eurofins | Product Service

FCC TEST REPORT

FCC 47 CFR Part 15C
Industry Canada RSS-210

Digital transmission systems operating within the 2400 – 2483.5 MHz band

Report Reference No.....:	G0M-1411-4306-TFC247BL-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 15C KDB Publication No. 558074 RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 4, 2014-11 ANSI C63.4:2009
Test scope……..:	partial Radio compliance test
Equipment under test (EUT):	
Product description	DECT handset 7532
Model No.	K022a
Additional Model(s)	None
Brand Name(s)	Spectralink
Hardware version	PCS 03
Firmware / Software version	PCS 14BA
	FCC-ID: PXA-K022 IC: 4604A-K022A
Test result	**Passed**

Possible test case verdicts:		
- neither assessed nor tested	:	N/N
- required by standard but not appl. to test object.....	:	N/A
- required by standard but not tested.....	:	N/T
- not required by standard for the test object	:	N/R
- test object does meet the requirement.....	:	P (Pass)
- test object does not meet the requirement.....	:	F (Fail)

Testing:		
Test Lab Temperature.....	:	20 – 23 °C
Test Lab Humidity	:	32 – 38 %
Date of receipt of test item	:	2014-11-13
Date (s) of performance of tests	:	2015-01-16 - 2015-02-02
Compiled by	:	Wilfried Treffke
Tested by (+ signature)..... (Responsible for Test)	:	Wilfried Treffke W. Treffke
Approved by (+ signature)	:	Christian Weber C. Weber
Date of issue	:	2015-03-17
Total number of pages	:	69

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
01	2015-03-17	Initial Release	

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

REPORT INDEX

1 Equipment (Test item) Description

Description	DECT handset 7532	
Model	K022a	
Additional Model(s)	None	
Brand Name(s)	Spectralink	
Serial number	None	
Hardware version	PCS 03	
Software / Firmware version	PCS 14BA	
FCC-ID	PXA-K022	
IC	4604A-K022A	
Contains FCC-ID	Z64-2564N	
Contains IC	451I-2564N	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	Bluetooth 4.0 Low Energy	
Operating frequency range	2402 - 2480 MHz	
Assigned frequency band	2400 - 2483.5 MHz	
Main test frequencies	F_{LOW}	2402 MHz
	F_{MID}	2440 MHz
	F_{HIGH}	2480 MHz
Spreading	Frequency Hopping	
Modulations	GFSK	
Number of channels	40	
Channel spacing	2MHz	
Number of antennas	1	
Antenna	Type	integrated
	Model	47948
	Manufacturer	MOLEX
	Gain	-1 dBi
Manufacturer	Spectralink Europe ApS Langmarksvej 34 8700 Horsens DENMARK	
Power supply	V_{NOM}	3.7VDC
	V_{MIN}	N/R
	V_{MAX}	N/R

AC/DC-Adaptor 2	Model	UE08WCP-060100SPA
	Vendor	Fuhua
	Charger, single	75XX, USB (84642472)
	Input	100 - 240 VAC
	Output	6.0 VDC
AC/DC-Adaptor	Model	UE08WCP-060100SPA
	Vendor	Fuhua
	Input	100 - 240 VAC
	Output	6.0 VDC
Temperature	T_{NOM}	25°C
	T_{MIN}	N/R
	T_{MAX}	N/R

1.1 Photos – Equipment External

EUT TOP


EUT BOTTOM


CHARGER OVERVIEW

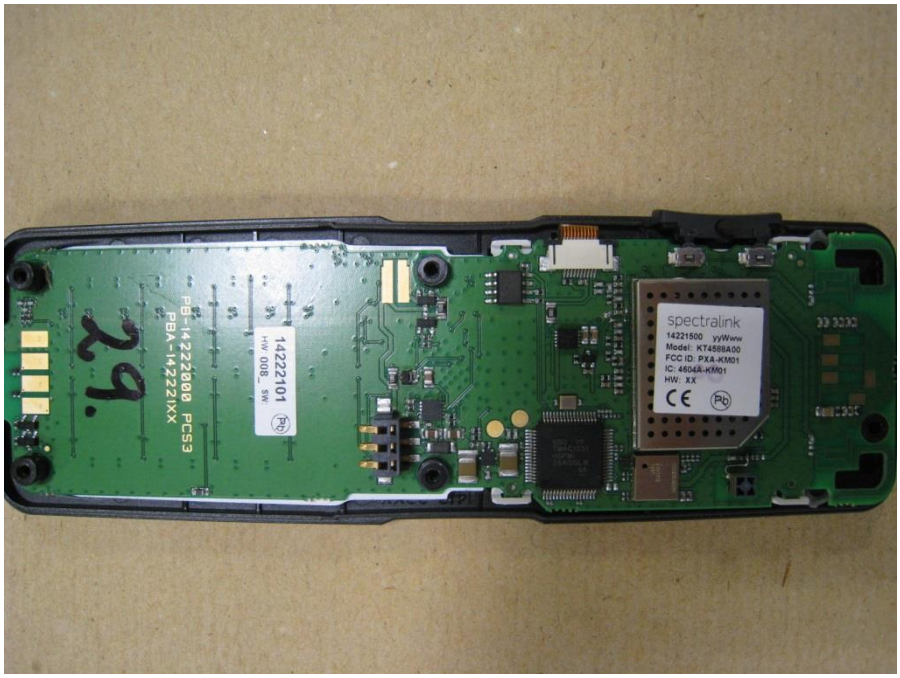

POWER ADAPTOR

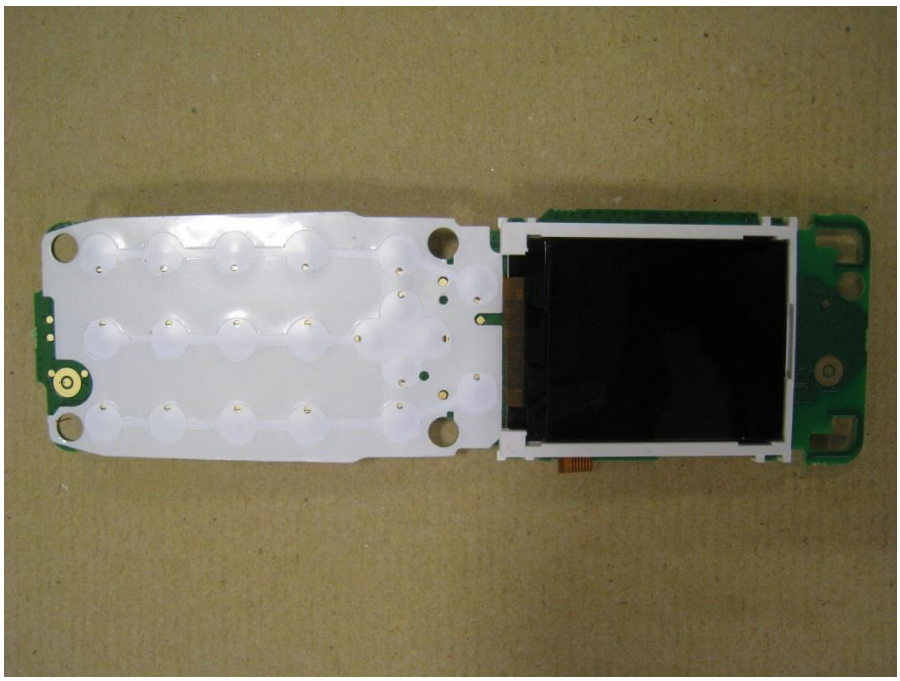

CHARGER TOP


CHARGER 75XX,USB BOTTOM


CHARGER 75XX BOTTOM

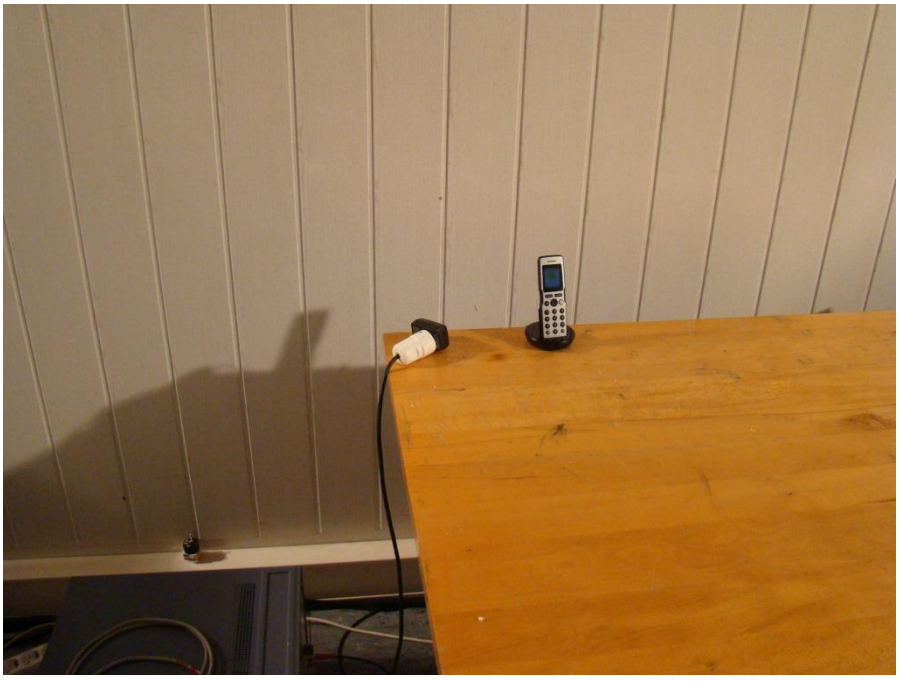

1.2 Photos – Equipment internal

PCB POP


PCB BOTTOM


1.3 Photos – Test setup

Test setup – Radiated emissions


Test setup – Conducted Emissions


1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
None				

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

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Test Modes

Mode #	Description	
Transmit	General conditions:	EUT powered by fully charged battery.
	Radio conditions:	Mode = standalone transmit Spreading = Hopping stopped (single hopping channel) Modulation = GFSK Data rate = 1 Mbps Bandwidth = 2 MHz Power level = Maximum
Receive	General conditions:	EUT powered by fully charged battery.
	Radio conditions:	Mode = standalone receive (scan mode) Spreading = Hopping stopped (single hopping channel) Modulation = GFSK
AC-Powerline	General conditions:	EUT powered by commercial AC/DC-Adapter
	Radio conditions:	Mode = Transmit Spreading = On

1.6 Test Equipment Used During Testing

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

Occupied Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSIQ26	EF00242	2014-03	2015-03
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03
LPD Antenna	R&S	HL 025	EF00327	2013-02	2016-02

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

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 (dBµV) + A.F. (dB) = Net field strength (dBµV/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 dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

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

2 Result Summary

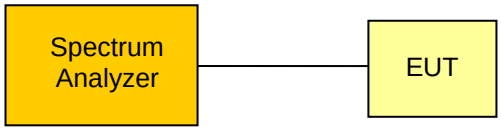
FCC 47 CFR Part 15C, IC RSS-210				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 6.6	Occupied Bandwidth	RSS-Gen 6.6	N/R	Informational only
FCC § 15.247(a)(2) IC RSS-210 § A8.2	6dB Bandwidth	KDB Publication No. 558074	N/R	See test report FCC-ID: Z64-2564N
FCC § 15.247(b)(3) IC RSS-210 § A8.4	Maximum peak conducted power	KDB Publication No. 558074	N/R	See test report FCC-ID: Z64-2564N
FCC § 15.247(e) IC RSS-210 § A8.2	Power spectral density	KDB Publication No. 558074	N/R	See test report FCC-ID: Z64-2564N
47 CFR 15.207 RSS-Gen 8.8	AC power line conducted emissions	KDB Publication No. 558074 / ANSI C63.4	PASS	
FCC § 15.247(d) IC RSS-210 § A8.5	Band edge compliance	KDB Publication No. 558074	N/R	See test report FCC-ID: Z64-2564N
FCC § 15.247(d) IC RSS-210 § A8.5	Conducted spurious emissions	KDB Publication No. 558074	N/R	See test report FCC-ID: Z64-2564N
FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 6.13	Transmitter radiated spurious emissions	KDB Publication No. 558074 / ANSI C 63.4	PASS	
IC RSS-Gen 7.1	Receiver radiated spurious emissions	ANSI C 63.4	PASS	

Remarks:

Partial test report, valid with the module report: model CC2564MODN FCC-ID : Z64-2564N / IC : 4511-2564N

3 Test Conditions and Results

3.1 Test Conditions and Results – Occupied Bandwidth

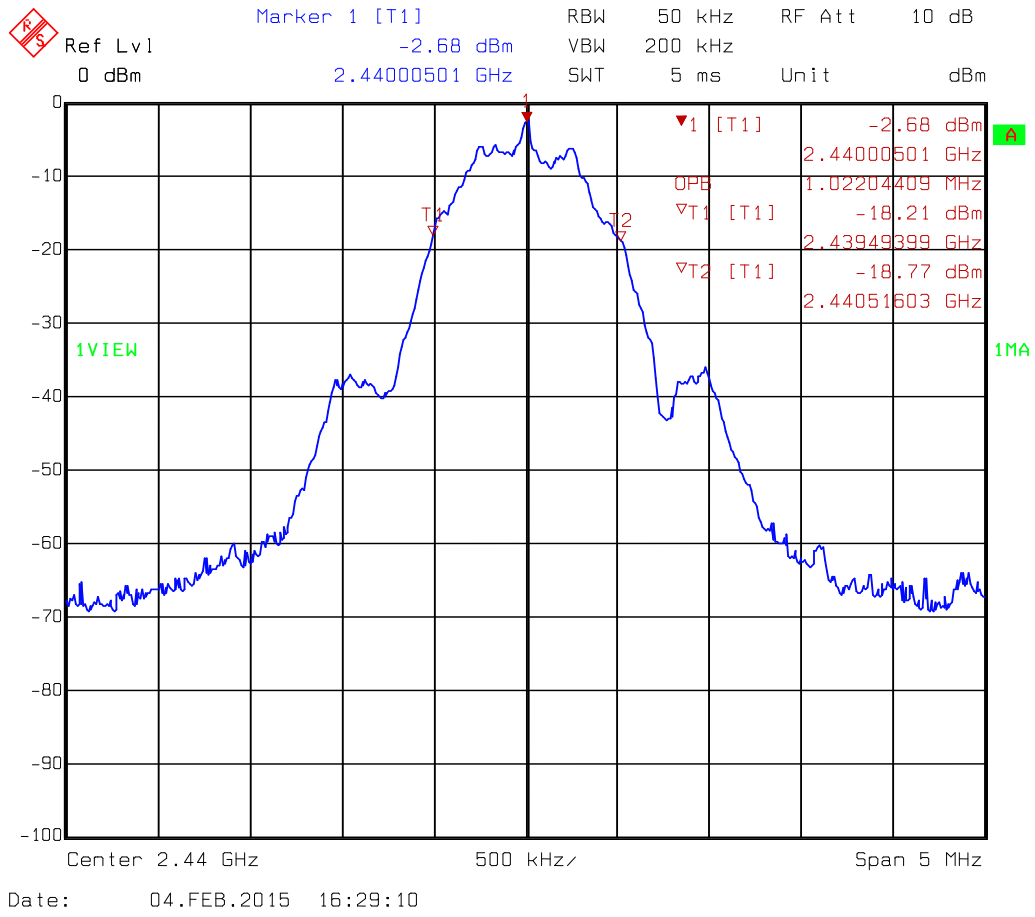
Occupied Bandwidth acc. to IC RSS-Gen			**Verdict: PASS**
Test according to measurement reference	Reference Method		
	RSS-Gen 6.6		
Test frequency range	Tested frequencies		
	F_{LOW} / F_{MID} / F_{HIGH}		
Limits			
None (Informational only)			
Test setup			
			
Test procedure			
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to at least twice the emission spectrum 3. Resolution bandwidth set to 1 % of span 4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function			
Test results			
Channel	Frequency [MHz]	Mode	Occupied Bandwidth [kHz]
F_{MID}	2440	Transmit	1022
Comments:			

Occupied Bandwidth – F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: 1411-4306

Applicant:	Spectralink Europe ApS
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, BTLE, 2440 MHz, modulated
Test Date:	2015-02-04
Verdict:	NONE (INFORMATION ONLY)
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	radiated measurement



Test Conditions and Results – AC power line conducted emissions

Power line conducted emissions acc. FCC 47 CFR 15.207 / IC RSS-Gen				**Verdict: PASS**
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			
Points of Application	Application Interface			
AC Mains	LISN			
EUT test mode	AC power line			
Limits and results				
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.				

Conducted Emissions charger 84642472

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

Project number: G0M-1411-4306

Manufacturer:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 6VDC via AC/DC Adapter
LISN:	ESH2-Z5 N
Mode:	DECT link to other phone
Test Date:	2014-12-16
Note:	charger 84642472

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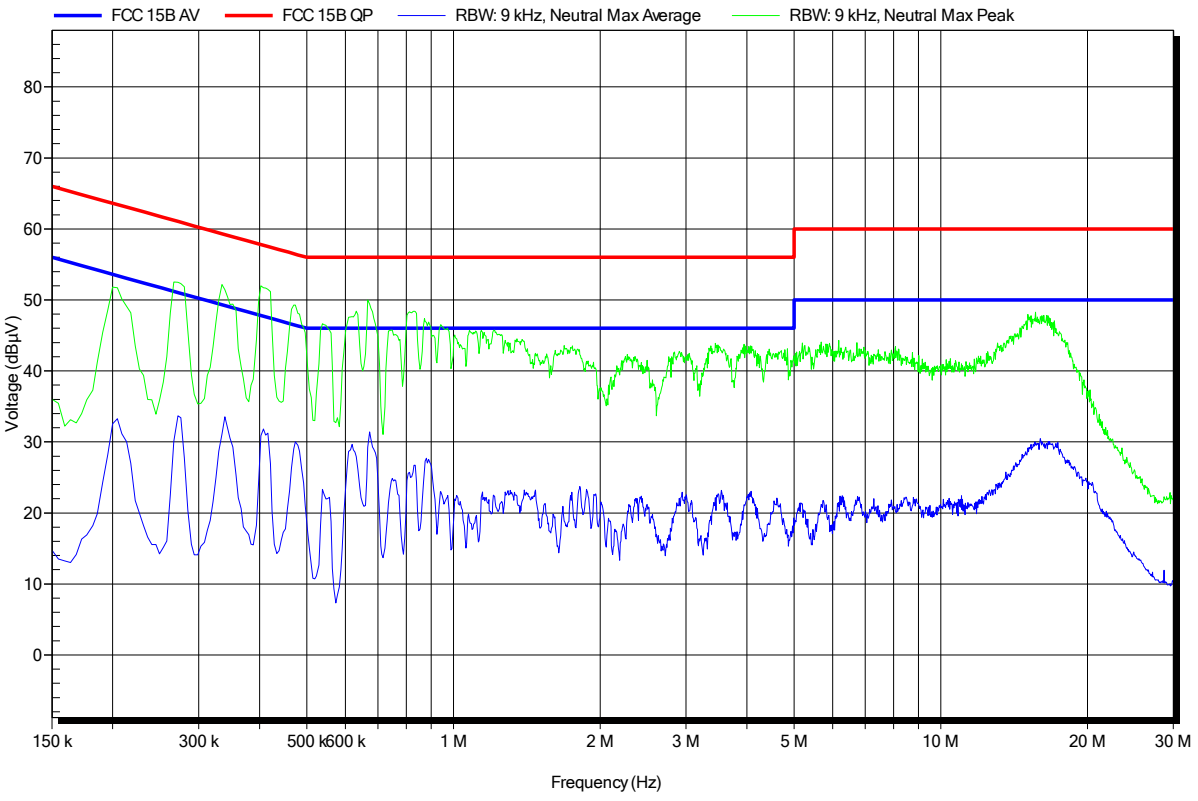

Conducted Emissions charger 84642472

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

Project number: G0M-1411-4306

Manufacturer:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 6VDC via AC/DC Adapter
LISN:	ESH2-Z5 L
Mode:	DECT link to other phone, BT activ
Test Date:	2014-12-16
Note:	charger 84642472

