

EMC TEST REPORT

FCC 47 CFR Part 15B
Industry Canada ICES-003

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1705-6514-EF0215B-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
IC Testing Laboratory site: 3470A-2

Applicant's name : Robert Bosch Tool Corporation

Address : 1800 W. Central Road
60056 Mount Prospect, IL
USA

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
ICES-003, Issue 6:2016
ANSI C63.4:2014

Equipment under test (EUT):

Product description	Laser Rangefinder
Model No.	GLM400CL
Additional Models	None
Hardware version	Main PCBA 3.1 (BOM 3.2), Long-Range PCBA 3.3
Firmware / Software version	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-EF0215B-V02

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

Possible test case verdicts:

- not applicable to test object : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement..... : F (Fail)

Testing:

Date of receipt of test item : 2017-11-22

Date (s) of performance of tests : 2017-12-15

Compiled by : Matthias Handrik

Tested by (+ signature)..... : Matthias Handrik

Approved by (+ signature) : Jens Marquardt
Deputy Head of Lab

Date of issue : 2018-01-31

Total number of pages : 32

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
V01	2017-12-19	Initial Release	
V02	2018-01-31	FCC ID / IC added.	M. Handrik

REPORT INDEX

1	EQUIPMENT (TEST ITEM) DESCRIPTION	5
1.1	Photos – Equipment external	6
1.2	Photos – Equipment internal	7
1.3	Photos – Test setup	8
1.4	Supporting Equipment Used During Testing	10
1.5	Input / Output Ports	10
1.6	Operating Modes and Configurations	11
1.7	Test Equipment Used During Testing	12
1.8	Sample emission level calculation	13
2	RESULT SUMMARY	14
3	TEST CONDITIONS AND RESULTS	15
3.1	Test Conditions and Results – Radiated emissions	15
3.2	Test Conditions and Results – AC power line conducted emissions	29

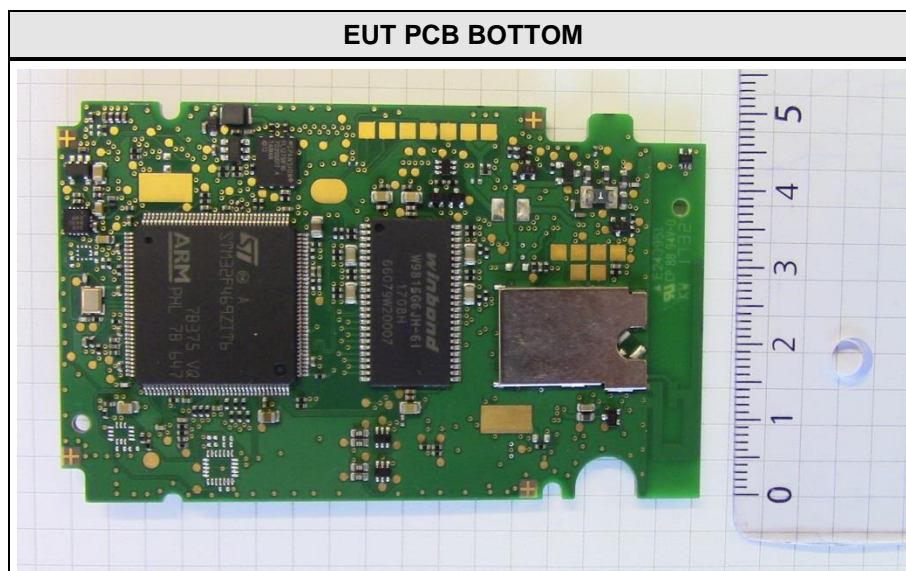
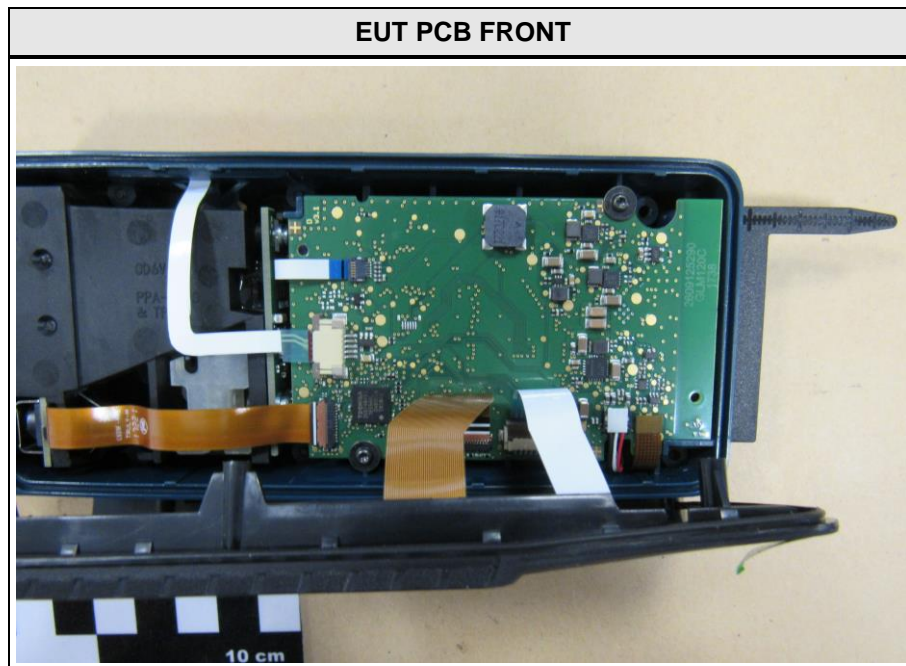
1 Equipment (Test item) Description

Description	Laser Rangefinder	
Model	GLM 400CL	
Additional Models	None	
Serial number	None	
Hardware version	Main PCBA 3.1 (BOM 3.2), Long-Range PCBA 3.3	
Software / Firmware version	CPU 1.0.0, MCU 1.0.0, Bluetooth 1.2.0	
FCC-ID	TXTGLM400C	
IC	909H-GLM400C	
Power supply	3.6V DC	
AC/DC-Adaptor	Model : 1600A0143H Manufacturer : Bosch Input : 100-240VAC / 50-60Hz Output : 5V DC / 1.0A	
Radio module	Type	Bluetooth Low Energy
	Model	unspecified
	Manufacturer	unspecified
	HW Version	unspecified
	SW Version	unspecified
	SVN	unspecified
	FCC-ID	unspecified
	IC	unspecified
Manufacturer	Robert Bosch Power Tools GmbH 70538 Stuttgart Germany	
Highest emission frequency	2480MHz	
Device classification	Class B	
Equipment type	Tabletop	
Number of tested samples	1	

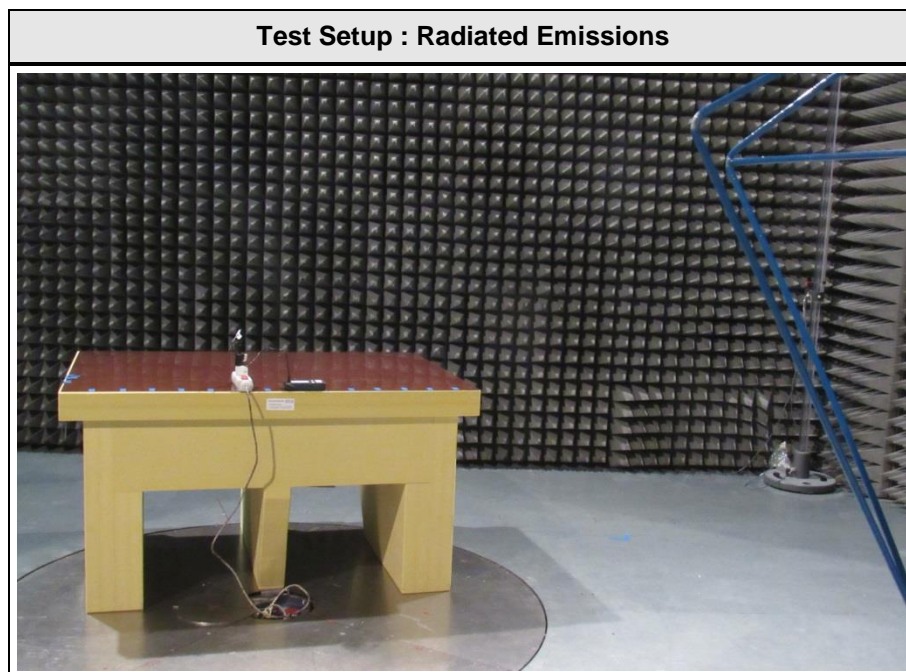
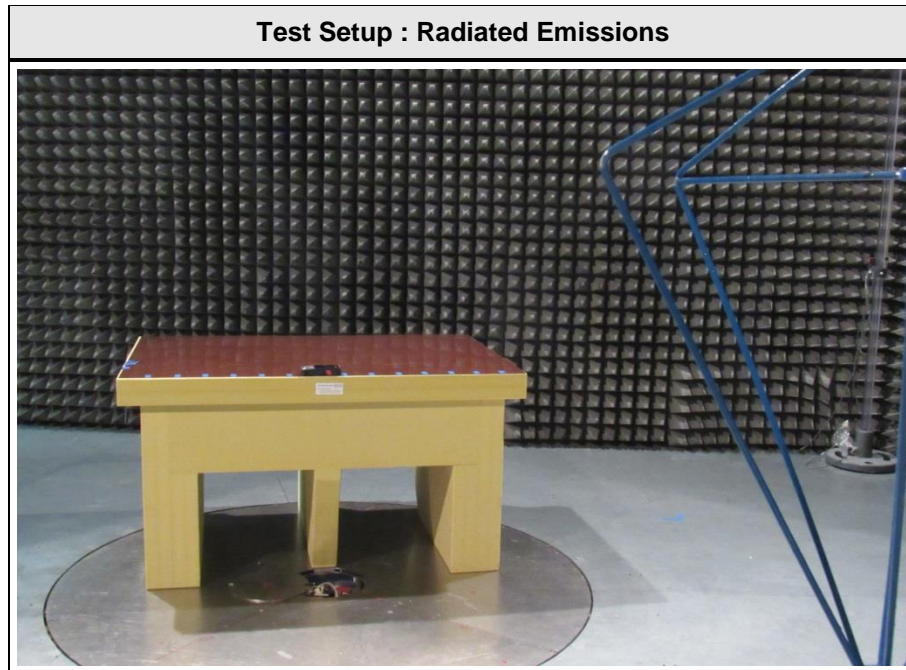
1.1 Photos – Equipment external



1.2 Photos – Equipment internal



1.3 Photos – Test setup



Test Setup : Conducted Emissions



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments (e.g. serial no.)
AE	iPhone	Apple	A1429 EMC 2610	
AE	AC adapter	Bosch	1600A0143H	
AE	USB cable	Bosch	2609120670	
AE	Software application	Bosch	App version: 1.2.0.7942	Measuring Master
None				
<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 Input / Output Ports

Port #	Name	Type*	Max. Cable Length	Cable Shielded	Comments (e.g. Cat. of Cable)
1	USB	DC / I/O	60cm		
<p>*Note: Use the following abbreviations:</p> <p>AC : AC power port</p> <p>DC : DC power port</p> <p>N/E : Non electrical</p> <p>I/O : Signal input or output port</p> <p>TP : Telecommunication port</p>					

1.6 Operating Modes and Configurations

Mode #	Description
1	EUT powered up. Bluetooth Low Energy connection to iPhone. Software application: continuous measurement mode.
2	Charging via AC/DC adaptor

Configuration #	EUT Configuration
Bluetooth	EUT powered up. Software application on iPhone controlled EUT via Bluetooth Low Energy. iPhone is placed outside the measurement chamber. Measurement values transmit via Bluetooth Low Energy to iPhone.
Charging	EUT connected via USB cable to AC/DC adaptor.

1.7 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2016.1.10

Conducted emissions SR1					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	EF00182	2017-01	2019-01
AMN	R&S	ESH3-Z5	EF00036	2017-01	2019-01
EMI Test Receiver	R&S	ESR7	EF00943	2017-07	2018-07
Cable	-	RG223/U	-	System Cal.	System Cal.

Radiated emissions AC1					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	EF00030	2016-04	2019-04
LPD Antenna	R&S	HL 223	EF00187	2016-05	2019-05
Double-Ridged Guide Antenna	ETS-Lindgren USA	3117	EF01256	2017-07	2018-07
MXE EMI Receiver	Keysight Technologies	N9038A-526/WXP	EF01070	2017-08	2018-08
RF Cable			-	System Cal.	System Cal
RF Cable			-	System Cal.	System Cal

1.8 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:

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

2 Result Summary

FCC 47 CFR Part 15B, Industry Canada ICES-003				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 ICES-003 Item 6.2	Radiated emissions	ANSI C 63.4	PASS	
47 CFR 15.107 ICES-003 Item 6.1	AC power line conducted emissions	ANSI C63.4	PASS	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

Radiated emissions acc. FCC 47 CFR 15.109 / ICES-003				Verdict: PASS		
Laboratory Parameters:		Required prior to the test		During the test		
Ambient Temperature		15 to 35 °C		23°C		
Relative Humidity		30 to 60 %		28%		
Test according referenced standards		Reference Method				
		ANSI C63.4				
Sample is tested with respect to the requirements of the equipment class		Equipment class				
		Class B				
Test frequency range determined from highest emission frequency		Highest emission frequency				
		2480MHz				
Fully configured sample scanned over the following frequency range		Frequency range				
		30 MHz to 13 GHz				
Operating mode		1 / 2				
Configuration		Bluetooth / Charging				
Limits and results Class B						
Frequency [MHz]	Quasi-Peak [dBµV/m]	Result	Average [dBµV/m]	Result	Peak [dBµV/m]	Result
30 – 88	40	PASS	-		-	-
88 – 216	43.5	PASS	-		-	-
216 – 960	46	PASS	-		-	-
960 – 1000	54	PASS	-		-	-
> 1000	-	-	54	PASS	74	PASS
Comments:						

Test Procedure:

The test site is in accordance with ANSI C63-4:2014 requirements and is listed by FCC.

The measurement procedure is as follows:

Exploratory measurement:

- The EUT was placed on a non-conductive table at a height of 0.8m.
- The EUT and support equipment, if needed, were set up to simulate typical usage.
- Cables, of type and length specified by the manufacturer, were connected to at least one port of each type and were terminated by a device or simulating load of actual usage.
- The antenna was placed at a distance of 3 or 10 m.
- The received signal was monitored at the measurement receiver.
 - Cables not bundled were manipulated within the range of likely arrangements to produce the highest emission amplitude
 - To maximize the suspected emissions the EUT is rotated 360 degrees. If the signal exceeds the previous amplitude, go back to the corresponding azimuth and manipulate the cables again for maximizing the emissions if possible.
 - Move the antenna from 1 to 4m to maximize the suspected highest amplitude signal.
- This procedure has to be performed in both antenna polarizations, horizontal and vertical.
- The arrangement of the equipment with the maximum emission level is shown on the setup picture at item 1.3.

Final measurement:

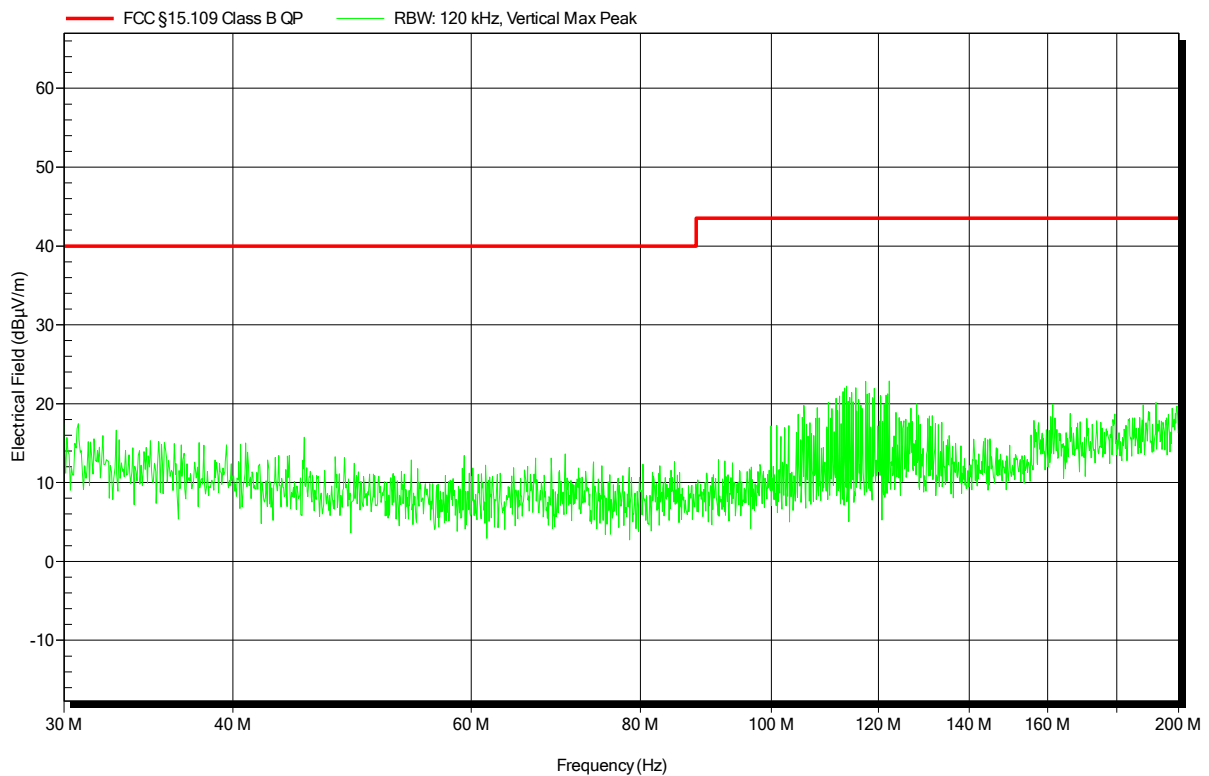
- The EUT was placed on a 0.8 m non-conductive table at a 3 m distance from the receive antenna. The antenna output was connected to the measurement receiver
- A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast
- The EUT and cable arrangement were based on the exploratory measurement results
- Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.
- The test data of the worst-case conditions were recorded and shown on the next pages.

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant:	Robert Bosch GmbH
EUT Name:	Laser Rangefinder
Model:	GLM400CL
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 23°C, Unom: 3.6V DC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3m
Mode:	Mode#1
Test Date:	2017-12-15
Note:	

Index 49

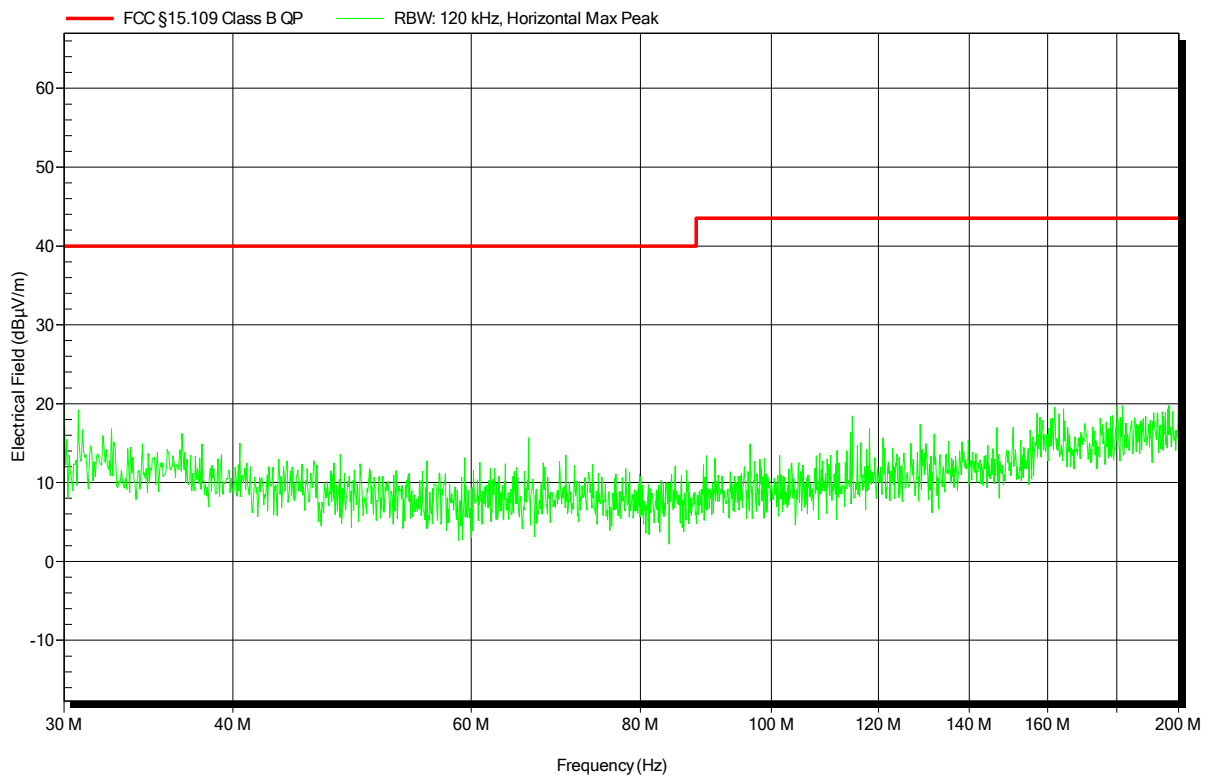


Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant:	Robert Bosch GmbH
EUT Name:	Laser Rangefinder
Model:	GLM400CL
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 23°C, Unom: 3.6V DC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	Mode#1
Test Date:	2017-12-15
Note:	

Index 50

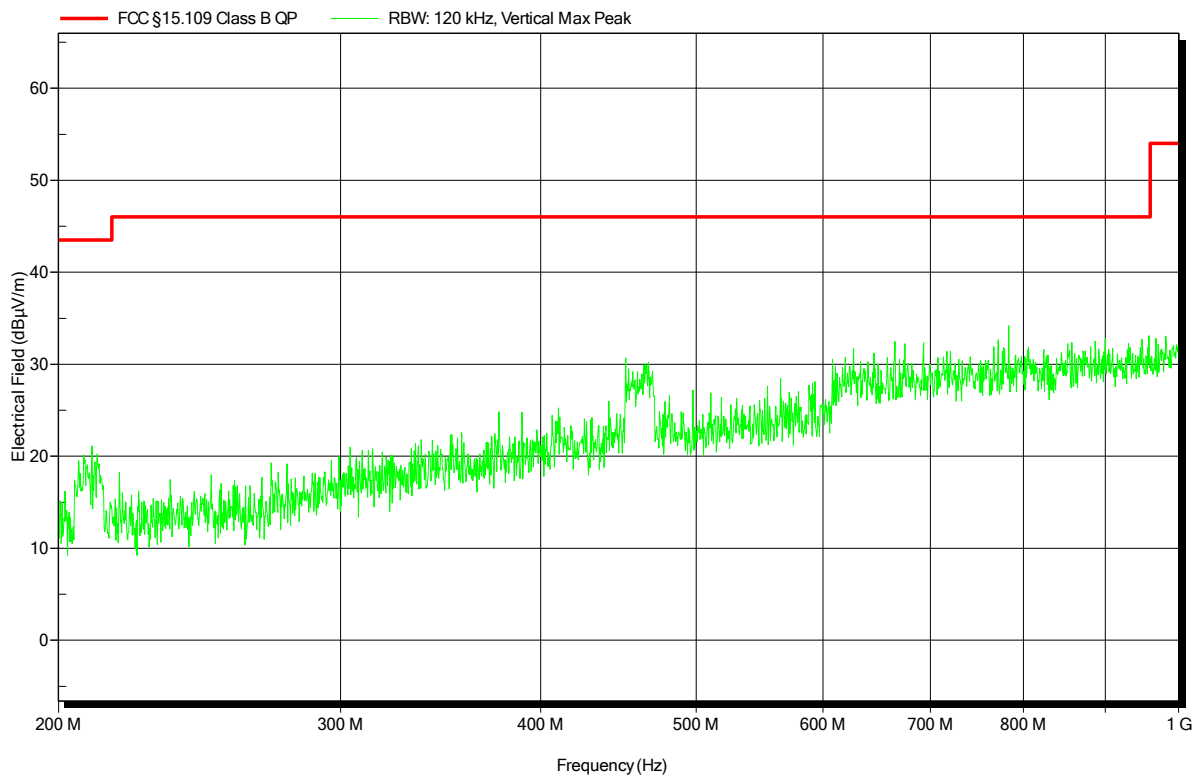


Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant:	Robert Bosch GmbH
EUT Name:	Laser Rangefinder
Model:	GLM400CL
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 23°C, Unom: 3.6V DC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	mode#1
Test Date:	2017-12-15
Note:	

Index 60



Test Report No.: G0M-1705-6514-EF0215B-V02

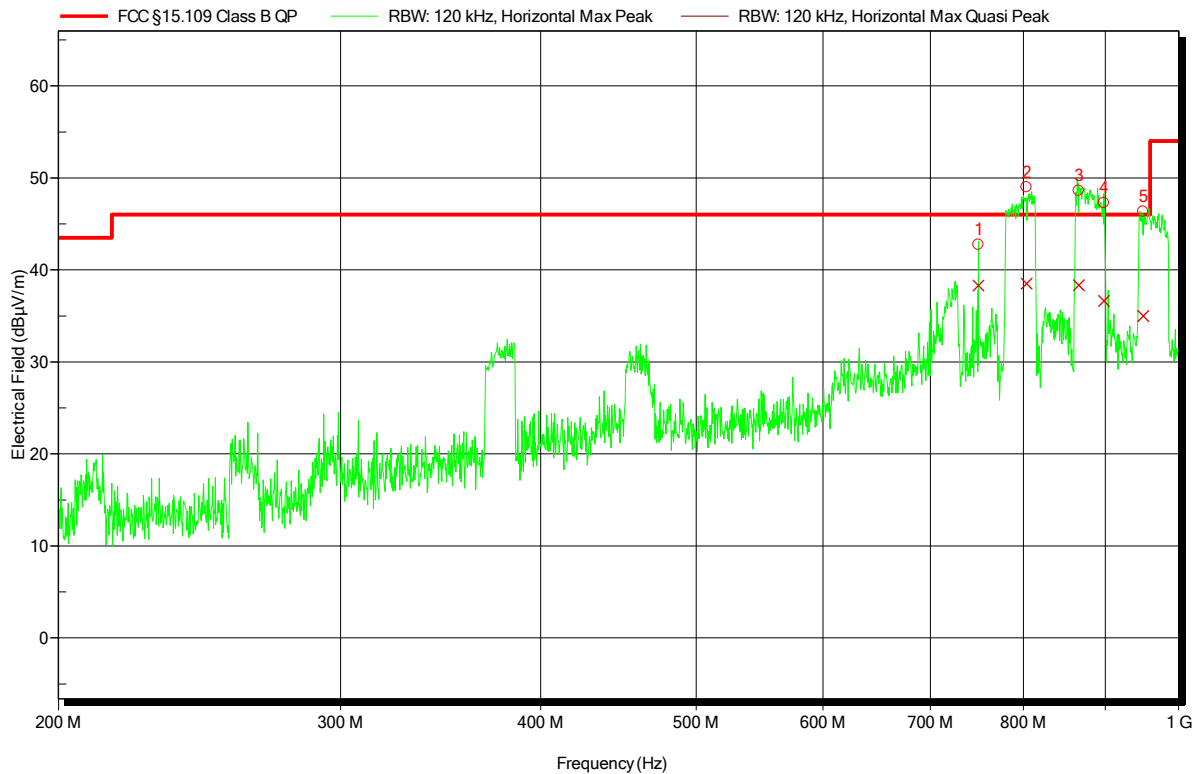
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 3.6V DC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: mode#1
 Test Date: 2017-12-15
 Note:

Index 59



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	749.96 MHz	38.3 dBμV/m	46.02 dBμV/m	-7.72 dB	Pass	-19 Degree	1 m
2	803.8 MHz	38.52 dBμV/m	46.02 dBμV/m	-7.5 dB	Pass	-19 Degree	1 m
3	866.262 MHz	38.36 dBμV/m	46.02 dBμV/m	-7.67 dB	Pass	-19 Degree	1 m
4	898.303 MHz	36.65 dBμV/m	46.02 dBμV/m	-9.37 dB	Pass	-19 Degree	1 m
5	950.205 MHz	35 dBμV/m	46.02 dBμV/m	-11.02 dB	Pass	-19 Degree	1 m

Test Report No.: G0M-1705-6514-EF0215B-V02

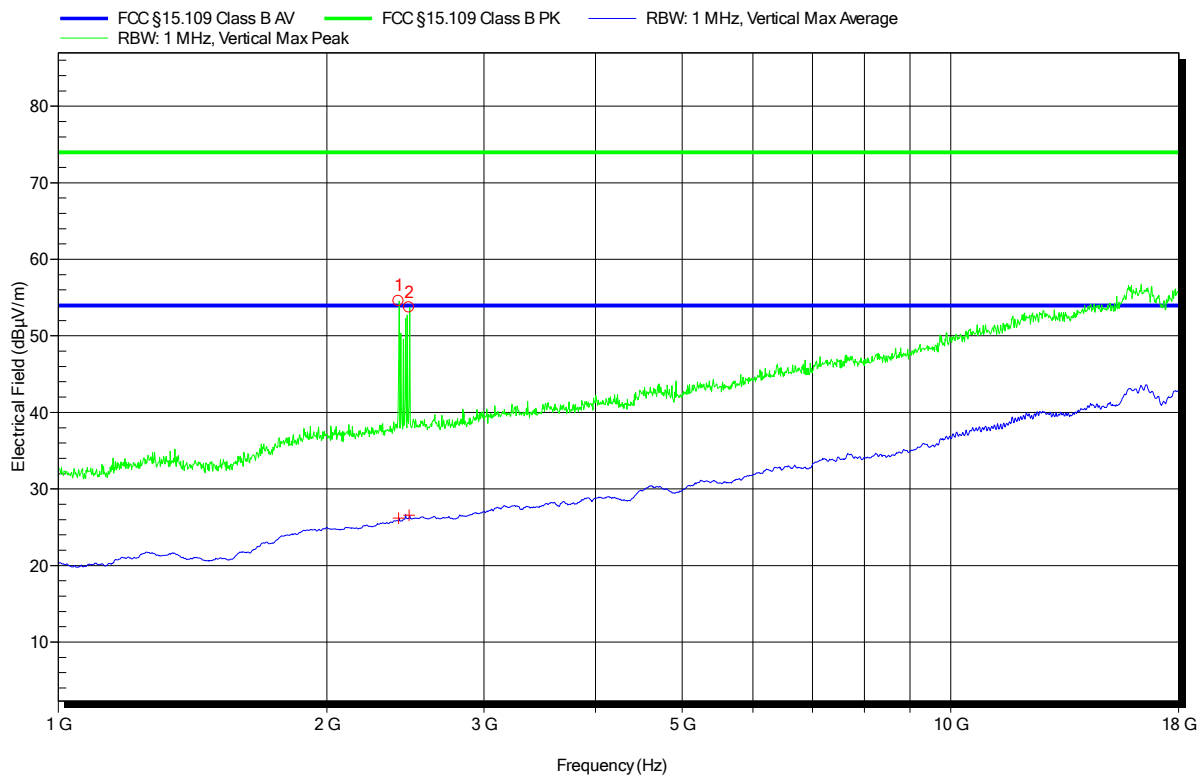
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 3.6V DC
 Antenna: ETS-Lindgren 3117, Vertical
 Measurement distance: 3m
 Mode: Mode#1
 Test Date: 2017-12-15
 Note:

Index 47



Peak Number	Frequency			
1	2.407 GHz	Bluetooth Carrier	Low	Enrgy
2	2.473 GHz	Bluetooth Carrier	Low	Enrgy

Test Report No.: G0M-1705-6514-EF0215B-V02

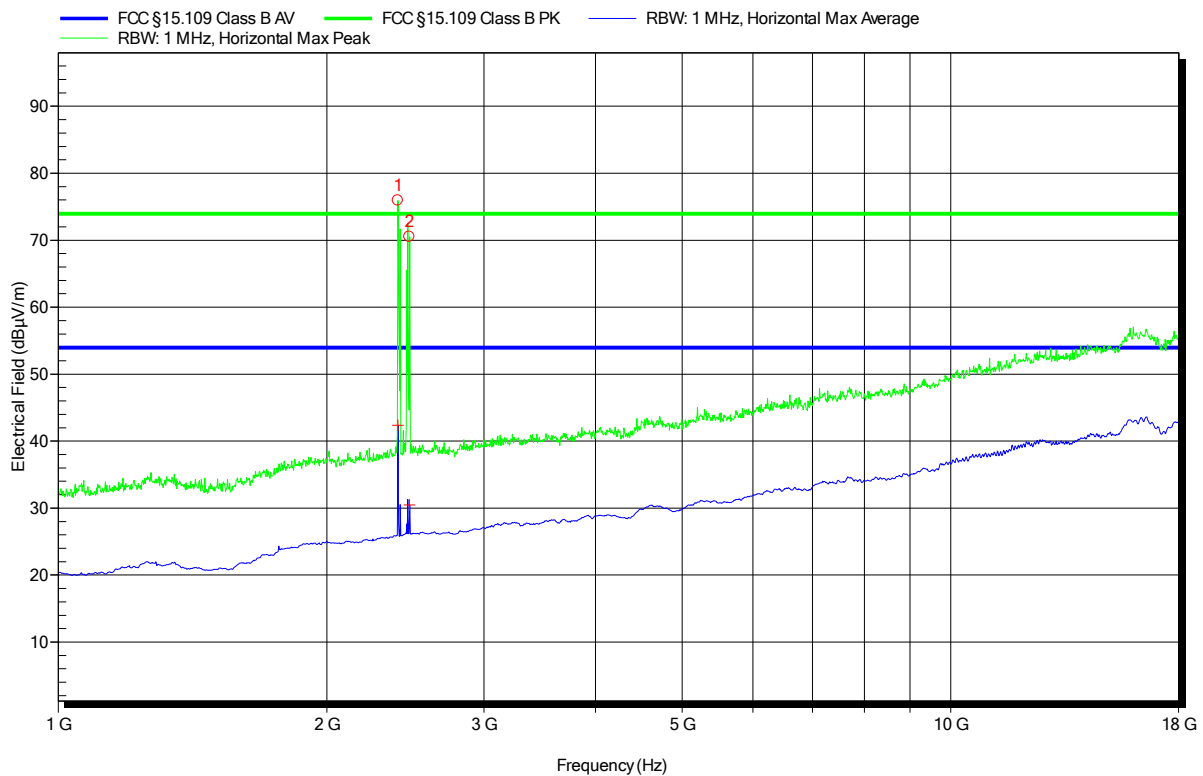
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 3.6V DC
 Antenna: ETS-Lindgren 3117, Horizontal
 Measurement distance: 3m
 Mode: Mode#1
 Test Date: 2017-12-15
 Note: GLM 400CL

Index 48



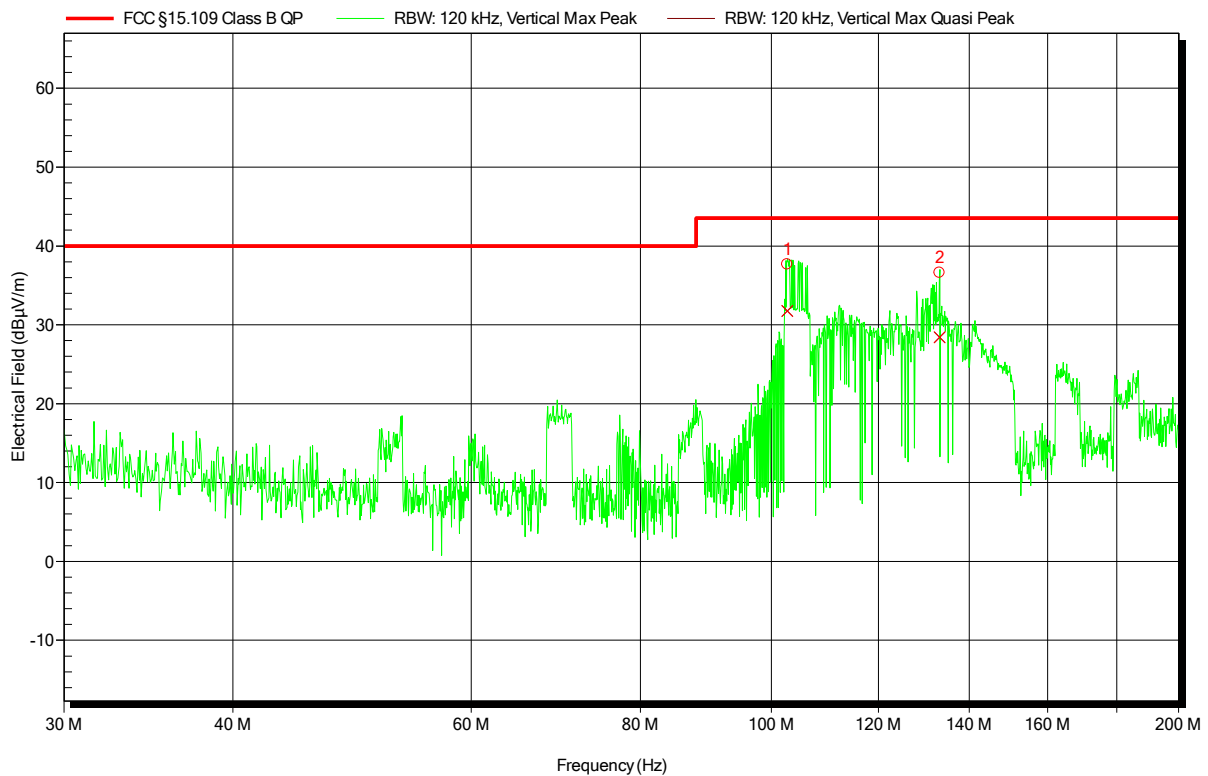
Peak Number	Frequency	Bluetooth	Low	Enrgy
1	2.402 GHz	Carrier	Low	Enrgy
2	2.476 GHz	Carrier	Low	Enrgy

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 61



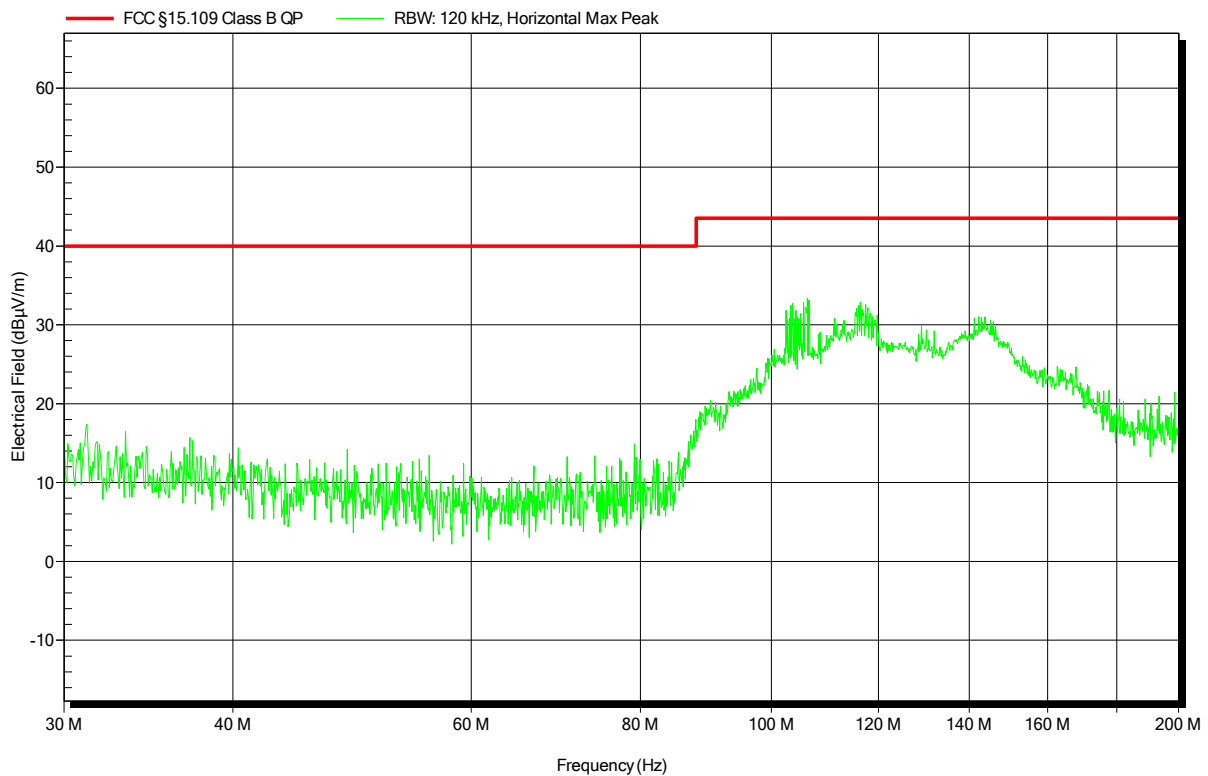
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	102.755 MHz	31.76 dBµV/m	43.52 dBµV/m	-11.76 dB	Pass	34 Degree	1 m
2	133.152 MHz	28.4 dBµV/m	43.52 dBµV/m	-15.12 dB	Pass	34 Degree	1 m

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant:	Robert Bosch GmbH
EUT Name:	Laser Rangefinder
Model:	GLM400CL
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	mode#2
Test Date:	2017-12-15
Note:	

Index 63



Test Report No.: G0M-1705-6514-EF0215B-V02

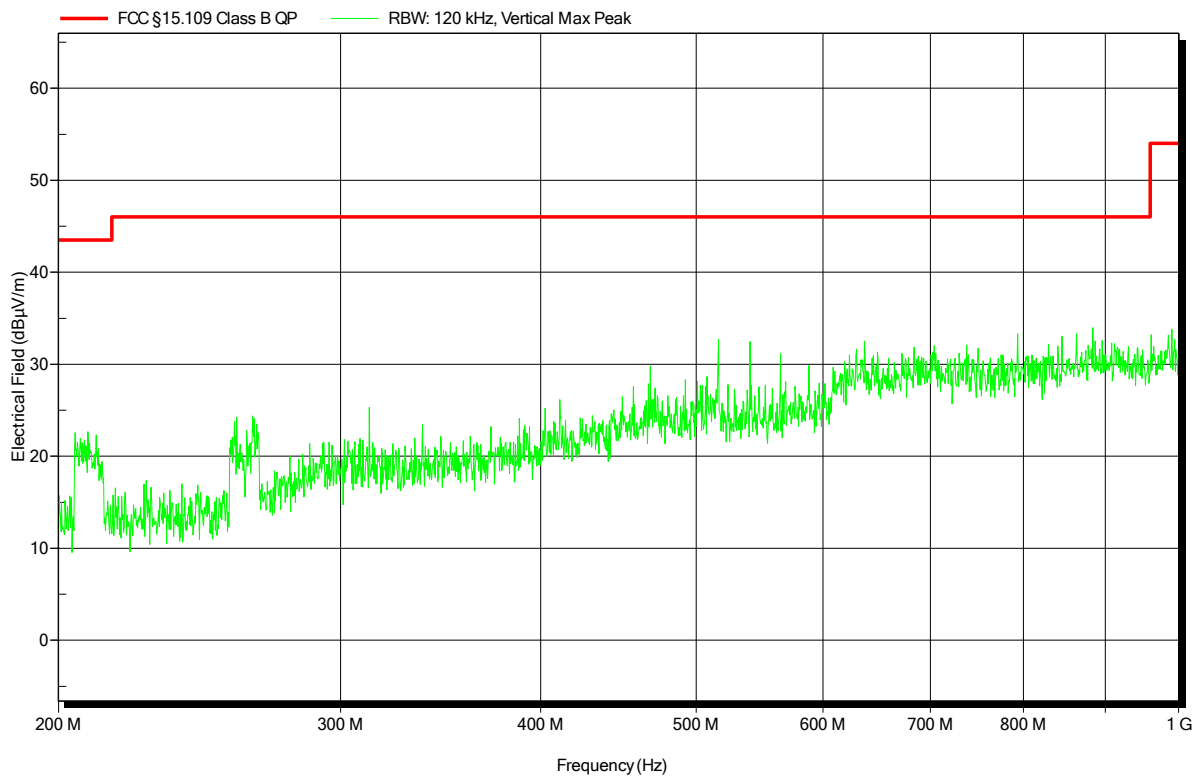
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant:	Robert Bosch GmbH
EUT Name:	Laser Rangefinder
Model:	GLM400CL
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	mode#2
Test Date:	2017-12-15
Note:	

Index 64



Test Report No.: G0M-1705-6514-EF0215B-V02

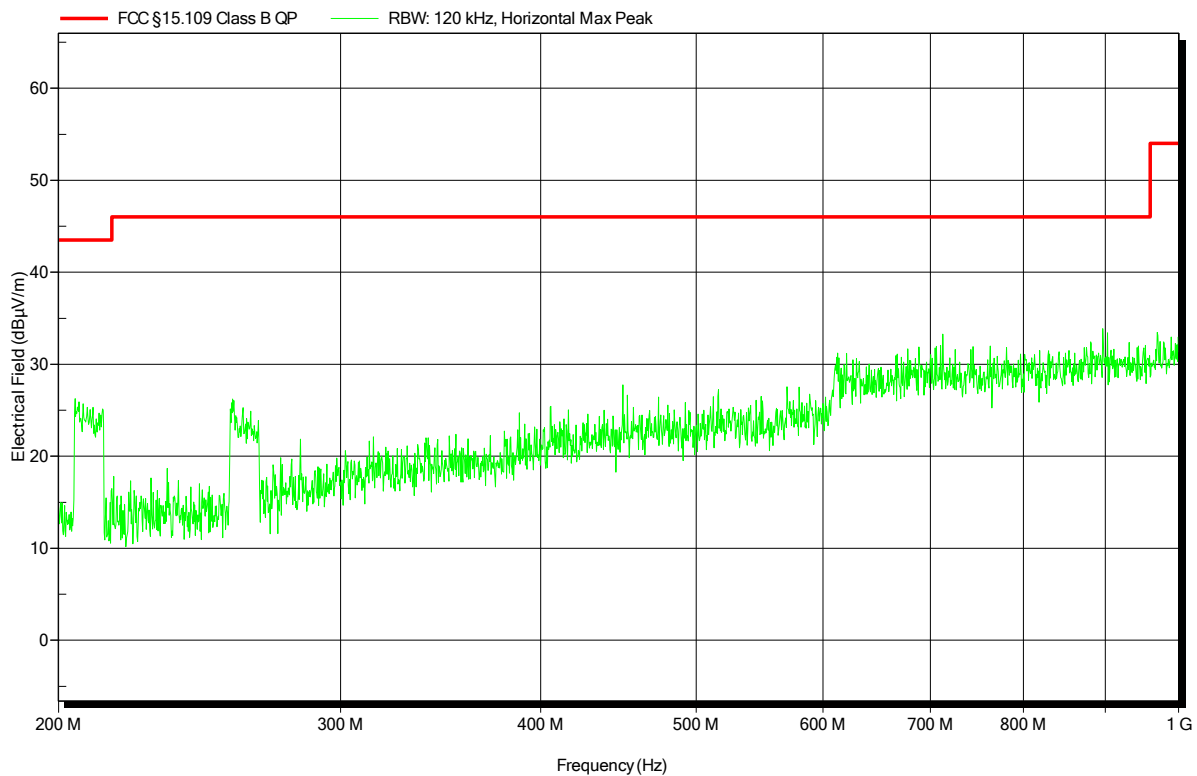
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 65

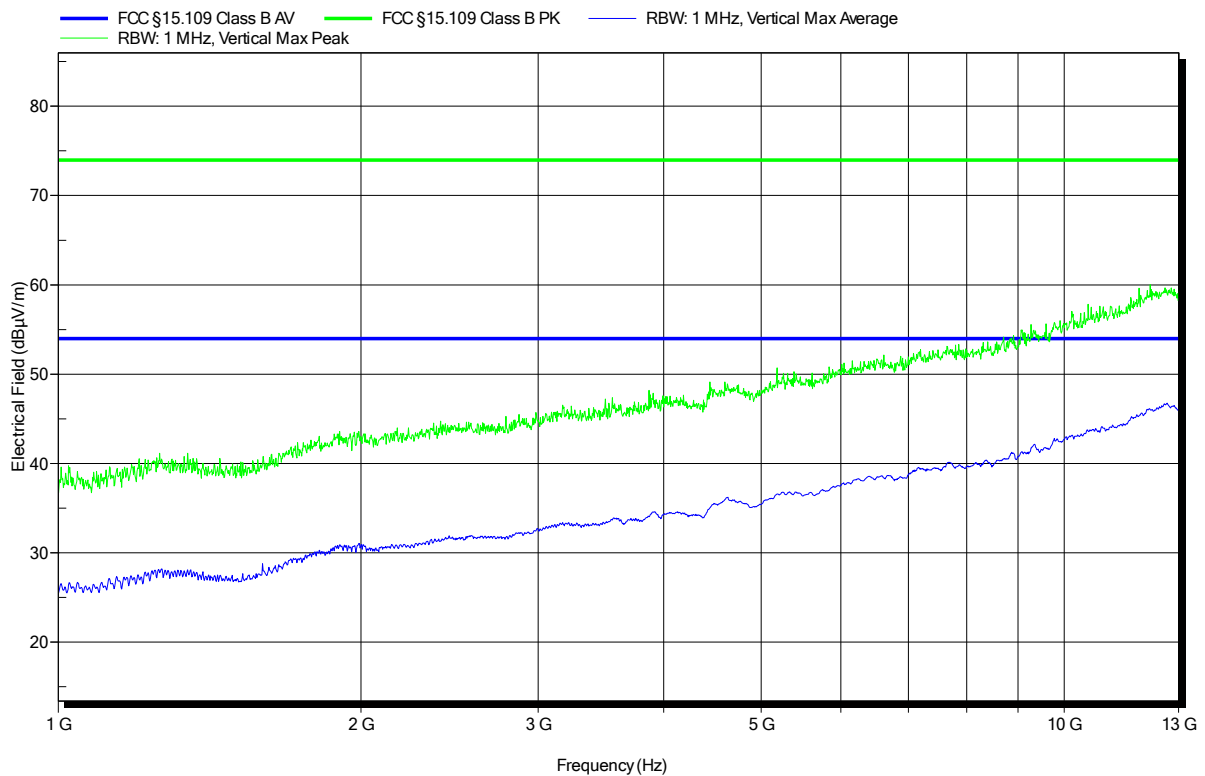


Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
 Antenna: ETS-Lindgren 3117, Vertical
 Measurement distance: 3m
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 70



Test Report No.: G0M-1705-6514-EF0215B-V02

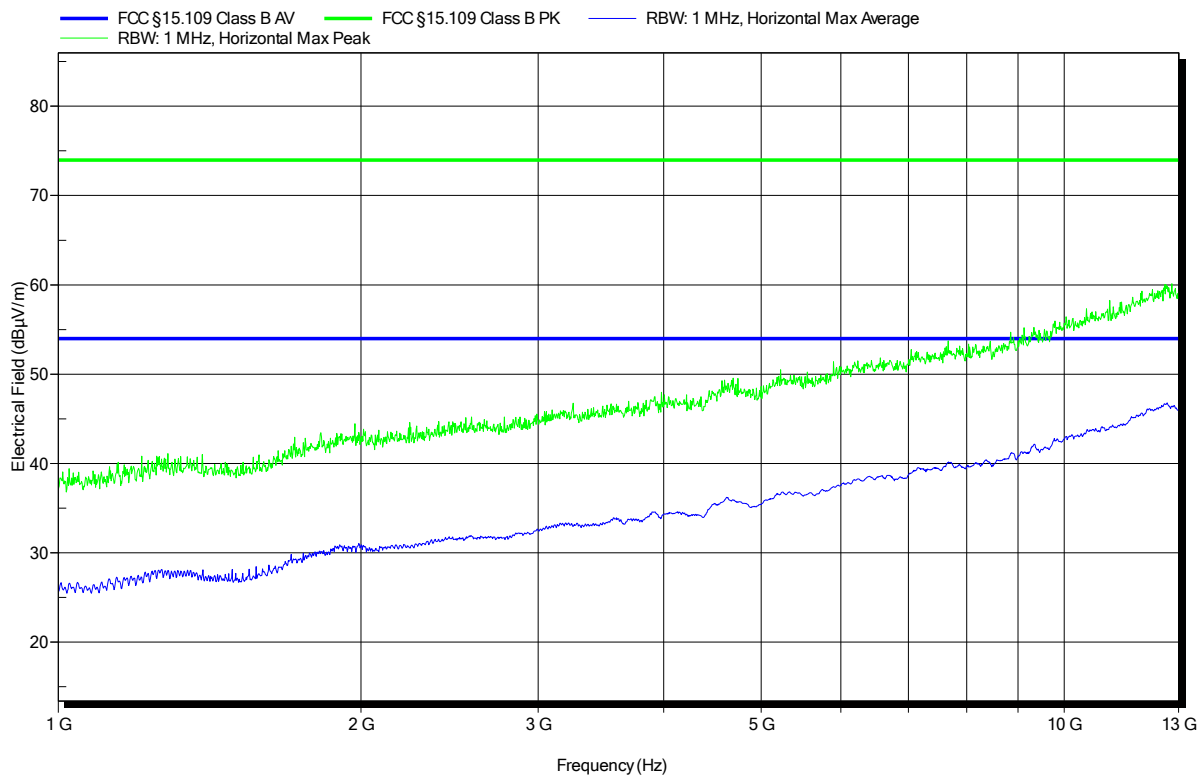
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 23°C, Unom: 120V AC (AC/DC adaptor)
 Antenna: ETS-Lindgren 3117, Horizontal
 Measurement distance: 3m
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 71



Test Report No.: G0M-1705-6514-EF0215B-V02

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

3.2 Test Conditions and Results – AC power line conducted emissions

Conducted emissions acc. FCC 47 CFR 15.107 / ICES-003			Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test
Ambient Temperature		15 to 35 °C		23°C
Relative Humidity		30 to 60 %		27%
Test according referenced standards		Reference Method		
		ANSI C63.4		
Fully configured sample scanned over the following frequency range		Frequency range		
		0.15 MHz to 30 MHz		
Sample is tested with respect to the requirements of the equipment class		Equipment class		
		Class B		
Points of Application		Application Interface		
AC Mains		LISN		
Operating mode		2		
Configuration		Charging		
Limits and results Class B				
Frequency [MHz]	Quasi-Peak [dBµV]	Result	Average [dBµV]	Result
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS
0.5 to 5	56	PASS	46	PASS
5 to 30	60	PASS	50	PASS
Comments:				
* Limit decreases linearly with the logarithm of the frequency.				

Test Procedure:

The test site is in accordance with ANSI C63-4:2014 requirements and is listed by FCC.

The measurement procedure is as follows:

Exploratory measurement:

- The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)
- The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
- The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).
- The LISN measurement port was connected to a measurement receiver
- I/O cables were bundled not longer than 0.4 m
- Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor
- To maximize the emissions the cable positions were manipulated
- The worst configuration of EUT and cables is shown on a test setup picture at item 1.3

Test Procedure:

Final measurement:

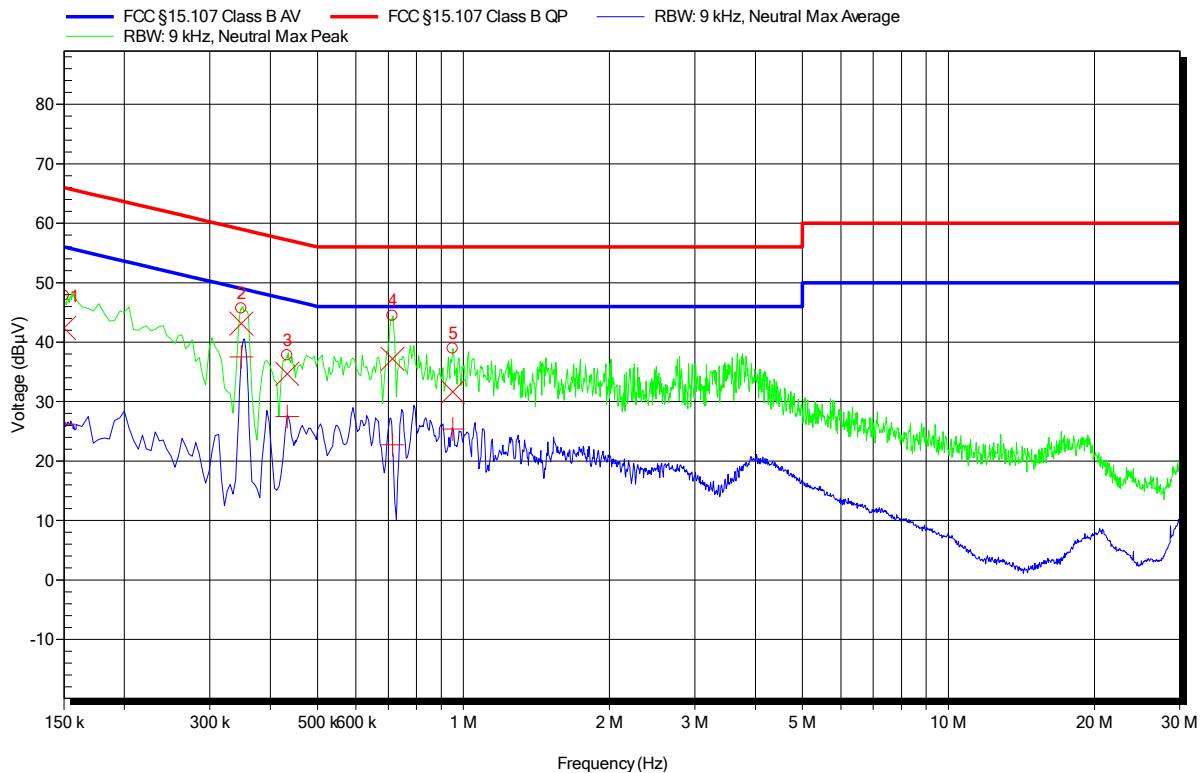
- The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)
- The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
- The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).
- The LISN measurement port was connected to a measurement receiver
- The EUT and cable arrangement were based on the exploratory measurement results
- The test data of the worst-case conditions were recorded and shown on the next pages.

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

Project number: G0M-1705-6514

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangefinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 120V AC (AC/DC adaptor)
 LISN: ESH2-Z5 N
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 11



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	150 kHz	42.4 dBμV	66 dBμV	-23.6 dB	Pass
2	348.45 kHz	43.13 dBμV	59 dBμV	-15.87 dB	Pass
3	433.5 kHz	34.65 dBμV	57.19 dBμV	-22.53 dB	Pass
4	713.85 kHz	37.17 dBμV	56 dBμV	-18.83 dB	Pass
5	951 kHz	31.63 dBμV	56 dBμV	-24.37 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	150 kHz	26.17 dBμV	56 dBμV	-29.83 dB	Pass
2	348.45 kHz	37.52 dBμV	49 dBμV	-11.48 dB	Pass
3	433.5 kHz	27.5 dBμV	47.19 dBμV	-19.68 dB	Pass
4	713.85 kHz	22.71 dBμV	46 dBμV	-23.29 dB	Pass
5	951 kHz	25.36 dBμV	46 dBμV	-20.64 dB	Pass

Test Report No.: G0M-1705-6514-EF0215B-V02

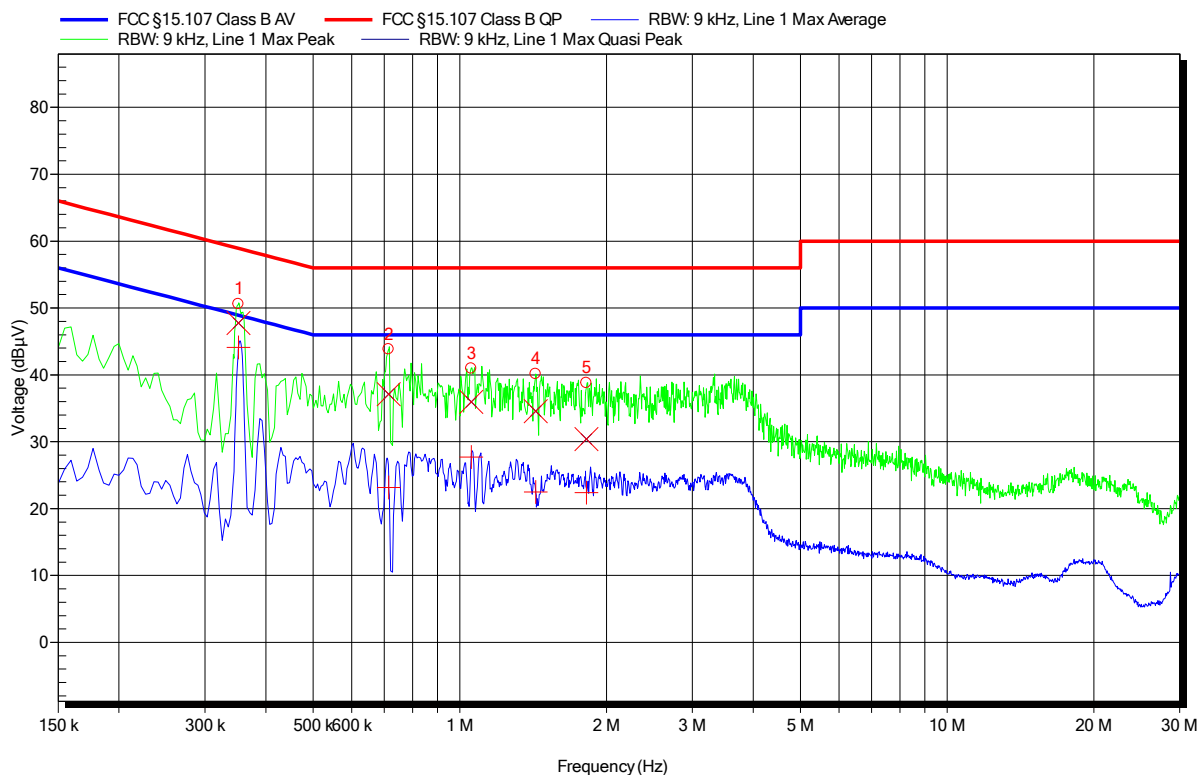
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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

Project number: G0M-1705-6614

Applicant: Robert Bosch GmbH
 EUT Name: Laser Rangfinder
 Model: GLM400CL
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 120V AC (AC/DC adaptor)
 LISN: ESH2-Z5 L
 Mode: mode#2
 Test Date: 2017-12-15
 Note:

Index 12



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	351.6 kHz	47.75 dBµV	58.92 dBµV	-11.18 dB	Pass
2	715.2 kHz	37.13 dBµV	56 dBµV	-18.87 dB	Pass
3	1.056 MHz	35.98 dBµV	56 dBµV	-20.02 dB	Pass
4	1.431 MHz	34.55 dBµV	56 dBµV	-21.45 dB	Pass
5	1.82 MHz	30.41 dBµV	56 dBµV	-25.59 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	351.6 kHz	44.1 dBµV	48.92 dBµV	-4.83 dB	Pass
2	715.2 kHz	23.16 dBµV	46 dBµV	-22.84 dB	Pass
3	1.056 MHz	27.73 dBµV	46 dBµV	-18.27 dB	Pass
4	1.431 MHz	22.5 dBµV	46 dBµV	-23.5 dB	Pass
5	1.82 MHz	22.41 dBµV	46 dBµV	-23.59 dB	Pass

Test Report No.: G0M-1705-6514-EF0215B-V02

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