

EMC TEST REPORT

**FCC 47 CFR Part 15B
Industry Canada RSS-Gen**

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M21102-4189 – C-3

Testing Laboratory : Eurofins Product Service GmbH

Address : Storkower Str. 38c
15526 Reichenwalde
Germany

Accreditation : FCC Filed Test Laboratory, Reg.-No.: 96970
A2LA Accredited Testing Laboratory, Certificate No.: 1983.01



Applicant's name : LifeScan Inc.

Address : 1000 Gibraltar Drive
CA 95035 Milpitas
USA

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 : Blood glucose meter

Model No. : Mango

Hardware version : DV3

Firmware / Software version : 01.00.00

FCC-ID: I5QM

IC: N/A

Test result : **Passed**

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: 16.08.2011

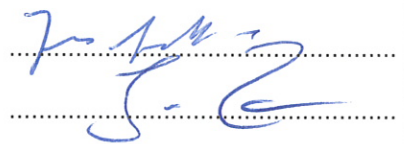
Date (s) of performance of tests: 17.08.2011

Tested by (+ signature).....: Jens Marquardt

Approved by (+ signature): Jens Zimmermann

Date of issue: 25.08.2011

Total number of pages: 19


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	Blood glucose meter
Model	Mango
Serial number	V4CNS05C
Hardware version	DV3
Software / Firmware version	01.00.00
Power supply	3.7VDC
AC/DC-Adaptor	None
Highest emission frequency	1.705MHz - 108MHz (up to 1GHz)
Device classification	Class B
Equipment type	Tabletop
Number of tested samples	1

1.2 Supporting Equipment Used During Testing:

Product Type*	Device	Manufacturer	Model No.	Comments
AE	Laptop	Lenovo	T400	
AE	AC/DC Adapter	Lenovo	P/N: 92P1107	

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

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.3 Operating Modes:

Mode #	Description
1	measurement mode active and data transmission USB mode to laptop

1.4 Test Equipment Used During Testing

Radiated emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	Inv. No. 0012	Jan 10	Jan 13
LPD-Antenne	R&S	HL 223	Inv. No. 0295	Feb 11	Feb 13
LPD-Antenna	R&S	HL 025	Inv. No. 0512	Feb 10	Feb 13
EMI Test Receiver	R&S	ESU8	Inv. No. 0567	Dec 10	Dec 11
EMI Test Receiver	R&S	ESCS30	Inv. No. 0474	Jun 11	Jun 12

Conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	Inv. No. 0288	Sep 10	Sep 12
AMN	R&S	ESH3-Z5	Inv. No. 0040	Nov 10	Nov 12
EMI Test Receiver	R&S	ESCS 30	Inv. No. 0474	Jun 11	Jun 12

2 Result Summary

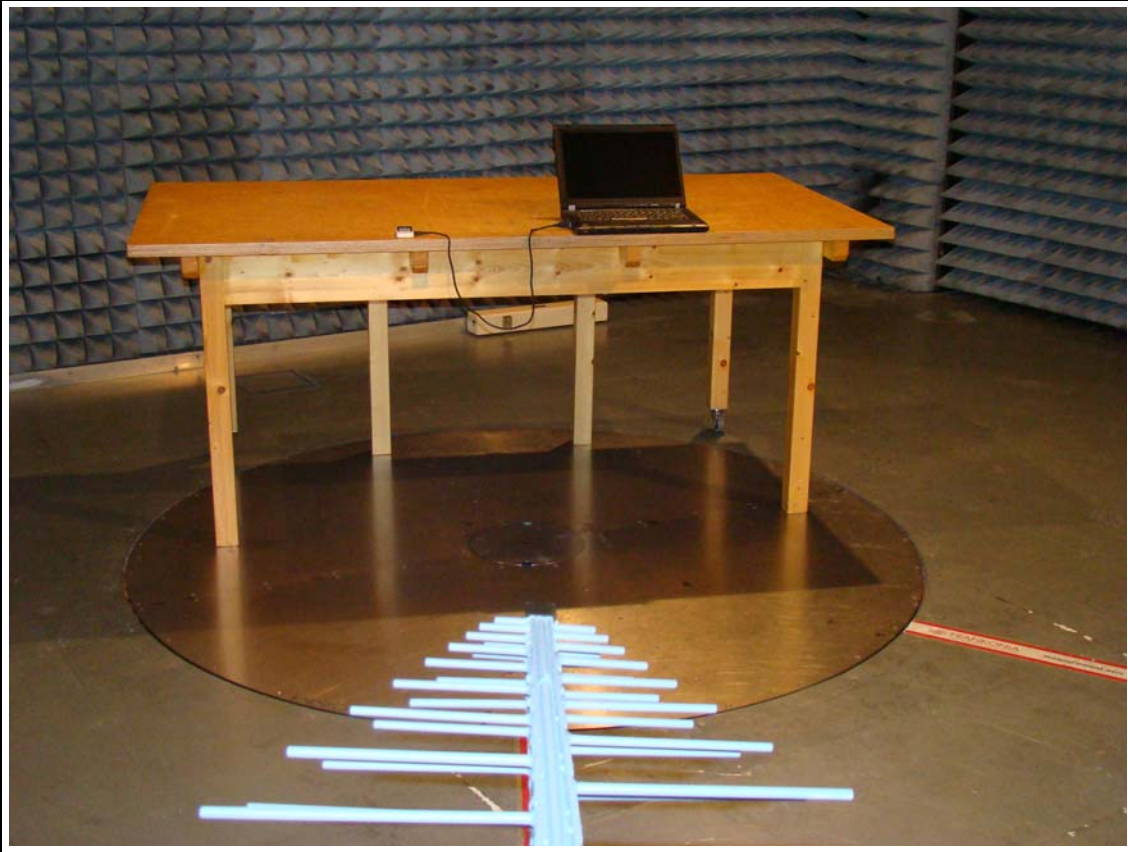
FCC 47 CFR Part 15B, Industry Canada RSS-Gen				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 RSS-Gen 4.9 & 4.10	Radiated emissions	ANSI C 63.4	PASS	
47 CFR 15.107 RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	PASS	
Remarks:				

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		22°C
Relative Humidity		30 to 60%		44%
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		
Limits and results Class B				
Frequency [MHz]	Quasi-Peak [dBµV/m]	Result	Average [dBµV/m]	Result
30 – 88	40	PASS	-	-
88 – 216	43.5	PASS	-	-
216 – 960	46	PASS	-	-
960 – 1000	54	PASS	-	-
> 1000	-	-	54	PASS
Comments:				

Test setup

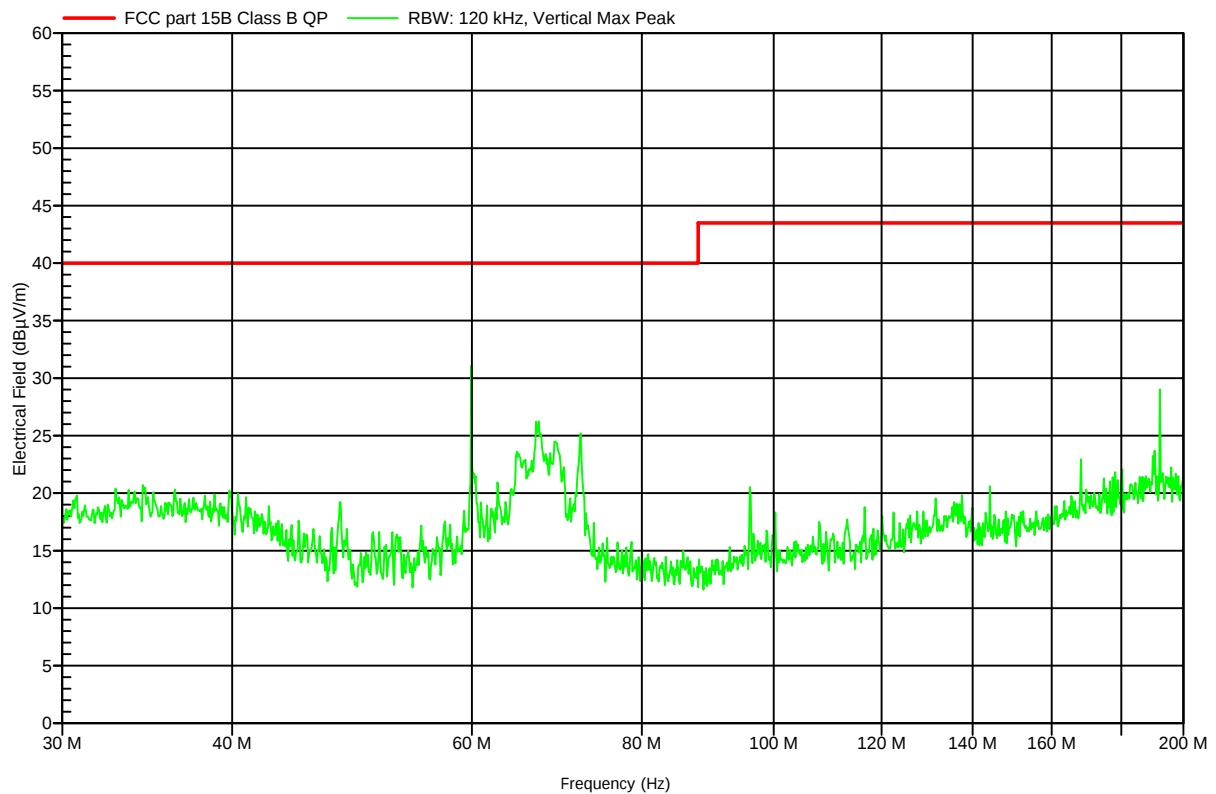


Spurious emissions under normal conditions according to FCC Part 15b

Order number: G0M21102-4189

Manufacturer: LifeScan California
 EUT Name: Blood glucose handheld meter (Mango)
 Model: V3CHN06B
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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Test Report No.: G0M21102-4189-C-3

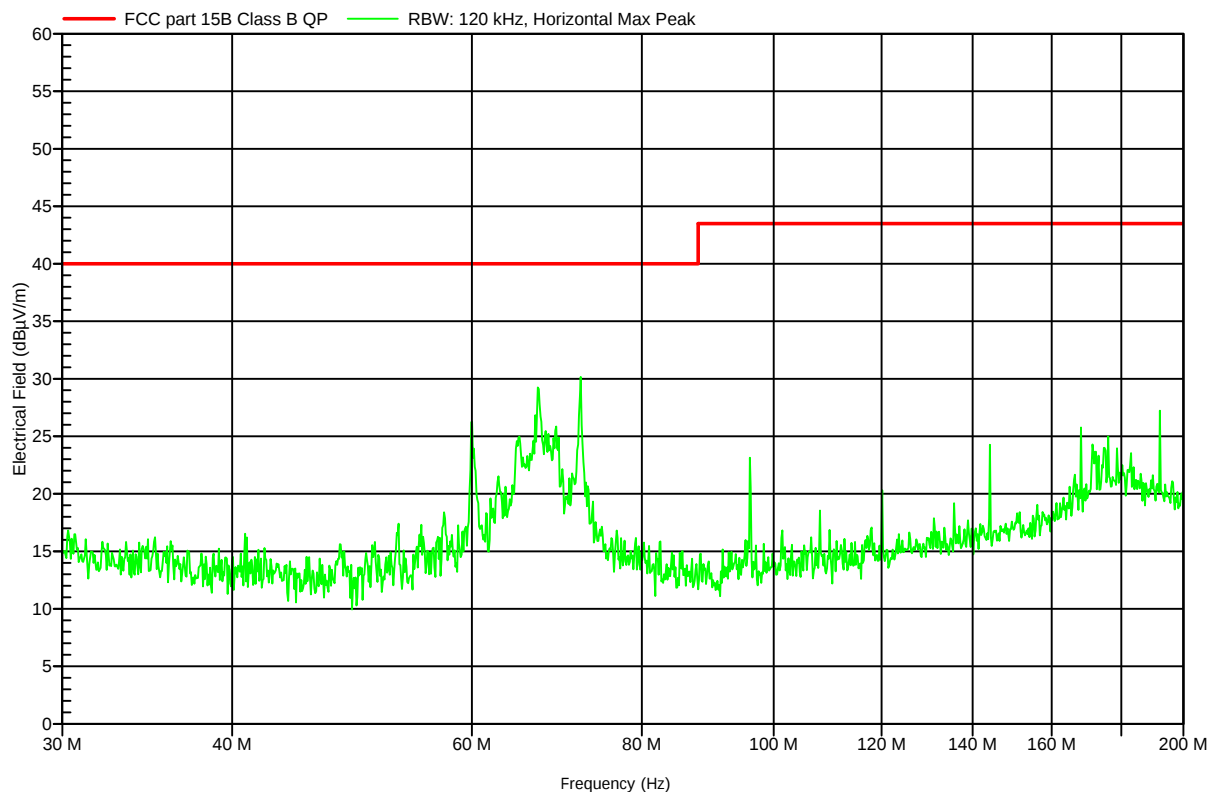
Eurofins Product Service GmbH
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 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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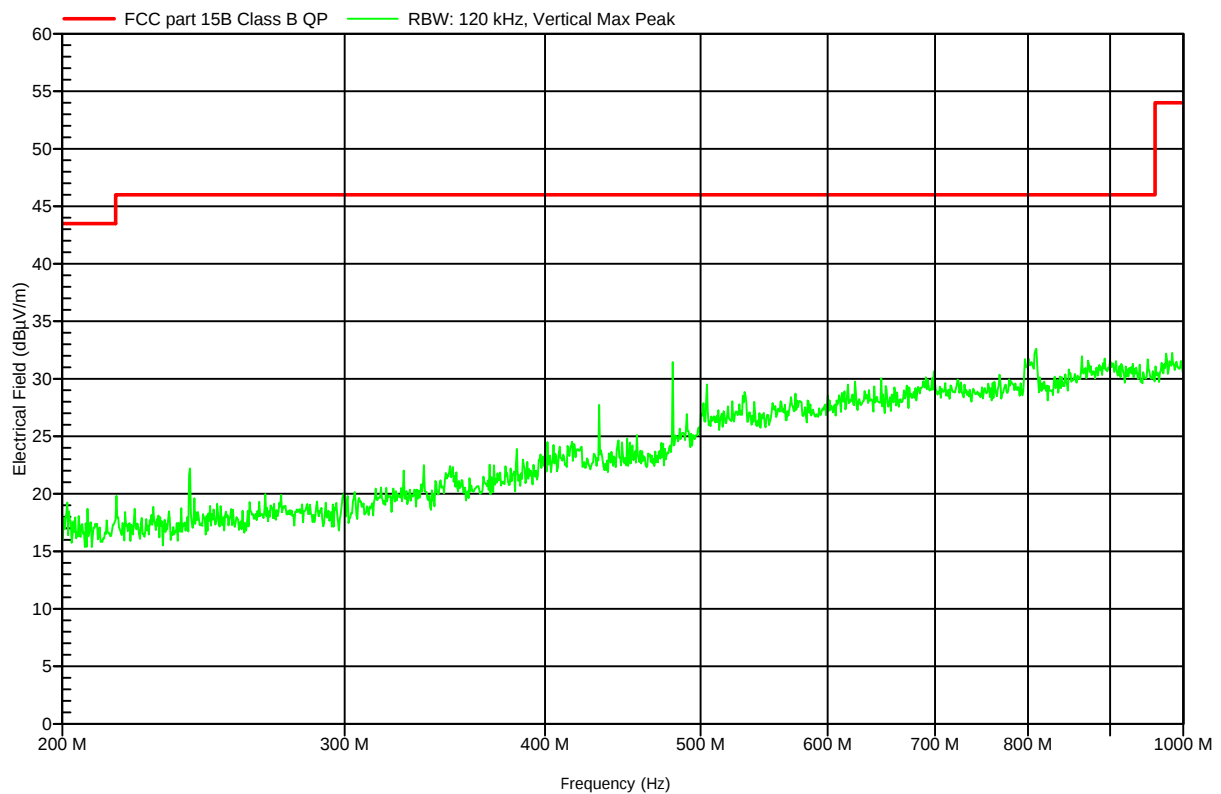
Eurofins Product Service GmbH
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 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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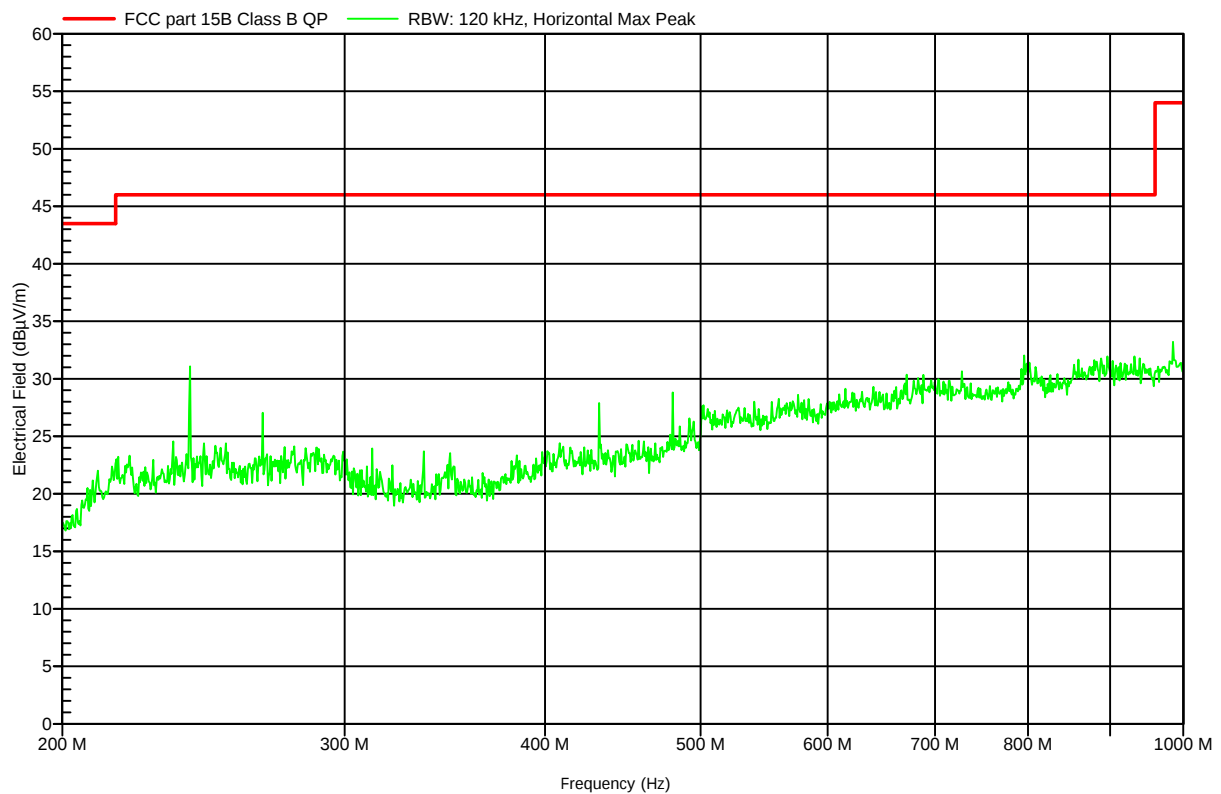
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Spurious emissions under normal conditions according to FCC Part 15b

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 EUT Name: Blood glucose handheld meter (Mango)
 Model: V3CHN06B
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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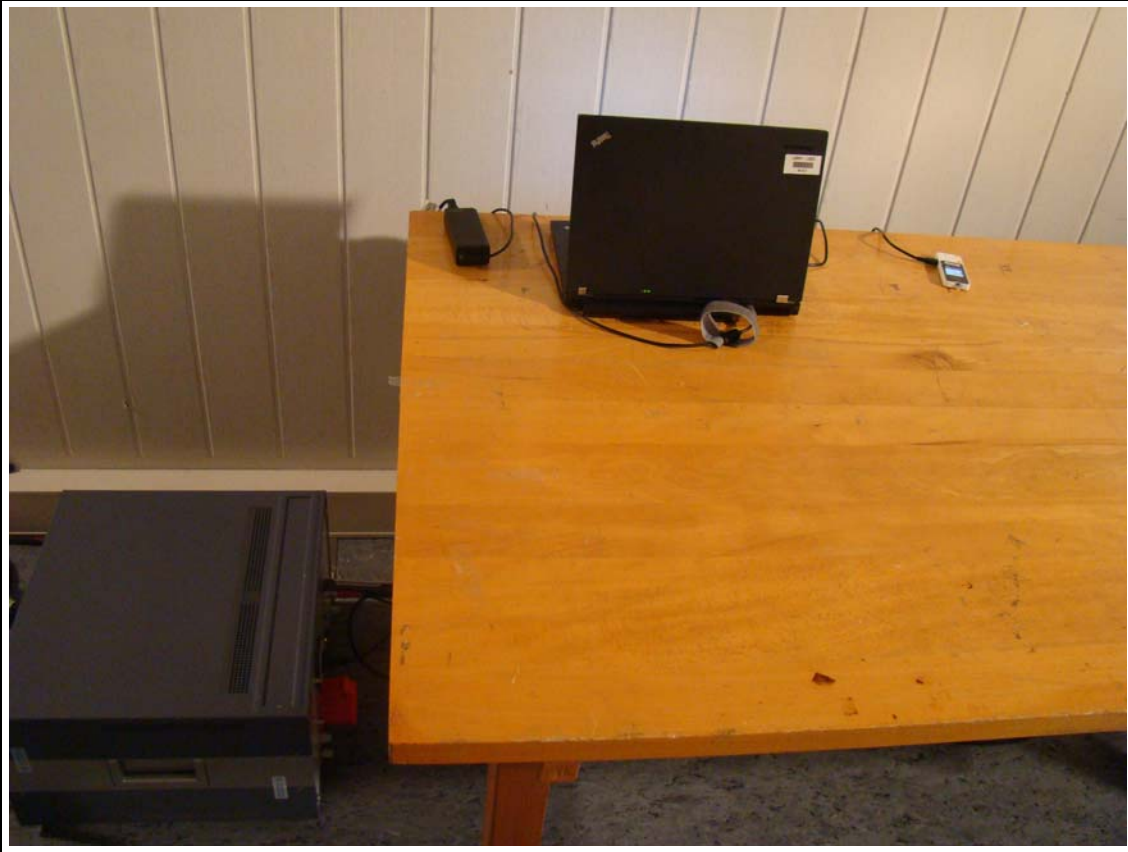
Test Report No.: G0M21102-4189-C-3

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 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Test Conditions and Results – AC power line conducted emissions

Conducted emissions acc. FCC 47 CFR 15.107 / IC RSS-Gen			Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test
Ambient Temperature		15 to 35°C		22°C
Relative Humidity		30 to 60%		44%
Test according referenced standards		Reference Method		
		ANSI C63.4		
Fully configured sample scanned over the following frequency range		Frequency range		
		0.15MHz to 30MHz		
Sample is tested with respect to the requirements of the equipment class		Equipment class		
		Class B		
Points of Application		Application Interface		
AC Mains		LISN		
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 setup

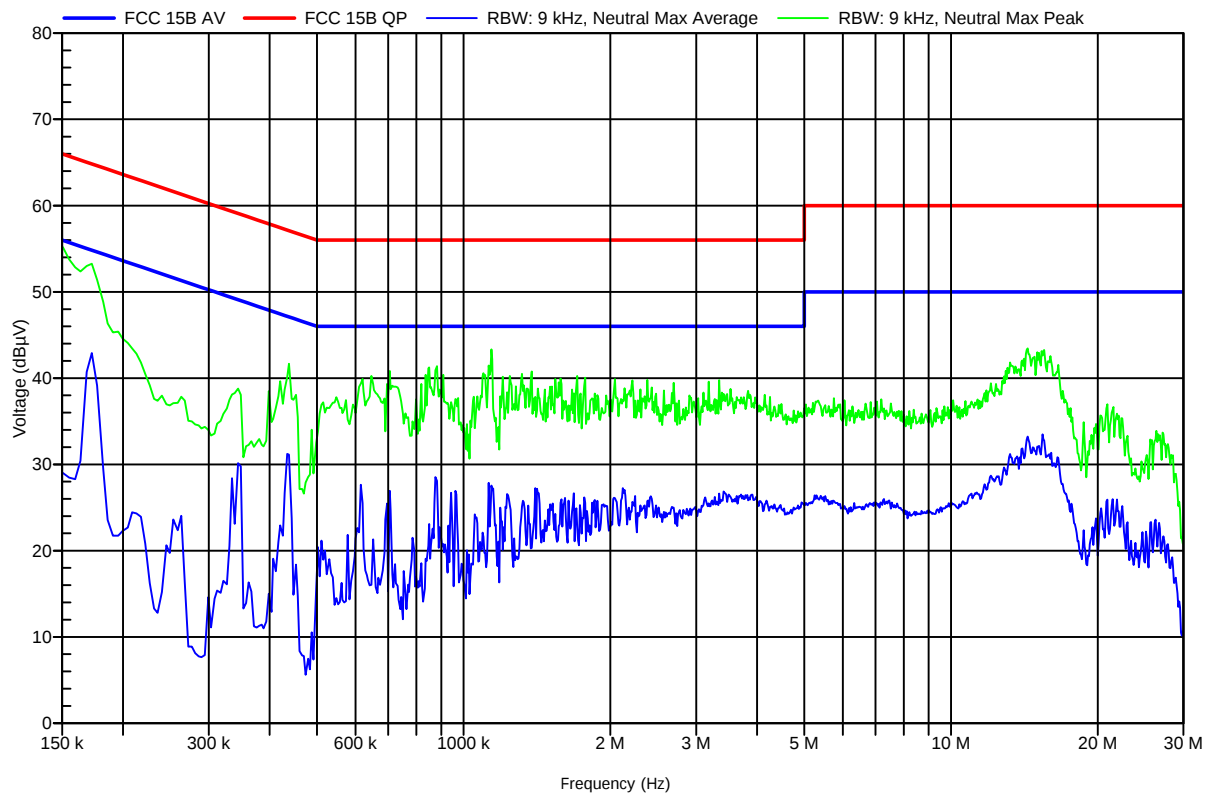


EMI voltage test in the ac-mains according to FCC Part 15b

Order number: G0M21102-4189

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 EUT Name: Blood glucose handheld meter (Mango)
 Model: V3CHN06B
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 LISN: ESH2-Z5 N
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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Test Report No.: G0M21102-4189-C-3

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 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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

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 EUT Name: Blood glucose handheld meter (Mango)
 Model: V3CHN06B
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 3.7 VDC Lithium
 LISN: ESH2-Z5 L
 Mode: USB-link, measure
 Test Date: 17.08.2011
 Note:

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