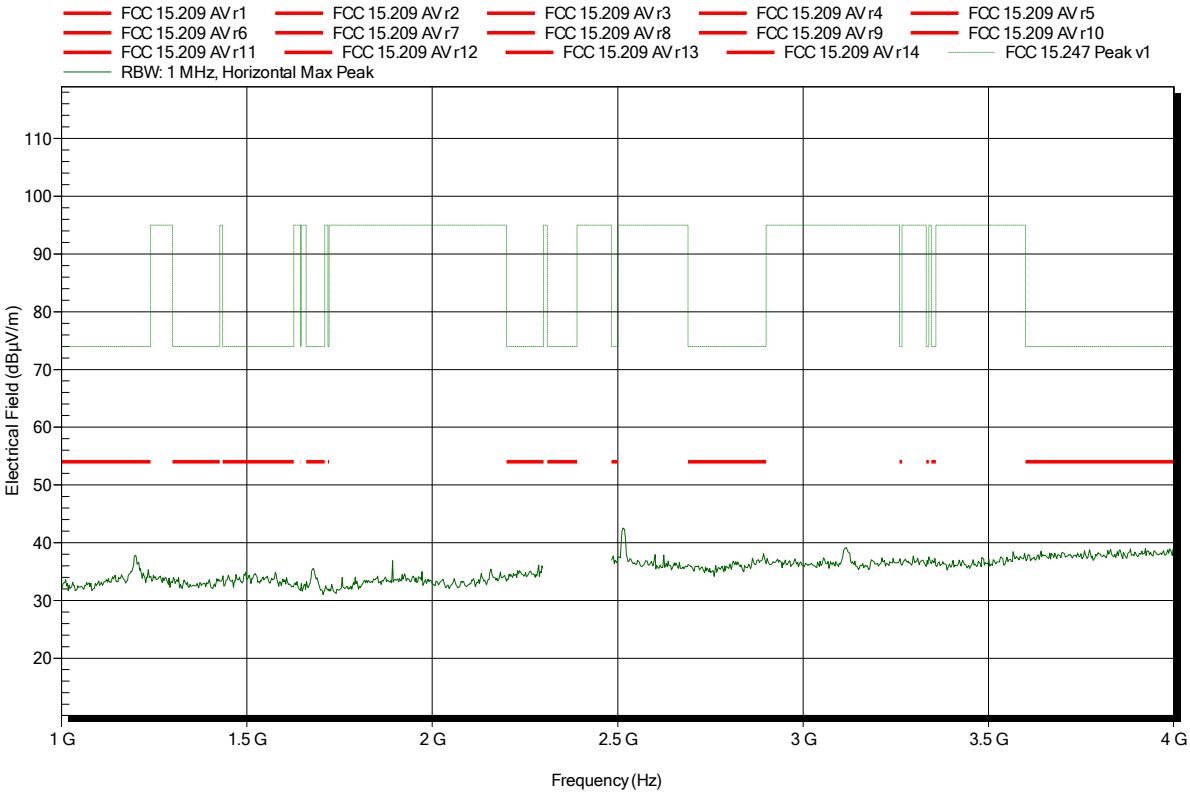

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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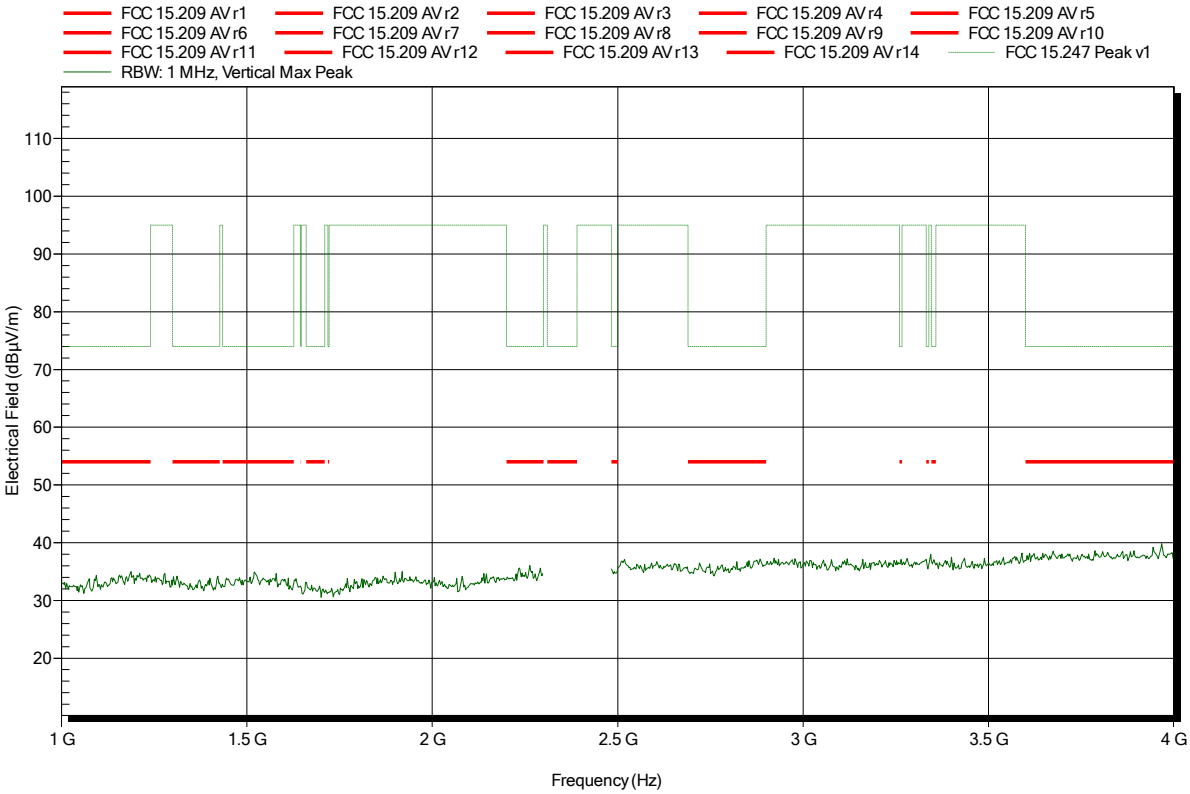
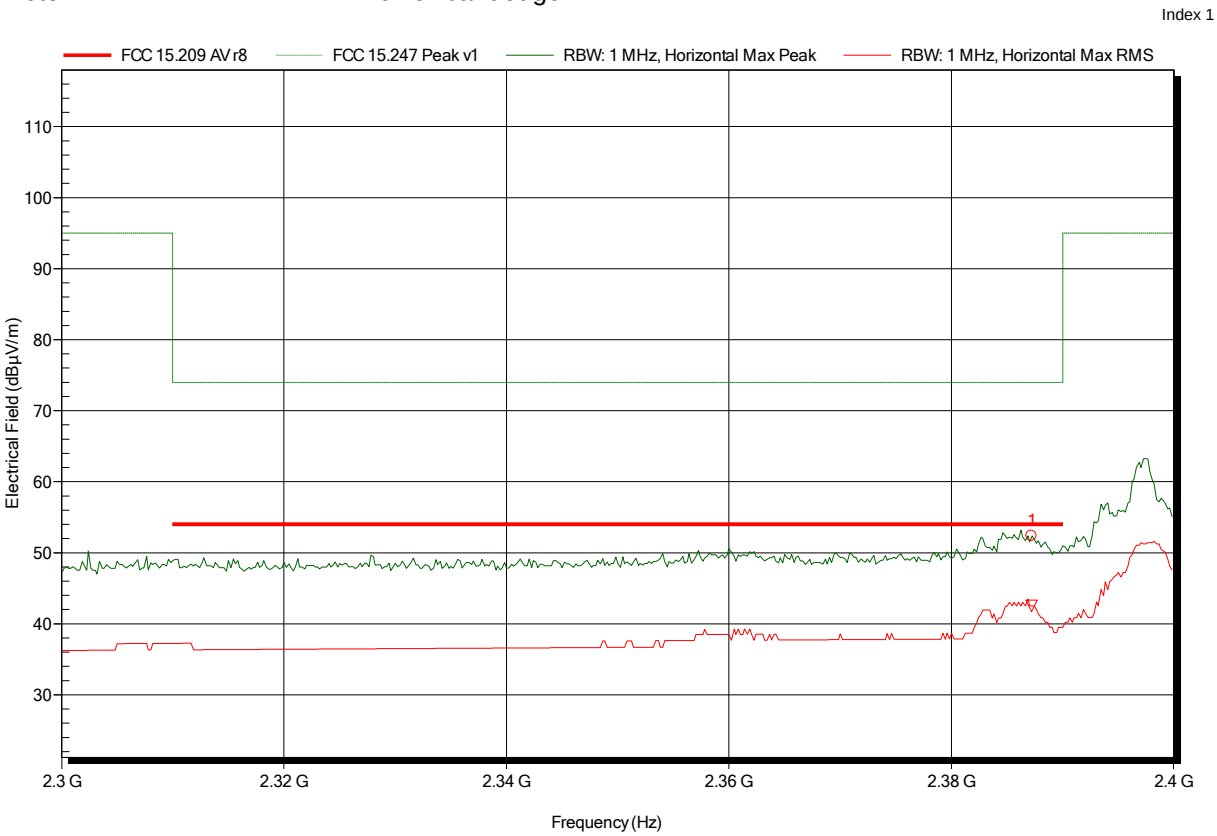


Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	lower bandedge



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.387 GHz	52.39 dBµV/m	74 dBµV/m	-21.61 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.387 GHz	42.51 dBµV/m	54 dBµV/m	-11.49 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	lower bandedge

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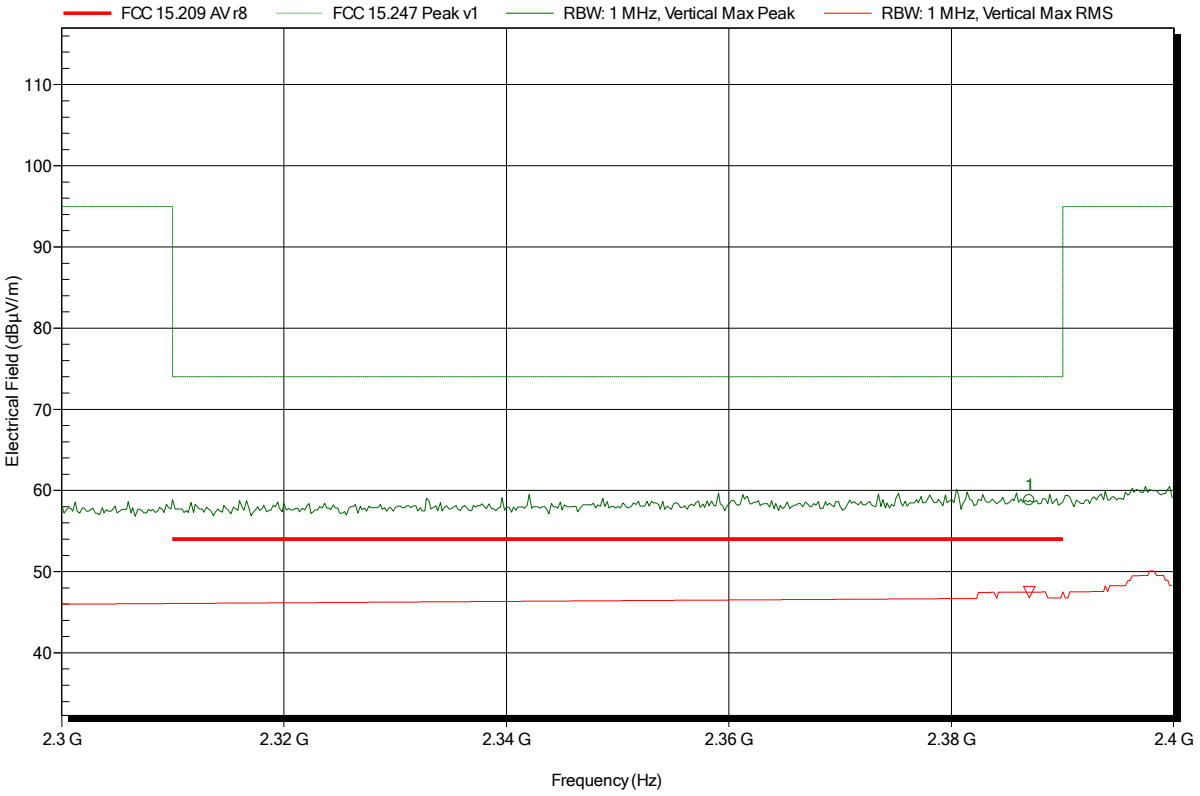


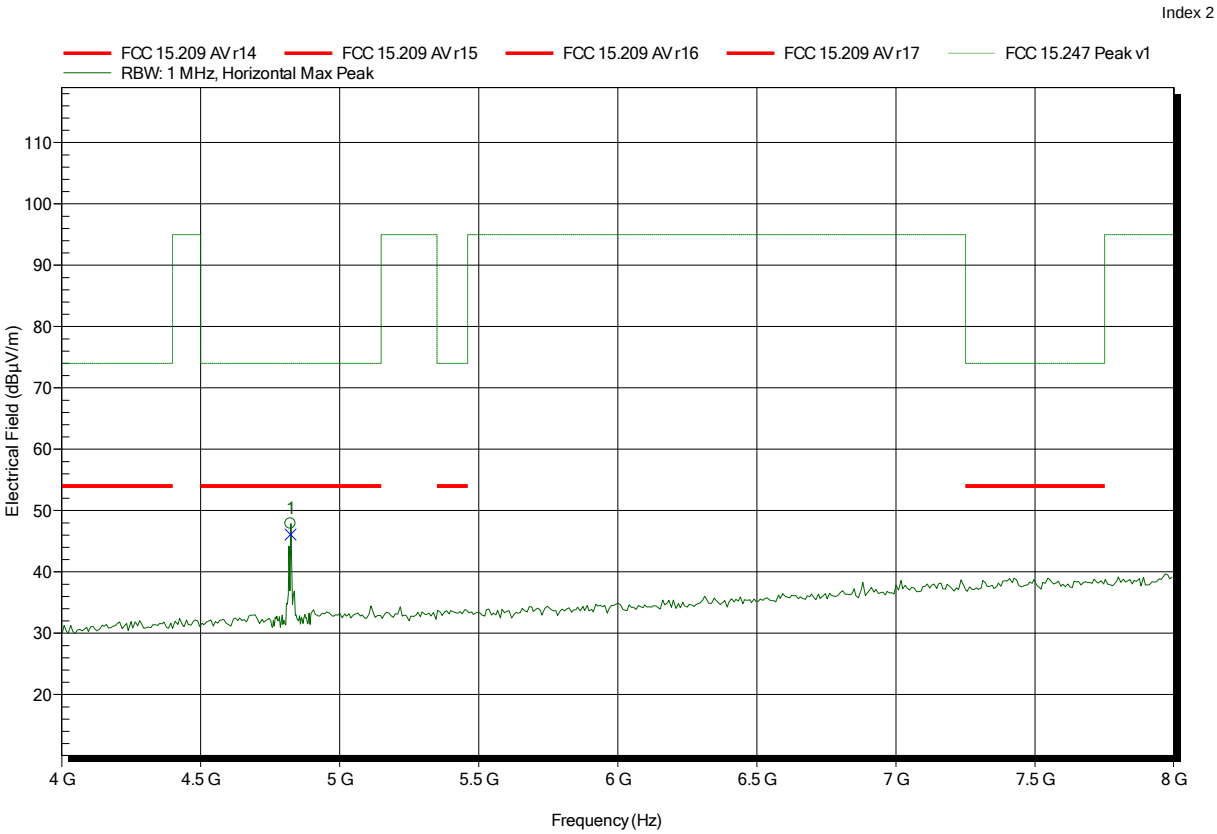
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.387 GHz	58.77 dBµV/m	74 dBµV/m	-15.23 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.387 GHz	47.48 dBµV/m	54 dBµV/m	-6.52 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	



Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	47.87 dBµV/m	74 dBµV/m	-26.13 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.824 GHz	46.11 dBµV/m	54 dBµV/m	-7.89 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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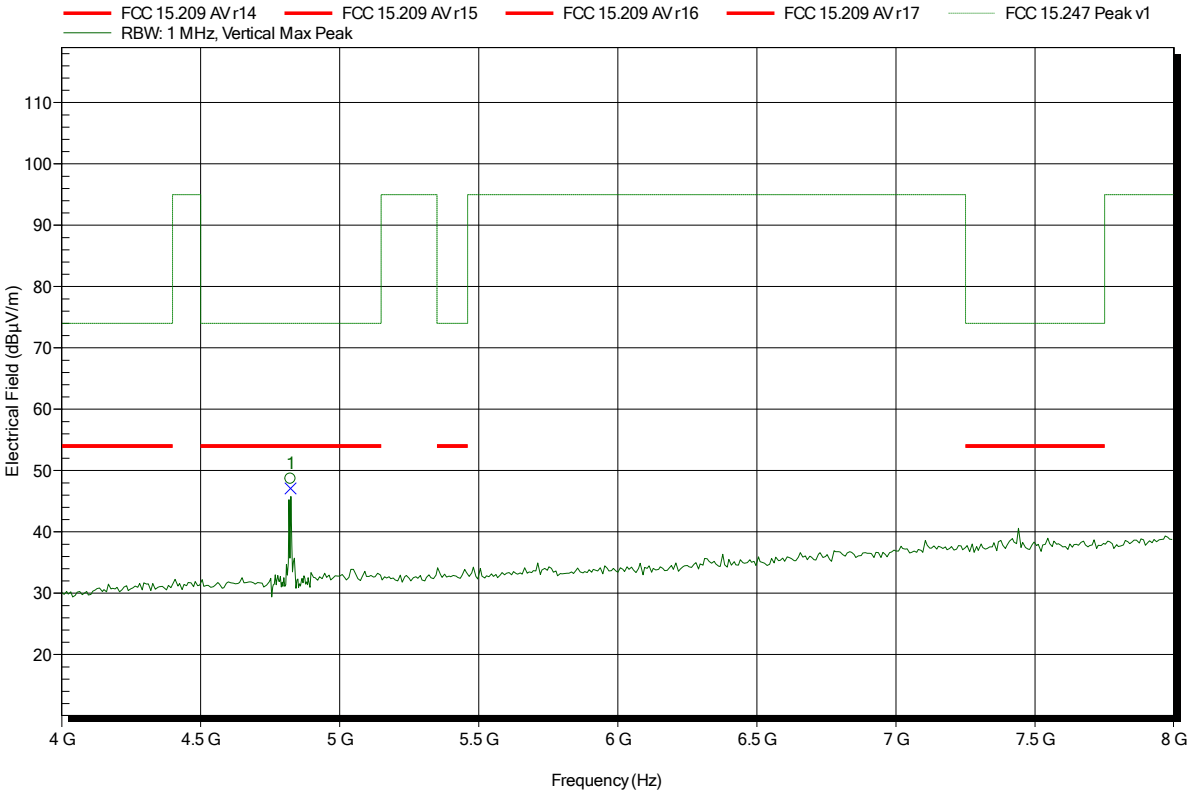

Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	48.64 dBµV/m	74 dBµV/m	-25.36 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.824 GHz	47.06 dBµV/m	54 dBµV/m	-6.94 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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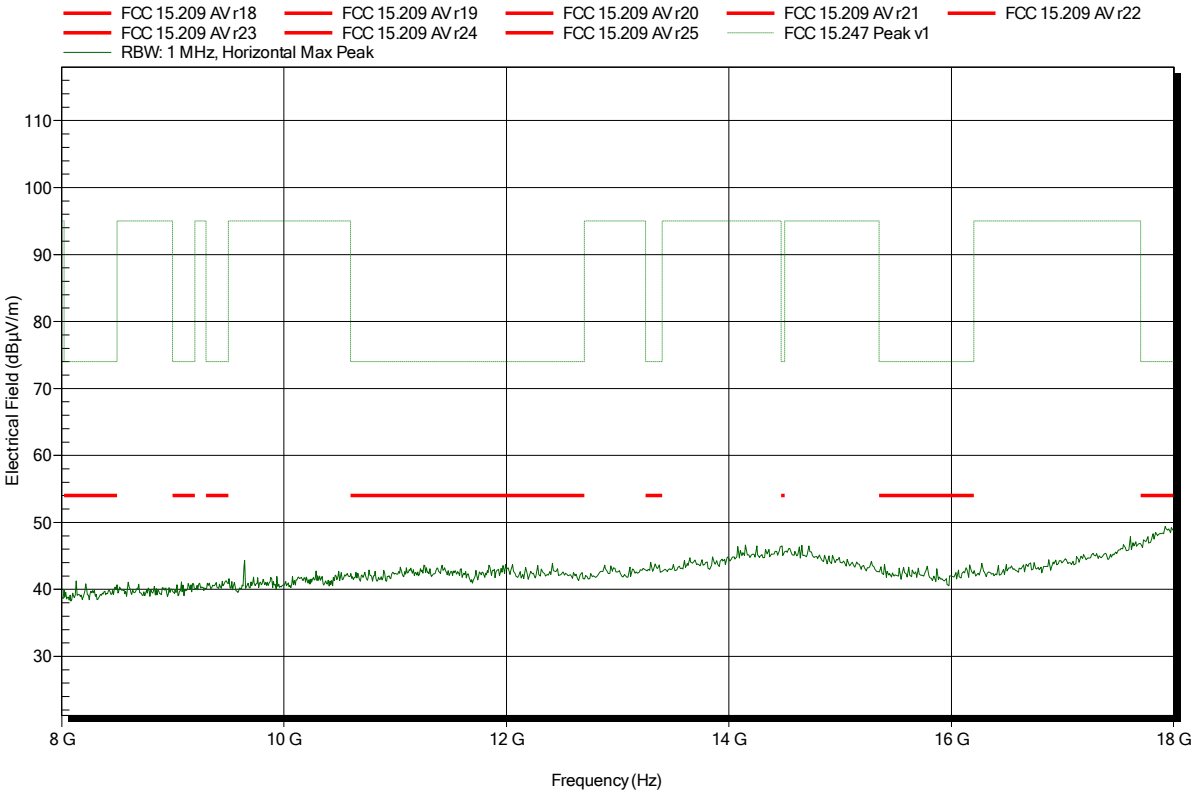

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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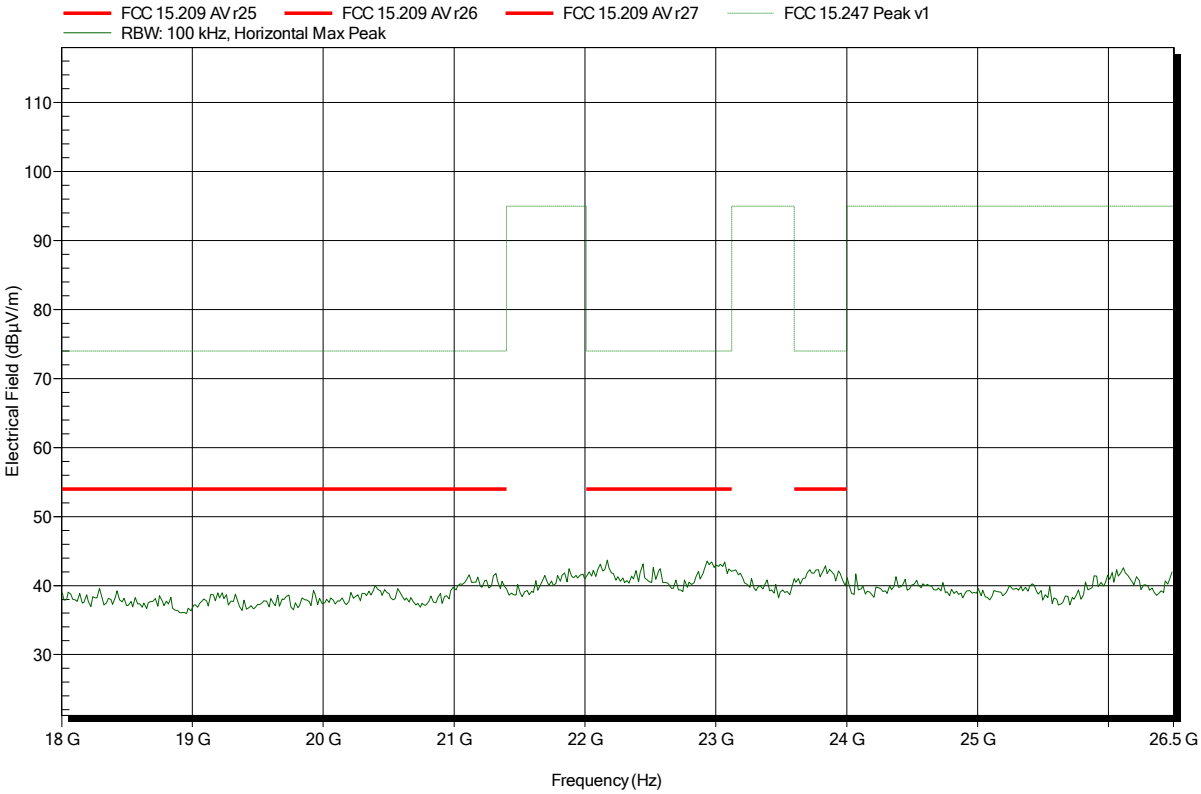

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-21
Note:	

