eurofins | Product Service

FCC TEST REPORT

FCC 47 CFR Part 15C
Industry Canada RSS-210

Intentional radiator operating within the 2400 – 2483.5 MHz band

Report Reference No. ..... :	G0M21008-3591-TFC249D-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 ..... :	Saxonar GmbH
Address ..... :	Hauptstraße 54 02906 Waldhufen OT Nieder Seifersdorf GERMANY
Test specification:	
Standard..... :	47 CFR Part 15C RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 3, 2010-12 ANSI C63.4:2009
Equipment under test (EUT):	
Product description	power2max
Model No.	P0004-6-A
Hardware version	BCD0004-6-A
Firmware / Software version	1.6
	FCC-ID: ZQ2-000406A IC: 9766A-000406A
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:

Date of receipt of test item	2011-06-12	
Date (s) of performance of tests	2011-06-12	
Compiled by	Christian Weber	
Tested by (+ signature) (Testing Manager)	Christian Weber	C. Weber
Approved by (+ signature) (Test Lab Manager)	Jens Zimmermann	
Date of issue	2012-04-19	
Total number of pages	58	

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:

REPORT INDEX

1 EQUIPMENT (TEST ITEM) DESCRIPTION: 4

1.1 Photos – Equipment External 5
1.2 Photos – Equipment internal 8
1.3 Photos – Test setup 10
1.4 Supporting Equipment Used During Testing 11
1.5 Test Modes 12
1.6 Test Equipment Used During Testing 13
1.7 Sample emission level calculation 14

2 RESULT SUMMARY 15

3 TEST CONDITIONS AND RESULTS 16

3.1 Test Conditions and Results – Occupied Bandwidth 16
3.2 Test Conditions and Results – Fundamental field strength emissions 18
3.3 Test Conditions and Results – Emissions radiated outside the specified frequency band 20
3.4 Test Conditions and Results – Receiver radiated emissions 22

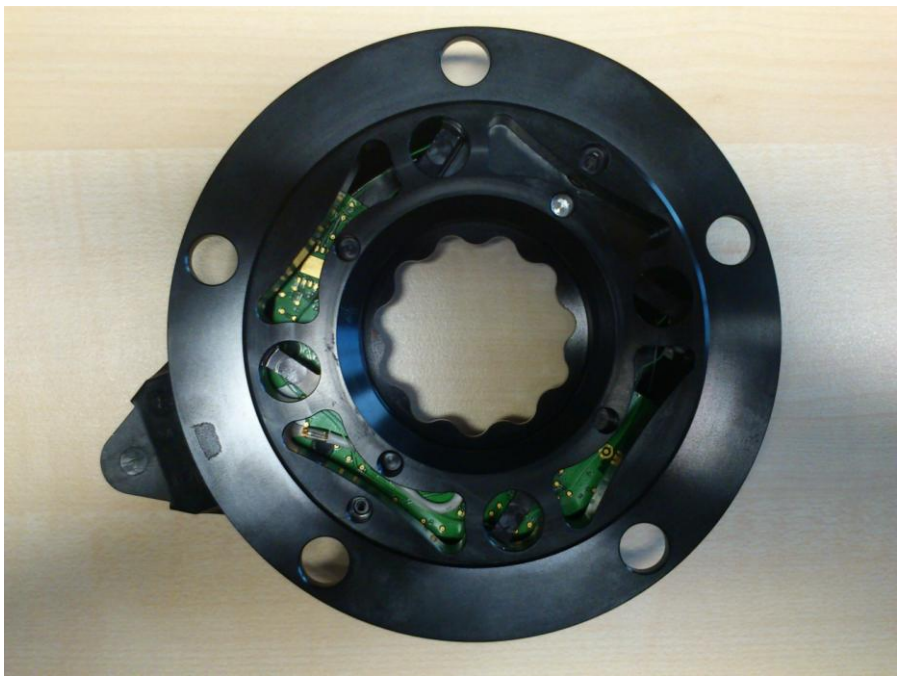
ANNEX A Transmitter fundamental field strength 24
ANNEX B Transmitter out-of-band emissions 33
ANNEX C Receiver radiated spurious emissions 50

1 Equipment (Test item) Description:

Description	power2max	
Model	P0004-6-A	
Serial number	None	
Hardware version	BCD0004-6-A	
Software / Firmware version	1.6	
FCC-ID	ZQ2-000406A	
IC	9766A-000406A	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	custom	
Operating frequency range	2457MHz	
Assigned frequency band	2400 - 2483.5MHz	
Frequency range	F_{MID}	2457MHz
Spreading	None	
Modulations	FSK	
Number of channels	1	
Channel spacing	None	
Number of antennas	1	
Antenna	Type	integrated
	Model	printed inverted-F antenna
	Manufacturer	Saxonar GmbH
	Gain	-5.0dBi
Manufacturer	Saxonar GmbH Hauptstraße 54 02906 Waldhufen OT Nieder Seifersdorf GERMANY	
Power supply	V_{NOM}	3.0VDC (Lithium-Battery)
	V_{MIN}	N/A
	V_{MIN}	N/A
AC/DC-Adaptor	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A

1.1 Photos – Equipment External

EUT TOP - 110MM VARIANT

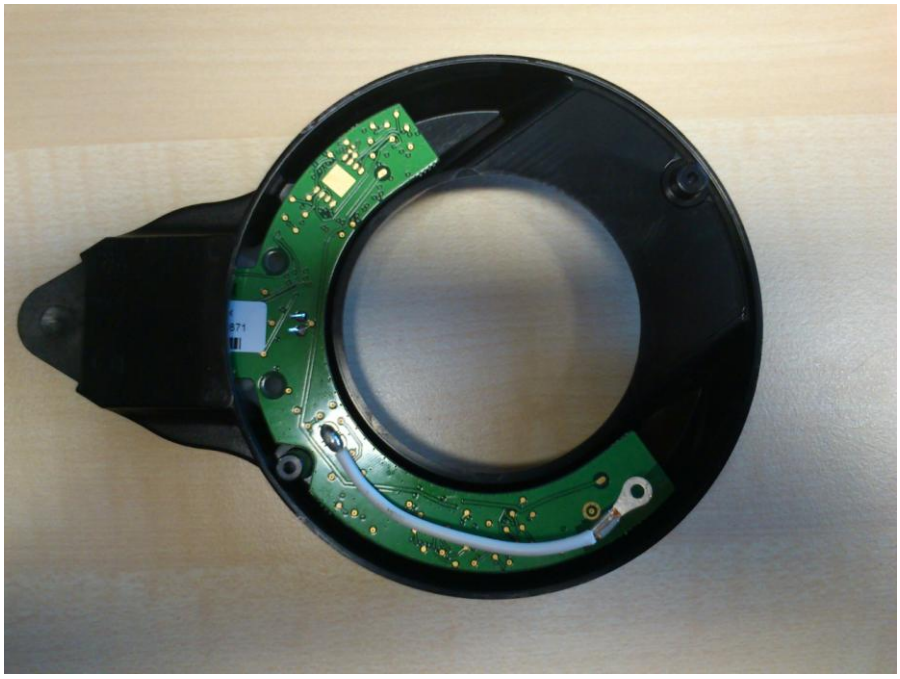
EUT BOTTOM - 110MM VARIANT


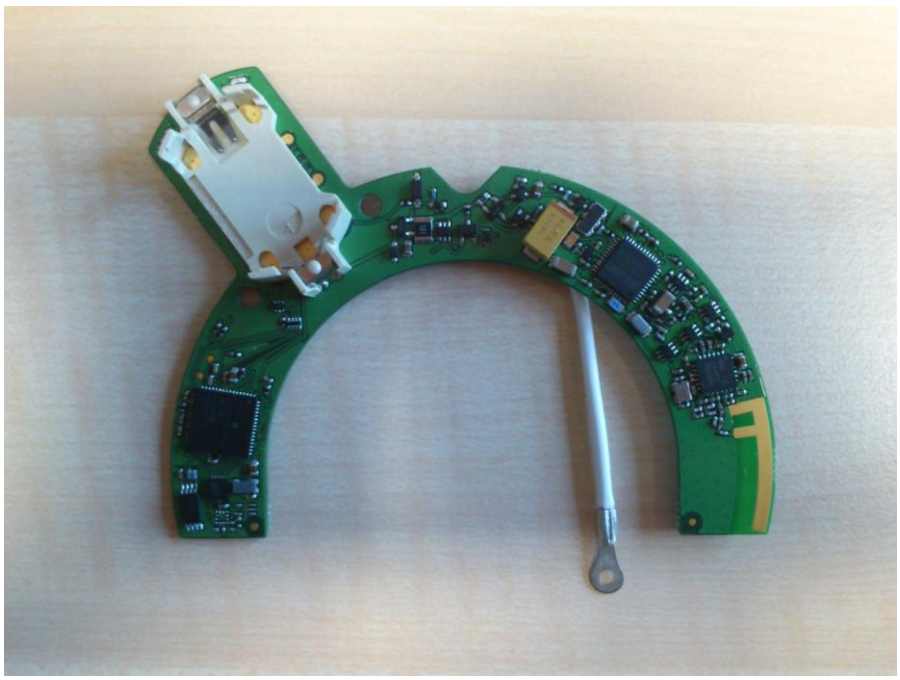
EUT TOP - 130MM VARIANT

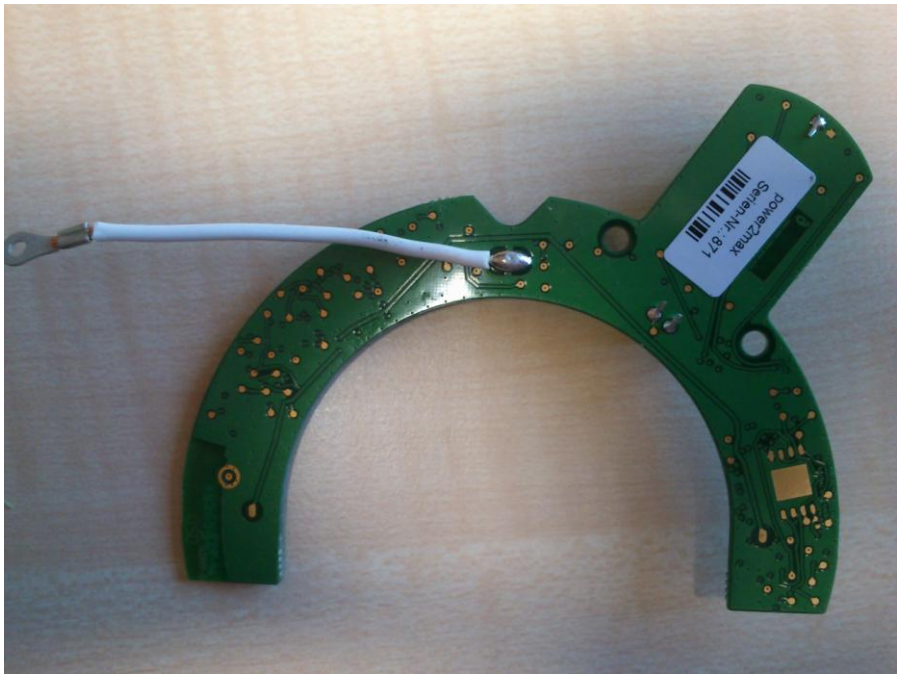
EUT BOTTOM - 130MM VARIANT

TRANSCEIVER PART TOP

1.2 Photos – Equipment internal

TRANSCEIVER OPEN


TRANSCEIVER PCB TOP


TRANSCEIVER PCB BOTTOM


1.3 Photos – Test setup

RADIATED 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	
Single	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone transmit Modulation = GFSK Power level = Maximum
Receive	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone receive Modulation = GFSK

1.6 Test Equipment Used During Testing

Occupied Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	Aug 10	Aug 12

Field strength emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 5	ETS 0583		
Spectrum Analyzer	R&S	FSIQ26	ETS 0413	Apr. 11	Apr. 12
Biconical Antenna	R&S	HK 116	ETS 0012	Jan 10	Jan 13
LPD Antenna	R&S	HL 223	ETS 0295	Feb 11	Feb 13
LPD Antenna	R&S	HL 025	ETS 0512	Feb 10	Feb 13

AC powerline conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	ETS 0288	Sep 10	Sep 12
AMN	R&S	ESH3-Z5	ETS 0040	Nov 10	Nov 12
EMI Test Receiver	R&S	ESCS 30	ETS 0474	Jun 11	Jun 12

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:

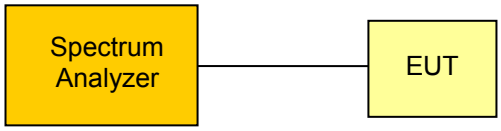
Reading	+	AF	=	Net Reading	:	Net reading - FCC limit = Margin
21.5 dBµV	+	26 dB	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m = -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, IC RSS-210				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 4.6.1	Occupied Bandwidth	RSS-Gen 4.6.1	N/R	Informational only
FCC 15.249(a),(c),(e) IC RSS-210 A2.9(a)	Fundamental field strength emissions	ANSI C63.4	PASS	
FCC 15.249(a),(c),(d),(e) IC RSS-210 A2.9(a),(b)	Emission radiated outside the specified frequency band	ANSI C63.4	PASS	
IC RSS-210 Section 2.3 IC RSS-Gen 4.10 6.1	Receiver radiated spurious emissions	ANSI C63.4	PASS	
FCC 15.207 IC RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	N/R	EUT exclusively battery powered
Remarks:				

3 Test Conditions and Results

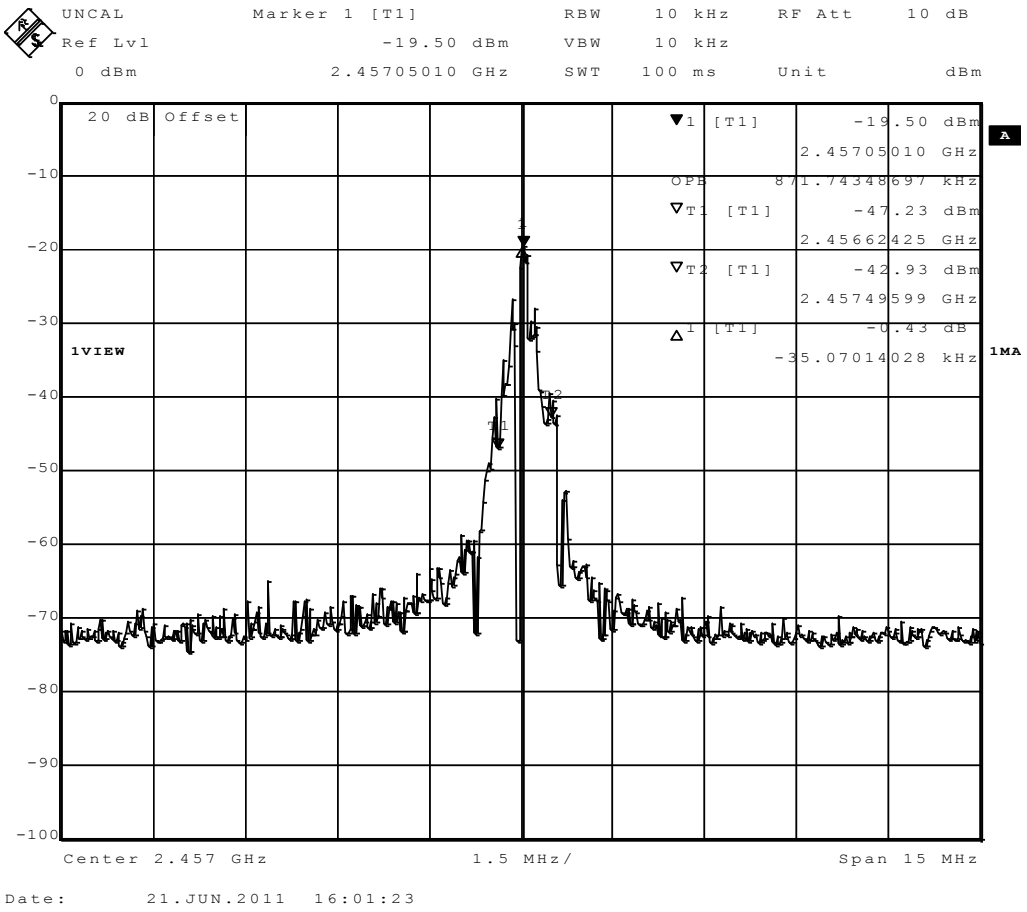
3.1 Test Conditions and Results – Occupied Bandwidth

Occupied Bandwidth acc. IC RSS-Gen		**Verdict: PASS**
Test according to measurement reference	Reference Method	
	RSS-Gen 4.6.1	
Test frequency range	Tested frequencies	
	F_{MID}	
EUT test mode	Single	
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]	Occupied Bandwidth [kHz]
F_{MID}	2457	871.7
Comments: Measurement is applicable to all variants		

Occupied Bandwidth - F_{MID}

RSS Gen
Occupied Bandwidth

EUT	power2max
Model	P0004-6-A Variante BCD110mm
Approval Holder	Saxonar GmbH. / Ord.: G0M21008-3591
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 2457 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	GFSK



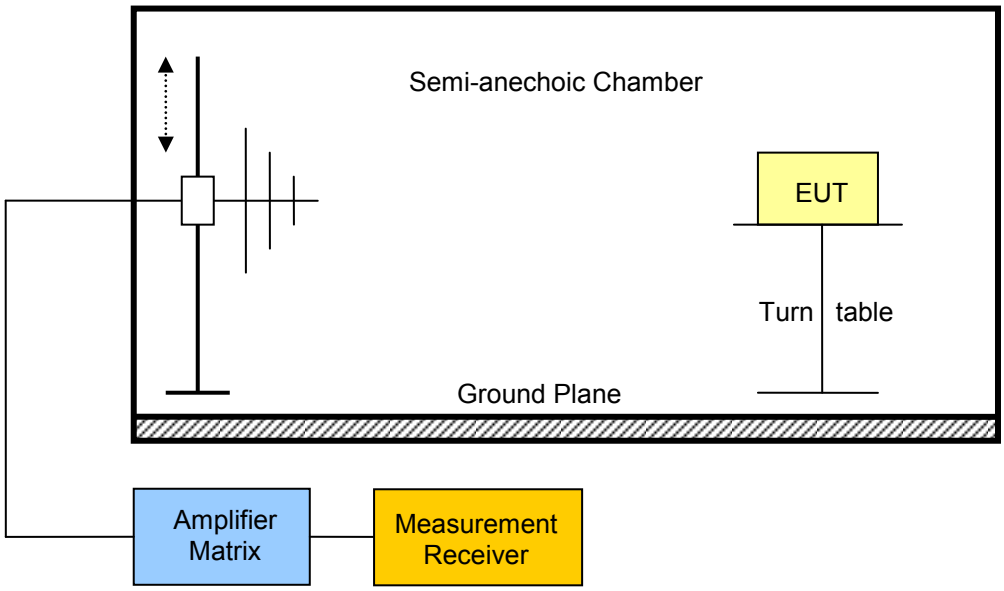
3.2 Test Conditions and Results – Fundamental field strength emissions

Field strength emissions acc. FCC 47 CFR 15.249 / IC RSS-210				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.249(a),(c),(e) / IC RSS-210 A2.9(a)		
Test according to measurement reference		Reference Method		
		ANSI C63.4		
Test frequency range		Tested frequencies		
		F_{MID}		
EUT test mode		Single		
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 setup



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

Test results – 110mm variant

Channel	Frequency [MHz]	Emission [MHz]	Level [dbµV/m]	Detector	Pol.	Limit [dbµV/m]	Limit distance [m]*	Margin [dB]
F_{MID}	2457	2457	85.82	peak	hor	94	3	-8.18
F_{MID}	2457	2457	77.62	peak	ver	94	3	-16.38

Test results – 130mm variant

Channel	Frequency [MHz]	Emission [MHz]	Level [dbµV/m]	Detector	Pol.	Limit [dbµV/m]	Limit distance [m]*	Margin [dB]
F_{MID}	2457	2457	85.65	peak	hor	94	3	-8.35
F_{MID}	2457	2457	77.32	peak	ver	94	3	-16.68

Comments: * Physical distance between EUT and measurement antenna.

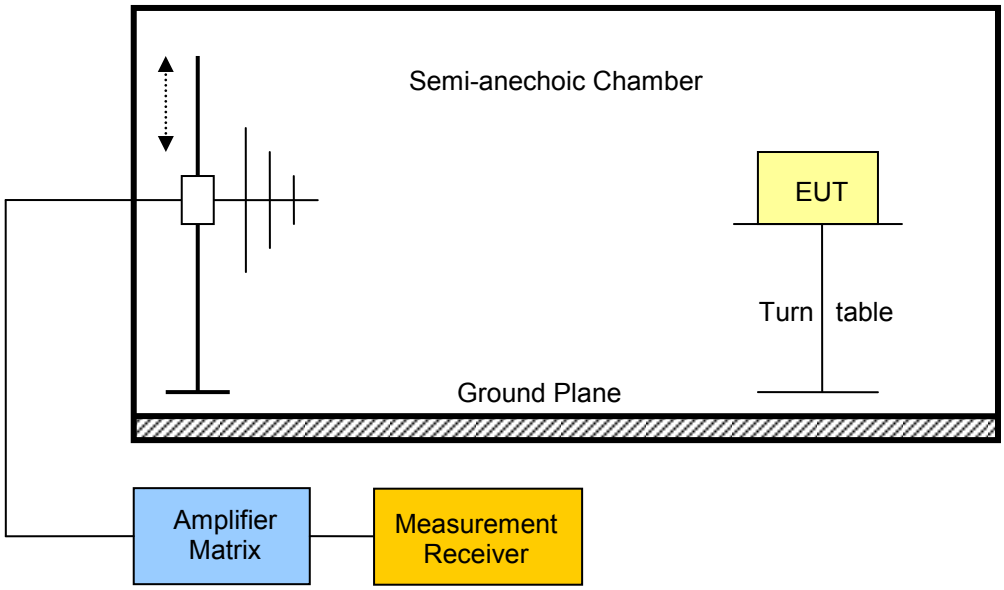
3.3 Test Conditions and Results – Emissions radiated outside the specified frequency band

Radiated out-of-band band emissions acc. FCC 47 CFR 15.249 / IC RSS-210				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.249(a),(c),(d),(e) / IC RSS-210 A2.9(a),(b)		
Test according to measurement reference		Reference Method		
		ANSI C63.4		
Test frequency range		Tested frequencies		
		30MHz – 10th hamonic		
EUT test mode		Single		
Limits - Harmonics				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
902 – 928	Quasi-Peak	500	54	3
2400 – 2483.5	Average	500	54	3
5725 - 5875	Average	500	54	3
Limits - 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	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	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.

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 setup



Test procedure

1. EUT set to test mode
2. Span it set according to measurement range
3. Resolution bandwidth below 1GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1MHz with peak/average detector is used above 1GHz
4. Markers are set to maximum emission levels

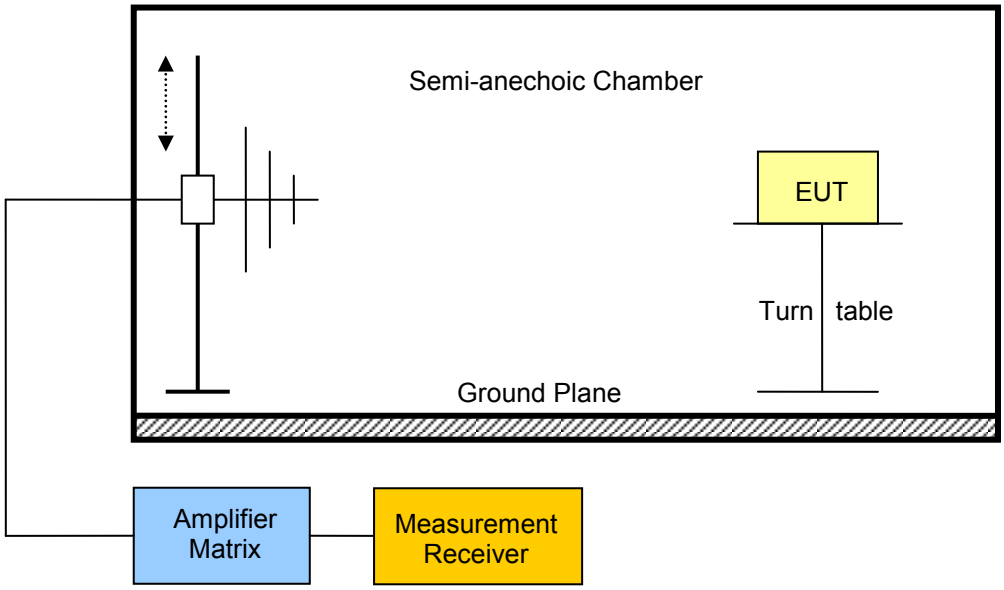
Test results – 110mm variant

Channel	Frequency [MHz]	Emission [MHz]	Level [dbµV/m]	Detector	Pol.	Limit [dbµV/m]	Limit distance [m]*	Margin [dB]
F_{MID}	2457	2359	41.75	pk	hor	54	3	-12.25
F_{MID}	2457	2359	42.47	pk	ver	54	3	-11.53
F_{MID}	2457	4914	57.43	pk	hor	74	3	-16.57
F_{MID}	2457	4914	40.92	avg	hor	54	3	-13.08
F_{MID}	2457	4914	59.02	pk	ver	74	3	-14.98
F_{MID}	2457	4914	42.21	avg	ver	54	3	-11.79

Comments: * Physical distance between EUT and measurement antenna.
After pretests variant 110mm has been selected as worst case variant with respect to the spurious emissions.

3.4 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			
	30MHz – 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 1GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1MHz with peak/average detector is used above 1GHz 4. Markers are set to peak emission levels

Test results

Channel	Frequency [MHz]	Emission [MHz]	Emission Level [dbµV/m]	Emission Level [µV/m]	Det.	Limit [µV/m]	Margin [µV/m]
F_{MID}	2457	7968	49.83	310.10	pk	500.00	-189.90

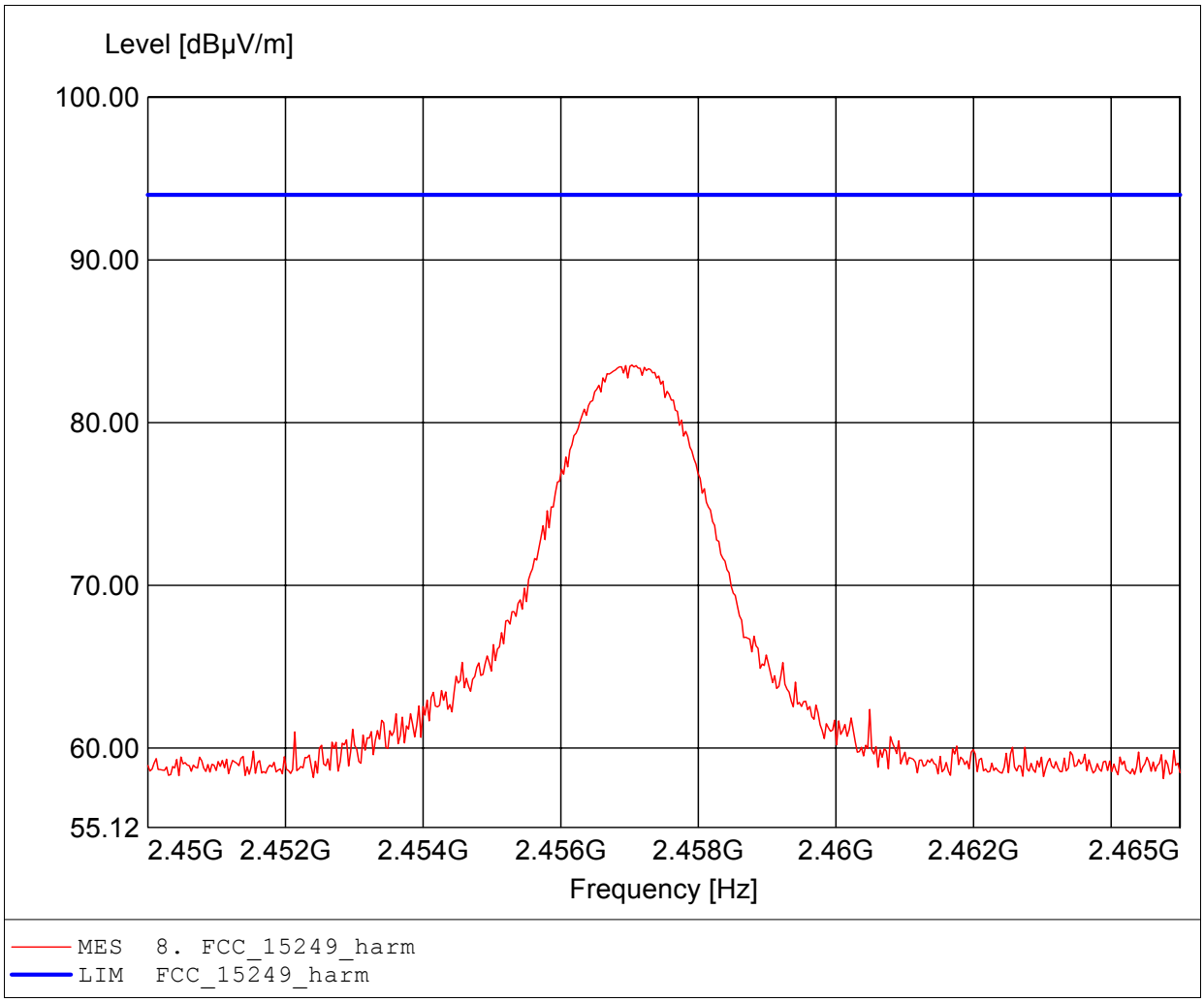
Comments: * Physical distance between EUT and measurement antenna.
The stated emission level corresponds to ambient noise floor. No real spurious emission has been measured.

ANNEX A Transmitter fundamental field strength

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT horizontal
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 83.54dBµV/m, RBW: 1MHz

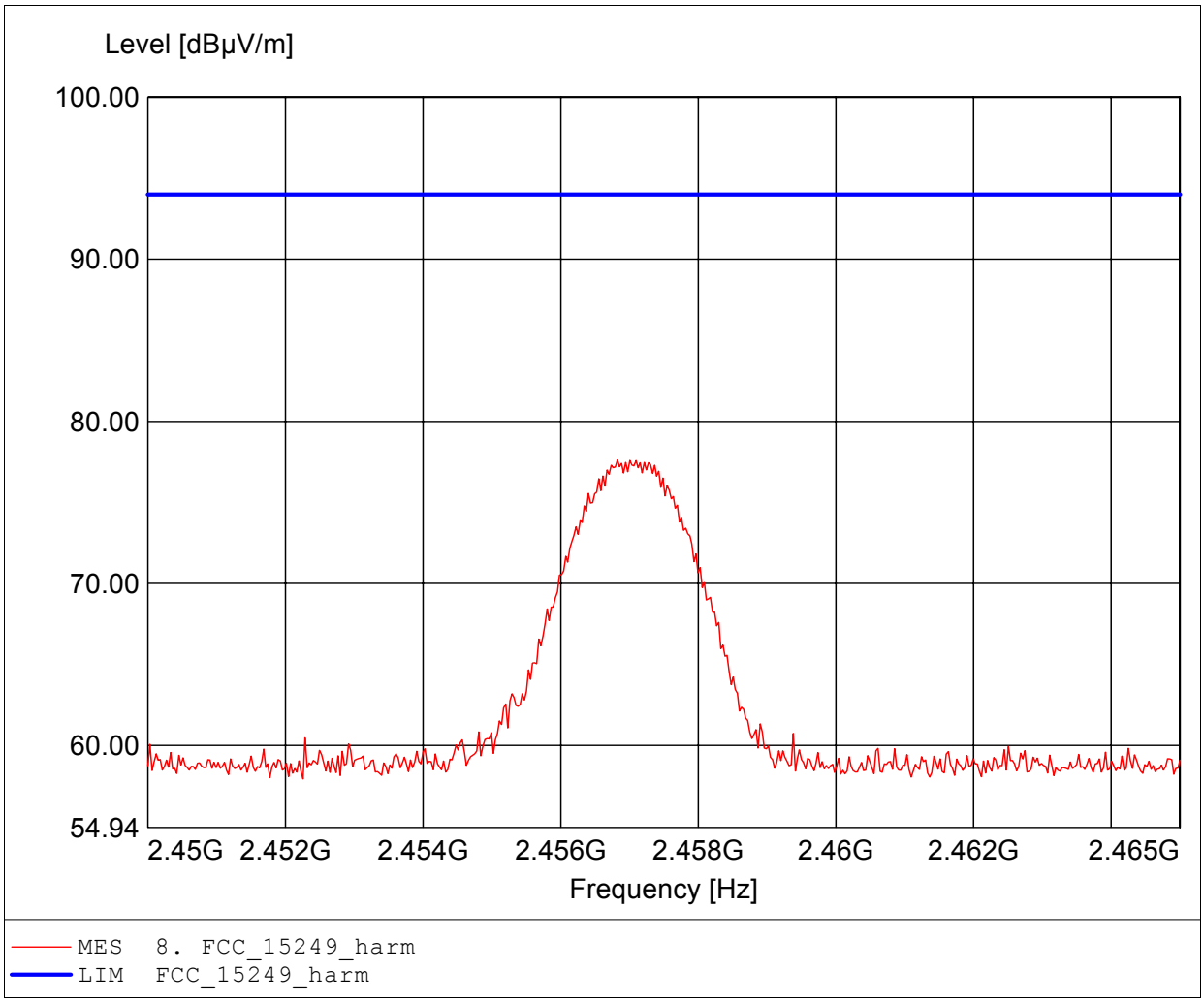


Page 1/1 12.06.2011 08:07 Overview / Antenna horizontal

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT horizontal
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 77.62dBµV/m, RBW: 1MHz

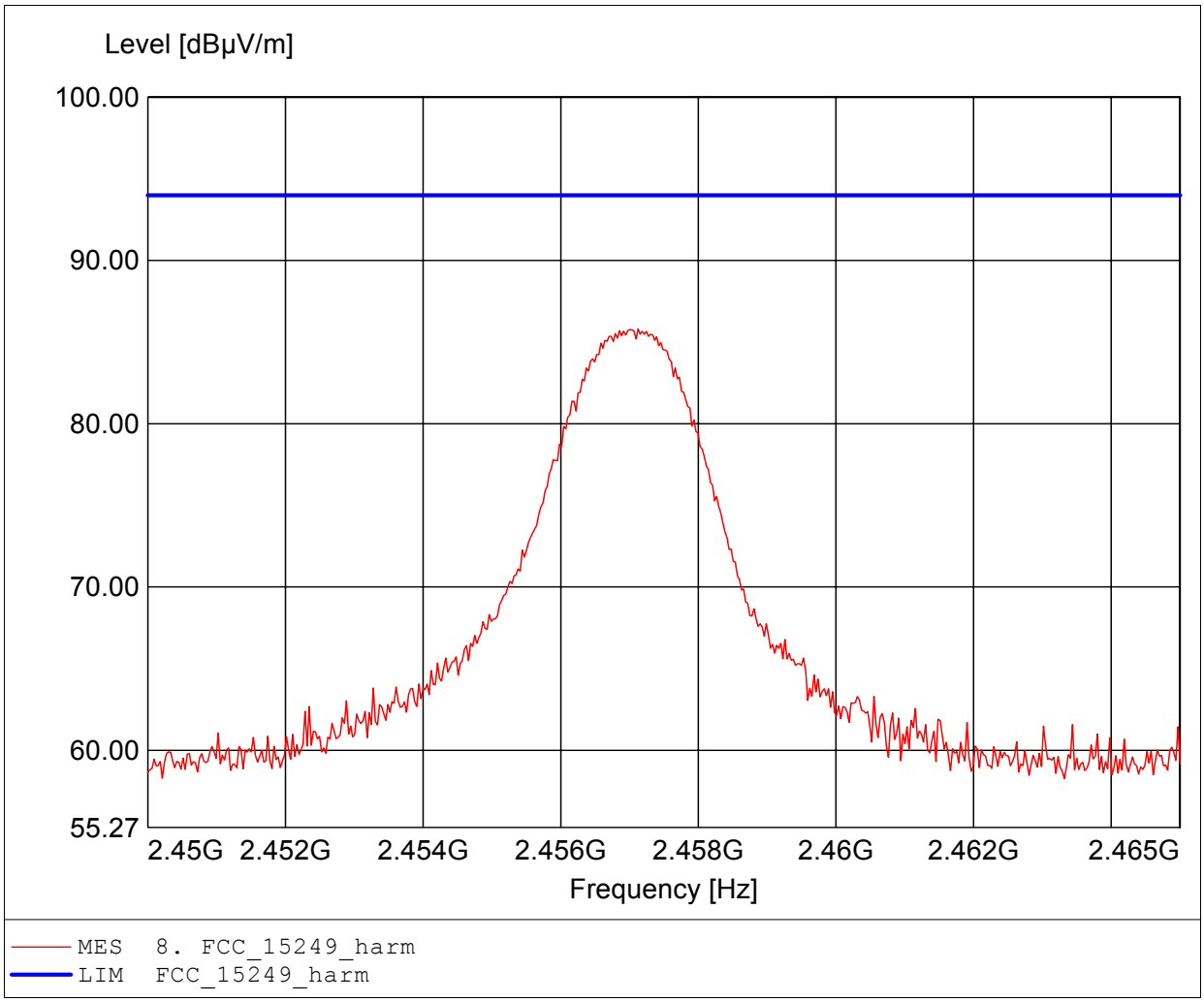


Page 1/1 12.06.2011 08:01 Overview / Antenna vertical

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 85.82dBµV/m, RBW: 1MHz

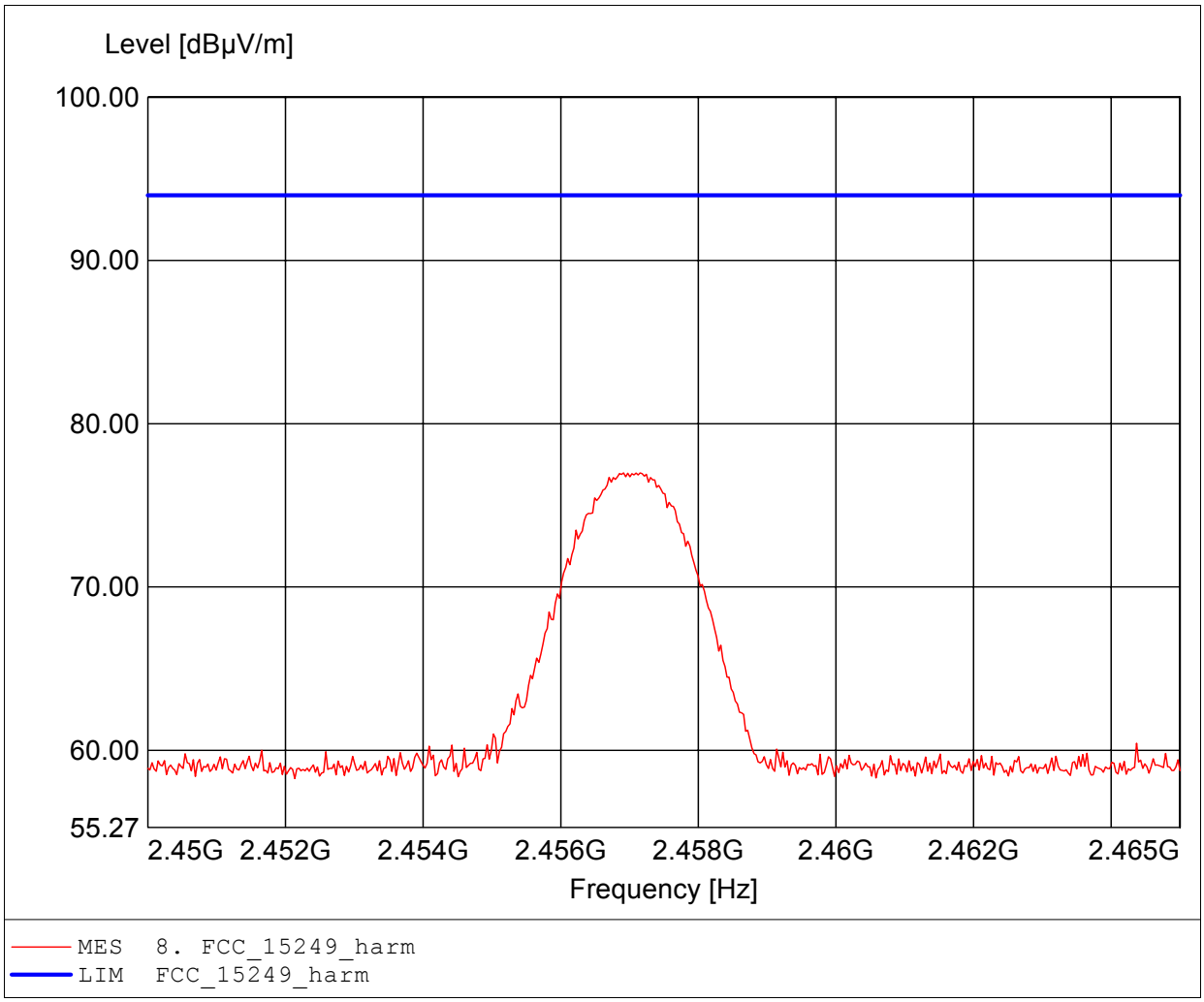


Page 1/1 12.06.2011 08:14 Overview / Antenna horizontal

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 76.99dBµV/m, RBW: 1MHz

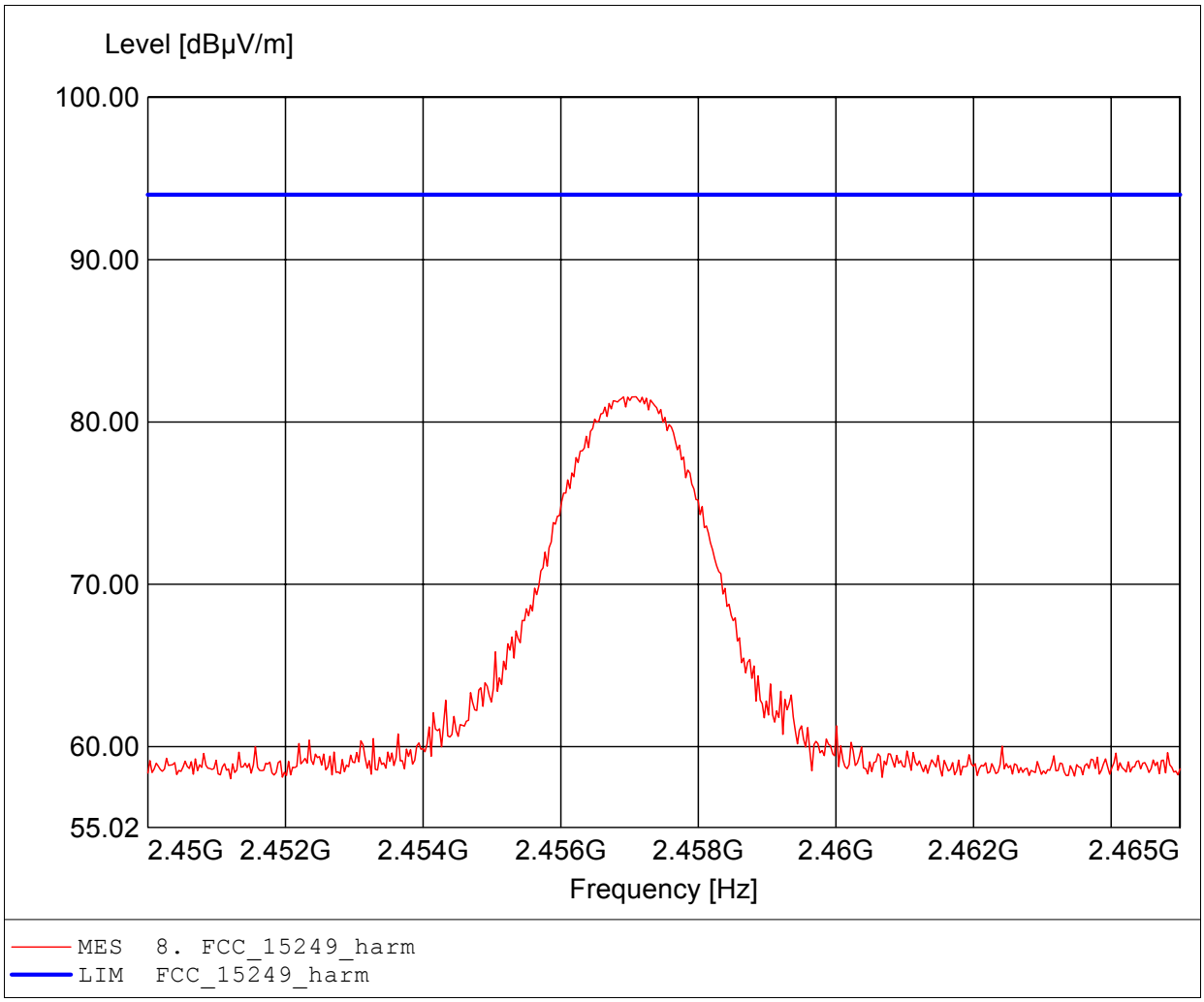


Page 1/1 12.06.2011 08:22 Overview / Antenna vertical

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD130mm
Configuration:	Setup: Tx: 2457MHz / EUT horizontal
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 81.56dBµV/m, RBW: 1MHz

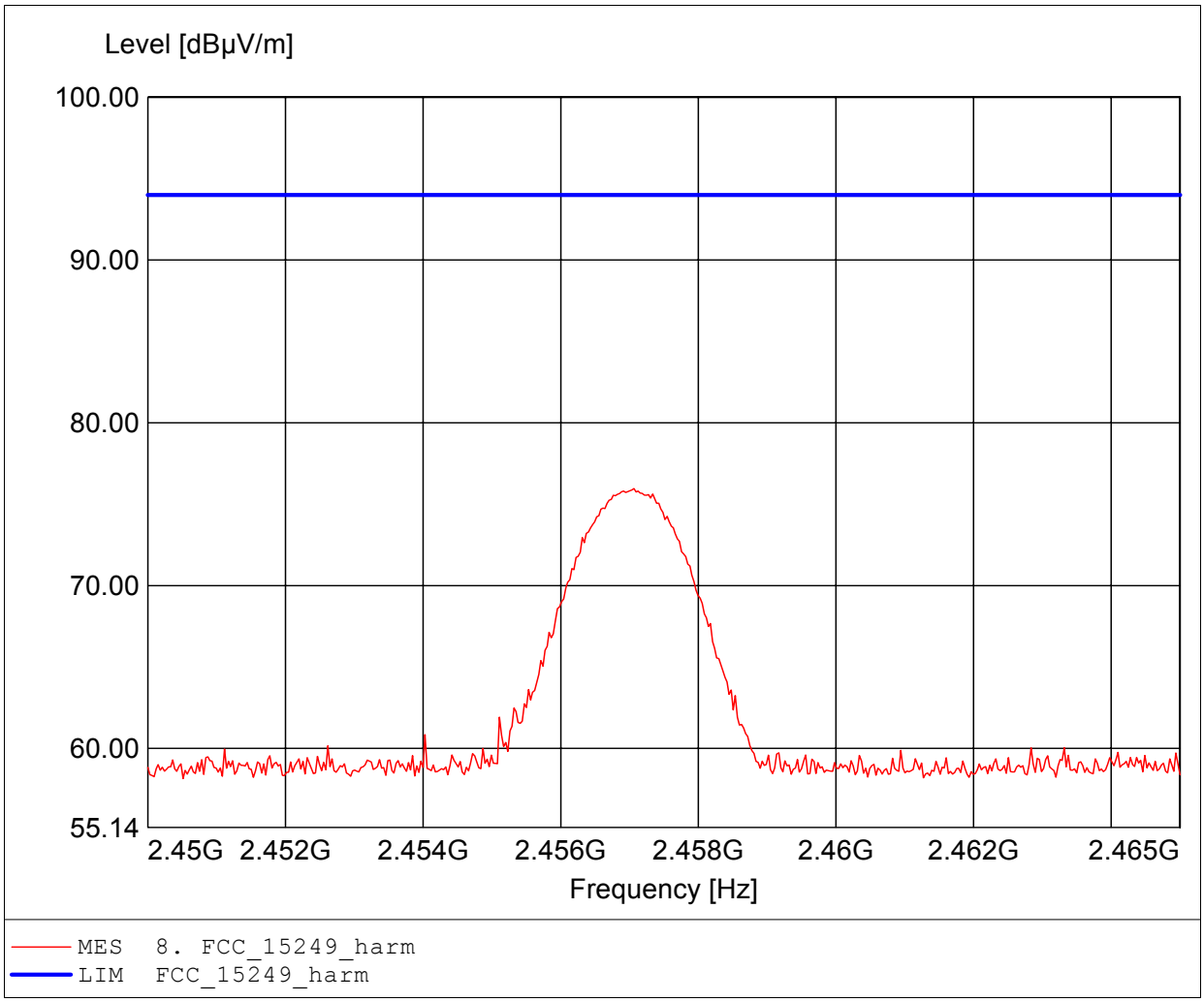


Page 1/1 12.06.2011 08:49 Overview / Antenna horizontal

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD130mm
Configuration:	Setup: Tx: 2457MHz / EUT horizontal
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 75.95dBµV/m, RBW: 1MHz

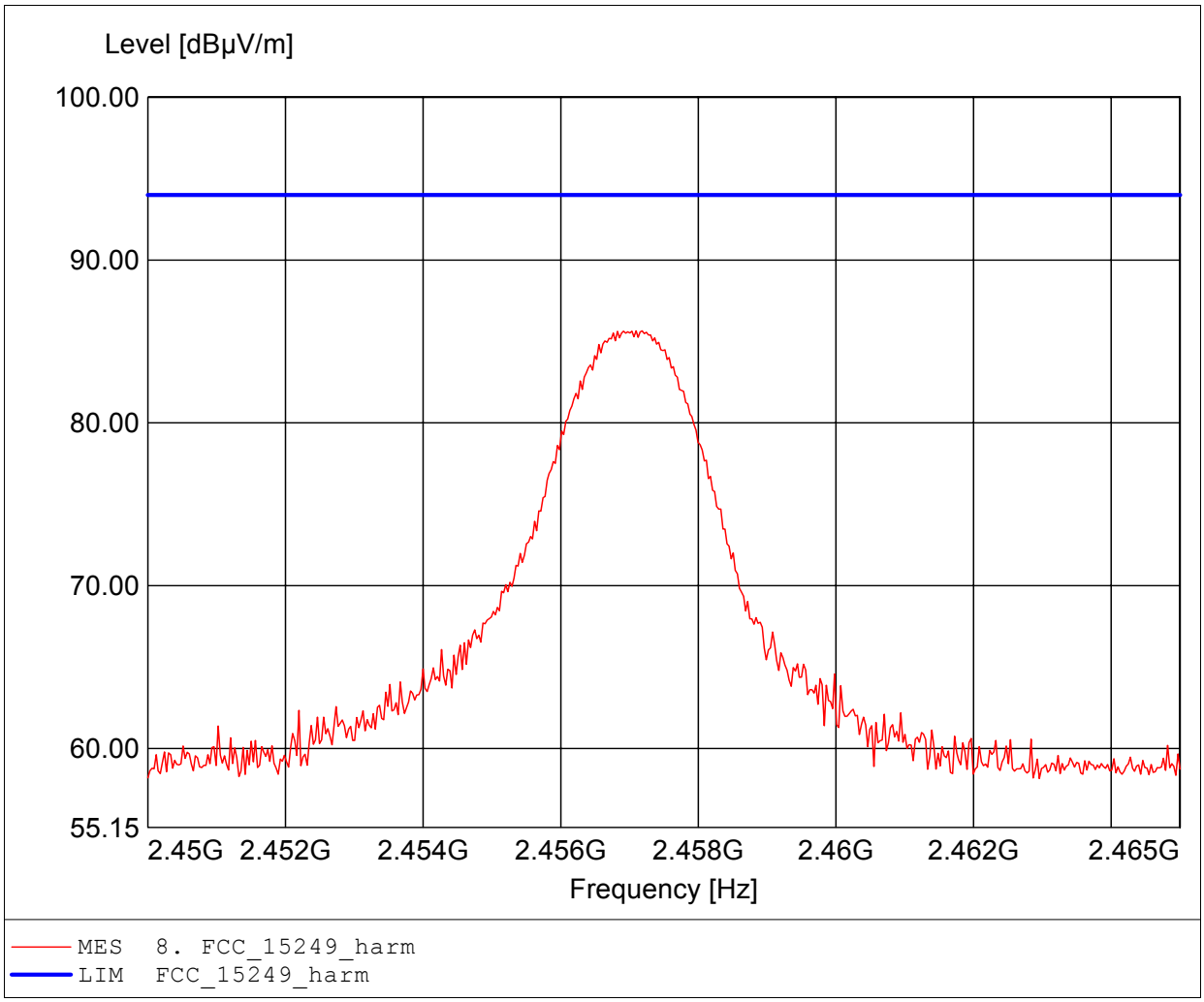


Page 1/1 12.06.2011 08:45 Overview / Antenna vertical

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD130mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 85.65dBµV/m, RBW: 1MHz

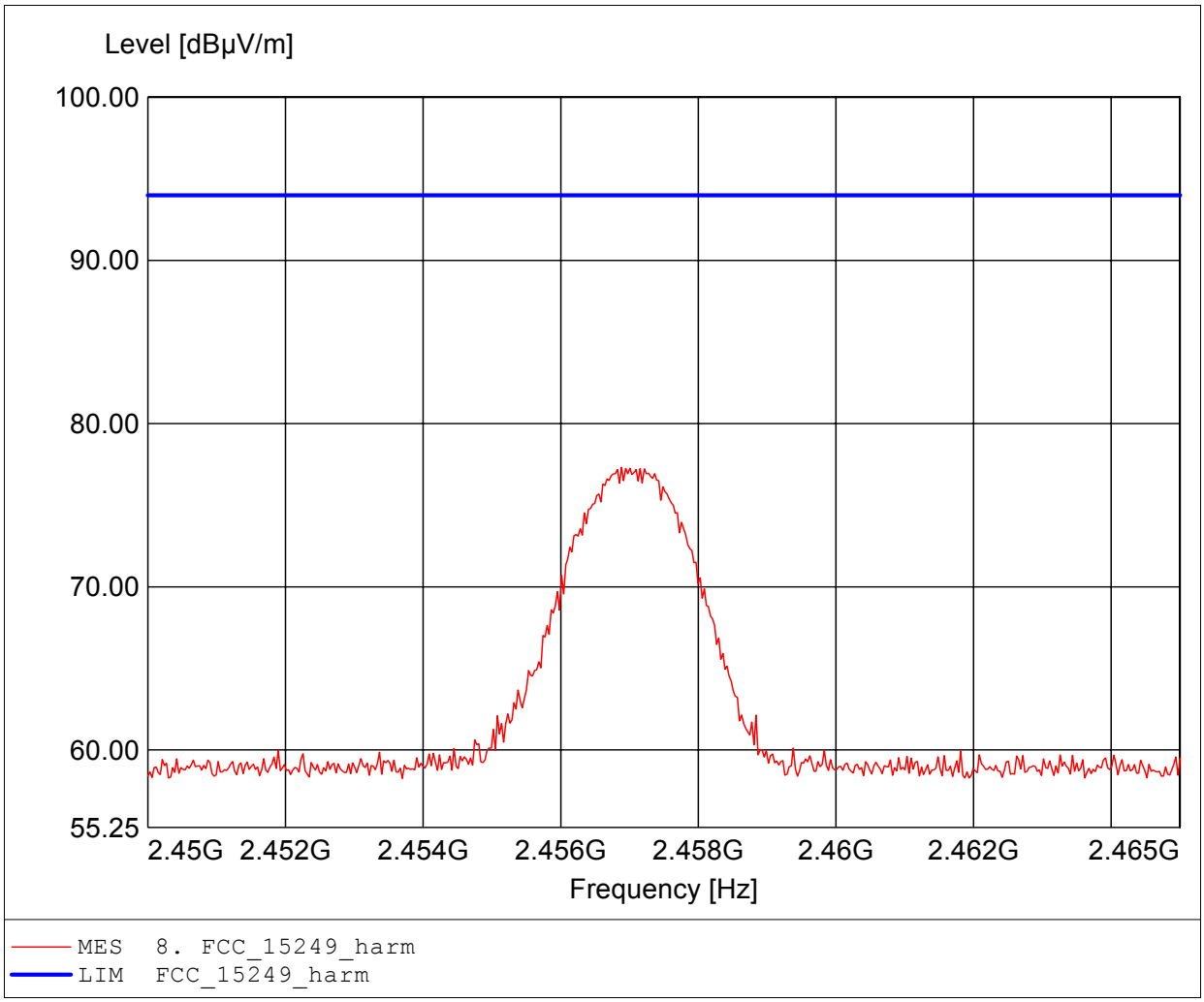


Page 1/1 12.06.2011 08:31 Overview / Antenna horizontal

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD130mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D
Comment 2:	Freq: 2.457GHz, Emax: 77.32dBµV/m, RBW: 1MHz



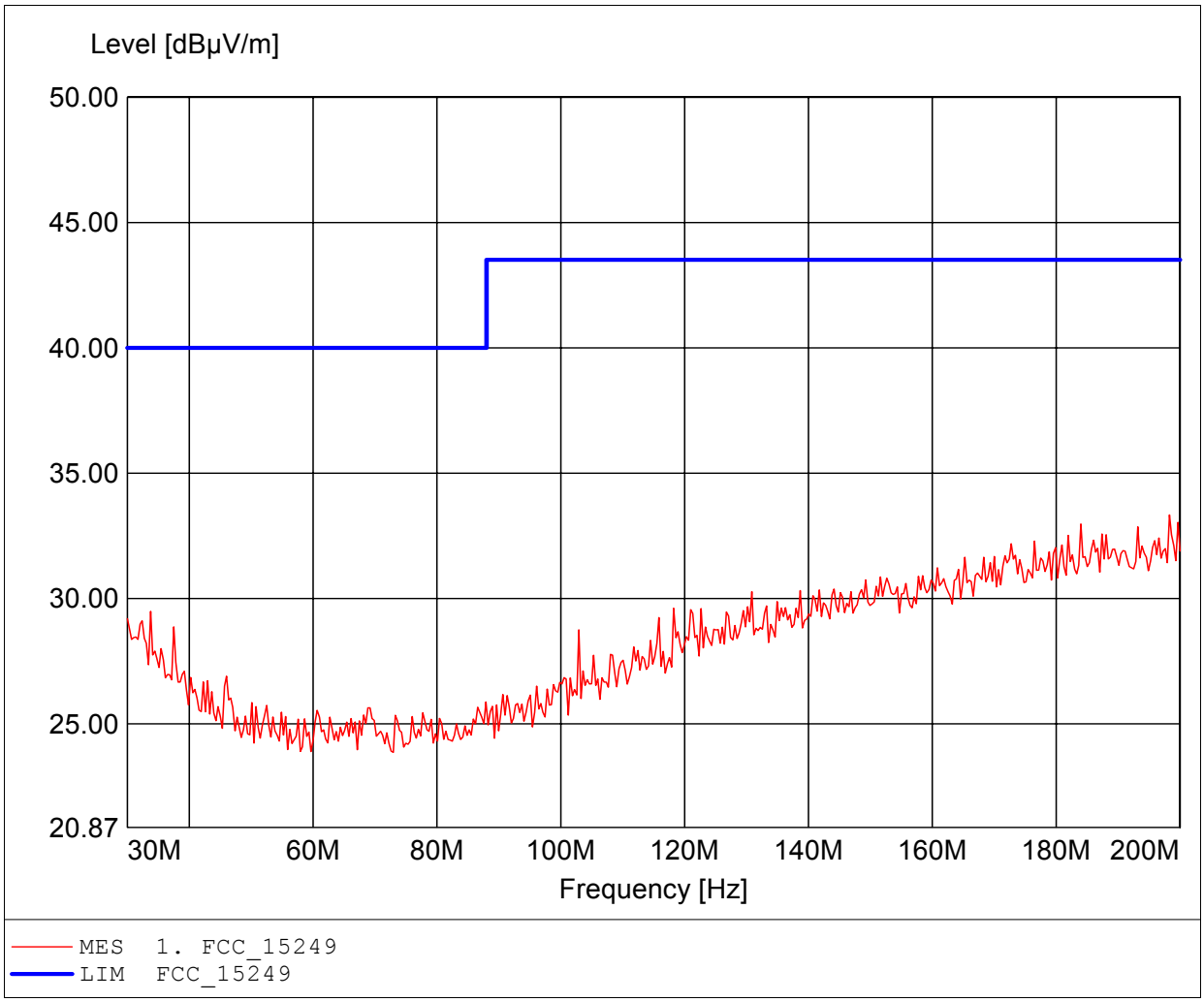
Page 1/1 12.06.2011 08:38 Overview / Antenna vertical

ANNEX B Transmitter out-of-band emissions

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq: 198.297MHz, Emax: 33.34dBµV/m, RBW: 100kHz

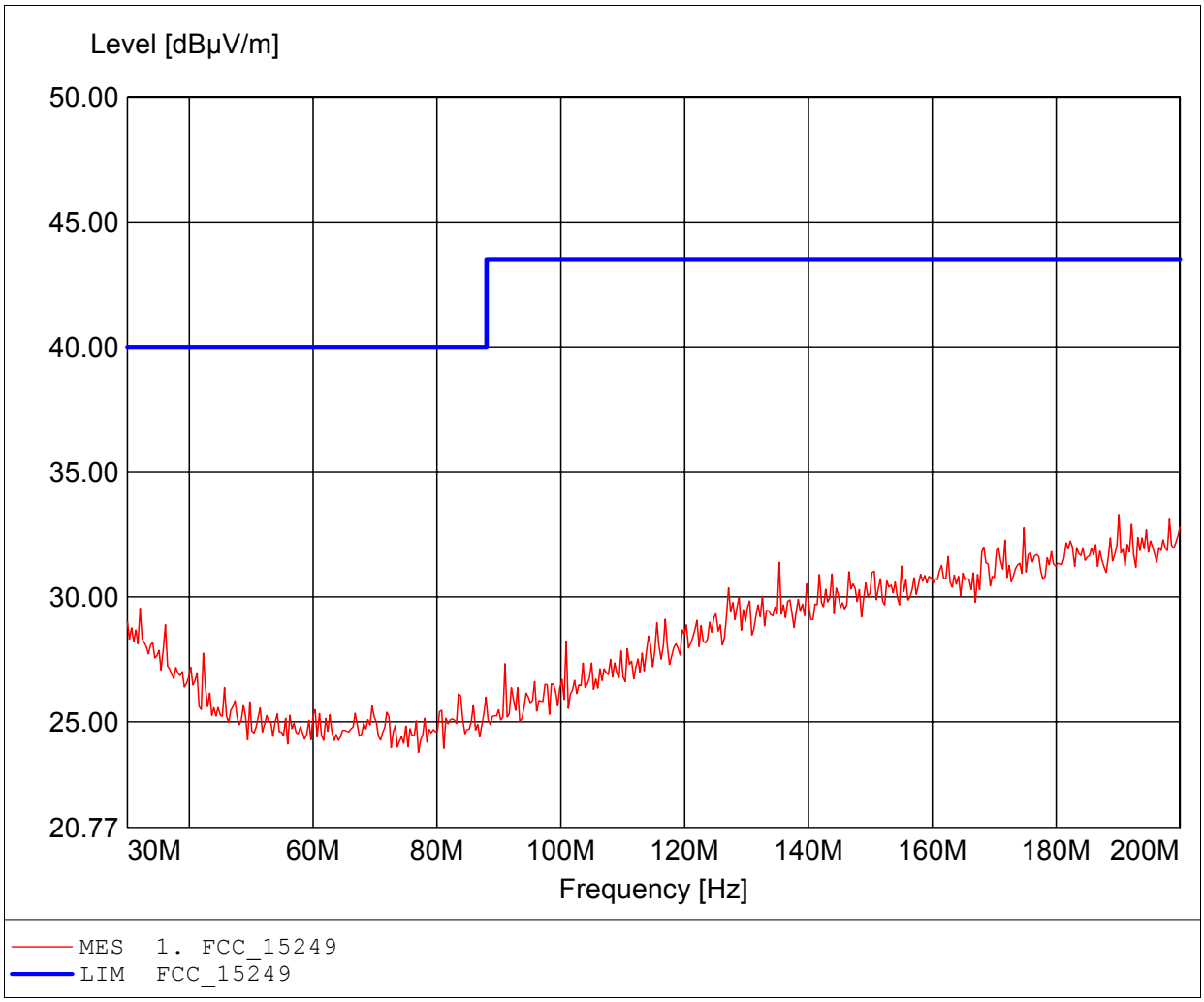


Page 1/1 12.06.2011 11:14 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq: 190.120MHz, Emax: 33.30dBµV/m, RBW: 100kHz

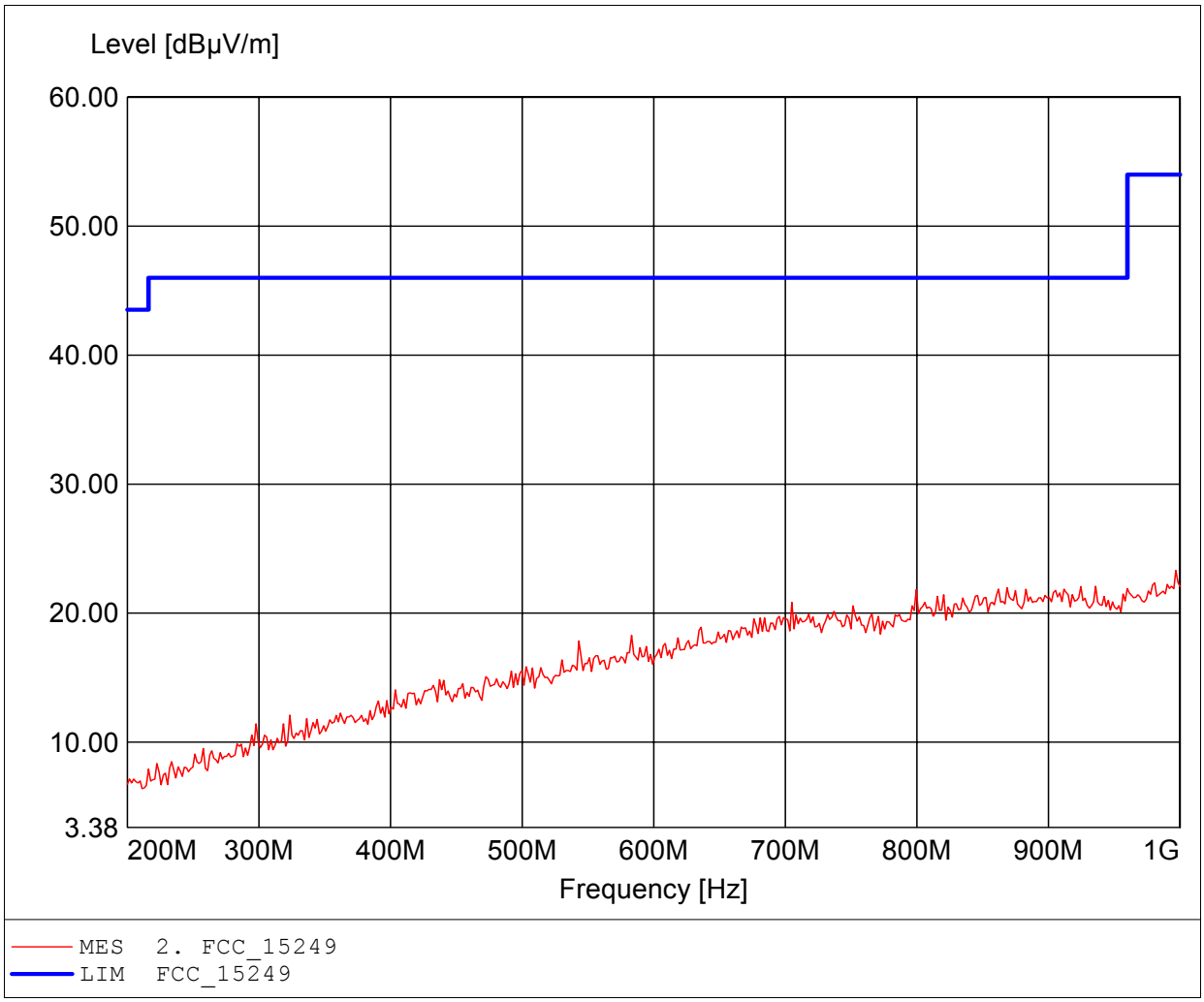


Page 1/1 12.06.2011 11:11 Overview / Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249
Comment 1:	Dist.: 3m, Ant.: HL 223, amplif.
Comment 2:	Freq: 996.794MHz, Emax: 23.31dBµV/m, RBW: 100kHz

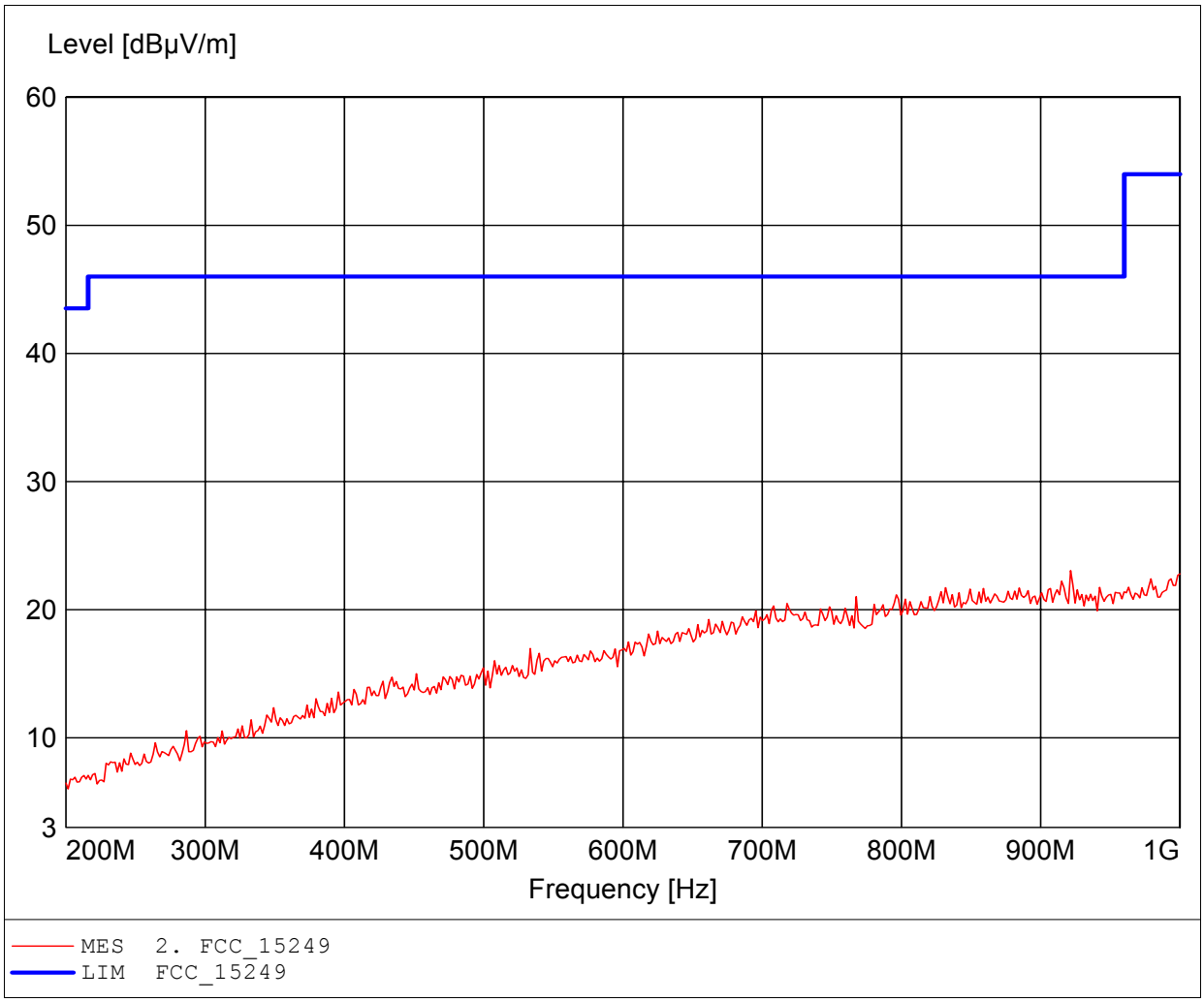


Page 1/1 12.06.2011 11:04 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249
Comment 1:	Dist.: 3m, Ant.: HL 223, amplif.
Comment 2:	Freq: 921.443MHz, Emax: 23.05dBµV/m, RBW: 100kHz

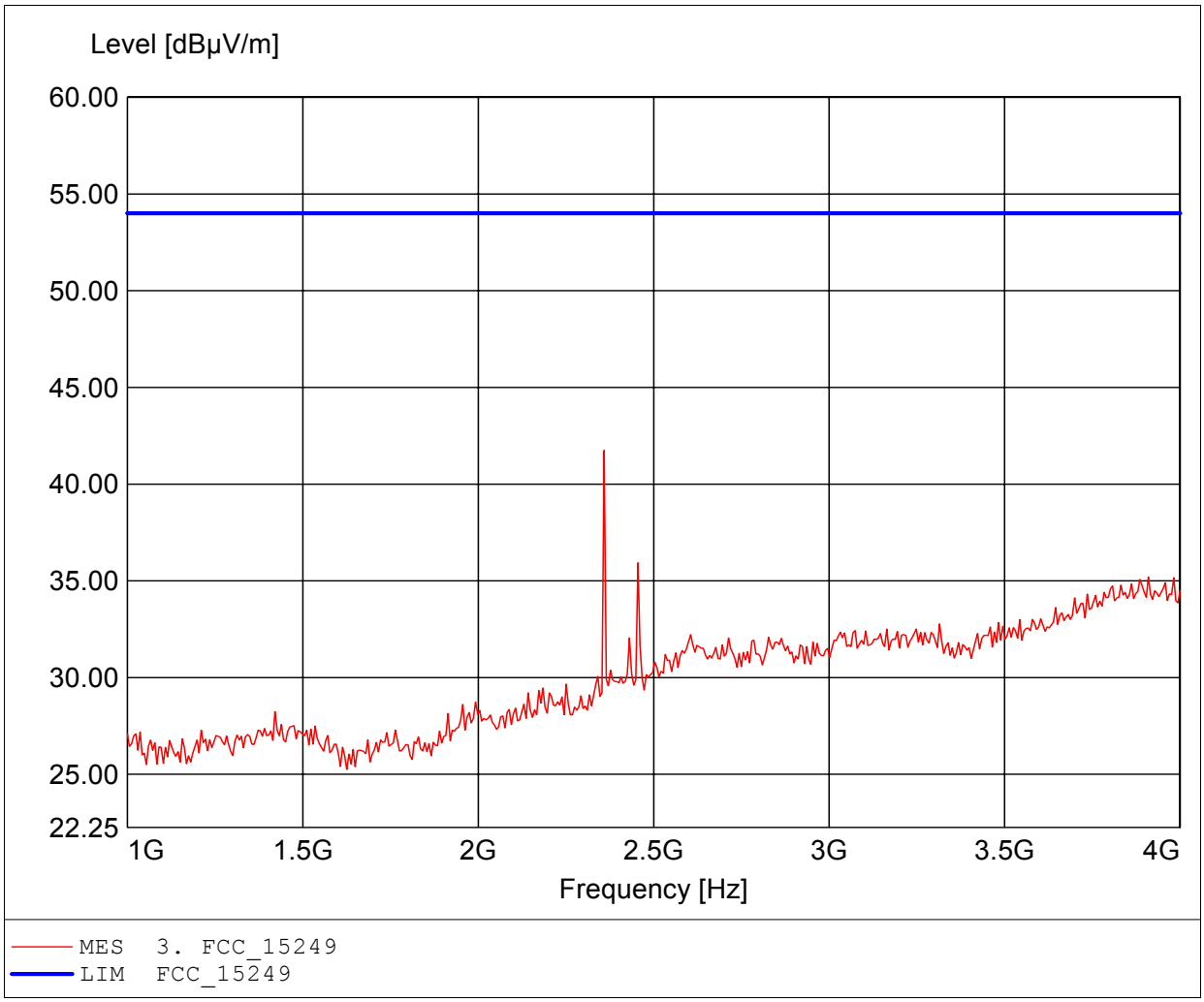


Page 1/1 12.06.2011 11:07 Overview / Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.359GHz, Emax: 41.75dBµV/m, RBW: 1MHz

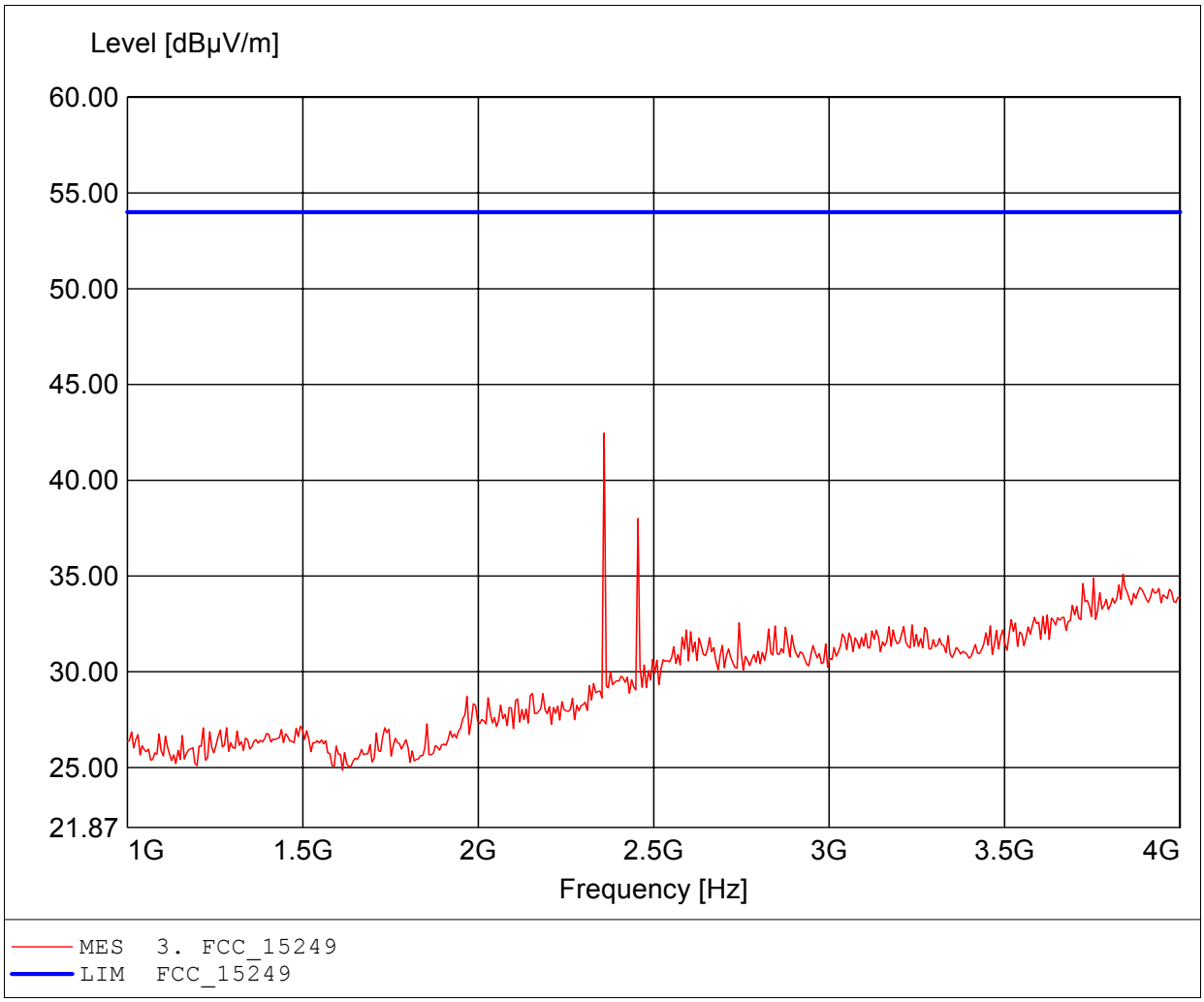


Page 1/1 12.06.2011 10:47 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.359GHz, Emax: 42.47dBµV/m, RBW: 1MHz

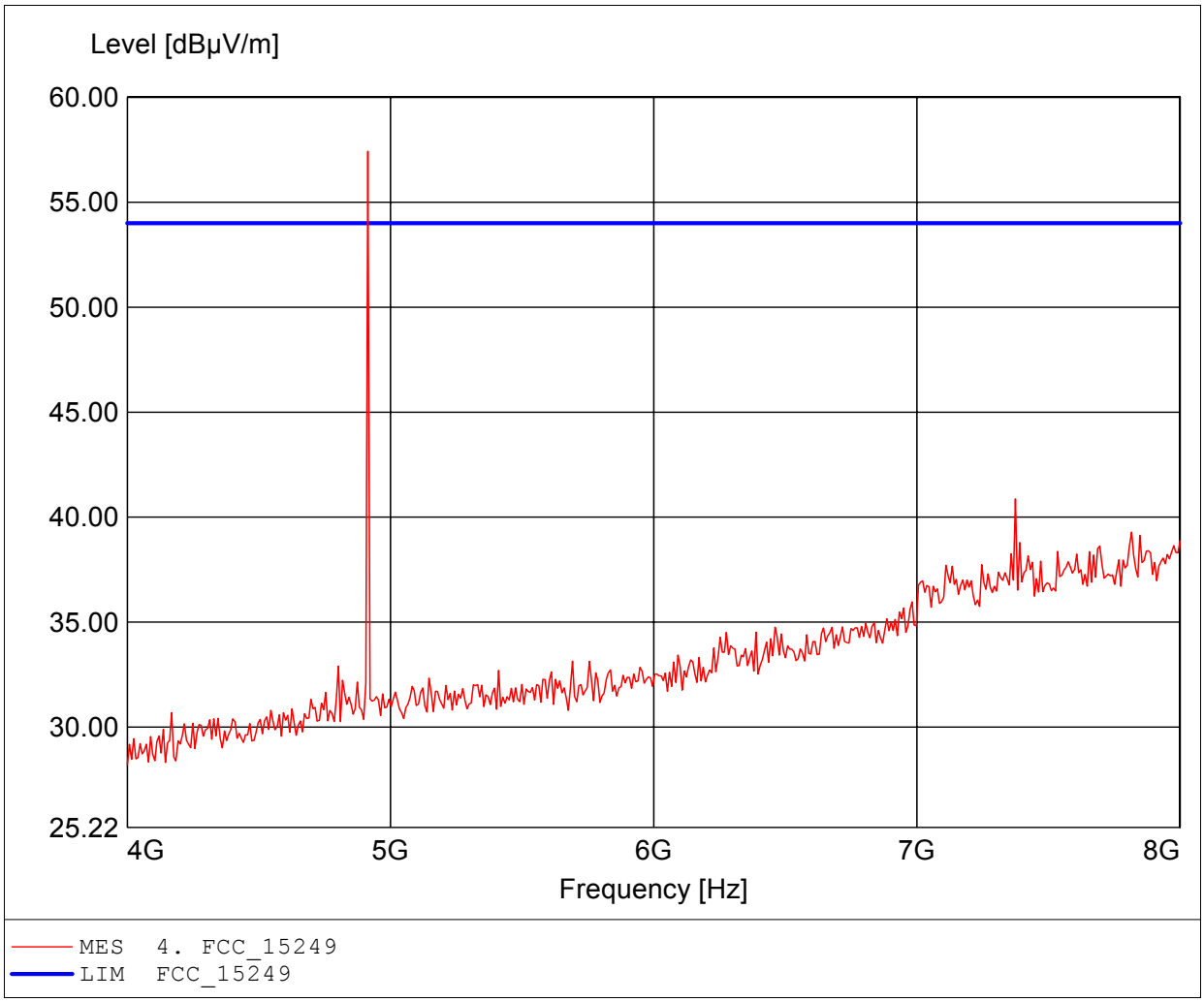


Page 1/1 12.06.2011 09:49 Overview / Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.914GHz, Emax: 57.43dBµV/m, RBW: 1MHz

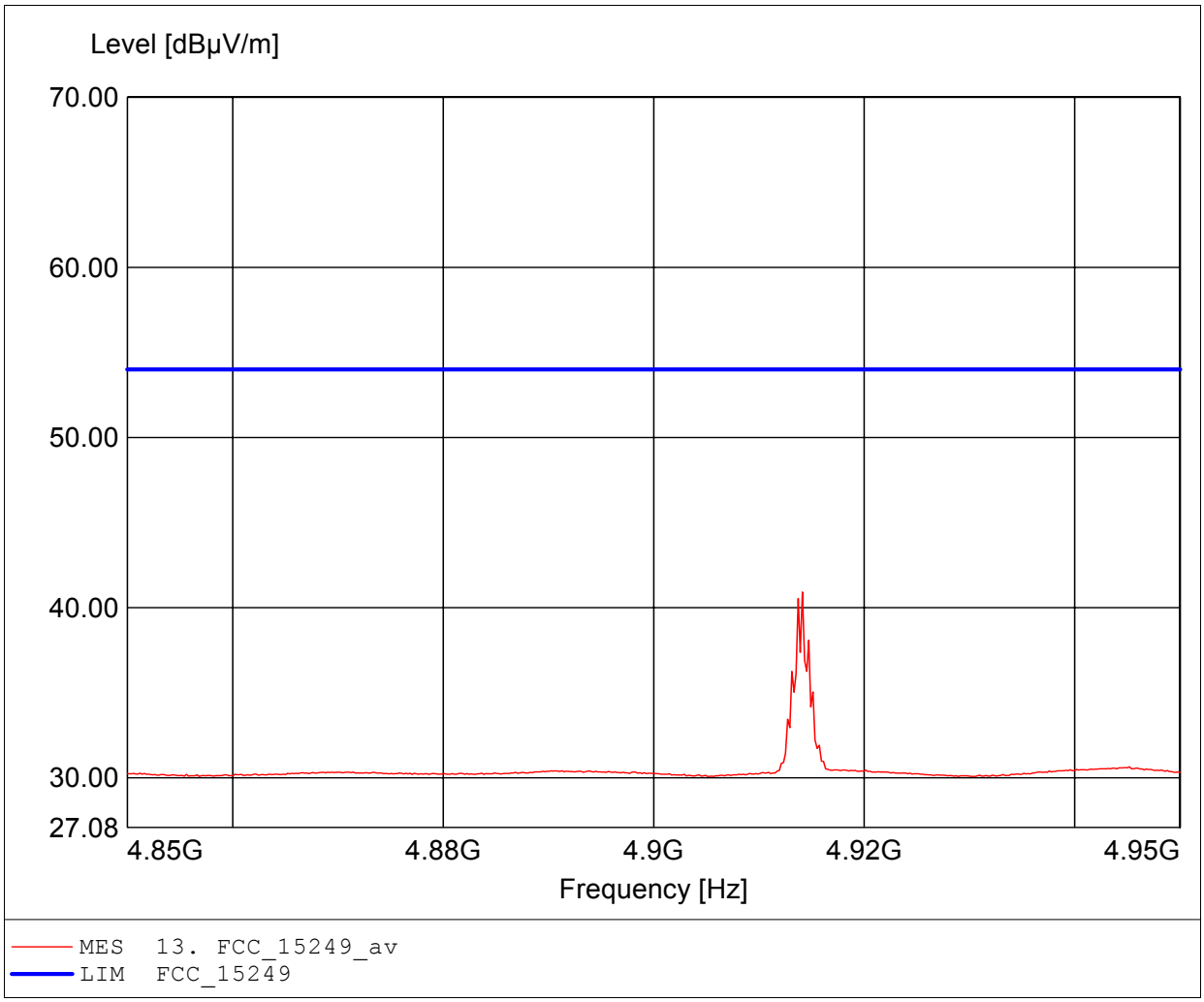


Page 1/1 12.06.2011 10:29 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, average detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 4.914GHz, Emax: 40.92dBµV/m, RBW: 1MHz



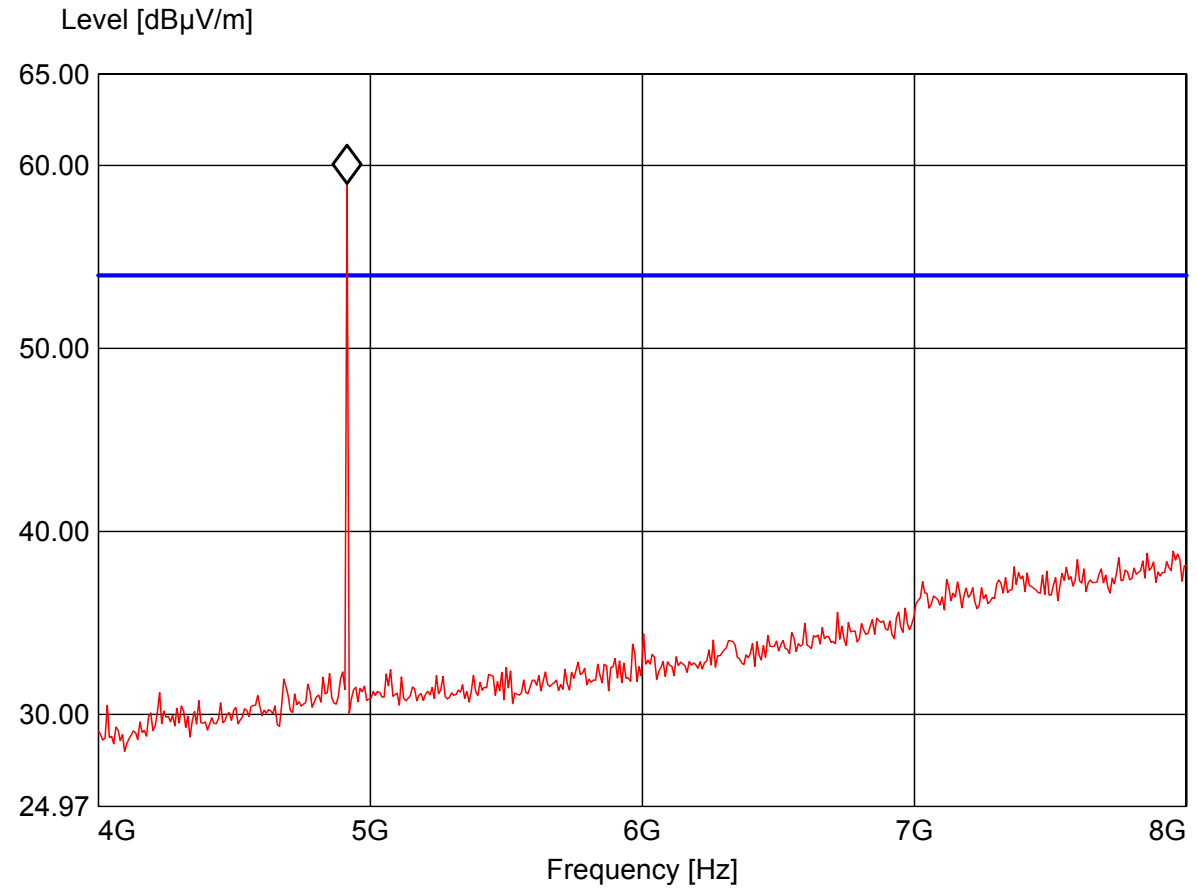
Page 1/1 12.06.2011 10:34 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.914GHz, Emax: 59.02dBµV/m, RBW: 1MHz

Marker: 4.913827655 GHz 59.02 dBµV/m

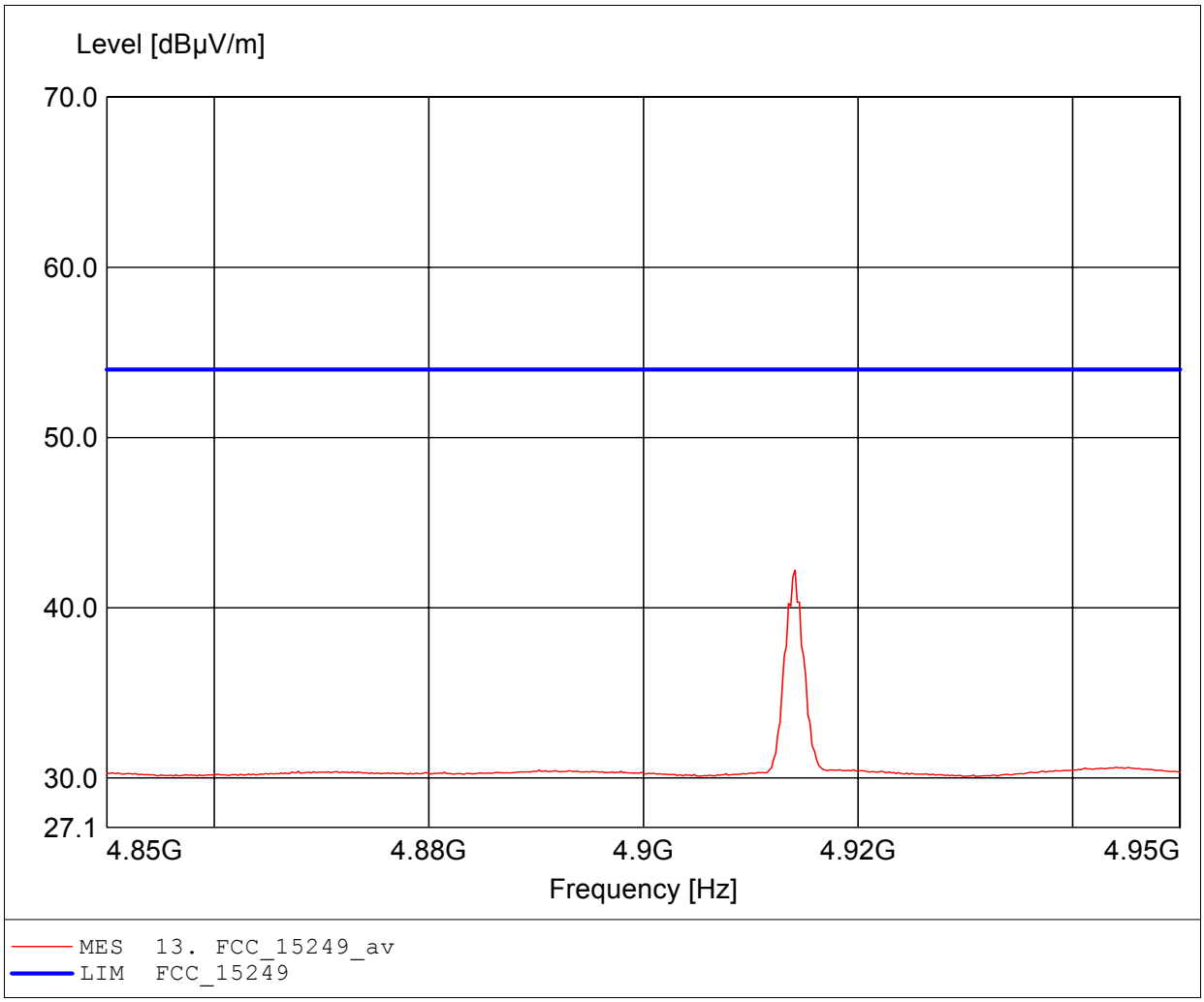


MES 4. FCC_15249
LIM FCC_15249

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, average detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 4.914GHz, Emax: 42.21dBµV/m, RBW: 1MHz

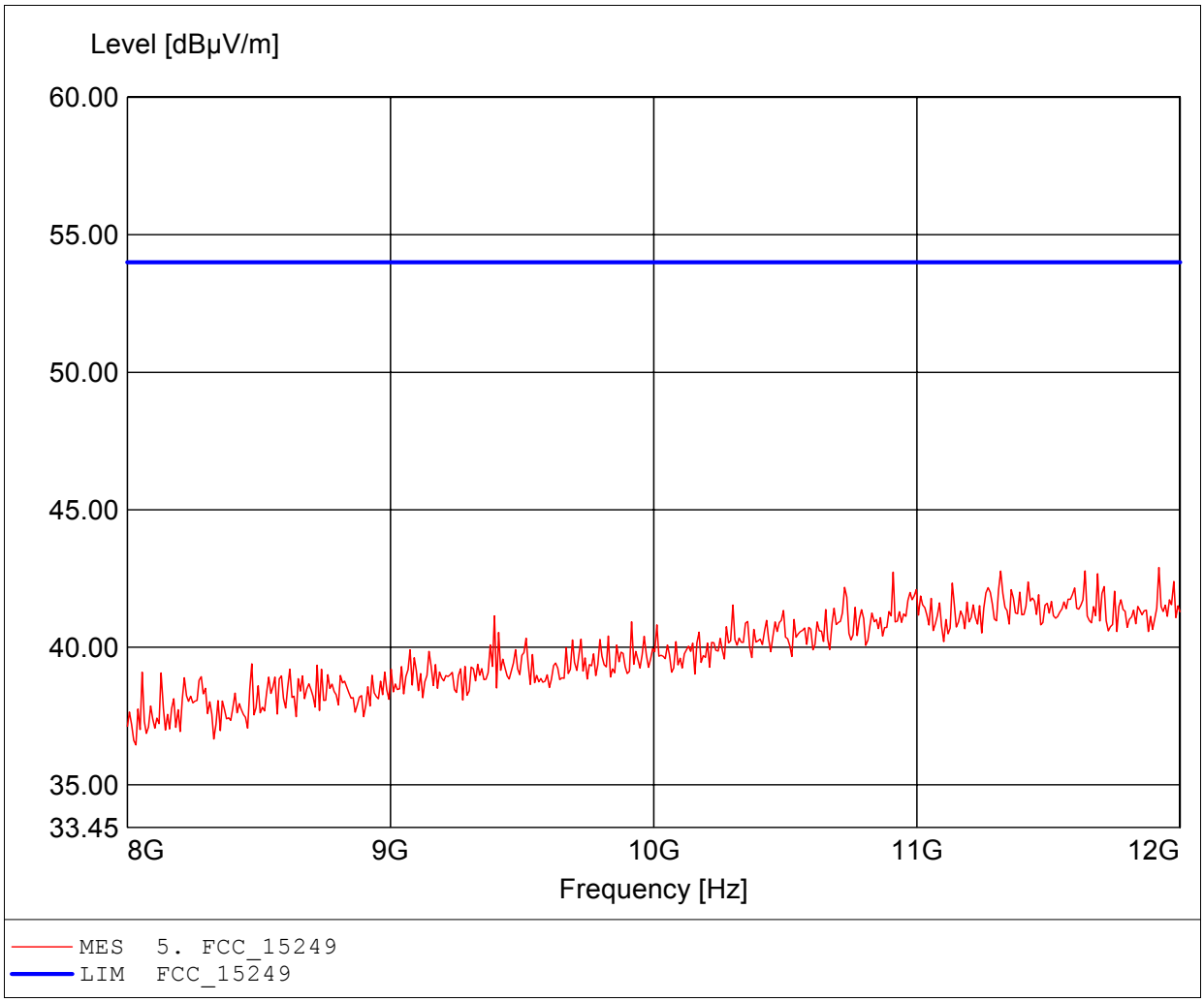


Page 1/1 12.06.2011 10:08 Overview / Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.920GHz, Emax: 42.90dBµV/m, RBW: 1MHz

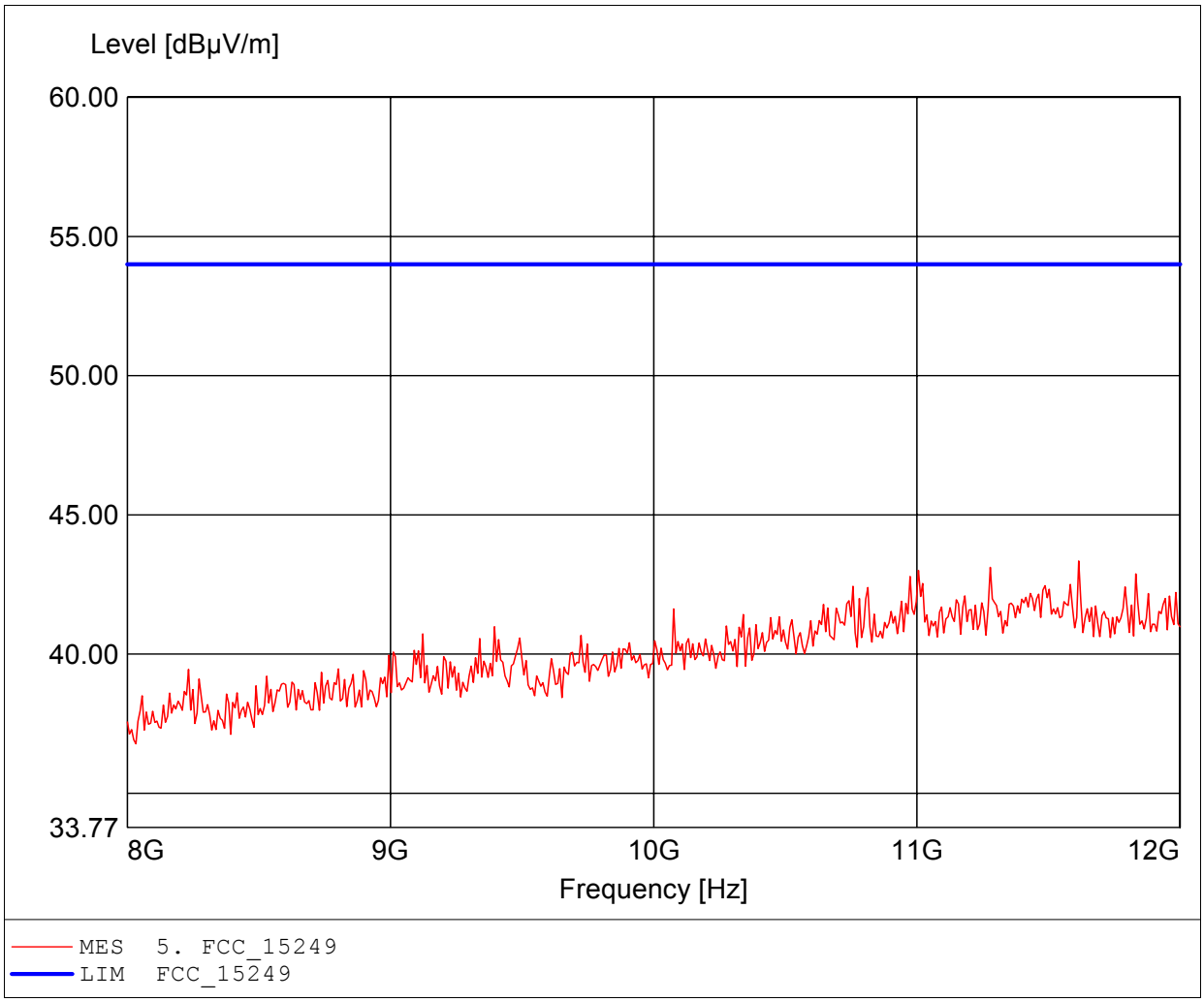


Page 1/1 12.06.2011 10:26 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.615GHz, Emax: 43.34dBµV/m, RBW: 1MHz

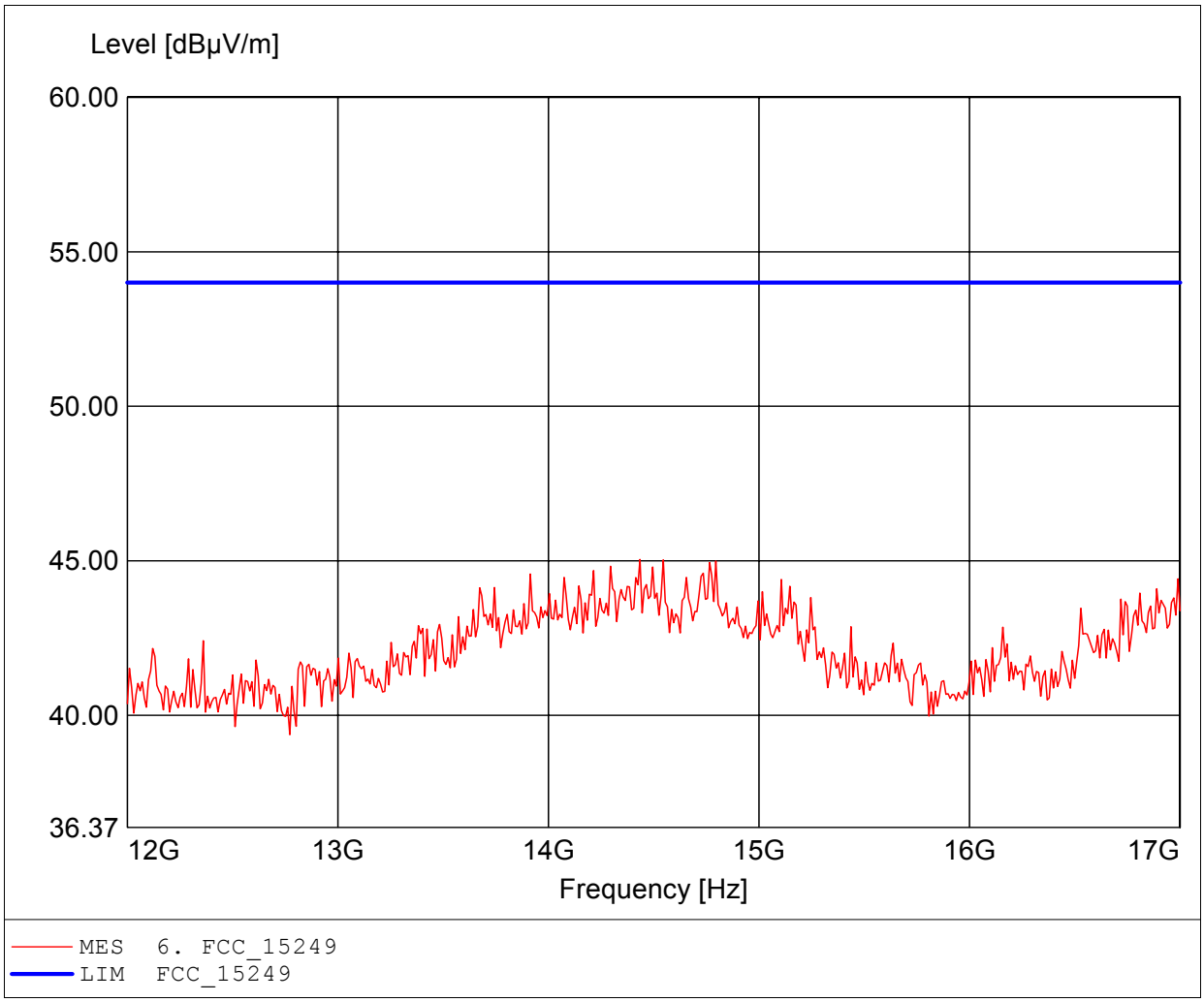


Page 1/1 12.06.2011 10:11 Overview / Antenna vertical

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.435GHz, Emax: 45.04dBµV/m, RBW: 1MHz

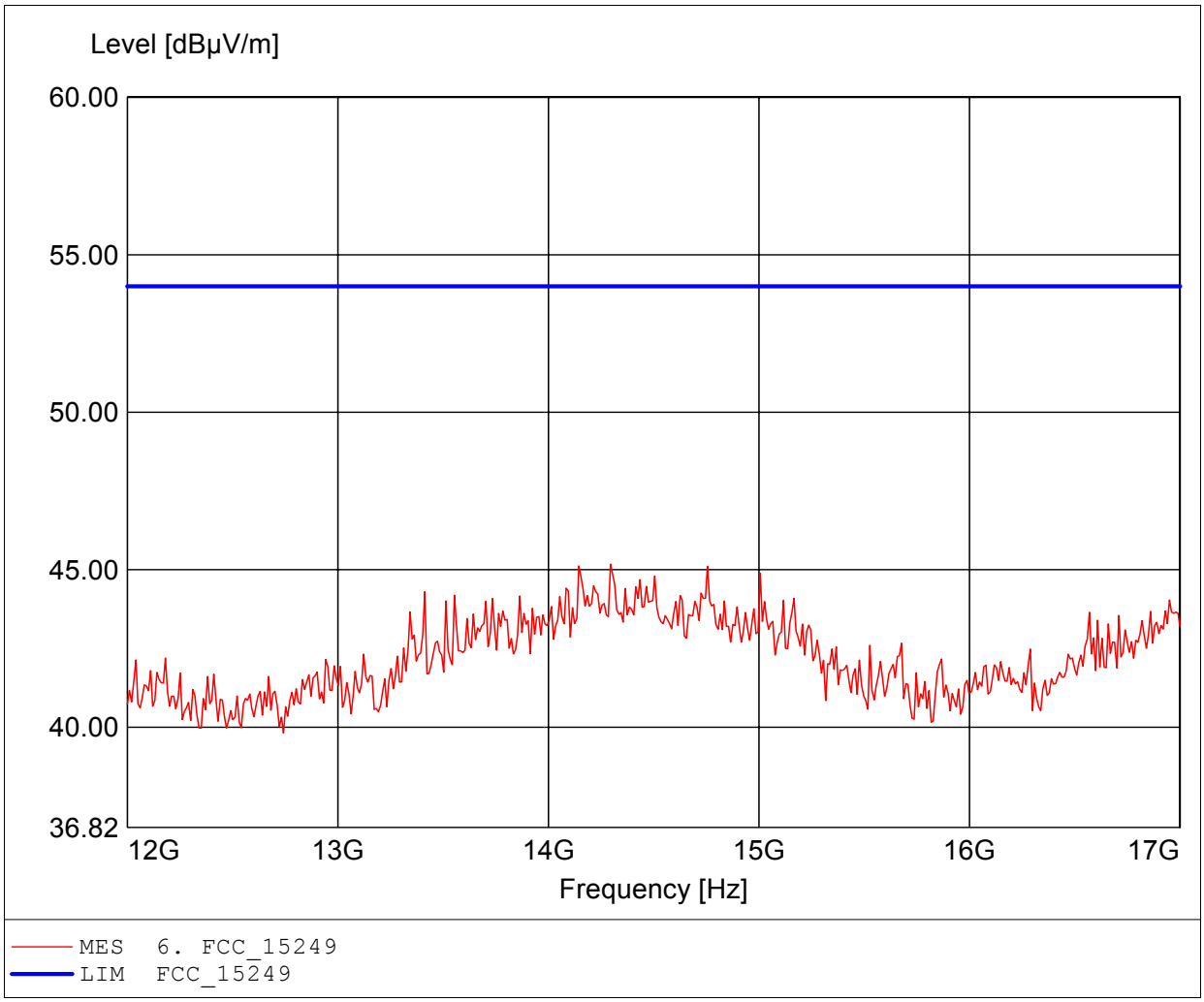


Page 1/1 12.06.2011 10:24 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

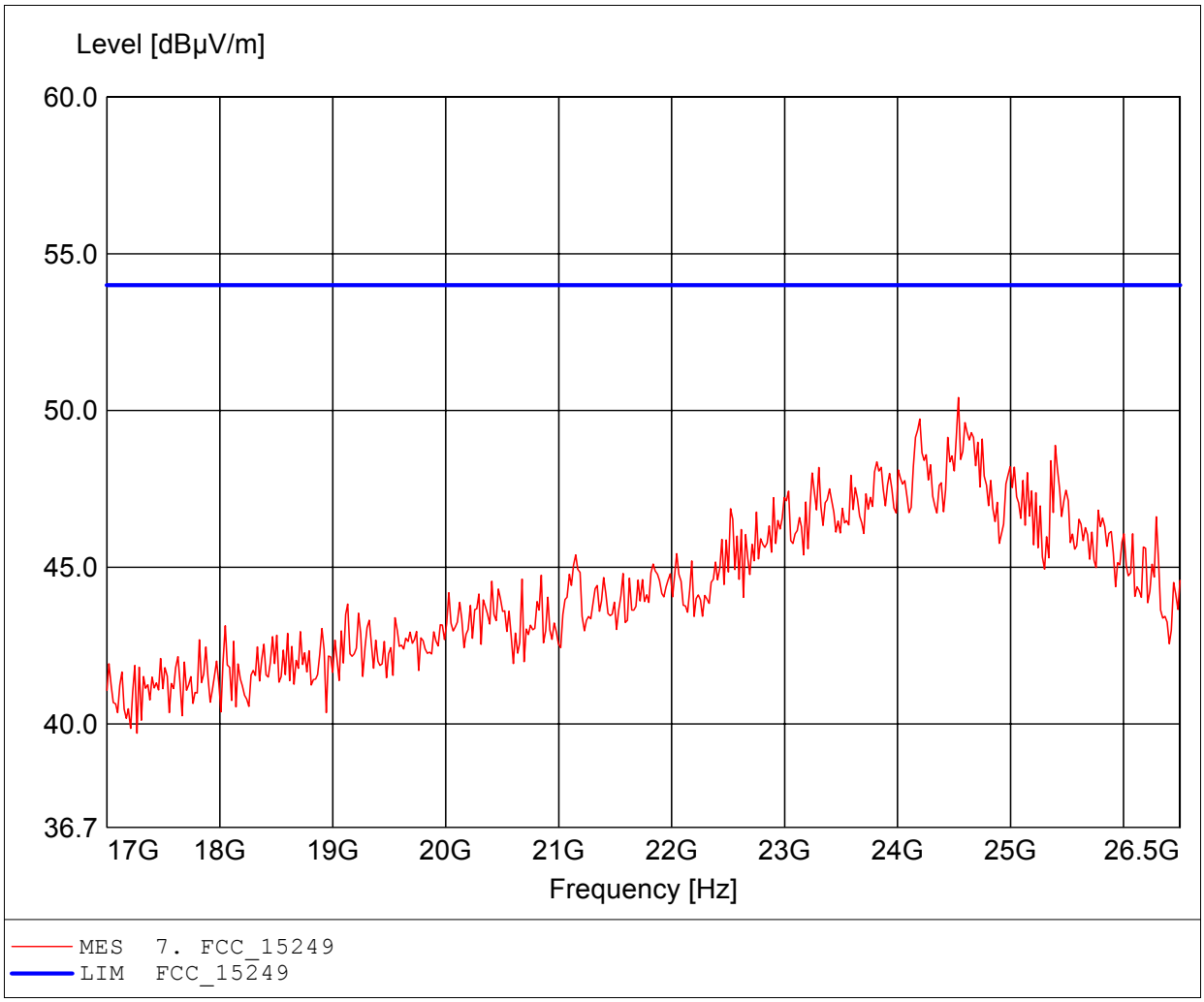
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.295GHz, Emax: 45.18dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.539GHz, Emax: 50.42dBµV/m, RBW: 1MHz

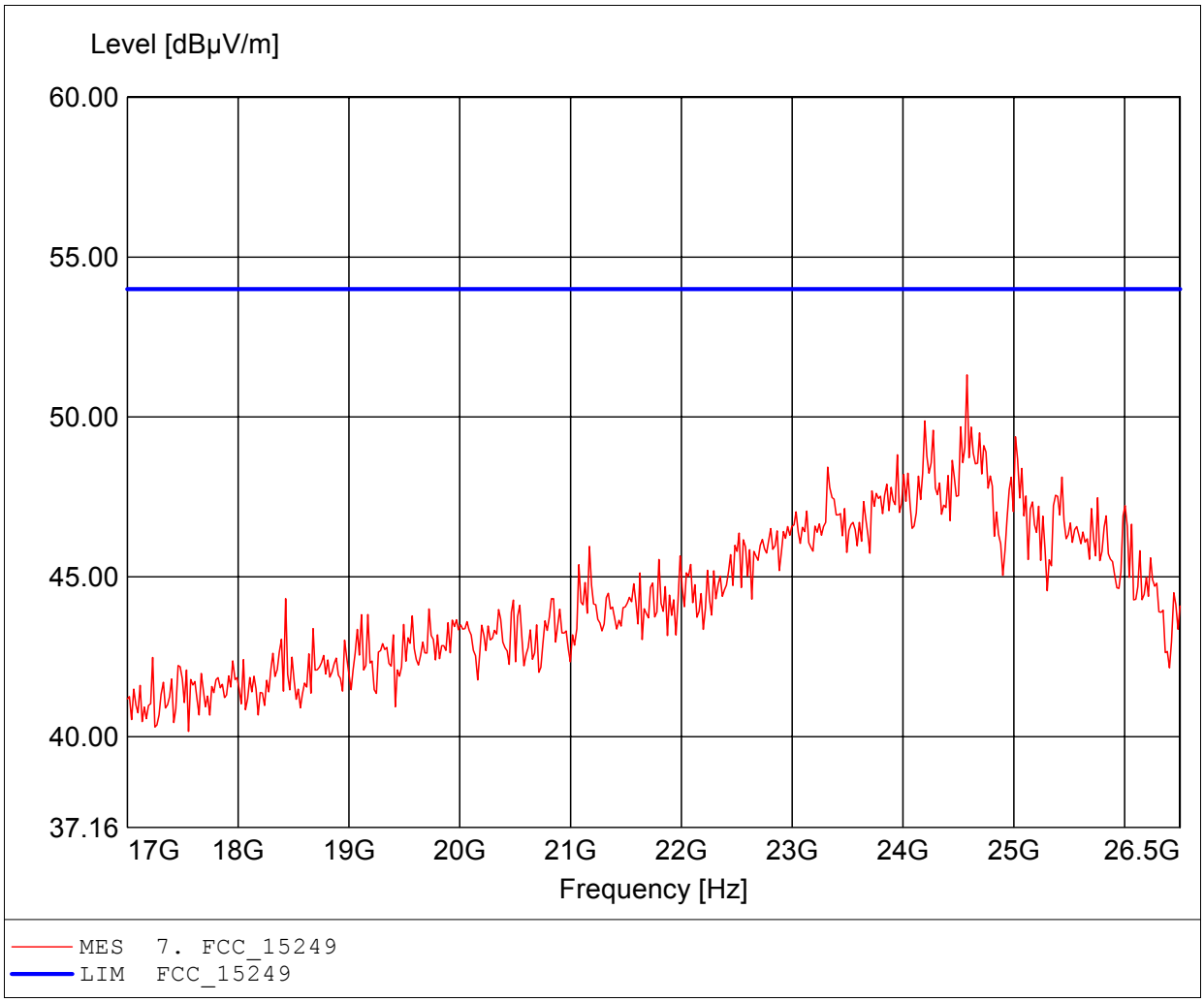


Page 1/1 12.06.2011 10:21 Overview / Antenna horizontal

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Tx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	according to §15.249, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.577GHz, Emax: 51.32dBµV/m, RBW: 1MHz



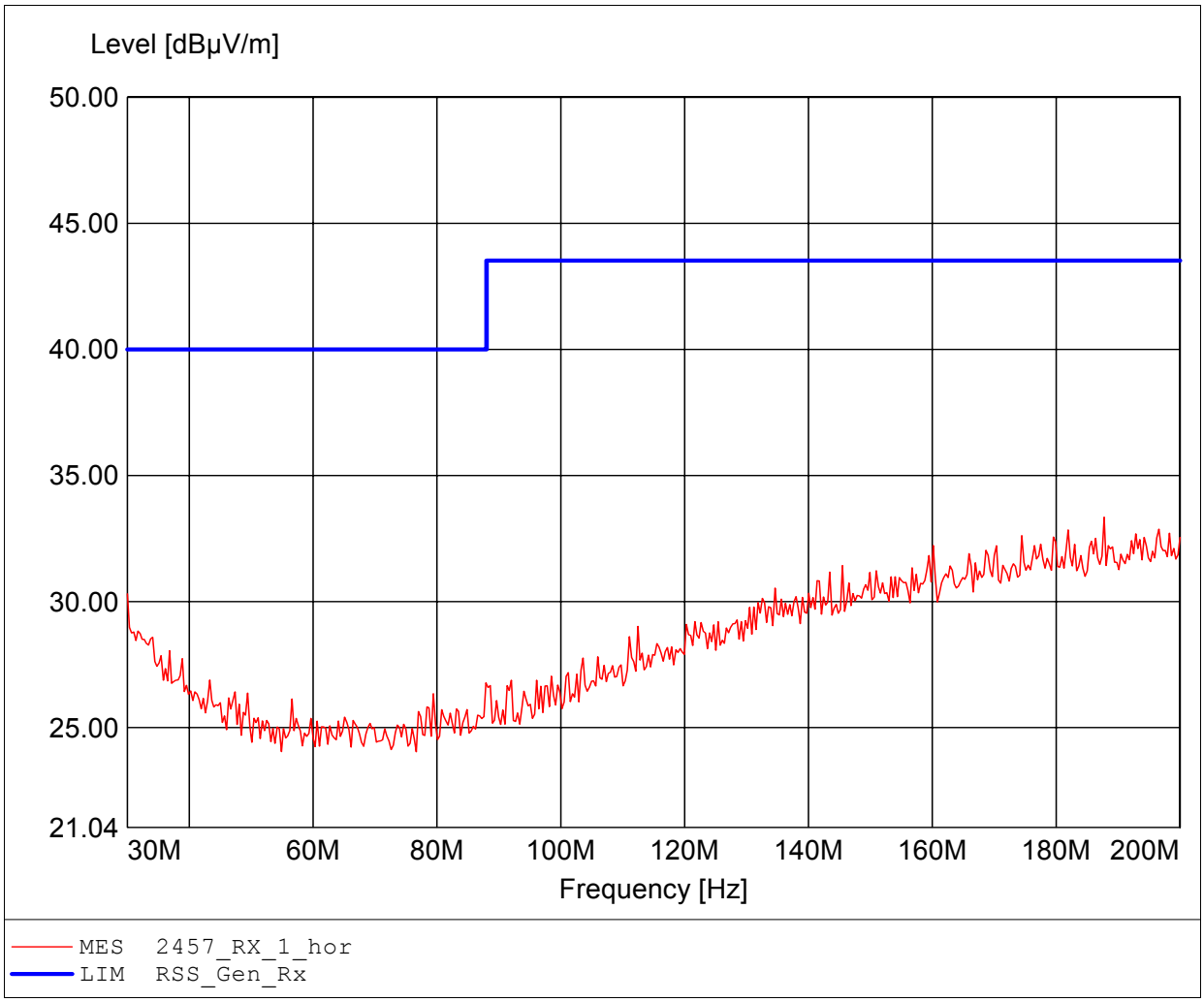
Page 1/1 12.06.2011 10:19 Overview / Antenna vertical

ANNEX C Receiver radiated spurious emissions

Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq:187.735MHz Emax:33.34dBµV/m RBW: 100 kHz

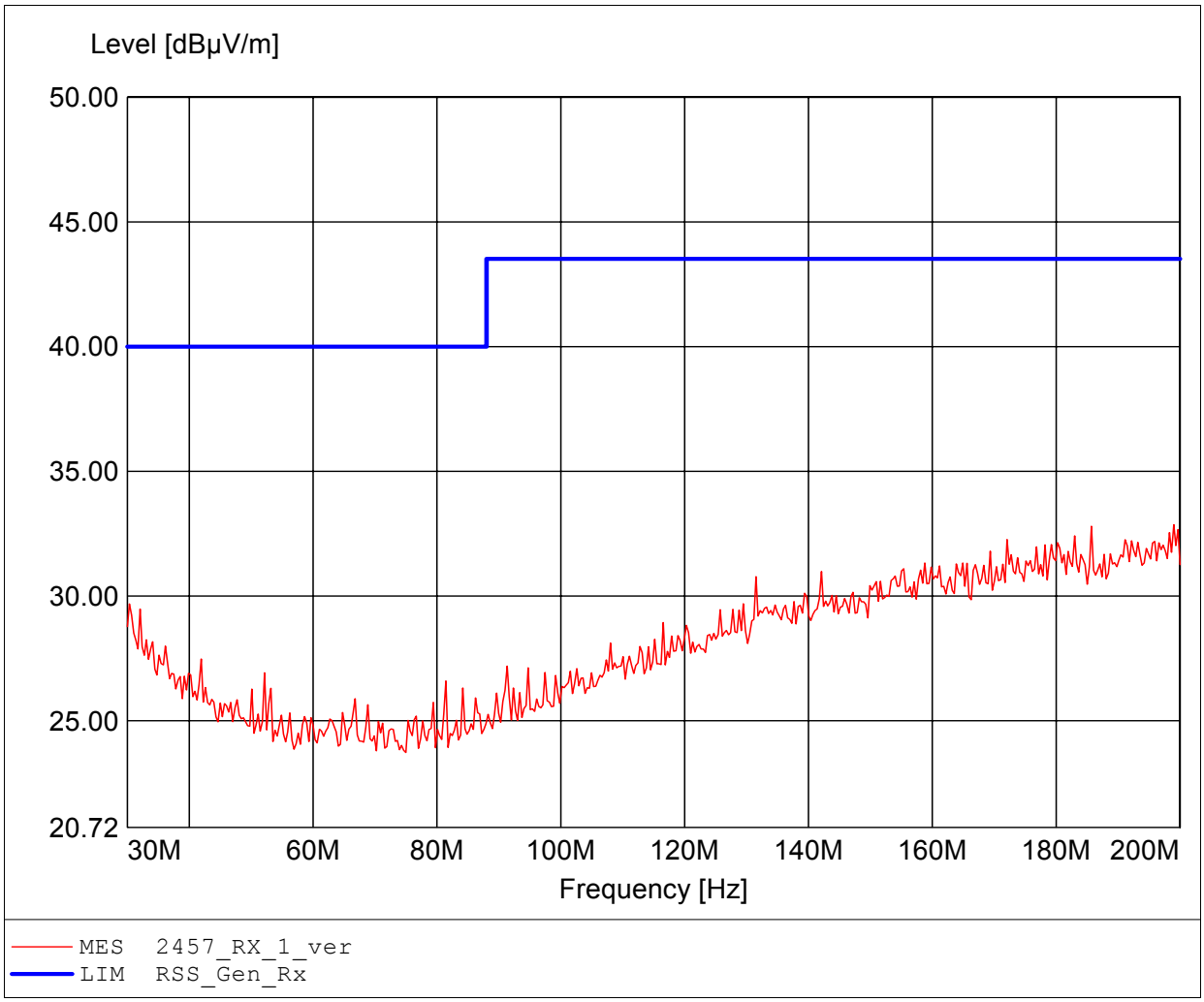


Page 1/1 12.06.2011 12:28 / Antenna horizontal G0M21008-3591

Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

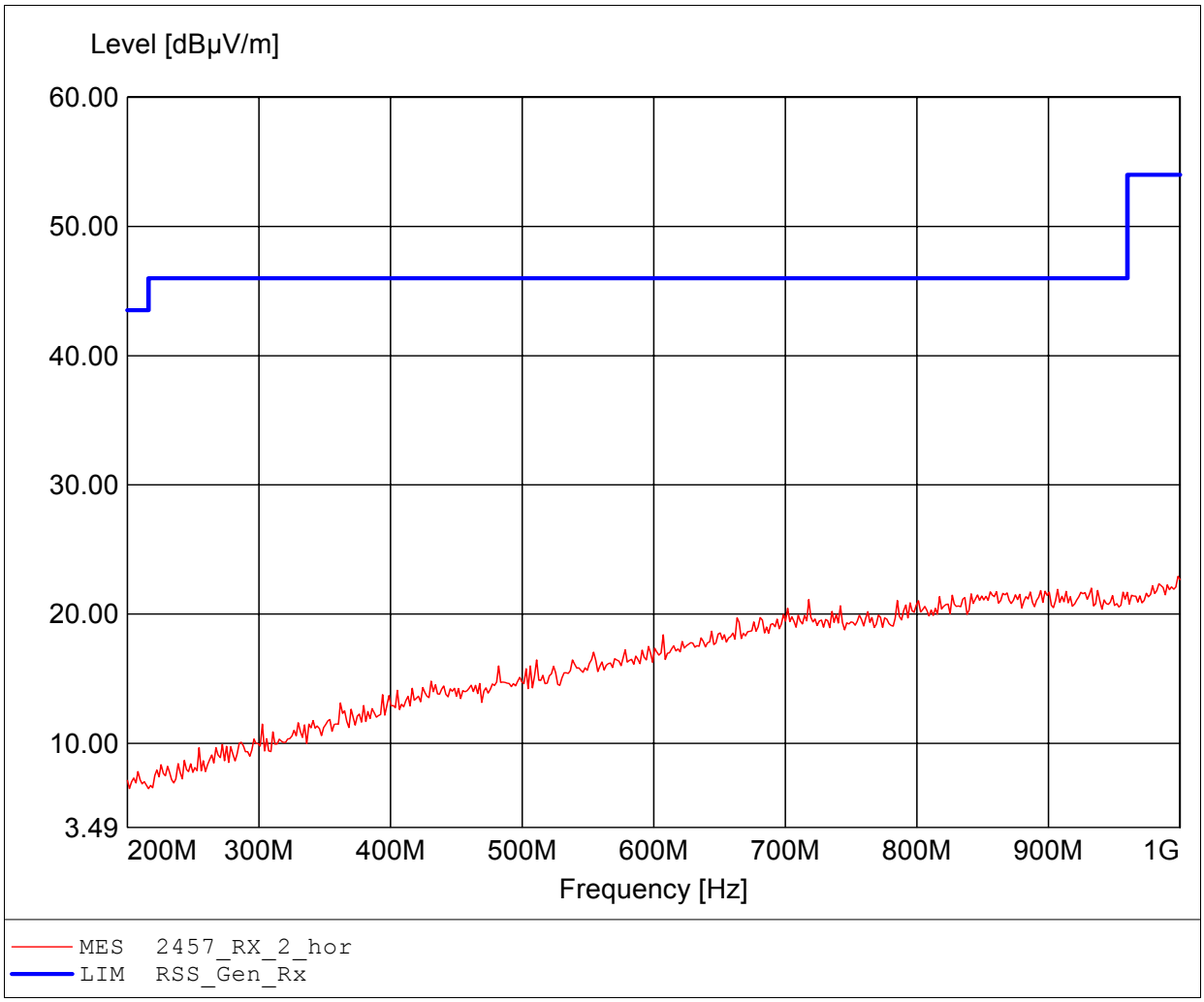
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq:198.978MHz Emax:32.86dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

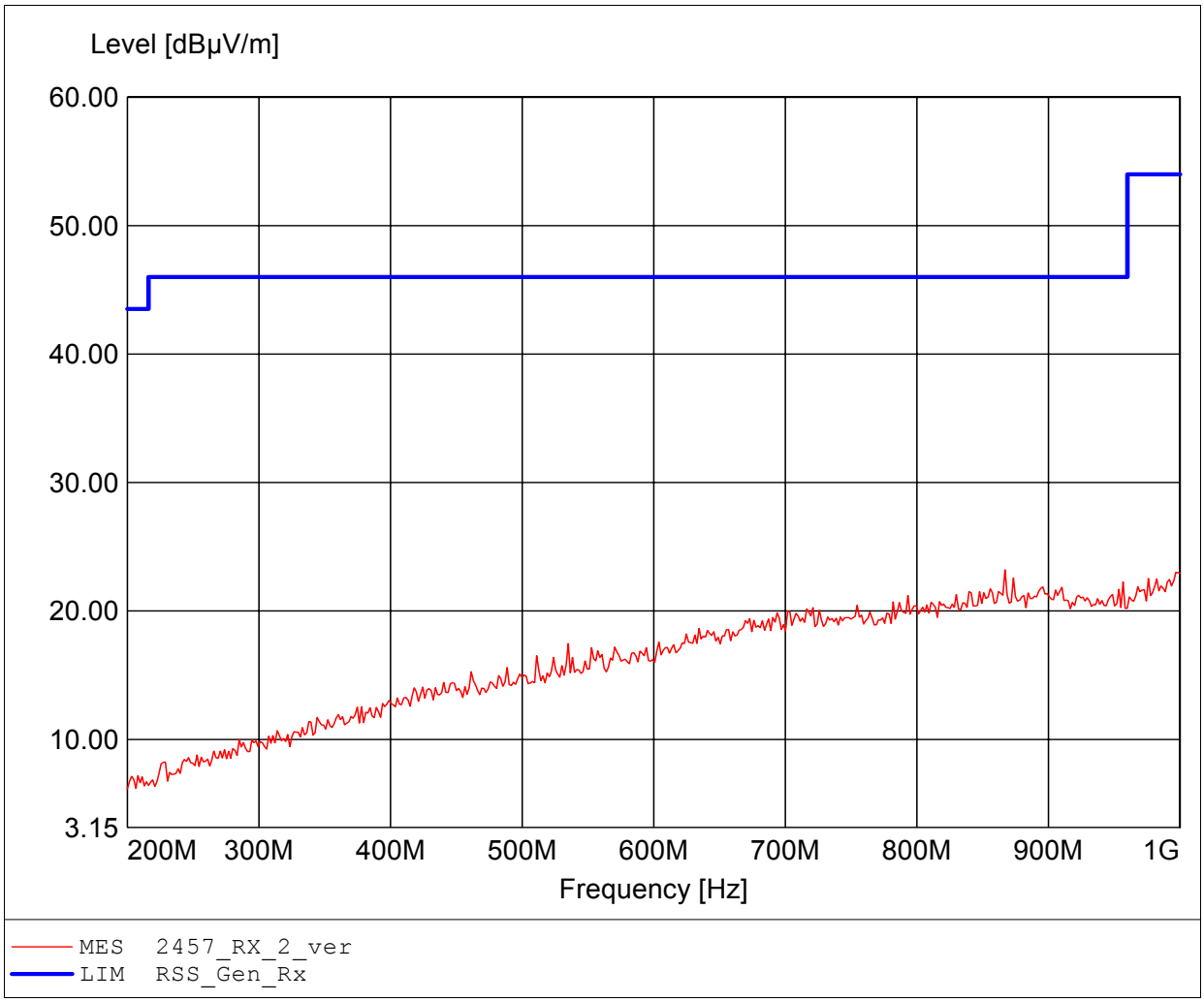
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL 223, ampl.
Comment 2:	Freq:998.397MHz Emax:22.91dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

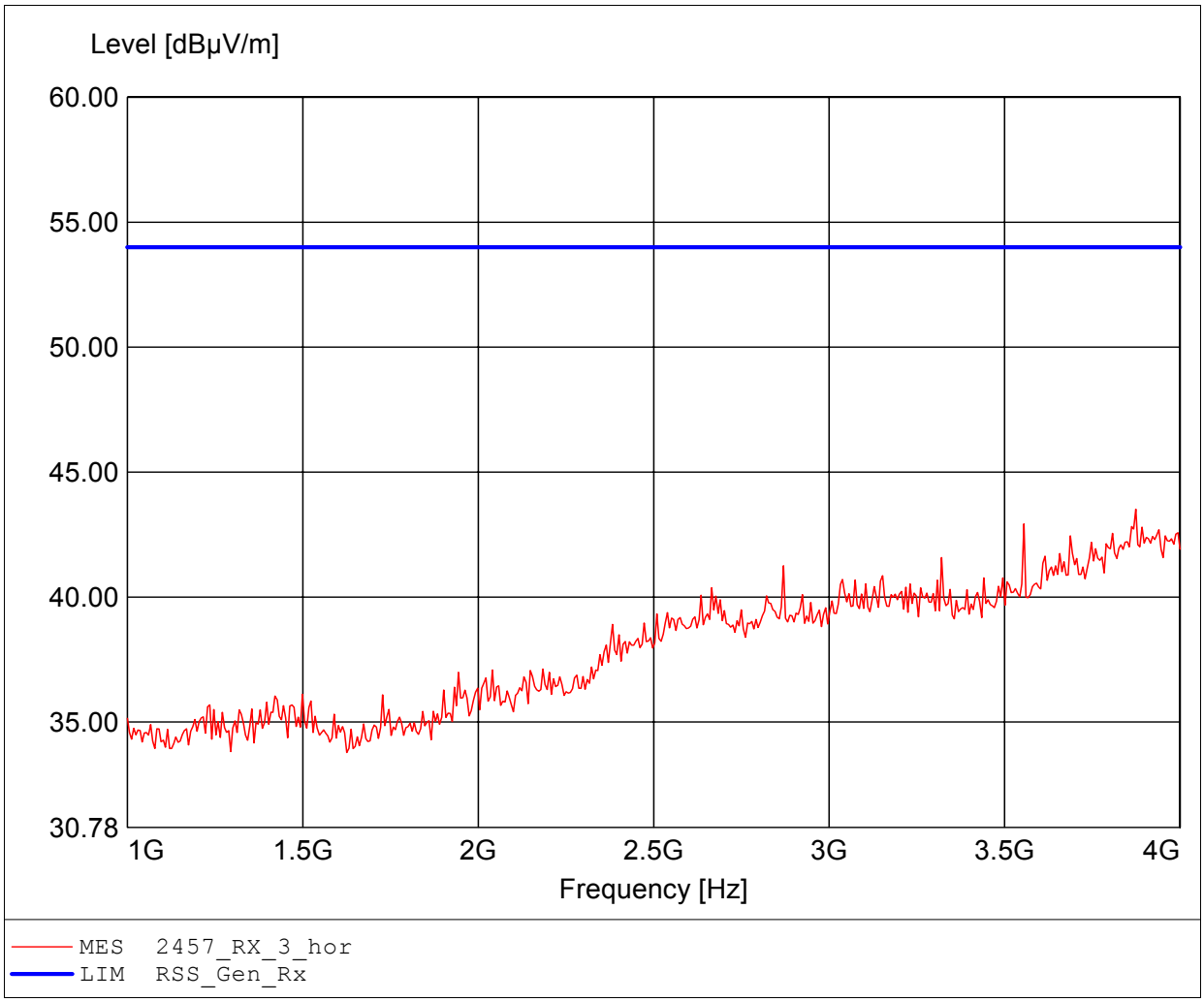
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL 223, ampl.
Comment 2:	Freq:866.934MHz Emax:23.20dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

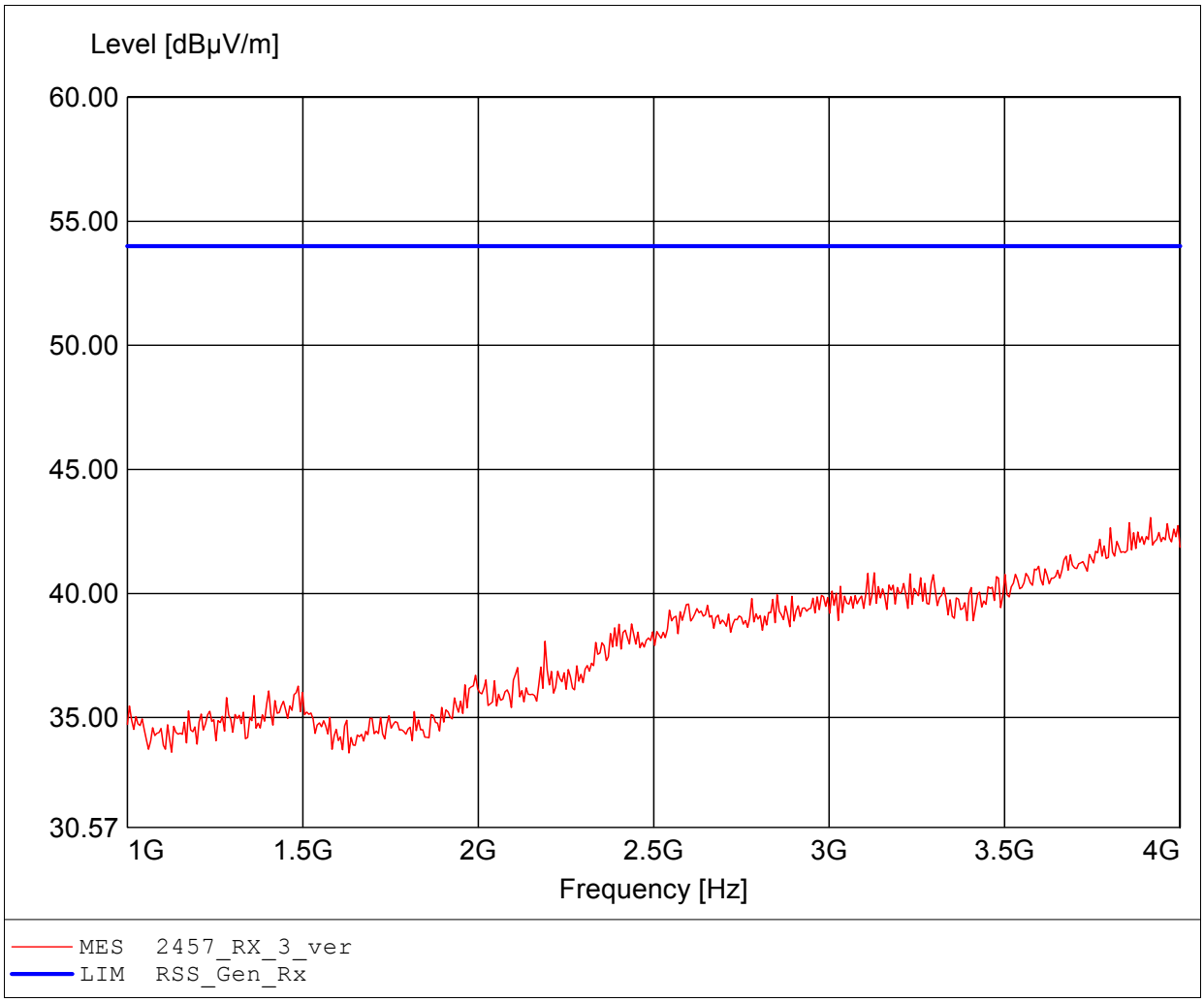
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL025, ampl.
Comment 2:	Freq:3.874GHz Emax:43.52dBµV/m RBW: 1 MHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

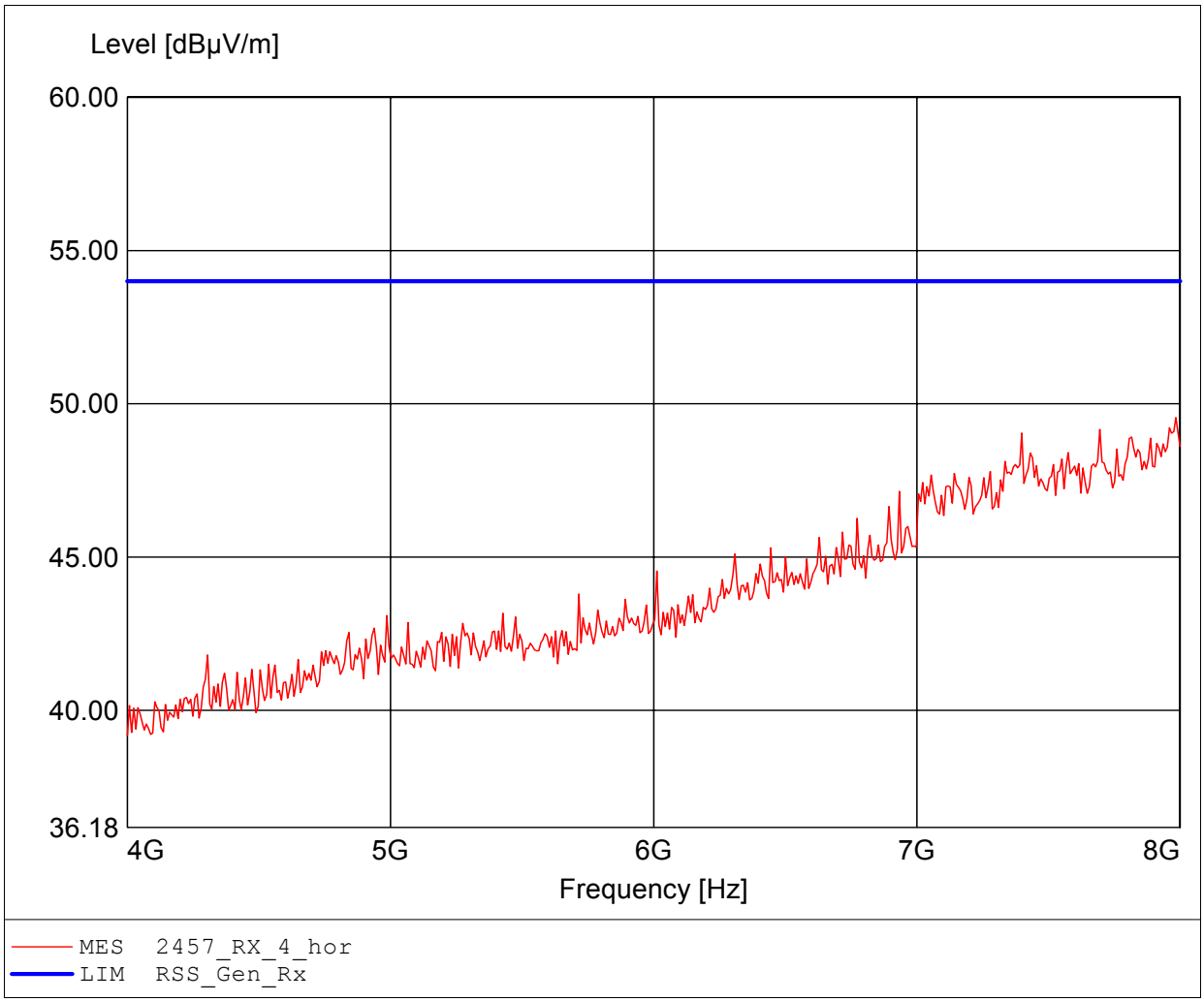
Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL025, ampl.
Comment 2:	Freq:3.916GHz Emax:43.06dBµV/m RBW: 1 MHz



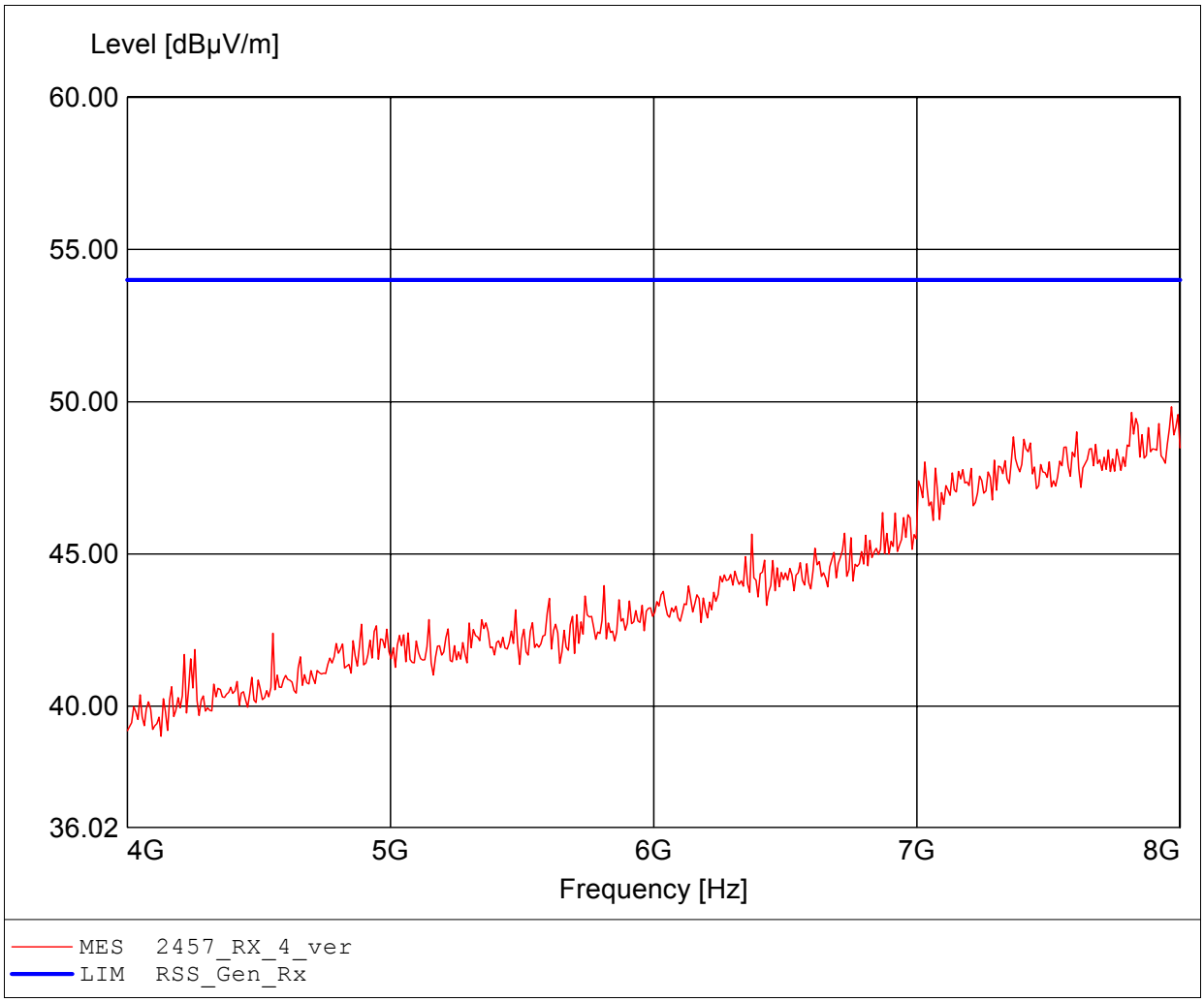
Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL025, ampl.
Comment 2:	Freq:7.984GHz Emax:49.55dBµV/m RBW: 1 MHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

Approval Holder:	Saxonar GmbH / G0M21008-3591
EUT / Model:	power2max / P0004-6-A Variante BCD110mm
Configuration:	Setup: Rx: 2457MHz / EUT vertical
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Weber
Test Condition:	Tnom.: 25°C / Unom: 3.0 VDC (Li-Battery)
Test Specification:	Freq. / CH: 2457
Comment 1:	Dist.: 3m, Ant.: HL025, ampl.
Comment 2:	Freq:7.968GHz Emax:49.83dBµV/m RBW: 1 MHz