

EMC TEST REPORT

FCC 47 CFR Part 15B
Industry Canada RSS-Gen

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1406-3933-EF0115B-V01

Testing Laboratory : Eurofins Product Service GmbH

Address : Storkower Str. 38c
15526 Reichenwalde
Germany

Accreditation:



A2LA Accredited Testing Laboratory, Certificate No.: 1983.01
FCC Filed Test Laboratory, Reg.-No.: 96970
IC OATS Filing assigned code: 3470A

Applicant's name: Kamstrup A/S

Address : Industrivej 28
8660 Skanderborg
DENMARK

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
RSS-Gen, Issue 3, 2010-12
ANSI C63.4:2009

Equipment under test (EUT):

Product description	READy Converter for the US market		
Model No.	READy Converter		
Additional Models	None		
Hardware version	5535 1377 A1		
Firmware / Software version	50981119 B1, Eeprom config : 55141211 B1		
	FCC-ID: OUY-READYAMR1		IC: N/A

Test result **Passed**

Test Report No.: G0M-1406-3933-EF0115B-V01

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

Possible test case verdicts:

- not applicable to test object: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Date of receipt of test item: 2014-09-08

Date (s) of performance of tests: 2014-09-08 – 2014-09-09

Compiled by: Jens Marquardt

Tested by (+ signature).....: Andreas Pflug

Approved by (+ signature): Marcus Klein

Date of issue: 2014-10-22

Total number of pages: 57


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:

Measurements are done with different variants of external antenna:

external antenna 1: whip antenna RP SMA / Laird technology / Nearson / S161AM-915

external antenna 2: roof top antenna / smarteq / 6699467+ 6699466

external antenna 2: roof top antenna / smarteq / 6699467+ 6699466 with low loss cable

Version History

Version	Issue Date	Remarks	Revised by
V01		Initial Release	

REPORT INDEX

1	EQUIPMENT (TEST ITEM) DESCRIPTION	5
1.1	Photos – Equipment external	6
1.2	Photos – Equipment internal	11
1.3	Photos – Test setup	12
1.4	Supporting Equipment Used During Testing	13
1.5	Operating Modes	14
1.6	Test Equipment Used During Testing	15
1.7	Sample emission level calculation	16
2	RESULT SUMMARY	17
3	TEST CONDITIONS AND RESULTS	18
3.1	Test Conditions and Results – Radiated emissions	18
3.2	Test Conditions and Results – AC power line conducted emissions	55

1 Equipment (Test item) Description

Description	READY Converter for the US market	
Model	READY Converter	
Additional Models	None	
Serial number	None	
Hardware version	5535 1377 A1	
Software / Firmware version	50981119 B1, Eeprom config : 55141211 B1	
FCC-ID	OUY-READYAMR1	
IC	N/A	
Power supply	5 VDC	
AC/DC-Adaptor	Model : dch5-050us Manufacturer : Emerson Input : 110 V / 50-60Hz Output : 5VDC / 1.0A	
DC/DC-Adaptor	Model : CC-DUAL01 Manufacturer : E-link Technology Input : 12 – 18 V DC Output : 5VDC / 1.0A	
Radio module	Type	Bluetooth module
	Model	PAN1322
	Manufacturer	Panasonic
	HW Version	02
	SW Version	3.1
	FCC-ID	T7VEBMU
	IC	216QEBMU
Manufacturer	Kamstrup A/S Industrivej 28 8660 Skanderborg DENMARK	
Highest emission frequency	Fmax [MHz] = 2500	
Device classification	Class B	
Equipment type	Tabletop	
Number of tested samples	1	

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

1.1 Photos – Equipment external



EUT Antenna Connector



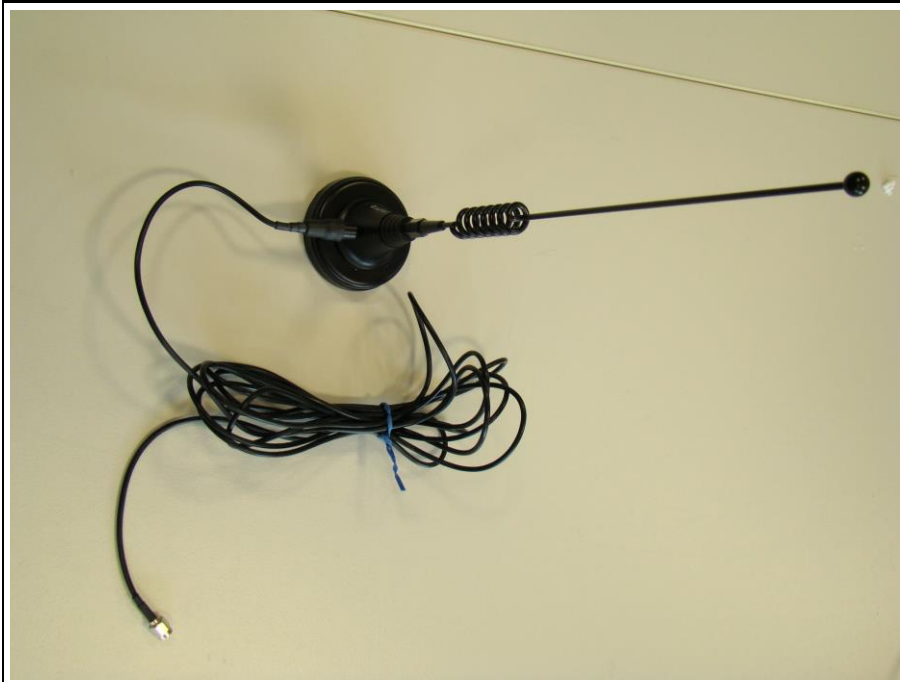
EUT Charging Connector



external antenna 1



external antenna 2



external antenna 3

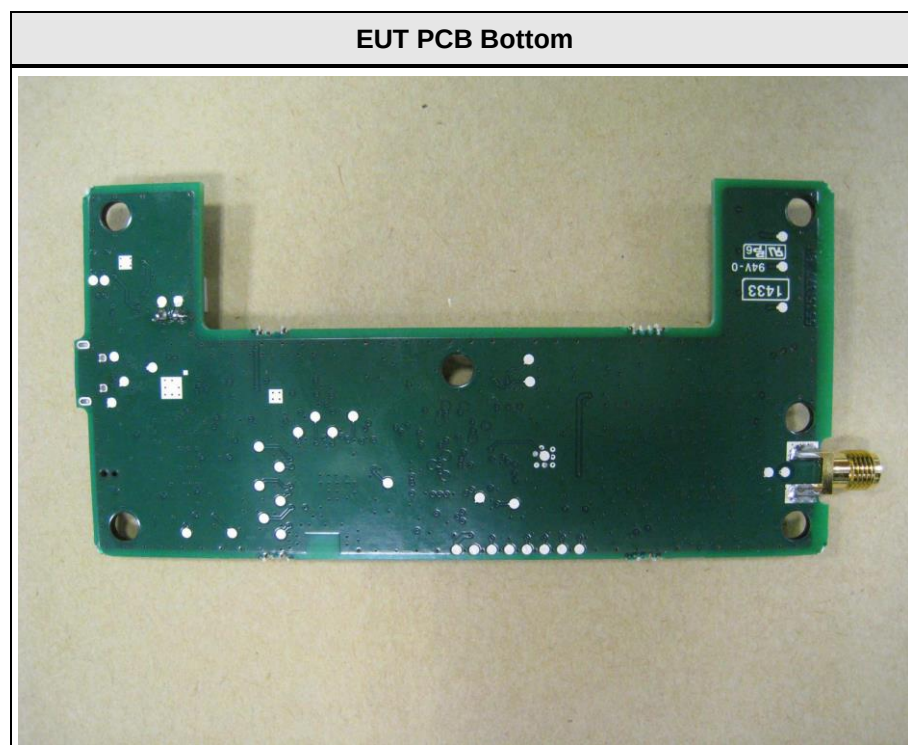
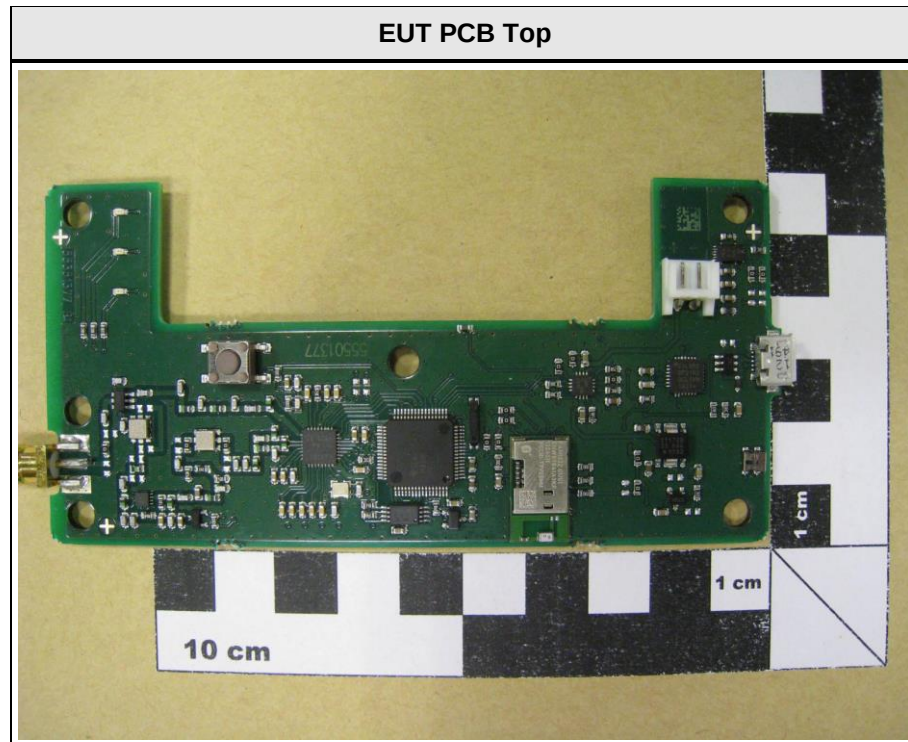


DC/DC Adapter

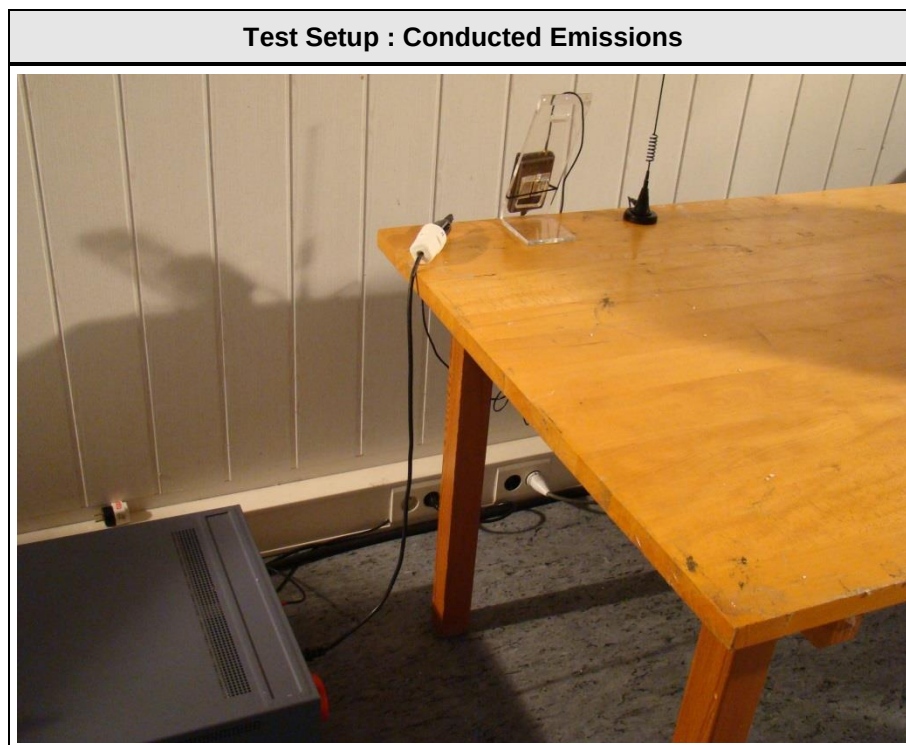
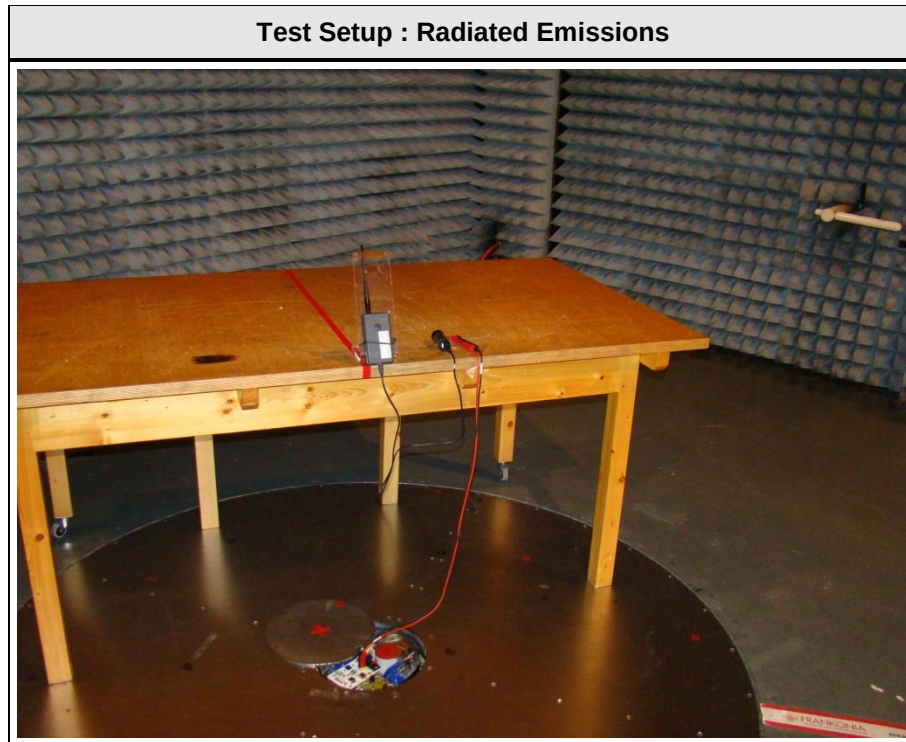




1.2 Photos – Equipment internal



1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	usb cable	Assmann	kamstrup part number 1652069	
AE	wall plug charger dch5-050us	Emerson	kamstrup part number 6699003	
AE	12VDC Car charger CC-DUAL01	E-link Technology	kamstrup part number 6696002	
None				
*Note: Use the following abbreviations: AE : Auxiliary/Associated Equipment, or SIM : Simulator (Not Subjected to Test) CABL : Connecting cables				

1.5 Operating Modes

Mode #	Description
1	EUT powered with 12V via car charger, BT link to BT-Tester and SRD in RX mode
2	EUT powered with 120 VAC via Wall plug charger, BT link to BT-Tester and SRD in RX mode

1.6 Test Equipment Used During Testing

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

Radiated emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD-Antenne	R&S	HL 223	EF00187	2014-03	2017-03
LPD-Antenna	R&S	HL 025	EF00327	2013-02	2016-02
EMI Test Receiver	R&S	ESU8	EF00379	2014-03	2015-03
EMI Test Receiver	R&S	ESCS30	EF00295	2013-10	2014-10

Conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	EF00182	2012-10	2014-10
AMN	R&S	ESH3-Z5	EF00036	2012-11	2014-11
EMI Test Receiver	R&S	ESCS 30	EF00295	2013-10	2014-10

1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBμV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of 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:

$$\text{Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

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

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

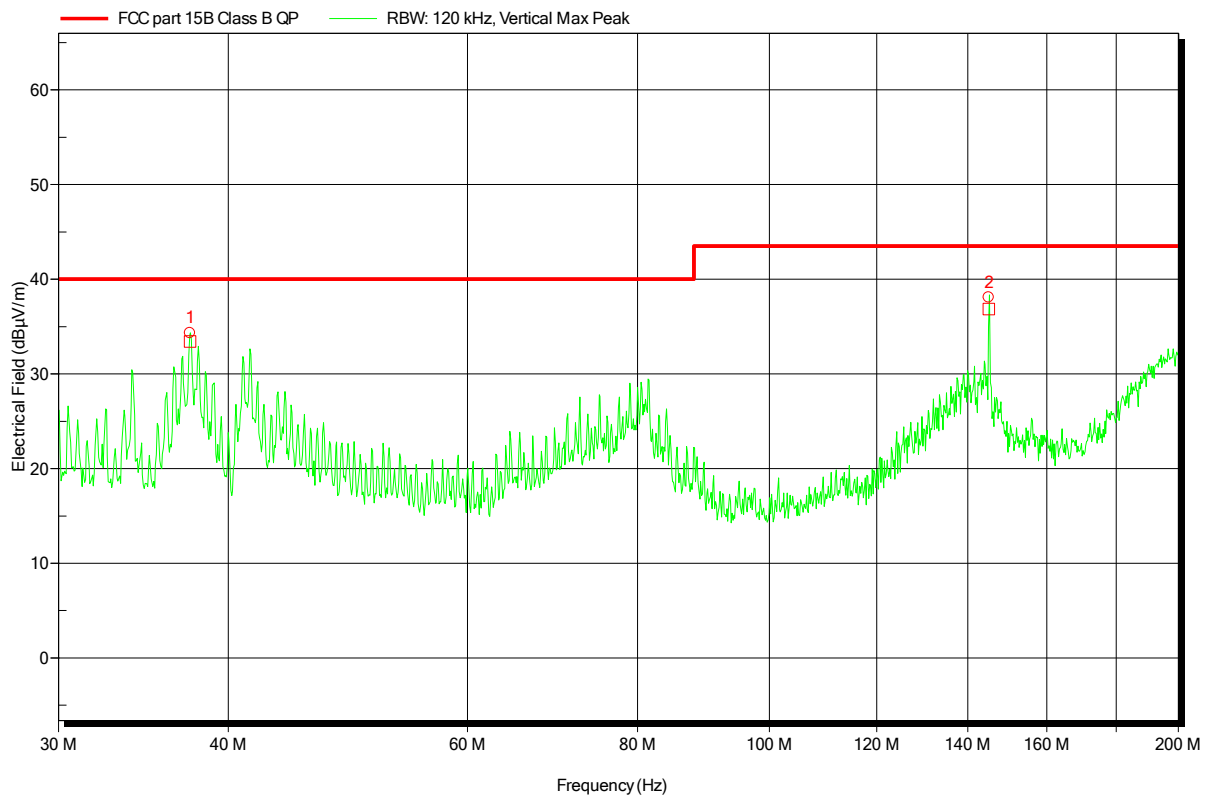
Radiated emissions acc. FCC 47 CFR 15.109 / IC RSS-Gen					Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test		
Ambient Temperature		15 to 35 °C		23 °C		
Relative Humidity		30 to 60 %		41 %		
Test according referenced standards		Reference Method				
		ANSI C63.4				
Sample is tested with respect to the requirements of the equipment class		Equipment class				
		Class B				
Test frequency range determined from highest emission frequency		Highest emission frequency				
		Fmax [MHz] = 2500				
Fully configured sample scanned over the following frequency range		Frequency range				
		30 MHz to 19 GHz				
Operating mode		1 + 2				
Limits and results Class B						
Frequency [MHz]	Quasi-Peak [dBµV/m]	Result	Average [dBµV/m]	Result	Peak [dBµV/m]	Result
30 – 88	40	PASS	-		-	-
88 – 216	43.5	PASS	-		-	-
216 – 960	46	PASS	-		-	-
960 – 1000	54	PASS	-		-	-
> 1000	-	-	54	PASS	74	PASS
Comments: Measurements with car charger were performed 3 times with 3 different antennas (see remark on page 2). The worst case antenna configuration was used to measure up to 19 GHz and additional with the wall plug charger.						

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 4



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
37.488 MHz	33.44 dBµV/m	40 dBµV/m	-6.56 dB	Pass
145.06 MHz	36.87 dBµV/m	43.5 dBµV/m	-6.63 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

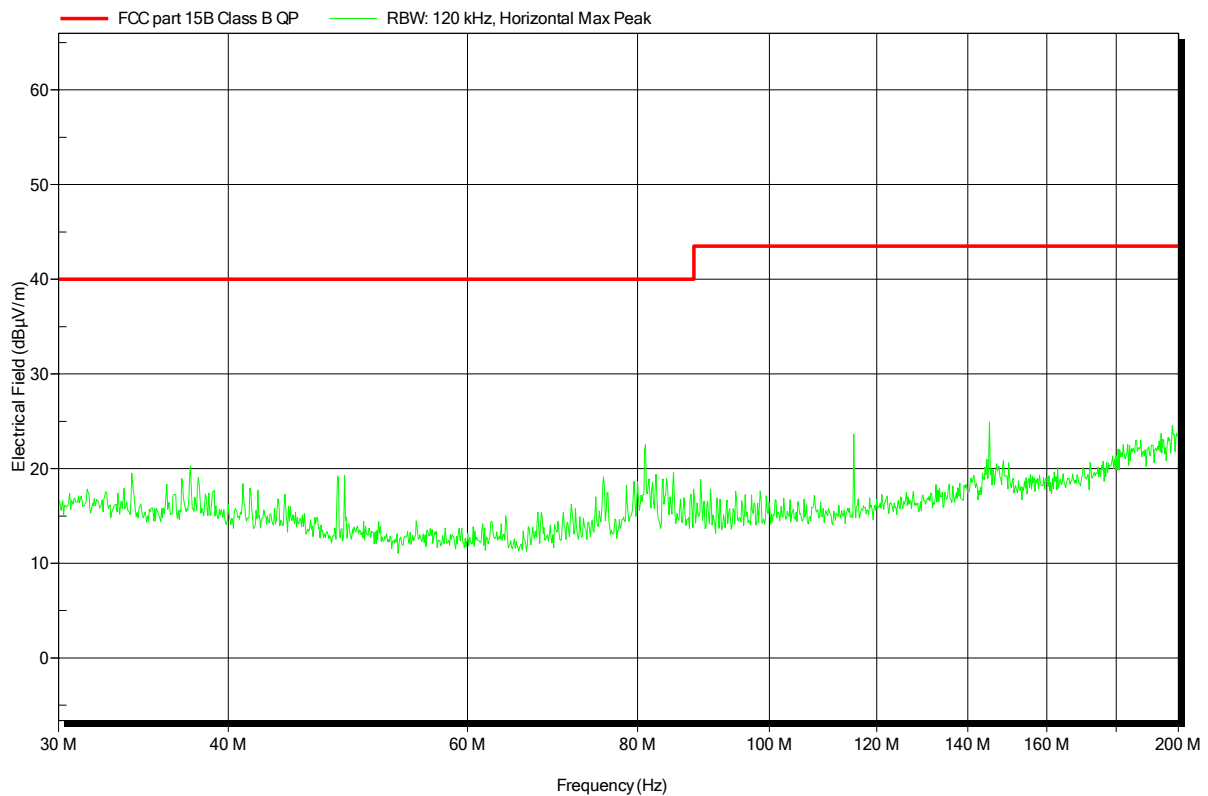
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: REAdy Converter
 Model: REAdy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 2



Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 20

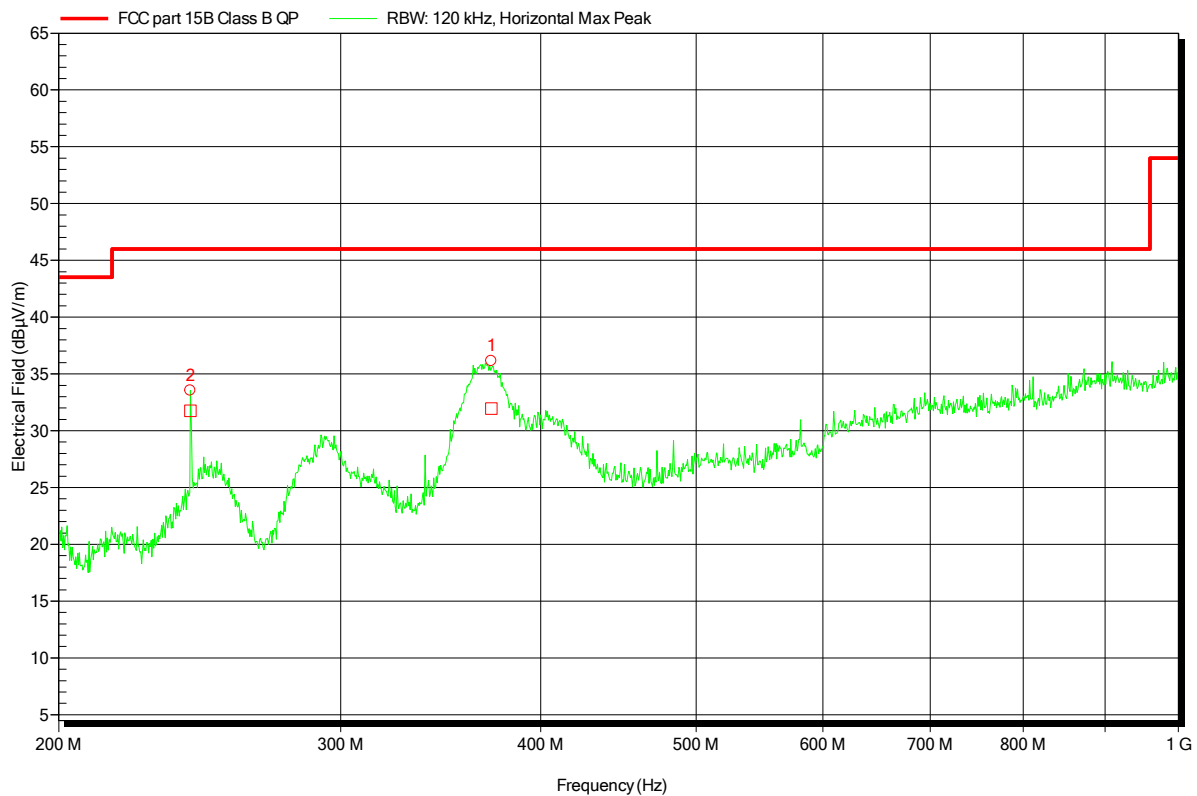


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 19



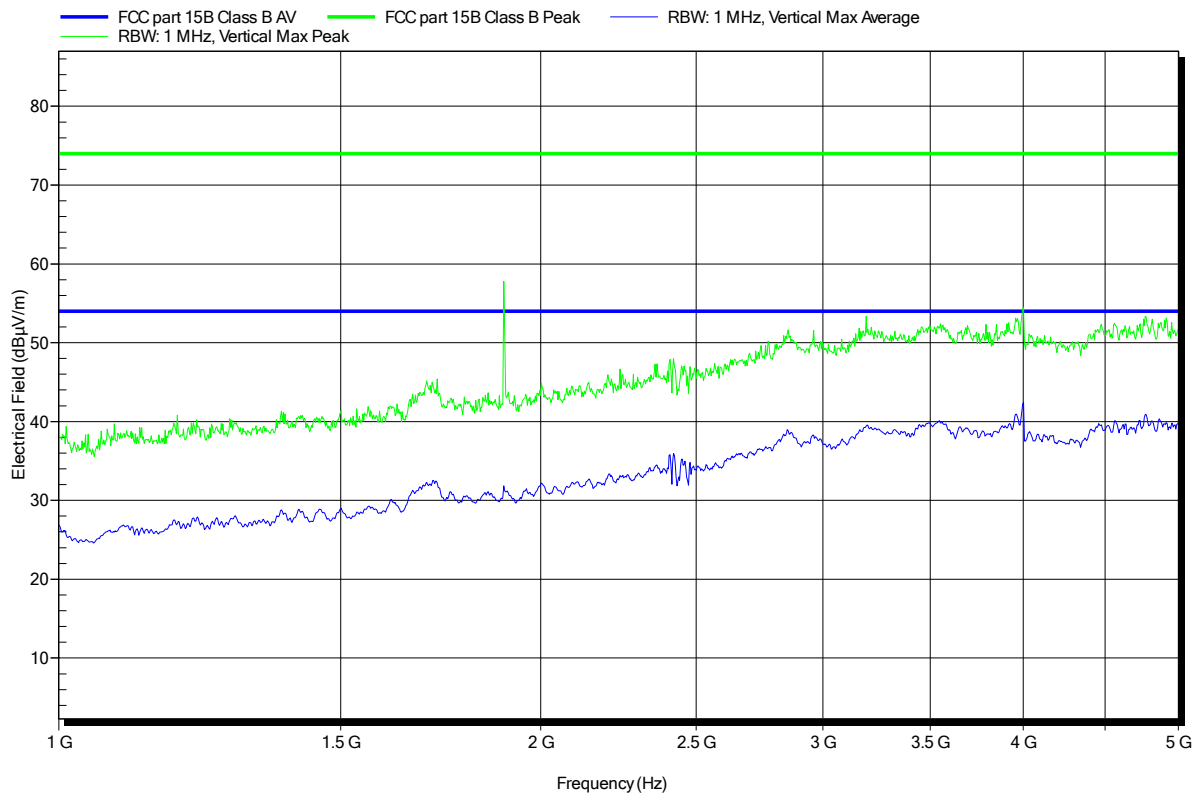
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
241.76 MHz	31.75 dBμV/m	46 dBμV/m	-14.25 dB	Pass
372.62 MHz	31.94 dBμV/m	46 dBμV/m	-14.06 dB	Pass

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 25

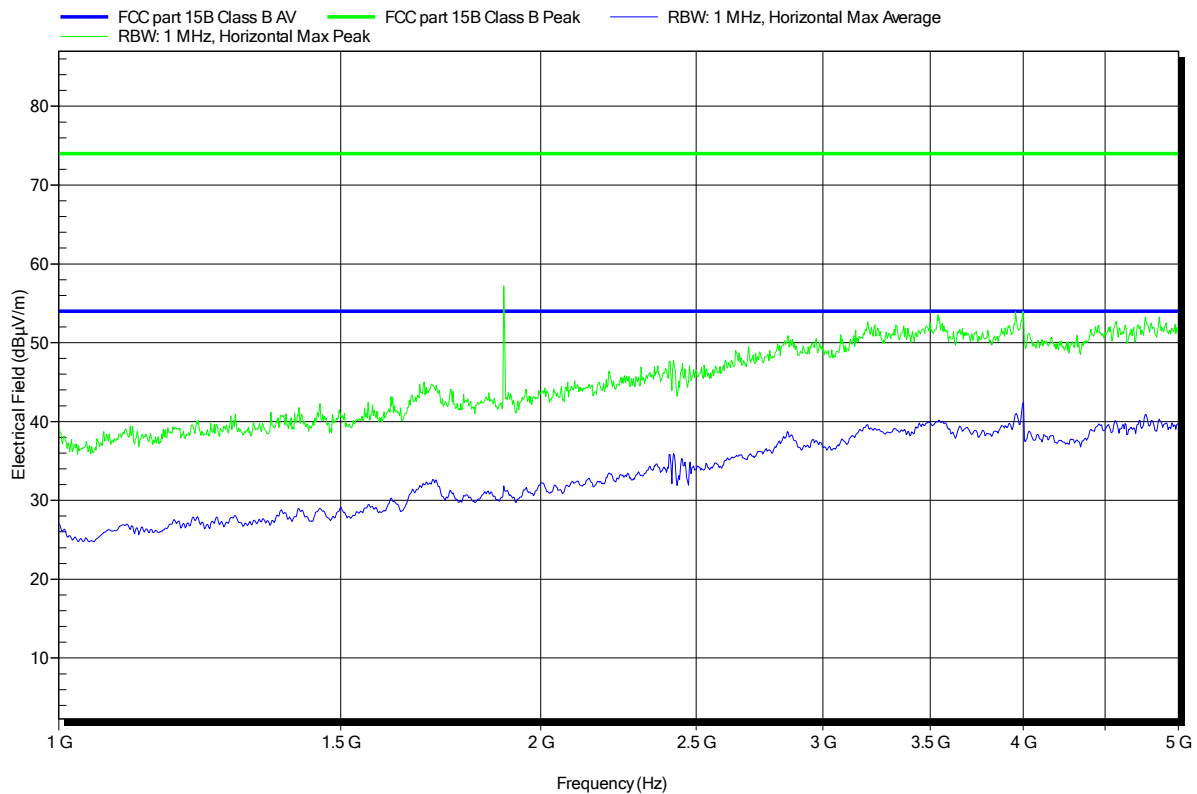


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 1
 Test Date: 2014-09-08
 Note:

Index 23

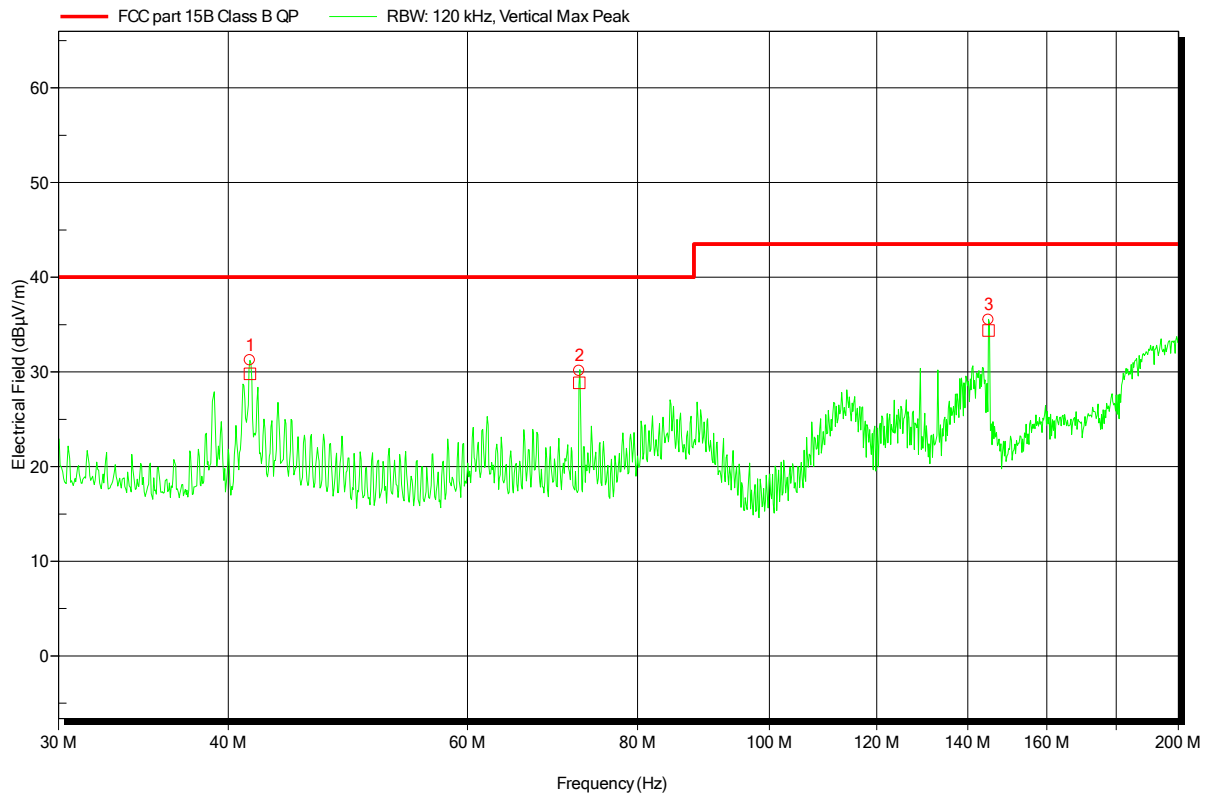


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READy Converter
 Model: READy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 6



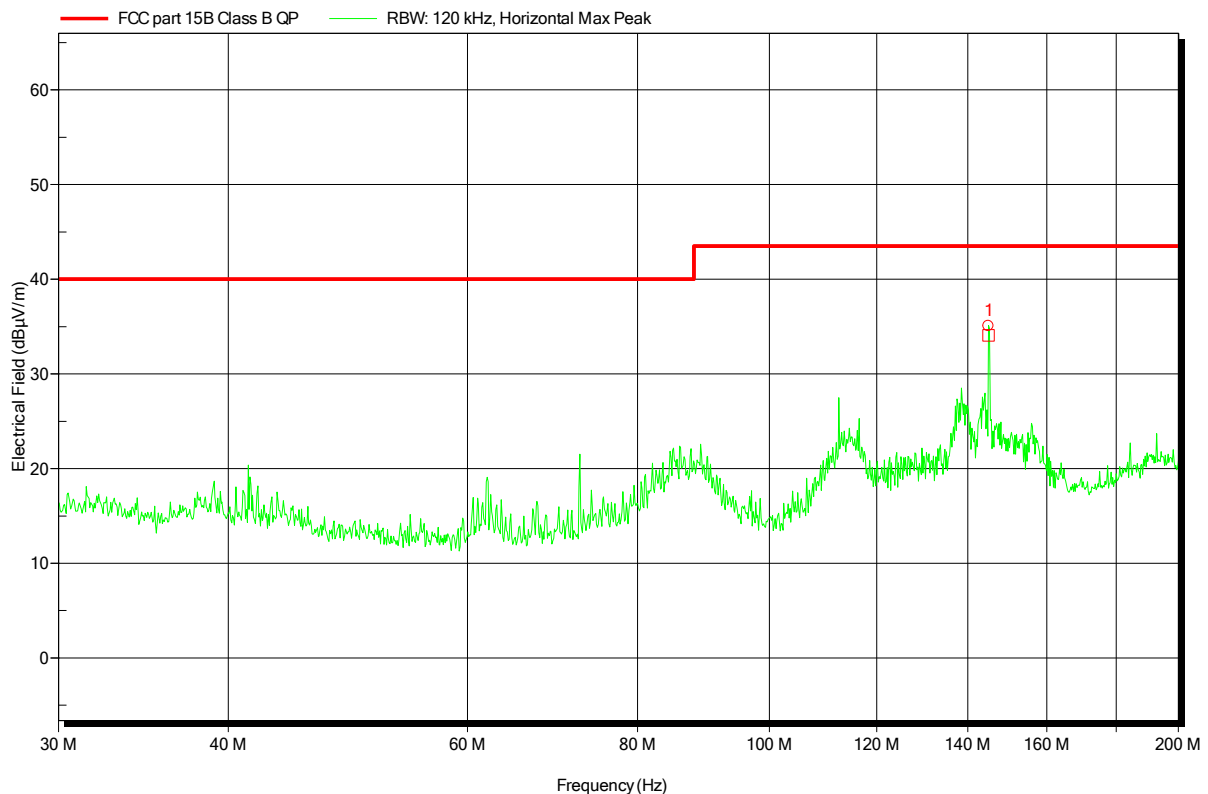
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
41.49 MHz	29.79 dBμV/m	40 dBμV/m	-10.21 dB	Pass
72.492 MHz	28.85 dBμV/m	40 dBμV/m	-11.15 dB	Pass
144.978 MHz	34.37 dBμV/m	43.5 dBμV/m	-9.13 dB	Pass

Spurious emissions under normal conditions according to FCC Part 15b

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Manufacturer: Kamstrup A/S
 EUT Name: READy Converter
 Model: READy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 7



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
144.978 MHz	34.09 dBµV/m	43.5 dBµV/m	-9.41 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

Eurofins Product Service GmbH
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 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 13



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
241.64 MHz	30.42 dBµV/m	46 dBµV/m	-15.58 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

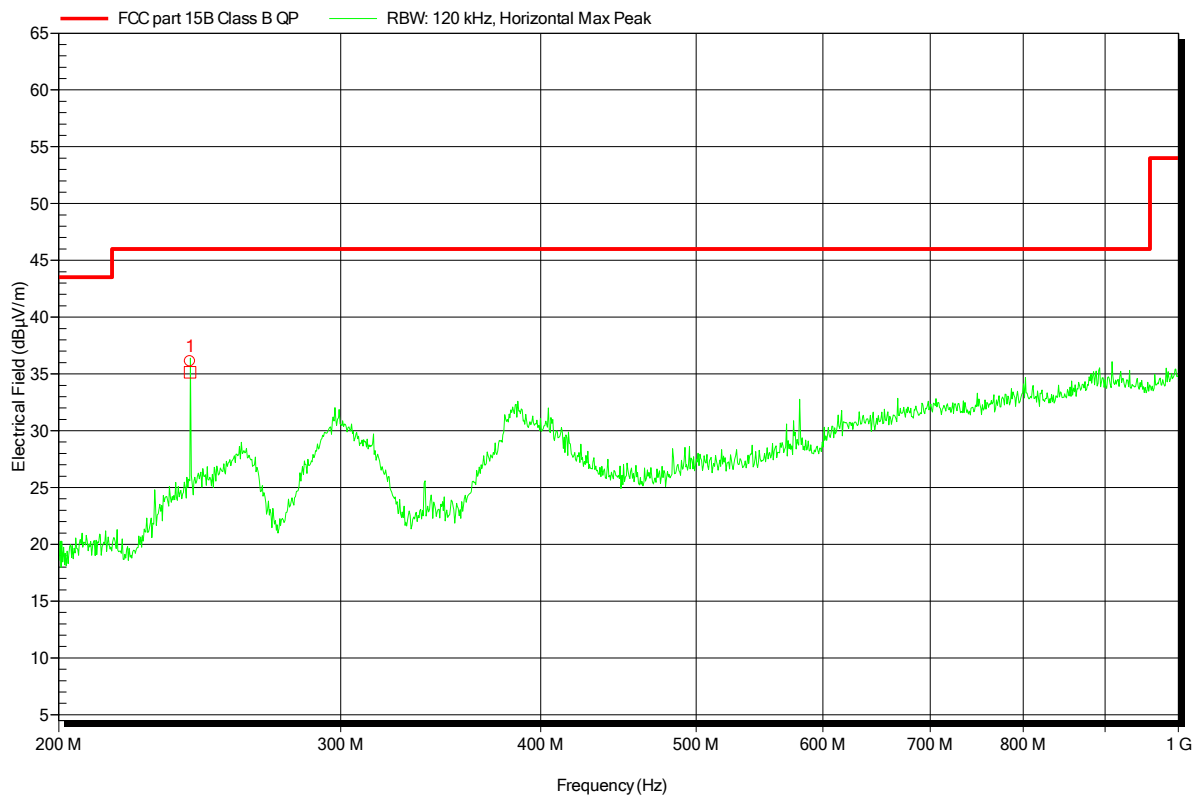
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 15



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
241.628 MHz	35.15 dBµV/m	46 dBµV/m	-10.85 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

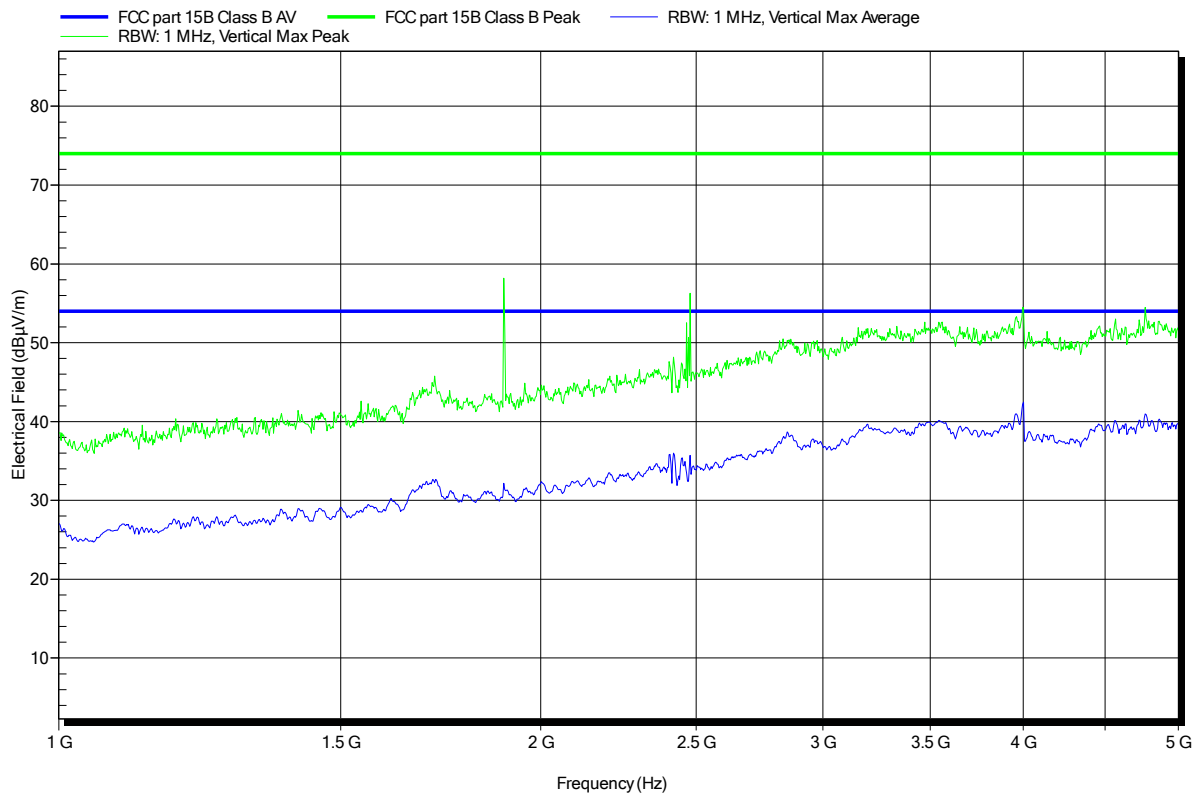
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 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 22

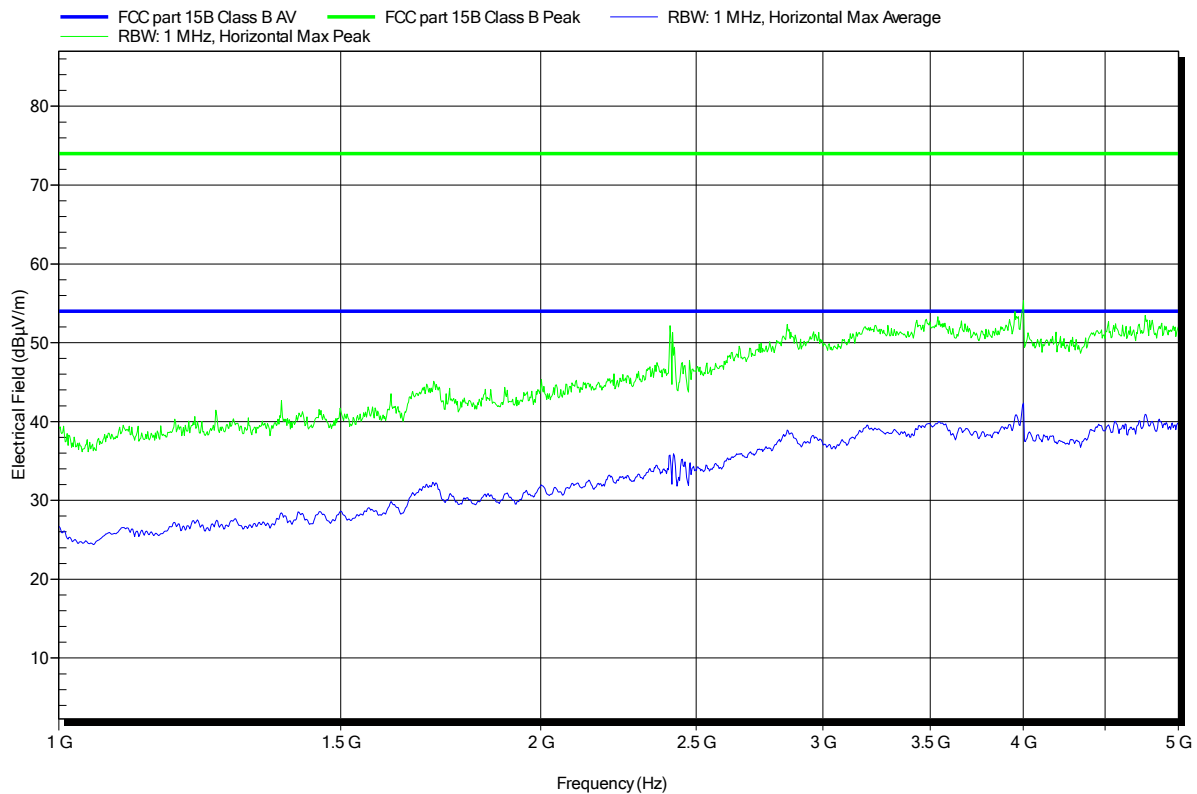


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 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 2
 Test Date: 2014-09-08
 Note:

Index 31

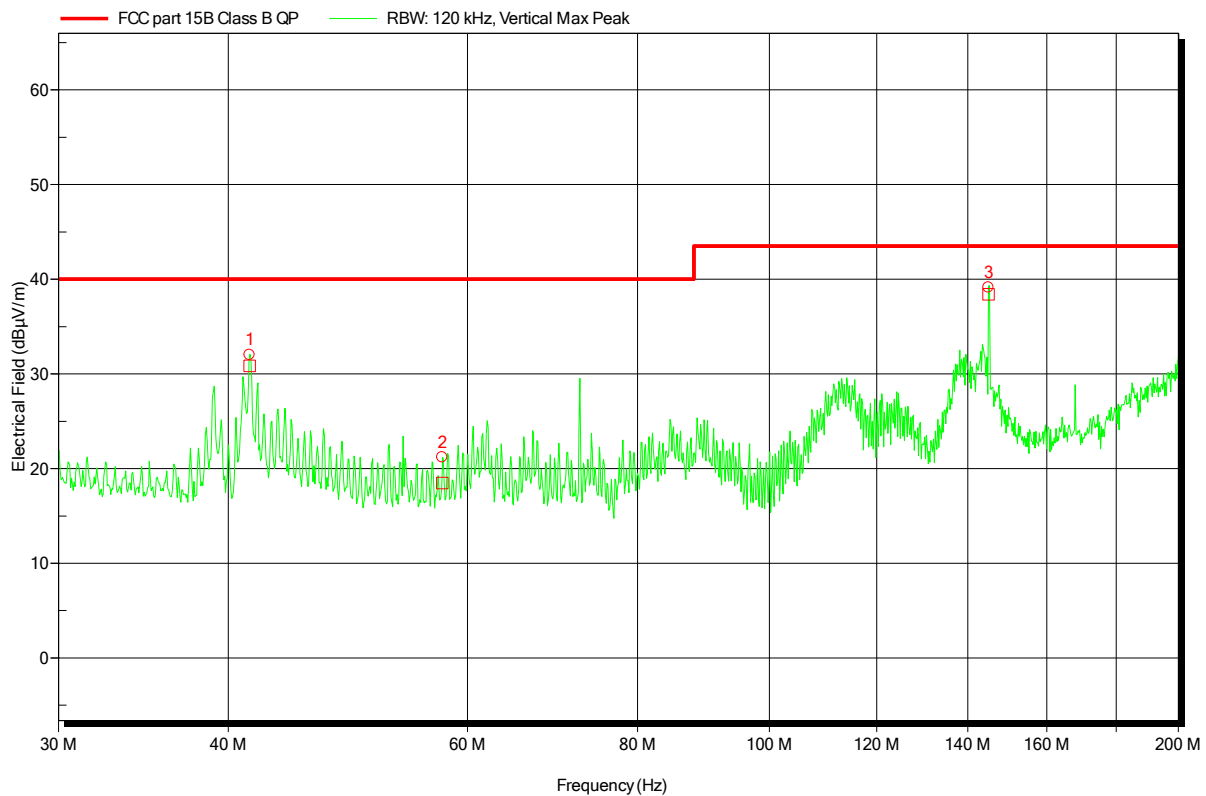


Spurious emissions under normal conditions according to FCC Part 15b

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Manufacturer: Kamstrup A/S
 EUT Name: REAdy Converter
 Model: REAdy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 5



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
41.472 MHz	30.86 dBµV/m	40 dBµV/m	-9.14 dB	Pass
57.486 MHz	18.48 dBµV/m	40 dBµV/m	-21.52 dB	Pass
144.996 MHz	38.43 dBµV/m	43.5 dBµV/m	-5.07 dB	Pass

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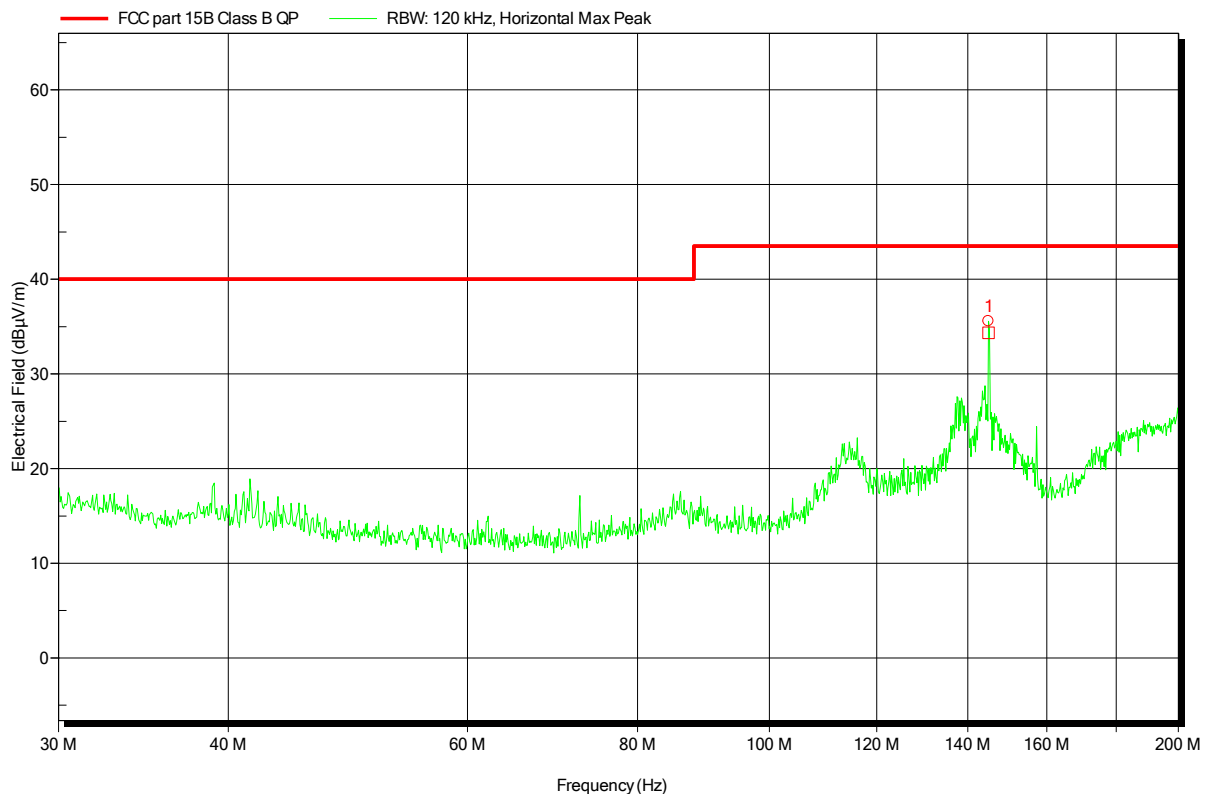
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 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 8



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
144.972 MHz	34.36 dBµV/m	43.5 dBµV/m	-9.14 dB	Pass

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 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 16



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
241.628 MHz	32.84 dBµV/m	46 dBµV/m	-13.16 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

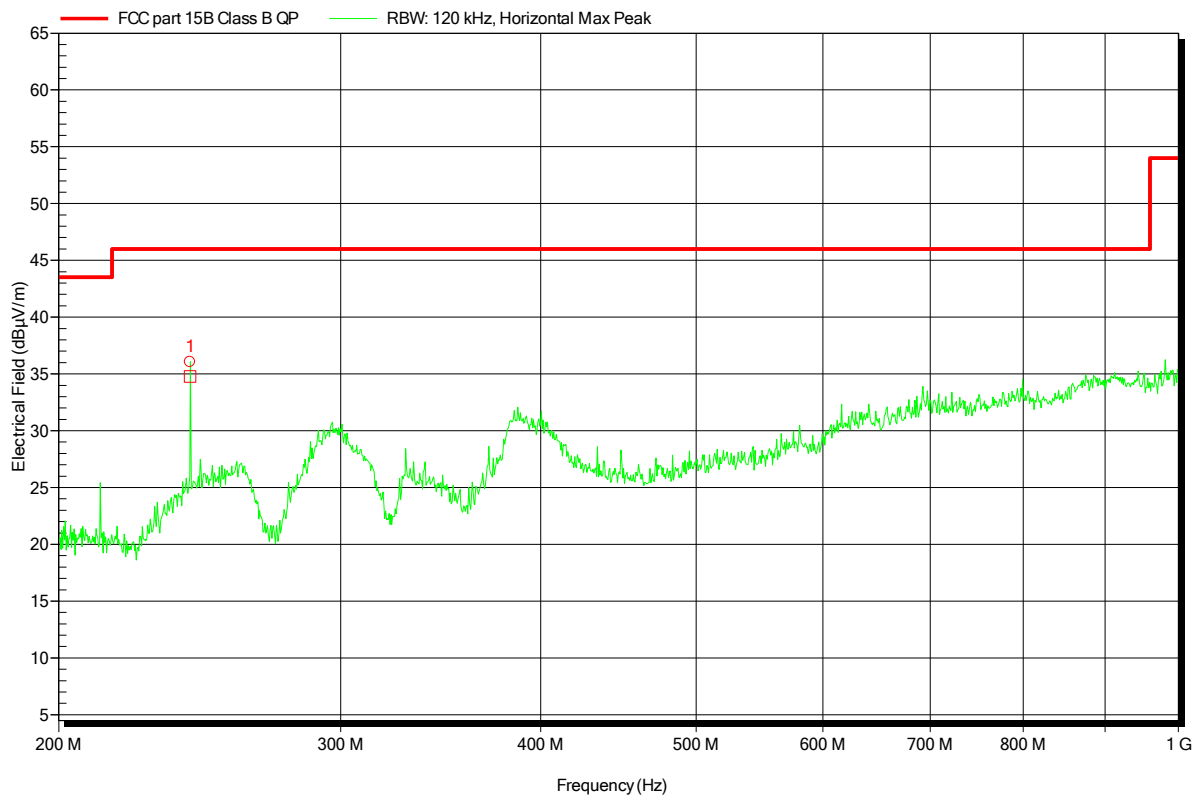
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: REAdy Converter
 Model: REAdy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 14



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
241.628 MHz	34.77 dBµV/m	46 dBµV/m	-11.23 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

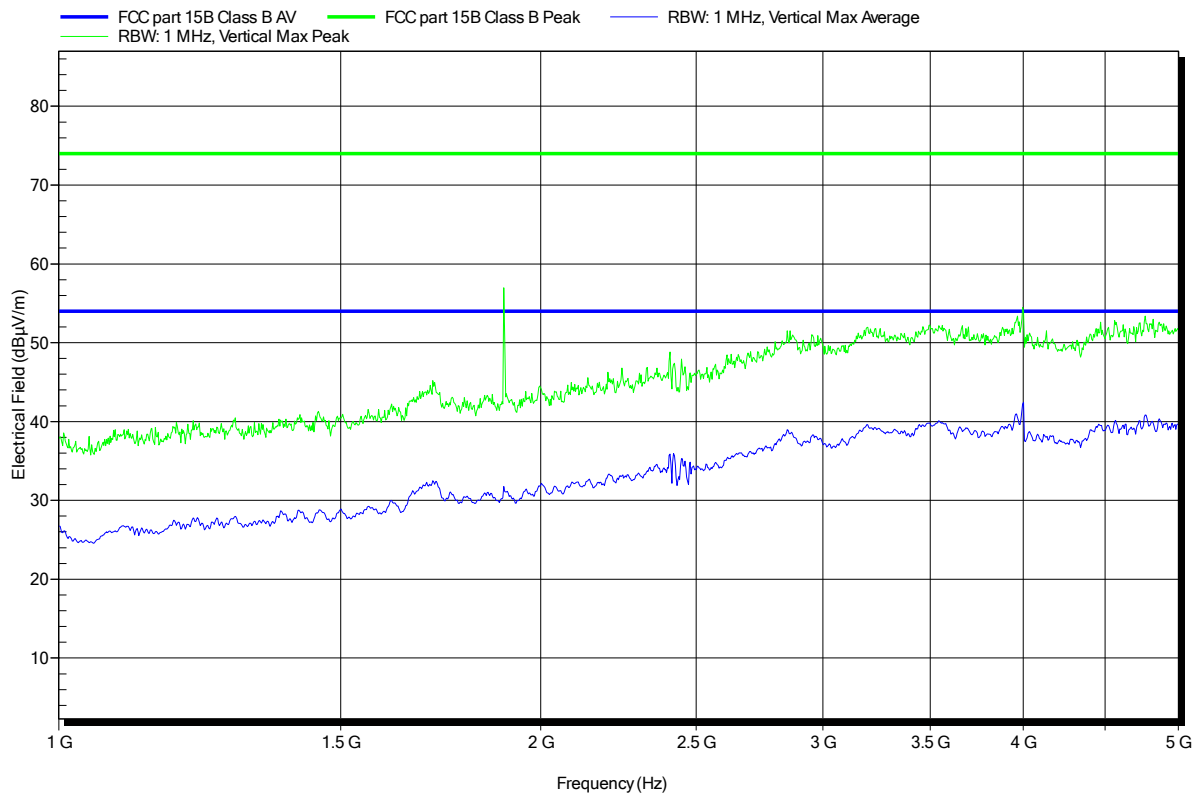
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 26

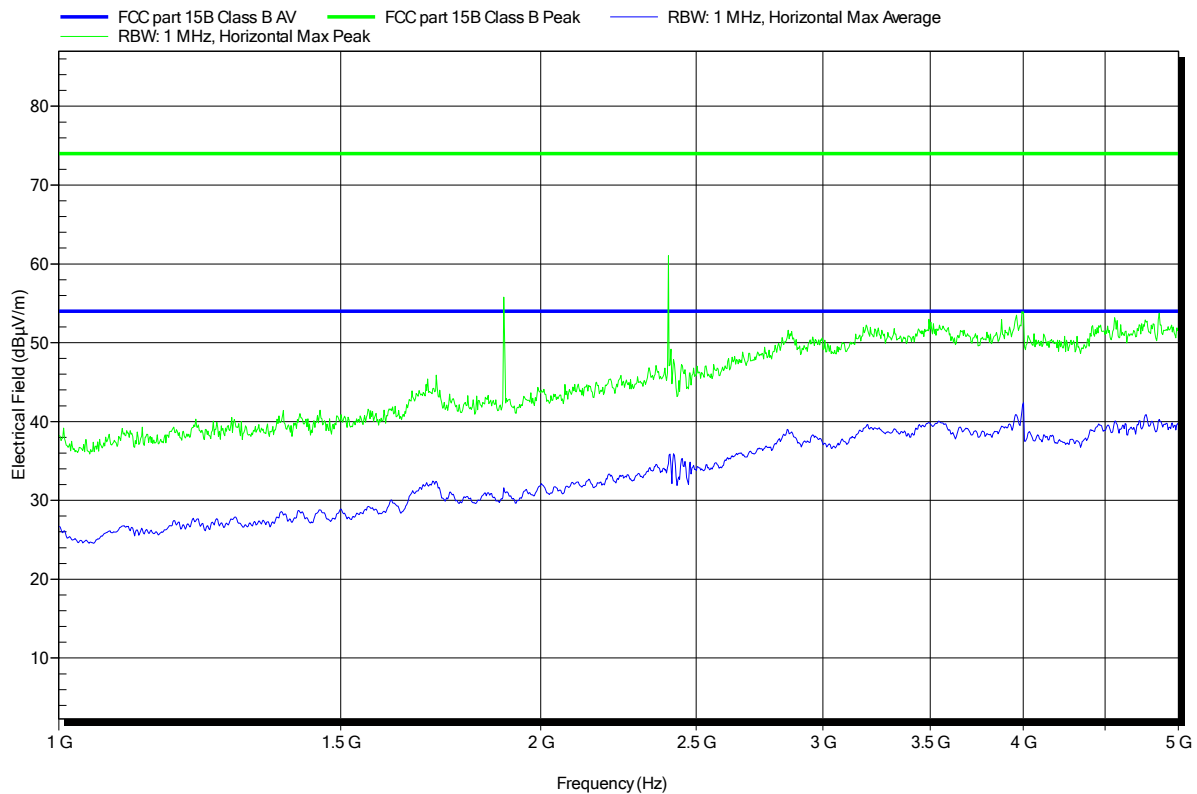


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 3
 Test Date: 2014-09-08
 Note:

Index 27



Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 10



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
38.994 MHz	29 dBμV/m	40 dBμV/m	-11 dB	Pass
41.988 MHz	31.63 dBμV/m	40 dBμV/m	-8.37 dB	Pass
42.978 MHz	27.09 dBμV/m	40 dBμV/m	-12.91 dB	Pass
53.76 MHz	34.17 dBμV/m	40 dBμV/m	-5.83 dB	Pass
66.96 MHz	29.38 dBμV/m	40 dBμV/m	-10.62 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

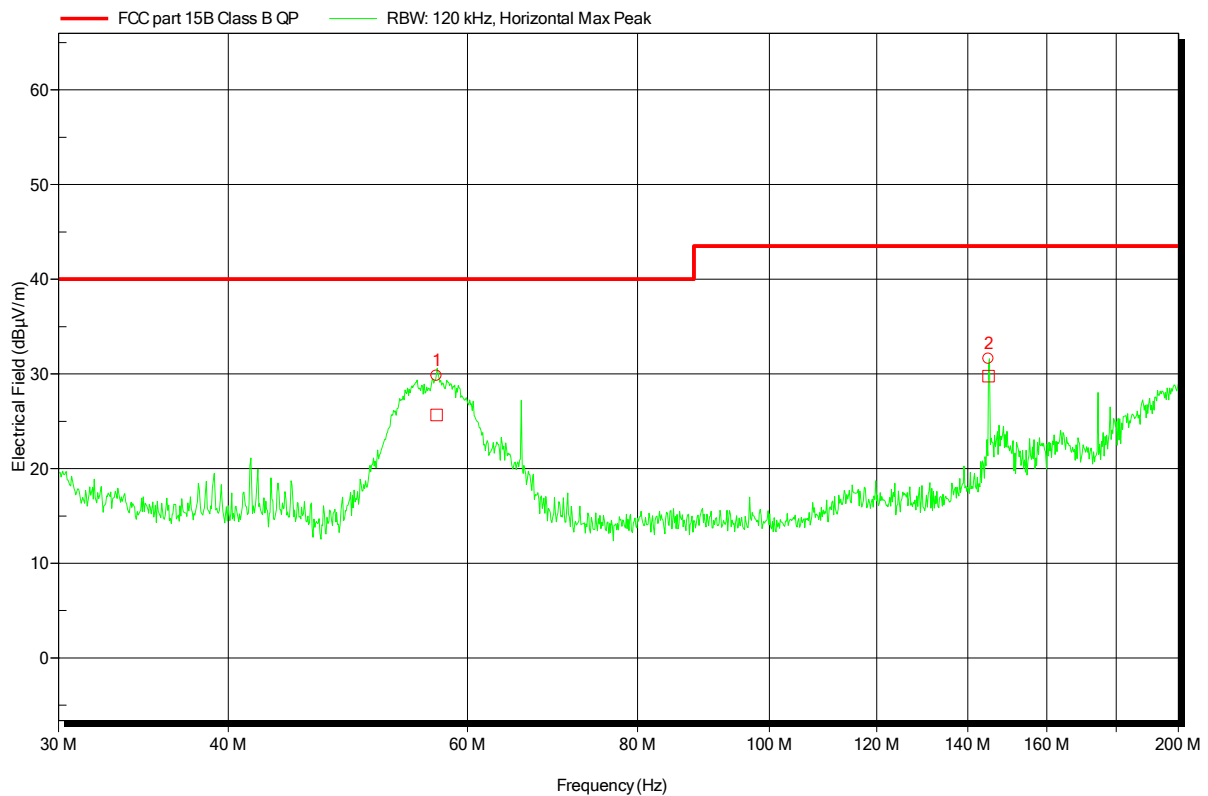
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 9



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
56.94 MHz	25.67 dBµV/m	40 dBµV/m	-14.33 dB	Pass
145.008 MHz	29.75 dBµV/m	43.5 dBµV/m	-13.75 dB	Pass

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer:	Kamstrup A/S
EUT Name:	READY Converter
Model:	READY US (walk-by-configuration)
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Pflug
Test Conditions:	Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3m
Mode:	charging + link + RX-mode var. 4
Test Date:	2014-09-08
Note:	

Index 17

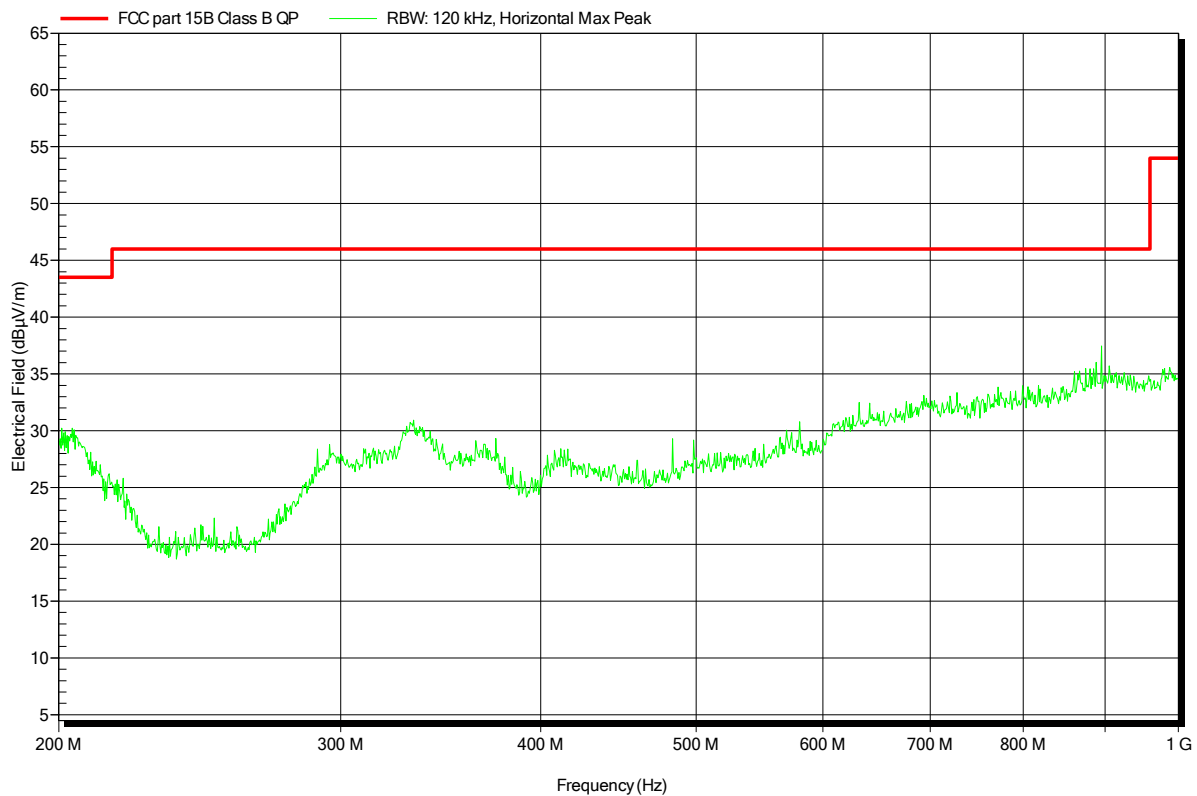


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READy Converter
 Model: READy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 11

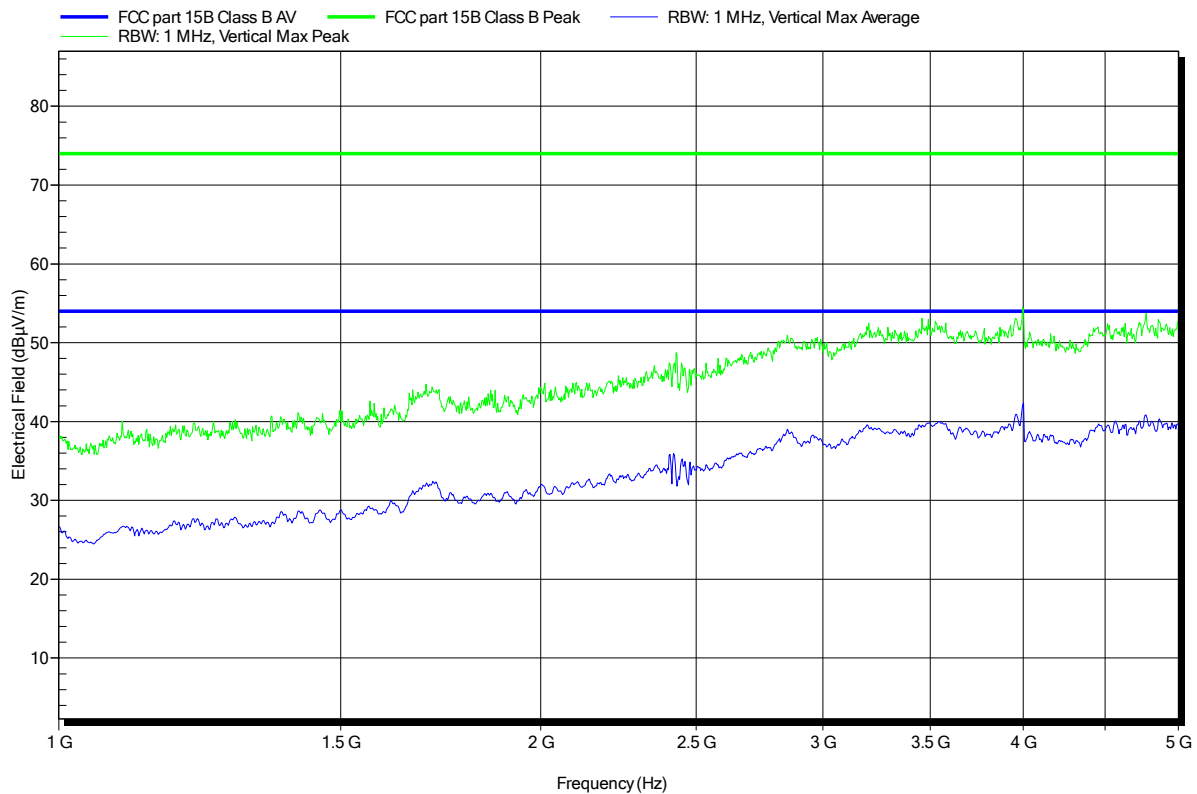


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 32

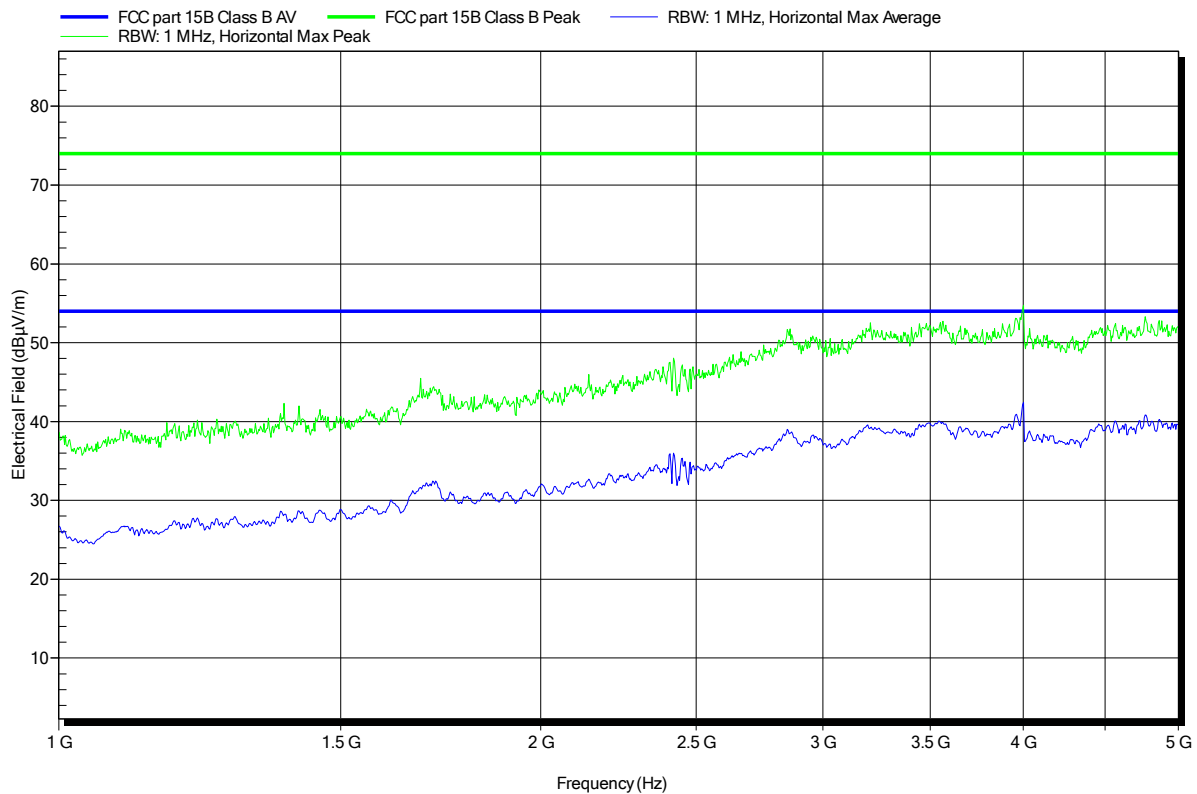


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 30

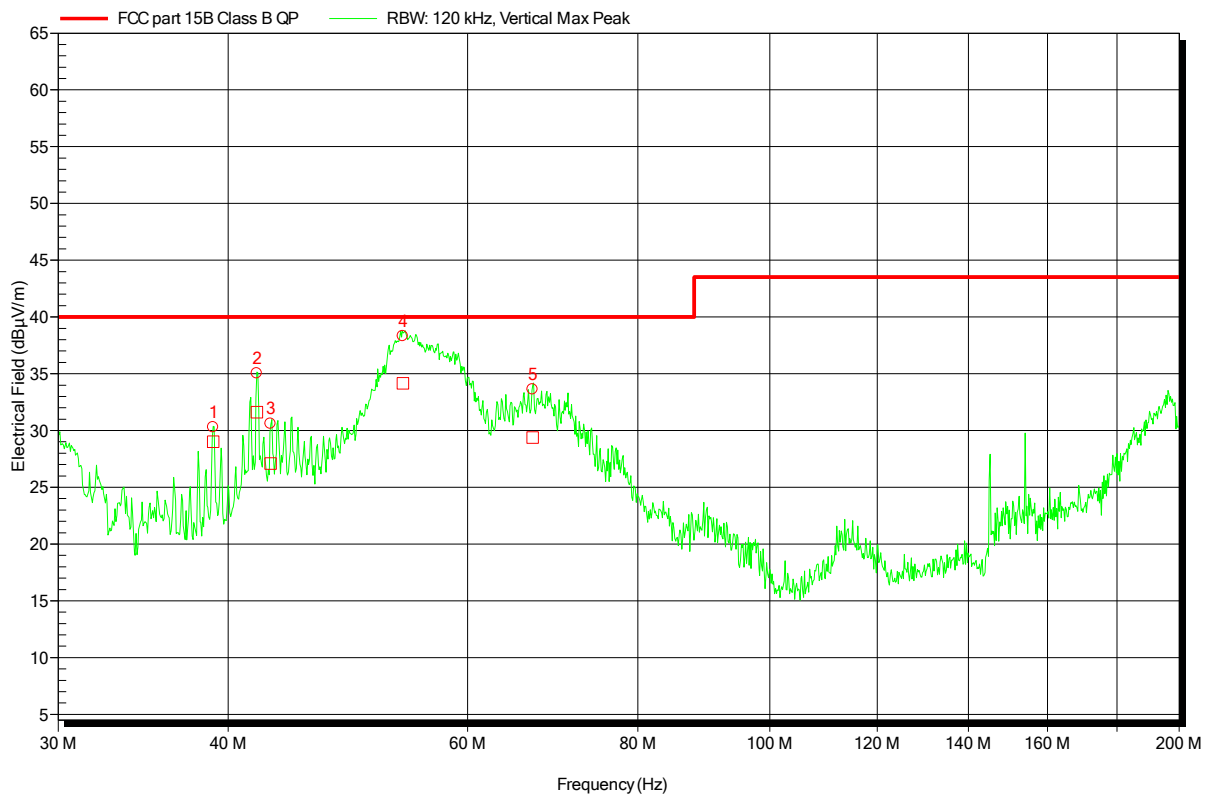


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 10



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
38.994 MHz	29 dBμV/m	40 dBμV/m	-11 dB	Pass
41.988 MHz	31.63 dBμV/m	40 dBμV/m	-8.37 dB	Pass
42.978 MHz	27.09 dBμV/m	40 dBμV/m	-12.91 dB	Pass
53.76 MHz	34.17 dBμV/m	40 dBμV/m	-5.83 dB	Pass
66.96 MHz	29.38 dBμV/m	40 dBμV/m	-10.62 dB	Pass

Test Report No.: G0M-1406-3933-EF0115B-V01

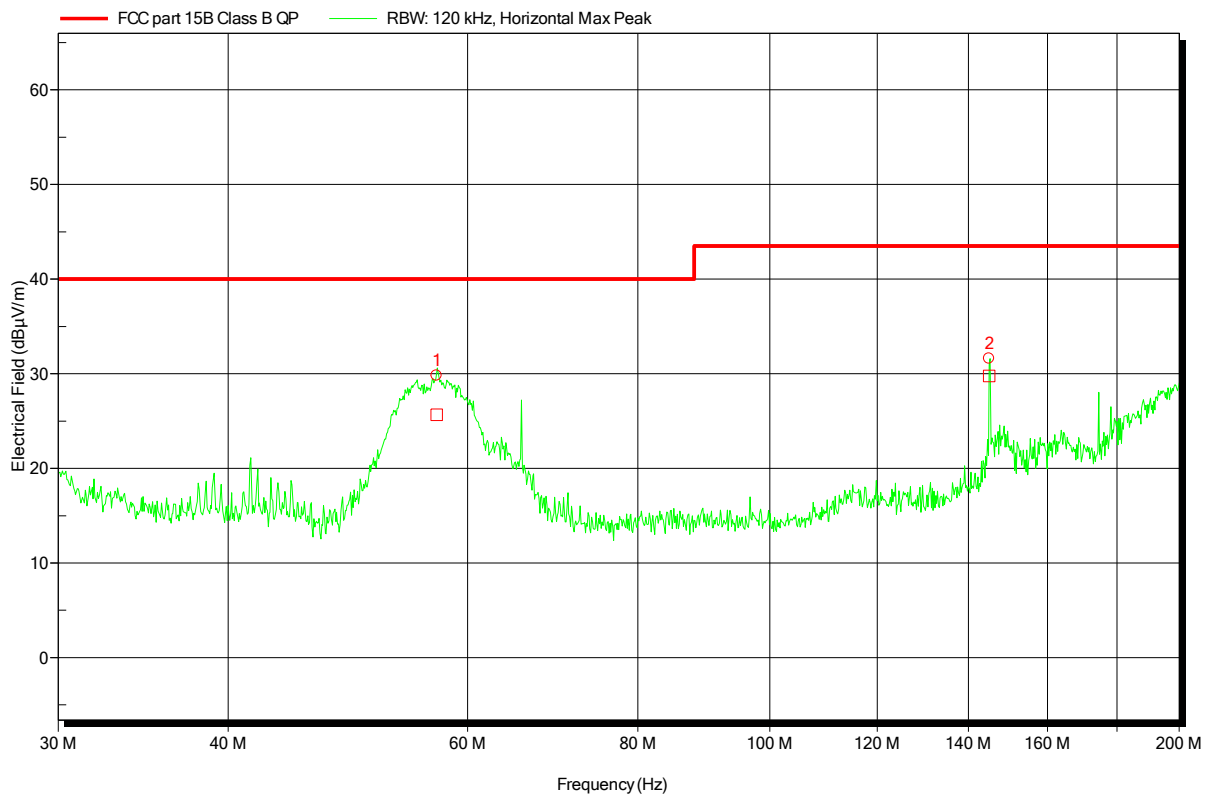
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 9



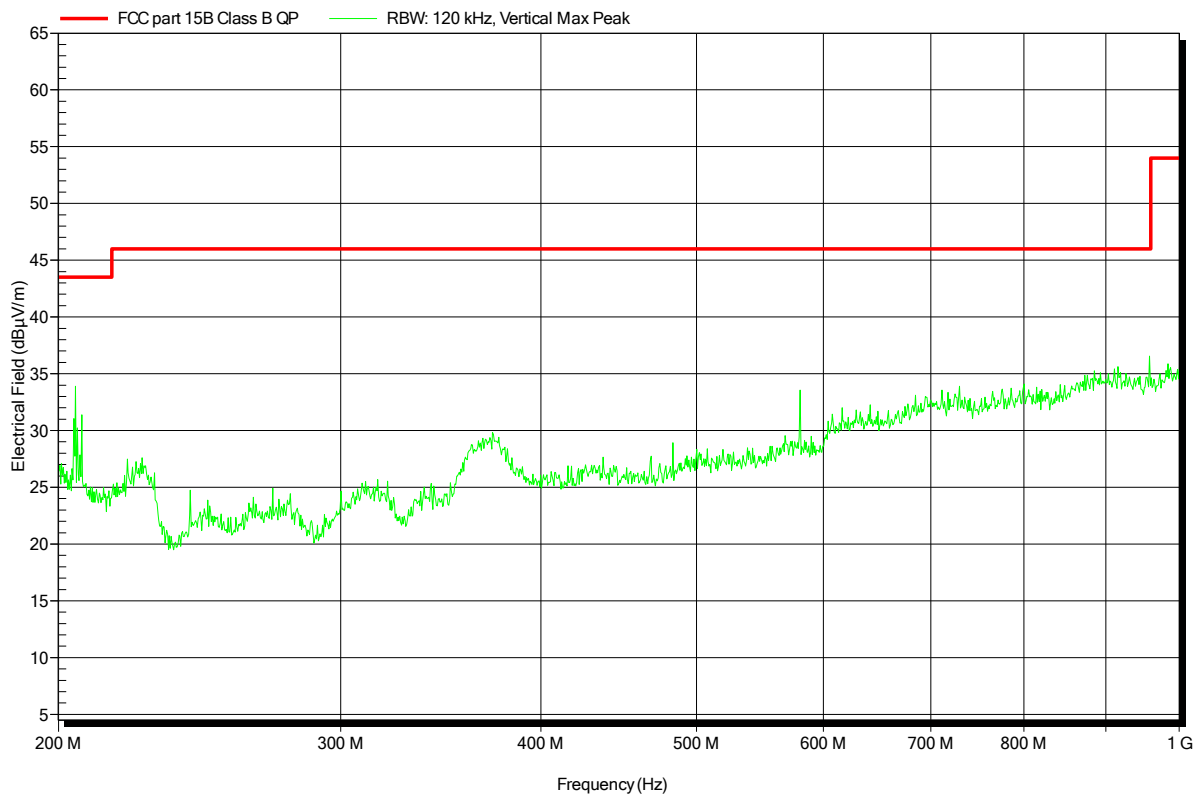
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
56.94 MHz	25.67 dBµV/m	40 dBµV/m	-14.33 dB	Pass
145.008 MHz	29.75 dBµV/m	43.5 dBµV/m	-13.75 dB	Pass

Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 17

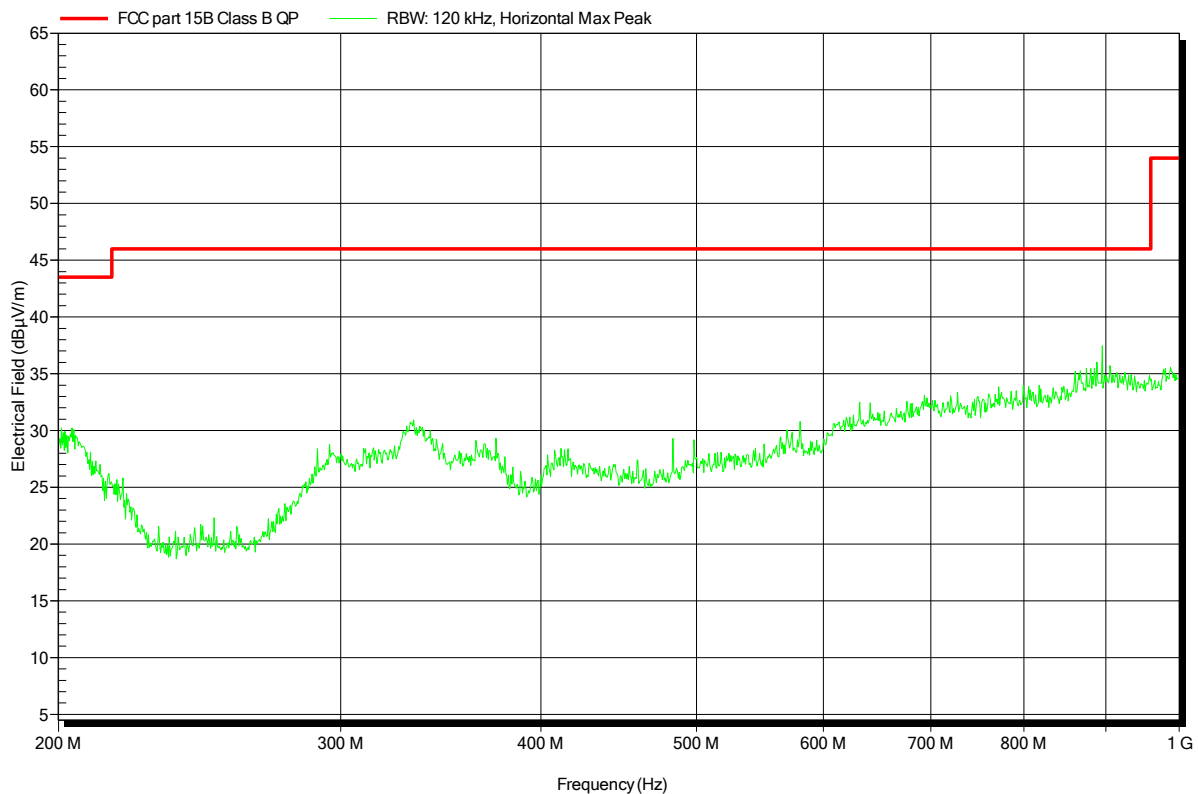


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READy Converter
 Model: READy US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 11

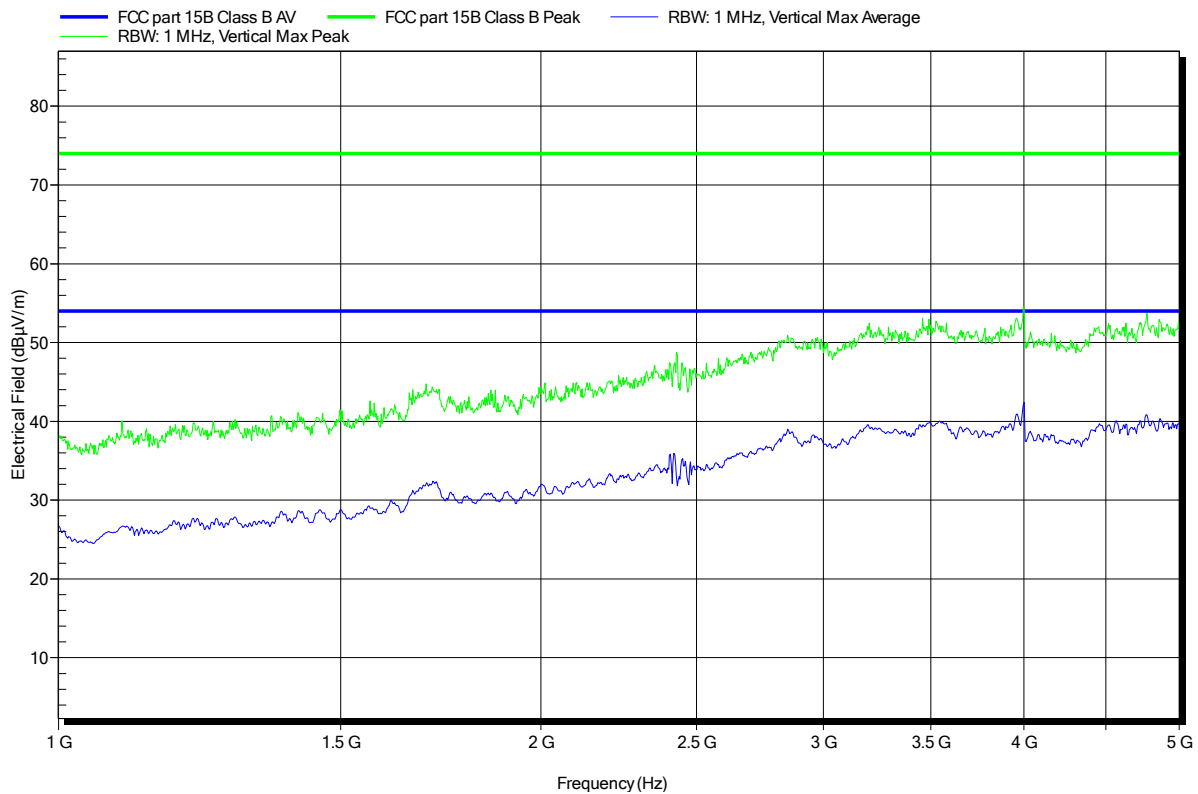


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 32

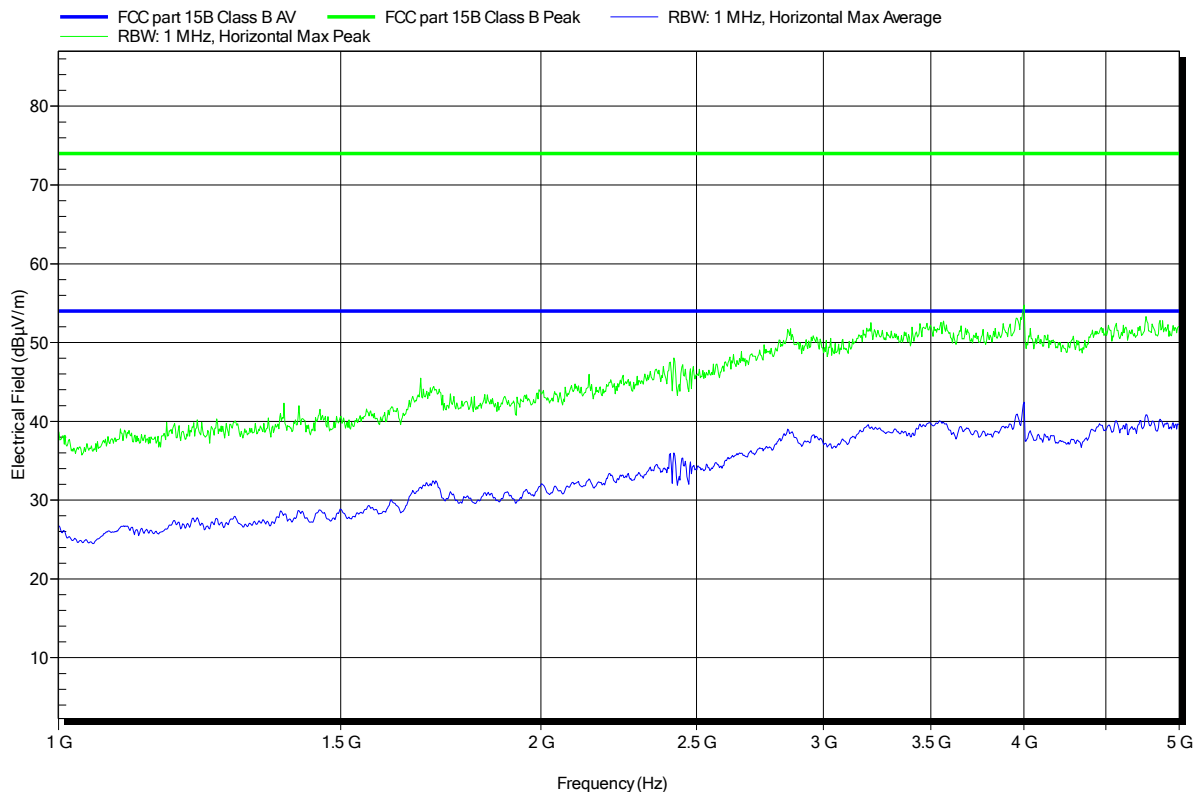


Spurious emissions under normal conditions according to FCC Part 15b

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC(AC/DC-adapter)
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 3m
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 30

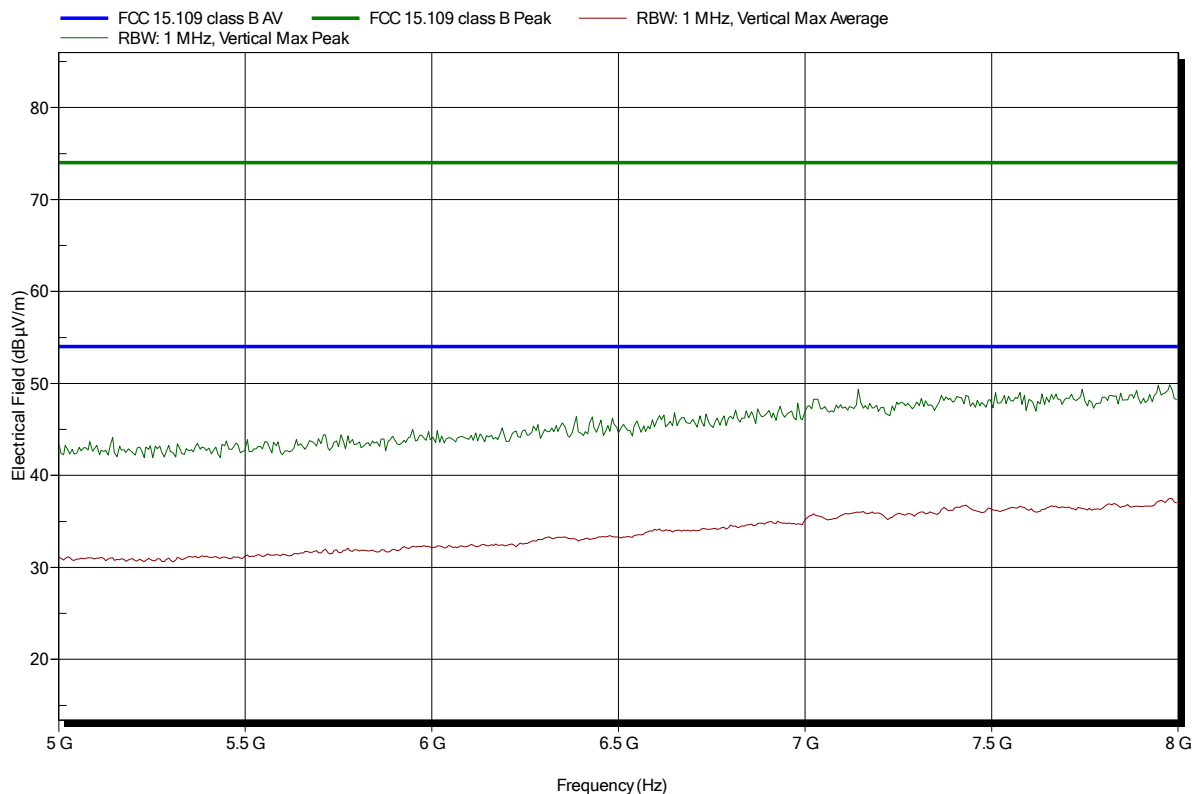


Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 36

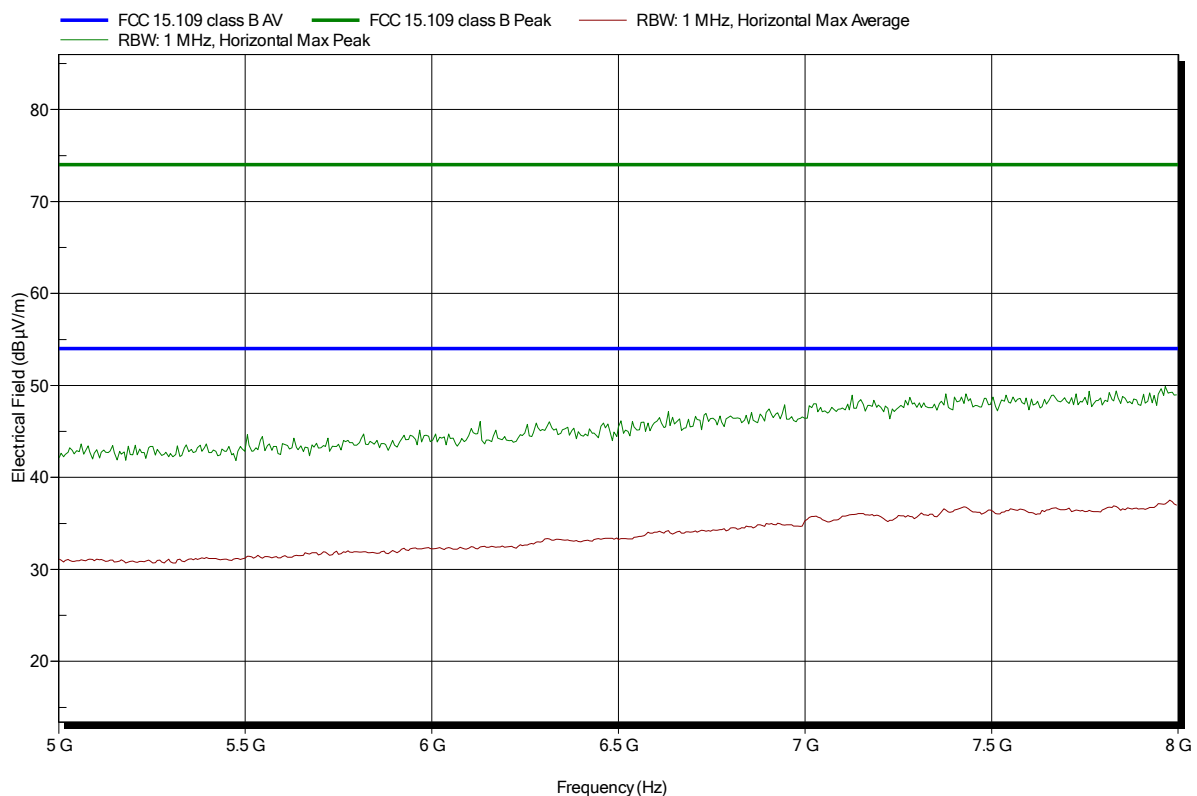


Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 35

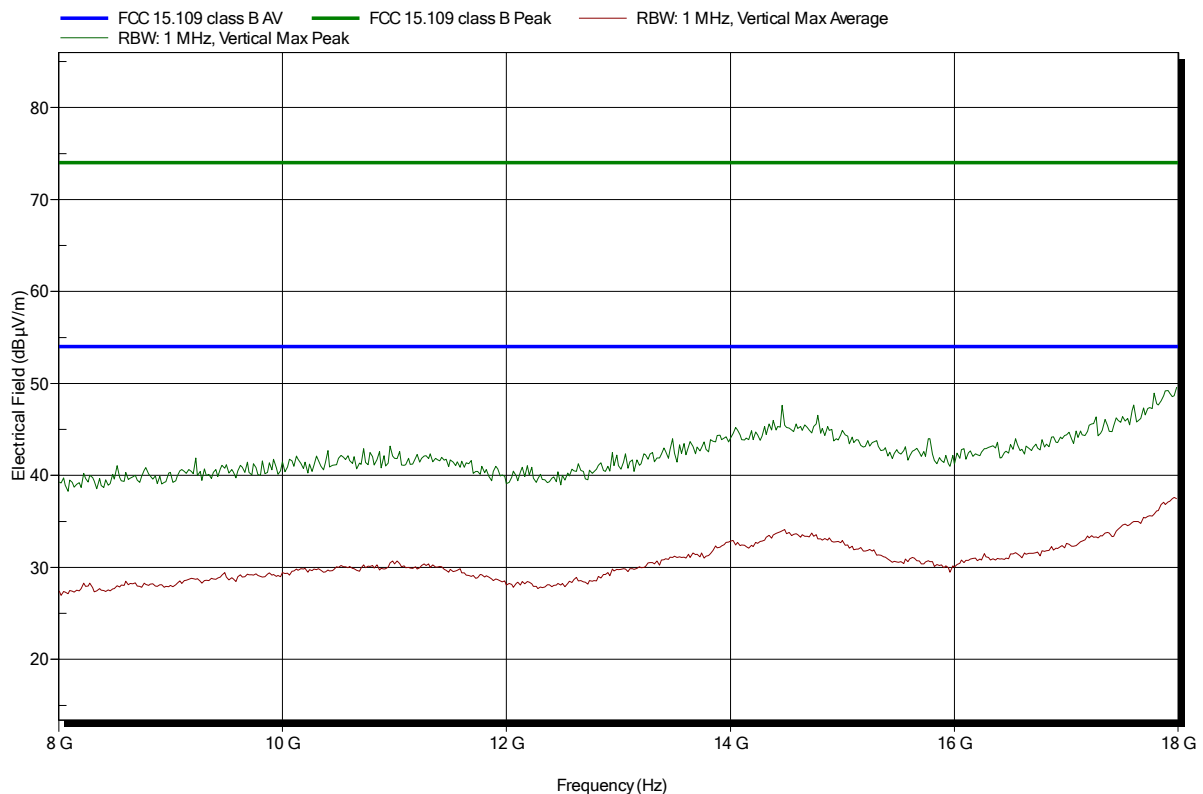


Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 38

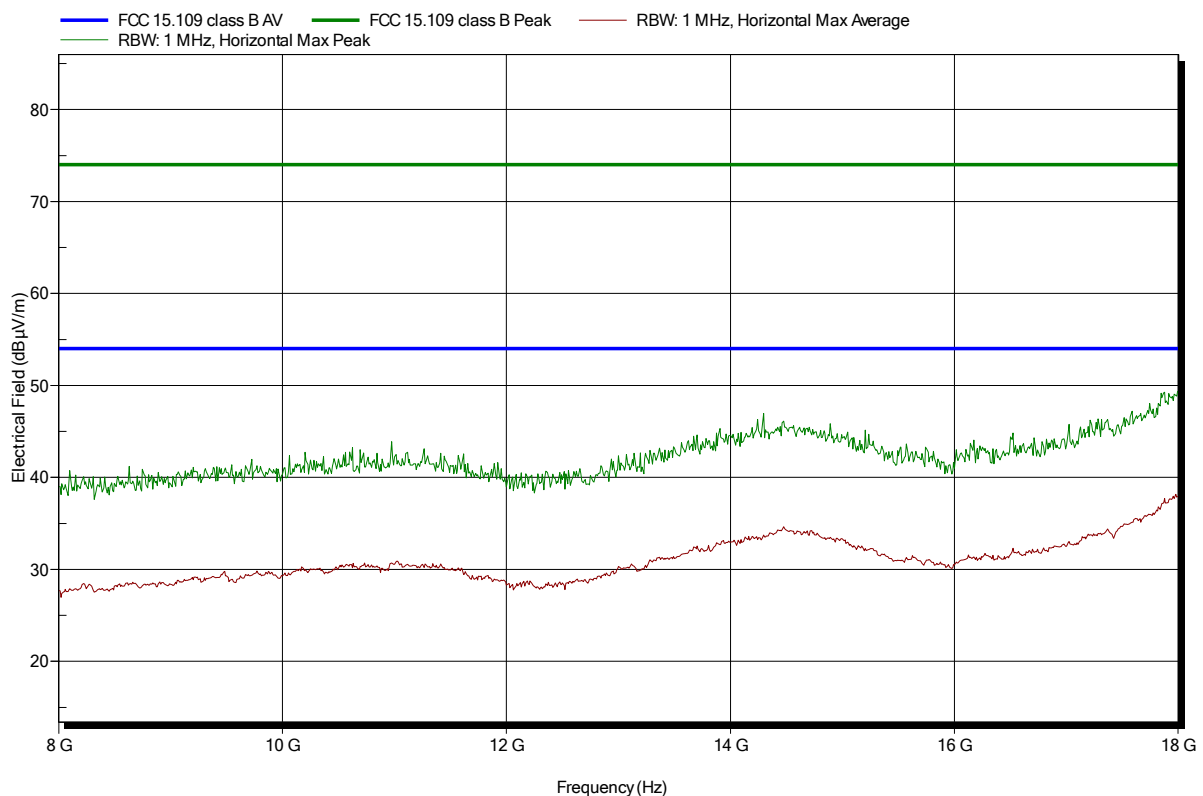


Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 37



Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 40

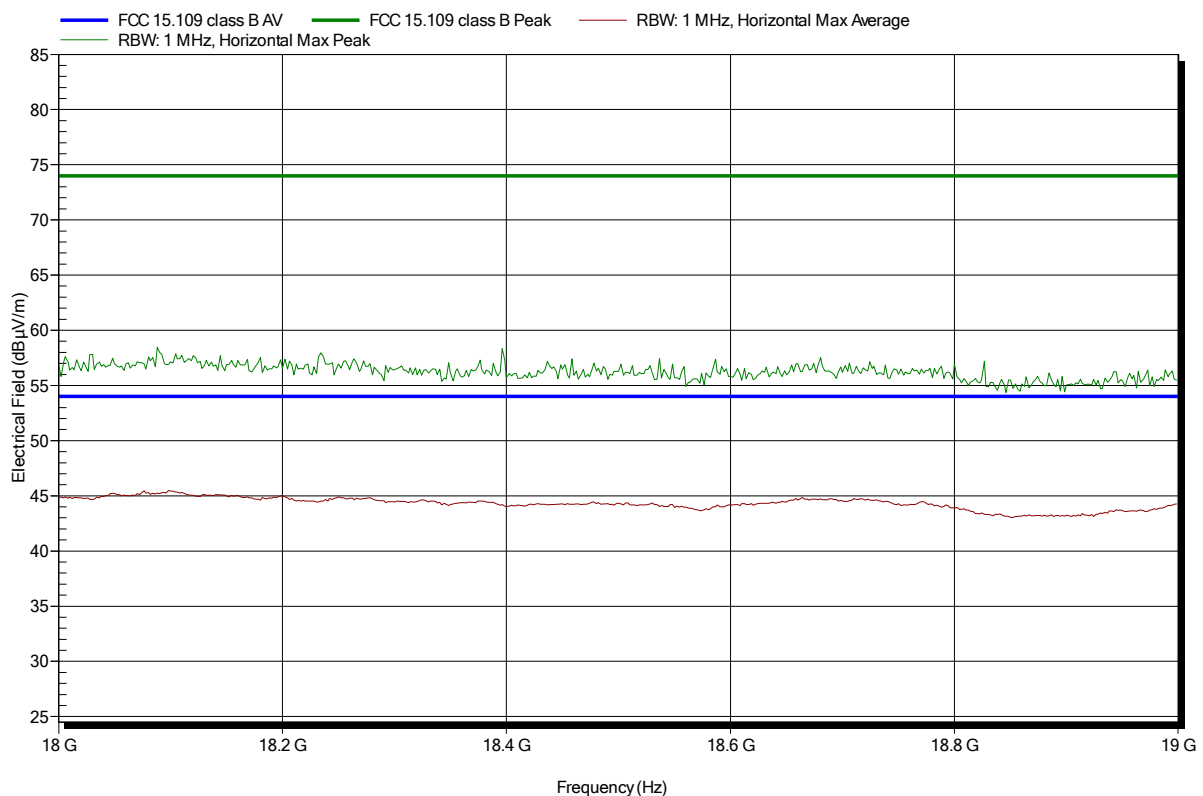


Spurious emissions according to FCC Part 15b

Project number: G0M-1406-3933

Applicant: Kamstrup A/S
 EUT Name: READY US (walk-by-configuration)
 Model: xyz
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Treffke
 Test Conditions: Tnom: 23°C, Vnom: 13.5VDC
 Antenna: Rohde & Schwarz HL 025, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; charging + link + RX-mode
 Test Date: 2014-09-08
 Note:

Index 39



3.2 Test Conditions and Results – AC power line conducted emissions

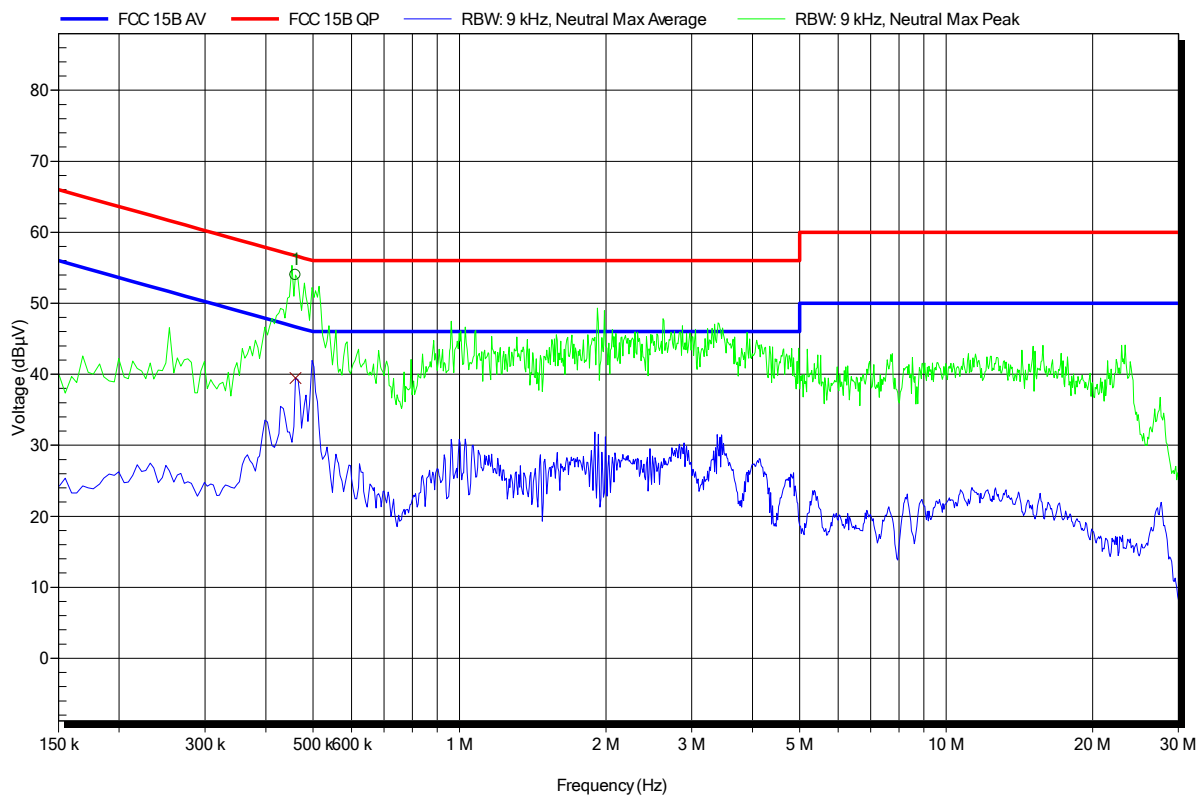
Conducted emissions acc. FCC 47 CFR 15.107 / IC RSS-Gen			Verdict: PASS	
Laboratory Parameters:		Required prior to the test	During the test	
Ambient Temperature		15 to 35 °C	23 °C	
Relative Humidity		30 to 60 %	41 %	
Test according referenced standards		Reference Method		
		ANSI C63.4		
Fully configured sample scanned over the following frequency range		Frequency range		
		0.15 MHz to 30 MHz		
Sample is tested with respect to the requirements of the equipment class		Equipment class		
		Class B		
Points of Application		Application Interface		
AC Mains		LISN		
Operating mode		2		
Limits and results Class B				
Frequency [MHz]	Quasi-Peak [dBµV]	Result	Average [dBµV]	Result
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS
0.5 to 5	56	PASS	46	PASS
5 to 30	60	PASS	50	PASS
Comments:				
* Limit decreases linearly with the logarithm of the frequency.				

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

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC
 LISN: ESH2-Z5 N
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 33



Frequency
460.5 kHz

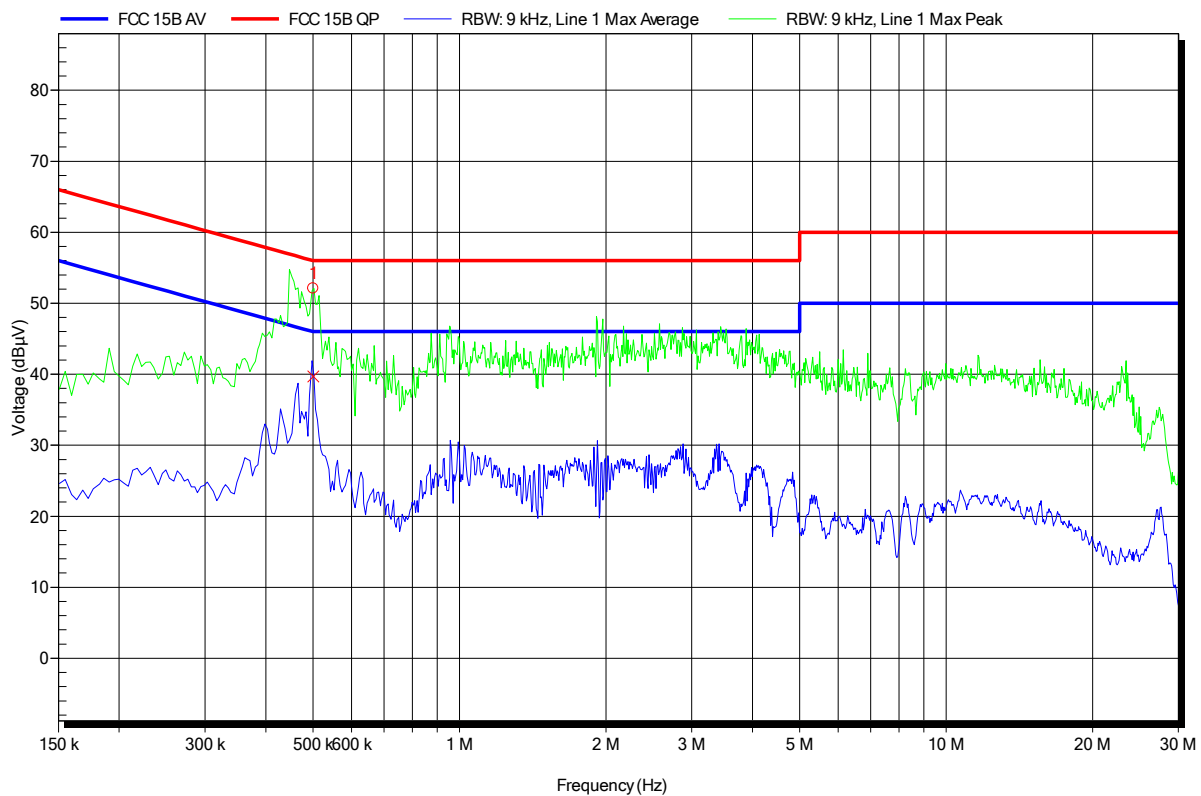
Frequency	Average	Average Limit	Average Difference	Average Status
460.5 kHz	39.46 dBμV	46.68 dBμV	-7.23 dB	Pass

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

Project number: G0M-1406-3933

Manufacturer: Kamstrup A/S
 EUT Name: READY Converter
 Model: READY US (walk-by-configuration)
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 120 VAC
 LISN: ESH2-Z5 L
 Mode: charging + link + RX-mode
 var. 4
 Test Date: 2014-09-08
 Note:

Index 34



Frequency
501 kHz

Frequency	Average	Average Limit	Average Difference	Average Status
501 kHz	39.67 dBμV	46 dBμV	-6.33 dB	Pass