

	RADIO REPORT			
	FCC 47 CFR Part 15C			
ISED Canada RSS-247				
Digital transmissi	on systems operating within the 2400 – 2483.5 MHz band			
Report Reference No G0M-1705-6514-TFC247BL-GLM400CL-V02				
Testing Laboratory	Eurofins Product Service GmbH			
Address	Storkower Str. 38c 15526 Reichenwalde Germany			
Accreditation	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Test Firm Designation Number: DE0008			
Applicant	IC Testing Laboratory site: 3470A-2 Robert Bosch Tool Corporation			
Address	1800 W. Central Road 60056 Mount Prospect, IL USA			
Test Specification	According to FCC/ISED rules			
Standard	47 CFR Part 15C RSS-247, Issue 2, 2017-02			
Non-Standard Test Method	None			
Test Scope	partial compliance test			
Equipment under Test (EUT):	·			
Product Description	Laser Rangefinder			
Model(s)	GLM400CL			
Additional Model(s)	None			
Brand Name(s)	BOSCH			
Hardware Version(s)	Main PCBA 3.1 (BOM 3.2), Long-Range PCBA 3.3			
Software Version(s)	CPU 1.0.0, MCU 1.0.0, Bluetooth 1.2.0			
FCC-ID	TXTGLM400C			
IC	909H-GLM400C			
Test Result	PASSED			

Test Report No.: G0M-1705-6514-TFC247BL-GLM400CL-V02



Possible test case verdicts:				
required by standard but not tested		N/T		
not required by standard		N/R	N/R	
not applicable to EUT		N/A		
test object does meet the requirement		P(PASS)		
test object does not meet the requirem	ent	F(FAIL)		
Testing:				
Test Lab Temperature		20 - 23 °C		
Test Lab Humidity		32 – 38 %		
Date of receipt of test item		2017-11-13		
Report:				
Compiled by	Sebastian Suck	OW		
Tested by (+ signature) (Responsible for Test)	Sebastian Suck	ow	Sudrest	
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn	Toralf Jahn		
Date of Issue	2018-01-31	2018-01-31		
Total number of pages	75	75		
General Remarks:				
The test results presented in this re The results contained in this report the responsibility of the manufactur requirements detailed within this re This report shall not be reproduced, ex	reflect the results f rer to ensure that al port.	or this particul I production m	ar model and serial number. It is odels meet the intent of the	
			and including tooking taboratory.	



VERSION HISTORY

	Version History			
Version Issue Date Remarks Revised By				
01	01 2017-01-09 Initial Release			
02	2018-01-31	FCC-ID, IC, HVIN, PMN updated	S. Suckow	



ABBREVIATIONS AND ACRONYMS

Acronyms		
Acronym	Description	
EUT	Equipment Under Test	
FCC	Federal Communications Commission	
ISED	Innovation, Science and Economic Development Canada	
RBW	Resolution bandwidth	
RMS	Root mean square	
VBW	Video bandwidth	
V_{NOM}	Nominal supply voltage	



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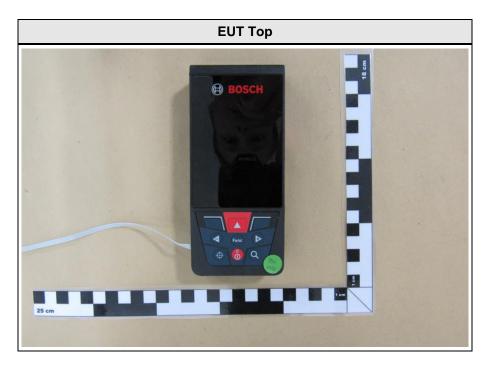


1 Equipment (Test Item) Under Test

Description	Laser Rangefinder		
Model	GLM400CL		
Additional Model(s)	None		
Brand Name(s)	BOSCH		
Serial Number(s)	None		
Hardware Version(s)	Main PCBA 3.1 (BC	DM 3.2), Long-Range PCBA 3.3	
Software Version(s)	CPU 1.0.0, MCU 1.	0.0, Bluetooth 1.2.0	
PMN	GLM400CL		
HVIN	GLM400CL		
FVIN	N/A		
HMN	N/A		
FCC-ID	TXTGLM400C		
IC	909H-GLM400C		
Equipment type	End Product		
Radio type	Transceiver		
Assigned frequency bands	2400 - 2483.5 MHz		
Radio technology	Bluetooth LE		
Modulation	GFSK		
Number of antenna ports	1		
	Туре	Bluetooth low-engergy	
	Model	CC2640	
Radio Module	Manufacturer	Texas Instruments	
	HW Version	PCBA 3.1, BOM 3.2	
	SW Version	Miraculix 1.2.0 R90	
	Туре	PCB antenna	
Antenna	Model	Inverted F antenna (TI reference design SWRU120C)	
	Manufacturer	N/A (PCB by ITEQ Corp.)	
	Gain	3.3 dBi	
Supply Voltage	V _{NOM} 3.6 VDC		
Operating Temperature	T _{NOM}	25 °C	
	Robert Bosch Powe	er Tools GmbH	
Manufacturer	70538 Stuttgart Germany		

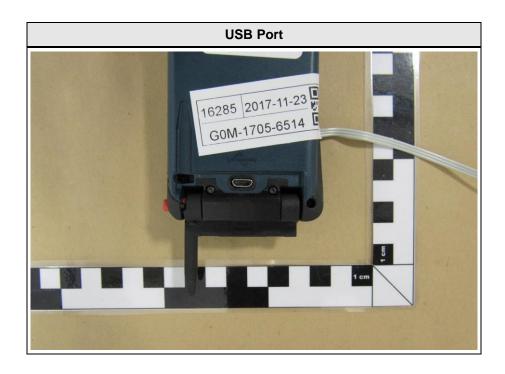


1.1 Photos – Equipment External



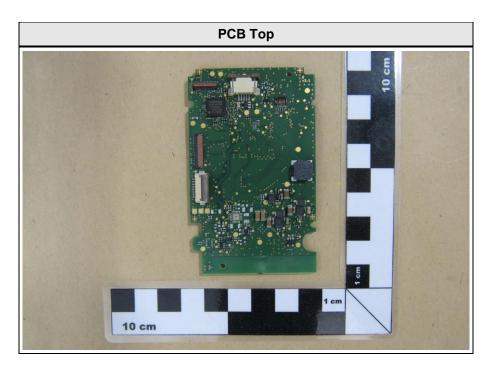


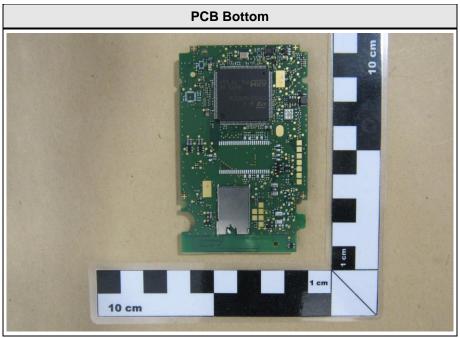






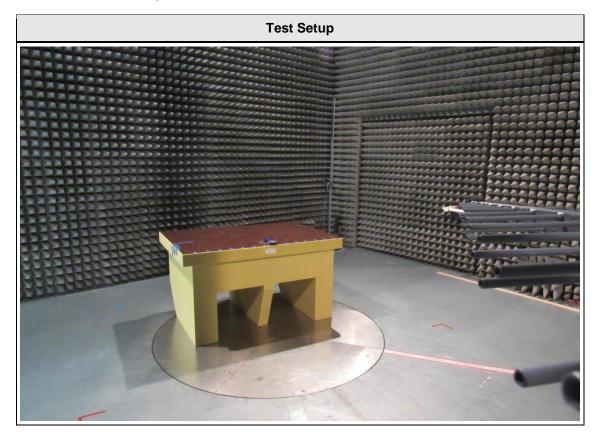
1.2 Photos – Equipment Internal







1.3 Photos – Test Setup





1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
		None		
Description:				
AE	Auxillary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
Comment:				



1.5 Test Modes

Mode	Description
GFSK	Mode = Transmit Modulation = GFSK Spreading = None Duty cycle = 50%
Receive	Mode = Receive
Comment:	



1.6 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	0	2402
F2	Tx / Rx	19	2440
F3	Tx / Rx	39	2480



1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

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

Net:

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

Limit:

This is the FCC Class B radiated emission limit (in units of $dB\mu V/m$). The FCC limits are given in units of $\mu V/m$. The following formula is used to convert the units of $\mu V/m$ to $dB\mu V/m$:

Limit (dB μ V/m) = 20*log (μ 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 dB μ V + 26 dB = 47.5 dB μ V/m : 47.5 dB μ V/m - 57.0 dB μ V/m = -9.5 dB



