

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-1407-4002-TFC247BL-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 RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 3, 2010-12 ANSI C63.4:2009
Equipment under test (EUT):	Product description Laser Distance Meter Model No. Leica DISTO S910 Additional Model(s) None Brand Name(s) Leica DISTO Hardware version V15 Firmware / Software version 2323 FCC-ID: RFF-LD5PS IC: 3177A-LD5PS
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: 2014-08-04

Date (s) of performance of tests: 2014-09-04 – 2014-09-11

Compiled by: Wilfried Treffke

Tested by (+ signature).....: Wilfried Treffke 

(Responsible for Test)

Approved by (+ signature): Christian Weber 

Date of issue: 2014-12-05

Total number of pages: 83

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Additional comments:

Version History

Version	Issue Date	Remarks	Revised by
01	2014-09-30	Initial Release	

REPORT INDEX

1	EQUIPMENT (TEST ITEM) DESCRIPTION	5
1.1	Photos – Equipment External	6
1.2	Photos – Equipment internal	8
1.3	Photos – Test setup	13
1.4	Supporting Equipment Used During Testing	14
1.5	Test Modes	15
1.6	Test Equipment Used During Testing	16
1.7	Sample emission level calculation	18
2	RESULT SUMMARY	19
3	TEST CONDITIONS AND RESULTS	20
3.1	Test Conditions and Results – Occupied Bandwidth	20
3.2	Test Conditions and Results – 6 dB Bandwidth	24
3.3	Test Conditions and Results – Maximum peak conducted power	28
3.4	Test Conditions and Results – Power spectral density	29
3.5	Test Conditions and Results – AC power line conducted emissions	30
3.6	Test Conditions and Results – Band edge compliance	33
3.7	Test Conditions and Results – Conducted spurious emissions	36
3.8	Test Conditions and Results – Transmitter radiated emissions	40
3.9	Test Conditions and Results – Receiver radiated emissions	42
ANNEX A	Transmitter radiated spurious emissions	44
ANNEX B	Receiver radiated spurious emissions	76

1 Equipment (Test item) Description

Description	Laser Distance Meter	
Model	Leica DISTO S910	
Additional Model(s)	None	
Brand Name(s)	Leica DISTO	
Serial number	4	
Hardware version	V15	
Software / Firmware version	2323	
FCC-ID	RFF-LD5PS	
IC	3177A-LD5PS	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	Bluetooth 4.0 Low Energy	
Operating frequency range	2402 - 2480 MHz	
Assigned frequency band	2400 - 2483.5 MHz	
Main test frequencies	F _{LOW}	2402 MHz
	F _{MID}	2442 MHz
	F _{HIGH}	2480 MHz
Spreading	Frequency Hopping	
Modulations	GFSK	
Number of channels	40	
Channel spacing	2MHz	
Number of antennas	1	
Antenna	Type	integrated
	Model	2450AT18B100
	Manufacturer	Johanson Technology
	Gain	-0.5 dBi (from declaration)
Manufacturer	Flextronics International GmbH Friesacher Strasse 3 9330 Althofen AUSTRIA	
Power supply	V _{NOM}	3.6VDC
	V _{MIN}	2.7VDC
	V _{MAX}	4.25VDC
AC/DC-Adaptor	Model	KS044067
	Vendor	Ktec
	Input	100-240 VAC
	Output	5 VDC

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	
Transmit	General conditions:	EUT powered by battery.
	Radio conditions:	Mode = standalone transmit Spreading = Hopping stopped (single hopping channel) Modulation = GFSK Data rate = 1 Mbps Bandwidth = 2 MHz Duty cycle = 100 % Power level = Maximum
Receive	General conditions:	EUT powered by battery.
	Radio conditions:	Mode = standalone receive (scan mode) Spreading = On Modulation = GFSK
AC-Powerline	General conditions:	EUT powered by AC/DC Adaptor
	Radio conditions:	Mode = Transmit Spreading = On

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	2013-01	2015-01
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	2012-10	2014-10
AMN	R&S	ESH3-Z5	EF00036	2012-11	2014-11
EMI Test Receiver	R&S	ESCS 30	EF00295	2013-10	2014-10

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:

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

Net:

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

Limit:

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

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

Margin:

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

Example only:

Reading	+	AF	=	Net Reading	:	Net reading - FCC limit	=	Margin
21.5 dBμV	+	26 dB	=	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 4.6.1	Occupied Bandwidth	RSS-Gen 4.6.1	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 7.2.4	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 4.10 IC RSS-Gen 6.1	Receiver radiated spurious emissions	ANSI C 63.4	PASS	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Occupied Bandwidth

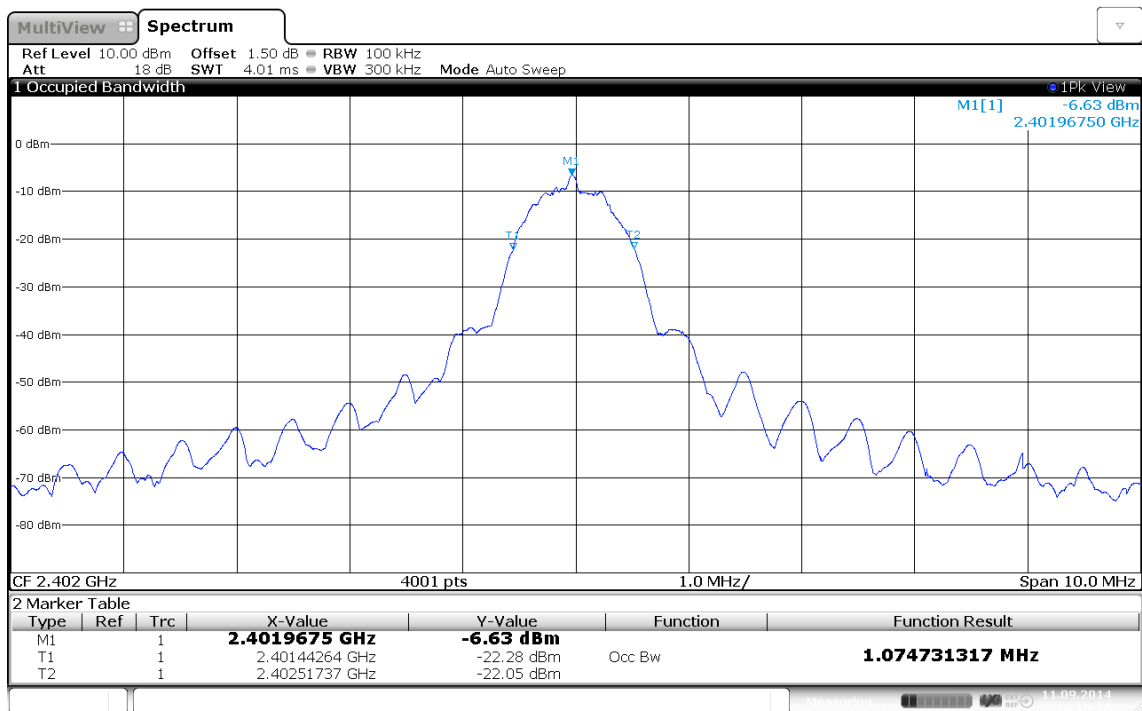
Occupied Bandwidth acc. IC RSS-Gen			Verdict: PASS
Test according to measurement reference	Reference Method		
	RSS-Gen 4.6.1		
Test frequency range	Tested frequencies		
	F _{LOW} / F _{MID} / F _{HIGH}		
Limits			
None (Informational only)			
Test setup			
Spectrum Analyzer EUT			
Test procedure			
1. 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}	2402	Transmit	1075
F _{MID}	2442	Transmit	1177
F _{HIGH}	2480	Transmit	2647
Comments:			

Occupied Bandwidth – F_{Low}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
EUT Name: Laser Distance Meter
Model: Leica Disto S910
Test Site: Eurofins Product Service GmbH
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom
Mode: Tx, BTLE, 2402 MHz, modulated
Test Date: 2014-09-11
Verdict: NONE (INFORMATION ONLY)
Note 1: A spectrum analyzer with an integrated 99% power bandwidth funktion is used
Note 2: conducted measurement

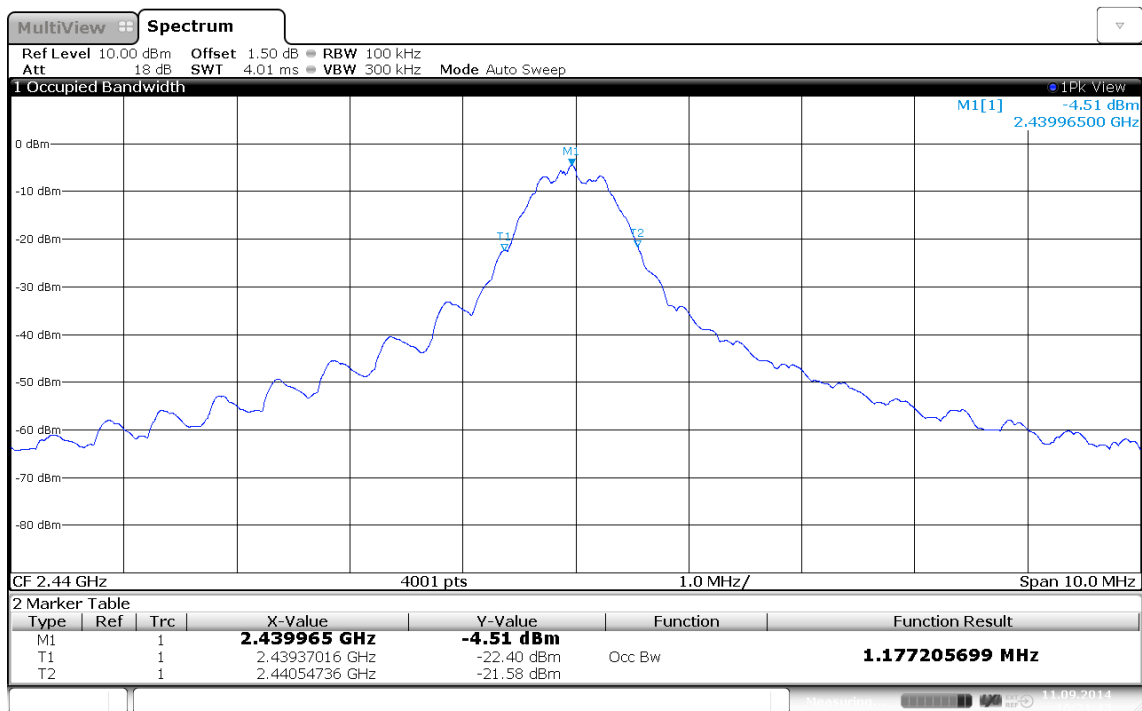


Occupied Bandwidth – F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: GOM-1407-4002

Applicant: Leica Geosystems
EUT Name: Laser Distance Meter
Model: Leica Disto S910
Test Site: Eurofins Product Service GmbH
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom
Mode: Tx, BTLE, 2440 MHz, modulated
Test Date: 2014-09-11
Verdict: NONE (INFORMATION ONLY)
Note 1: A spectrum analyzer with an integrated 99% power bandwidth funktion is used
Note 2: conducted measurement

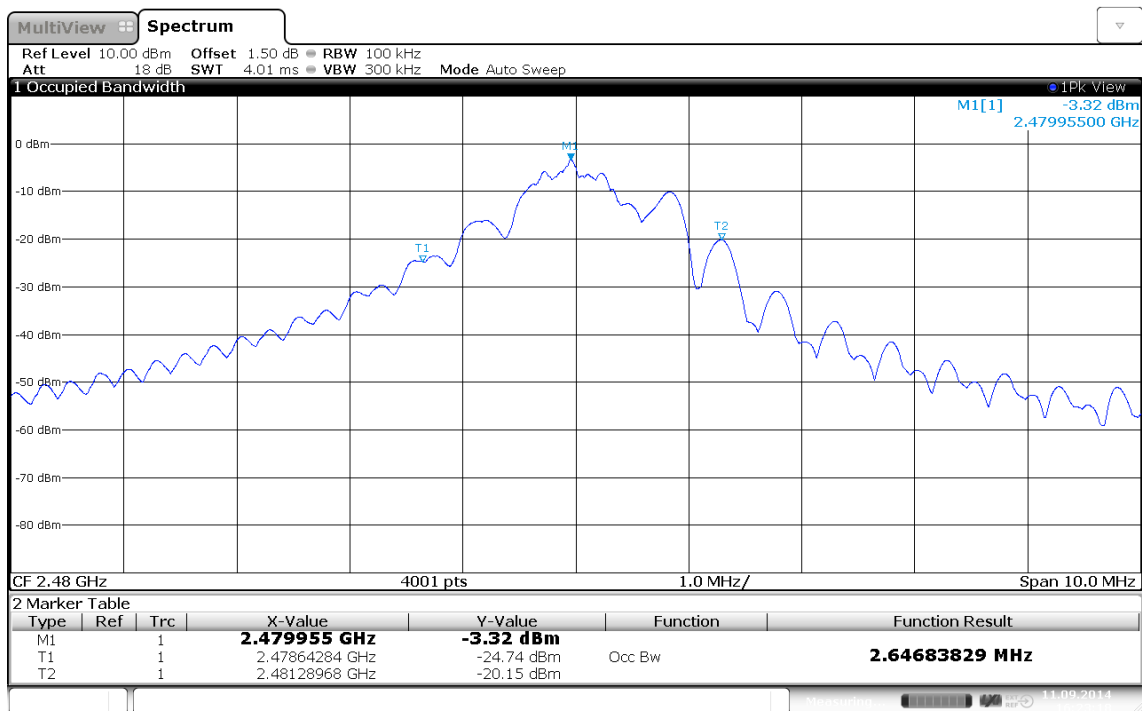


Occupied Bandwidth – F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
EUT Name: Laser Distance Meter
Model: Leica Disto S910
Test Site: Eurofins Product Service GmbH
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom
Mode: Tx, BTLE, 2480 MHz, modulated
Test Date: 2014-09-11
Verdict: NONE (INFORMATION ONLY)
Note 1: A spectrum analyzer with an integrated 99% power bandwidth funktion is used
Note 2: conducted measurement



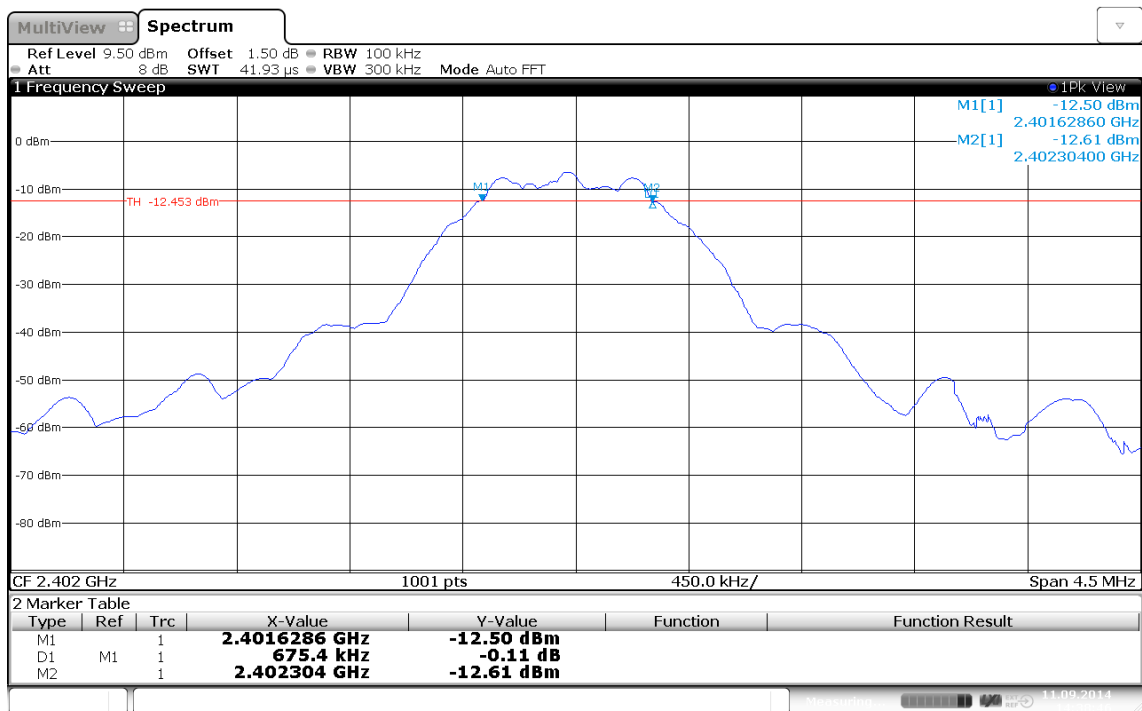
3.2 Test Conditions and Results – 6 dB Bandwidth

6dB Bandwidth acc. 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}			
Limit					
≥ 500kHz					
Test setup					
Spectrum Analyzer EUT					
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}	2402	Transmit	675.4	500	PASS
F _{MID}	2442	Transmit	719.5	500	PASS
F _{HIGH}	2480	Transmit	769.7	500	PASS
Comments:					

6 dB Bandwidth – F_{Low}
Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted

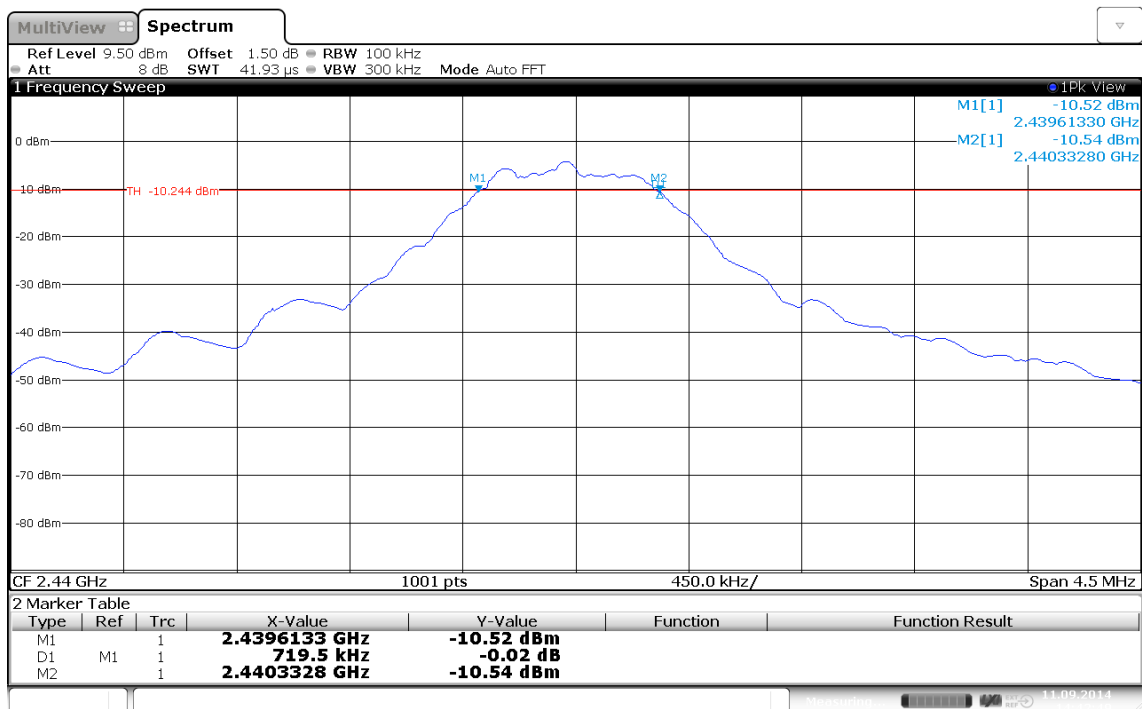


6 dB bandwidth: 675.4 kHz > 500 kHz; verdict: PASS
 Date: 11.SEP.2014 14:38:46

6 dB Bandwidth – F_{MID}
Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: GOM-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2440 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted



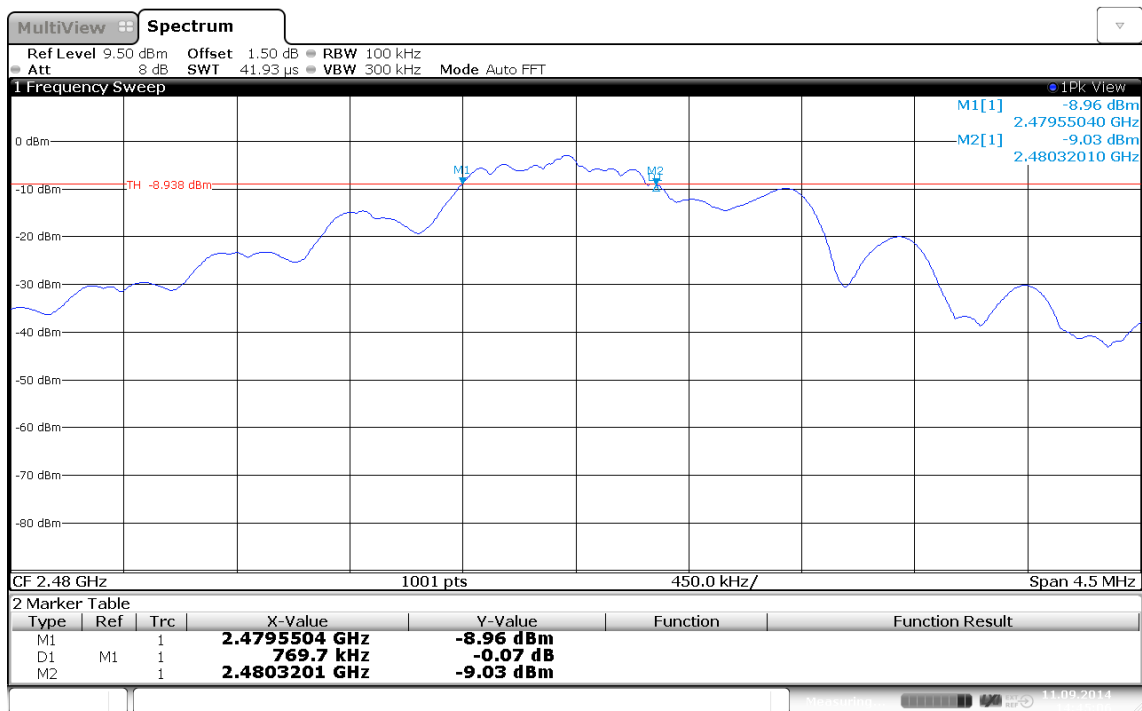
6 dB bandwidth: 719.5 kHz > 500 kHz; verdict: PASS

Date: 11.SEP.2014 14:42:48

6 dB Bandwidth – F_{HIGH}
Minimum 6 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted



6 dB bandwidth: 769.7 KHz > 500 KHz; verdict: PASS
 Date: 11.SEP.2014 14:45:05

3.3 Test Conditions and Results – Maximum peak conducted power

Maximum peak conducted power acc. 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			-0.5 dBi ⇒ Limit correction = 0 dB				
Limits							
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							
Spectrum Analyzer EUT							
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}	2402	V _{nom} = 3.6V	Transmit	-6.68	0.001	30	-36.64
F _{MID}	2442	V _{nom} = 3.6V	Transmit	-4.51	0.001	30	-34.51
F _{HIGH}	2480	V _{nom} = 3.6V	Transmit	-3.70	0.001	30	-33.10
Comment:							

3.4 Test Conditions and Results – Power spectral density

Power spectral density acc. 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 _{LOW} / F _{MID} / F _{HIGH}			
Measurement mode			Peak			
Limits						
8 dBm / 3 kHz						
Test setup						
Spectrum Analyzer EUT						
Test procedure						
1. EUT set to test mode (Communication tester is used if needed) 2. Center frequency set to test channel center frequency 3. Span is set large enough to capture maximum emissions in passband, RBW is set to 3kHz 4. Peak power density is determined from peak emission of envelope						
Test results						
Channel	Frequency [MHz]	Test mode	Peak frequency [MHz]	Peak power density [dBm/100kHz]	Limit [dBm/3kHz]	Result
F _{LOW}	2402	Transmit	2.401966	-6.6	8.0	Pass
F _{MID}	2442	Transmit	2.439962	-4.48	8.0	Pass
F _{HIGH}	2480	Transmit	2.479959	-3.19	8.0	Pass
Comments:						

3.5 Test Conditions and Results – AC power line conducted emissions

Power line conducted emissions acc. 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 power line			
Limits and results					
Frequency [MHz]	Quasi-Peak [dBμV]	Result	Average [dBμV]	Result	
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS	
0.5 to 5	56	PASS	46	PASS	
5 to 30	60	PASS	50	PASS	
Comments:					
* Limit decreases linearly with the logarithm of the frequency.					