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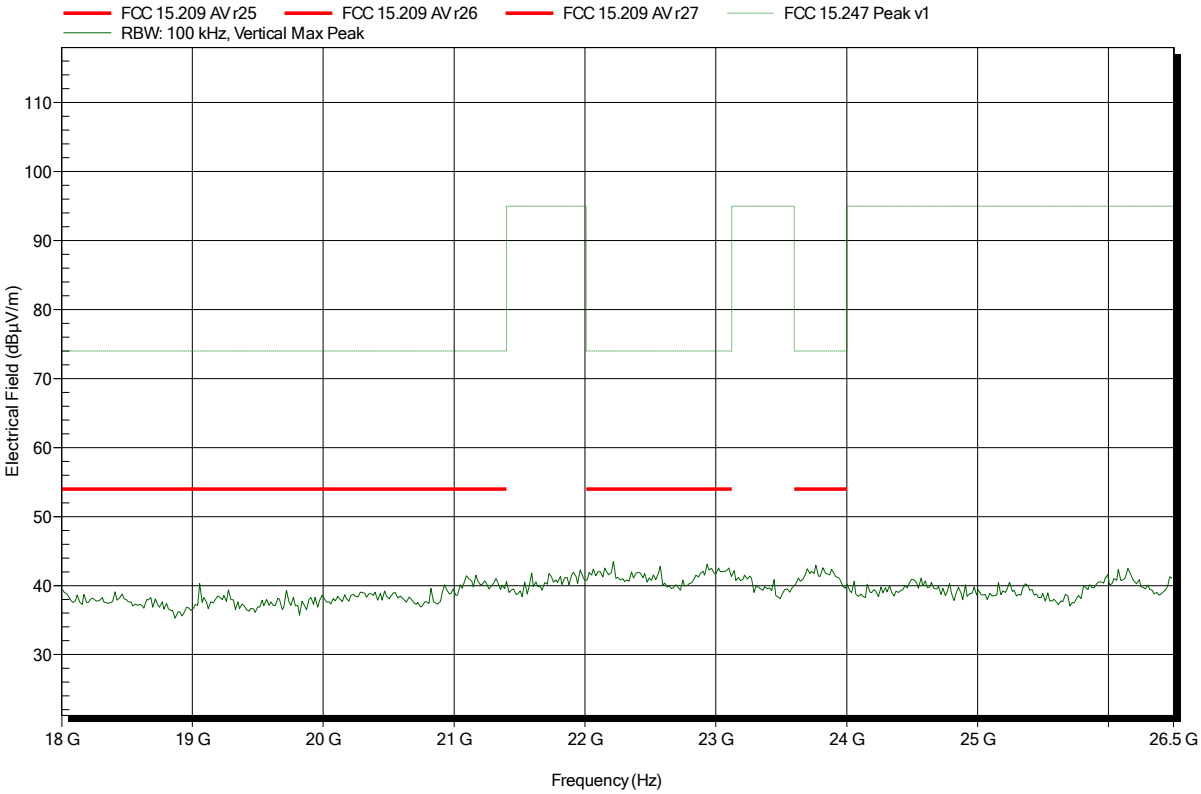

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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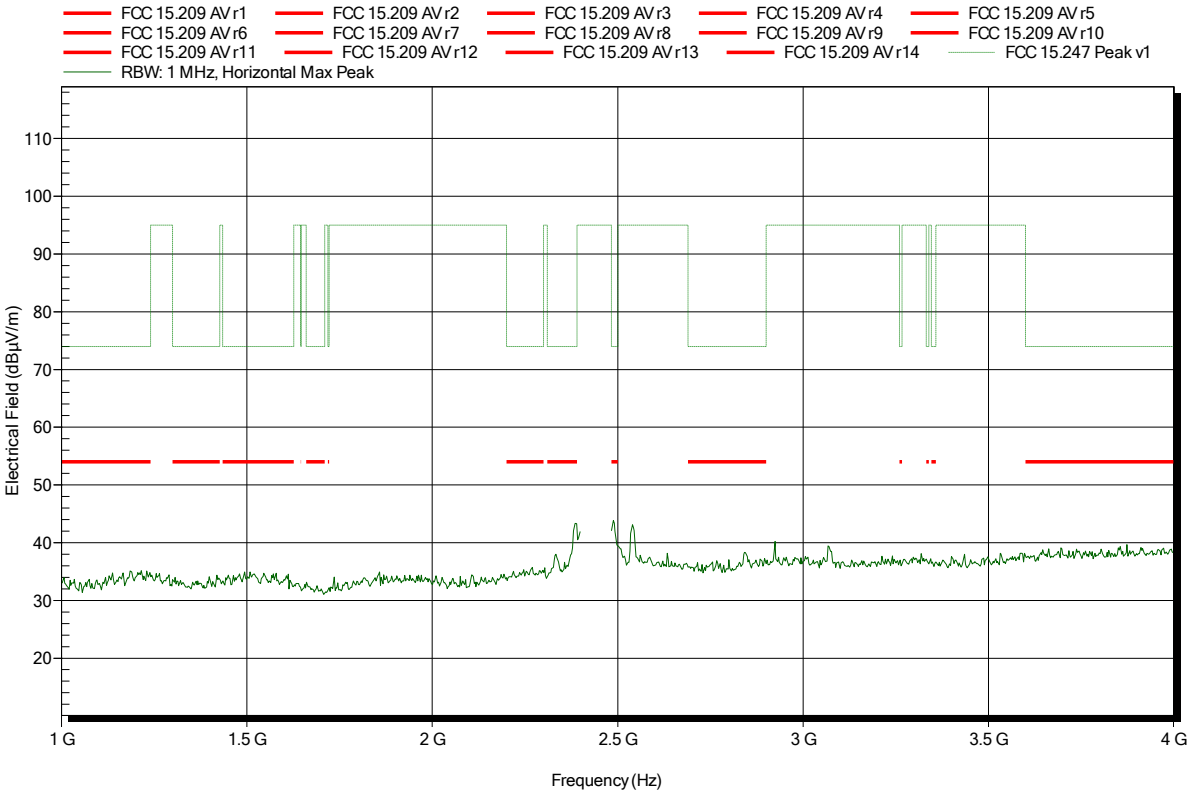

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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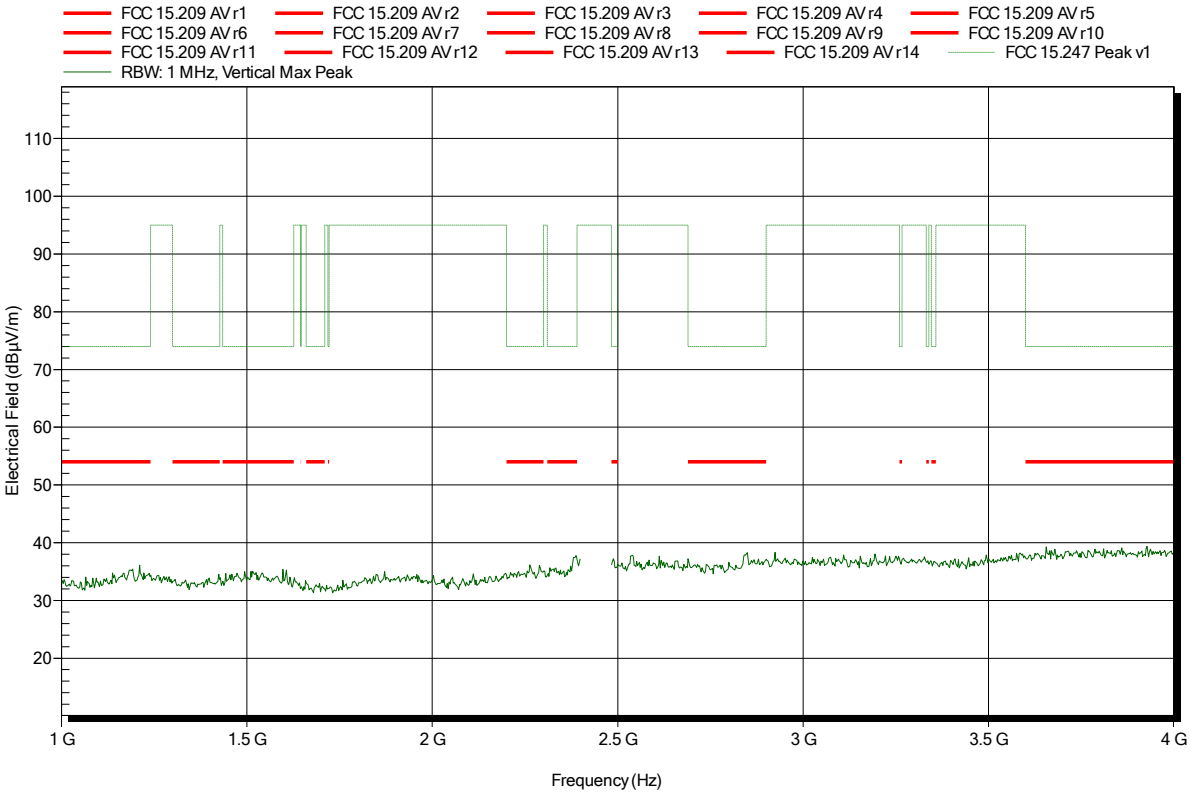

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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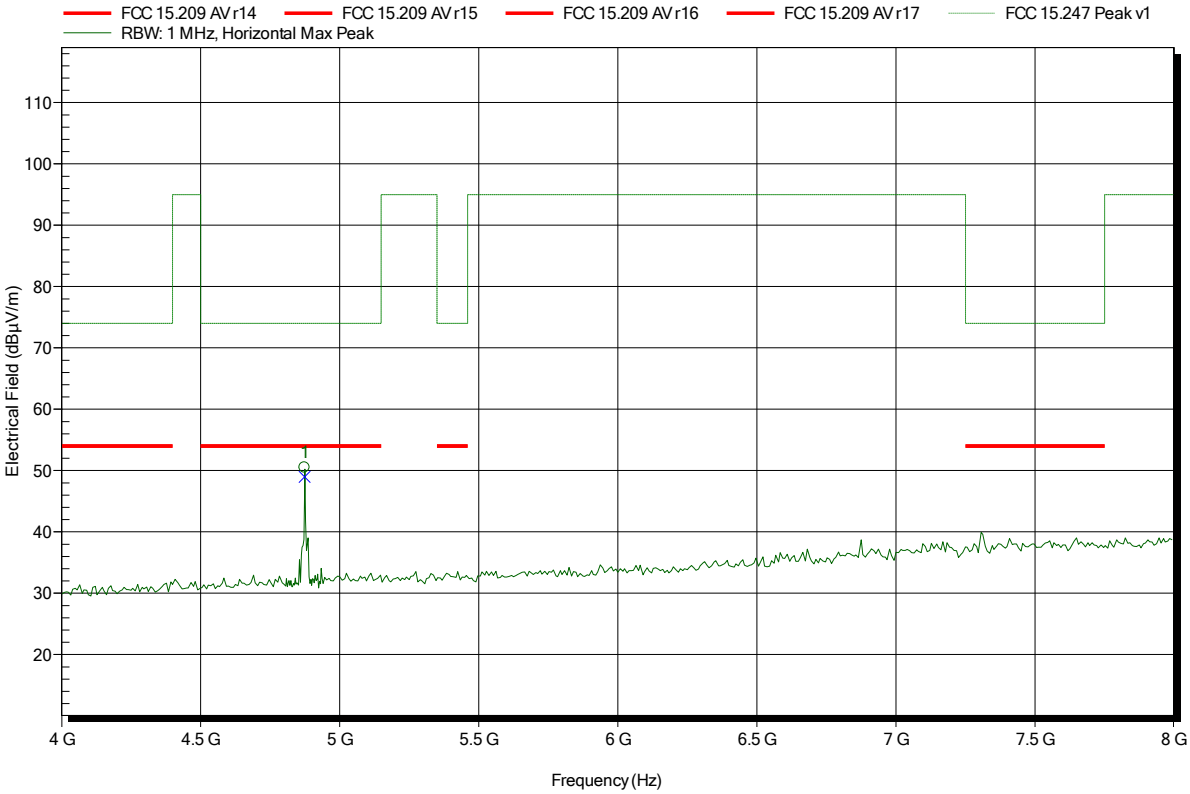

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	50.47 dBµV/m	74 dBµV/m	-23.53 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	48.99 dBµV/m	54 dBµV/m	-5.01 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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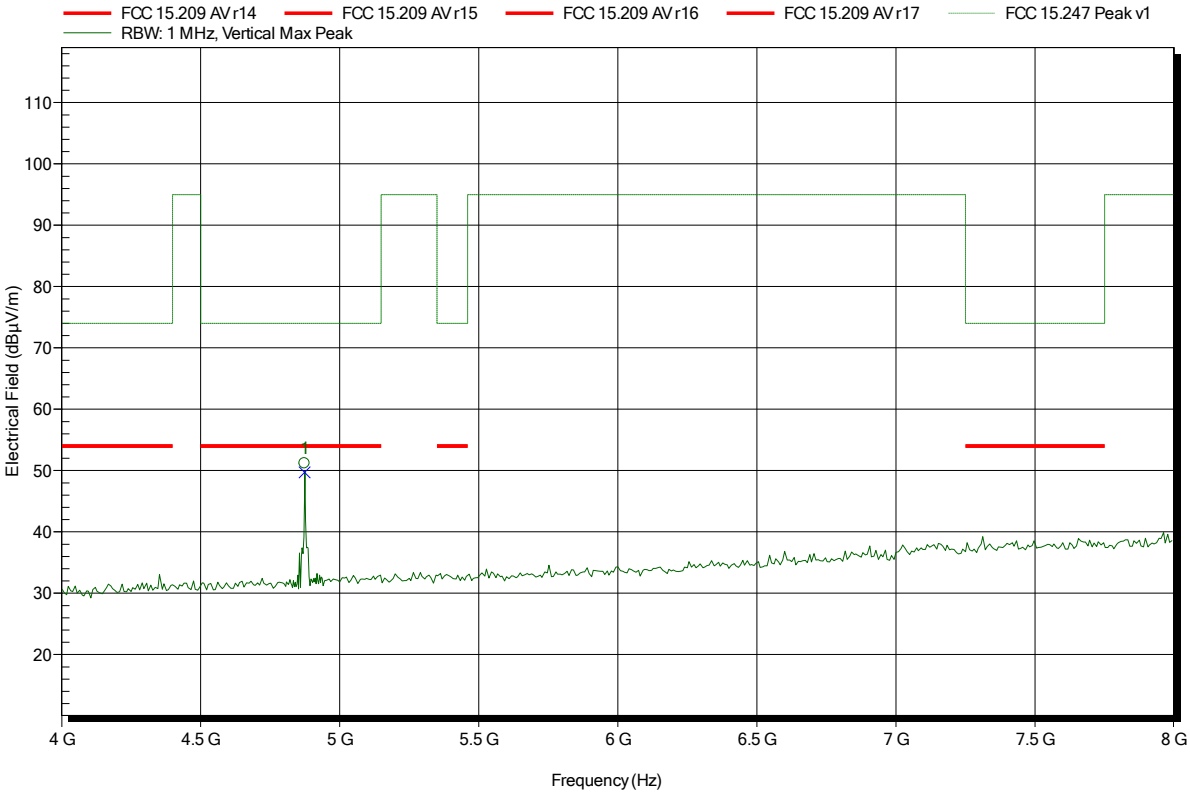

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	51.15 dBµV/m	74 dBµV/m	-22.85 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	49.73 dBµV/m	54 dBµV/m	-4.27 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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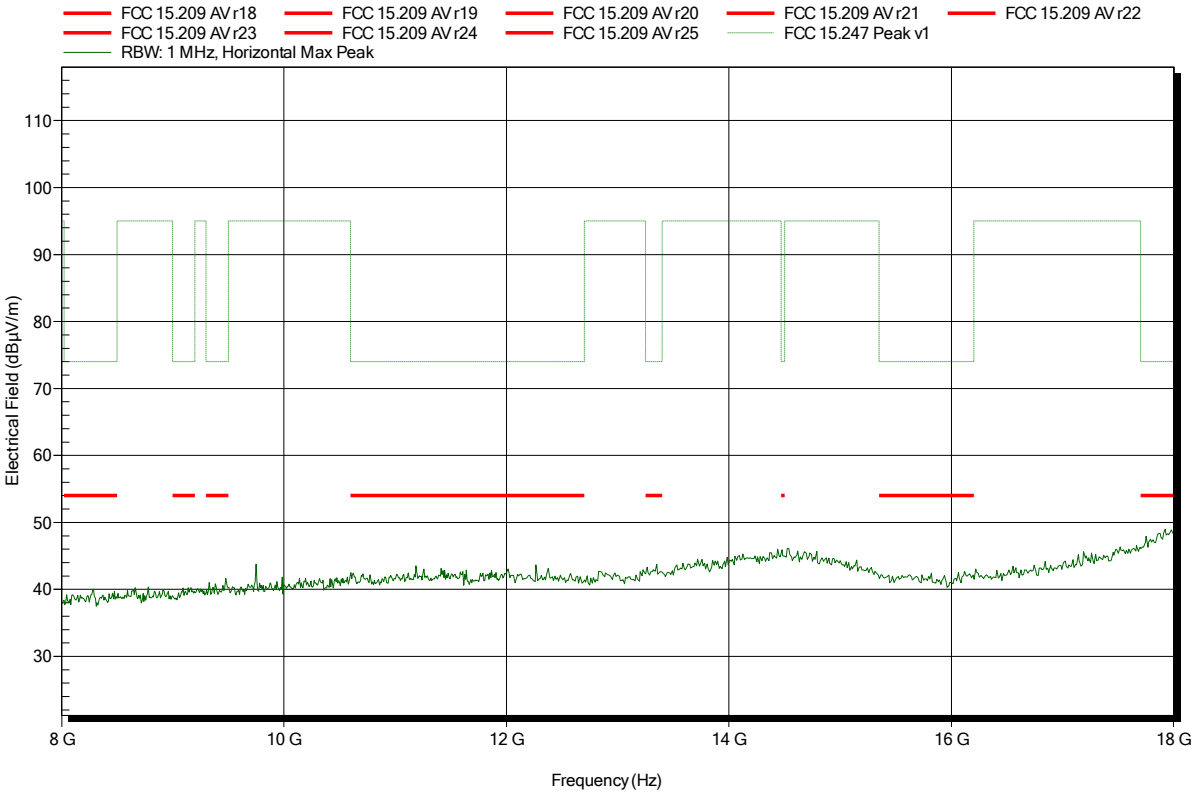

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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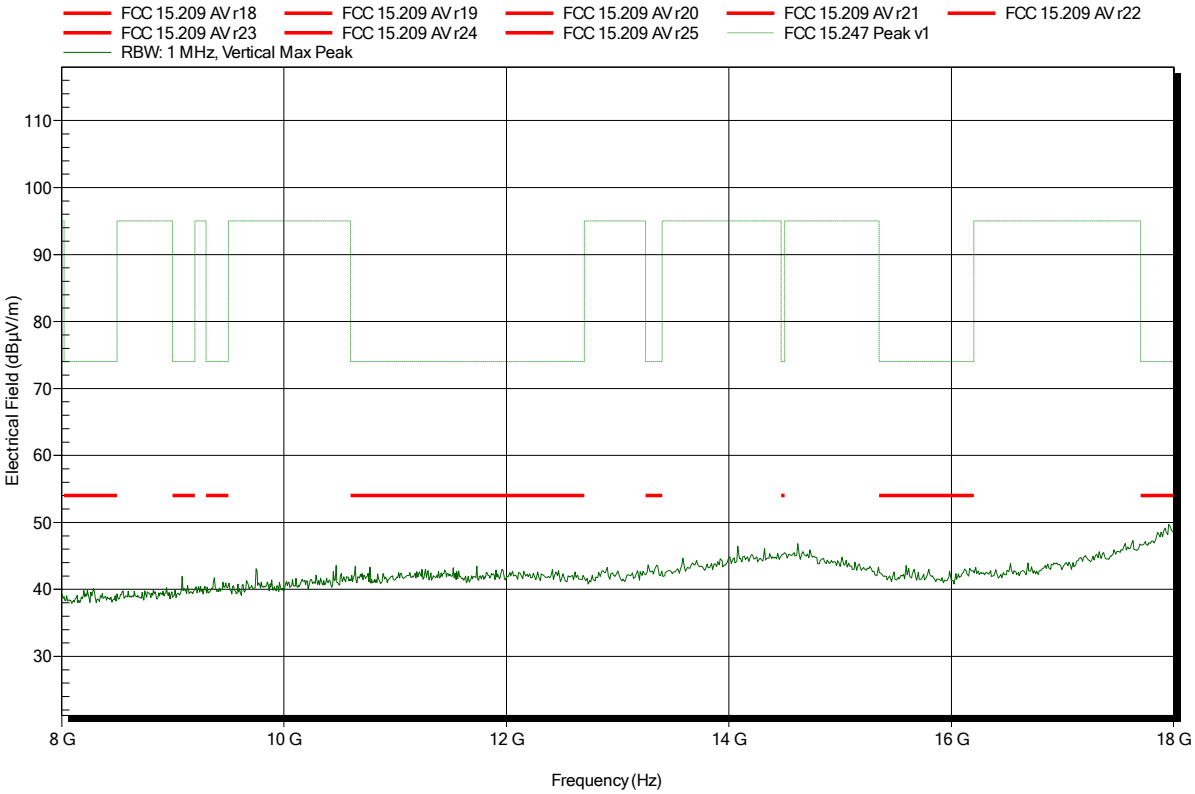

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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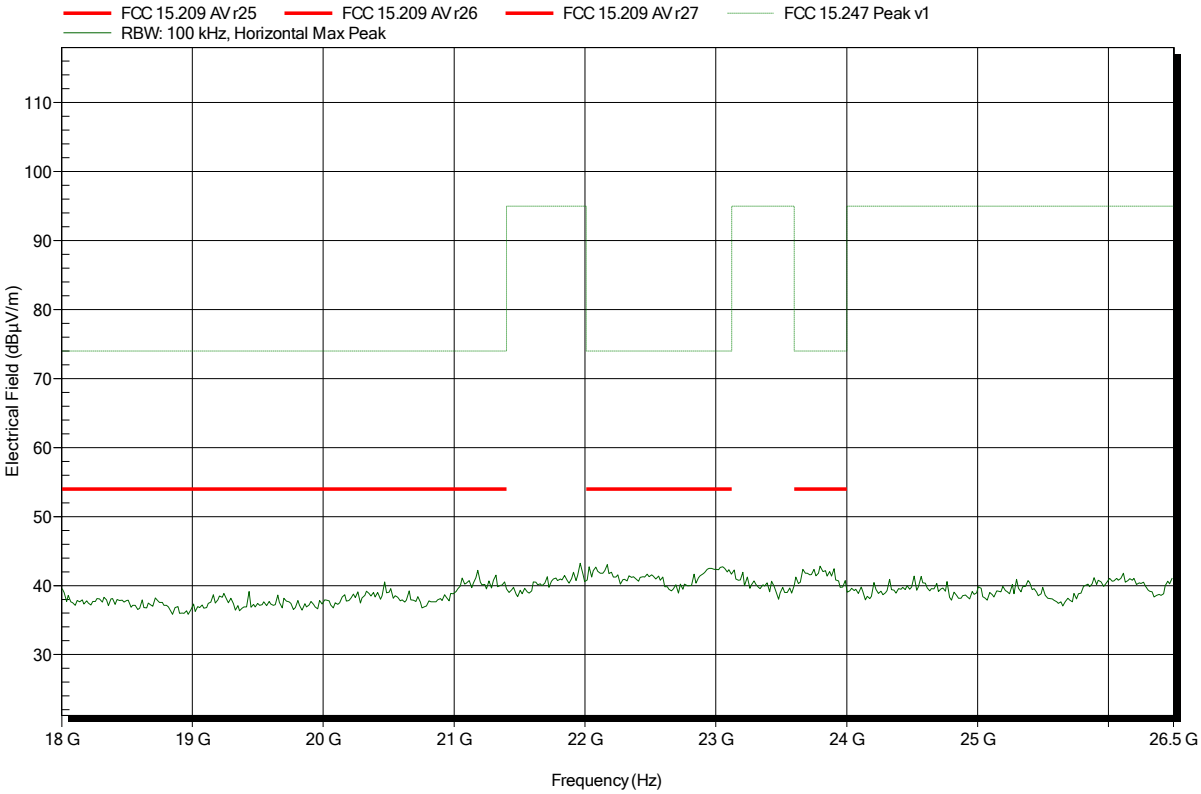

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-21
Note:	

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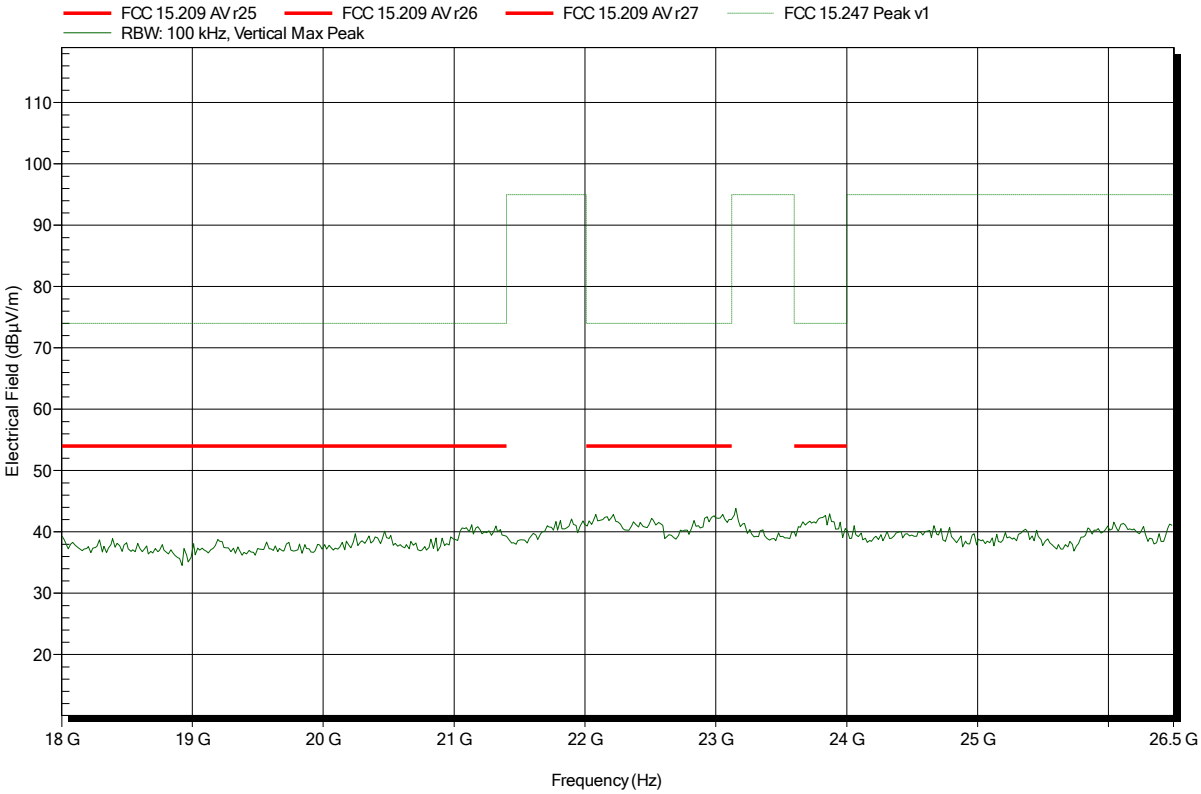