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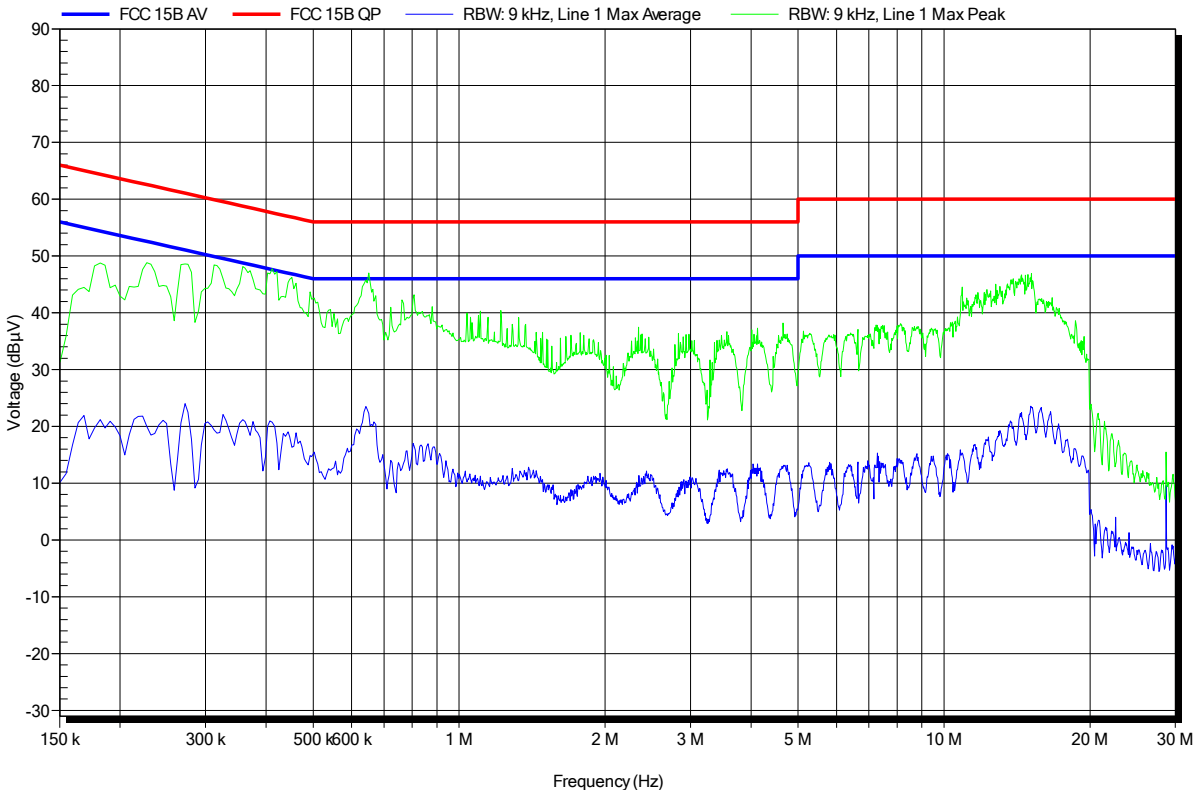
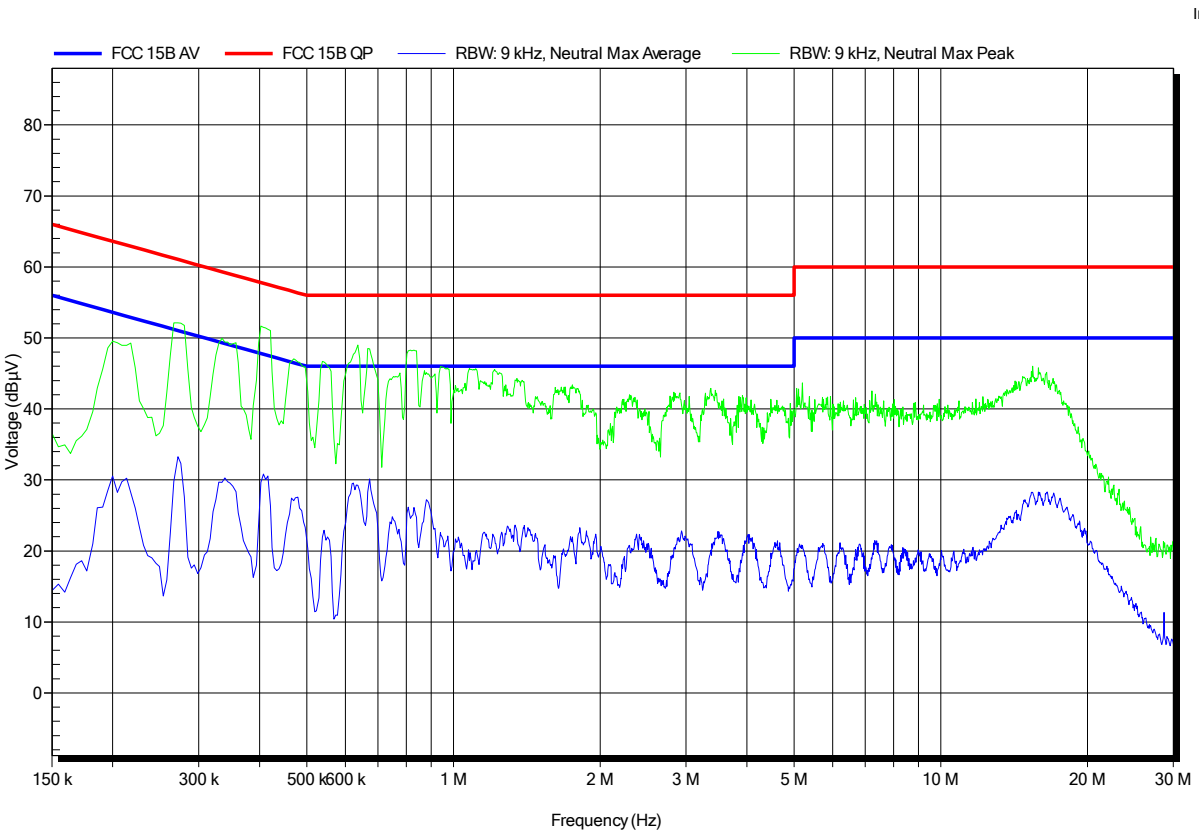


Conducted Emissions charger 84642473

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

Project number: G0M-1411-4306

Manufacturer:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 6VDC via AC/DC Adapter
LISN:	ESH2-Z5 N
Mode:	DECT link to other phone
Test Date:	2014-12-16
Note:	charger 84642473

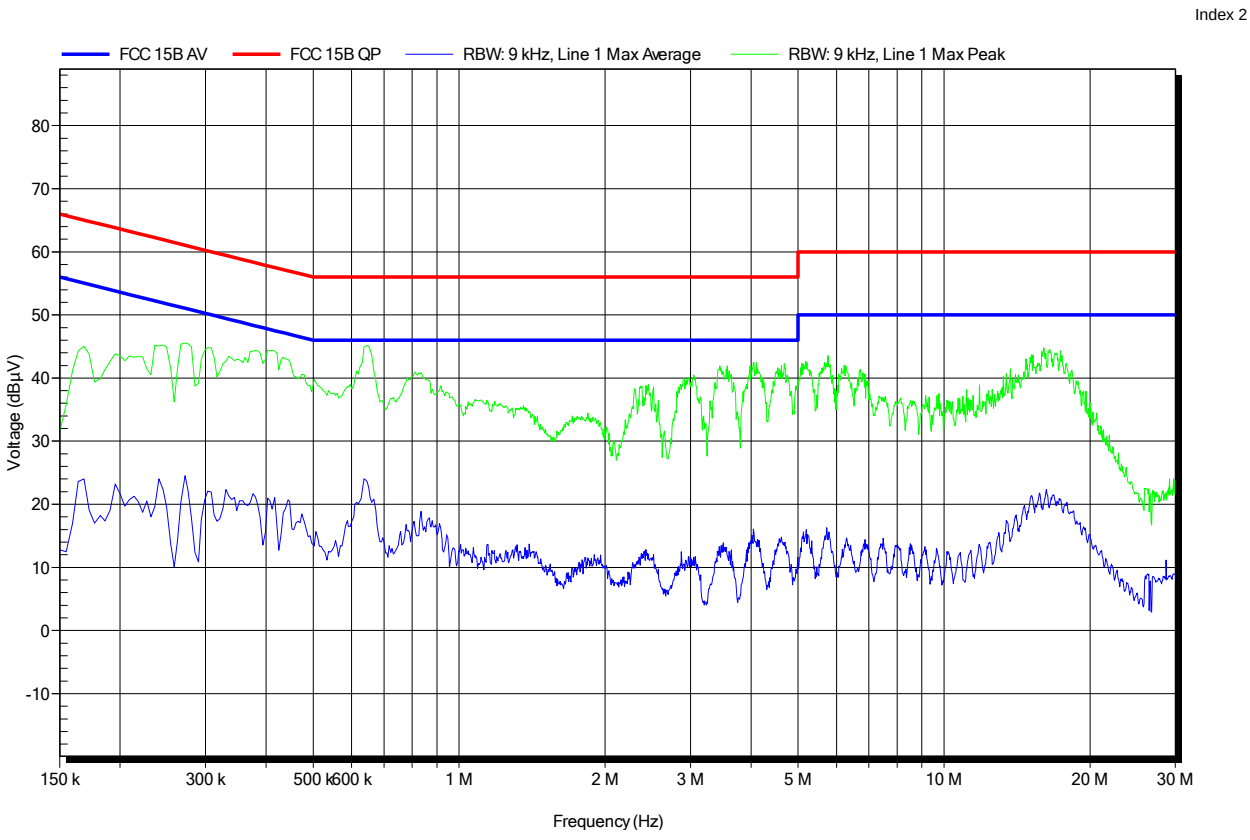


Conducted Emissions charger 84642473

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

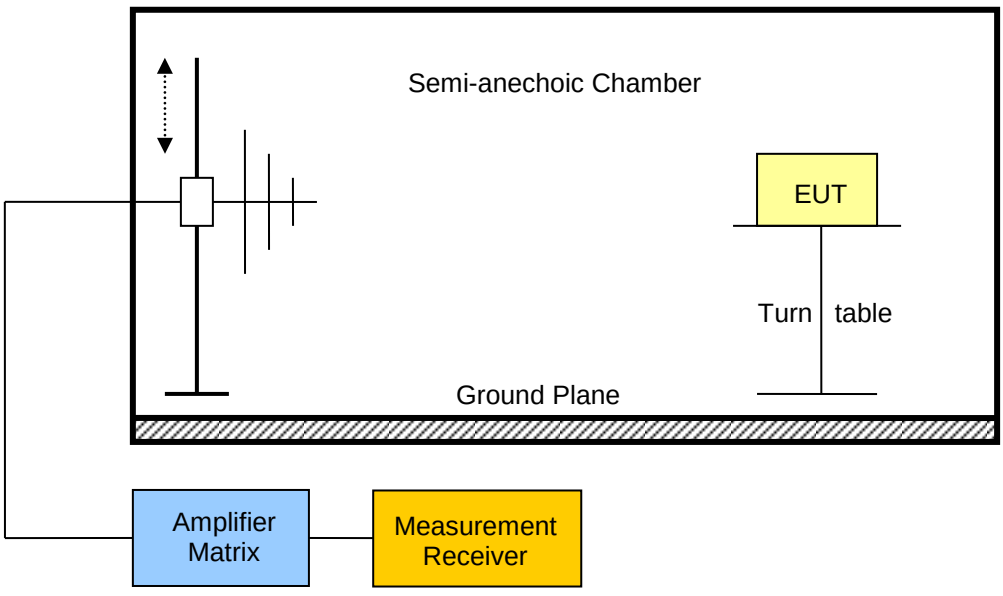
Project number: G0M-1411-4306

Manufacturer:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Zunke
Test Conditions:	Tnom: 23°C, Unom: 6VDC via AC/DC Adapter
LISN:	ESH2-Z5 L
Mode:	DECT link to other phone
Test Date:	2014-12-16
Note:	charger 84642473



3.2 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. FCC 47 CFR 15.247 / IC RSS-210				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.247(d) / IC RSS-210 A8.5		
Test according to measurement reference		Reference Method		
		FCC KDB Publication No. 558074 / ANSI C63.4		
Test frequency range		Tested frequencies		
		30 MHz – 10th Harmonic		
Limits				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.				
Test setup				

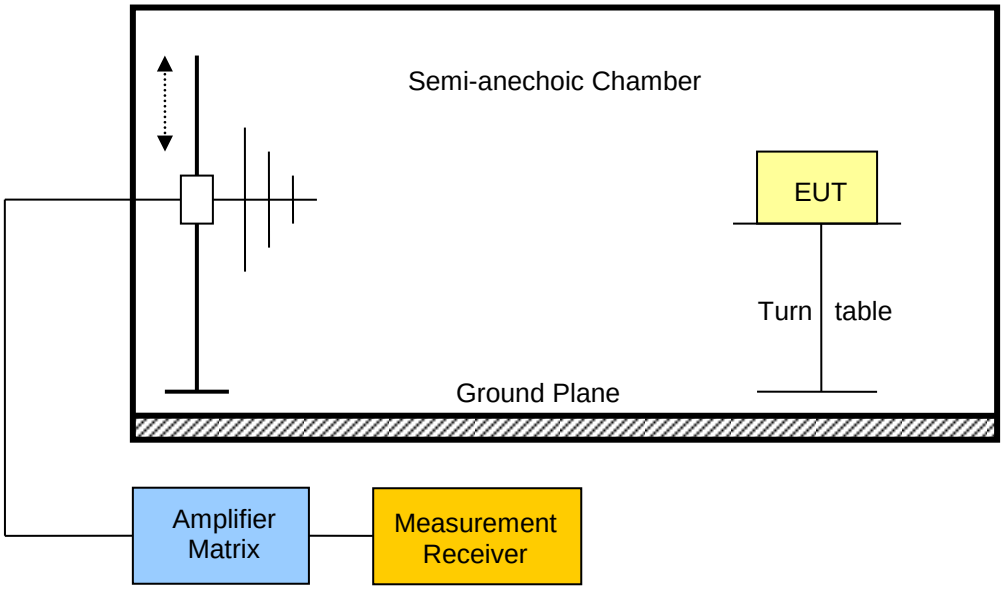


Test procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz 4. Markers are set to peak emission levels within restricted bands

Test results									
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2402	Transmit	2363	42.34	pk	hor	74.00	3	-31.66
F_{LOW}	2402	Transmit	2386	53.09	pk	hor	74.00	3	-20.91
F_{LOW}	2402	Transmit	4800	47.77	pk	ver	74.00	3	-26.23
F_{LOW}	2402	Transmit	4804	55.34	pk	hor	74.00	1	-18.66
F_{LOW}	2402	Transmit	4804	52.88	avg	hor	54.00	1	-01.12
F_{LOW}	2402	Transmit	12000	50.51	pk	hor	74.00	1	-23.49
F_{LOW}	2402	Transmit	19207	49.04	pk	hor	74.00	3	-24.96
F_{MID}	2440	Transmit	2336.5	52.21	pk	hor	74.00	3	-21.79
F_{MID}	2440	Transmit	2336.5	46.45	avg	hor	54.00	3	-07.55
F_{MID}	2440	Transmit	2386.1	50.02	pk	hor	74.00	3	-23.98
F_{MID}	2440	Transmit	2386.1	44.16	avg	hor	54.00	3	-09.84
F_{HIGH}	2480	Transmit	2336	52.40	pk	hor	74.00	3	-21.60
F_{HIGH}	2480	Transmit	2336	46.77	avg	hor	54.00	3	-07.23
F_{HIGH}	2480	Transmit	2336	52.47	pk	ver	74.00	3	-21.53
F_{HIGH}	2480	Transmit	2336	46.32	avg	ver	54.00	3	-07.68
F_{HIGH}	2480	Transmit	2386	52.26	pk	hor	74.00	3	-21.74
F_{HIGH}	2480	Transmit	2386	46.16	avg	hor	54.00	3	-07.84
F_{HIGH}	2480	Transmit	2386	52.52	pk	ver	74.00	3	-21.48
F_{HIGH}	2480	Transmit	2386	46.99	avg	ver	54.00	3	-07.01
F_{HIGH}	2480	Transmit	2483.5	53.18	pk	hor	74.00	3	-20.82
F_{HIGH}	2480	Transmit	2483.5	46.51	pk	ver	74.00	3	-27.49
F_{HIGH}	2480	Transmit	2483.5	37.04	RMS	ver	54.00	3	-16.96
F_{HIGH}	2480	Transmit	4960	52.05	pk	hor	74.00	1	-21.95
F_{HIGH}	2480	Transmit	4960	50.31	avg	hor	54.00	1	-03.69
F_{HIGH}	2480	Transmit	4960	49.26	pk	ver	74.00	1	-24.74
F_{HIGH}	2480	Transmit	19836	51.09	pk	ver	74.00	1	-22.91
F_{HIGH}	2480	Transmit	19840	55.92	pk	hor	74.00	1	-18.08
F_{HIGH}	2480	Transmit	19840	52.41	avg	hor	54.00	1	-01.59
Comments: * Physical distance between EUT and measurement antenna.									

3.3 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. IC RSS-210				**Verdict: PASS**
Test according referenced standards	Reference Method			
	IC RSS-210 A8.5			
Test according to measurement reference	Reference Method			
	ANSI C63.4			
Test frequency range	Tested frequencies			
	30 MHz – 3th Harmonic			
EUT test mode	Receive			
Limits				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Test setup				



Test procedure
1. EUT set to receive mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz 4. Markers are set to peak emission levels

Test results

Channel	Frequency [MHz]	Emission [MHz]	Emission Level [dbµV/m]	Polarisation	Det.	Limit [dbµV/m]	Margin [dbµV/m]
F_{MID}	2440	4952	44.97	hor	pk	53.98	-9.01 dB
F_{MID}	2440	4952	45.15	ver	pk	53.98	-8.83 dB

Comments:

ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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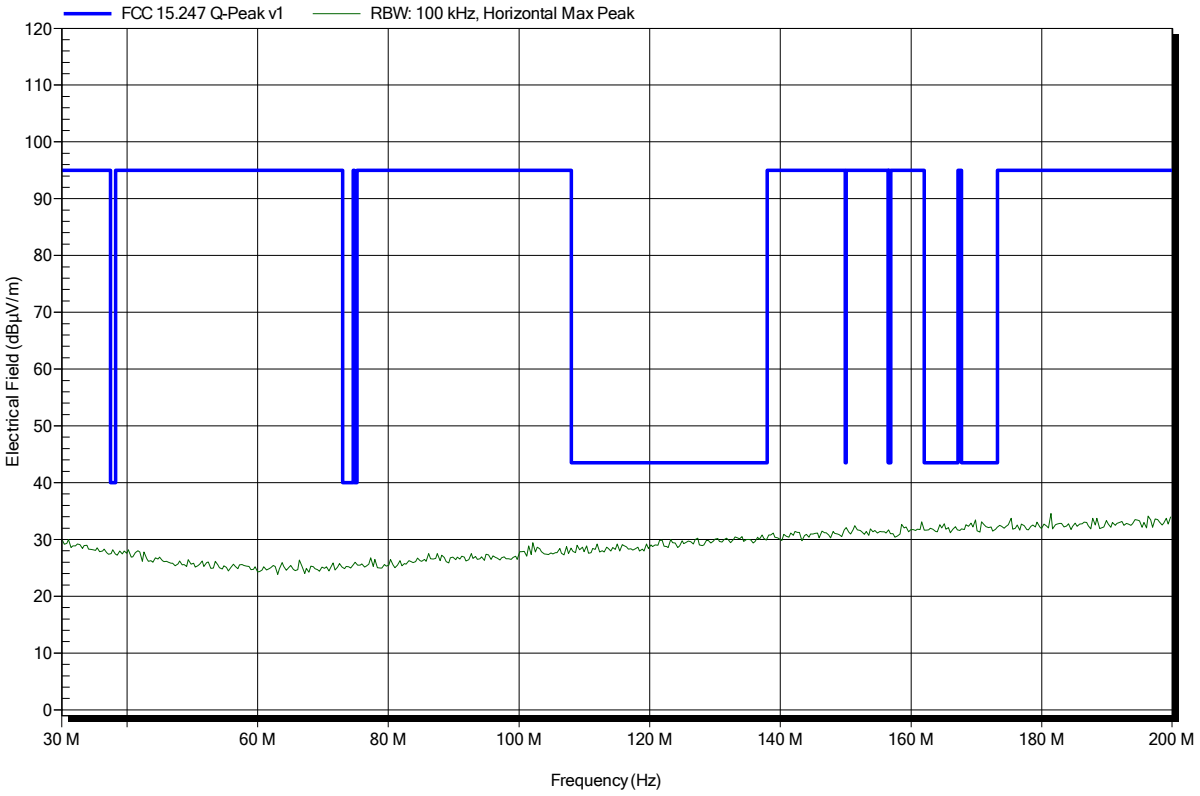