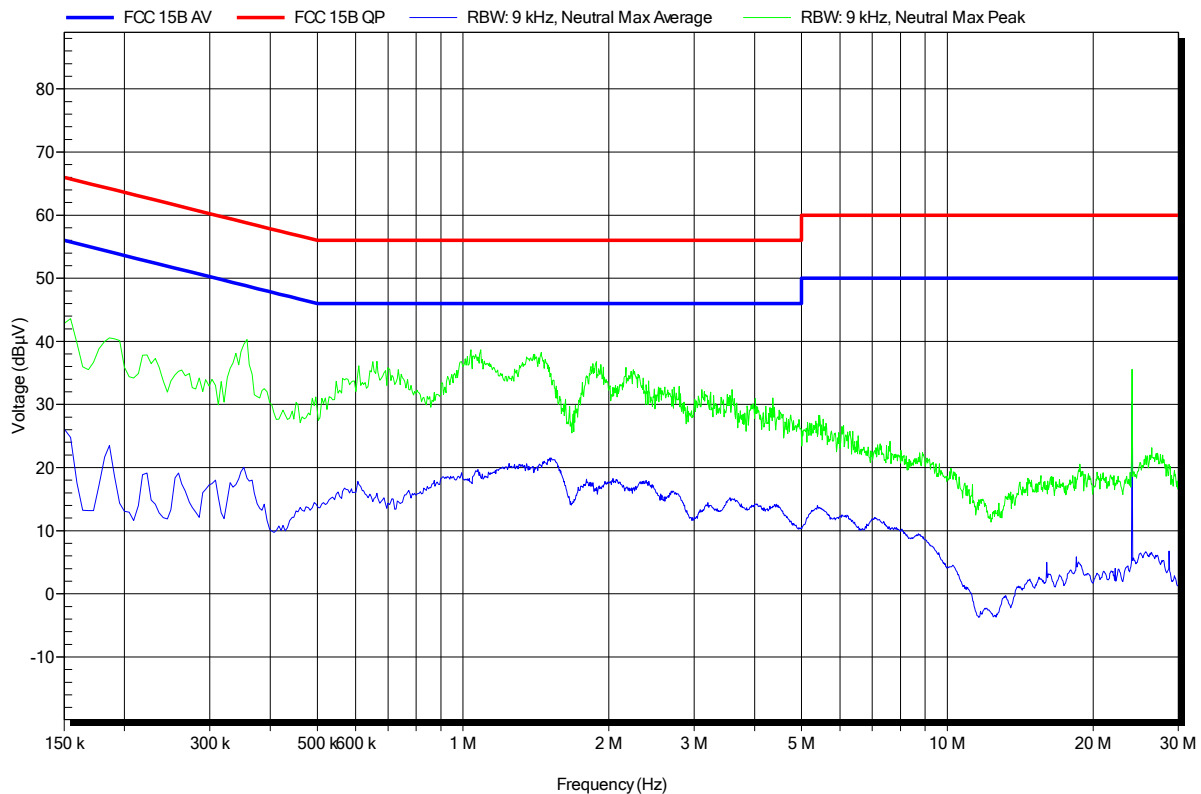
Conducted Emissions

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

Project number: G0M-1407-4002

Manufacturer: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Zunke
 Test Conditions: Tnom: 25°C, Unom: 120 VAC
 LISN: ESH2-Z5 N
 Mode: measure mode, charging, WLAN active
 Test Date: 2014-09-09
 Note:

Index 15



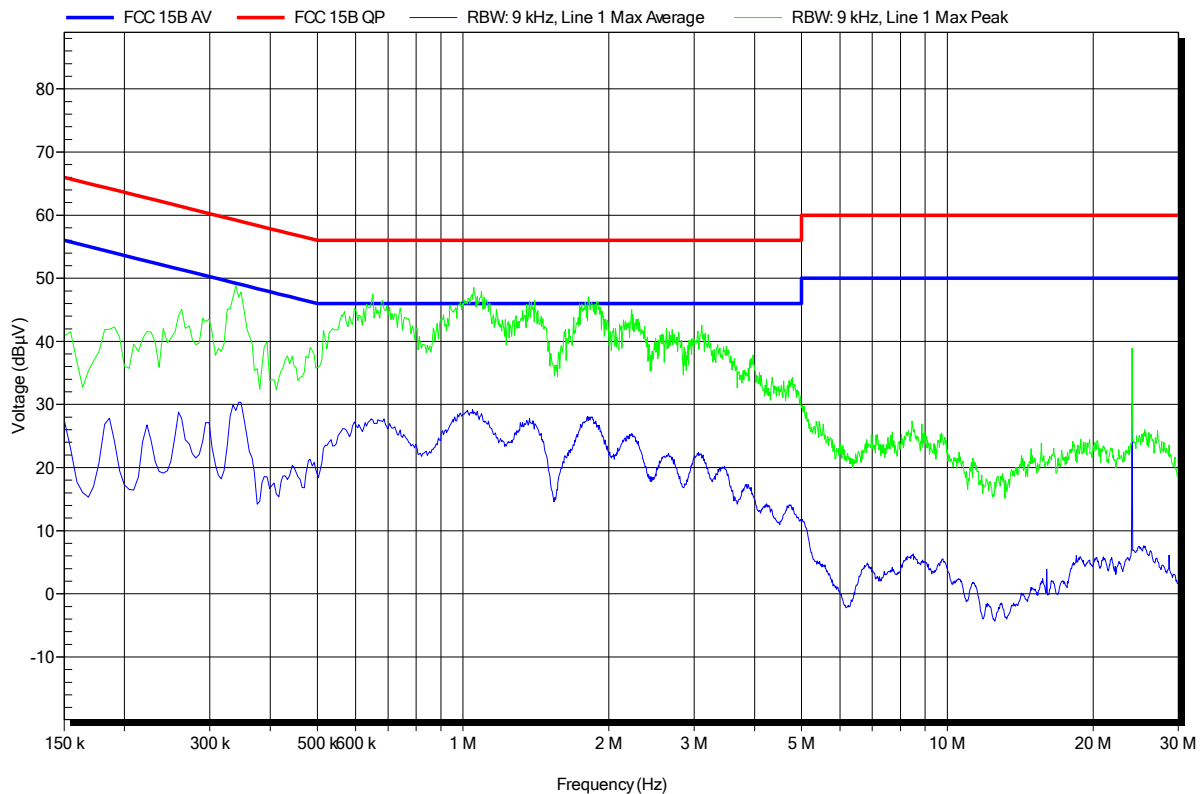
Conducted Emissions

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

Project number: G0M-1407-4002

Manufacturer: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Zunke
 Test Conditions: Tnom: 25°C, Unom: 120 VAC
 LISN: ESH2-Z5 L
 Mode: measure mode, charging, WLAN active
 Test Date: 2014-09-09
 Note:

Index 16



3.6 Test Conditions and Results – Band edge compliance

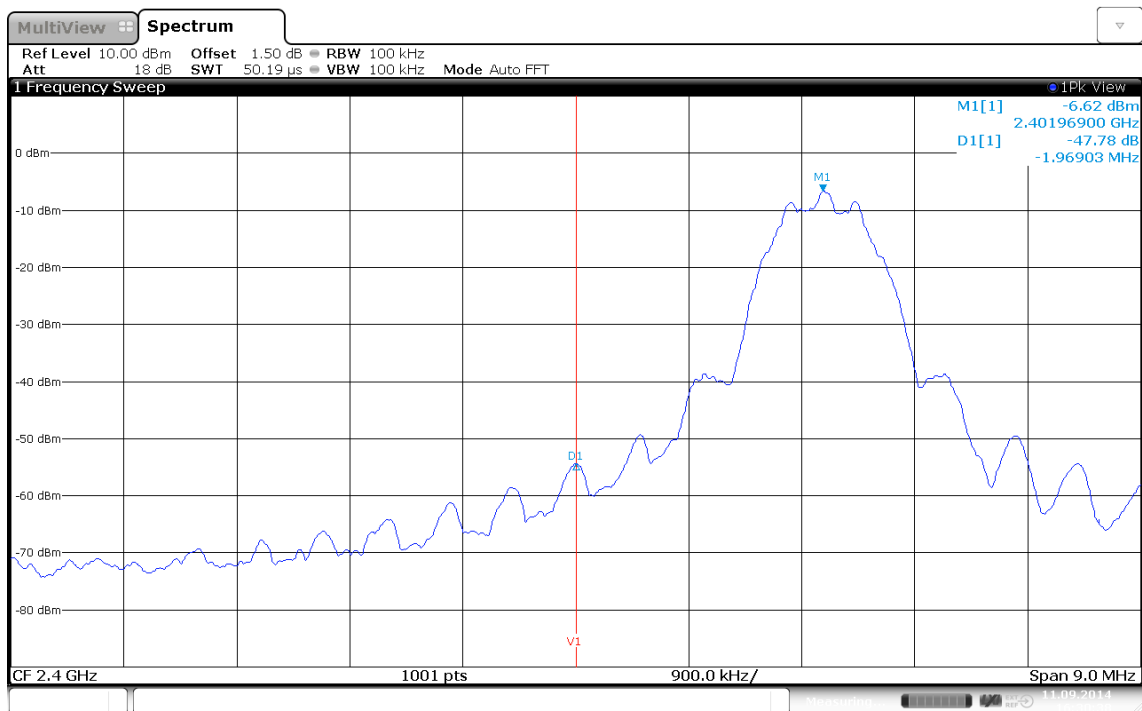
Band-edge compliance acc. FCC 15.247 / IC RSS-210					Verdict: PASS
EUT requirement rule parts and clause		Reference			
		FCC 15.247(d) / IC RSS-210 A8.5			
Test according to measurement reference		Reference Method			
		FCC KDB Publication No. 558074			
Test frequency range		Tested frequencies			
		F _{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					
Spectrum Analyzer EUT					
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}	2402	Transmit	-47.8	-20	-27.80
F _{HIGH}	2480	Transmit	-44.4	-20	-24.40
Comments:					

Band-edge compliance – lower band edge

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
EUT Name: Laser Distance Meter
Model: Leica Disto S910
Test Site: Eurofins Product Service GmbH
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom
Mode: Tx, BTLE, 2402 MHz, modulated
Test Date: 2014-09-11
Verdict: PASS
Note 1: Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2: lower Band-edge, conducted measurement



Limit: Marker Delta value >20 dB; Result: PASS
Date: 11.SEP.2014 16:30:38

Test Report No.: G0M-1407-4002-TFC247BL-V01

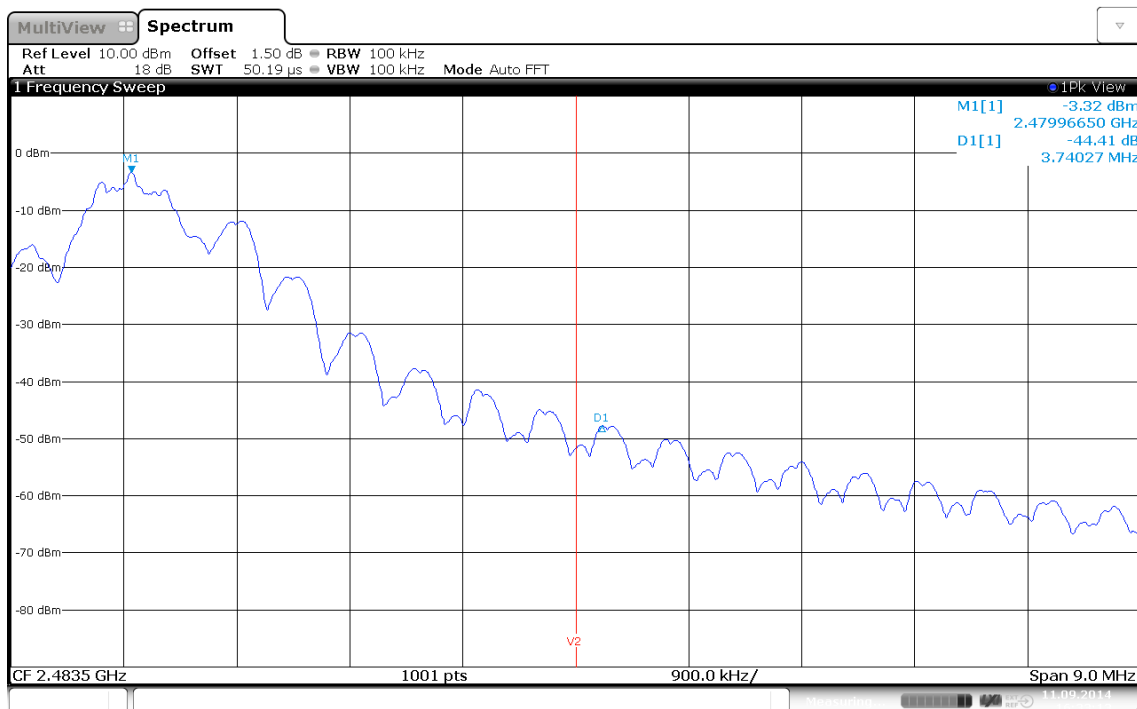
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Band-edge compliance – upper band edge

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
EUT Name: Laser Distance Meter
Model: Leica Disto S910
Test Site: Eurofins Product Service GmbH
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom
Mode: Tx, BTLE, 2480 MHz, modulated
Test Date: 2014-09-11
Verdict: PASS
Note 1: Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
Note 2: upper Band-edge, conducted measurement



Limit: Marker Delta value >20 dB; Result: PASS
Date: 11.SEP.2014 16:33:13

Test Report No.: G0M-1407-4002-TFC247BL-V01

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

3.7 Test Conditions and Results – Conducted spurious emissions

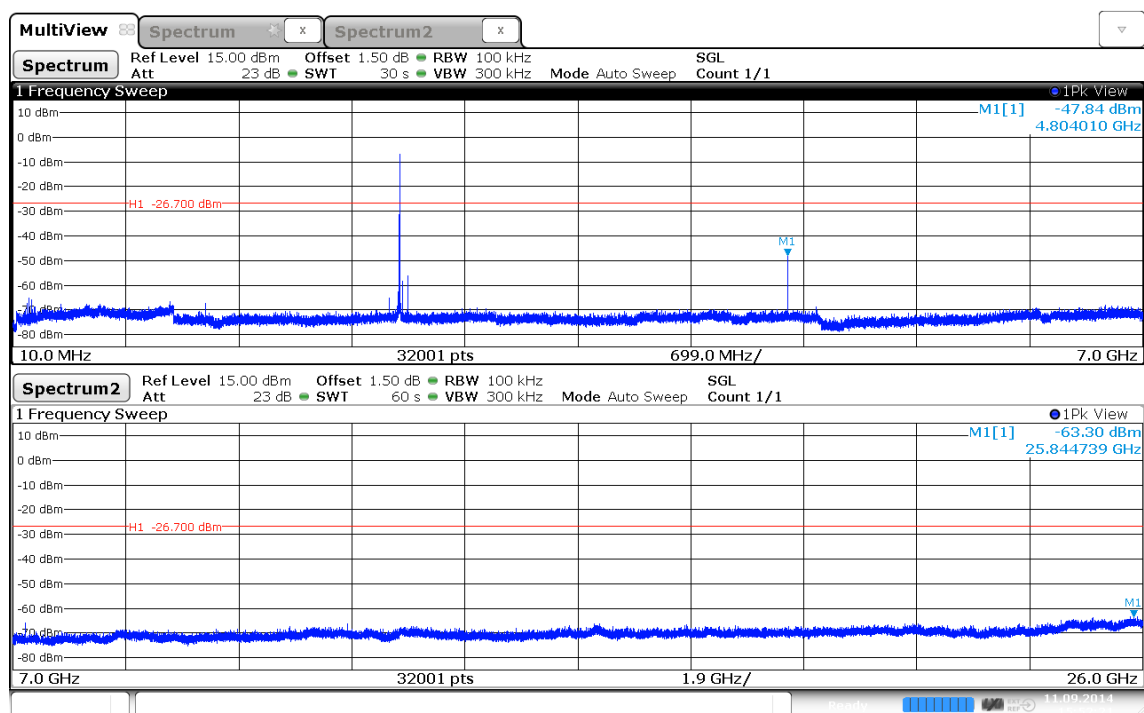
Conducted spurious emissions acc. FCC 15.247 / IC RSS-210						Verdict: PASS	
EUT requirement rule parts and clause			Reference				
			FCC 15.247(d) / IC RSS-210 A8.5				
Test according to measurement reference			Reference Method				
			FCC KDB Publication No. 558074				
Test frequency range			Tested frequencies				
			10 MHz – 10 th 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							
Spectrum Analyzer EUT							
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}	2402	Tx	4804.0	-47.84	-6.7	-26.7	-21.14
F _{MID}	2440	Tx	4899.2	-48.63	-4.5	-24.5	-24.13
F _{HIGH}	2480	Tx	4959.5	-51.42	-3.7	-23.7	-27.72
Comments:							

Conducted spurious emissions – F_{Low}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas.Guidance)
 Note 2: conducted measurement



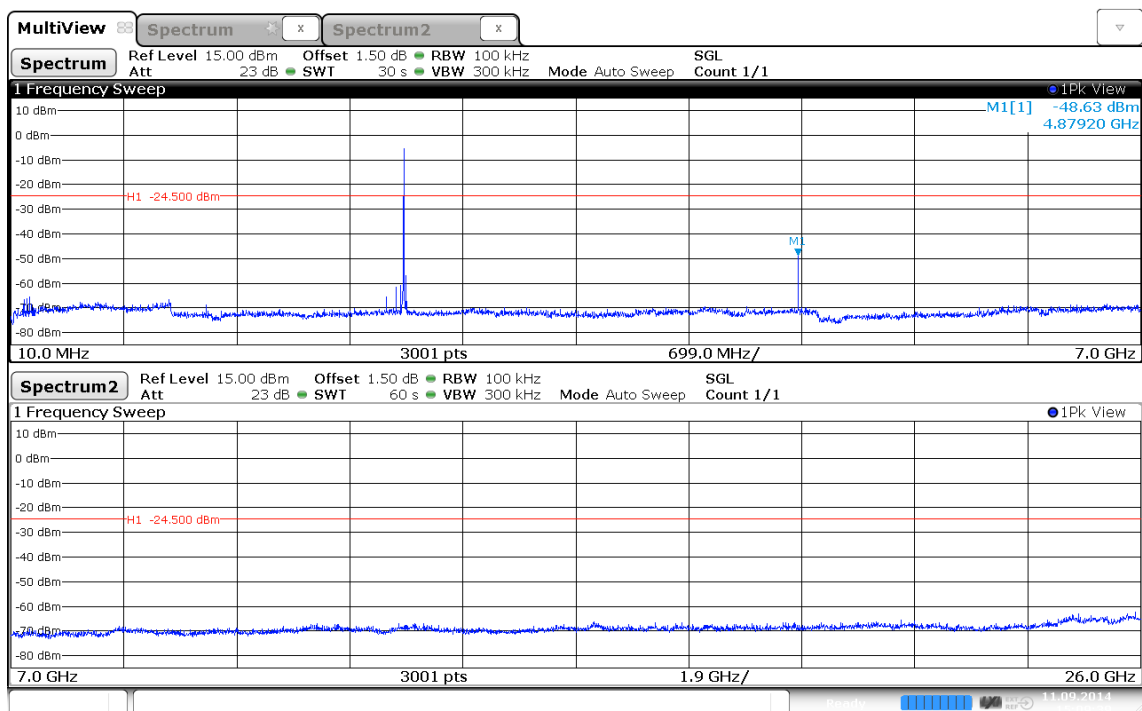
Date: 11.SEP.2014 15:52:21

Conducted spurious emissions – F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: GOM-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2440 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas. Guidance)
 Note 2: conducted measurement