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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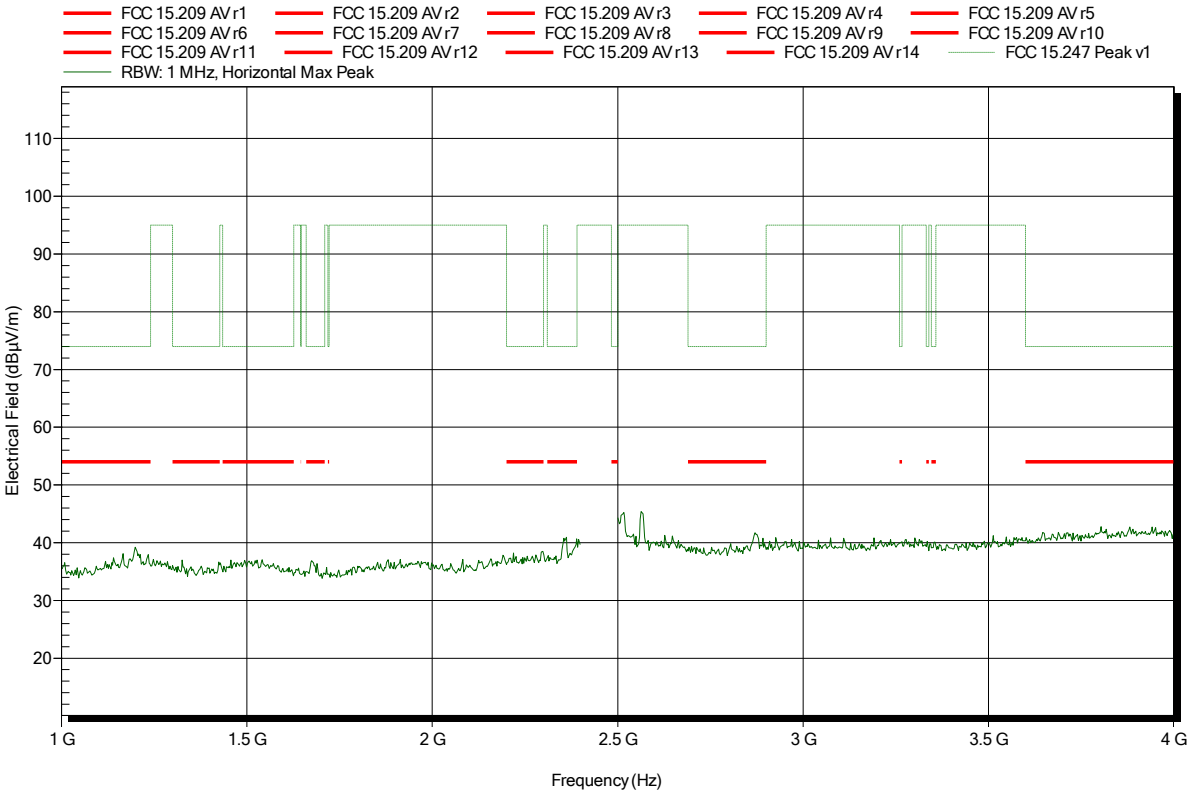

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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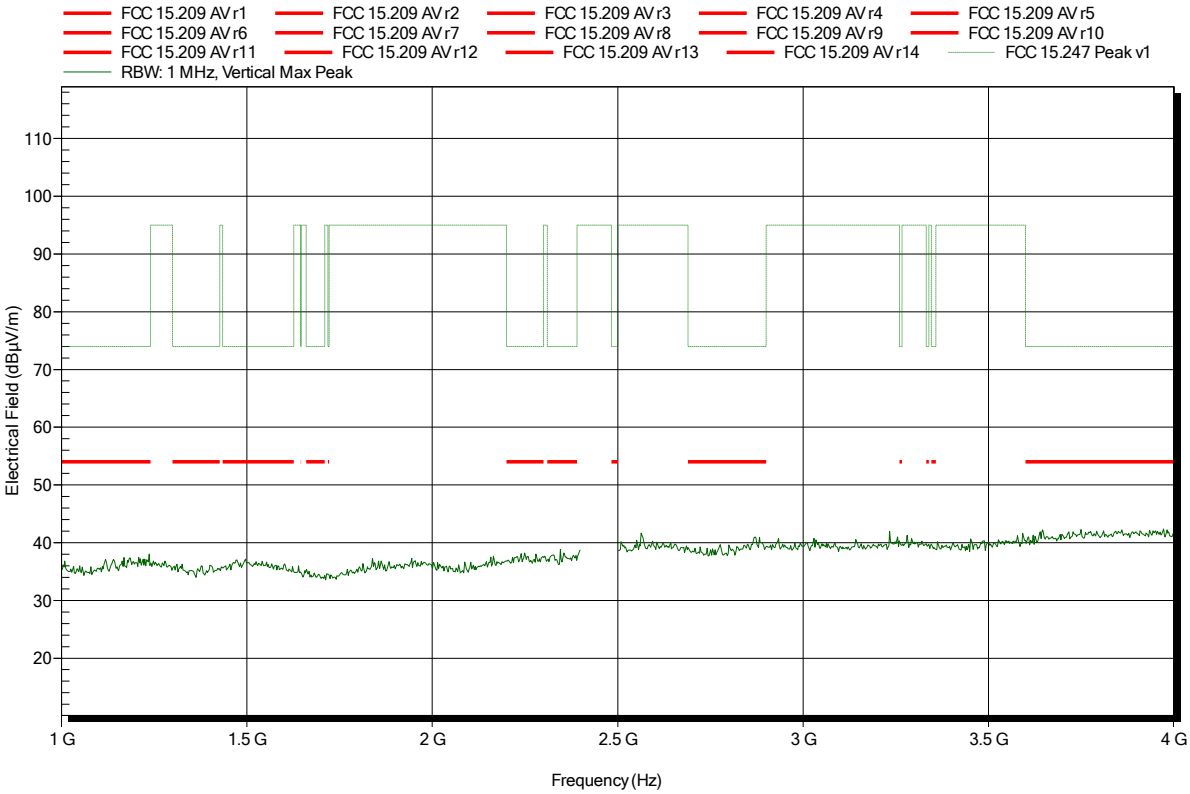

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	upper bandedge

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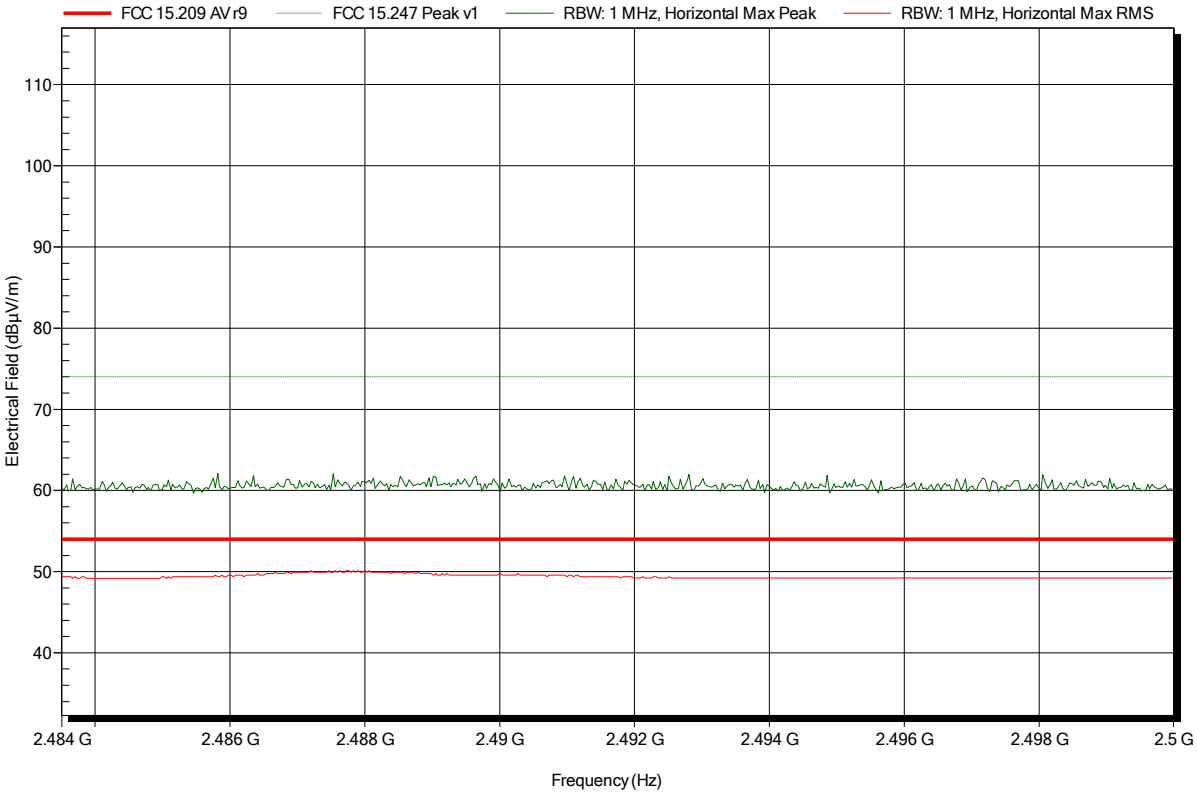

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	upper bandedge

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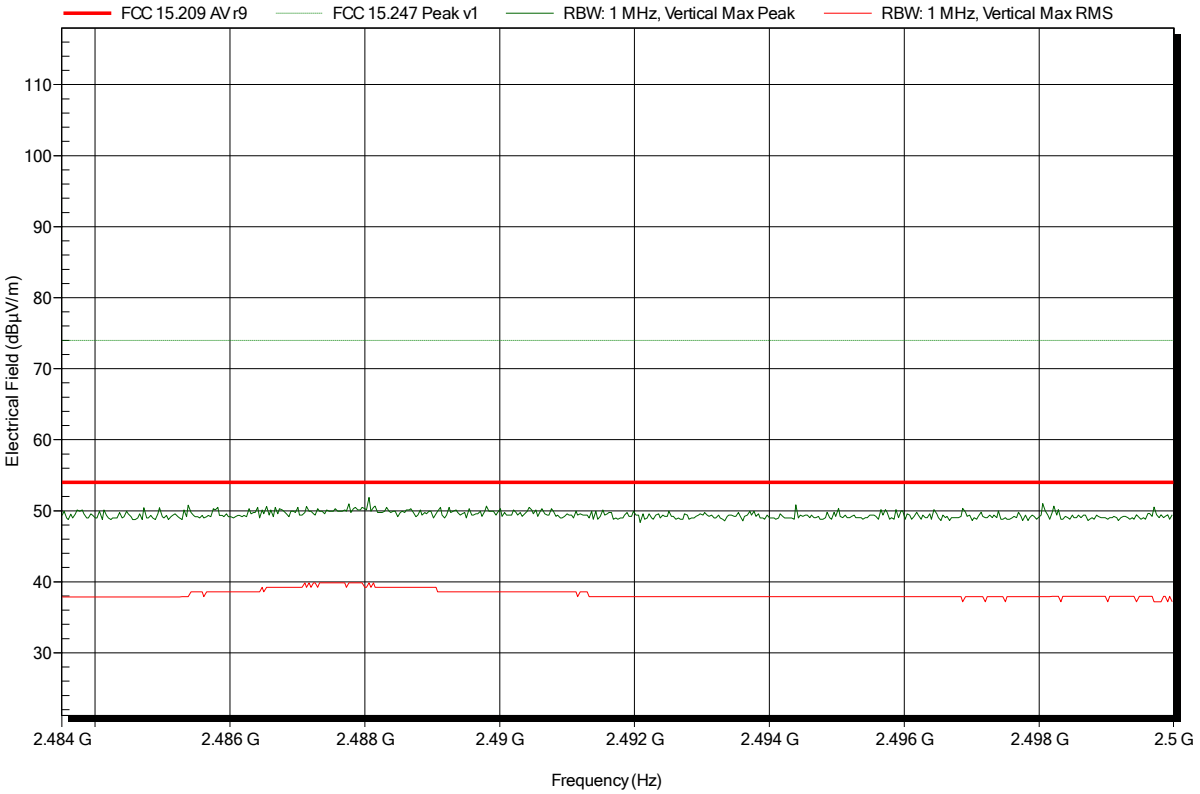

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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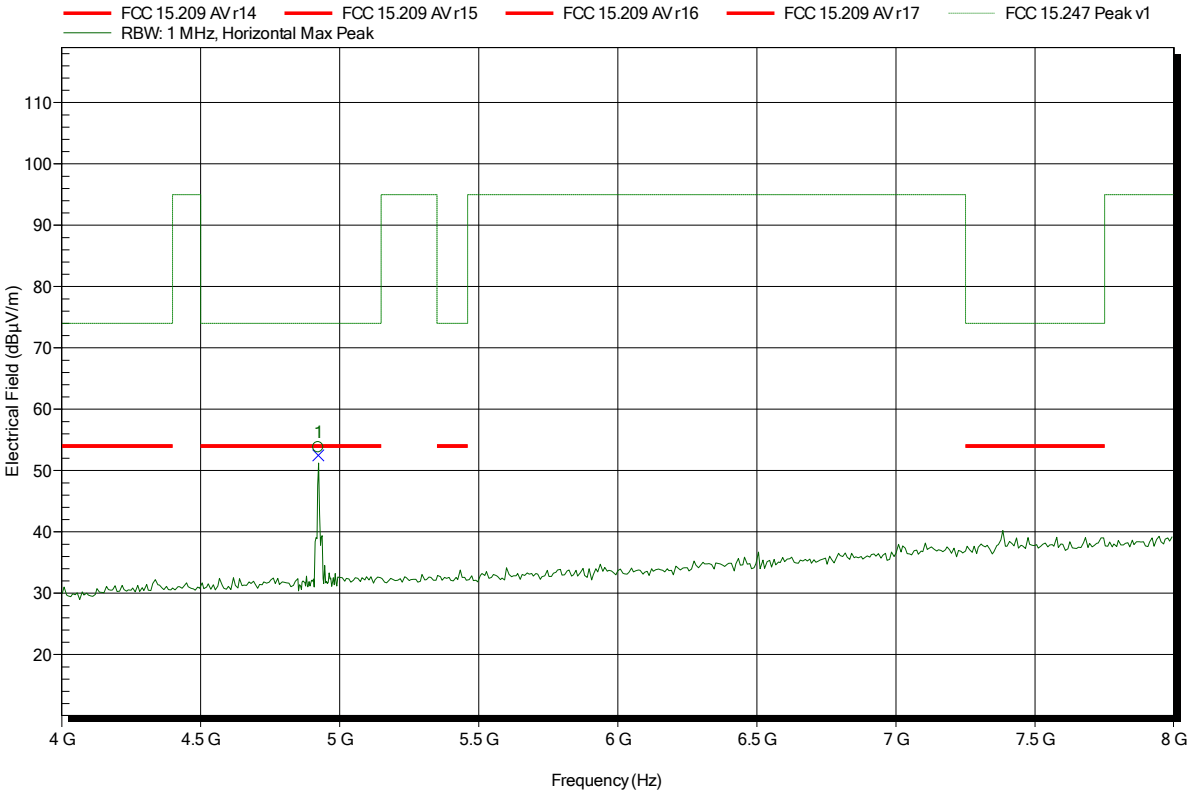

Frequency	Peak	Peak Limit	Peak Difference	Status
4.924 GHz	53.78 dBµV/m	74 dBµV/m	-20.22 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.924 GHz	52.46 dBµV/m	54 dBµV/m	-1.54 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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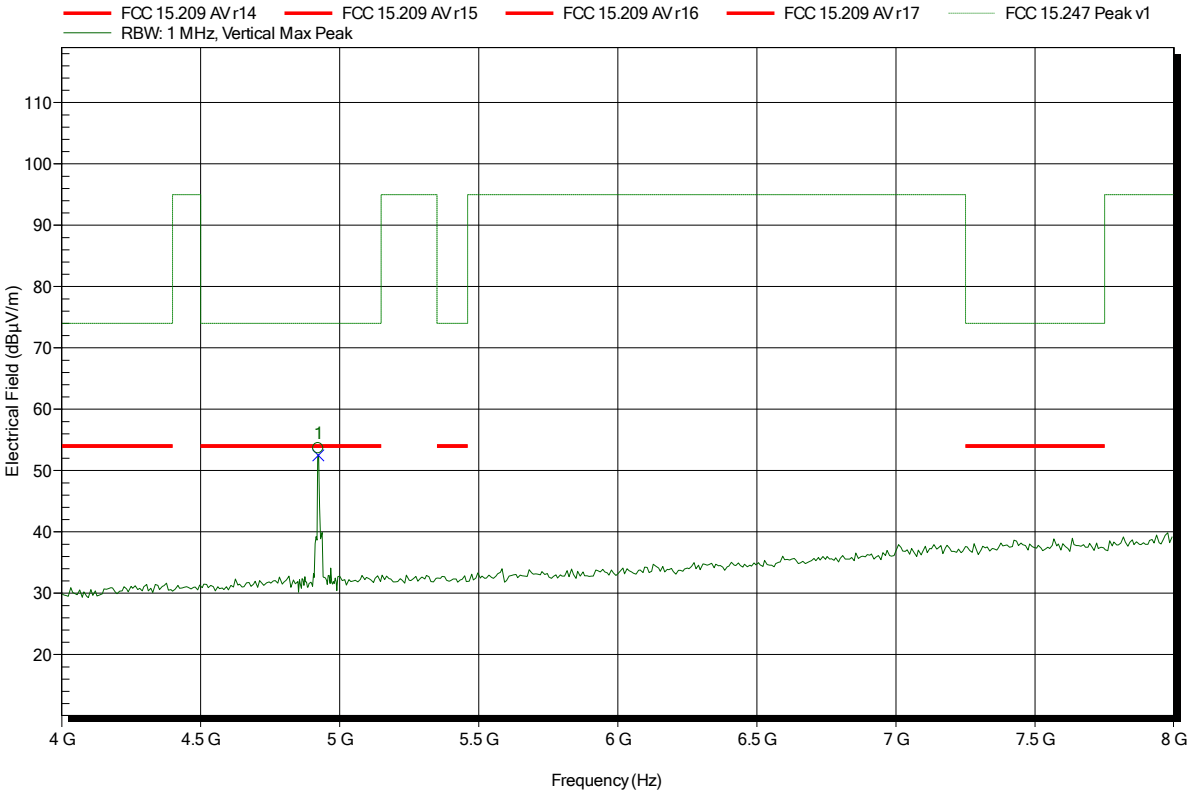

Frequency	Peak	Peak Limit	Peak Difference	Status
4.924 GHz	53.61 dBµV/m	74 dBµV/m	-20.39 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.924 GHz	52.48 dBµV/m	54 dBµV/m	-1.52 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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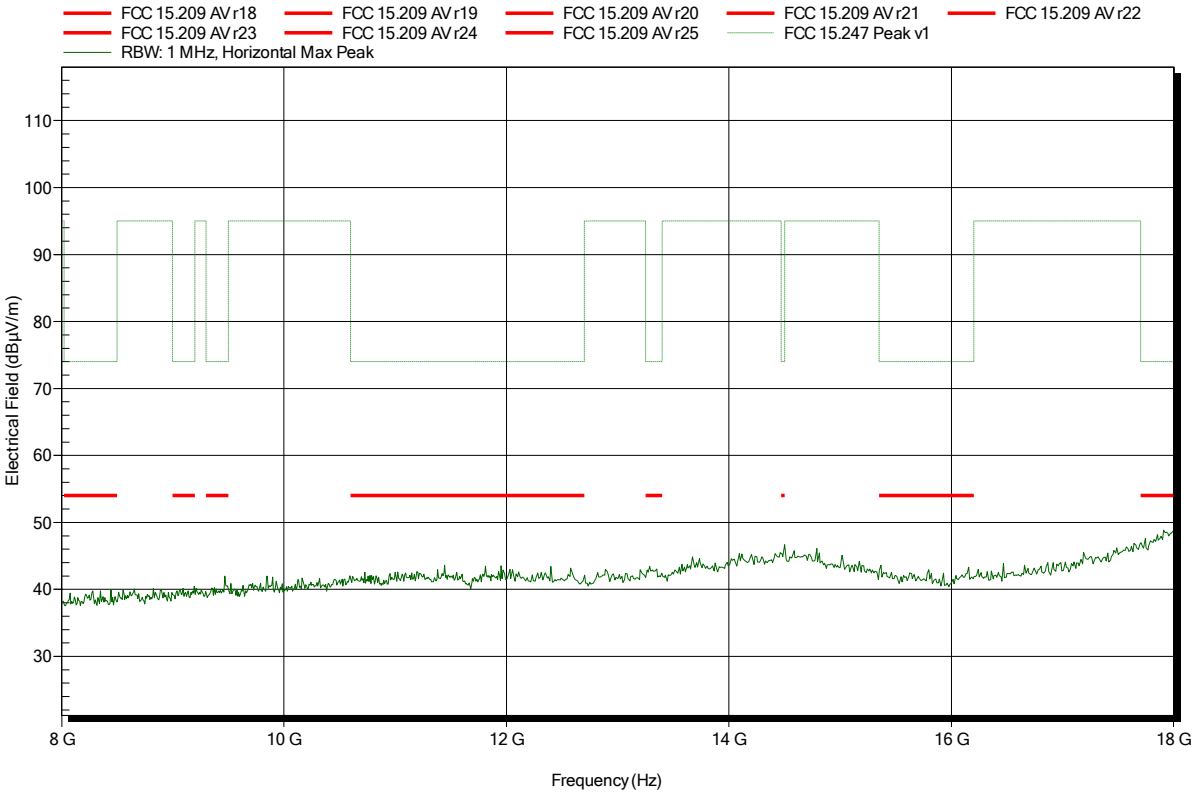

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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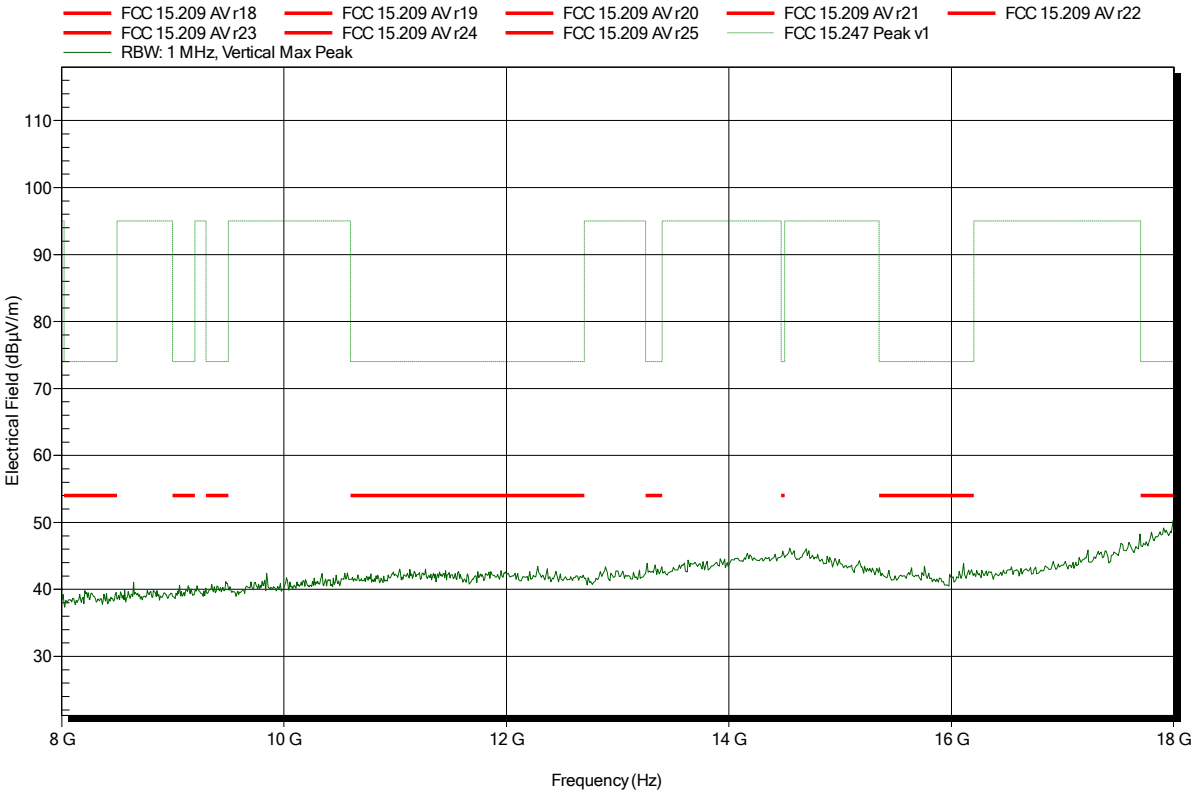

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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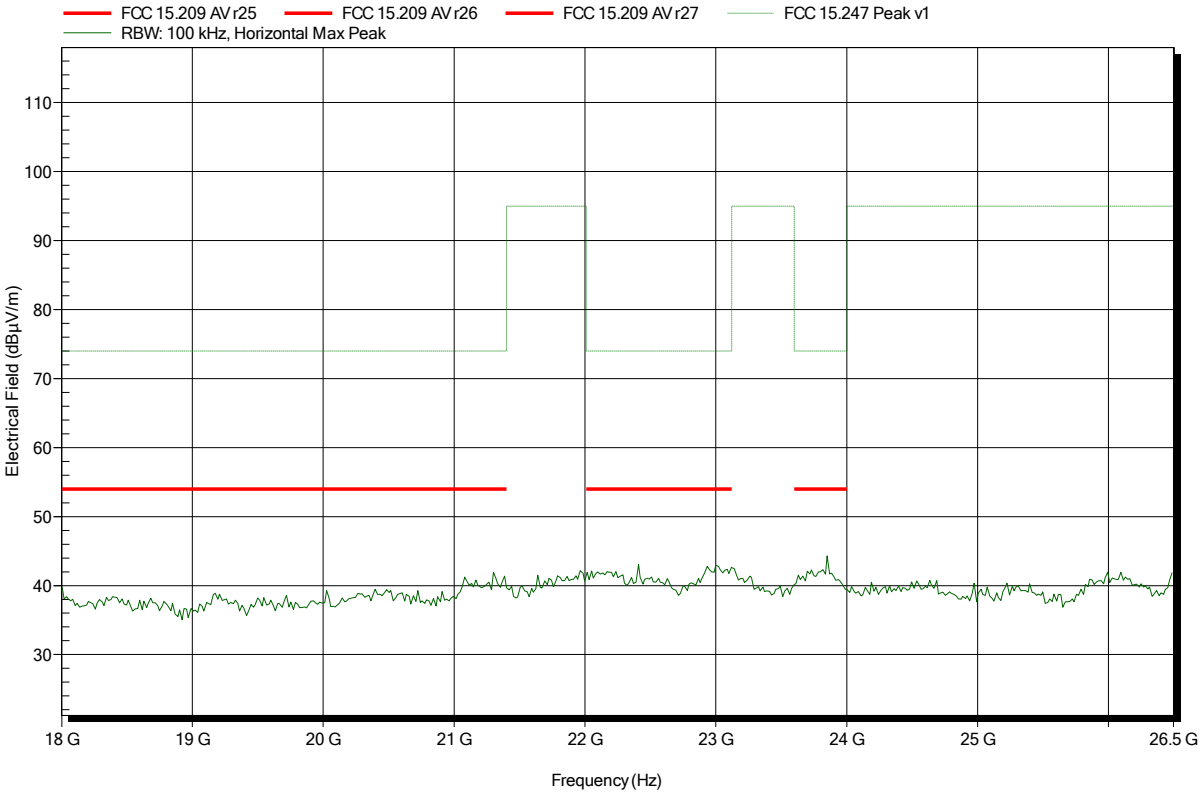

