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FCC TEST REPORT

FCC 47 CFR Part 15C
Industry Canada RSS-210
Digital transmission systems operating within the 2400 – 2483.5 MHz band

Report Reference No.....:	G0M-1406-3917-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.....:	Leica Geosystems AG
Address.....:	Heinrich Wild Strasse 9435 Heerbrugg SWITZERLAND
Test specification:	
Standard.....:	47 CFR Part 15C KDB Publication No. 558074 D01 v03r02 RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 4, 2014-11 ANSI C63.4:2009
Test scope.....:	complete Radio compliance test
Equipment under test (EUT):	
Product description	Field Controller Win EC7
Model No.	CS20 3.75G
Additional Model(s)	CS20 3.75G GNSS, CS20 3.75G Disto, CS20 3.75G Disto GNSS
Brand Name(s)	Leica Geosystems
Hardware version	V5.0
Firmware / Software version	1.0
	FCC-ID: RFD-CSNGF IC: 3177A-CSNGF
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 ..... :	2014-10-06	
Date (s) of performance of tests ..... :	2014-08-07 – 2015-01-08	
Compiled by ..... :	Matthias Handrik	
Tested by (+ signature)..... : (Responsible for Test)	Wilfried Treffke	W. Treff .....
Approved by (+ signature) ..... :	Christian Weber	C. Weber .....
Date of issue ..... :	2015-04-22	
Total number of pages ..... :	146	

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:

CS20 3.75G was tested as the worst case configuration which incorporates all the radio technologies also used in CS20 3.75G GNSS, CS20 3.75G Disto, CS20 3.75G Disto GNSS

Version History

Version	Issue Date	Remarks	Revised by
01	2015-04-22	Initial Release	

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1 Equipment (Test item) Description

Description	Field Controller Win EC7	
Model	CS20 3.75G	
Additional Model(s)	CS20 3.75G GNSS, CS20 3.75G Disto, CS20 3.75G Disto GNSS	
Brand Name(s)	Leica Geosystems	
Serial number	None	
Hardware version	V5.0	
Software / Firmware version	1.0	
FCC-ID	RFD-CSNGF	
IC	3177A-CSNGF	
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_{LOW}	2412 MHz
	F_{MID}	2437 MHz
	F_{HIGH}	2462 MHz
Spreading	CCK, DSSS, OFDM	
Modulations	BPSK, QPSK, 16-QAM, 64-QAM	
Number of channels	11	
Channel spacing	5MHz	
Number of antennas	1	
Antenna	Type	integrated
	Model	W3008C
	Manufacturer	Pulse
	Gain	+2.2 dBi (manufacturer declaration)
Manufacturer	Leica Geosystems AG Heinrich Wild Strasse 9435 Heerbrugg SWITZERLAND	
Power supply	V_{NOM}	11.1 VDC
AC/DC-Adaptor	Model	AEL40US15
	Vendor	XP Power
	Input	100 - 240 V AC
	Output	15 V DC

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 by USB power supply.
	Radio conditions:	Mode = standalone transmit Spreading = DSSS Modulation = BPSK Data rate = 1 Mbps Bandwidth = 20 MHz Duty cycle = 99 % Power level = 17dBm
OFDM	General conditions:	EUT powered by USB power supply.
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = 6 Mbps Bandwidth = 20 MHz Duty cycle = 99 % Power level = 17dBm
HT20	General conditions:	EUT powered by USB power supply.
	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = 7.2 Mbps Bandwidth = 20 MHz Duty cycle = 99 % Power level = 17dBm
Receive	General conditions:	EUT powered by USB power supply.
	Radio conditions:	Mode = standalone receive Spreading = DSSS / OFDM
AC-Powerline	General conditions:	EUT powered by dedicated AC/DC-Adaptor
	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	2014-02	2015-02

6dB Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Maximum peak conducted power					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Power spectral density					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Band edge compliance					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Conducted spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSIQ26	EF00242	2014-03	2015-03
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
AMN	R&S	ESH3-Z5	EF00036	2014-12	2016-12
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-210				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 6.6	Occupied Bandwidth	RSS-Gen 6.6	N/R	Informational only
FCC § 15.247(a)(2) IC RSS-210 § A8.2	6dB Bandwidth	KDB Publication No. 558074	PASS	
FCC § 15.247(b)(3) IC RSS-210 § A8.4	Maximum peak conducted power	KDB Publication No. 558074	PASS	
FCC § 15.247(e) IC RSS-210 § A8.2	Power spectral density	KDB Publication No. 558074	PASS	
47 CFR 15.207 RSS-Gen 8.8	AC power line conducted emissions	KDB Publication No. 558074 / ANSI C63.4	PASS	
FCC § 15.247(d) IC RSS-210 § A8.5	Band edge compliance	KDB Publication No. 558074	PASS	
FCC § 15.247(d) IC RSS-210 § A8.5	Conducted spurious emissions	KDB Publication No. 558074	PASS	
FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 4.9 IC RSS-Gen 7.2.5	Transmitter radiated spurious emissions	KDB Publication No. 558074 / ANSI C 63.4	PASS	
IC RSS-Gen 7.1	Receiver radiated spurious emissions	ANSI C 63.4	PASS	
Remarks:				

3 Test Conditions and Results

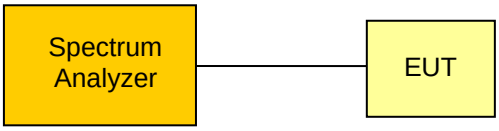
3.1 Test Conditions and Results – Occupied Bandwidth

Occupied Bandwidth acc. to IC RSS-Gen	**Verdict: PASS**
Test according to measurement reference	Reference Method
	RSS-Gen 4.6.1
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_{LOW}	2412	DSSS	14000
F_{MID}	2437	DSSS	14000
F_{HIGH}	2462	DSSS	14100
F_{LOW}	2412	OFDM	17100
F_{MID}	2437	OFDM	17100
F_{HIGH}	2462	OFDM	17100
F_{LOW}	2412	HT20	18000
F_{MID}	2437	HT20	18200
F_{HIGH}	2462	HT20	18200

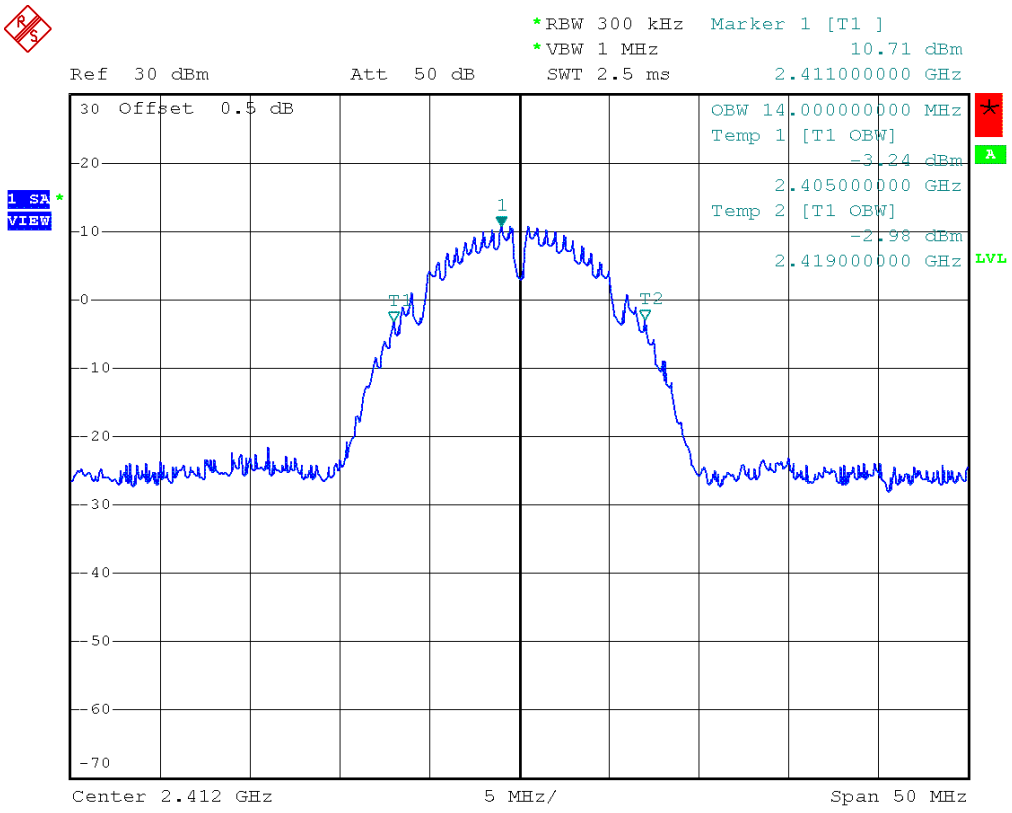
Comments:

Occupied Bandwidth – DSSS F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1MBit, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 14.000 MHz



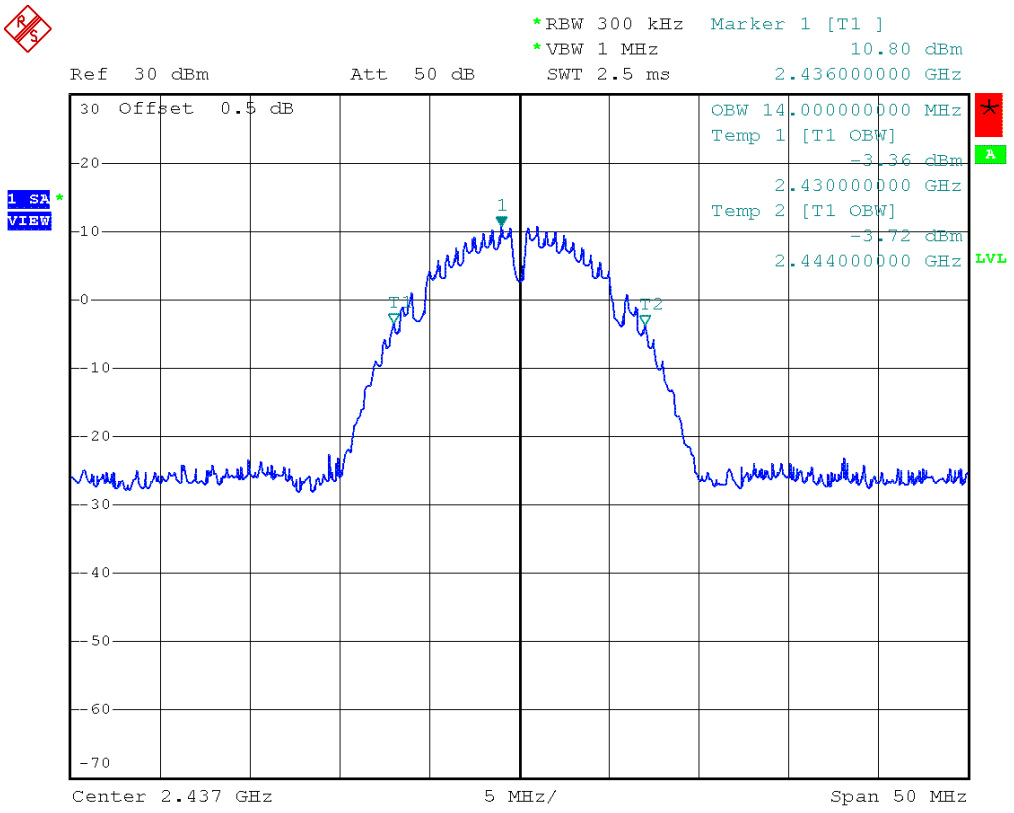
Comment: Occupied bandwidth: 14000 KHz
Date: 7.JAN.2015 15:03:29

Occupied Bandwidth – DSSS F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1MBit, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 14.000 MHz



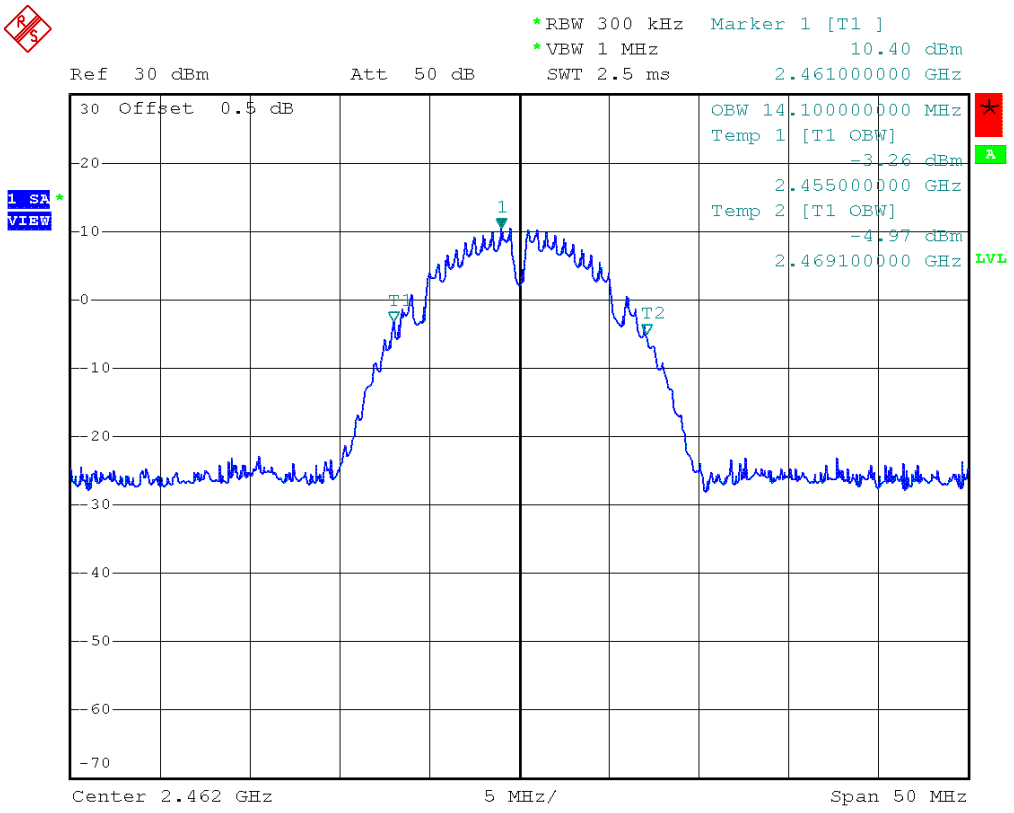
Comment: Occupied bandwidth: 14000 KHz
Date: 7.JAN.2015 15:07:20

Occupied Bandwidth – DSSS F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1MBit, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 14.100 MHz



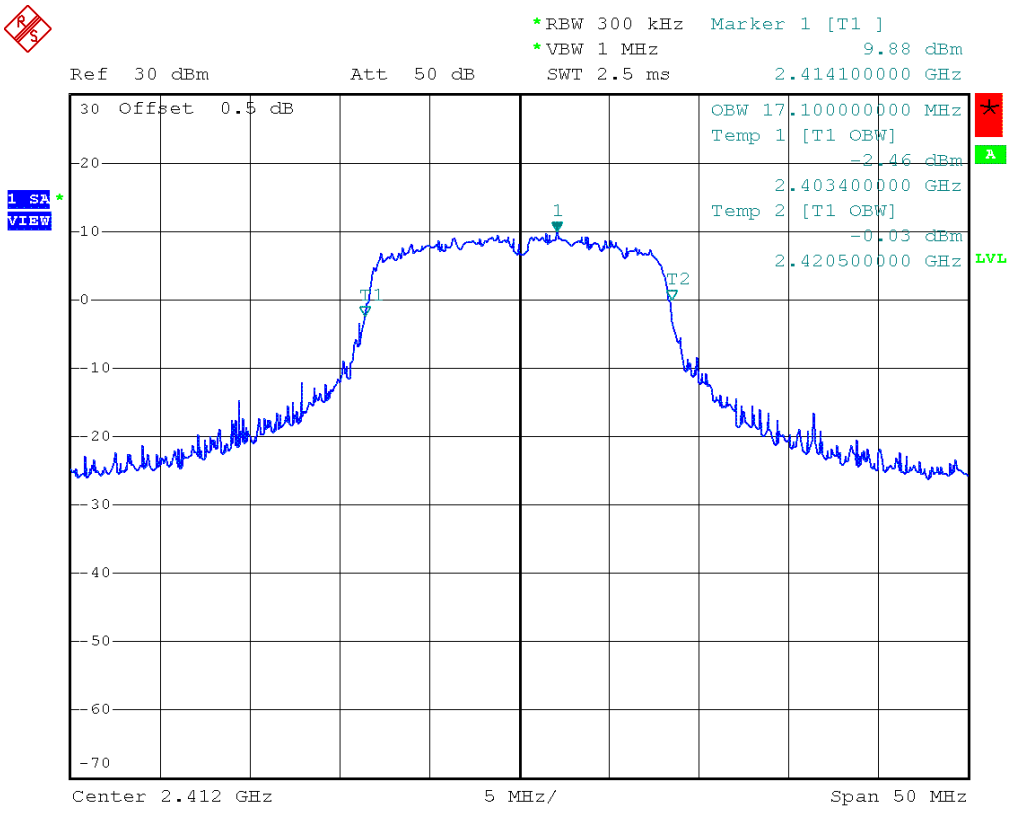
Comment: Occupied bandwidth: 14100 KHz
Date: 7.JAN.2015 15:09:26

Occupied Bandwidth – OFDM F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6MBit, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 17.100 MHz



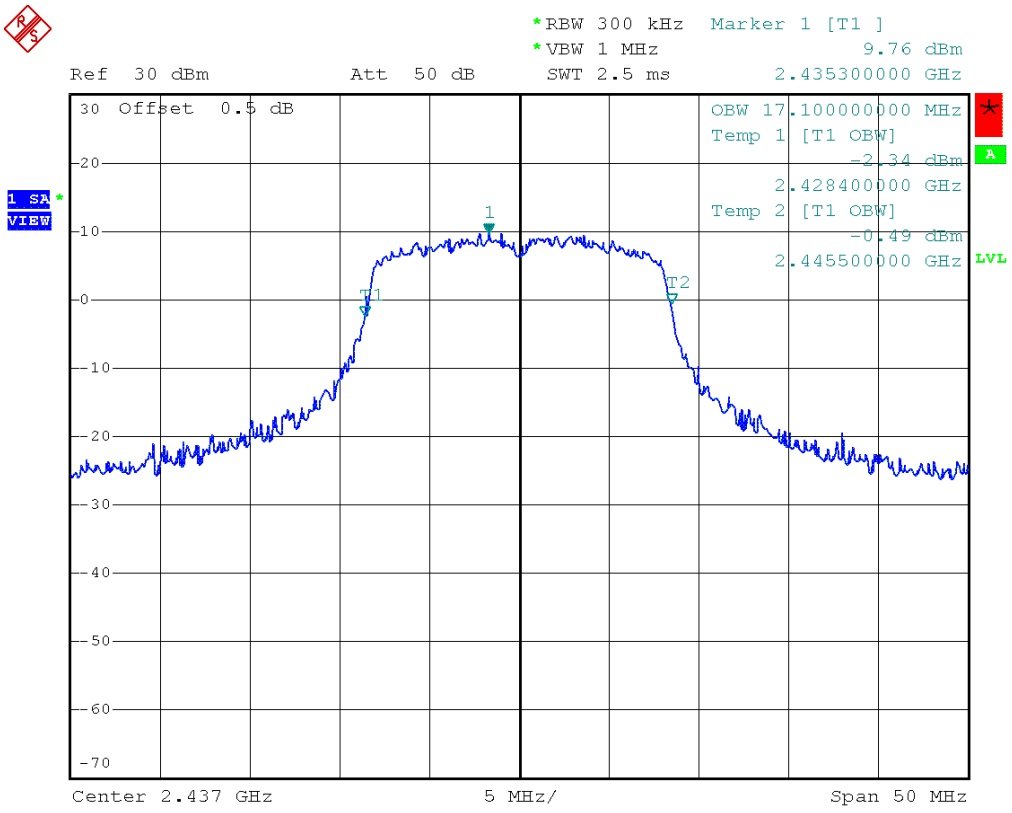
Comment: Occupied bandwidth: 17100 KHz
Date: 7.JAN.2015 15:12:07

Occupied Bandwidth – OFDM F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6MBit, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 17.100 MHz



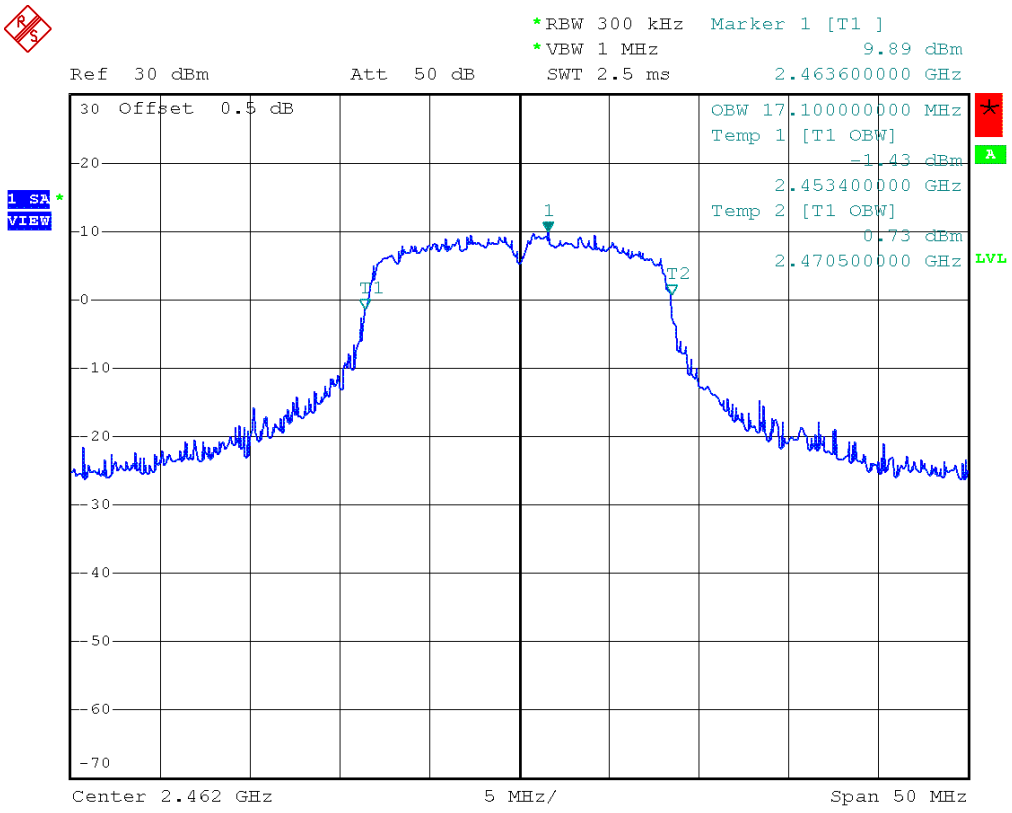
Comment: Occupied bandwidth: 17100 KHz
Date: 7.JAN.2015 15:13:40

Occupied Bandwidth – OFDM F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6MBit, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 17.100 MHz



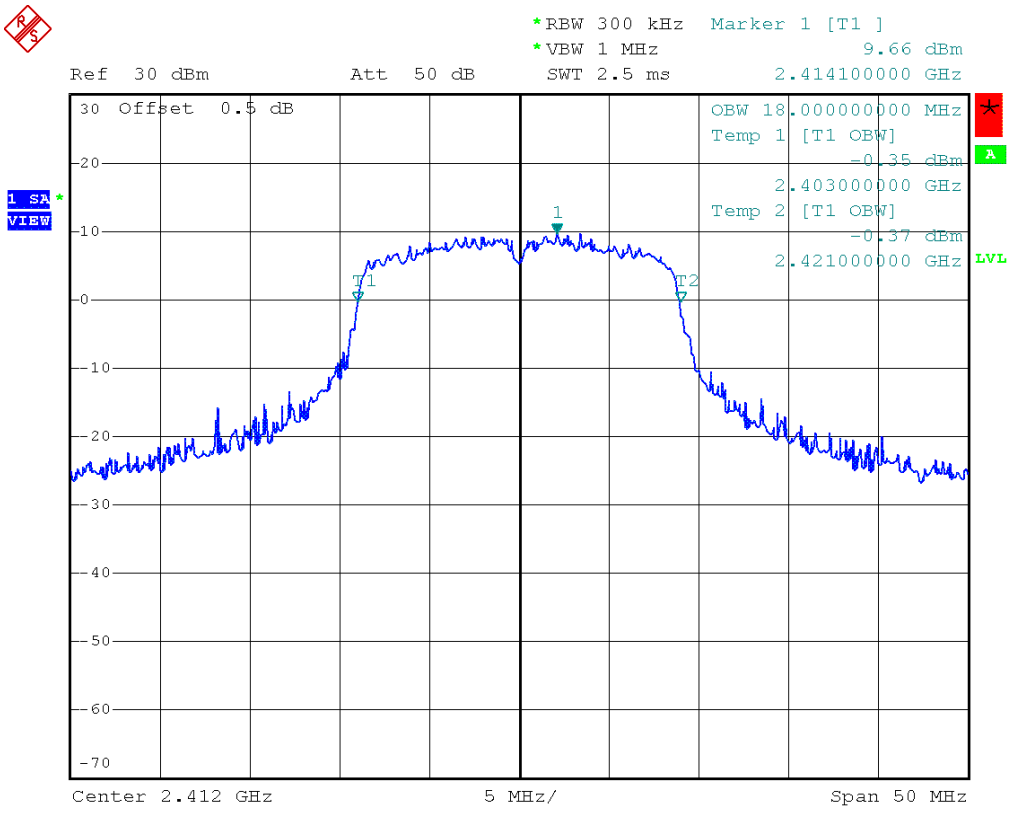
Comment: Occupied bandwidth: 17100 KHz
Date: 7.JAN.2015 15:15:05

Occupied Bandwidth – HT20 F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 18.000 MHz



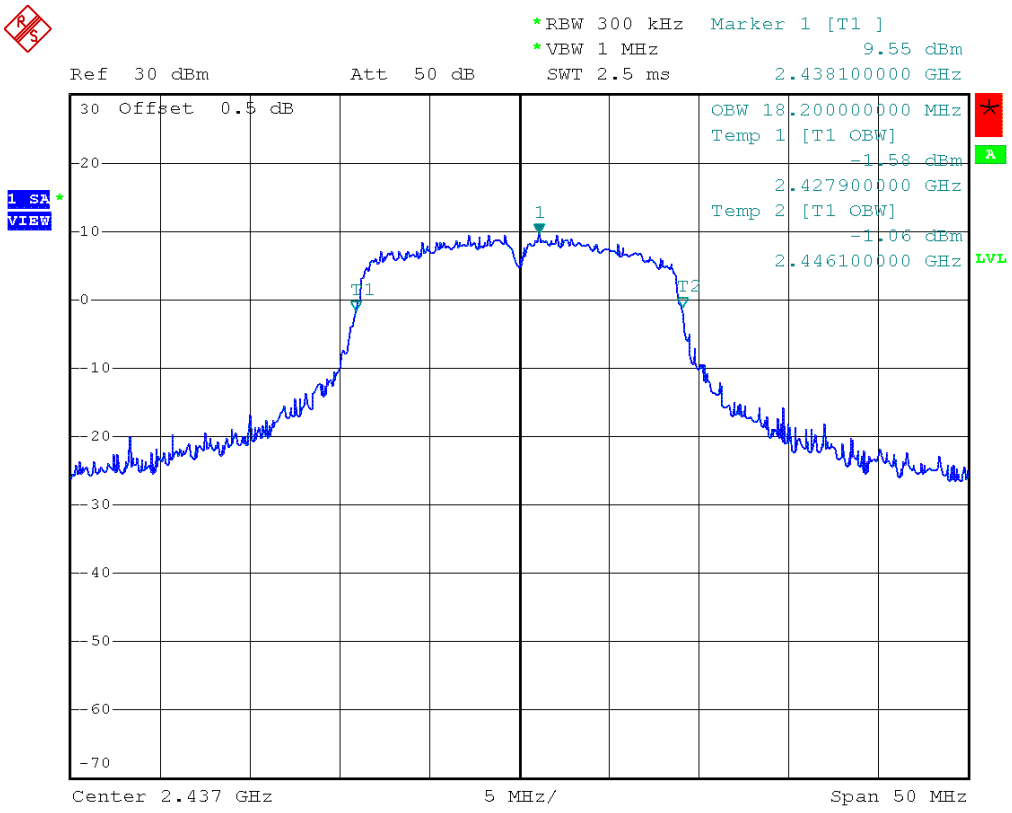
Comment: Occupied bandwidth: 18000 KHz
Date: 7.JAN.2015 15:17:48

Occupied Bandwidth – HT20 F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 18.200 MHz



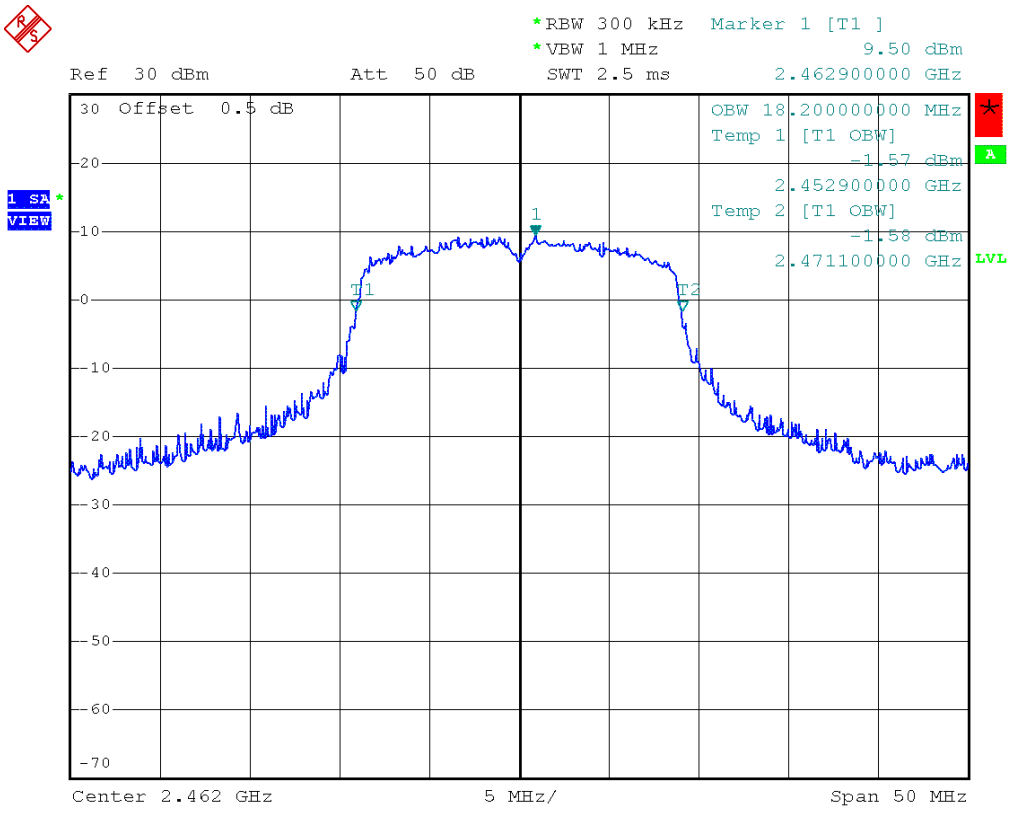
Comment: Occupied bandwidth: 18200 KHz
Date: 7.JAN.2015 15:19:30

Occupied Bandwidth – HT20 F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

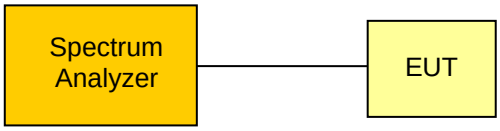
Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	OBW= 18.200 MHz



Comment: Occupied bandwidth: 18200 KHz
Date: 7.JAN.2015 15:21:03

3.2 Test Conditions and Results – 6 dB Bandwidth

6dB Bandwidth acc. to FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(a)(2) / IC RSS-210 A8.2
Test according to measurement reference	Reference Method
	FCC KDB Publication No. 558074
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_{LOW}	2412	DSSS	9432	500	PASS
F_{MID}	2437	DSSS	9144	500	PASS
F_{HIGH}	2462	DSSS	9144	500	PASS
F_{LOW}	2412	OFDM	15636	500	PASS
F_{MID}	2437	OFDM	15888	500	PASS
F_{HIGH}	2462	OFDM	15384	500	PASS
F_{LOW}	2412	HT20	15756	500	PASS
F_{MID}	2437	HT20	15576	500	PASS
F_{HIGH}	2462	HT20	15.624	500	PASS

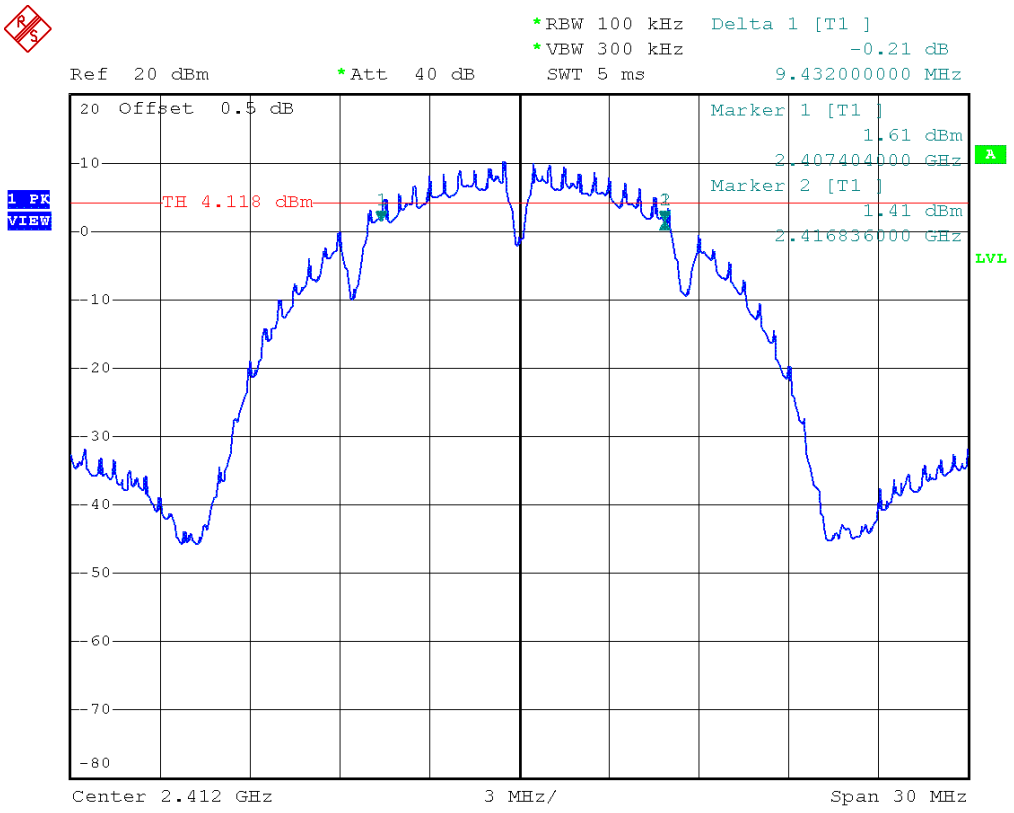
Comments:

6 dB Bandwidth – DSSS F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



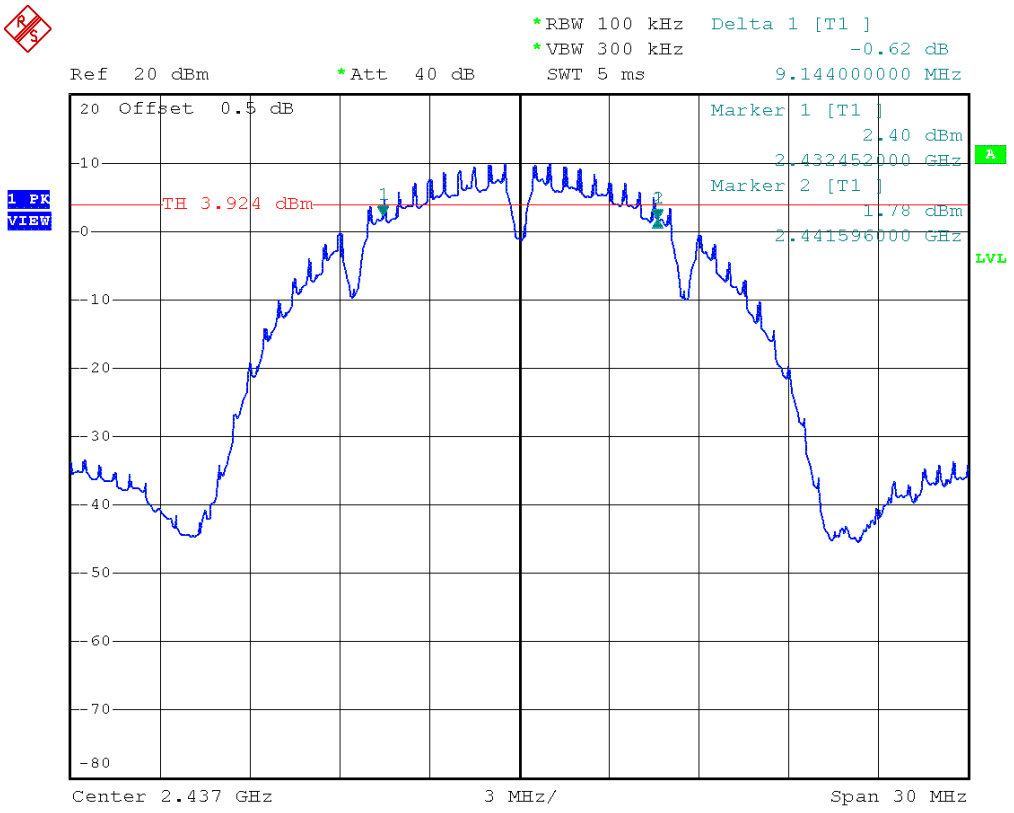
Comment: 6 dB bandwidth: 9432 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:36:57

6 dB Bandwidth – DSSS F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



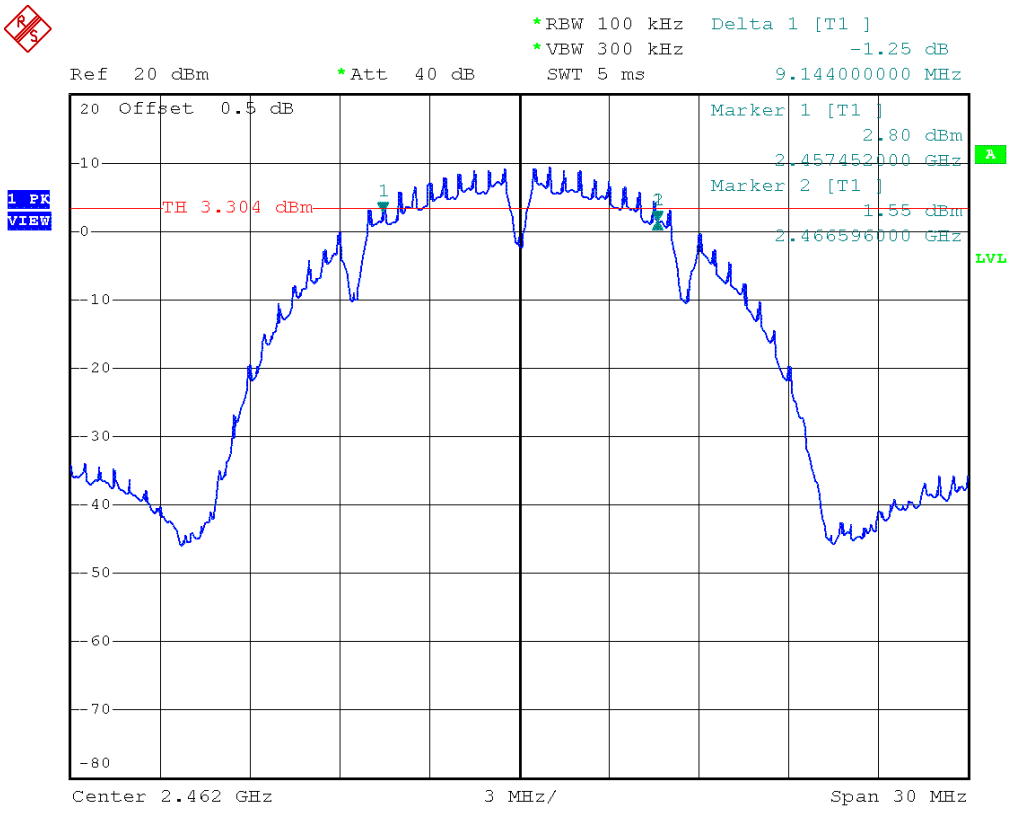
Comment: 6 dB bandwidth: 9144 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:39:12

6 dB Bandwidth – DSSS F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



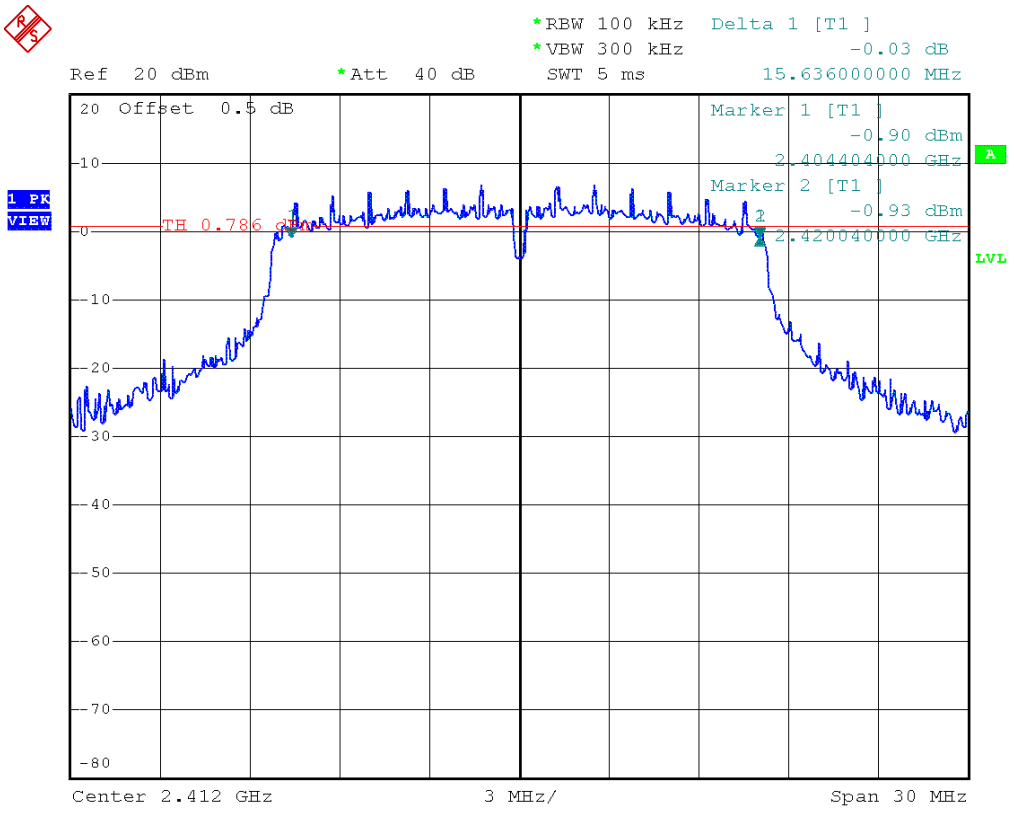
Comment: 6 dB bandwidth: 9144 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:42:05

6 dB Bandwidth – OFDM F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



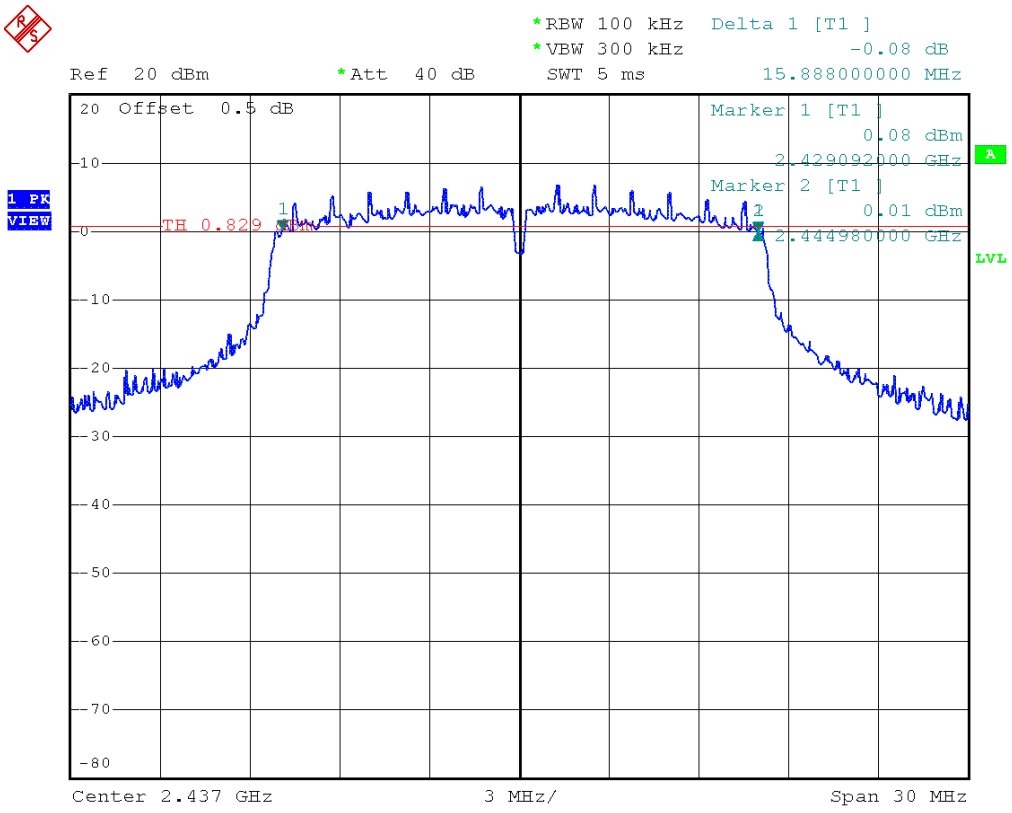
Comment: 6 dB bandwidth: 15636 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:46:53

6 dB Bandwidth – OFDM F_{MID}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



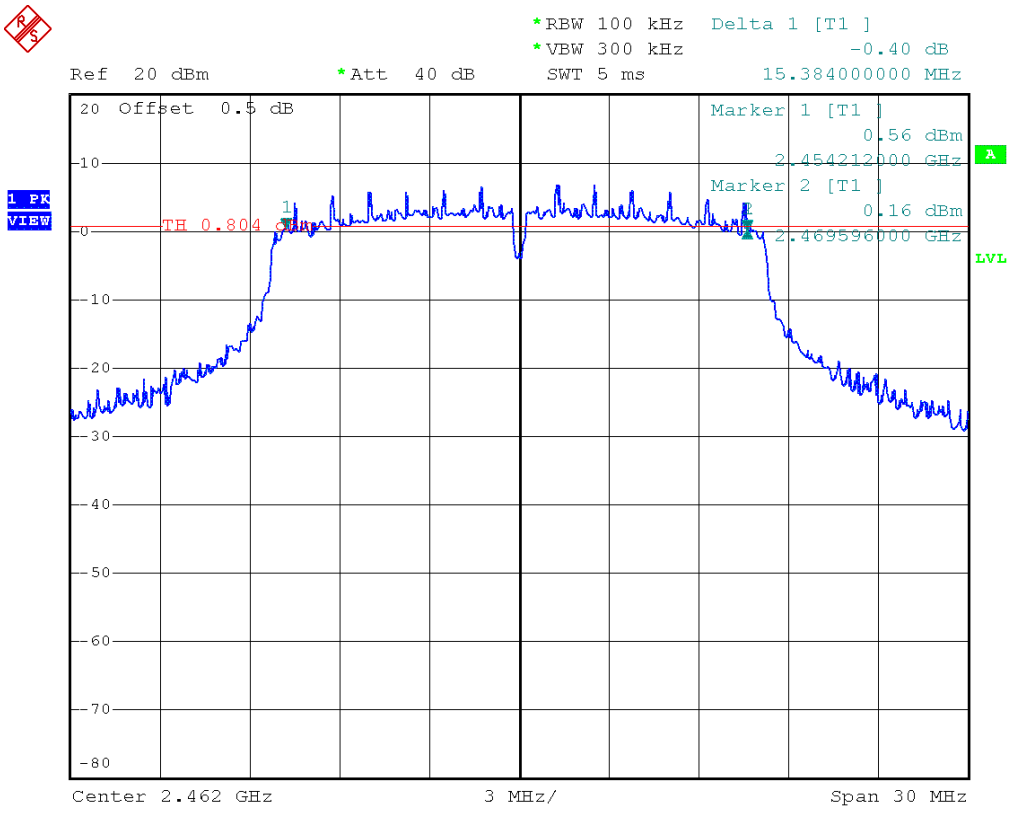
Comment: 6 dB bandwidth: 15888 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:49:10