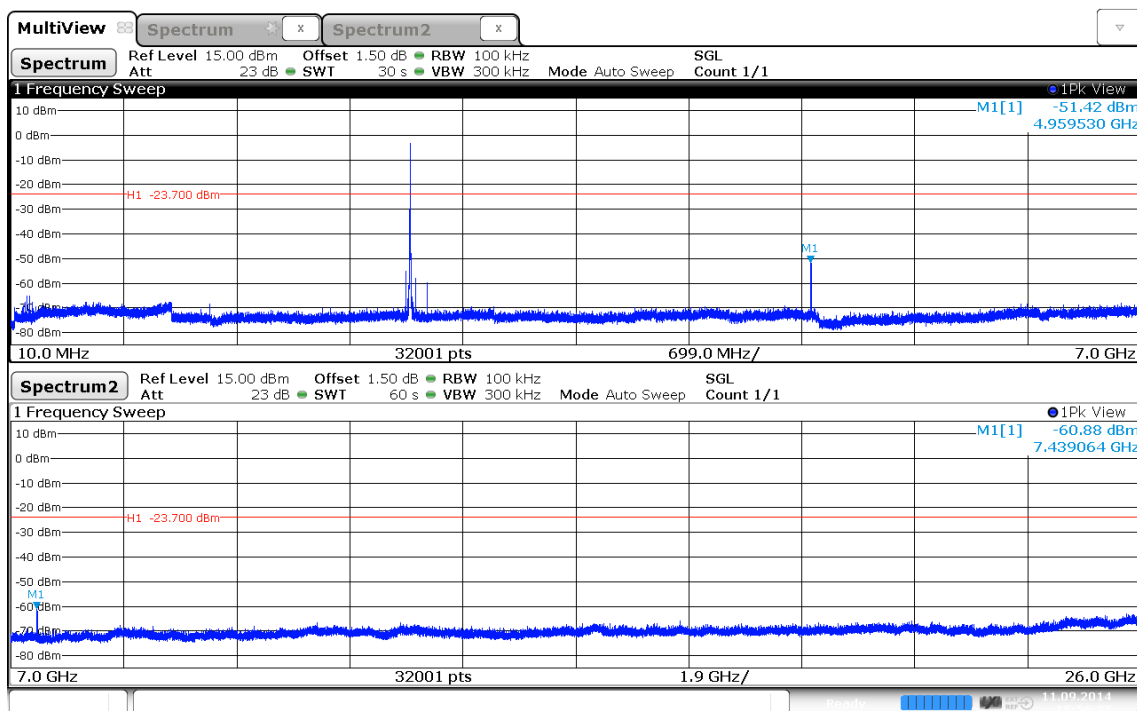


Conducted spurious emissions – F_{HIGH}

Spurious Emissions acc. to FCC 15.247

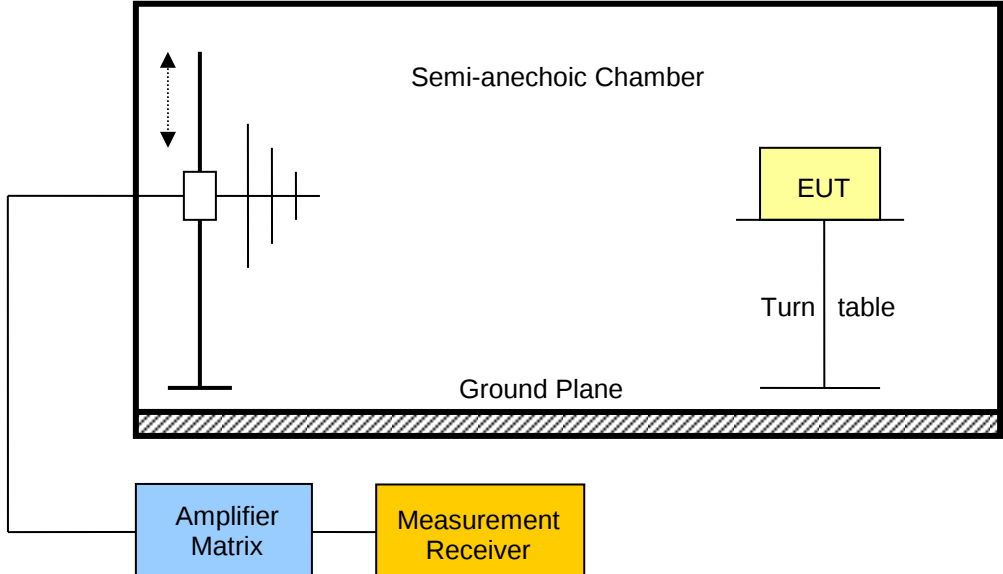
Project Number: G0M-1407-4002

Applicant: Leica Geosystems
 EUT Name: Laser Distance Meter
 Model: Leica Disto S910
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-09-11
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
 Note 2: conducted measurement



Date: 11. SEP. 2014 15:56:35

3.8 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. 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 – 10 th 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}	2402	Transmit	265.6	28.96	pk	hor	46.00	3	-17.04
F _{LOW}	2402	Transmit	324.8	33.44	pk	hor	46.00	3	-12.56
F _{LOW}	2402	Transmit	612.8	30.08	pk	hor	46.00	3	-15.92
F _{LOW}	2402	Transmit	2369	39.51	pk	hor	74.00	3	-34.49
F _{LOW}	2402	Transmit	2369	24.72	RMS	hor	54.00	3	-29.28
F _{LOW}	2402	Transmit	2371	41.06	pk	ver	74.00	3	-32.94
F _{LOW}	2402	Transmit	2371	25.37	RMS	ver	54.00	3	-28.63
F _{LOW}	2402	Transmit	4800	51.69	pk	hor	74.00	3	-22.31
F _{LOW}	2402	Transmit	4800	48.01	pk	ver	74.00	3	-25.99
F _{LOW}	2402	Transmit	4880	48.72	pk	hor	74.00	3	-25.28
F _{MID}	2440	Transmit	4880	49.30	pk	ver	74.00	3	-24.70
F _{HIGH}	2480	Transmit	2483.5	59.32	pk	hor	74.00	3	-14.68
F _{HIGH}	2480	Transmit	2483.5	35.87	RMS	hor	54.00	3	-18.13
F _{HIGH}	2480	Transmit	2483.5	57.51	pk	ver	74.00	3	-16.49
F _{HIGH}	2480	Transmit	2483.5	34.51	RMS	ver	54.00	3	-19.49
F _{HIGH}	2480	Transmit	4952	49.91	pk	ver	74.00	3	-24.09
F _{HIGH}	2480	Transmit	4960	47.47	pk	hor	74.00	3	-26.53

Comments: * Physical distance between EUT and measurement antenna.

3.9 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. 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 – 3 th 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 [μV/m]	Margin [μV/m]
F _{MID}	2442	531.2	34.63	hor	pk	46	-11.37 dB
F _{MID}	2442	611.2	34.42	hor	pk	46	-11.58 dB
F _{MID}	2442	664	40.03	hor	pk	46	-05.97 dB
F _{MID}	2442	929.6	36.20	hor	pk	46	-09.80 dB
F _{MID}	2442	958.4	34.15	hor	pk	46	-11.85 dB
F _{MID}	2442	1858	43.74	hor	pk	54	-10.24 dB
F _{MID}	2442	1990	41.49	ver	pk	54	-12.49 dB
Comments:							

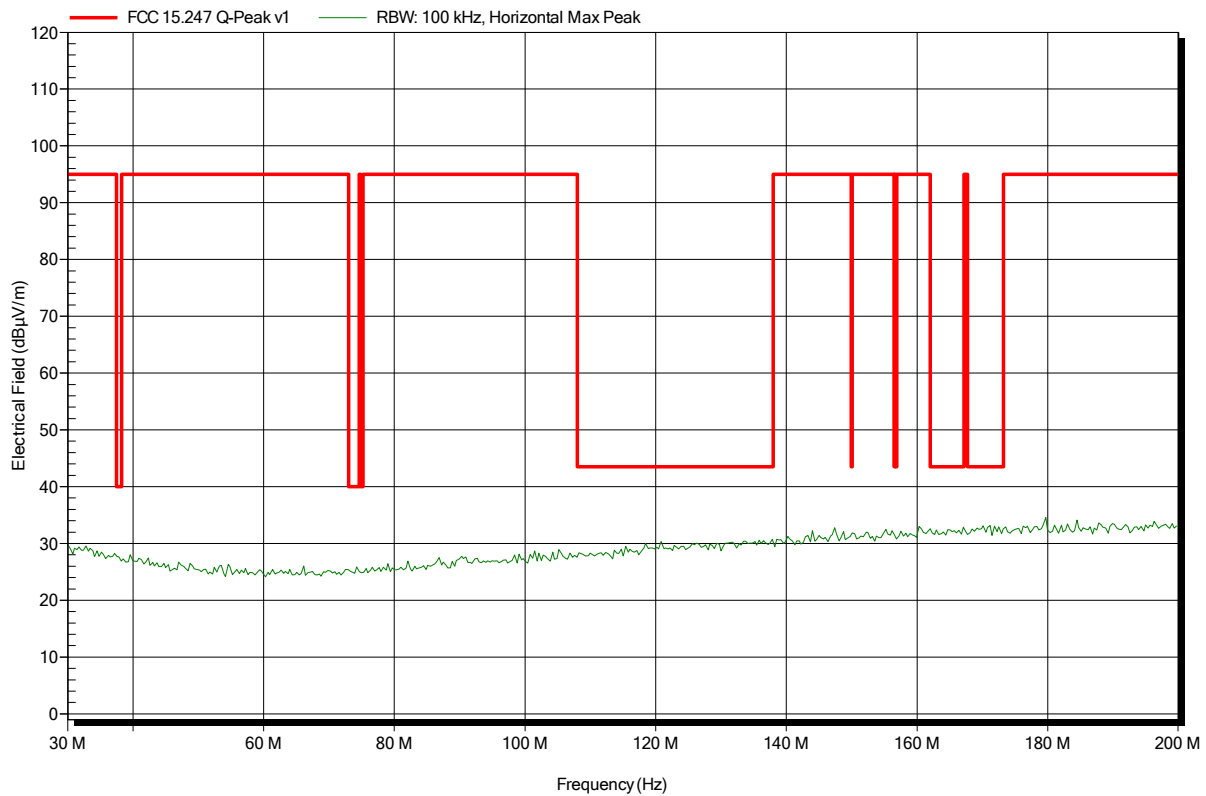
ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1407-4002

Applicant:	Leica
EUT Name:	Laser Distance Meter
Model:	Leica DISTO S910
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.6V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE; GFSK; 2402 MHz
Test Date:	2014-09-05
Note:	worst case

Index 89

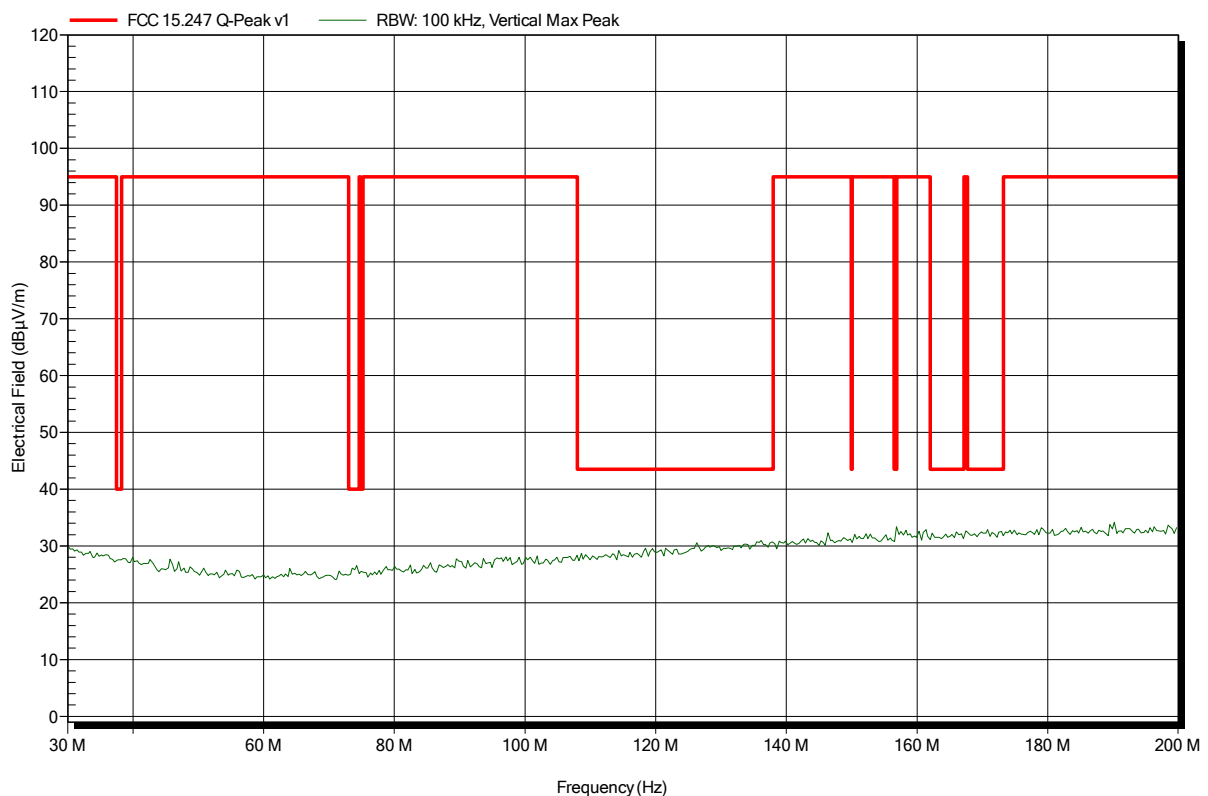


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note: worst case

Index 90

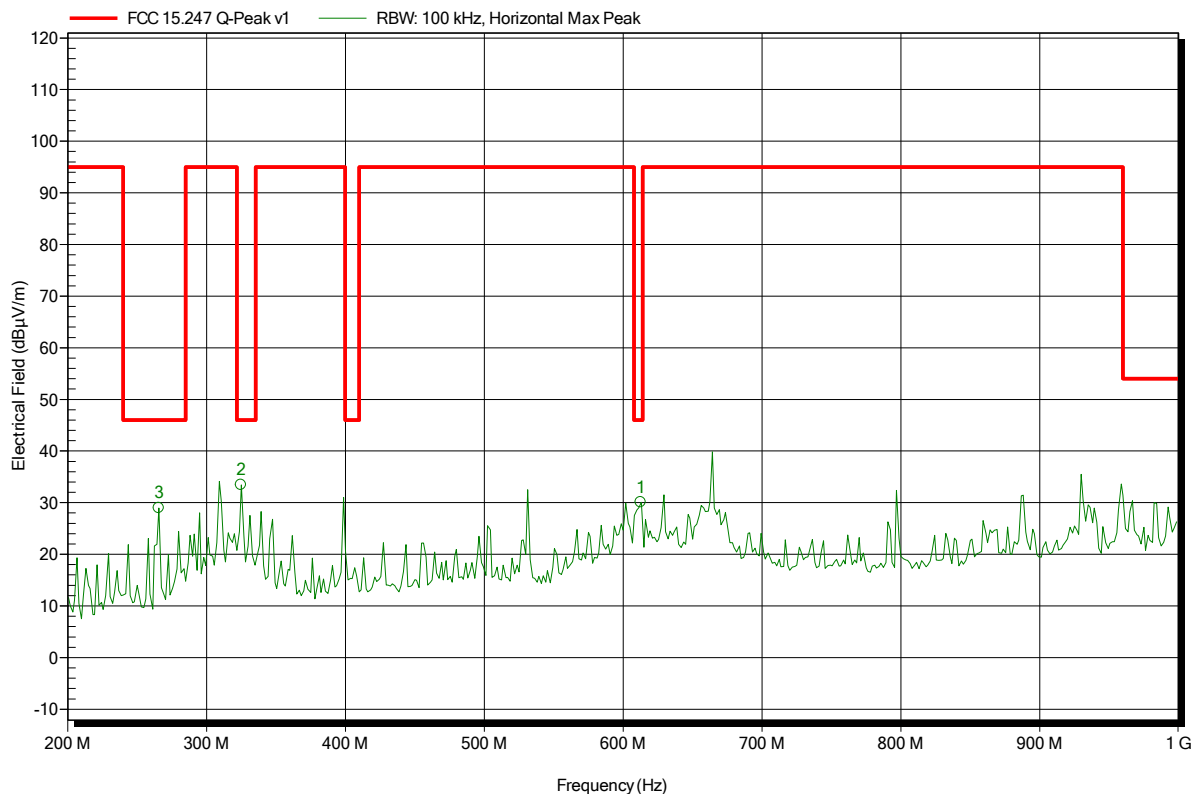


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note: worst case

Index 87



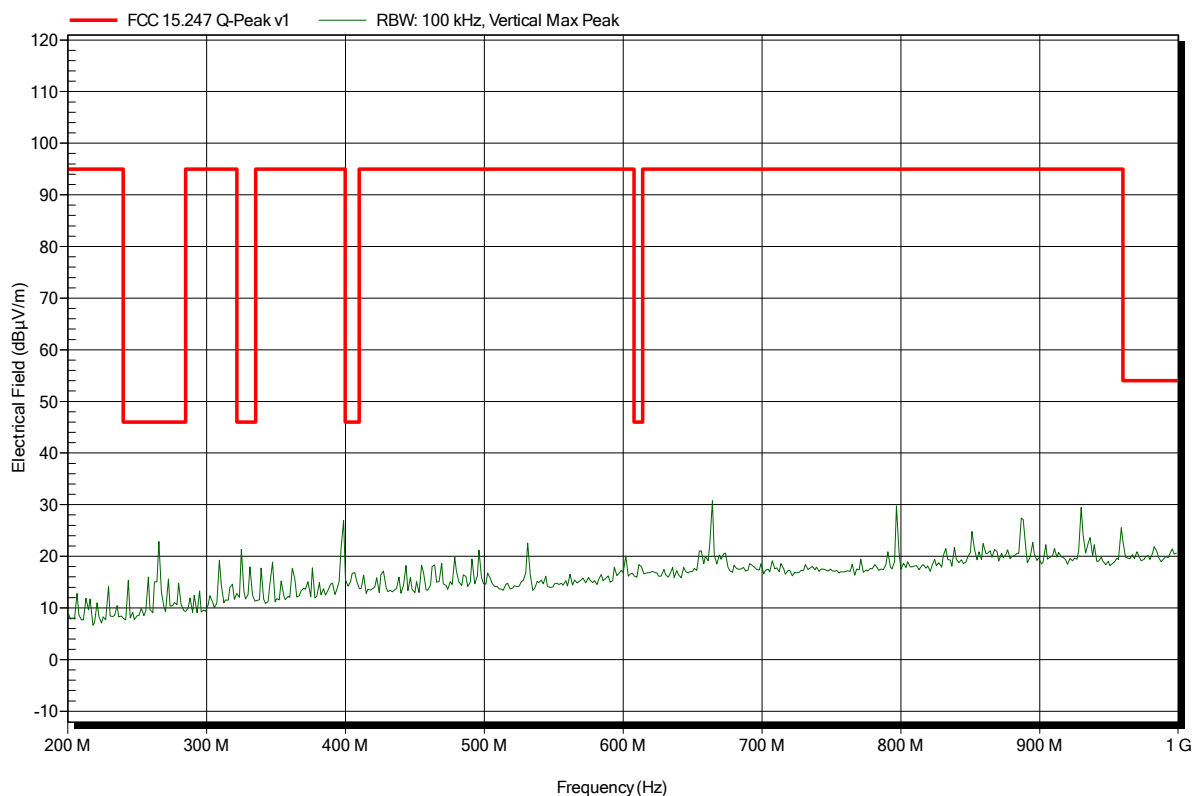
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
265.6 MHz	28.96 dBµV/m	46 dBµV/m	-17.04 dB	Pass
324.8 MHz	33.44 dBµV/m	46 dBµV/m	-12.56 dB	Pass
612.8 MHz	30.08 dBµV/m	46 dBµV/m	-15.92 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant:	Leica
EUT Name:	Laser Distance Meter
Model:	Leica DISTO S910
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.6V DC lithium battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE; GFSK; 2402 MHz
Test Date:	2014-09-05
Note:	worst case

Index 88

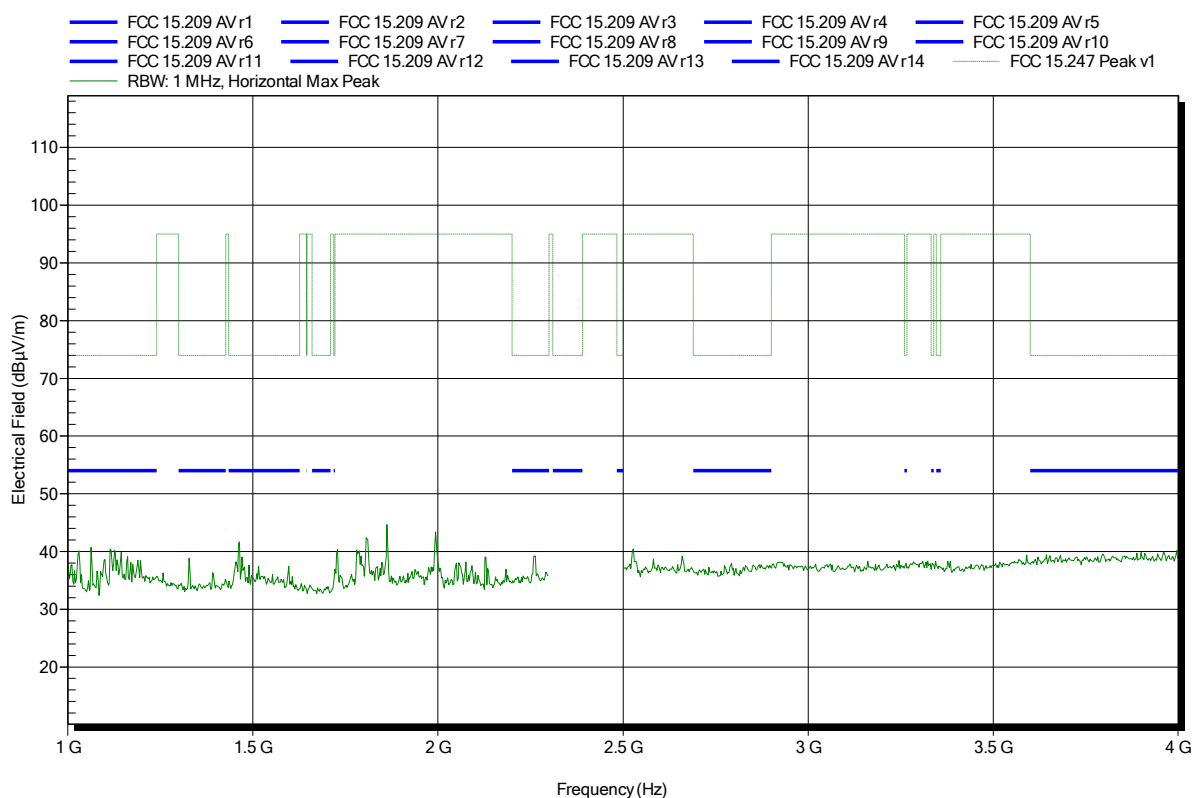


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-04
 Note:

Index 59

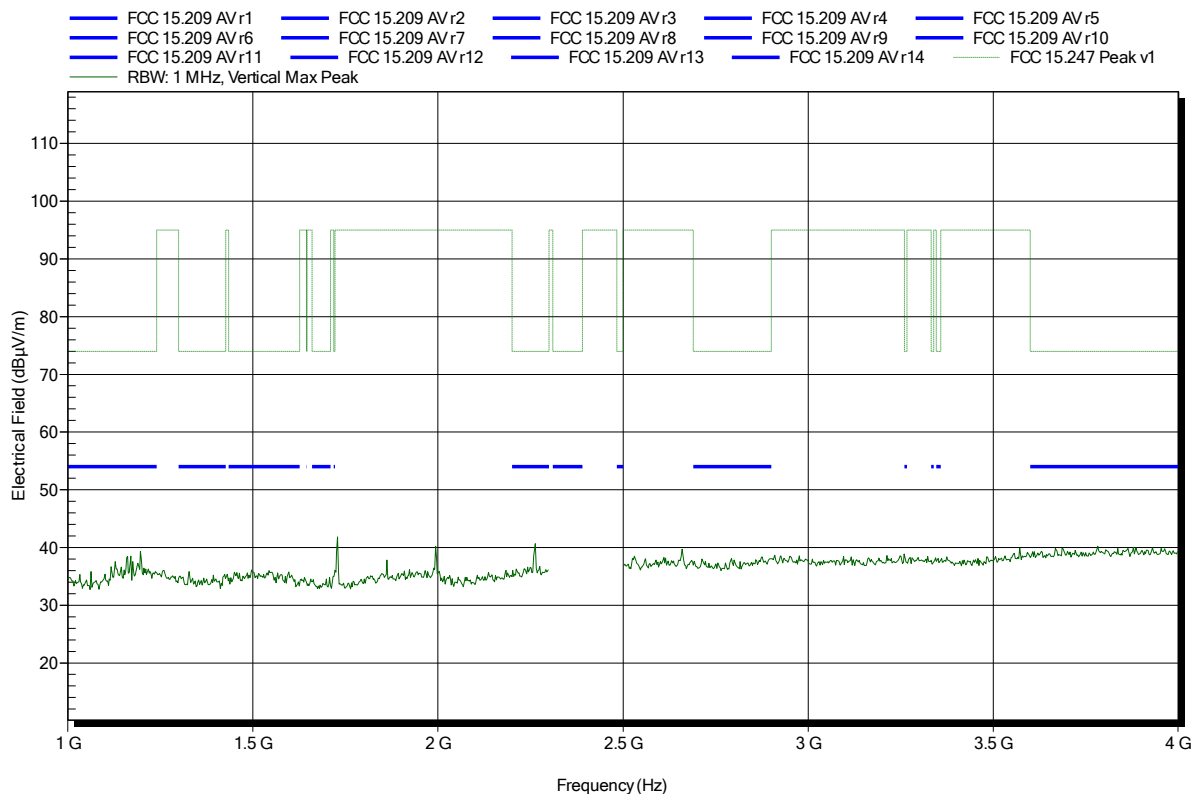


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 62

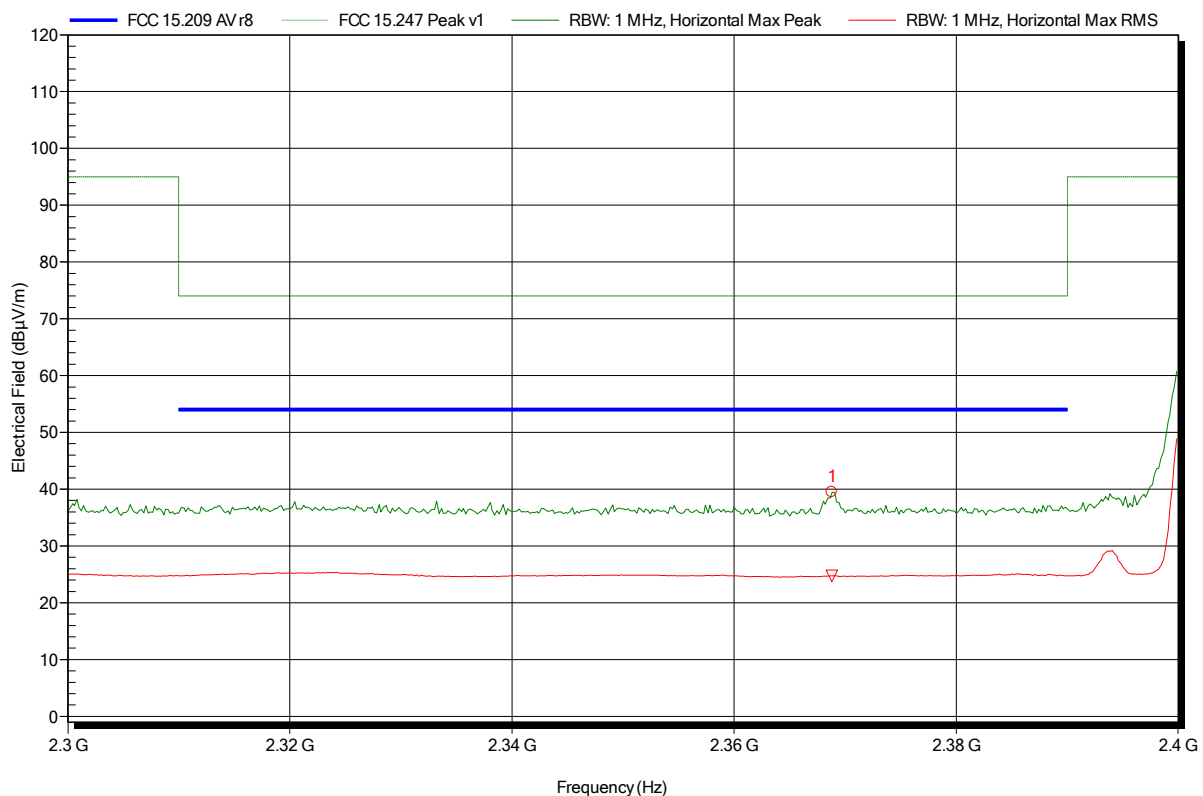


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-04
 Note: lower bandedge

Index 60



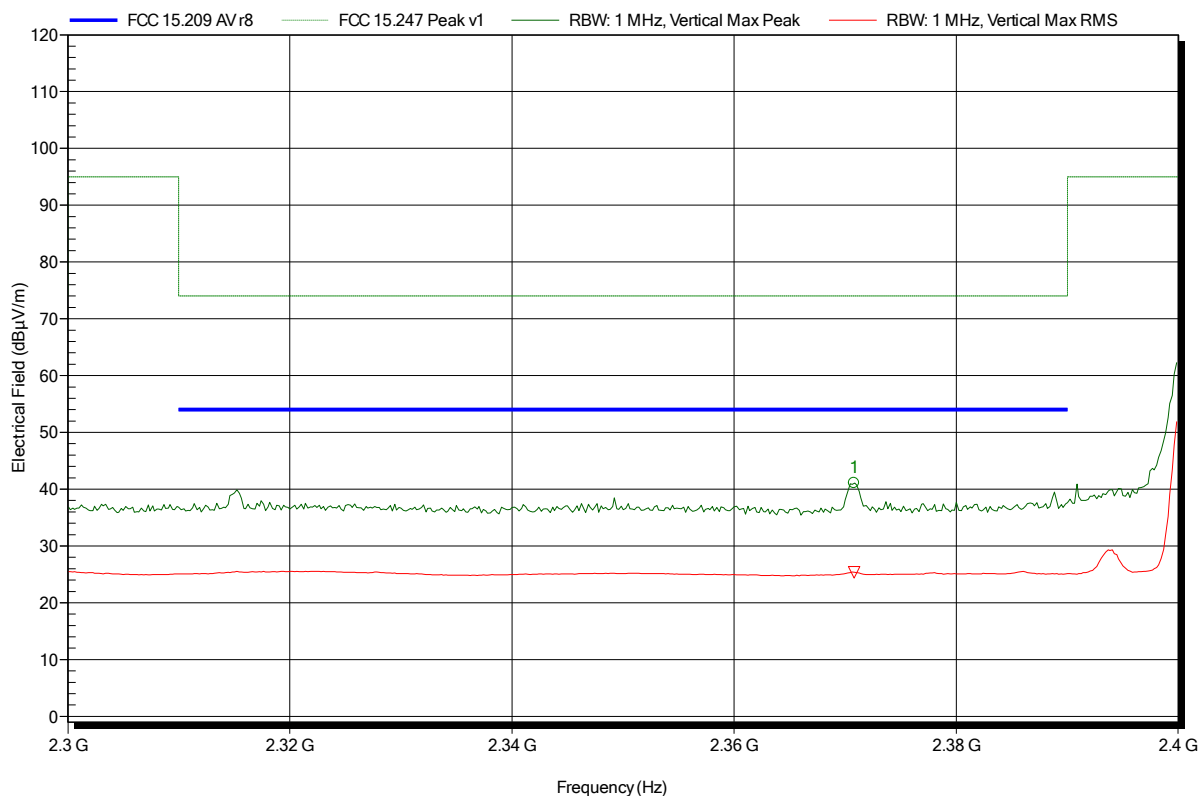
Frequency 2.369 GHz	Peak 39.51 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -34.49 dB	Peak Status Pass
Frequency 2.369 GHz	RMS 24.72 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -29.28 dB	RMS Status Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note: lower bandedge

Index 63



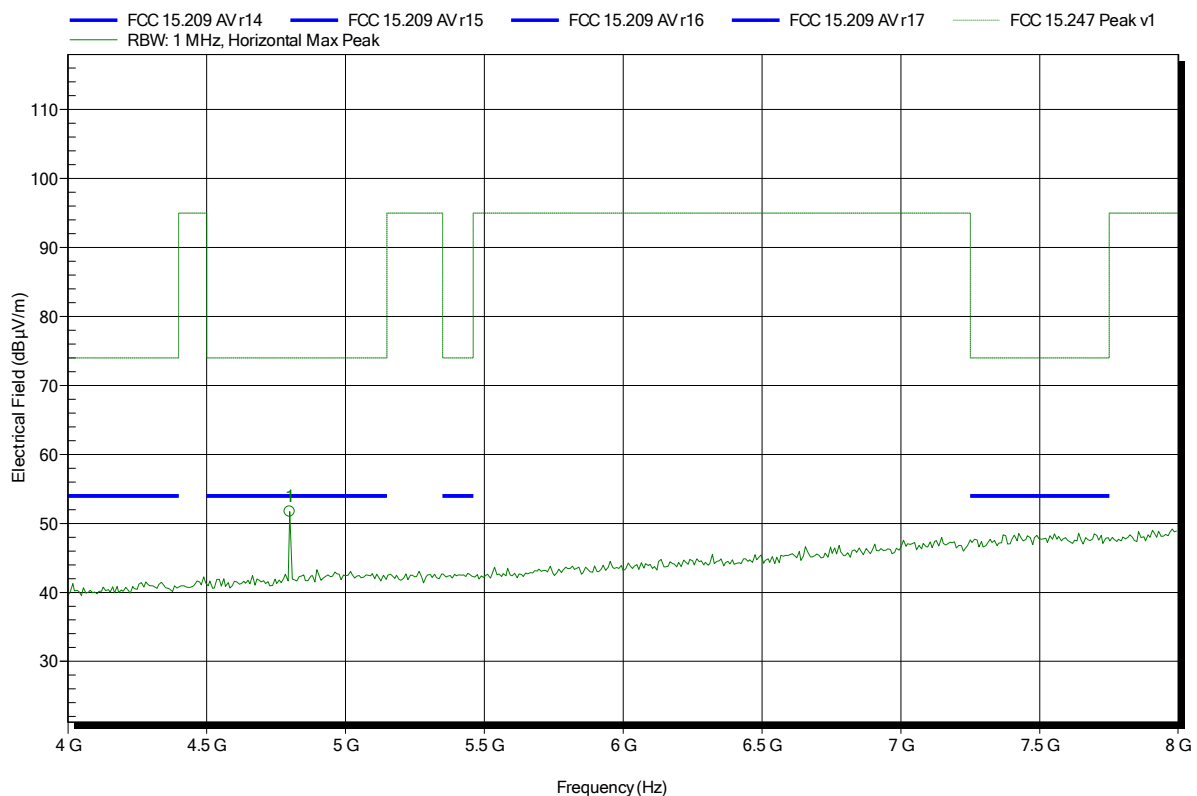
Frequency 2.371 GHz	Peak 41.06 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -32.94 dB	Peak Status Pass
Frequency 2.371 GHz	RMS 25.37 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -28.63 dB	RMS Status Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-04
 Note:

Index 61



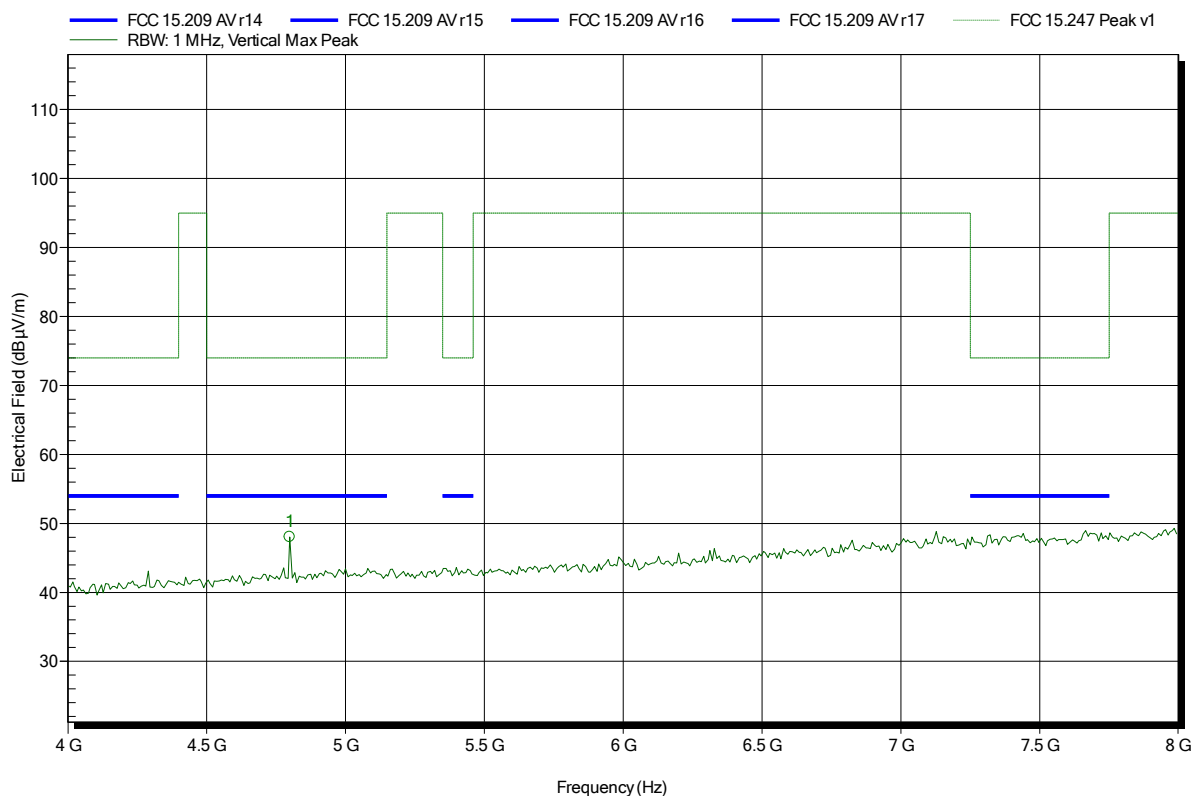
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8 GHz	51.69 dBµV/m	74 dBµV/m	-22.31 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 64



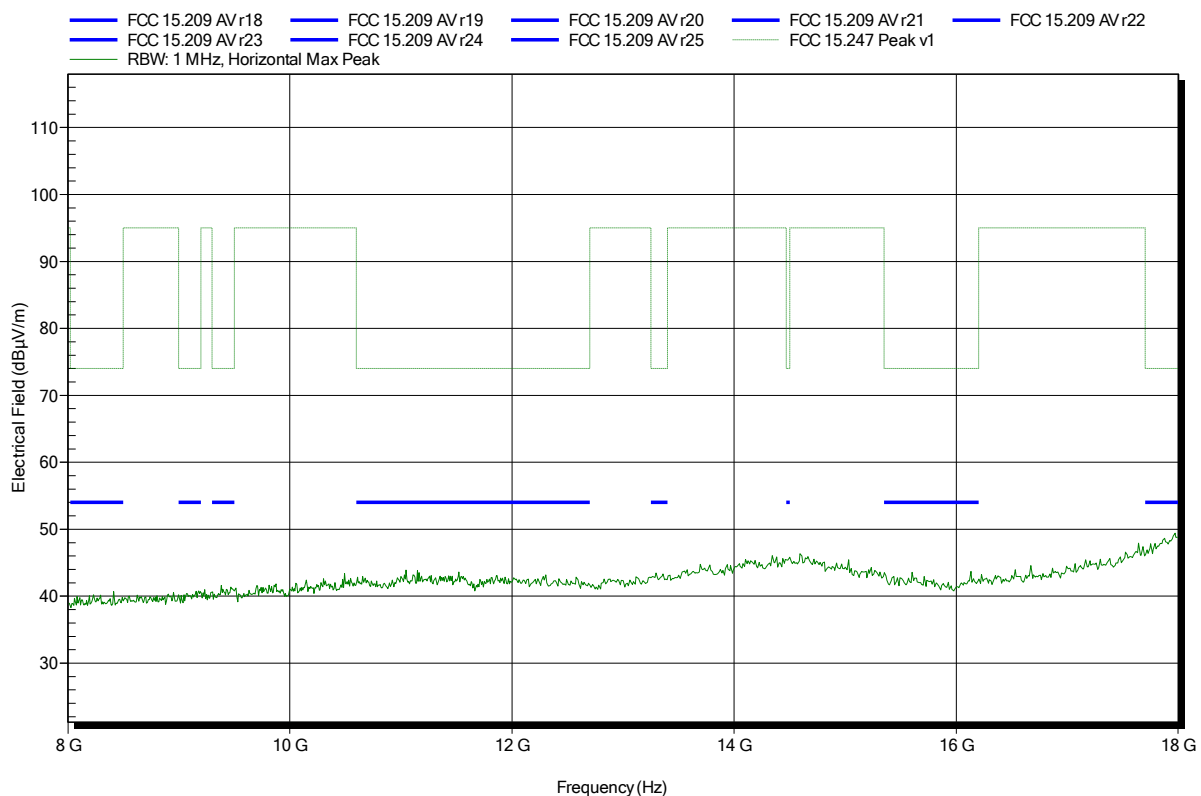
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8 GHz	48.01 dBµV/m	74 dBµV/m	-25.99 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 75

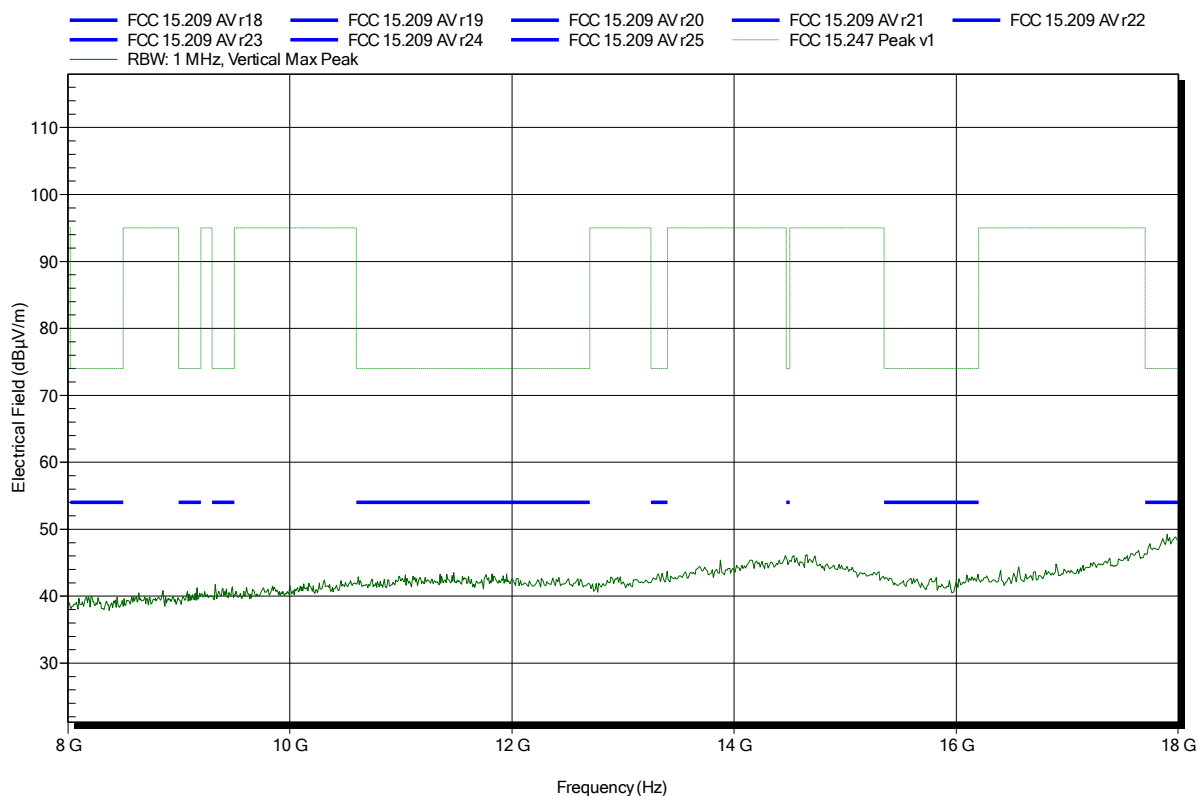


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 77

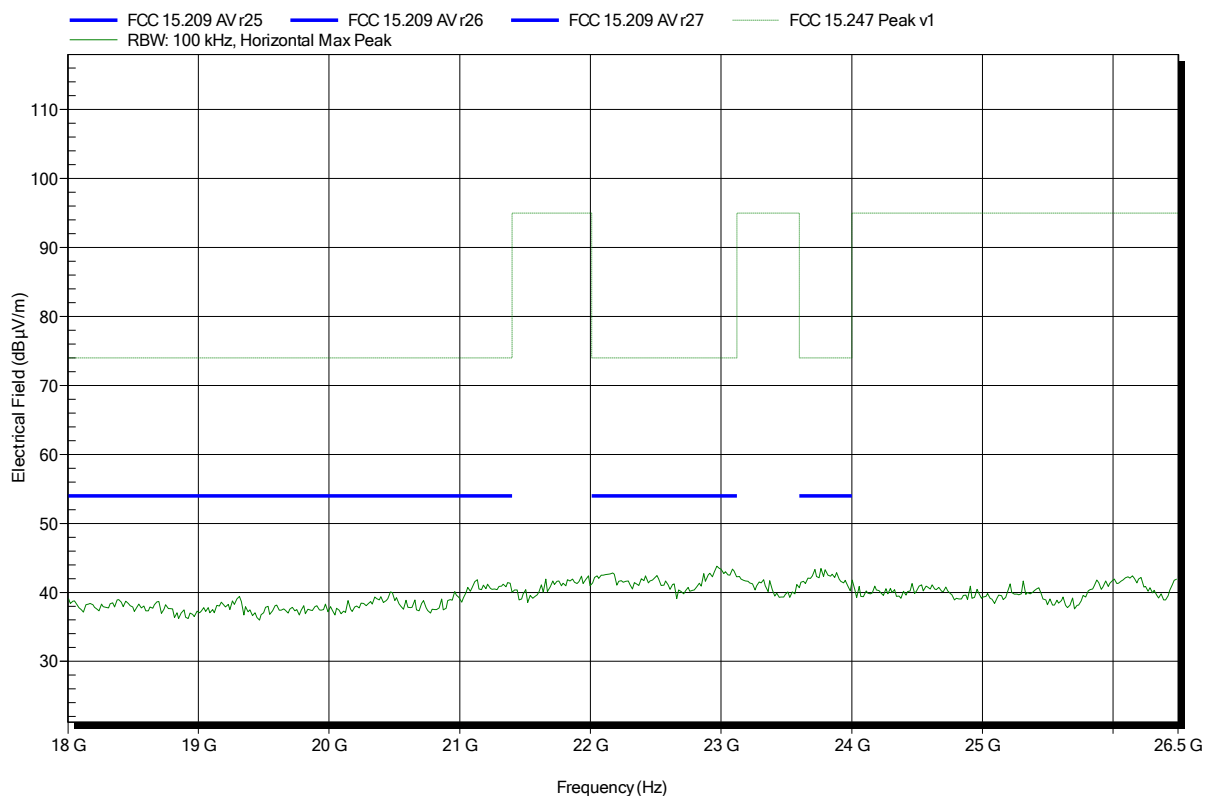


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 76

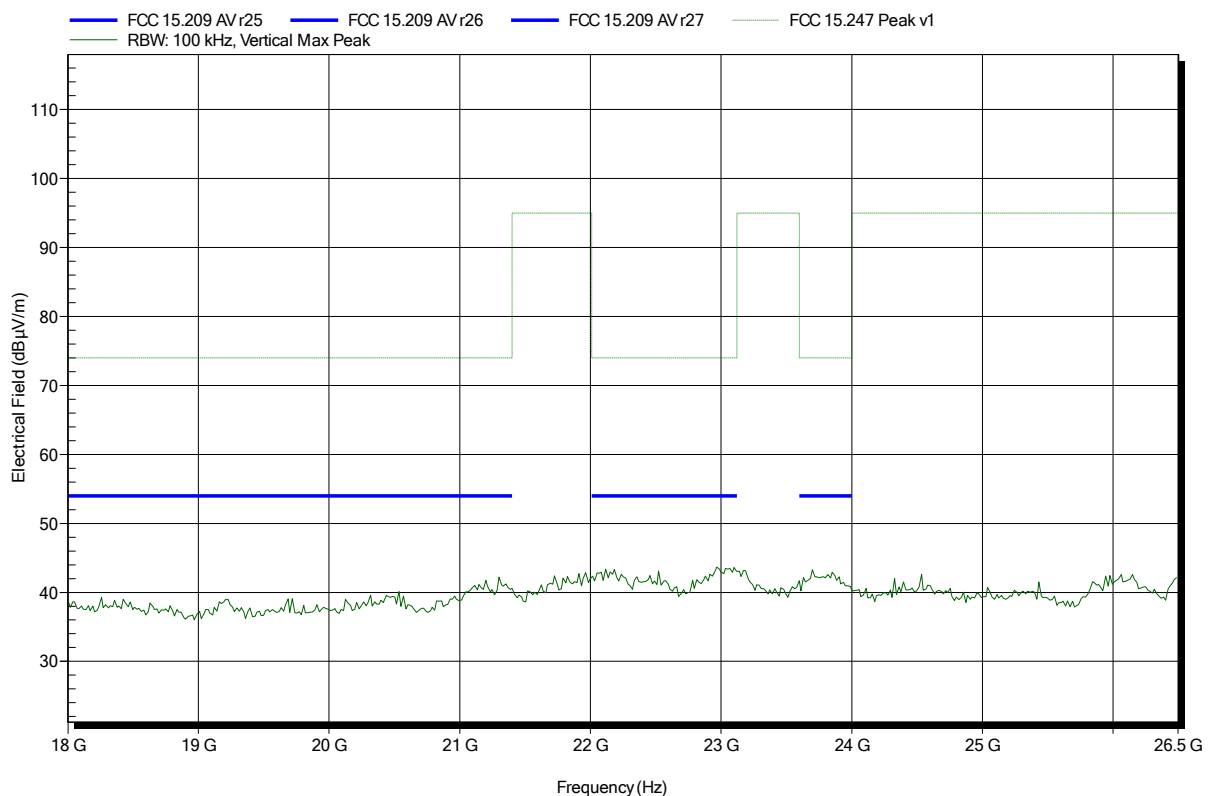


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2402 MHz
 Test Date: 2014-09-05
 Note:

Index 78

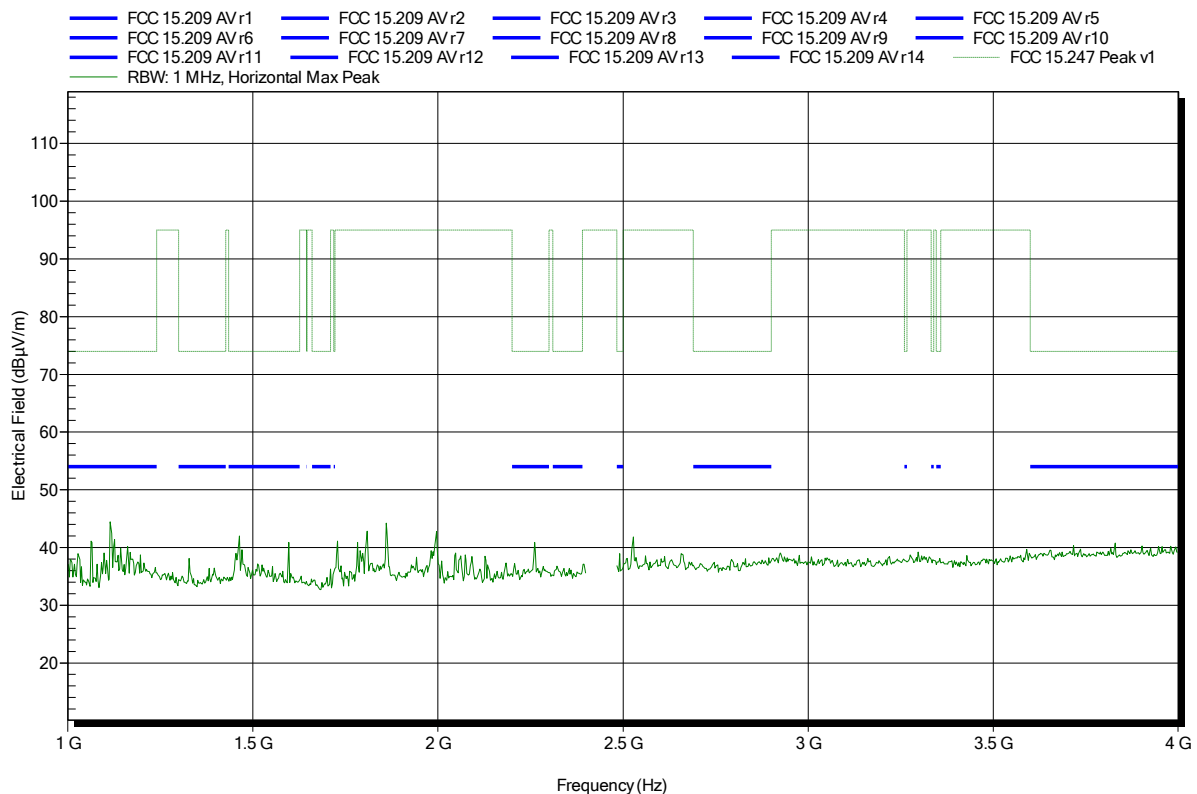


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 65

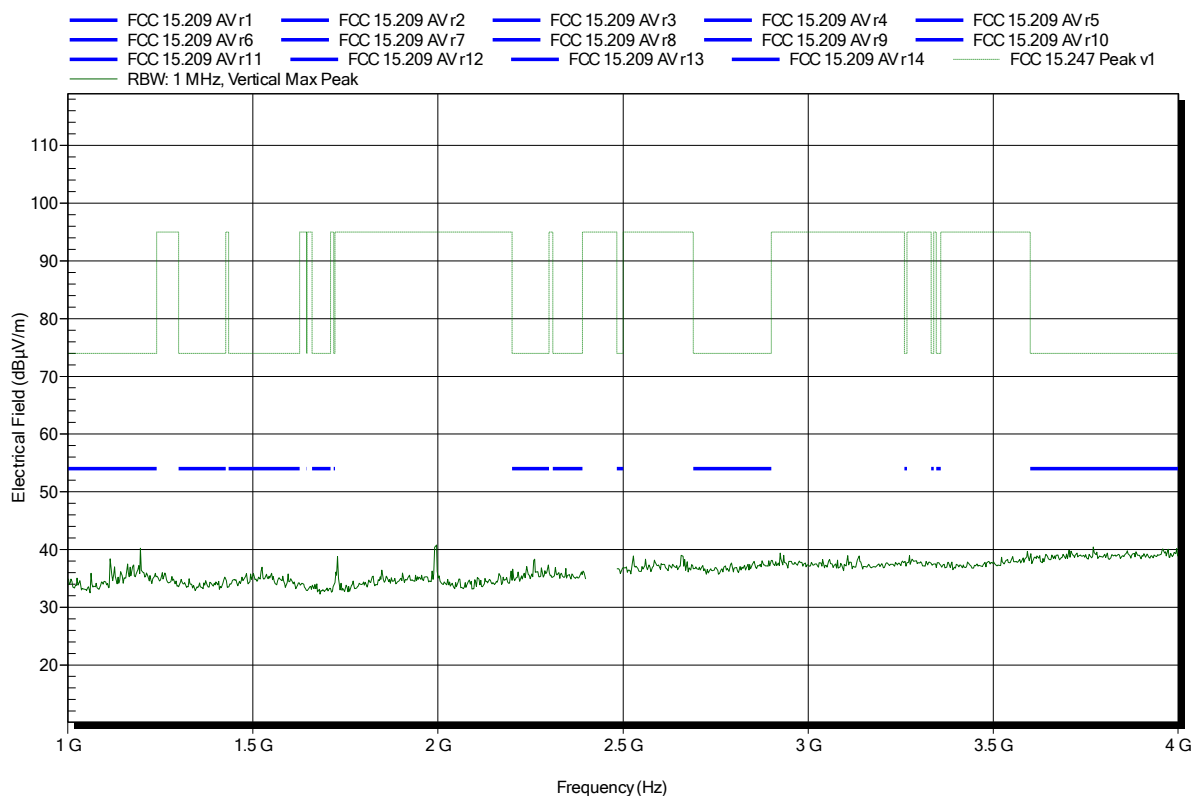


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 67

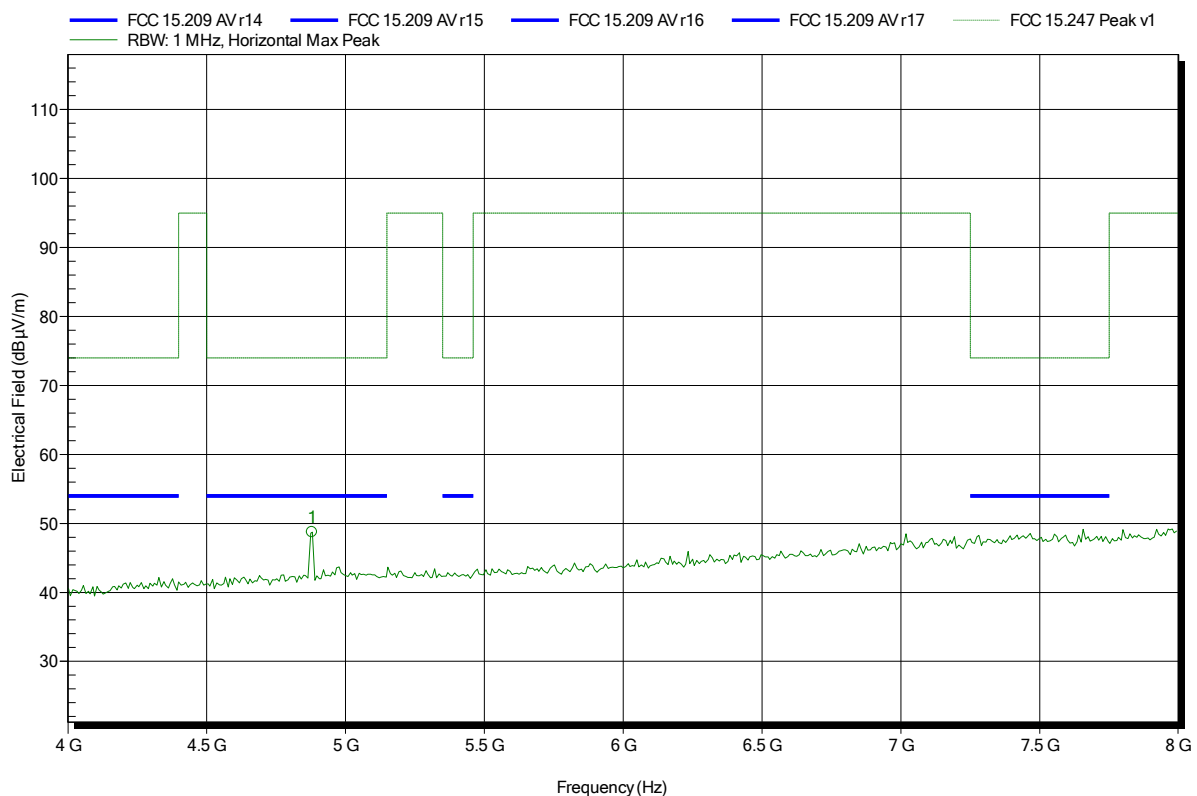


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 66



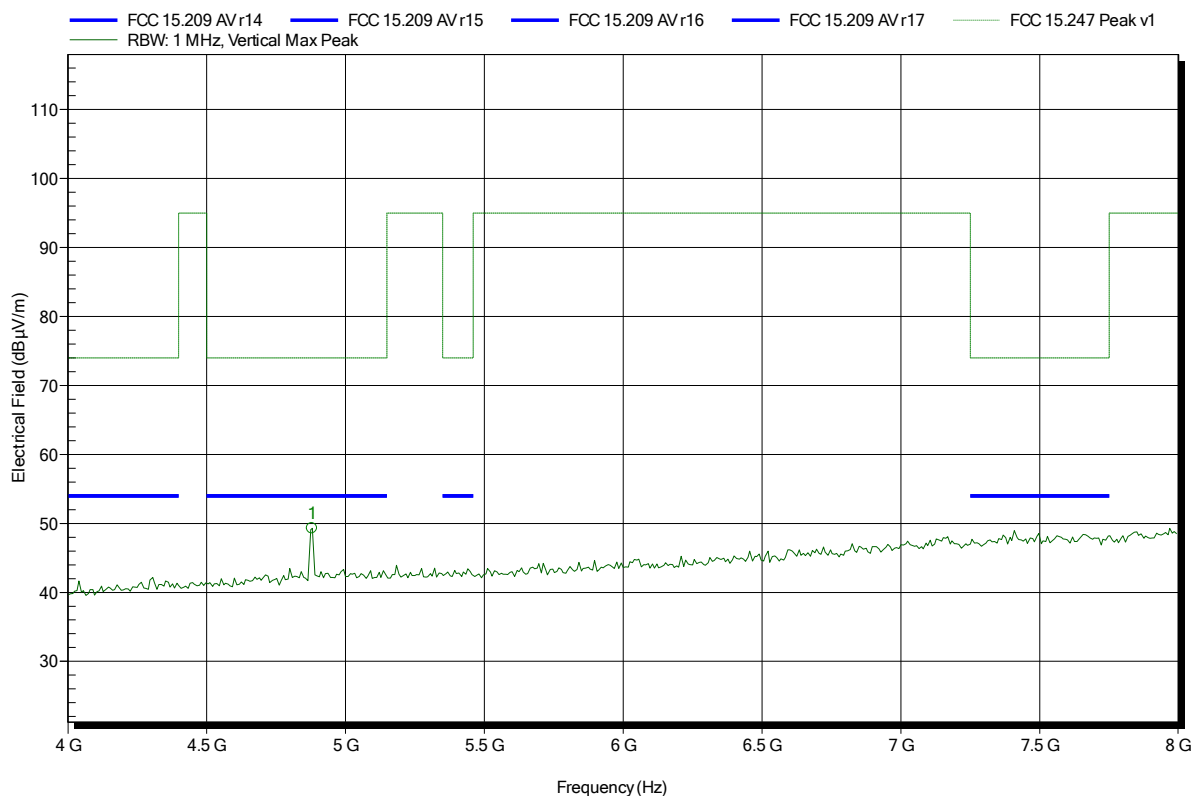
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.88 GHz	48.72 dBµV/m	74 dBµV/m	-25.28 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 68



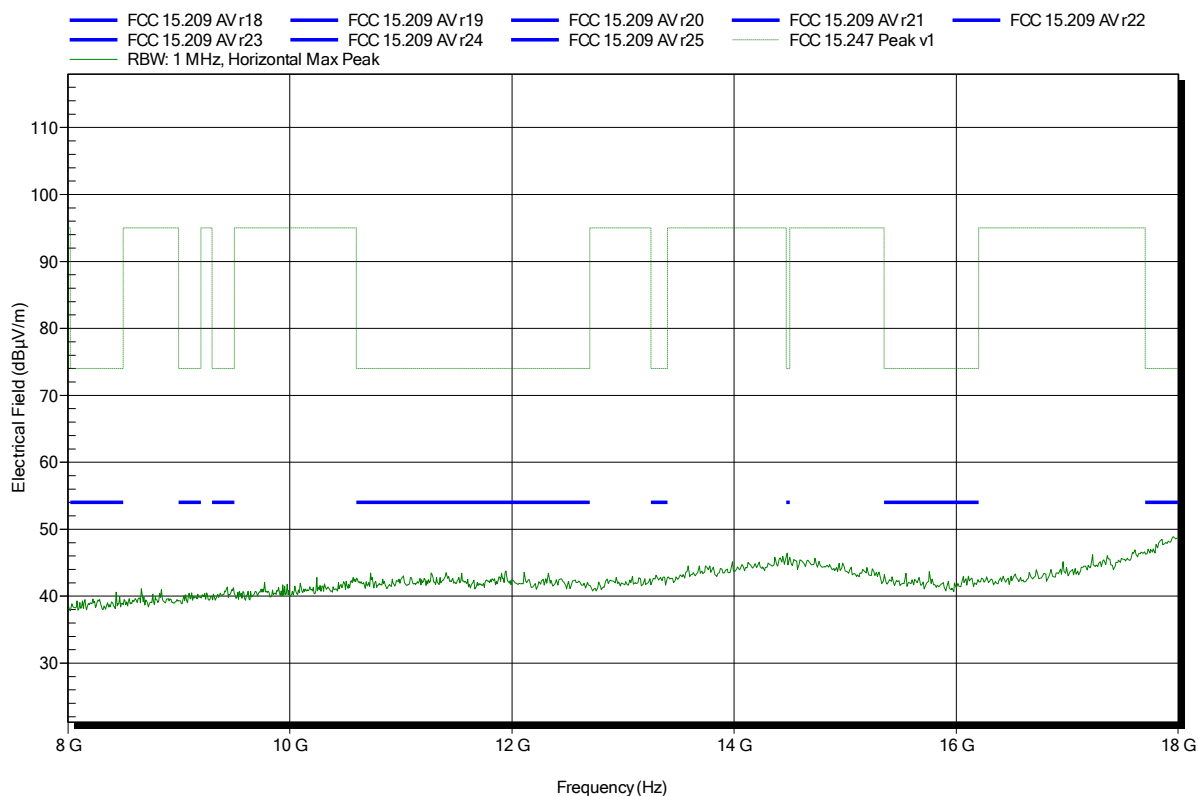
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.88 GHz	49.3 dBµV/m	74 dBµV/m	-24.7 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 79

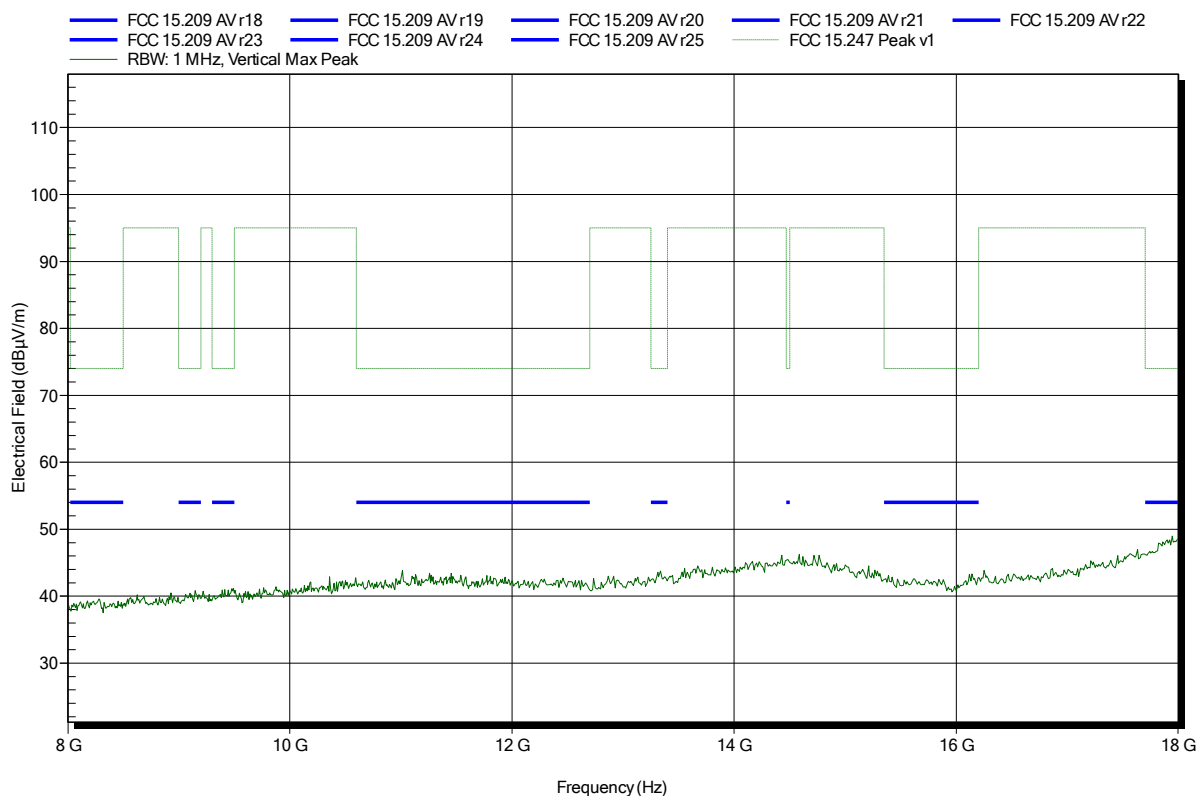


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 81

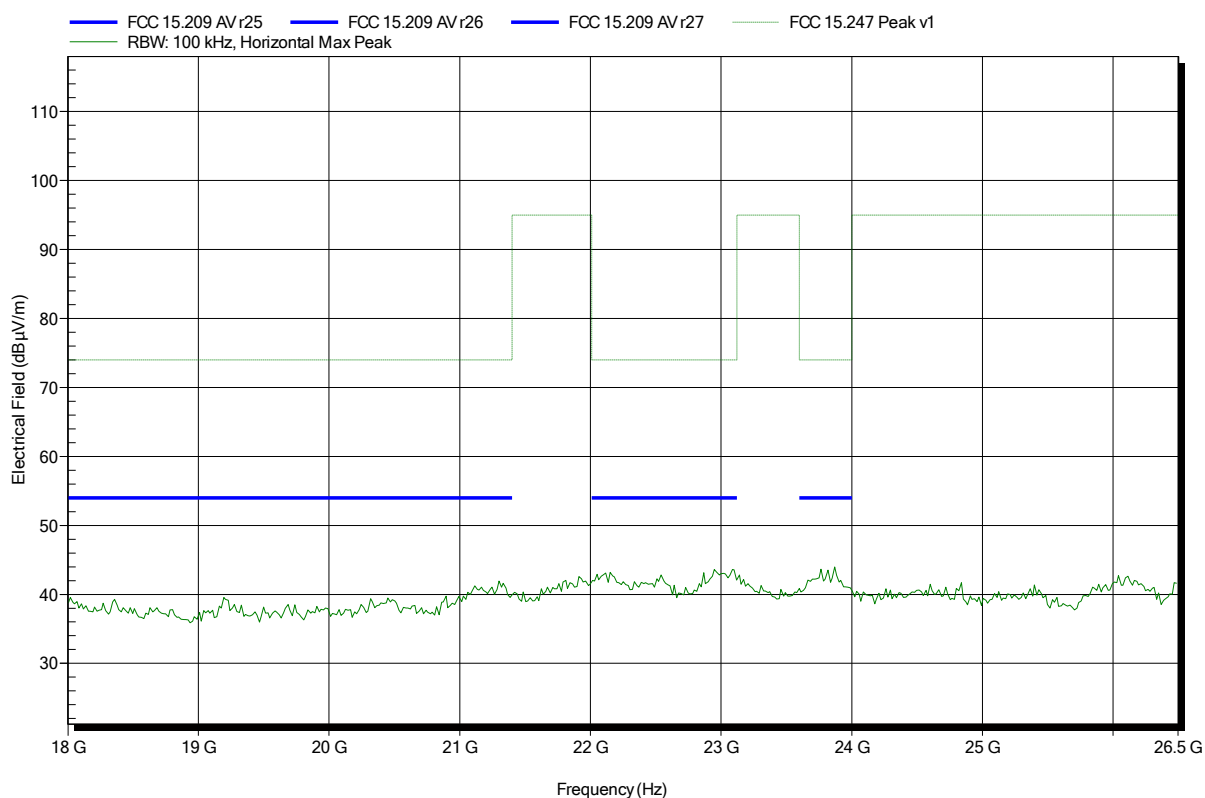


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 80

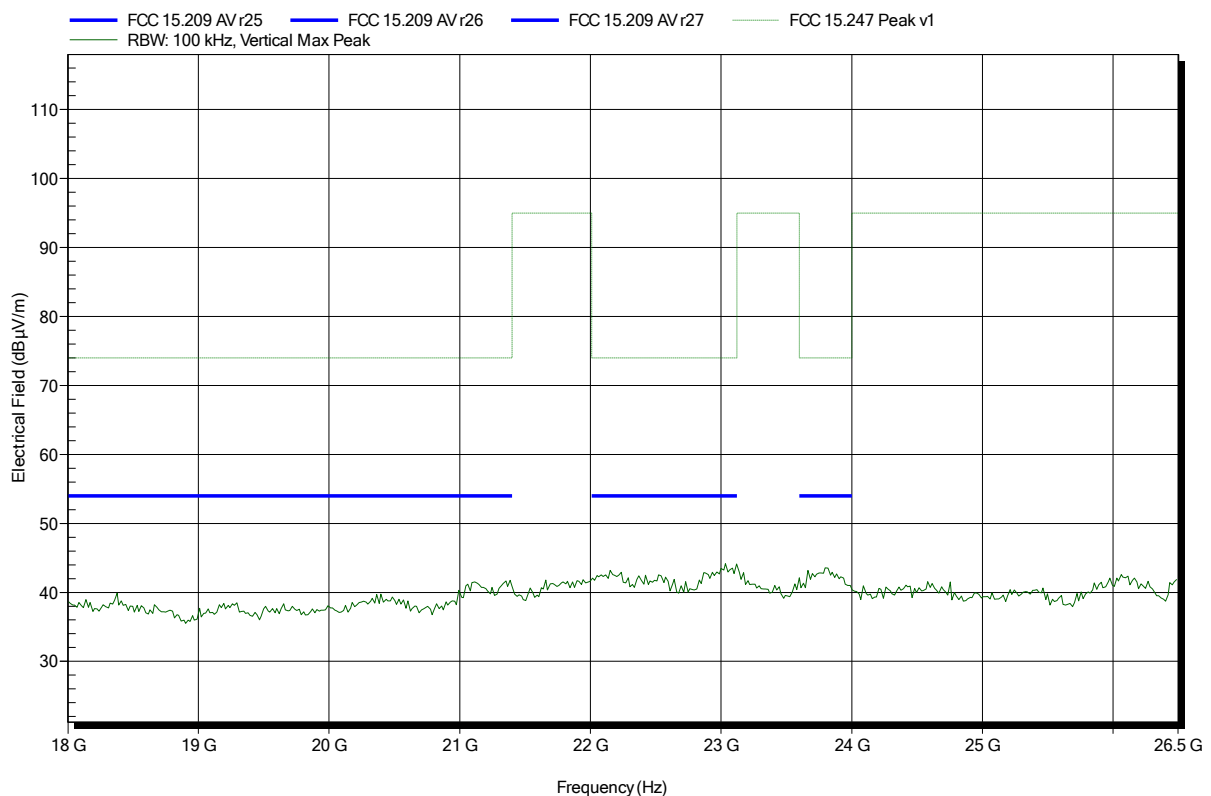


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 82

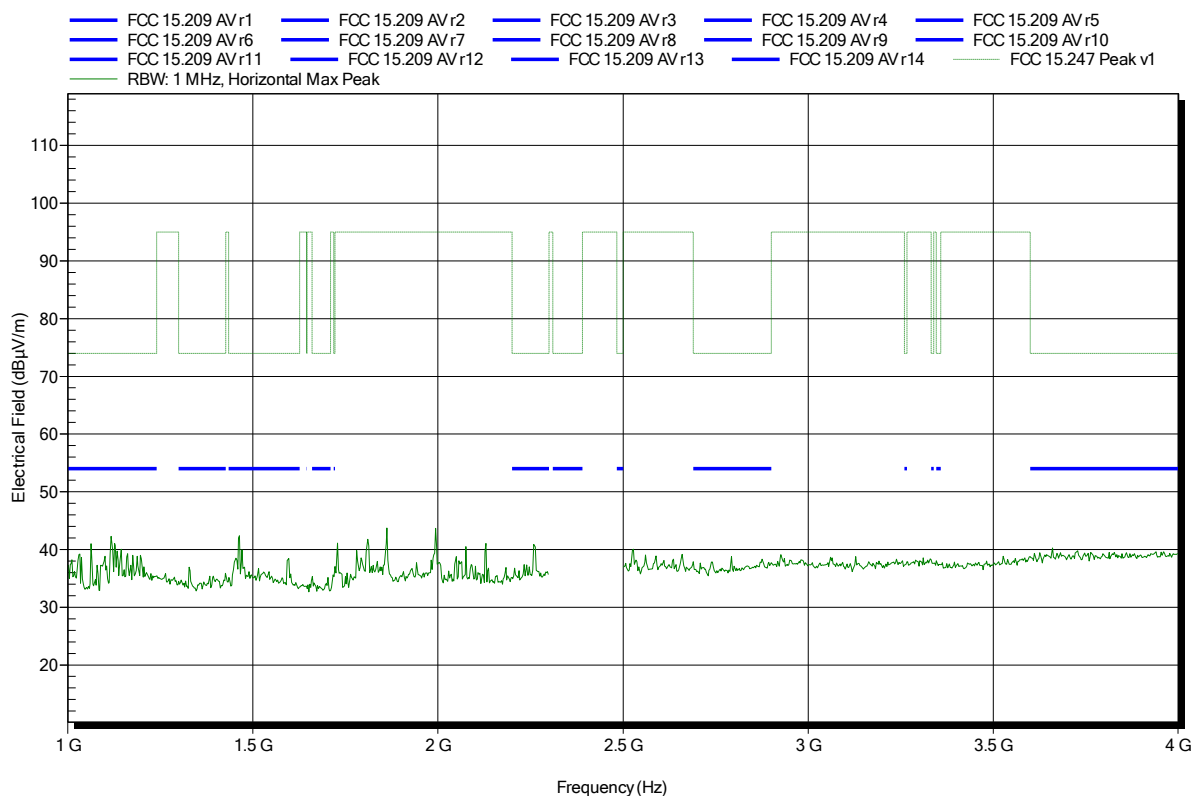


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 69

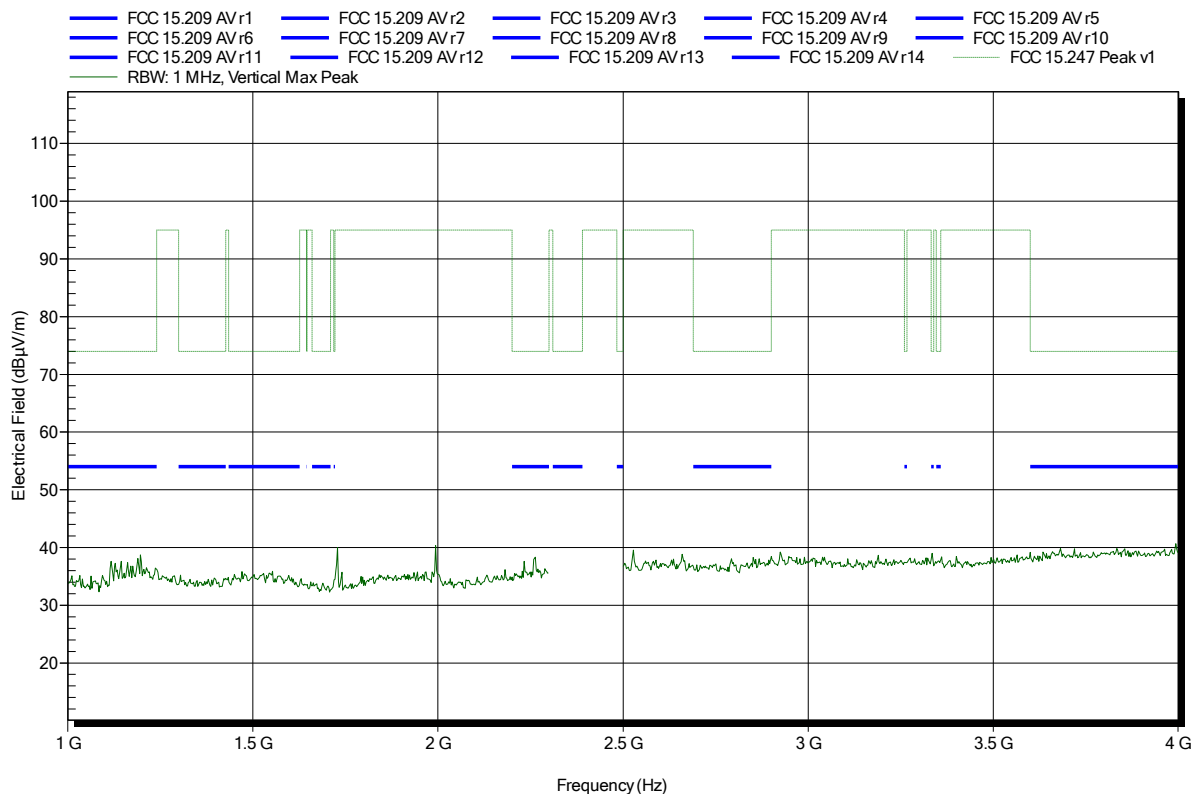


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 72

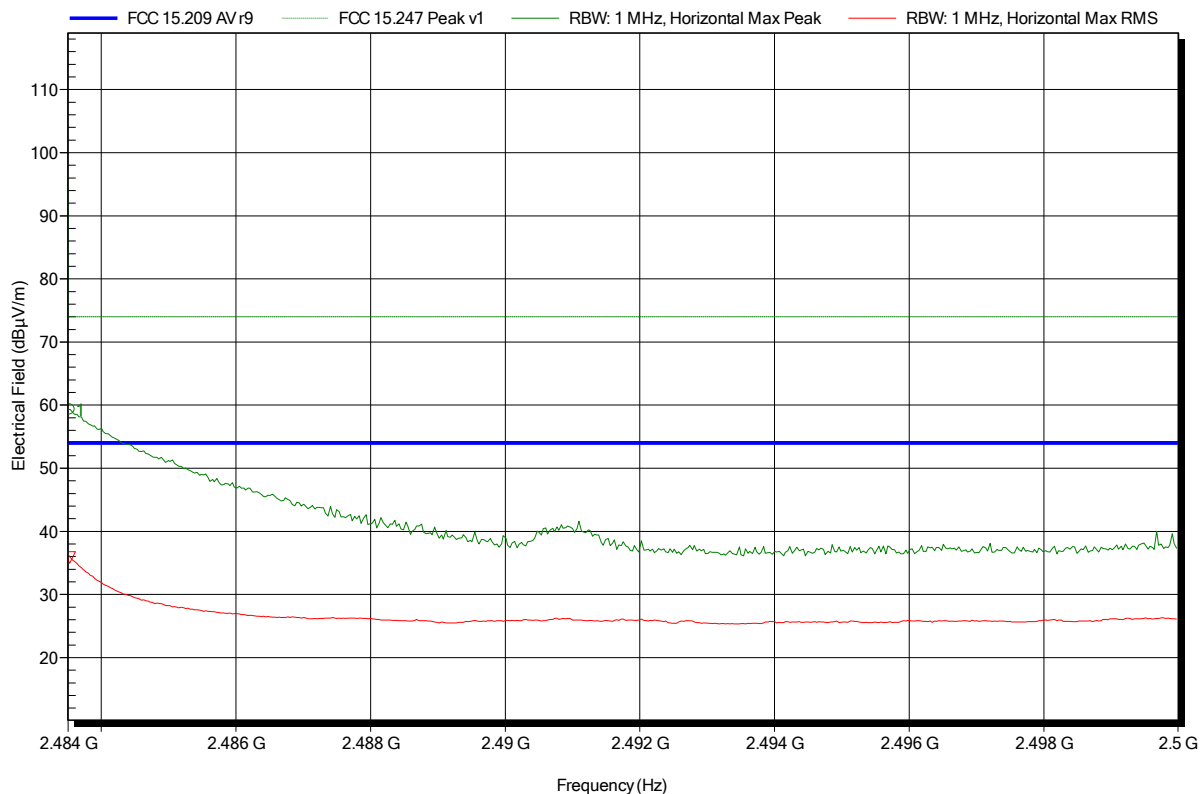


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note: upper bandedge

Index 70



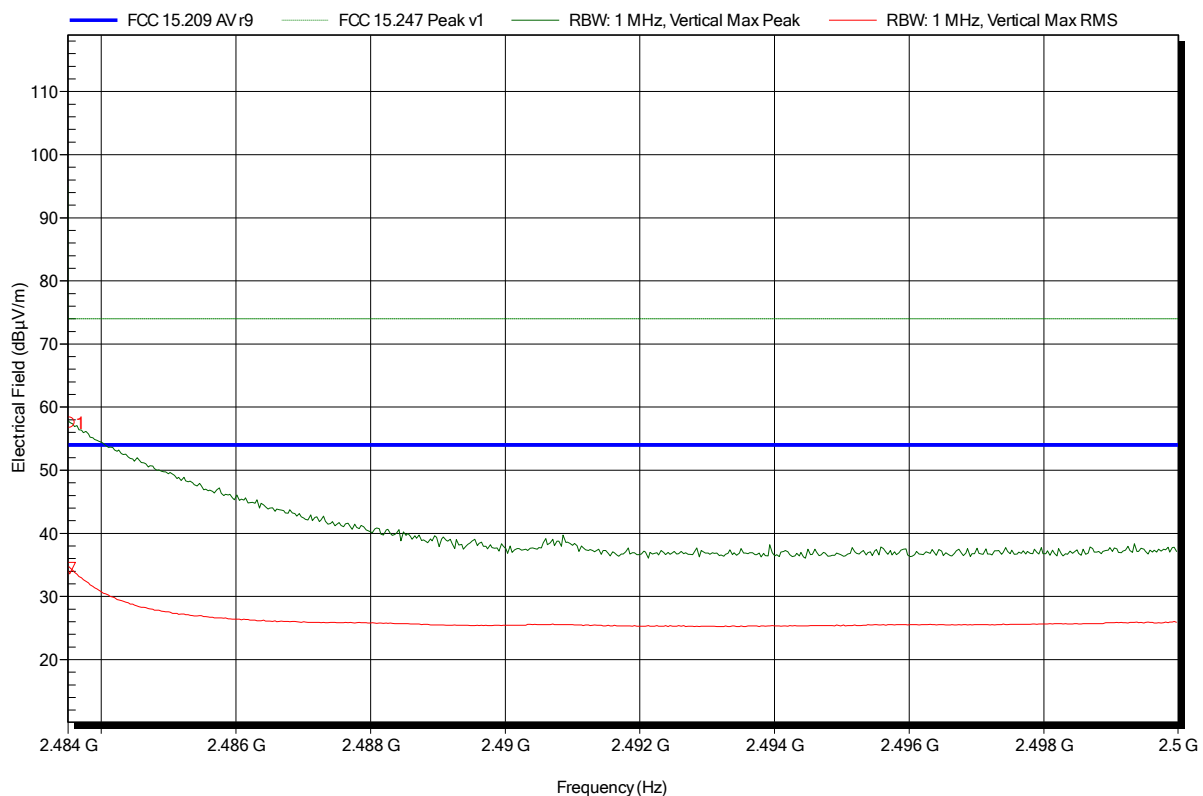
Frequency 2.4835 GHz	Peak 59.32 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -14.68 dB	Peak Status Pass
Frequency 2.4835 GHz	RMS 35.87 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -18.13 dB	RMS Status Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note: upper bandedge

Index 73



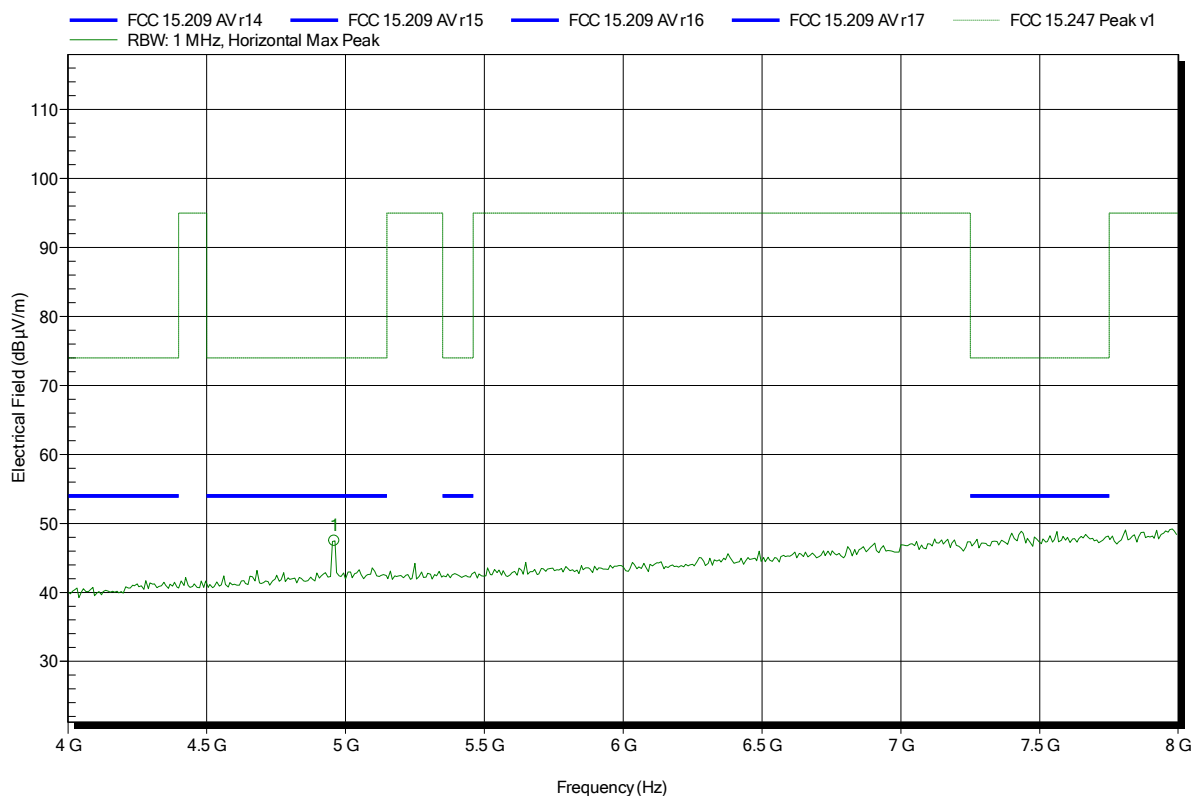
Frequency 2.4835 GHz	Peak 57.51 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -16.49 dB	Peak Status Pass
Frequency 2.4835 GHz	RMS 34.51 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -19.49 dB	RMS Status Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 71



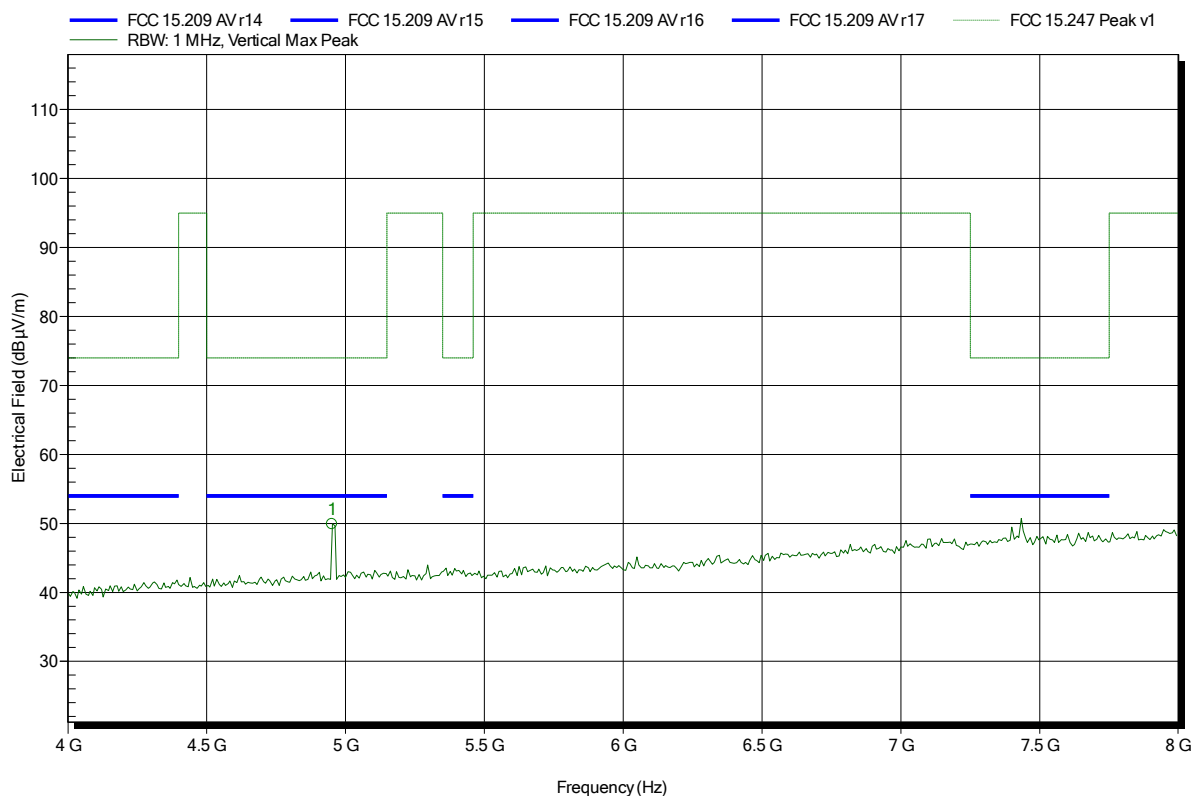
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.96 GHz	47.47 dBµV/m	74 dBµV/m	-26.53 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 74



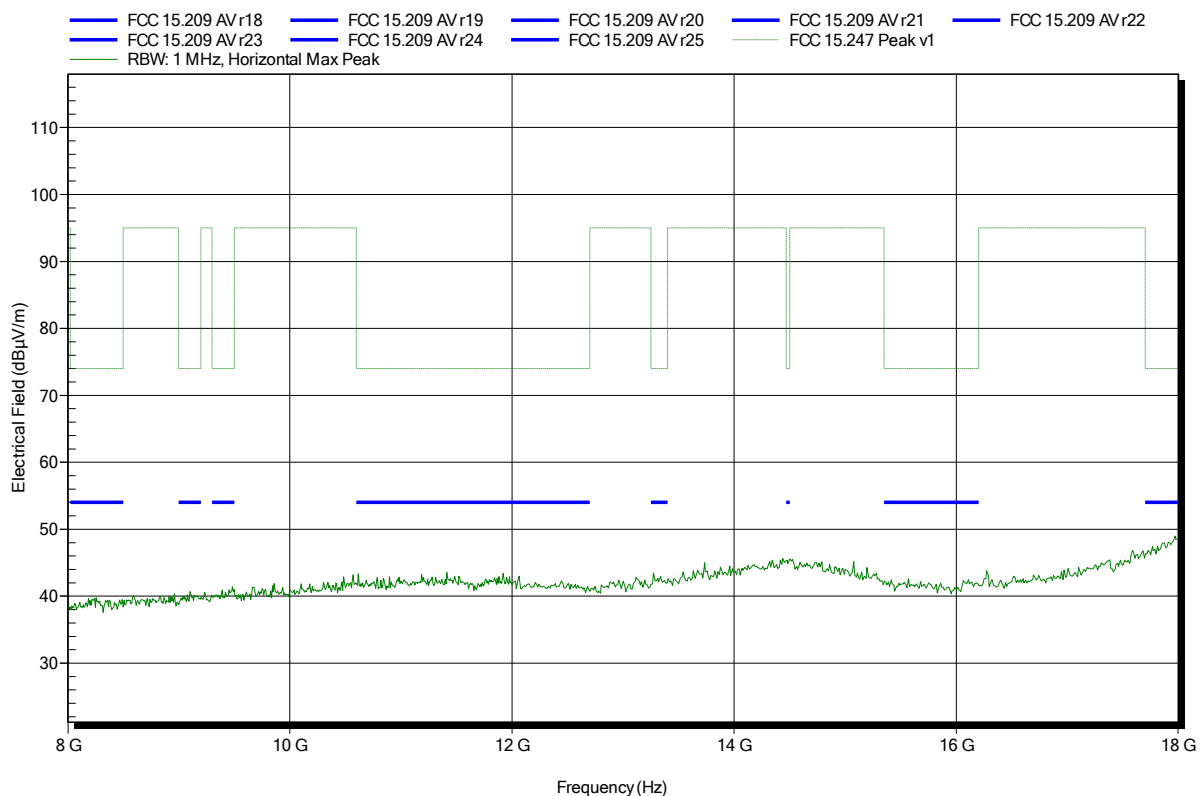
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.952 GHz	49.91 dBµV/m	74 dBµV/m	-24.09 dB	Pass

Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 83

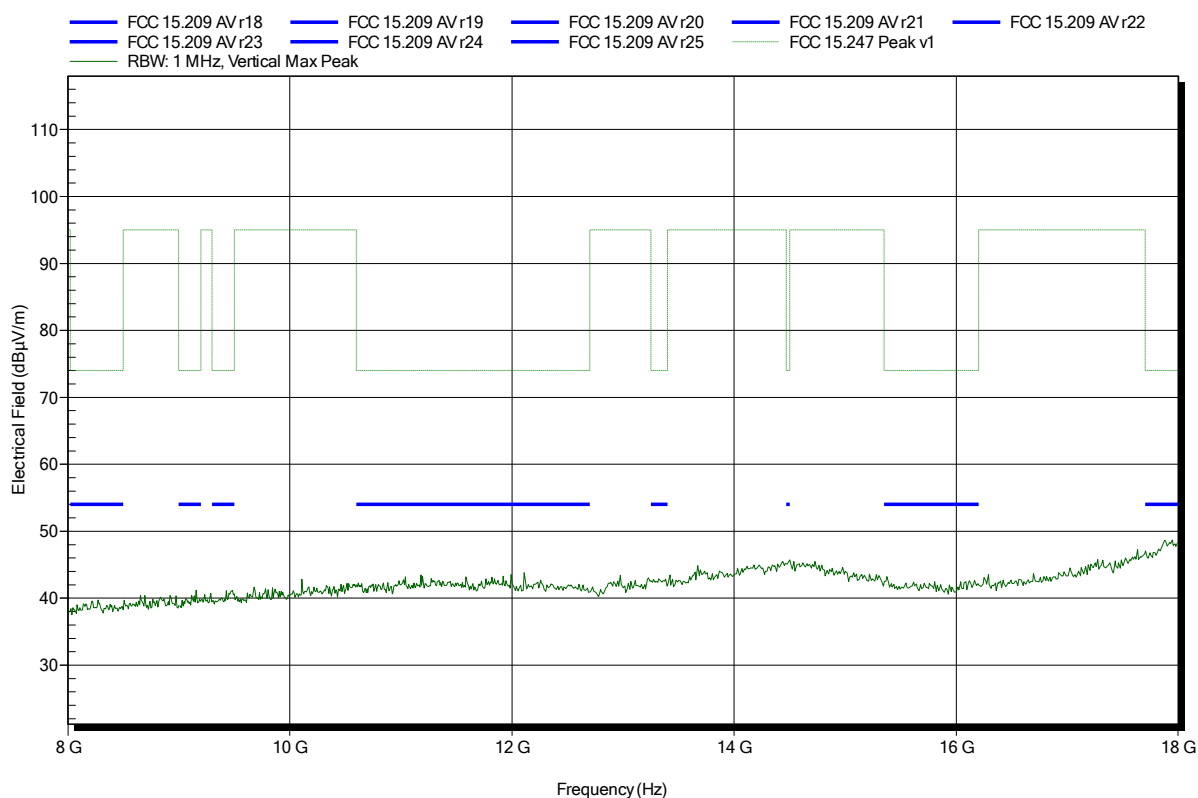


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 85

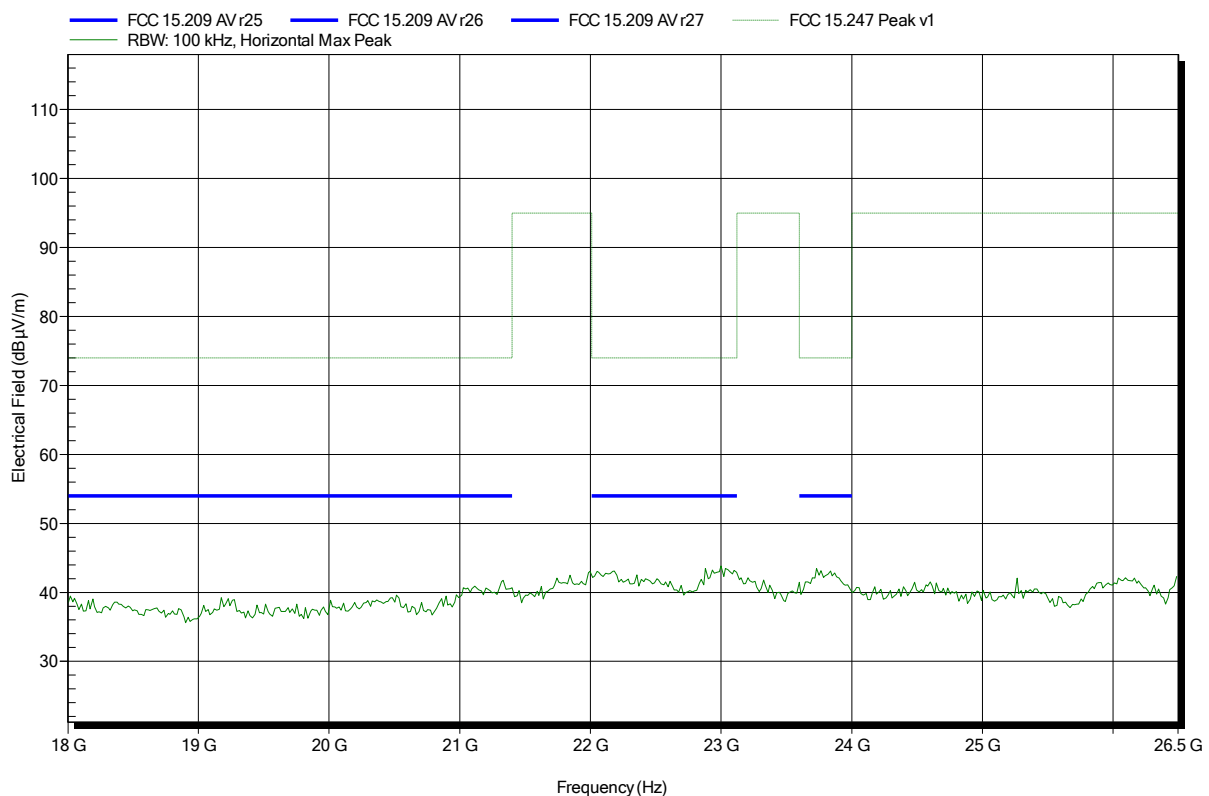


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 84

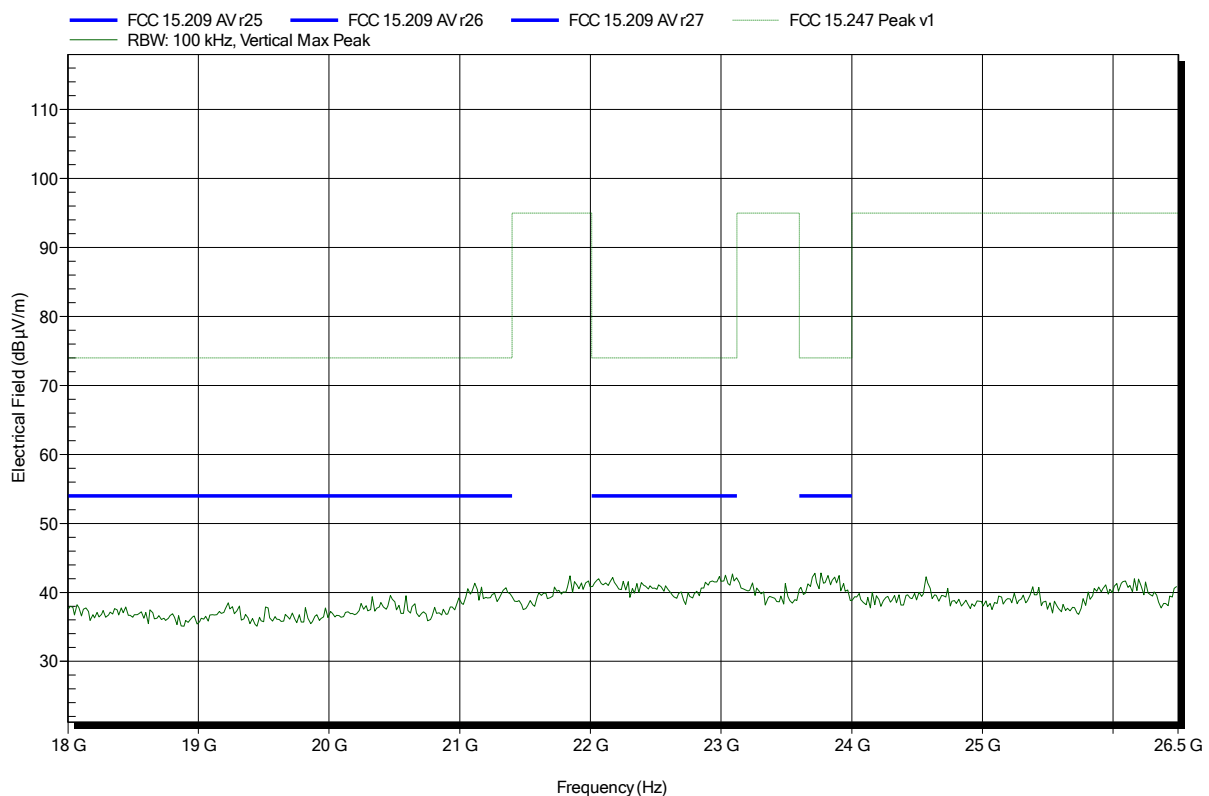


Spurious emissions according to FCC 15.247

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6V DC lithium battery
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 1 m
 Mode: TX; BTLE; GFSK; 2480 MHz
 Test Date: 2014-09-05
 Note:

Index 86



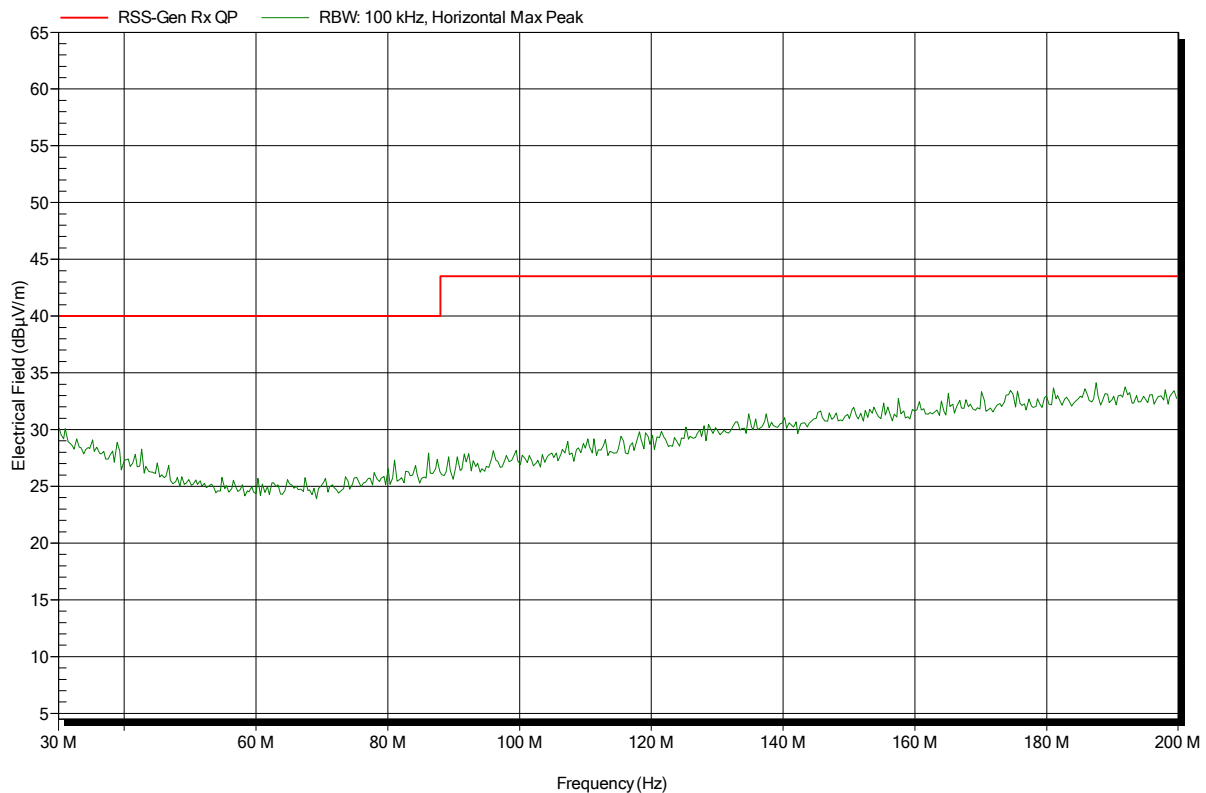
ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1407-4002

Applicant:	Leica
EUT Name:	Laser Distance Meter
Model:	Leica DISTO S910
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.6 V DC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-09-05
Note:	

Index 91

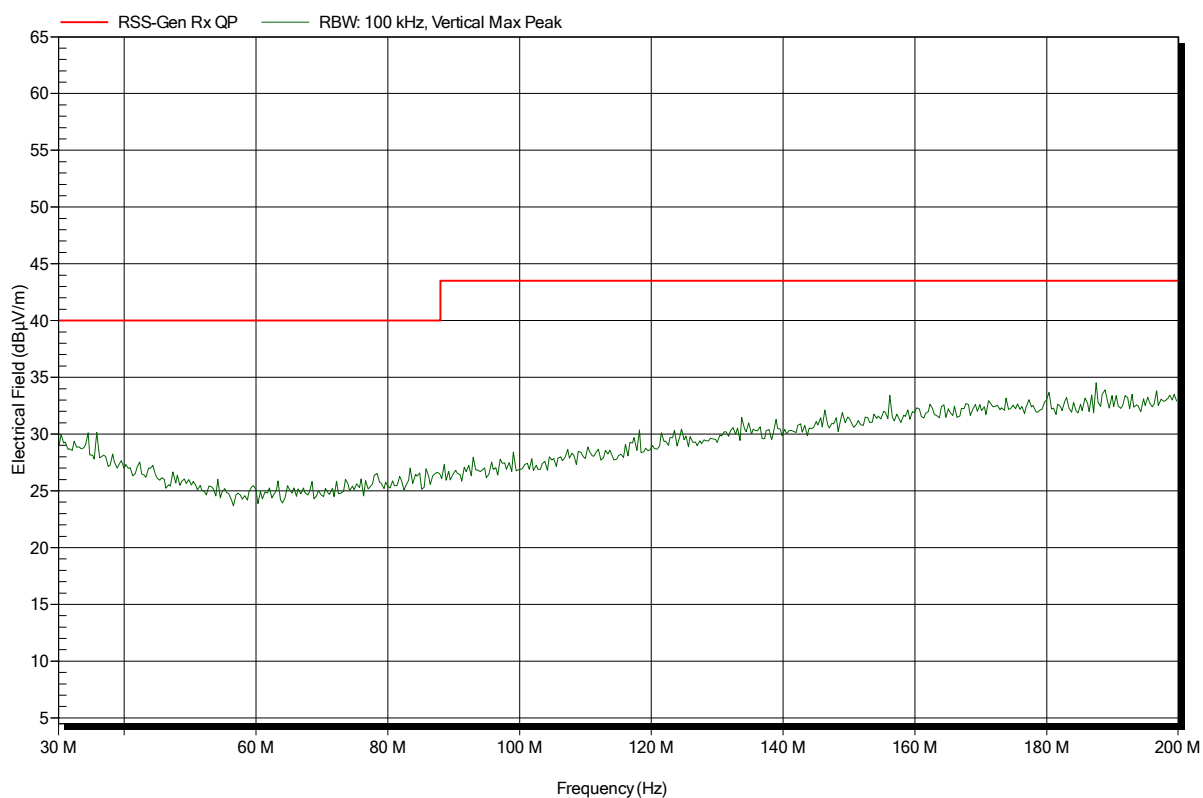


Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 92

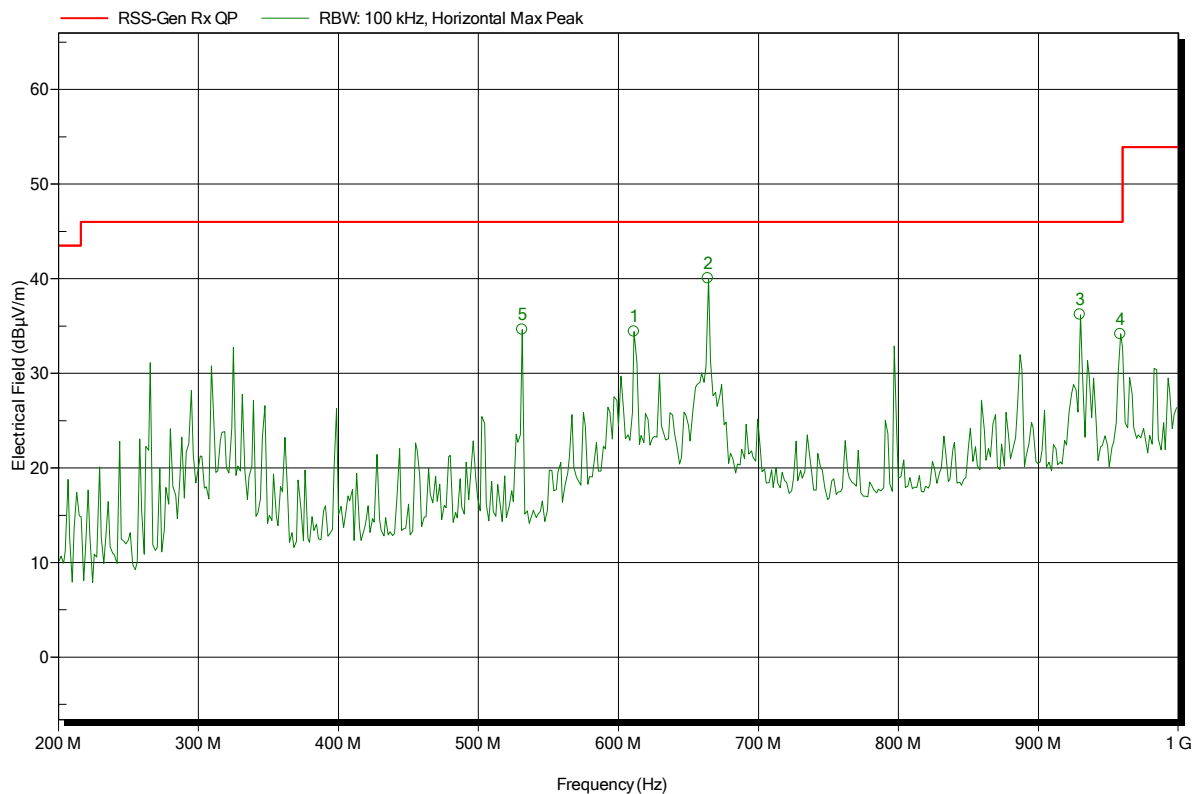


Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 93

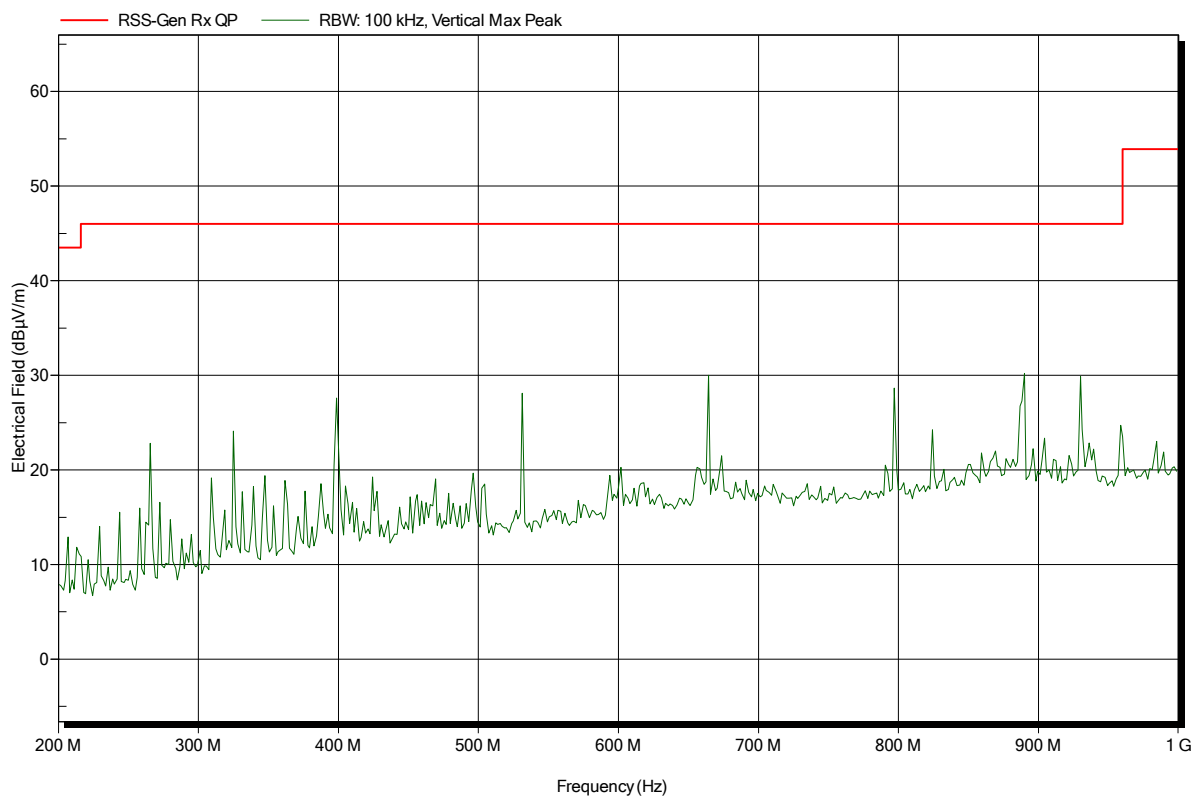


Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 94

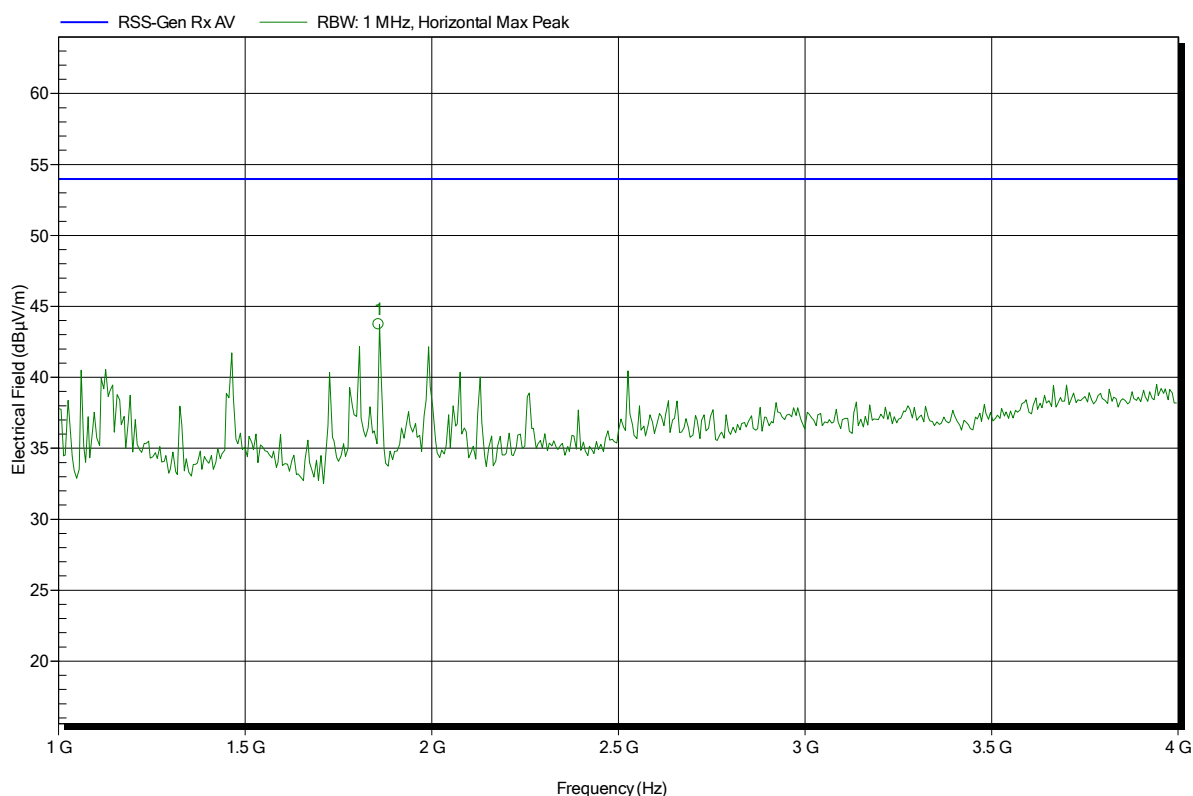


Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 95



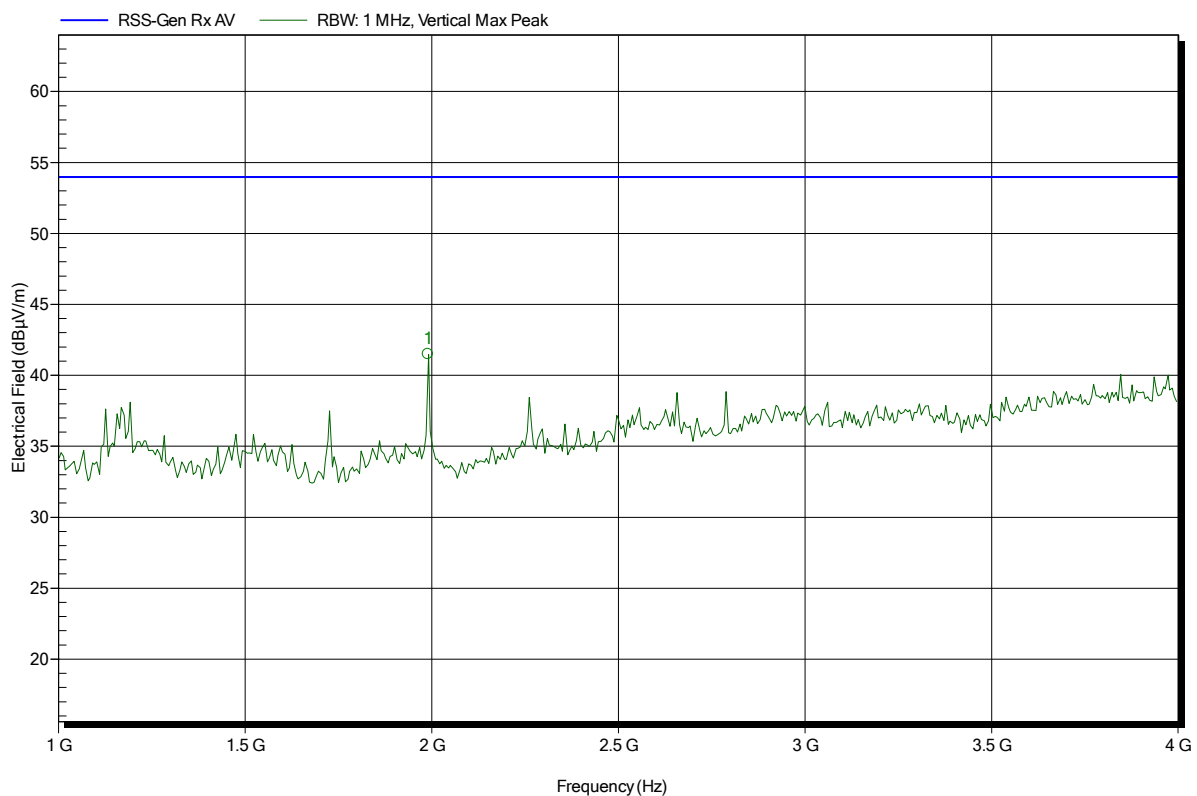
Frequency	Peak	Peak Limit	Peak Difference	Status
1.858 GHz	43.74 dBµV/m	53.98 dBµV/m	-10.24 dB	Pass

Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 97



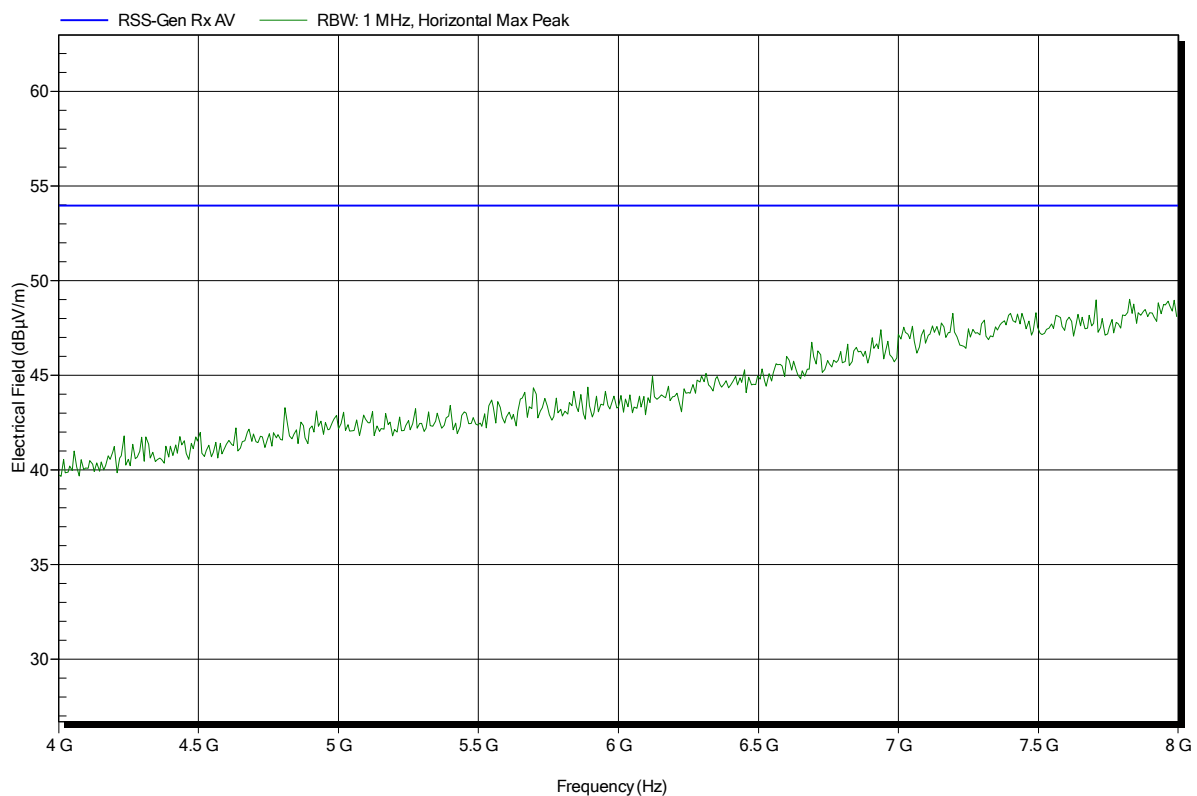
Frequency	Peak	Peak Limit	Peak Difference	Status
1.99 GHz	41.49 dBµV/m	53.98 dBµV/m	-12.49 dB	Pass

Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant:	Leica
EUT Name:	Laser Distance Meter
Model:	Leica DISTO S910
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.6 V DC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-09-05
Note:	

Index 96



Spurious emissions according to RSS-GEN

Project number: GOM-1407-4002

Applicant: Leica
 EUT Name: Laser Distance Meter
 Model: Leica DISTO S910
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.6 V DC lithium battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-09-05
 Note:

Index 98