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-21
Note:	

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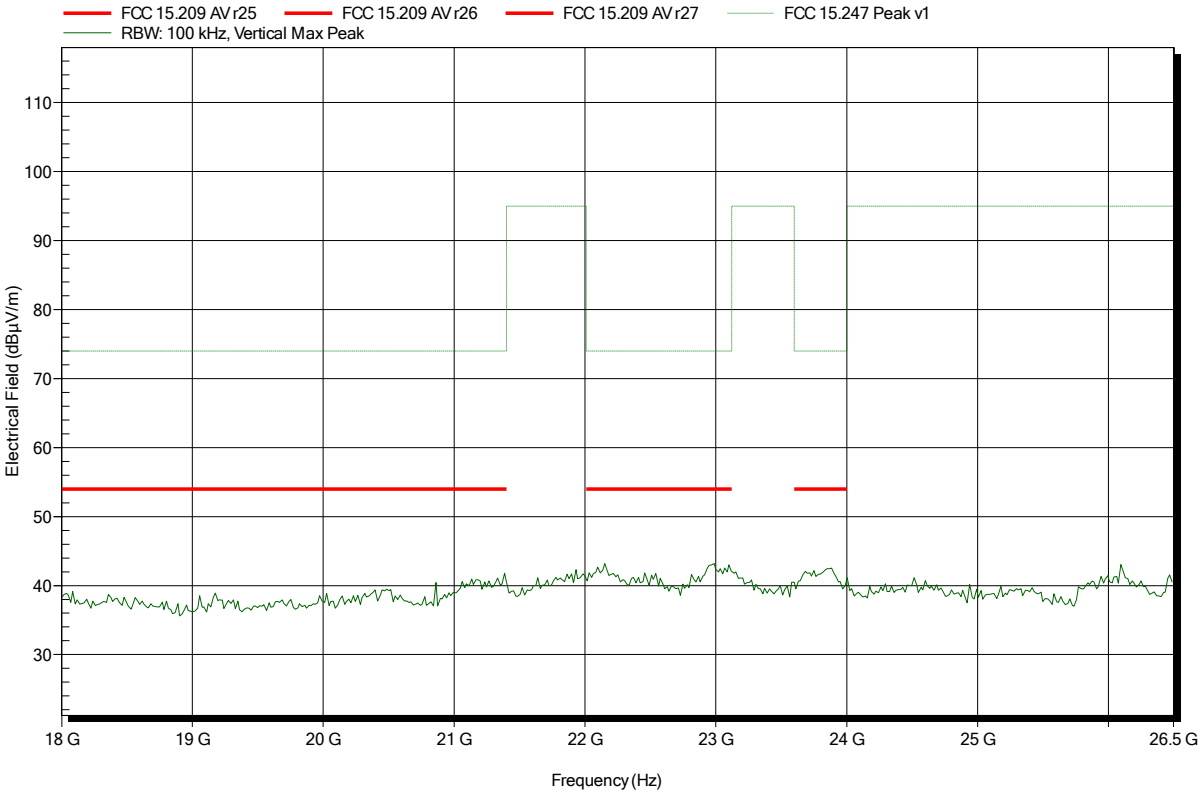

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	

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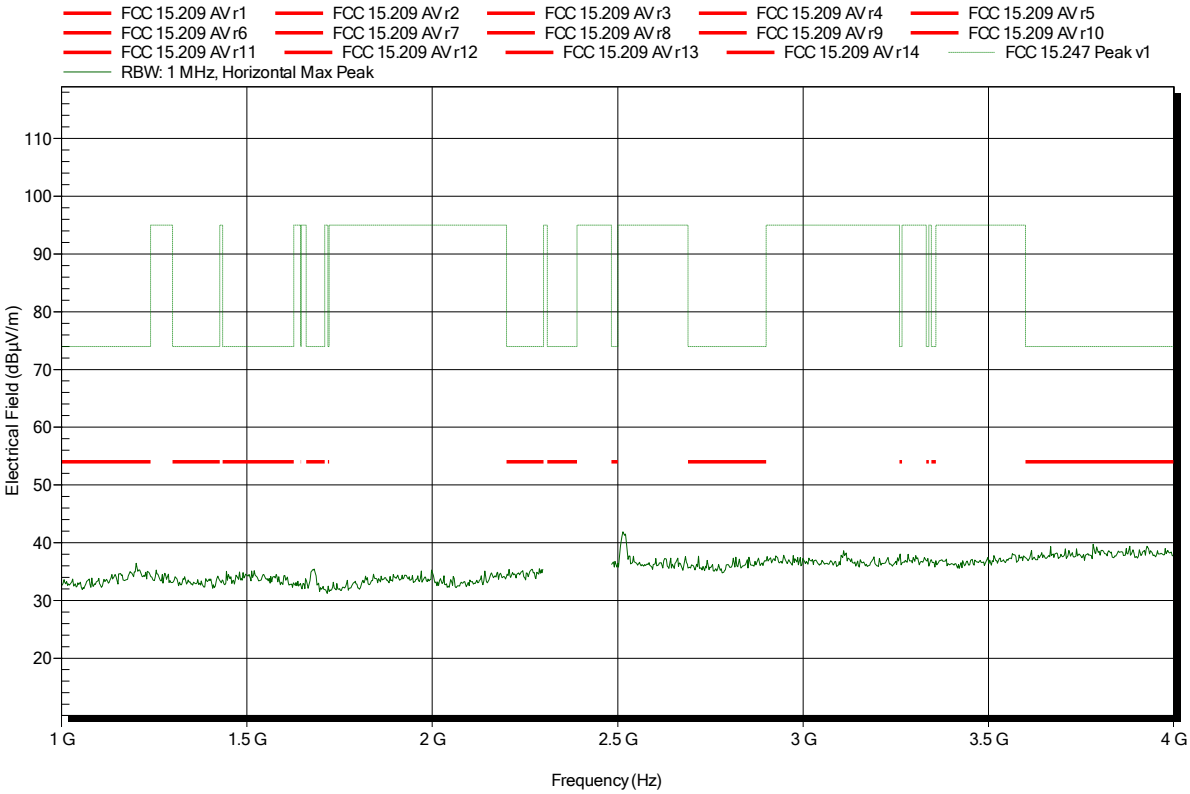

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	

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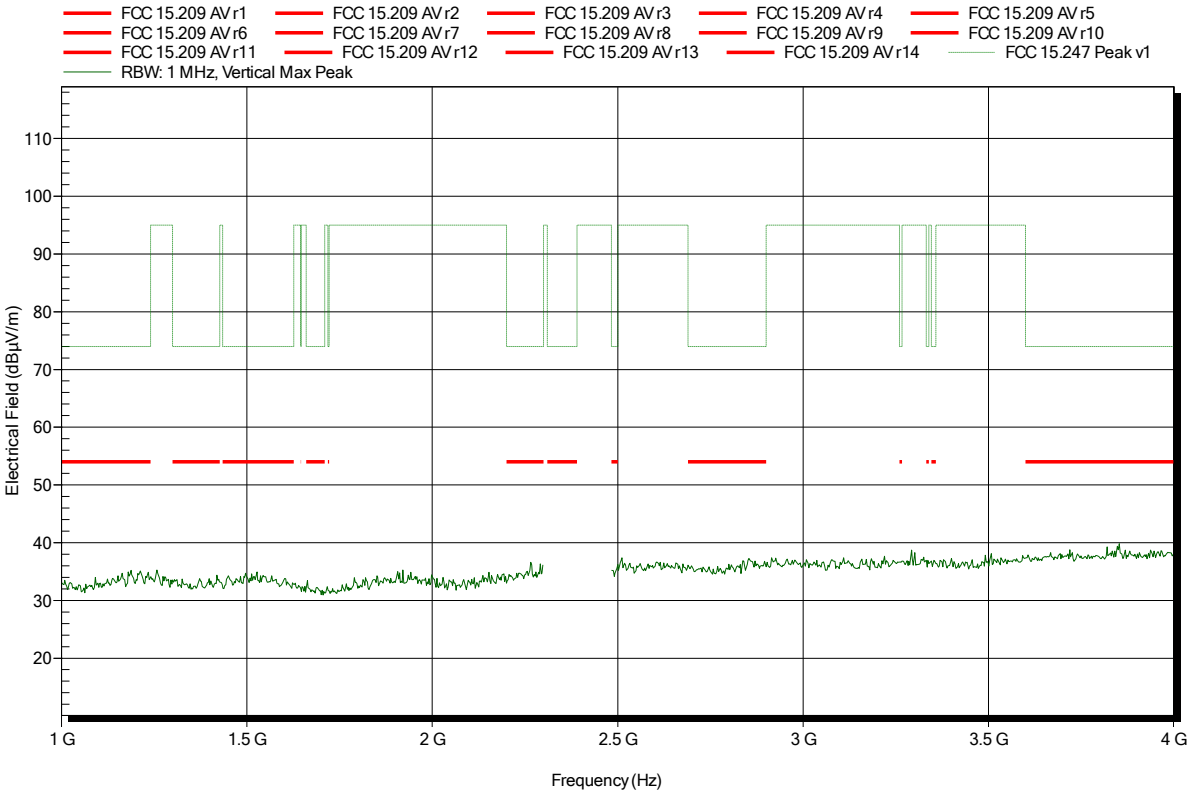

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	lower bandedge

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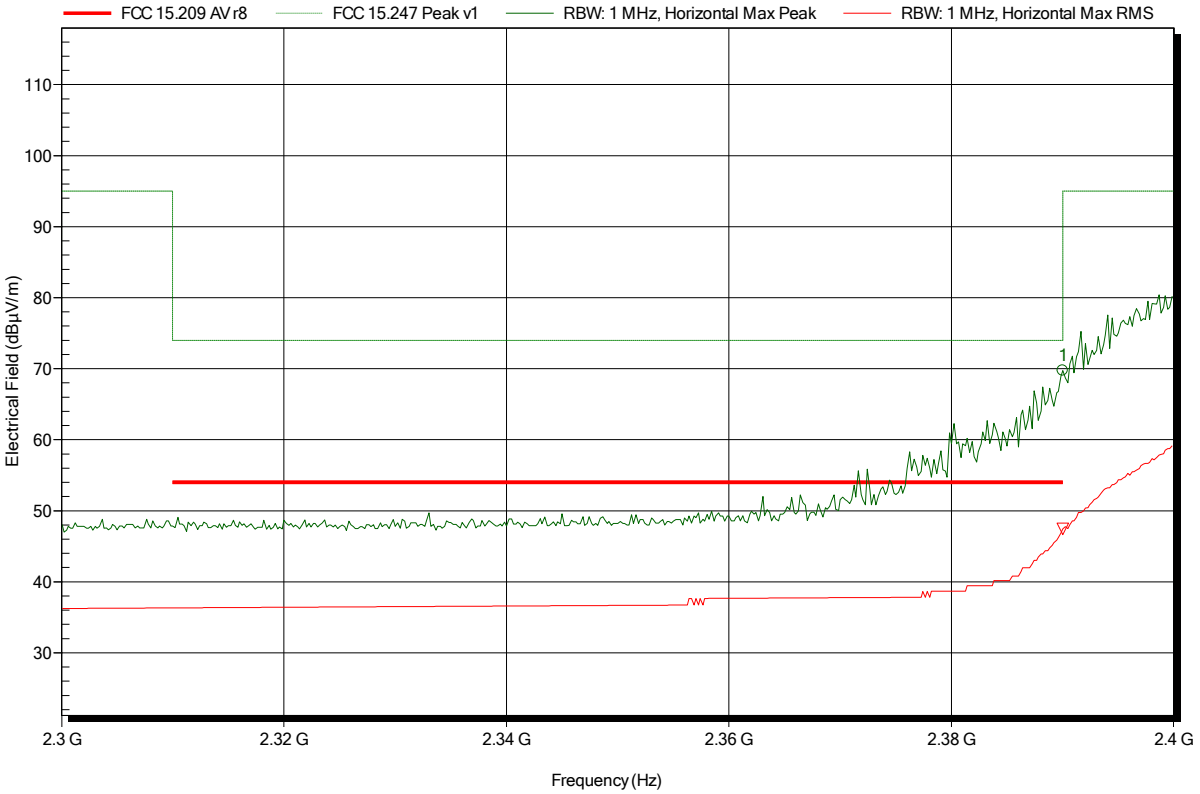

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.39 GHz	69.75 dBµV/m	74 dBµV/m	-4.25 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.39 GHz	47.47 dBµV/m	54 dBµV/m	-6.53 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	lower bandedge

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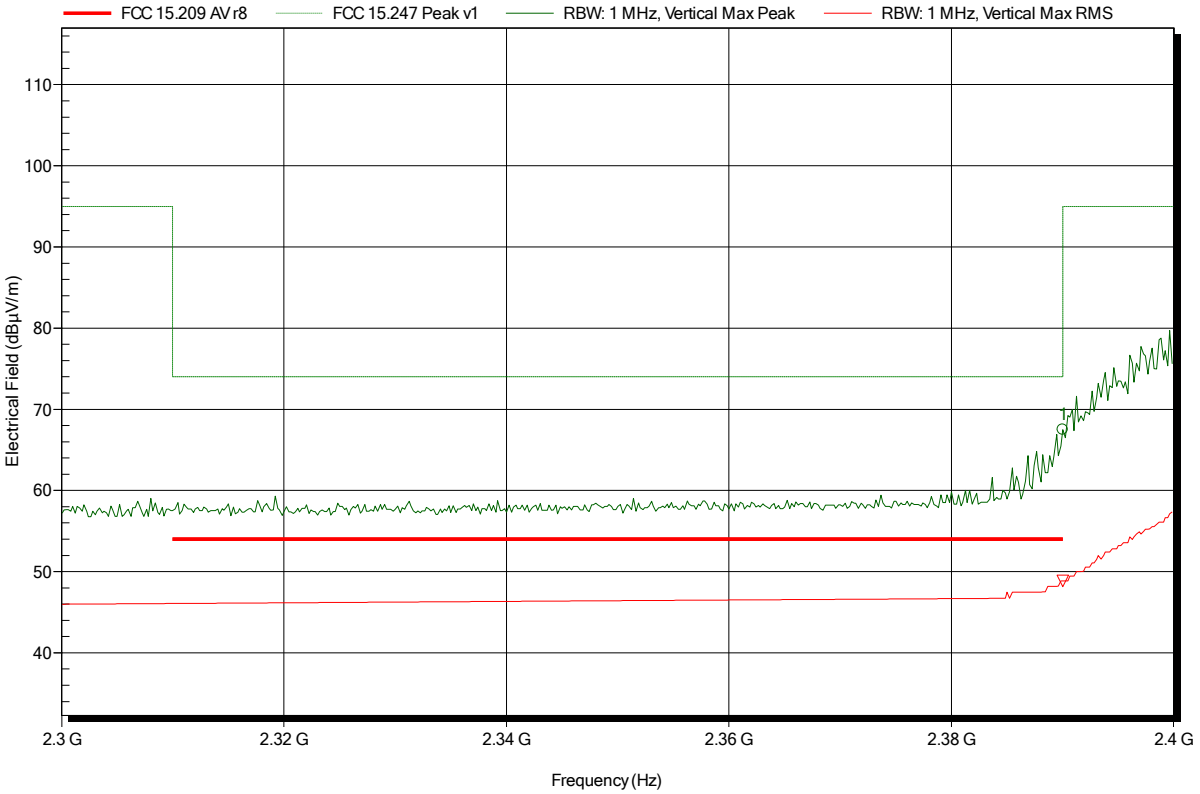

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.39 GHz	67.51 dBµV/m	74 dBµV/m	-6.49 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.39 GHz	48.85 dBµV/m	54 dBµV/m	-5.15 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	

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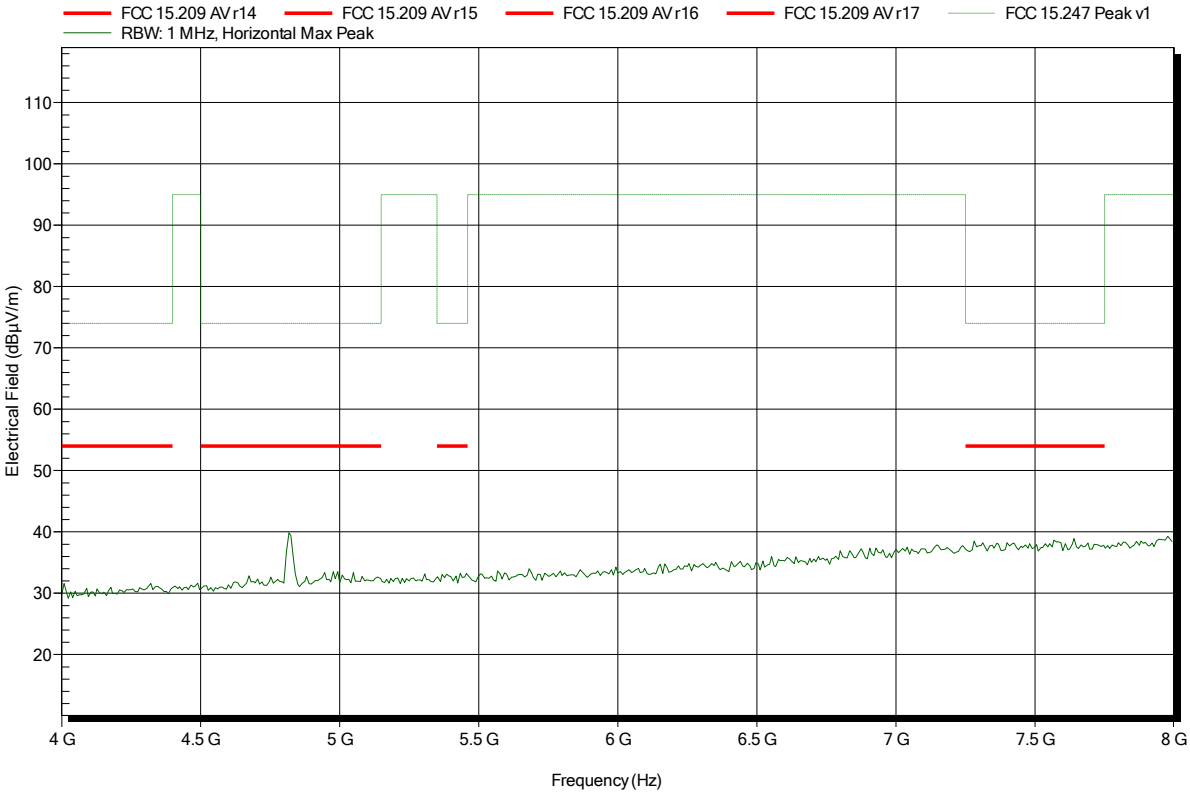

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-21
Note:	

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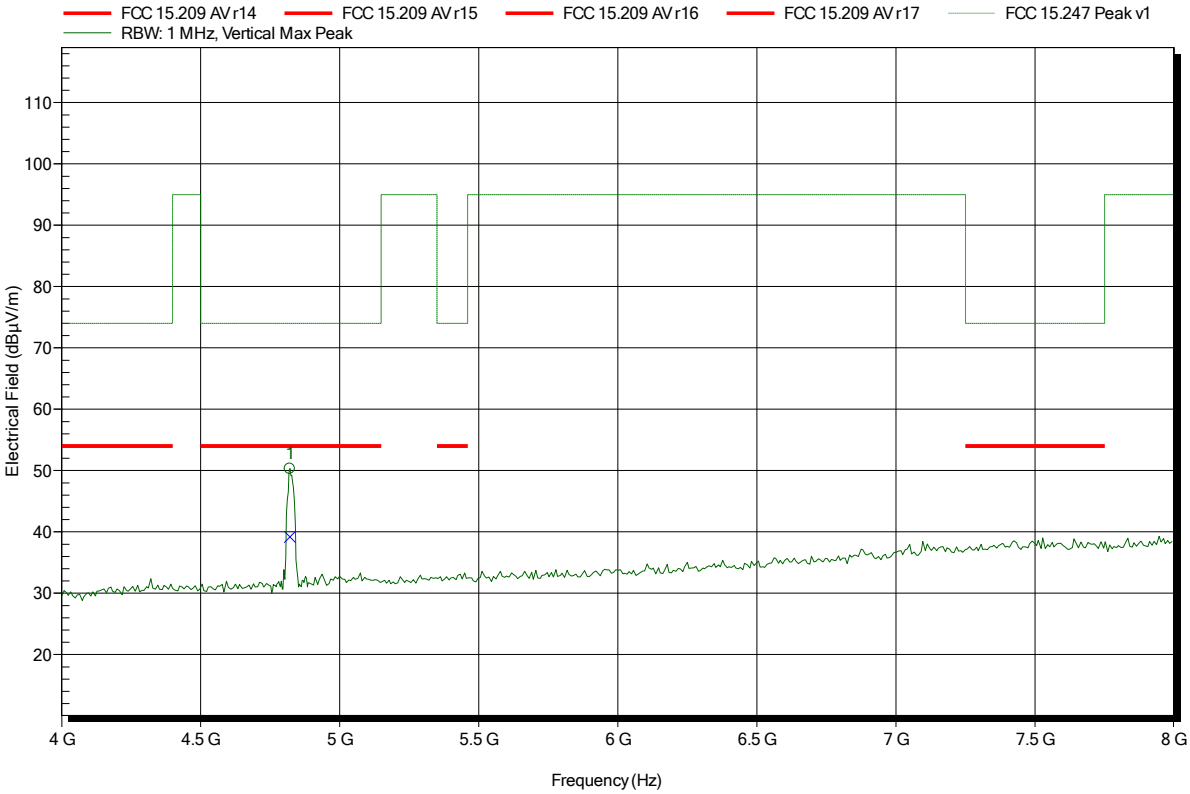

Frequency	Peak	Peak Limit	Peak Difference	Status
4.821 GHz	50.29 dBµV/m	74 dBµV/m	-23.71 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.821 GHz	39.2 dBµV/m	54 dBµV/m	-14.8 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-21
Note:	

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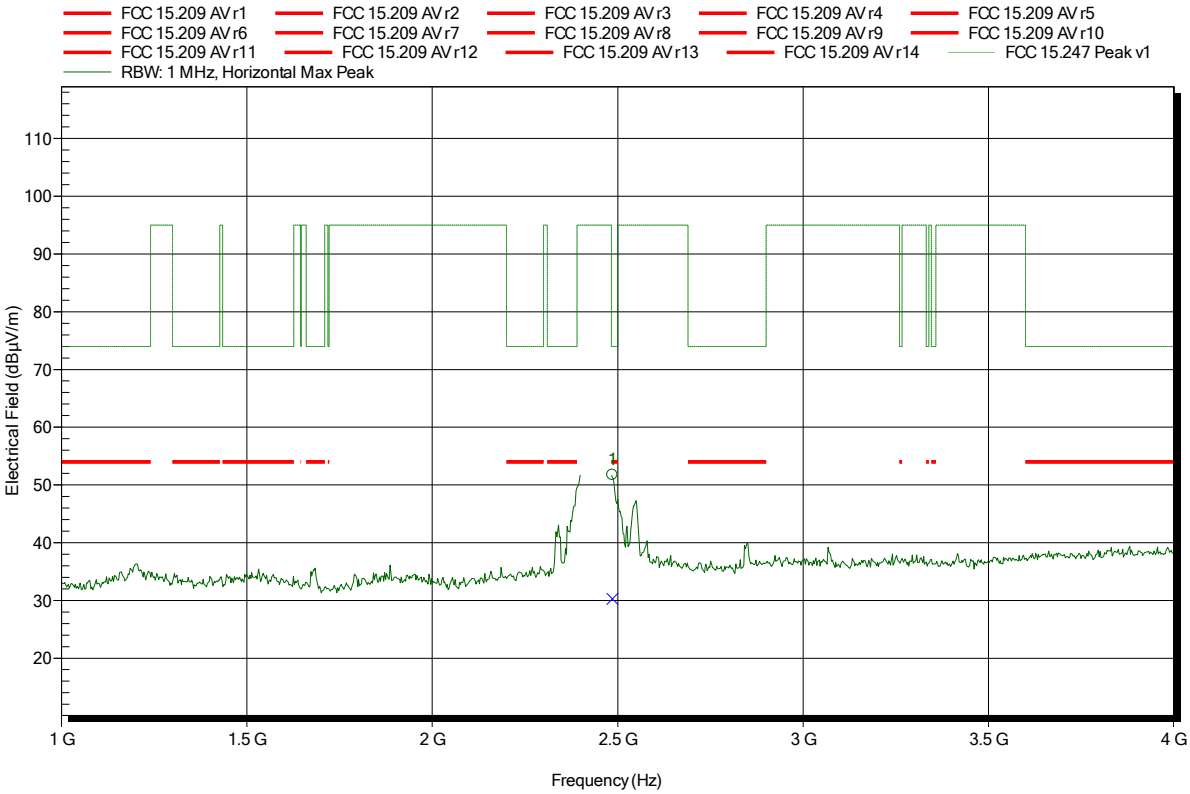

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4857 GHz	51.72 dBµV/m	74 dBµV/m	-22.28 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.4857 GHz	30.28 dBµV/m	54 dBµV/m	-23.72 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-21
Note:	

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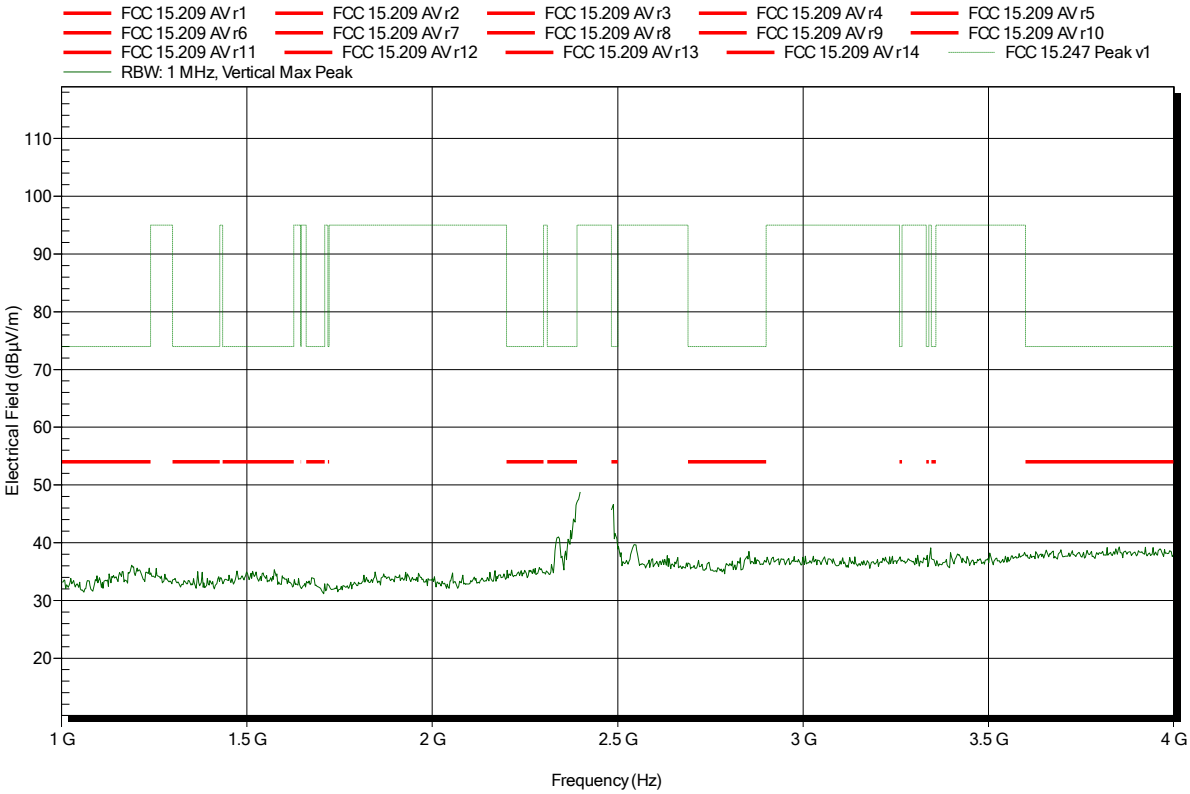

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-21
Note:	

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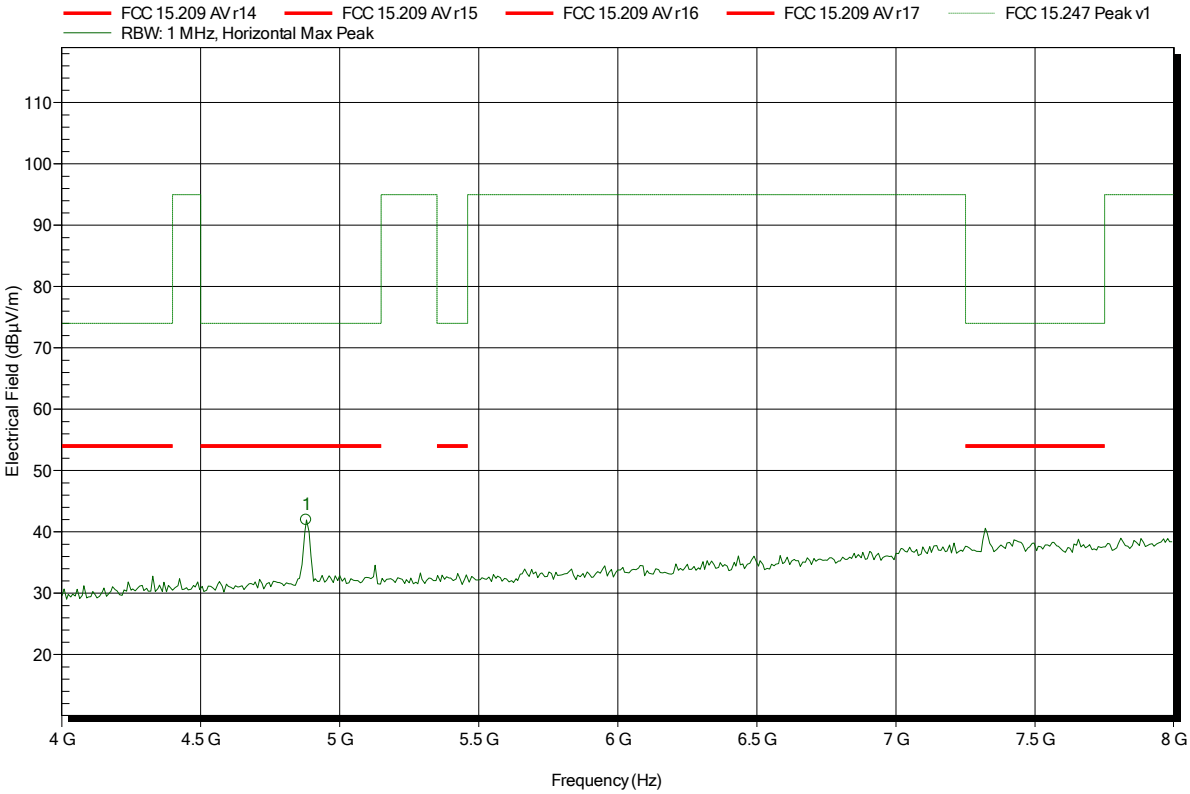

Frequency	Peak	Peak Limit	Peak Difference	Status
4.88 GHz	41.97 dBµV/m	74 dBµV/m	-32.03 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-21
Note:	

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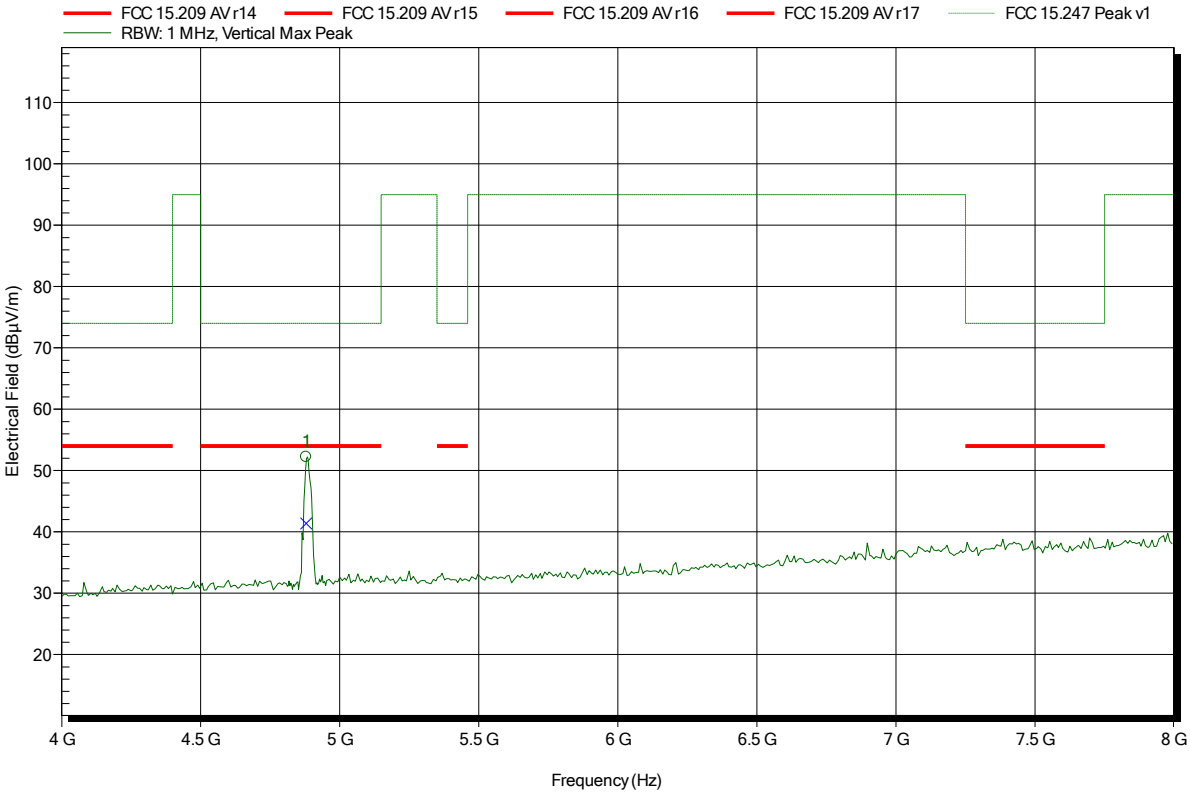

Frequency	Peak	Peak Limit	Peak Difference	Status
4.881 GHz	52.23 dBµV/m	74 dBµV/m	-21.77 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.881 GHz	41.38 dBµV/m	54 dBµV/m	-12.62 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	

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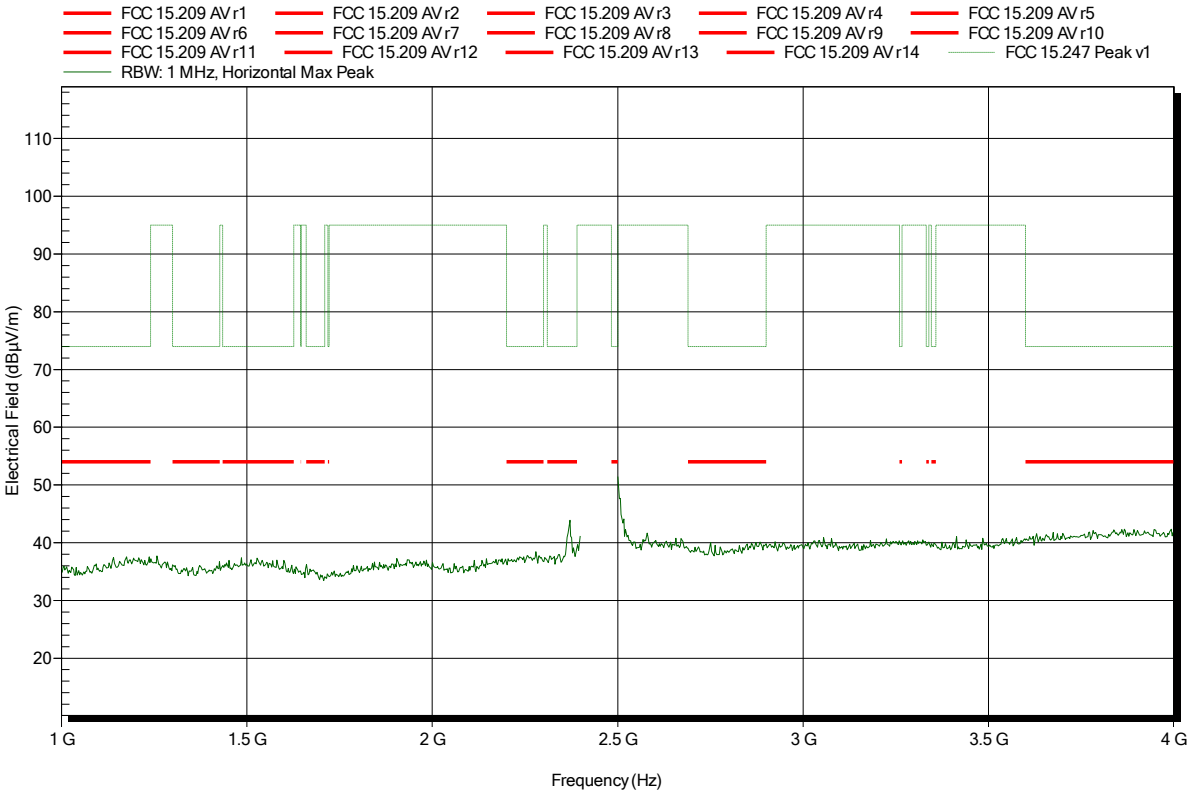

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	

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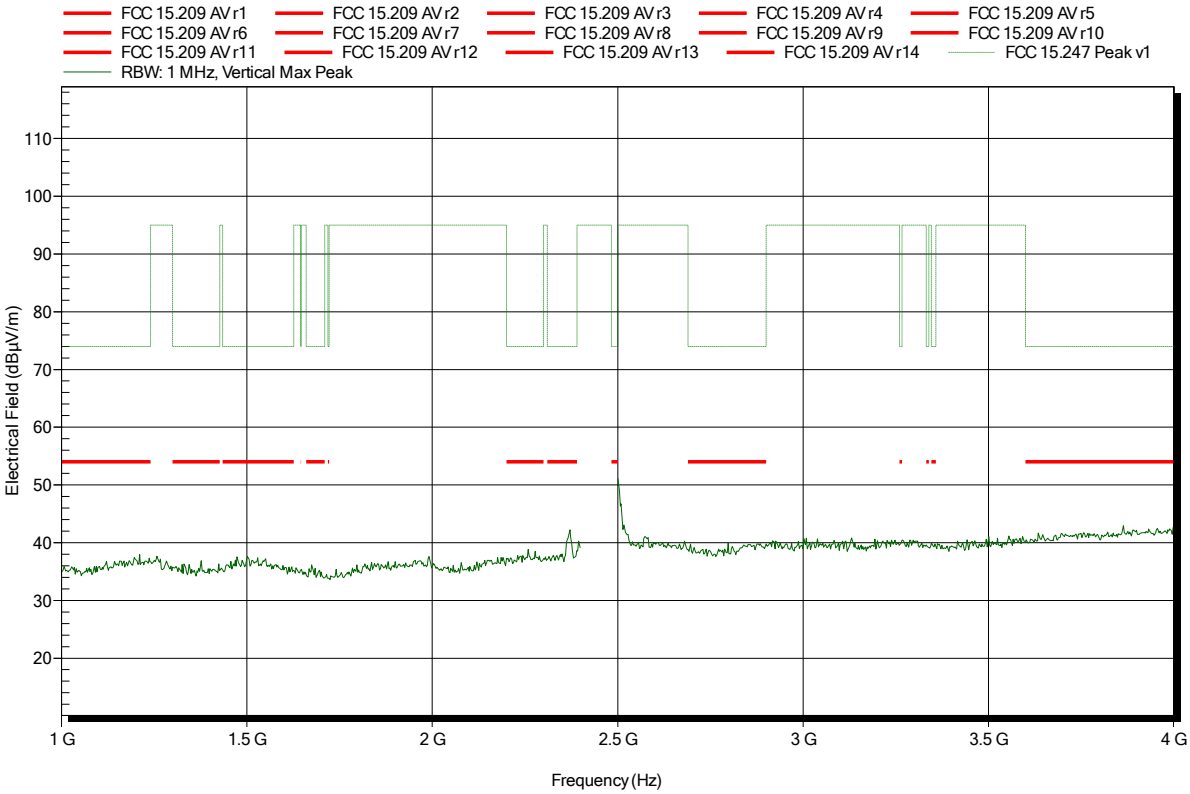

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	upper bandedge

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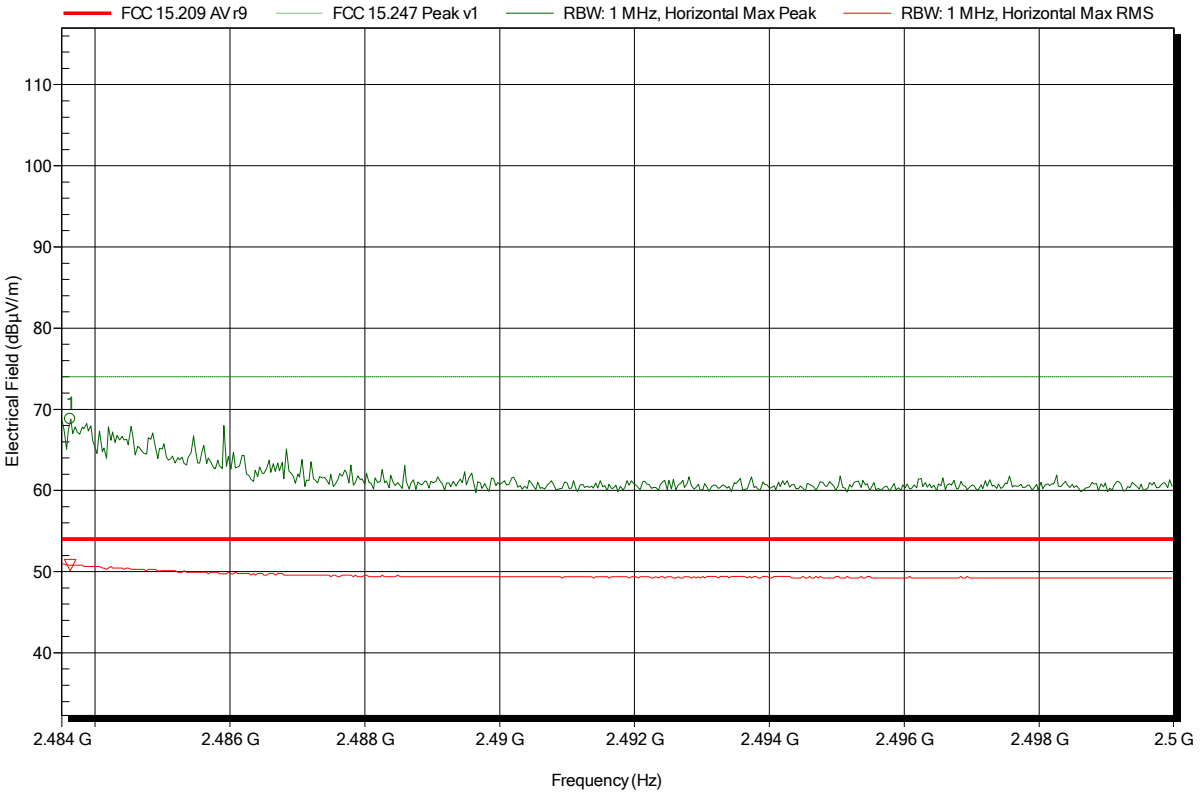

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4836 GHz	68.81 dBµV/m	74 dBµV/m	-5.19 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4836 GHz	50.79 dBµV/m	54 dBµV/m	-3.21 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	upper bandedge

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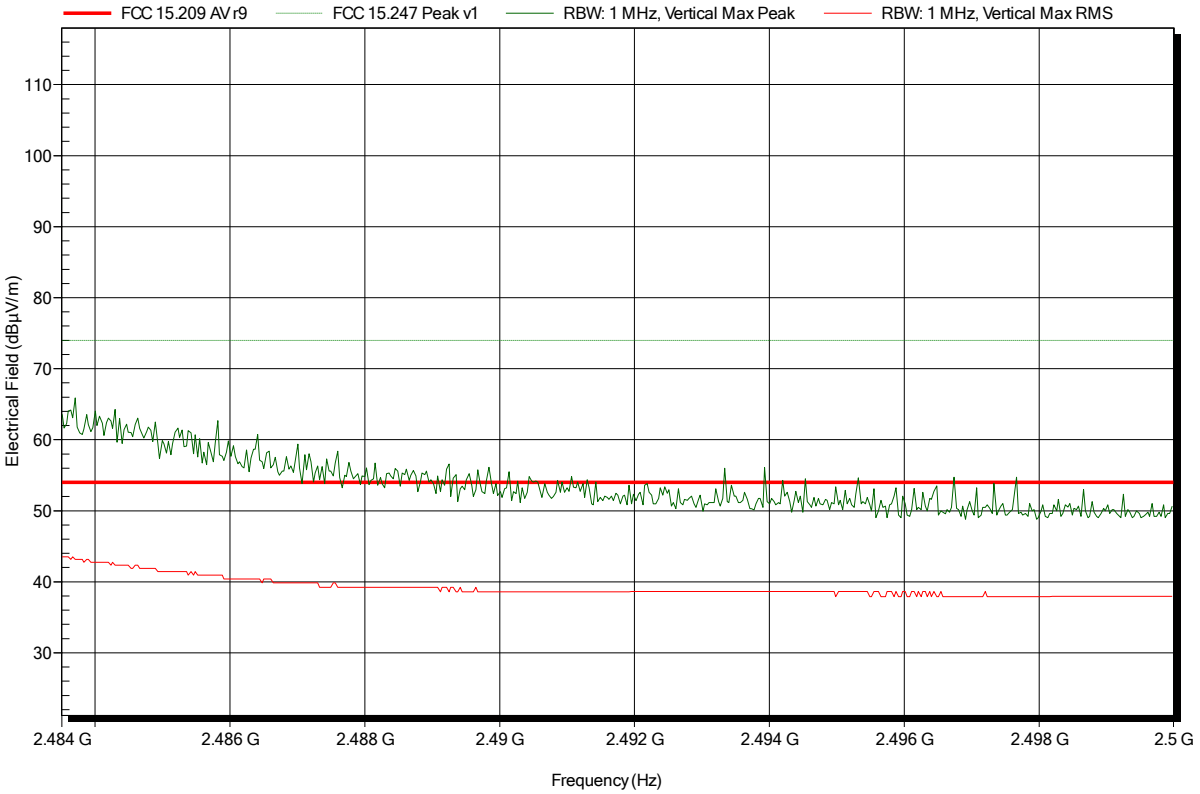

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	

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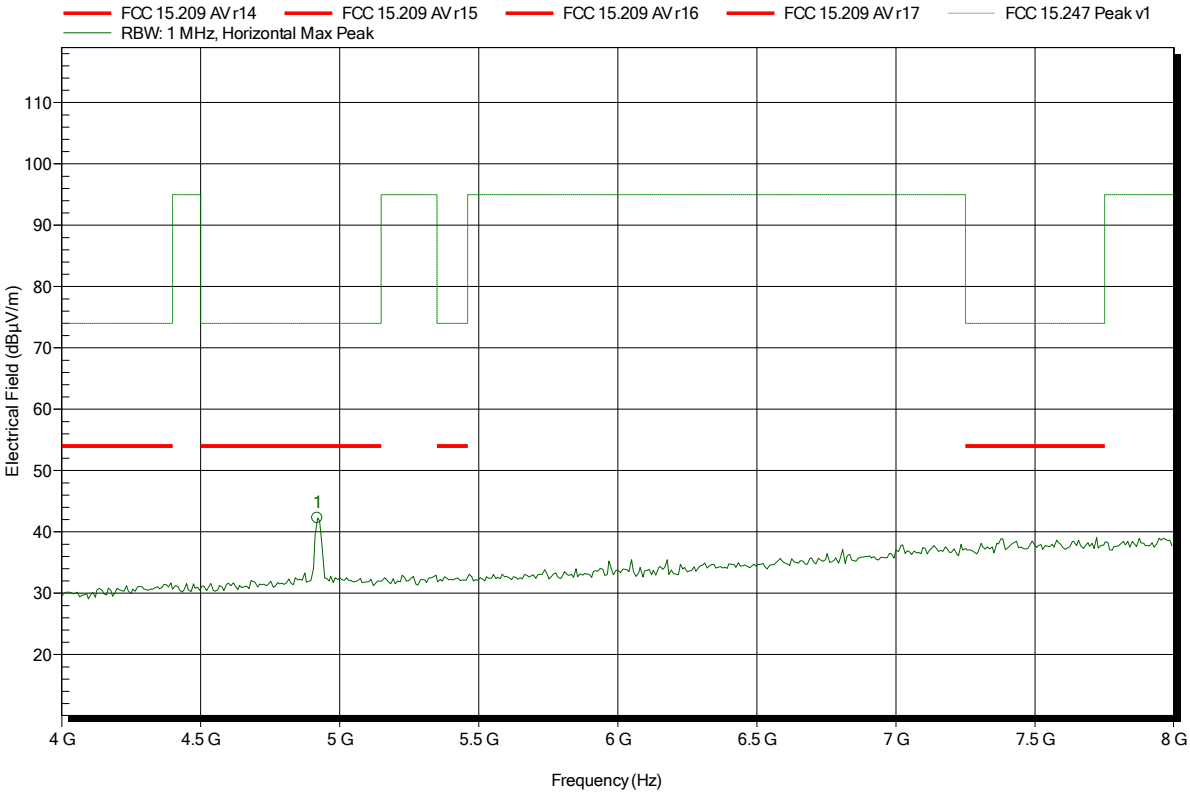

Frequency	Peak	Peak Limit	Peak Difference	Status
4.92 GHz	42.28 dBµV/m	74 dBµV/m	-31.72 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-21
Note:	

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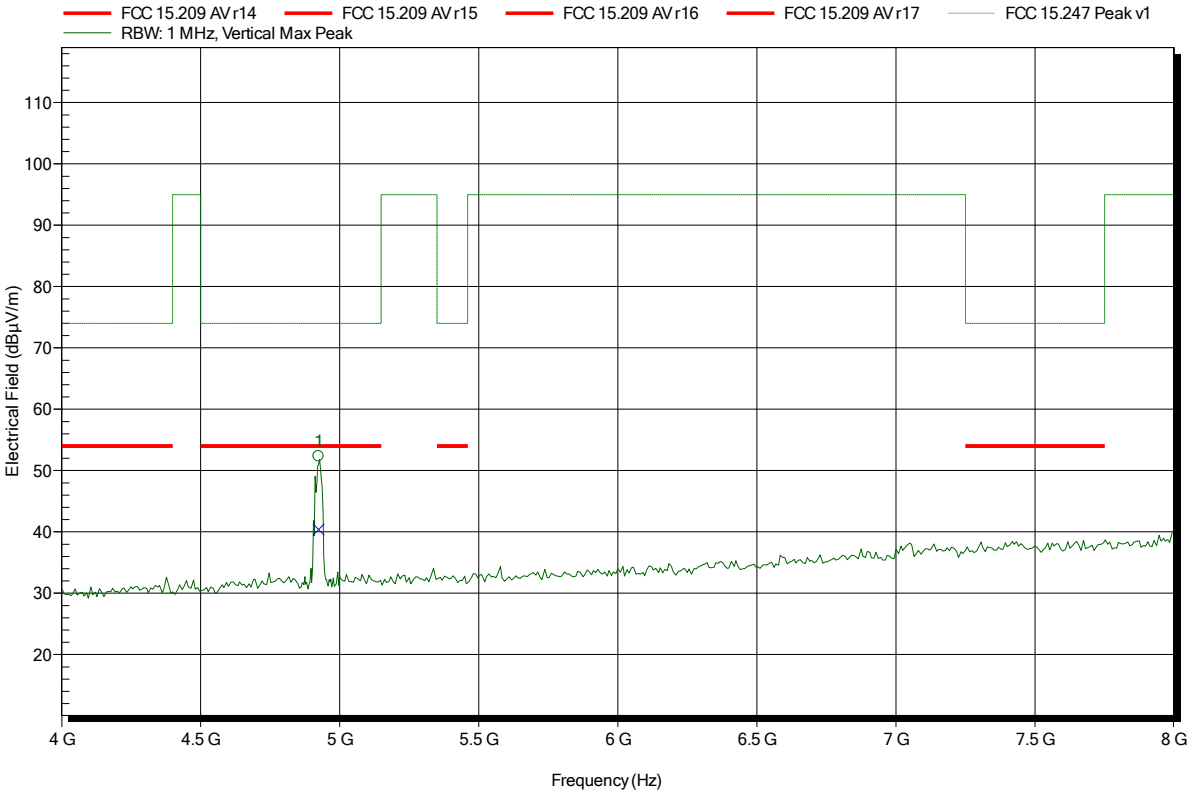

Frequency	Peak	Peak Limit	Peak Difference	Status
4.925 GHz	52.3 dBµV/m	74 dBµV/m	-21.7 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.925 GHz	40.4 dBµV/m	54 dBµV/m	-13.6 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-22
Note:	

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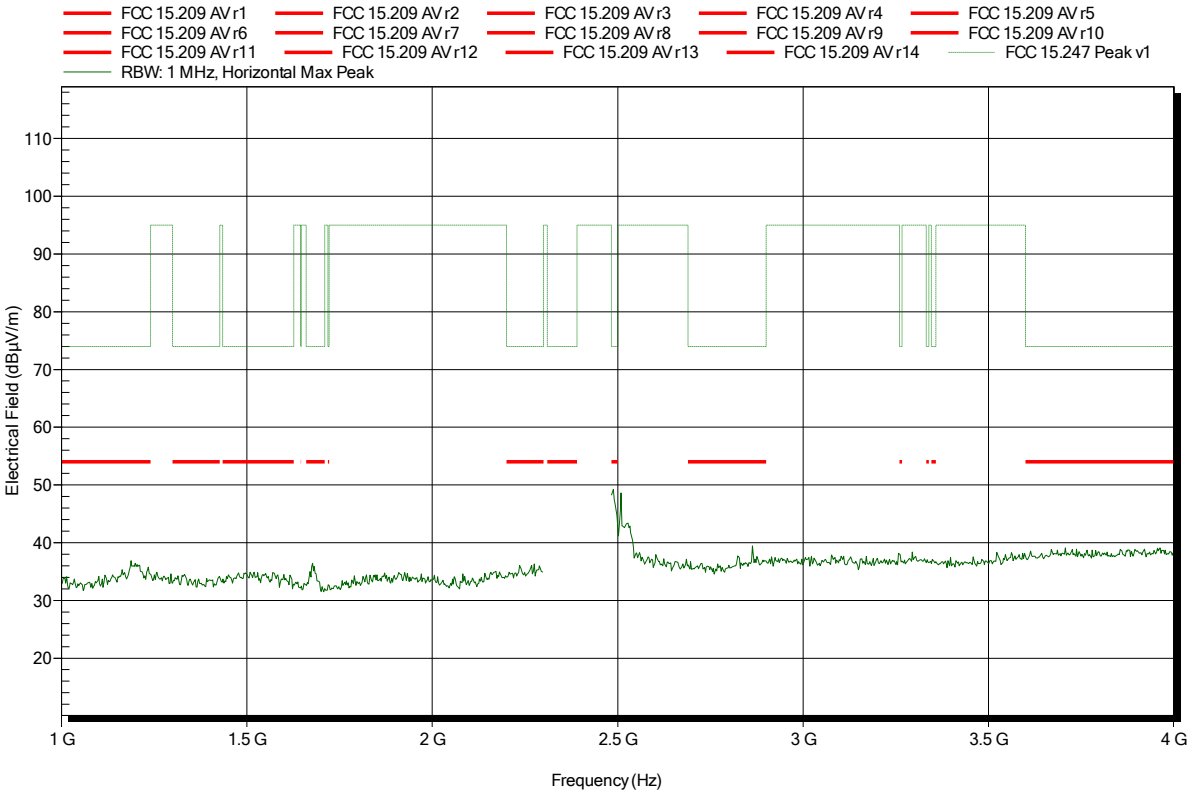

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-22
Note:	

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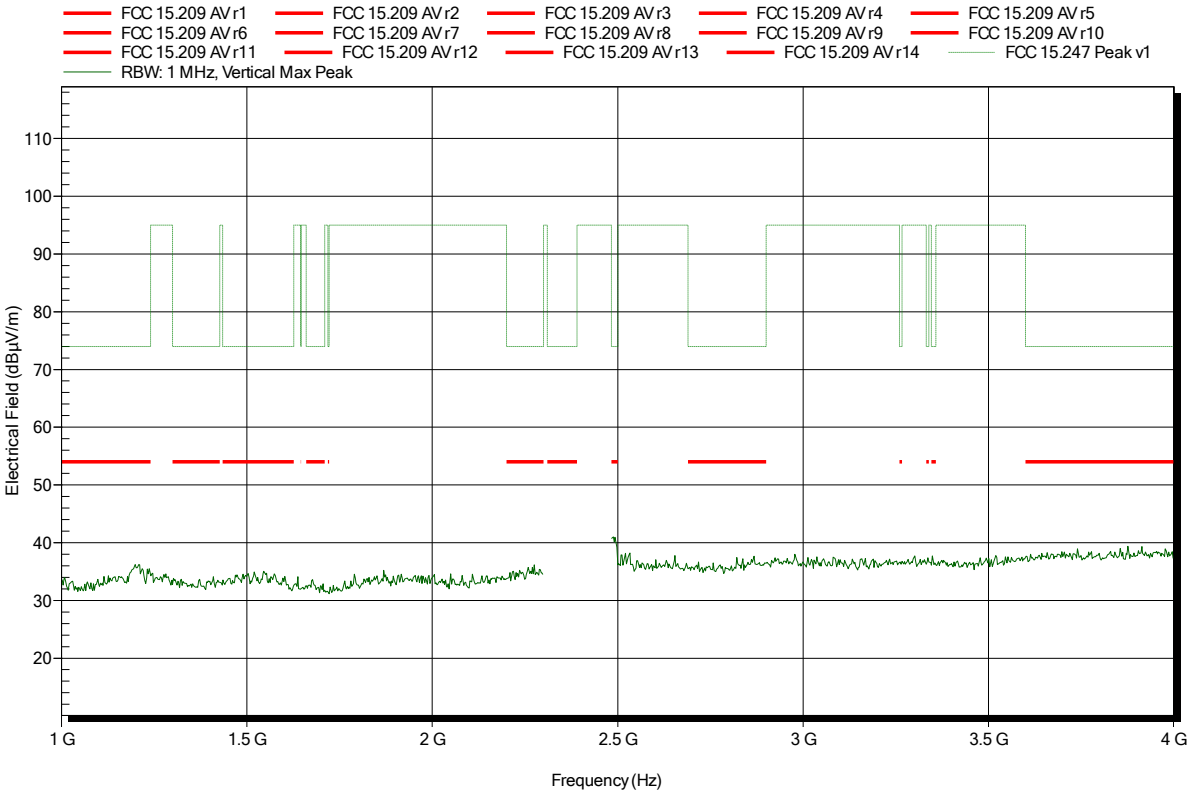

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-21
Note:	lower bandedge

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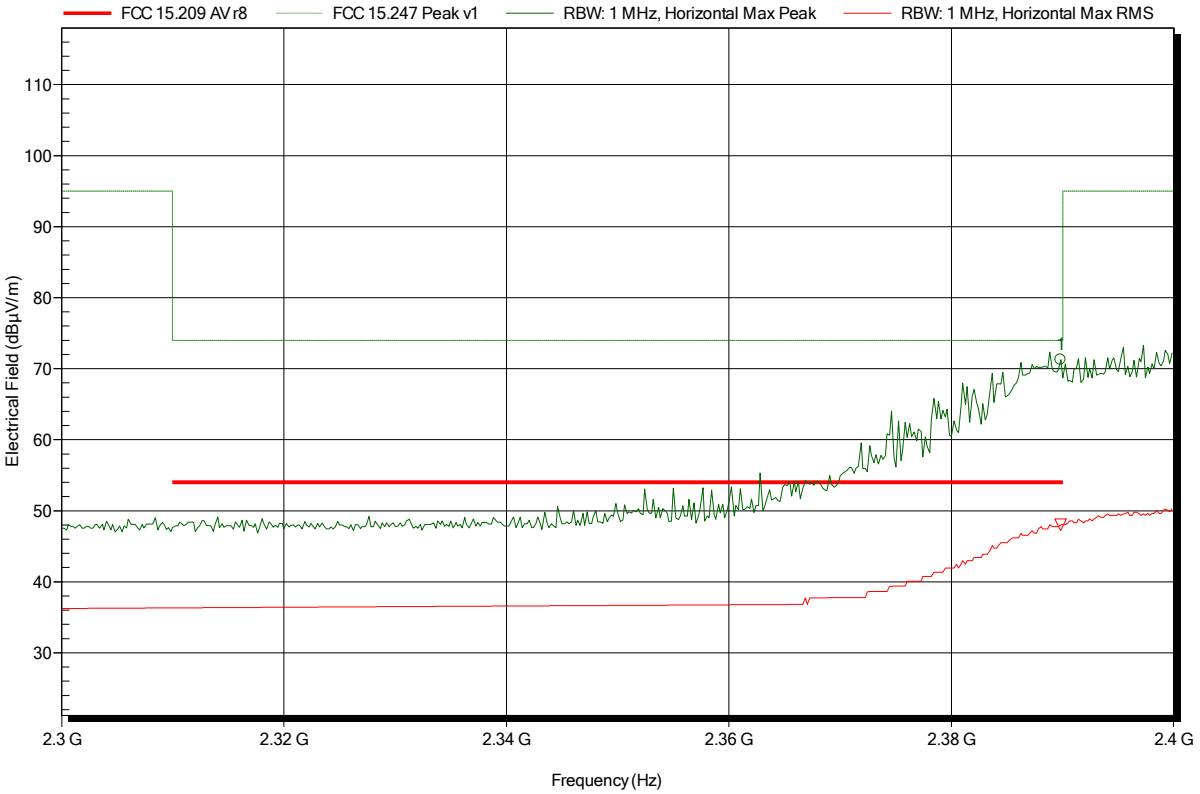

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.39 GHz	71.26 dBµV/m	74 dBµV/m	-2.74 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.39 GHz	48.03 dBµV/m	54 dBµV/m	-5.97 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-21
Note:	lower bandedge

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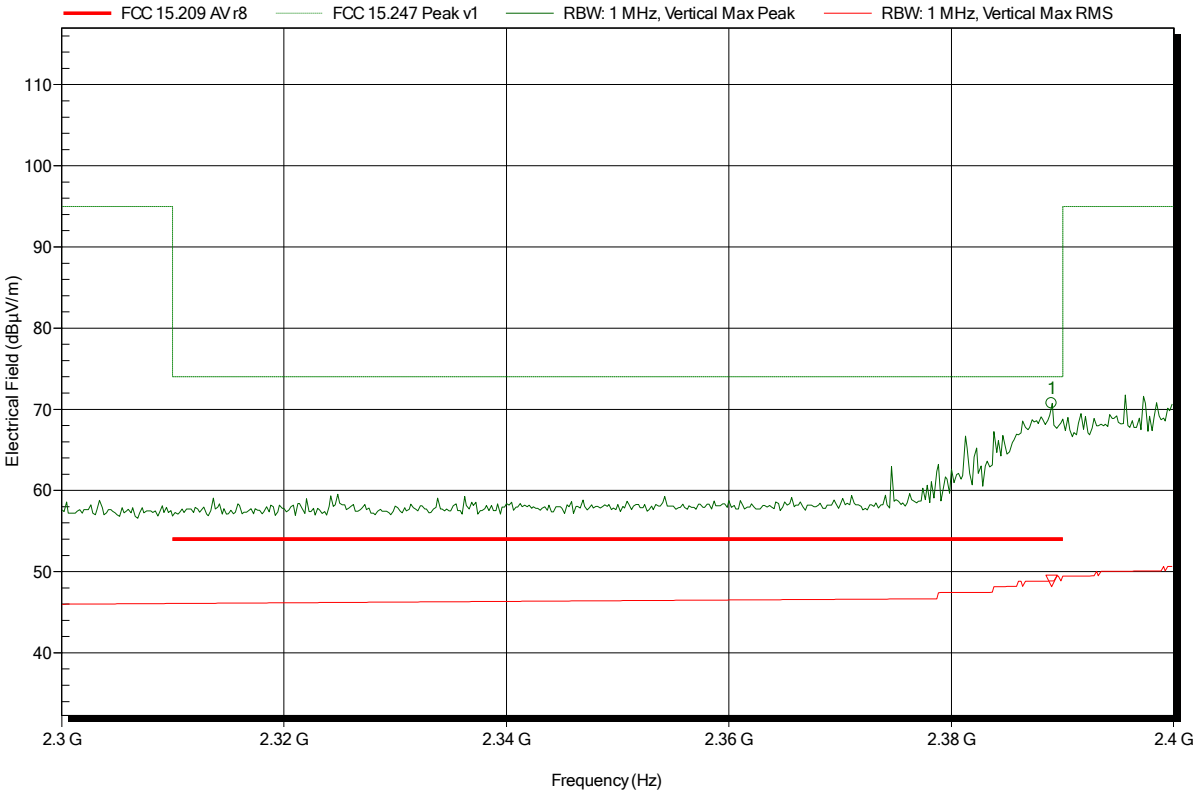

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.389 GHz	70.73 dBµV/m	74 dBµV/m	-3.27 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.389 GHz	48.84 dBµV/m	54 dBµV/m	-5.16 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-21
Note:	

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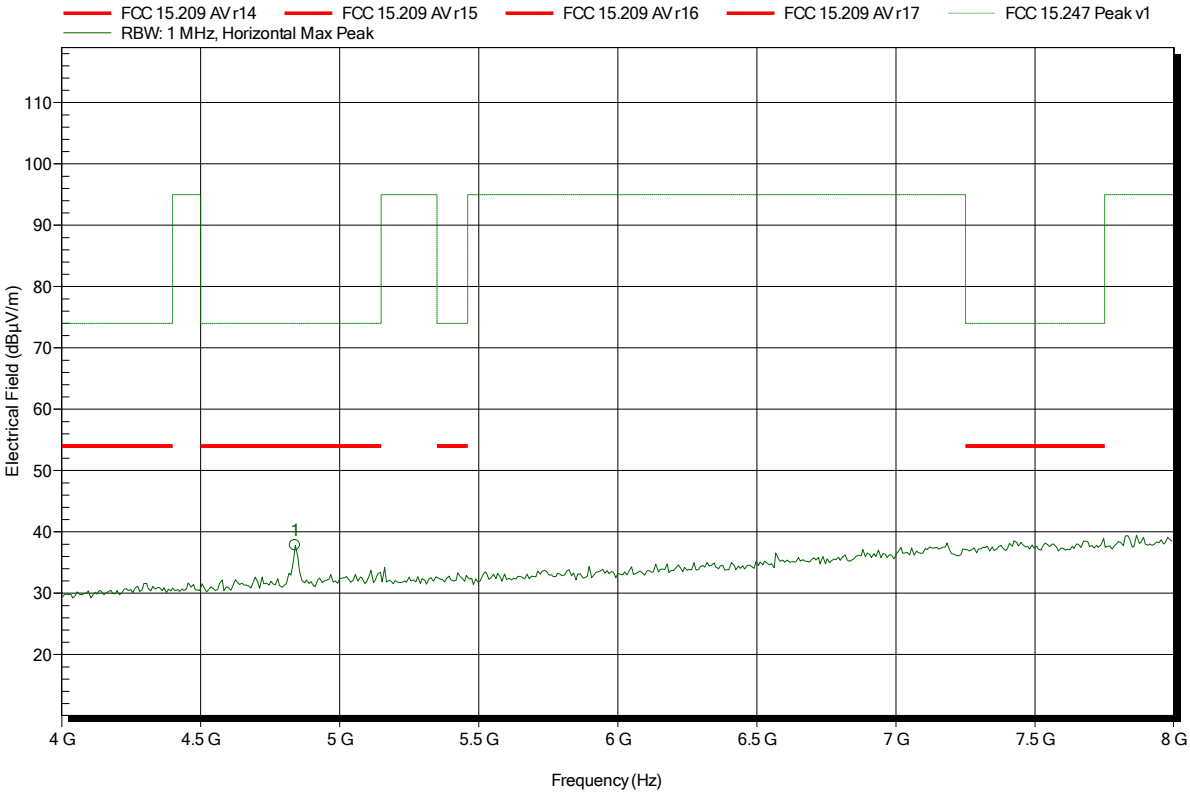

Frequency	Peak	Peak Limit	Peak Difference	Status
4.84 GHz	37.85 dBµV/m	74 dBµV/m	-36.15 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2422 MHz
Test Date:	2015-04-21
Note:	

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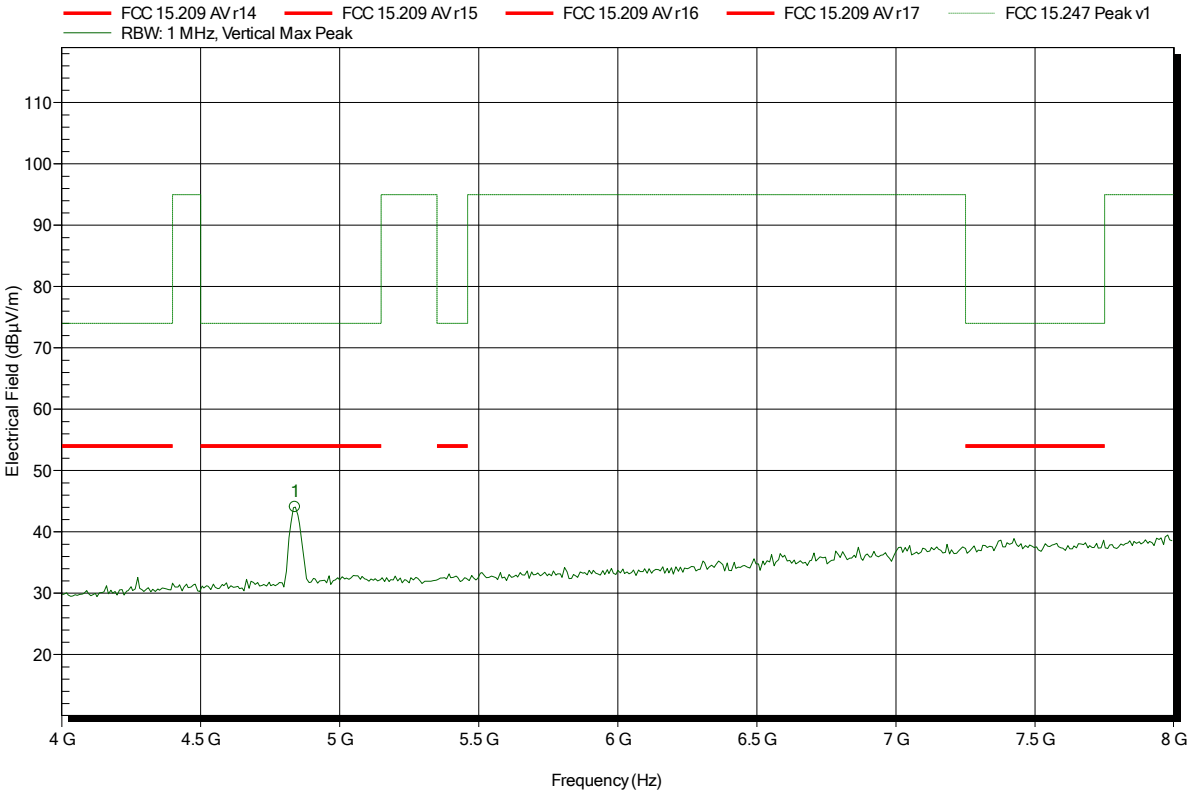

Frequency	Peak	Peak Limit	Peak Difference	Status
4.84 GHz	44.05 dBµV/m	74 dBµV/m	-29.95 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2437 MHz
Test Date:	2015-04-22
Note:	

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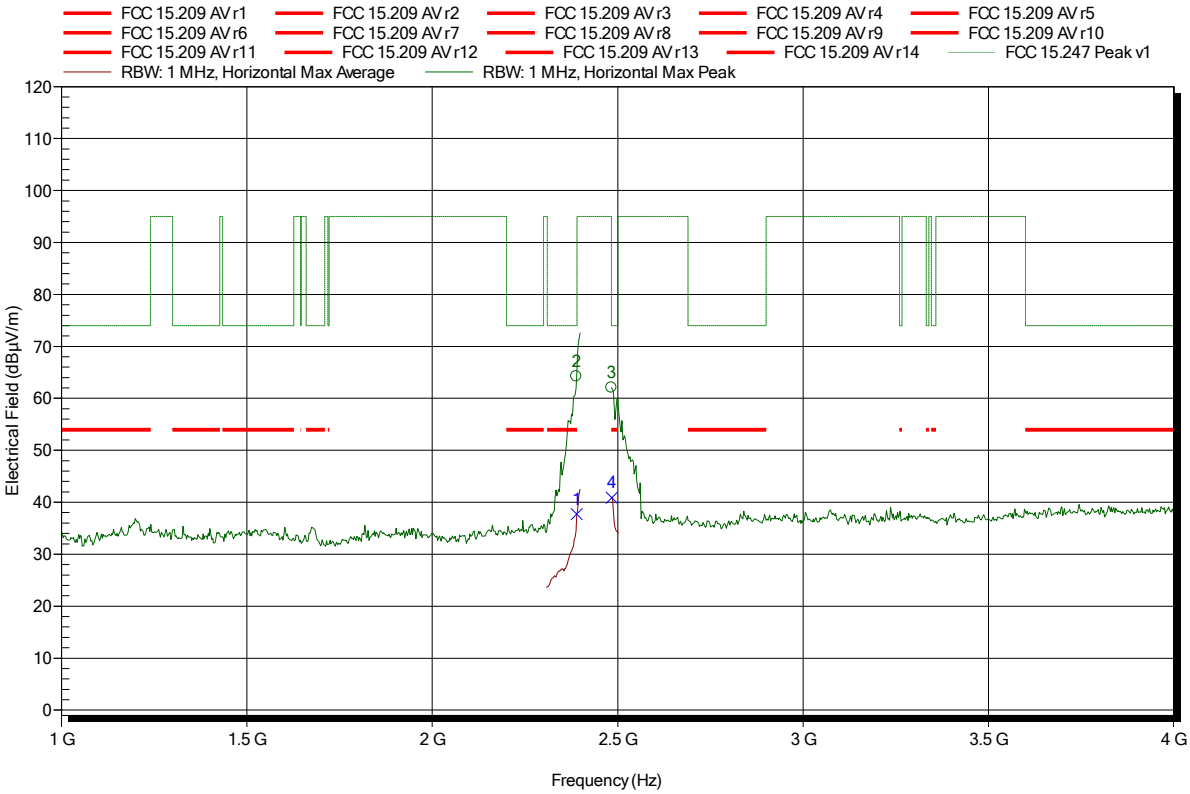

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3888 GHz	64.22 dBµV/m	74 dBµV/m	-9.78 dB	Pass
2.4835 GHz	62.09 dBµV/m	74 dBµV/m	-11.91 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.3899 GHz	37.7 dBµV/m	54 dBµV/m	-16.3 dB	Pass
2.4838 GHz	40.85 dBµV/m	54 dBµV/m	-13.15 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2437 MHz
Test Date:	2015-04-22
Note:	

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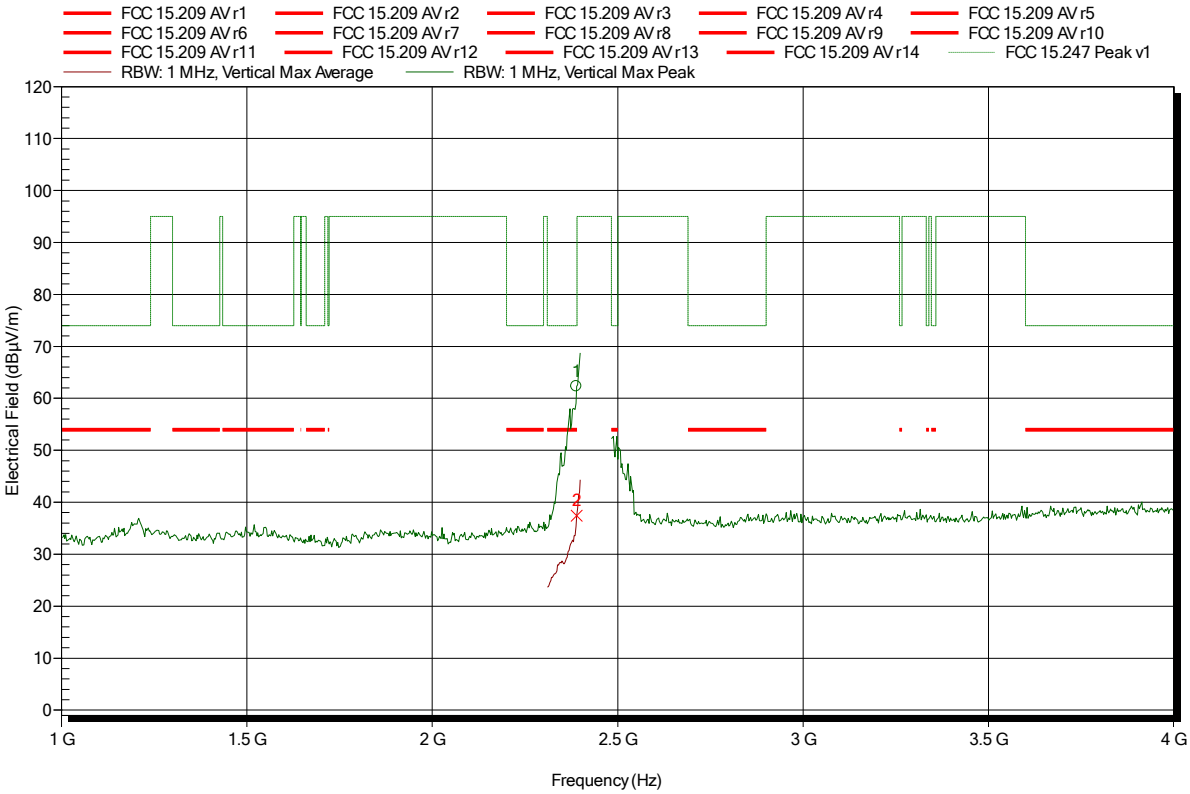

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3888 GHz	62.28 dBµV/m	74 dBµV/m	-11.72 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.3894 GHz	37.4 dBµV/m	54 dBµV/m	-16.6 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2437 MHz
Test Date:	2015-04-22
Note:	

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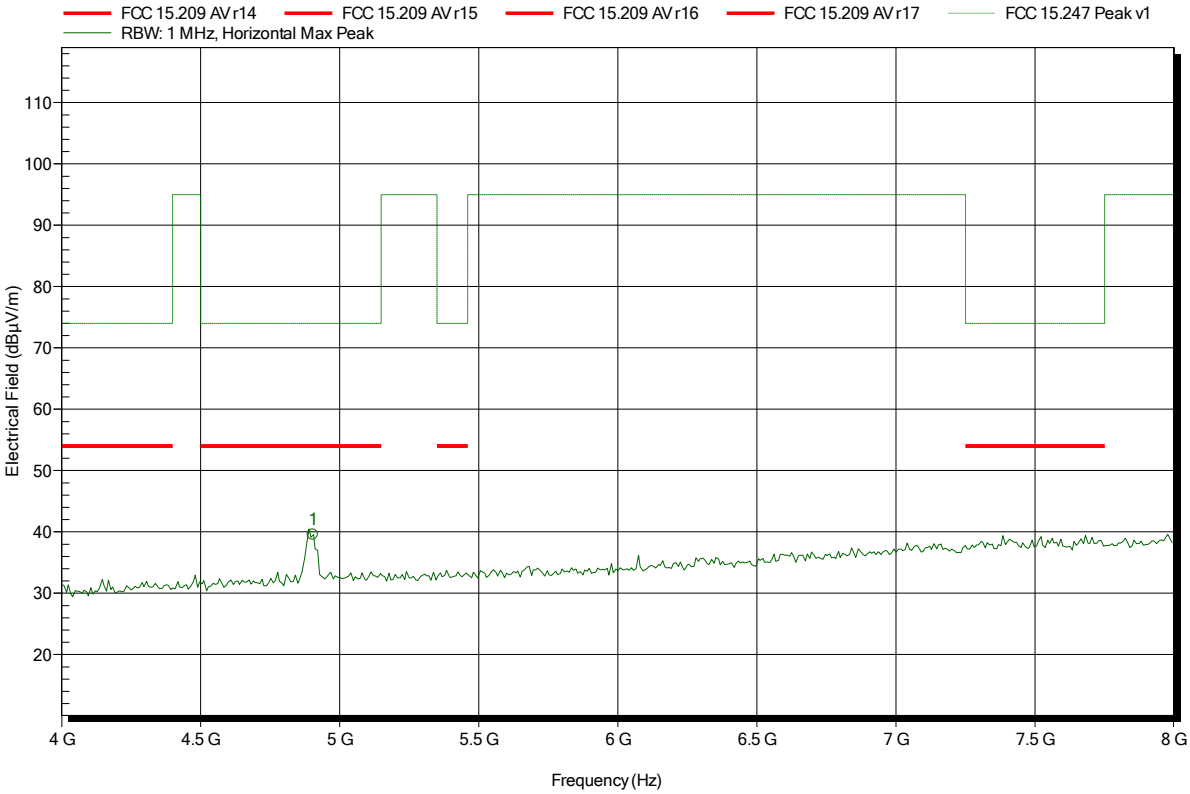

Frequency	Peak	Peak Limit	Peak Difference	Status
4.904 GHz	39.57 dBµV/m	74 dBµV/m	-34.43 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2437 MHz
Test Date:	2015-04-22
Note:	

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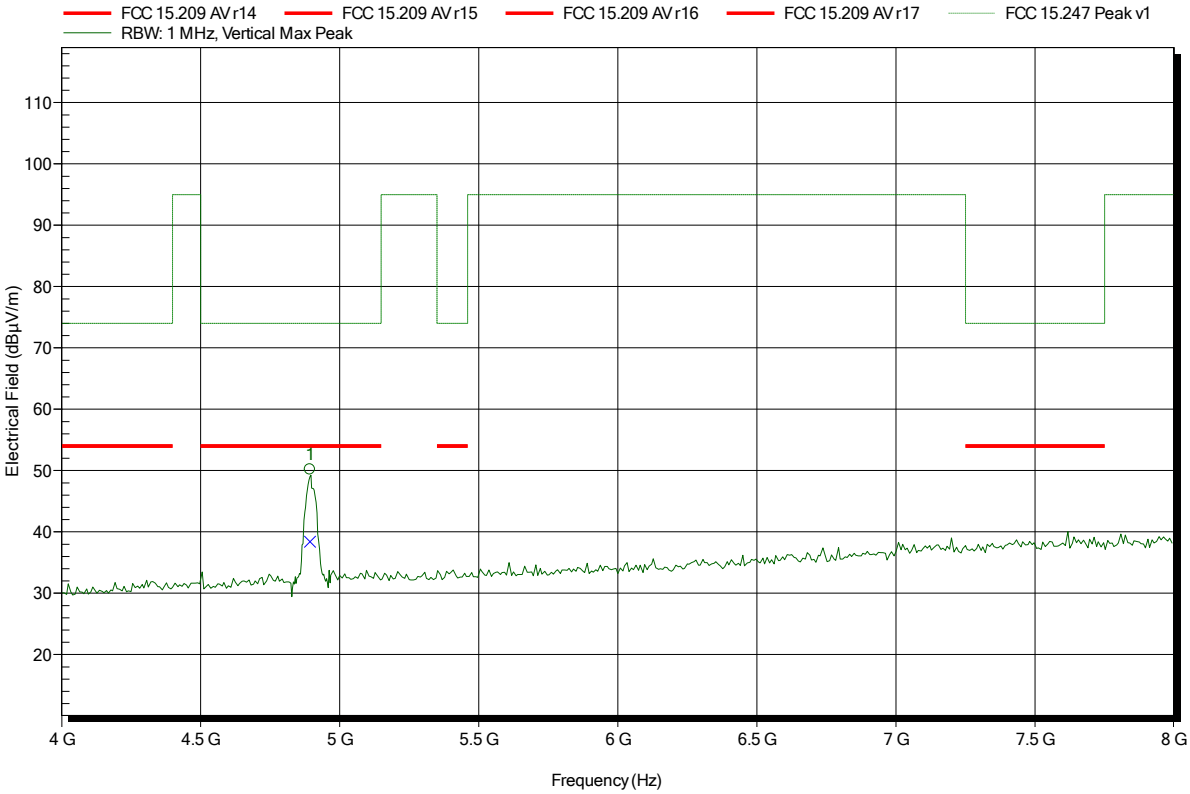

Frequency	Peak	Peak Limit	Peak Difference	Status
4.894 GHz	50.16 dBµV/m	74 dBµV/m	-23.84 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.894 GHz	38.4 dBµV/m	54 dBµV/m	-15.6 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	

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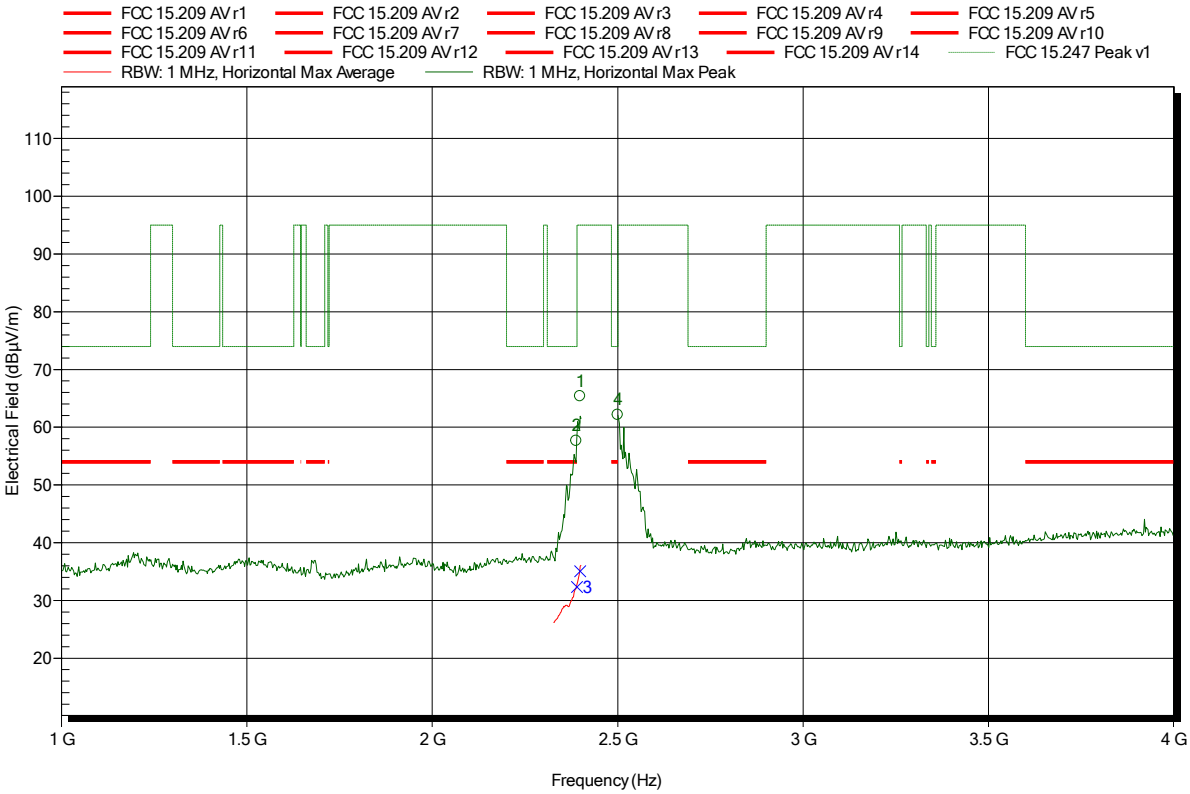

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.389 GHz	57.63 dBµV/m	74 dBµV/m	-16.37 dB	Pass
2.399 GHz	65.34 dBµV/m	95 dBµV/m	-29.66 dB	Pass
2.501 GHz	62.16 dBµV/m	95 dBµV/m	-32.84 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.39 GHz	32.31 dBµV/m	54 dBµV/m	-21.69 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	

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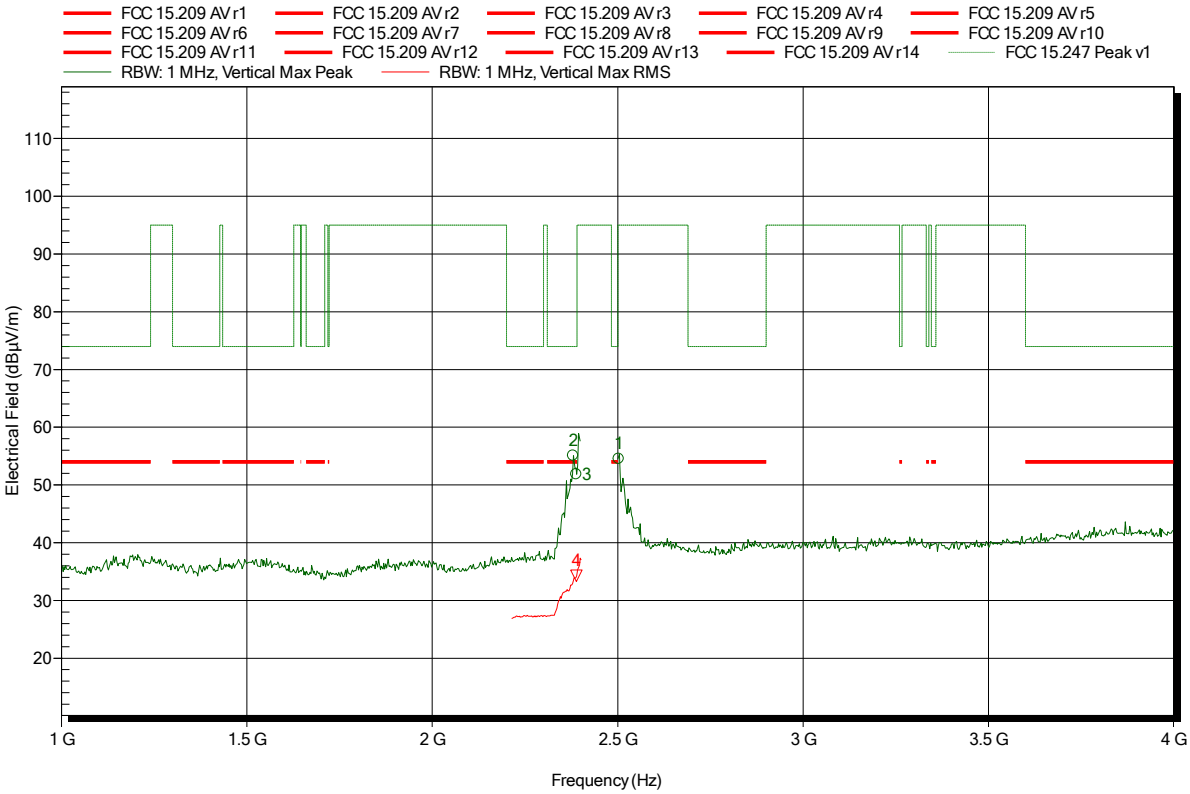

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.38 GHz	55.08 dBµV/m	74 dBµV/m	-18.92 dB	Pass
2.389 GHz	51.85 dBµV/m	74 dBµV/m	-22.15 dB	Pass
2.503 GHz	54.54 dBµV/m	95 dBµV/m	-40.46 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	upper bandedge

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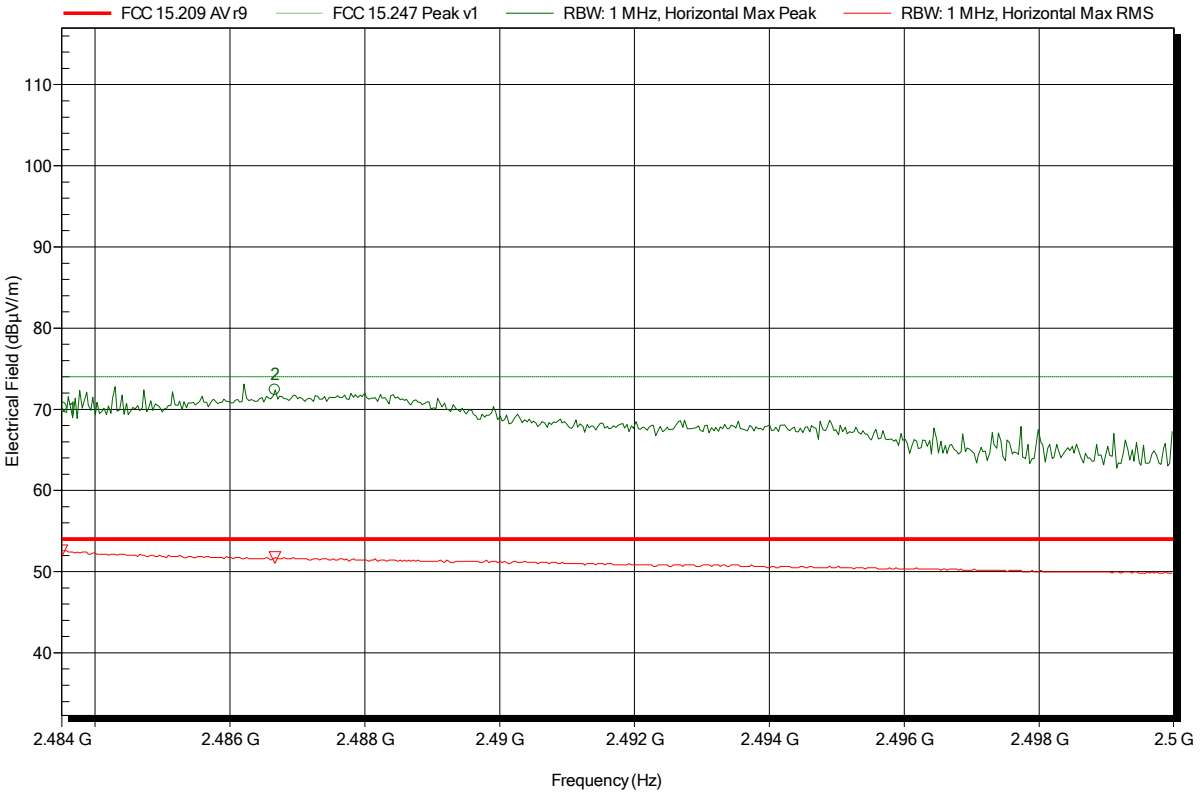

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4835 GHz	70.24 dBµV/m	74 dBµV/m	-3.76 dB	Pass
2.4867 GHz	72.38 dBµV/m	74 dBµV/m	-1.62 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4835 GHz	52.56 dBµV/m	54 dBµV/m	-1.44 dB	Pass
2.4867 GHz	51.73 dBµV/m	54 dBµV/m	-2.27 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	upper bandedge

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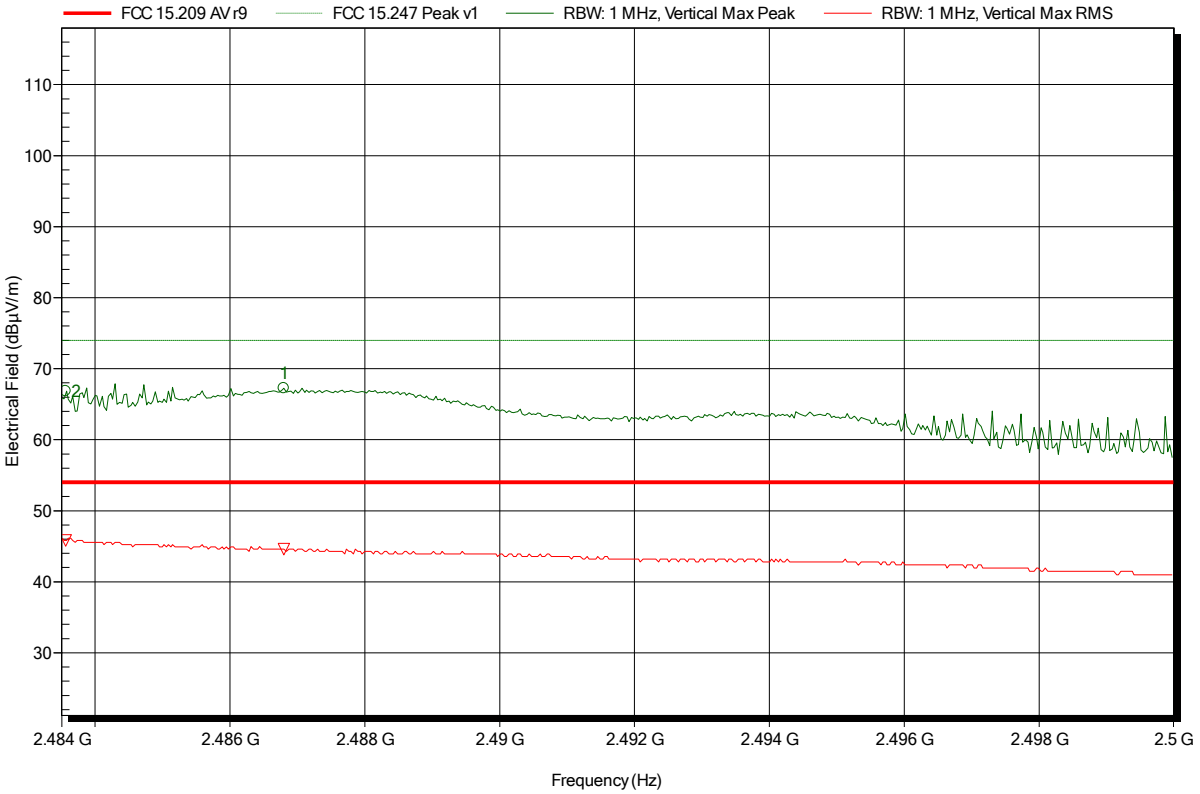

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4836 GHz	66.85 dBµV/m	74 dBµV/m	-7.15 dB	Pass
2.4868 GHz	67.24 dBµV/m	74 dBµV/m	-6.76 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4836 GHz	45.84 dBµV/m	54 dBµV/m	-8.16 dB	Pass
2.4868 GHz	44.61 dBµV/m	54 dBµV/m	-9.39 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	

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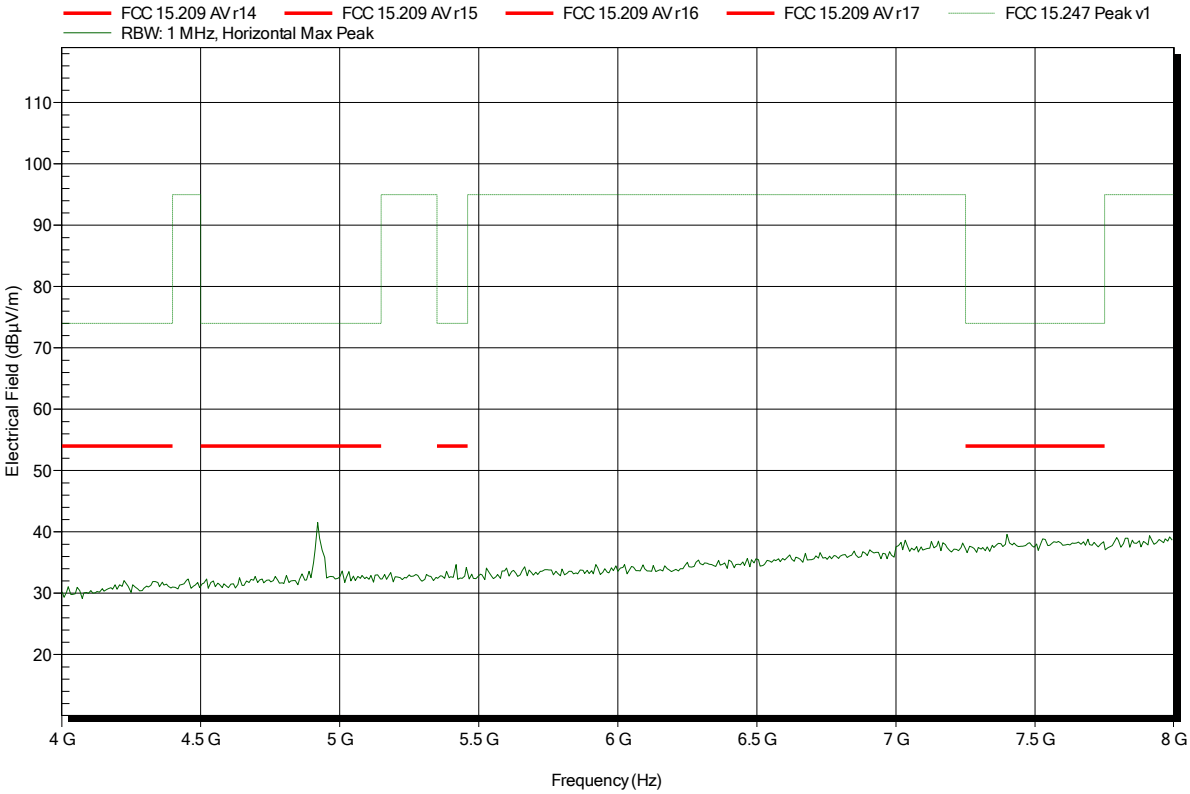

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT40; MCS0; 2452 MHz
Test Date:	2015-04-22
Note:	

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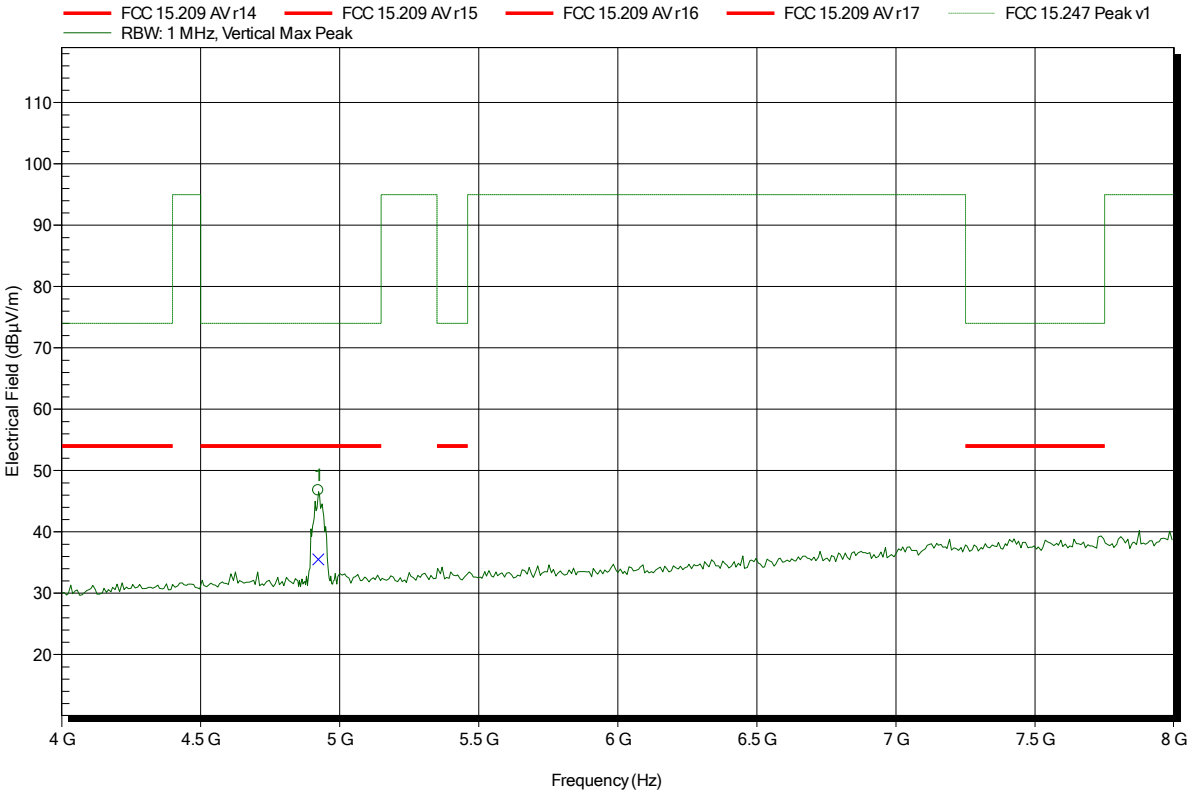

Frequency	Peak	Peak Limit	Peak Difference	Status
4.924 GHz	46.79 dBµV/m	74 dBµV/m	-27.21 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.924 GHz	35.53 dBµV/m	54 dBµV/m	-18.47 dB	Pass

ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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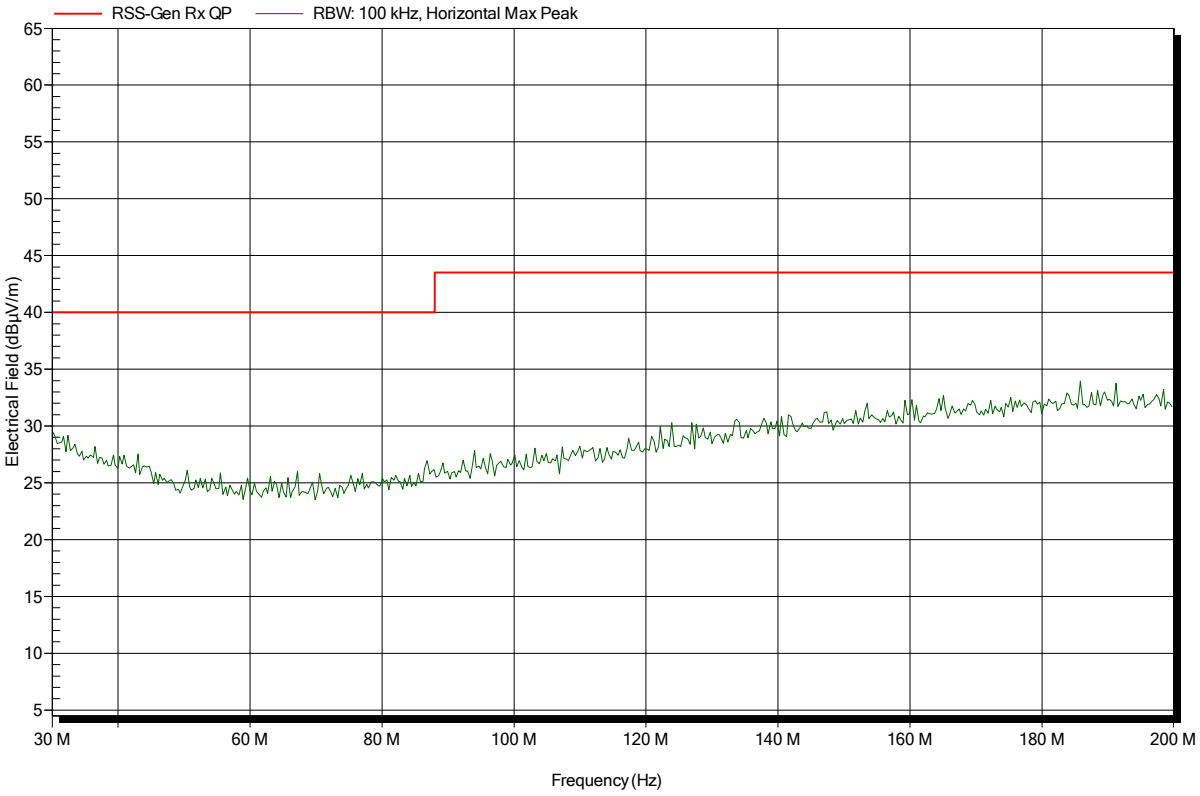

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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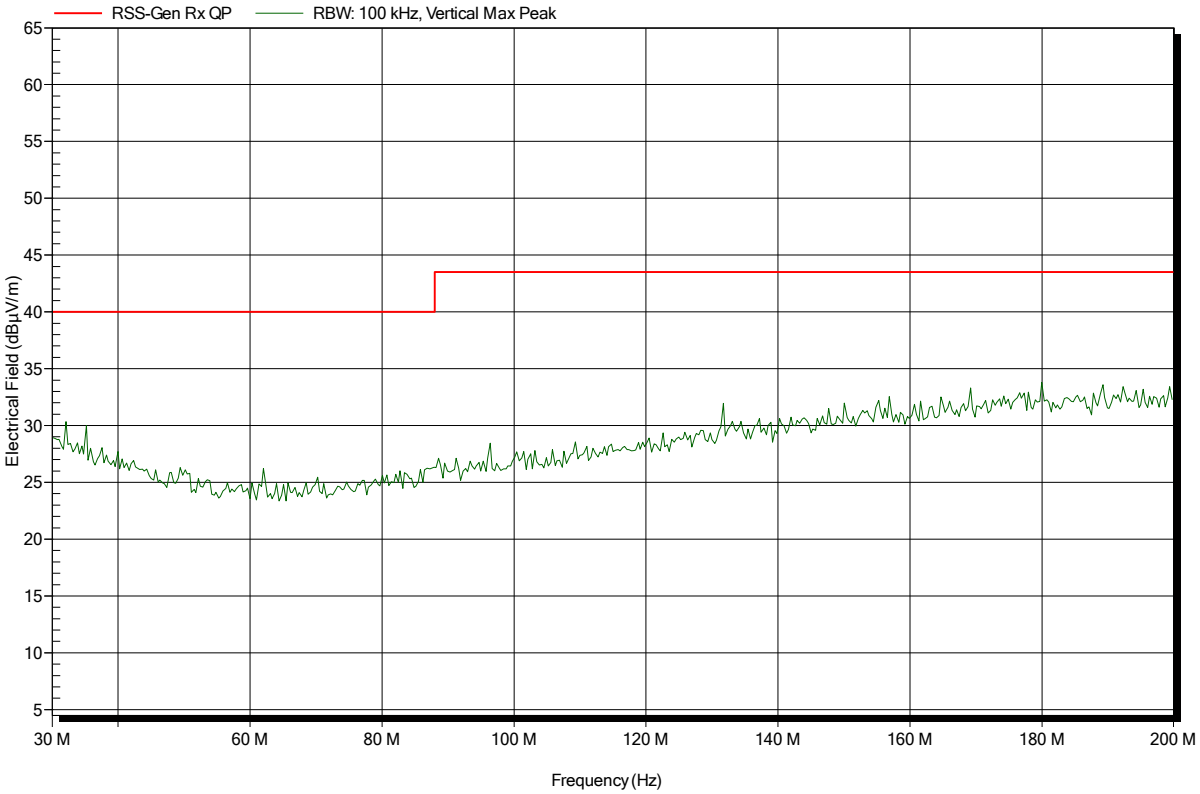

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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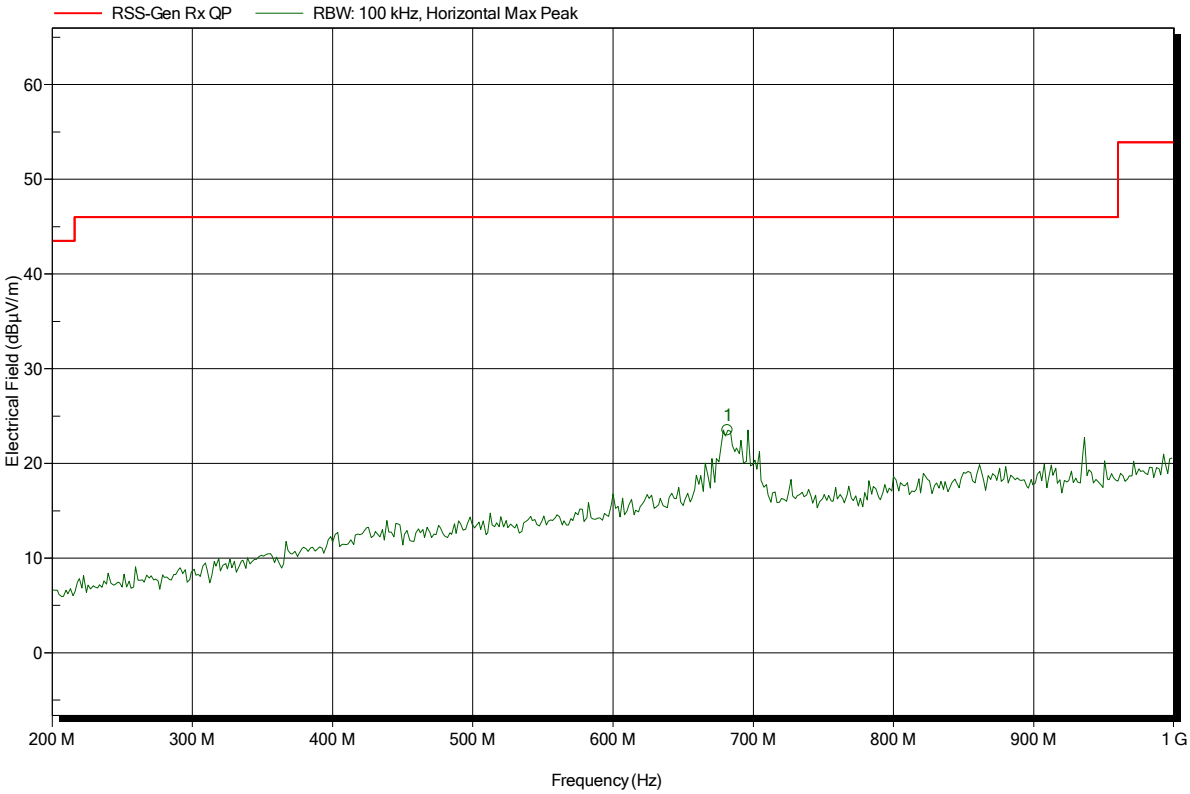

Frequency	Peak	Peak Limit	Peak Difference	Status
681.6 MHz	23.5 dBµV/m	46 dBµV/m	-22.5 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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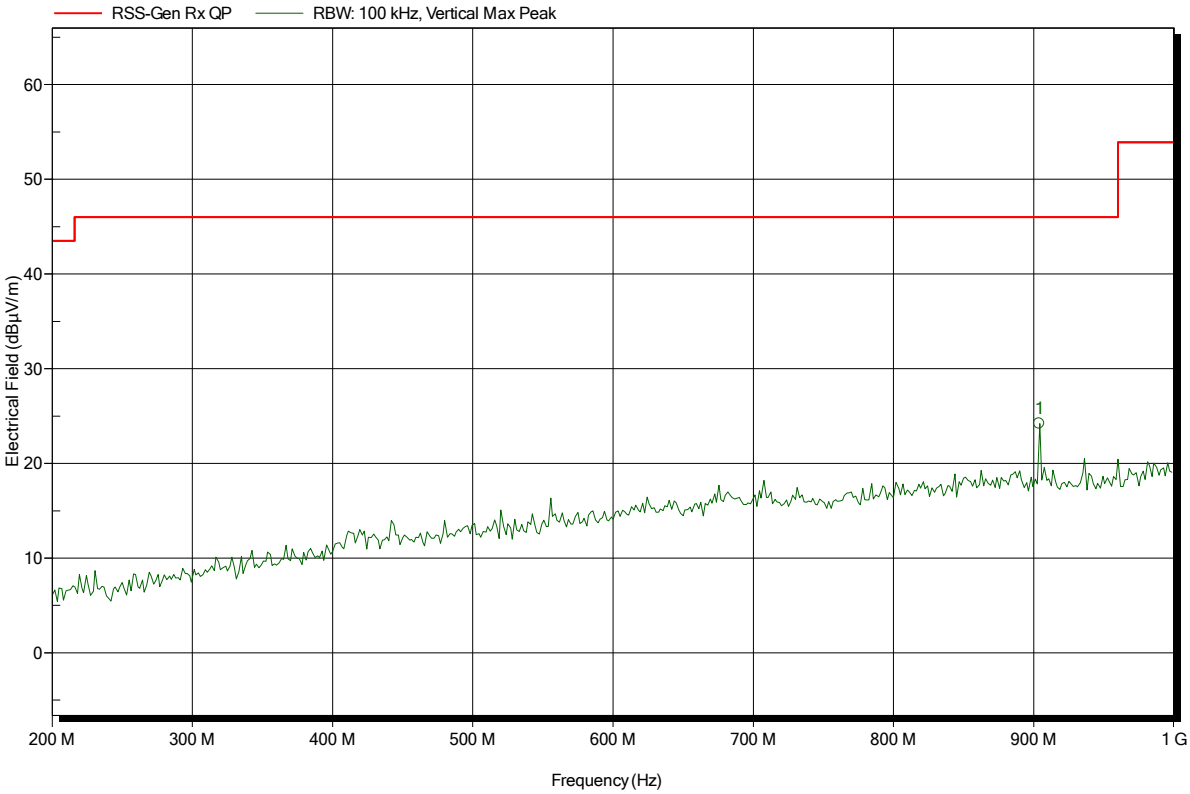

Frequency	Peak	Peak Limit	Peak Difference	Status
904 MHz	24.22 dBµV/m	46 dBµV/m	-21.78 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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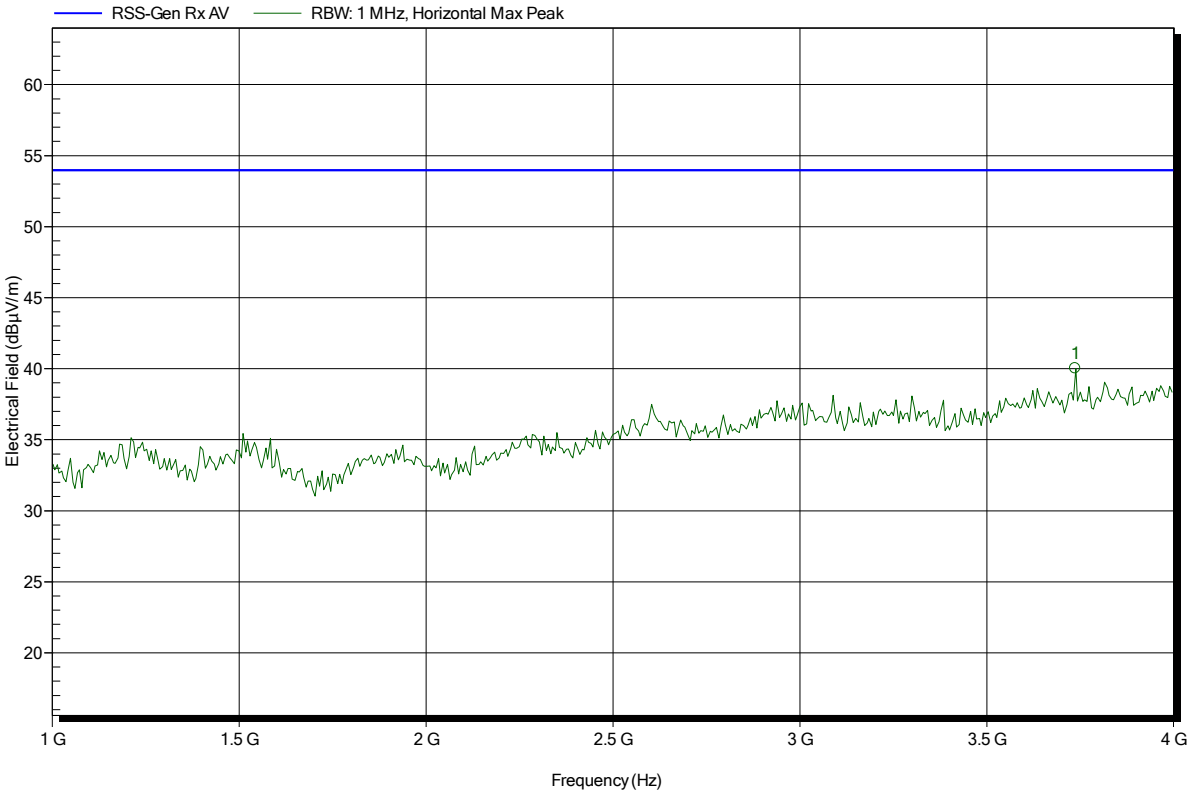

Frequency	Peak	Peak Limit	Peak Difference	Status
3.736 GHz	40.02 dBµV/m	53.98 dBµV/m	-13.96 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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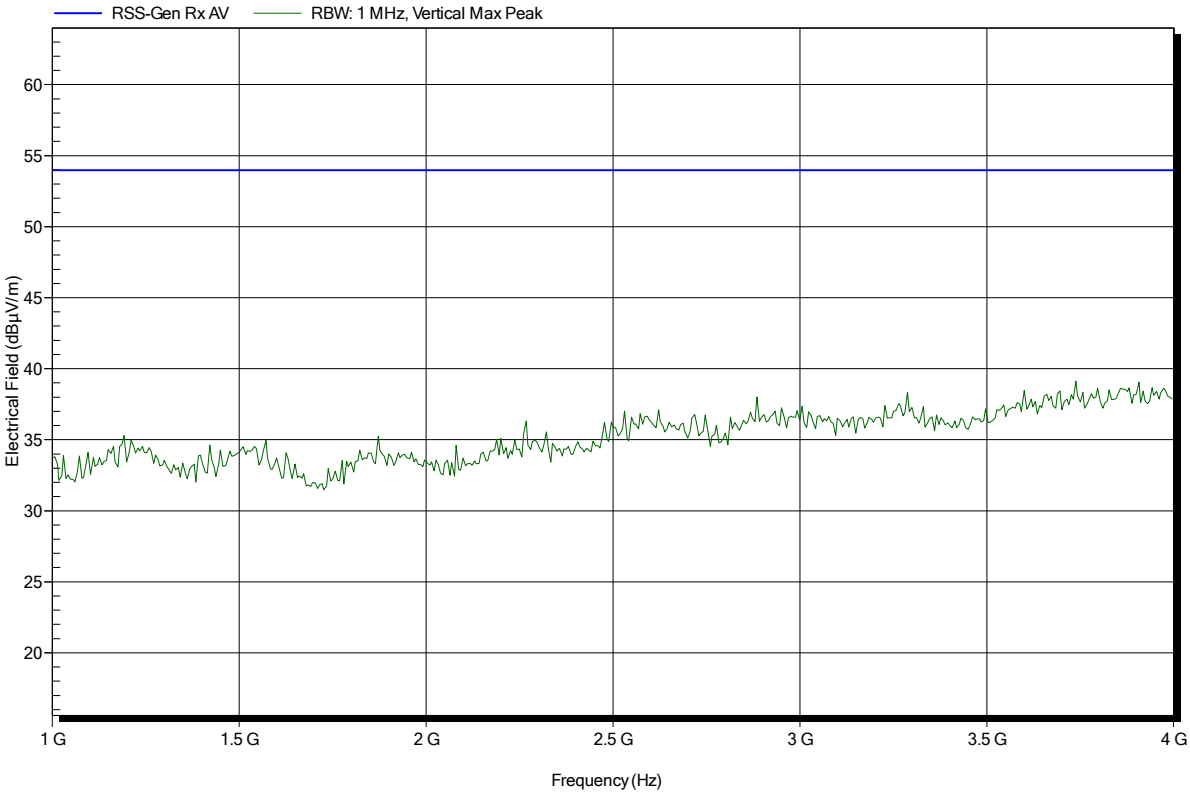

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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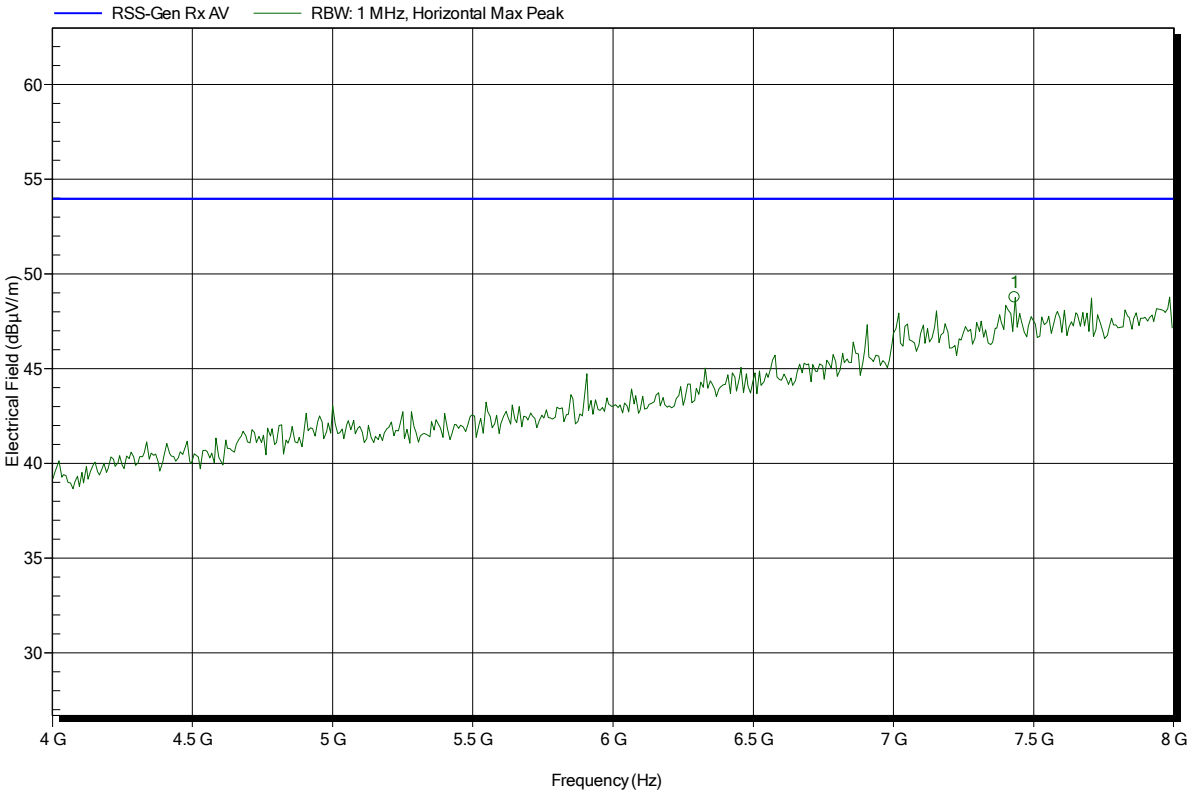

Frequency	Peak	Peak Limit	Peak Difference	Status
7.432 GHz	48.76 dBµV/m	53.98 dBµV/m	-5.22 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4620

Applicant:	BARTEC PIXAVI AS
EUT Name:	Wireless camera (Standard version)
Model:	OrbitX ST
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-22
Note:	

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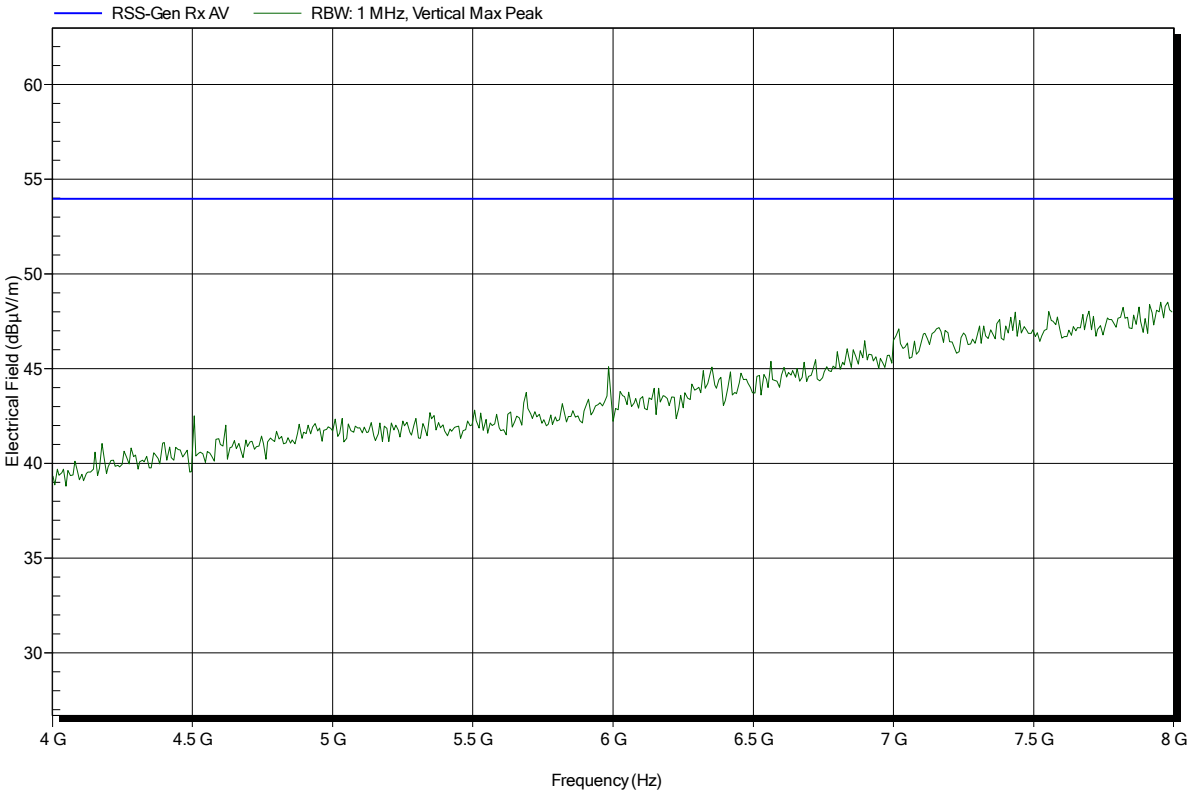


Title	**BARTEC PIXAVI OrbitX Model Differences Declaration**
Document ID	PX-ORBITX-Models-DoC
Revision	1
Project	OrbitX
Author	David Wightman
Created	23.04.2015
Last	23.04.2015
Nature of document	~~CONFIDENTIAL~~
Contents	**Contents:** Bartec Pixavi ORBITX RoHS Declaration of Conformity

Revision History

Revision	Date	Change	Revised by
1	23.04.2015		

BARTEC PIXAVI OrbitX Model Differences Statement

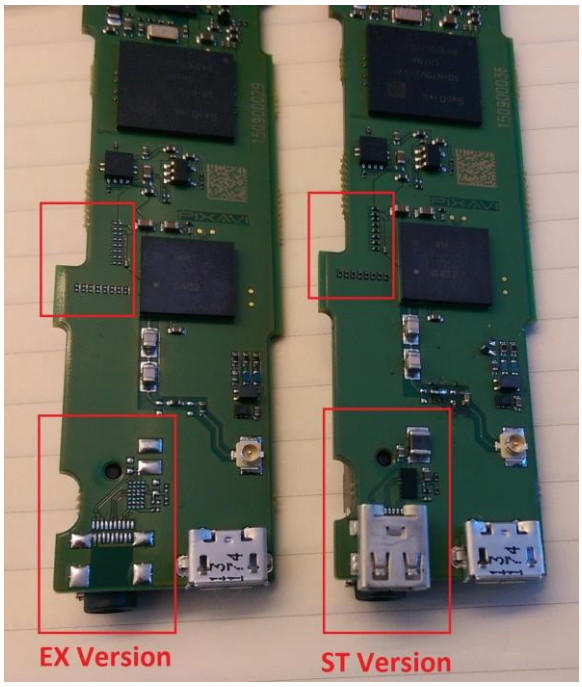
To whom it may concern,

The OrbitX comes in two models, an OrbitX-EX model and an OrbitX-ST model. Both models are identical except for the following differences highlighted below. There are no differences to the radio section between models.

HDMI

The **ST model** includes circuitry to support a Micro-HDMI connection and mechanics to give access to the HDMI port.

The **EX model** uses the same PCB, but does not have the HDMI components populated.



SILICON POTTING

The EX model is made for Hazardous areas and therefore is filled with a silicon potting in the following area. The antenna is not enclosed in Silicon.

The ST model is not filled with silicon potting.