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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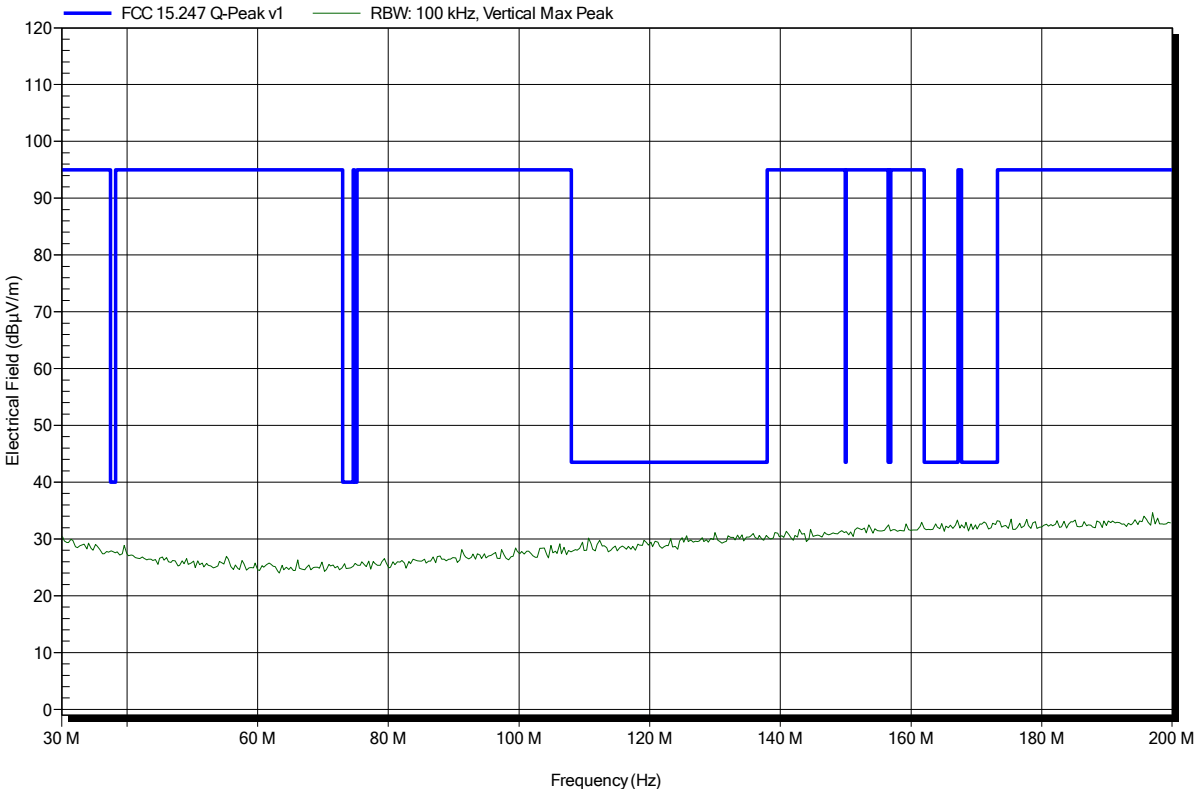

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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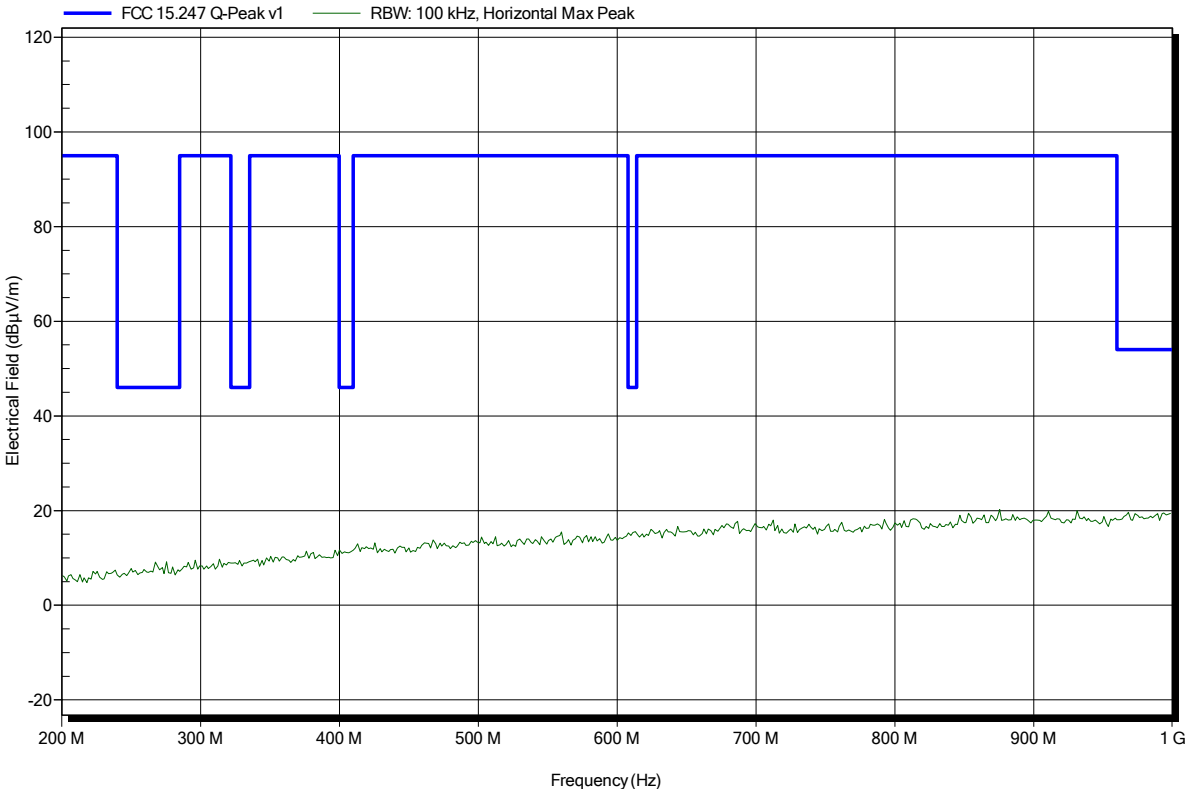

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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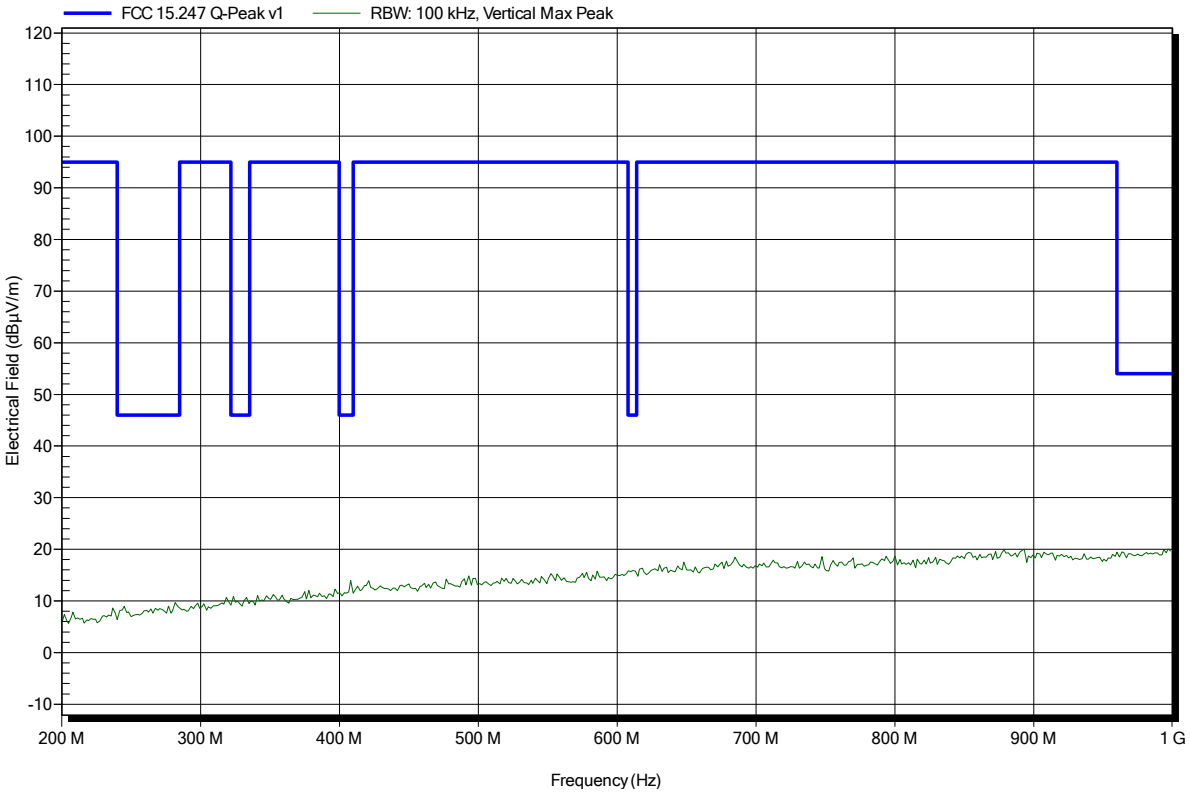

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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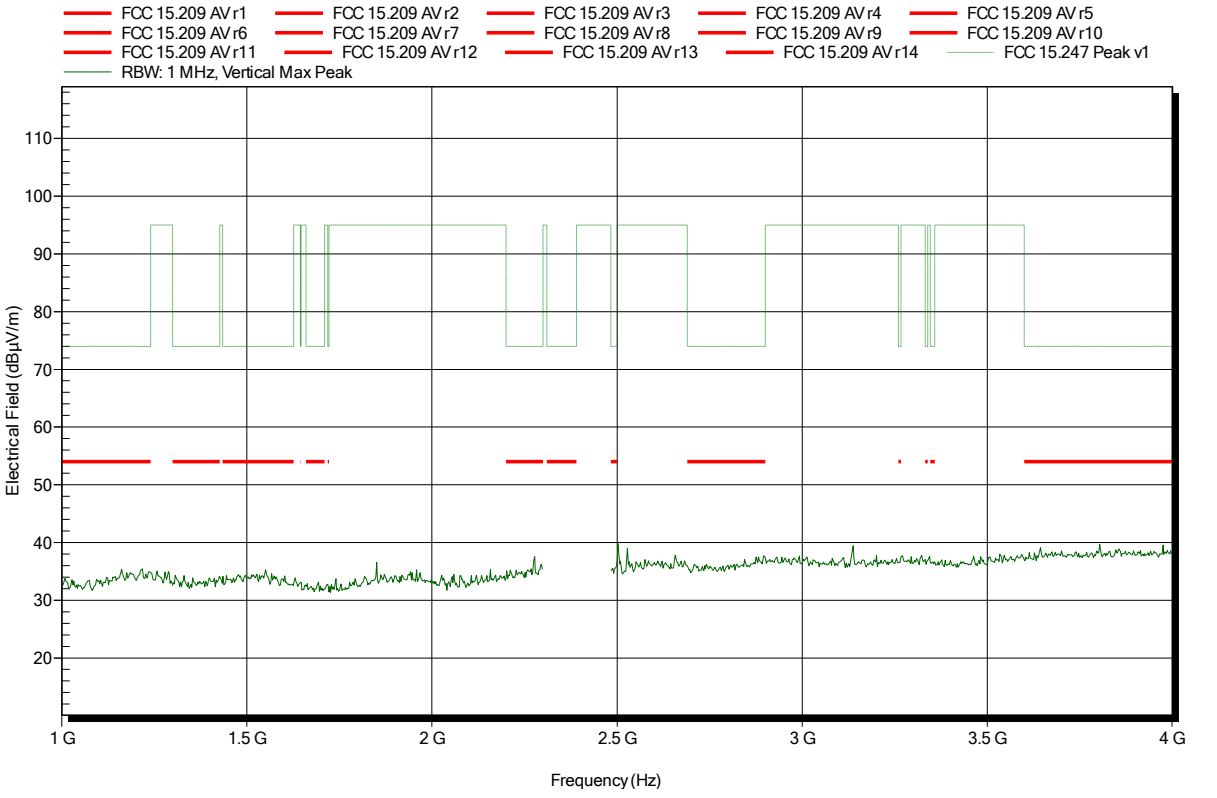

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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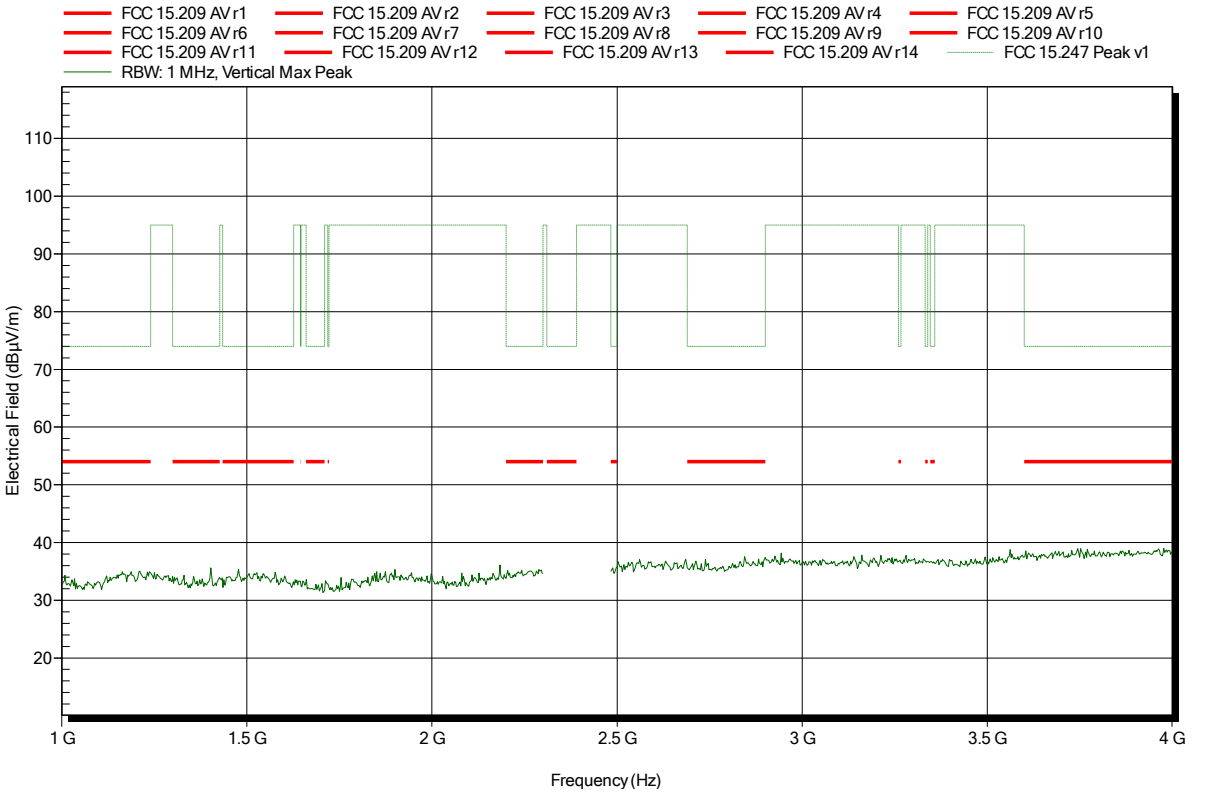

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	lower bandedge

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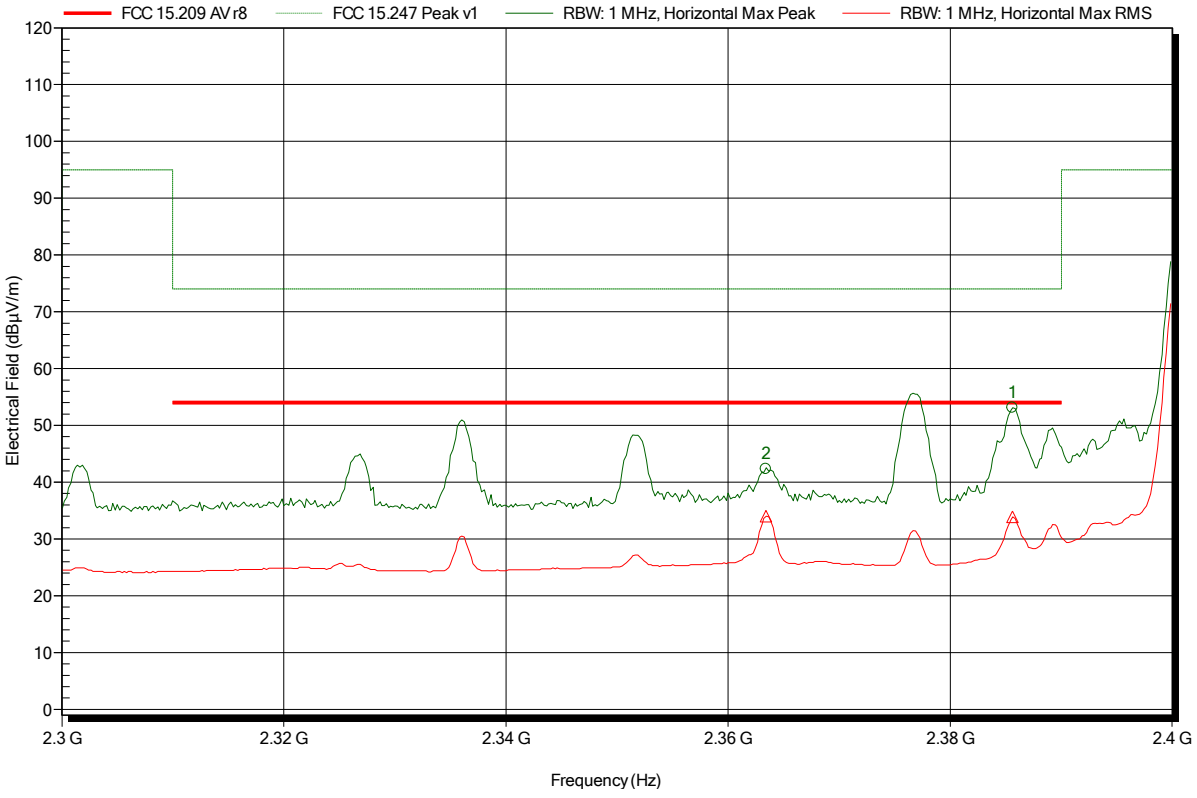

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.363 GHz	42.34 dBµV/m	74 dBµV/m	-31.66 dB	Pass
2.386 GHz	53.09 dBµV/m	74 dBµV/m	-20.91 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	lower bandedge

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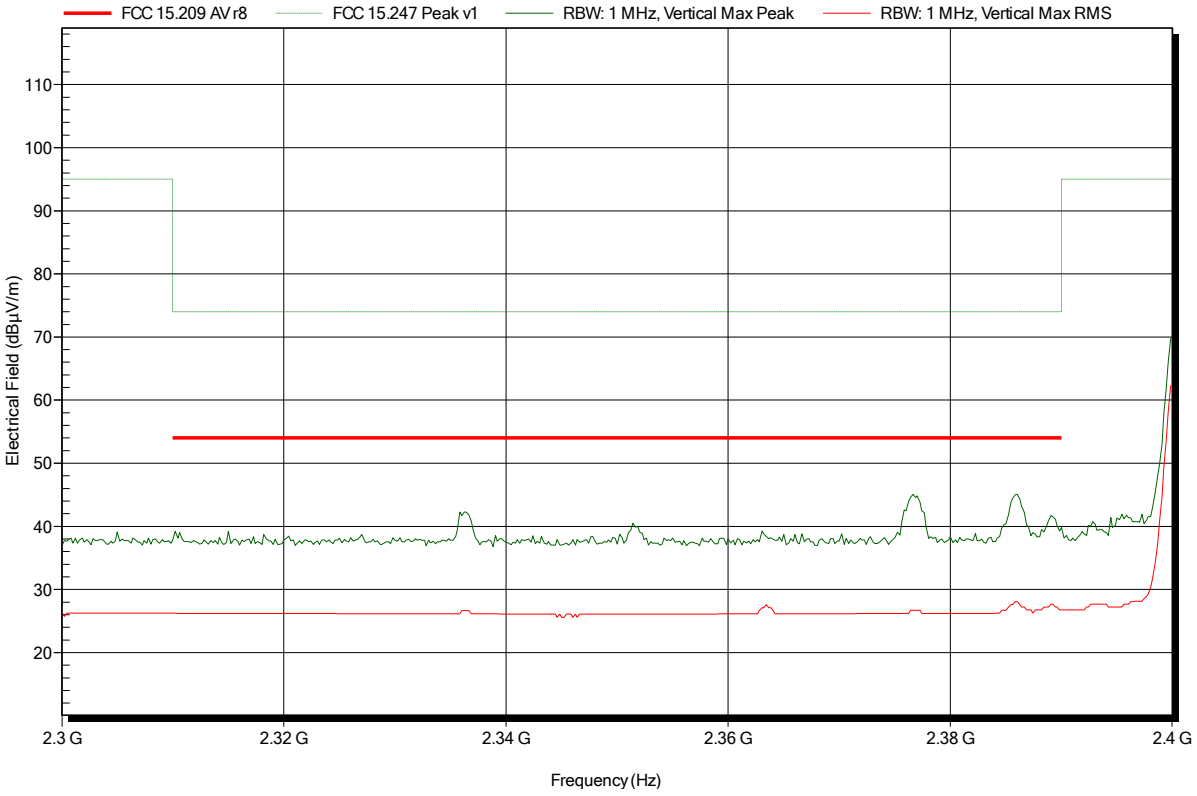

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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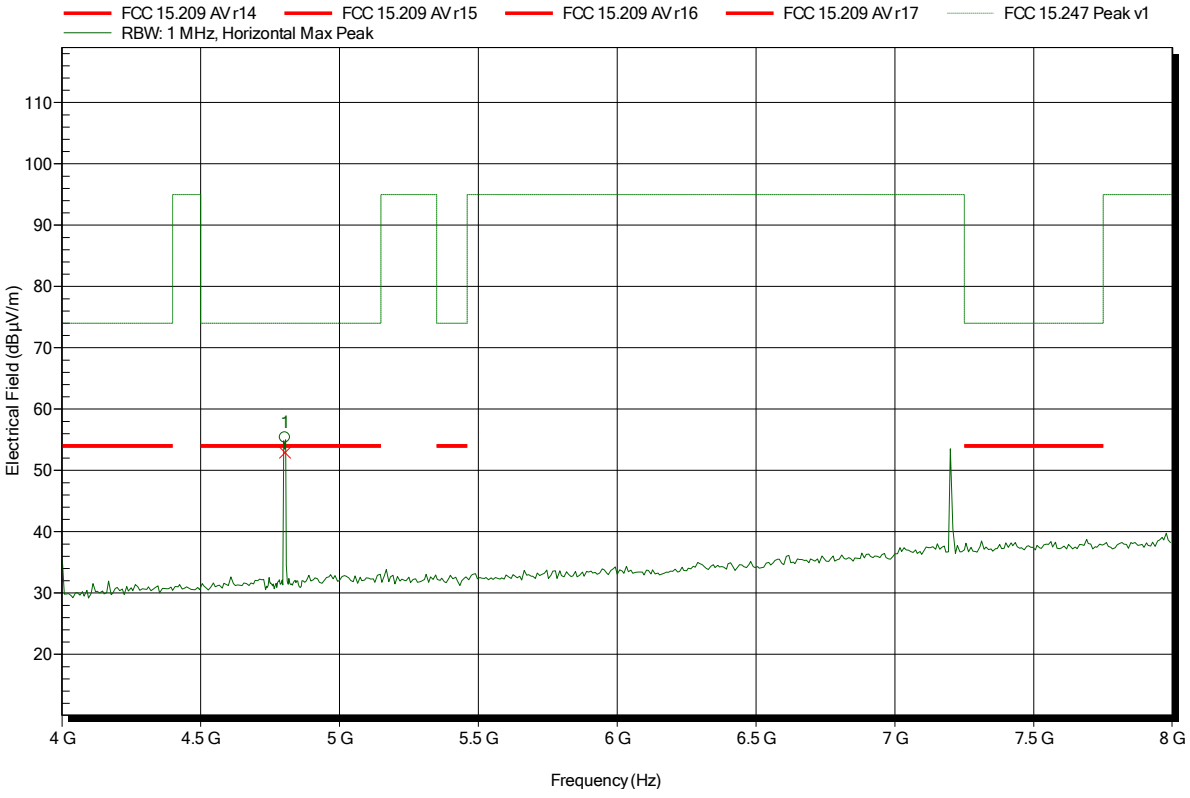

Frequency	Peak	Peak Limit	Peak Difference	Status
4.804 GHz	55.34 dBµV/m	74 dBµV/m	-18.66 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.804 GHz	52.88 dBµV/m	54 dBµV/m	-1.12 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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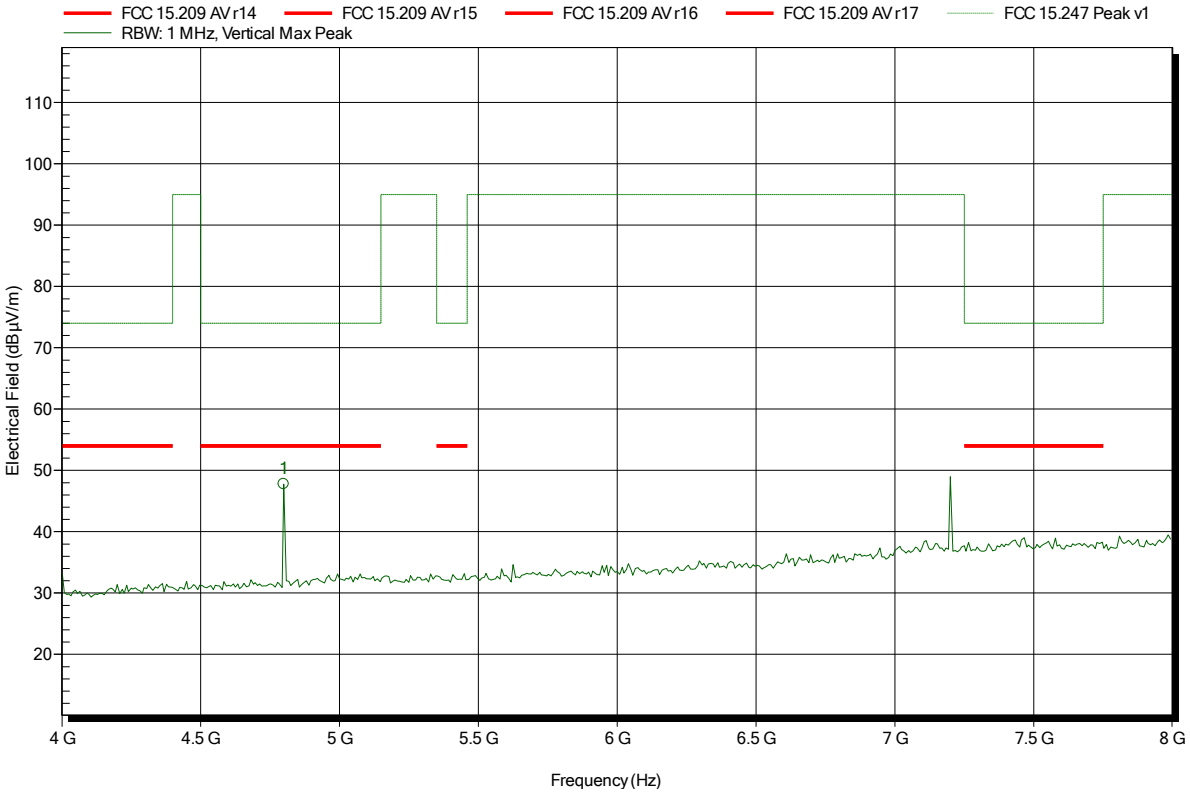

Frequency	Peak	Peak Limit	Peak Difference	Status
4.8 GHz	47.77 dBµV/m	74 dBµV/m	-26.23 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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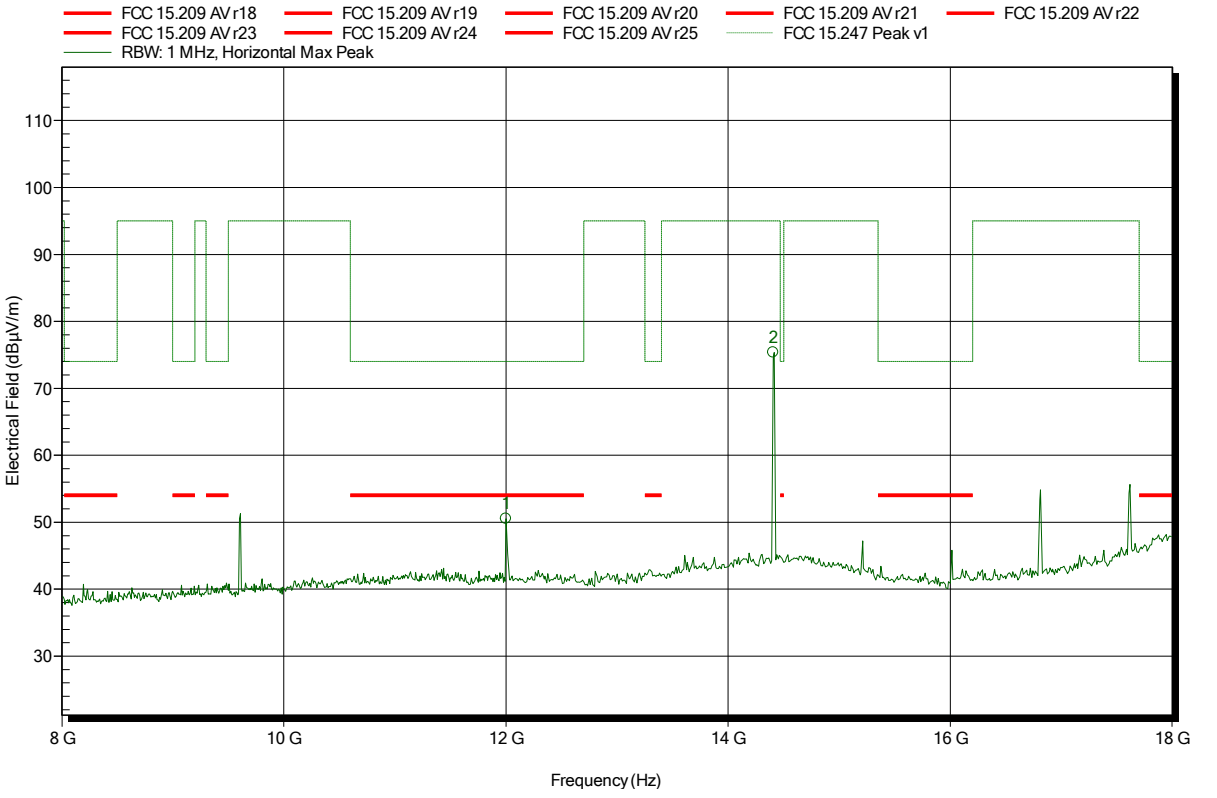

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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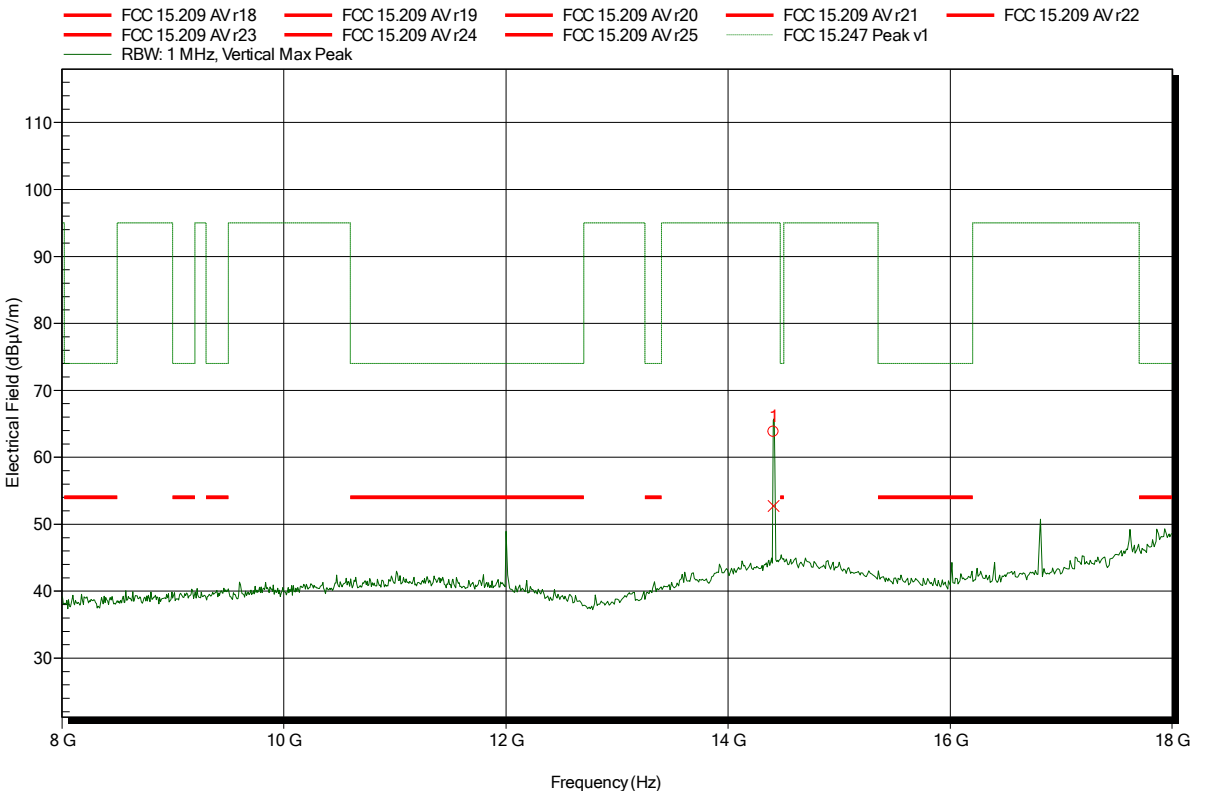

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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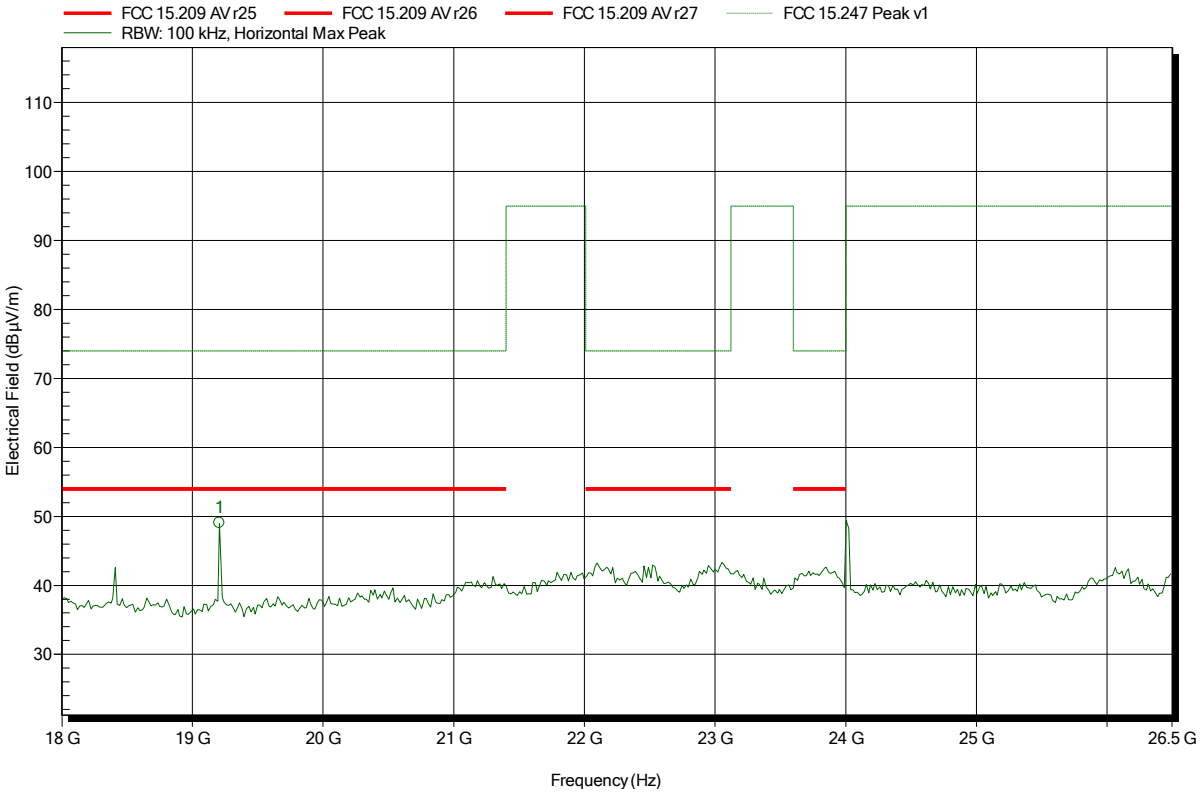

Frequency	Peak	Peak Limit	Peak Difference	Status
19.207 GHz	49.04 dBµV/m	74 dBµV/m	-24.96 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2402 MHz
Test Date:	2015-02-02
Note:	

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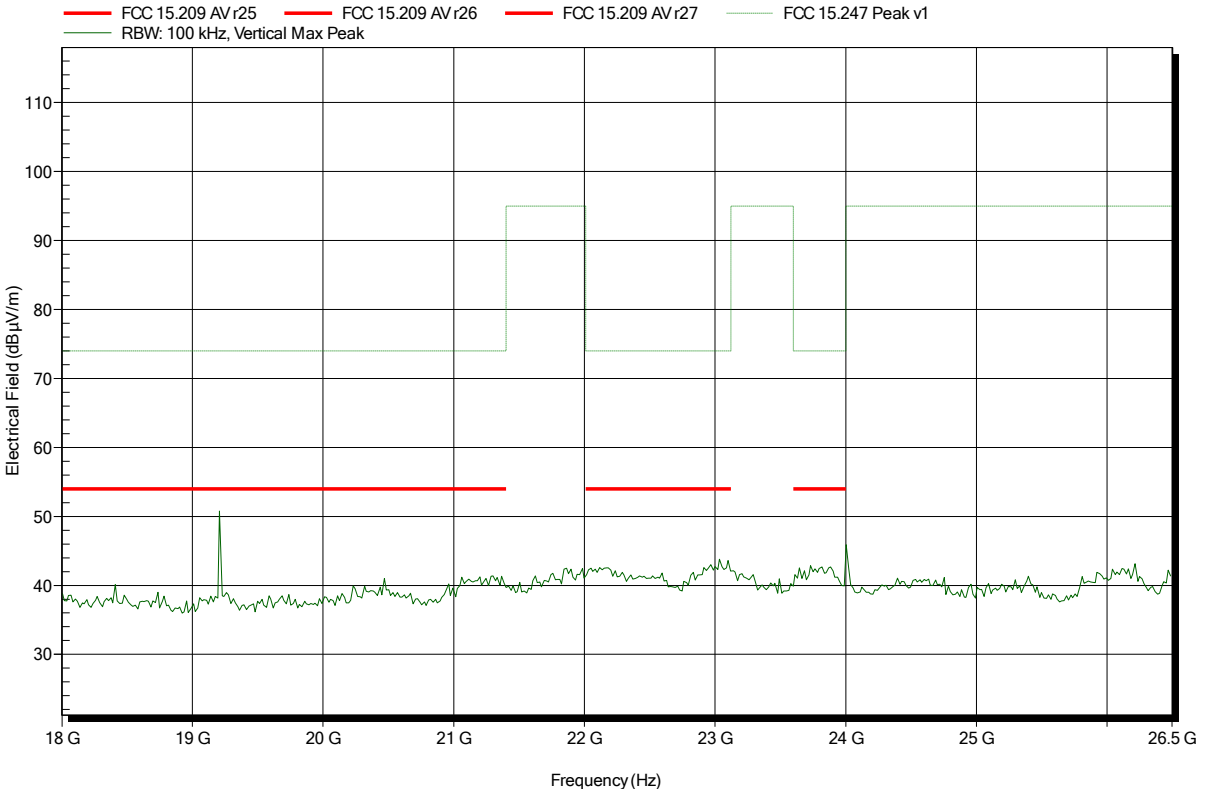

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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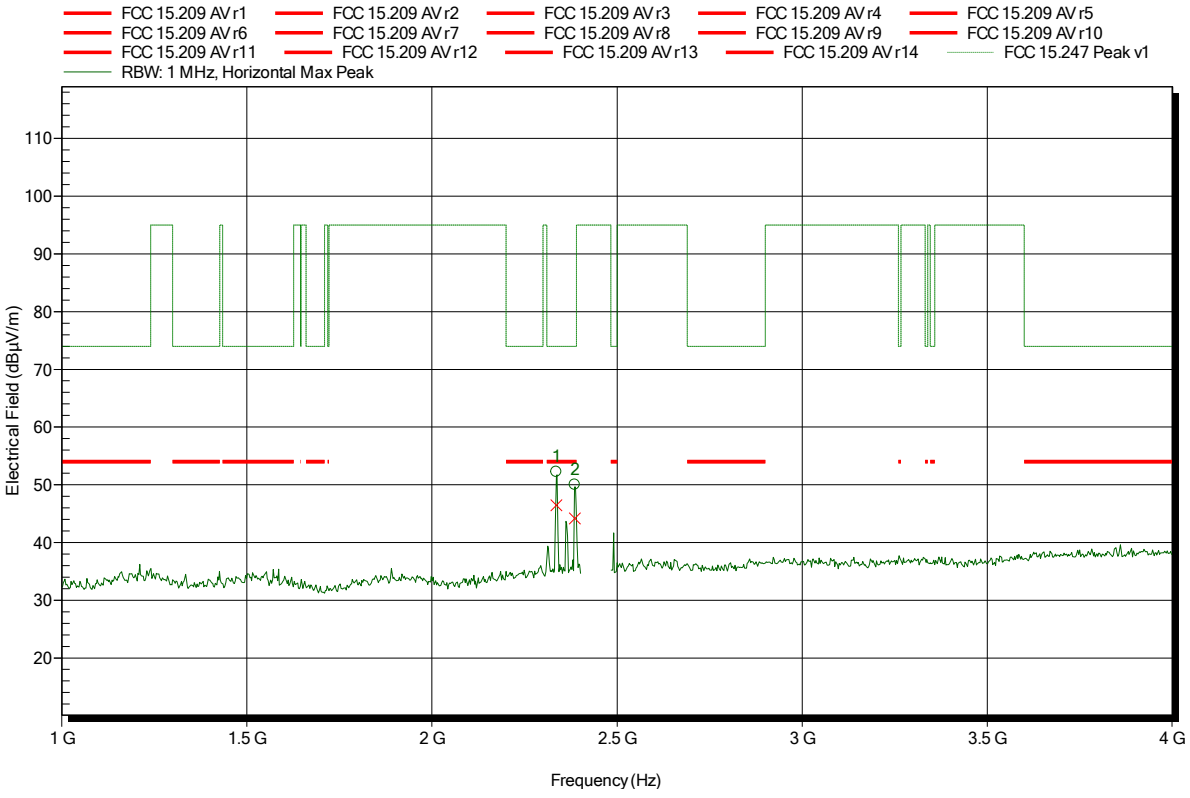

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3365 GHz	52.21 dBµV/m	74 dBµV/m	-21.79 dB	Pass
2.3861 GHz	50.02 dBµV/m	74 dBµV/m	-23.98 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.3365 GHz	46.45 dBµV/m	54 dBµV/m	-7.55 dB	Pass
2.3861 GHz	44.16 dBµV/m	54 dBµV/m	-9.84 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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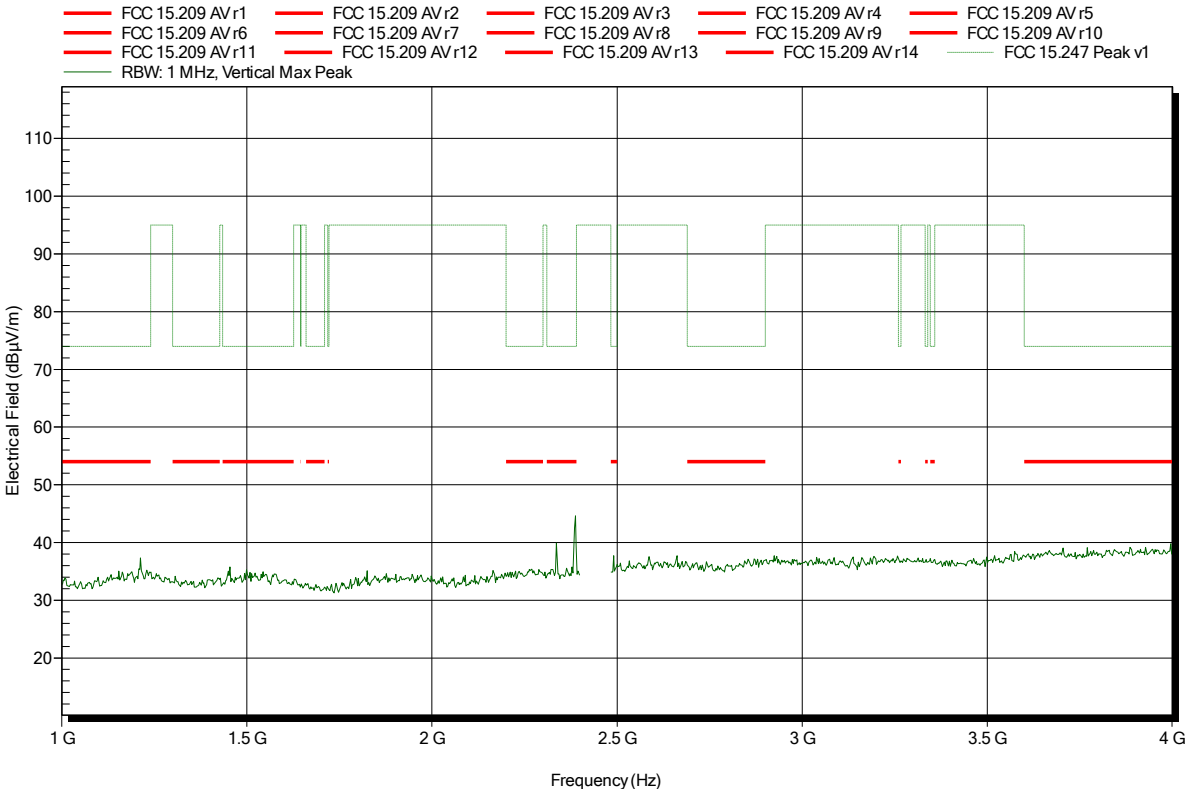

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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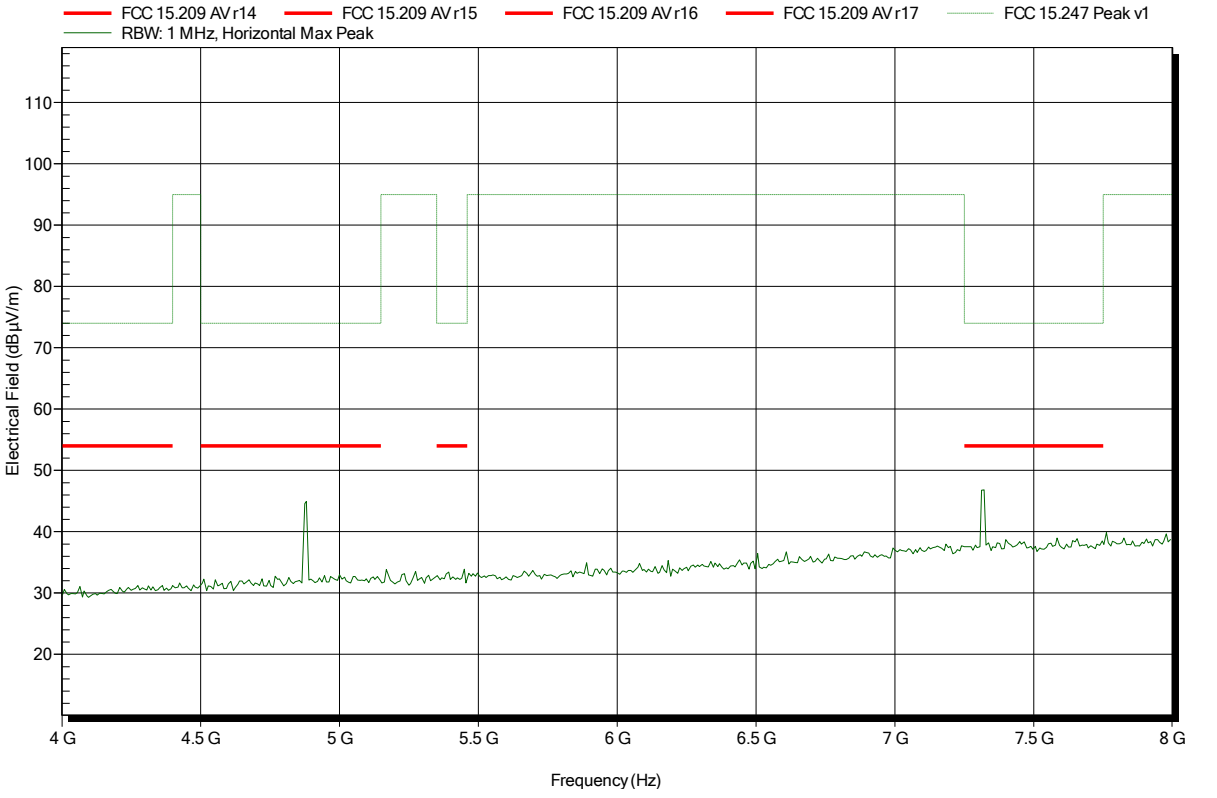

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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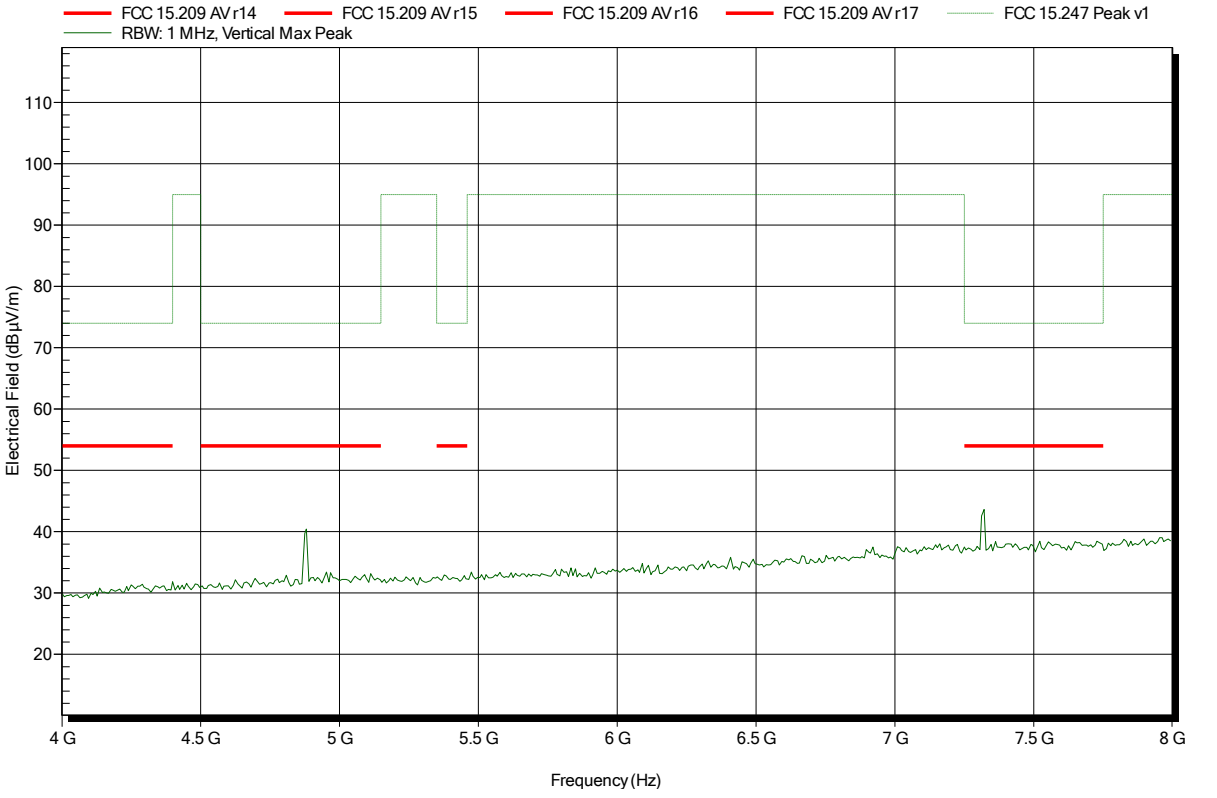

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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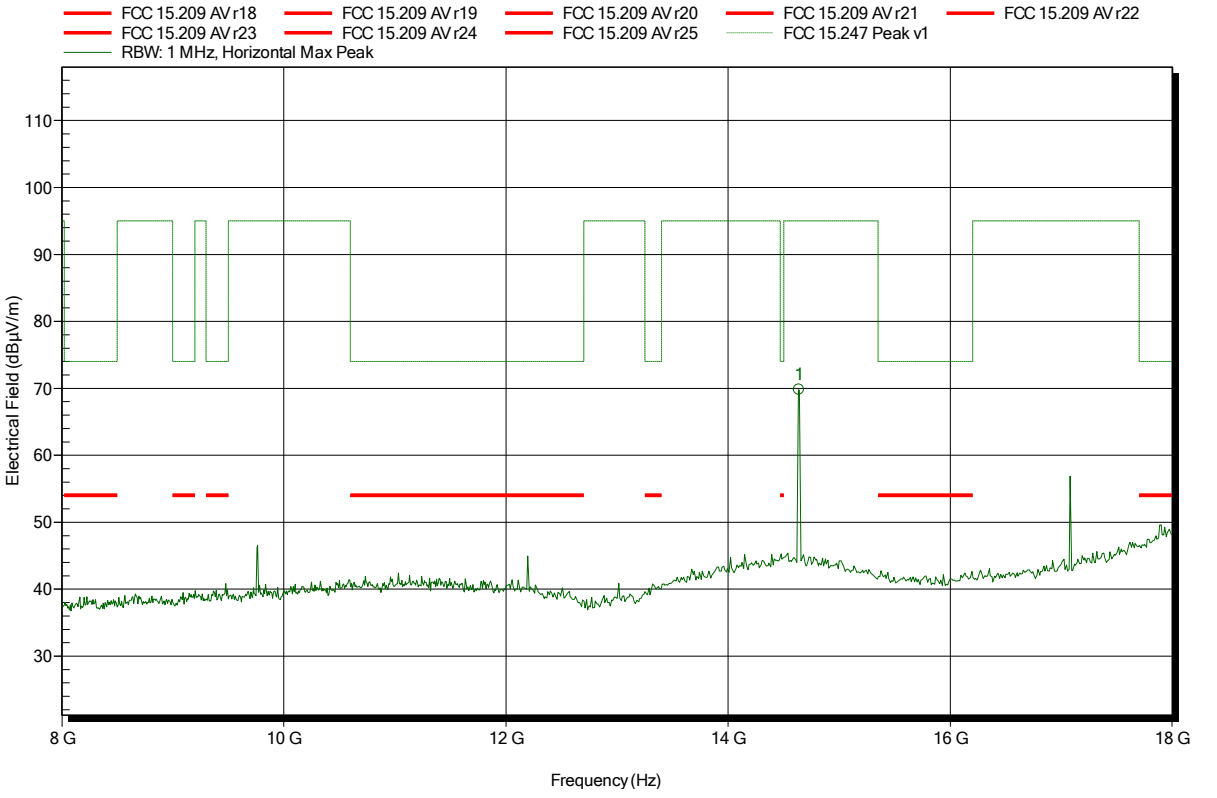

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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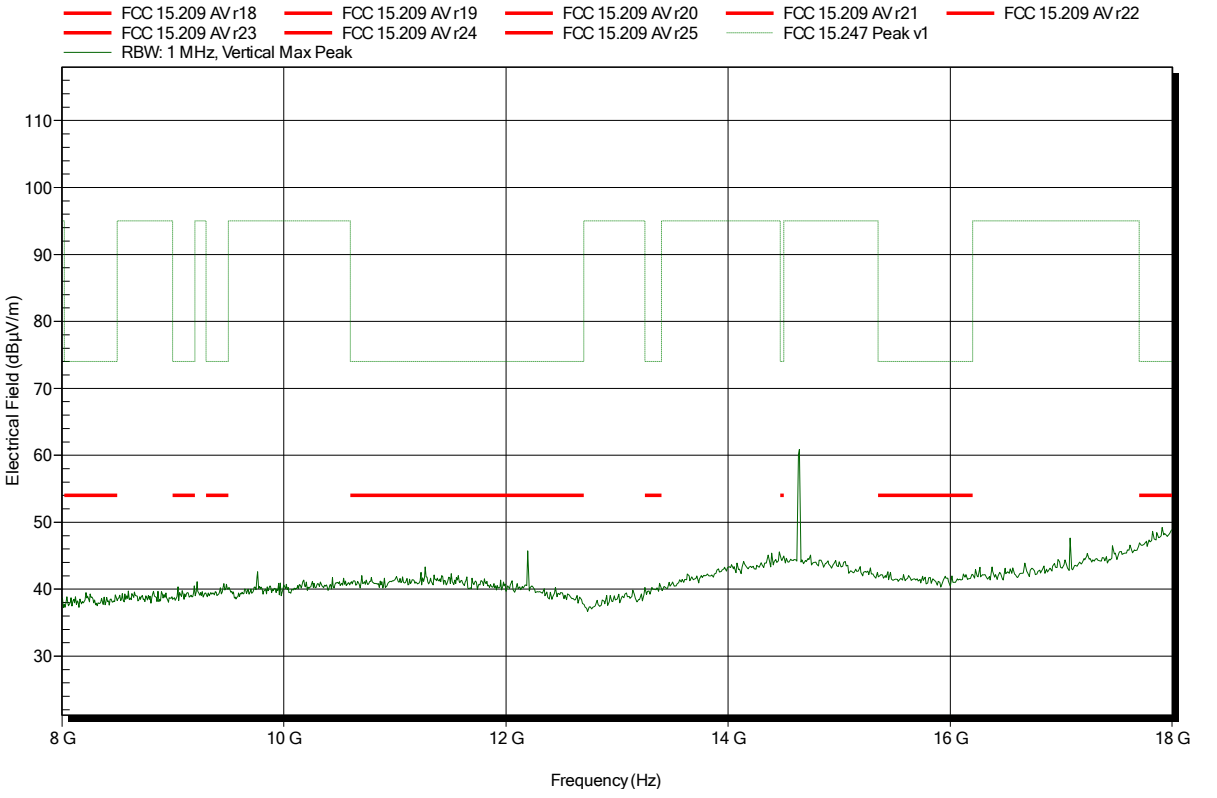

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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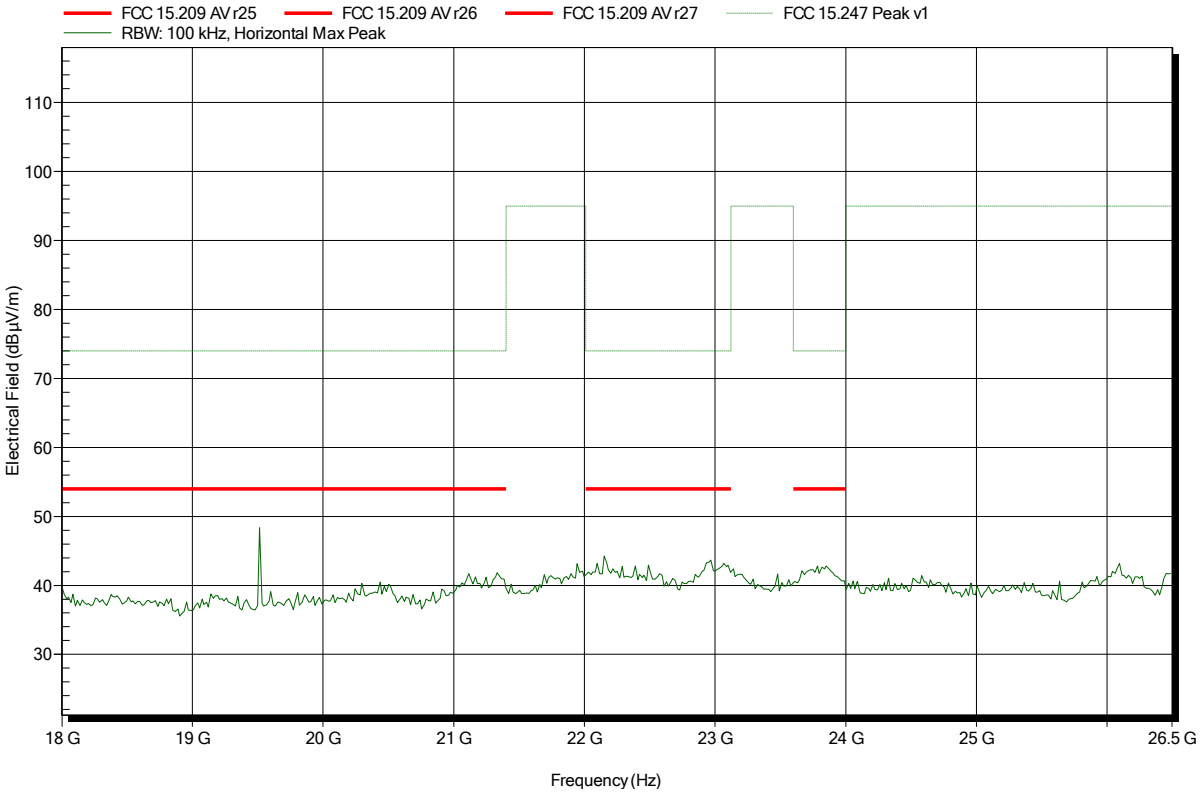

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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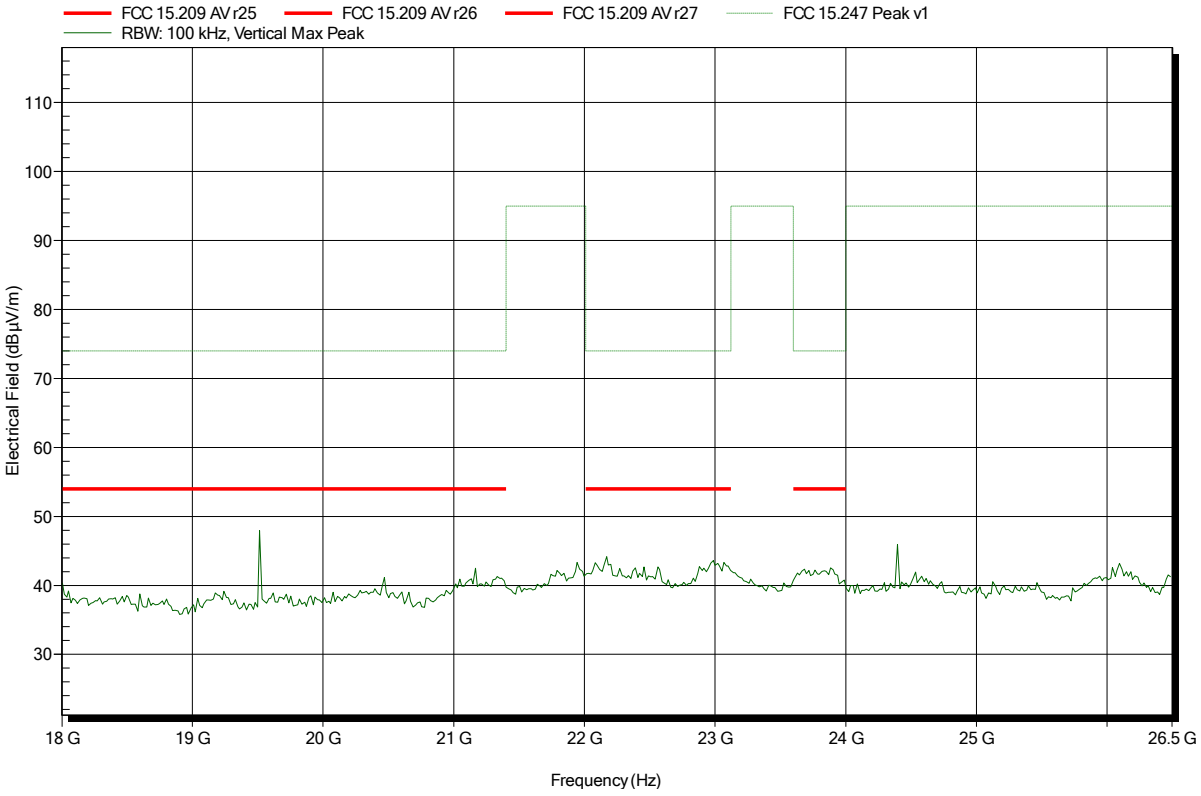

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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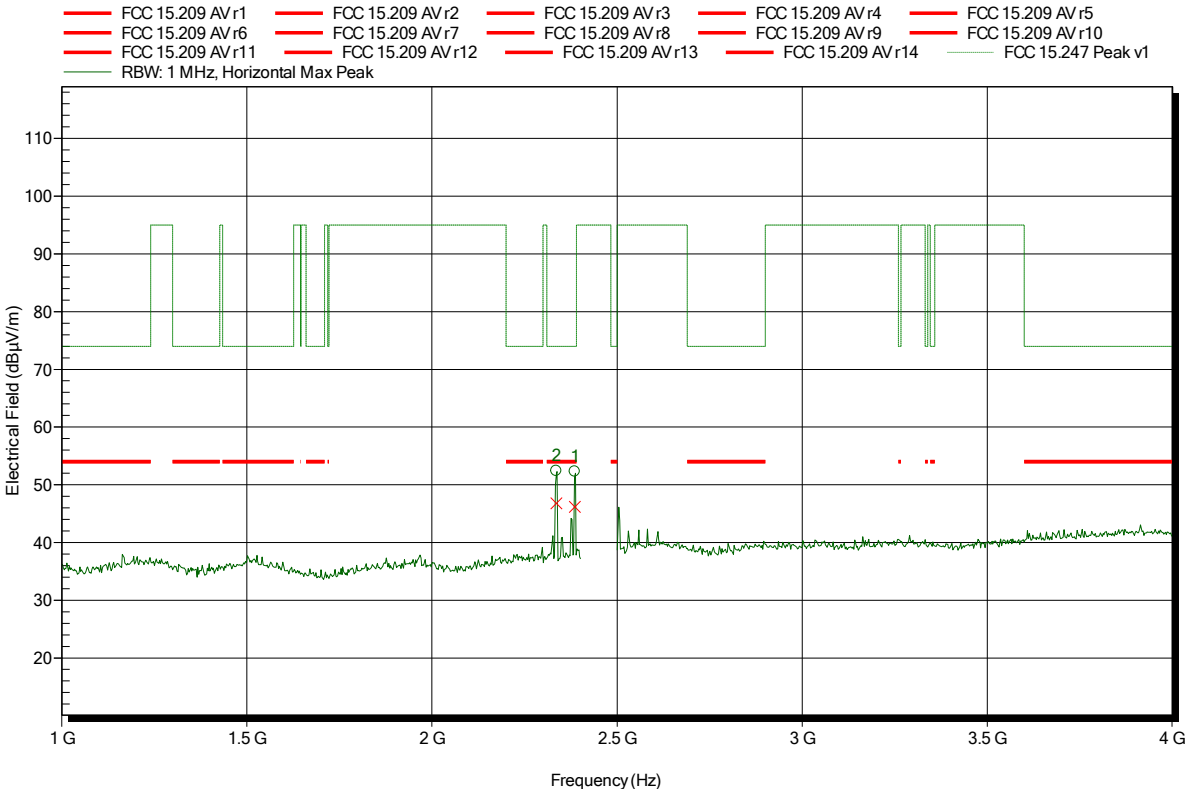

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.336 GHz	52.4 dBµV/m	74 dBµV/m	-21.6 dB	Pass
2.386 GHz	52.26 dBµV/m	74 dBµV/m	-21.74 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.336 GHz	46.77 dBµV/m	54 dBµV/m	-7.23 dB	Pass
2.386 GHz	46.16 dBµV/m	54 dBµV/m	-7.84 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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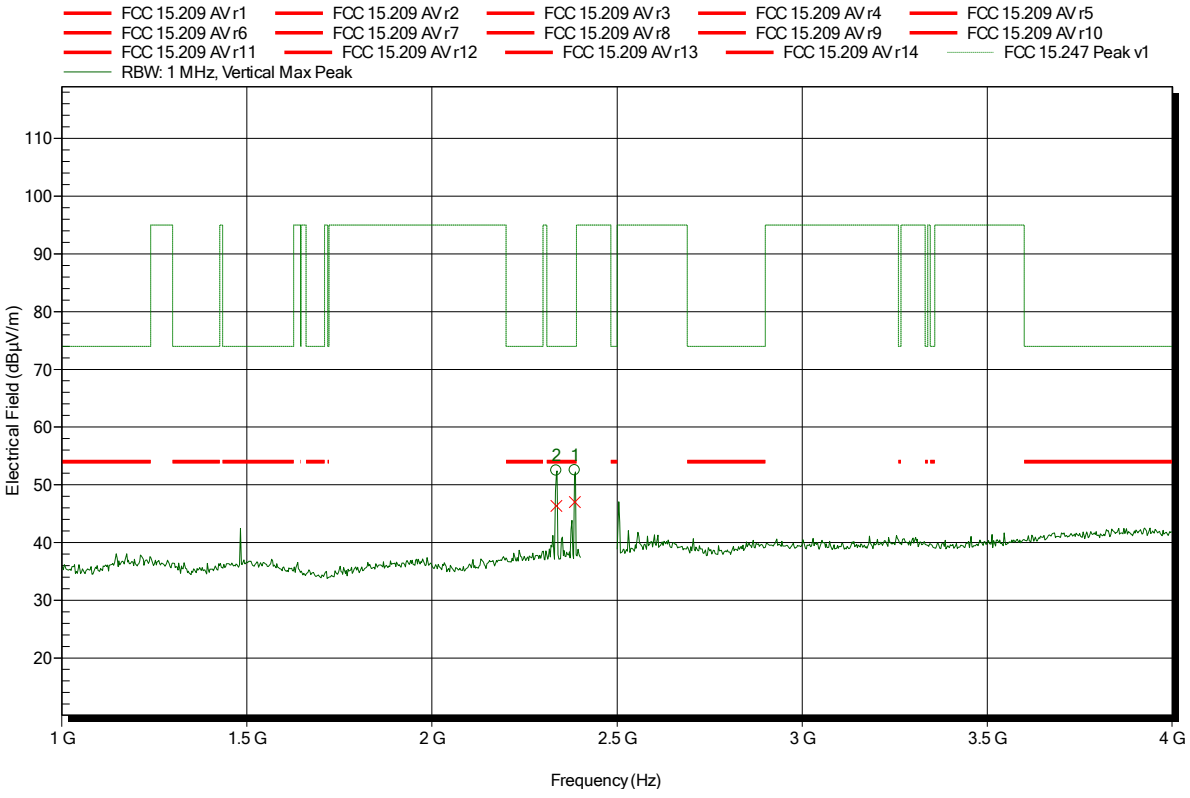

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.336 GHz	52.47 dBµV/m	74 dBµV/m	-21.53 dB	Pass
2.386 GHz	52.52 dBµV/m	74 dBµV/m	-21.48 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.336 GHz	46.32 dBµV/m	54 dBµV/m	-7.68 dB	Pass
2.386 GHz	46.99 dBµV/m	54 dBµV/m	-7.01 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	upper bandedge

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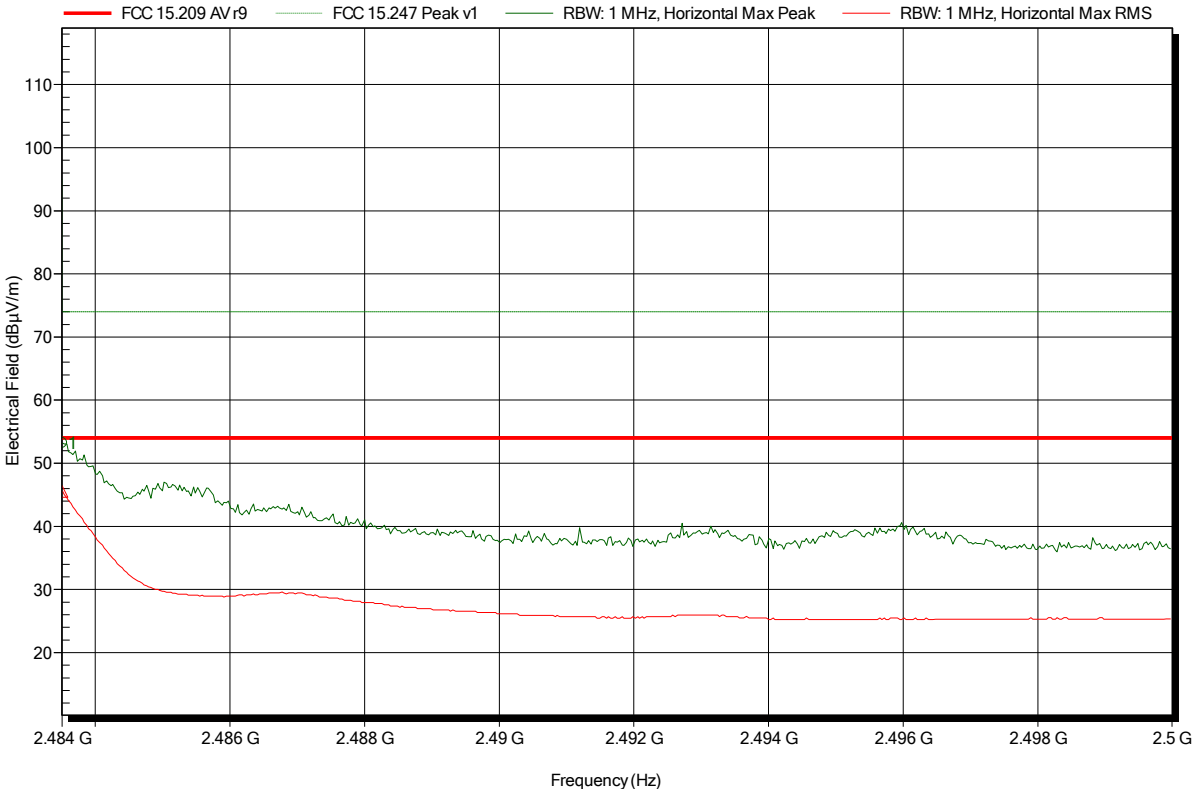

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4835 GHz	53.18 dBµV/m	74 dBµV/m	-20.82 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	upper bandedge

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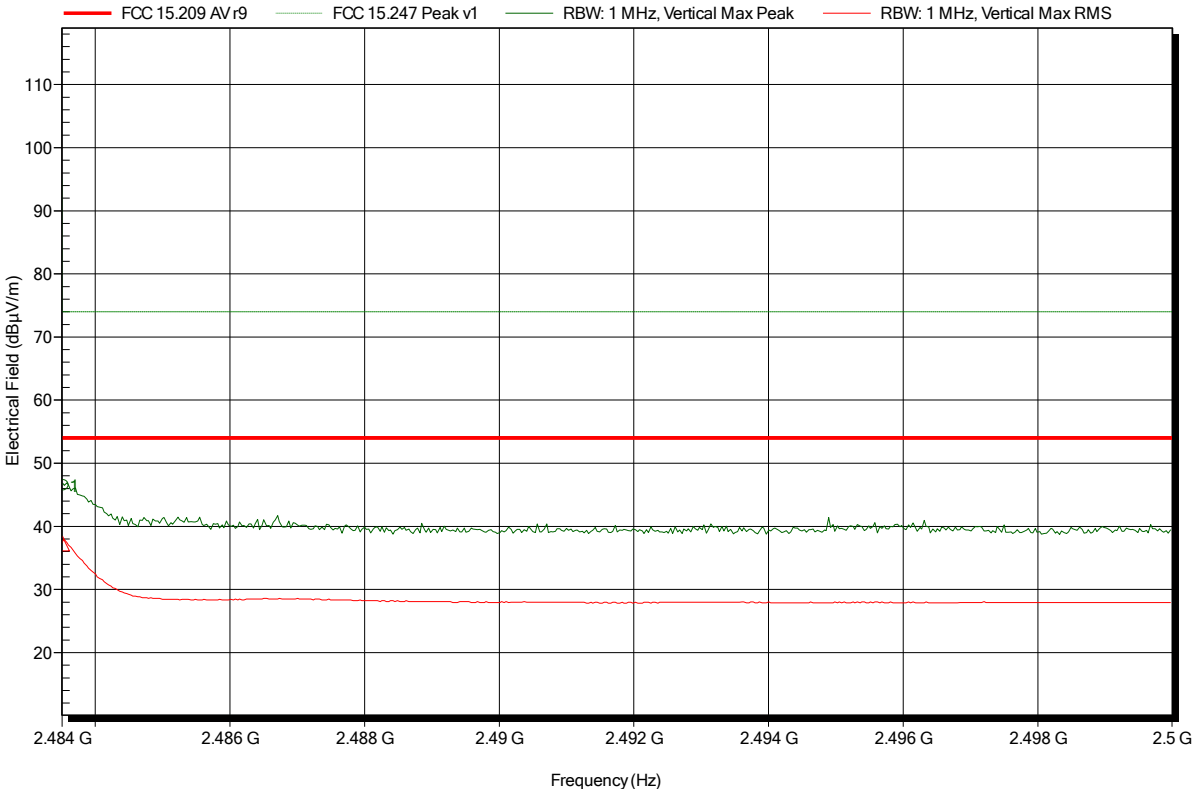

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4835 GHz	46.51 dBµV/m	74 dBµV/m	-27.49 dB	Pass

Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4835 GHz	37.04 dBµV/m	54 dBµV/m	-16.96 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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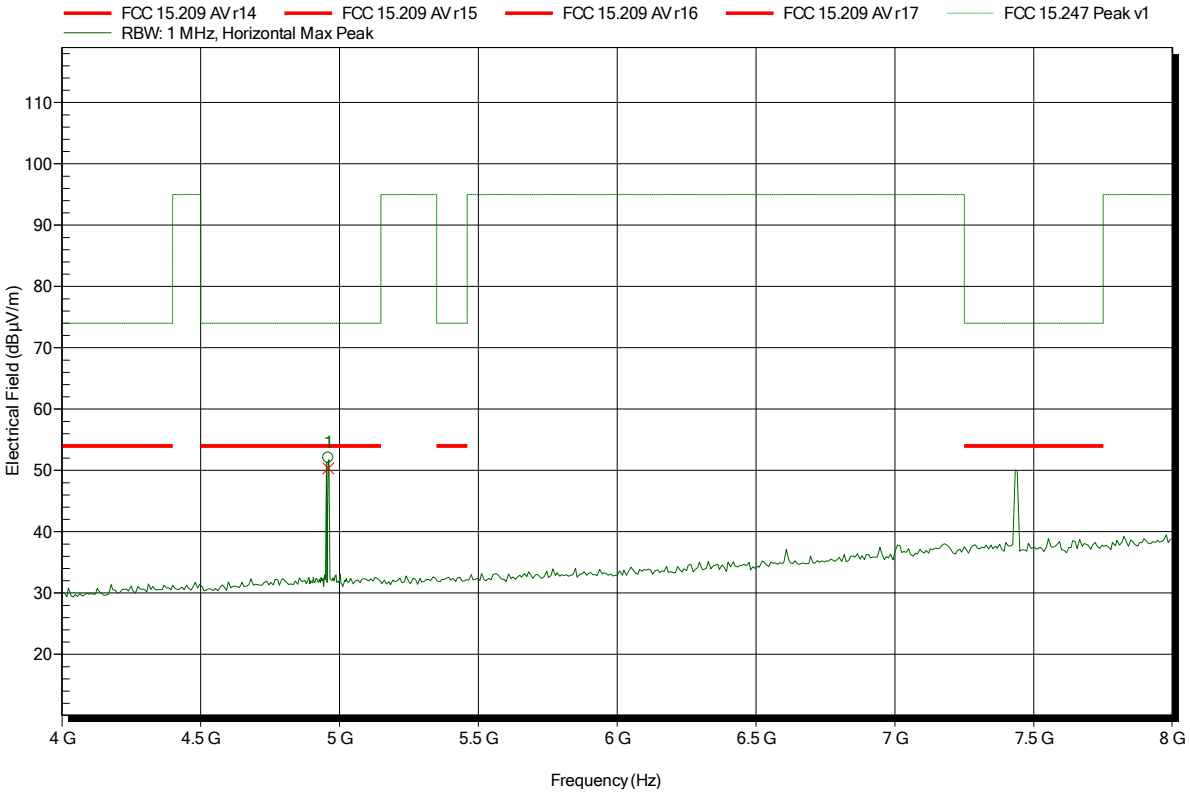

Frequency	Peak	Peak Limit	Peak Difference	Status
4.96 GHz	52.05 dBµV/m	74 dBµV/m	-21.95 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.96 GHz	50.31 dBµV/m	54 dBµV/m	-3.69 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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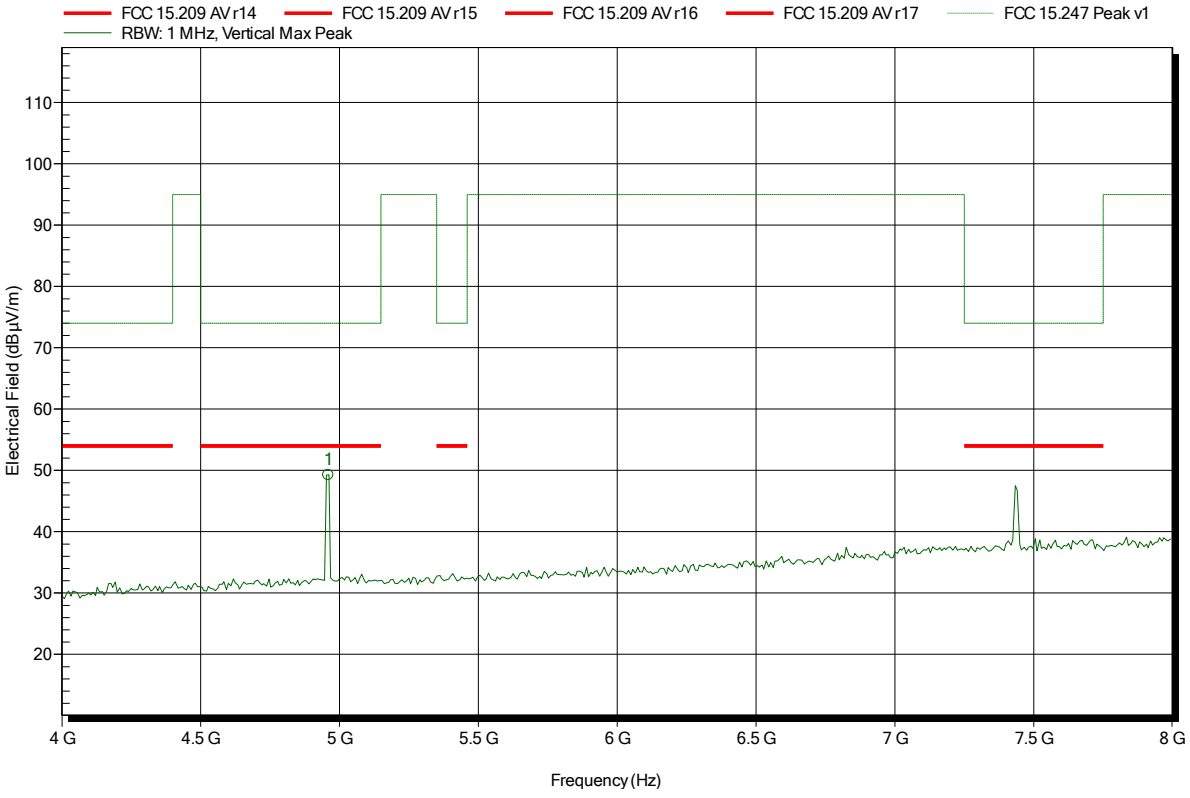

Frequency	Peak	Peak Limit	Peak Difference	Status
4.96 GHz	49.26 dBµV/m	74 dBµV/m	-24.74 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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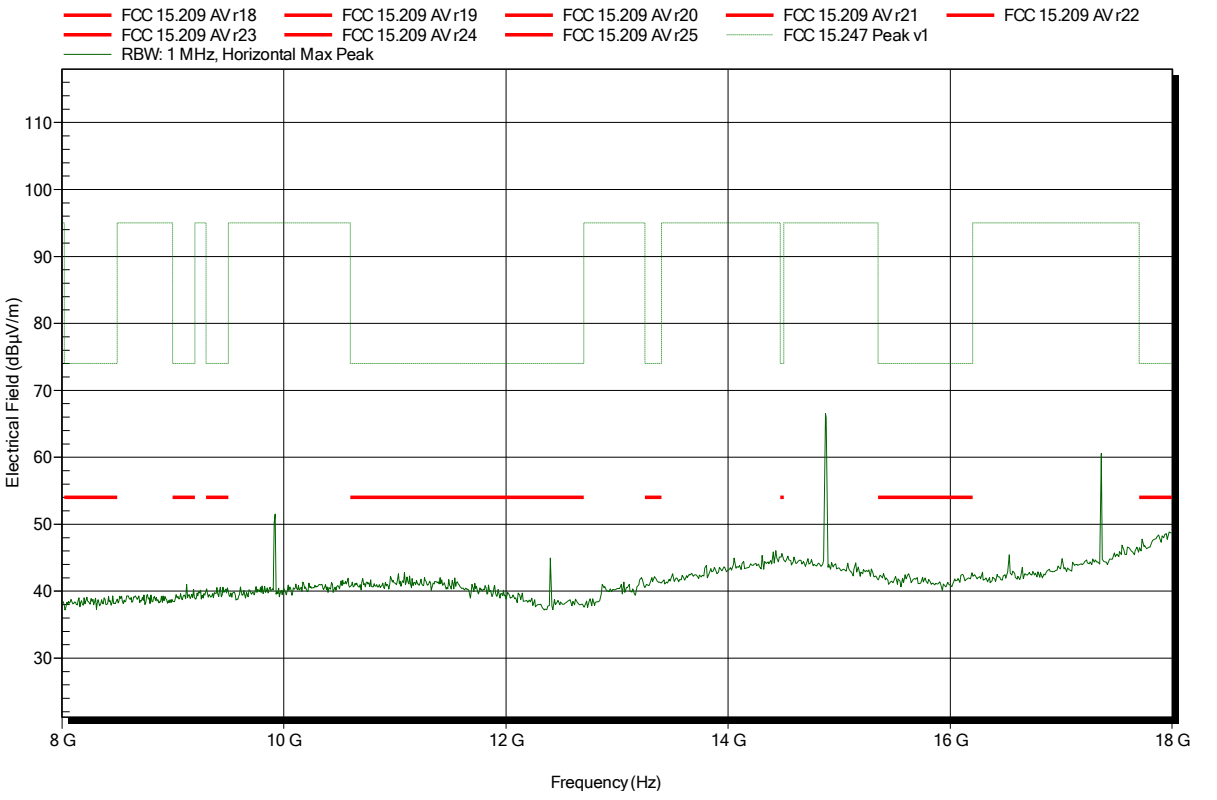

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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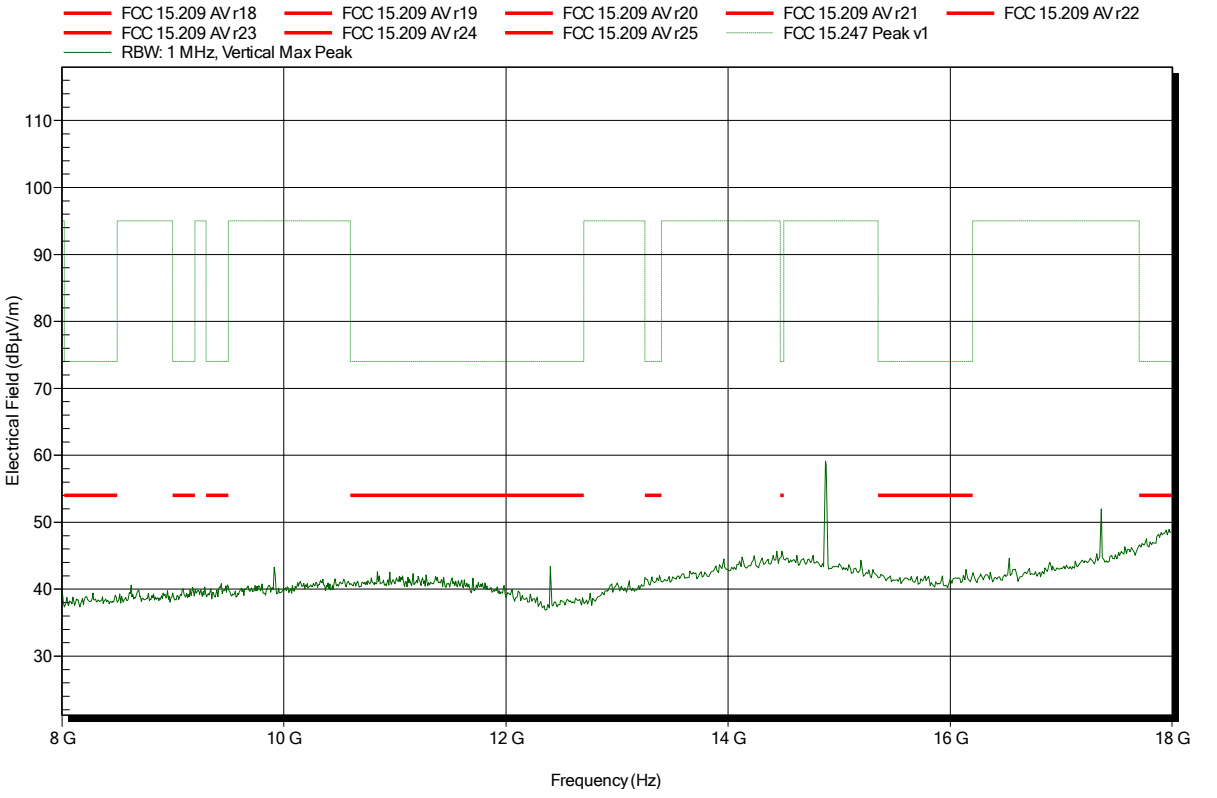

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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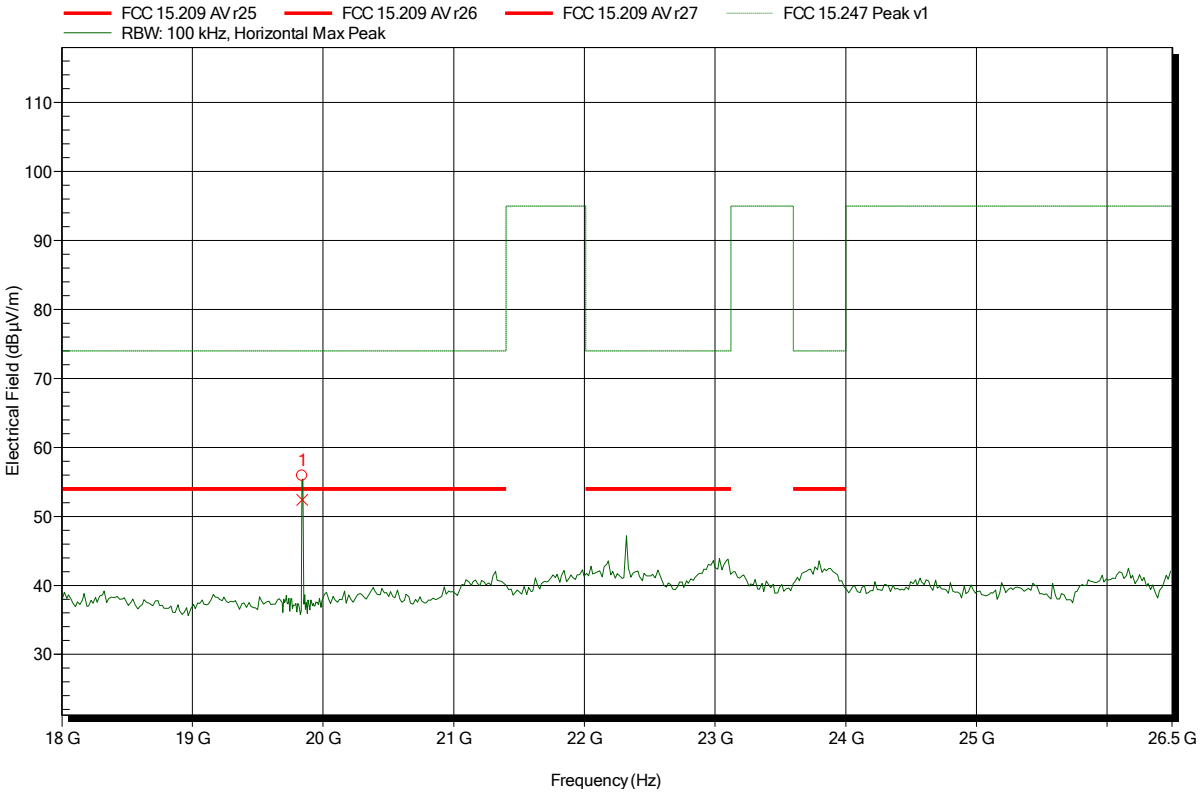

Frequency	Peak	Peak Limit	Peak Difference	Status
19.84 GHz	55.92 dBµV/m	74 dBµV/m	-18.08 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.84 GHz	52.41 dBµV/m	54 dBµV/m	-1.59 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BTLE, 2480 MHz
Test Date:	2015-02-02
Note:	

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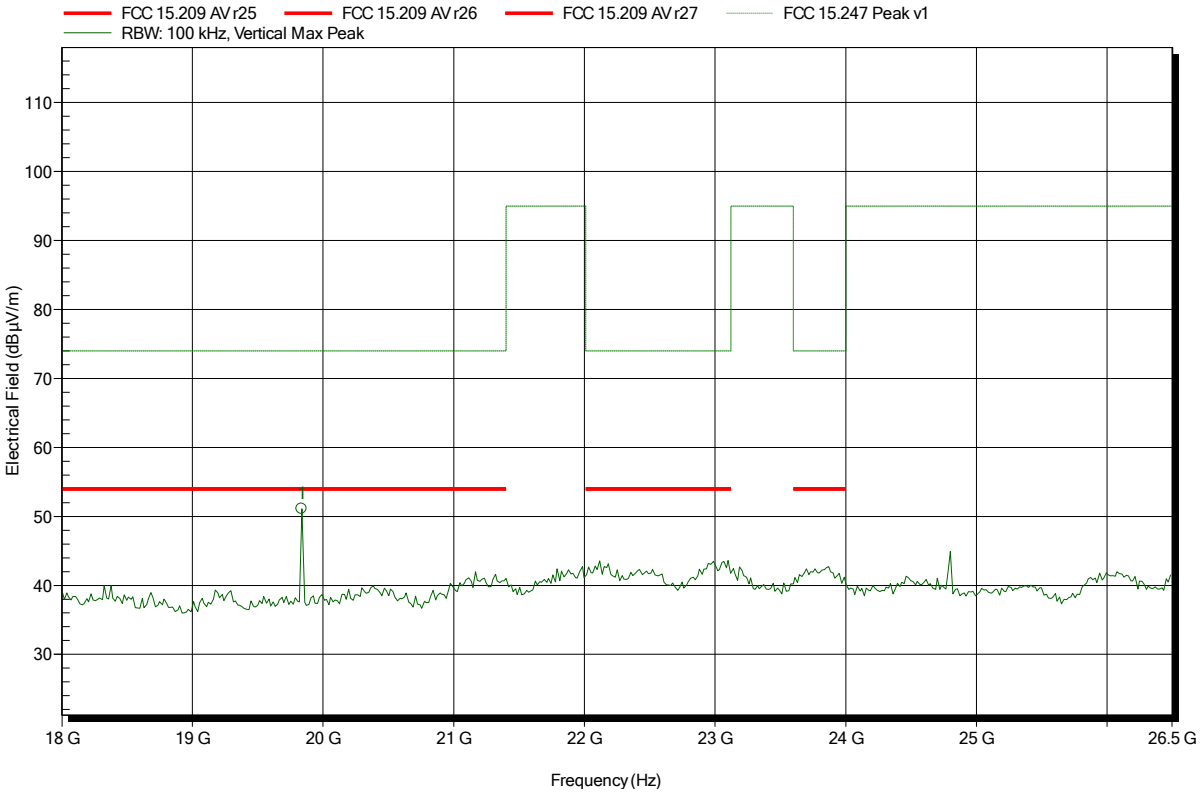

Frequency	Peak	Peak Limit	Peak Difference	Status
19.836 GHz	51.09 dBµV/m	74 dBµV/m	-22.91 dB	Pass

ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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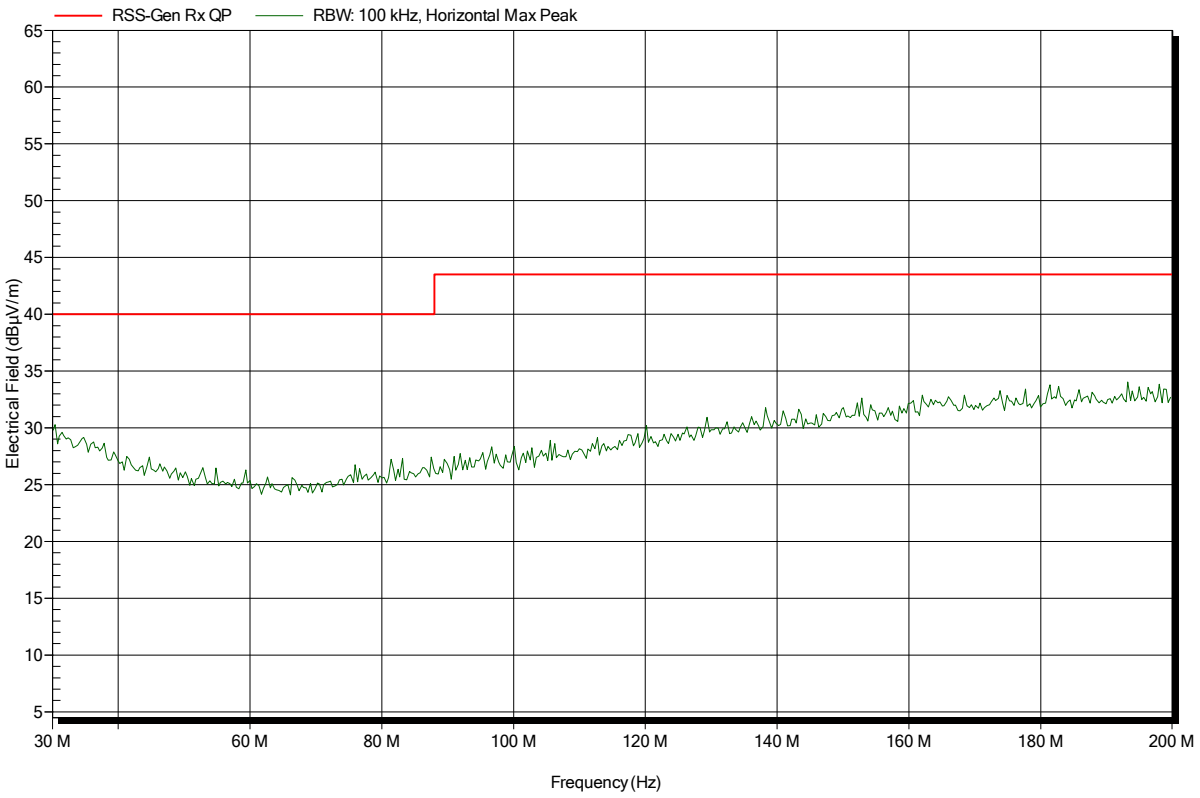

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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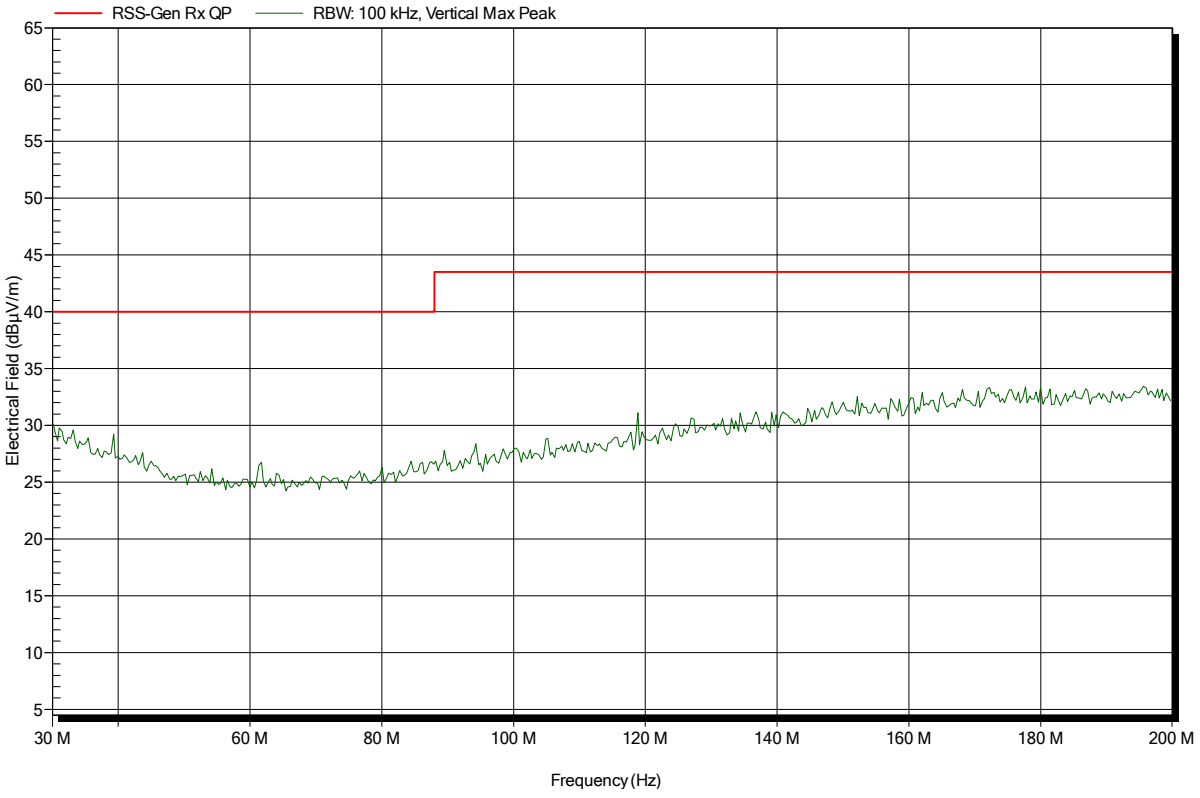

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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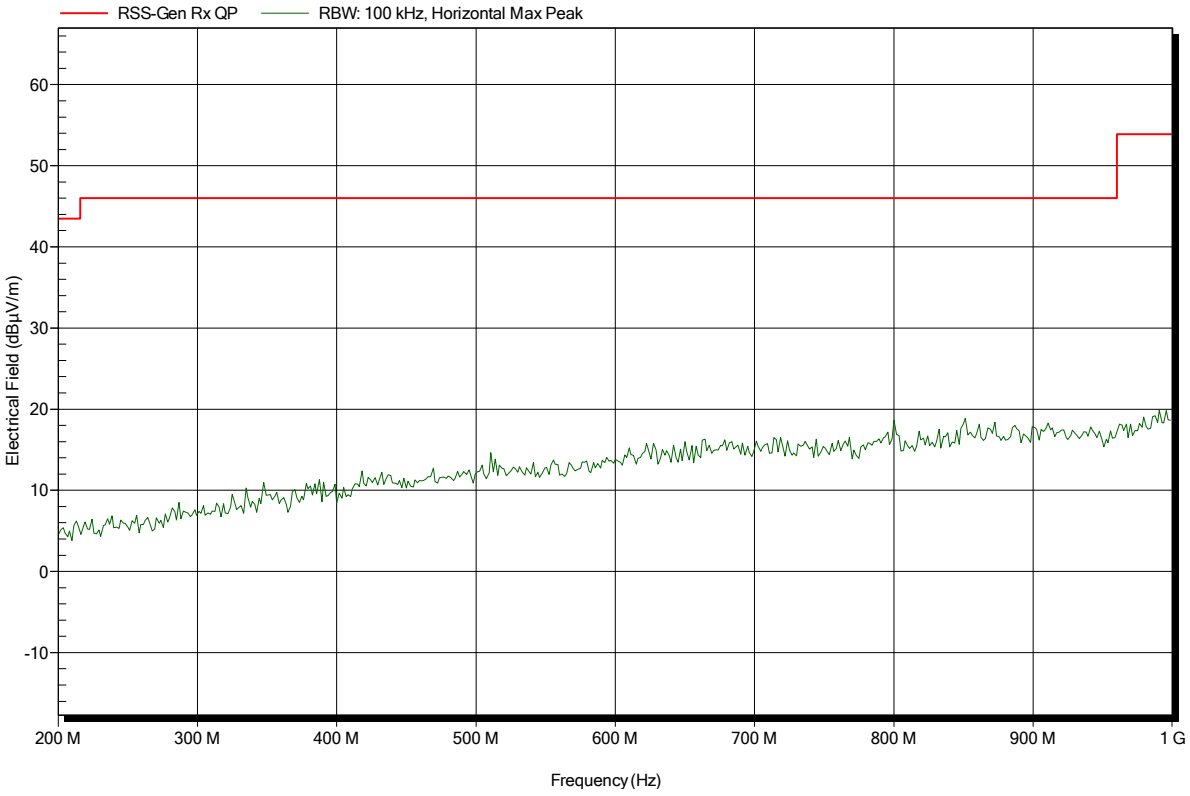

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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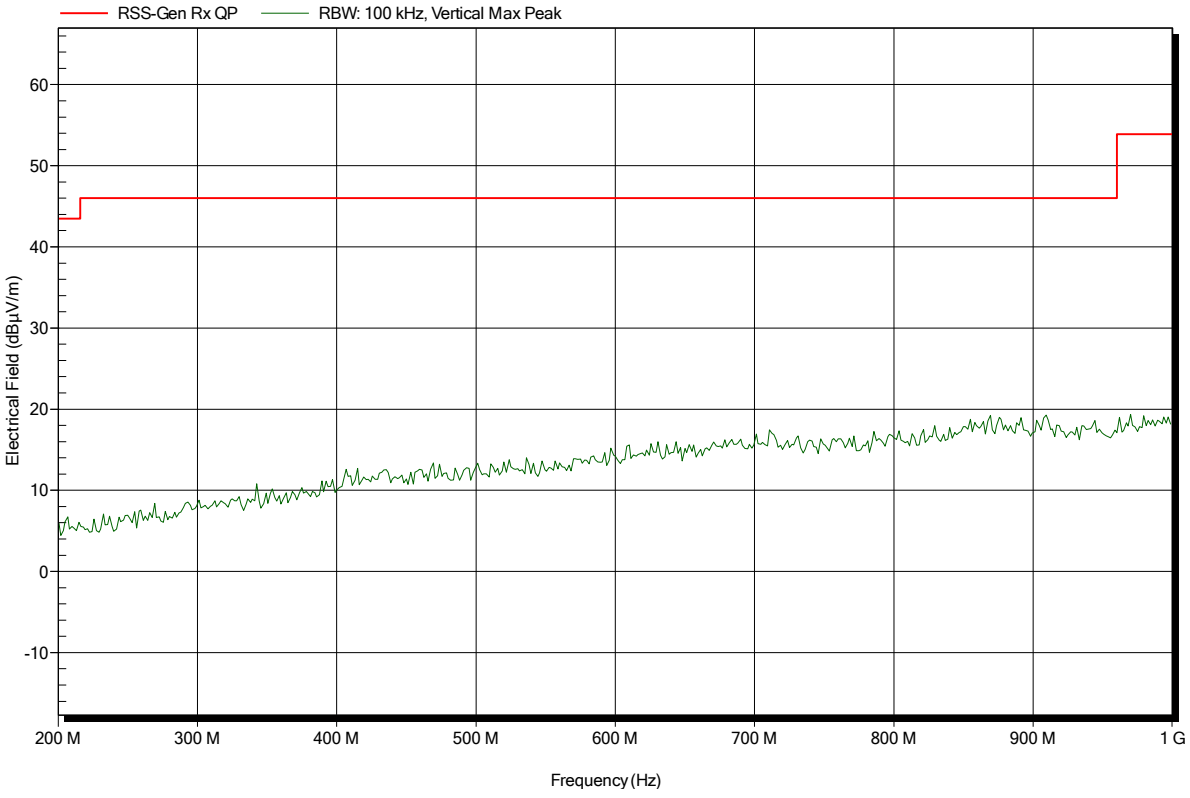

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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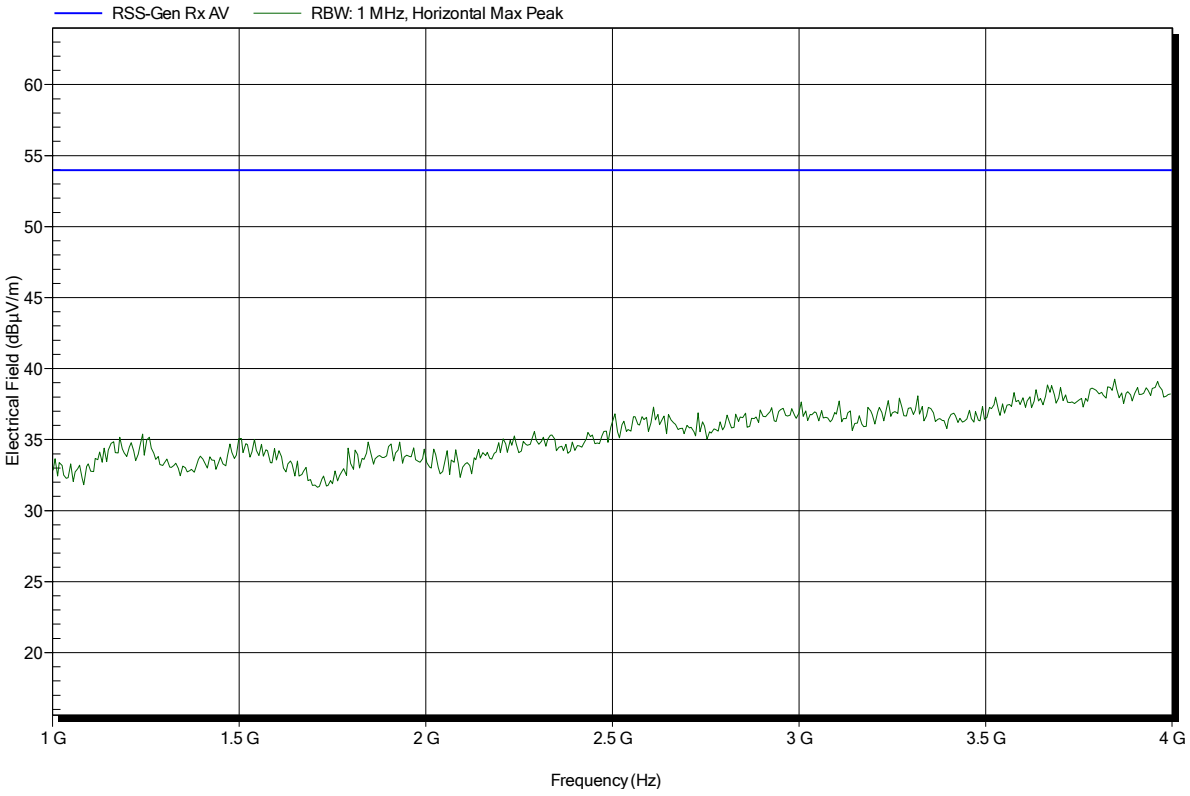

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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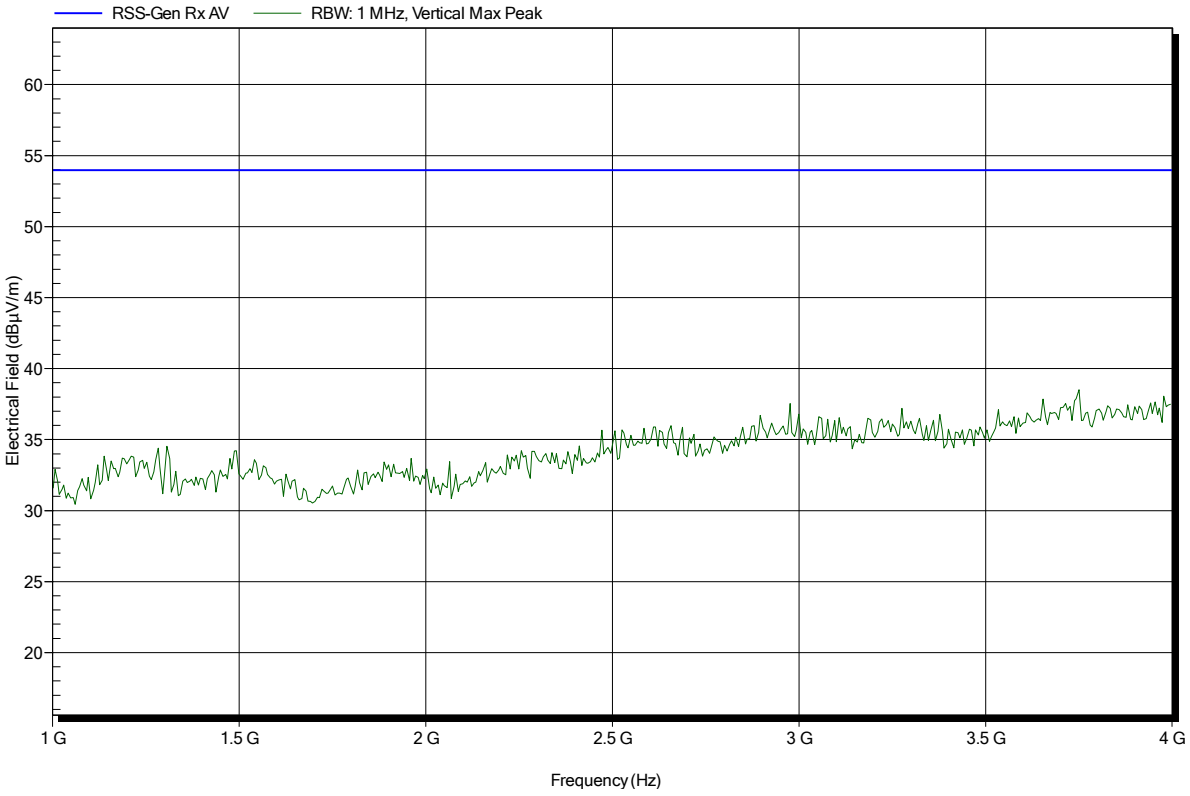

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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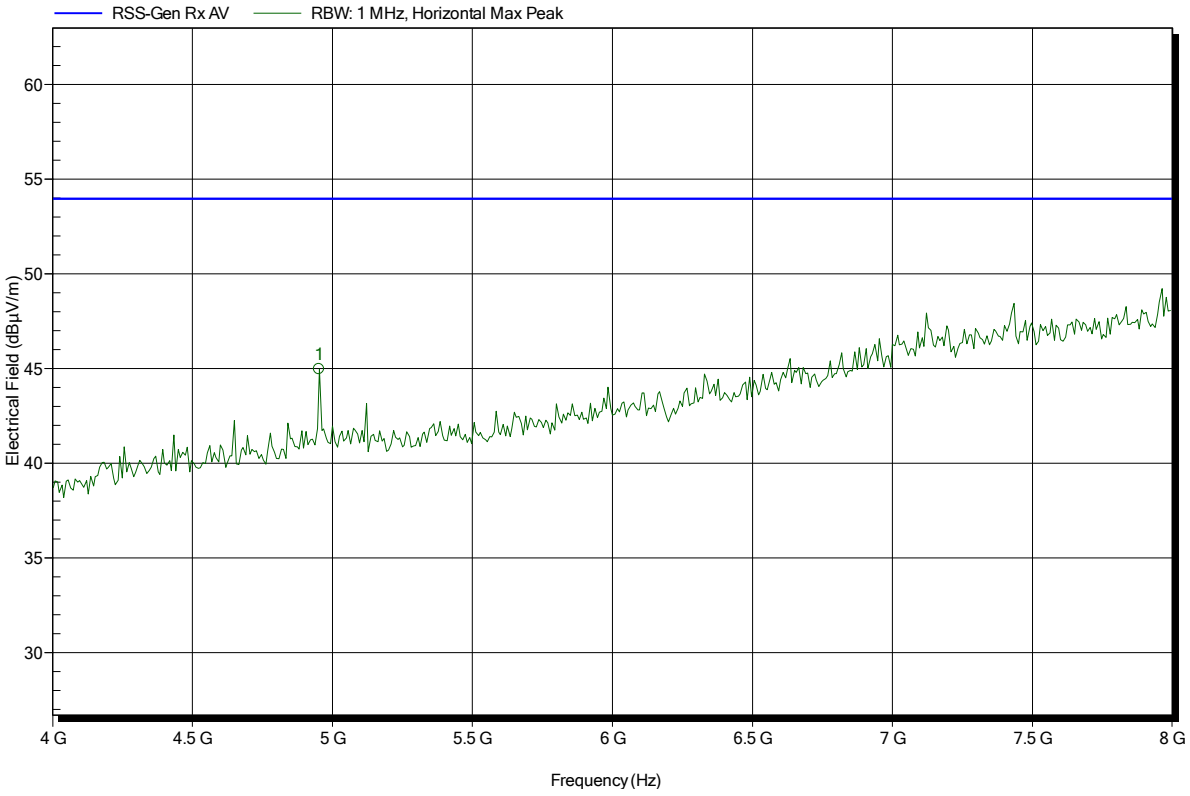

Frequency	Peak	Peak Limit	Peak Difference	Status
4.952 GHz	44.97 dBµV/m	53.98 dBµV/m	-9.01 dB	Pass

Spurious emissions according to RSS-GEN

Project number: G0M-1411-4306

Applicant:	Spectralink Europe Aps
EUT Name:	DECT handset 7532
Model:	K022a
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 3.7 VDC lithium battery
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; BTLE, 2440 MHz
Test Date:	2015-02-02
Note:	

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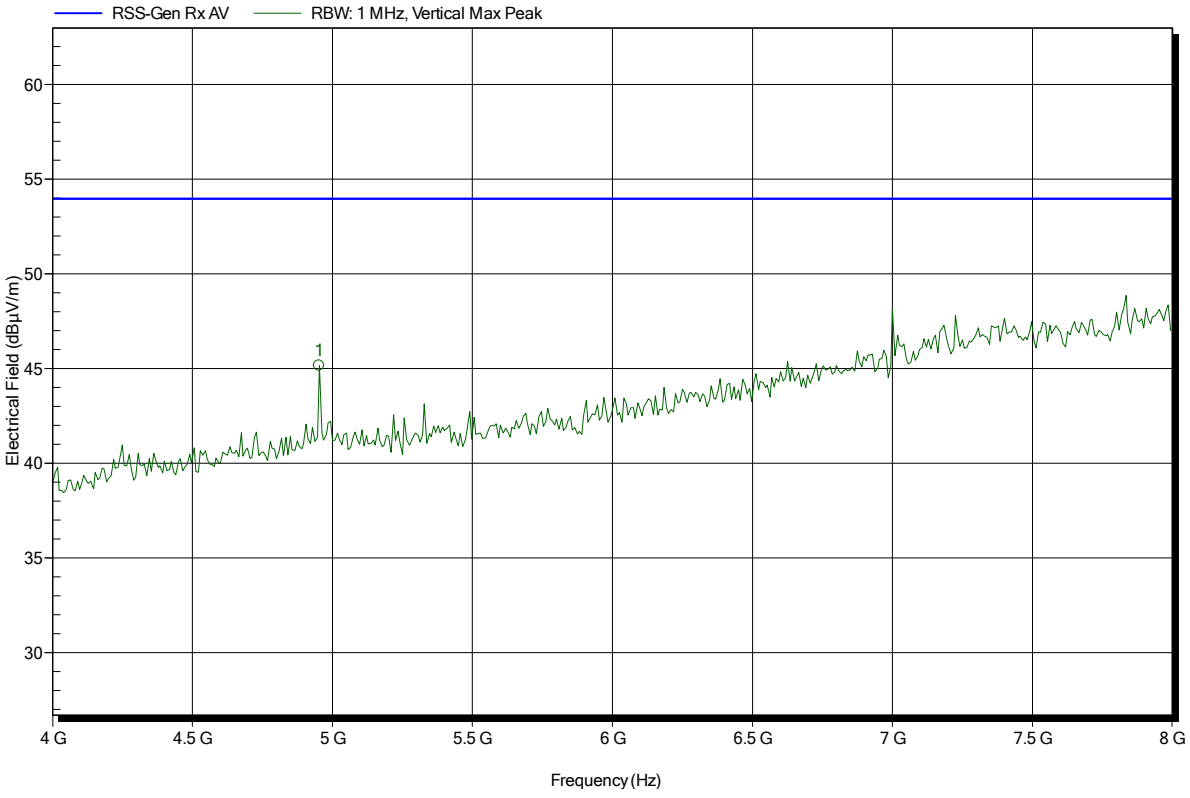

Frequency	Peak	Peak Limit	Peak Difference	Status
4.952 GHz	45.15 dBµV/m	53.98 dBµV/m	-8.83 dB	Pass