2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
RSS-Gen 6.6	Occupied Bandwidth	ANSI C63.10	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247 § 5.2	6 dB Bandwidth	ANSI C63.10	N/T	
FCC § 15.247(b)(3) ISED RSS-247 § 5.4	Maximum peak conducted power	ANSI C63.10	N/T	
FCC § 15.247(e) ISED RSS-247 § 5.2	Power spectral density	ANSI C63.10	N/T	
FCC § 15.207 ISED RSS-247 § 3.1	AC power line conducted emissions	ANSI C63.10	N/R	No transitions during charging
FCC § 15.247(d) ISED RSS-247 § 5.5	Band edge compliance	ANSI C63.10	N/T	
FCC § 15.247(d) ISED RSS-247 § 5.5	Conducted spurious emissions	ANSI C63.10	N/T	
FCC § 15.247(d) FCC § 15.209 ISED RSS-GEN § 8.9	Transmitter radiated spurious emissions	ANSI C63.10	PASS	
ISED RSS-247 § 3.1	Receiver radiated spurious emissions	ANSI C63.10	PASS	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object



3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth

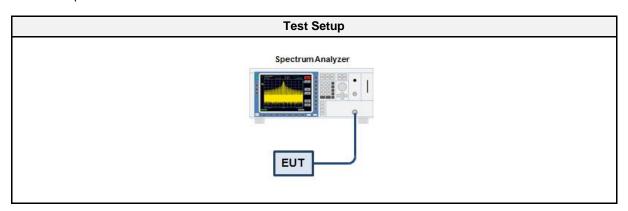
3.1.1 Information

Test Information		
Reference	ISED RSS-Gen 6.6	
Measurement Method	ANSI C63.10 6.9.3	
Operator Sebastian Suckow		
Date	2017-12-18	

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup



3.1.4 Equipment

Test Equipment						
Description Manufacturer Model Identifier Cal. Date Cal. D						
Spectrum Analyzer R&S FSW 43 EF00896 2017-08 2018-0						

3.1.5 Procedure

Test Procedure

- 1. EUT transmitter is activated in test mode under normal conditions
- The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum
- 3. The resolution bandwidth is set to 1 % of the bandwidth
- 4. The occupied bandwidth is measured with the build-in analyzer function

3.1.6 Results

Test Results						
Mode Frequency Bandwidth [MHz] [MHz]						
GFSK	2402	1.068				
GFSK	2440	1.048				
GFSK	2480	1.045				

Test Report No.: G0M-1705-6514-TFC247BL-GLM400CL-V02



Occupied Bandwidth

Project Number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

Model Description: Laser Rangefinder

Model: GLM400CL

Test Sample ID: 16007

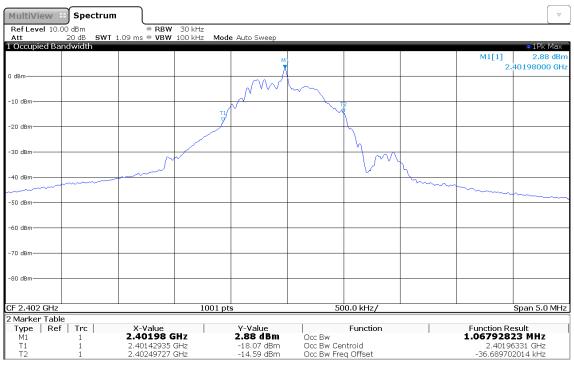
Reference Standards: FCC 15.247, RSS-247

Reference Method: ANSI C63.10:2013, Section 6.9.3 Operational Mode: GFSK, Channel: 0, 2402 MHz

Operating Conditions: Tnom/Vnom Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2017-12-18
Occupied Bandwidth [MHz]: 1.068



11:10:55 18.12.2017



Occupied Bandwidth

Project Number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

Model Description: Laser Rangefinder

Model: GLM400CL

Test Sample ID: 16007

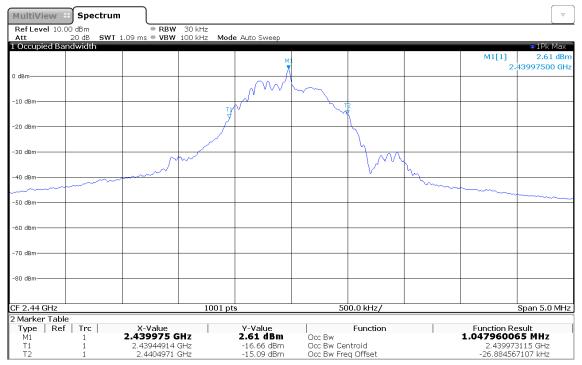
Reference Standards: FCC 15.247, RSS-247

Reference Method: ANSI C63.10:2013, Section 6.9.3 Operational Mode: GFSK, Channel: 19, 2440 MHz

Operating Conditions: Tnom/Vnom Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2017-12-18
Occupied Bandwidth [MHz]: 1.048



11:12:17 18.12.2017



Occupied Bandwidth

Project Number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

Model Description: Laser Rangefinder Model: GLM 400CL

Test Sample ID: 16007

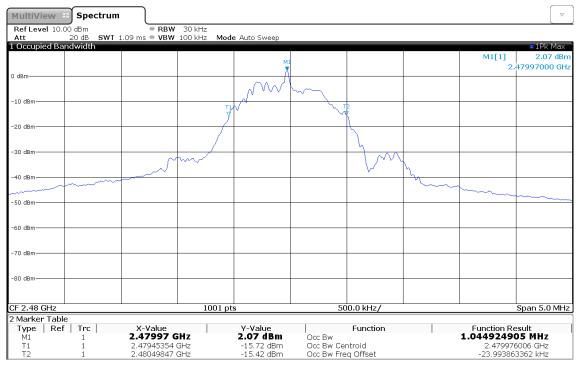
Reference Standards: FCC 15.247, RSS-247

Reference Method: ANSI C63.10:2013, Section 6.9.3 Operational Mode: GFSK, Channel: 39, 2480 MHz

Operating Conditions: Tnom/Vnom Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2017-12-18
Occupied Bandwidth [MHz]: 1.045



11:13:21 18.12.2017



3.2 Test Conditions and Results - Transmitter radiated emissions

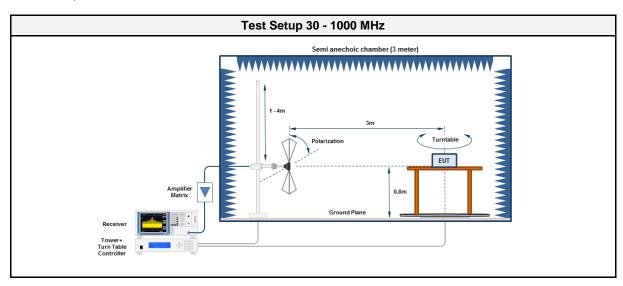
3.2.1 Information

Test Information				
Reference FCC 15.247(d) / ISED RSS-GEN 8.9				
Measurement Method ANSI C63.10 6.4, 6.5, 6.6, 11.12				
Operator	Sebastian Suckow			
Date	2017-11-13 – 2017-12-13			

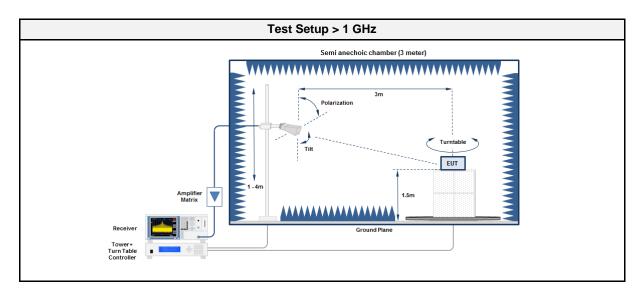
3.2.2 Limits

	Limits						
Frequency [MHz]	Detector	Field strength [dBµV/m]	Measurement distance [m]				
0.009 - 0.09	Average	2400/F[kHz]	300				
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300				
0.110 - 0.490	Average	2400/F[kHz]	300				
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30				
1.705 - 30.0	Quasi-Peak	30	30				
30 - 88	Quasi-Peak	100	3				
88 - 216	Quasi-Peak	150	3				
216 - 960	Quasi-Peak	200	3				
960 - 1000	Quasi-Peak	500	3				
>1000	Average	500	3				

3.2.3 Setup







3.2.4 Equipment

Test Equipment 30 - 1000 MHz								
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due			
Anechoic Chamber	Frankonia	AC1	EF00062	-	-			
Measurement Receiver	Agilent	N9038A- 526/WXP	EF01070	2017-08	2018-08			
Antenna	R&S	HK 116	EF00203	2016-06	2018-06			
Antenna	R&S	HL 223	EF00187	2016-05	2019-05			

Test Equipment > 1 GHz								
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due			
Anechoic Chamber	Frankonia	AC1	EF00062	-	-			
Measurement Receiver	Agilent	N9038A- 526/WXP	EF01070	2017-08	2018-08			
Antenna	R&S	BBHA 9120D	EF01153	2017-08	2018-08			
Antenna	Amplifier Research	AT4560	EF01152	2017-10	2018-10			

