

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-1405-3836-TFC247BL-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	<div style="display: flex; justify-content: center; align-items: center;">   </div> <p style="text-align: center; margin-top: 5px;"> A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A </p>
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 E7100i
Additional Model(s)	None
Brand Name(s)	Leica DISTO
Hardware version	V04
Firmware / Software version	0309
	FCC-ID: RFF-LD1BT IC: 3177A-LD1BT
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: 2014-05-15

Date (s) of performance of tests: 2014-05-15 – 2014-05-16

Compiled by: Antje Bartusch

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

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

Date of issue: 2014-05-23

Total number of pages: 79

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	2014-05-23	Initial Release	

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1 Equipment (Test item) Description

Description	Laser Distance Meter	
Model	Leica DISTO E7100i	
Additional Model(s)	None	
Brand Name(s)	Leica DISTO	
Serial number	None	
Hardware version	V04	
Software / Firmware version	0309	
FCC-ID	RFF-LD1BT	
IC	3177A-LD1BT	
Equipment type	Radio module	
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	2 MHz	
Number of antennas	1	
Antenna	Type	integrated
	Model	2450AT18B100
	Manufacturer	Johanson Technology
	Gain	-0.5 dBi (manufacturer declaration)
Manufacturer	Flextronics Munkas u. 28 8660 Tab Hungary	
Power supply	V _{NOM}	3.0VDC
	V _{MIN}	--
	V _{MAX}	--
AC/DC-Adaptor	none	

1.1 Photos – Equipment External



EUT SIDE VIEW



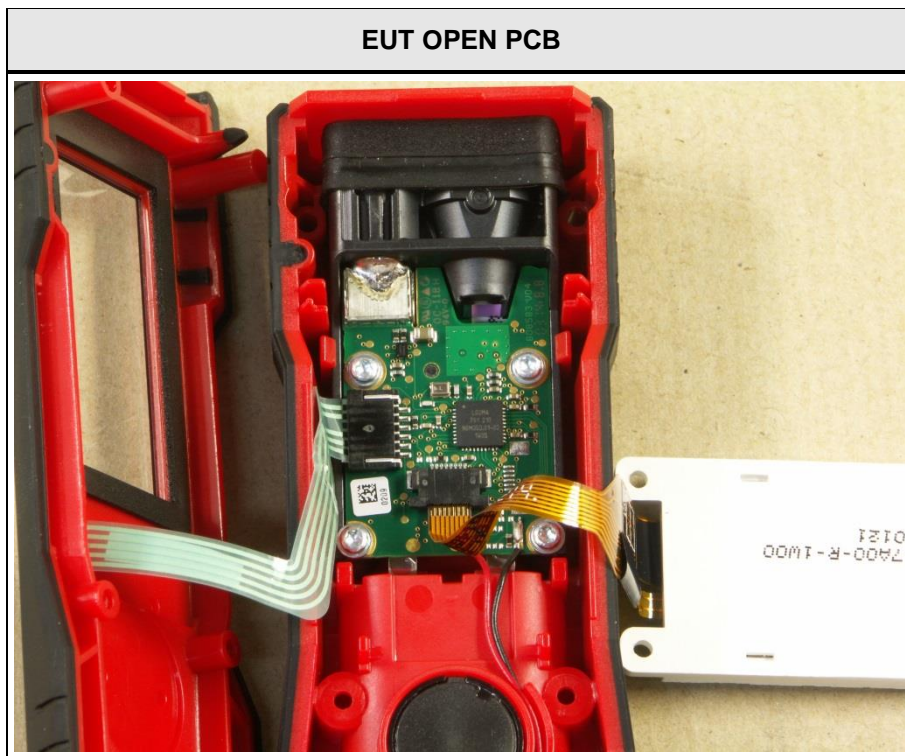
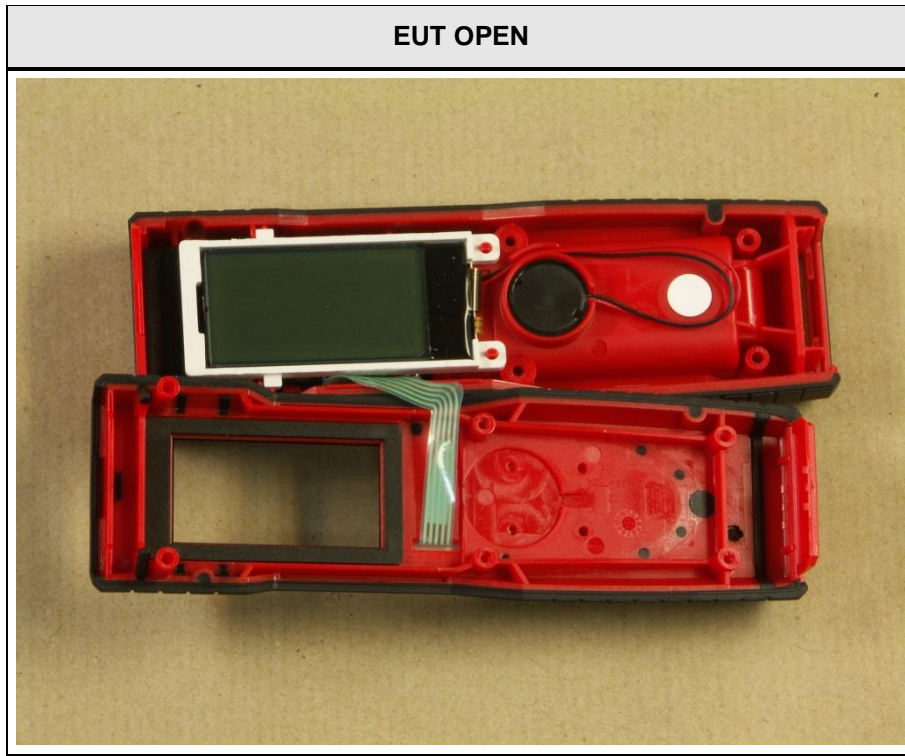
EUT TOP



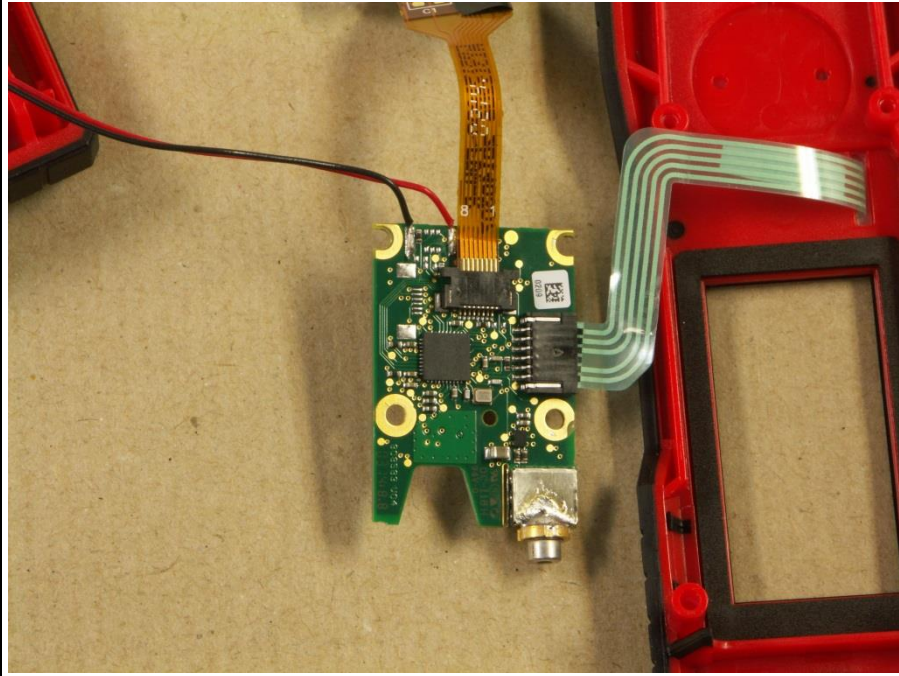
EUT BATTERY CHASE OPEN



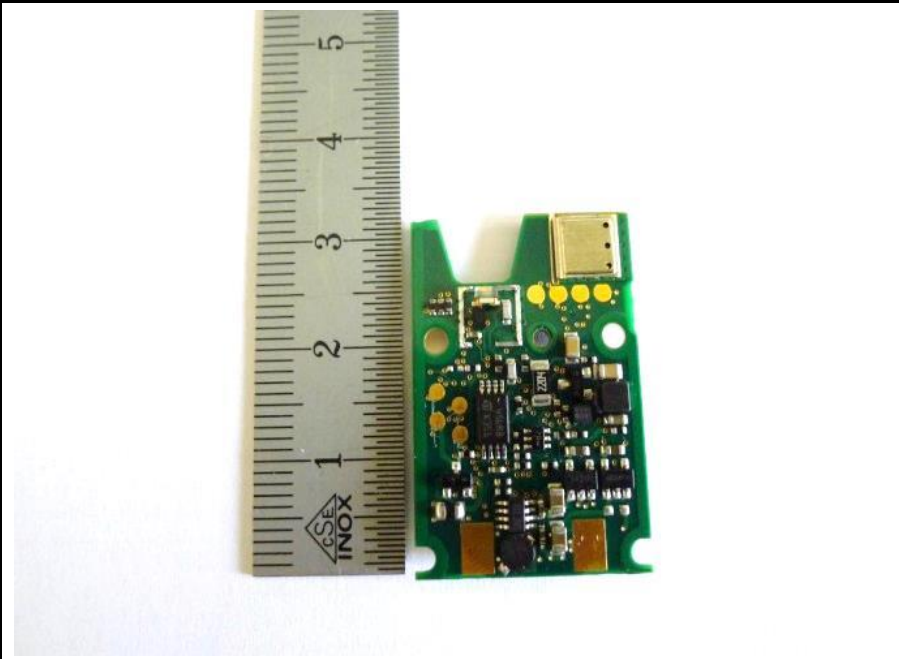
1.2 Photos – Equipment internal

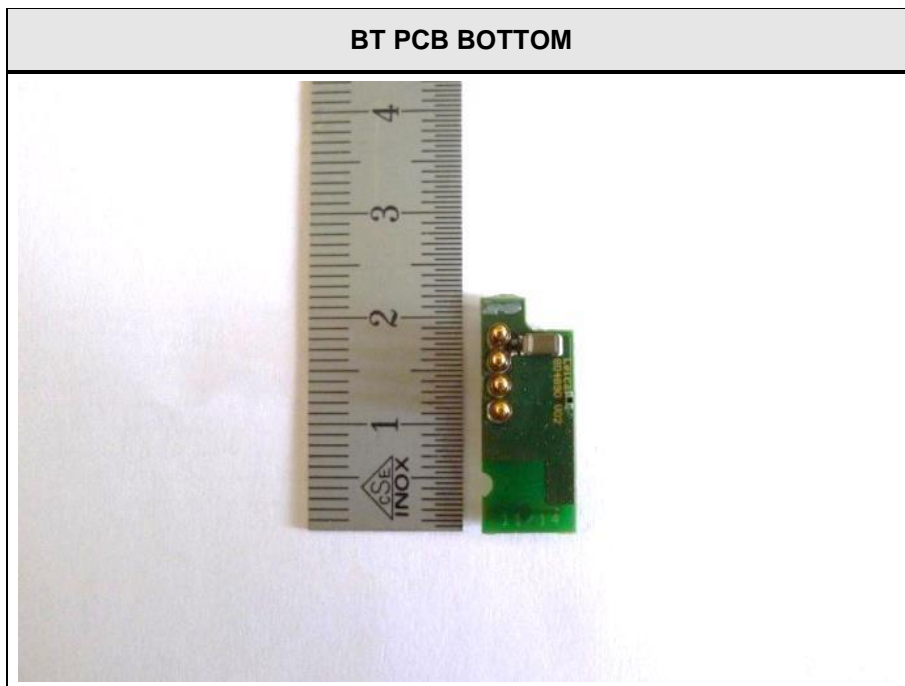
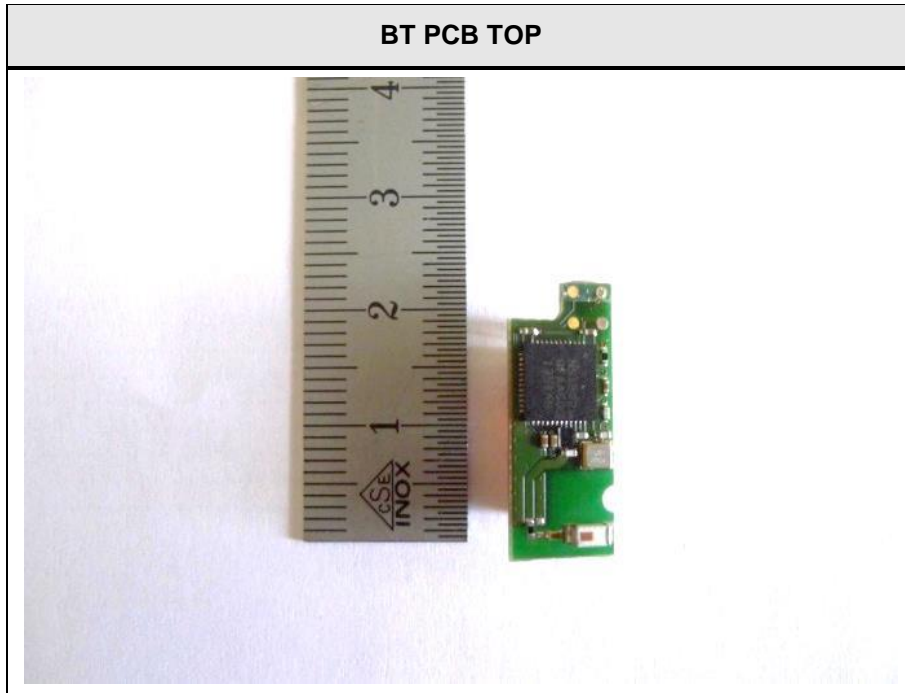


PCB TOP

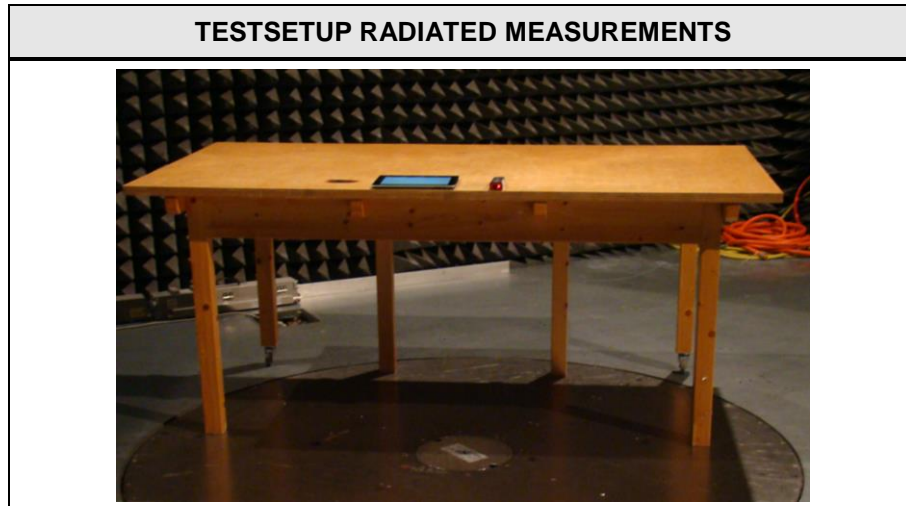


PCB BOTTOM





1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	I-PAD	Apple	-	-
<p>*Note: Use the following abbreviations:</p> <p>AE : Auxiliary/Associated Equipment, or</p> <p>SIM : Simulator (Not Subjected to Test)</p> <p>CABL : Connecting cables</p>				

1.5 Test Modes

Mode #	Description	
Transmit	General conditions:	EUT powered by laboratory power supply.
	Radio conditions:	Mode = standalone transmit Spreading = Hopping stopped (single hopping channel) Modulation = GFSK Duty cycle = 100 %
Receive	General conditions:	EUT powered by laboratory power supply.
	Radio conditions:	Mode = standalone receive (scan mode) Modulation = GFSK

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 5	EF00395	Verification	Verification
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 dB μ V. 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 dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

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

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:


$$\begin{array}{rclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading - FCC limit} & = & \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} & = & -9.5 \text{ dB} \end{array}$$

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	N/A	
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

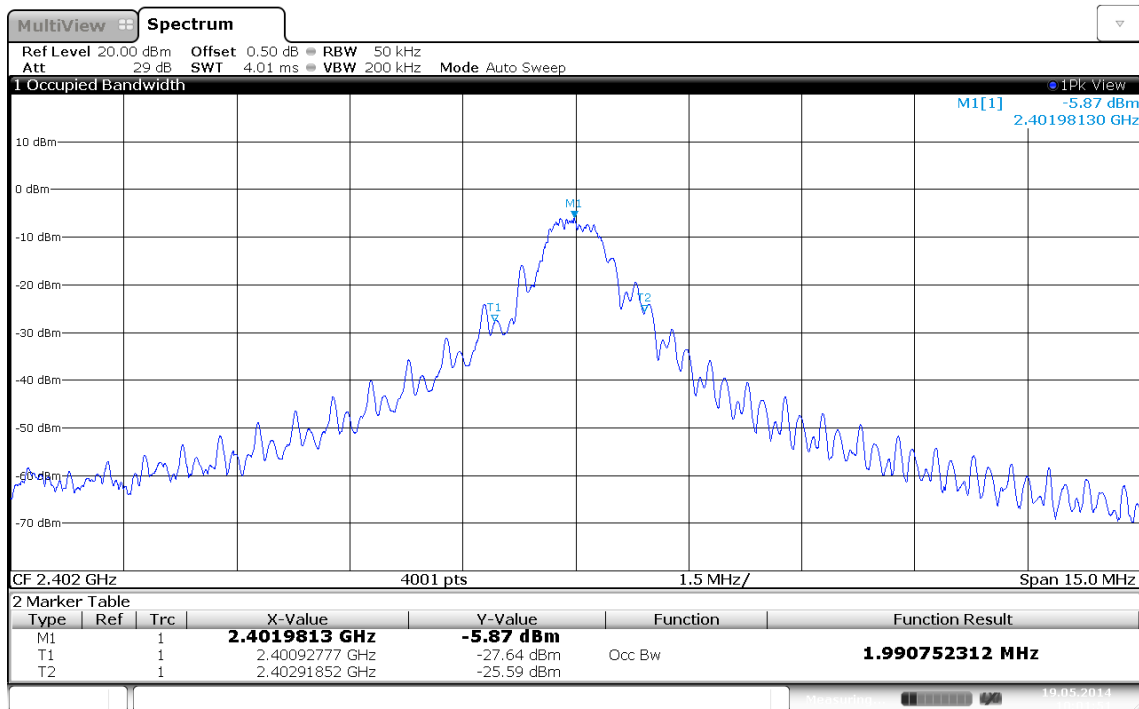
Occupied Bandwidth acc. IC RSS-Gen		Verdict: PASS	
Test according to measurement reference	Reference Method		
	RSS-Gen 4.6.1		
Test frequency range	Tested frequencies		
	$F_{LOW} / F_{MID} / F_{HIGH}$		
Limits			
None (Informational only)			
Test setup			
			
Test procedure			
1. EUT set to test mode (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 [MHz]
F_{LOW}	2402	Transmit	1.990
F_{MID}	2442	Transmit	2.088
F_{HIGH}	2480	Transmit	2.111
Comments:			

Occupied Bandwidth – F_{Low}

Occupied Bandwidth acc, to RSS-Gen

Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-05-19
 Verdict: NONE (INFORMATION ONLY)
 Note 1: A spectrum analyzer with an integrated 99% power bandwidth funktion is used
 Note 2: conducted measurement



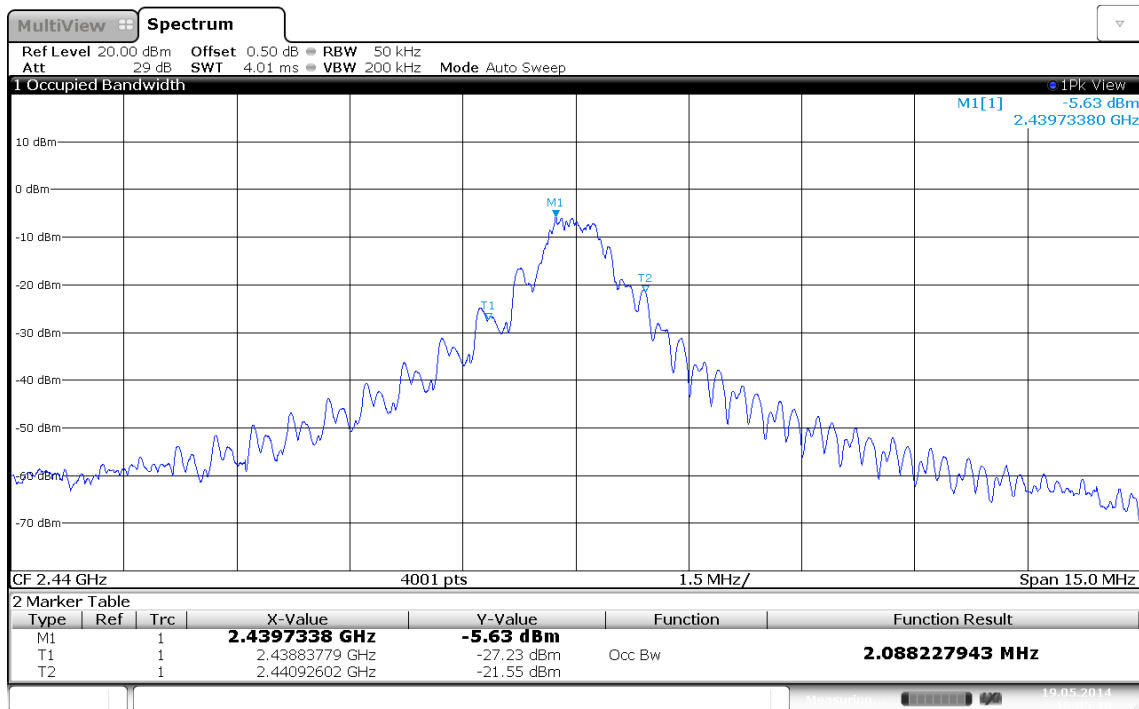
Occupied bandwidth: 1990.8 KHz
 Date: 19.MAY.2014 10:01:51

Occupied Bandwidth – F_{MID}

Occupied Bandwidth acc, to RSS-Gen

Project Number: G0M-1405-3836

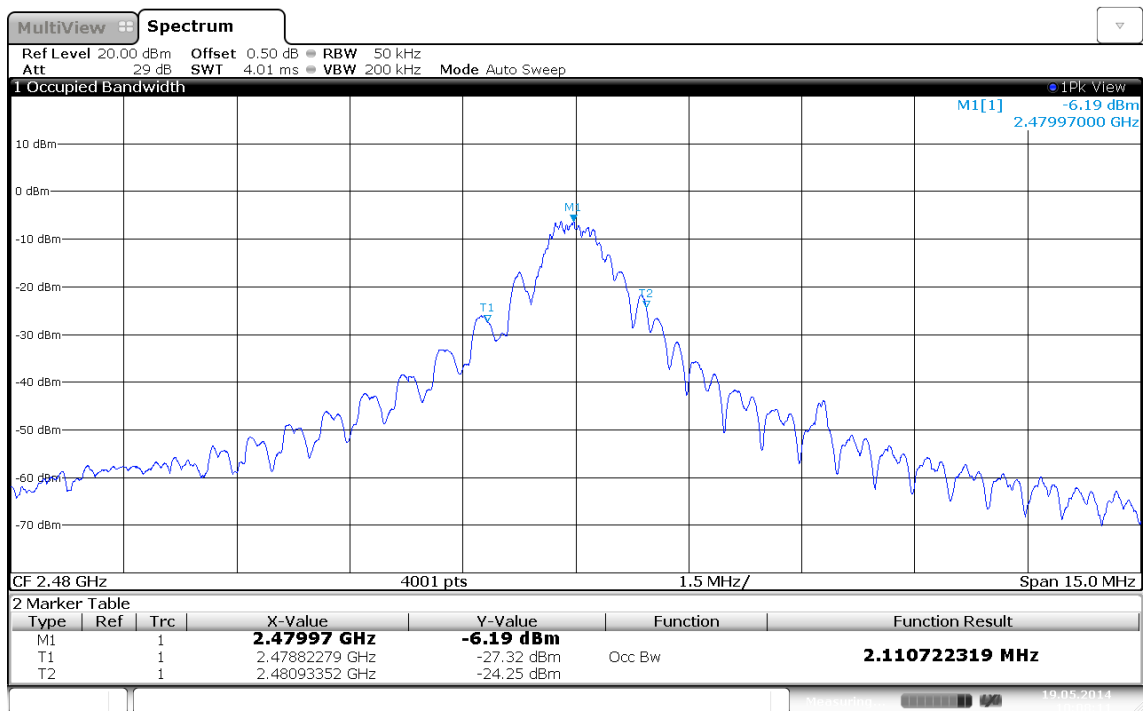
Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2440 MHz, modulated
 Test Date: 2014-05-19
 Verdict: NONE (INFORMATION ONLY)
 Note 1: A spectrum 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-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-05-19
 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

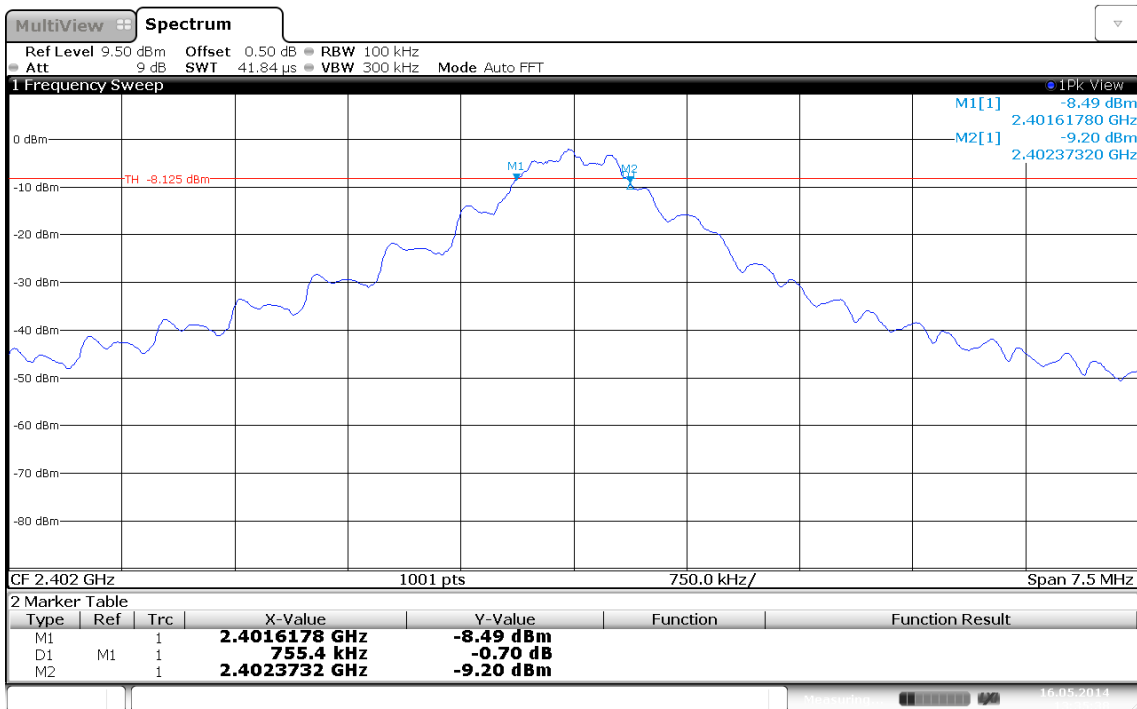
6dB Bandwidth acc. FCC 15.247 / IC RSS-210				Verdict: PASS	
EUT requirement rule parts and clause	Reference				
	FCC 15.247(a)(2) / IC RSS-210 A8.2				
Test according to measurement reference	Reference Method				
	FCC KDB Publication No. 558074				
Test frequency range	Tested frequencies				
	$F_{LOW} / F_{MID} / F_{HIGH}$				
Limits					
Limit					
≥ 500kHz					
Test setup					
					
Test procedure					
<ol style="list-style-type: none"> 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	755.4	500	PASS
F_{MID}	2442	Transmit	674.5	500	PASS
F_{HIGH}	2480	Transmit	658.0	500	PASS
Comments:					

6 dB Bandwidth – F_{Low}

Minimum 6 dB Bandwidth acc, to FCC 15.247

Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted



6 dB bandwidth: 755.4 kHz > 500 kHz; verdict: PASS
 Date: 16.MAY.2014 13:35:38

6 dB Bandwidth – F_{MID}

Minimum 6 dB Bandwidth acc, to FCC 15.247

Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2440 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted



6 dB bandwidth: 674.5 kHz > 500 kHz; verdict: PASS
 Date: 16.MAY.2014 13:38:46

6 dB Bandwidth – F_{HIGH}

Minimum 6 dB Bandwidth acc, to FCC 15.247


Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Procedure 8.1 DTS (558074 D01 Meas Guidance)
 Note 2: Minimum 6 dB Bandwidth conducted




6 dB bandwidth: 658 KHz > 500 KHz; verdict: PASS
 Date: 16.MAY.2014 13:42:49


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 \Rightarrow 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							
							
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	$V_{nom} = 3.3V$	Transmit	-1.59	0.001	30	-31.59
F_{LOW}	2402	$V_{min} = 2.0V$	Transmit	-1.88	0.001	30	-31.88
F_{LOW}	2402	$V_{max} = 3.6V$	Transmit	-2.28	0.001	30	-32.28
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						
						
Test procedure						
<ol style="list-style-type: none"> 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]	Limit [dBm/3kHz]	Margin [dB]
F_{LOW}	2402	Transmit	2401.982	-1.81	8.0	-09.81
F_{MID}	2442	Transmit	2439.982	-2.00	8.0	-10.00
F_{HIGH}	2480	Transmit	2479.978	-2.36	8.0	-10.36
Comments:						

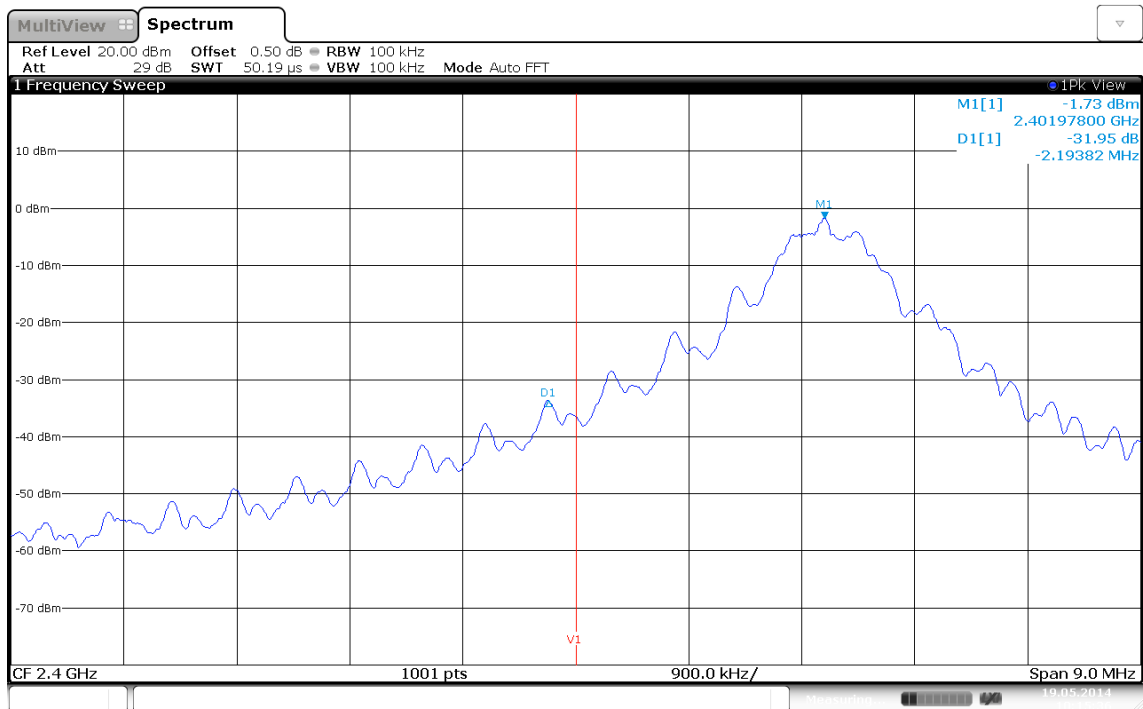
3.6 Test Conditions and Results – Band edge compliance

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					
					
Test procedure					
<ol style="list-style-type: none"> 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	-31.95	-20	-11.95
F_{HIGH}	2480	Transmit	-46.25	-20	-26.25
Comments:					

Band-edge compliance
Band-edge compliance acc, to FCC 15.247

Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-05-19
 Verdict: PASS
 Note 1: Procedure 13.2 Marker-delta method (558074 D01 Meas Guidance)
 Note 2: lower Band-edge, conducted measurement

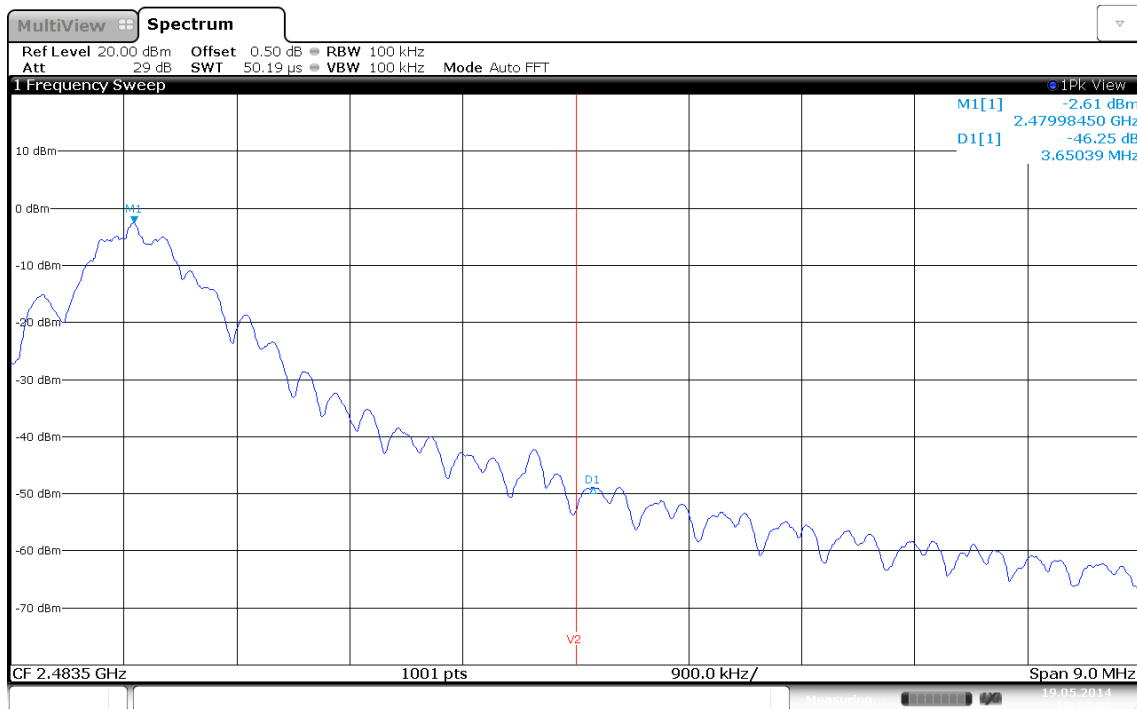


Limit: Marker Delta value >20 dB; Result: PASS
 Date: 19.MAY.2014 10:15:36

Band-edge compliance
Band-edge compliance acc, to FCC 15.247

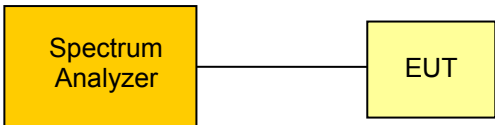
Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-05-19
 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: 19.MAY.2014 10:13:01

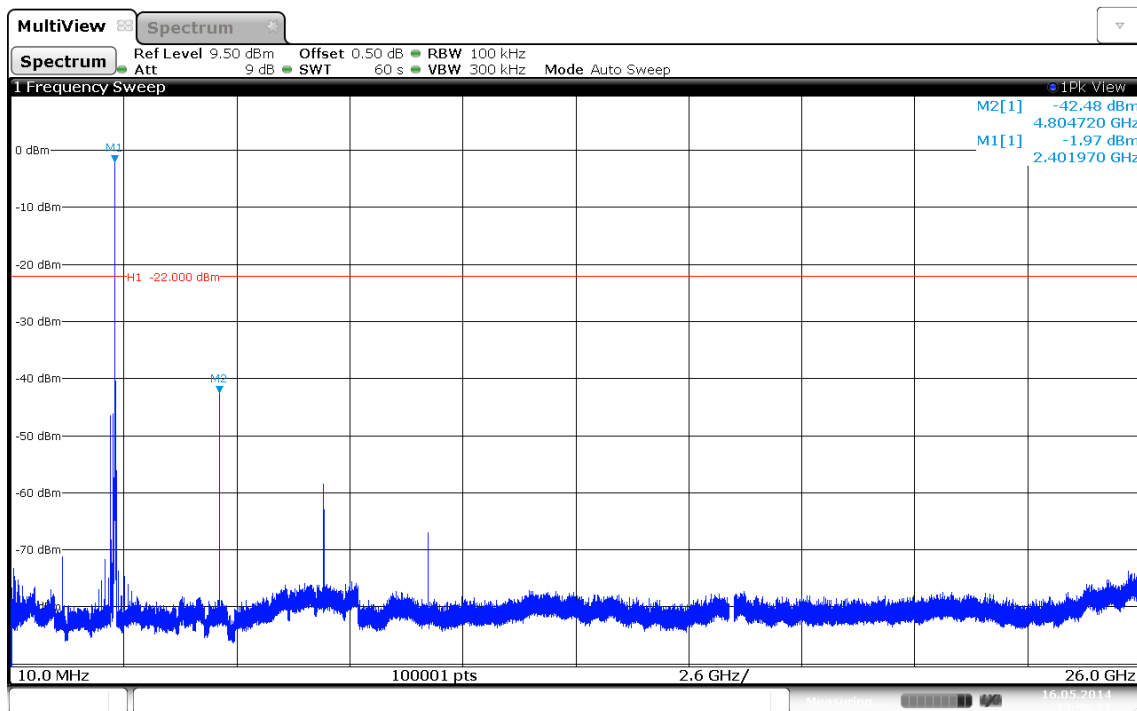
3.7 Test Conditions and Results – Conducted spurious emissions

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							
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>							
Test procedure							
<ol style="list-style-type: none"> 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	BT LE	4804.720	-42.48	-1.97	-22.00	-20.48
F _{LOW}	2402	BT LE	4880.870	-45.35	-1.82	-22.00	-23.35
F _{HIGH}	2480	BT LE	4960.920	-46.73	-3.16	-22.00	-24.73
Comments:							

Conducted spurious emissions – F_{Low}
Spurious Emissions acc, to FCC 15.247

Project Number: G0M-1405-3836

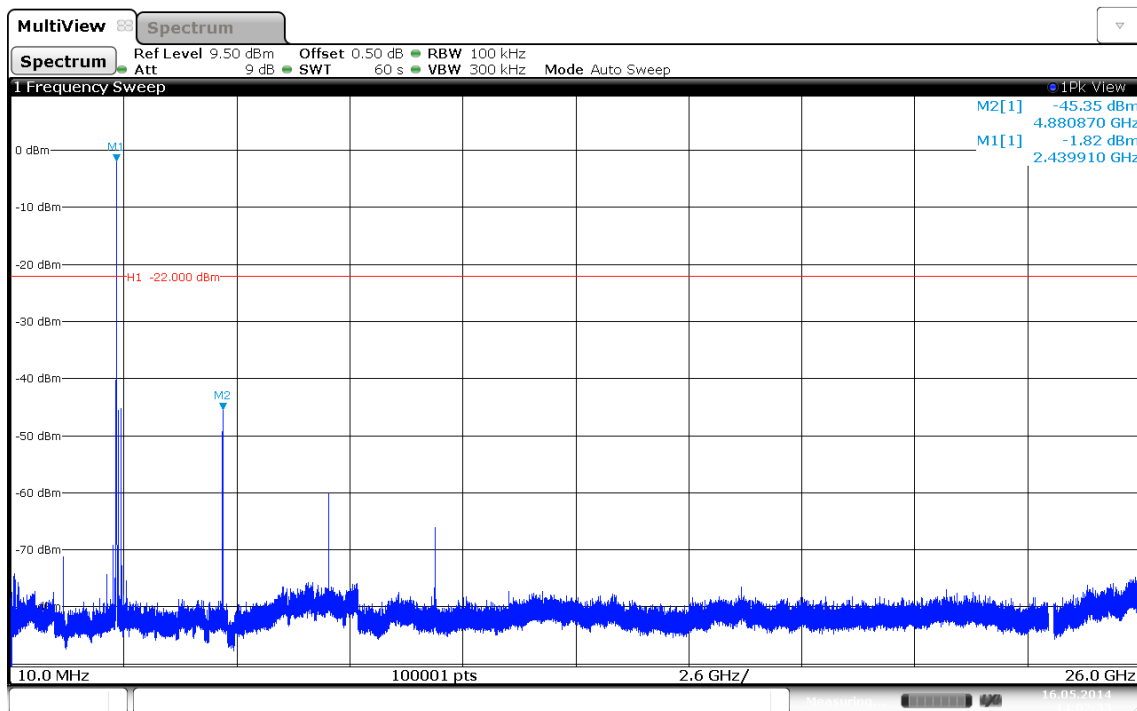
Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2402 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
 Note 2: conducted measurement



Conducted spurious emissions – F_{MID}
Spurious Emissions acc, to FCC 15.247

Project Number: G0M-1405-3836

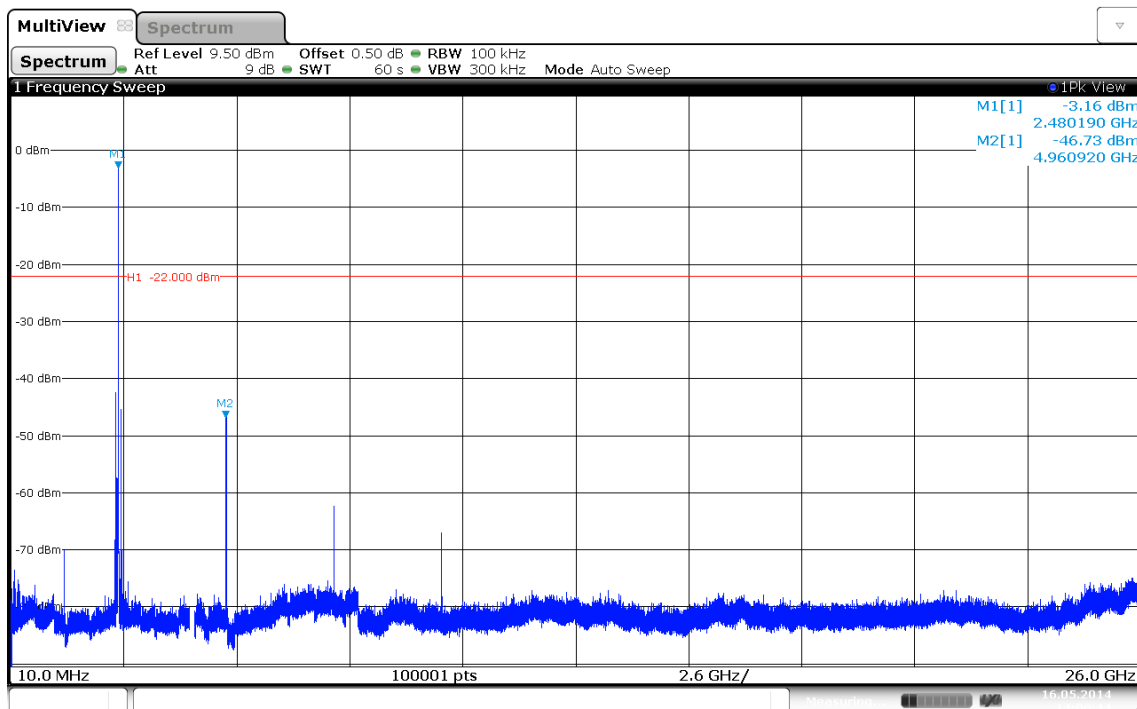
Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2440 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
 Note 2: conducted measurement



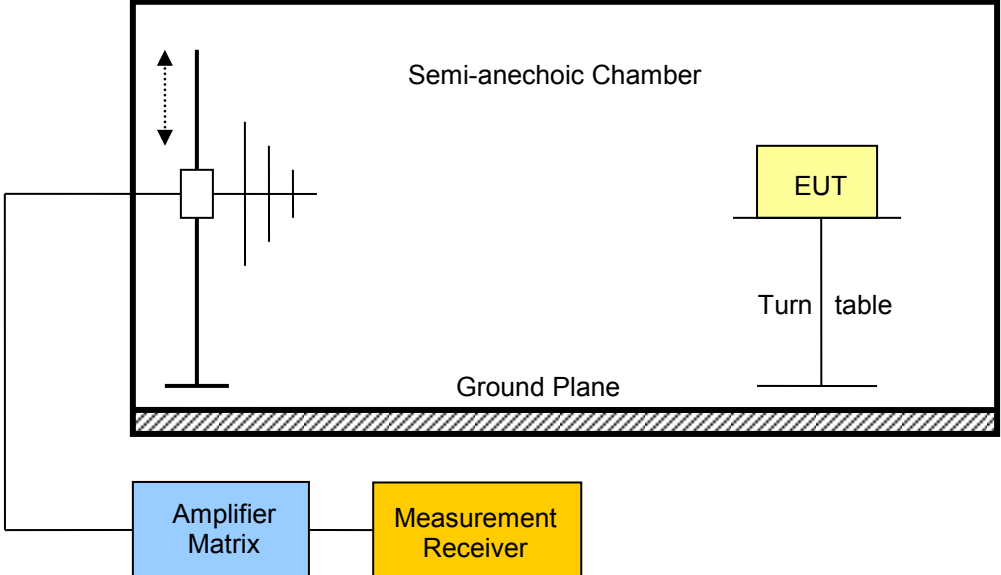
Conducted spurious emissions – F_{HIGH}
Spurious Emissions acc, to FCC 15.247

Project Number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Wilfried Treffke
 Test Conditions: Tnom / Vnom
 Mode: Tx, BTLE, 2480 MHz, modulated
 Test Date: 2014-05-16
 Verdict: PASS
 Note 1: Spurious in non-restricted frequency bands (558074 D01 Meas Guidance)
 Note 2: conducted measurement

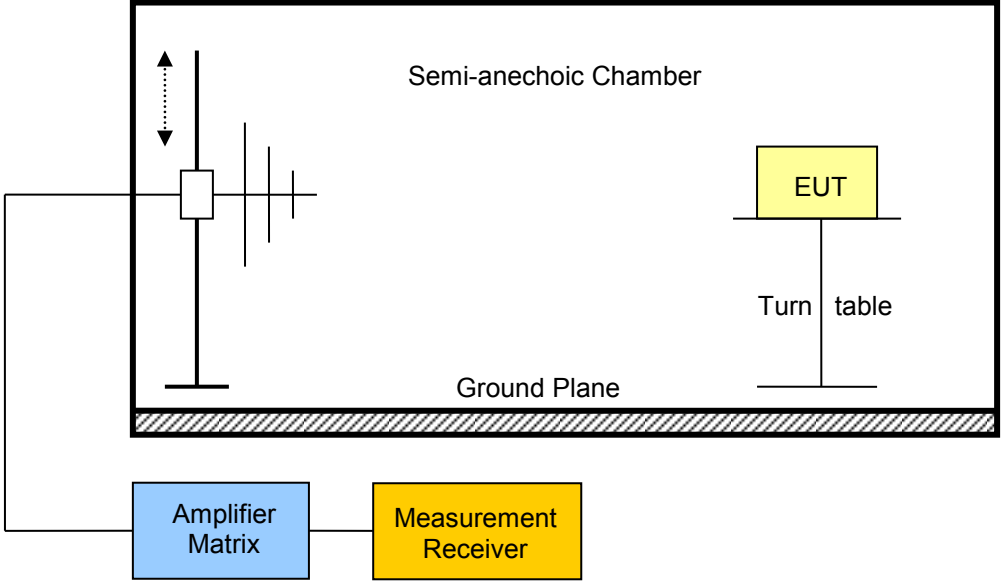


3.8 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. 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 [μ V/m]	Limit [dB μ V/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	
<p>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)).</p> <p>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.</p>					
Test setup					
 <p>The diagram illustrates the test setup. A Semi-anechoic Chamber is shown with a Ground Plane at the bottom. Inside the chamber, an Amplifier Matrix is connected to a Measurement Receiver. The Equipment Under Test (EUT) is placed on a Turn table within the chamber. A vertical antenna is positioned to the left of the chamber, with a dashed arrow indicating its vertical movement.</p>					

Test procedure									
<ol style="list-style-type: none"> 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 [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Limit dist. [m]*	Margin [dB]
F _{LOW}	2402	Transmit	4805	59.16	pk	hor	74.00	3	-14.84
F _{LOW}	2402	Transmit	4805	52.02	avg	hor	54.00	3	-01.98
F _{LOW}	2402	Transmit	4805	58.17	pk	ver	74.00	3	-15.83
F _{LOW}	2402	Transmit	4805	51.30	avg	ver	54.00	3	-02.70
F _{MID}	2440	Transmit	4881	57.11	pk	hor	74.00	3	-16.89
F _{MID}	2440	Transmit	4881	50.09	avg	hor	54.00	3	-03.91
F _{MID}	2440	Transmit	4881	59.45	pk	ver	74.00	3	-14.55
F _{MID}	2440	Transmit	4881	53.01	avg	ver	54.00	3	-00.99
F _{HIGH}	2480	Transmit	2483.6	52.46	pk	hor	74.00	3	-21.54
F _{HIGH}	2480	Transmit	2483.6	32.43	RMS	hor	54.00	3	-21.57
F _{HIGH}	2480	Transmit	4961	53.89	pk	ver	74.00	3	-20.11
F _{HIGH}	2480	Transmit	4961	46.68	avg	ver	54.00	3	-07.32
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 [μ V/m]	Limit [dB μ V/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				
 <p>The diagram illustrates the test setup within a Semi-anechoic Chamber. A Ground Plane is located at the bottom. An Amplifier Matrix (blue box) is connected to a Measurement Receiver (yellow box) outside the chamber. Inside the chamber, an antenna is positioned to receive signals from the EUT (Equipment Under Test, yellow box) which is mounted on a Turn table. The chamber walls are shown with vertical lines representing absorbers.</p>				

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 [db μ V/m]	Emission Level [μ V/m]	Det.	Limit [μ V/m]	Margin [μ V/m]
F _{MID}	2440	7888	48.79	275.11	pk	500	-224.89

Comments:

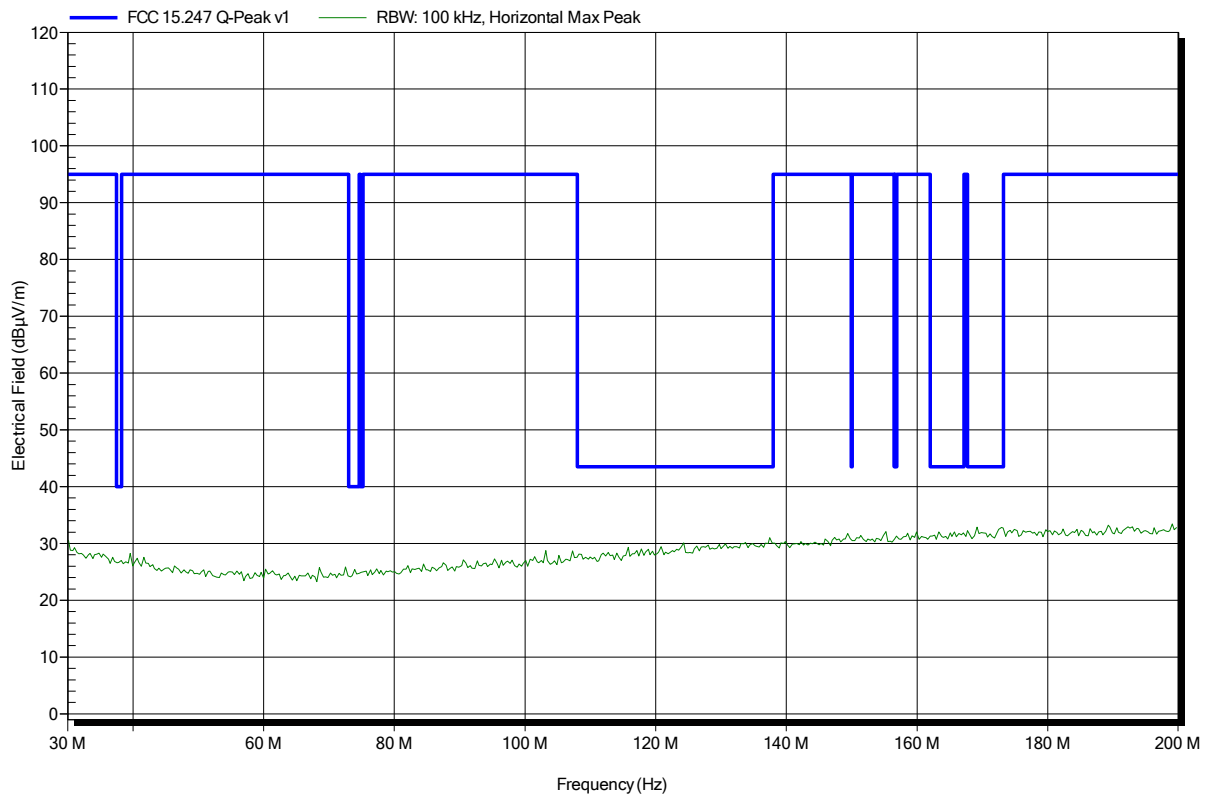
ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-16
Note:	worst case

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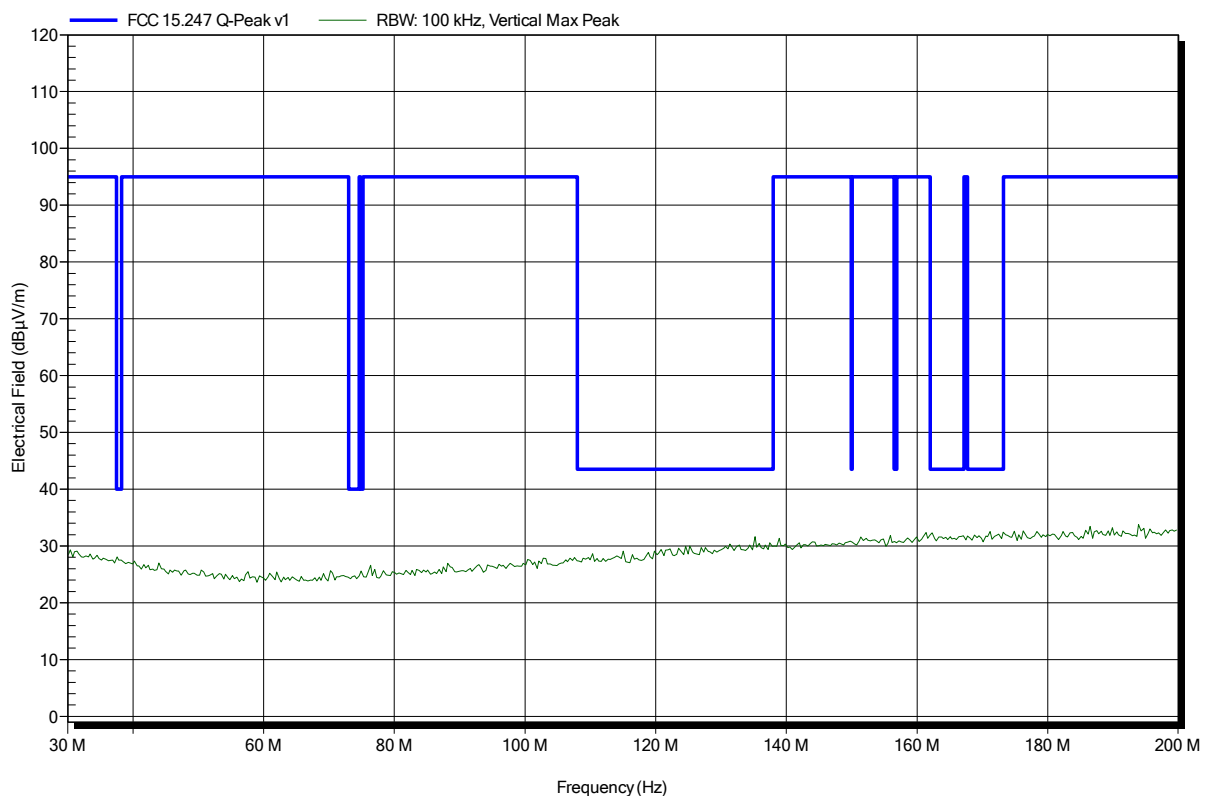


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-16
Note:	worst case

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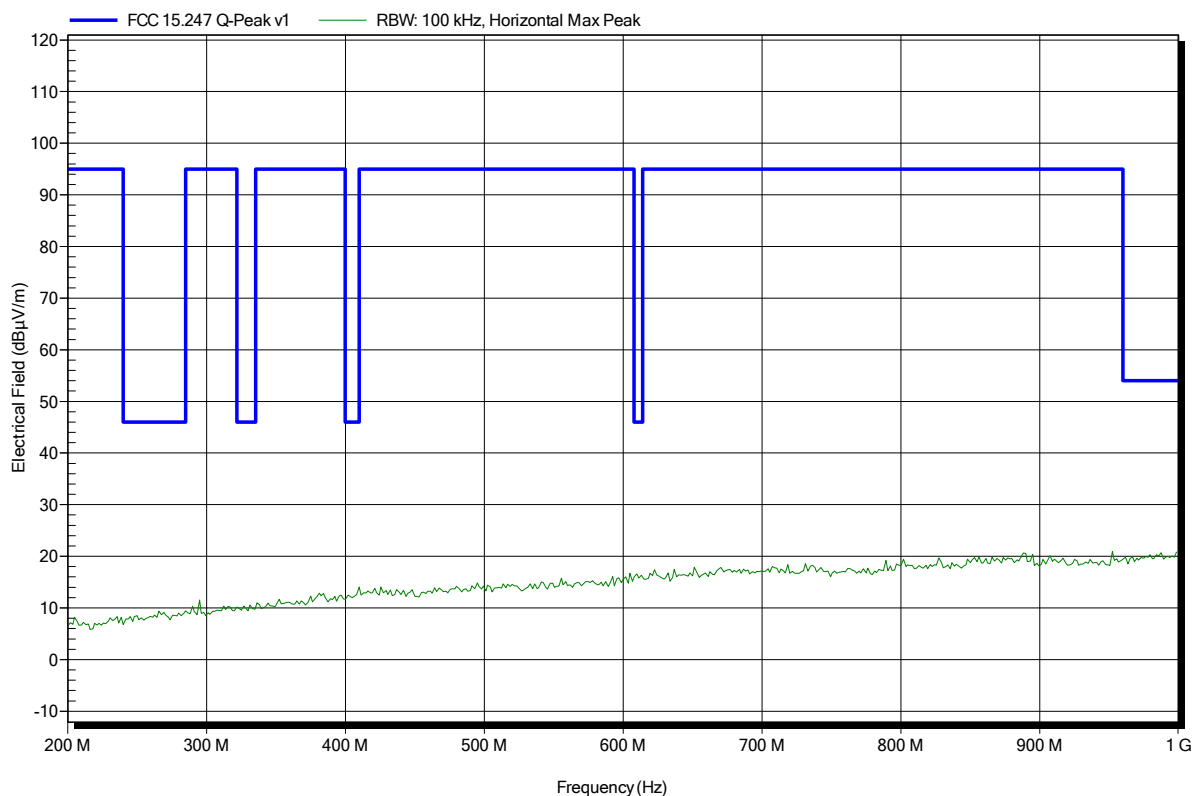


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-16
Note:	worst case

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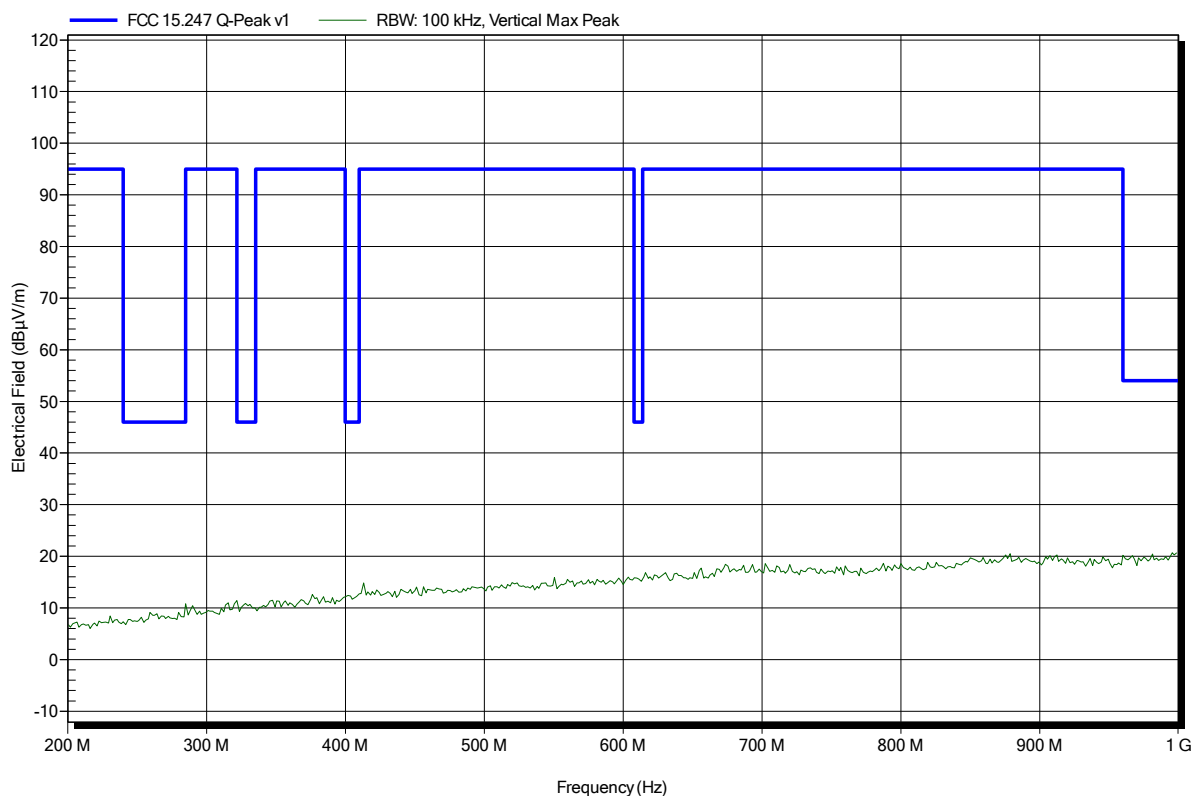


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-16
Note:	worst case

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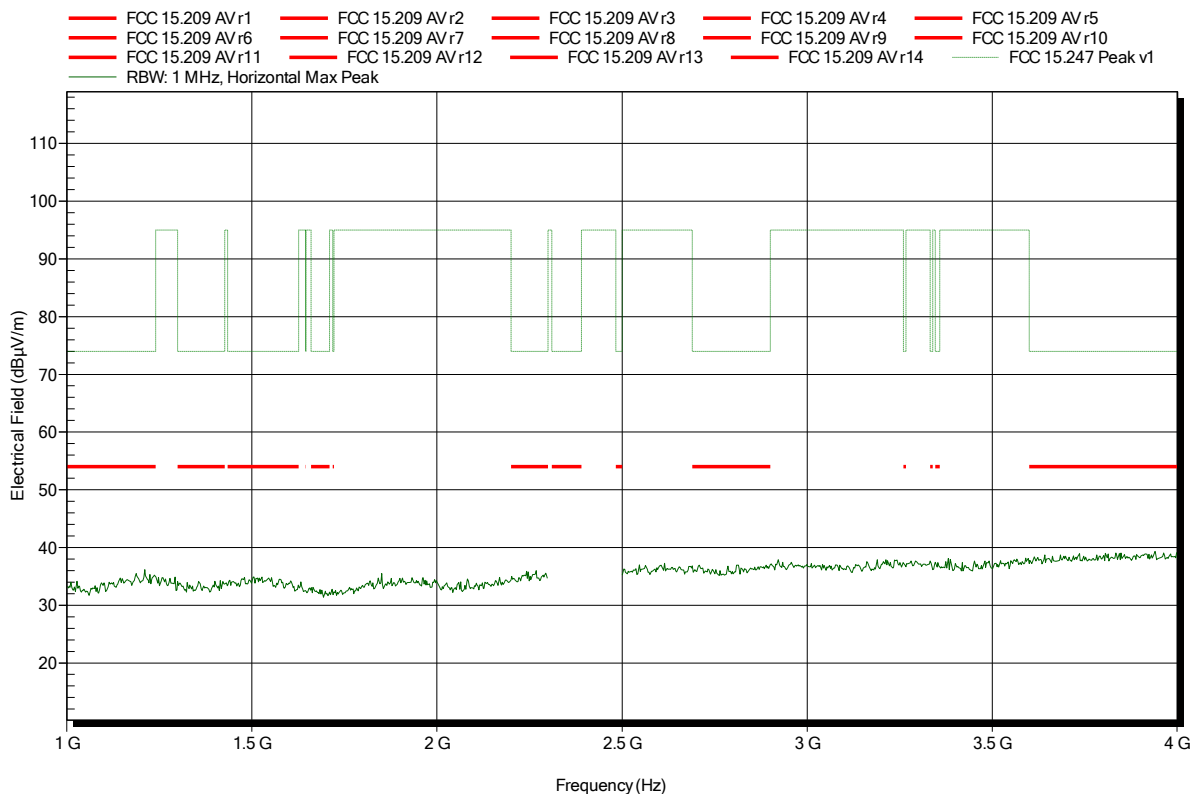


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

Index 3

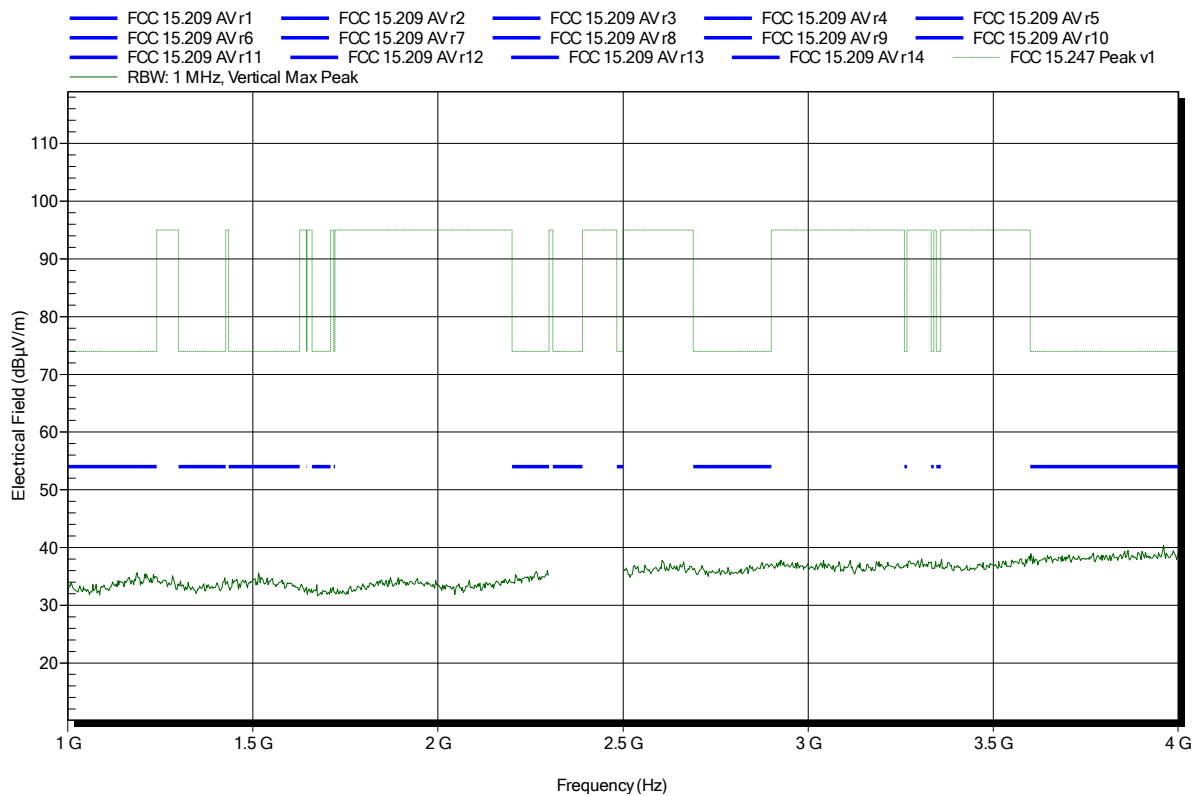


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

Index 7

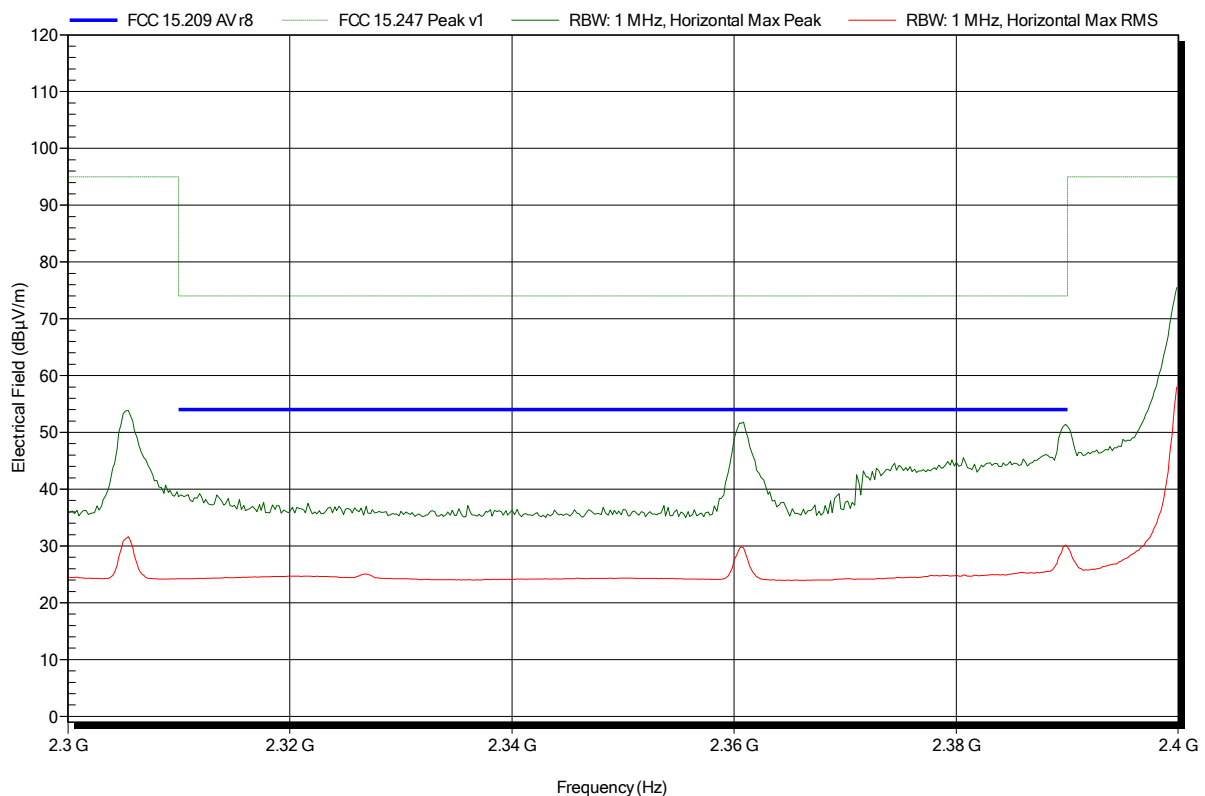


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-15
Note:	lower bandedge

Index 4

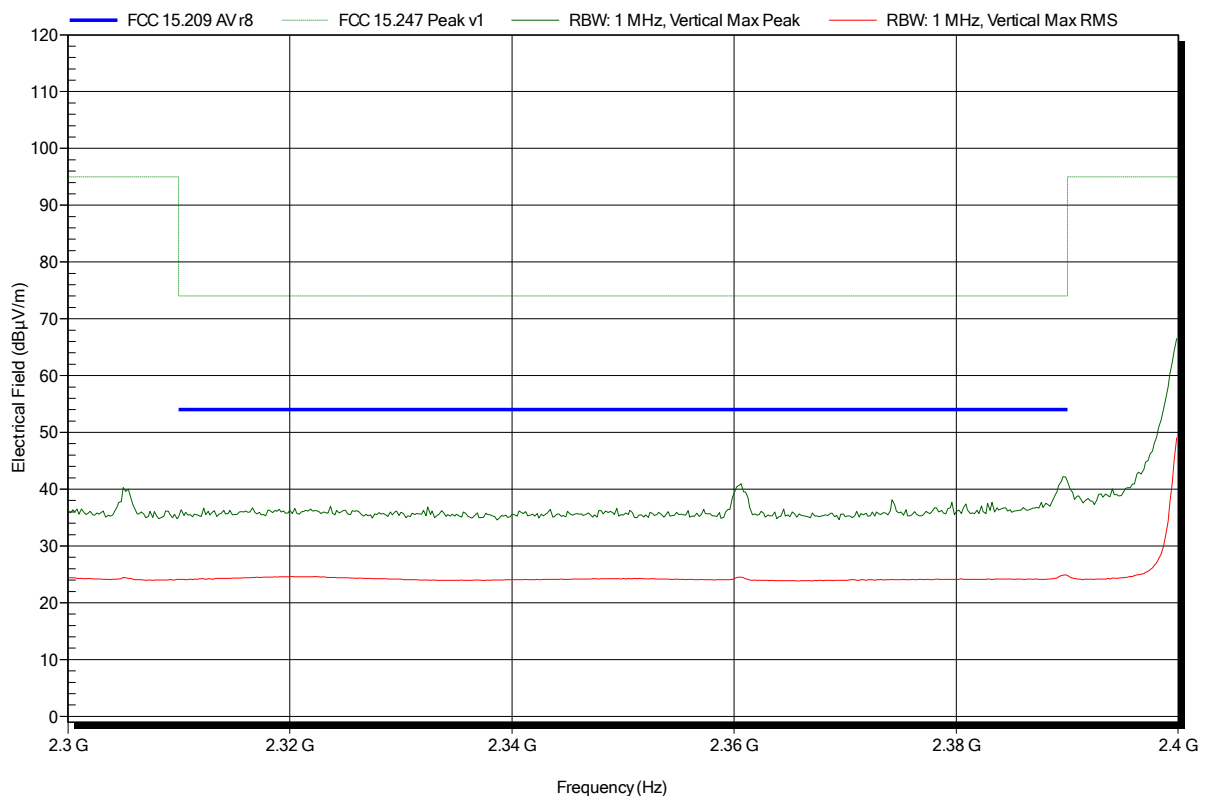


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-15
Note:	lower bandedge

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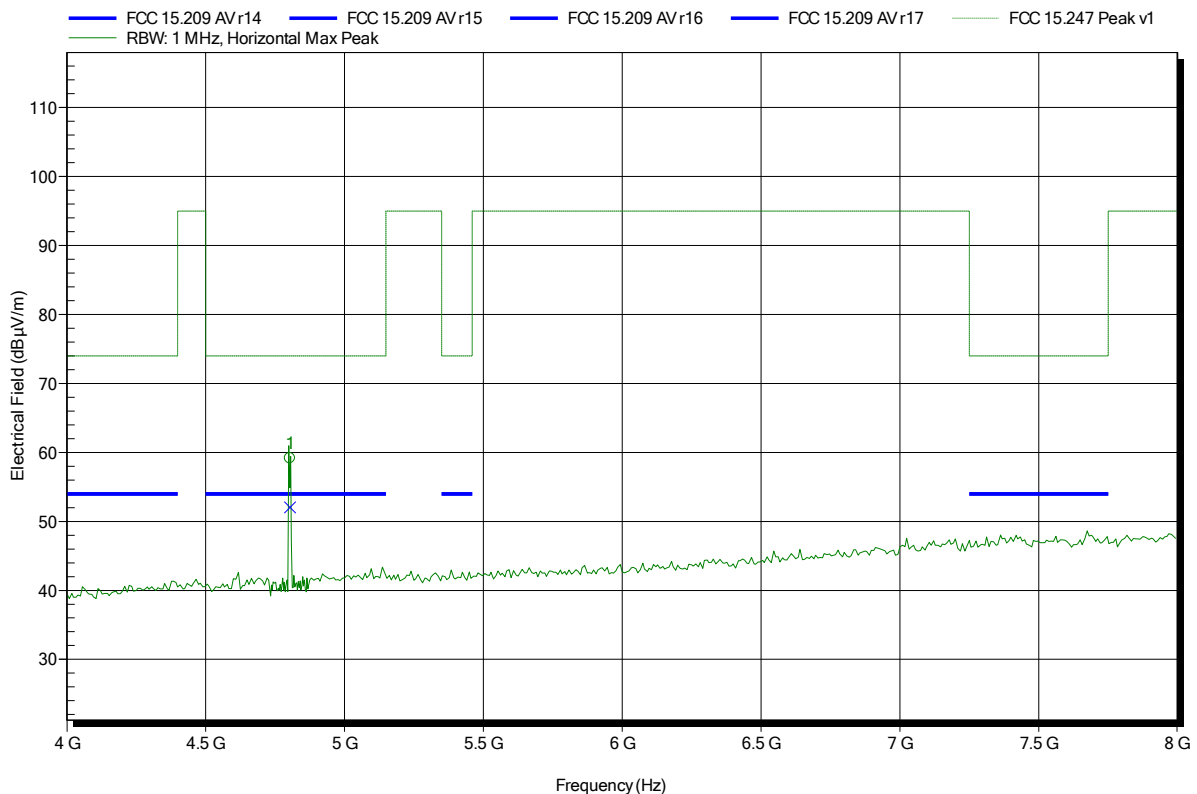


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

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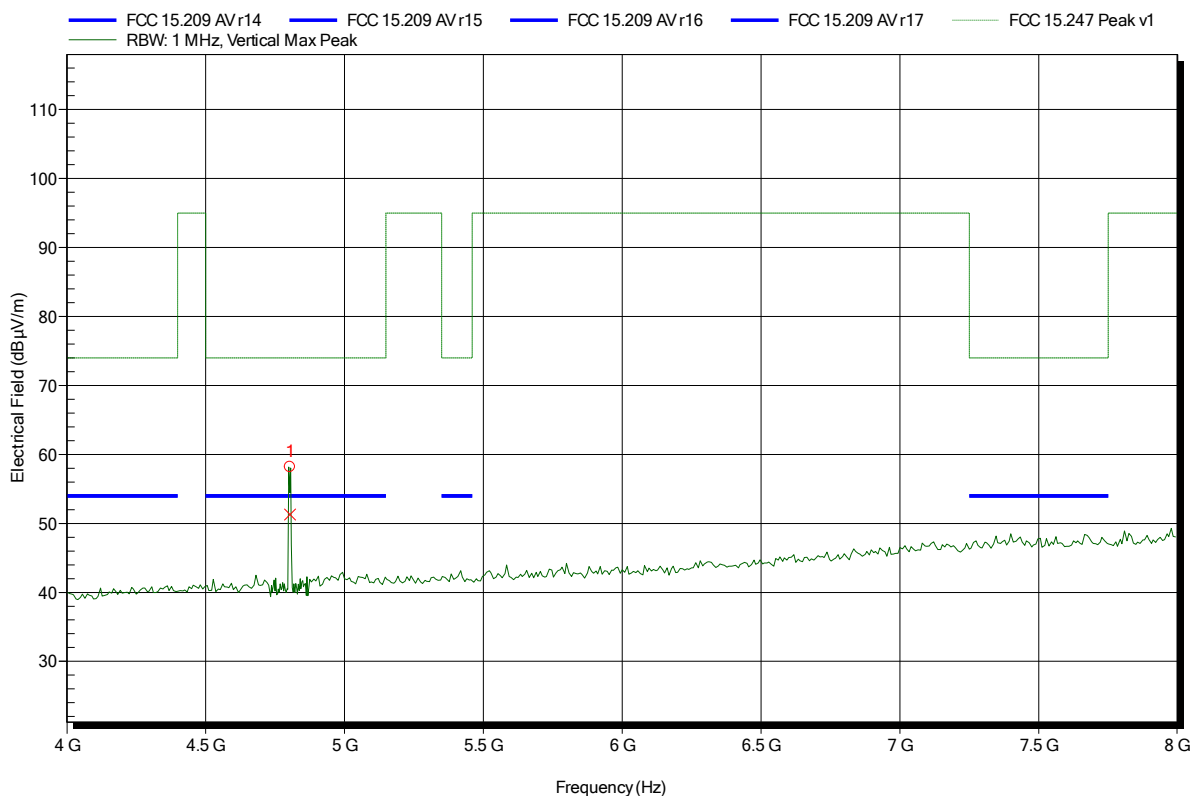
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.805 GHz	59.16 dBµV/m	74 dBµV/m	-14.84 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.805 GHz	52.02 dBµV/m	54 dBµV/m	-1.98 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

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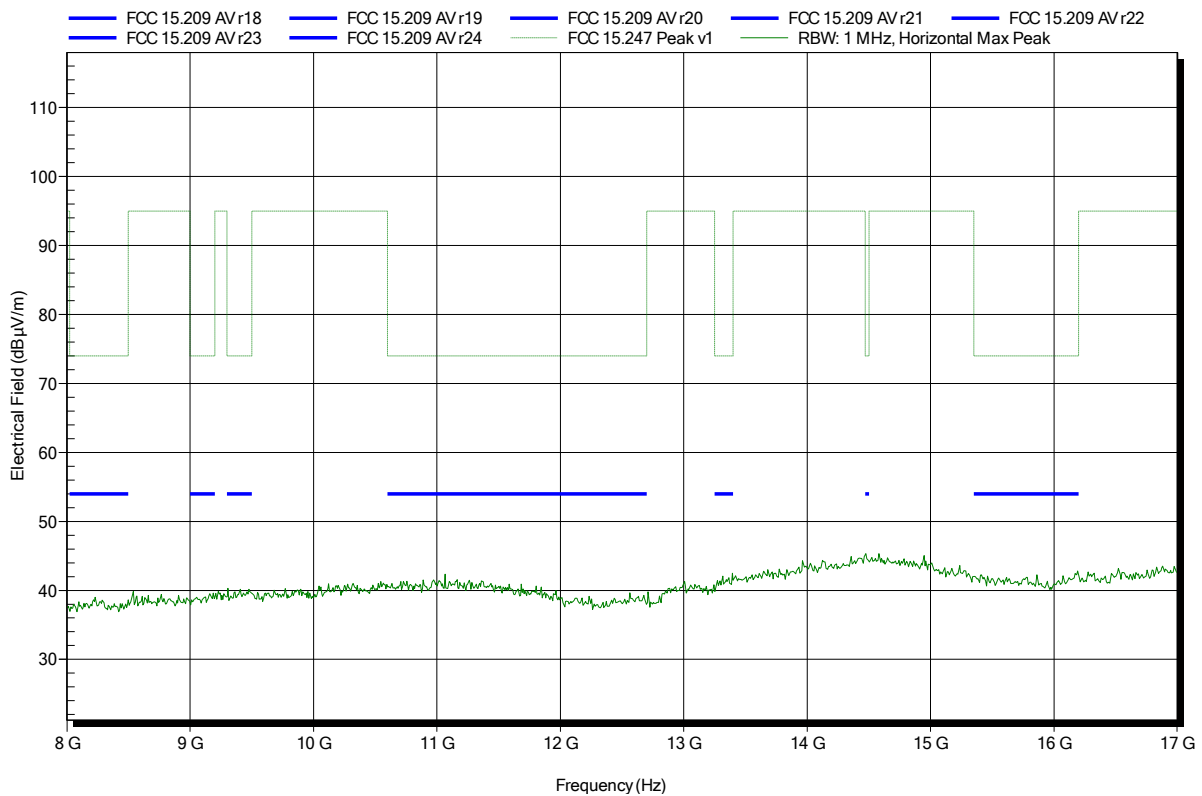
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.805 GHz	58.17 dBµV/m	74 dBµV/m	-15.83 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.805 GHz	51.3 dBµV/m	54 dBµV/m	-2.7 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

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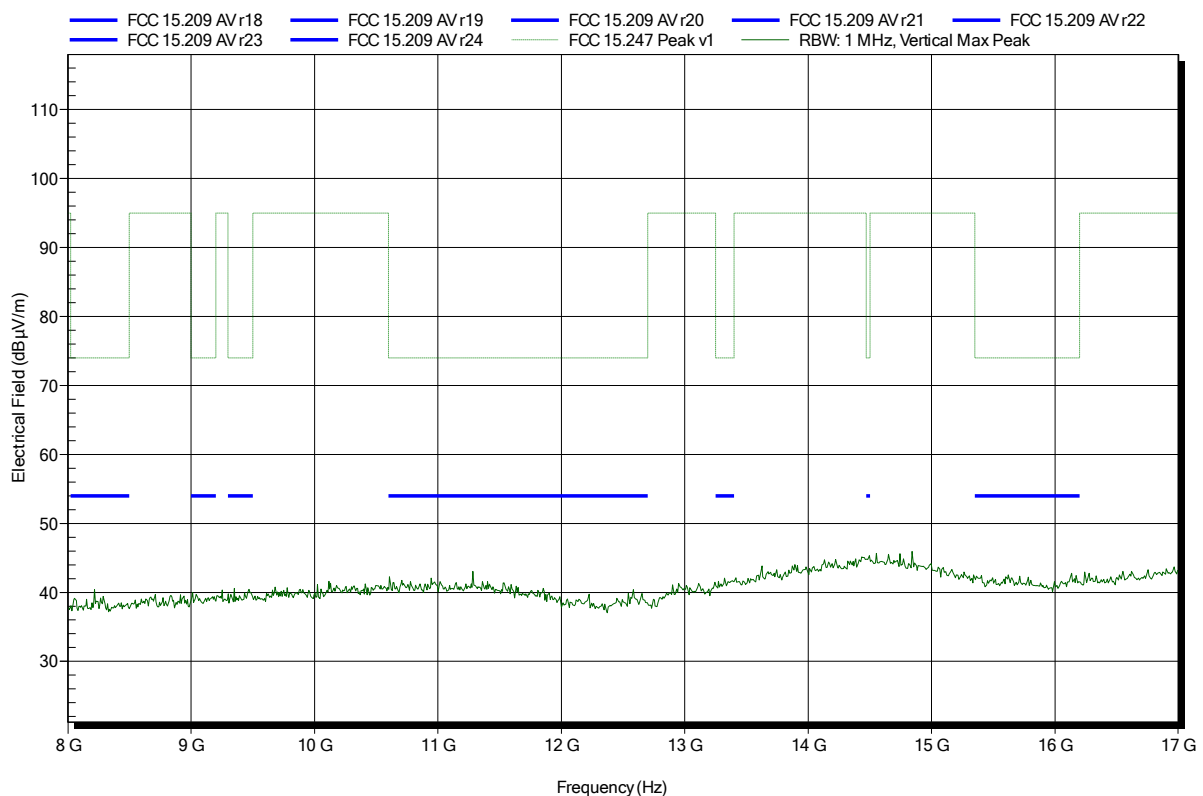


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2402 MHz
 Test Date: 2014-05-15
 Note:

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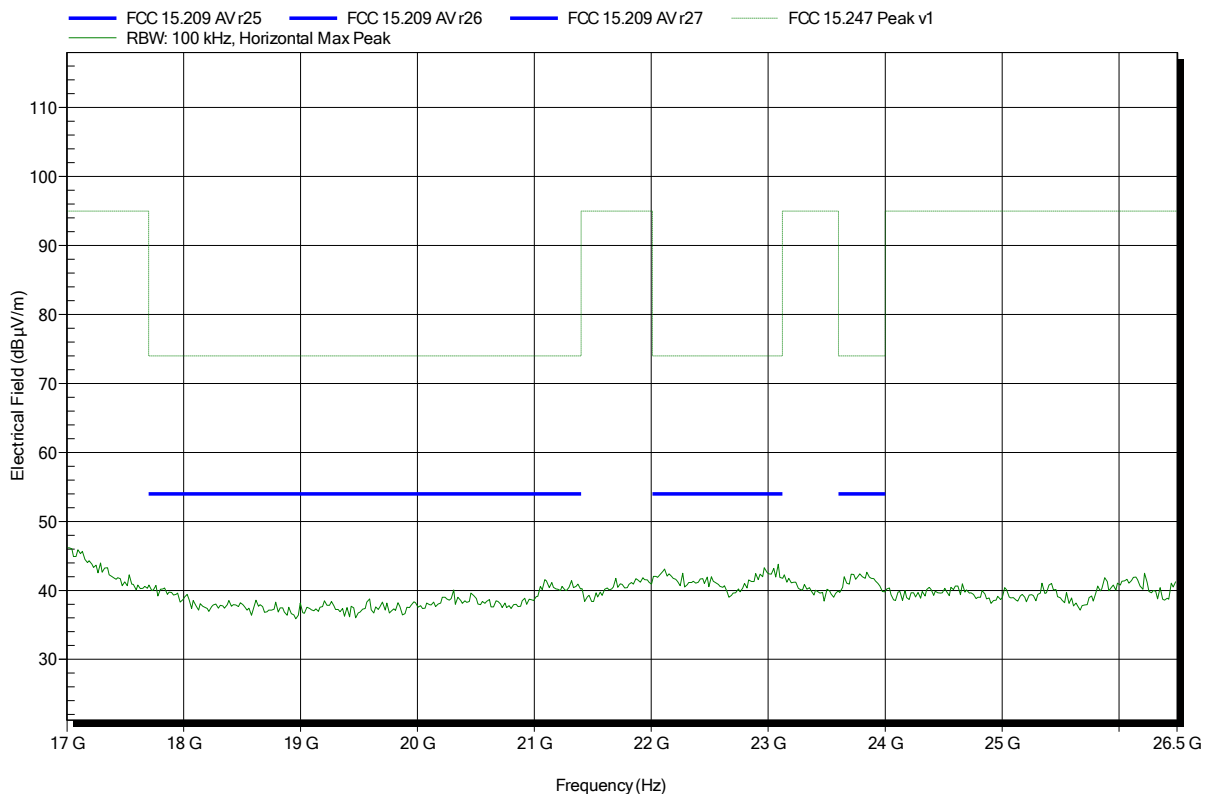


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-15
Note:	

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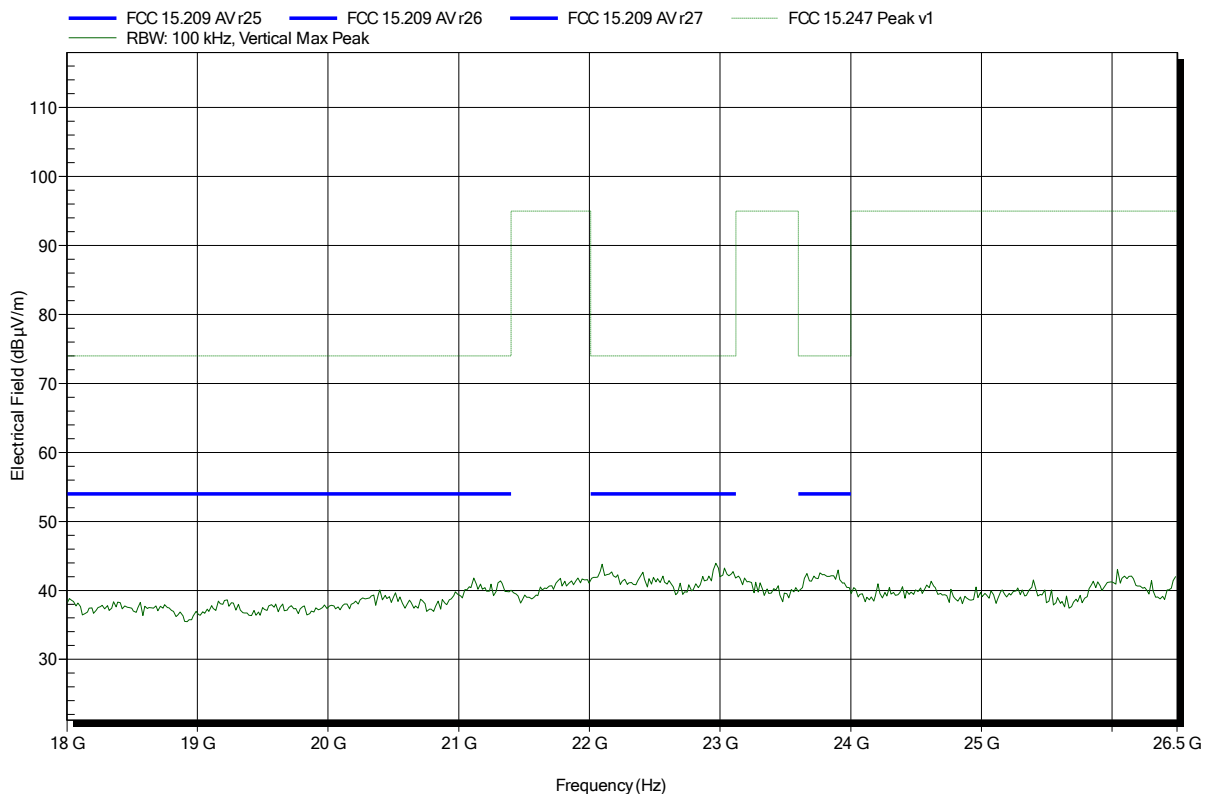


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; BTLE; 2402 MHz
Test Date:	2014-05-15
Note:	

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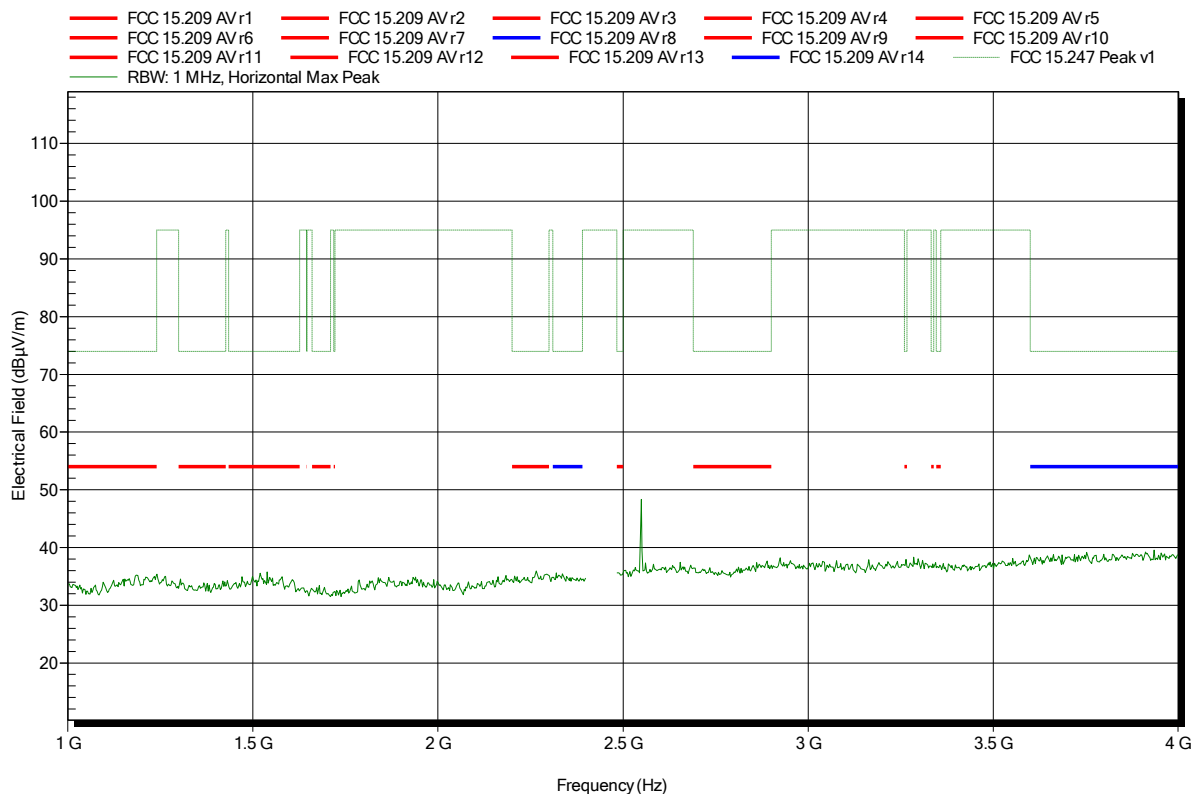


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

Index 10

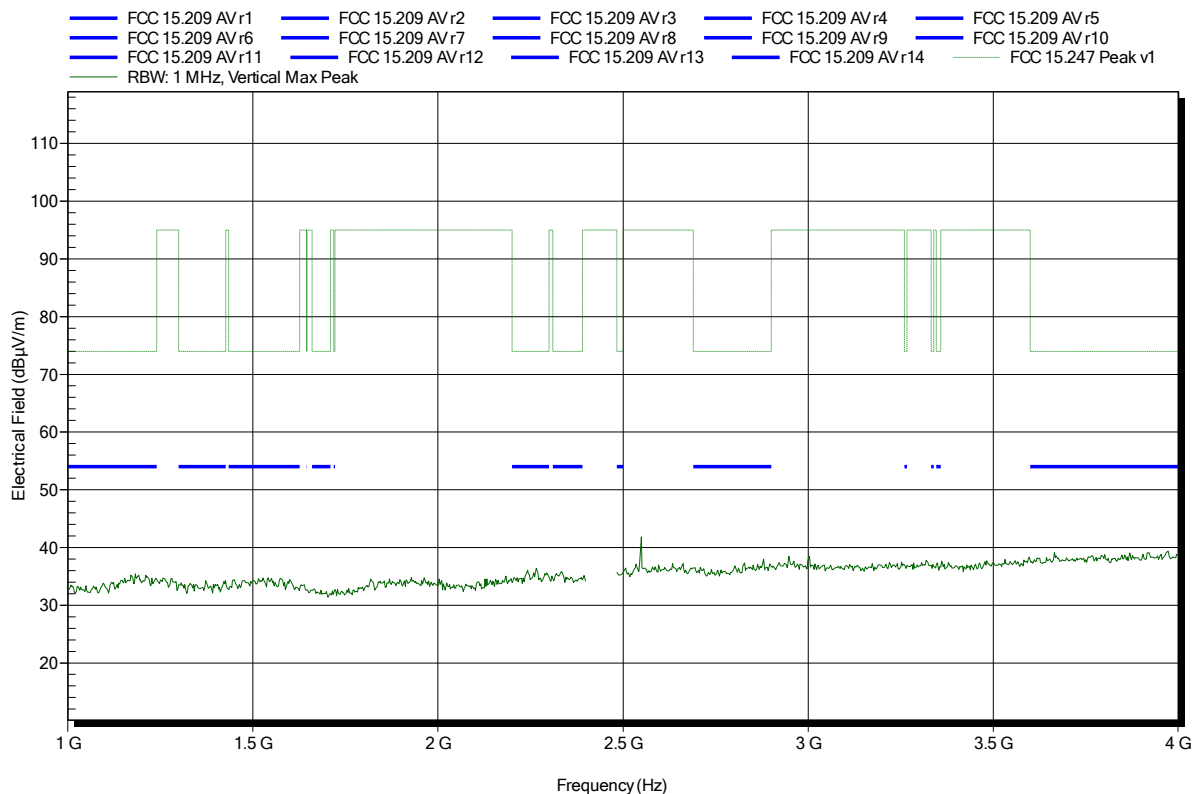


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

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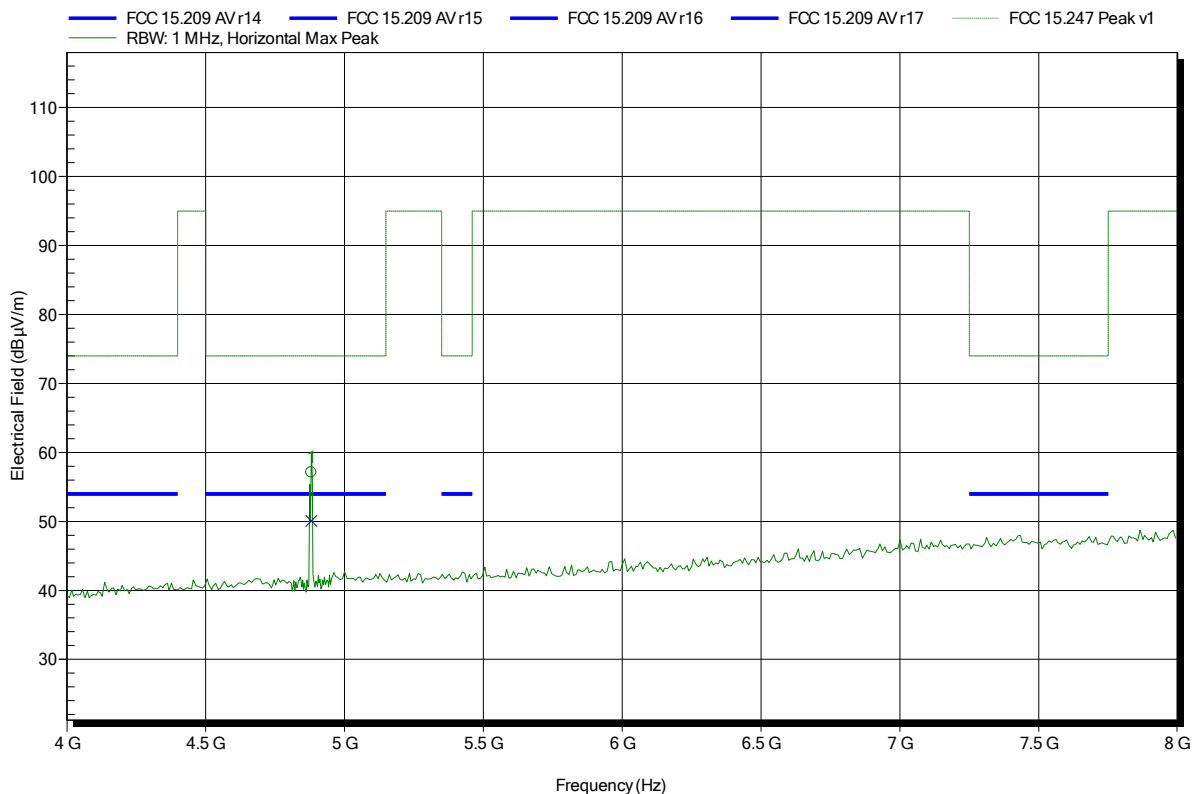


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

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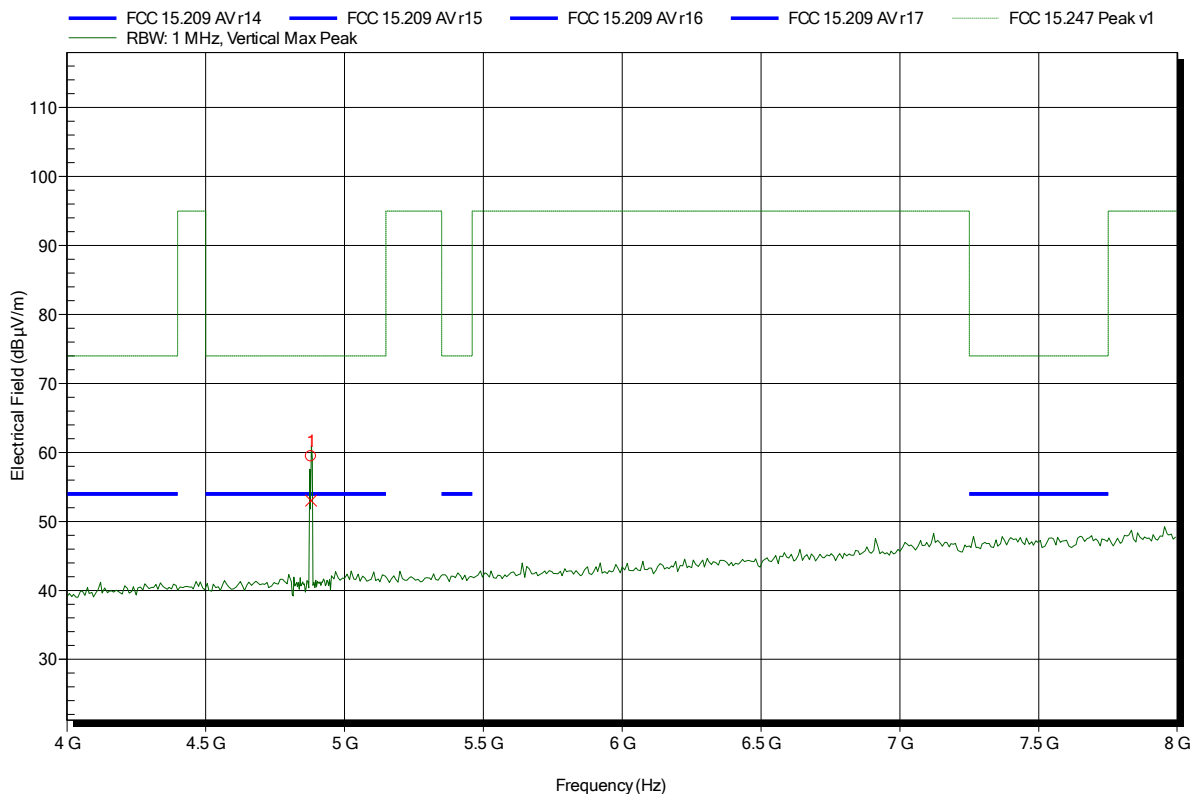
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.881 GHz	57.11 dBµV/m	74 dBµV/m	-16.89 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.881 GHz	50.09 dBµV/m	54 dBµV/m	-3.91 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

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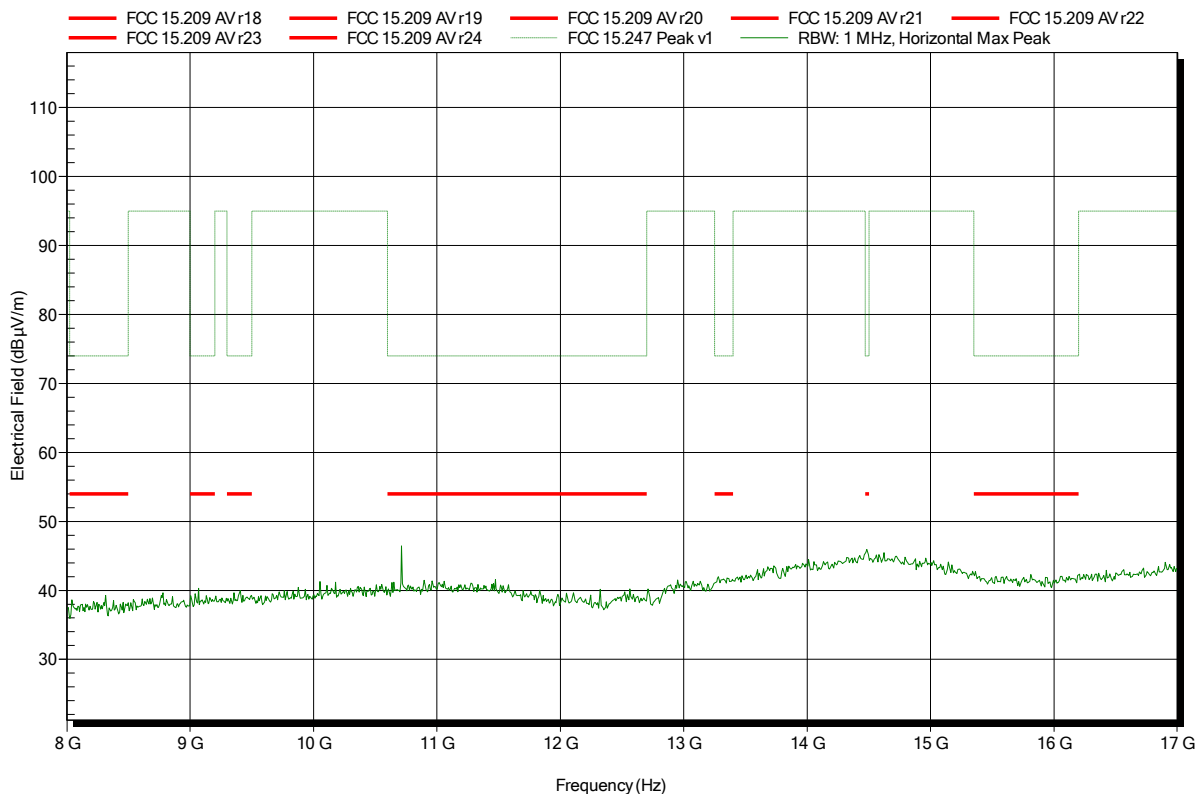
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.881 GHz	59.45 dBµV/m	74 dBµV/m	-14.55 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.881 GHz	53.01 dBµV/m	54 dBµV/m	-0.99 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

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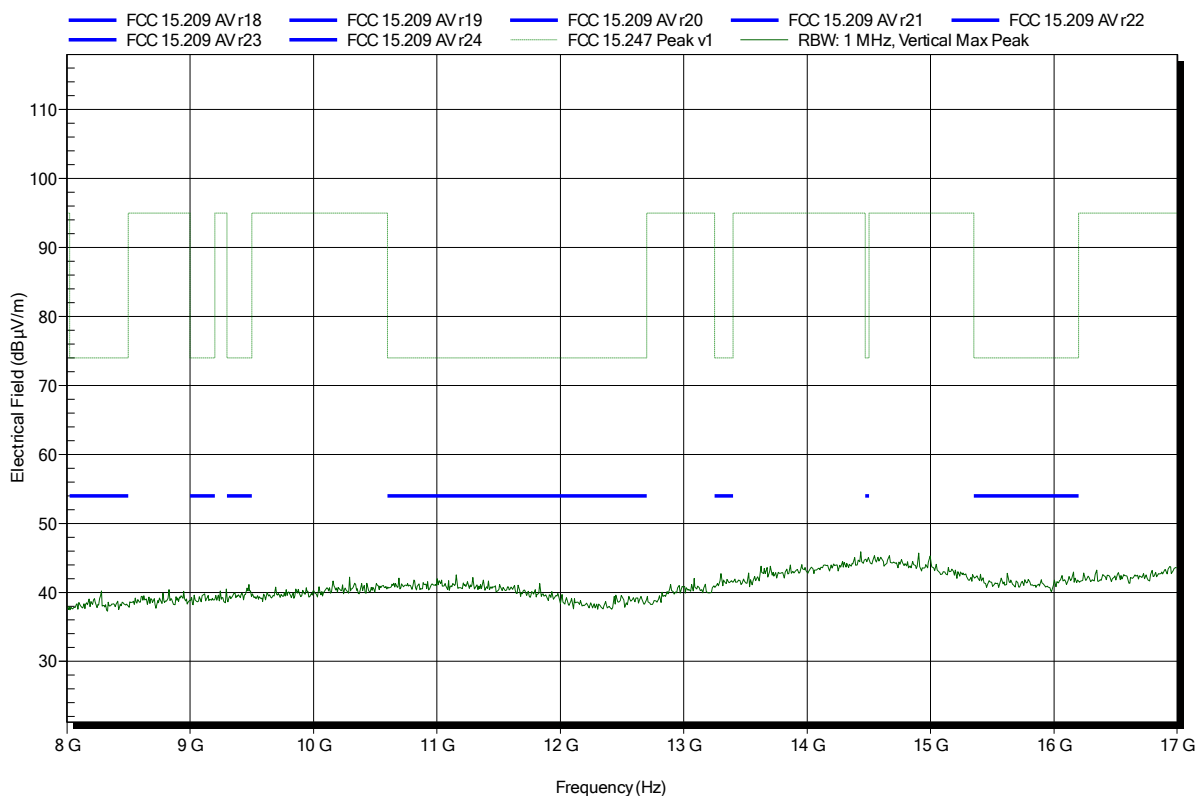


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2440 MHz
 Test Date: 2014-05-15
 Note:

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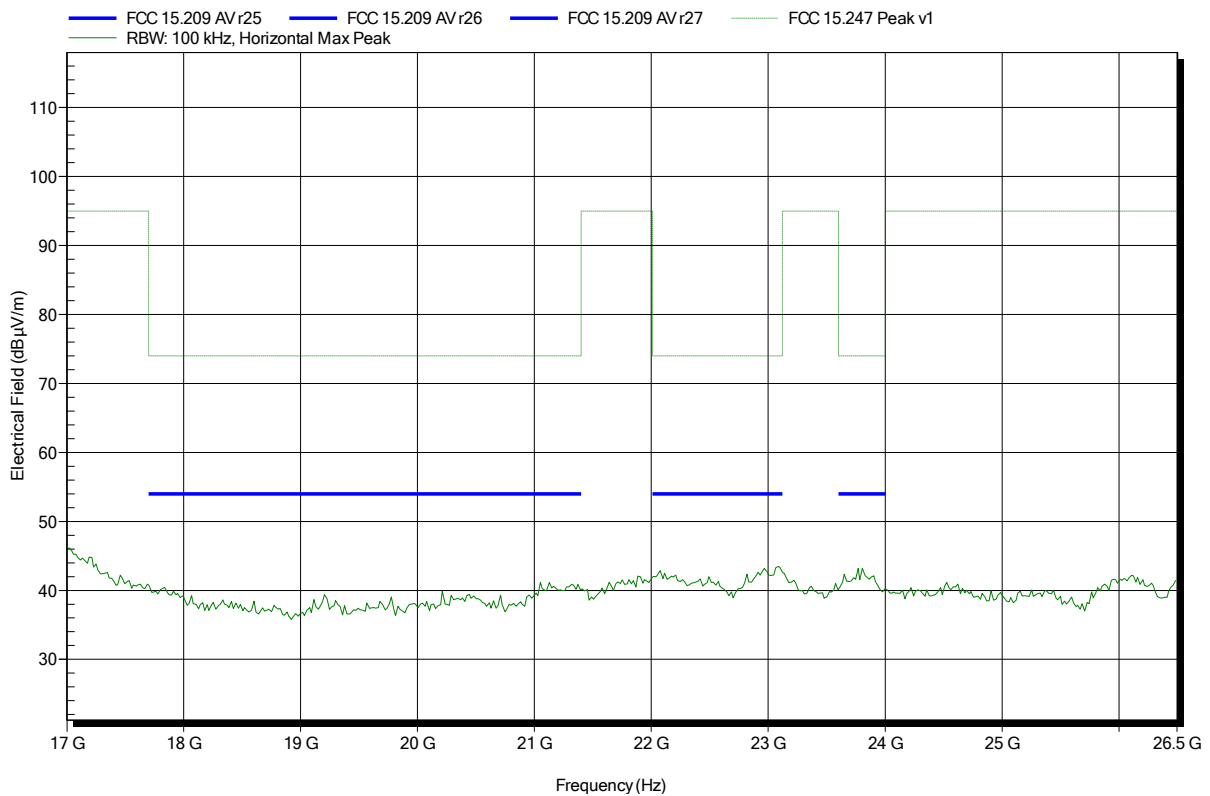


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; BTLE; 2440 MHz
Test Date:	2014-05-15
Note:	

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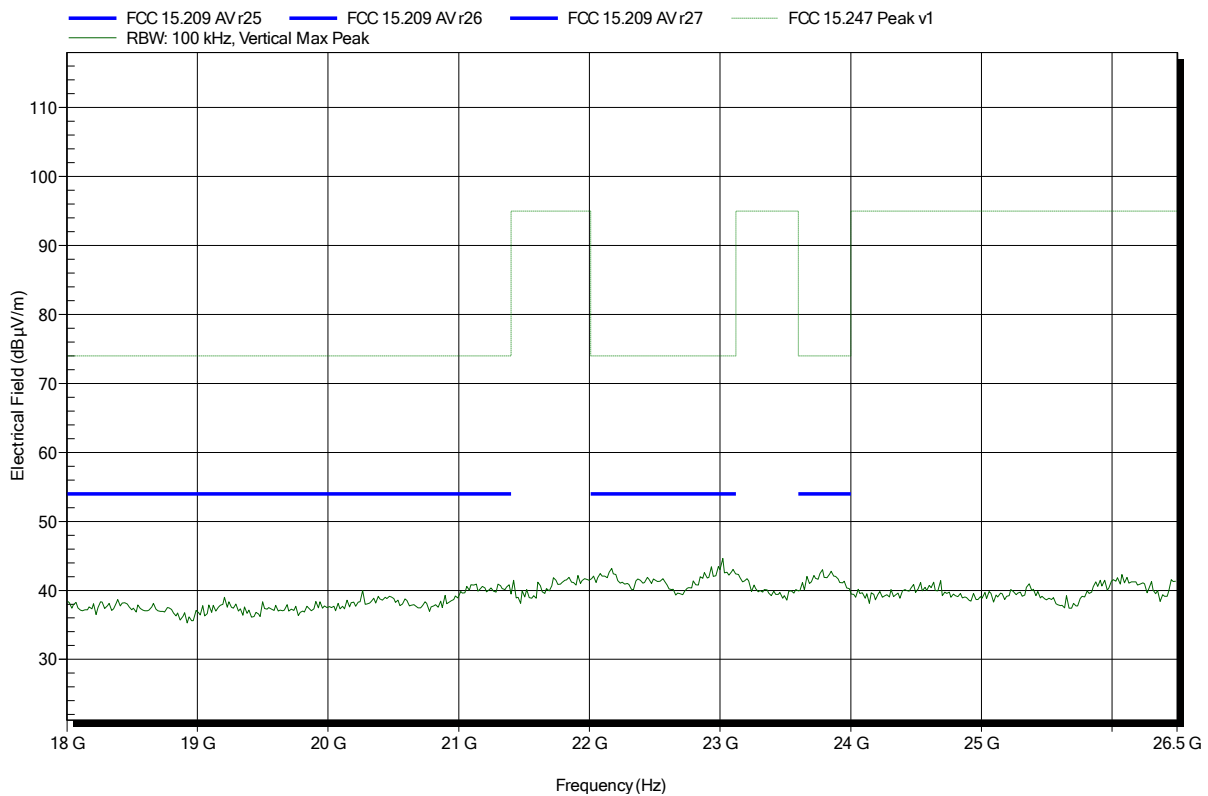


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; BTLE; 2440 MHz
Test Date:	2014-05-15
Note:	

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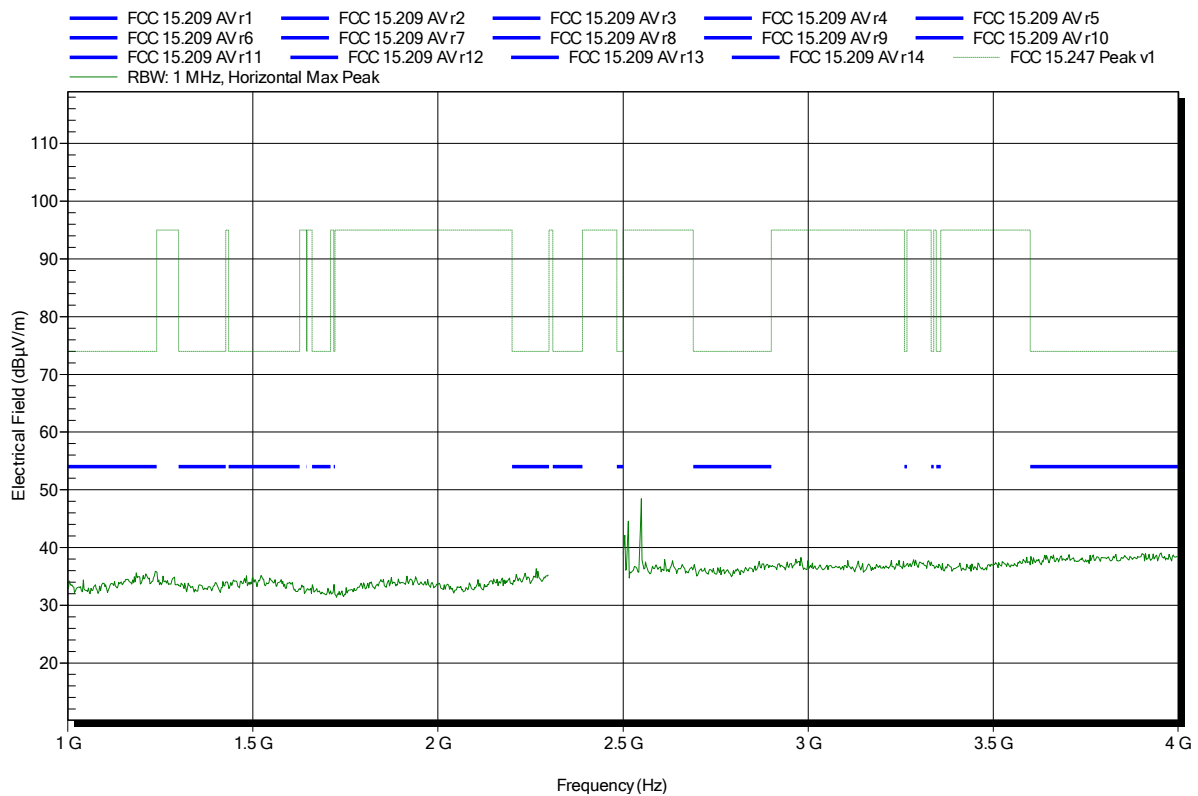


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note:

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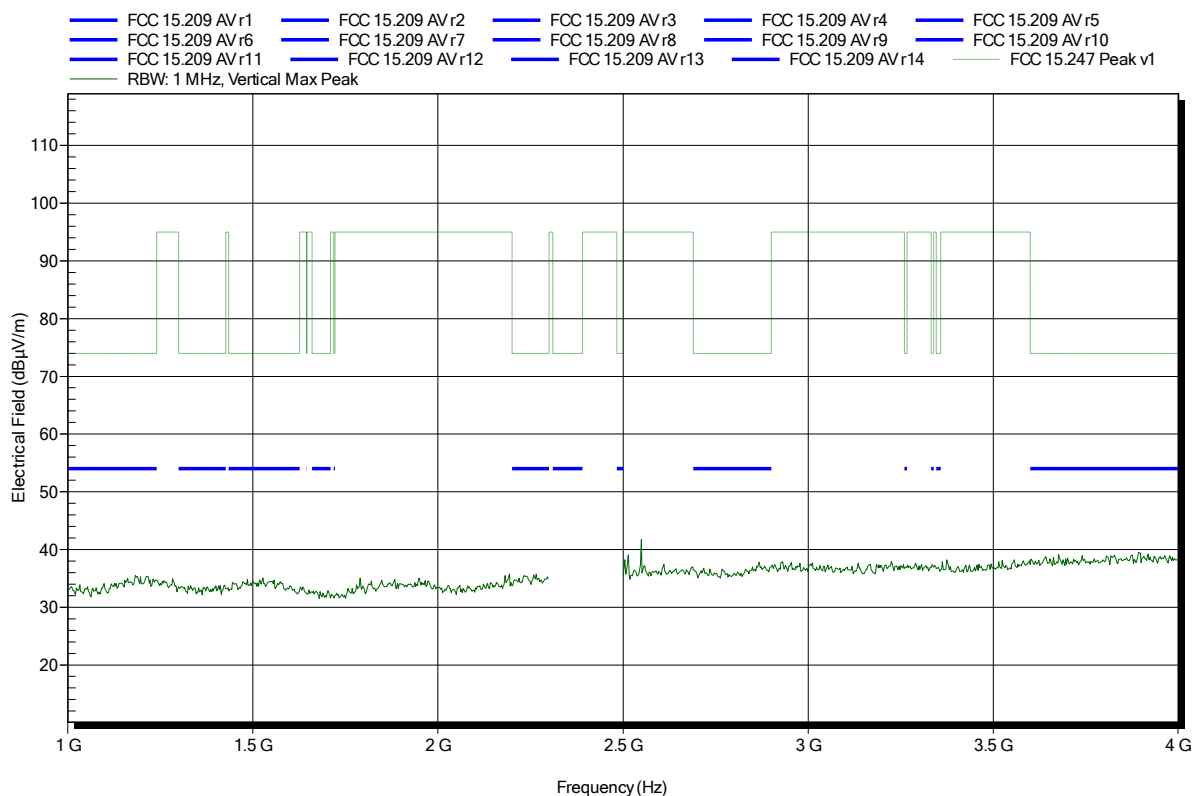


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note:

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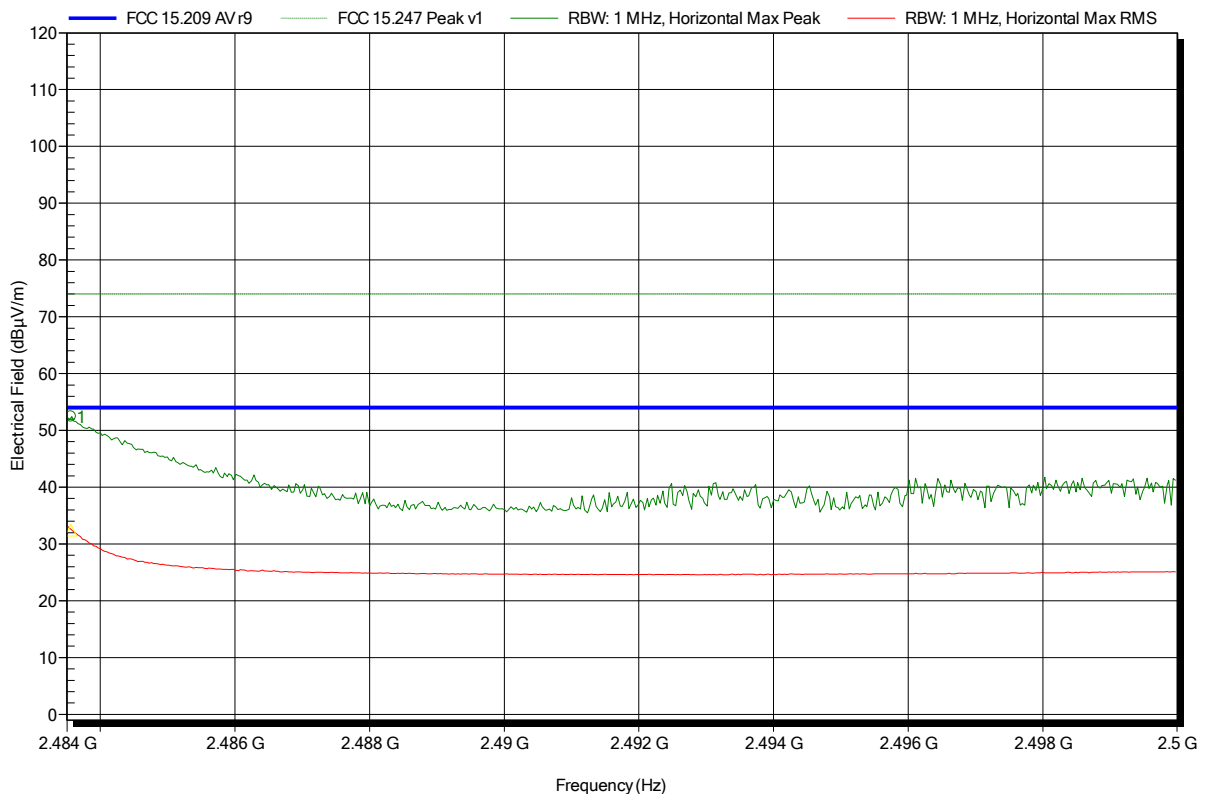


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note: upper bandedge

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4836 GHz	52.46 dBµV/m	74 dBµV/m	-21.54 dB	Pass

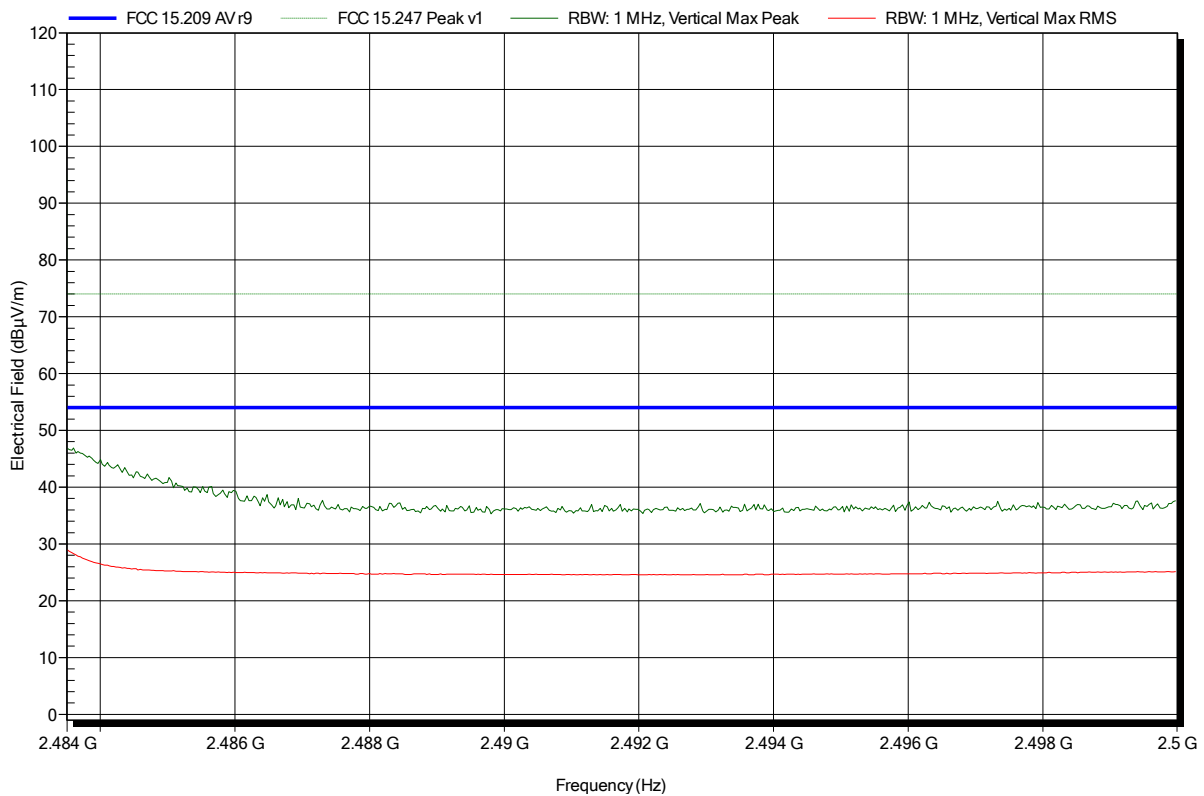
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4836 GHz	32.43 dBµV/m	54 dBµV/m	-21.57 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE; 2480 MHz
Test Date:	2014-05-15
Note:	upper bandedge

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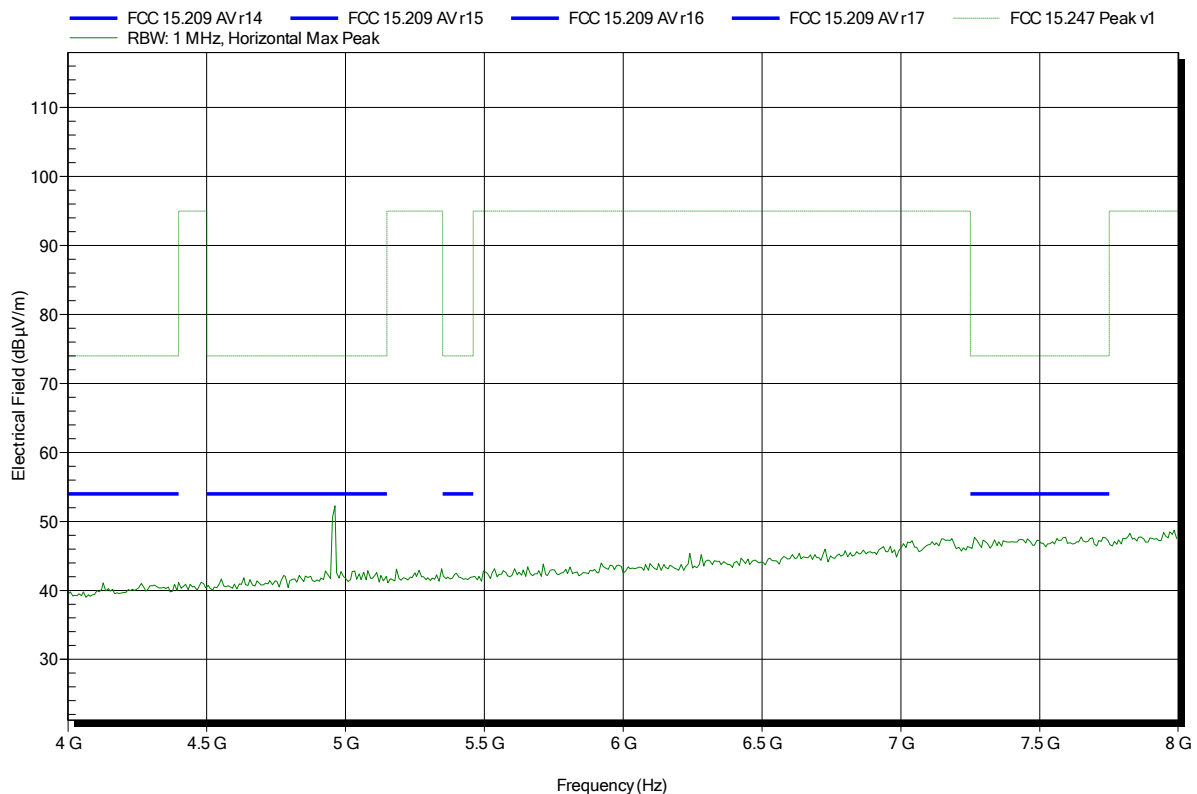


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE; 2480 MHz
Test Date:	2014-05-15
Note:	

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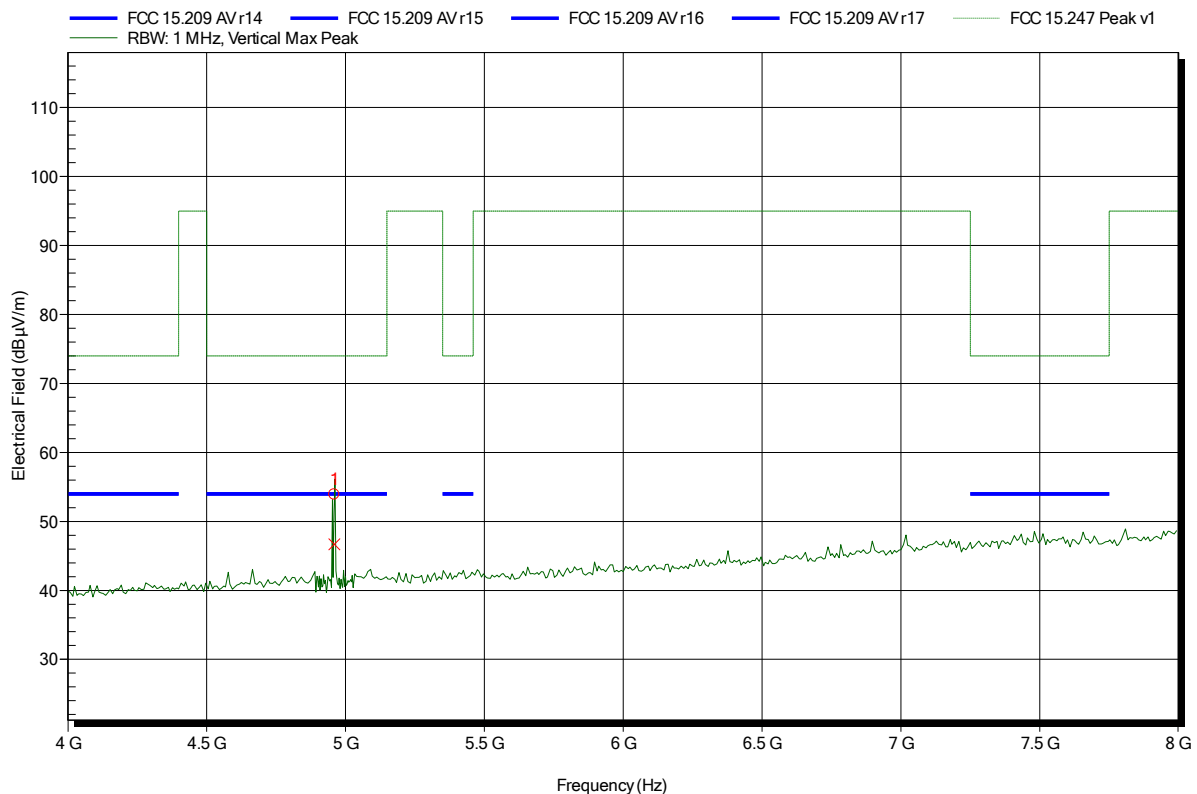


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note:

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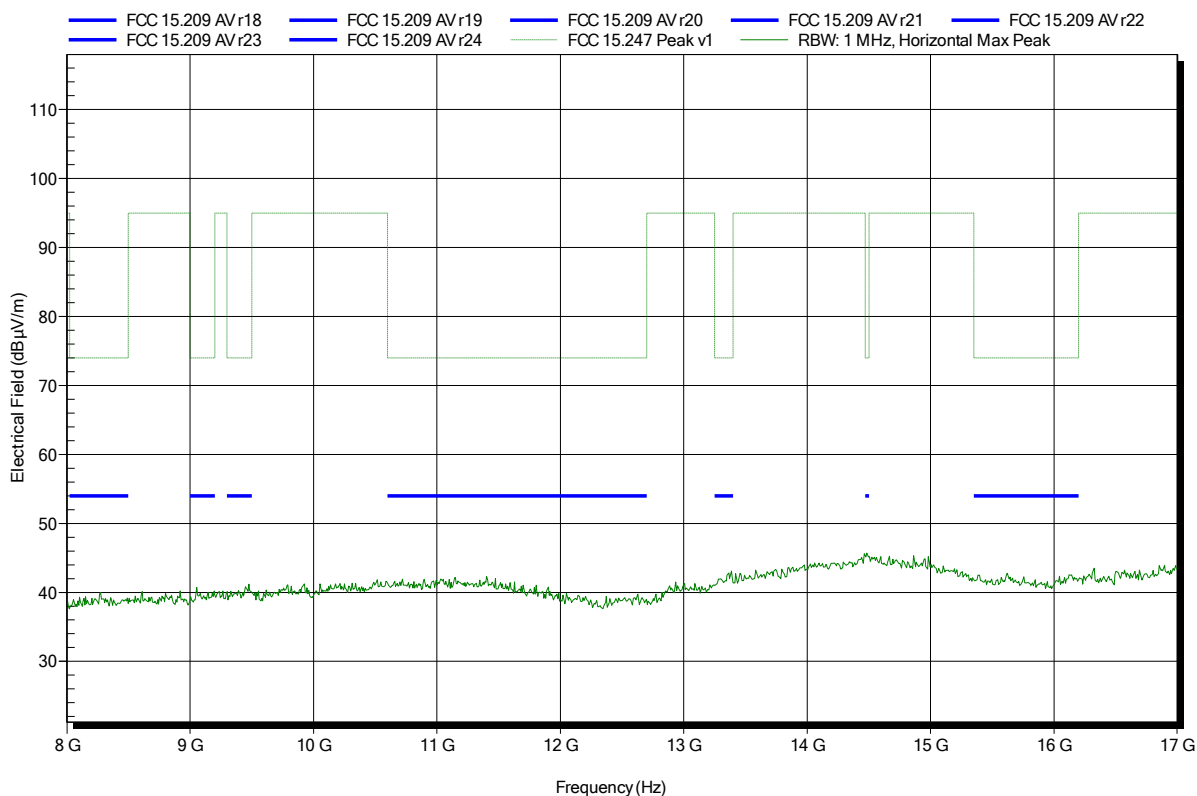
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.961 GHz	53.89 dBµV/m	74 dBµV/m	-20.11 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
4.961 GHz	46.68 dBµV/m	54 dBµV/m	-7.32 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note:

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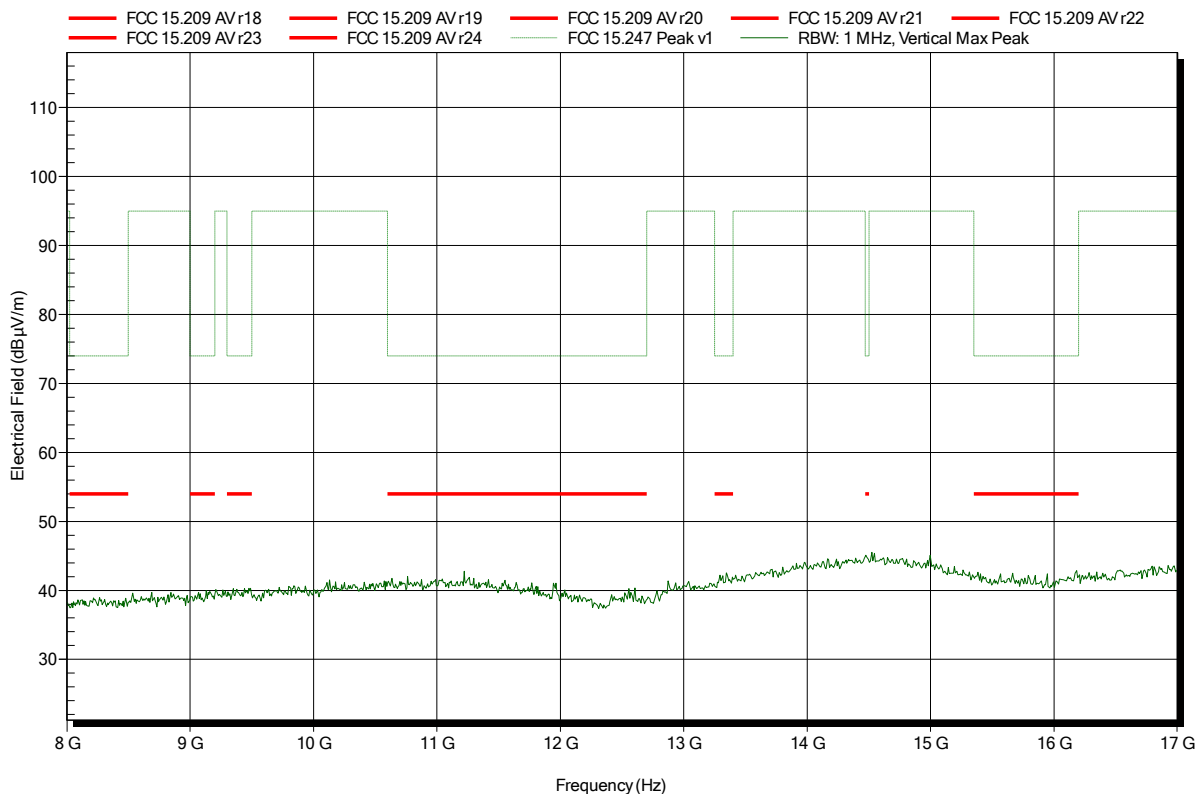


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BTLE; 2480 MHz
 Test Date: 2014-05-15
 Note:

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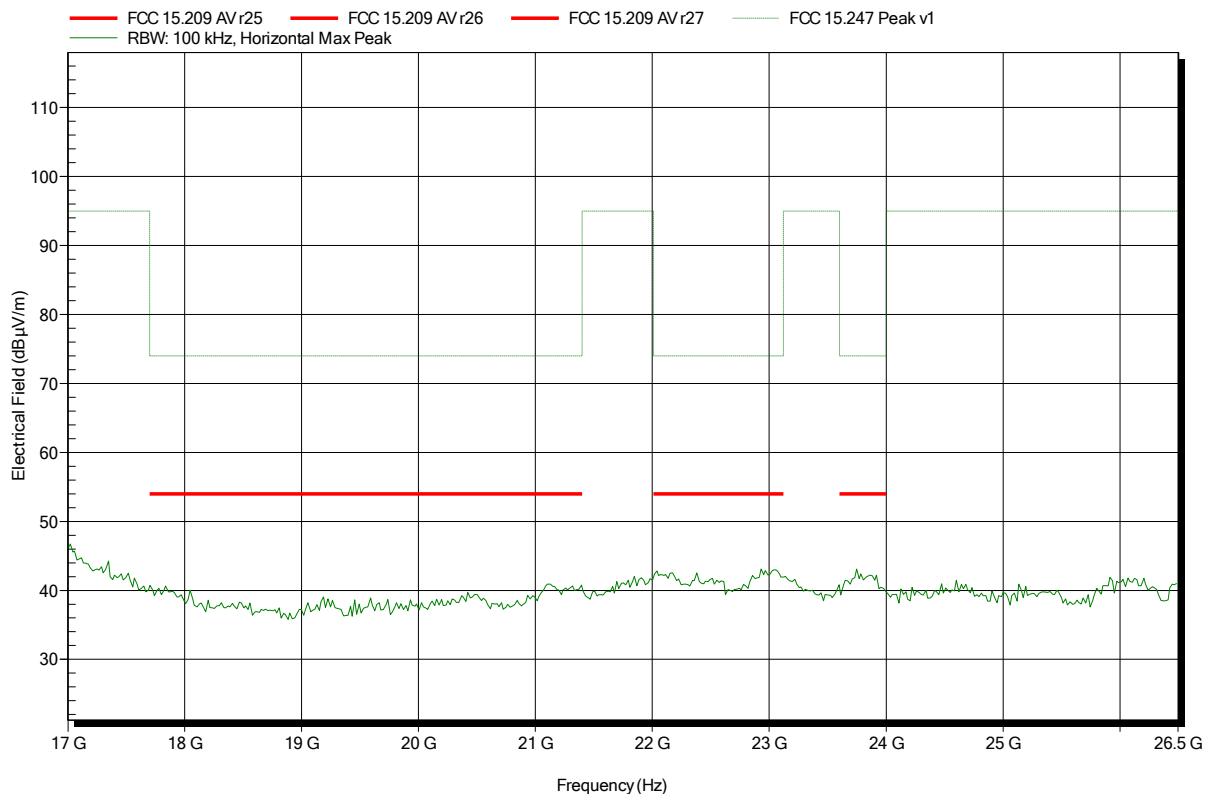


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; BTLE; 2480 MHz
Test Date:	2014-05-15
Note:	

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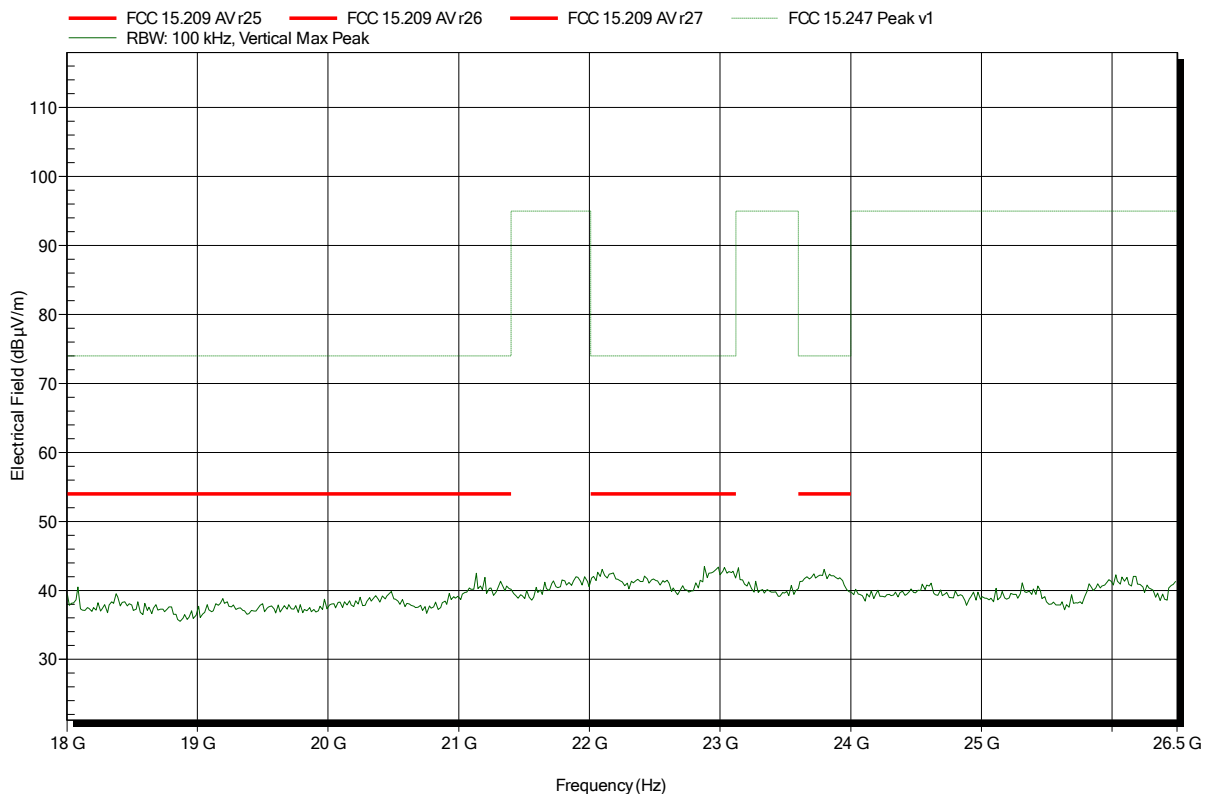


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; BTLE; 2480 MHz
Test Date:	2014-05-15
Note:	

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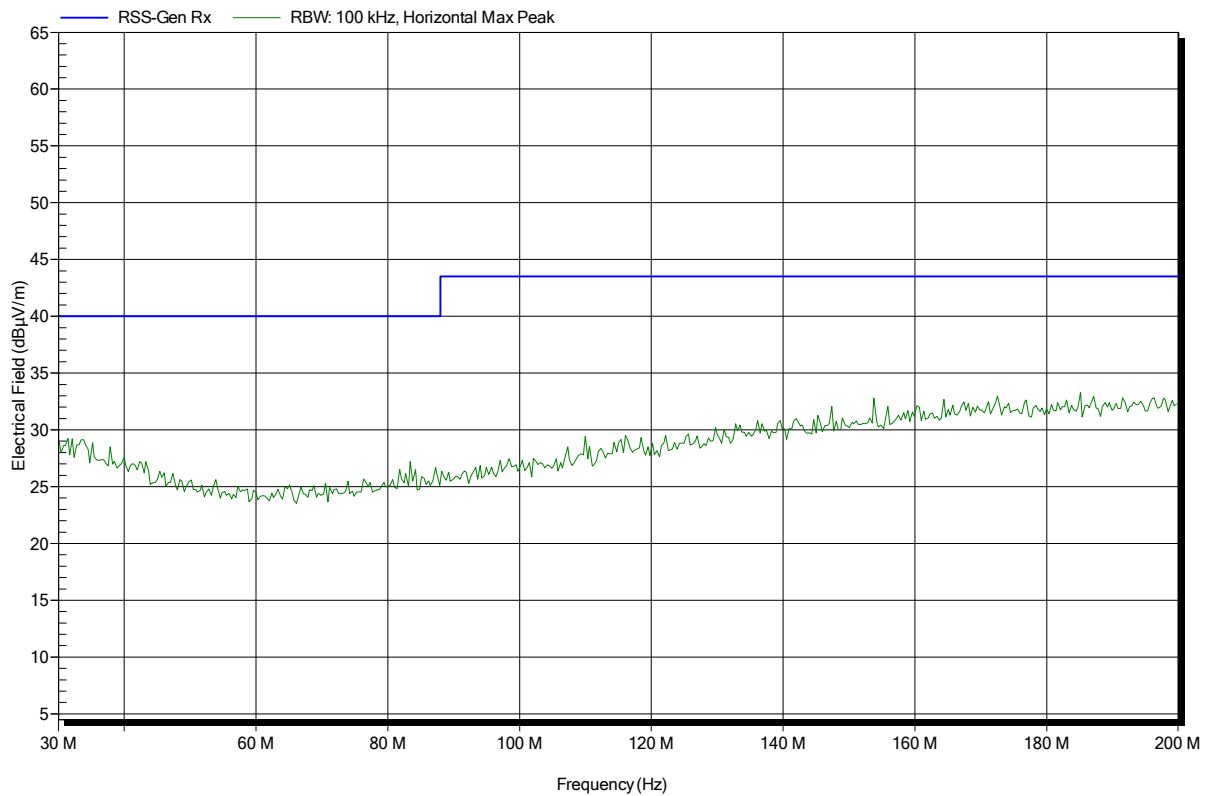
ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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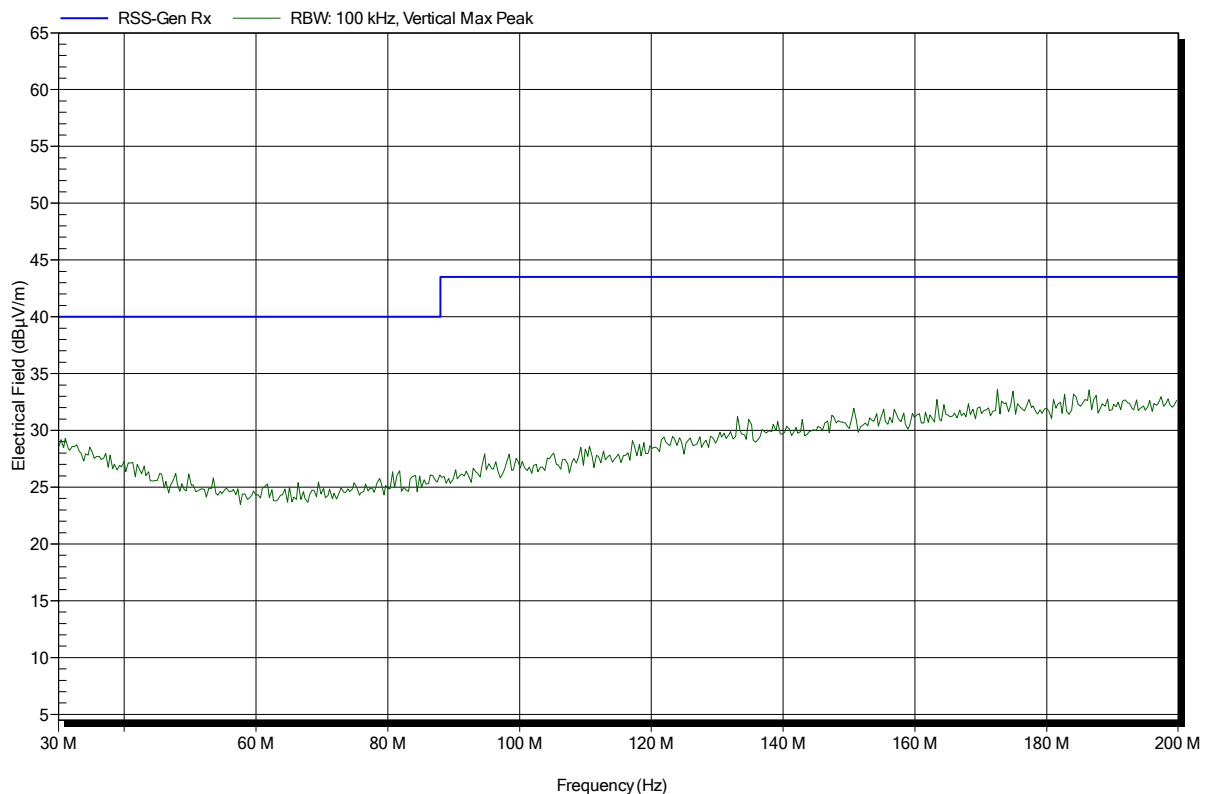


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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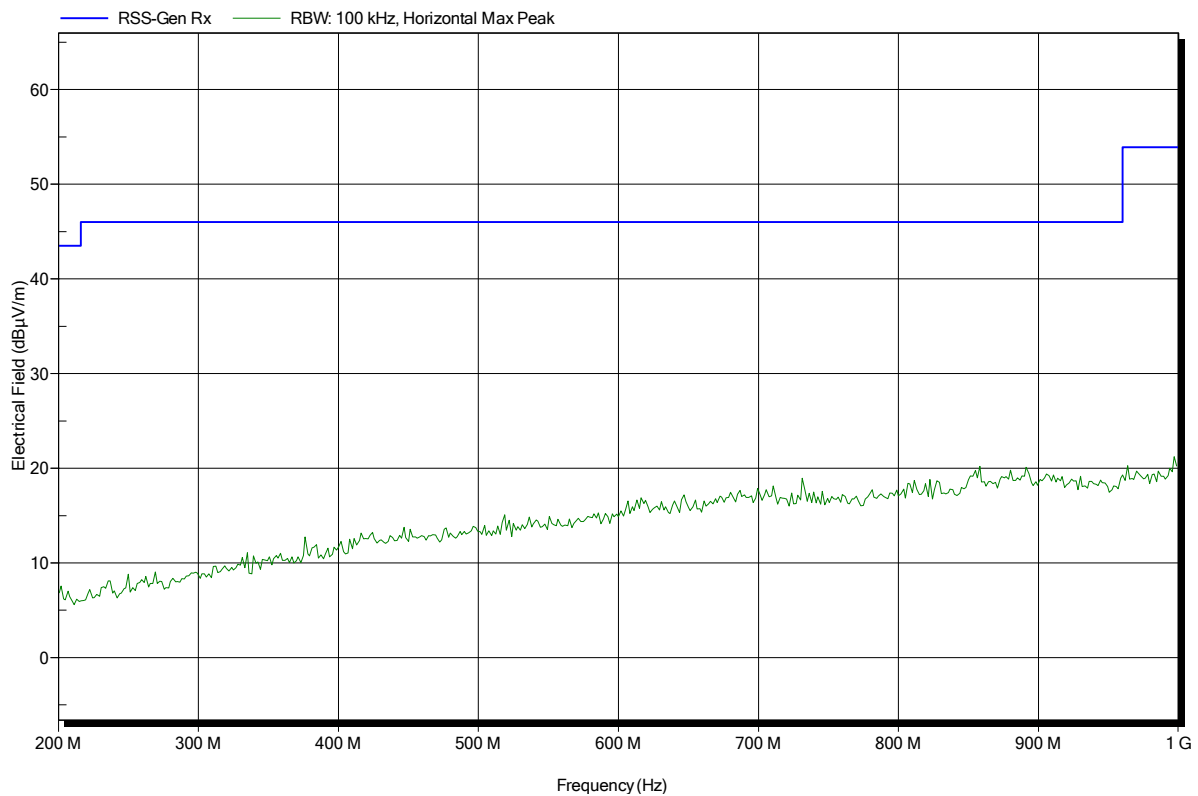


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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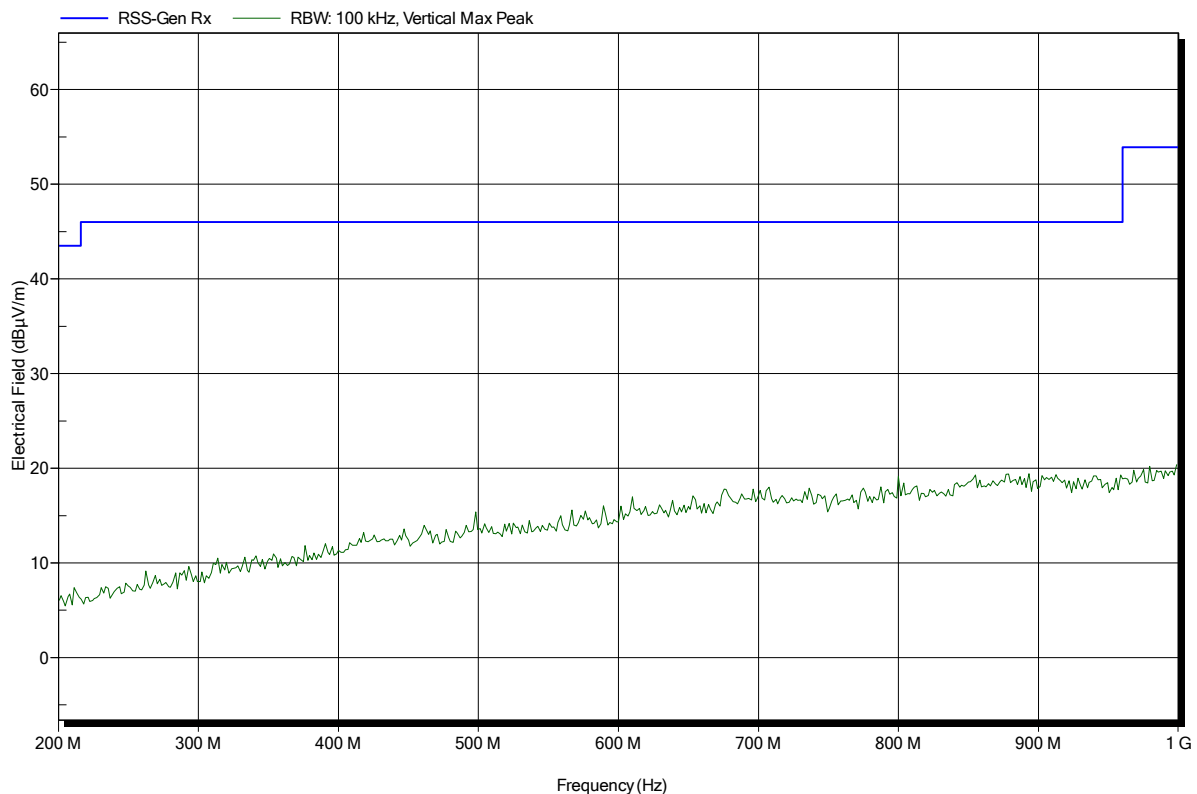


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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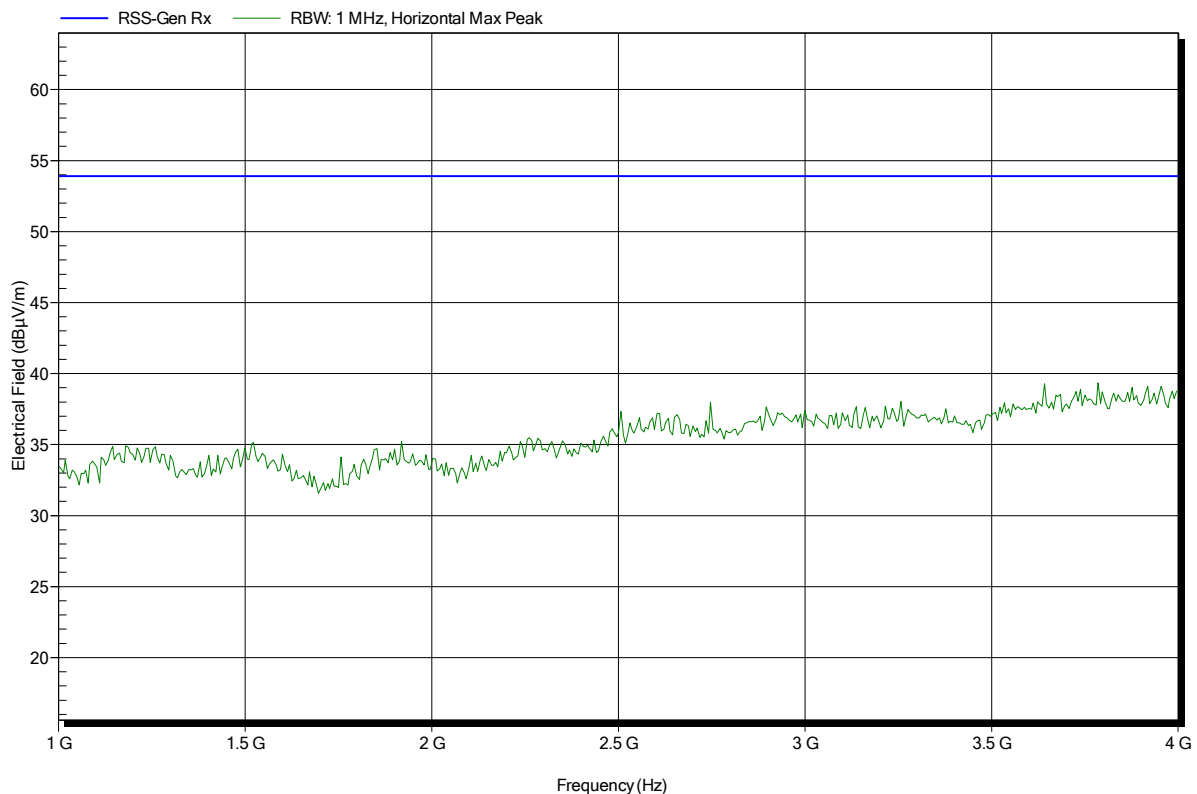


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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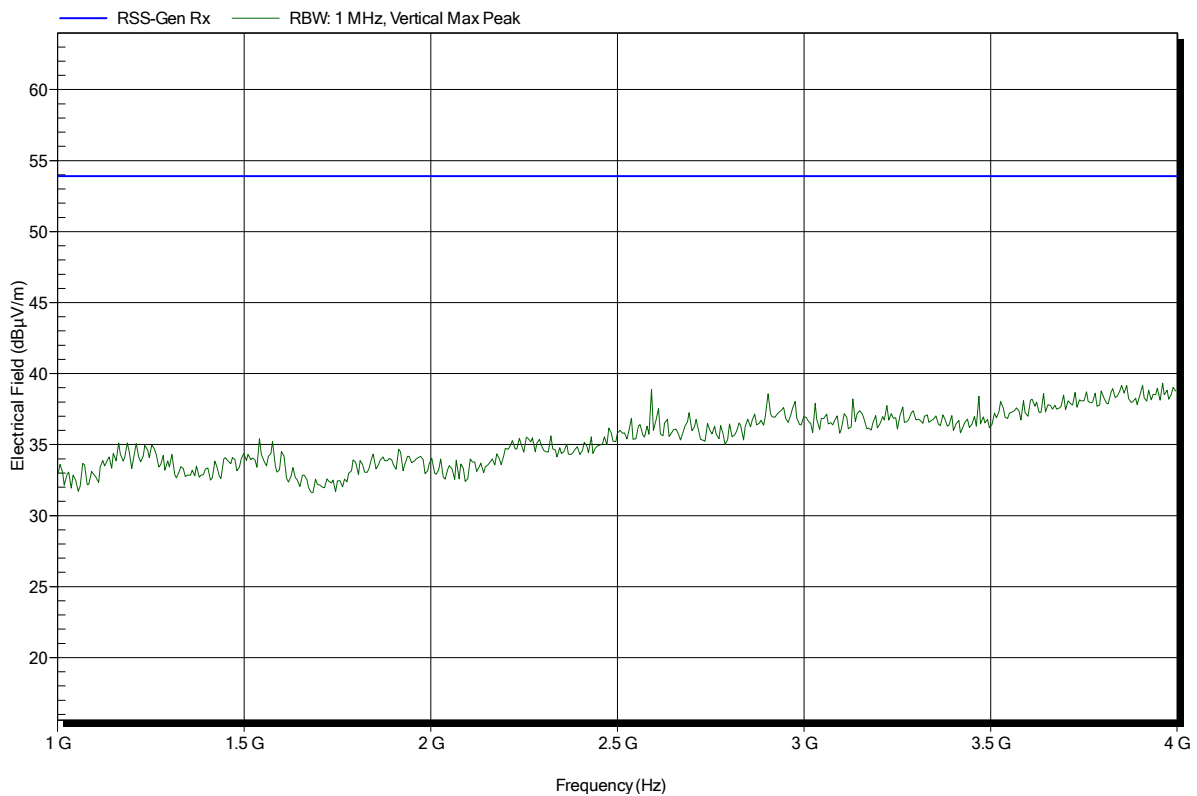


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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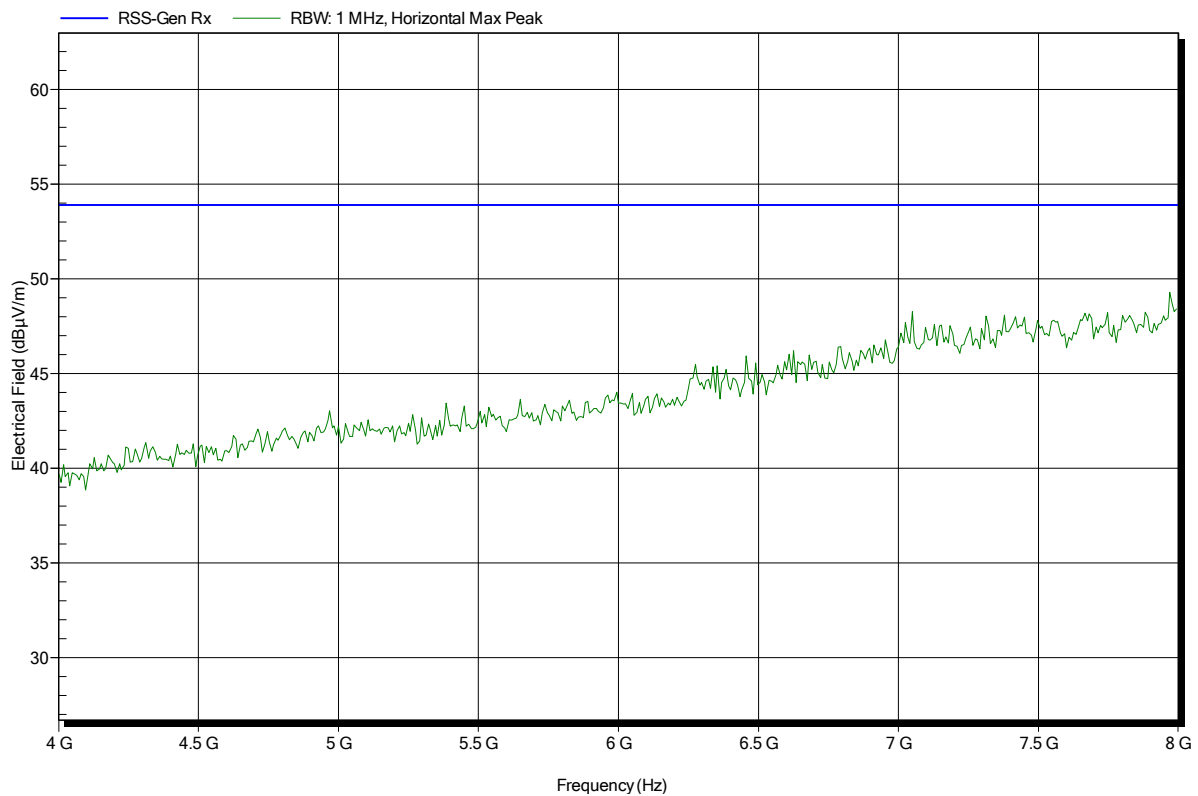


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant:	Leica Geosystems AG
EUT Name:	Laser Distance Meter
Model:	Leica DISTO E7100i
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE; 2440 MHz
Test Date:	2014-05-16
Note:	

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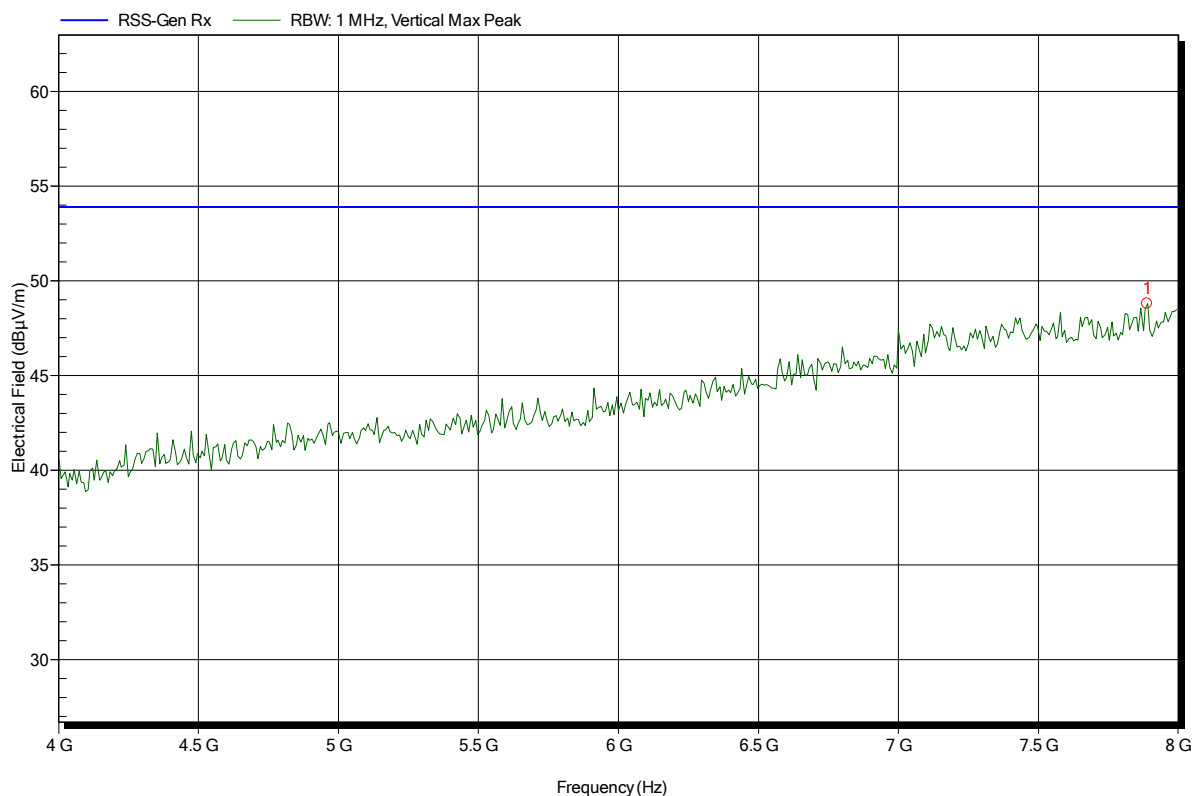


Spurious emissions according to RSS-GEN

Project number: G0M-1405-3836

Applicant: Leica Geosystems AG
 EUT Name: Laser Distance Meter
 Model: Leica DISTO E7100i
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 25°C, Vnom: 3.0 v DC (2x1.5V AAA battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; BTLE; 2440 MHz
 Test Date: 2014-05-16
 Note:

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Frequency	Peak	Peak Limit	Peak Difference	Status
7.888 GHz	48.79 dBµV/m	53.9 dBµV/m	-5.11 dB	Pass