6 dB Bandwidth – OFDM F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



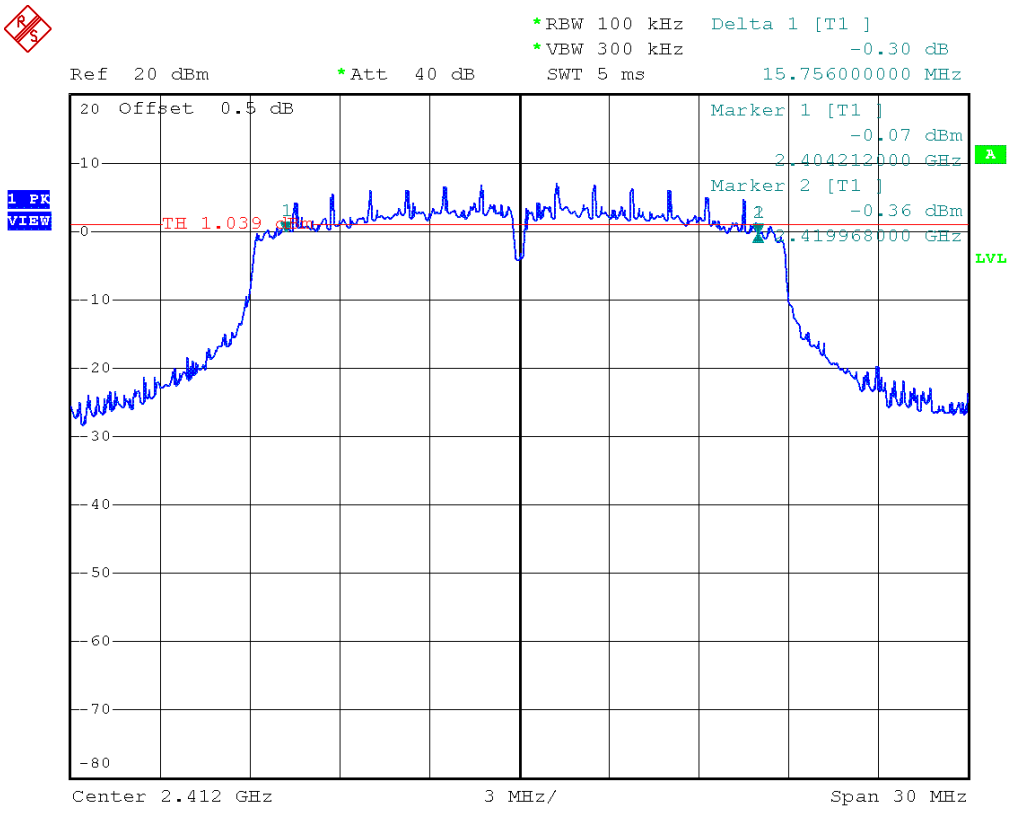
Comment: 6 dB bandwidth: 15384 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:51:13

6 dB Bandwidth – HT20 F_{LOW}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2412 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



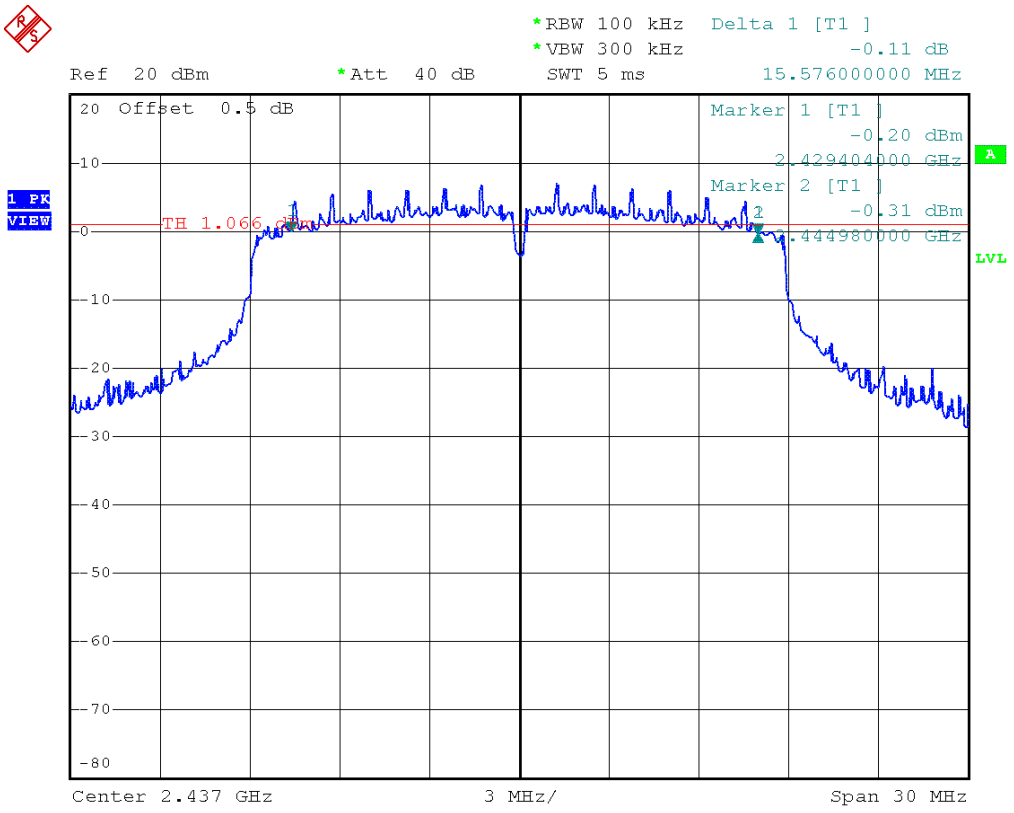
Comment: 6 dB bandwidth: 15756 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:55:15

6 dB Bandwidth – $HT20_{MID}$

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2437 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



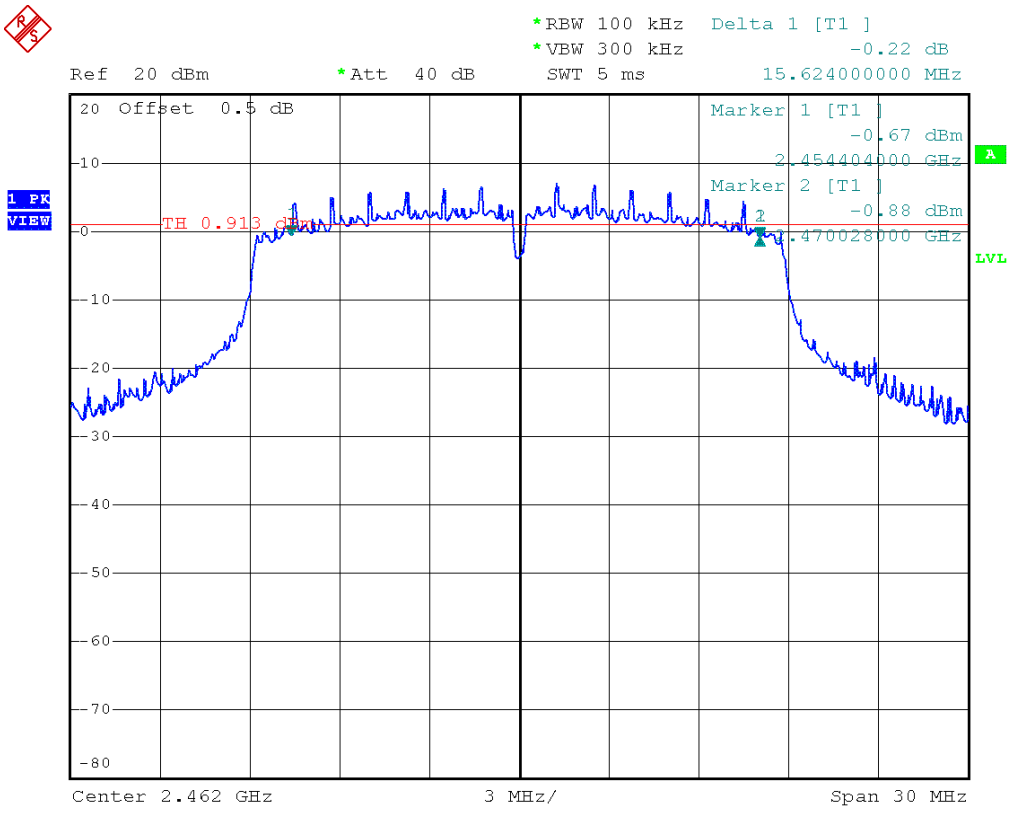
Comment: 6 dB bandwidth: 15576 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 15:58:00

6 dB Bandwidth – HT20 F_{HIGH}

Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2462 MHz, modulated
Test Date:	2015-01-07
Verdict:	PASS
Note 1:	Procedure 8.1 DTS (558074 D01 Meas Guidance)
Note 2:	Minimum 6 dB Bandwidth conducted



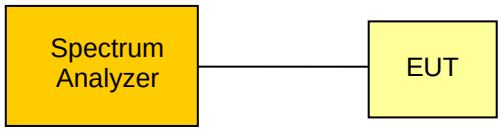
Comment: 6 dB bandwidth: 15624 KHz > 500 KHz; verdict: PASS
Date: 7.JAN.2015 16:00:01

3.3 Test Conditions and Results – Maximum peak conducted power

Maximum peak conducted power acc. to FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(b)(3) / IC RSS-210 A8.4
Test according to measurement reference	Reference Method
	FCC KDB Publication No. 558074
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Measurement mode	Peak
Maximum antenna gain	2.2 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_{LOW}	2412	11.1 VDC	DSSS	20.3	0.107	30	-09.70
F_{MID}	2437	11.1 VDC	DSSS	20.0	0.100	30	-10.00
F_{HIGH}	2462	11.1 VDC	DSSS	19.9	0.098	30	-10.10
F_{LOW}	2412	11.1 VDC	OFDM	24.1	0.257	30	-05.90
F_{MID}	2437	11.1 VDC	OFDM	23.9	0.245	30	-06.10
F_{HIGH}	2462	11.1 VDC	OFDM	23.6	0.229	30	-06.40
F_{LOW}	2412	11.1 VDC	HT20	24.1	0.257	30	-05.90
F_{MID}	2437	11.1 VDC	HT20	23.9	0.245	30	-06.10
F_{HIGH}	2462	11.1 VDC	HT20	23.6	0.229	30	-06.40
Comments:							

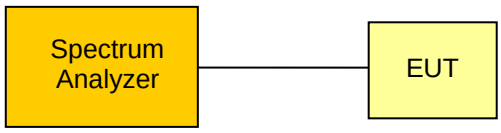
3.4 Test Conditions and Results – Power spectral density

Power spectral density acc. to FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(e) / IC RSS-210 A8.2
Test according to measurement reference	Reference Method
	FCC KDB Publication No. 558074
Test frequency range	Tested frequencies
	F_{MID}
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/10kHz]	Limit [dBm/3kHz]	Margin [dB]
F_{LOW}	2412	DSSS	2410.47	1.58	8.0	-06.42
F_{MID}	2437	DSSS	2436.46	1.26	8.0	-06.74
F_{HIGH}	2462	DSSS	2462.54	1.27	8.0	-06.73
F_{LOW}	2412	OFDM	2413.26	-0.81	8.0	-08.81
F_{MID}	2437	OFDM	2440.15	-1.89	8.0	-09.89
F_{HIGH}	2462	OFDM	2465.15	-1.85	8.0	-09.85
F_{LOW}	2412	HT20	2409.48	-1.32	8.0	-09.32
F_{MID}	2437	HT20	2438.26	-1.74	8.0	-09.74
F_{HIGH}	2462	HT20	2464.52	-2.87	8.0	-10.87

Comments:

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 1

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

Project number: G0M-1406-3917

Manufacturer:	Leica Geosystems AG
EUT Name:	Feld Controller
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 25°C, Unom: 10.8VDC via AC/DC Adapter
LISN:	ESH2-Z5 N
Mode:	Full Disto+ME, charging, WLAN link to AP, BT link to Laptop, GSM900 link to CMU, LR-BT link to TS15 with RH16
Test Date:	2014-08-07
Note:	

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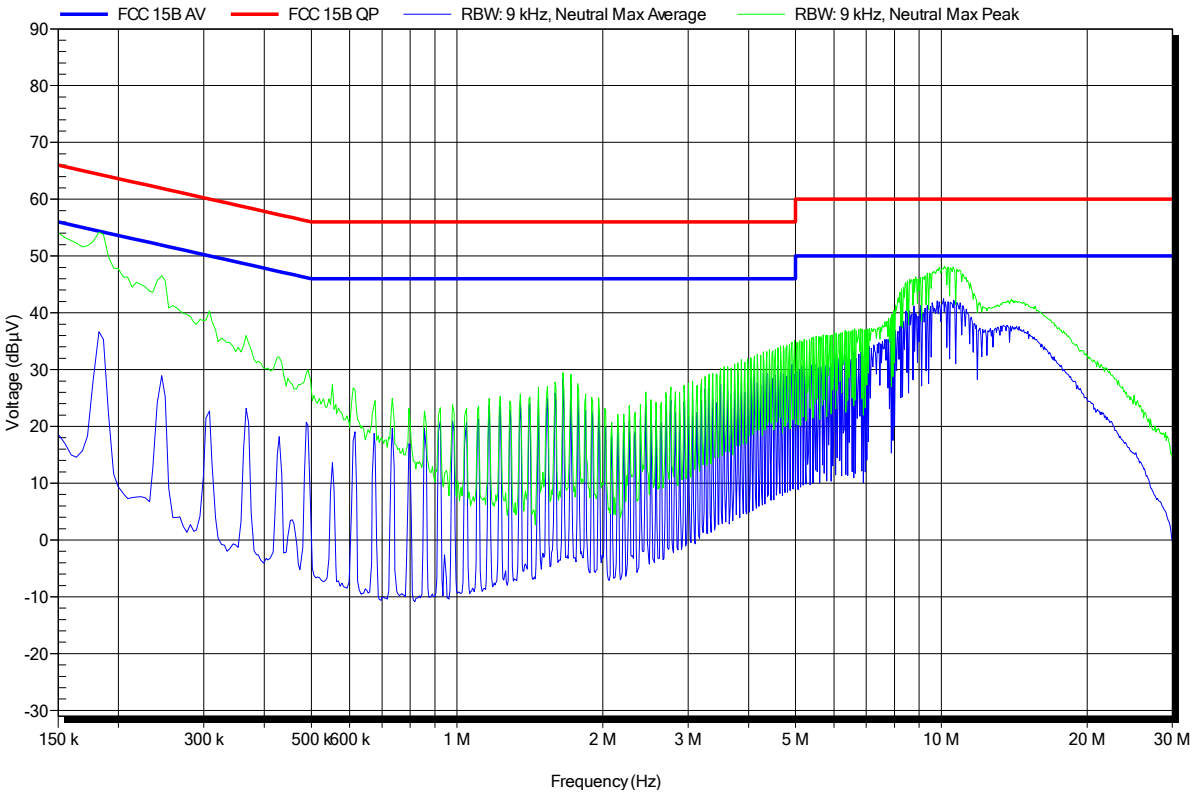

Conducted Emissions 2

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

Project number: G0M-1406-3917

Manufacturer:	Leica Geosystems AG
EUT Name:	Feld Controller
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 25°C, Unom: 10.8VDC via AC/DC Adapter
LISN:	ESH2-Z5 L
Mode:	Full Disto+ME, charging, WLAN link to AP, BT link to Laptop, GSM900 link to CMU, LR-BT link to TS15 with RH16
Test Date:	2014-08-07
Note:	

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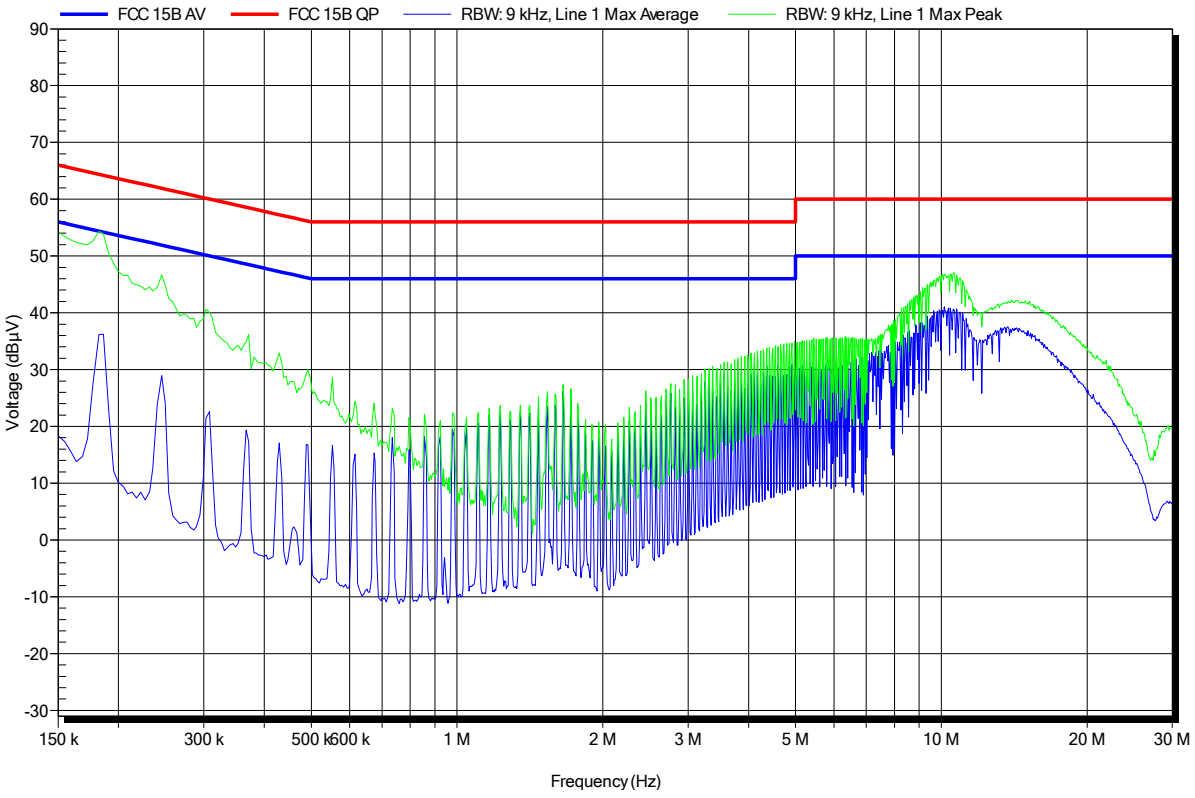


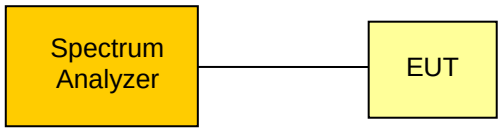
3.6 Test Conditions and Results – Band edge compliance

Band-edge compliance acc. to FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-210 A8.5
Test according to measurement reference	Reference Method
	FCC KDB Publication No. 558074
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_{LOW}	2412	DSSS	-41.06	-20	-21.06
F_{HIGH}	2462	DSSS	-46.65	-20	-26.65
F_{LOW}	2412	OFDM	-27.73	-20	-07.73
F_{HIGH}	2462	OFDM	-39.49	-20	-19.49
F_{LOW}	2412	HT20	-27.02	-20	-07.02
F_{HIGH}	2462	HT20	-38.86	-20	-18.86

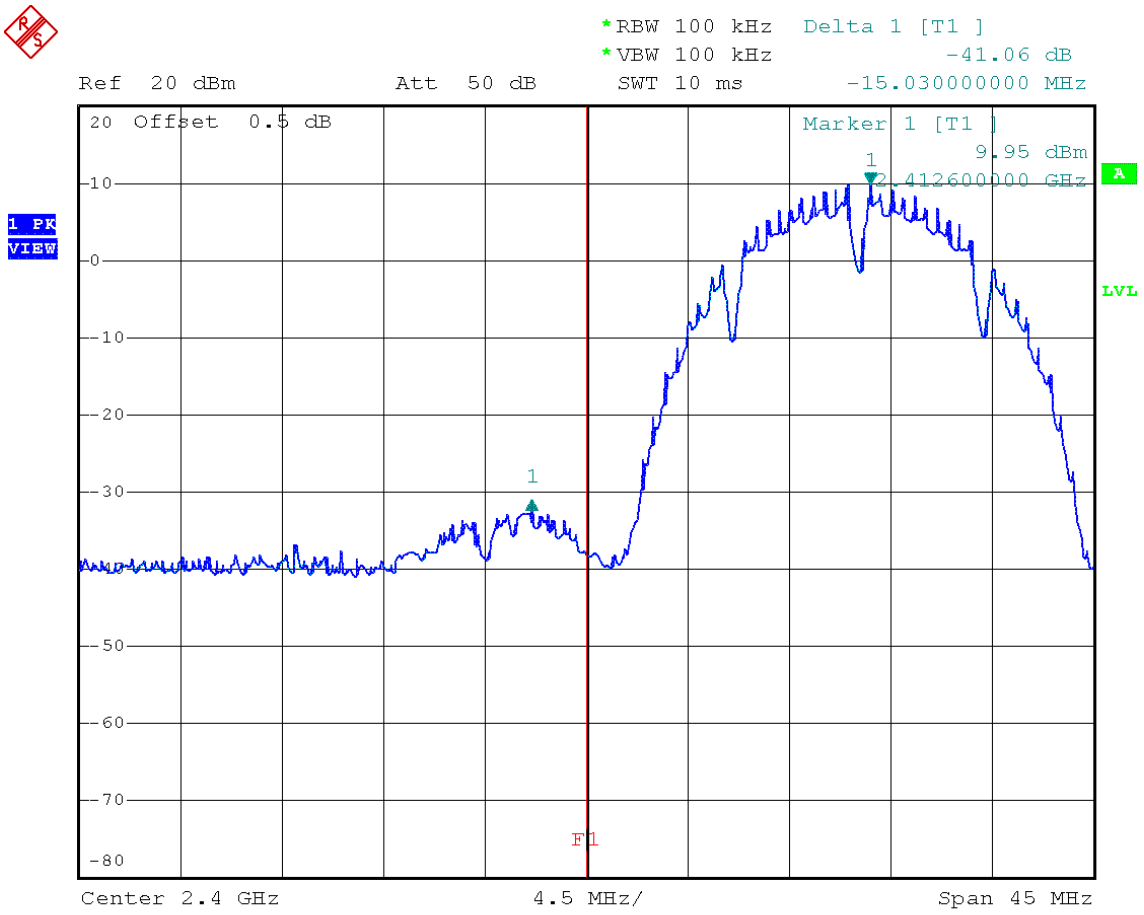
Comments:

Band-edge compliance – DSSS F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	lower Band-edge, conducted measurement



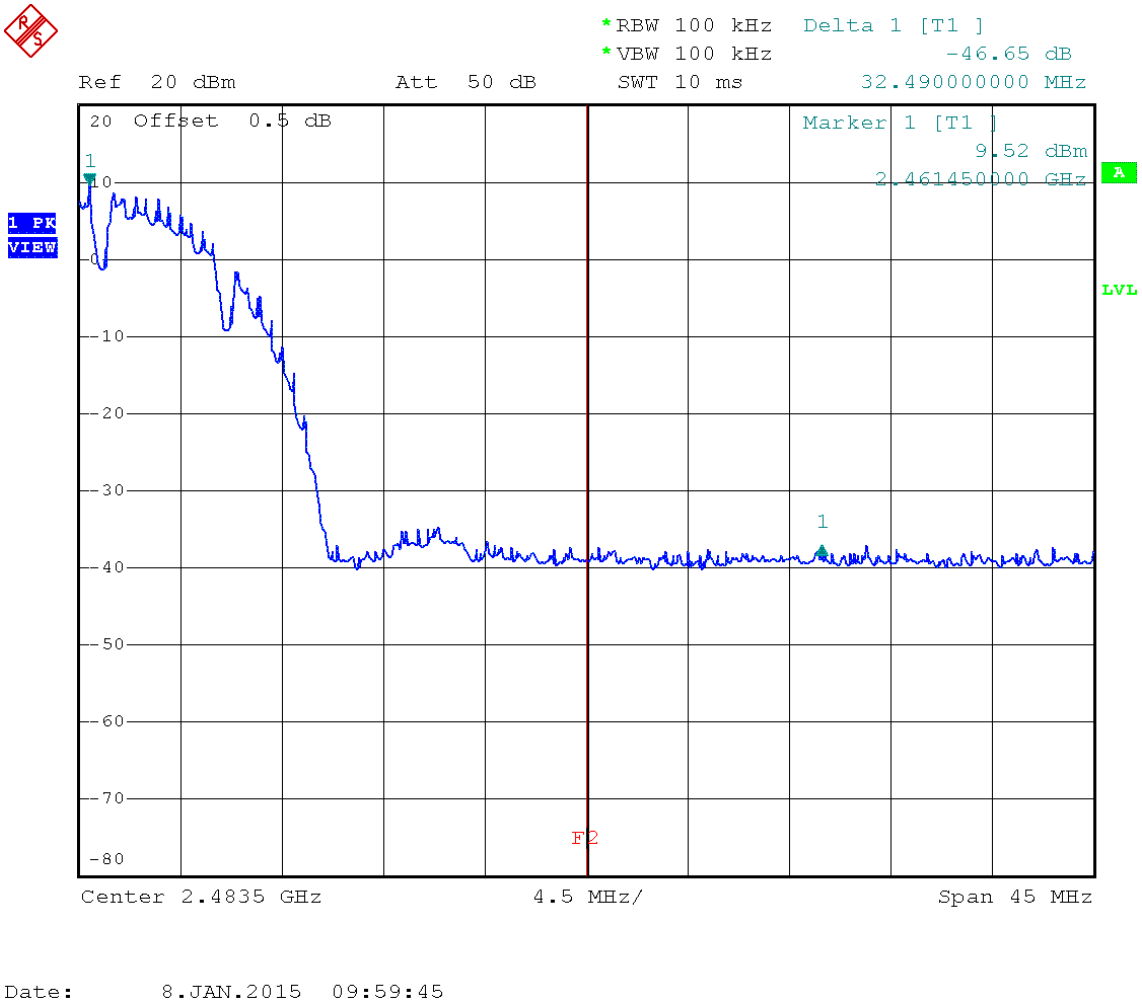
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 8.JAN.2015 09:52:46

Band-edge compliance – DSSS F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	upper Band-edge, conducted measurement

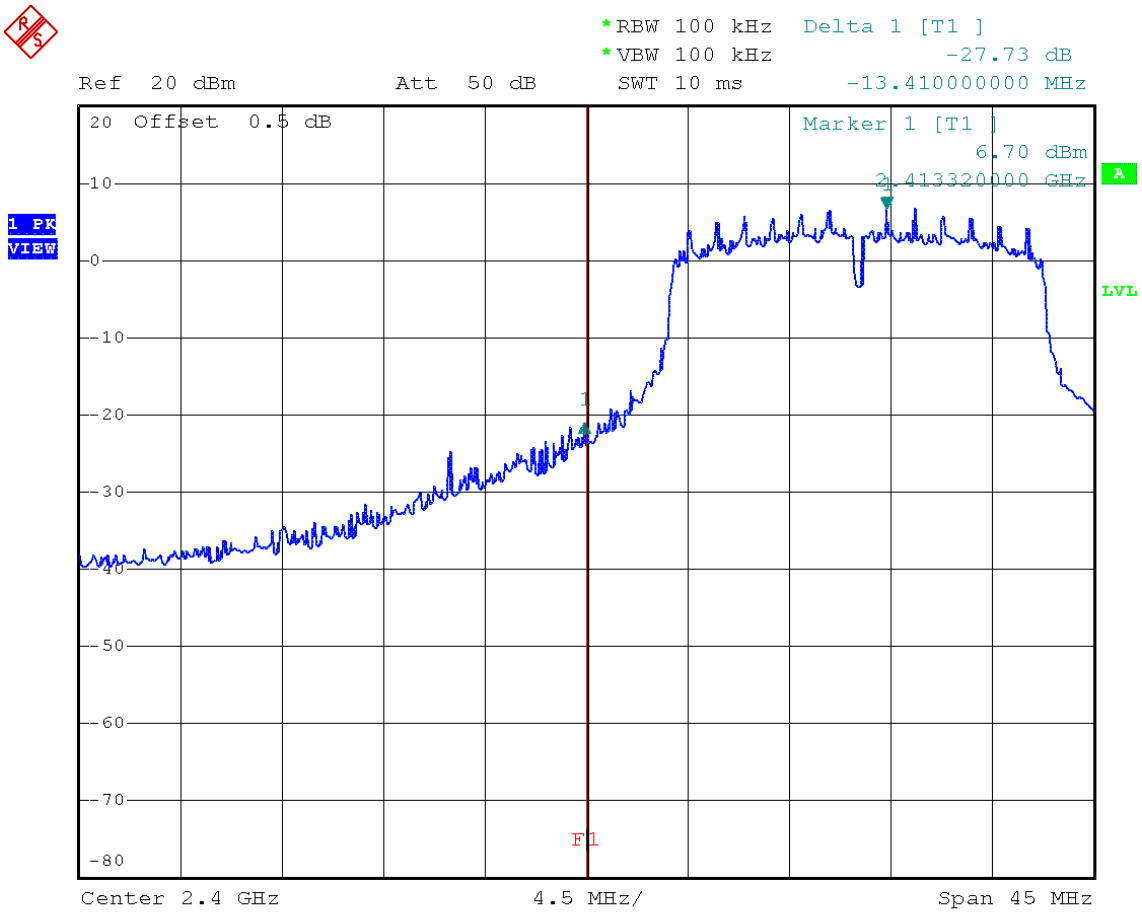


Band-edge compliance – OFDM F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	lower Band-edge, conducted measurement



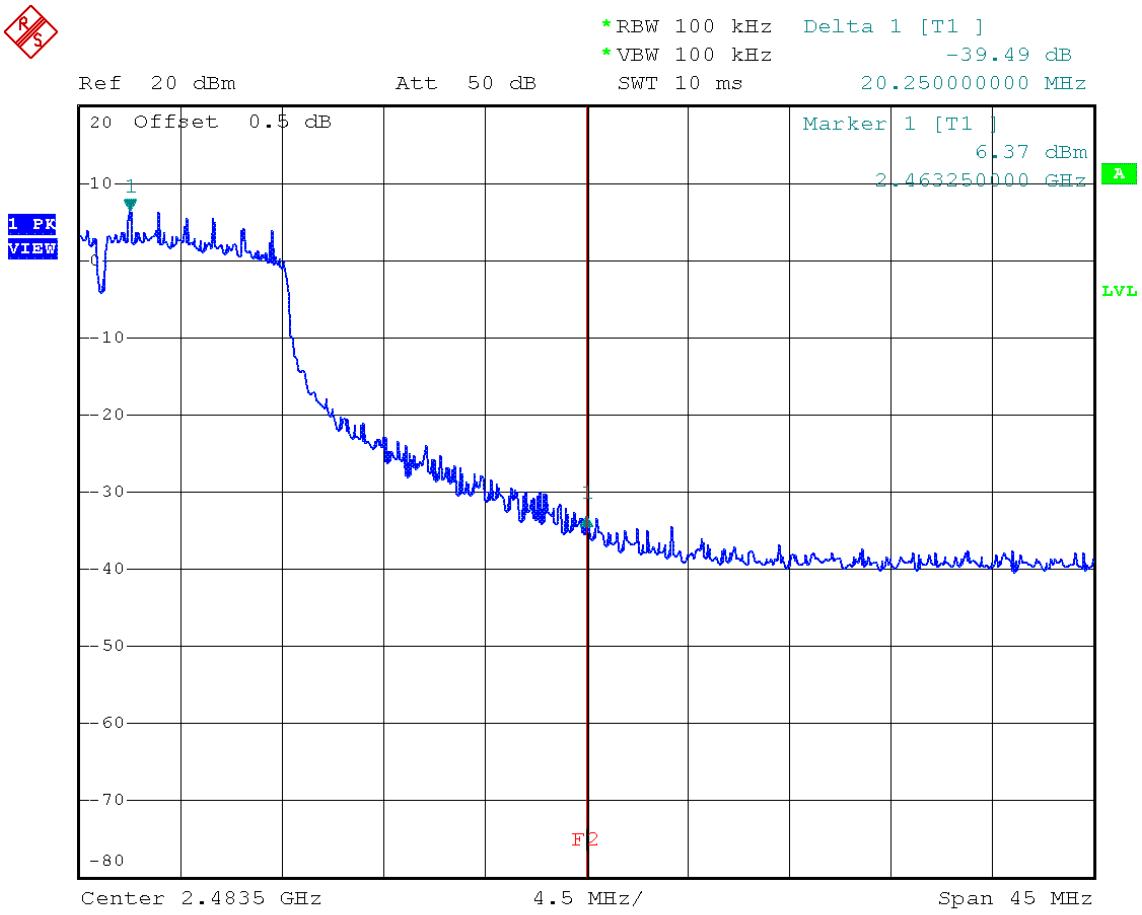
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 8.JAN.2015 10:04:17

Band-edge compliance – OFDM F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	upper Band-edge, conducted measurement



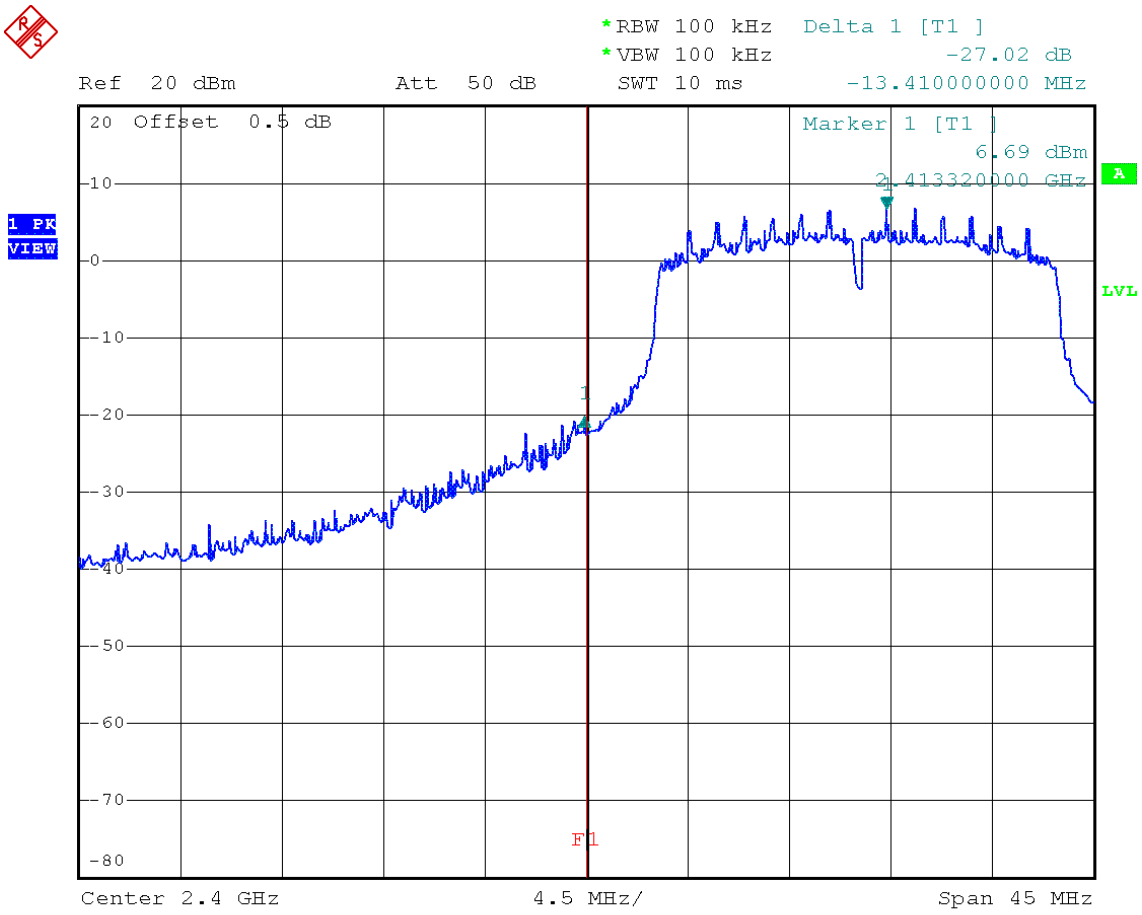
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 8.JAN.2015 10:02:08

Band-edge compliance – HT20 F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	lower Band-edge, conducted measurement



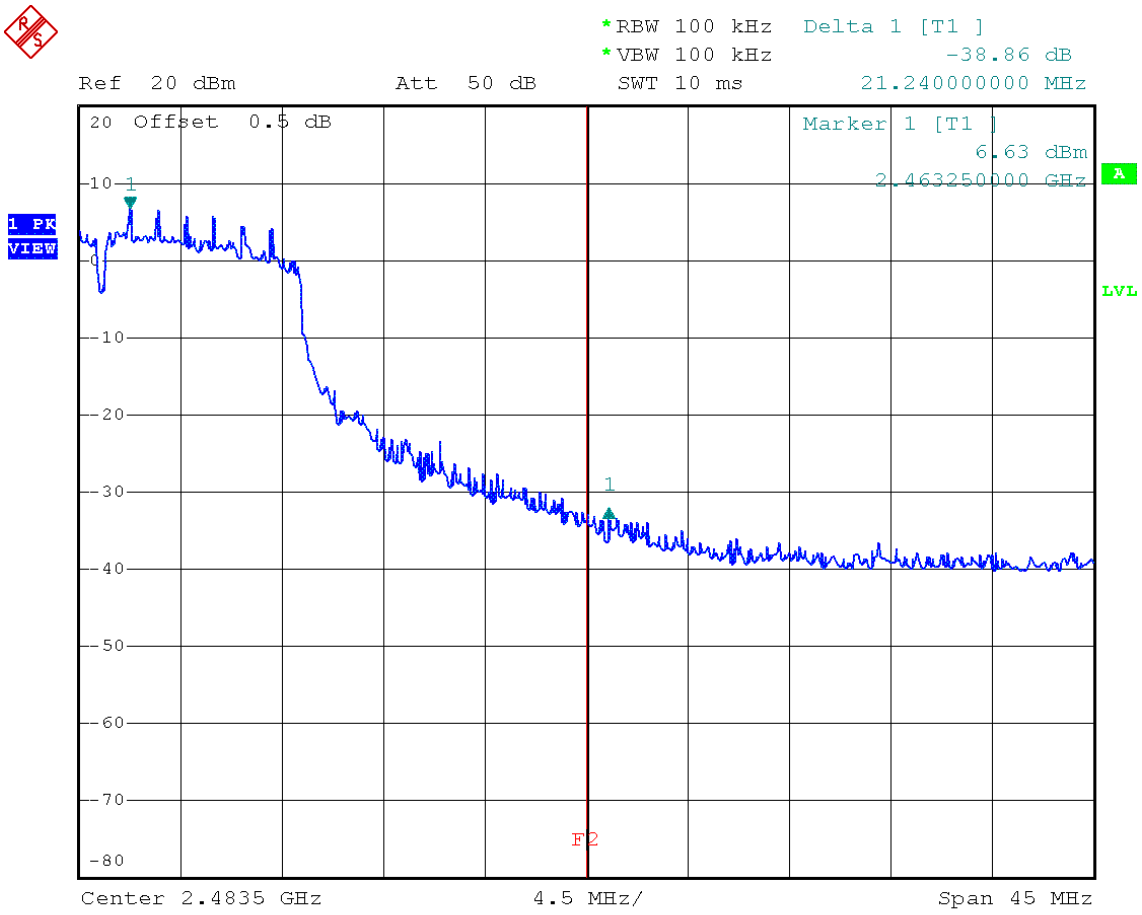
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 8.JAN.2015 10:07:01

Band-edge compliance – HT20 F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2:	upper Band-edge, conducted measurement



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 8.JAN.2015 10:09:43

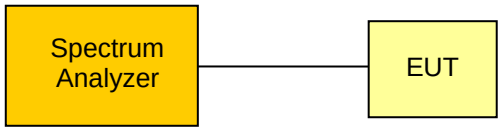
3.7 Test Conditions and Results – Conducted spurious emissions

Conducted spurious emissions acc. to FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-210 A8.5
Test according to measurement reference	Reference Method
	FCC KDB Publication No. 558074
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

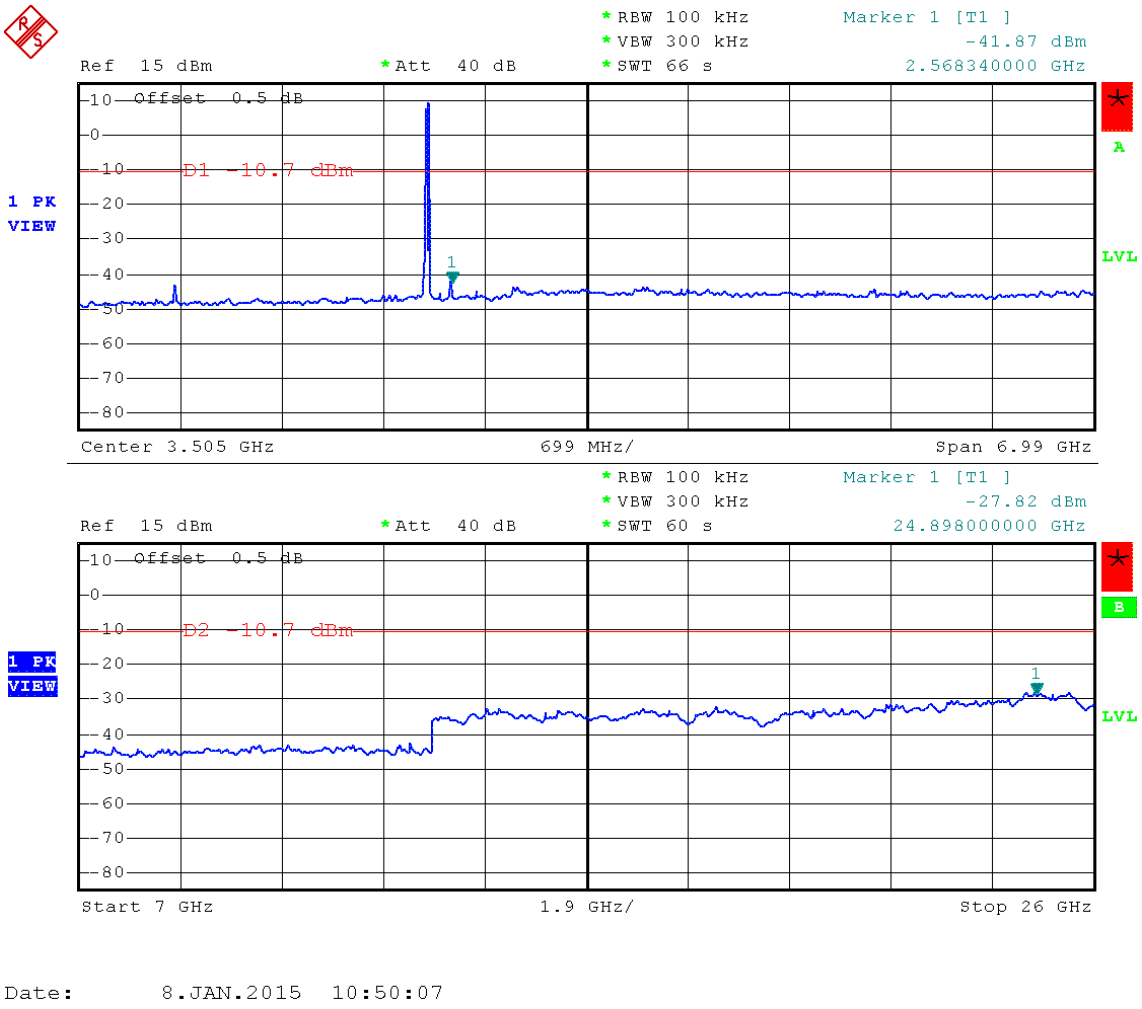
Test results							
Channel	Frequency [MHz]	Mode	Emission [MHz]	Emission Level [dbm]	Peak power [dBm]	Limit [dBm]	Margin [dB]
F_{LOW}	2412	DSSS	24898.0	-27.82	9.3	-10.7	-17.12
F_{MID}	2437	DSSS	24822.0	-27.73	8.3	-11.7	-16.03
F_{HIGH}	2462	DSSS	25506.0	-27.35	8.6	-11.4	-15.95
F_{LOW}	2412	OFDM	25544.0	-27.82	6.9	-13.1	-14.72
F_{MID}	2437	OFDM	24974.0	-27.98	8.7	-14.3	-13.68
F_{HIGH}	2462	OFDM	25012.0	-27.44	8.7	-14.3	-13.14
F_{LOW}	2412	HT20	25468.0	-27.96	7.0	-13.0	-14.96
F_{MID}	2437	HT20	24974.0	-27.52	7.2	-12.8	-14.72
F_{HIGH}	2462	HT20	25582.0	-27.39	6.3	-13.7	-13.69
Comments:							

Conducted spurious emissions – DSSS F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement



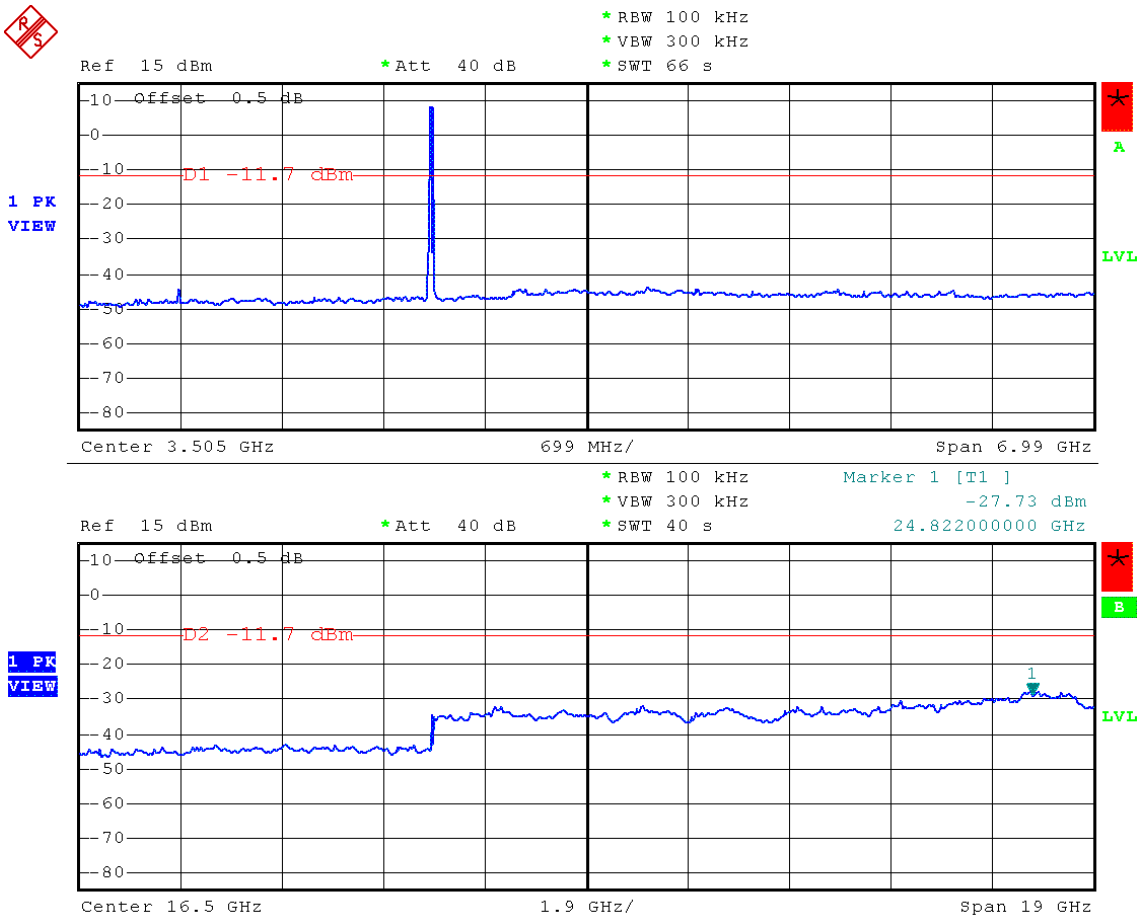
Date: 8.JAN.2015 10:50:07

Conducted spurious emissions – DSSS F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2437 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

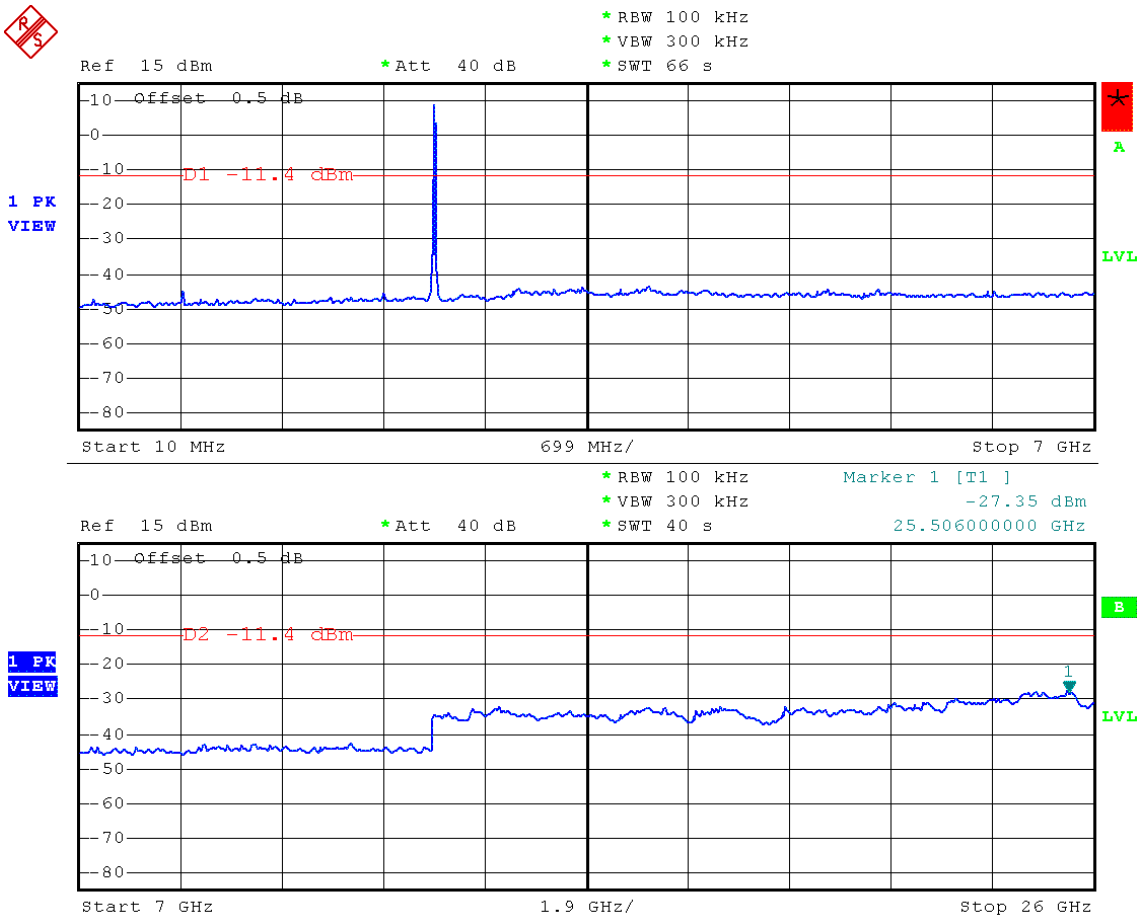


Conducted spurious emissions – DSSS F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, DSSS, 1Mbps, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

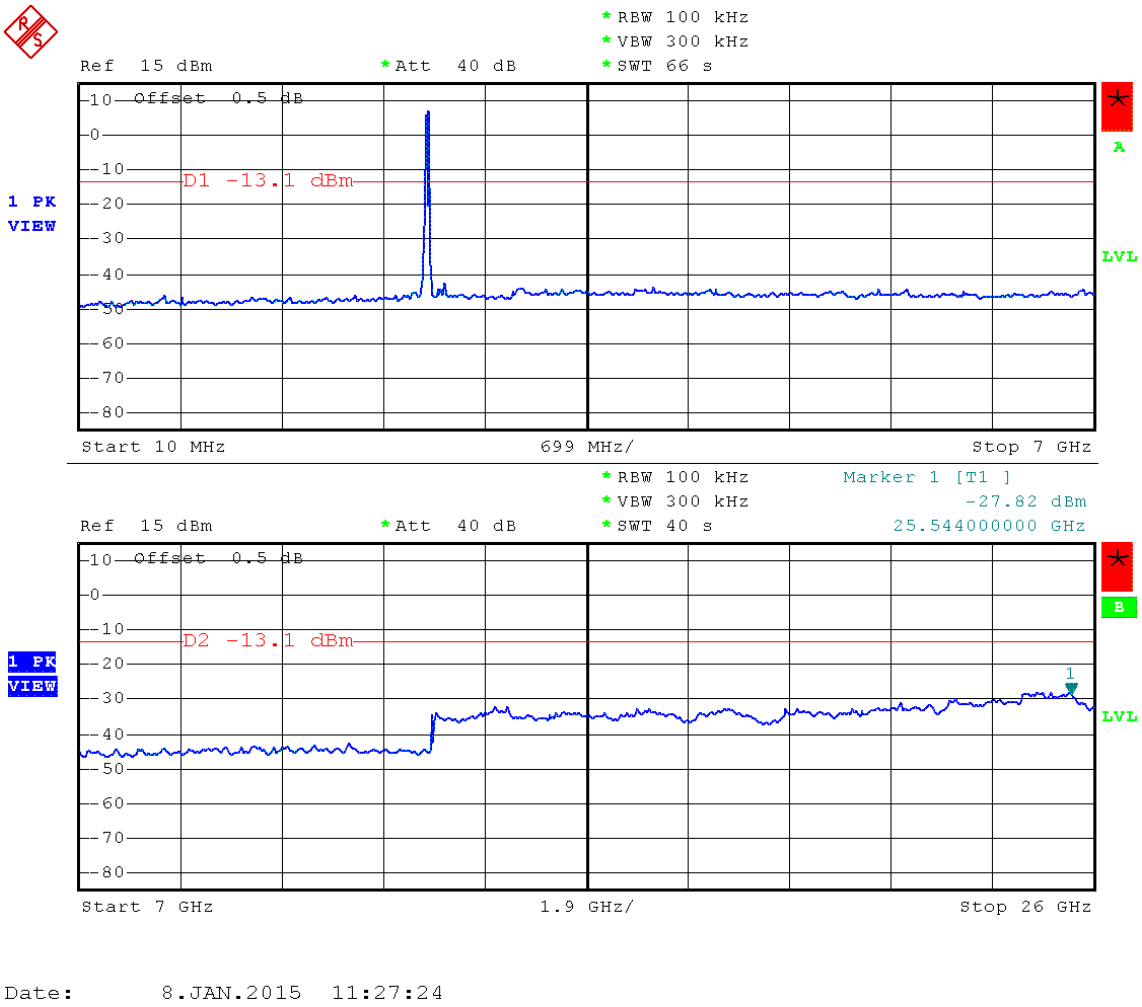


Conducted spurious emissions – OFDM F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

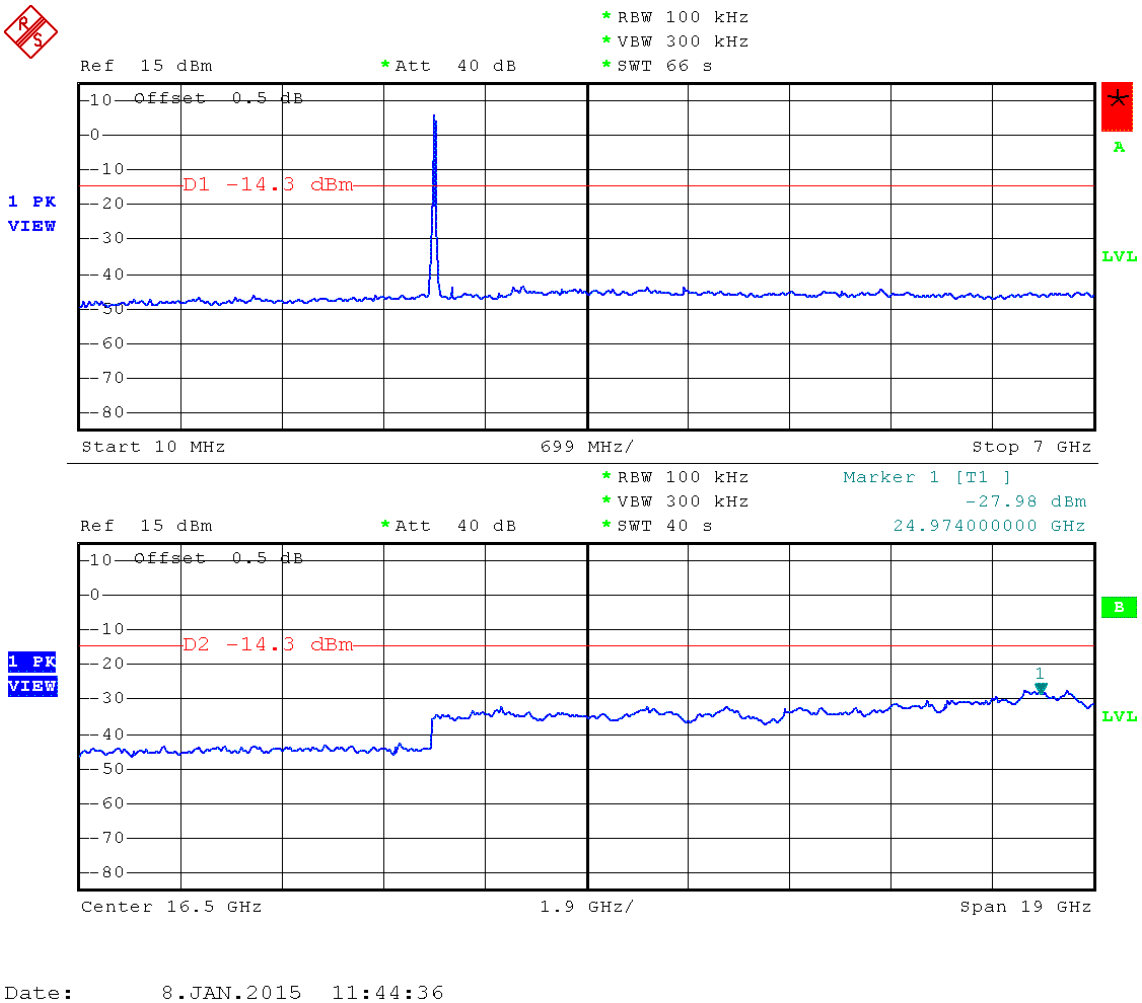


Conducted spurious emissions – OFDM F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2437 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

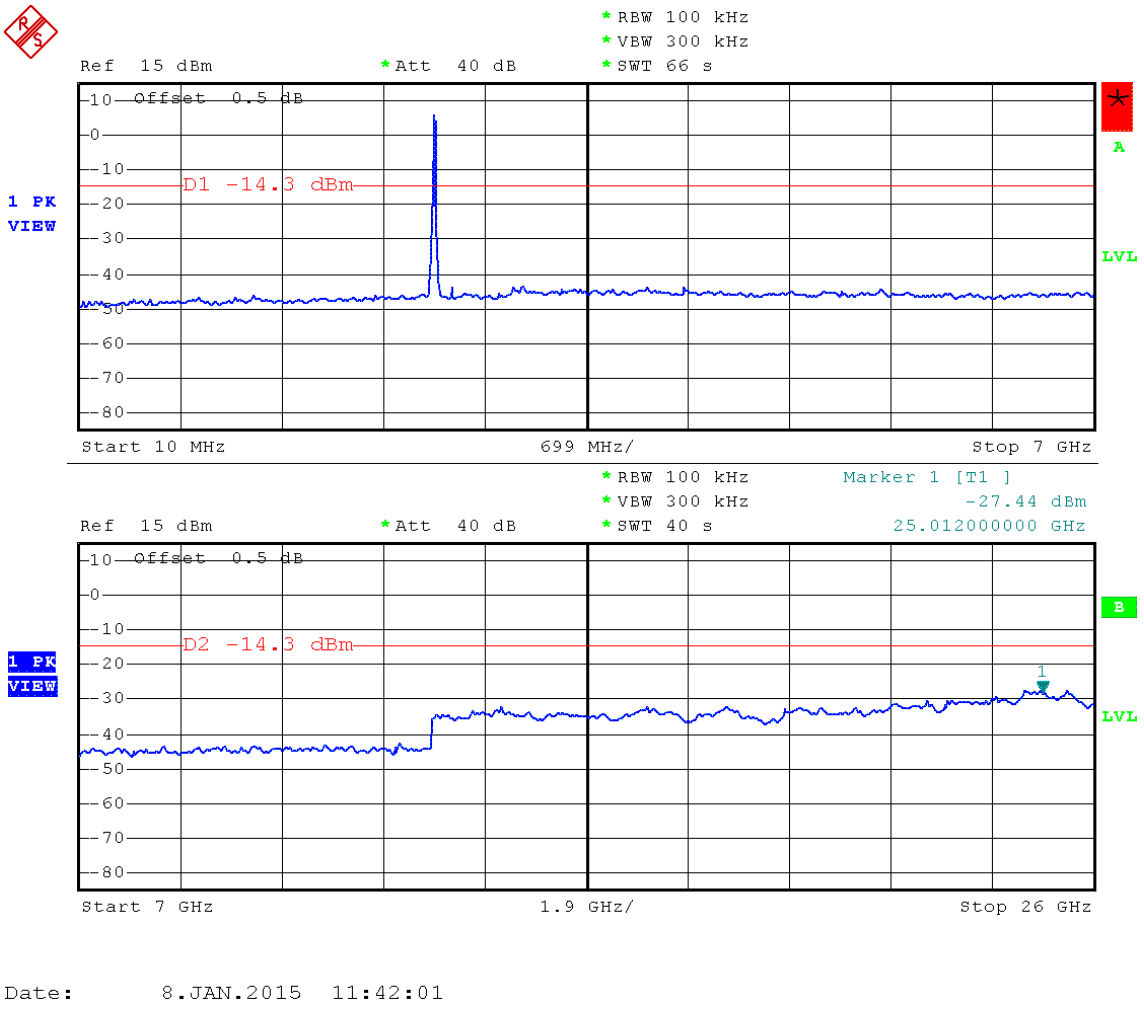


Conducted spurious emissions – OFDM F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, OFDM, 6Mbps, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

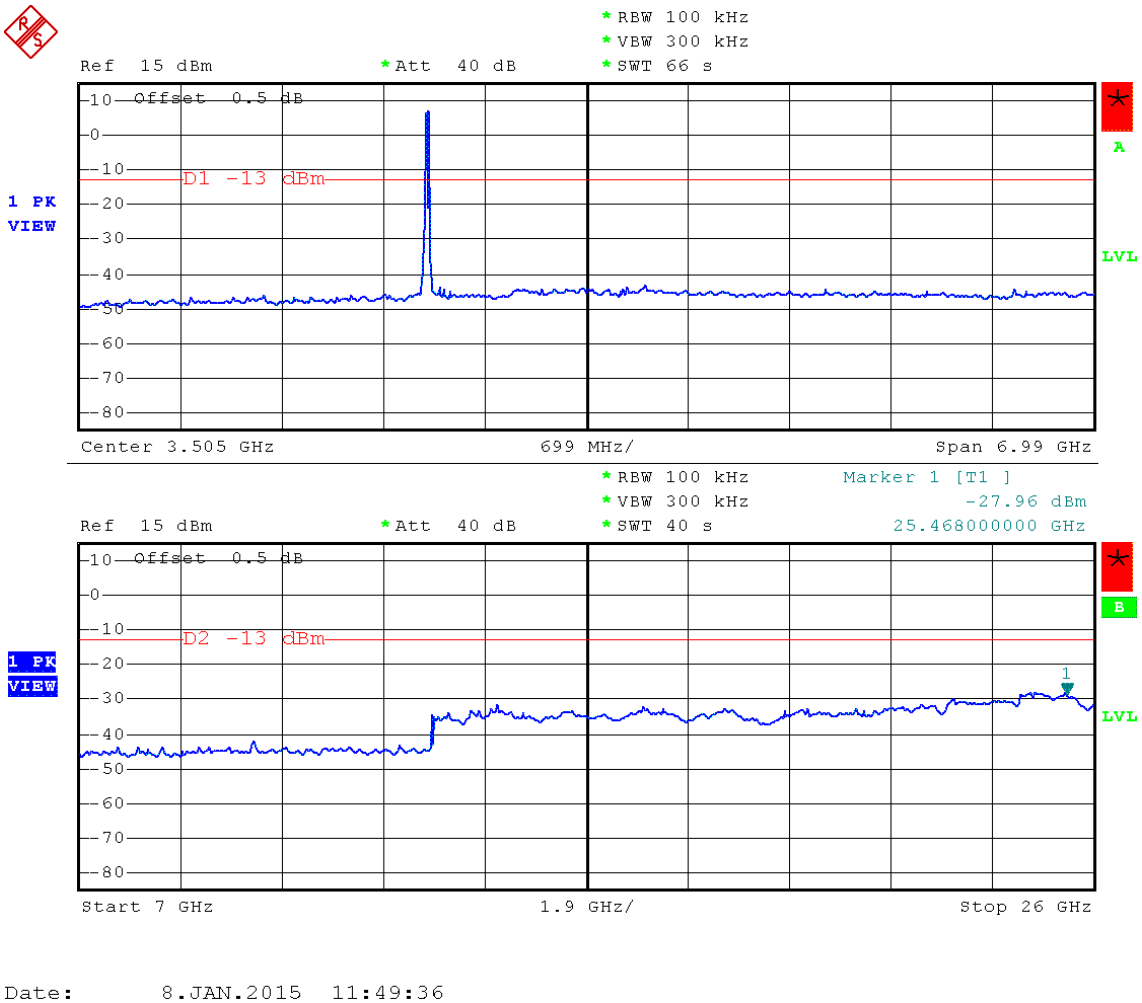


Conducted spurious emissions – HT20 F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2412 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

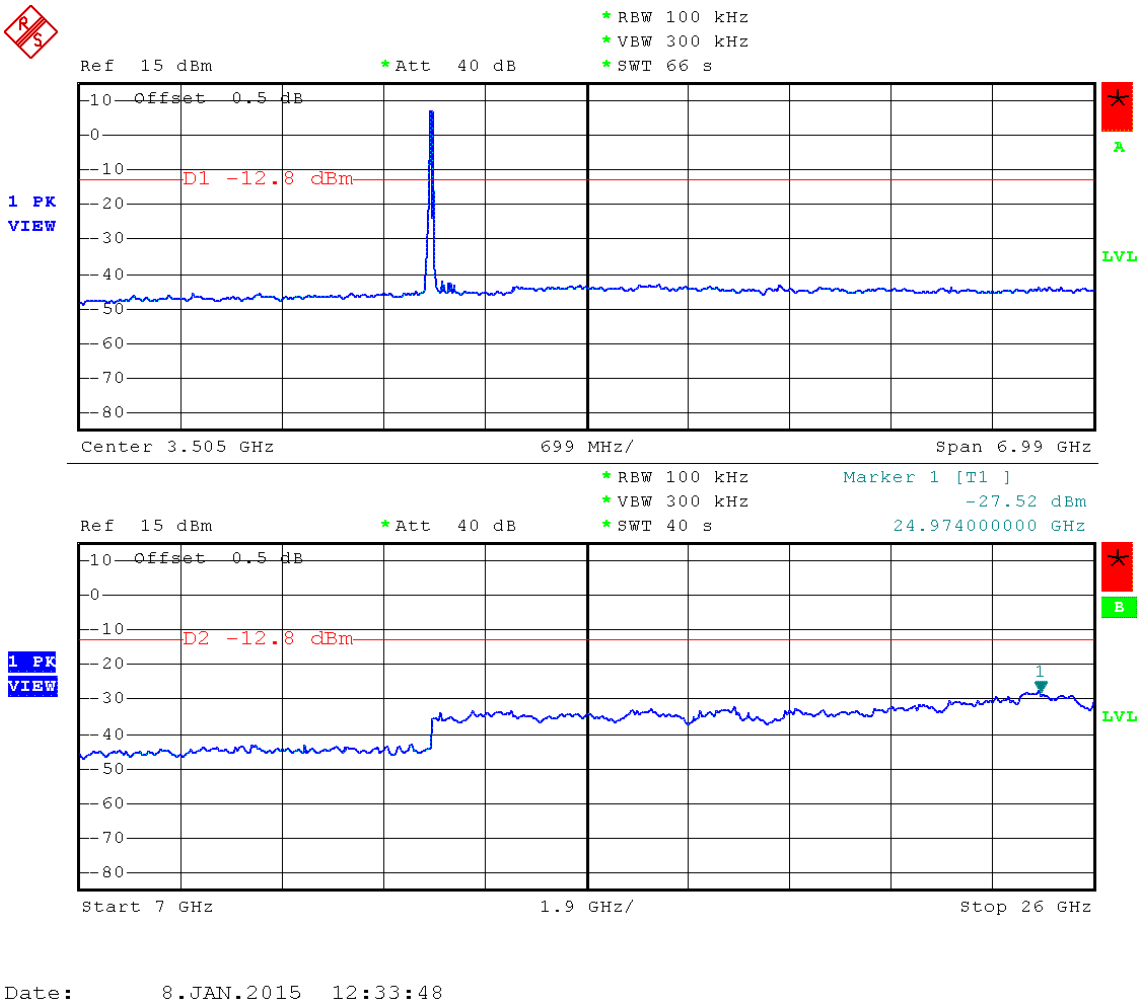


Conducted spurious emissions – HT20 F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2437 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement

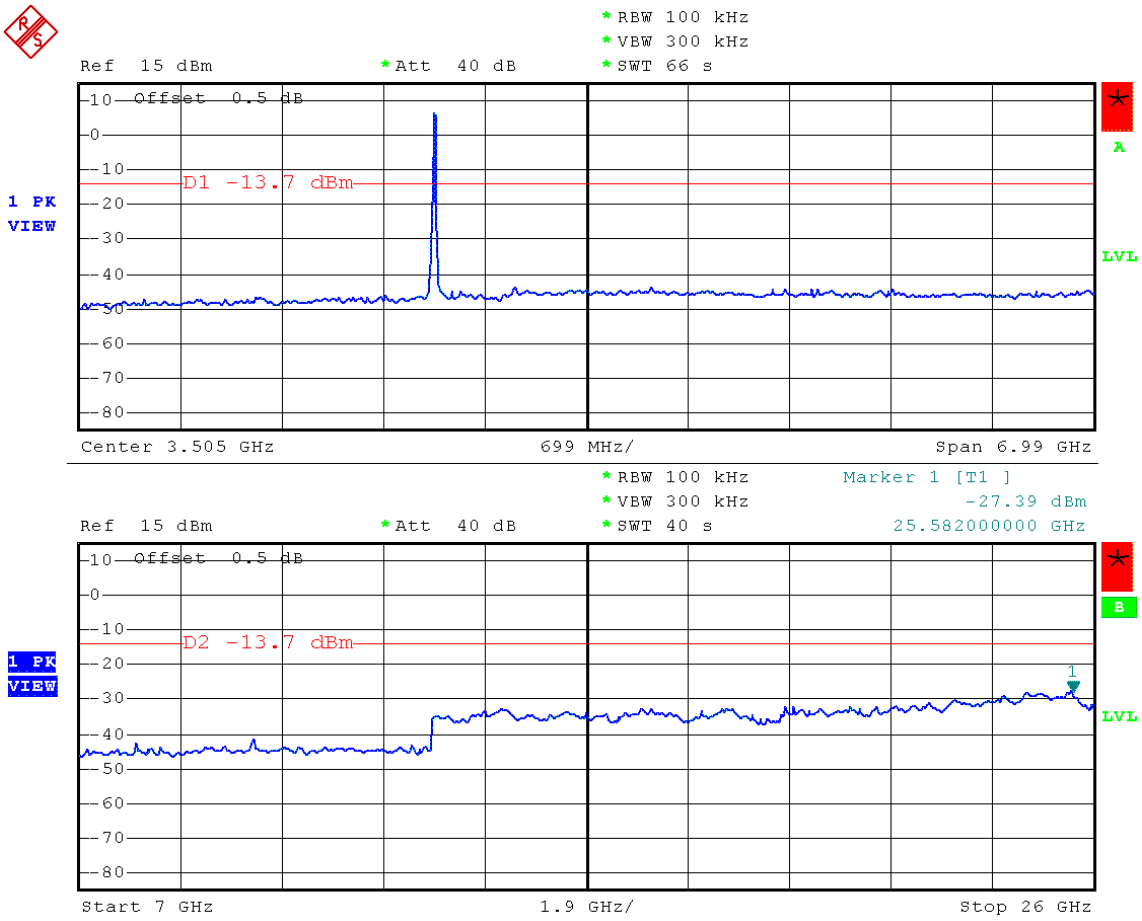


Conducted spurious emissions – HT20 F_{HIGH}

Spurious Emissions acc. to FCC 15.247

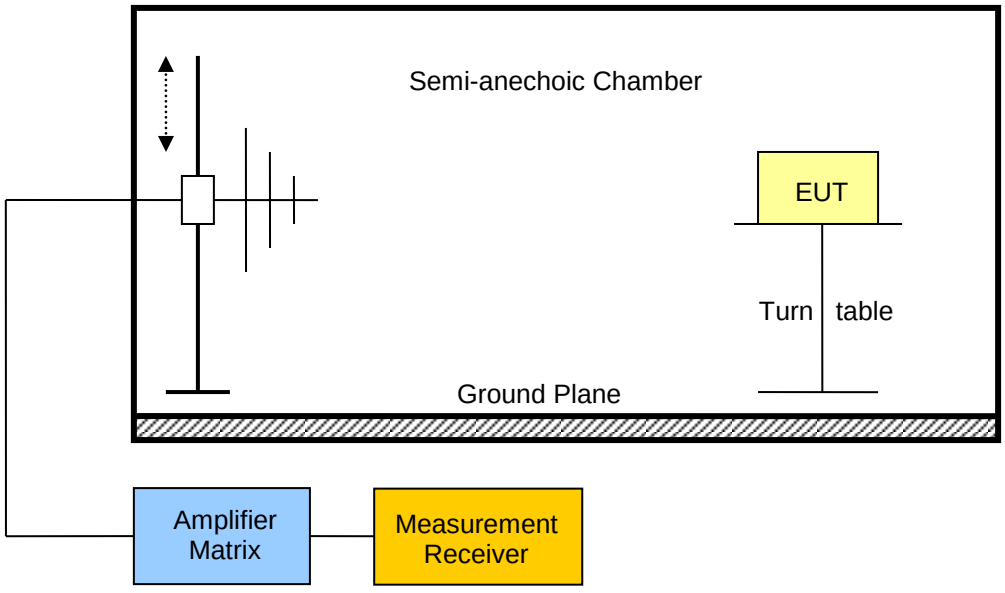
Project Number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20 3.75G
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, WLAN, HT20, MCS0, 2462 MHz, modulated
Test Date:	2015-01-08
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
Note 2:	conducted measurement



3.8 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. to FCC 47 CFR 15.247 / IC RSS-210				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.247(d) / IC RSS-210 A8.5		
Test according to measurement reference		Reference Method		
		FCC KDB Publication No. 558074 / ANSI C63.4		
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

Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2412	DSSS	608	25.18	pk	hor	46.00	3	-20.82
F_{LOW}	2412	DSSS	608.282	29.97	pk	ver	46.00	3	-16.03
F_{LOW}	2412	DSSS	2386	47.58	pk	ver	74.00	3	-26.42
F_{LOW}	2412	DSSS	2386	40.02	RMS	ver	54.00	3	-13.98
F_{LOW}	2412	DSSS	2386	48.91	pk	hor	74.00	3	-25.09
F_{LOW}	2412	DSSS	2386	40.24	RMS	hor	54.00	3	-13.76
F_{LOW}	2412	DSSS	2490.3	56.65	pk	ver	74.00	3	-17.35
F_{LOW}	2412	DSSS	2490.3	34.35	RMS	ver	54.00	3	-19.65
F_{LOW}	2412	DSSS	2490.4	55.53	pk	hor	74.00	3	-18.47
F_{LOW}	2412	DSSS	2490.4	34.60	RMS	hor	54.00	3	-19.40
F_{LOW}	2412	DSSS	2490.7	56.28	pk	ver	74.00	3	-17.72
F_{LOW}	2412	DSSS	2490.7	34.35	RMS	ver	54.00	3	-19.65
F_{LOW}	2412	DSSS	2490.8	55.12	pk	hor	74.00	3	-18.88
F_{LOW}	2412	DSSS	2490.8	34.66	RMS	hor	54.00	3	-19.34
F_{LOW}	2412	DSSS	2491	55.81	pk	ver	74.00	3	-18.19
F_{LOW}	2412	DSSS	2491	34.97	RMS	ver	54.00	3	-19.03
F_{LOW}	2412	DSSS	2491.2	55.07	pk	hor	74.00	3	-18.93
F_{LOW}	2412	DSSS	2491.2	34.09	RMS	hor	54.00	3	-19.91
F_{LOW}	2412	DSSS	2493.1	56.35	pk	ver	74.00	3	-17.65
F_{LOW}	2412	DSSS	2493.1	34.42	RMS	ver	54.00	3	-19.58
F_{LOW}	2412	DSSS	2493.2	56.42	pk	hor	74.00	3	-17.58
F_{LOW}	2412	DSSS	2493.2	34.16	RMS	hor	54.00	3	-19.84
F_{LOW}	2412	DSSS	2493.5	55.11	pk	ver	74.00	3	-18.89
F_{LOW}	2412	DSSS	2493.5	34.29	RMS	ver	54.00	3	-19.71
F_{LOW}	2412	DSSS	2493.8	55.39	pk	ver	74.00	3	-18.61
F_{LOW}	2412	DSSS	2493.8	34.10	RMS	ver	54.00	3	-19.90
F_{LOW}	2412	DSSS	2527	52.64	pk	hor	95.00	3	-42.36
F_{LOW}	2412	DSSS	2539	53.96	pk	ver	95.00	3	-41.04

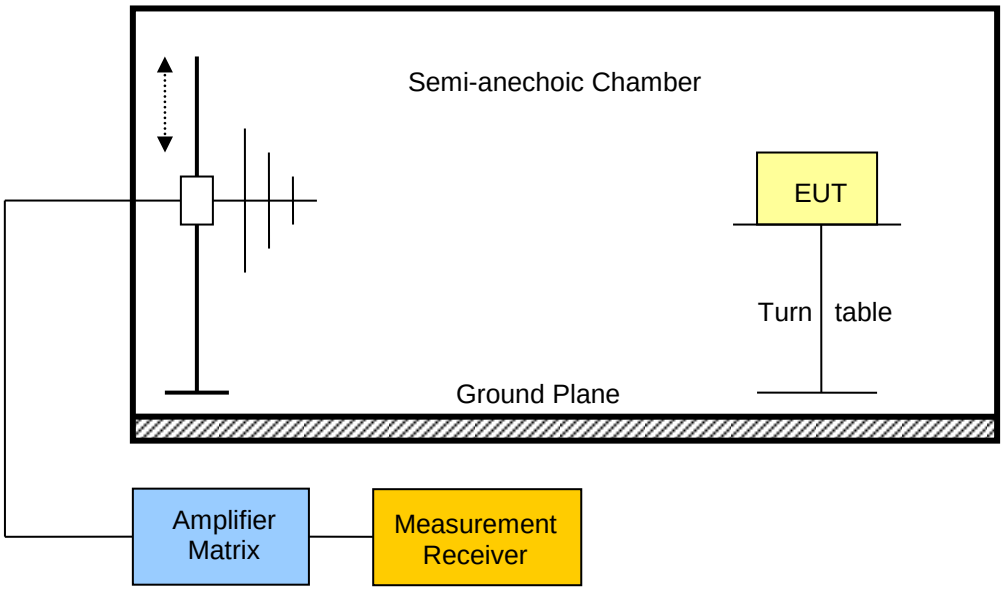
F_{LOW}	2412	DSSS	4823	51.58	pk	ver	74.00	3	-22.42
F_{LOW}	2412	DSSS	4824	52.18	pk	hor	74.00	3	-21.82
F_{LOW}	2412	HT20	2383	57.90	pk	hor	74.00	3	-16.10
F_{LOW}	2412	HT20	2383	36.55	RMS	hor	54.00	3	-17.45
F_{LOW}	2412	HT20	2385	59.38	pk	hor	74.00	3	-14.62
F_{LOW}	2412	HT20	2385	37.64	RMS	hor	54.00	3	-16.36
F_{LOW}	2412	HT20	2386	60.48	pk	ver	74.00	3	-13.52
F_{LOW}	2412	HT20	2386	36.98	RMS	ver	54.00	3	-17.02
F_{LOW}	2412	HT20	2386	61.89	pk	hor	74.00	3	-12.11
F_{LOW}	2412	HT20	2386	39.00	RMS	hor	54.00	3	-15.00
F_{LOW}	2412	HT20	2388	62.10	pk	ver	74.00	3	-11.90
F_{LOW}	2412	HT20	2388	38.90	RMS	ver	54.00	3	-15.10
F_{LOW}	2412	HT20	2388	63.28	pk	hor	74.00	3	-10.72
F_{LOW}	2412	HT20	2388	40.00	RMS	hor	54.00	3	-14.00
F_{LOW}	2412	HT20	2390	62.56	pk	ver	74.00	3	-11.44
F_{LOW}	2412	HT20	2390	42.01	RMS	ver	54.00	3	-11.99
F_{LOW}	2412	HT20	2390	64.84	pk	hor	74.00	3	-09.16
F_{LOW}	2412	HT20	2390	43.27	RMS	hor	54.00	3	-10.73
F_{LOW}	2412	HT20	2487.2	54.40	pk	ver	74.00	3	-19.60
F_{LOW}	2412	HT20	2487.2	31.47	RMS	ver	54.00	3	-22.53
F_{LOW}	2412	HT20	2487.4	52.99	pk	hor	74.00	3	-21.01
F_{LOW}	2412	HT20	2487.4	31.38	RMS	hor	54.00	3	-22.62
F_{LOW}	2412	HT20	2491.3	54.03	pk	ver	74.00	3	-19.97
F_{LOW}	2412	HT20	2491.3	31.11	RMS	ver	54.00	3	-22.89
F_{LOW}	2412	HT20	2491.5	54.69	pk	hor	74.00	3	-19.31
F_{LOW}	2412	HT20	2491.5	32.25	RMS	hor	54.00	3	-21.75
F_{LOW}	2412	HT20	2494.3	55.17	pk	ver	74.00	3	-18.83
F_{LOW}	2412	HT20	2494.3	31.75	RMS	ver	54.00	3	-22.25
F_{LOW}	2412	HT20	2494.6	55.71	pk	hor	74.00	3	-18.29
F_{LOW}	2412	HT20	2494.6	32.42	RMS	hor	54.00	3	-21.58
F_{LOW}	2412	HT20	2498.2	53.36	pk	hor	74.00	3	-20.64
F_{LOW}	2412	HT20	2498.2	31.41	RMS	hor	54.00	3	-22.59
F_{LOW}	2412	HT20	2498.4	53.43	pk	ver	74.00	3	-20.57
F_{LOW}	2412	HT20	2498.4	30.94	RMS	ver	54.00	3	-23.06
F_{LOW}	2412	HT20	2535	54.16	pk	hor	95.00	3	-40.84
F_{LOW}	2412	HT20	2577	53.55	pk	ver	95.00	3	-41.45

F_{LOW}	2412	HT20	4818	53.84	pk	ver	74.00	3	-20.16
F_{LOW}	2412	HT20	4818	37.44	RMS	ver	54.00	3	-16.56
F_{LOW}	2412	HT20	4826	51.34	pk	hor	74.00	3	-22.66
F_{LOW}	2412	HT20	4826	34.88	RMS	hor	54.00	3	-19.12
F_{MID}	2437	DSSS	2594	54.22	pk	ver	95.00	3	-40.78
F_{MID}	2437	DSSS	2594	52.91	pk	hor	95.00	3	-42.09
F_{MID}	2437	DSSS	4872	48.97	pk	ver	74.00	3	-25.03
F_{MID}	2437	DSSS	4872	48.25	pk	hor	74.00	3	-25.75
F_{MID}	2437	HT20	2518	53.45	pk	ver	95.00	3	-41.55
F_{MID}	2437	HT20	4872	47.26	pk	ver	74.00	3	-26.74
F_{HIGH}	2462	DSSS	2380	50.26	pk	hor	74.00	3	-23.74
F_{HIGH}	2462	DSSS	2380	33.28	RMS	hor	54.00	3	-20.72
F_{HIGH}	2462	DSSS	2384	49.80	pk	hor	74.00	3	-24.20
F_{HIGH}	2462	DSSS	2384	33.44	RMS	hor	54.00	3	-20.56
F_{HIGH}	2462	DSSS	2624	53.40	pk	ver	95.00	3	-41.60
F_{HIGH}	2462	HT20	2483.8	64.63	pk	hor	74.00	3	-09.37
F_{HIGH}	2462	HT20	2483.8	40.11	RMS	hor	54.00	3	-13.89
F_{HIGH}	2462	HT20	2483.9	57.16	pk	ver	74.00	3	-16.84
F_{HIGH}	2462	HT20	2483.9	34.12	RMS	ver	54.00	3	-19.88
F_{HIGH}	2462	HT20	2484.4	64.86	pk	hor	74.00	3	-09.14
F_{HIGH}	2462	HT20	2484.4	41.17	RMS	hor	54.00	3	-12.83
F_{HIGH}	2462	HT20	2485.1	57.62	pk	ver	74.00	3	-16.38
F_{HIGH}	2462	HT20	2485.1	32.55	RMS	ver	54.00	3	-21.45
F_{HIGH}	2462	HT20	2485.6	64.95	pk	hor	74.00	3	-09.05
F_{HIGH}	2462	HT20	2485.6	40.15	RMS	hor	54.00	3	-13.85
F_{HIGH}	2462	HT20	2486.2	64.58	pk	hor	74.00	3	-09.42
F_{HIGH}	2462	HT20	2486.2	38.84	RMS	hor	54.00	3	-15.16
F_{HIGH}	2462	HT20	2486.3	57.79	pk	ver	74.00	3	-16.21
F_{HIGH}	2462	HT20	2486.3	32.23	RMS	ver	54.00	3	-21.77
F_{HIGH}	2462	HT20	2486.8	56.71	pk	ver	74.00	3	-17.29
F_{HIGH}	2462	HT20	2486.8	32.47	RMS	ver	54.00	3	-21.53
F_{HIGH}	2462	HT20	2487.4	63.35	pk	hor	74.00	3	-10.65
F_{HIGH}	2462	HT20	2487.4	37.71	RMS	hor	54.00	3	-16.29
F_{HIGH}	2462	HT20	2488	55.89	pk	ver	74.00	3	-18.11
F_{HIGH}	2462	HT20	2488	31.73	RMS	ver	54.00	3	-22.27
F_{HIGH}	2462	HT20	2488	62.15	pk	hor	74.00	3	-11.85

F_{HIGH}	2462	HT20	2488	38.70	RMS	hor	54.00	3	-15.30
F_{HIGH}	2462	HT20	2490	59.16	pk	hor	74.00	3	-14.84
F_{HIGH}	2462	HT20	2490	37.03	RMS	hor	54.00	3	-16.97
Comments: * Physical distance between EUT and measurement antenna.3									

3.9 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. to IC RSS-210				**Verdict: PASS**
Test according referenced standards	Reference Method			
	IC RSS-210 A8.5			
Test according to measurement reference	Reference Method			
	ANSI C63.4			
Test frequency range	Tested frequencies			
	30 MHz – 3th 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]	Pol	Det.	Limit [dBµV/m]	Margin [dB]
F_{MID}	2437	177.9	38.62	ver	pk	43.50	-04.88
F_{MID}	2437	416	35.93	ver	pk	46.00	-10.07
F_{MID}	2437	768	34.68	hor	pk	46.00	-11.32

Comments:

ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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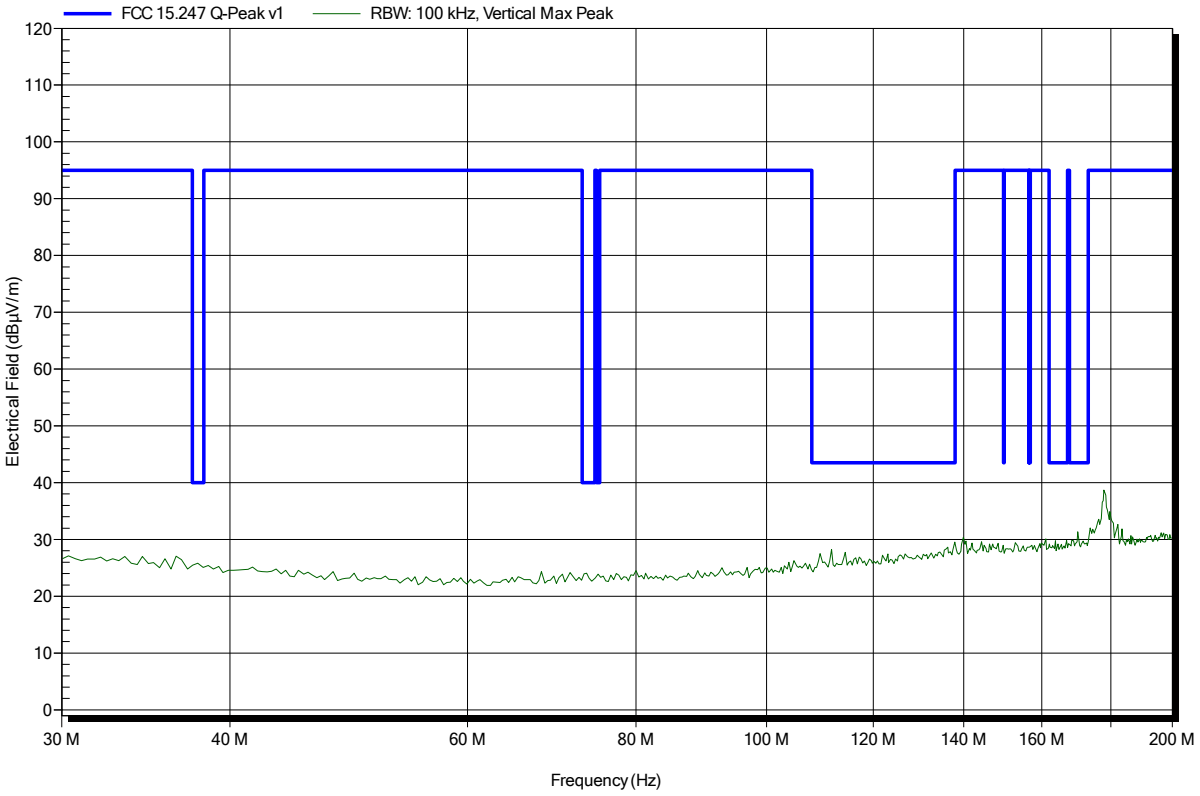

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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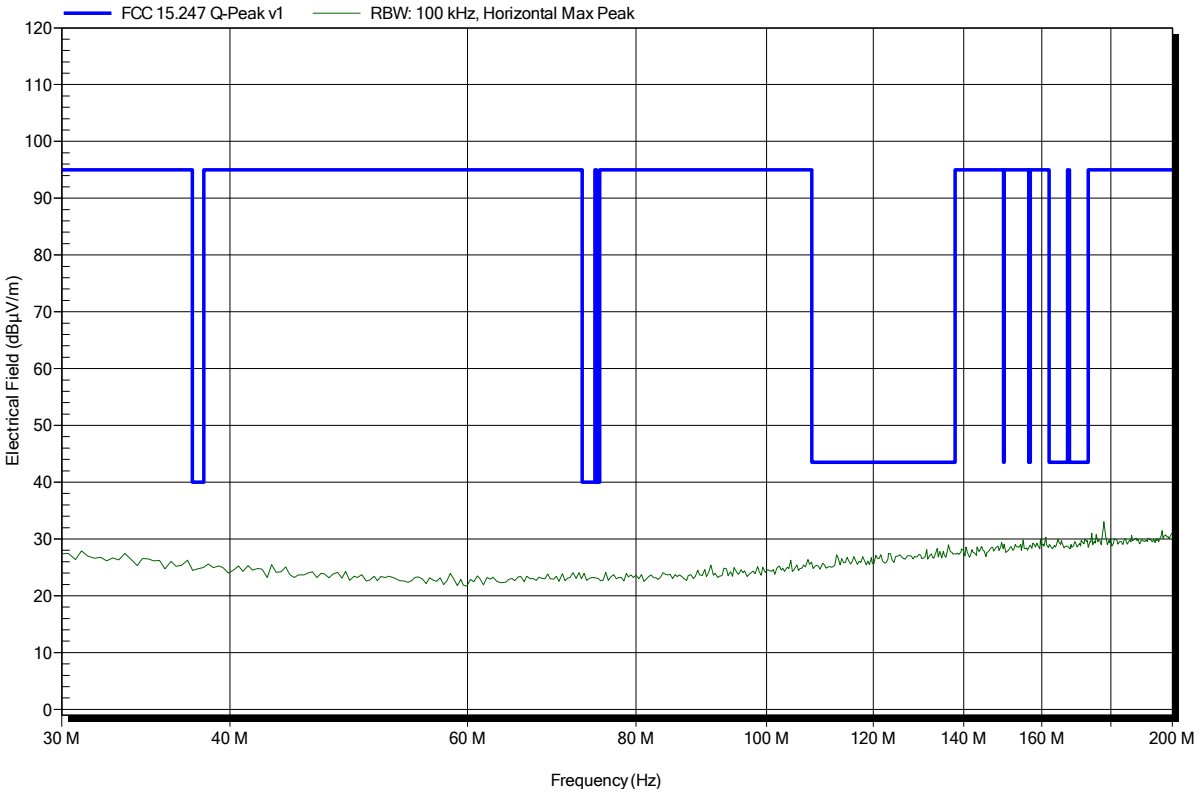

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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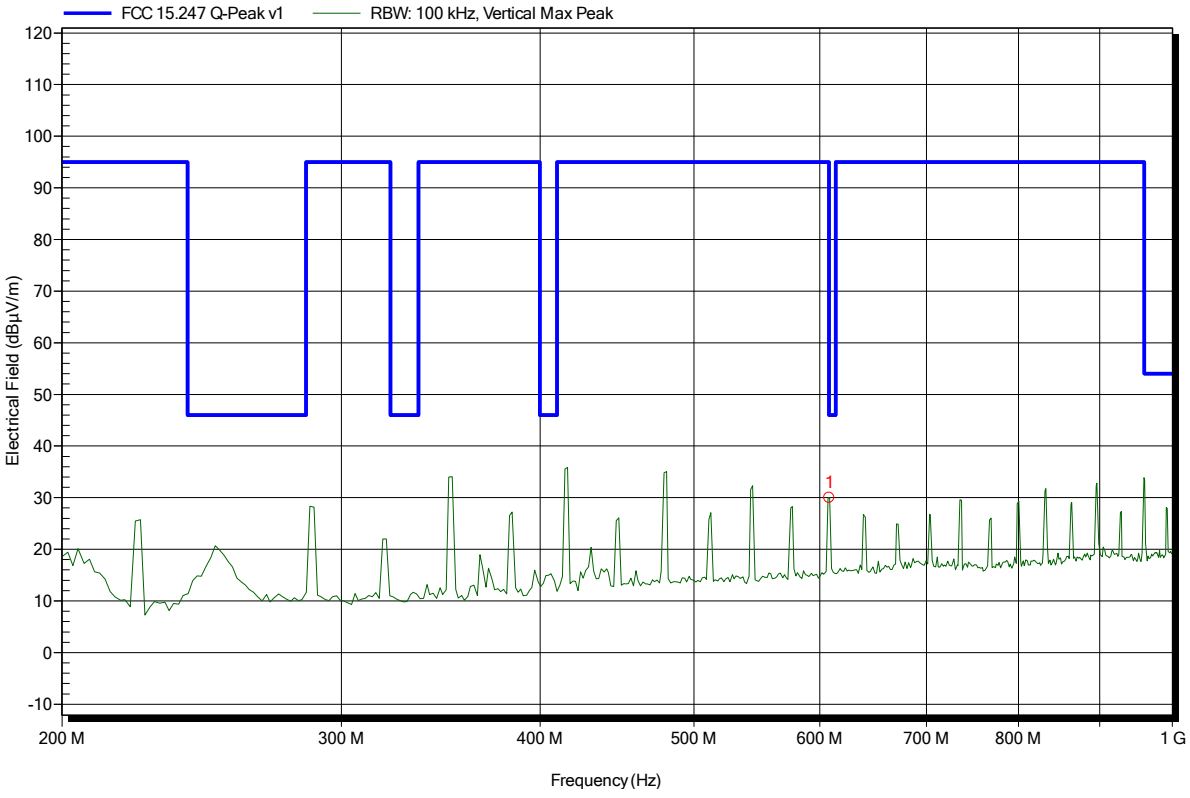

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
608.282 MHz	29.97 dBµV/m	46 dBµV/m	-16.03 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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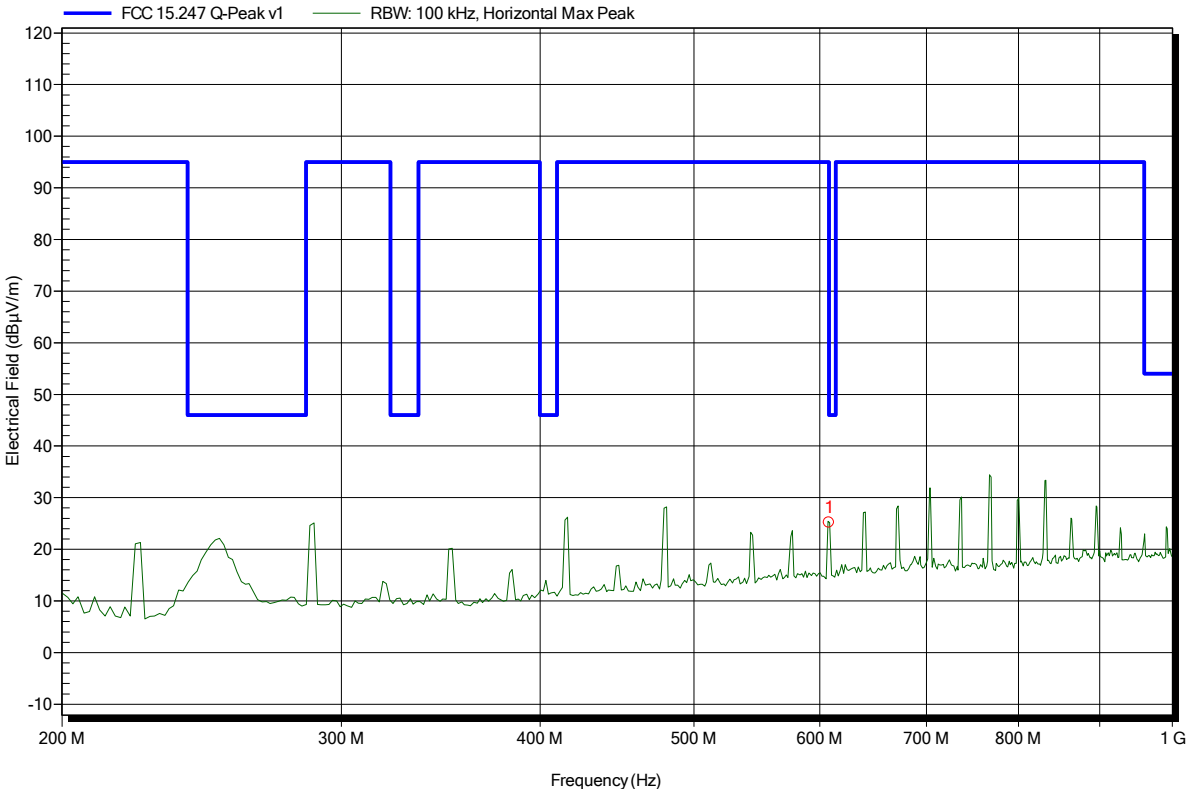

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
608 MHz	25.18 dBµV/m	46 dBµV/m	-20.82 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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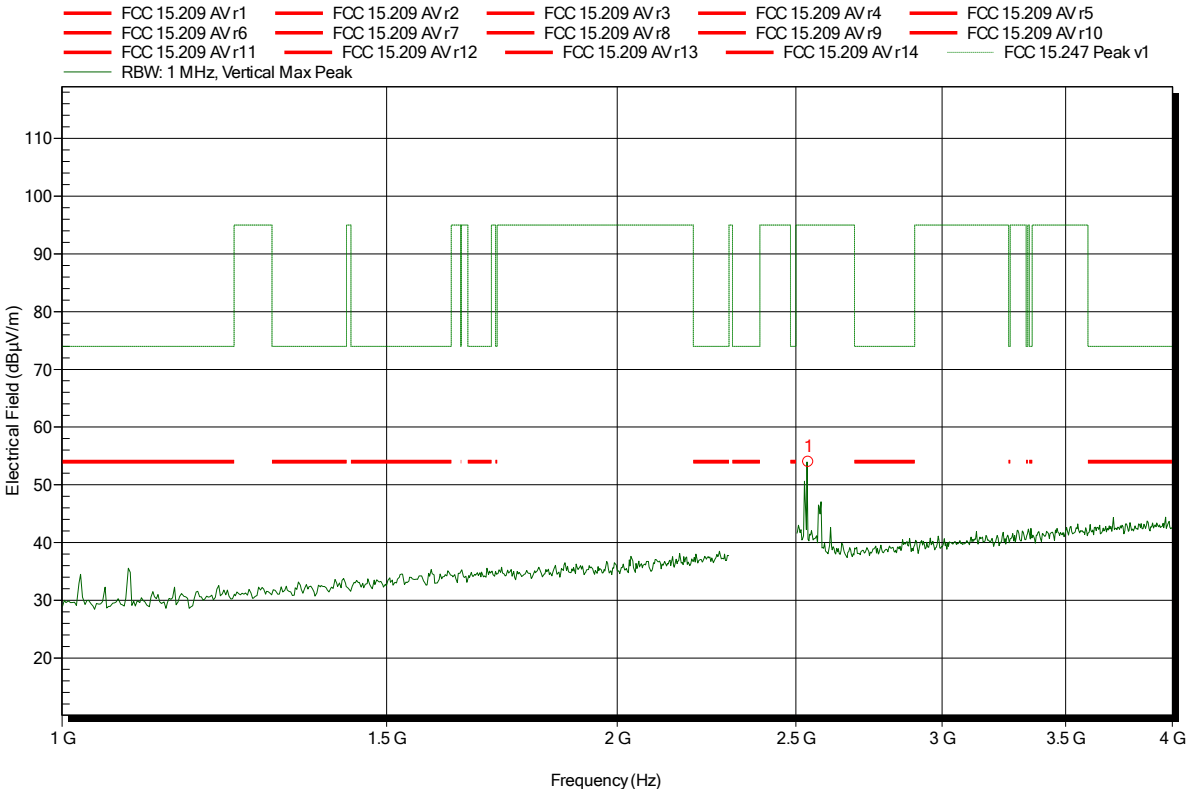

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.539 GHz	53.96 dBµV/m	95 dBµV/m	-41.04 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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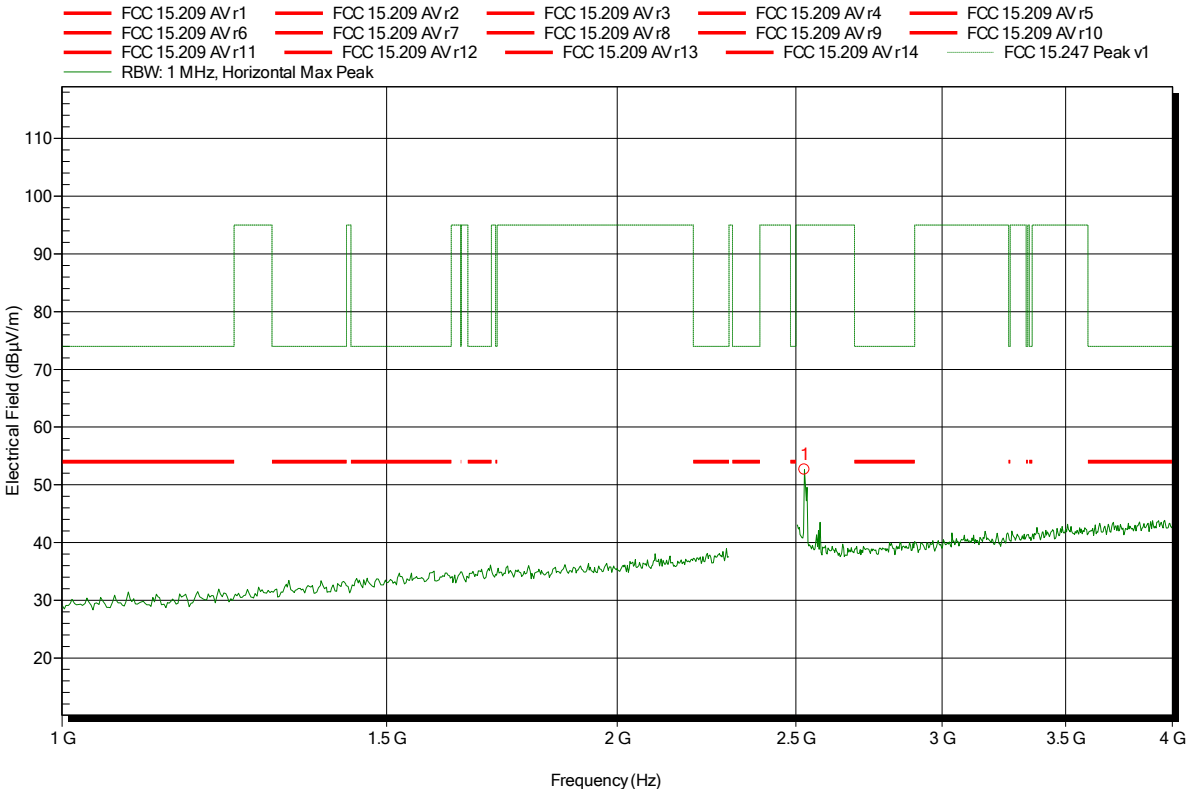

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.527 GHz	52.64 dBµV/m	95 dBµV/m	-42.36 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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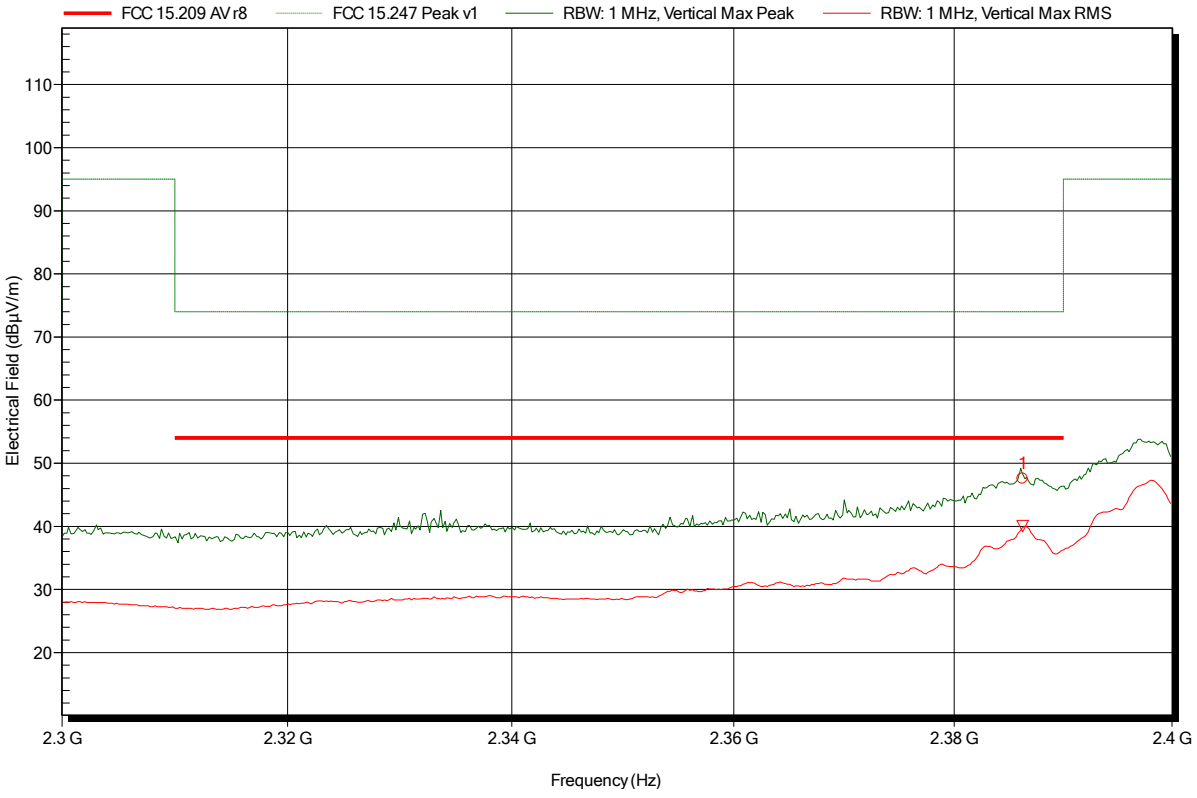

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.386 GHz	47.58 dBµV/m	74 dBµV/m	-26.42 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.386 GHz	40.02 dBµV/m	54 dBµV/m	-13.98 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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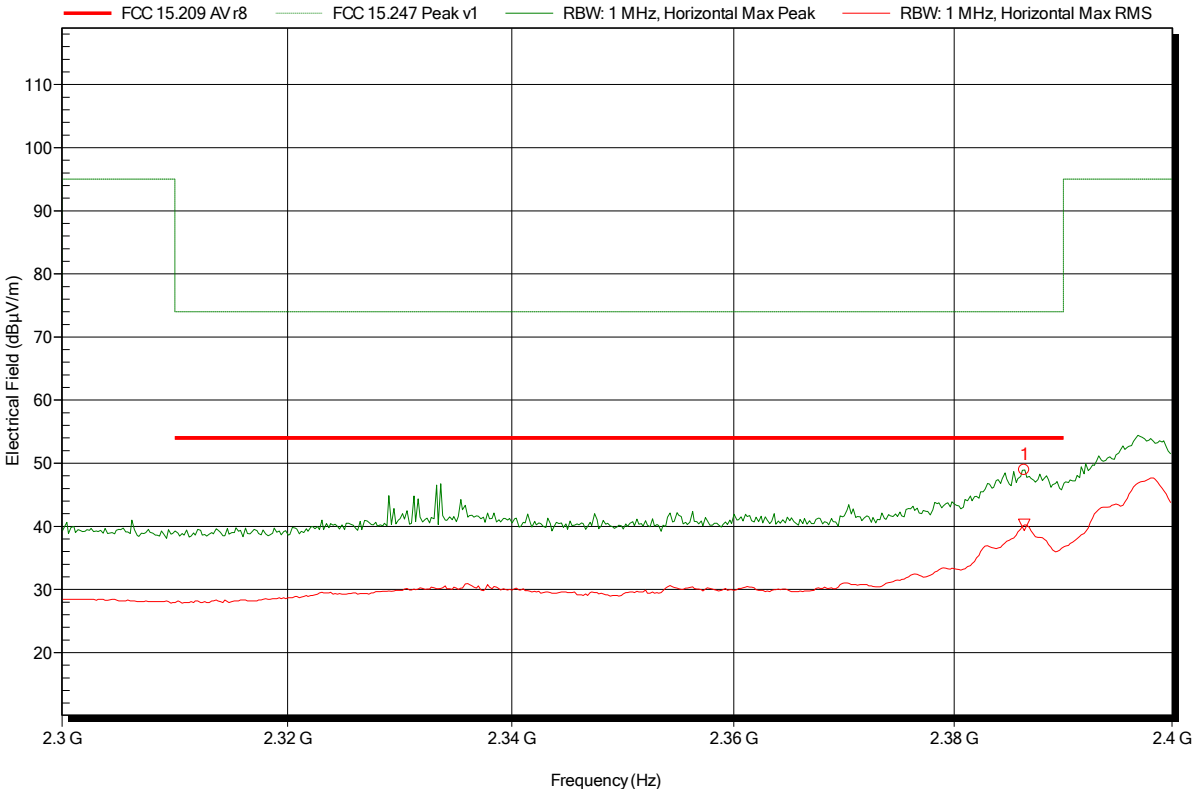

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.386 GHz	48.91 dBµV/m	74 dBµV/m	-25.09 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.386 GHz	40.24 dBµV/m	54 dBµV/m	-13.76 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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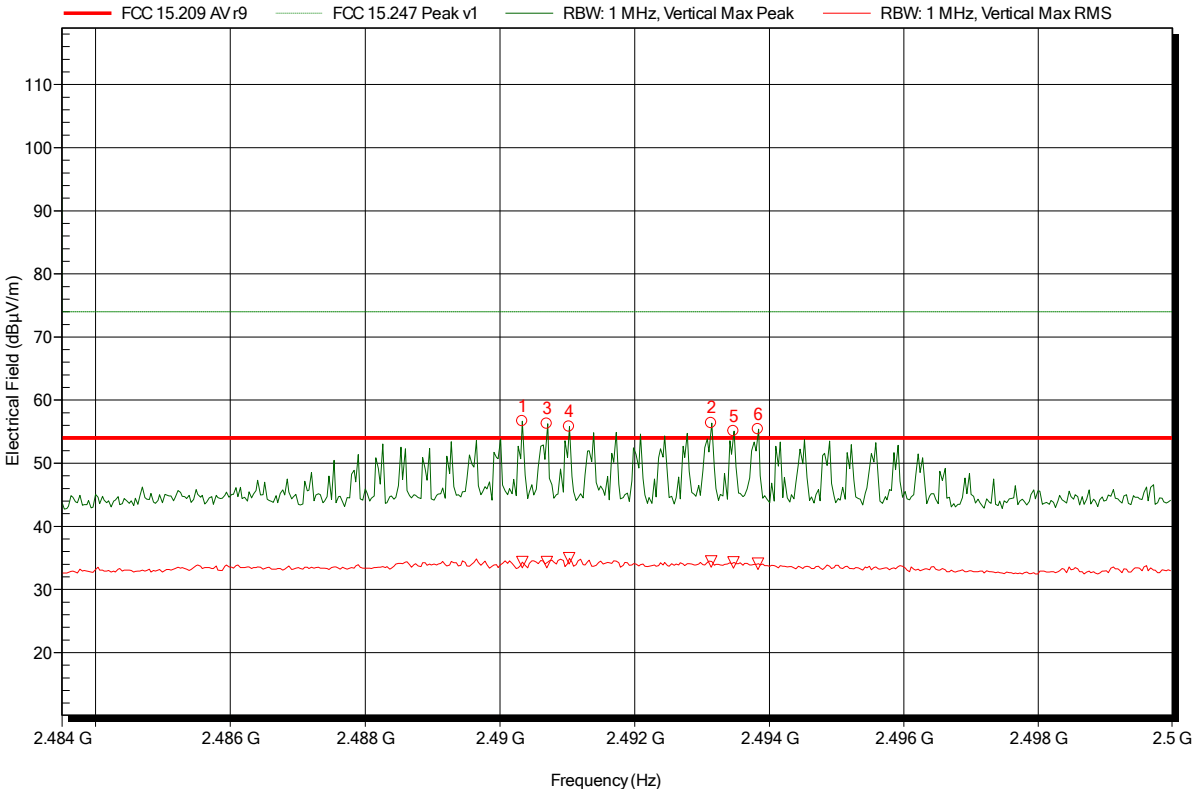

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4903 GHz	56.65 dBµV/m	74 dBµV/m	-17.35 dB	Pass
2.4907 GHz	56.28 dBµV/m	74 dBµV/m	-17.72 dB	Pass
2.491 GHz	55.81 dBµV/m	74 dBµV/m	-18.19 dB	Pass
2.4931 GHz	56.35 dBµV/m	74 dBµV/m	-17.65 dB	Pass
2.4935 GHz	55.11 dBµV/m	74 dBµV/m	-18.89 dB	Pass
2.4938 GHz	55.39 dBµV/m	74 dBµV/m	-18.61 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4903 GHz	34.35 dBµV/m	54 dBµV/m	-19.65 dB	Pass
2.4907 GHz	34.35 dBµV/m	54 dBµV/m	-19.65 dB	Pass
2.491 GHz	34.97 dBµV/m	54 dBµV/m	-19.03 dB	Pass
2.4931 GHz	34.42 dBµV/m	54 dBµV/m	-19.58 dB	Pass
2.4935 GHz	34.29 dBµV/m	54 dBµV/m	-19.71 dB	Pass
2.4938 GHz	34.1 dBµV/m	54 dBµV/m	-19.9 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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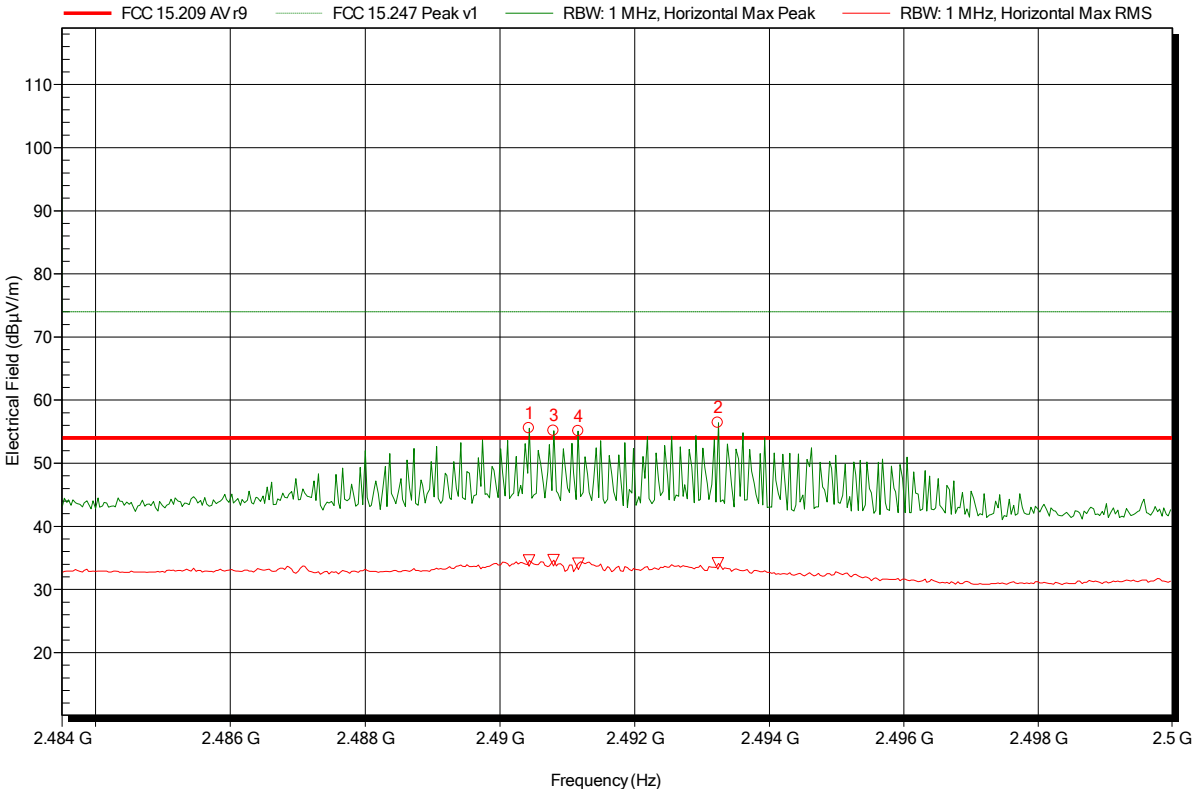

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4904 GHz	55.53 dBµV/m	74 dBµV/m	-18.47 dB	Pass
2.4908 GHz	55.12 dBµV/m	74 dBµV/m	-18.88 dB	Pass
2.4912 GHz	55.07 dBµV/m	74 dBµV/m	-18.93 dB	Pass
2.4932 GHz	56.42 dBµV/m	74 dBµV/m	-17.58 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4904 GHz	34.6 dBµV/m	54 dBµV/m	-19.4 dB	Pass
2.4908 GHz	34.66 dBµV/m	54 dBµV/m	-19.34 dB	Pass
2.4912 GHz	34.09 dBµV/m	54 dBµV/m	-19.91 dB	Pass
2.4932 GHz	34.16 dBµV/m	54 dBµV/m	-19.84 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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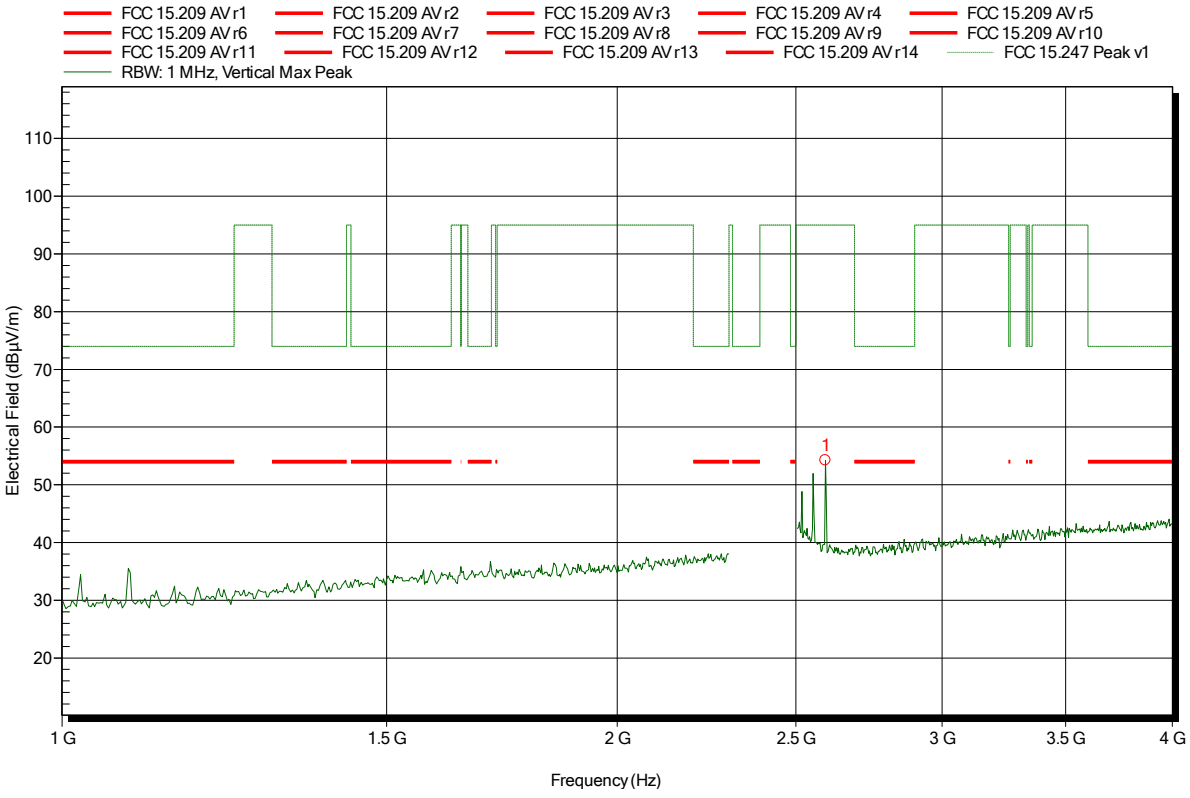

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.594 GHz	54.22 dBµV/m	95 dBµV/m	-40.78 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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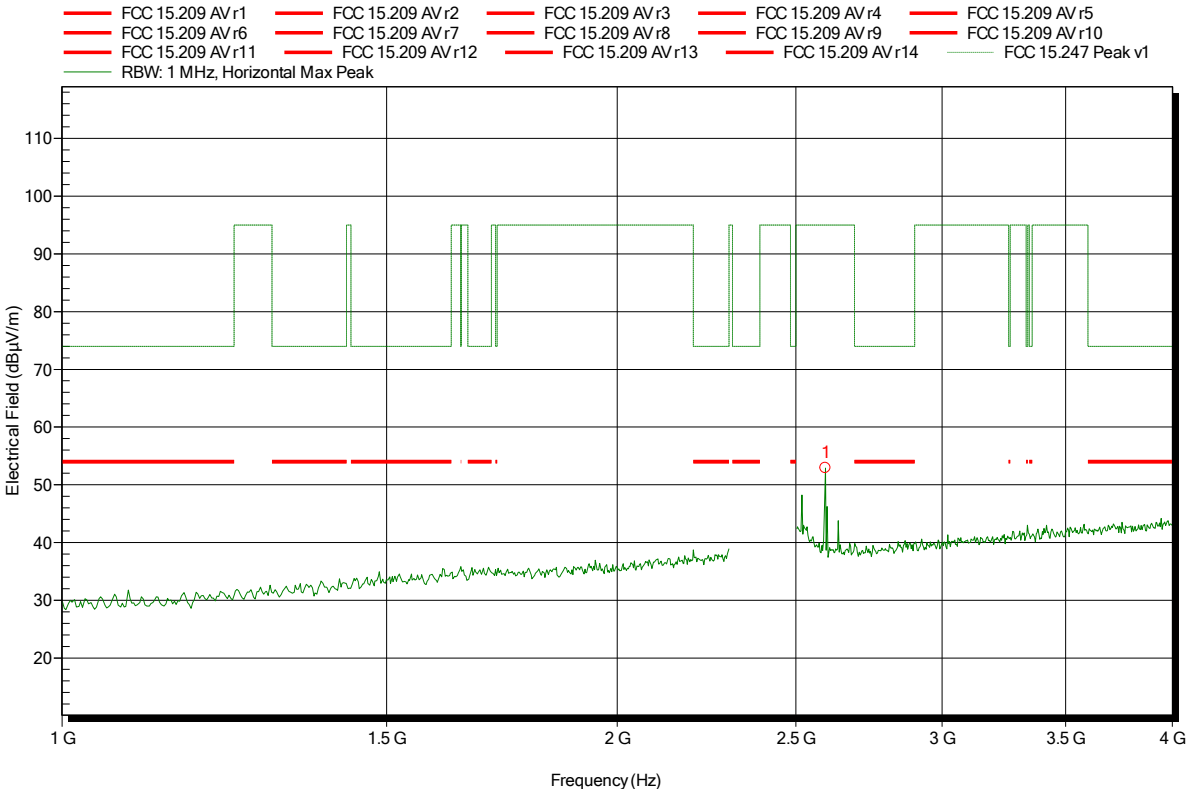

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.594 GHz	52.91 dBµV/m	95 dBµV/m	-42.09 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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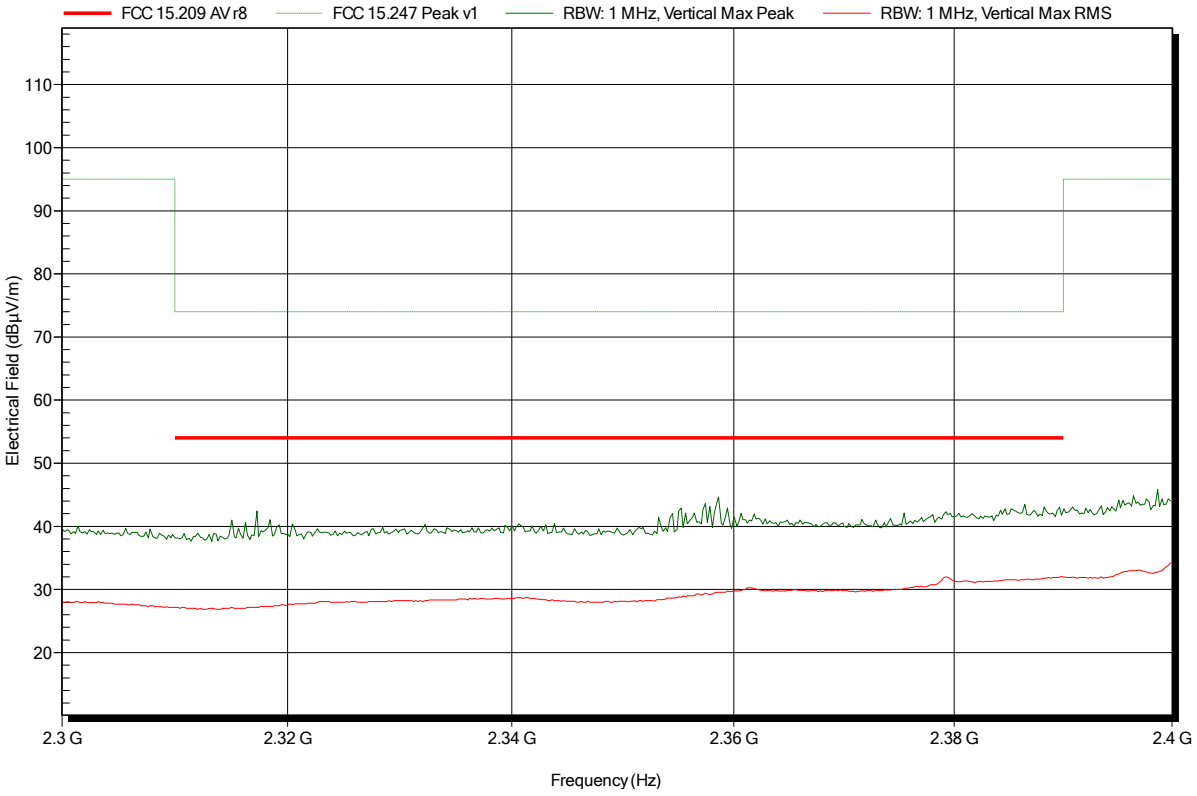

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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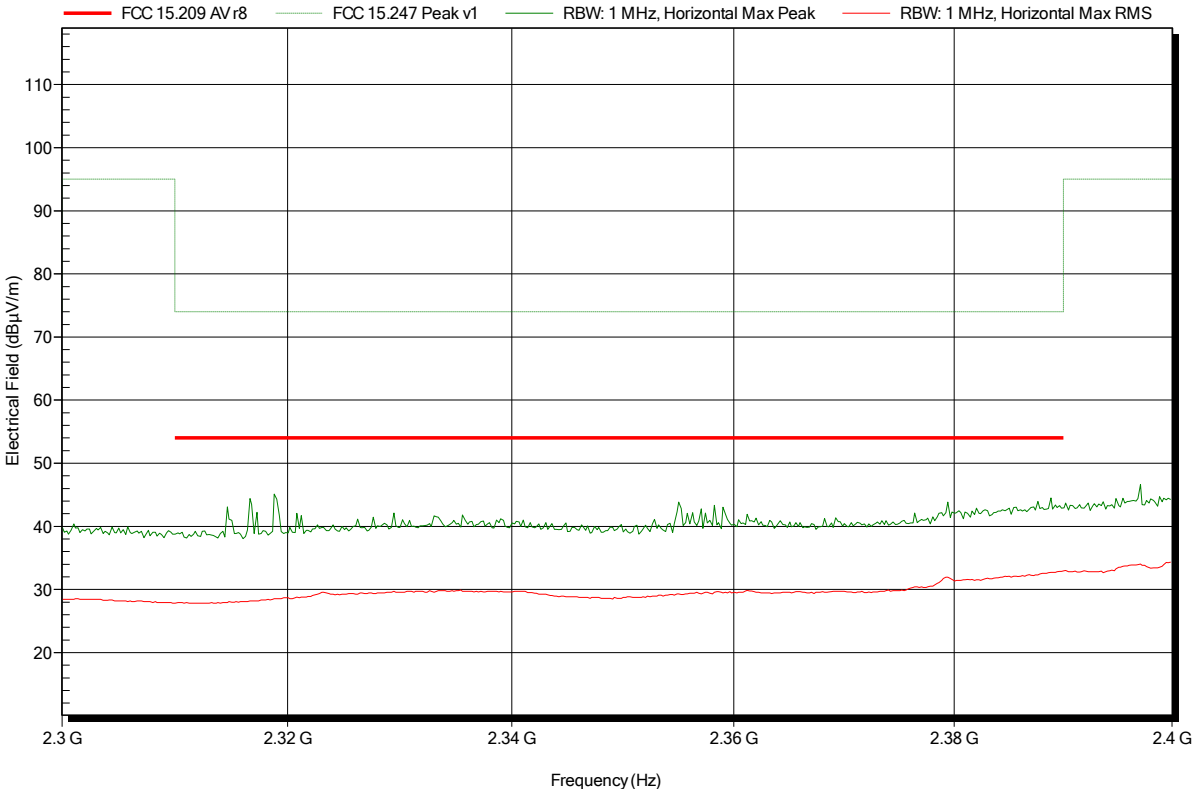

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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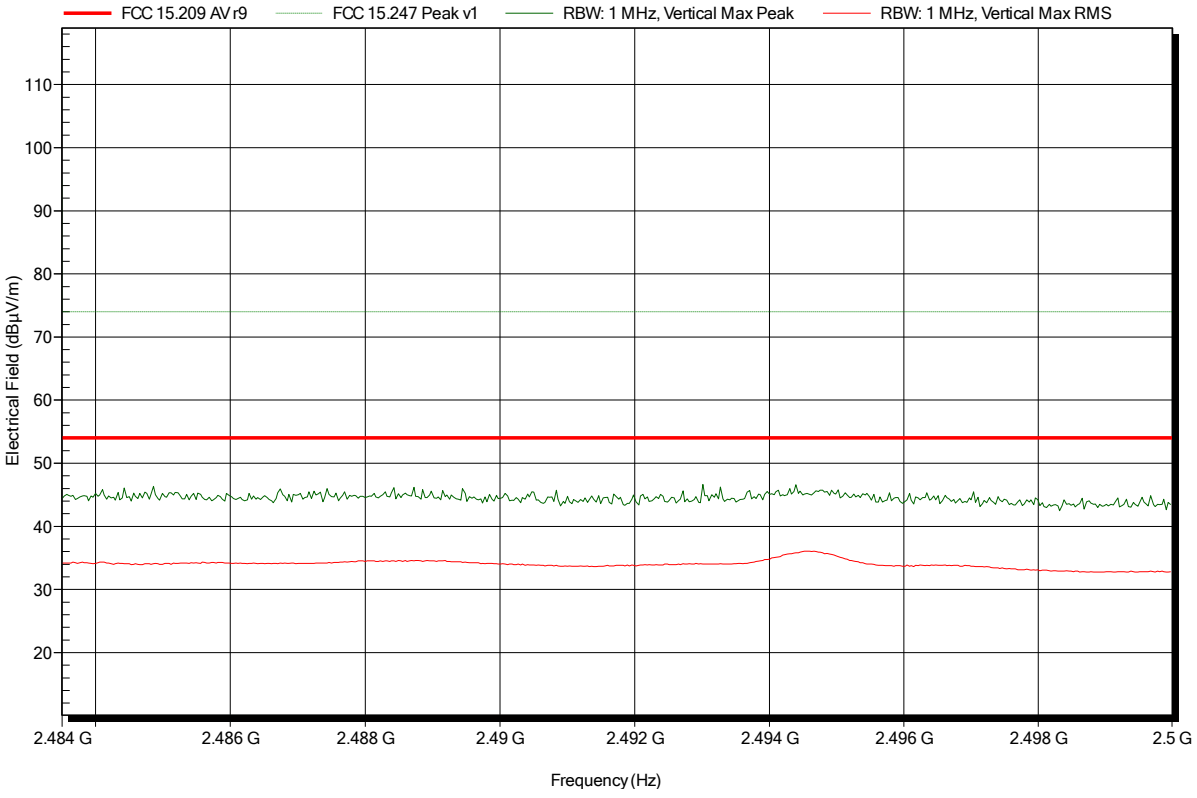

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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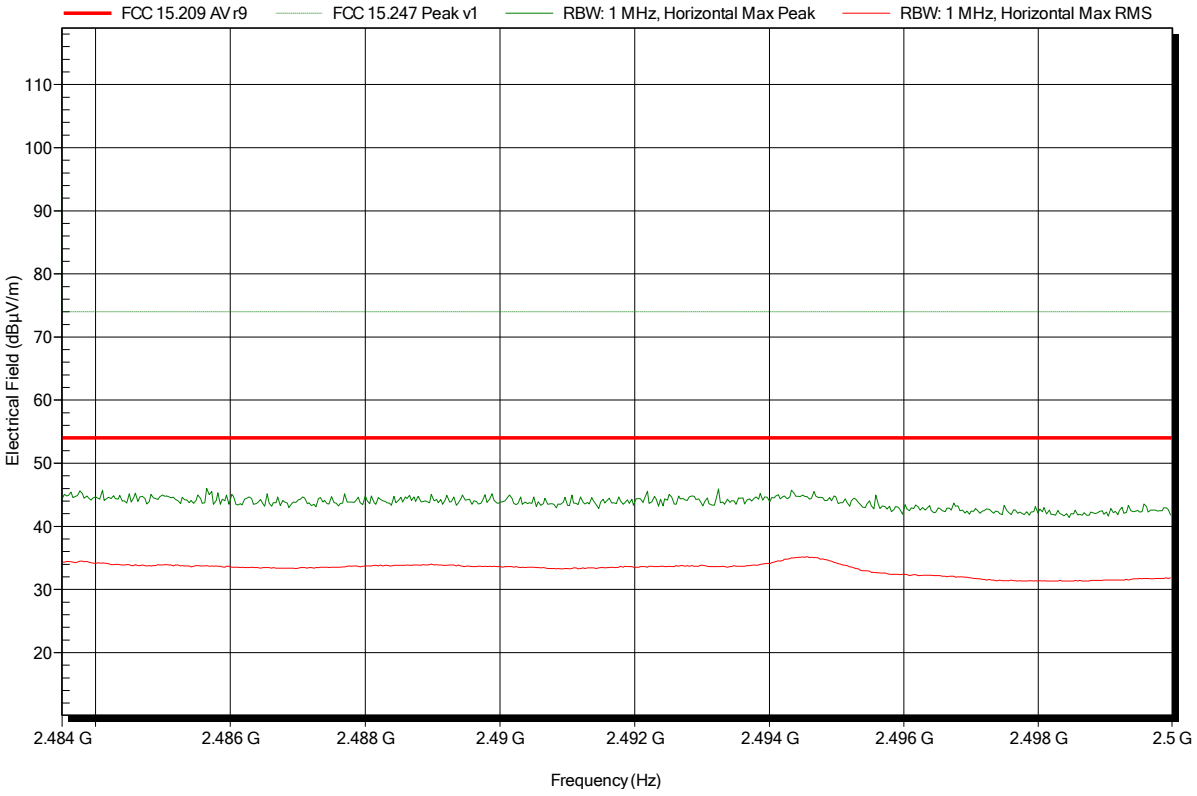

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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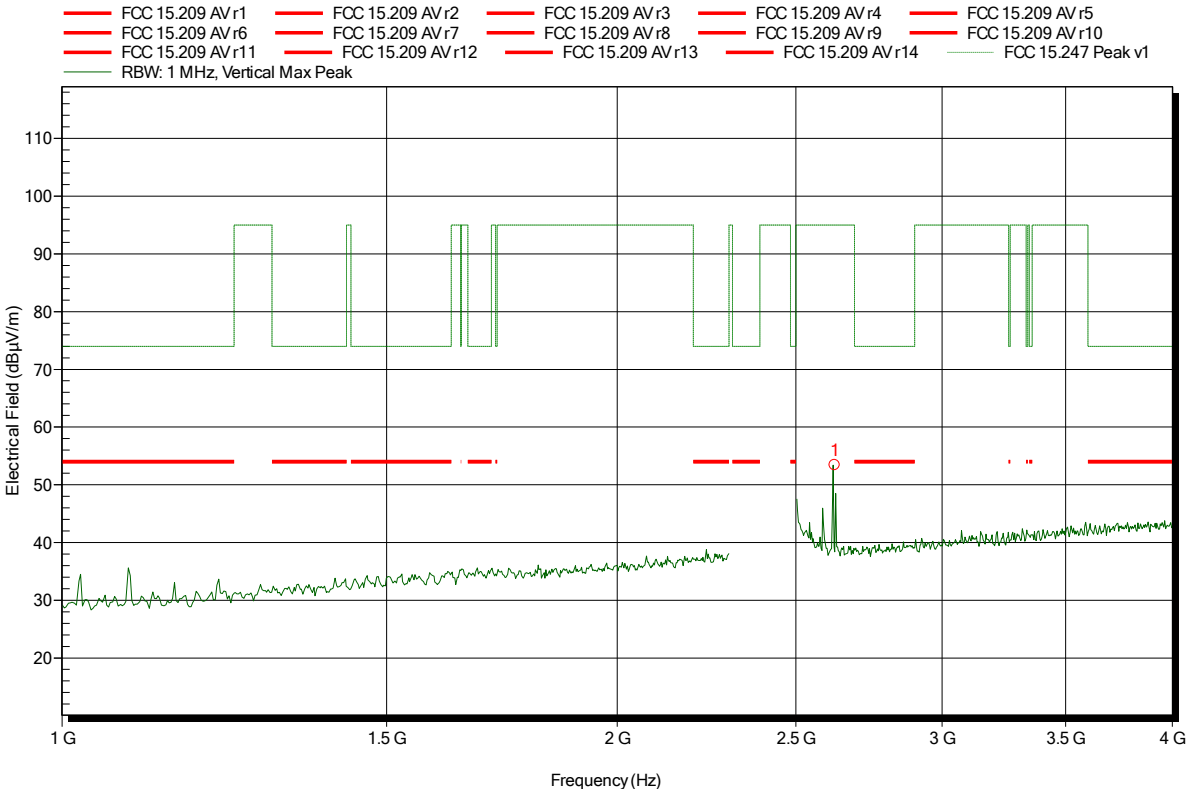

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.624 GHz	53.4 dBµV/m	95 dBµV/m	-41.6 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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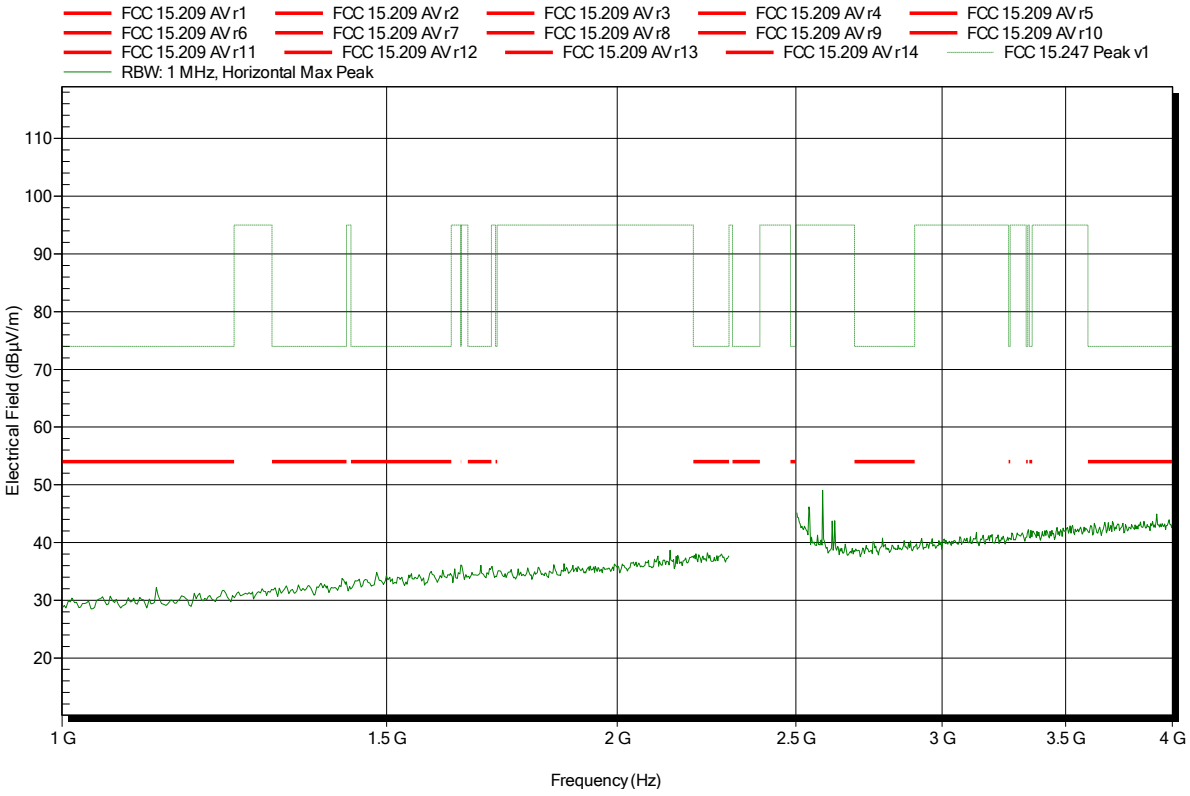

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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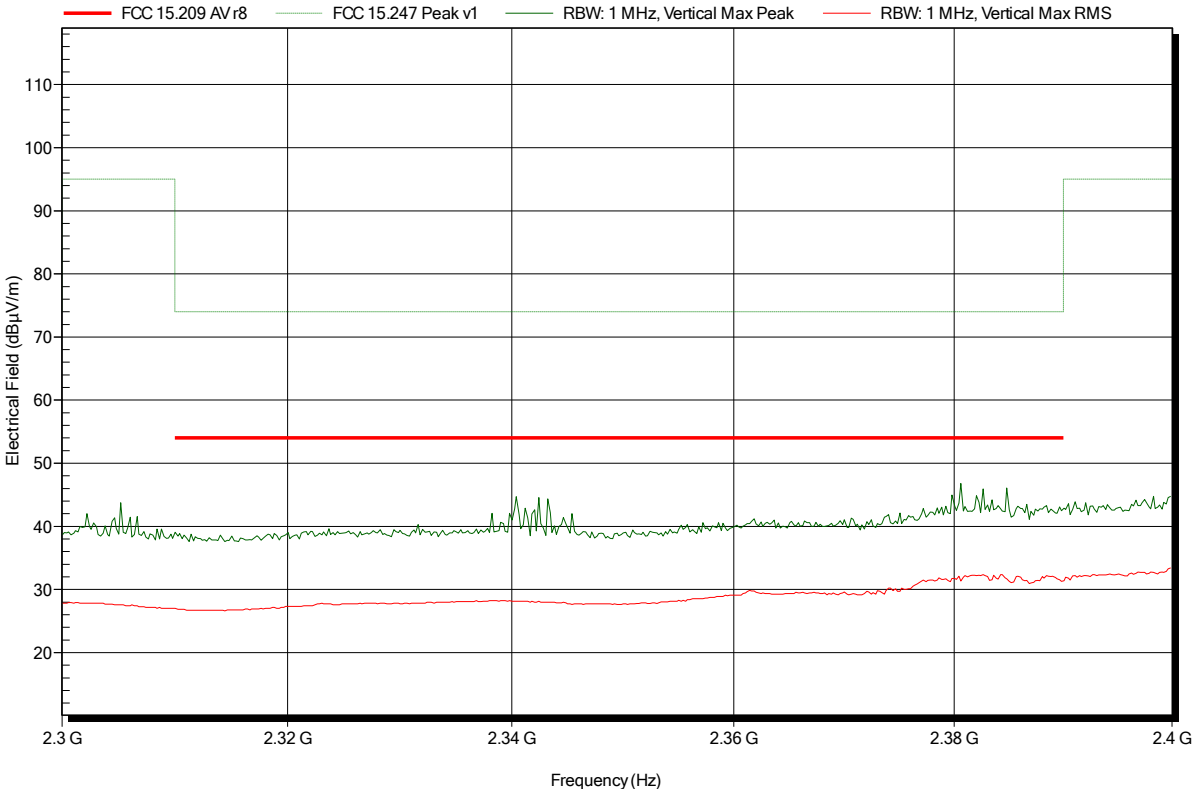

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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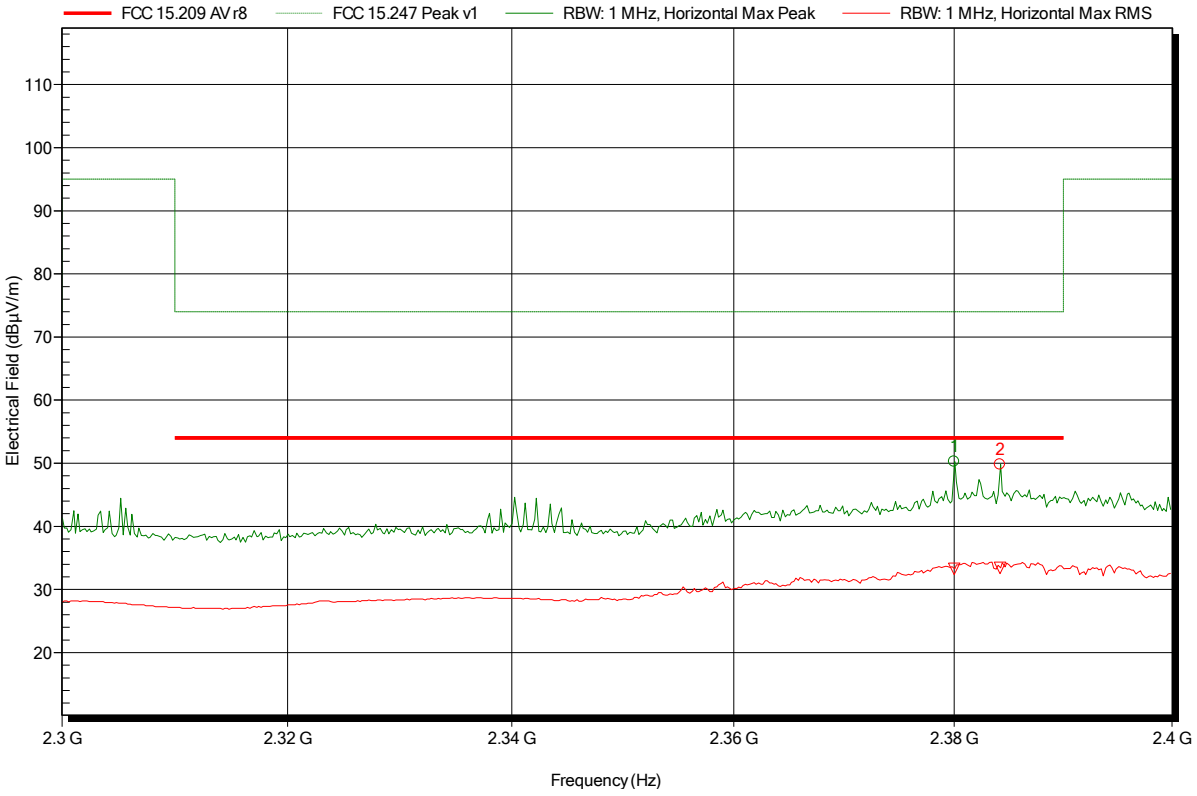

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.38 GHz	50.26 dBµV/m	74 dBµV/m	-23.74 dB	Pass
2.384 GHz	49.8 dBµV/m	74 dBµV/m	-24.2 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.38 GHz	33.28 dBµV/m	54 dBµV/m	-20.72 dB	Pass
2.384 GHz	33.44 dBµV/m	54 dBµV/m	-20.56 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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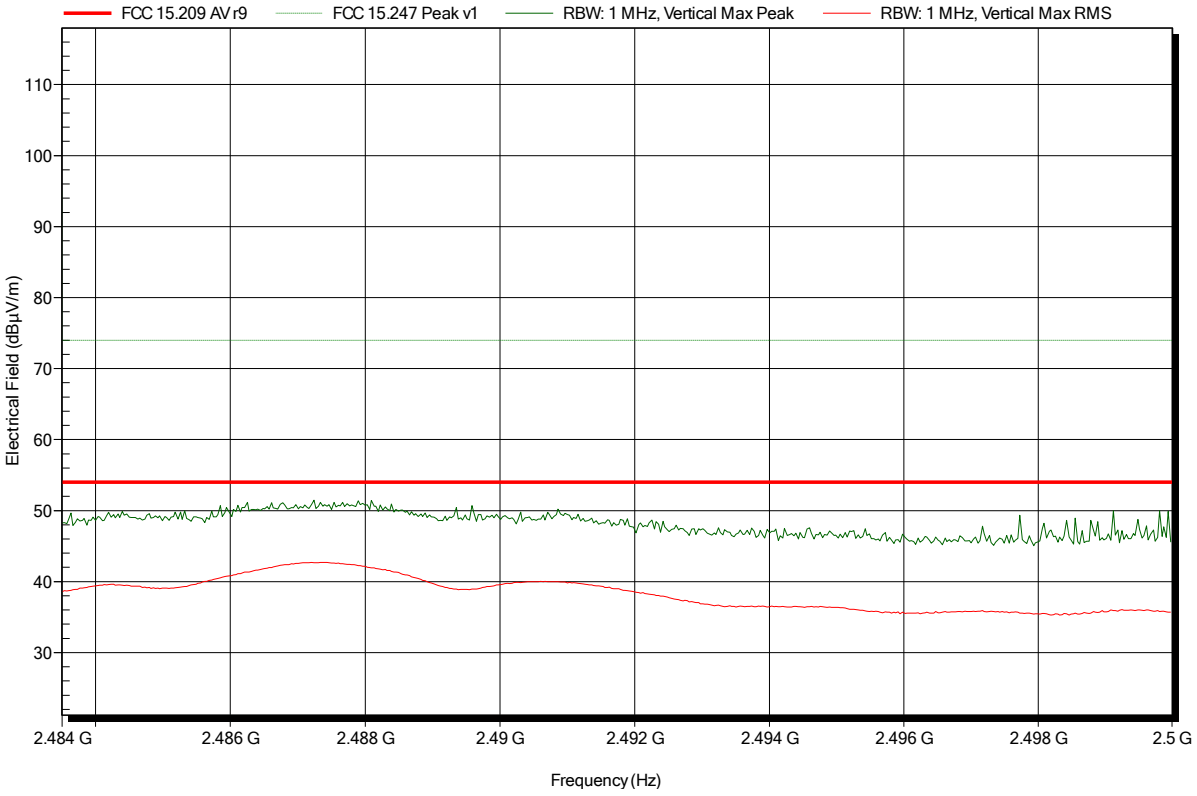

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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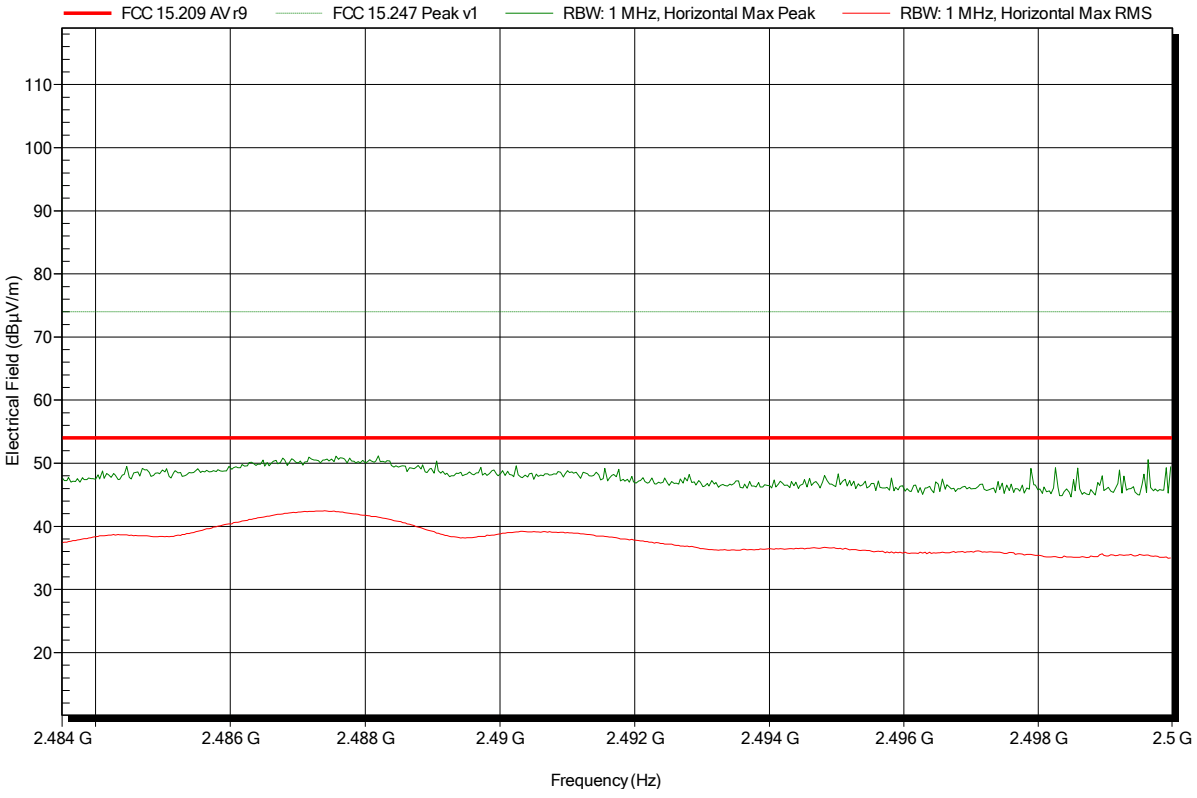

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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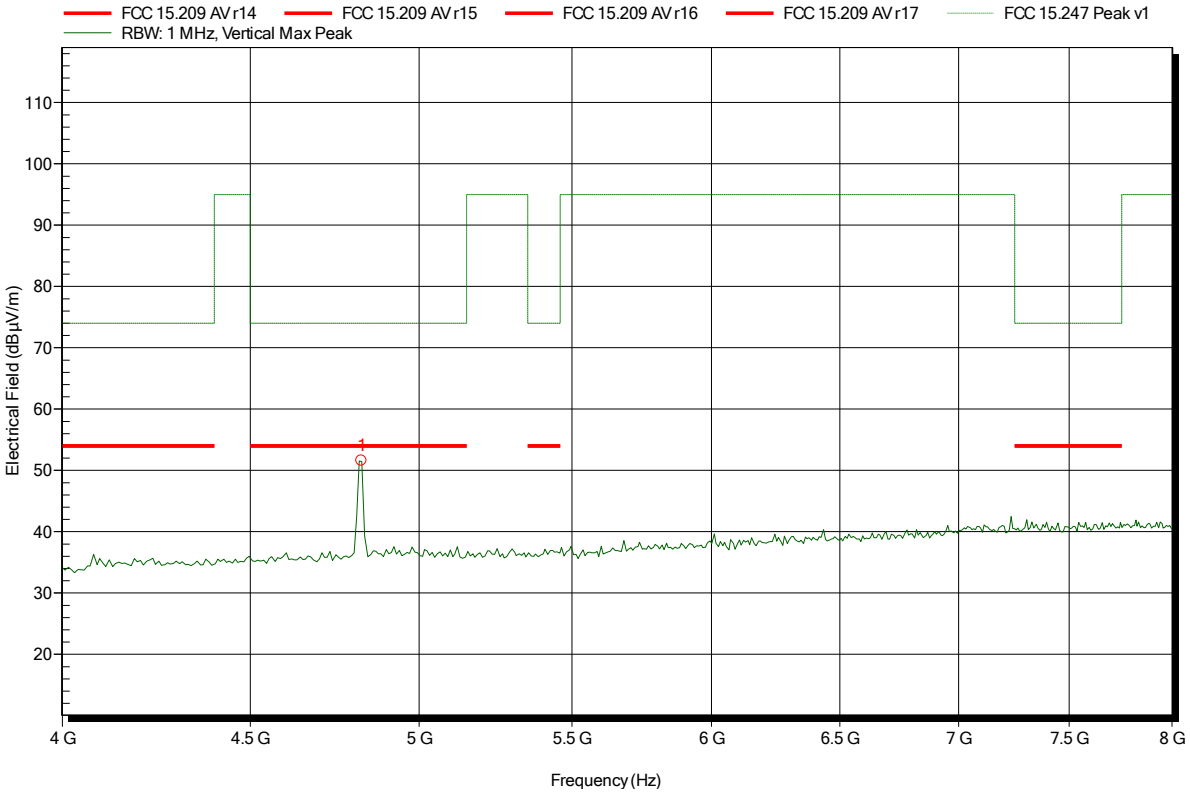

Frequency	Peak	Peak Limit	Peak Difference	Status
4.823 GHz	51.58 dBµV/m	74 dBµV/m	-22.42 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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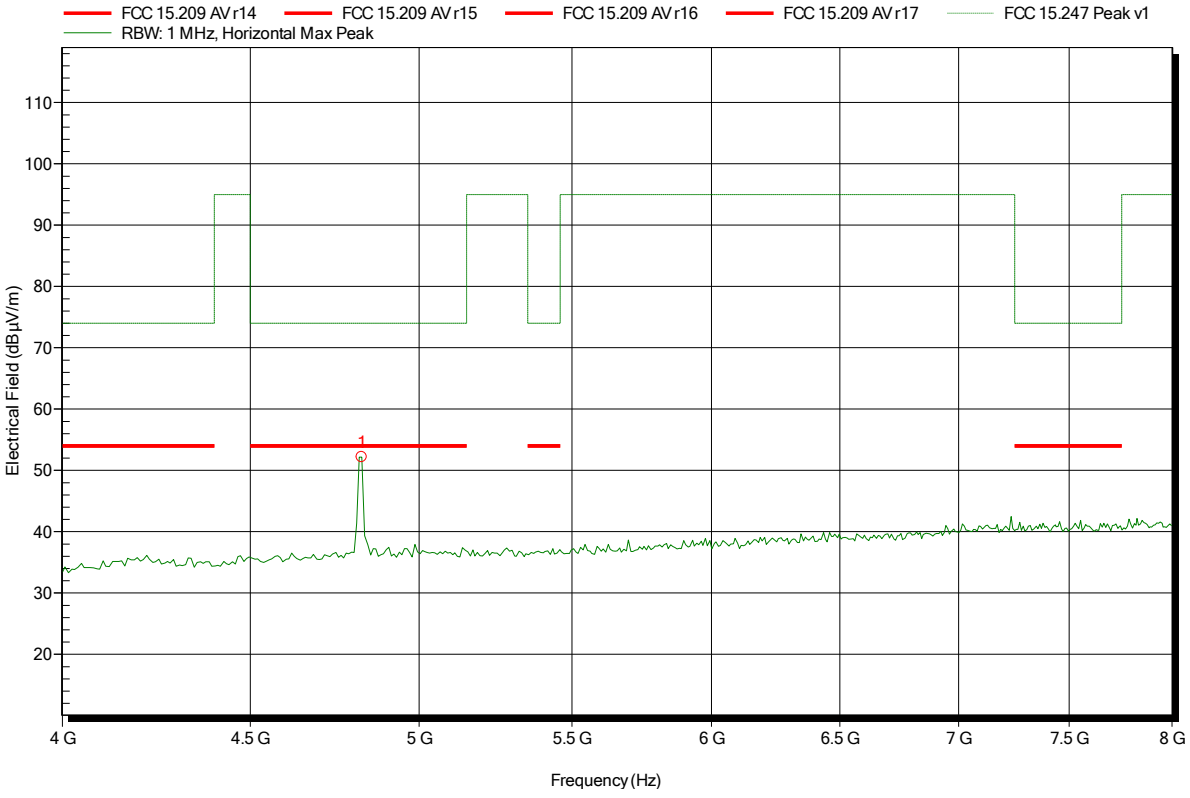

Frequency	Peak	Peak Limit	Peak Difference	Status
4.824 GHz	52.18 dBµV/m	74 dBµV/m	-21.82 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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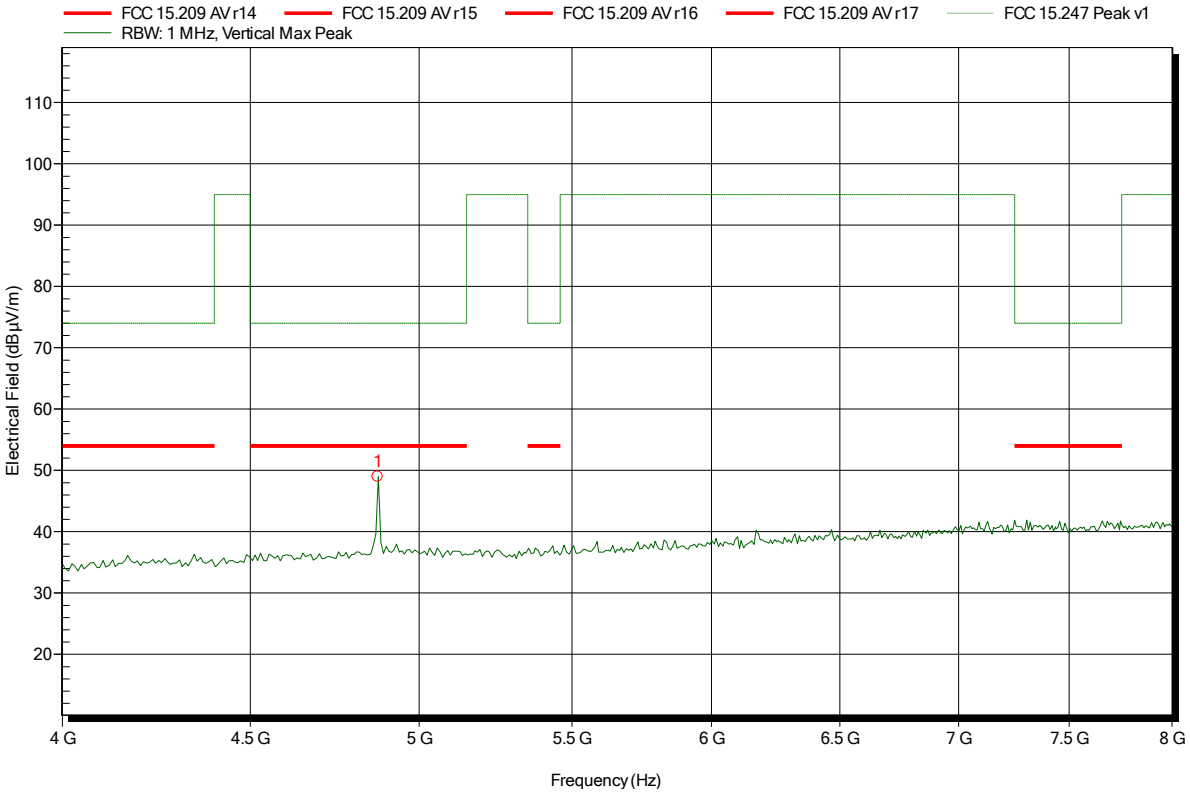

Frequency	Peak	Peak Limit	Peak Difference	Status
4.872 GHz	48.97 dBµV/m	74 dBµV/m	-25.03 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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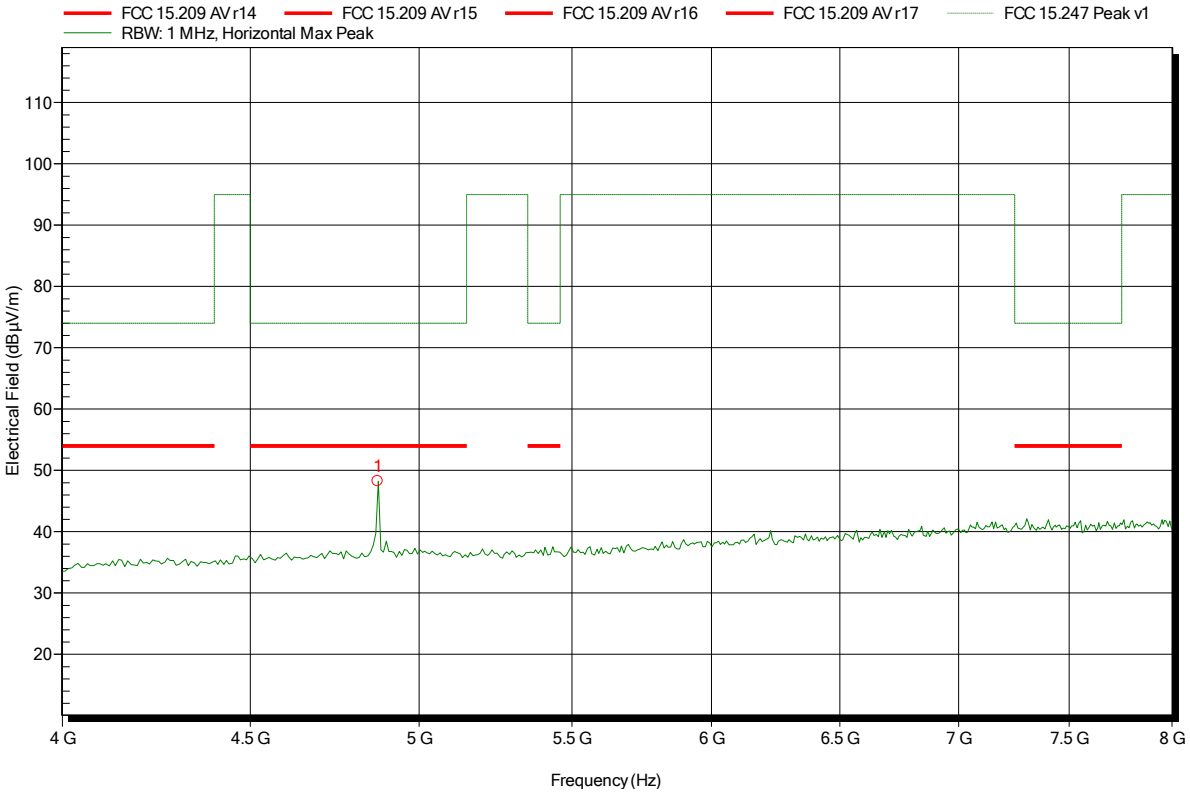

Frequency	Peak	Peak Limit	Peak Difference	Status
4.872 GHz	48.25 dBµV/m	74 dBµV/m	-25.75 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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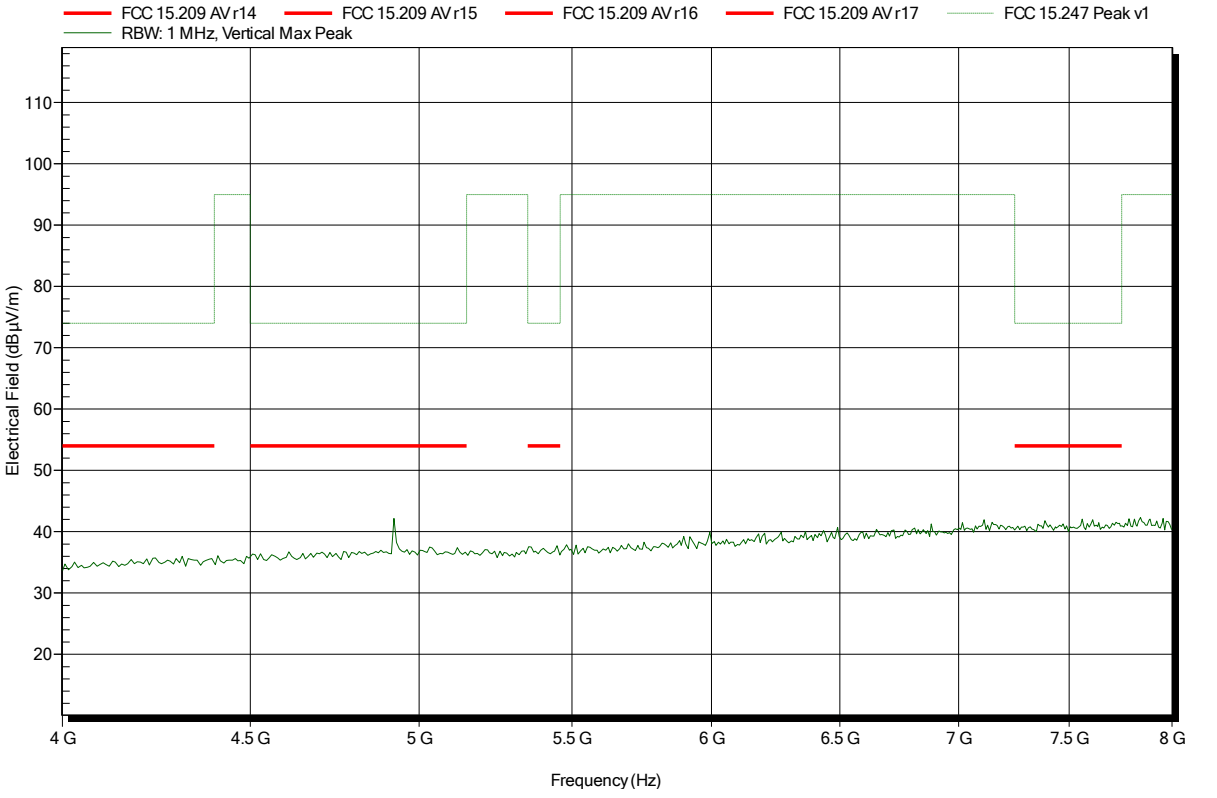

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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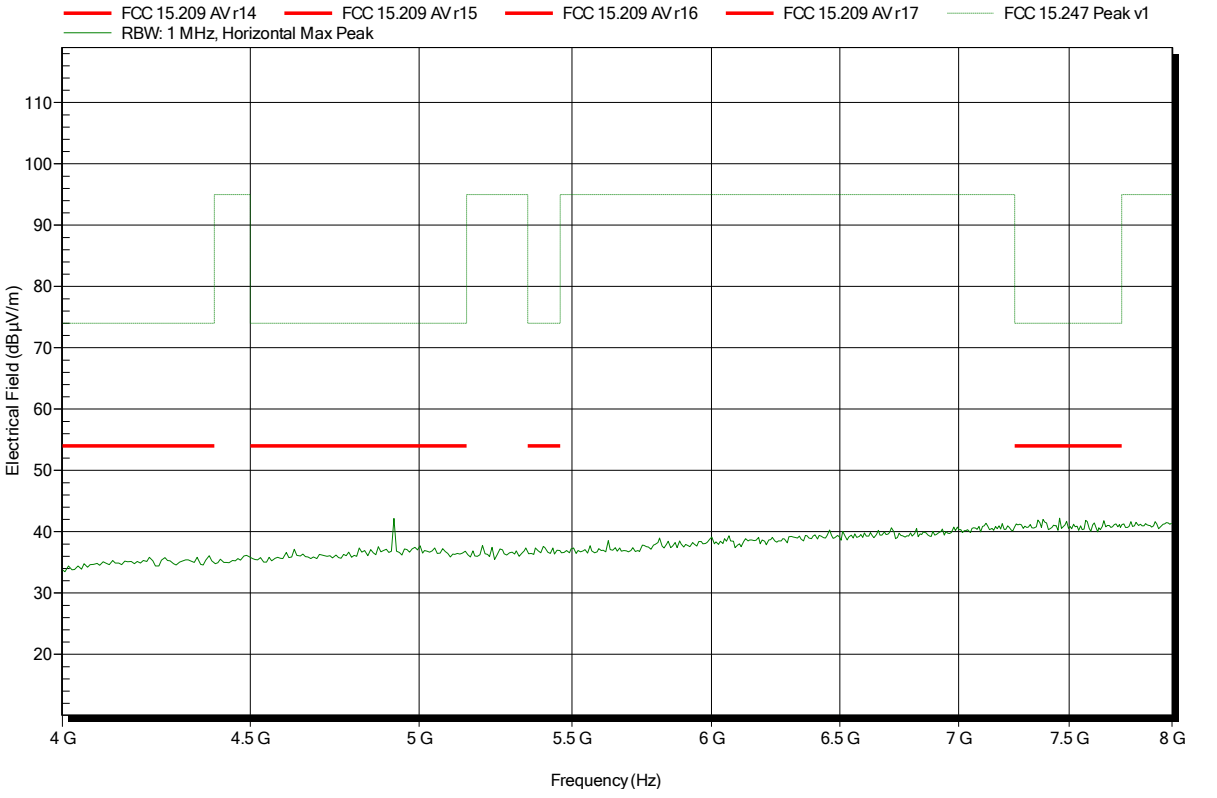

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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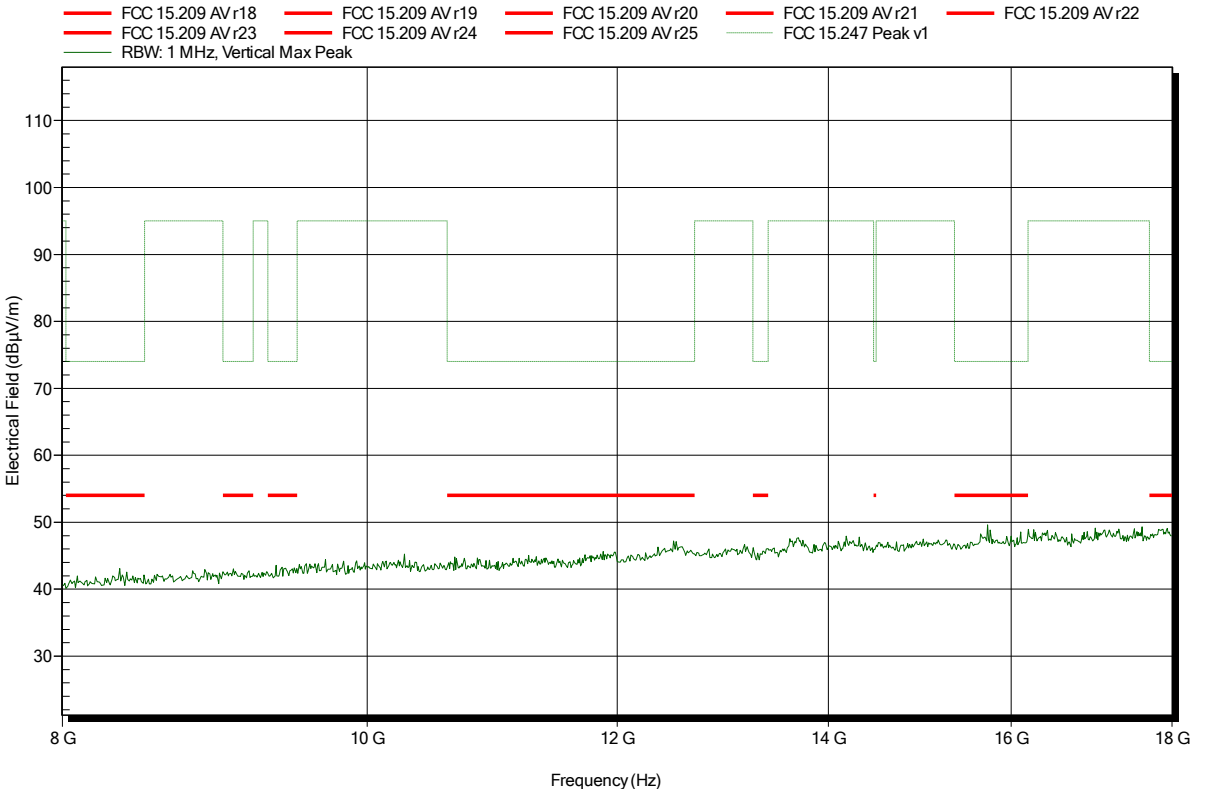

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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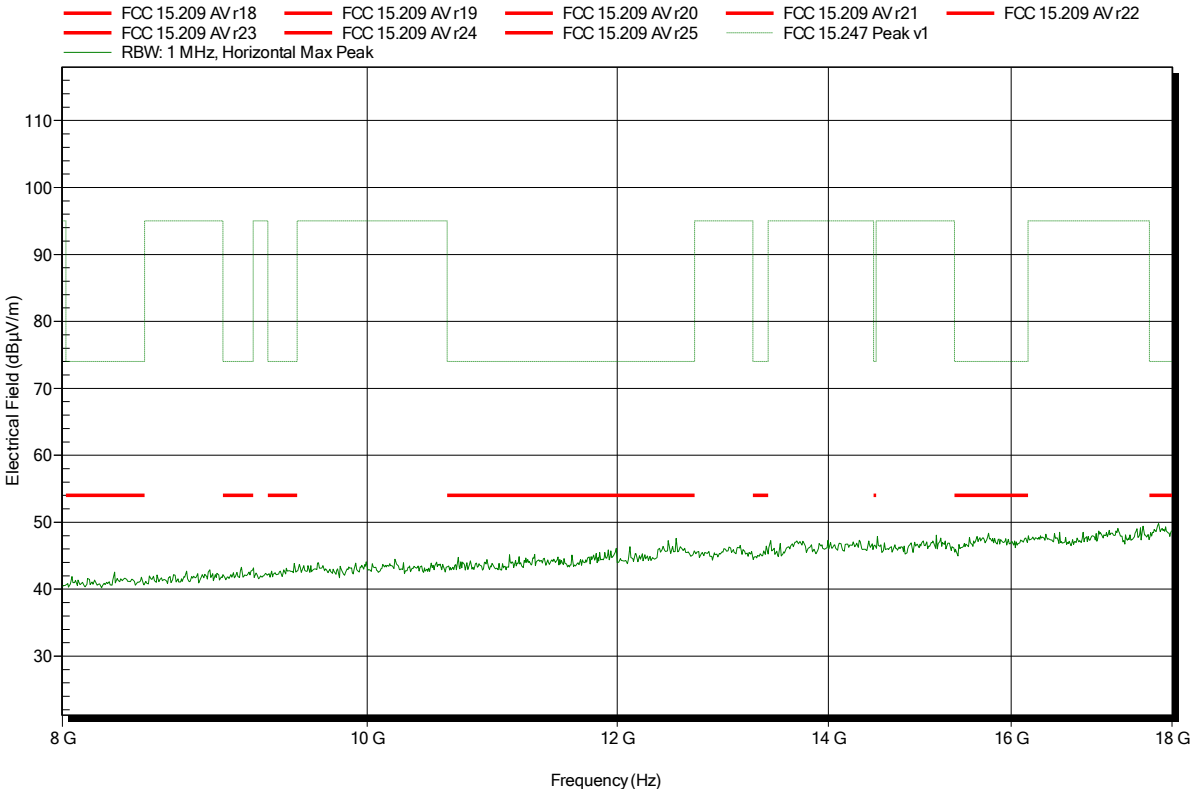

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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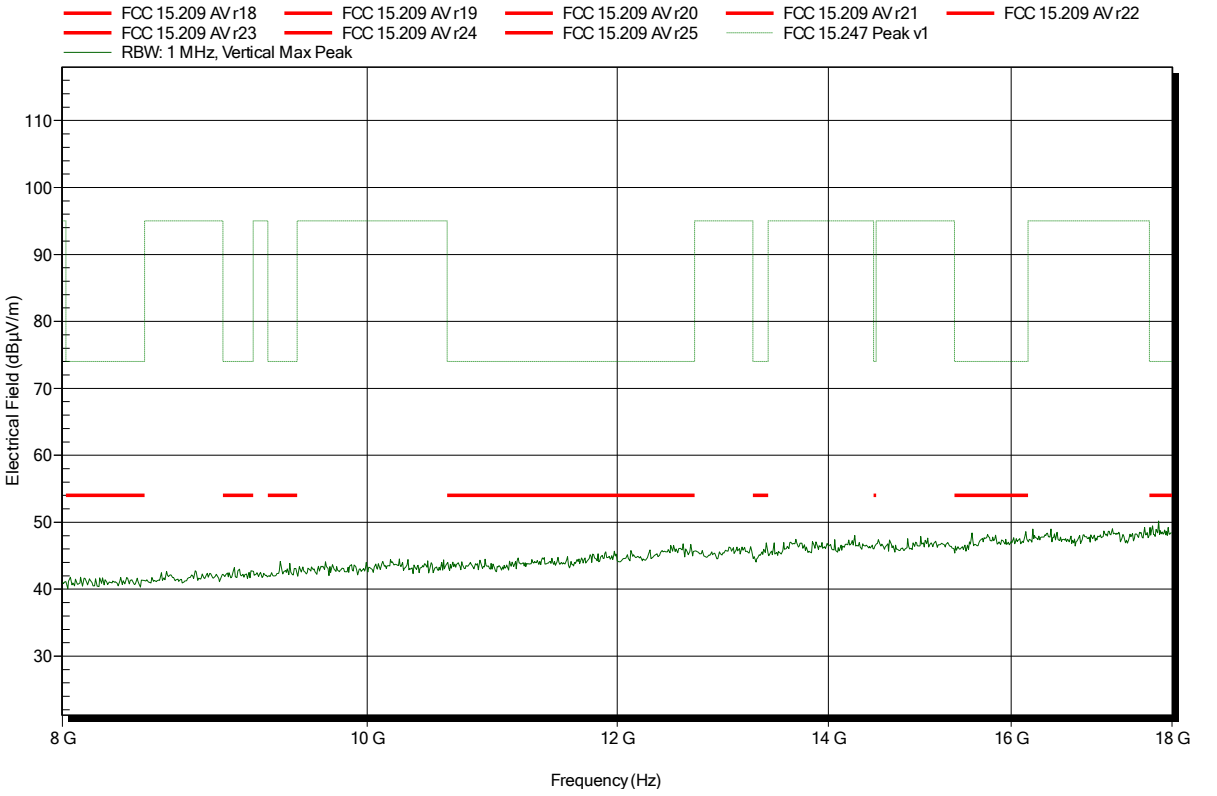

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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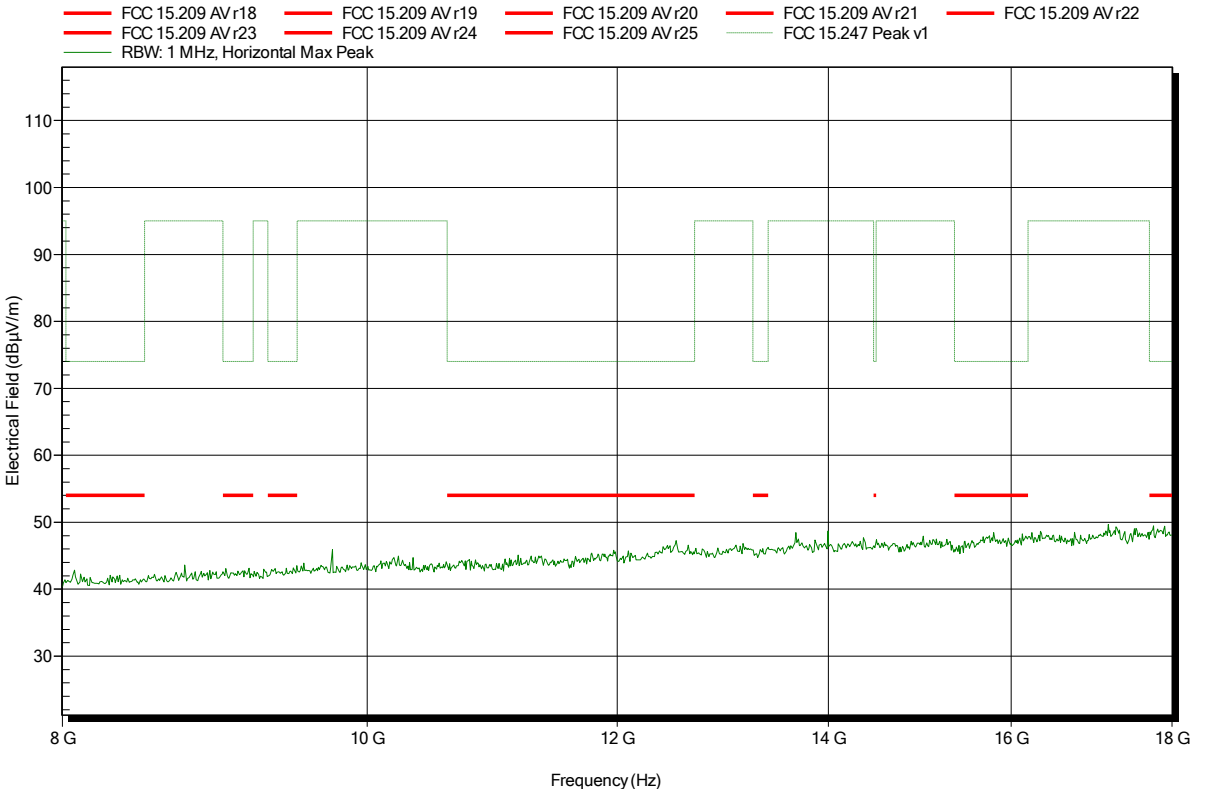

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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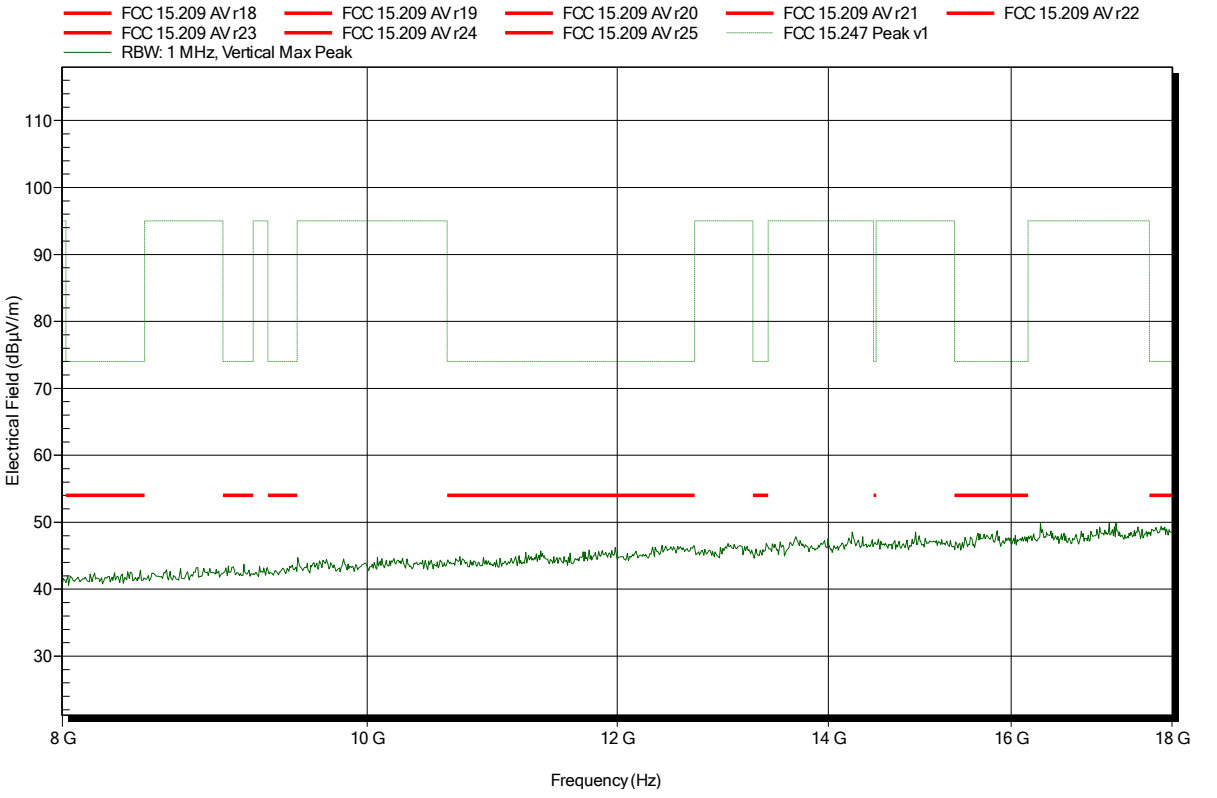

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical

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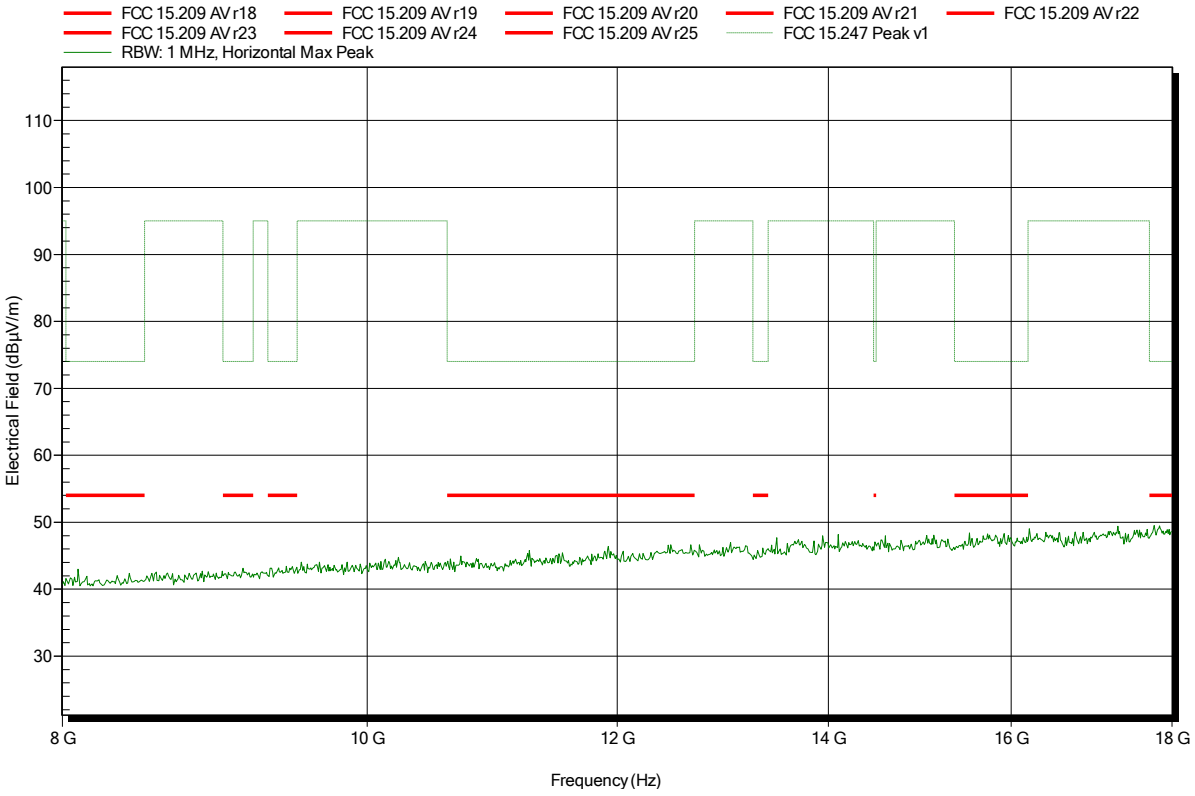

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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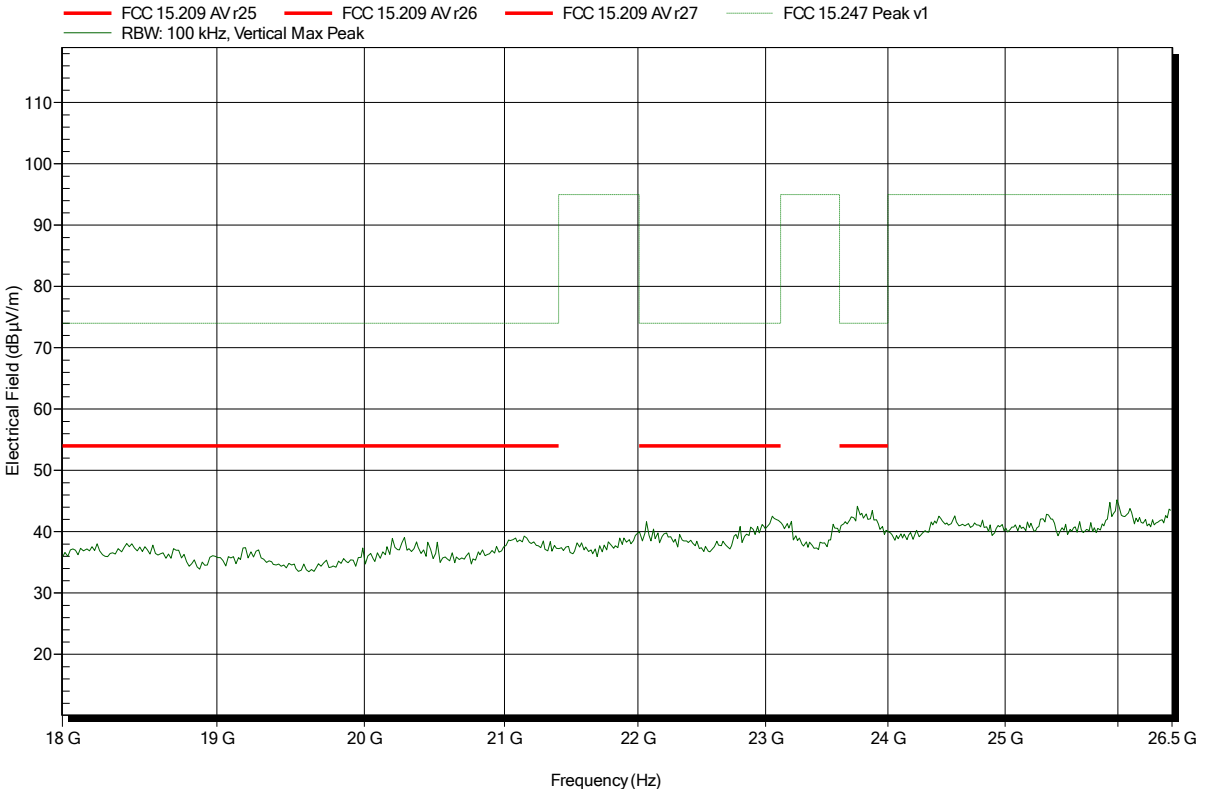

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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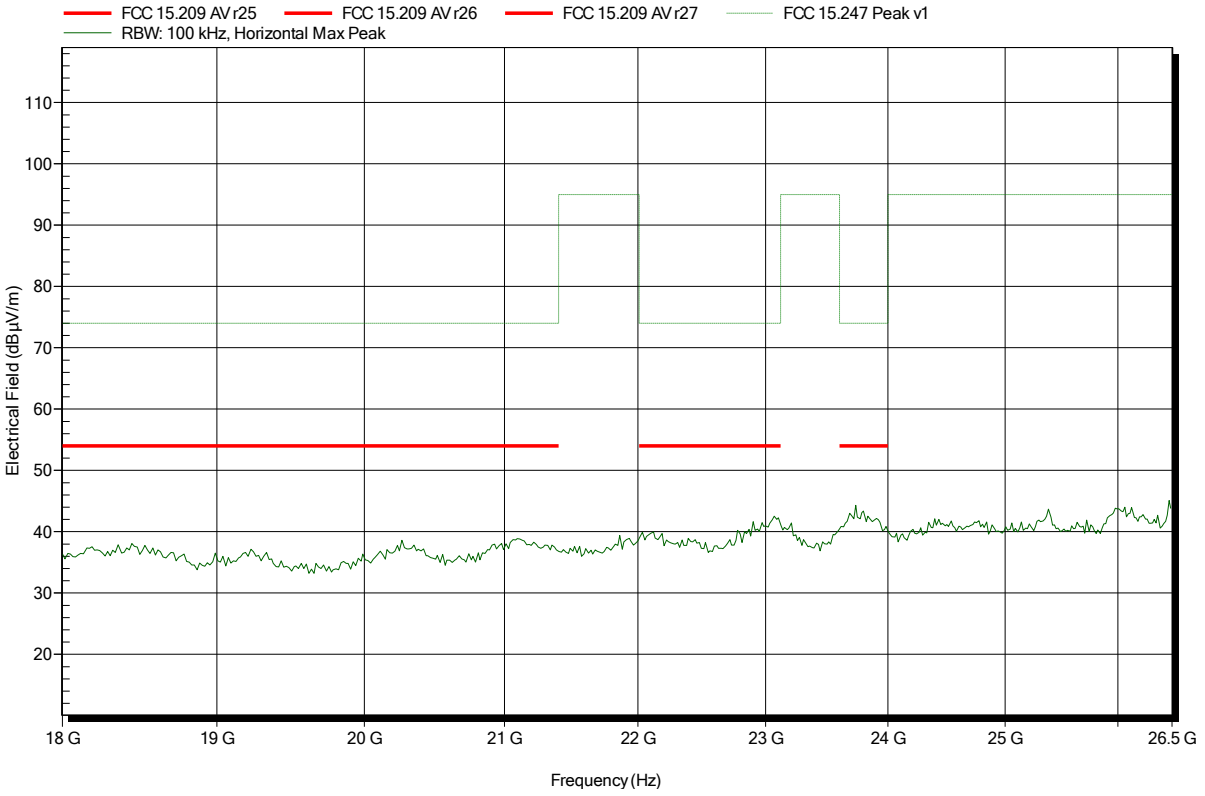

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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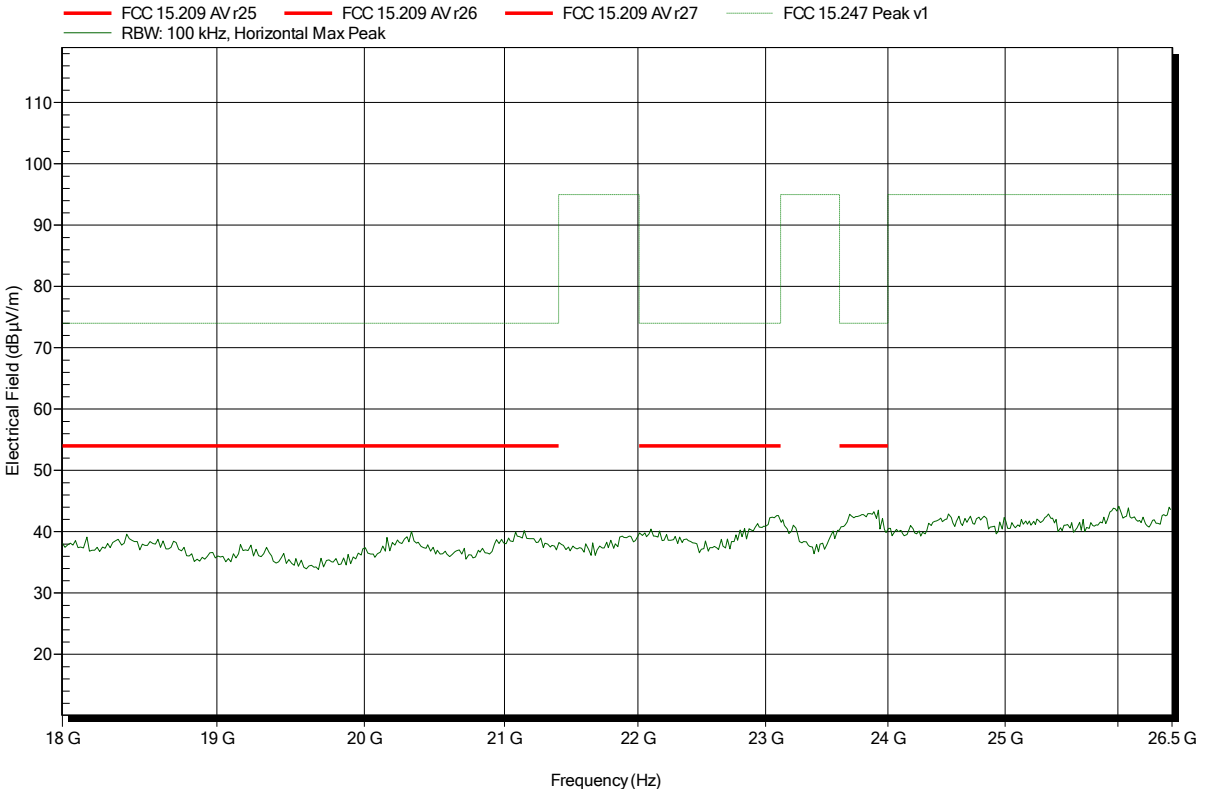

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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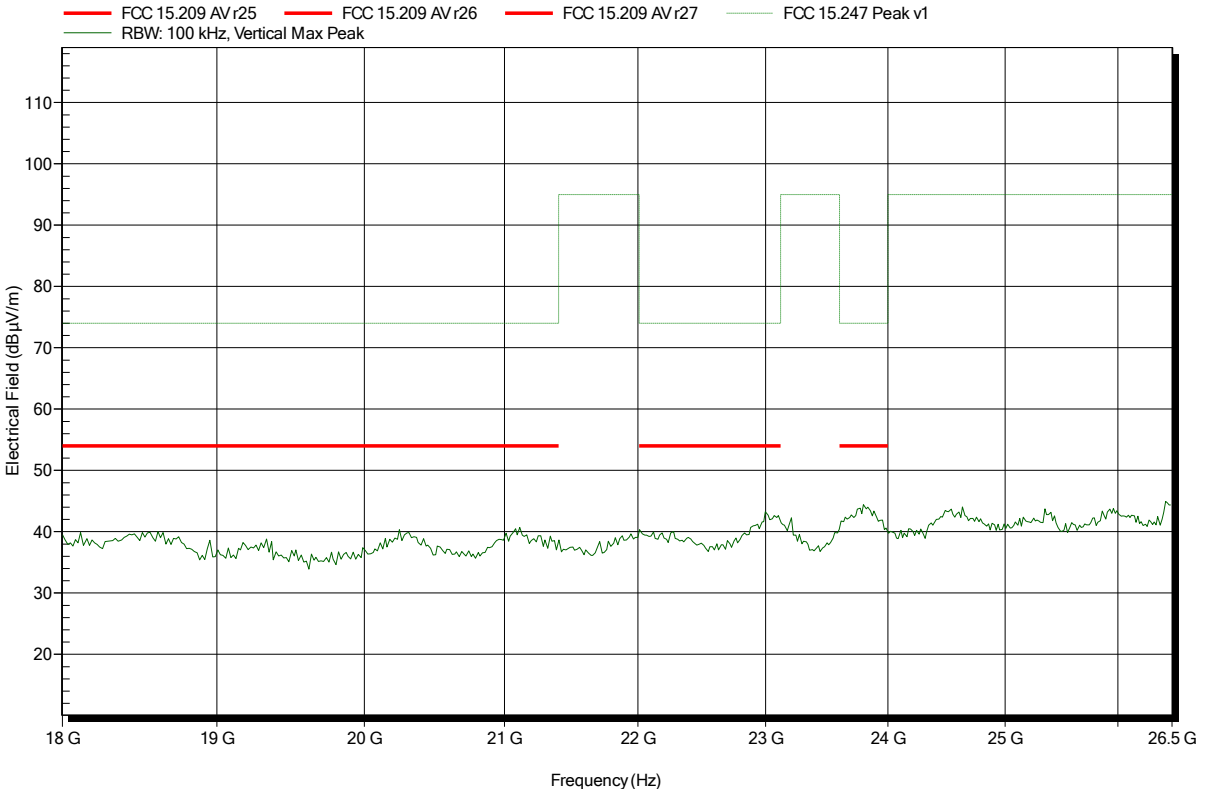

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; DSSS 1MBit
Test Date:	2014-11-24
Note:	EUT vertical; worst case

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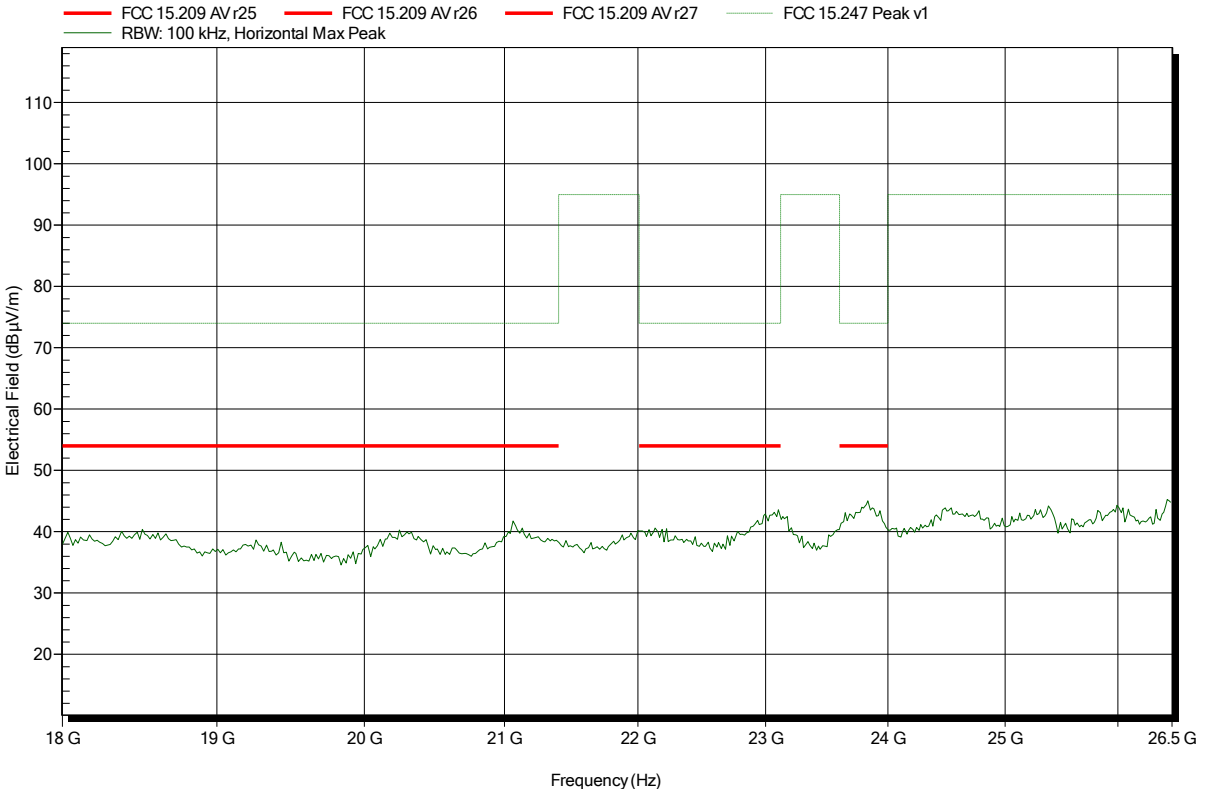

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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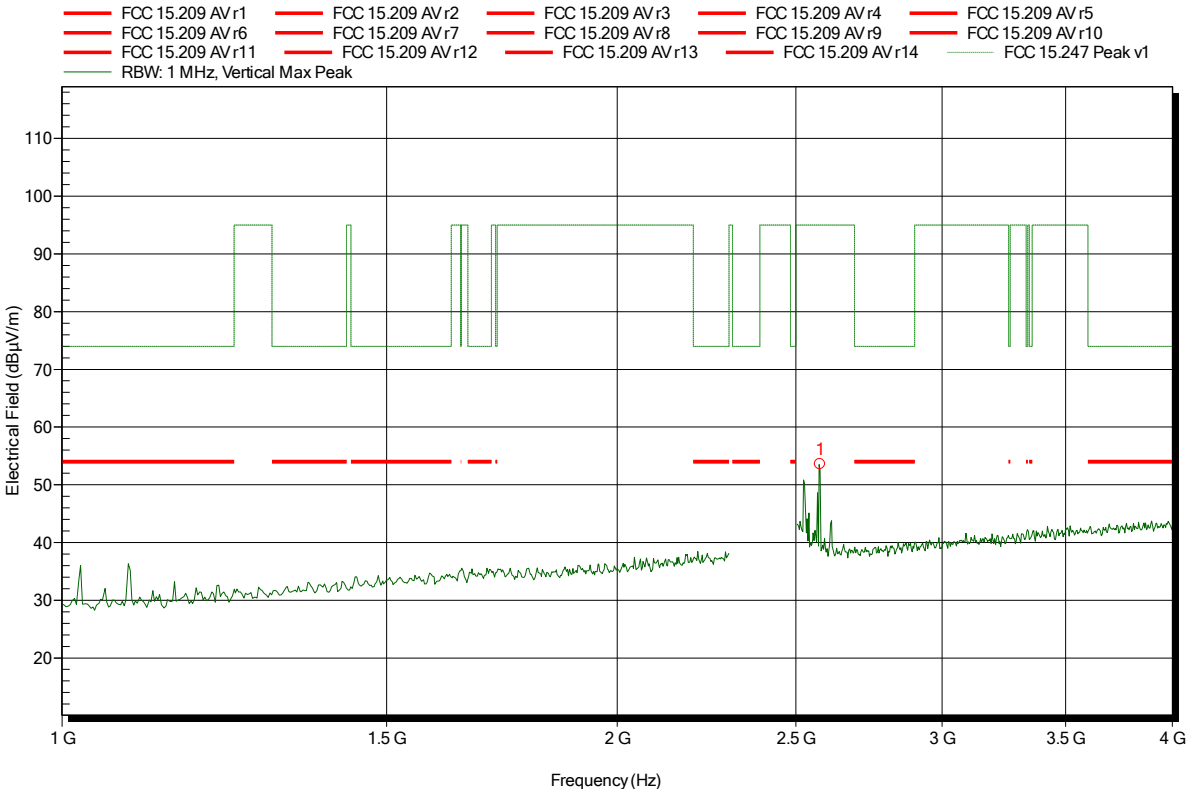

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.577 GHz	53.55 dBµV/m	95 dBµV/m	-41.45 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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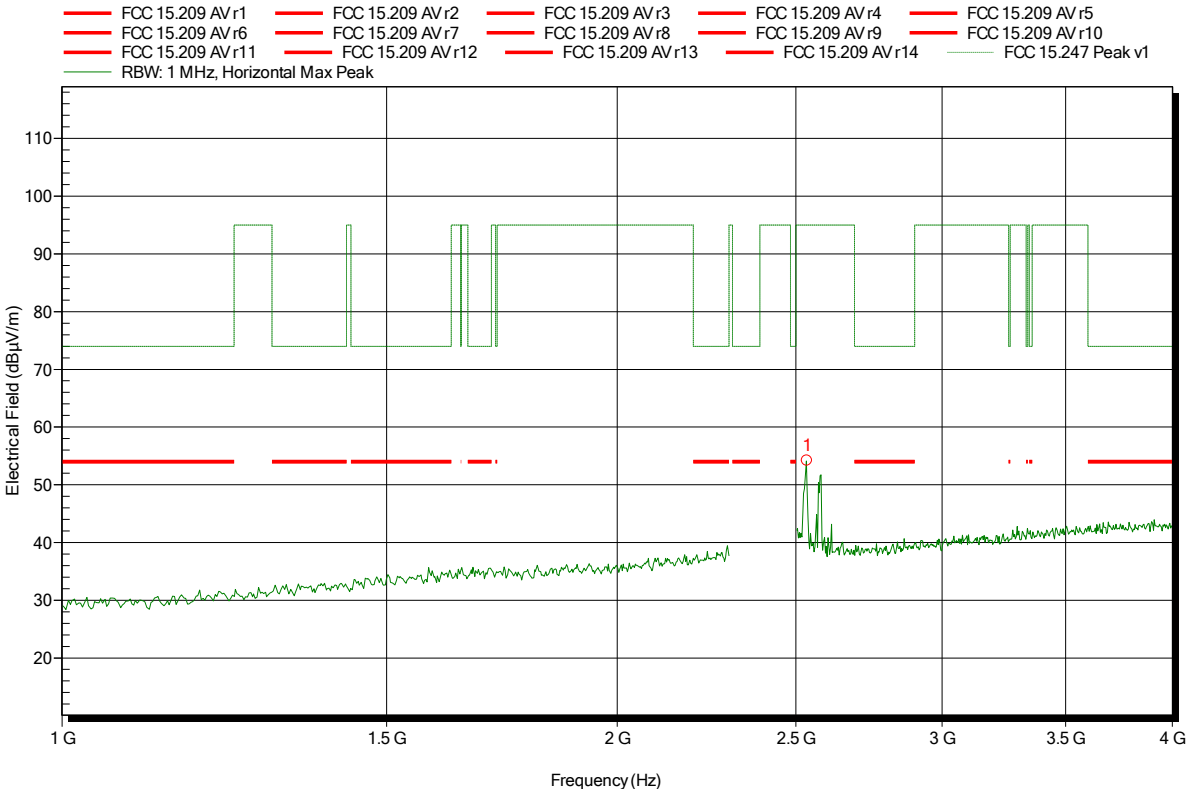

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.535 GHz	54.16 dBµV/m	95 dBµV/m	-40.84 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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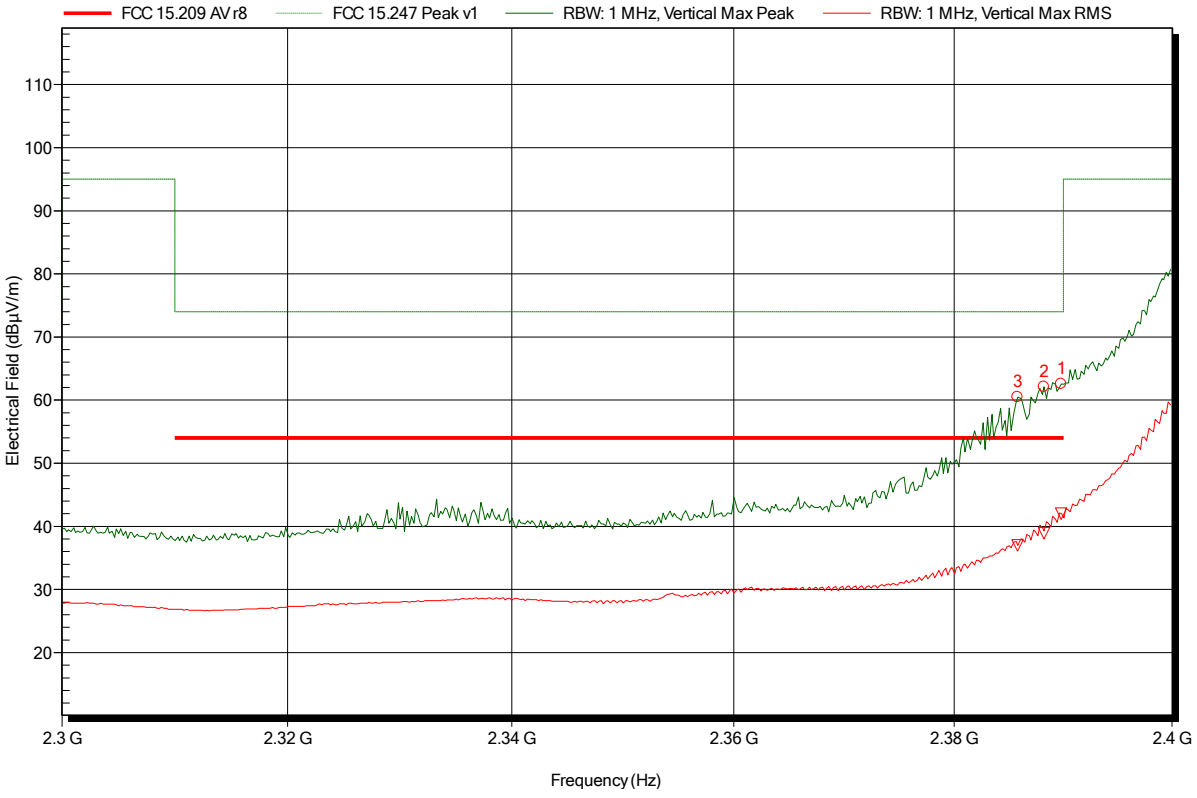

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.386 GHz	60.48 dBµV/m	74 dBµV/m	-13.52 dB	Pass
2.388 GHz	62.1 dBµV/m	74 dBµV/m	-11.9 dB	Pass
2.39 GHz	62.56 dBµV/m	74 dBµV/m	-11.44 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.386 GHz	36.98 dBµV/m	54 dBµV/m	-17.02 dB	Pass
2.388 GHz	38.9 dBµV/m	54 dBµV/m	-15.1 dB	Pass
2.39 GHz	42.01 dBµV/m	54 dBµV/m	-11.99 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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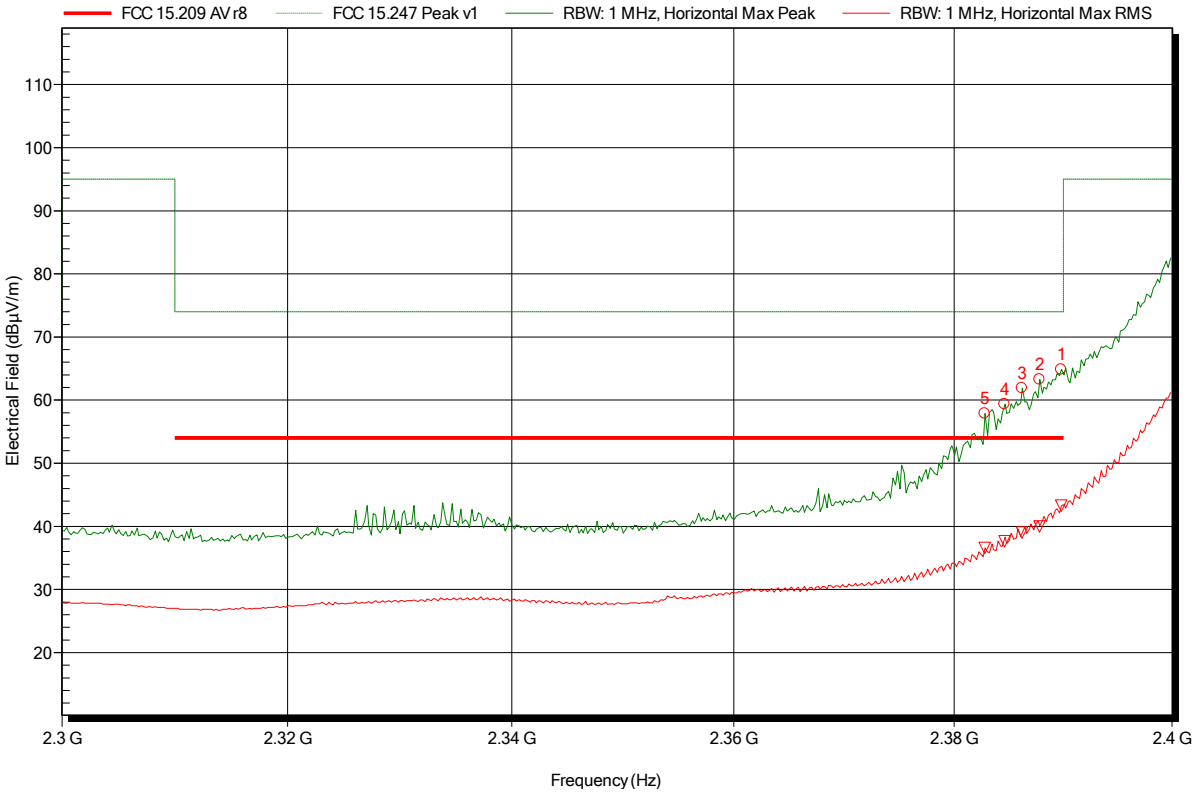

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.383 GHz	57.9 dBµV/m	74 dBµV/m	-16.1 dB	Pass
2.385 GHz	59.38 dBµV/m	74 dBµV/m	-14.62 dB	Pass
2.386 GHz	61.89 dBµV/m	74 dBµV/m	-12.11 dB	Pass
2.388 GHz	63.28 dBµV/m	74 dBµV/m	-10.72 dB	Pass
2.39 GHz	64.84 dBµV/m	74 dBµV/m	-9.16 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.383 GHz	36.55 dBµV/m	54 dBµV/m	-17.45 dB	Pass
2.385 GHz	37.64 dBµV/m	54 dBµV/m	-16.36 dB	Pass
2.386 GHz	39 dBµV/m	54 dBµV/m	-15 dB	Pass
2.388 GHz	40 dBµV/m	54 dBµV/m	-14 dB	Pass
2.39 GHz	43.27 dBµV/m	54 dBµV/m	-10.73 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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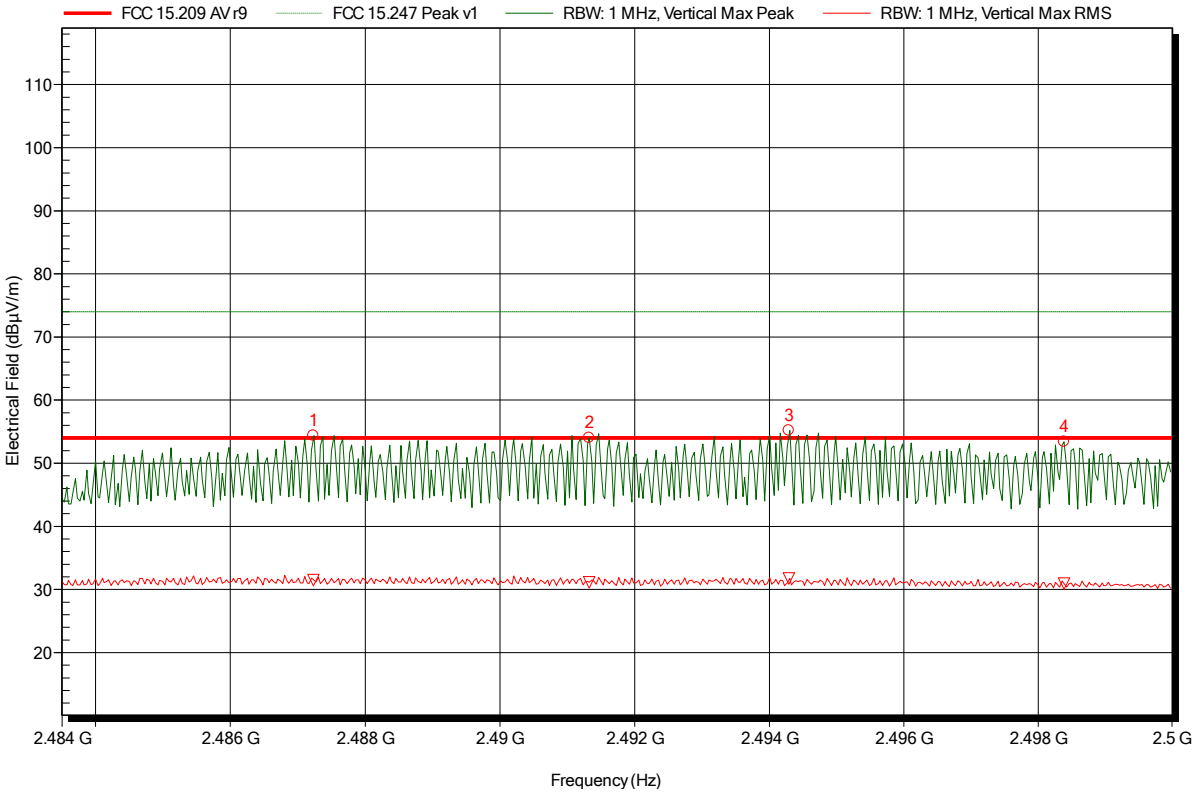

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4872 GHz	54.4 dBµV/m	74 dBµV/m	-19.6 dB	Pass
2.4913 GHz	54.03 dBµV/m	74 dBµV/m	-19.97 dB	Pass
2.4943 GHz	55.17 dBµV/m	74 dBµV/m	-18.83 dB	Pass
2.4984 GHz	53.43 dBµV/m	74 dBµV/m	-20.57 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4872 GHz	31.47 dBµV/m	54 dBµV/m	-22.53 dB	Pass
2.4913 GHz	31.11 dBµV/m	54 dBµV/m	-22.89 dB	Pass
2.4943 GHz	31.75 dBµV/m	54 dBµV/m	-22.25 dB	Pass
2.4984 GHz	30.94 dBµV/m	54 dBµV/m	-23.06 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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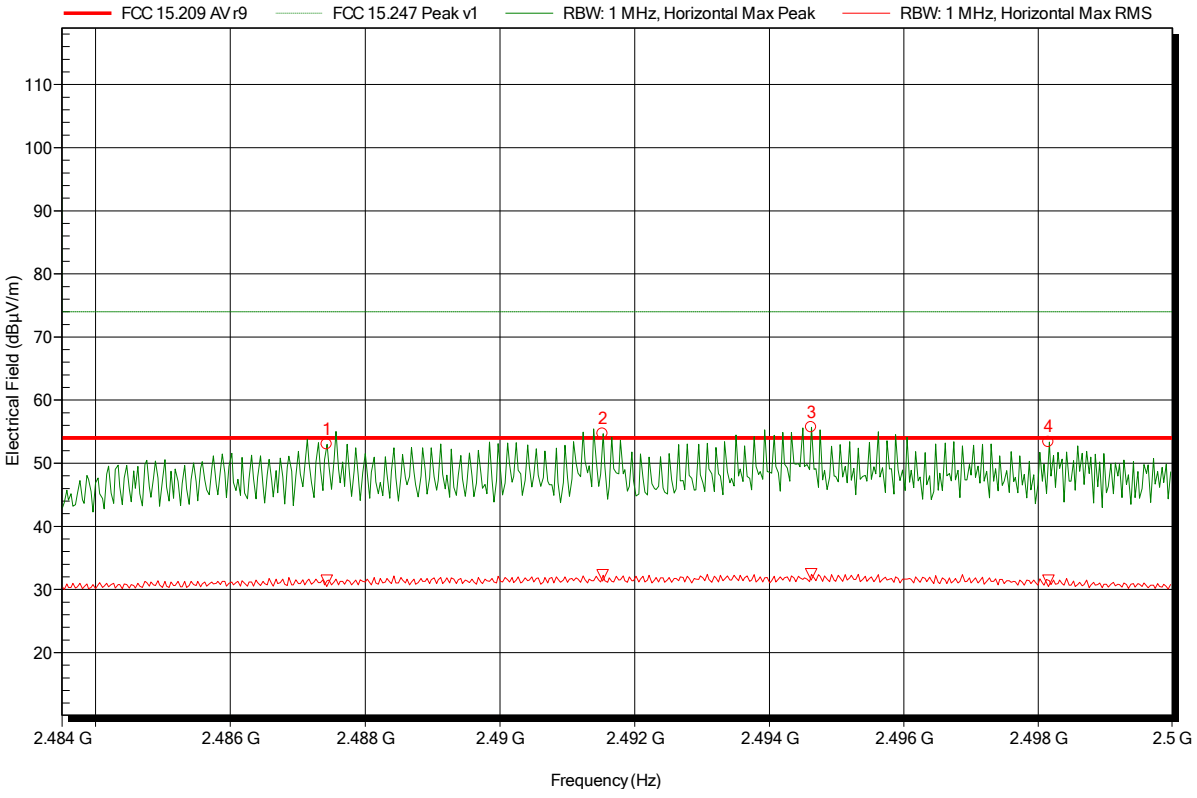

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4874 GHz	52.99 dBµV/m	74 dBµV/m	-21.01 dB	Pass
2.4915 GHz	54.69 dBµV/m	74 dBµV/m	-19.31 dB	Pass
2.4946 GHz	55.71 dBµV/m	74 dBµV/m	-18.29 dB	Pass
2.4982 GHz	53.36 dBµV/m	74 dBµV/m	-20.64 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4874 GHz	31.38 dBµV/m	54 dBµV/m	-22.62 dB	Pass
2.4915 GHz	32.25 dBµV/m	54 dBµV/m	-21.75 dB	Pass
2.4946 GHz	32.42 dBµV/m	54 dBµV/m	-21.58 dB	Pass
2.4982 GHz	31.41 dBµV/m	54 dBµV/m	-22.59 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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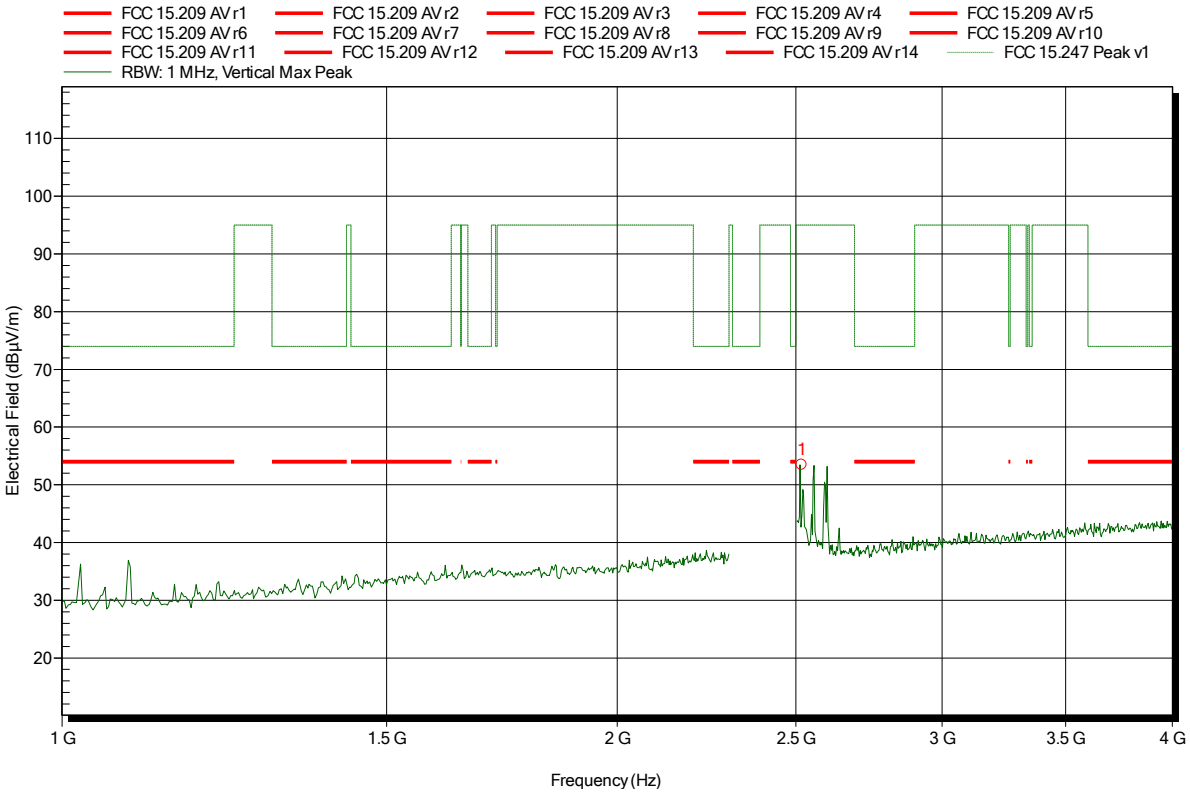

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.518 GHz	53.45 dBµV/m	95 dBµV/m	-41.55 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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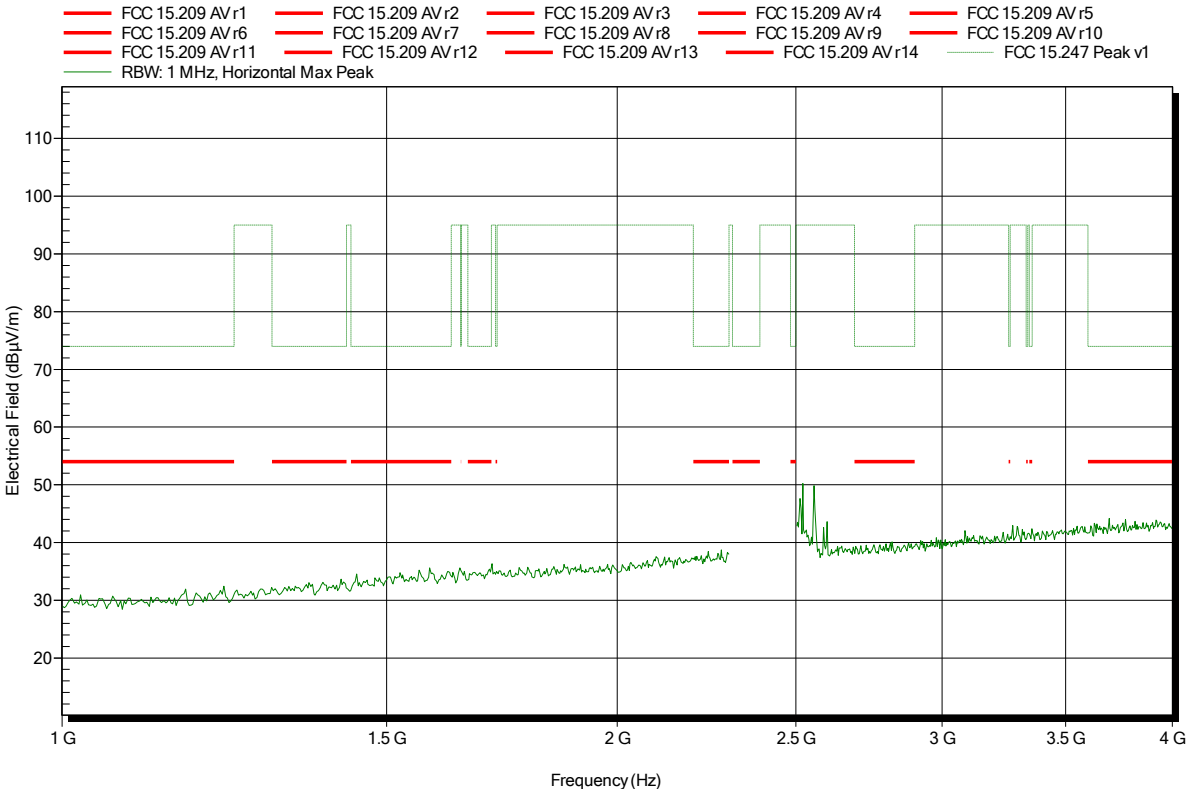

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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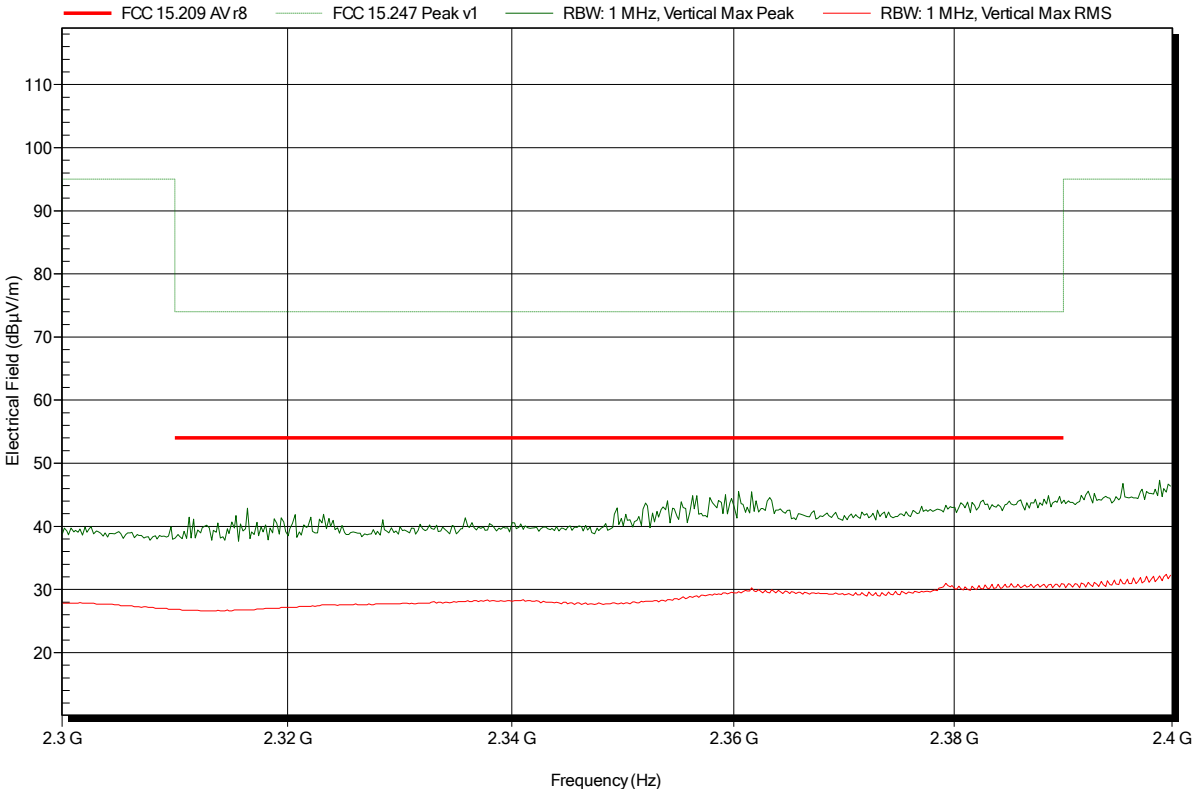

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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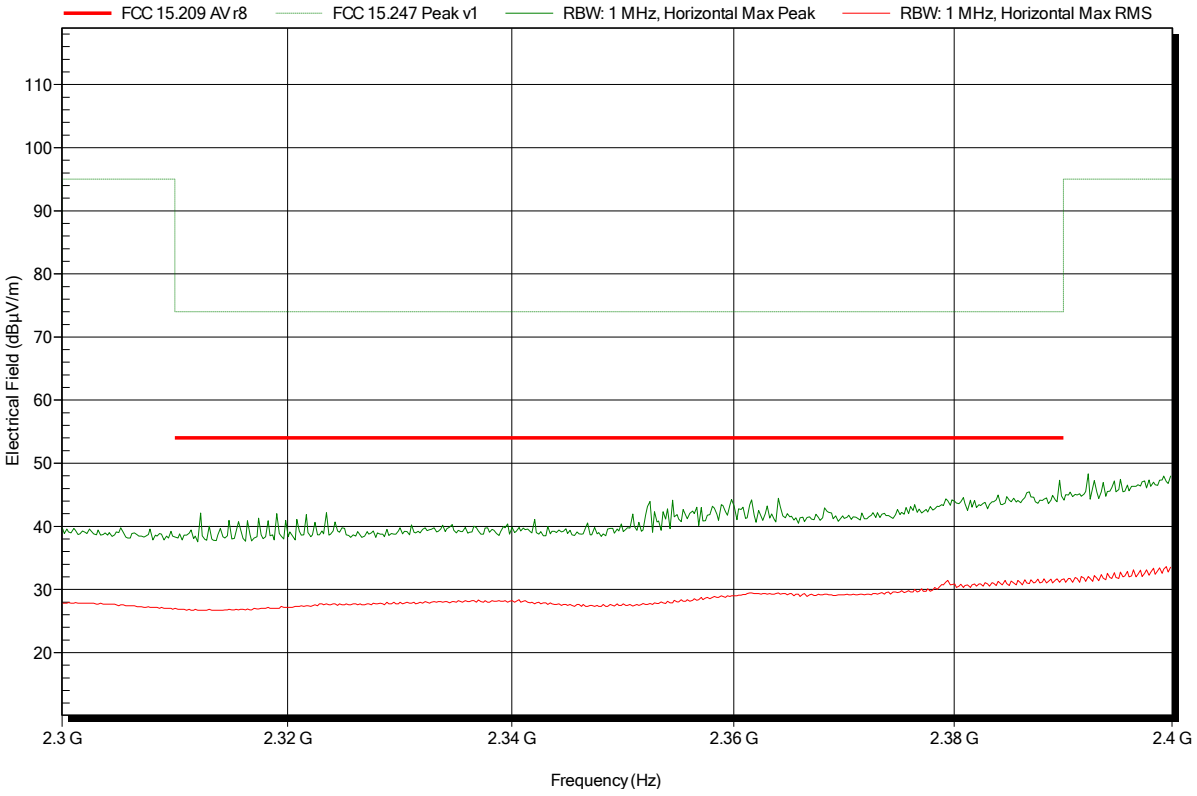

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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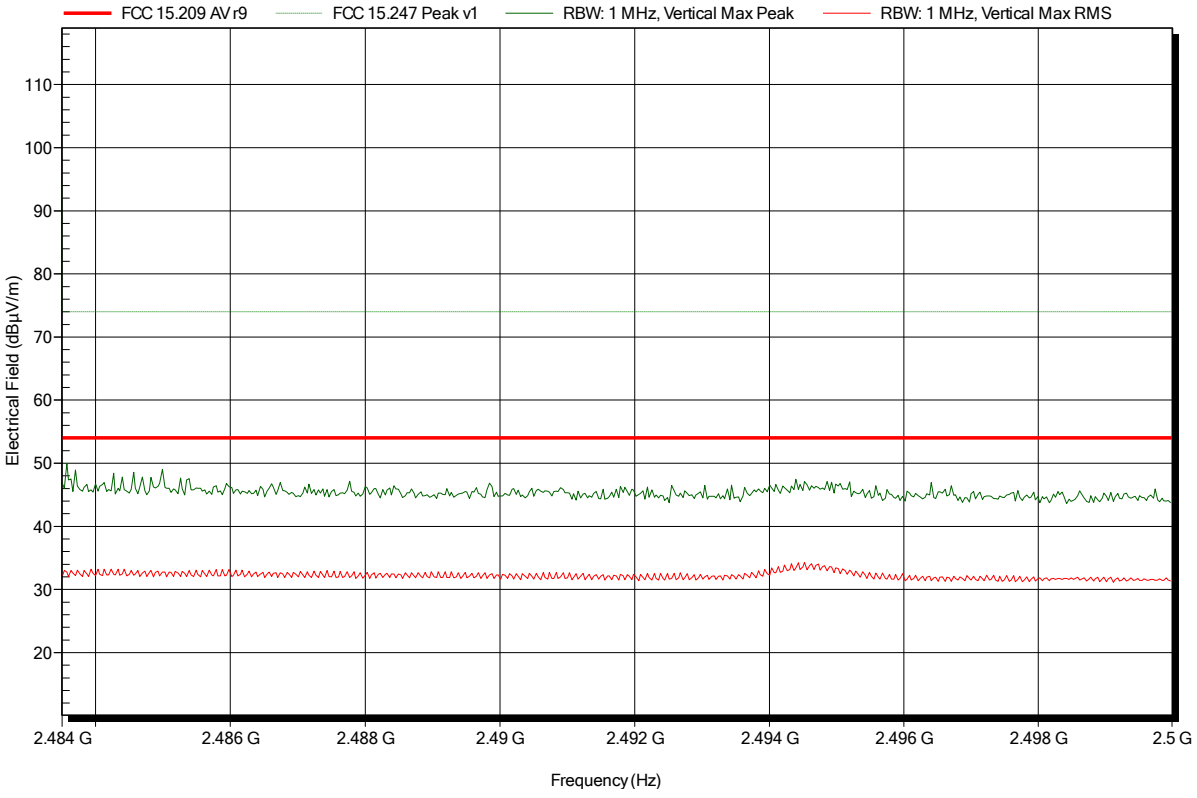

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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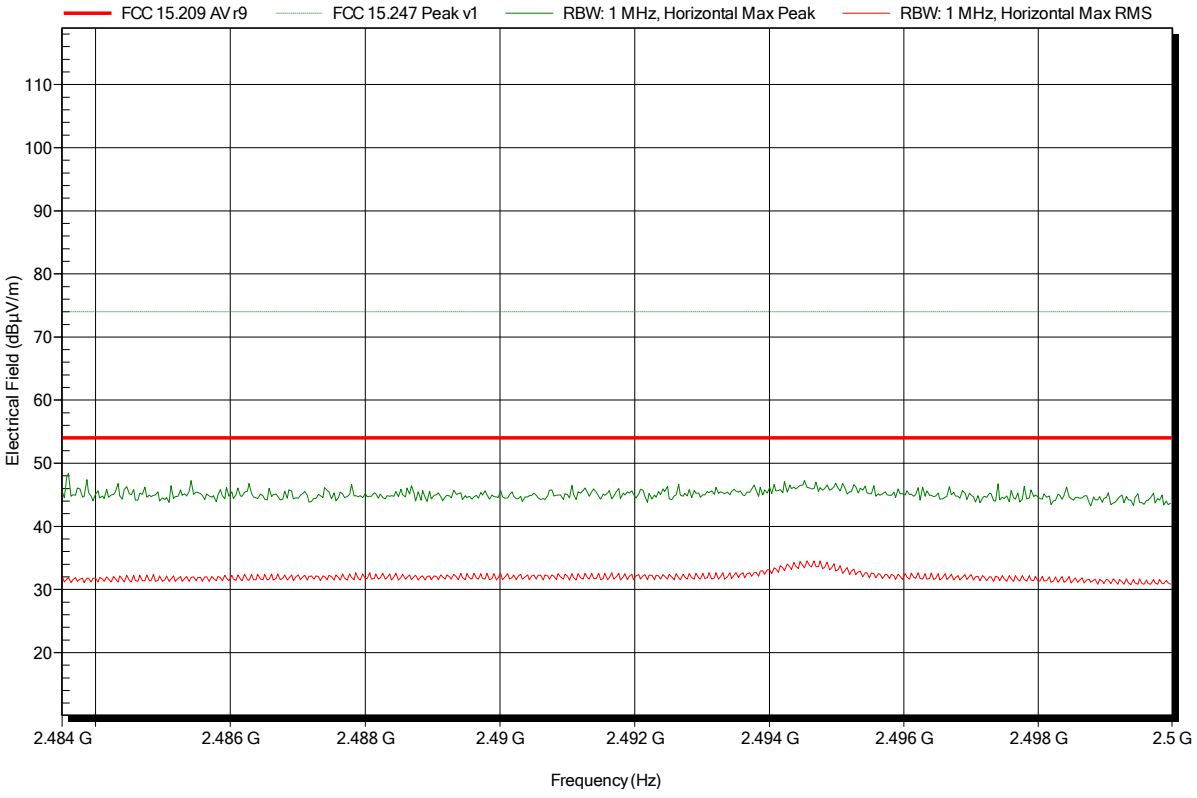

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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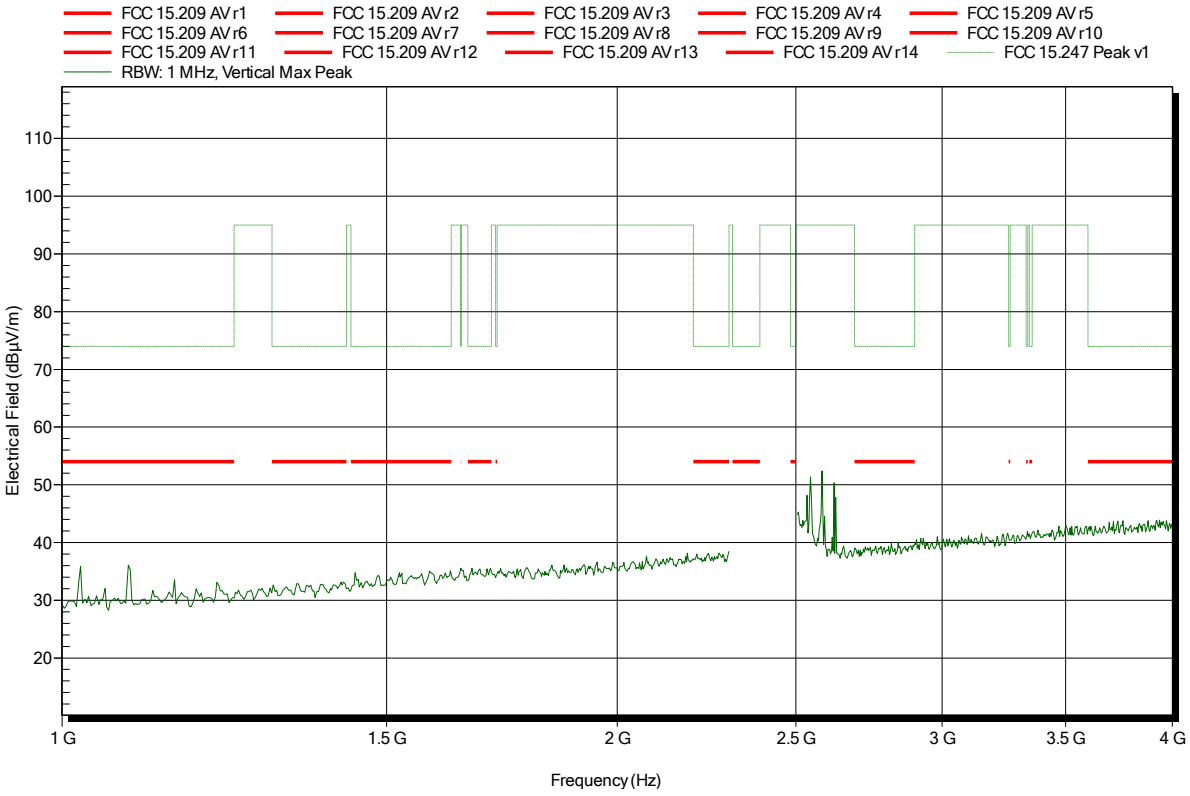

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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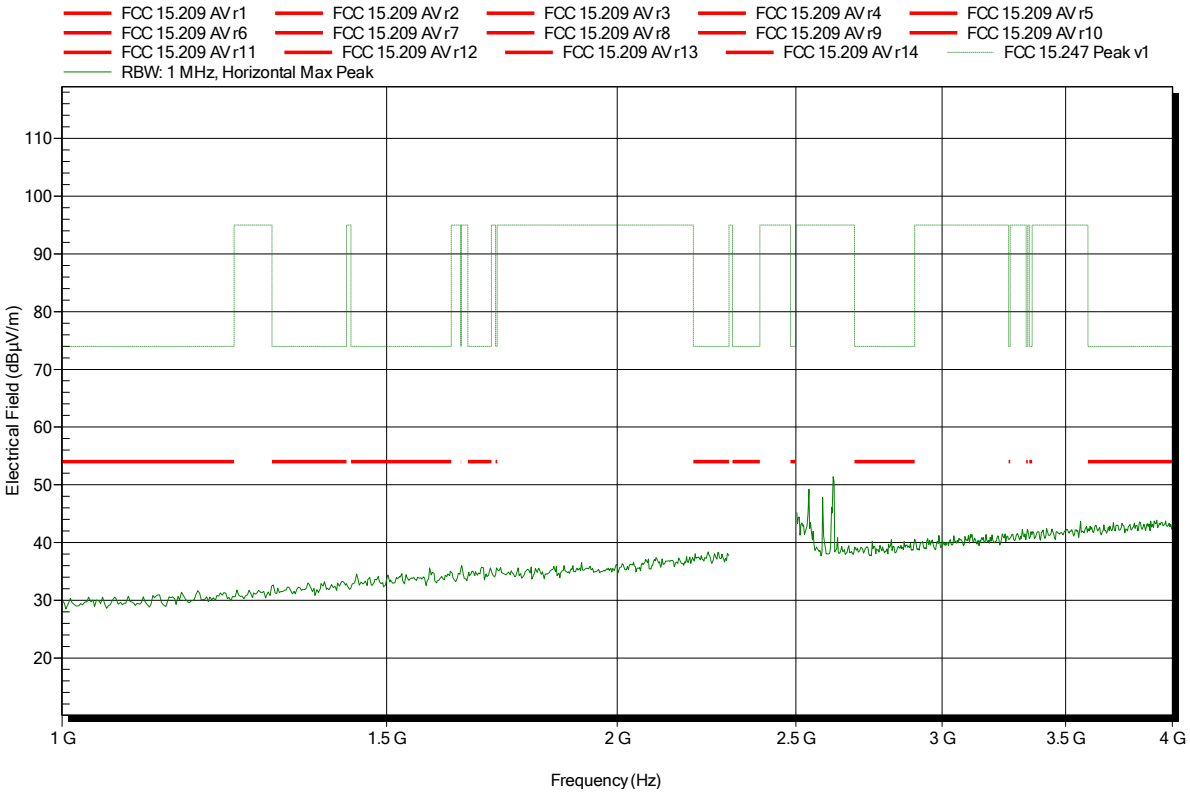

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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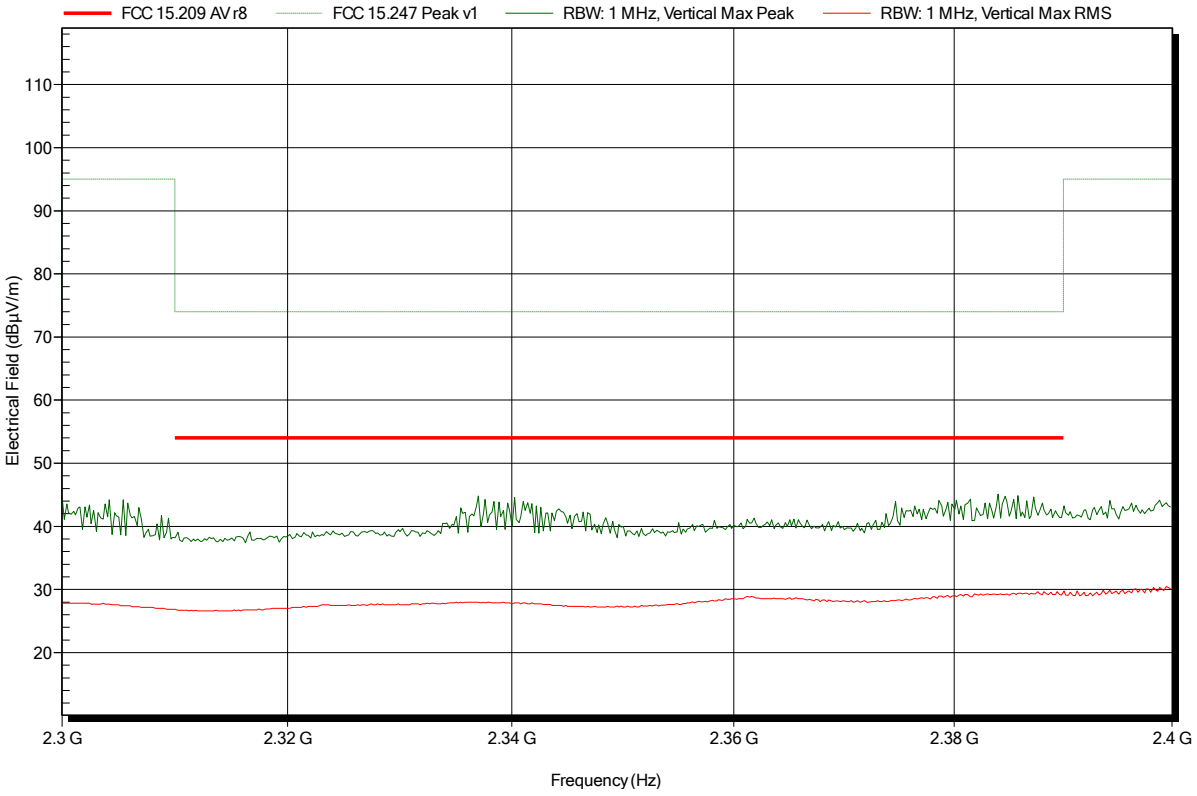

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; lower bandedge

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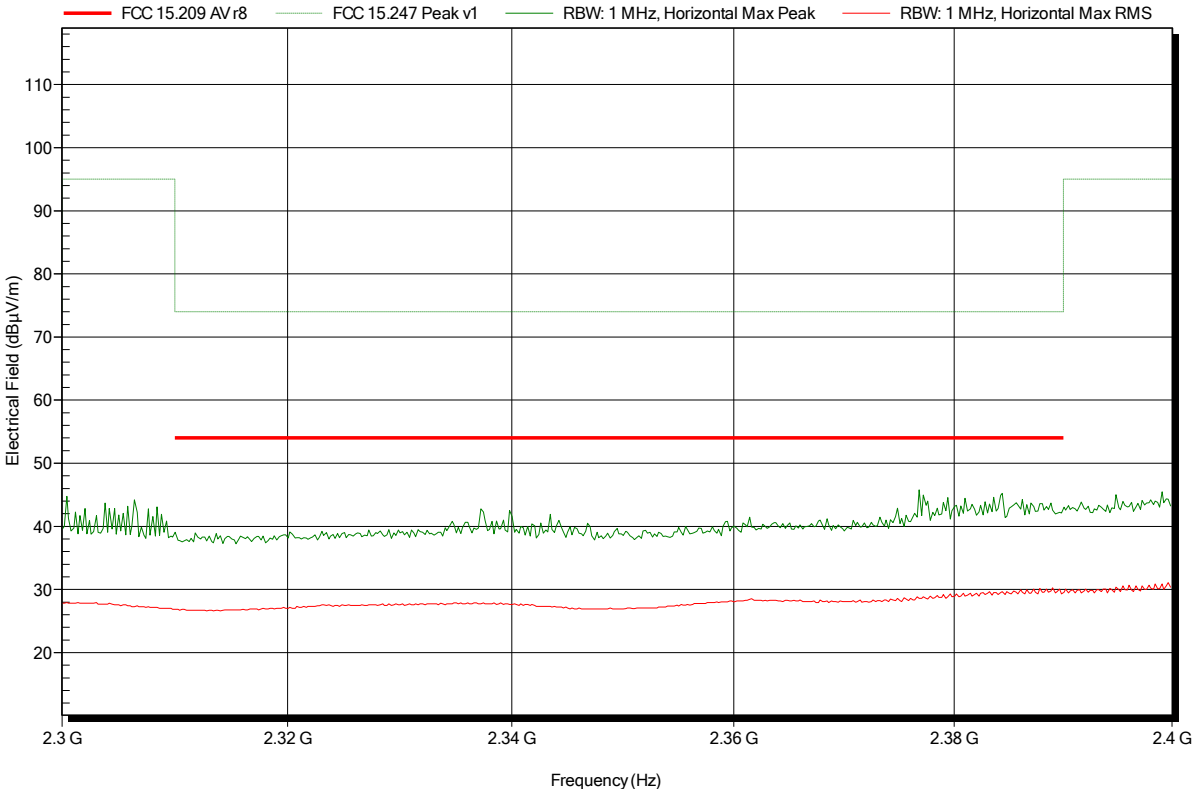

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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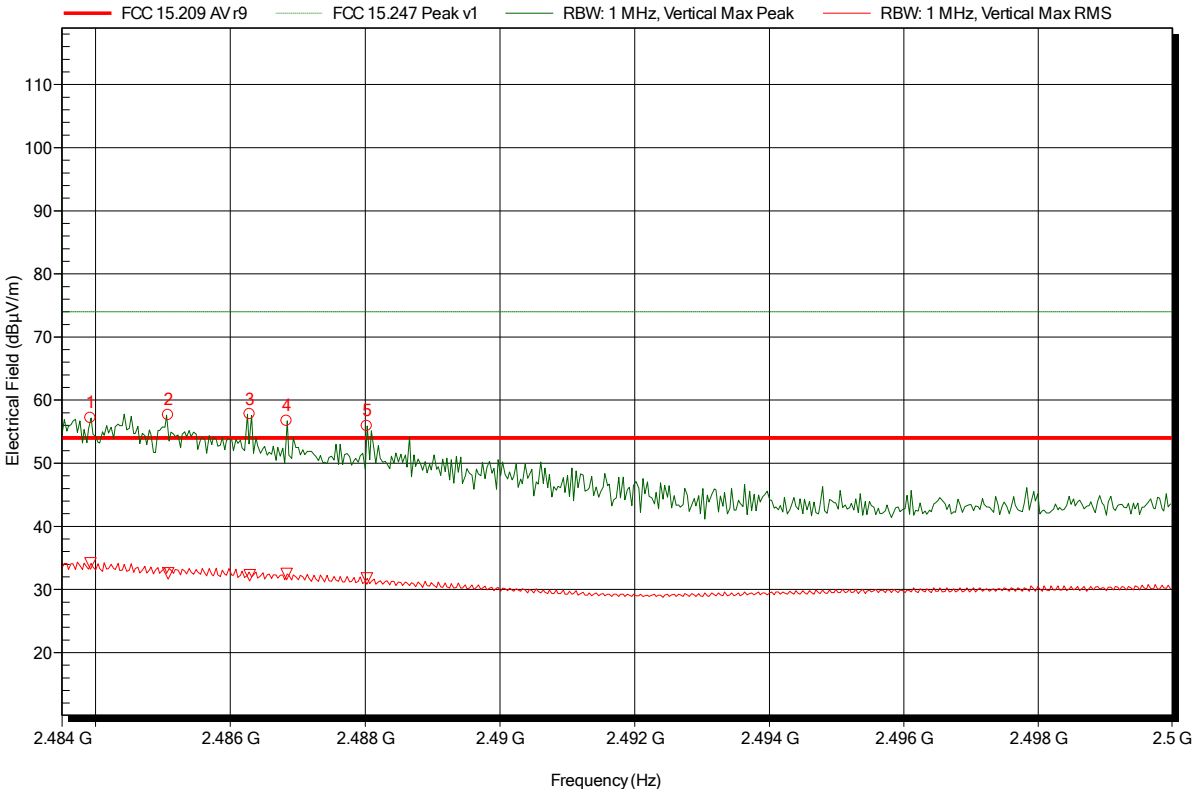

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4839 GHz	57.16 dBµV/m	74 dBµV/m	-16.84 dB	Pass
2.4851 GHz	57.62 dBµV/m	74 dBµV/m	-16.38 dB	Pass
2.4863 GHz	57.79 dBµV/m	74 dBµV/m	-16.21 dB	Pass
2.4868 GHz	56.71 dBµV/m	74 dBµV/m	-17.29 dB	Pass
2.488 GHz	55.89 dBµV/m	74 dBµV/m	-18.11 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4839 GHz	34.12 dBµV/m	54 dBµV/m	-19.88 dB	Pass
2.4851 GHz	32.55 dBµV/m	54 dBµV/m	-21.45 dB	Pass
2.4863 GHz	32.23 dBµV/m	54 dBµV/m	-21.77 dB	Pass
2.4868 GHz	32.47 dBµV/m	54 dBµV/m	-21.53 dB	Pass
2.488 GHz	31.73 dBµV/m	54 dBµV/m	-22.27 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical; upper bandedge

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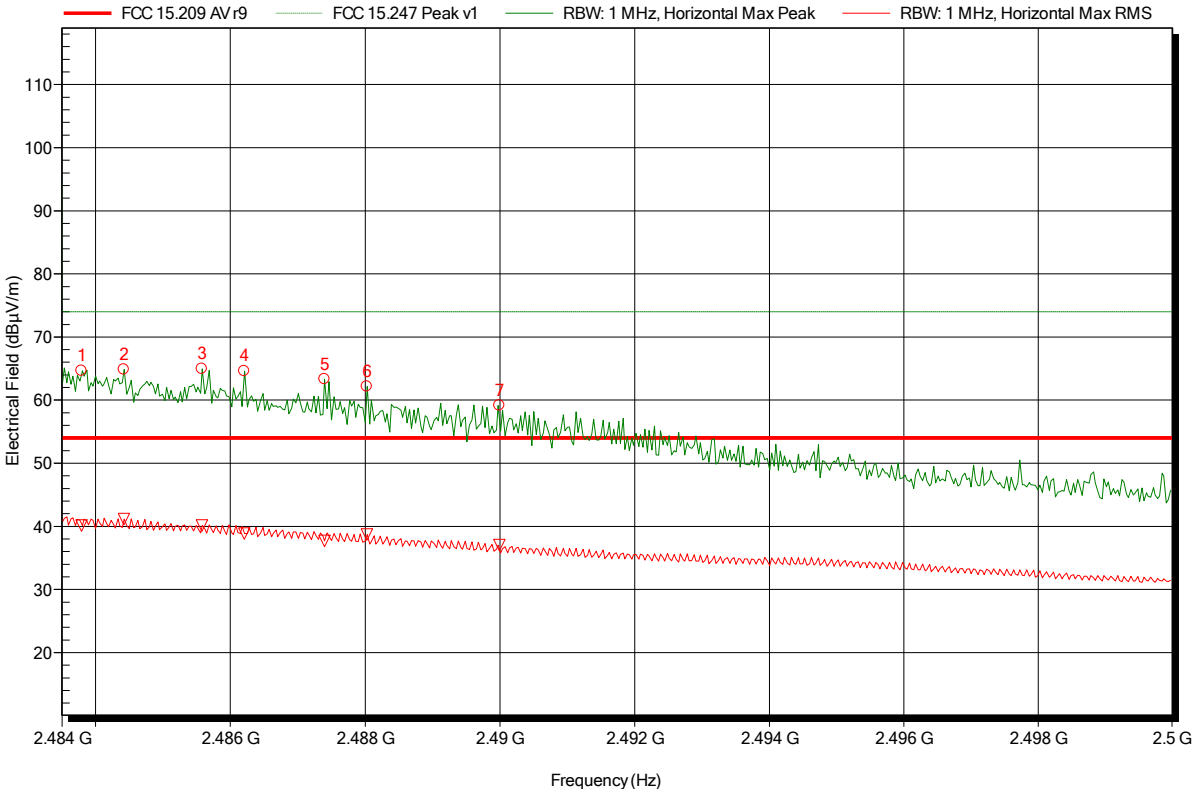

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4838 GHz	64.63 dBµV/m	74 dBµV/m	-9.37 dB	Pass
2.4844 GHz	64.86 dBµV/m	74 dBµV/m	-9.14 dB	Pass
2.4856 GHz	64.95 dBµV/m	74 dBµV/m	-9.05 dB	Pass
2.4862 GHz	64.58 dBµV/m	74 dBµV/m	-9.42 dB	Pass
2.4874 GHz	63.35 dBµV/m	74 dBµV/m	-10.65 dB	Pass
2.488 GHz	62.15 dBµV/m	74 dBµV/m	-11.85 dB	Pass
2.49 GHz	59.16 dBµV/m	74 dBµV/m	-14.84 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4838 GHz	40.11 dBµV/m	54 dBµV/m	-13.89 dB	Pass
2.4844 GHz	41.17 dBµV/m	54 dBµV/m	-12.83 dB	Pass
2.4856 GHz	40.15 dBµV/m	54 dBµV/m	-13.85 dB	Pass
2.4862 GHz	38.84 dBµV/m	54 dBµV/m	-15.16 dB	Pass
2.4874 GHz	37.71 dBµV/m	54 dBµV/m	-16.29 dB	Pass
2.488 GHz	38.7 dBµV/m	54 dBµV/m	-15.3 dB	Pass
2.49 GHz	37.03 dBµV/m	54 dBµV/m	-16.97 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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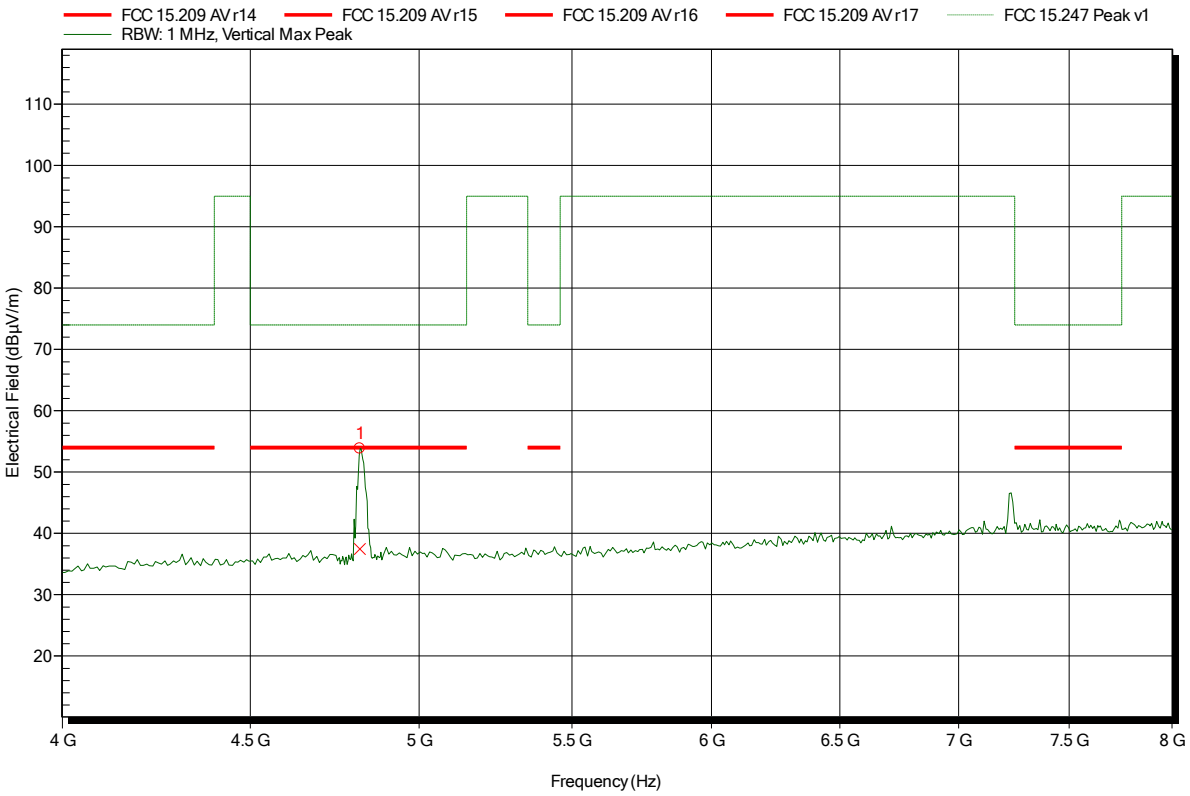

Frequency	Peak	Peak Limit	Peak Difference	Status
4.818 GHz	53.84 dBµV/m	74 dBµV/m	-20.16 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
4.818 GHz	37.44 dBµV/m	54 dBµV/m	-16.56 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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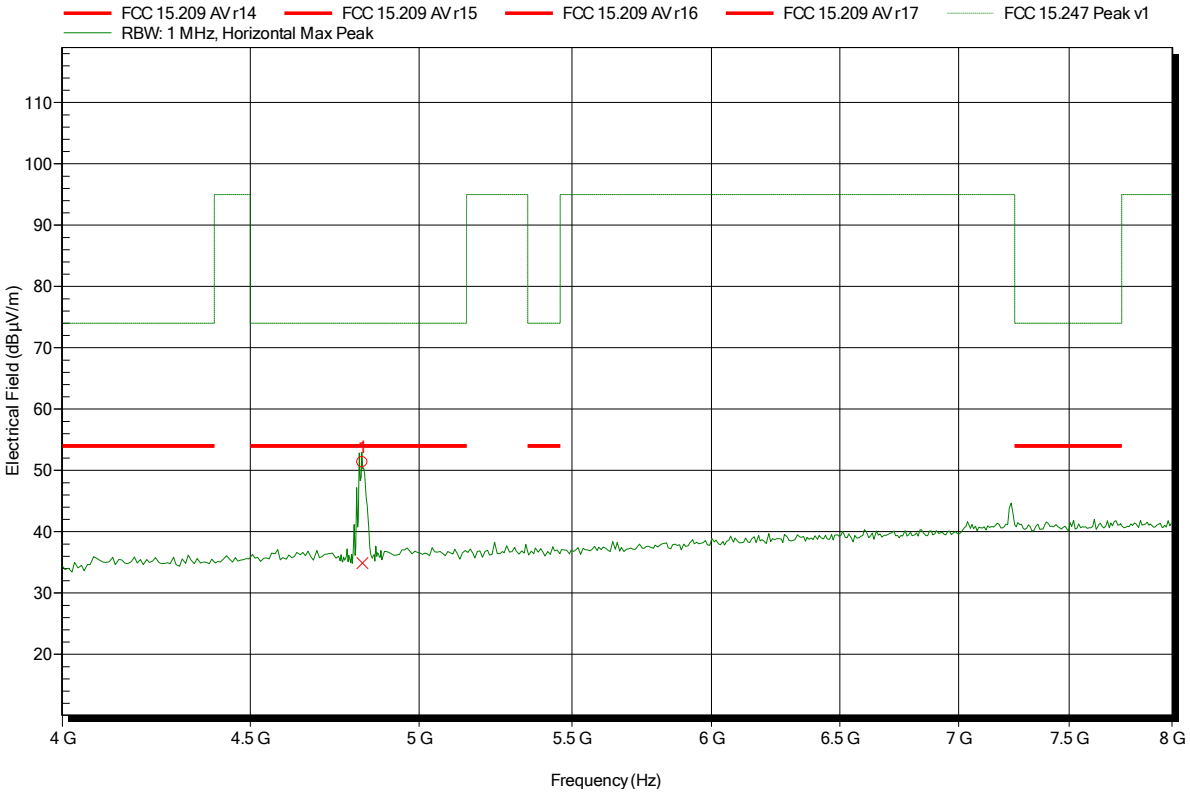

Frequency	Peak	Peak Limit	Peak Difference	Status
4.826 GHz	51.34 dBµV/m	74 dBµV/m	-22.66 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
4.826 GHz	34.88 dBµV/m	54 dBµV/m	-19.12 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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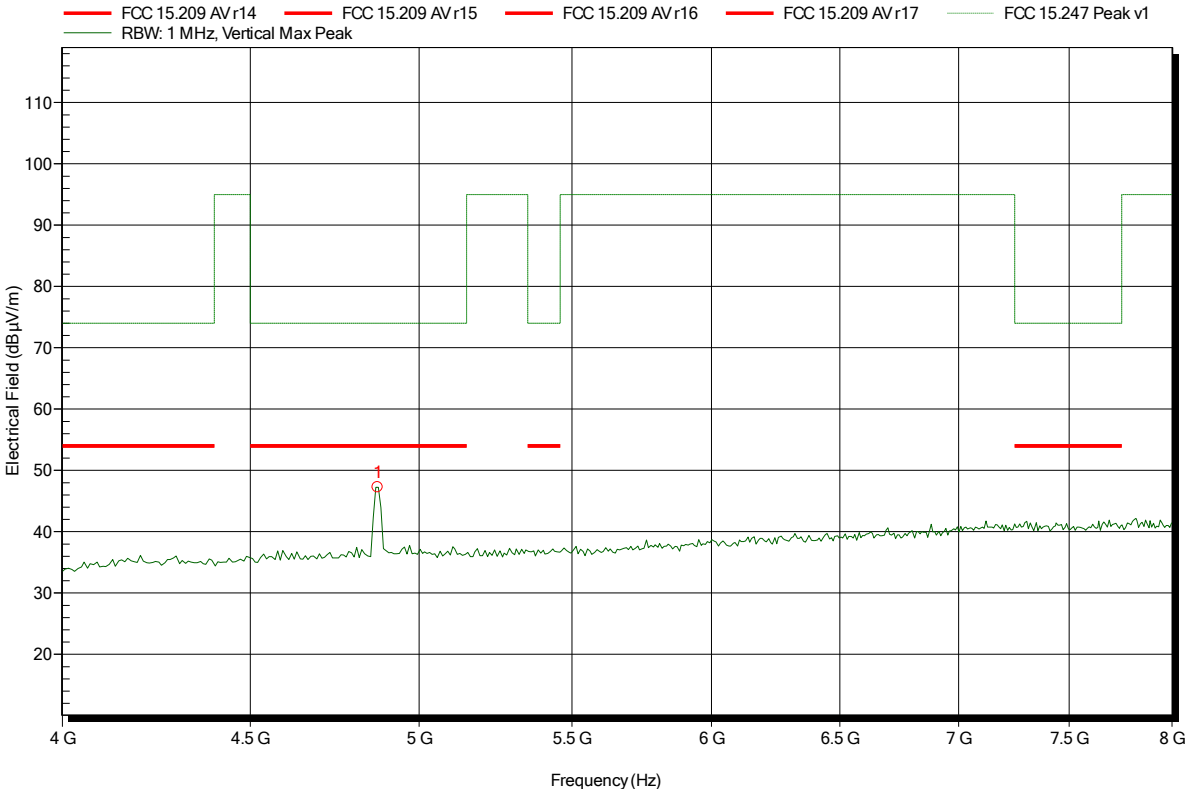

Frequency	Peak	Peak Limit	Peak Difference	Status
4.872 GHz	47.26 dBµV/m	74 dBµV/m	-26.74 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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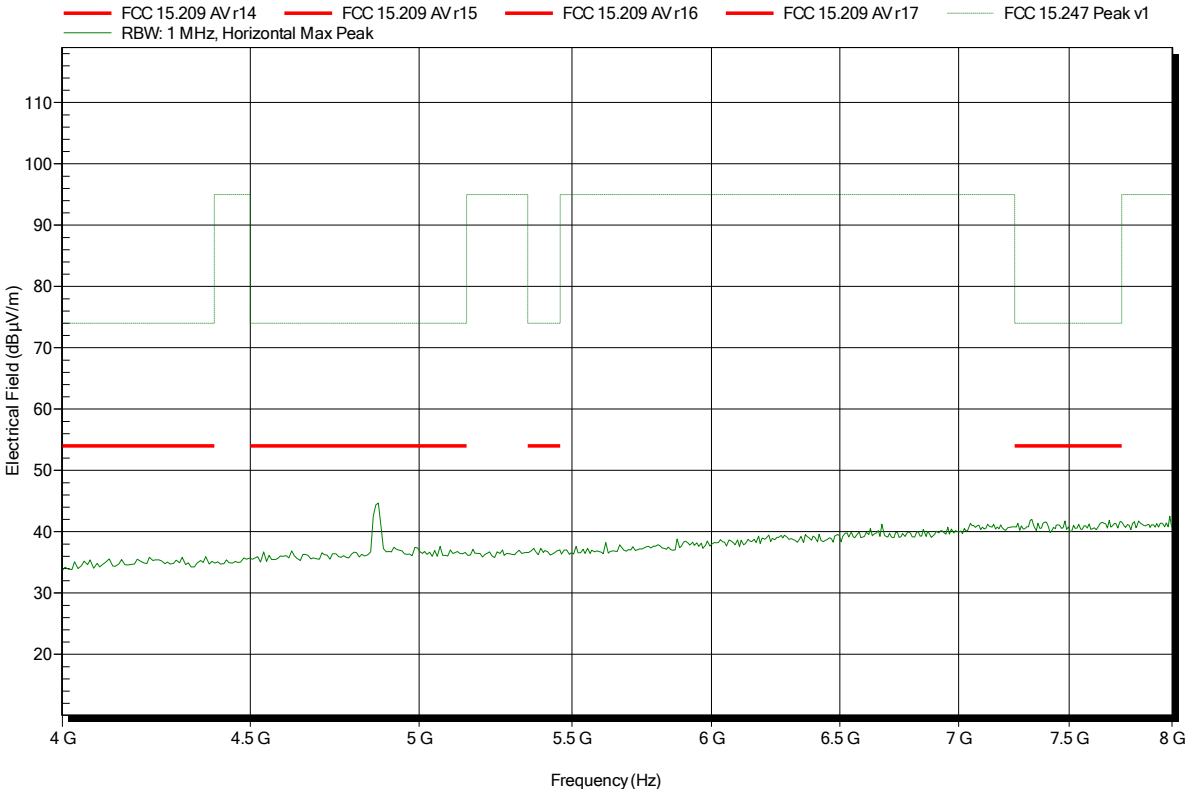

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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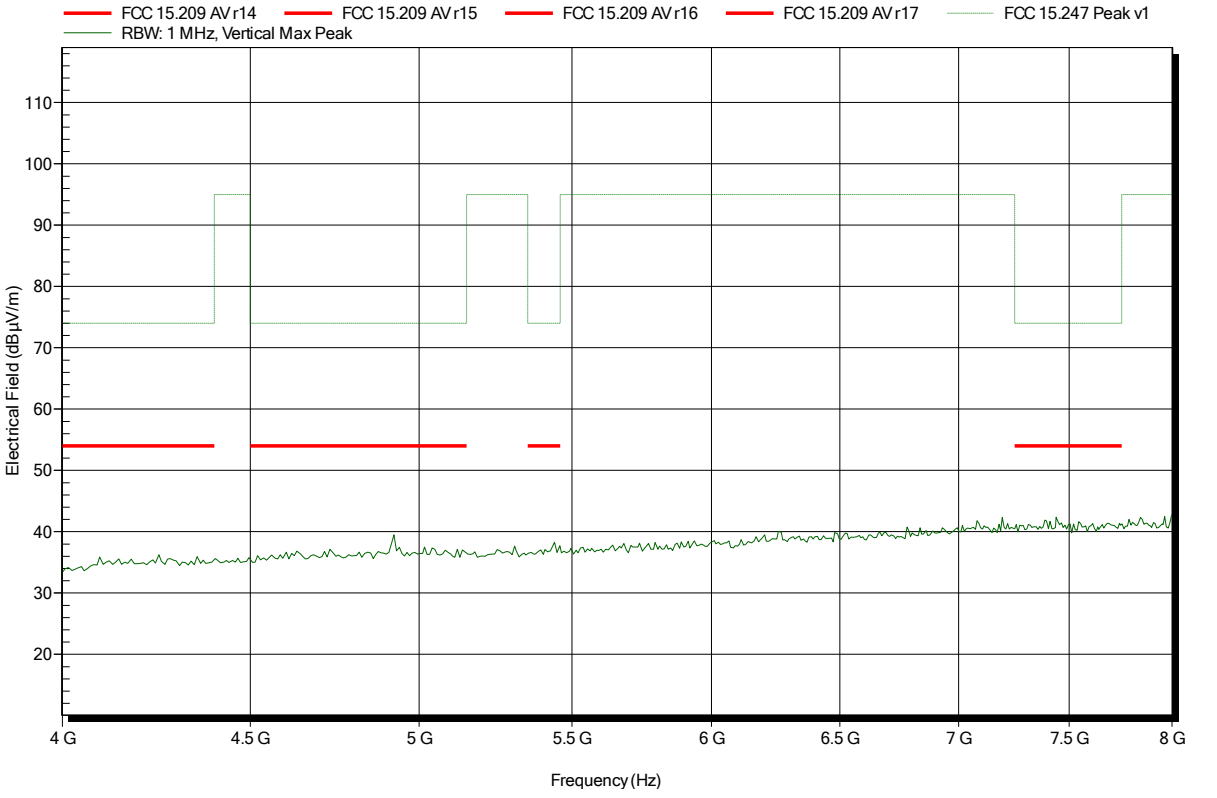

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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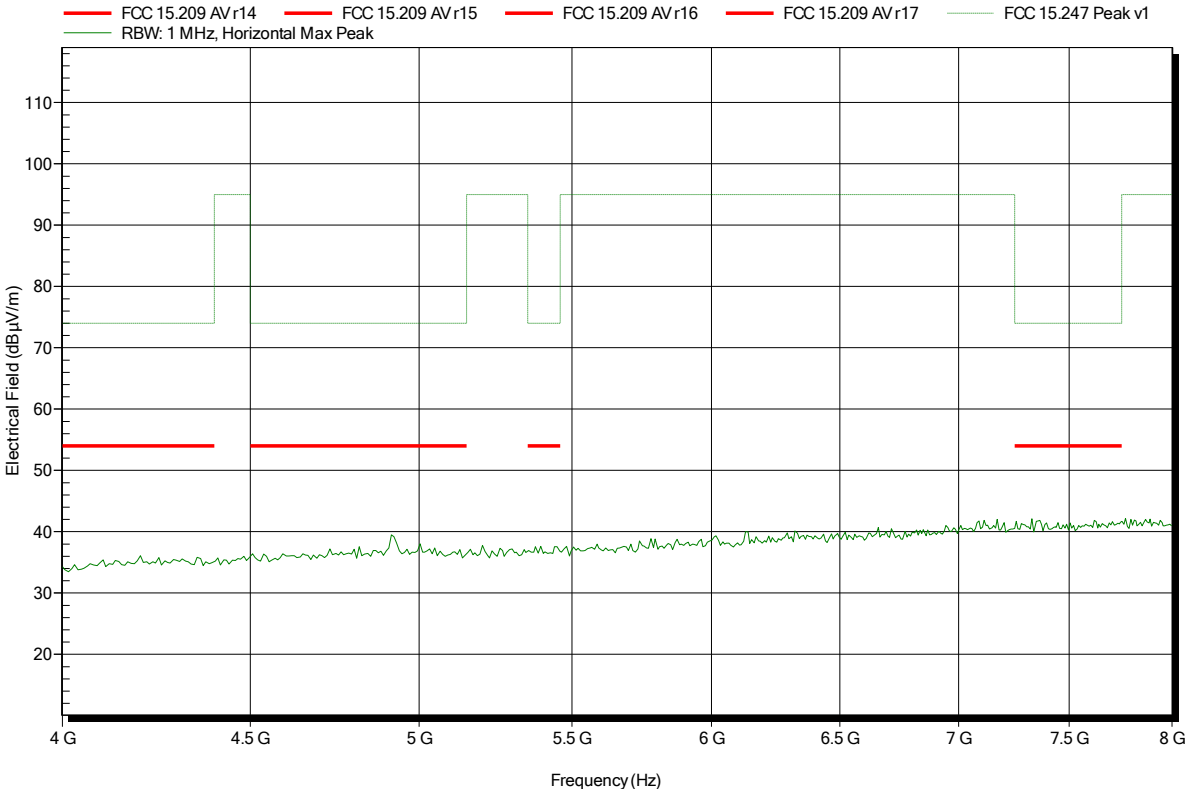

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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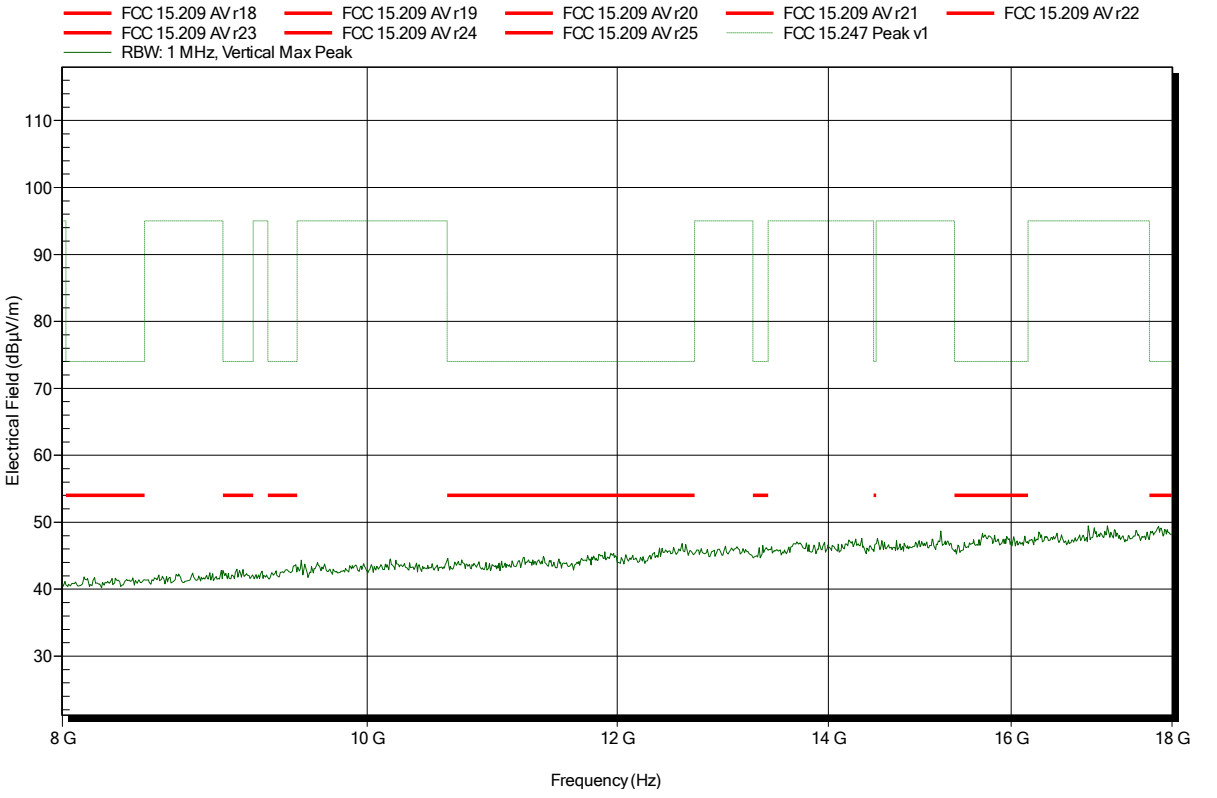

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 1; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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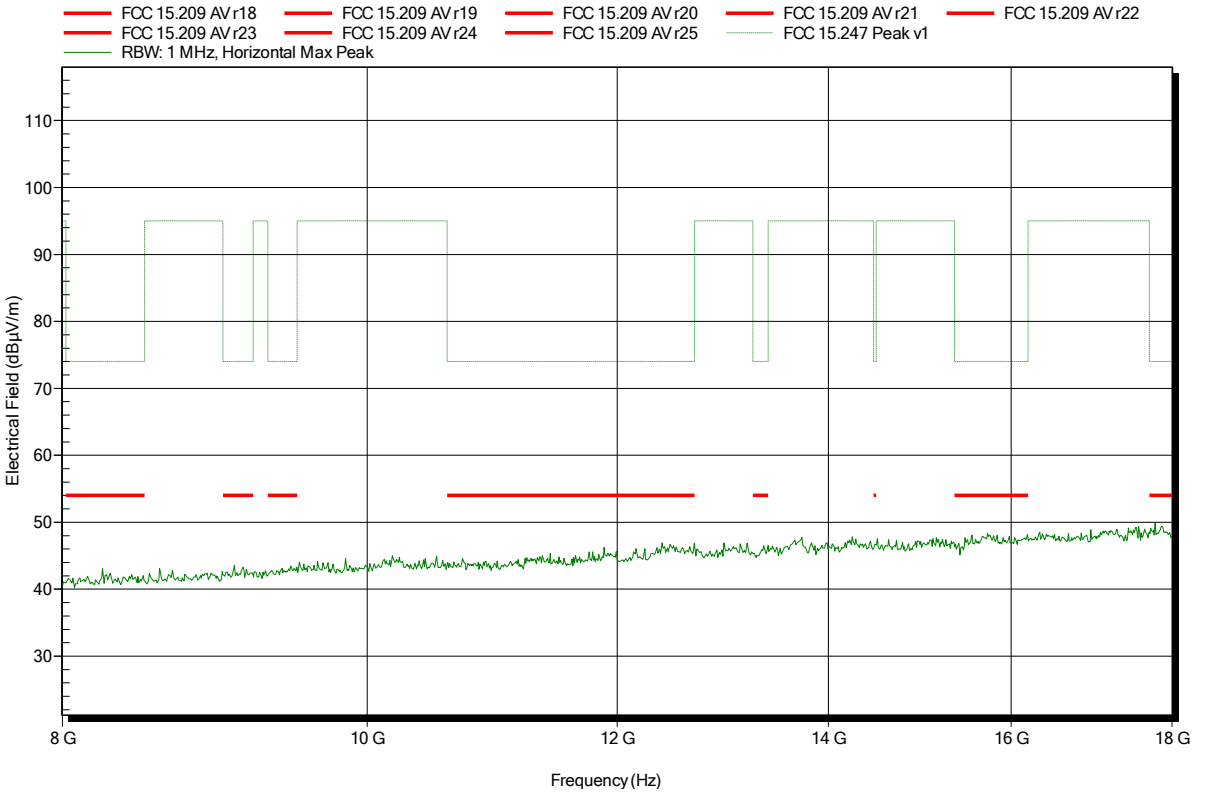

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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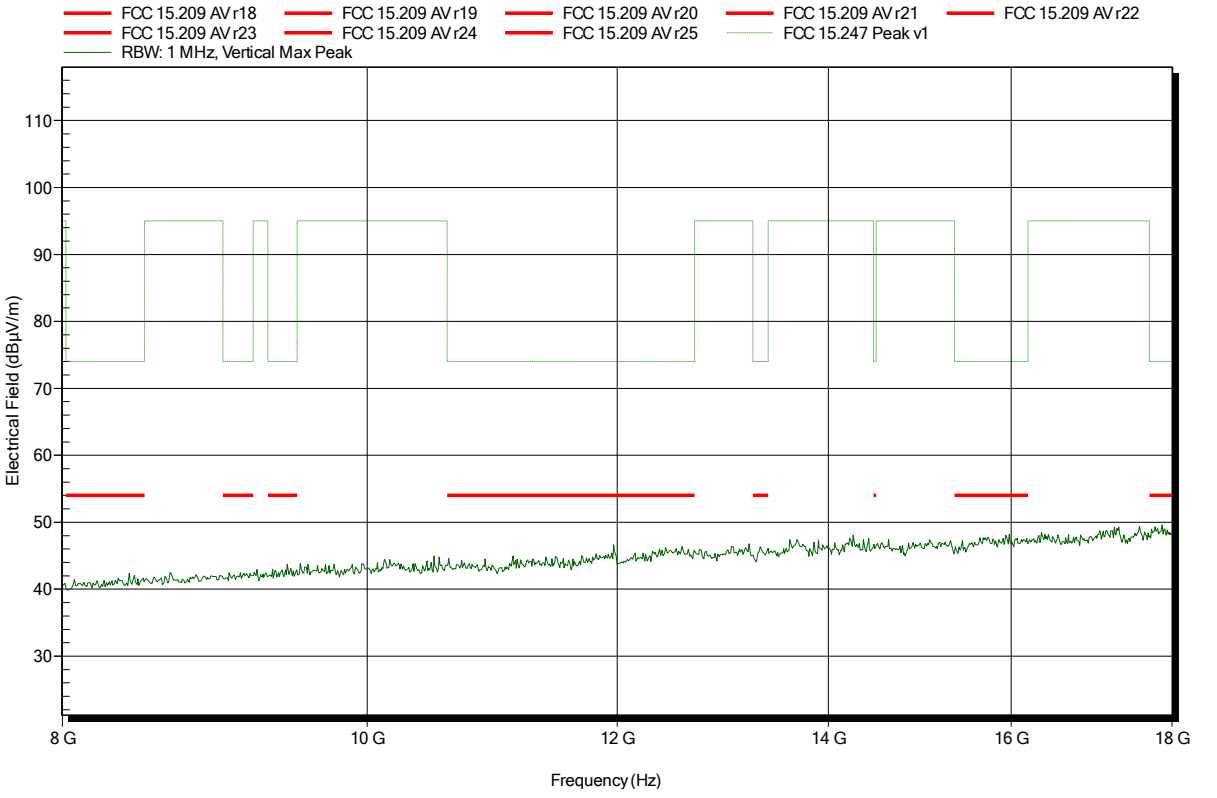

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 6; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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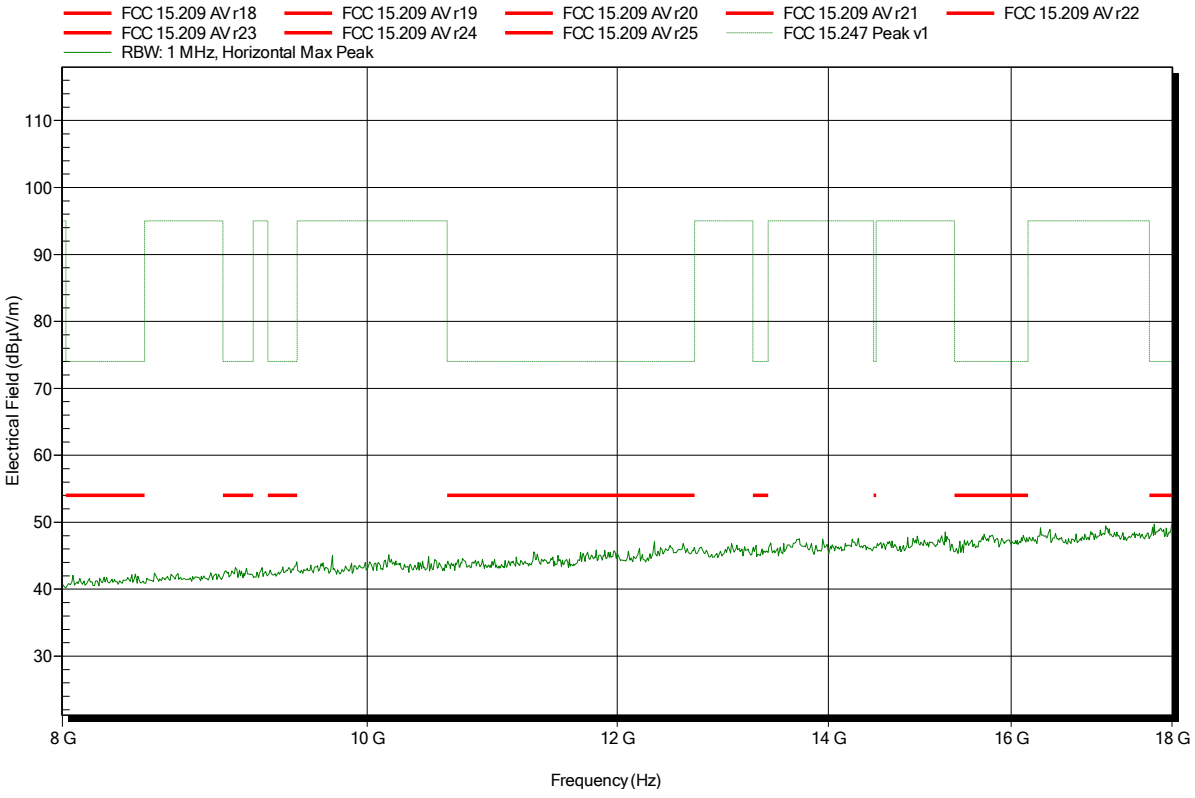

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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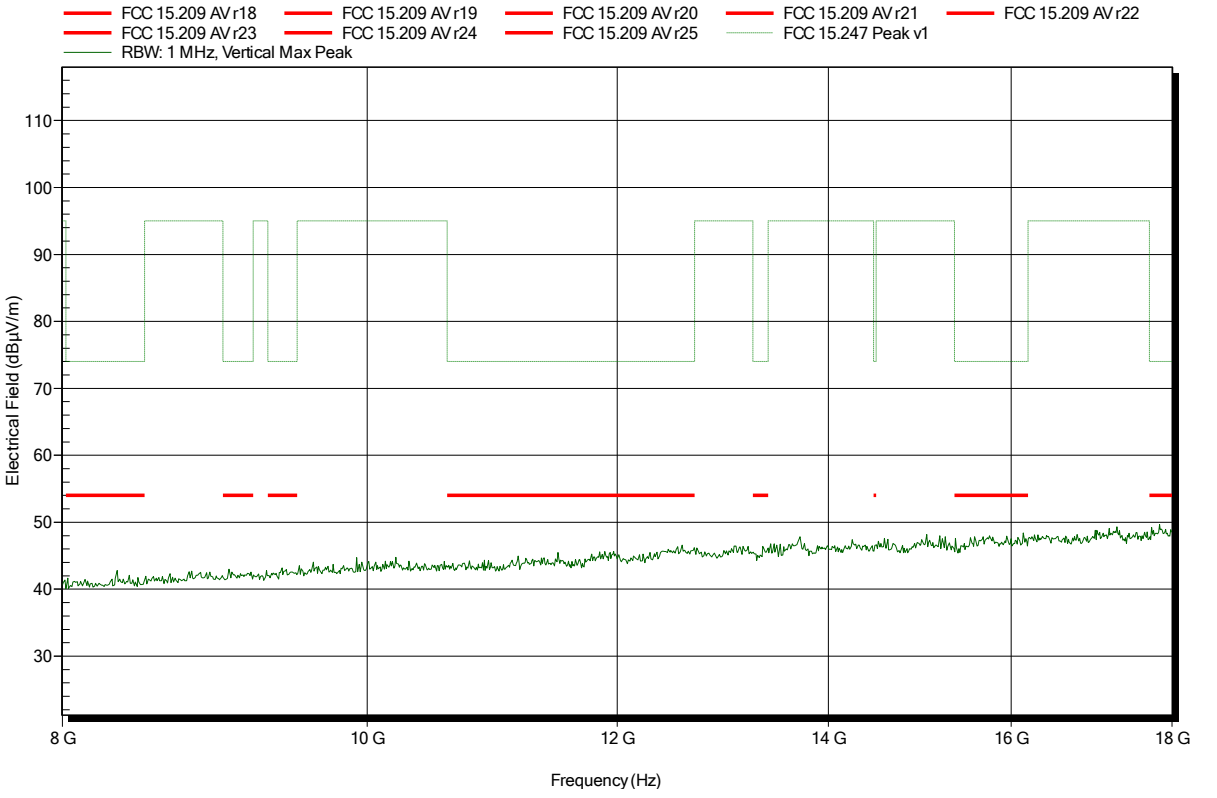

Spurious emissions according to FCC part 15 Subpart C § 15.247

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 V DC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; WLAN 2.4G; CH: 11; OFDM HT20 MCS0
Test Date:	2014-11-24
Note:	EUT vertical

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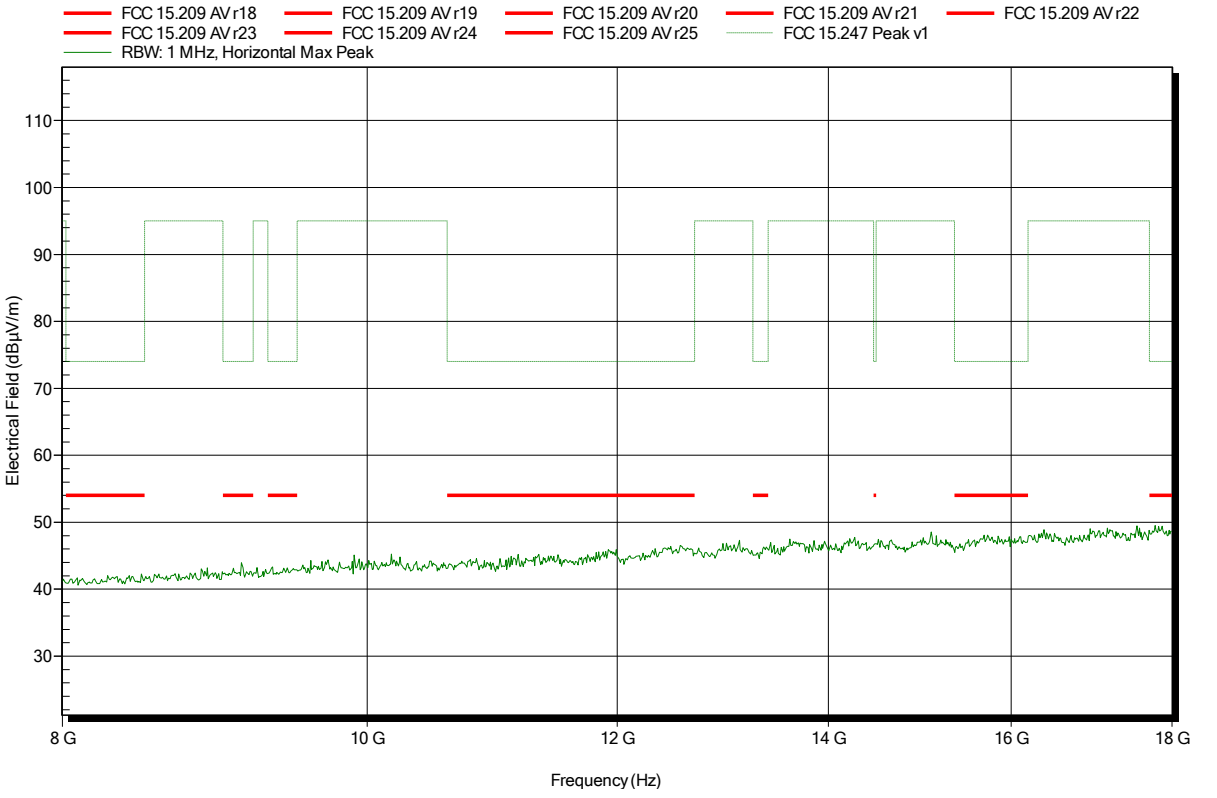

ANNEX B Receiver radiated spurious emissions

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-24
Note:	EUT vertical

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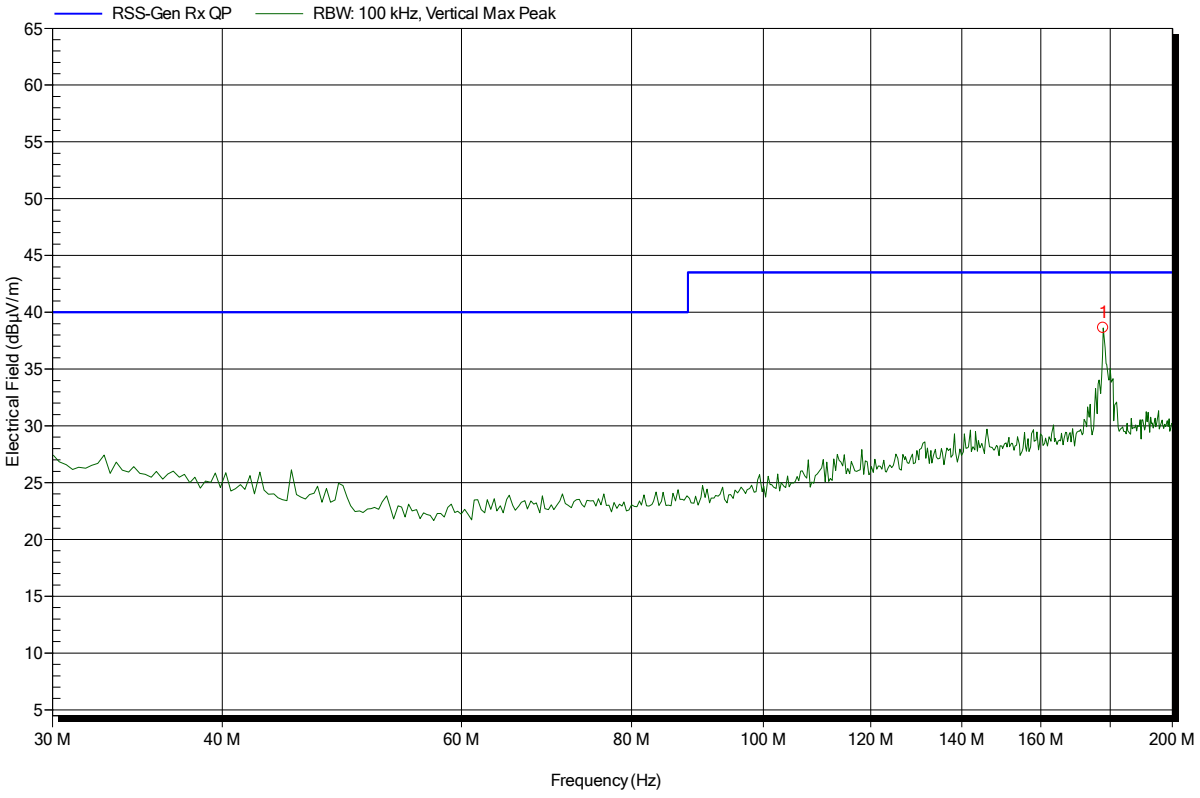

Frequency	Peak	Peak Limit	Peak Difference	Status
177.9 MHz	38.62 dBµV/m	43.5 dBµV/m	-4.88 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-24
Note:	EUT vertical

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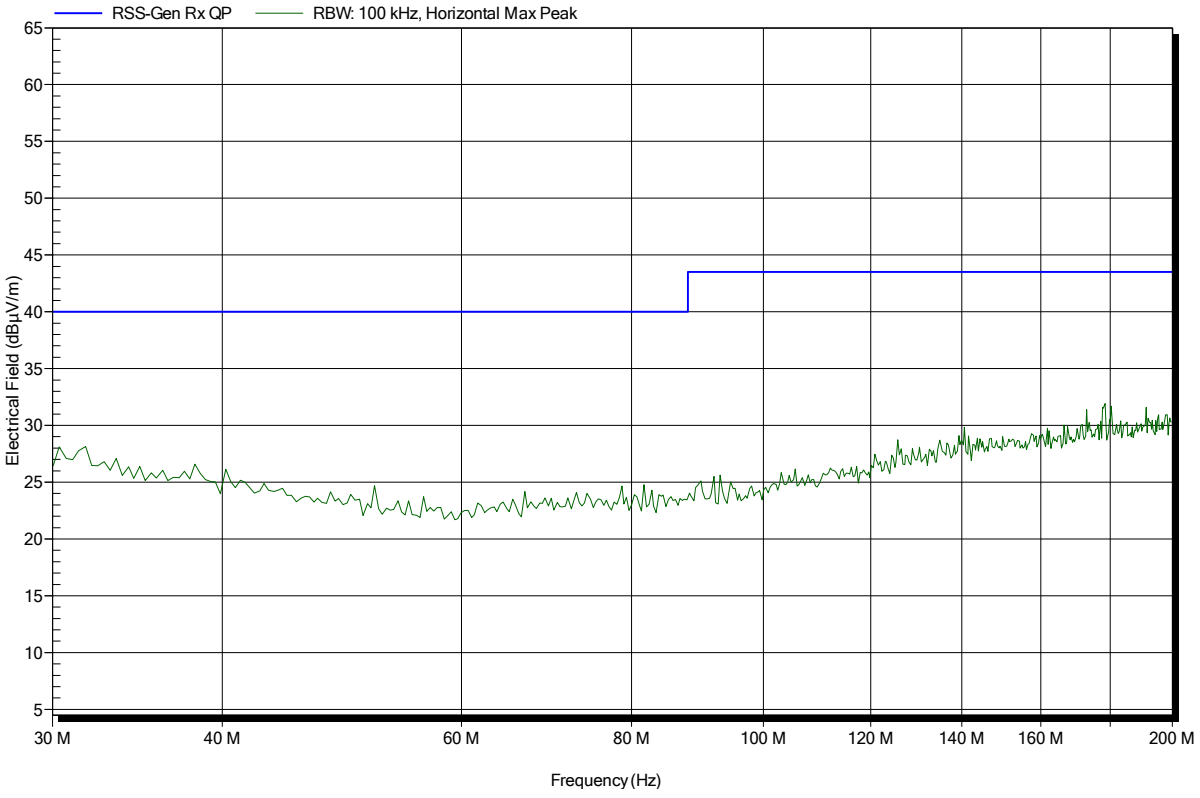

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-24
Note:	EUT vertical

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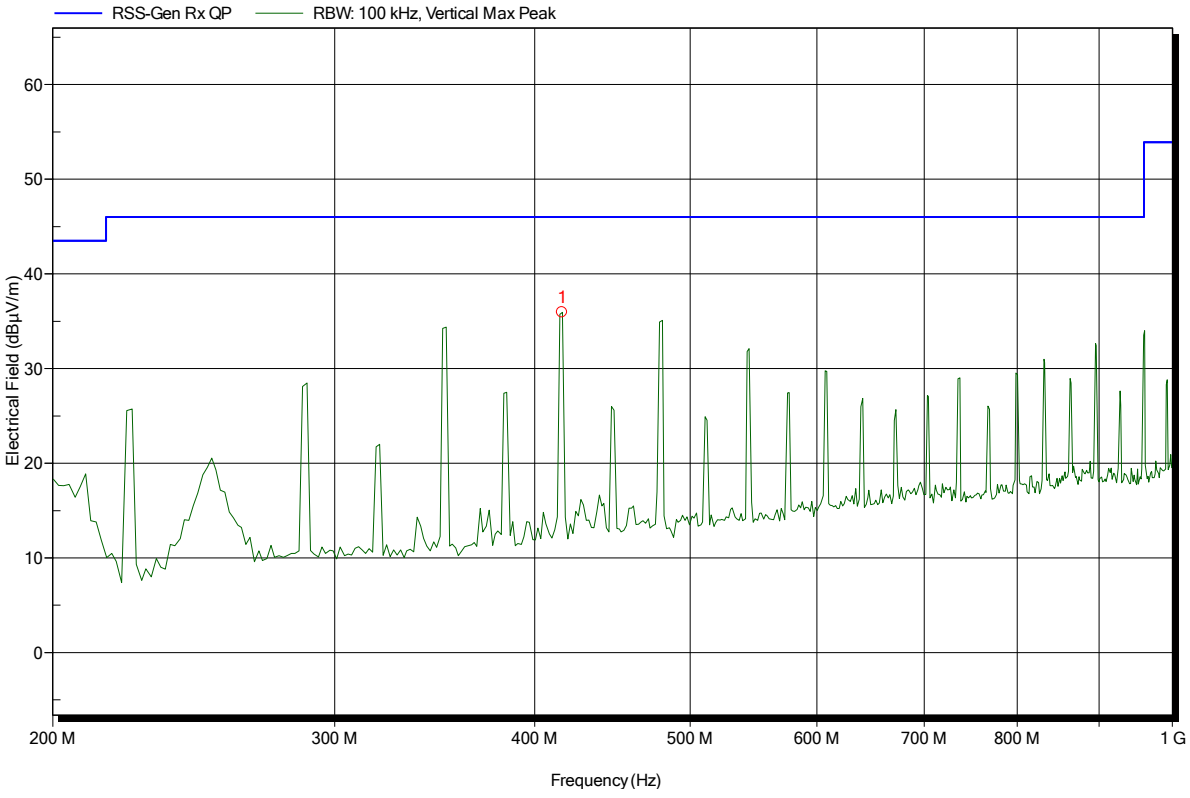

Frequency	Peak	Peak Limit	Peak Difference	Status
416 MHz	35.93 dBµV/m	46 dBµV/m	-10.07 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-24
Note:	EUT vertical

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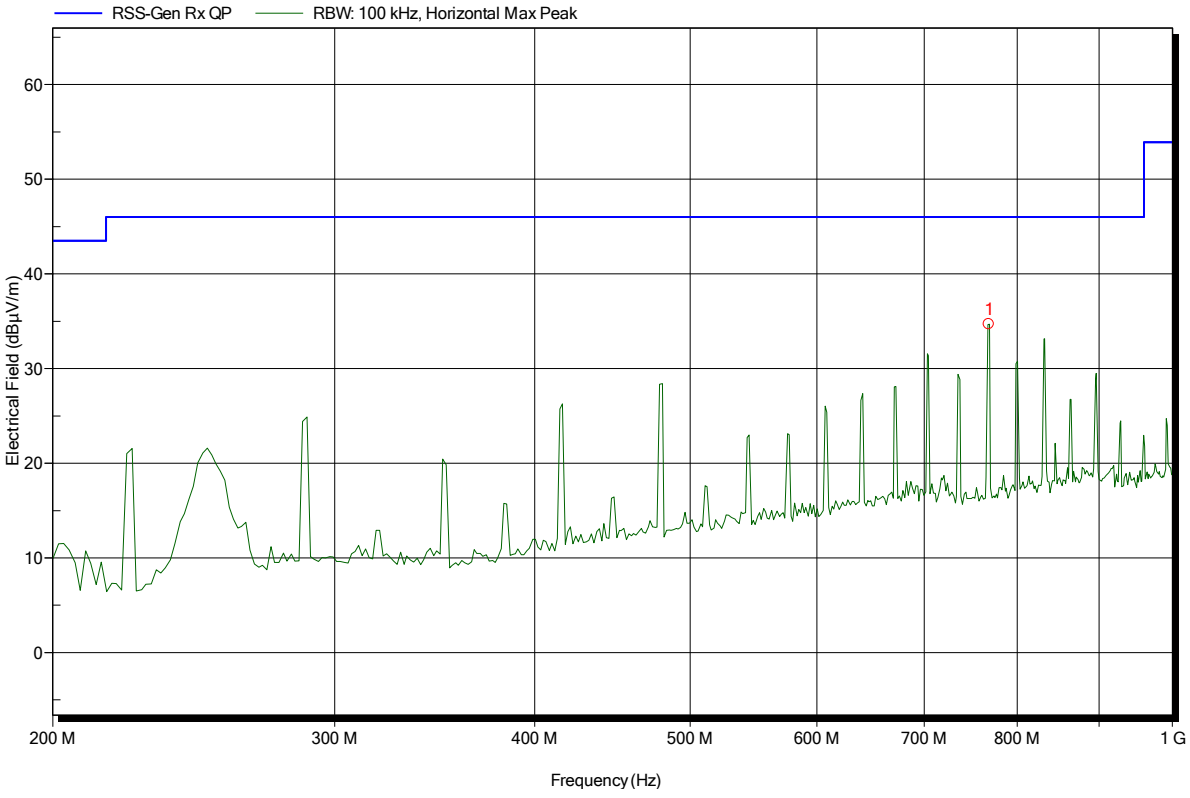

Frequency	Peak	Peak Limit	Peak Difference	Status
768 MHz	34.68 dBµV/m	46 dBµV/m	-11.32 dB	Pass

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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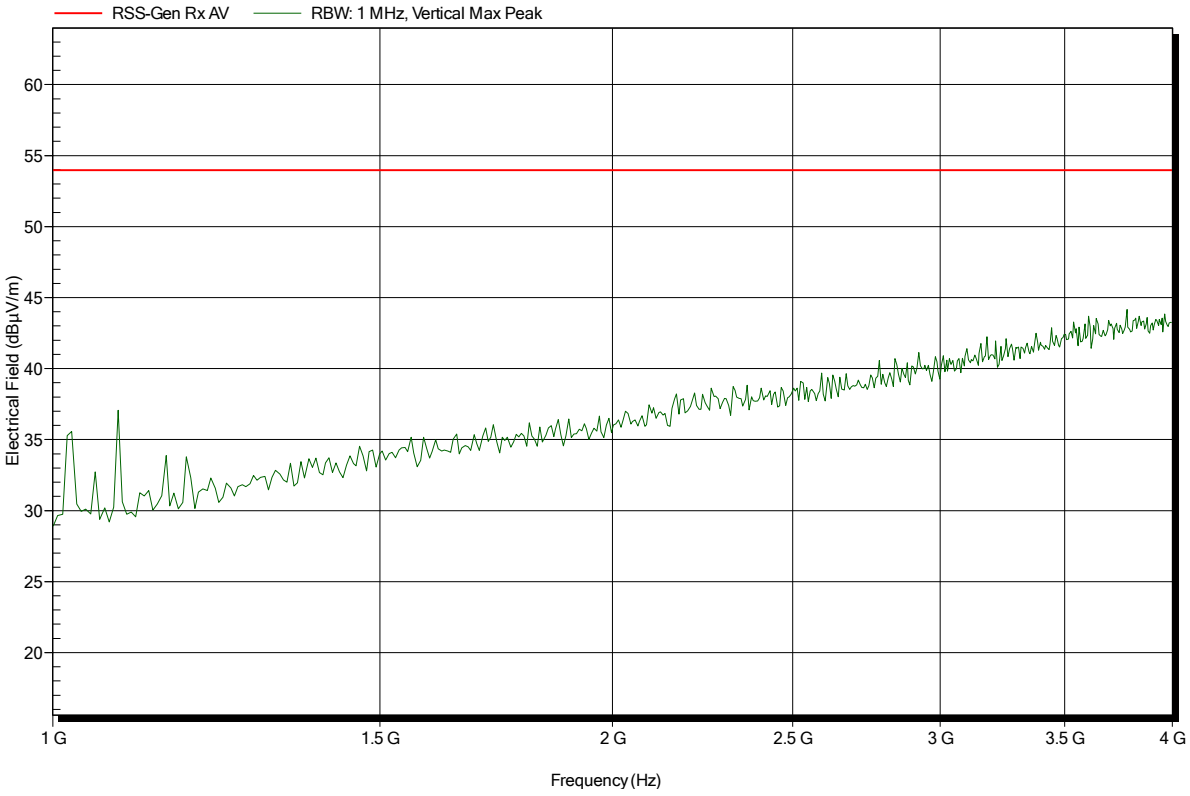

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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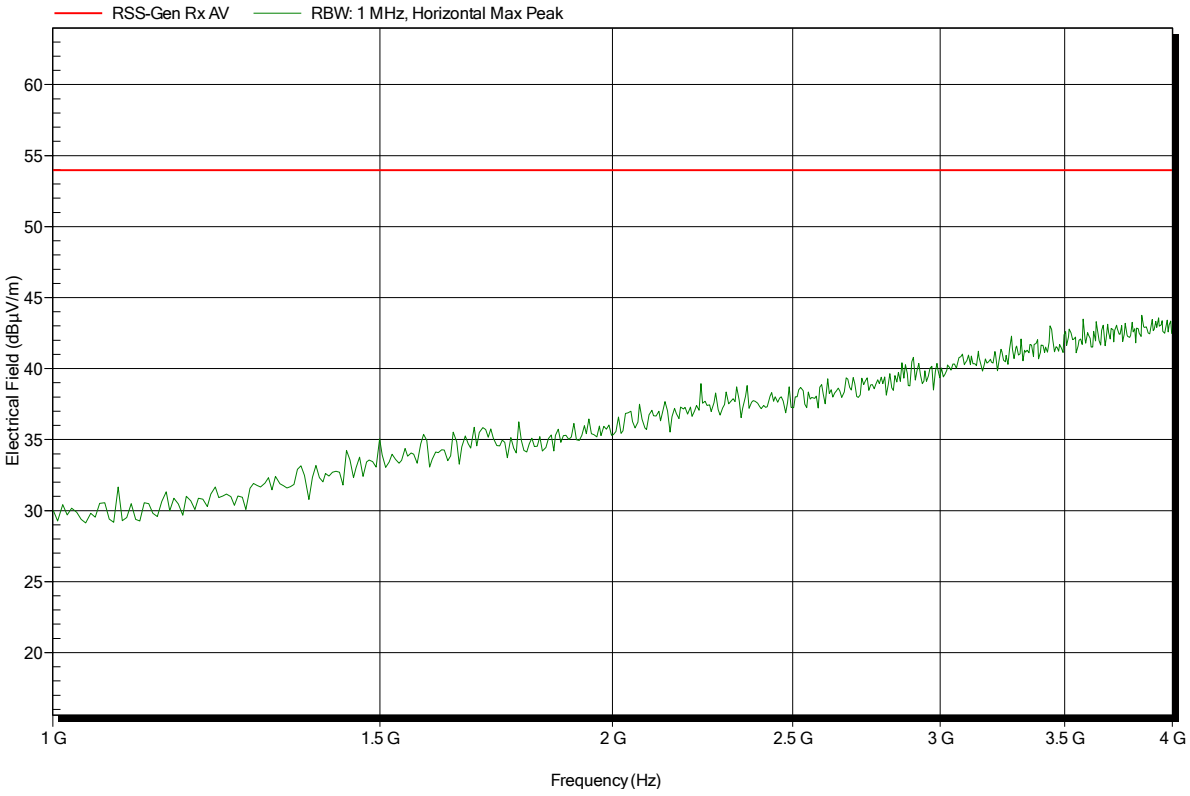

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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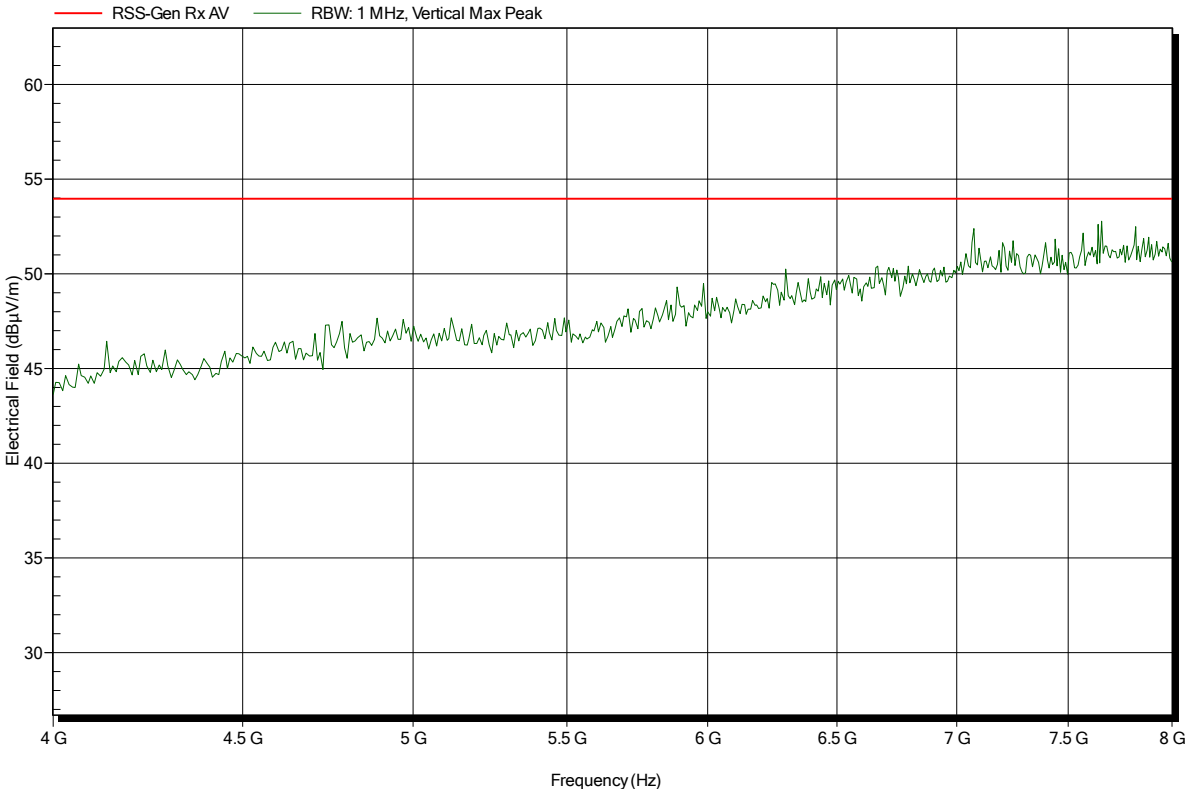

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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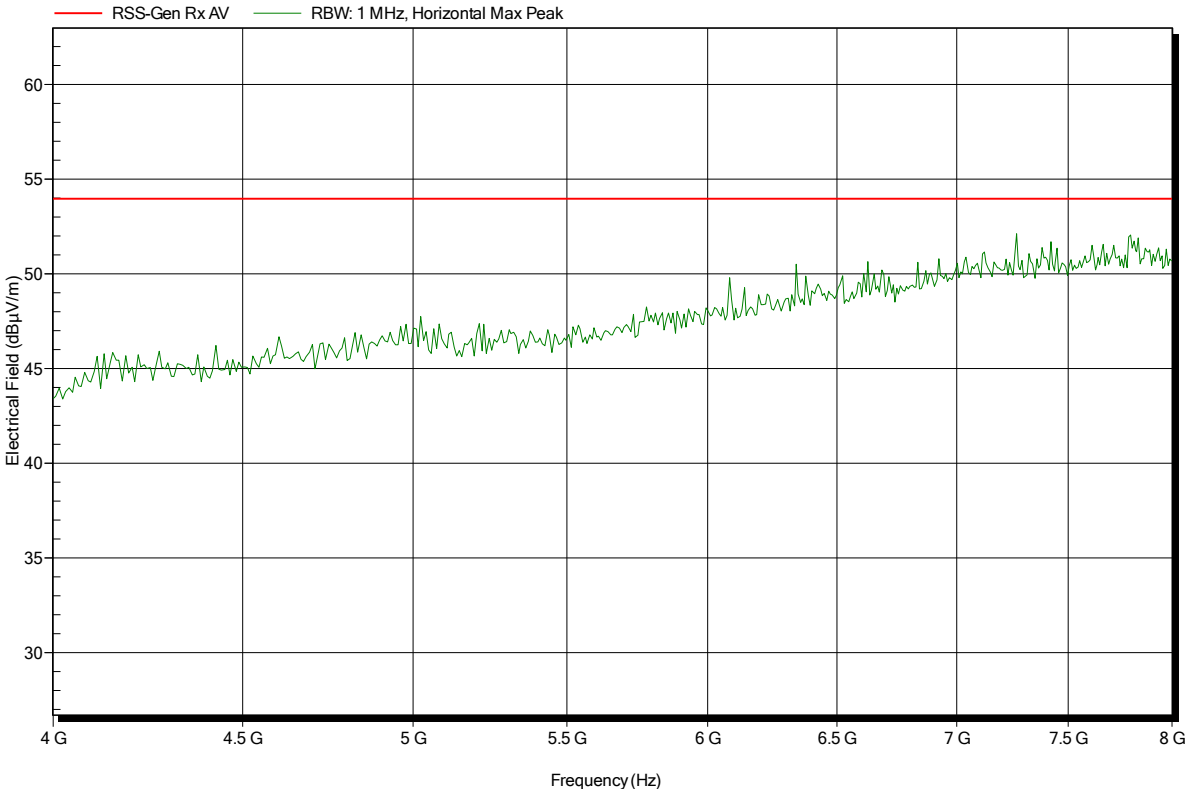

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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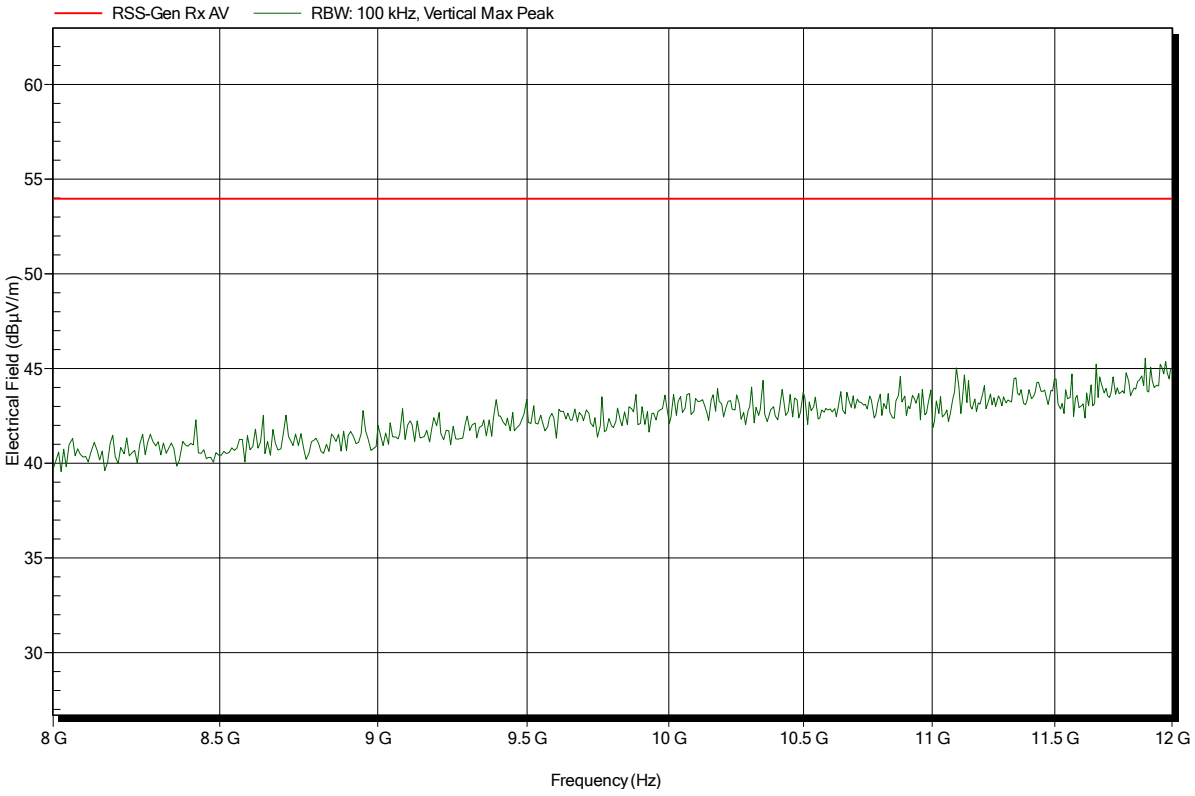
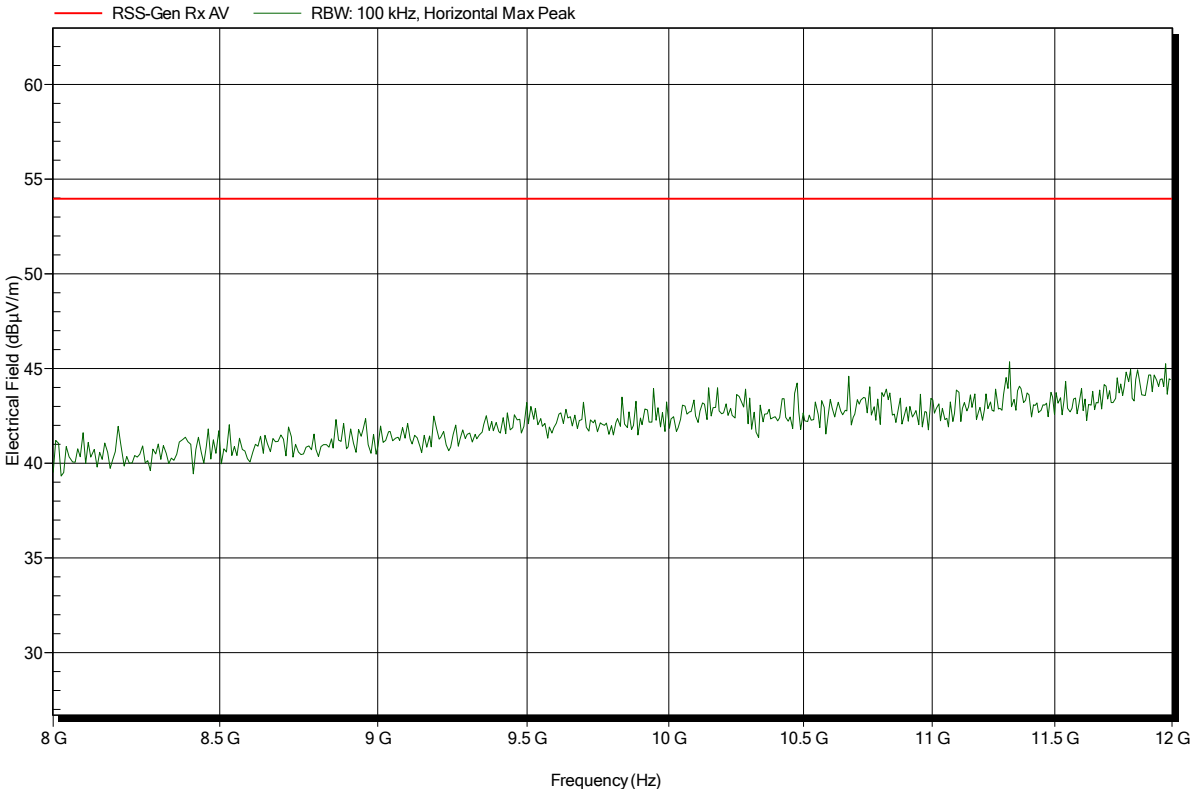


Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-210

Project number: G0M-1406-3917

Applicant:	Leica Geosystems AG
EUT Name:	Field Controller Win EC7
Model:	CS20
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pudell
Test Conditions:	Tnom: 24°C, Vnom: 11.1 VDC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	3 m
Mode:	RX; WLAN 2.4G; CH: 6, RX-Mode
Test Date:	2014-11-25
Note:	EUT vertical

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