

EMC TEST REPORT

FCC 47 CFR Part 15B
Industry Canada RSS-Gen

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1505-4754-EF0115B-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 : Spectralink Europe ApS

Address : Langmarksvej 34
8700 Horsens
DENMARK

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
RSS-Gen, Issue 4, 2014-11
ANSI C63.4:2014

Equipment under test (EUT):

Product description	DECT handset 7722/7622/7212/7202	
Model No.	K023c	
Additional Models	K023d, K023e, K023f	
Hardware version	PCS 04	
Firmware / Software version	PCS 15J_	
IDs	FCC-ID: PXA-K023B	IC: 4604A-K023B
Test result	Passed	

Test Report No.: G0M-1505-4754-EF0115B-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 2015-06-01

Date (s) of performance of tests 2015-06-03 - 2015-06-04

Compiled by : Steffen Zunke

Tested by (+ signature)..... : Marcus Klein

Approved by (+ signature) : Jens Zimmermann

Date of issue : 2015-08-19

Total number of pages : 63


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: The difference between the model 7722 and the models 7622, 7212 and 7202 is described in following costumer document K023cdef_Variant decl_001.

Declaration of changes due to variant creation.

Applicant: Spectralink Europe ApS
Project No(s): G0M-1505-4753, G0M-1505-4754
EUT (Product): Spectralink 7722 (K023c), Spectralink 7622 (K023d)
Spectralink 7212 (K023e), Spectralink 7202 (K023f)

The difference between 7722 and 7622 is the keyboard type with corresponding plastic.
7722 use Foil-keyboard with ESD protection circuit.
7622 use Key-buttons with keyfoil.
All other components and firmware are the same.

The difference between 7722 and 7212 is the keyboard type with corresponding plastic, DECT module and EEPROM.
7722 use DECT module KT4588A00, Foil-keyboard with ESD protection circuit and 1M EEPROM.
7212 use DECT module KT4588A30, Key-buttons with keyfoil and 64K EEPROM.
All other components and firmware are the same.

The difference between 7722 and 7202 is the keyboard type, DECT module, EEPROM, headset port and vibrator.
7722 use DECT module KT4588A00, Foil-keyboard with ESD protection circuit, 1M EEPROM, headset port and vibrator.
7202 use DECT module KT4588A30, Key-buttons with keyfoil and 64K EEPROM.
7202 do not have headset port and vibrator with associated components.
All other components and firmware are the same.

Date: 2015-06-11


Henrik Birch Rasmussen

Spectralink Europe Aps.
Langmarksvej 34
8700 Horsens
Denmark

spectralink.com | 2550 55th Street | Boulder, CO 80301 | +1 800-775-5330

Version History

Version	Issue Date	Remarks	Revised by
V01	2015-08-19	Initial Release	

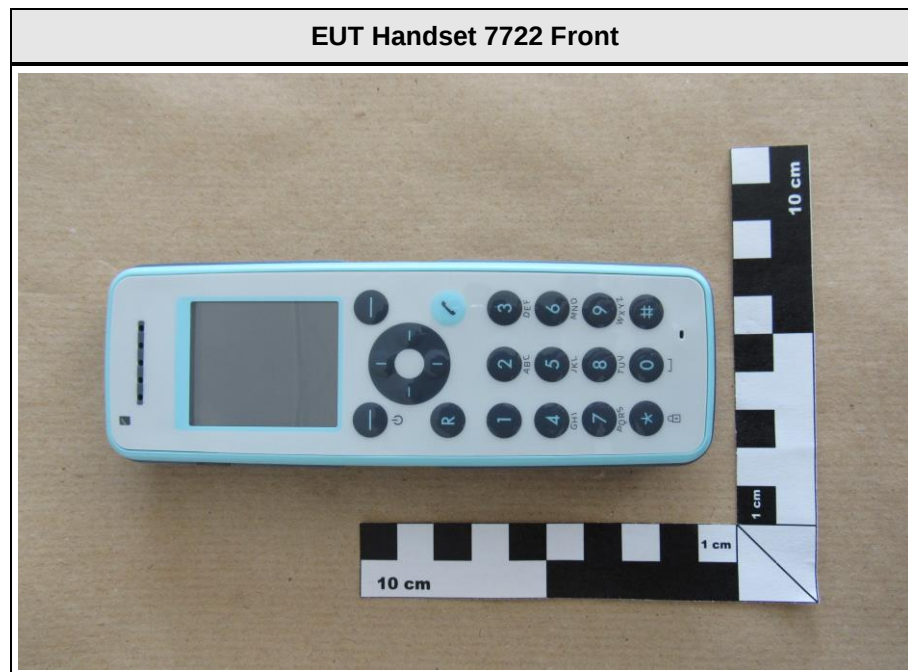
REPORT INDEX

1	EQUIPMENT (TEST ITEM) DESCRIPTION	6
1.1	Photos – Equipment external	7
1.2	Photos – Equipment internal	11
1.3	Photos – Test setup	15
1.4	Supporting Equipment Used During Testing	17
1.5	Input / Output Ports	17
1.6	Operating Modes and Configurations	18
1.7	Test Equipment Used During Testing	19
1.8	Sample emission level calculation	20
2	RESULT SUMMARY	21
3	TEST CONDITIONS AND RESULTS	22
3.1	Test Conditions and Results – Radiated emissions	22
3.2	Test Conditions and Results – AC power line conducted emissions	60

1 Equipment (Test item) Description

Description	DECT handset 7722/7622/7212/7202
Model	K023c
Additional Models	K023d, K023e, K023f
Serial number	None
Hardware version	PCS 04
Software / Firmware version	PCS 15J_
FCC-ID	PXA-K023B
IC	4604A-K023B
Power supply	3.7 VDC via rechargeable Battery
AC/DC-Adaptor	Model : UE08WCP-060100SPA Manufacturer : Fuhua Input : 100-240VAC / 50-60Hz Output : 6VDC / 1.0A
Manufacturer	Spectralink Europe ApS Langmarksvej 34 8700 Horsens DENMARK
Highest emission frequency	Fmax [MHz] = 4966
Device classification	Class B
Equipment type	Tabletop
Number of tested samples	1 of every kind

1.1 Photos – Equipment external



EUT Handset 7622 Front



EUT Handset 7622 Back



EUT Handset 7212 Front



EUT Handset 7212 Back



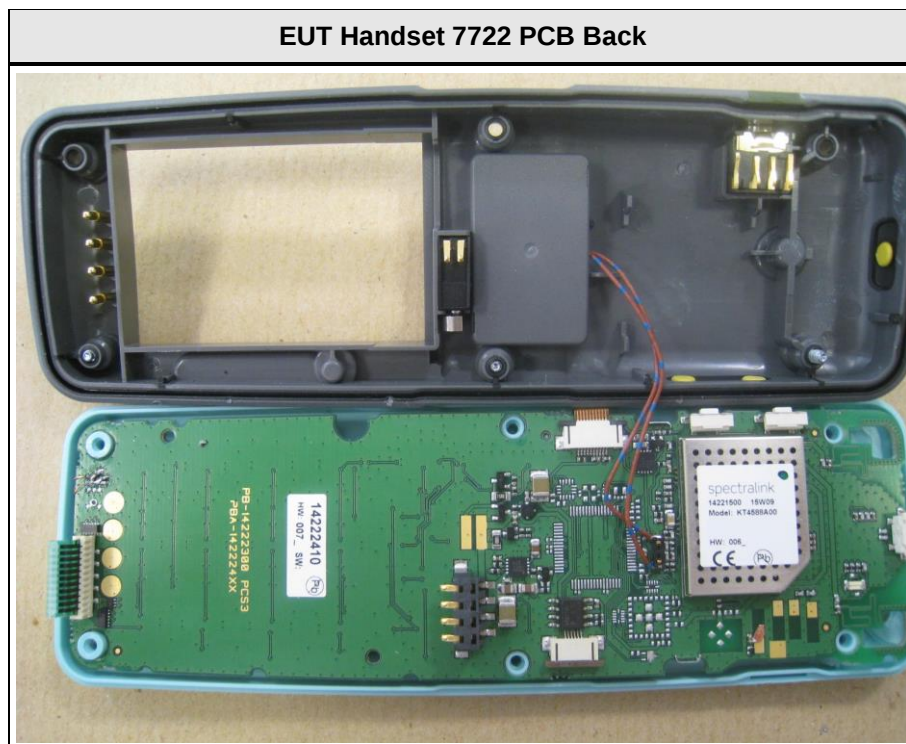
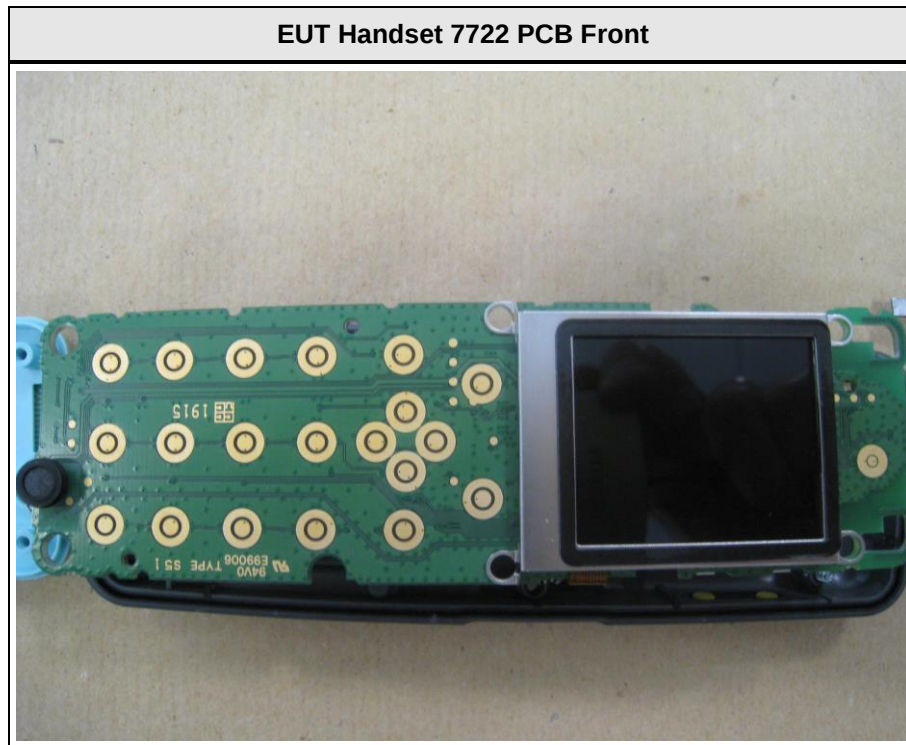
EUT Handset 7202 Front



EUT Handset 7202 Back



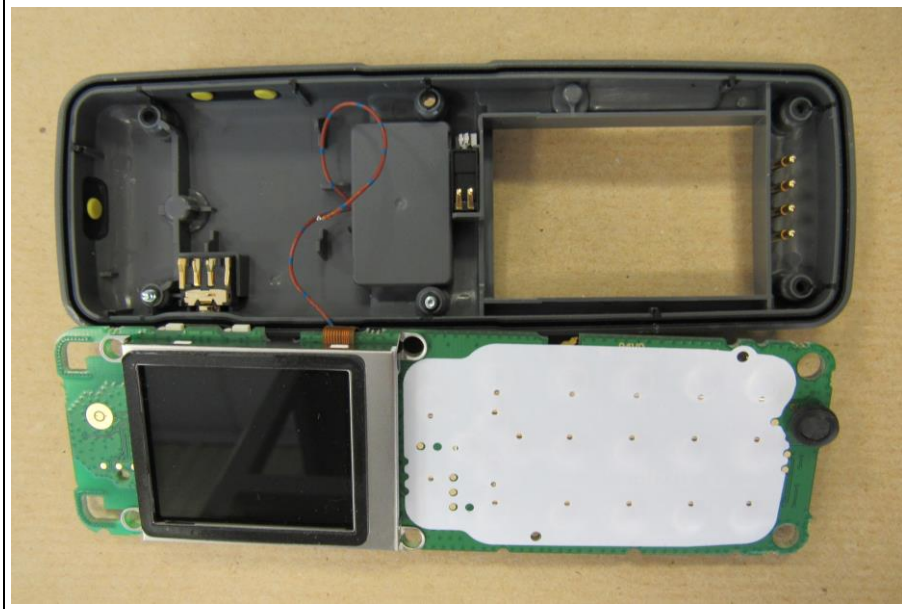
1.2 Photos – Equipment internal



Test Report No.: G0M-1505-4754-EF0115B-V01

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

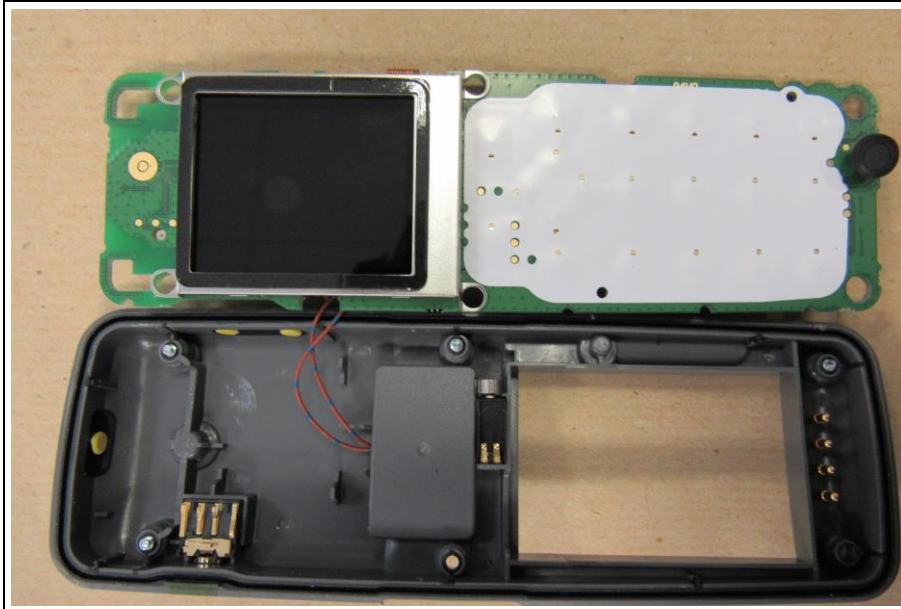
EUT Handset 7622 PCB Front



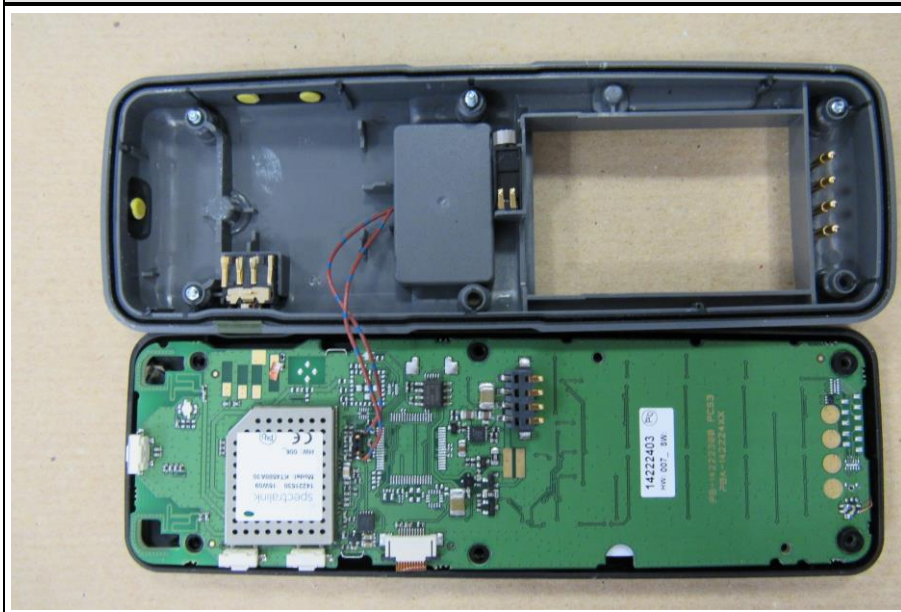
EUT Handset 7622 PCB Back



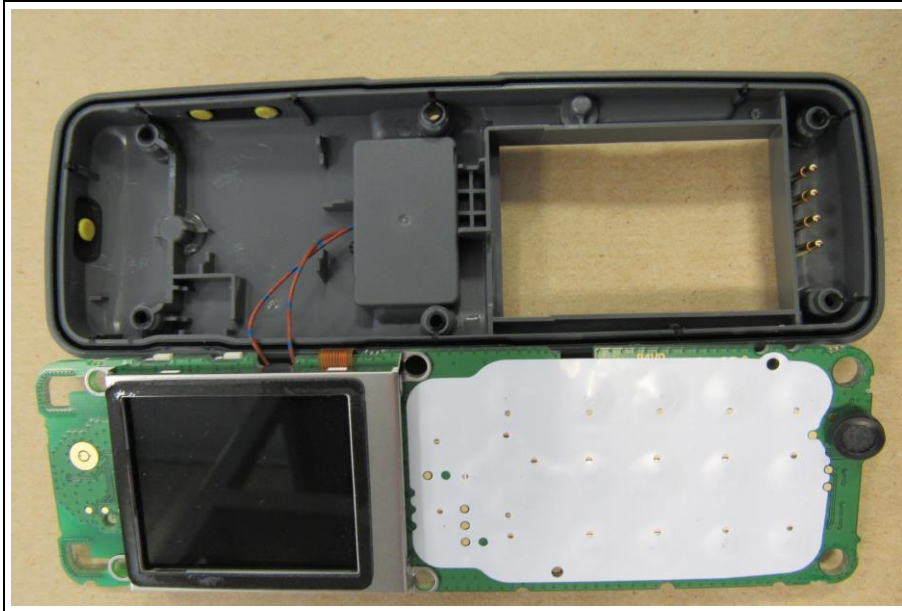
EUT Handset 7212 PCB Front



EUT Handset 7212 PCB Back



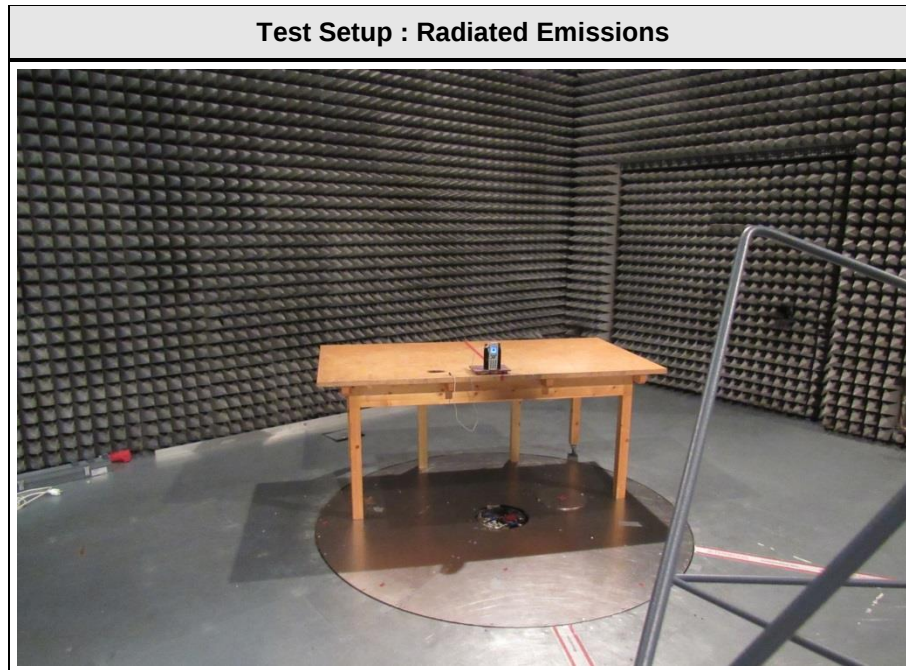
EUT Handset 7202 PCB Front



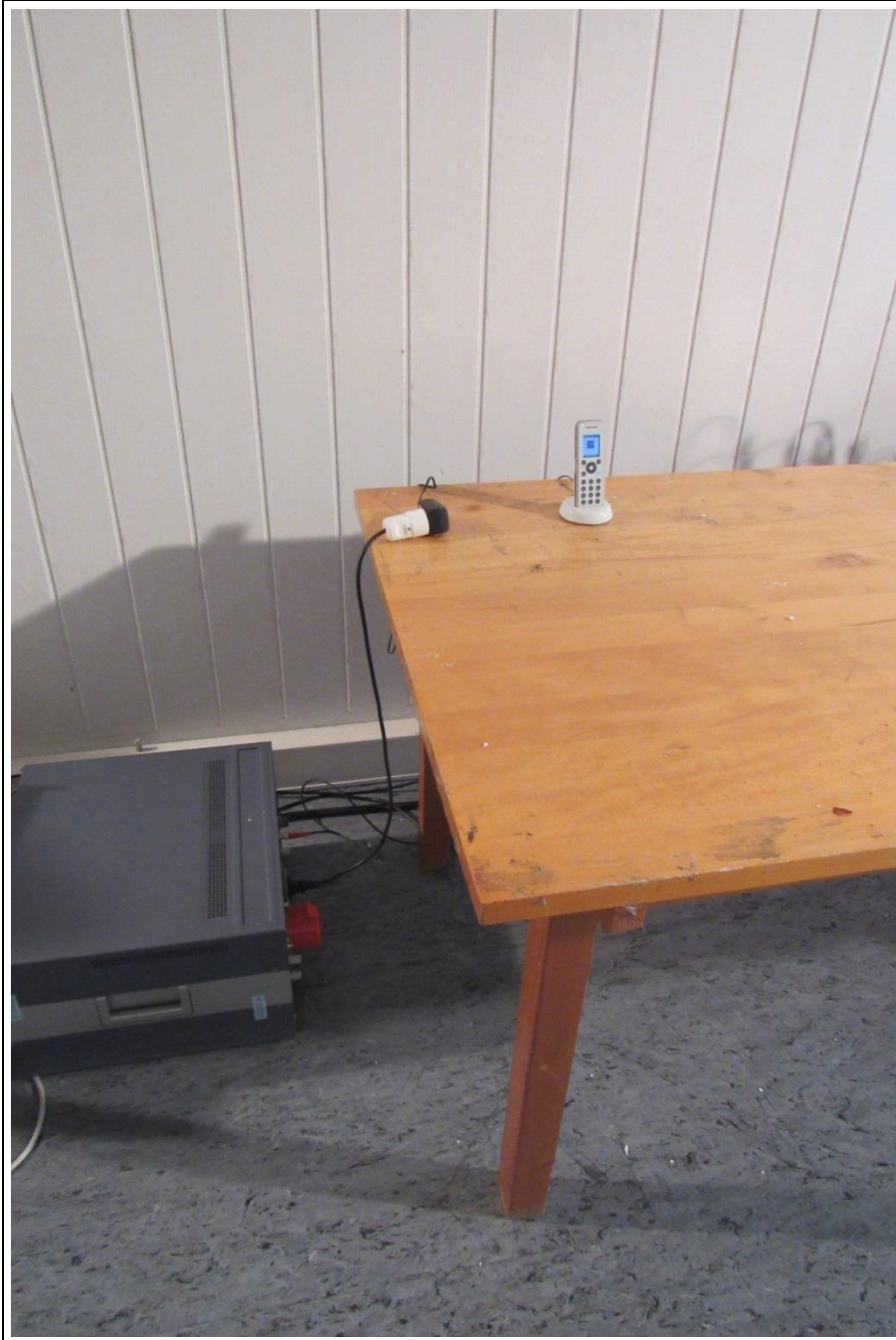
EUT Handset 7202 PCB Back



1.3 Photos – Test setup



Test Setup : Conducted Emissions



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	Charger, single	Spectralink	84642493	-
AE	Charger, single, USB	Spectralink	84642494	-
AE	Power adaptor	Fuhua	UE08WCP-060100SPA	-
AE	DECT Base	Spectralink	IP-DECT Server 400	-
AE	Companion device	Spectralink	7722	-
*Note: Use the following abbreviations:				
AE :	Auxiliary/Associated Equipment, or			
SIM :	Simulator (Not Subjected to Test)			
CABL :	Connecting cables			

1.5 Input / Output Ports

Port #	Name	Type*	Max. Cable Length	Cable Shielded	Comments
1	Headset	I/O	<3m	No	-
2	USB	I/O	<3m	Yes	@charger, service only
3	AC Mains	I/O	<3m	No	@charger
*Note: Use the following abbreviations:					
AC :	AC power port				
DC :	DC power port				
N/E :	Non electrical				
I/O :	Signal input or output port				
TP :	Telecommunication port				

1.6 Operating Modes and Configurations

Mode #	Description
1	DECT handset 7722, EUT battery powered, DECT link to companion device
2	DECT handset 7722, EUT at charging mode, DECT link to companion device
3	DECT handset 7622, EUT battery powered, DECT link to companion device
4	DECT handset 7212, EUT battery powered, DECT link to companion device
5	DECT handset 7202, EUT battery powered, DECT link to companion device

Configuration #	EUT Configuration
1	DECT handset 7722 fully assembled
2	DECT handset 7622 fully assembled
3	DECT handset 7212 fully assembled
4	DECT handset 7202 fully assembled

1.7 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2014.1.15

Radiated emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD-Antenne	R&S	HL 223	EF00187	2014-03	2017-03
Horn antenna	Schwarzbeck	BBHA 9120D	EF00018	2013-09	2016-09
EMI Test Receiver	R&S	ESU26	EF00887	2015-01	2016-01

Conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	EF00182	2014-11	2016-11
AMN	R&S	ESH3-Z5	EF00036	2014-12	2016-12
EMI Test Receiver	R&S	ESCS 30	EF00295	2014-10	2015-10

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 RSS-Gen				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 RSS-Gen 6.13	Radiated emissions	ANSI C 63.4	PASS	-
47 CFR 15.107 RSS-Gen 8.8	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		24°C		
Relative Humidity		30 to 60 %		42%		
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				
		Fmax [MHz] = 4966				
Fully configured sample scanned over the following frequency range		Frequency range				
		30 MHz to 25 GHz				
Operating mode		1 / 2 / 3 / 4 / 5				
Configuration		1 / 2 / 3 / 4				
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:						
Over 18 GHz were no relevant emission detected. The report shows results up to 18 GHz only. For the radiated emission the charger 84642494 was detected as worst case. This report shows results with this charger only.						

Test Procedure:

The test site is in accordance with ANSI C63-4:2009 requirements and is listed by FCC.

The measurement procedure is as follows:

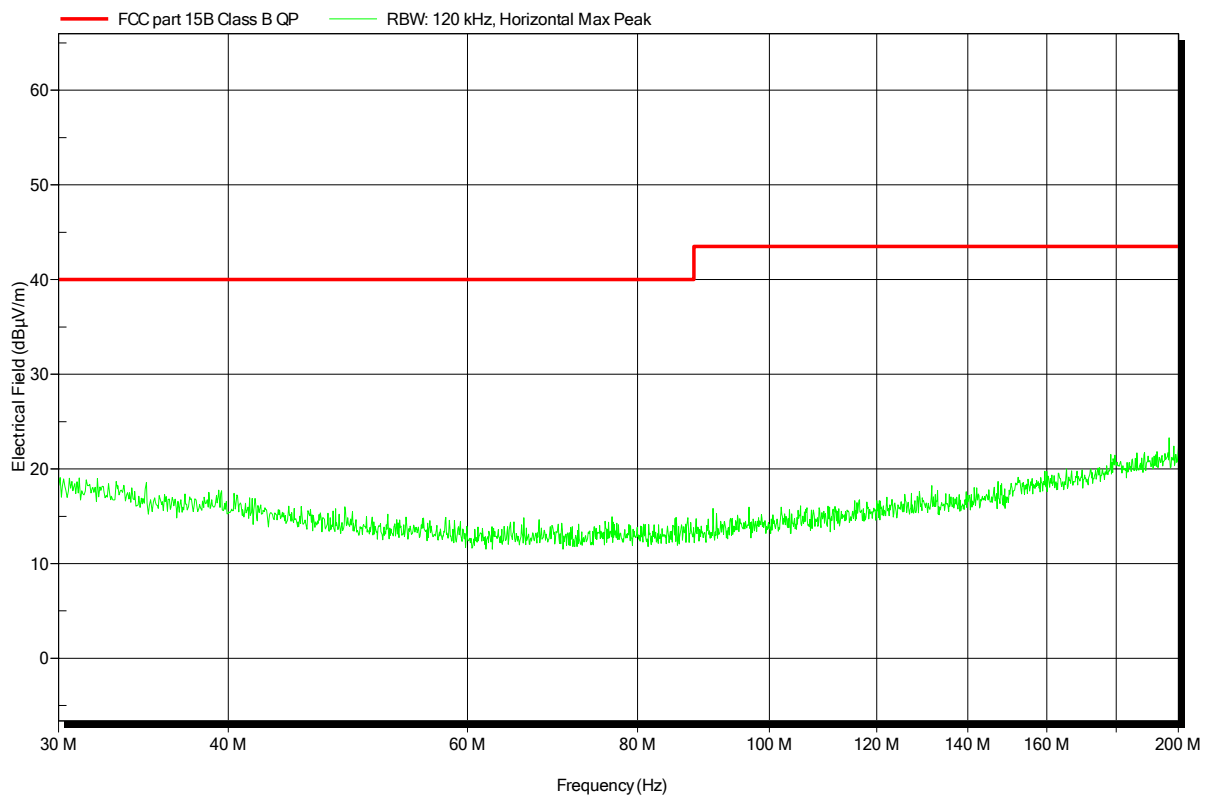
- 1) The EUT was placed on a 0.8 m non conductive table at a 3 m distance from the receive antenna (ANSI C63.4: 2009 item 6.2)
- 2) The antenna output was connected to the measurement receiver
- 3) A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was 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
- 4) Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023c
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC Battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 32

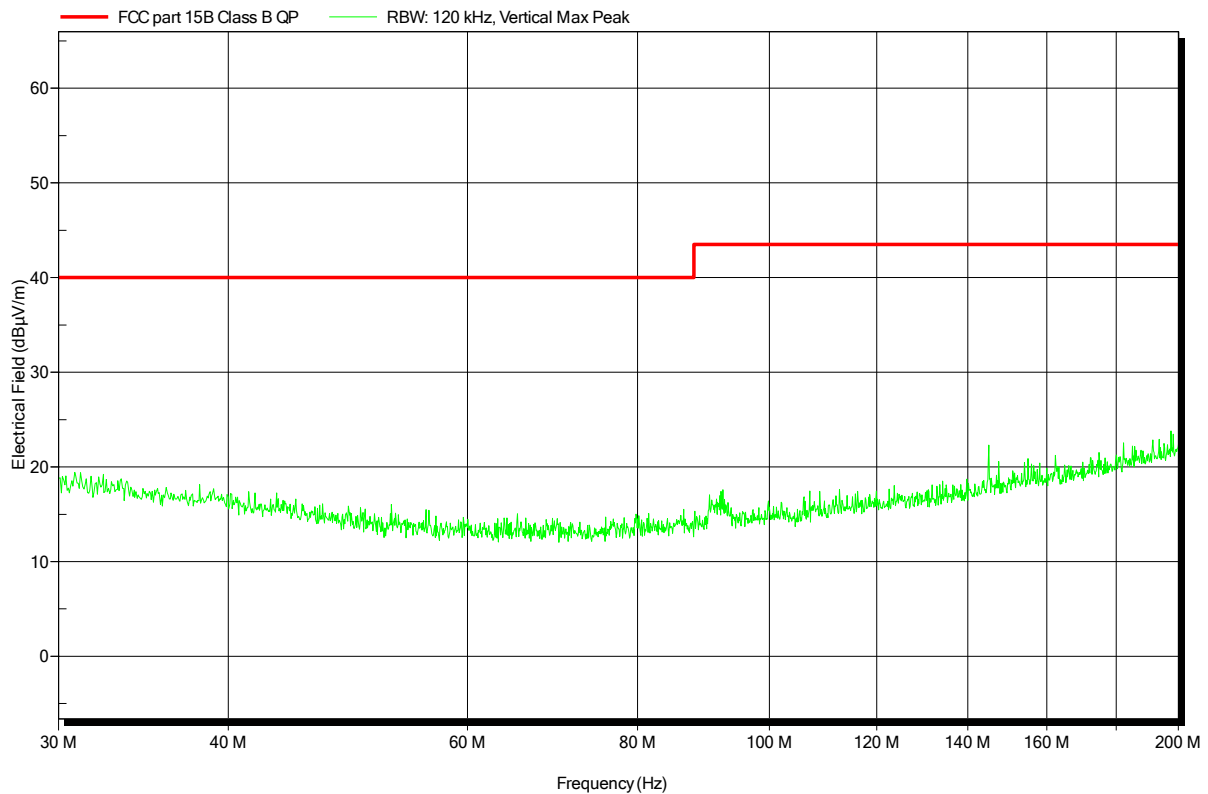


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Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC Battery
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 31

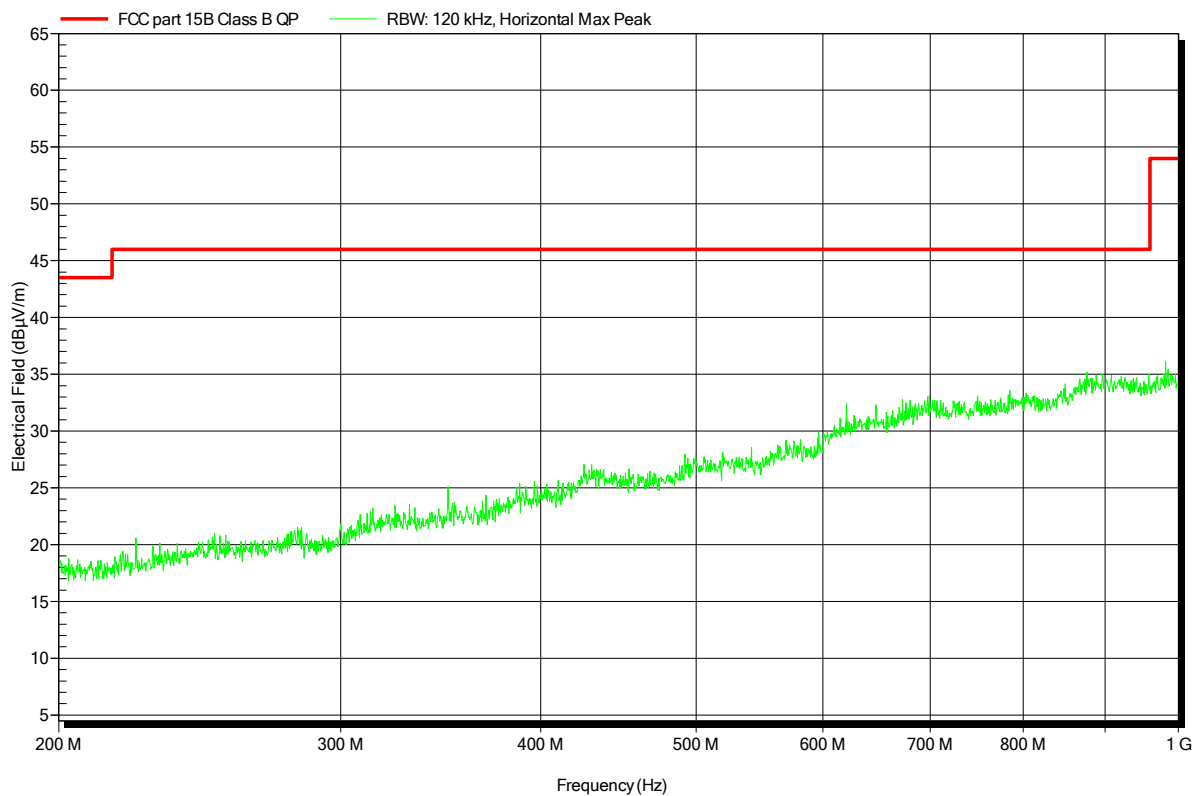


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Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC Battery
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 29

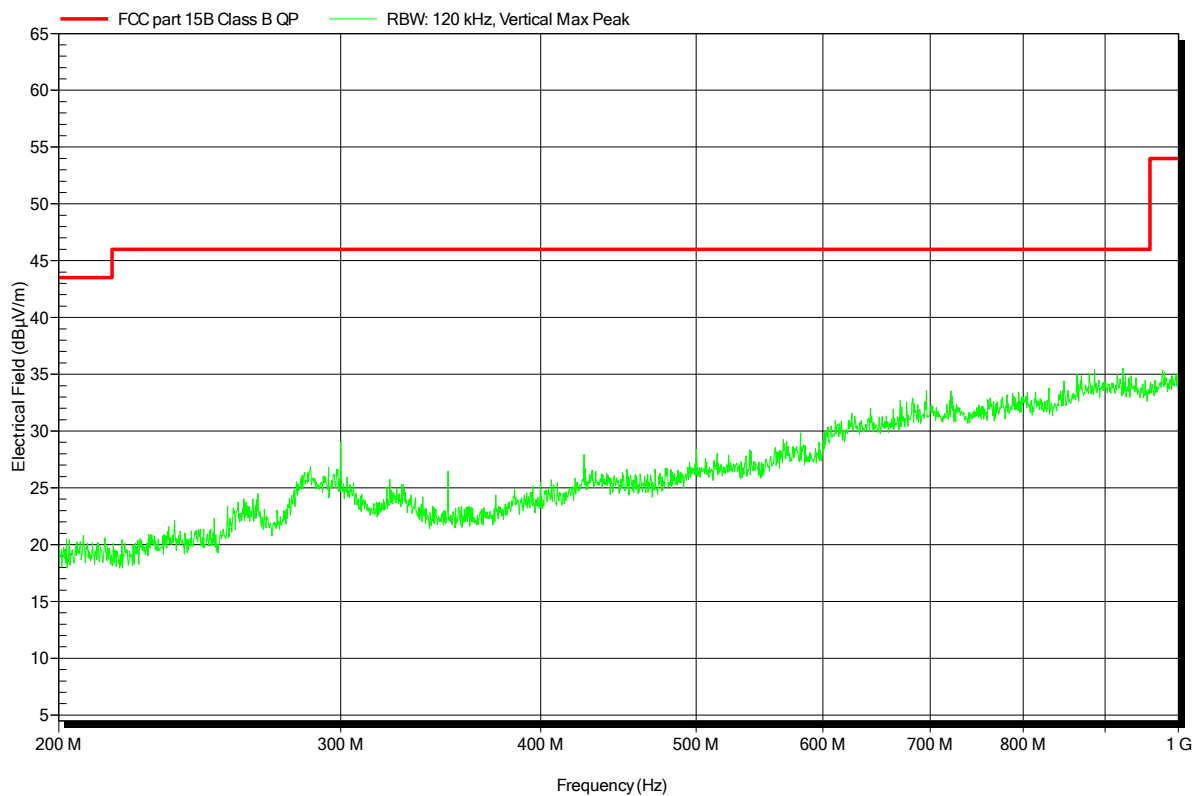


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Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC Battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 30

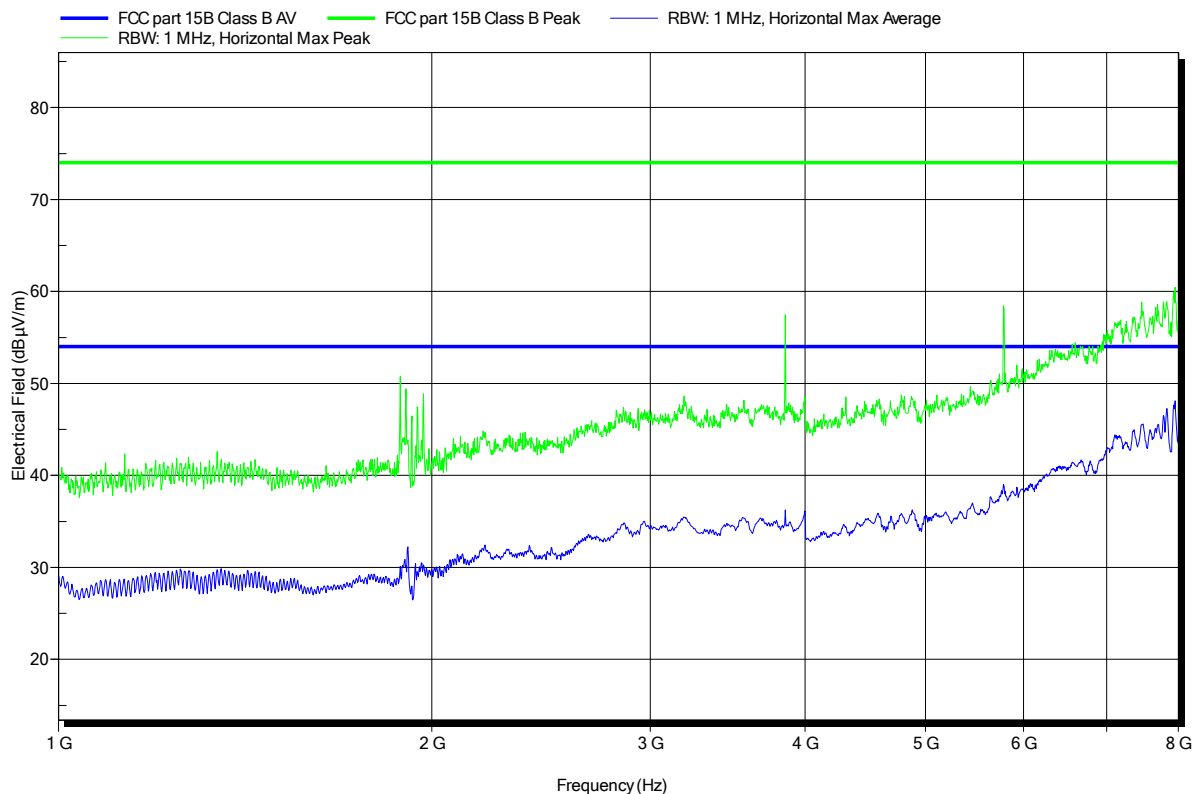


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EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023c
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC Battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 28

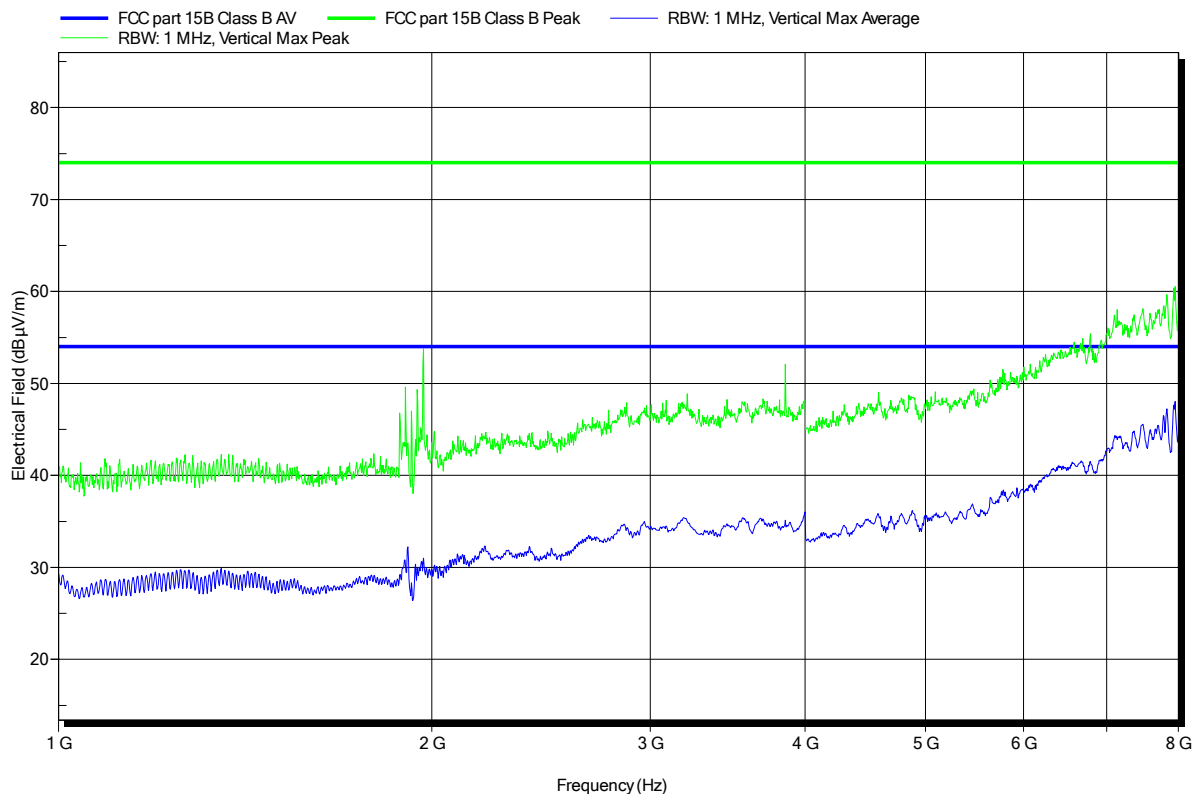


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Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 27

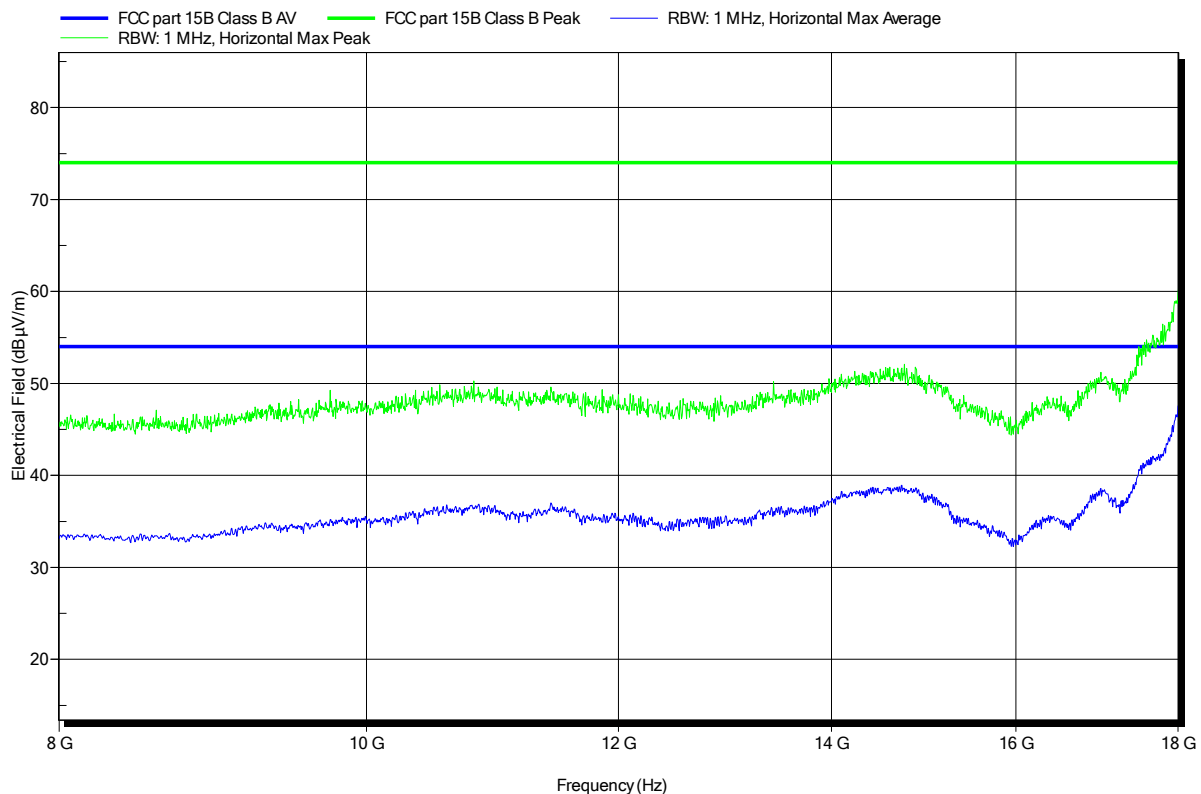


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 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7722, Sample B04, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 25

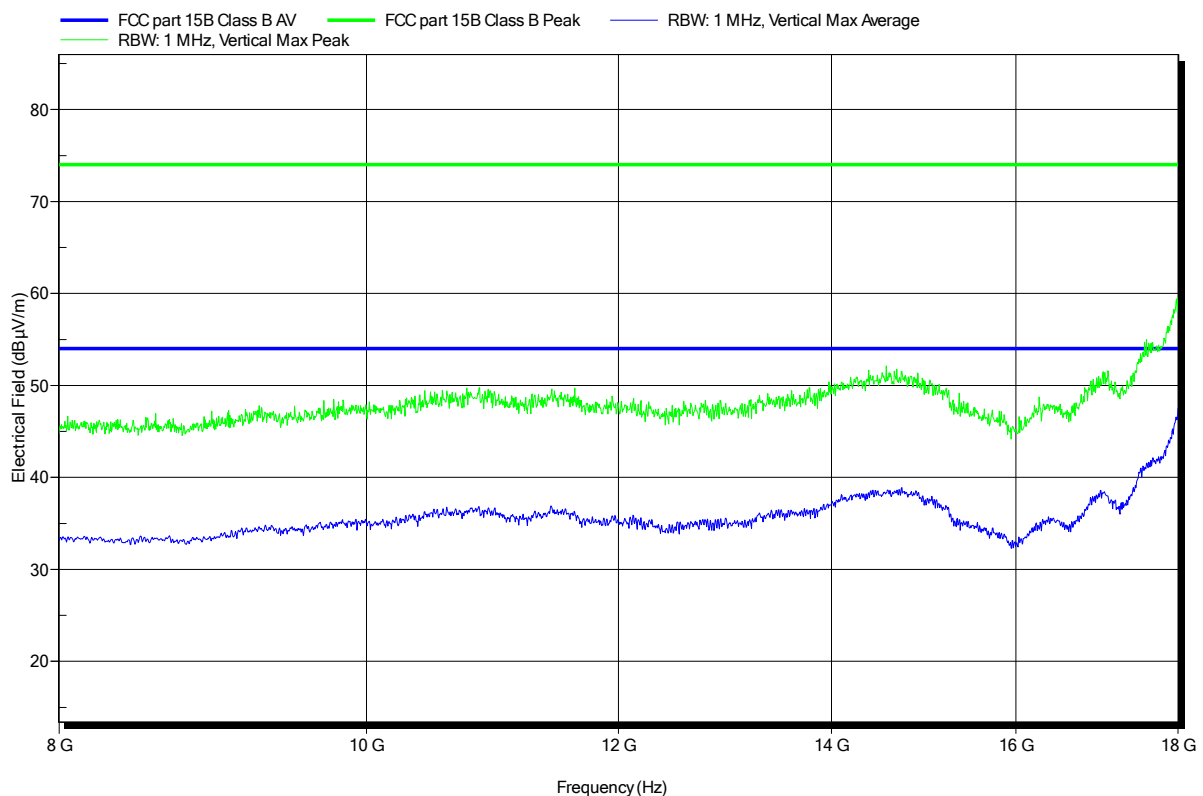


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 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC Battery
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: 7722, Sample B04, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 26

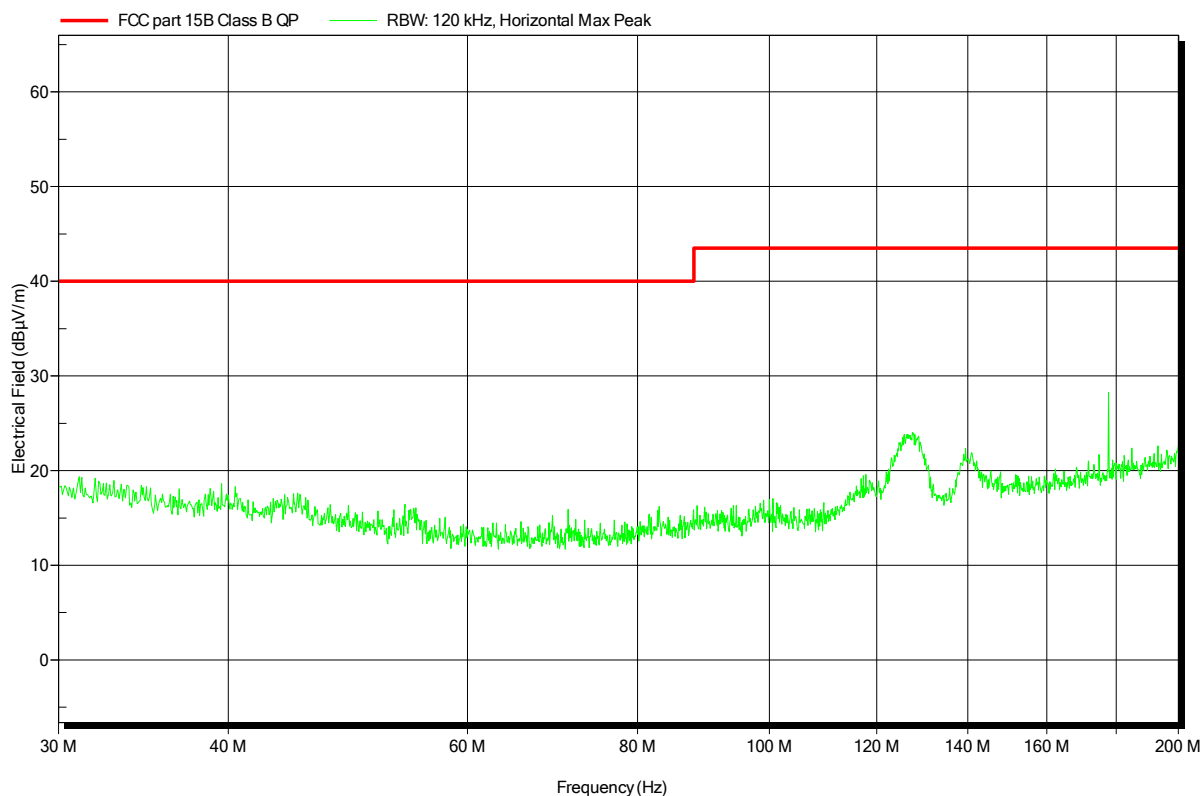


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Model:	K023c
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 120 VAC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	7722, Sample B04, DECT link to Base and Companion device, charging
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 33

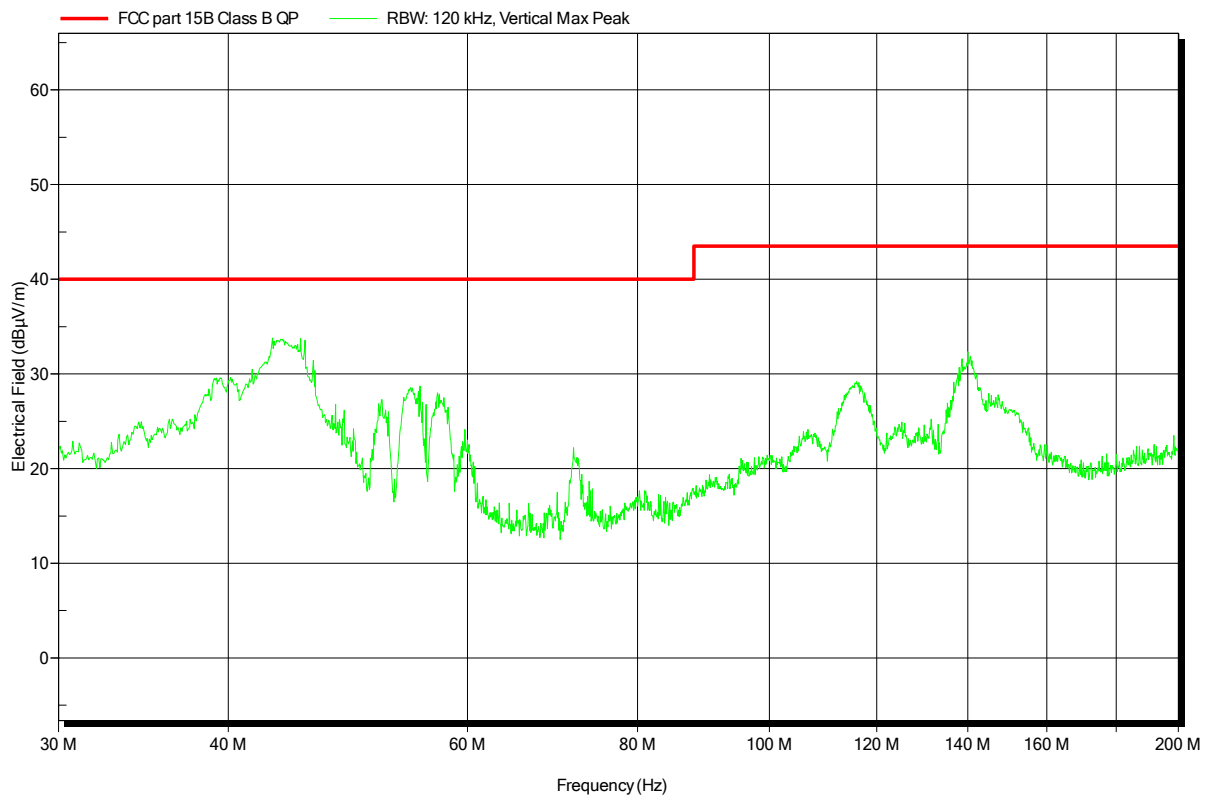


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Index 34



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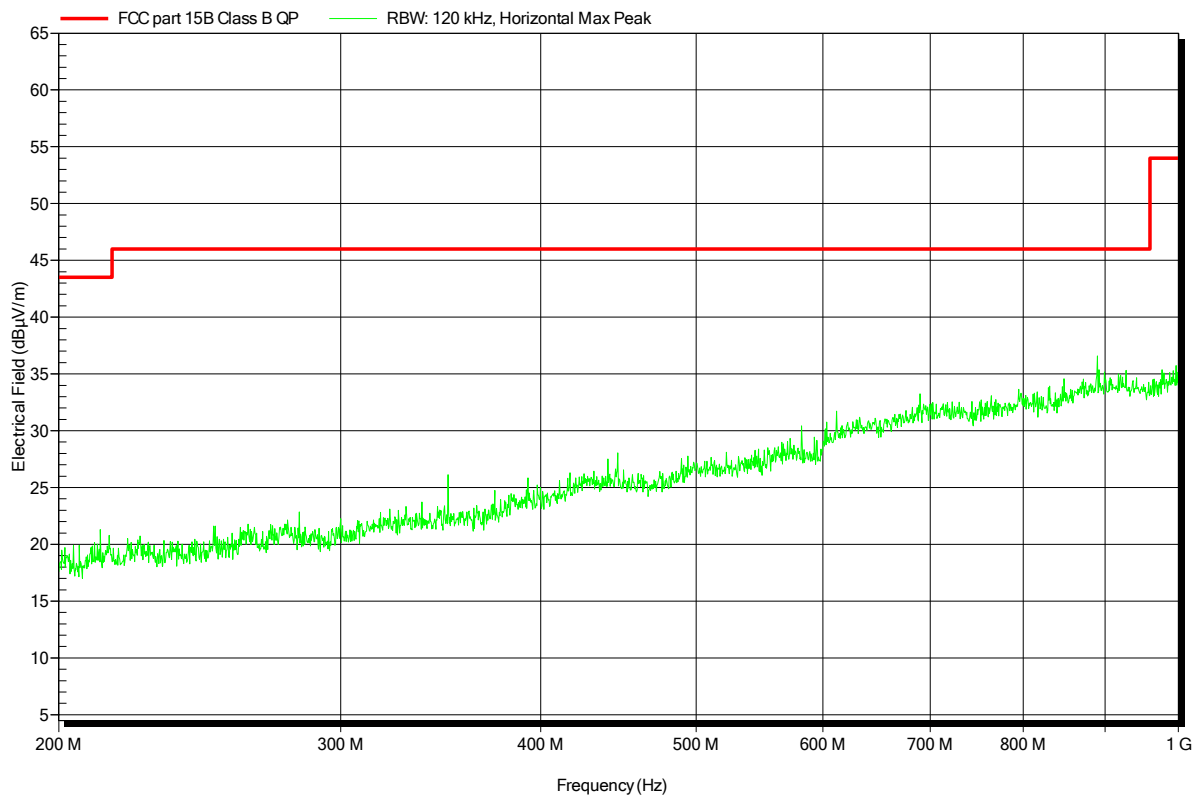
Eurofins Product Service GmbH
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Index 36

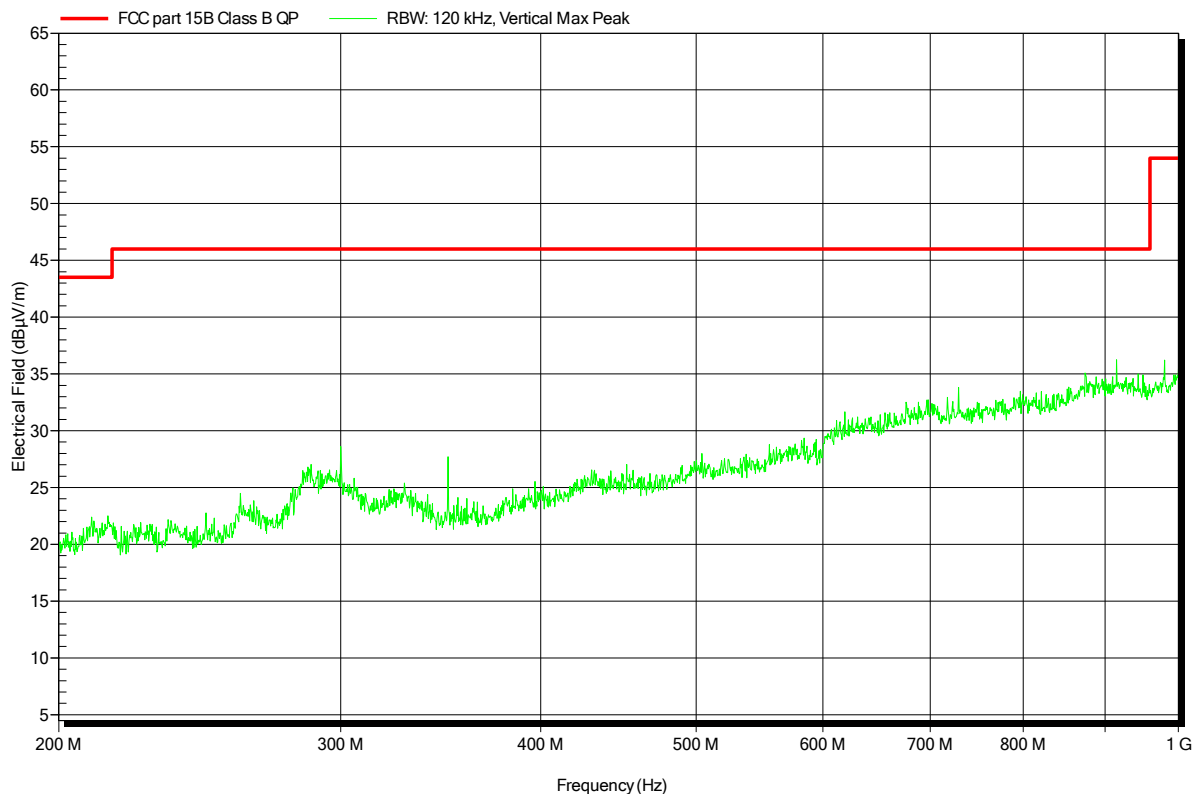


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Index 35

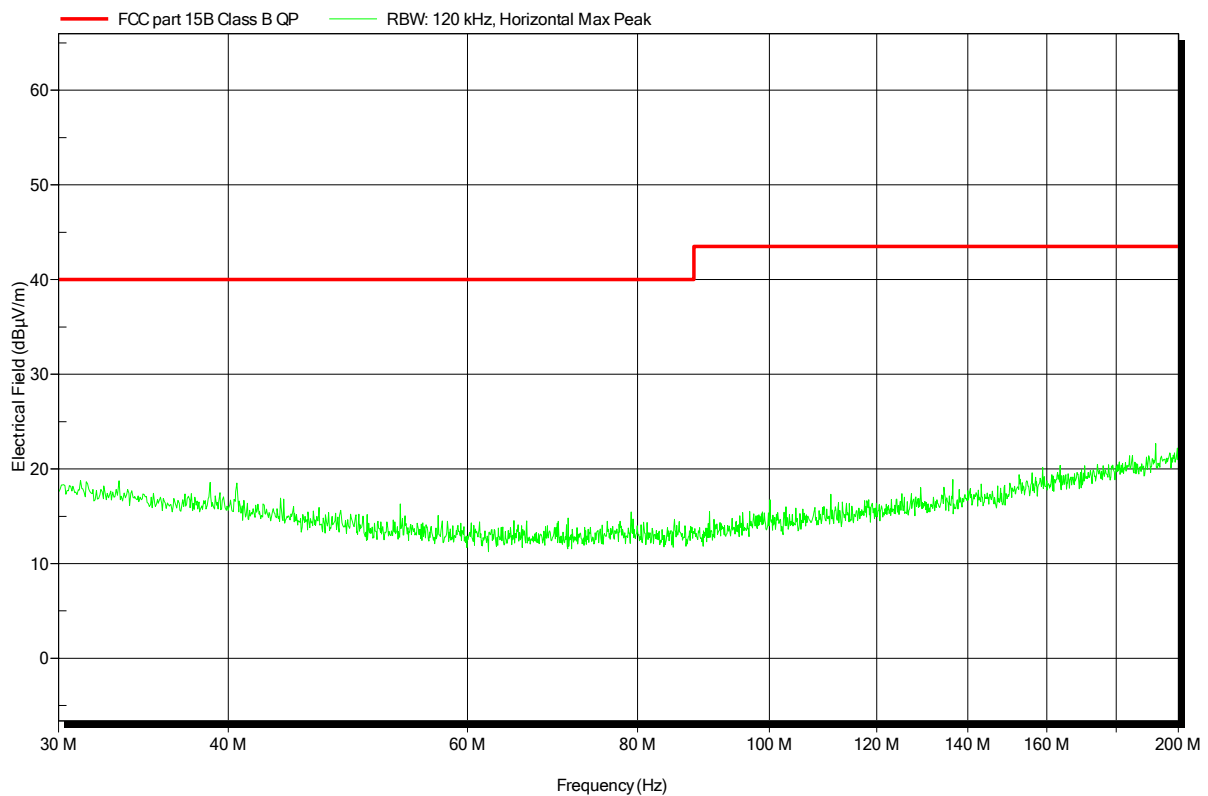


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EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 17



Test Report No.: G0M-1505-4754-EF0115B-V01

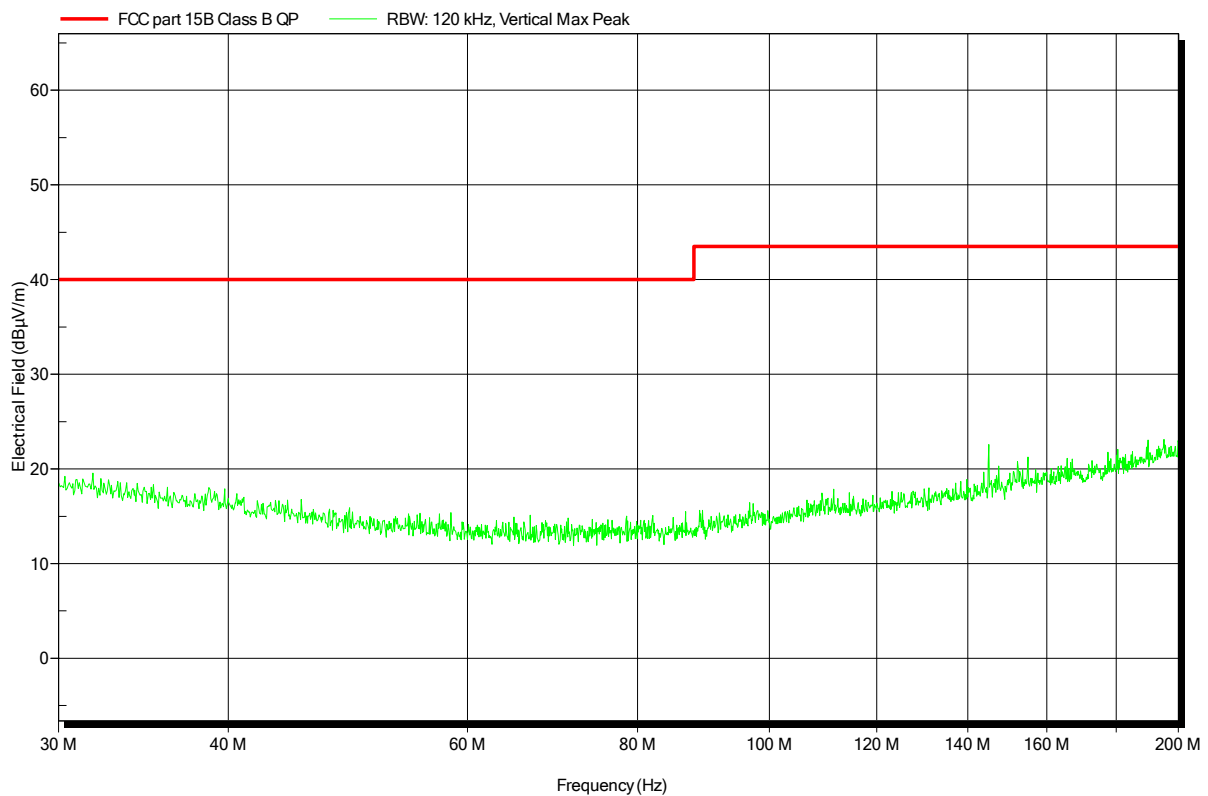
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 18



Test Report No.: G0M-1505-4754-EF0115B-V01

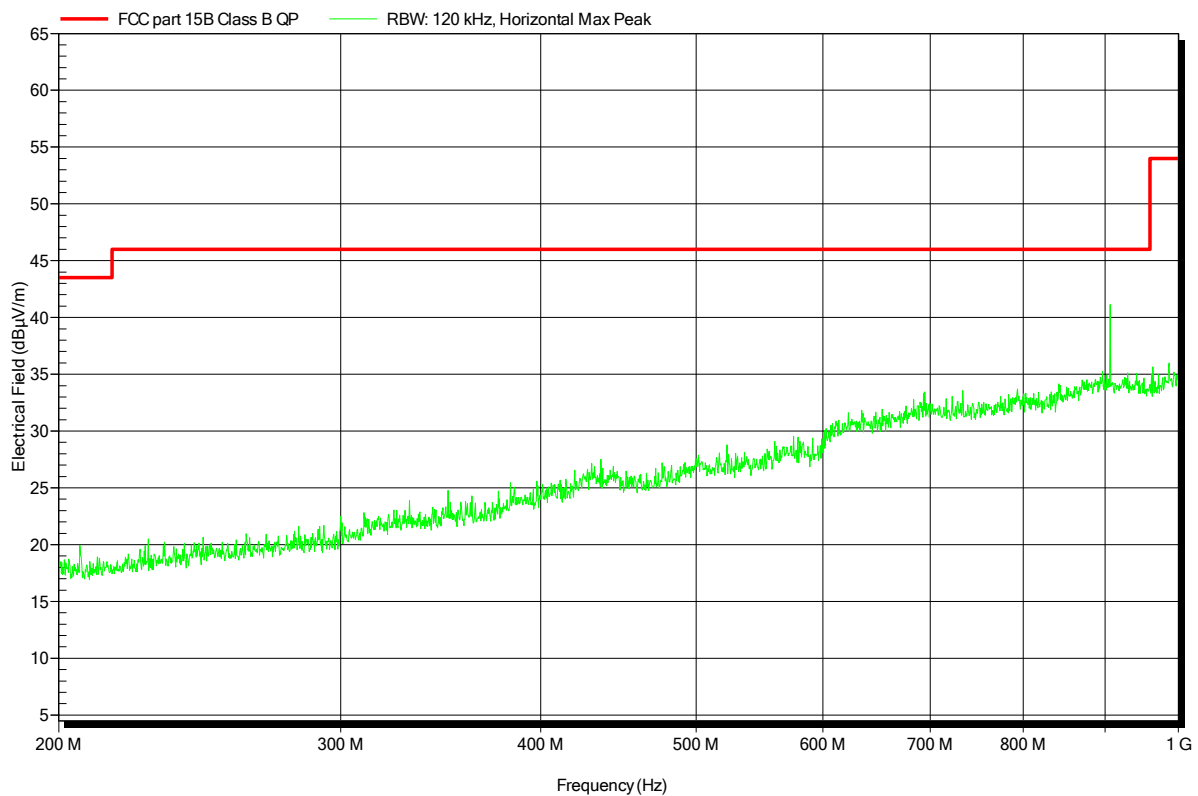
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 20



Test Report No.: G0M-1505-4754-EF0115B-V01

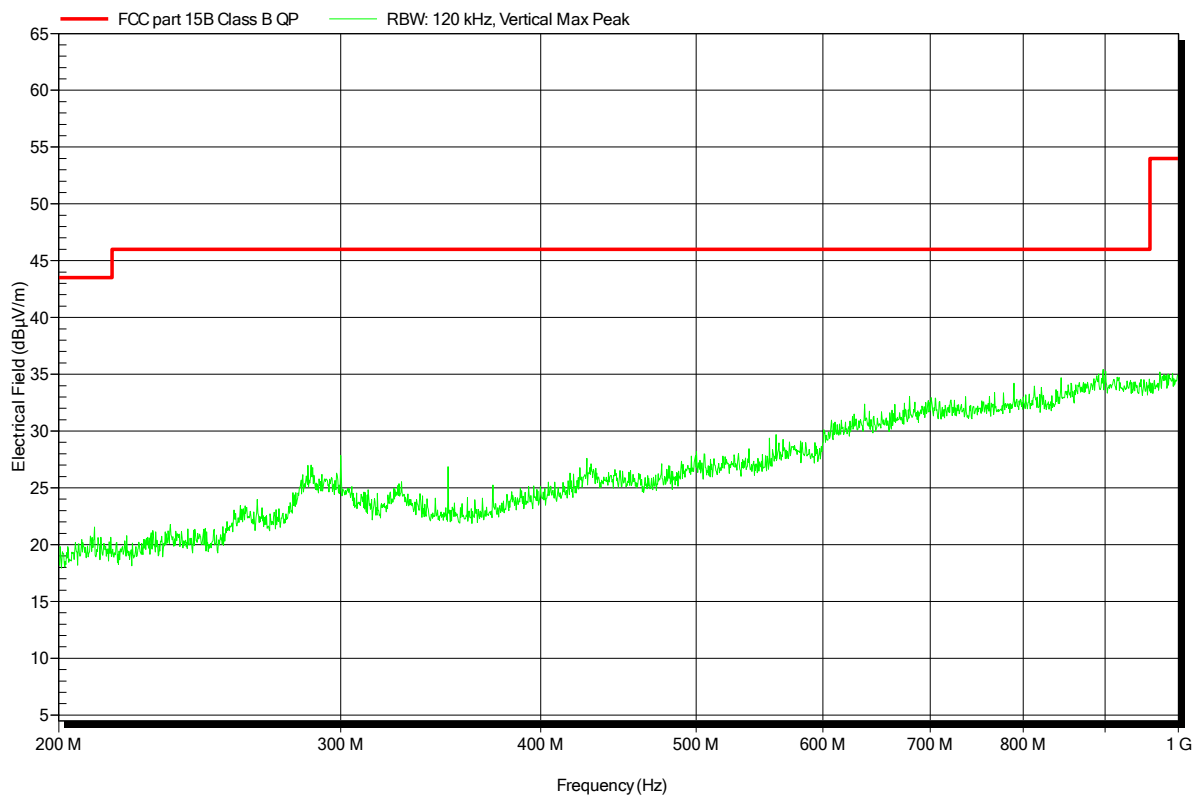
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 19

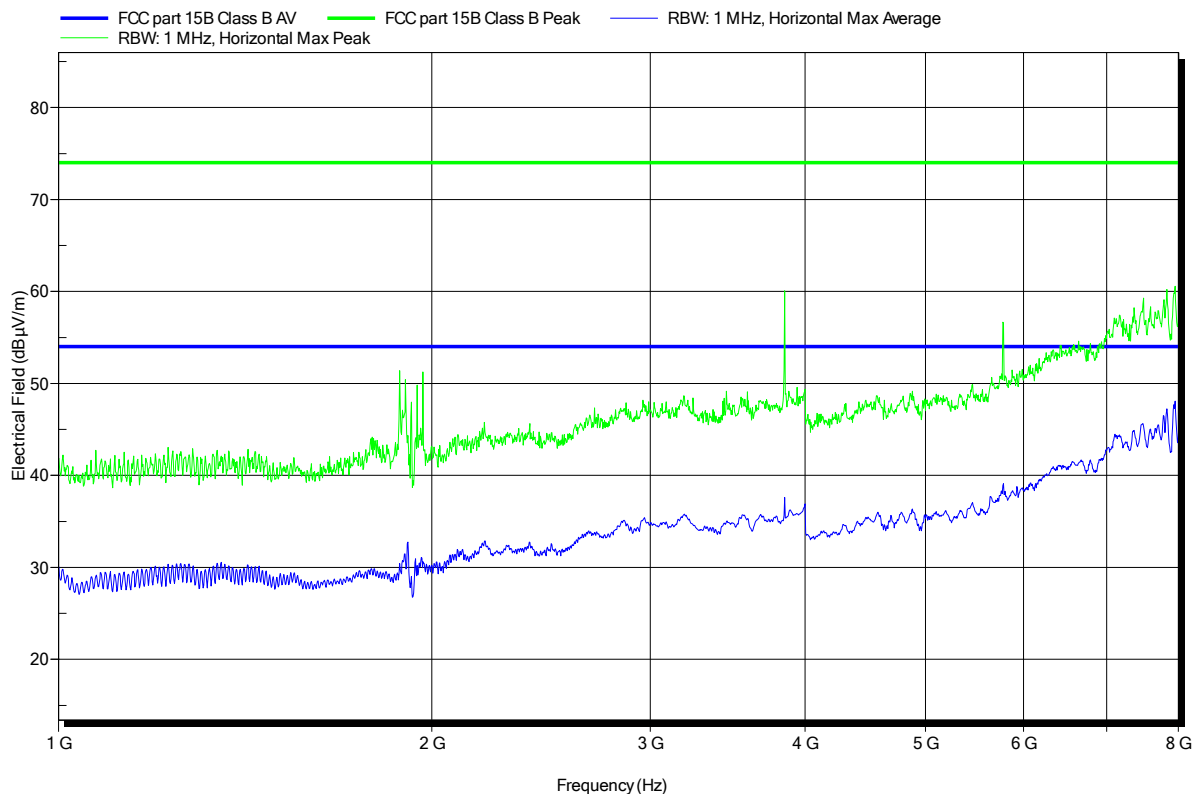


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023d
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7622, Sample B07, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 21

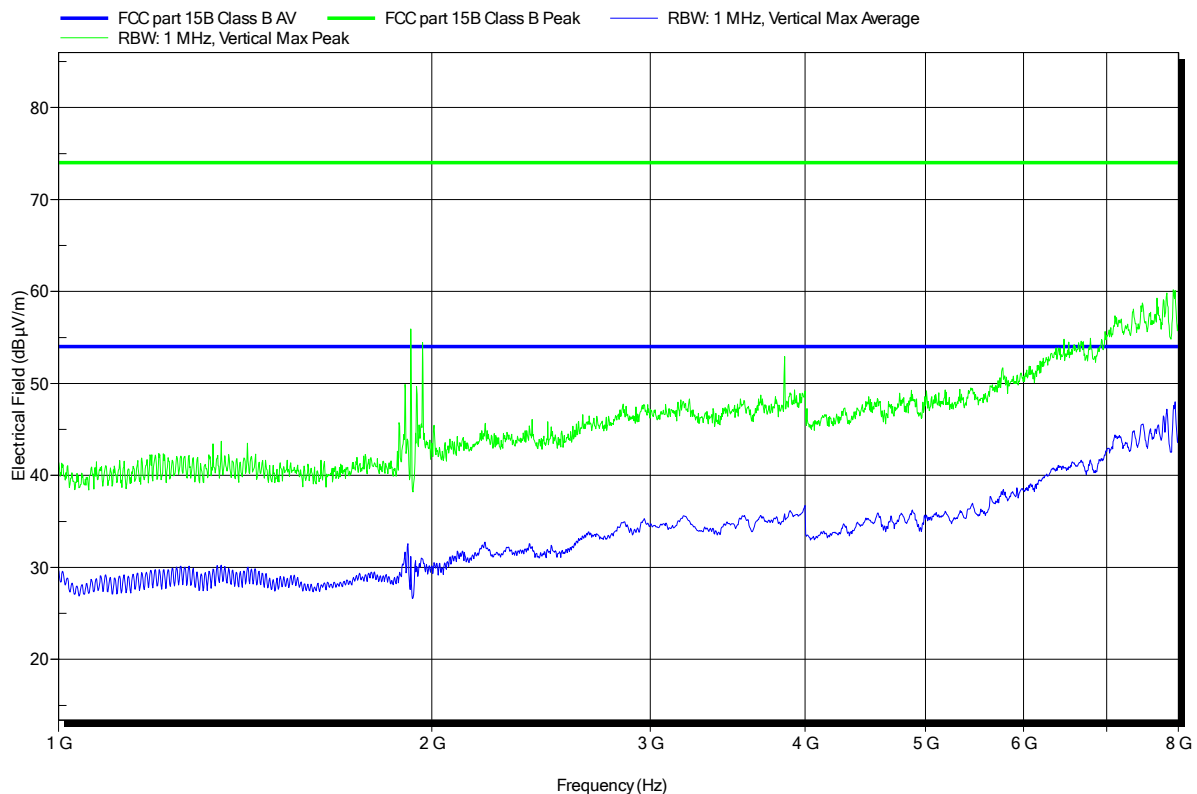


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 22

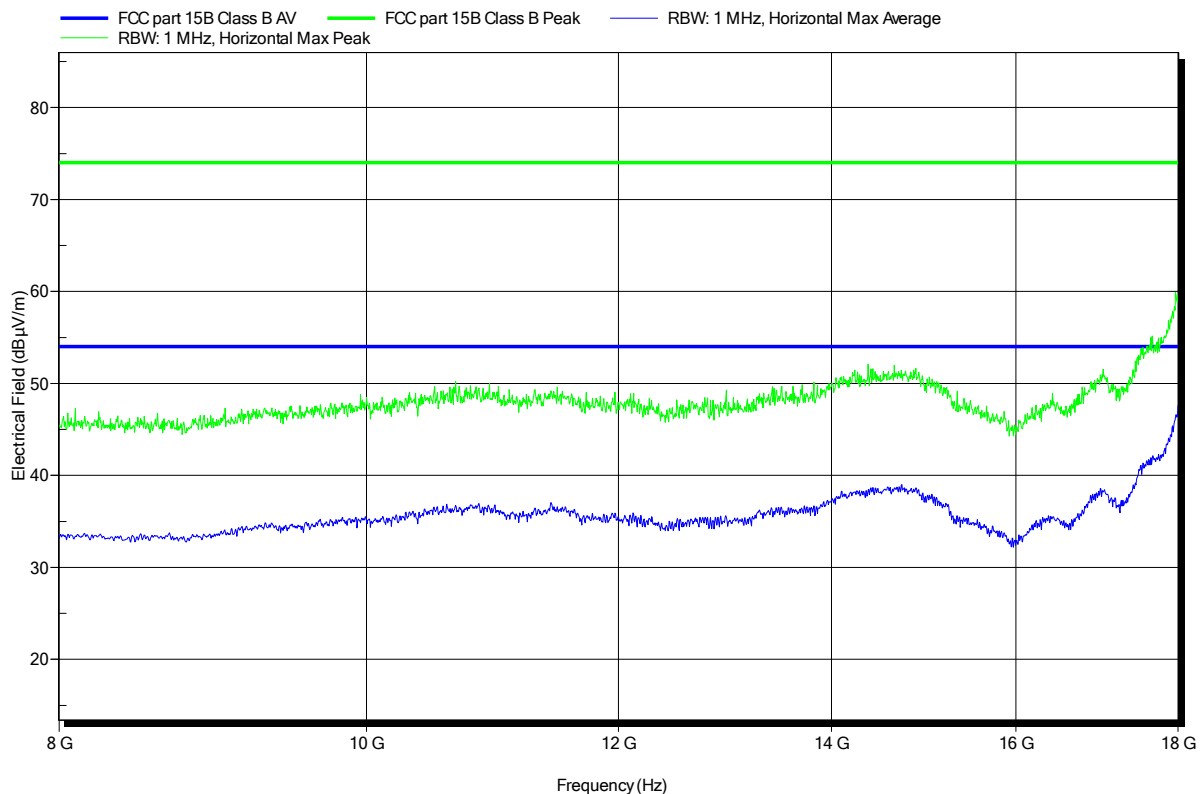


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023d
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7622, Sample B07, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 24

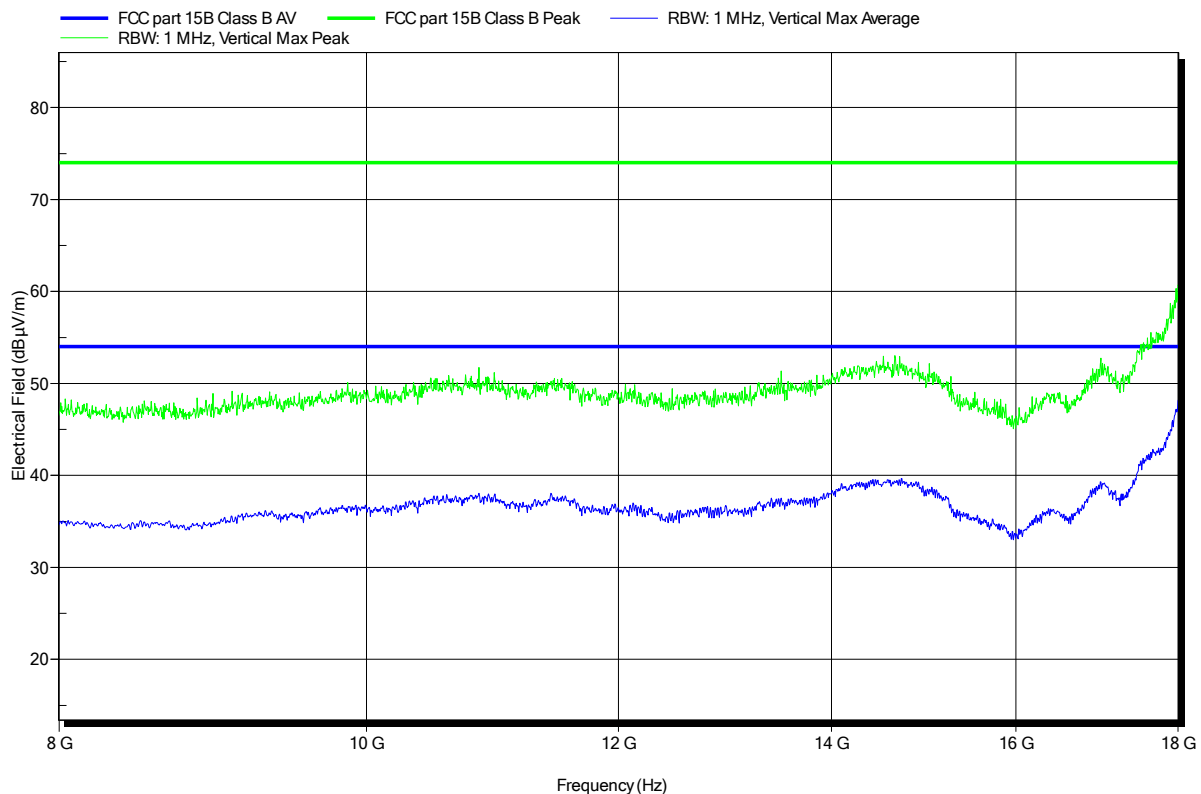


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023d
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3m
Mode:	7622, Sample B07, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 23

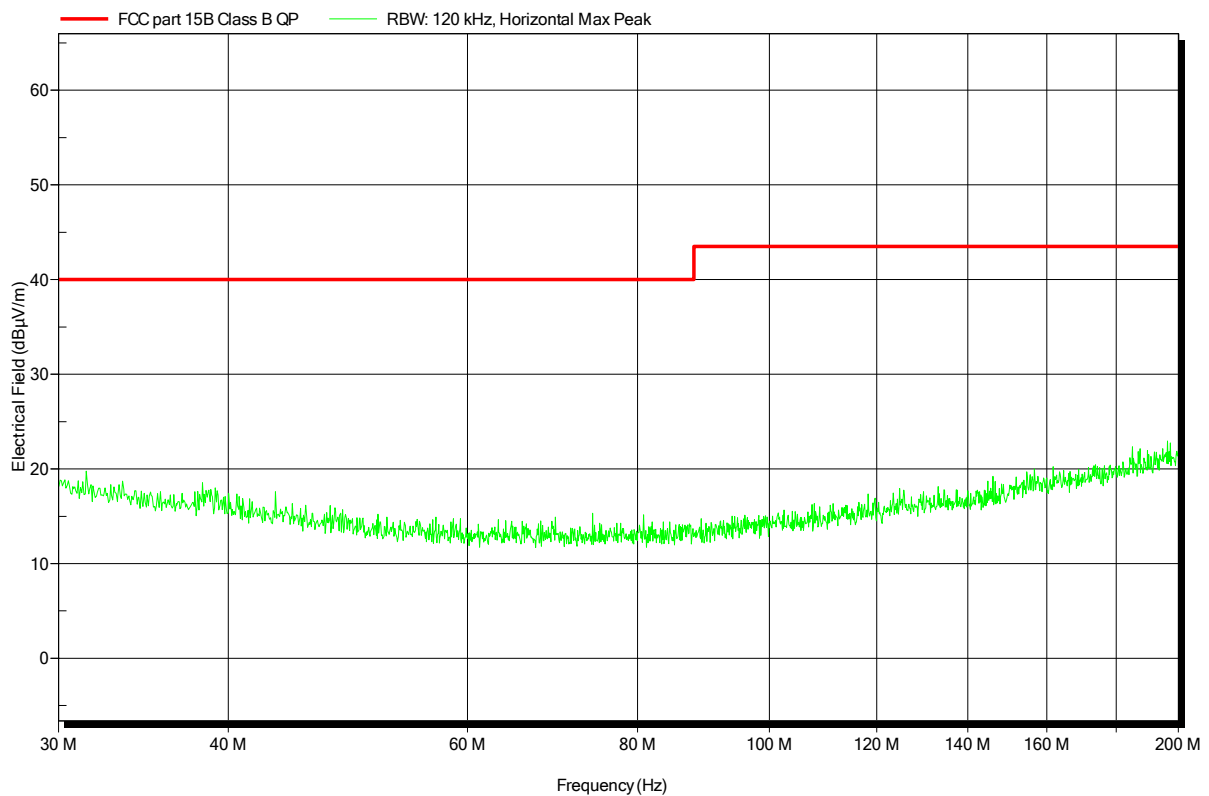


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023e
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	7212, Sample B12, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 16



Test Report No.: G0M-1505-4754-EF0115B-V01

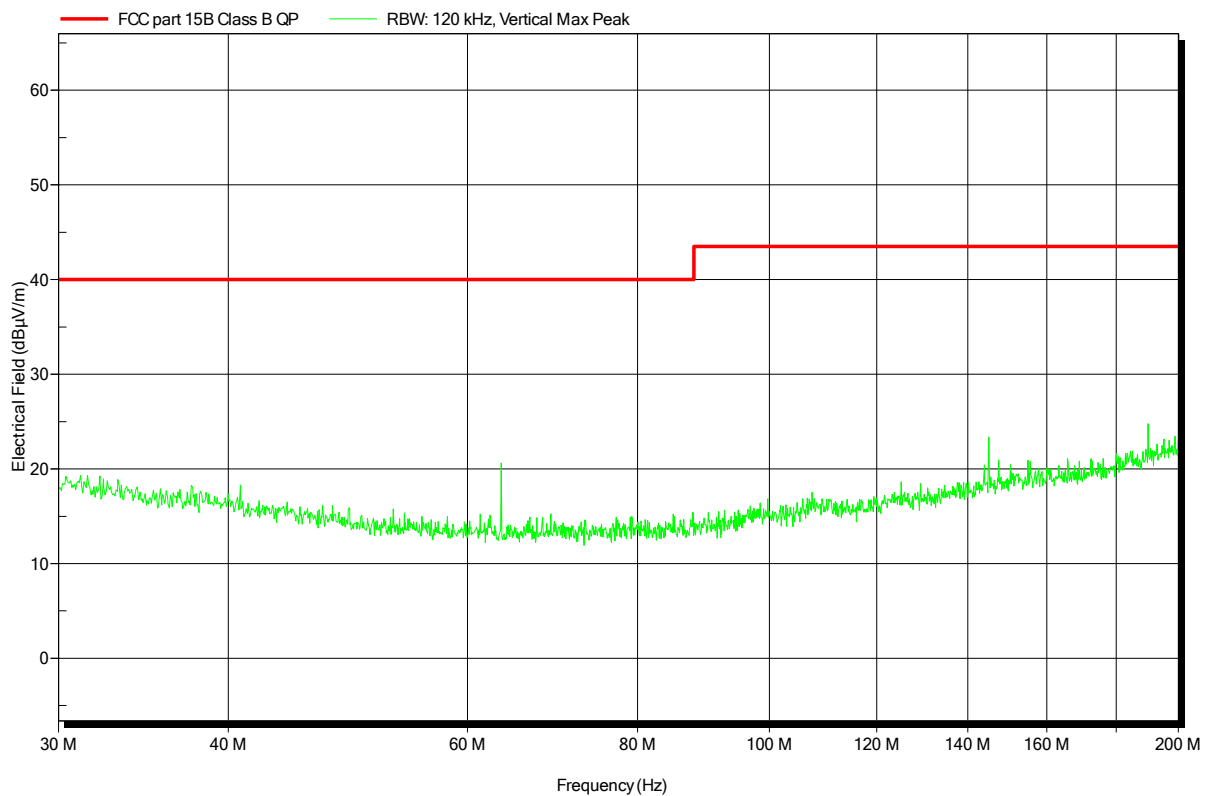
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023e
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3m
Mode:	7212, Sample B12, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 15

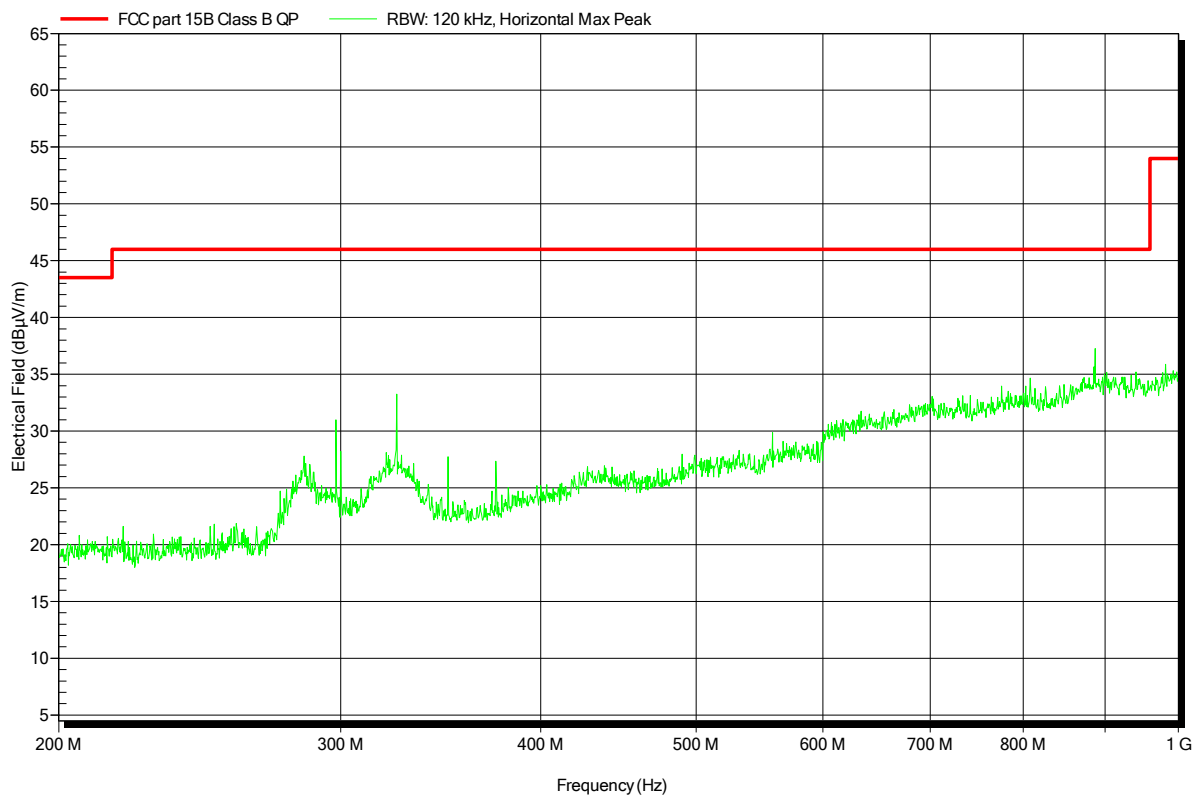


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023e
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3m
Mode:	7212, Sample B12, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 14

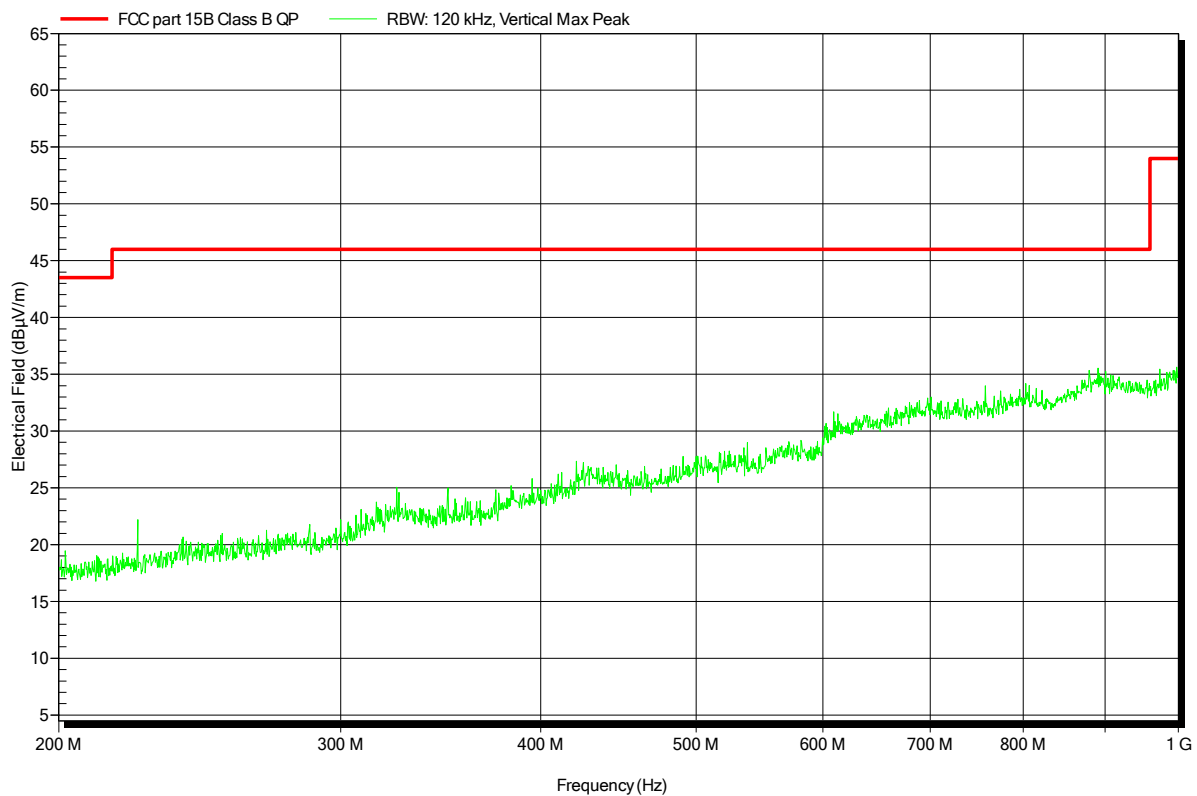


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023e
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	7212, Sample B12, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 13

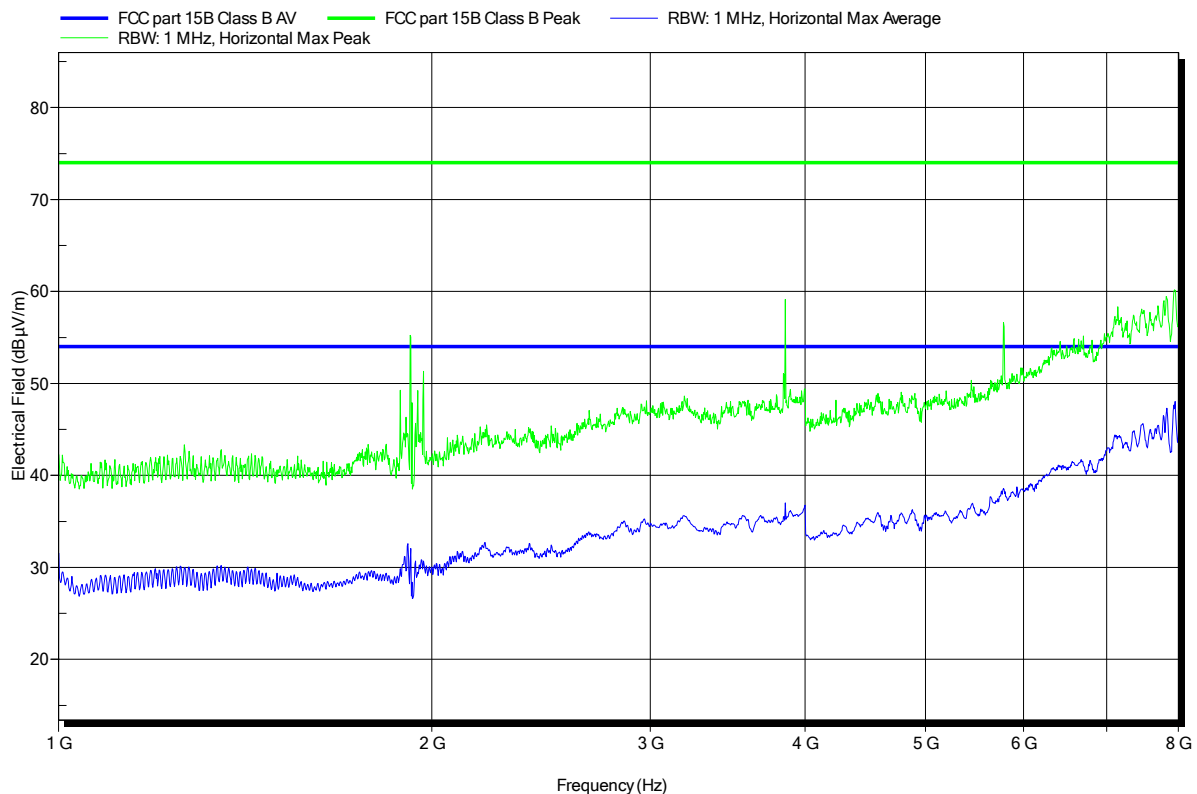


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023e
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7212, Sample B12, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 12

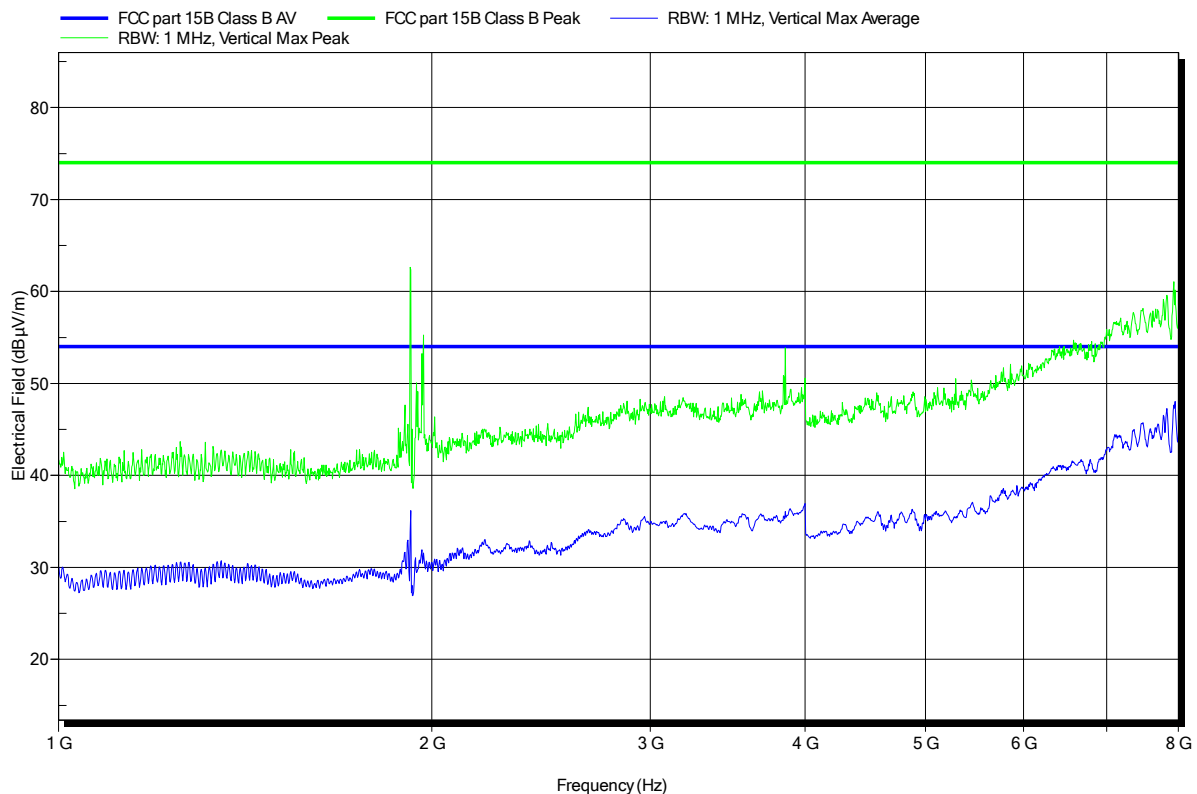


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023e
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3m
Mode:	7212, Sample B12, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 11

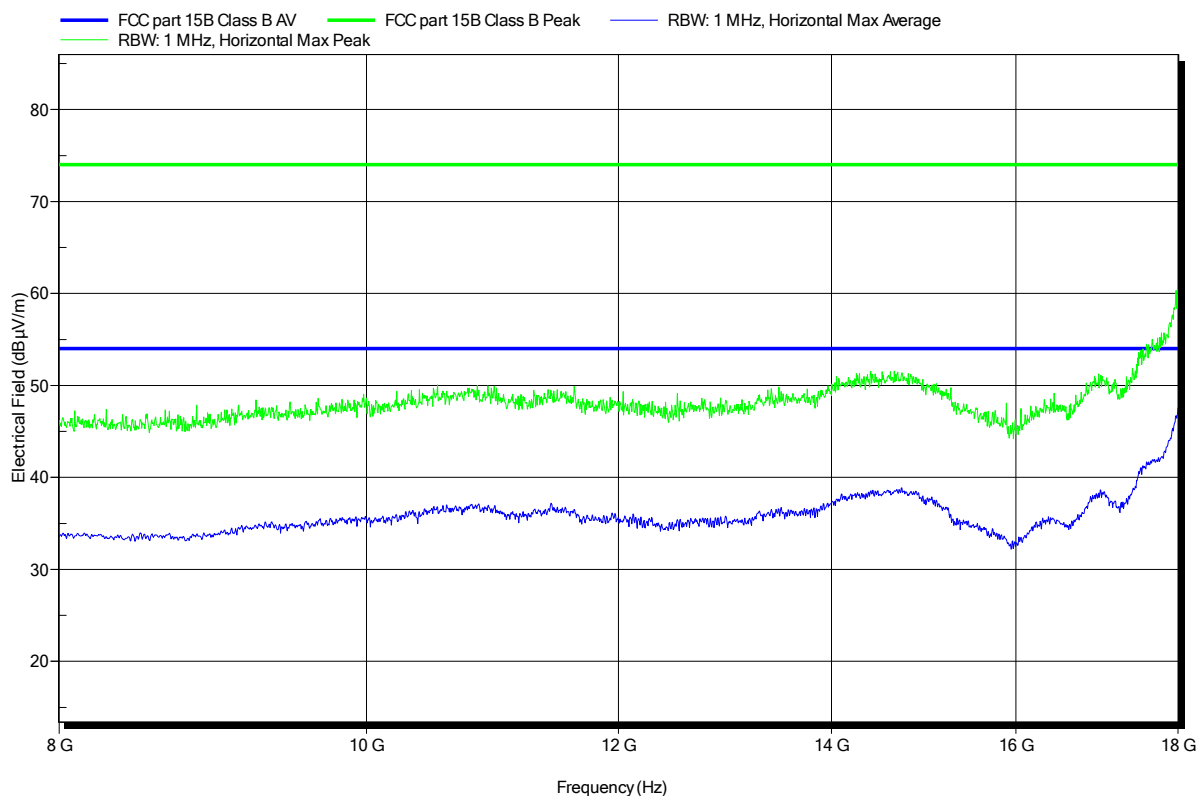


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023e
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7212, Sample B12, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 9

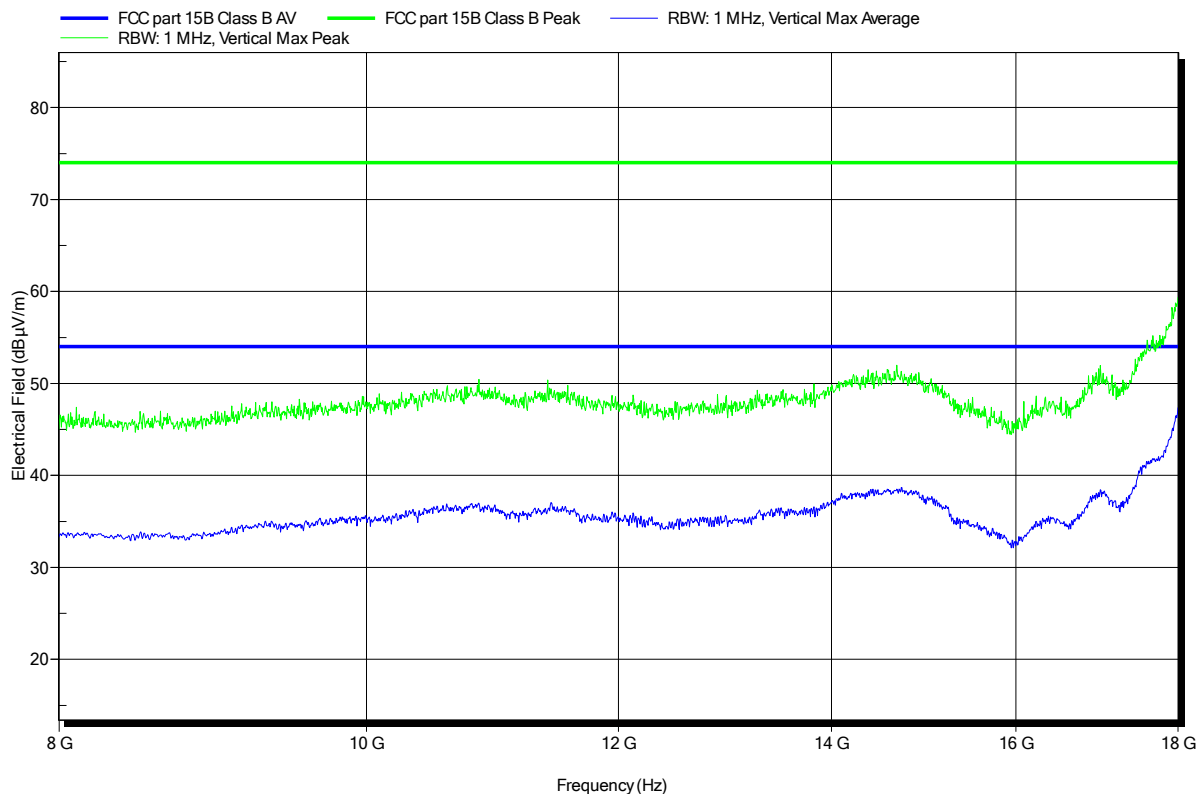


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023e
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: 7212, Sample B12, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 10

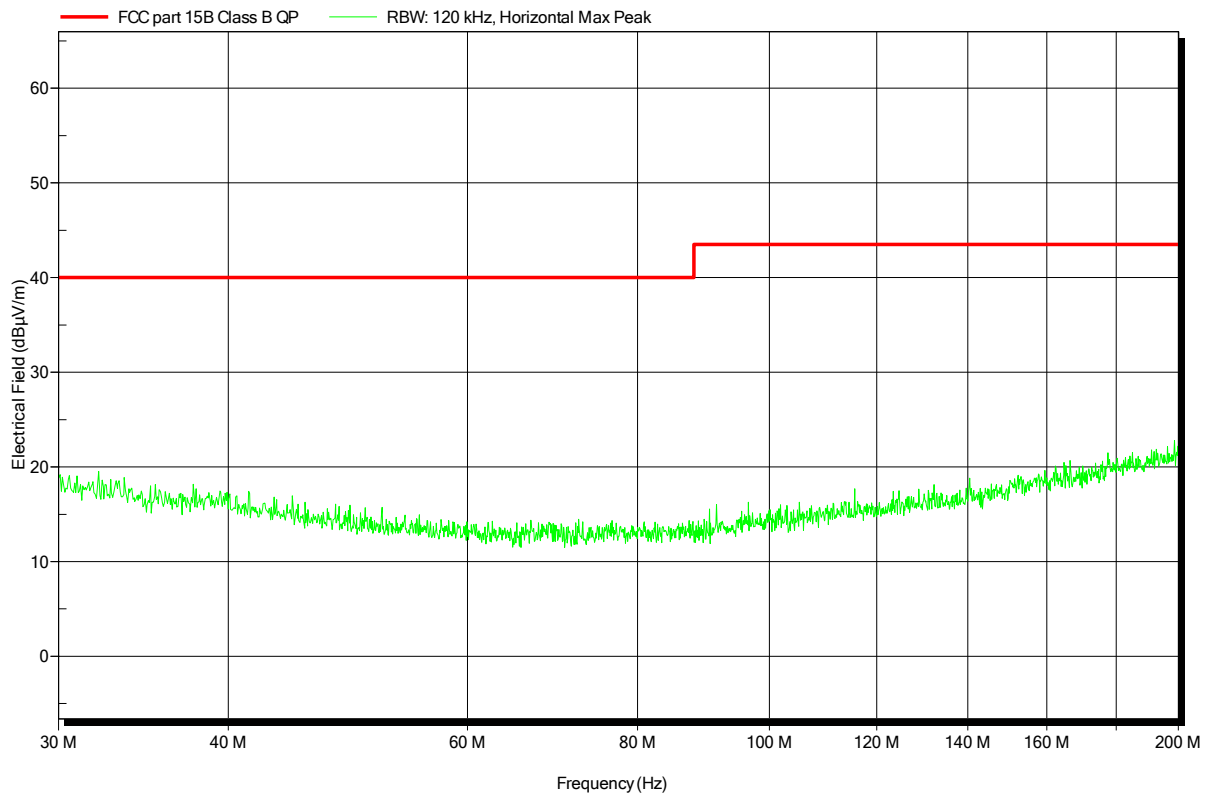


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023f
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3m
Mode:	7202, Sample B17, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 5

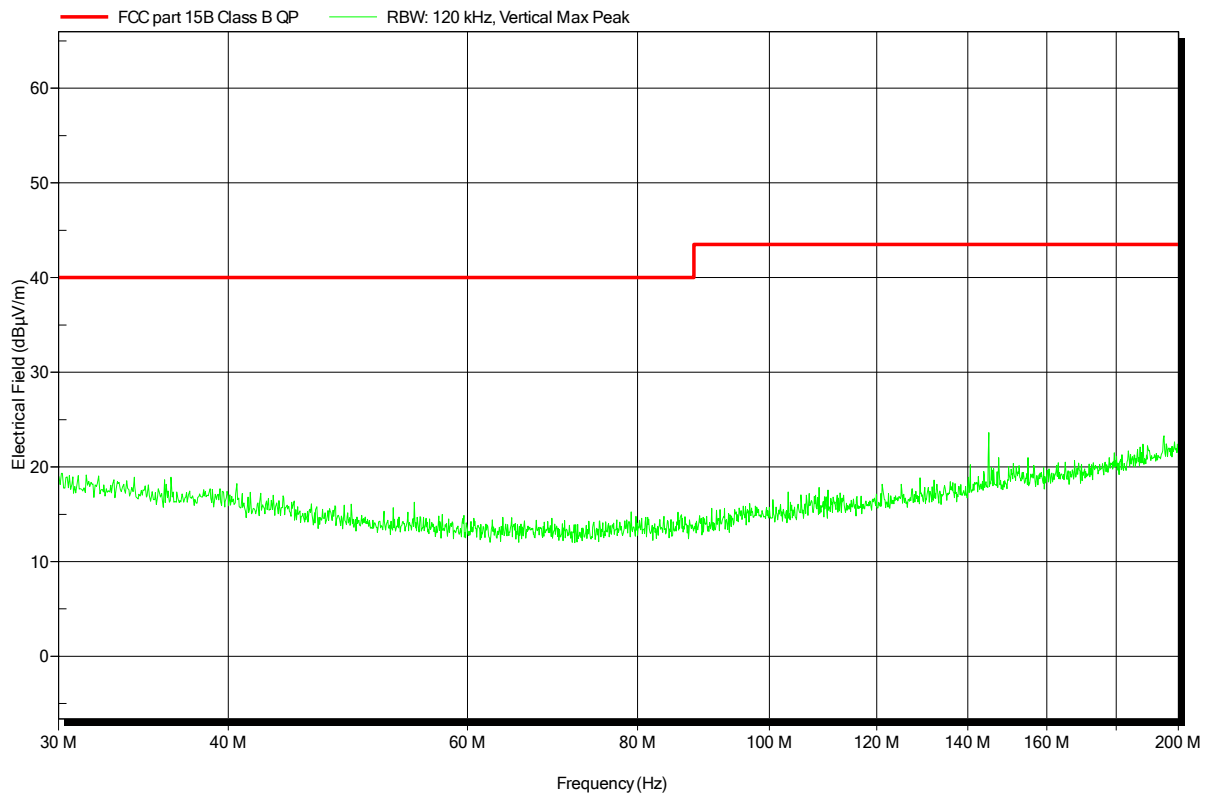


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023f
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3m
Mode:	7202, Sample B17, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 6

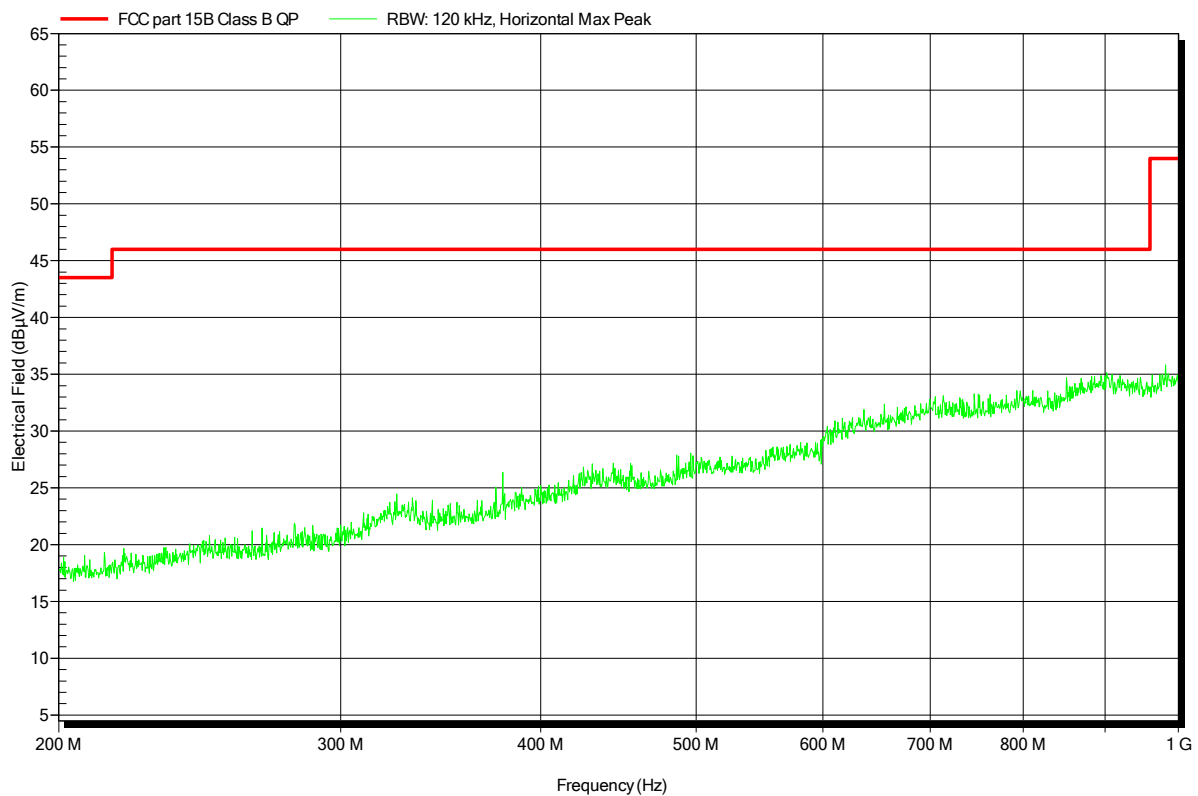


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023f
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3m
Mode:	7202, Sample B17, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 4

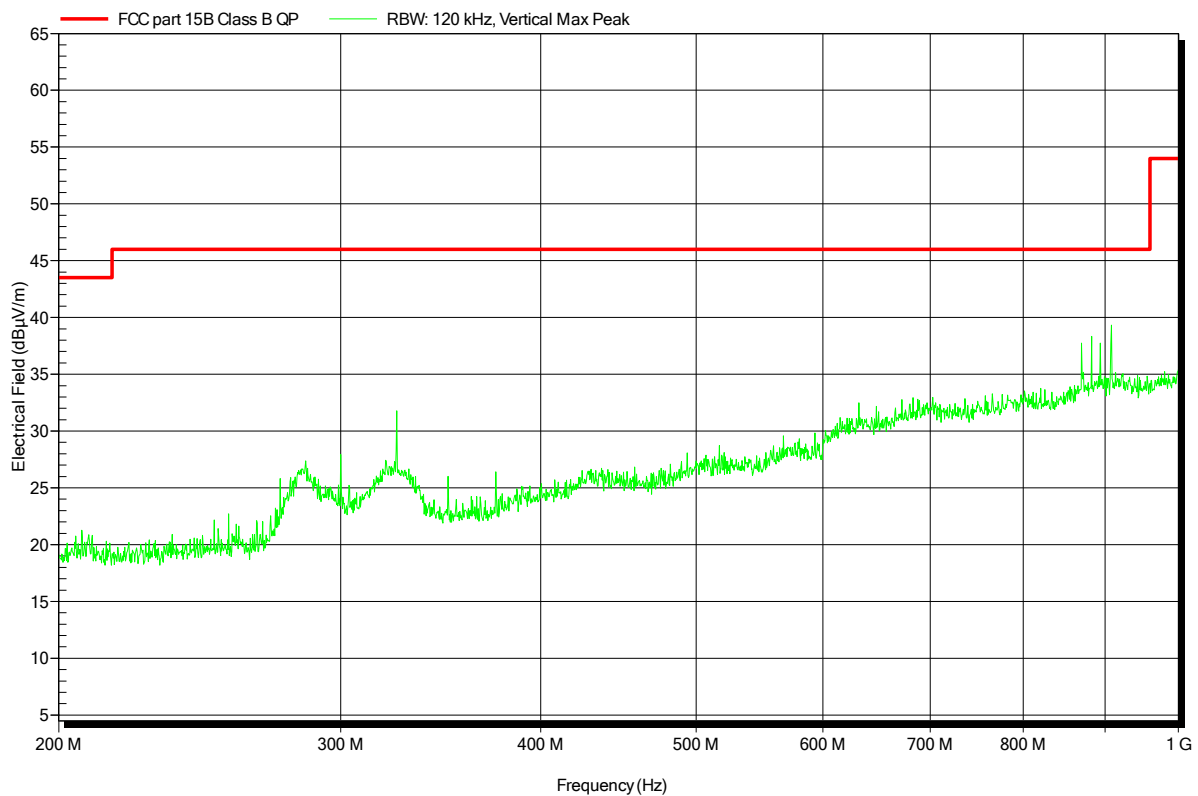


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7722/7622/7212/7202
Model:	K023f
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 24°C, Unom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	7202, Sample B17, DECT link to Base and Companion device
Test Date:	Mittwoch, 3. Juni 2015
Note:	

Index 3

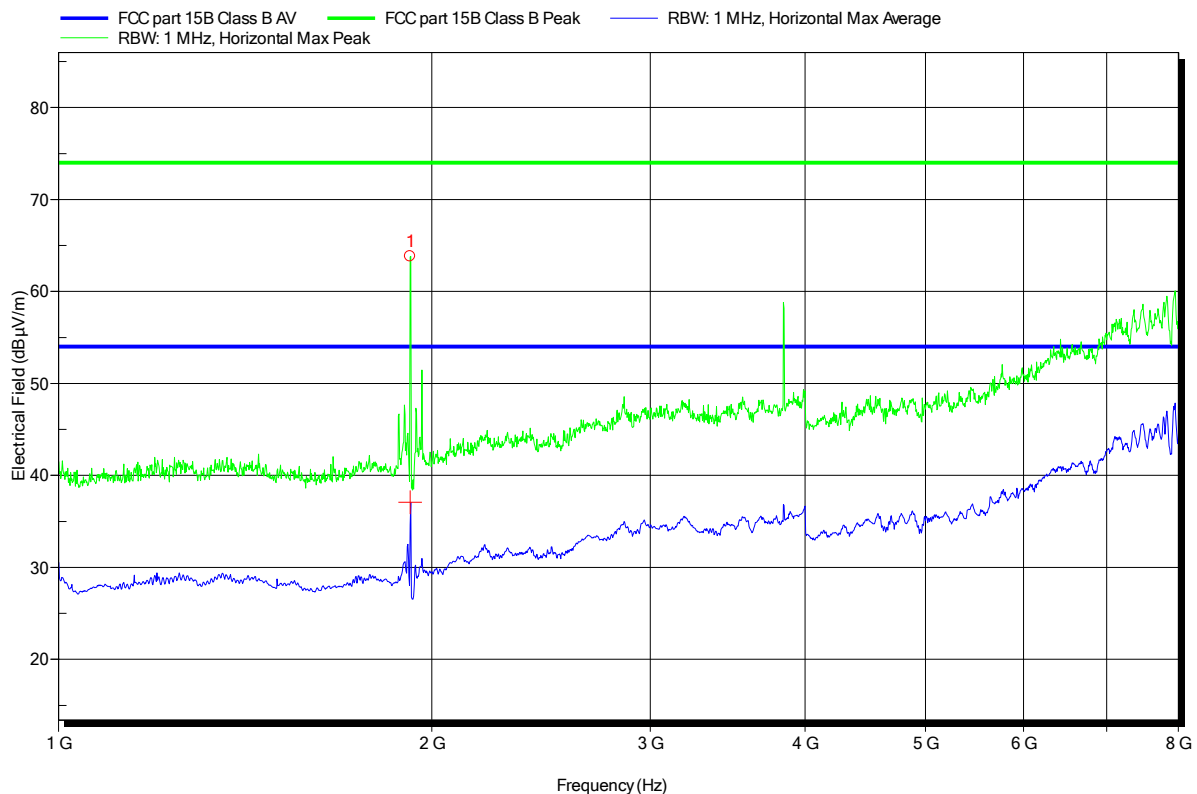


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023f
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7202, Sample B17, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note: Peak 1: DECT Carrier

Index 1



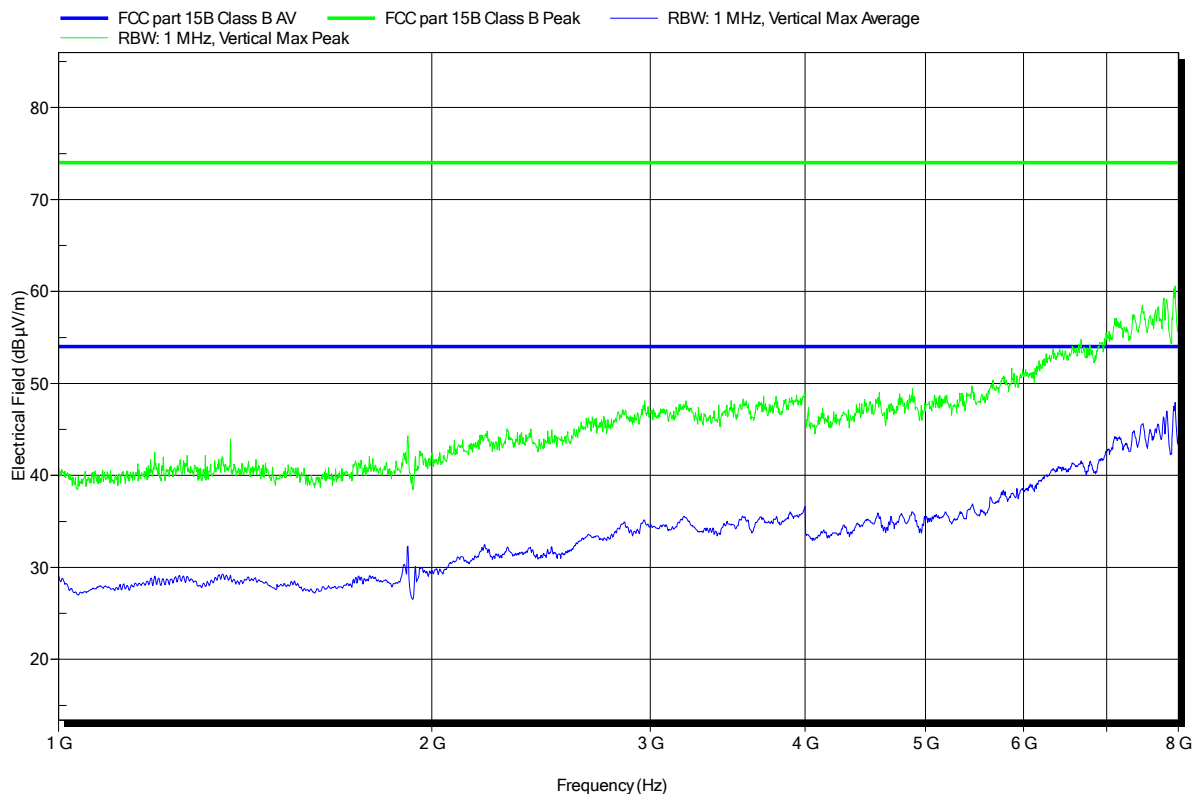
Frequency	Average	Average Limit	Average Difference	Average Status
1,922 GHz	37,09 dBµV/m	54 dBµV/m	-16,91 dB	Pass

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023f
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: 7202, Sample B17, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 2

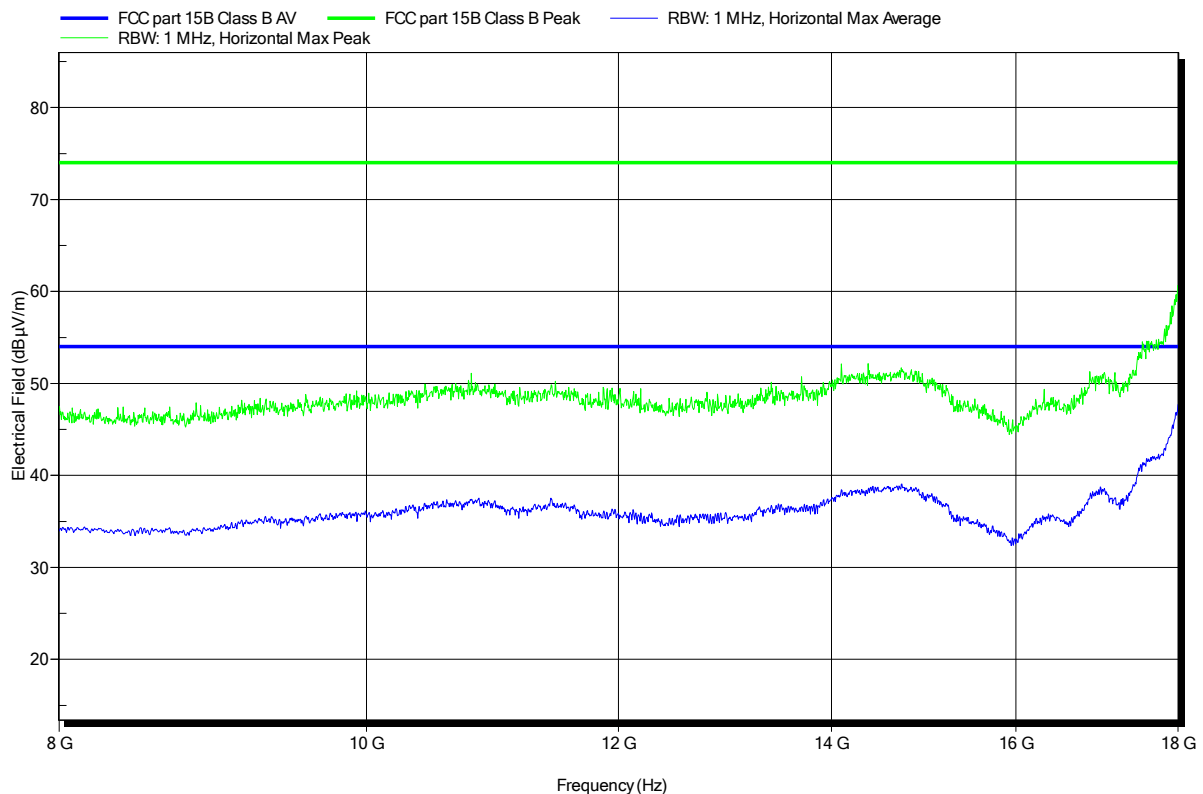


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023f
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: 7202, Sample B17, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 8

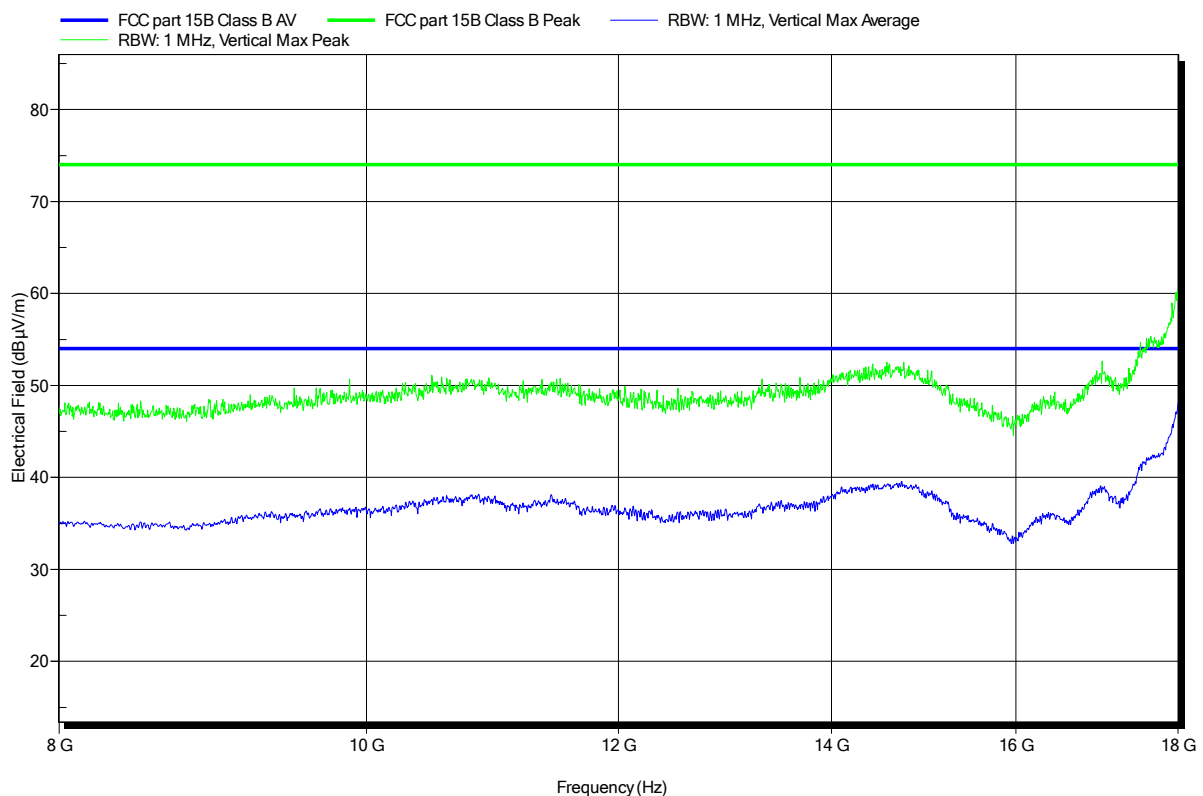


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023f
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 3.7 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: 7202, Sample B17, DECT link to Base and Companion device
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 7



Test Report No.: G0M-1505-4754-EF0115B-V01

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 / IC RSS-Gen				Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test	
Ambient Temperature		15 to 35 °C		24°C	
Relative Humidity		30 to 60 %		42%	
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		1			
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.					
For the conducted emission the charger 84642494 was detected as worst case. This report shows results with this charger only.					

Test Procedure:

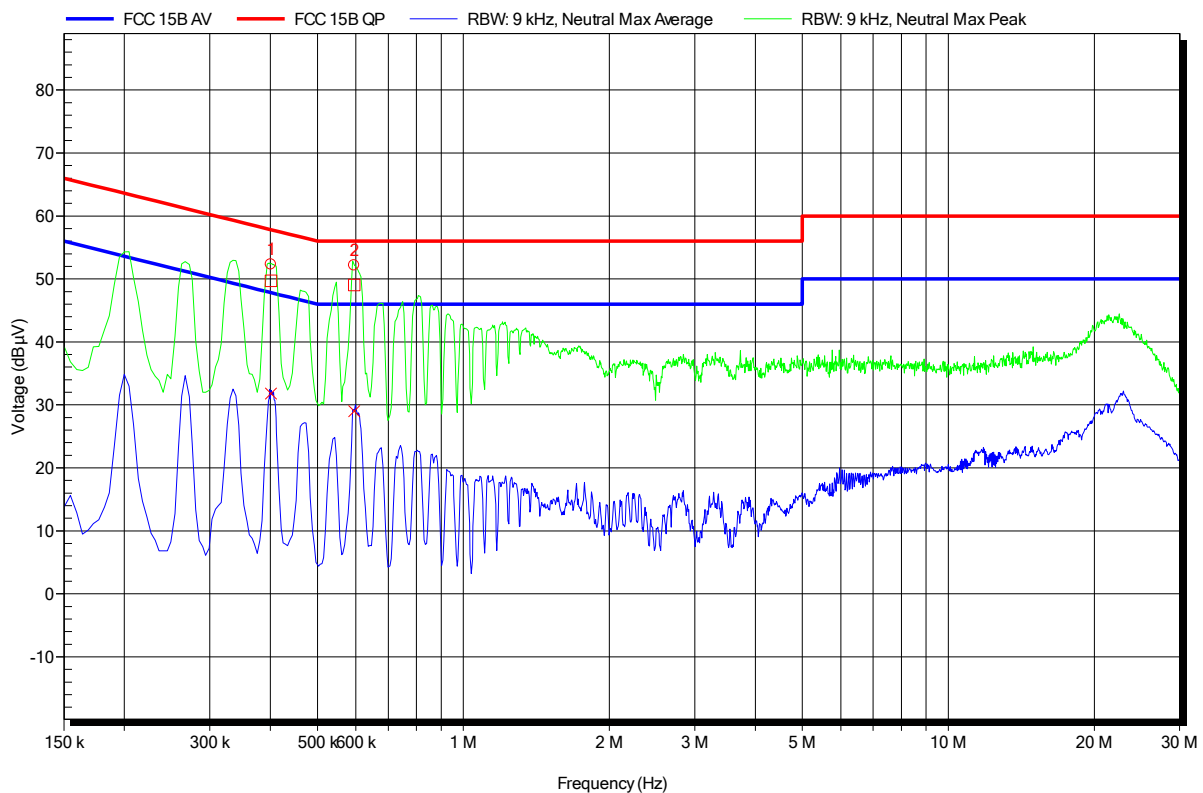
- 1) The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2009 item 7.3.1)
- 2) The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
- 3) The distance between 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).
- 4) The LISN measurement port was connected to a measurement receiver
- 5) I/O cables were bundled not longer than 0.4 m
- 6) Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor

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

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023c
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 120 VAC / Battery
 LISN: ESH2-Z5 N
 Mode: 7722, Sample B04, DECT link to Base and Companion device, charging
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 37



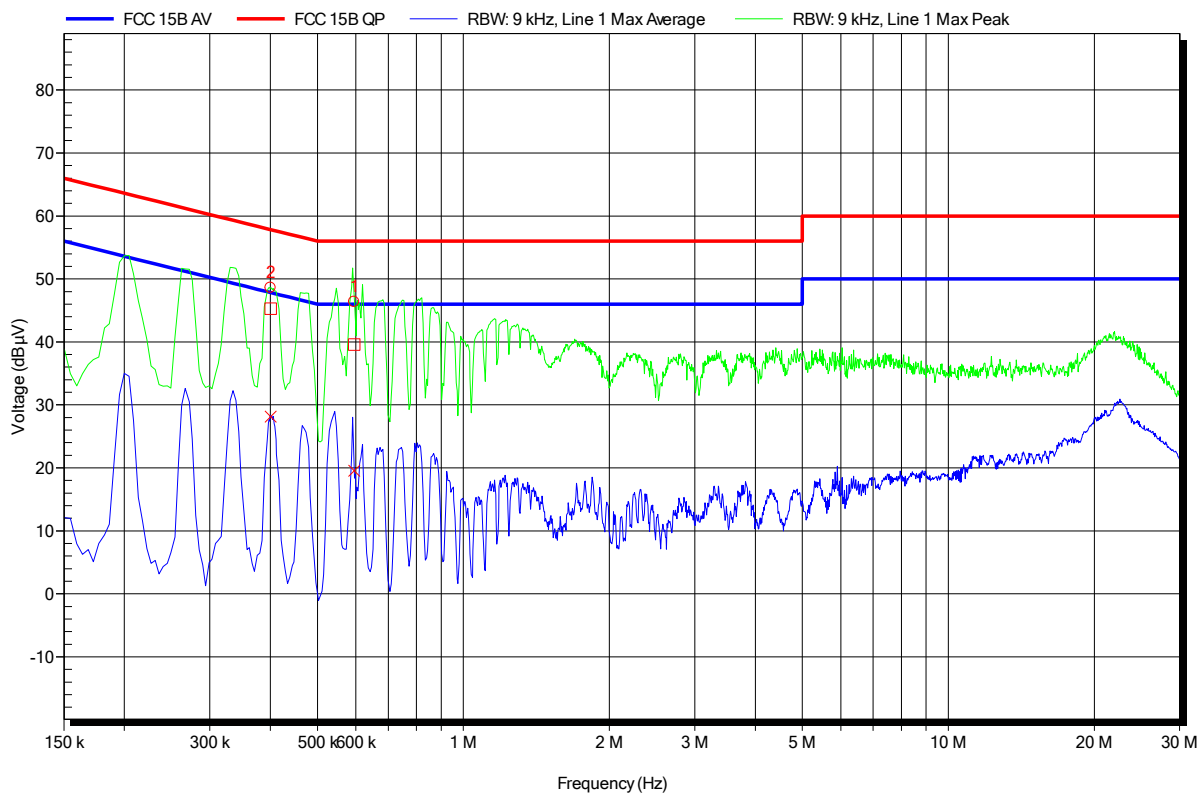
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
401,1 kHz	49,69 dBμV	57,83 dBμV	-8,14 dB	Pass
595,5 kHz	49,02 dBμV	56 dBμV	-6,98 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
401,1 kHz	31,8 dBμV	47,83 dBμV	-16,03 dB	Pass
595,5 kHz	29,02 dBμV	46 dBμV	-16,98 dB	Pass

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

Project number: G0M-1505-4754

Applicant: Spectralink Europe ApS
 EUT Name: DECT handset 7722/7622/7212/7202
 Model: K023c
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Klein
 Test Conditions: Tnom: 24°C, Unom: 120 VAC / Battery
 LISN: ESH2-Z5 L
 Mode: 7722, Sample B04, DECT link to Base and Companion device, charging
 Test Date: Mittwoch, 3. Juni 2015
 Note:

Index 38



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
400,2 kHz	45,28 dBμV	57,85 dBμV	-12,57 dB	Pass
595,5 kHz	39,57 dBμV	56 dBμV	-16,43 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
400,2 kHz	28,15 dBμV	47,85 dBμV	-19,7 dB	Pass
595,5 kHz	19,55 dBμV	46 dBμV	-26,45 dB	Pass

Test Report No.: G0M-1505-4754-EF0115B-V01

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