3.2.5 Procedure

Test Procedure 30 - 1000 MHz

- 1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
- 2. EUT set to test mode
- 3. The receiver is set to peak detection with max hold
- 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
- 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz

- 1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
- 2. EUT set to test mode
- 3. The receiver is set to peak detection with max hold
- 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
- 5. All significant emissions are measured again using the corresponding final detector



3.2.6 Results

			Test Results			
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2402	4804	53.08	pk	hor	74.00	-20.92
2402	4804	51.06	RMS	hor	54.00	-02.94
2402	4804	51.48	pk	ver	74.00	-22.52
2402	4804	49.26	RMS	ver	54.00	-04.74
2402	12009	53.80	pk	hor	74.00	-20.20
2402	12009	43.32	avg	hor	54.00	-10.68
2402	12009	53.62	pk	ver	74.00	-20.38
2402	12009	44.97	avg	ver	54.00	-09.03
2440	262.9	40.40	pk	hor	46.00	-05.57
2440	4880	50.98	pk	hor	74.00	-23.02
2440	4881	35.25	pk	ver	74.00	-38.75
2440	4881	26.40	RMS	ver	54.00	-27.60
2440	7319	52.19	pk	ver	74.00	-21.81
2440	7319	49.72	RMS	ver	54.00	-04.28
2440	12190	51.98	pk	ver	74.00	-22.02
2480	2500	55.88	pk	hor	74.00	-18.12
2480	2500	49.87	pk	ver	74.00	-24.13
2480	4960	45.71	pk	hor	74.00	-28.29
2480	4960	50.74	pk	ver	74.00	-23.26
2480	7440	50.22	pk	ver	74.00	-23.78



3.3 Test Conditions and Results - Receiver radiated emissions

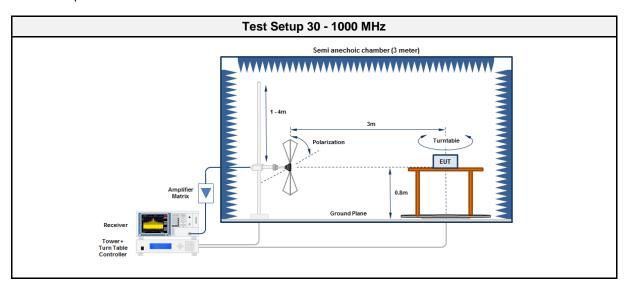
3.3.1 Information

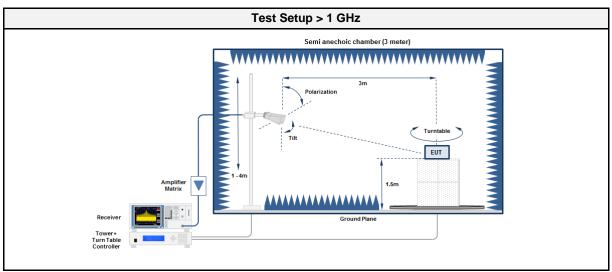
Test Information				
Reference ISED RSS-247 3.1				
Measurement Method ANSI C63.10 6.5, 6.6, 11.12				
Operator	Sebastian Suckow			
Date	2017-11-13 – 2017-12-13			

3.3.2 Limits

Limits						
Frequency [MHz]	Detector	Field strength [dBµV/m]	Measurement distance [m]			
30 - 88	Quasi-Peak	100	3			
88 - 216	Quasi-Peak	150	3			
216 - 960	Quasi-Peak	200	3			
960 - 1000	Quasi-Peak	500	3			
>1000	Average	500	3			

3.3.3 Setup





3.3.4 Equipment

Test Equipment 30 - 1000 MHz								
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due			
Anechoic Chamber	Frankonia	AC1	EF00062	-	-			
Measurement Receiver	Agilent	N9038A- 526/WXP	EF01070	2017-08	2018-08			
Antenna	R&S	HK 116	EF00203	2016-06	2018-06			
Antenna	R&S	HL 223	EF00187	2016-05	2019-05			

Test Equipment > 1 GHz								
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due			
Anechoic Chamber	Frankonia	AC6	EF00910	2017-03	2020-03			
Anechoic Chamber	Frankonia	AC1	EF00062	-	-			
Measurement Receiver	Agilent	N9038A- 526/WXP	EF01070	2017-08	2018-08			
Antenna	R&S	BBHA 9120D	EF01153	2017-08	2018-08			

3.3.5 Procedure

Test Procedure 30 - 1000 MHz

- 1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
- 2. EUT set to test mode
- 3. The receiver is set to peak detection with max hold
- 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
- 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz

- 1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
- 2. EUT set to test mode
- 3. The receiver is set to peak detection with max hold
- 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
- 5. All significant emissions are measured again using the corresponding final detector



3.3.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2440	53.119	33.80	pk	ver	40.00	-06.21



ANNEX A Transmitter spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

Antenna: Rohde & Schwarz HK 116, Horizontal

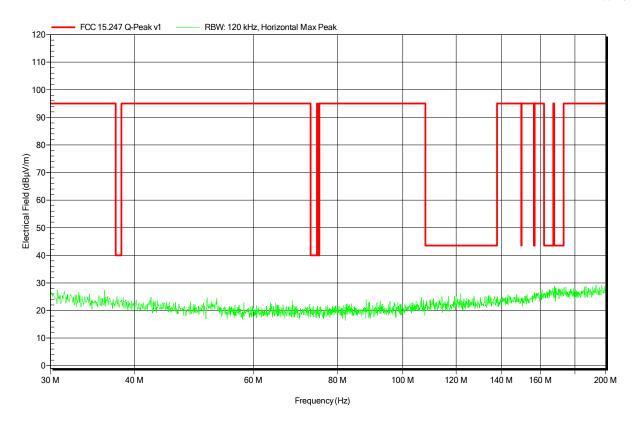
Measurement distance: 3 m

Mode: TX; BT LE 2402 MHz

Test Date: 2017-12-13

Note:

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Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

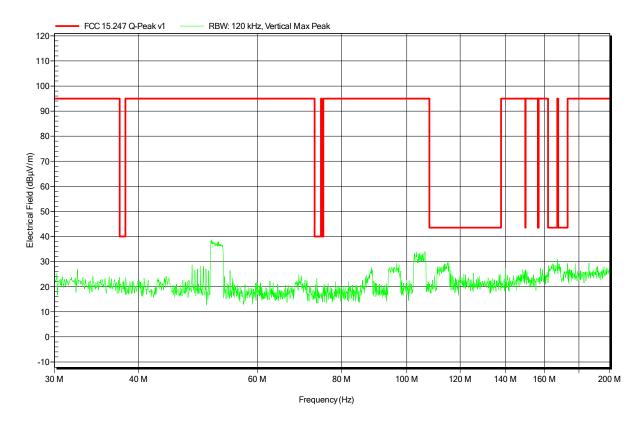
Measurement distance: 3 m

Mode: TX; BT LE 2402 MHz

Test Date: 2017-12-13

Note:

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Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

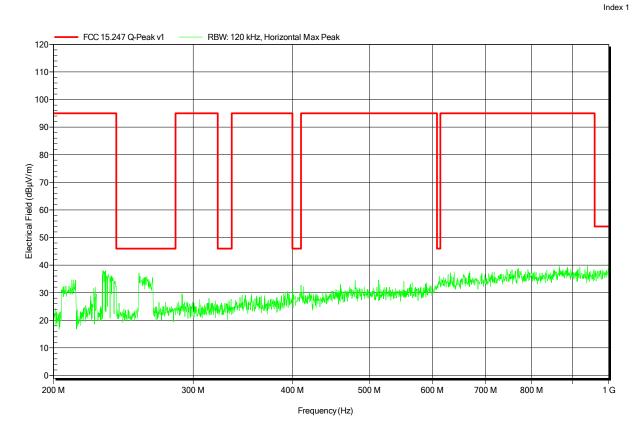
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2402 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

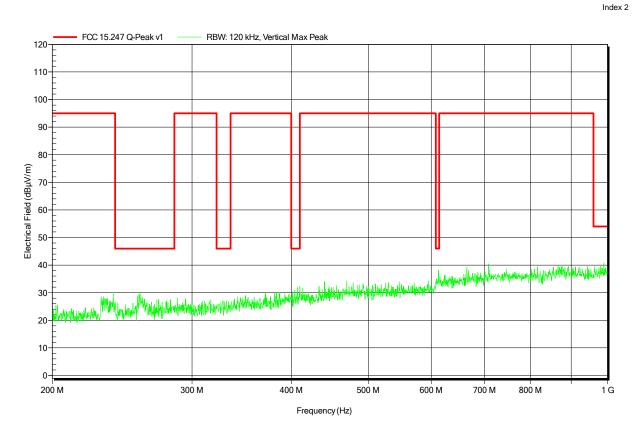
Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2402 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

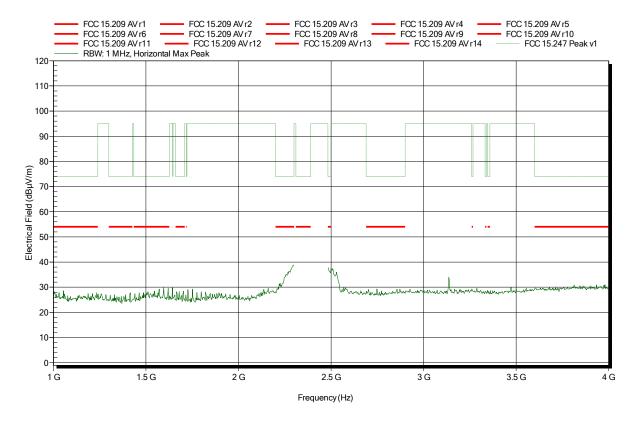
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

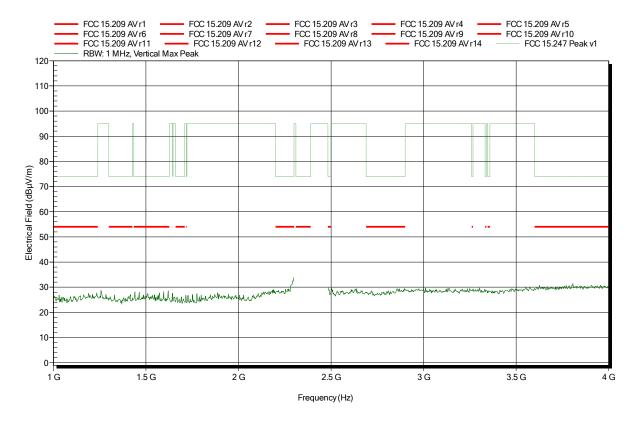
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

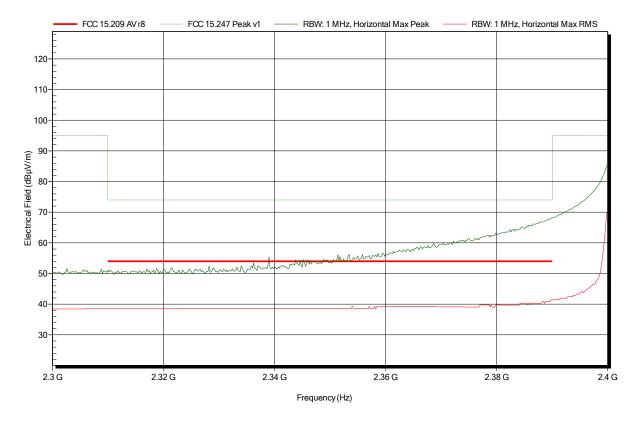
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23 Note: lower bandedge

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Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

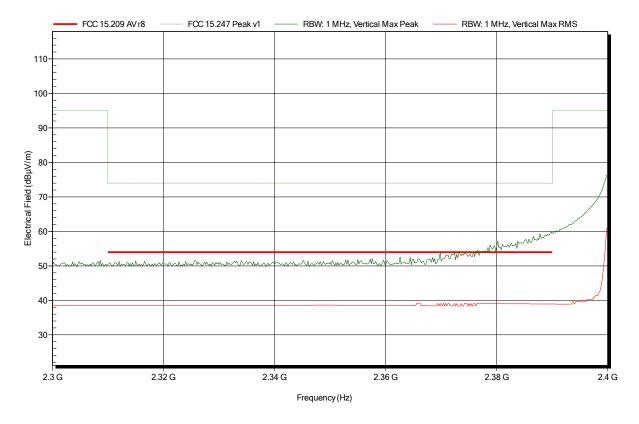
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23 Note: lower bandedge

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Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

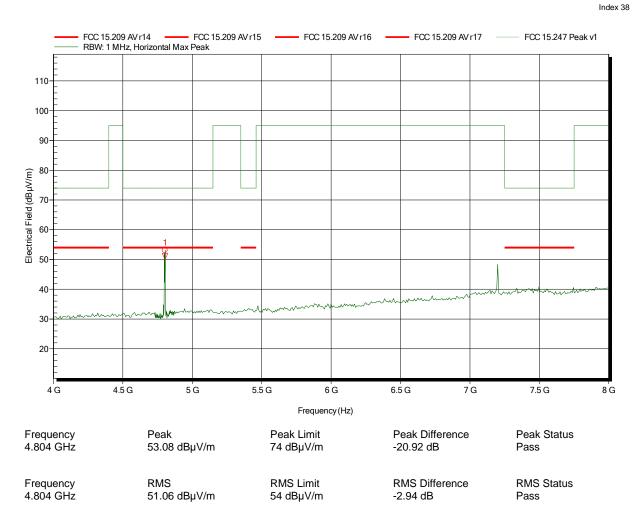
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

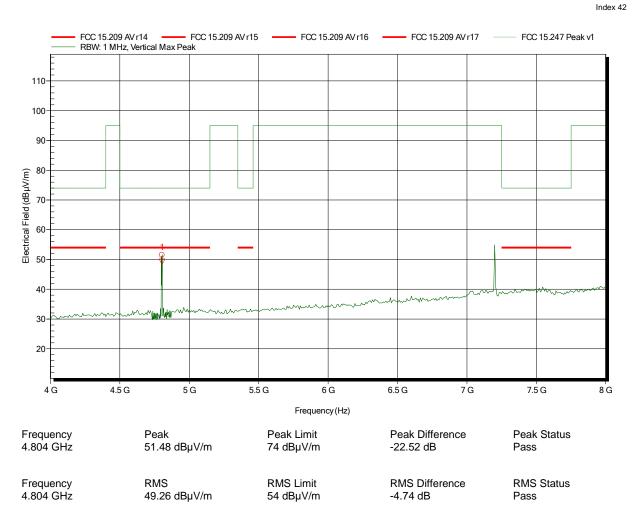
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

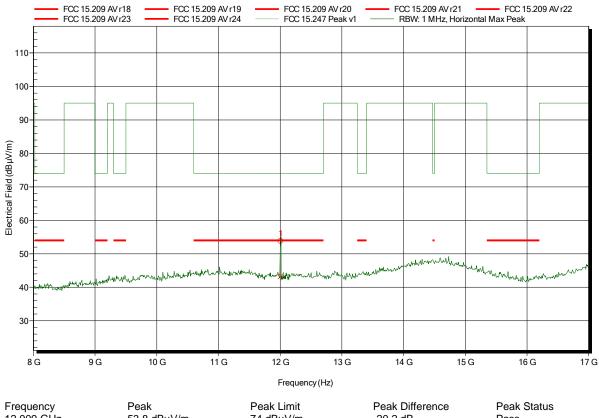
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23

Note:



Frequency Peak Peak Limit Peak Difference Peak Status 12.009 GHz 53.8 dB μ V/m 74 dB μ V/m -20.2 dB Pass Frequency Average Average Limit Average Difference Average Status 12.009 GHz 43.32 dB μ V/m 54 dB μ V/m -10.68 dB Pass

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Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

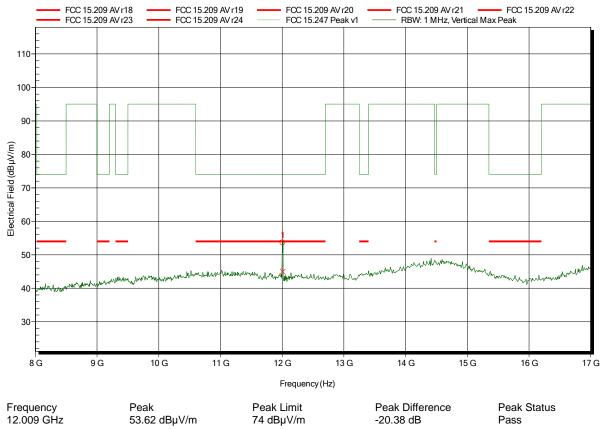
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-11-23

Note:



Frequency Peak Peak Limit Peak Difference Peak Status 12.009 GHz 53.62 dB μ V/m 74 dB μ V/m -20.38 dB Pass Frequency Average Average Limit Average Difference Average Status 12.009 GHz 44.97 dB μ V/m 54 dB μ V/m -9.03 dB Pass



Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions:

Antenna:

Measurement distance:

Mode:

Tnom: 22°C, Vnom: 3.6 VDC

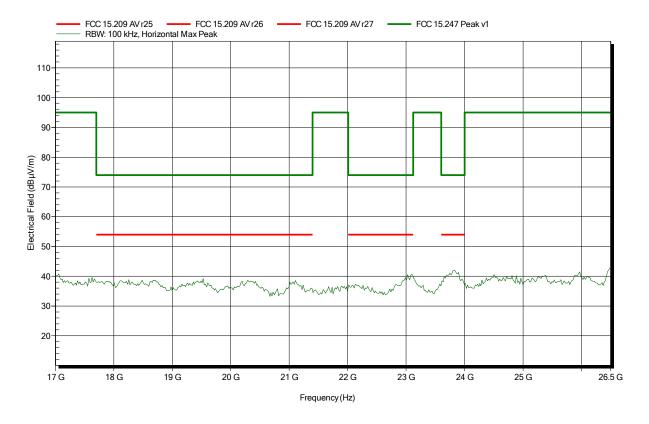
ATH18G40, Horizontal

1 m converted to 3m

TX; BT LE 2402 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

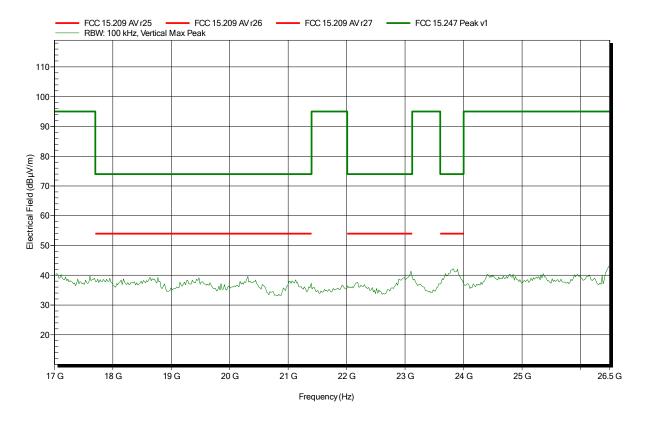
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: ATH18G40, Vertical Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2402 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

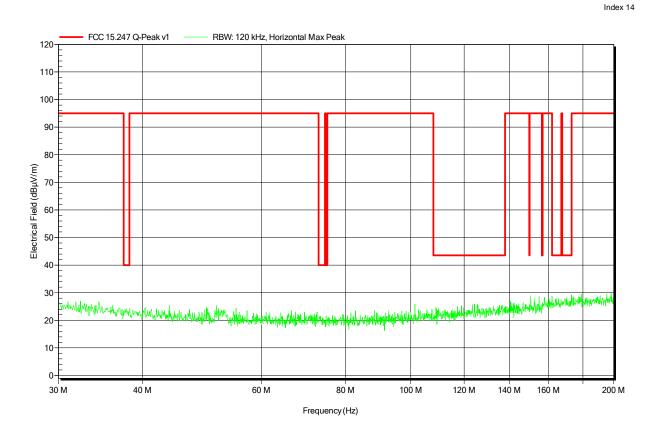
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

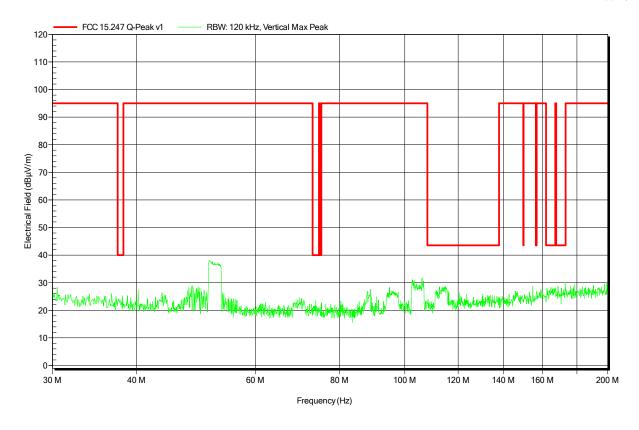
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

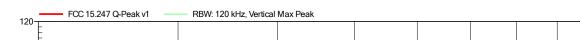
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

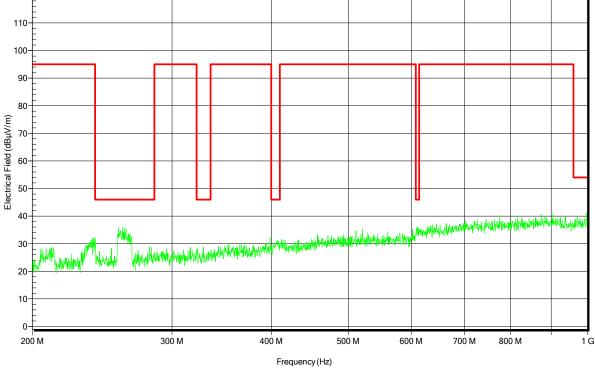
Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:







Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

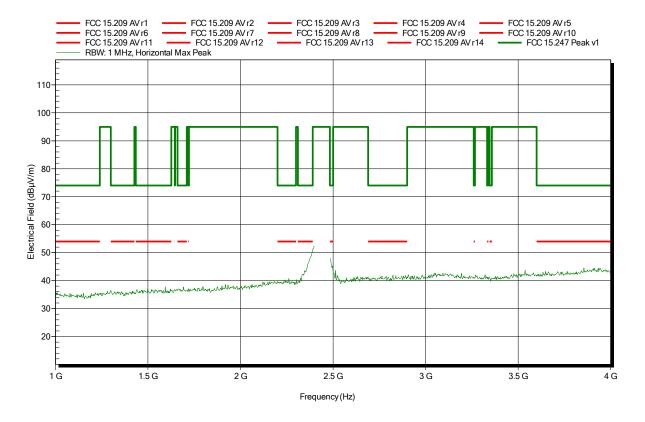
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

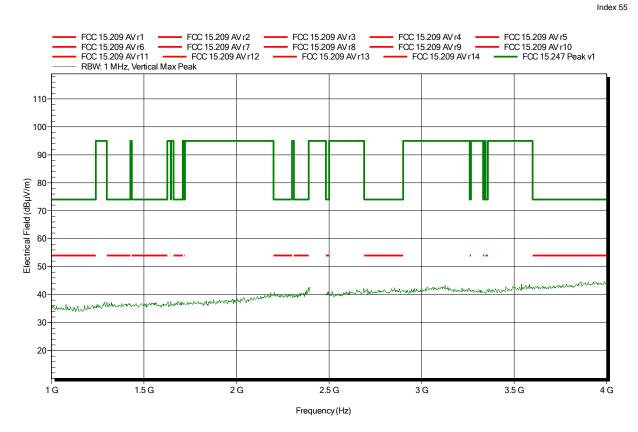
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

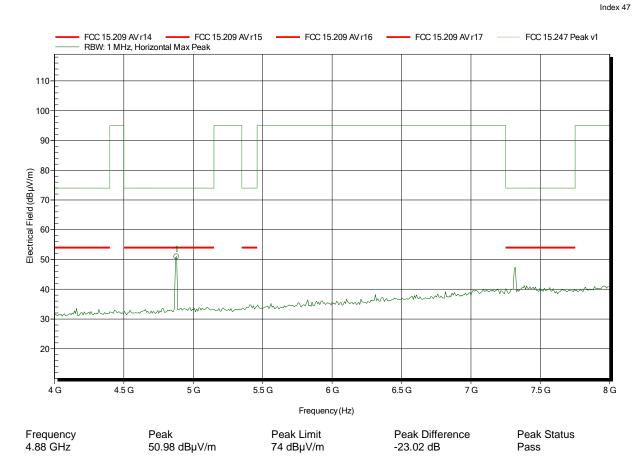
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2440 MHz

Test Date: 2017-11-24





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

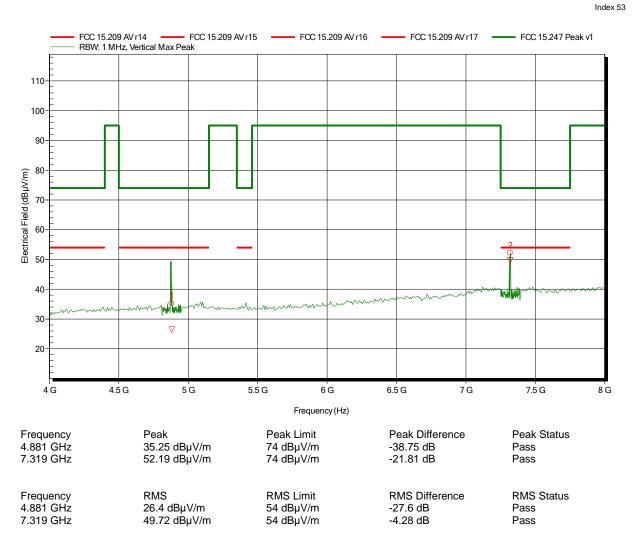
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

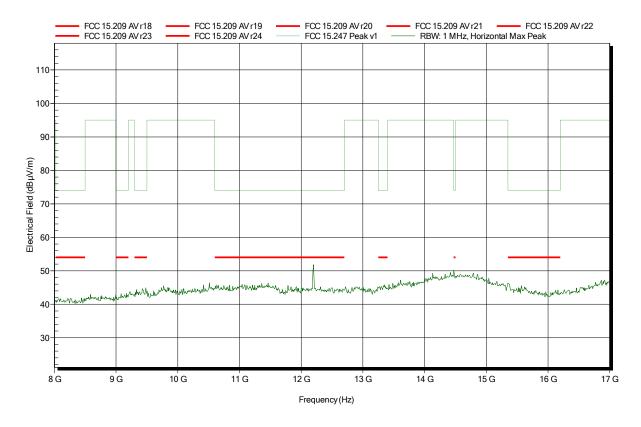
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2440 MHz

Test Date: 2017-11-24





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

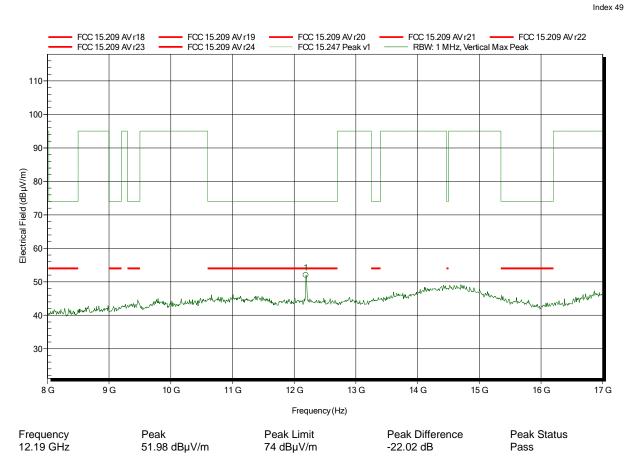
Operator: Sebastian Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2440 MHz

Test Date: 2017-11-24





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions:

Antenna:

Measurement distance:

Mode:

Tnom: 22°C, Vnom: 3.6 VDC

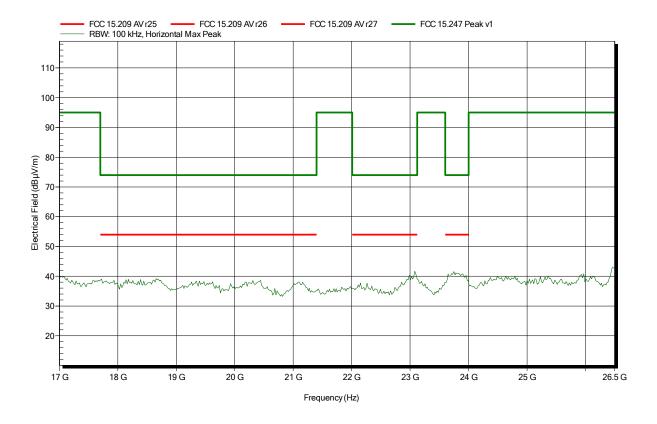
ATH18G40, Horizontal

1 m converted to 3m

TX; BT LE 2440 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

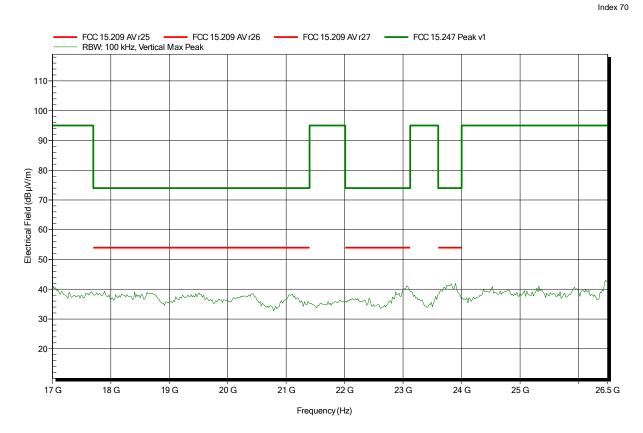
Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: ATH18G40, Vertical Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2440 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

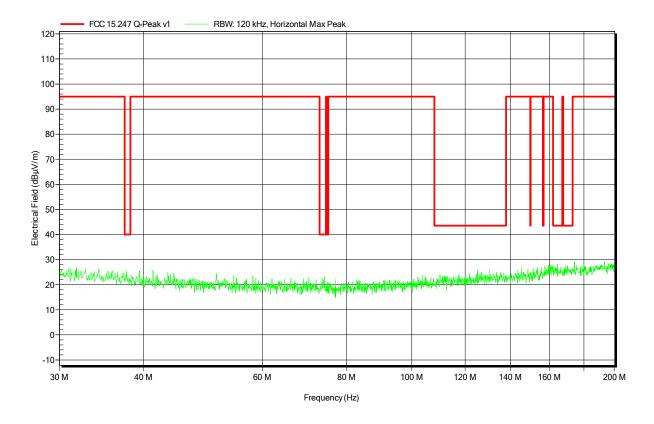
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

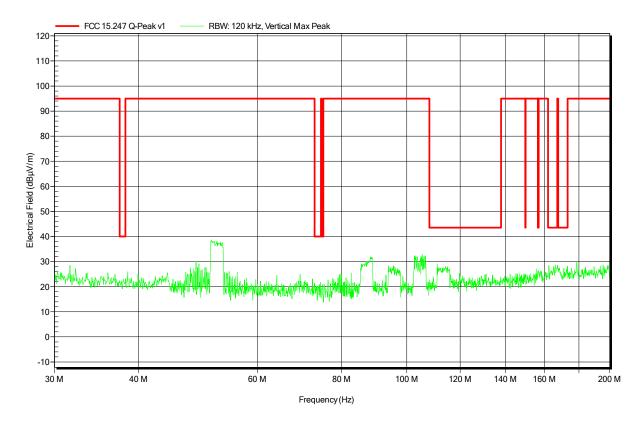
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

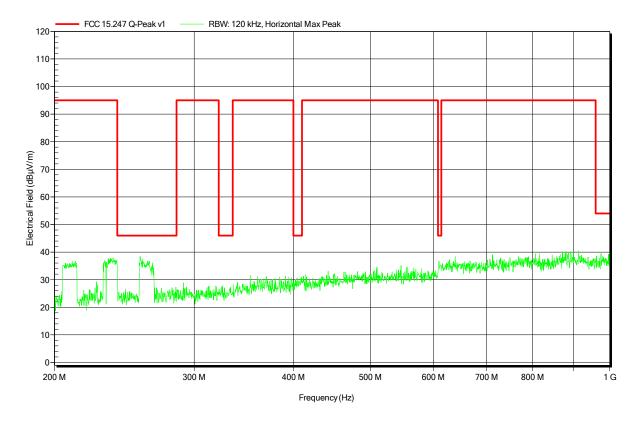
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

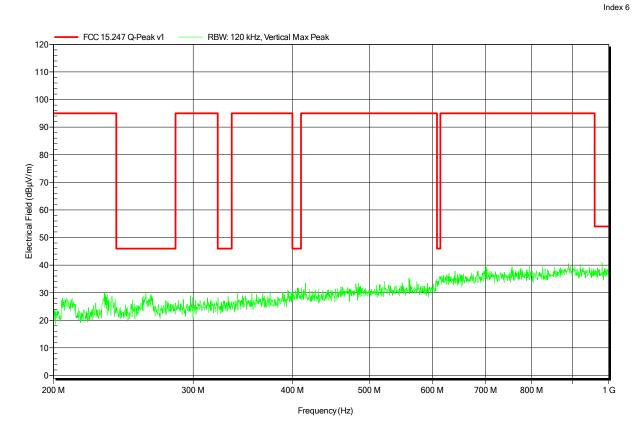
Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

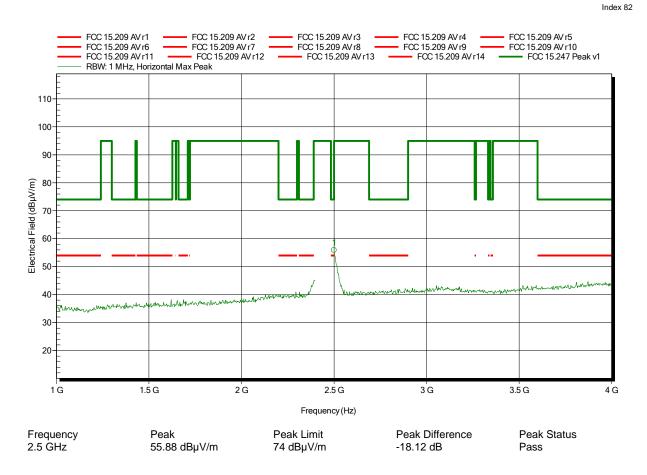
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

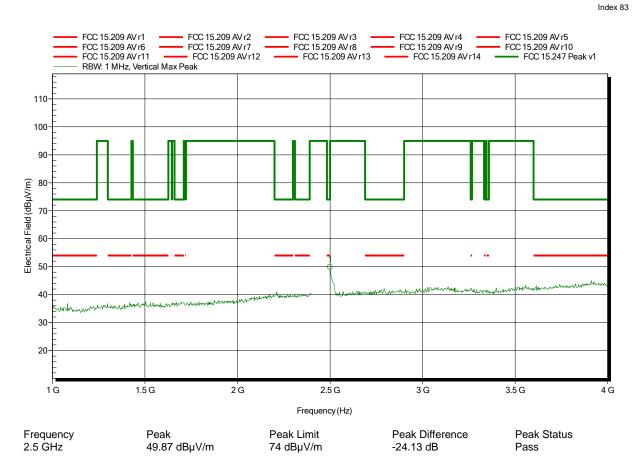
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

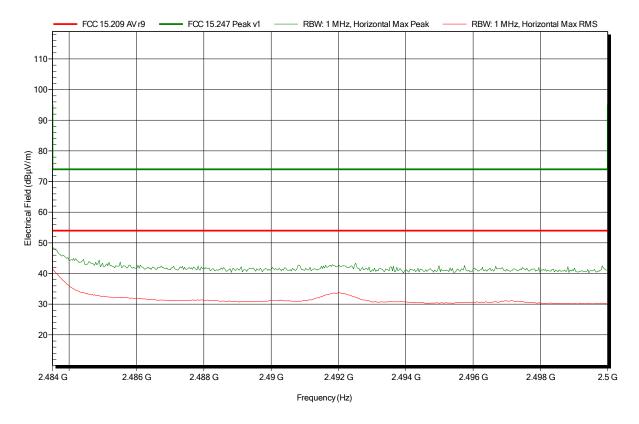
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12 Note: higher bandedge





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

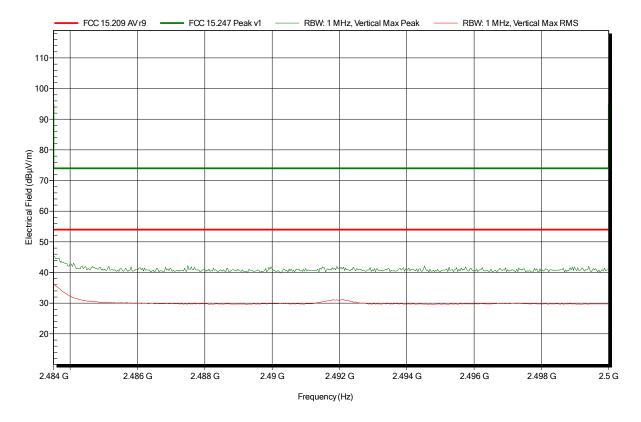
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12 Note: higher bandedge





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

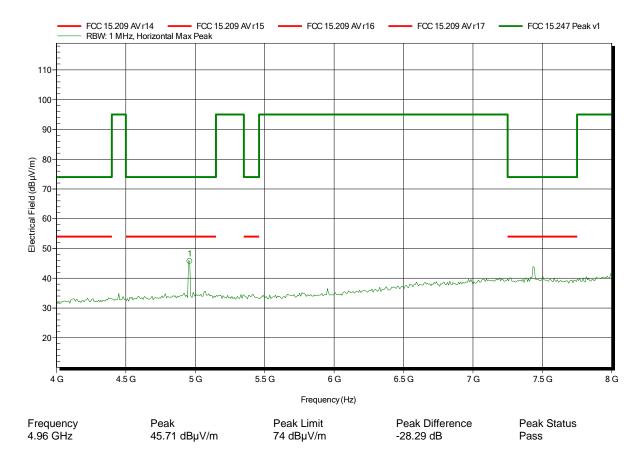
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

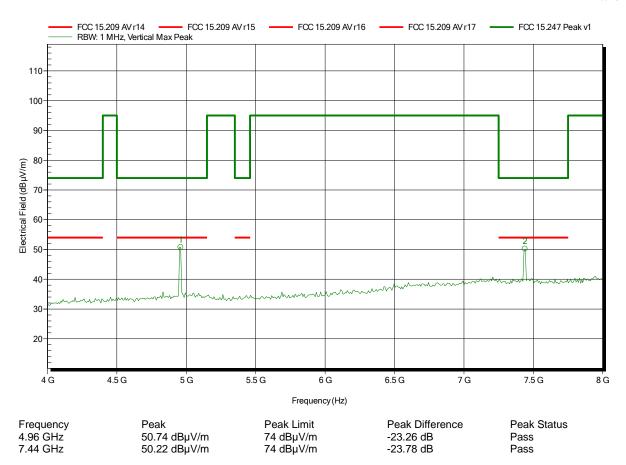
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

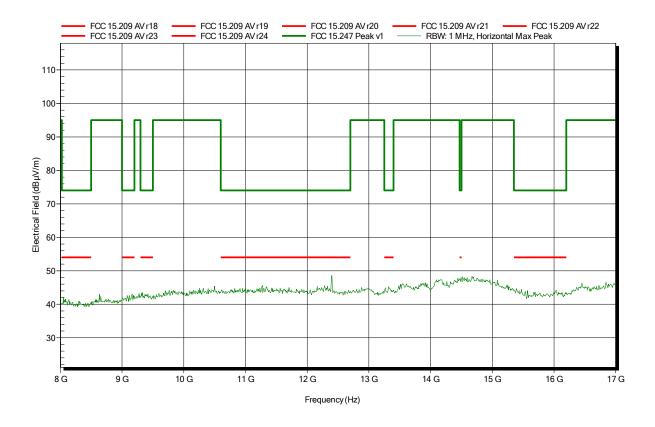
Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

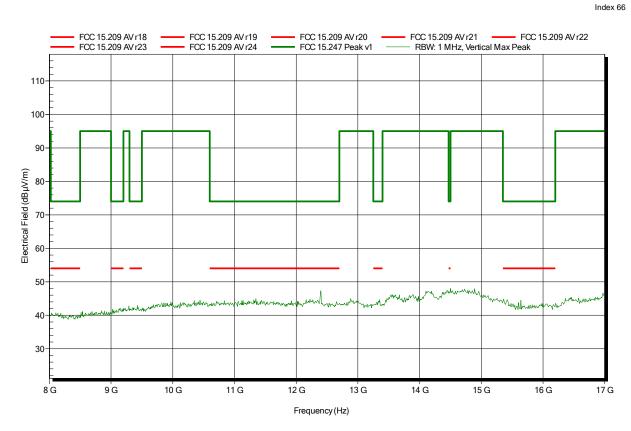
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions:

Antenna:

Measurement distance:

Mode:

Tnom: 22°C, Vnom: 3.6 VDC

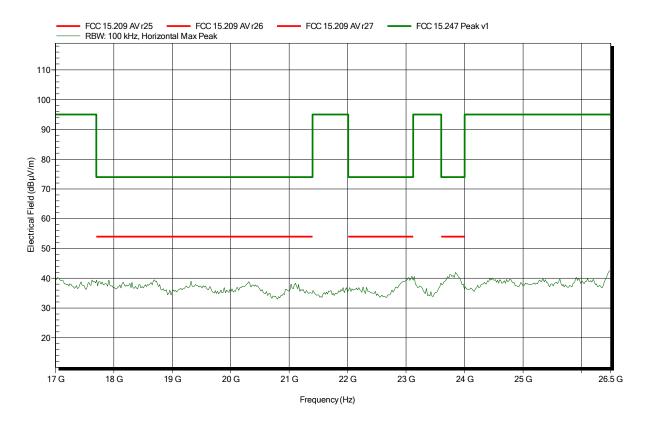
ATH18G40, Horizontal

1 m converted to 3m

TX; BT LE 2480 MHz

Test Date: 2017-12-12

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

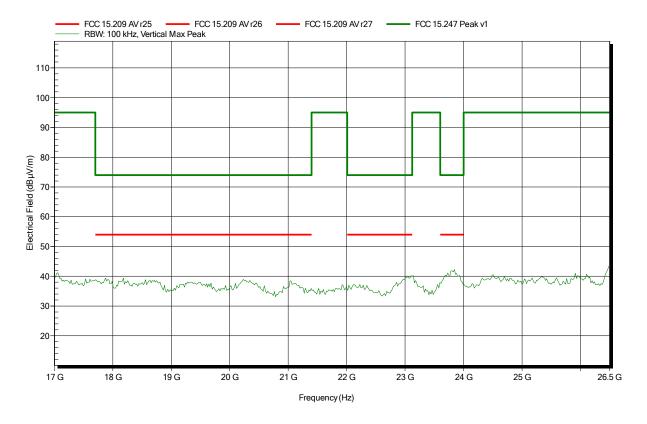
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: ATH18G40, Vertical Measurement distance: 1 m converted to 3m Mode: TX; BT LE 2480 MHz

Test Date: 2017-12-12

Note:





ANNEX B Receiver spurious emissions

Spurious emissions according to RSS-Gen Issue 4

Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

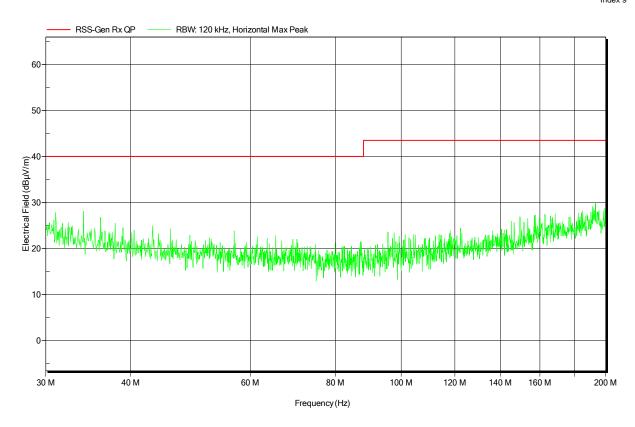
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

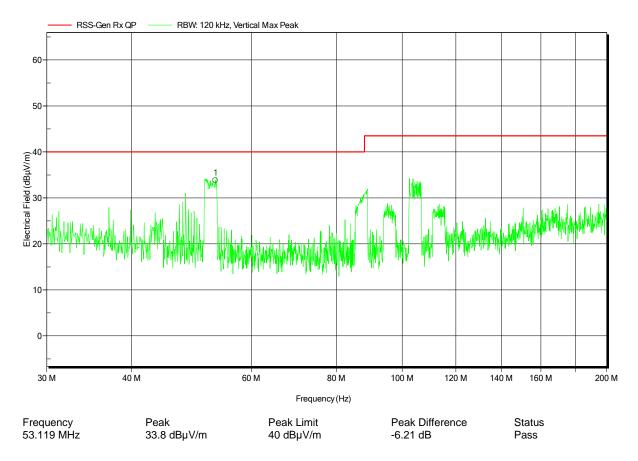
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC

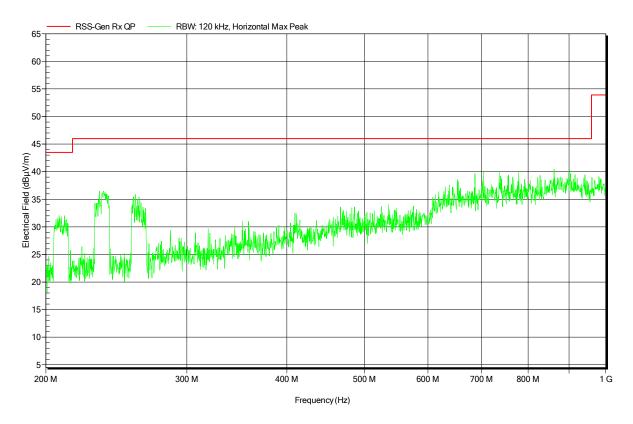
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

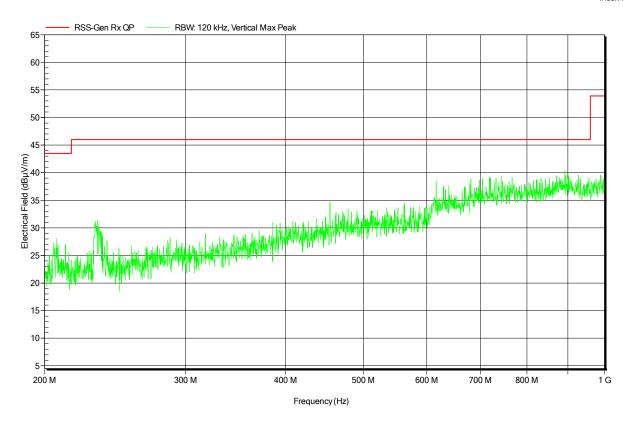
Test Conditions: Tnom: 21°C, Vnom: 3.6 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

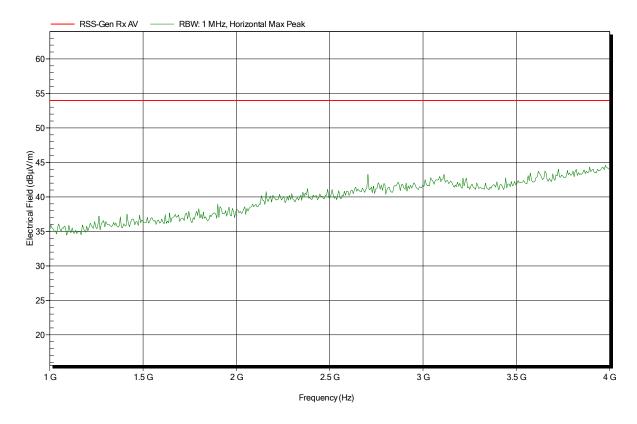
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

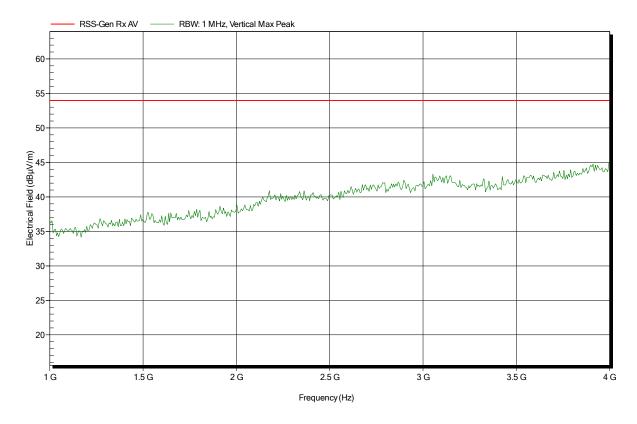
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

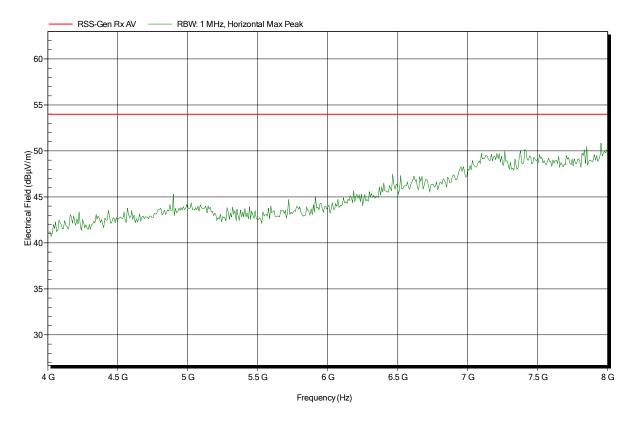
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

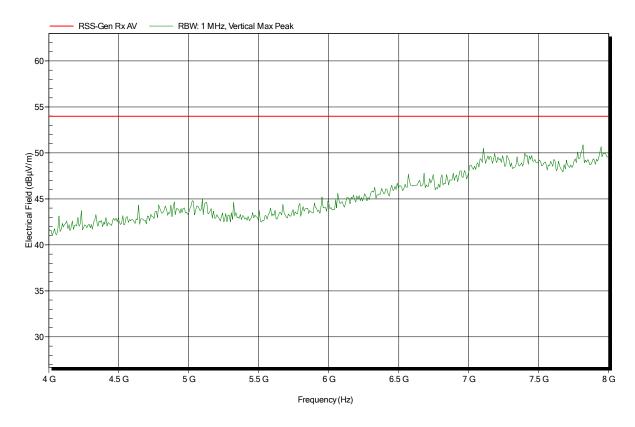
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

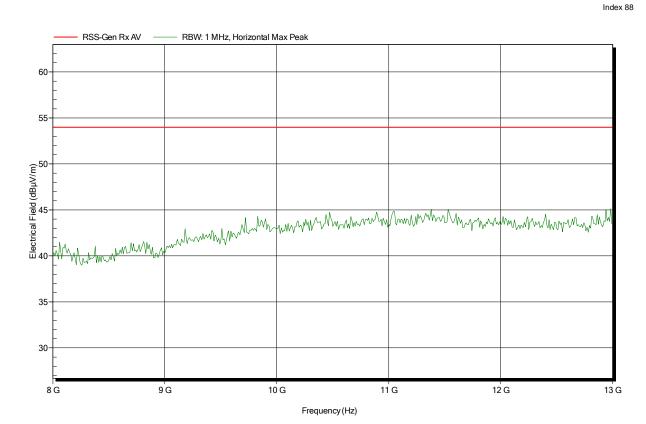
Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13





Project number: G0M-1705-6514

Applicant: Robert Bosch Tool Corporation

EUT Name: Laser Rangefinder

Model: GLM 400CL

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 22°C, Vnom: 3.6 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: RX; BT LE 2440 MHz

Test Date: 2017-12-13

Note:

