

FCC TEST REPORT

FCC 47 CFR Part 15C Industry Canada RSS-210

Intentional radiator operating within the bands 902 – 928 MHz, 2400 – 2483.5 MHz and 5725 – 5875 MHz

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-2

Applicant's name: Liftup A/S

Address: Hagensvej 21

DK-9530 Støvring

DENMARK

Test specification:

Hardware version

Standard.....: 47 CFR Part 15C

RSS-210, Issue 9, 2016-08 RSS-Gen, Issue 4, 2014-11

ANSI C63.10, 2013

Test scope....: complete Radio compliance test

Equipment under test (EUT):

Product description Remote Control for Liftup A/S products

С

Model No. Remote 2

Additional Model(s) None
Brand Name(s) Liftup

Firmware / Software version 0.13

FCC-ID: 2AK8H-REMOTE2 IC: 22516-REMOTE2

Test result Passed



Product Service

Possible test case verdicts:

- 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.....: 2018-07-04

Compiled by Sebastian Suckow

(....)

Approved by (+ signature)......

(Deputy Head of Lab)

Toralf Jahn

Date of issue 2018-09-14

Total number of pages 81

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	2018-08-17	Initial Release	
02	2018-09-14	HVIN/PMN updated	S. Suckow



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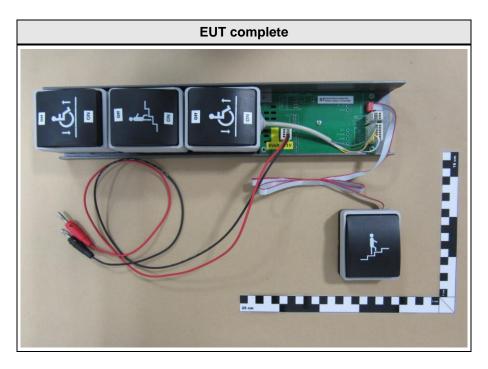


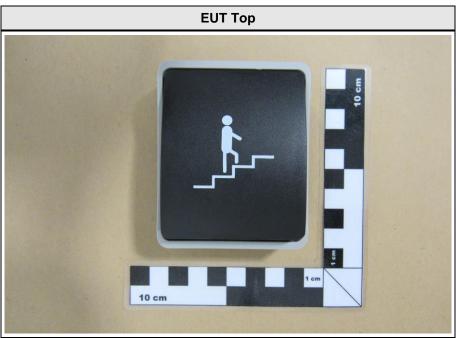
1 Equipment (Test item) Description:

Description	Remote Contro	ol for	Liftup A/S products	
Model	Remote 2			
Additional Model(s)	None			
Brand Name(s)	Liftup			
Serial number	None			
Hardware version	С			
Software / Firmware version	0.13			
PMN	REMOTE2			
HVIN	REMOTE2			
FVIN	N/A			
HMN	N/A			
FCC-ID	2AK8H-REMO	TE2		
IC	22516-REMOT	E ₂		
Equipment type	End product			
Radio type	Transceiver			
Radio technology	custom			
Operating frequency range	2410 - 2460 MHz			
Assigned frequency band	2400 - 2483.5 MHz			
	F _{LOW}		2410 MHz	
Frequency range	F _{MID}		2435 MHz	
	F _{HIGH}		2460 MHz	
Spreading	None			
Modulations	GFSK			
Number of channels	3			
Channel spacing	25 MHz			
Number of antennas	1	1		
	Туре		grated	
Antenna	Model	PCE	3	
7 III O III G	Manufacturer	-	ıp A/S	
	Gain	0.72	2 dBi	
	Liftup A/S			
Manufacturer	Hagensvej 21			
	DK- 9530 Støvring			
	DENMARK		2.0.VDC	
Dawer aumah	V _{NOM}		3.0 VDC	
Power supply	V _{MIN}		N/A	
	V _{MIN}		N/A	



1.1 Photos – Equipment External

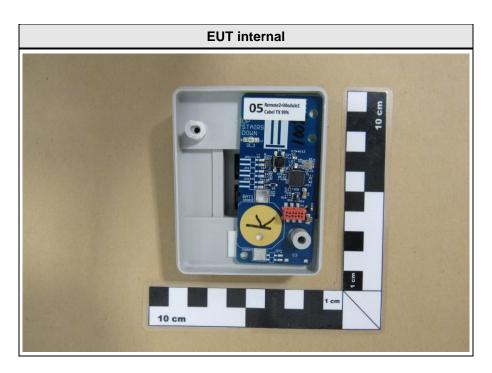


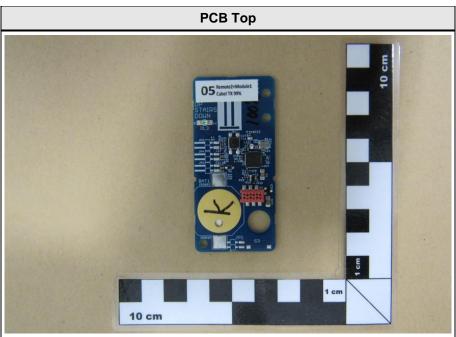


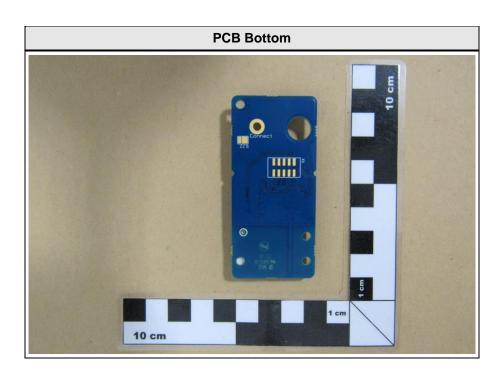




1.2 Photos – Equipment internal

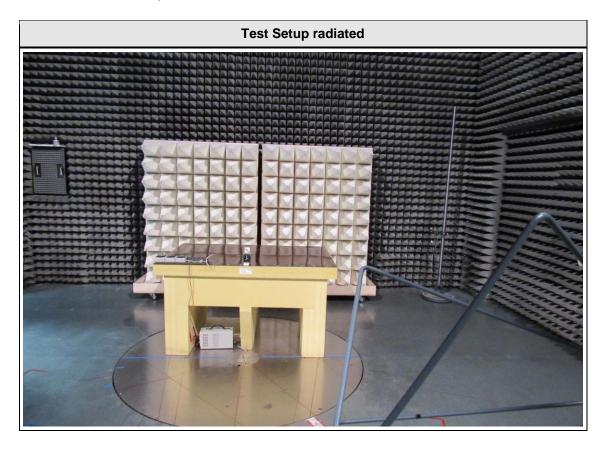








1.3 Photos – Test setup





1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments				
	None							
*Note: Use	*Note: Use the following abbreviations:							
AE:	AE : Auxiliary/Associated Equipment, or							
SIM:	SIM : Simulator (Not Subjected to Test)							
CABL:	Connecting cables							



1.5 Test Modes

Mode #	Description				
	General conditions:	Specially prepared test mode with 100% duty cycle.			
Transmit	Radio conditions:	Mode = standalone transmit Modulation = GFSK Power level = Maximum			
	General conditions:	EUT powered by fully charged battery			
Receive	Radio conditions:	Mode = standalone receive Modulation = GFSK			



1.6 Test Equipment Used During Testing

Measurement Software					
Description	Manufacturer	Name	Version		
EMC Test Software	Dare Instruments	Radimation	2015.2.4		

Occupied Bandwidth							
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due		
Spectrum analyzer	R&S	FSU 26	EF01003	2017-07	2018-07		

Duty Cycle							
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due		
Spectrum analyzer	R&S	FSU 26	EF01003	2017-07	2018-07		

Field strength emissions							
Description Manufacturer Model Identifier Cal. Date Cal. D							
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-		
MXE EMI Receiver	Keysight Technologies	N9038A- 526/WXP	EF01070	2017-08	2018-08		
Biconical Antenna	R&S	HK 116	EF00203	2018-06	2020-06		
LPD Antenna	R&S	HL 223	EF00187	2016-05	2019-05		
Horn antenna	Schwarzbeck	BBHA 9120D	EF00019	2016-09	2018-09		



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

Limit (dB μ V/m) = 20*log (μ 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:

Reading + AF = Net Reading : Net reading - FCC limit = Margin 21.5 dB μ V + 26 dB = 47.5 dB μ V/m : 47.5 dB μ V/m - 57.0 dB μ V/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 15.35(c) RSS-Gen 6.10	Duty Cycle	ANSI C63.10	N/R	Informational only				
FCC 15.249(a),(c),(e) RSS-210 B.10(a)	Fundamental field strength emissions	ANSI C63.10	PASS					
FCC 15.249(a),(c),(d),(e) RSS-210 B.10(b)	Emission radiated outside the specified frequency band	ANSI C63.10	PASS					
RSS-Gen 7.1	Receiver radiated spurious emissions	ANSI C63.10	PASS					
FCC § 15.207 RSS-Gen 8.8	AC power line conducted emissions	ANSI C63.10	N/R					



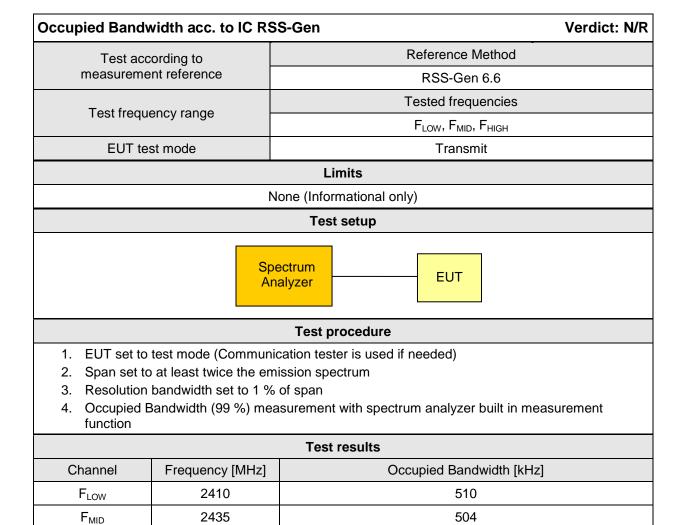
3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied Bandwidth

2460

FHIGH

Comments:



Test Report No.: G0M-1805-7423-TFC249-V02

509



Occupied Bandwidth - FLOW

Occupied Bandwidth acc. to ISED RSS-Gen 6.6

Project Number: G0M-1805-7423

Applicant: Liftup A/S

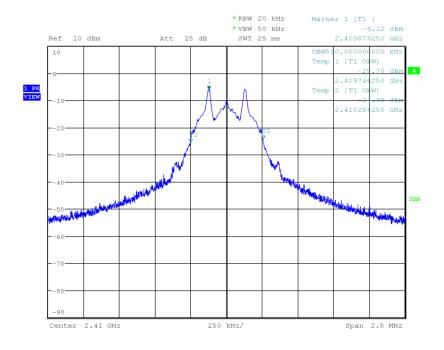
Model Description: Remote for Liftup A/S products

Model: Remote 2
Test Sample ID: 19142
Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2018-07-09
Operating Conditions: Tnom/Vnom

Mode: TX 2410 MHz GFSK



Date: 9.JUL.2018 09:52:13



Occupied Bandwidth - F_{MID}

Occupied Bandwidth acc. to ISED RSS-Gen 6.6

Project Number: G0M-1805-7423

Applicant: Liftup A/S

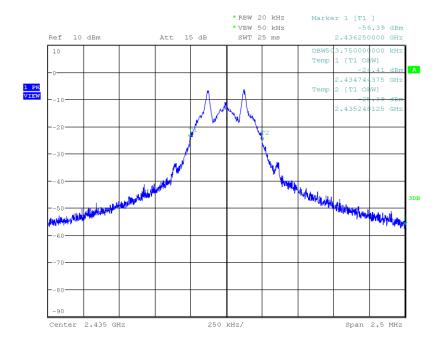
Model Description: Remote for Liftup A/S products

Model: Remote 2
Test Sample ID: 19142
Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2018-07-09
Operating Conditions: Tnom/Vnom

Mode: TX 2435 MHz GFSK



Date: 9.JUL.2018 09:55:30



Occupied Bandwidth - FHIGH

Occupied Bandwidth acc. to ISED RSS-Gen 6.6

Project Number: G0M-1805-7423

Applicant: Liftup A/S

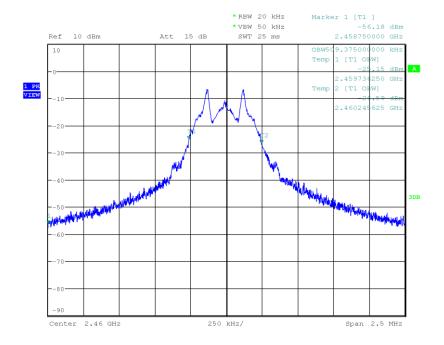
Model Description: Remote for Liftup A/S products

Model: Remote 2
Test Sample ID: 19142
Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

Test Date: 2018-07-09
Operating Conditions: Tnom/Vnom

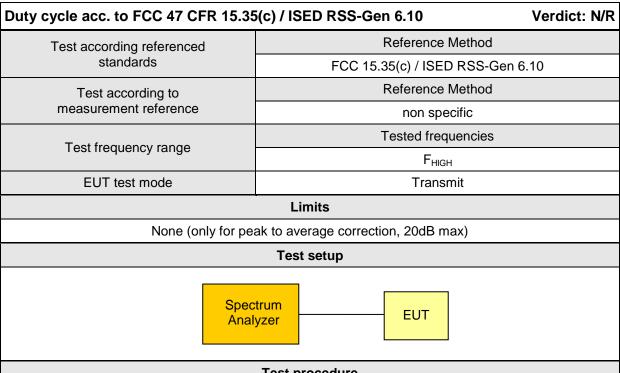
Mode: TX 2460 MHz GFSK



Date: 9.JUL.2018 09:54:12



3.2 Test Conditions and Results - Duty Cycle



Test procedure

- 1. EUT set to test mode
- 2. Center frequency is set to test frequency
- 3. Span it set to zero span
- 4. Resolution bandwidth is set large enough to accurately capture transmission bursts
- 5. Total transmission time is measured

	Test results						
Channel	Frequency [MHz]	Duty Cycle [% @ 100ms]	Duty Cycle correction [dB]				
F _{HIGH}	2460	1	40 -> 20				

Comments: Duty cycle correction is used if pulsed operation is employed and field strength limits are expressed in terms of average value.

Duty Cycle - F_{HIGH}

Duty Cycle

Project Number: G0M-1805-7423

Applicant: Liftup A/S

Model Description: Remote Control for Liftup A/S products

Model: Remote 2
Test Sample ID: 16140

Reference Standards: ANSI C63.10:2013

Reference Method: ANSI C63.10:2013, Section 7.5

Operating Frequency: 2460 MHz
Operating Conditions: Tnom/Vnom
Operator: S. Suckow

Test Site: Eurofins Product Service GmbH

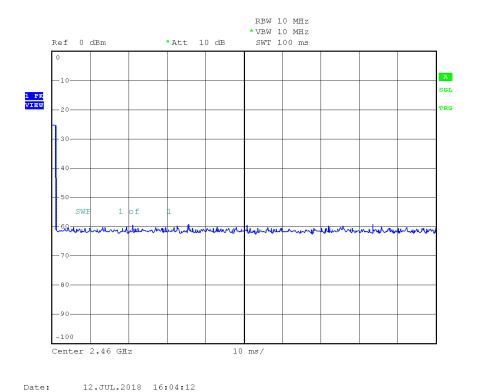
Test Date: 2018-07-12

Duty Cycle Period: 100

Maximum Duty Cycle: 0.01

Maximum Duty Cycle [%]: 1

Duty Cycle Correction [dB]: -40.00



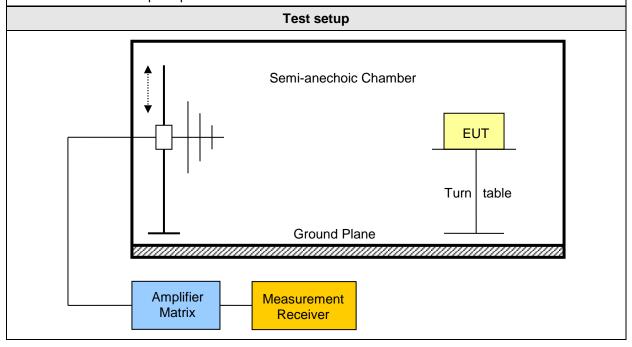


3.3 Test Conditions and Results - Fundamental field strength emissions

Field strength emissions acc. to FCC 47 CFR 15.249 / IC RSS-210 Verdict: N/R						
Test according refe	renced	Reference Method				
standards		FCC 1	5.249(a),(c),(e) / IC	RSS-210 B.10(a)		
Test according	to		Reference Me	thod		
measurement refe	erence	ANSI C63.10				
Toot fraguency r	200	Tested frequencies				
Test frequency ra	ange	F _{LOW} , F _{MID} , F _{HIGH}				
EUT test mod	le	Transmit				
		Limits				
Frequency range [MHz]	Detector	Limit [mV/m]	Limit [dBµV/m]	Limit Distance [m]		
902 – 928	Quasi-Peak	50	94	3		
2400 – 2483.5	Average	50	94	3		
5725 - 5875	Average	50	94	3		

FCC 15.249(e): for frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Below 1GHz a CISPR quasi-peak detector is used.





Test procedure

- 1. EUT set to test mode
- 2. Span it set according to measurement range
- 3. Below 1 GHz the resolution bandwidth is set according to CISPR 16 to 120 kHz with peak/quasi-peak detector.
- 4. Above 1 GHz the resolution bandwidth is set to 1 MHz with peak/average detector. Pulsed emissions are averaged over 100 ms with duty cycle correction.
- 5. Markers are set to maximum emission levels

Test results pulsed emissions > 1 GHz											
Channel	Frequency [MHz]	Pol.	Peak Level [dBµV/m]	Duty Cycle Correct. [dB]	Average Level [dBµV/m]	Average Limit [dBµV/m]	Limit distance [m]*	Margin [dB]			
F_{LOW}	2410	hor	86.41	20	66.41	94	3	-27.59			
F_{LOW}	2410	ver	98.07	20	78.07	94	3	-15.93			
F _{MID}	2435	hor	90.49	20	70.49	94	3	-23.51			
F _{MID}	2435	ver	96.60	20	76.60	94	3	-17.40			
F _{HIGH}	2460	hor	90.64	20	70.64	94	3	-23.36			
F _{HIGH}	2460	ver	96.32	20	76.32	94	3	-17.68			

Comments: * Physical distance between EUT and measurement antenna.

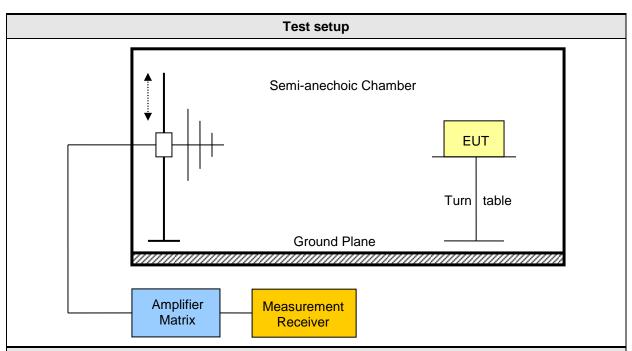


3.4 Test Conditions and Results – Emissions radiated outside the specified frequency band

Radiated out-of-band band emissions acc. to FCC 47 CFR 15.249 / IC RSS-210 Verdict: PASS								
Test according refe	erenced	Reference Method						
standards		FCC 15.249(a),(c),(d),(e) / IC RSS-210 B.10(b)						
Test according	g to		Reference Method	d				
measurement ref	erence		ANSI C63.10					
Toot fraguancy	-0000		Tested frequencie	s				
Test frequency i	ange	30 MHz – 10 th harmonic						
EUT test mod	de	Transmit						
Limits - Harmonics								
The field strength of harmonic emissions, measured at 3 m, shall not exceed 500 μV/m (54 dBμV/								
	L	_imits - General						
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	216 – 960 Quasi-Peak		46	3				
960 – 1000	960 – 1000 Quasi-Peak		54	3				
> 1000	Average	500	54	3				

For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Except the higher order harmonics, emission radiated outside the specified frequency band shall be attenuated by at least 50 dB below the level of the fundamental or to the general field strength limits listed in 15.209 / RSS-Gen, whichever is less stringent.



Test procedure

- 1. EUT set to test mode
- 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 maximum emission levels

Test results										
Channel	Frequency [MHz]	Emission [MHz]	Level [dBµV/m]	Detector	Pol.	Limit [dBµV/m]	Margin [dB]			
F _{LOW}	2410	4819	41.37	pk	hor	74.00	-32.63			
F _{MID}	2435	4867	41.52	pk	hor	74.00	-32.48			
F _{HIGH}	2460	4919	42.09	pk	hor	74.00	-31.91			

Comments: * Physical distance between EUT and measurement antenna.



3.5 Test Conditions and Results - Receiver radiated emissions

Receiver radiated emis	sions acc.	to I	C RSS-210			Verdict: PASS				
Test according refere	enced	Reference Method								
standards				RSS-Gen 7.1						
Test according to		Reference Method								
measurement refere	ence			ANSI C63.10						
Test frequency ran	Toot frequency range			Tested frequencies						
rest frequency far	Test frequency range			30 MHz – 5 th Harmonic						
EUT test mode				Receive						
			Limits							
Frequency range [MHz]	Detector	•	Limit [µV/m]	Limit [dBµV/n	n]	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							
			Semi-anechoic Cl		JT tab	le				
Ground Plane										
Amplifier Measurement Receiver										



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]	Level [dBµV/m]	Detector	Pol.	Limit [dBµV/m]	Margin [dB]			
F _{MID}	2435	36.0049	37.30	qpk	ver	40.00	-02.70			

The stated emission level corresponds to ambient noise floor. No real spurious emission has been measured.



ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.249

Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC

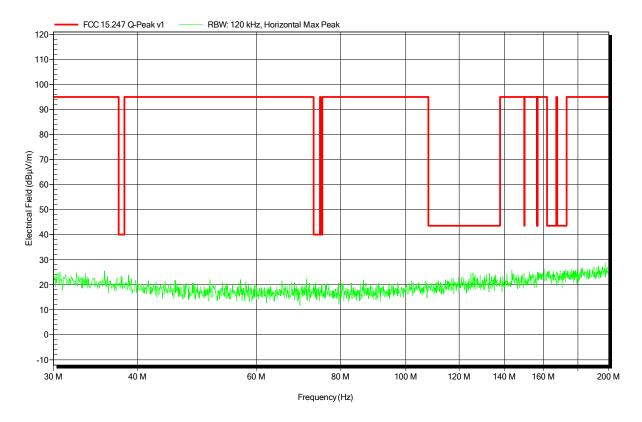
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS, 2410 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

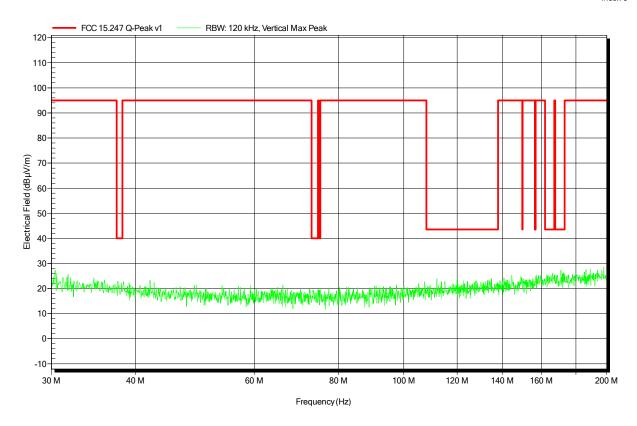
Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; FHSS, 2410 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

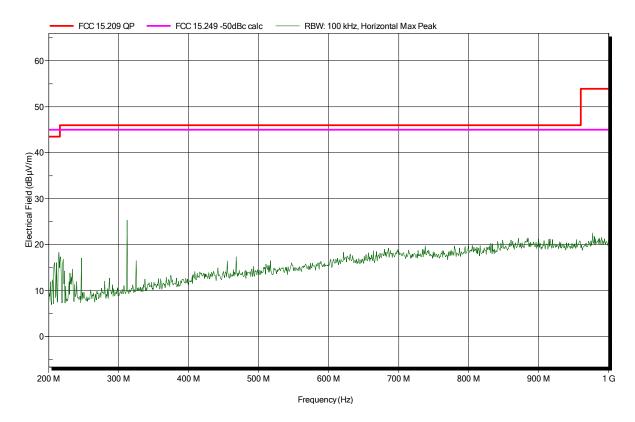
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

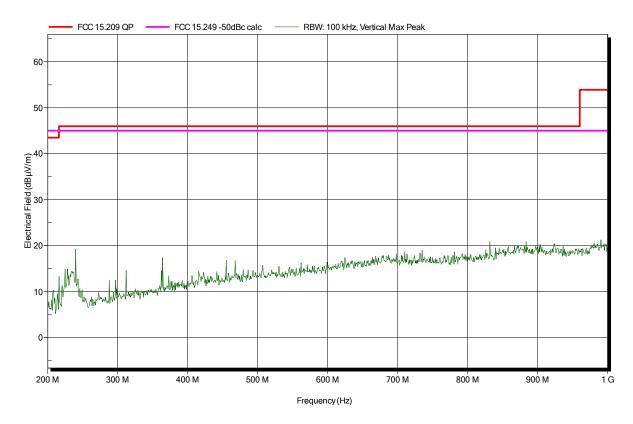
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

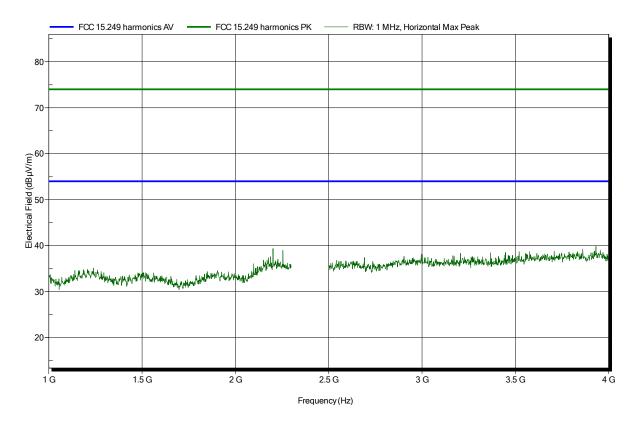
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

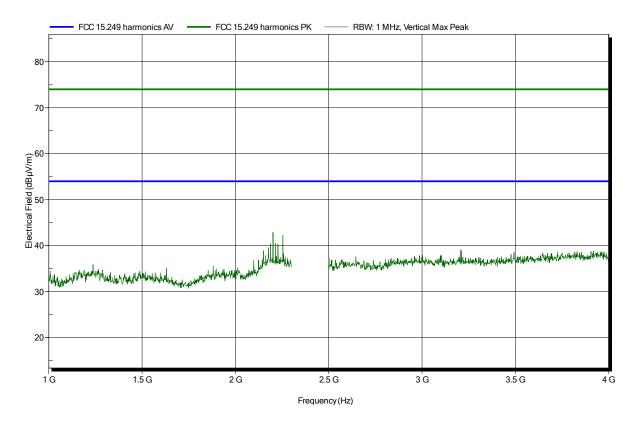
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

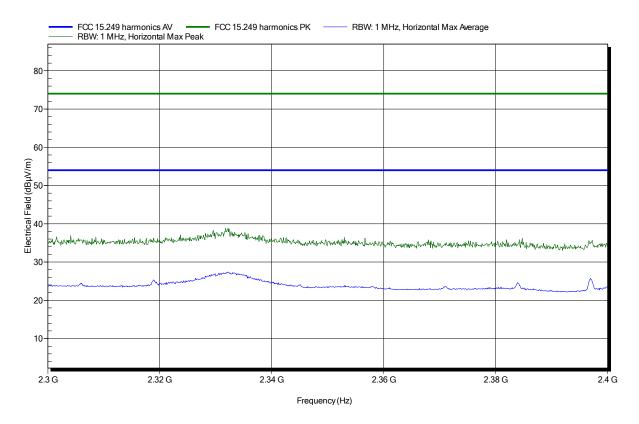
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

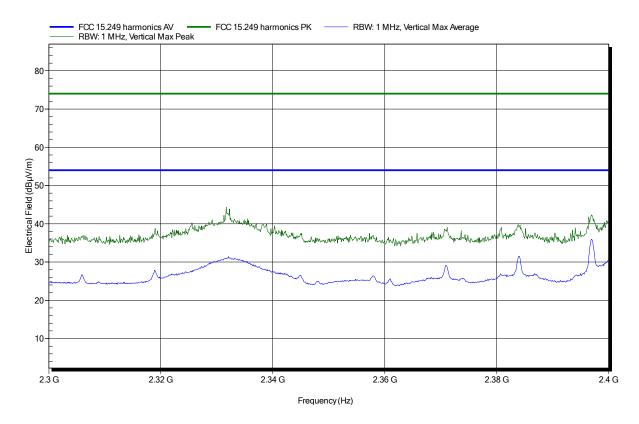
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

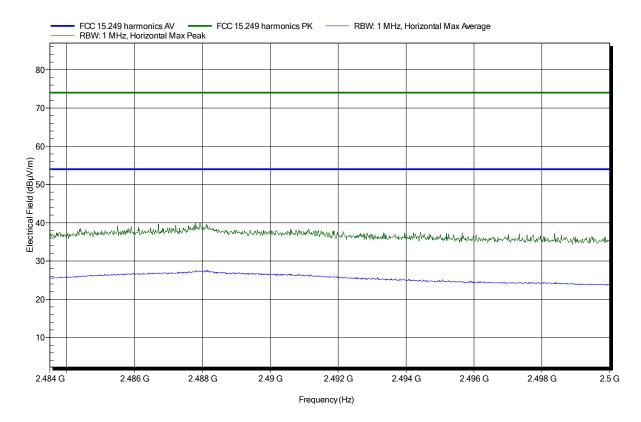
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

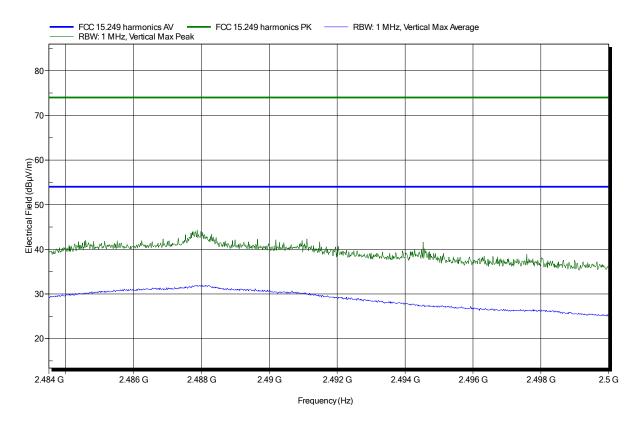
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

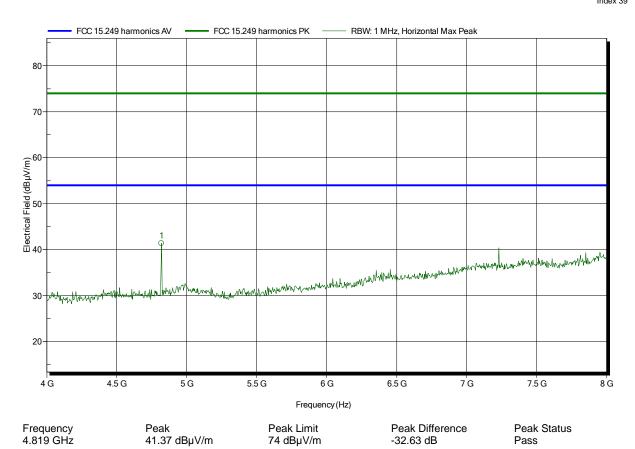
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

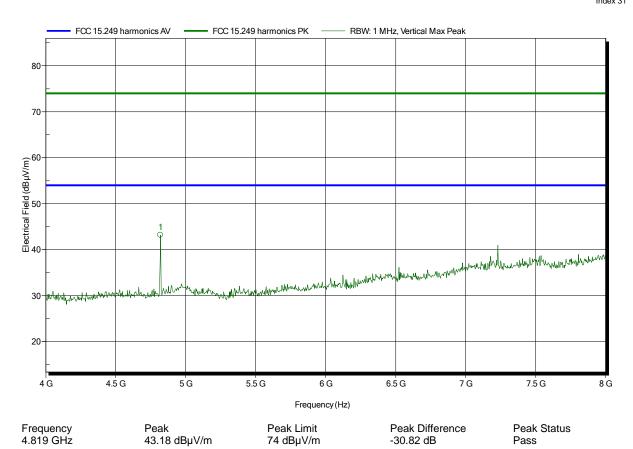
Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:

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Test Report No.: G0M-1805-7423-TFC249-V02



Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

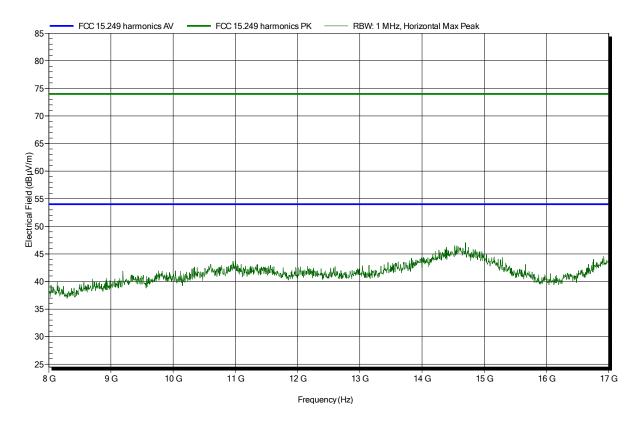
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

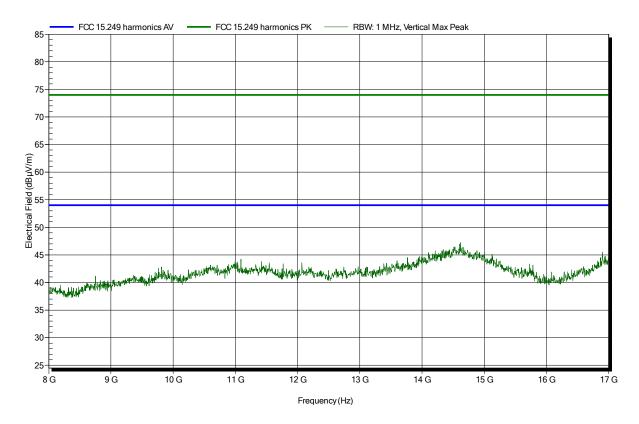
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

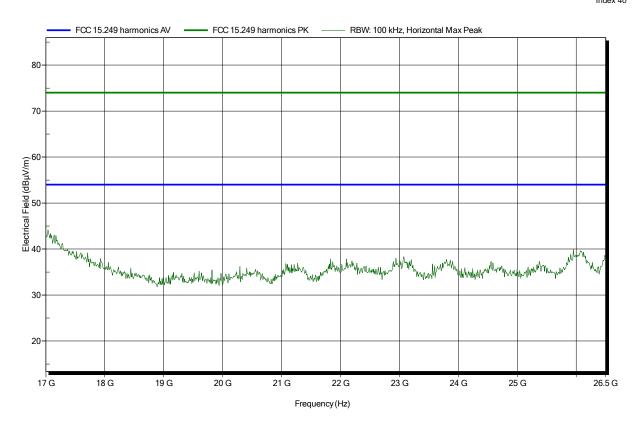
Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz Test Date: 2018-07-12

Test Date: Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

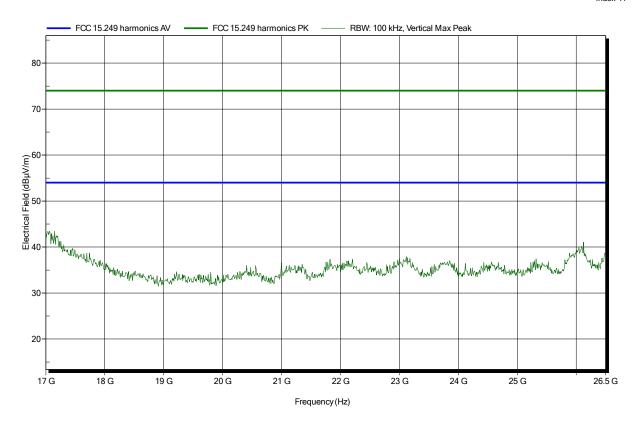
Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2410 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC

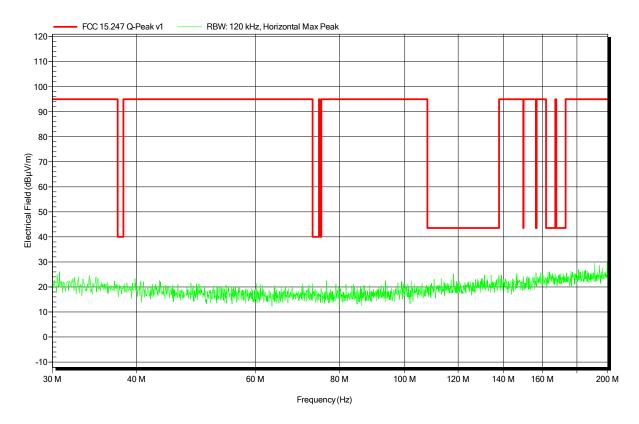
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS, 2435 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

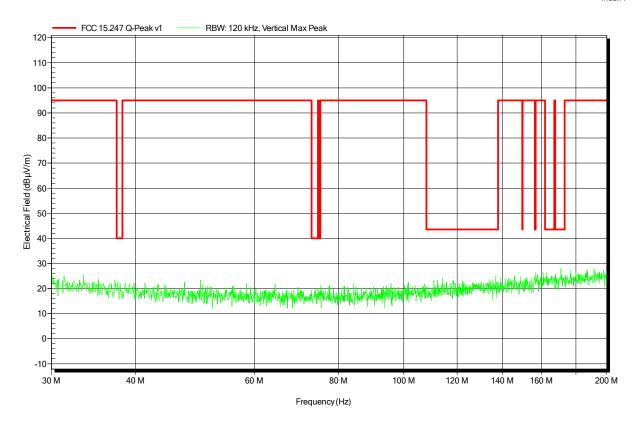
Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; TX, FHSS, 2435 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

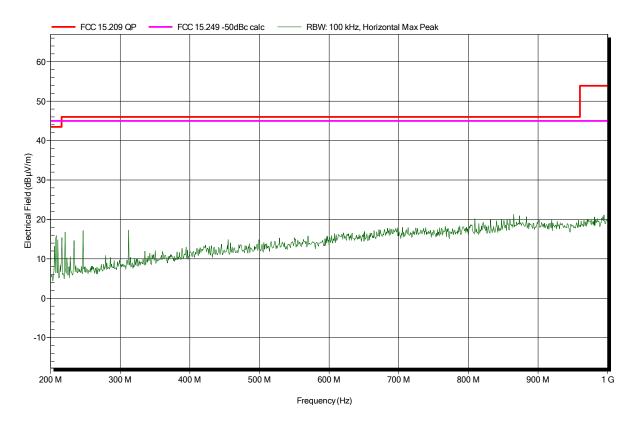
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

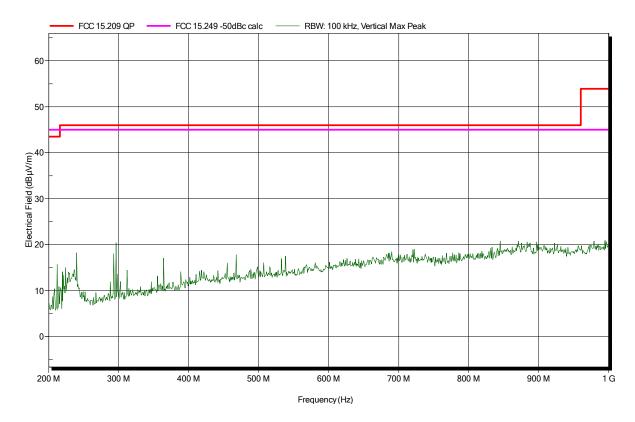
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

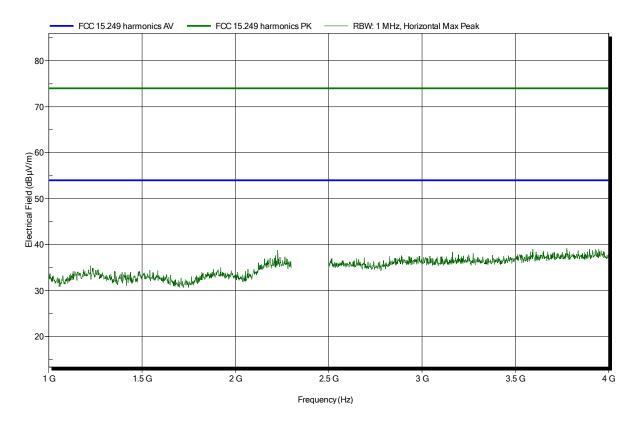
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

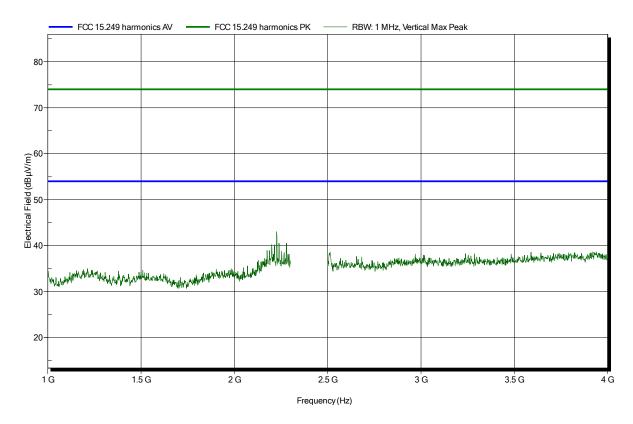
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

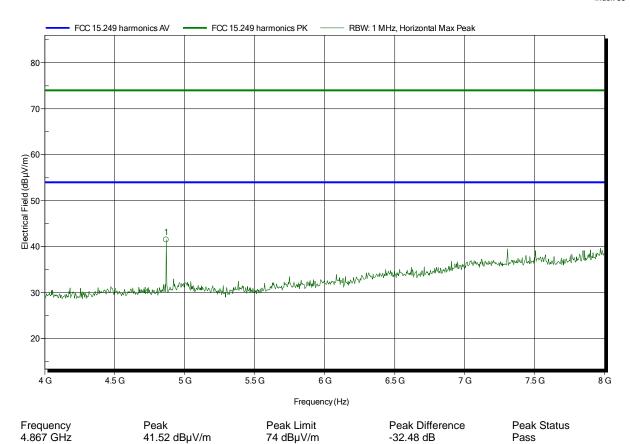
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

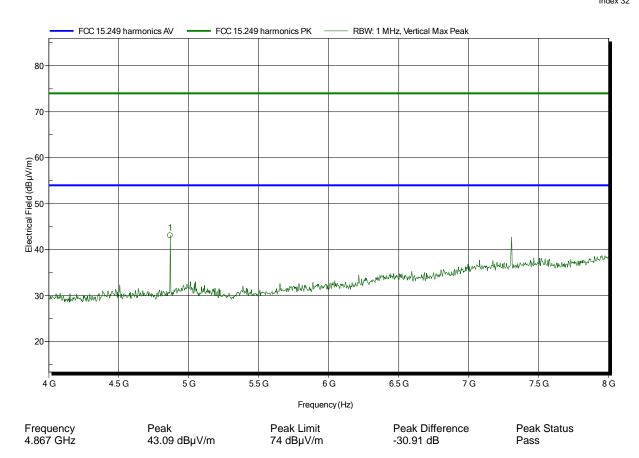
Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:

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Test Report No.: G0M-1805-7423-TFC249-V02



Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

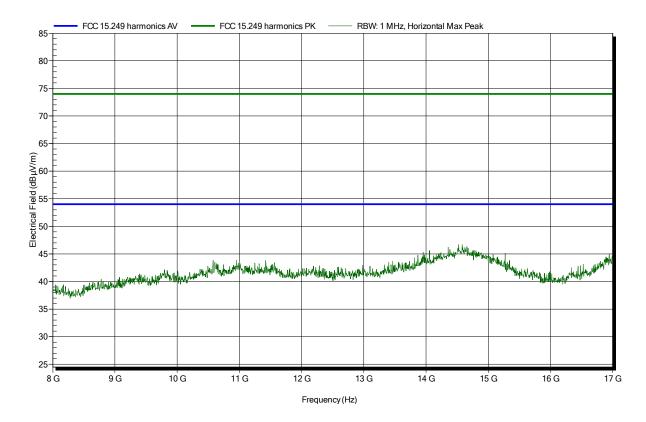
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

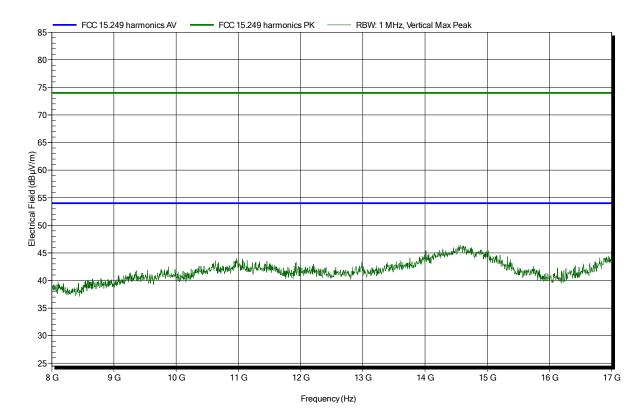
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

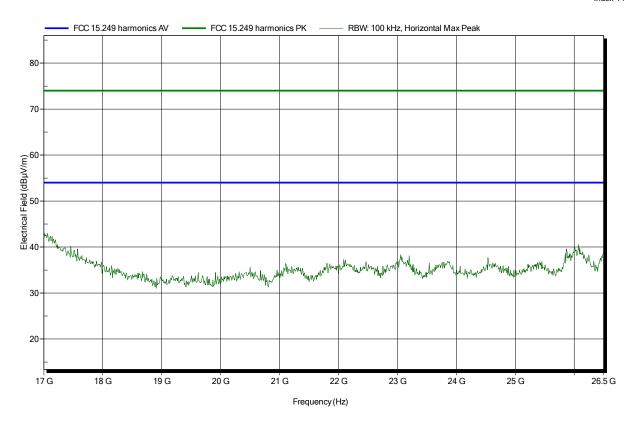
Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

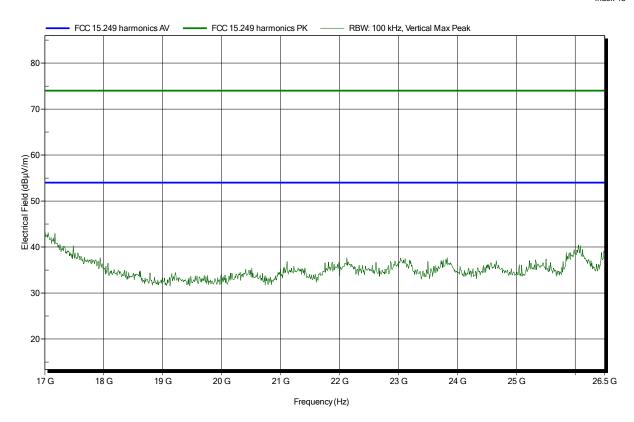
Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 24°C, Vnom: 6 VDC

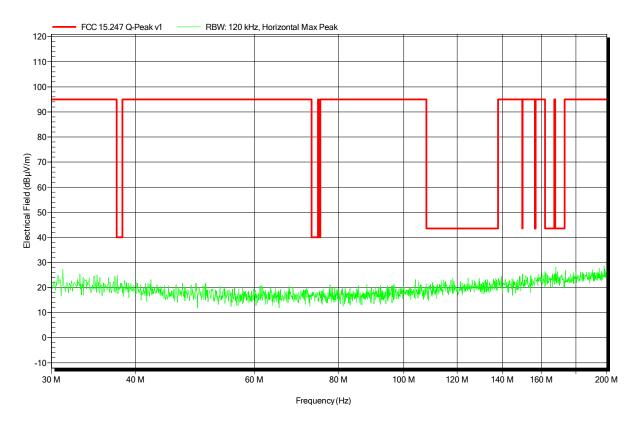
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 24°C, Vnom: 6 VDC

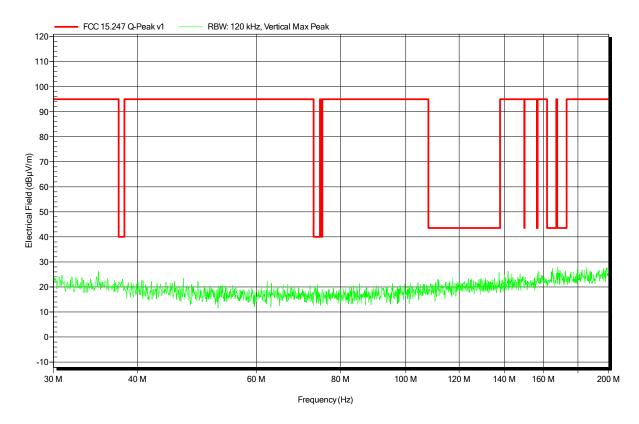
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-13

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

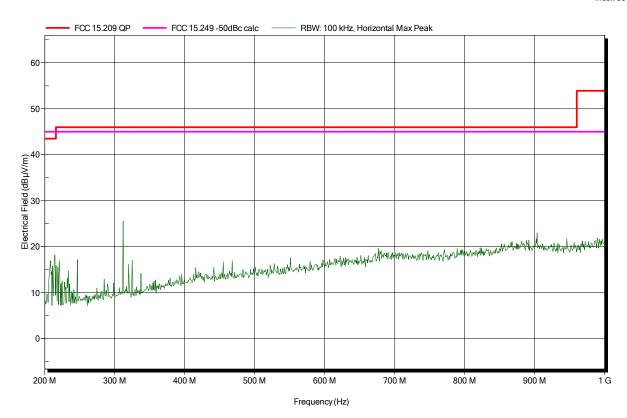
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

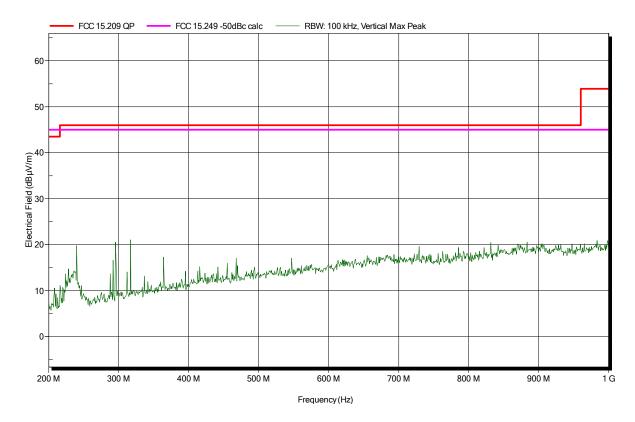
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

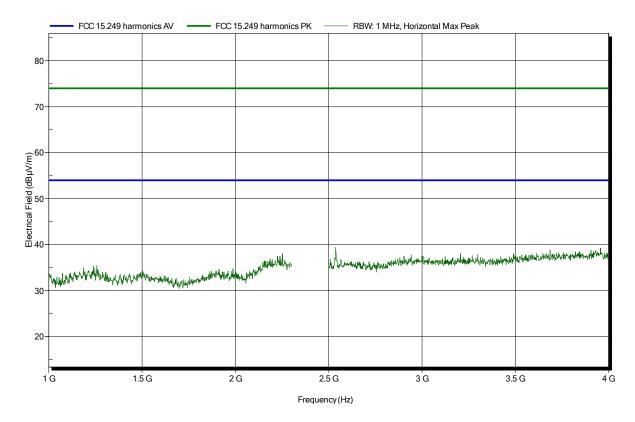
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

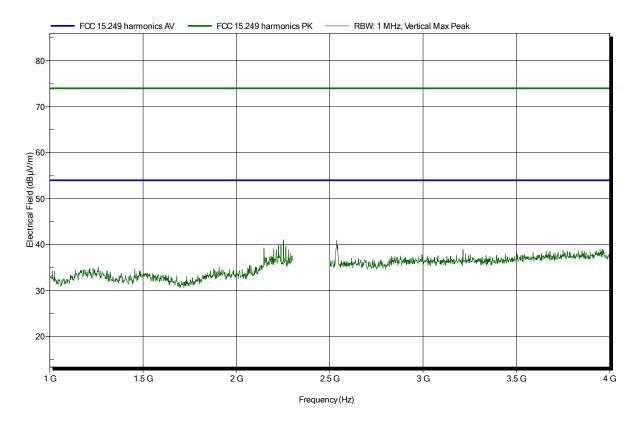
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

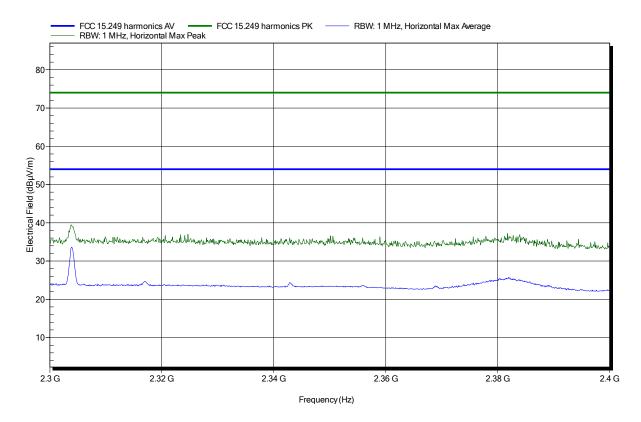
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Schwarzbeck BBHA 9120D, Vertical

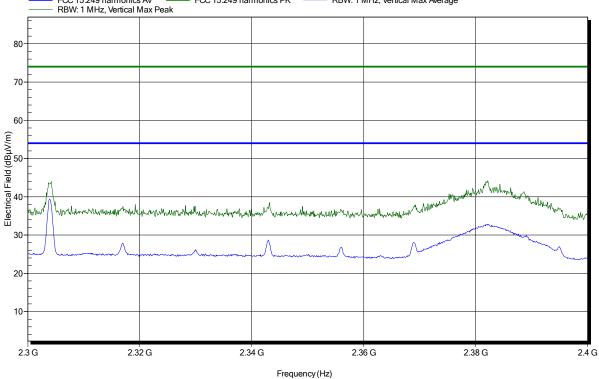
Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:

FCC 15.249 harmonics AV FCC 15.249 harmonics PK RBW: 1 MHz, Vertical Max Average RBW: 1 MHz, Vertical Max Peak





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

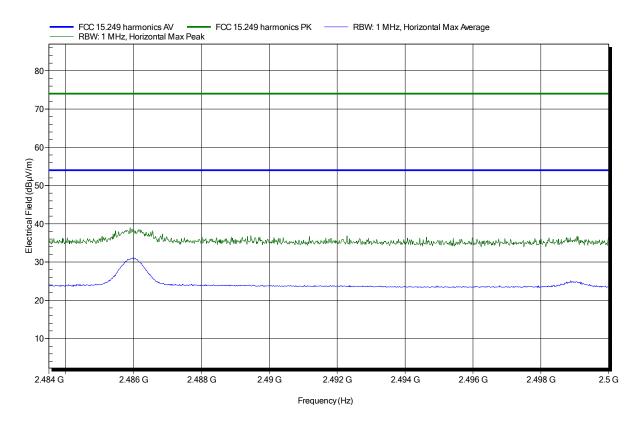
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

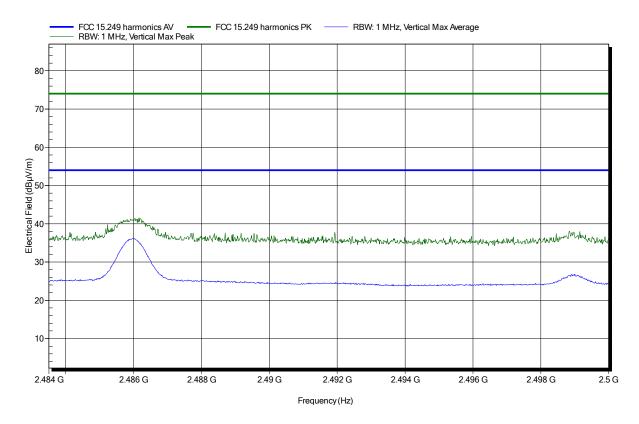
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Sebastian Suckow Operator:

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

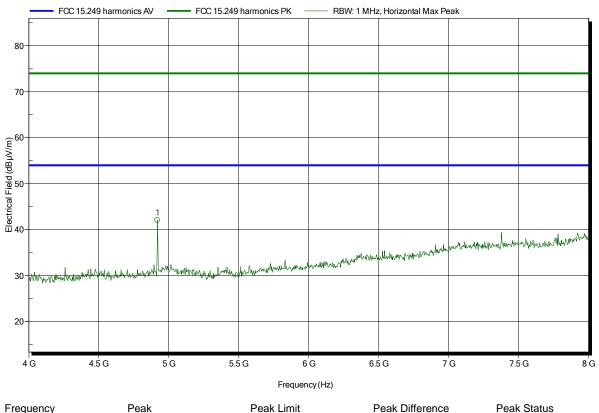
Measurement distance: 1 m converted to 3m

TX; FHSS GFSK 2460 MHz Mode:

Test Date: 2018-07-12

Note:

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4.919 GHz

Peak 42.09 dBµV/m Peak Limit 74 dBµV/m Peak Difference -31.91 dB

Peak Status **Pass**

Frequency 4.919 GHz



Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

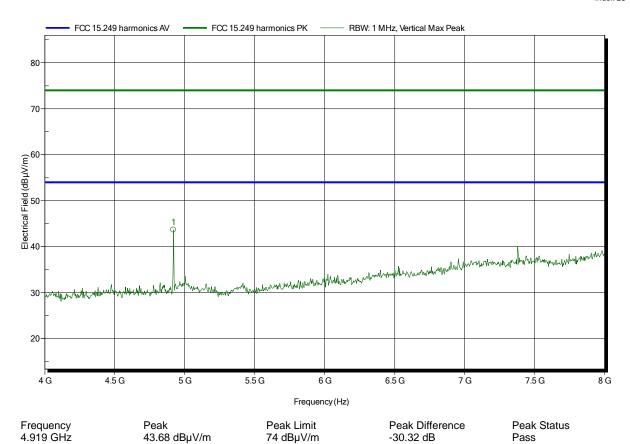
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

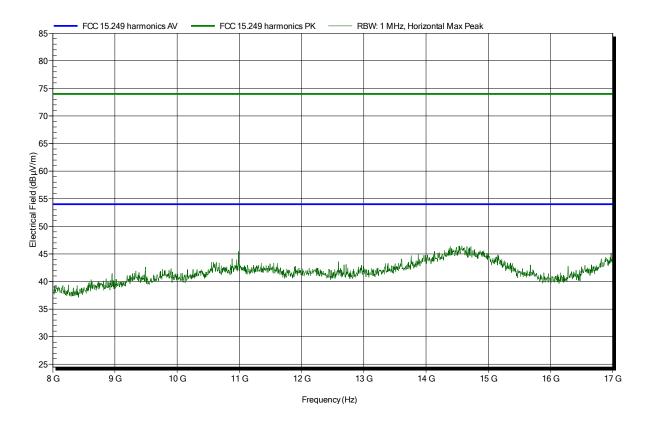
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

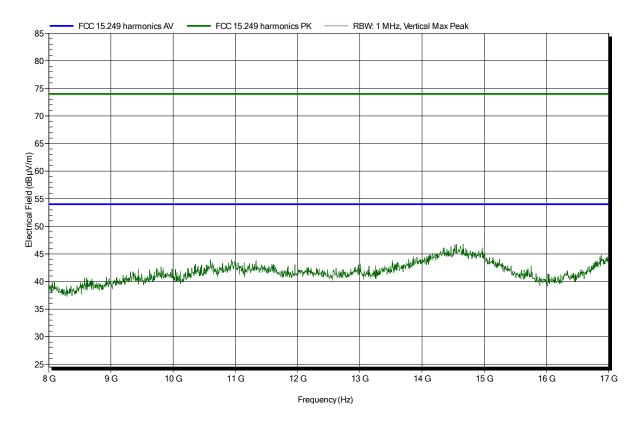
Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

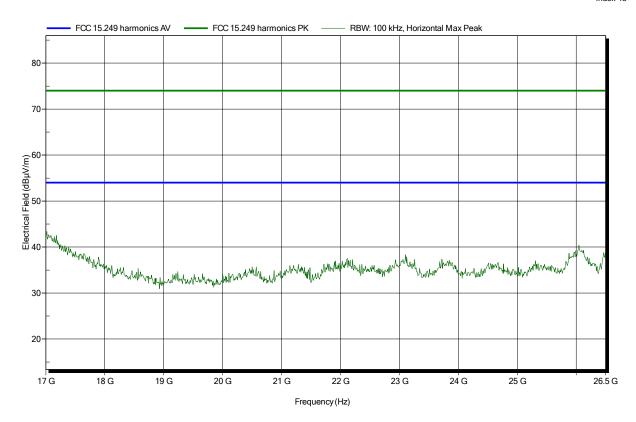
Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7423

Applicant: Liftup A/S

EUT Name: Remote for Liftup A/S products

Model: Remote 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 25°C, Vnom: 3.0 VDC

Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),

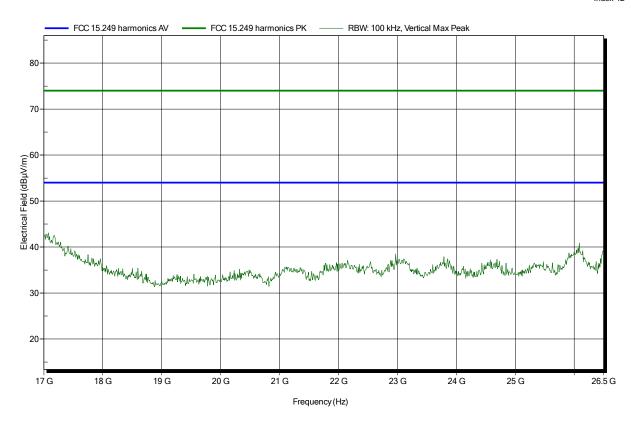
Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; FHSS GFSK 2460 MHz

Test Date: 2018-07-12

Note:





ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-Gen

Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC

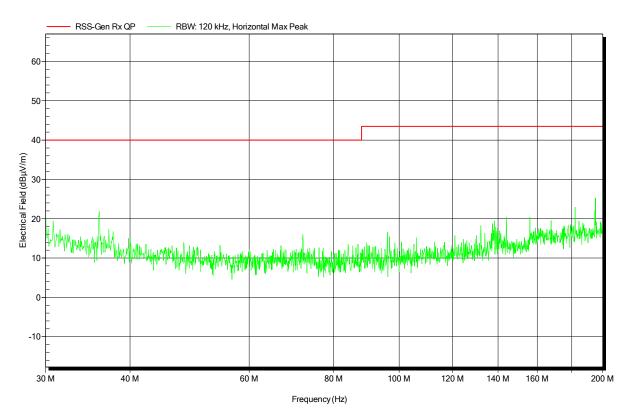
Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-13

Note:





Spurious emissions according to RSS-Gen

Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Mr. Suckow

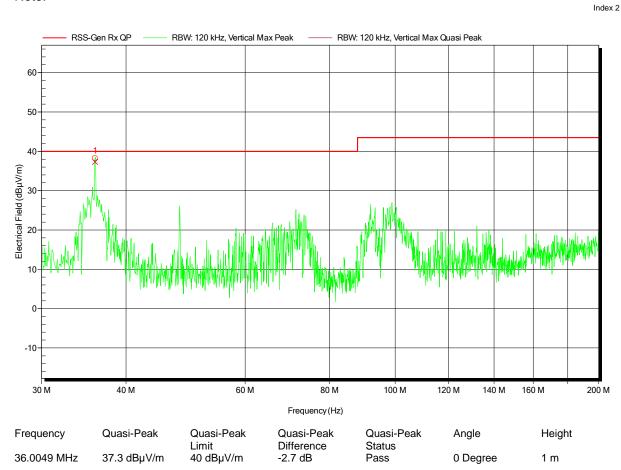
Test Conditions: Tnom: 24°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-13

Note:



Test Report No.: G0M-1805-7423-TFC249-V02



Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC

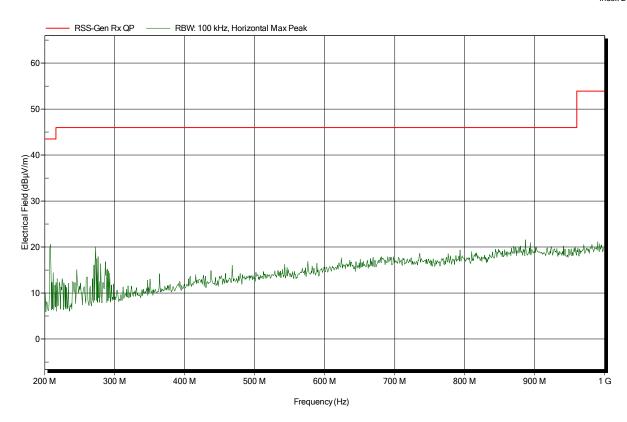
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

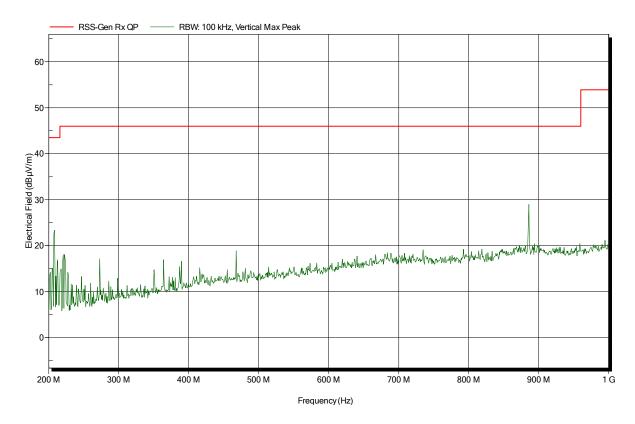
Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC

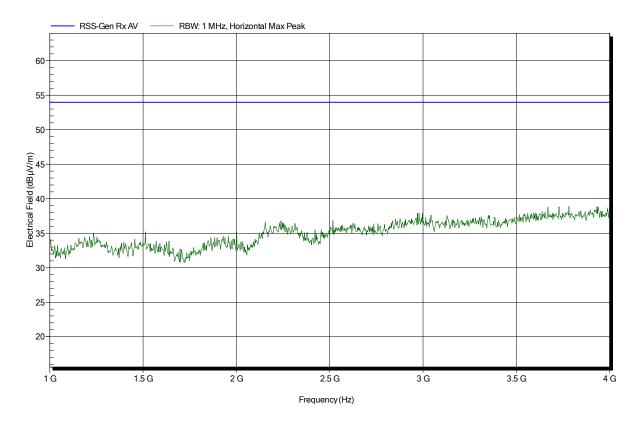
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

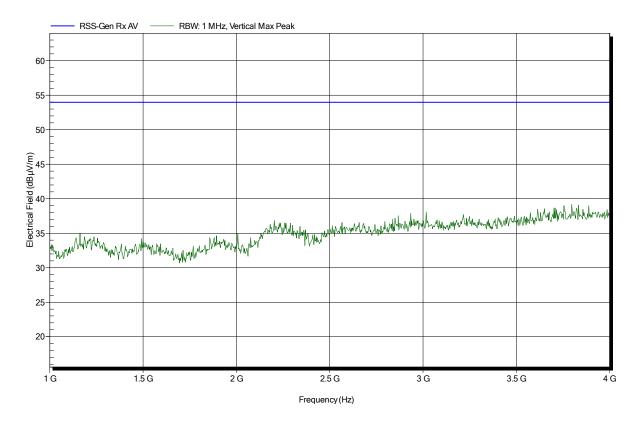
Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC

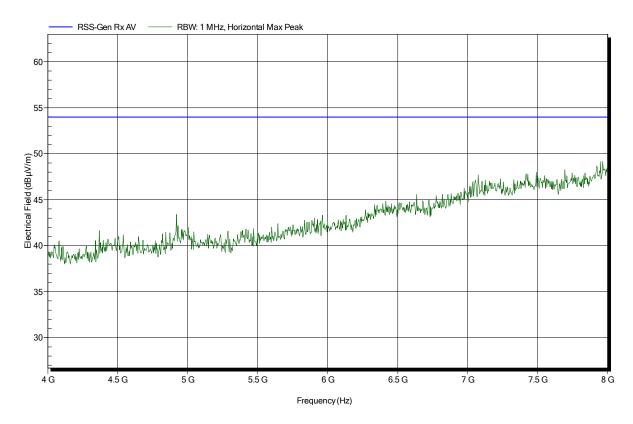
Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC

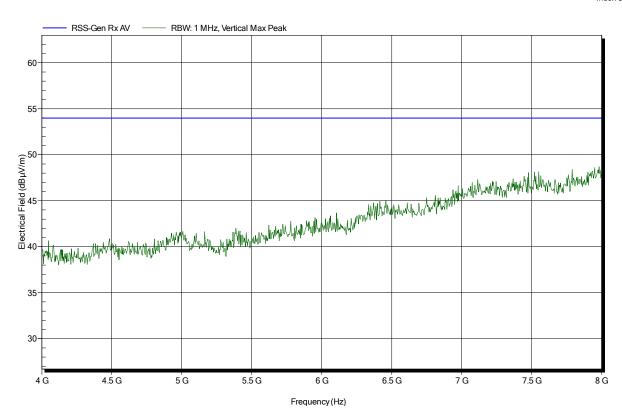
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

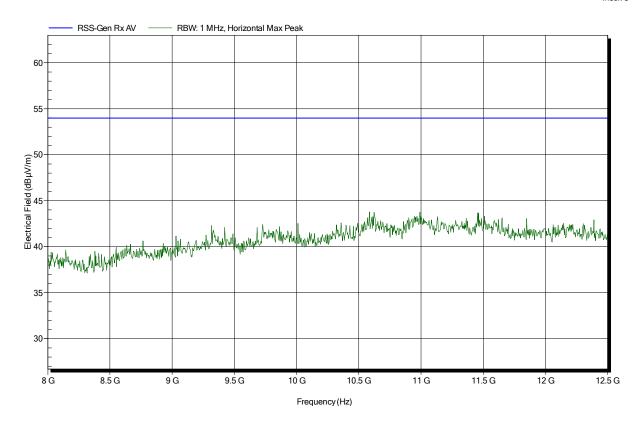
Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC

Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:





Project number: G0M-1805-7424

Applicant: Liftup A/S

EUT Name: Remote Control for Liftup A/S products

Model: REMOTE 2

Test Site: Eurofins Product Service GmbH

Operator: Sebastian Suckow

Test Conditions: Tnom: 26°C, Vnom: 3.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m Mode: RX; FHSS, 2435 MHz

Test Date: 2018-07-12

Note:

