

EMC TEST REPORT

FCC 47 CFR Part 15B
Industry Canada RSS-Gen

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1111-1529-EF01-V01

Testing Laboratory : Eurofins Product Service GmbH

Address : Storkower Str. 38c
15526 Reichenwalde
Germany

Accreditation :



A2LA Accredited Testing Laboratory, Certificate No.: 1983.01
FCC Filed Test Laboratory, Reg.-No.: 96970
IC OATS Filing assigned code: 3470A

Applicant's name : TomTom International BV

Address : Rembrandtplein 35
1017 CT Amsterdam
The Netherlands

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
RSS-Gen, Issue 3, 2010-12
ANSI C63.4:2009

Equipment under test (EUT):

Product description : Telematic Device with GPRS/BT/GPS

Model No. : LINK 5

Hardware version : TomTom drs1_2a_pcb 37/2011

Firmware / Software version : 10.02.855

Contains : FCC-ID: S4LLINK500

Test result : Passed

Test Report No.: G0M-1111-1529-EF01-V01

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: 2011-11-14

Date (s) of performance of tests: 2011-11-20

Compiled by: Antje Bartusch

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

Approved by (+ signature): Jens Zimmermann

Date of issue: 2012-01-24

Total number of pages.....: 16


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:

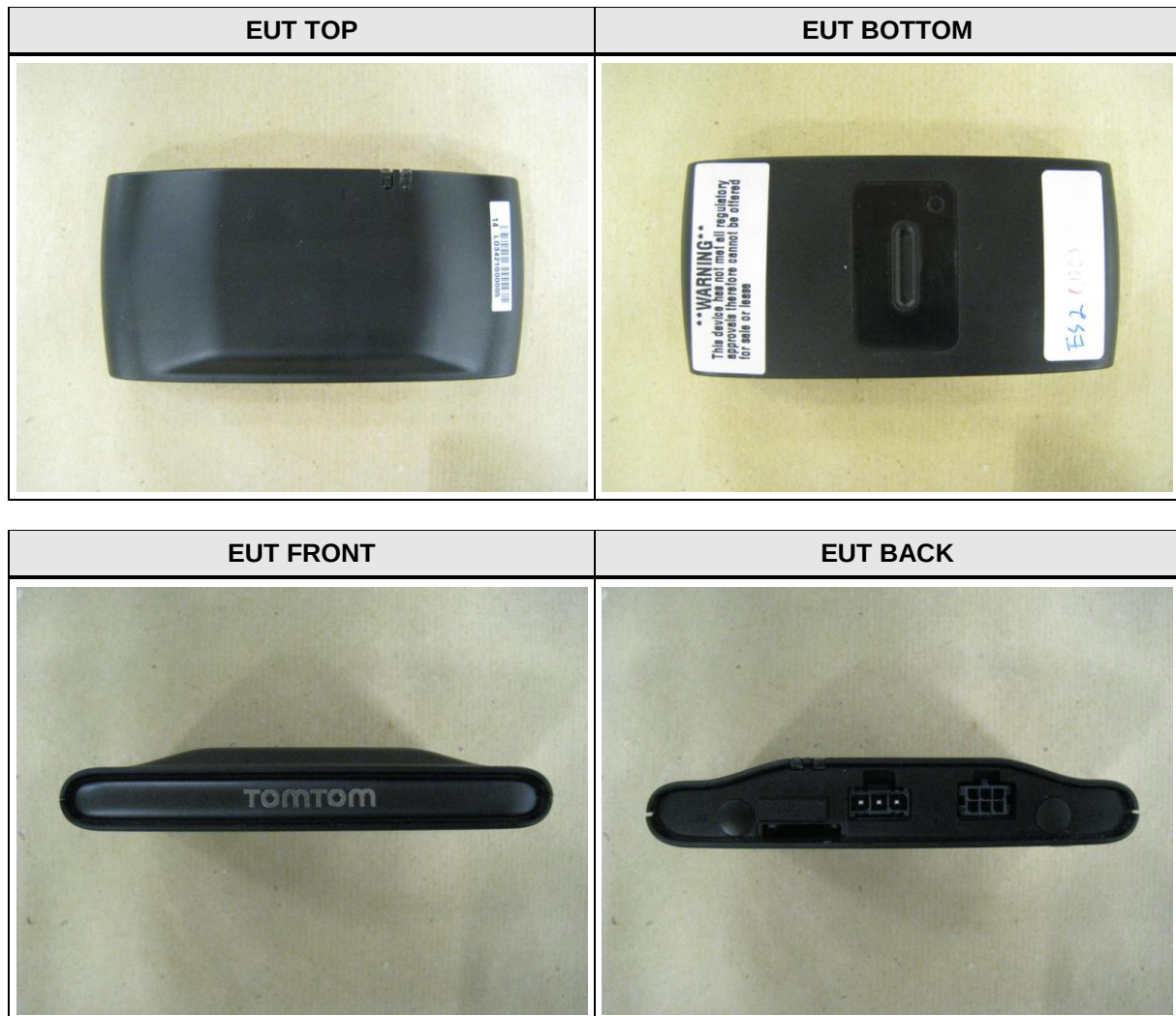
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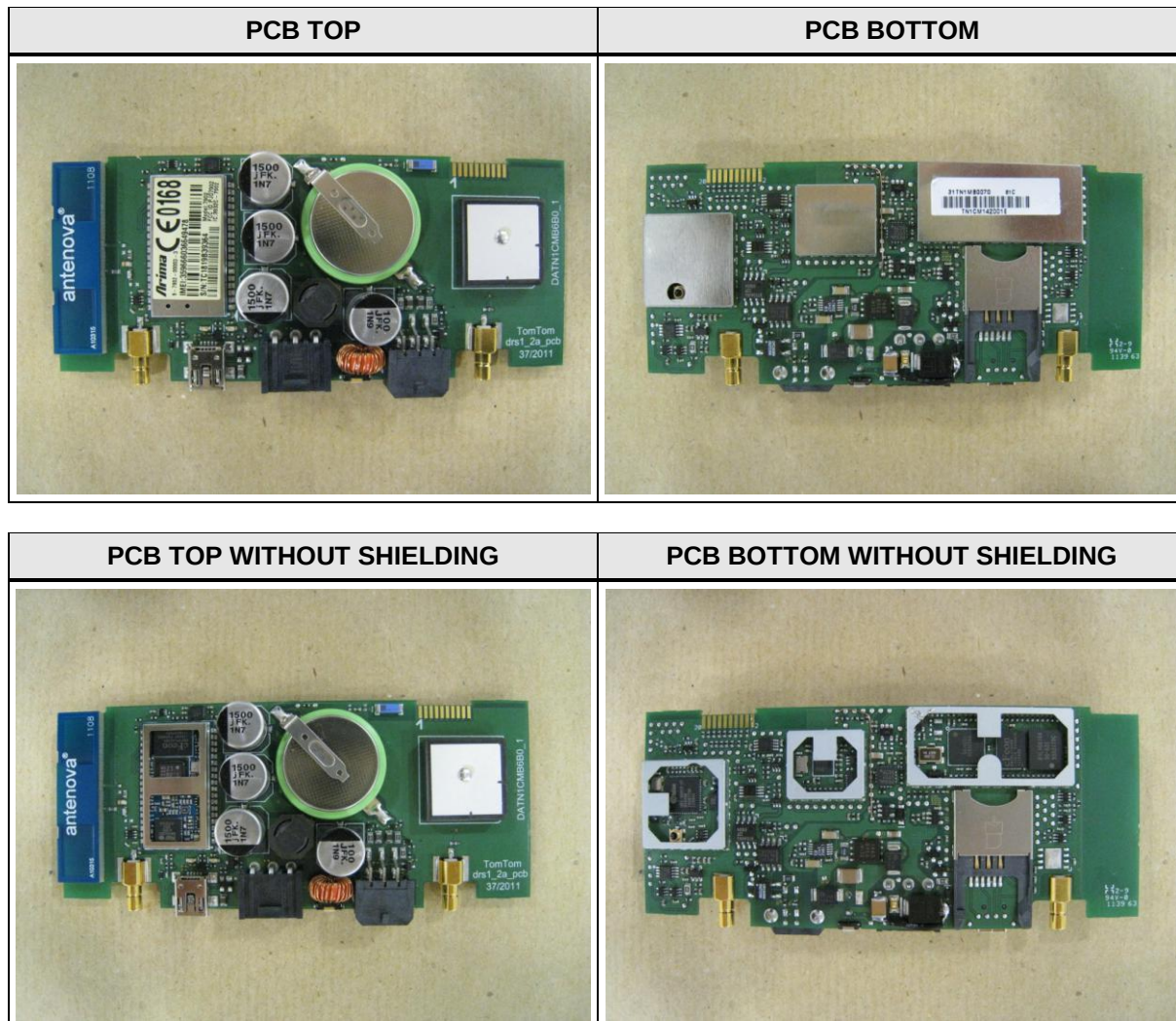
1 Equipment (Test item) Description

Description	Telematic Device with GPRS/BT/GPS
Model	LINK 5
Serial number	None
Hardware version	TomTom drs1_2a_pcb 37/2011
Software / Firmware version	10.02.855
FCC-ID	S4LLINK500
IC	unspecified
Power supply	12 or 24VDC (Battery only)
AC/DC-Adaptor	None
Manufacturer	Quanta Computer Inc. No.188, Wen Hwa 2nd Road., Kuei Shan Hsiang 00333 Tao Yuan Shien Taiwan (ROC)
Highest emission frequency	1.705MHz - 108MHz (up to 1GHz)
Device classification	Class B
Equipment type	Tabletop
Number of tested samples	1

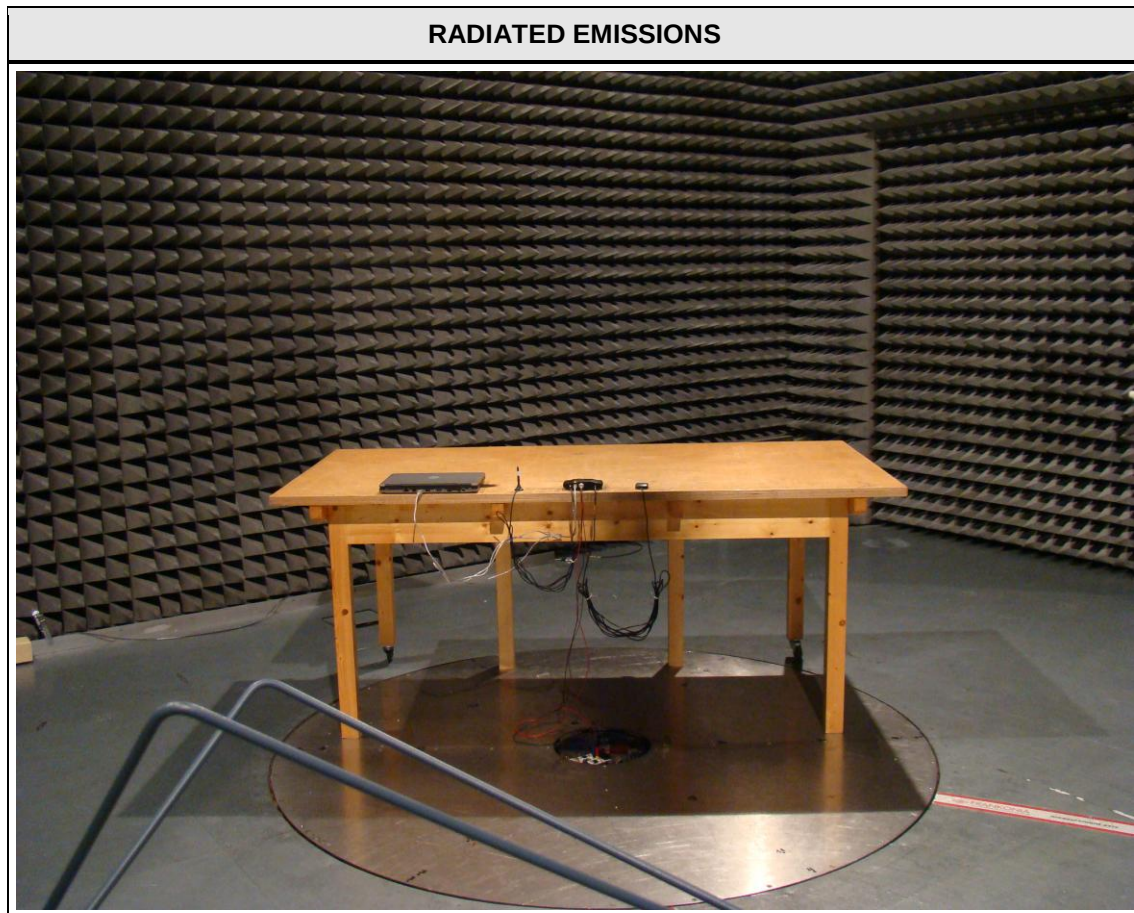
1.1 Photos – Equipment external



1.2 Photos – Equipment internal



1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
SIM	Communication tester	Rohde & Schwarz	CMU 200	
AE	Laptop		X20	

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Operating Modes

Mode #	Description
1	External GSM antenna and external GPS antenna connected to EUT. Active GSM 1900 connection to communication tester. GPS and Bluetooth active.

1.6 Test Equipment Used During Testing

Radiated emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	ETS 0012	2010-01	2013-01
LPD-Antenne	R&S	HL 223	ETS 0295	2011-02	2014-02
LPD-Antenna	R&S	HL 025	ETS 0512	2010-02	2013-02
EMI Test Receiver	R&S	ESU8	ETS 0567	2011-12	2012-12
EMI Test Receiver	R&S	ESCS30	ETS 0474	2011-06	2012-06

2 Result Summary

FCC 47 CFR Part 15B, Industry Canada RSS-Gen				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 RSS-Gen 4.9 & 4.10	Radiated emissions	ANSI C 63.4	PASS	
47 CFR 15.107 RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	N/A	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

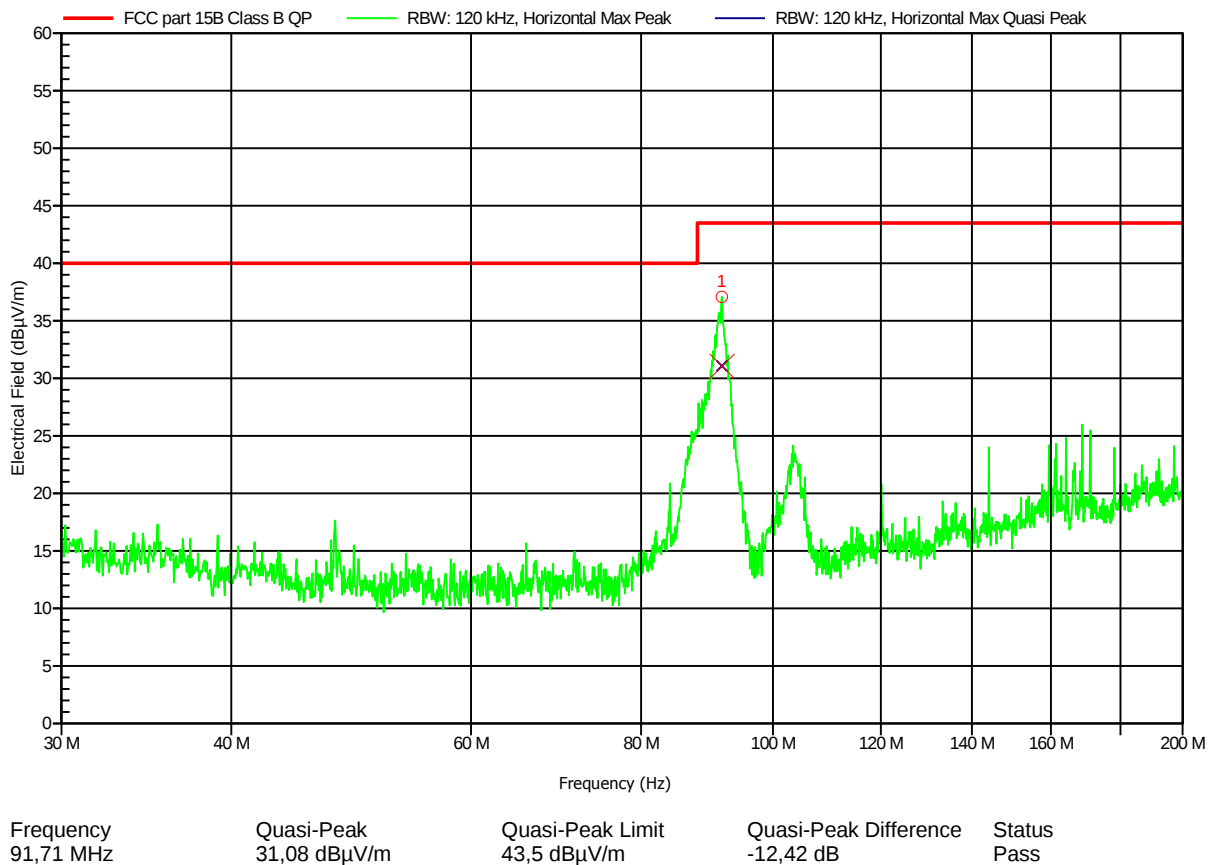
Radiated emissions acc. FCC 47 CFR 15.109 / IC RSS-Gen					Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test		
Ambient Temperature		15 to 35°C		23°C		
Relative Humidity		30 to 60%		41%		
Test according referenced standards		Reference Method				
		ANSI C63.4				
Sample 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				
		1.705MHz - 108MHz (up to 1GHz)				
Fully configured sample scanned over the following frequency range		Frequency range				
		30MHz to 1GHz				
Operating mode		1				
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	-		-	-
Comments:						

Spurious emissions under normal conditions according to FCC PART 15B

Project number: G0M-1111-1529

Manufacturer: TomTom Development Germany GmbH
 EUT Name: Telematic Device with GPRS/BT/GPS
 Model: Link5
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 24°C, Unom: 12 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: GSM 1900, ant.: ext.; GPS, ant.: ext.; Bluetooth
 Test Date: Mittwoch, 23. November 2011
 Note:

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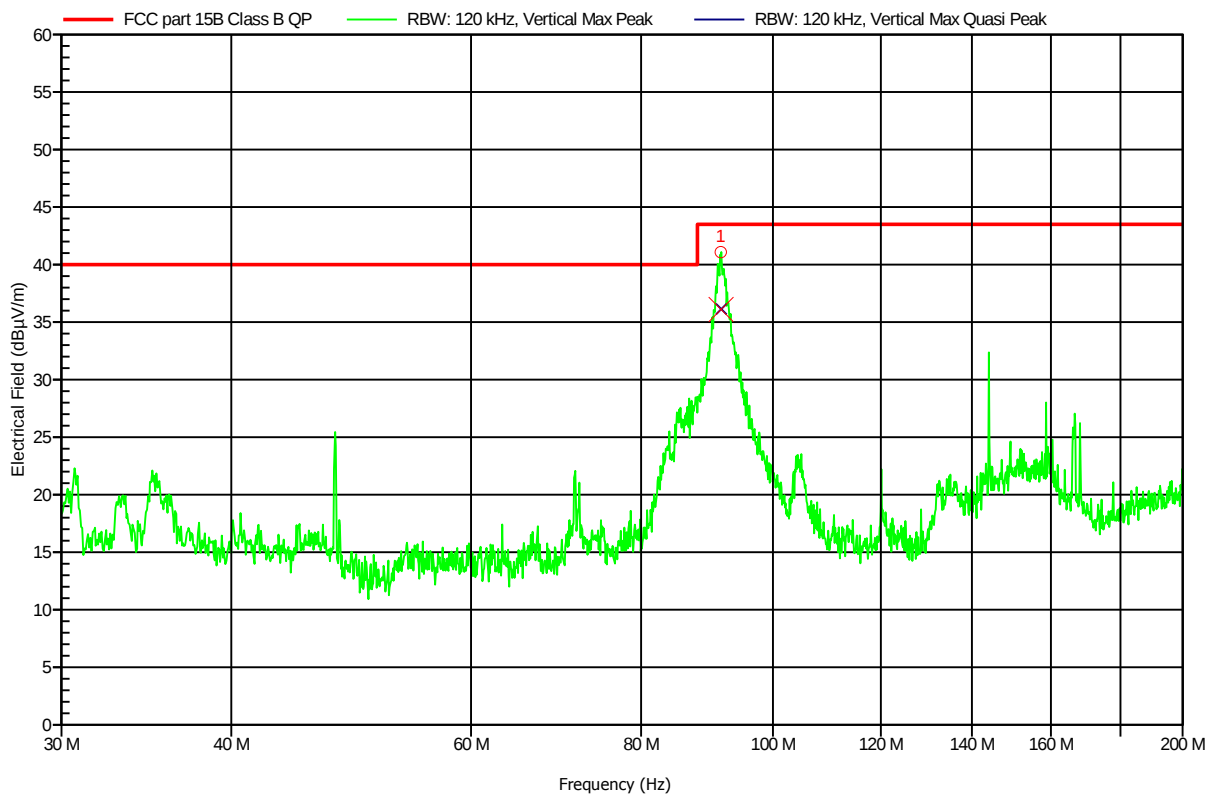


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 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: GSM 1900, ant.: ext.; GPS, ant.: ext.; Bluetooth
 Test Date: Mittwoch, 23. November 2011
 Note:

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Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Status
91,548 MHz	36,12 dBµV/m	43,5 dBµV/m	-7,38 dB	Pass

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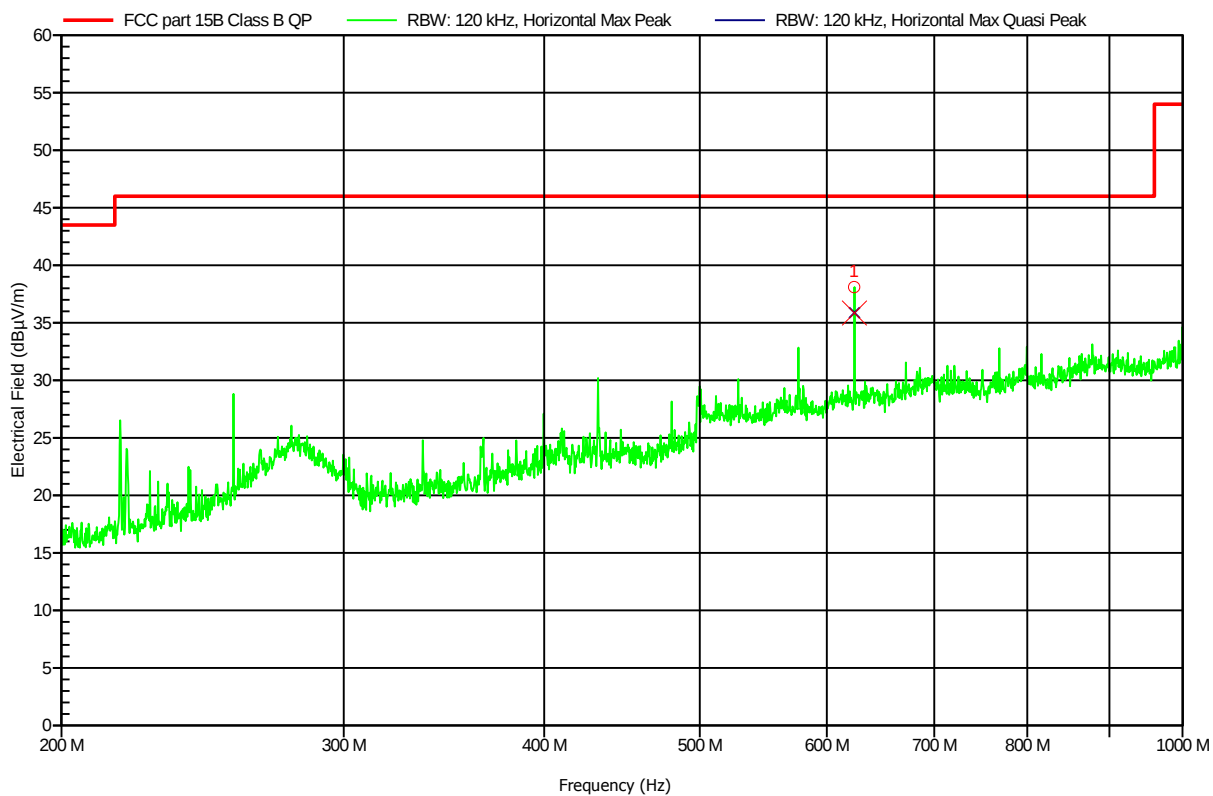
Eurofins Product Service GmbH
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 Model: Link5
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 24°C, Unom: 12 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: GSM 1900, ant.: ext.; GPS, ant.: ext.; Bluetooth; 12 V DC
 Test Date: Mittwoch, 23. November 2011
 Note:

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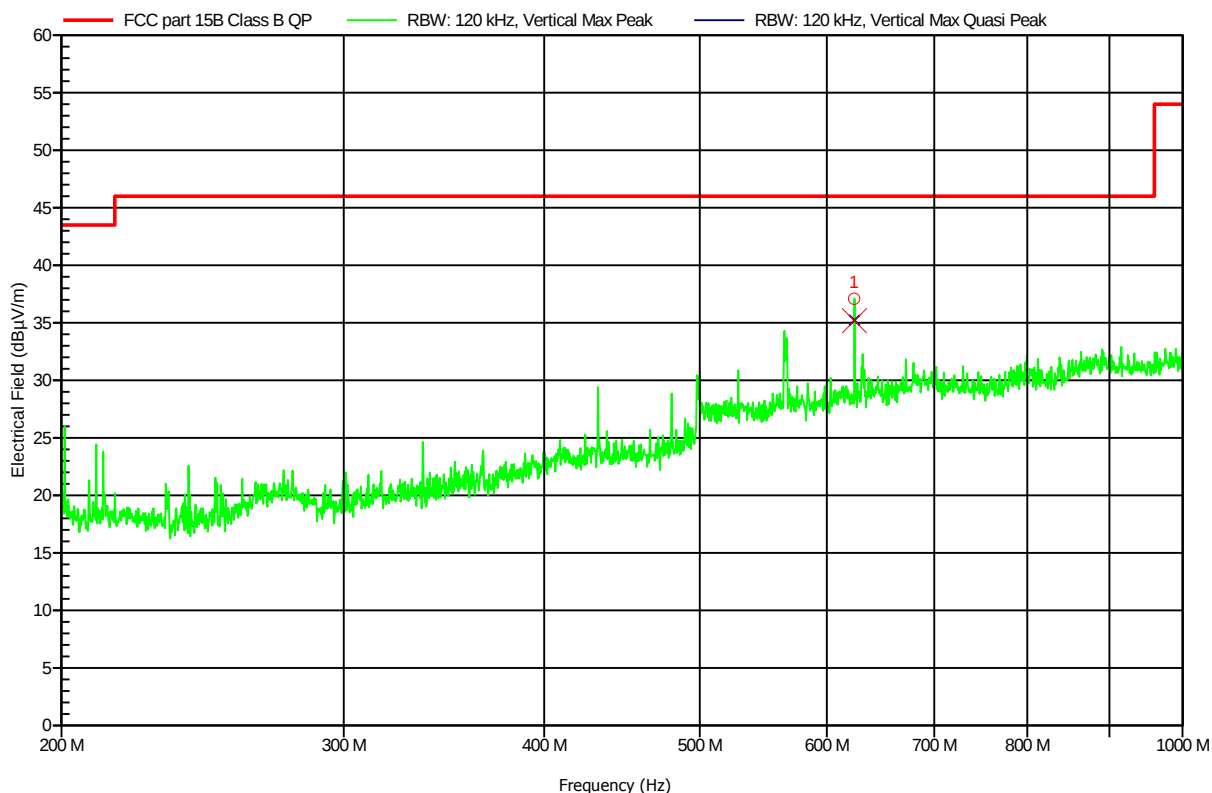
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Status
623,996 MHz	35,87 dBµV/m	46 dBµV/m	-10,13 dB	Pass

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 Operator: Mr. Handrik
 Test Conditions: Tnom: 24°C, Unom: 12 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: GSM 1900, ant.: ext.; GPS, ant.: ext.; Bluetooth; 12 V DC
 Test Date: Mittwoch, 23. November 2011
 Note:

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Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Status
623,996 MHz	35,21 dBµV/m	46 dBµV/m	-10,79 dB	Pass