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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-1503-4616-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 Test Firm Designation Number: DE0008 IC Testing Laboratory site: 3470A-3
Applicant's name.....:	Leica Microsystems (Schweiz) AG
Address.....:	Max Schmidheiny-Strasse 201 9435 Heerbrugg SWITZERLAND
Test specification:	
Standard.....:	47 CFR Part 15C RSS-247, Issue 1, 2015-05 RSS-Gen, Issue 4, 2014-11 ANSI C63.10:2013
Test scope…….....:	partial Radio compliance test
Equipment under test (EUT):	
Product description	Stereo microscope with integrated camera
Model No.	EZ4 W
Additional Model(s)	None
Brand Name(s)	Leica
Hardware version	2.0
Firmware / Software version	None
	FCC-ID: 2AEJM-EZ4W IC: 20232-EZ4W
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 .....: 2015-04-07

Date (s) of performance of tests .....: 2015-04-07 – 2015-04-09

Compiled by ..... : Wilfried Treffke

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

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

Date of issue ..... : 2017-04-11

Total number of pages ..... : 91

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:

Version History

Version	Issue Date	Remarks	Revised by
01	2017-04-11	Initial Release	

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1 Equipment (Test item) Description

Description	Stereo microscope with integrated camera	
Model	EZ4 W	
Additional Model(s)	None	
Brand Name(s)	Leica	
Serial number	None	
Hardware version	2.0	
Software / Firmware version	None	
FCC-ID	2AEJM-EZ4W	
IC	20232-EZ4W	
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_{MID20}	2437 MHz
	F_{HIGH20}	2462 MHz
Spreading	CCK, DSSS, OFDM	
Modulations	BPSK, QPSK, 16-QAM, 64-QAM	
Number of channels	11	
Channel spacing	5 MHz	
Number of antennas	1	
Radio module	Type	Wi-Fi Module
	Model	HF-A11-1
	Manufacturer	High Flying Electronics
	HW Version	V3.1
	SW Version	V3.1
	FCC-ID	AZYHF-A11X
	IC	12243A-HFA11
Antenna	Type	integrated
	Model	2.4 GHz SMD Stand Alone; Series 47950
	Manufacturer	Molex
	Gain	3.5 dBi (antenna data)
Manufacturer	Leica Instruments (Singapore) Pte Ltd 12 Teban Gardens Crescent 608924 Singapore Singapore	

Power supply	V_{NOM}	120 VAC
	V_{MIN}	N/A
	V_{MAX}	N/A
AC/DC-Adaptor	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A

1.3 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

1.4 Test Modes

Mode #	Description	
DSSS	General conditions:	EUT powered by AC mains power
	Radio conditions:	Mode = standalone transmit Spreading = DSSS Modulation = BPSK Data rate = 1 Mbps Bandwidth = 20 MHz Duty cycle = 100 % Power level = 14hex; *0.5 =10 dBm (Test mode setting)
OFDM	General conditions:	EUT powered by AC mains power
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = 6 Mbps Bandwidth = 20 MHz Duty cycle = 100 % Power level = 14hex; *0.5 =10 dBm (Test mode setting)
Receive	General conditions:	EUT powered by AC mains power
	Radio conditions:	Mode = standalone receive
AC-Powerline	General conditions:	EUT powered by AC mains power
	Radio conditions:	Mode = standalone transmit Spreading = DSSS Power level = Maximum

1.5 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

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSEK30	EF00168	2015-01	2016-01
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

1.6 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-210				
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-210 § A8.2	6dB Bandwidth	ANSI C63.10	N/R	integration of certified module
FCC § 15.247(b)(3) IC RSS-210 § A8.4	Maximum peak conducted power	ANSI C63.10	N/R	integration of certified module
FCC § 15.247(e) IC RSS-210 § A8.2	Power spectral density	ANSI C63.10	N/R	integration of certified module
47 CFR 15.207 RSS-Gen 8.8	AC power line conducted emissions	ANSI C63.4	PASS	
FCC § 15.247(d) IC RSS-210 § A8.5	Band edge compliance	ANSI C63.10	N/R	integration of certified module
FCC § 15.247(d) IC RSS-210 § A8.5	Conducted spurious emissions	ANSI C63.10	N/R	integration of certified module
FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 6.13	Transmitter radiated spurious emissions	ANSI C63.10	PASS	
IC RSS-Gen 7.1	Receiver radiated spurious emissions	ANSI C63.10	PASS	
Remarks:				

3 Test Conditions and Results

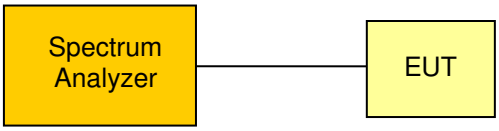
3.1 Test Conditions and Results – Occupied Bandwidth

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	15.23
F_{MID20}	2437	DSSS	15.13
F_{HIGH20}	2462	DSSS	15.03
F_{LOW20}	2412	OFDM	16.83
F_{MID20}	2437	OFDM	16.73
F_{HIGH20}	2462	OFDM	16.83
F_{LOW20}	2412	HT20	17.73
F_{MID20}	2437	HT20	17.73
F_{HIGH20}	2462	HT20	17.74

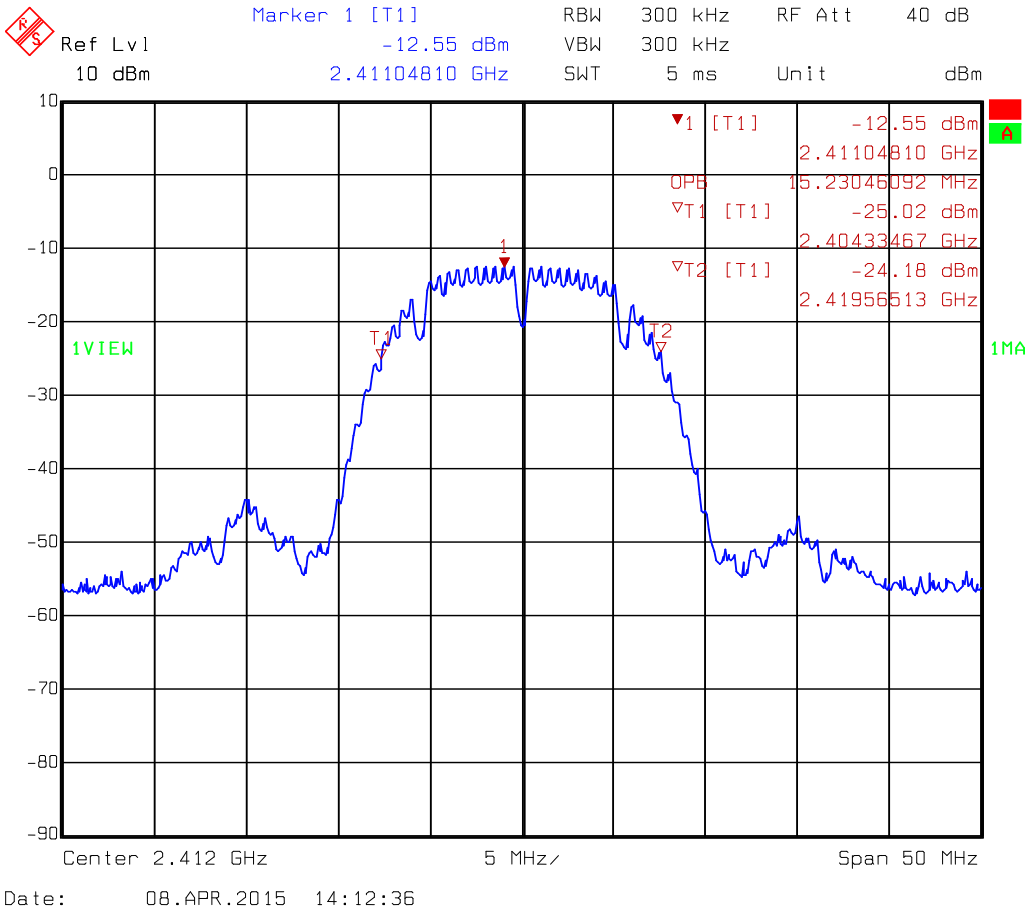
Comments:

Occupied Bandwidth – DSSS F_{LOW}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=15.23 MHz

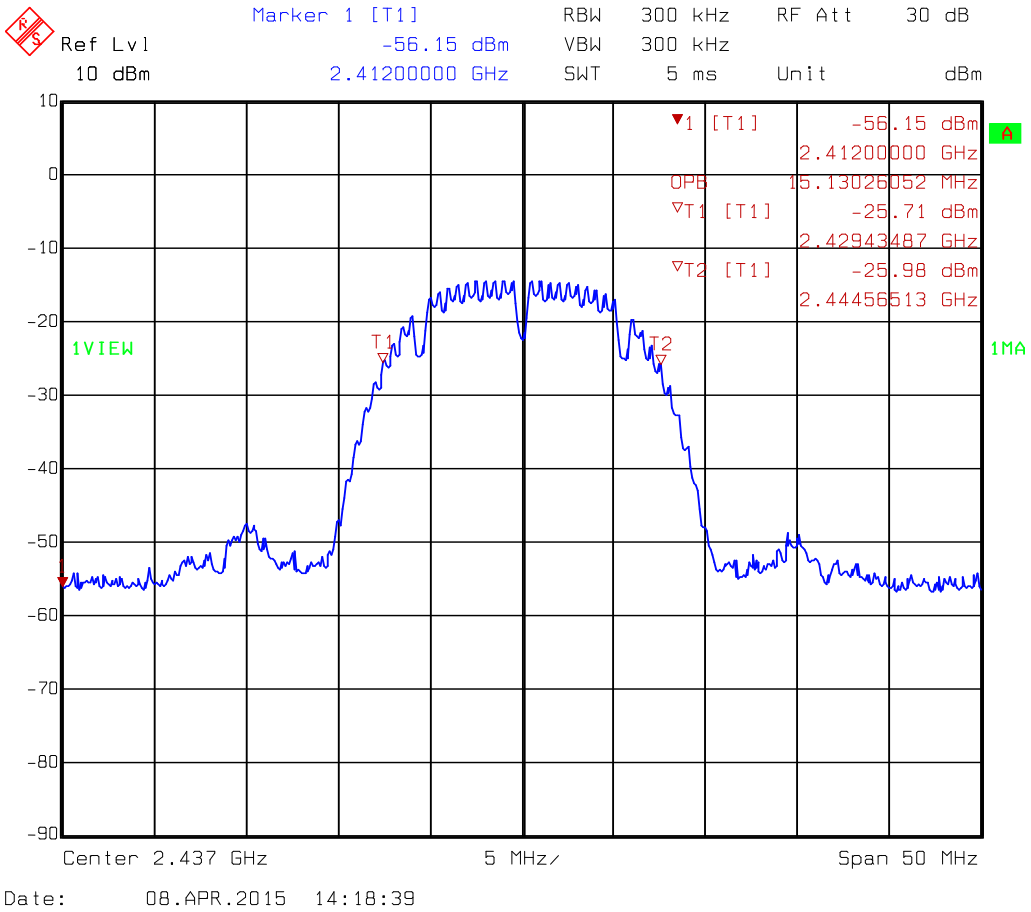


Occupied Bandwidth – DSSS F_{MID}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=15.13 MHz

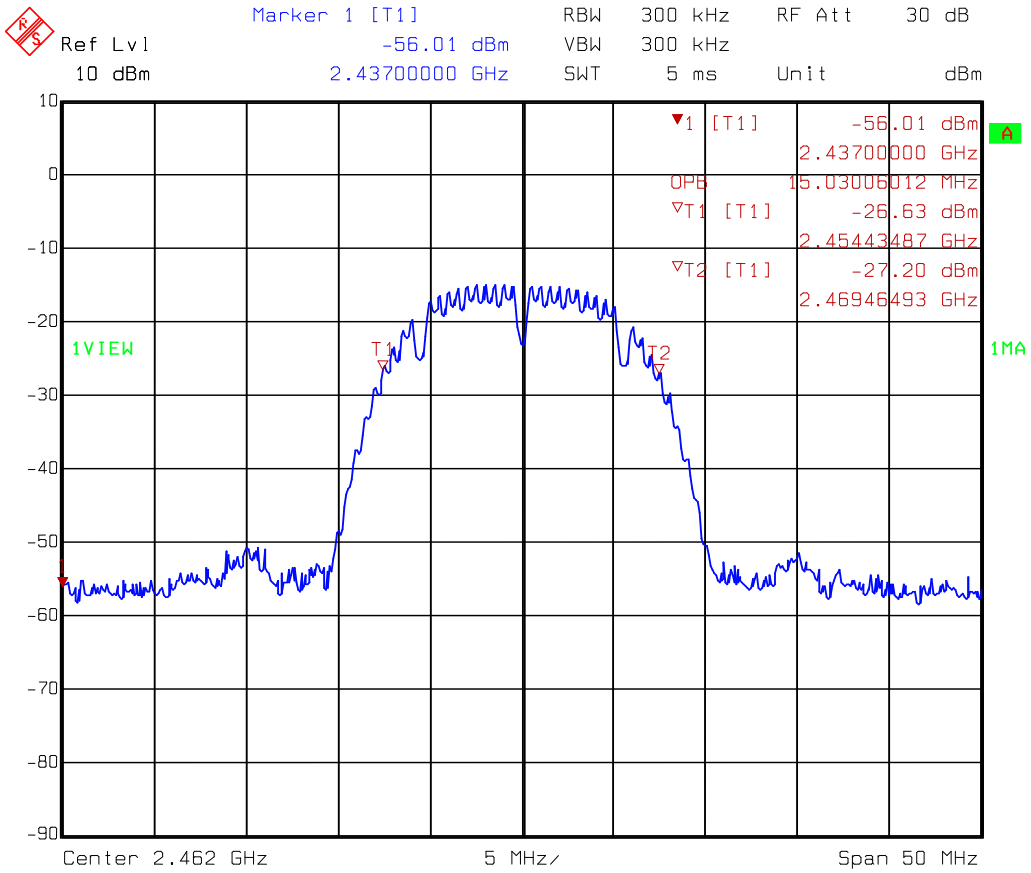


Occupied Bandwidth – DSSS F_{HIGH}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=15.03 MHz

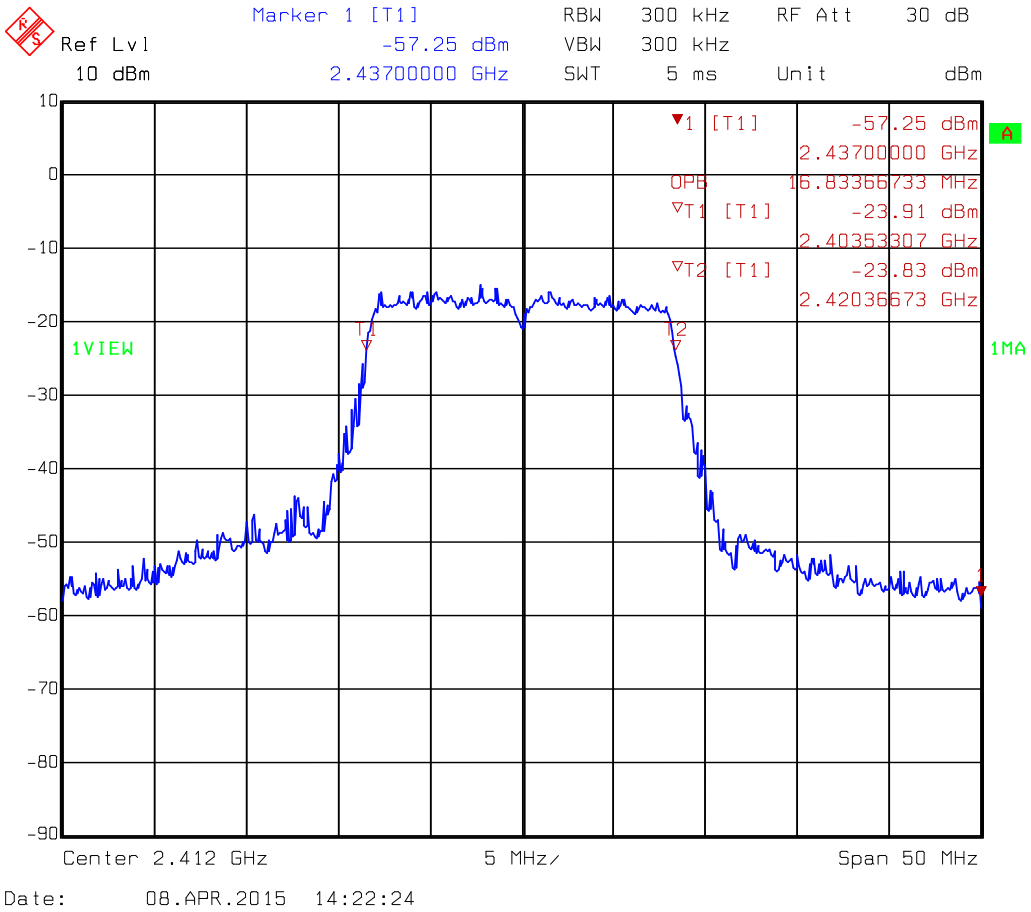


Occupied Bandwidth – OFDM F_{Low}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	OFDM; 6Mbps; 2412 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=16.83 MHz

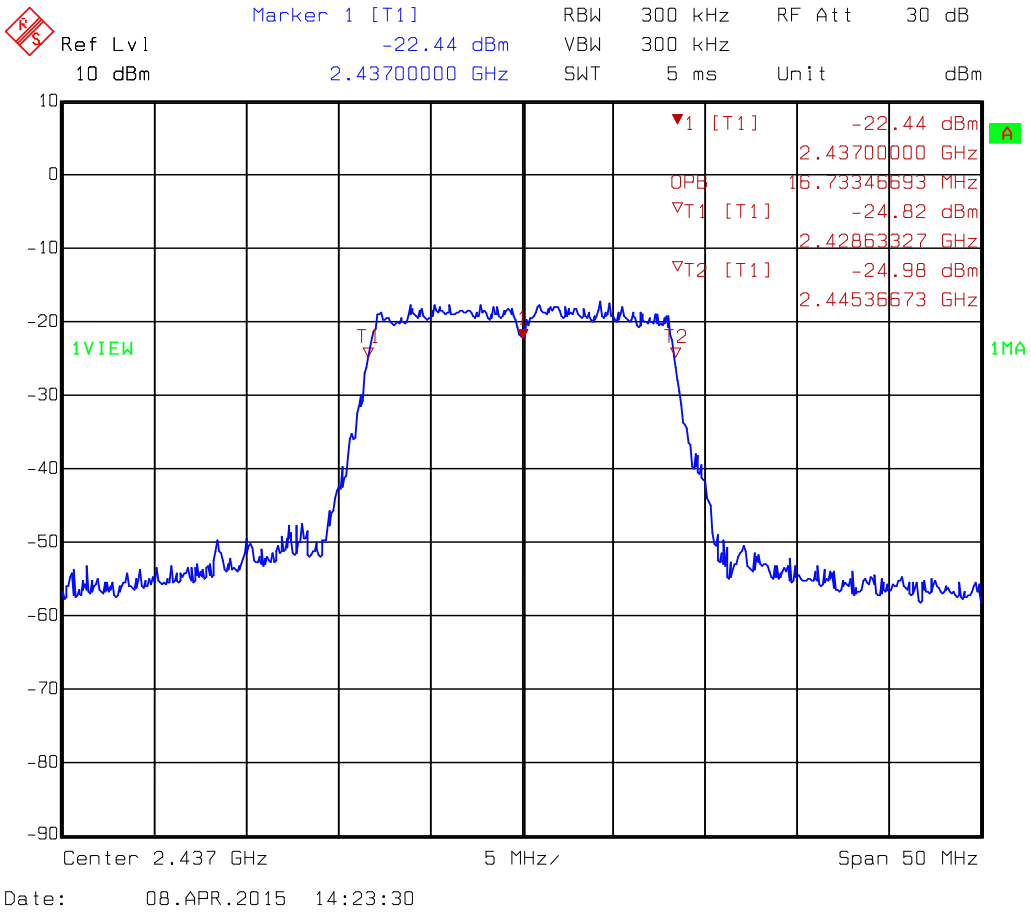


Occupied Bandwidth – OFDM F_{MID}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	OFDM; 6Mbps; 2437 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=16.73 MHz

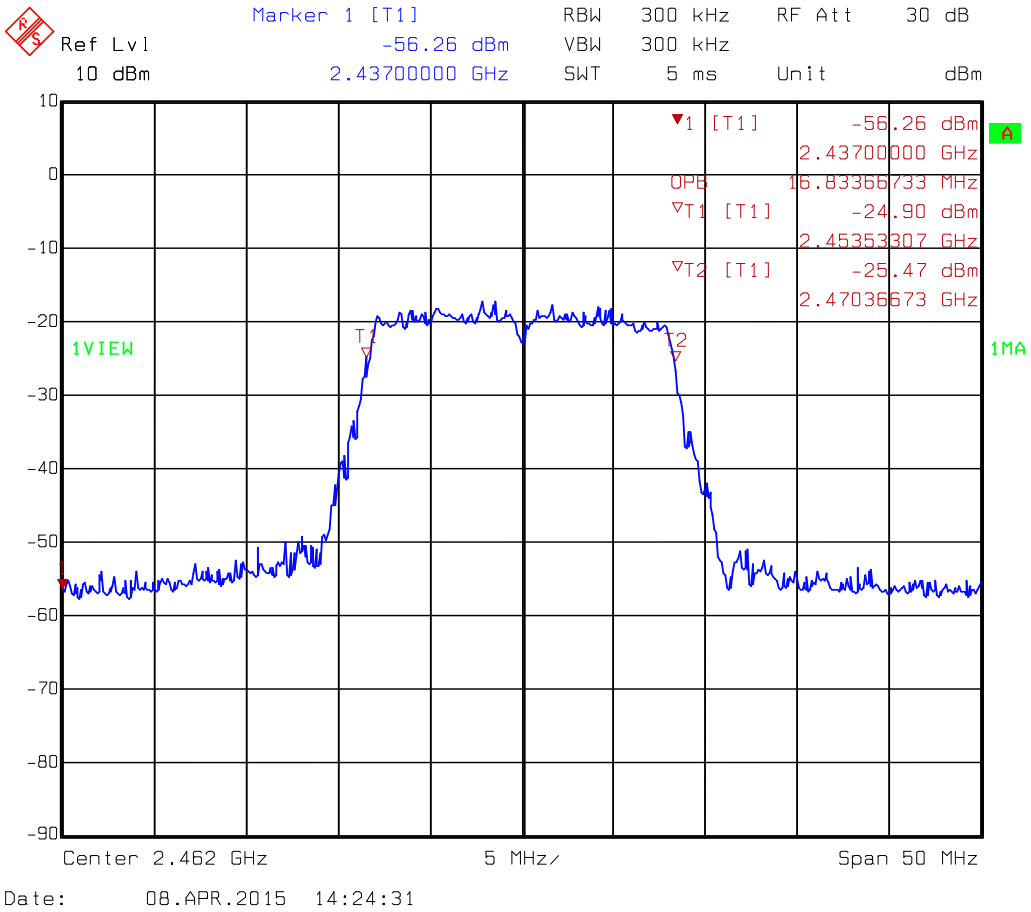


Occupied Bandwidth – OFDM F_{HIGH}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	OFDM; 6Mbps; 2462 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=16.83 MHz

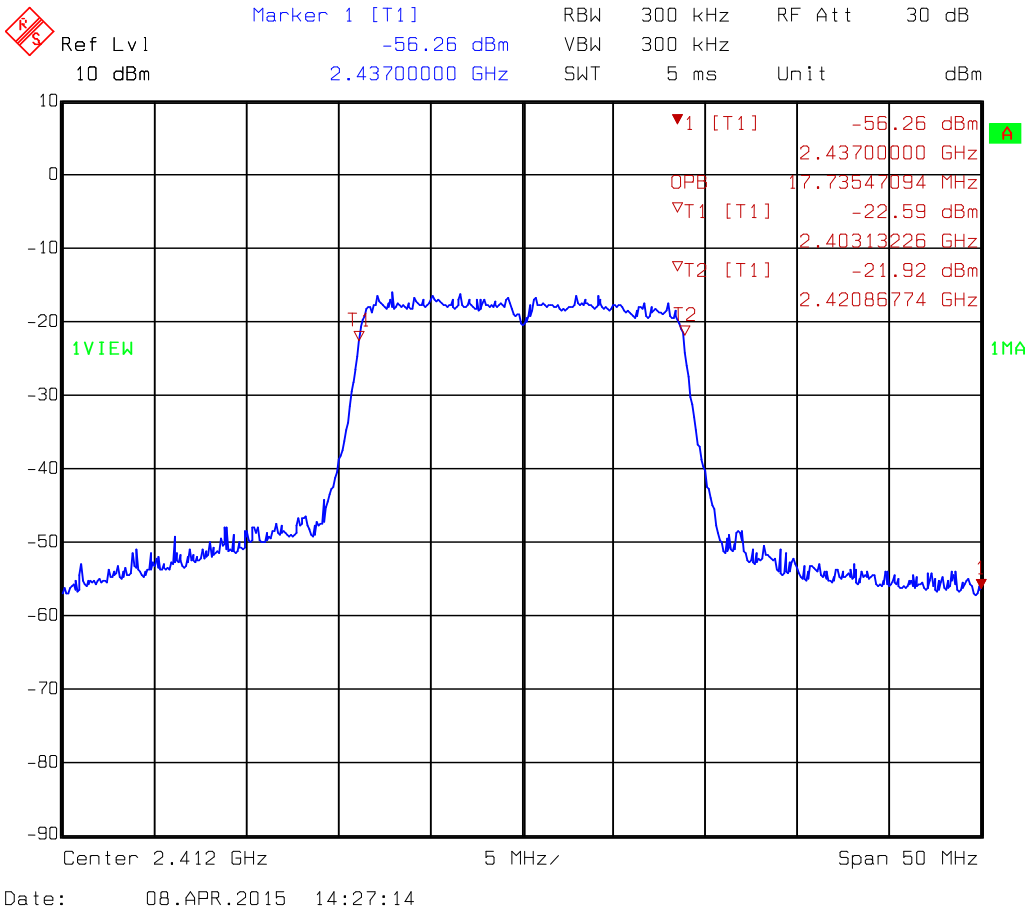


Occupied Bandwidth – HT20 F_{LOW}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	HT20; MCS 0; 2412 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=17.73 MHz

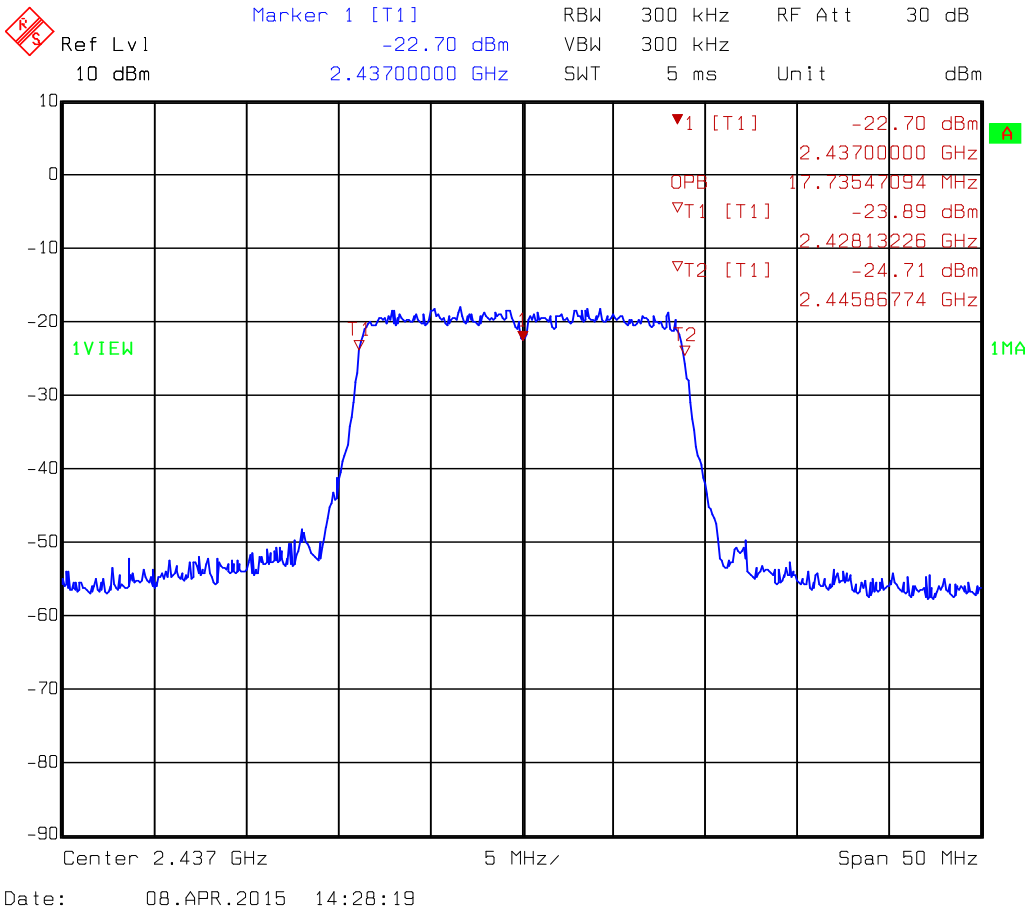


Occupied Bandwidth – HT20 F_{MID}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	HT20; MCS 0; 2437 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=17.73 MHz

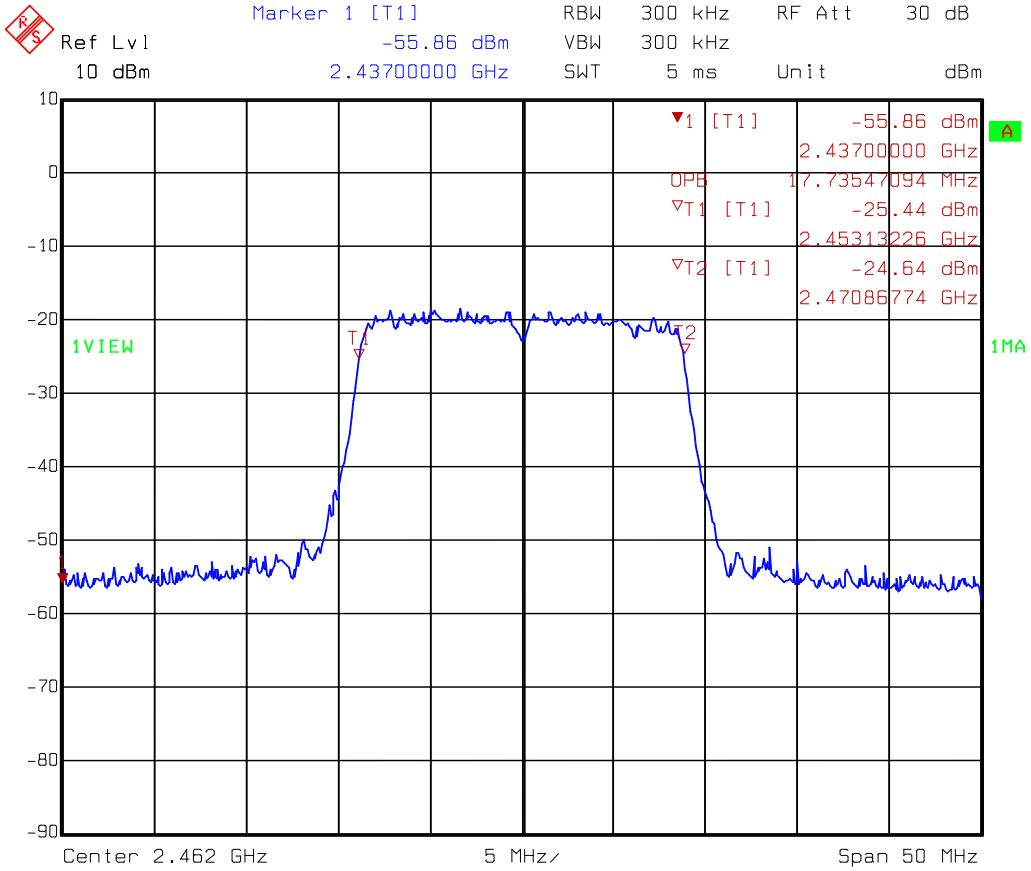


Occupied Bandwidth – HT20 F_{HIGH}

RSS-Gen, Occupied Bandwidth

Project Number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	HT20; MCS 0; 2462 MHz
Test Date:	2015-04-08
Verdict:	NONE (INFORMATION ONLY)
Note 1:	OBW=17.74 MHz



3.2 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.				

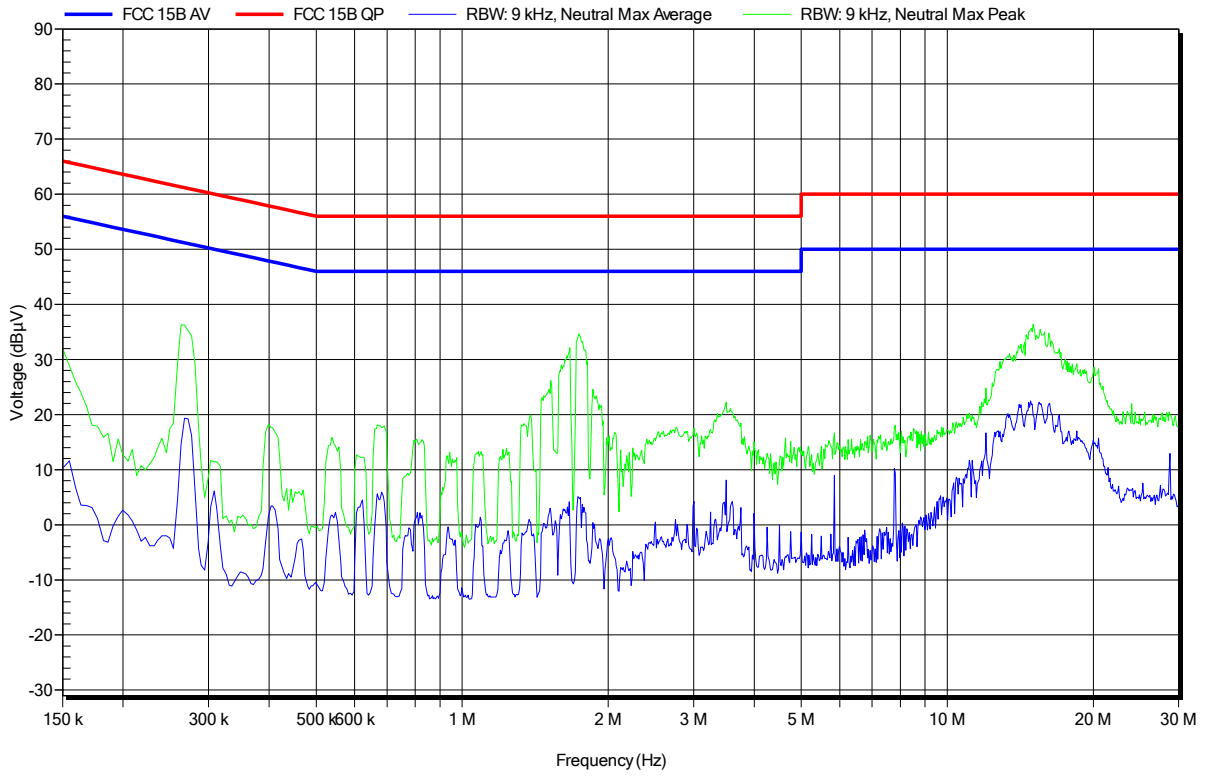
Conducted Emissions

EMI voltage test in the ac-mains according to FCC15B

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	Stereo microscope with integrated canera
Model:	EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 120VAC
LISN:	ESH2-Z5 N
Mode:	WLAN link to laptop, HDMI connection to monitor, light full power
Test Date:	2015-02-06
Note:	

Index 1



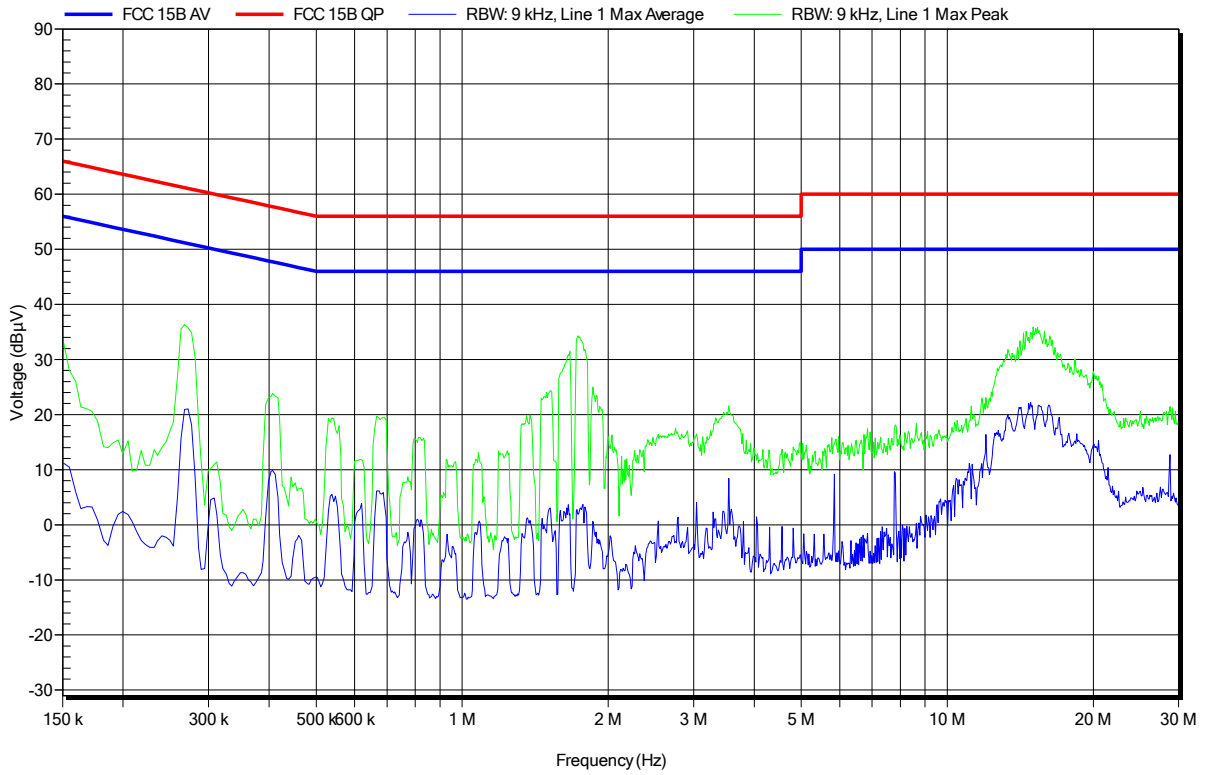
Conducted Emissions

EMI voltage test in the ac-mains according to FCC15B

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	Stereo microscope with integrated canera
Model:	EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 120VAC
LISN:	ESH2-Z5 L
Mode:	WLAN link to laptop, HDMI connection to monitor, light full power
Test Date:	2015-02-06
Note:	

Index 2



3.3 Test Conditions and Results – Transmitter radiated emissions

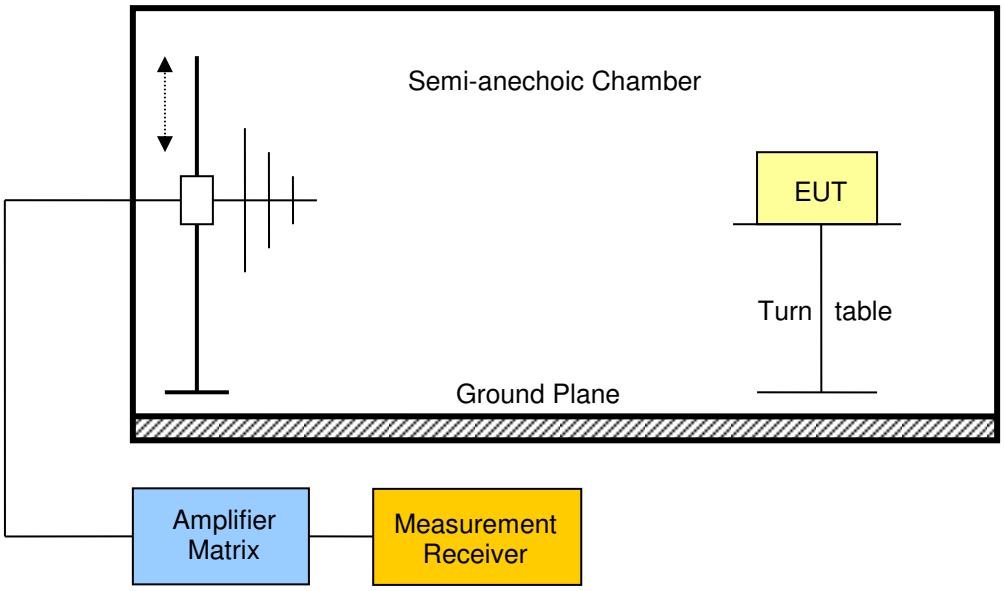
Transmitter radiated emissions acc. to FCC 47 CFR 15.247 / IC RSS-247	Verdict: PASS
Test according referenced standards	Reference Method
	FCC 15.247(d) / IC RSS-247 5.5
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	30 MHz – 10th Harmonic

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

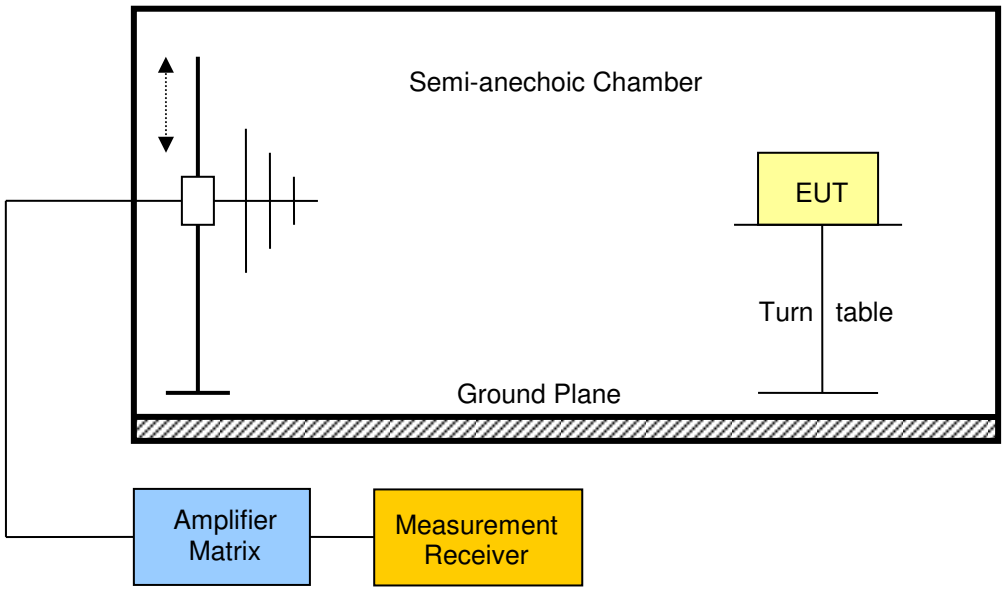
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2412	DSSS	238.962	46.15	pk	ver	95.00	3	-48.85
F_{LOW}	2412	DSSS	239.174	45.60	pk	hor	95.00	3	-49.40
F_{LOW}	2412	DSSS	2390	50.60	pk	hor	74.00	3	-23.40
F_{LOW}	2412	DSSS	2390	40.21	RMS	hor	54.00	3	-13.79
F_{LOW}	2412	DSSS	4824	50.52	pk	hor	74.00	1	-23.48
F_{LOW}	2412	DSSS	4824	49.48	avg	hor	54.00	1	-04.52
F_{LOW}	2412	DSSS	4824	51.70	pk	ver	74.00	1	-22.30
F_{LOW}	2412	DSSS	4824	50.78	avg	ver	54.00	1	-03.22
F_{MID}	2437	DSSS	2352.4	46.18	pk	ver	74.00	3	-27.82
F_{MID}	2437	DSSS	4874	52.10	pk	hor	74.00	1	-21.90
F_{MID}	2437	DSSS	4874	51.10	avg	hor	54.00	1	-02.90
F_{MID}	2437	DSSS	4874	51.90	pk	ver	74.00	1	-22.10
F_{MID}	2437	DSSS	4874	51.23	avg	ver	54.00	1	-02.77
F_{HIGH}	2462	DSSS	2344	48.03	pk	ver	74.00	3	-25.97
F_{HIGH}	2462	DSSS	2483.7	50.62	pk	ver	74.00	3	-23.38
F_{HIGH}	2462	DSSS	2483.7	39.22	RMS	ver	54.00	3	-14.78
F_{HIGH}	2462	DSSS	4920	47.35	pk	ver	74.00	1	-26.65
F_{HIGH}	2462	DSSS	4924	51.34	pk	hor	74.00	1	-22.66
F_{HIGH}	2462	DSSS	4924	50.31	avg	hor	54.00	1	-03.69

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	57.58	pk	hor	74.00	3	-16.42
F_{LOW}	2412	HT20	2390	41.45	RMS	hor	54.00	3	-12.55
F_{LOW}	2412	HT20	4824	46.09	pk	ver	74.00	1	-27.91
F_{LOW}	2412	HT20	4826	49.64	pk	hor	74.00	1	-24.36
F_{LOW}	2412	HT20	4826	37.64	avg	hor	54.00	1	-16.36
F_{LOW}	2437	HT20	4874	52.53	pk	hor	74.00	1	-21.47
F_{LOW}	2437	HT20	4874	40.90	avg	hor	54.00	1	-13.10
F_{LOW}	2437	HT20	4874	50.93	pk	ver	74.00	1	-23.07
F_{LOW}	2437	HT20	4874	39.14	avg	ver	54.00	1	-14.86
F_{LOW}	2462	HT20	4920	54.45	pk	ver	74.00	1	-19.55
F_{LOW}	2462	HT20	4920	39.87	avg	ver	54.00	1	-14.13
F_{LOW}	2462	HT20	4924	55.23	pk	hor	74.00	1	-18.77
F_{LOW}	2462	HT20	4924	43.60	avg	hor	54.00	1	-10.40
Comments: * Physical distance between EUT and measurement antenna.									

3.4 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}	2437	240	35.34	pk	hor	46.00	-10.66 dB
F_{MID}	2437	240	37.05	pk	ver	46.00	-8.95 dB
F_{MID}	2437	468.8	34.37	pk	hor	46.00	-11.63 dB
F_{MID}	2437	468.8	32.27	pk	ver	46.00	-13.73 dB
F_{MID}	2437	489.6	35.80	pk	hor	46.00	-10.2 dB
F_{MID}	2437	489.6	31.08	pk	ver	46.00	-14.92 dB
F_{MID}	2437	1006	42.30	pk	ver	53.98	-11.68 dB
F_{MID}	2437	1438	43.08	pk	hor	53.98	-10.9 dB
F_{MID}	2437	1438	41.86	pk	ver	53.98	-12.12 dB
F_{MID}	2437	1678	42.22	pk	ver	53.98	-11.76 dB
F_{MID}	2437	1798	42.33	pk	hor	53.98	-11.65 dB
F_{MID}	2437	2350	41.54	pk	hor	53.98	-12.44 dB
F_{MID}	2437	2350	41.58	pk	ver	53.98	-12.4 dB
F_{MID}	2437	2686	42.26	pk	hor	53.98	-11.72 dB
F_{MID}	2437	2968	42.37	pk	hor	53.98	-11.61 dB

Comments:
* Physical distance between EUT and measurement antenna.
** Emission level corresponds to ambient noise floor

ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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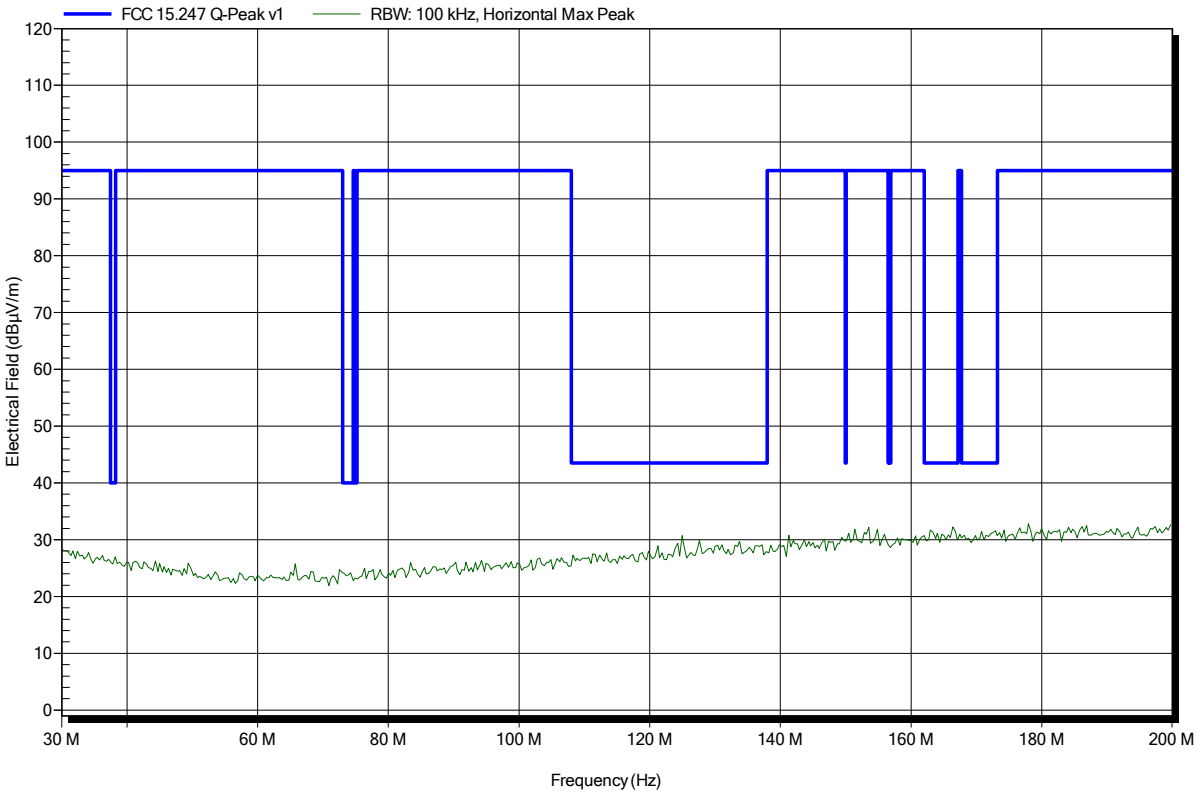

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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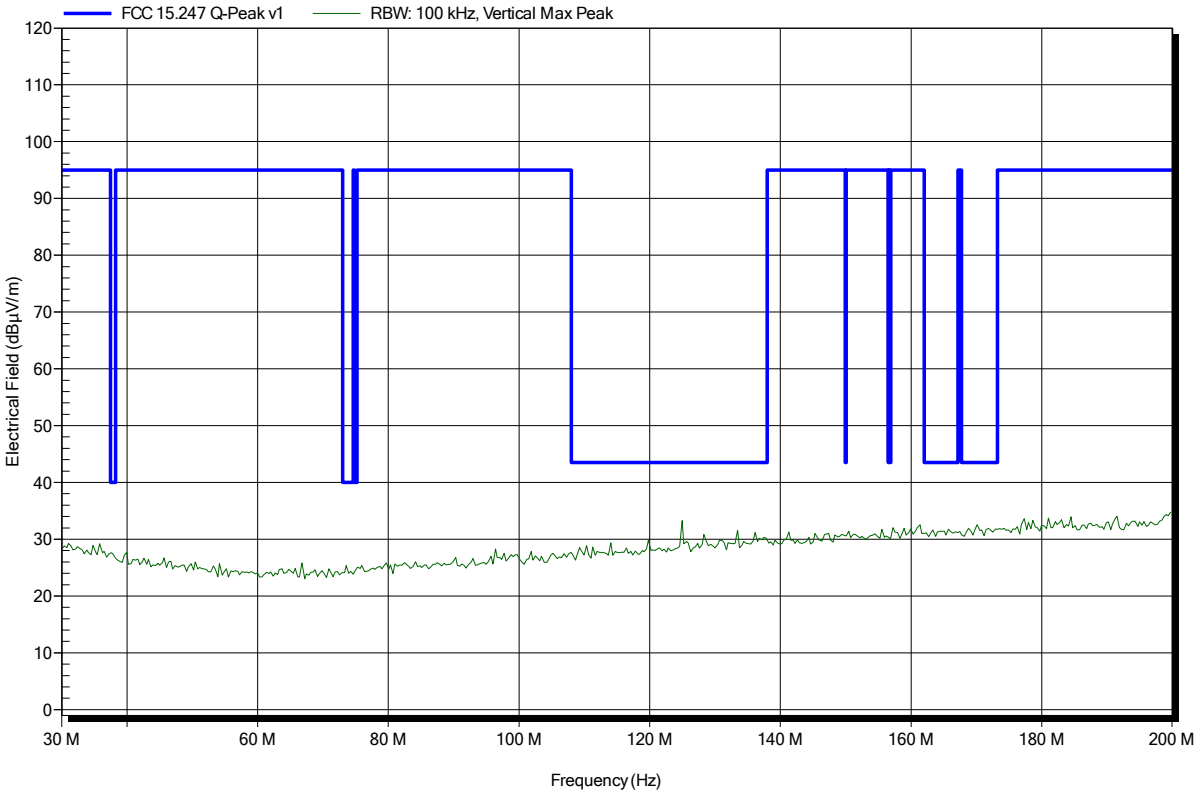

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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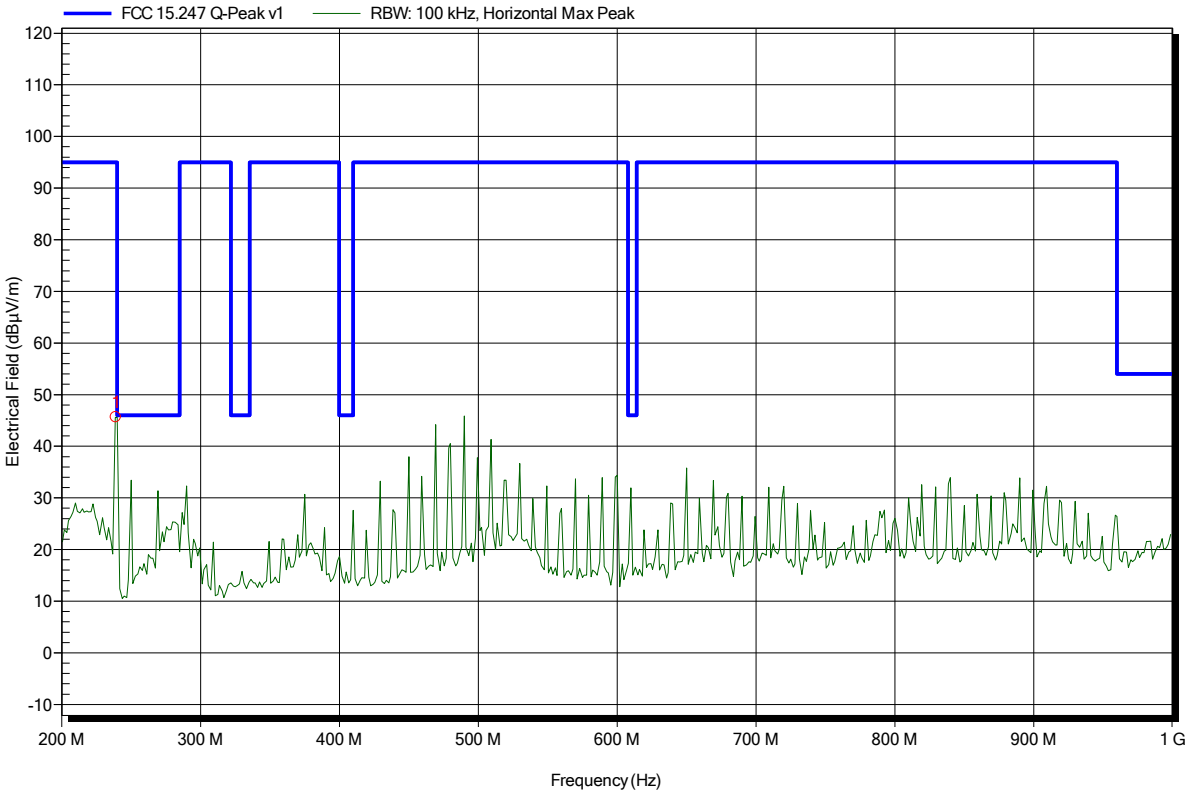

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
239.174 MHz	45.6 dBµV/m	95 dBµV/m	-49.4 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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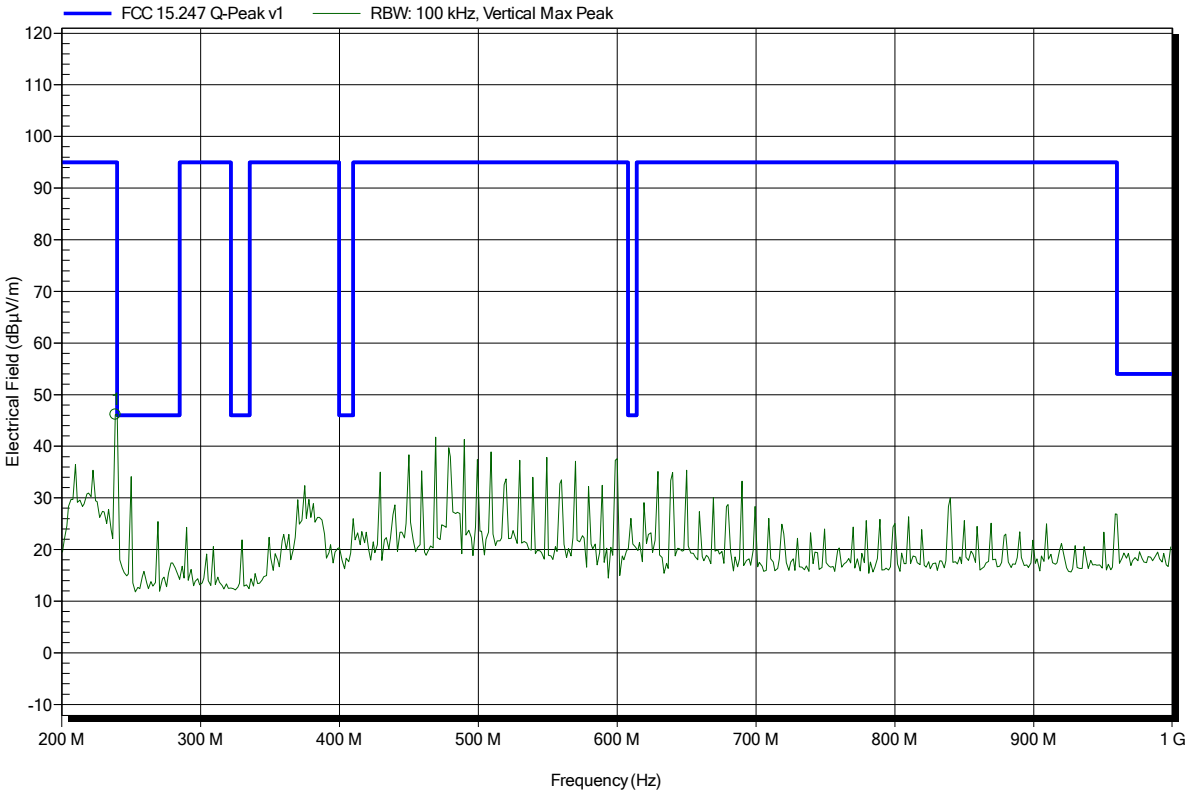

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
238.962 MHz	46.15 dBµV/m	95 dBµV/m	-48.85 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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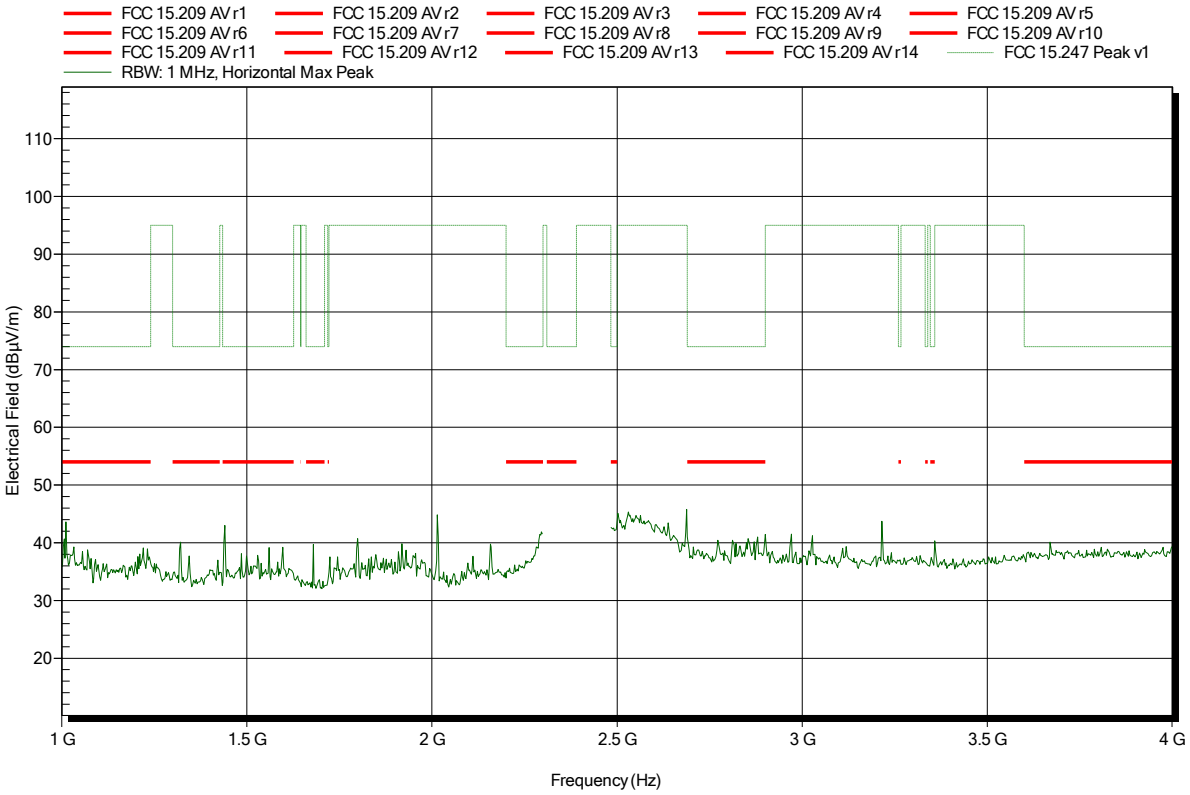

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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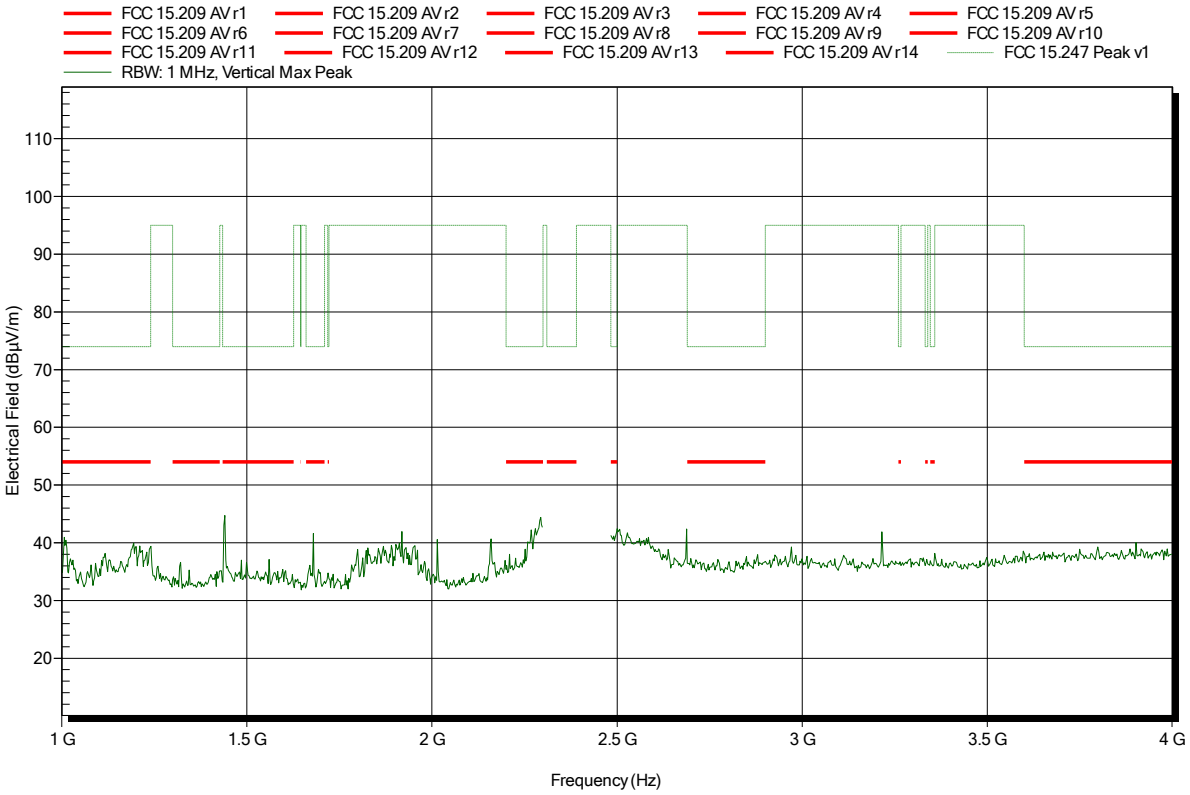

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	lower bandedge

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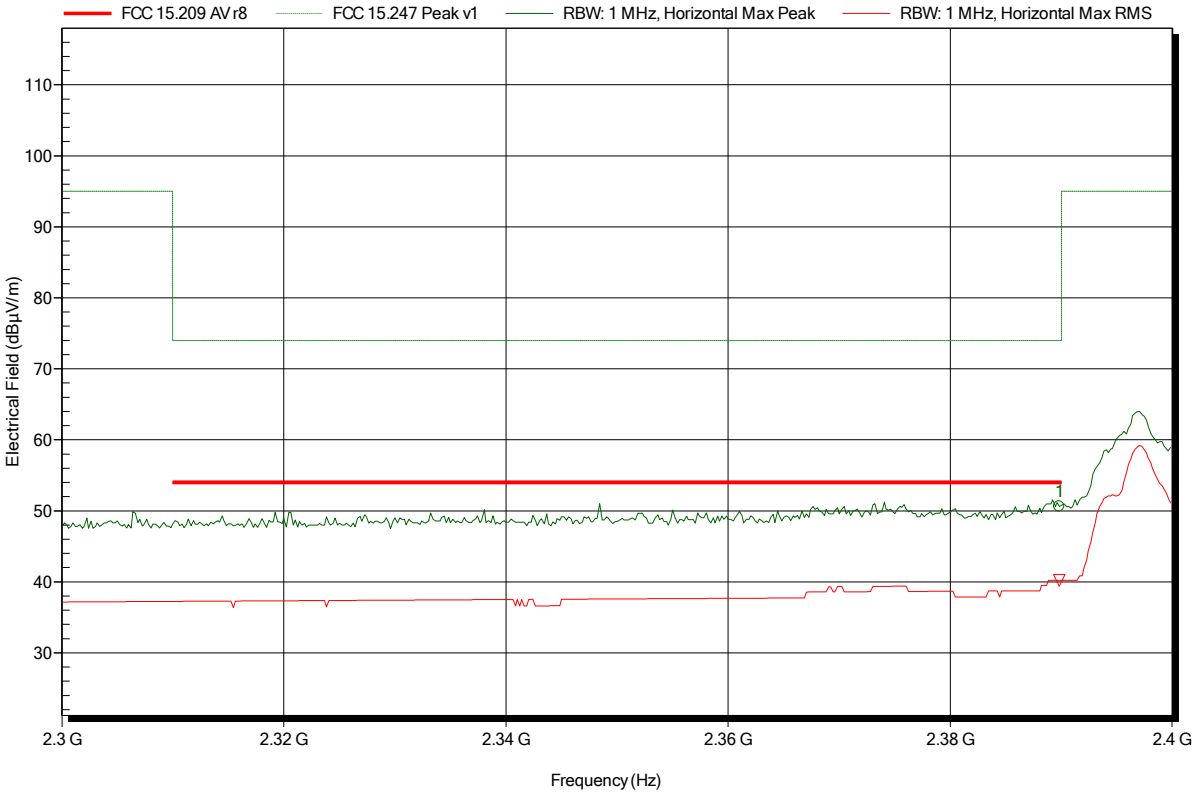

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.39 GHz	50.6 dBµV/m	74 dBµV/m	-23.4 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.39 GHz	40.21 dBµV/m	54 dBµV/m	-13.79 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	lower bandedge

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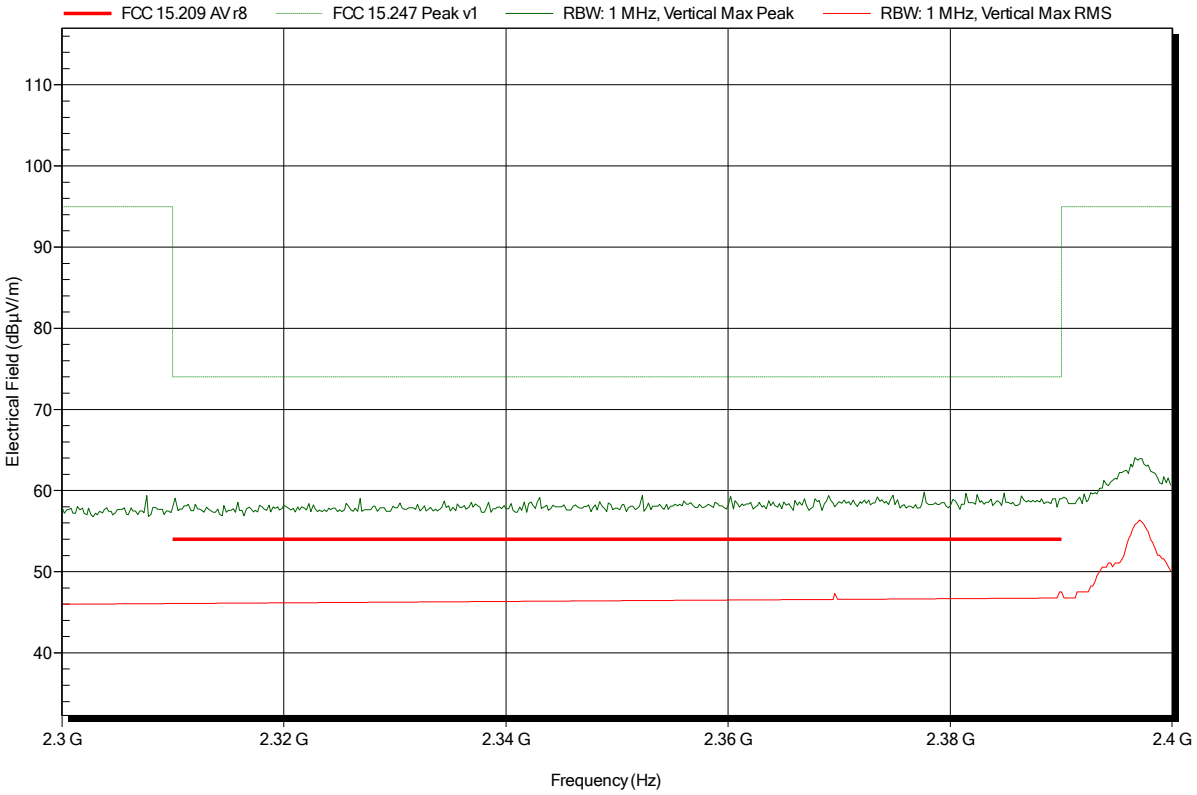

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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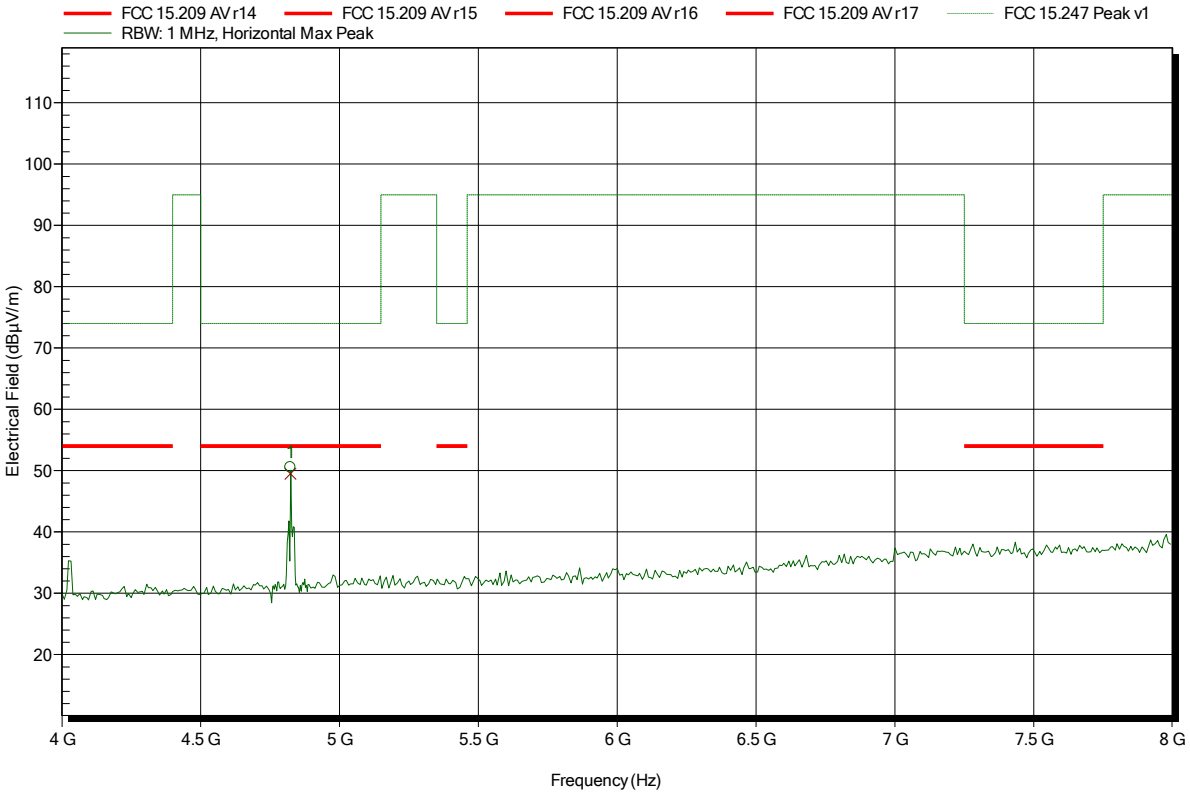

Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	50.52 dBµV/m	74 dBµV/m	-23.48 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.824 GHz	49.48 dBµV/m	54 dBµV/m	-4.52 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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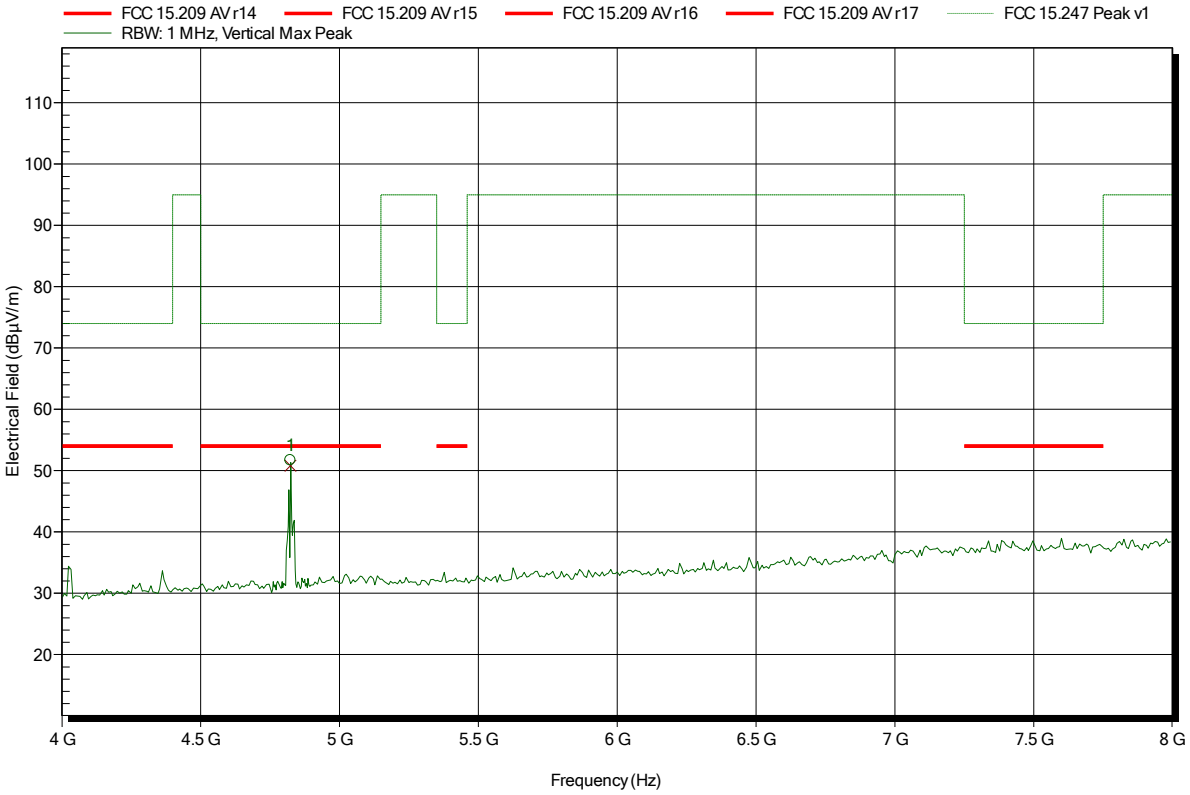

Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	51.7 dBµV/m	74 dBµV/m	-22.3 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.824 GHz	50.78 dBµV/m	54 dBµV/m	-3.22 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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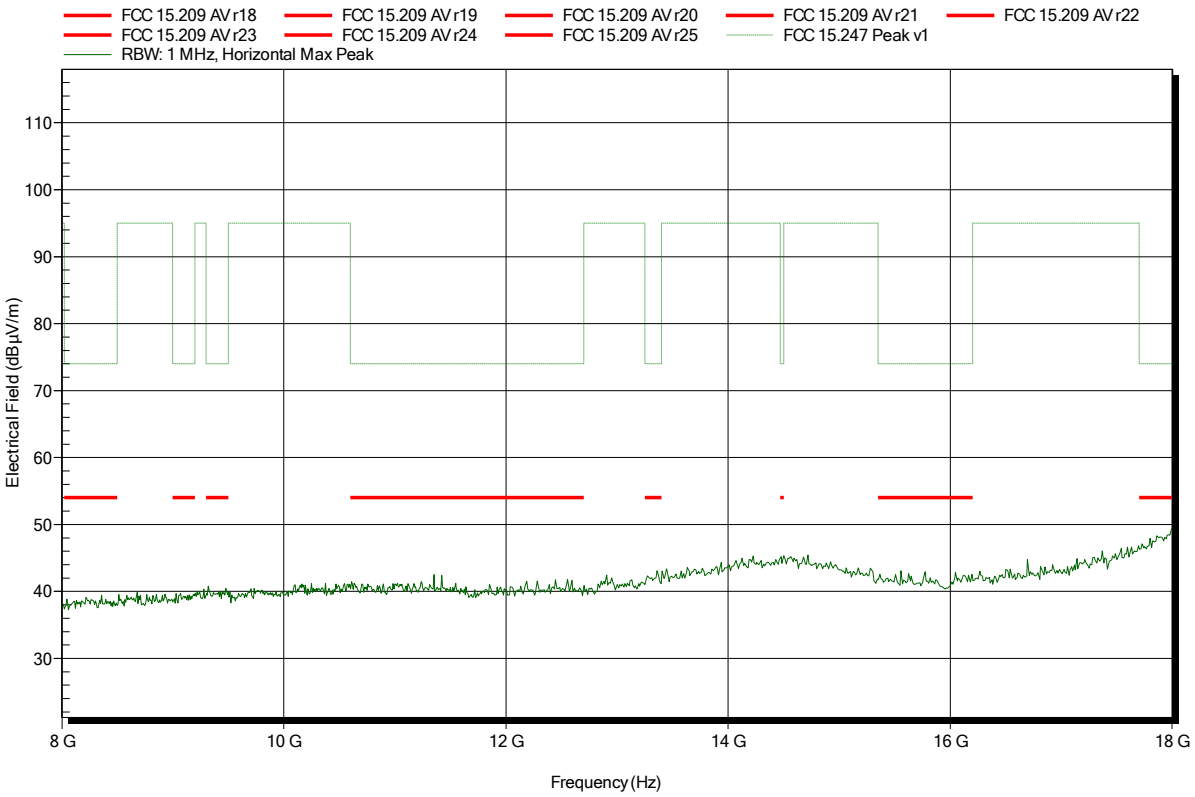

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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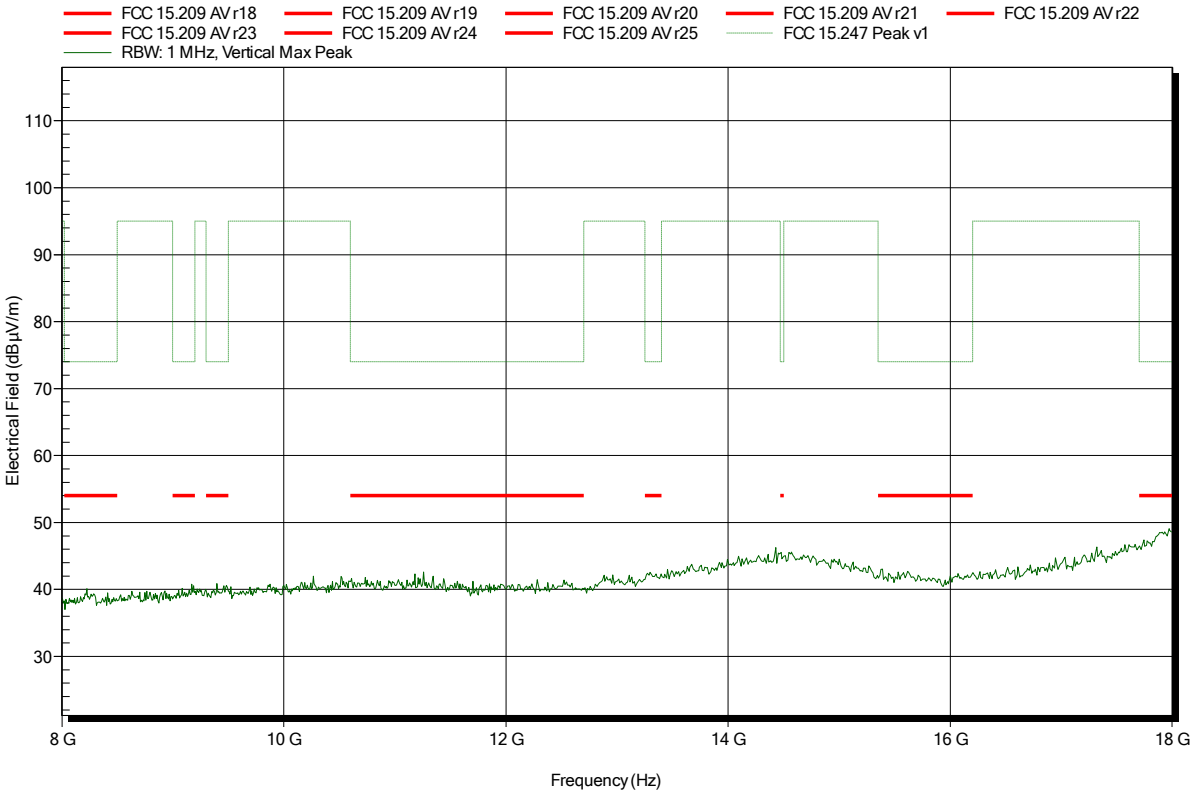

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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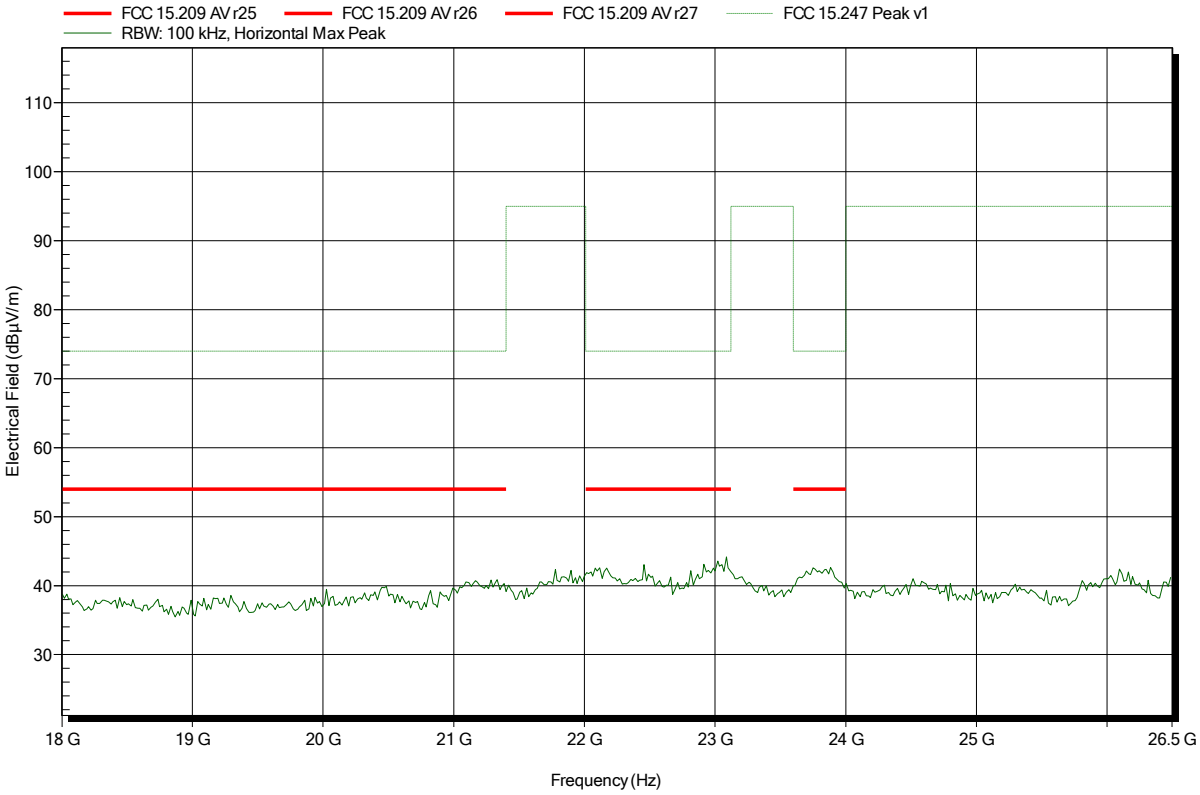

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2412 MHz
Test Date:	2015-04-08
Note:	

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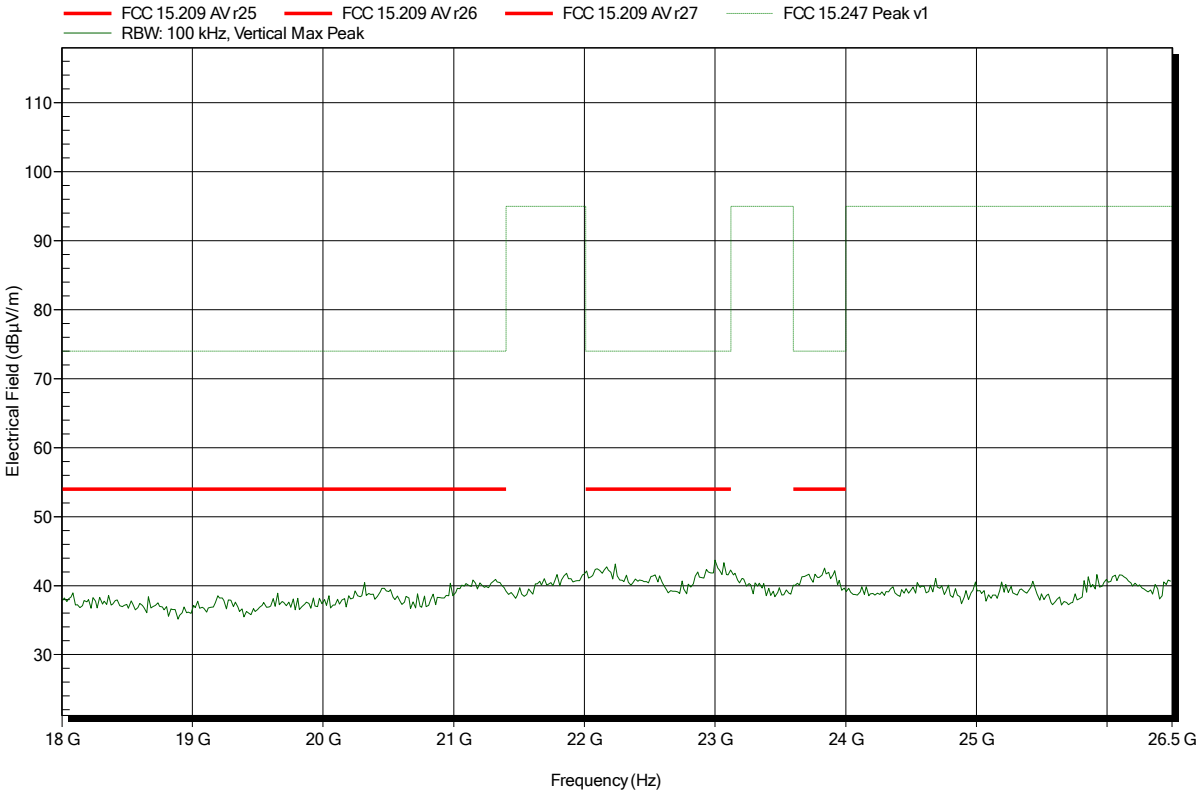

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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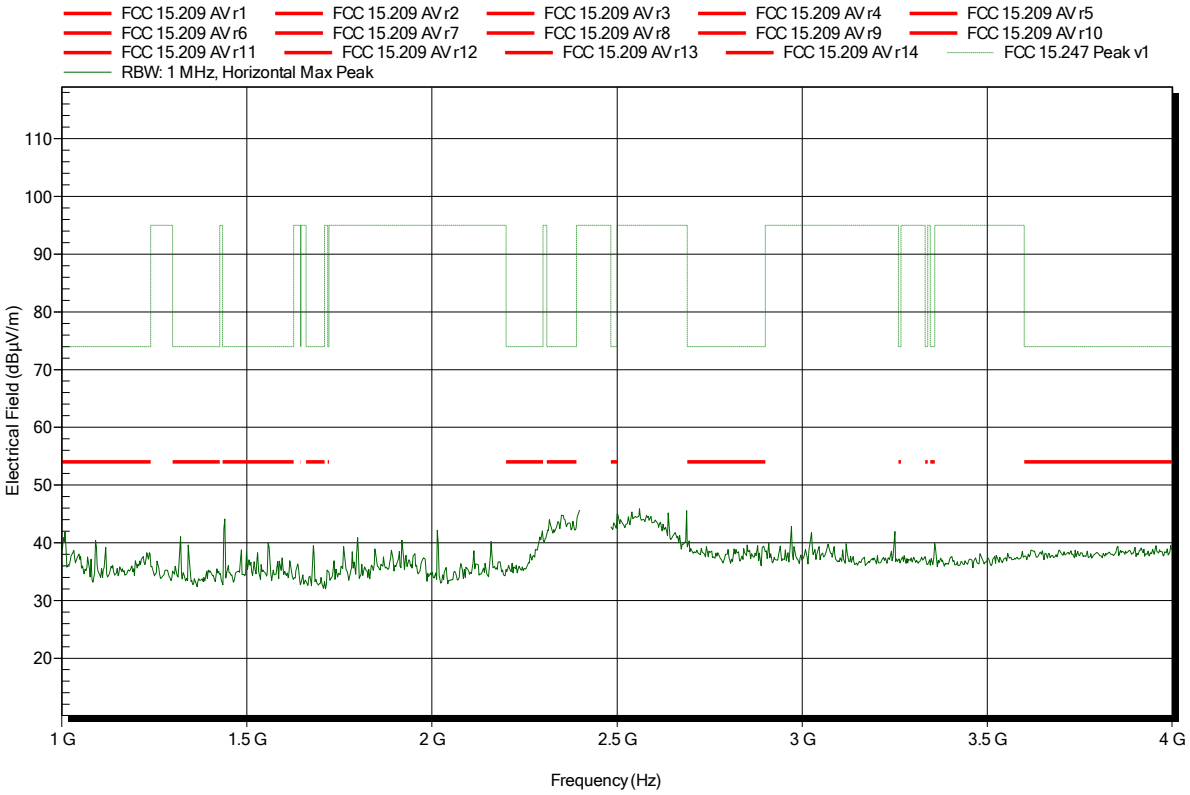

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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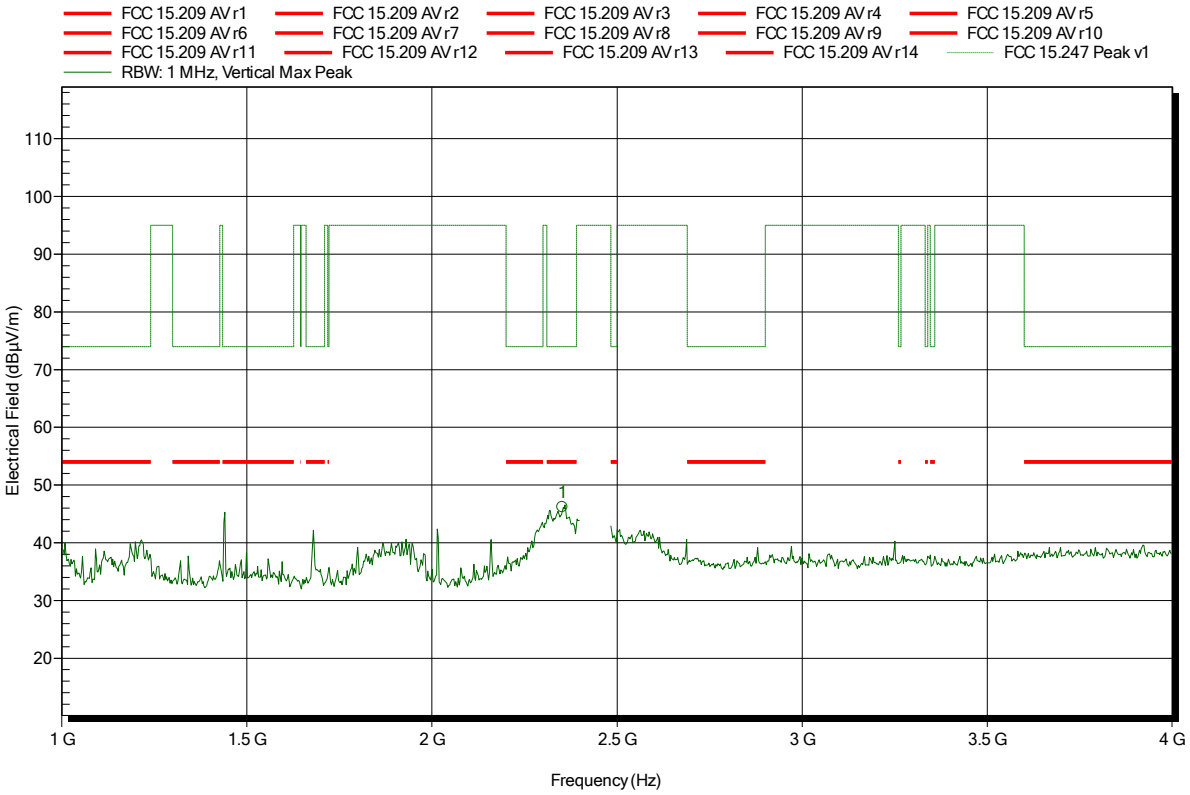

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3524 GHz	46.18 dBµV/m	74 dBµV/m	-27.82 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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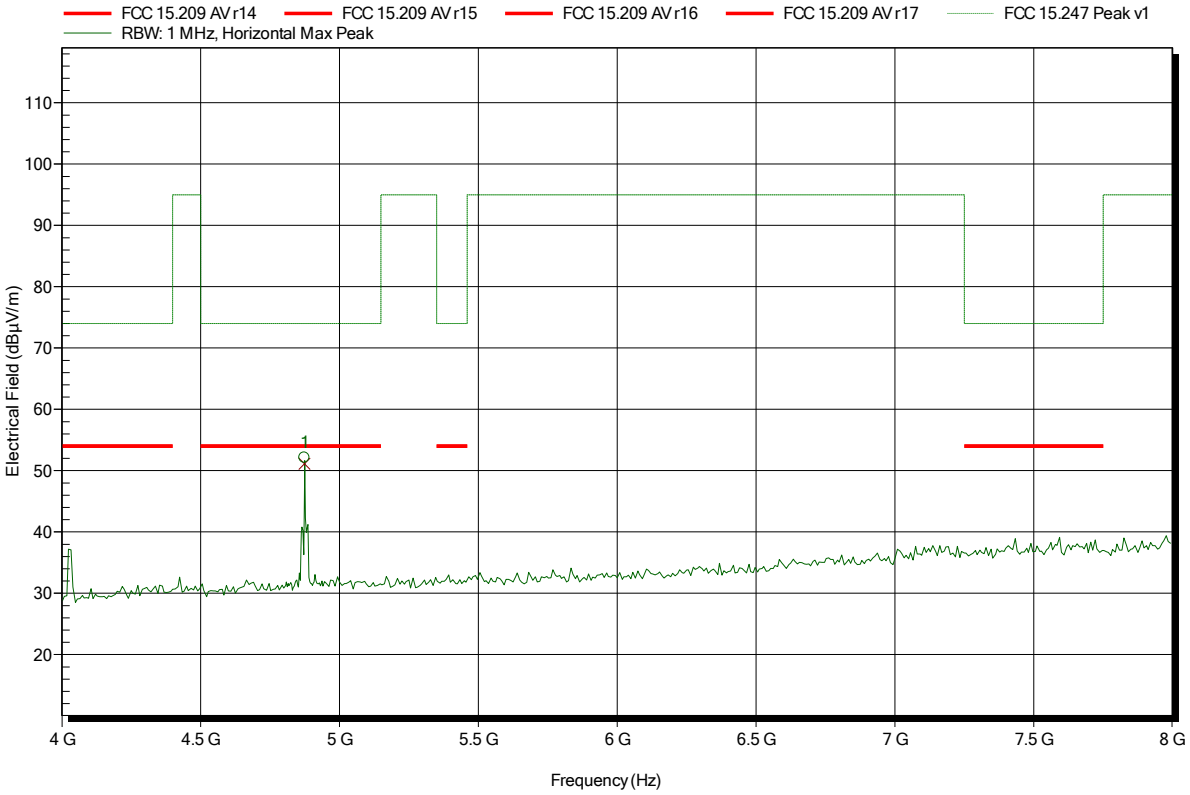

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	52.1 dBµV/m	74 dBµV/m	-21.9 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	51.1 dBµV/m	54 dBµV/m	-2.9 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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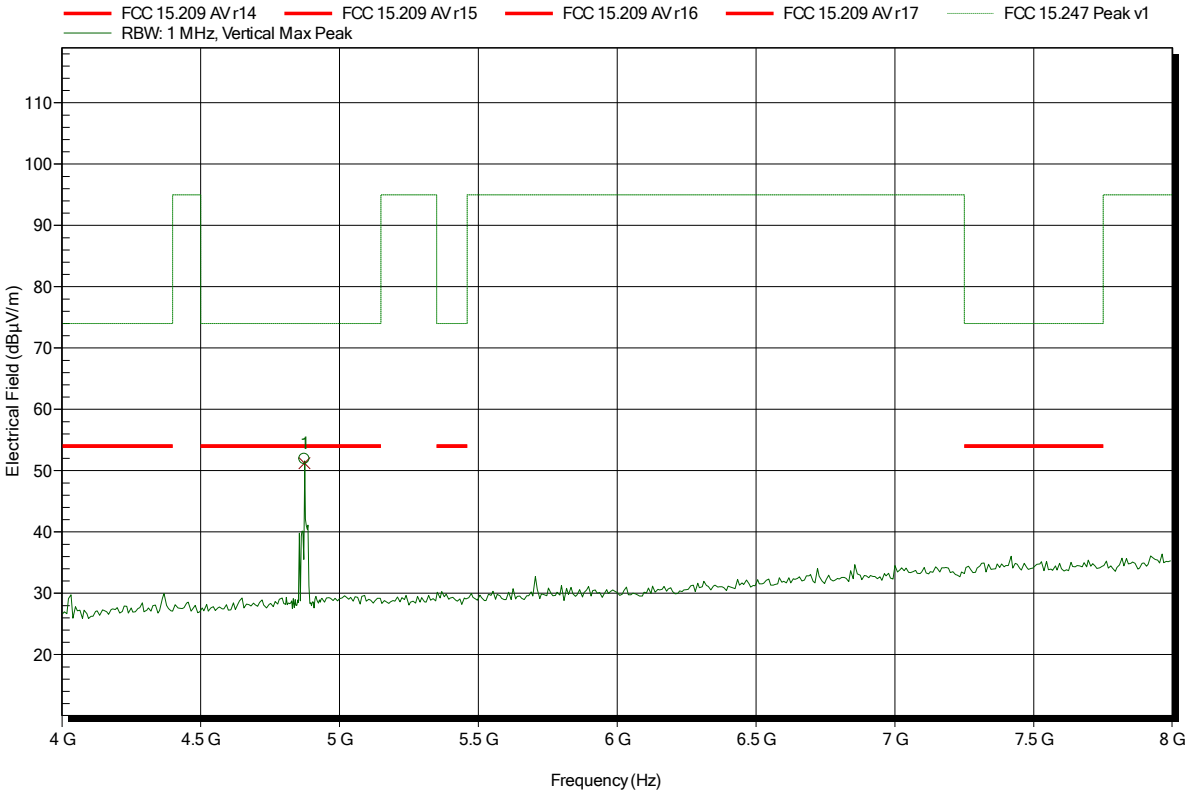

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	51.9 dBµV/m	74 dBµV/m	-22.1 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	51.23 dBµV/m	54 dBµV/m	-2.77 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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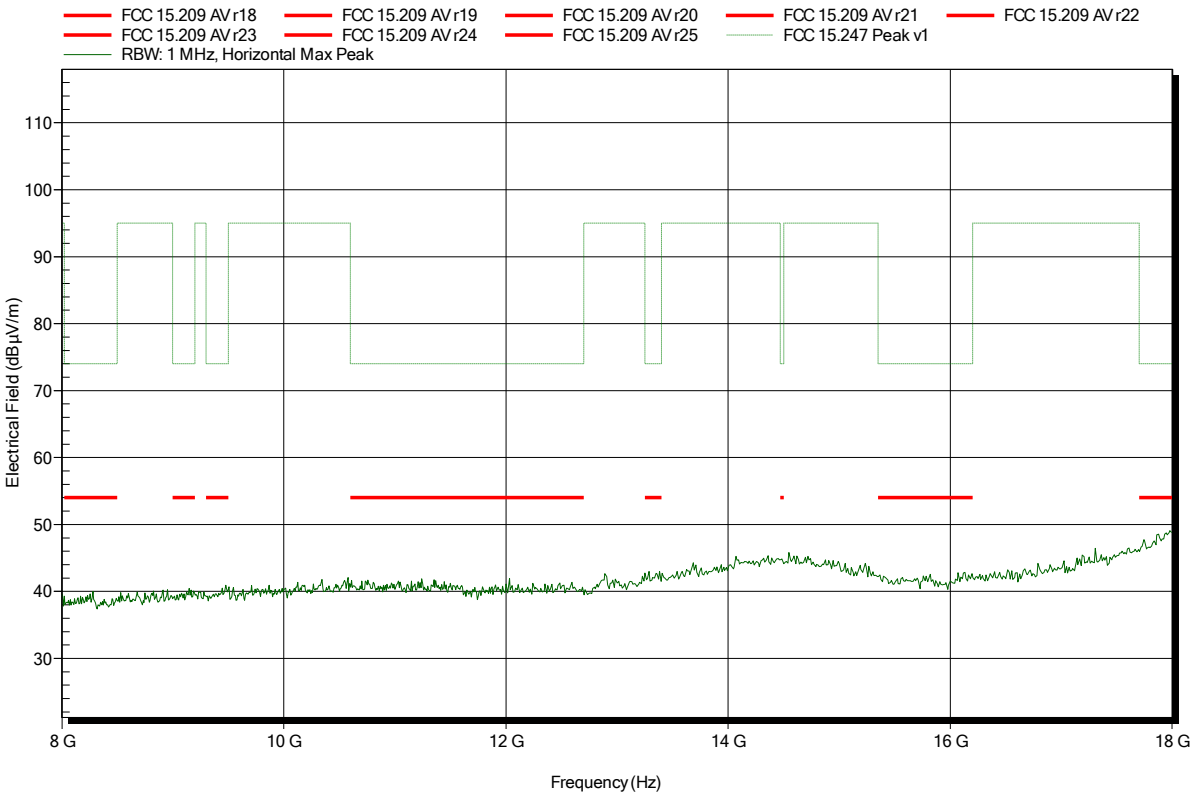

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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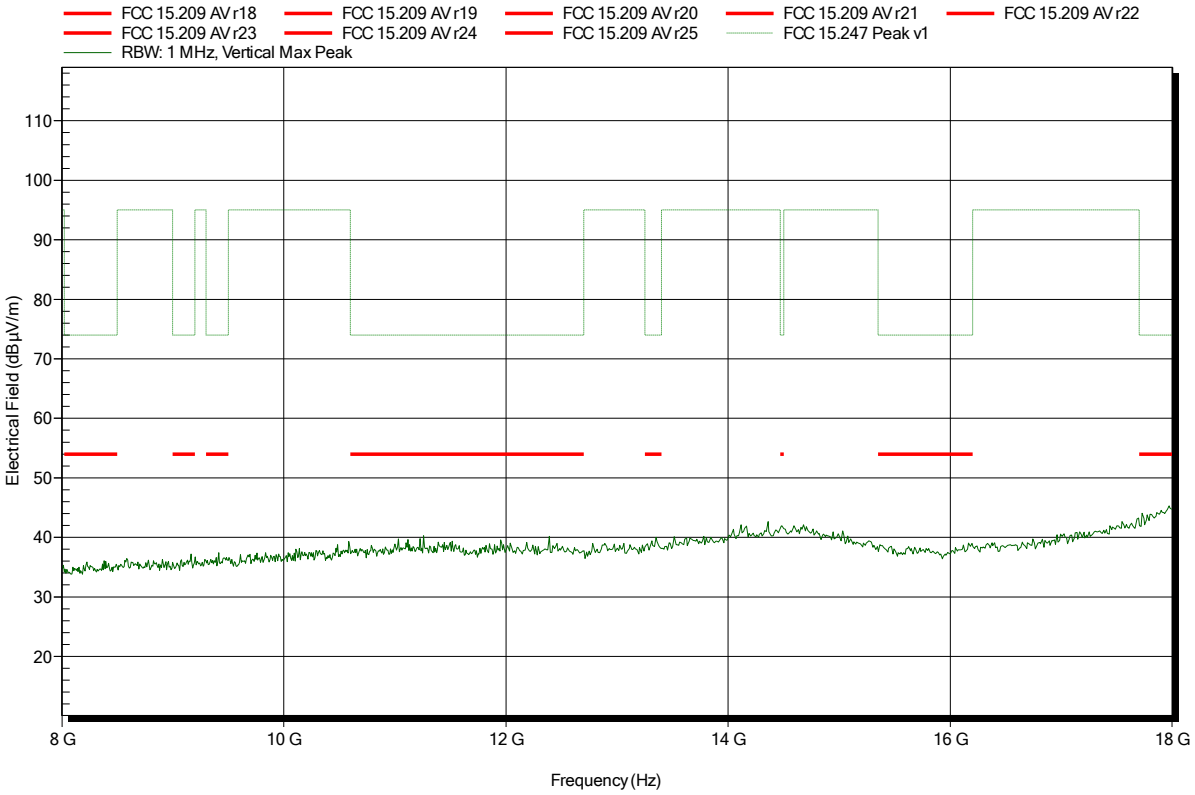

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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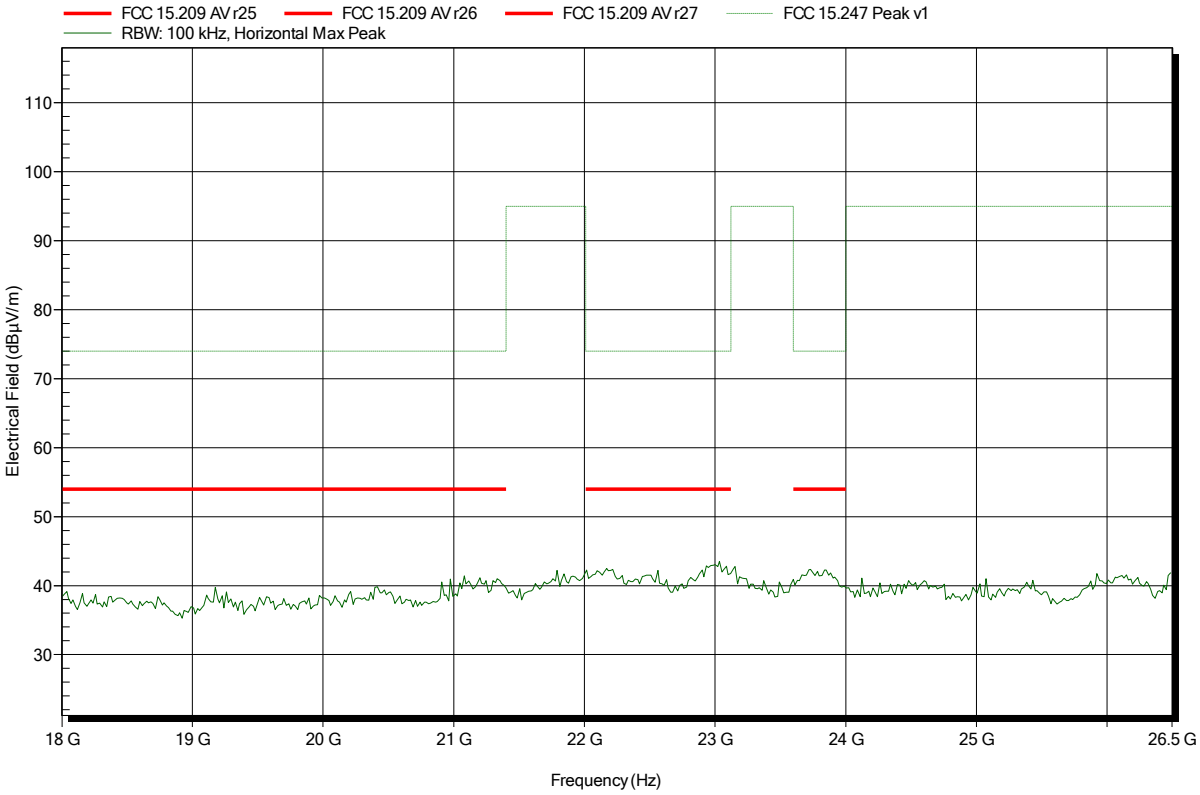

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2437 MHz
Test Date:	2015-04-08
Note:	

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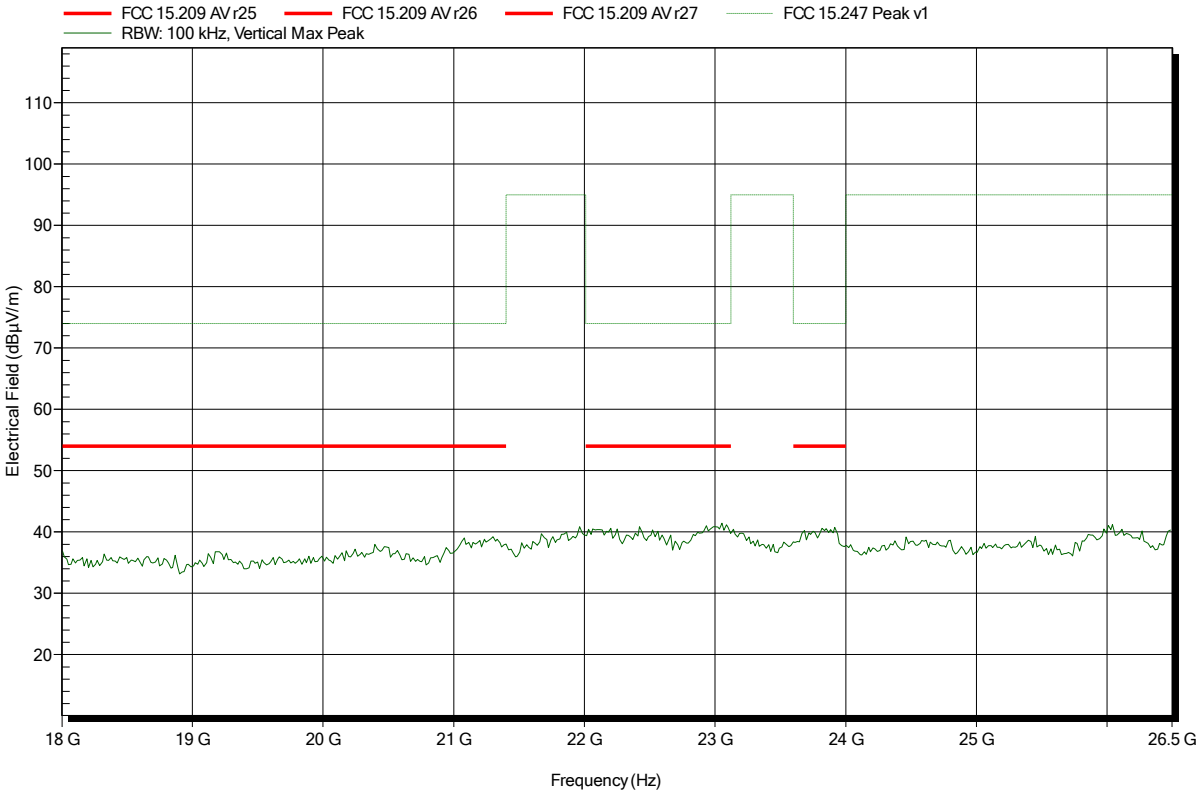

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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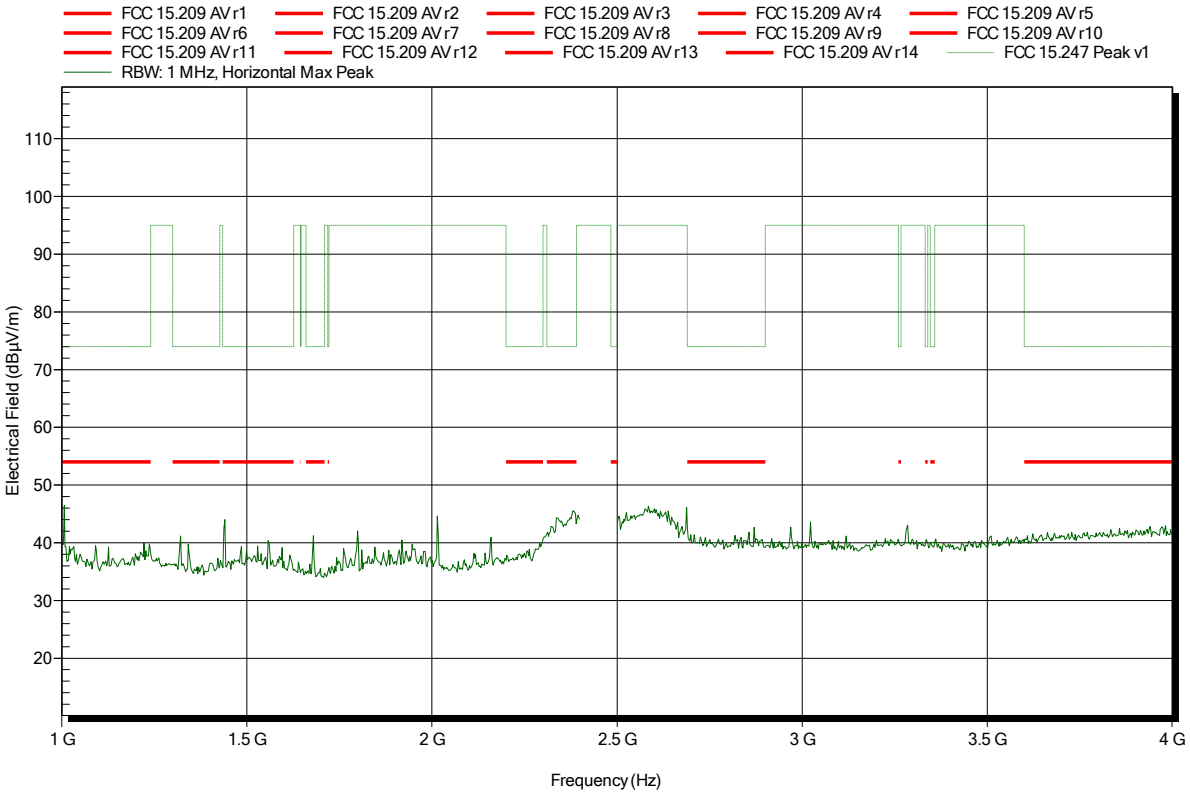

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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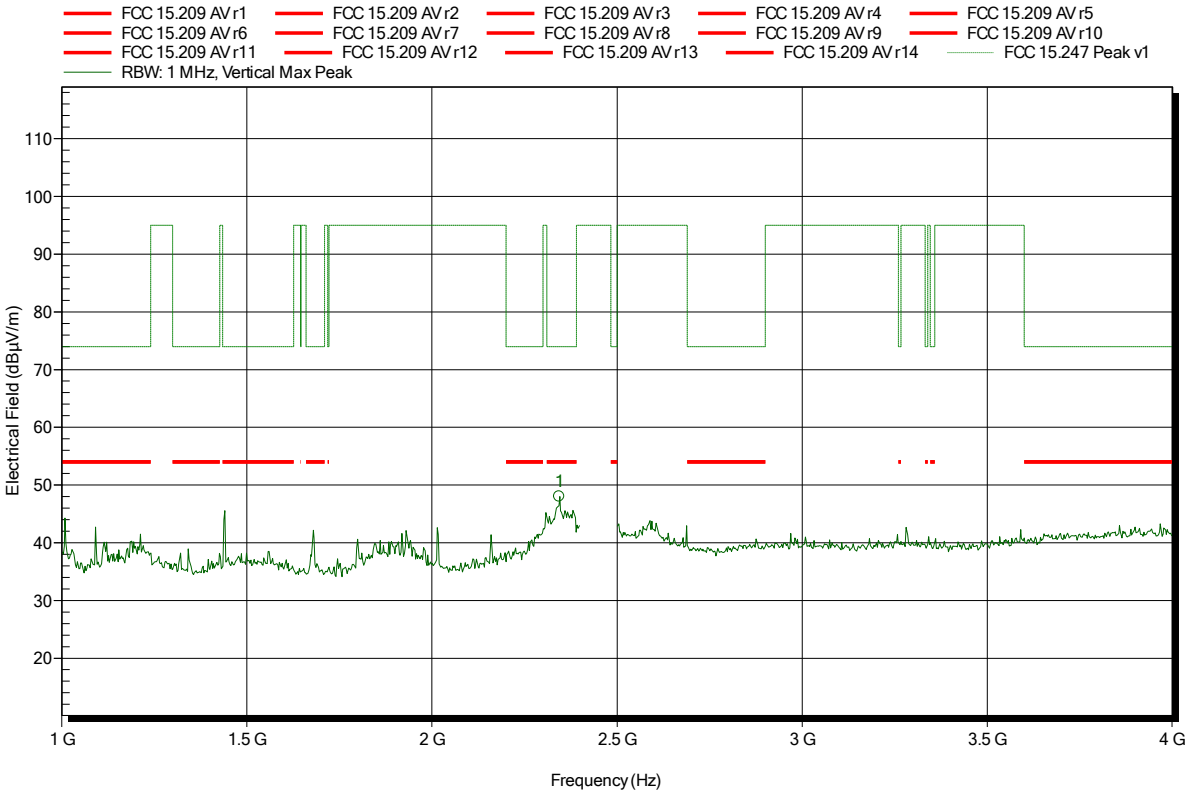

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.344 GHz	48.03 dBµV/m	74 dBµV/m	-25.97 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	upper bandedge

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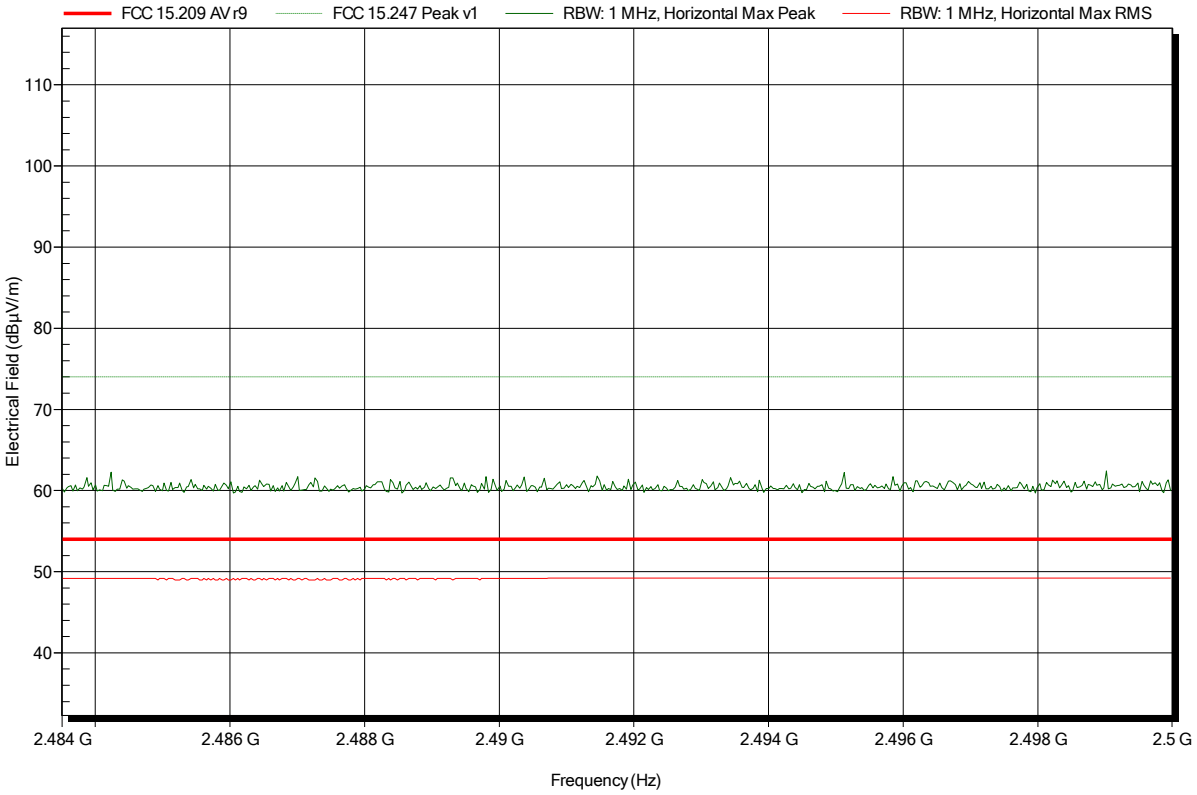

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	upper bandedge

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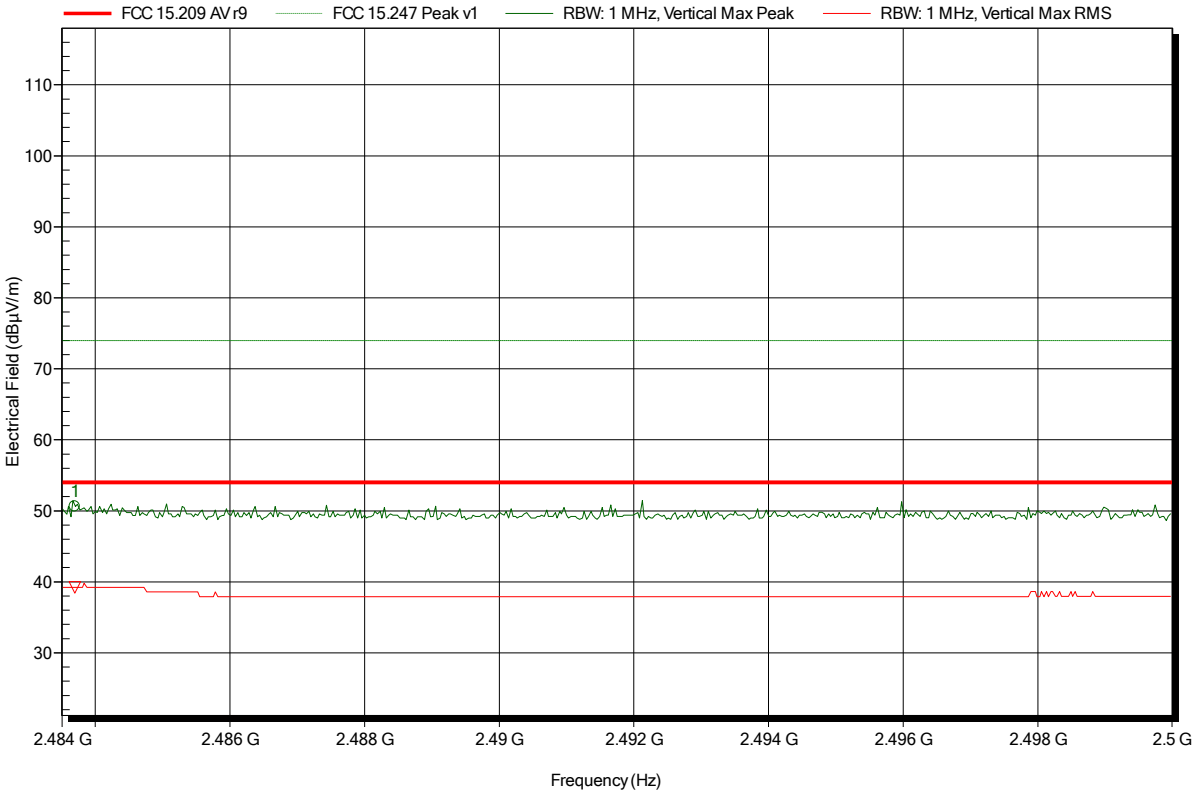

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4837 GHz	50.62 dBµV/m	74 dBµV/m	-23.38 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4837 GHz	39.22 dBµV/m	54 dBµV/m	-14.78 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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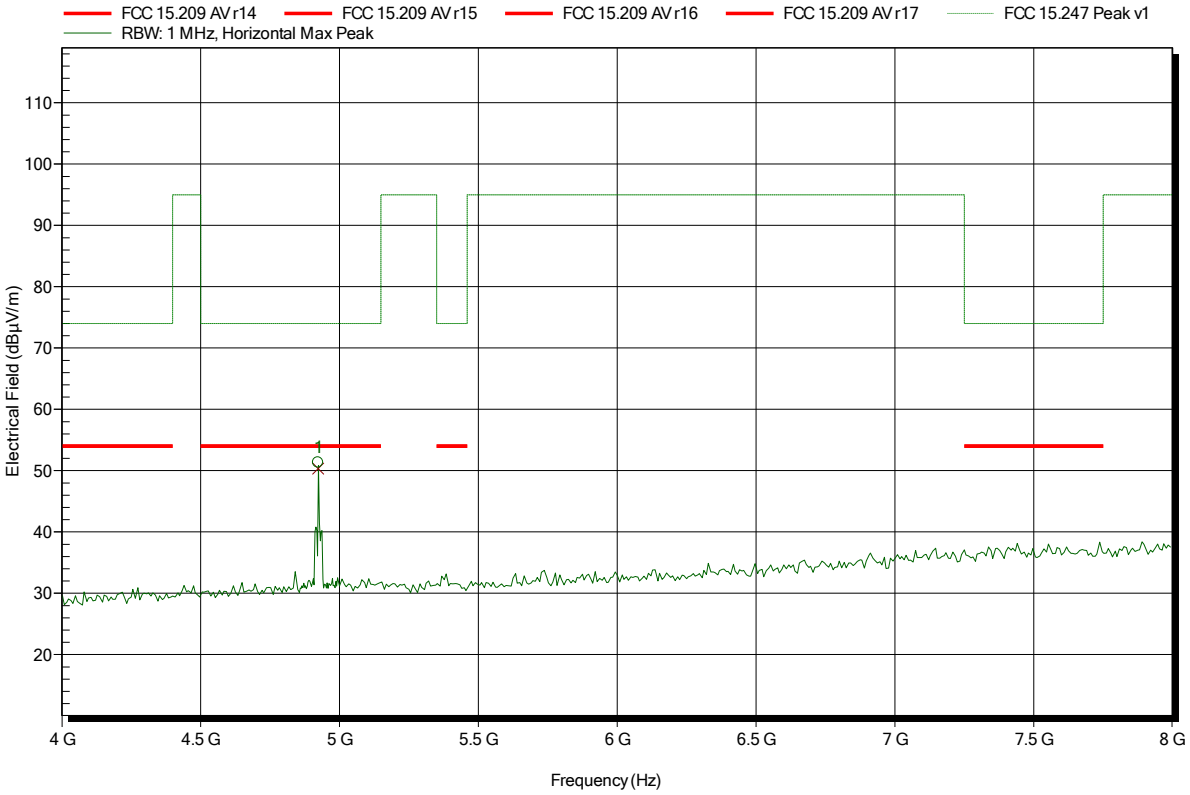

Frequency	Peak	Peak Limit	Peak Difference	Status
4.924 GHz	51.34 dBµV/m	74 dBµV/m	-22.66 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.924 GHz	50.31 dBµV/m	54 dBµV/m	-3.69 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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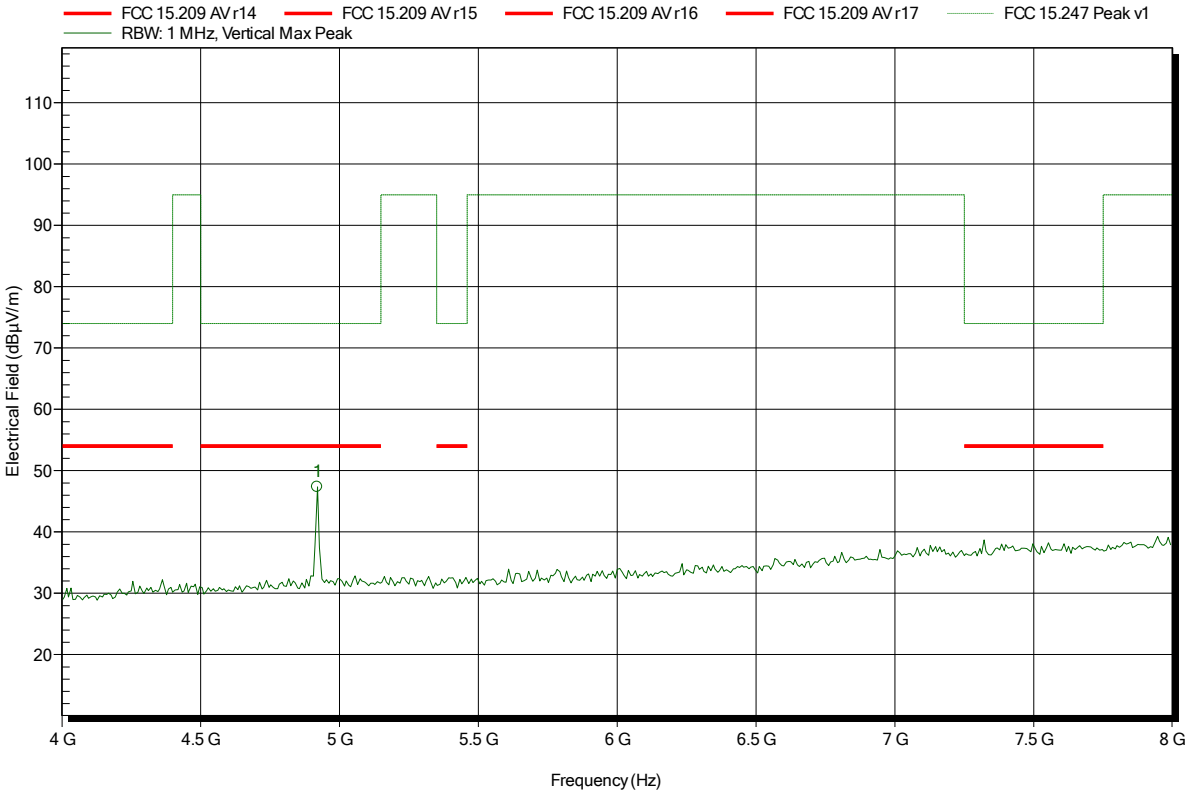

Frequency	Peak	Peak Limit	Peak Difference	Status
4.92 GHz	47.35 dBµV/m	74 dBµV/m	-26.65 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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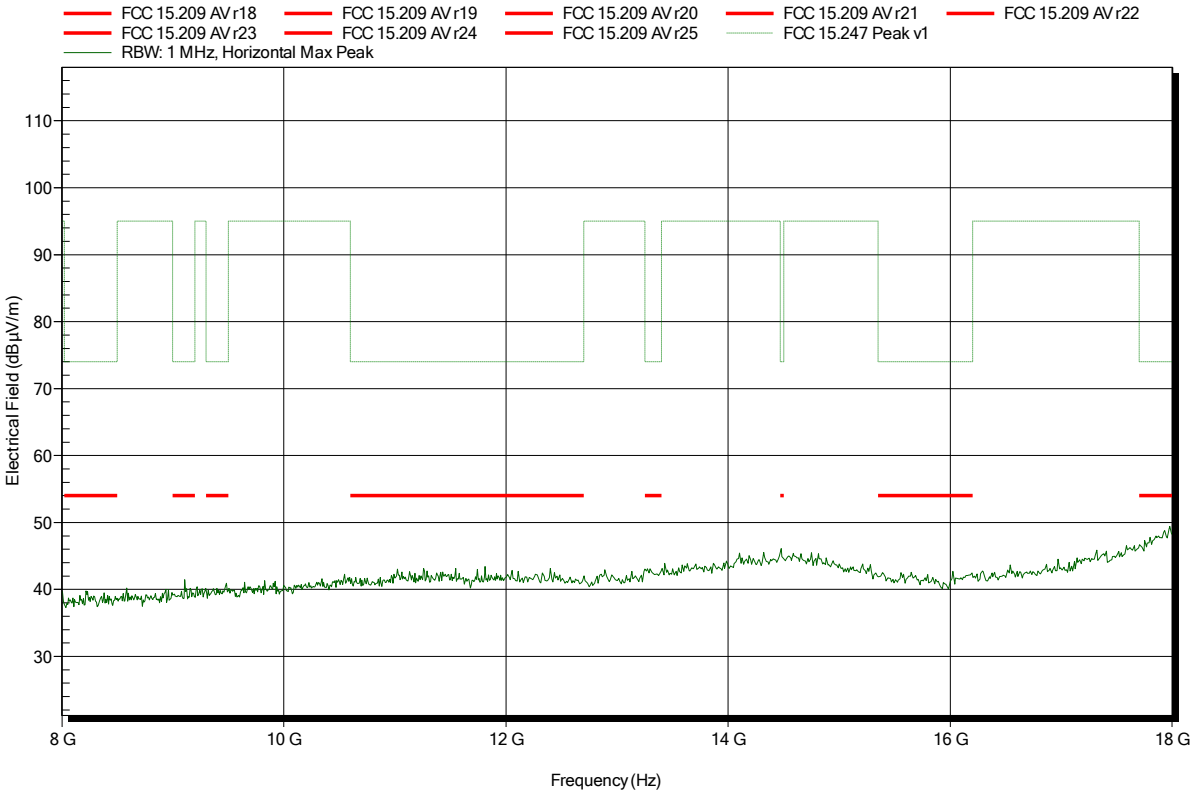

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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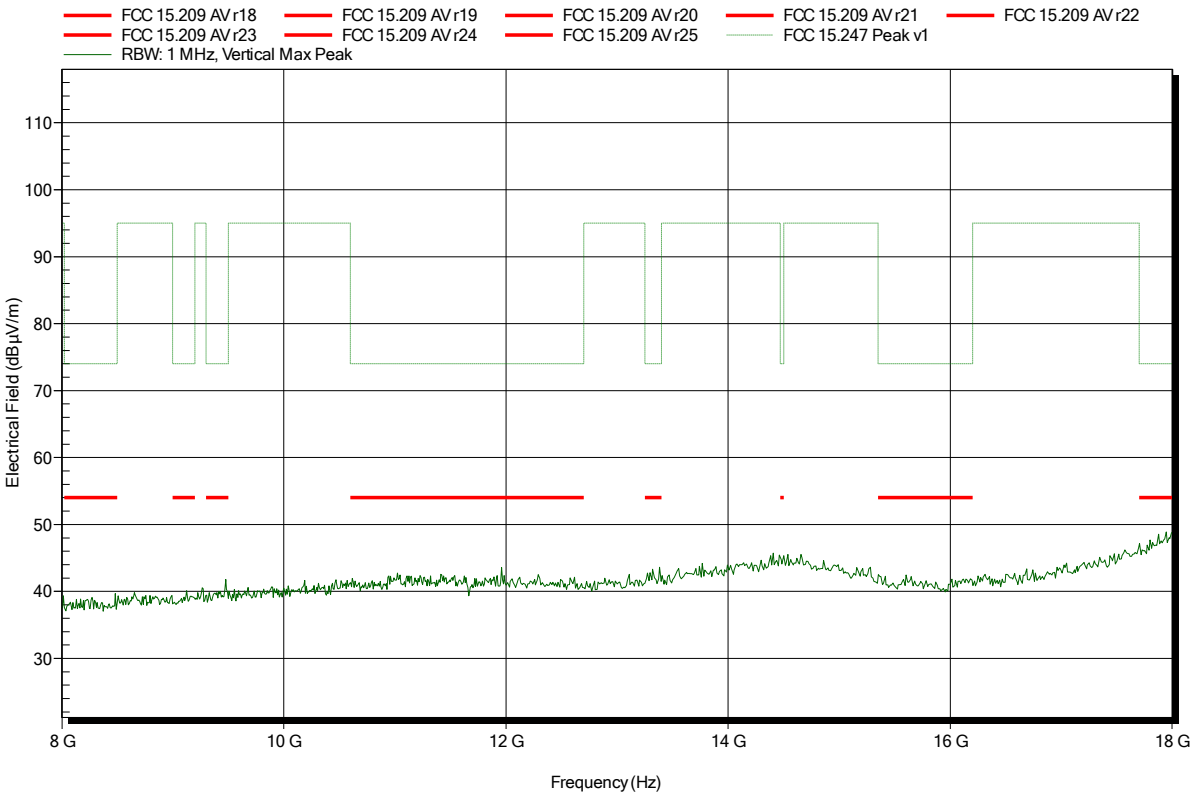

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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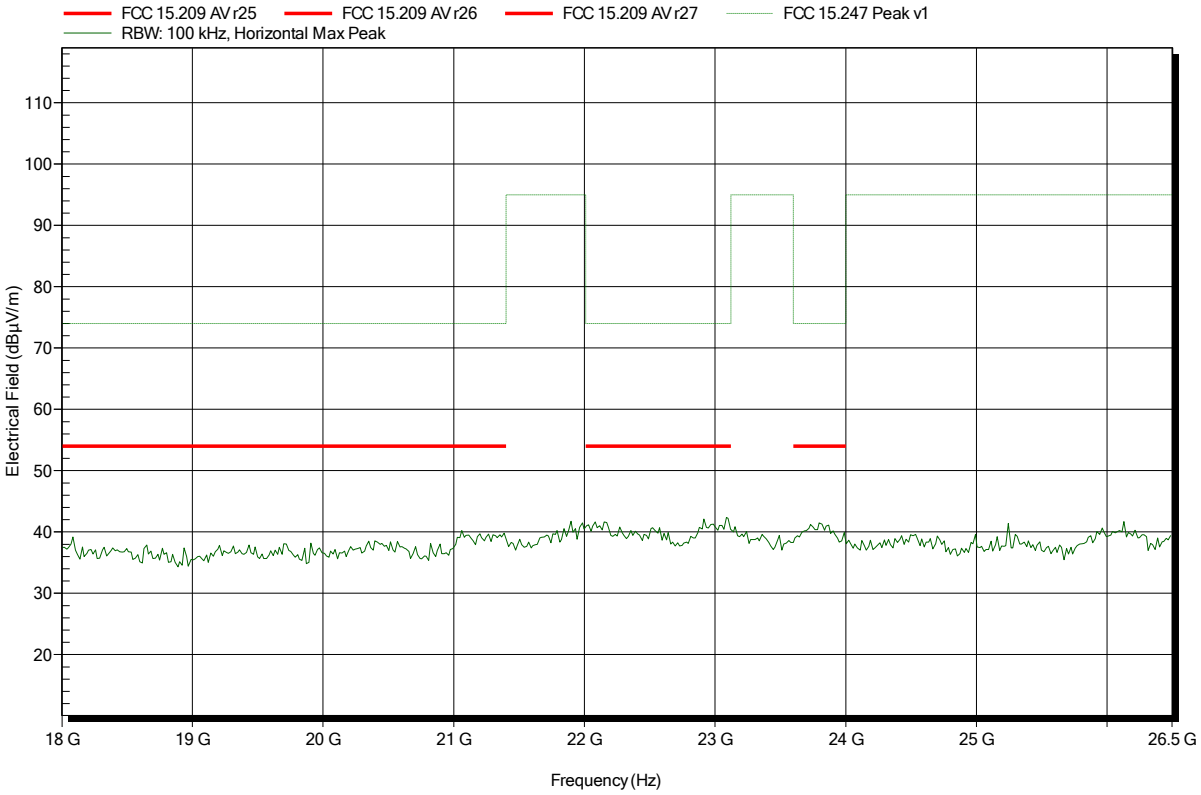

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; DSSS; 1Mbps; 2462 MHz
Test Date:	2015-04-08
Note:	

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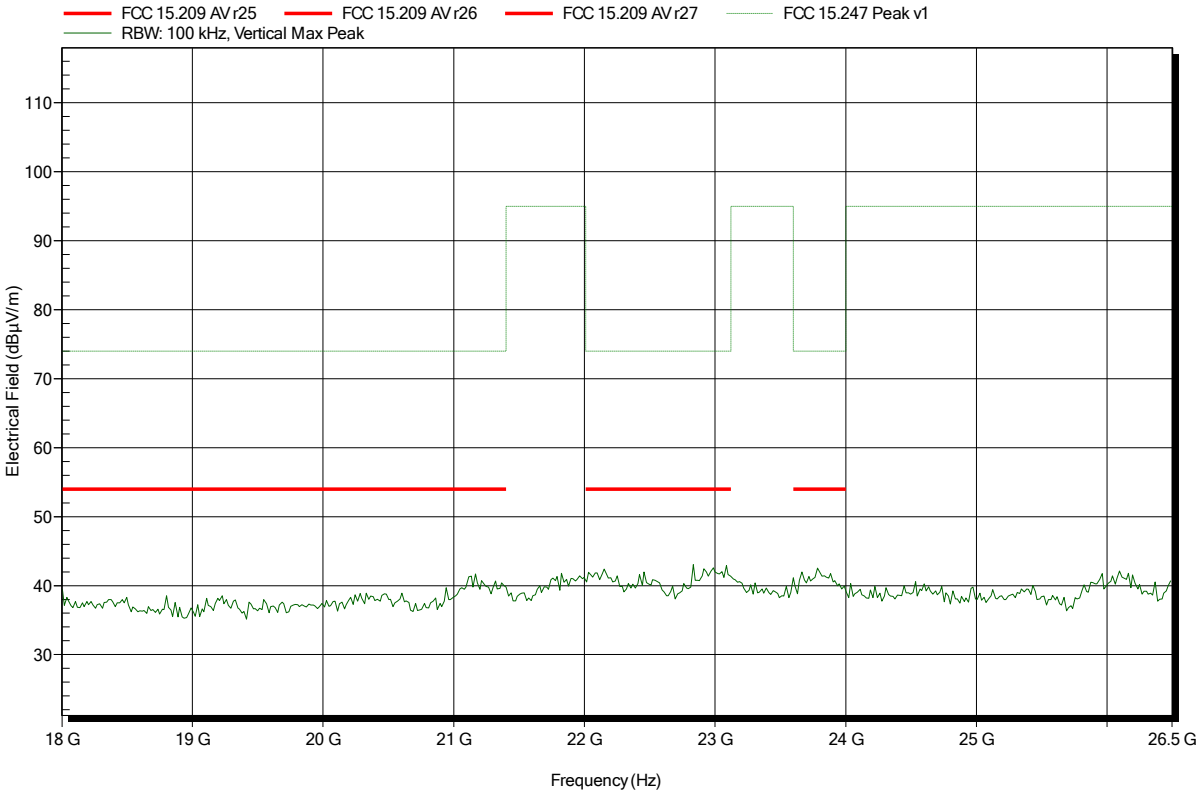

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	

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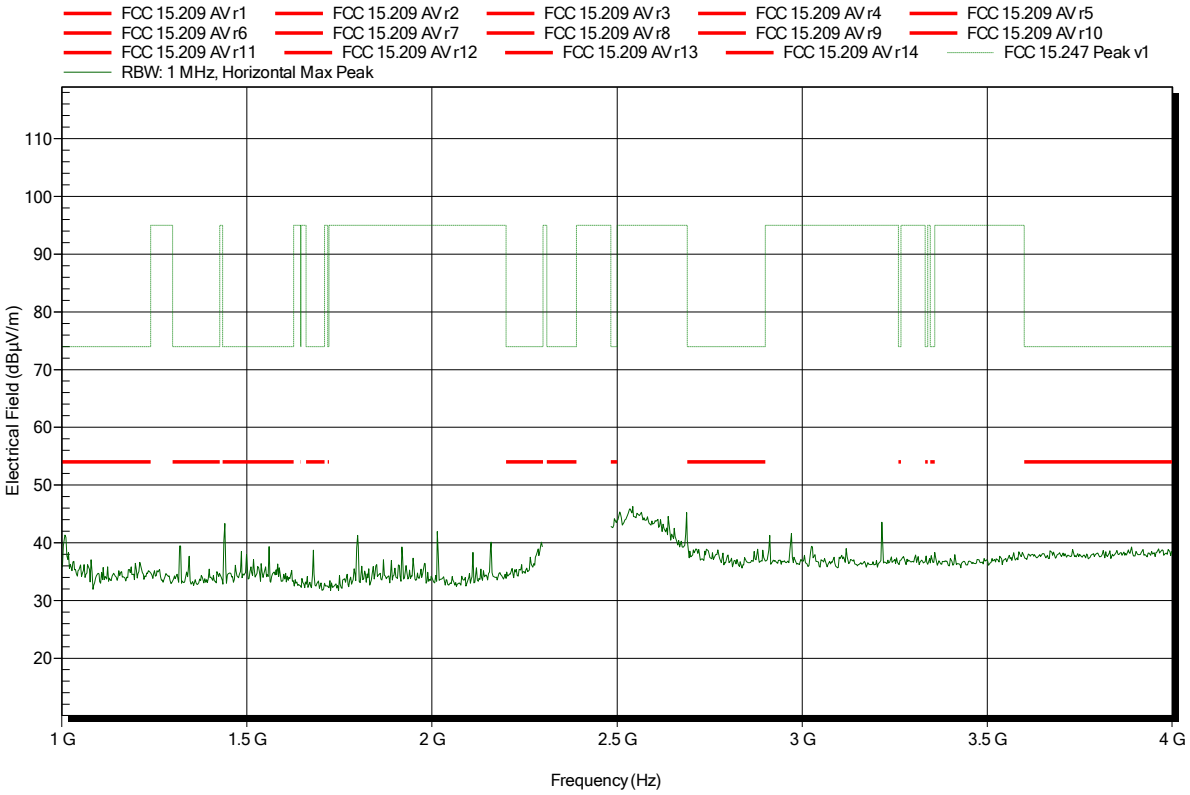

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	

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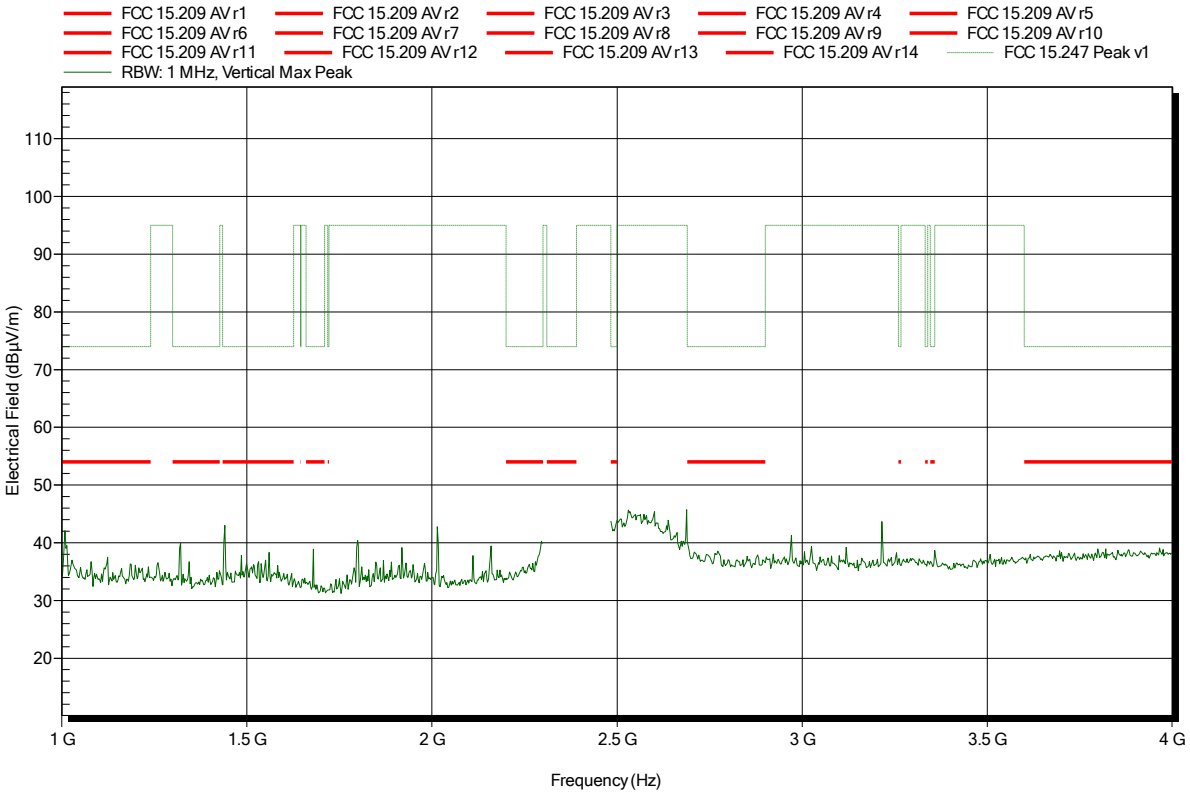

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	lower bandedge

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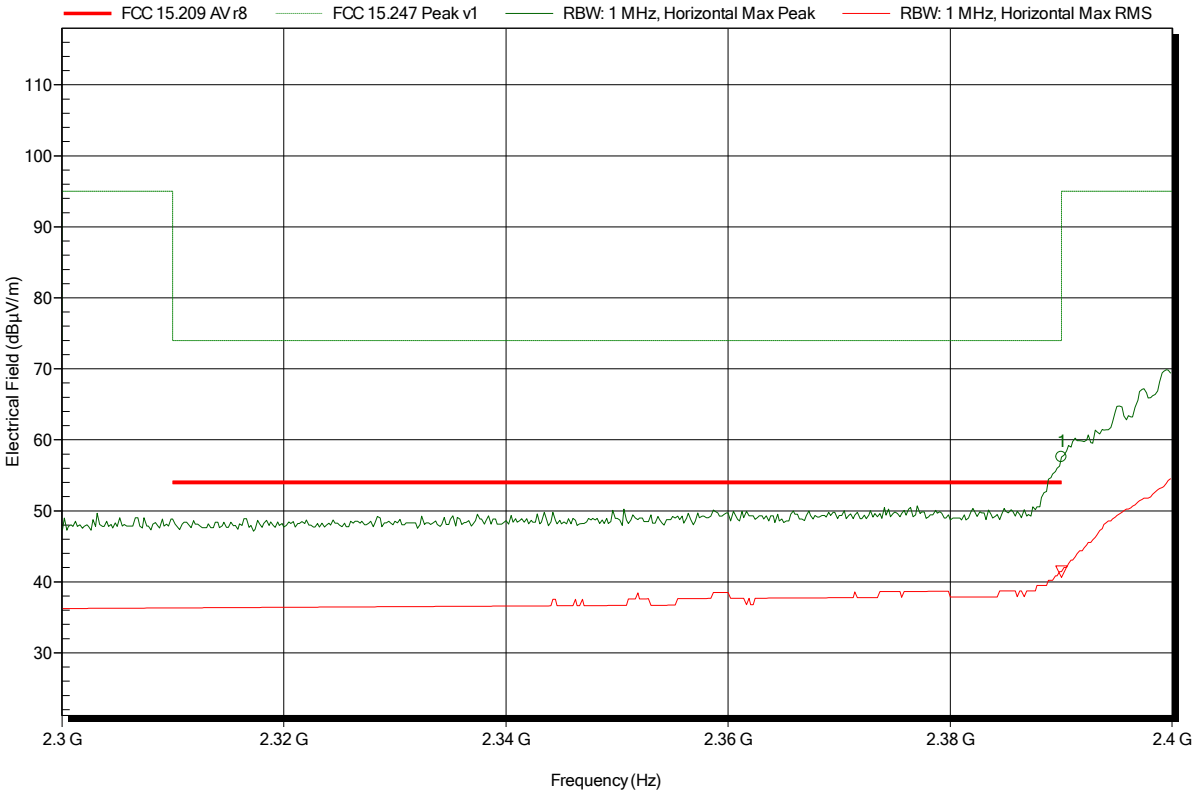

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.39 GHz	57.58 dBµV/m	74 dBµV/m	-16.42 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.39 GHz	41.45 dBµV/m	54 dBµV/m	-12.55 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	lower bandedge

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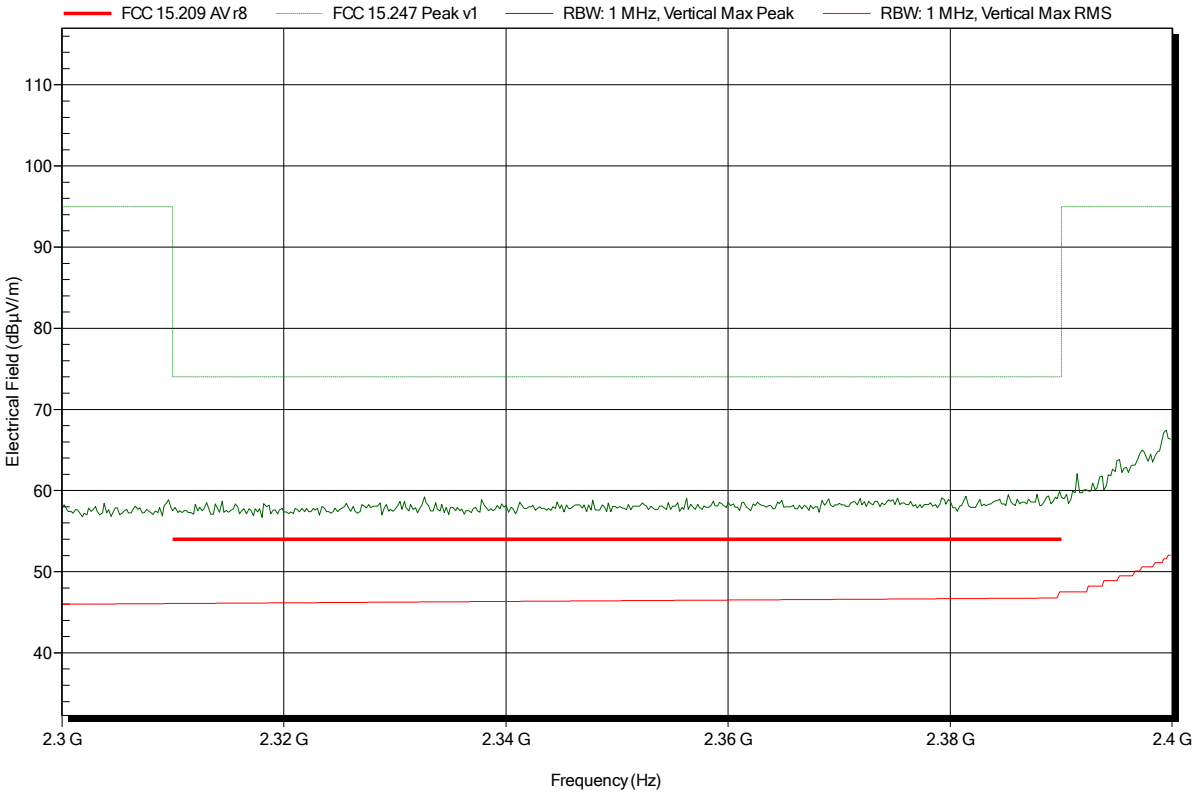

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	

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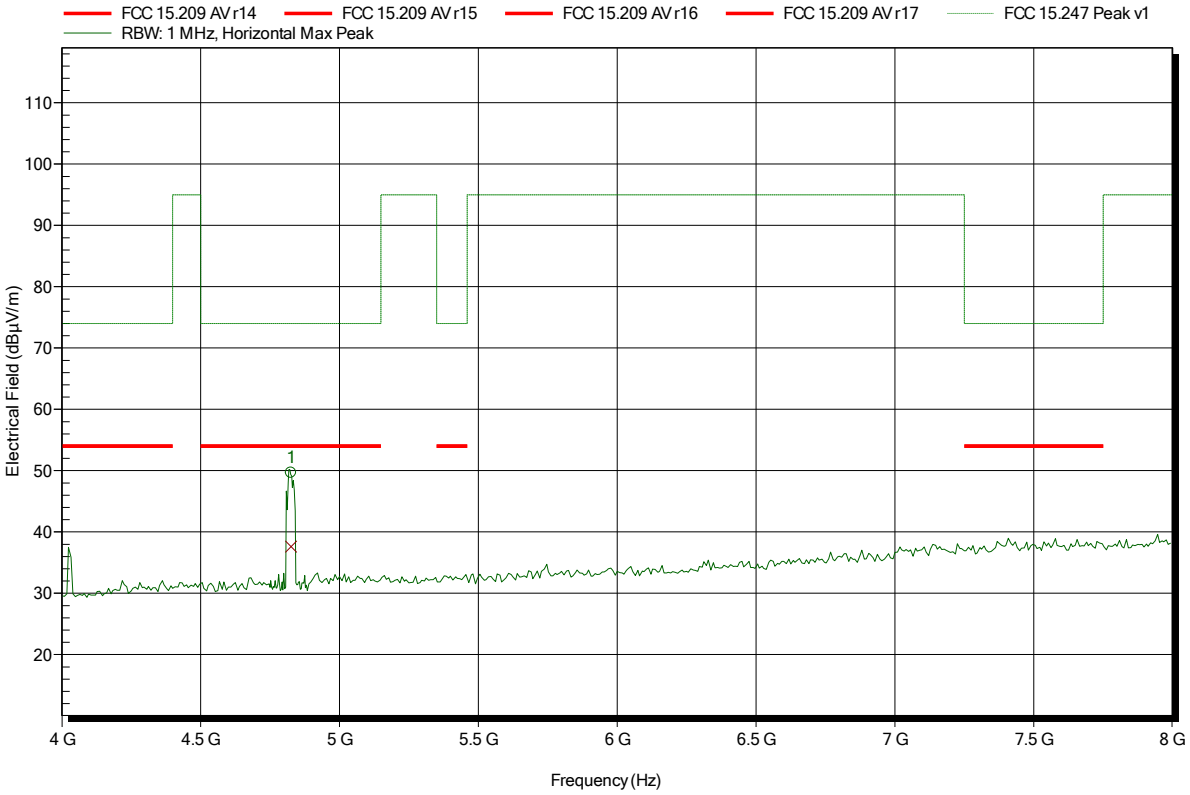

Frequency	Peak	Peak Limit	Peak Difference	Status
4.826 GHz	49.64 dBµV/m	74 dBµV/m	-24.36 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.826 GHz	37.64 dBµV/m	54 dBµV/m	-16.36 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2412 MHz
Test Date:	2015-04-08
Note:	

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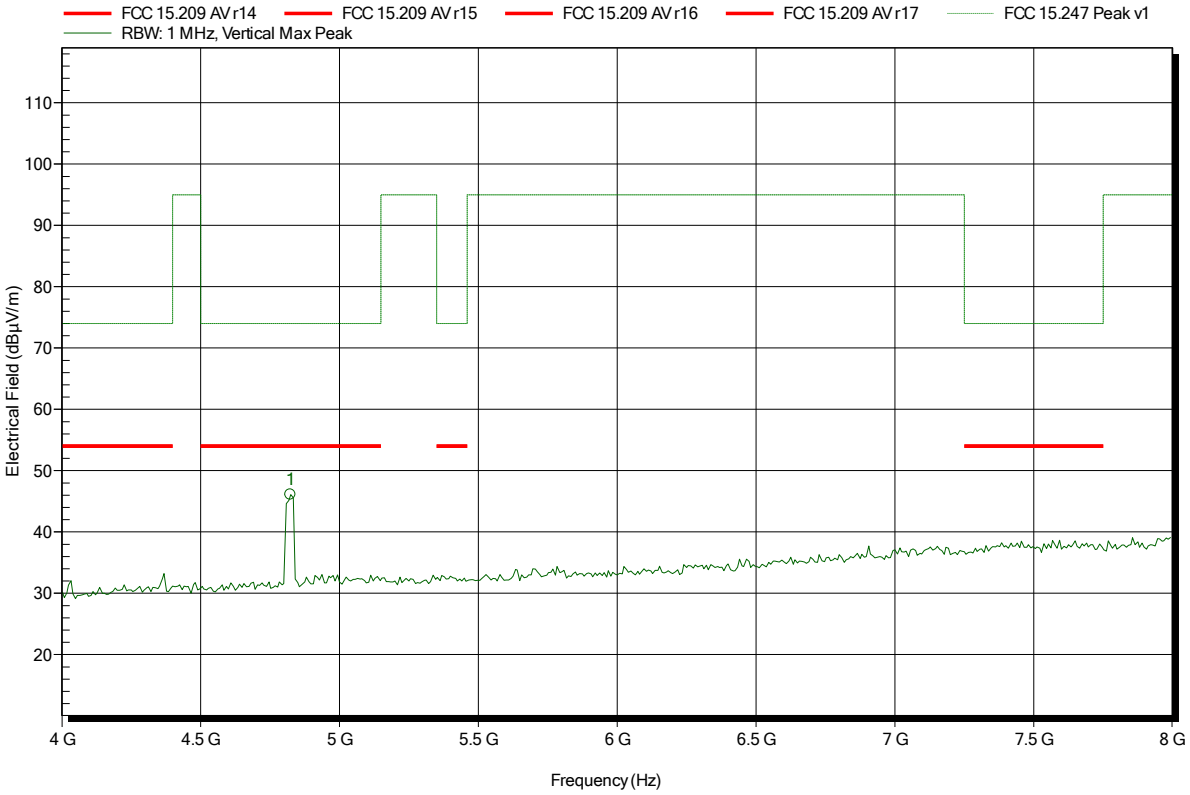

Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	46.09 dBµV/m	74 dBµV/m	-27.91 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-08
Note:	

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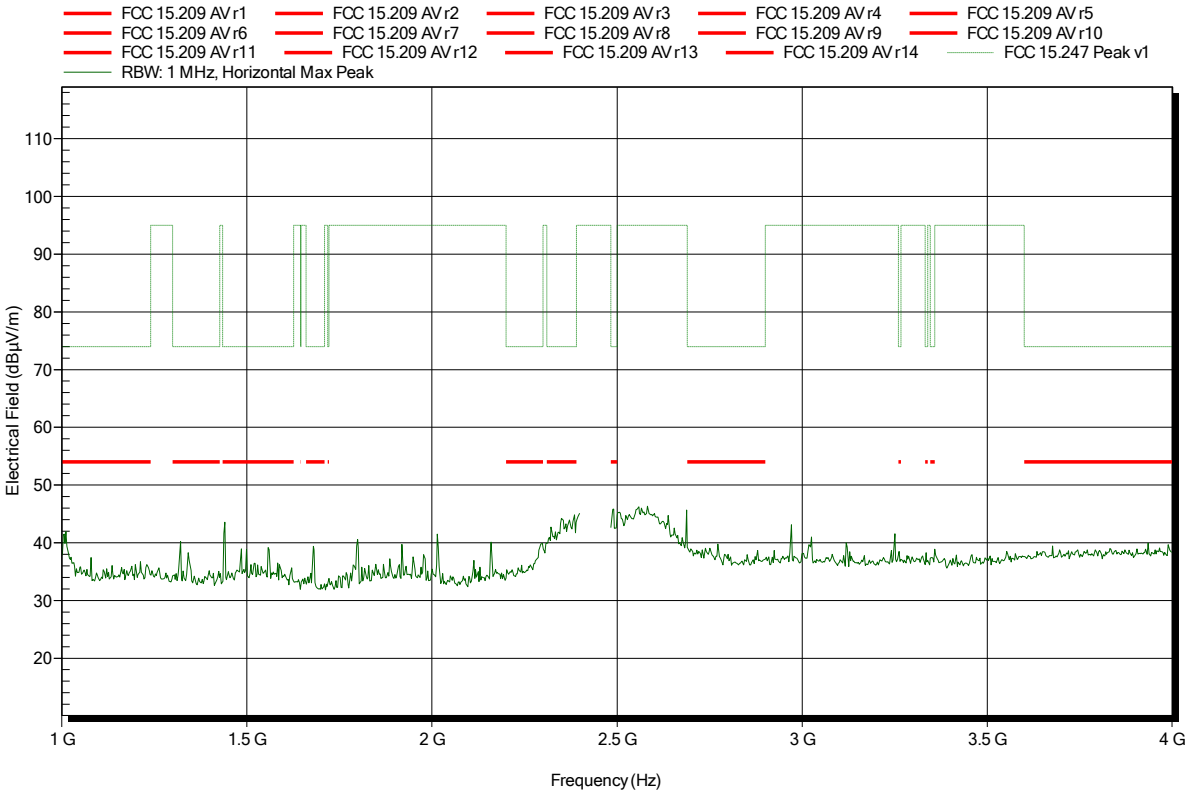

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-08
Note:	

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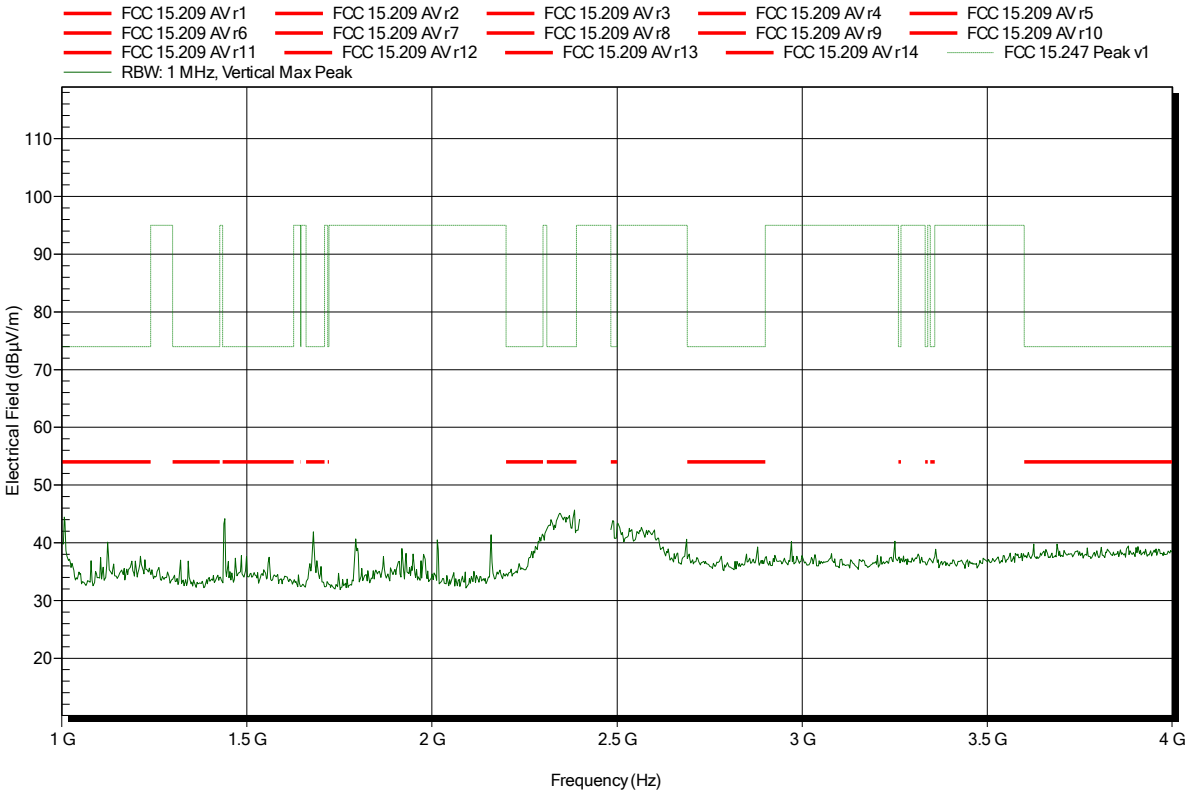

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-08
Note:	

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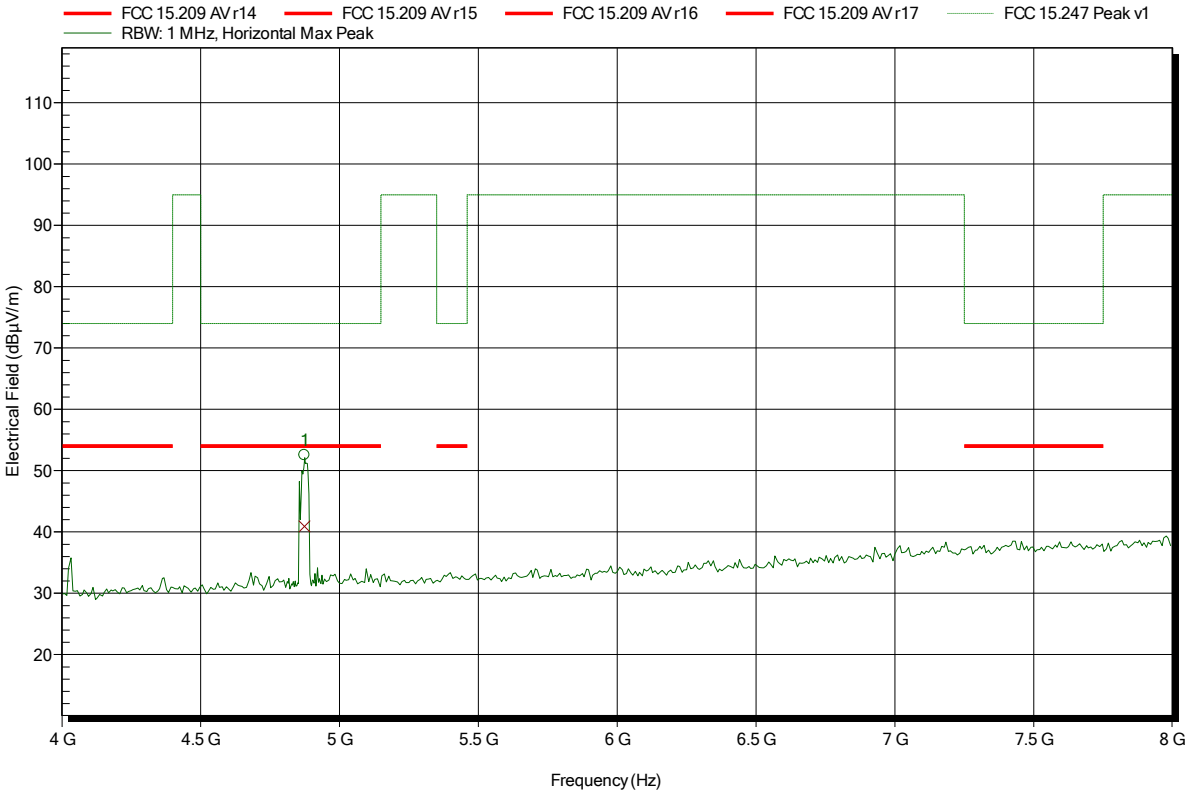

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	52.53 dBµV/m	74 dBµV/m	-21.47 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	40.9 dBµV/m	54 dBµV/m	-13.1 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2437 MHz
Test Date:	2015-04-08
Note:	

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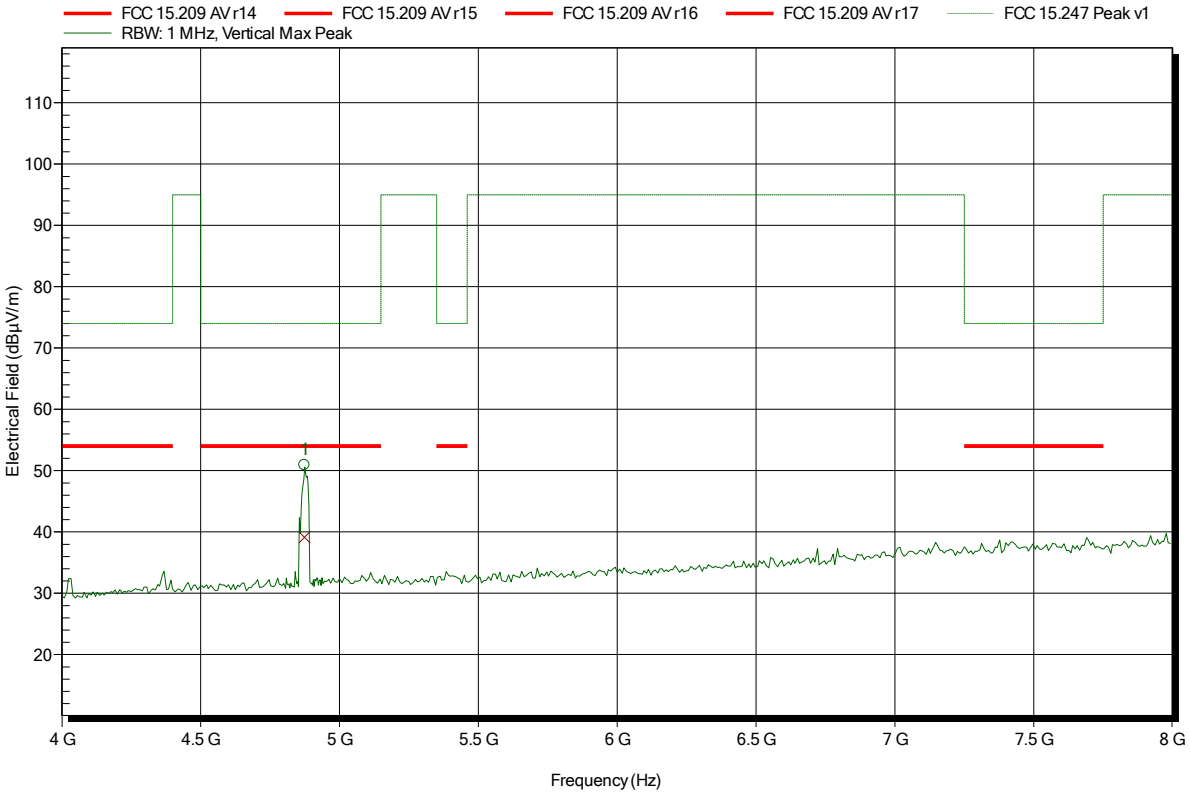

Frequency	Peak	Peak Limit	Peak Difference	Status
4.874 GHz	50.93 dBµV/m	74 dBµV/m	-23.07 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.874 GHz	39.14 dBµV/m	54 dBµV/m	-14.86 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	

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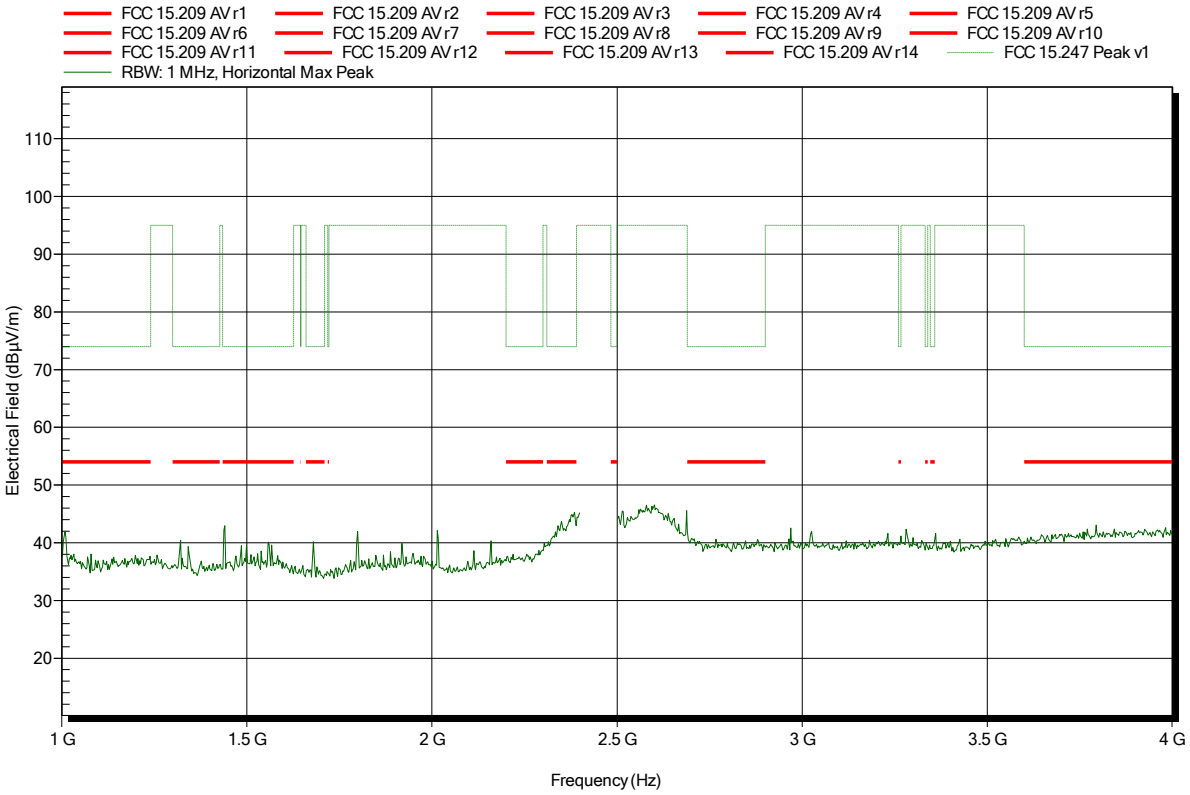

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	

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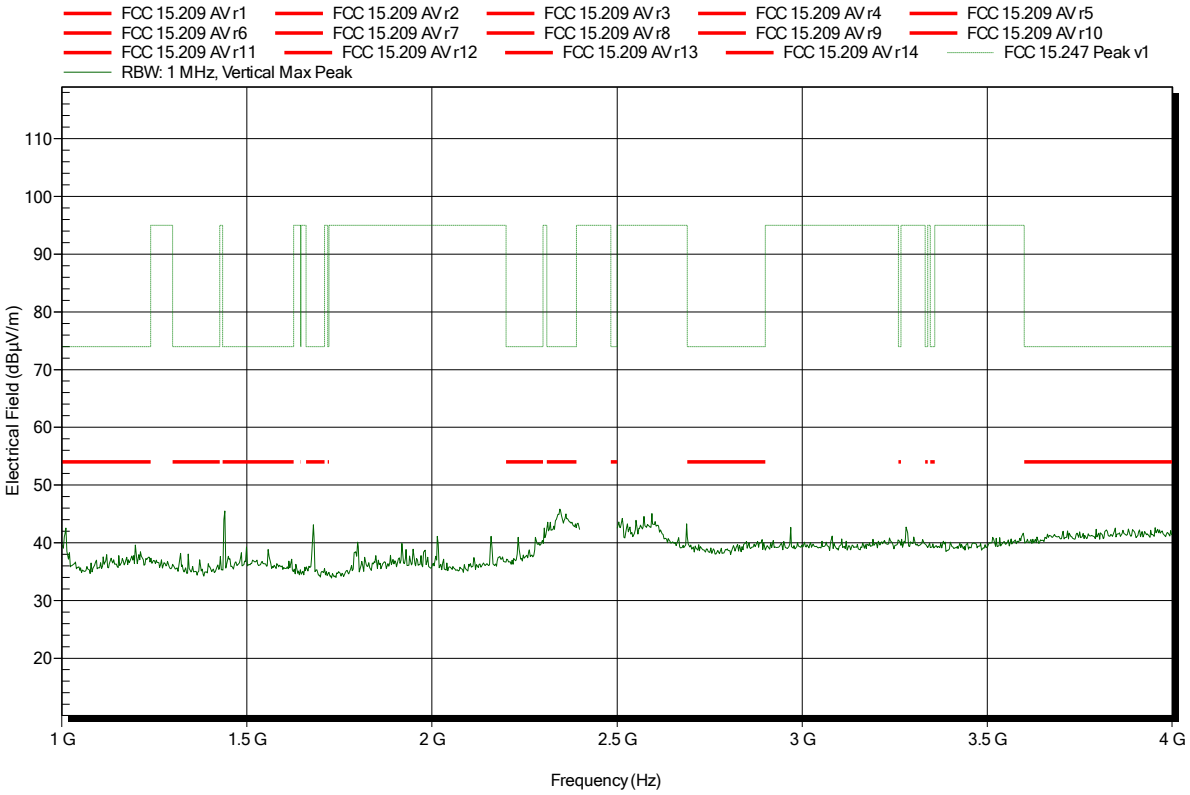

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	upper bandedge

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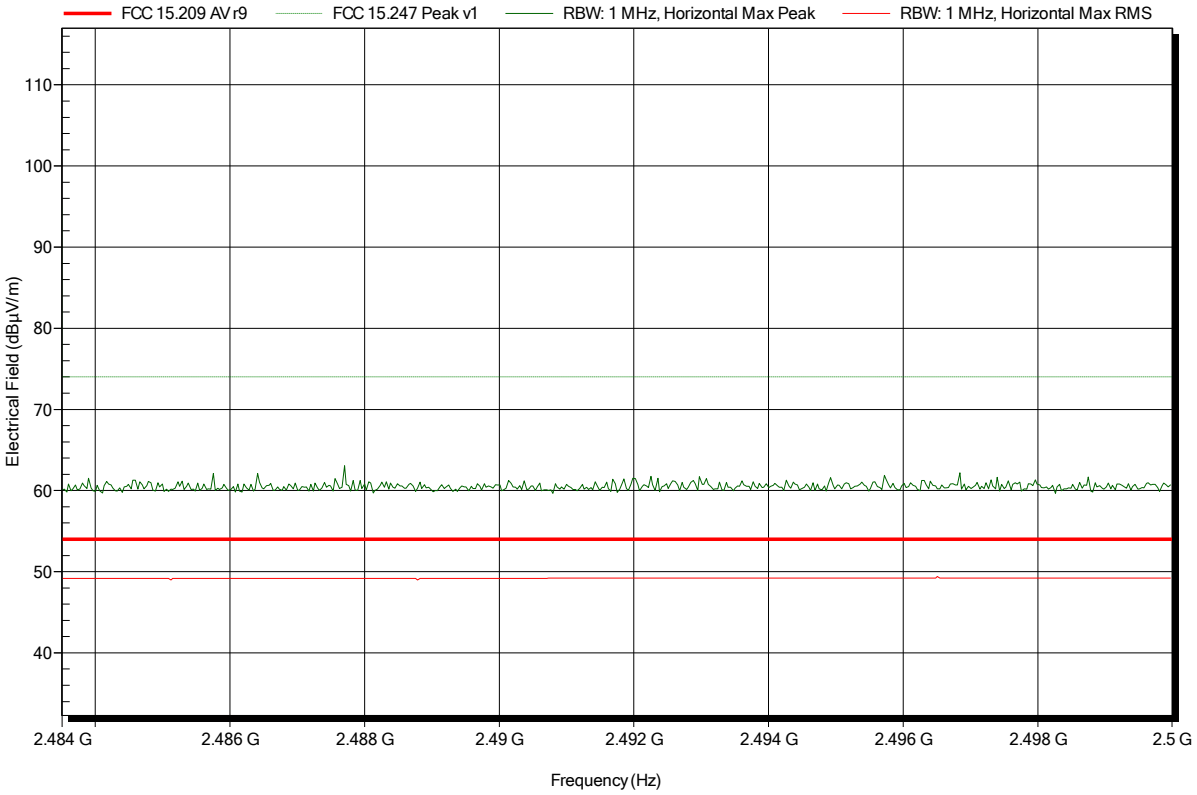

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	upper bandedge

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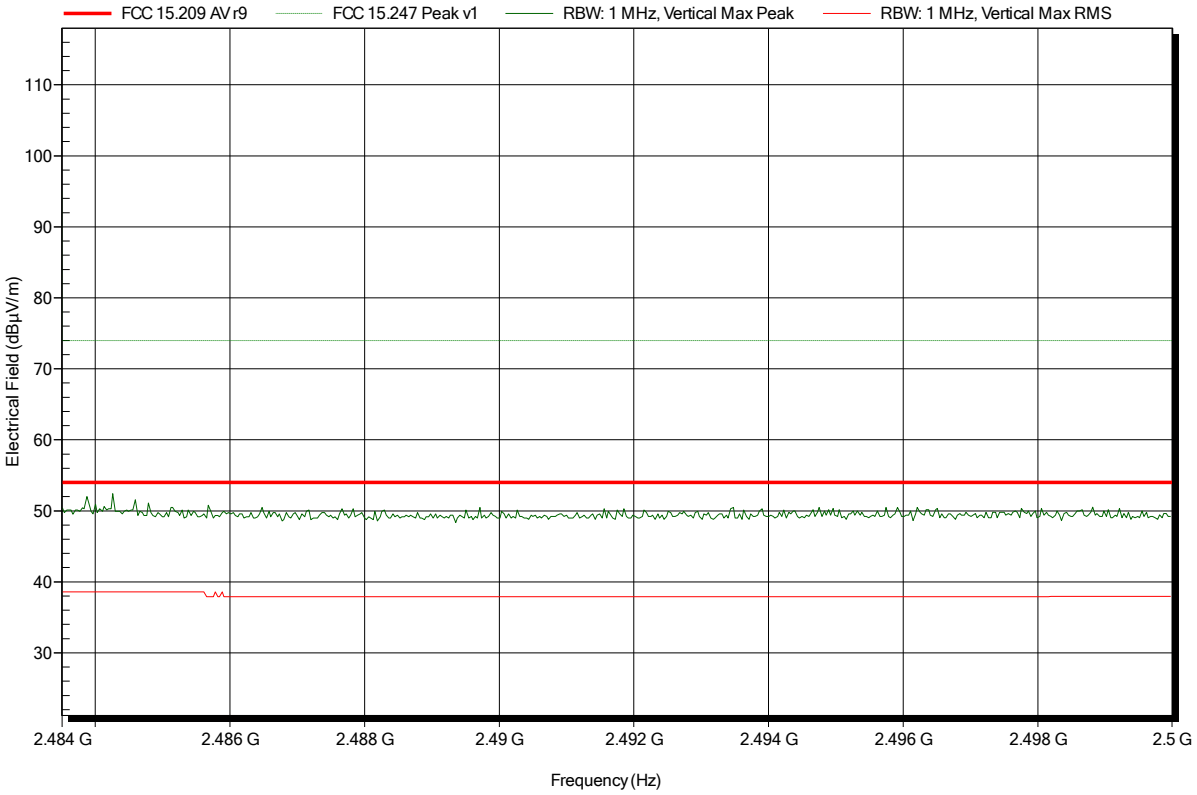

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	

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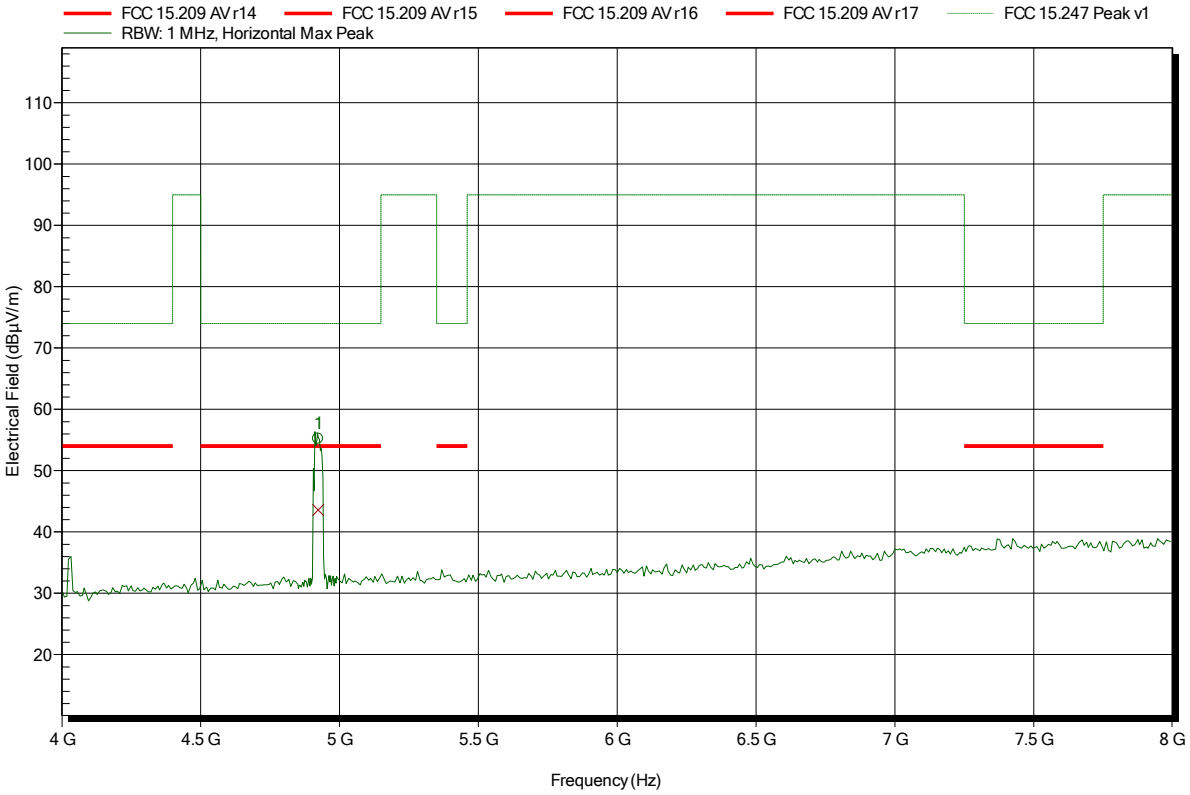

Frequency	Peak	Peak Limit	Peak Difference	Status
4.924 GHz	55.23 dBµV/m	74 dBµV/m	-18.77 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.924 GHz	43.6 dBµV/m	54 dBµV/m	-10.4 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; HT20; MCS0; 2462 MHz
Test Date:	2015-04-08
Note:	

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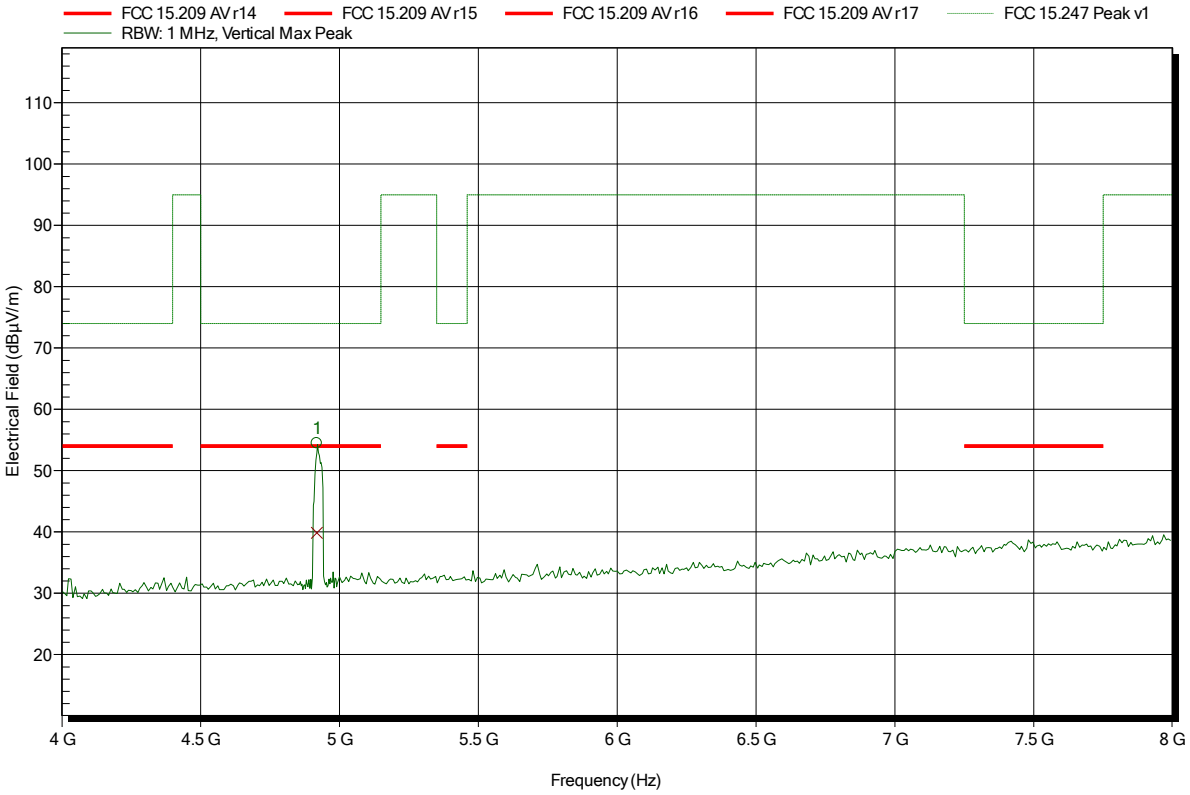

Frequency	Peak	Peak Limit	Peak Difference	Status
4.92 GHz	54.45 dBµV/m	74 dBµV/m	-19.55 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.92 GHz	39.87 dBµV/m	54 dBµV/m	-14.13 dB	Pass

ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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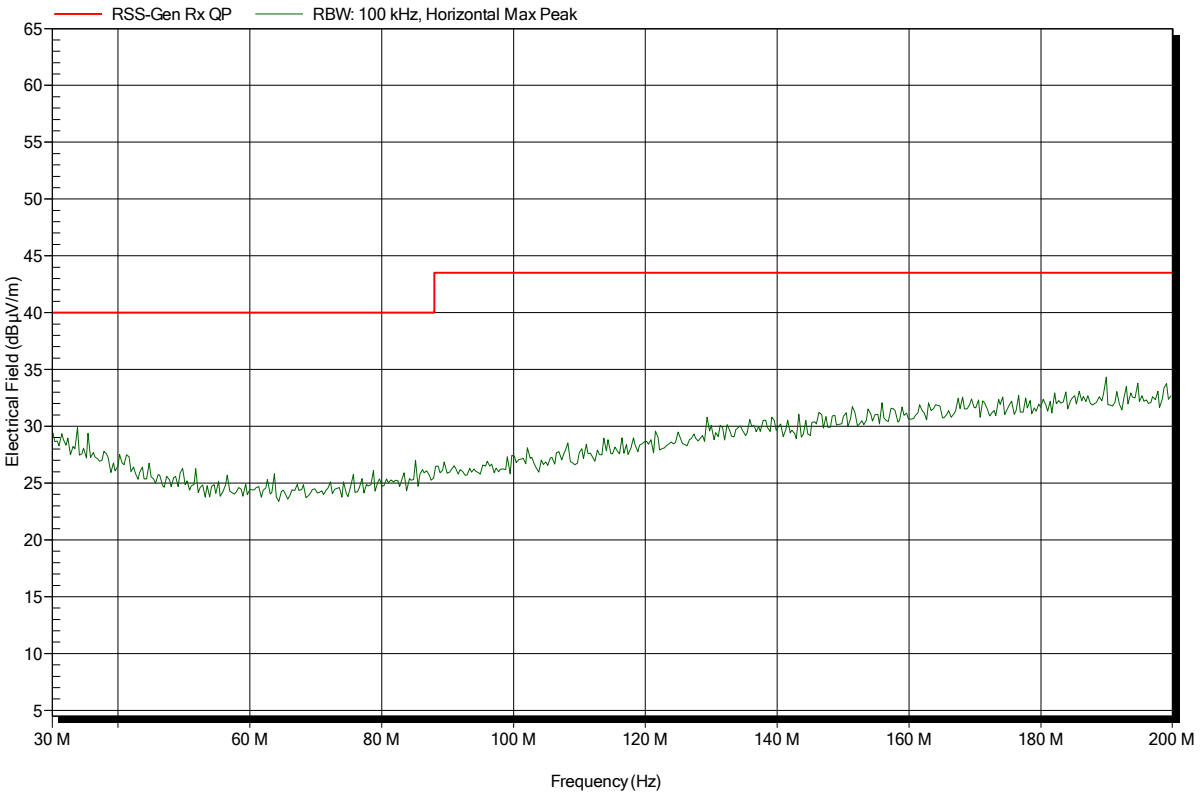

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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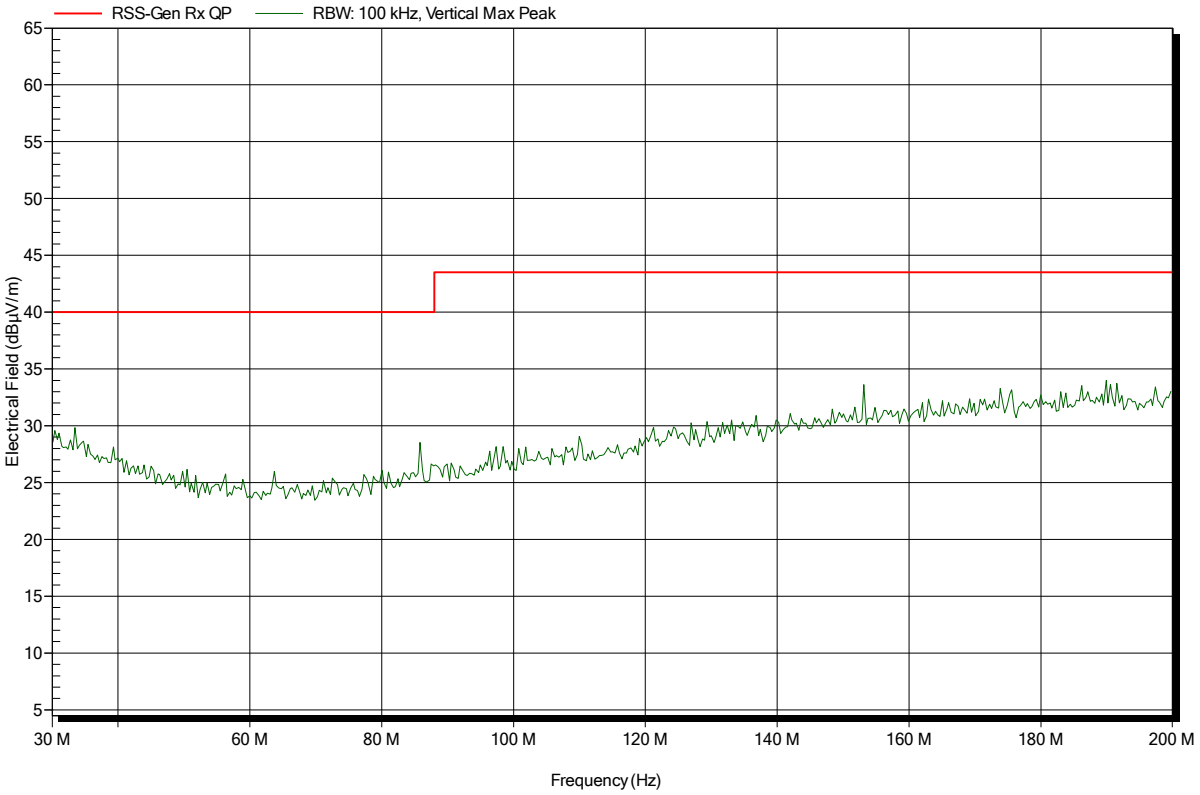

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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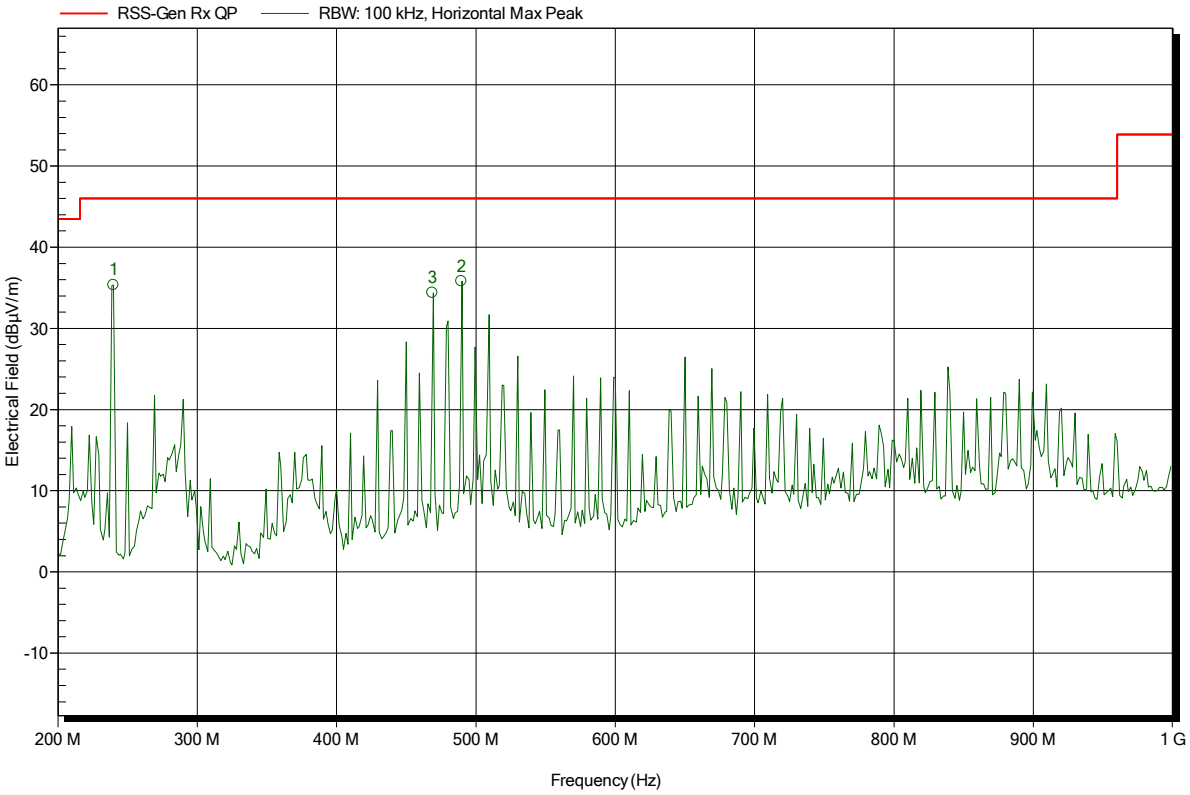

Frequency	Peak	Peak Limit	Peak Difference	Status
240 MHz	35.34 dBµV/m	46 dBµV/m	-10.66 dB	Pass
468.8 MHz	34.37 dBµV/m	46 dBµV/m	-11.63 dB	Pass
489.6 MHz	35.8 dBµV/m	46 dBµV/m	-10.2 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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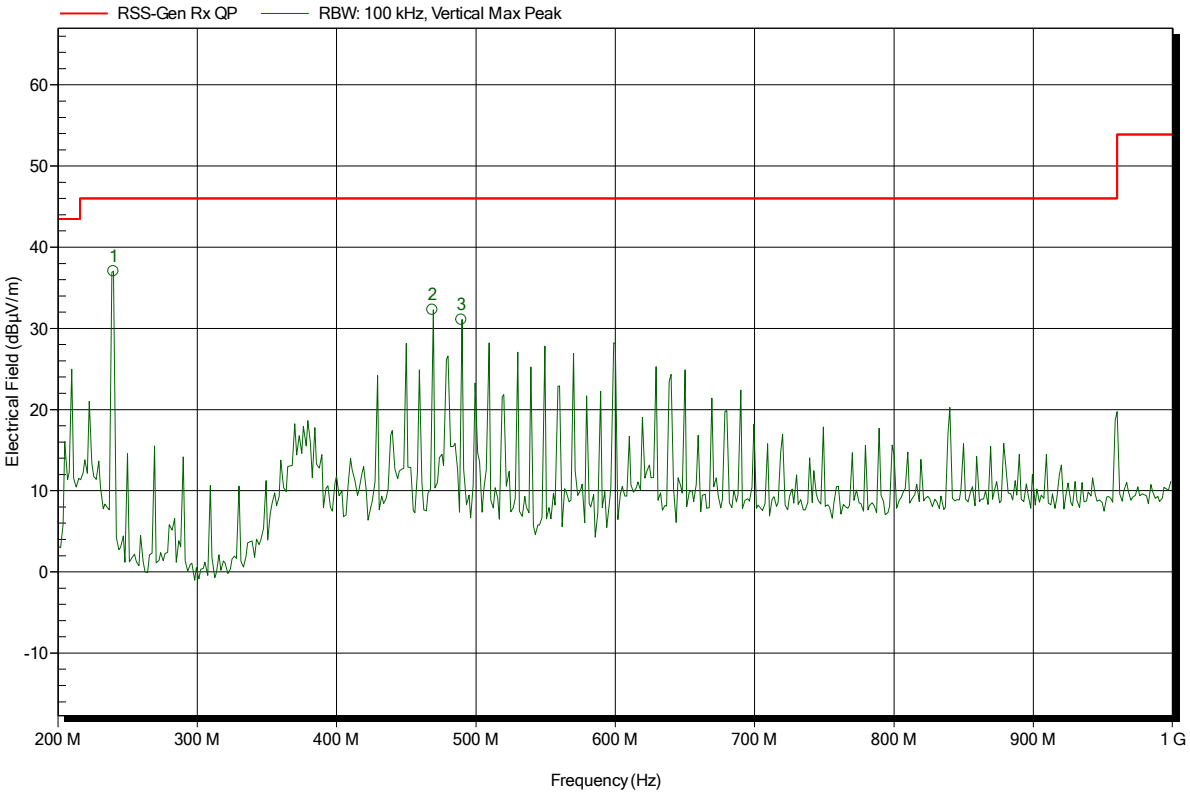

Frequency	Peak	Peak Limit	Peak Difference	Status
240 MHz	37.05 dBµV/m	46 dBµV/m	-8.95 dB	Pass
468.8 MHz	32.27 dBµV/m	46 dBµV/m	-13.73 dB	Pass
489.6 MHz	31.08 dBµV/m	46 dBµV/m	-14.92 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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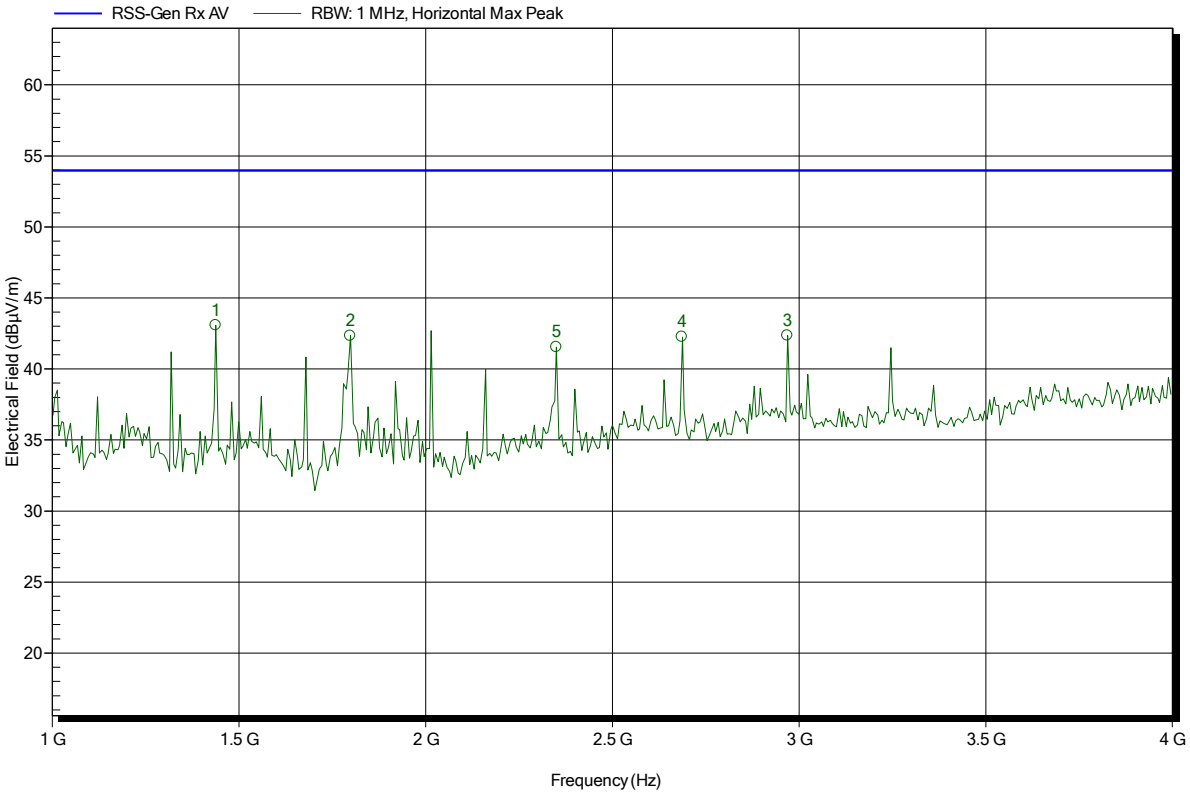

Frequency	Peak	Peak Limit	Peak Difference	Status
1.438 GHz	43.08 dBµV/m	53.98 dBµV/m	-10.9 dB	Pass
1.798 GHz	42.33 dBµV/m	53.98 dBµV/m	-11.65 dB	Pass
2.35 GHz	41.54 dBµV/m	53.98 dBµV/m	-12.44 dB	Pass
2.686 GHz	42.26 dBµV/m	53.98 dBµV/m	-11.72 dB	Pass
2.968 GHz	42.37 dBµV/m	53.98 dBµV/m	-11.61 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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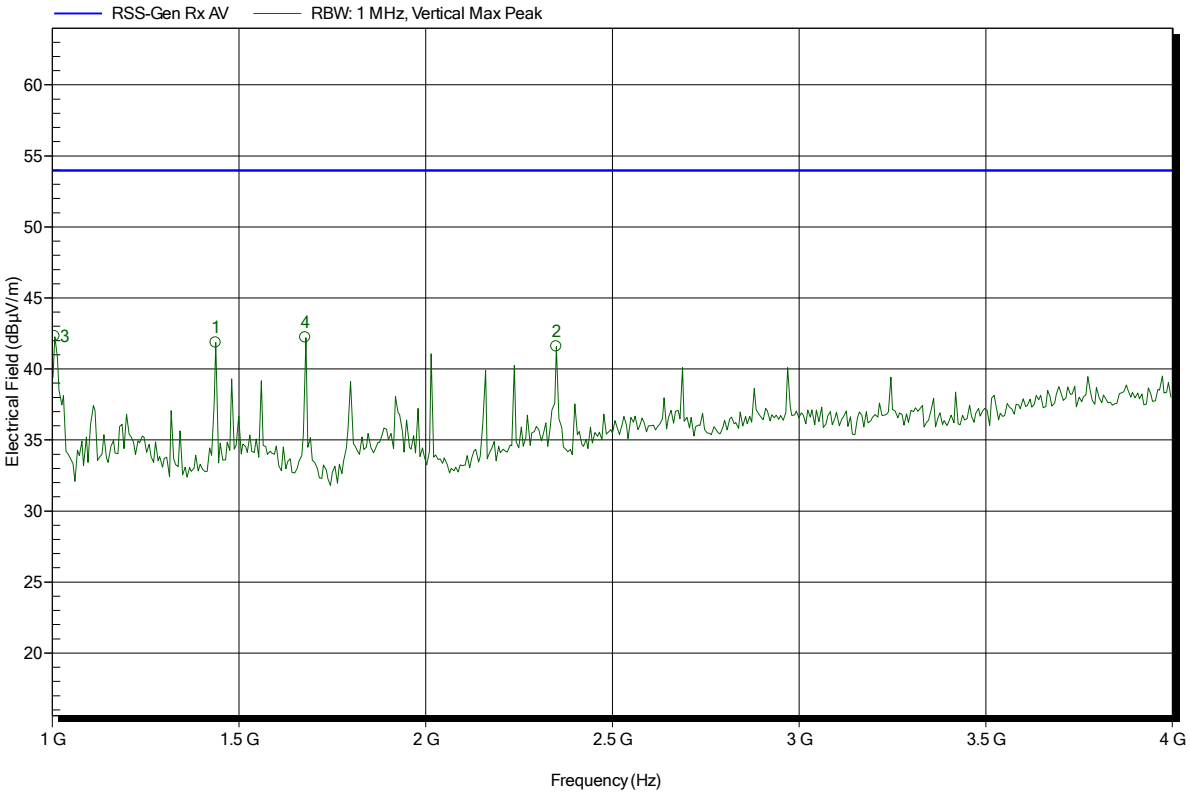

Frequency	Peak	Peak Limit	Peak Difference	Status
1.006 GHz	42.3 dBµV/m	53.98 dBµV/m	-11.68 dB	Pass
1.438 GHz	41.86 dBµV/m	53.98 dBµV/m	-12.12 dB	Pass
1.678 GHz	42.22 dBµV/m	53.98 dBµV/m	-11.76 dB	Pass
2.35 GHz	41.58 dBµV/m	53.98 dBµV/m	-12.4 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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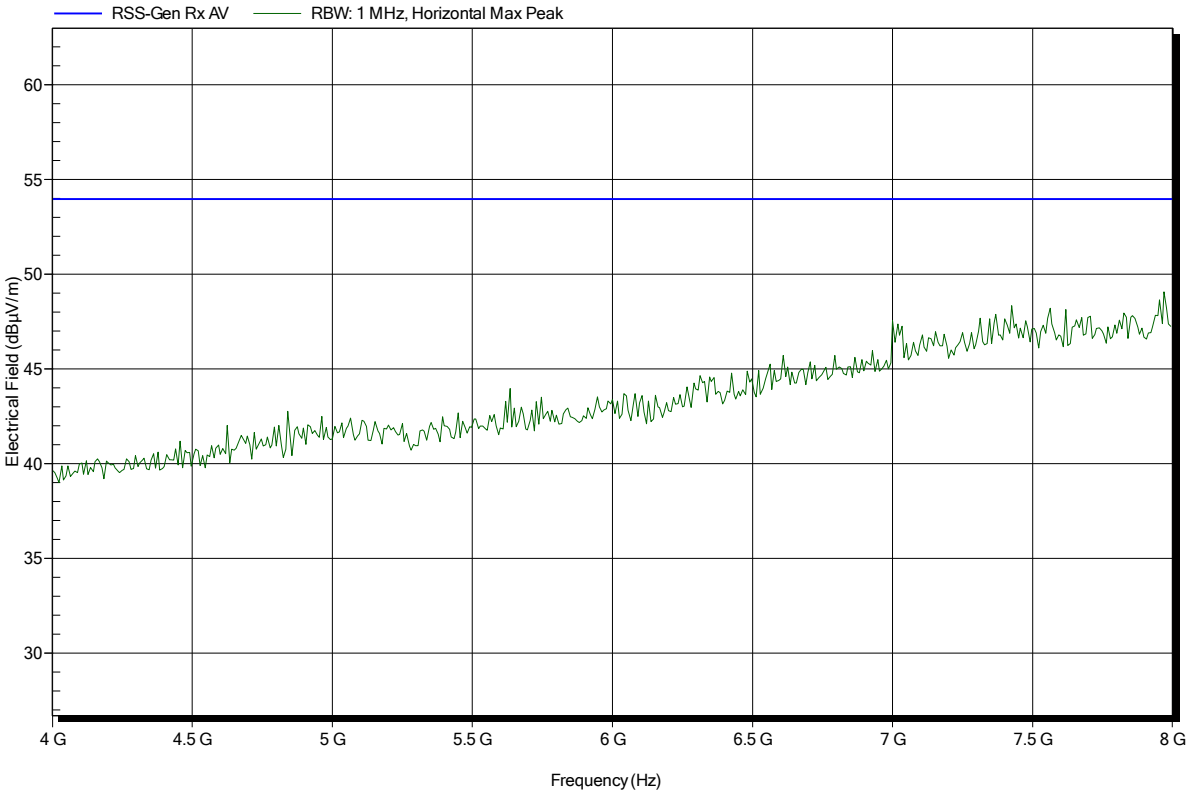
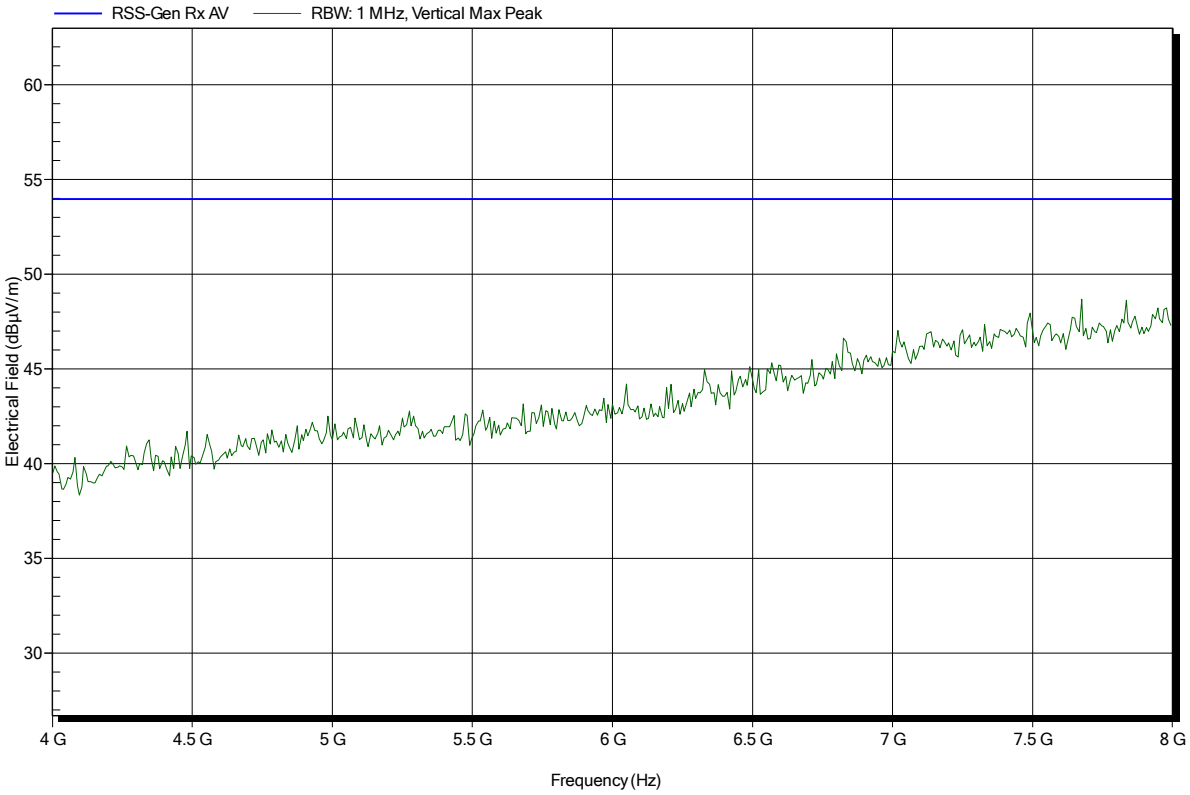


Spurious emissions according to RSS-GEN

Project number: G0M-1503-4616

Applicant:	Leica Microsystems (Schweiz) AG
EUT Name:	HD stereo microscope mit WLAN-Modul
Model:	Leica EZ4 W
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 VAC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; 2437 MHz
Test Date:	2015-04-08
Note:	

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